SOC®

Protectors for all electronic circuits and equipment

Fuses Fuseholders Fuse clips

How to use this catalog

The following is an example of how to search for a fuse satisfying the requirements shown below:

<Example>

Rated voltage	: DC 70 V or more	Step 1
Shape	: Surface mount type	Step 2
Dimensions	: W2 mm × H1.2 mm × L4 mm or less	Step 3
Characteristic	: Inrush-withstand	Step 4
Region of use	: North America	Step 5
Rated current	: 1.25 A	Step 6

Step 1
Select a rated voltage for the fuse suitable for the circuit in which it is to be inserted.

* Do not select AC fuses for DC circuits, and vice versa.
* Select a rated voltage higher than the voltage of the circuit.

DC42V max.
DC100V max.
DC450V max.
DC700V max.
AC100V max.
AC125V max.
AC250V max.
AC600V max.

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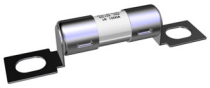
Step 2
Select the shape.

Step 3
Select the dimensions and proceed to the listed page.

Rated voltage	Shape	Dimensions	Page
DC72V		W2.57mm × H2.57mm × L6.1mm	22
		W1.6mm × H1.05mm × L3.2mm	23
		W1.5mm × H1.2mm × L2.4mm	23
		φ10mm × L32mm	23

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Step 4
Select the time/current characteristic.

Step 5
Select the region of use.

Step 6
Confirm the product name and rated current range of the selected fuse and proceed to the listed page.

DC72V W1.6mm × H1.05mm × L3.2mm

Scale: 5/1

Scale: 1/1

Charac-teristic	Region of use: Japan	Region of use: North America	Region of use: Europe /Asia	Product name	Rated current	Page
Quick-acting	○	●		11CF	100mA - 10A	32
	○	○	○	P11CF	100mA - 10A	33
Inrush-withstand	○	●		11CT	100mA - 10A	33
	○	○	○	P11CT	100mA - 10A	34

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Fuse selection completed Confirm the detailed specifications of the selected fuse.

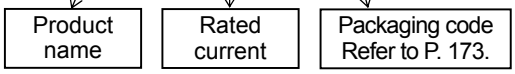
If you cannot find a fuse satisfying your requirements, please contact your local SOC sales representative. Fuses marked with the symbol Ⓑ specified in the Electrical Appliance and Material Safety Law of Japan are not contained in this catalog. Please contact your local SOC sales representative for fuses marked with this symbol.

IMPORTANT Before proceeding with final fuse selection, be sure to read Fuse Selection Process on P. 178 and Safety Precautions on P. 194.

Product name composition for orders

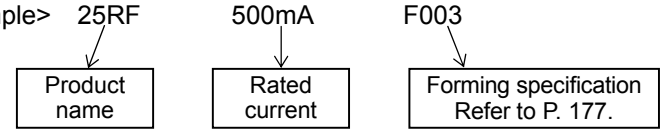
■ Surface mount type

<Example> 11CT 1A R08B4



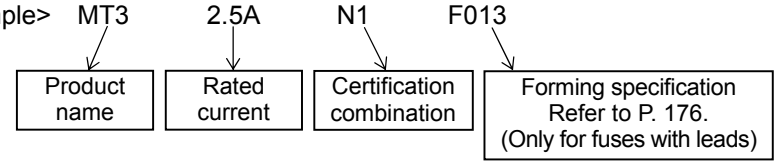
■ Sub-miniature type with leads

<Example> 25RF 500mA F003



■ Cartridge type

<Example> MT3 2.5A N1 F013



RoHS-compliant

SOC offers products that comply with the EU Directive on the restriction of the use of certain hazardous substances in electrical and electronic equipment (RoHS).

The individual product specification pages for RoHS-compliant products use the following marks:

RoHS Pb

■ Products that do not use lead, cadmium, mercury, hexavalent chromium, PBB (polybrominated biphenyls), or PBDE (polybrominated diphenyl ethers)

RoHS

■ Products that use lead in solders that are exempted from the requirements of the EU RoHS Directive*

* High melting temperature type solders containing more than 85% lead by weight

■ After selecting your preferred shape and dimensions, proceed to the listed page.

Rated voltage	Shape	Dimensions	Page
AC600V		ϕ5.2mm × L20mm	11
		ϕ10.4mm × L40mm	11
AC500V		ϕ6.35mm × L31.8mm	11
		ϕ5.2mm × L20mm	11
		ϕ6.35mm × L31.8mm	11
		ϕ10mm × L32mm	11
		ϕ10mm × L31mm	11
AC400V		ϕ6.35mm × L31.8mm	11
		ϕ5.2mm × L20mm	11
		ϕ6.35mm × L31.8mm	11
		ϕ5.2mm × L20mm	12
AC380V		ϕ6.35mm × L31.8mm	12
		ϕ5.2mm × L20mm	12
		ϕ5.2mm × L20mm	12
AC350V		W2.77mm × H2.77mm × L10.3mm	12

■ After selecting your preferred shape and dimensions, proceed to the listed page.

Rated voltage	Shape	Dimensions	Page
AC250V		W3.6mm × H3.6mm × L17mm	12
		W2.57mm × H2.57mm × L6.1mm	12
		W2.57mm × H2.57mm × L9mm	12
		W4mm × H7.7mm × L8.4mm	12
		φ10.3mm × L38.1mm	12
		φ6.35mm × L31.8mm	13
		φ6.35mm × L30mm	13
		φ6.35mm × L25.4mm	13
		φ5.2mm × L20mm	13
		φ4.6mm × L16mm	14
		φ10.3mm × L38.1mm	14
		φ6.35mm × L31.8mm	14
		φ6.35mm × L30mm	14
		φ6.35mm × L20mm	14
		φ5.2mm × L20mm	14
		φ4.6mm × L16mm	14
		φ4mm × L9mm	15
		φ6.35mm × L31.8mm	15
		φ6.35mm × L30mm	15
		φ5.2mm × L20mm	15

AC250V max.
AC600V max.

■ After selecting your preferred shape and dimensions, proceed to the listed page.

Rated voltage	Shape	Dimensions	Page
AC125V		W2.57mm × H2.57mm × L6.1mm	15
		W1.5mm × H1.2mm × L2.4mm	15
		W2.57mm × H2.57mm × L9mm	15
		φ6.6mm × L7.4mm	15
		φ10.3mm × L38.1mm	15
		φ7.14mm × L31.8mm	15
		φ6.35mm × L31.8mm	16
		φ6.35mm × L30mm	16
		φ6.35mm × L25.4mm	16
		φ6.35mm × L15.9mm	16
		φ5.2mm × L20mm	16
		φ4.6mm × L16mm	16
		φ4.6mm × L14mm	16
		φ10.3mm × L38.1mm	16
		φ6.35mm × L31.8mm	17
		φ6.35mm × L30mm	17
		φ6.35mm × L15.9mm	17
		φ5.2mm × L20mm	17
		φ4.6mm × L16mm	17
		φ4.6mm × L14mm	17
		φ4mm × L9mm	17
		φ6.35mm × L31.8mm	18
		φ6.35mm × L30mm	18
		φ5.2mm × L20mm	18

■ After selecting your preferred shape and dimensions, proceed to the listed page.

Rated voltage	Shape	Dimensions	Page
AC90V		W2.57mm × H2.57mm × L9mm	18
		φ6.6mm × L7.4mm	18
AC42V		φ5.2mm × L20mm	18
AC32V		W1.6mm × H1.05mm × L3.2mm	18
		φ6.35mm × L31.8mm	18
		φ6.35mm × L31.8mm	18

AC100V max.
AC125V max.

■ After selecting your preferred shape and dimensions, proceed to the listed page.

Rated voltage	Shape	Dimensions	Page
DC700V		ϕ6.35mm × L31.8mm	19
		ϕ6.35mm × L31.8mm	19
DC600V		W3.6mm × H3.6mm × L11mm	19
DC500V		ϕ10.3mm × L38.1mm	19
		ϕ6.35mm × L31.8mm	19
		ϕ6.35mm × L25.4mm	19
		ϕ6.35mm × L25.4mm	19
		ϕ30mm × L51mm	19
		ϕ20.6mm × L34.4mm	19
		ϕ10mm × L32mm	19
		ϕ6.35mm × L24.6mm	20
		ϕ10mm × L31mm	20
		ϕ6.35mm × L24.6mm	20

■ After selecting your preferred shape and dimensions, proceed to the listed page.

DC450V max.
DC700V max.

Rated voltage	Shape	Dimensions	Page
DC450V		ϕ5.2mm × L20mm	20
DC420V		ϕ6.35mm × L25.4mm	20
DC400V		ϕ6.35mm × L31.8mm	20
		ϕ5.2mm × L20mm	20
		ϕ6.35mm × L31.8mm	20
		ϕ5.2mm × L20mm	21
DC300V		W3.6mm × H3.6mm × L17mm	21
		W2.57mm × H2.57mm × L6.1mm	21
DC250V		ϕ5.2mm × L20mm	21
DC150V		W2.57mm × H2.57mm × L6.1mm	21
DC125V		W2.77mm × H2.77mm × L10.3mm	21
		W2.57mm × H2.57mm × L6.1mm	21
		W2.57mm × H2.57mm × L9mm	21
		ϕ6.35mm × L31.8mm	21
		ϕ6.35mm × L31.8mm	22
		ϕ6.35mm × L30mm	22

■ After selecting your preferred shape and dimensions, proceed to the listed page.

Rated voltage	Shape	Dimensions	Page
DC100V		ϕ4mm × L9mm	22
DC90V		W2.57mm × H2.57mm × L9mm	22
DC86V		W2.57mm × H2.57mm × L6.1mm	22
		W1.6mm × H1.05mm × L3.2mm	22
DC72V		W2.57mm × H2.57mm × L6.1mm	22
		W1.6mm × H1.05mm × L3.2mm	23
		W1.5mm × H1.2mm × L2.4mm	23
		ϕ10mm × L32mm	23
DC65V		ϕ7.14mm × L31.8mm	23
DC60V		W2.57mm × H2.57mm × L6.1mm	23
		W2.57mm × H2.57mm × L9mm	23
		ϕ6.6mm × L7.4mm	23
		ϕ6.35mm × L15.9mm	23

DC42V max.
DC100V max.

■ After selecting your preferred shape and dimensions, proceed to the listed page.

Rated voltage	Shape	Dimensions	Page
DC42V		ϕ5.2mm × L20mm	23
DC35V		W2.57mm × H2.57mm × L6.1mm	24
		W1.6mm × H1.05mm × L3.2mm	24
		W2.57mm × H2.57mm × L9mm	24
DC32V		W1.6mm × H1.05mm × L3.2mm	24

■ After selecting your preferred time/current characteristic and region of use, proceed to the listed page.

	Charac-teristic	Region of use			Product name	Rated current	Page
		Japan	North America	Europe /Asia			
AC600V φ5.2mm×└20mm 	Lightning surge withstand	○	●		SHVD2	1.25A	45
AC600V φ10.4mm×└40mm 	Quick-acting	○	●		SHV5	5A - 20A	107
AC500V φ6.35mm×└31.8mm 	Inrush-withstand	○	●		SHV4	1A - 10A	45
AC500V φ5.2mm×└20mm 	Inrush-withstand	○	●		SHV12	100mA - 6.3A	46
AC500V φ6.35mm×└31.8mm 	Inrush-withstand	○	○	○	NSHV3	1A - 10A	107
AC500V φ10mm×└32mm 	Inrush-withstand	○	●		AC500VBL1030TEA	5A - 50A	163
AC500V φ10mm×└31mm 	Inrush-withstand	○	●		AC500VBI1030TE	5A - 50A	163
AC400V φ6.35mm×└31.8mm 	Inrush-withstand	○	●	●	SHV14	10A - 20A	47
		○	●		SHV14	5A - 20A	47
AC400V φ5.2mm×└20mm 	Inrush-withstand	○	●	●	SHV12	1A - 6.3A	46
		○	●		SHV12	100mA - 6.3A	46
AC400V φ6.35mm×└31.8mm 	Inrush-withstand	○	○	○	NSHV13	5A - 25A	108
		○	○	○	NSHV23A	1A - 20A	108

●: Certification acquired
○: Please contact your local SOC sales representative.

■ After selecting your preferred time/current characteristic and region of use, proceed to the listed page.

	Charac-teristic	Region of use: Japan	Region of use: North America	Region of use: Europe /Asia	Product name	Rated current	Page
AC400V ϕ5.2mm×L20mm 	Inrush-withstand	○	●		SHV11	100mA - 6.3A	109
AC380V ϕ6.35mm×L31.8mm 	Inrush-withstand	○	●		SHV4	1A - 20A	45
AC380V ϕ5.2mm×L20mm 	Inrush-withstand	○	●		SHV2	1A - 6.3A	48
AC380V ϕ5.2mm×L20mm 	Inrush-withstand	○	●		SHV1	1A - 6.3A	109
AC250V W3.6mm×H3.6mm×L17mm 	Inrush-withstand	●	●	●	36CT	1A - 6.3A	26
		●	●		36CT	100mA - 6.3A	26
AC250V W2.57mm×H2.57mm×L6.1mm  Scale: 3/1  Scale: 1/1	Quick-acting		●		25CF	63mA - 4A	28
	Inrush-withstand		●		25CT	100mA - 3.15A	29
AC250V W2.57mm×H2.57mm×L9mm 	Quick-acting		●		25RF	50mA - 10A	39
AC250V W4mm×H7.7mm×L8.4mm 	Inrush-withstand	●		●	SMC	4A	43
AC250V ϕ10.3mm×L38.1mm 	Normal-acting	●			250VⒶLLC	500mA - 30A	52
	Inrush-withstand	●	●		SKM10 N1	100mA - 25A	53
		●	●		KST2 N1	Over 5A - 30A	55
		●			250VⒶTLLC	500mA - 30A	52
			●		SKM10	100mA - 30A	53
			●		KST2	1A - 30A	54

●: Certification acquired

○: Please contact your local SOC sales representative.

■ After selecting your preferred time/current characteristic and region of use, proceed to the listed page.

	Charac-teristic	Region of use: Japan	Region of use: North America	Region of use: Europe /Asia	Product name	Rated current	Page
AC250V ϕ6.35mm×└31.8mm 	Normal-acting	●	●		SS2 N1	50mA - 5A	58
		●	●		SS6 N1	Over 5A - 8A	60
		●			250VⒶLNC	63mA - 25A	56
			●		SS2	50mA - 5A	58
			●		SS6	Over 5A - 8A	59
	Inrush-withstand	●	●		CES14 N1	100mA - 10A	61
		●	●		CES14 N2	Over 10A - 15A	62
		●	●		ST4 N1	100mA - 8A	64
		●			250VⒶTLNC	100mA - 30A	56
			●		ST4	100mA - 30A	63
			●		CES14	100mA - 15A	61
	Time-delay	●	●		SD4 N1	100mA - 8A	66
		●			250VⒶSDLNC	100mA - 15A	57
			●		SD4	100mA - 8A	65
AC250V ϕ6.35mm×└30mm 	Normal-acting	●			250VⒶLC	50mA - 30A	68
	Inrush-withstand	●	●	●	TLC N4	8A - 25A	67
		●			250VⒶTLC	100mA - 30A	68
	Time-delay	●			250VⒶSDLC	100mA - 8A	69
AC250V ϕ6.35mm×└25.4mm 	Normal-acting		●		SL4	80mA - 2A	69
AC250V ϕ5.2mm×└20mm 	Quick-acting		●	●	HQ	400mA - 6.3A	71
			●	●	EQ	80mA - 6.3A	72
	Normal-acting	●	●		MQ4 N1	62mA - 3A	78
		●			250VⒶSC	62mA - 12A	75
			●		MQ4	62mA - 15A	77
	Inrush-withstand	●	●		MT4 N1	100mA - 3.5A	80
		●	●		MT4 N2	Over 3.5A - 15A	81
		●			250VⒶTSC	100mA - 10A	75
			●		MT4	100mA - 15A	79
	Time-lag	●	●	●	HT	1A - 10A	70
		●	●	●	ET	50mA - 800mA	73
		●	●	●	ET6	1A - 6.3A	74
	Time-delay	●	●		SD6 N1	62mA - 5A	83
		●			250VⒶSDSC	100mA - 8A	76
			●		SD6	62mA - 8A	82

●: Certification acquired

○: Please contact your local SOC sales representative.

■ After selecting your preferred time/current characteristic and region of use, proceed to the listed page.

	Charac-teristic	Region of use: Japan	Region of use: North America	Region of use: Europe /Asia	Product name	Rated current	Page
AC250V φ4.6mm×└16mm 	Normal-acting	●			250VⒶMSC	100mA - 5A	84
	Inrush-withstand	●			250VⒶTMSC	100mA - 5A	84
AC250V φ10.3mm×└38.1mm 	Normal-acting	●			250VⒶLLCR	500mA - 15A	112
	Inrush-withstand	●			250VⒶTLLCR	500mA - 30A	112
			●		SKM7	100mA - 30A	113
AC250V φ6.35mm×└31.8mm 	Normal-acting	●	●		SS1 N1	50mA - 5A	116
		●	●		SS5 N1	Over 5A - 8A	118
		●			250VⒶLNCR	100mA - 20A	114
			●		SS1	50mA - 5A	116
			●		SS5	Over 5A - 8A	117
	Inrush-withstand	●	●		ST3 N1	100mA - 8A	120
		●	●		CES15 N1	100mA - 25A	122
		●			250VⒶTLNCR	100mA - 25A	114
			●		ST3	100mA - 30A	119
			●		CES15	100mA - 30A	121
AC250V φ6.35mm×└30mm 	Normal-acting	●			250VⒶLCR	50mA - 20A	125
	Inrush-withstand	●			250VⒶTLCR	100mA - 30A	125
AC250V φ6.35mm×└20mm 	Inrush-withstand	●	●		250VTMCR N1	1A - 20A	127
AC250V φ5.2mm×└20mm 	Normal-acting	●	●		MQ3 N1	62mA - 3A	132
		●			250VⒶSCR	62mA - 10A	130
			●		MQ3	62mA - 15A	132
	Inrush-withstand	●	●		MT3 N1	100mA - 3.5A	133
		●	●		MT3 N2	Over 3.5A - 15A	134
		●			250VⒶTSCR	100mA - 15A	130
			●		MT3	100mA - 15A	133
	Time-lag	●	●	●	HTR	1A - 10A	128
		●	●	●	ET6R	1A - 6.3A	129
AC250V φ4.6mm×└16mm 	Normal-acting	●			250VⒶMSCR	100mA - 5A	137
	Inrush-withstand	●			250VⒶTMSCR	100mA - 5A	137

●: Certification acquired
○: Please contact your local SOC sales representative.

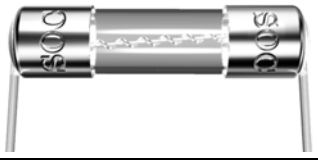
■ After selecting your preferred time/current characteristic and region of use, proceed to the listed page.

	Charac-teristic	Region of use: Japan	Region of use: North America	Region of use: Europe /Asia	Product name	Rated current	Page
AC250V ϕ4mm×L9mm 	Quick-acting		●		NQ3	62mA - 10A	138
	Inrush-withstand		●		NT3	100mA - 10A	138
AC250V ϕ6.35mm×L31.8mm 	Time-delay	●	●		SD3 N1	100mA - 8A	124
		●			250VⒶSDLNCR	100mA - 8A	115
			●		SD3	100mA - 18A	123
AC250V ϕ6.35mm×L30mm 	Time-delay	●			250VⒶSDLCR	100mA - 8A	126
AC250V ϕ5.2mm×L20mm 	Time-delay	●	●		SD5 N1	62mA - 8A	136
		●			250VⒶSDSCR	100mA - 8A	131
			●		SD5	62mA - 8A	135
AC125V W2.57mm×H2.57mm×L6.1mm  Scale: 3/1  Scale: 1/1	Quick-acting	●	●		25CF	63mA - 6.3A	28
			●		25CF	63mA - 15A	28
	Inrush-withstand	●	●		25CT	100mA - 5A	29
AC125V W1.5mm×H1.2mm×L2.4mm  Scale: 3/1  Scale: 1/1	Quick-acting		●		MCF2	50mA - 1.6A	37
AC125V W2.57mm×H2.57mm×L9mm 	Quick-acting	●	●	●	25RF	200mA - 5A	39
		●	●		25RF	50mA - 5A	39
			●		25RF	50mA - 10A	39
	Inrush-withstand		●		25RT	100mA - 5A	40
AC125V ϕ6.6mm×L7.4mm 	Quick-acting	●	●		SM4	63mA - 5A	44
AC125V ϕ10.3mm×L38.1mm 	Normal-acting	●			ⒶLLC	500mA - 30A	85
	Inrush-withstand	●			ⒶTLLC	500mA - 30A	85
			●		SKM2	3A - 15A	86
AC125V ϕ7.14mm×L31.8mm 	Inrush-withstand		●		SKM4	250mA - 30A	87

●: Certification acquired

○: Please contact your local SOC sales representative.

■ After selecting your preferred time/current characteristic and region of use, proceed to the listed page.

	Charac-teristic	Region of use: Japan	Region of use: North America	Region of use: Europe /Asia	Product name	Rated current	Page
AC125V ϕ6.35mm×└31.8mm 	Normal-acting	●	●		SS6 N1	Over 5A - 15A	60
		●			ⒶLNC	63mA - 25A	88
			●		SS6	Over 5A - 15A	59
	Inrush-withstand	●	●		CES6 N1	100mA - 15A	91
		●	●		ST6 N1	100mA - 15A	93
		●			ⒶTLNC	100mA - 30A	88
			●		CES6	100mA - 20A	90
			●		ST6	100mA - 30A	92
	Time-delay	●			ⒶSDLNC	100mA - 15A	89
			●		SD4	100mA - 20A	65
AC125V ϕ6.35mm×└30mm 	Normal-acting	●			ⒶLC	50mA - 30A	94
	Inrush-withstand	●			ⒶTLC	100mA - 30A	94
	Time-delay	●			ⒶSDLC	100mA - 8A	95
AC125V ϕ6.35mm×└25.4mm 	Normal-acting		●		SL2	80mA - 6A	96
AC125V ϕ6.35mm×└15.9mm 	Normal-acting		●		SU2	100mA - 20A	96
AC125V ϕ5.2mm×└20mm 	Normal-acting	●	●		MQ2 N1	62mA - 10A	101
		●			ⒶSC	62mA - 12A	98
			●		MQ2	62mA - 15A	100
	Inrush-withstand	●	●		ULTSC N1	100mA - 10A	102
		●			ⒶTSC	100mA - 10A	98
			●		TSD2	100mA - 3A	97
			●		ULTSC	100mA - 10A	102
	Time-delay	●			ⒶSDSC	100mA - 8A	99
AC125V ϕ4.6mm×└16mm 	Normal-acting	●			ⒶMSC	100mA - 5A	103
	Inrush-withstand	●			ⒶTMSC	100mA - 5A	103
AC125V ϕ4.6mm×└14mm 	Normal-acting		●		SQ8	80mA - 3A	104
	Inrush-withstand		●		MT8	100mA - 3A	104
AC125V ϕ10.3mm×└38.1mm 	Normal-acting	●			ⒶLLCR	500mA - 30A	139
	Inrush-withstand	●			ⒶTLLCR	500mA - 30A	139

●: Certification acquired

○: Please contact your local SOC sales representative.

■ After selecting your preferred time/current characteristic and region of use, proceed to the listed page.

	Charac-teristic	Region of use: Japan	Region of use: North America	Region of use: Europe /Asia	Product name	Rated current	Page
AC125V φ6.35mm×└31.8mm 	Normal-acting	●	●		SS5 N1	Over 5A - 15A	118
		●			ⒶLNCR	100mA - 20A	141
			●		SS5	Over 5A - 15A	117
	Inrush-withstand	●	●		ST5 N1	100mA - 15A	144
		●	●		CES7 N1	100mA - 15A	140
		●			ⒶTLNCR	100mA - 25A	141
			●		ST5	100mA - 30A	143
			●		CES7	100mA - 15A	140
AC125V φ6.35mm×└30mm 	Normal-acting	●			ⒶLCR	50mA - 20A	145
	Inrush-withstand	●			ⒶTLCR	100mA - 30A	145
AC125V φ6.35mm×└15.9mm 	Normal-acting		●		SU1	80mA - 5A	146
AC125V φ5.2mm×└20mm 	Normal-acting	●	●		MQ1 N1	62mA - 10A	150
		●			ⒶSCR	62mA - 10A	147
			●		MQ1	62mA - 15A	149
	Inrush-withstand	●	●		ULTSCR N1	100mA - 10A	151
		●			ⒶTSCR	100mA - 15A	147
			●		ULTSCR	100mA - 10A	151
AC125V φ4.6mm×└16mm 	Normal-acting	●			ⒶMSCR	100mA - 5A	153
	Inrush-withstand	●			ⒶTMSCR	100mA - 5A	153
AC125V φ4.6mm×└14mm 	Normal-acting		●		SQ7	80mA - 3A	154
	Inrush-withstand		●		MT7	100mA - 3A	154
AC125V φ4mm×└9mm 	Quick-acting		●		NQ1	62mA - 10A	155
	Inrush-withstand		●		NT1	100mA - 10A	155

●: Certification acquired
○: Please contact your local SOC sales representative.

■ After selecting your preferred time/current characteristic and region of use, proceed to the listed page.

	Charac-teristic	Region of use			Product name	Rated current	Page
		Japan	North America	Europe /Asia			
AC125V ϕ6.35mm×L31.8mm 	Time-delay	●			ⒶSDLNCR	100mA - 8A	142
AC125V ϕ6.35mm×L30mm 	Time-delay	●			ⒶSDLCR	100mA - 8A	146
AC125V ϕ5.2mm×L20mm 	Inrush-withstand		●		TSD1	100mA - 3A	152
	Time-delay	●			ⒶSDSCR	100mA - 8A	148
AC90V W2.57mm×H2.57mm×L9mm 	Quick-acting	○	○	○	P25RF	50mA - 10A	41
	Inrush-withstand	○	○	○	P25RT	100mA - 6.3A	41
AC90V ϕ6.6mm×L7.4mm 	Quick-acting	○	○	○	PSM	63mA - 5A	44
AC42V ϕ5.2mm×L20mm 	Inrush-withstand	○	○	○	PMT4	100mA - 20A	105
AC32V W1.6mm×H1.05mm×L3.2mm  Scale: 5/1  Scale: 1/1	Inrush-withstand	○		●	32V11CF	800mA - 5A	36
AC32V ϕ6.35mm×L31.8mm 	Time-delay	○	●		NSD10	Over 8A - 15A	106
AC32V ϕ6.35mm×L31.8mm 	Time-delay	○	●		NSD9	Over 8A - 15A	156

●: Certification acquired

○: Please contact your local SOC sales representative.

■ After selecting your preferred time/current characteristic and region of use, proceed to the listed page.

	Charac-teristic	Region of use			Product name	Rated current	Page
		Japan	North America	Europe /Asia			
DC700V ϕ6.35mm×L31.8mm 	Inrush-withstand	○	●		SHV16	1A - 4A	48
DC700V ϕ6.35mm×L31.8mm 	Inrush-withstand	○	○	○	NSHV15	1A - 4A	110
DC600V W3.6mm×H3.6mm×L11mm 	Quick-acting	○	●		36CFA	63mA - 3.15A	25
DC500V ϕ10.3mm×L38.1mm 	Inrush-withstand	○	●		SHV22	1A - 10A	49
DC500V ϕ6.35mm×L31.8mm 	Inrush-withstand	○	○	○	NSHV14	10A	49
DC500V ϕ6.35mm×L25.4mm 	Inrush-withstand	○	●		SHV18	1A - 30A	50
DC500V ϕ6.35mm×L25.4mm 	Inrush-withstand	○	○	○	NSHV17	10A - 30A	110
DC500V ϕ30mm×L51mm 	Quick-acting, inrush-withstand	○	○	○	DC500VBT3050A	280A	158
DC500V ϕ20.6mm×L34.4mm 	Quick-acting, inrush-withstand	○	○	○	DC500VBT2035	60A - 150A	158
DC500V ϕ10mm×L32mm 	Quick-acting, inrush-withstand	○	○	○	DC500VBL1030A	15A - 50A	159

●: Certification acquired
○: Please contact your local SOC sales representative.

■ After selecting your preferred time/current characteristic and region of use, proceed to the listed page.

	Charac-teristic	Region of use			Product name	Rated current	Page
		Japan	North America	Europe /Asia			
DC500V ϕ6.35mm×└24.6mm 	Quick-acting, inrush-withstand	○	○	○	DC500VBC625A	5A - 35A	160
DC500V ϕ10mm×└31mm 	Quick-acting, inrush-withstand	○	○	○	DC500VBI1030	15A - 50A	162
DC500V ϕ6.35mm×└24.6mm 	Quick-acting, inrush-withstand	○	○	○	DC500VBI625C	5A - 35A	162
DC450V ϕ5.2mm×└20mm 	Inrush-withstand	○	●		SHV20	500mA - 6.3A	50
		○	○	○	NSHV12	100mA - 6.3A	51
DC420V ϕ6.35mm×└25.4mm 	Inrush-withstand	○	●		SHV27	10A - 30A	111
DC400V ϕ6.35mm×└31.8mm 	Inrush-withstand	○	●	●	SHV14	10A - 20A	47
		○	●		SHV14	5A - 20A	47
DC400V ϕ5.2mm×└20mm 	Inrush-withstand	○	●	●	SHV12	1A - 6.3A	46
		○	●		SHV12	100mA - 6.3A	46
	Lightning surge withstand	○	●		SHVD2	1.25A	45
DC400V ϕ6.35mm×└31.8mm 	Inrush-withstand	○	○	○	NSHV13	5A - 25A	108
		○	○	○	NSHV23A	1A - 20A	108

●: Certification acquired

○: Please contact your local SOC sales representative.

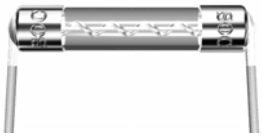
■ After selecting your preferred time/current characteristic and region of use, proceed to the listed page.

	Charac-teristic	Region of use			Product name	Rated current	Page
		Japan	North America	Europe /Asia			
DC400V ϕ5.2mm×L20mm 	Inrush-withstand	○	●		SHV11	100mA - 6.3A	109
DC300V W3.6mm×H3.6mm×L17mm 	Inrush-withstand	○	●		36CT	100mA - 6.3A	26
DC300V W2.57mm×H2.57mm×L6.1mm  Scale: 3/1  Scale: 1/1	Quick-acting	○	●		DC300V25CF	63mA - 2A	27
DC250V ϕ5.2mm×L20mm 	Inrush-withstand	○	●	●	SHV12	1A - 6.3A	46
		○	●		SHV12	100mA - 6.3A	46
DC150V W2.57mm×H2.57mm×L6.1mm  Scale: 3/1  Scale: 1/1	Quick-acting	○	●		25CF	63mA - 6.3A	28
			●		25CF	63mA - 15A	28
DC125V W2.57mm×H2.57mm×L6.1mm  Scale: 3/1  Scale: 1/1	Inrush-withstand	○	●		25CT	100mA - 5A	29
DC125V W2.57mm×H2.57mm×L9mm 	Quick-acting	○	●	●	25RF	200mA - 5A	39
		○	●		25RF	50mA - 5A	39
			●		25RF	50mA - 10A	39
	Inrush-withstand		●		25RT	100mA - 5A	40
DC125V ϕ6.35mm×L31.8mm 	Inrush-withstand	○	●		ST6 N1	100mA - 15A	93
			●		ST6	100mA - 30A	92

●: Certification acquired

○: Please contact your local SOC sales representative.

■ After selecting your preferred time/current characteristic and region of use, proceed to the listed page.

	Charac-teristic	Region of use			Product name	Rated current	Page
		Japan	North America	Europe /Asia			
DC125V ϕ6.35mm×L31.8mm 	Inrush-withstand	○	●		ST5 N1	Over 8A - 15A	144
			●		ST5	Over 8A - 30A	143
DC125V ϕ6.35mm×L30mm 	Inrush-withstand	○	●		DC125VTLKR	800mA - 35A	156
DC100V ϕ4mm×L9mm 	Inrush-withstand	○	○	○	PNT5	100mA - 10A	157
DC90V W2.57mm×H2.57mm×L9mm 	Quick-acting	○	○	○	P25RF	50mA - 10A	41
DC86V W2.57mm×H2.57mm×L6.1mm   Scale: 3/1 Scale: 1/1	Quick-acting	○	●		25CF	63mA - 6.3A	28
			●		25CF	63mA - 15A	28
	Inrush-withstand	○	●		25CT	100mA - 5A	29
DC86V W1.6mm×H1.05mm×L3.2mm   Scale: 5/1 Scale: 1/1	Inrush-withstand	○	●		DC86V11CT	100mA - 8A	32
DC72V W2.57mm×H2.57mm×L6.1mm   Scale: 3/1 Scale: 1/1	Quick-acting	○	●		25CF	63mA - 6.3A	28
			●		25CF	63mA - 18A	28

●: Certification acquired
○: Please contact your local SOC sales representative.

■ After selecting your preferred time/current characteristic and region of use, proceed to the listed page.

	Charac-teristic	Region of use			Product name	Rated current	Page
		Japan	North America	Europe /Asia			
DC72V W1.6mm × H1.05mm × L3.2mm  Scale: 5/1 Scale: 1/1	Quick-acting	○	●		11CF	100mA - 10A	32
		○	○	○	P11CF	100mA - 10A	33
	Inrush-withstand	○	●		11CT	100mA - 10A	33
		○	○	○	P11CT	100mA - 10A	34
DC72V W1.5mm × H1.2mm × L2.4mm  Scale: 3/1 Scale: 1/1	Quick-acting		●		MCF2	50mA - 1.6A	37
DC72V φ10mm × L32mm 	Quick-acting, inrush-withstand	○	○	○	DC72VBL1030	50A - 70A	161
DC65V φ7.14mm × L31.8mm 	Inrush-withstand		●		SKM4	250mA - 30A	87
DC60V W2.57mm × H2.57mm × L6.1mm  Scale: 3/1  Scale: 1/1	Quick-acting	○	○	○	P25CF	63mA - 18A	30
	Inrush-withstand	○	○	○	P25CT	100mA - 5A	30
DC60V W2.57mm × H2.57mm × L9mm 	Inrush-withstand	○	○	○	P25RT	100mA - 6.3A	41
DC60V φ6.6mm × L7.4mm 	Quick-acting	○	○	○	PSM	63mA - 5A	44
DC60V φ6.35mm × L15.9mm 	Normal-acting	○	●		DCSU2	Over 5A - 20A	106
DC42V φ5.2mm × L20mm 	Inrush-withstand	○	○	○	PMT4	100mA - 20A	105

●: Certification acquired
○: Please contact your local SOC sales representative.

■ After selecting your preferred time/current characteristic and region of use, proceed to the listed page.

	Charac-teristic	Region of use			Product name	Rated current	Page
		Japan	North America	Europe /Asia			
DC35V W2.57mm×H2.57mm×L6.1mm  Scale: 3/1  Scale: 1/1	Quick-acting	○	○	○	DC35VP25CF	63mA - 18A	31
	Inrush-withstand	○	○	○	DC35VP25CT	100mA - 5A	31
DC35V W1.6mm×H1.05mm×L3.2mm  Scale: 5/1 Scale: 1/1	Quick-acting	○	○	○	DC35VP11CF	100mA - 10A	34
	Inrush-withstand	○	●		DC35V11CT	100mA - 10A	35
		○	○	○	DC35VP11CT	100mA - 10A	35
DC35V W2.57mm×H2.57mm×L9mm 	Quick-acting	○	○	○	DC35VP25RF	50mA - 10A	42
	Inrush-withstand	○	○	○	DC35VP25RT	100mA - 6.3A	42
DC32V W1.6mm×H1.05mm×L3.2mm  Scale: 5/1 Scale: 1/1	Inrush-withstand	○	●	●	32V11CF	800mA - 5A	36

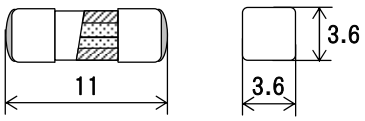
●: Certification acquired
○: Please contact your local SOC sales representative.

36CFA (Quick-acting)

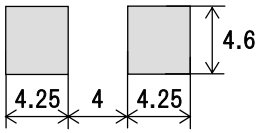
RoHS *1

DC600V

Scale: 2/1

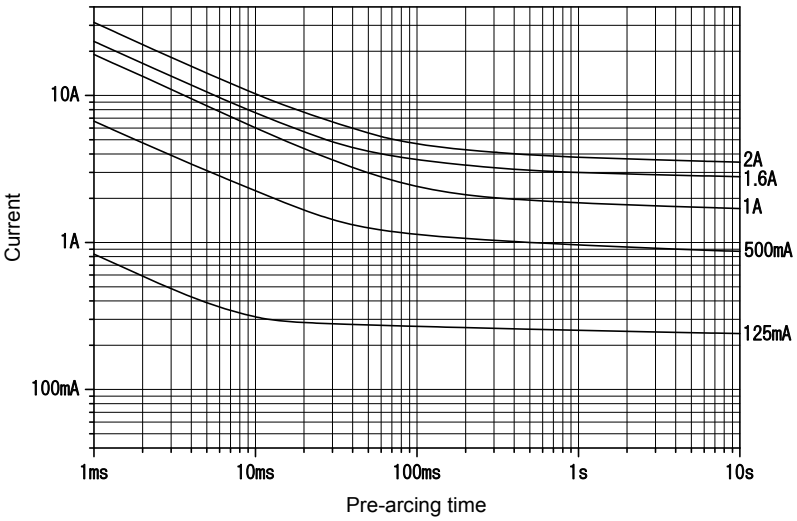


Recommended land pattern for reflow soldering
(Reference dimensions)



Unit: mm

I-t curve



The I-t curves above are plots of the average values of measurements obtained under conditions specified by SOC. These data are for reference only and are not intended to infer any guaranteed values.

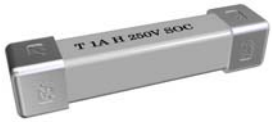
Rated voltage	Certification	Range of rated current (I_N) *2	Rated breaking current		Current carrying capacity	Temp. rise	Overload operation
DC600V	C-UL US Recognized	63mA - 3.15A	100A	Resistive circuit	1.0I_N until temperature stabilization occurs.	75K or less at 1.0I_N	Within 60s at 2.0I_N

*1: High melting temperature type solder containing more than 85 wt% lead is used in this product.
*2: Any rated current value can be selected within this range.

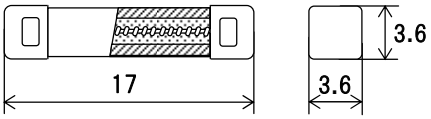
36CT (Inrush-withstand)

RoHS

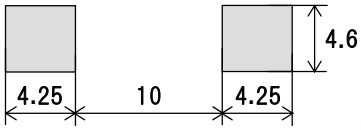
AC250V
DC300V



Scale: 2/1

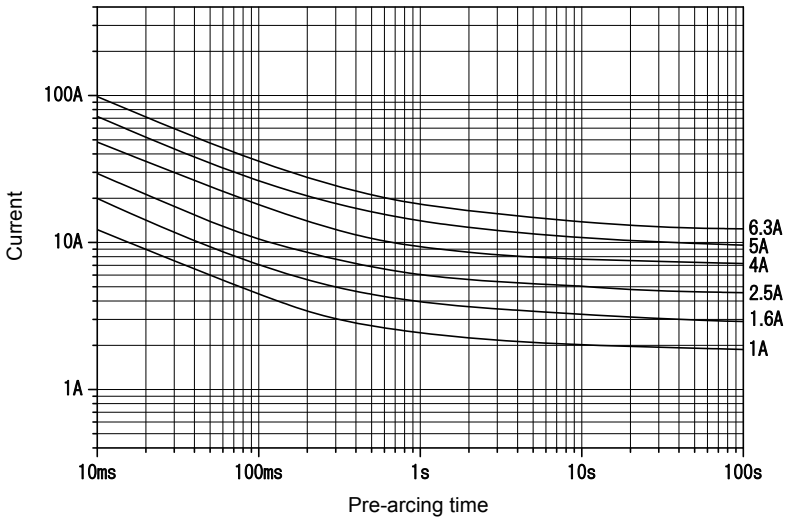


Recommended land pattern for reflow soldering
(Reference dimensions)



Unit: mm

I-t curve



The I-t curves above are plots of the average values of measurements obtained under conditions specified by SOC. These data are for reference only and are not intended to infer any guaranteed values.

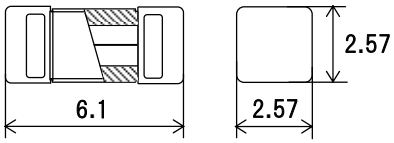
Rated voltage	Certification	Range of rated current (I_N)	Rated breaking current		Current carrying capacity/ Endurance test	Temp. rise	Overload operation
AC250V	C-UL US Recognized	100mA - 6.3A *2	1500A	PF 0.7 - 0.8	1.0I_N until temperature stabilization occurs.	75K or less at 1.0I_N	Within 2min at 2.0I_N
	SEMKO Certified	1A, 1.25A, 1.6A, 2A, 2.5A, 3.15A, 4A, 5A, 6.3A			*3	*4	Within 2min at 2.0I_N 0.01s - 0.1s inclusive at 10I_N
	<PS>E JET *1	100mA - 6.3A *2	500A		1.0I_N until temperature stabilization occurs.	At 1.0I_N, 140K or less at the center, 60K or less at the contact	Within 2min at 2.0I_N
DC300V	C-UL US Recognized	100mA - 6.3A *2	200A	Resistive circuit	1.0I_N until temperature stabilization occurs.	75K or less at 1.0I_N	Within 2min at 2.0I_N

*1: Fuses with rated currents below 1 A are not covered under the Electrical Appliance and Material Safety Law.
*2: Any rated current value can be selected within this range.
*3: Endurance test: After repeating 100 cycles of 1.05 I_N for 1 h and switching-off for 15 min, 1.25 I_N can be passed through the fuse for 1 h or more.
*4: 95 K or less on each part of the fuse when measured during the final 5 min of the endurance test at 1.25 I_N.

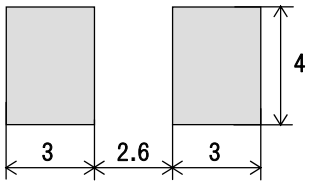
DC300V25CF (Quick-acting)

RoHS

Scale: 4/1

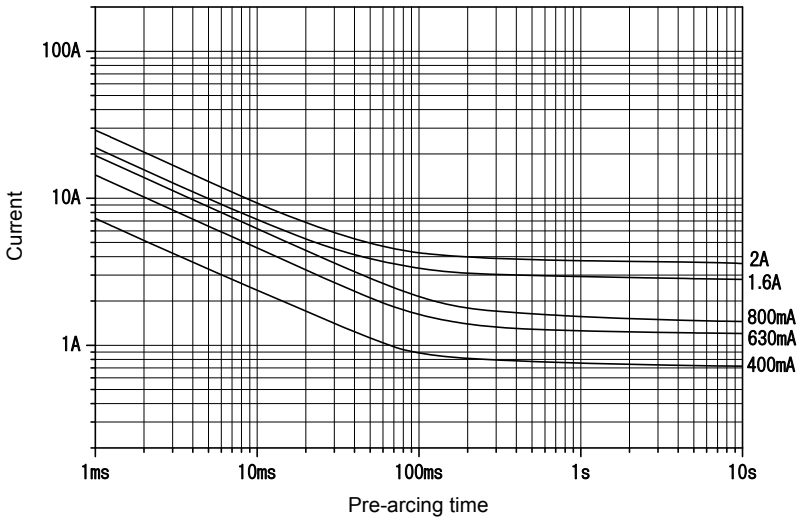


Recommended land pattern for reflow soldering
(Reference dimensions)



Unit: mm

I-t curve



The I-t curves above are plots of the average values of measurements obtained under conditions specified by SOC. These data are for reference only and are not intended to infer any guaranteed values.

Rated voltage	Certification	Range of rated current (I_N) *1	Rated breaking current		Current carrying capacity	Temp. rise	Overload operation
DC300V	C-UL US Listed	63mA - 2A	50A	Resistive circuit	1.0I_N until temperature stabilization occurs.	75K or less at 1.0I_N	Within 60s at 2.0I_N

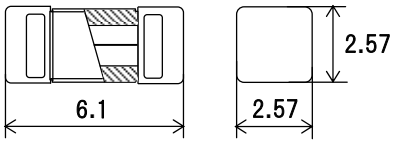
*1: Any rated current value can be selected within this range.

25CF (Quick-acting)

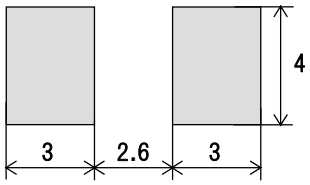
RoHS Pb

AC250V AC125V
DC150V DC86V DC72V

Scale: 4/1

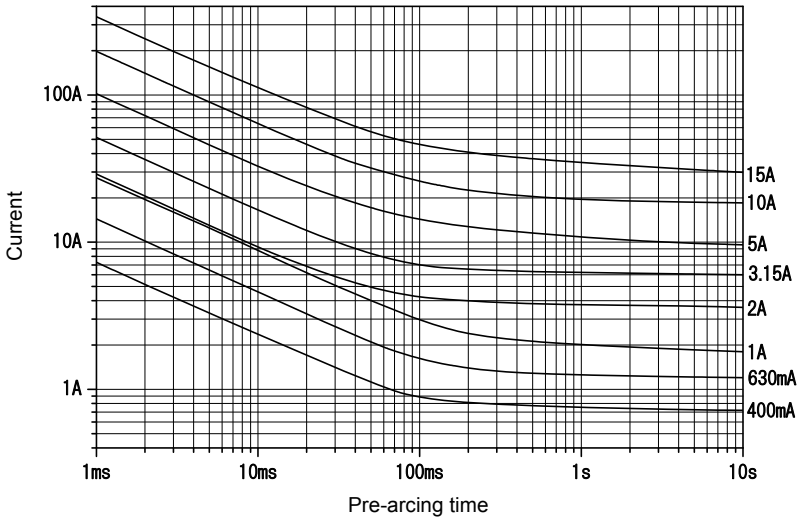


Recommended land pattern for reflow soldering
(Reference dimensions)



Unit: mm

I-t curve



The I-t curves above are plots of the average values of measurements obtained under conditions specified by SOC. These data are for reference only and are not intended to infer any guaranteed values.

Rated voltage	Certification	Range of rated current (I_N) *2	Rated breaking current		Current carrying capacity/ Endurance test	Temp. rise	Overload operation
AC250V	UL Recognized CSA Certified	63mA - 4A	50A	Resistive circuit	1.0I_N until temperature stabilization occurs.	75K or less at 1.0I_N	Within 60s at 2.0I_N
AC125V	UL Recognized CSA Certified	Over 4A - 10A					
	UL Recognized CSA Component Acceptance	Over 10A - 15A				—	
	<PS>E JET *1	63mA - 6.3A	*3		*4	*5	Within 2min at 2.0I_N 0.001s - 0.01s inclusive at 10I_N
DC150V	UL Recognized CSA Certified	63mA - 10A	350A	Resistive circuit	1.0I_N until temperature stabilization occurs.	75K or less at 1.0I_N	Within 60s at 2.0I_N
	UL Recognized CSA Component Acceptance	Over 10A - 15A				—	
DC86V	UL Recognized CSA Certified	63mA - 5A	10000A			75K or less at 1.0I_N	
DC72V	UL Recognized	Over 15A - 18A	100A				

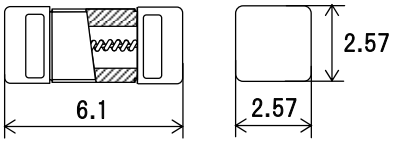
*1: Fuses with rated currents below 1 A are not covered under the Electrical Appliance and Material Safety Law.
*2: Any rated current value can be selected within this range.
*3: 50 A or 10 I_N, whichever is greater.
*4: Endurance test: After repeating 100 cycles of 1.05 I_N for 1 h and switching-off for 15 min, 1.25 I_N can be passed through the fuse for 1 h or more.
*5: 70 K or less on each part of the fuse when measured during the final 5 min of the endurance test at 1.25 I_N.

25CT (Inrush-withstand)

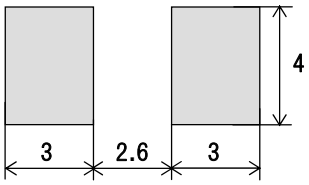
RoHS

AC250V AC125V
DC125V DC86V

Scale: 4/1

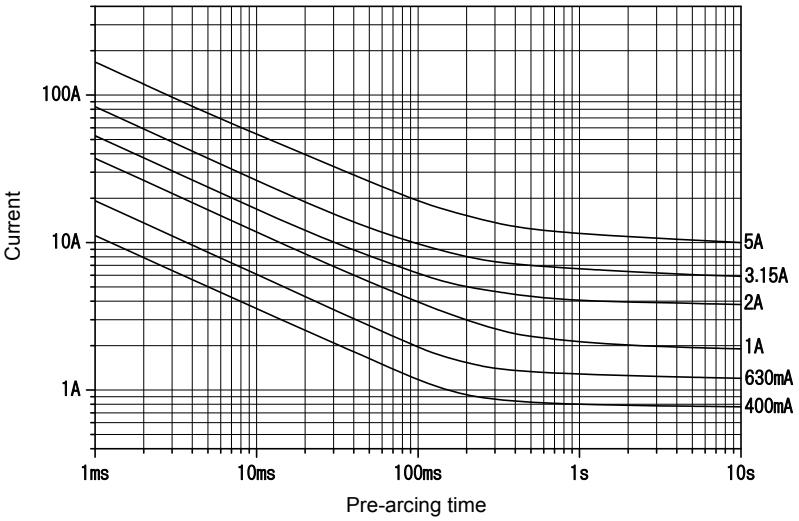


Recommended land pattern for reflow soldering
(Reference dimensions)



Unit: mm

I-t curve



The I-t curves above are plots of the average values of measurements obtained under conditions specified by SOC. These data are for reference only and are not intended to infer any guaranteed values.

Rated voltage	Certification	Range of rated current (I_N) *2	Rated breaking current		Current carrying capacity/ Endurance test	Temp. rise	Overload operation
AC250V	C-UL US Listed	100mA - 3.15A	50A	Resistive circuit	1.0I_N until temperature stabilization occurs.	75K or less at 1.0I_N	Within 60s at 2.0I_N
AC125V		Over 3.15A - 5A					
	<PS>E JET *1	100mA - 5A			*3	*4	Within 2min at 2.0I_N
DC125V	C-UL US Listed		350A		1.0I_N until temperature stabilization occurs.	75K or less at 1.0I_N	Within 60s at 2.0I_N
DC86V			10000A				

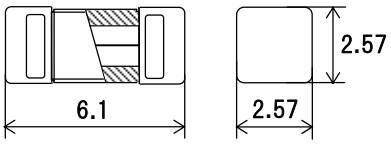
*1: Fuses with rated currents below 1 A are not covered under the Electrical Appliance and Material Safety Law.
*2: Any rated current value can be selected within this range.
*3: Endurance test: After repeating 100 cycles of 1.05 I_N for 1 h and switching-off for 15 min, 1.25 I_N can be passed through the fuse for 1 h or more.
*4: 70 K or less on each part of the fuse when measured during the final 5 min of the endurance test at 1.25 I_N.

P25CF (Quick-acting protector)

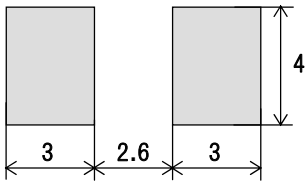
RoHS Pb

DC60V

Scale: 4/1

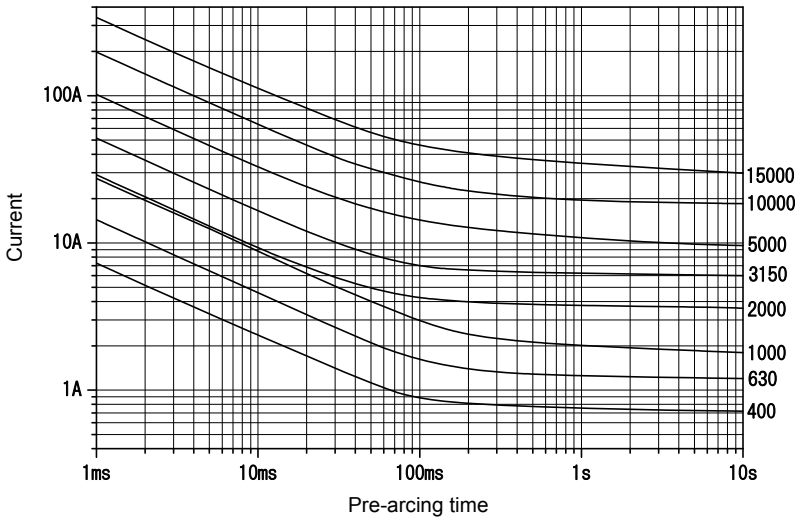


Recommended land pattern for reflow soldering
(Reference dimensions)



Unit: mm

I-t curve



The I-t curves above are plots of the average values of measurements obtained under conditions specified by SOC. These data are for reference only and are not intended to infer any guaranteed values.

Maximum working voltage	Certification	Range of rated current (I_N) *1	Maximum breaking current		Current carrying capacity	Temp. rise	Overload operation
DC60V	—	63mA - 10A	50A	Resistive circuit	1.0I_N until temperature stabilization occurs.	75K or less at 1.0I_N	Within 60s at 2.0I_N
		Over 10A - 15A				—	
		Over 15A - 18A				75K or less at 1.0I_N	

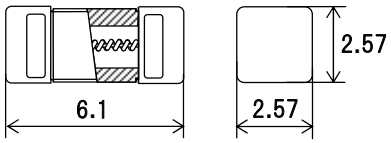
*1: Any rated current value can be selected within this range.
The numeric value “3150” shown on this product and its packaging expresses a rated current value obtained from multiplying 3.15 A by 1000.

P25CT (Inrush-withstand protector)

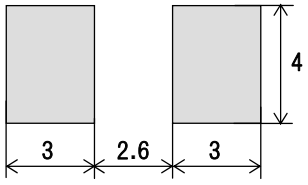
RoHS Pb

DC60V

Scale: 4/1

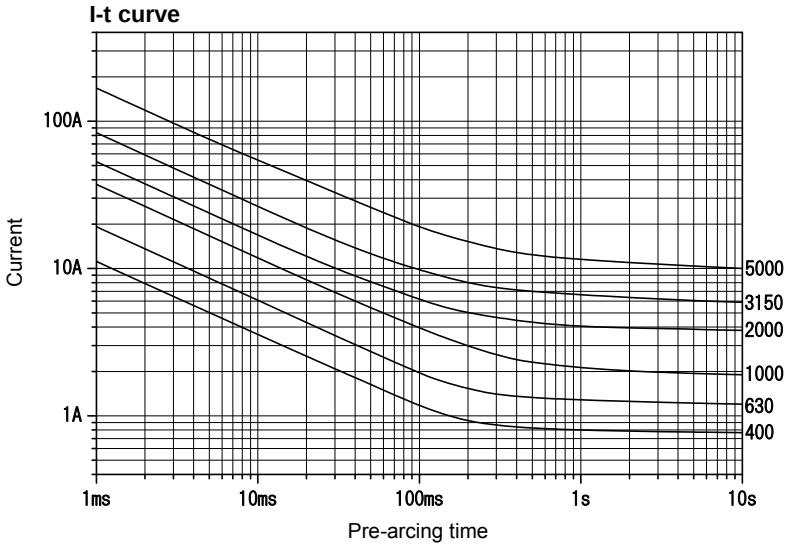


Recommended land pattern for reflow soldering
(Reference dimensions)



Unit: mm

I-t curve



The I-t curves above are plots of the average values of measurements obtained under conditions specified by SOC. These data are for reference only and are not intended to infer any guaranteed values.

Maximum working voltage	Certification	Range of rated current (I_N) *1	Maximum breaking current		Current carrying capacity	Temp. rise	Overload operation
DC60V	—	100mA - 5A	50A	Resistive circuit	1.0I_N until temperature stabilization occurs.	75K or less at 1.0I_N	Within 60s at 2.0I_N

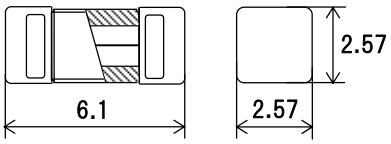
*1: Any rated current value can be selected within this range.
The numeric value “3150” shown on this product and its packaging expresses a rated current value obtained from multiplying 3.15 A by 1000.

DC35VP25CF (Quick-acting protector)

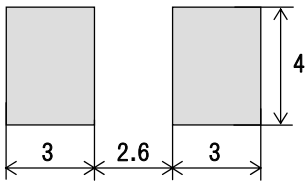
RoHS

DC35V

Scale: 4/1

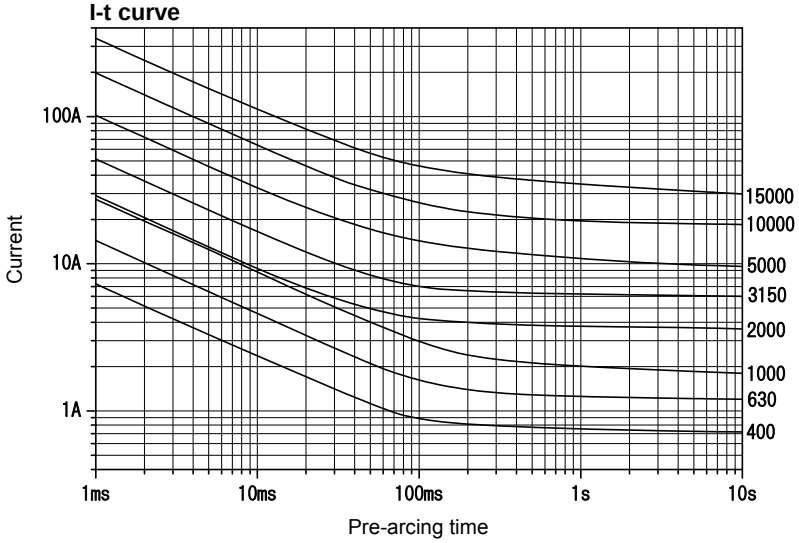


Recommended land pattern for reflow soldering
(Reference dimensions)



Unit: mm

I-t curve



The I-t curves above are plots of the average values of measurements obtained under conditions specified by SOC. These data are for reference only and are not intended to infer any guaranteed values.

Maximum working voltage	Certification	Range of rated current (I_N) *1	Maximum breaking current		Current carrying capacity	Temp. rise	Overload operation
DC35V	—	63mA - 10A	50A	Resistive circuit	1.0I_N until temperature stabilization occurs.	75K or less at 1.0I_N	Within 60s at 2.0I_N
		Over 10A - 15A				—	
		Over 15A - 18A				75K or less at 1.0I_N	

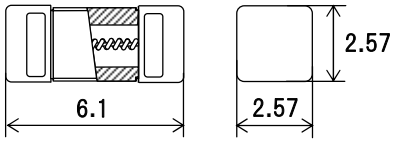
*1: Any rated current value can be selected within this range.
The numeric value “3150” shown on this product and its packaging expresses a rated current value obtained from multiplying 3.15 A by 1000.

DC35VP25CT (Inrush-withstand protector)

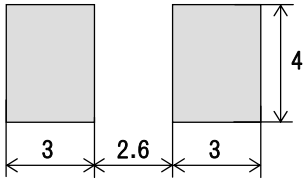
RoHS

DC35V

Scale: 4/1

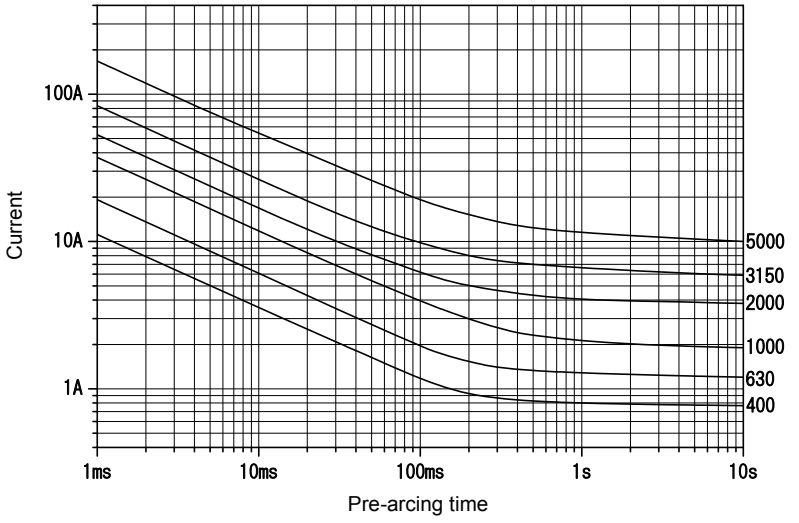


Recommended land pattern for reflow soldering
(Reference dimensions)



Unit: mm

I-t curve



The I-t curves above are plots of the average values of measurements obtained under conditions specified by SOC. These data are for reference only and are not intended to infer any guaranteed values.

Maximum working voltage	Certification	Range of rated current (I_N) *1	Maximum breaking current		Current carrying capacity	Temp. rise	Overload operation
DC35V	—	100mA - 5A	50A	Resistive circuit	1.0I_N until temperature stabilization occurs.	75K or less at 1.0I_N	Within 60s at 2.0I_N

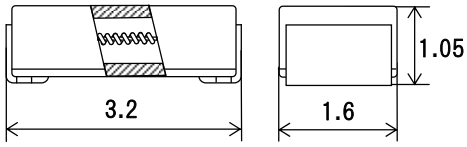
*1: Any rated current value can be selected within this range.
The numeric value “3150” shown on this product and its packaging expresses a rated current value obtained from multiplying 3.15 A by 1000.

DC86V11CT (Inrush-withstand)

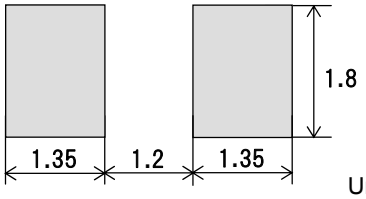
RoHS Pb

DC86V

Scale: 10/1

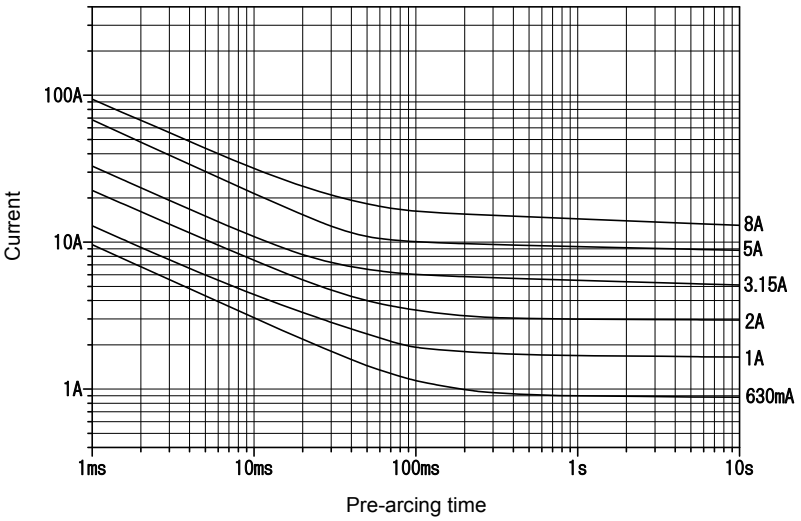


Recommended land pattern for reflow soldering
(Reference dimensions)



Unit: mm

I-t curve



The I-t curves above are plots of the average values of measurements obtained under conditions specified by SOC. These data are for reference only and are not intended to infer any guaranteed values.

Rated voltage	Certification	Range of rated current (I_N) *1	Rated breaking current		Current carrying capacity	Temp. rise	Overload operation
DC86V	C-UL US Listed	100mA - 8A	50A	Resistive circuit	1.0I_N until temper-ature stabilization occurs.	75K or less at 1.0I_N	Within 60s at 2.0I_N

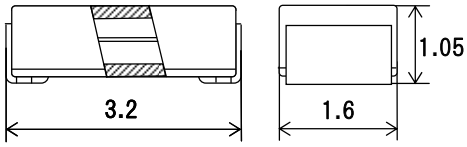
*1: Any rated current value can be selected within this range.

11CF (Quick-acting)

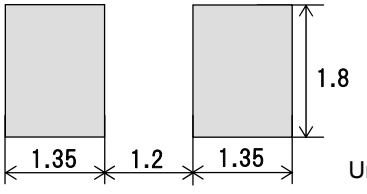
RoHS Pb

DC72V

Scale: 10/1

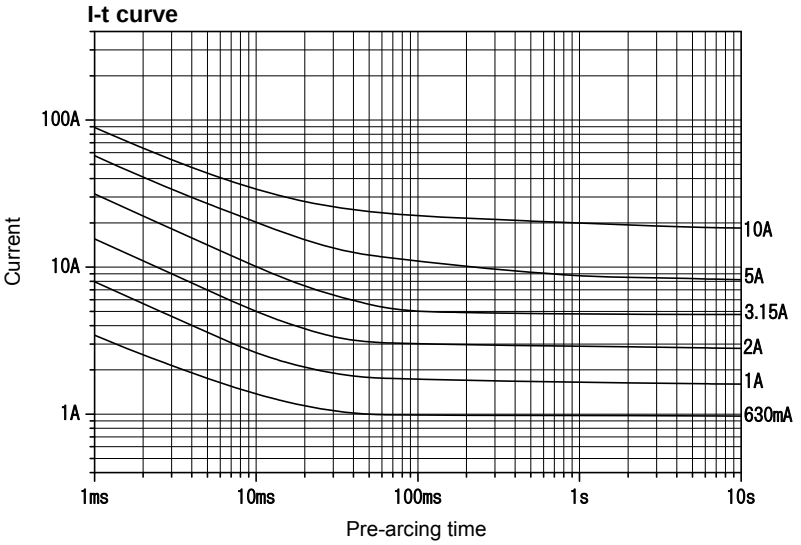


Recommended land pattern for reflow soldering
(Reference dimensions)



Unit: mm

I-t curve



The I-t curves above are plots of the average values of measurements obtained under conditions specified by SOC. These data are for reference only and are not intended to infer any guaranteed values.

Rated voltage	Certification	Range of rated current (I_N) *1	Rated breaking current		Current carrying capacity	Temp. rise	Overload operation
DC72V	UL Recognized CSA Certified	100mA - 10A	50A	Resistive circuit	1.0I_N until temper-ature stabilization occurs.	75K or less at 1.0I_N	Within 60s at 2.0I_N

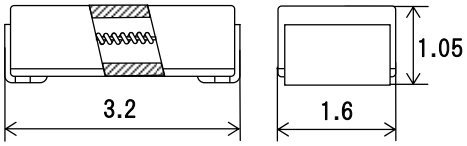
*1: Any rated current value can be selected within this range.

11CT (Inrush-withstand)

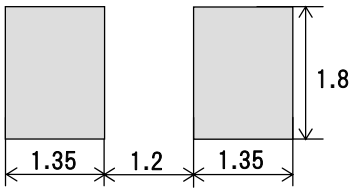
RoHS

DC72V

Scale: 10/1

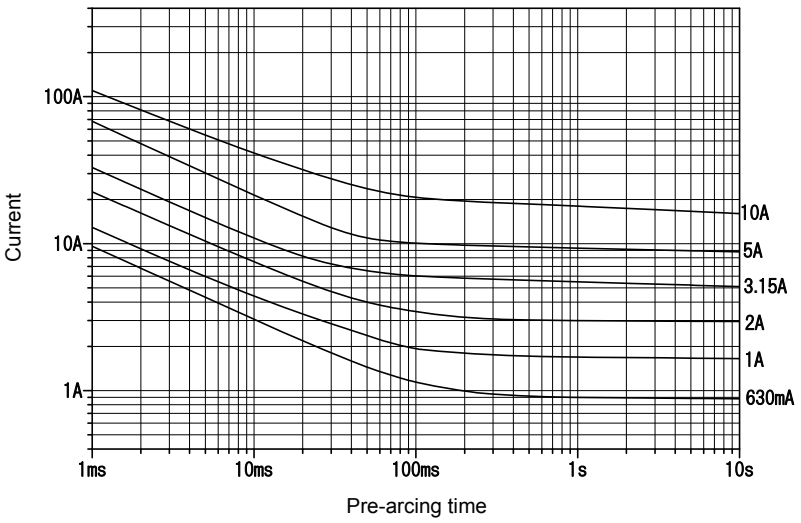


Recommended land pattern for reflow soldering
(Reference dimensions)



Unit: mm

I-t curve



The I-t curves above are plots of the average values of measurements obtained under conditions specified by SOC. These data are for reference only and are not intended to infer any guaranteed values.

Rated voltage	Certification	Range of rated current (I_N) *1	Rated breaking current		Current carrying capacity	Temp. rise	Overload operation
DC72V	UL Recognized CSA Certified	100mA - 10A	50A	Resistive circuit	1.0I_N until temperature stabilization occurs.	75K or less at 1.0I_N	Within 60s at 2.0I_N

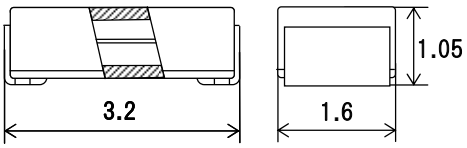
*1: Any rated current value can be selected within this range.

P11CF (Quick-acting protector)

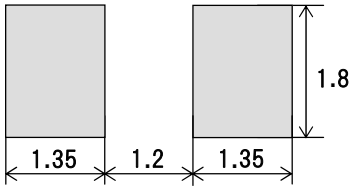
RoHS

DC72V

Scale: 10/1

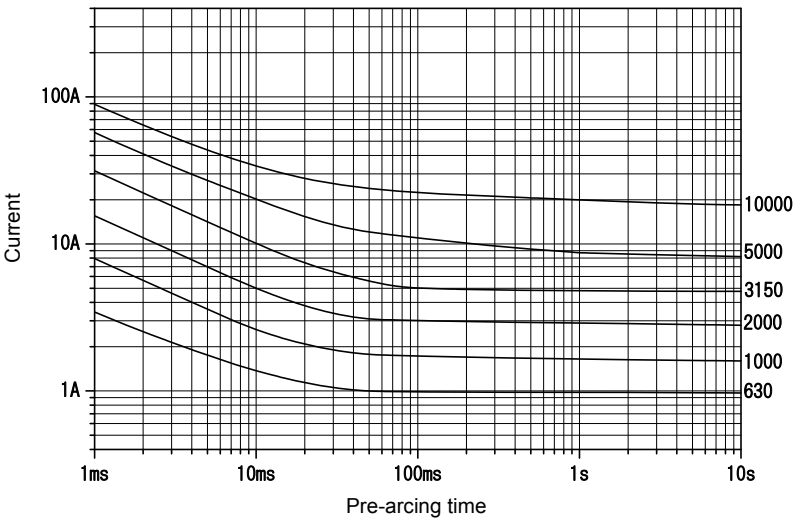


Recommended land pattern for reflow soldering
(Reference dimensions)



Unit: mm

I-t curve



The I-t curves above are plots of the average values of measurements obtained under conditions specified by SOC. These data are for reference only and are not intended to infer any guaranteed values.

Maximum working voltage	Certification	Range of rated current (I_N) *1	Maximum breaking current		Current carrying capacity	Temp. rise	Overload operation
DC72V	—	100mA - 10A	50A	Resistive circuit	1.0I_N until temperature stabilization occurs.	75K or less at 1.0I_N	Within 60s at 2.0I_N

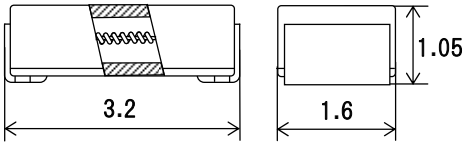
*1: Any rated current value can be selected within this range.
The numeric value “3150” shown on this product and its packaging expresses a rated current value obtained from multiplying 3.15 A by 1000.

P11CT (Inrush-withstand protector)

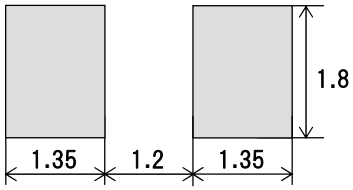
RoHS

DC72V

Scale: 10/1

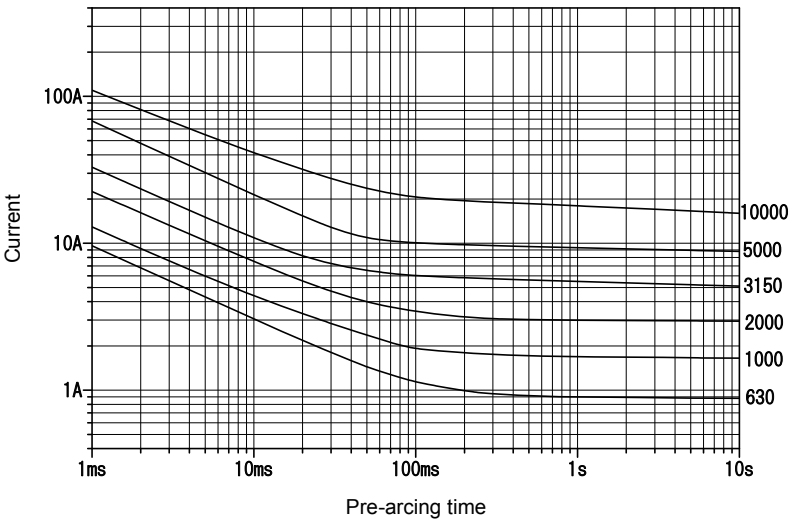


Recommended land pattern for reflow soldering
(Reference dimensions)



Unit: mm

I-t curve



The I-t curves above are plots of the average values of measurements obtained under conditions specified by SOC. These data are for reference only and are not intended to infer any guaranteed values.

Maximum working voltage	Certification	Range of rated current (I_N) *1	Maximum breaking current		Current carrying capacity	Temp. rise	Overload operation
DC72V	—	100mA - 10A	50A	Resistive circuit	1.0I_N until temperature stabilization occurs.	75K or less at 1.0I_N	Within 60s at 2.0I_N

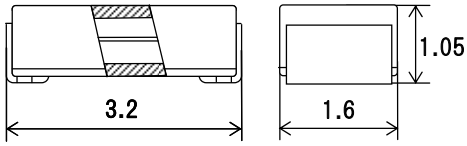
*1: Any rated current value can be selected within this range.
The numeric value “3150” shown on this product and its packaging expresses a rated current value obtained from multiplying 3.15 A by 1000.

DC35VP11CF (Quick-acting protector)

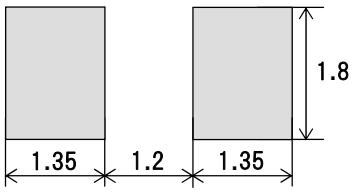
RoHS

DC35V

Scale: 10/1

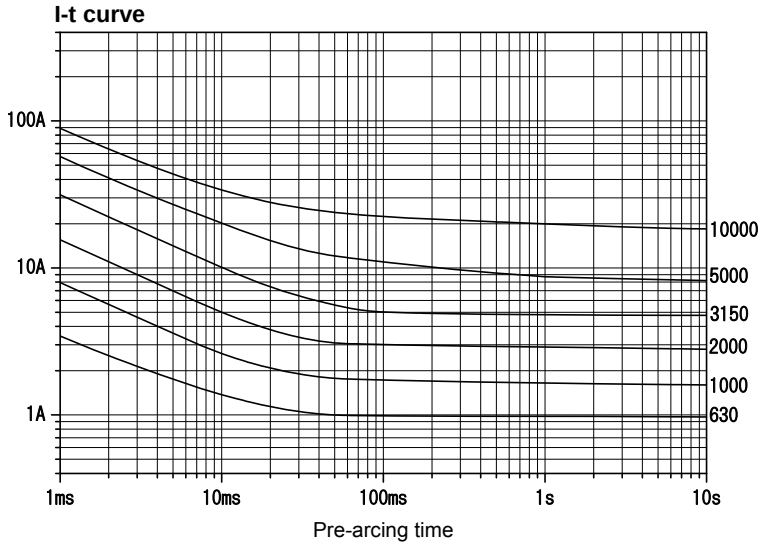


Recommended land pattern for reflow soldering
(Reference dimensions)



Unit: mm

I-t curve



The I-t curves above are plots of the average values of measurements obtained under conditions specified by SOC. These data are for reference only and are not intended to infer any guaranteed values.

Maximum working voltage	Certification	Range of rated current (I_N) *1	Maximum breaking current		Current carrying capacity	Temp. rise	Overload operation
DC35V	—	100mA - 10A	50A	Resistive circuit	1.0I_N until temperature stabilization occurs.	75K or less at 1.0I_N	Within 60s at 2.0I_N

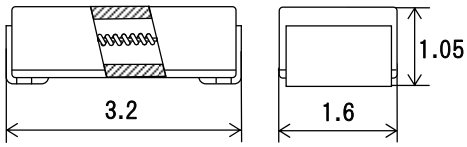
*1: Any rated current value can be selected within this range.
The numeric value “3150” shown on this product and its packaging expresses a rated current value obtained from multiplying 3.15 A by 1000.

DC35V11CT (Inrush-withstand)

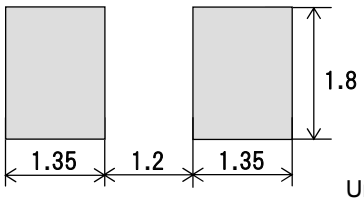
RoHS

DC35V

Scale: 10/1

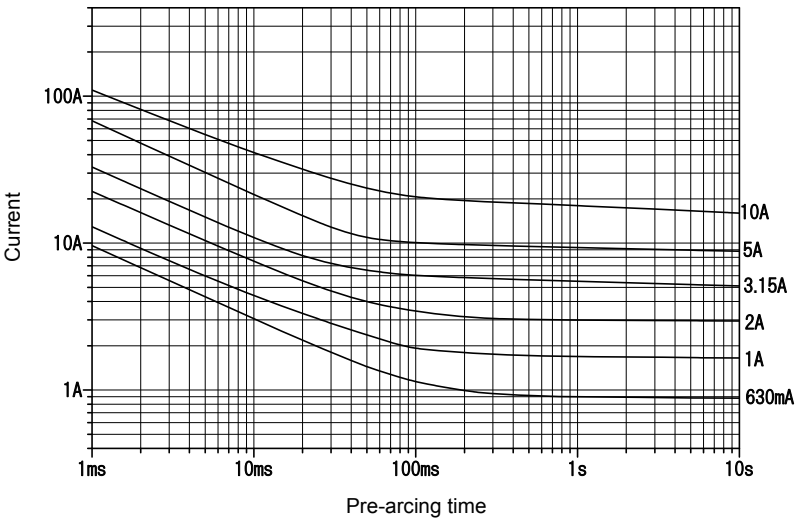


Recommended land pattern for reflow soldering
(Reference dimensions)



Unit: mm

I-t curve



The I-t curves above are plots of the average values of measurements obtained under conditions specified by SOC. These data are for reference only and are not intended to infer any guaranteed values.

Rated voltage	Certification	Range of rated current (I_N) *1	Rated breaking current		Current carrying capacity	Temp. rise	Overload operation
DC35V	UL Recognized	100mA - 10A	50A	Resistive circuit	1.0I_N until temper-ature stabilization occurs.	75K or less at 1.0I_N	Within 60s at 2.0I_N

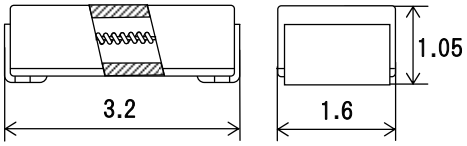
*1: Any rated current value can be selected within this range.

DC35VP11CT (Inrush-withstand protector)

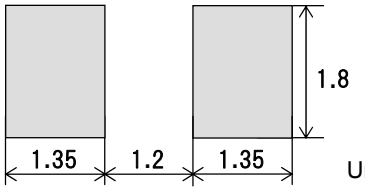
RoHS

DC35V

Scale: 10/1

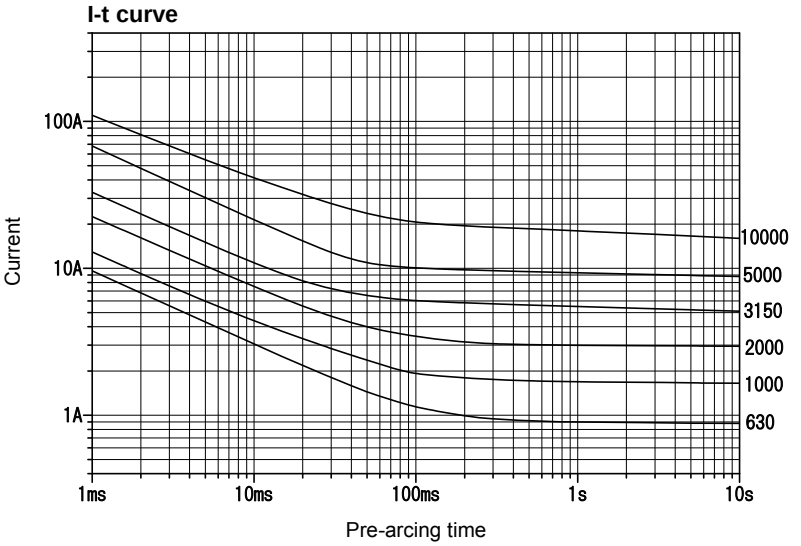


Recommended land pattern for reflow soldering
(Reference dimensions)



Unit: mm

I-t curve



The I-t curves above are plots of the average values of measurements obtained under conditions specified by SOC. These data are for reference only and are not intended to infer any guaranteed values.

Maximum working voltage	Certifi-cation	Range of rated current (I_N) *1	Maximum breaking current		Current carrying capacity	Temp. rise	Overload operation
DC35V	—	100mA - 10A	50A	Resistive circuit	1.0I_N until temper-ature stabilization occurs.	75K or less at 1.0I_N	Within 60s at 2.0I_N

*1: Any rated current value can be selected within this range.
The numeric value “3150” shown on this product and its packaging expresses a rated current value obtained from multiplying 3.15 A by 1000.

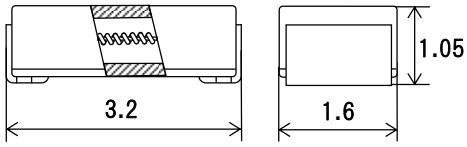
32V11CF (Inrush-withstand)

RoHS Pb

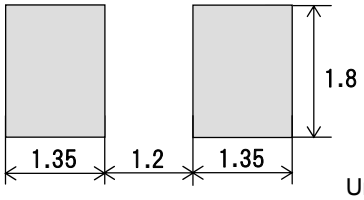
AC32V
DC32V

★This fuse is categorized as Inrush-withstand within SOC; however, it is referred to as Type F (Quick-acting) in the certificate issued by SEMKO.

Scale: 10/1

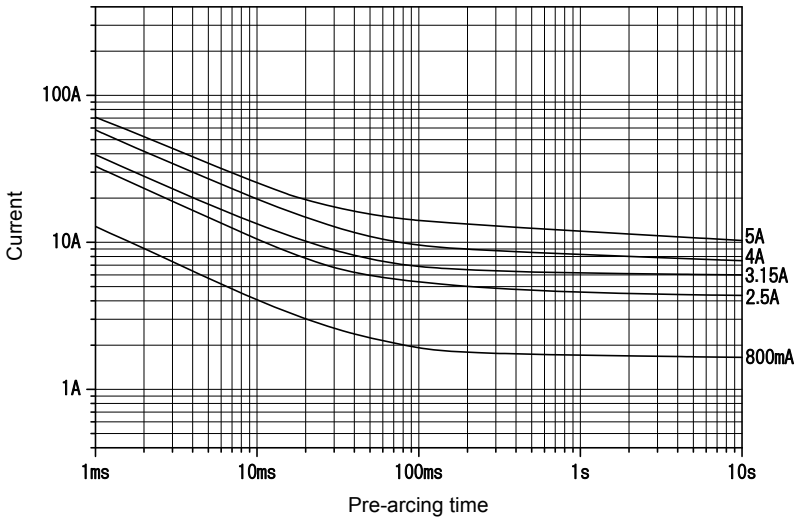


Recommended land pattern for reflow soldering
(Reference dimensions)



Unit: mm

I-t curve



The I-t curves above are plots of the average values of measurements obtained under conditions specified by SOC. These data are for reference only and are not intended to infer any guaranteed values.

Rated voltage	Certification	Rated current (I_N)	Rated breaking current		Current carrying capacity/ Endurance test	Temp. rise	Overload operation
AC32V	SEMKO Certified	800mA, 2.5A, 3.15A, 4A, 5A	50A	Resistive circuit	*1	*2	Within 2min at 2.0I_N 0.001s - 0.01s inclusive at 10I_N
DC32V	UL Recognized				1.0I_N until temperature stabilization occurs.	75K or less at 1.0I_N	Within 60s at 2.0I_N

*1: Endurance test: After repeating 100 cycles of 1.05 I_N for 1 h and switching-off for 15 min, 1.25 I_N can be passed through the fuse for 1 h or more.
*2: 70 K or less on each part of the fuse when measured during the final 5 min of the endurance test at 1.25 I_N.

NEW

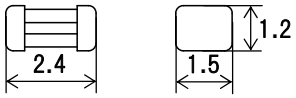
The MCF2 fuse uses a high-quality and highly reliable wire-type fuse-element enclosed in a ceramic case. With a size of 1.5×1.2×2.4 mm, it is the world's smallest wire-in-air surface mount fuse.

MCF2 (Quick-acting)

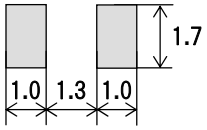
RoHS *1

AC125V
DC72V

Scale: 5/1

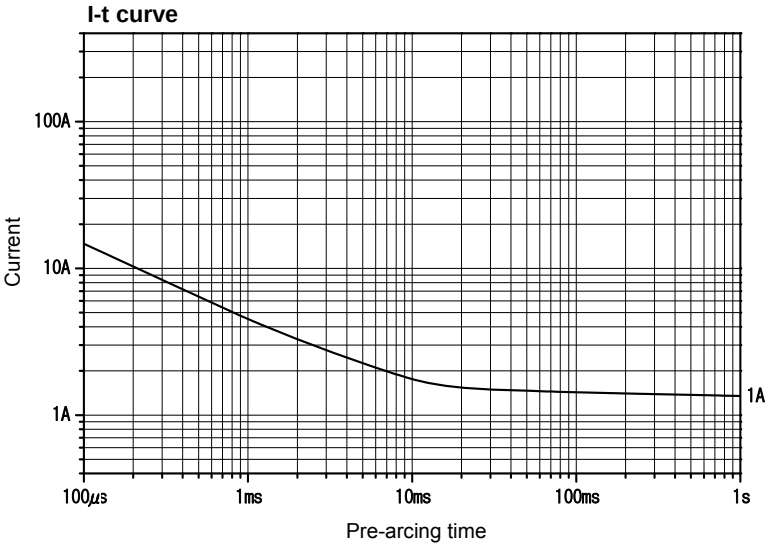


Recommended land pattern for reflow soldering
(Reference dimensions)



Unit: mm

I-t curve



The I-t curve above is a plot of the average values of measurements obtained under conditions specified by SOC. These data are for reference only and are not intended to infer any guaranteed values.

Rated voltage	Certification	Range of rated current (I_N) *2	Rated breaking current		Current carrying capacity	Temp. rise	Overload operation
AC125V	C-UL US Listed	50mA - 1.6A	50A	PF 0.95 - 1.0	1.0I_N until temperature stabilization occurs.	75K or less at 1.0I_N	Within 60s at 2.0I_N
DC72V				Resistive circuit			

*1: High melting temperature type solder containing more than 85 wt% lead is used in this product.
*2: Any rated current value can be selected within this range.

Aug. 2013

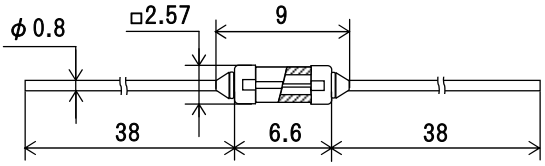
Intentionally blank

25RF (Quick-acting)

RoHS Pb

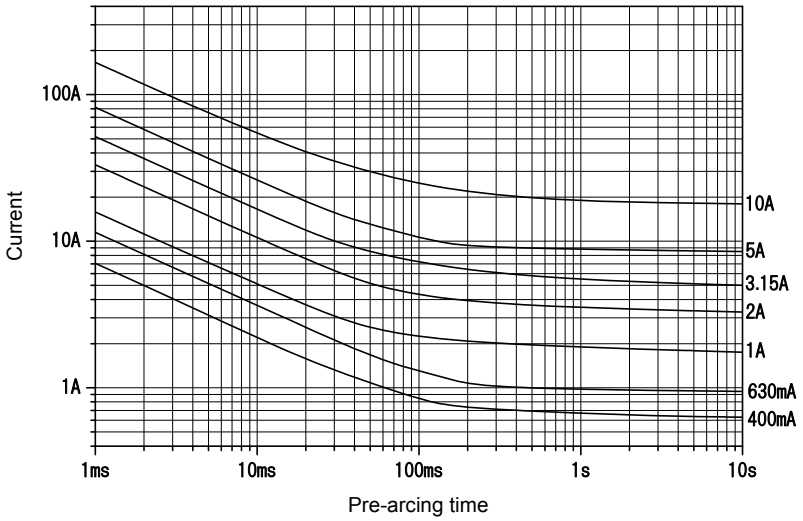
AC250V AC125V
DC125V

Scale: 2/1



Unit: mm

I-t curve



The I-t curves above are plots of the average values of measurements obtained under conditions specified by SOC. These data are for reference only and are not intended to infer any guaranteed values.

Rated voltage	Certification	Range of rated current (I_N)	Rated breaking current		Current carrying capacity	Temp. rise	Pre-arcing time/current characteristic
AC250V	C-UL US Listed	50mA - 10A *2	100A	Resistive circuit	1.0I_N until temperature stabilization occurs.	75K or less at 1.0I_N	Within 60s at 2.0I_N
AC125V	SEMKO Certified	200mA, 250mA, 315mA, 400mA, 500mA, 630mA, 800mA, 1A, 1.25A, 1.6A, 2A, 2.5A, 3.15A, 4A, 5A	50A	PF Over 0.95	4h or more at 1.0I_N	*3	*4
	<PS>E JET *1	50mA - 5A *2					Within 5s at 2.0I_N
DC125V	C-UL US Listed	50mA - 10A *2	300A	Resistive circuit	1.0I_N until temperature stabilization occurs.	75K or less at 1.0I_N	Within 60s at 2.0I_N
	SEMKO Certified	200mA, 250mA, 315mA, 400mA, 500mA, 630mA, 800mA, 1A, 1.25A, 1.6A, 2A, 2.5A, 3.15A, 4A, 5A	50A		4h or more at 1.0I_N	*3	*4

*1: Fuses with rated currents below 1 A are not covered under the Electrical Appliance and Material Safety Law.
*2: Any rated current value can be selected within this range.
*3: 135 K or less on each part of the fuse when 1.0 I_N is applied for 15 min, and then the current is increased by 0.1 I_N every 15 min until the fuse operates.
*4:

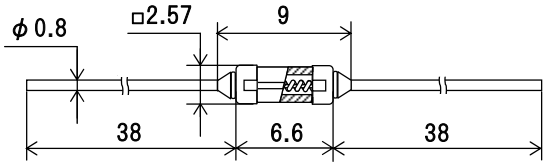
Rated current	2.0I_N	2.75I_N	4.0I_N	10I_N
200mA - 5A	Within 5s	Within 0.3s	Within 0.03s	Within 0.004s

25RT (Inrush-withstand)

RoHS Pb

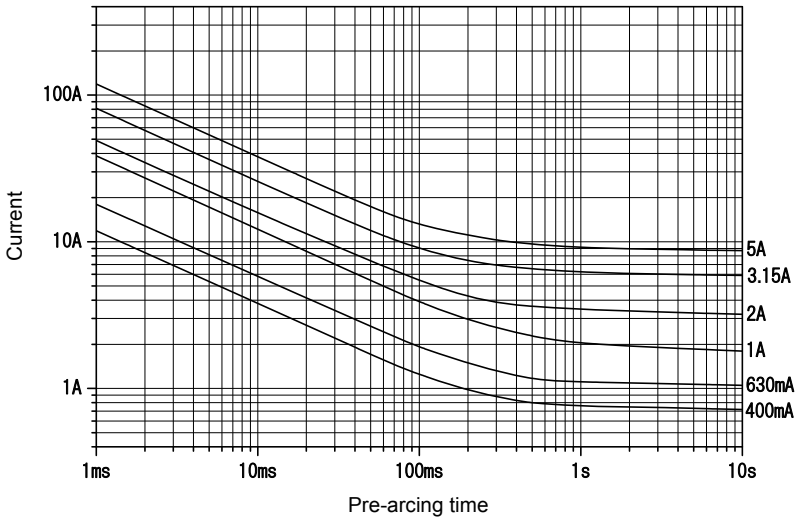
AC125V
DC125V

Scale: 2/1



Unit: mm

I-t curve



The I-t curves above are plots of the average values of measurements obtained under conditions specified by SOC. These data are for reference only and are not intended to infer any guaranteed values.

Rated voltage	Certification	Range of rated current (I_N) *1	Rated breaking current		Current carrying capacity	Temp. rise	Overload operation
AC125V	C-UL US Listed	100mA - 5A	100A	Resistive circuit	1.0I_N until temper-ature stabilization occurs.	75K or less at 1.0I_N	Within 60s at 2.0I_N
DC125V			300A				

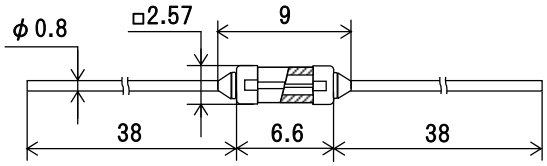
*1: Any rated current value can be selected within this range.

P25RF (Quick-acting protector)

RoHS Pb

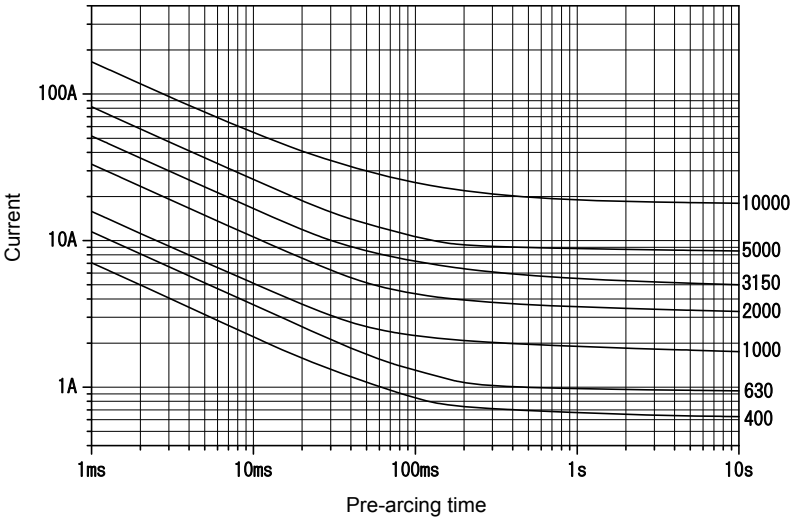
AC90V
DC90V

Scale: 2/1



Unit: mm

I-t curve



The I-t curves above are plots of the average values of measurements obtained under conditions specified by SOC. These data are for reference only and are not intended to infer any guaranteed values.

Maximum working voltage	Certification	Range of rated current (I_N) *1	Maximum breaking current		Current carrying capacity	Temp. rise	Overload operation
AC90V DC90V	—	50mA - 10A	50A	Resistive circuit	1.0I_N until temperature stabilization occurs.	75K or less at 1.0I_N	Within 60s at 2.0I_N

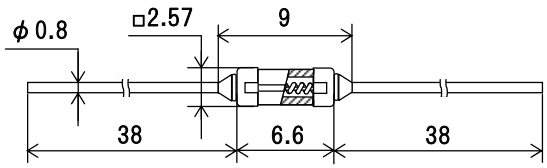
*1: Any rated current value can be selected within this range.
The numeric value “3150” shown on this product and its packaging expresses a rated current value obtained from multiplying 3.15 A by 1000.

P25RT (Inrush-withstand protector)

RoHS Pb

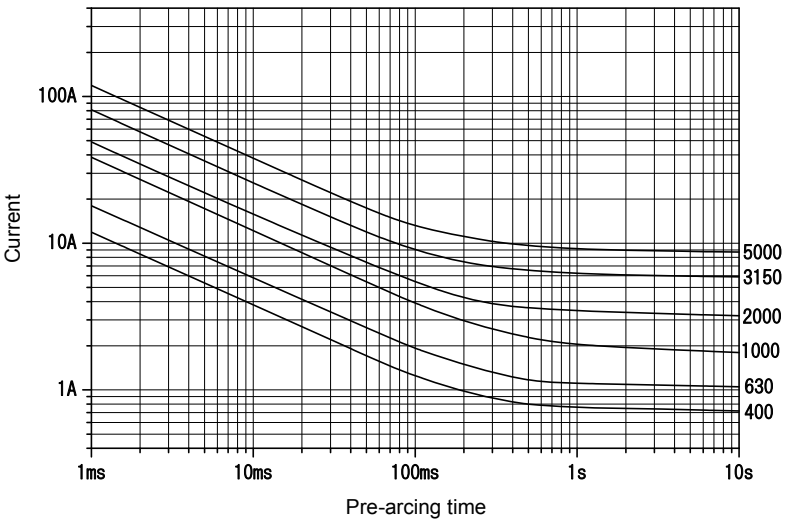
AC90V
DC60V

Scale: 2/1



Unit: mm

I-t curve



The I-t curves above are plots of the average values of measurements obtained under conditions specified by SOC. These data are for reference only and are not intended to infer any guaranteed values.

Maximum working voltage	Certification	Range of rated current (I_N) *1	Maximum breaking current		Current carrying capacity	Temp. rise	Overload operation
AC90V DC60V	—	100mA - 6.3A	50A	Resistive circuit	1.0I_N until temperature stabilization occurs.	75K or less at 1.0I_N	Within 60s at 2.0I_N

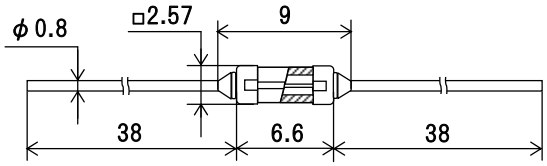
*1: Any rated current value can be selected within this range.
The numeric value “3150” shown on this product and its packaging expresses a rated current value obtained from multiplying 3.15 A by 1000.

DC35VP25RF (Quick-acting protector)

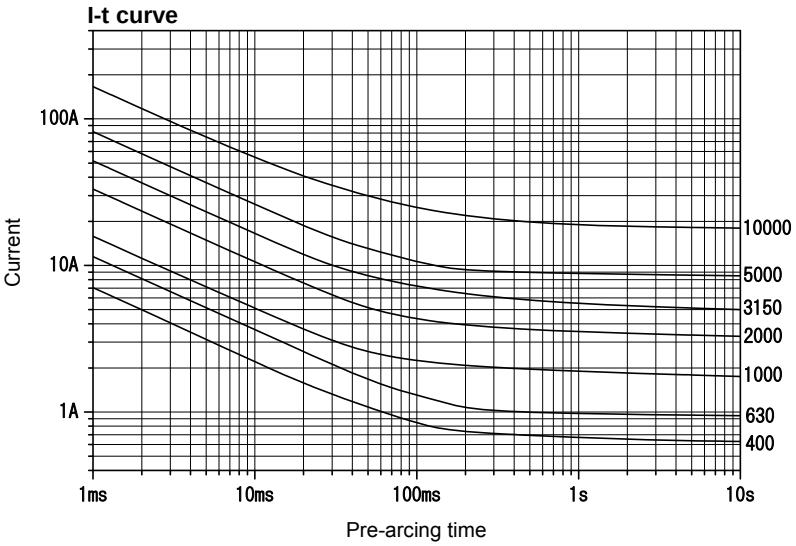
RoHS Pb

DC35V

Scale: 2/1



Unit: mm



The I-t curves above are plots of the average values of measurements obtained under conditions specified by SOC. These data are for reference only and are not intended to infer any guaranteed values.

Maximum working voltage	Certification	Range of rated current (I_N) *1	Maximum breaking current		Current carrying capacity	Temp. rise	Overload operation
DC35V	—	50mA - 10A	50A	Resistive circuit	1.0I_N until temperature stabilization occurs.	75K or less at 1.0I_N	Within 60s at 2.0I_N

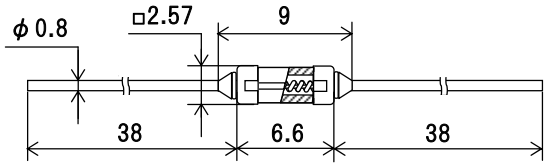
*1: Any rated current value can be selected within this range.
The numeric value “3150” shown on this product and its packaging expresses a rated current value obtained from multiplying 3.15 A by 1000.

DC35VP25RT (Inrush-withstand protector)

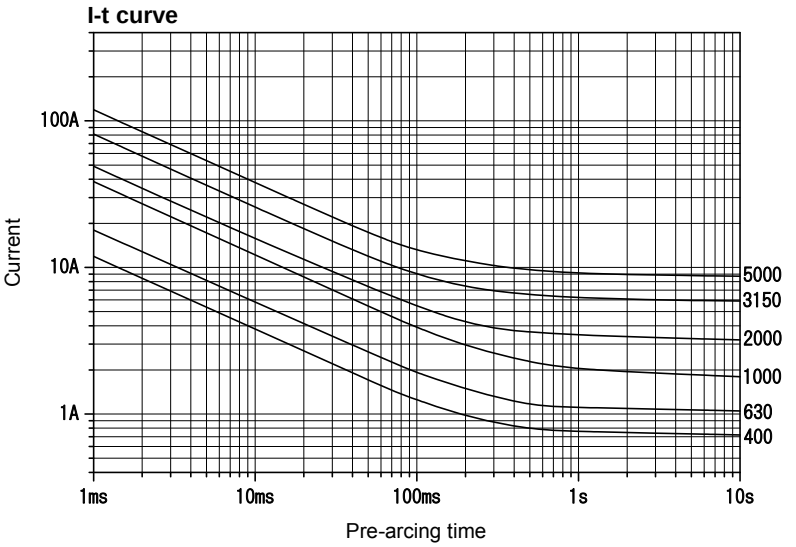
RoHS Pb

DC35V

Scale: 2/1



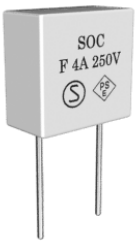
Unit: mm



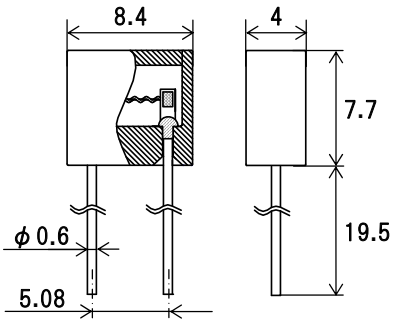
The I-t curves above are plots of the average values of measurements obtained under conditions specified by SOC. These data are for reference only and are not intended to infer any guaranteed values.

Maximum working voltage	Certification	Range of rated current (I_N) *1	Maximum breaking current		Current carrying capacity	Temp. rise	Overload operation
DC35V	—	100mA - 6.3A	50A	Resistive circuit	1.0I_N until temperature stabilization occurs.	75K or less at 1.0I_N	Within 60s at 2.0I_N

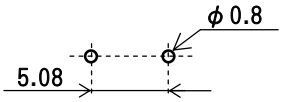
*1: Any rated current value can be selected within this range.
The numeric value “3150” shown on this product and its packaging expresses a rated current value obtained from multiplying 3.15 A by 1000.



Scale: 2/1

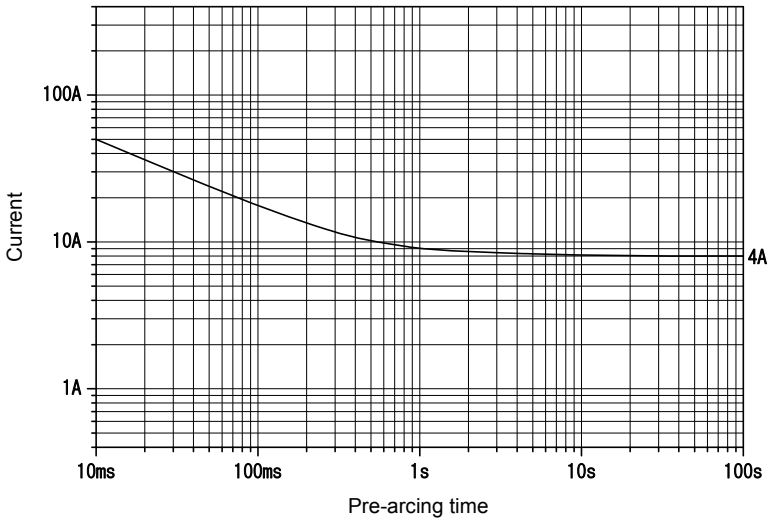


Referential dimensions of mounting holes



Unit: mm

I-t curve



The I-t curve above is a plot of the average values of measurements obtained under conditions specified by SOC. These data are for reference only and are not intended to infer any guaranteed values.

Rated voltage	Certification	Rated current (I_N)	Rated breaking current		Endurance test	Temp. rise	Pre-arcing time/ current characteristic
AC250V	SEMKO Certified <PS>E JET	4A	40A	PF Over 0.95	*1	*2	*3

*1: After repeating 100 cycles of 1.0 I_N for 1 h and switching-off for 15 min, 1.5 I_N can be passed through the fuse for 1 h or more.
*2: 135 K or less on each part of the fuse when 1.5 I_N is applied for 15 min, and then the current is increased by 0.1 I_N every 15 min until the fuse operates.
*3:

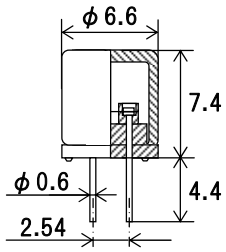
Rated current	2.1I_N	2.75I_N	4.0I_N	10I_N
4A	Within 30min	0.01s - 3s	0.003s - 0.3s	Within 0.02s

SM4 (Quick-acting)

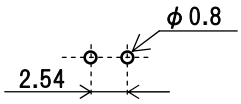
RoHS Pb

AC125V

Scale: 2/1

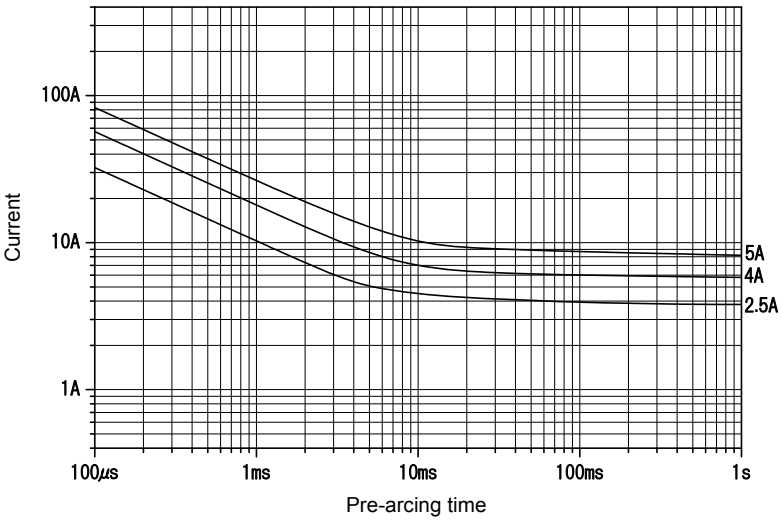


Referential dimensions of mounting holes



Unit: mm

I-t curve



The I-t curves above are plots of the average values of measurements obtained under conditions specified by SOC. These data are for reference only and are not intended to infer any guaranteed values.

Rated voltage	Certification	Range of rated current (I_N) *2	Rated breaking current		Current carrying capacity	Temp. rise	Overload operation
AC125V	UL Listed	63mA - 5A	50A	PF 0.7 - 0.8	1.0I_N for 15min or more after temper-ature stabilization occurs.	70K or less at 1.0I_N	Within 10min at 1.5I_N Within 60s at 2.0I_N
	CSA Certified			PF 0.95 - 1.0			
	<PS>E JET *1		100A	PF 0.7 - 0.8			

*1: Fuses with rated currents below 1 A are not covered under the Electrical Appliance and Material Safety Law.
*2: Any rated current value can be selected within this range.

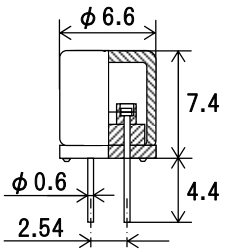
PSM (Quick-acting protector)

RoHS Pb

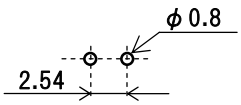
AC90V

DC60V

Scale: 2/1

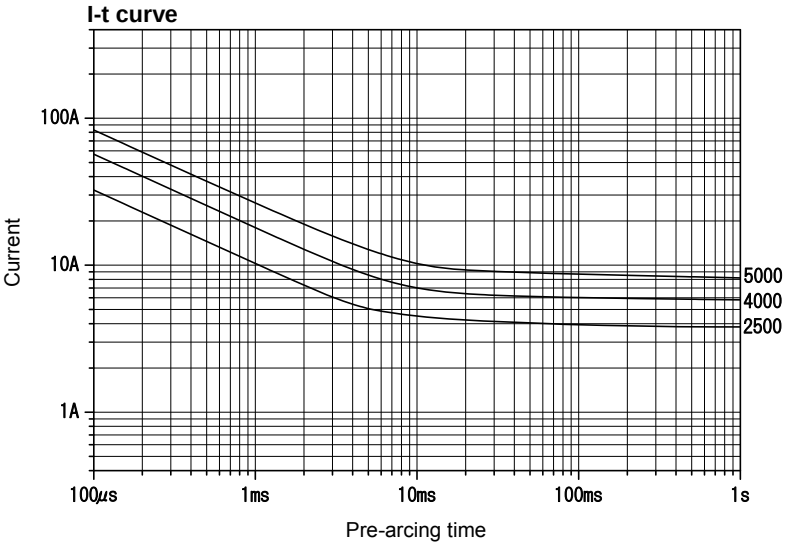


Referential dimensions of mounting holes



Unit: mm

I-t curve



The I-t curves above are plots of the average values of measurements obtained under conditions specified by SOC. These data are for reference only and are not intended to infer any guaranteed values.

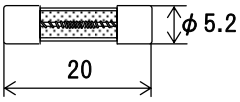
Maximum working voltage	Certification	Range of rated current (I_N) *1	Maximum breaking current		Current carrying capacity	Temp. rise	Overload operation
AC90V	—	63mA - 5A	50A	PF 0.7 - 0.8	1.0I_N for 15min or more after temper-ature stabilization occurs.	70K or less at 1.0I_N	Within 10min at 1.5I_N Within 60s at 2.0I_N
DC60V				Resistive circuit			

*1: Any rated current value can be selected within this range.
The numeric value “250” shown on this product and its packaging expresses a rated current value obtained from multiplying 0.25 A by 1000.

SHVD2 (Lightning surge withstand)*1 RoHS*2

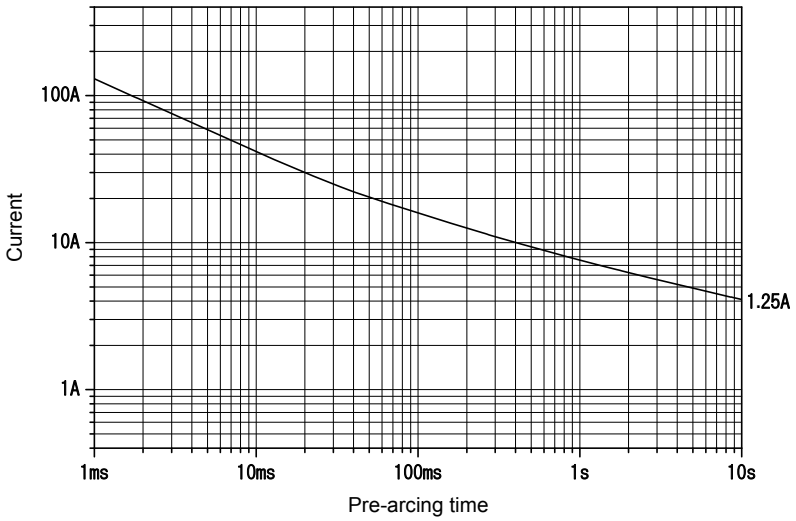
AC600V
DC400V

Scale: 1/1



Unit: mm

I-t curve



The I-t curve above is a plot of the average values of measurements obtained under conditions specified by SOC. These data are for reference only and are not intended to infer any guaranteed values.

Rated voltage	Certification	Rated current (I_N)	Rated breaking current		Current carrying capacity	Temp. rise	Overload operation
AC600V	C-UL US Recognized	1.25A	60A	Resistive circuit	1.0I_N until temperature stabilization occurs.	75K or less at 1.0I_N	Within 15min at 2.4I_N
DC400V			100A				

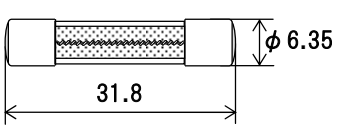
*1: This fuse can interrupt the short circuit current of 60 A at AC 600 V (resistive circuit), which is intended to represent the primary power contact condition provided in the Second-Level AC Power Fault Tests specified in the Telcordia GR-1089-CORE, Issue 4 (an American telecommunications equipment standard).
For further details, including the lightning surge withstand conditions, please contact your local SOC sales representative.
*2: High melting temperature type solder containing more than 85 wt% lead is used in this product.

SHV4 (Inrush-withstand)

1A - 6.3A: RoHS Pb
Over 6.3A - 20A: RoHS *1

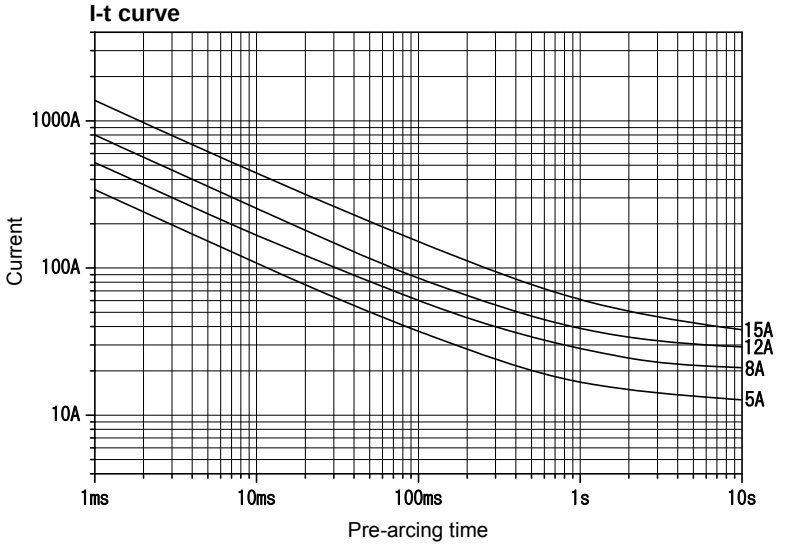
AC500V AC380V

Scale: 1/1



Unit: mm

I-t curve



The I-t curves above are plots of the average values of measurements obtained under conditions specified by SOC. These data are for reference only and are not intended to infer any guaranteed values.

Rated voltage	Certification	Range of rated current (I_N)*2	Rated breaking current		Current carrying capacity	Temp. rise	Overload operation
AC500V	UL Recognized CSA Component Acceptance	1A - 10A	500A	Resistive circuit	1.0I_N until temperature stabilization occurs.	75K or less at 1.0I_N	Within 60s at 2.1I_N
AC380V		Over 10A - 20A					

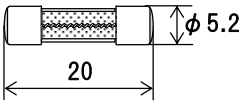
*1: High melting temperature type solder containing more than 85 wt% lead is used in this product (over 6.3 A - 20 A).
*2: Any rated current value can be selected within this range.

SHV12 (Inrush-withstand)

RoHS *1

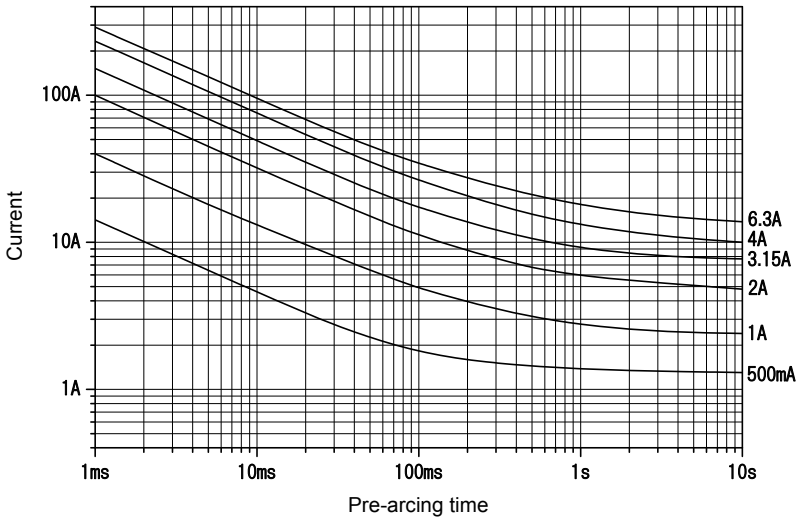
AC500V AC400V
DC400V DC250V

Scale: 1/1



Unit: mm

I-t curve



The I-t curves above are plots of the average values of measurements obtained under conditions specified by SOC. These data are for reference only and are not intended to infer any guaranteed values.

Rated voltage	Certification	Range of rated current (I_N)	Rated breaking current		Current carrying capacity/ Endurance test	Temp. rise	Pre-arcing time/current characteristic
AC500V	UL Recognized CSA Component Acceptance	100mA - 6.3A *2	80A	Resistive circuit	1.0I_N until temperature stabilization occurs.	75K or less at 1.0I_N	Within 30min at 2.1I_N
AC400V			500A				
	SEMKO Certified	1A, 1.6A, 2A, 3A, 3.15A, 4A, 5A, 6.3A			*3	—	*4
DC400V			200A				
	UL Recognized CSA Component Acceptance	100mA - 6.3A *2	1500A		1.0I_N until temperature stabilization occurs.	75K or less at 1.0I_N	Within 30min at 2.1I_N
DC250V			2000A				

*1: High melting temperature type solder containing more than 85 wt% lead is used in this product.
*2: Any rated current value can be selected within this range.
*3: After repeating 100 cycles of 1.2 I_N for 1 h and switching-off for 15 min, 1.5 I_N can be passed through the fuse for 1 h or more.
*4:

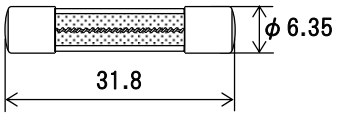
Rated current	2.1I_N	2.75I_N	4.0I_N	10I_N
1A	Within 30min	0.3s - 2s	0.095s - 0.5s	0.01s - 0.03s
1.6A, 2A		1s - 30s	0.095s - 1s	0.01s - 0.05s
3A - 6.3A			0.15s - 1s	0.02s - 0.1s

SHV14 (Inrush-withstand)

RoHS *1

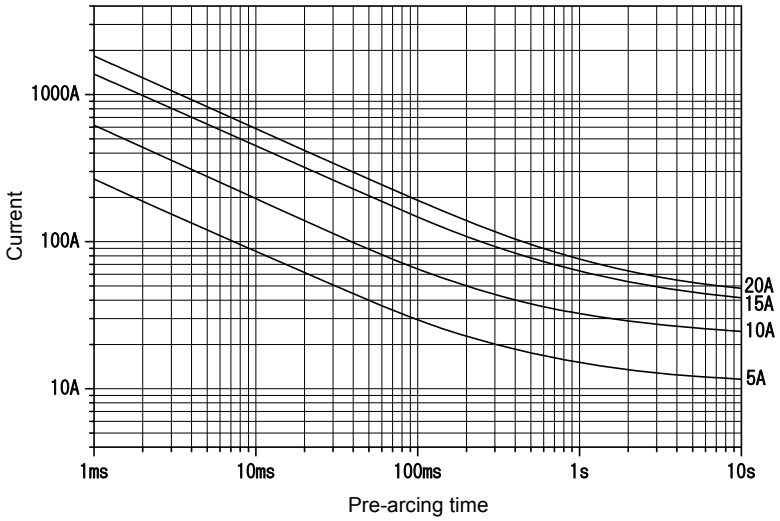
AC400V
DC400V

Scale: 1/1



Unit: mm

I-t curve



The I-t curves above are plots of the average values of measurements obtained under conditions specified by SOC. These data are for reference only and are not intended to infer any guaranteed values.

Rated voltage	Certification	Range of rated current (I_N)	Rated breaking current		Current carrying capacity/ Endurance test	Temp. rise	Pre-arcing time/current characteristic
AC400V	UL Recognized CSA Component Acceptance	5A - 20A *2	500A	Resistive circuit	1.0I_N until temperature stabilization occurs.	75K or less at 1.0I_N	Within 30min at 2.1I_N
	SEMKO Certified	10A, 15A, 20A			*3	—	*4
DC400V	UL Recognized CSA Component Acceptance	5A - 20A *2			1.0I_N until temperature stabilization occurs.	75K or less at 1.0I_N	Within 30min at 2.1I_N
	SEMKO Certified	10A, 15A, 20A			*3	—	*4

*1: High melting temperature type solder containing more than 85 wt% lead is used in this product.
*2: Any rated current value can be selected within this range.
*3: After repeating 100 cycles of 1.2 I_N for 1 h and switching-off for 15 min, 1.5 I_N can be passed through the fuse for 1 h or more.
*4:

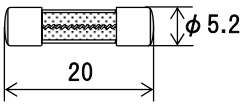
Rated current	2.1I_N	2.75I_N	4.0I_N	10I_N
10A, 15A, 20A	Within 30min	1s - 80s	0.15s - 5s	0.02s - 0.1s

SHV2 (Inrush-withstand)

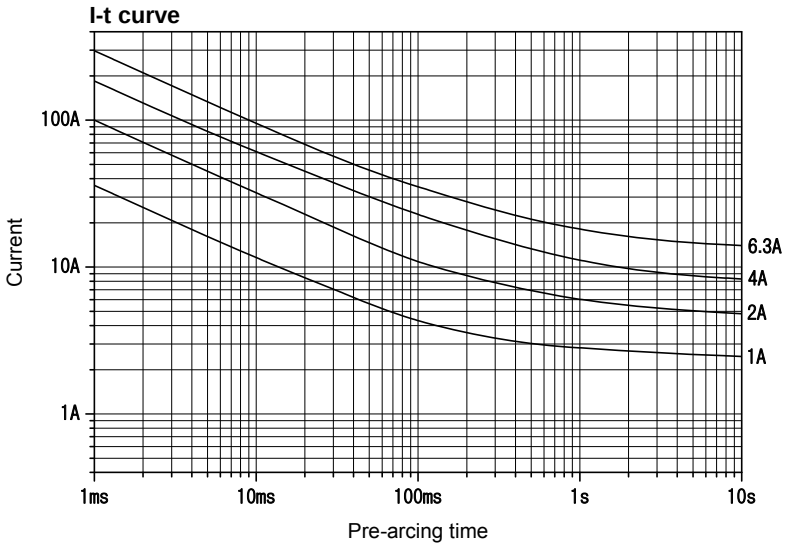
RoHS *1

AC380V

Scale: 1/1



Unit: mm



The I-t curves above are plots of the average values of measurements obtained under conditions specified by SOC. These data are for reference only and are not intended to infer any guaranteed values.

Rated voltage	Certification	Range of rated current (I_N) *2	Rated breaking current		Current carrying capacity	Temp. rise	Overload operation
AC380V	UL Recognized CSA Component Acceptance	1A - 6.3A	500A	Resistive circuit	1.0I_N until temperature stabilization occurs.	75K or less at 1.0I_N	Within 60min at 2.1I_N

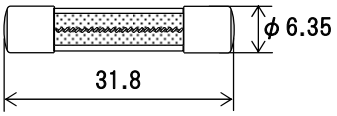
*1: High melting temperature type solder containing more than 85 wt% lead is used in this product.
*2: Any rated current value can be selected within this range.

SHV16 (Inrush-withstand)

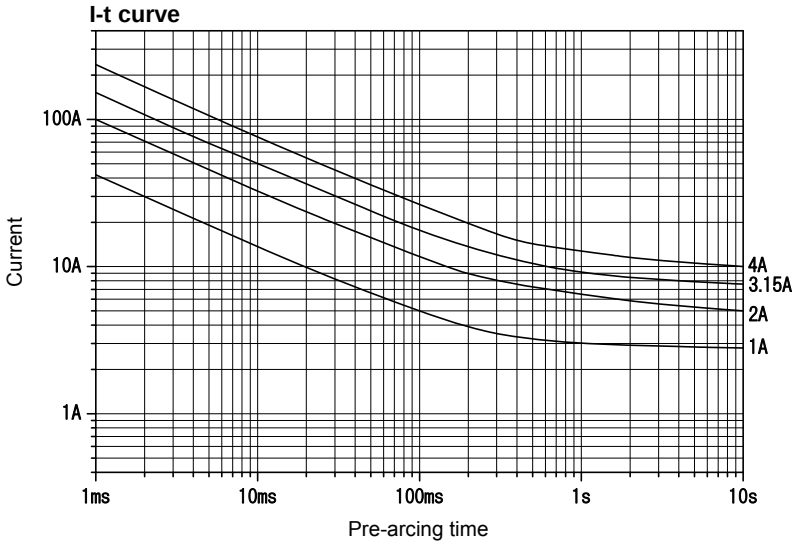
RoHS *1

DC700V

Scale: 1/1



Unit: mm



The I-t curves above are plots of the average values of measurements obtained under conditions specified by SOC. These data are for reference only and are not intended to infer any guaranteed values.

Rated voltage	Certification	Range of rated current (I_N) *2	Rated breaking current		Current carrying capacity	Temp. rise	Overload operation
DC700V	UL Recognized	1A - 4A	500A	Resistive circuit	1.0I_N until temperature stabilization occurs.	75K or less at 1.0I_N	Within 30min at 2.1I_N

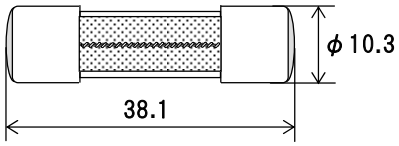
*1: High melting temperature type solder containing more than 85 wt% lead is used in this product.
*2: Any rated current value can be selected within this range.

SHV22 (Inrush-withstand)

1A – 5A: RoHS Pb
Over 5A – 10A: RoHS *1

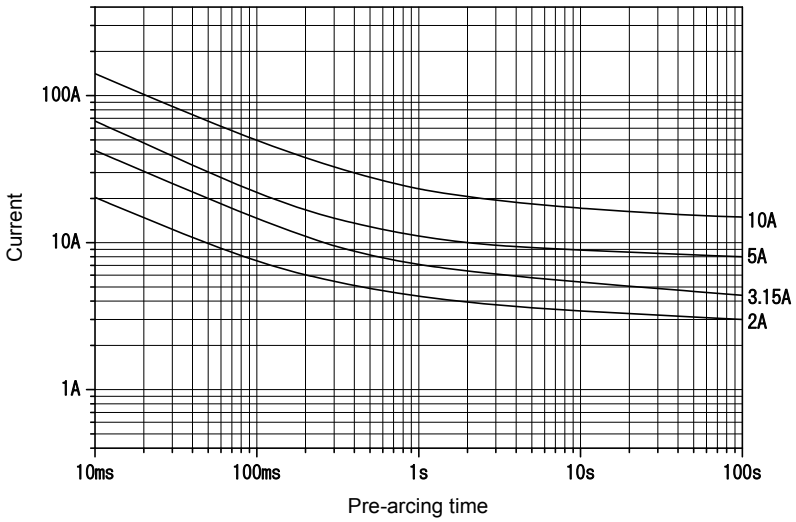
DC500V

Scale: 1/1



Unit: mm

I-t curve



The I-t curves above are plots of the average values of measurements obtained under conditions specified by SOC. These data are for reference only and are not intended to infer any guaranteed values.

Rated voltage	Certification	Range of rated current (I_N) *2	Rated breaking current		Current carrying capacity	Temp. rise	Overload operation
DC500V	C-UL US Recognized	1A - 10A	1000A	Resistive circuit	1.0I_N until temperature stabilization occurs.	75K or less at 1.0I_N	Within 60min at 1.35I_N Within 2min at 2.0I_N

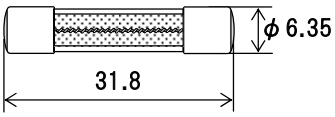
*1: High melting temperature type solder containing more than 85 wt% lead is used in this product (over 5 A - 10 A).
*2: Any rated current value can be selected within this range.

NSHV14 (Inrush-withstand protector)

RoHS *1

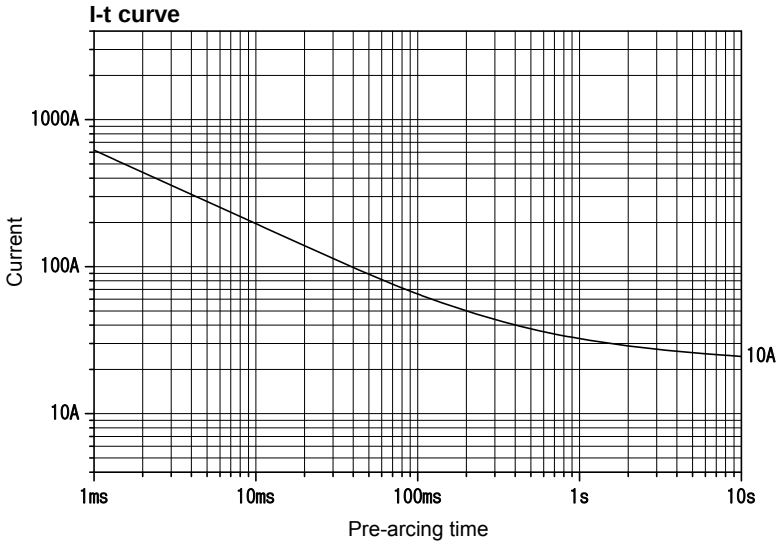
DC500V

Scale: 1/1



Unit: mm

I-t curve



The I-t curve above is a plot of the average values of measurements obtained under conditions specified by SOC. These data are for reference only and are not intended to infer any guaranteed values.

Maximum working voltage	Certification	Rated current (I_N)	Maximum breaking current		Endurance test	Temp. rise	Overload operation
DC500V	—	10A	30A	Resistive circuit	*2	75K or less at 1.0I_N	Within 30min at 2.1I_N

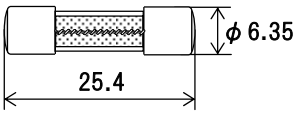
*1: High melting temperature type solder containing more than 85 wt% lead is used in this product.
*2: After repeating 100 cycles of 1.2 I_N for 1 h and switching-off for 15 min, 1.5 I_N can be passed through the fuse for 1 h or more.

SHV18 (Inrush-withstand)

RoHS *1

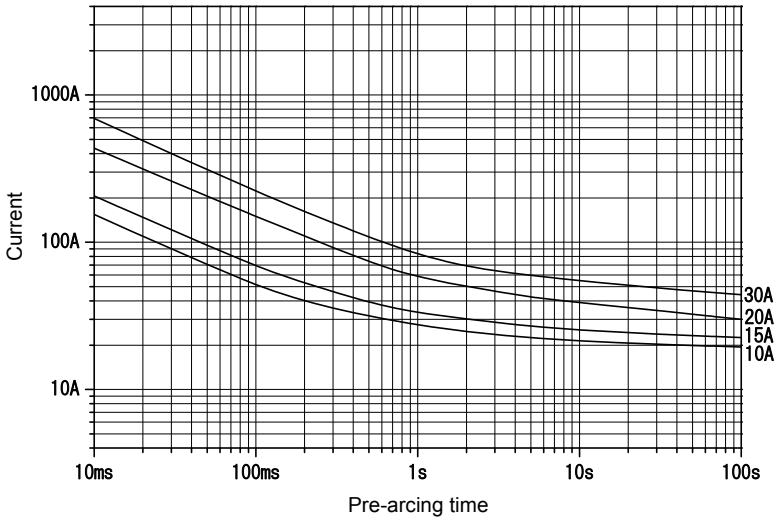
DC500V

Scale: 1/1



Unit: mm

I-t curve



The I-t curves above are plots of the average values of measurements obtained under conditions specified by SOC. These data are for reference only and are not intended to infer any guaranteed values.

Rated voltage	Certification	Range of rated current (I_N) *2	Rated breaking current		Current carrying capacity	Temp. rise	Overload operation
DC500V	C-UL US Recognized	1A - 30A	1000A	Resistive circuit	1.0I_N until temperature stabilization occurs.	—	Within 30min at 2.1I_N

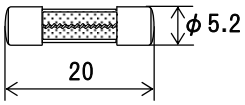
*1: High melting temperature type solder containing more than 85 wt% lead is used in this product.
*2: Any rated current value can be selected within this range.

SHV20 (Inrush-withstand)

RoHS Pb

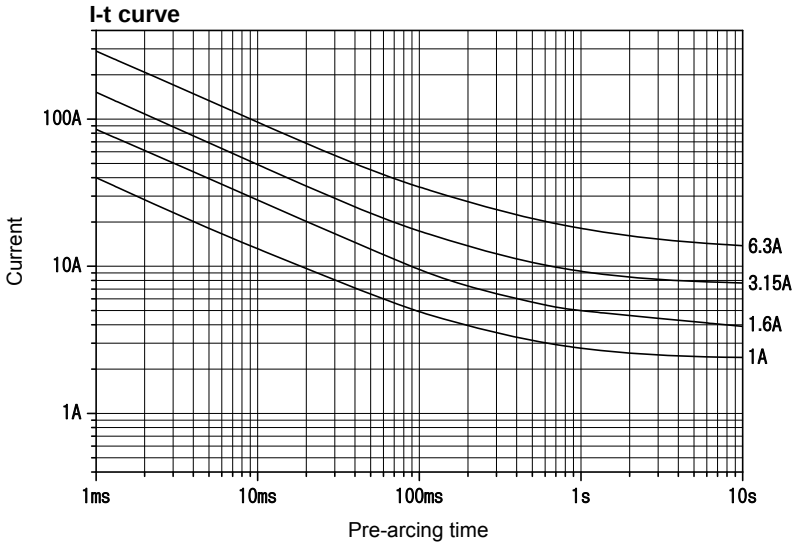
DC450V

Scale: 1/1



Unit: mm

I-t curve



The I-t curves above are plots of the average values of measurements obtained under conditions specified by SOC. These data are for reference only and are not intended to infer any guaranteed values.

Rated voltage	Certification	Range of rated current (I_N) *1	Rated breaking current		Current carrying capacity	Temp. rise	Overload operation
DC450V	C-UL US Recognized	500mA - 6.3A	200A	Resistive circuit	1.0I_N until temperature stabilization occurs.	75K or less at 1.0I_N	Within 30min at 2.1I_N

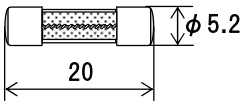
*1: Any rated current value can be selected within this range.

NSHV12 (Inrush-withstand protector)

RoHS *1

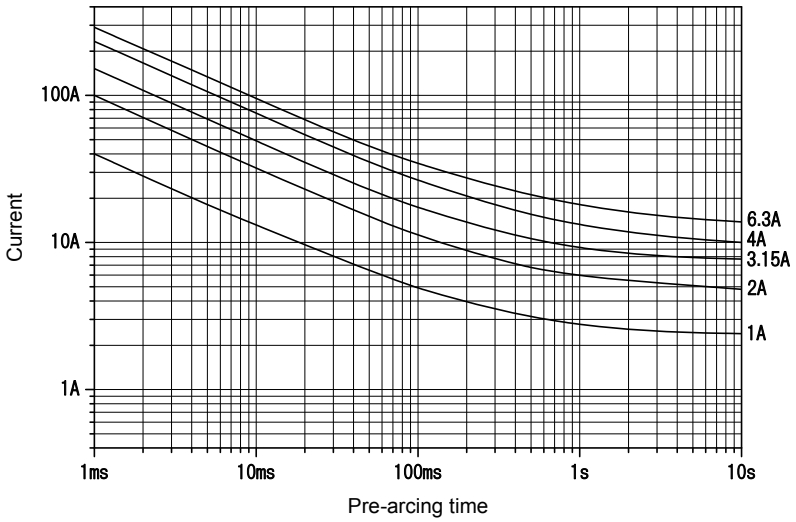
DC450V

Scale: 1/1



Unit: mm

I-t curve



The I-t curves above are plots of the average values of measurements obtained under conditions specified by SOC. These data are for reference only and are not intended to infer any guaranteed values.

Maximum working voltage	Certification	Range of rated current (I_N)	Maximum breaking current		Current carrying capacity/ Endurance test	Temp. rise	Pre-arcing time/current characteristic
DC450V	—	100mA - under 1A *2	200A	Resistive circuit	1.0I_N until temperature stabilization occurs.	75K or less at 1.0I_N	Within 30min at 2.1I_N
		1A, 1.6A, 2A, 3A, 3.15A, 4A, 5A, 6.3A			*3	—	*4

*1: High melting temperature type solder containing more than 85 wt% lead is used in this product.
*2: Any rated current value can be selected within this range.
*3: After repeating 100 cycles of 1.2 I_N for 1 h and switching-off for 15 min, 1.5 I_N can be passed through the fuse for 1 h or more.
*4:

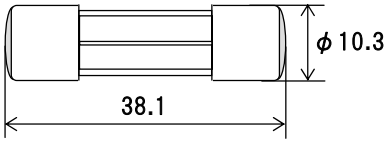
Rated current	2.1I_N	2.75I_N	4.0I_N	10I_N
1A	Within 30min	0.3s - 2s	0.095s - 0.5s	0.01s - 0.03s
1.6A, 2A		1s - 30s	0.095s - 1s	0.01s - 0.05s
3A - 6.3A			0.15s - 1s	0.02s - 0.1s

250VⒶLLC (Normal-acting)

500mA - 12A: RoHS
Over 12A - 30A: RoHS *1

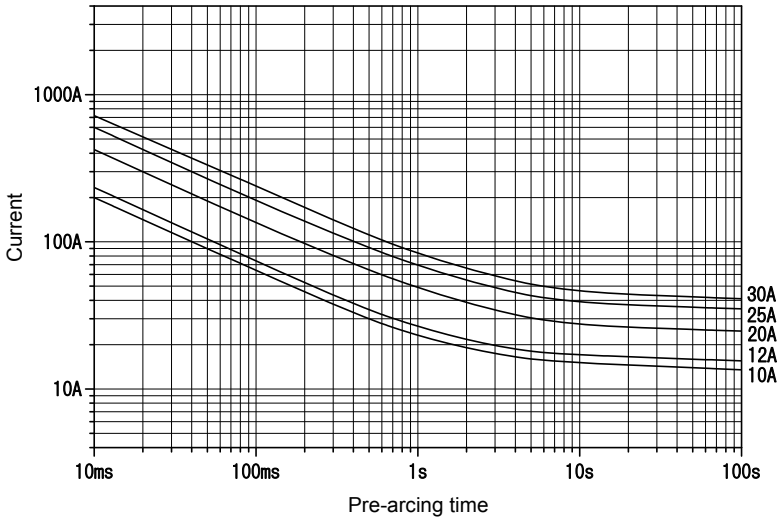
AC250V

Scale: 1/1



Unit: mm

I-t curve



The I-t curves above are plots of the average values of measurements obtained under conditions specified by SOC. These data are for reference only and are not intended to infer any guaranteed values.

Rated voltage	Certification *2	Range of rated current (I_N) *3	Rated breaking current		Current carrying capacity	Temp. rise	Overload operation
AC250V	<PS>E JET	500mA - 30A	100A	PF 0.7 - 0.8	1.1I_N until temperature stabilization occurs.	At 1.1I_N, 140K or less at the center, 60K or less at the contact	Within 60min at 1.35I_N Within 2min at 2.0I_N

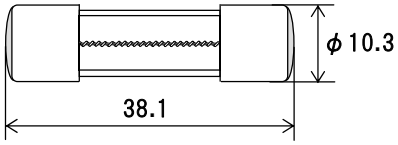
*1: High melting temperature type solder containing more than 85 wt% lead is used in this product (over 12 A - 30 A).
*2: Fuses with rated currents below 1 A are not covered under the Electrical Appliance and Material Safety Law.
*3: Any rated current value can be selected within this range.

250VⒶTLLC (Inrush-withstand)

500mA - 12A: RoHS
Over 12A - 30A: RoHS *1

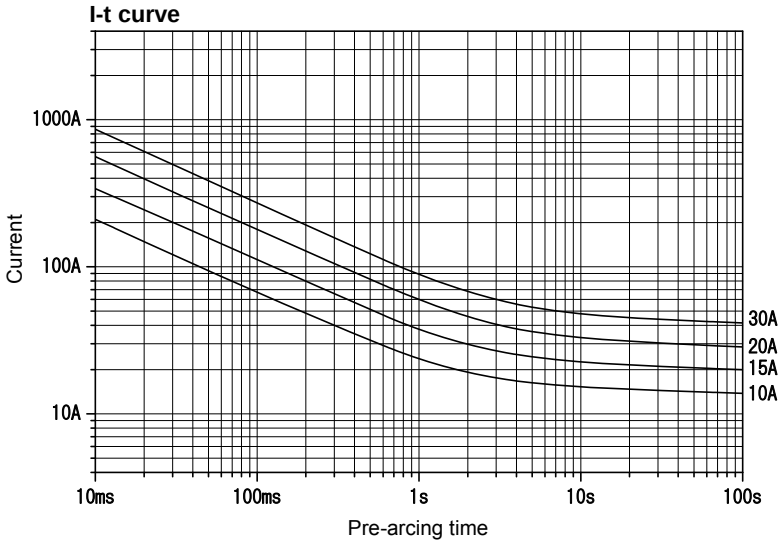
AC250V

Scale: 1/1



Unit: mm

I-t curve



The I-t curves above are plots of the average values of measurements obtained under conditions specified by SOC. These data are for reference only and are not intended to infer any guaranteed values.

Rated voltage	Certification *2	Range of rated current (I_N) *3	Rated breaking current		Current carrying capacity	Temp. rise	Overload operation
AC250V	<PS>E JET	500mA - 5A	500A	PF 0.7 - 0.8	1.1I_N until temperature stabilization occurs.	At 1.1I_N, 140K or less at the center, 60K or less at the contact	Within 60min at 1.35I_N Within 2min at 2.0I_N
		Over 5A - 30A	100A				

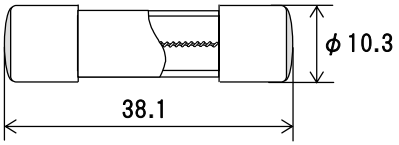
*1: High melting temperature type solder containing more than 85 wt% lead is used in this product (over 12 A - 30 A).
*2: Fuses with rated currents below 1 A are not covered under the Electrical Appliance and Material Safety Law.
*3: Any rated current value can be selected within this range.

SKM10 (Inrush-withstand)

100mA - 12A: RoHS Pb
Over 12A - 30A: RoHS *1

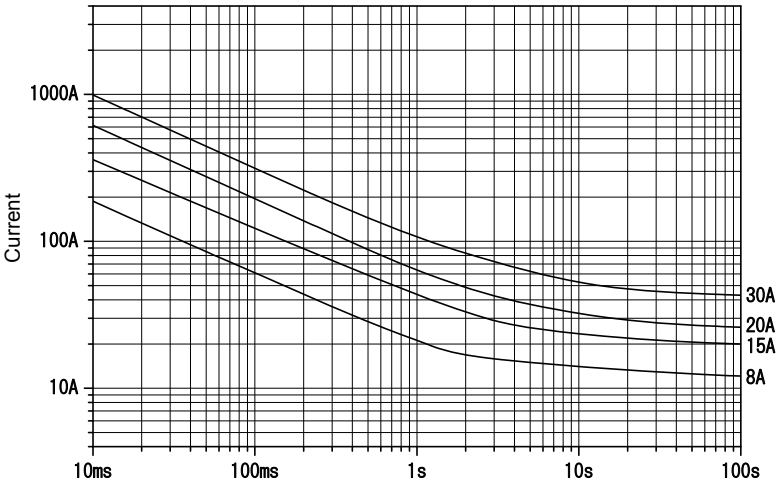
AC250V

Scale: 1/1



Unit: mm

I-t curve



The I-t curves above are plots of the average values of measurements obtained under conditions specified by SOC. These data are for reference only and are not intended to infer any guaranteed values.

Rated voltage	Certification	Range of rated current (I_N) *2	Rated breaking current		Current carrying capacity	Temp. rise	Overload operation
AC250V	UL Recognized CSA Component Acceptance	100mA - 30A	1000A	Resistive circuit	1.0I_N until temperature stabilization occurs.	—	Within 60min at 1.35I_N Within 2min at 2.0I_N

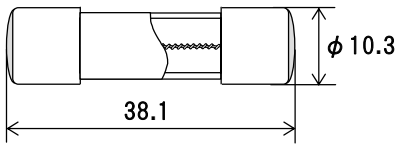
*1: High melting temperature type solder containing more than 85 wt% lead is used in this product (over 12 A - 30 A).
*2: Any rated current value can be selected within this range.

SKM10 N1 (Inrush-withstand)

100mA - 12A: RoHS Pb
Over 12A - 25A: RoHS *1

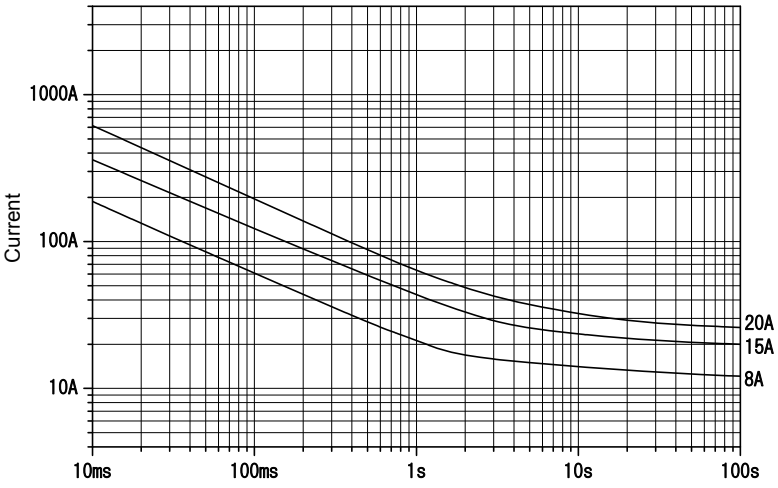
AC250V

Scale: 1/1



Unit: mm

I-t curve



The I-t curves above are plots of the average values of measurements obtained under conditions specified by SOC. These data are for reference only and are not intended to infer any guaranteed values.

Rated voltage	Certification	Range of rated current (I_N) *3	Rated breaking current		Current carrying capacity	Temp. rise	Overload operation
AC250V	UL Recognized CSA Component Acceptance	100mA - 25A	1000A	Resistive circuit	*4	—	Within 60min at 1.35I_N Within 2min at 2.0I_N
	<PS>E JET *2		100A	PF 0.7 - 0.8	*5	At 1.1I_N, 140K or less at the center, 60K or less at the contact	

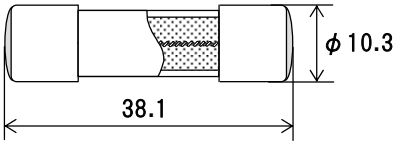
*1: High melting temperature type solder containing more than 85 wt% lead is used in this product (over 12 A - 25 A).
*2: Fuses with rated currents below 1 A are not covered under the Electrical Appliance and Material Safety Law.
*3: Any rated current value can be selected within this range.
*4: 1.0 I_N until temperature stabilization occurs.
*5: 1.1 I_N until temperature stabilization occurs.

KST2 (Inrush-withstand)

1A - 12A: RoHS Pb
Over 12A - 30A: RoHS *1

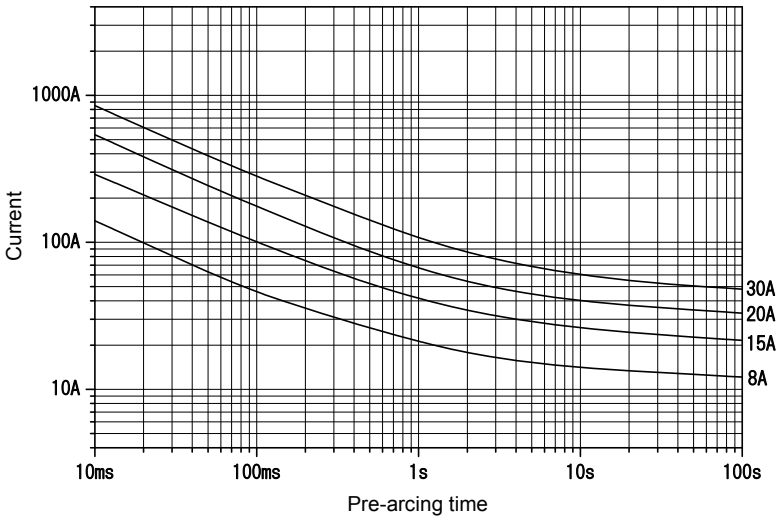
AC250V

Scale: 1/1



Unit: mm

I-t curve



The I-t curves above are plots of the average values of measurements obtained under conditions specified by SOC. These data are for reference only and are not intended to infer any guaranteed values.

Rated voltage	Certification	Range of rated current (I_N) *2	Rated breaking current		Current carrying capacity	Temp. rise	Overload operation
AC250V	UL Recognized CSA Component Acceptance	1A - 30A	10000A	PF 0.7 - 0.8	1.0I_N until temperature stabilization occurs.	—	Within 60min at 1.35I_N Within 2min at 2.0I_N

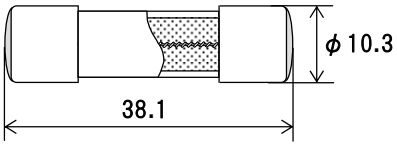
*1: High melting temperature type solder containing more than 85 wt% lead is used in this product (over 12 A - 30 A).
*2: Any rated current value can be selected within this range.

KST2 N1 (Inrush-withstand)

Over 5A - 12A: RoHS
Over 12A - 30A: RoHS *1

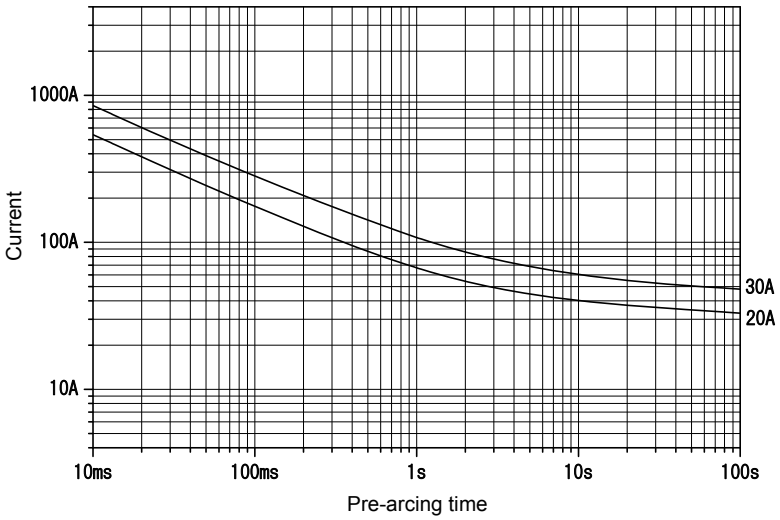
AC250V

Scale: 1/1



Unit: mm

I-t curve



The I-t curves above are plots of the average values of measurements obtained under conditions specified by SOC. These data are for reference only and are not intended to infer any guaranteed values.

Rated voltage	Certification	Range of rated current (I_N) *2	Rated breaking current		Current carrying capacity	Temp. rise	Overload operation
AC250V	UL Recognized CSA Component Acceptance	Over 5A - 30A	10000A	PF 0.7 - 0.8	1.0I_N until temperature stabilization occurs.	—	Within 60min at 1.35I_N Within 2min at 2.0I_N
	<PS>E JET		1500A			At 1.0I_N, 140K or less at the center, 60K or less at the contact	Within 60min at 1.5I_N

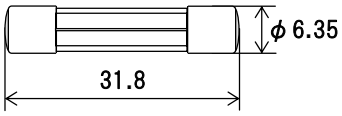
*1: High melting temperature type solder containing more than 85 wt% lead is used in this product (over 12 A - 30 A).
*2: Any rated current value can be selected within this range.

250VⒶLNC (Normal-acting)

63mA – 12A: RoHS
Over 12A – 25A: RoHS *1

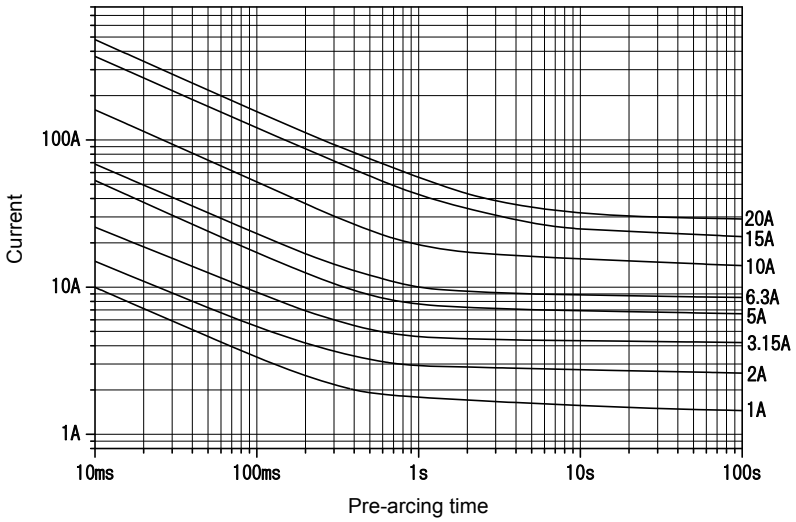
AC250V

Scale: 1/1



Unit: mm

I-t curve



The I-t curves above are plots of the average values of measurements obtained under conditions specified by SOC. These data are for reference only and are not intended to infer any guaranteed values.

Rated voltage	Certification *2	Range of rated current (I_N) *3	Rated breaking current		Current carrying capacity	Temp. rise	Overload operation
AC250V	<PS>E JET	63mA - 25A	100A	PF 0.7 - 0.8	1.1I_N until temperature stabilization occurs.	At 1.1I_N, 140K or less at the center, 60K or less at the contact	Within 60min at 1.35I_N Within 2min at 2.0I_N

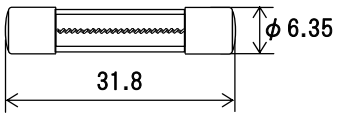
*1: High melting temperature type solder containing more than 85 wt% lead is used in this product (over 12 A - 25 A).
*2: Fuses with rated currents below 1 A are not covered under the Electrical Appliance and Material Safety Law.
*3: Any rated current value can be selected within this range.

250VⒶTLNC (Inrush-withstand)

100mA – 12A: RoHS
Over 12A – 30A: RoHS *1

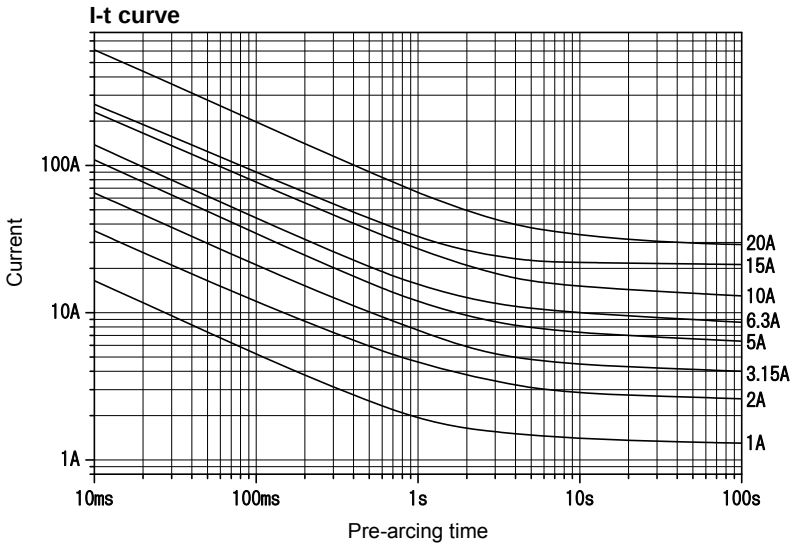
AC250V

Scale: 1/1



Unit: mm

I-t curve



The I-t curves above are plots of the average values of measurements obtained under conditions specified by SOC. These data are for reference only and are not intended to infer any guaranteed values.

Rated voltage	Certification *2	Range of rated current (I_N) *3	Rated breaking current		Current carrying capacity	Temp. rise	Overload operation
AC250V	<PS>E JET	100mA - 5A	500A	PF 0.7 - 0.8	1.1I_N until temperature stabilization occurs.	At 1.1I_N, 140K or less at the center, 60K or less at the contact	Within 60min at 1.35I_N Within 2min at 2.0I_N
		Over 5A - 30A	100A				

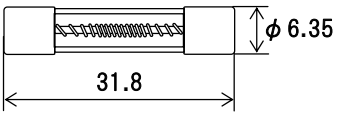
*1: High melting temperature type solder containing more than 85 wt% lead is used in this product (over 12 A - 30 A).
*2: Fuses with rated currents below 1 A are not covered under the Electrical Appliance and Material Safety Law.
*3: Any rated current value can be selected within this range.

250VⒶSDLNC (Time-delay)

RoHS *1

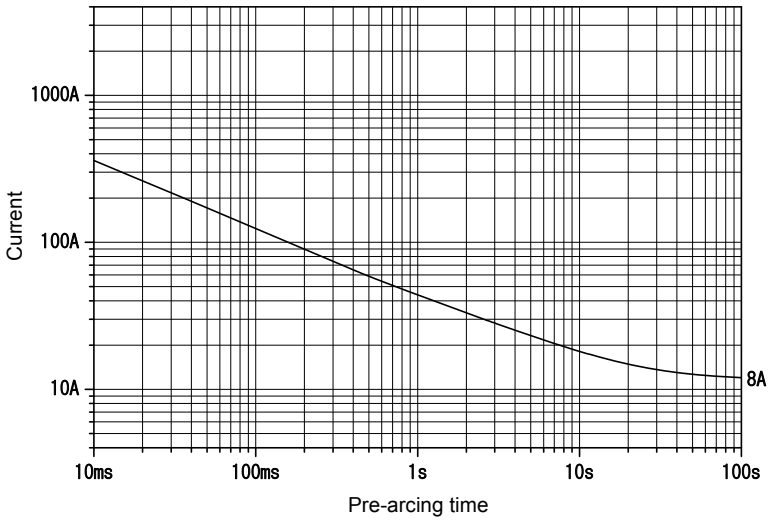
AC250V

Scale: 1/1



Unit: mm

I-t curve



The I-t curve above is a plot of the average values of measurements obtained under conditions specified by SOC. These data are for reference only and are not intended to infer any guaranteed values.

Rated voltage	Certification *2	Range of rated current (I_N) *3	Rated breaking current		Current carrying capacity	Temp. rise	Overload operation
AC250V	<PS>E JET	100mA - 15A	100A	PF 0.7 - 0.8	1.1I_N until temperature stabilization occurs.	At 1.1I_N, 140K or less at the center, 60K or less at the contact	*4

*1: High melting temperature type solder containing more than 85 wt% lead is used in this product.
*2: Fuses with rated currents below 1 A are not covered under the Electrical Appliance and Material Safety Law.
*3: Any rated current value can be selected within this range.
*4:

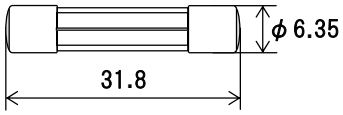
Rated current	1.35I_N	2.0I_N
100mA - 3A	Within 60min	5s - 2min
Over 3A - 15A		12s - 2min

SS2 (Normal-acting)

RoHS Pb

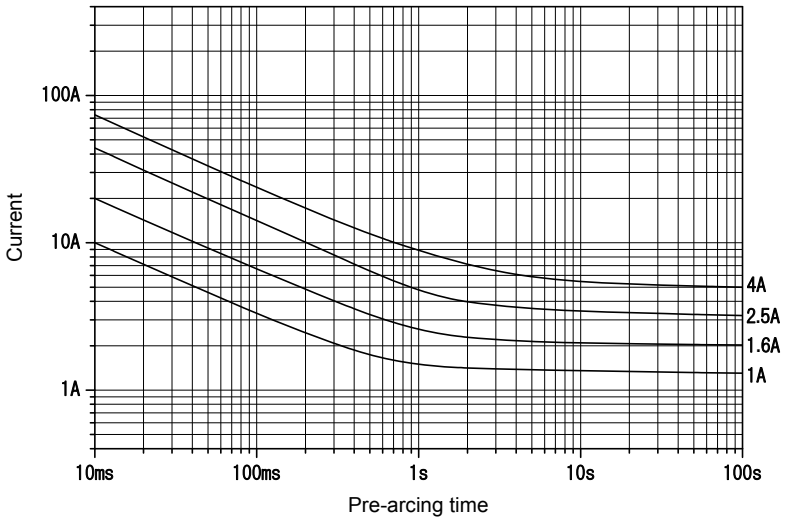
AC250V

Scale: 1/1



Unit: mm

I-t curve



The I-t curves above are plots of the average values of measurements obtained under conditions specified by SOC. These data are for reference only and are not intended to infer any guaranteed values.

Rated voltage	Certification	Range of rated current (I_N) *1	Rated breaking current		Current carrying capacity	Temp. rise	Overload operation
AC250V	UL Listed CSA Certified	50mA - 5A	10000A	PF 0.7 - 0.8	1.1I_N for 15min or more after temperature stabilization occurs.	70K or less at 1.1I_N	Within 60min at 1.35I_N Within 2min at 2.0I_N

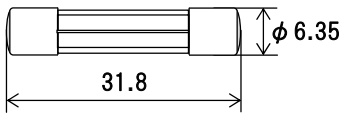
*1: Any rated current value can be selected within this range.

SS2 N1 (Normal-acting)

RoHS Pb

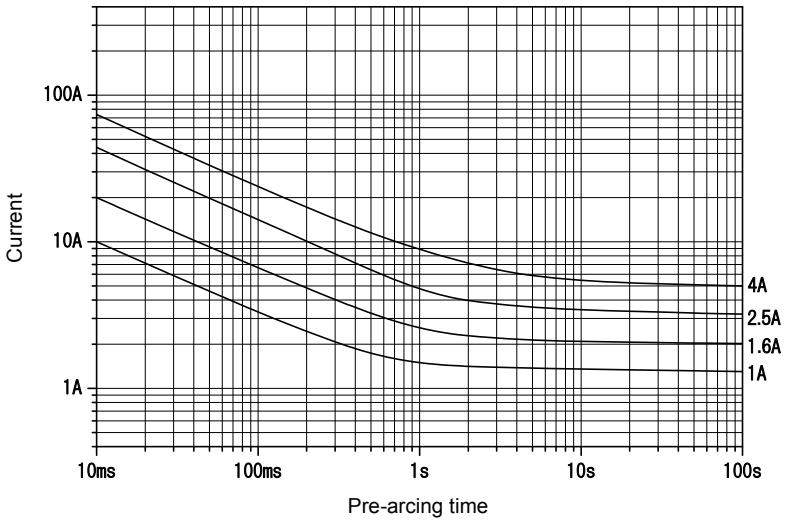
AC250V

Scale: 1/1



Unit: mm

I-t curve



The I-t curves above are plots of the average values of measurements obtained under conditions specified by SOC. These data are for reference only and are not intended to infer any guaranteed values.

Rated voltage	Certification	Range of rated current (I_N) *2	Rated breaking current		Current carrying capacity	Temp. rise	Overload operation
AC250V	UL Listed CSA Certified	50mA - 5A	10000A	PF 0.7 - 0.8	*3	70K or less at 1.1I_N	Within 60min at 1.35I_N Within 2min at 2.0I_N
	<PS>E JET *1		500A		*4	At 1.1I_N, 140K or less at the center, 60K or less at the contact	

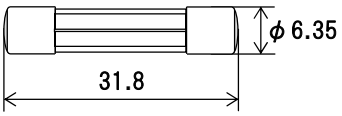
*1: Fuses with rated currents below 1 A are not covered under the Electrical Appliance and Material Safety Law.
*2: Any rated current value can be selected within this range.
*3: 1.1 I_N for 15min or more after temperature stabilization occurs.
*4: 1.1 I_N until temperature stabilization occurs.

SS6 (Normal-acting)

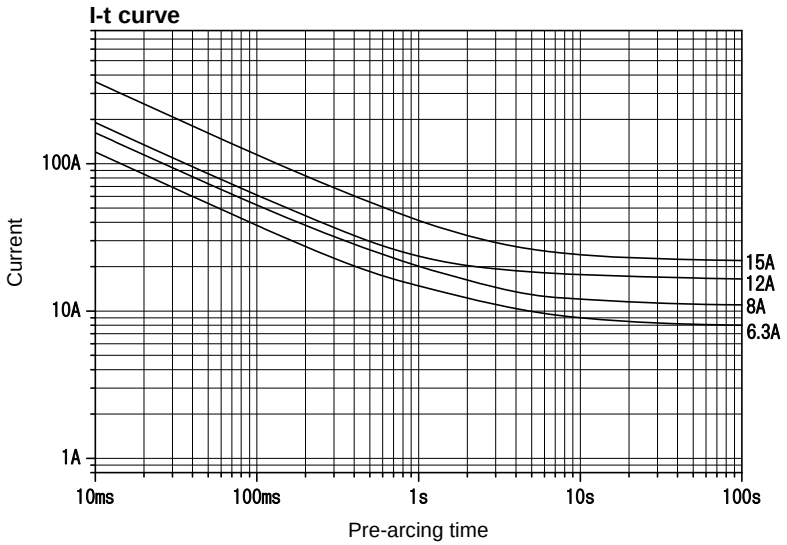
Over 5A - 8A: RoHS Pb
Over 8A - 15A: RoHS *1

AC250V AC125V

Scale: 1/1



Unit: mm



The I-t curves above are plots of the average values of measurements obtained under conditions specified by SOC. These data are for reference only and are not intended to infer any guaranteed values.

Rated voltage	Certification	Range of rated current (I_N) *2	Rated breaking current		Current carrying capacity	Temp. rise	Overload operation
AC250V	UL Listed CSA Certified	Over 5A - 8A	200A	PF 0.7 - 0.8	1.1I_N for 15min or more after temperature stabilization occurs.	70K or less at 1.1I_N	Within 60min at 1.35I_N Within 2min at 2.0I_N
AC125V	UL Recognized CSA Certified	Over 8A - 15A	10000A		1.0I_N for 15min or more after temperature stabilization occurs.	70K or less at 1.0I_N	

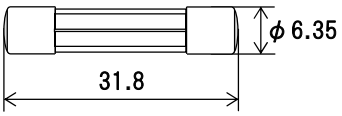
*1: High melting temperature type solder containing more than 85 wt% lead is used in this product (over 8 A - 15 A).
*2: Any rated current value can be selected within this range.

SS6 N1 (Normal-acting)

Over 5A - 8A: RoHS Pb
Over 8A - 15A: RoHS *1

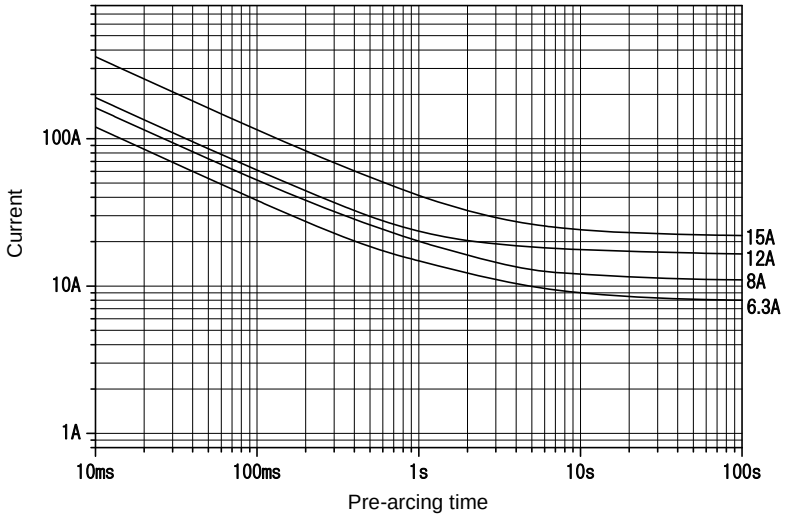
AC250V AC125V

Scale: 1/1



Unit: mm

I-t curve



The I-t curves above are plots of the average values of measurements obtained under conditions specified by SOC. These data are for reference only and are not intended to infer any guaranteed values.

Rated voltage	Certification	Range of rated current (I_N) *2	Rated breaking current		Current carrying capacity	Temp. rise	Overload operation
AC250V	UL Listed CSA Certified	Over 5A - 8A	200A	PF 0.7 - 0.8	1.1I_N for 15min or more after temperature stabilization occurs.	70K or less at 1.1I_N	Within 60min at 1.35I_N Within 2min at 2.0I_N
	<PS>E JET		100A		1.1I_N until temperature stabilization occurs.	At 1.1I_N, 140K or less at the center, 60K or less at the contact	
AC125V	UL Recognized CSA Certified	Over 8A - 15A	10000A		1.0I_N for 15min or more after temperature stabilization occurs.	70K or less at 1.0I_N	
	<PS>E JET		500A		1.1I_N until temperature stabilization occurs.	At 1.1I_N, 140K or less at the center, 60K or less at the contact	

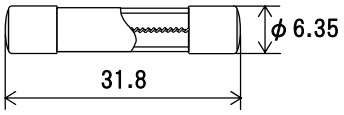
*1: High melting temperature type solder containing more than 85 wt% lead is used in this product (over 8 A - 15 A).
*2: Any rated current value can be selected within this range.

CES14 (Inrush-withstand)

100mA - 8A: RoHS Pb
Over 8A - 15A: RoHS *1

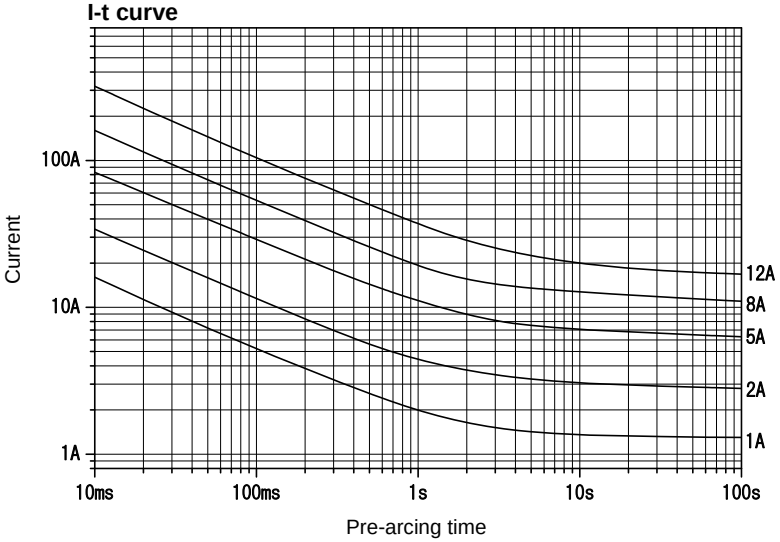
AC250V

Scale: 1/1



Unit: mm

I-t curve



The I-t curves above are plots of the average values of measurements obtained under conditions specified by SOC. These data are for reference only and are not intended to infer any guaranteed values.

Rated voltage	Certification	Range of rated current (I_N) *2	Rated breaking current		Current carrying capacity	Temp. rise	Overload operation
AC250V	UL Listed CSA Certified	100mA - 10A	200A	PF 0.7 - 0.8	1.1I_N for 15min or more after temper-ature stabilization occurs.	70K or less at 1.1I_N	Within 60min at 1.35I_N Within 2min at 2.0I_N
	UL Recognized	Over 10A - 15A	100A				

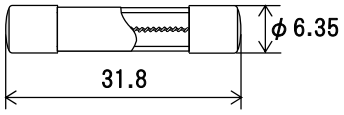
*1: High melting temperature type solder containing more than 85 wt% lead is used in this product (over 8 A - 15 A).
*2: Any rated current value can be selected within this range.

CES14 N1 (Inrush-withstand)

100mA - 8A: RoHS Pb
Over 8A - 10A: RoHS *1

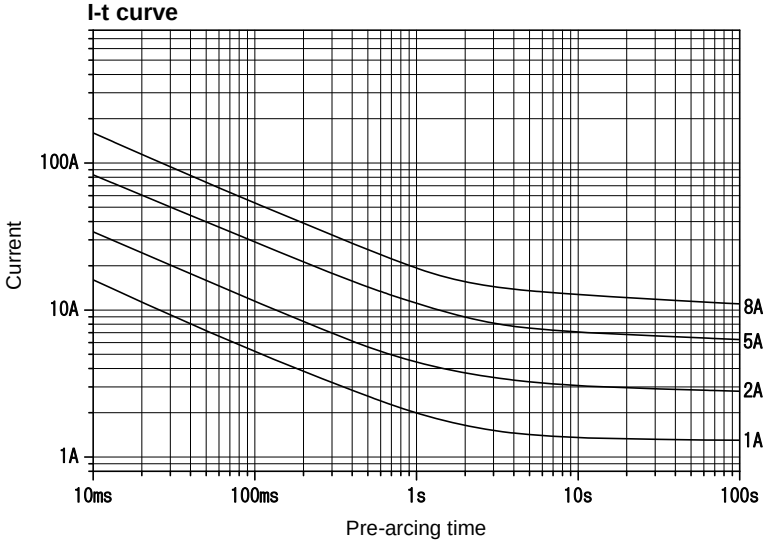
AC250V

Scale: 1/1



Unit: mm

I-t curve



The I-t curves above are plots of the average values of measurements obtained under conditions specified by SOC. These data are for reference only and are not intended to infer any guaranteed values.

Rated voltage	Certification	Range of rated current (I_N) *3	Rated breaking current		Current carrying capacity	Temp. rise	Overload operation
AC250V	UL Listed CSA Certified	100mA - 10A	200A	PF 0.7 - 0.8	*4	70K or less at 1.1I_N	Within 60min at 1.35I_N Within 2min at 2.0I_N
	<PS>E JET *2		100A		*5	At 1.1I_N, 140K or less at the center, 60K or less at the contact	

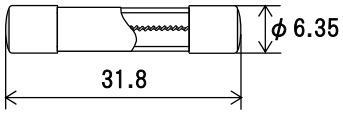
*1: High melting temperature type solder containing more than 85 wt% lead is used in this product (over 8 A - 10 A).
*2: Fuses with rated currents below 1 A are not covered under the Electrical Appliance and Material Safety Law.
*3: Any rated current value can be selected within this range.
*4: 1.1 I_N for 15min or more after temperature stabilization occurs.
*5: 1.1 I_N until temperature stabilization occurs.

CES14 N2 (Inrush-withstand)

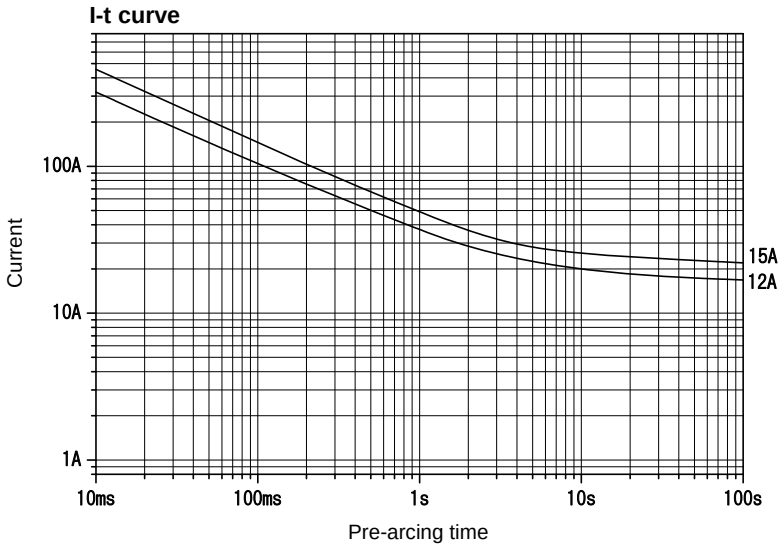
RoHS *1

AC250V

Scale: 1/1



Unit: mm



The I-t curves above are plots of the average values of measurements obtained under conditions specified by SOC. These data are for reference only and are not intended to infer any guaranteed values.

Rated voltage	Certification	Range of rated current (I_N) *2	Rated breaking current		Current carrying capacity	Temp. rise	Overload operation
AC250V	UL Recognized	Over 10A - 15A	100A	PF 0.7 - 0.8	1.1I_N for 15min or more after temperature stabilization occurs.	70K or less at 1.1I_N	Within 60min at 1.35I_N Within 2min at 2.0I_N
	<PS>E JET				1.1I_N until temperature stabilization occurs.	At 1.1I_N, 140K or less at the center, 60K or less at the contact	

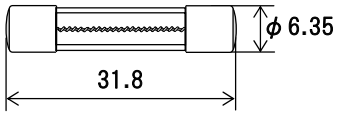
*1: High melting temperature type solder containing more than 85 wt% lead is used in this product.
*2: Any rated current value can be selected within this range.

ST4 (Inrush-withstand)

100mA - 8A: RoHS Pb
Over 8A - 30A: RoHS *1

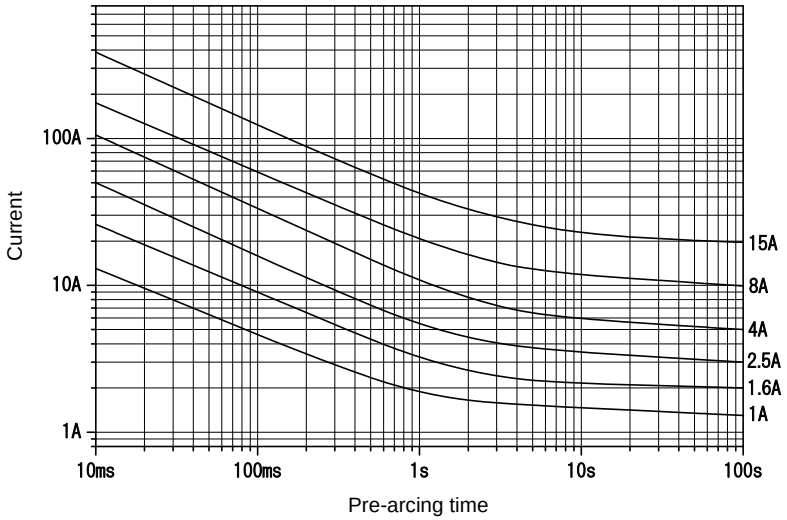
AC250V

Scale: 1/1



Unit: mm

I-t curve



The I-t curves above are plots of the average values of measurements obtained under conditions specified by SOC. These data are for reference only and are not intended to infer any guaranteed values.

Rated voltage	Certification	Range of rated current (I_N) *2	Rated breaking current		Current carrying capacity	Temp. rise	Overload operation
AC250V	UL Listed CSA Certified	100mA - 1A	10000A	PF 0.7 - 0.8	$1.1I_N$ for 15min or more after temperature stabilization occurs.	70K or less at $1.1I_N$	Within 60min at $1.35I_N$ Within 2min at $2.0I_N$
		Over 1A - 8A	200A				
	C-UL US Recognized	Over 8A - 30A			$1.0I_N$ until temperature stabilization occurs.	—	

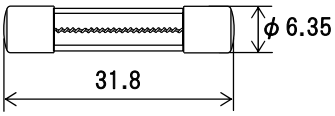
*1: High melting temperature type solder containing more than 85 wt% lead is used in this product (over 8 A - 30 A).
*2: Any rated current value can be selected within this range.

ST4 N1 (Inrush-withstand)

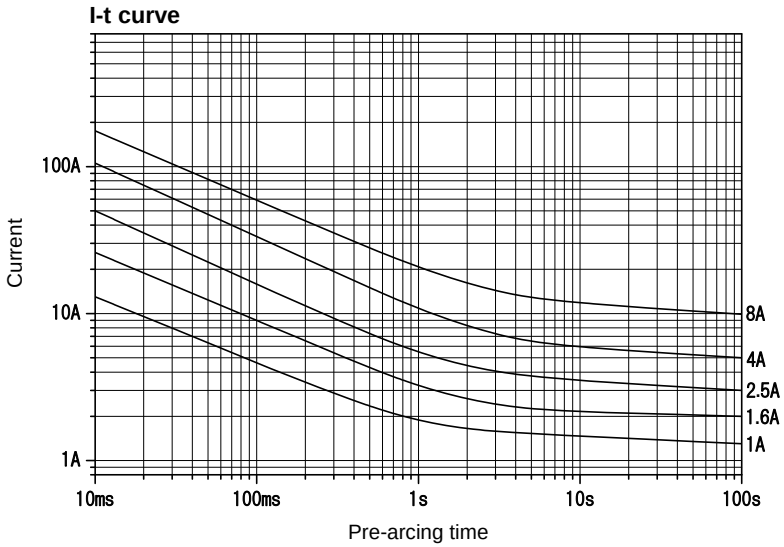
RoHS Pb

AC250V

Scale: 1/1



Unit: mm



The I-t curves above are plots of the average values of measurements obtained under conditions specified by SOC. These data are for reference only and are not intended to infer any guaranteed values.

Rated voltage	Certification	Range of rated current (I_N) *2	Rated breaking current		Current carrying capacity	Temp. rise	Overload operation
AC250V	UL Listed CSA Certified	100mA - 1A	10000A	PF 0.7 - 0.8	1.1I_N for 15min or more after temperature stabilization occurs.	70K or less at 1.1I_N	Within 60min at 1.35I_N Within 2min at 2.0I_N
		Over 1A - 8A	200A				
	<PS>E JET *1	100mA - 1A	500A		1.1I_N until temperature stabilization occurs.	At 1.1I_N, 140K or less at the center, 60K or less at the contact	
		Over 1A - 8A	100A				

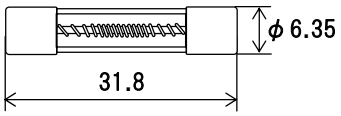
*1: Fuses with rated currents below 1 A are not covered under the Electrical Appliance and Material Safety Law.
*2: Any rated current value can be selected within this range.

SD4 (Time-delay)

RoHS *1

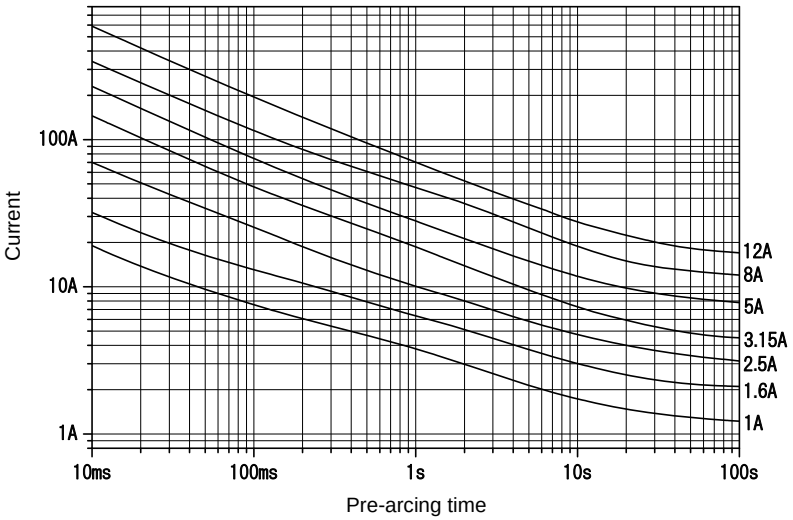
AC250V AC125V

Scale: 1/1



Unit: mm

I-t curve



The I-t curves above are plots of the average values of measurements obtained under conditions specified by SOC. These data are for reference only and are not intended to infer any guaranteed values.

Rated voltage	Certification	Range of rated current (I_N) *2	Rated breaking current		Current carrying capacity	Temp. rise	Overload operation
AC250V	UL Listed	100mA - 3A	10000A	PF 0.7 - 0.8	1.1I_N for 15min or more after temperature stabilization occurs.	70K or less at 1.1I_N	*3
	CSA Certified		100A				
	UL Listed CSA Certified	Over 3A - 8A	200A				
AC125V	CSA Component Acceptance	Over 8A - 20A	10000A		1.0I_N for 15min or more after temperature stabilization occurs.	70K or less at 1.0I_N	

*1: High melting temperature type solder containing more than 85 wt% lead is used in this product.

*2: Any rated current value can be selected within this range.

*3:

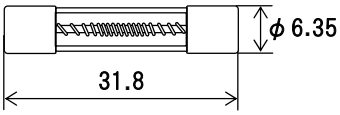
Rated current	1.35I_N	2.0I_N
100mA - 3A	Within 60min	5s - 2min
Over 3A - 20A		12s - 2min

SD4 N1 (Time-delay)

RoHS *1

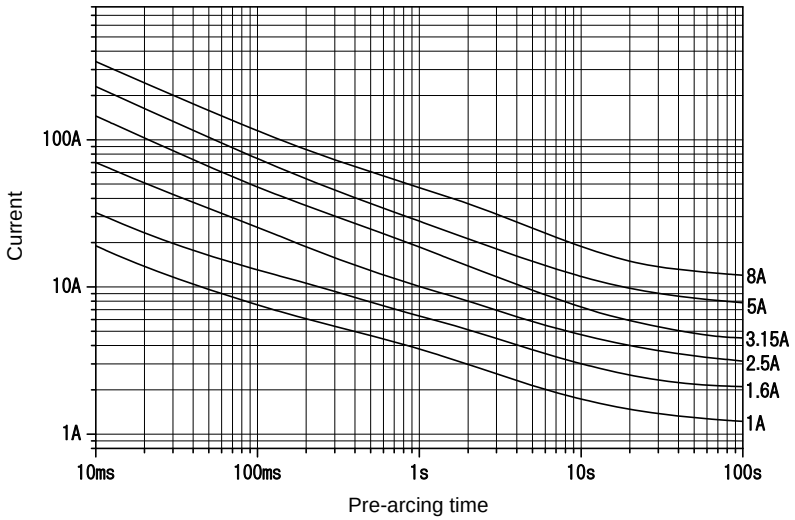
AC250V

Scale: 1/1



Unit: mm

I-t curve



The I-t curves above are plots of the average values of measurements obtained under conditions specified by SOC. These data are for reference only and are not intended to infer any guaranteed values.

Rated voltage	Certification	Range of rated current (I_N) *3	Rated breaking current		Current carrying capacity	Temp. rise	Overload operation
AC250V	UL Listed	100mA - 3A	10000A	PF 0.7 - 0.8	1.1I_N for 15min or more after temperature stabilization occurs.	70K or less at 1.1I_N	*4
	CSA Certified		100A				
	UL Listed CSA Certified	Over 3A - 8A	200A				
	<PS>E JET *2	100mA - 8A	100A		1.1I_N until temperature stabilization occurs.	At 1.1I_N, 140K or less at the center, 60K or less at the contact	Within 60min at 1.35I_N Within 2min at 2.0I_N

*1: High melting temperature type solder containing more than 85 wt% lead is used in this product.
*2: Fuses with rated currents below 1 A are not covered under the Electrical Appliance and Material Safety Law.
*3: Any rated current value can be selected within this range.
*4:

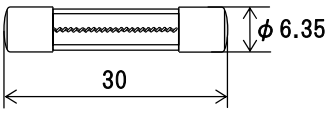
Rated current	1.35I_N	2.0I_N
100mA - 3A	Within 60min	5s - 2min
Over 3A - 8A		12s - 2min

TLC N4 (Inrush-withstand)

RoHS *1

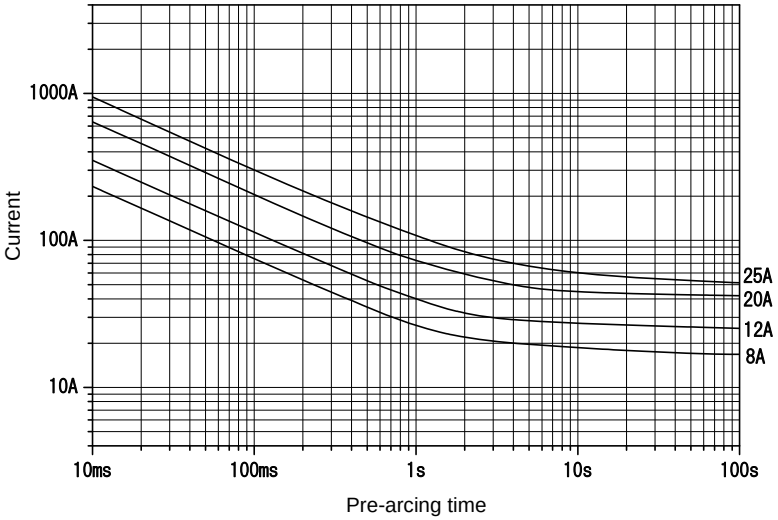
AC250V

Scale: 1/1



Unit: mm

I-t curve



The I-t curves above are plots of the average values of measurements obtained under conditions specified by SOC. These data are for reference only and are not intended to infer any guaranteed values.

Rated voltage	Certification	Rated current (I_N)	Rated breaking current		Endurance test	Test at elevated temp.	Pre-arcing time/ current characteristic
AC250V	SEMKO Certified	8A, 10A, 12A, 15A, 20A, 25A	250A	Resistive circuit	*2	*3	*4
	C-UL US Recognized						
	<PS>E JET		100A	PF 0.7 - 0.8			

*1: High melting temperature type solder containing more than 85 wt% lead is used in this product.
*2: After repeating 100 cycles of 1.2 I_N for 1 h and switching-off for 15 min, 1.5 I_N can be passed through the fuse for 1 h or more.
*3: 1.1 I_N can be passed through the fuse for 1 h or more at 70±2 °C.
*4:

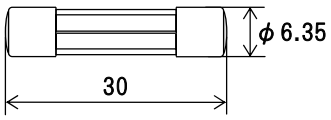
Rated current	2.1I_N	2.75I_N	4.0I_N	10I_N
8A - 25A	Within 30min	0.6s - 10s	0.15s - 3s	0.02s - 0.3s

250VⒶLC (Normal-acting)

50mA - 12A: RoHS
Over 12A - 30A: RoHS *1

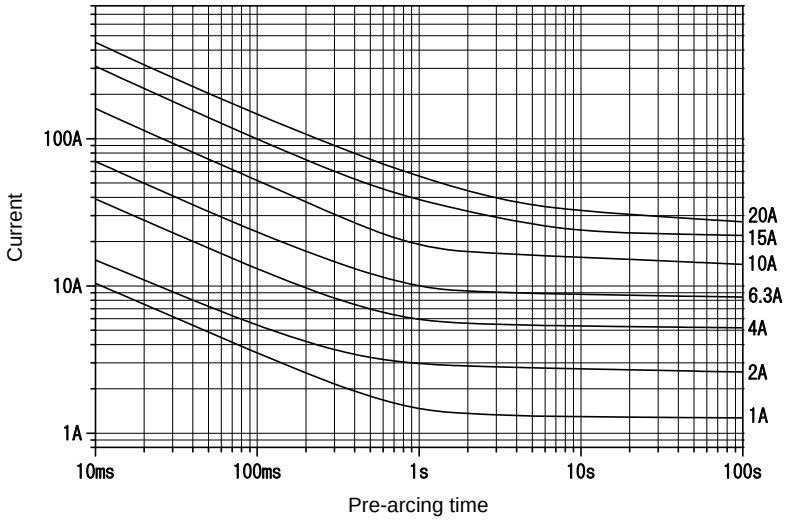
AC250V

Scale: 1/1



Unit: mm

I-t curve



The I-t curves above are plots of the average values of measurements obtained under conditions specified by SOC. These data are for reference only and are not intended to infer any guaranteed values.

Rated voltage	Certification *2	Range of rated current (I_N) *3	Rated breaking current		Current carrying capacity	Temp. rise	Overload operation
AC250V	<PS>E JET	50mA - 30A	100A	PF 0.7 - 0.8	1.1I_N until temperature stabilization occurs.	At 1.1I_N, 140K or less at the center, 60K or less at the contact	Within 60min at 1.35I_N Within 2min at 2.0I_N

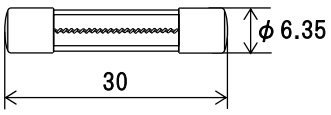
*1: High melting temperature type solder containing more than 85 wt% lead is used in this product (over 12 A - 30 A).
*2: Fuses with rated currents below 1 A are not covered under the Electrical Appliance and Material Safety Law.
*3: Any rated current value can be selected within this range.

250VⒶTLC (Inrush-withstand)

100mA - 12A: RoHS
Over 12A - 30A: RoHS *1

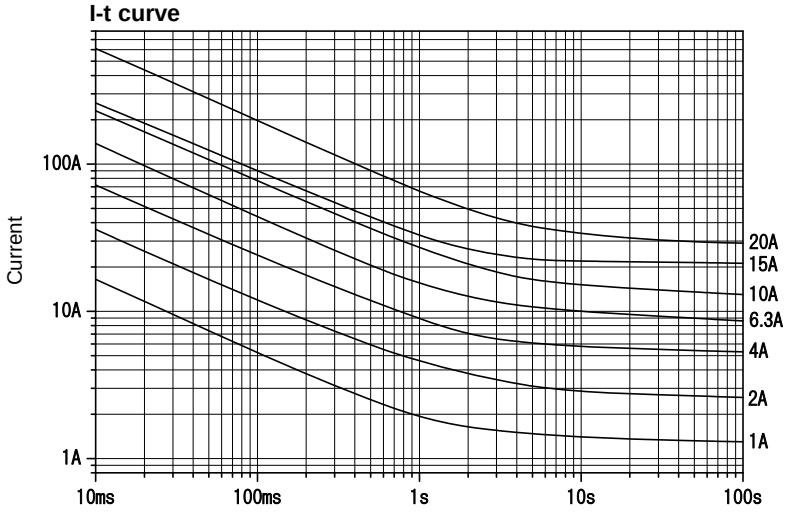
AC250V

Scale: 1/1



Unit: mm

I-t curve



The I-t curves above are plots of the average values of measurements obtained under conditions specified by SOC. These data are for reference only and are not intended to infer any guaranteed values.

Rated voltage	Certification *2	Range of rated current (I_N) *3	Rated breaking current		Current carrying capacity	Temp. rise	Overload operation
AC250V	<PS>E JET	100mA - 5A	500A	PF 0.7 - 0.8	1.1I_N until temperature stabilization occurs.	At 1.1I_N, 140K or less at the center, 60K or less at the contact	Within 60min at 1.35I_N Within 2min at 2.0I_N
		Over 5A - 30A	100A				

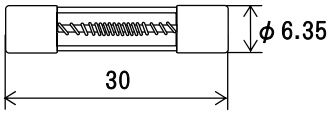
*1: High melting temperature type solder containing more than 85 wt% lead is used in this product (over 12 A - 30 A).
*2: Fuses with rated currents below 1 A are not covered under the Electrical Appliance and Material Safety Law.
*3: Any rated current value can be selected within this range.

250VⒶSDLC (Time-delay)

RoHS *1

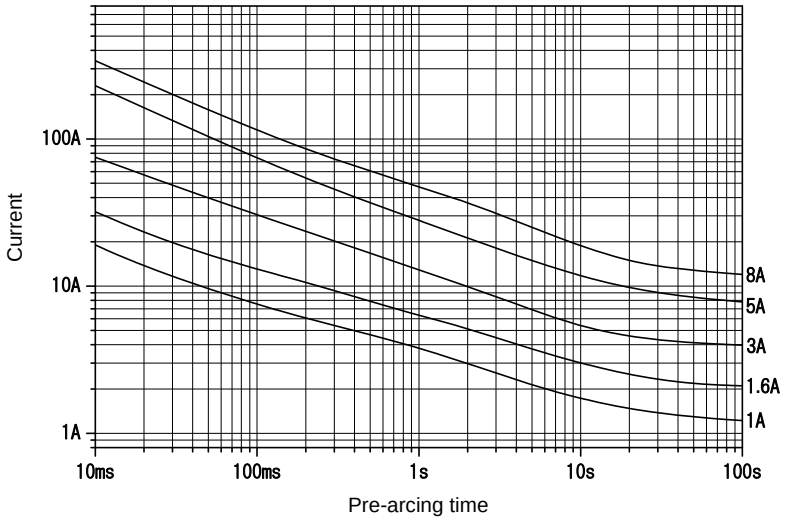
AC250V

Scale: 1/1



Unit: mm

I-t curve



The I-t curves above are plots of the average values of measurements obtained under conditions specified by SOC. These data are for reference only and are not intended to infer any guaranteed values.

Rated voltage	Certification *2	Range of rated current (I_N) *3	Rated breaking current		Current carrying capacity	Temp. rise	Overload operation
AC250V	<PS>E JET	100mA - 8A	100A	PF 0.7 - 0.8	1.1I_N until temperature stabilization occurs.	At 1.1I_N, 140K or less at the center, 60K or less at the contact	*4

*1: High melting temperature type solder containing more than 85 wt% lead is used in this product.
*2: Fuses with rated currents below 1 A are not covered under the Electrical Appliance and Material Safety Law.
*3: Any rated current value can be selected within this range.
*4:

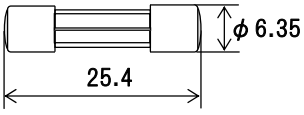
Rated current	1.35I_N	2.0I_N
100mA - 3A	Within 60min	5s - 2min
Over 3A - 8A		12s - 2min

SL4 (Normal-acting)

RoHS Pb

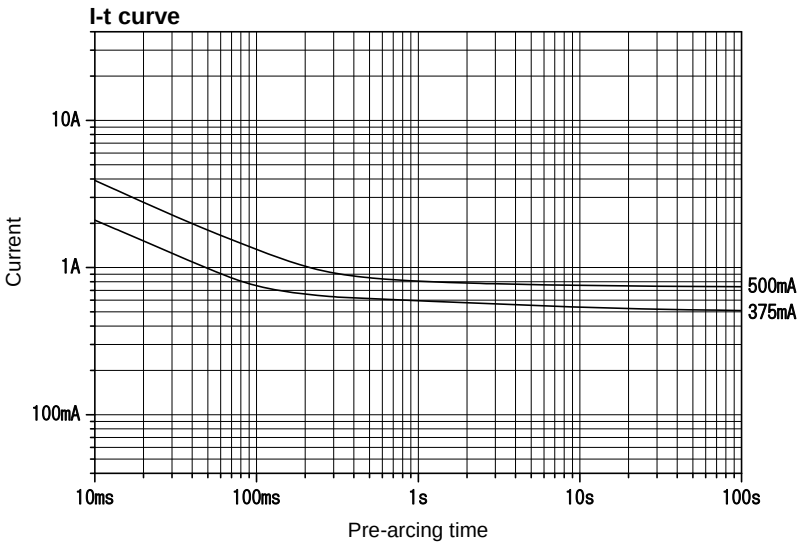
AC250V

Scale: 1/1



Unit: mm

I-t curve



The I-t curves above are plots of the average values of measurements obtained under conditions specified by SOC. These data are for reference only and are not intended to infer any guaranteed values.

Rated voltage	Certification	Range of rated current (I_N) *1	Rated breaking current		Current carrying capacity	Temp. rise	Overload operation
AC250V	UL Listed CSA Certified	80mA - 2A	100A	PF 0.7 - 0.8	1.1I_N for 15min or more after temperature stabilization occurs.	70K or less at 1.1I_N	Within 60min at 1.35I_N Within 2min at 2.0I_N

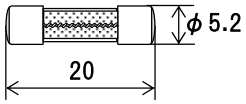
*1: Any rated current value can be selected within this range.

HT (Time-lag, high-breaking capacity)

1A – 6.3A: RoHS Pb
8A – 10A: RoHS *1

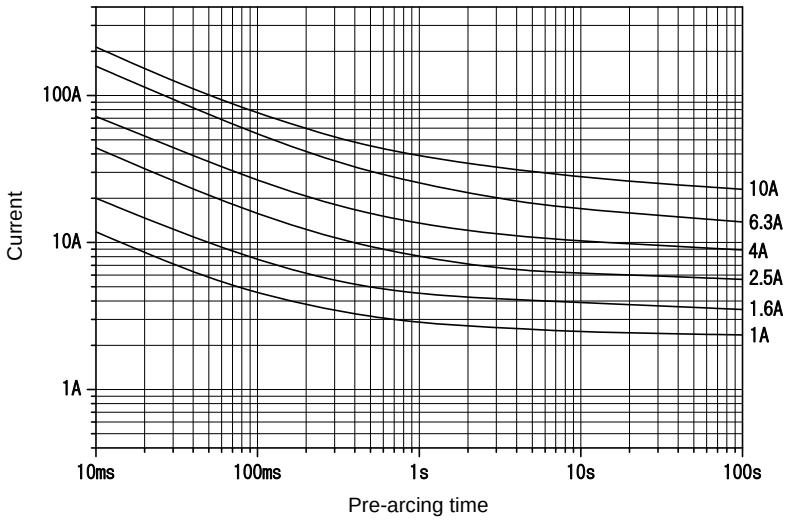
AC250V

Scale: 1/1



Unit: mm

I-t curve



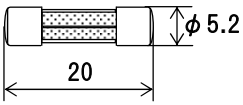
The I-t curves above are plots of the average values of measurements obtained under conditions specified by SOC. These data are for reference only and are not intended to infer any guaranteed values.

Rated voltage	Certification	Rated current (I_N)	Rated breaking current		Endurance test	Test at elevated temp.	Pre-arcing time/ current characteristic
AC250V	UL Recognized CSA Component Acceptance SEMKO Certified BSI Licensed <PS>E JET	1A, 1.25A, 1.6A, 2A, 2.5A, 3.15A, 4A, 5A, 6.3A	1500A	PF 0.7 - 0.8	*2	*3	*4
	C-UL US Recognized SEMKO Certified BSI Licensed <PS>E JET	8A, 10A					

*1: High melting temperature type solder containing more than 85 wt% lead is used in this product (8 A - 10 A).
*2: After repeating 100 cycles of 1.2 I_N for 1 h and switching-off for 15 min, 1.5 I_N can be passed through the fuse for 1 h or more.
*3: 1.1 I_N can be passed through the fuse for 1 h or more at 70±2 °C.
*4:

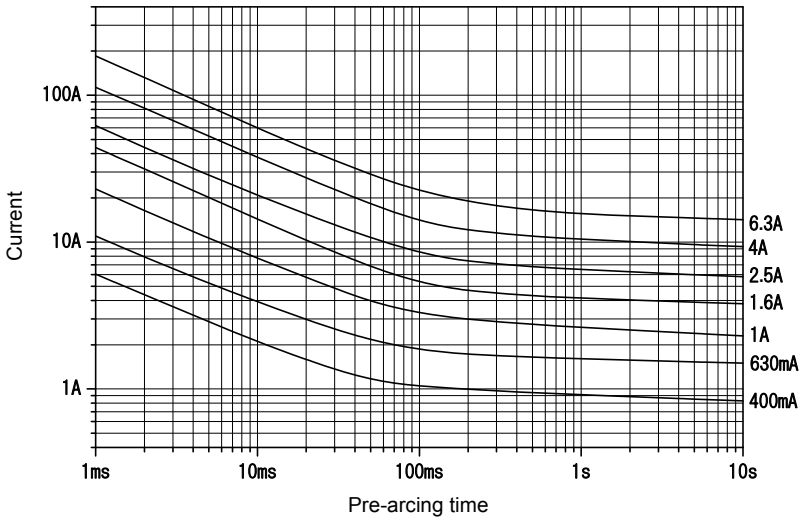
Rated current	$2.1I_N$	$2.75I_N$	$4.0I_N$	$10I_N$
1A - 3.15A	Within 30min	0.75s - 80s	0.095s - 5s	0.01s - 0.15s
4A - 10A			0.15s - 5s	

Scale: 1/1



Unit: mm

I-t curve



The I-t curves above are plots of the average values of measurements obtained under conditions specified by SOC. These data are for reference only and are not intended to infer any guaranteed values.

Rated voltage	Certification	Rated current (I_N)	Rated breaking current		Endurance test	Pre-arcing time/ current characteristic
AC250V	UL Recognized CSA Component Acceptance SEMKO Certified BSI Licensed	400mA, 500mA, 630mA, 800mA, 1A, 1.25A, 1.6A, 2 A, 2.5A, 3.15A, 4A, 5A, 6.3 A	1500A	PF 0.7 - 0.8	*1	*2

*1: After repeating 100 cycles of 1.2 I_N for 1 h and switching-off for 15 min, 1.5 I_N can be passed through the fuse for 1 h or more.

*2:

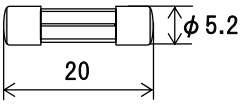
Rated current	2.1I_N	2.75I_N	4.0I_N	10I_N
400mA - 3.15A	Within 30min	0.01s - 2s	0.003s - 0.3s	Within 0.02s
4A - 6.3A		0.01s - 3s		

EQ (Quick-acting, low-breaking capacity)

RoHS Pb

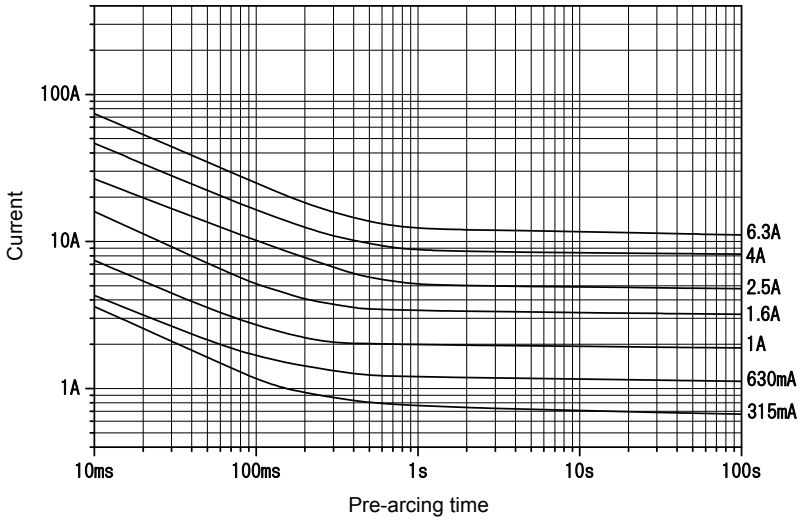
AC250V

Scale: 1/1



Unit: mm

I-t curve



The I-t curves above are plots of the average values of measurements obtained under conditions specified by SOC. These data are for reference only and are not intended to infer any guaranteed values.

Rated voltage	Certification	Rated current (I_N)	Rated breaking current		Endurance test	Pre-arcing time/ current characteristic
AC250V	UL Recognized SEMKO Certified BSI Licensed	80mA, 100mA, 125mA, 160mA, 200mA, 250mA, 315mA, 400mA, 500mA, 630mA, 800mA, 1A, 1.25A, 1.6A, 2A, 2.5A, 3.15A, 4A, 5A, 6.3A	35A or 10I_N, whichever is greater.	Resistive circuit	*1	*2

*1: After repeating 100 cycles of 1.2 I_N for 1 h and switching-off for 15 min, 1.5 I_N can be passed through the fuse for 1 h or more.

*2:

Rated current	2.1I_N	2.75I_N	4.0I_N	10I_N
80mA, 100mA	Within 30min	0.01s - 0.5s	0.003s - 0.1s	Within 0.02s
125mA - 6.3A		0.05s - 2s	0.01s - 0.3s	

ET (Time-lag, low-breaking capacity)

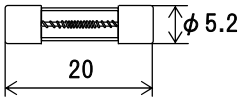
50mA – 250mA: RoHS *1
315mA – 800mA: RoHS Pb

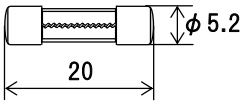
AC250V

250 mA or less

315 mA or more

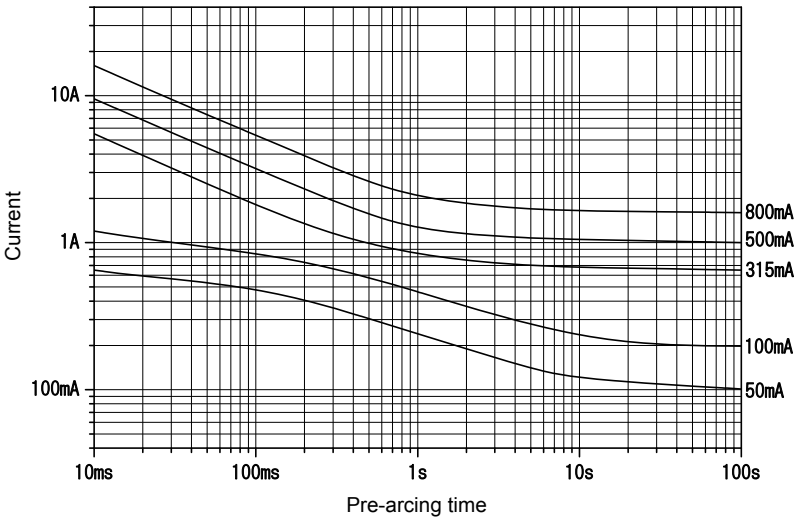
Scale: 1/1





Unit: mm

I-t curve



The I-t curves above are plots of the average values of measurements obtained under conditions specified by SOC. These data are for reference only and are not intended to infer any guaranteed values.

Rated voltage	Certification	Rated current (I_N)	Rated breaking current		Endurance test	Test at elevated temp.	Pre-arcing time/ current characteristic
AC250V	UL Recognized CSA Component Acceptance SEMKO Certified BSI Licensed	50mA, 63mA, 80mA, 100mA, 125mA, 160mA, 200mA, 250mA, 315mA, 400mA, 500mA, 630mA, 800mA	35A	Resistive circuit	*2	*3	*4

*1: High melting temperature type solder containing more than 85 wt% lead is used in this product (50 mA - 250 mA).
*2: After repeating 100 cycles of 1.2 I_N for 1 h and switching-off for 15 min, 1.5 I_N can be passed through the fuse for 1 h or more.
*3: 1.1 I_N can be passed through the fuse for 1 h or more at 70±2 °C.
*4:

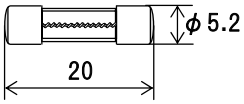
Rated current	2.1I_N	2.75I_N	4.0I_N	10I_N
50mA - 100mA	Within 2min	0.2s - 10s	0.04s - 3s	0.01s - 0.3s
125mA - 800mA		0.6s - 10s	0.15s - 3s	0.02s - 0.3s

ET6 (Time-lag, enhanced breaking capacity)

RoHS

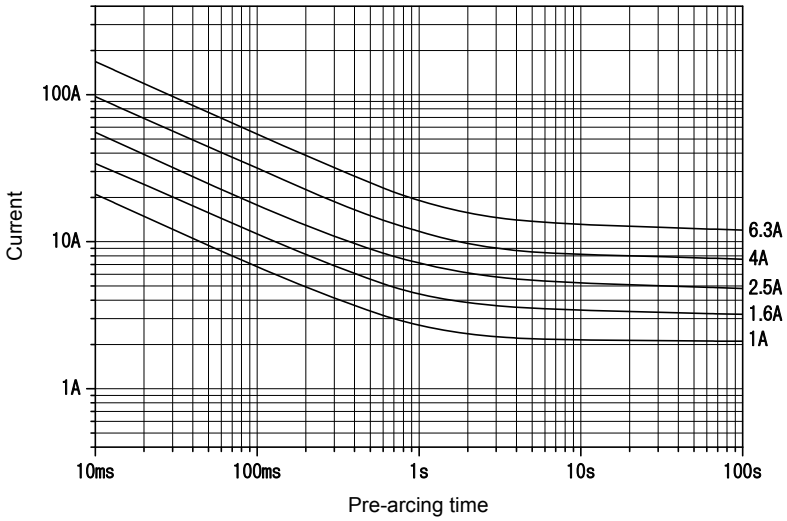
AC250V

Scale: 1/1



Unit: mm

I-t curve



The I-t curves above are plots of the average values of measurements obtained under conditions specified by SOC. These data are for reference only and are not intended to infer any guaranteed values.

Rated voltage	Certification	Rated current (I_N)	Rated breaking current		Current carrying capacity/ Endurance test	Test at elevated temp.	Temp. rise	Pre-arcing time/current characteristic
AC250V	C-UL US Recognized	1A, 1.25A, 1.6A, 2A, 2.5A, 3.15A, 4A, 5A, 6.3A	150A	Resistive circuit	1.0I_N until temperature stabilization occurs.	—	75K or less at 1.0I_N	Within 30min at 2.1I_N
	SEMKO Certified				*1	*2	—	*3
	<PS>E JET		100A	PF 0.7 - 0.8	1.0I_N until temperature stabilization occurs.	—	At 1.0I_N, 140K or less at the center, 60K or less at the contact	Within 30min at 2.1I_N

*1: Endurance test: After repeating 100 cycles of 1.2 I_N for 1 h and switching-off for 15 min, 1.5 I_N can be passed through the fuse for 1 h or more.

*2: 1.1 I_N can be passed through the fuse for 1 h or more at 70±2 °C.

*3:

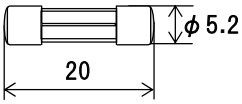
Rated current	2.1I_N	2.75I_N	4.0I_N	10I_N
1A - 6.3A	Within 2min	0.6s - 10s	0.15s - 3s	0.02s - 0.3s

250VⒶSC (Normal-acting)

62mA - 10A: RoHS Pb
Over 10A - 12A: RoHS *1

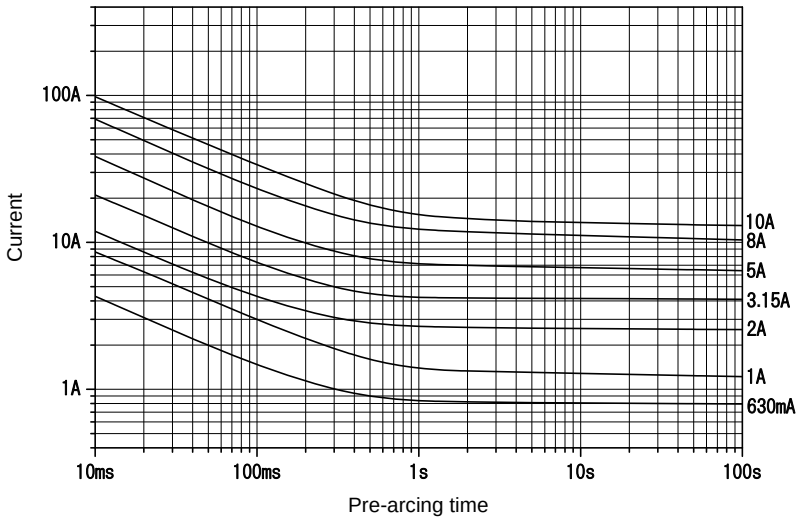
AC250V

Scale: 1/1



Unit: mm

I-t curve



The I-t curves above are plots of the average values of measurements obtained under conditions specified by SOC. These data are for reference only and are not intended to infer any guaranteed values.

Rated voltage	Certification *2	Range of rated current (I_N) *3	Rated breaking current		Current carrying capacity	Temp. rise	Overload operation
AC250V	<PS>E JET	62mA - 12A	100A	PF 0.7 - 0.8	1.1I_N until temperature stabilization occurs.	At 1.1I_N, 140K or less at the center, 60K or less at the contact	Within 60min at 1.35I_N Within 2min at 2.0I_N

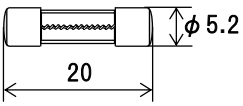
*1: High melting temperature type solder containing more than 85 wt% lead is used in this product (over 10 A - 12 A).
*2: Fuses with rated currents below 1 A are not covered under the Electrical Appliance and Material Safety Law.
*3: Any rated current value can be selected within this range.

250VⒶTSC (Inrush-withstand)

RoHS Pb

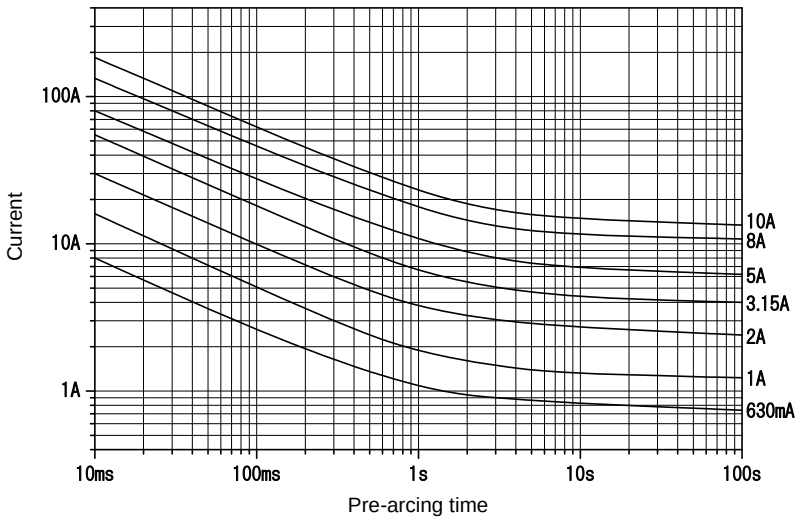
AC250V

Scale: 1/1



Unit: mm

I-t curve



The I-t curves above are plots of the average values of measurements obtained under conditions specified by SOC. These data are for reference only and are not intended to infer any guaranteed values.

Rated voltage	Certification *1	Range of rated current (I_N) *2	Rated breaking current		Current carrying capacity	Temp. rise	Overload operation
AC250V	<PS>E JET	100mA - 10A	100A	PF 0.7 - 0.8	1.1I_N until temperature stabilization occurs.	At 1.1I_N, 140K or less at the center, 60K or less at the contact	Within 60min at 1.35I_N Within 2min at 2.0I_N

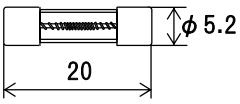
*1: Fuses with rated currents below 1 A are not covered under the Electrical Appliance and Material Safety Law.
*2: Any rated current value can be selected within this range.

250VⒶSDSC (Time-delay)

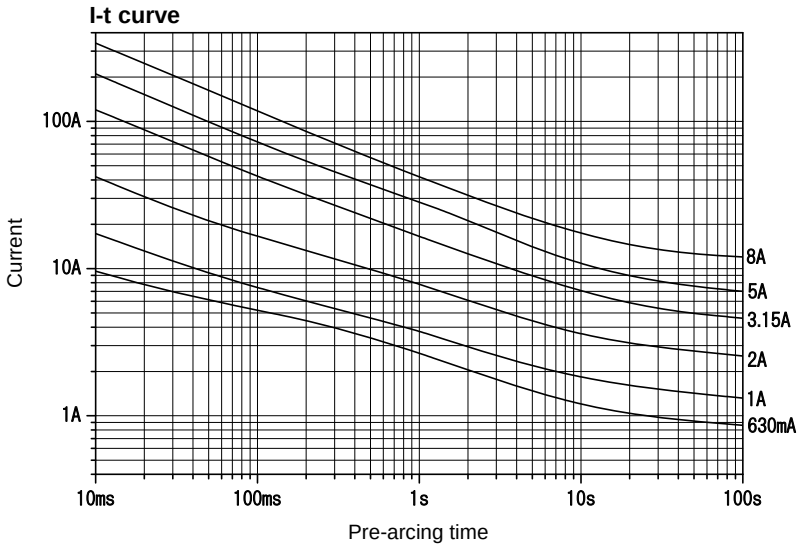
RoHS *1

AC250V

Scale: 1/1



Unit: mm



The I-t curves above are plots of the average values of measurements obtained under conditions specified by SOC. These data are for reference only and are not intended to infer any guaranteed values.

Rated voltage	Certification *2	Range of rated current (I_N) *3	Rated breaking current		Current carrying capacity	Temp. rise	Overload operation
AC250V	<PS>E JET	100mA - 8A	100A	PF 0.7 - 0.8	1.1I_N until temperature stabilization occurs.	At 1.1I_N, 140K or less at the center, 60K or less at the contact	*4

*1: High melting temperature type solder containing more than 85 wt% lead is used in this product.
*2: Fuses with rated currents below 1 A are not covered under the Electrical Appliance and Material Safety Law.
*3: Any rated current value can be selected within this range.
*4:

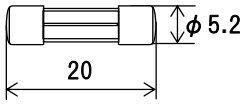
Rated current	1.35I_N	2.0I_N
100mA - 3A	Within 60min	5s - 2min
Over 3A - 8A		12s - 2min

MQ4 (Normal-acting)

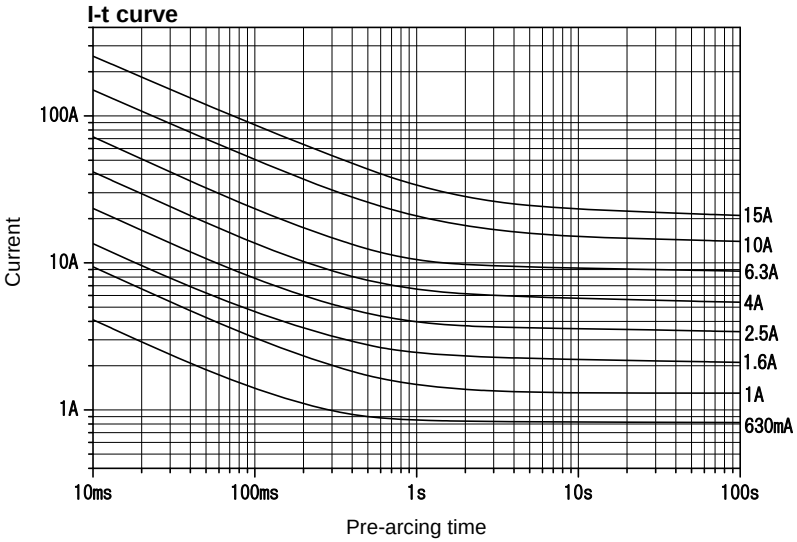
62mA - 8A: RoHS Pb
Over 8A - 15A: RoHS *1

AC250V

Scale: 1/1



Unit: mm



The I-t curves above are plots of the average values of measurements obtained under conditions specified by SOC. These data are for reference only and are not intended to infer any guaranteed values.

Rated voltage	Certification	Range of rated current (I_N) *2	Rated breaking current		Current carrying capacity	Temp. rise	Overload operation
AC250V	UL Listed CSA Certified	62mA - 3A	100A	PF 0.7 - 0.8	1.1I_N for 15min or more after temperature stabilization occurs.	70K or less at 1.1I_N	Within 60min at 1.35I_N Within 2min at 2.0I_N
	UL Recognized	Over 3A - 15A			1.0I_N for 15min or more after temperature stabilization occurs.	70K or less at 1.0I_N	

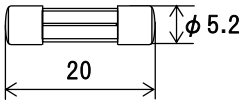
*1: High melting temperature type solder containing more than 85 wt% lead is used in this product (over 8 A - 15 A).
*2: Any rated current value can be selected within this range.

MQ4 N1 (Normal-acting)

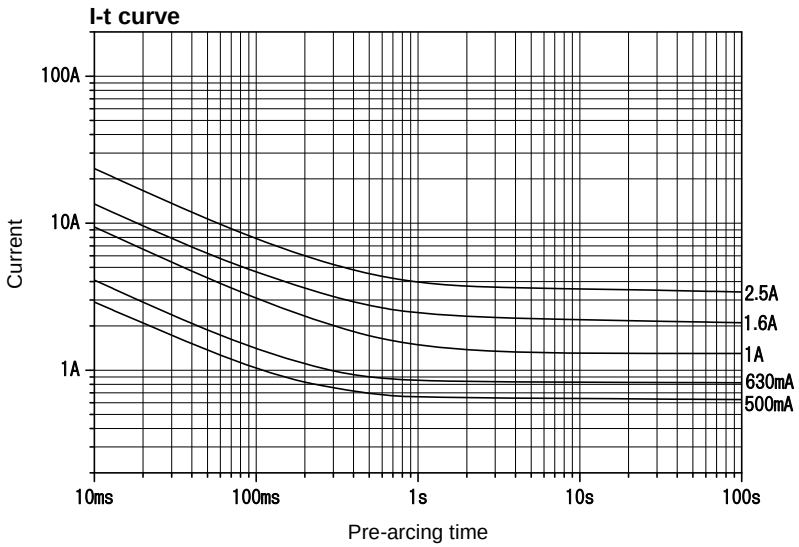
RoHS Pb

AC250V

Scale: 1/1



Unit: mm



The I-t curves above are plots of the average values of measurements obtained under conditions specified by SOC. These data are for reference only and are not intended to infer any guaranteed values.

Rated voltage	Certification	Range of rated current (I_N)*2	Rated breaking current		Current carrying capacity	Temp. rise	Overload operation
AC250V	UL Listed CSA Certified	62mA - 3A	100A	PF 0.7 - 0.8	1.1I_N for 15min or more after temperature stabilization occurs.	70K or less at 1.1I_N	Within 60min at 1.35I_N Within 2min at 2.0I_N
	<PS>E JET*1				1.1I_N until temperature stabilization occurs.	At 1.1I_N, 140K or less at the center, 60K or less at the contact	

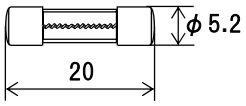
*1: Fuses with rated currents below 1 A are not covered under the Electrical Appliance and Material Safety Law.
*2: Any rated current value can be selected within this range.

MT4 (Inrush-withstand)

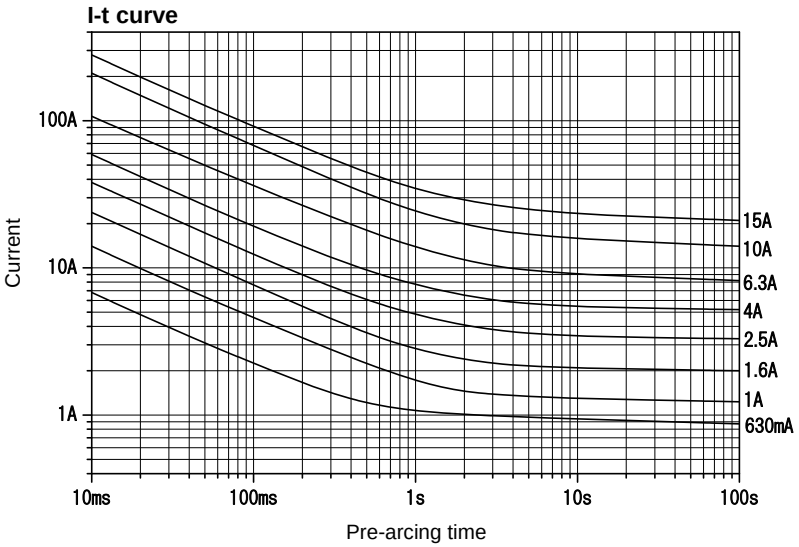
100mA - 8A: RoHS Pb
Over 8A - 15A: RoHS *1

AC250V

Scale: 1/1



Unit: mm



The I-t curves above are plots of the average values of measurements obtained under conditions specified by SOC. These data are for reference only and are not intended to infer any guaranteed values.

Rated voltage	Certification	Range of rated current (I_N) *2	Rated breaking current		Current carrying capacity	Temp. rise	Overload operation
AC250V	UL Listed CSA Certified	100mA - 3.5A	100A	PF 0.7 - 0.8	1.1I_N for 15min or more after temperature stabilization occurs.	70K or less at 1.1I_N	Within 60min at 1.35I_N Within 2min at 2.0I_N
	UL Recognized	Over 3.5A - 8A					
		Over 8A - 15A			1.0I_N for 15min or more after temperature stabilization occurs.	70K or less at 1.0I_N	

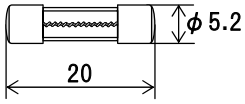
*1: High melting temperature type solder containing more than 85 wt% lead is used in this product (over 8 A - 15 A).
*2: Any rated current value can be selected within this range.

MT4 N1 (Inrush-withstand)

RoHS Pb

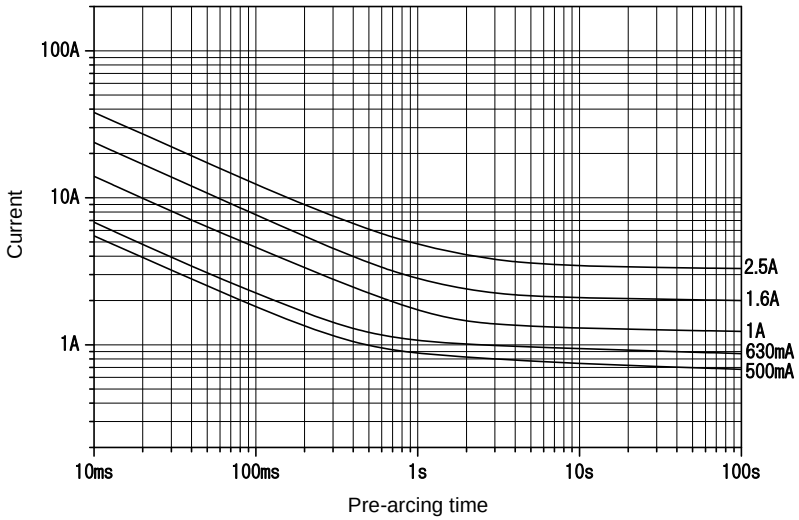
AC250V

Scale: 1/1



Unit: mm

I-t curve



The I-t curves above are plots of the average values of measurements obtained under conditions specified by SOC. These data are for reference only and are not intended to infer any guaranteed values.

Rated voltage	Certification	Range of rated current (I_N) *2	Rated breaking current		Current carrying capacity	Temp. rise	Overload operation
AC250V	UL Listed CSA Certified	100mA - 3.5A	100A	PF 0.7 - 0.8	1.1I_N for 15min or more after temperature stabilization occurs.	70K or less at 1.1I_N	Within 60min at 1.35I_N Within 2min at 2.0I_N
	<PS>E JET *1				1.1I_N until temperature stabilization occurs.	At 1.1I_N, 140K or less at the center, 60K or less at the contact	

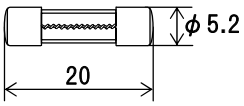
*1: Fuses with rated currents below 1 A are not covered under the Electrical Appliance and Material Safety Law.
*2: Any rated current value can be selected within this range.

MT4 N2 (Inrush-withstand)

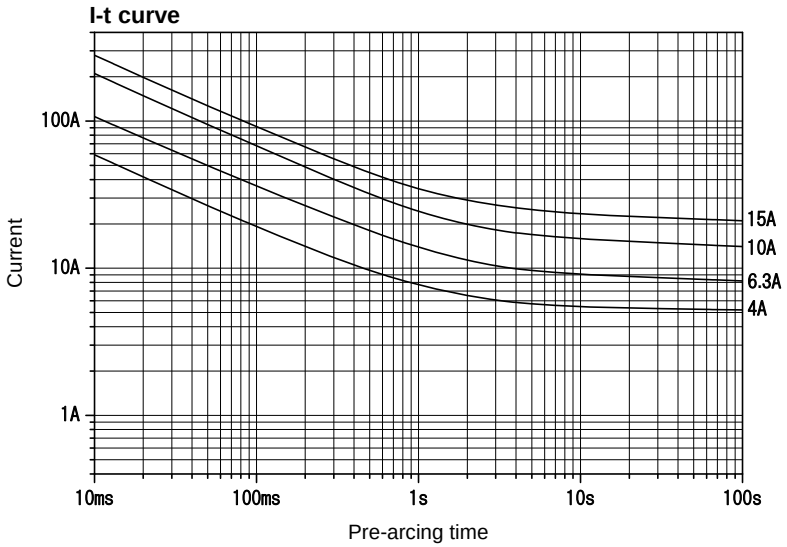
Over 3.5A - 8A: RoHS Pb
Over 8A - 15A: RoHS *1

AC250V

Scale: 1/1



Unit: mm



The I-t curves above are plots of the average values of measurements obtained under conditions specified by SOC. These data are for reference only and are not intended to infer any guaranteed values.

Rated voltage	Certification	Range of rated current (I_N) *2	Rated breaking current		Current carrying capacity	Temp. rise	Overload operation
AC250V	UL Recognized	Over 3.5A - 8A	100A	PF 0.7 - 0.8	1.1I_N for 15min or more after temperature stabilization occurs.	70K or less at 1.1I_N	Within 60min at 1.35I_N Within 2min at 2.0I_N
		Over 8A - 15A			1.0I_N for 15min or more after temperature stabilization occurs.	70K or less at 1.0I_N	
	<PS>E JET	Over 3.5A - 15A			1.1I_N until temperature stabilization occurs.	At 1.1I_N, 140K or less at the center, 60K or less at the contact	

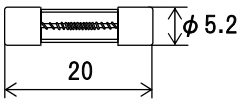
*1: High melting temperature type solder containing more than 85 wt% lead is used in this product (over 8 A - 15 A).
*2: Any rated current value can be selected within this range.

SD6 (Time-delay)

RoHS *1

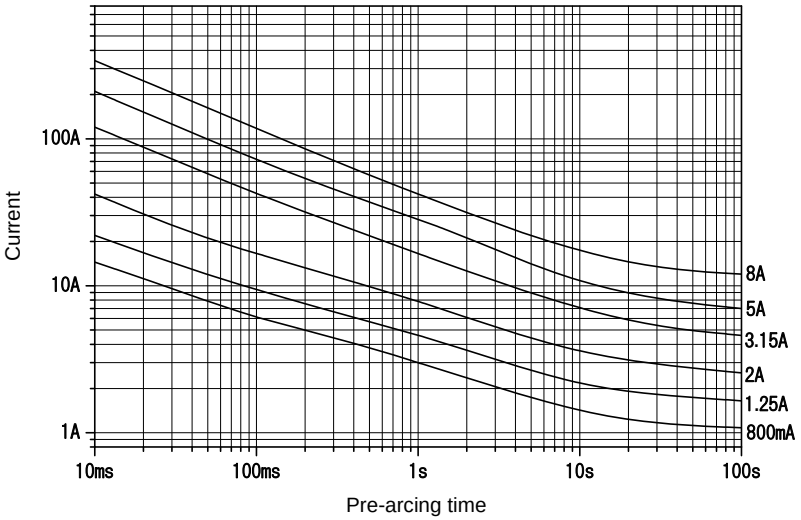
AC250V

Scale: 1/1



Unit: mm

I-t curve



The I-t curves above are plots of the average values of measurements obtained under conditions specified by SOC. These data are for reference only and are not intended to infer any guaranteed values.

Rated voltage	Certification	Range of rated current (I_N) *2	Rated breaking current		Current carrying capacity	Temp. rise	Overload operation
AC250V	UL Listed CSA Certified	62mA - 3A	100A	PF 0.7 - 0.8	1.1I_N for 15min or more after temperature stabilization occurs.	70K or less at 1.1I_N	*3
	UL Recognized CSA Component Acceptance	Over 3A - 8A			1.0I_N for 15min or more after temperature stabilization occurs.	70K or less at 1.0I_N	

*1: High melting temperature type solder containing more than 85 wt% lead is used in this product.
*2: Any rated current value can be selected within this range.
*3:

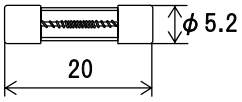
Rated current	1.35I_N	2.0I_N
62mA - 3A	Within 60min	5s - 2min
Over 3A - 8A		12s - 2min

SD6 N1 (Time-delay)

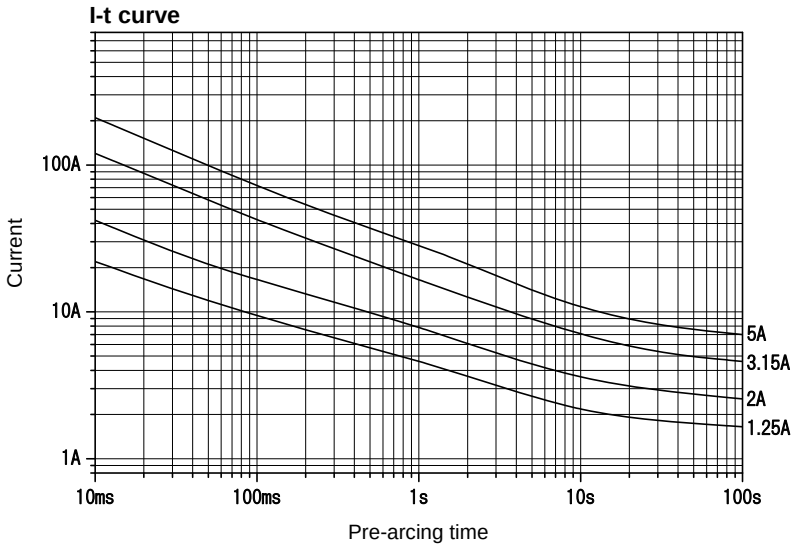
RoHS *1

AC250V

Scale: 1/1



Unit: mm



The I-t curves above are plots of the average values of measurements obtained under conditions specified by SOC. These data are for reference only and are not intended to infer any guaranteed values.

Rated voltage	Certification	Range of rated current (I_N) *3	Rated breaking current		Current carrying capacity	Temp. rise	Overload operation
AC250V	UL Listed CSA Certified	62mA - 3A	100A	PF 0.7 - 0.8	1.1I_N for 15min or more after temperature stabilization occurs.	70K or less at 1.1I_N	*4
	UL Recognized CSA Component Acceptance	Over 3A - 5A			1.0I_N for 15min or more after temperature stabilization occurs.	70K or less at 1.0I_N	
	<PS>E JET *2	62mA - 5A			1.1I_N until temperature stabilization occurs.	At 1.1I_N, 140K or less at the center, 60K or less at the contact	Within 60min at 1.35I_N Within 2min at 2.0I_N

*1: High melting temperature type solder containing more than 85 wt% lead is used in this product.
*2: Fuses with rated currents below 1 A are not covered under the Electrical Appliance and Material Safety Law.
*3: Any rated current value can be selected within this range.
*4:

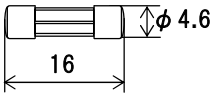
Rated current	1.35I_N	2.0I_N
62mA - 3A	Within 60min	5s - 2min
Over 3A - 5A		12s - 2min

250VⒶMSC (Normal-acting)

RoHS Pb

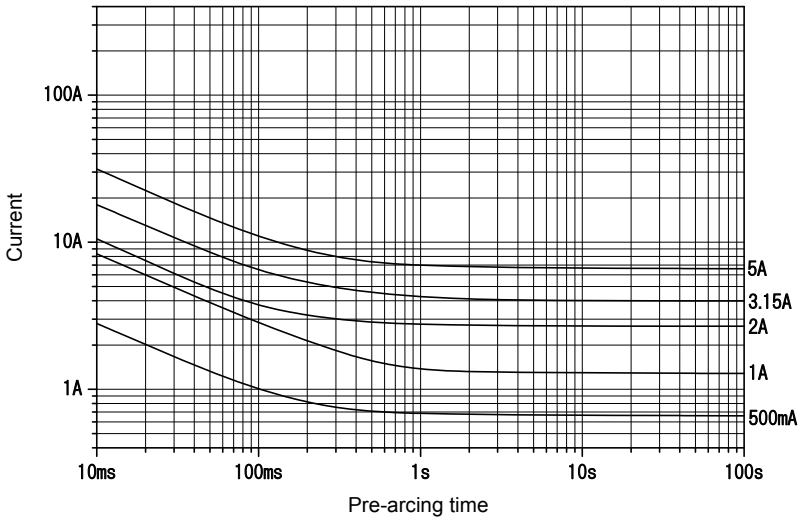
AC250V

Scale: 1/1



Unit: mm

I-t curve



The I-t curves above are plots of the average values of measurements obtained under conditions specified by SOC. These data are for reference only and are not intended to infer any guaranteed values.

Rated voltage	Certification *1	Range of rated current (I_N) *2	Rated breaking current		Current carrying capacity	Temp. rise	Overload operation
AC250V	<PS>E JET	100mA - 5A	100A	PF 0.7 - 0.8	1.1I_N until temperature stabilization occurs.	At 1.1I_N, 140K or less at the center, 60K or less at the contact	Within 60min at 1.35I_N Within 2min at 2.0I_N

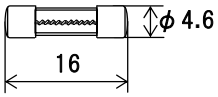
*1: Fuses with rated currents below 1 A are not covered under the Electrical Appliance and Material Safety Law.
*2: Any rated current value can be selected within this range.

250VⒶTMSC (Inrush-withstand)

RoHS Pb

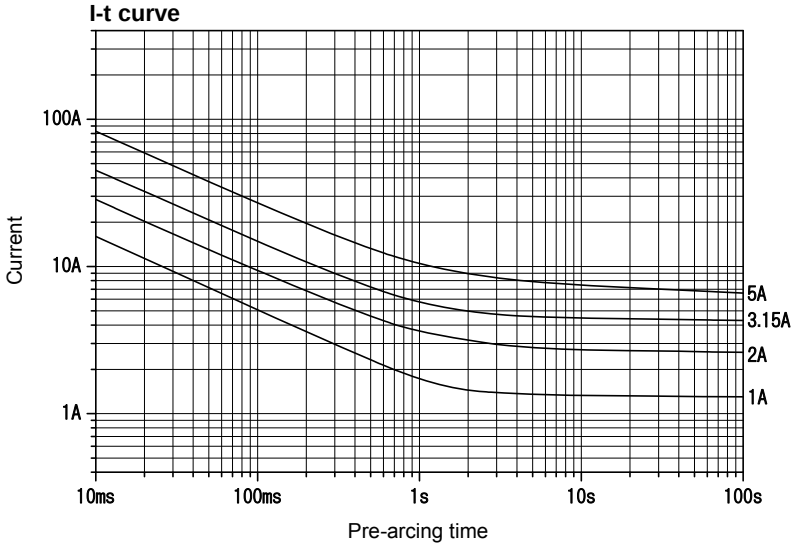
AC250V

Scale: 1/1



Unit: mm

I-t curve



The I-t curves above are plots of the average values of measurements obtained under conditions specified by SOC. These data are for reference only and are not intended to infer any guaranteed values.

Rated voltage	Certification *1	Range of rated current (I_N) *2	Rated breaking current		Current carrying capacity	Temp. rise	Overload operation
AC250V	<PS>E JET	100mA - 5A	100A	PF 0.7 - 0.8	1.1I_N until temperature stabilization occurs.	At 1.1I_N, 140K or less at the center, 60K or less at the contact	Within 60min at 1.35I_N Within 2min at 2.0I_N

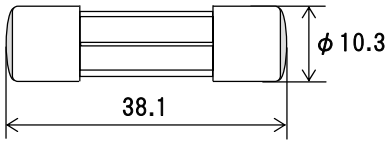
*1: Fuses with rated currents below 1 A are not covered under the Electrical Appliance and Material Safety Law.
*2: Any rated current value can be selected within this range.

ⒶLLC (Normal-acting)

500mA - 12A: RoHS Pb
Over 12A - 30A: RoHS *1

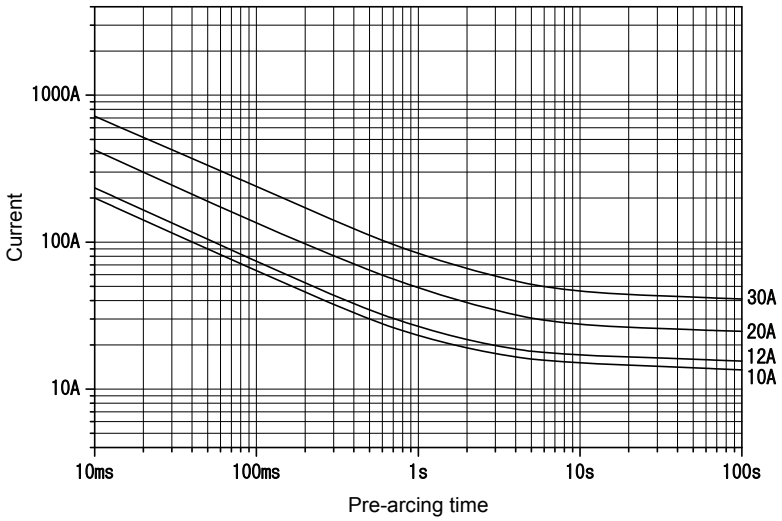
AC125V

Scale: 1/1



Unit: mm

I-t curve



The I-t curves above are plots of the average values of measurements obtained under conditions specified by SOC. These data are for reference only and are not intended to infer any guaranteed values.

Rated voltage	Certification *2	Range of rated current (I_N) *3	Rated breaking current		Current carrying capacity	Temp. rise	Overload operation
AC125V	<PS>E JET	500mA - 30A	500A	PF 0.7 - 0.8	1.1I_N until temperature stabilization occurs.	At 1.1I_N, 140K or less at the center, 60K or less at the contact	Within 60min at 1.35I_N Within 2min at 2.0I_N

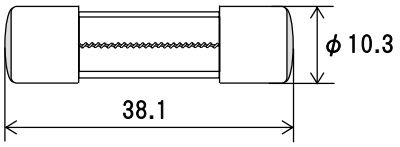
*1: High melting temperature type solder containing more than 85 wt% lead is used in this product (over 12 A - 30 A).
*2: Fuses with rated currents below 1 A are not covered under the Electrical Appliance and Material Safety Law.
*3: Any rated current value can be selected within this range.

ⒶTLLC (Inrush-withstand)

500mA - 12A: RoHS Pb
Over 12A - 30A: RoHS *1

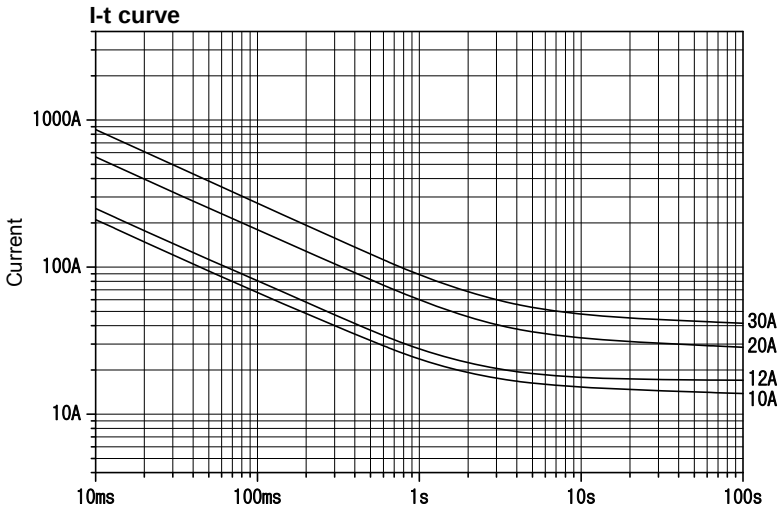
AC125V

Scale: 1/1



Unit: mm

I-t curve



The I-t curves above are plots of the average values of measurements obtained under conditions specified by SOC. These data are for reference only and are not intended to infer any guaranteed values.

Rated voltage	Certification *2	Range of rated current (I_N) *3	Rated breaking current		Current carrying capacity	Temp. rise	Overload operation
AC125V	<PS>E JET	500mA - 30A	500A	PF 0.7 - 0.8	1.1I_N until temperature stabilization occurs.	At 1.1I_N, 140K or less at the center, 60K or less at the contact	Within 60min at 1.35I_N Within 2min at 2.0I_N

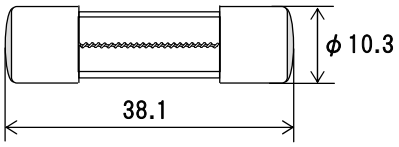
*1: High melting temperature type solder containing more than 85 wt% lead is used in this product (over 12 A - 30 A).
*2: Fuses with rated currents below 1 A are not covered under the Electrical Appliance and Material Safety Law.
*3: Any rated current value can be selected within this range.

SKM2 (Inrush-withstand)

3A - 12A: RoHS Pb
Over 12A - 15A: RoHS *1

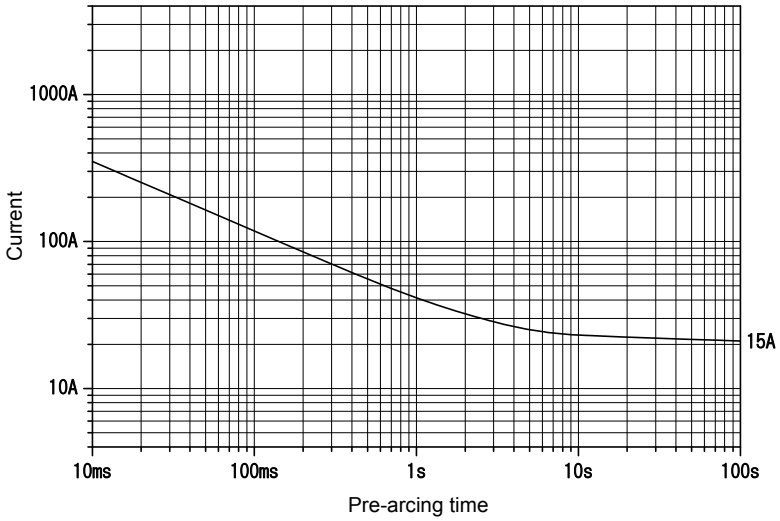
AC125V

Scale: 1/1



Unit: mm

I-t curve



The I-t curve above is a plot of the average values of measurements obtained under conditions specified by SOC. These data are for reference only and are not intended to infer any guaranteed values.

Rated voltage	Certification	Range of rated current (I_N) *2	Rated breaking current		Current carrying capacity	Temp. rise	Overload operation
AC125V	UL Listed	3A - 15A	10000A	PF 0.7 - 0.8	1.1I_N for 15min or more after temperature stabilization occurs.	70K or less at 1.1I_N	Within 60min at 1.35I_N Within 2min at 2.0I_N

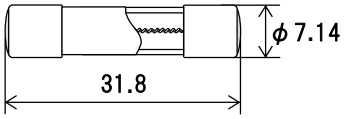
*1: High melting temperature type solder containing more than 85 wt% lead is used in this product (over 12 A - 15 A).
*2: Any rated current value can be selected within this range.

SKM4 (Inrush-withstand)

250mA - 25A: RoHS Pb
Over 25A - 30A: RoHS *1

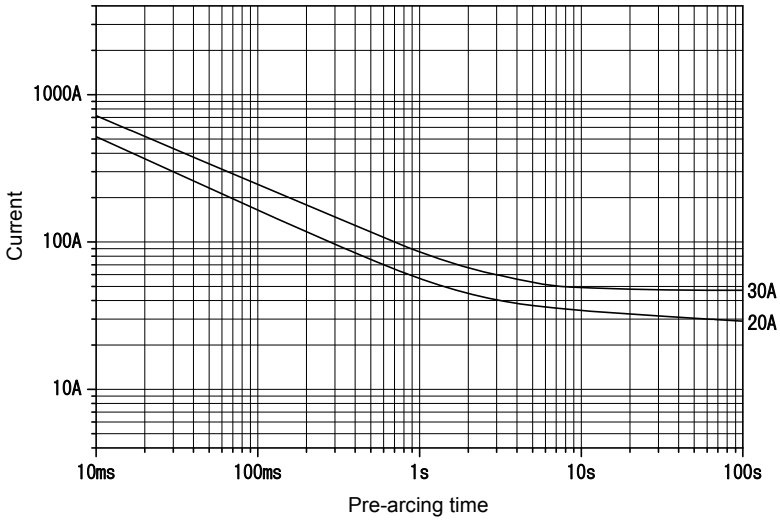
AC125V
DC65V

Scale: 1/1



Unit: mm

I-t curve



The I-t curves above are plots of the average values of measurements obtained under conditions specified by SOC. These data are for reference only and are not intended to infer any guaranteed values.

Rated voltage	Certification	Range of rated current (I_N) *2	Rated breaking current		Current carrying capacity	Temp. rise	Overload operation
AC125V	UL Listed CSA Certified	250mA - 20A	10000A	PF 0.7 - 0.8	1.1I_N for 15min or more after temperature stabilization occurs.	70K or less at 1.1I_N	Within 60min at 1.35I_N Within 2min at 2.0I_N
	UL Recognized CSA Component Acceptance	Over 20A - 30A	5000A	Resistive circuit	1.0I_N for 15min or more after temperature stabilization occurs.	—	
DC65V	UL Listed CSA Certified	250mA - 20A			1.1I_N for 15min or more after temperature stabilization occurs.	70K or less at 1.1I_N	
	UL Recognized CSA Component Acceptance	Over 20A - 30A			1.0I_N for 15min or more after temperature stabilization occurs.	—	

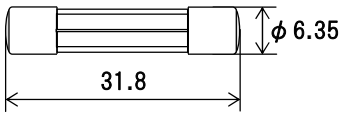
*1: High melting temperature type solder containing more than 85 wt% lead is used in this product (over 25 A - 30 A).
*2: Any rated current value can be selected within this range.

ⒶLNC (Normal-acting)

63mA – 12A: RoHS Pb
Over 12A – 25A: RoHS *1

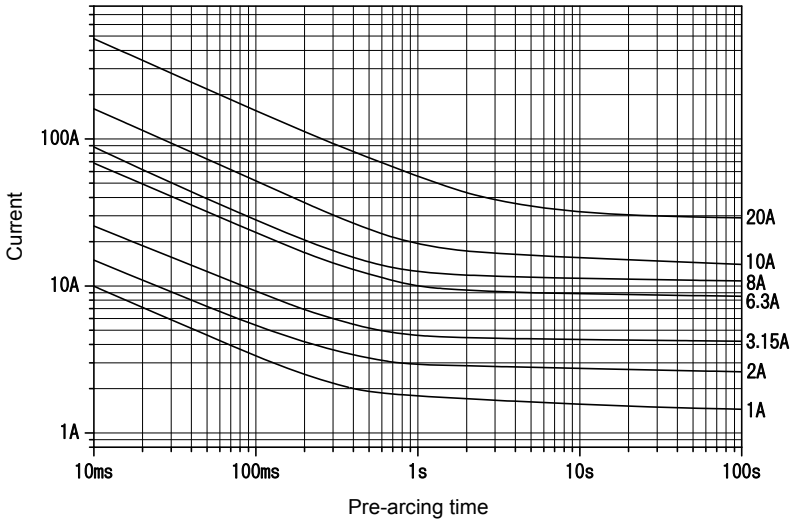
AC125V

Scale: 1/1



Unit: mm

I-t curve



The I-t curves above are plots of the average values of measurements obtained under conditions specified by SOC. These data are for reference only and are not intended to infer any guaranteed values.

Rated voltage	Certification *2	Range of rated current (I_N) *3	Rated breaking current		Current carrying capacity	Temp. rise	Overload operation
AC125V	<PS>E JET	63mA - 25A	500A	PF 0.7 - 0.8	1.1I_N until temperature stabilization occurs.	At 1.1I_N, 140K or less at the center, 60K or less at the contact	Within 60min at 1.35I_N Within 2min at 2.0I_N

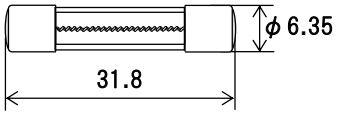
*1: High melting temperature type solder containing more than 85 wt% lead is used in this product (over 12 A - 25 A).
*2: Fuses with rated currents below 1 A are not covered under the Electrical Appliance and Material Safety Law.
*3: Any rated current value can be selected within this range.

ⒶTLNC (Inrush-withstand)

100mA – 12A: RoHS Pb
Over 12A – 30A: RoHS *1

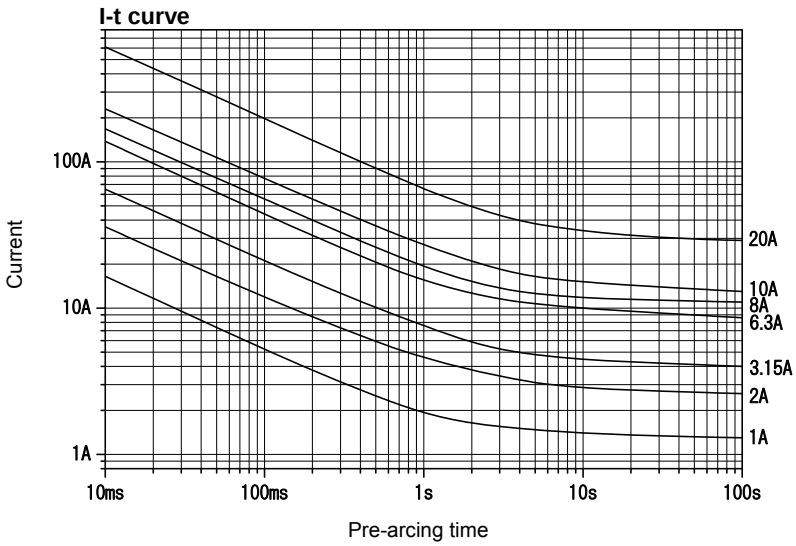
AC125V

Scale: 1/1



Unit: mm

I-t curve

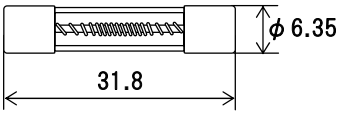


The I-t curves above are plots of the average values of measurements obtained under conditions specified by SOC. These data are for reference only and are not intended to infer any guaranteed values.

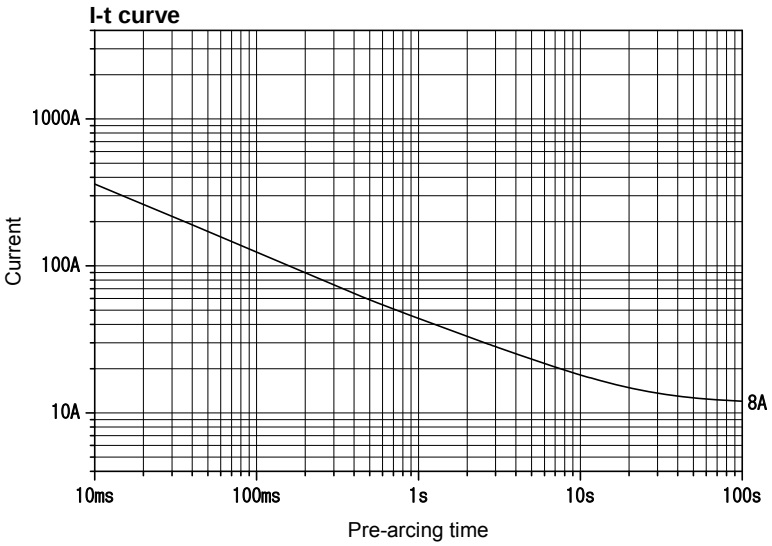
Rated voltage	Certification *2	Range of rated current (I_N) *3	Rated breaking current		Current carrying capacity	Temp. rise	Overload operation
AC125V	<PS>E JET	100mA - 30A	500A	PF 0.7 - 0.8	1.1I_N until temperature stabilization occurs.	At 1.1I_N, 140K or less at the center, 60K or less at the contact	Within 60min at 1.35I_N Within 2min at 2.0I_N

*1: High melting temperature type solder containing more than 85 wt% lead is used in this product (over 12 A - 30 A).
*2: Fuses with rated currents below 1 A are not covered under the Electrical Appliance and Material Safety Law.
*3: Any rated current value can be selected within this range.

Scale: 1/1



Unit: mm



The I-t curve above is a plot of the average values of measurements obtained under conditions specified by SOC. These data are for reference only and are not intended to infer any guaranteed values.

Rated voltage	Certification *2	Range of rated current (I_N) *3	Rated breaking current		Current carrying capacity	Temp. rise	Overload operation
AC125V	<PS>E JET	100mA - 15A	500A	PF 0.7 - 0.8	1.1I_N until temper-ature stabilization occurs.	At 1.1I_N, 140K or less at the center, 60K or less at the contact	*4

*1: High melting temperature type solder containing more than 85 wt% lead is used in this product.
*2: Fuses with rated currents below 1 A are not covered under the Electrical Appliance and Material Safety Law.
*3: Any rated current value can be selected within this range.
*4:

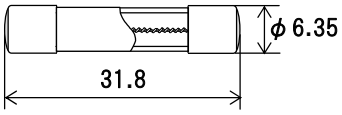
Rated current	1.35I_N	2.0I_N
100mA - 3A	Within 60min	5s - 2min
Over 3A - 15A		12s - 2min

CES6 (Inrush-withstand)

100mA - 8A / Over 15A - 20A: RoHS Pb
Over 8A - 15A: RoHS *1

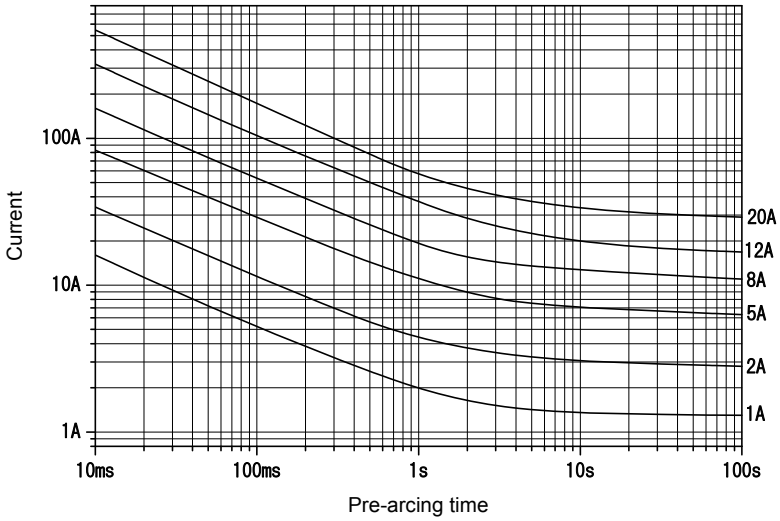
AC125V

Scale: 1/1



Unit: mm

I-t curve



The I-t curves above are plots of the average values of measurements obtained under conditions specified by SOC. These data are for reference only and are not intended to infer any guaranteed values.

Rated voltage	Certification	Range of rated current (I_N) *2	Rated breaking current		Current carrying capacity	Temp. rise	Overload operation
AC125V	UL Listed CSA Certified	100mA - 15A	10000A	PF 0.7 - 0.8	1.1I_N for 15min or more after temperature stabilization occurs.	70K or less at 1.1I_N	Within 60min at 1.35I_N Within 2min at 2.0I_N
	UL Recognized	Over 15A - 20A			1.0I_N for 15min or more after temperature stabilization occurs.	70K or less at 1.0I_N	

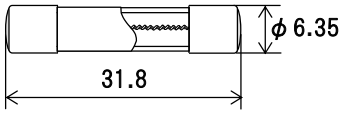
*1: High melting temperature type solder containing more than 85 wt% lead is used in this product (over 8 A - 15 A).
*2: Any rated current value can be selected within this range.

CES6 N1 (Inrush-withstand)

100mA - 8A: RoHS Pb
Over 8A - 15A: RoHS *1

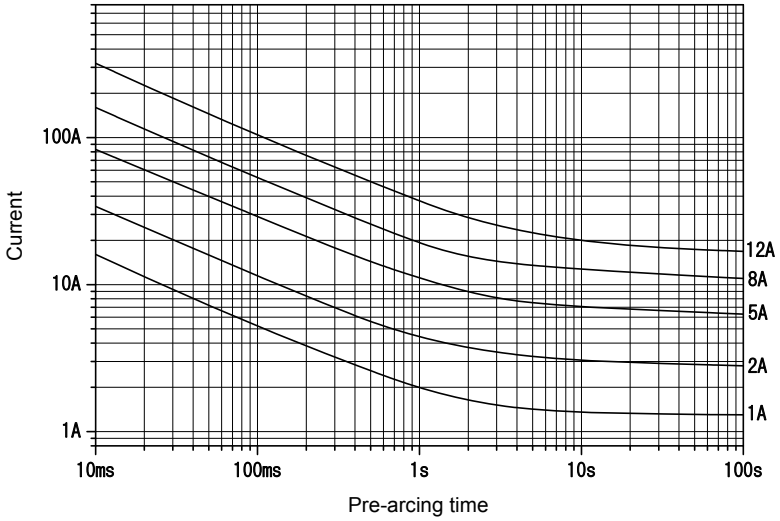
AC125V

Scale: 1/1



Unit: mm

I-t curve



The I-t curves above are plots of the average values of measurements obtained under conditions specified by SOC. These data are for reference only and are not intended to infer any guaranteed values.

Rated voltage	Certification	Range of rated current (I_N) *3	Rated breaking current		Current carrying capacity	Temp. rise	Overload operation
AC125V	UL Listed CSA Certified	100mA - 15A	10000A	PF 0.7 - 0.8	1.1I_N for 15min or more after temperature stabilization occurs.	70K or less at 1.1I_N	Within 60min at 1.35I_N Within 2min at 2.0I_N
	<PS>E JET *2		500A		1.1I_N until temperature stabilization occurs.	At 1.1I_N, 140K or less at the center, 60K or less at the contact	

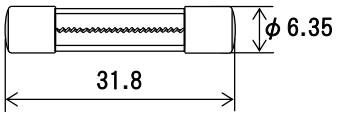
*1: High melting temperature type solder containing more than 85 wt% lead is used in this product (over 8 A - 15 A).
*2: Fuses with rated currents below 1 A are not covered under the Electrical Appliance and Material Safety Law.
*3: Any rated current value can be selected within this range.

ST6 (Inrush-withstand)

100mA - 8A: RoHS Pb
Over 8A - 30A: RoHS *1

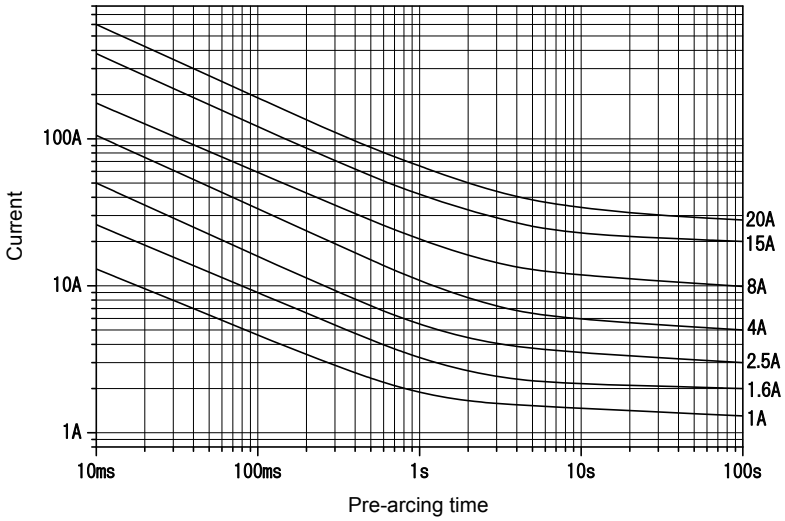
AC125V
DC125V

Scale: 1/1



Unit: mm

I-t curve



The I-t curves above are plots of the average values of measurements obtained under conditions specified by SOC. These data are for reference only and are not intended to infer any guaranteed values.

Rated voltage	Certification	Range of rated current (I_N) *2	Rated breaking current		Current carrying capacity	Temp. rise	Overload operation
AC125V	UL Listed CSA Certified	100mA - 8A	10000A	PF 0.7 - 0.8	1.1I_N for 15min or more after temperature stabilization occurs.	70K or less at 1.1I_N	Within 60min at 1.35I_N Within 2min at 2.0I_N
	UL Recognized CSA Component Acceptance	Over 8A - 30A	500A		0.9I_N for 15min or more after temperature stabilization occurs.	—	
DC125V	UL Listed CSA Certified	100mA - 8A		Resistive circuit	1.1I_N for 15min or more after temperature stabilization occurs.	70K or less at 1.1I_N	
	UL Recognized CSA Component Acceptance	Over 8A - 30A			0.9I_N for 15min or more after temperature stabilization occurs.	—	

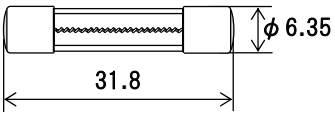
*1: High melting temperature type solder containing more than 85 wt% lead is used in this product (over 8 A - 30 A).
*2: Any rated current value can be selected within this range.

ST6 N1 (Inrush-withstand)

100mA - 8A: RoHS Pb
Over 8A - 15A: RoHS *1

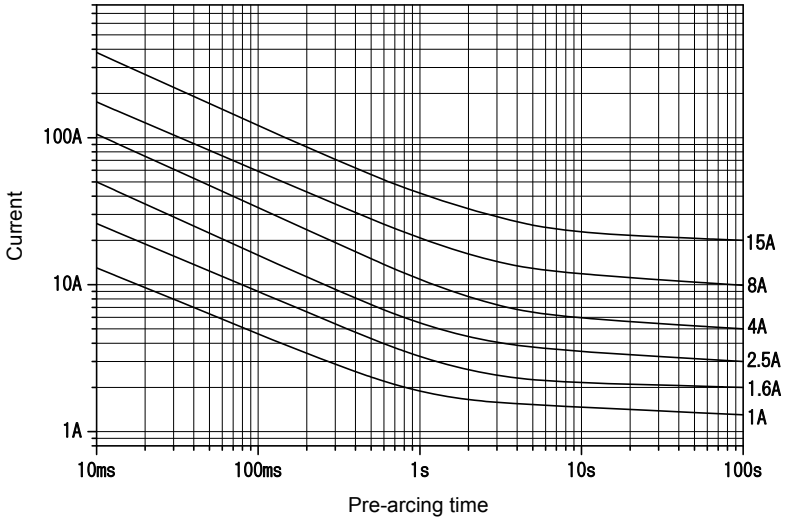
AC125V
DC125V

Scale: 1/1



Unit: mm

I-t curve



The I-t curves above are plots of the average values of measurements obtained under conditions specified by SOC. These data are for reference only and are not intended to infer any guaranteed values.

Rated Voltage	Certification	Range of rated current (I_N) *3	Rated breaking current		Current carrying capacity	Temp. rise	Overload operation
AC125V	UL Listed CSA Certified	100mA - 8A	10000A	PF 0.7 - 0.8	1.1I_N for 15min or more after temperature stabilization occurs.	70K or less at 1.1I_N	Within 60min at 1.35I_N Within 2min at 2.0I_N
	UL Recognized CSA Component Acceptance	Over 8A - 15A	500A		0.9I_N for 15min or more after temperature stabilization occurs.	—	
	<PS>E JET *2	100mA - 15A			1.1I_N until temperature stabilization occurs.	At 1.1I_N, 140K or less at the center, 60K or less at the contact	
DC125V	UL Listed CSA Certified	100mA - 8A		Resistive circuit	1.1I_N for 15min or more after temperature stabilization occurs.	70K or less at 1.1I_N	
	UL Recognized CSA Component Acceptance	Over 8A - 15A			0.9I_N for 15min or more after temperature stabilization occurs.	—	

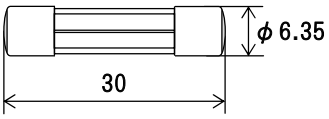
*1: High melting temperature type solder containing more than 85 wt% lead is used in this product (over 8 A - 15 A).
*2: Fuses with rated currents below 1 A are not covered under the Electrical Appliance and Material Safety Law.
*3: Any rated current value can be selected within this range.

ⒶLC (Normal-acting)

50mA - 12A: RoHS Pb
Over 12A - 30A: RoHS *1

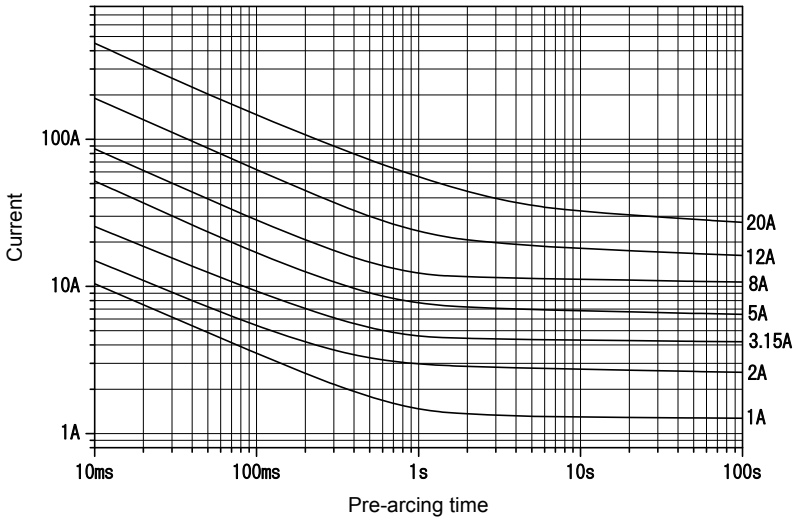
AC125V

Scale: 1/1



Unit: mm

I-t curve



The I-t curves above are plots of the average values of measurements obtained under conditions specified by SOC. These data are for reference only and are not intended to infer any guaranteed values.

Rated voltage	Certification *2	Range of rated current (I_N) *3	Rated breaking current		Current carrying capacity	Temp. rise	Overload operation
AC125V	<PS>E JET	50mA - 30A	500A	PF 0.7 - 0.8	1.1I_N until temperature stabilization occurs.	At 1.1I_N, 140K or less at the center, 60K or less at the contact	Within 60min at 1.35I_N Within 2min at 2.0I_N

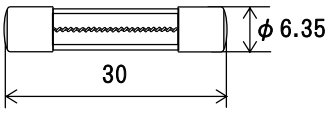
*1: High melting temperature type solder containing more than 85 wt% lead is used in this product (over 12 A - 30 A).
*2: Fuses with rated currents below 1 A are not covered under the Electrical Appliance and Material Safety Law.
*3: Any rated current value can be selected within this range.

ⒶTLC (Inrush-withstand)

100mA - 12A: RoHS Pb
Over 12A - 30A: RoHS *1

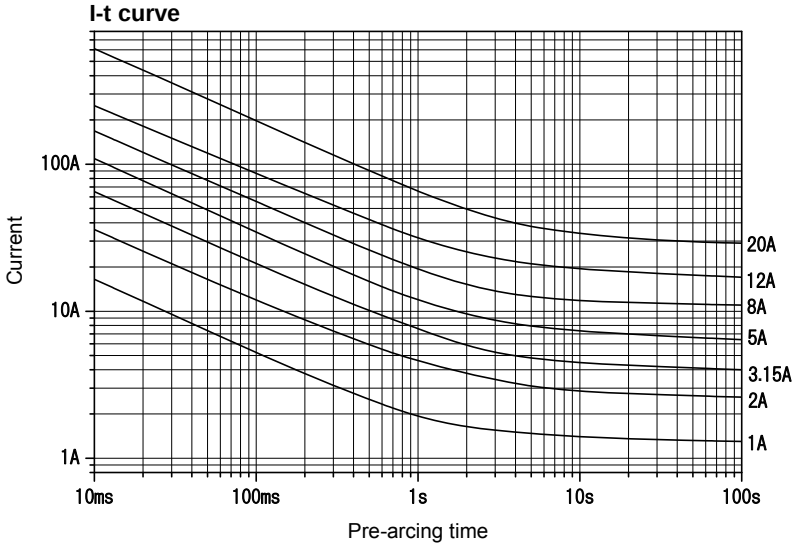
AC125V

Scale: 1/1



Unit: mm

I-t curve



The I-t curves above are plots of the average values of measurements obtained under conditions specified by SOC. These data are for reference only and are not intended to infer any guaranteed values.

Rated voltage	Certification *2	Range of rated current (I_N) *3	Rated breaking current		Current carrying capacity	Temp. rise	Overload operation
AC125V	<PS>E JET	100mA - 30A	500A	PF 0.7 - 0.8	1.1I_N until temperature stabilization occurs.	At 1.1I_N, 140K or less at the center, 60K or less at the contact	Within 60min at 1.35I_N Within 2min at 2.0I_N

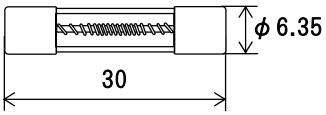
*1: High melting temperature type solder containing more than 85 wt% lead is used in this product (over 12 A - 30 A).
*2: Fuses with rated currents below 1 A are not covered under the Electrical Appliance and Material Safety Law.
*3: Any rated current value can be selected within this range.

ⒶSDLC (Time-delay)

RoHS *1

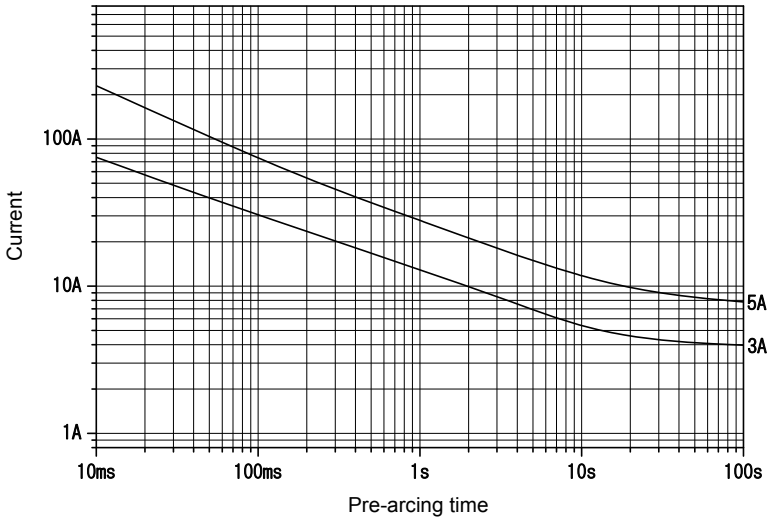
AC125V

Scale: 1/1



Unit: mm

I-t curve



The I-t curves above are plots of the average values of measurements obtained under conditions specified by SOC. These data are for reference only and are not intended to infer any guaranteed values.

Rated voltage	Certification *2	Range of rated current (I_N) *3	Rated breaking current		Current carrying capacity	Temp. rise	Overload operation
AC125V	<PS>E JET	100mA - 8A	500A	PF 0.7 - 0.8	1.1I_N until temperature stabilization occurs.	At 1.1I_N, 140K or less at the center, 60K or less at the contact	*4

*1: High melting temperature type solder containing more than 85 wt% lead is used in this product.
*2: Fuses with rated currents below 1 A are not covered under the Electrical Appliance and Material Safety Law.
*3: Any rated current value can be selected within this range.
*4:

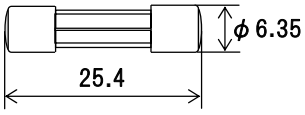
Rated current	1.35I_N	2.0I_N
100mA - 3A	Within 60min	5s - 2min
Over 3A - 8A		12s - 2min

SL2 (Normal-acting)

RoHS Pb

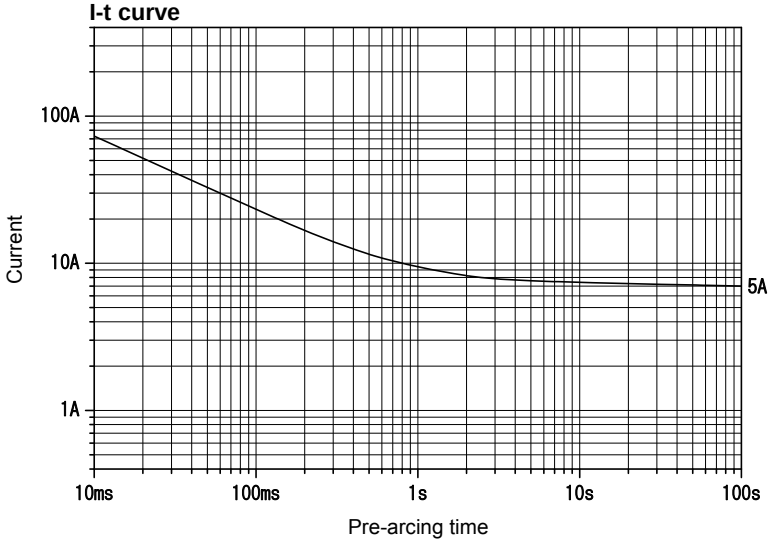
AC125V

Scale: 1/1



Unit: mm

I-t curve



The I-t curve above is a plot of the average values of measurements obtained under conditions specified by SOC. These data are for reference only and are not intended to infer any guaranteed values.

Rated voltage	Certification	Range of rated current (I_N) *1	Rated breaking current		Current carrying capacity	Temp. rise	Overload operation
AC125V	UL Listed CSA Certified	80mA - 6A	10000A	PF 0.7 - 0.8	1.1I_N for 15min or more after temper-ature stabilization occurs.	70K or less at 1.1I_N	Within 60min at 1.35I_N Within 2min at 2.0I_N

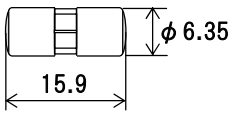
*1: Any rated current value can be selected within this range.

SU2 (Normal-acting)

100mA - 15A: RoHS Pb
Over 15A - 20A: RoHS *1

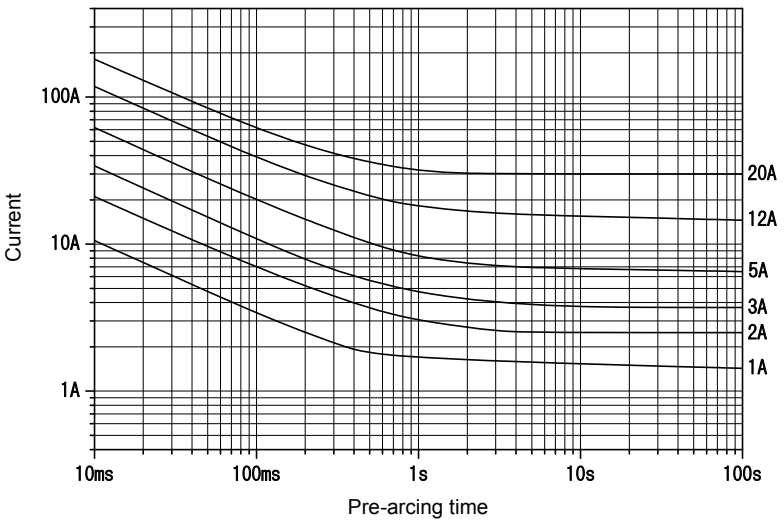
AC125V

Scale: 1/1



Unit: mm

I-t curve



The I-t curves above are plots of the average values of measurements obtained under conditions specified by SOC. These data are for reference only and are not intended to infer any guaranteed values.

Rated voltage	Certification	Range of rated current (I_N) *2	Rated breaking current		Current carrying capacity	Temp. rise	Overload operation
AC125V	UL Recognized	100mA - 5A	200A	PF 0.7 - 0.8	*3	70K or less at 1.1I_N	Within 60min at 1.35I_N Within 2min at 2.0I_N
		Over 5A - 20A		Resistive circuit	*4	—	

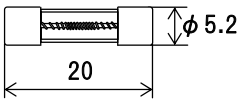
*1: High melting temperature type solder containing more than 85 wt% lead is used in this product (over 15 A - 20 A).
*2: Any rated current value can be selected within this range.
*3: 1.1 I_N for 15 min or more after temperature stabilization occurs.
*4: 1.0 I_N for 15 min or more after temperature stabilization occurs.

TSD2 (Inrush-withstand)

RoHS *1

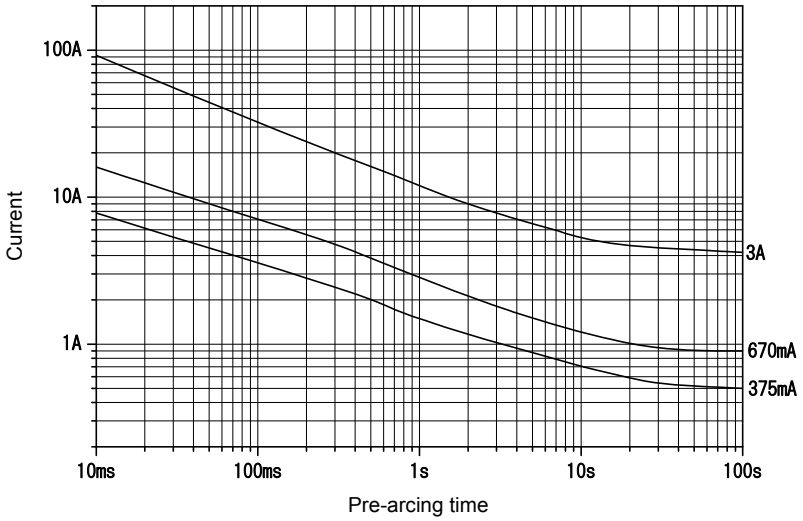
AC125V

Scale: 1/1



Unit: mm

I-t curve



The I-t curves above are plots of the average values of measurements obtained under conditions specified by SOC. These data are for reference only and are not intended to infer any guaranteed values.

Rated voltage	Certification	Range of rated current (I_N) *2	Rated breaking current		Current carrying capacity	Temp. rise	Overload operation
AC125V	UL Listed CSA Certified	100mA - 3A	10000A	PF 0.7 - 0.8	1.1I_N for 15min or more after temper-ature stabilization occurs.	70K or less at 1.1I_N	Within 60min at 1.35I_N Within 2min at 2.0I_N

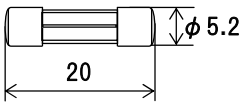
*1: High melting temperature type solder containing more than 85 wt% lead is used in this product.
*2: Any rated current value can be selected within this range.

ⒶSC (Normal-acting)

62mA - 10A: RoHS Pb
Over 10A - 12A: RoHS *1

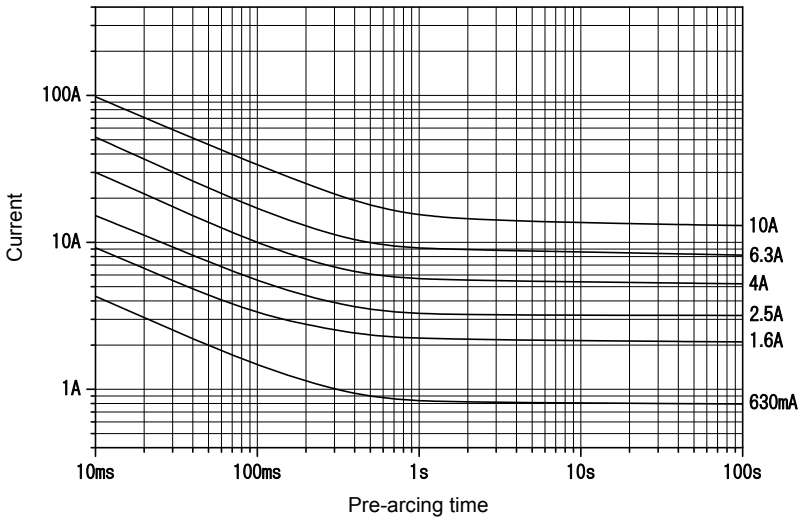
AC125V

Scale: 1/1



Unit: mm

I-t curve



The I-t curves above are plots of the average values of measurements obtained under conditions specified by SOC. These data are for reference only and are not intended to infer any guaranteed values.

Rated voltage	Certification *2	Range of rated current (I_N) *3	Rated breaking current		Current carrying capacity	Temp. rise	Overload operation
AC125V	<PS>E JET	62mA - 12A	500A	PF 0.7 - 0.8	1.1I_N until temperature stabilization occurs.	At 1.1I_N, 140K or less at the center, 60K or less at the contact	Within 60min at 1.35I_N Within 2min at 2.0I_N

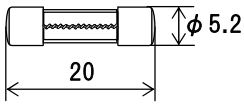
*1: High melting temperature type solder containing more than 85 wt% lead is used in this product (over 10 A - 12 A).
*2: Fuses with rated currents below 1 A are not covered under the Electrical Appliance and Material Safety Law.
*3: Any rated current value can be selected within this range.

ⒶTSC (Inrush-withstand)

RoHS Pb

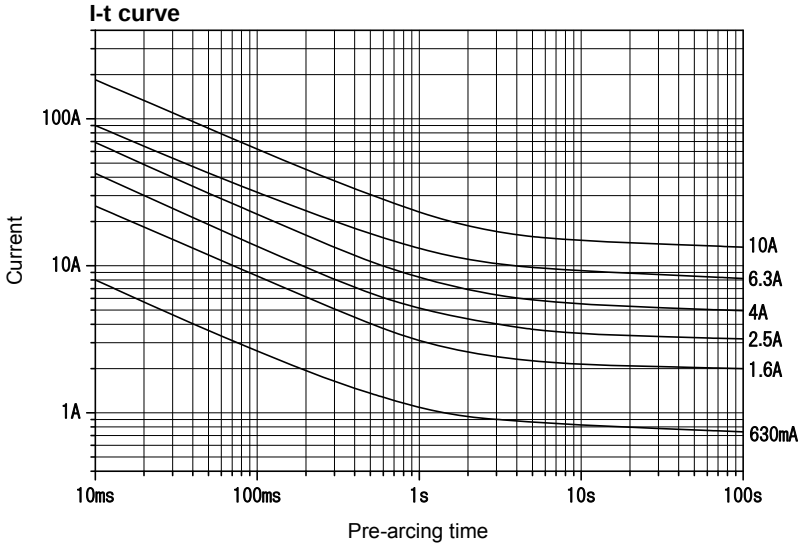
AC125V

Scale: 1/1



Unit: mm

I-t curve

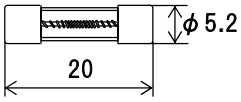


The I-t curves above are plots of the average values of measurements obtained under conditions specified by SOC. These data are for reference only and are not intended to infer any guaranteed values.

Rated voltage	Certification *1	Range of rated current (I_N) *2	Rated breaking current		Current carrying capacity	Temp. rise	Overload operation
AC125V	<PS>E JET	100mA - 10A	500A	PF 0.7 - 0.8	1.1I_N until temperature stabilization occurs.	At 1.1I_N, 140K or less at the center, 60K or less at the contact	Within 60min at 1.35I_N Within 2min at 2.0I_N

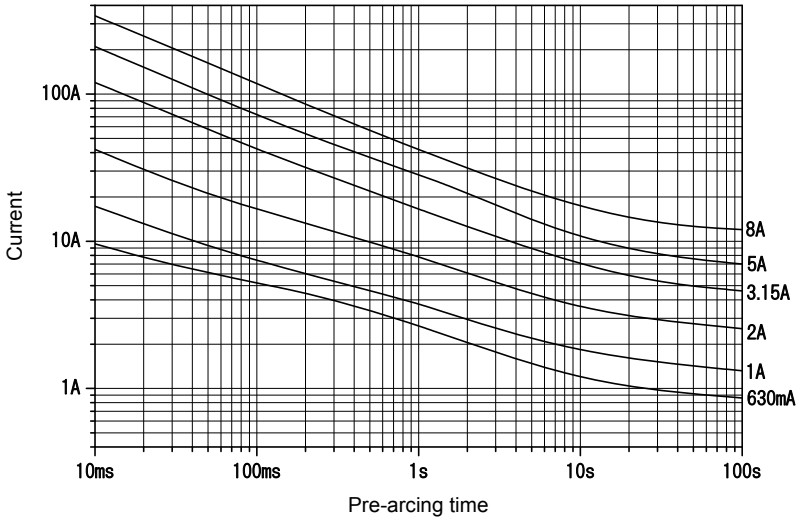
*1: Fuses with rated currents below 1 A are not covered under the Electrical Appliance and Material Safety Law.
*2: Any rated current value can be selected within this range.

Scale: 1/1



Unit: mm

I-t curve



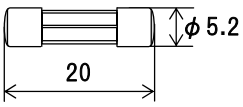
The I-t curves above are plots of the average values of measurements obtained under conditions specified by SOC. These data are for reference only and are not intended to infer any guaranteed values.

Rated voltage	Certification *2	Range of rated current (I_N) *3	Rated breaking current		Current carrying capacity	Temp. rise	Overload operation
AC125V	<PS>E JET	100mA - 5A	500A	PF 0.7 - 0.8	1.1I_N until temperature stabilization occurs.	At 1.1I_N, 140K or less at the center, 60K or less at the contact	*4
		Over 5A - 8A	100A				

*1: High melting temperature type solder containing more than 85 wt% lead is used in this product.
*2: Fuses with rated currents below 1 A are not covered under the Electrical Appliance and Material Safety Law.
*3: Any rated current value can be selected within this range.
*4:

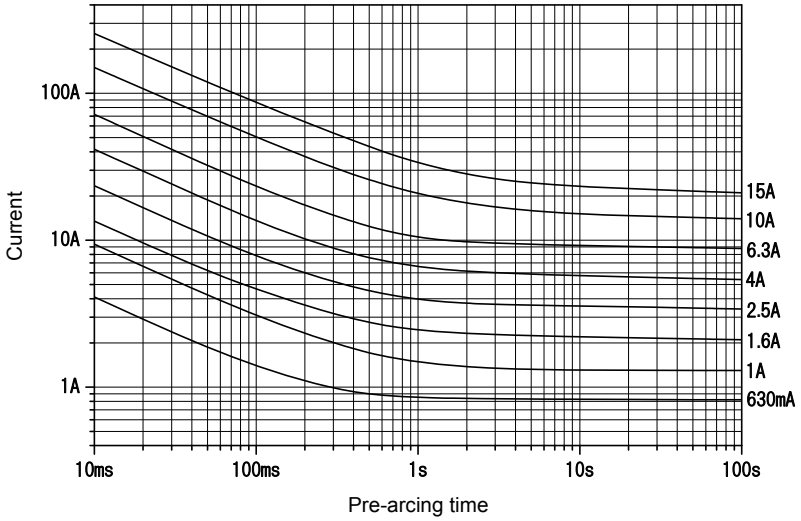
Rated current	1.35I_N	2.0I_N
100mA - 3A	Within 60min	5s - 2min
Over 3A - 8A		12s - 2min

Scale: 1/1



Unit: mm

I-t curve



The I-t curves above are plots of the average values of measurements obtained under conditions specified by SOC. These data are for reference only and are not intended to infer any guaranteed values.

Rated voltage	Certification	Range of rated current (I_N) *2	Rated breaking current		Current carrying capacity	Temp. rise	Overload operation
AC125V	UL Listed CSA Certified	62mA - 5A	10000A	PF 0.7 - 0.8	1.1I_N for 15min or more after temperature stabilization occurs.	70K or less at 1.1I_N	Within 60min at 1.35I_N Within 2min at 2.0I_N
	UL Recognized CSA Certified	Over 5A - 10A				—	
	CSA Certified	Over 10A - 15A			1.0I_N for 15min or more after temperature stabilization occurs.	75K or less at 1.0I_N	

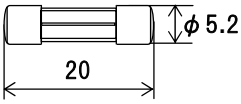
*1: High melting temperature type solder containing more than 85 wt% lead is used in this product (over 8 A - 15 A).
*2: Any rated current value can be selected within this range.

MQ2 N1 (Normal-acting)

62mA - 8A: RoHS Pb
Over 8A - 10A: RoHS *1

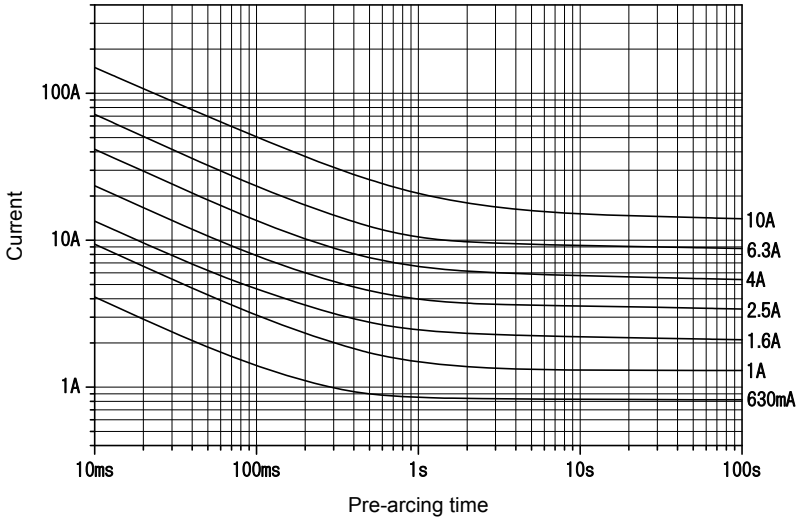
AC125V

Scale: 1/1



Unit: mm

I-t curve



The I-t curves above are plots of the average values of measurements obtained under conditions specified by SOC. These data are for reference only and are not intended to infer any guaranteed values.

Rated voltage	Certification	Range of rated current (I_N) *3	Rated breaking current		Current carrying capacity	Temp. rise	Overload operation
AC125V	UL Listed CSA Certified	62mA - 5A	10000A	PF 0.7 - 0.8	1.1I_N for 15min or more after temperature stabilization occurs.	70K or less at 1.1I_N	Within 60min at 1.35I_N Within 2min at 2.0I_N
	UL Recognized CSA Certified	Over 5A - 10A				—	
	<PS>E JET *2	62mA - 10A	500A		1.1I_N until temperature stabilization occurs.	At 1.1I_N, 140K or less at the center, 60K or less at the contact	

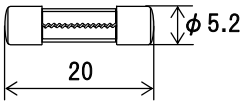
*1: High melting temperature type solder containing more than 85 wt% lead is used in this product (over 8 A - 10 A).
*2: Fuses with rated currents below 1 A are not covered under the Electrical Appliance and Material Safety Law.
*3: Any rated current value can be selected within this range.

ULTSC (Inrush-withstand)

RoHS Pb

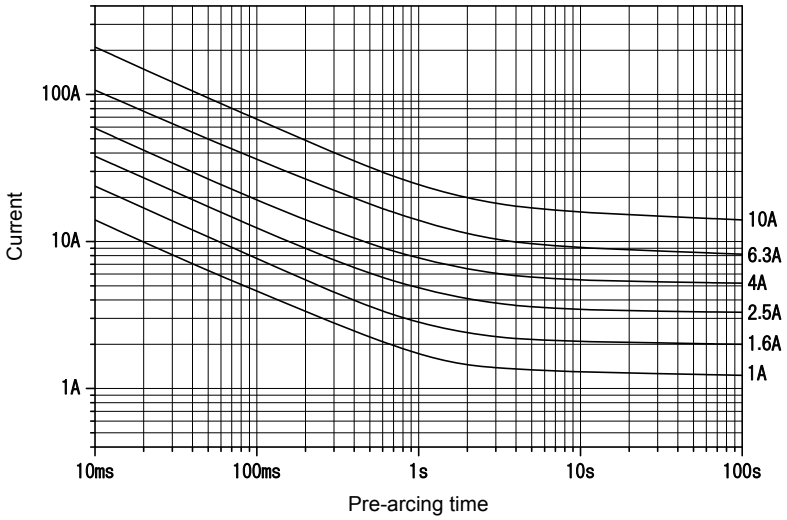
AC125V

Scale: 1/1



Unit: mm

I-t curve



The I-t curves above are plots of the average values of measurements obtained under conditions specified by SOC. These data are for reference only and are not intended to infer any guaranteed values.

Rated voltage	Certification	Range of rated current (I_N) *1	Rated breaking current		Current carrying capacity	Temp. rise	Overload operation
AC125V	UL Listed CSA Certified	100mA - 10A	10000A	PF 0.7 - 0.8	1.1I_N for 15min or more after temperature stabilization occurs.	70K or less at 1.1I_N	Within 60min at 1.35I_N Within 2min at 2.0I_N

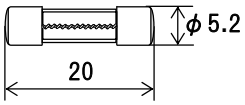
*1: Any rated current value can be selected within this range.

ULTSC N1 (Inrush-withstand)

RoHS Pb

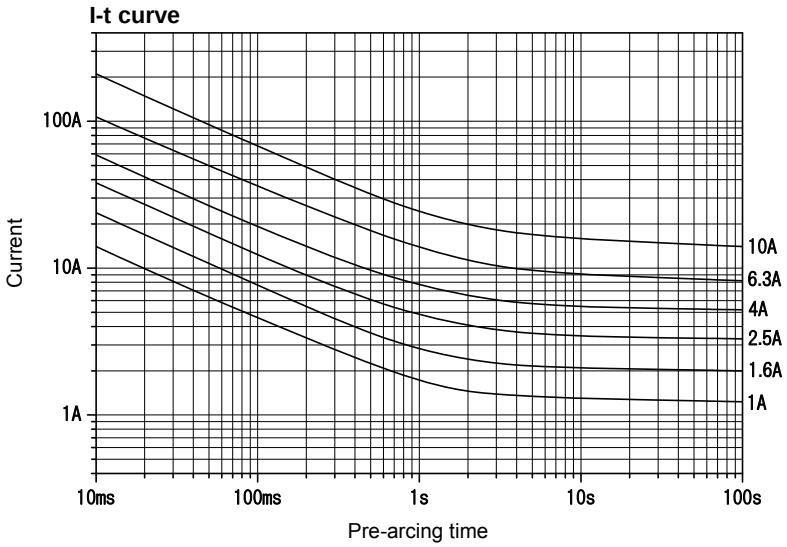
AC125V

Scale: 1/1



Unit: mm

I-t curve



The I-t curves above are plots of the average values of measurements obtained under conditions specified by SOC. These data are for reference only and are not intended to infer any guaranteed values.

Rated voltage	Certification	Range of rated current (I_N) *2	Rated breaking current		Current carrying capacity	Temp. rise	Overload operation
AC125V	UL Listed CSA Certified	100mA - 10A	10000A	PF 0.7 - 0.8	*3	70K or less at 1.1I_N	Within 60min at 1.35I_N Within 2min at 2.0I_N
	<PS>E JET *1		500A		*4	At 1.1I_N, 140K or less at the center, 60K or less at the contact	

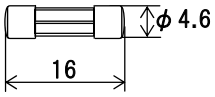
*1: Fuses with rated currents below 1 A are not covered under the Electrical Appliance and Material Safety Law.
*2: Any rated current value can be selected within this range.
*3: 1.1 I_N for 15 min or more after temperature stabilization occurs.
*4: 1.1 I_N until temperature stabilization occurs.

ⒶMSC (Normal-acting)

RoHS Pb

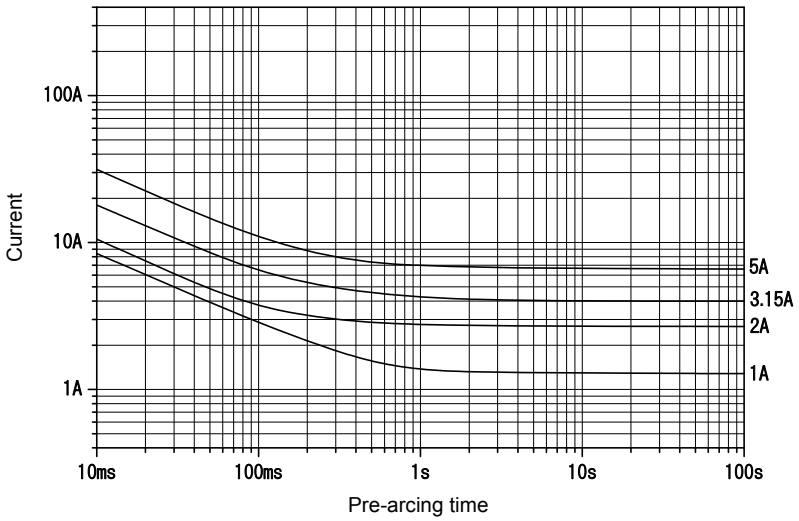
AC125V

Scale: 1/1



Unit: mm

I-t curve



The I-t curves above are plots of the average values of measurements obtained under conditions specified by SOC. These data are for reference only and are not intended to infer any guaranteed values.

Rated voltage	Certification *1	Range of rated current (I_N) *2	Rated breaking current		Current carrying capacity	Temp. rise	Overload operation
AC125V	<PS>E JET	100mA - 5A	500A	PF 0.7 - 0.8	1.1I_N until temperature stabilization occurs.	At 1.1I_N, 140K or less at the center, 60K or less at the contact	Within 60min at 1.35I_N Within 2min at 2.0I_N

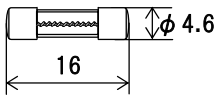
*1: Fuses with rated currents below 1 A are not covered under the Electrical Appliance and Material Safety Law.
*2: Any rated current value can be selected within this range.

ⒶTMSC (Inrush-withstand)

RoHS Pb

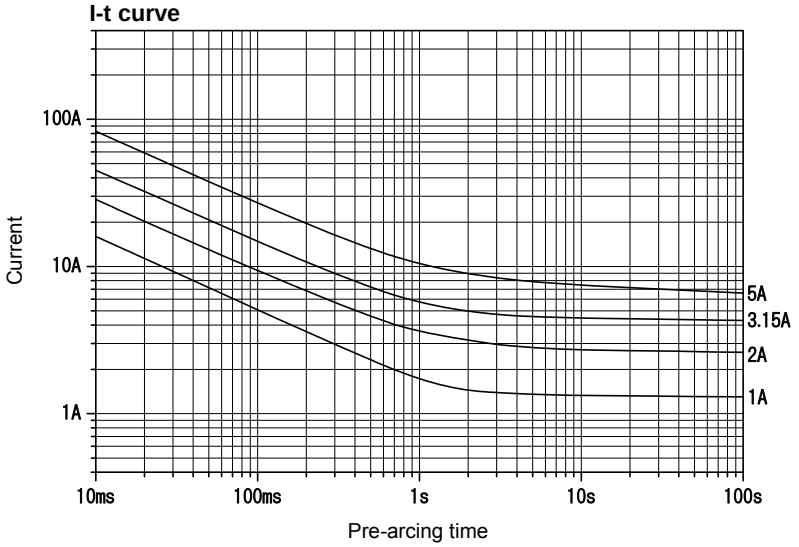
AC125V

Scale: 1/1



Unit: mm

I-t curve



The I-t curves above are plots of the average values of measurements obtained under conditions specified by SOC. These data are for reference only and are not intended to infer any guaranteed values.

Rated voltage	Certification *1	Range of rated current (I_N) *2	Rated breaking current		Current carrying capacity	Temp. rise	Overload operation
AC125V	<PS>E JET	100mA - 5A	500A	PF 0.7 - 0.8	1.1I_N until temperature stabilization occurs.	At 1.1I_N, 140K or less at the center, 60K or less at the contact	Within 60min at 1.35I_N Within 2min at 2.0I_N

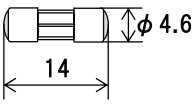
*1: Fuses with rated currents below 1 A are not covered under the Electrical Appliance and Material Safety Law.
*2: Any rated current value can be selected within this range.

SQ8 (Normal-acting)

RoHS Pb

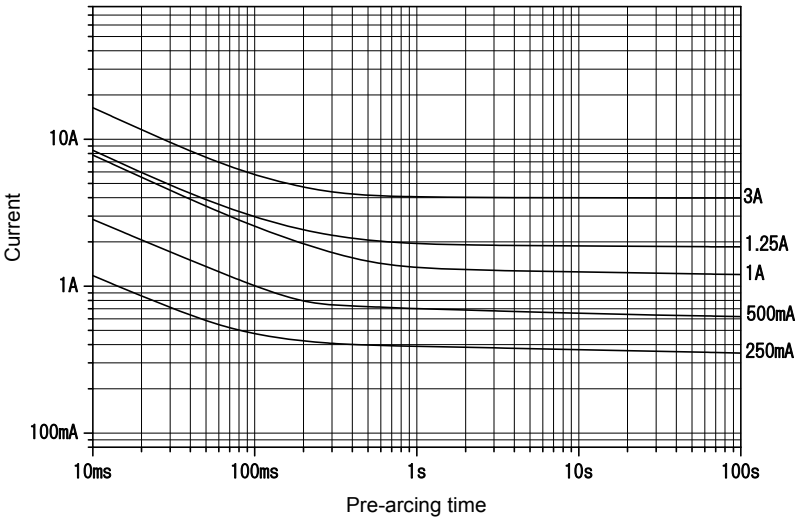
AC125V

Scale: 1/1



Unit: mm

I-t curve



The I-t curves above are plots of the average values of measurements obtained under conditions specified by SOC. These data are for reference only and are not intended to infer any guaranteed values.

Rated voltage	Certification	Range of rated current (I_N) *1	Rated breaking current		Current carrying capacity	Temp. rise	Overload operation
AC125V	UL Listed CSA Certified	80mA - 3A	10000A	PF 0.7 - 0.8	1.1I_N for 15min or more after temper-ature stabilization occurs.	70K or less at 1.1I_N	Within 60min at 1.35I_N Within 2min at 2.0I_N

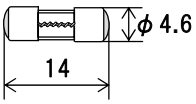
*1: Any rated current value can be selected within this range.

MT8 (Inrush-withstand)

RoHS Pb

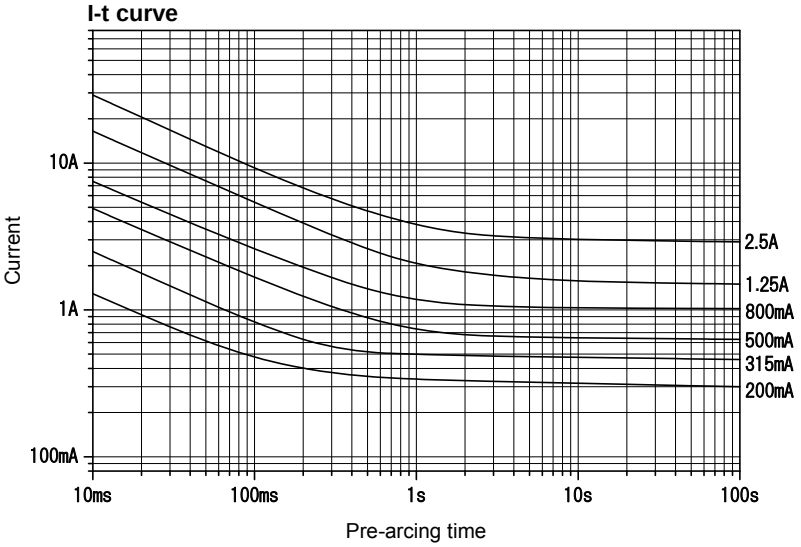
AC125V

Scale: 1/1



Unit: mm

I-t curve



The I-t curves above are plots of the average values of measurements obtained under conditions specified by SOC. These data are for reference only and are not intended to infer any guaranteed values.

Rated voltage	Certification	Range of rated current (I_N) *1	Rated breaking current		Current carrying capacity	Temp. rise	Overload operation
AC125V	UL Listed CSA Certified	100mA - 3A	10000A	PF 0.7 - 0.8	1.1I_N for 15min or more after temper-ature stabilization occurs.	70K or less at 1.1I_N	Within 60min at 1.35I_N Within 2min at 2.0I_N

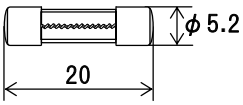
*1: Any rated current value can be selected within this range.

PMT4 (Inrush-withstand protector)

100mA - 8A: RoHS Pb
Over 8A - 20A: RoHS *1

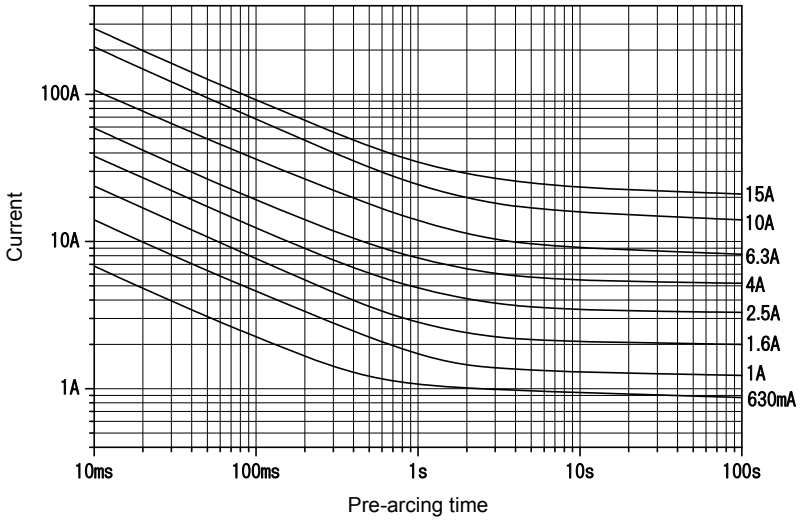
AC42V
DC42V

Scale: 1/1



Unit: mm

I-t curve



The I-t curves above are plots of the average values of measurements obtained under conditions specified by SOC. These data are for reference only and are not intended to infer any guaranteed values.

Maximum working voltage	Certification	Range of rated current (I_N)*2	Maximum breaking current		Current carrying capacity	Temp. rise	Overload operation
AC42V	—	100mA - 20A	100A	Resistive circuit	1.0I_N for 15min or more after temper-ature stabilization occurs.	70K or less at 1.0I_N	Within 60min at 1.35I_N Within 2min at 2.0I_N
DC42V							

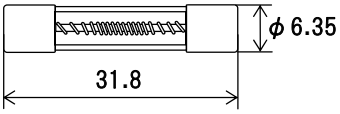
*1: High melting temperature type solder containing more than 85 wt% lead is used in this product (over 8 A - 20 A).
*2: Any rated current value can be selected within this range.

NSD10 (Time-delay)

RoHS *1

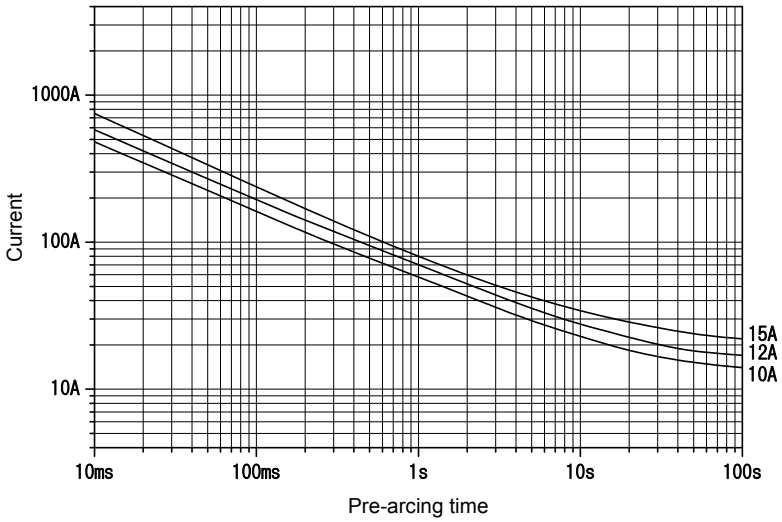
AC32V

Scale: 1/1



Unit: mm

I-t curve



The I-t curves above are plots of the average values of measurements obtained under conditions specified by SOC. These data are for reference only and are not intended to infer any guaranteed values.

Rated voltage	Certification	Range of rated current (I_N) *2	Rated breaking current		Current carrying capacity	Temp. rise	Overload operation
AC32V	UL Recognized CSA Certified	Over 8A - 15A	3000A	PF 0.7 - 0.8	1.1I_N for 15min or more after temperature stabilization occurs.	70K or less at 1.1I_N	Within 60min at 1.35I_N 12s - 2min inclusive at 2.0I_N

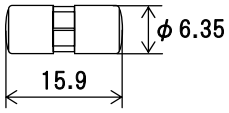
*1: High melting temperature type solder containing more than 85 wt% lead is used in this product.
*2: Any rated current value can be selected within this range.

DCSU2 (Normal-acting)

Over 5A - 15A: RoHS Pb
Over 15A - 20A: RoHS *1

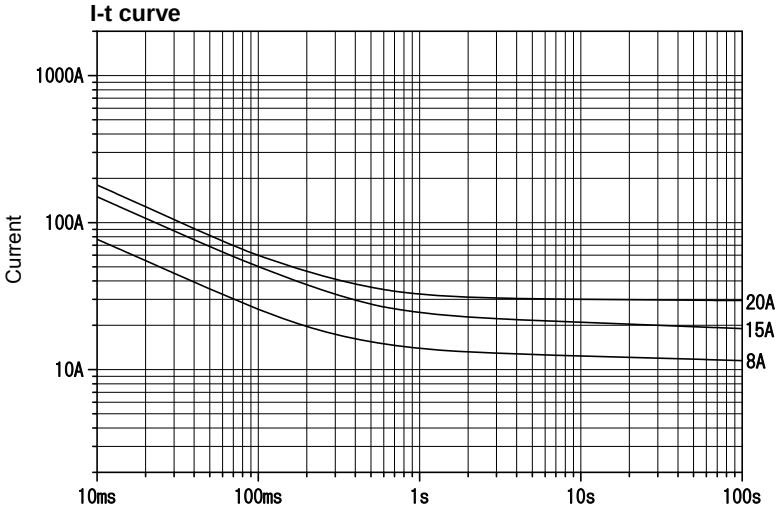
DC60V

Scale: 1/1



Unit: mm

I-t curve



The I-t curves above are plots of the average values of measurements obtained under conditions specified by SOC. These data are for reference only and are not intended to infer any guaranteed values.

Rated voltage	Certification	Range of rated current (I_N) *2	Rated breaking current		Current carrying capacity	Temp. rise	Overload operation
DC60V	UL Recognized	Over 5A - 20A	100A	Resistive circuit	1.0I_N for 15min or more after temperature stabilization occurs.	—	Within 60min at 1.35I_N Within 2min at 2.0I_N

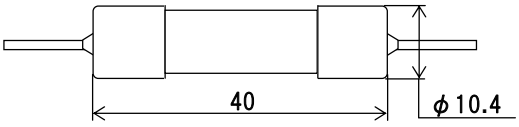
*1: High melting temperature type solder containing more than 85 wt% lead is used in this product (over 15 A - 20 A).
*2: Any rated current value can be selected within this range.

SHV5 (Quick-acting)

RoHS Pb

AC600V

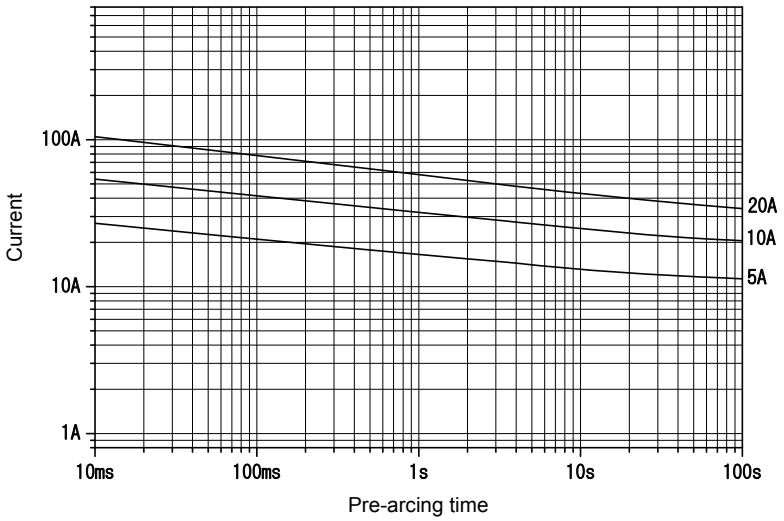
Scale: 1/1



Lead wire diameter: ϕ 1.2

Unit: mm

I-t curve



The I-t curves above are plots of the average values of measurements obtained under conditions specified by SOC. These data are for reference only and are not intended to infer any guaranteed values.

Rated voltage	Certification	Rated current (I_N)	Rated breaking current		Current carrying capacity	Temp. rise	Overload operation
AC600V	UL Recognized CSA Component Acceptance	5A, 10A, 15A, 20A	10000A	PF 0.7 - 0.8	1.0I_N until temperature stabilization occurs.	—	Within 60s at 2.6I_N Within 1s at 3.6I_N

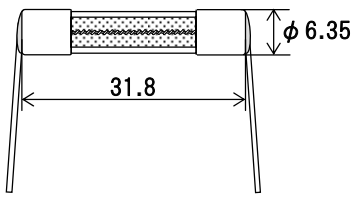
NSHV3 (Inrush-withstand protector)

1A - 6.3A: RoHS Pb

Over 6.3A - 10A: RoHS *1

AC500V

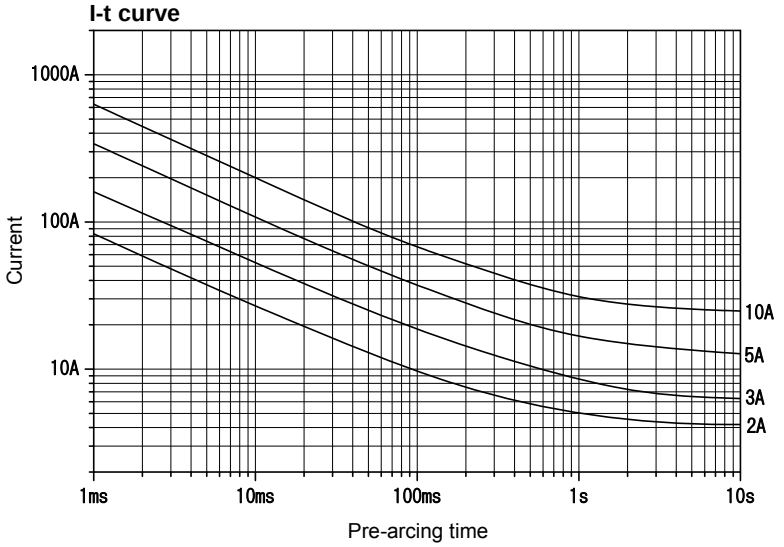
Scale: 1/1



Lead wire diameter: ϕ 1.0

Unit: mm

I-t curve



The I-t curves above are plots of the average values of measurements obtained under conditions specified by SOC. These data are for reference only and are not intended to infer any guaranteed values.

Maximum working voltage	Certification	Range of rated current (I_N) *2	Maximum breaking current		Current carrying capacity	Temp. rise	Overload operation
AC500V	—	1A - 10A	500A	Resistive circuit	1.0I_N until temperature stabilization occurs.	75K or less at 1.0I_N	Within 60min at 2.1I_N

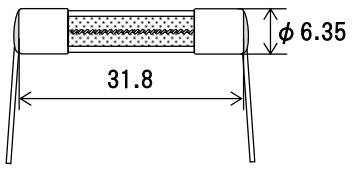
*1: High melting temperature type solder containing more than 85 wt% lead is used in this product (over 6.3 A - 10 A).
*2: Any rated current value can be selected within this range.

NSHV13 (Inrush-withstand protector)

RoHS *1

AC400V
DC400V

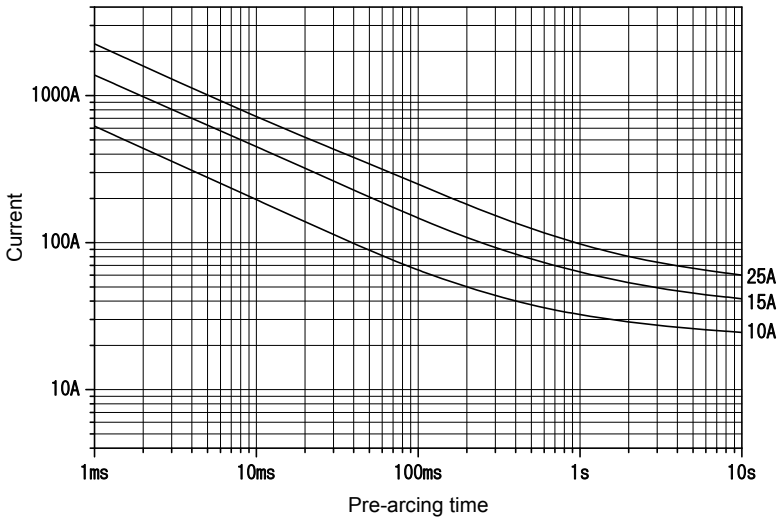
Scale: 1/1



Lead wire diameter:
ϕ 0.8 (5A - under 10A)
ϕ 1.0 (10A - 15A)
ϕ 1.2 (Over 15A - 25A)

Unit: mm

I-t curve



The I-t curves above are plots of the average values of measurements obtained under conditions specified by SOC. These data are for reference only and are not intended to infer any guaranteed values.

Maximum working voltage	Certification	Range of rated current (I_N) *2	Maximum breaking current		Endurance test	Temp. rise	Overload operation
AC400V DC400V	—	5A - 25A	500A	Resistive circuit	*3	75K or less at 1.0I_N	Within 30min at 2.1I_N

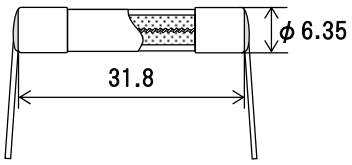
*1: High melting temperature type solder containing more than 85 wt% lead is used in this product.
*2: Any rated current value can be selected within this range.
*3: After repeating 100 cycles of 1.2 I_N for 1 h and switching-off for 15 min, 1.5 I_N can be passed through the fuse for 1 h or more.

NSHV23A (Inrush-withstand protector)

RoHS *1

AC400V
DC400V

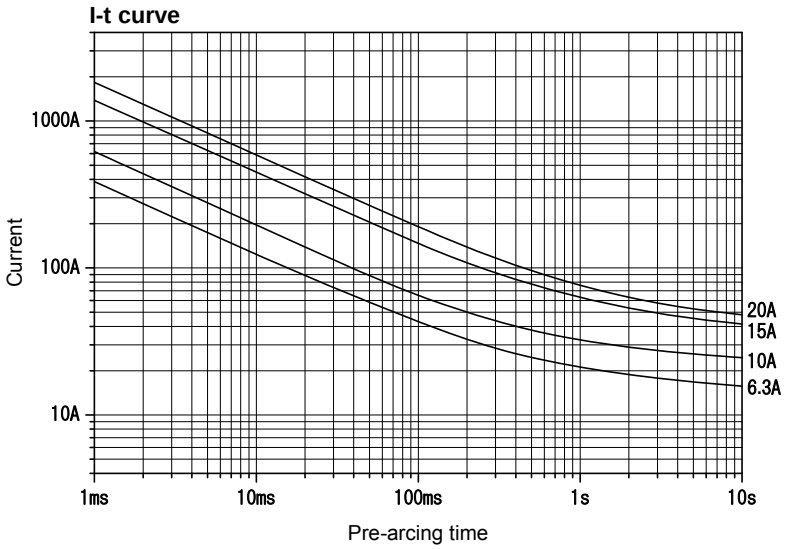
Scale: 1/1



Lead wire diameter: ϕ 1.0

Unit: mm

I-t curve



The I-t curves above are plots of the average values of measurements obtained under conditions specified by SOC. These data are for reference only and are not intended to infer any guaranteed values.

Maximum working voltage	Certification	Range of rated current (I_N) *2	Maximum breaking current		Endurance test	Temp. rise	Overload operation
AC400V DC400V	—	1A - 20A	500A	Resistive circuit	*3	75K or less at 1.0I_N	Within 30min at 2.1I_N

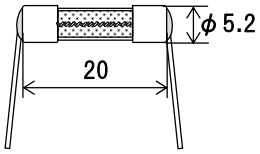
*1: High melting temperature type solder containing more than 85 wt% lead is used in this product.
*2: Any rated current value can be selected within this range.
*3: After repeating 100 cycles of 1.2 I_N for 1 h and switching-off for 15 min, 1.5 I_N can be passed through the fuse for 1 h or more.

SHV11 (Inrush-withstand)

RoHS *1

AC400V
DC400V

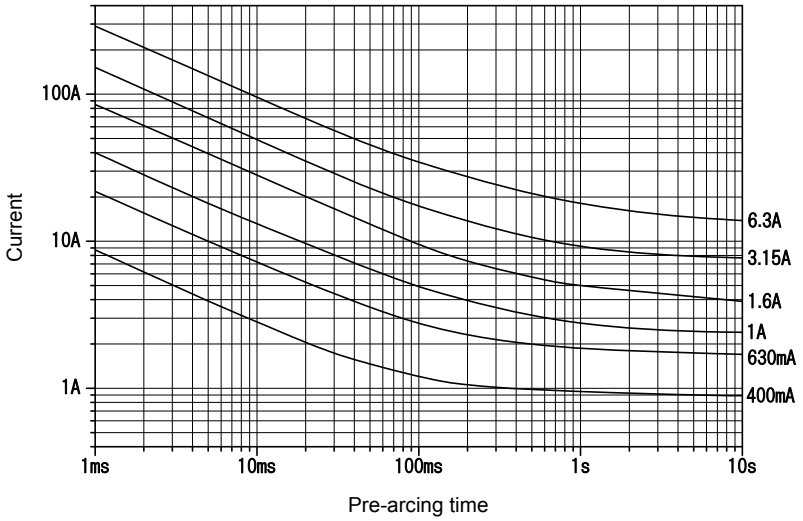
Scale: 1/1



Lead wire diameter: ϕ0.8

Unit: mm

I-t curve



The I-t curves above are plots of the average values of measurements obtained under conditions specified by SOC. These data are for reference only and are not intended to infer any guaranteed values.

Rated voltage	Certification	Range of rated current (I_N) *3	Rated breaking current		Current carrying capacity	Temp. rise	Overload operation
AC400V	C-UL US Recognized	100mA - 6.3A	500A	Resistive circuit	1.0I_N until temperature stabilization occurs.	75K or less at 1.0I_N	Within 30min at 2.1I_N
DC400V	C-UL US Recognized	100mA - 6.3A	200A	Resistive circuit	1.0I_N until temperature stabilization occurs.	75K or less at 1.0I_N	Within 30min at 2.1I_N
DC400V	— *2	100mA - 2.5A	1500A	Resistive circuit	1.0I_N until temperature stabilization occurs.	75K or less at 1.0I_N	Within 30min at 2.1I_N

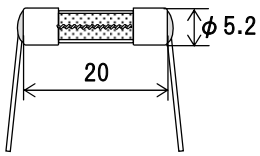
*1: High melting temperature type solder containing more than 85 wt% lead is used in this product.
*2: This specification is based on SOC internal testing.
*3: Any rated current value can be selected within this range.

SHV1 (Inrush-withstand)

RoHS *1

AC380V

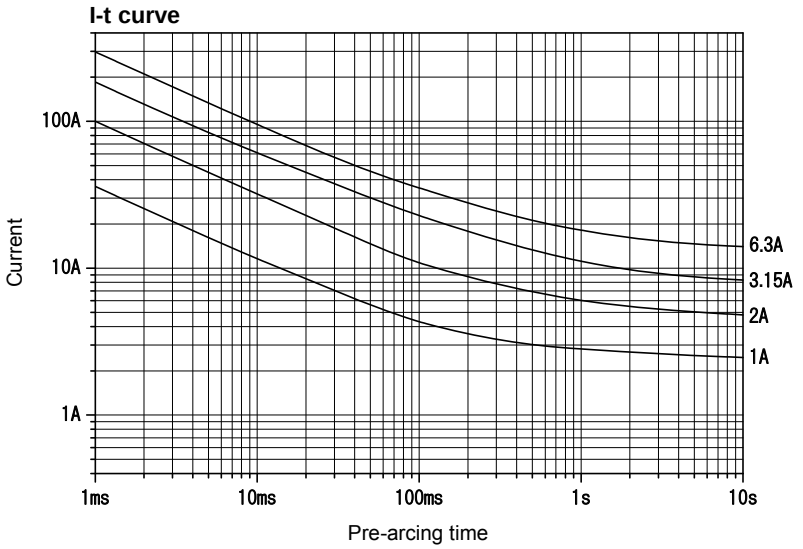
Scale: 1/1



Lead wire diameter: ϕ0.8

Unit: mm

I-t curve



The I-t curves above are plots of the average values of measurements obtained under conditions specified by SOC. These data are for reference only and are not intended to infer any guaranteed values.

Rated voltage	Certification	Range of rated current (I_N) *2	Rated breaking current		Current carrying capacity	Temp. rise	Overload operation
AC380V	UL Recognized CSA Component Acceptance	1A - 6.3A	500A	Resistive circuit	1.0I_N until temperature stabilization occurs.	75K or less at 1.0I_N	Within 60min at 2.1I_N

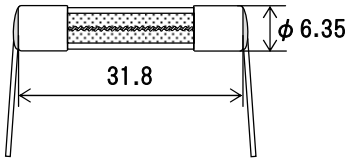
*1: High melting temperature type solder containing more than 85 wt% lead is used in this product.
*2: Any rated current value can be selected within this range.

NSHV15 (Inrush-withstand protector)

RoHS *1

DC700V

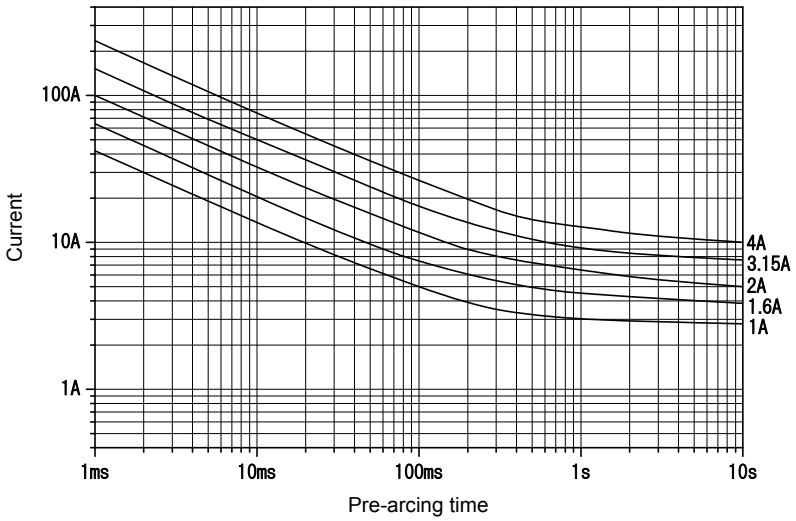
Scale: 1/1



Lead wire diameter: ϕ0.8

Unit: mm

I-t curve



The I-t curves above are plots of the average values of measurements obtained under conditions specified by SOC. These data are for reference only and are not intended to infer any guaranteed values.

Maximum working voltage	Certification	Range of rated current (I_N) *2	Maximum breaking current		Current carrying capacity	Temp. rise	Overload operation
DC700V	—	1A - 4A	500A	Resistive circuit	1.0I_N until temperature stabilization occurs.	75K or less at 1.0I_N	Within 30min at 2.1I_N

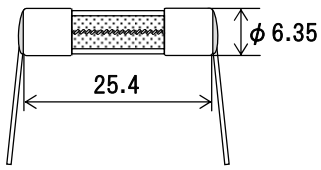
*1: High melting temperature type solder containing more than 85 wt% lead is used in this product.
*2: Any rated current value can be selected within this range.

NSHV17 (Inrush-withstand protector)

RoHS *1

DC500V

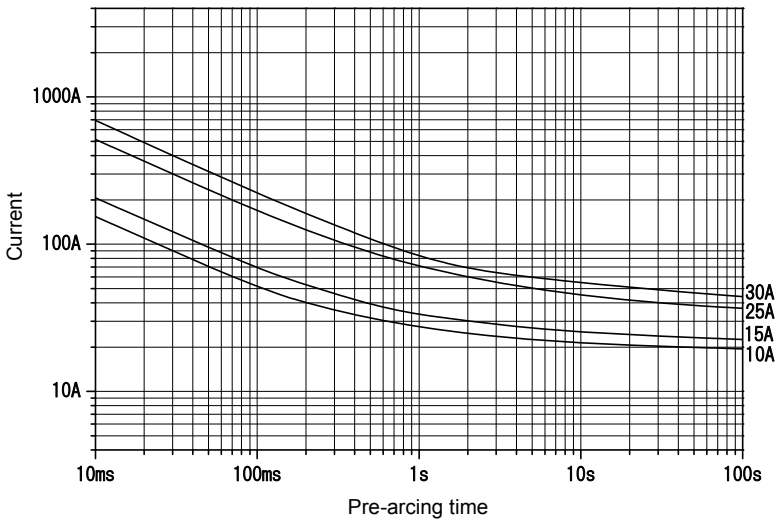
Scale: 1/1



Lead wire diameter:
ϕ1.0 (10A - under 15A)
ϕ1.2 (15A - 30A)

Unit: mm

I-t curve



The I-t curves above are plots of the average values of measurements obtained under conditions specified by SOC. These data are for reference only and are not intended to infer any guaranteed values.

Maximum working voltage	Certification	Range of rated current (I_N) *2	Maximum breaking current		Current carrying capacity	Temp. rise	Overload operation
DC500V	—	10A - 30A	1000A	Resistive circuit	1.0I_N until temperature stabilization occurs.	75K or less at 0.5I_N	Within 2min at 2.0I_N

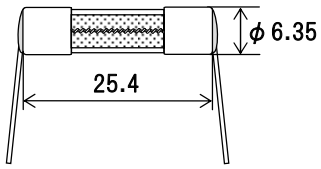
*1: High melting temperature type solder containing more than 85 wt% lead is used in this product.
*2: Any rated current value can be selected within this range.

SHV27 (Inrush-withstand)

RoHS *1

DC420V

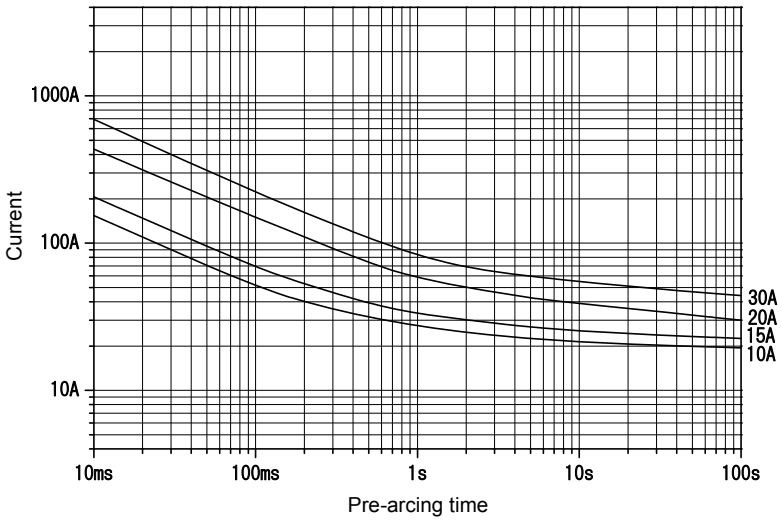
Scale: 1/1



Lead wire diameter: ϕ 1.2

Unit: mm

I-t curve



The I-t curves above are plots of the average values of measurements obtained under conditions specified by SOC. These data are for reference only and are not intended to infer any guaranteed values.

Rated voltage	Certification	Range of rated current (I_N) *2	Rated breaking current		Current carrying capacity	Temp. rise	Overload operation
DC420V	C-UL US Recognized	10A - 30A	400A	Resistive circuit	1.0I_N until temperature stabilization occurs.	—	Within 30min at 2.1I_N

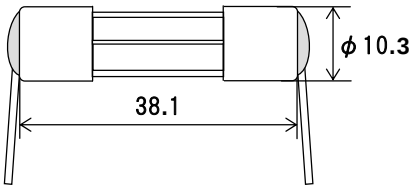
*1: High melting temperature type solder containing more than 85 wt% lead is used in this product.
*2: Any rated current value can be selected within this range.

250VⒶLLCR (Normal-acting)

500mA - 12A: RoHS Pb
Over 12A - 15A: RoHS *1

AC250V

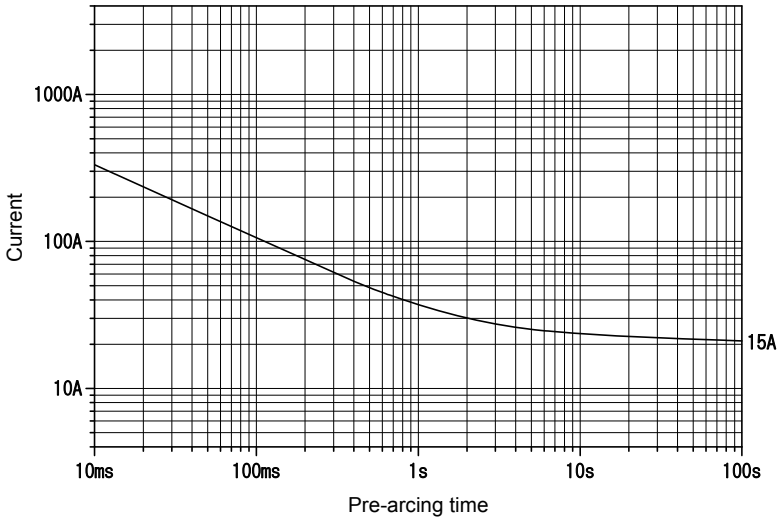
Scale: 1/1



Lead wire diameter:
ϕ0.8 (500mA - 8A)
ϕ1.0 (Over 8A - 15A)

Unit: mm

I-t curve



The I-t curve above is a plot of the average values of measurements obtained under conditions specified by SOC. These data are for reference only and are not intended to infer any guaranteed values.

Rated voltage	Certification *2	Range of rated current (I_N) *3	Rated breaking current		Current carrying capacity	Temp. rise	Overload operation
AC250V	<PS>E JET	500mA - 15A	100A	PF 0.7 - 0.8	1.1I_N until temperature stabilization occurs.	At 1.1I_N, 140K or less at the center, 60K or less at the contact	Within 60min at 1.35I_N Within 2min at 2.0I_N

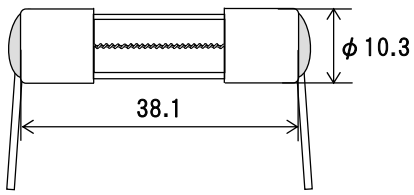
*1: High melting temperature type solder containing more than 85 wt% lead is used in this product (over 12 A - 15 A).
*2: Fuses with rated currents below 1 A are not covered under the Electrical Appliance and Material Safety Law.
*3: Any rated current value can be selected within this range.

250VⒶTLLCR (Inrush-withstand)

500mA - 12A: RoHS Pb
Over 12A - 30A: RoHS *1

AC250V

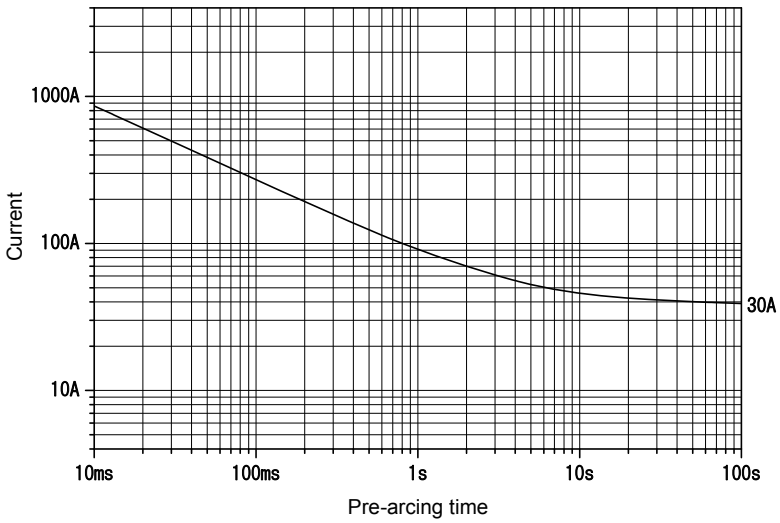
Scale: 1/1



Lead wire diameter:
ϕ0.8 (500mA - 8A)
ϕ1.0 (Over 8A - 15A)
ϕ1.2 (Over 15A - 30A)

Unit: mm

I-t curve



The I-t curve above is a plot of the average values of measurements obtained under conditions specified by SOC. These data are for reference only and are not intended to infer any guaranteed values.

Rated voltage	Certification *2	Range of rated current (I_N) *3	Rated breaking current		Current carrying capacity	Temp. rise	Overload operation
AC250V	<PS>E JET	500mA - 5A	500A	PF 0.7 - 0.8	1.1I_N until temperature stabilization occurs.	At 1.1I_N, 140K or less at the center, 60K or less at the contact	Within 60min at 1.35I_N Within 2min at 2.0I_N
		Over 5A - 30A	100A				

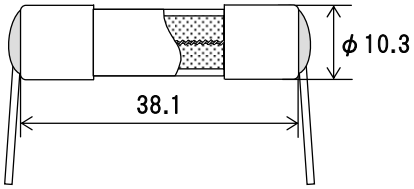
*1: High melting temperature type solder containing more than 85 wt% lead is used in this product (over 12 A - 30 A).
*2: Fuses with rated currents below 1 A are not covered under the Electrical Appliance and Material Safety Law.
*3: Any rated current value can be selected within this range.

SKM7 (Inrush-withstand)

100mA - 12A: RoHS Pb
Over 12A - 30A: RoHS *1

AC250V

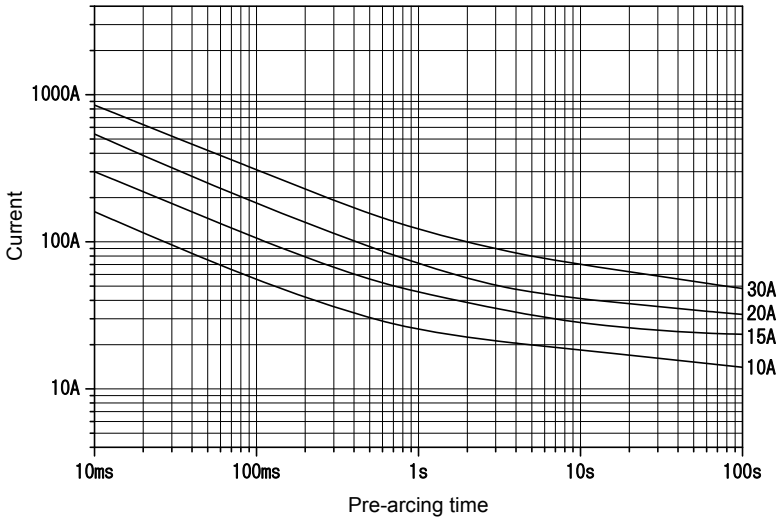
Scale: 1/1



Lead wire diameter: ϕ 1.2

Unit: mm

I-t curve



The I-t curves above are plots of the average values of measurements obtained under conditions specified by SOC. These data are for reference only and are not intended to infer any guaranteed values.

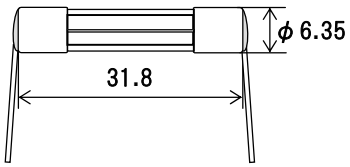
Rated voltage	Certification	Range of rated current (I_N) *2	Rated breaking current		Current carrying capacity	Temp. rise	Overload operation
AC250V	UL Recognized CSA Certified	100mA - 30A	1500A	PF 0.7 - 0.8	1.0I_N for 15min or more after temperature stabilization occurs.	75K or less at 1.0I_N	Within 60min at 1.35I_N Within 2min at 2.0I_N

*1: High melting temperature type solder containing more than 85 wt% lead is used in this product (over 12 A - 30 A).
*2: Any rated current value can be selected within this range.

250VⒶLNCR (Normal-acting)

100mA - 12A: RoHS Pb
Over 12A - 20A: RoHS *1

AC250V

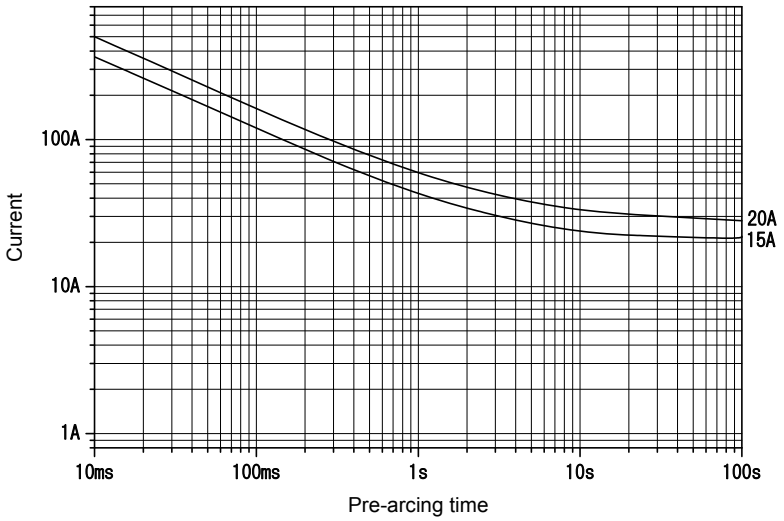


Scale: 1/1

Lead wire diameter:
ϕ 0.8 (100mA - 8A)
ϕ 1.0 (Over 8A - 15A)
ϕ 1.2 (Over 15A - 20A)

Unit: mm

I-t curve



The I-t curves above are plots of the average values of measurements obtained under conditions specified by SOC. These data are for reference only and are not intended to infer any guaranteed values.

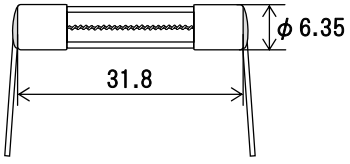
Rated voltage	Certification *2	Range of rated current (I_N) *3	Rated breaking current		Current carrying capacity	Temp. rise	Overload operation
AC250V	<PS>E JET	100mA - 20A	100A	PF 0.7 - 0.8	1.1I_N until temperature stabilization occurs.	At 1.1I_N, 140K or less at the center, 60K or less at the contact	Within 60min at 1.35I_N Within 2min at 2.0I_N

*1: High melting temperature type solder containing more than 85 wt% lead is used in this product (over 12 A - 20 A).
*2: Fuses with rated currents below 1 A are not covered under the Electrical Appliance and Material Safety Law.
*3: Any rated current value can be selected within this range.

250VⒶTLNCR (Inrush-withstand)

100mA - 12A: RoHS Pb
Over 12A - 25A: RoHS *1

AC250V

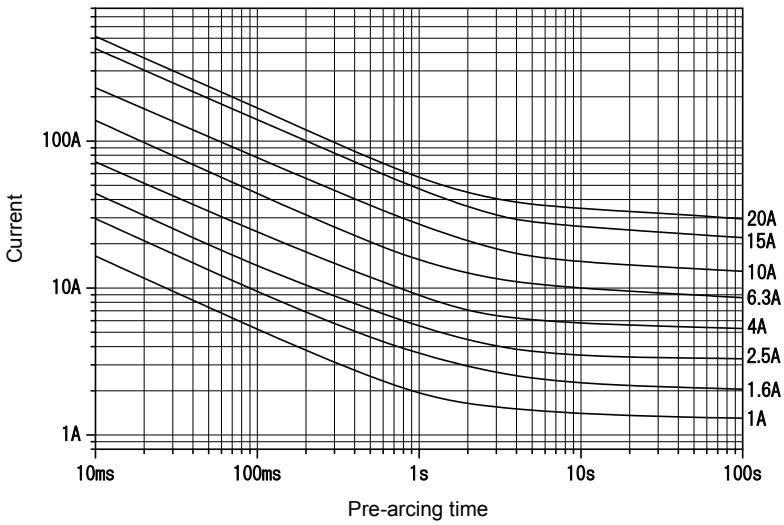


Scale: 1/1

Lead wire diameter:
ϕ 0.8 (100mA - 8A)
ϕ 1.0 (Over 8A - 15A)
ϕ 1.2 (Over 15A - 25A)

Unit: mm

I-t curve



The I-t curves above are plots of the average values of measurements obtained under conditions specified by SOC. These data are for reference only and are not intended to infer any guaranteed values.

Rated voltage	Certification *2	Range of rated current (I_N) *3	Rated breaking current		Current carrying capacity	Temp. rise	Overload operation
AC250V	<PS>E JET	100mA - 5A	500A	PF 0.7 - 0.8	1.1I_N until temperature stabilization occurs.	At 1.1I_N, 140K or less at the center, 60K or less at the contact	Within 60min at 1.35I_N Within 2min at 2.0I_N
		Over 5A - 25A	100A				

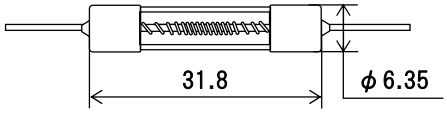
*1: High melting temperature type solder containing more than 85 wt% lead is used in this product (over 12 A - 25 A).
*2: Fuses with rated currents below 1 A are not covered under the Electrical Appliance and Material Safety Law.
*3: Any rated current value can be selected within this range.

250VⒶSDLNCR (Time-delay)

RoHS *1

AC250V

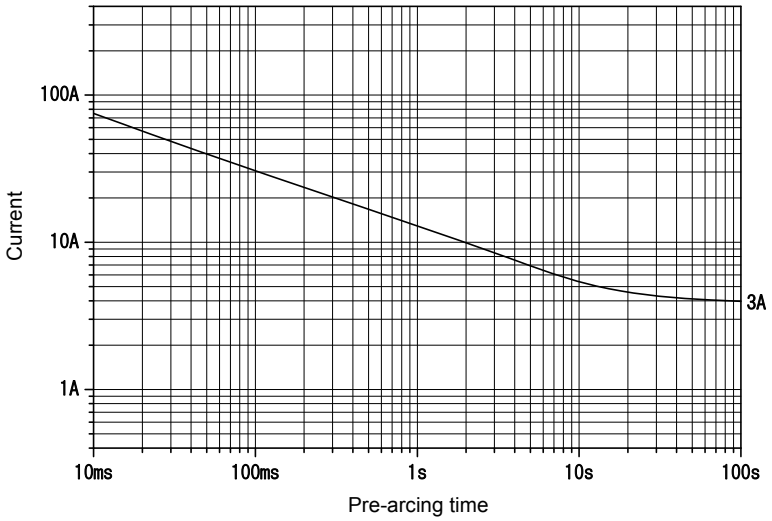
Scale: 1/1



Lead wire diameter: ϕ0.8

Unit: mm

I-t curve



The I-t curve above is a plot of the average values of measurements obtained under conditions specified by SOC. These data are for reference only and are not intended to infer any guaranteed values.

Rated voltage	Certification *2	Range of rated current (I_N) *3	Rated breaking current		Current carrying capacity	Temp. rise	Overload operation
AC250V	<PS>E JET	100mA - 8A	100A	PF 0.7 - 0.8	1.1I_N until temper-ature stabilization occurs.	At 1.1I_N, 140K or less at the center, 60K or less at the contact	*4

*1: High melting temperature type solder containing more than 85 wt% lead is used in this product.
*2: Fuses with rated currents below 1 A are not covered under the Electrical Appliance and Material Safety Law.
*3: Any rated current value can be selected within this range.
*4:

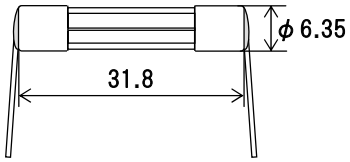
Rated current	1.35I_N	2.0I_N
100mA - 3A	Within 60min	5s - 2min
Over 3A - 8A		12s - 2min

SS1 (Normal-acting)

RoHS

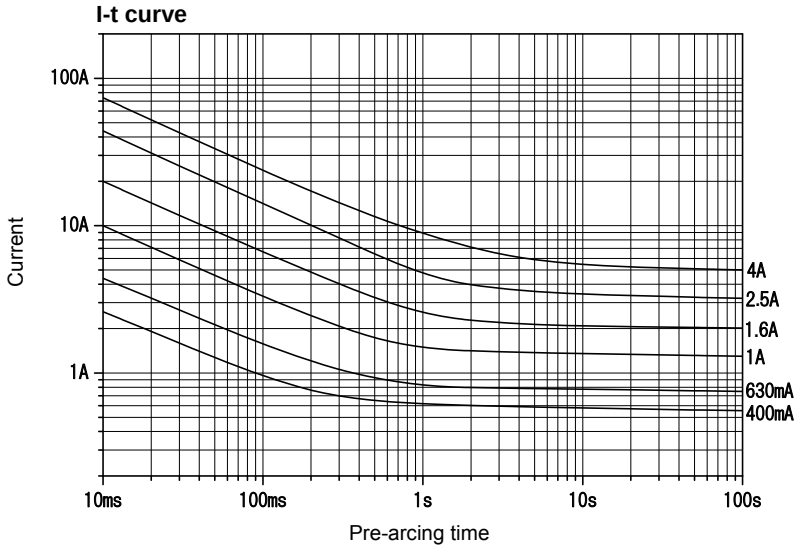
AC250V

Scale: 1/1



Lead wire diameter: ϕ0.8

Unit: mm



The I-t curves above are plots of the average values of measurements obtained under conditions specified by SOC. These data are for reference only and are not intended to infer any guaranteed values.

Rated voltage	Certification	Range of rated current (I_N) *1	Rated breaking current		Current carrying capacity	Temp. rise	Overload operation
AC250V	UL Listed CSA Certified	50mA - 5A	10000A	PF 0.7 - 0.8	1.1I_N for 15min or more after temper-ature stabilization occurs.	70K or less at 1.1I_N	Within 60min at 1.35I_N Within 2min at 2.0I_N

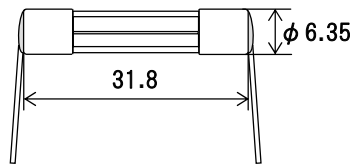
*1: Any rated current value can be selected within this range.

SS1 N1 (Normal-acting)

RoHS

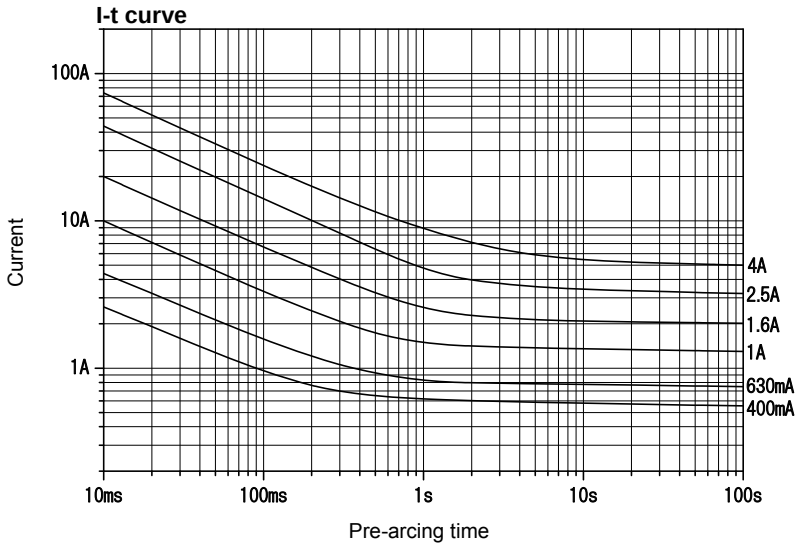
AC250V

Scale: 1/1



Lead wire diameter: ϕ0.8

Unit: mm



The I-t curves above are plots of the average values of measurements obtained under conditions specified by SOC. These data are for reference only and are not intended to infer any guaranteed values.

Rated voltage	Certification	Range of rated current (I_N) *2	Rated breaking current		Current carrying capacity	Temp. rise	Overload operation
AC250V	UL Listed CSA Certified	50mA - 5A	10000A	PF 0.7 - 0.8	*3	70K or less at 1.1I_N	Within 60min at 1.35I_N Within 2min at 2.0I_N
	<PS>E JET *1		500A		*4	At 1.1I_N, 140K or less at the center, 60K or less at the contact	

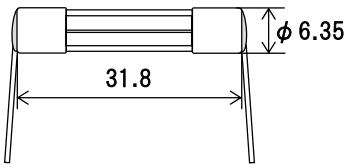
*1: Fuses with rated currents below 1 A are not covered under the Electrical Appliance and Material Safety Law.
*2: Any rated current value can be selected within this range.
*3: 1.1 I_N for 15 min or more after temperature stabilization occurs.
*4: 1.1 I_N until temperature stabilization occurs.

SS5 (Normal-acting)

Over 5A - 8A: RoHS Pb
Over 8A - 15A: RoHS *1

AC250V AC125V

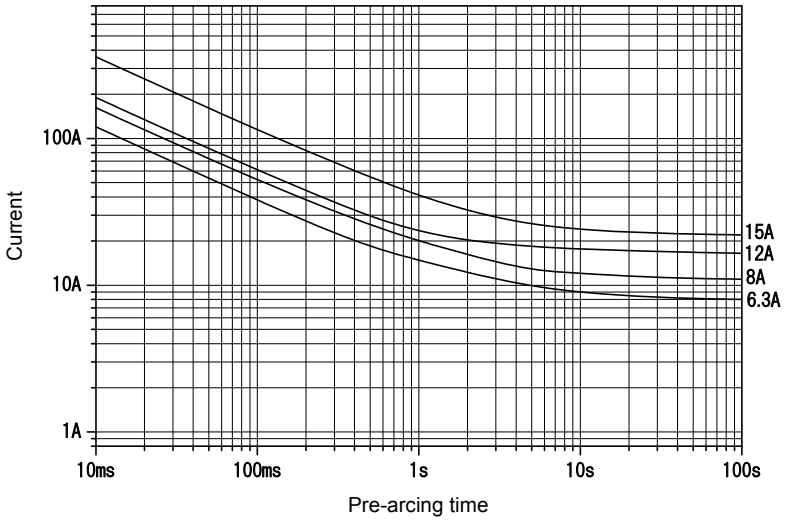
Scale: 1/1



Lead wire diameter:
ϕ0.8 (Over 5A - 8A)
ϕ1.0 (Over 8A - 15A)

Unit: mm

I-t curve



The I-t curves above are plots of the average values of measurements obtained under conditions specified by SOC. These data are for reference only and are not intended to infer any guaranteed values.

Rated voltage	Certification	Range of rated current (I_N) *2	Rated breaking current		Current carrying capacity	Temp. rise	Overload operation
AC250V	UL Listed CSA Certified	Over 5A - 8A	200A	PF 0.7 - 0.8	1.1I_N for 15min or more after temperature stabilization occurs.	70K or less at 1.1I_N	Within 60min at 1.35I_N Within 2min at 2.0I_N
AC125V	UL Recognized CSA Certified	Over 8A - 15A	10000A		1.0I_N for 15min or more after temperature stabilization occurs.	70K or less at 1.0I_N	

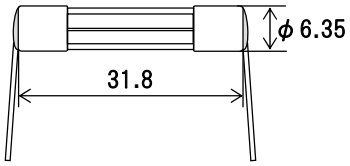
*1: High melting temperature type solder containing more than 85 wt% lead is used in this product (over 8 A - 15 A).
*2: Any rated current value can be selected within this range.

SS5 N1 (Normal-acting)

Over 5A - 8A: RoHS Pb
Over 8A - 15A: RoHS *1

AC250V AC125V

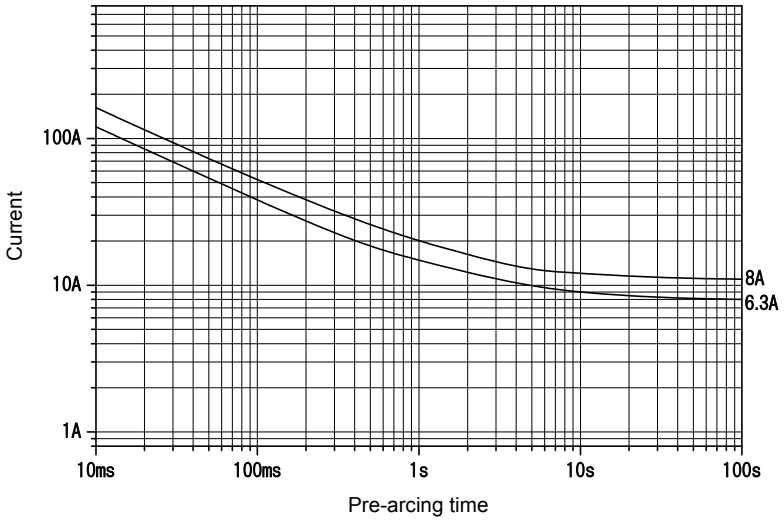
Scale: 1/1



Lead wire diameter:
ϕ0.8 (Over 5A - 8A)
ϕ1.0 (Over 8A - 15A)

Unit: mm

I-t curve



The I-t curves above are plots of the average values of measurements obtained under conditions specified by SOC. These data are for reference only and are not intended to infer any guaranteed values.

Rated voltage	Certification	Range of rated current (I_N) *2	Rated breaking current		Current carrying capacity	Temp. rise	Overload operation
AC250V	UL Listed CSA Certified	Over 5A - 8A	200A	PF 0.7 - 0.8	1.1I_N for 15min or more after temperature stabilization occurs.	70K or less at 1.1I_N	Within 60min at 1.35I_N Within 2min at 2.0I_N
	<PS>E JET		100A		1.1I_N until temperature stabilization occurs.	At 1.1I_N, 140K or less at the center, 60K or less at the contact	
AC125V	UL Recognized CSA Certified	Over 8A - 15A	10000A		1.0I_N for 15min or more after temperature stabilization occurs.	70K or less at 1.0I_N	
	<PS>E JET		500A		1.1I_N until temperature stabilization occurs.	At 1.1I_N, 140K or less at the center, 60K or less at the contact	

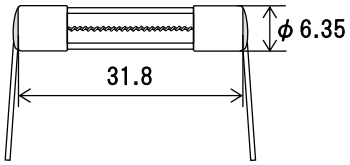
*1: High melting temperature type solder containing more than 85 wt% lead is used in this product (over 8 A - 15 A).
*2: Any rated current value can be selected within this range.

ST3 (Inrush-withstand)

100mA – 8A: RoHS Pb
Over 8A – 30A: RoHS *1

AC250V

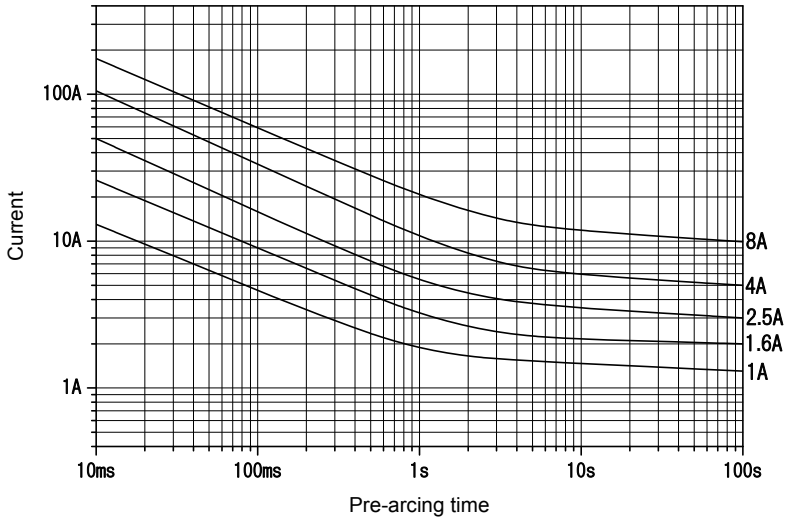
Scale: 1/1



Lead wire diameter:
ϕ 0.8 (100mA - 8A)
ϕ 1.0 (Over 8A – 15A)
ϕ 1.2 (Over 15A - 30A)

Unit: mm

I-t curve



The I-t curves above are plots of the average values of measurements obtained under conditions specified by SOC. These data are for reference only and are not intended to infer any guaranteed values.

Rated voltage	Certification	Range of rated current (I_N) *2	Rated breaking current		Current carrying capacity	Temp. rise	Overload operation
AC250V	UL Listed CSA Certified	100mA - 1A	10000A	PF 0.7 - 0.8	1.1I_N for 15min or more after temperature stabilization occurs.	70K or less at 1.1I_N	Within 60min at 1.35I_N Within 2min at 2.0I_N
		Over 1A - 8A	200A				
	C-UL US Recognized	Over 8A - 30A			1.0I_N until temperature stabilization occurs.	—	

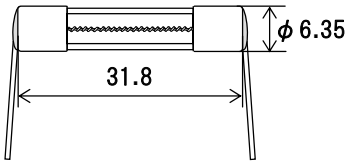
*1: High melting temperature type solder containing more than 85 wt% lead is used in this product (over 8 A - 30 A).
*2: Any rated current value can be selected within this range.

ST3 N1 (Inrush-withstand)

RoHS Pb

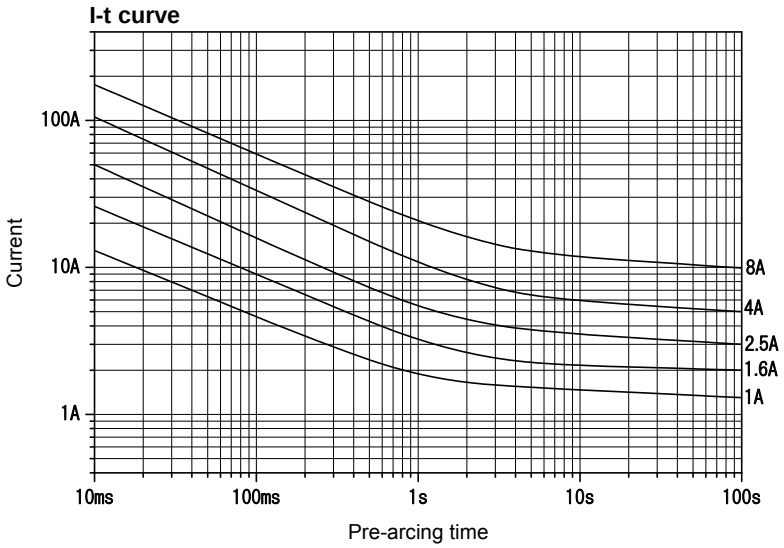
AC250V

Scale: 1/1



Lead wire diameter: ϕ0.8

Unit: mm



The I-t curves above are plots of the average values of measurements obtained under conditions specified by SOC. These data are for reference only and are not intended to infer any guaranteed values.

Rated voltage	Certification	Range of rated current (I_N)*2	Rated breaking current		Current carrying capacity	Temp. rise	Overload operation
AC250V	UL Listed CSA Certified	100mA - 1A	10000A	PF 0.7 - 0.8	1.1I_N for 15min or more after temperature stabilization occurs.	70K or less at 1.1I_N	Within 60min at 1.35I_N Within 2min at 2.0I_N
		Over 1A - 8A	200A				
	<PS>E JET*1	100mA - 1A	500A		1.1I_N until temperature stabilization occurs.	At 1.1I_N, 140K or less at the center, 60K or less at the contact	
		Over 1A - 8A	100A				

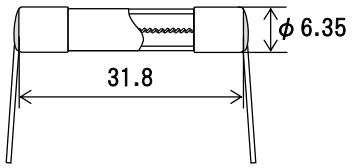
*1: Fuses with rated currents below 1 A are not covered under the Electrical Appliance and Material Safety Law.
*2: Any rated current value can be selected within this range.

CES15 (Inrush-withstand)

100mA - 8A / Over 15A - 25A: RoHS Pb *1
Over 8A - 15A / Over 25A - 30A: RoHS

AC250V

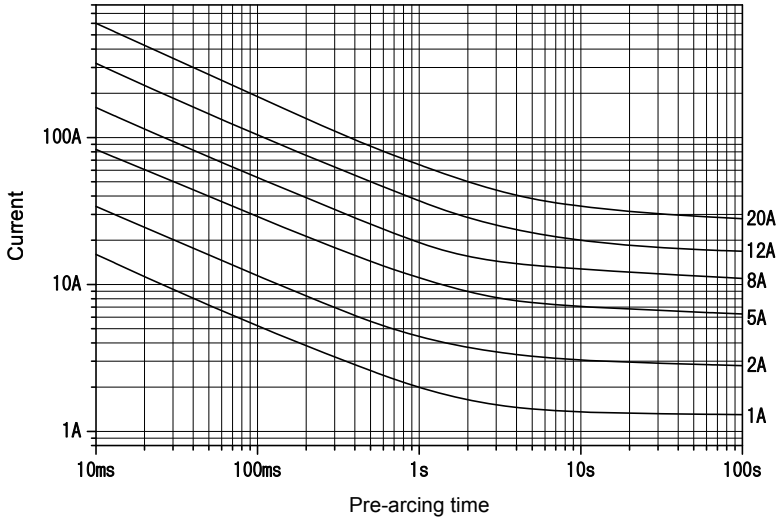
Scale: 1/1



Lead wire diameter:
ϕ 0.8 (100mA - 8A)
ϕ 1.2 (Over 8A - 30A)

Unit: mm

I-t curve



The I-t curves above are plots of the average values of measurements obtained under conditions specified by SOC. These data are for reference only and are not intended to infer any guaranteed values.

Rated voltage	Certification	Range of rated current (I_N) *2	Rated breaking current		Current carrying capacity	Temp. rise	Overload operation
AC250V	UL Recognized CSA Component Acceptance	100mA - 15A	200A	PF 0.7 - 0.8	1.1I_N for 15min or more after temperature stabilization occurs.	70K or less at 1.1I_N	Within 60min at 1.35I_N Within 2min at 2.0I_N
	C-UL US Recognized	Over 15A - 30A			1.0I_N until temperature stabilization occurs.	—	

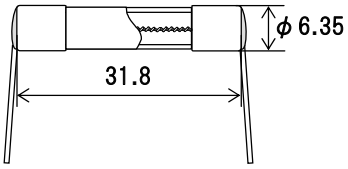
*1: High melting temperature type solder containing more than 85 wt% lead is used in this product (over 8 A - 15 A and over 25 A - 30 A).
*2: Any rated current value can be selected within this range.

CES15 N1 (Inrush-withstand)

100mA - 8A / Over 15A - 25A: RoHS Pb
Over 8A - 15A: RoHS *1

AC250V

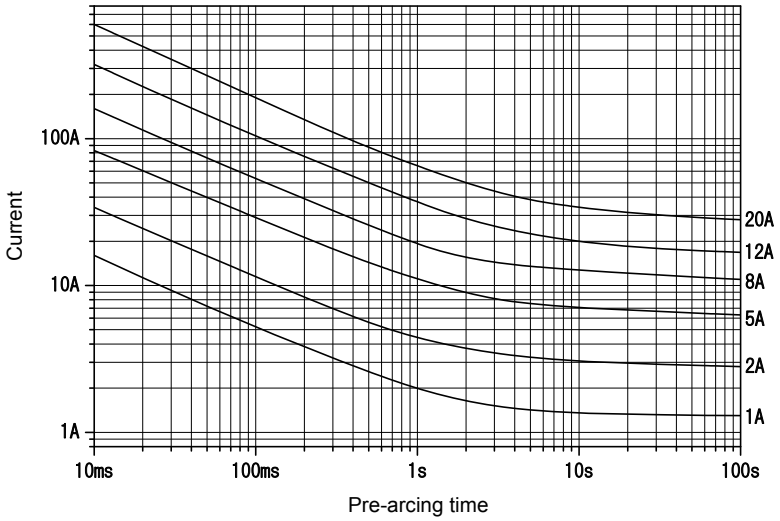
Scale: 1/1



Lead wire diameter:
ϕ 0.8 (100mA - 8A)
ϕ 1.2 (Over 8A - 25A)

Unit: mm

I-t curve



The I-t curves above are plots of the average values of measurements obtained under conditions specified by SOC. These data are for reference only and are not intended to infer any guaranteed values.

Rated voltage	Certification	Range of rated current (I_N) *3	Rated breaking current		Current carrying capacity	Temp. rise	Overload operation
AC250V	UL Recognized CSA Component Acceptance	100mA - 15A	200A	PF 0.7 - 0.8	1.1I_N for 15min or more after temperature stabilization occurs.	70K or less at 1.1I_N	Within 60min at 1.35I_N Within 2min at 2.0I_N
	C-UL US Recognized	Over 15A - 25A			1.0I_N until temperature stabilization occurs.	—	
	<PS>E JET *2	100mA - 25A	100A		1.1I_N until temperature stabilization occurs.	At 1.1I_N, 140K or less at the center, 60K or less at the contact	

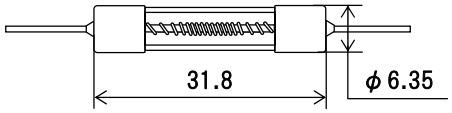
*1: High melting temperature type solder containing more than 85 wt% lead is used in this product (over 8 A - 15 A).
*2: Fuses with rated currents below 1 A are not covered under the Electrical Appliance and Material Safety Law.
*3: Any rated current value can be selected within this range.

SD3 (Time-delay)

RoHS *1

AC250V

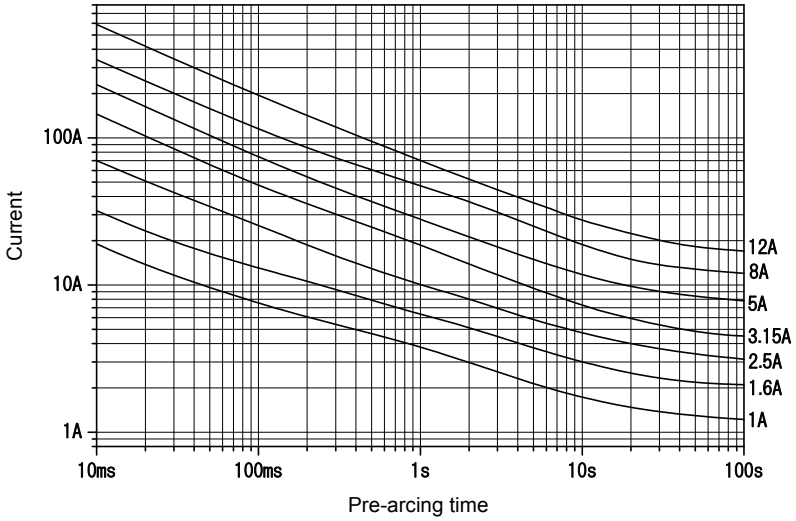
Scale: 1/1



Lead wire diameter:
ϕ 0.8 (100mA - 8A)
ϕ 1.0 (Over 8A - 18A)

Unit: mm

I-t curve



The I-t curves above are plots of the average values of measurements obtained under conditions specified by SOC. These data are for reference only and are not intended to infer any guaranteed values.

Rated voltage	Certification	Range of rated current (I_N) *2	Rated breaking current		Current carrying capacity	Temp. rise	Overload operation
AC250V	UL Listed	100mA - 3A	10000A	PF 0.7 - 0.8	1.1I_N for 15min or more after temperature stabilization occurs.	70K or less at 1.1I_N	*3
	CSA Certified		100A				
	UL Listed CSA Certified	Over 3A - 8A	200A				
	UL Recognized CSA Component Acceptance	Over 8A - 18A	500A			—	

*1: High melting temperature type solder containing more than 85 wt% lead is used in this product.
*2: Any rated current value can be selected within this range.
*3:

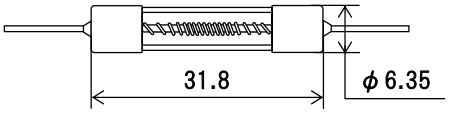
Rated current	1.35I_N	2.0I_N
100mA - 3A	Within 60min	5s - 2min
Over 3A - 18A		12s - 2min

SD3 N1 (Time-delay)

RoHS *1

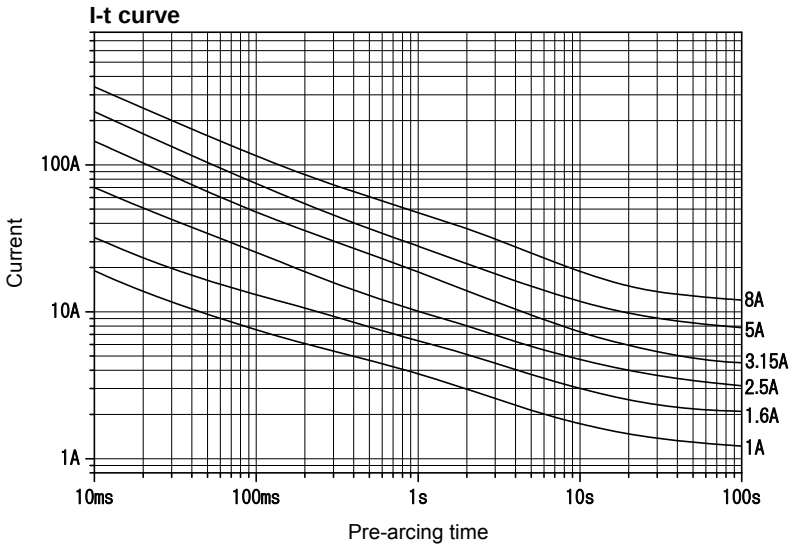
AC250V

Scale: 1/1



Lead wire diameter: ϕ0.8

Unit: mm



The I-t curves above are plots of the average values of measurements obtained under conditions specified by SOC. These data are for reference only and are not intended to infer any guaranteed values.

Rated voltage	Certification	Range of rated current (I_N) *3	Rated breaking current		Current carrying capacity	Temp. rise	Overload operation
AC250V	UL Listed	100mA - 3A	10000A	PF 0.7 - 0.8	1.1I_N for 15min or more after temperature stabilization occurs.	70K or less at 1.1I_N	*4
	CSA Certified		100A				
	UL Listed CSA Certified	Over 3A - 8A	200A				
	<PS>E JET *2	100mA - 8A	100A		1.1I_N until temperature stabilization occurs.	At 1.1I_N, 140K or less at the center, 60K or less at the contact	Within 60min at 1.35I_N Within 2min at 2.0I_N

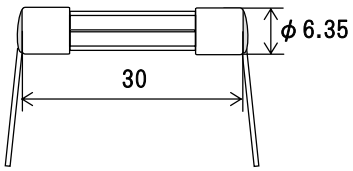
*1: High melting temperature type solder containing more than 85 wt% lead is used in this product.
*2: Fuses with rated currents below 1 A are not covered under the Electrical Appliance and Material Safety Law.
*3: Any rated current value can be selected within this range.
*4:

Rated current	1.35I_N	2.0I_N
100mA - 3A	Within 60min	5s - 2min
Over 3A - 8A		12s - 2min

250VⒶLCR (Normal-acting)

50mA – 12A: RoHS
Over 12A – 20A: RoHS *1

AC250V

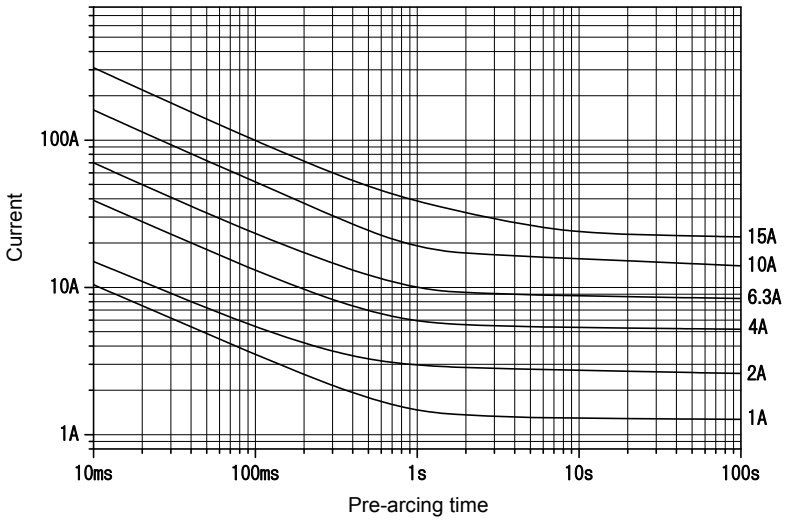


Scale: 1/1

Lead wire diameter:
ϕ 0.8 (50mA - 8A)
ϕ 1.0 (Over 8A - 15A)
ϕ 1.2 (Over 15A - 20A)

Unit: mm

I-t curve



The I-t curves above are plots of the average values of measurements obtained under conditions specified by SOC. These data are for reference only and are not intended to infer any guaranteed values.

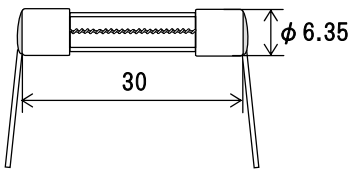
Rated voltage	Certification *2	Range of rated current (I_N) *3	Rated breaking current		Current carrying capacity	Temp. rise	Overload operation
AC250V	<PS>E JET	50mA - 20A	100A	PF 0.7 - 0.8	1.1I_N until temperature stabilization occurs.	At 1.1I_N, 140K or less at the center, 60K or less at the contact	Within 60min at 1.35I_N Within 2min at 2.0I_N

*1: High melting temperature type solder containing more than 85 wt% lead is used in this product (over 12 A - 20 A).
*2: Fuses with rated currents below 1 A are not covered under the Electrical Appliance and Material Safety Law.
*3: Any rated current value can be selected within this range.

250VⒶTLCR (Inrush-withstand)

100mA – 12A: RoHS
Over 12A – 30A: RoHS *1

AC250V

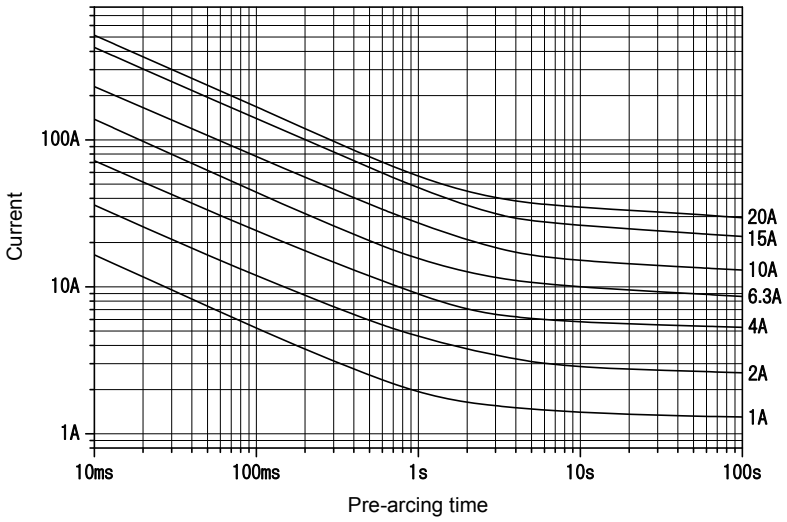


Scale: 1/1

Lead wire diameter:
ϕ 0.8 (100mA - 8A)
ϕ 1.0 (Over 8A - 15A)
ϕ 1.2 (Over 15A - 30A)

Unit: mm

I-t curve



The I-t curves above are plots of the average values of measurements obtained under conditions specified by SOC. These data are for reference only and are not intended to infer any guaranteed values.

Rated voltage	Certification *2	Range of rated current (I_N) *3	Rated breaking current		Current carrying capacity	Temp. rise	Overload operation
AC250V	<PS>E JET	100mA - 5A	500A	PF 0.7 - 0.8	1.1I_N until temperature stabilization occurs.	At 1.1I_N, 140K or less at the center, 60K or less at the contact	Within 60min at 1.35I_N Within 2min at 2.0I_N
		Over 5A - 30A	100A				

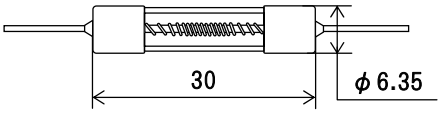
*1: High melting temperature type solder containing more than 85 wt% lead is used in this product (over 12 A - 30 A).
*2: Fuses with rated currents below 1 A are not covered under the Electrical Appliance and Material Safety Law.
*3: Any rated current value can be selected within this range.

250VⒶSDLCR (Time-delay)

RoHS *1

AC250V

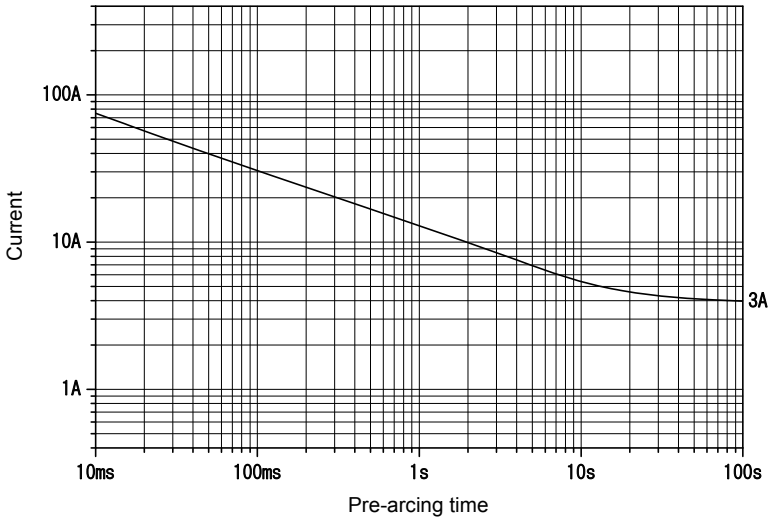
Scale: 1/1



Lead wire diameter: ϕ0.8

Unit: mm

I-t curve



The I-t curve above is a plot of the average values of measurements obtained under conditions specified by SOC. These data are for reference only and are not intended to infer any guaranteed values.

Rated voltage	Certification *2	Range of rated current (I_N) *3	Rated breaking current		Current carrying capacity	Temp. rise	Overload operation
AC250V	<PS>E JET	100mA - 8A	100A	PF 0.7 - 0.8	1.1I_N until temperature stabilization occurs.	At 1.1I_N, 140K or less at the center, 60K or less at the contact	*4

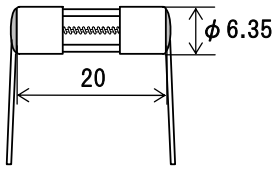
*1: High melting temperature type solder containing more than 85 wt% lead is used in this product.
*2: Fuses with rated currents below 1 A are not covered under the Electrical Appliance and Material Safety Law.
*3: Any rated current value can be selected within this range.
*4:

Rated current	1.35I_N	2.0I_N
100mA - 3A	Within 60min	5s - 2min
Over 3A - 8A		12s - 2min

250VTMCR N1 (Inrush-withstand)

RoHS *1

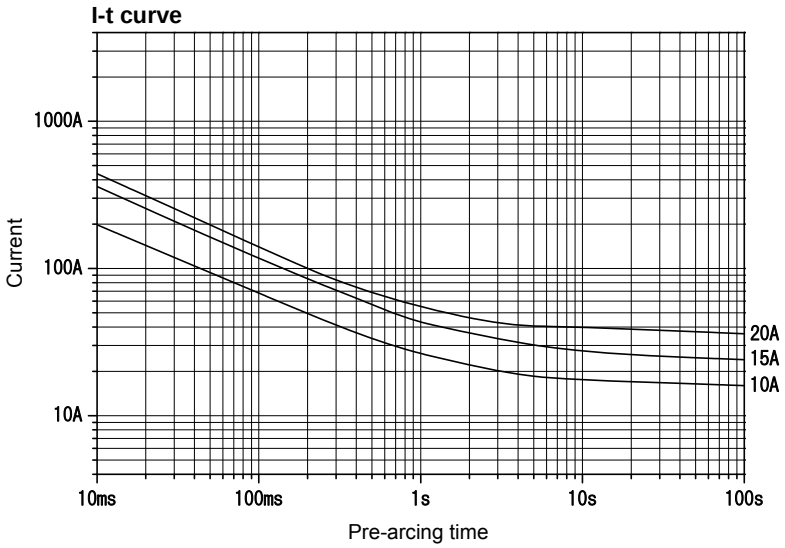
AC250V



Lead wire diameter: ϕ 1.2

Scale: 1/1

Unit: mm



The I-t curves above are plots of the average values of measurements obtained under conditions specified by SOC. These data are for reference only and are not intended to infer any guaranteed values.

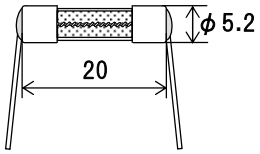
Rated voltage	Certification	Range of rated current (I_N) *2	Rated breaking current		Current carrying capacity	Temp. rise	Overload operation
AC250V	C-UL US Recognized	1A - 20A	100A	PF 0.7 - 0.8	1.0I_N until temperature stabilization occurs.	75K or less at 1.0I_N	Within 2min at 2.0I_N
	<PS>E JET				1.3I_N until temperature stabilization occurs.	At 1.15I_N, 140K or less at the center, 60K or less at the contact	Within 60min at 1.6I_N Within 2min at 2.0I_N

*1: High melting temperature type solder containing more than 85 wt% lead is used in this product.
*2: Any rated current value can be selected within this range.

HTR (Time-lag, high-breaking capacity)

1A – 6.3A: RoHS Pb
8A – 10A: RoHS *1

AC250V

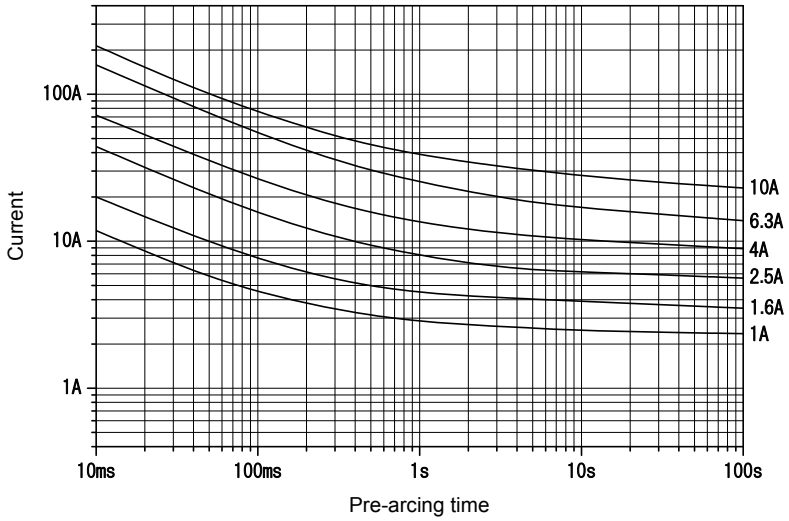


Lead wire diameter:
ϕ 0.8 (1A - 6.3A)
ϕ 1.0 (8A - 10A)

Scale: 1/1

Unit: mm

I-t curve



The I-t curves above are plots of the average values of measurements obtained under conditions specified by SOC. These data are for reference only and are not intended to infer any guaranteed values.

Rated voltage	Certification	Rated current (I_N)	Rated breaking current		Endurance test	Test at elevated temp.	Pre-arcing time/ current characteristic
AC250V	C-UL US Recognized SEMKO Certified BSI Licensed <PS>E JET	1A, 1.25A, 1.6A, 2A, 2.5A, 3.15A, 4A, 5A, 6.3A, 8A, 10A	1500A	PF 0.7 - 0.8	*2	*3	*4

*1: High melting temperature type solder containing more than 85 wt% lead is used in this product (8 A - 10 A).
*2: After repeating 100 cycles of 1.2 I_N for 1 h and switching-off for 15 min, 1.5 I_N can be passed through the fuse for 1 h or more.
*3: 1.1 I_N can be passed through the fuse for 1 h or more at 70±2 °C.
*4:

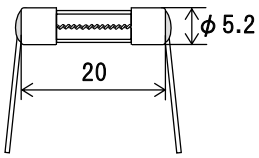
Rated current	2.1I_N	2.75I_N	4.0I_N	10I_N
1A - 3.15A	Within 30min	0.75s - 80s	0.095s - 5s	0.01s - 0.15s
4A - 10A			0.15s - 5s	

ET6R (Time-lag, enhanced breaking capacity)

RoHS Pb

AC250V

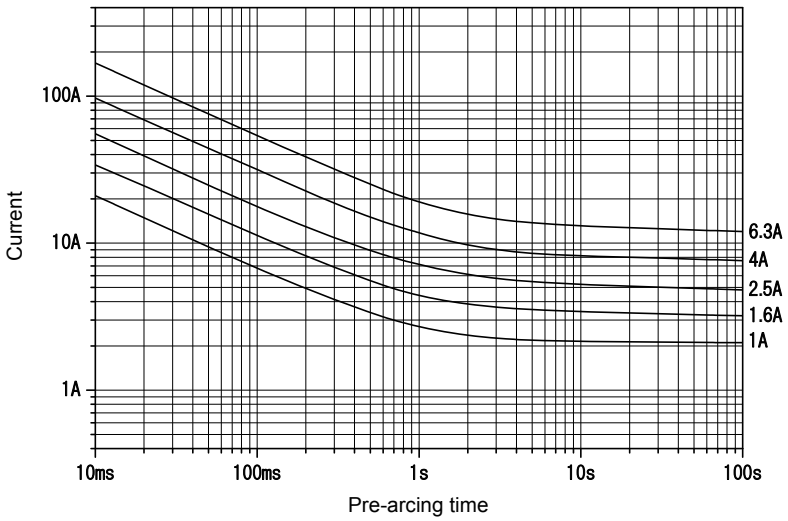
Scale: 1/1



Lead wire diameter: ϕ0.8

Unit: mm

I-t curve



The I-t curves above are plots of the average values of measurements obtained under conditions specified by SOC. These data are for reference only and are not intended to infer any guaranteed values.

Rated voltage	Certification	Rated current (I_N)	Rated breaking current		Current carrying capacity/ Endurance test	Test at elevated temp.	Temp. rise	Pre-arcing time/current characteristic
AC250V	C-UL US Recognized	1A, 1.25A, 1.6A, 2A, 2.5A, 3.15A, 4A, 5A, 6.3A	150A	Resistive circuit	1.0I_N until temperature stabilization occurs.	—	75K or less at 1.0I_N	Within 30min at 2.1I_N
	SEMKO Certified				*1	*2	—	*3
	<PS>E JET		100A	PF 0.7 - 0.8	1.0I_N until temperature stabilization occurs.	—	At 1.0I_N, 140K or less at the center, 60K or less at the contact	Within 30min at 2.1I_N

*1: Endurance test: After repeating 100 cycles of 1.2 I_N for 1 h and switching-off for 15 min, 1.5 I_N can be passed through the fuse for 1 h or more.

*2: 1.1 I_N can be passed through the fuse for 1 h or more at 70±2 °C.

*3:

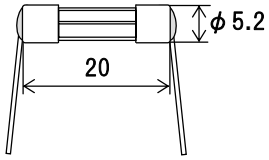
Rated current	2.1I_N	2.75I_N	4.0I_N	10I_N
1A - 6.3A	Within 2min	0.6s - 10s	0.15s - 3s	0.02s - 0.3s

250VⒶSCR (Normal-acting)

RoHS Pb

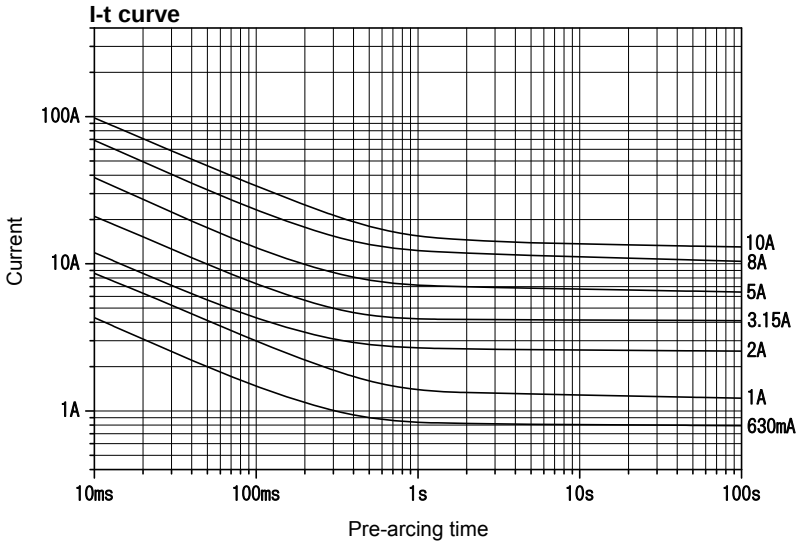
AC250V

Scale: 1/1



Lead wire diameter:
ϕ 0.5 (62mA - under 5A)
ϕ 0.8 (5A - 10A)

Unit: mm



The I-t curves above are plots of the average values of measurements obtained under conditions specified by SOC. These data are for reference only and are not intended to infer any guaranteed values.

Rated voltage	Certification *1	Range of rated current (I_N) *2	Rated breaking current		Current carrying capacity	Temp. rise	Overload operation
AC250V	<PS>E JET	62mA - 10A	100A	PF 0.7 - 0.8	1.1I_N until temperature stabilization occurs.	At 1.1I_N, 140K or less at the center, 60K or less at the contact	Within 60min at 1.35I_N Within 2min at 2.0I_N

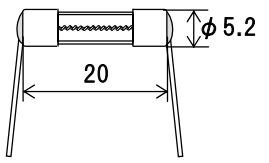
*1: Fuses with rated currents below 1 A are not covered under the Electrical Appliance and Material Safety Law.
*2: Any rated current value can be selected within this range.

250VⒶTSCR (Inrush-withstand)

100mA - 10A: RoHS Pb
Over 10A - 15A: RoHS *1

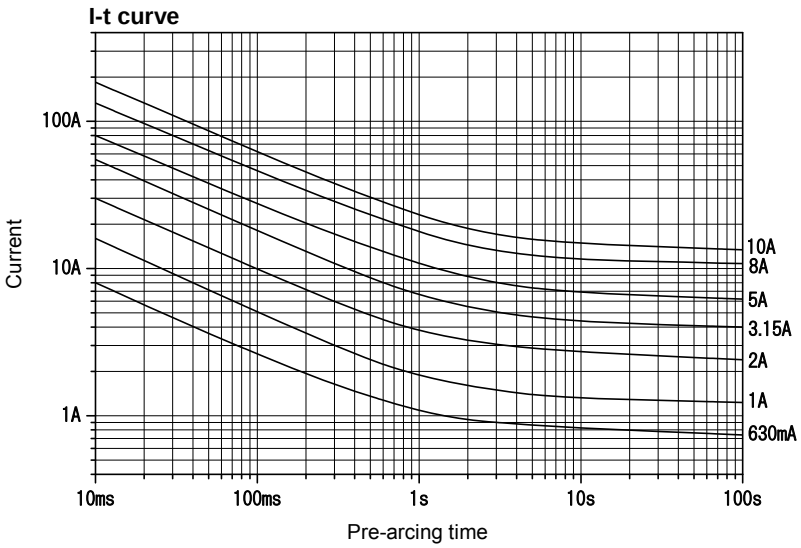
AC250V

Scale: 1/1



Lead wire diameter:
ϕ 0.5 (100mA - under 5A)
ϕ 0.8 (5A - 15A)

Unit: mm



The I-t curves above are plots of the average values of measurements obtained under conditions specified by SOC. These data are for reference only and are not intended to infer any guaranteed values.

Rated voltage	Certification *2	Range of rated current (I_N) *3	Rated breaking current		Current carrying capacity	Temp. rise	Overload operation
AC250V	<PS>E JET	100mA - 15A	100A	PF 0.7 - 0.8	1.1I_N until temperature stabilization occurs.	At 1.1I_N, 140K or less at the center, 60K or less at the contact	Within 60min at 1.35I_N Within 2min at 2.0I_N

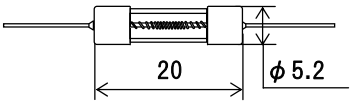
*1: High melting temperature type solder containing more than 85 wt% lead is used in this product (over 10 A - 15 A).
*2: Fuses with rated currents below 1 A are not covered under the Electrical Appliance and Material Safety Law.
*3: Any rated current value can be selected within this range.

250VⒶSDSCR (Time-delay)

RoHS *1

AC250V

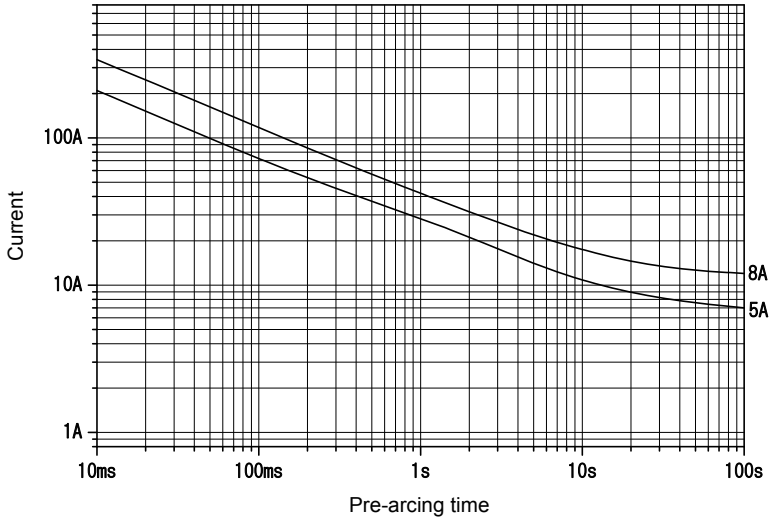
Scale: 1/1



Lead wire diameter: ϕ0.8

Unit: mm

I-t curve



The I-t curves above are plots of the average values of measurements obtained under conditions specified by SOC. These data are for reference only and are not intended to infer any guaranteed values.

Rated voltage	Certification *2	Range of rated current (I_N) *3	Rated breaking current		Current carrying capacity	Temp. rise	Overload operation
AC250V	<PS>E JET	100mA - 8A	100A	PF 0.7 - 0.8	1.1I_N until temperature stabilization occurs.	At 1.1I_N, 140K or less at the center, 60K or less at the contact	*4

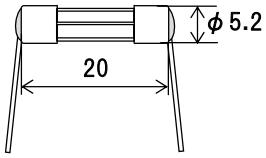
*1: High melting temperature type solder containing more than 85 wt% lead is used in this product.
*2: Fuses with rated currents below 1 A are not covered under the Electrical Appliance and Material Safety Law.
*3: Any rated current value can be selected within this range.
*4:

Rated current	1.35I_N	2.0I_N
100mA - 3A	Within 60min	5s - 2min
Over 3A - 8A		12s - 2min

MQ3 (Normal-acting)

62mA - 8A: RoHS Pb
Over 8A - 15A: RoHS *1

AC250V

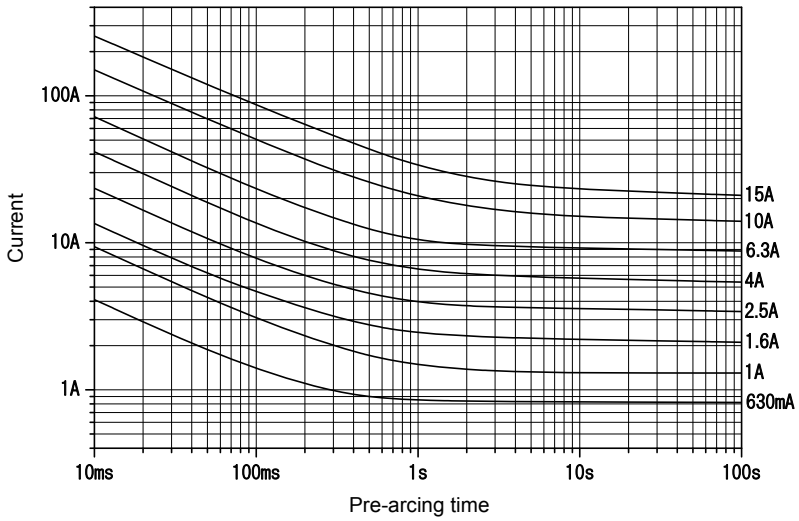


Lead wire diameter:
ϕ 0.5 (62mA - 3A)
ϕ 0.8 (Over 3A - 10A)
ϕ 1.0 (Over 10A - 15A)

Scale: 1/1

Unit: mm

I-t curve



The I-t curves above are plots of the average values of measurements obtained under conditions specified by SOC. These data are for reference only and are not intended to infer any guaranteed values.

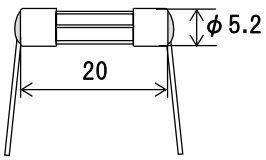
Rated voltage	Certification	Range of rated current (I_N) *2	Rated breaking current		Current carrying capacity	Temp. rise	Overload operation
AC250V	UL Listed CSA Certified	62mA - 3A	100A	PF 0.7 - 0.8	*3	70K or less at 1.1I_N	Within 60min at 1.35I_N Within 2min at 2.0I_N
	UL Recognized	Over 3A - 15A			*4	70K or less at 1.0I_N	

*1: High melting temperature type solder containing more than 85 wt% lead is used in this product (over 8 A - 15 A).
*2: Any rated current value can be selected within this range.
*3: 1.1 I_N for 15 min or more after temperature stabilization occurs.
*4: 1.0 I_N for 15 min or more after temperature stabilization occurs.

MQ3 N1 (Normal-acting)

RoHS Pb

AC250V

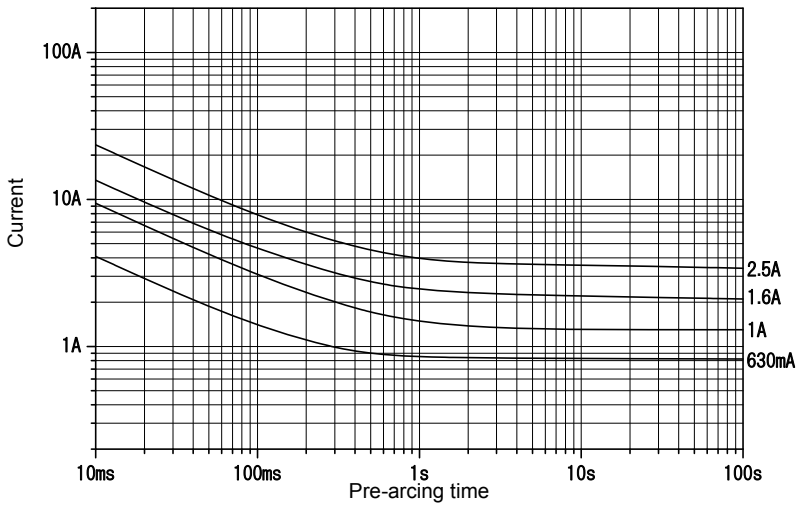


Lead wire diameter: ϕ 0.5

Scale: 1/1

Unit: mm

I-t curve



The I-t curves above are plots of the average values of measurements obtained under conditions specified by SOC. These data are for reference only and are not intended to infer any guaranteed values.

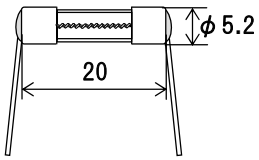
Rated voltage	Certification	Range of rated current (I_N) *2	Rated breaking current		Current carrying capacity	Temp. rise	Overload operation
AC250V	UL Listed CSA Certified	62mA - 3A	100A	PF 0.7 - 0.8	*3	70K or less at 1.1I_N	Within 60min at 1.35I_N Within 2min at 2.0I_N
	<PS>E JET *1				*4	At 1.1I_N, 140K or less at the center, 60K or less at the contact	

*1: Fuses with rated currents below 1 A are not covered under the Electrical Appliance and Material Safety Law.
*2: Any rated current value can be selected within this range.
*3: 1.1 I_N for 15 min or more after temperature stabilization occurs.
*4: 1.1 I_N until temperature stabilization occurs.

MT3 (Inrush-withstand)

100mA - 8A: RoHS Pb
Over 8A - 15A: RoHS *1

AC250V

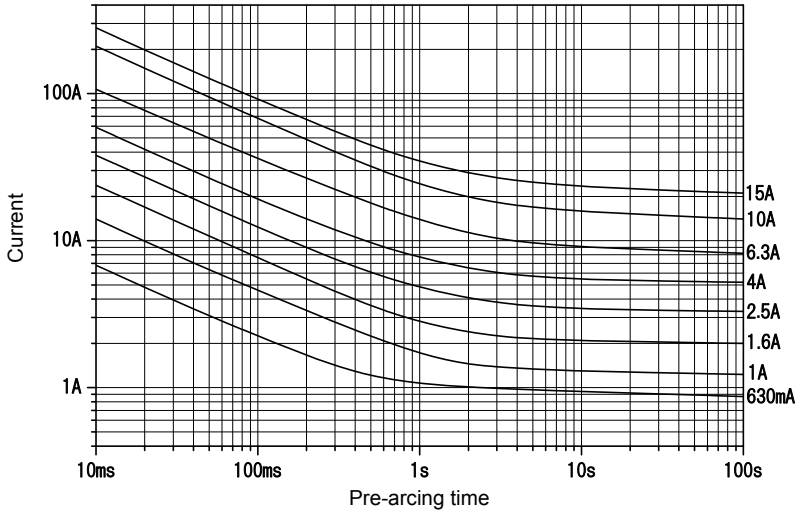


Scale: 1/1

Lead wire diameter:
ϕ0.5 (100mA - 1A)
ϕ0.8 (Over 1A - 10A)
ϕ1.0 (Over 10A - 15A)

Unit: mm

I-t curve



The I-t curves above are plots of the average values of measurements obtained under conditions specified by SOC. These data are for reference only and are not intended to infer any guaranteed values.

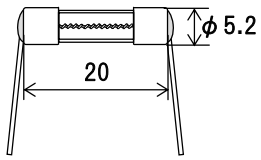
Rated voltage	Certification	Range of rated current (I_N) *2	Rated breaking current		Current carrying capacity	Temp. rise	Overload operation
AC250V	UL Listed CSA Certified	100mA - 3.5A	100A	PF 0.7 - 0.8	*3	70K or less at 1.1I_N	Within 60min at 1.35I_N Within 2min at 2.0I_N
	UL Recognized	Over 3.5A - 8A					
		Over 8A - 15A			*4	70K or less at 1.0I_N	

*1: High melting temperature type solder containing more than 85 wt% lead is used in this product (over 8 A - 15 A).
*2: Any rated current value can be selected within this range.
*3: 1.1 I_N for 15 min or more after temperature stabilization occurs.
*4: 1.0 I_N for 15 min or more after temperature stabilization occurs.

MT3 N1 (Inrush-withstand)

RoHS Pb

AC250V

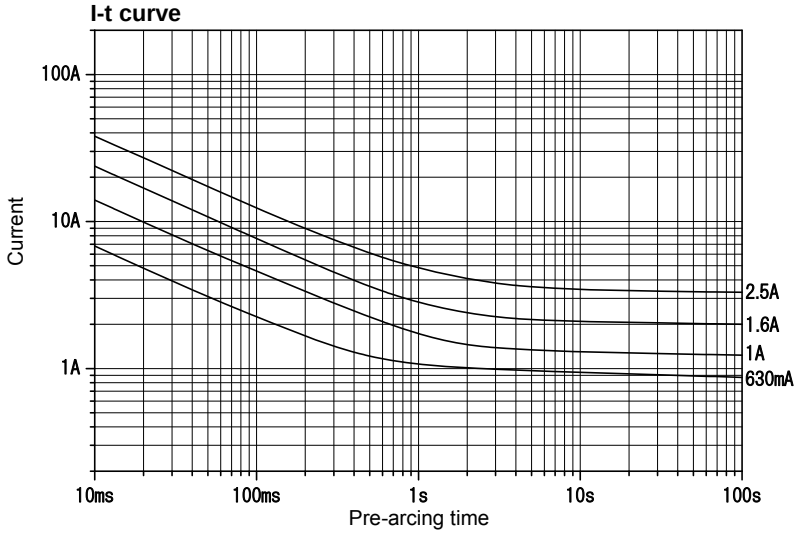


Scale: 1/1

Lead wire diameter:
ϕ0.5 (100mA - 1A)
ϕ0.8 (Over 1A - 3.5A)

Unit: mm

I-t curve



The I-t curves above are plots of the average values of measurements obtained under conditions specified by SOC. These data are for reference only and are not intended to infer any guaranteed values.

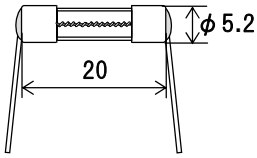
Rated voltage	Certification	Range of rated current (I_N) *2	Rated breaking current		Current carrying capacity	Temp. rise	Overload operation
AC250V	UL Listed CSA Certified	100mA - 3.5A	100A	PF 0.7 - 0.8	*3	70K or less at 1.1I_N	Within 60min at 1.35I_N Within 2min at 2.0I_N
	<PS>E JET *1				*4	At 1.1I_N, 140K or less at the center, 60K or less at the contact	

*1: Fuses with rated currents below 1 A are not covered under the Electrical Appliance and Material Safety Law.
*2: Any rated current value can be selected within this range.
*3: 1.1 I_N for 15 min or more after temperature stabilization occurs.
*4: 1.1 I_N until temperature stabilization occurs.

MT3 N2 (Inrush-withstand)

Over 3.5A - 8A: RoHS Pb
Over 8A - 15A: RoHS *1

AC250V

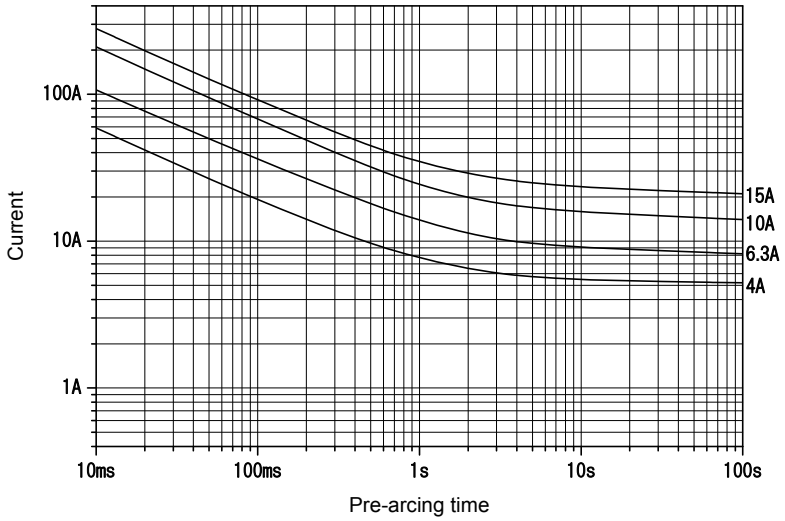


Lead wire diameter:
ϕ 0.8 (Over 3.5A - 10A)
ϕ 1.0 (Over 10A - 15A)

Scale: 1/1

Unit: mm

I-t curve



The I-t curves above are plots of the average values of measurements obtained under conditions specified by SOC. These data are for reference only and are not intended to infer any guaranteed values.

Rated voltage	Certification	Range of rated current (I_N) *2	Rated breaking current		Current carrying capacity	Temp. rise	Overload operation
AC250V	UL Recognized	Over 3.5A - 8A	100A	PF 0.7 - 0.8	1.1I_N for 15min or more after temperature stabilization occurs.	70K or less at 1.1I_N	Within 60min at 1.35I_N Within 2min at 2.0I_N
		Over 8A - 15A			1.0I_N for 15min or more after temperature stabilization occurs.	70K or less at 1.0I_N	
	<PS>E JET	Over 3.5A - 15A			1.1I_N until temperature stabilization occurs.	At 1.1I_N, 140K or less at the center, 60K or less at the contact	

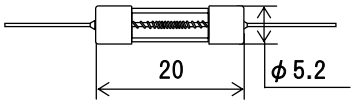
*1: High melting temperature type solder containing more than 85 wt% lead is used in this product (over 8 A - 15 A).
*2: Any rated current value can be selected within this range.

SD5 (Time-delay)

RoHS *1

AC250V

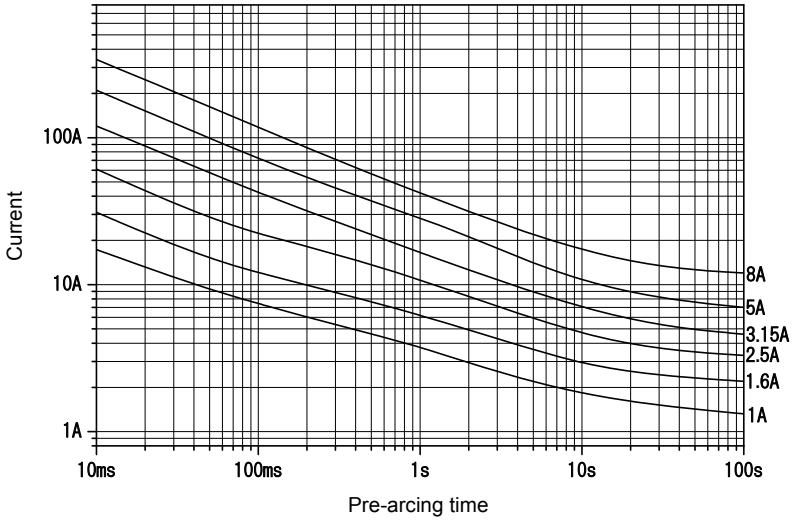
Scale: 1/1



Lead wire diameter: ϕ0.8

Unit: mm

I-t curve



The I-t curves above are plots of the average values of measurements obtained under conditions specified by SOC. These data are for reference only and are not intended to infer any guaranteed values.

Rated voltage	Certification	Range of rated current (I_N) *2	Rated breaking current		Current carrying capacity	Temp. rise	Overload operation
AC250V	UL Listed CSA Certified	62mA - 3A	100A	PF 0.7 - 0.8	1.1I_N for 15min or more after temperature stabilization occurs.	70K or less at 1.1I_N	*3
	UL Recognized CSA Component Acceptance	Over 3A - 8A			1.0I_N for 15min or more after temperature stabilization occurs	70K or less at 1.0I_N	

*1: High melting temperature type solder containing more than 85 wt% lead is used in this product.

*2: Any rated current value can be selected within this range.

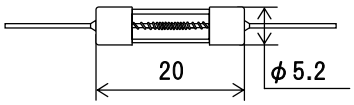
*3:

Rated current	1.35I_N	2.0I_N
62mA - 3A	Within 60min	5s - 2min
Over 3A - 8A		12s - 2min

SD5 N1 (Time-delay)

RoHS *1

AC250V

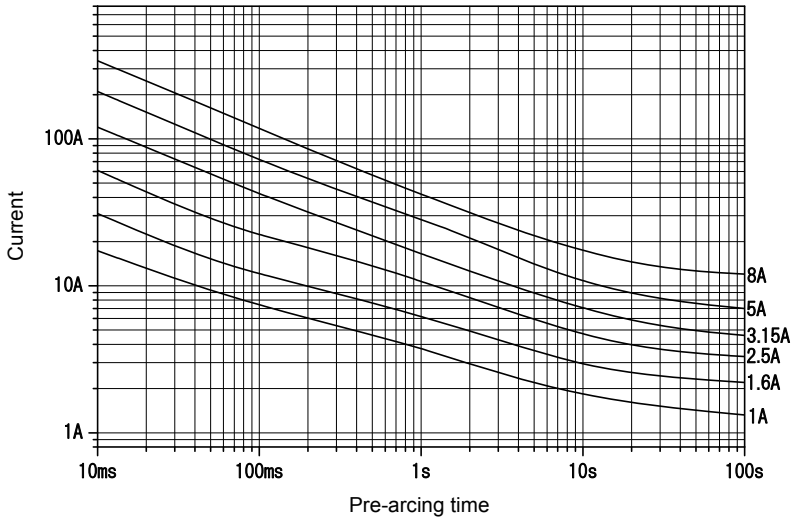


Lead wire diameter: ϕ0.8

Scale: 1/1

Unit: mm

I-t curve



The I-t curves above are plots of the average values of measurements obtained under conditions specified by SOC. These data are for reference only and are not intended to infer any guaranteed values.

Rated voltage	Certification	Range of rated current (I_N) *3	Rated breaking current		Current carrying capacity	Temp. rise	Overload operation
AC250V	UL Listed CSA Certified	62mA - 3A	100A	PF 0.7 - 0.8	1.1I_N for 15min or more after temperature stabilization occurs.	70K or less at 1.1I_N	*4
	UL Recognized CSA Component Acceptance	Over 3A - 8A			1.0I_N for 15min or more after temperature stabilization occurs.	70K or less at 1.0I_N	
	<PS>E JET *2	62mA - 8A			1.1I_N until temperature stabilization occurs.	At 1.1I_N, 140K or less at the center, 60K or less at the contact	Within 60min at 1.35I_N Within 2min at 2.0I_N

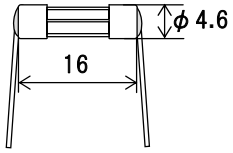
*1: High melting temperature type solder containing more than 85 wt% lead is used in this product.
*2: Fuses with rated currents below 1 A are not covered under the Electrical Appliance and Material Safety Law.
*3: Any rated current value can be selected within this range.
*4:

Rated current	1.35I_N	2.0I_N
62mA - 3A	Within 60min	5s - 2min
Over 3A - 8A		12s - 2min

250VⒶMSCR (Normal-acting)

100mA – under 5A: RoHS Pb
5A: RoHS *1

AC250V

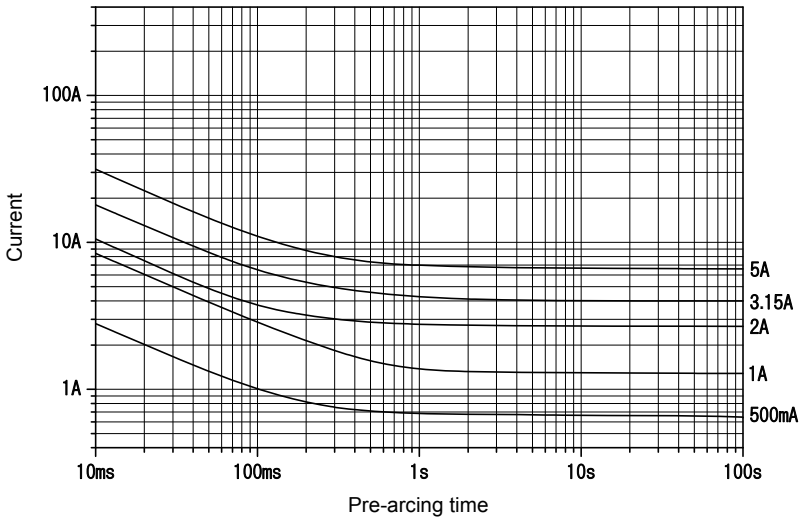


Lead wire diameter:
ϕ0.5 (100mA - under 5A)
ϕ0.8 (5A)

Scale: 1/1

Unit: mm

I-t curve



The I-t curves above are plots of the average values of measurements obtained under conditions specified by SOC. These data are for reference only and are not intended to infer any guaranteed values.

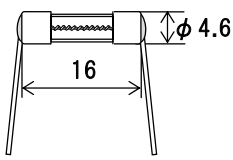
Rated voltage	Certification *2	Range of rated current (I_N) *3	Rated breaking current		Current carrying capacity	Temp. rise	Overload operation
AC250V	<PS>E JET	100mA - 5A	100A	PF 0.7 - 0.8	1.1I_N until temperature stabilization occurs.	At 1.1I_N, 140K or less at the center, 60K or less at the contact	Within 60min at 1.35I_N Within 2min at 2.0I_N

*1: High melting temperature type solder containing more than 85 wt% lead is used in this product (5 A).
*2: Fuses with rated currents below 1 A are not covered under the Electrical Appliance and Material Safety Law.
*3: Any rated current value can be selected within this range.

250VⒶTMSCR (Inrush-withstand)

100mA – under 5A: RoHS Pb
5A: RoHS *1

AC250V

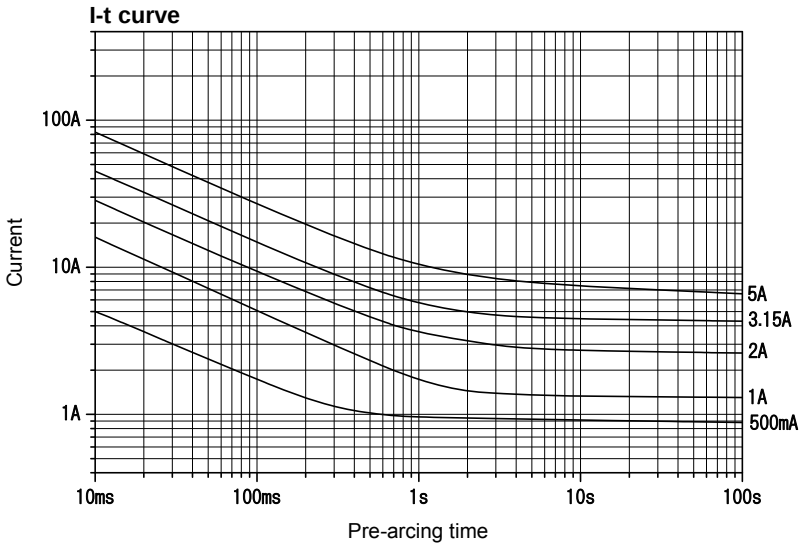


Lead wire diameter:
ϕ0.5 (100mA - under 5A)
ϕ0.8 (5A)

Scale: 1/1

Unit: mm

I-t curve



The I-t curves above are plots of the average values of measurements obtained under conditions specified by SOC. These data are for reference only and are not intended to infer any guaranteed values.

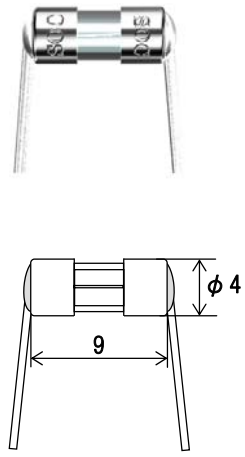
Rated voltage	Certification *2	Range of rated current (I_N) *3	Rated breaking current		Current carrying capacity	Temp. rise	Overload operation
AC250V	<PS>E JET	100mA - 5A	100A	PF 0.7 - 0.8	1.1I_N until temperature stabilization occurs.	At 1.1I_N, 140K or less at the center, 60K or less at the contact	Within 60min at 1.35I_N Within 2min at 2.0I_N

*1: High melting temperature type solder containing more than 85 wt% lead is used in this product (5 A).
*2: Fuses with rated currents below 1 A are not covered under the Electrical Appliance and Material Safety Law.
*3: Any rated current value can be selected within this range.

NQ3 (Quick-acting)

RoHS *1

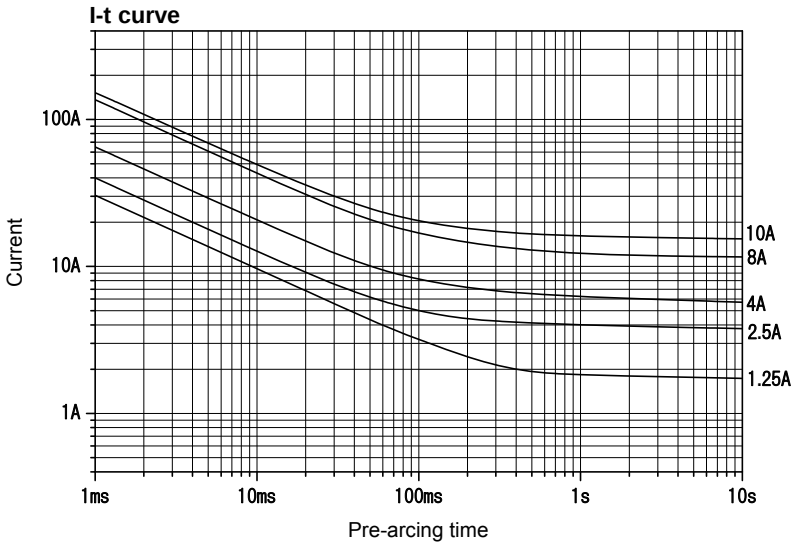
AC250V



Lead wire diameter: ϕ0.8

Scale: 2/1

Unit: mm



The I-t curves above are plots of the average values of measurements obtained under conditions specified by SOC. These data are for reference only and are not intended to infer any guaranteed values.

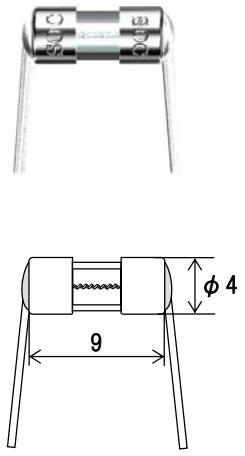
Rated voltage	Certification	Range of rated current (I_N) *2	Rated breaking current		Current carrying capacity	Temp. rise	Overload operation
AC250V	UL Recognized	62mA - 10A	50A	Resistive circuit	1.0I_N for 15min or more after temper-ature stabilization occurs.	70K or less at 1.0I_N	Within 10min at 1.5I_N Within 60s at 2.0I_N
	CSA Certified			PF 0.95 - 1.0			

*1: High melting temperature type solder containing more than 85 wt% lead is used in this product.
*2: Any rated current value can be selected within this range.

NT3 (Inrush-withstand)

RoHS *1

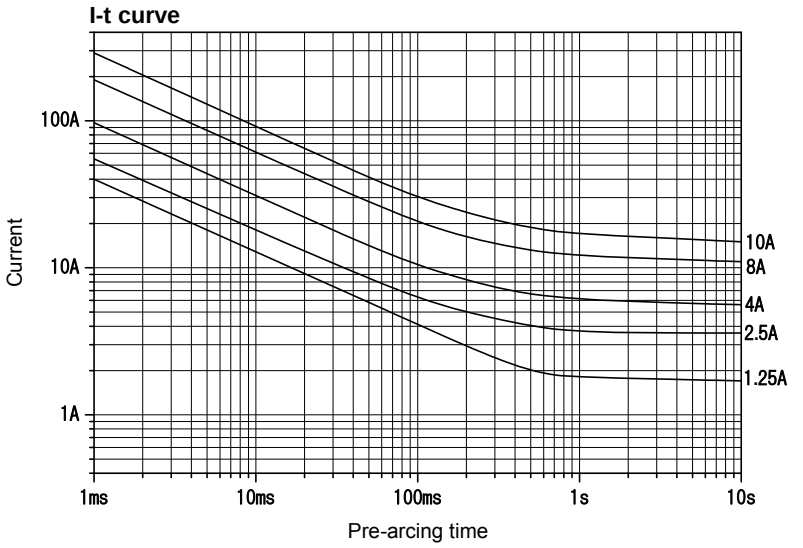
AC250V



Lead wire diameter: ϕ0.8

Scale: 2/1

Unit: mm



The I-t curves above are plots of the average values of measurements obtained under conditions specified by SOC. These data are for reference only and are not intended to infer any guaranteed values.

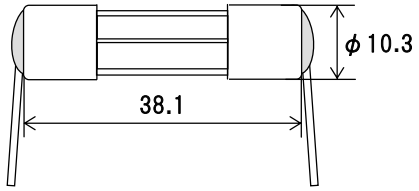
Rated voltage	Certification	Range of rated current (I_N) *2	Rated breaking current		Current carrying capacity	Temp. rise	Overload operation
AC250V	UL Recognized	100mA - 10A	50A	Resistive circuit	1.0I_N for 15min or more after temper-ature stabilization occurs.	70K or less at 1.0I_N	Within 10min at 1.5I_N Within 60s at 2.0I_N
	CSA Certified			PF 0.95 - 1.0			

*1: High melting temperature type solder containing more than 85 wt% lead is used in this product.
*2: Any rated current value can be selected within this range.

ⒶLLCR (Normal-acting)

500mA - 12A: RoHS Pb
Over 12A - 30A: RoHS *1

AC125V

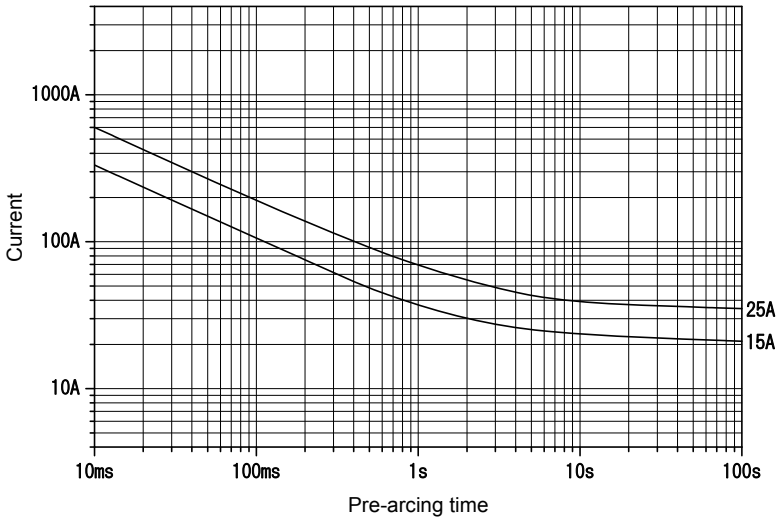


Scale: 1/1

Lead wire diameter:
ϕ0.8 (500mA - 8A)
ϕ1.0 (Over 8A - 15A)
ϕ1.2 (Over 15A - 30A)

Unit: mm

I-t curve



The I-t curves above are plots of the average values of measurements obtained under conditions specified by SOC. These data are for reference only and are not intended to infer any guaranteed values.

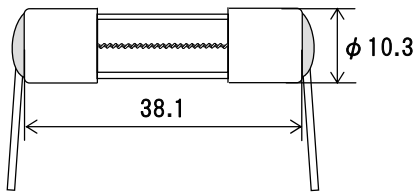
Rated voltage	Certification *2	Range of rated current (I_N) *3	Rated breaking current		Current carrying capacity	Temp. rise	Overload operation
AC125V	<PS>E JET	500mA - 15A	500A	PF 0.7 - 0.8	1.1I_N until temperature stabilization occurs.	At 1.1I_N, 140K or less at the center, 60K or less at the contact	Within 60min at 1.35I_N Within 2min at 2.0I_N
		Over 15A - 30A	100A				

*1: High melting temperature type solder containing more than 85 wt% lead is used in this product (over 12 A - 30 A).
*2: Fuses with rated currents below 1 A are not covered under the Electrical Appliance and Material Safety Law.
*3: Any rated current value can be selected within this range.

ⒶTLLCR (Inrush-withstand)

500mA - 12A: RoHS Pb
Over 12A - 30A: RoHS *1

AC125V

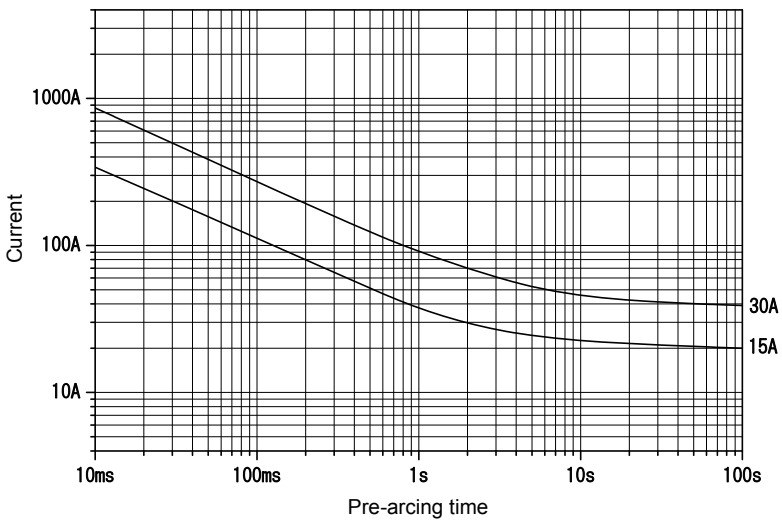


Scale: 1/1

Lead wire diameter:
ϕ0.8 (500mA - 8A)
ϕ1.0 (Over 8A - 15A)
ϕ1.2 (Over 15A - 30A)

Unit: mm

I-t curve



The I-t curves above are plots of the average values of measurements obtained under conditions specified by SOC. These data are for reference only and are not intended to infer any guaranteed values.

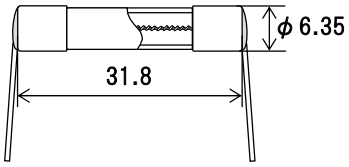
Rated voltage	Certification *2	Range of rated current (I_N) *3	Rated breaking current		Current carrying capacity	Temp. rise	Overload operation
AC125V	<PS>E JET	500mA - 15A	500A	PF 0.7 - 0.8	1.1I_N until temperature stabilization occurs.	At 1.1I_N, 140K or less at the center, 60K or less at the contact	Within 60min at 1.35I_N Within 2min at 2.0I_N
		Over 15A - 30A	100A				

*1: High melting temperature type solder containing more than 85 wt% lead is used in this product (over 12 A - 30 A).
*2: Fuses with rated currents below 1 A are not covered under the Electrical Appliance and Material Safety Law.
*3: Any rated current value can be selected within this range.

CES7 (Inrush-withstand)

100mA - 8A: RoHS Pb
Over 8A - 15A: RoHS *1

AC125V

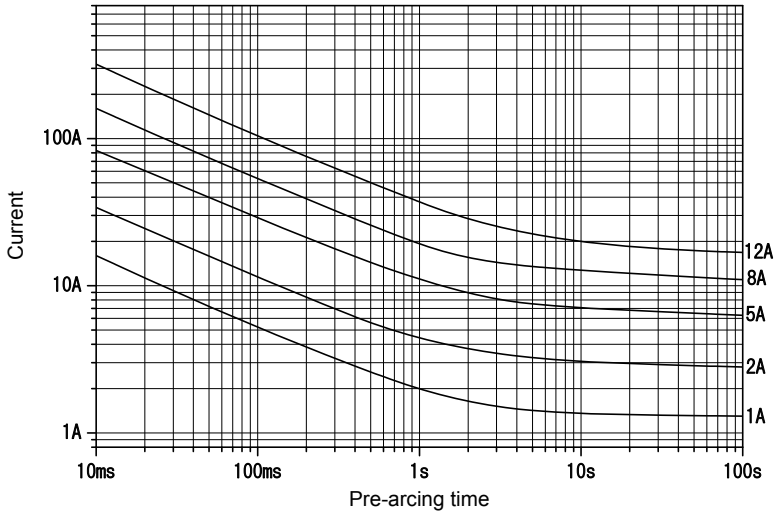


Lead wire diameter:
ϕ 0.8 (100mA - 8A)
ϕ 1.2 (Over 8A - 15A)

Scale: 1/1

Unit: mm

I-t curve



The I-t curves above are plots of the average values of measurements obtained under conditions specified by SOC. These data are for reference only and are not intended to infer any guaranteed values.

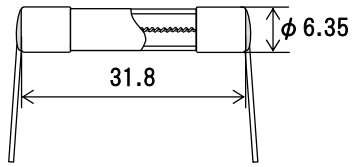
Rated voltage	Certification	Range of rated current (I_N) *2	Rated breaking current		Current carrying capacity	Temp. rise	Overload operation
AC125V	UL Listed CSA Certified	100mA - 15A	10000A	PF 0.7 - 0.8	1.1I_N for 15min or more after temper-ature stabilization occurs.	70K or less at 1.1I_N	Within 60min at 1.35I_N Within 2min at 2.0I_N

*1: High melting temperature type solder containing more than 85 wt% lead is used in this product (over 8 A - 15 A).
*2: Any rated current value can be selected within this range.

CES7 N1 (Inrush-withstand)

100mA - 8A: RoHS Pb
Over 8A - 15A: RoHS *1

AC125V

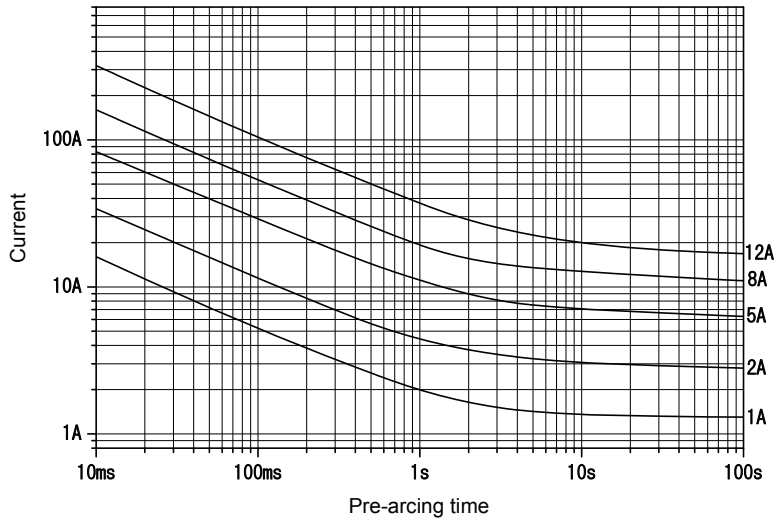


Lead wire diameter:
ϕ 0.8 (100mA - 8A)
ϕ 1.2 (Over 8A - 15A)

Scale: 1/1

Unit: mm

I-t curve



The I-t curves above are plots of the average values of measurements obtained under conditions specified by SOC. These data are for reference only and are not intended to infer any guaranteed values.

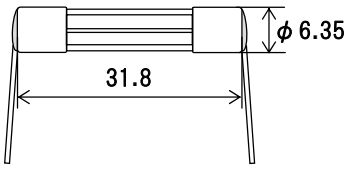
Rated voltage	Certification	Range of rated current (I_N) *3	Rated breaking current		Current carrying capacity	Temp. rise	Overload operation
AC125V	UL Listed CSA Certified	100mA - 15A	10000A	PF 0.7 - 0.8	*4	70K or less at 1.1I_N	Within 60min at 1.35I_N Within 2min at 2.0I_N
	<PS>E JET *2		500A		*5	At 1.1I_N, 140K or less at the center, 60K or less at the contact	

*1: High melting temperature type solder containing more than 85 wt% lead is used in this product (over 8 A - 15 A).
*2: Fuses with rated currents below 1 A are not covered under the Electrical Appliance and Material Safety Law.
*3: Any rated current value can be selected within this range.
*4: 1.1 I_N for 15 min or more after temperature stabilization occurs.
*5: 1.1 I_N until temperature stabilization occurs.

ⒶLNCR (Normal-acting)

100mA - 12A: RoHS Pb
Over 12A - 20A: RoHS *1

AC125V

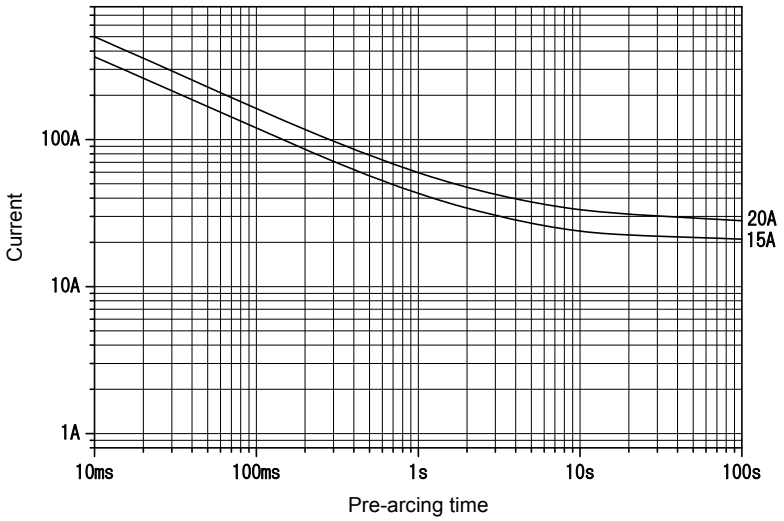


Scale: 1/1

Lead wire diameter:
ϕ 0.8 (100mA - 8A)
ϕ 1.0 (Over 8A - 15A)
ϕ 1.2 (Over 15A - 20A)

Unit: mm

I-t curve



The I-t curves above are plots of the average values of measurements obtained under conditions specified by SOC. These data are for reference only and are not intended to infer any guaranteed values.

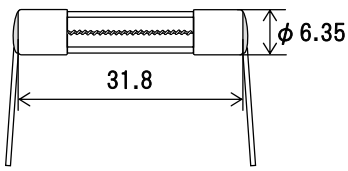
Rated voltage	Certification *2	Range of rated current (I_N) *3	Rated breaking current		Current carrying capacity	Temp. rise	Overload operation
AC125V	<PS>E JET	100mA - 15A	500A	PF 0.7 - 0.8	1.1I_N until temperature stabilization occurs.	At 1.1I_N, 140K or less at the center, 60K or less at the contact	Within 60min at 1.35I_N Within 2min at 2.0I_N
		Over 15A - 20A	100A				

*1: High melting temperature type solder containing more than 85 wt% lead is used in this product (over 12 A - 20 A).
*2: Fuses with rated currents below 1 A are not covered under the Electrical Appliance and Material Safety Law.
*3: Any rated current value can be selected within this range.

ⒶTLNCR (Inrush-withstand)

100mA - 12A: RoHS Pb
Over 12A - 25A: RoHS *1

AC125V

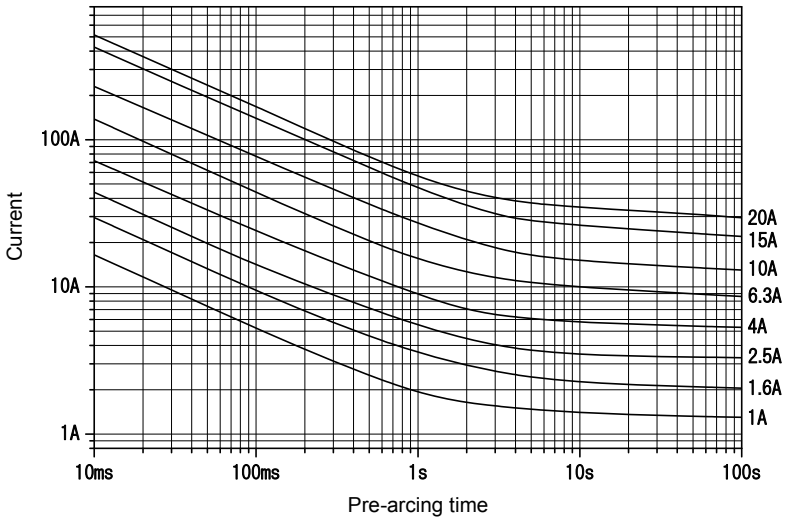


Scale: 1/1

Lead wire diameter:
ϕ 0.8 (100mA - 8A)
ϕ 1.0 (Over 8A - 15A)
ϕ 1.2 (Over 15A - 25A)

Unit: mm

I-t curve

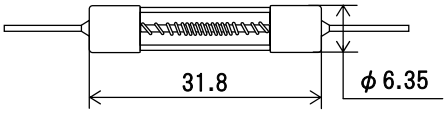


The I-t curves above are plots of the average values of measurements obtained under conditions specified by SOC. These data are for reference only and are not intended to infer any guaranteed values.

Rated voltage	Certification *2	Range of rated current (I_N) *3	Rated breaking current		Current carrying capacity	Temp. rise	Overload operation
AC125V	<PS>E JET	100mA - 15A	500A	PF 0.7 - 0.8	1.1I_N until temperature stabilization occurs.	At 1.1I_N, 140K or less at the center, 60K or less at the contact	Within 60min at 1.35I_N Within 2min at 2.0I_N
		Over 15A - 25A	100A				

*1: High melting temperature type solder containing more than 85 wt% lead is used in this product (over 12 A - 25 A).
*2: Fuses with rated currents below 1 A are not covered under the Electrical Appliance and Material Safety Law.
*3: Any rated current value can be selected within this range.

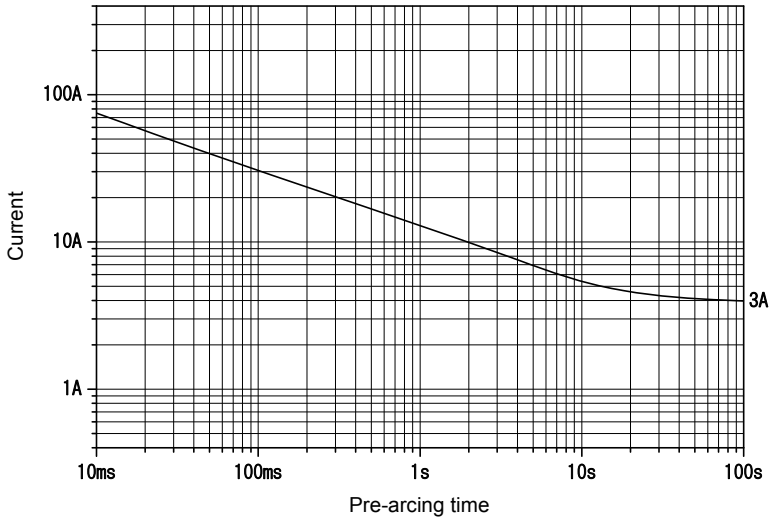
Scale: 1/1



Lead wire diameter: ϕ0.8

Unit: mm

I-t curve



The I-t curve above is a plot of the average values of measurements obtained under conditions specified by SOC. These data are for reference only and are not intended to infer any guaranteed values.

Rated voltage	Certification *2	Range of rated current (I_N) *3	Rated breaking current		Current carrying capacity	Temp. rise	Overload operation
AC125V	<PS>E JET	100mA - 8A	100A	PF 0.7 - 0.8	1.1I_N until temperature stabilization occurs.	At 1.1I_N, 140K or less at the center, 60K or less at the contact	*4

*1: High melting temperature type solder containing more than 85 wt% lead is used in this product.
*2: Fuses with rated currents below 1 A are not covered under the Electrical Appliance and Material Safety Law.
*3: Any rated current value can be selected within this range.
*4:

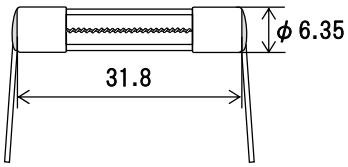
Rated current	1.35I_N	2.0I_N
100mA - 3A	Within 60min	5s - 2min
Over 3A - 8A		12s - 2min

ST5 (Inrush-withstand)

100mA - 8A: RoHS Pb
Over 8A - 30A: RoHS *1

AC125V
DC125V

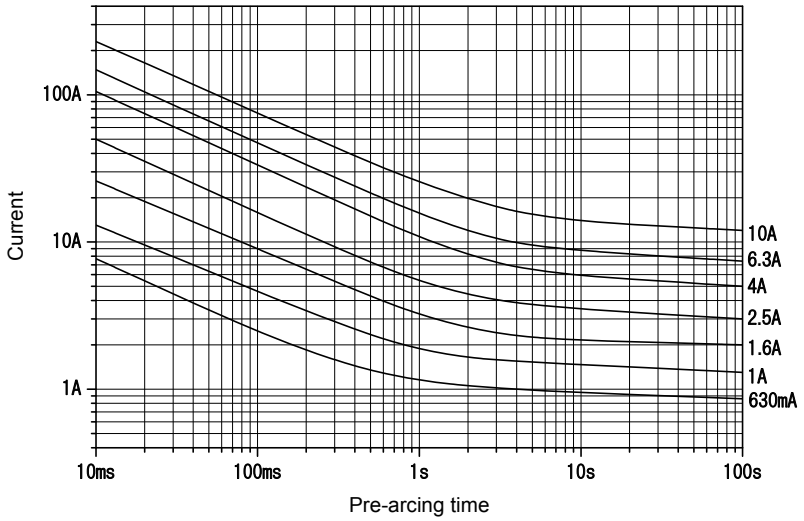
Scale: 1/1



Lead wire diameter:
ϕ0.8 (100mA - 8A)
ϕ1.0 (Over 8A - 15A)
ϕ1.2 (Over 15A - 30A)

Unit: mm

I-t curve



The I-t curves above are plots of the average values of measurements obtained under conditions specified by SOC. These data are for reference only and are not intended to infer any guaranteed values.

Rated voltage	Certification	Range of rated current (I_N) *2	Rated breaking current		Current carrying capacity	Temp. rise	Overload operation
AC125V	UL Listed CSA Certified	100mA - 8A	10000A	PF 0.7 - 0.8	1.1I_N for 15min or more after temperature stabilization occurs.	70K or less at 1.1I_N	Within 60min at 1.35I_N Within 2min at 2.0I_N
DC125V	UL Recognized CSA Component Acceptance	Over 8A - 30A	500A	Resistive circuit	1.0I_N until temperature stabilization occurs.	—	

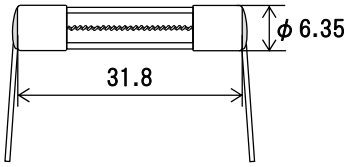
*1: High melting temperature type solder containing more than 85 wt% lead is used in this product (over 8 A - 30 A).
*2: Any rated current value can be selected within this range.

ST5 N1 (Inrush-withstand)

100mA - 8A: RoHS Pb
Over 8A - 15A: RoHS *1

AC125V
DC125V

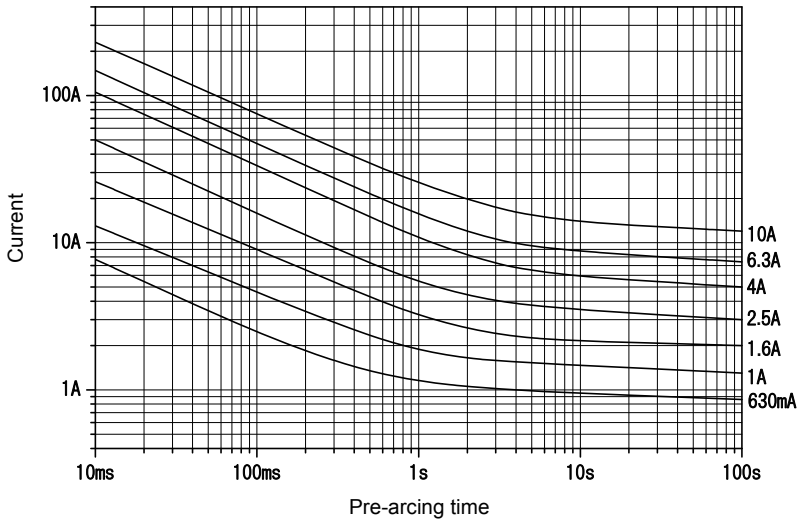
Scale: 1/1



Lead wire diameter:
ϕ0.8 (100mA - 8A)
ϕ1.0 (Over 8A - 15A)

Unit: mm

I-t curve



The I-t curves above are plots of the average values of measurements obtained under conditions specified by SOC. These data are for reference only and are not intended to infer any guaranteed values.

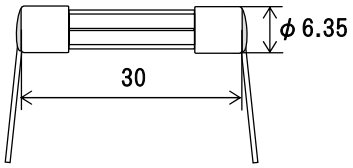
Rated voltage	Certification	Range of rated current (I_N) *3	Rated breaking current		Current carrying capacity	Temp. rise	Overload operation
AC125V	UL Listed CSA Certified	100mA - 8A	10000A	PF 0.7 - 0.8	1.1I_N for 15min or more after temperature stabilization occurs.	70K or less at 1.1I_N	Within 60min at 1.35I_N Within 2min at 2.0I_N
	UL Recognized CSA Component Acceptance	Over 8A - 15A	500A		1.0I_N until temperature stabilization occurs.	—	
	<PS>E JET *2	100mA - 15A			1.1I_N until temperature stabilization occurs.	At 1.1I_N, 140K or less at the center, 60K or less at the contact	
DC125V	UL Recognized CSA Component Acceptance	Over 8A - 15A	500A	Resistive circuit	1.0I_N until temperature stabilization occurs.	—	

*1: High melting temperature type solder containing more than 85 wt% lead is used in this product (over 8 A - 15 A).
*2: Fuses with rated currents below 1 A are not covered under the Electrical Appliance and Material Safety Law.
*3: Any rated current value can be selected within this range.

ⒶLCR (Normal-acting)

50mA – 12A: RoHS Pb
Over 12A – 20A: RoHS *1

AC125V

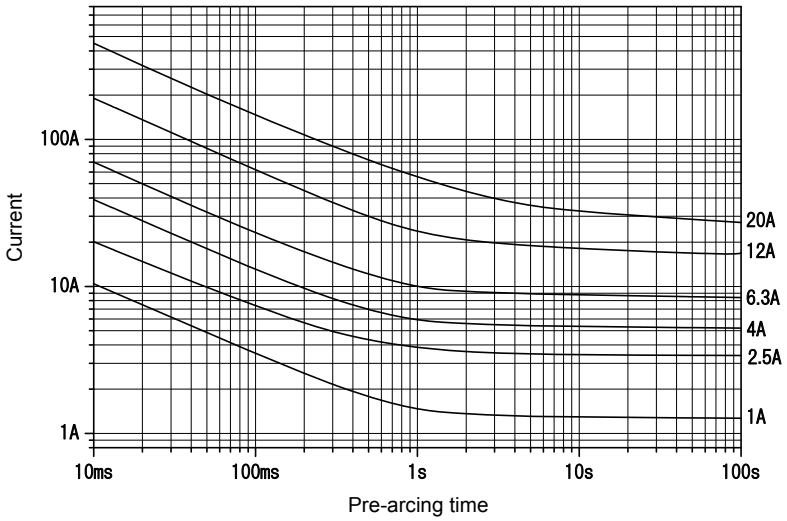


Scale: 1/1

Lead wire diameter:
ϕ 0.8 (50mA - 8A)
ϕ 1.0 (Over 8A - 15A)
ϕ 1.2 (Over 15A - 20A)

Unit: mm

I-t curve



The I-t curves above are plots of the average values of measurements obtained under conditions specified by SOC. These data are for reference only and are not intended to infer any guaranteed values.

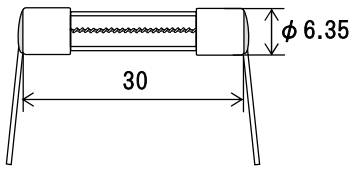
Rated voltage	Certification *2	Range of rated current (I_N) *3	Rated breaking current		Current carrying capacity	Temp. rise	Overload operation
AC125V	<PS>E JET	50mA - 15A	500A	PF 0.7 - 0.8	1.1I_N until temperature stabilization occurs.	At 1.1I_N, 140K or less at the center, 60K or less at the contact	Within 60min at 1.35I_N Within 2min at 2.0I_N
		Over 15A - 20A	100A				

*1: High melting temperature type solder containing more than 85 wt% lead is used in this product (over 12 A - 20 A).
*2: Fuses with rated currents below 1 A are not covered under the Electrical Appliance and Material Safety Law.
*3: Any rated current value can be selected within this range.

ⒶTLCR (Inrush-withstand)

100mA – 12A: RoHS Pb
Over 12A – 30A: RoHS *1

AC125V

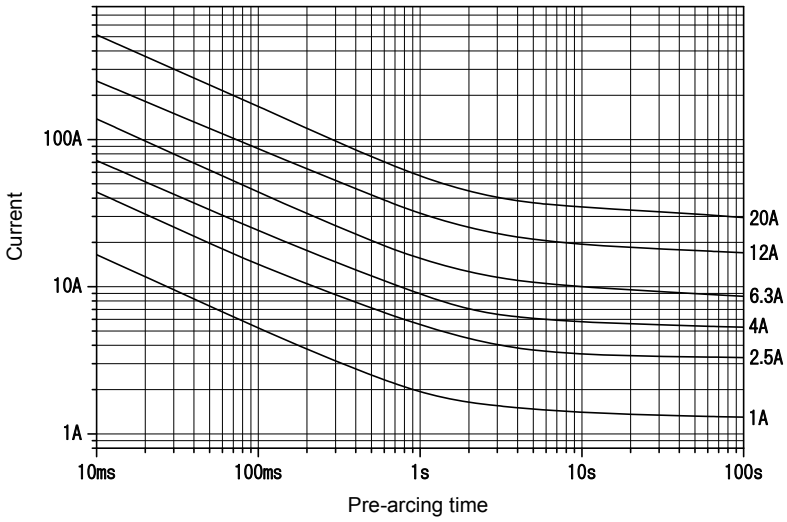


Scale: 1/1

Lead wire diameter:
ϕ 0.8 (100mA - 8A)
ϕ 1.0 (Over 8A - 15A)
ϕ 1.2 (Over 15A - 30A)

Unit: mm

I-t curve



The I-t curves above are plots of the average values of measurements obtained under conditions specified by SOC. These data are for reference only and are not intended to infer any guaranteed values.

Rated voltage	Certification *2	Range of rated current (I_N) *3	Rated breaking current		Current carrying capacity	Temp. rise	Overload operation
AC125V	<PS>E JET	100mA - 15A	500A	PF 0.7 - 0.8	1.1I_N until temperature stabilization occurs.	At 1.1I_N, 140K or less at the center, 60K or less at the contact	Within 60min at 1.35I_N Within 2min at 2.0I_N
		Over 15A - 30A	100A				

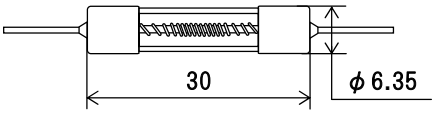
*1: High melting temperature type solder containing more than 85 wt% lead is used in this product (over 12 A - 30 A).
*2: Fuses with rated currents below 1 A are not covered under the Electrical Appliance and Material Safety Law.
*3: Any rated current value can be selected within this range.

ⒶSDLCR (Time-delay)

RoHS *1

AC125V

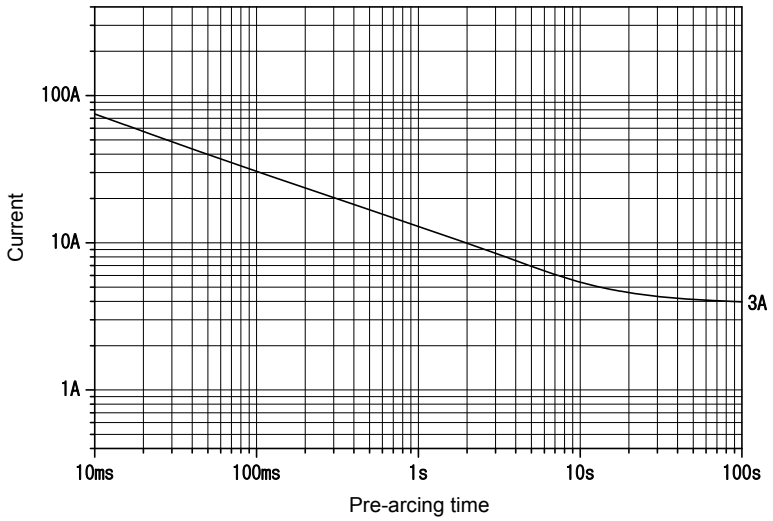
Scale: 1/1



Lead wire diameter: ϕ0.8

Unit: mm

I-t curve



The I-t curve above is a plot of the average values of measurements obtained under conditions specified by SOC. These data are for reference only and are not intended to infer any guaranteed values.

Rated voltage	Certification *2	Range of rated current (I_N) *3	Rated breaking current		Current carrying capacity	Temp. rise	Overload operation
AC125V	<PS>E JET	100mA - 8A	100A	PF 0.7 - 0.8	1.1I_N until temper-ature stabilization occurs.	At 1.1I_N, 140K or less at the center, 60K or less at the contact	*4

*1: High melting temperature type solder containing more than 85 wt% lead is used in this product.
*2: Fuses with rated currents below 1 A are not covered under the Electrical Appliance and Material Safety Law.
*3: Any rated current value can be selected within this range.
*4:

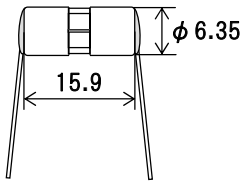
Rated current	1.35I_N	2.0I_N
100mA - 3A	Within 60min	5s - 2min
Over 3A - 8A		12s - 2min

SU1 (Normal-acting)

RoHS Pb

AC125V

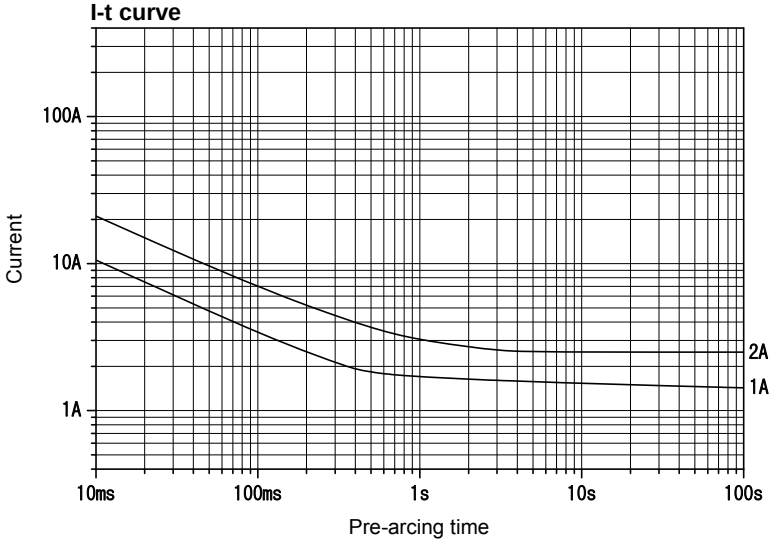
Scale: 1/1



Lead wire diameter: ϕ0.8

Unit: mm

I-t curve



The I-t curves above are plots of the average values of measurements obtained under conditions specified by SOC. These data are for reference only and are not intended to infer any guaranteed values.

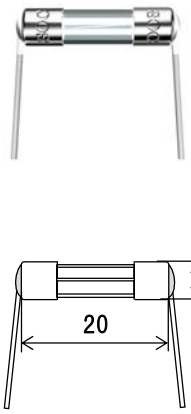
Rated voltage	Certification	Range of rated current (I_N) *1	Rated breaking current		Current carrying capacity	Temp. rise	Overload operation
AC125V	UL Recognized	80mA - 5A	200A	PF 0.7 - 0.8	1.1I_N for 15min or more after temper-ature stabilization occurs.	70K or less at 1.1I_N	Within 60min at 1.35I_N Within 2min at 2.0I_N

*1: Any rated current value can be selected within this range.

ⒶSCR (Normal-acting)

RoHS Pb

AC125V

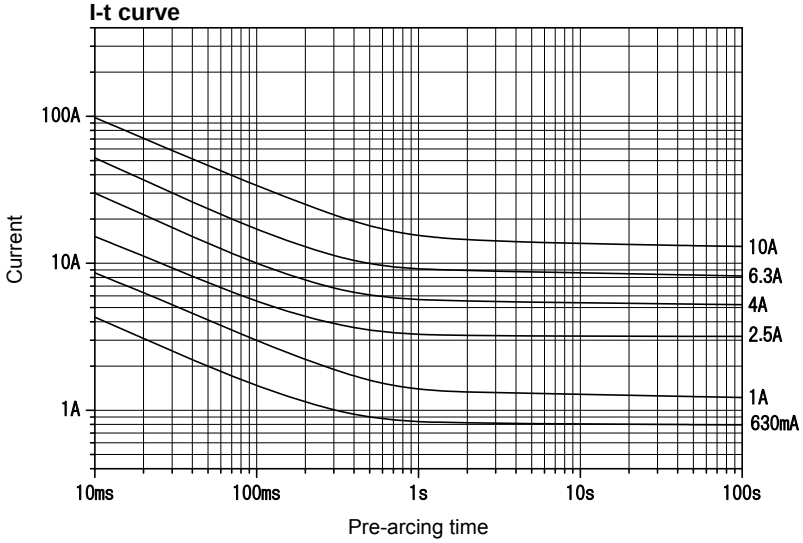


Scale: 1/1

Lead wire diameter:
ϕ0.5 (62mA - under 5A)
ϕ0.8 (5A - 10A)

Unit: mm

I-t curve



The I-t curves above are plots of the average values of measurements obtained under conditions specified by SOC. These data are for reference only and are not intended to infer any guaranteed values.

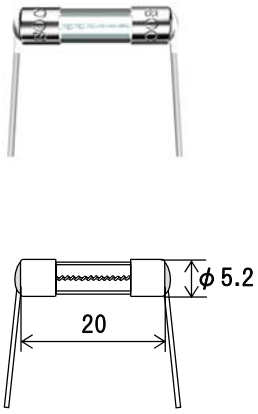
Rated voltage	Certification *1	Range of rated current (I_N) *2	Rated breaking current		Current carrying capacity	Temp. rise	Overload operation
AC125V	<PS>E JET	62mA - 5A	500A	PF 0.7 - 0.8	1.1I_N until temperature stabilization occurs.	At 1.1I_N, 140K or less at the center, 60K or less at the contact	Within 60min at 1.35I_N Within 2min at 2.0I_N
		Over 5A - 10A	100A				

*1: Fuses with rated currents below 1 A are not covered under the Electrical Appliance and Material Safety Law.
*2: Any rated current value can be selected within this range.

ⒶTSCR (Inrush-withstand)

100mA - 10A: RoHS Pb
Over 10A - 15A: RoHS *1

AC125V

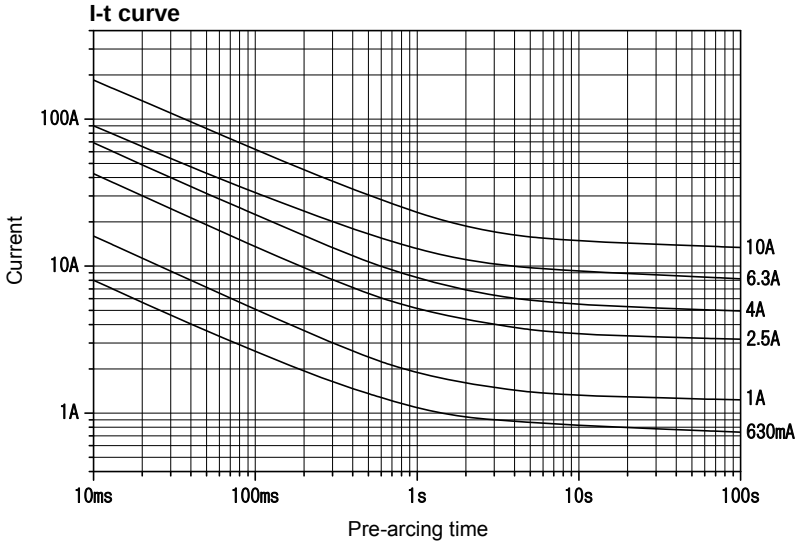


Scale: 1/1

Lead wire diameter:
ϕ0.5 (100mA - under 5A)
ϕ0.8 (5A - 15A)

Unit: mm

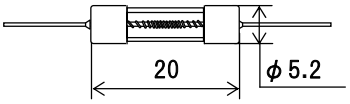
I-t curve



The I-t curves above are plots of the average values of measurements obtained under conditions specified by SOC. These data are for reference only and are not intended to infer any guaranteed values.

Rated voltage	Certification *2	Range of rated current (I_N) *3	Rated breaking current		Current carrying capacity	Temp. rise	Overload operation
AC125V	<PS>E JET	100mA - 5A	500A	PF 0.7 - 0.8	1.1I_N until temperature stabilization occurs.	At 1.1I_N, 140K or less at the center, 60K or less at the contact	Within 60min at 1.35I_N Within 2min at 2.0I_N
		Over 5A - 15A	100A				

*1: High melting temperature type solder containing more than 85 wt% lead is used in this product (over 10 A - 15 A).
*2: Fuses with rated currents below 1 A are not covered under the Electrical Appliance and Material Safety Law.
*3: Any rated current value can be selected within this range.

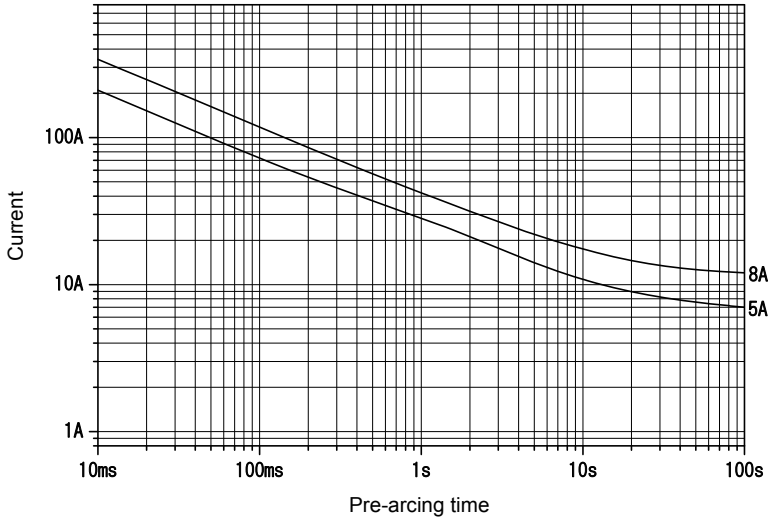


Lead wire diameter: ϕ0.8

Scale: 1/1

Unit: mm

I-t curve



The I-t curves above are plots of the average values of measurements obtained under conditions specified by SOC. These data are for reference only and are not intended to infer any guaranteed values.

Rated voltage	Certification *2	Range of rated current (I_N) *3	Rated breaking current		Current carrying capacity	Temp. rise	Overload operation
AC125V	<PS>E JET	100mA - 5A	500A	PF 0.7 - 0.8	1.1I_N until temperature stabilization occurs.	At 1.1I_N, 140K or less at the center, 60K or less at the contact	*4
		Over 5A - 8A	100A				

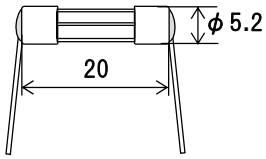
*1: High melting temperature type solder containing more than 85 wt% lead is used in this product.
*2: Fuses with rated currents below 1 A are not covered under the Electrical Appliance and Material Safety Law.
*3: Any rated current value can be selected within this range.
*4:

Rated current	1.35I_N	2.0I_N
100mA - 3A	Within 60min	5s - 2min
Over 3A - 8A		12s - 2min

MQ1 (Normal-acting)

62mA - 8A: RoHS Pb
Over 8A - 15A: RoHS *1

AC125V

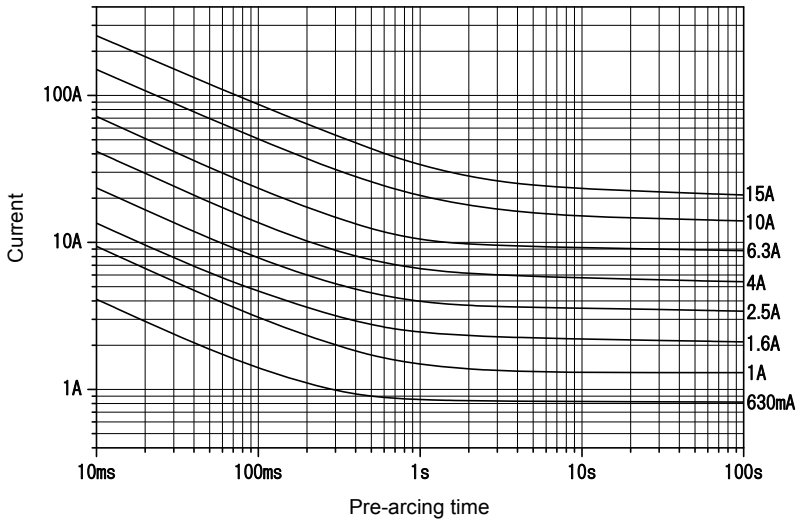


Lead wire diameter:
ϕ0.5 (62mA - 5A)
ϕ0.8 (Over 5A - 10A)
ϕ1.0 (Over 10A - 15A)

Scale: 1/1

Unit: mm

I-t curve



The I-t curves above are plots of the average values of measurements obtained under conditions specified by SOC. These data are for reference only and are not intended to infer any guaranteed values.

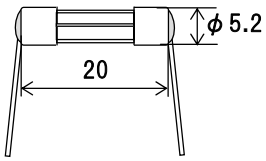
Rated voltage	Certification	Range of rated current (I_N) *2	Rated breaking current		Current carrying capacity	Temp. rise	Overload operation
AC125V	UL Listed CSA Certified	62mA - 5A	10000A	PF 0.7 - 0.8	1.1I_N for 15min or more after temperature stabilization occurs.	70K or less at 1.1I_N	Within 60min at 1.35I_N Within 2min at 2.0I_N
	UL Recognized CSA Certified	Over 5A - 10A				—	
	CSA Certified	Over 10A - 15A			1.0I_N for 15min or more after temperature stabilization occurs.	75K or less at 1.0I_N	

*1: High melting temperature type solder containing more than 85 wt% lead is used in this product (over 8 A - 15 A).
*2: Any rated current value can be selected within this range.

MQ1 N1 (Normal-acting)

62mA - 8A: RoHS Pb
Over 8A - 10A: RoHS *1

AC125V

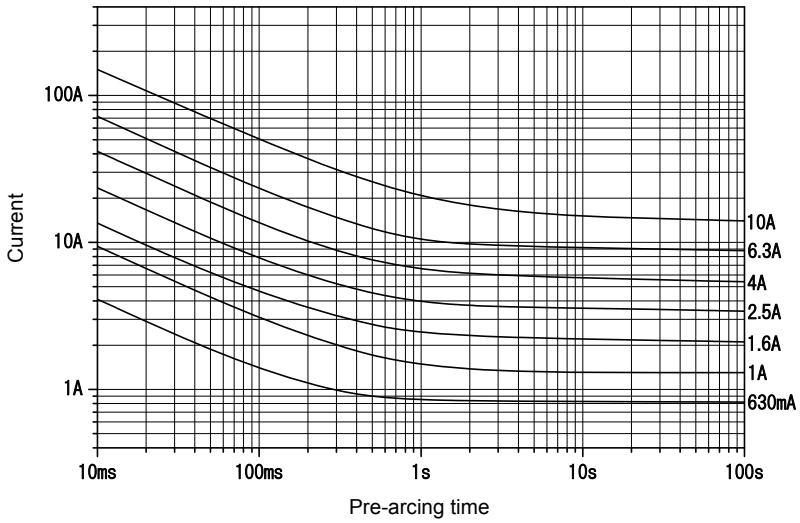


Lead wire diameter:
ϕ0.5 (62mA - 5A)
ϕ0.8 (Over 5A - 10A)

Scale: 1/1

Unit: mm

I-t curve



The I-t curves above are plots of the average values of measurements obtained under conditions specified by SOC. These data are for reference only and are not intended to infer any guaranteed values.

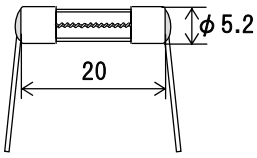
Rated voltage	Certification	Range of rated current (I_N) *3	Rated breaking current		Current carrying capacity	Temp. rise	Overload operation
AC125V	UL Listed CSA Certified	62mA - 5A	10000A	PF 0.7 - 0.8	1.1I_N for 15min or more after temperature stabilization occurs.	70K or less at 1.1I_N	Within 60min at 1.35I_N Within 2min at 2.0I_N
	UL Recognized CSA Certified	Over 5A - 10A				—	
	<PS>E JET *2	62mA - 10A	500A		1.1I_N until temperature stabilization occurs.	At 1.1I_N, 140K or less at the center, 60K or less at the contact	

*1: High melting temperature type solder containing more than 85 wt% lead is used in this product (over 8 A - 10 A).
*2: Fuses with rated currents below 1 A are not covered under the Electrical Appliance and Material Safety Law.
*3: Any rated current value can be selected within this range.

ULTSCR (Inrush-withstand)

RoHS

AC125V

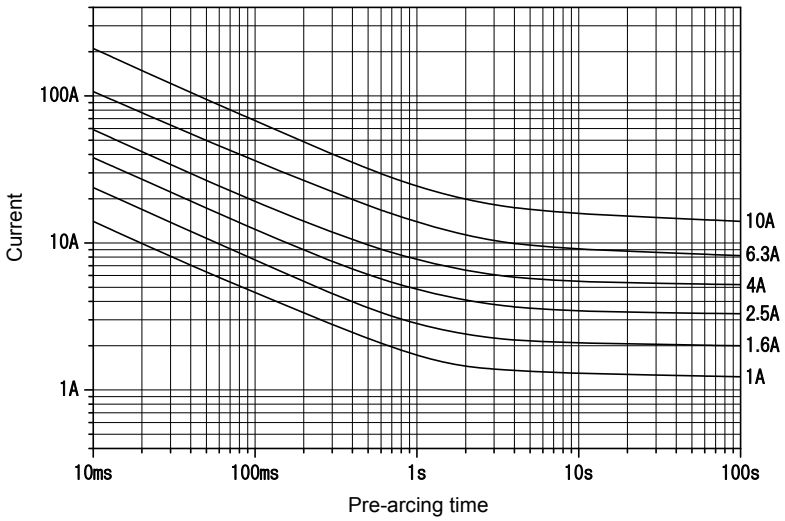


Lead wire diameter:
ϕ0.5 (100mA - 4A)
ϕ0.8 (Over 4A - 10A)

Scale: 1/1

Unit: mm

I-t curve



The I-t curves above are plots of the average values of measurements obtained under conditions specified by SOC. These data are for reference only and are not intended to infer any guaranteed values.

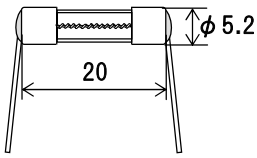
Rated voltage	Certification	Range of rated current (I_N) *1	Rated breaking current		Current carrying capacity	Temp. rise	Overload operation
AC125V	UL Listed CSA Certified	100mA - 10A	10000A	PF 0.7 - 0.8	1.1I_N for 15min or more after temper-ature stabilization occurs.	70K or less at 1.1I_N	Within 60min at 1.35I_N Within 2min at 2.0I_N

*1: Any rated current value can be selected within this range.

ULTSCR N1 (Inrush-withstand)

RoHS

AC125V

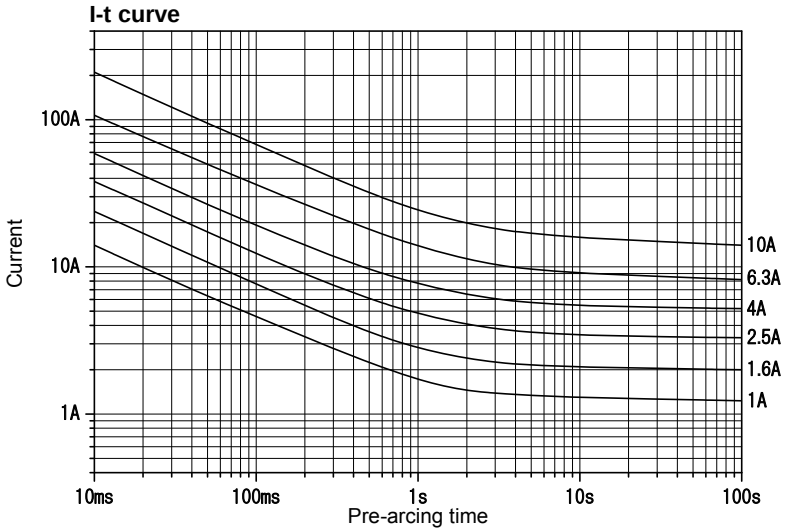


Lead wire diameter:
ϕ0.5 (100mA - 4A)
ϕ0.8 (Over 4A - 10A)

Scale: 1/1

Unit: mm

I-t curve



The I-t curves above are plots of the average values of measurements obtained under conditions specified by SOC. These data are for reference only and are not intended to infer any guaranteed values.

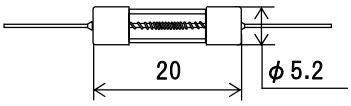
Rated voltage	Certification	Range of rated current (I_N) *2	Rated breaking current		Current carrying capacity	Temp. rise	Overload operation
AC125V	UL Listed CSA Certified	100mA - 10A	10000A	PF 0.7 - 0.8	*3	70K or less at 1.1I_N	Within 60min at 1.35I_N Within 2min at 2.0I_N
	<PS>E JET *1		500A		*4	At 1.1I_N, 140K or less at the center, 60K or less at the contact	

*1: Fuses with rated currents below 1 A are not covered under the Electrical Appliance and Material Safety Law.
*2: Any rated current value can be selected within this range.
*3: 1.1 I_N for 15 min or more after temperature stabilization occurs.
*4: 1.1 I_N until temperature stabilization occurs.

TSD1 (Inrush-withstand)

RoHS *1

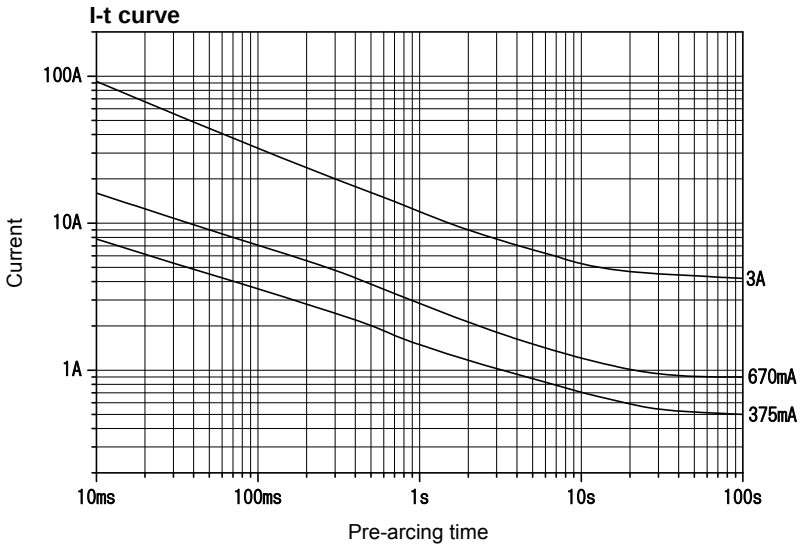
AC125V



Lead wire diameter: ϕ0.8

Scale: 1/1

Unit: mm



The I-t curves above are plots of the average values of measurements obtained under conditions specified by SOC. These data are for reference only and are not intended to infer any guaranteed values.

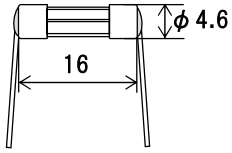
Rated voltage	Certification	Range of rated current (I_N) *2	Rated breaking current		Current carrying capacity	Temp. rise	Overload operation
AC125V	UL Listed CSA Certified	100mA - 3A	10000A	PF 0.7 - 0.8	1.1I_N for 15min or more after temper-ature stabilization occurs.	70K or less at 1.1I_N	Within 60min at 1.35I_N Within 2min at 2.0I_N

*1: High melting temperature type solder containing more than 85 wt% lead is used in this product.
*2: Any rated current value can be selected within this range.

ⒶMSCR (Normal-acting)

100mA - under 5A: RoHS Pb
5A: RoHS *1

AC125V

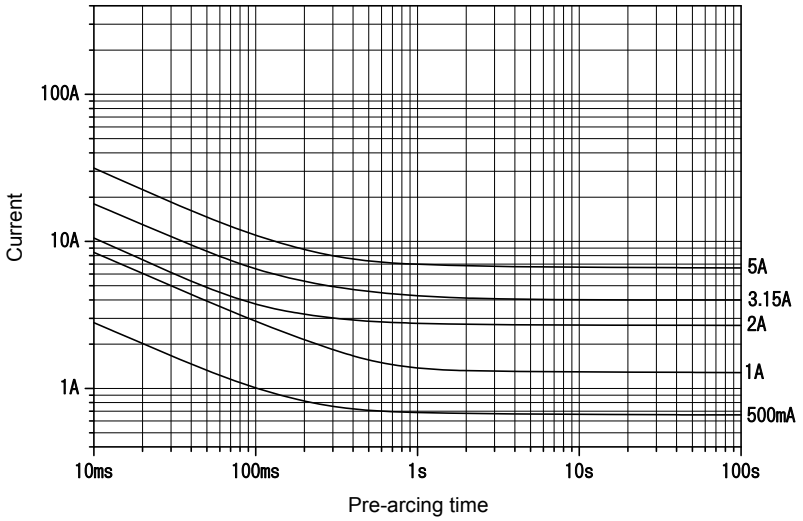


Scale: 1/1

Lead wire diameter:
ϕ0.5 (100mA – under 5A)
ϕ0.8 (5A)

Unit: mm

I-t curve



The I-t curves above are plots of the average values of measurements obtained under conditions specified by SOC. These data are for reference only and are not intended to infer any guaranteed values.

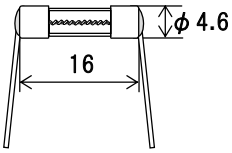
Rated voltage	Certification *2	Range of rated current (I_N) *3	Rated breaking current		Current carrying capacity	Temp. rise	Overload operation
AC125V	<PS>E JET	100mA - 3A	500A	PF 0.7 - 0.8	1.1I_N until temperature stabilization occurs.	At 1.1I_N, 140K or less at the center, 60K or less at the contact	Within 60min at 1.35I_N Within 2min at 2.0I_N
		Over 3A - 5A	100A				

*1: High melting temperature type solder containing more than 85 wt% lead is used in this product (5 A).
*2: Fuses with rated currents below 1 A are not covered under the Electrical Appliance and Material Safety Law.
*3: Any rated current value can be selected within this range.

ⒶTMSCR (Inrush-withstand)

100mA - under 5A: RoHS Pb
5A: RoHS *1

AC125V

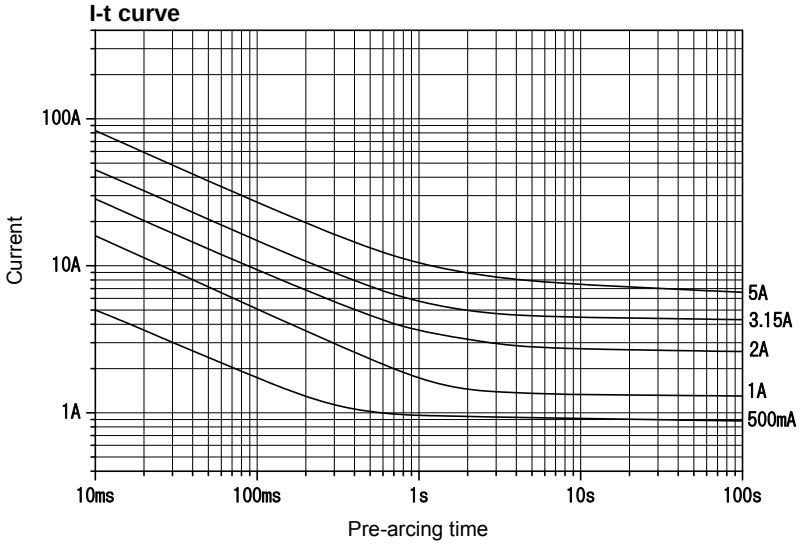


Scale: 1/1

Lead wire diameter:
ϕ0.5 (100mA – under 5A)
ϕ0.8 (5A)

Unit: mm

I-t curve



The I-t curves above are plots of the average values of measurements obtained under conditions specified by SOC. These data are for reference only and are not intended to infer any guaranteed values.

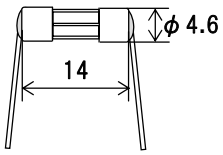
Rated voltage	Certification *2	Range of rated current (I_N) *3	Rated breaking current		Current carrying capacity	Temp. rise	Overload operation
AC125V	<PS>E JET	100mA - 3A	500A	PF 0.7 - 0.8	1.1I_N until temperature stabilization occurs.	At 1.1I_N, 140K or less at the center, 60K or less at the contact	Within 60min at 1.35I_N Within 2min at 2.0I_N
		Over 3A - 5A	100A				

*1: High melting temperature type solder containing more than 85 wt% lead is used in this product (5 A).
*2: Fuses with rated currents below 1 A are not covered under the Electrical Appliance and Material Safety Law.
*3: Any rated current value can be selected within this range.

SQ7 (Normal-acting)

RoHS Pb

AC125V

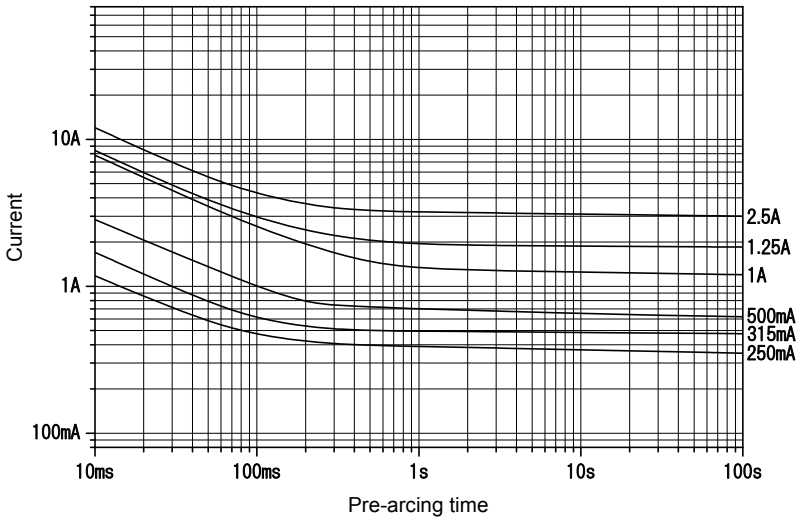


Lead wire diameter: ϕ0.8

Scale: 1/1

Unit: mm

I-t curve



The I-t curves above are plots of the average values of measurements obtained under conditions specified by SOC. These data are for reference only and are not intended to infer any guaranteed values.

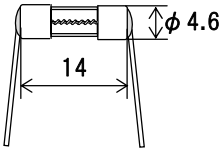
Rated voltage	Certification	Range of rated current (I_N) *1	Rated breaking current		Current carrying capacity	Temp. rise	Overload operation
AC125V	UL Listed CSA Certified	80mA - 3A	10000A	PF 0.7 - 0.8	1.1I_N for 15min or more after temper-ature stabilization occurs.	70K or less at 1.1I_N	Within 60min at 1.35I_N Within 2min at 2.0I_N

*1: Any rated current value can be selected within this range.

MT7 (Inrush-withstand)

RoHS Pb

AC125V

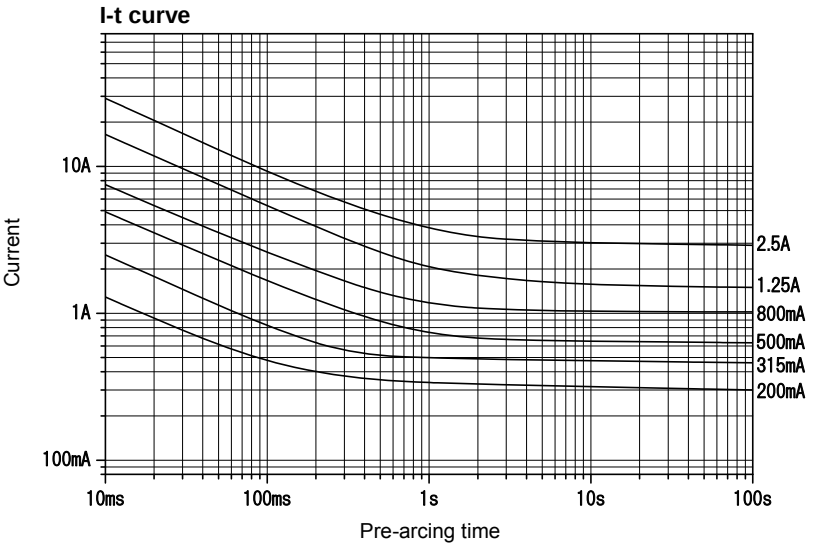


Lead wire diameter: ϕ0.8

Scale: 1/1

Unit: mm

I-t curve



The I-t curves above are plots of the average values of measurements obtained under conditions specified by SOC. These data are for reference only and are not intended to infer any guaranteed values.

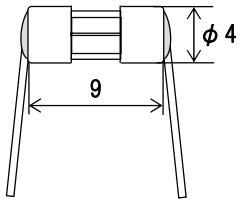
Rated voltage	Certification	Range of rated current (I_N) *1	Rated breaking current		Current carrying capacity	Temp. rise	Overload operation
AC125V	UL Listed CSA Certified	100mA - 3A	10000A	PF 0.7 - 0.8	1.1I_N for 15min or more after temper-ature stabilization occurs.	70K or less at 1.1I_N	Within 60min at 1.35I_N Within 2min at 2.0I_N

*1: Any rated current value can be selected within this range.

NQ1 (Quick-acting)

RoHS *1

AC125V

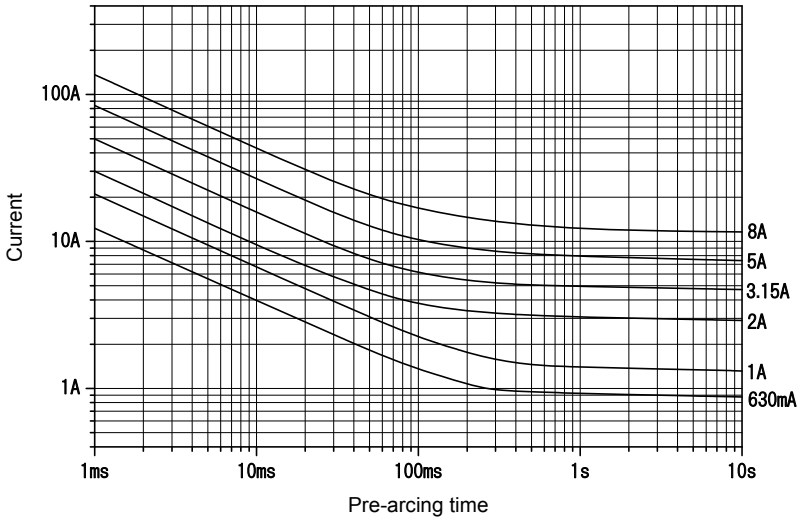


Lead wire diameter: ϕ0.8

Scale: 2/1

Unit: mm

I-t curve



The I-t curves above are plots of the average values of measurements obtained under conditions specified by SOC. These data are for reference only and are not intended to infer any guaranteed values.

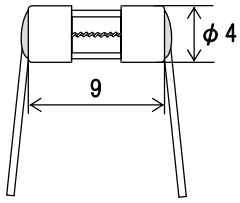
Rated voltage	Certification	Range of rated current (I_N) *2	Rated breaking current		Current carrying capacity	Temp. rise	Overload operation
AC125V	UL Listed	62mA - 10A	50A	PF 0.7 - 0.8	1.0I_N for 15min or more after temper-ature stabilization occurs.	70K or less at 1.0I_N	Within 10min at 1.5I_N Within 60s at 2.0I_N
	CSA Certified			PF 0.95 - 1.0			

*1: High melting temperature type solder containing more than 85 wt% lead is used in this product.
*2: Any rated current value can be selected within this range.

NT1 (Inrush-withstand)

RoHS *1

AC125V

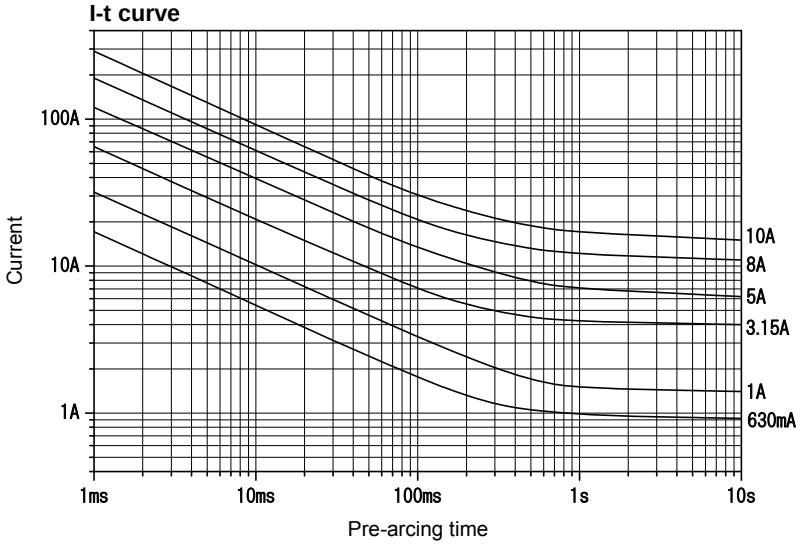


Lead wire diameter: ϕ0.8

Scale: 2/1

Unit: mm

I-t curve



The I-t curves above are plots of the average values of measurements obtained under conditions specified by SOC. These data are for reference only and are not intended to infer any guaranteed values.

Rated voltage	Certification	Range of rated current (I_N) *2	Rated breaking current		Current carrying capacity	Temp. rise	Overload operation
AC125V	UL Listed	100mA - 10A	50A	PF 0.7 - 0.8	1.0I_N for 15min or more after temper-ature stabilization occurs.	70K or less at 1.0I_N	Within 10min at 1.5I_N Within 60s at 2.0I_N
	CSA Certified			PF 0.95 - 1.0			

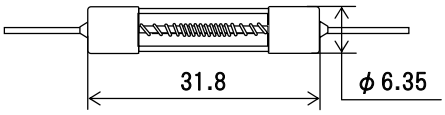
*1: High melting temperature type solder containing more than 85 wt% lead is used in this product.
*2: Any rated current value can be selected within this range.

NSD9 (Time-delay)

RoHS *1

AC32V

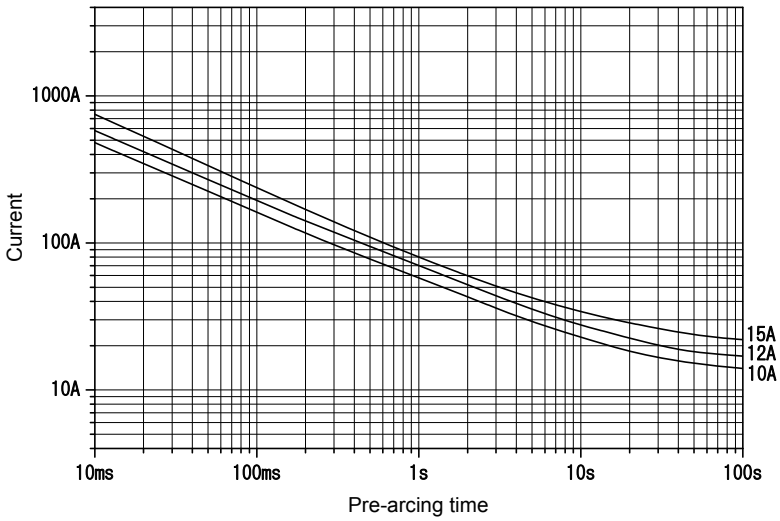
Scale: 1/1



Lead wire diameter: ϕ 1.0

Unit: mm

I-t curve



The I-t curves above are plots of the average values of measurements obtained under conditions specified by SOC. These data are for reference only and are not intended to infer any guaranteed values.

Rated voltage	Certification	Range of rated current (I_N) *2	Rated breaking current		Current carrying capacity	Temp. rise	Overload operation
AC32V	UL Recognized CSA Certified	Over 8A - 15A	3000A	PF 0.7 - 0.8	1.0I_N for 15min or more after temperature stabilization occurs.	70K or less at 1.0I_N	Within 60min at 1.35I_N 12s - 2min inclusive at 2.0I_N

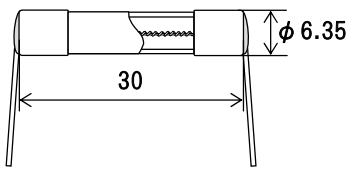
*1: High melting temperature type solder containing more than 85 wt% lead is used in this product.
*2: Any rated current value can be selected within this range.

DC125VTLKR (Inrush-withstand)

RoHS *1

DC125V

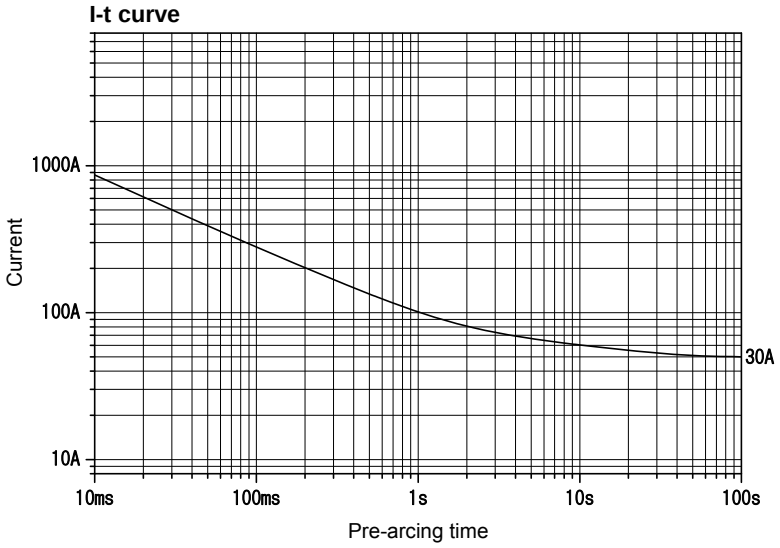
Scale: 1/1



Lead wire diameter: ϕ 1.2

Unit: mm

I-t curve



The I-t curve above is a plot of the average values of measurements obtained under conditions specified by SOC. These data are for reference only and are not intended to infer any guaranteed values.

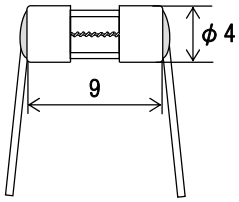
Rated voltage	Certification	Range of rated current (I_N) *2	Rated breaking current		Current carrying capacity	Temp. rise	Overload operation
DC125V	C-UL US Recognized	800mA - 35A	1000A	Resistive circuit	1.0I_N until temperature stabilization occurs.	—	Within 2min at 2.0I_N

*1: High melting temperature type solder containing more than 85 wt% lead is used in this product.
*2: Any rated current value can be selected within this range.

PNT5 (Inrush-withstand protector)

RoHS

DC100V

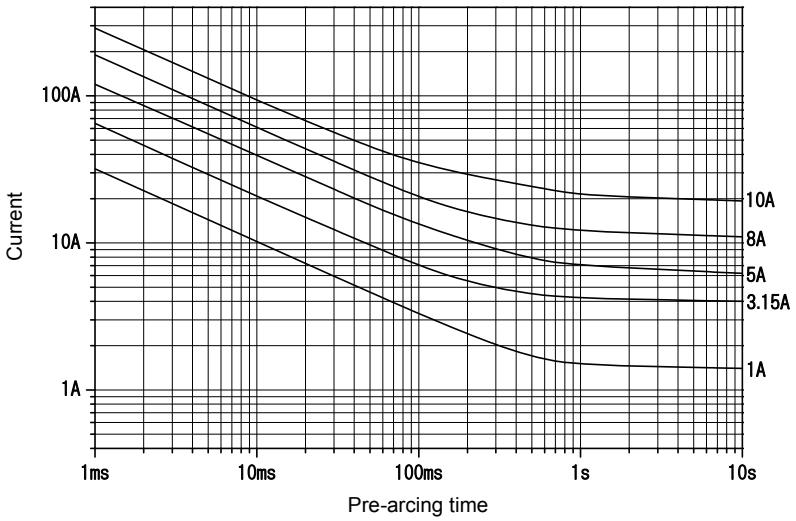


Lead wire diameter: ϕ0.8

Scale: 2/1

Unit: mm

I-t curve



The I-t curves above are plots of the average values of measurements obtained under conditions specified by SOC. These data are for reference only and are not intended to infer any guaranteed values.

Maximum working voltage	Certification	Range of rated current (I_N) *1	Maximum breaking current		Current carrying capacity	Temp. rise	Overload operation
DC100V	—	100mA - 10A	100A	Resistive circuit	1.0I_N for 15min or more after temper-ature stabilization occurs.	75K or less at 1.0I_N	Within 2min at 2.0I_N

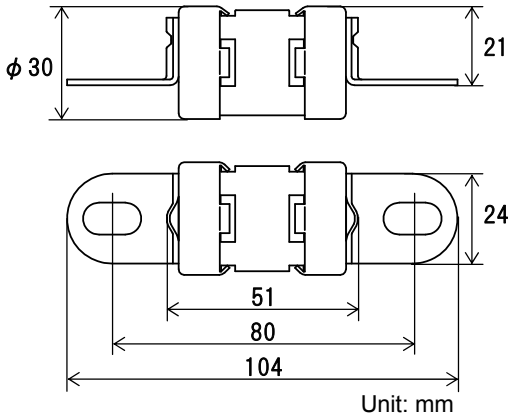
*1: Any rated current value can be selected within this range.

DC500VBT3050A

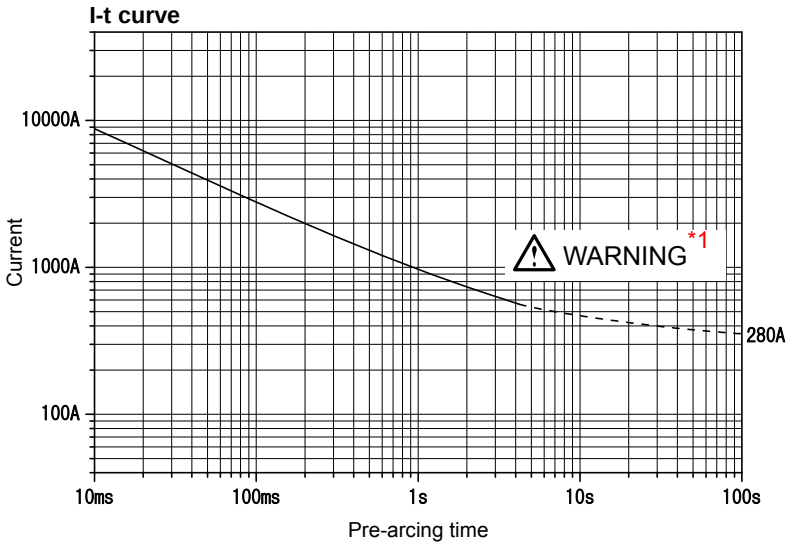
RoHS Pb

DC500V

Scale: 1/2



Unit: mm



The I-t curve above is a plot of the average values of measurements obtained under conditions specified by SOC. These data are for reference only and are not intended to infer any guaranteed values.

Rated voltage	Certification	Rated current (I_N)	Rated breaking current		Current carrying capacity	Temp. rise	Overload operation
DC500V	—	280A	2000A	Resistive circuit	0.5I_N until temperature stabilization occurs.	50K or less at 0.5I_N	Within 2min at 2.0I_N

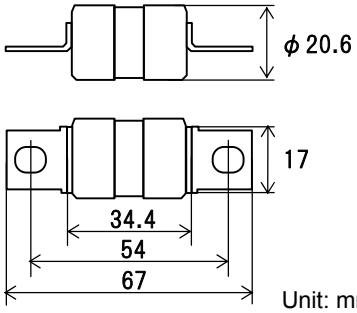
*1: If the current is less than 2.0 I_N (represented by the dotted portion of the I-t curve), an arc current may continuously pass through the fuse, and it may therefore not be possible to break the current. Do not apply fusing conditions of currents less than 2.0 I_N, as fires and other accidents may occur due to the inability to open the circuit.

DC500VBT2035

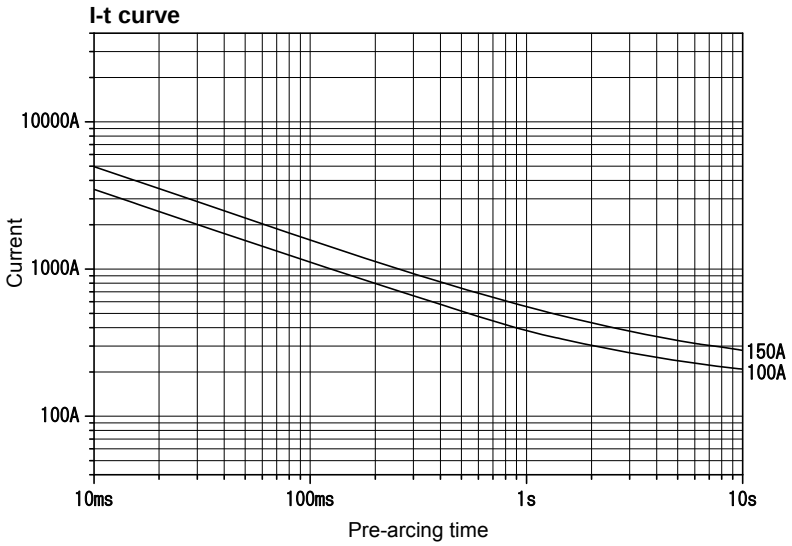
RoHS Pb

DC500V

Scale: 1/2



Unit: mm



The I-t curves above are plots of the average values of measurements obtained under conditions specified by SOC. These data are for reference only and are not intended to infer any guaranteed values.

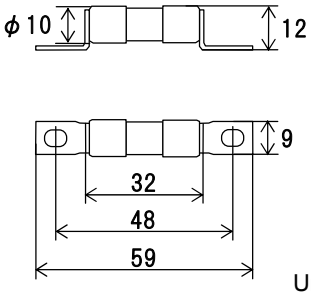
Rated voltage	Certification	Rated current (I_N)	Rated breaking current		Current carrying capacity	Temp. rise	Overload operation
DC500V	—	60A, 70A, 100A, 125A, 150A	2000A	Resistive circuit	1.0I_N until temperature stabilization occurs.	35K or less at 0.5I_N	Within 1s at 5.0I_N

DC500VBL1030A

RoHS Pb

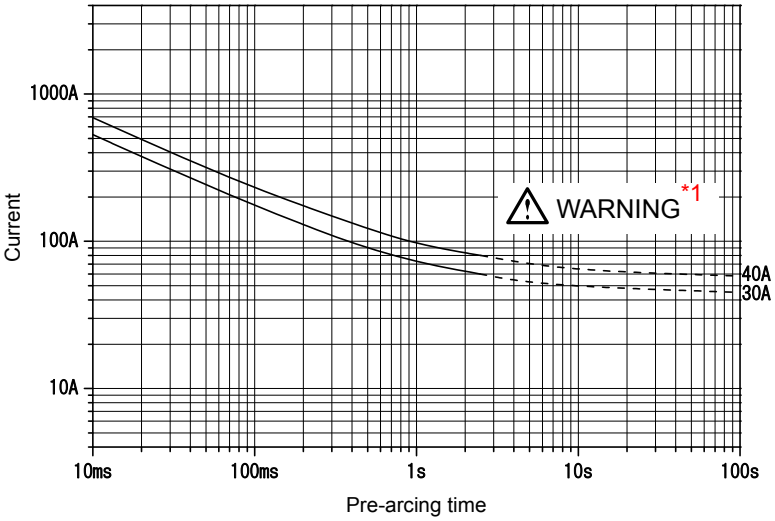
DC500V

Scale: 1/2



Unit: mm

I-t curve



The I-t curves above are plots of the average values of measurements obtained under conditions specified by SOC. These data are for reference only and are not intended to infer any guaranteed values.

Rated voltage	Certification	Rated current (I_N)	Rated breaking current		Current carrying capacity	Temp. rise	Overload operation
DC500V	—	15A, 20A, 25A, 30A, 35A, 40A, 50A	1000A	Resistive circuit	1.0I_N until temperature stabilization occurs.	150K or less at 1.0I_N	Within 2min at 2.0I_N

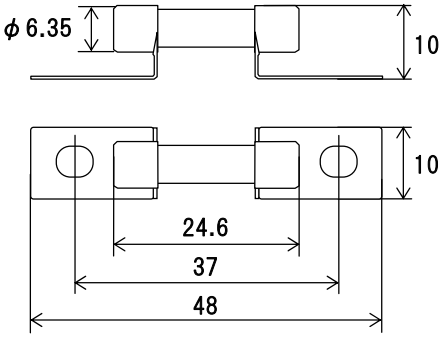
*1: If the current is less than 2.0 I_N (represented by the dotted portion of the I-t curve), an arc current may continuously pass through the fuse, and it may therefore not be possible to break the current. Do not apply fusing conditions of currents less than 2.0 I_N, as fires and other accidents may occur due to the inability to open the circuit.

DC500VBC625A

RoHS *1

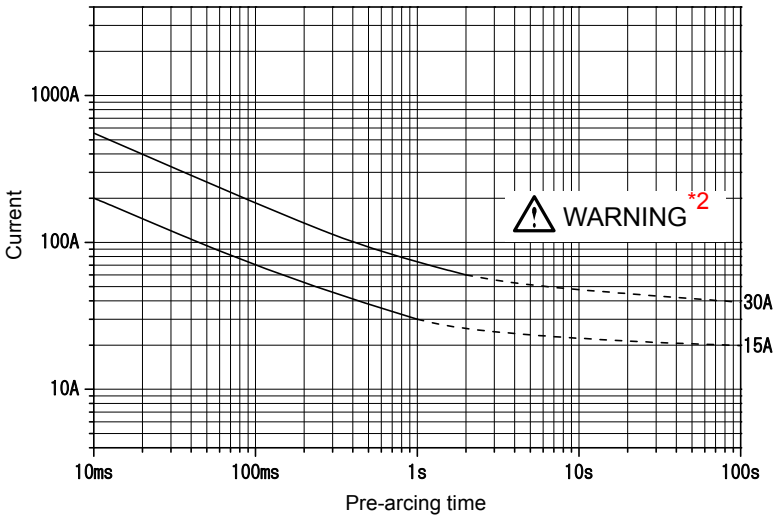
DC500V

Scale: 1/1



Unit: mm

I-t curve



The I-t curves above are plots of the average values of measurements obtained under conditions specified by SOC. These data are for reference only and are not intended to infer any guaranteed values.

Rated voltage	Certification	Rated current (I_N)	Rated breaking current		Current carrying capacity	Temp. rise	Overload operation
DC500V	—	5A, 10A, 15A, 20A, 25A, 30A, 35A	1000A	Resistive circuit	1.0I_N until temperature stabilization occurs.	75K or less at 0.5I_N	Within 2min at 2.0I_N

*1: High melting temperature type solder containing more than 85 wt% lead is used in this product.
*2: If the current is less than 2.0 I_N (represented by the dotted portion of the I-t curve), an arc current may continuously pass through the fuse, and it may therefore not be possible to break the current. Do not apply fusing conditions of currents less than 2.0 I_N, as fires and other accidents may occur due to the inability to open the circuit.

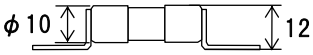
Intentionally blank

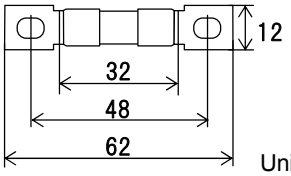
DC72VBL1030

RoHS Pb

DC72V

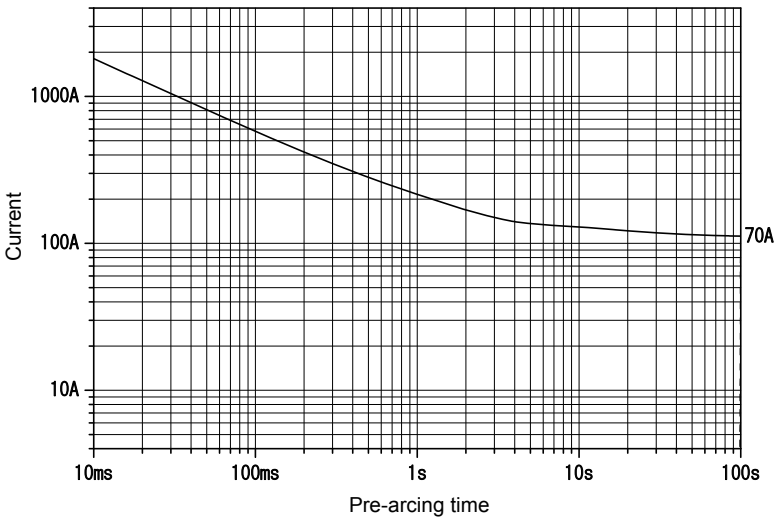
Scale: 1/2





Unit: mm

I-t curve



The I-t curve above is a plot of the average values of measurements obtained under conditions specified by SOC. These data are for reference only and are not intended to infer any guaranteed values.

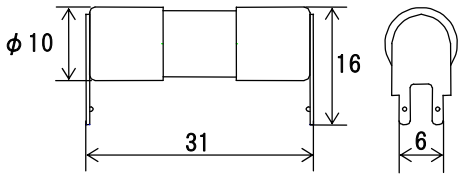
Rated voltage	Certification	Rated current (I_N)	Rated breaking current		Current carrying capacity	Temp. rise	Overload operation
DC72V	—	50A, 70A	1000A	Resistive circuit	1.0I_N until temperature stabilization occurs.	75K or less at 1.0I_N	Within 2min at 2.0I_N

DC500VBI1030

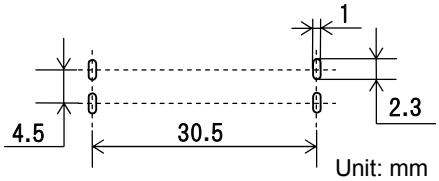
RoHS Pb

DC500V

Scale: 1/1

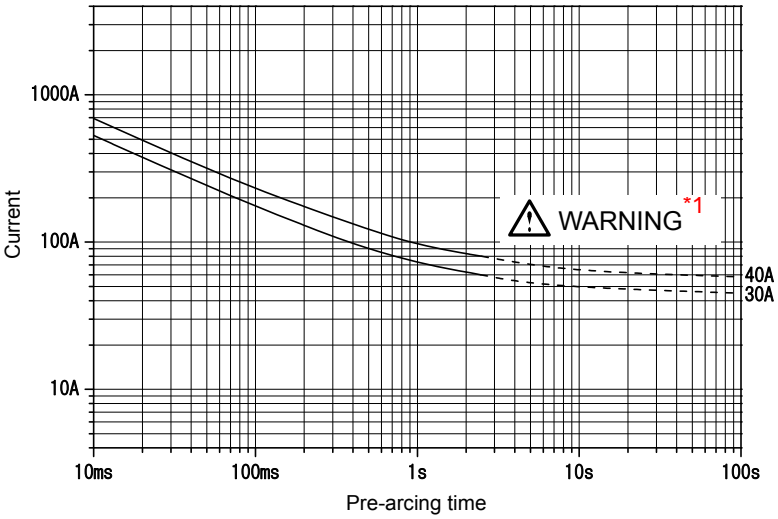


Referential dimensions of mounting holes



Unit: mm

I-t curve



The I-t curves above are plots of the average values of measurements obtained under conditions specified by SOC. These data are for reference only and are not intended to infer any guaranteed values.

Rated voltage	Certification	Rated current (I_N)	Rated breaking current		Current carrying capacity	Temp. rise	Overload operation
DC500V	—	15A, 20A, 25A, 30A, 35A, 40A, 50A	1000A	Resistive circuit	1.0I_N until temperature stabilization occurs.	150K or less at 1.0I_N	Within 2min at 2.0I_N

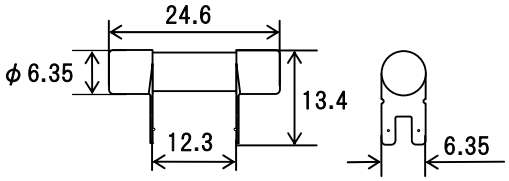
*1: If the current is less than 2.0 I_N (represented by the dotted portion of the I-t curve), an arc current may continuously pass through the fuse, and it may therefore not be possible to break the current. Do not apply fusing conditions of currents less than 2.0 I_N, as fires and other accidents may occur due to the inability to open the circuit.

DC500VBI625C

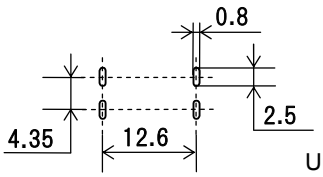
RoHS *1

DC500V

Scale: 1/1

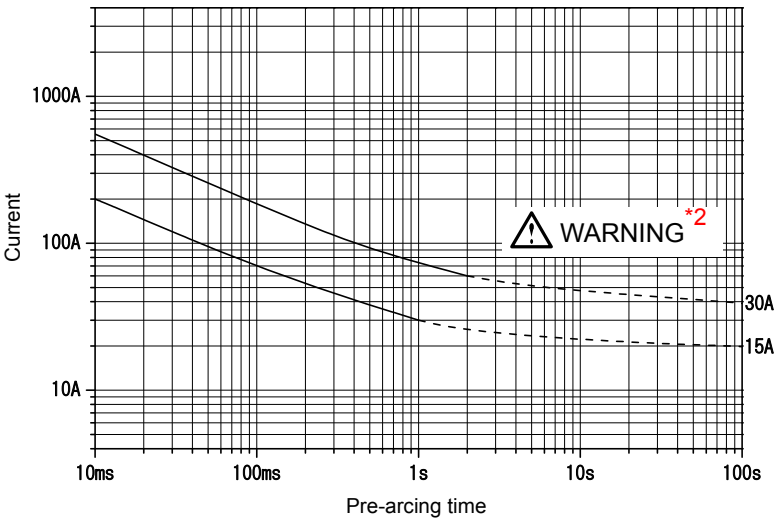


Referential dimensions of mounting holes



Unit: mm

I-t curve



The I-t curves above are plots of the average values of measurements obtained under conditions specified by SOC. These data are for reference only and are not intended to infer any guaranteed values.

Rated voltage	Certification	Rated current (I_N)	Rated breaking current		Current carrying capacity	Temp. rise	Overload operation
DC500V	—	5A, 10A, 15A, 20A, 25A, 30A, 35A	1000A	Resistive circuit	1.0I_N until temperature stabilization occurs.	75K or less at 0.5I_N	Within 2min at 2.0I_N

*1: High melting temperature type solder containing more than 85 wt% lead is used in this product.

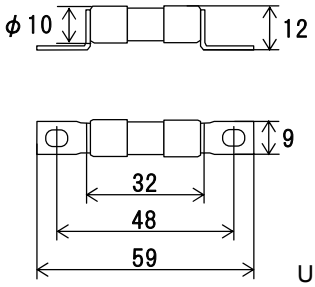
*2: If the current is less than 2.0 I_N (represented by the dotted portion of the I-t curve), an arc current may continuously pass through the fuse, and it may therefore not be possible to break the current. Do not apply fusing conditions of currents less than 2.0 I_N, as fires and other accidents may occur due to the inability to open the circuit.

AC500VBL1030TEA

RoHS Pb

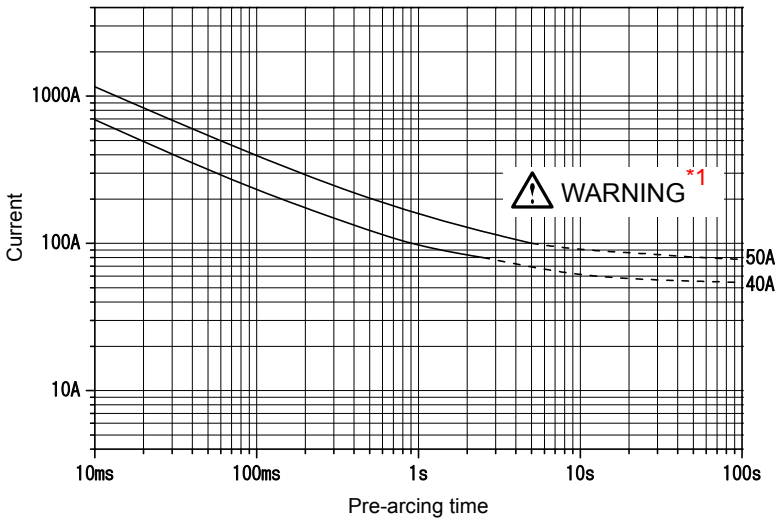
AC500V

Scale: 1/2



Unit: mm

I-t curve



The I-t curves above are plots of the average values of measurements obtained under conditions specified by SOC. These data are for reference only and are not intended to infer any guaranteed values.

Rated voltage	Certification	Range of rated current (I_N) *2	Rated breaking current		Current carrying capacity	Temp. rise	Overload operation
AC500V	C-UL US Recognized	5A - 50A	500A	Resistive circuit	1.0I_N until temperature stabilization occurs.	150K or less at 1.0I_N	Within 2min at 2.0I_N

*1: If the current is less than 2.0 I_N (represented by the dotted portion of the I-t curve), an arc current may continuously pass through the fuse, and it may therefore not be possible to break the current. Do not apply fusing conditions of currents less than 2.0 I_N, as fires and other accidents may occur due to the inability to open the circuit.

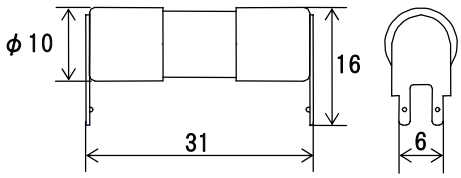
*2: Any rated current value can be selected within this range.

AC500VBI1030TE

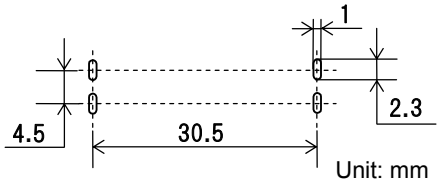
RoHS Pb

AC500V

Scale: 1/1

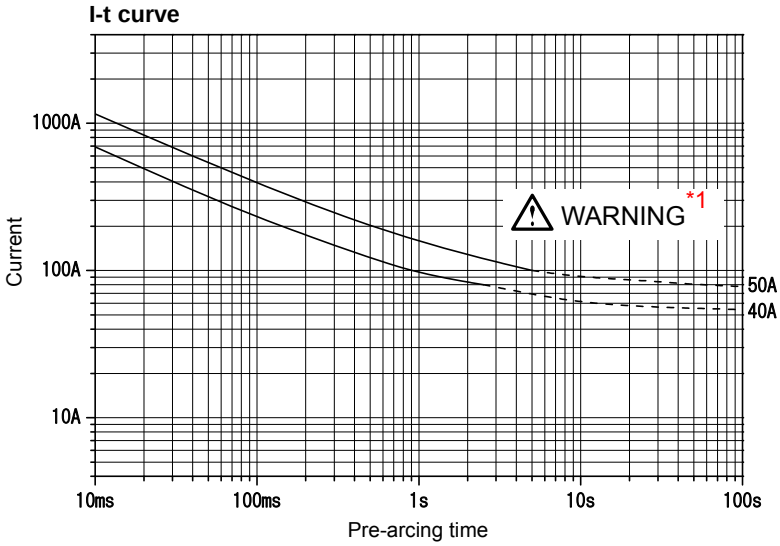


Referential dimensions of mounting holes



Unit: mm

I-t curve



The I-t curves above are plots of the average values of measurements obtained under conditions specified by SOC. These data are for reference only and are not intended to infer any guaranteed values.

Rated voltage	Certification	Range of rated current (I_N) *2	Rated breaking current		Current carrying capacity	Temp. rise	Overload operation
AC500V	C-UL US Recognized	5A - 50A	500A	Resistive circuit	1.0I_N until temperature stabilization occurs.	150K or less at 1.0I_N	Within 2min at 2.0I_N

*1: If the current is less than 2.0 I_N (represented by the dotted portion of the I-t curve), an arc current may continuously pass through the fuse, and it may therefore not be possible to break the current. Do not apply fusing conditions of currents less than 2.0 I_N, as fires and other accidents may occur due to the inability to open the circuit.

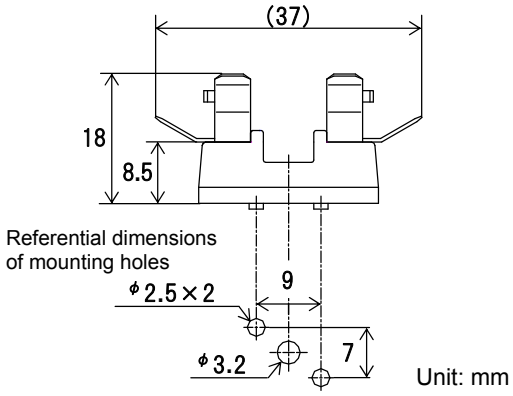
*2: Any rated current value can be selected within this range.

Fuseholders

RoHS Pb

BM-SS-I-14

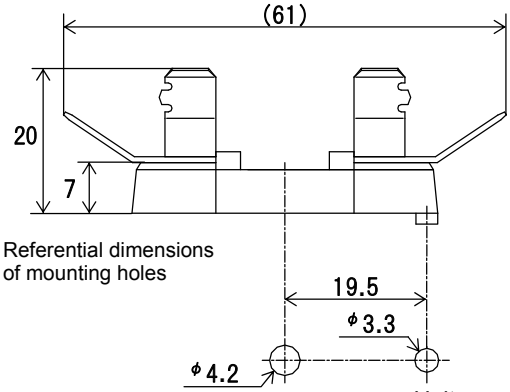
Fuse size : ϕ5.2mm × └20mm
Rating : 15 A, 250 V
Certification : UL Recognized
Base material : Phenolic resin (UL94V-0)
Terminals : #187 Tab
Surface treatment : Nickel plated



Unit: mm

BM-LQ-I-13

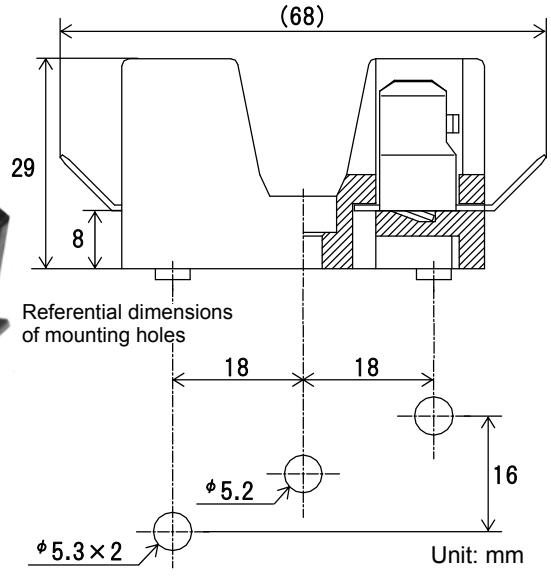
Fuse size : ϕ6.35mm × └30mm
ϕ6.35mm × └31.8mm
Rating : 30 A, 250 V
Certification : UL Recognized
Base material : Phenolic resin (UL94V-0)
Terminals : #250 Tab
Surface treatment : Tin plated



Unit: mm

BM-LQ-I-15

Fuse size : ϕ10.3mm × └38.1mm
Rating : 30 A, 250 V
Certification : UL Recognized
Base material : Phenolic resin (UL94V-0)
Terminals : #250 Tab
Surface treatment : Nickel plated



Unit: mm

⚠ CAUTION

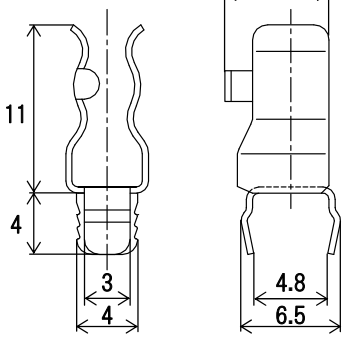
- The ratings listed on the fuseholders shown above represent the maximum ratings for UL-compliant fuses which can be employed. When IEC-compliant fuses are to be used in the fuseholders, please contact your local SOC sales representative as the maximum ratings may differ between the UL and IEC standards.
- When inserting a fuse into a fuseholder, care must be taken to avoid forcing the fuse into the fuseholder with excess pressure or mechanical impact. Such mishandling may result in cracking of the fuse body and may significantly affect its ability to safely interrupt current.
- Forcing a fuse into a fuseholder may create additional space between the contacts of the fuseholder clip. This can cause contact failures and abnormal rises in temperature, resulting in changes to the fuse performance and shortening of its service life, and may eventually lead to nuisance operations.

Fuse clips

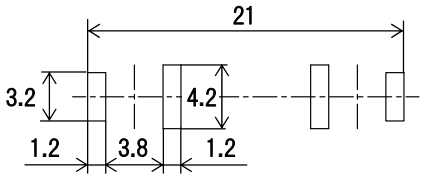
RoHS Pb

H-0016-2

Fuse size	:	ϕ5.2 mm
Rating	:	AC/DC 10 A
Thickness	:	0.4 mm
Material	:	C5191 phosphor bronze
Surface treatment	:	Tin plated



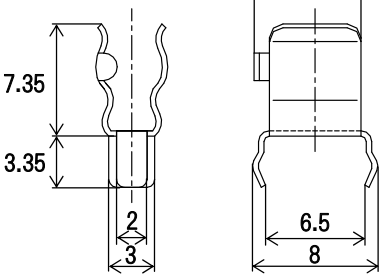
Referential dimensions of mounting holes



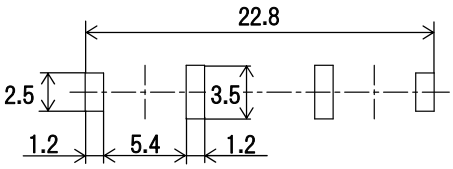
Unit: mm

H-0032-2

Fuse size	:	ϕ5.2 mm
Rating	:	AC/DC 10 A
Thickness	:	0.35 mm
Material	:	C5191 phosphor bronze
Surface treatment	:	Tin plated



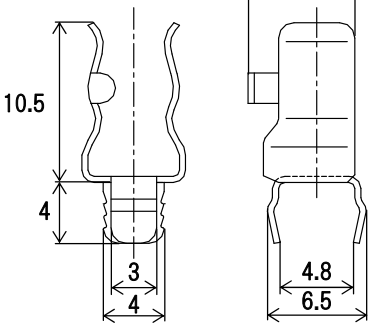
Referential dimensions of mounting holes



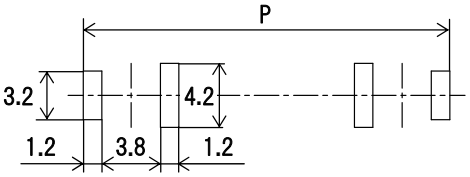
Unit: mm

H-0014-2

Fuse size	:	ϕ6.35 mm
Rating	:	AC/DC 15 A
Thickness	:	0.4 mm
Material	:	C5191 phosphor bronze
Surface treatment	:	Tin plated



Referential dimensions of mounting holes

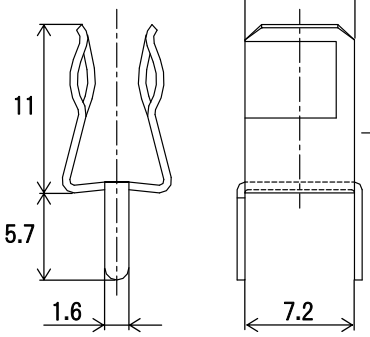


For ϕ6.35×30 : P=31
For ϕ6.35×31.8: P=33

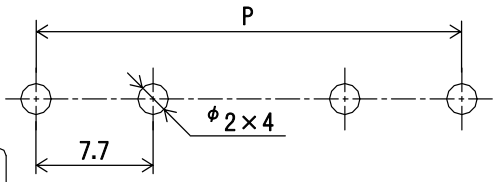
Unit: mm

H-0017-2

Fuse size	:	ϕ6.35 mm
Rating	:	AC/DC 15 A
Thickness	:	0.5 mm
Material	:	C5191 phosphor bronze
Surface treatment	:	Tin plated



Referential dimensions of mounting holes



For ϕ6.35×30 : P=34.7
For ϕ6.35×31.8: P=36.7

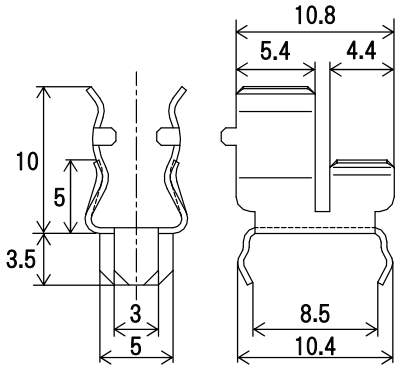
Unit: mm

Fuse clips

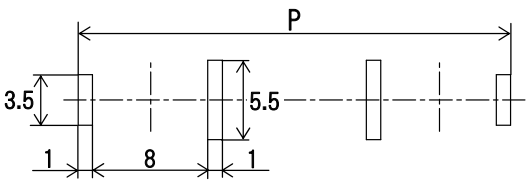
RoHS Pb

H-0048-2

Fuse size : ϕ5.2 mm
or ϕ6.35 mm
Rating : AC/DC 15 A
Thickness : 0.4 mm
Material : C5191
phosphor bronze
Surface treatment : Tin plated



Referential dimensions of mounting holes

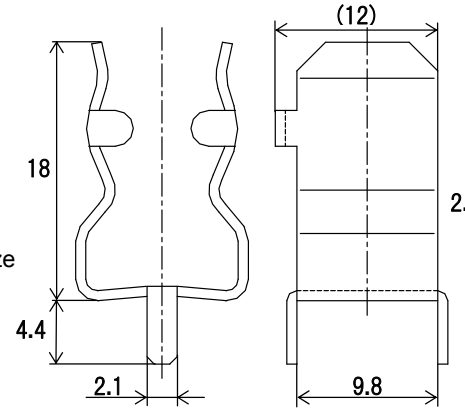


For ϕ5.2×20 : P=30.6
For ϕ6.35×30 : P=29.8
For ϕ6.35×31.8: P=31.6

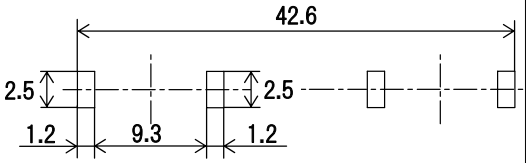
Unit: mm

H-0084-2

Fuse size : ϕ10.3 mm
Rating : AC/DC 30 A
Thickness : 0.7 mm
Material : C5191
phosphor bronze
Surface treatment : Tin plated



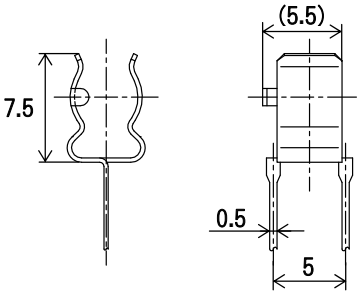
Referential dimensions of mounting holes



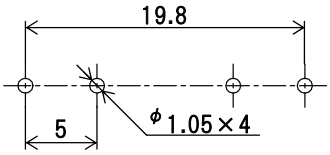
Unit: mm

H-0060

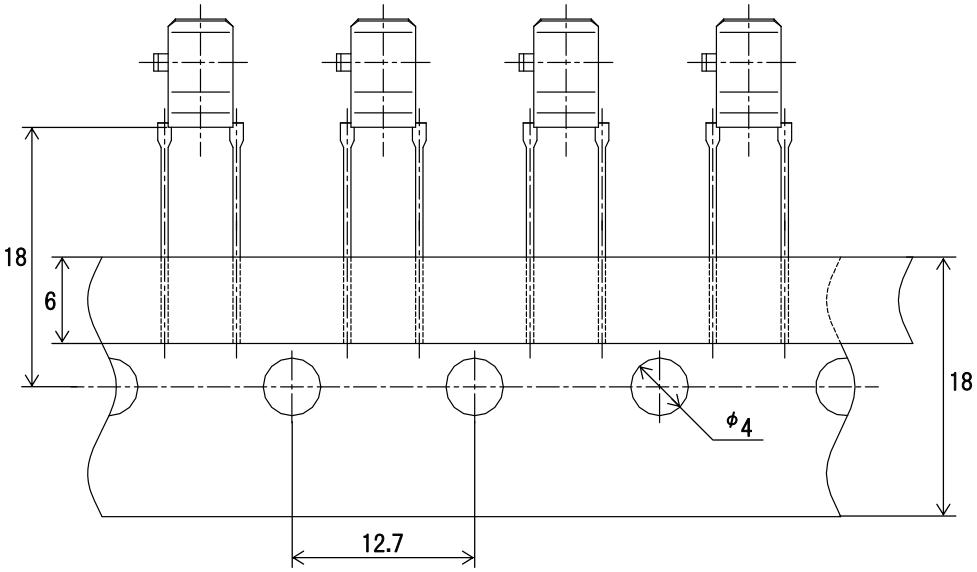
Fuse size : ϕ5.2 mm
Rating : AC/DC 10 A
Thickness : 0.3 mm
Material : Copper alloy
Surface treatment : Tin plated

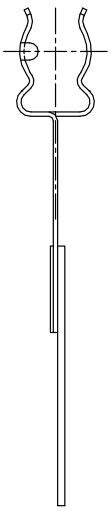


Referential dimensions of mounting holes



Tape configuration





Unit: mm

Intentionally blank

Intentionally blank

Intentionally blank

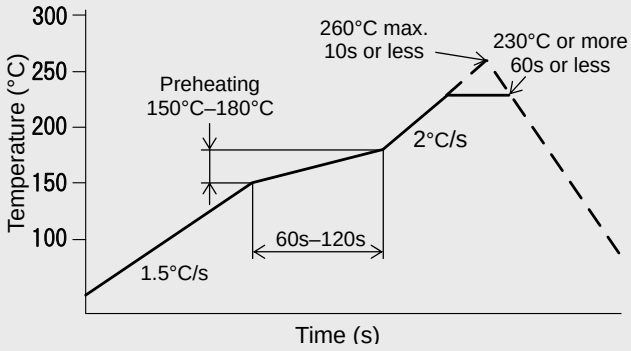
Intentionally blank

Technical information

Soldering specifications

■ Surface mount fuses

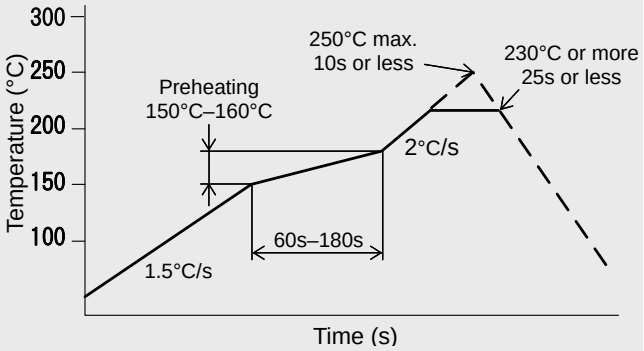
Reflow soldering
(11CT / 25CT / 36CFA* / 36CT type)



Soldering can be repeated a maximum of 2 times under the conditions specified above.

* Please ensure that the height of the fillets is not more than one-third of the entire height for 36CFA type fuses.

Reflow soldering
(MCF2 type)



Soldering can be repeated a maximum of 2 times under the conditions specified above.

■ Sub-miniature fuses with leads (25RT type)

・Wave soldering
Solder bath temp.: 260°C or less
Duration: 10 s or less

・Hand soldering with soldering iron
Soldering iron tip temp.: 380°C or less
Duration: 5 s or less

■ Pin terminal fuses (SM4 / SMC type)

・Wave soldering
Solder bath temp.: 265°C or less
Duration: 5 s or less

・Hand soldering with soldering iron
Soldering iron tip temp.: 350°C or less
Duration: 2 s or less

■ Cartridge fuses with leads

Wave soldering

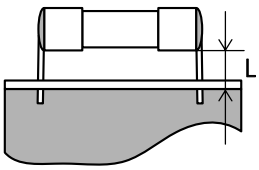
Lead wire diameter	Length between the fuse body and the side to be soldered (L)
ϕ0.5mm, ϕ0.6mm	5mm or more
ϕ0.8mm, ϕ1.0mm, ϕ1.2mm	8mm or more

Preheating temp.: 80°C–140°C
Preheating time: 30 s–60 s
Solder bath temp.: 260°C or less
Duration: 7 s or less

Hand soldering with soldering iron

Lead wire diameter	Length between the fuse body and the side to be soldered (L)
ϕ0.5mm, ϕ0.6mm, ϕ0.8mm, ϕ1.0mm, ϕ1.2mm	5mm or more

Soldering iron tip temp.: 380°C or less
Duration: 3 s or less



■ Fuses are sensitive to heat. The soldering conditions shown above are examples based on the use of SOC facilities. Sufficiently evaluate and examine your company's soldering conditions as they may vary depending on such factors as the facilities, solder type, solder quantity, board size, and board materials to be used.

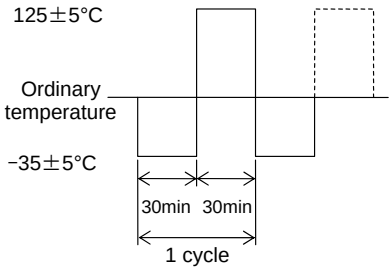
■ Board and solder used at SOC
Board: Glass epoxy, thickness 1.6 mm
Solder: Sn-3.0Ag-0.5Cu

Whiskers

The following tests are performed to ensure that there is no whisker generation on the tin-plated parts of our products.

■ Temperature cycling test

After test samples are subjected to 500 cycles of temperature cycling as specified below, there shall be no whisker generation when observed using a microscope having a magnification of 40 times.



■ Constant temperature and humidity test

After test samples are left at a temperature of 85°C and an RH of 85% for 500 h, there shall be no whisker generation when observed using a microscope having a magnification of 40 times.

Storage conditions

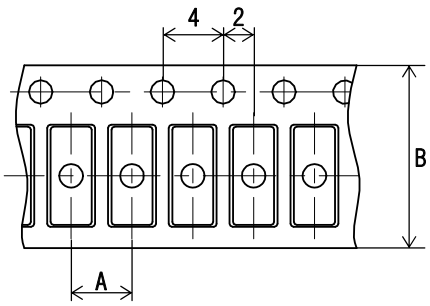
Prerequisite:	Products shall be packaged as delivered.
Ambient temperature:	−20°C – +40°C
Ambient humidity:	85% RH or less
Storage environment:	Not exposed to corrosive gas or sea breeze.
	Not exposed to direct sunlight.
	Not subjected to loads which could cause deformation of the products.
Storage period:	Within one year from the shipping date on the product packaging.

Packaging specifications

■ Tape packaging for surface mount fuses

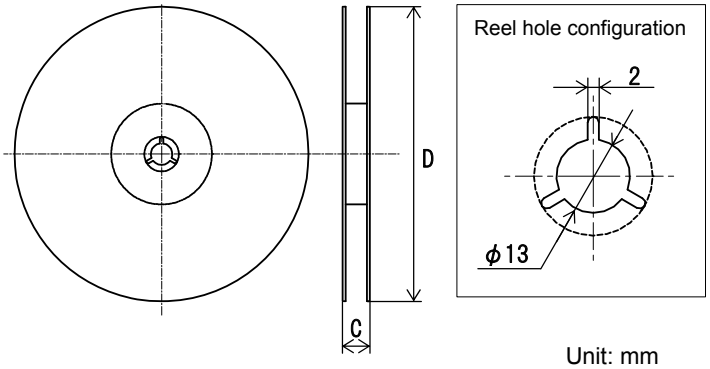
Product name			Packaging code	Qty. packed	Dimensions (Unit: mm)			
					A	B	C	D
11CF 11CT 32V11CF	P11CF P11CT DC35V11CT	DC35VP11CF DC35VP11CT DC86V11CT	R08B4	2000 pcs.	4	8	11.4	180
MCF2								
25CF 25CT DC300V25CF	P25CF P25CT	DC35VP25CF DC35VP25CT	R12A4	1000 pcs.	4	12	15.6	178
36CFA			R24D4	2000 pcs.	8	24	29.5	330
36CT								

・Tape configuration



Unit: mm

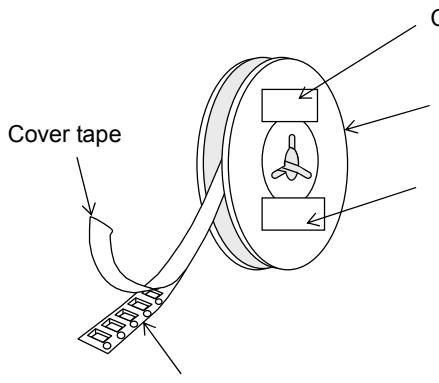
・Reel configuration



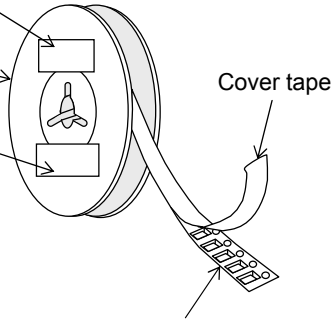
Unit: mm

・Packing method

(11CT type)



(MCF2 / 25CT / 36CFA / 36CT type)



■ Bag packaging for surface mount fuses

Product name			Packaging code	Qty. packed
11CF 11CT 32V11CF	P11CF P11CT DC35V11CT	DC35VP11CF DC35VP11CT DC86V11CT	B	100 pcs.
MCF2				
25CF 25CT DC300V25CF	P25CF P25CT	DC35VP25CF DC35VP25CT		
36CFA				
36CT				

■ Bag packaging for sub-miniature fuses with leads

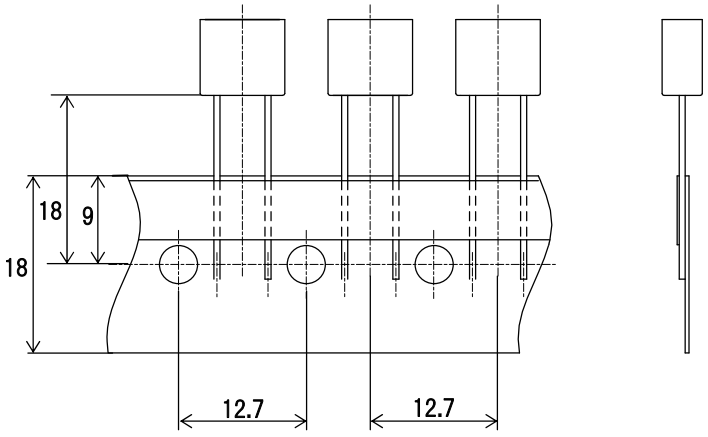
Product name		Forming specification	Standard total qty. per box	Packing contents
25RF DC35VP25RF	P25RF	Without forming / F006 / F007	1000 pcs.	100 pcs.×10 bags
25RT DC35VP25RT	P25RT	F002 / F003	2000 pcs.	100 pcs.×20 bags

■ Bag/tape packaging for pin terminal fuses

Product name		Standard total qty. per box	Packing contents
SM4	PSM	1000 pcs.	100 pcs.×10 bags
SMC		1000 pcs.	Tape packaging

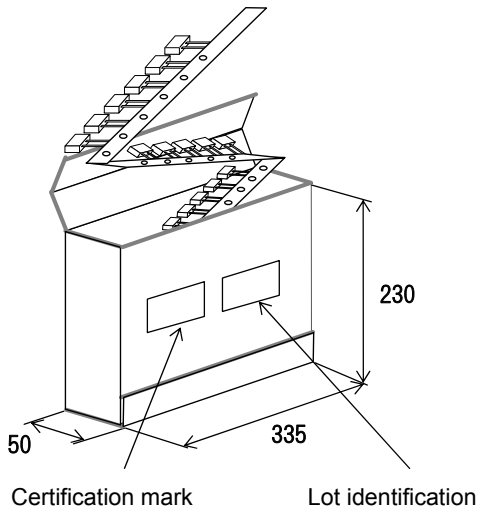
(Tape packaging for SMC type fuses)

・Tape configuration



Unit: mm

・Packing method

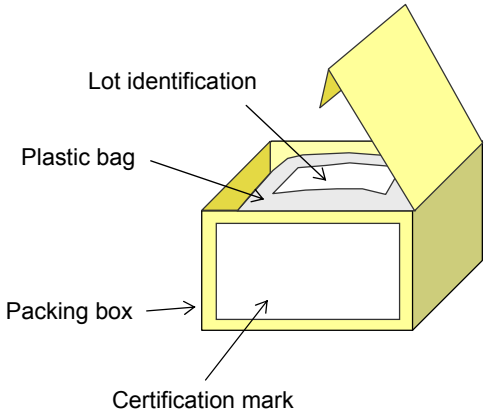


Unit: mm

■ Bag packaging for cartridge fuses

Fuse dimensions (Unit: mm)	Cartridge type	Cartridge type with leads	
		Leads of ϕ 0.6 mm or less	Leads of ϕ 0.8 mm or more
	Standard total qty. per box	Standard total qty. per box	Standard total qty. per box
ϕ4 × └9	2000 pcs. (1000 pcs. × 2 bags)	400 pcs. (100 pcs. × 4 bags)	400 pcs. (100 pcs. × 4 bags)
ϕ4.6 × └14	1000 pcs. (1000 pcs. × 1 bag)	—	200 pcs. (100 pcs. × 2 bags)
ϕ4.6 × └16	1000 pcs. (1000 pcs. × 1 bag)	400 pcs. (100 pcs. × 4 bags)	200 pcs. (100 pcs. × 2 bags)
ϕ5.2 × └20	1000 pcs. (1000 pcs. × 1 bag)	400 pcs. (100 pcs. × 4 bags)	200 pcs. (100 pcs. × 2 bags)
ϕ6.35 × └15.9	500 pcs. (500 pcs. × 1 bag)	—	200 pcs. (100 pcs. × 2 bags)
ϕ6.35 × └20	—	—	100 pcs. (100 pcs. × 1 bag)
ϕ6.35 × └25.4	500 pcs. (500 pcs. × 1 bag)	—	100 pcs. (100 pcs. × 1 bag)
ϕ6.35 × └30	500 pcs. (500 pcs. × 1 bag)	—	100 pcs. (100 pcs. × 1 bag)
ϕ6.35 × └31.8	400 pcs. (400 pcs. × 1 bag)	—	100 pcs. (100 pcs. × 1 bag)
ϕ7.14 × └31.8	300 pcs. (300 pcs. × 1 bag)	—	—
ϕ10.3 × └38.1	100 pcs. (100 pcs. × 1 bag)	—	50 pcs. (50 pcs. × 1 bag)

· Packing method



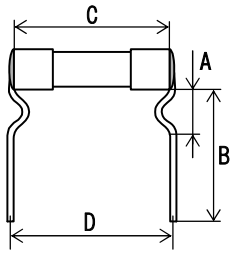
Forming specifications

■ Cartridge fuses with leads

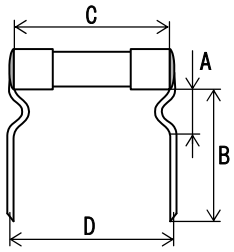
Fig. No.	Fuse dimensions (Unit: mm)	Lead wire diameter (Unit: mm)	Forming No.	Dimensions (Unit: mm)			
				A	B	C	D
＊1	ϕ4 × └9	0.8	F451	5.2	10	9	(10)
	ϕ4.6 × └16	0.8	F051	5.2	10	16	(17)
	ϕ5.2 × └20	0.8	F013	5	9.5	20	(21)
		1.0	F057	5	8.6	20	(21.4)
	φ6.35 × └30	1.0	F916	5	9.7	30	(32.2)
	ϕ6.35 × └31.8	1.0	F019	5	40	31.8	(33)
		1.2	F021	5	9	31.8	(33)
		0.8	F918	5	9	31.8	(33)
＊2	ϕ6.35 × └30	1.2	F915	5	9.7	30	(32.2)
＊3	ϕ6.35 × └30	1.2	F502	5	9.7	30	(25)
＊4	ϕ4.6 × └14	0.8	F024	5	10	14	(15)
	ϕ4.6 × └16	0.8	F025	5	10	16	(17)
	ϕ5.2 × └20	0.8	F026	5	10	20	(21)
		1.0	F036	5	10	20	(21)

Please contact your local SOC sales representative for forming specifications which are not listed above and for questions regarding dimensional tolerances.
The D dimensions in parentheses are for reference purposes only, and are not intended to infer any guaranteed values.

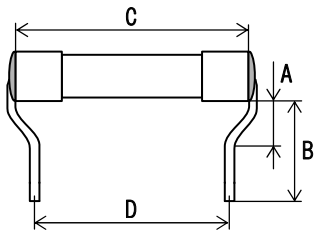
＊1



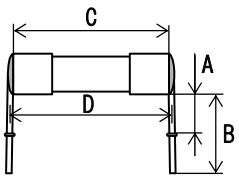
＊2



＊3



＊4

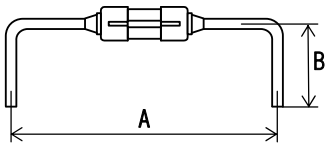


■ 25RT type fuses (Lead wire diameter: ϕ 0.8 mm)

Fig. No.	Forming No.	Dimensions (Unit: mm)			
		A	B	C	D
＊5	F003	12.5	6	—	—
＊6	F002	10	5.1	10.1	2.5
＊7	F007	12.5	6	11	3.4
＊8	F006	5	15.6	20.6	5

Please contact your local SOC sales representative for questions regarding dimensional tolerances.

＊5



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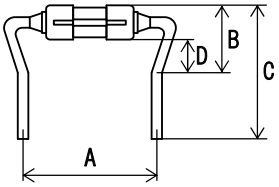

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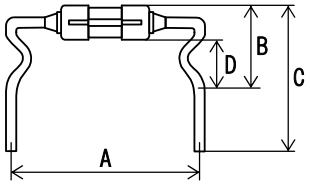

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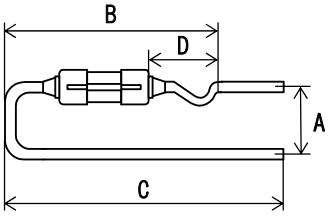
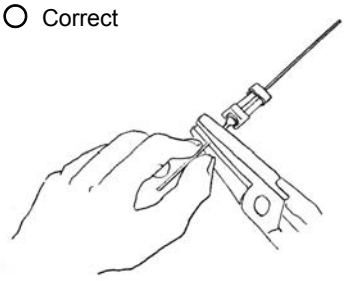


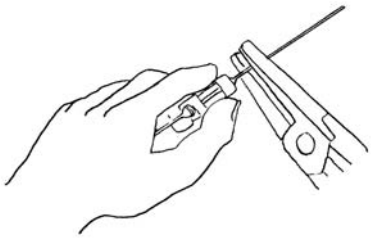
■ Lead wire forming

· When forming by hand

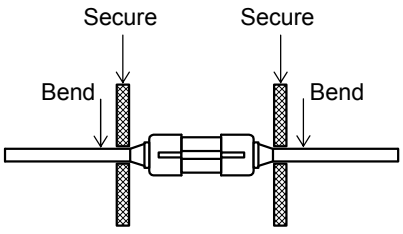
○ Correct



× Incorrect



· When forming with forming dies



When forming lead wires, always secure the area between the fuse body and the part of the lead wire to be formed as shown in the figure above. Make sure not to put any stress on the area connecting the fuse body with the lead wire.

Keywords

Fuse selection process

Fuses can prevent accidents including the electronic circuit emitting smoke and/or catching fire by opening the circuit if any abnormal current passes through it. However, selection of a fuse inappropriate to the intended protection purpose may lead to nuisance operations and the inability to open the circuit in the case of abnormal currents, which may result in accidents.

Nuisance operations

Safety precautions when selecting fuses

■ What is the voltage of the circuit where the fuse is to be inserted?

Rated voltage

The rated voltage of a fuse indicates the maximum voltage of a circuit for which the fuse can safely interrupt the circuit's abnormal current up to its breaking capacity without bursting. Please exercise caution when the voltage of the circuit is higher than the rated voltage of the fuse, as the fuse may break as shown in Figure 1.

【Figure 1】Example of a breaking test where the circuit voltage is higher than the rated voltage of the fuse

! Make sure to select a fuse with a rated voltage higher than the voltage of the circuit.

■ Will the fuse be inserted in an AC circuit or a DC circuit?

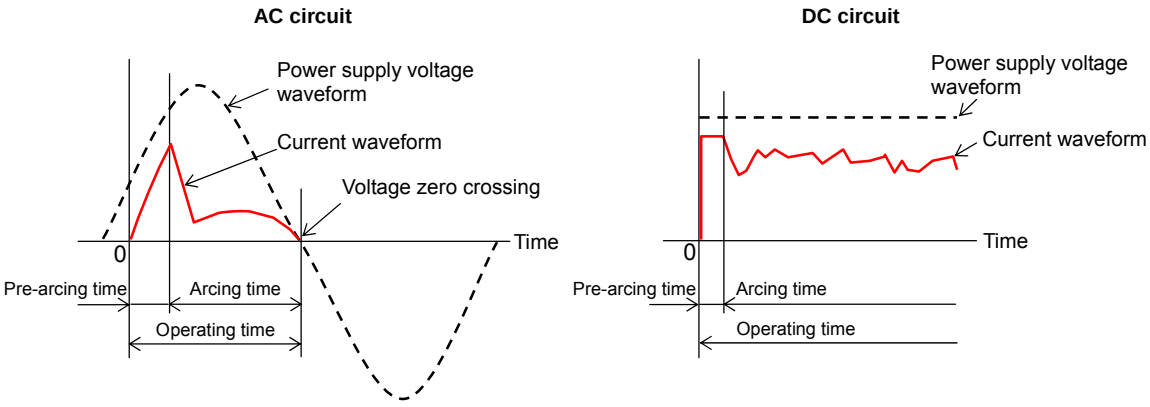
AC circuit

DC circuit

The breaking ability of a fuse will differ depending on whether the circuit is an AC or a DC circuit. Fuses intended for use in AC circuits should therefore not be employed in DC circuits, and vice versa, as this may result in accidents.

Arcing

In AC circuits, arcing tends to be extinguished near a voltage zero crossing point as in Figure 2. In the case of DC circuits, however, care should be exercised as arcing, which can cause the fuse to burst, may persist because there is no zero crossing of the power supply voltage. Therefore, only use fuses with DC rated voltage in DC circuits.



【Figure 2】Current breaking waveform differences between AC and DC circuits

! Only select fuses with DC rated voltage for DC circuits, and those with AC rated voltage for AC circuits.

Keywords

Power factor

Time constant

Recovery voltage

Electrical Appliance and Material Safety Law

UL/CSA

IEC

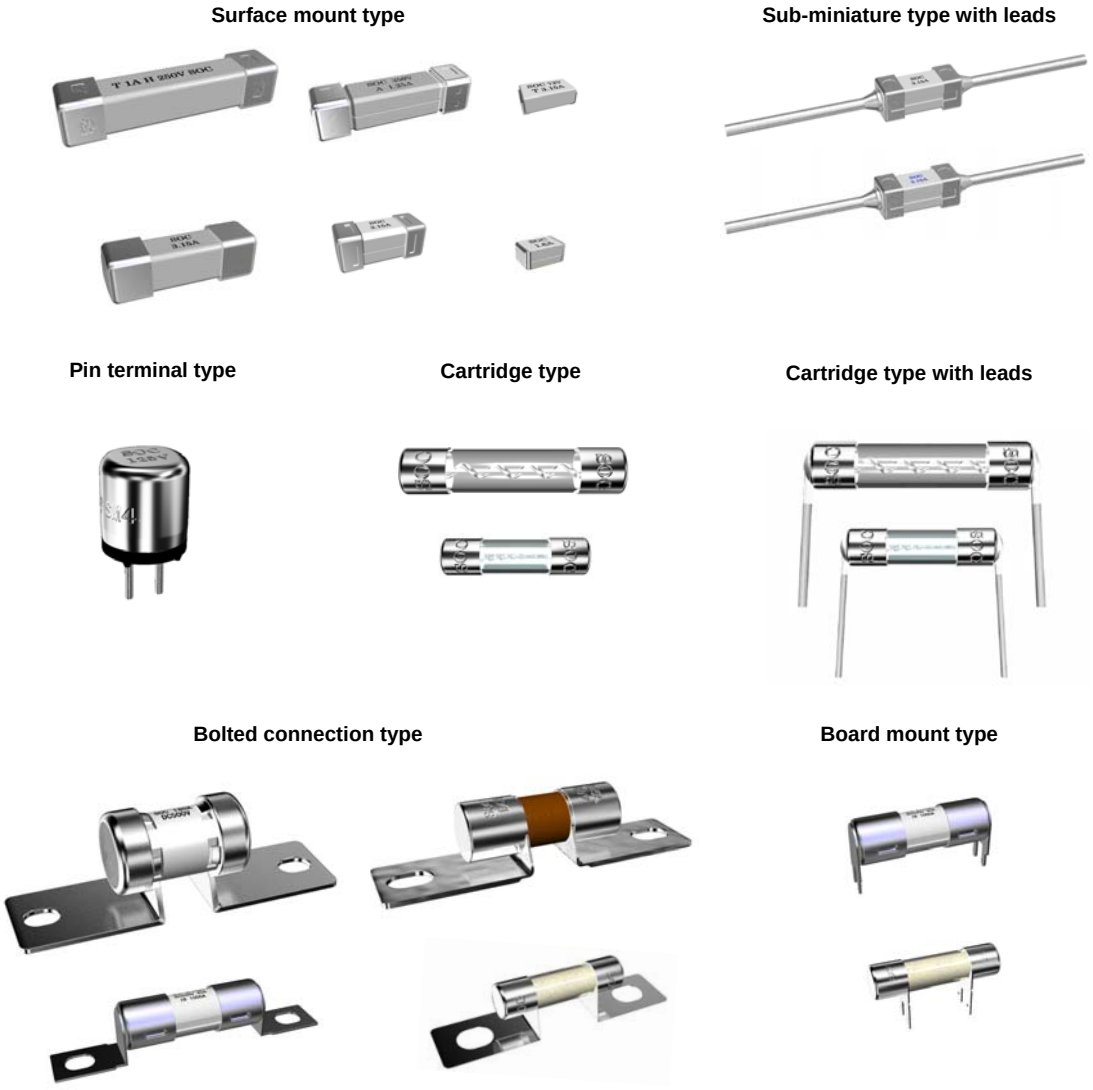
■ What is the power factor/time constant of the circuit in which the fuse is to be inserted?

The size of the inductance of the circuit relates to the magnitude of the power factor or the time constant. When the fuse interrupts an abnormal current in a circuit with a large inductance, a large recovery voltage is generated and this can prevent the fuse from breaking the current.

! When selecting fuses, please confirm that the fuse you have selected can safety clear abnormal currents in the equipment in which it is to be used.

■ How will the fuse be installed?

The basic shapes and dimensions of fuses are determined by various standards, as per Table 1 on P. 180. The Electrical Appliance and Material Safety Law of Japan and the UL/CSA standards limit the maximum dimensions, while the IEC standards restrict both the shapes and dimensions of fuses.

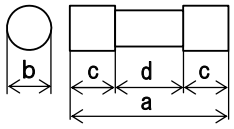
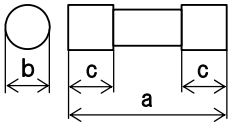
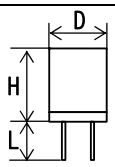
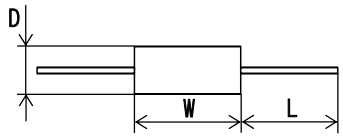
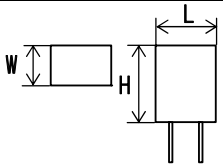
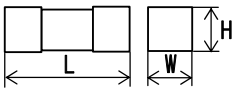


【Figure 3】Example of fuse shapes

! Please contact SOC for the development of custom-designed fuses based on your requirements for shape and dimensions.

【Table 1】 Examples of fuse shapes and principal dimensions by standard

■ Electrical Appliance and Material Safety Law of Japan

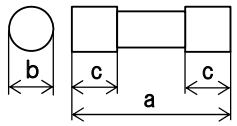
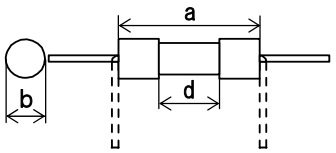
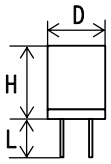
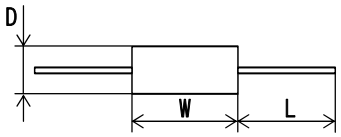
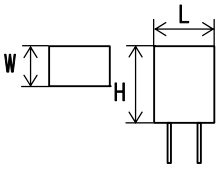
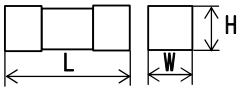
<table>
<tr><th colspan="3">Ordinances and standards</th><th>Shape</th><th>Dimensions (Unit: mm)</th></tr>
<tr><td colspan="2">Paragraph 1, Appended Table 3, Chapter 2 of the Ministerial Ordinance establishing technical requirements for electrical appliances and materials</td><td>Miniature cartridge fuses</td><td> 
</td><td>a ≦ 40
b ≦ 11
c ≧ b×0.6
d ≧ 6</td></tr>
<tr><td rowspan="5">Paragraph 2 of the Ministerial Ordinance establishing technical requirements for electrical appliances and materials</td><td rowspan="2">J60127-2 (H20)*1</td><td>S.S.1/S.S.2/S.S.3
S.S.5/S.S.6
Cartridge fuse-links</td><td rowspan="2"> 
</td><td>a = 20±0.5
b = $5.2^{+0.1}_{-0.2}$
c = 5.1±0.6</td></tr>
<tr><td>S.S.4
Cartridge fuse-links</td><td>a = 31.8±0.8
b = 6.35±0.1
c = 6.2±0.6</td></tr>
<tr><td rowspan="2">J60127-3 (H20)*1</td><td>S.S.1/S.S.3/S.S.4
Sub-miniature fuse-links</td><td> 
</td><td>H ≦ 10
D ≦ ϕ10
(L = 4.3±0.3)</td></tr>
<tr><td>S.S.2
Sub-miniature fuse-links</td><td> 
</td><td>D ≦ ϕ10
W ≦ 10
(L ≦ 40)</td></tr>
<tr><td rowspan="2">J60127-4 (H22)*1</td><td>S.S.1
Through-hole UM fuse-links</td><td> 
</td><td>W ≦ 7.5
H ≦ 10
L* ≦ 8, 10.5, 12.5, 15, 18
* Dimensions vary depending on the rated voltage.</td></tr>
<tr><td>S.S.2
Surface mount UM fuse-links</td><td> 
</td><td>W* ≦ 1.8, 6
H* ≦ 2.5, 5
L* ≦ 3.4, 6, 8, 10
* Dimensions vary depending on the rated voltage.</td></tr>
</table>

*1: The main bodies for the respective J60127 standards are JIS C 6575-2: 2005, JIS C 6575-3: 2005, and JIS C 6575-4: 2009.

■ UL/CSA standards

<table>
<tr><th colspan="2">Ordinances and standards</th><th>Shape</th><th>Dimensions (Unit: mm)</th></tr>
<tr><td rowspan="2">UL248-1
UL248-14
CSA C22.2 No.248.1
CSA C22.2 No.248.14</td><td>Microfuses</td><td colspan="2">Principal dimensions (length, width, height, and diameter) excluding the leads or terminals ≦ 10</td></tr>
<tr><td>Supplemental fuses other than microfuses</td><td colspan="2">Dimensions not specified</td></tr>
</table>

■ IEC standards

Ordinances and standards		Shape	Dimensions (Unit: mm)
IEC60127-2	S.S.1/S.S.2/S.S.3/S.S.5/S.S.6 Cartridge fuse-links		a = 20±0.5 b = $\phi 5.2^{+0.1}_{-0.2}$ c = 5.1±0.6
	S.S.4 Cartridge fuse-links		a = 31.8±0.8 b = ϕ6.35±0.1 c = 6.2±0.6
	Miniature fuse-links with wire terminations		a ≦ 24 b ≦ 6 d = 10±2
IEC60127-3	S.S.1/S.S.3/S.S.4 Sub-miniature fuse-links		H ≦ 10 D ≦ ϕ10 (L = 4.3±0.3)
	S.S.2 Sub-miniature fuse-links		D ≦ ϕ10 W ≦ 10 (L ≦ 40)
IEC60127-4	S.S.1 Through-hole fuse-links		W ≦ 7.5 H ≦ 10 L* ≦ 8, 10.5, 12.5, 15, 18 * Dimensions vary depending on the rated voltage.
	S.S.2 Surface mount fuse-links		W* ≦ 1.8, 6 H* ≦ 2.5, 5 L* ≦ 3.4, 6, 8, 10 * Dimensions vary depending on the rated voltage.

Please contact SOC for the development of custom-designed fuses based on your requirements for shape and dimensions.

■ How many amperes will flow through the circuit the fuse is to be used in?

A rated current is defined for each fuse, and this value is marked on it. When selecting fuses by rated current, it is important to fully examine the following current conditions (including current waveform) of the circuit in which the fuse is to be inserted, in order to prevent nuisance operation of the fuse and ensure that all necessary protection goals are met.

- Steady-state current
- Inrush current
- Abnormal current

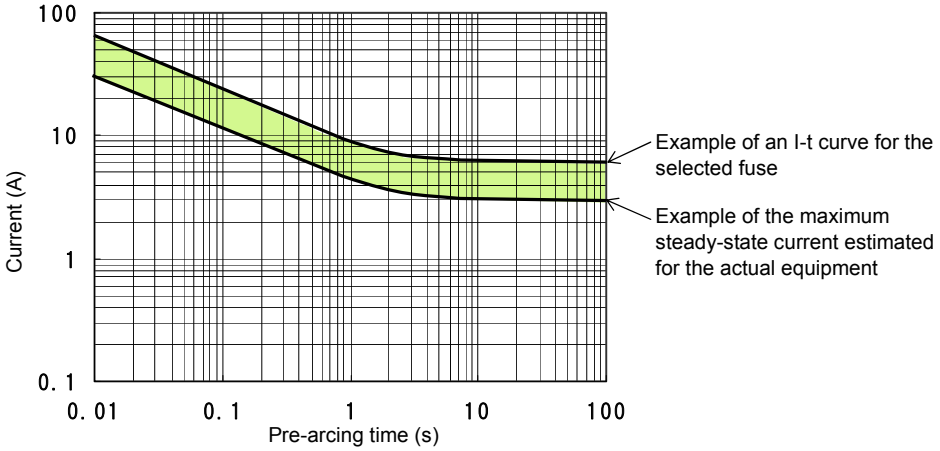
Steady-state current
Inrush current
Abnormal current

(1) Evaluation of a steady-state current

In order to minimize nuisance operations and ensure a long service life, select fuses so that their time/current characteristic (I-t curve*) guarantees an adequate margin against the steady-state current (r.m.s. value) of the equipment they are to be employed in (the ▭ area in Figure 4).

Steady-state current
I-t curve

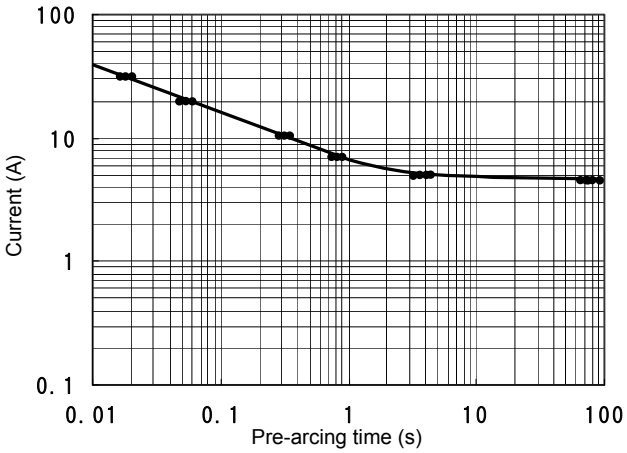
The margin required for your application should be determined based on evaluations made in your actual equipment as this may vary depending on usage conditions.



【Figure 4】Fuse selection example for a steady-state current

* I-t curve
An I-t curve is a plot of the average pre-arcing times measured with various constant currents being applied to the fuse as shown in Figure 5, and does not guarantee fuse characteristics.

Current applied	Average pre-arcing time
30 A	0.018 s
20 A	0.058 s
10 A	0.33 s
7 A	0.91 s
5 A	3.9 s
4.5 A	82 s



【Figure 5】Example of how to plot an I-t curve

(2) Evaluation of an inrush current

Variations in inrush current are generally so complicated that it is difficult to evaluate the inrush current by means of an I-t curve.
When the fuse is less affected by heat dissipation (e.g., when a current has flowed for only a short period of time), it is possible to evaluate the occurrence of nuisance operations by comparing the Joule integral of the current waveform of the circuit (I_m^2t) with the pre-arcing I_f^2t-t characteristic of the fuse.

Evaluation process:

① Repeatedly measure the current waveform data of the equipment from the inrush current at power-on to the steady-state current.
② When there is a capacitor in the circuit, measure the current waveform data after completion of the discharge. When there is a device like a thermistor whose resistance varies depending on the temperature, measure the current waveform data under the conditions where impedance of the circuit is at the minimum.
③ Based on the measured current waveform, calculate the I_m^2t as follows:

(⊿t: Sampling time)

$$I_m^2t = \Sigma i_m^2 \times \Delta t$$

$$= \int_0^t i_m(t)^2 \, dt$$

④ Plot the obtained I_m^2t as in Figure 6.
⑤ In order to prevent nuisance operations caused by aging, it is necessary to select a fuse so that the I_f^2t-t curve of the fuse guarantees enough margin against the maximum I_m^2t of the equipment (the ▭ area in Figure 7). The required margin should be determined based on evaluations made using your actual equipment as this may vary depending on usage conditions.

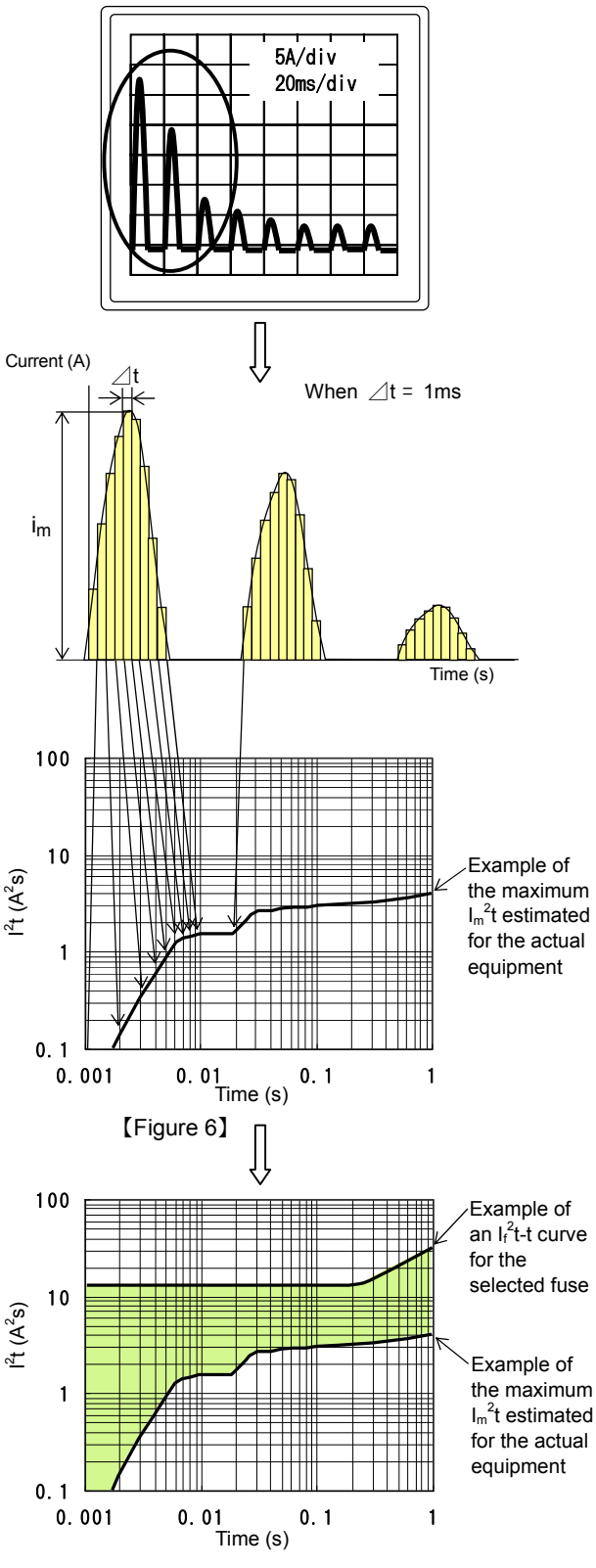
(3) Evaluation of an abnormal current

Measure the maximum possible abnormal current, and select a fuse whose rated breaking current is larger than that value.

For the minimum possible abnormal current, select a fuse which meets the conditions of the following formula:

$$I_f^2t \leqq I_m^2t$$

Example of a current waveform of equipment



【Figure 6】

【Figure 7】Fuse selection example for an inrush current

! Before final fuse selection, always test the proposed fuse in your actual equipment to ensure that the fuse satisfies all your operational and safety requirements. Please contact your local SOC sales representative for help in selecting fuses.

Inrush current
Joule-integral
I_f^2t-t curve
Abnormal current
Rated breaking current

Keywords

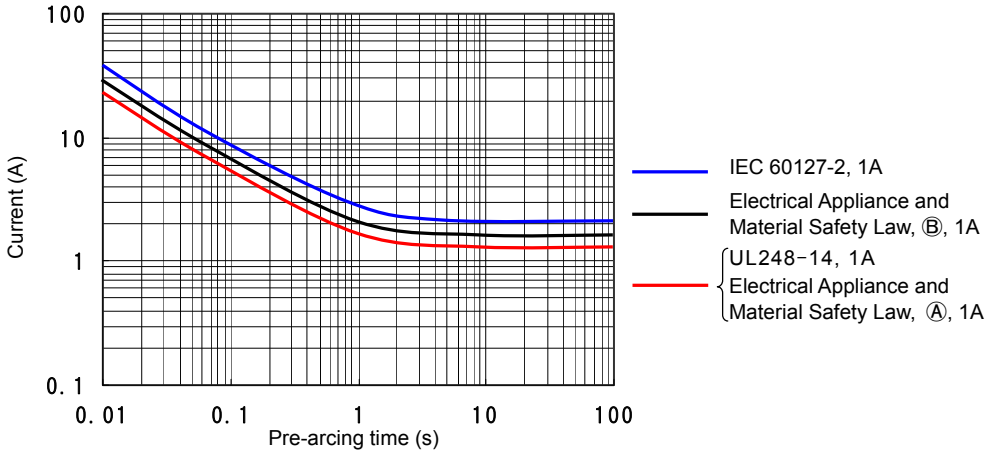
Rated current

I_N

■ Explanation of rated current

Testing conditions differ even among fuses with the same rated current depending on the standard. Each standard specifies the pre-arcing (clearing) times for the multiple of the rated current (I_N)* as per Table 2 below. For details about these specified times, please refer to Table 3.

Accordingly, as in Figure 8, I-t curves differ depending on the standard even when the rated current is the same.



【Figure 8】Examples of I-t curves for the same rated current based on different standards

∗ I_N indicates the rated curent. For example, 2.0 I_N indicates a value of twice the rated current.

【Table 2】 Examples of current carrying capacities/endurance tests and overload operations/pre-arcing time/current characteristics for cartridge fuses compared by standard

Ordinances and standards		Current carrying capacity/ Endurance test	Overload operation/ Pre-arcing time/current characteristic
UL 248-1 UL 248-14 CSA C22.2 No.248.1 CSA C22.2 No.248.14		Shall carry 1.0I_N until temperature stabilization occurs.	Within 60min at 1.35I_N
Paragraph 1, Appended Table 3, Chapter 2 of the Ministerial Ordinance establishing technical requirements for electrical appliances and materials	Miniature cartridge fuses marked with the symbol Ⓐ	Shall carry 1.1I_N until temperature stabilization occurs.	Within 60min at 1.35I_N
	Miniature cartridge fuses marked with the symbol Ⓑ	Shall carry 1.3I_N until temperature stabilization occurs.	Within 60min at 1.6I_N
IEC 60127-2	S.S.1/S.S.2/S.S.5	After repeating 100 cycles of 1.2I_N for 1h and switching-off for 15 min, 1.5I_N can be passed through the fuse for 1h or more.	Within 30min at 2.1I_N
	S.S.3/S.S.6		Within 2min at 2.1I_N

【Table 3】 Examples of pre-arcing (clearing) times by standard

■ Electrical Appliance and Material Safety Law of Japan

Ordinances and standards		Rated current (I_N)	Current carrying capacity/pre-arcing time		
			1.35I_N	1.6I_N	2.0I_N
Paragraph 1, Appended Table 3, Chapter 2 of the Ministerial Ordinance establishing technical requirements for electrical appliances and materials	Miniature cartridge fuses marked with the symbol Ⓐ	1A－31.5A	≦ 60min	—	≦ 2min
	Miniature cartridge fuses marked with the symbol Ⓑ	1A－31.5A	—	≦ 60min	≦ 2min

Ordinances and standards			Rated current (I_N)	Current carrying capacity/pre-arcing time						Charac-teristic
				1.0I_N	2.0I_N	2.1I_N	2.75I_N	4.0I_N	10I_N	
Paragraph 2 of the Ministerial Ordinance establishing technical requirements for electrical appliances and materials	J60127-2 (H20)*1	S.S.1	50mA －4A	—	—	≦30min	10ms－2s	3ms － 300ms	≦20ms	Quick-acting
			Over 4A －6.3A				10ms－3s			
			Over 6.3A －10A				40ms－20s	10ms － 1s	≦30ms	
		S.S.2	32mA －100mA	—	—	≦30min	10ms－500ms	3ms － 100ms	≦20ms	
			Over 100mA －6.3A				50ms－2s	10ms － 300ms		
			Over 6.3A －10A					10ms － 400ms	≦ 40ms	
		S.S.3	32mA －100mA	—	—	≦2min	200ms－10s	40ms － 3s	10ms－300ms	Time-lag
			Over 100mA －10A				600ms－10s	150ms － 3s	20ms－300ms	
		S.S.4	50mA －100mA	—	≦ 20s	—	2ms－200ms	1ms － 30ms	≦5ms	Quick-acting
			Over 100mA －10A				20ms－1.5s	8ms － 400ms	≦80ms	
		S.S.5	100mA －800mA	—	—	≦30min	250ms－80s	50ms － 5s	5ms－150ms	Time-lag
			Over 800mA －3.15A				750ms－80s	95ms － 5s	10ms－150ms	
			Over 3.15A －10A					150ms － 5s		
		S.S.6	32mA －100mA	—	—	≦2min	200ms－10s	40ms － 3s	10ms－300ms	
			Over 100mA －10A				600ms－10s	150ms － 3s	20ms－300ms	
	J60127-3 (H20)*1	S.S.1	2mA －5A	4h ≦	≦ 5s	—	≦300ms	≦30ms	≦4ms	Quick-acting
		S.S.2	50mA －5A							
		S.S.3	50mA －5A	—	—	≦30min	10ms－3s	3ms － 300ms	≦20ms	
		S.S.4	40mA －4A			≦2min	400ms－10s	150ms － 3s	20ms－150ms	Time-lag
	J60127-4 (H22)*1	S.S.1 S.S.2	100mA －10A	—	≦ 2min	—	—	—	＜1ms	Super-quick-acting
									1ms－10ms	Quick-acting
									Over 10ms－100ms	Time-lag
									Over 100ms－1s	Super-time-lag

*1: The main bodies for the respective J60127 standards are JIS C 6575-2: 2005, JIS C 6575-3: 2005, and JIS C 6575-4: 2009.

■ UL/CSA standards

Ordinances and standards		Rated current (I_N)	Current carrying capacity/ clearing time		Charac-teristic
			1.35I_N	2.0I_N	
UL 248-1 UL 248-14 CSA C22.2 No.248.1 CSA C22.2 No.248.14	Supplemental fuses	≦ 30A	≦ 60min	≦ 2min	Other than time-delay
		Over 30A – 60A		≦ 4min	
		≦ 3A	—	5s – 2min	Time-delay
		3A <		12s – 2min	
	Supplemental fuses (Microfuses)	≦ 60A	—	≦ 1min	Other than time-delay
		≦ 3A		5s – 1min	Time-delay
		3A <		12s – 1min	

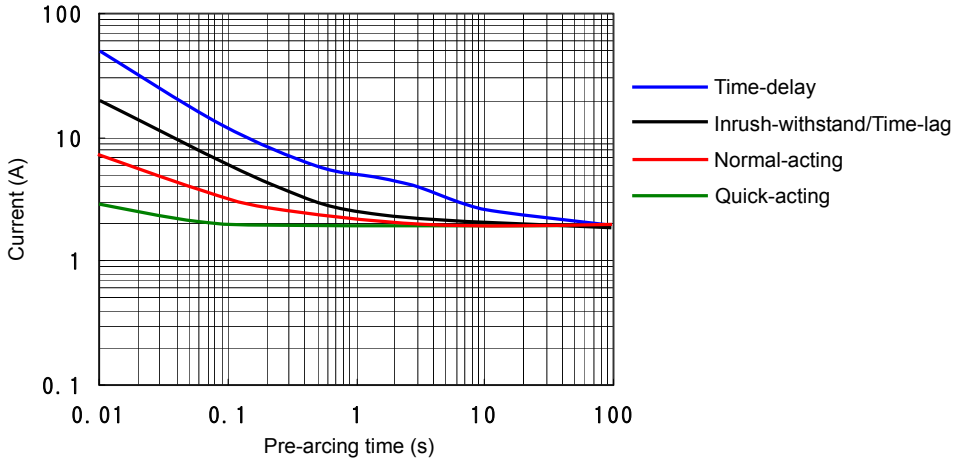
■ IEC standards

Ordinances and standards		Rated current (I_N)	Current carrying capacity/pre-arcing time						Charac-teristic
			1.0I_N	2.0I_N	2.1I_N	2.75I_N	4.0I_N	10I_N	
IEC 60127-2	S.S.1	50mA – 4A	—	—	≦ 30min	10ms – 2s	3ms – 300ms	≦ 20ms	Quick-acting
		Over 4A – 6.3A				10ms – 3s			
		Over 6.3A – 10A				40ms – 20s	10ms – 1s	≦ 30ms	
	S.S.2	32mA – 100mA	—	—	≦ 30min	10ms – 500ms	3ms – 100ms	≦ 20ms	
		Over 100mA – 6.3A				50ms – 2s	10ms – 300ms		
		Over 6.3A – 10A					10ms – 400ms	≦ 40ms	
	S.S.3	32mA – 100mA	—	—	≦ 2min	200ms – 10s	40ms – 3s	10ms – 300ms	Time-lag
		Over 100mA – 10A				600ms – 10s	150ms – 3s	20ms – 300ms	
	S.S.4	50mA – 100mA	—	≦ 20s	—	2ms – 200ms	1ms – 30ms	≦ 5ms	Quick-acting
		Over 100mA – 10A				20ms – 1.5s	8ms – 400ms	≦ 80ms	
	S.S.5	100mA – 800mA	—	—	≦ 30min	250ms – 80s	50ms – 5s	5ms – 150ms	Time-lag
		Over 800mA – 3.15A				750ms – 80s	95ms – 5s	10ms – 150ms	
		Over 3.15A – 10A					150ms – 5s		
	S.S.6	32mA – 100mA	—	—	≦ 2min	200ms – 10s	40ms – 3s	10ms – 300ms	
		Over 100mA – 10A				600ms – 10s	150ms – 3s	20ms – 300ms	
IEC 60127-3	S.S.1	2mA – 5A	4h ≦	≦ 5s	—	≦ 300ms	≦ 30ms	≦ 4ms	Quick-acting
	S.S.2	50mA – 5A							
	S.S.3	50mA – 5A	—	—	≦ 30min	10ms – 3s	3ms – 300ms	≦ 20ms	
	S.S.4	40mA – 4A			≦ 2min	400ms – 10s	150ms – 3s	20ms – 150ms	Time-lag
IEC 60127-4	S.S.1 S.S.2	32mA – 6.3A	—	≦ 2min	—	—	—	< 1ms	Super-quick-acting
								1ms – 10ms	Quick-acting
								Over 10ms – 100ms	Time-lag
								Over 100ms – 1s	Super-time-lag

■ Time/current characteristic

Time/current characteristic

As per Figure 9, it is possible to design fuses having the same rated current, but with differing I-t curves and time/current characteristics. Please consult your SOC sales representative when it is necessary to prevent fuse operations due to an inrush current, or when an abnormal current should be interrupted more quickly.



Time-delay
Inrush-withstand
Time-lag
Normal-acting
Quick-acting

【Figure 9】Examples of differences in I-t curves for the same rated current due to differing time/current characteristics

■ Rated breaking current (capacity)

Rated breaking current

Rated breaking current is the maximum r.m.s. current value that a fuse is capable of safely interrupting at a circuit voltage equal to the rated voltage of the fuse, under the testing conditions specified by each standard. The specifications for the rated breaking current vary depending on which standard the fuse conforms to, as per Table 4.

【Table 4】 Examples of rated breaking currents (capacities) compared by standard

Ordinances and standards		Type/ Characteristic	Rated voltage	Rated current (I_N)	Rated breaking current (capacity)	Power factor
Paragraph 1, Appended Table 3, Chapter 2 of the Ministerial Ordinance establishing technical requirements for electrical appliances and materials		For electronic equipment	125V / 250V	1A ≦	100A / 300A / 500A	0.7−0.8
UL 248-1 UL 248-14 CSA C22.2 No.248.1 CSA C22.2 No.248.14		Listed products, other than microfuses	125V	≦ 30A	10000A	0.7−0.8
			250V	1A < ≦ 3.5A	100A	0.7−0.8
				3.5A < ≦ 10A	200A	
				10A < ≦ 15A	750A	
				15A < ≦ 30A	1500A	
IEC 60127-2	S.S.1	Quick-acting	250V	100mA − 10A	1500A	0.7−0.8
	S.S.2			32mA − 6.3A	35A or $10I_N$, whichever is greater	Resistive circuit
	S.S.3	Time-lag		50mA − 6.3A		
	S.S.4	Quick-acting		50mA − 2A		
	S.S.5	Time-lag		100mA − 10A	1500A	0.7−0.8
	S.S.6			32mA − 10A	150A	Resistive circuit
IEC 60127-3	S.S.1	Quick-acting	125V	2mA − 5A	50A	Resistive circuit
	S.S.2			50mA − 5A		
	S.S.3		250V	50mA − 5A	35A or $10I_N$, whichever is greater	
	S.S.4	Time-lag		40mA − 4A		
IEC 60127-4	S.S.2	—	32V	32mA − 6.3A		
			250V	32mA − 6.3A	1500A	0.7−0.8

Keywords

Ambient temperature

Joule heat

Heat dissipation

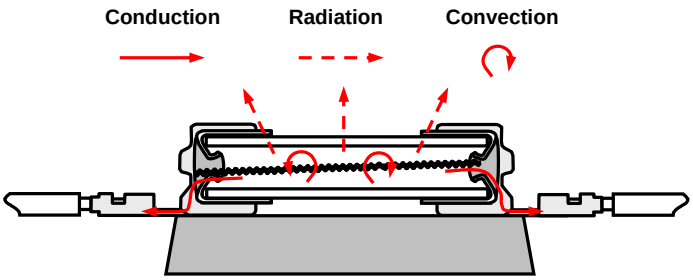
Temperature rerating

■ What is the fuse's ambient temperature?

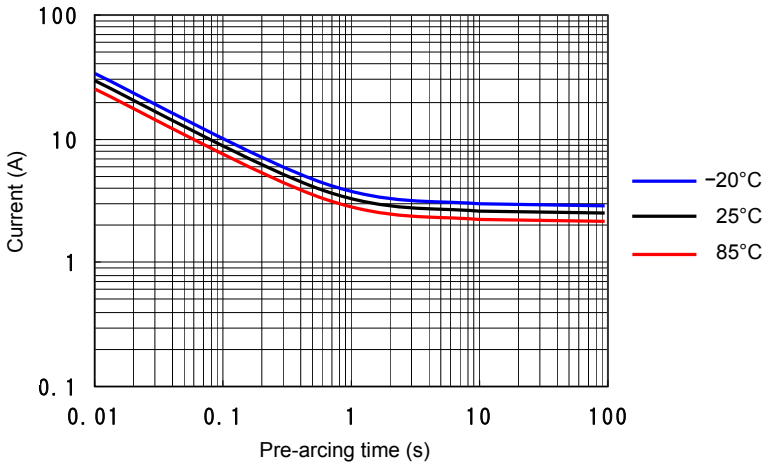
A fuse will operate when the fuse-element temperature exceeds the melting point of the metal it is comprised of due to Joule heating caused by overcurrents. The temperature of the fuse-element is strongly influenced by heat dissipation. As can be seen from Figure 10, such heat dissipation differs according to the heat conduction or heat capacity of the surroundings such as the fuse clip, fuseholder, wiring, and board, as well as the ambient temperature conditions.

The fuse's I-t curve, for example, varies depending on the ambient temperature conditions as in Figure 11. Therefore, it is essential that final equipment testing be conducted with the end application subjected to actual mechanical, electrical, and ambient conditions to assure that satisfactory results and desired reliability will be achieved.

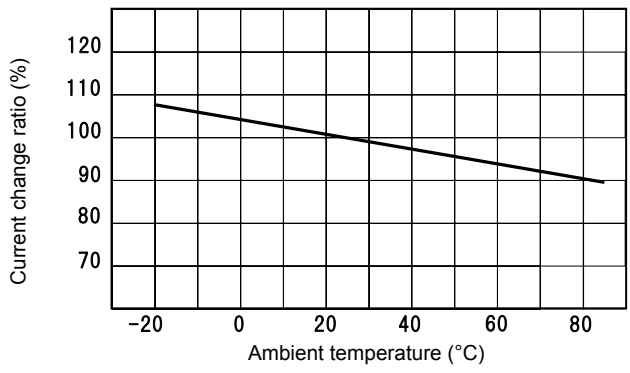
The effect of ambient temperature on an I-t curve can be confirmed by temperature rerating as shown in Figure 12. Please contact your SOC sales representative for temperature rerating information.



【Figure 10】Example of heat dissipation for a glass cartridge fuse



【Figure 11】Example of changes to an I-t curve due to the ambient temperature



【Figure 12】Example of temperature rerating

Certification

The following is an explanation of the markings on fuses and their packaging.

PSE Mark

This is a marking based on the Electrical Appliance and Material Safety Law (EAMSL) of Japan. As per the EAMSL, parts of electrical facilities for general use, or machines, appliances or materials for use in connection thereto, stipulated by one of the cabinet ordinances (the Enforcement Ordinance of the EAMSL), are regulated as electrical appliances and materials.

In regard to fuses, those rated AC 100 V to 300 V and 1 A to 200 A inclusive are categorized as electrical appliances and materials according to the cabinet ordinance. SOC as an enclosed fuse manufacturer notifies the Ministry of Economy, Trade and Industry (METI) of the type classifications, specified in the Enforcement Regulations of the EAMSL, of enclosed fuses that SOC manufactures in accordance with the EAMSL.

Fuses SOC manufactures rated AC 100 V to 300 V inclusive and equal to or greater than 1A (hereafter called “the relevant fuses”) are categorized as specific electrical appliances and materials, as per the cabinet ordinance. Unless the relevant fuses satisfy the requirements provided in the EAMSL, they shall not, as a general rule, be sold in Japan.

One of the requirements is that the relevant fuses shall be marked with the items stipulated to be marked in the Enforcement Regulations in a certain way prescribed therein.

In order to be allowed to bear such marking, the relevant fuses are required to be in compliance with the technical requirements stipulated in the METI Ordinance establishing technical requirements for electrical appliances and materials, and sample fuses that fall within the same type classification of the relevant fuses must be tested by a test house registered with the METI to receive at least one valid conformity test certificate for each type classification.

SOC applies to the Japan Electrical Safety & Environment Technology Laboratories (JET) for conformity test certificates, which are valid for 7 years from the date issued, so that at least one valid conformity test certificate for each type classification, which the relevant fuses for the Japanese market fall within, can be kept.

In principle, packing labels for the relevant fuses for the Japanese market are marked with the PSE Mark and JET, the abbreviated name of the Japan Electrical Safety & Environment Technology Laboratories, adjacent to as well as our trademark SOC and electrical ratings. The position of JET is under or on the right side of .
The relevant fuses are marked with SOC. If there is sufficient space, the relevant fuses for the Japanese market are also marked with .

Example of PSE Mark

Some fuses, however, despite being specific electrical appliances and materials, are not marked with JET, nor are the packing boxes for these fuses. These are fuses which have been manufactured entirely for export to countries outside of Japan.

Cautions about fuses to be used in Japan

Fuses which fall within the ratings listed below and are intended to be employed for the protection of electrical appliances to be used in Japan shall not be sold in Japan unless they are marked in accordance with the Electrical Appliance and Material Safety Law (EAMSL) of Japan.

Therefore, when purchasing fuses falling within the following ratings for employment in electrical appliances to be used in Japan, make sure the fuses are marked as stipulated in the EAMSL. Never use such fuses in electrical appliances to be used in Japan if they are not marked in this way.

Applicable ratings: AC 100 V – 300 V, 1 A – 200 A

Certification marks for North America

Here follows an explanation of the markings shown on products which have received either UL (Underwriters Laboratories Inc.) or CSA (Canadian Standards Association) product certification services.

■ UL Listing Mark

This is a mark based on the UL Listing and Follow-Up Services. UL tests product samples (fuses) to confirm conformity with the applicable UL standards. After a set of reports are issued by UL, authorization to use the UL Listing Mark is provided based on the conditions listed in the reports.

UL Listing Mark

In order to confirm that the fuses produced afterward are continuously in conformance to the requirements described in the reports, UL conducts quarterly on-site inspections and sampling tests as Follow-Up Services.

The standard with which SOC fuses must conform is UL 248-14: Supplemental Fuses, in principle. This standard is Part 14 of UL 248 Low-Voltage Fuses, which consists of 16 parts. The UL 248 standards are harmonized among the United States, Canada, and Mexico. The requirements of the UL and CSA standards are the same for Part 14 as listed below:

ANSI / UL 248-14 = CAN / CSA C22.2 No. 248.14

In 1992, the Standards Council of Canada (SCC) granted UL Canadian Certification Organization and Testing Organization status providing services for Canada to complement its United States program, which accredits UL to conduct tests and issue certifications to Canadian National Standards.

Several years ago, SOC began applying for the Canadian as well as the United States certification, when it applied for new UL product certification. In this instance, as the requirements of both the UL and CSA standards are the same, use of the C-UL US Listing Mark is accepted in the issued reports without the need for additional testing, with a description stating that, in addition to UL 248-14, the requirements of CSA C22.2 No. 248.14 have also been evaluated.

C-UL US
Listing Mark

(UL Listing Mark for Canada and the United States)

As long as space permits, the UL Listing Mark is marked on fuses. As for cartridge fuses, it is die-stamped on the side of one of their end-caps. Along with either the UL Listing Mark or the C-UL US Listing Mark, “Listed,” “360C,” and the product identity (“SUPPLEMENTAL FUSE,” “MISCELLANEOUS FUSE,” “MINIATURE FUSE” or “MICRO-FUSE”) are also printed on their packing box. “360C” is the control number assigned to SOC.

■ UL Recognized Component Mark

This mark is based on the UL Component Recognition and Follow-Up Services. As in the UL Listing Service, UL tests product samples (either fuses or fuseholders) in order to issue a set of reports and authorize the use of the UL Recognized Component Mark under the conditions as specified in the reports. Additionally, in order to confirm that the fuses produced afterward are continuously in conformance to the requirements described in the reports, UL conducts quarterly on-site inspections and sampling tests as Follow-Up Services.

UL Recognized Component Mark

Although the Listing Service requires that the fuses conform to the UL standard, the Component Recognition Service does not necessarily require this as it is possible to change a portion of the UL standard requirements. For example, although the 5×20 mm cartridge fuses based on IEC 60127-2 do not meet the time/current characteristic of the UL standards, they can be applied for for the Component Recognition Service according to the characteristic and the breaking capacity stipulated by the IEC standard. Fuses having only the DC rating can also be applied for for this service. SOC applies for this service for some of its fuseholders as well.

The Recognized Components which have undergone the Component Recognition and Follow-Up Services are, as the name suggests, components to be employed in equipment. UL evaluates whether the fuse or fuseholder is appropriate for use in the end-equipment, and if it is a fuse, whether the fuse can appropriately protect the equipment.

As with the Listing and Follow-Up Services, when certification for both the United States and Canada is applied for under the Component Recognition and Follow-Up Services, use of the C-UL US Recognized Component Mark is accepted.

In principle, SOC marks the Recognized Component Mark or the C-UL US Recognized Component Mark on the packing box instead of on the product itself.

C-UL US Recognized Component Mark

Recognized Component Mark for Canada and the United States

■ CSA Mark

This mark is based on the CSA Certification Service, which is essentially the same as the UL Listing and Follow-Up Services. Use of this mark is authorized under the conditions as stated in the reports issued under this service. On-site inspections and sampling tests are conducted as Factory Audit.

As long as space permits, this mark is marked on fuses. As for cartridge fuses, it is die-stamped on the side of one of their end-caps. This mark is also printed on the packing box.

CSA Mark

■ CSA Component Acceptance Mark

This mark is based on the CSA Component Acceptance Service, which are again essentially the same as the UL Component Recognition and Follow-Up Services. For the CSA Component Acceptance Mark, a triangle is added to the CSA Mark. On-site inspections and sampling tests are conducted as Factory Audit as well.

In principle, SOC prints the CSA Component Acceptance Mark on the packing box instead of on the product itself.

CSA Component Acceptance Mark

Certification marks for Europe

■ S Mark

This mark is based on the certification service provided by Intertek Semko AB (SEMKO).

SEMKO tests product samples in accordance with the requirements of the applicable EN standards, and issues a certificate and accepts the use of the S Mark for products which can be confirmed as conforming to those requirements.

Should SEMKO judge that product samples conform to minimum safety requirements, it is possible to partially modify the testing conditions of the EN standard. Testing, issuance of a certificate, and authorization to use the certification mark are then carried out under these modified testing conditions.

S Mark

In contrast to the case of UL or CSA, the certification mark in this situation is the same as the one which is approved for usage for conforming to EN standards, the S Mark.

For marking on the packing box for SOC fuses which have received this certification, the S Mark is used. For marking on the fuse itself, however, use of the S mark without “Intertek” anchored below the certification mark is accepted as it is impractical to provide the S Mark due to limited space on the fuse.


S Mark without “Intertek” anchored below the certification mark

■ Kitemark

This is a certification mark based on the Kitemark Licence issued by the British Standards Institution (BSI). BSI issues the Kitemark Licence in those cases where the product sample is confirmed by testing to conform to the relevant British Standards, and additionally where the quality system for its production conforms to BS EN ISO 9001. BSI grants the right to use the Kitemark based on the Kitemark Licence. Twice yearly on-site inspections and sampling tests are conducted for continued use of the mark. For those cartridge fuses which have received the Kitemark Licence, the Kitemark is marked on the side of one of their end-caps.


Kitemark

BSI has granted the Kitemark Licence to SOC’s Akita Factory based on the standard “BS EN 60127-2: Miniature fuses. Cartridge fuse-links (5 × 20 mm).”

The quality management systems employed in SOC’s Akita Factory and Tochigi Factory have been certified in accordance with BS EN ISO 9001: 2008.

Terminology/Abbreviations

■ Explanations of terminology and abbreviations used in this catalog

11CT type	: The 11CT type includes the following fuses: 11CT, 11CF, P11CT, P11CF, DC35V11CT, DC35VP11CT, DC35VP11CF, DC86V11CT, and 32V11CF
25CT type	: The 25CT type includes the following fuses: 25CT, 25CF, P25CT, P25CF, DC35VP25CT, DC35VP25CF, and DC300V25CF
25RT type	: The 25RT type includes the following fuses: 25RT, 25RF, P25RT, P25RF, DC35VP25RT, and DC35VP25RF
36CFA type	: The 36CFA type includes the following fuse: 36CFA
36CT type	: The 36CT type includes the following fuse: 36CT
MCF2 type	: The MCF2 type includes the following fuses: MCF2
SM4 type	: The SM4 type includes the following fuses: SM4 and PSM
SMC type	: The SMC type includes the following fuse: SMC
AC	: Alternating current
DC	: Direct current
I-t curve	: Pre-arcing time/current characteristic
BSI	: British Standards Institution
BSI Licensed	: Products for which the Kitemark Licence has been issued
CSA	: Canadian Standards Association
CSA Certified	: Products that have been subjected to and passed the CSA Certification Service
CSA Component Acceptance	: Products that have been subjected to and passed the CSA Component Acceptance Service
C-UL US Listed	: Products that have been subjected to and passed the UL Listing Service, and have also been certified by UL as being in compliance with the requirements of Canada
C-UL US Recognized	: Products that have been subjected to and passed the UL Recognized Component Service, and have also been certified by UL as being in compliance with the requirements of Canada
EN	: Europäische Norm (Ger.), Norme Européenne (Fr.), European Standard (Eng.)
IEC	: International Electrotechnical Commission
<PS>E JET	: Products falling under the type classification for which the conformity test certificate has been issued in accordance with the Electrical Appliance and Material Safety Law of Japan
RoHS	: EU Directive on the restriction of the use of certain hazardous substances in electrical and electronic equipment
SEMKO	: Intertek Semko AB
SEMKO Certified	: Products that have been subjected to and passed the SEMKO certification service
UL	: Underwriters Laboratories Inc. (USA)
UL Listed	: Products that have been subjected to and passed the UL Listing Service
UL Recognized	: Products that have been subjected to and passed the UL Recognized Component Service

Safety Precautions

WARNING

Failure to properly select, install, and use fuses may result in not only property damage but also serious injury and/or death. This catalog contains references to only a portion of the data available for the products included. Before making a final fuse selection, confirm the final product specifications and parameters with one of SOC's local sales representatives.

- Use fuses within their specification requirements. Exceeding specification requirements may lead to an accident.
- Before final fuse selection, always test the proposed fuse in your actual equipment to ensure that the fuse satisfies all your operational and safety requirements.
- Be aware that the breaking ability of a fuse will differ depending on whether the circuit is an AC or a DC circuit. Fuses intended for use in AC circuits should therefore not be employed in DC circuits, and vice versa, as this may result in accidents such as explosions, property damage, and/or serious injury. (Refer to P. 178 of this catalog.)
- Make sure to consider the effect of ambient temperature when you use a fuse. Fuse electrical characteristics may vary depending on the temperature. (Refer to P. 188 of this catalog.)
- Do not use fuses where they may be exposed to high-temperature and/or high-humidity conditions exceeding specification requirements. Doing so may lead to nuisance operations and/or disconnection of the fuse-element which may result in an accident. Confirm the specification requirements with one of SOC's local sales representatives as requirements may vary by product type.
- Use fuses in places where vibration and impact levels are within the specified limits. When using fuses in an application or equipment which may be subjected to vibrations and/or impacts, confirm the specification requirements with one of SOC's local sales representatives as requirements may vary by product type. Exceeding these limits may result in nuisance operations and/or disconnection of the fuse-element, which may lead to an accident.
- Do not use fuses where they may be exposed to corrosive gasses and/or flammable gasses. Doing so may result in nuisance operations, disconnection of the fuse-element, and/or explosions.
- Do not use ultrasonic cleaning on fuses. Ultrasonic cleaning may result in disconnection of the fuse-element, which may lead to an accident.
- Coating or potting a fuse may change its electrical characteristics. Please consult your SOC sales representatives before applying treatment as this may result in accidents.
- Never force a fuse into a fuseholder. Doing so may result in damage to the fuse or contact failure due to changes in the shape of the fuseholder clip. This can significantly affect the electrical characteristics and/or the service life of the fuse, and may lead to an accident.
- Turn off all power leading to the fuse before touching it. Failure to do so may result in electrocution or serious burns.
- When using a fuse in a life support system or other equipment that relates to health and/or requires high reliability or the like, carefully examine and evaluate the fuse in actual circuit conditions to be certain that it is an appropriate application.
- Use sample fuses only for evaluation. Do not reuse sample or other used fuses. Properly dispose of fuses in accordance with local laws and regulations.

IMPORTANT NOTICES

- Special operating, electrical, and/or mechanical characteristic limits for products covered in this catalog, as well as their availability, are subject to change without prior notice.
- The content of this catalog was considered to be reliable at the time of its preparation—February 2012; however, the accuracy of information in this catalog cannot be guaranteed. Check with your local SOC sales representative before finalizing your fuse selection.
- Questions related to specific product applications, specifications or performance characteristics may be directed to SOC's sales representatives.

Search by certification

■ Fuses

Certification					Shape	Dimensions (Unit: mm)	Rated voltage	Charac-teristic	Product name	Rated current	Page
PSE*	UL	CSA	SEMKO	BSI							
●	●	●	●	●	Cartridge type	ϕ5.2 × L20	AC250V	Time-lag	HT	1A - 10A	70
●	●	●	●	●	Cartridge type with leads	ϕ5.2 × L20	AC250V	Time-lag	HTR	1A - 10A	128
●	●	●	●		Surface mount type	W3.6 × H3.6 × L17	AC250V	Inrush-withstand	36CT	1A - 6.3A	26
●	●	●	●		Cartridge type	ϕ6.35 × L30	AC250V	Inrush-withstand	TLC N4	8A - 25A	67
●	●	●	●			ϕ5.2 × L20	AC250V	Time-lag	ET6	1A - 6.3A	74
●	●	●	●		Cartridge type with leads	ϕ5.2 × L20	AC250V	Time-lag	ET6R	1A - 6.3A	129
	●	●	●	●	Cartridge type	ϕ5.2 × L20	AC250V	Quick-acting	HQ	400mA - 6.3A	71
	●	●	●	●				Time-lag	ET	50mA - 800mA	73
●	●	●			Surface mount type	W3.6 × H3.6 × L17	AC250V	Inrush-withstand	36CT	1A - 6.3A	26
●	●	●				W2.57 × H2.57 × L6.1	AC125V	Quick-acting	25CF	Over 4A - 6.3A	28
●	●	●						Inrush-withstand	25CT	Over 3.15A - 5A	29
●	●	●			Pin terminal type	ϕ6.6 × H7.4	AC125V	Quick-acting	SM4	63mA - 5A	44
●	●	●			Cartridge type	ϕ10.3 × L38.1	AC250V	Inrush-withstand	SKM10 N1	100mA - 25A	53
●	●	●							KST2 N1	Over 5A - 30A	55
●	●	●				ϕ6.35 × L31.8	AC250V	Normal-acting	SS2 N1	50mA - 5A	58
●	●	●							SS6 N1	Over 5A - 8A	60
●	●	●						Inrush-withstand	CES14 N1	100mA - 10A	61
●	●	●							ST4 N1	100mA - 8A	64
●	●	●						Time-delay	SD4 N1	100mA - 8A	66
●	●	●					AC125V	Normal-acting	SS6 N1	Over 8A - 15A	60
●	●	●						Inrush-withstand	ST6 N1	100mA - 15A	93
●	●	●							CES6 N1	100mA - 15A	91
●	●	●				ϕ5.2 × L20	AC250V	Normal-acting	MQ4 N1	62mA - 3A	78
●	●	●						Inrush-withstand	MT4 N1	100mA - 3.5A	80
●	●	●						Time-delay	SD6 N1	62mA - 5A	83
●	●	●					AC125V	Normal-acting	MQ2 N1	62mA - 10A	101
●	●	●						Inrush-withstand	ULTSC N1	100mA - 10A	102
●	●	●			Cartridge type with leads	ϕ6.35 × L31.8	AC250V	Normal-acting	SS1 N1	50mA - 5A	116
●	●	●							SS5 N1	Over 5A - 8A	118
●	●	●						Inrush-withstand	CES15 N1	100mA - 25A	122
●	●	●							ST3 N1	100mA - 8A	120
●	●	●						Time-delay	SD3 N1	100mA - 8A	124
●	●	●					AC125V	Normal-acting	SS5 N1	Over 8A - 15A	118
●	●	●						Inrush-withstand	ST5 N1	100mA - 15A	144
●	●	●							CES7 N1	100mA - 15A	140
●	●	●				ϕ6.35 × L20	AC250V	Inrush-withstand	250VTMCR N1	1A - 20A	127
●	●	●				ϕ5.2 × L20	AC250V	Normal-acting	MQ3 N1	62mA - 3A	132
●	●	●						Inrush-withstand	MT3 N1	100mA - 3.5A	133
●	●	●						Time-delay	SD5 N1	62mA - 8A	136
●	●	●					AC125V	Normal-acting	MQ1 N1	62mA - 10A	150
●	●	●						Inrush-withstand	ULTSCR N1	100mA - 10A	151
	●	●	●		Cartridge type	ϕ6.35 × L31.8	AC400V DC400V	Inrush-withstand	SHV14	10A - 20A	47
	●	●	●			ϕ5.2 × L20	AC400V DC400V	Inrush-withstand	SHV12	1A - 6.3A	46
	●		●	●	Cartridge type	ϕ5.2 × L20	AC250V	Quick-acting	EQ	80mA - 6.3A	72
●	●				Cartridge type	ϕ6.35 × L31.8	AC250V	Inrush-withstand	CES14 N2	Over 10A - 15A	62
●	●					ϕ5.2 × L20	AC250V	Inrush-withstand	MT4 N2	Over 3.5A - 15A	81
●	●				Cartridge type with leads	ϕ5.2 × L20	AC250V	Inrush-withstand	MT3 N2	Over 3.5A - 15A	134

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Certification						Shape	Dimensions (Unit: mm)	Rated voltage	Charac-teristic	Product name	Rated current	Page
PSE*	UL	CSA	SEMKO	BSI								
●			●			Sub-miniature type with leads	W2.57 × H2.57 × L9	AC125V	Quick-acting	25RF	200mA - 5A	39
●			●			Pin terminal type	W4 × H7.7 × L8.4	AC250V	Inrush-withstand	SMC	4A	43
	●	●				Surface mount type	W3.6 × H3.6 × L17	AC250V DC300V	Inrush-withstand	36CT	100mA - 6.3A	26
	●	●					W3.6 × H3.6 × L11	DC600V	Quick-acting	36CFA	63mA - 3.15A	25
	●	●					W2.57 × H2.57 × L6.1	DC300V	Quick-acting	DC300V25CF	63mA - 2A	27
	●	●						AC250V DC150V	Quick-acting	25CF	63mA - 4A	28
	●	●						AC125V DC150V			Over 4A - 15A	
	●	●						AC250V DC125V	Inrush-withstand	25CT	100mA - 3.15A	29
	●	●						AC125V DC125V			Over 3.15A - 5A	
	●	●					W1.6 × H1.05 × L3.2	DC86V	Inrush-withstand	DC86V11CT	100mA - 8A	32
	●	●						DC72V	Quick-acting	11CF	100mA - 10A	32
	●	●							Inrush-withstand	11CT	100mA - 10A	33
	●	●					W1.5 × H1.2 × L2.4	AC125V DC72V	Quick-acting	MCF2	50mA - 1.6A	37
	●	●				Sub-miniature type with leads	W2.57 × H2.57 × L9	AC250V DC125V	Quick-acting	25RF	50mA - 10A	39
	●	●						AC125V DC125V	Inrush-withstand	25RT	100mA - 5A	40
	●	●				Cartridge type	φ10.3 × L38.1	AC250V	Inrush-withstand	SKM10	100mA - 30A	53
	●	●								KST2	1A - 30A	54
	●	●						DC500V	Inrush-withstand	SHV22	1A - 10A	49
	●	●					φ7.14 × L31.8	AC125V DC65V	Inrush-withstand	SKM4	250mA - 30A	87
	●	●					φ6.35 × L31.8	AC500V	Inrush-withstand	SHV4	1A - 10A	45
	●	●						AC400V DC400V	Inrush-withstand	SHV14	5A - 20A	47
	●	●						AC380V	Inrush-withstand	SHV4	Over 10A - 20A	45
	●	●						AC250V	Normal-acting	SS2	50mA - 5A	58
	●	●								SS6	Over 5A - 8A	59
	●	●							Inrush-withstand	ST4	100mA - 30A	63
	●	●								CES14	100mA - 10A	61
	●	●							Time-delay	SD4	100mA - 8A	65
	●	●						AC125V	Normal-acting	SS6	Over 8A - 15A	59
	●	●							Inrush-withstand	CES6	100mA - 15A	90
	●	●						AC125V DC125V	Inrush-withstand	ST6	100mA - 30A	92
	●	●								ST6 N1	100mA - 15A	93
	●	●						AC32V	Time-delay	NSD10	Over 8A - 15A	106
	●	●					φ6.35 × L25.4	AC250V	Normal-acting	SL4	80mA - 2A	69
	●	●						AC125V	Normal-acting	SL2	80mA - 6A	96
	●	●						DC500V	Inrush-withstand	SHV18	1A - 30A	50

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Certification					Shape	Dimensions (Unit: mm)	Rated voltage	Charac-teristic	Product name	Rated current	Page
PSE*	UL	CSA	SEMKO	BSI							
	●	●			Cartridge type	φ5.2 × L20	AC600V DC400V	Lightning surge withstand	SHVD2	1.25A	45
	●	●					AC500V DC400V	Inrush-withstand	SHV12	100mA - 6.3A	46
	●	●					AC380V	Inrush-withstand	SHV2	1A - 6.3A	48
	●	●					AC250V	Normal-acting	MQ4	62mA - 3A	77
	●	●						Inrush-withstand	MT4	100mA - 3.5A	79
	●	●						Time-delay	SD6	62mA - 8A	82
	●	●					AC125V	Normal-acting	MQ2	62mA - 10A	100
	●	●						Inrush-withstand	ULTSC	100mA - 10A	102
	●	●							TSD2	100mA - 3A	97
	●	●					DC450V	Inrush-withstand	SHV20	500mA - 6.3A	50
	●	●				φ4.6 × L14	AC125V	Normal-acting	SQ8	80mA - 3A	104
	●	●						Inrush-withstand	MT8	100mA - 3A	104
	●	●			Cartridge type with leads	φ10.4 × L40	AC600V	Quick-acting	SHV5	5A - 20A	107
	●	●				φ10.3 × L38.1	AC250V	Inrush-withstand	SKM7	100mA - 30A	113
	●	●				φ6.35 × L31.8	AC250V	Normal-acting	SS1	50mA - 5A	116
	●	●							SS5	Over 5A - 8A	117
	●	●						Inrush-withstand	ST3	100mA - 30A	119
	●	●							CES15	100mA - 30A	121
	●	●						Time-delay	SD3	100mA - 18A	123
	●	●					AC125V	Normal-acting	SS5	Over 8A - 15A	117
	●	●						Inrush-withstand	CES7	100mA - 15A	140
	●	●							ST5	100mA - 30A	143
	●	●					AC125V DC125V	Inrush-withstand	ST5	Over 8A - 30A	143
	●	●							ST5 N1	Over 8A - 15A	144
	●	●					AC32V	Time-delay	NSD9	Over 8A - 15A	156
	●	●				φ6.35 × L30	DC125V	Inrush-withstand	DC125VTLKR	800mA - 35A	156
	●	●				φ6.35 × L25.4	DC420V	Inrush-withstand	SHV27	10A - 30A	111
	●	●				φ5.2 × L20	AC400V DC400V	Inrush-withstand	SHV11	100mA - 6.3A	109
	●	●					AC380V	Inrush-withstand	SHV1	1A - 6.3A	109
	●	●					AC250V	Normal-acting	MQ3	62mA - 3A	132
	●	●						Inrush-withstand	MT3	100mA - 3.5A	133
	●	●						Time-delay	SD5	62mA - 8A	135
	●	●					AC125V	Normal-acting	MQ1	62mA - 10A	149
	●	●						Inrush-withstand	ULTSCR	100mA - 10A	151
	●	●							TSD1	100mA - 3A	152
	●	●				φ4.6 × L14	AC125V	Normal-acting	SQ7	80mA - 3A	154
	●	●						Inrush-withstand	MT7	100mA - 3A	154
	●	●				φ4 × L9	AC250V	Quick-acting	NQ3	62mA - 10A	138
	●	●						Inrush-withstand	NT3	100mA - 10A	138
	●	●					AC125V	Quick-acting	NQ1	62mA - 10A	155
	●	●						Inrush-withstand	NT1	100mA - 10A	155
	●	●			Bolted connection type	φ10 × L32	AC500V	Inrush-withstand	AC500VBL1030TEA	5A - 50A	163
	●	●			Board mount type	φ10 × L31	AC500V	Inrush-withstand	AC500VBI1030TE	5A - 50A	163
	●		●		Surface mount type	W1.6 × H1.05 × L3.2	AC32V DC32V	Inrush-withstand	32V11CF	800mA - 5A	36

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Certification					Shape	Dimensions (Unit: mm)	Rated voltage	Charac-teristic	Product name	Rated current	Page
PSE*	UL	CSA	SEMKO	BSI							
●					Surface mount type	W2.57 × H2.57 × L6.1	AC125V	Quick-acting	25CF	63mA - 6.3A	28
●								Inrush-withstand	25CT	100mA - 5A	29
●					Sub-miniature type with leads	W2.57 × H2.57 × L9	AC125V	Quick-acting	25RF	50mA - 5A	39
●					Cartridge type	ϕ10.3 × L38.1	AC250V	Normal-acting	250VⒶLLC	500mA - 30A	52
●								Inrush-withstand	250VⒶTLLC	500mA - 30A	52
●							AC125V	Normal-acting	ⒶLLC	500mA - 30A	85
●								Inrush-withstand	ⒶTLLC	500mA - 30A	85
●						ϕ6.35 × L31.8	AC250V	Normal-acting	250VⒶLNC	63mA - 25A	56
●								Inrush-withstand	250VⒶTLNC	100mA - 30A	56
●								Time-delay	250VⒶSDLNC	100mA - 15A	57
●							AC125V	Normal-acting	ⒶLNC	63mA - 25A	88
●								Inrush-withstand	ⒶTLNC	100mA - 30A	88
●								Time-delay	ⒶSDLNC	100mA - 15A	89
●						ϕ6.35 × L30	AC250V	Normal-acting	250VⒶLC	50mA - 30A	68
●								Inrush-withstand	250VⒶTLC	100mA - 30A	68
●								Time-delay	250VⒶSDLC	100mA - 8A	69
●							AC125V	Normal-acting	ⒶLC	50mA - 30A	94
●								Inrush-withstand	ⒶTLC	100mA - 30A	94
●								Time-delay	ⒶSDLC	100mA - 8A	95
●						ϕ5.2 × L20	AC250V	Normal-acting	250VⒶSC	62mA - 12A	75
●								Inrush-withstand	250VⒶTSC	100mA - 10A	75
●								Time-delay	250VⒶSDSC	100mA - 8A	76
●							AC125V	Normal-acting	ⒶSC	62mA - 12A	98
●								Inrush-withstand	ⒶTSC	100mA - 10A	98
●								Time-delay	ⒶSDSC	100mA - 8A	99
●						ϕ4.6 × L16	AC250V	Normal-acting	250VⒶMSC	100mA - 5A	84
●								Inrush-withstand	250VⒶTMSC	100mA - 5A	84
●							AC125V	Normal-acting	ⒶMSC	100mA - 5A	103
●								Inrush-withstand	ⒶTMSC	100mA - 5A	103
●					Cartridge type with leads	ϕ10.3 × L38.1	AC250V	Normal-acting	250VⒶLLCR	500mA - 15A	112
●								Inrush-withstand	250VⒶTLLCR	500mA - 30A	112
●							AC125V	Normal-acting	ⒶLLCR	500mA - 30A	139
●								Inrush-withstand	ⒶTLLCR	500mA - 30A	139
●						ϕ6.35 × L31.8	AC250V	Normal-acting	250VⒶLNCR	100mA - 20A	114
●								Inrush-withstand	250VⒶTLNCR	100mA - 25A	114
●								Time-delay	250VⒶSDLNCR	100mA - 8A	115
●							AC125V	Normal-acting	ⒶLNCR	100mA - 20A	141
●								Inrush-withstand	ⒶTLNCR	100mA - 25A	141
●								Time-delay	ⒶSDLNCR	100mA - 8A	142
●						ϕ6.35 × L30	AC250V	Normal-acting	250VⒶLCR	50mA - 20A	125
●								Inrush-withstand	250VⒶTLCR	100mA - 30A	125
●								Time-delay	250VⒶSDLCR	100mA - 8A	126
●							AC125V	Normal-acting	ⒶLCR	50mA - 20A	145
●								Inrush-withstand	ⒶTLCR	100mA - 30A	145
●								Time-delay	ⒶSDLCR	100mA - 8A	146

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Certification					Shape	Dimensions (Unit: mm)	Rated voltage	Charac-teristic	Product name	Rated current	Page
PSE*	UL	CSA	SEMKO	BSI							
●					Cartridge type with leads	ϕ5.2 × L20	AC250V	Normal-acting	250VⒶSCR	62mA - 10A	130
●								Inrush-withstand	250VⒶTSCR	100mA - 15A	130
●								Time-delay	250VⒶSDSCR	100mA - 8A	131
●							AC125V	Normal-acting	ⒶSCR	62mA - 10A	147
●								Inrush-withstand	ⒶTSCR	100mA - 15A	147
●								Time-delay	ⒶSDSCR	100mA - 8A	148
●						ϕ4.6 × L16	AC250V	Normal-acting	250VⒶMSCR	100mA - 5A	137
●								Inrush-withstand	250VⒶTMSCR	100mA - 5A	137
●							AC125V	Normal-acting	ⒶMSCR	100mA - 5A	153
●								Inrush-withstand	ⒶTMSCR	100mA - 5A	153
	●				Surface mount type	W2.57 × H2.57 × L6.1	DC72V	Quick-acting	25CF	Over 15A - 18A	28
	●					W1.6 × H1.05 × L3.2	DC35V	Inrush-withstand	DC35V11CT	100mA - 10A	35
	●				Cartridge type	ϕ10.3 × L38.1	AC125V	Inrush-withstand	SKM2	3A - 15A	86
	●					ϕ6.35 × L31.8	AC250V	Inrush-withstand	CES14	Over 10A - 15A	61
	●						AC125V	Inrush-withstand	CES6	Over 15A - 20A	90
	●						DC700V	Inrush-withstand	SHV16	1A - 4A	48
	●					ϕ6.35 × L15.9	AC125V	Normal-acting	SU2	100mA - 20A	96
	●						DC60V	Normal-acting	DCSU2	Over 5A - 20A	106
	●					ϕ5.2 × L20	AC250V	Normal-acting	MQ4	Over 3A - 15A	77
	●							Inrush-withstand	MT4	Over 3.5A - 15A	79
	●				Cartridge type with leads	ϕ6.35 × L15.9	AC125V	Normal-acting	SU1	80mA - 5A	146
	●					ϕ5.2 × L20	AC250V	Normal-acting	MQ3	Over 3A - 15A	132
	●							Inrush-withstand	MT3	Over 3.5A - 15A	133
		●			Cartridge type	ϕ6.35 × L31.8	AC125V	Time-delay	SD4	Over 8A - 20A	65
		●				ϕ5.2 × L20	AC125V	Normal-acting	MQ2	Over 10A - 15A	100
		●			Cartridge type with leads	ϕ5.2 × L20	AC125V	Normal-acting	MQ1	Over 10A - 15A	149
			●		Sub-miniature type with leads	W2.57 × H2.57 × L9	AC125V DC125V	Quick-acting	25RF	200mA - 5A	39

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■ Protectors

Certification						Shape	Dimensions (Unit: mm)	Maximum working voltage	Charac-teristic	Product name	Rated current	Page
PSE ＊	UL	CSA	SEMKO	BSI								
					Surface mount type	W2.57 × H2.57 × L6.1	DC60V	Quick-acting	P25CF	63mA - 18A	30
								Inrush-withstand	P25CT	100mA - 5A	30
							DC35V	Quick-acting	DC35VP25CF	63mA - 18A	31
								Inrush-withstand	DC35VP25CT	100mA - 5A	31
						W1.6 × H1.05 × L3.2	DC72V	Quick-acting	P11CF	100mA - 10A	33
								Inrush-withstand	P11CT	100mA - 10A	34
							DC35V	Quick-acting	DC35VP11CF	100mA - 10A	34
								Inrush-withstand	DC35VP11CT	100mA - 10A	35
					Sub-miniature type with leads	W2.57 × H2.57 × L9	AC90V DC90V	Quick-acting	P25RF	50mA - 10A	41
							AC90V DC60V	Inrush-withstand	P25RT	100mA - 6.3A	41
							DC35V	Quick-acting	DC35VP25RF	50mA - 10A	42
								Inrush-withstand	DC35VP25RT	100mA - 6.3A	42
					Pin terminal type	φ6.6 × H7.4	AC90V DC60V	Quick-acting	PSM	63mA - 5A	44
					Cartridge type	φ6.35 × L31.8	DC500V	Inrush-withstand	NSHV14	10A	49
						φ5.2 × L20	AC42V DC42V	Inrush-withstand	PMT4	100mA - 20A	105
							DC450V	Inrush-withstand	NSHV12	100mA - 6.3A	51
					Cartridge type with leads	φ6.35 × L31.8	AC500V	Inrush-withstand	NSHV3	1A - 10A	107
							AC400V DC400V	Inrush-withstand	NSHV23A	1A - 20A	108
									NSHV13	5A - 25A	108
							DC700V	Inrush-withstand	NSHV15	1A - 4A	110
						φ6.35 × L25.4	DC500V	Inrush-withstand	NSHV17	10A - 30A	110
						φ4 × L9	DC100V	Inrush-withstand	PNT5	100mA - 10A	157
					Bolted connection type	φ30 × L51	DC500V	Quick-acting, inrush-withstand	DC500VBT3050A	280A	158
						φ20.6 × L34.4	DC500V	Quick-acting, inrush-withstand	DC500VBT2035	60A - 150A	158
						φ10 × L32	DC500V	Quick-acting, inrush-withstand	DC500VBL1030A	15A - 50A	159
							DC72V	Quick-acting, inrush-withstand	DC72VBL1030	50A - 70A	161
						φ6.35 × L24.6	DC500V	Quick-acting, inrush-withstand	DC500VBC625A	5A - 35A	160
					Board mount type	φ10 × L31	DC500V	Quick-acting, inrush-withstand	DC500VBI1030	15A - 50A	162
						φ6.35 × L24.6	DC500V	Quick-acting, inrush-withstand	DC500VBI625C	5A - 35A	162

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Search by product name

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SOC®

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The DC450VBT3050A 360A employs a highly reliable wire-type fuse-element especially developed to protect the circuits of electric and hybrid vehicles with large main battery capacities. We have unprecedentedly improved the breaking performance of this wire-type fuse-element, successfully realizing this highly durable and reliable fuse.

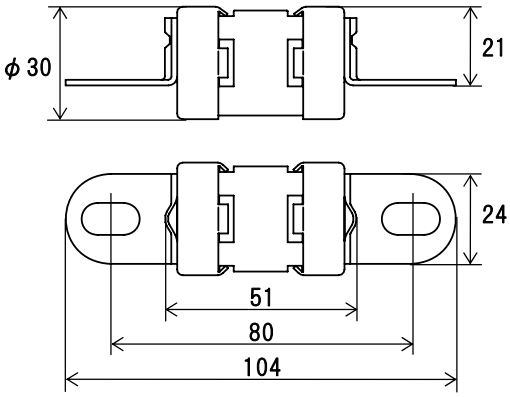
NEW

DC450VBT3050A

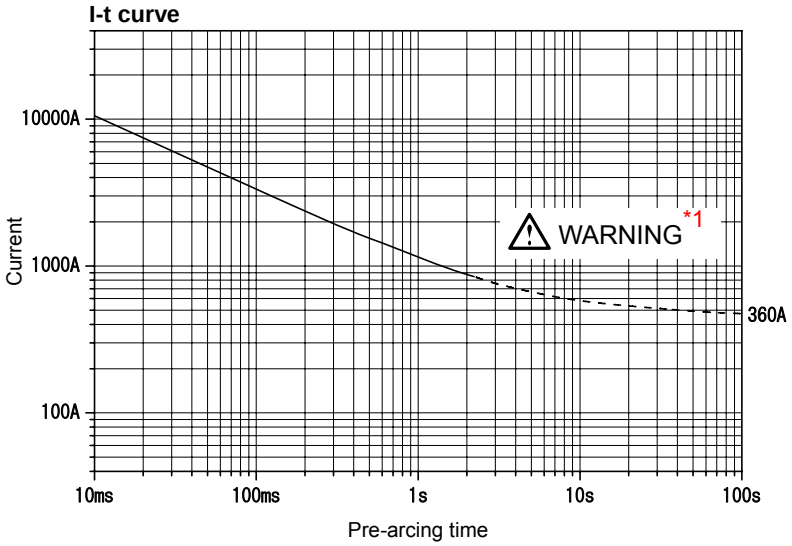
RoHS Pb

DC450V

Scale: 1/2



Unit: mm



The I-t curve above is a plot of the average values of measurements obtained under conditions specified by SOC. These data are for reference only and are not intended to infer any guaranteed values.

Rated voltage	Certification	Rated current (I_N)	Rated breaking current		Minimum breaking current *1	Current carrying capacity
DC450V	—	360A	2700A	Resistive circuit	850A	0.5I_N until temperature stabilization occurs.

*1: If the current is less than 850 A (represented by the dotted portion of the I-t curve), an arc current may continuously pass through the fuse, and it may therefore not be possible to break the current. Do not apply fusing conditions of currents less than 850 A, as fires and other accidents may occur due to the inability to open the circuit.

May 2013