



BOURNS®

Features

- RoHS compliant*
- Low capacitance ~ 2.5 pF
- ESD protection
- Surge protection

Applications

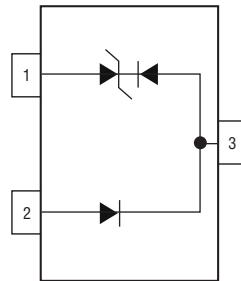
- Personal Digital Assistants (PDAs)
- Mobile phones & accessories
- Memory card protection
- SIM card port protection
- Portable electronics

CDSOT23-SLVU2.8 - Surface Mount TVS Diode

General Information

The CDSOT23-SLVU2.8 device provides ESD, EFT and Surge protection for high speed data ports meeting IEC 61000-4-2 (ESD), IEC 61000-4-4 (EFT) and IEC 61000-4-5 (Surge) requirements. The Transient Voltage Suppressor Array offers a Working Peak Reverse Voltage of 2.8 V and Minimum Breakdown Voltage of 3 V.

The SOT23 packaged device will mount directly onto the industry standard SOT23 footprint. Bourns® Chip Diodes conform to JEDEC standards, are easy to handle with standard pick and place equipment and the flat configuration minimizes roll away.



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

Parameter	Symbol	Value	Unit
Peak Pulse Power ($t_p = 8/20 \mu s$) ¹	P _{PK}	600	W
Peak Pulse Current ($t_p = 8/20 \mu s$)	I _{PPM}	30	A
Storage Temperature	T _{TSG}	-55 to +150	°C
Operating Temperature	T _{OPR}	-55 to +150	°C
Minimum Breakdown Voltage @ 1 mA	V _{BR}	3.0	V
Minimum Snap Back Voltage @ 50 mA	V _{BR}	2.8	V
Maximum Working Peak Voltage	V _{WM}	2.8	V
Maximum Leakage Current @ V _{WM} (Pin 3 to Pin 1) or (Pin 2 to Pin 1)	I _D	1.0	µA
Maximum Clamping Voltage @ I _p = 2 A	V _C	5.5	V
Maximum Clamping Voltage @ I _p = 5 A (Pin 2 to Pin 1)	V _C	7.0 8.5	V
Maximum Clamping Voltage @ I _p = 30 A	V _C	21.0	V
Typical Junction Capacitance @ 0 V, 1 MHz (Pin 3 to Pin 1 & Pin 2) (Pin 2 to Pin 1 with Pin 3 NC)	C _D	20 2.5	pF
Maximum Junction Capacitance @ 0 V, 1 MHz	C _D	3	pF
Maximum Peak Reverse Voltage @ I = 10 µA	V _{RRM}	40	V
Maximum Reverse Leakage Current @ V _{WM}	I _{DR}	0.1	µA
Maximum Forward Voltage @ I _F = 1 A, 120 µS	V _F	2	V

Note:

1. See Peak Pulse Power vs. Pulse Time.



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.

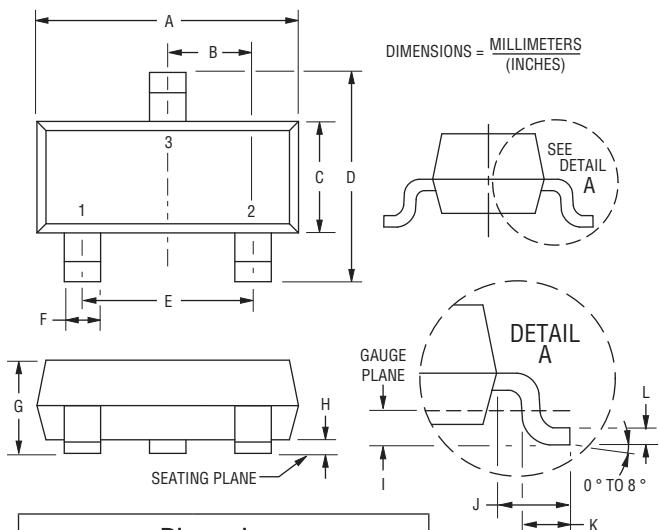
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CDSOT23-SLVU2.8 - Surface Mount TVS Diode

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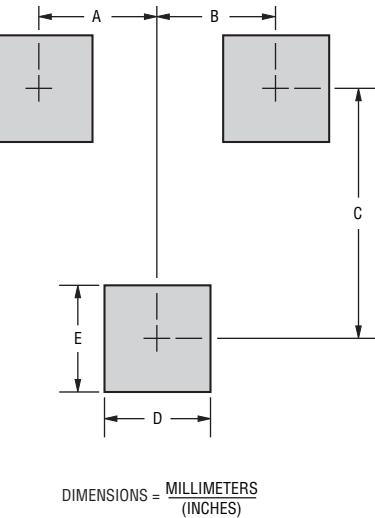
Product Dimensions

This is a molded JEDEC SOT-323 package with 100 % Matte Sn plating on the lead frame. It weighs approximately 8 mg and has a flammability rating of UL 94V-0.



Dimensions	
A	$2.80 - 3.00$ (0.110 - 0.118)
B	0.95 (0.037) BSC
C	$1.20 - 1.40$ (0.047 - 0.055)
D	$2.10 - 2.49$ (0.083 - 0.098)
E	1.90 (0.075) BSC
F	$0.30 - 0.50$ (0.012 - 0.019)
G	$0.89 - 1.17$ (0.035 - 0.046)
H	$0.05 - 0.015$ (0.002 - 0.006)
I	0.25 (0.010) BSC
J	$0.46 - 0.64$ (0.018 - 0.025)
K	$0.40 - 0.58$ (0.016 - 0.023)
L	$0.08 - 0.20$ (0.003 - 0.008)

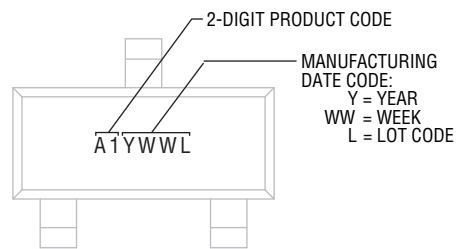
Recommended Footprint



DIMENSIONS = MILLIMETERS
(INCHES)

Dimensions	
A	0.95 (0.037)
B	0.95 (0.037)
C	2.00 (0.079)
D	0.85 (0.033)
E	0.85 (0.033)

Typical Part Marking



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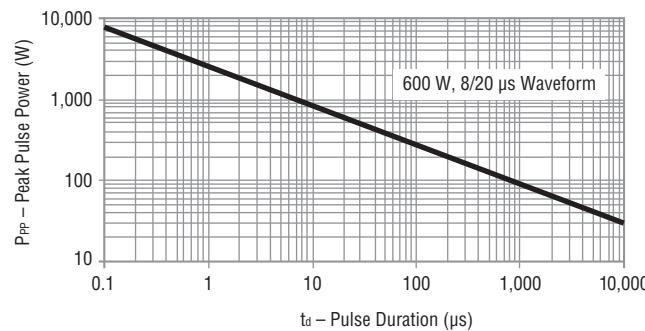
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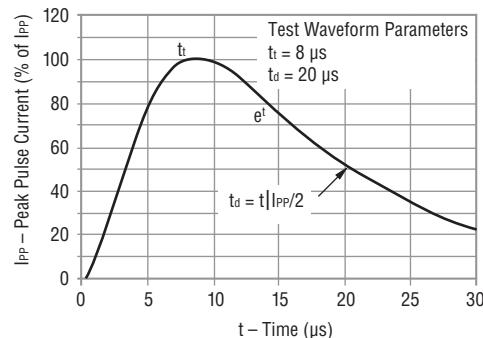
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Performance Graphs

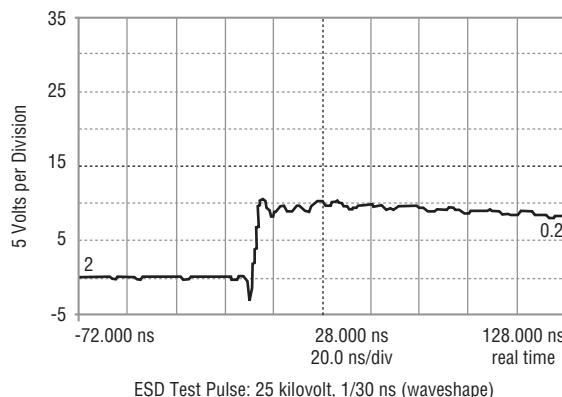
Peak Pulse Power vs. Pulse Time



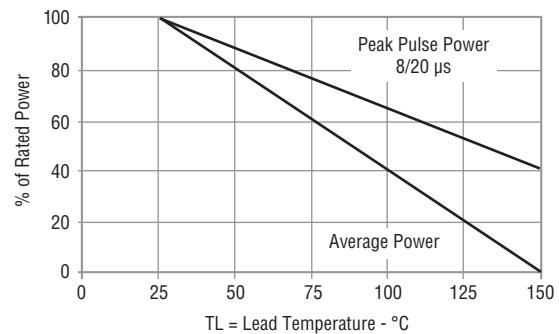
Pulse Waveform



Overshoot & Clamping Voltage



Power Derating Curve



How to Order

CD SOT23 - SLVU 2.8

Common Code _____
 Chip Diode _____
 Package _____
 • SOT23 = SOT23 Package
 Model _____
 SLVU = Special Model
 Working Peak Reverse Voltage _____
 2.8 = 2.8 V_{RWM} (Volts)

Environmental Specifications

Moisture Sensitivity Level	1
ESD Classification (HBM)	3B

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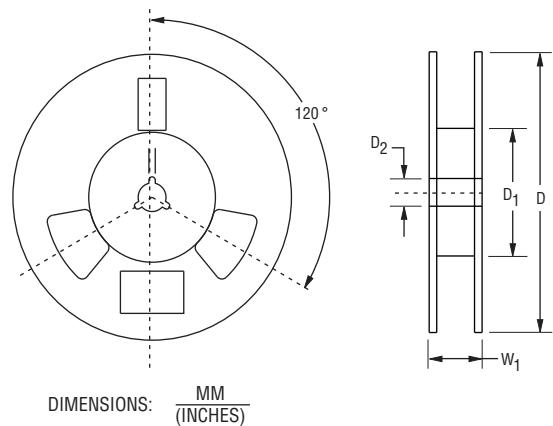
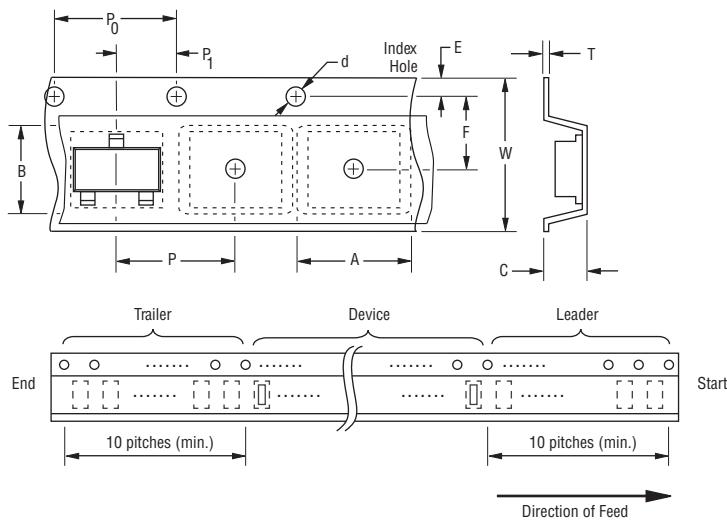
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Packaging Information

The surface mount product is packaged in an 8 mm x 4 mm tape and reel format per EIA-481 standard.



Devices are packed in accordance with EIA standard RS-481-A.

Item	Symbol	SOT23
Carrier Width	A	2.25 ± 0.10 (0.088 ± 0.004)
Carrier Length	B	2.34 ± 0.10 (0.092 ± 0.004)
Carrier Depth	C	1.22 ± 0.10 (0.048 ± 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	--	3,000

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- Консультации по применению компонента;
- Поставка образцов и прототипов;
- Техническая поддержка проекта;
- Защита от снятия компонента с производства.



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