

Features

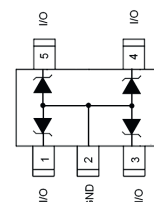
- Protects up to 4 lines
- Low leakage: nA level
- Low clamping voltage
- Excellent surge protection (400W at 8/20μs)
- Complies with following standards:
-IEC 61000-4-2 (ESD) immunity test
Air discharge: ±30kV
Contact discharge: ±30kV
-IEC61000-4-5 (Lightning) 14A (8/20μs)

Applications

- Audio players
- Peripherals
- Portable instrumentation
- Desktops PC and servers
- Microprocessor based equipment
- Cell phone handsets and accessories
- Notebook, laptop, and palmtop computers



SOT-23-5



Schematic Diagram

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

Parameter	Symbol	Value	Unit
Peak Pulse Power (8/20μs)	P _{pk}	400	W
Peak Pulse Current (8/20μs)	I _{pp}	14	A
ESD Per IEC 61000-4-2 (Air)	V _{ESD}	±30	kV
ESD Per IEC 61000-4-2 (Contact)		±30	
Operating Temperature Range	T _J	-55 to +125	°C
Storage Temperature Range	T _{stg}	-55 to +150	°C

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

Parameter	Symbol	Test Condition	Min	Typ	Max	Unit
Reverse Working Voltage	V _{RWM}	Any I/O pin to ground	-	-	12	V
Breakdown Voltage	V _{BR}	I _T =1mA, any I/O pin to ground	13.3	-	16	V
Reverse Leakage Current	I _R	V _{RWM} =12V, any I/O pin to ground	-	-	0.5	μA
Clamping Voltage	V _C	I _{pp} =1A (8 x 20μs pulse), any I/O pin to ground	-	15	-	V
		I _{pp} =14A (8 x 20μs pulse), any I/O pin to ground	-	21	-	V
Junction Capacitance	C _J	V _R =0V, f=1MHz, any I/O pin to ground	-	70	-	pF

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

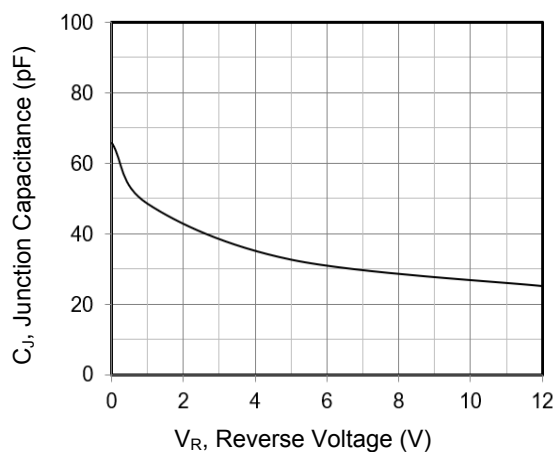


Figure 1. Junction Capacitance vs. Reverse Voltage

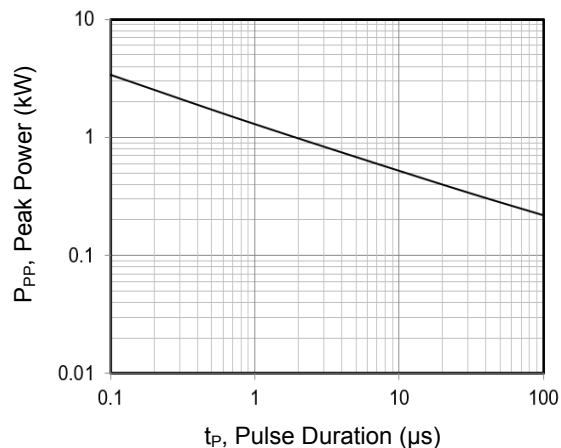


Figure 2. Peak Pulse Power vs. Pulse Time

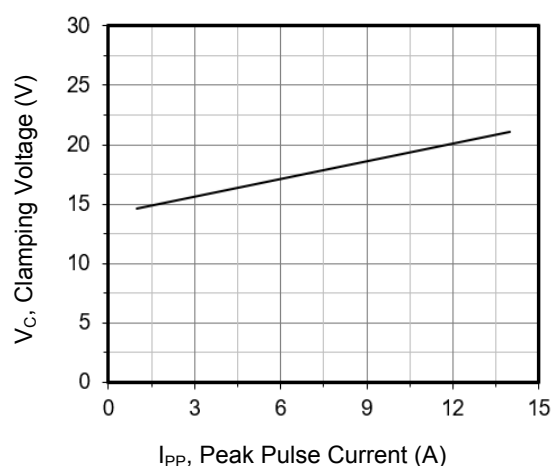


Figure 3. Clamping Voltage vs. Peak Pulse Current
($t_p=8/20\mu\text{s}$)

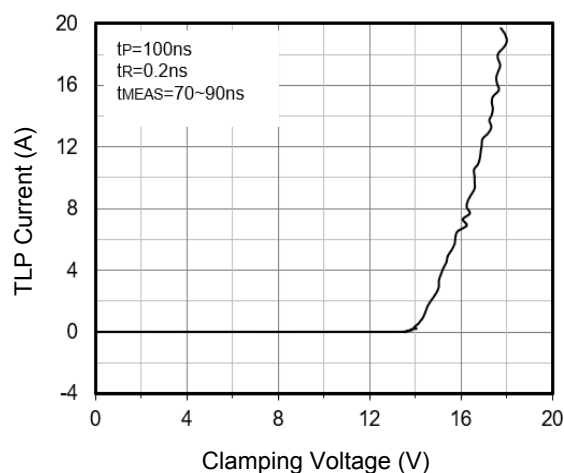


Figure 4. TLP Measurement

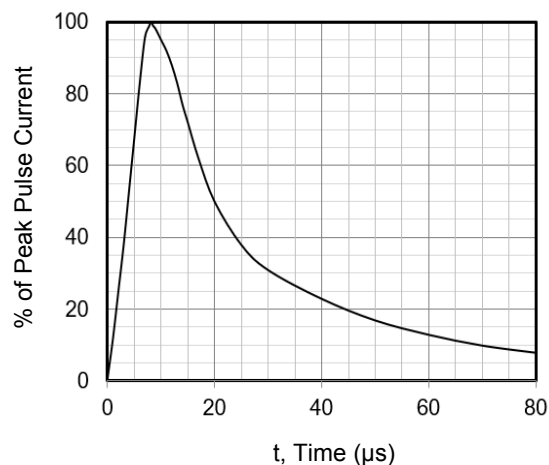


Figure 5. 8 X 20 μs Pulse Waveform

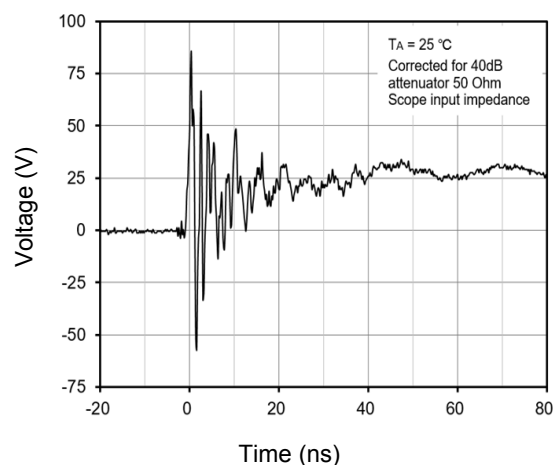
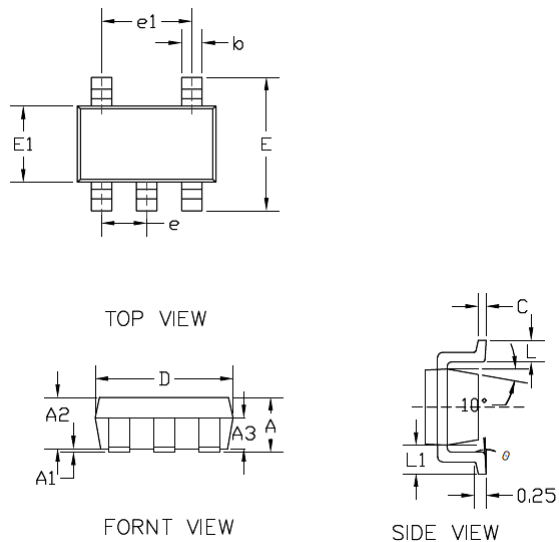


Figure 6. ESD Clamping Voltage
8kV Contact per IEC61000-4-2

Package Outline Dimensions (SOT-23-5)



Symbol	Dimensions In Millimeters		Dimensions In Inches	
	Min.	Max.	Min.	Max.
A	1.05	1.25	0.041	0.049
A1	0.01	0.15	0.000	0.006
A2	1.00	1.20	0.039	0.047
A3	0.60	0.70	0.024	0.028
E1	1.50	1.70	0.059	0.067
E	2.80	3.00	0.110	0.118
D	2.82	3.02	0.111	0.119
e	0.90	1.00	0.035	0.039
e1	1.85	1.95	0.073	0.077
b	0.30	0.40	0.012	0.016
c	0.14	0.20	0.006	0.008
L	0.32	0.52	0.013	0.020
L1	0.654 REF		0.026 REF	
θ	0°	8°	0°	8°

Order Information

Device	Package	Marking	Carrier	Quantity
GSER12U700	SOT-23-5	B5S2	Tape & Reel	3,000 pcs / Reel