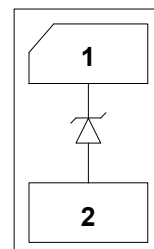


Features

- Ultra small package: 1.0x0.6x0.5mm
- Protects one data or power line
- Ultra low leakage: nA level
- Operating voltage: 12V
- Low clamping voltage
- 2-pin leadless package
- Complies with following standards:
 - IEC 61000-4-2 (ESD) immunity test
 - Air discharge: $\pm 30\text{kV}$
 - Contact discharge: $\pm 30\text{kV}$
 - IEC 61000-4-5 (Lightning) 20A (8/20 μs)
- RoHS compliant



DFN1006



Schematic Diagram

Applications

- Cellular handsets and accessories
- Personal digital assistants
- Notebooks and handhelds
- Portable instrumentation
- Digital cameras
- Peripherals
- Audio players
- Keypads, side keys, LCD displays

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

Parameter	Symbol	Value	Unit
Peak Pulse Power (8/20 μs)	P_{pk}	450	W
Peak Pulse Current (8/20 μs)	I_{PP}	20	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	$^\circ\text{C}$
Storage Temperature Range	T_{stg}	-55 to +150	$^\circ\text{C}$

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

Parameter	Symbol	Test Condition	Min	Typ	Max	Unit
Reverse Working Voltage	V_{RWM}	Pin 1 to Pin 2	-	-	12	V
Breakdown Voltage	V_{BR}	$I_T=1\text{mA}$, Pin 1 to Pin 2	13.3	-	-	V
Reverse Leakage Current	I_R	$V_{RWM}=12\text{V}$, Pin 1 to Pin 2	-	-	0.2	μA
Forward Voltage	V_F	$I_F=10\text{mA}$, Pin 2 to Pin 1	-	0.8	1.2	V
Clamping Voltage	V_C	$I_{PP}=1\text{A}$ (8 x 20 μs pulse), Pin 1 to Pin 2	-	-	15	V
		$I_{PP}=20\text{A}$ (8 x 20 μs pulse), Pin 1 to Pin 2	-	-	22.5	
Junction Capacitance	C_J	$V_R=0\text{V}$, $F=1\text{MHz}$	-	100	-	pF

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

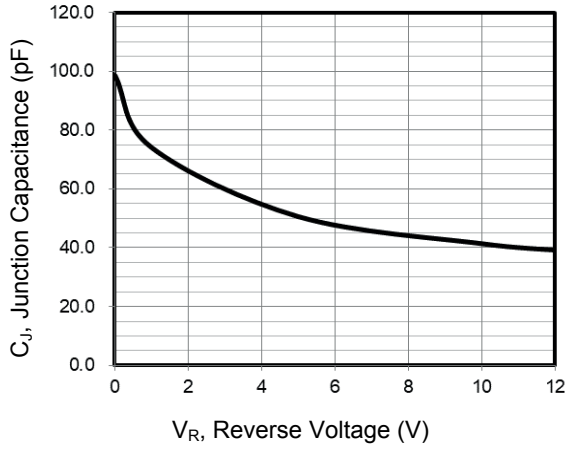


Figure 1. Junction Capacitance vs. Reverse Voltage

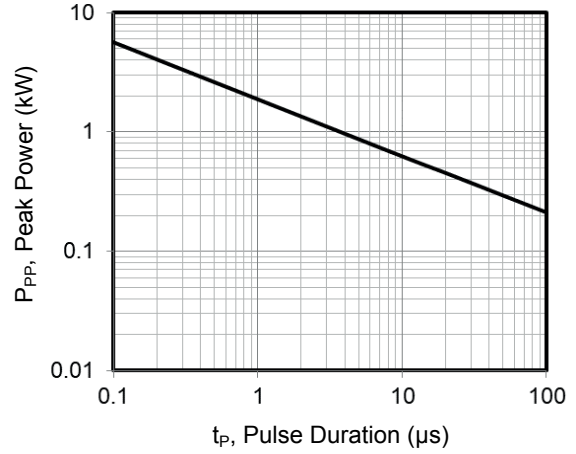


Figure 2. Peak Pulse Power vs. Pulse Time

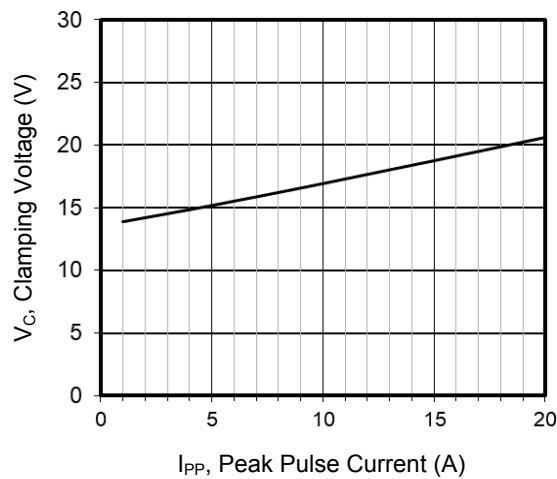


Figure 3. Clamping Voltage vs. Peak Pulse Current

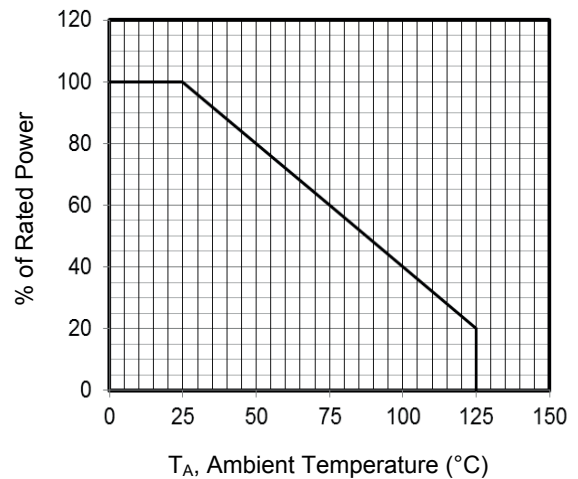


Figure 4. Power Derating Curve

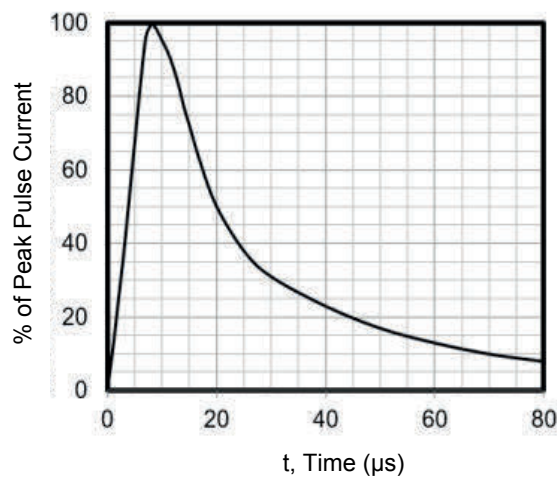


Figure 5. 8 X 20 μs Pulse Waveform

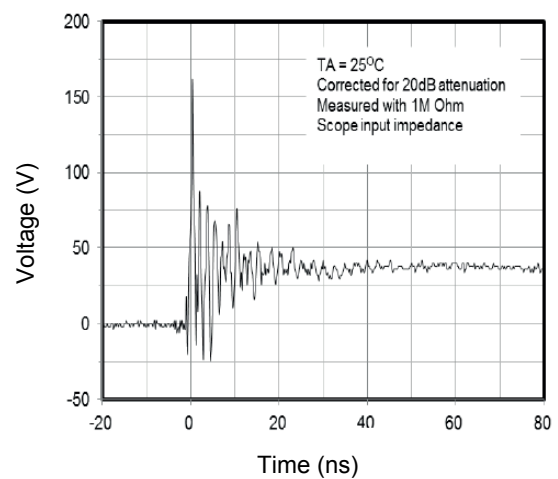
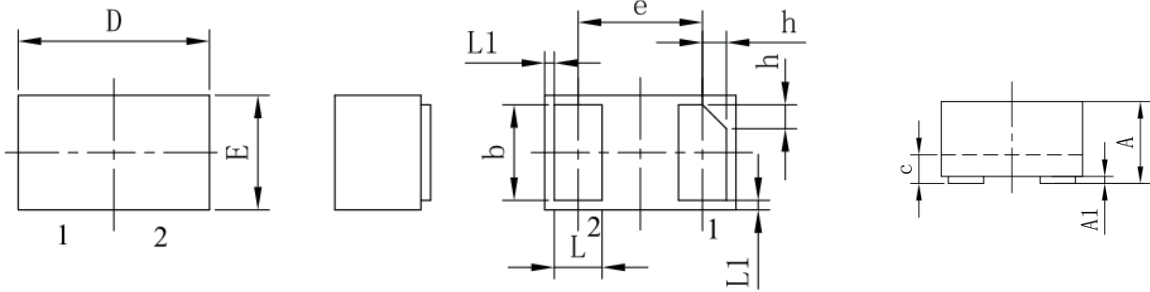


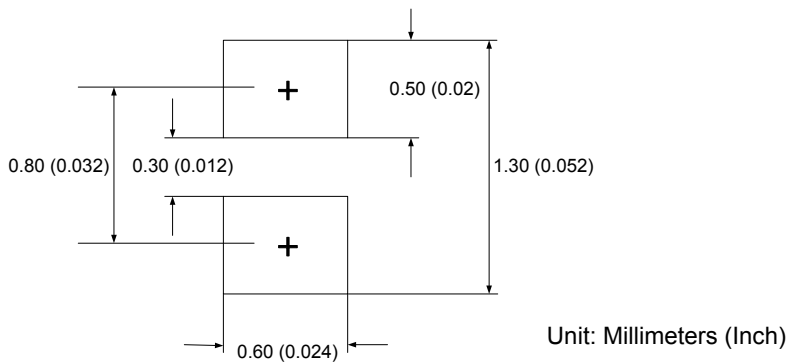
Figure 6. ESD Clamping Voltage
8 kV Contact per IEC61000-4-2

Package Outline Dimensions (DFN1006)



Symbol	Dimensions In Millimeters		Dimensions In Inches	
	Min.	Max.	Min.	Max.
A	0.45	0.55	0.018	0.022
A1	0.00	0.05	0.000	0.002
b	0.45	0.55	0.018	0.022
c	0.12	0.18	0.005	0.007
D	0.95	1.05	0.037	0.041
e	0.65 BSC		0.026 BSC	
E	0.55	0.65	0.022	0.026
L	0.20	0.30	0.008	0.012
L1	0.05 REF		0.002 REF	
h	0.07	0.17	0.003	0.007

Recommended Pad Layout



Order Information

Device	Package	Marking	Carrier	Quantity
GSEZ12U1000	DFN1006	B7	Tape & Reel	10,000pcs / Reel