

Data Sheet for Precision Resistor

Power Resistor (wirewound)

Series SUT



- Power ratings up to 15 Watts
- Compact design
- Good pulse handling
- Resistor tolerances from 0.01% to 10%
- TCR up to ± 20 ppm/ $^{\circ}$ C
- Non-inductive windings (option)
- Resistance range from 0.01 Ω ..260k Ω

Electrical Specification	SUT						
	1*	2*	3*	5	7*	10	12
Resistance range from 0.01 Ω3.4k Ω	..7.5k Ω	..12.5k Ω	..32k Ω	..95k Ω	..150k Ω	..260k Ω
Resistance tolerance	$\pm 0,01\% \dots \pm 10\%$						
Power rating (0W @ +250 $^{\circ}$ C)	1W	1.5W	3W	5W	7W	10W	15W
Max. working voltage	33V	42V	135V	194V	425V	607V	1050V
TCR-rate	± 20 ppm/ $^{\circ}$ C @ R > 10 Ω ± 50 ppm/ $^{\circ}$ C @ R = 1 Ω ..10 Ω ± 90 ppm/ $^{\circ}$ C @ R < 1 Ω						
Working temperature range (max.)	-55 $^{\circ}$ C up to +250 $^{\circ}$ C						
*MIL-R-26 / MIL-R-39007	RW-81	RW-82	RW-80	--	RW-84	--	--

Mechanical Specification

Resistance technology / material	Wirewound / wire alloy
Housing material	Inorganic Silicone
Connections	Axial cooper tinned

Parameters	Test Conditions (MIL-STD 202)	Specification ΔR
Dielectric	See norm	$\pm 0.2\% + 0.05\Omega$
Load life	See norm	$\pm 1\%$ dep. on resistance value
Storage	See norm	$\pm 0.2\% + 0.05\Omega$
Moisture resistance	See norm	$\pm 0.2\% + 0.05\Omega$
Thermal shock	See norm	$\pm 0.2\% + 0.05\Omega$
5X Overload (5s)	See norm	$\pm 0.2\% + 0.05\Omega$
Shock	See norm	$\pm 0.1\% + 0.05\Omega$
Vibration	See norm	$\pm 0.1\% + 0.05\Omega$

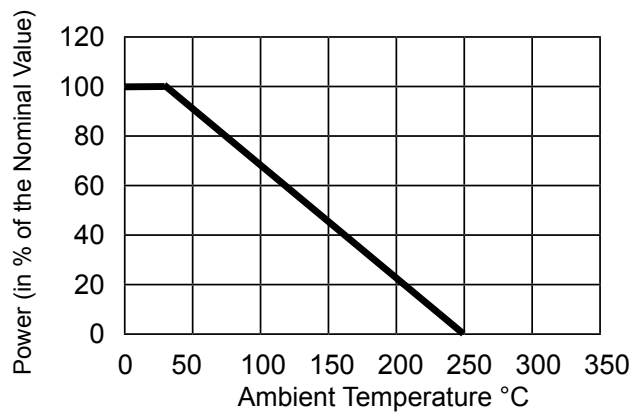
Dielectric strength: 1000 VAC (500 VAC @ SUT1, SUT2)

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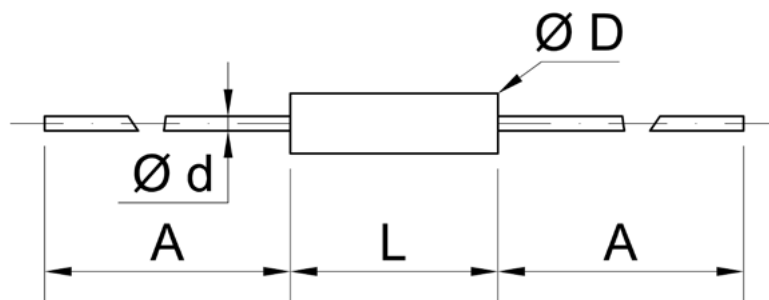
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Power Derating Curve



Drawing



SUT	A (min.)	L (±1.6)	ØD (±0.8)	d (±0.05)
1	25.4	6.4	2.2	0.5
2	25.4	7.9	2.0	0.5
3	25.4	8.9	4.0	0.8
5	25.4	12.7	6.4	1.0
7	25.4	22.2	7.9	1.0
10	25.4	31.0	7.9	1.0
12	25.4	45.2	9.5	1.0

Dimensions in mm

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Order code						
Description	Selection: standard=black/bold , possible <i>options=grey/italic</i>					
Series:	SUT					
Type / size:						
1 (max. 3.4kΩ)		1				
2 (max. 7.5kΩ)		2				
3 (max. 12.5kΩ)		3				
5 (max. 32kΩ)		5				
7 (max. 95kΩ)		7				
10 (max. 150kΩ)		10				
12 (max. 260kΩ)		12				
Resistance tolerance:						
±0.02%			W0,02%			
±0.05%			W0,05%			
±0.1%			W0,1%			
±0.25%			W0,25%			
±0.5%			W0,5%			
±1%			W1%			
±5			W5%			
±10%			W10%			
<i>Option ±0.01%</i>			<i>W0,01%</i>			
Temperature coefficient:						
±20ppm/°C @ R >10Ω				TK20		
±50ppm/°C @ R =1Ω..10Ω				TK50		
<i>Option ±90ppm/°C @ R <1Ω</i>				<i>TK90</i>		
Resistance value - please choose:						
From 0.01Ω to ≤ see type					xxxkxxx	
<i>Option non-inductive windings:</i>						
<i>max. resistance value / 2</i>						<i>N</i>

Order Example	Series	Type	Resistance tolerance	Temperature coefficient	Resistance value	Inductance
Choice	SUT	3	±0.1%	20ppm/°C	10.1kΩ	Standard
Code	SUT	3	W0.1%	TK20	10k100	-