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

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)

<table>
<thead>
<tr>
<th>Parameter</th>
<th>Symbol</th>
<th>Min.</th>
<th>Nom.</th>
<th>Max.</th>
<th>Unit</th>
</tr>
</thead>
<tbody>
<tr>
<td>Peak Pulse Forward Current</td>
<td>IFPP</td>
<td>12</td>
<td></td>
<td>12</td>
<td>A</td>
</tr>
<tr>
<td>(tp = 8/20 µs)</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Continuous Power Dissipation</td>
<td>PPC</td>
<td>125</td>
<td></td>
<td></td>
<td>mW</td>
</tr>
<tr>
<td>Typical Forward Voltage</td>
<td>Vf</td>
<td>2</td>
<td></td>
<td></td>
<td>V</td>
</tr>
<tr>
<td>(8/20 µs @ 25 °C, If = 1 A)</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Repetitive Peak Reverse Voltage</td>
<td>VRRM</td>
<td>20</td>
<td></td>
<td></td>
<td>V</td>
</tr>
<tr>
<td>Reverse Leakage Current @ VRRM</td>
<td>lD</td>
<td>10</td>
<td></td>
<td></td>
<td>nA</td>
</tr>
<tr>
<td>Capacitance @ 0 V &amp; 1 MHz</td>
<td>C(jSD)</td>
<td>3</td>
<td></td>
<td></td>
<td>pF</td>
</tr>
<tr>
<td>Quiescent Supply Current @ 20 V</td>
<td>IQ</td>
<td>100</td>
<td></td>
<td></td>
<td>nA</td>
</tr>
</tbody>
</table>

Notes:
1. Vf is +VCC for pin 5, -VEE 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)

<table>
<thead>
<tr>
<th>Parameter</th>
<th>Symbol</th>
<th>Min.</th>
<th>Nom.</th>
<th>Max.</th>
<th>Unit</th>
</tr>
</thead>
<tbody>
<tr>
<td>Operating Temperature</td>
<td>TJ</td>
<td>-55</td>
<td>+25</td>
<td>+150</td>
<td>°C</td>
</tr>
<tr>
<td>Storage Temperature</td>
<td>TSTG</td>
<td>-55</td>
<td>+25</td>
<td>+150</td>
<td>°C</td>
</tr>
</tbody>
</table>

Specifications are subject to change without notice.
Customers should verify actual device performance in their specific applications.
CDSOT23-SR724 – Steering Diode Array

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

<table>
<thead>
<tr>
<th>DIMENSIONS</th>
<th>MILLIMETERS</th>
<th>(INCHES)</th>
</tr>
</thead>
<tbody>
<tr>
<td>1.70 - 2.10</td>
<td>0.067 - 0.083</td>
<td></td>
</tr>
<tr>
<td>2.80 - 3.05</td>
<td>0.110 - 0.120</td>
<td></td>
</tr>
<tr>
<td>0.90 - 1.30</td>
<td>0.035 - 0.051</td>
<td></td>
</tr>
<tr>
<td>0.90 - 1.45</td>
<td>0.035 - 0.057</td>
<td></td>
</tr>
</tbody>
</table>

Recommended Footprint

Packaging Information

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

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CDSOT23-SR724 – Steering Diode Array

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

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Customers should verify actual device performance in their specific applications.
CDSOT23-SR724 – Steering Diode Array

How To Order

CD SOT23 - SR 724

Common Code
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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www.bourns.com

REV. 07/09

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