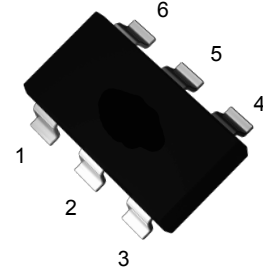


Features

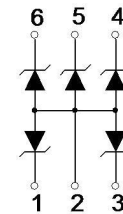
- Uni-directional ESD protection of five lines
- Low reverse stand-off voltage: 5V
- Low reverse clamping voltage
- Low leakage current
- Excellent package: 2.10mm × 1.25mm × 0.96mm
- Fast response time
- JESD22-A114-B ESD Rating of class 3B per human body model
- IEC 61000-4-2 Level 4 ESD protection



Package: SOT-363

Applications

- Computers and peripherals
- Audio and video equipment
- Cellular handsets and accessories
- Portable electronics
- Other electronics equipments / communication systems



Schematic Diagram

Absolute Maximum Ratings (T_A=25°C unless otherwise specified)

Parameter	Symbol	Value	Unit
IEC 61000-4-2 ESD Voltage	V _{ESD} ⁽¹⁾	Air Model	±25
		Contact Model	±25
		Per Human Body Model	±16
		Machine Model	±0.4
Peak Pulse Power	P _{PP} ⁽²⁾	60	W
Peak Pulse Current	I _{PP} ⁽²⁾	5	A
Lead Solder Temperature – Maximum (10 Second Duration)	T _L	260	°C
Junction Temperature	T _J	150	°C
Storage Temperature Range	T _{STG}	-55 to +150	°C

(1). Device stressed with ten non-repetitive ESD pulses, Per channel(I/O to GND).

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

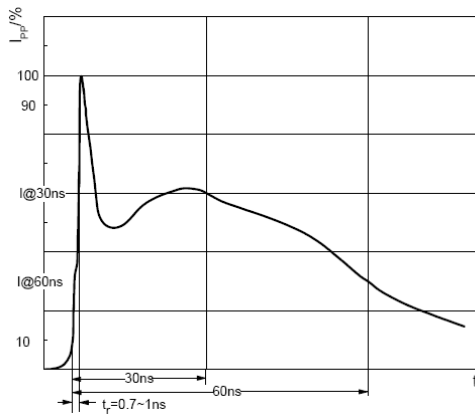
ESD Standards Compliance

IEC61000-4-2 Standard

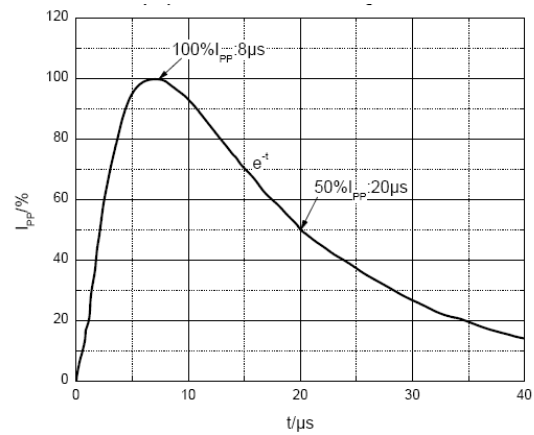
Contact Discharge		Air Discharge	
Level	Test Voltage kV	Level	Test Voltage kV
1	2	1	2
2	4	2	4
3	6	3	8
4	8	4	15

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



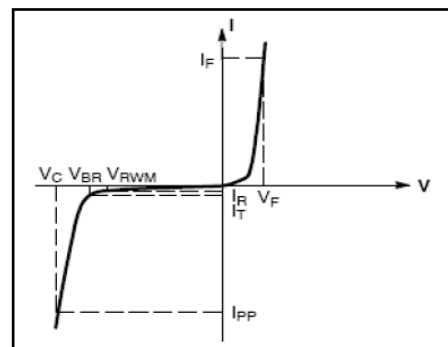
ESD pulse waveform according to IEC61000-4-2



8/20µs pulse waveform according to IEC 61000-4-5

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_F	Forward Voltage @ I_F
I_F	Forward Current



V-I characteristics for a uni-directional TVS

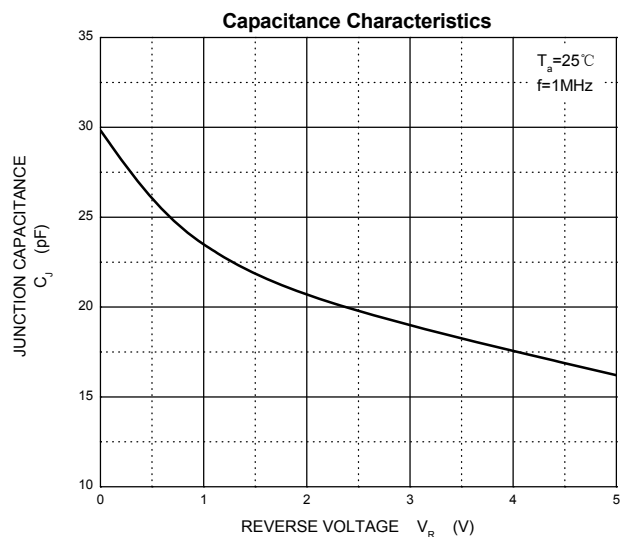
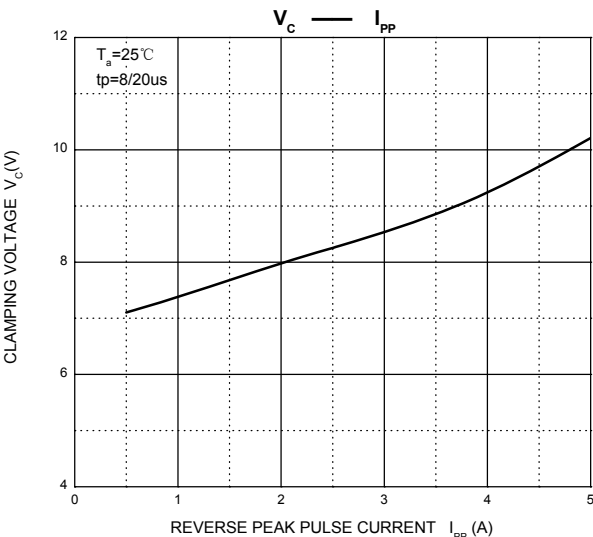
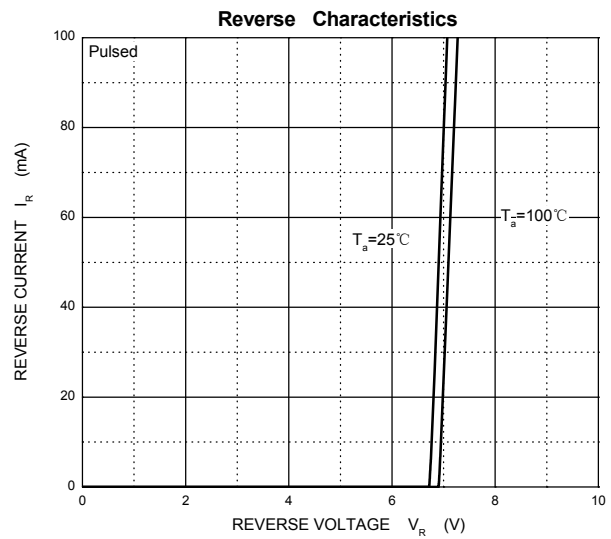
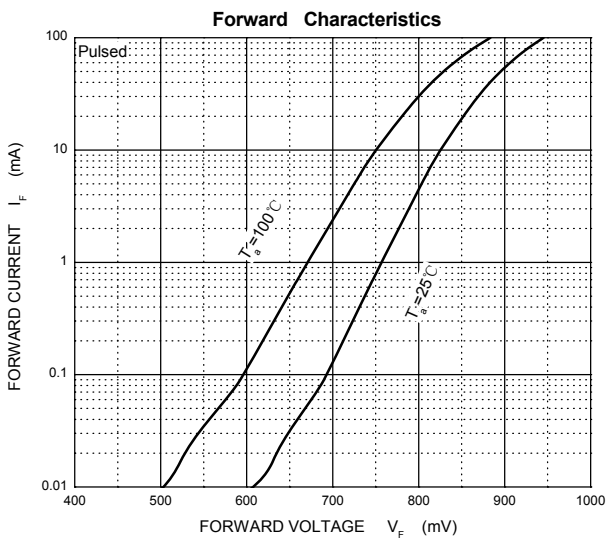
Electrical Characteristics ($T_A=25^\circ\text{C}$ unless otherwise specified)

Parameter	Symbol	Test conditions	Min	Typ	Max	Unit
Per Diode						
Reverse Stand Off Voltage	$V_{RWM}^{(1)}$				5	V
Breakdown Voltage	$V_{(BR)}$	$I_T=1\text{mA}$	6.0		7.2	V
Reverse Leakage Current	I_R	$V_{RWM}=5\text{V}$			5.0	μA
Forward Voltage	V_F	$I_F=10\text{mA}$			0.9	V
Clamping Voltage	$V_C^{(2)}$	$I_{PP}=5\text{A}$			12	V
Junction Capacitance	C_J	$V_R=0\text{V}, f=1\text{MHz}$		30		pF

(1). Other voltages available upon request.

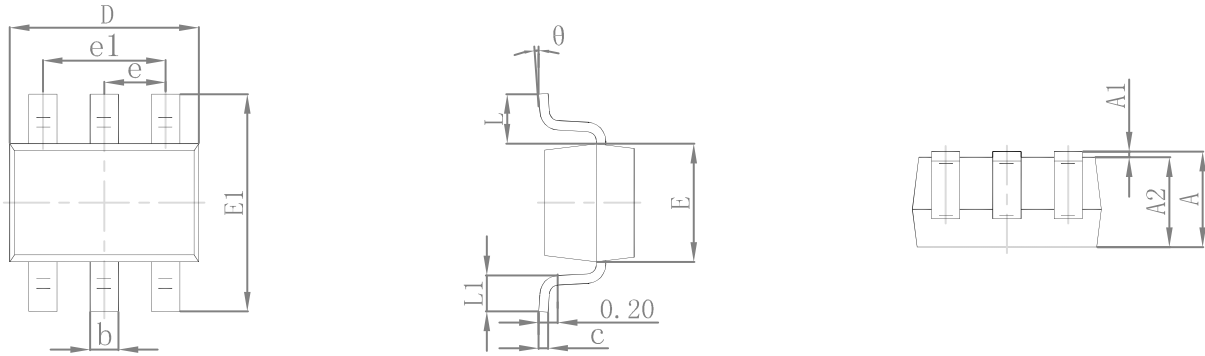
(2). Non-repetitive current pulse 8/20 μs exponential decay waveform according to IEC61000-4-5

Typical Characteristic Curves ($T_A=25^\circ\text{C}$ unless otherwise specified)



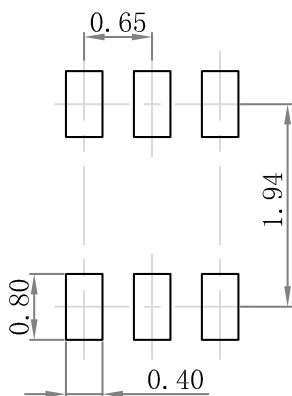
Package Outline Dimensions

SOT-363



Symbol	Dimensions In Millimeters		Dimensions In Inches	
	Min	Max	Min	Max
A	0.900	1.100	0.035	0.043
A1	0.000	0.100	0.000	0.004
A2	0.900	1.000	0.035	0.039
b	0.150	0.350	0.006	0.014
c	0.100	0.150	0.004	0.006
D	2.000	2.200	0.079	0.087
E	1.150	1.350	0.045	0.053
E1	2.150	2.400	0.085	0.094
e	0.650 TYP		0.026 TYP	
e1	1.200	1.400	0.047	0.055
L	0.525 REF		0.021 REF	
L1	0.260	0.460	0.010	0.018
theta	0°	8°	0°	8°

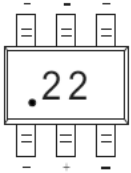
Suggested Pad Layout



- Note:
1. Controlling dimension: in millimeters.
 2. General tolerance: ± 0.05 mm.
 3. The pad layout is for reference purposes only.



Marking



22 = Device code

Solid dot=Pin1 indicator

Front side

Order Information

Device	Package	Carrier	Quantity	HSF Status
GSES5VT363-2U	SOT-363	Tape & Reel(7")	3000pcs	RoHS compliant