

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*

UT Series – Riedon™ High Temperature Power Resistors by Bourns

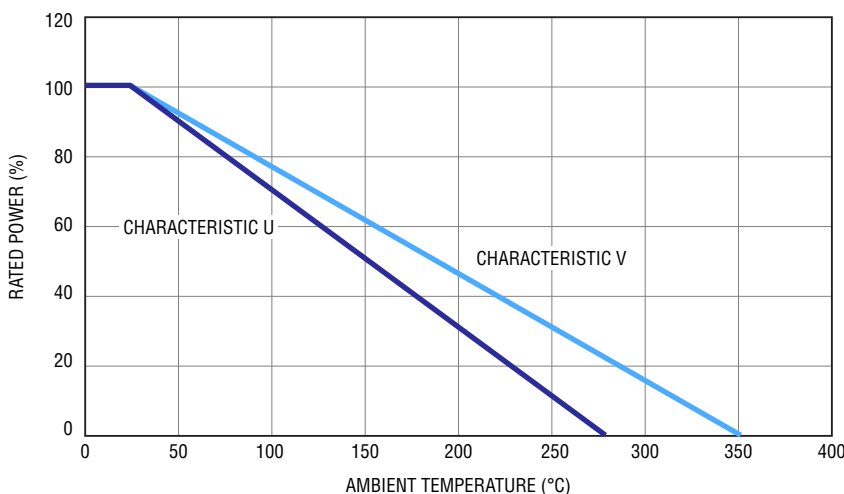
Specifications

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. Contact Bourns.
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.



*RoHS Directive 2015/863, Mar 31, 2015 and Annex. Specifications are subject to change without notice. Users should verify actual device performance in their specific applications. The products described herein and this document are subject to specific legal disclaimers as set forth on the last page of this document, and at www.bourns.com/docs/legal/disclaimer.pdf.

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BOURNS®

Specifications and Dimensions



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

Model & Power Rating Code	Power Rating (W)		Max. Ohms ² (Ω)	Dimensions			Designed to Mil-R-26 / MIL-R-39007
	U	V		A	B ³	C ¹	
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	$\frac{6.4 \pm 1.6}{(.250 \pm .062)}$	$\frac{2.4 \pm 0.8}{(.094 \pm .031)}$	$\frac{0.5 \pm 0.05}{(.020 \pm .002)}$	—
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	$\frac{14.2 \pm 1.6}{(.560 \pm .062)}$	$\frac{4.7 \pm 0.8}{(.187 \pm .031)}$	$\frac{1.0 \pm 0.05}{(.040 \pm .002)}$	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	$\frac{17.1 \pm 1.6}{(.675 \pm .062)}$	$\frac{6.9 \pm 0.8}{(.270 \pm .031)}$	$\frac{1.0 \pm 0.05}{(.040 \pm .002)}$	—
UT5	5.0	6.5	91k	$\frac{22.2 \pm 1.6}{(.875 \pm .062)}$	$\frac{7.9 \pm 0.8}{(.312 \pm .031)}$	$\frac{1.0 \pm 0.05}{(.040 \pm .002)}$	RW-74
UT5A	5.0	6.5	65k	$\frac{24.6 \pm 1.6}{(.970 \pm .062)}$	$\frac{5.2 \pm 0.8}{(.250 \pm .031)}$	$\frac{0.8 \pm 0.05}{(.032 \pm .002)}$	—
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:

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 **bold** 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 +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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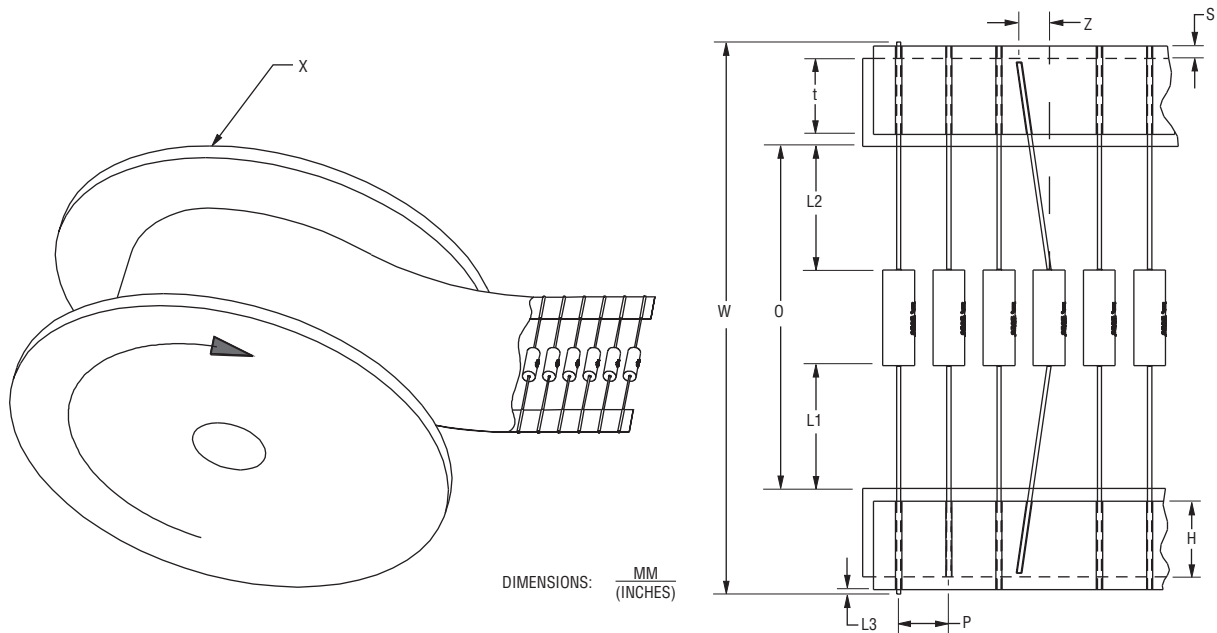
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Packaging Specifications



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Pitch (Inches) Dimension P	Dimension O (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										

REV. 02/26

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