Features
- Recommended for reflow soldering
- Rotor design compatible with pick and place and automatic adjustment equipment
- 3 mm size meets EIA/EIAJ standard trimmer footprint
- RoHS compliant*

For trimmer applications/processing guidelines, click here

TC33 - 3 mm SMD Trimpot® Trimming Potentiometer

Electrical Characteristics

Standard Resistance Range

<table>
<thead>
<tr>
<th>Resistance Range</th>
<th>Min.</th>
<th>Max.</th>
</tr>
</thead>
<tbody>
<tr>
<td>100 ohms to 1 megohm</td>
<td>100 ohms</td>
<td>1 megohm</td>
</tr>
</tbody>
</table>

Resistance Tolerance

±25% std.

Absolute Minimum Resistance

≤ 1 K Ohms

> 1 K Ohms

≤ 20 ohms max.

≤ 2% max. of TR

Resolution

Essentially infinite

Adjustment Angle

270 ° ± 20 °

Environmental Characteristics

Power Rating (50 VDC max.)

70 °C .................................... 0.15 watt

Temperature Range

-40 °C to +100 °C

Temperature Coefficient

±250 ppm/°C

Humidity

±5 %

Load Life

@ 70 °C rated power 1000 hours

TRS ±5 %

Rotational Cycling

20 cycles, TRS ±10 %

Physical Characteristics

Torque

0.98-11.76 mN-m max.

Mechanical Angle

Continuous rotation

Standard Packaging

2500 pcs./7" reel

Adjustment Tool

See note(1)

Pushing Static Force

<4.9 N

(1) Use an adjustment tool with the following recommended measurements:

1.7 mm (.067 in.) cross slot

The recommended adjustment tool size is not available from Bourns. Please contact a Bourns representative for further information.

Cautions

- Aqueous cleaning not recommended
- Flow soldering not recommended; use reflow soldering
- Model TC33 is not designed to be used with flux - use care with flux when soldering
- It is not recommended to adjust the Model TC33X-1 past the effective rotary angle.
- If an excessive force is applied to the sliding part (the operating shaft) when adjusting the resistance value, the sliding part may be deformed or broken.


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Standard Resistance Table

<table>
<thead>
<tr>
<th>Resistance (Ohms)</th>
<th>Resistance Code</th>
</tr>
</thead>
<tbody>
<tr>
<td>100</td>
<td>101</td>
</tr>
<tr>
<td>200</td>
<td>201</td>
</tr>
<tr>
<td>500</td>
<td>501</td>
</tr>
<tr>
<td>1,000</td>
<td>102</td>
</tr>
<tr>
<td>2,000</td>
<td>202</td>
</tr>
<tr>
<td>5,000</td>
<td>502</td>
</tr>
<tr>
<td>10,000</td>
<td>103</td>
</tr>
<tr>
<td>20,000</td>
<td>203</td>
</tr>
<tr>
<td>50,000</td>
<td>503</td>
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<tr>
<td>100,000</td>
<td>104</td>
</tr>
<tr>
<td>200,000</td>
<td>204</td>
</tr>
<tr>
<td>500,000</td>
<td>504</td>
</tr>
<tr>
<td>1,000,000</td>
<td>105</td>
</tr>
</tbody>
</table>

Popular distribution resistance values listed in boldface.

How To Order

<table>
<thead>
<tr>
<th>Model</th>
<th>TC33 X - 1 - 103 E</th>
</tr>
</thead>
<tbody>
<tr>
<td>Style</td>
<td></td>
</tr>
<tr>
<td>Standard Product Indicator</td>
<td>-1 = Continuous Rotation -2 = Rotational Stop</td>
</tr>
<tr>
<td>Resistance Code</td>
<td>Embossed Tape Designator</td>
</tr>
<tr>
<td></td>
<td>E = 2500 pcs./7” Reel</td>
</tr>
<tr>
<td></td>
<td>G = 9000 pcs./13” Reel</td>
</tr>
</tbody>
</table>
| Tape and reel material meets Antistatic ANSI/ESD 5541-2003 packaging standards.

Recommended Storage Conditions

Temperature ......................+5 °C to +35 °C
Humidity......................... 45 % to 85 % RH

Recommended Reflow Solder Profile

<table>
<thead>
<tr>
<th>Temperature (°C)</th>
<th>Time (Seconds)</th>
</tr>
</thead>
<tbody>
<tr>
<td>260 °C (MAX.)</td>
<td>40 SEC. (MAX.)</td>
</tr>
<tr>
<td>230 °C</td>
<td>70 SEC. (REF.)</td>
</tr>
<tr>
<td>150 °C (REF.)</td>
<td>10 SEC. (REF.)</td>
</tr>
<tr>
<td>ROOM TEMPERATURE</td>
<td>180 SEC. (REF.)</td>
</tr>
</tbody>
</table>

DIMENSIONS: MM (INCHES)
TOLERANCES: ± 0.3 (±0.012) EXCEPT WHERE NOTED

TC33 - 3 mm SMD Trimpot® Trimming Potentiometer

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