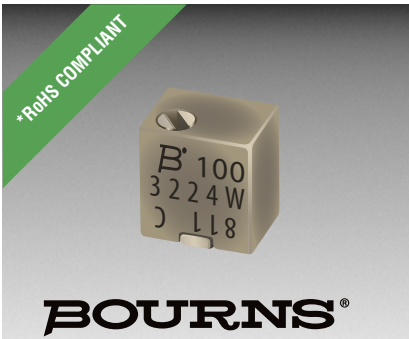




**THE DATASHEET OF  
3224W-1-200E**





## 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

## 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

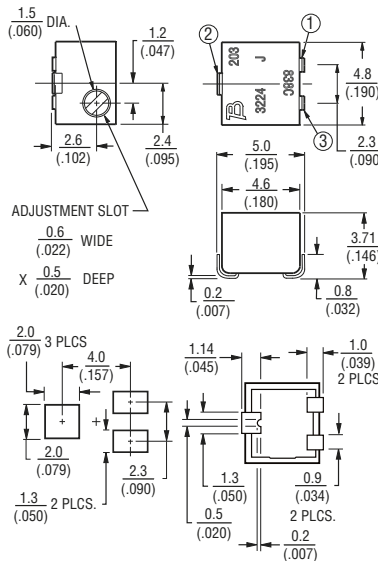
DIMENSIONS:  $\frac{\text{MM}}{\text{(INCHES)}}$   
 TOLERANCES: ±  $\frac{0.25}{(.010)}$  EXCEPT WHERE NOTED



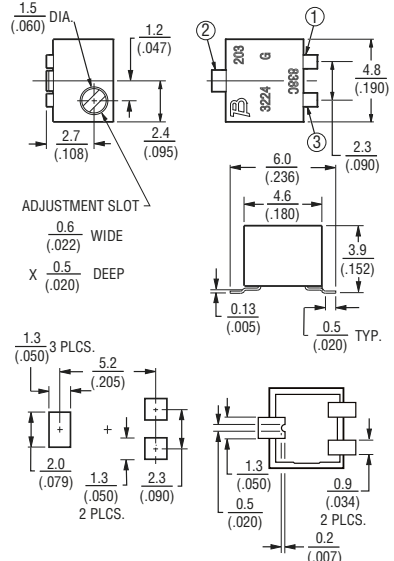
**WARNING Cancer and Reproductive Harm**  
[www.P65Warnings.ca.gov](http://www.P65Warnings.ca.gov)

## Product Dimensions

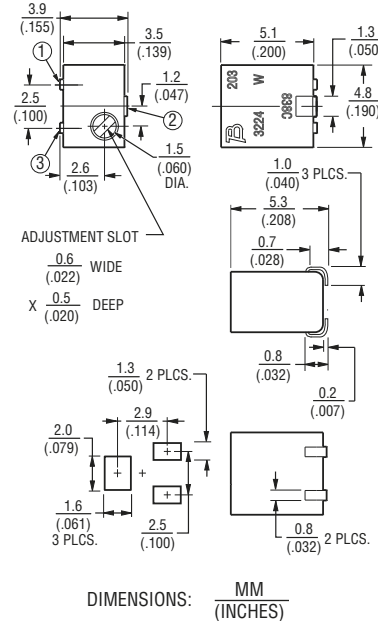
### 3224J Side Adjust



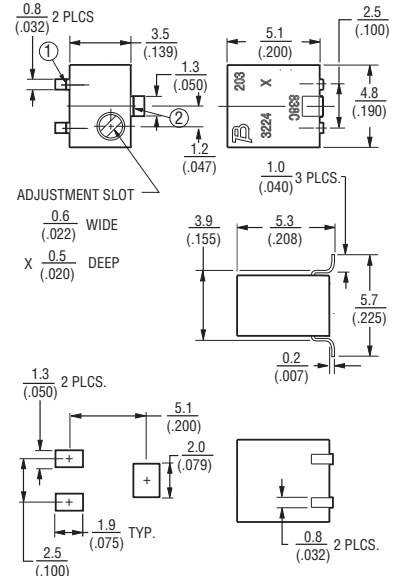
### 3224G Side Adjust



### 3224W Top Adjust



### 3224X Top Adjust



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

\*RoHS Directive 2002/95/EC Jan. 27, 2003 including annex and RoHS Recast 2011/65/EU June 8, 2011.

\*\*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.

<sup>†</sup>"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.

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## Additional Features

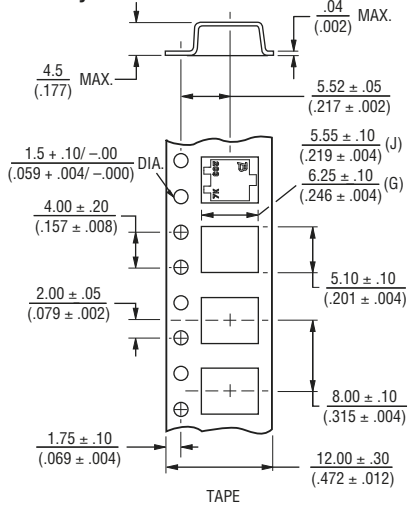
- Top and side adjust styles
- J-hook, and gull-wing

# 3224 - 4 mm SMD Trimpot® Trimming Potentiometer

# BOURNS®

## Packaging Specifications

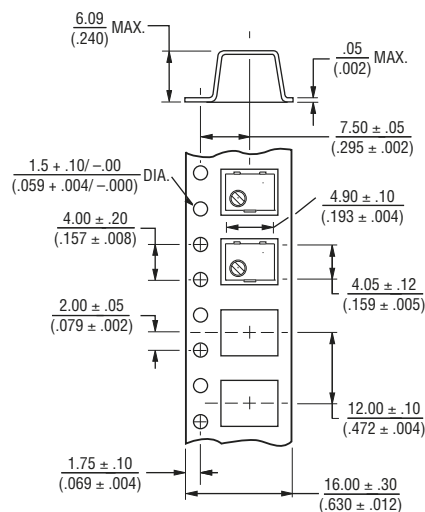
### J & G Styles



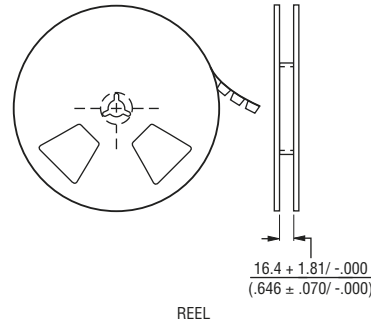
\* Embossed Tape Designator "E"  
 \*\* Embossed Tape Designator "G"  
 (See How To Order chart for further information.)

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. 07/18

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