

Product Summary

The GESDBX3V3D34 is ultra low capacitance transient voltage suppressor arrays, designed to protect applications such as portable electronics and SMART phones. This series is available in both unidirectional and bidirectional configurations and is rated at 350 Watts for an 8/20 μ s waveform.

The GESDBX3V3D34 meets IEC61000-4-2(ESD) requirements. At higher operating frequencies or faster edge rates, insertion loss and signal integrity are a major concern. This series offers an ultra low capacitance and low leakage current in a miniature SOD-323 package.

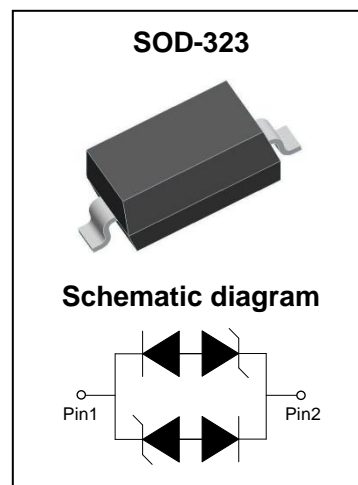
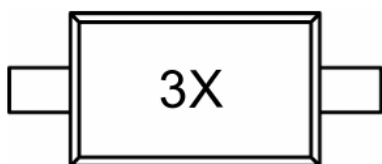
Feature

- Low Reverse Stand-off Voltage: 3.3V
- Low Reverse Clamping Voltage
- Low Leakage Current
- Fast Response Time
- IEC 61000-4-2 Level 4 ESD Protection

Application

- Hand-Held Portable Applications
- Networking and Telecom(Ethernet 10/100/1000 Base T)
- USB Interface
- Automotive Electronics
- Serial and Parallel Ports
- Notebooks, Desktops, Servers

Marking:



Absolute Maximum Ratings ($T_A=25^{\circ}\text{C}$ unless otherwise noted)

Parameter	Symbol	Value	Unit
IEC 61000-4-2 ESD Voltage	$V_{\text{ESD}}^{1)}$	± 30	kV
IEC 61000-4-2 ESD Voltage		± 30	
Peak Pulse Power	$P_{\text{PP}}^{2)}$	440	W
Peak Pulse Current	$I_{\text{PP}}^{2)}$	20	A
Lead Solder Temperature – Maximum (10 Second Duration)	T_L	260	$^{\circ}\text{C}$
Junction Temperature	T_J	-55~ +125	$^{\circ}\text{C}$
Storage Temperature	T_{STG}	-55~ +125	$^{\circ}\text{C}$

- 1) Device stressed with ten non-repetitive ESD pulses.
- 2) Non-repetitive current pulse 8/20 μs exponential decay waveform according to IEC61000-4-5.

ESD standards compliance

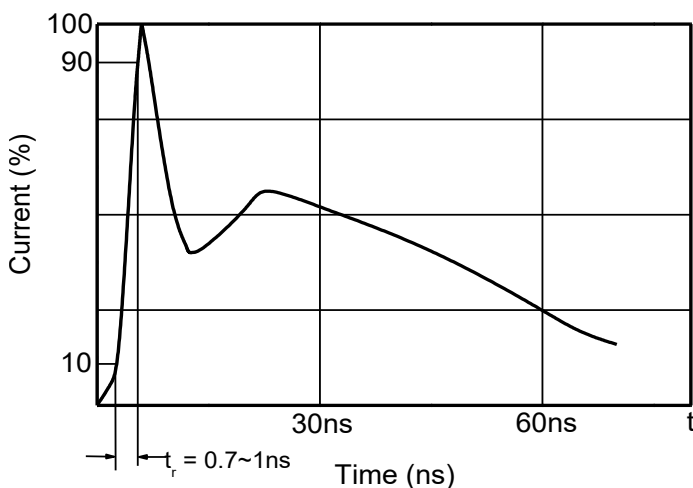
IEC61000-4-2 Standard

Contact Discharge		Air Discharge	
Level	Test Voltage kV	Level	Test Voltage kV
1	2	1	2
2	4	2	4
3	6	3	8
4	8	4	15

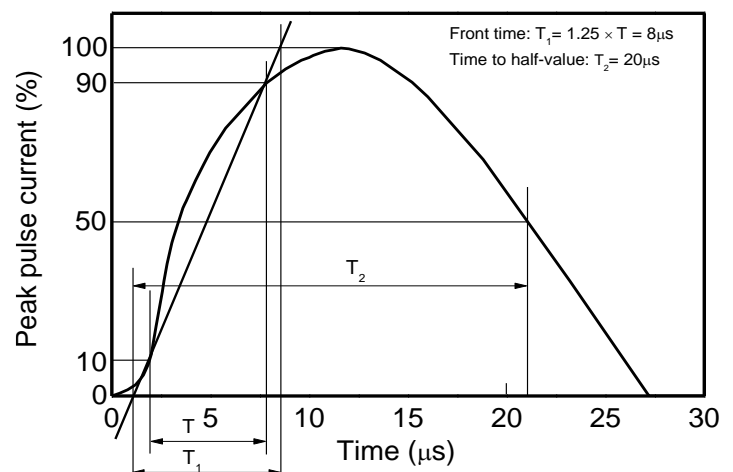
JESD22-A114-B Standard

ESD Class	Human Body Discharge V
0	0~249
1A	250~499
1B	500~999
1C	1000~1999
2	2000~3999
3A	4000~7999
3B	8000~15999

Contact discharge current waveform per IEC61000-4-2

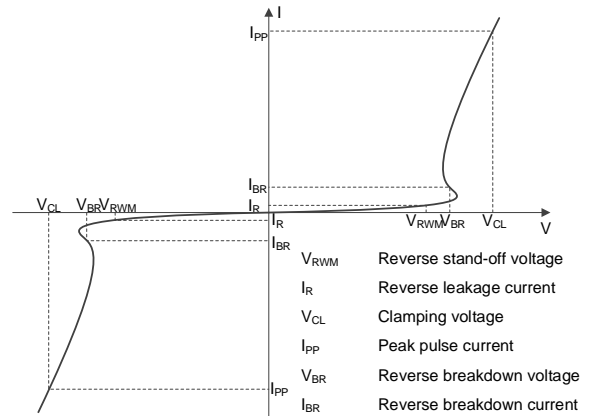


8/20 μs waveform per IEC61000-4-5



Electrical Parameter

Symbol	Parameter
V _C	Clamping Voltage @ I _{PP}
I _{PP}	Peak Pulse Current
V _{BR}	Breakdown Voltage @ I _{BR}
I _{BR}	Test Current
I _R	Reverse Leakage Current @ V _{RWM}
V _{RWM}	Reverse Standoff Voltage



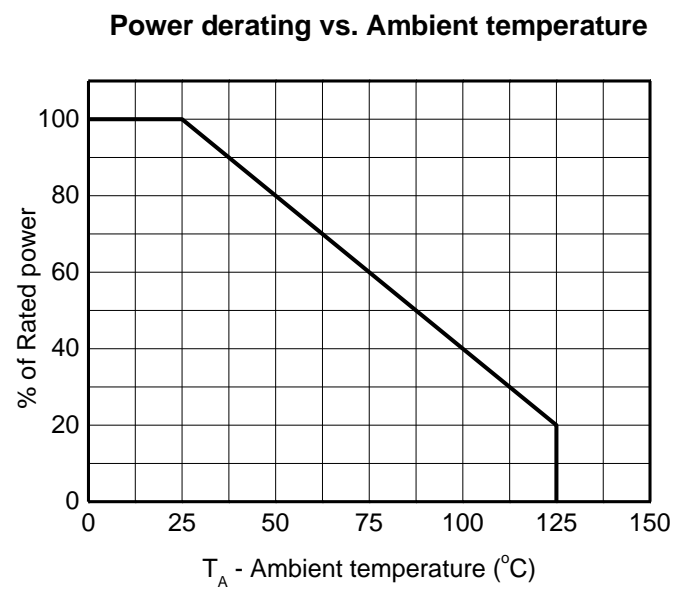
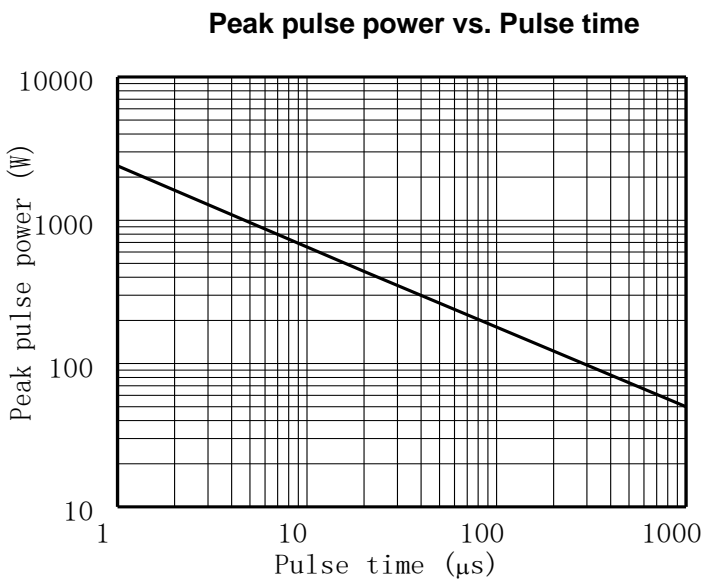
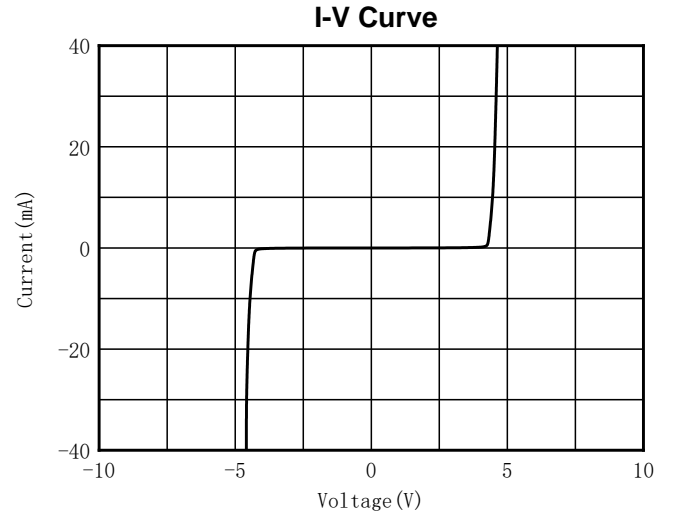
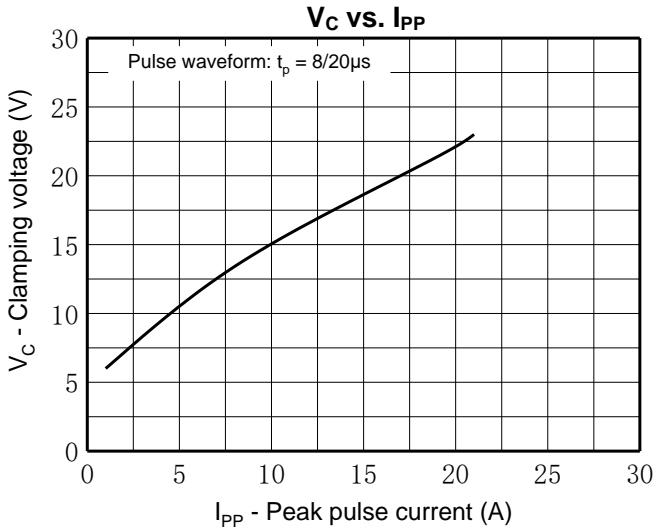
V-I characteristics for a Bi-directional TVS

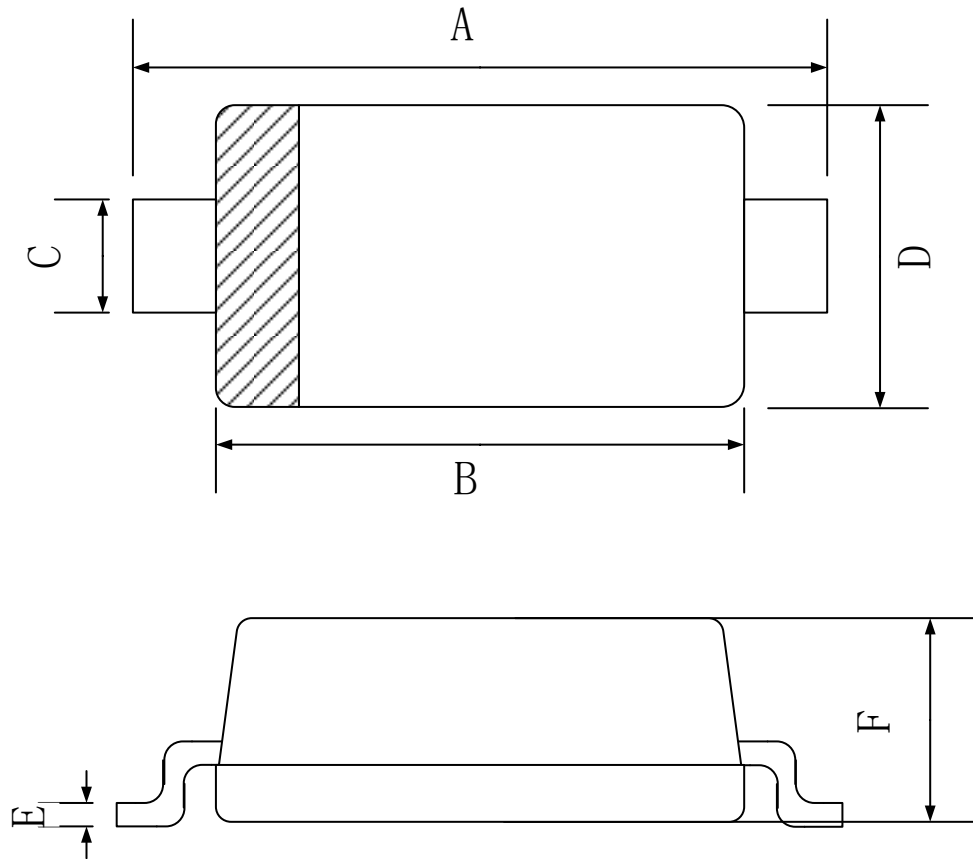
Electrical Characteristics (T_A=25°C unless otherwise specified)

Parameter	Symbol	Test conditions	Min	Typ	Max	Unit
Reverse Stand-Off Voltage	V _{RWM} ¹⁾				3.3	V
Reverse Leakage Current	I _R	V _{RWM} =3.3V			0.2	uA
Breakdown Voltage	V _{BR}	I _T =1mA	4.2	5	6.5	V
Clamping Voltage	V _C ²⁾	I _{PP} =7A		13		V
		I _{PP} =14A		19	23	V
		I _{PP} =20A		22	29	V
Junction Capacitance	C _J	V _R =0V, f=1MHz		1.4	1.8	pF

- 1) Other voltages available upon request.
- 2) Non-repetitive current pulse 8/20μs exponential decay waveform according to IEC61000-4-5

Typical Characteristics



SOD-323 Package Outline Dimensions


Symbol	Dimensions In Millimeters		
	Min.	Typ.	Max.
A	2.30	2.50	2.75
B	1.60	1.70	1.80
C	0.25	0.325	0.40
D	1.20	1.25	1.40
E	0.08	0.095	0.15
F	-	-	1.00

Attention:

- GreenPower Electronics reserves the right to improve product design function and reliability without notice.
- Any and all semiconductor products have certain probability to fail or malfunction, which may result in personal injury, death or property damage. Customer are solely responsible for providing adequate safe measures when design their systems.
- GreenPower Electronics products belong to consumer electronics or other civilian electronic products.