

Features

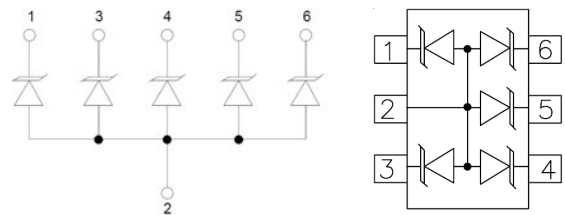
- Protects up to 5 lines
- Low leakage: nA level
- Low clamping voltage
- Excellent surge protection (100W at 8/20µs)
- Complies with following standards:
 - IEC 61000-4-2 (ESD) immunity test
 Air discharge: ±30kV
 Contact discharge: ±30kV
 - IEC61000-4-5 (Lightning) 8A (8/20µs)



SOT-23-6L

Applications

- Audio players
- Peripherals
- Printers
- Desktops PC, laptops and servers
- Microprocessor based equipment
- Cell phone handsets and accessories
- Set top box



Schematic Diagram

Absolute Maximum Ratings ($T_A=25^{\circ}\text{C}$ unless otherwise specified)

Parameter	Symbol	Value	Unit
Peak Pulse Power (8/20µs)	P_{PK}	100	W
Peak Pulse Current (8/20µs)	I_{PP}	8	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 ($T_A=25^{\circ}\text{C}$ unless otherwise specified)

Parameter	Symbol	Test Condition	Min	Typ	Max	Unit
Reverse Working Voltage	V_{RWM}	-	-	-	5	V
Breakdown Voltage	V_{BR}	$I_T=1\text{mA}$	6	-	8.5	V
Reverse Leakage Current	I_R	$V_{RWM}=5\text{V}$	-	-	0.2	µA
Clamping Voltage	V_C	$I_{PP}=1\text{A}$	-	-	8	V
Clamping Voltage	V_C	$I_{PP}=8\text{A}$	-	-	12	V
Junction Capacitance	C_J	$V_R 0\text{V}, f=1\text{MHz}$	-	60	-	pF

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

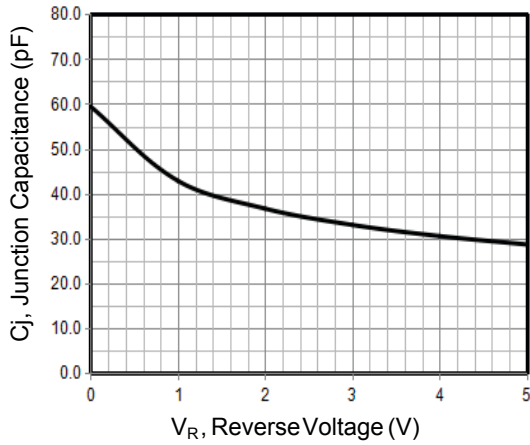


Figure 1. Junction Capacitance vs. Reverse Voltage

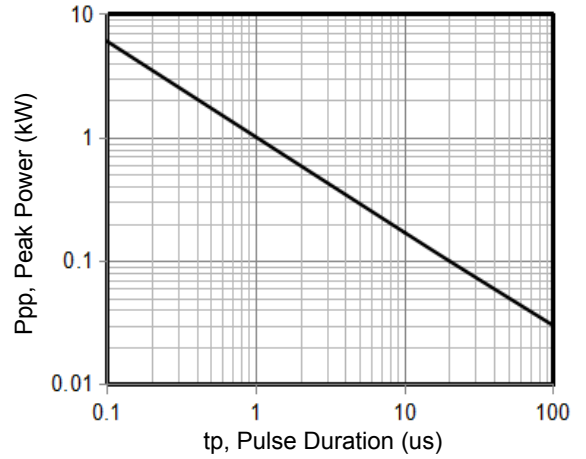


Figure 2. Peak Pulse Power vs. Pulse Time

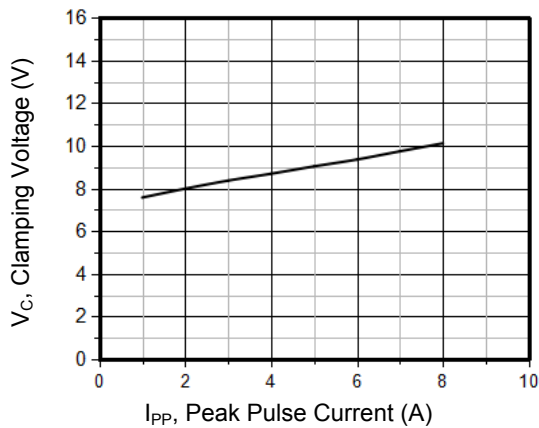


Figure 3. Clamping Voltage vs. Peak Pulse Current

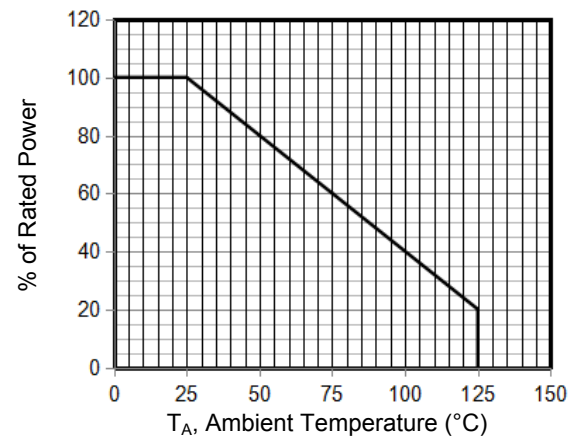


Figure 4. Power Derating Curve

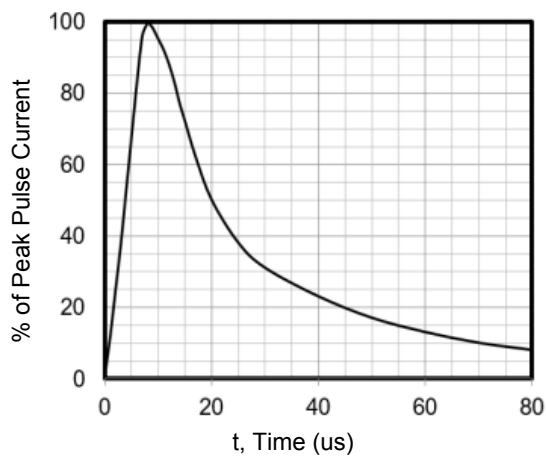
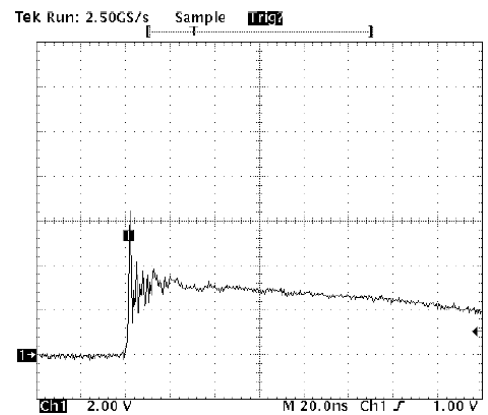


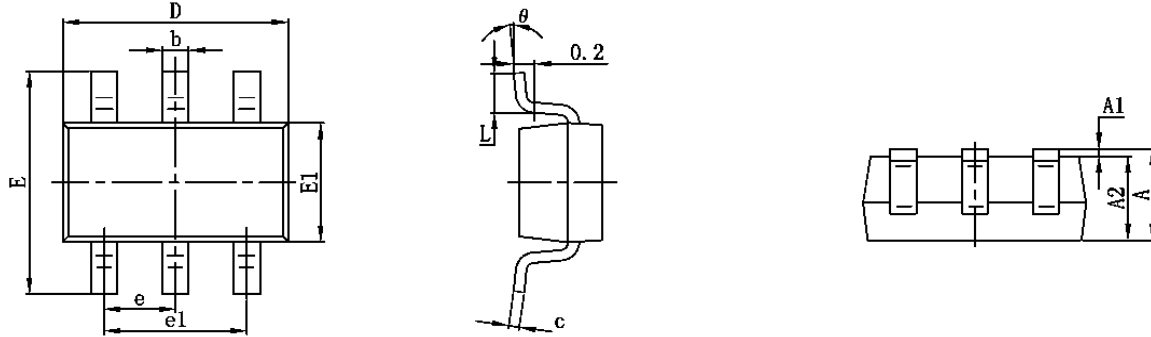
Figure 5. 8 X 20µs Pulse Waveform



Note: Data is taken with a 10x attenuator

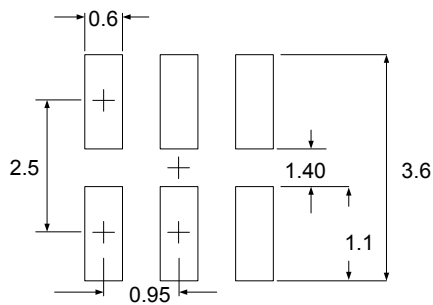
Figure 6. ESD Clamping Voltage
(8 kV Contact per IEC61000-4-2)

Package Outline Dimensions (SOT-23-6L)



Symbol	Dimensions in millimeters		Dimensions in inches	
	Min	Max	Min	Max
A	1.050	1.250	0.041	0.049
A1	0.000	0.100	0.000	0.004
A2	1.050	1.150	0.041	0.045
b	0.300	0.500	0.012	0.020
c	0.100	0.200	0.004	0.008
D	2.820	3.020	0.111	0.119
E1	1.500	1.700	0.059	0.067
E	2.650	2.950	0.104	0.116
e	0.950 (BSC)		0.037 (BSC)	
e1	1.800	2.000	0.071	0.079
L	0.300	0.600	0.012	0.024
θ	0°	8°	0°	8°

Recommended Pad layout



Unit: mm

Order Information

Device	Package	Marking	Quantity	HSF Status
GSER5U600	SOT-23-6L	0505	3,000pcs / Reel	RoHS Compliant