

# Resistors

Precision - Voltage Divider

MLD - series



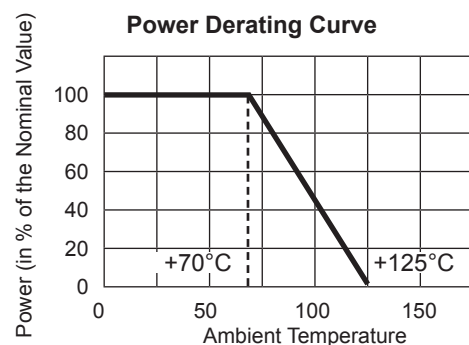
- 3 Pin Voltage Divider
- Any Resistance from 50Ω - 30kΩ
- Standard TCR  $\pm 2,5$  ppm/K,  $\pm 5$  ppm/K
- Tolerances from 0,02%
- Non-inductive
- Good Load Life Ratio Stability

## 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



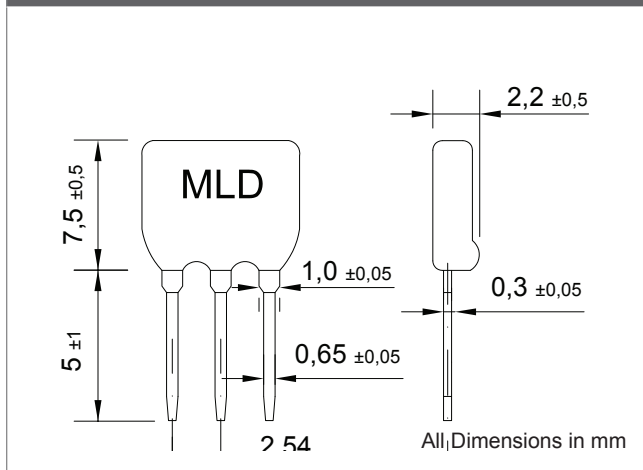
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## Precision - Voltage Divider

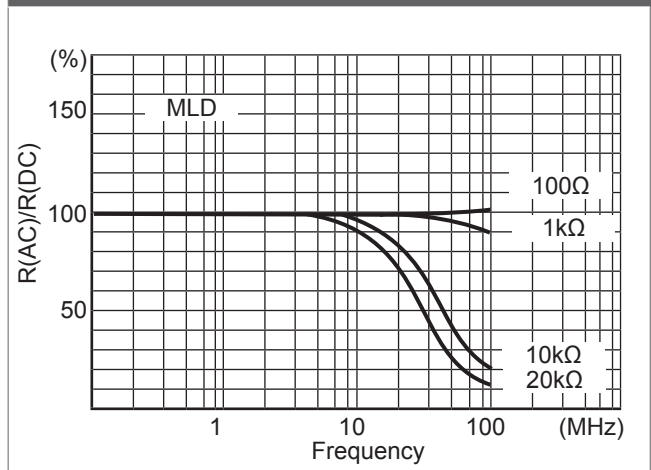
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Parameter	Test	$\Delta$ Ratio	$\Delta R$
Load Life	90 min ON, 30 min OFF, 2000h at 125°C	$\pm 0,05\%$	$\pm 0,1\%$
Overload	2,5 x Related Voltage, 5 Seconds	$\pm 0,01\%$	$\pm 0,05\%$
Humidity	90 - 98% RH, Related Voltage, 240h, at -65°C to -10°C	$\pm 0,05\%$	$\pm 0,1\%$
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!

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.