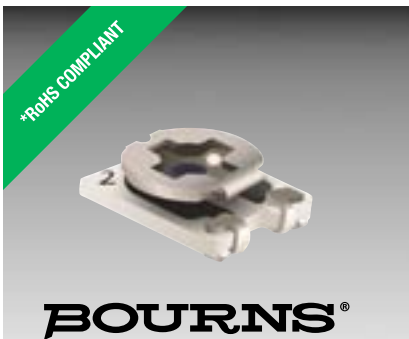




## Features

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

## TC42 - 2 mm SMD Trimpot® Trimming Potentiometer

### Electrical Characteristics

Standard Resistance Range  
 ..... 100 ohms to 1 megohm  
 (see standard resistance table)  
 Resistance Tolerance .....  $\pm 25\%$  std.  
 Absolute Minimum Resistance  
 $\leq 1\text{K Ohms}$  ..... 20 ohms max.  
 $> 1\text{K Ohms}$  ..... 2 % max. of TR  
 Contact Resistance Variation ..... 5 % max.  
 Resolution ..... Essentially infinite  
 Adjustment Angle .....  $240^\circ \pm 20^\circ$

### Environmental Characteristics

Power Rating (50 VDC max.)  
 $70^\circ\text{C}$  ..... 0.1 watt  
 Temperature Range .....  $-40^\circ\text{C}$  to  $+100^\circ\text{C}$   
 Temperature Coefficient .....  $\pm 250\text{ ppm}/^\circ\text{C}$   
 Humidity .....  $+40^\circ\text{C} \pm 2^\circ\text{C}$ , 90-95 % RH  
 TRS Max .....  $\pm 5\%$   
 Load Life .... @  $70^\circ\text{C}$  rated power 1000 hrs.  
 TRS  $\pm 5\%$   
 Rotational Cycling .... 20 cycles, TRS  $\pm 10\%$   
 Moisture Sensitivity Level ..... N/A  
 ESD Classification (HBM) ..... 2

### 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 .....  $< 4.9\text{ N}$

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

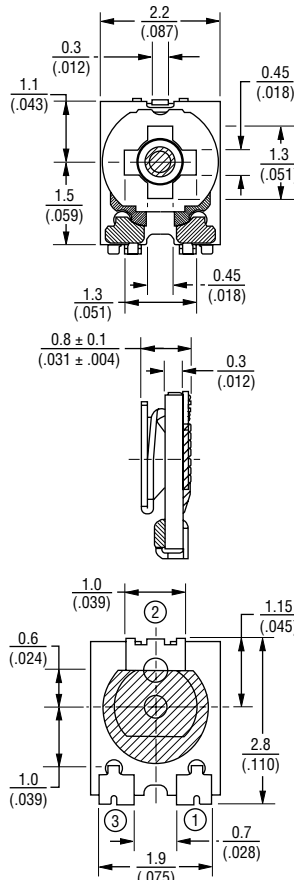
- 1.2 mm (.047 in.) blade slot
- 0.2 mm (.008 in.) slot width

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

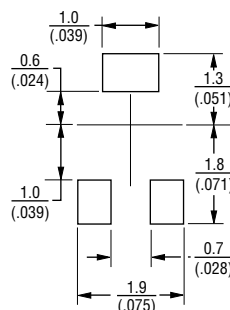
### Cautions

- 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.

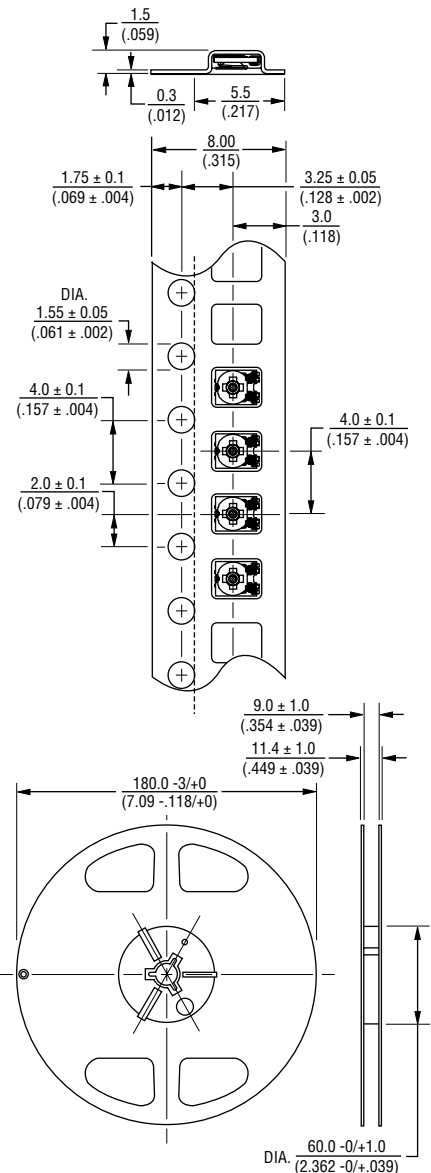
### Product Dimensions



### Recommended Land Pattern

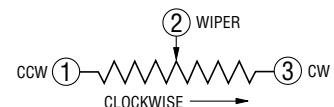


### Packaging Specifications



DIMENSIONS:  $\frac{\text{MM}}{(\text{INCHES})}$

TOLERANCES:  $\pm \frac{0.3}{(0.01)}$  EXCEPT WHERE NOTED



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



**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

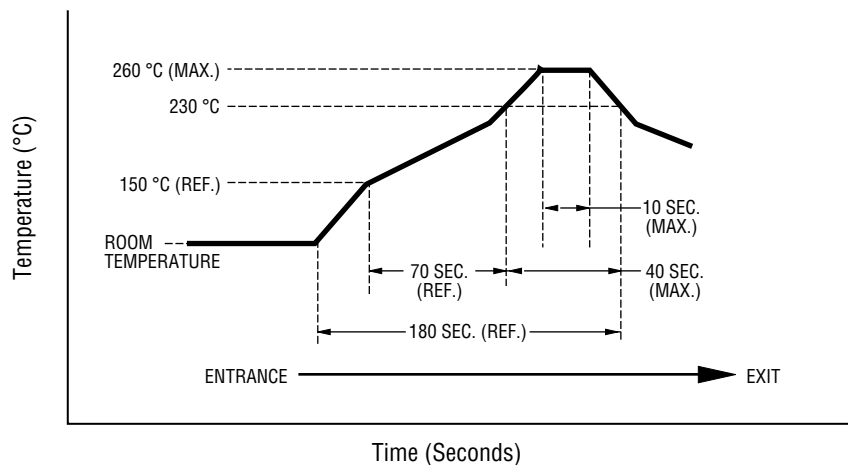
Temperature ..... +5 °C to +35 °C  
 Humidity..... 45 % to 85 % RH

## 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



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