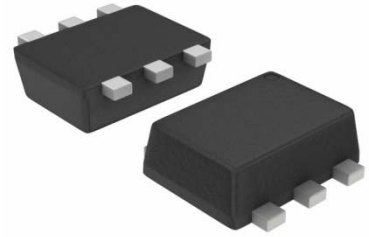


### Features

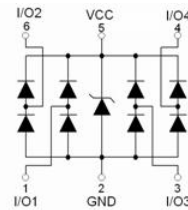
- Uni-directional ESD protection of four lines
- Low capacitance: 0.8pF(max)
- Low reverse clamping voltage
- Low leakage current
- IEC 61000-4-2 Level 4 ESD protection
- SOT-563 package
- RoHS compliant

### Applications

- Digital Visual Interface (DVI)
- LVDS
- USB 2.0
- High Definition Multi-Media Interface (HDMI)



SOT-563



Schematic Diagram

### Maximum Ratings

(T<sub>A</sub>=25°C unless otherwise specified)

Parameter	Symbol	Value	Unit
IEC 61000-4-2 ESD Voltage(I/O to GND & V <sub>CC</sub> to GND)	V <sub>ESD</sub> <sup>(1)</sup>	Air Model	±25
		Contact Model	±25
		Per Human Body Model	±16
		Machine Model	±0.4
Peak Pulse Power	P <sub>PP</sub> <sup>(2)</sup>	125	W
Peak Pulse Current	I <sub>PP</sub> <sup>(2)</sup>	5	A
Lead Solder Temperature – Maximum (10 Second Duration)	T <sub>L</sub>	260	°C
Junction Temperature	T <sub>J</sub>	150	°C
Storage Temperature Range	T <sub>STG</sub>	-55 ~ +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.

## Electrical Characteristics

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

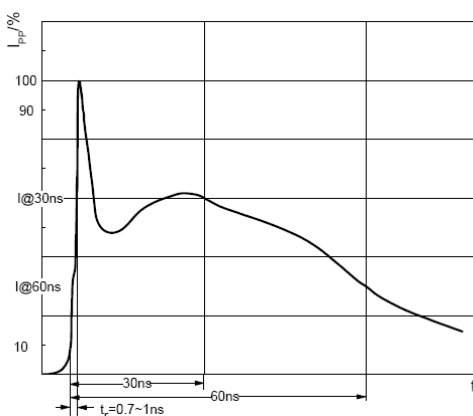
Parameter	Symbol	Test conditions	Min	Max	Unit
Per channel(I/O to GND unless otherwise specified)					
Reverse Stand-off Voltage	$V_{RWM}^{(1)}$		-	5	V
Breakdown Voltage	$V_{(BR)}$	$I_T=1\text{mA}$	6.5	8.8	V
		$I_T=1\text{mA}$ $V_{CC}$ to GND	5.8	8.1	V
Reverse Leakage Current	$I_R$	$V_{RWM}=5\text{V}$ (I/O to GND & $V_{CC}$ to GND)	-	1	$\mu\text{A}$
Forward Voltage	$V_F$	$I_F=10\text{mA}$ (I/O to GND & $V_{CC}$ to GND)	0.5	1.0	V
Clamping Voltage	$V_C^{(2)}$	$I_{PP}=1\text{A}$ (I/O to GND & $V_{CC}$ to GND)	-	15	V
		$I_{PP}=5\text{A}$ (I/O to GND & $V_{CC}$ to GND)	-	25	V
Junction Capacitance	$C_J$	$V_R=0\text{V}, f=1\text{MHz}$	-	0.8	pF
		$V_R=0\text{V}, f=1\text{MHz}, I/O$ to I/O	-	0.4	pF

(1).Other voltages available upon request.

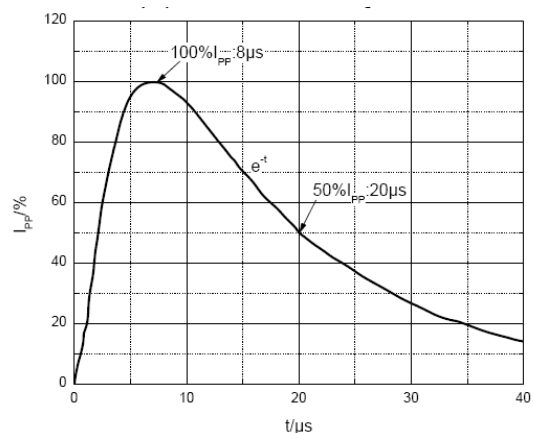
(2).Non-repetitive current pulse 8/20 $\mu\text{s}$  exponential decay waveform according to IEC61000-4-5

## Typical Characteristic Curves

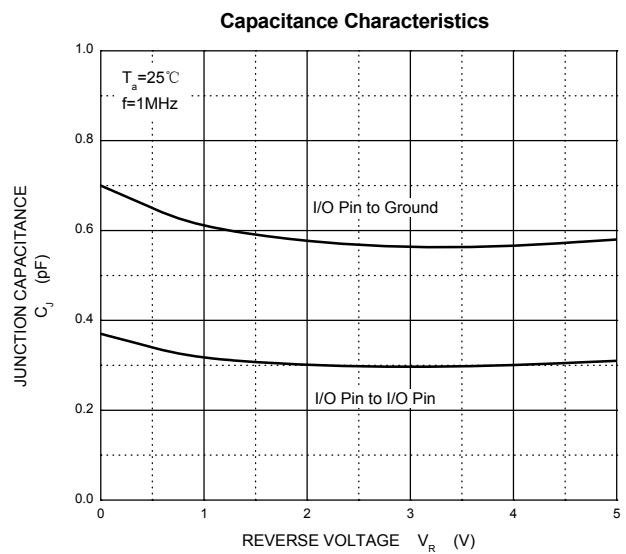
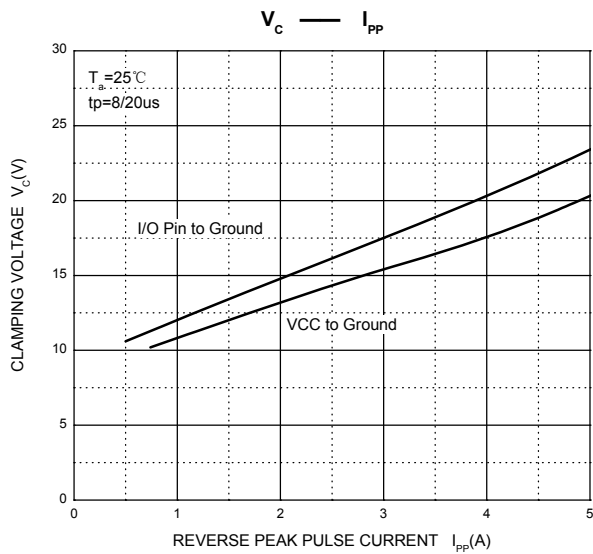
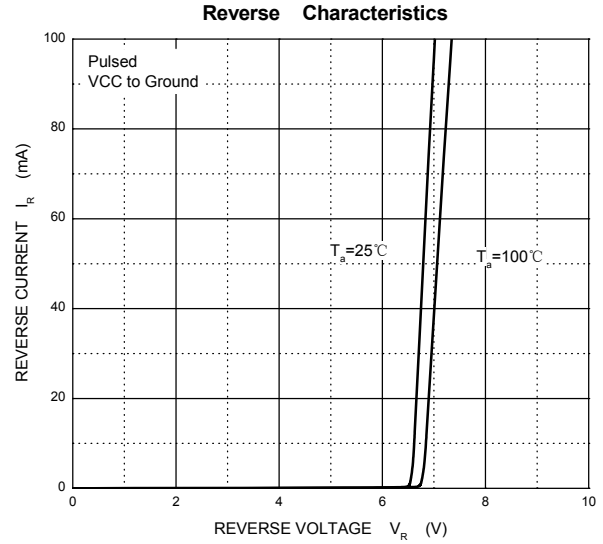
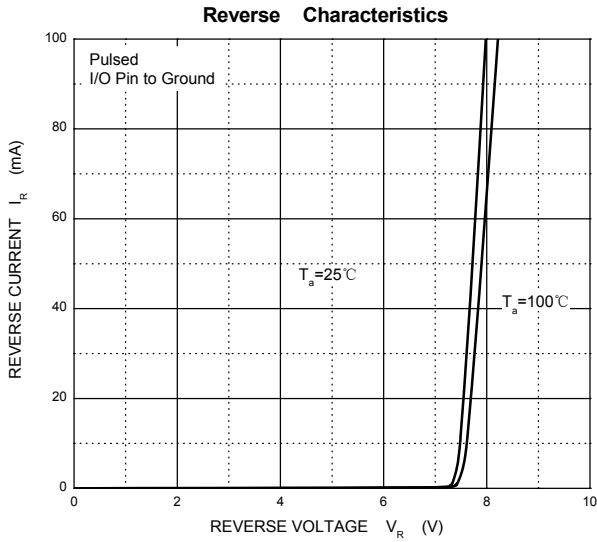
ESD pulse waveform according to IEC61000-4-2



8/20 $\mu\text{s}$  pulse waveform according to IEC 61000-4-5

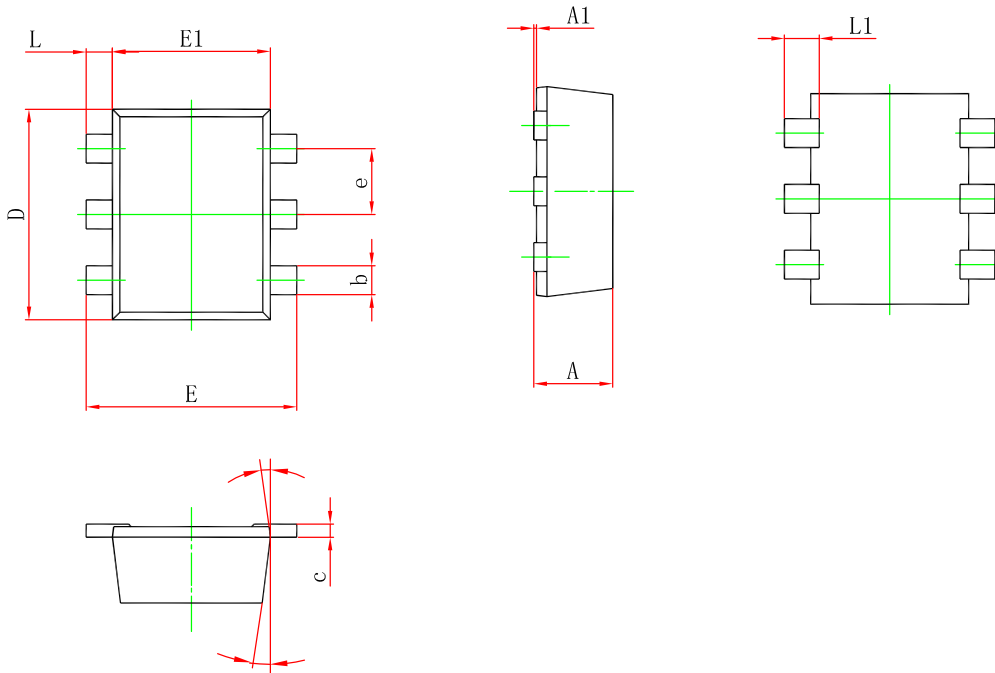


### Typical Characteristic Curves



**Product Dimensions**

**SOT-563**



Symbol	Dimensions In Millimeters		Dimensions in inches	
	Min.	Max.	Min.	Max.
A	0.525	0.600	0.021	0.024
A1	0.000	0.050	0.000	0.002
e	0.450	0.550	0.018	0.022
c	0.090	0.160	0.004	0.006
D	1.500	1.700	0.059	0.067
b	0.170	0.270	0.007	0.011
E1	1.100	1.300	0.043	0.051
E	1.500	1.700	0.059	0.067
L	0.100	0.300	0.004	0.012
L1	0.200	0.400	0.008	0.016
θ	7 °REF.		7 °REF.	

**Order Information**

Device	Package	Marking	Carrier	Quantity	HSF Status
SPESPLC5VT563-6U	SOT-563	U5N4	Tape & Reel	3000pcs/Reel	RoHS compliant