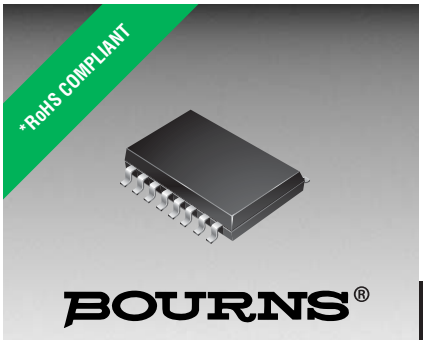


Features

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

Applications

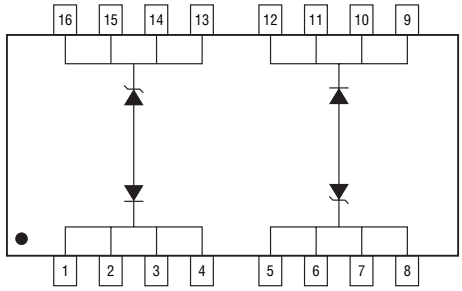
- T1/E1 line cards
- ISDN telecom equipment
- XDSL, USB, SCSI & ethernet interfaces
- Data & bus lines for FCC Part 68 applications

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	V_{WM}			6	V
Breakdown Voltage @ 1 mA	V_{BR}	8			V
Clamping Voltage @ I_P = 100 A[1]	V_C			15	V
Clamping Voltage @ I_P = 200 A[2]	V_C			16	V
Leakage Current @ V_{WM}	I_D			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 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.

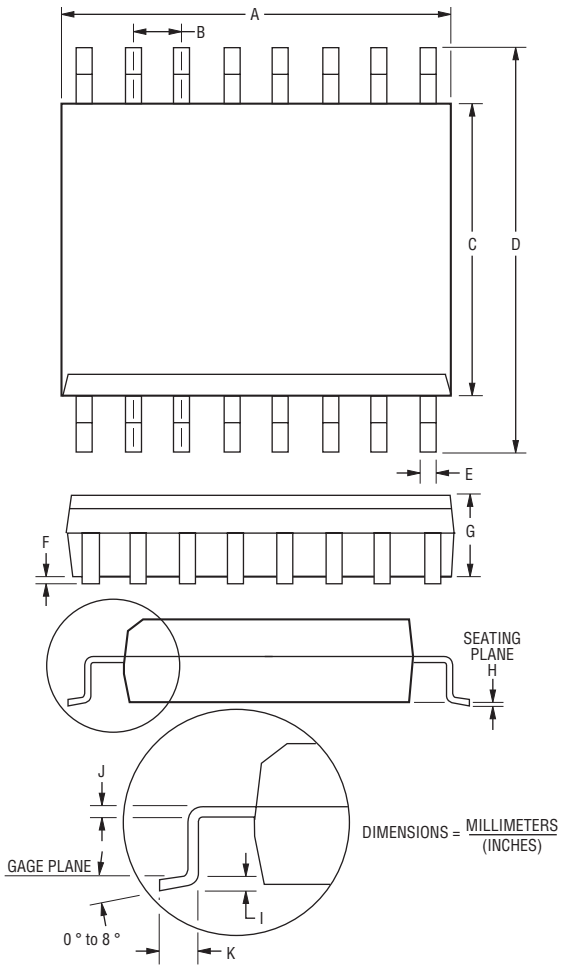
Thermal Characteristics (@ T_A = 25 °C Unless Otherwise Noted)

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 and RoHS Recast 2011/65/EU June 8, 2011.
Specifications are subject to change without notice.
Customers should verify actual device performance in their specific applications.

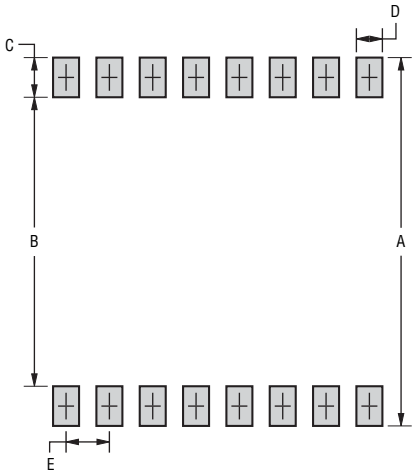
Product Dimensions

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			
A	10.16 - 10.41 (0.400 - 0.410)	G	2.65 (0.104) Max.
B	1.27 (0.050)	H	0.10 (0.004)
C	7.45 - 7.59 (0.293 - 0.299)	I	0.25 (0.010)
D	10.15 - 10.65 (0.400 - 0.419)	J	0.25 (0.010) Nom.
E	0.35 - 0.51 (0.014 - 0.020)	K	0.40 - 1.27 (0.016 - 0.050)
F	0.10 - 0.30 (0.004 - 0.012)		

Recommended Footprint



Dimensions	
A	10.7 (0.420) Min.
B	5.225 ±0.127 (0.325 ±0.005)
C	1.143 ±0.127 (0.045 ±0.005)
D	0.762 ±0.127 (0.045 ±0.005)
E	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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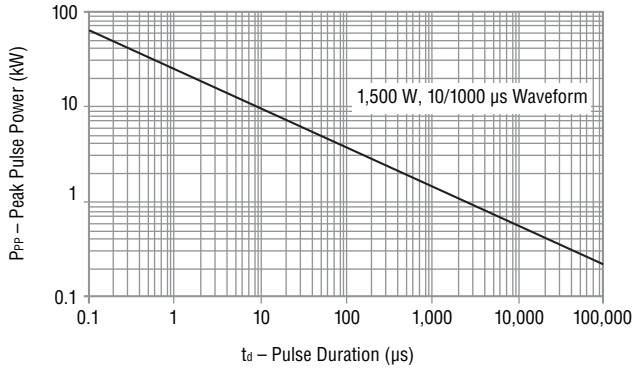
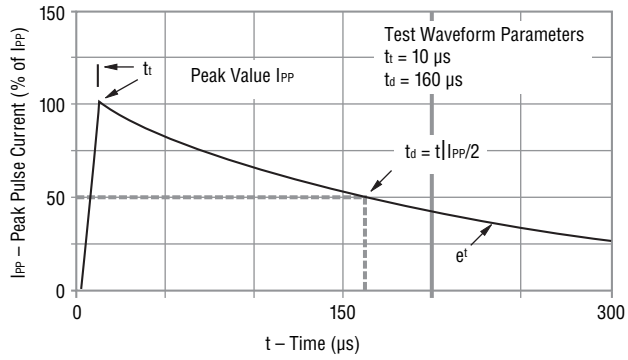
Customers should verify actual device performance in their specific applications.

Performance Graphs

Peak Pulse Power vs Pulse Time

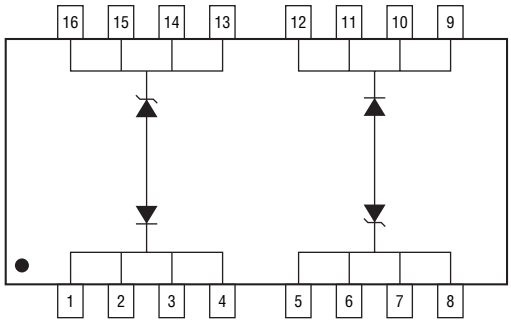


Pulse Wave Form

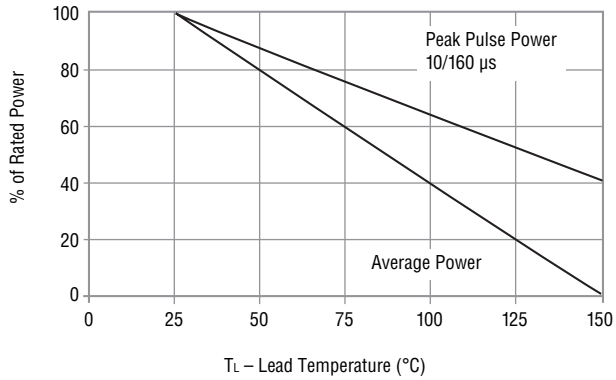


Block Diagram

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



Power Derating Curve



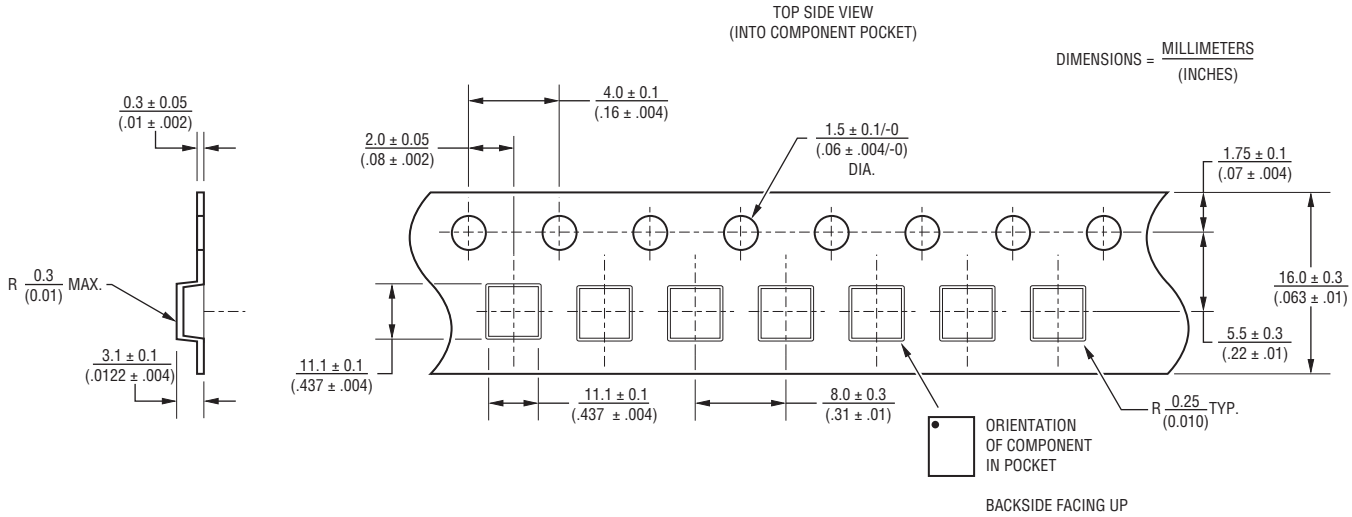
Typical Part Marking

CDWBS16-PLC01-6.....BLC01-6

Specifications are subject to change without notice.
Customers should verify actual device performance in their specific applications.

Packaging

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



REV. 07/12

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