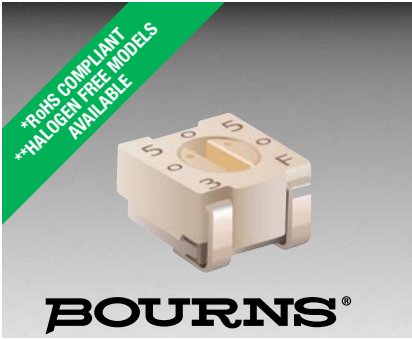




**THE DATASHEET OF**  
**3313S-1-501E**





## Features

- Surface Mount 3 mm Square Single-Turn Cermet / Sealed
- Compatible with surface mount manufacturing processes (not recommended for wave soldering)
- 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\*
- Halogen free models available
- AEC-Q200 Qualified Grade 1

## 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.

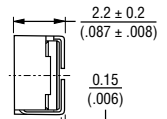
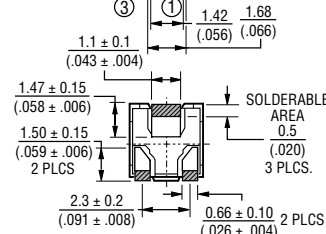
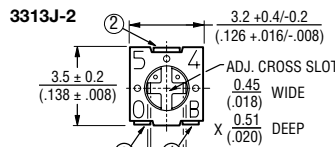
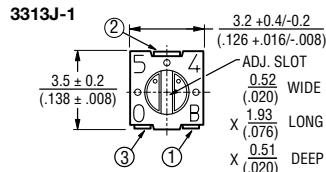
### Environmental Characteristics

Max. Soldering Exposure ..... 250 °C/10 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<sup>†</sup>/60 seconds  
 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 %

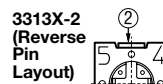
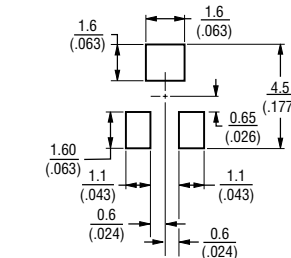
### Physical Characteristics

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 (MSL-1) ..... 1000 pcs./7 " reel  
 S Style (MSL-1) ..... 200 pcs./7 " reel  
 Adjustment Tool ..... H-91

### Product Dimensions

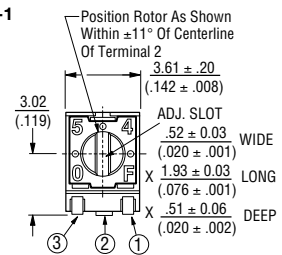


#### RECOMMENDED LAND PATTERN

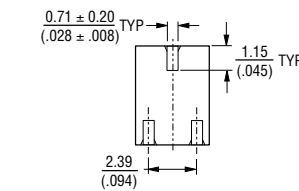
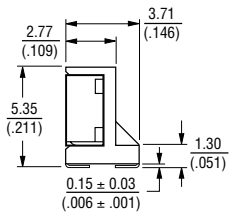
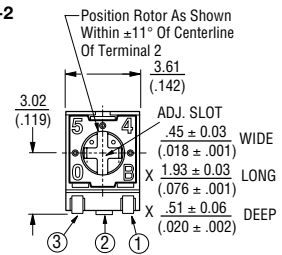


DIMENSIONS: MM (INCHES)  
 TOLERANCES: ± 0.25 (0.010) EXCEPT WHERE NOTED

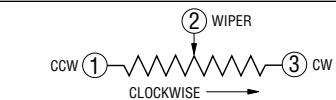
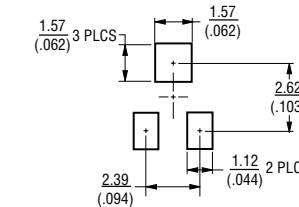
### 3313S-1



### 3313S-2

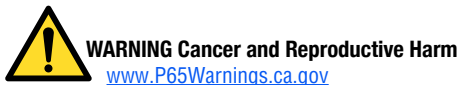


#### RECOMMENDED LAND PATTERN



\* 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.

† "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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## Features (Continued)

- See [processing information](#) on RoHS compliant surface mount trimmers
- For trimmer applications/processing guidelines, [click here](#)

# 3313 - 3 mm Trimpot® Trimming Potentiometer

# BOURNS®

### 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)

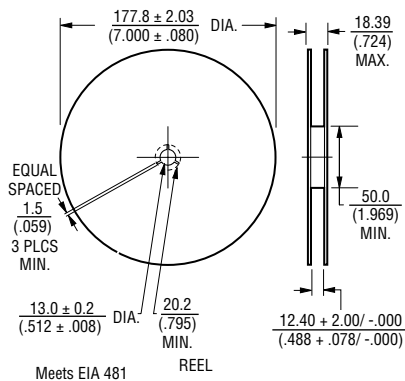
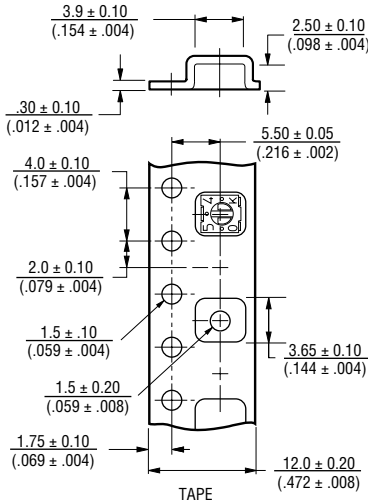
Resistance Code \_\_\_\_\_

Embossed Tape \_\_\_\_\_

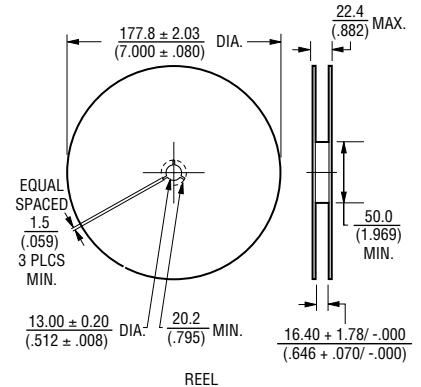
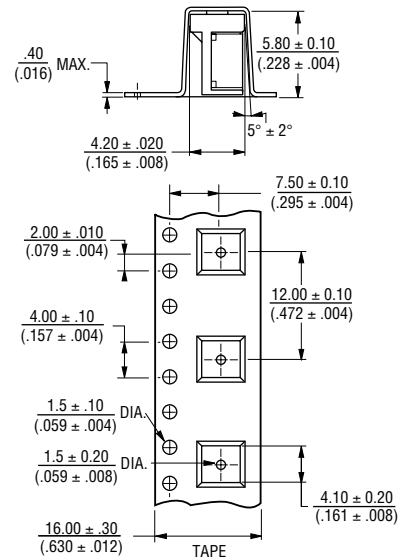
- 1000 pcs. / 7" Reel (J, X Styles - MSL-1)
- 200 pcs. / 7" Reel (S Style - MSL-1)

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

### 3313J, X Packaging Specifications



### 3313S Packaging Specifications



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

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

REV. 07/19

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Users should verify actual device performance in their specific applications.

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