

Resistors

Precision Power Resistors

UT - series

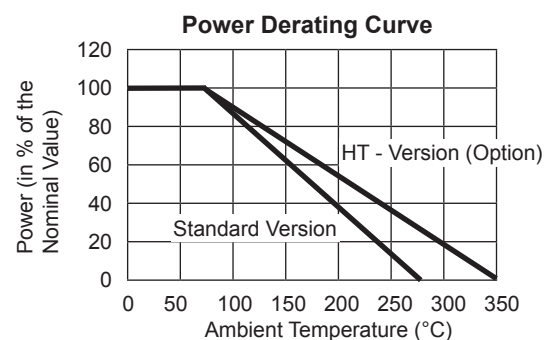


- Power Ratings up to 10 Watts
- Stable Pulse Handling
- Tolerances 0,01% to 1%
- Standard TCR ± 20 ppm/K
- Low Inductive Version (Option)
- Any Resistance from $0,01\Omega$ to $260k\Omega$
- Special Lead Bending
- High Temperature Range -55°C bis 350°C

Specification	UT-1/2A	UT-1A	UT-2A	UT-3	UT-5	UT-7	UT-10
Resistance Range	0,01 - 2,5k	0,01 - 10k	0,01 - 22k	0,01 - 45k	0,01 - 90k	0,01 - 154k	0,01 - 260k
Power	0,4Watts	1Watts	2,5Watts	4Watts	5Watts	7Watts	10Watts
Standard Tolerance	0,02%; 0,05%; 0,1%; 0,25%; 0,5%, 1%; 5%						
Temperature Coefficient	± 20 ppm/K ($R \geq 10\Omega$) ± 50 ppm/K ($1\Omega \geq R < 10\Omega$) ± 90 ppm/K / 120ppm ($R < 1\Omega$)						
Operating Temperature	$-55^{\circ}\text{C} - 275^{\circ}\text{C}$ (HT Version: $-55^{\circ}\text{C} - 350^{\circ}\text{C}$)						
Operating Voltage (max.)	20VAC	52VAC	130VAC	210VAC	360VAC	620VAC	850VAC
Withstanding Voltage	1000VAC (500VAC UT-1/2A, UT-1A)						
Insulation Resistance \geq	$\geq 1\text{GOhm}$						

Mechanical Data

Housing Silcone Coating	Silcone Coating
Resistance Element	Wire, Special Alloy
Carrier	Multi - Chamber Coil
Leads	Copper



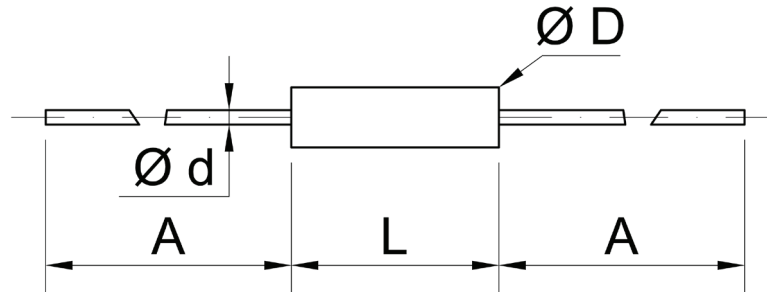
Parameter	Test	ΔR (HT-Standard)	ΔR (HT-Version)
Load Life	90 min ON, 30 min OFF, 1000h at 25°C	$\pm 1\% + 0,05\Omega$	$\pm 3\% + 0,05\Omega$
Shelf Life	$15^{\circ}\text{C} - 35^{\circ}\text{C}$, r.H. 15 - 75%, 10000h	$\pm 0,2\% + 0,05\Omega$	$\pm 2\% + 0,05\Omega$
Humidity	90 - 95% RH, 0,1W, 1000h at 40°C	$\pm 0,2\% + 0,05\Omega$	$\pm 2\% + 0,05\Omega$
Temperature Cycle	-55°C 30 min, $+155^{\circ}\text{C}$ 30min. 1000h	$\pm 0,2\% + 0,05\Omega$	$\pm 2\% + 0,05\Omega$
Overload	5x Related Power, 5 sec.	$\pm 0,2\% + 0,05\Omega$	$\pm 2\% + 0,05\Omega$
Shock	IEC 60068-2-27 10G, 6ms, Saw Tooth	$\pm 0,1\% + 0,05\Omega$	$\pm 0,2\% + 0,05\Omega$
Vibration	20G, 10Hz - 55Hz - 10Hz, 3 min.	$\pm 0,1\% + 0,05\Omega$	$\pm 0,2\% + 0,05\Omega$
Soldering Heat Resistance	$350^{\circ}\text{C} \pm 5^{\circ}\text{C}$ 3 Seconds	$\pm 0,1\% + 0,05\Omega$	$\pm 0,2\% + 0,05\Omega$

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Technical Drawing



Dimensions

	A (min.)	L ($\pm 1,6$)	D ($\pm 0,8$)	d
UT-1/2A	25	6,4	2,0	0,5
UT-1A	25	10,3	2,4	0,5
UT-2A	25	12,7	4,8	0,8
UT-3	25	15,6	6,3	1,0
UT-5	25	22,2	8,0	1,0
UT-7	25	35,0	9,5	1,0
UT-10	25	45,2	9,5	1,0

All Dimensions in mm

Options

Remark

High Temperature Version	„HT“
4Terminal (Kelvin) Connector	„K“
Low Inductive Version (on Request)	„N“ (Non inductive Windings, only half resistance value possible, TCR: 120ppm)

Ordering Information

UT	W1%	TK20	10k000	N	HT	K
Typ	Tolerance	Temperature Coefficient	Resist. Range	Low Inductance	High Temp.	4 - Term.
	0,02%; 0,05%; 0,1%; 0,25%; 0,5%; 1%	± 20 ppm/K ($R \geq 10\Omega$) ± 50 ppm/K ($1\Omega \geq R < 10\Omega$) ± 90 ppm/K ($0,1\Omega \geq R < 1\Omega$) ± 120 ppm/K ($R < 0,1\Omega$)	(0,05 Ω - 260k Ω)	N	HT	K