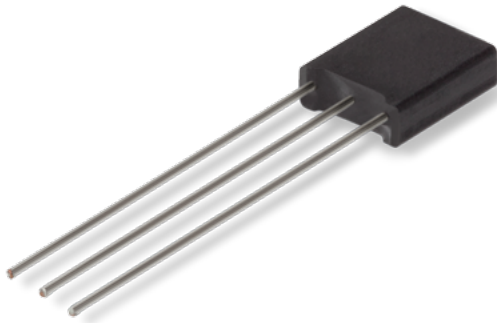


Data Sheet for Precision Resistor

Voltage Divider (metal foil)

Series MSM



- High load capacity @125°C
- Resistance range from 50Ω..30kΩ
- TCR up to ±2.5 ppm/°C
- Resistance tolerances absolute from ±0.02%, matching from ±0.01%
- Low current noise with excellent load life ratio stability

Electrical Specification	Absolute	Matching
Resistance range	50Ω..30kΩ (max. aggregate value 30kΩ)	
Resistance tolerance	±0.02%..±0.1%	±0.01%..±0.1%
Power rating @ 125°C (0W @ +150°C)	0,3W (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.)	-55 °C up to +125 °C (-65..+150°C)	

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

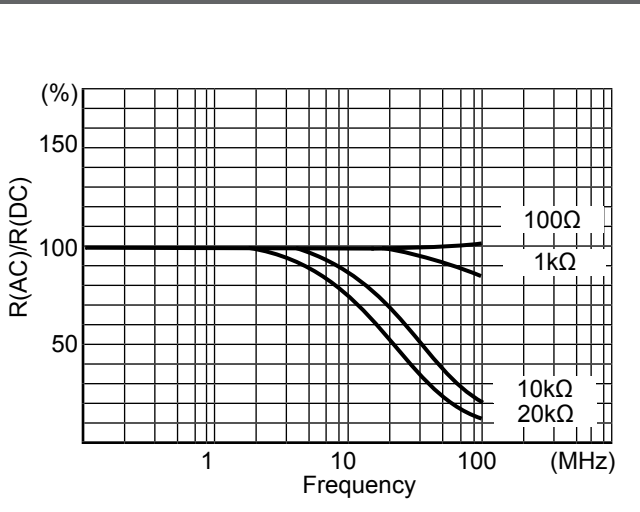
Parameters	Test Conditions	Specification	
		ΔR	Δ Ratio
Short time overload	2.5 x rated voltage, 5 sec.	±0.0025%	±0.001%
Life span (biased)	125°C, rated power, 90 min. on 30 min off, 2000 h	±0.015%	±0.005%
High temperature / humidity	-65°C..10°C, 90..98% RH rated voltage, 10 cycles, 240h	±0.02%	±0.01%
Temperature shock	-65°C (30 min.), +150°C (30 min), 5 cycles	±0.005%	±0.0025%
High temperature exposure	+150°C, no load 2000 h	±0.015%	±0.005%
Solderability	245°C, 5 sec.	Coverage > 95%	
Resistance to soldering heat	350°C, 3 sec.	±0.0025%	±0.001%
Isolation resistance	500 VDC, 2 min.	>10.000MΩ	
Dielectric strength	Atmo. Pres.: 300 VAC, 1 min.	±0.0025%	±0.001%
Shock	100G, 6 ms, halfsine, X, Y, Z each 10 shocks	±0.0025%	±0.001%
Vibration high frequency	20G, 10Hz zu 2kHz zu 10Hz, 20 min. X, Y, Z each 2.5h	±0.0025%	±0.001%
Current noise		-42 dB	

Data Sheet for Precision Resistor

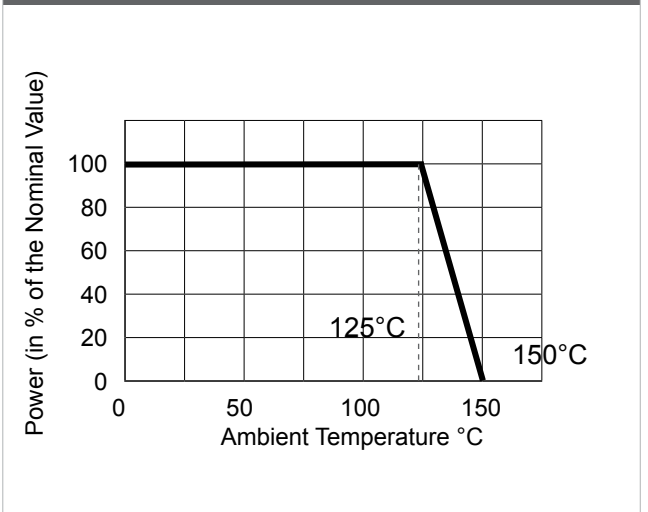
Voltage Divider (metal foil)

Series MSM

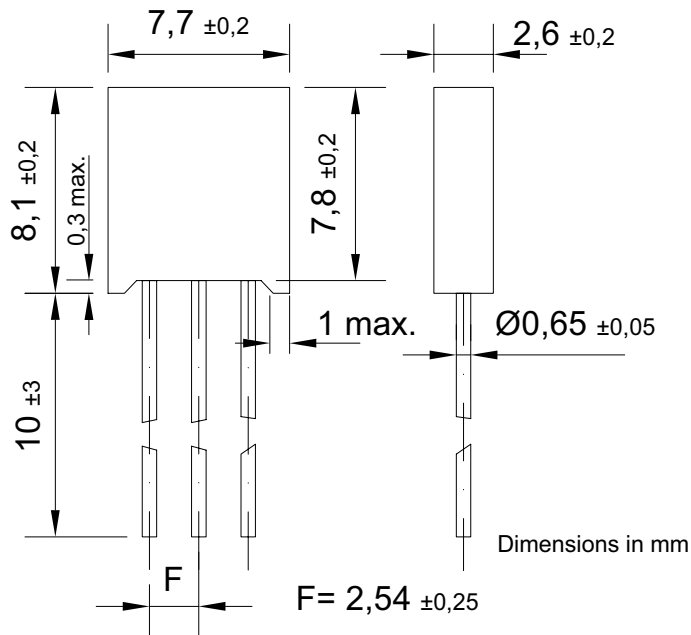
Frequency Characteristics



Power Derating Curve



Drawing



Data Sheet for Precision Resistor

Voltage Divider (metal foil)

Series MSM

Order code						
Description		Selection: standard=black/bold , possible <i>options=grey/italic</i>				
Series:	MSM					
Resistance tolerance absolute: ±0,1% ±0,05% ±0,02%		WA0,1% WA0,05% WA0,02%				
Resistance tolerance matching: ±0,1% ±0,05% ±0,02% ±0,01%			WM0,1% WM0,05% WM0,02% WM0,01%			
Temperature coefficient absolute: ±5ppm/°C ±2,5ppm/°C				TK5 TK2,5		
Resistance value 1 - please choose: From 50Ω to ≤ 30kΩ (aggregate value max. 30kΩ)					xxkxxx	
Resistance value 2 - please choose: From 50Ω to ≤ 30kΩ (aggregate value max. 30kΩ)						/xxkxxx

Order Example	Series	Resistance tolerance absolute	Resistance tolerance matching	Temperature coefficient absolute	Resistance value 1	Resistance value 2
Choice	MSM	±0.1%	±0.1%	5ppm/°C	10,1kΩ	5kΩ
Code	MSM	WA0.1%	WM0.1%	TK5	10k100	/5k000