

为您的产品保驾护航

PRODUCT DATASHEET

Electro-Static Discharge

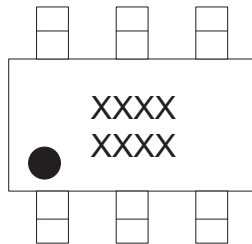
JET563-6V-UL4 ESD

Features

- Package: SOT-563
- Ultra low capacitance: 0.3pF typical (I/O to I/O)
- Ultra low leakage: nA level
- 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: $\pm 25\text{kV}$
Contact discharge: $\pm 20\text{kV}$
 - IEC61000-4-5 (Lightning) 5A (8/20 μs)

- RoHS compliant

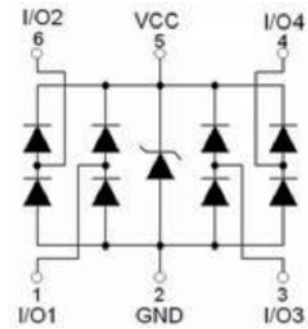
Pin Description



Applications

- USB 2.0 and USB 3.0 Ports
- USB OTG
- Digital Visual Interface (DVI)
- Monitor and Flat Panel Displays
- PCI Express and Serial SATA Ports
- Gigabit Ethernet
- IEEE 1394 Firewire Ports
- Consumer products (STB, DVD, DSC, DVC)

Schematic Diagram

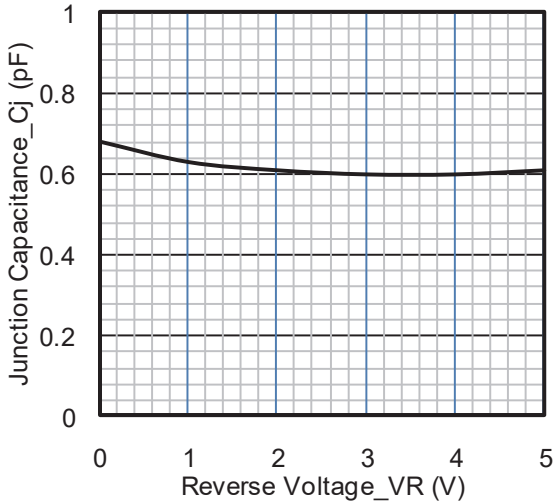
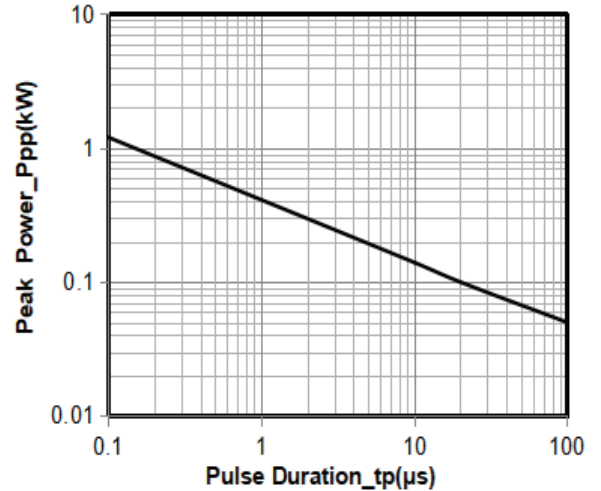
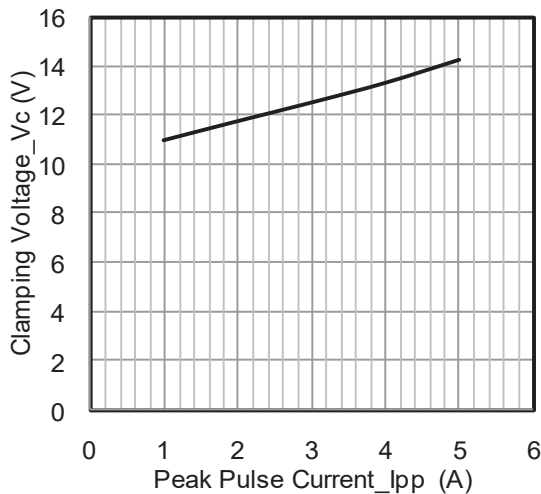
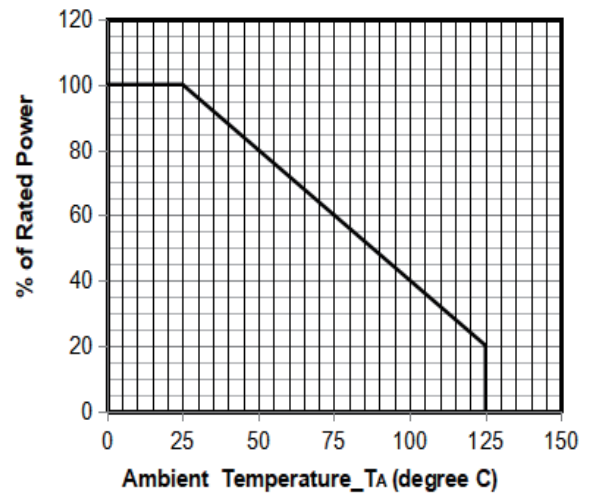
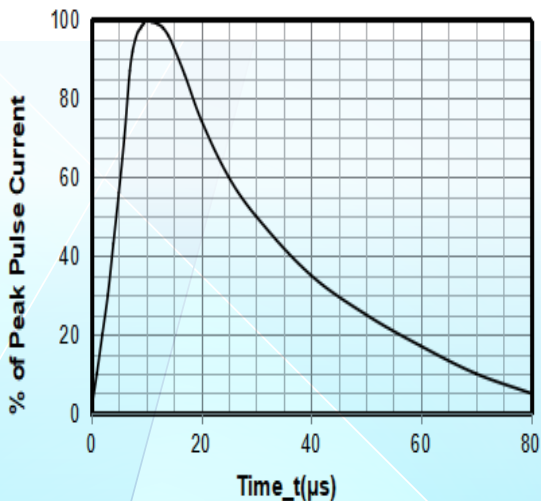
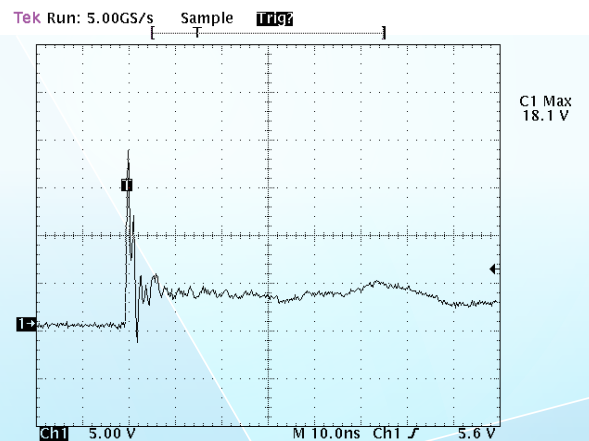


Limiting Values($T_A = 25\text{ }^\circ\text{C}$, unless otherwise specified)

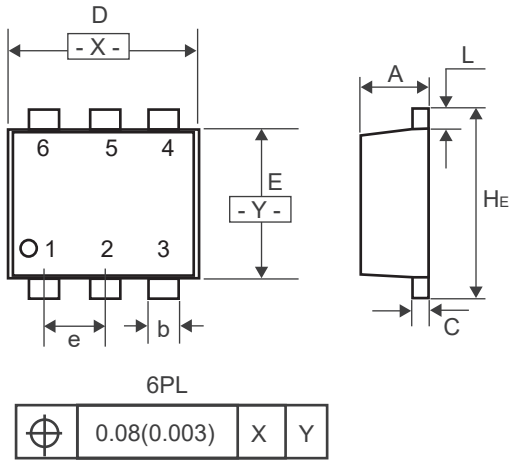
Symbol	Parameter	Conditions	Value	Unit
V _{ESD}	Electrostatic Discharge Voltage	IEC 61000-4-2;Contact Discharge	± 20	kV
		IEC 61000-4-2;Air Discharge	± 25	kV
P _{PP}	Peak Pulse Power	$t_P=8/20\mu\text{s}$	100	W
I _{PP}	Peak Pulse Current	$t_P=8/20\mu\text{s}$	5	A
T _J	Operating Temperature Range	-	-55 to +125	$^\circ\text{C}$
T _{stg}	Storage Temperature Range	-	-55 to +150	$^\circ\text{C}$

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

Symbol	Parameter	Conditions	Min	Typ.	Max	Unit
V _{RWM}	Reverse Working Voltage	Any I/O pin to ground	-	-	5	V
V _{BR}	Breakdown Voltage	I _T =1mA,any I/O pin to ground	6.0	-	-	V
I _R	Reverse Leakage Current	V _{RWM} =5V;any I/O pin to ground	-	-	0.5	μA
V _C	Clamping Voltage	I _{PP} =1A(8x20 μs pulse);any I/O pin to ground	-	-	15	V
V _C	Clamping Voltage	I _{PP} =5A(8x20 μs pulse);any I/O pin to ground	-	-	20	V
C _J	Junction Capacitance	V _R =0V,f=1 MHz,between I/O pins	-	0.3	0.4	pF
C _J	Junction Capacitance	V _R =0V,f=1 MHz,bany I/O pin to ground	-	-	0.8	pF

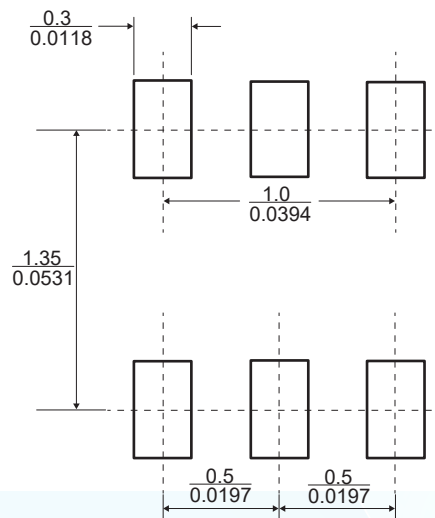
Typical Characteristics

Junction Capacitance vs. Reverse Voltage

Peak Pulse Power vs. Pulse Time

Clamping Voltage vs. Peak Pulse Current ($t_p = 8/20 \mu$ s)

Power Derating Curve

8x20 μ s Pulse Waveform


Note: Data is taken with a 10x attenuator
ESD Clamping Voltage
8 kV Contact per IEC61000-4-2

Physical Dimensions(mm.)


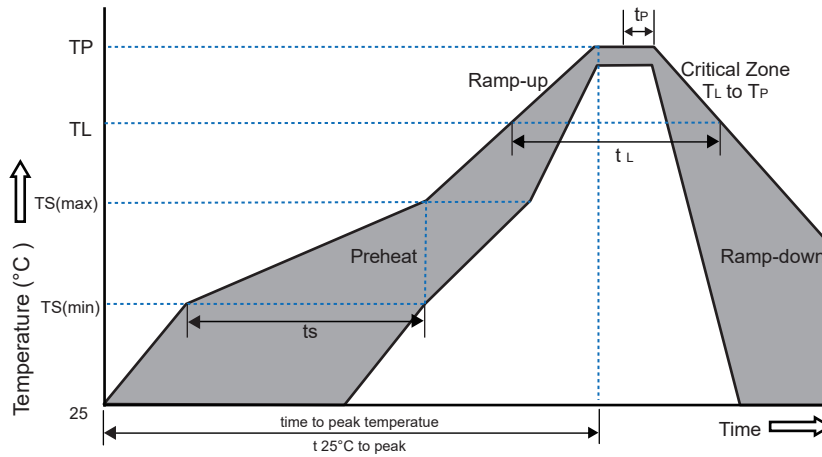
Symbol	Dimensions In Millimeters			Dimensions In Inches		
	Min	Nom	Max	Min	Nom	Max
A	0.50	0.55	0.60	0.020	0.021	0.023
b	0.17	0.22	0.27	0.007	0.009	0.011
C	0.08	0.12	0.18	0.003	0.005	0.007
D	1.50	1.60	1.70	0.059	0.062	0.066
E	1.10	1.20	1.30	0.043	0.047	0.051
e	0.5 BSC			0.02 BSC		
L	0.10	0.20	0.30	0.004	0.008	0.012
He	1.50	1.60	1.70	0.059	0.062	0.066

Suggested Land Pattern

 SCALE 20:1 ($\frac{\text{mm}}{\text{inches}}$)

Packaging Quantity

Part Number	Delivery Form	Delivery Quantity
JET563-6V-UL4	7"T&R	3,000

Soldering Parameters



Reflow Condition		Pb-Free Assembly
Pre-heat	-Temperature Min($T_{s(min)}$)	+150°C
	-Temperature Max($T_{s(max)}$)	+200°C
	-Time(Min to Max)(t_s)	60~180 secs.
Average ramp up rate (Liquid us Temp(T_L) to peak)		3°C/sec. Max
Ts(max) to T_L - Ramp-up Rate		3°C/sec. Max
Reflow	-Temperature(T_L)(Liquid us)	+217°C
	-Temperature (t_L)	60~150 secs.
Peak Temp (T_P)		+260(+0/-5)°C
Time within 5°C of actual Peak Temp (t_p)		30 secs. Max
Ramp-down Rate		6°C/sec. Max
xTime 25°C to Peak Temp (TP)		8 min. Max
Do not exceed		+260°C

Part Number System

JE T563 - 6V - UL 4

