



### FEATURES

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

### APPLICATIONS

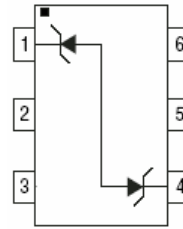
- Personal Digital Assistant (PDA)
- Mobile Phones & Accessories
- Portable Electronics
- ADSL / VDSL Cards

## 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)	$P_{PK}$	350	W
Peak Pulse Current ( $t_p = 8/20\mu s$ )	$I_{PPM}$	11	A
Storage Temperature	$T_{STG}$	-55°C to 150°C	°C
Operating Temperature	$T_{OPR}$	-55°C to 150°C	°C
Minimum Breakdown Voltage @ 1mA	$V_{BR}$	13.3	V
Working Peak Voltage	$V_M$	12	V
Maximum Clamping Voltage @ $I_P = 1 A$	$V_P$	19	V
Maximum Clamping Voltage @ 8/20 $\mu s$ @ $I_{PP}$	$V_{PP}$	28.3 V @ 11 A	V
Maximum Leakage Current @ $V_{WM}$	$I_L$	1	$\mu A$
Typical Capacitance @ 0 V, 1 MHz	$C_P$	3	pF

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

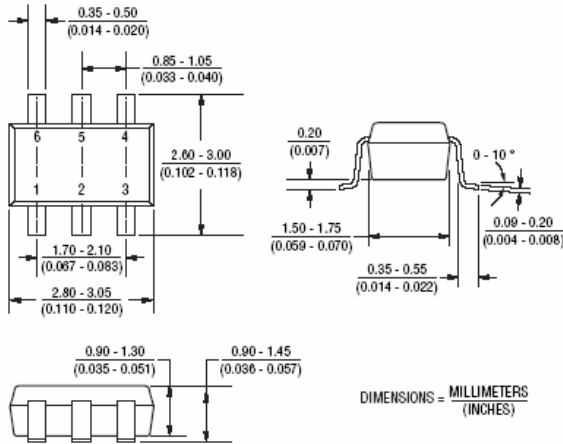
Note 2: Per IEC 61000-4-2, ESD  $\pm 25kV$

# CDSOT236-T12LC – Surface Mount TVS Diode

**BOURNS**

## Mechanical Drawing

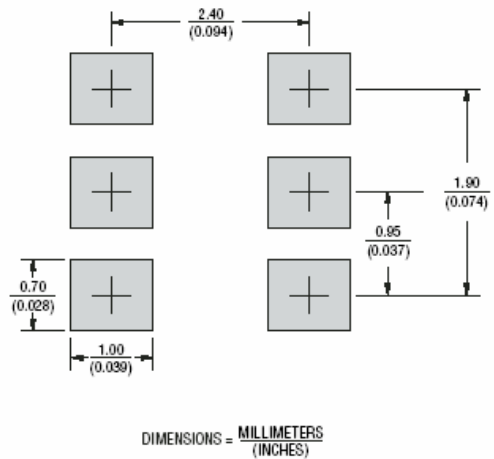
This is a molded SOT23-6L package with lead free 100% Matte Sn on the lead frame. It weighs approximately 15mg and has a flammability rating of UL 94V-0.



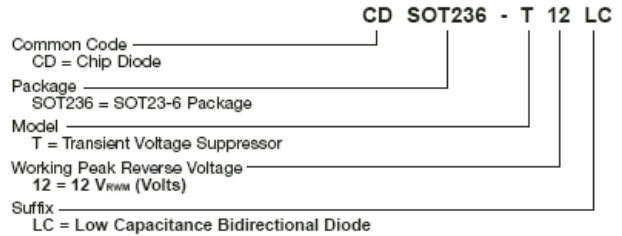
## Part Marking

CDSOT236-T12LC.....12L

## Recommended Footprint



## How To Order



Reliable Electronic Solutions

**Asia-Pacific:**  
Tel: +886-2 2562-4117 • Fax: +886-2 2562-4116

**Europe:**  
Tel: +41-41 768 5555 • Fax: +41-41 768 5510

**The Americas:**  
Tel: +1-951 781-5500 • Fax: +1-951 781-5700

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

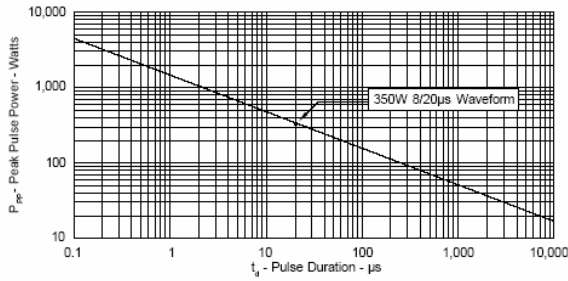
\*RoHS Directive 2002/95/EC Jan 27 2003 including Annex  
Specifications are subject to change without notice.  
Customers should verify actual device performance in their specific applications.

# CDSOT236-T12LC – Surface Mount TVS Diode

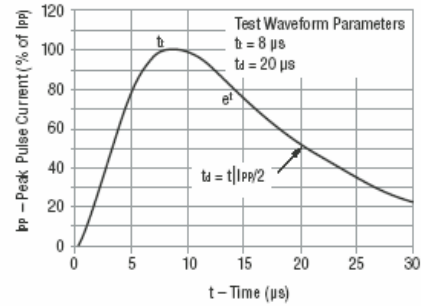
**BOURNS**

## Rating & Characteristic Curves

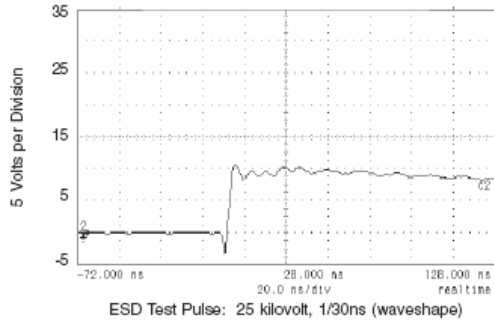
Peak Pulse Power vs Pulse Time



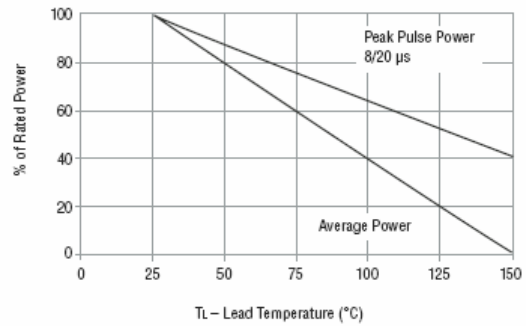
Pulse Waveform



Overshoot & Clamping Voltage

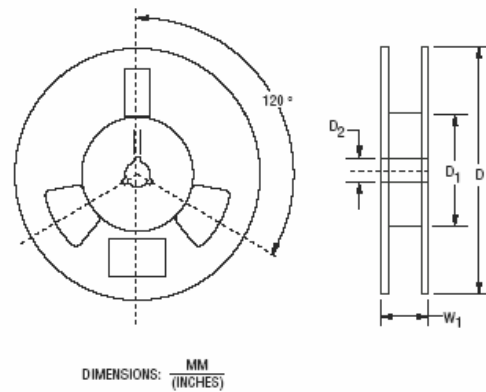
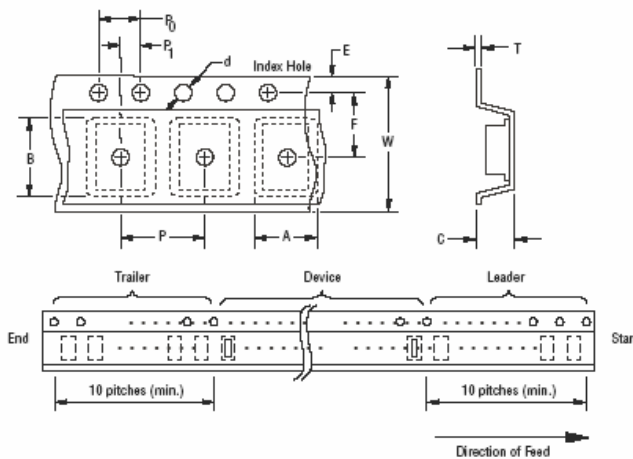


Power Derating Curve



## 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

\*RoHS Directive 2002/95/EC Jan 27 2003 including Annex Specifications are subject to change without notice. Customers should verify actual device performance in their specific applications.