MOLDED PRECISION CARBON FILM RESISTORS

Meet or exceed all requirements of Specification MIL-R-10509C for Characteristic B

Full rated load at 70°C ambient
High degree of stability and reliability
Precision resistances — ±1% tolerance
Tough molded coating • Fully insulated

Specifications

<table>
<thead>
<tr>
<th>TI type number</th>
<th>wattage rating — watts</th>
<th>MIL designation</th>
<th>standard resistance ranges</th>
<th>max. recommended voltage — volts</th>
<th>body length — inches</th>
<th>body diameter — inches</th>
<th>lead length — inches</th>
<th>lead diameter — inches</th>
<th>avg. weight per 100 unpacked units — lbs.</th>
</tr>
</thead>
<tbody>
<tr>
<td>CDM½ 3/32</td>
<td>1/8</td>
<td>RN68B</td>
<td>10 Ohm-1 Meg</td>
<td>350</td>
<td>0.406 (±0.015)</td>
<td>0.140 (±0.015)</td>
<td>1.500 (±0.062)</td>
<td>0.025</td>
<td>22</td>
</tr>
<tr>
<td>CDM½ 1/4</td>
<td>1/4</td>
<td>RN68B</td>
<td>10 Ohm-1 Meg</td>
<td>500</td>
<td>0.585 (±0.015)</td>
<td>0.200 (±0.020)</td>
<td>1.500 (±0.062)</td>
<td>0.025</td>
<td>22</td>
</tr>
<tr>
<td>CDM½ 5/32</td>
<td>3/32</td>
<td>RN70B</td>
<td>10 Ohm-5 Meg</td>
<td>750</td>
<td>0.750 (±0.015)</td>
<td>0.250 (±0.020)</td>
<td>1.450 (±0.062)</td>
<td>0.032</td>
<td>20</td>
</tr>
<tr>
<td>CDM 1</td>
<td>1</td>
<td>RN75B</td>
<td>10 Ohm-10 Meg</td>
<td>1000</td>
<td>1.062 (±0.020)</td>
<td>0.375 (±0.025)</td>
<td>1.500 (±0.062)</td>
<td>0.032</td>
<td>20</td>
</tr>
<tr>
<td>CDM 2</td>
<td>2</td>
<td>RN80B</td>
<td>50 Ohm-45 Meg</td>
<td>2000</td>
<td>2.187 (±0.020)</td>
<td>0.375 (±0.025)</td>
<td>1.500 (±0.062)</td>
<td>0.032</td>
<td>20</td>
</tr>
</tbody>
</table>

Commercial Symbolization

Standard symbolization includes TI Type Number, Resistance Value, and Tolerance.

Space limitations on the 1/8 watt resistor require that the type designation be abbreviated to C1/8.

Military Symbolization

Per MIL-R-10509 — Resistors, Fixed Film (High Stability)

All resistors are calibrated at 25°C. Resistance values are available expressed to a maximum of three significant figures.

Modifications Available Upon Request

± ½, 2 or 5% Resistance Tolerance
Resistance Values Outside Published Ranges

TI carbon film resistors are manufactured under license agreement with the Western Electric Company.
TYPICAL CHARACTERISTICS

Test
- Temperature Cycling per MIL-R-10509C (4.6.4)
- Low Temperature Operation per MIL-R-10509C (4.6.5)
- Short Time Overload per MIL-R-10509C (4.6.6)
- Effect of Soldering per MIL-R-10509C (4.6.10)
- Insulation Resistance per MIL-R-10509C (4.6.9)
- Acceleration per MIL-R-10509C (4.6.14)
- Shock per MIL-R-10509C (4.6.15)
- Vibration, High Frequency per MIL-R-10509C (4.6.16)
- Shelf Life, Change per Year
- Voltage Coefficient

Average performance of TI resistors

- +0.05 to -0.15%
- less than ±0.10%
- less than ±0.05%
- greater than 100,000 megohms

MIL-R-10509C limits

- ±0.50%
- ±0.50%
- ±0.75%
- ±0.50%

*Unless otherwise noted, data is % change in total resistance. The two sigma limits were used as the range indications in all tests shown.