

# UB Series

Miniature Silicone Coated Power Resistors



- High Power Rating in a Small Package
- Excellent Pulse Handling
- High Temperature: -55°C to +250°C
- Resistances from 0.02 to 260kOhms
- Power Rating 1 to 15Watts
- Resistance Tolerances to  $\pm 0.01\%$
- Low TCR:  $\pm 20\text{ppm/K}$  Standard
- MIL-R-26 / MIL-R-39007 Power Ratings
- Non-Inductive Windings Available
- Flame resistant coating



## SPECIFICATIONS

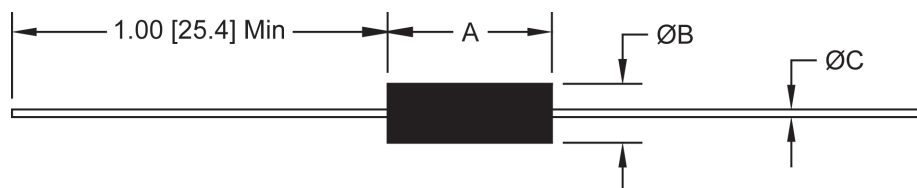
| Type  | Wattage Rating<br>( Watts ) | Maximum<br>Ohms <sup>2</sup> | Dimensions                                  |                                                          |                                                           | Maximum<br>Working<br>Voltage | MIL-R-26 /<br>MIL-R-39007<br>Style |
|-------|-----------------------------|------------------------------|---------------------------------------------|----------------------------------------------------------|-----------------------------------------------------------|-------------------------------|------------------------------------|
|       |                             |                              | A<br>$\pm 0.062"$<br>[ $\pm 1.6\text{mm}$ ] | B <sup>3</sup><br>$\pm 0.031"$<br>[ $\pm 0.8\text{mm}$ ] | C <sup>1</sup><br>$\pm 0.002"$<br>[ $\pm 0.05\text{mm}$ ] |                               |                                    |
| UB-1  | 1                           | 3.4k                         | 0.250 [6.4]                                 | 0.085 [2.2]                                              | <b>0.020 [0.5]</b><br>0.025 [0.6]                         | 33                            | RW-81<br>RWR-81                    |
| UB-2  | 1.5                         | 7.5k                         | 0.312 [7.9]                                 | 0.078 [2.0]                                              | <b>0.020 [0.5]</b><br>0.025 [0.6]                         | 42                            | RWR-82                             |
| UB-3  | 2                           | 10k                          | 0.406 [10.3]                                | 0.094 [2.4]                                              | <b>0.025 [0.6]</b><br>0.020 [0.5]                         | 80                            | RW-80<br>RWR-80                    |
| UB-3C | 3                           | 12.5k                        | 0.350 [8.9]                                 | 0.156 [4.0]                                              | 0.032 [0.8]                                               | 135                           |                                    |
| UB-5  | 4                           | 25k                          | 0.560 [14.2]                                | 0.187 [4.7]                                              | 0.032 [0.8]                                               | 162                           |                                    |
| UB-5C | 5                           | 32k                          | 0.500 [12.7]                                | 0.250 [6.4]                                              | 0.040 [1.0]                                               | 194                           |                                    |
| UB-6  | 6                           | 50k                          | 0.625 [15.9]                                | 0.250 [6.4]                                              | 0.040 [1.0]                                               | 258                           |                                    |
| UB-10 | 7                           | 95k                          | 0.875 [22.2]                                | 0.312 [7.9]                                              | 0.040 [1.0]                                               | 425                           | RW-84                              |
| UB-12 | 10                          | 150k                         | 1.220 [31.0]                                | 0.312 [7.9]                                              | 0.040 [1.0]                                               | 607                           |                                    |
| UB-15 | 15                          | 260k                         | 1.780 [45.2]                                | 0.375 [9.5]                                              | 0.040 [1.0]                                               | 1050                          |                                    |

<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 top value is Standard

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

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



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## SPECIFICATIONS (continued)

| Specification                              | Value                                                                                                                                                             |
|--------------------------------------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Tolerances                                 | $\pm 0.01\%$ to $\pm 10\%$ ( 1% Standard )                                                                                                                        |
| Temperature Coefficient                    | $>10\Omega$ : $\pm 20\text{ppm/K}$<br>$1\Omega$ to $10\Omega$ : $\pm 50\text{ppm/K}$<br>$<1\Omega$ : Call Factory                                                 |
| Temperature Range                          | $-55^{\circ}\text{C}$ to $+250^{\circ}\text{C}$                                                                                                                   |
| Dielectric Strength                        | 500 VAC : UB-1 / UB-2 / UB-3<br>1000 VAC : All Others                                                                                                             |
| Construction                               | Centerless ground ceramic core<br>Matte Tin over Copper<br>Flame resistant / High temperature / trivalent / inorganic Silicone coating<br>All welded terminations |
| Environmental Performance<br>(MIL-STD 202) | $\Delta R$                                                                                                                                                        |
| Dielectric                                 | $\pm 0.2\% + 0.05\Omega$                                                                                                                                          |
| Load Life                                  | To $\pm 1\%$ Depending on Size and Resistance Value                                                                                                               |
| 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



## Ordering Information

For Non-Inductive Windings / insert the letter "N" ( i.e. UBN-5 )

Part Description: Part Type - Resistance - Tolerance - TCR ( If not standard )

Example: UB-3 10 Ohm 1%