GOOD-ARK
SEMICONDUCTOR

GSEJ5U83
ESD Protection Diode

Features

- 25W peak pulse power per line (TP=8/20μs)
- Protects up to 5 lines
- Working voltage: 5V
- Low clamping voltage
- Low leakage current
- Complies with following standards
  IEC 61000-4-2(ESD) ±16 KV(air), ±16KV(contact)
  IEC 61000-4-5 (Lightning) 1.8A (8/20μs)

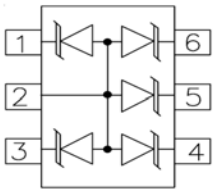
RoHS COMPLIANT



SOT-563

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°C unless otherwise specified)

Parameter	Symbol	Value	Unit
Peak Pulse Power (8/20μs)	P_{PK}	25	W
Peak Pulse Current (8/20μs)	I_{PP}	1.8	A
ESD per IEC 61000−4−2 (Air)	V_{ESD}	±16	kV
ESD per IEC 61000−4−2 (Contact)		±16	
Operating Temperature Range	T_J	−55 to +125	°C
Storage Temperature Range	T_{stg}	−55 to +150	°C

Electrical Characteristics Per Line (T_A=25°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 = 1mA	6	-	8.5	V
Reverse Leakage Current	I_R	V_{RWM} = 5V	-	-	0.2	μA
Clamping Voltage	V_C	I_{PP} = 1A	-	-	10	V
		I_{PP} = 1.8A	-	-	12	V
Junction Capacitance	C_J	V_R = 0V, f = 1MHz	-	8.3	-	pF

Typical Characteristic Curves (T_A=25°C unless otherwise specified)

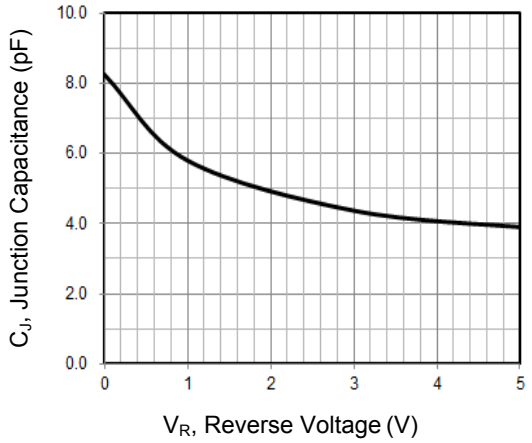


Figure 1. Junction Capacitance vs. Reverse Voltage

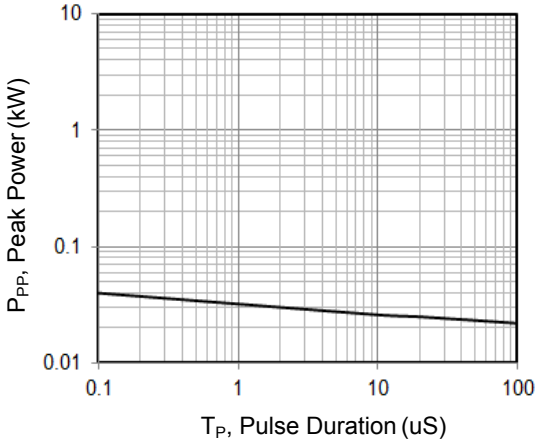


Figure 2. Peak Pulse Power vs. Pulse Time

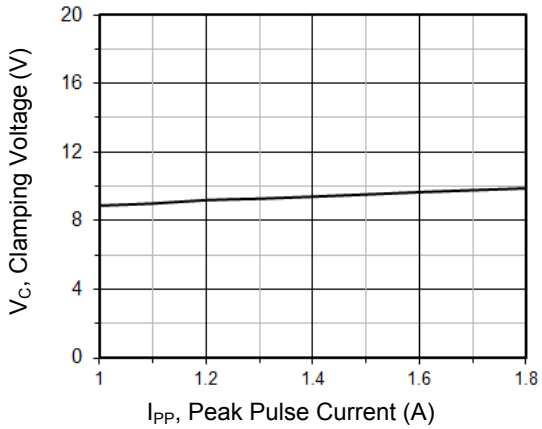


Figure 3. Clamping Voltage vs. Peak Pulse Current

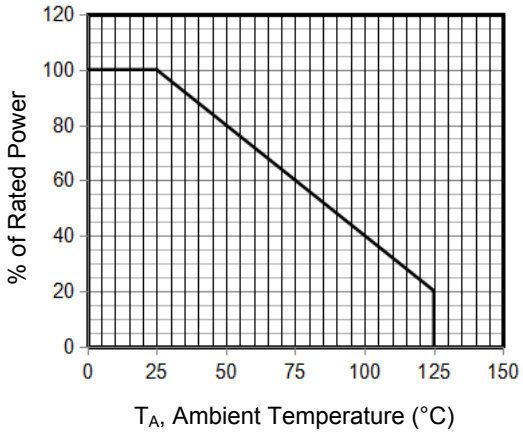


Figure 4. Power Derating Curve

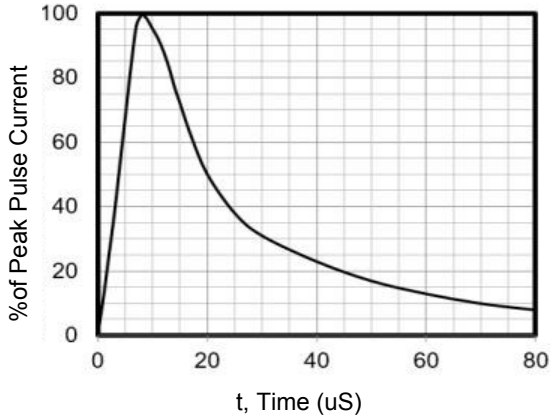


Figure 5. 8x20μs Pulse Waveform

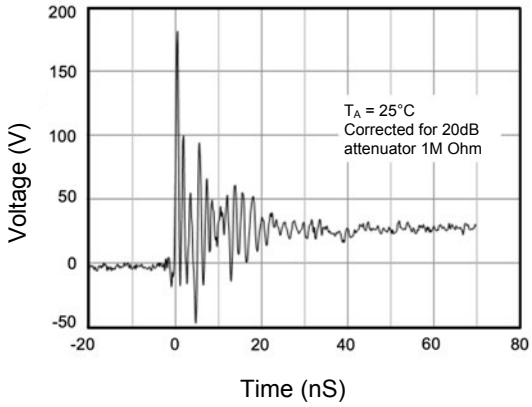
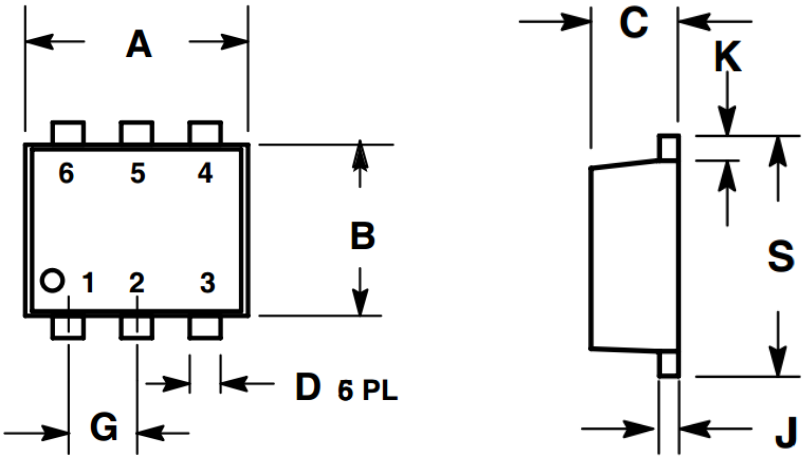


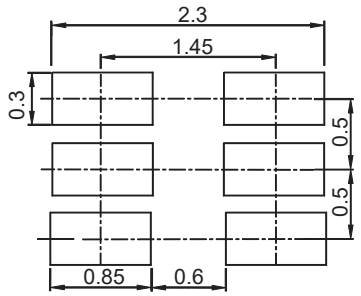
Figure 6. ESD Clamping Voltage 8 kV Contact per IEC61000−4−2

Package Outline Dimensions (SOT-563)



Symbol	Dimensions in Milimeters		Dimensions in Inches	
	Min	Max	Min	Max
A	1.50	1.70	0.059	0.067
B	1.10	1.30	0.043	0.051
C	0.50	0.60	0.020	0.024
D	0.17	0.27	0.007	0.011
G	0.50 BSC		0.020 BSC	
J	0.08	0.18	0.003	0.007
K	0.10	0.30	0.004	0.012
S	1.50	1.70	0.059	0.067

Recommended Pad Layout



unit: mm

Order Information

Device	Package	Marking	Carrier	Quantity
GSEJ5U83	SOT-563	US6L	Tape & Reel	3,000 pcs / Reel