

ESD5V0D8BH

Features

- Ultra small package: 1.0x0.6x0.5mm
- Ultra low leakage: nA level
- Low operating voltage: 5V
- 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) 18A (8/20 μs)
- RoHS Compliant

Description

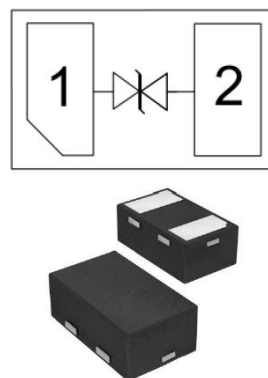
The ESD5V0D8BH in a DFN1006-2 package and will protect bidirectional line. These devices are designed to replace multilayer varistors (MLVs) in portable applications such as cell phones, notebook computers, and PDA's. They offer superior electrical characteristics such as lower clamping voltage and no device degradation when compared to MLVs, The ESD5V0D8BH are designed to protect sensitive

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

Applications

- Cellular phones
- Portable devices
- Digital cameras
- Power supplies

Circuit Diagram



Absolute Maximum Ratings

Tamb=25°C unless otherwise specified

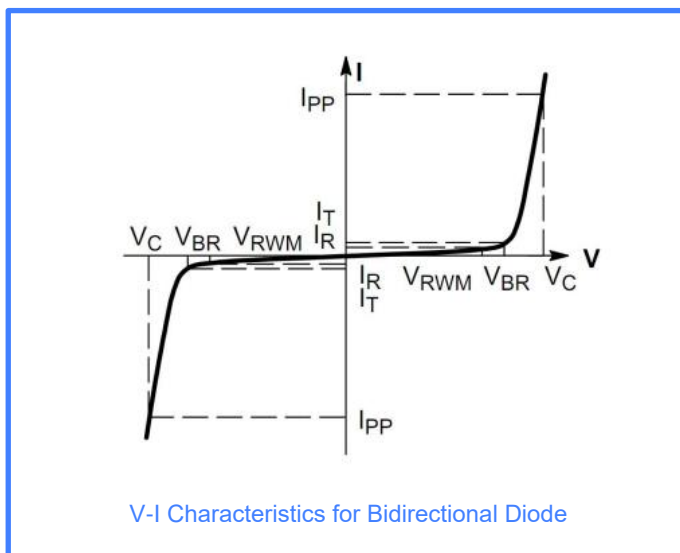
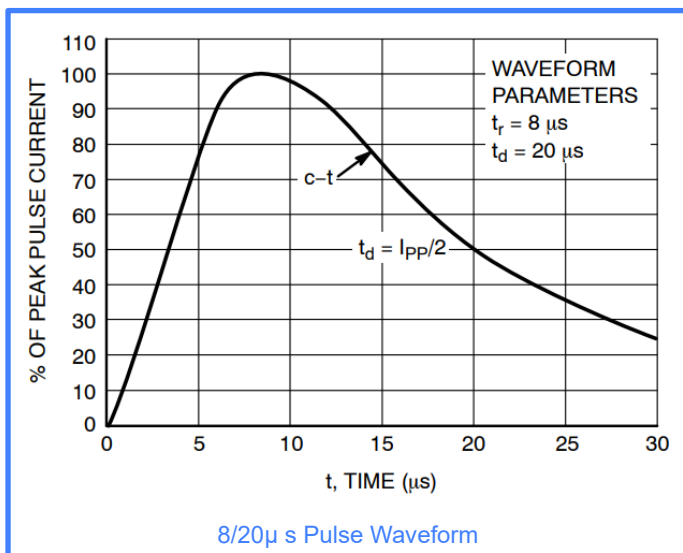
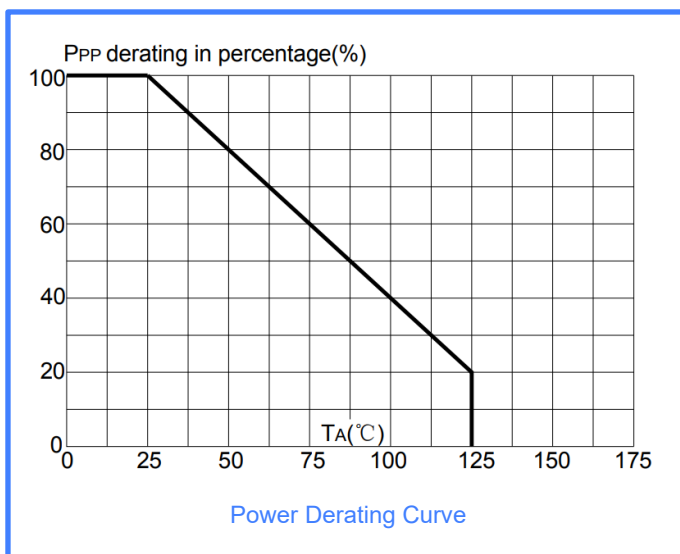
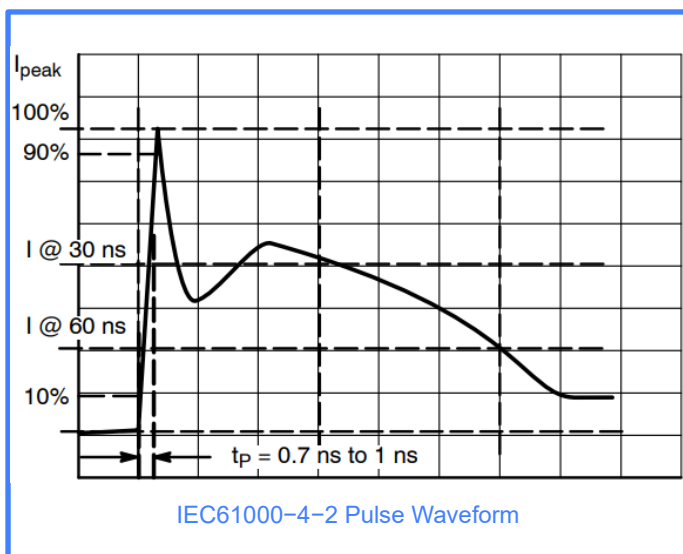
Parameter	Symbol	Value	Unit
Peak Pulse Power (8/20 μs)	Ppp	200	W
Maximum Reverse Peak Pulse Current	I _{PP} *1	18	A
ESD per IEC 61000-4-2 (Air)	V _{ESD}	± 30	KV
ESD per IEC 61000-4-2 (Contact)		± 30	
Storage Temperature Range	T _{STJ}	-55 to +150	°C
Operating Temperature Range	T _J	-55 to +125	°C

Electrical Characteristics

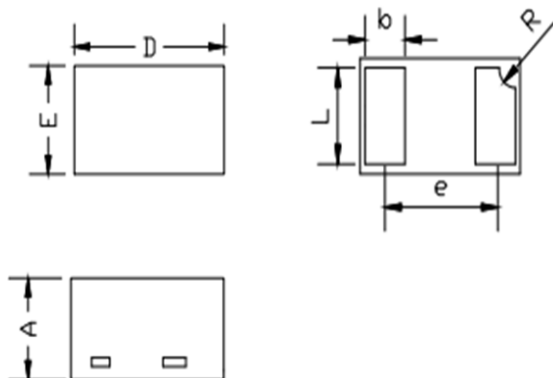
TA=25°C unless otherwise specified

Symbol	Parameter	Conditions	Min	Typ	Max	Units
V _{RWM}	Reverse Working Peak Voltage	-			5.0	V
V _{BR}	Reverse Breakdown Voltage	I _T = 1mA	6.0	6.8	8.5	V
I _R	Reverse Current	V _{RWM} = 5V			0.2	μA
V _C	Clamping Voltage	I _{PP} =1A, t _P =8/20 μs			9	V
V _C	Clamping Voltage	I _{PP} =18A, t _P =8/20 μs			12	V
C _D	Diode Capacitance	V _R = 0V, f = 1MHz		30	50	pF

Characteristic Curves



DFN1006-2 Package Outline & Dimensions



MILLMETER			
SYMBOL	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.