



## Features

- Knurled or plain metal shaft
- Audio and linear tapers
- Low noise/low impedance
- Conductive polymer element
- 25k and 50k ohm resistance values for active electronics



## Model 95 Premium Guitar Potentiometer

### Initial Electrical Characteristics<sup>1</sup>

|                                                                                   |                                    |
|-----------------------------------------------------------------------------------|------------------------------------|
| Standard Resistance Value .....                                                   | 25k, 50k, 250k, 300k and 500k ohms |
| Total Resistance Tolerance .....                                                  | 20 %                               |
| Independent Linearity .....                                                       | ±5 %                               |
| Absolute Minimum Resistance .....                                                 | 2 ohms maximum                     |
| Effective Electrical Angle .....                                                  | 225 ° ± 5 °                        |
| Contact Resistance Variation .....                                                | ±1 %                               |
| Dielectric Withstanding Voltage (MIL-STD-202, Method 301)                         |                                    |
| Sea Level .....                                                                   | 1,500 VAC minimum                  |
| 70,000 Feet .....                                                                 | 500 VAC minimum                    |
| Insulation Resistance (500 VDC) .....                                             | 1,000 megohms minimum              |
| Power Rating (Voltage Limited By Power Dissipation or 350 VAC, Whichever Is Less) |                                    |
| +70 °C .....                                                                      | 0.25 watt                          |
| +125 °C .....                                                                     | 0 watt                             |
| Theoretical Resolution .....                                                      | Essentially infinite               |

### Environmental Characteristics<sup>1</sup>

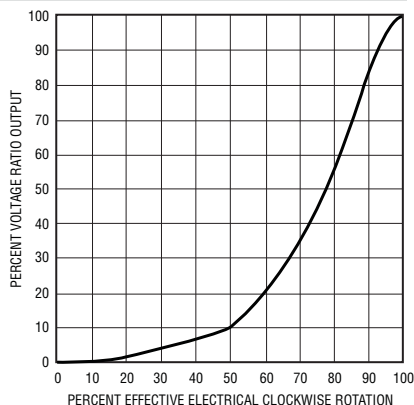
|                                                              |                     |
|--------------------------------------------------------------|---------------------|
| Operating Temperature Range .....                            | -40 °C to +125 °C   |
| Storage Temperature Range .....                              | -55 °C to +125 °C   |
| Temperature Coefficient Over Storage Temperature Range ..... | ±1,000 ppm/°C       |
| Vibration .....                                              | 15 G                |
| Total Resistance Shift .....                                 | ±2 % maximum        |
| Voltage Ratio Shift .....                                    | ±5 % maximum        |
| Shock .....                                                  | 30 G                |
| Total Resistance Shift .....                                 | ±2 % maximum        |
| Voltage Ratio Shift .....                                    | ±5 % maximum        |
| Load Life .....                                              | 1,000 hours         |
| Total Resistance Shift .....                                 | ±10 % maximum       |
| Rotational Life (No Load) .....                              | 100,000 cycles      |
| Total Resistance Shift .....                                 | ±20 % maximum       |
| Contact Resistance Variation @ 50,000 cycles .....           | ±3 %                |
| Moisture Resistance (MIL-STD-202, Method 103, Condition B)   |                     |
| Total Resistance Shift .....                                 | ±20 % TRS maximum   |
| Insulation Resistance (500 VDC) .....                        | 100 megohms minimum |
| IP Rating .....                                              | IP 40               |

### Mechanical Characteristics<sup>1</sup>

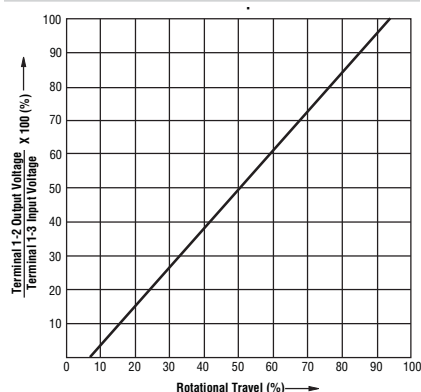
|                           |                                                                                                                                                                                     |
|---------------------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Mechanical Angle .....    | 300 ° ± 5 °                                                                                                                                                                         |
| Rotational Torque .....   | 0.7 oz-in (50 g-cm) typical                                                                                                                                                         |
| Weight                    |                                                                                                                                                                                     |
| Standard Bushing .....    | 14.25 grams                                                                                                                                                                         |
| Long Bushing .....        | 18.15 grams                                                                                                                                                                         |
| Terminals .....           | Solder lugs                                                                                                                                                                         |
| Soldering Condition ..... | Recommended hand soldering using Sn95/Ag5 no clean solder, 0.025 " wire diameter. Maximum temperature 399 °C (750 °F) for 3 seconds. No wash process to be used with no clean flux. |
| Marking .....             | Manufacturer's trademark, date code, resistance, manufacturer's part number                                                                                                         |
| Hardware .....            | One lockwasher, one flat washer, two mounting nuts and one solder lug washer are shipped with each potentiometer.                                                                   |

<sup>1</sup> AT ROOM AMBIENT: +25 °C NOMINAL AND 50 % RELATIVE HUMIDITY NOMINAL, EXCEPT AS NOTED.

### Audio Taper Plot



### Linear Taper Plot



### Schematic



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.

## Additional Features

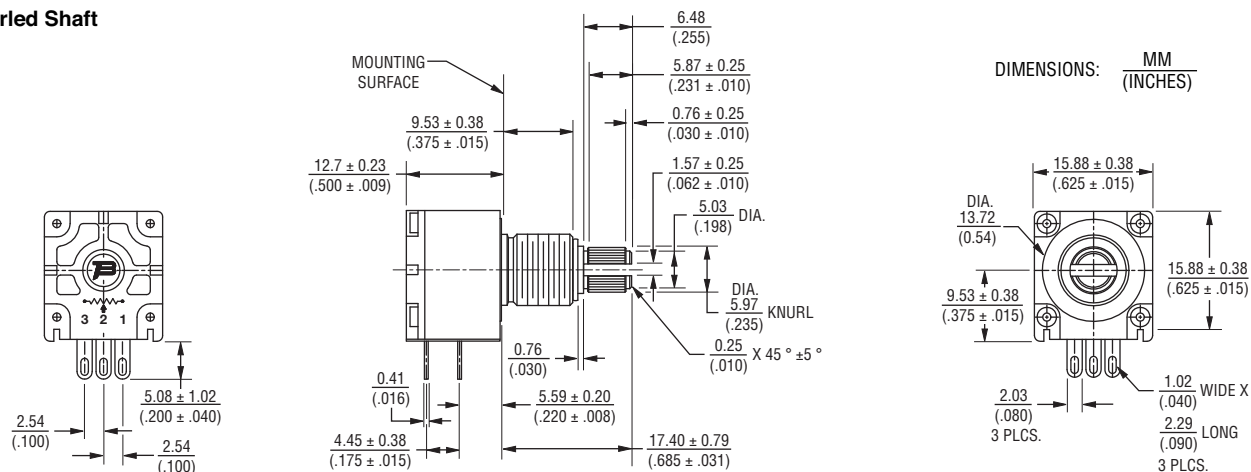
- Single-turn
- 250k, 300k and 500k standard resistance options
- Smooth rotational feel
- Long rotational life
- Long bushing option
- RoHS compliant\*

## Model 95 Premium Guitar Potentiometer

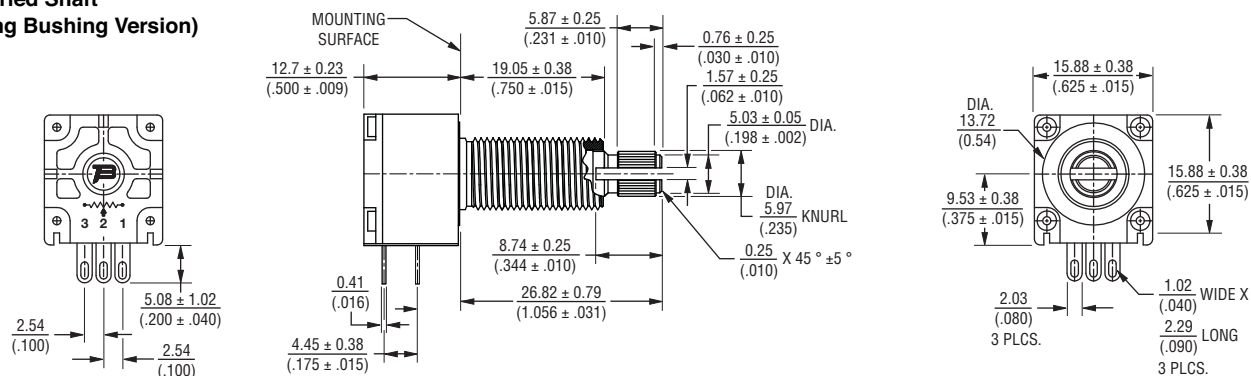
**BOURNS®**

### Product Dimensions

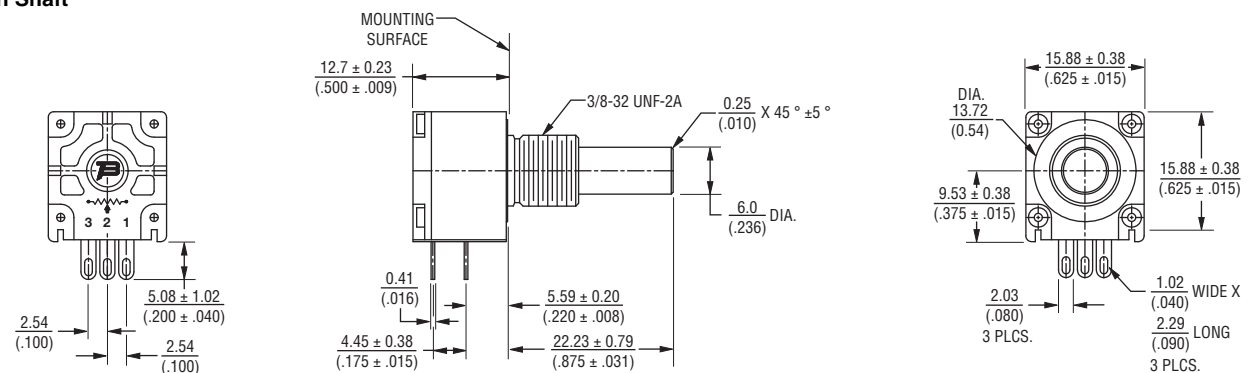
#### Knurled Shaft



#### Knurled Shaft (Long Bushing Version)



#### Plain Shaft



\*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.

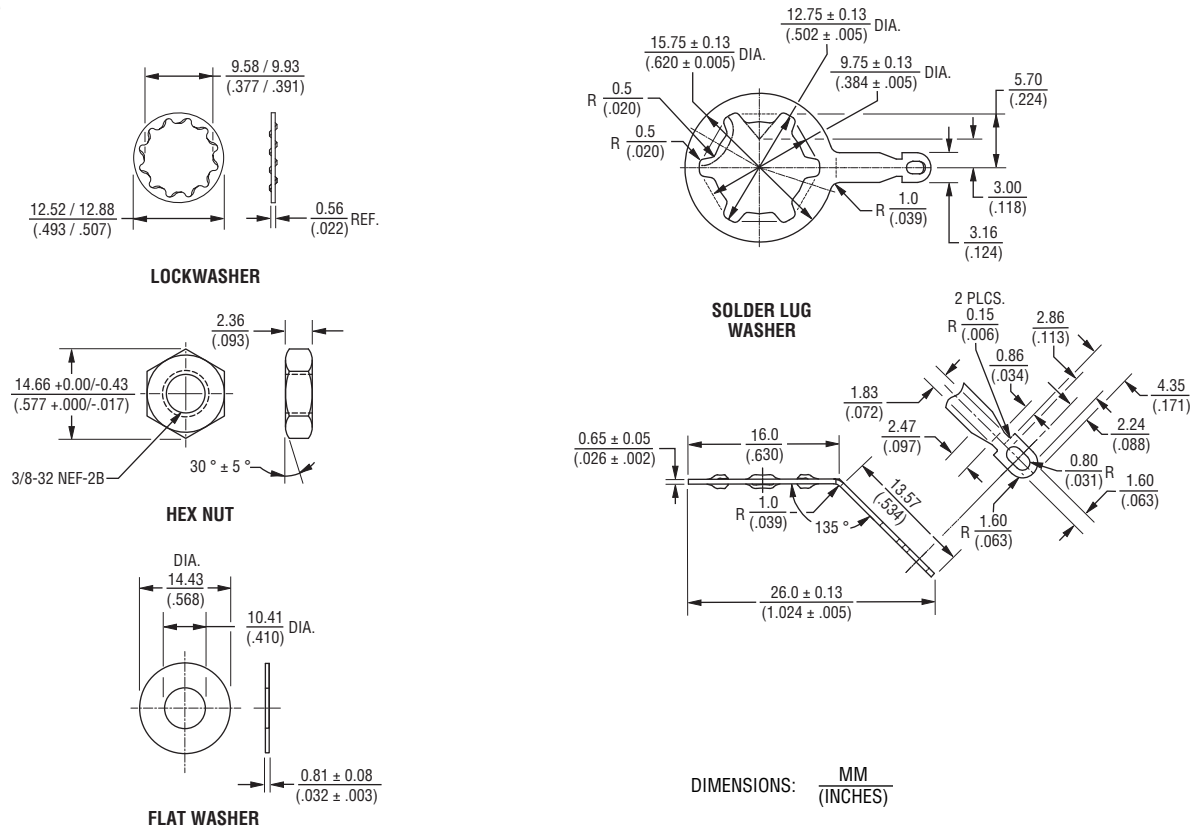
The device characteristics and parameters in this data sheet can and do vary in different applications and actual device performance may vary over time. Users should verify actual device performance in their specific applications.

# Model 95 Premium Guitar Potentiometer

**BOURNS®**

## Product Dimensions

### Hardware



## Selection Guide

| Part Number        | Taper  | Shaft   | Bushing  | Resistance Value (kΩ) |
|--------------------|--------|---------|----------|-----------------------|
| 95A1D-Z28-EA0/300L | Audio  | Knurled | Standard | 250                   |
| 95A1D-Z28-EA0/301L | Audio  | Plain   | Standard | 250                   |
| 95A1D-Z28-EA0/302L | Audio  | Knurled | Standard | 500                   |
| 95A1D-Z28-EA0/303L | Audio  | Plain   | Standard | 500                   |
| 95Z1D-Z33-EA0/304L | Audio  | Knurled | Long     | 250                   |
| 95Z1D-Z33-EA0/305L | Audio  | Knurled | Long     | 500                   |
| 95A1D-Z28-EA0/317L | Audio  | Knurled | Standard | 25                    |
| 95A1D-Z28-EA0/318L | Audio  | Knurled | Standard | 50                    |
| 95Z1D-Z33-EA0/319L | Audio  | Knurled | Long     | 25                    |
| 95Z1D-Z33-EA0/320L | Audio  | Knurled | Long     | 50                    |
| 95A1D-Z28-EA0/321L | Linear | Knurled | Standard | 300                   |
| 95A1D-Z28-EA0/322L | Linear | Knurled | Standard | 500                   |
| 95Z1D-Z33-EA0/323L | Linear | Knurled | Long     | 300                   |
| 95Z1D-Z33-EA0/324L | Linear | Knurled | Long     | 500                   |

REV. 10/13

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.