

ESD3V3D8B

Features

- Ultra small package: 1.0x0.6x0.5mm
- Ultra low capacitance: 15pF typical
- Ultra low leakage: nA level
- Low operating voltage: 3.3V
- 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) 8A (8/20 μs)
- RoHS Compliant

Description

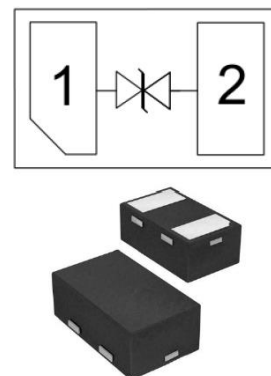
The ESD3V3D8B is a bi-directional TVS diode, utilizing leading monolithic silicon technology to provide fast response time and low ESD clamping voltage, making this device an ideal solution for protecting voltage sensitive data lines. The ESD3V3D8B complies with the IEC 61000-4-2 (ESD) standard with $\pm 30\text{kV}$

air and $\pm 30\text{kV}$ contact discharge. It is assembled into an ultra-small 1.0x0.6x0.5mm lead-free DFN package.

Applications

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

Circuit Diagram



Absolute Maximum Ratings

Tamb=25°C unless otherwise specified

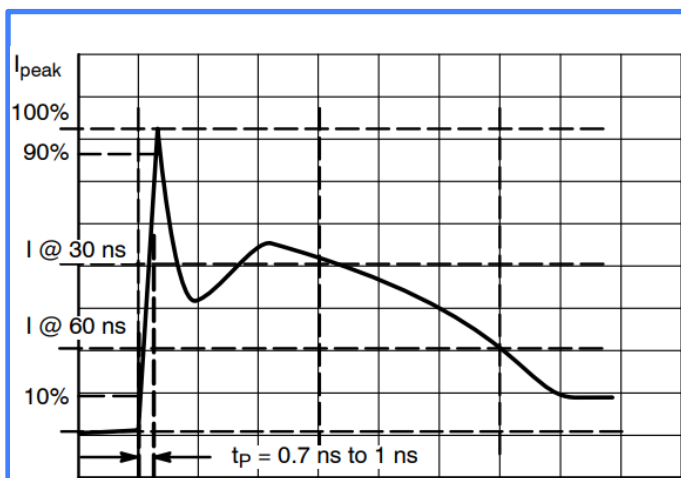
Parameter	Symbol	Value	Unit
Peak Pulse Power (8/20 μs)	P _{pp}	60	W
Maximum Reverse Peak Pulse Current	I _{PP} *1	8	A
ESD per IEC 61000-4-2 (Air)	V _{ESD}	± 30	KV
ESD per IEC 61000-4-2 (Contact)		± 30	
Storage Temperature Range	T _{STJ}	-55 to +150	°C
Operating Temperature Range	T _J	-55 to +125	°C

Electrical Characteristics

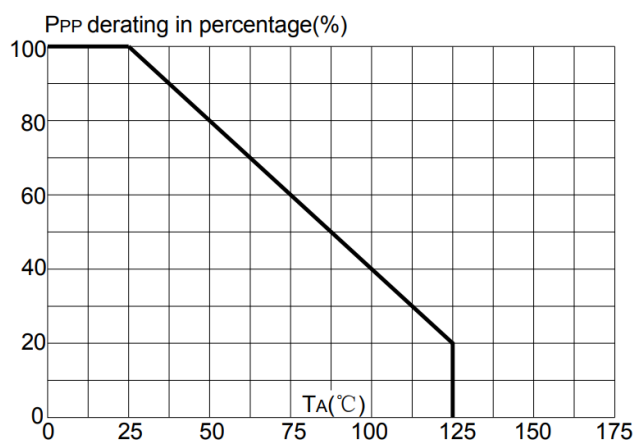
T_A=25°C unless otherwise specified

Symbol	Parameter	Conditions	Min	Typ	Max	Units
V _{RWM}	Reverse Working Peak Voltage	-			3.3	V
V _{BR}	Reverse Breakdown Voltage	I _T = 1mA	4.5			V
I _R	Reverse Current	V _{RWM} = 3.3V			0.5	μA
V _C	Clamping Voltage	I _{PP} =1A, t _P =8/20 μs			7	V
V _C	Clamping Voltage	I _{PP} =8A, t _P =8/20 μs			9	V
C _D	Diode Capacitance	V _R = 0V, f = 1MHz		15	20	pF

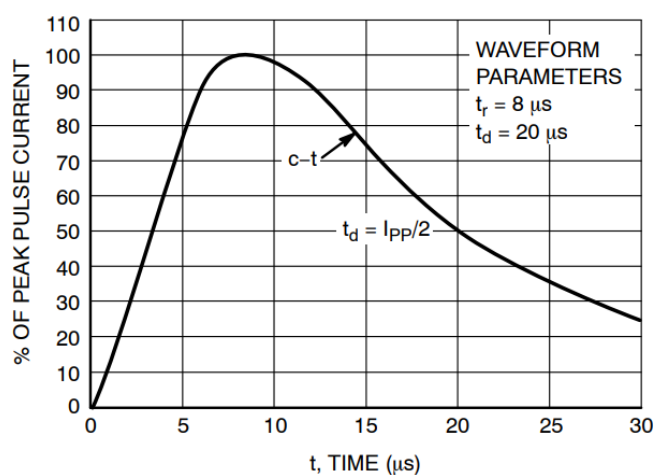
Characteristic Curves



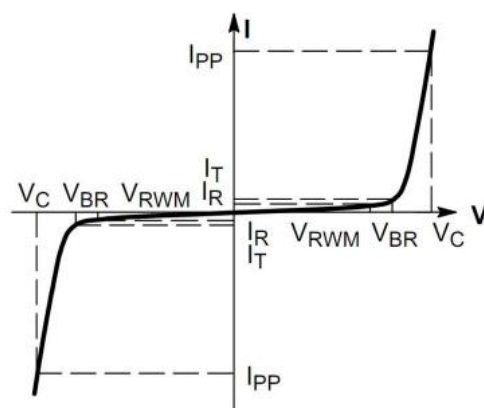
IEC61000-4-2 Pulse Waveform



Power Derating Curve

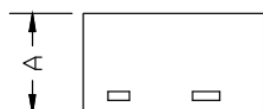
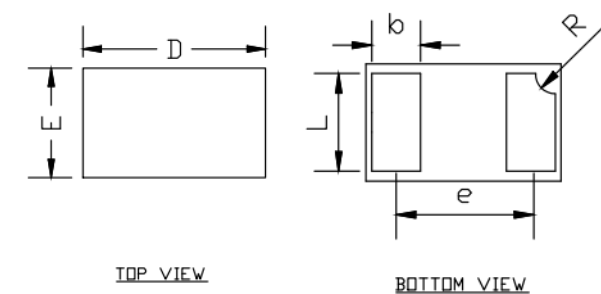


8/20μs Pulse Waveform



V-I Characteristics for Bidirectional Diode

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.