

Product Summary

The GESDB24VD11F 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.

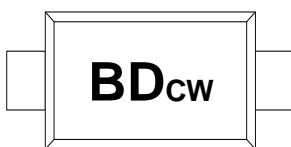
Feature

- Low reverse stand-off voltage: 24V
- Low leakage current
- 7200W Peak pulse power per line ($t_P = 8/20\mu s$)
- SOD-123FL package
- Response time is typically $< 1ns$
- Protect one I/O or power line

Application

- Cell phone handsets and accessories
- Personal digital assistants (PDA's)
- Notebooks, desktops and servers
- Portable instrumentation
- Cordless phones
- Digital cameras
- Peripherals
- MP3 players
- Digital cameras

Marking:

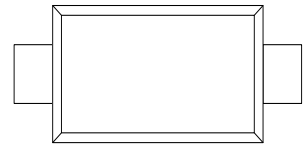


Front Side

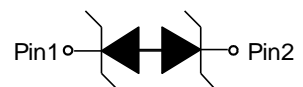
BD = Device Code

CW = Date Code

SOD-123FL



Schematic diagram

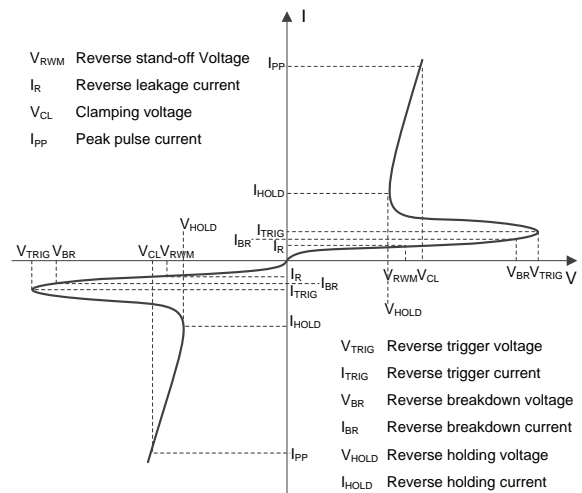


Absolute Maximum Ratings ($T_a=25^\circ\text{C}$ unless otherwise noted)

Parameter	Symbol	Value	Unit
IEC 61000-4-2 ESD Voltage	Air Model	± 30	KV
IEC 61000-4-2 ESD Voltage	Contact Model	± 30	
ESD Voltage	Per Human Body Model	± 16	
ESD Voltage	Machine Model	± 0.4	
Peak Pulse Power	P_{PP}	7200	W
Peak Pulse Current	I_{PP}	200	A
Lead Solder Temperature – Maximum (10 Second Duration)	T_L	260	$^\circ\text{C}$
Junction Temperature	T_j	150	$^\circ\text{C}$
Storage Temperature	T_{stg}	-55~ +150	$^\circ\text{C}$

Electrical Parameter

Symbol	Parameter
V_{CL}	Clamping Voltage @ IPP
I_{PP}	Peak Pulse Current
V_{TRIG}	Reverse trigger voltage
I_{TRIG}	Reverse trigger current
V_{BR}	Reverse breakdown Voltage
I_{BR}	Reverse breakdown current
V_{RWM}	Reverse Standoff Voltage
I_R	Reverse Leakage Current @ VRWM
V_{HOLD}	Reverse Holding Voltage
I_{HOLD}	Reverse Holding Current



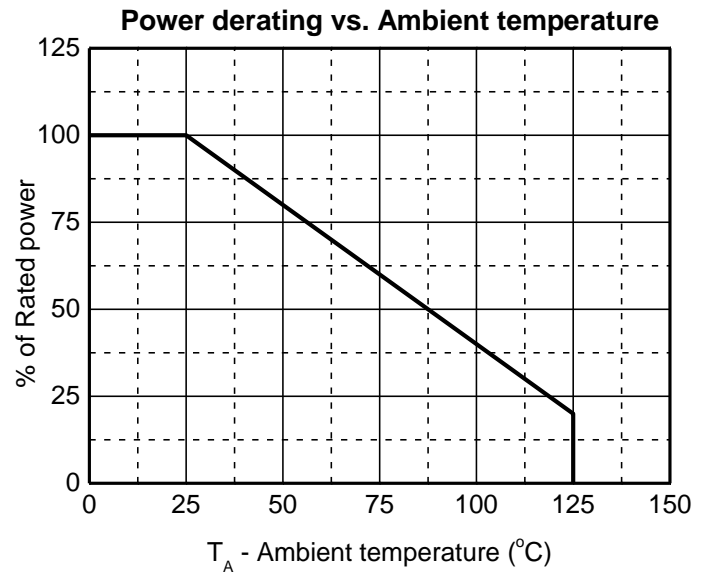
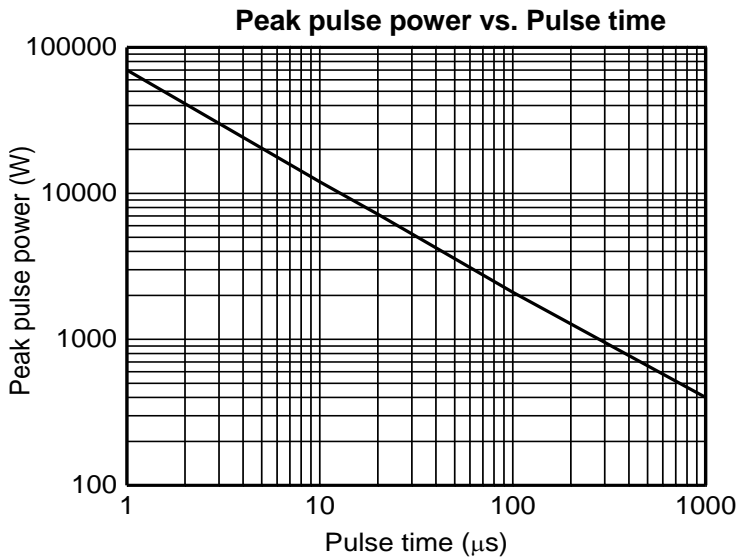
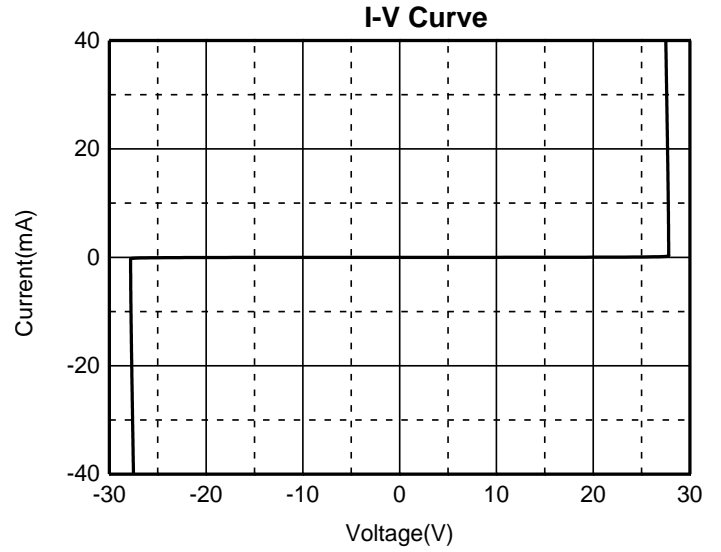
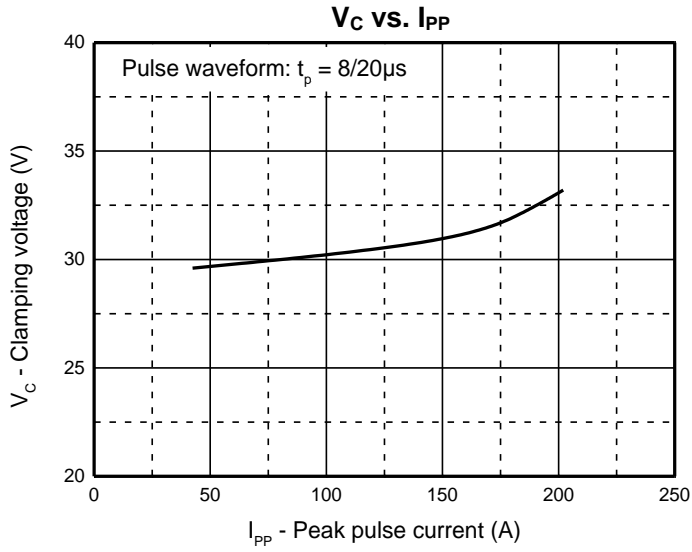
V-I characteristics for a Bi-direction TVS

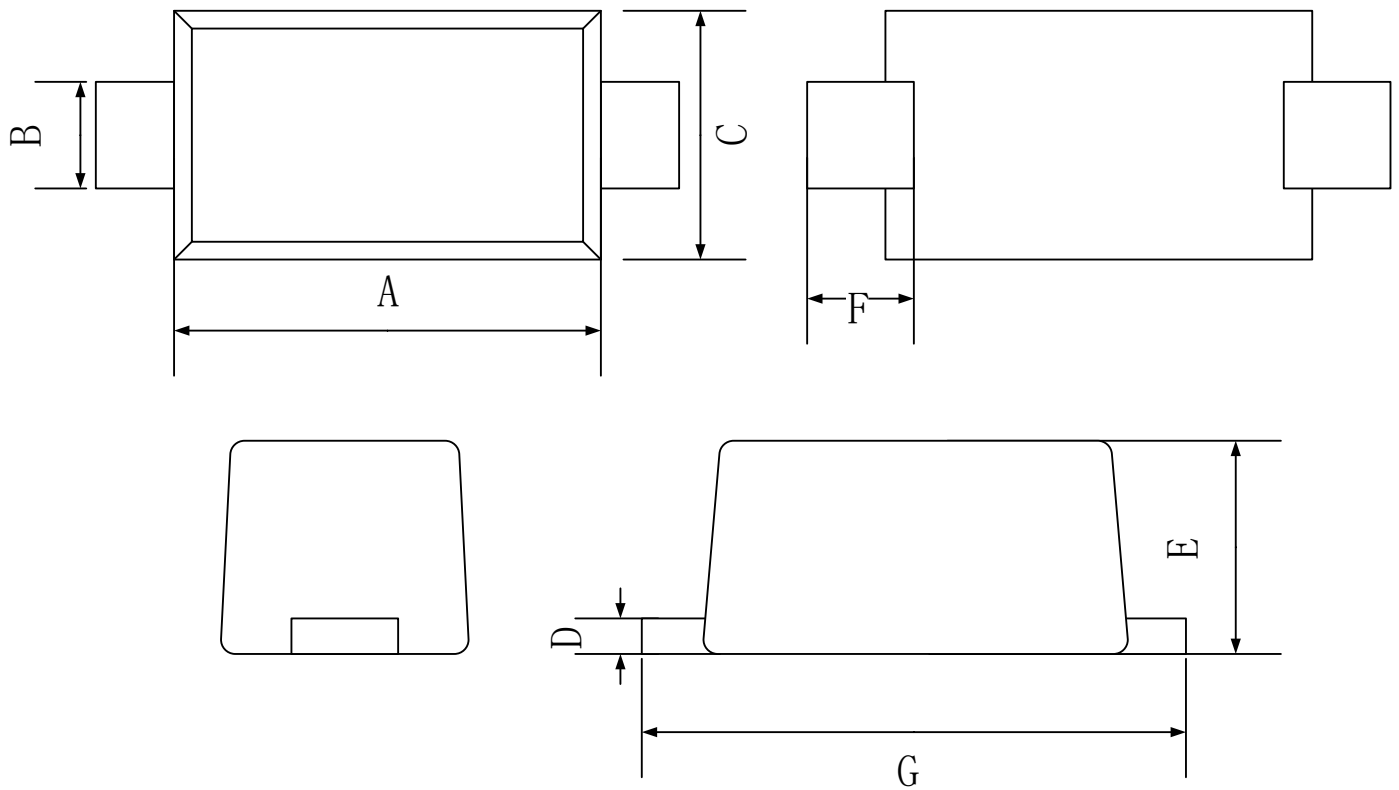
Electrical Characteristics ($T_a=25^\circ\text{C}$ unless otherwise specified)

Parameter	Symbol	Test conditions	Min	Typ	Max	Unit
Reverse stand-off voltage	V_{RWM}				24	V
Reverse leakage current	I_R	$V_{RWM}=24\text{V}$			1	μA
Breakdown voltage	$V_{BR}^{1)}$	$I_T=1\text{mA}$	26.7		29.5	V
Clamping voltage	V_{C1}	$I_{PP}=200\text{A}(8/20\mu\text{S})$		40	50	V
Junction capacitance	C_j	$V_R=0\text{V}, f=1\text{MHz}$			350	pF

1) V_{BR} is measured with a pulse test current I_T at an ambient temperature of 25°C

Typical Characters



SOD-123FL Package Outline Dimensions


Symbol	Dimensions In Millimeters	
	Min.	Max.
A	2.85	2.95
B	0.99	1.01
C	1.75	1.85
D	0.10	0.20
E	0.95	1.05
F	0.65	0.85
G	3.75	4.05