GOOD-ARK
SEMICONDUCTOR

GSEZ12U1100
ESD Protection Diode

Features

- 1600 Watts peak pulse power (tp=8/20μs)
- Unidirectional configuration
- Solid-state silicon-avalanche technology
- Low clamping voltage
- Low leakage current
- Protection one data/power line to:
  IEC 61000-4-2 ±30kV contact ±30kV air
  IEC 61000-4-4 (EFT) 40A (5/50ns)
  IEC 61000-4-5 (Lightning) 70A (8/20 μs)

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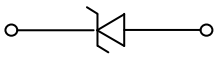

Schematic Diagram

Applications

- Audio Line, Speaker, Headset, Microphone Protection
- Human Interface Devices (Keyboard, Touchpad, Buttons)
- DC Power Line Protection

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

Parameter	Symbol	Max.	Unit
Peak Pulse Power (t_P=8/20μS)	P_{PP}	1600	W
ESD Contact/Air Discharge (IEC-61000-4-2)	V_{ESD}	30/30	kV
Peak Pulse Current (t_P=8/20μS)	I_{PP}	70	A
Junction Temperature	T_J	-55 To +125	°C
Storage Temperature	T_{STG}	-55 To +150	°C

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

Parameter	Symbol	Conditions	Min.	Typ.	Max.	Unit
Reverse Stand-Off Voltage	V_{RWM}	-	-	-	12	V
Reverse Breakdown Voltage	V_{BR}	I_T=1mA	13.3	-	-	V
Reverse Leakage Current	I_R	V_R=12V	-	-	1	μA
Clamping Voltage (IEC 61000-4-5)	V_C	I_{PP}=70A	-	24	-	V
Junction Capacitance	C_J	V_R=0V, f=1MHz	-	110	-	pF

Typical Characteristic Curves

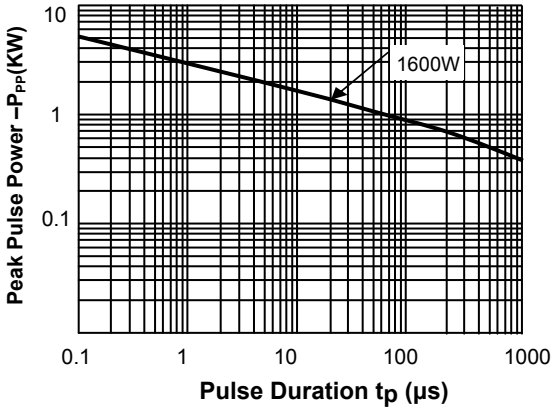

Figure 1. Peak Pulse Power Rating Curve

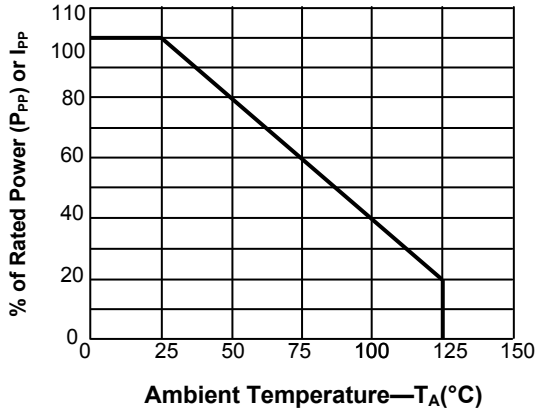

Figure 2. Pulse Derating Curve

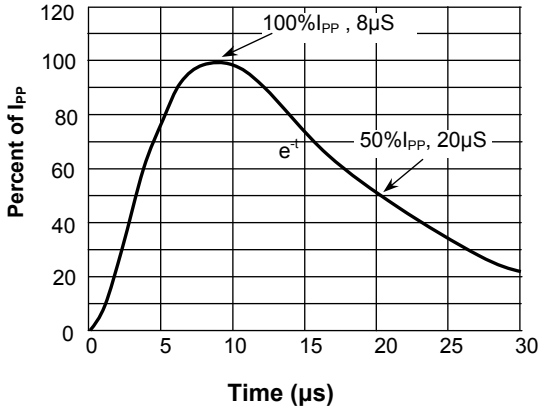

Figure 3. Pulse Waveform-8/20μs

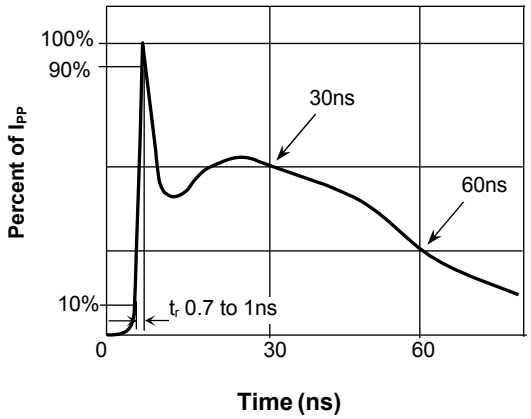

Figure 4. Pulse Waveform-ESD(IEC61000-4-2)

Package Outline Dimensions

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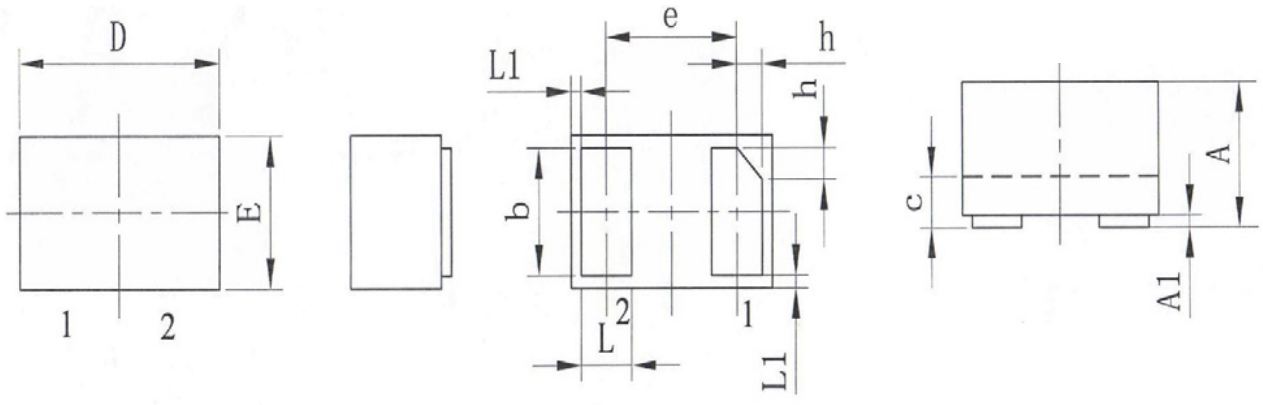

Symbol	Millimeter		
	Min	Nom	Max
A	0.45	0.50	0.55
A1	0	0.02	0.05
b	0.45	0.50	0.55
c	0.12	0.15	0.18
D	0.95	1.00	1.05
e	0.65BSC		
E	0.55	0.60	0.65
L	0.20	0.25	0.30
L1	0.05REF		
h	0.07	0.12	0.17

Order Information

Device	Package	Marking	Carrier	Quantity	HSF Status
GSEZ12U1100	DFN1006	P12	Tape & Reel	10,000pcs	RoHS compliant