

## Features

- Formerly a Riedon™ product
- Resistances from 0.02 to 260K Ω
- Resistance tolerances as low as ±0.01 %
- Power rating: 1 to 15 watts
- High power rating in a small package
- Excellent pulse handling
- Operating Temp. Range: -55 °C to +250 °C

- Low TCR: ±20 PPM/°C standard
- Designed to Mil-R-26 / MIL-R-39007 power ratings
- Non-inductive windings available
- Flame resistant coating
- RoHS compliant\*

## UB Series – Riedon™ Miniature Silicone Coated Power Resistors by Bourns

### Specifications

Model and Power Rating Code	Power Rating (W)	Max. Ohms <sup>2</sup> (Ω)	Dimensions			Designed to Mil-R-26 / MIL-R-39007
			A	B <sup>3</sup>	C <sup>1</sup>	
UB1	1	3.4k	$\frac{6.4 \pm 1.6}{(.250 \pm .062)}$	$\frac{2.2 \pm 0.8}{(.085 \pm .031)}$	$\frac{0.5 \pm 0.05}{(.020 \pm .002)}$	RW-81 RWR-81
UB2	1.5	7.5k	$\frac{7.9 \pm 1.6}{(.312 \pm .062)}$	$\frac{2.0 \pm 0.8}{(.078 \pm .031)}$	$\frac{0.6 \pm 0.05}{(.025 \pm .002)}$	RWR-82
UB3	2	10k	$\frac{10.3 \pm 1.6}{(.406 \pm .062)}$	$\frac{2.4 \pm 0.8}{(.094 \pm .031)}$	$\frac{0.6 \pm 0.05}{(.025 \pm .002)}$	RW-80 RWR-80
UB3C	3	12.5k	$\frac{8.9 \pm 1.6}{(.350 \pm .062)}$	$\frac{4.0 \pm 0.8}{(.156 \pm .031)}$	$\frac{0.8 \pm 0.05}{(.032 \pm .002)}$	—
UB5	4	25k	$\frac{14.2 \pm 1.6}{(.560 \pm .062)}$	$\frac{4.7 \pm 0.8}{(.187 \pm .031)}$	1.0 ± 0.05 (.040 ± .002)	—
UB5C	5	32k	$\frac{12.7 \pm 1.6}{(.500 \pm .062)}$	$\frac{6.4 \pm 0.8}{(.250 \pm .031)}$		—
UB6	6	50k	$\frac{15.9 \pm 1.6}{(.625 \pm .062)}$	$\frac{6.4 \pm 0.8}{(.250 \pm .031)}$		—
UB10	7	95k	$\frac{22.2 \pm 1.6}{(.875 \pm .062)}$	$\frac{7.9 \pm 0.8}{(.312 \pm .031)}$		RW-84
UB12	10	150k	$\frac{31.0 \pm 1.6}{(1.220 \pm .062)}$	$\frac{7.9 \pm 0.8}{(.312 \pm .031)}$	—	—
UB15	15	260k	$\frac{45.2 \pm 1.6}{(1.780 \pm .062)}$	$\frac{9.5 \pm 0.8}{(.375 \pm .031)}$		—

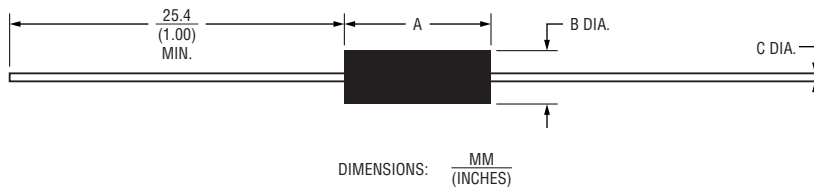
#### Notes:

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

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 ").



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	-55 °C to +250 °C
Maximum Working Voltage	$\sqrt{P * R}$
Dielectric Strength	UB1 / UB2 / UB3: 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

### Additional Information

Click these links for more information:



### How To Order

#### UB 5 - 25R F 1 - TR12

Model \_\_\_\_\_  
 UB (standard)  
 UBN (non-inductive)  
 Power Rating Code \_\_\_\_\_  
 (See Specifications table)  
 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 %.



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

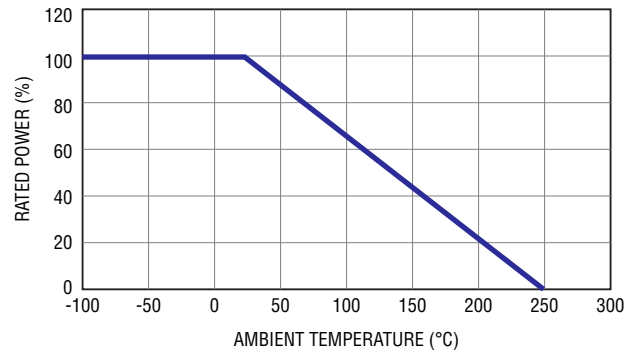
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**Environmental Performance**

Specification (MIL-STD 202)	ΔR
Dielectric	±0.2 % + 0.05 Ω
Load Life	To ±1 % depending on size and resistance value
Storage	±0.2 % + 0.05 Ω
Moisture Resistance	±0.2 % + 0.05 Ω
Thermal Shock	±0.2 % + 0.05 Ω
5X Overload (5 s)	±0.2 % + 0.05 Ω
Shock	±0.1 % + 0.05 Ω
Vibration	±0.1 % + 0.05 Ω

**Power Derating Curve**



**Packaging Quantities**

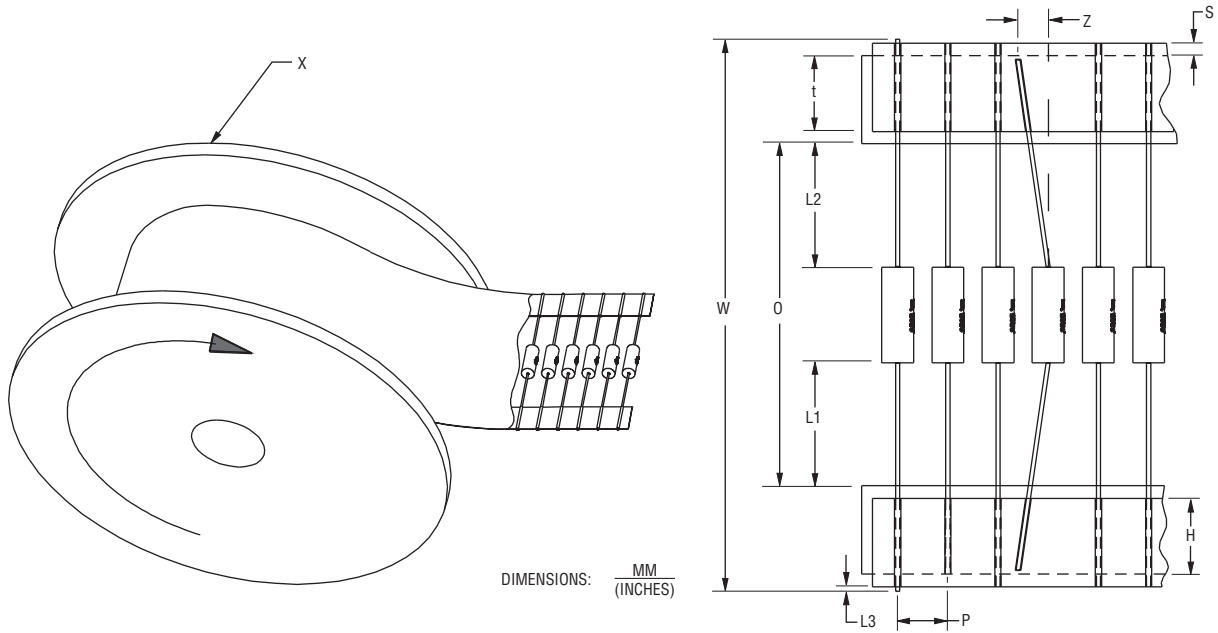
Bourns Model Number	Max. Bulk	12" Reel	14" Reel
UB1 UB2 UB3 UB3C	500	3000	N/A
UB5		1500	N/A
UB5C		1000	N/A
UB6 UB10 UB12	250	N/A	1000
UB15		N/A	500

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Packaging Specifications



Model	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
UB1	1.983-2.141	12	0.2	$\frac{1.4}{(.055)}$	$\frac{0.8}{(.031)}$	$\frac{1.0}{(.039)}$	$\frac{0.8}{(.031)}$	$\frac{7}{(177.8)}$	t/2	$\frac{123.5}{(4.862)}$
UB2										
UB3										
UB3C										
UB5	2.421-2.579	14	0.4	$\frac{1.4}{(.055)}$	$\frac{0.8}{(.031)}$	$\frac{1.0}{(.039)}$	$\frac{0.8}{(.031)}$	$\frac{7}{(177.8)}$	t/2	$\frac{123.5}{(4.862)}$
UB5C										
UB6										
UB10										
UB12	3.206-3.364									

REV. 02/26

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