

Data Sheet for Precision Resistor

Power Resistor (wirewound)

Series UT



- Power ratings up to 10 Watts
- Stable pulse handling
- Resistance tolerances $\pm 0,01\%..10\%$
- TCR up to ± 20 ppm/ $^{\circ}\text{C}$
- Non-inductive windings (option)
- Resistance values from $0,01\Omega..260\text{k}\Omega$
- Option high temperature range $-55^{\circ}\text{C}..350^{\circ}\text{C}$
- Option 4 pin (Kelvin) connection

Electrical Specification	UT						
	1/2A	1A*	2A*	3	5*	7	10*
Resistance range from $0,01\Omega..$	$..2,5\text{k}\Omega$	$..10\text{k}\Omega$	$..22\text{k}\Omega$	$..45\text{k}\Omega$	$..91\text{k}\Omega$	$..150\text{k}\Omega$	$..260\text{k}\Omega$
Resistance tolerance	$\pm 0,01\%..10\%$						
Power rating standard (0W @ $+275^{\circ}\text{C}$)	0,4W	1W	2,5W	4W	5W	7W	10W
Power rating HT version (0W @ $+350^{\circ}\text{C}$)	0,5W	1,5W	3W	5,5W	6,5W	9W	13W
Max. working voltage	20V	52V	130V	210V	360V	650V	850V
TCR-rate	$\pm 20\text{ppm}/^{\circ}\text{C}$ @ $R > 10\Omega$ $\pm 50\text{ppm}/^{\circ}\text{C}$ @ $R = 1\Omega..10\Omega$ $\pm 90\text{ppm}/^{\circ}\text{C}$ @ $R < 1\Omega$						
Working temperature range (max.)	$-55..+275^{\circ}\text{C}$ standard / $-55..+350^{\circ}\text{C}$ HT version						
*MIL-R-26 / MIL-R-39007	--	RW-70	RW-69	--	RW-74	--	RW-78

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

Parameters	Test Conditions (MIL-STD 202)	Specification	
		ΔR Standard	ΔR HT version
Dielectric	See norm	$\pm 0,2\% + 0,05\Omega$	$\pm 0,2\% + 0,05\Omega$
Load life	See norm	$\pm 1\% + 0,05\Omega$	$\pm 3\% + 0,05\Omega$
Storage	See norm	$\pm 0,2\% + 0,05\Omega$	$\pm 2\% + 0,05\Omega$
Moisture resistance	See norm	$\pm 0,2\% + 0,05\Omega$	$\pm 2\% + 0,05\Omega$
Thermal shock	See norm	$\pm 0,2\% + 0,05\Omega$	$\pm 2\% + 0,05\Omega$
5X Overload (5s)	See norm	$\pm 0,2\% + 0,05\Omega$	$\pm 2\% + 0,05\Omega$
Shock	See norm	$\pm 0,1\% + 0,05\Omega$	$\pm 0,2\% + 0,05\Omega$
Vibration	See norm	$\pm 0,1\% + 0,05\Omega$	$\pm 0,2\% + 0,05\Omega$

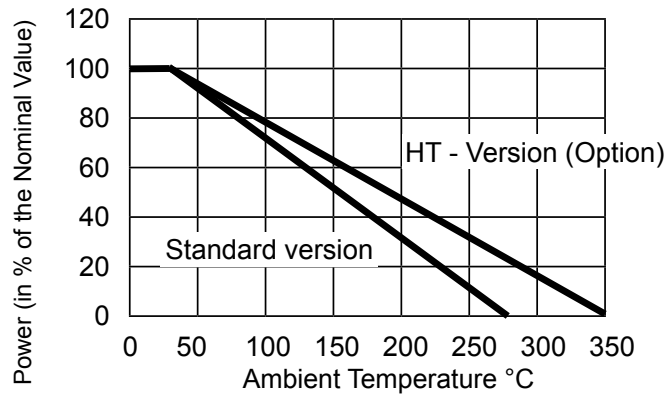
Dielectric strength: 1000 VAC (500 VAC @ UT-1/2A, UT-1A)

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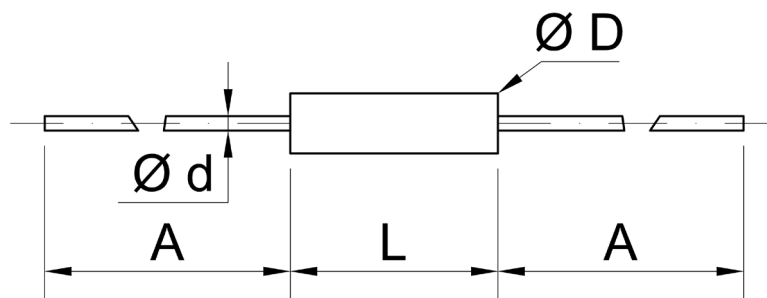
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Power Derating Curve



Technical Drawing



UT	A (min.)	L (±1,6)	ØD (±0,8)	d (±0,05)
1/2A	25,4	6,4	2,4	0,5
1A	25,4	10,3	2,4	0,5
2A	25,4	12,7	4,7	0,8
3	25,4	17,1	6,9	1,0
5	25,4	22,2	7,9	1,0
7	25,4	35,0	9,5	1,0
10	25,4	45,2	9,5	1,0

Dimensions in mm

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Order code								
Description	Selection: standard=black/bold, possible options=grey/cursive							
Series:	UT							
Type / size:								
1/2A (max. 2,5kΩ)			1/2A					
1A (max. 10kΩ)			1A					
2A (max. 22kΩ)			2A					
3 (max. 45kΩ)			3					
5 (max. 91kΩ)			5					
7 (max. 150kΩ)			7					
10 (max. 260kΩ)			10					
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 bis ≤ see type						xxxxxxx		
<i>Option non-inductive windings: max. resistance value / 2</i>							<i>N</i>	
<i>Option high temperature version</i>								<i>HT</i>
<i>Option 4 pin (Kelvin) connection</i>								<i>K</i>

Order Example	Series	Type	Resistance tolerance	Temperature coefficient	Resistance value	Inductance	Temperature version	Connection
Choice	UT	3	±0,1%	20ppm/°C	10,1kΩ	Standard	Standard	Standard
Code	UT	3	W0,1%	TK20	10k100	-	-	-