



### Features

- Lead free device (RoHS Compliant\*)
- Protects 4 lines
- Low leakage current
- Low capacitance 3 pF Typ.

### Applications

- Ethernet – 10/100/100 Base T
- Portable electronics
- Video/graphics card
- USB 2.0 interface
- FireWire

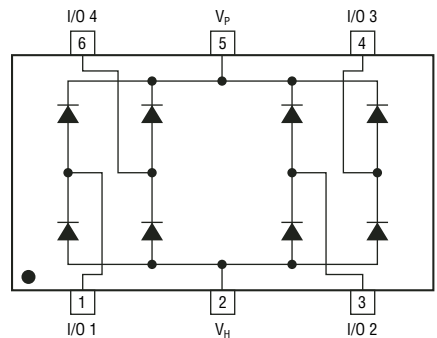
## CDSOT23-SR724 – Steering Diode Array

### 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 Surge 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), IEC 61000-4-4 (EFT) and IEC 61000-4-5 (Surge) requirements.



### Electrical Characteristics (@ TA = 25 °C Unless Otherwise Noted)

| Parameter  | Symbol      | Min. | Nom. | Max. | Unit |
|--|-------------|------|------|------|------|
| Peak Pulse Forward Current<br>( $t_p = 8/20 \mu s$ )                                       | $I_{PP}$    |      |      | 12   | A    |
| Continuous Power Dissipation   | $P_{PC}$    |      |      | 125  | mW   |
| Typical Forward Voltage<br>( $8/20 \mu s @ 25 \text{ }^\circ\text{C}, I_F = 1 \text{ A}$ ) | $V_F$       |      | 2    |      | V    |
| Repetitive Peak Reverse Voltage <sup>1</sup>   | $V_{RRM}$   |      |      | 20   | V    |
| Reverse Leakage Current @ $V_{RRM}^2$  | $I_D$       |      |      | 10   | nA   |
| Capacitance @ 0 V & 1 MHz  | $C_{J(SD)}$ |      | 3    |      | pF   |
| Quiescent Supply Current @ 20 V <sup>3</sup>   | $I_{RQ}$    |      |      | 100  | nA   |

- Notes:
1.  $V_{RRM}$  is  $+V_{CC}$  for pin 5,  $-V_{EE}$  for pin 2. Pin 2 also represents ground for unidirectional applications.
  2. +20 V from Pin 5 to 1, 5 to 4, 5 to 3, and 5 to 6. -20 V from Pin 2 to 1, 2 to 3, 2 to 4, and 2 to 6.
  3. +20 V from Pin 5 to 2.

### Thermal Characteristics (@ TA = 25 °C Unless Otherwise Noted)

| Parameter             | Symbol    | Min. | Nom. | Max. | Unit |
|-----------------------|-----------|------|------|------|------|
| Operating Temperature | $T_J$     | -55  | +25  | +150 | °C   |
| Storage Temperature   | $T_{STG}$ | -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.

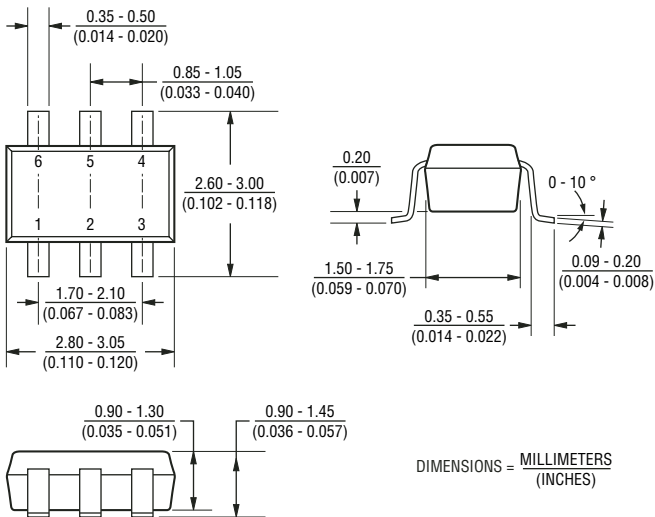
# CDSOT23-SR724 – Steering Diode Array

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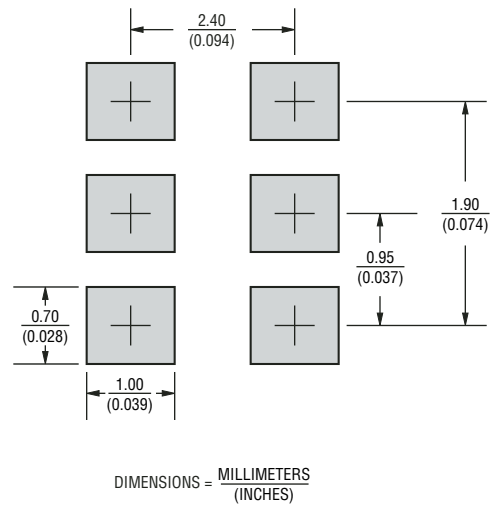
## Mechanical Characteristics

This is a molded JEDEC SOT23-6 package with lead free 100 % Tin (Sn) on the lead frame. It weighs approximately 16 mg and has a flammability rating of UL 94V-0.

## Product Dimensions

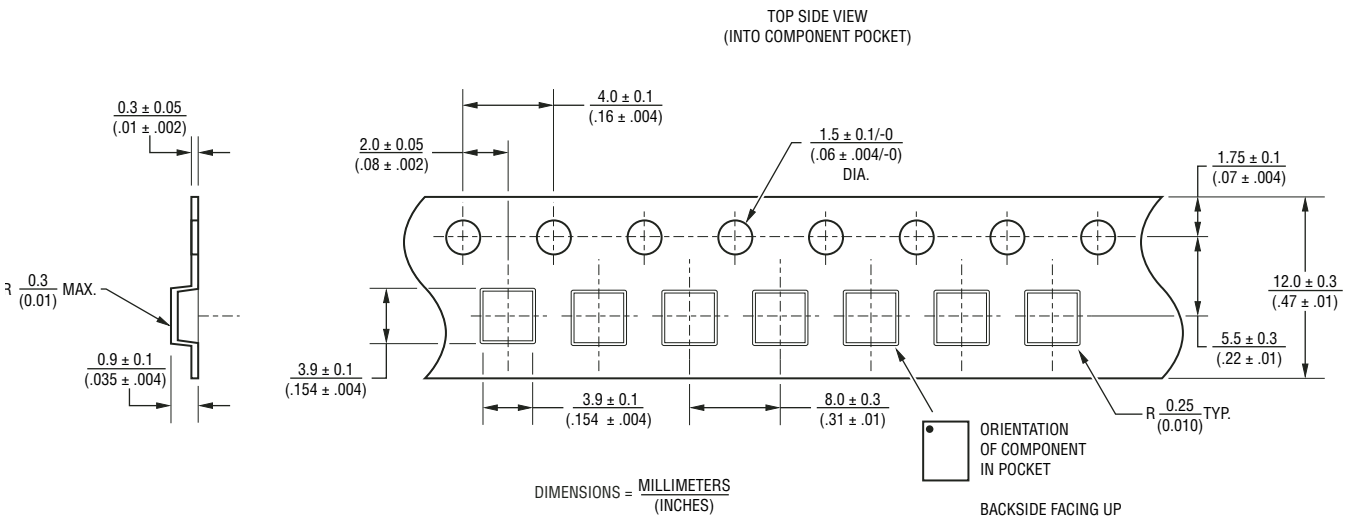


## Recommended Footprint



## Packaging Information

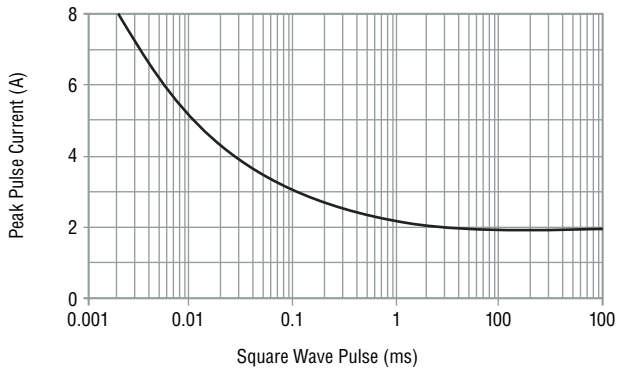
The product will be dispensed in Tape and Reel format (see diagram below).



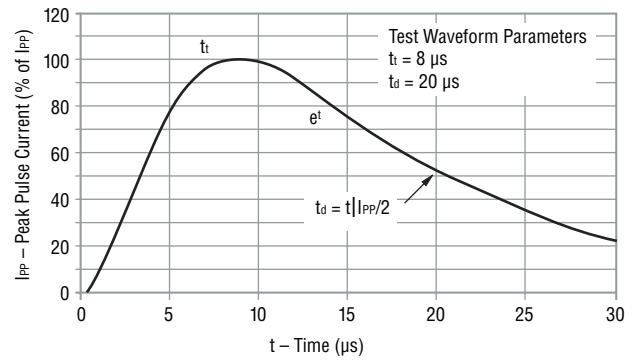
Devices are packed in accordance with EIA standard RS-481-A and specifications shown here.

## Performance Graphs

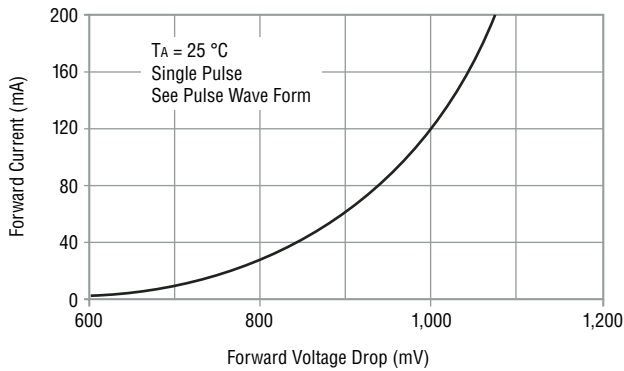
### Non-Repetitive Peak Pulse Current Capability



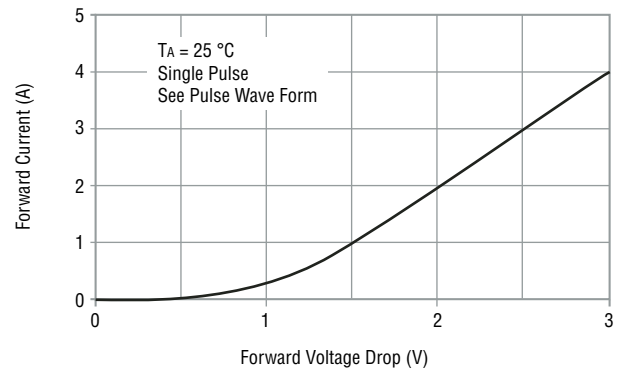
### Pulse Wave Form



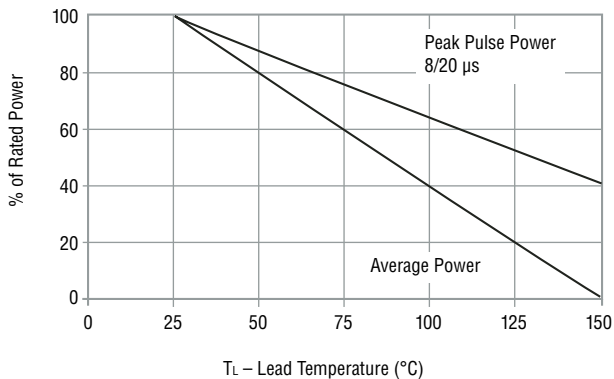
### Typical Low Current Forward Voltage Drop



### Typical High Current Forward Voltage Drop



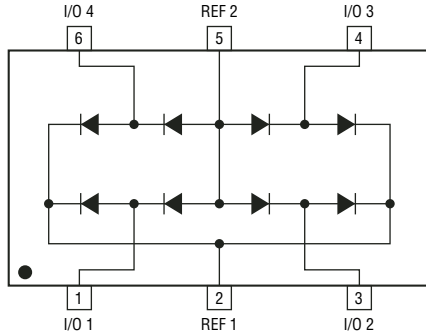
### Power Derating Curve



# CDSOT23-SR724 – Steering Diode Array

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## Block Diagram



## How To Order

Common Code \_\_\_\_\_ **CD SOT23 - SR 724**  
CD = Chip Diode  
Package \_\_\_\_\_  
SOT23 = SOT23-6 Package  
Model \_\_\_\_\_  
SR = Steering Diode  
Model Number \_\_\_\_\_  
724

## Typical Part Marking

CDSOT23-SR724 ..... **724**



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