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

Click these links for more information:

PRODUCT SELECTOR | TECHNICAL LIBRARY | INVENTORY | SAMPLES | CONTACT

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 %

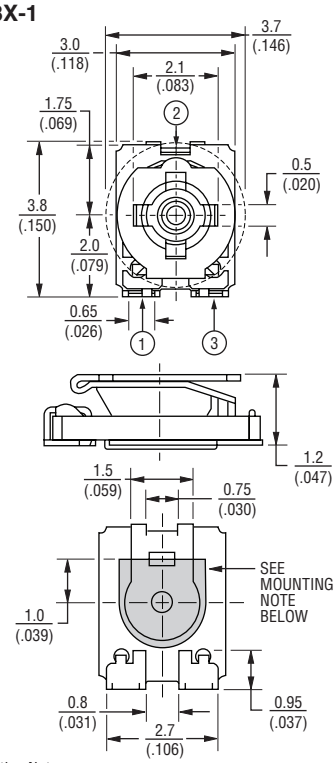
Physical Characteristics

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.

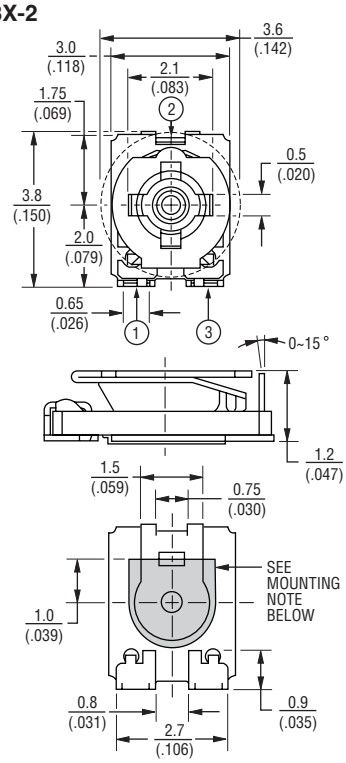
Product Dimensions

TC33X-1



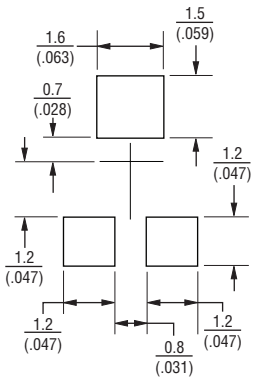
Mounting Note:
The gray area can be used to apply cement to hold the unit in place during board processing, if required.

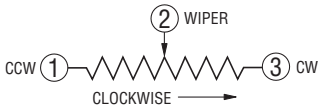
TC33X-2



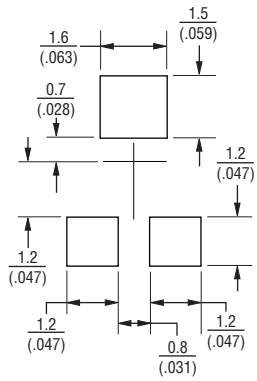
Mounting Note:
The gray area can be used to apply cement to hold the unit in place during board processing, if required.

Recommended Land Pattern





Recommended Land Pattern



DIMENSIONS: MM / (INCHES)

TOLERANCES: ± 0.3 (.010) EXCEPT WHERE NOTED

WARNING Cancer and Reproductive Harm
www.P65Warnings.ca.gov

*RoHS Directive 2015/863, Mar. 31, 2015 and Annex
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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

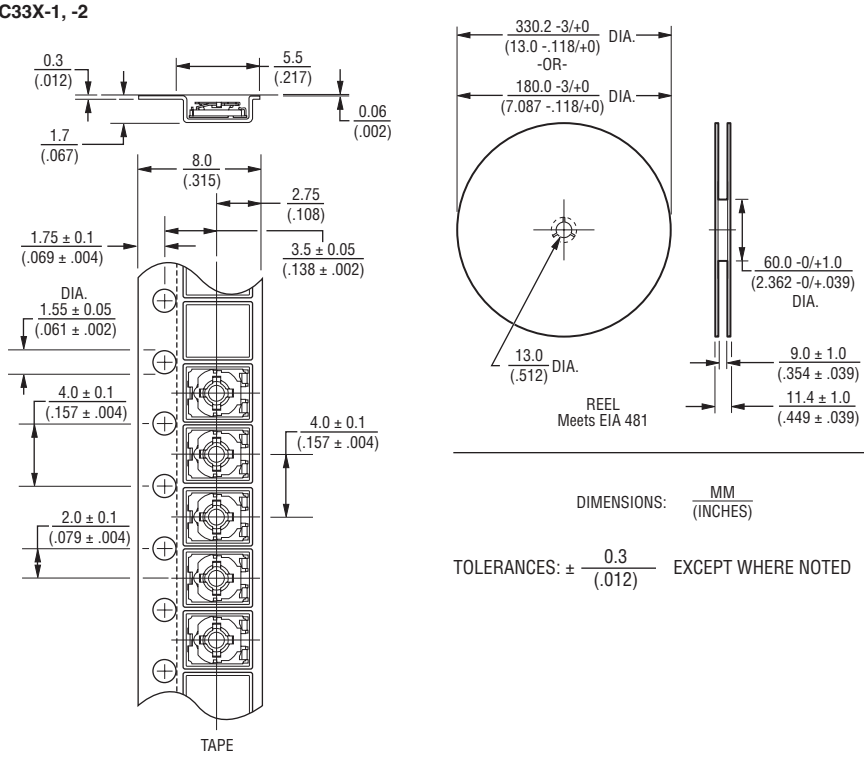
Tape and reel material meets Antistatic ANSI/ ESD 5541-2003 packaging standards.

Recommended Storage Conditions

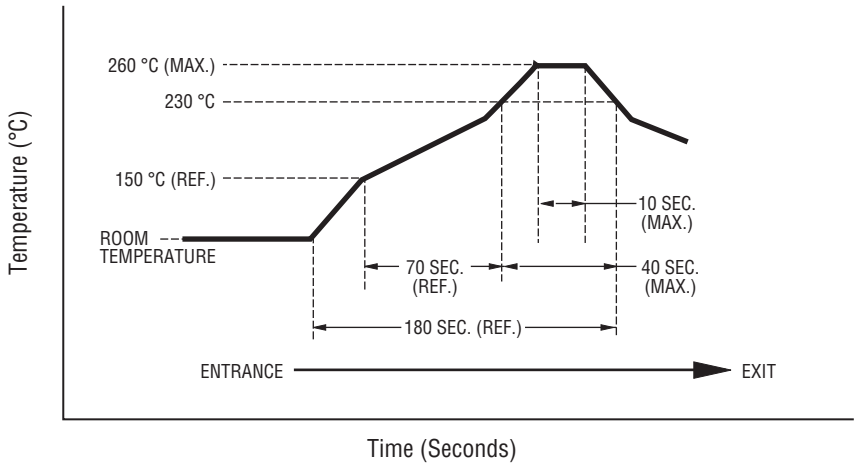
Temperature .....+5 °C to +35 °C
Humidity..... 45 % to 85 % RH

Packaging Specifications

TC33X-1, -2



Recommended Reflow Solder Profile



REV. 08/19

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