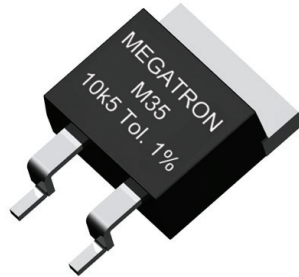


Resistors

Power Resistor

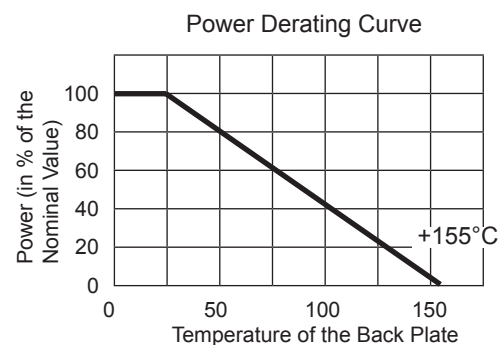
M35 - series



- Power Rating up to 35 Watt (with Heat-Sink)
- Any Resistance from 0,02Ω - 51kΩ
- Standard Tolerance ±1%
- Standard TCR to 50ppm
- TO-263 Housing (D²PAK)
- Low Inductance
- Reflow Solderable at 260°C / 20 sec.

| Specification | M35 | | |
|---------------------------------------|--|-------------|------------|
| Resistance Range | 0,02Ω - 0,099Ω | 0,1Ω - 9,9Ω | 10Ω - 51kΩ |
| Standard Tolerance (other on request) | ±5% | ±1% / ±5% | ±1% |
| Temperature Coefficient | ±250 ppm/K | ±100 ppm/K | ±50 ppm/K |
| Power | 35 Watt, at Surface Temperature 25 °C (2 Watt Free to Air) | | |
| Thermal Resistance | 3,3 K / W | | |
| Operating Temperature Range | -55 °C to 155 °C | | |
| Operating Voltage (max.) | 500 V | | |
| Withstanding Voltage | 2000 Vrms - 1 min - 10 mA max. | | |
| Insulation Resistance | ≥ 1GΩ | | |
| Inductance | 8,38nH | | |

| Mechanical Data | |
|--------------------|--------------------|
| Housing | Epoxy - Moulded |
| Resistance Element | NiCr or RuO |
| Substrate | Alumina |
| Leads | Copper, Tin Plated |
| Back Plate | Copper, Tin Plated |



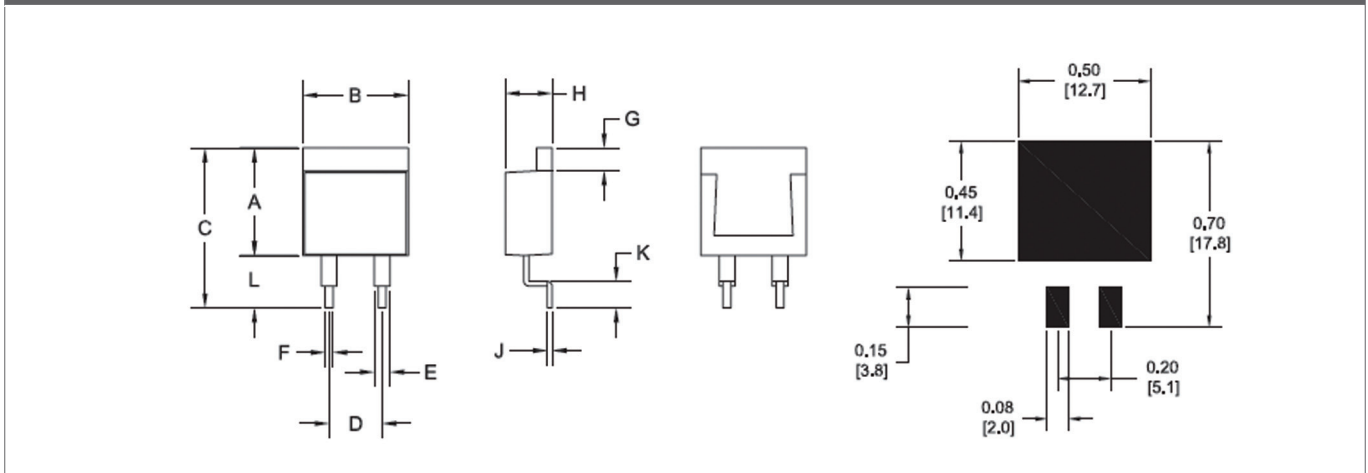
| Parameter | Test | |
|---------------------------|--------------------------------------|--------------|
| Load Life | 90 min ON, 30 min OFF, 1000h at 25°C | ±1% |
| Humidity | 90 - 95% RH, 0,1W, 1000h at 40°C | ±1% |
| Temperature Cycle | -55°C 30 min, +155°C 30min. 5 Cycles | ±0,25% |
| Vibration | IEC60068-2-6 | ±0,25% |
| Shock | IEC 60068-2-27 10G, 6ms, Saw Tooth | ±0,5% |
| Soldering Heat Resistance | 350°C ±5°C 3 Seconds | ±0,1% |
| Solderability | 230°C ±5°C 3 Seconds | >95% Covered |

Resistors

Power Resistor

M35 - series

Technical Drawing



| Dimension | A | B | C | D | E | F | G | H | J | K | L |
|-----------|-----------|-----------|-----------|-----------|-----------|------------|----------|----------|-----------|----------|----------|
| (in mm) | 10,3 ±0,2 | 10,1 ±0,2 | 15,3 ±1,0 | 5,08 ±0,1 | 1,5 ±0,05 | 0,75 ±0,05 | 2,2 ±0,2 | 4,5 ±0,2 | 0,5 ±0,05 | 2,5 ±0,5 | 5,0 ±1,0 |

Power Rating Notes:

The M35 series resistors have to be combined with a correctly dimensioned heat-sink.
The internal temperature of the resistor should not exceed 155°C.

Formula for the calculation of an appropriate heat-sink:

$$R_{\Theta H} = \frac{T_{\max} - (P \times R_{\Theta R}) - T_U}{P}$$

- $R_{\Theta H}$ Thermal Resistance of the Heat-Sink (K/W)
- $R_{\Theta R}$ Thermal Resistance of the Resistor (K/W)
- T_{\max} Maximum Temperature of the Resistor
- T_U Ambient Temperature of the Heat-Sink (°C)
- P Power applied to the Resistor (W)

| Packaging | Quantity | Reel Dimensions |
|-----------|----------|--|
| Reel | 500 | Outer Diameter:330mm, Inner Diameter: 100mm, Tape Width: 23,9mm (min.), 27,4 (max.) |

Ordering Information

| M35 Type | W1% Resistance Tolerance | TK50 Temperature Coefficient | 10k000 Resistance Value |
|-------------|-----------------------------|---------------------------------|----------------------------|
| | 1% | 50 ppm (10Ω - 51kΩ) | (0,02Ω - 51kΩ) |
| | 5% | 100 ppm (0,1Ω - 9,9Ω) | |
| | | 250ppm (0,02Ω - 0,099Ω) | |

Note: All specifications and information in this data sheet are not considering customer's special requirements. All containing information of this data sheet are not a binding description of the product's properties. MEGATRON is not responsible for any damage caused by an improper use of the product. The customer has the responsibility to check the usability of the product in his application. MEGATRON does not guarantee the reproducibility of their publications.