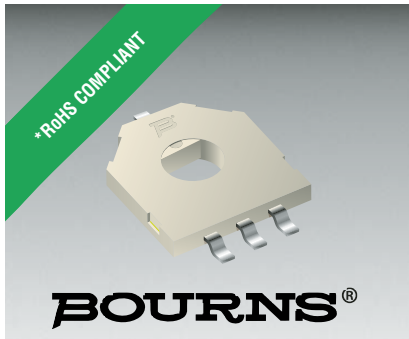




## Features

- Surface Mount 12 mm Square / Dustproof
- One million rotational cycles
- Thin profile
- RoHS compliant\*

## Applications

- Volume control on audio equipment
- Motion controllers
- Dishwasher control systems
- Automotive temperature range

# 3382 - 12 mm Rotary Position Sensor

## Electrical Characteristics

Standard Resistance Range .....10K ohms  
 Resistance Tolerance .....  $\pm 30\%$  std.  
 Linearity .....  $\pm 2\%$   
 Resolution ..... Essentially infinite  
 Insulation Resistance @ 500 VDC  
 ..... 100 megohms min.  
 Dielectric Strength  
 Sea Level ..... 500 VAC  
 70,000 Feet ..... 350 VAC  
 Adjustment Angle .....  $328^\circ$  nom.

## Environmental Characteristics

Power Rating (16 volts max.)  
 $50^\circ\text{C}$  ..... 0.05 watt  
 $120^\circ\text{C}$  ..... 0 watt  
 Operating Temperature Range  
 .....  $-40^\circ\text{C}$  to  $+120^\circ\text{C}$   
 Temperature Coefficient ...  $\pm 500$  ppm/ $^\circ\text{C}$   
 Humidity ..... TRS  $\pm 20\%$   
 Shock ..... 20 G TRS  $\pm 10\%$ ; VRS  $\pm 10\%$   
 Load Life @  $50^\circ\text{C}$  Rated Power  
 ..... TRS  $\pm 10/-20\%$   
 Rotational Life ..... 1,000,000 cycles  
 TRS  $\pm 20\%$   
 Thermal Shock ..... 5 cycles  
 TRS  $\pm 20\%$ ; VRS  $\pm 10\%$

## Physical Characteristics

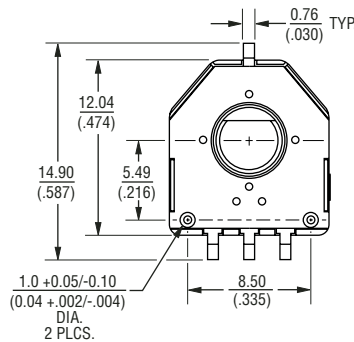
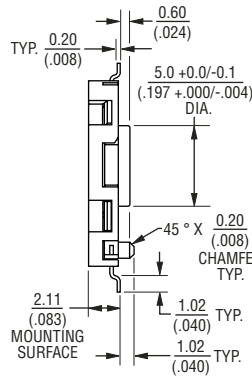
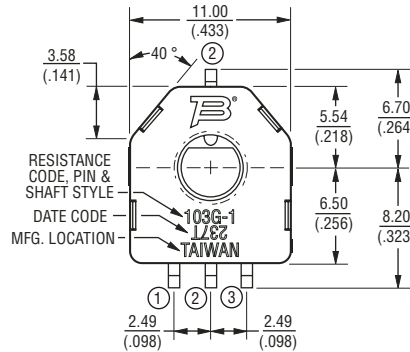
Mechanical Angle ... Continuous rotation  
 Torque ..... 30 gf-cm max.  
 Weight ..... Approximately 0.0321 g  
 Marking ..... Resistance code  
 and date code  
 Standard Packaging  
 ..... 1000 pcs./13 " reel  
 IP Rating ..... IP40

## How To Order

**3382 G - 1 - 103 G**

Model \_\_\_\_\_  
 Style \_\_\_\_\_  
 Standard Product Indicator \_\_\_\_\_  
 -1 = Standard Product  
 Resistance Code \_\_\_\_\_  
 Embossed Tape Designator \_\_\_\_\_  
 G = 1000 pcs./13 " Reel

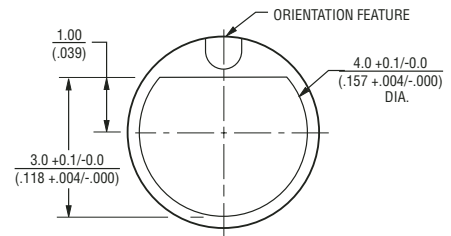
## Product Dimensions



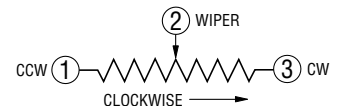
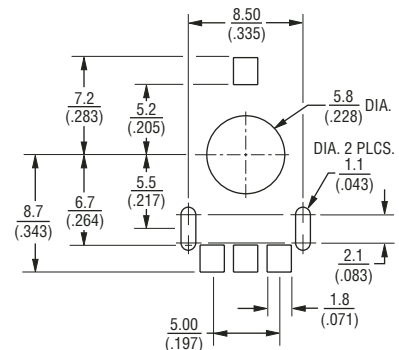
DIMENSIONS:  $\frac{\text{MM}}{(\text{INCHES})}$

TOLERANCES:  $\pm 0.30$   
 $\pm (0.12)$  UNLESS OTHERWISE NOTED

## Shaft Hole



## Recommended Land Pattern

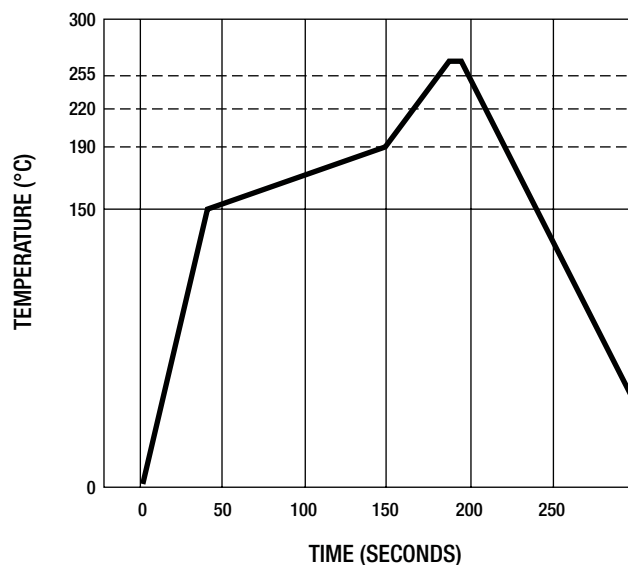


## 3382 - 12 mm Rotary Position Sensor

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### Processing Information

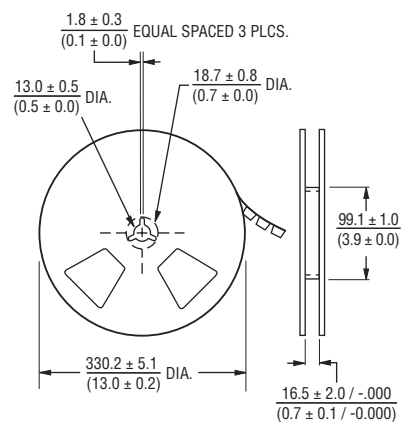
| Process Description                                       | Materials                                                                                                                                                                                                 | Temperature                         | Time Interval                                      |
|-----------------------------------------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-------------------------------------|----------------------------------------------------|
| 1. Apply solder paste to test board<br>(8 - 10 mil thick) | <ul style="list-style-type: none"> <li>• Sn/Ag/Cu 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                                                |                                                                                                                                                                                                           | 150 °C to 190 °C                    | 90 ±30 seconds                                     |
| 5. Time above liquidus                                    |                                                                                                                                                                                                           | 220 °C                              | 60-90 seconds                                      |
| 6. Peak temperature                                       |                                                                                                                                                                                                           |                                     | 260 °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                                        |



# 3382 - 12 mm Rotary Position Sensor

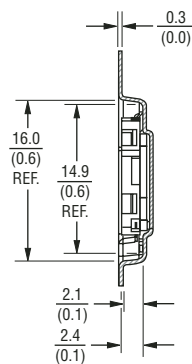
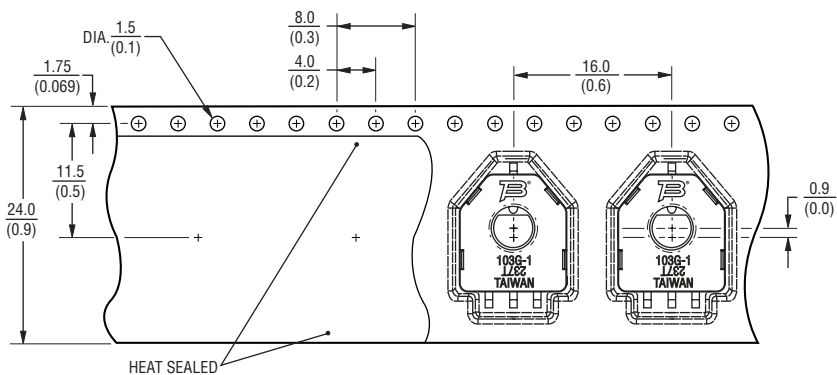
**BOURNS®**

## Packaging Specifications



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

REEL



REV. 09/08

Specifications are subject to change without notice.

Customers should verify actual device performance in their specific applications