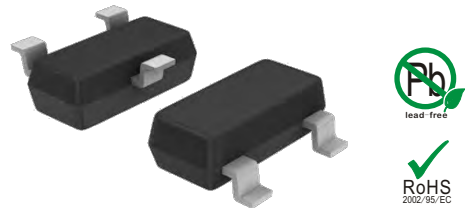


Features

- Ultra low capacitance: 0.3pF typical
- Working voltage: 5V
- Low clamping voltage
- Protects two data lines
- RoHS compliant



IEC Compatibility (EN61000-4)

- IEC 61000-4-2 ± 20 kV contact ± 25 kV air
- IEC 61000-4-5 (Lightning) 5A (8/20 μ s)

SOT-23

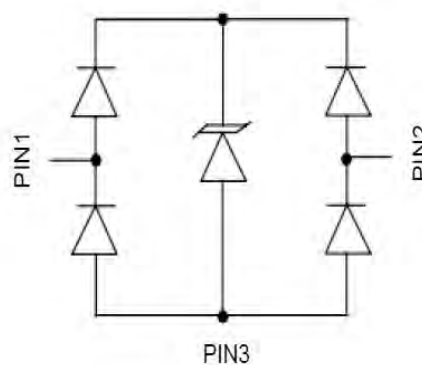
Applications

- Cellular Handsets and Accessories
- Display Ports
- MDDI Ports
- USB 2.0 and 3.0 Ports
- HDMI 1.3 and 1.4
- Digital Visual Interface (DVI)
- PCI Express and Serial SATA Ports
- Notebook Computer

Mechanical Characteristics

- 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

Schematic & PIN Configuration



Circuit Diagram

Absolute Maximum Ratings

Parameter	Symbol	Value	Unit
Peak Pulse Power ($t_p = 8/20\mu s$ waveform)	P_{PP}	80	W
Peak Pulse Current (8/20 μs)	I_{PP}	5	A
ESD per IEC 61000-4-2 (Air)	V_{ESD}	± 25	kV
ESD per IEC 61000-4-2 (Contact)		± 20	
Operating Temperature Range	T_J	-55 to +125	$^{\circ}C$
Storage Temperature Range	T_{STG}	-55 to +150	$^{\circ}C$

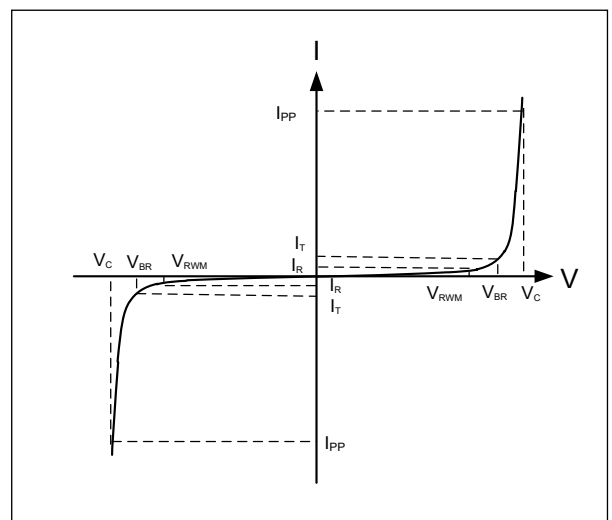
Electrical Characteristics

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	$V_{RWM} = 5V$			0.5	μA
Clamping Voltage	V_C	$I_{PP} = 1A$ (8 x 20 μs pulse), Pin 1 or pin 2 to pin 3			9	V
Clamping Voltage	V_C	$I_{PP} = 5A$ (8 x 20 μs pulse), Pin 1 or pin 2 to pin 3			16	V
Junction Capacitance	C_J	$V_R = 0V$, $f = 1MHz$, Between I/O pins, Between pin 1 and pin 2		0.3	0.4	pF
Junction Capacitance	C_J	$V_R = 0V$, $f = 1MHz$, Any I/O pin to Gnd, Between pin 1 or pin 2 to pin 3		0.6	0.8	pF

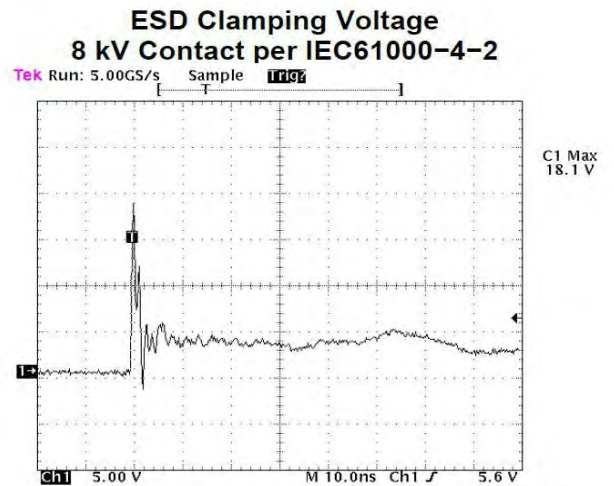
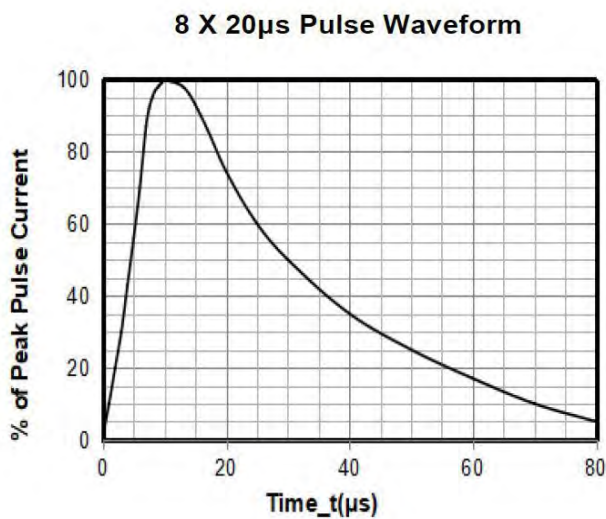
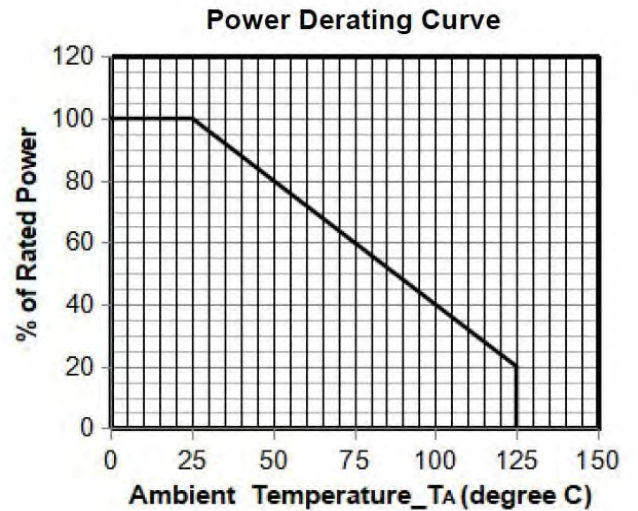
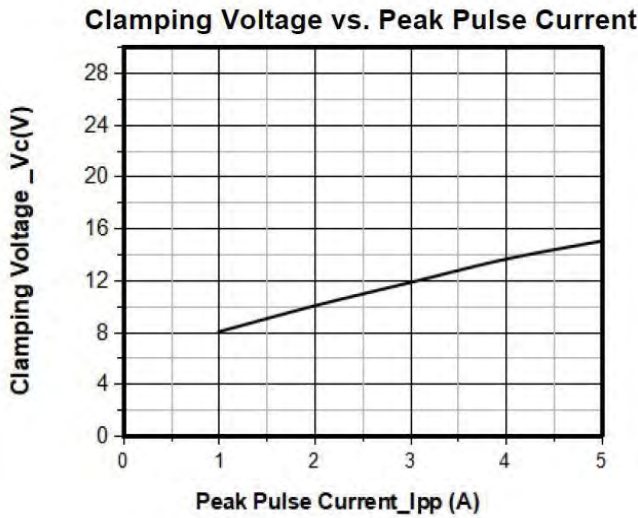
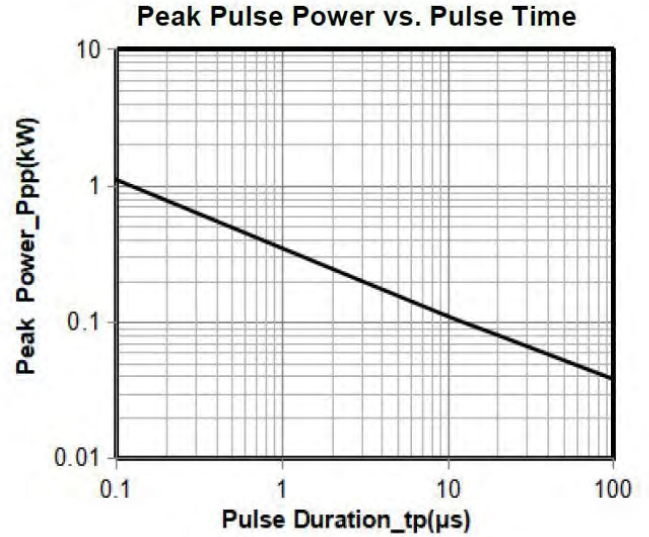
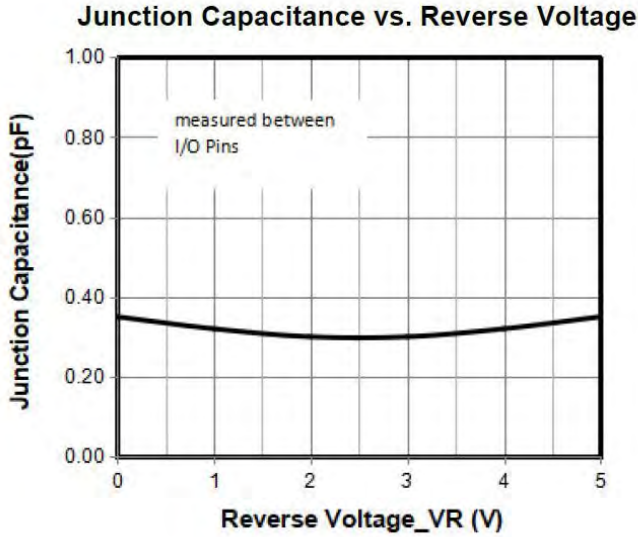
Electrical Parameters (TA = 25 $^{\circ}C$ unless otherwise noted)

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.

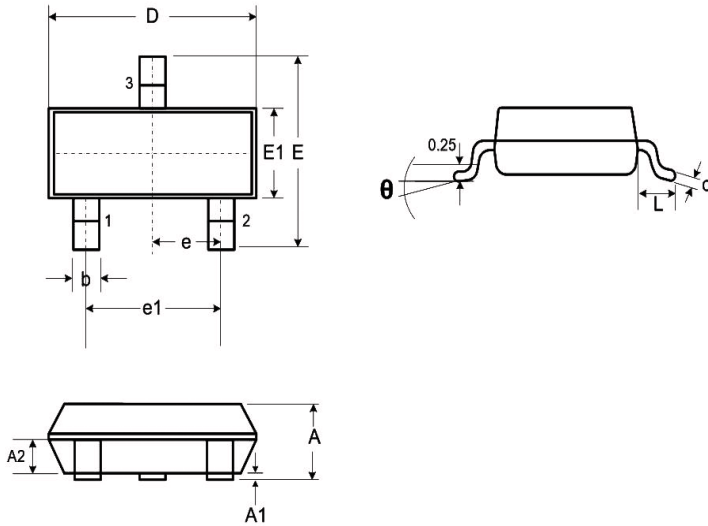


Typical Performance Characteristics (TA=25°C unless otherwise Specified)



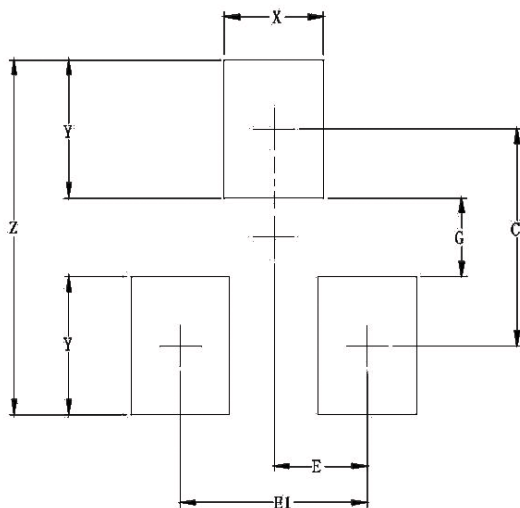
Note: Data is taken with a 10x attenuator

Package Mechanical Data



GMA	8-A9BG-CBG					
	INCHES			MILLIMETERS		
	MIN	NOM	MAX	MIN	NOM	MAX
A	0.035	-	0.044	0.890	-	1.120
A1	0.000	-	0.004	0.010	-	0.100
A2	0.035	0.037	0.040	0.880	0.950	1.020
b	0.012	-	0.020	0.300	-	0.510
c	0.030	-	0.007	0.080	-	0.180
D	0.110	0.114	0.120	2.800	2.900	3.040
E	0.082	0.093	0.104	2.100	2.370	2.640
E1	0.047	0.051	0.055	1.200	1.300	1.400
e	0.075			1.900		
e1	0.037			0.950		
L	0.015	0.020	0.024	0.400	0.500	0.60
L1	0.022			0.550		
N	3.000			3.000		
θ	0°	-	8°	0°	-	8°

Suggested Land Pattern



GMA	8-A9BG-CBG	
	A=00A9H9FG	B7<9G
C	0.087	2.200
E	0.037	0.950
E1	0.075	1.900
G	0.031	0.800
X1	0.039	1.000
Y	0.055	1.400
Z	0.141	3.600

Ordering Information

Order code	Package	Base qty	Delivery mode
PTT233L08S5CA8	SOT-23	3K	Tape and reel