

## 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

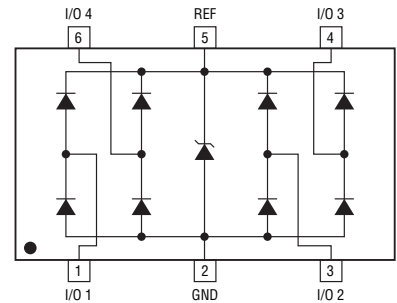
# CDSOT23-SRV05-4 — Steering Diode TVS Array Combo

## 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 meet IEC 61000-4-2 (ESD), IEC 61000-4-4 (EFT) and IEC 61000-4-5 (Surge) requirements.



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

Parameter	Symbol	Min.	Nom.	Max.	Unit
Peak Pulse Current (t <sub>p</sub> = 8/20 μs)	I <sub>PP</sub>			30	A
Peak Pulse Power (t <sub>p</sub> = 8/20 μs) <sup>1</sup>	P <sub>PP</sub>			500	W
Working Peak Reverse Voltage	V <sub>WM</sub>			5	V
Breakdown Voltage @ 1 mA	V <sub>BR</sub>	6			V
Leakage Current @ V <sub>WM</sub>	I <sub>D</sub>			5	μA
Capacitance	C <sub>j(SD)</sub>		3.5	5	pF
Forward Surge Rating (1/20 s @ 25 °C, I <sub>F</sub> = 10 mA)	V <sub>F</sub>			1.5	V
Clamping Voltage (per IEC 61000-4-5) 8/20 μs)	V <sub>C</sub>	@ I <sub>PP</sub> = 1 A		12	V
		@ I <sub>PP</sub> = 5 A		15	
ESD Protection (per IEC 61000-4-2) Contact Discharge Air Discharge	ESD		8		kV
			15		
EFT Protection (per IEC 61000-4-4) @ 5/50 ns	EFT	40			A

Notes:

1. See Peak Pulse Power vs. Pulse Time.

## 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 and RoHS Recast 2011/65/EU June 8, 2011. Specifications are subject to change without notice. Customers should verify actual device performance in their specific applications.

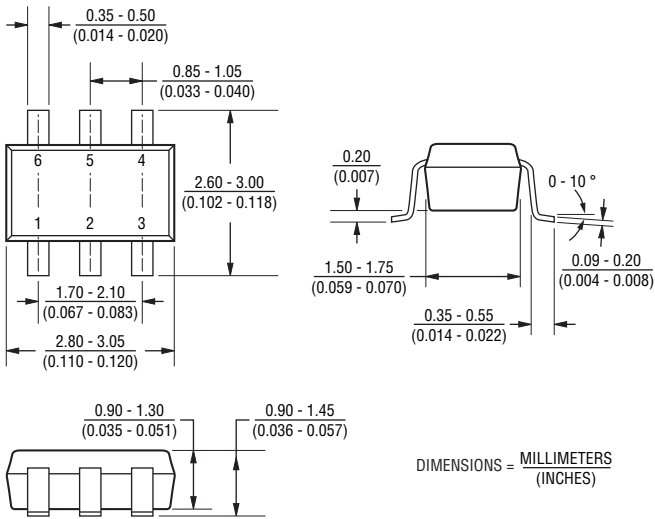
# CDSOT23-SRV05-4 — Steering Diode TVS Array Combo



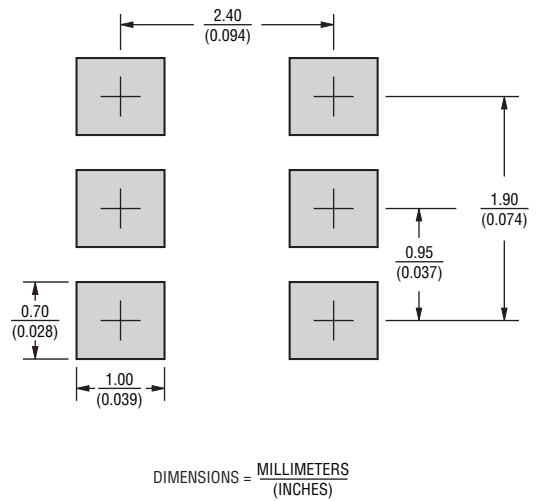
## Mechanical Characteristics

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.

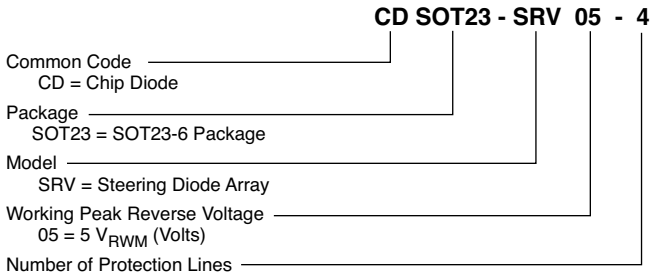
## Product Dimensions



## Recommended Footprint



## How to Order



## Typical Part Marking

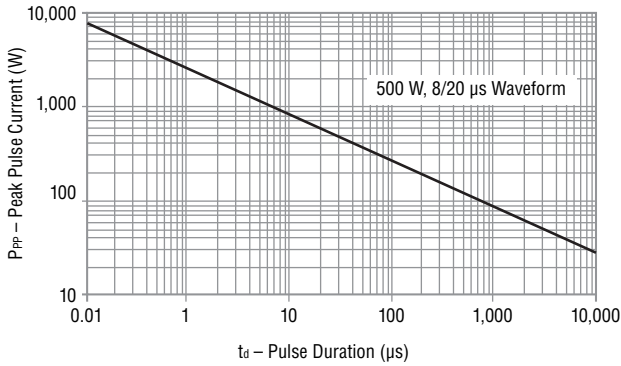
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# CDSOT23-SRV05-4 — Steering Diode TVS Array Combo

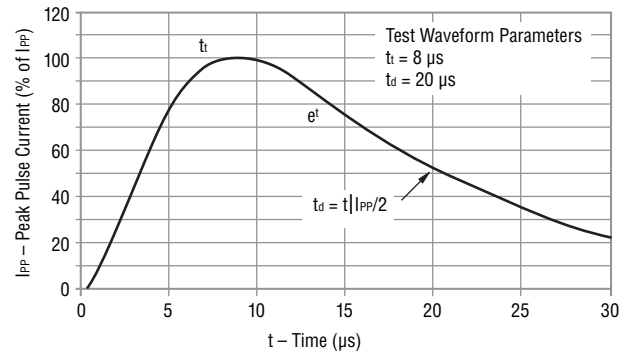


## Performance Graphs

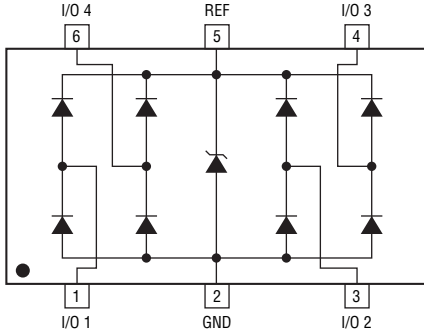
### Peak Pulse Power vs. Pulse Time



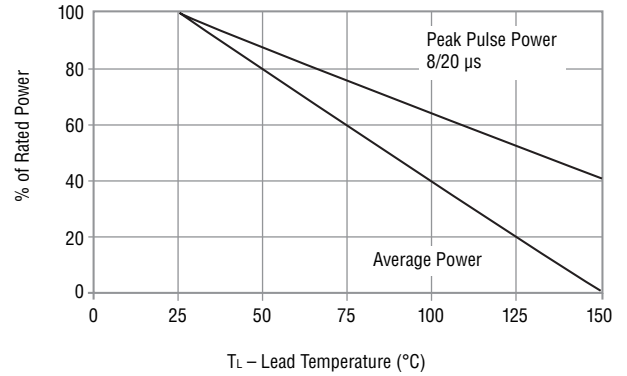
### Pulse Waveform



### Block Diagram



### Power Derating Curve

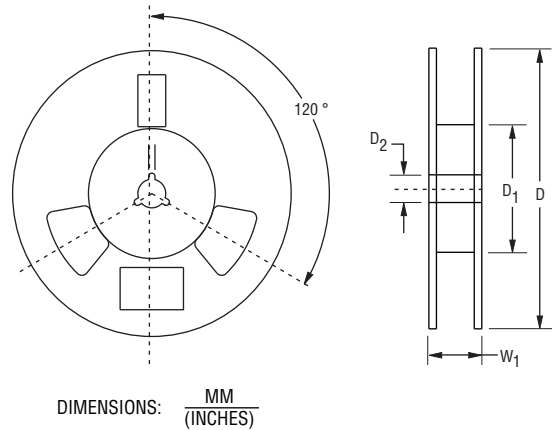
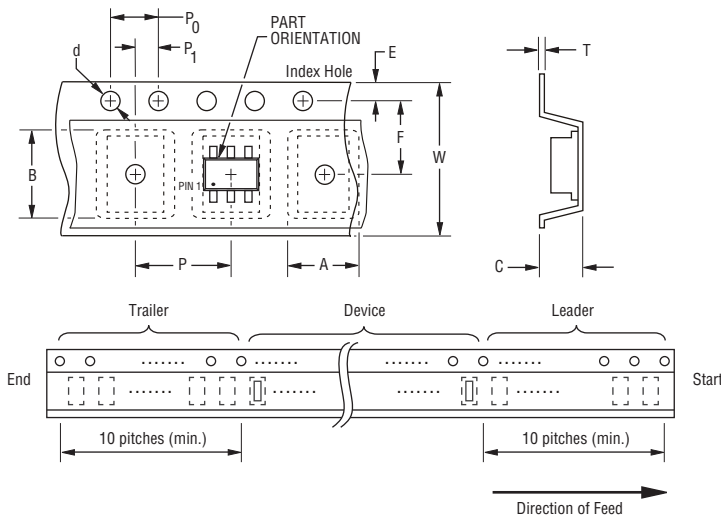


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**BOURNS®**

## Packaging Information

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



DIMENSIONS:  $\frac{\text{MM}}{\text{(INCHES)}}$

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 <sub>1</sub>	$\frac{50.0}{(1.969)}$ MIN.
Feed Hole Diameter	D <sub>2</sub>	$\frac{13.0 \pm 0.20}{(0.512 \pm 0.008)}$
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 <sub>0</sub>	$\frac{4.00 \pm 0.10}{(0.157 \pm 0.004)}$
Embossment Center	P <sub>1</sub>	$\frac{2.00 \pm 0.05}{(0.079 \pm 0.002)}$
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 <sub>1</sub>	$\frac{14.4}{(0.567)}$ MAX.
Quantity per Reel	--	3000

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REV. 12/12

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