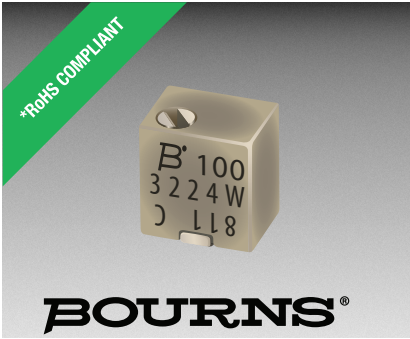




**THE DATASHEET OF**  
**3224X-1-503E**





## Features

- Surface Mount 4 mm Square / Multiturn Cermet / Industrial / Sealed
- Halogen free\*\* with date code 114
- Sealed to withstand board wash processing
- Pick and place centering design, with flush adjustment
- 4mm design meets EIA/EIAJ/IPC/VECI SMD standard trimmer footprint
- Low CRV - 1 %
- RoHS compliant\* - see [processing information](#) on RoHS compliant surface mount trimmers
- For trimmer applications/processing guidelines, [click here](#)

## 3224 - 4 mm SMD Trimpot® Trimming Potentiometer

### Additional Information

Click these links for more information:



### Electrical Characteristics

Standard Resistance Range.. 10 to 2 megohm (see standard resistance table)  
 Resistance Tolerance .....±10 % std.  
 Absolute Min. Resistance..... 1 % or 2.0 ohms (whichever is greater)  
 Contact Resistance Variation ..... 1 % or 3 ohms max.  
 Resolution ..... Essentially Infinite  
 Insulation Resistance ..... 500 vdc. 100 megohms min.  
 Dielectric Strength  
 Sea Level ..... 600 vac (1 minute)  
 Adjustment Angle ..... 12 turns nom.

### Environmental Characteristics

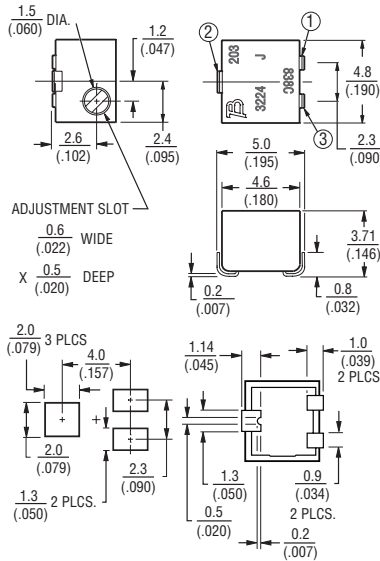
Power Rating (300 volts max.)  
 85 °C ..... 0.25 watt  
 150 °C ..... 0 watt  
 Temperature Range ..... -65 °C to +150 °C  
 Temperature Coefficient ..... ±100 ppm/°C  
 Seal Test ..... 85 °C Fluorinert<sup>†</sup>/60 seconds  
 Humidity ..... MIL-STD 202 Method 106 TRS ±2 %; IR 10 megohms  
 Vibration ..... 20 G TRS ±1 %; VRS ±1 %  
 Shock ..... 100 G TRS ±1 %; VRS ±1 %  
 Load Life..... @ 85 °C rated power 1,000 hours  
 TRS ..... 3 ohms or 3 % (whichever is greater)  
 Rotational Cycling ..... 200 cycles  
 TRS ..... 3 ohms or 3 % (whichever is greater)  
 Thermal Shock ..... 5 cycles TRS ±2 %; VRS ±1 %  
 Moisture Sensitivity Level ..... N/A  
 ESD Classification ..... 2

### Physical Characteristics

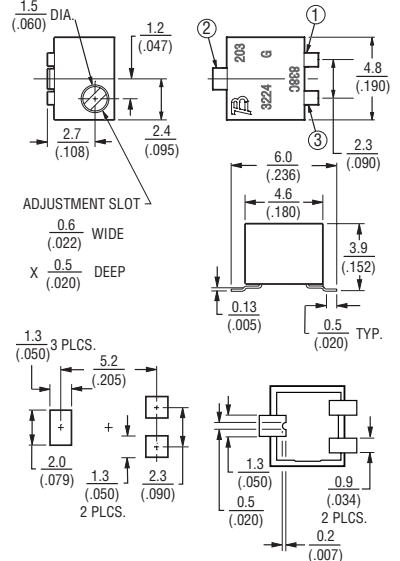
Mechanical Stop ..... Wiper idles  
 Torque ..... 180 g-cm max.  
 Weight ..... Approximately 0.01 oz.  
 Marking ..... Manufacturer's code, resistance code and date code  
 Solderability ..... Per MIL-STD-202, Method 208  
 Wiper ..... 50 % (Actual TR) ±10 %  
 Flammability ..... UL94V0  
 Pushover Strength  
 J, G ..... 4.4 lbs.  
 W, X ..... 1 lb.  
 Adjustment Tool ..... H-91  
 Storage Condition  
 ..... 40 °C max. / 70 % R.H. max.

### Product Dimensions

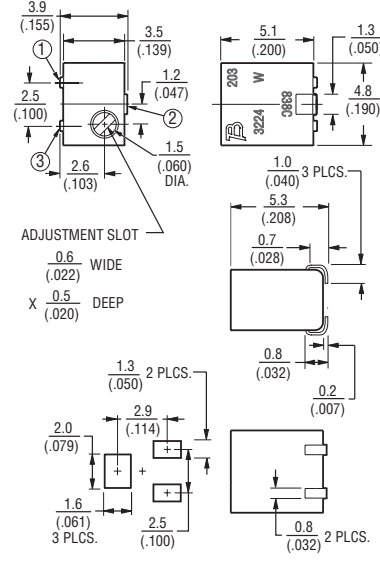
#### 3224J Side Adjust



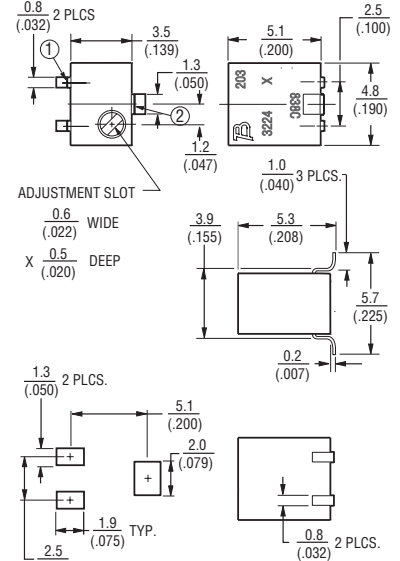
#### 3224G Side Adjust



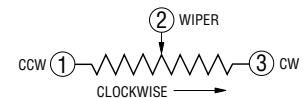
#### 3224W Top Adjust



#### 3224X Top Adjust



DIMENSIONS:  $\frac{\text{MM}}{\text{(INCHES)}}$   
 TOLERANCES: ±  $\frac{0.25}{(0.010)}$  EXCEPT WHERE NOTED



\* RoHS Directive 2015/863, Mar. 31, 2015 and Annex  
 \*\* Bourns follows the prevailing definition of "halogen free" in the industry. Bourns considers a product to be "halogen free" if (a) the Bromine (Br) content is 900 ppm or less; (b) the Chlorine (Cl) content is 900 ppm or less; and (c) the total Bromine (Br) and Chlorine (Cl) content is 1500 ppm or less.  
 † "Fluorinert" is a trademark of Bourns, Inc. † "Fluorinert" is a registered trademark of 3M Co.  
 Specifications are subject to change without notice. Users should verify actual device performance in their specific applications. The products described herein and this document are subject to specific legal disclaimers as set forth on the last page of this document, and at [www.bourns.com/docs/legal/disclaimer.pdf](http://www.bourns.com/docs/legal/disclaimer.pdf).



## Additional Features

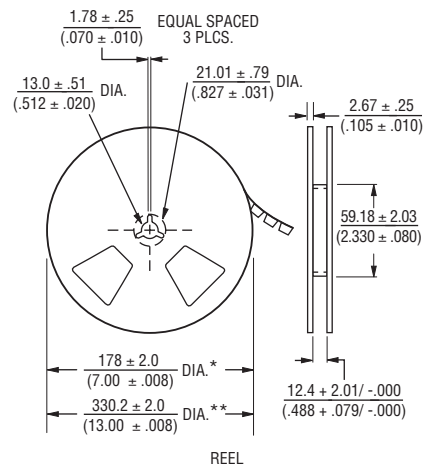
- Top and side adjust styles
- J-hook, and gull-wing

# 3224 - 4 mm SMD TrimPot® Trimming Potentiometer

**BOURNS®**

## Packaging Specifications

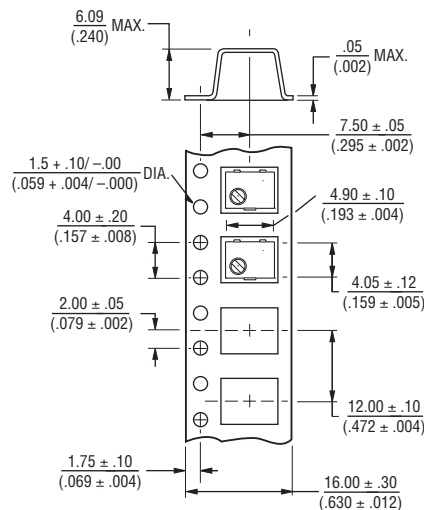
### J & G Styles



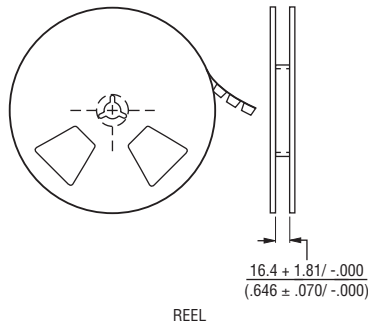
\* Embossed Tape Designator "E"  
 \*\* Embossed Tape Designator "G"  
 (See How To Order chart for further information.)

Cover tape peel strength: Meets EIA specification 481.

### W Style



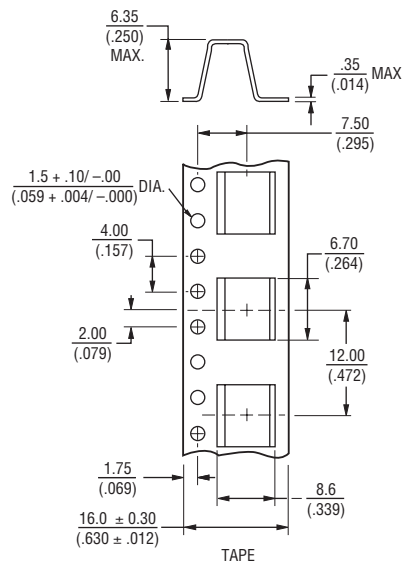
### W & X Style Reel



\* Embossed Tape Designator "E"  
 \*\* Embossed Tape Designator "G"  
 (See How To Order chart for further information.)

Cover tape peel strength: Meets EIA specification 481.

### X Style



## How To Order

Model **3224 J - 1 - 502 E**  
 Style \_\_\_\_\_  
 Standard or Modified Product Indicator \_\_\_\_\_  
 -1= IR Reflow (standard)  
 †-2= Wave Solderable  
 -FW5= .070" ± .010" Shaft Extension  
 Resistance Code \_\_\_\_\_

Embossed Tape Designator \_\_\_\_\_  
 E = Style J, G: 500 pcs./7" reel (standard)  
 Style W: 250 pcs./7" reel (standard)  
 Style X: 200 pcs./7" reel (standard)  
 G = Style J, G: 1500 pcs./13" reel (standard)  
 Style W: 1000 pcs./13" reel (standard)  
 Style X: 850 pcs./13" reel (standard)  
 Blank = Style J, G: 1500 pcs./13" reel (FW5)  
 Style W, X: 600 pcs./13" reel (FW5)

Consult factory for other available options.  
 †-2 has a treated stainless steel shaft.

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

## Standard Resistance Table

Resistance (Ohms)	Resistance Code
10	100
20	200
50	500
<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>

Resistance (Ohms)	Resistance Code
<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
2,000,000	205

Popular distribution values listed in boldface.  
 Special resistances available.

REV. 07/23

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