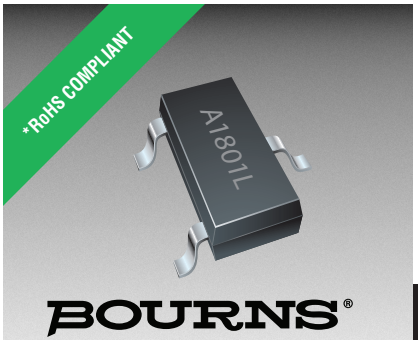
THE DATASHEET OF

CDSOT23-SLVU2.8



Features

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

Applications

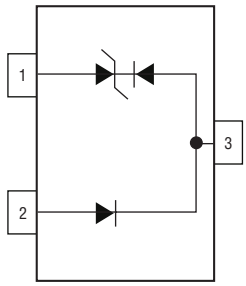
- Personal Digital Assistants (PDAs)
- Mobile phones & accessories
- Memory card protection
- SIM card port protection
- Portable electronics

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 (@ T_A = 25 °C Unless Otherwise Noted)

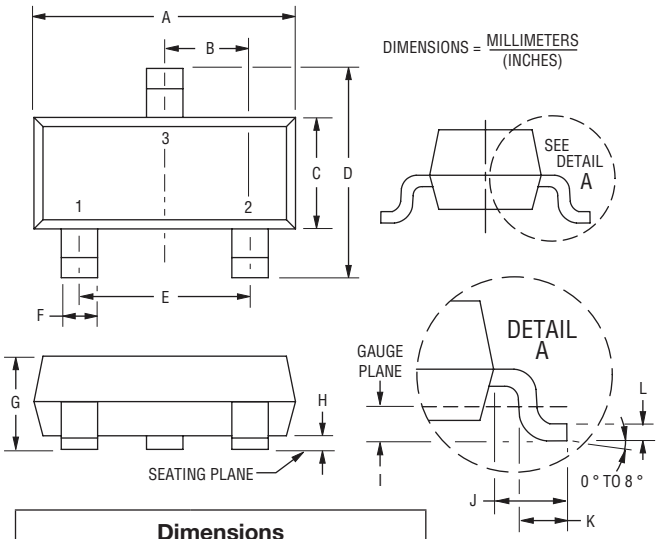
Parameter	Symbol	Value	Unit
Peak Pulse Power (t_p= 8/20 µs)[1]	P_{PK}	600	W
Peak Pulse Current (t_p= 8/20 µs)	I_{PPM}	30	A
Storage Temperature	T_{STG}	-55 to +150	ºC
Operating Temperature	T_{OPR}	-55 to +150	ºC
Minimum Breakdown Voltage @ 1 mA	V_{BR}	3.0	V
Minimum Snap Back Voltage @ 50 mA	V_{BR}	2.8	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.

*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.
The device characteristics and parameters in this data sheet can and do vary in different applications and actual device performance may vary over time.
Users should verify actual device performance in their specific applications.

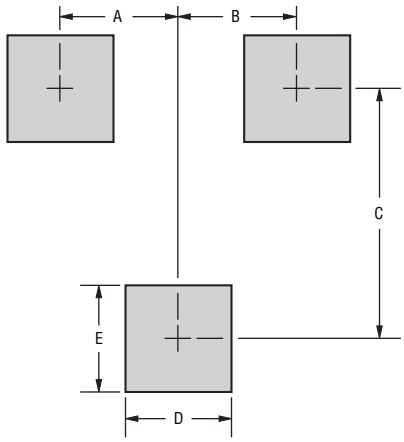
Product Dimensions

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)

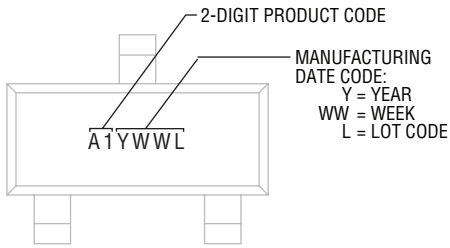
Recommended Footprint



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)

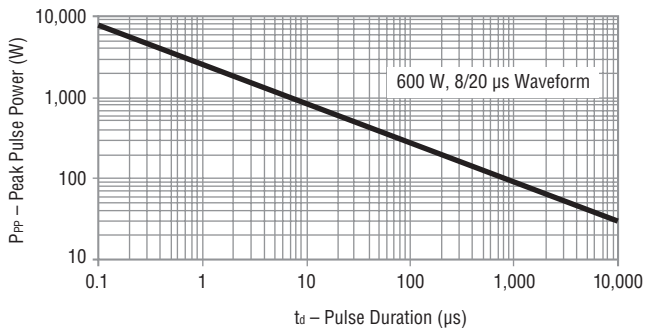
Typical Part Marking



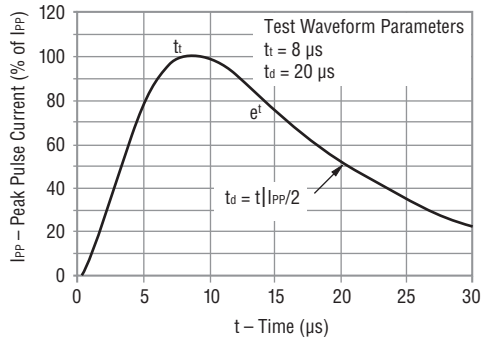
Specifications are subject to change without notice.
The device characteristics and parameters in this data sheet can and do vary in different applications and actual device performance may vary over time.
Users should verify actual device performance in their specific applications.

Performance Graphs

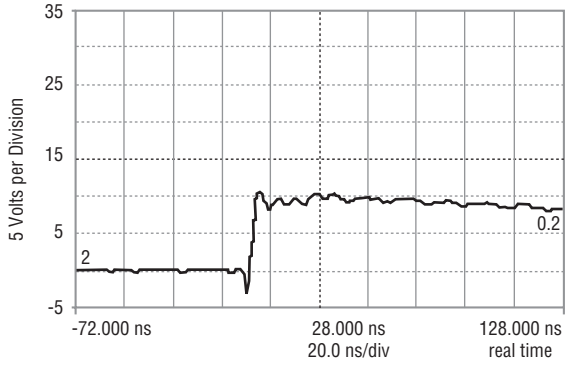
Peak Pulse Power vs. Pulse Time



Pulse Waveform

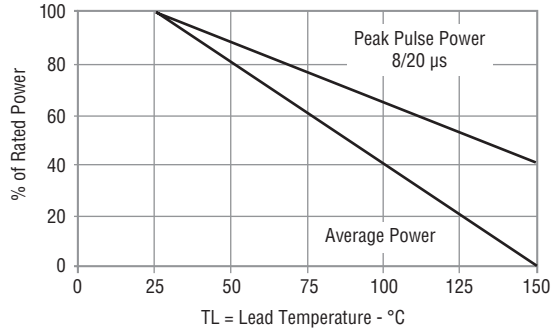


Overshoot & Clamping Voltage



ESD Test Pulse: 25 kilovolt, 1/30 ns (waveshape)

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)

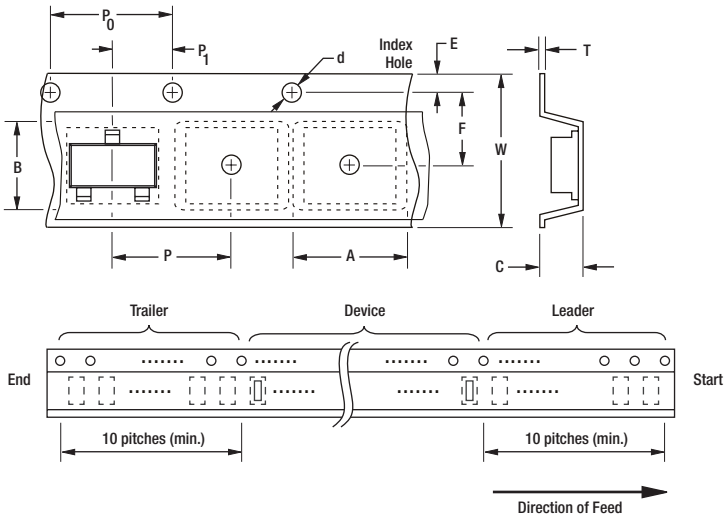
Environmental Specifications

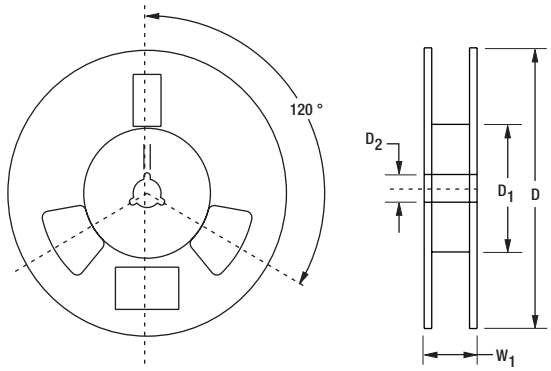
Moisture Sensitivity Level.....1
ESD Classification (HBM).....3B

Specifications are subject to change without notice.
The device characteristics and parameters in this data sheet can and do vary in different applications and actual device performance may vary over time.
Users should verify actual device performance in their specific applications.

Packaging Information

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





DIMENSIONS: MM (INCHES)

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

Asia-Pacific:
Tel: +886-2 2562-4117
Email: asiacus@bourns.com
Europe:
Tel: +36 88 520 390
Email: eurocus@bourns.com
The Americas:
Tel: +1-951 781-5500
Email: americus@bourns.com
www.bourns.com

Specifications are subject to change without notice.
The device characteristics and parameters in this data sheet can and do vary in different applications and actual device performance may vary over time.
Users should verify actual device performance in their specific applications.

Looking for pricing, stock, or lifecycle information?

Click below to explore more details on WIN SOURCE:

- View CDSOT23-SLVU2.8 on WIN SOURCE
- Bourns Inc. Information

Optimize Your Supply Chain with WIN SOURCE Solutions

- Global Sourcing Solution
- Obsolete Management
- Cost Control Management
- Shortage Management
- Alternative Solution
- Excess Inventory Management