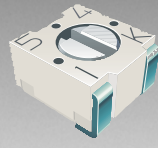


\*ROHS COMPLIANT  
\*\*HALOGEN FREE MODELS  
AVAILABLE



**BOURNS®**

## Features

- Surface Mount 3 mm Square Single-Turn Cermet / Sealed
- Compatible with surface mount manufacturing processes
- Rotor stop for “in-circuit” adjustment
- 100 cycle rotational and seal life
- Plastic housing for RF applications
- Reverse pin layout option (Model 3313X)
- RoHS compliant\* - see [processing information](#) on RoHS compliant surface mount trimmers
- For trimmer applications/processing guidelines, [click here](#)
- Halogen free models available\*\*

# 3313 - 3 mm Trimpot® Trimming Potentiometer

## Electrical Characteristics

Standard Resistance Range ..... 10 ohms to 2 megohms  
(see standard resistance table)  
Resistance Tolerance ..... ±20 % std.  
End Resistance ..... 1 % or 3 ohms max.  
(whichever is greater)  
Contact Resistance Variation ..... 3 % or 3 ohms  
Adjustability  
Voltage Divider ..... ±0.1 %  
Rheostat ..... ±0.2 %  
Resolution ..... Infinite  
Insulation Resistance ..... 500 vdc.  
100 megohms min.  
Dielectric Strength  
Sea Level ..... 500 vac  
70,000 Feet ..... 350 vac  
Adjustment Angle ..... 220° nom.

## Environmental Characteristics

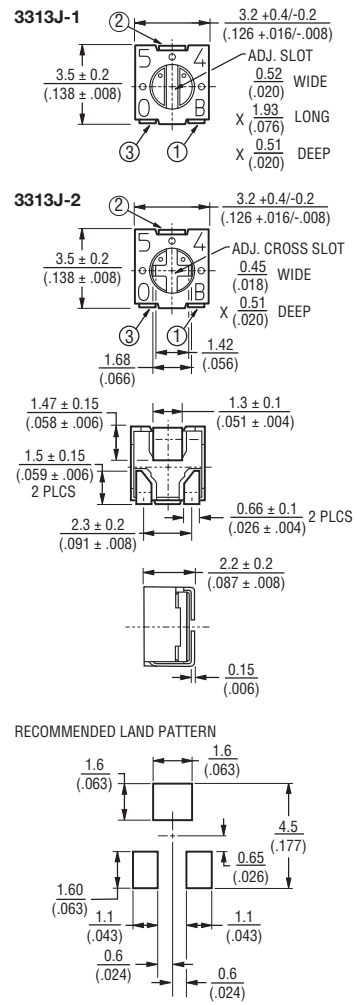
Max. Soldering Exposure ..... 260 °C/5 seconds  
Power Rating (200 volts max.)  
70 °C ..... 0.125 watt  
125 °C ..... 0 watt  
Operating Temp. Range ..... -55 °C to +125 °C  
Temperature Coefficient  
..... ≤100 ohms ±150 ppm/°C;  
..... >100 ohms ±100 ppm/°C  
Seal Test ..... 85 °C Fluorinert†  
Humidity ..... MIL-STD 202, Method 106  
(no vibration) TRS ±3 %;  
IR 10 megohms  
Vibration ..... 20 G TRS ±1 %; VRS ±1 %  
Shock ..... 100 G TRS ±1 %; VRS ±1 %  
Load Life ..... 1000 hours  
@ 70 °C Rated Power; TRS ±3 %  
Rotational Life ..... 100 cycles TRS ±3 %  
Thermal Shock ..... 5 cycles  
TRS ±2 %; VRS ±1 %

## Physical Characteristics

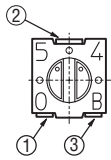
Mechanical Angle ..... 250 ° nom.  
Torque ..... 50 g-cm max.  
Stop Strength ..... 200 g-cm min.  
Pushover Strength (“S” Style only)  
..... 1.6 Kilograms (3.5 lbs) minimum  
Flammability ..... U.L. 94V-0  
Weight ..... Approx. 0.01 oz.  
Marking ..... Resistance code  
and date code  
Wiper ..... 50 % (Actual TR) ±10 %  
Standard Packaging  
J, X Styles ..... 1000 pcs./7 ” reel  
S Style ..... 200 pcs./7 ” reel  
Adjustment Tool ..... H-91

†“Fluorinert” is a registered trademark of 3M Co.  
Specifications are subject to change without notice.  
The device characteristics and parameters in this data sheet can and do vary in different applications and actual device performance may vary over time.  
Users should verify actual device performance in their specific applications.  
\* RoHS Directive 2002/95/EC Jan. 27, 2003 including annex and RoHS Recast 2011/65/EU June 8, 2011.  
\*\* Halogen free product is identified by a black housing color. 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.

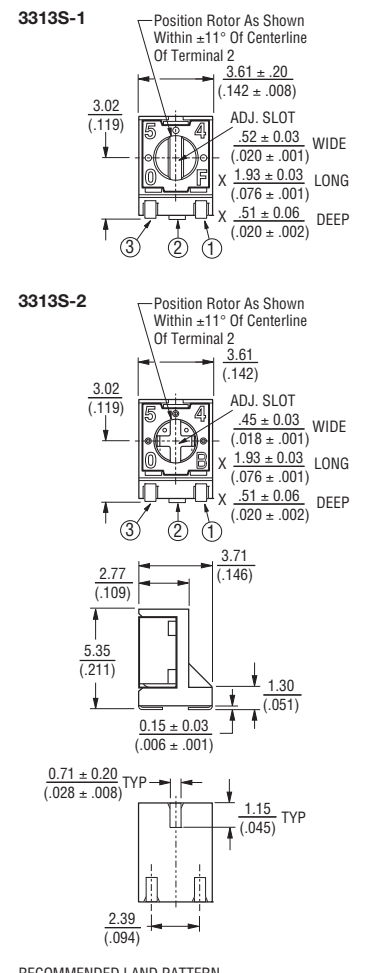
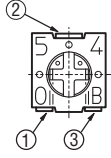
## Product Dimensions



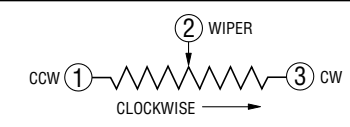
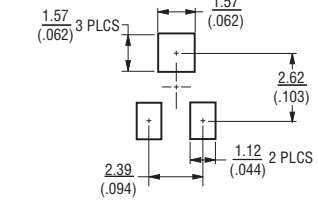
3313X-1 (Reverse Pin Layout)



3313X-2 (Reverse Pin Layout)



RECOMMENDED LAND PATTERN

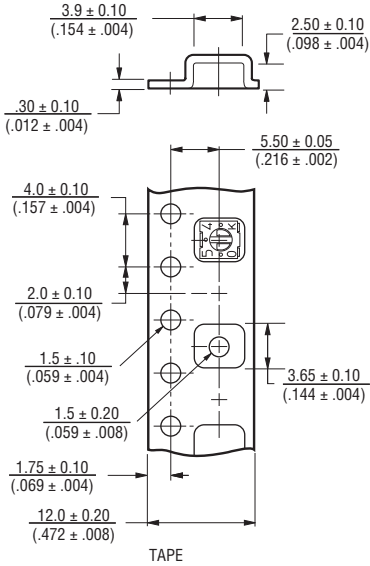


DIMENSIONS:  $\frac{\text{MM}}{\text{(INCHES)}}$   
 TOLERANCES: ±  $\frac{0.25}{(.010)}$  EXCEPT WHERE NOTED

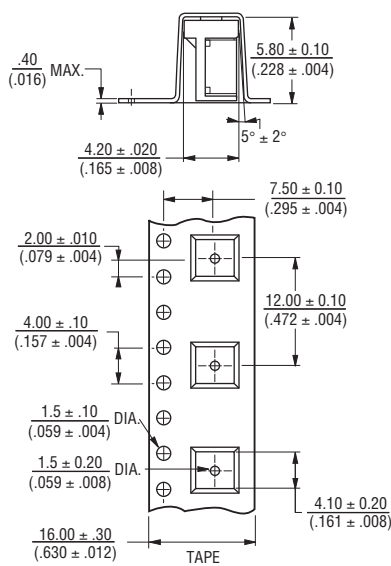
# 3313 - 3 mm Trimpot® Trimming Potentiometer

# BOURNS®

## 3313J, X Packaging Specifications



## 3313S Packaging Specifications



## Standard Resistance Table

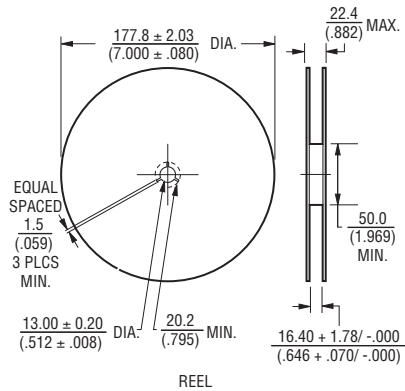
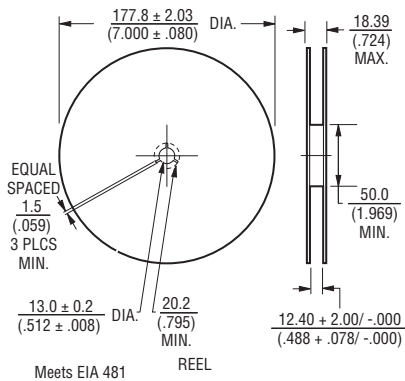
Resistance (Ohms)	Part Marking Code	Resistance Code
10	A1	100
20	21	200
50	51	500
<b>100</b>	<b>A2</b>	<b>101</b>
<b>200</b>	<b>22</b>	<b>201</b>
<b>500</b>	<b>52</b>	<b>501</b>
<b>1,000</b>	<b>A3</b>	<b>102</b>
<b>2,000</b>	<b>23</b>	<b>202</b>
<b>5,000</b>	<b>53</b>	<b>502</b>
<b>10,000</b>	<b>A4</b>	<b>103</b>
<b>20,000</b>	<b>24</b>	<b>203</b>
<b>50,000</b>	<b>54</b>	<b>503</b>
<b>100,000</b>	<b>A5</b>	<b>104</b>
200,000	25	204
500,000	55	504
1,000,000	A6	105
2,000,000	26	205

Popular distribution resistance values listed in boldface. Special resistances available.

## How To Order

**3313 J - 1 - 502 E**

Model \_\_\_\_\_  
 Style \_\_\_\_\_  
 Standard or Modified \_\_\_\_\_  
 Product Indicator \_\_\_\_\_  
 -1 = Standard Single Slot  
 -2 = Standard Cross Slot  
 -GK2 = Halogen Free Single Slot (Black Housing Color)  
 -GL5 = Halogen Free Cross Slot (Black Housing Color)  
 Resistance Code \_\_\_\_\_  
 Embossed Tape \_\_\_\_\_  
 1000 pcs. / 7" Reel (J, X Styles)  
 200 pcs. / 7" Reel (S Style)



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

TOLERANCES:  $\pm \frac{0.25}{(.010)}$  EXCEPT WHERE NOTED

REV. 06/13

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