

ESDLC12VD3B

Description

The ESDLC12VD3B is a low capacitance TVS (Transient Voltage Suppressor) array designed to protect high speed data interfaces. It has been specifically designed to protect sensitive electronic components which are connected to data and transmission lines from over-stress caused by Electrostatic Discharge (ESD), cable discharge events (CDE), lightning and other induced voltage surges.

Features

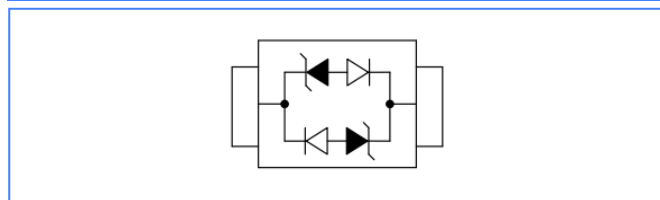
- Package: SOD-323
- Ultra low leakage: nA level
- Low operating voltage: 12V
- Low clamping voltage
- Response Time is Typically < 1 ns
- Complies with following standards:
 - IEC 61000-4-2 (ESD) immunity test
 - Air discharge: $\pm 30\text{kV}$
 - Contact discharge: $\pm 30\text{kV}$
 - IEC61000-4-5 (Lightning) 12A (8/20 μs)
 - IEC61000-4-4 (EFT) 40A (5/50ns)



Applications

- 10/100/1000 Ethernet
- Cellular phones
- PDAs
- USB interface

Circuit Diagram



Absolute Ratings

Tamb=25°C unless otherwise specified

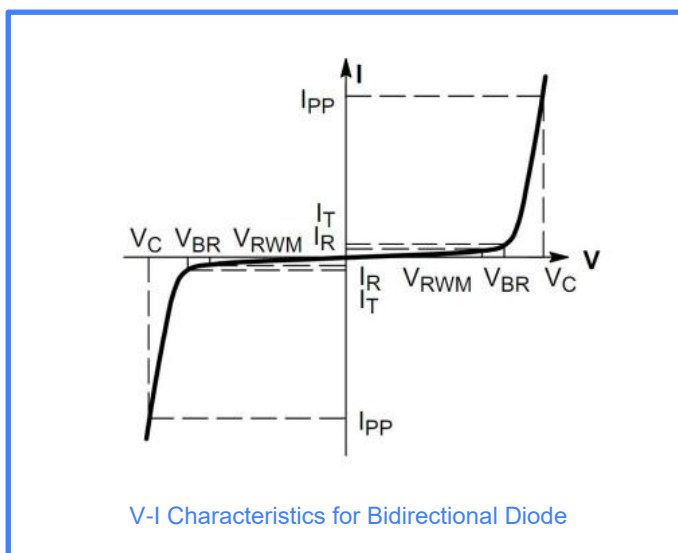
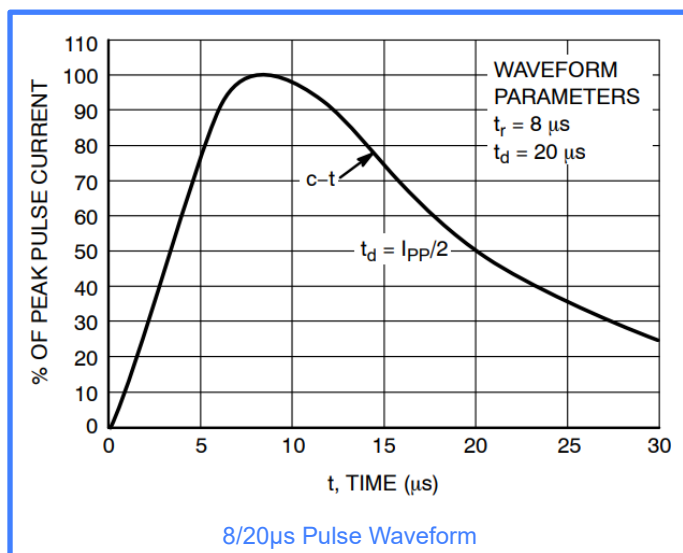
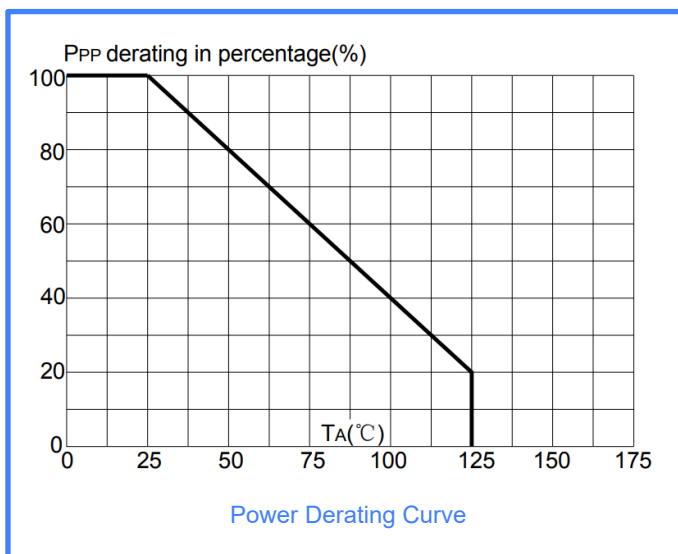
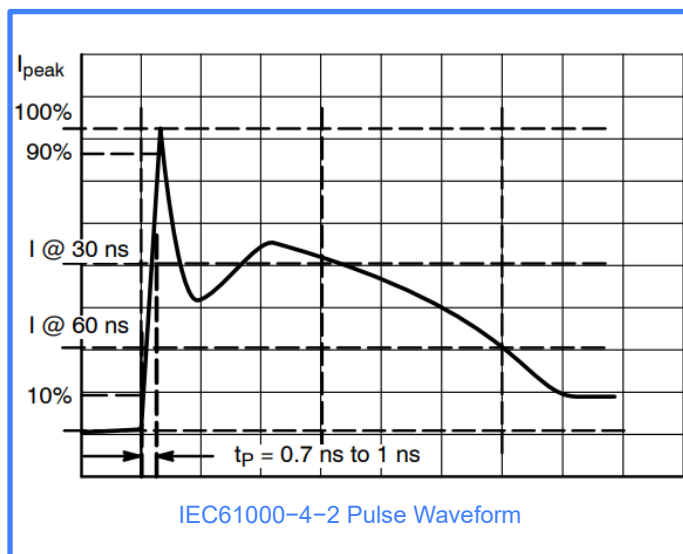
Parameter	Symbol	Value	Unit
Peak pulse power (tp = 8/20 μs)	P _{PK}	350	W
Maximum Reverse Peak Pulse Current(8/20 μs)	I _{PP}	12	A
ESD per IEC 61000-4-2 (Air)	V _{ESD}	± 30	KV
ESD per IEC 61000-4-2 (Contact)		± 30	
Storage Temperature Range	T _{STJ}	-55 to +150	°C
Operating Temperature Range	T _J	-40 to +125	°C

Electrical Characteristics

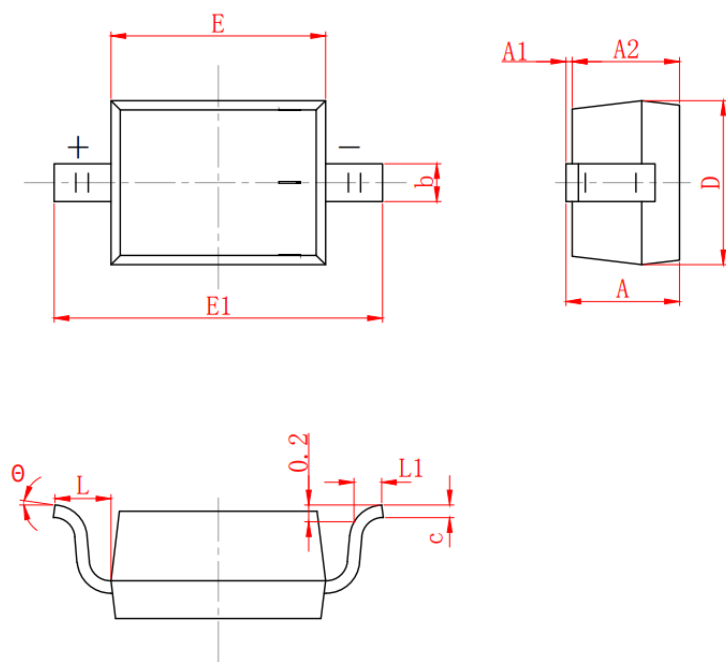
TA=25°C unless otherwise specified

Symbol	Parameter	Conditions	Min	Typ	Max	Units
V _{RWM}	Reverse Working Peak Voltage	-			12	V
V _{BR}	Reverse Breakdown Voltage	I _T = 1mA	13.3			V
I _R	Reverse Current	V _{RWM} = 15V			0.2	μA
V _C	Clamping Voltage	I _{PP} = 1A, t _P = 8/20 μs			18	V
V _C	Clamping Voltage	I _{PP} = 12A, t _P = 8/20 μs			30	V
C _D	Diode Capacitance	V _R = 0V, f = 1MHz		1		pF

Characteristic Curves



SOD323 Package Outline & Dimensions



Symbol	Dimensions in mm	
	min	max
A		1.000
A1	0.000	0.100
A2	0.800	0.900
b	0.250	0.350
c	0.008	0.150
D	1.200	1.400
E	1.600	1.800
E1	2.500	2.700
L	0.475(REF)	
L1	0.250	0.400
θ	0°	8°

Disclaimer

Specifications are subject to change without notice.

The device characteristics and parameters in this data sheet can and do vary in different applications and actual device performance may vary over time.

Users should verify actual device performance in their specific applications.