

### Product Summary

The GESDBY5V0AE1 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.

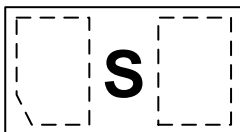
### Feature

- Low reverse stand-off voltage: 5V Max.
- Low leakage current
- Fast response time
- ESD Rating of Class 3(>16kV) Per Human Body Model
- IEC 61000-4-2 Level 4 ESD protection

### Application

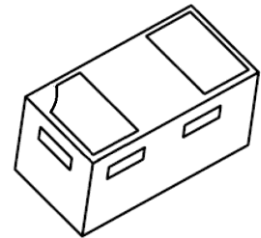
- Digital cameras
- Portable applications
- Audio and video equipment
- MP3 players
- Mobile phone

### Marking:

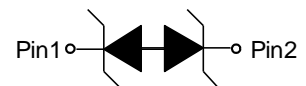


Front Side  
S=Device Code

**DFN0603-2L**



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	$\pm 15$	kV
IEC 61000-4-2 ESD Voltage	Contact Model	$\pm 15$	
JESD22-A114-B ESD Voltage	Per Human Body Model	$\pm 16$	
ESD Voltage	Machine Model	$\pm 0.4$	
Peak Pulse Power	$P_{PP}^{2)}$	48	W
Peak Pulse Current	$I_{PP}^{2)}$	4	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	$^{\circ}\text{C}$

- 1) Device stressed with ten non-repetitive ESD pulses.
- 2) Non-repetitive current pulse  $8/20\mu\text{s}$  exponential decay waveform according to IEC61000-4-5.

## ESD standards compliance

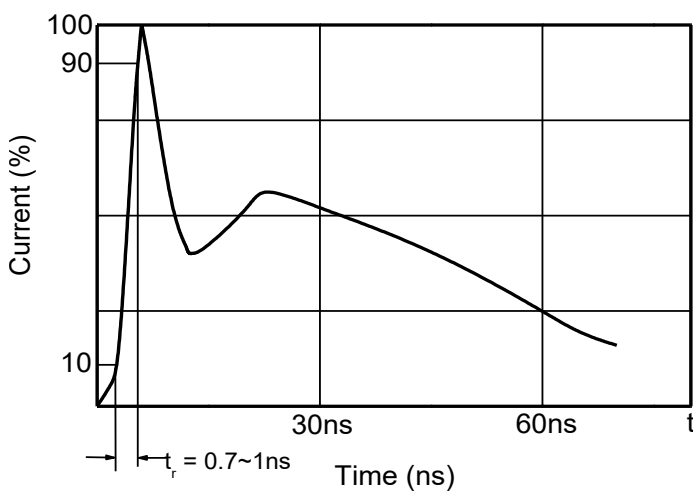
### IEC61000-4-2 Standard

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

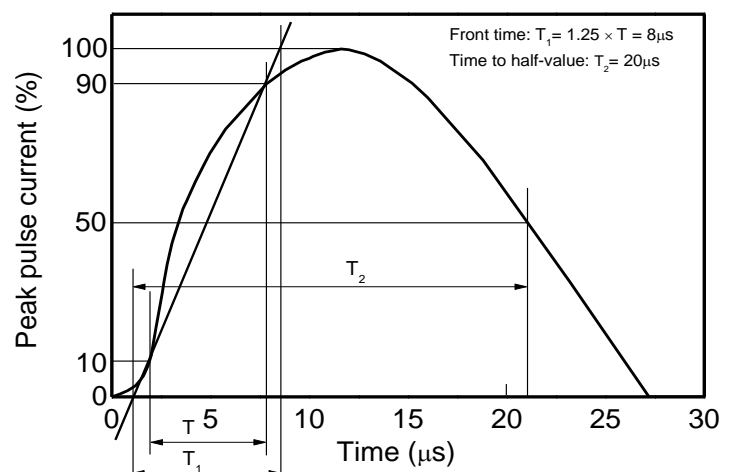
### JESD22-A114-B Standard

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

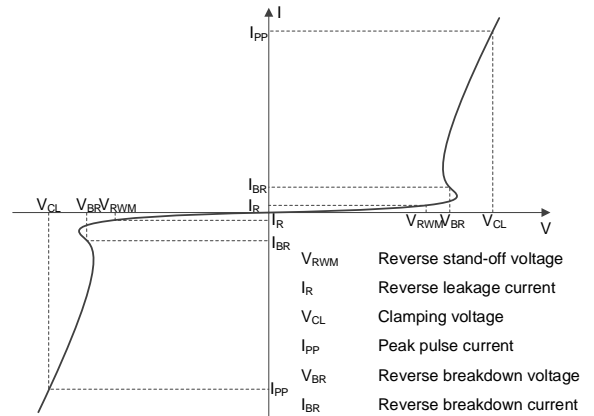


### 8/20 $\mu\text{s}$ waveform per IEC61000-4-5



## 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>BR</sub>
I <sub>BR</sub>	Test Current
I <sub>R</sub>	Reverse Leakage Current @ V <sub>RWM</sub>
V <sub>RWM</sub>	Reverse Standoff Voltage



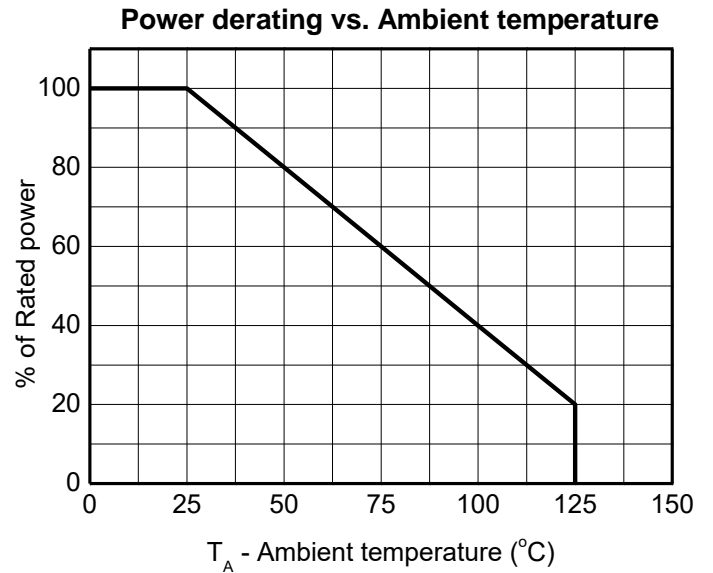
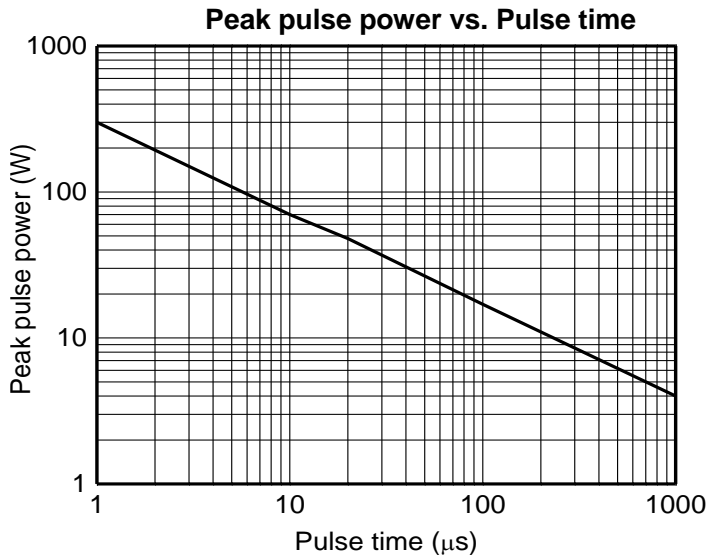
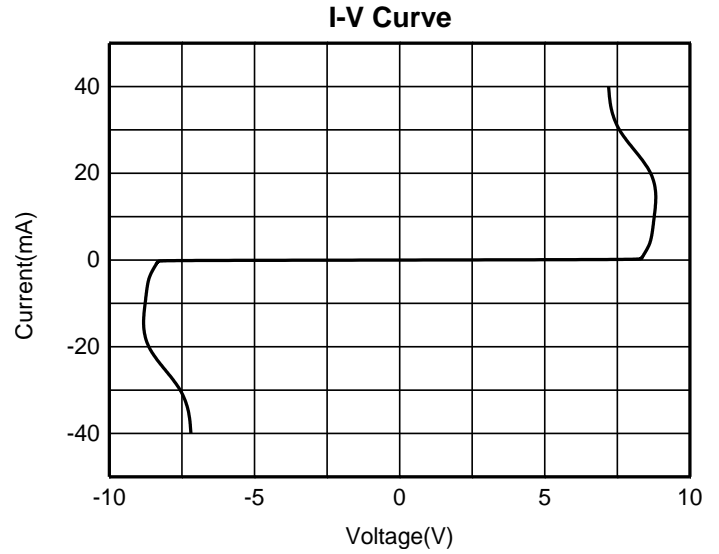
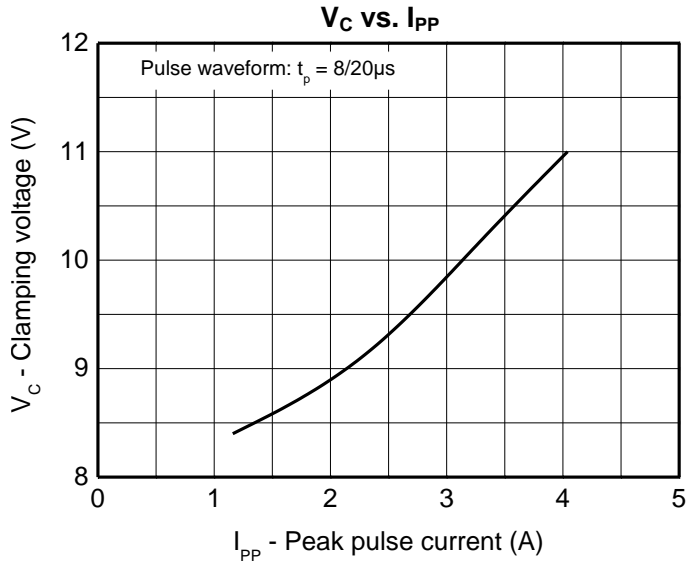
**V-I characteristics for a Bi-directional TVS**

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

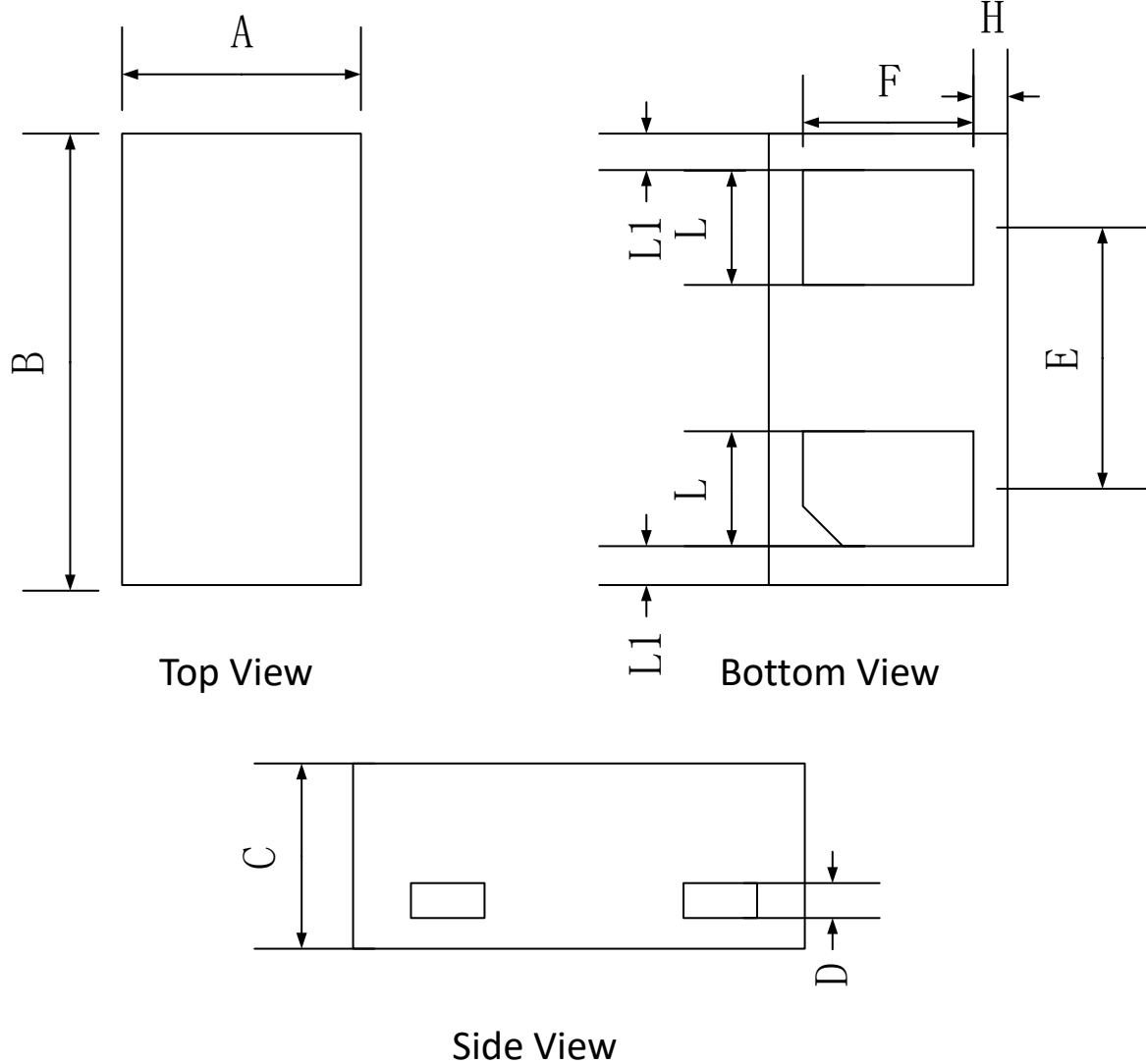
Parameter	Symbol	Test conditions	Min	Typ	Max	Unit
Reverse standoff voltage	V <sub>RWM</sub>				5	V
Reverse leakage current	I <sub>R</sub>	V <sub>RWM</sub> =5V			0.1	μA
Breakdown voltage	V <sub>BR</sub> <sup>1)</sup>	I <sub>T</sub> =1mA	6	8.3	9	V
Clamping voltage	V <sub>C1</sub>	I <sub>PP</sub> =1A			10	V
	V <sub>C2</sub>	I <sub>PP</sub> =4A			12	V
Junction capacitance	C <sub>J</sub>	V <sub>R</sub> =0V, f=1MHz		0.45	0.5	pF

1) V<sub>BR</sub> is measured with a pulse test current I<sub>T</sub> at an ambient temperature of 25°C

**Typical Characteristics**

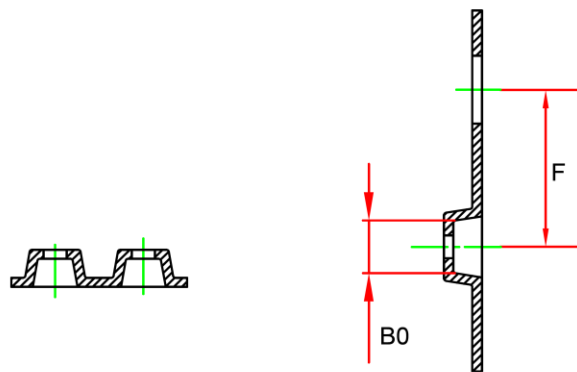
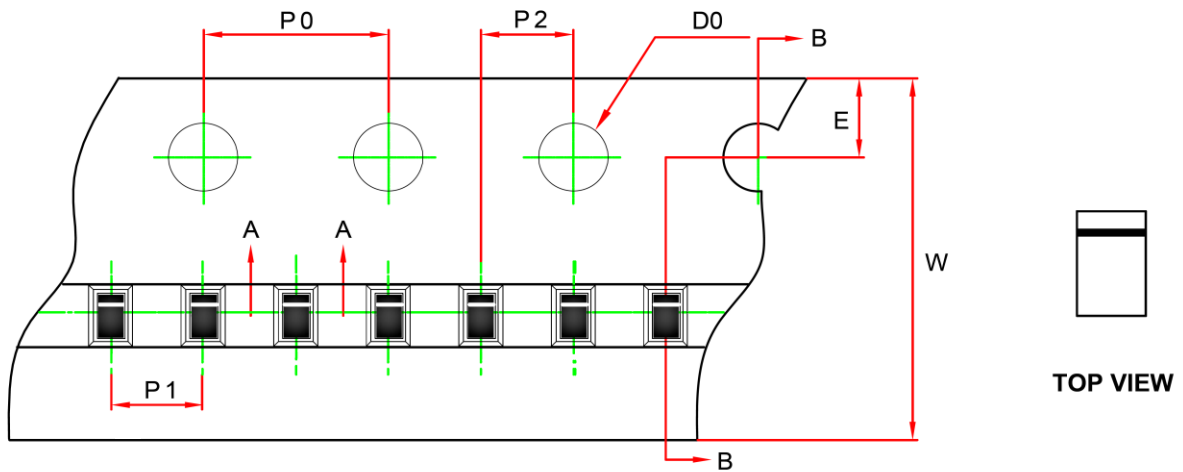


## DFN0603-2L Package Outline Dimensions

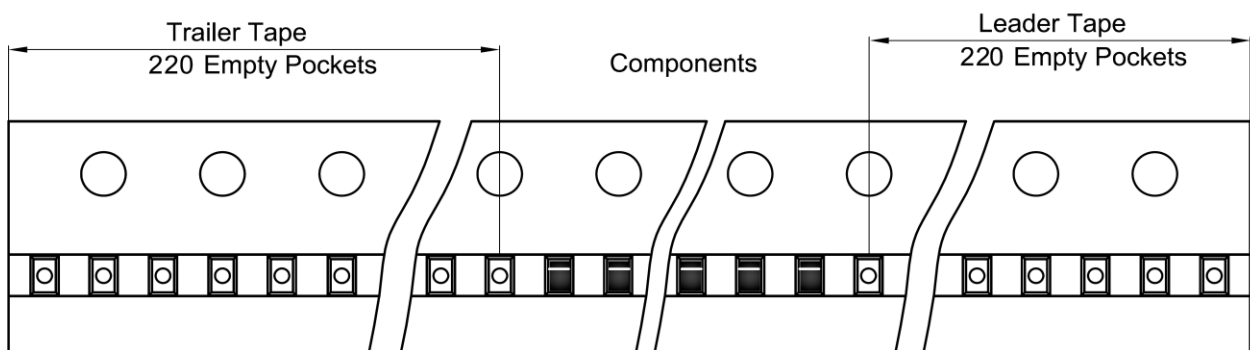


	Dimensions In Millimeters		
	Min.	Typ.	Max.
A	0.25	0.30	0.35
B	0.55	0.60	0.65
C	0.27	0.30	0.34
D	0.050REF		
E	-	0.35	-
F	0.20	0.25	0.35
H	0.045 REF		
L	0.13	0.18	0.23
L1	0.045REF		

**DFN0603-2L Tape and Reel**



Dimensions In Millimeters (mm)								
Pkg type	B0	P0	P1	P2	E	F	W	D0
DFN 0.6×0.3-2L	0.67	4.00	2.00	2.00	1.75	3.50	8.00	1.55
Tolerance	+/-0.05	+/-0.1	+/-0.1	+/-0.1	+/-0.1	+/-0.1	+/-0.3	+/-0.1



单击下面可查看定价，库存，交付和生命周期等信息

[>>GP\(格瑞宝\)](#)