

### Product Summary

The GESDM36VD31 is designed to protect voltage sensitive electronic components from ESD and other transients. Excellent clamping capability, low leakage, low capacitance, and fast response time, make these parts ideal for ESD protection on designs where board space is at a premium. Because of its small size, it is suited for use in digital cameras, cellular phones, MP3 players and many other portable applications where board space is at a premium.

### Feature

- Low reverse stand-off voltage: 36V Max.
- Low reverse clamping voltage
- Ultra-low leakage current
- Fast response time
- IEC 61000-4-2 Level 4 ESD protection

### Application

- Digital cameras
- Portable applications
- Audio and video equipment
- MP3 players
- Mobile phone

### Marking:

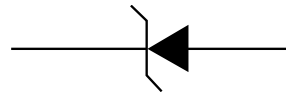


Front Side  
R=Device Code

SOD-323



Schematic diagram



## Absolute Maximum Ratings (Ta=25°C unless otherwise noted)

Parameter	Symbol	Value	Unit
IEC 61000-4-2 ESD Voltage	V <sub>ESD</sub>	±25	kV
IEC 61000-4-2 ESD Voltage		±25	
JESD22-A114-B ESD Voltage		±8	
ESD Voltage		±0.4	
Peak Pulse Power (8/20μs)	P <sub>pk</sub>	180	W
Peak Pulse Current (8/20μs)	I <sub>PP</sub>	2	A
Junction Temperature	T <sub>J</sub>	-55~ +125	°C
Storage Temperature	T <sub>stg</sub>	-55~ +150	°C

## ESD standards compliance

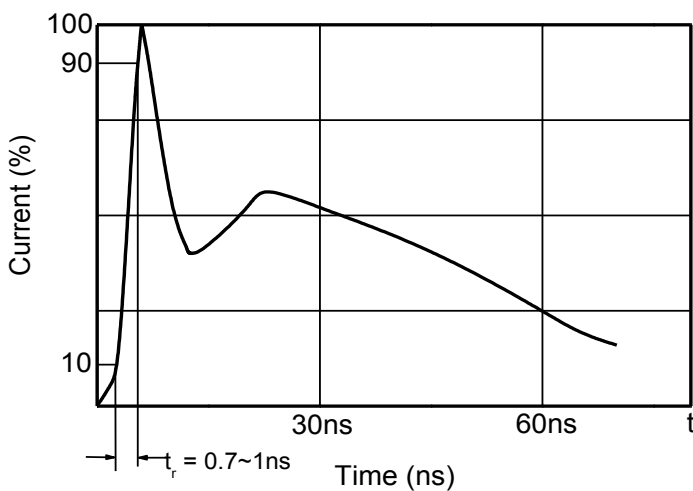
### IEC61000-4-2 Standard

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

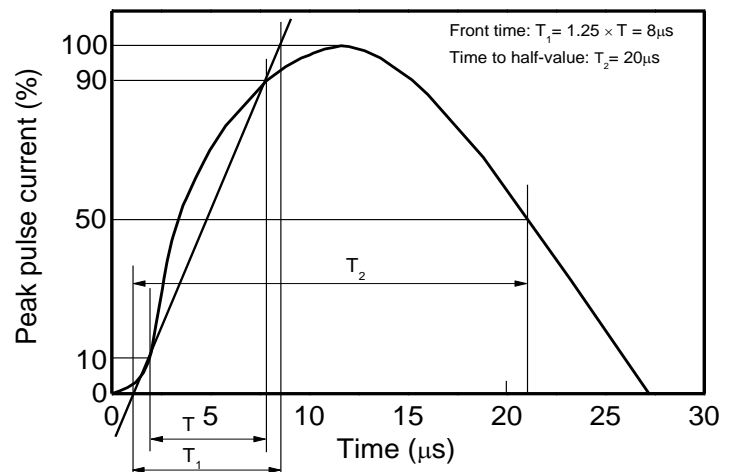
### JESD22-A114-B Standard

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

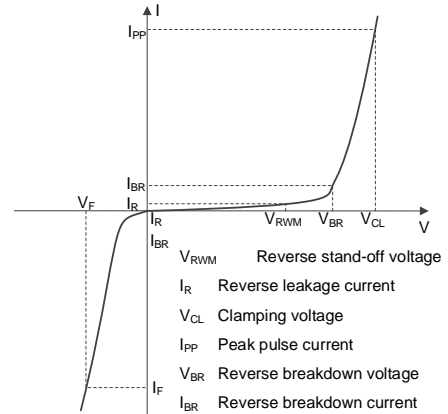


### 8/20μs waveform per IEC61000-4-5



## Electrical Parameter

Symbol	Parameter
V <sub>C</sub>	Clamping Voltage @ I <sub>PP</sub>
I <sub>PP</sub>	Peak Pulse Current
V <sub>BR</sub>	Breakdown Voltage @ I <sub>T</sub>
I <sub>T</sub>	Test Current
I <sub>R</sub>	Reverse Leakage Current @ V <sub>RWM</sub>
V <sub>RWM</sub>	Reverse Standoff Voltage

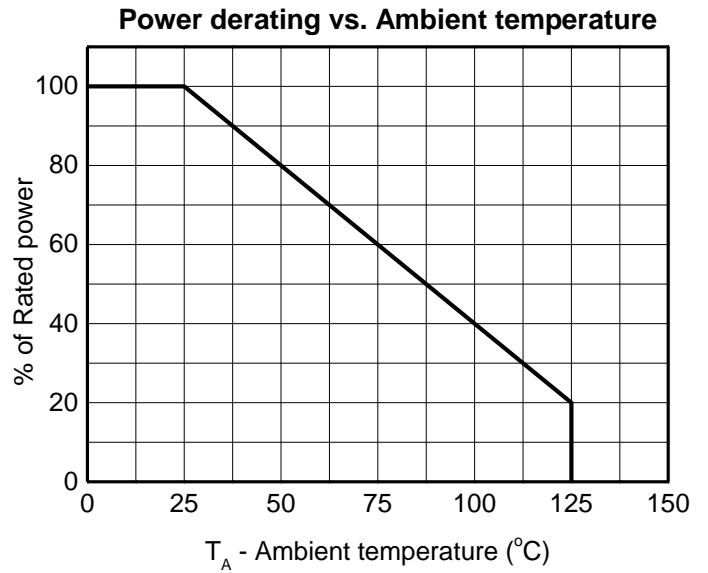
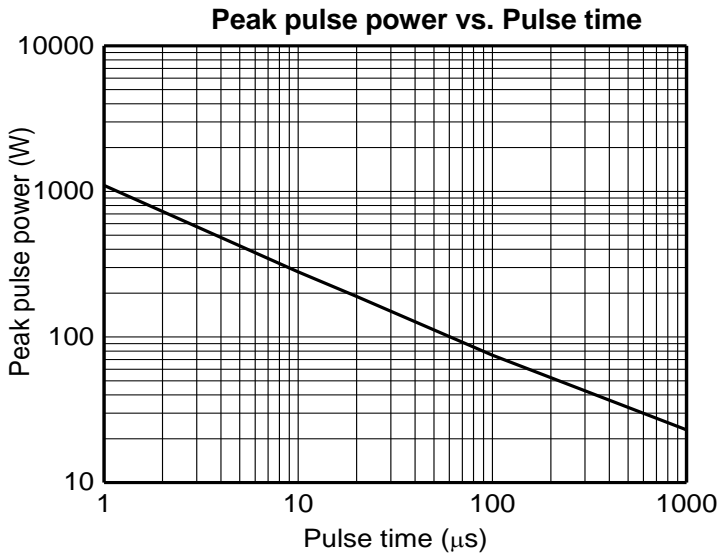
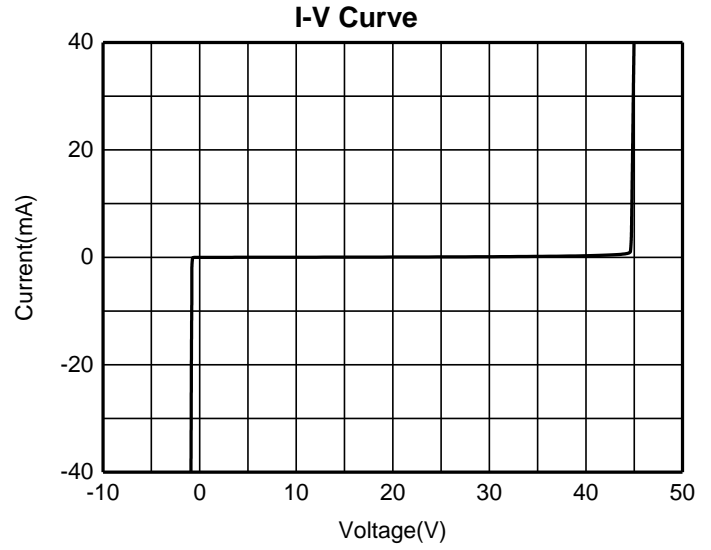
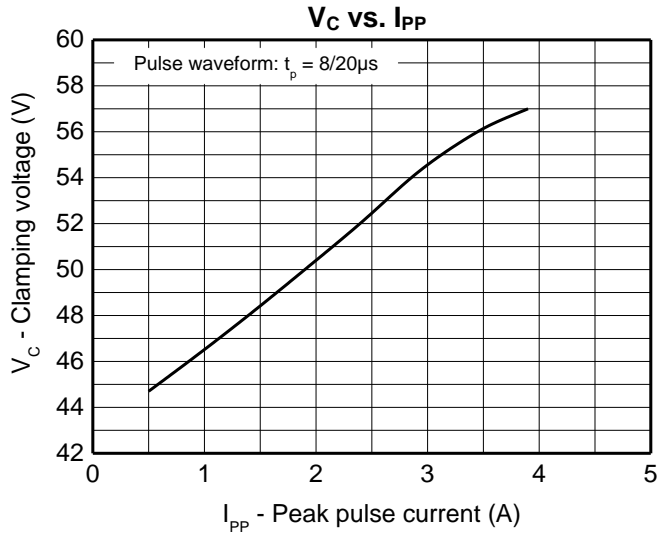


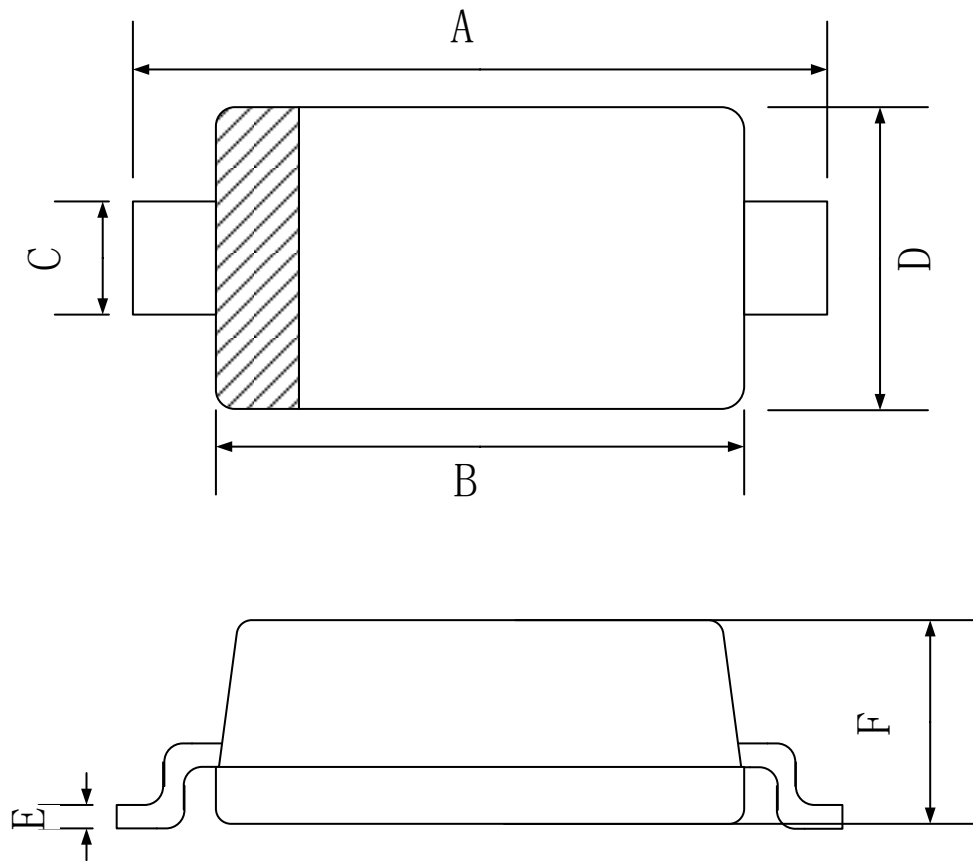
V-I characteristics for a Uni-directional TVS

## Electrical Characteristics (T<sub>a</sub>=25°C unless otherwise specified)

Parameter	Symbol	Test conditions	Min	Typ	Max	Unit
Reverse stand-off voltage	V <sub>RWM</sub>				36	V
Reverse leakage current	I <sub>R</sub>	V <sub>RWM</sub> =36V			1	μA
Breakdown voltage	V <sub>(BR)</sub>	I <sub>T</sub> =1mA	40			V
Clamping voltage	V <sub>C1</sub>	I <sub>PP</sub> = 1A (8 x 20μs pulse)		47	60	V
	V <sub>C2</sub>	I <sub>PP</sub> = 2A (8 x 20μs pulse)		50	90	V
Junction capacitance	C <sub>J</sub>	V <sub>R</sub> =0V, f=1MHz		27	35	pF

**Typical Characteristics**



**SOD-323 Package Outline Dimensions**


Symbol	Dimensions In Millimeters		
	Min.	Typ.	Max.
A	2.30	2.50	2.70
B	1.60	1.70	1.90
C	0.25	0.325	0.40
D	1.15	1.25	1.35
E	0.089	0.095	0.101
F	0.80	0.90	1.00