ARC3 High Voltage Precision Resistors

Designed for applications such as voltage dividers, medical and measuring equipment, electrostatic and current limiting devices where high stability, low TCR and high ohmic values are required.

- Non Inductive, Thick Film
- Low TCR
- RoHS Compliant
- High Voltage to 96 kVdc
- Tolerance as low as ± 0.1%

Characteristics

Operating temperature:
-55°C to +225°C

Tolerance (Code):
± 0.1% (B), ± 0.25% (C), ± 0.5% (D), ± 1% (F), ± 2% (G), ± 5% (J), ± 10% (K)

Temperature Coefficient (Code):
± 15ppm/°C (A), ± 25ppm/°C (E), ± 50ppm/°C (F), ± 100ppm/°C (S), ± 200ppm/°C (L)

TCR stated is measure at +25°C and +85°C. For TCR outside this range, please contact ARCOL.

Insulation resistance:
> 10,000Mohm 500 Volts @ 25°C, 75% relative humidity

Dielectric strength:
> 1000 Volt 25°C, 75% relative humidity

Thermal shock:
ΔR/R 0.25% max

Overload:
ΔR/R 0.25% max 1.5 x Pnom, 5 sec (do not exceed 1.5 x V max)

Moisture resistance:
ΔR/R 0.25% max

Load life:
ΔR/R 0.5% max 1000 hours at rated load

Conformal silicone coating as standard for operation in air. For oil and potted applications, ARCOL would suggest polymide coating. Please contact ARCOL for further details.

Electrical Specifications

<table>
<thead>
<tr>
<th>Type</th>
<th>P Watt</th>
<th>U kV dc</th>
<th>Resistance range available at Tolerance / TCR</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>40°C</td>
<td></td>
<td>± 0.1-10% 15 ppm/°C</td>
</tr>
<tr>
<td>ARC3-11</td>
<td>11</td>
<td>24</td>
<td>50K-500M</td>
</tr>
<tr>
<td>ARC3-23</td>
<td>23</td>
<td>48</td>
<td>100K-1G</td>
</tr>
<tr>
<td>ARC3-54</td>
<td>54</td>
<td>48</td>
<td>100K-1G</td>
</tr>
<tr>
<td>ARC3-71</td>
<td>71</td>
<td>64</td>
<td>100K-1G</td>
</tr>
<tr>
<td>ARC3-105</td>
<td>105</td>
<td>96</td>
<td>150K-2G</td>
</tr>
</tbody>
</table>

The information contained herein does not form part of a contract and is subject to change without notice. ARCOL operate a policy of continual product development, therefore, specifications may change.

It is the responsibility of the customer to ensure that the component selected from our range is suitable for the intended application. If in doubt please ask ARCOL.
**Ordering Procedure**

**Standard Resistor** To specify standard: Series, Termination Style, Coating Type, Ohmic Value, Tolerance Code and Temperature Coefficient Code, e.g.: ARC3-23 20M D E

**Tolerance (Code)** ±0.1% (B), ±0.25% (C), ±0.5% (D), ±1% (F), ±2% (G), ±5% (J), ±10% (K)

**Temperature Coefficient (Code)** ±15ppm/°C (A), ±25ppm/°C (E), ±50ppm/°C (F), ±100ppm/°C (S), ±200ppm/°C (L)

For Polymide coating add DP: e.g.: ARC3-23 DP 20M D E

**Dimensions (mm)**

<table>
<thead>
<tr>
<th>Type</th>
<th>L</th>
<th>B</th>
<th>C</th>
<th>D</th>
<th>G</th>
</tr>
</thead>
<tbody>
<tr>
<td>ARC3-11</td>
<td>81 ± 1</td>
<td>14.5 ± 0.2</td>
<td>13.5 ± 0.5</td>
<td>10.0 ± 0.2</td>
<td>M4</td>
</tr>
<tr>
<td>ARC3-23</td>
<td>156 ± 2</td>
<td>14.5 ± 0.2</td>
<td>13.5 ± 0.5</td>
<td>10.0 ± 0.2</td>
<td>M4</td>
</tr>
<tr>
<td>ARC3-54</td>
<td>160 ± 2</td>
<td>31.5 ± 0.2</td>
<td>30.5 ± 0.5</td>
<td>18.0 ± 0.2</td>
<td>M8</td>
</tr>
<tr>
<td>ARC3-71</td>
<td>210 ± 2.5</td>
<td>31.5 ± 0.2</td>
<td>30.5 ± 0.5</td>
<td>18.0 ± 0.2</td>
<td>M8</td>
</tr>
<tr>
<td>ARC3-105</td>
<td>308 ± 3.5</td>
<td>31.5 ± 0.2</td>
<td>30.5 ± 0.5</td>
<td>18.0 ± 0.2</td>
<td>M8</td>
</tr>
</tbody>
</table>