

## Features

- Surface mount 2 mm Square / Single-turn / Cermet / Sealed
- Compatible with surface mount manufacturing processes
- Miniature design for flexibility
- RoHS compliant\*
- For trimmer applications/processing guidelines, [click here](#)

# 3312 - 2 mm SMD 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 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.

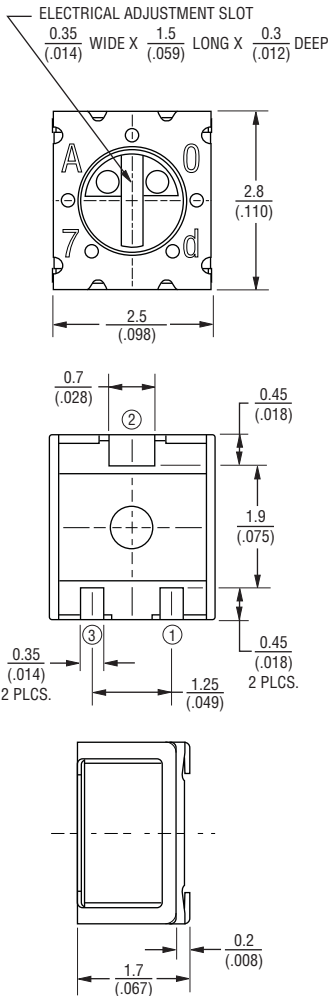
## Environmental Characteristics

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 %

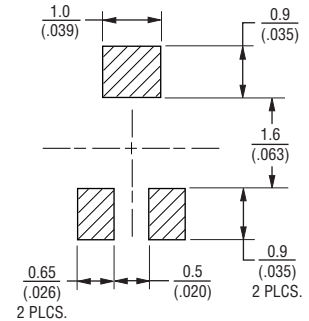
## Physical Characteristics

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  
 (MSL-1)

## Product Dimensions



## Recommended Land Pattern



## Standard Resistance Table

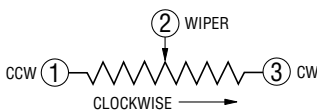
| Resistance (Ohms) | Part Marking Code | Resistance Code |
|-------------------|-------------------|-----------------|
| 10                | A1                | 100             |
| 20                | U1                | 200             |
| 50                | V1                | 500             |
| 100               | A2                | 101             |
| 200               | U2                | 201             |
| 500               | V2                | 501             |
| 1,000             | A3                | 102             |
| 2,000             | U3                | 202             |
| 5,000             | V3                | 502             |
| 10,000            | A4                | 103             |
| 20,000            | U4                | 203             |
| 50,000            | V4                | 503             |
| 100,000           | A5                | 104             |
| 200,000           | U5                | 204             |
| 500,000           | V5                | 504             |
| 1,000,000         | A6                | 105             |
| 2,000,000         | U6                | 205             |

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 (MSL-1)



\*RoHS Directive 2002/95/EC Jan. 27, 2003 including annex and RoHS Recast 2011/65/EU June 8, 2011. Specifications are subject to change without notice.

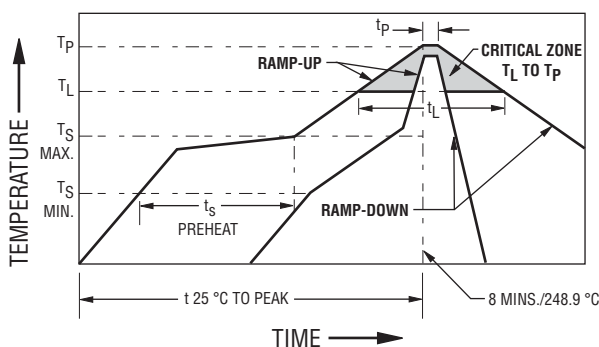
The device characteristics and parameters in this data sheet can and do vary in different applications and actual device performance may vary over time. Users should verify actual device performance in their specific applications.

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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 <sub>S</sub> )                           |  | 150 °C to 190 °C                    | 90 ±30 seconds                                     |
| 5. Time above liquidus (T <sub>L</sub> )               |  | 220 °C                              | 60-90 seconds                                      |
| 6. Peak temperature (T <sub>P</sub> )                  |  |                                     | 250 °C +0 °/-5 °<br>10-20 sec. within 5 °C of peak |
| 7. Ramp down   |  | Room temperature                    | 3 °C ±0.5 °C/second                                |
| 8. Cleaning water clean profile                        | High pressure deionized water<br>65 PSI maximum  | 72 °F to 160 °F<br>(22 °C to 71 °C) | As required  |

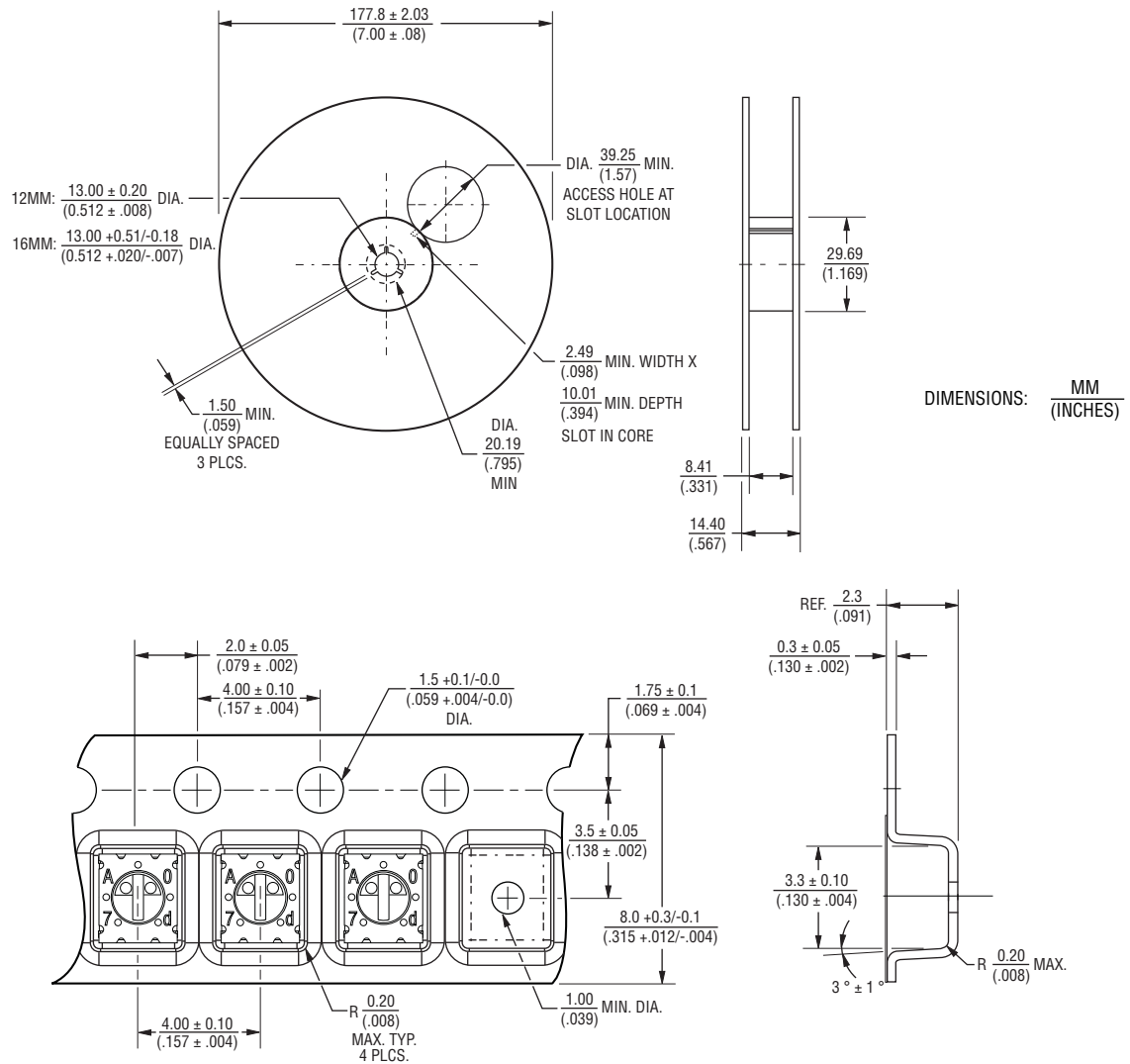


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## Packaging Specifications



REV. 10/13

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