

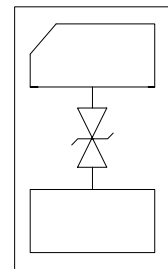
GSEZ3B400 ESD Protection Diode

Features

- Protects one data or power line
- Ultra low leakage: nA level
- Low operating voltage: 3.3V
- 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: $\pm 30\text{kV}$
 - IEC61000-4-5 (Lightning) 20A (8/20 μs)



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}	200	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)	V_{ESD}	± 30	kV
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}	-	-	-	3.3	V
Punch-Through Voltage	V_{PT}	$I_{PT}=2\mu\text{A}$	4	-	-	V
Breakdown Voltage	V_{BR}	$I_{BR}=1\text{mA}$	3.5	-	-	V
Snap-Back Voltage	V_{SB}	$I_{SB}=50\text{mA}$	3.5	-	-	V
Reverse Leakage Current	I_R	$V_{RWM}=3.3\text{V}$	-	-	0.2	μA
Clamping Voltage	V_C	$I_{PP}=1\text{A}$	-	-	6	V
Clamping Voltage	V_C	$I_{PP}=20\text{A}$	-	-	10	V
Junction Capacitance	C_J	$V_R=0\text{V}$, $f=1\text{MHz}$	-	40	-	pF

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

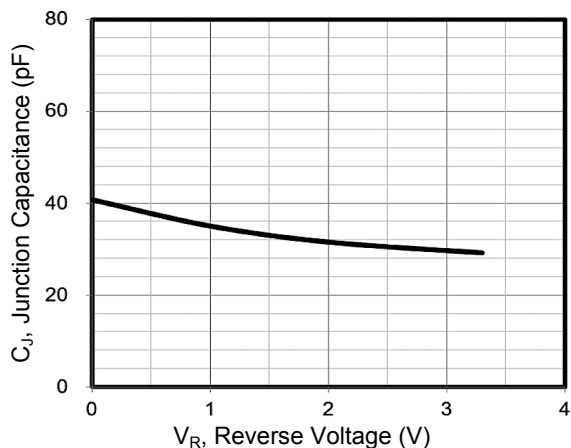


Figure 1. Junction Capacitance vs. Reverse Voltage

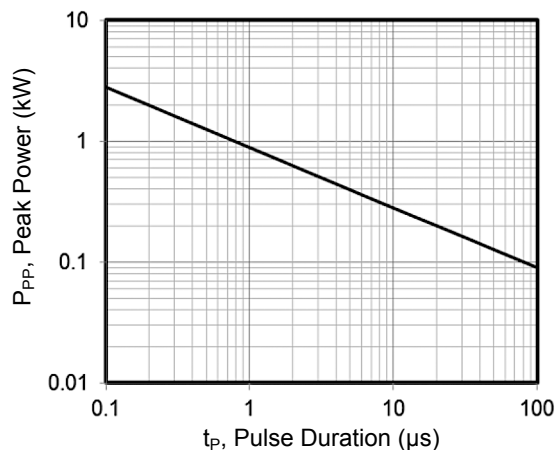


Figure 2. Peak Pulse Power vs. Pulse Time

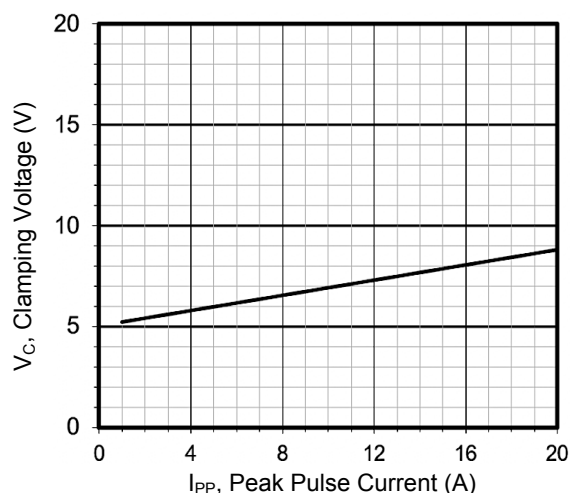


Figure 3. Clamping Voltage vs. Peak Pulse Current
($t_p=8/20\mu\text{s}$)

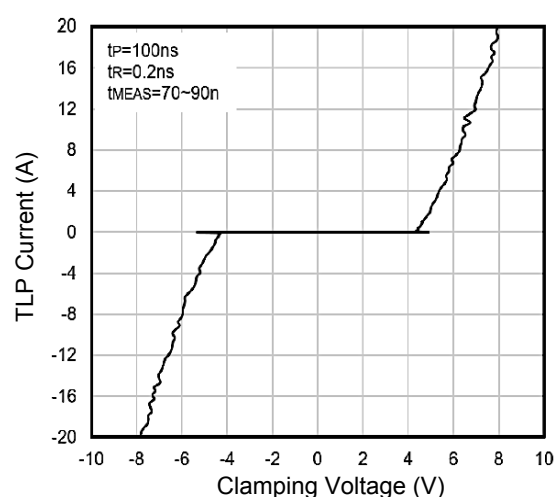


Figure 4. TLP Curve

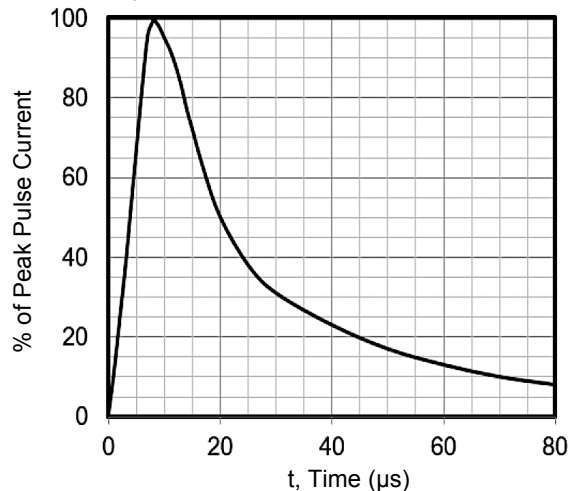


Figure 5. 8 x 20 μs Pulse Waveform

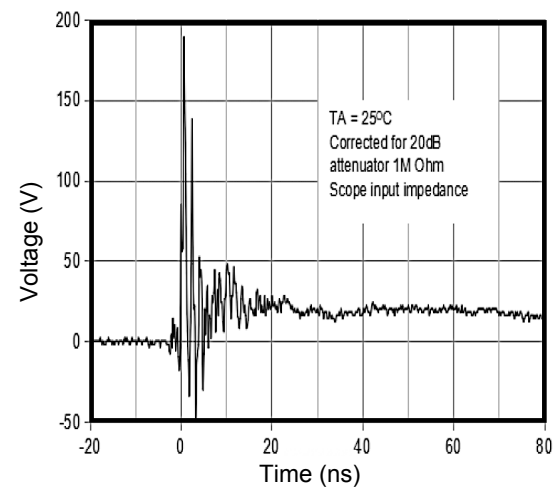
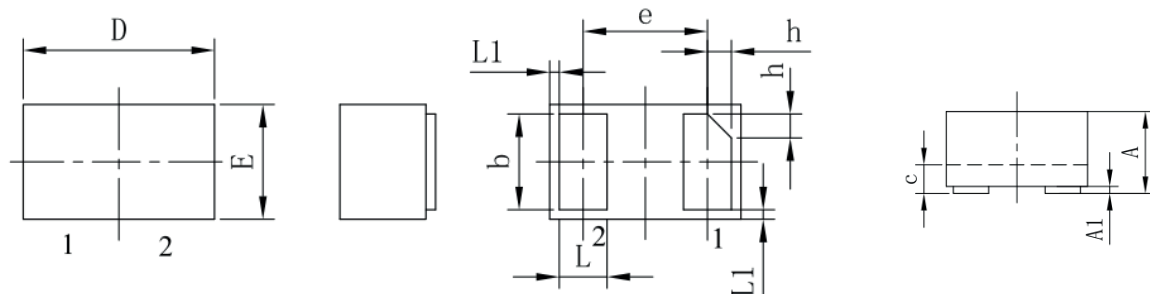


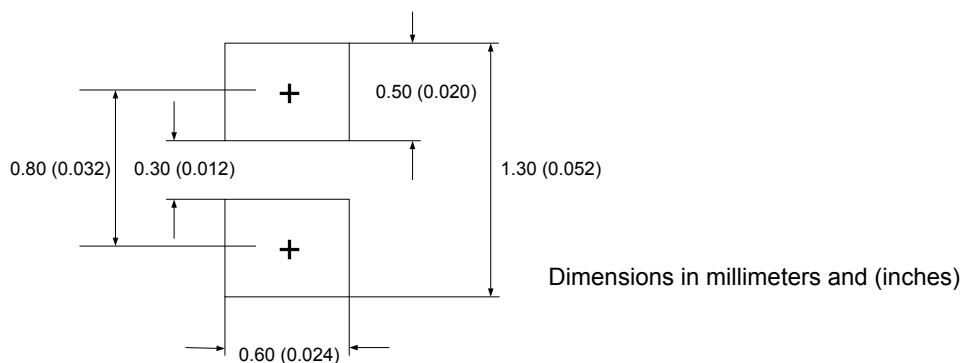
Figure 6. ESD Clamping Voltage
8kV Contact Per IEC61000-4-2

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
GSEZ3B400	DFN1006	DF	Tape & Reel	10,000 Pcs / Reel