

## Features

- Lead free as standard
- RoHS compliant\*
- ESD protection
- Protects 2 lines
- Low clamping voltage
- Bidirectional configuration

## Applications

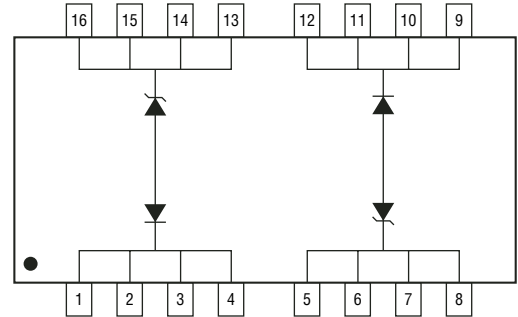
- T1/E1 line cards
- ISDN telecom equipment
- XDSL, USB, SCSI & ethernet interfaces
- Data & bus lines for FCC Part 68 applications

# 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<sub>A</sub> = 25 °C Unless Otherwise Noted)

Parameter	Symbol	Minimum	Nominal	Maximum	Unit
Capacitance @ 0 V, 1 MHz	C		50		pF
Rated Standoff Voltage	V <sub>WM</sub>			6	V
Breakdown Voltage @ 1 mA	V <sub>BR</sub>	8			V
Clamping Voltage @ I <sub>P</sub> = 100 A <sup>1</sup>	V <sub>C</sub>			15	V
Clamping Voltage @ I <sub>P</sub> = 200 A <sup>2</sup>	V <sub>C</sub>			16	V
Leakage Current @ V <sub>WM</sub>	I <sub>D</sub>			25	μA
ESD Protection: IEC 61000-4-2 Contact Discharge Air Discharge		±8 ±15			kV kV
EFT Protection: IEC 61000-4-4 @ 5/50 ns		40			A
Surge Protection: IEC 61000-4-5 @ 8/20 μs Level 2 (Line-Gnd) & Level 3 (Line-Line)		24			A

Notes:

1. V<sub>C</sub> tested at 10/1000 μs impulse waveform.
2. 10/160 μs impulse waveform per FCC Part 68.

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

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

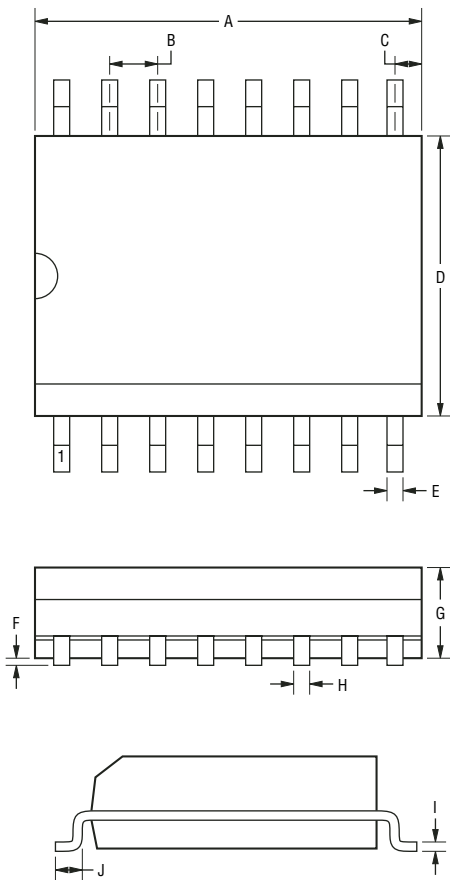
\*RoHS Directive 2002/95/EC Jan 27 2003 including Annex  
Specifications are subject to change without notice.  
Customers should verify actual device performance in their specific applications.

# CDWBS16-PLC01-6 TVS Diode Array



## Product Dimensions

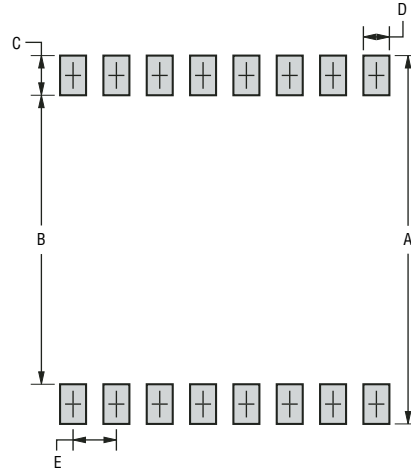
This is a molded JEDEC wide body SO-16 package with lead free 100 % Sn plating on the lead frame, weighs approximately 0.15 g and has a flammability rating of UL 94V-0. The dimensions for the packaged device are shown below.



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<sub>BR</sub> (Volts)

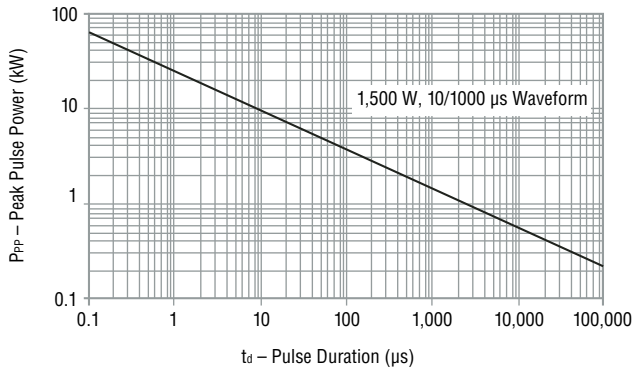
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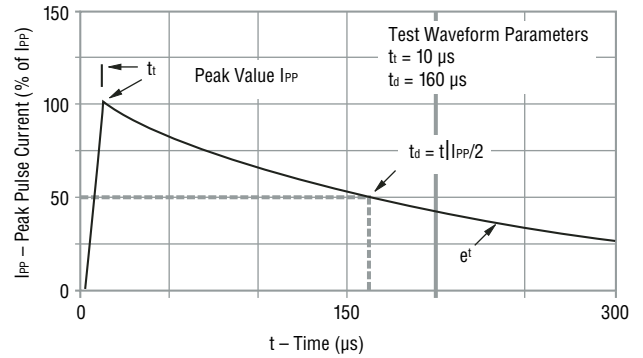


## Performance Graphs

### Peak Pulse Power vs Pulse Time

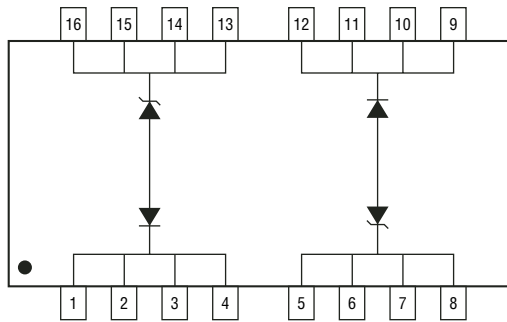


### Pulse Wave Form

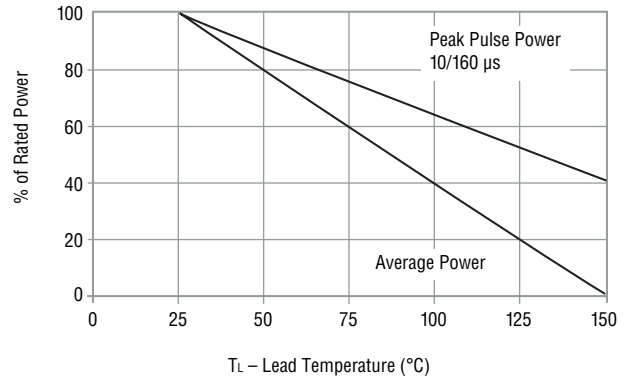


### Block Diagram

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



### Power Derating Curve



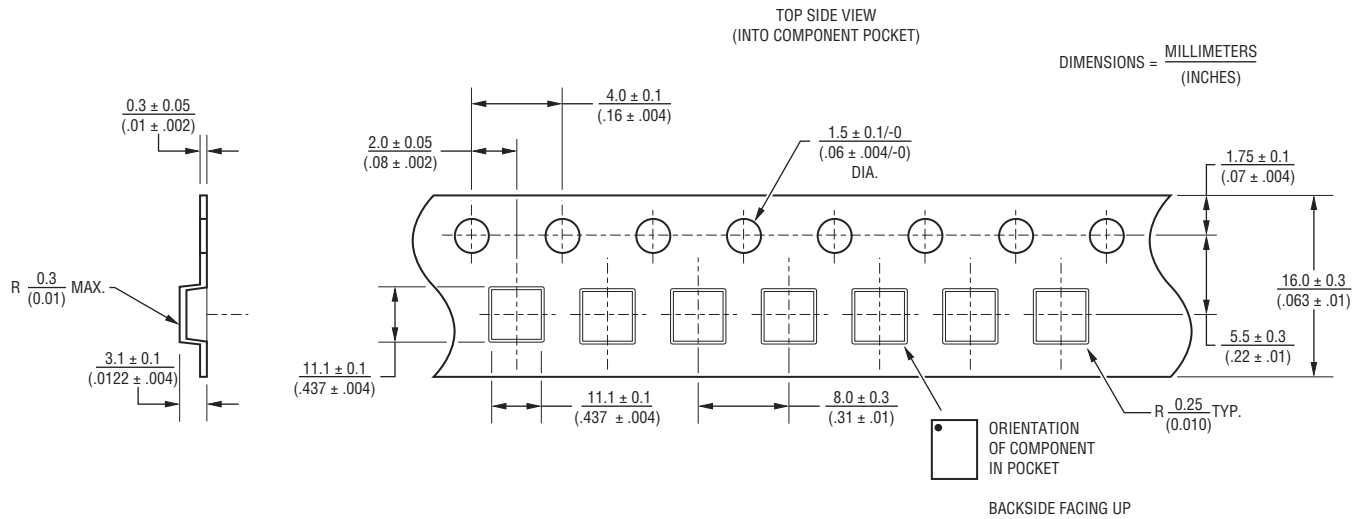
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# BOURNS®

## 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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