

Features

- Ultra low capacitance: 0.3pF typical (I/O to I/O)
- Ultra low leakage: nA level
- Low operating voltage: 5V
- Low clamping voltage
- Up to 4 data lines and one power line protects
- Complies with following standards:
 - IEC 61000-4-2 (ESD) immunity test
 - Air discharge: $\pm 30\text{kV}$
 - Contact discharge: $\pm 25\text{kV}$
 - IEC61000-4-4 (EFT) 40A (5/50ns)
 - IEC61000-4-5 (Lightning) 5A (8/20 μs)
- RoHS Compliant

Ordering Information

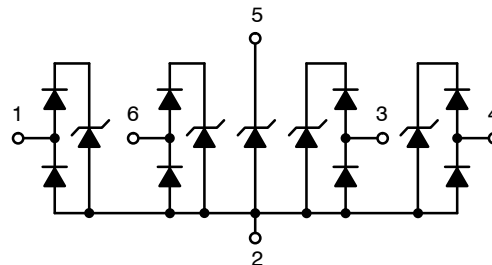
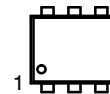
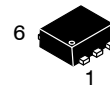
Part Number	Qty per Reel	Reel Size
TPESD4114-563	4000	7"

Mechanical Characteristics

- Package: SOT-563
- Lead Finish: Matte Tin
- Case Material: "Green" Molding Compound.
- UL Flammability Classification Rating 94V-0
- Moisture Sensitivity: Level 3 per J-STD-020
- Terminal Connections: See Diagram Below

Applications

- Cellular Handsets & Accessories
- Digital Visual Interface (DVI)
- Display Port
- MDDI Ports
- USB Ports
- PCI Express
- Serial ATA



PROTECTION PRODUCTS

Absolute Maximum Rating

Parameter	Symbol	Value	Unit
Peak Pulse Power (8/20 μ s)	Ppk	120	W
Peak Pulse Current (8/20 μ s)	I _{PP}	5	A
ESD per IEC 61000-4-2 (Air)	VESD	± 30	kV
ESD per IEC 61000-4-2 (Contact)		± 25	
Operating Temperature Range	T _J	-55 to +125	°C
Storage Temperature Range	T _{stg}	-55 to +150	°C

ELECTRICAL CHARACTERISTICS PER LINE @ 25°C Unless Otherwise Specified

Parameter	Symbol	Min	Typ	Max	Unit	Test Condition
Reverse Working Voltage	V _{RWM}			5	V	Any I/O pin to ground
Breakdown Voltage	V _{BR}	6			V	I _T = 1mA, any I/O pin to ground
Reverse Leakage Current	I _R			0.5	μ A	V _{RWM} = 5V, any I/O pin to ground
Clamping Voltage	V _C			15	V	I _{PP} = 1A (8 x 20 μ s pulse), any I/O pin to ground
Clamping Voltage	V _C			20	V	I _{PP} = 5A (8 x 20 μ s pulse), any I/O pin to ground
Junction Capacitance	C _J		0.3	0.45	pF	V _R = 0V, f = 1MHz, between I/O pins
Junction Capacitance	C _J			0.7	pF	V _R = 0V, f = 1MHz, any I/O pin to ground

Characteristic Curves

Fig1. 8/20 μ s Pulse Waveform

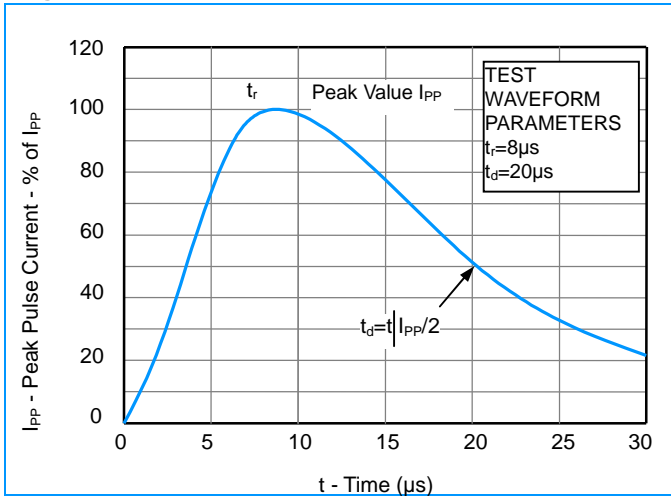


Fig2. ESD Pulse Waveform (according to IEC 61000-4-2)

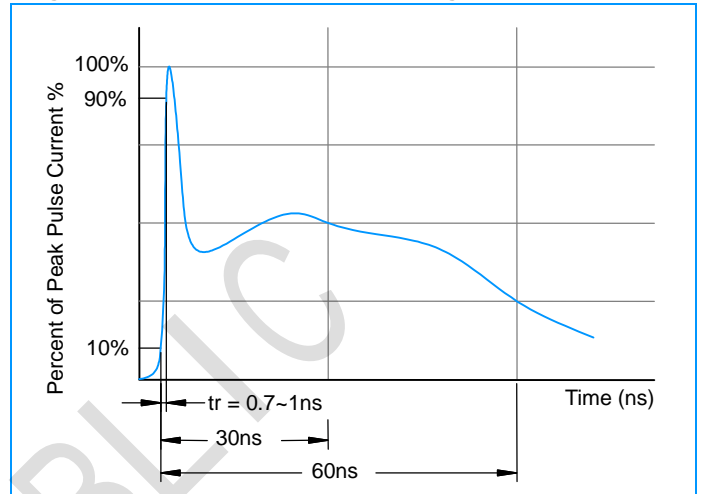


Fig3. Non - Repetitive Peak Pulse Power vs. Pulse Time

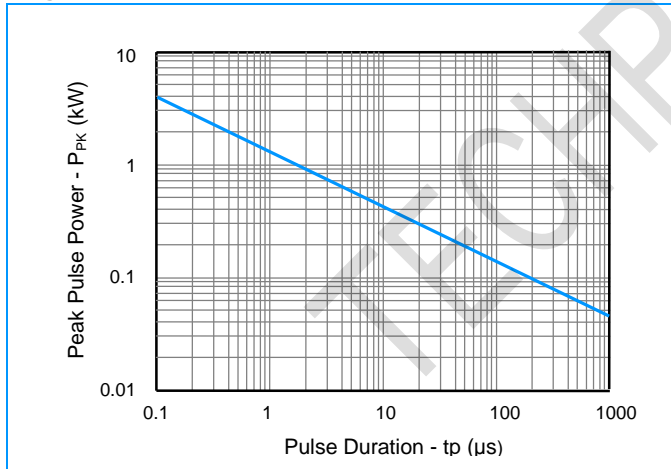
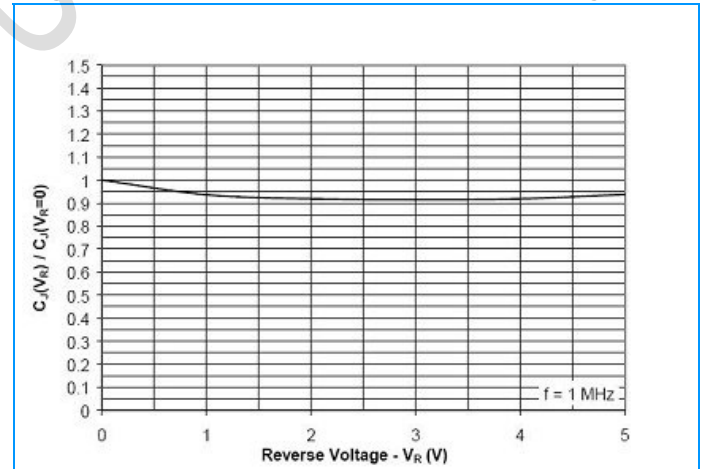
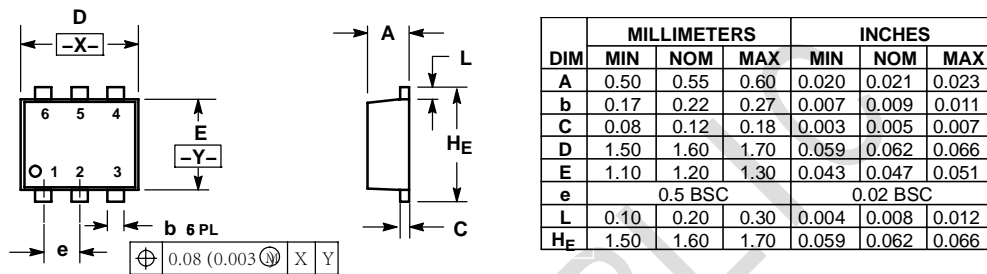


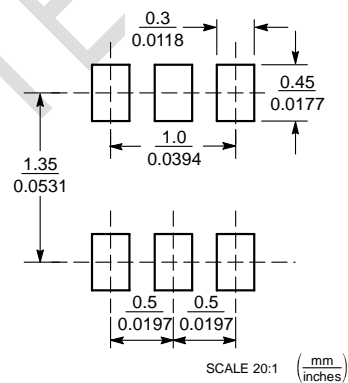
Fig4. Normalized Capacitance vs. Reverse Voltage



Outline Drawing - SOT563



Land Pattern - SOT563



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