

Features

- RoHS compliant*
- Protects four lines
- ESD protection
- Low capacitance - 3.5 pF

Applications

- Ethernet - 10/100/100 Base T
- Cellular phones
- Video/graphics cards
- USB 2.0 interface
- DVI interface

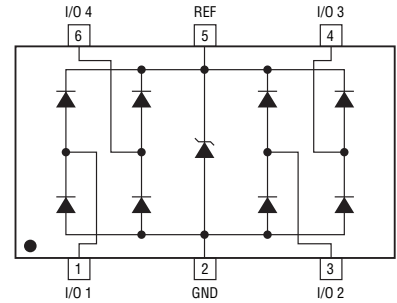
CDSOT23-SRV05-4 — Steering Diode TVS Array Combo

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. 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 assist in meeting IEC 61000-4-2 (ESD), IEC 61000-4-4 (EFT) and IEC 61000-4-5 (Surge) requirements.



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

Parameter	Symbol	Min.	Nom.	Max.	Unit
Peak Pulse Current (t _p = 8/20 μs)	I _{PP}			30	A
Peak Pulse Power (t _p = 8/20 μs) ¹	P _{PP}			500	W
Working Peak Reverse Voltage	V _{WM}			5	V
Breakdown Voltage @ 1 mA	V _{BR}	6			V
Leakage Current @ V _{WM}	I _D			5	μA
Capacitance	C _{j(SD)}		3.5	5	pF
Forward Surge Rating (1/20 s @ 25 °C, I _F = 10 mA)	V _F			1.5	V
Clamping Voltage (per IEC 61000-4-5) 8/20 μs)	@ I _{PP} = 1 A			12	V
	@ I _{PP} = 5 A			15	
ESD Protection (per IEC 61000-4-2) Contact Discharge Air Discharge	ESD			30	kV
				30	
EFT Protection (per IEC 61000-4-4 Level 4 I/O, Signal, Data & Control Lines @ 5/50 ns)	EFT			2	kV

Notes:

1. See Peak Pulse Power vs. Pulse Time.

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 2002/95/EC Jan. 27, 2003 including annex and RoHS Recast 2011/65/EU June 8, 2011. Specifications are subject to change without notice.

Users should verify actual device performance in their specific applications.

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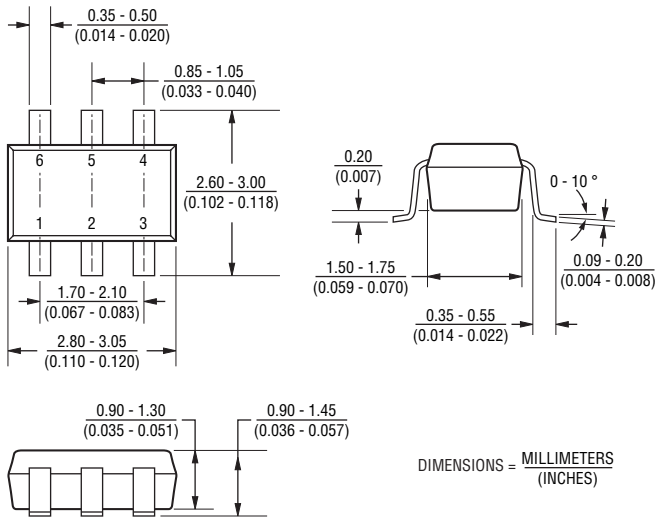
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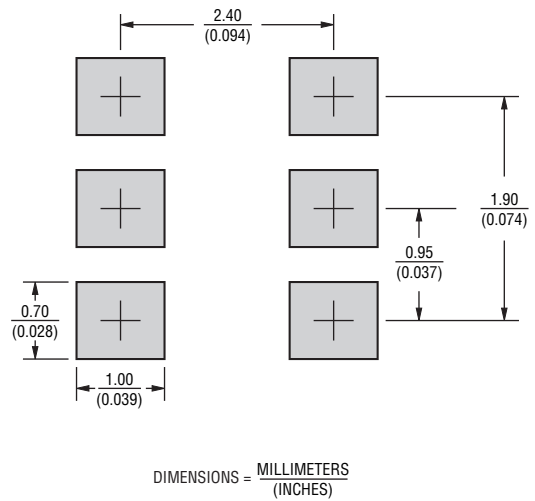
Mechanical Characteristics

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

Product Dimensions



Recommended Footprint

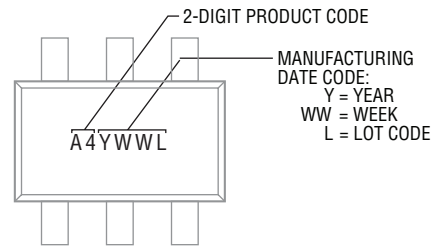


How to Order

	CD SOT23 - SRV 05 - 4
Common Code	CD
Package	SOT23
Model	SRV
Working Peak Reverse Voltage	05
Number of Protection Lines	4

CD = Chip Diode
SOT23 = SOT23-6 Package
SRV = Steering Diode Array
05 = 5 V_{RWM} (Volts)

Typical Part Marking



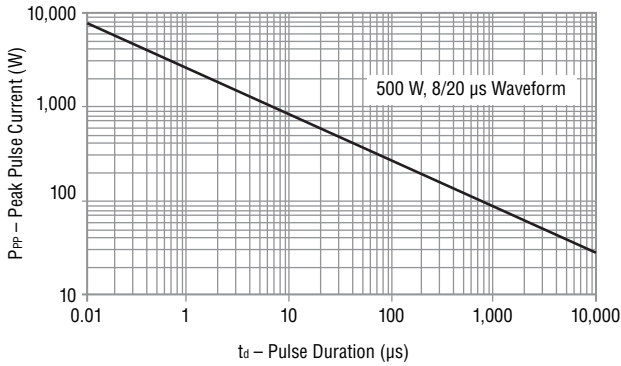
Environmental Specifications

Moisture Sensitivity Level	1
ESD Classification (HBM)	3B

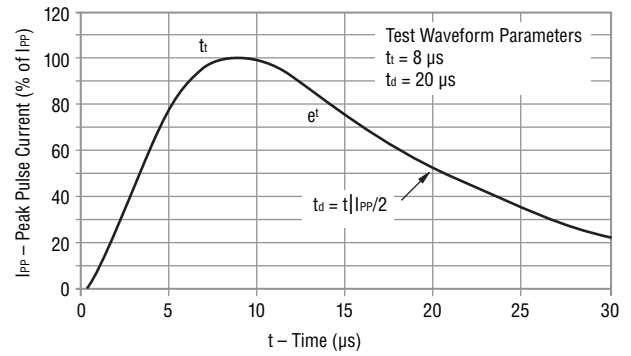
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Performance Graphs

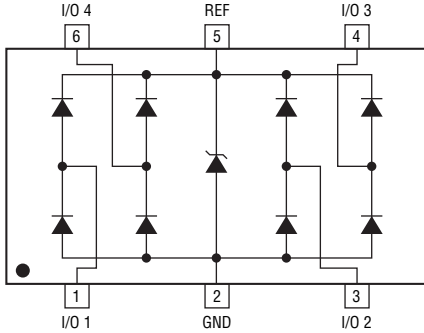
Peak Pulse Power vs. Pulse Time



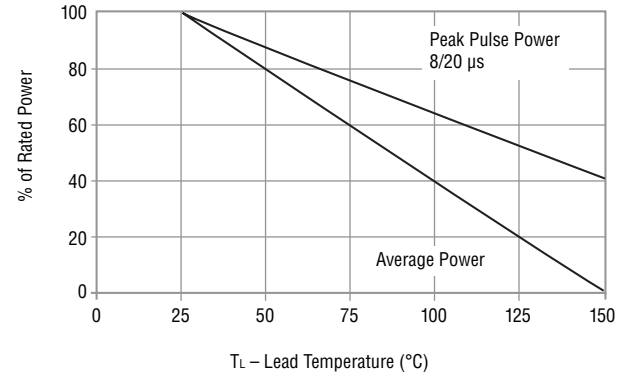
Pulse Waveform



Block Diagram



Power Derating Curve



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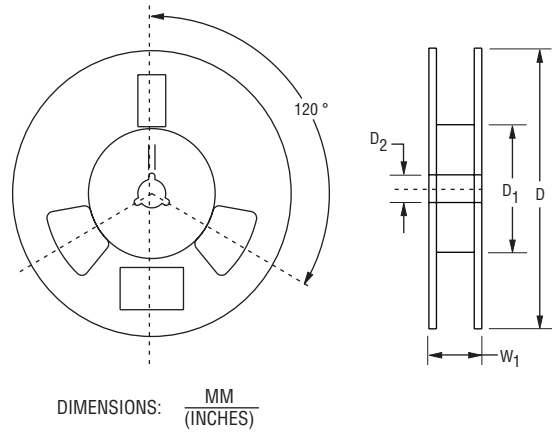
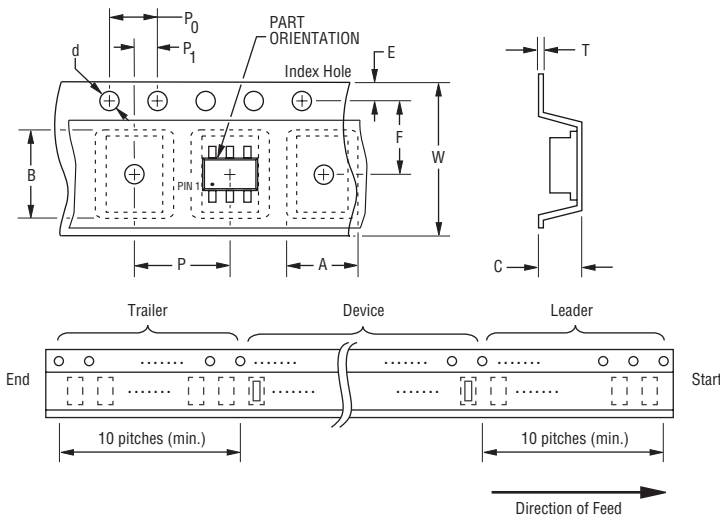
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BOURNS®

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	$\frac{50.0}{(1.969)}$ 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	$\frac{14.4}{(0.567)}$ MAX.
Quantity per Reel	--	3000

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REV. 10/18

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