



**THE DATASHEET OF
TC33X-1-104E**










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

Additional Information

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Electrical Characteristics

Standard Resistance Range 100 ohms to 1 megohm
 (see standard resistance table)
 Resistance Tolerance ±25 % std.
 Absolute Minimum Resistance
 ≤ 1 K Ohms 20 ohms max.
 > 1 K Ohms 2 % max. of TR
 Contact Resistance Variation 5 % max.
 Resolution Essentially infinite
 Adjustment Angle 270 ° ± 20 °

Environmental Characteristics

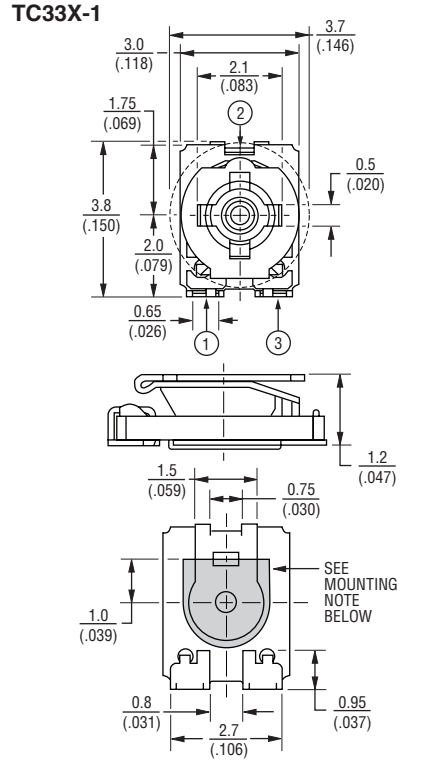
Power Rating (50 VDC max.)
 70 °C 0.15 watt
 Temperature Range -40 °C to +100 °C
 Temperature Coefficient ±250 ppm/°C
 Humidity +40 °C ± 2 °C, 90-95 % RH
 TRS max. ±5 %
 Load Life
 @ 70 °C rated power 1000 hours
 TRS ±5 %
 Rotational Cycling
 20 cycles, TRS ±10 %

Physical Characteristics

Torque 0.98-11.76 mN-m max.
 Mechanical Angle Continuous rotation
 for Model TC33X-1
 Marking Part marking code
 Standard Packaging 2500 pcs./7 " reel
 Adjustment Tool See note⁽¹⁾
 Pushing Static Force <4.9 N

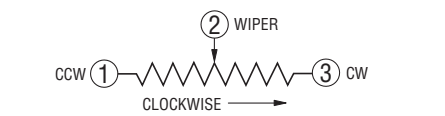
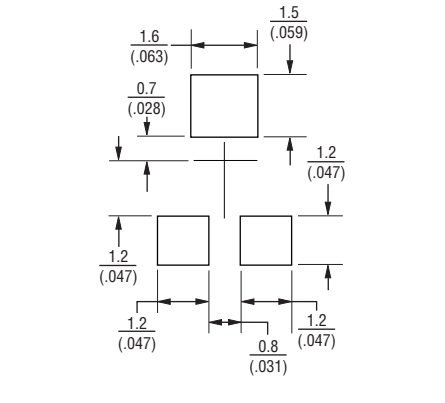
⁽¹⁾ Use an adjustment tool with the following recommended measurements:
 1.7 mm (.067 in.) cross slot
 The recommended adjustment tool size is not available from Bourns. Please contact a Bourns representative for further information.

Product Dimensions

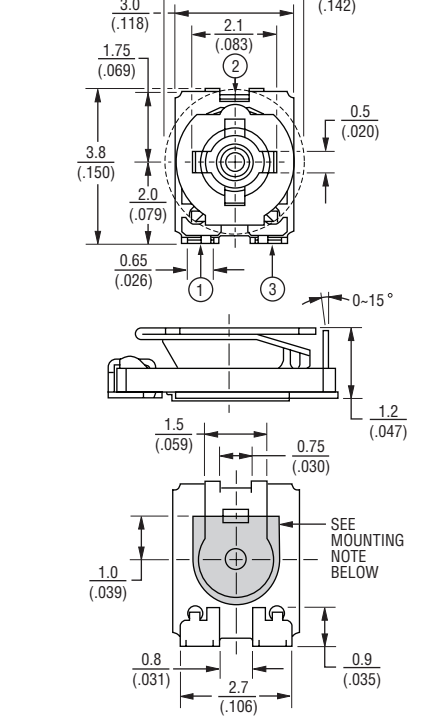


Mounting Note:
 The gray area can be used to apply cement to hold the unit in place during board processing, if required.

Recommended Land Pattern

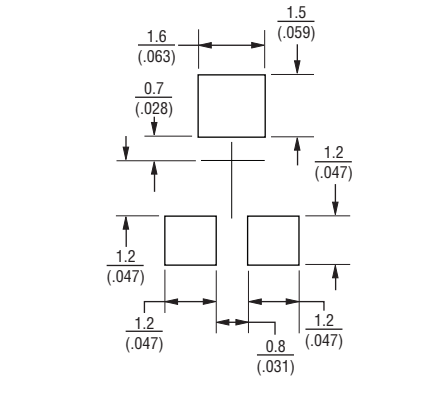


TC33X-2



Mounting Note:
 The gray area can be used to apply cement to hold the unit in place during board processing, if required.

Recommended Land Pattern



DIMENSIONS: $\frac{\text{MM}}{\text{(INCHES)}}$
 TOLERANCES: ± $\frac{0.3}{(.010)}$ EXCEPT WHERE NOTED



*RoHS Directive 2015/863, Mar. 31, 2015 and Annex
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TC33 – 3 mm SMD Trimpot® Trimming Potentiometer

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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.

Standard Resistance Table

| Resistance (Ohms) | Resistance Code |
|-------------------|-----------------|
| 100 | 101 |
| 200 | 201 |
| 500 | 501 |
| 1,000 | 102 |
| 2,000 | 202 |
| 5,000 | 502 |
| 10,000 | 103 |
| 20,000 | 203 |
| 50,000 | 503 |
| 100,000 | 104 |
| 200,000 | 204 |
| 500,000 | 504 |
| 1,000,000 | 105 |

Popular distribution resistance values listed in boldface.

How To Order

TC33 X - 1 - 103 E

Model _____
 Style _____
 Standard Product Indicator _____
 -1 = Continuous Rotation
 -2 = Rotational Stop
 Resistance Code _____
 Embossed Tape Designator _____
 E = 2500 pcs./7" Reel
 G = 9000 pcs./13" Reel

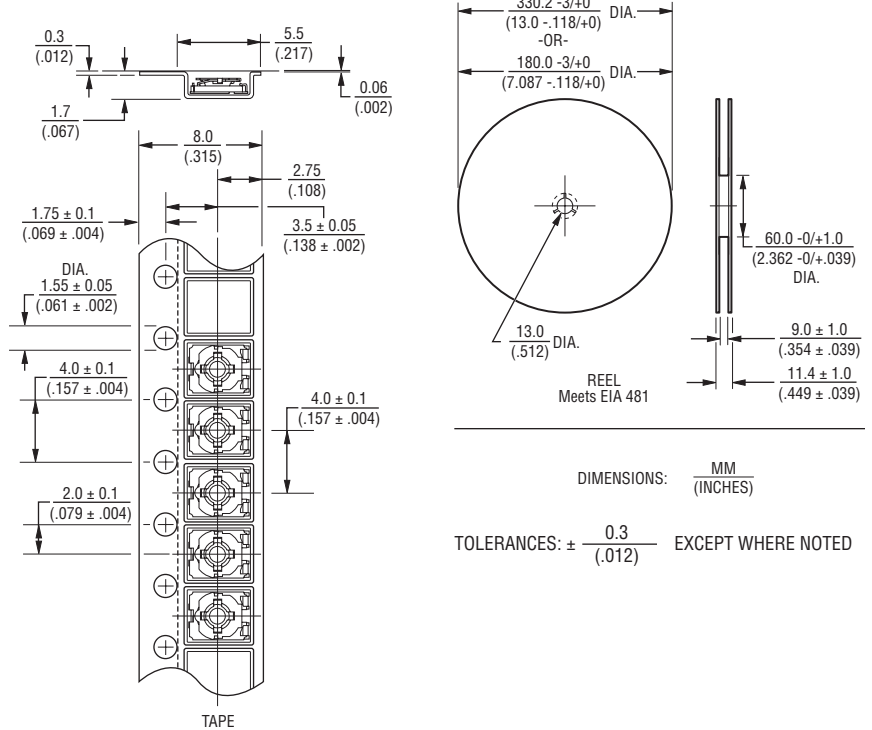
Tape and reel material meets Antistatic ANSI/ESD 5541-2003 packaging standards.

Recommended Storage Conditions

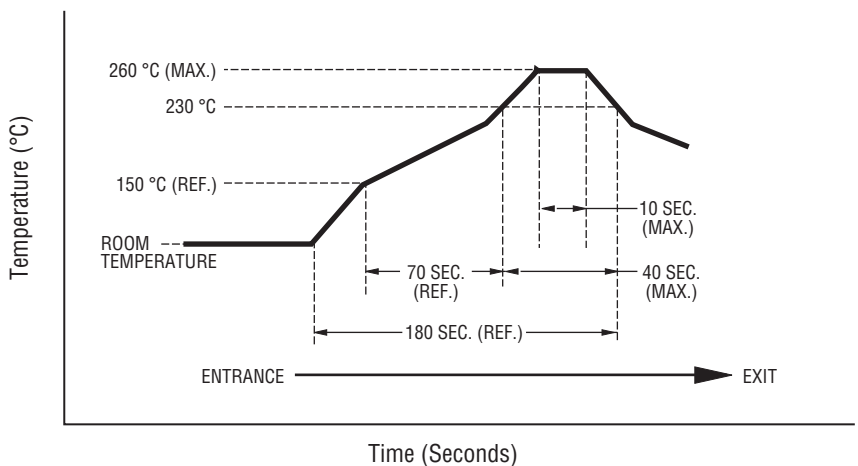
Temperature+5 °C to +35 °C
 Humidity..... 45 % to 85 % RH

Packaging Specifications

TC33X-1, -2



Recommended Reflow Solder Profile



REV. 08/19

Specifications are subject to change without notice.

Users should verify actual device performance in their specific applications.

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