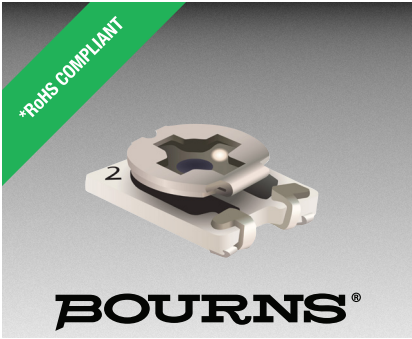




**THE DATASHEET OF  
TC42X-2-501E**





**BOURNS®**

**Features**

- Single-turn cermet/open-frame
- 2 mm size meets EIA/EIAJ standard trimmer footprint
- RoHS compliant\*
- For trimmer applications/processing guidelines, [click here](#)

**Additional Information**

Click these links for more information:







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**TC42 – 2 mm SMD Trimpot® Trimming Potentiometer**

**Electrical Characteristics**

Standard Resistance Range ..... 100 ohms to 1 megohm  
 (see standard resistance table)  
 Resistance Tolerance ..... ±25 % std.  
 Absolute Minimum Resistance  
 ≤ 1K Ohms ..... 20 ohms max.  
 > 1K Ohms ..... 2 % max. of TR  
 Contact Resistance Variation ..... 5 % max.  
 Resolution ..... Essentially infinite  
 Adjustment Angle ..... 240 ° ±20 °

**Environmental Characteristics**

Power Rating (50 VDC max.)  
 70 °C ..... 0.1 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 hrs.  
 TRS ±5 %  
 Rotational Cycling ..... 20 cycles, TRS ±10 %  
 Moisture Sensitivity Level ..... N/A

**Physical Characteristics**

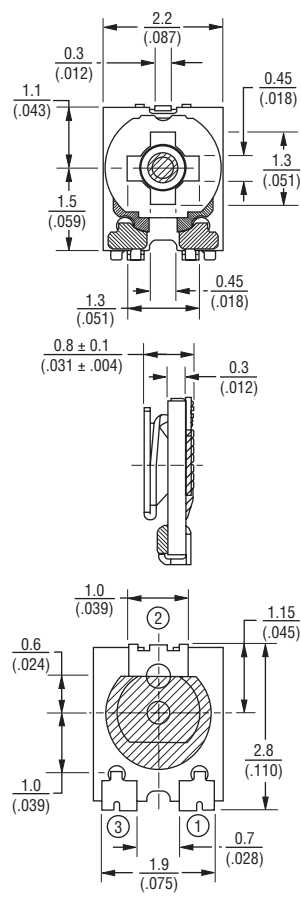
Torque ..... 0.49 - 7.84 mN-m max.  
 Mechanical Angle ..... Continuous rotation  
 Marking ..... Part marking code  
 Standard Packaging ..... 3000 pcs./7" reel  
 Adjustment Tool ..... See note<sup>(1)</sup>  
 Pushing Static Force ..... <4.9 N

<sup>(1)</sup> Use an adjustment tool with the following recommended measurements:  
 • 1.2 mm (.047 in.) blade slot  
 • 0.2 mm (.008 in.) slot width  
 The recommended adjustment tool size is not available from Bourns. Please contact a Bourns representative for further information.

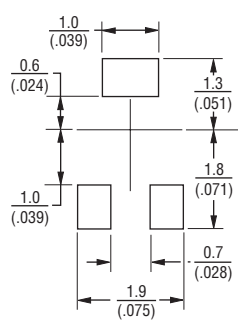
**Cautions**

- Aqueous cleaning not recommended
- Flow soldering not recommended; use reflow soldering
- Model TC42 is not designed to be used with flux - use care with flux when soldering
- It is not recommended to adjust the Model TC42X-2 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.

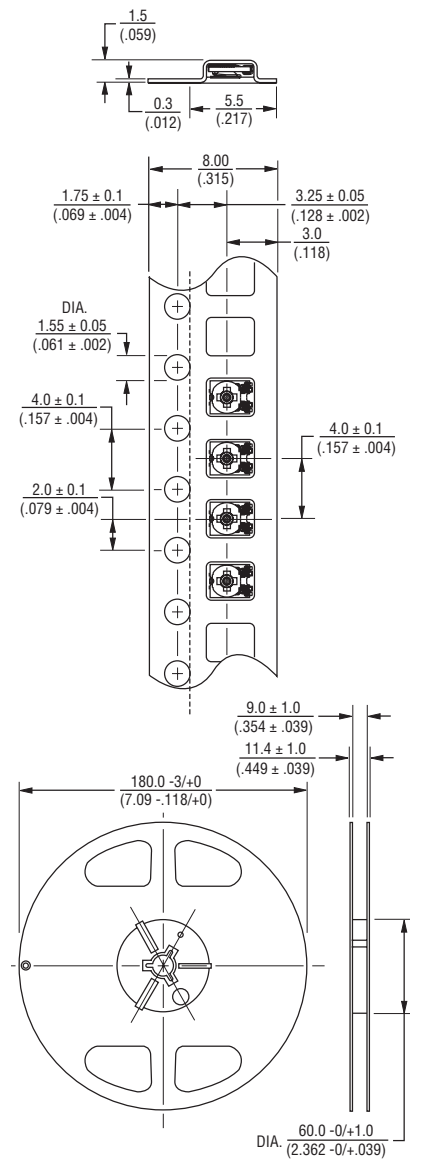
**Product Dimensions**



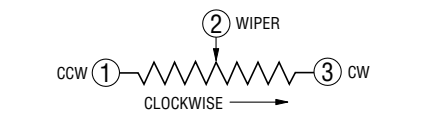
**Recommended Land Pattern**




**Packaging Specifications**



DIMENSIONS:  $\frac{\text{MM}}{\text{(INCHES)}}$   
 TOLERANCES: ±  $\frac{0.3}{(0.01)}$  EXCEPT WHERE NOTED



\*RoHS Directive 2015/863, Mar. 31, 2015 and Annex  
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**WARNING Cancer and Reproductive Harm**  
[www.P65Warnings.ca.gov](http://www.P65Warnings.ca.gov)

# TC42 – 2 mm SMD Trimpot® Trimming Potentiometer

**BOURNS®**

## How To Order

**TC42 X - 2 - 103 E**

Model \_\_\_\_\_  
 Style \_\_\_\_\_  
 Standard Product Indicator \_\_\_\_\_  
 -2 = Cross Slot Rotor  
 Resistance Code \_\_\_\_\_  
 Embossed Tape Designator \_\_\_\_\_  
 E = 3000 pcs./7" Reel (Standard)  
 Tape and reel material meets Antistatic ANSI/  
 ESD 5541-2003 packaging standards.

## Recommended Storage Conditions

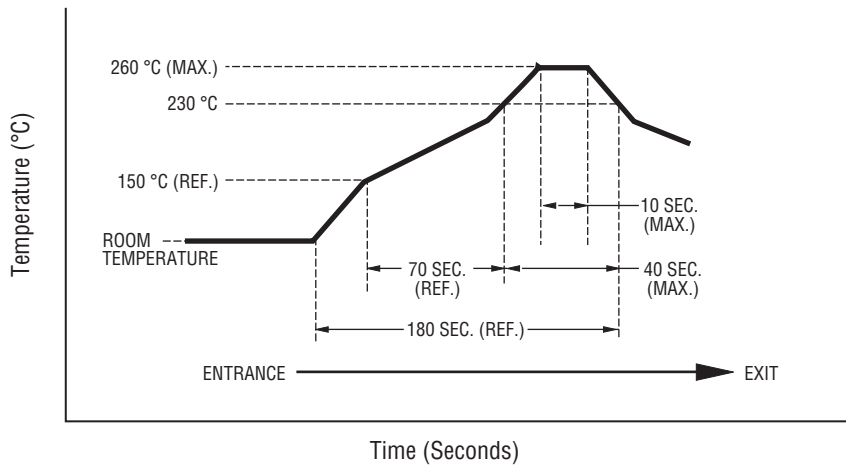
Temperature ..... +5 °C to +35 °C  
 Humidity..... 45 % to 85 % RH

## Standard Resistance Table

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

Popular distribution values listed in boldface.

## Recommended Reflow Solder Profile



**BOURNS®**

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Users should verify actual device performance in their specific applications.

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