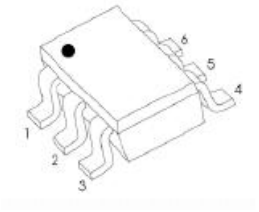
GESDW5V0DW1

Uni-direction Transient Voltage Suppressors

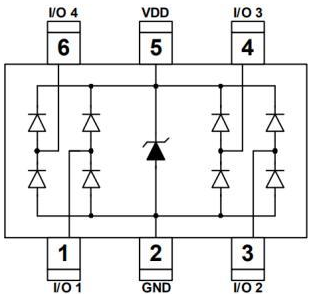
Product Summary

The TVS arrays are designed to protect sensitive electronics from damage or latch-up due to ESD and other voltage-induced transient events. They are designed for use in applications where board space is at a premium. Each device will protect up to five lines. They are unidirectional devices and may be used on lines where the signal polarities are above ground.

SOT-363



Schematic diagram



Feature

- Low Reverse Stand−Off Voltage: 5.0V
- Line Capacitance:0.5pF(typical)@1MHz
- Very Low Reverse Current:I_R< 0.2uA(Typical)t
- Halogen Free,Lead Free And RoHs
- IEC61000-4-4(EFT):40A(5/50ns)

Application

- Cellular Phones
- Portable Devices
- Digital Cameras
- Player
- Smart Home
- Robot

Marking: 5T

Absolute Maximum Ratings (T_A=25℃ unless otherwise noted)

Parameter		Symbol	Value	Unit
IEC 61000-4-2 ESD Voltage	Air Model	V_{ESD} 1)	±20	kV
IEC 61000-4-2 ESD Voltage	Contact Model		±15	
Peak Pulse Power		P_{PP} 2)	52	W
Peak Pulse Current		I_{PP} 2)	4	A
Lead Solder Temperature − Maximum (10 Second Duration)		T_L	260	℃
Junction Temperature		T_J	-40 ~ +125	℃
Storage Temperature		T_{STG}	-55 ~ +155	℃

1) Device stressed with ten non-repetitive ESD pulses.

2) Non-repetitive current pulse 8/20μs exponential decay waveform according to IEC61000-4-5.

ESD standards compliance

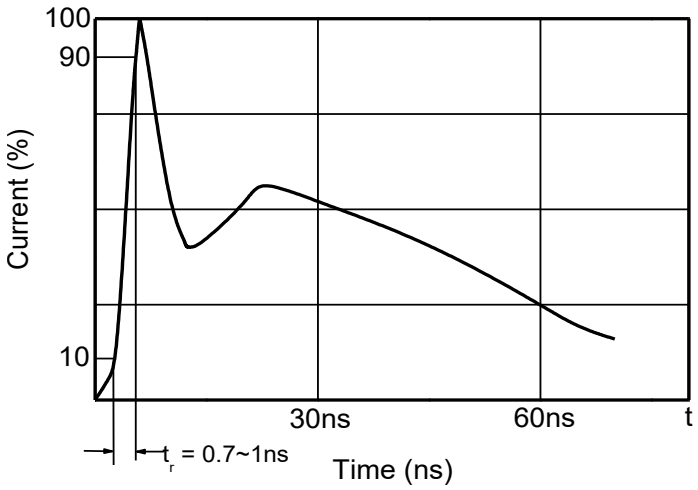
IEC61000-4-2 Standard

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

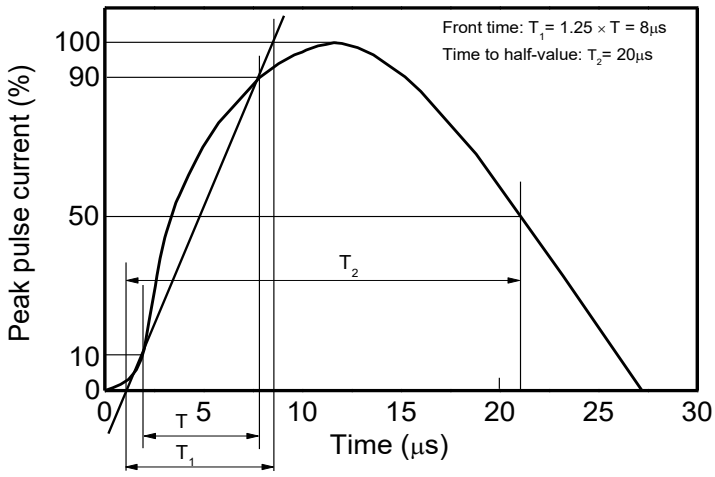
JESD22-A114-B Standard

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

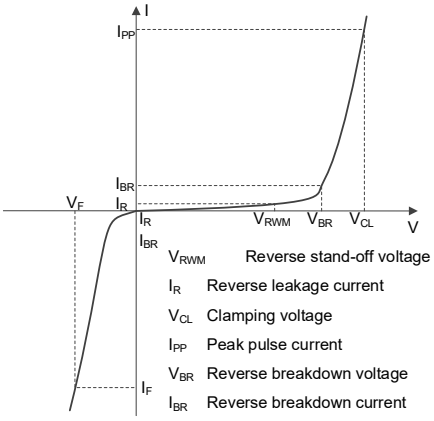


8/20μs waveform per IEC61000-4-5



Electrical Parameter

Symbol	Parameter
V_C	Clamping Voltage @ I_{PP}
I_{PP}	Peak Pulse Current
V_{BR}	Breakdown Voltage @ I_T
I_T	Test Current
I_R	Reverse Leakage Current @ V_{RWM}
V_{RWM}	Reverse Standoff Voltage



V-I characteristics for a Uni-directional TVS

Electrical Characteristics (T_A=25℃ unless otherwise specified)

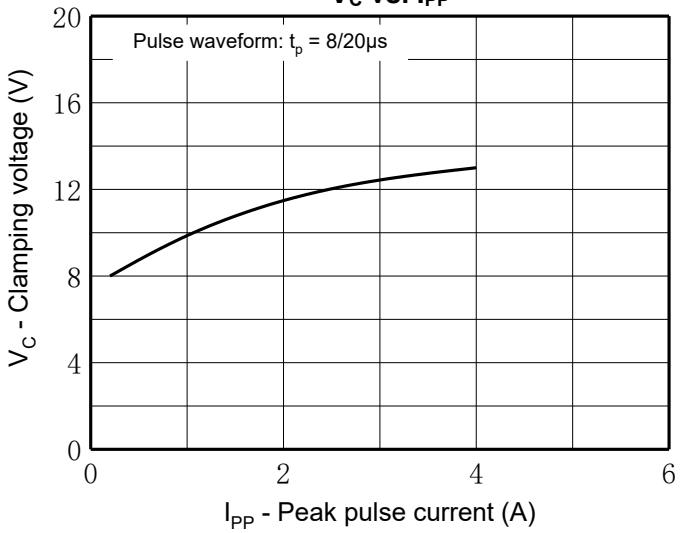
Parameter	Symbol	Test conditions	Min	Typ	Max	Unit
Reverse Standoff Voltage	V_{RWM}[1)]				5	V
Reverse Leakage Current	I_R	V_{RWM}=5V			0.2	uA
Breakdown Voltage	V_{BR}	I_T=1mA	5.5	7	9	V
Clamping Voltage	V_C[2)]	I_{PP}=4A, I/O to GND			13	V
		I_{PP}=16A, Vcc to GND			17	V
Channel Input Capacitance	C_J	V_R=0V,f=1MHz, I/O to GND		0.6	0.7	pF
		V_R=0V,f=1MHz, I/O to I/O		0.3	0.4	pF

1) Other voltages available upon request.

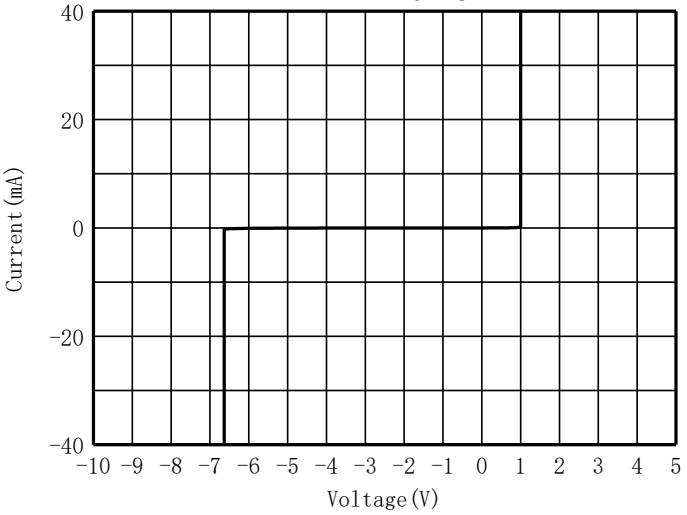
2) Non-repetitive current pulse 8/20μs exponential decay waveform according to IEC61000-4-5

Typical Characteristics

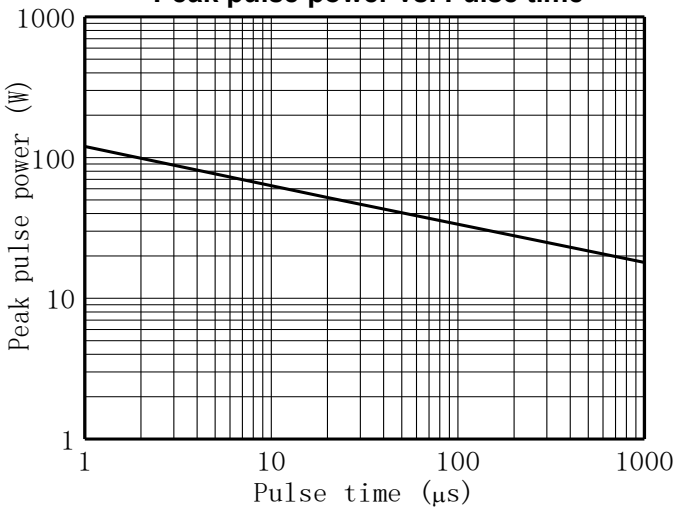
V_C vs. I_{PP}



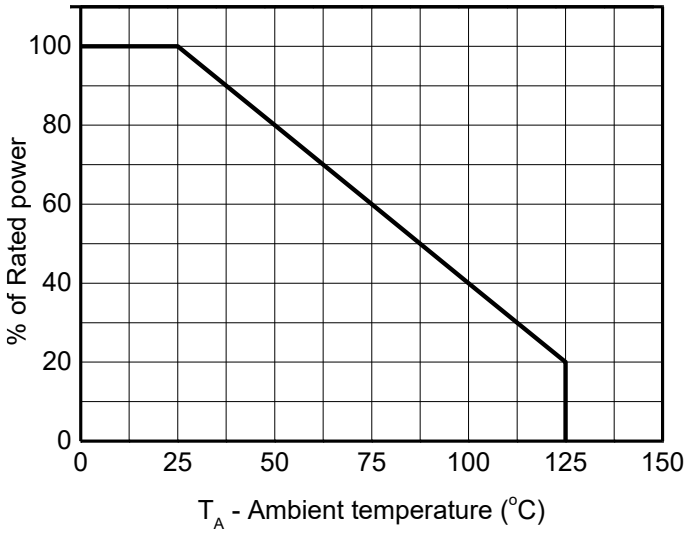
I-V Curve



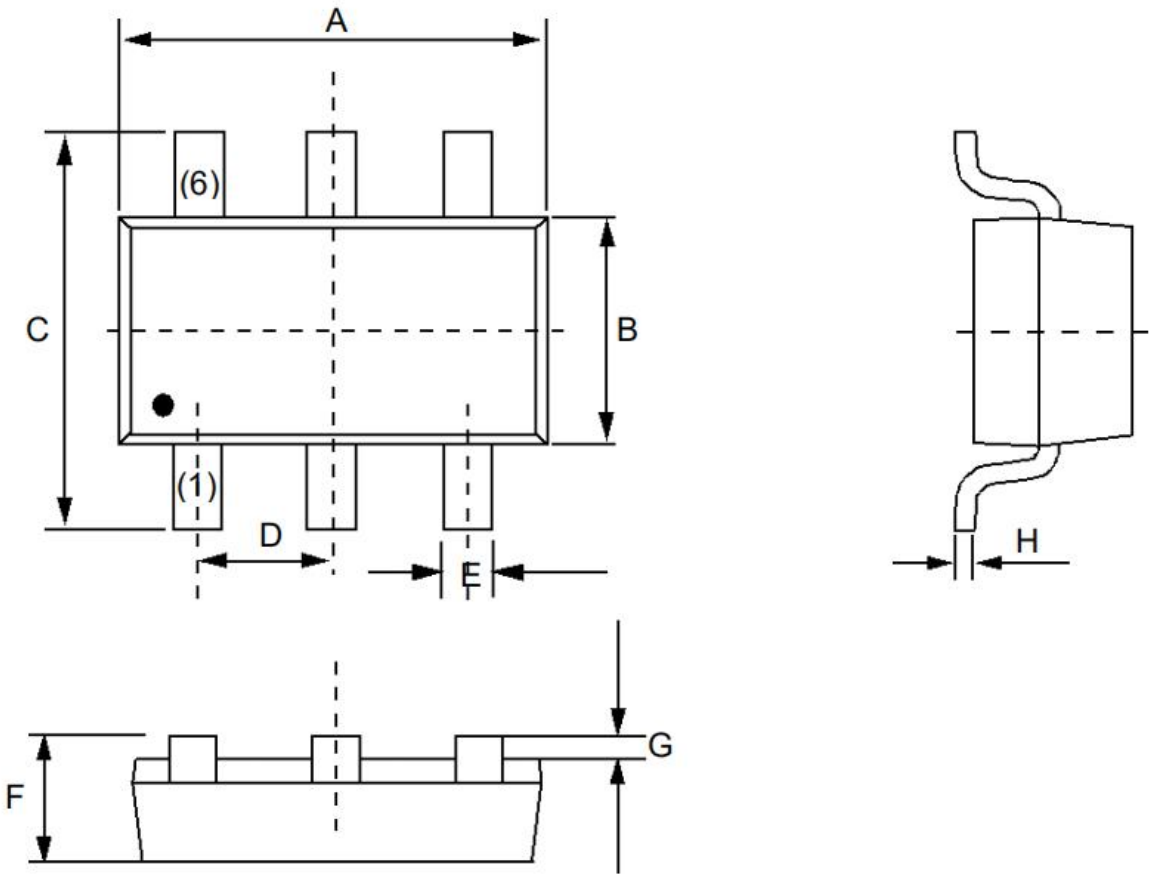
Peak pulse power vs. Pulse time



Power derating vs. Ambient temperature



SOT-363 Package Outline Dimensions



Symbol	Dimensions In Millimet	
	Min	Max
A	2.0	2.2
B	1.10	1.40
C	2.10	2.50
D	0.65BSC	
E	0.15	0.35
F	0.90	1.1
G	0.00	0.12
H	0.05	0.20

Attention：

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