# UT Series

High Temperature Power Resistors

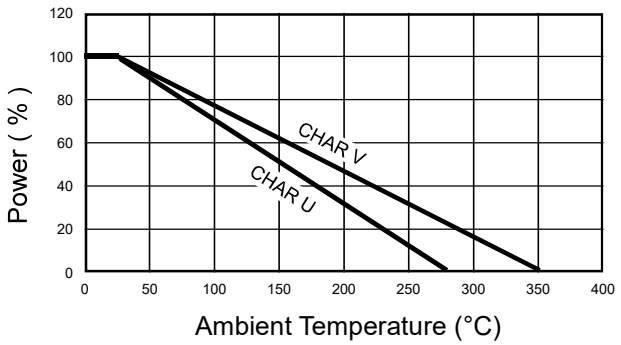
- **Resistances from 0.02 to 320kOhms**
- **Excellent Pulse Handling**
- **High Temperature: -55°C to +350°C (“V” Rating )**
- **Power Rating 0.1 to 13Watts**
- **Resistance Tolerances to ± 0.01%**
- **Low TCR: ± 20ppm/K Standard**
- **Silicone Coated Power Resistor**
- **MIL-R-26 / MIL-R-39007 Power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

RoHS compliant

## SPECIFICATIONS

| Specification | Value | |
|---|---|---|
| Tolerances | ±0.01% to ±10% ( 1% Standard ) | |
| Temperature Coefficient | >10Ω : ±20ppm/K<br>1Ω to10Ω : ±50ppm/K<br><1Ω : Call Factory | |
| Temperature Range | -55°C to +275°C : Characteristic U<br>-55°C to +350°C : Characteristic V | |
| Dielectric Strength | 500 VAC : UT-1 / UT-1/2A / UT-1/2 / UT-1A<br>1000 VAC : All Others | |
| Constuction | Centerless ground ceramic core<br>Matte Tin over Copper<br>Flame Resistant / High temperature / trivalent / inorganic Silicone coating<br>All welded terminations | |
| Environmental Performance (MIL-STD 202) | ΔR | |
| | Characteristic U | Characteristic V |
| Dielectric | ±0.2% + 0.05Ω | ±0.2% + 0.05Ω |
| Load Life | ±1% + 0.05Ω | ±3% + 0.05Ω |
| Storage | ±0.2% + 0.05Ω | ±2% + 0.05Ω |
| Moisture Resistance | ±0.2% + 0.05Ω | ±2% + 0.05Ω |
| Thermal Shock | ±0.2% + 0.05Ω | ±2% + 0.05Ω |
| 5X Overload ( 5s ) | ±0.2% + 0.05Ω | ±2% + 0.05Ω |
| Shock | ±0.1% + 0.05Ω | ±0.2% + 0.05Ω |
| Vibration | ±0.1% + 0.05Ω | ±0.2% + 0.05Ω |

Power Derating Curve

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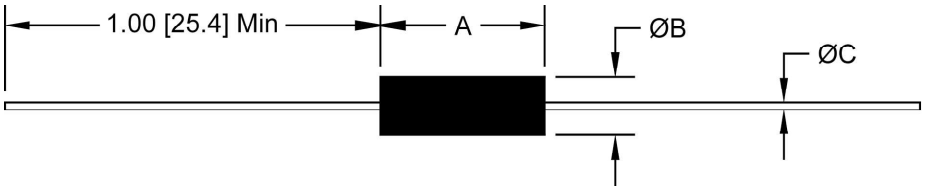
# UT Series

Silicone Coated Power Resistors

## SPECIFICATIONS (continued)




| Type | Wattage Rating ( Watts ) | | Maximum Ohms [2] | Dimensions | | | Maximum Working Voltage | MIL-R-26 / MIL-R-39007 Style |
|---|---|---|---|---|---|---|---|---|
| | U | V | | A ±0.062" [±1.6mm] | B[3] ±0.031" [±0.8mm] | C[1] ±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] | **0.020 [0.5]** 0.025 [0.6] | 20 | |
| UT-1/2 | 0.75 | 0.9 | 7.5k | 0.330 [8.4] | 0.094 [2.4] | **0.020 [0.5]** 0.025 [0.6] | 29 | |
| UT-1A | 1.0 | 1.5 | 10k | 0.406 [10.3] | 0.094 [2.4] | **0.020 [0.5]** 0.025 [0.6] | 52 | RW-70 |
| UT-2 | 1.5 | 2.0 | 12.5k | 0.350 [8.9] | 0.156 [4.0] | **0.032 [0.8]** | 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] | **0.040 [1.0]** 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] | **0.040 [1.0]** 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 | |

[1] 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
[2] For non-inductive windings / divide maximum resistance by 2
[3] For non-inductive winding where R ≤ 0.10 Ohms, Tolerance is +0.063/-0.00 [+1.6/-0.0 mm]

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| 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%


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