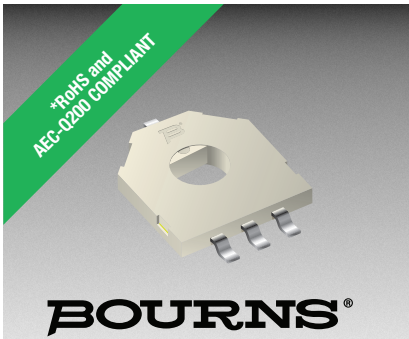




THE DATASHEET OF
3382G-2-103G





Features

- Surface mount and through-hole versions
- 12 mm Square / Dustproof
- One million rotational cycles
- Thin profile
- RoHS compliant*
- AEC-Q200 compliant

Applications

- Volume control on audio equipment
- Motion controllers
- Dishwasher control systems

3382 - 12 mm Rotary Position Sensor

Additional Information

Click these links for more information:



Electrical Characteristics

Standard Resistance Range 2.5K to 100K ohms
 Resistance Tolerance $\pm 30\%$ std.
 Independent Linearity⁽¹⁾ $\pm 2\%$
 Resolution Essentially infinite
 Insulation Resistance @ 500 VDC 100 megohms min.
 Dielectric Strength
 Sea Level 500 VAC
 70,000 Feet 350 VAC
 Adjustment Angle 330° nom.

Environmental Characteristics

Power Rating (16 volts max.)
 50 °C 0.05 watt
 120 °C 0 watt
 Operating Temperature Range -40 °C to +120 °C
 Temperature Coefficient ± 500 ppm/°C
 Humidity TRS $\pm 20\%$
 Shock 20 G TRS $\pm 10\%$; VRS $\pm 10\%$
 Load Life @ 50 °C Rated Power TRS +10/-20 %
 Rotational Life 1,000,000 cycles TRS $\pm 20\%$
 Thermal Shock 5 cycles TRS $\pm 20\%$; VRS $\pm 10\%$
 Moisture Sensitivity Level 1
 ESD Classification (HBM) N/A

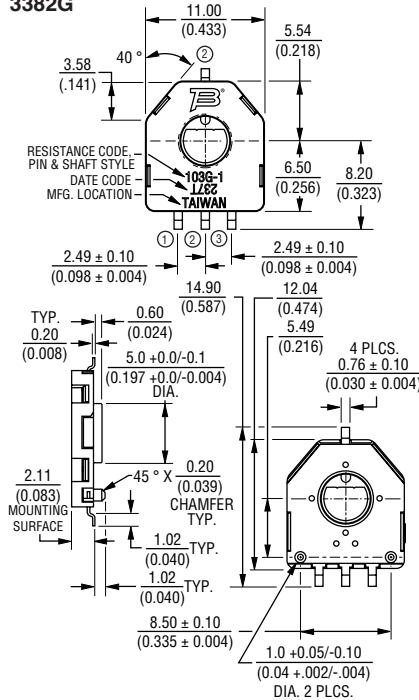
Physical Characteristics

Mechanical Angle Continuous rotation
 Torque 30 gf-cm max.
 Weight Approximately 0.321 g
 Marking Resistance code and date code
 Standard Packaging
 G Style 1000 pcs./13" reel
 H Style 50 pcs./tube
 IP Rating IP40

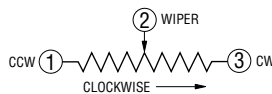
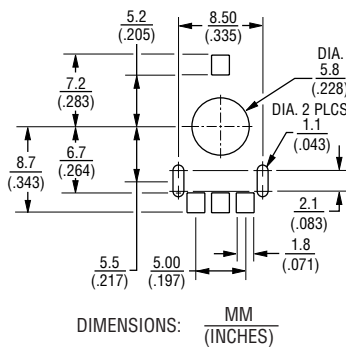
(1) See Independent Linearity, page 3.

Product Dimensions

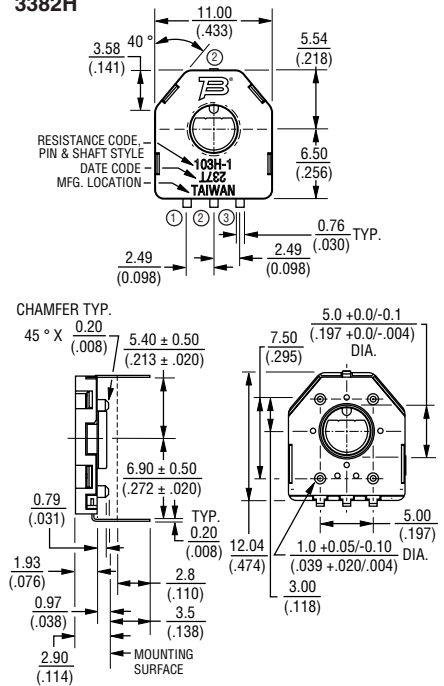
3382G



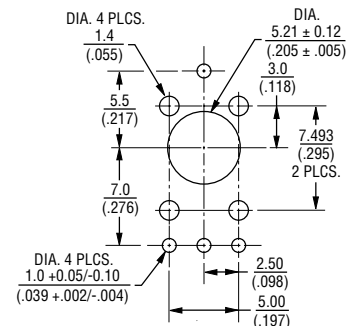
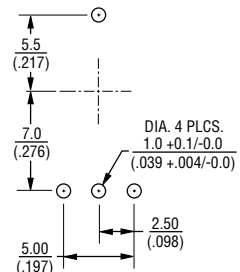
Recommended Land Pattern



3382H



Recommended Land Patterns



TOLERANCES: ± 0.30 UNLESS OTHERWISE NOTED
 $\pm (.012)$



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

*RoHS Directive 2015/863, Mar 31, 2015 and Annex.

Specifications are subject to change without notice.

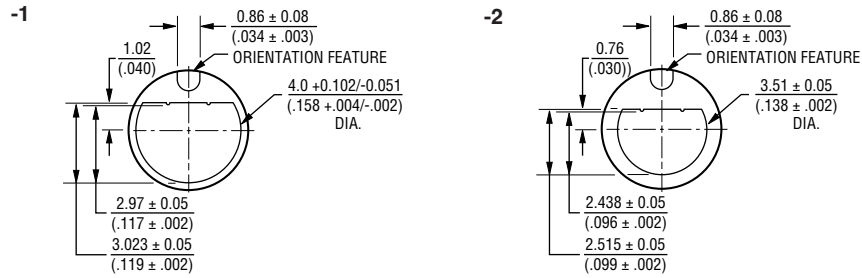
Users should verify actual device performance in their specific applications.

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3382 - 12 mm Rotary Position Sensor

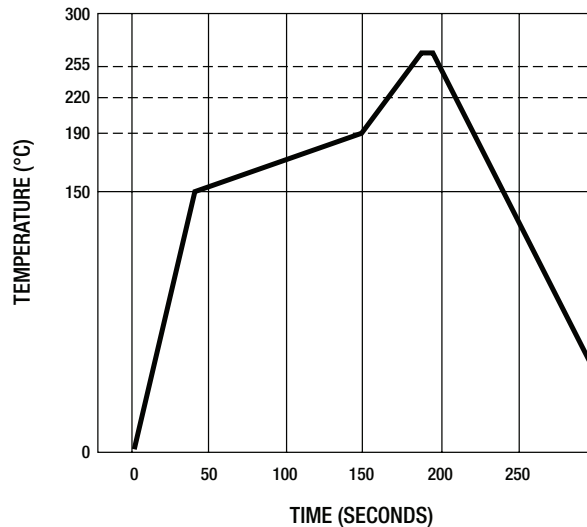
BOURNS®

Rotor Dimensions



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"> Sn/Ag/Cu Alloy water soluble or no clean solder paste Single sided epoxy glass (G10) (UL approved) PC board approx. 4x4x.06 in. 	Room temperature	
2. Place test units onto board	6 units/board		
3. Ramp up	Convection oven		$2.5 \text{ }^\circ\text{C} \pm 0.5 \text{ }^\circ\text{/second}$
4. Preheat		$150 \text{ }^\circ\text{C}$ to $190 \text{ }^\circ\text{C}$	90 ± 30 seconds
5. Time above liquidus		$220 \text{ }^\circ\text{C}$	60-90 seconds
6. Peak temperature			$260 \text{ }^\circ\text{C} +0 \text{ }^\circ\text{-}5 \text{ }^\circ$ 10-20 sec. within $5 \text{ }^\circ\text{C}$ of peak
7. Ramp down		Room temperature	$3 \text{ }^\circ\text{C} \pm 0.5 \text{ }^\circ\text{C/second}$



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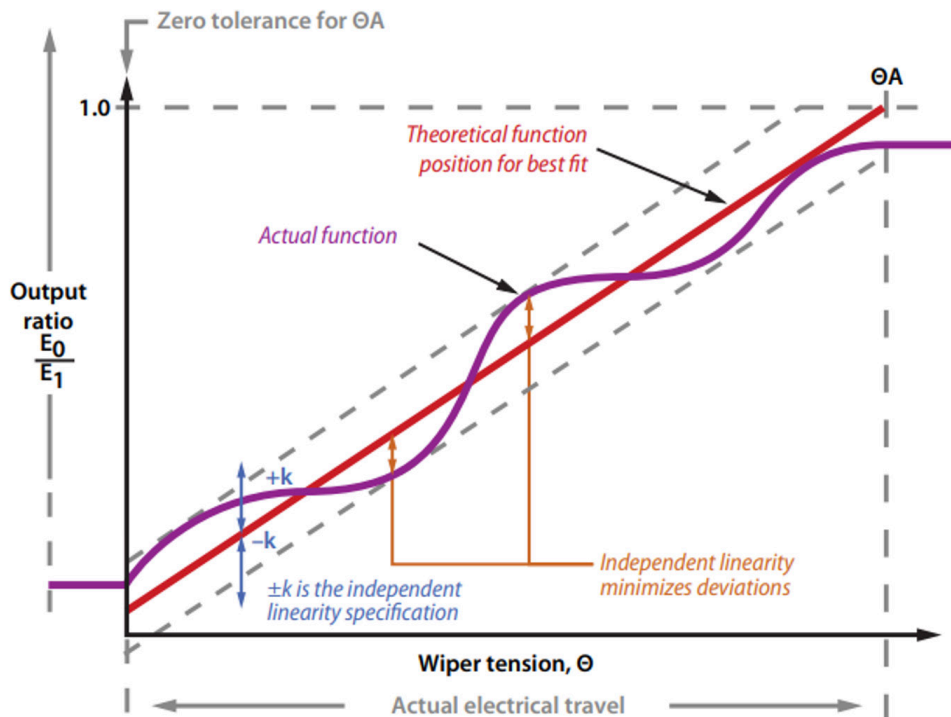
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3382 - 12 mm Rotary Position Sensor

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Independent Linearity

Independent linearity is the maximum permissible deviation of the actual output curve from a reference line. The slope and position of this reference line are chosen to minimize deviations over all or a portion of the actual electrical travel. The reference line is placed for best straight-line fit through the actual output curve. Please reference the illustration below.



How To Order

Model _____ **3382 G - 1 - 103 G**

Style _____
 G = SMD with 8.5 mm Locator Pin Spacing
 H = Through-hole with 5 mm x 7.5 mm Locator Pin Spacing

Standard Product Indicator _____
 -1 = 4 mm Shaft Diameter
 -2 = 3.5 mm Shaft Diameter

Resistance Code _____

Packaging Designator _____
 G = 1000 pcs./13" Reel (G Style)
 Blank = 50 pcs./Tube (H Style)

Standard Resistance Table

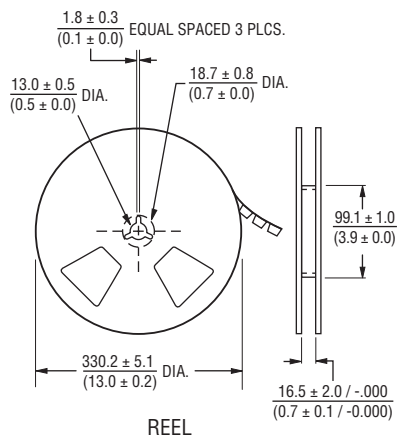
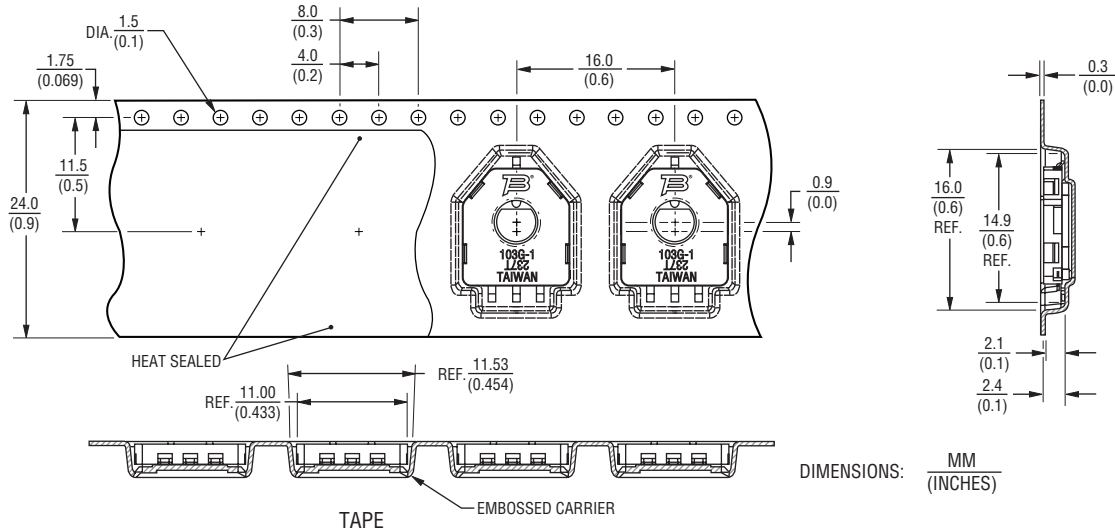
Resistance (Ohms)	Resistance Code
2,500	252
5,000	502
10,000	103
20,000	203
25,000	253
50,000	503
100,000	104

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3382 - 12 mm Rotary Position Sensor

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Packaging Specifications



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- ✓ Shortage Management
- ✓ Alternative Solution
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