



Features

- Lead free device
- RoHS compliant*
- Protects four lines
- ESD and EFT protection
- Low capacitance: <5 pF

Applications

- Portable electronics
- Cellular phones
- Video/graphics cards
- USB 2.0 interface
- Sensor interface

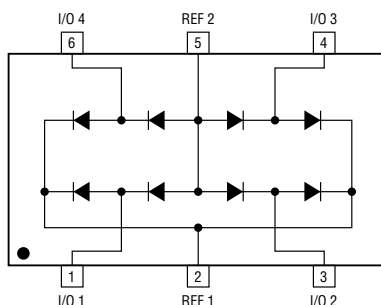
CDSOT23-SR208 – Steering Diode Array

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.



Additional Information

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

Parameter	Symbol	Min.	Nom.	Max.	Unit
Repetitive Peak Forward Current (t _p = 5 μs, F = 50 KHz)	I _{FRM}			700	mA
Continuous Power Dissipation	P _{PC}			500	mW
Forward Voltage @ 50 mA	V _F			1.2	V
Repetitive Peak Reverse Voltage @ 10 μA	V _{RRM}			20	V
Reverse Leakage Current @ V _{RRM} 5 V	I _R			1	μA
Capacitance ¹	C _{j(SD)}			5	pF
Forward Surge Rating (1/20 s @ 25 °C, I _F = 10 mA)	V _F			1.5	V

Note:

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

Thermal Characteristics (@ T_A = 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



WARNING Cancer and Reproductive Harm - www.P65Warnings.ca.gov

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

Specifications are subject to change without notice.

Users should verify actual device performance in their specific applications.

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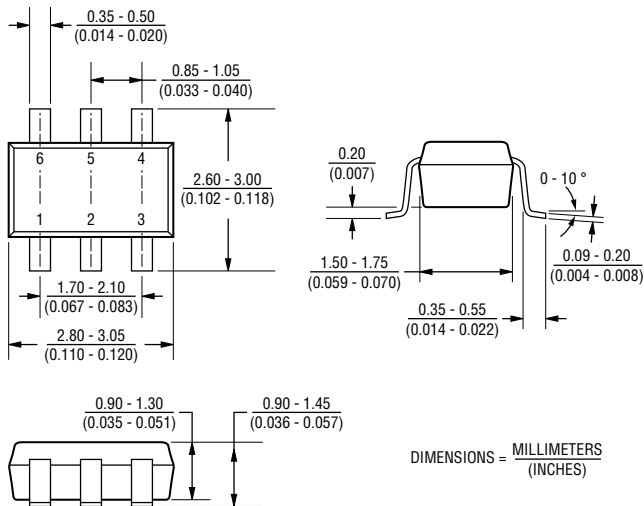
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Mechanical Characteristics

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

Product Dimensions



How to Order

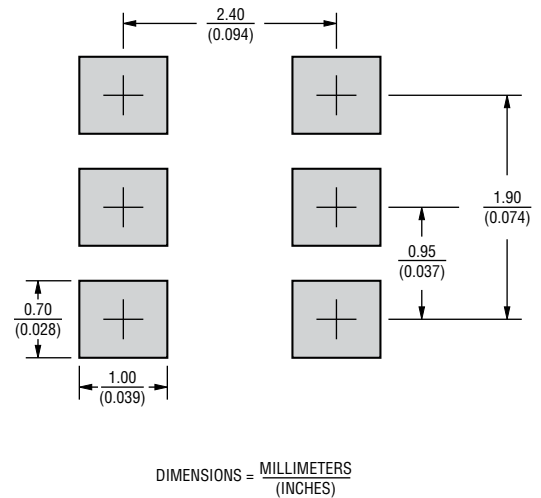
CD SOT23 - SR 208

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

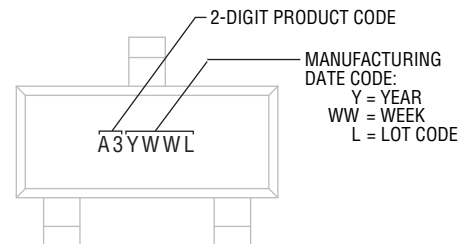
Environmental Specifications

Moisture Sensitivity Level 1
 ESD Classification (HBM) 2

Recommended Footprint



Typical Part Marking



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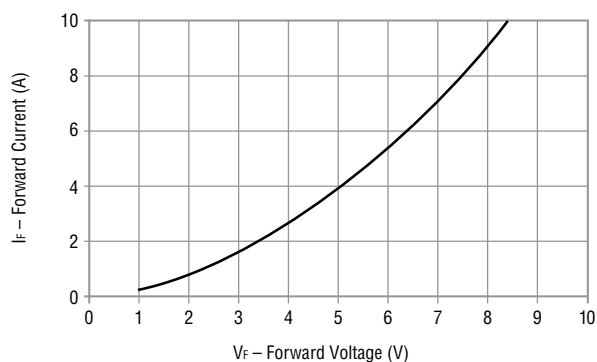
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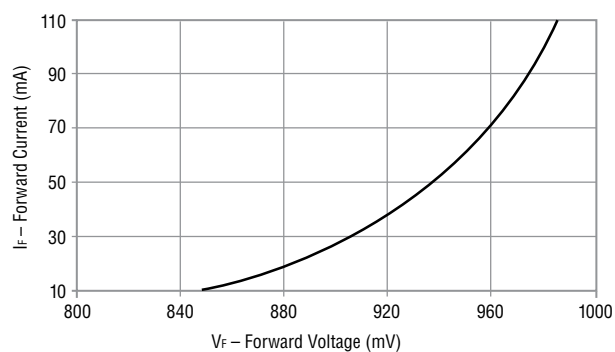
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Performance Graphs

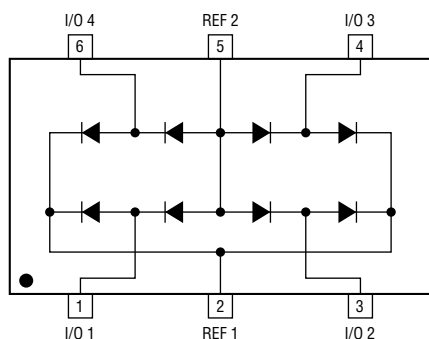
Peak Forward Current vs. Forward Voltage



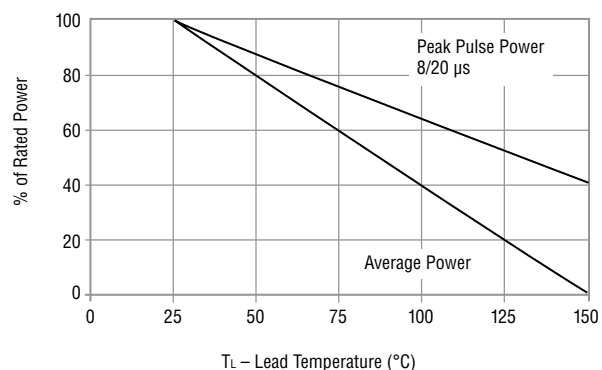
Low Forward Current vs. Forward Voltage



Block Diagram



Power Derating Curve



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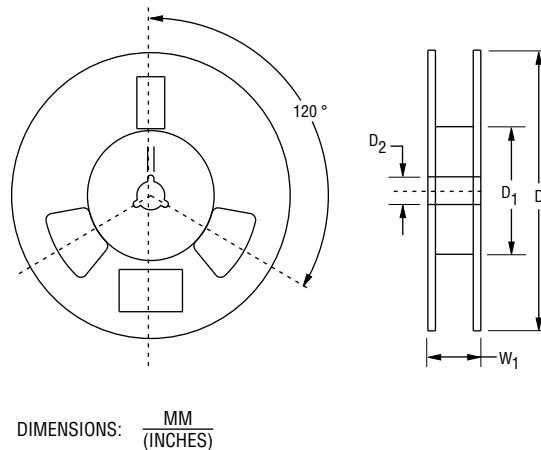
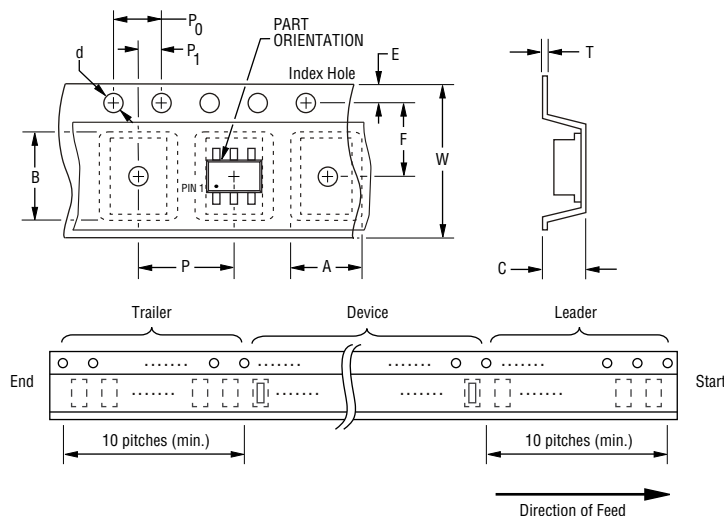
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CDSOT23-SR208 – Steering Diode Array

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Packaging Information

The product is packaged in tape and reel format per EIA-481 standard.



Item	Symbol	SOT23-6
Carrier Width	A	$\frac{3.90 \pm 0.10}{(0.154 \pm 0.004)}$
Carrier Length	B	$\frac{3.90 \pm 0.10}{(0.154 \pm 0.004)}$
Carrier Depth	C	$\frac{0.90 \pm 0.10}{(0.035 \pm 0.004)}$
Sprocket Hole	d	$\frac{1.55 \pm 0.05}{(0.061 \pm 0.002)}$
Reel Outside Diameter	D	$\frac{178}{(7.008)}$
Reel Inner Diameter	D ₁	$\frac{50.0}{(1.969)} \text{ MIN.}$
Feed Hole Diameter	D ₂	$\frac{13.0 \pm 0.20}{(0.512 \pm 0.008)}$
Sprocket Hole Position	E	$\frac{1.75 \pm 0.10}{(0.069 \pm 0.004)}$
Punch Hole Position	F	$\frac{3.50 \pm 0.05}{(0.138 \pm 0.002)}$
Punch Hole Pitch	P	$\frac{4.00 \pm 0.10}{(0.157 \pm 0.004)}$
Sprocket Hole Pitch	P ₀	$\frac{4.00 \pm 0.10}{(0.157 \pm 0.004)}$
Embossment Center	P ₁	$\frac{2.00 \pm 0.05}{(0.079 \pm 0.002)}$
Overall Tape Thickness	T	$\frac{0.20 \pm 0.10}{(0.008 \pm 0.004)}$
Tape Width	W	$\frac{8.00 \pm 0.20}{(0.315 \pm 0.008)}$
Reel Width	W ₁	$\frac{14.4}{(0.567)} \text{ MAX.}$
Quantity per Reel	--	3000

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REV. 08/19

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