

## Features

- Lead free device (RoHS Compliant\*)
- Protects 4 lines
- ESD & EFT protection
- Low capacitance <5 pF

## Applications

- Portable electronics
- Cell phones
- Video/graphics card
- USB 2.0 interface
- Sensor interface

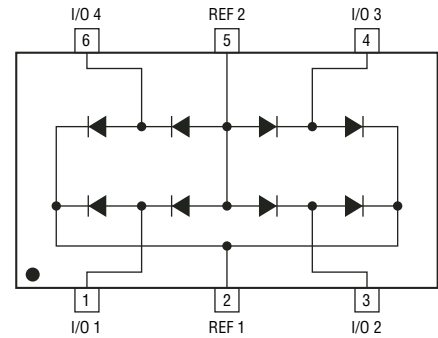
# CDSOT23-SR208 – Steering Diode Array

## General Information

The markets of portable communications, computing and video equipment are challenging the semiconductor industry to develop increasingly smaller electronic components.

Bourns offers Transient Voltage Suppressor Array diodes for EFT and ESD protection applications, in compact chip package SOT23-6 size format. Bourns® Chip Diodes conform to JEDEC standards, are easy to handle on standard pick and place equipment and their flat configuration minimizes roll away.

The Bourns® device will meet IEC 61000-4-2 (ESD) and IEC 61000-4-4 (EFT) requirements.



## Electrical Characteristics (@ T<sub>A</sub> = 25 °C Unless Otherwise Noted)

| Parameter  | Symbol             | Min. | Nom. | Max. | Unit |
|--|--------------------|------|------|------|------|
| Repetitive Peak Forward Current<br>(t <sub>p</sub> = 5 μs, F = 50 KHz) | I <sub>FRM</sub>   |      |      | 700  | mA   |
| Continuous Power Dissipation   | P <sub>PC</sub>    |      |      | 500  | mW   |
| Forward Voltage @ 5 mA   | V <sub>F</sub>     |      |      | 1.2  | V    |
| Repetitive Peak Reverse Voltage<br>@ 10 μA                             | V <sub>RRM</sub>   |      |      | 20   | V    |
| Reverse Leakage Current @ V <sub>RRM</sub> 5V                          | I <sub>R</sub>     |      |      | 1    | μA   |
| Capacitance <sup>1</sup>   | C <sub>J(SD)</sub> |      |      | 5    | pF   |
| Forward Surge Rating<br>(1/20 s @ 25 °C, I <sub>F</sub> = 10 mA)       | V <sub>F</sub>     |      |      | 1.5  | V    |

Note:

1. Apply a 5 V bias between pins 2 (REF 1) to pin 5 (REF 2). Measure C<sub>j</sub> between any I/O pins to pin 5 (REF 2) and divide by two.

## Thermal Characteristics (@ T<sub>A</sub> = 25 °C Unless Otherwise Noted)

| Parameter             | Symbol           | Min. | Nom. | Max. | Unit |
|-----------------------|------------------|------|------|------|------|
| Operating Temperature | T <sub>J</sub>   | -55  | +25  | +150 | °C   |
| Storage Temperature   | T <sub>STG</sub> | -55  | +25  | +150 | °C   |

\*RoHS Directive 2002/95/EC Jan 27 2003 including Annex.  
 Specifications are subject to change without notice.  
 Customers should verify actual device performance in their specific applications.

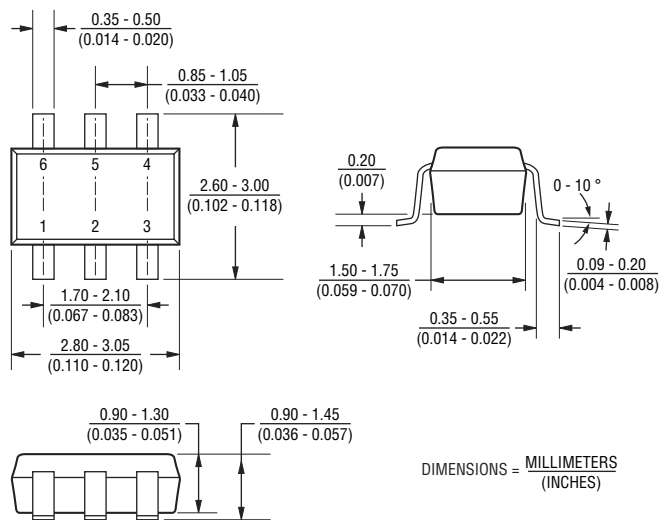
# CDSOT23-SR208 – Steering Diode Array

**BOURNS®**

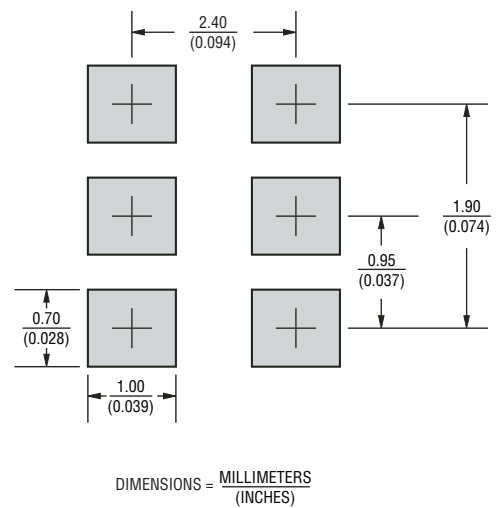
## Mechanical Characteristics

This is a molded JEDEC SOT23-6 package with lead free 100 % Tin (Sn) on the lead frame. It weighs approximately 15 mg and has a flammability rating of UL 94V-0.

## Product Dimensions



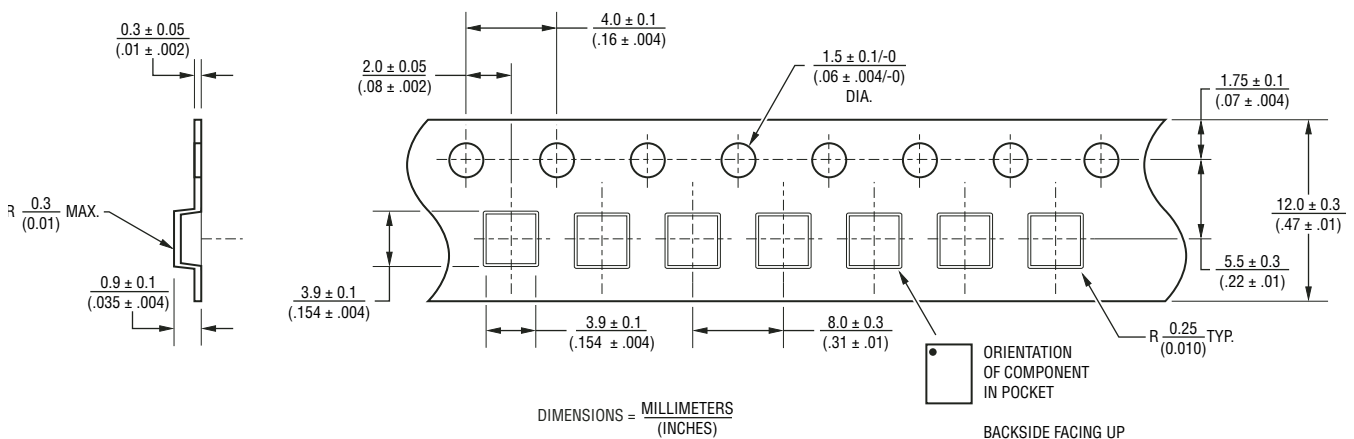
## Recommended Footprint



## Packaging Information

The product will be dispensed in Tape and Reel format (see diagram below).

TOP SIDE VIEW  
(INTO COMPONENT POCKET)



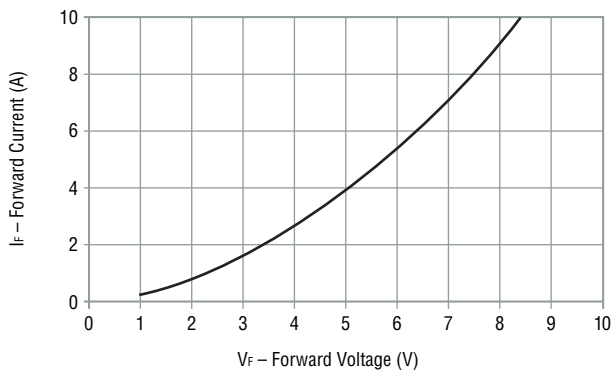
Devices are packed in accordance with EIA standard RS-481-A and specifications shown here.

# CDSOT23-SR208 – Steering Diode Array

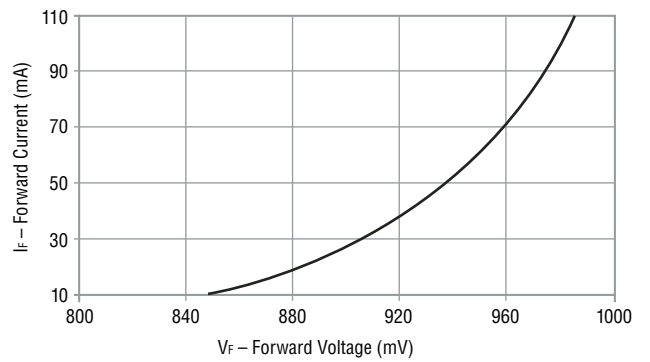


## Performance Graphs

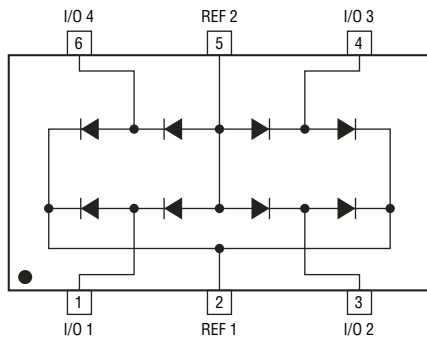
Peak Forward Current vs Forward Voltage



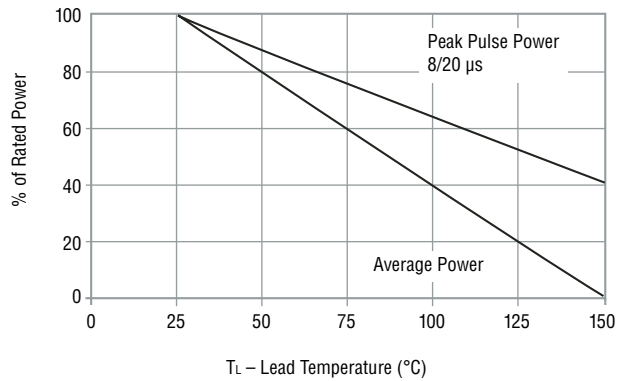
Low Forward Current vs Forward Voltage



## Block Diagram



## Power Derating Curve



## How To Order

**CD SOT23 - SR 208**

Common Code \_\_\_\_\_  
 CD = Chip Diode  
 Package \_\_\_\_\_  
 SOT23 = SOT23-6 Package  
 Model \_\_\_\_\_  
 SR = Steering Diode  
 Model Number \_\_\_\_\_  
 208

## Typical Part Marking

CDSOT23-SR208 ..... **PSB**



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