

## Features

- Formerly a Riedon™ product
- Resistances 0.02 to 320k Ω
- Resistance tolerances as low as ±0.01 %
- Power rating: 1 to 13 watts
- Excellent pulse handling
- Low TCR: ±20 PPM/°C standard

- Operating Temperature Range: -55 °C to +350 °C ("V" Rating)
- Designed to MIL-R-26 / MIL-R-39007 power ratings
- Silicone coated power resistor
- Non-inductive windings available
- RoHS compliant\*

**BOURNS®**

## UT Series – Riedon™ High Temperature Power Resistors by Bourns

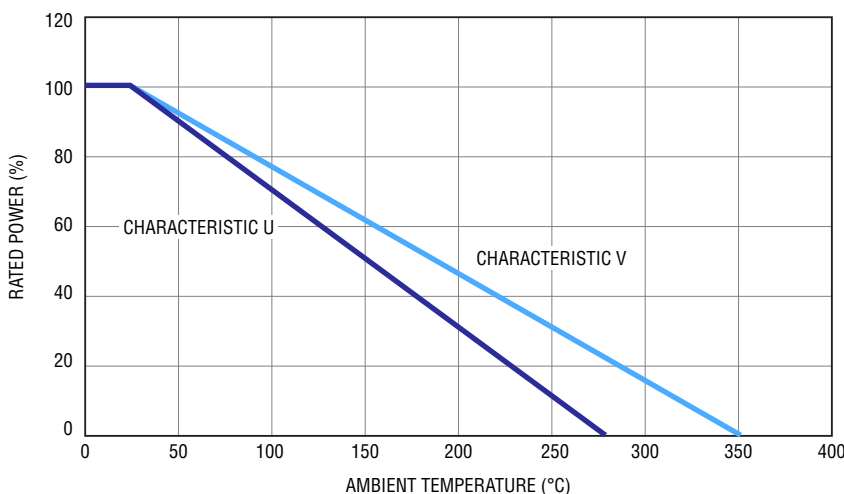
### Specifications

Specification	Value
Tolerances	±0.01 % to ±10 % (1 % Standard)
Temperature Coefficient	>10 Ω: ±20 PPM/°C 1 Ω to 10 Ω: ±50 PPM/°C <1 Ω: Other TCR values available. <a href="#">Contact Bourns.</a>
Temperature Range	Characteristic U: -55 °C to +275 °C Characteristic V: -55 °C to +350 °C
Maximum Working Voltage	$\sqrt{P \cdot R}$
Dielectric Strength	UT1 / UT1/2A / UT1/2 / UT1A: 500 VAC; All Others: 1000 VAC
Construction	Centerless ground ceramic core Matte tin over copper Flame resistant / high temperature / trivalent / inorganic Silicone coating All welded terminations

### Environmental Performance

Specification (MIL-STD 202)	ΔR	
	Characteristic U	Characteristic V
Dielectric	±0.2 % + 0.05 Ω	±0.2 % + 0.05 Ω
Load Life	±1 % + 0.05 Ω	±3 % + 0.05 Ω
Storage	±0.2 % + 0.05 Ω	±2 % + 0.05 Ω
Moisture Resistance	±0.2 % + 0.05 Ω	±2 % + 0.05 Ω
Thermal Shock	±0.2 % + 0.05 Ω	±2 % + 0.05 Ω
5X Overload (5 s)	±0.2 % + 0.05 Ω	±2 % + 0.05 Ω
Shock	±0.1 % + 0.05 Ω	±0.2 % + 0.05 Ω
Vibration	±0.1 % + 0.05 Ω	±0.2 % + 0.05 Ω

### Power Derating Curves



### Additional Information

Click these links for more information:



### How To Order

**UT 5 - 25R F 1 - TR14**

Model \_\_\_\_\_  
 UT (standard)  
 UTN (non-inductive)  
 Power Rating Code \_\_\_\_\_  
 (See Specifications and Dimensions table on page 2)  
 Resistance Code \_\_\_\_\_  
 For values ≤10K Ω,  
 "R" represents decimal point  
 (Example: 25R = 25 Ω)  
 For values >10K Ω,  
 "K" represents decimal point  
 (Example 1K5 = 1.5K Ω)  
 Tolerance \_\_\_\_\_  
 X\*\* = ±0.01 %      D = ±0.5 %  
 W\*\* = ±0.02 %      F = ±1 %  
 V\*\* = ±0.025 %      G = ±2 %  
 U\*\* = ±0.05 %      H = ±3 %  
 B = ±0.1 %          J = ±5 %  
 T = ±0.2 %          K = ±10 %  
 C = ±0.25 %  
 Internal Use \_\_\_\_\_  
 Packaging Options \_\_\_\_\_  
 (Blank) = Bulk Packaging  
 -TR12 = Tape and Reel (12-inch Reel)  
 -TR14 = Tape and Reel (14-inch Reel)  
 (Specific TCR values available upon request.)

\*\*[Contact Bourns](#) for tolerances <±0.01 %.

Note: Characteristic U is standard; [Contact Bourns](#) for Characteristic V.

**CALIFORNIA WARNING:** Can expose you to lead, a carcinogen and reproductive toxicant. See [www.P65Warnings.ca.gov](http://www.P65Warnings.ca.gov)

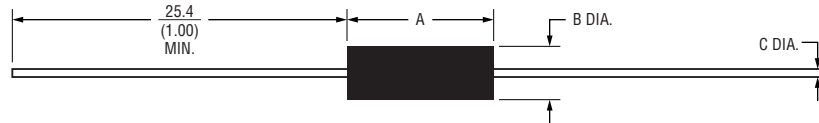
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# UT Series – Riedon™ High Temperature Power Resistors by Bourns



## Specifications and Dimensions



DIMENSIONS:  $\frac{\text{MM}}{\text{(INCHES)}}$

Model & Power Rating Code	Power Rating (W)		Max. Ohms <sup>2</sup> (Ω)	Dimensions			Designed to Mil-R-26 / MIL-R-39007
	U	V		A	B <sup>3</sup>	C <sup>1</sup>	
UT1	0.1	0.25	500	$\frac{3.8 \pm 1.6}{(.150 \pm .062)}$	$\frac{2.0 \pm 0.8}{(.078 \pm .031)}$	$\frac{0.46 \pm 0.05}{(.018 \pm .002)}$	—
UT1/2A	0.4	0.5	2.5k	$\frac{6.4 \pm 1.6}{(.250 \pm .062)}$	$\frac{2.4 \pm 0.8}{(.094 \pm .031)}$	<b><math>\frac{0.5 \pm 0.05}{(.020 \pm .002)}</math></b>	—
UT1/2	0.75	0.9	7.5k	$\frac{8.4 \pm 1.6}{(.330 \pm .062)}$	$\frac{2.4 \pm 0.8}{(.094 \pm .031)}$		$\frac{0.6 \pm 0.05}{(.025 \pm .002)}$
UT1A	1.0	1.5	10k	$\frac{10.3 \pm 1.6}{(.406 \pm .062)}$	$\frac{2.4 \pm 0.8}{(.094 \pm .031)}$	$\frac{0.8 \pm 0.05}{(.032 \pm .002)}$	RW-70
UT2	1.5	2.0	12.5k	$\frac{8.9 \pm 1.6}{(.350 \pm .062)}$	$\frac{4.0 \pm 0.8}{(.156 \pm .031)}$		—
UT2A	2.5	3.0	22k	$\frac{12.7 \pm 1.6}{(.500 \pm .062)}$	$\frac{4.7 \pm 0.8}{(.187 \pm .031)}$		RW-69
UT2B	3.0	3.75	22k	$\frac{14.2 \pm 1.6}{(.560 \pm .062)}$	$\frac{4.7 \pm 0.8}{(.187 \pm .031)}$	<b><math>\frac{1.0 \pm 0.05}{(.040 \pm .002)}</math></b>	RW-79
UT2C	3.0	4.0	40k	$\frac{12.7 \pm 1.6}{(.500 \pm .062)}$	$\frac{6.4 \pm 0.8}{(.250 \pm .031)}$		$\frac{0.8 \pm 0.05}{(.032 \pm .002)}$
UT2E	3.0	3.5	30k	$\frac{12.7 \pm 1.6}{(.500 \pm .062)}$	$\frac{5.1 \pm 0.8}{(.200 \pm .031)}$	$\frac{0.8 \pm 0.05}{(.032 \pm .002)}$	—
UT3	4.0	5.5	45k	$\frac{17.1 \pm 1.6}{(.675 \pm .062)}$	$\frac{6.9 \pm 0.8}{(.270 \pm .031)}$	<b><math>\frac{1.0 \pm 0.05}{(.040 \pm .002)}</math></b>	—
UT5	5.0	6.5	91k	$\frac{22.2 \pm 1.6}{(.875 \pm .062)}$	$\frac{7.9 \pm 0.8}{(.312 \pm .031)}$	$\frac{0.8 \pm 0.05}{(.032 \pm .002)}$	RW-74
UT5A	5.0	6.5	65k	$\frac{24.6 \pm 1.6}{(.970 \pm .062)}$	$\frac{5.2 \pm 0.8}{(.250 \pm .031)}$	$\frac{1.0 \pm 0.05}{(.040 \pm .002)}$	—
UT6	5.0	6.5	95k	$\frac{26.0 \pm 1.6}{(1.025 \pm .062)}$	$\frac{7.9 \pm 0.8}{(.312 \pm .031)}$	$\frac{1.0 \pm 0.05}{(.040 \pm .002)}$	RW-67
UT7A	7.0	9.0	150k	$\frac{35.0 \pm 1.6}{(1.375 \pm .062)}$	$\frac{9.5 \pm 0.8}{(.375 \pm .031)}$		—
UT7B	7.0	9.0	100k	$\frac{35.6 \pm 1.6}{(1.400 \pm .062)}$	$\frac{7.9 \pm 0.8}{(.312 \pm .031)}$	$\frac{0.8 \pm 0.05}{(.032 \pm .002)}$	—
UT7C	7.0	9.0	154k	$\frac{31.0 \pm 1.6}{(1.220 \pm .062)}$	$\frac{7.9 \pm 0.8}{(.312 \pm .031)}$	$\frac{1.0 \pm 0.05}{(.040 \pm .002)}$	—
UT10	10	13	260k	$\frac{45.2 \pm 1.6}{(1.780 \pm .062)}$	$\frac{9.5 \pm 0.8}{(.375 \pm .031)}$		RW-78
UT15	15	—	320k	$\frac{46.0 \pm 1.6}{(1.810 \pm .062)}$	$\frac{13.0 \pm 0.8}{(.510 \pm .031)}$	$\frac{1.5 \pm 0.05}{(.050 \pm .002)}$	—

**Notes:**

<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 **bold** 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 +1.6/-0.0 mm (+0.063/-0.00 ").

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## Standard Package Quantities

Model & Power Rating Code	Bulk	12" Reel	14" Reel
UT1	500	N/A	
UT1/2A UT1/2 UT1A UT2		3000	N/A
UT2A UT2B		1500	
UT2C UT2E UT5A		1000	
UT3 UT5 UT6 UT7C		250	N/A
UT7A UT7B UT10	500		
UT15	25	N/A	

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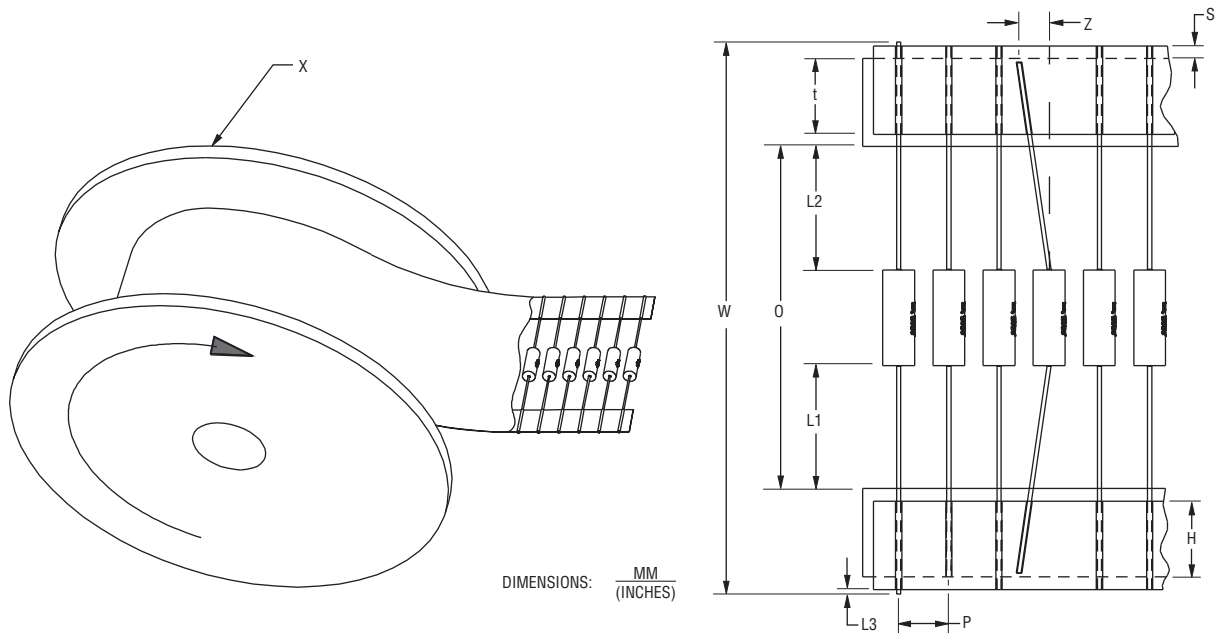
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## Packaging Specifications



Pitch (Inches) Dimension P	Dimension 0 (mm)	Reel Size (Inches) Dimension X	Pitch (Inches) Dimension P	Clean Lead to Clean Lead Eccentricity (Max.) Dimension L1-L2	Lead Extension (Max.) - Zero is Preferred Dimension L3	Lead Bending Dimension Z	Exposed Adhesive (Max.) Dimension S	Tape Width (mm) Dimension t	Lead Sandwich (Min.) Dimension H	Overall Width (Max.) Dimension W
UT1/2A	1.983-2.141	12	0.2	$\frac{1.4}{(.055)}$	$\frac{0.8}{(.031)}$	$\frac{1.0}{(.039)}$	$\frac{0.8}{(.031)}$	$\frac{7.0}{(177.8)}$	t/2	$\frac{123.5}{(4.862)}$
UT1/2										
UT1A										
UT2	1.983-2.141		0.4							
UT2A										
UT2B										
UT2C	2.421-2.579	14	0.4							
UT2E										
UT3										
UT5	3.206-3.364	14	0.4							
UT5A										
UT6										
UT7A										
UT7B										
UT7C										
UT10										

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