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
Seal Test 85 °C Fluorinert™/60 seconds
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)

Recommended Land Pattern

Standard Resistance Table

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

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

How To Order
Model 3312 J - 1 - 502 E
Style
Standard Product Indicator -1 = Standard Product
Resistance Code
Embossed Tape Designator E = 500 pcs./.7 " Reel (MSL-1)
Tape and reel material meets Antistatic ANSI/ESD 5541-2003 packaging standards.

WARNING Cancer and Reproductive Harm
www.P65Warnings.ca.gov

†“Fluorinert” is a registered trademark of 3M Co.
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### Processing Information

<table>
<thead>
<tr>
<th>Process Description</th>
<th>Materials</th>
<th>Temperature</th>
<th>Time Interval</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. Apply solder paste to test board (8 - 10 mil thick)</td>
<td>• Sn 96.5/Ag 3.0/Cu 0.5 Alloy water soluble or no clean solder paste</td>
<td>Room temperature</td>
<td></td>
</tr>
<tr>
<td></td>
<td>• Single sided epoxy glass (G10) (UL approved)</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>• PCB board approx. 4x4x.06 in.</td>
<td></td>
<td></td>
</tr>
<tr>
<td>2. Place test units onto board</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>3. Ramp up</td>
<td>Convection oven</td>
<td></td>
<td>2.5 °C ± 0.5 °/second</td>
</tr>
<tr>
<td>4. Preheat (T_s)</td>
<td></td>
<td>150 °C to 190 °C</td>
<td>90 ± 30 seconds</td>
</tr>
<tr>
<td>5. Time above liquidus (T_L)</td>
<td></td>
<td>220 °C</td>
<td>60-90 seconds</td>
</tr>
<tr>
<td>6. Peak temperature (T_P)</td>
<td></td>
<td>220 °C ± 0 °/-5 °</td>
<td>10-20 sec. within 5 ° of peak</td>
</tr>
<tr>
<td>7. Ramp down</td>
<td></td>
<td>Room temperature</td>
<td>3 °C ± 0.5 °/second</td>
</tr>
<tr>
<td>8. Cleaning water clean profile</td>
<td>High pressure deionized water 65 PSI maximum</td>
<td>72 °F to 160 °F (22 °C to 71 °C)</td>
<td>As required</td>
</tr>
</tbody>
</table>

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