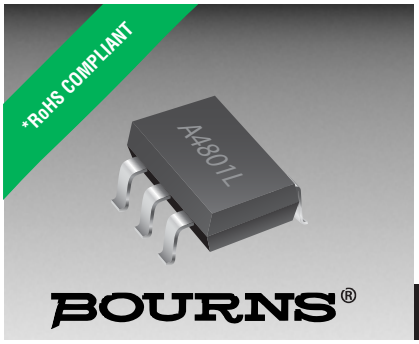


Features

- 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

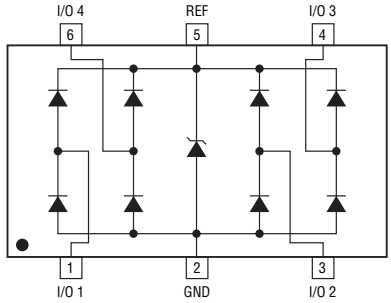
CDSOT23-SRV05-4 — Steering Diode TVS Array Combo

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	V_C			12	V
	@ I_{PP} = 5 A				15	
ESD Protection (per IEC 61000-4-2) Contact Discharge Air Discharge		ESD			 30 30	kV
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

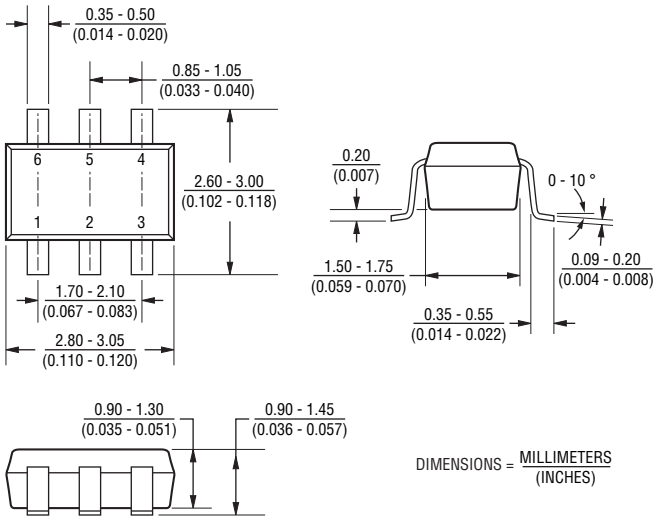
WARNING Cancer and Reproductive Harm - www.P65Warnings.ca.gov

*RoHS Directive 2015/863, Mar 31, 2015 and Annex.
Specifications are subject to change without notice.
Users should verify actual device performance in their specific applications.

Mechanical Characteristics

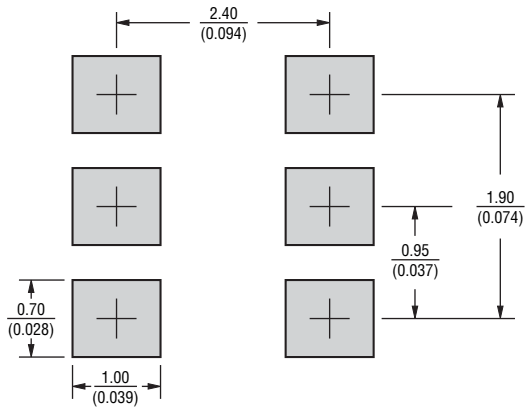
This is a molded JEDEC SOT23-6 package with 100 % Matte Sn on the lead frame. It weighs approximately 15 mg and has a flammability rating of UL 94V-0.

Product Dimensions



DIMENSIONS = MILLIMETERS / (INCHES)

Recommended Footprint



DIMENSIONS = MILLIMETERS / (INCHES)

How to Order

CD SOT23 - SRV 05 - 4

Common Code
CD = Chip Diode

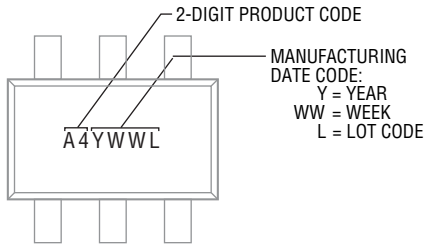
Package
SOT23 = SOT23-6 Package

Model
SRV = Steering Diode Array

Working Peak Reverse Voltage
05 = 5 V_{RWM} (Volts)

Number of Protection Lines

Typical Part Marking

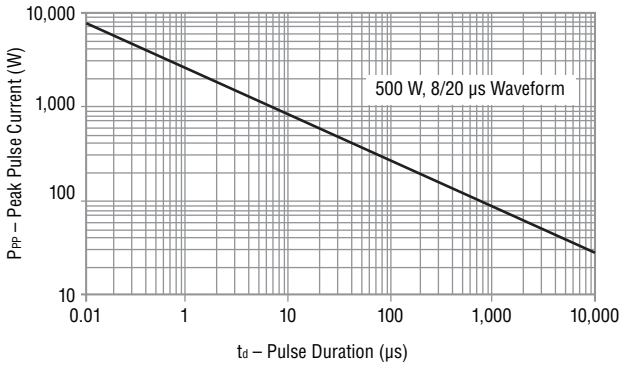


Environmental Specifications

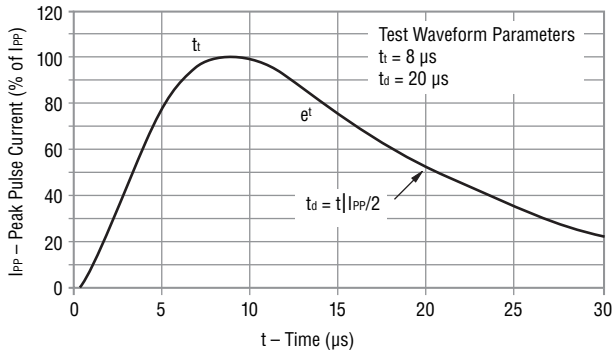
Moisture Sensitivity Level 1
ESD Classification (HBM) 3B

Performance Graphs

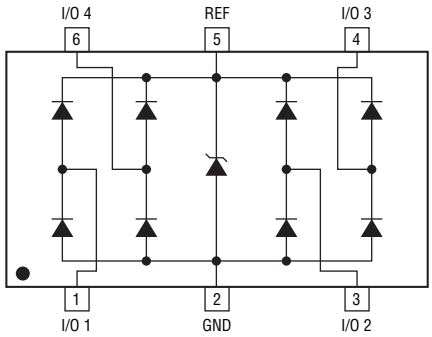
Peak Pulse Power vs. Pulse Time



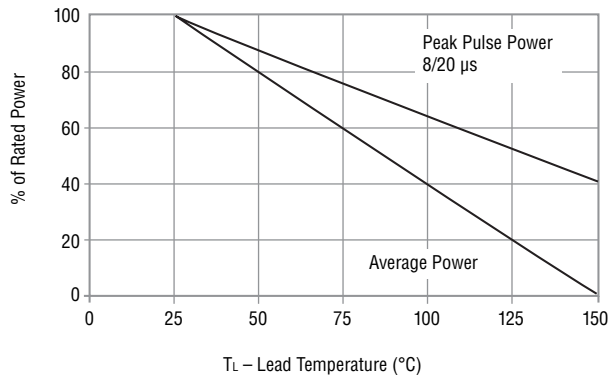
Pulse Waveform



Block Diagram

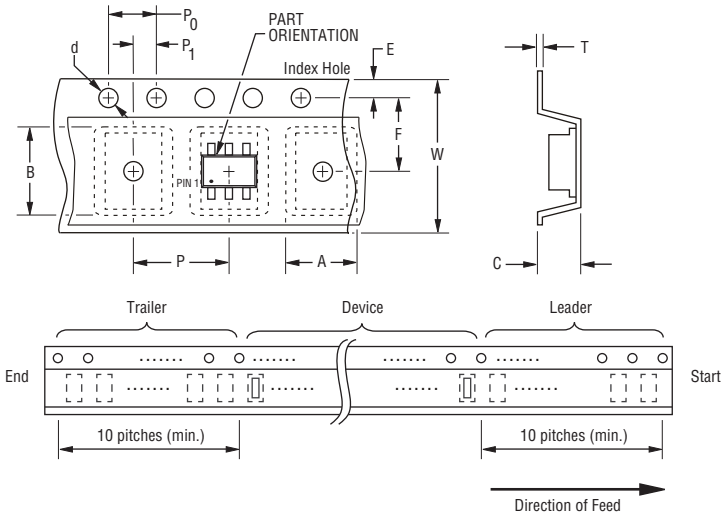


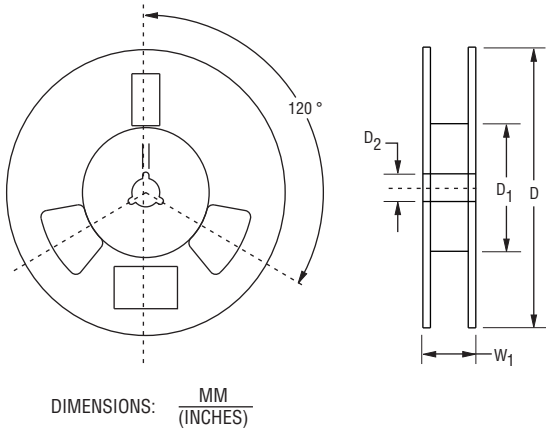
Power Derating Curve



Packaging Information

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





DIMENSIONS: MM / (INCHES)

Item	Symbol	SOT23-6
Carrier Width	A	3.90 ± 0.10 (0.154 ± 0.004)
Carrier Length	B	3.90 ± 0.10 (0.154 ± 0.004)
Carrier Depth	C	0.90 ± 0.10 (0.035 ± 0.004)
Sprocket Hole	d	1.55 ± 0.05 (0.061 ± 0.002)
Reel Outside Diameter	D	178 (7.008)
Reel Inner Diameter	D_1	50.0 (1.969) MIN.
Feed Hole Diameter	D_2	13.0 ± 0.20 (0.512 ± 0.008)
Sprocket Hole Position	E	1.75 ± 0.10 (0.069 ± 0.004)
Punch Hole Position	F	3.50 ± 0.05 (0.138 ± 0.002)
Punch Hole Pitch	P	4.00 ± 0.10 (0.157 ± 0.004)
Sprocket Hole Pitch	P_0	4.00 ± 0.10 (0.157 ± 0.004)
Embossment Center	P_1	2.00 ± 0.05 (0.079 ± 0.002)
Overall Tape Thickness	T	0.20 ± 0.10 (0.008 ± 0.004)
Tape Width	W	8.00 ± 0.20 (0.315 ± 0.008)
Reel Width	W_1	14.4 (0.567) MAX.
Quantity per Reel	--	3000

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