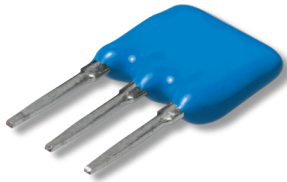


# Resistors

Precision - Voltage Divider

MLD - series



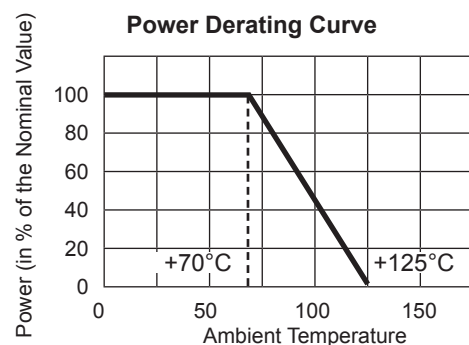
- 3 Pin Voltage Divider
- Any Resistance from 50Ω - 30kΩ
- Standard TCR  $\pm 2,5$  ppm/K,  $\pm 5$  ppm/K
- Tolerances from 0,02%
- Non-inductive
- Good Load Life Ratio Stability

## Spezifikation

Resistance Range	50Ω - 30kΩ / Element		
Power	0,25Watts Each Single Element		
Tolerances	Absolut	Matching	
	50Ω - 100Ω	$\pm 0,1\%$ , $\pm 0,5\%$	$\pm 0,05\%$ , $\pm 0,1\%$
	100Ω - 30k	$\pm 0,05\%$ , $\pm 0,1\%$	$\pm 0,02\%$ , $\pm 0,05\%$ , $\pm 0,1\%$
Temperature Coefficient	Absolute	Tracking	
	$\pm 2,5$ ppm/K, 5ppm/K	Ratio	Value
		R1/R2 = 1	$\pm 0,5$ ppm/K
		$1 < R1/R2 \leq 10$	$\pm 1$ ppm/K
		$10 < R1/R2 \leq 100$	$\pm 2$ ppm/K
R1/R2 >100	$\pm 3$ ppm/K		
Operating Temperature Range	-65°C bis 145°C		
Current Noise	-42dB		
Voltage Coefficient	0,0005%/V		
Thermal EMF	0,1μV/°C		
Insulation Resistance	>10 GOhm		

## Mechanical Data

Housing	Epoxy
Resistance Element	NiCr - Foil
Carrier	Steatit
Leads	Copper, Tin Plated



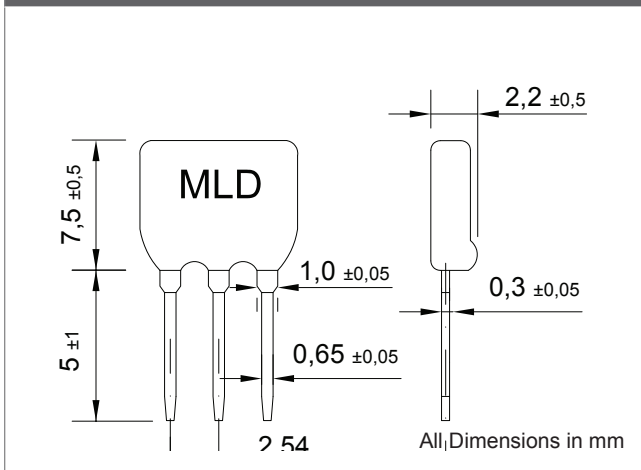
# Resistors

## Precision - Voltage Divider

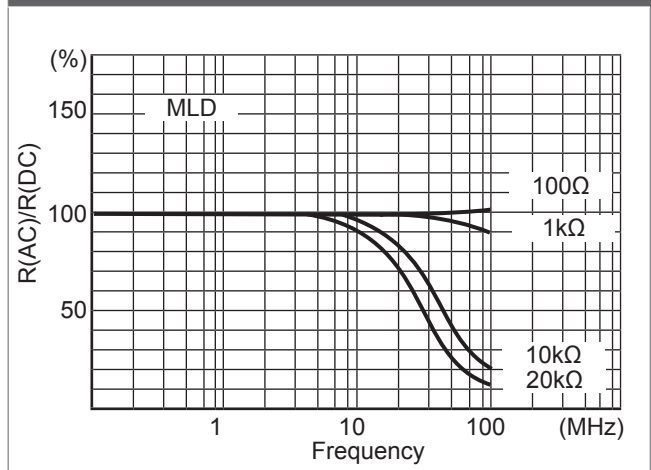
## MLD - series

Parameter	Test	$\Delta$ Ratio	$\Delta R$
Load Life	90 min ON, 30 min OFF, 2000h at 125°C	$\pm 0,05\%$	$\pm 0,1\%$
Overload	2,5 x Related Voltage, 5 Seconds	$\pm 0,01\%$	$\pm 0,05\%$
Humidity	90 - 98% RH, Related Voltage, 240h, at -65°C to -10°C	$\pm 0,05\%$	$\pm 0,1\%$
Thermal Shock	-65°C 30 min, +155°C 30min. 5 Cycles	$\pm 0,03\%$	$\pm 0,05\%$
Vibration	20G, 10Hz - 2kHz - 10Hz, X,Y,Z 20 min each, 2,5h	$\pm 0,01\%$	$\pm 0,03\%$
Shock	100G, 6ms, Saw Tooth, X,Y,Z je 3 shocks	$\pm 0,01\%$	$\pm 0,03\%$
Soldering Heat Resistance	350°C $\pm 5^\circ\text{C}$ , 3 Seconds	$\pm 0,01\%$	$\pm 0,03\%$
Solderability	245°C $\pm 5^\circ\text{C}$ 5 Seconds	>95% Coverage	
Storage Life	15°C to 35°C, 15 - 75% RH, Load Free, 10000h	$\pm 0,01\%$	$\pm 0,02\%$

### Technical Drawing



### Frequency Characteristics



### Ordering Information

MLD Type	WA0,1% Tolerance (absolute)	WM0,1% Tolerance (matching)	TK5 Temp. Coefficient (absolute)	10k/10k Resistance Value
	50Ω - <100Ω: $\pm 0,5\%$ , $\pm 0,1\%$ 100Ω - <30kΩ: $\pm 0,5\%$ , $\pm 0,1\%$	50Ω - <100Ω: $\pm 0,05\%$ , $\pm 0,1\%$ 100Ω - <30kΩ: $\pm 0,02\%$ , $\pm 0,05\%$ , $\pm 0,1\%$	$\pm 2,5\text{ppm}$ $\pm 5\text{ppm}$	(50Ω - 30kΩ) The total resistance must not exceed 60kΩ!