

ESD12VD8B

Features

- Ultra small package: 1.0x0.6x0.5mm
- Ultra low leakage: nA level
- Low operating voltage: 12V
- Low clamping voltage
- 2-pin leadless package
- 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) 7A (8/20 μs)
- RoHS Compliant

Description

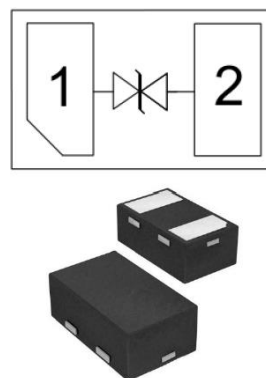
The ESD12VD8B in a DFN1006 package and will protect bidirectional line. These devices are designed to replace multilayer varistors (MLVs) in portable applications such as cell phones, notebook computers, and PDA's. They offer superior electrical characteristics such as lower clamping voltage and no device degradation when compared to MLVs, The

ESD12VD8B are designed to protect sensitive semiconductor components from damage or upset due to electrostatic discharge (ESD), and other voltage induced transient events.

Applications

- Smart Phone and Tablet PC
- TV and Set Top Box
- Wearable Devices
- PDA

Circuit Diagram



Absolute Maximum Ratings

Tamb=25°C unless otherwise specified

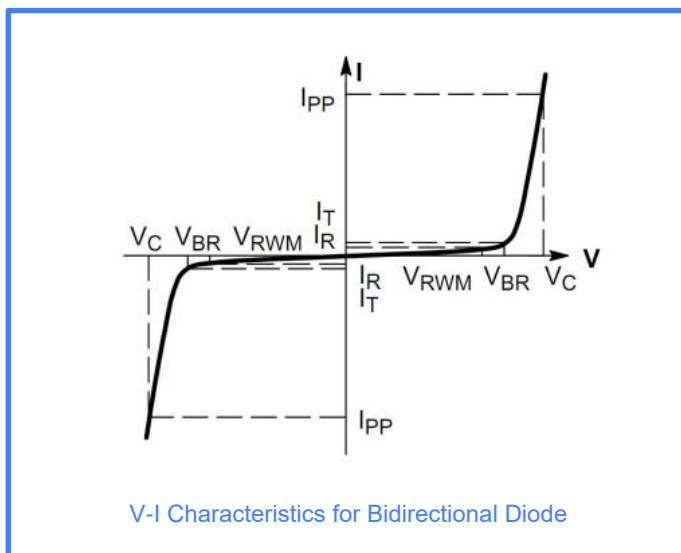
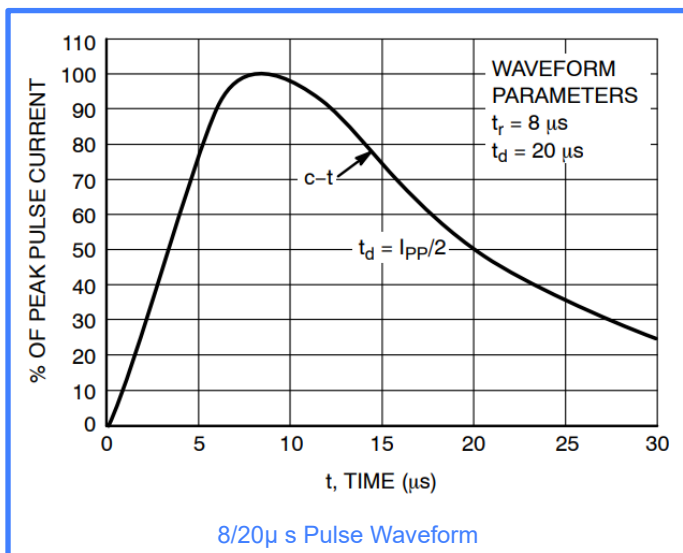
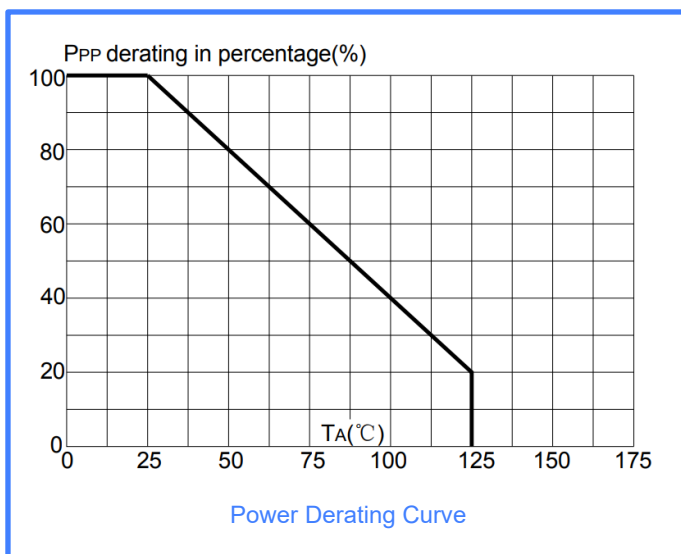
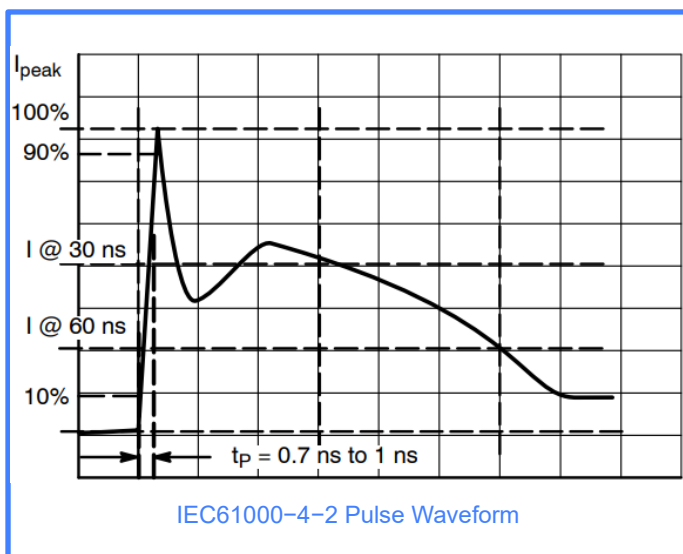
Parameter	Symbol	Value	Unit
Peak Pulse Power (8/20 μs)	P _{pp}	120	W
Maximum Reverse Peak Pulse Current (8/20 μs)	I _{pp}	7	A
ESD per IEC 61000-4-2 (Air)	V _{ESD}	± 30	KV
ESD per IEC 61000-4-2 (Contact)		± 30	
Storage Temperature Range	T _{STJ}	-55 to +150	°C
Operating Temperature Range	T _J	-55 to +125	°C

Electrical Characteristics

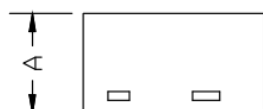
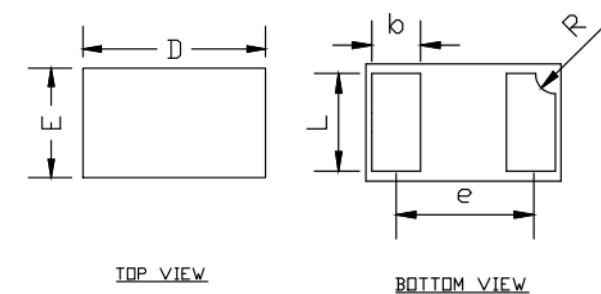
TA=25°C unless otherwise specified

Symbol	Parameter	Conditions	Min	Typ	Max	Units
V _{RWM}	Reverse Working Peak Voltage	-			12	V
V _{BR}	Reverse Breakdown Voltage	I _T = 1mA	13.0	14	17.0	V
I _R	Reverse Current	V _{RWM} = 12V			0.2	μA
V _C	Clamping Voltage	I _{pp} =7A, t _P =8/20 μs			18	V
C _D	Diode Capacitance	V _R = 0V, f = 1MHz			15	pF

Characteristic Curves



DFN1006-2 Package Outline & Dimensions



SYM	DIMENSIONS		
	MILLIMETERS		
	MIN	NOM	MAX
A	0.40	-	0.50
D	0.95	1.00	1.05
E	0.55	0.60	0.65
b	0.20	0.25	0.30
L	0.45	0.50	0.55
e	0.675		
R	0.07	0.10	0.13

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.