

# UT Series

High Temperature Power Resistors



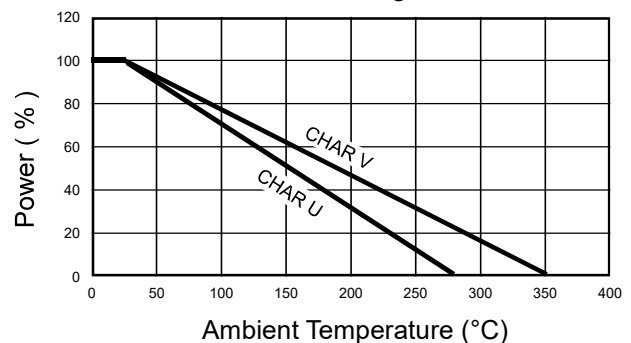
- Resistances from 0.02 to 320kOhms
- Excellent Pulse Handling
- High Temperature: -55°C to +350°C (“V” Rating )
- Power Rating 0.1 to 13Watts
- Resistance Tolerances to  $\pm 0.01\%$
- Low TCR:  $\pm 20\text{ppm/K}$  Standard
- Silicone Coated Power Resistor
- MIL-R-26 / MIL-R-39007 Power Ratings
- Non-Inductive Windings Available



## SPECIFICATIONS

Specification	Value																		
Tolerances	$\pm 0.01\%$ to $\pm 10\%$ ( 1% Standard )																		
Temperature Coefficient	>10 $\Omega$ : $\pm 20\text{ppm/K}$ 1 $\Omega$ to 10 $\Omega$ : $\pm 50\text{ppm/K}$ <1 $\Omega$ : Call Factory																		
Temperature Range	-55°C to +275°C : Characteristic U -55°C to +350°C : Characteristic V																		
Dielectric Strength	500 VAC : UT-1 / UT-1/2A / UT-1/2 / UT-1A 1000 VAC : All Others																		
Constuction	Centerless ground ceramic core Matte Tin over Copper Flame Resistant / High temperature / trivalent / inorganic Silicone coating All welded terminations																		
Environmental Performance (MIL-STD 202)	$\Delta R$																		
	<table border="1" style="width: 100%; border-collapse: collapse;"> <thead> <tr> <th style="width: 50%; text-align: center;">Characteristic U</th> <th style="width: 50%; text-align: center;">Characteristic V</th> </tr> </thead> <tbody> <tr> <td style="text-align: center;"><math>\pm 0.2\% + 0.05\Omega</math></td> <td style="text-align: center;"><math>\pm 0.2\% + 0.05\Omega</math></td> </tr> <tr> <td style="text-align: center;"><math>\pm 1\% + 0.05\Omega</math></td> <td style="text-align: center;"><math>\pm 3\% + 0.05\Omega</math></td> </tr> <tr> <td style="text-align: center;"><math>\pm 0.2\% + 0.05\Omega</math></td> <td style="text-align: center;"><math>\pm 2\% + 0.05\Omega</math></td> </tr> <tr> <td style="text-align: center;"><math>\pm 0.2\% + 0.05\Omega</math></td> <td style="text-align: center;"><math>\pm 2\% + 0.05\Omega</math></td> </tr> <tr> <td style="text-align: center;"><math>\pm 0.2\% + 0.05\Omega</math></td> <td style="text-align: center;"><math>\pm 2\% + 0.05\Omega</math></td> </tr> <tr> <td style="text-align: center;"><math>\pm 0.2\% + 0.05\Omega</math></td> <td style="text-align: center;"><math>\pm 2\% + 0.05\Omega</math></td> </tr> <tr> <td style="text-align: center;"><math>\pm 0.1\% + 0.05\Omega</math></td> <td style="text-align: center;"><math>\pm 0.2\% + 0.05\Omega</math></td> </tr> <tr> <td style="text-align: center;"><math>\pm 0.1\% + 0.05\Omega</math></td> <td style="text-align: center;"><math>\pm 0.2\% + 0.05\Omega</math></td> </tr> </tbody> </table>	Characteristic U	Characteristic V	$\pm 0.2\% + 0.05\Omega$	$\pm 0.2\% + 0.05\Omega$	$\pm 1\% + 0.05\Omega$	$\pm 3\% + 0.05\Omega$	$\pm 0.2\% + 0.05\Omega$	$\pm 2\% + 0.05\Omega$	$\pm 0.2\% + 0.05\Omega$	$\pm 2\% + 0.05\Omega$	$\pm 0.2\% + 0.05\Omega$	$\pm 2\% + 0.05\Omega$	$\pm 0.2\% + 0.05\Omega$	$\pm 2\% + 0.05\Omega$	$\pm 0.1\% + 0.05\Omega$	$\pm 0.2\% + 0.05\Omega$	$\pm 0.1\% + 0.05\Omega$	$\pm 0.2\% + 0.05\Omega$
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Dielectric	$\pm 0.2\% + 0.05\Omega$																		
Load Life	$\pm 1\% + 0.05\Omega$																		
Storage	$\pm 0.2\% + 0.05\Omega$																		
Moisture Resistance	$\pm 0.2\% + 0.05\Omega$																		
Thermal Shock	$\pm 0.2\% + 0.05\Omega$																		
5X Overload ( 5s )	$\pm 0.2\% + 0.05\Omega$																		
Shock	$\pm 0.1\% + 0.05\Omega$																		
Vibration	$\pm 0.1\% + 0.05\Omega$																		

Power Derating Curve

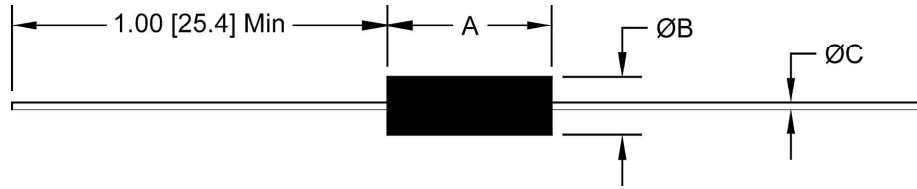


# UT Series

Silicone Coated Power Resistors



## SPECIFICATIONS (continued)



Type	Wattage Rating ( Watts )		Maximum Ohms <sup>2</sup>	Dimensions			Maximum Working Voltage	MIL-R-26 / MIL-R-39007 Style
	U	V		A ±0.062" [±1.6mm]	B <sup>3</sup> ±0.031" [±0.8mm]	C <sup>1</sup> ±0.002" [±0.05mm]		
UT-1	0.1	0.25	500	0.150 [3.8]	0.078 [2.0]	0.018 [0.46]	8.5	
UT-1/2A	0.4	0.5	2.5k	0.250 [6.4]	0.094 [2.4]	<b>0.020 [0.5]</b> 0.025 [0.6]	20	
UT-1/2	0.75	0.9	7.5k	0.330 [8.4]	0.094 [2.4]	<b>0.020 [0.5]</b> 0.025 [0.6]	29	
UT-1A	1.0	1.5	10k	0.406 [10.3]	0.094 [2.4]	<b>0.020 [0.5]</b> 0.025 [0.6]	52	RW-70
UT-2	1.5	2.0	12.5k	0.350 [8.9]	0.156 [4.0]	<b>0.032 [0.8]</b>	60	
UT-2A	2.5	3.0	22k	0.500 [12.7]	0.187 [4.7]	0.032 [0.8]	130	RW-69
UT-2B	3.0	3.75	22k	0.560 [14.2]	0.187 [4.7]	0.032 [0.8]	140	RW-79
UT-2C	3.0	4.0	40k	0.500 [12.7]	0.250 [6.4]	<b>0.040 [1.0]</b> 0.032 [0.8]	140	
UT-2E	3.0	3.5	30k	0.500 [12.7]	0.200 [5.1]	0.032 [0.8]	140	
UT-3	4.0	5.5	45k	0.675 [17.1]	0.270 [6.9]	<b>0.040 [1.0]</b> 0.032 [0.8]	210	
UT-5	5.0	6.5	91k	0.875 [22.2]	0.312 [7.9]	0.040 [1.0]	360	RW-74
UT-5A	5.0	6.5	65k	0.970 [24.6]	0.250 [5.2]	0.032 [0.8]	390	
UT-6	5.0	6.5	95k	1.025 [26.0]	0.312 [7.9]	0.040 [1.0]	504	RW-67
UT-7A	7.0	9.0	150k	1.375 [35.0]	0.375 [9.5]	0.040 [1.0]	650	
UT-7B	7.0	9.0	100k	1.400 [35.6]	0.312 [7.9]	0.032 [0.8]	590	
UT-7C	7.0	9.0	154k	1.220 [31.0]	0.312 [7.9]	0.040 [1.0]	620	
UT-10	10	13	260k	1.780 [45.2]	0.375 [9.5]	0.040 [1.0]	850	RW-78
UT-15	15	-	320k	1.810 [46.0]	0.510 [13.0]	0.050 [1.5]	1500	

<sup>1</sup> Lead Diameter: 18 AWG = 0.040" / 20 AWG = 0.032" / 22 AWG = 0.025" / 24 AWG = 0.020" / 25 AWG = 0.018"

Where more than one lead is listed / the top value is Standard

<sup>2</sup> For non-inductive windings / divide maximum resistance by 2

<sup>3</sup> For non-inductive winding where R ≤ 0.10 Ohms, Tolerance is +0.063/-0.00 [+1.6/-0.0 mm]



Standard Package Quantities				
	Bulk	10" Reel	12" Reel	14" Reel
UT-1	Bulk Only, No T&R			
UT-1/2A	1000	2000	3000	5000
UT-1/2	1000	2000	3000	5000
UT-1A	1000	2000	3000	5000
UT-2	1000	2000	3000	5000
UT-2A	1000	500	1500	3000
UT-2B	1000	500	1500	3000
UT-2C	1000	500	1000	1500
UT-2E	1000	500	1000	1500
UT-3	1000	N/A	500	1000
UT-5	1000	N/A	500	1000
UT-5A	1000	500	1000	1500
UT-6	1000	N/A	500	1000
UT-7A	1000	N/A	500	750
UT-7B	1000	N/A	500	750
UT-7C	1000	N/A	500	750
UT-10	1000	N/A	500	750

### Ordering Information

For Non-Inductive Windings / insert the letter "N" ( i.e. UTN-5 )  
 Part Description: Part Type - Resistance - Tolerance - TCR ( If not standard )  
 Example: UT-5 25 kOhms 0.1%