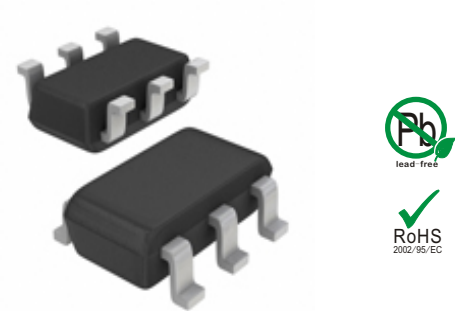


Features

- Ultra low capacitance: 1.5pF typical (I/O to I/O)
- Ultra low leakage: nA level
- Working voltage: 5V
- Low clamping voltage
- Up to 4 data lines and one power line protects
- RoHS compliant



SOT23!*

IEC Compatibility (EN61000-4)

- IEC 61000-4-2 $\pm 30\text{kV}$ contact $\pm 30\text{kV}$ air
- IEC61000-4-4 (EFT) 40A (5/50ns)
- IEC 61000-4-5 (Lightning) 12A (8/20 μs)

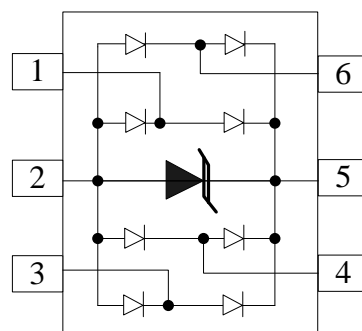
Applications

- USB 2.0 Power and Data Line
- Monitors and Flat Panel Displays
- Set-Top Box and Digital TV
- Video Graphics Cards
- Digital Video Interface (DVI)
- Notebook Computers
- SIM Ports
- 10/100 Ethernet
- IEEE 1394 Firewire Ports

Mechanical Characteristics

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

Schematic & PIN Configuration



SOT23-6 (Top View)

Absolute Maximum Ratings

Parameter	Symbol	Value	Unit
Peak Pulse Power ($t_p = 8/20\mu s$ waveform)	P_{PP}	300	W
Peak Pulse Current (8/20 μs)	I_{PP}	12	A
ESD per IEC 61000-4-2 (Air) ESD per IEC 61000-4-2 (Contact)	V_{ESD}	± 30 ± 30	kV
Operating Temperature Range	T_J	-55 to +125	$^{\circ}C$
Storage Temperature Range	T_{STG}	-55 to +150	$^{\circ}C$

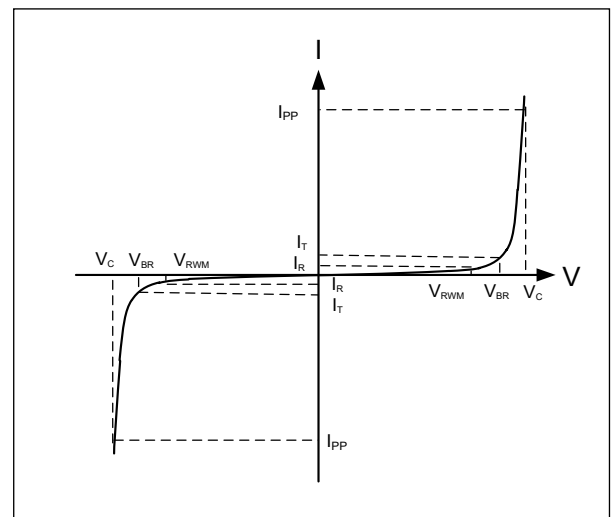
Electrical Characteristics

Parameter	Symbol	Test Condition	Min	Typ	Max	Unit
Reverse Working Voltage	V_{RWM}				5	V
Breakdown Voltage	V_{BR}	$I_T = 1mA$	6			V
Reverse Leakage Current	I_R	$V_{RWM} = 5V$			5	μA
Forward Voltage	V_F	$I_T = 10mA$			1.2	V
Clamping Voltage	V_C	$I_{PP} = 1A$ (8 x 20 μs pulse)			15	V
Clamping Voltage	V_C	$I_{PP} = 12A$ (8 x 20 μs pulse)			25	V
Junction Capacitance	C_J	$V_R = 0V$, $f = 1MHz$, Between I/O pins		1.5		pF
Junction Capacitance	C_J	$V_R = 0V$, $f = 1MHz$, Any I/O pin to Gnd		3	5	pF

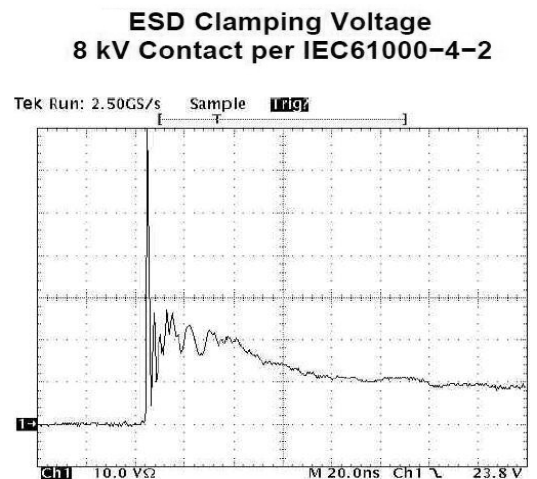
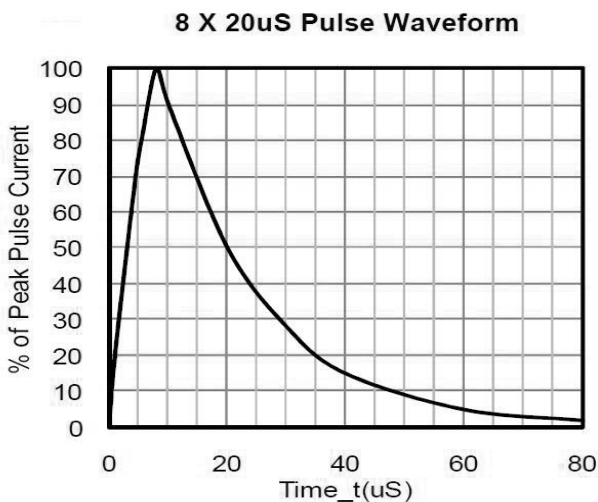
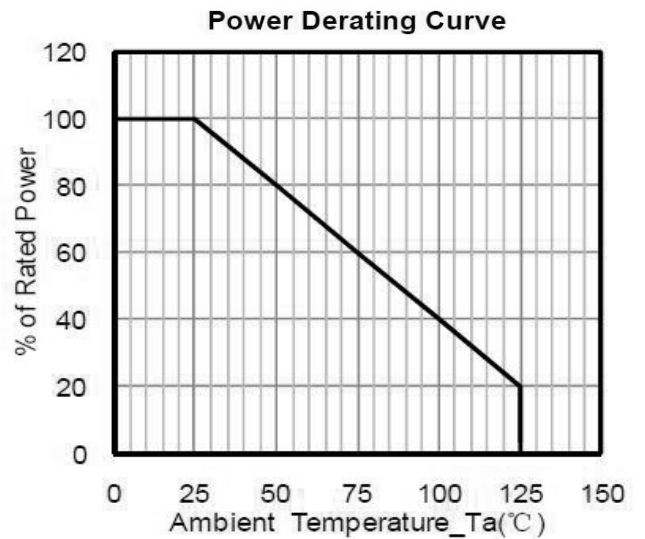
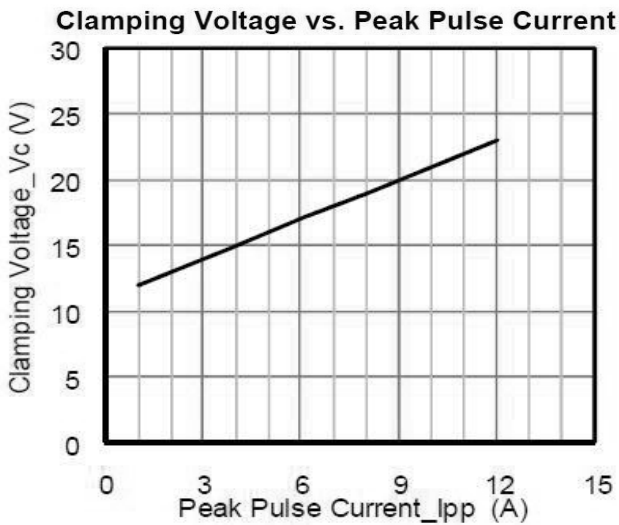
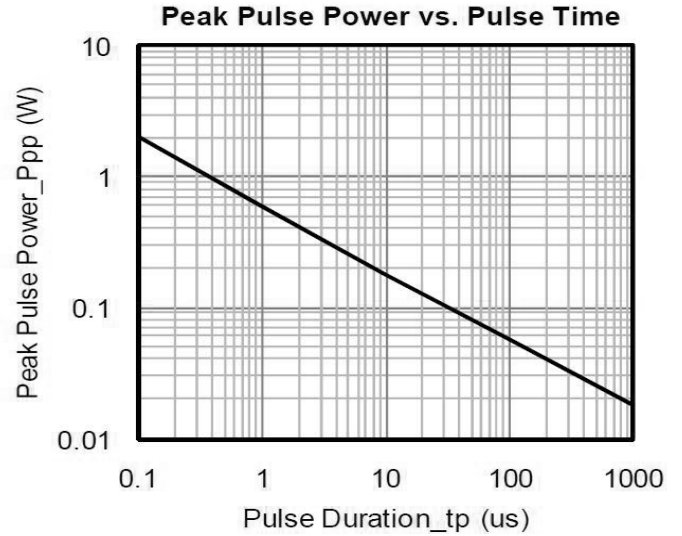
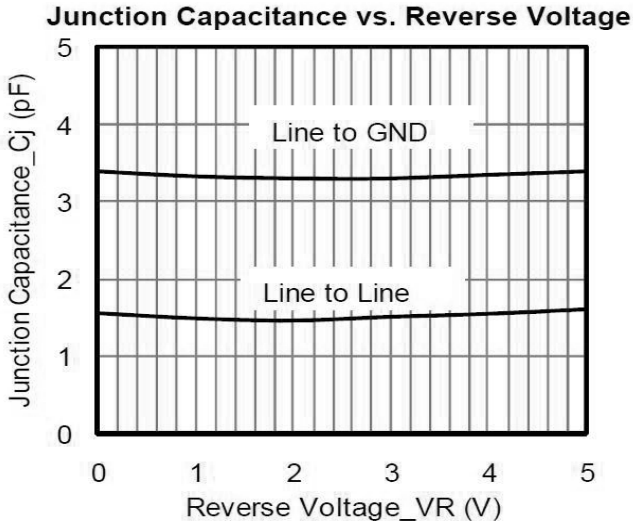
Electrical Parameters (TA = 25 $^{\circ}C$ unless otherwise noted)

Symbol	Parameter
I_{PP}	Maximum Reverse Peak Pulse Current
V_C	Clamping Voltage @ I_{PP}
V_{RWM}	Working Peak Reverse Voltage
I_R	Maximum Reverse Leakage Current @ V_{RWM}
V_{BR}	Breakdown Voltage @ I_T
I_T	Test Current

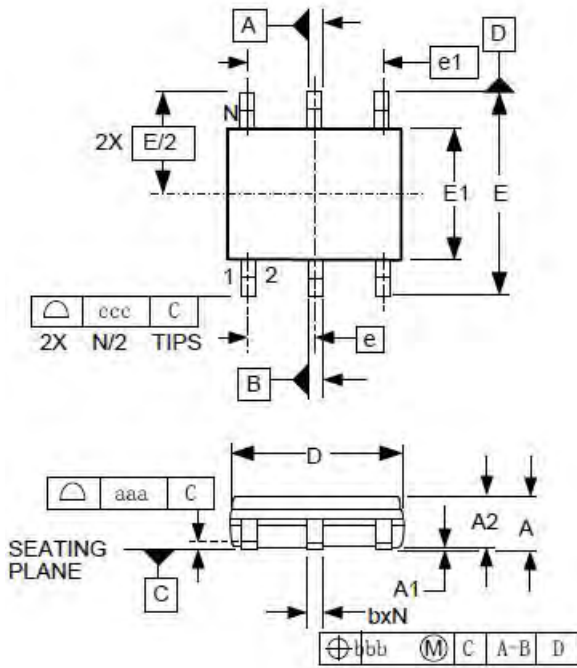
Note.: 8/20 μs pulse waveform.



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

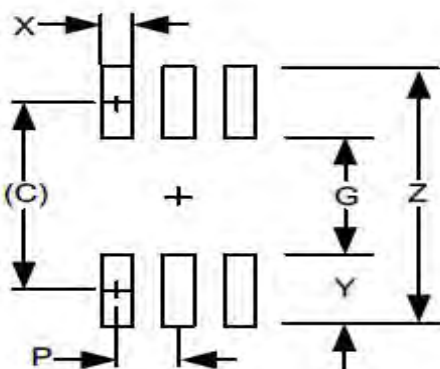


Package Mechanical Data



SYM	DIMENSIONS					
	MILLIMETERS			INCHES		
	MIN	NOM	MAX	MIN	NOM	MAX
A	0.900	-	1.450	0.035	-	0.057
A1	0.000	-	0.150	0.000	-	0.006
A2	0.900	1.250	1.300	0.035	0.049	0.051
b	0.350	-	0.500	0.010	-	0.020
c	0.080	-	0.200	0.003	-	0.007
D	2.800	2.900	3.000	0.110	0.114	0.122
E1	1.500	1.625	1.750	0.060	0.063	0.069
E	2.800 BSC			0.110 BSC		
e	0.950 BSC			0.037 BSC		
e1	1.900 BSC			0.075 BSC		
L	0.350	0.450	0.600	0.013	0.018	0.024
L1	(0.600)			(0.024)		
theta	0°	-	8°	0°	-	8°
N	6			6		
aaa	0.100			0.004		
bbb	0.200			0.008		
ccc	0.200			0.008		

Suggested Land Pattern



SYM	DIMENSIONS	
	MILLIMETERS	INCHES
C	(2.500)	(0.098)
G	1.400	0.055
P	0.950	0.037
X	0.600	0.024
Y	1.100	0.043
Z	3.600	0.141

Ordering Information

Order code	Package	Base qty	Delivery mode
PTT236L5S5CA30	SOT23-6	3K	Tape and reel