

# Data Sheet for Precision Resistor

Voltage Divider (metal foil)

Series MLD



- Resistance range from 50Ω..30kΩ
- TCR up to ±2,5 ppm/°C
- Resistance tolerances absolute from ±0,05%, matching from ±0,02%
- Low current noise with excellent load life ratio stability

Electrical Specification	Absolute	Matching
Resistance range	50Ω..30kΩ (max. aggregate value 30kΩ)	
Resistance tolerance	±0,05%..±0,5%	±0,02%..±0,1%
Power rating @ 70°C (0W @ +125°C)	0,25W (each single element)	
TCR-rate	±2,5ppm/°C, ±5ppm/°C	Tracking
		Ratio
		Value
		R1 / R2 = 1 1 < R1 / R2 ≤ 10 10 < R1 / R2 ≤ 100 R1 / R2 > 100
Working temperature range (max.)	-25..+125°C	

Mechanical Specification	
Resistance technology / material	Metal foil
Housing material	Epoxy
Connections	Radial cooper tinned

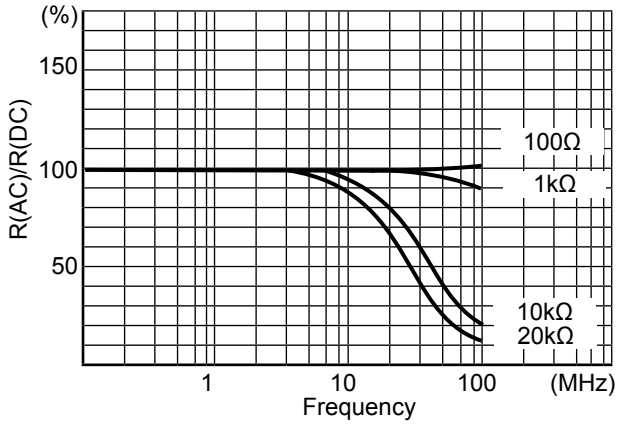
Parameters	Test Conditions	Specification	
		ΔR	Δ Ratio
Short time overload	2,5 x rated voltage, 5 sec.	±0,0025%	±0,001%
Life span (biased)	70°C, rated power, 90 min. on 30 min off, 1000 h	±0,01%	±0,005%
High temperature / humidity	+65°C..-10°C, 90..98% RH rated voltage, 10 cycles, 240h	±0,03%	±0,01%
Temperature shock	-25°C (30 min.), +25°C (5 min), +125°C (30 min), 5 cycles	±0,01%	±0,005%
High temperature exposure	+125°C, no load 1000 h	±0,01%	±0,005%
Solderability	235°C, 2 sec.	Abdeckung > 75%	
Resistance to soldering heat	350°C, 3 sec.	±0,0025%	±0,001%
Isolation resistance	100 VDC, 1 min.	>10.000MΩ	
Dielectric strength	Atmo. Pres.: 300 VAC, 1 min.	±0,0025%	±0,001%
Shock	50G, 11 ms, halfsine, X, Y, Z each 3 shocks	±0,005%	±0,001%
Vibration	20G, 10Hz zu 55Hz zu 10Hz, 1 min. X, Y, Z each 2h	±0,005%	±0,001%

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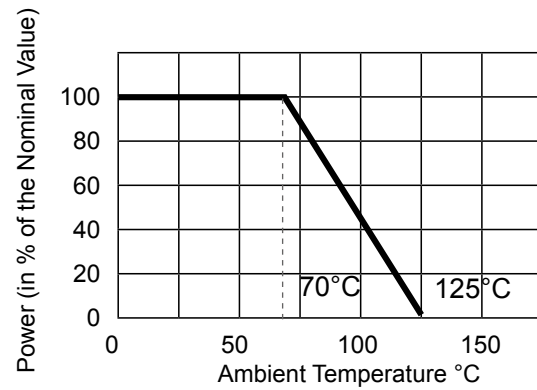
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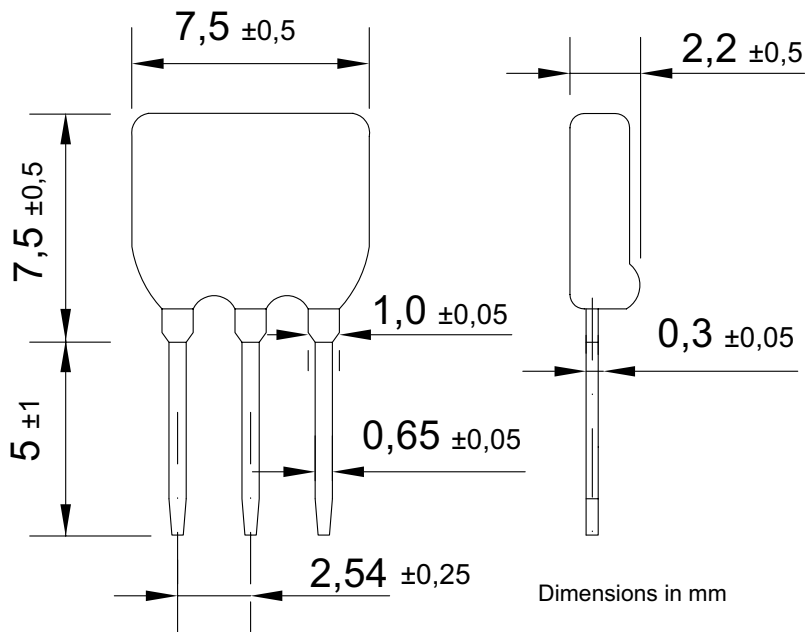
## Frequency Characteristics



## Power Derating Curve



## Technical Drawing



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Order code						
<b>Description</b>		Selection: standard=black/bold, possible options=grey/cursive				
<b>Series:</b>	<b>MLD</b>					
<b>Resistance tolerance absolute:</b> ±0,5% @ R = 50Ω..100Ω ±0,1% @ R = 50Ω..30kΩ ±0,05% @ R = 100Ω..30kΩ		<b>WA0,5%</b> <b>WA0,1%</b> <b>WA0,05%</b>				
<b>Resistance tolerance matching:</b> ±0,1% @ R = 50Ω..30kΩ ±0,05% @ R = 50Ω..30kΩ ±0,02% @ R = 100Ω..30kΩ			<b>WM0,1%</b> <b>WM0,05%</b> <b>WM0,02%</b>			
<b>Temperature coefficient absolute:</b> ±5ppm/°C ±2,5ppm/°C				<b>TK5</b> <b>TK2,5</b>		
<b>Resistance value 1 - please choose:</b> From 50Ω to ≤ 30kΩ (aggregate value max. 30kΩ)					<b>xxkxxx</b>	
<b>Resistance value 2 - please choose:</b> From 50Ω to ≤ 30kΩ (aggregate value max. 30kΩ)						<b>/xxkxxx</b>

Order Example	Series	Resistance tolerance absolut	Resistance tolerance matching	Temperature coefficient absolut	Resistance value 1	Resistance value 2
Choice	MLD	±0,1%	±0,1%	5ppm/°C	10,1kΩ	5kΩ
Code	MLD	WA0,1%	WM0,1%	TK5	10k100	/5k000