

Features

- Lead free as standard - RoHS compliant*
- Telcordia GR1089 (Intra-Building)
- ESD protection >40 kV
- Protects 1 line
- Low clamping voltage
- Bidirectional configuration

Applications

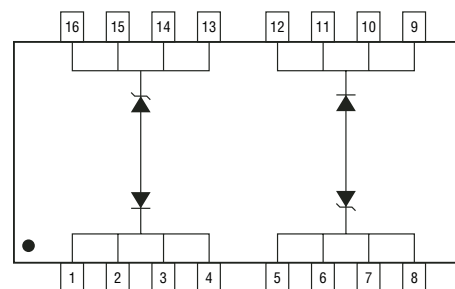
- T1/E1 line cards
- ISDN telecom equipment
- XDSL, USB, SCSI & ethernet interfaces
- Data & bus lines for FCC Part 68 applications

CDWBS16-PLC01-6 TVS Diode Array

General Information

The CDWBS16-PLC01-6 device provides protection for the external ports of telecom equipment such as cellular base stations, XDSL, USB, SCSI & Ethernet interfaces and data lines for FCC Part 68 applications.

Protection provided by the devices meets the IEC 61000-4-2 (ESD), 61000-4-4 (EFT) and 61000-4-5 (Surge) standards. The device measures 10.15 mm x 10 mm and is intended to be mounted directly onto an FR4 printed circuit board.



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

Parameter	Symbol	Min.	Nom.	Max.	Unit
Capacitance @ 0 V, 1 MHz	C		50		pF
Rated Standoff Voltage	VWM			6	V
Breakdown Voltage @ 1 mA	VBR	8			V
Clamping Voltage @ IP = 100 A ¹	VC			15	V
Clamping Voltage @ IP = 200 A ²	VC			16	V
Leakage Current @ VWM	ID			25	μA
ESD Protection: IEC 61000-4-2 Contact Discharge		±8			kV
Air Discharge		±15			kV
EFT Protection: IEC 61000-4-4 @ 5/50 ns		40			A
Surge Protection: IEC 61000-4-5 @ 8/20 μs L3 (Line-Gnd), L4 (Line-Line) & L1 (Power)		48			A
Surge Protection: Telcordia GR1089 (Intra-Building) @ 10/1000 μs		100			A
Surge Protection: FCC Part 68 @ 10/160 μs		200			A

Notes:

1. V_c tested at 10/1000 μs impulse waveform.
2. 10/160 μs impulse waveform per FCC Part 68.

Thermal Characteristics (@ T_A = 25 °C Unless Otherwise Noted)

Parameter	Symbol	Min.	Nom.	Max.	Unit
Peak Pulse Power (td = 10/1000 μs)	P _{PP}			1500	W
Operating Temperature Range	T _J	-55	25	+150	°C
Storage Temperature Range	T _{STG}	-55	25	+150	°C

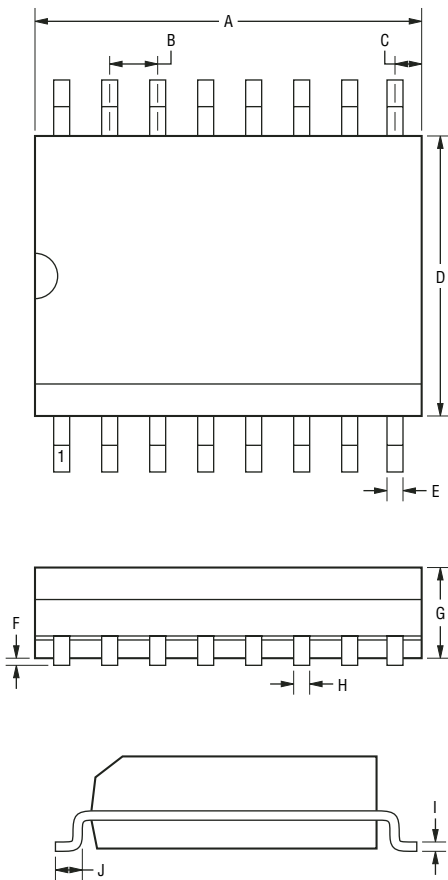
*RoHS Directive 2002/95/EC Jan 27 2003 including Annex
Specifications are subject to change without notice.
Customers should verify actual device performance in their specific applications.

CDWBS16-PLC01-6 TVS Diode Array



Product Dimensions

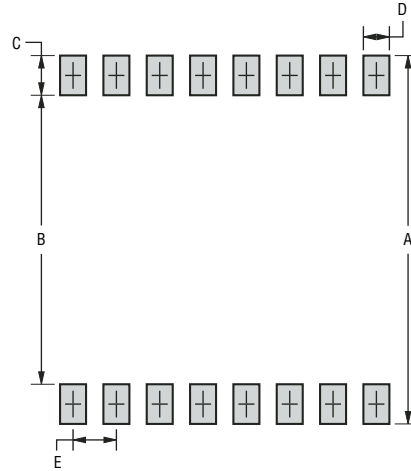
This is a molded JEDEC wide body SO-16 package with lead free 100 % Sn plating on the lead frame, weighs approximately 0.15 g and has a flammability rating of UL 94V-0. The dimensions for the packaged device are shown below.



DIMENSIONS = $\frac{\text{MILLIMETERS}}{\text{(INCHES)}}$

Dimensions			
A	$\frac{10.15 - 10.45}{(0.400 - 0.411)}$	F	$\frac{0.10 - 0.25}{(0.004 - 0.009)}$
B	$\frac{1.27}{(0.05)}$	G	$\frac{2.35 - 2.65}{(0.093 - 0.104)}$
C	$\frac{0.66}{(0.26)}$	H	$\frac{0.35 - 0.49}{(0.014 - 0.019)}$
D	$\frac{7.40 - 7.60}{(0.292 - 0.299)}$	I	$\frac{0.25 - 0.32}{(0.010 - 0.012)}$
E	$\frac{0.35 - 0.49}{(0.014 - 0.019)}$	J	$\frac{0.50 - 0.90}{(0.020 - 0.035)}$

Recommended Footprint



DIMENSIONS = $\frac{\text{MILLIMETERS}}{\text{(INCHES)}}$

Dimensions	
A	$\frac{10.7}{(0.420)}$ Min.
B	$\frac{5.225 \pm 0.127}{(0.325 \pm 0.005)}$
C	$\frac{1.143 \pm 0.127}{(0.045 \pm 0.005)}$
D	$\frac{0.762 \pm 0.127}{(0.045 \pm 0.005)}$
E	$\frac{1.270}{(0.050)}$ Typ.

How To Order

CD WBS16 - PLC01 - 6

Common Code _____
 Chip Diode _____
 Package _____
 • WBS16 = Wide Body SOIC16 Package
 Model _____
 PLC01 = Model Number
 Rated Standoff Voltage _____
 6 = 6 V_{BR} (Volts)

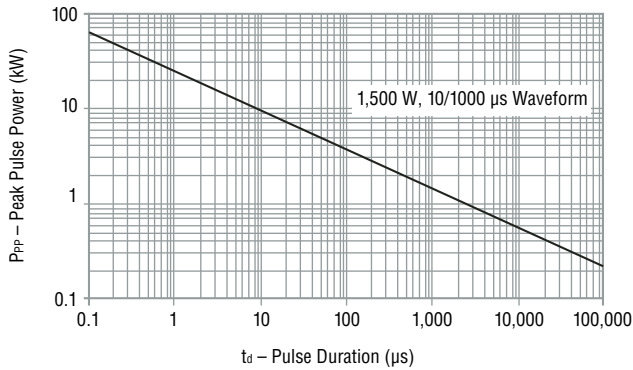
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CDWBS16-PLC01-6 TVS Diode Array

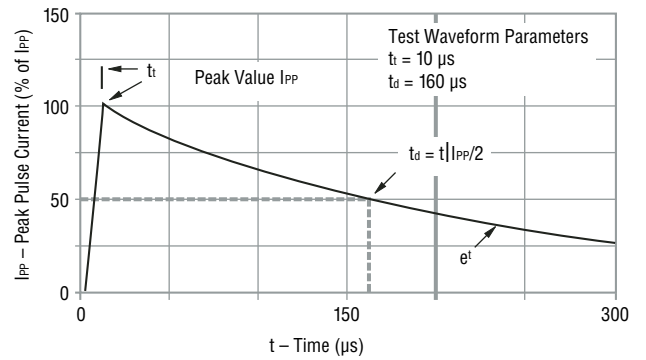


Performance Graphs

Peak Pulse Power vs Pulse Time

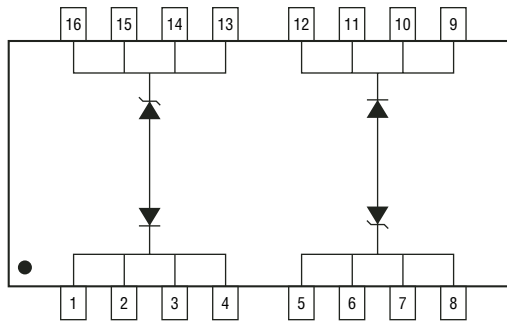


Pulse Wave Form

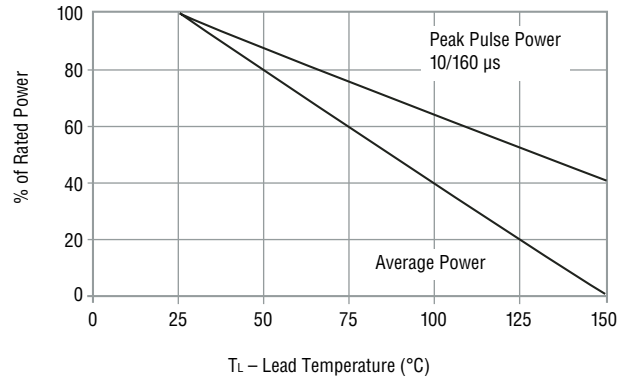


Block Diagram

The device block diagrams below include the pin names and basic electrical connections associated with each channel.



Power Derating Curve



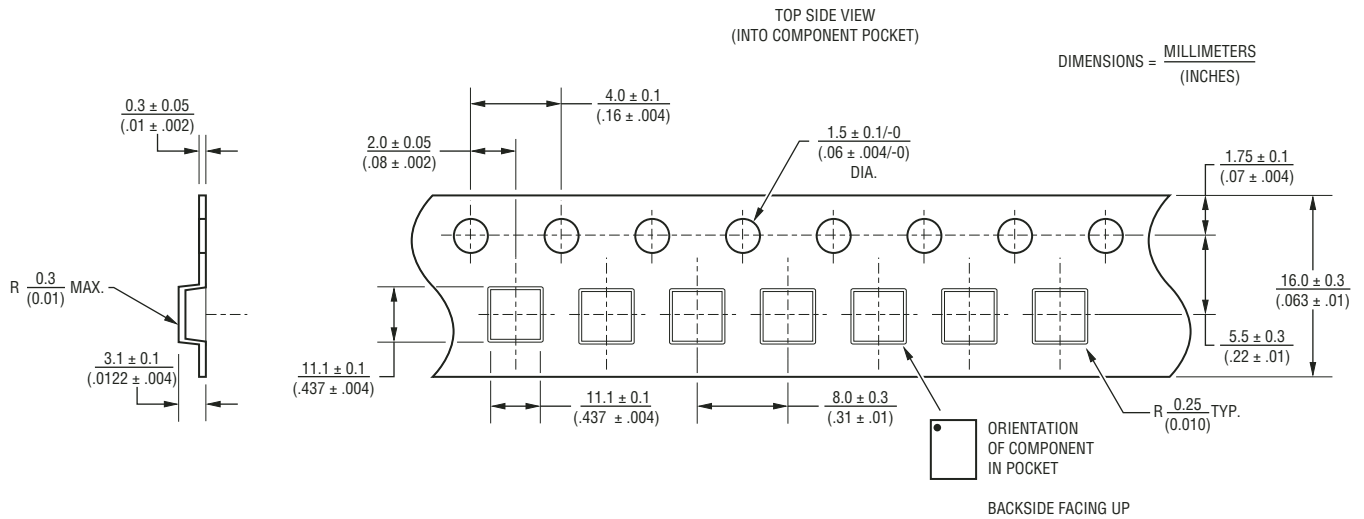
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Packaging

The surface mount product is packaged in a 16 mm x 8 mm Tape and Reel format per EIA-481 standard.



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REV. 12/05

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