

PRODUCT BRIEF



Bourns® SMD Trimmers – Resistive Product Solution

INTRODUCTION

Bourns is committed to Surface Mount Technology (SMT). In the early days of this technology, we worked with board designers, process engineers, processing equipment manufacturers and materials suppliers to initiate a program that set the standards for surface mount trimming potentiometers. Today, we offer the broadest range of surface mount trimmers in the industry. Our new designs adhere to standardized footprints, maximum soldering temperature/time limits and packaging specifications which include RoHS*, WEE**, and EIA***.

APPLICATIONS

- **Industrial:** Sensors, Relays, Laser Diode Drivers, Fluid Measurements, Bar Code Scanners, Smoke Detectors, Graphic Printers, RFID Systems, Automated Gates/Doors, Power Supplies
- **Consumer:** Microwave Ovens, Coffee/Tea Makers, Intercom Systems, Game Units, Clocks, Digital Cameras, Laptops, Cellphones, HDTVs
- **Medical (Low/Medium Risk)****:** Scanners, Temperature and Respiratory Monitors, Blood Chemical Analyzers, MRIs
- **Telecom:** Satellite Systems, Portable/Handheld Radios, GPS Navigation, RF Amplifiers
- **Military & Aerospace:** Military Radios, Control Systems, Radar Systems, Analytical Equipment, Avionics, Laser Altimeters
- **Automotive:** Bourns offers AEC-Q200 3 mm and 4 mm SMD Products

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

**Waste Electrical and Electronic Equipment

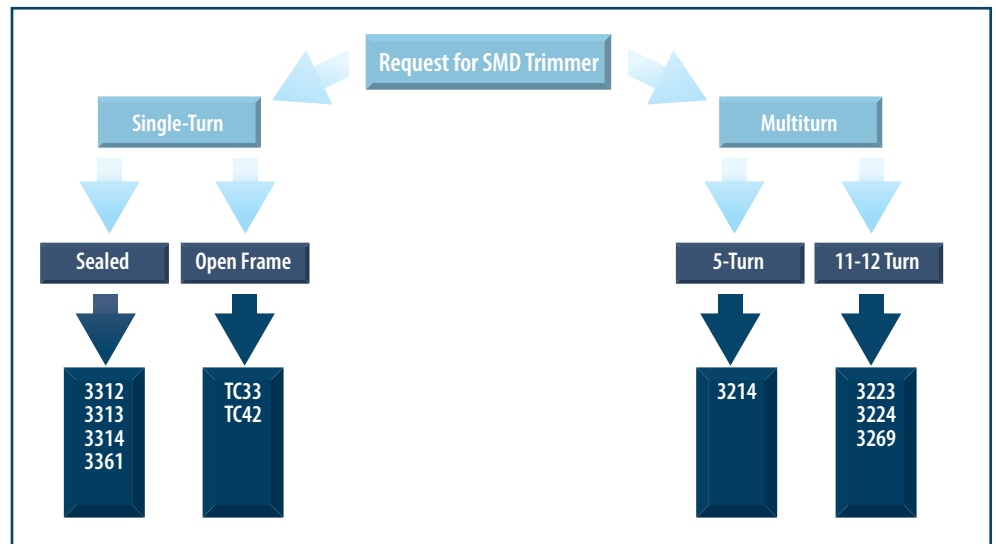
***Electronic Industry Association

****Bourns® products have not been designed for and are not intended for use in "lifesaving," "life-critical" or "life-sustaining" applications nor any other applications where failure or malfunction of the Bourns® product may result in personal injury or death. See Legal Disclaimer Notice <http://www.bourns.com/docs/legal/disclaimer.pdf>.

SOLUTION

The use of leadless surface mount trimmers, coupled with smaller and shorter traces, permits circuits to operate at higher frequencies or at faster speeds. From the component viewpoint, the fact that they are

much smaller in mass results in improved shock and vibration characteristics. A selection guide for Bourns® Trimspot® Trimming Potentiometer SMD models is shown below.



ADVANTAGES

- Bourns uses advanced housing construction and molding materials compatible with popular surface mount processes.
- Our sealed models employ improved sealing techniques to withstand high soldering temperatures and thermal shock from typical board washing.
- For today's subminiature resistive elements and wipers, Bourns has developed new techniques to minimize noise and Contact Resistance Variation (CRV).
- Bourns® Trimspot® trimming potentiometers are designed for standard vacuum pick and place equipment.
- Rotor designs of most models are compatible with automatic adjustment equipment.

BENEFITS

- Designing environmentally friendly PCBs with RoHS compliant*, halogen free**** SMD trimmers.
- Bourns' highly automated production complies with stringent statistical quality control measures to ensure consistent quality and performance.
- Small part sizes allow customers to save on board space.
- Easy to adjust.

****Bourns considers a product to be "halogen free" if (a) the Bromine (Br) content is 900 ppm or less; (b) the Chlorine (Cl) content is 900 ppm or less; and (c) the total Bromine (Br) and Chlorine (Cl) content is 1500 ppm or less.



FAQs

Question	Bourns Response
Are the SMD sealed trimmers hermetically sealed?	Bourns® SMD Sealed Trimmers are not hermetically sealed. They are sealed to Bourns' construction design, using a chevron seal on the shaft to help protect against humidity and board washing.
Are there any limitations for processing and washing Bourns® sealed trimmers?	<ul style="list-style-type: none"> Bourns recommends no more than 60 psi direct water pressure. Exceeding this specification can compromise the seal integrity of the unit. More details can be found in Bourns' processing recommendations (https://www.bourns.com/docs/technical-documents/technical-library/trimmers/technical-articles/bourns_applications_and_processing_guide_trimpot.pdf). Bourns recommends reducing temperature shock from the moist environment of the wash: <ul style="list-style-type: none"> Use a wash/rinse temperature as near to the component temperature as possible Extend time between solder processing & wash Cool board after solder operation, prior to entering wash - cool down rate 3 °C/sec.

HOW TO ORDER

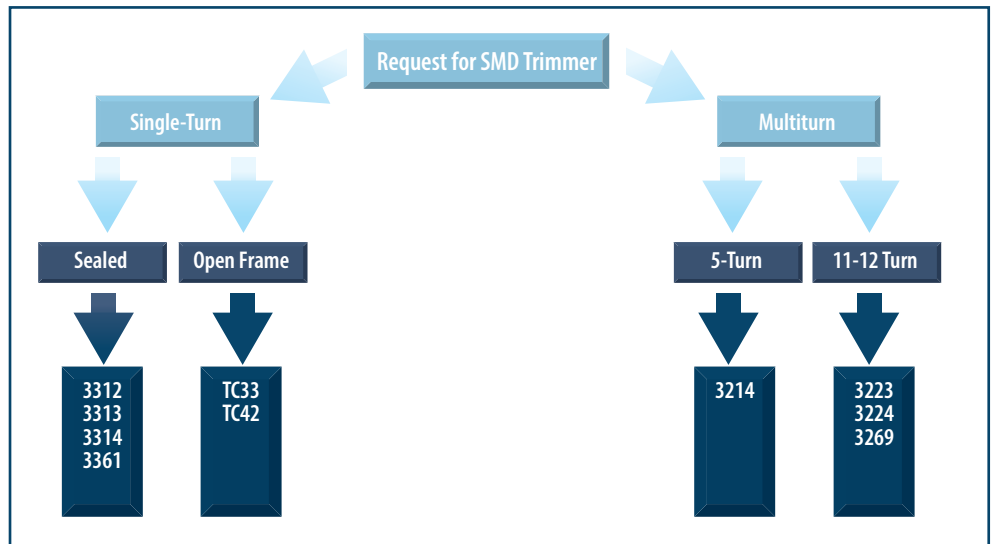
The broad range of Bourns® Surface Mount Trimpot® Trimming Potentiometers can be easily configured for ordering based on your requirements. The main parameters to be considered are model, style, standard or modified product indicator, resistance code and packaging specification.

3224 J - 1 - 502 E

Model _____
 Style _____
 Standard of Modified _____
 Product Indicator _____
 -1 = IR Reflow (Standard)
 -2 = Wave Solderable †
 -FW5 = .070 " ± 0.10 " Shaft Extension

Resistance Code _____
 Embossed Tape Designator _____
 E = Style J, G: 500 pcs./7 " reel (standard)
 Style W: 250 pcs./7 " reel (standard)
 Style X: 200 pcs./7 " reel (standard)
 G = Style J, G: 1500 pcs./13 " reel (standard)
 Style W: 1000 pcs./13 " reel (standard)
 Style X: 850 pcs./13 " reel (standard)
 Blank = Style J, G: 1500 pcs./13 " reel (FW5)
 Style W, X: 600 pcs./13 " reel (FW5)

Consult factory for other available options.
 † -2 has a treated stainless steel shaft.



ADDITIONAL RESOURCES

- Trimpot® Portfolio: <https://bourns.com/products/trimpot-trimming-potentiometers>
- Samples/Design Kits Available: <https://bourns.com/resources/design-tools/design-kits/trimpot-trimming-potentiometers>

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