

# Resistors

## Precision - Power Resistors

## SUT - series

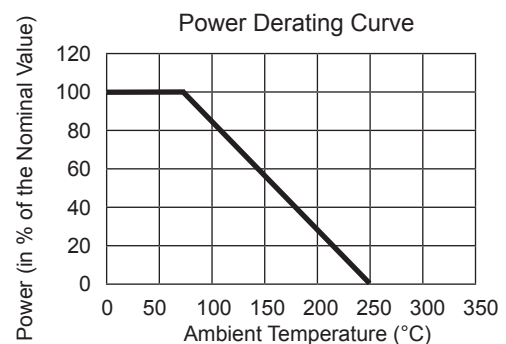


- Power Ratings up to 12 Watts
- Small Package Design
- Good Pulse Handling
- Tolerances 0,02% to 1%
- Standard TCR  $\pm 20$  ppm/K
- Low Inductive Version (Option)
- Any Resistance from 0,01 $\Omega$  to 260k $\Omega$
- Special Lead Bending

Spezifikation	SUT-1	SUT-2	SUT-3	SUT-5	SUT-7	SUT-10	SUT-12
Resistance Range	0,01 - 3,4k	0,01 - 7,5k	0,01 - 10k	0,01 - 25k	0,01 - 95k	0,01 - 150k	0,01 - 260k
Power	1Watt	1,5Watt	3Watt	5Watt	7Watt	10Watt	12Watt
Standard Tolerance	0,02%; 0,05%; 0,1%; 0,25%; 0,5%, 1%;						
Temperature Coefficient	$\pm 20$ ppm/K ( $R \geq 10\Omega$ ) $\pm 50$ ppm/K ( $1\Omega \geq R < 10\Omega$ ) $\pm 90$ ppm/K / 120ppm ( $R < 1\Omega$ )						
Operating Temperature Range	-55 °C - 250 °C						
Operating Voltage (max.)	30VAC	40VAC	80VAC	190VAC	425VAC	600VAC	1000VAC
Withstanding Voltage	1000VAC (500VAC SUT-1, SUT 2)						
Insulation Resistance	$\geq 1$ GOhm						

### Mechanical Data

Housing	Ceramics, Silicone
Resistance Element	Wire, Special Alloy
Carrier	Multi - Chamber Coil
Leads	Copper, Tin Plated



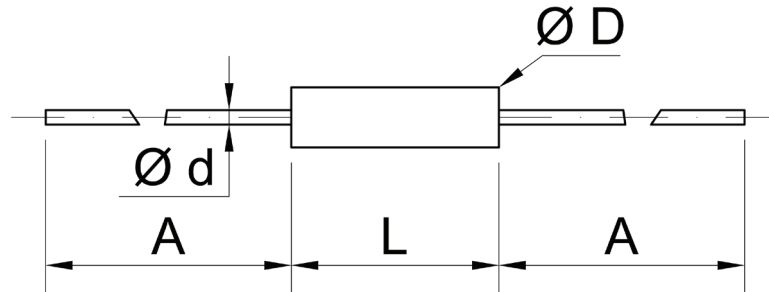
Parameter	Test	$\Delta R$
Load Life	90 min ON, 30 min OFF, 1000h at 25°C	$\pm 1\% + 0,05\Omega$
Shelf Life	15°C - 35°C, r.H. 15 - 75%, 10000h	$\pm 0,2\% + 0,05\Omega$
Humidity	90 - 95% RH, 0,1W, 1000h at 40°C	$\pm 0,2\% + 0,05\Omega$
Temperature Cycle	-55°C 30 min, +155°C 30min. 1000h	$\pm 0,2\% + 0,05\Omega$
5X Overload (5s)		$\pm 0,2\% + 0,05\Omega$
Shock	IEC 60068-2-27 10G, 6ms, Saw Tooth	$\pm 0,1\% + 0,05\Omega$
Vibration	20G, 10Hz - 55Hz - 10Hz, 3 min.	$\pm 0,1\% + 0,05\Omega$
Soldering Heat Resistance	350°C $\pm 5$ °C 3 Seconds	$\pm 0,1\% + 0,05\Omega$

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### Technical Drawing



### Dimensions

	A (min.)	L ( $\pm 1,6$ )	D ( $\pm 0,8$ )	d
SUT-1	25,3	6,4	2,2	0,5
SUT-2	25,3	7,9	2,0	0,5
SUT-3	25,3	8,9	4,0	0,8
SUT-5	25,3	12,7	5,5	1,0
SUT-7	25,3	22,2	7,9	1,0
SUT-10	25,3	31,0	7,9	1,0
SUT-12	25,3	45,2	9,5	1,0

All Dimensions in mm

### Optionen

### Remark

Low Inductive Version  
(upon Request)

„N“  
Non inductive Windings, only half resistance value possible, TCR: 120ppm

### Ordering Information

UT	W1%	TK20	10k000	N
<b>Type</b>	<b>Resistance Tolerance</b>	<b>Temperature Coefficient</b>	<b>Resistance Range</b>	<b>Low Inductance</b>
	0,02%; 0,05%; 0,1%; 0,25%; 0,5%; 1%	$\pm 20$ ppm/K ( $R \geq 10\Omega$ ) $\pm 50$ ppm/K ( $1\Omega \geq R < 10\Omega$ ) $\pm 90$ ppm/K ( $0,1\Omega \geq R < 1\Omega$ ) $\pm 120$ ppm/K ( $R < 0,1\Omega$ )	(0,01 $\Omega$ - 260k $\Omega$ )	N