



#### FEATURES

- Lead Free As Standard
- RoHS Compliant
- Low Capacitance 3pF
- ESD Protection
- Surge Protection

#### APPLICATIONS

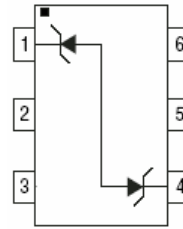
- Personal Digital Assistant (PDA)
- Mobile Phones & Accessories
- Portable Electronics
- ADSL / VDSL Cards

### CDSOT236-T12LC – Surface Mount TVS Diode

#### General Information

The CDSOT236-T12LC 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 12V and Minimum Breakdown Voltage of 13.3V.

The SOT23-6L packaged device will mount directly onto the industry standard SOT23-6L footprint. Bourns® Chip Diodes are easy to handle with standard pick and place equipment and the flat configuration minimizes roll away.



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

Parameter	Symbol	CDSOT236-T12LC	Unit
Peak Pulse Power ( $t_p = 8/20\mu s$ ) (See Fig 1)	P <sub>PK</sub>	350	W
Peak Pulse Current ( $t_p = 8/20\mu s$ )	I <sub>PPM</sub>	11	A
Storage Temperature	T <sub>STG</sub>	-55°C to 150°C	°C
Operating Temperature	T <sub>OPR</sub>	-55°C to 150°C	°C
Minimum Breakdown Voltage @ 1mA	V <sub>BR</sub>	13.3	V
Working Peak Voltage	V <sub>M</sub>	12	V
Maximum Clamping Voltage @ I <sub>P</sub> = 1 A	V <sub>P</sub>	19	V
Maximum Clamping Voltage @ 8/20 μs @ I <sub>PP</sub>	V <sub>PP</sub>	28.3 V @ 11 A	V
Maximum Leakage Current @ V <sub>WM</sub>	I <sub>L</sub>	1	uA
Typical Capacitance @ 0 V, 1 MHz	C <sub>P</sub>	3	pF

Note 1: Test between Pins 1 to 4 in both directions.

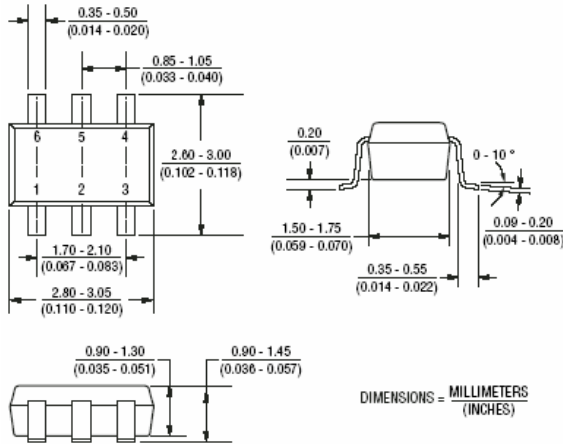
Note 2: Per IEC 61000-4-2, ESD ±25kV

# CDSOT236-T12LC – Surface Mount TVS Diode

**BOURNS**

## Mechanical Drawing

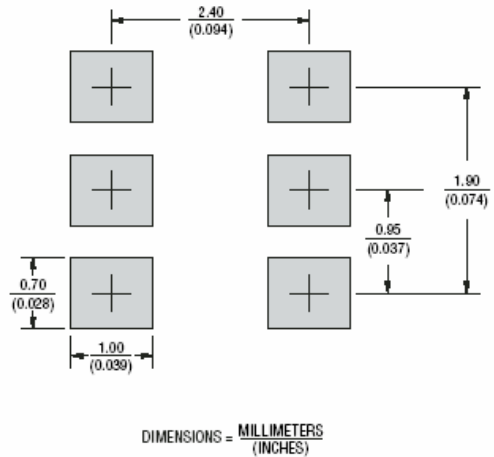
This is a molded SOT23-6L package with lead free 100% Matte Sn on the lead frame. It weighs approximately 15mg and has a flammability rating of UL 94V-0.



## Part Marking

CDSOT236-T12LC.....12L

## Recommended Footprint



## How To Order

CD SOT236 - T 12 LC

Common Code \_\_\_\_\_  
 CD = Chip Diode

Package \_\_\_\_\_  
 SOT236 = SOT23-6 Package

Model \_\_\_\_\_  
 T = Transient Voltage Suppressor

Working Peak Reverse Voltage \_\_\_\_\_  
 12 = 12 V<sub>RM</sub> (Volts)

Suffix \_\_\_\_\_  
 LC = Low Capacitance Bidirectional Diode



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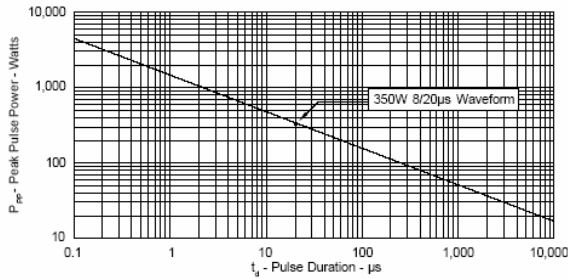
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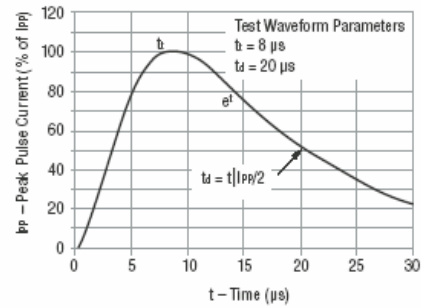
[www.bourns.com](http://www.bourns.com)

## Rating & Characteristic Curves

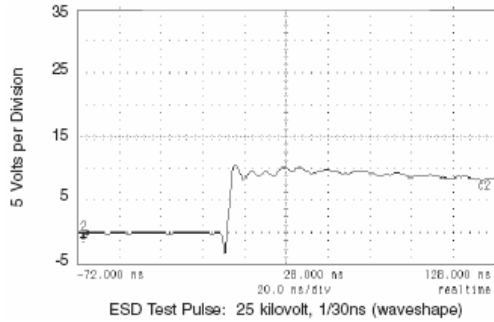
Peak Pulse Power vs Pulse Time



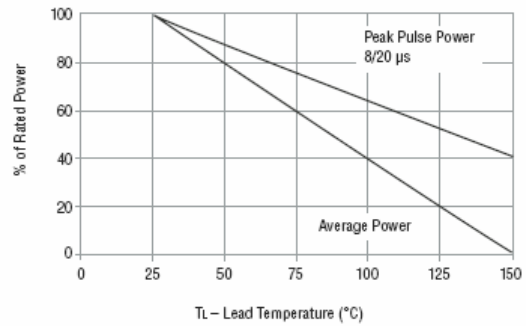
Pulse Waveform



Overshoot & Clamping Voltage

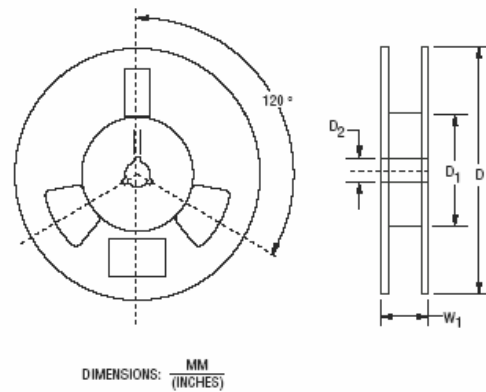
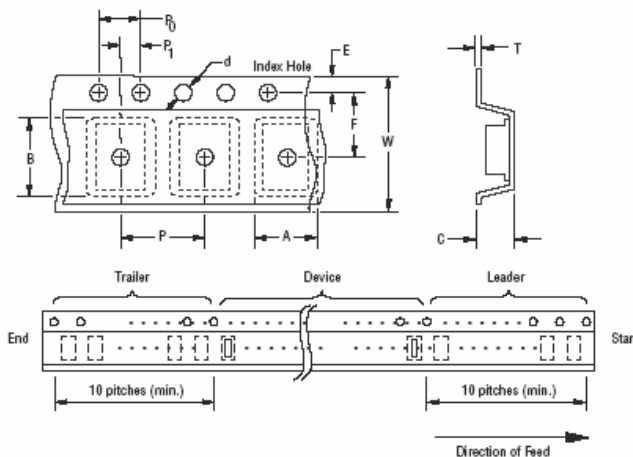


Power Derating Curve



## Packaging Information

The product will be dispensed in Tape and Reel format (see diagram below).



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