

Features

- 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: $\pm 30\text{kV}$
 - Contact discharge: $\pm 25\text{kV}$
 - IEC61000-4-5 (Lightning) 5A (8/20 μs)
- RoHS Compliant

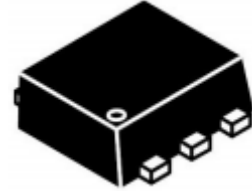
Applications

- 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)

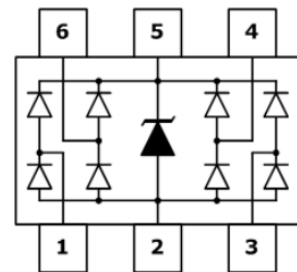
Mechanical Characteristics

- Package: SOT-563
- Lead Finish: Lead Free
- UL Flammability Classification Rating 94V-0
- Quantity Per Reel: 3,000pcs
- Reel Size: 7inch

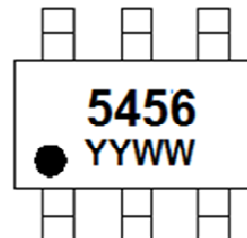
Dimensions SOT-563



Pin Configuration



Marking Information



5456 = Device Marking Code
 YYWW = Date Code
 Dot denotes Pin1

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

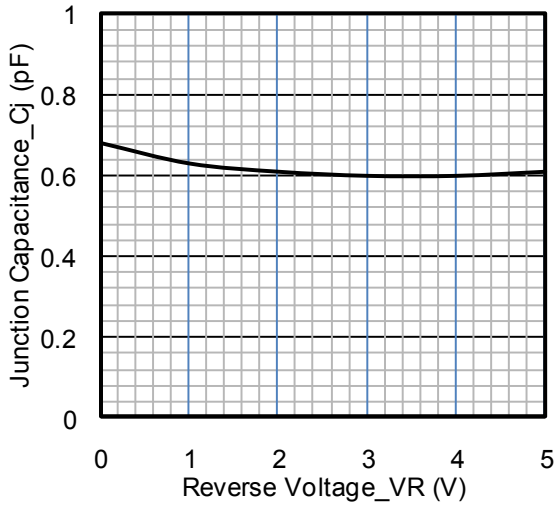
Parameter	Symbol	Value	Unit
Peak Pulse Power (8/20 μs)	Ppp	100	W
ESD per IEC 61000-4-2 (Air)	V _{ESD}	± 35	Kv
ESD per IEC 61000-4-2 (Contact)		± 20	
Operating Temperature Range	T _J	-55 to +125	°C
Storage Temperature Range	T _{STJ}	-55 to +150	°C

Electrical Characteristics (TA=25°C unless otherwise specified)

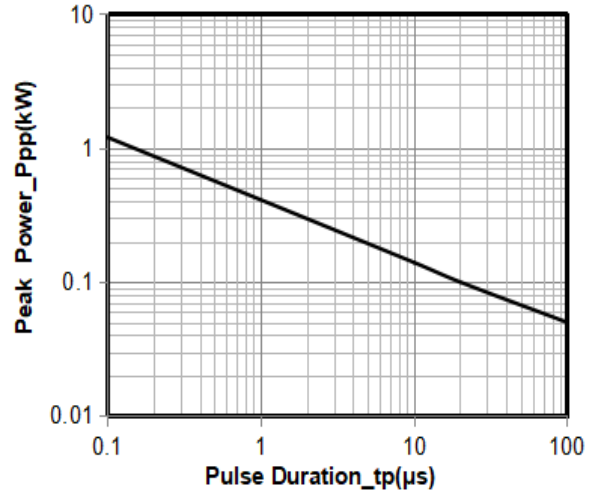
Parameter	Test Condition	Symbol	Min	Typ	Max	Unit
Reverse Working Voltage	Any I/O pin to ground	V _F			5	V
Breakdown Voltage	I _T = 1mA, any I/O pin to ground	V _{BR}	6			V
Reverse Leakage Current	V _{RWM} = 5V, any I/O pin to ground	I _R			0.5	μA
Clamping Voltage	I _{PP} = 1A (8 x 20μs pulse), any I/O pin to ground	V _C			15	V
Clamping Voltage	I _{PP} = 5A (8 x 20μs pulse), any I/O pin to ground	V _C			20	V
Junction Capacitance	V _R = 0V, f = 1MHz, between I/O pins	C _J		0.3	0.4	pF
Junction Capacitance	V _R = 0V, f = 1MHz, any I/O pin to ground	C _J			0.8	pF

Note 1: I/O pins are Pin 1, 3, 4 and 6

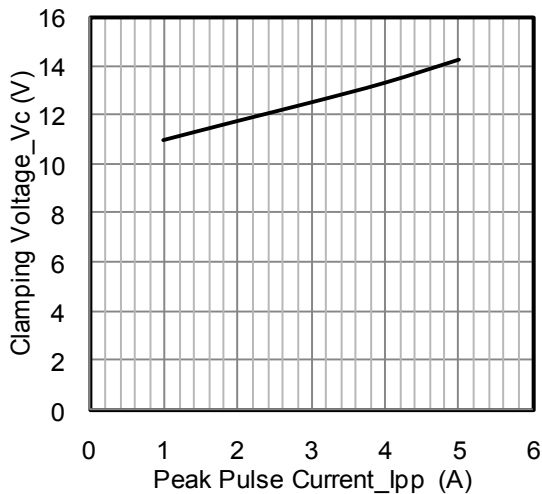
Typical Performance Characteristics (T_A=25°C unless otherwise Specified)



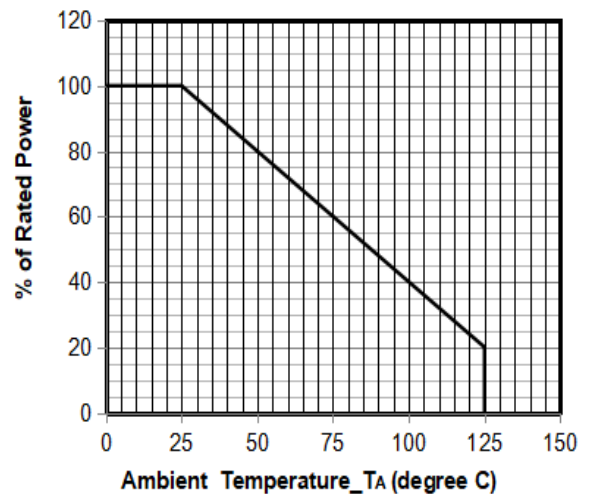
Junction Capacitance vs. Reverse Voltage



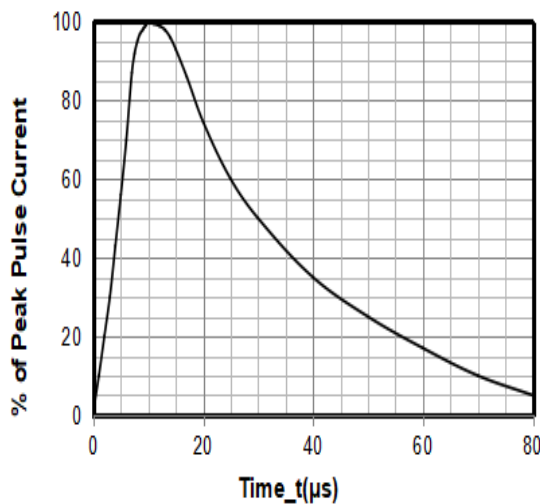
Peak Pulse Power vs. Pulse Time



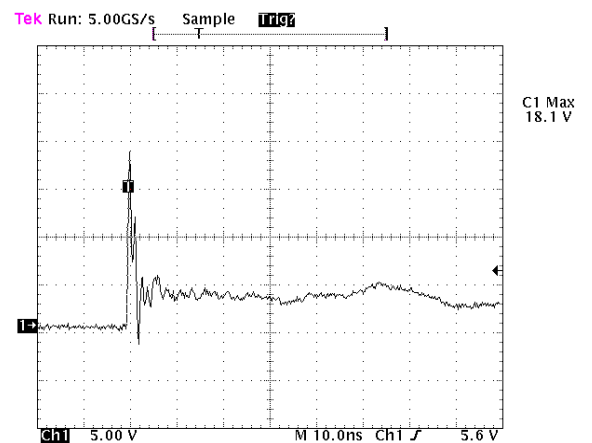
Clamping Voltage vs. Peak Pulse Current



Power Derating Curve



8 X 20μs Pulse Waveform

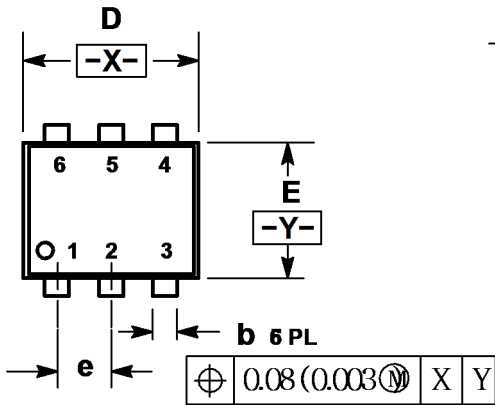


Note: Data is taken with a 10x attenuator

ESD Clamping Voltage

8 kV Contact per IEC61000-4-2

SOT-563 Package Outline & Dimensions



DIM	MILLIMETERS			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

