

## Features

- Surface mount 2 mm Square / Single-turn / Sealed
- Compatible with surface mount manufacturing processes
- Miniature design for flexibility
- RoHS compliant\*

# 3312 - 2 mm SMD Trimming Potentiometer

### Electrical Characteristics

Standard Resistance Range  
 .....10 ohms to 1 megohm  
 (see standard resistance table)  
 Resistance Tolerance.....±20 % std.  
 End Resistance  
 .....1 % or 2 ohms max.  
 (whichever is greater)  
 Contact Resistance Variation  
 .....5 % or 3 ohms max.  
 (whichever is greater)  
 Adjustability  
 Voltage Divider.....±0.4 %  
 Rheostat.....±0.8 %  
 Resolution.....Essentially infinite  
 Insulation Resistance.....500 VDC  
 100 megohms min.  
 Dielectric Strength  
 Sea Level.....500 VAC  
 70,000 Feet.....350 VAC  
 Adjustment Angle.....255 ° nom.

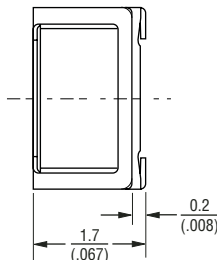
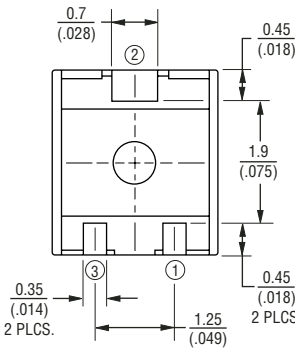
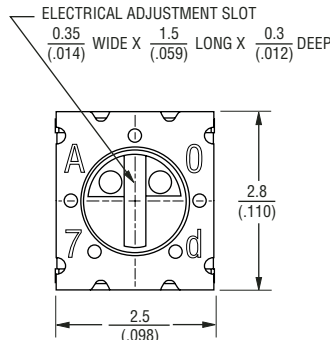
### Environmental Characteristics

Power Rating (50 volts max.)  
 70 °C.....0.1 watt  
 125 °C.....0 watt  
 Operating Temperature Range  
 .....-55 °C to +125 °C  
 Temperature Coefficient.....±100 ppm/°C  
 Humidity.....MIL-STD-202 Method 106  
 TRS ±5 %; IR 10 megohms  
 Vibration.....20 G TRS ±1 %; VRS ±1 %  
 Shock.....100 G TRS ±1 %; VRS ±1 %  
 Load Life @ 70 °C Rated Power  
 .....TRS ±3 %  
 Rotational Life.....25 cycles TRS ±3 %  
 Thermal Shock.....5 cycles  
 TRS ±2 %; VRS ±4 %

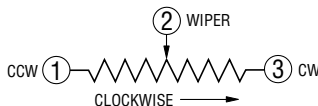
### Physical Characteristics

Mechanical Stop.....285 ° nom.  
 Torque.....0.7 oz-in. max  
 Stop Strength.....0.7 oz-in. nom.  
 Weight.....Approximately 0.0321 g  
 Marking  
 .....Resistance code and date code  
 Standard Packaging.....500 pcs./7 " reel

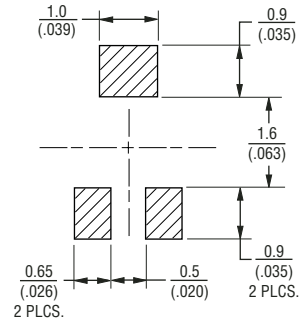
### Product Dimensions



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



### Recommended Land Pattern



### Standard Resistance Table

Resistance (Ohms)	Resistance Code
<b>10</b>	<b>100</b>
<b>20</b>	<b>200</b>
<b>50</b>	<b>500</b>
<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>
<b>200,000</b>	<b>204</b>
<b>500,000</b>	<b>504</b>
<b>1,000,000</b>	<b>105</b>

Popular values listed in boldface. Consult factory for special resistances.

### How To Order

**3312 J - 1 - 502 E**

Model \_\_\_\_\_  
 Style \_\_\_\_\_  
 Standard Product Indicator \_\_\_\_\_  
 -1 = Standard Product  
 Resistance Code \_\_\_\_\_  
 Embossed Tape Designator \_\_\_\_\_  
 E = 500 pcs./7 " Reel

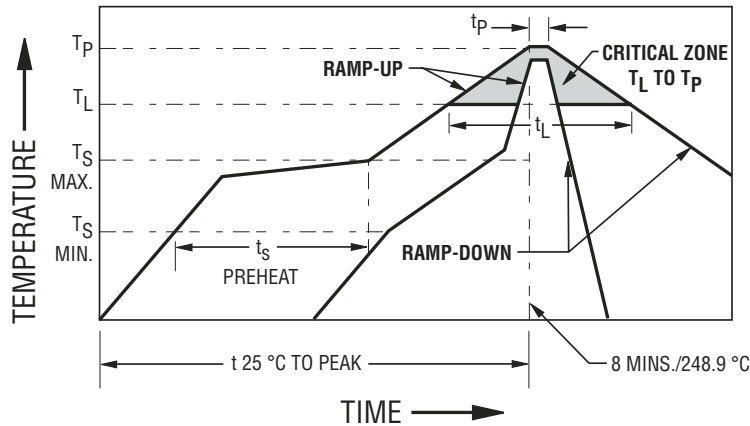
\*RoHS Directive 2002/95/EC Jan 27 2003 including Annex. Specifications are subject to change without notice. Customers should verify actual device performance in their specific applications.

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## Processing Information

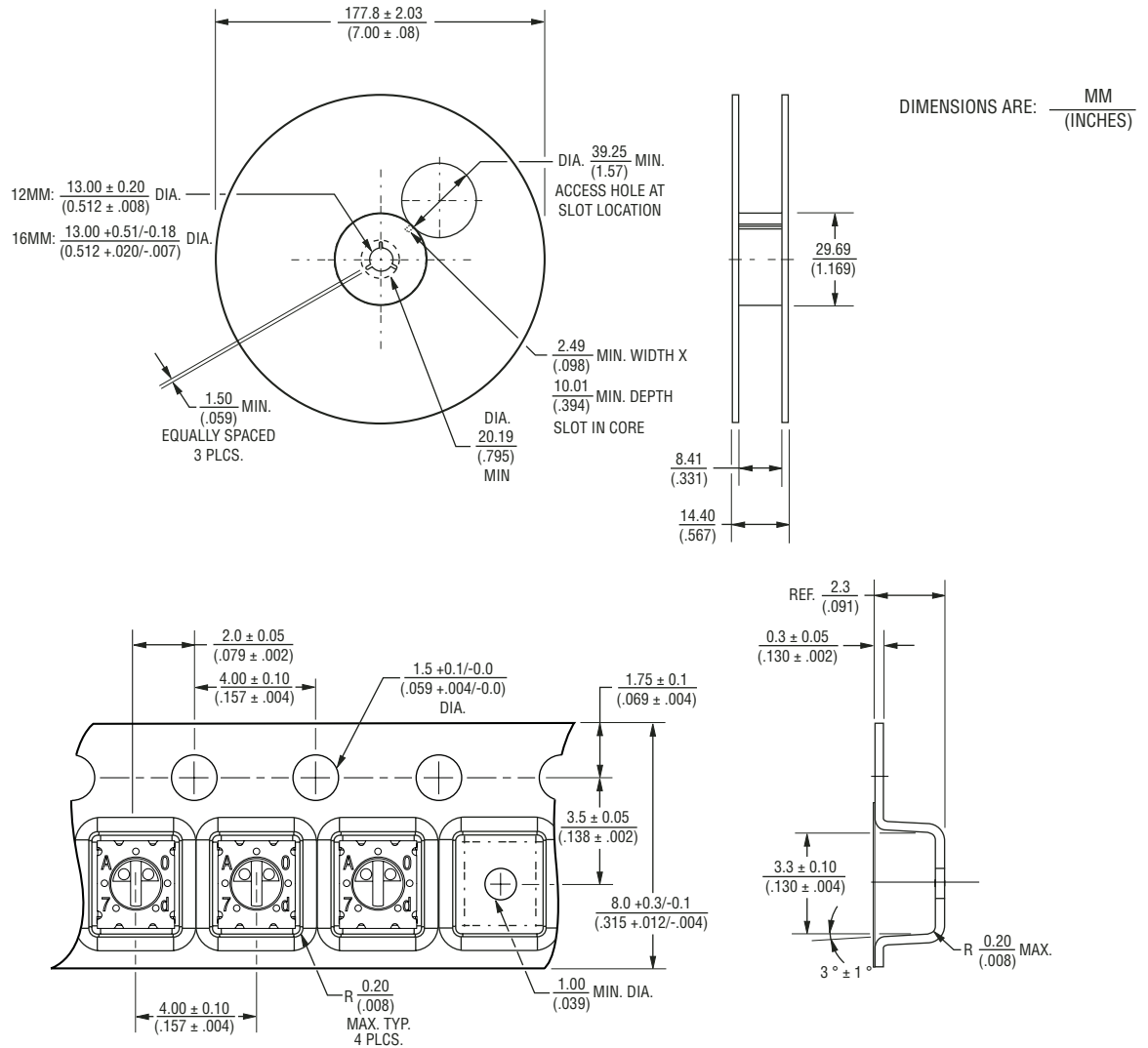
Process Description	Materials	Temperature	Time Interval
1. Apply solder paste to test board (8 - 10 mil thick)	<ul style="list-style-type: none"> <li>• Sn 96.5/Ag 3.0/Cu 0.5 Alloy water soluble or no clean solder paste</li> <li>• Single sided epoxy glass (G10) (UL approved)</li> <li>• PC board approx. 4x4x.06 in.</li> </ul>	Room temperature	
2. Place test units onto board	6 units/board		
3. Ramp up	Convection oven		2.5 °C ±0.5 °/second
4. Preheat ( $T_S$ )		150 °C to 190 °C	90 ±30 seconds
5. Time above liquidus ( $T_L$ )		220 °C	60-90 seconds
6. Peak temperature ( $T_P$ )			250 °C +0 °/-5 ° 10-20 sec. within 5 °C of peak
7. Ramp down		Room temperature	3 °C ±0.5 °/second
8. Cleaning water clean profile	High pressure deionized water 65 PSI maximum	72 °F to 160 °F (22 °C to 71 °C)	As required



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## Packaging Specifications



**Asia-Pacific:**  
 TEL +886- (0)2 25624117 • FAX +886- (0)2 25624116  
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 TEL +41-41 7685555 • FAX +41-41 7685510  
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