

## Features

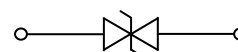
- 1 Line, Bi-directional ESD protection diode
- Ultra low capacitance: 25pF typical
- Ultra low leakage: nA level
- Low operating voltage: 5V
- Low clamping voltage
- ESD per IEC 61000-4-2 >30KV (air & contact model)



**DFN1006**

## Applications

- Cellular handsets and accessories
- Personal digital assistants
- Notebook computers
- Digital cameras
- Keypads, side keys, LCD displays



**Schematic Diagram**

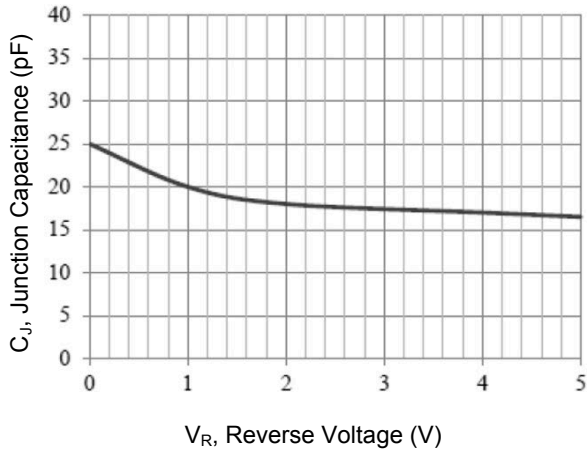
## Absolute Maximum Ratings (T<sub>A</sub>=25°C unless otherwise specified)

Parameter	Symbol	Value	Unit
Peak Pulse Power (8/20μs)	P <sub>PK</sub>	170	W
Peak Pulse Current (8/20μs)	I <sub>PP</sub>	17	A
ESD per IEC 61000-4-2 (Air)	V <sub>ESD</sub>	±30	KV
ESD per IEC 61000-4-2 (Contact)		±30	
Operating Temperature Range	T <sub>J</sub>	- 55 to +125	°C
Storage Temperature Range	T <sub>STG</sub>	- 55 to + 150	°C

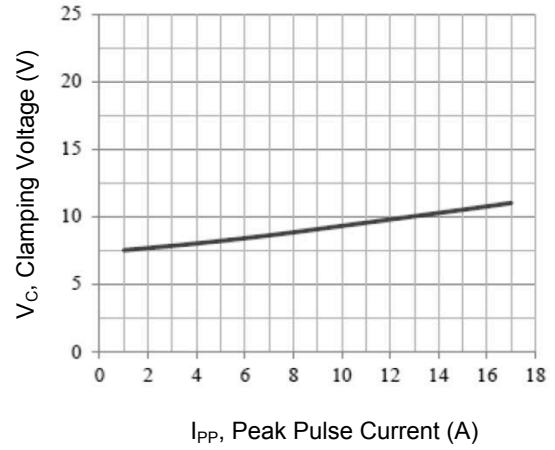
## Electrical Characteristics (T<sub>A</sub>=25°C, Unless otherwise specified)

Parameter	Symbol	Test Condition	Min	Typ	Max	Unit
Reverse Working Voltage	V <sub>RWM</sub>	-	-	-	5.0	V
Breakdown Voltage	V <sub>BR</sub>	I <sub>T</sub> = 1mA	5.8	6.8	8.0	V
Reverse Leakage Current	I <sub>R</sub>	V <sub>RWM</sub> = 5.0V	-	-	0.5	μA
Clamping Voltage	V <sub>C</sub>	I <sub>PP</sub> = 10A (8x20μs pulse)	-	8.0	9.5	V
Clamping Voltage	V <sub>C</sub>	I <sub>PP</sub> = 17A (8x20μs pulse)	-	10.5	11	V
Dynamic Resistance	R <sub>DYN</sub>	TLP = 0.2/100ns	-	0.1	-	Ω
Junction Capacitance	C <sub>J</sub>	V <sub>R</sub> = 0V, f = 1MHz	-	25	50	pF

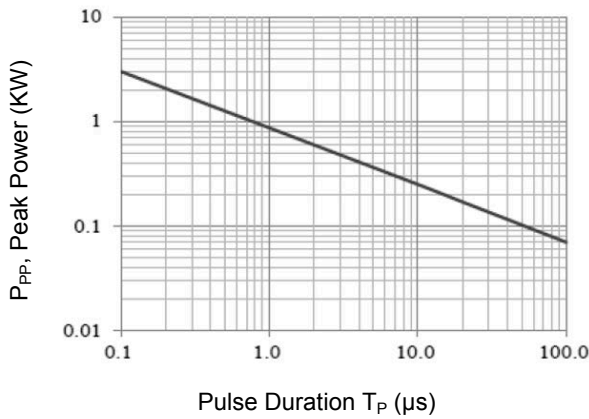
**Typical Characteristic Curves** ( $T_A=25^\circ\text{C}$ , Unless otherwise specified)



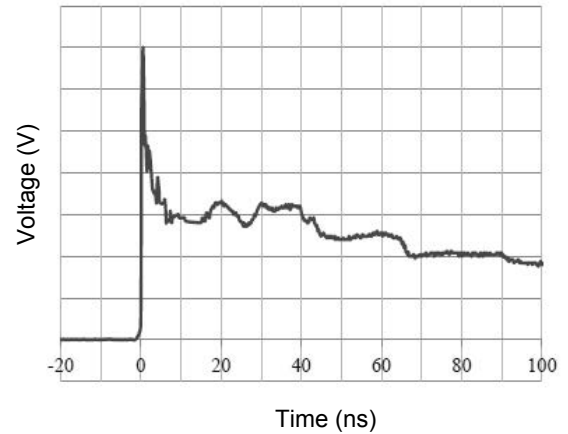
**Figure 1. Junction Capacitance vs. Reverse Voltage**



**Figure 2. Clamping Voltage vs. Peak Pulse Current**

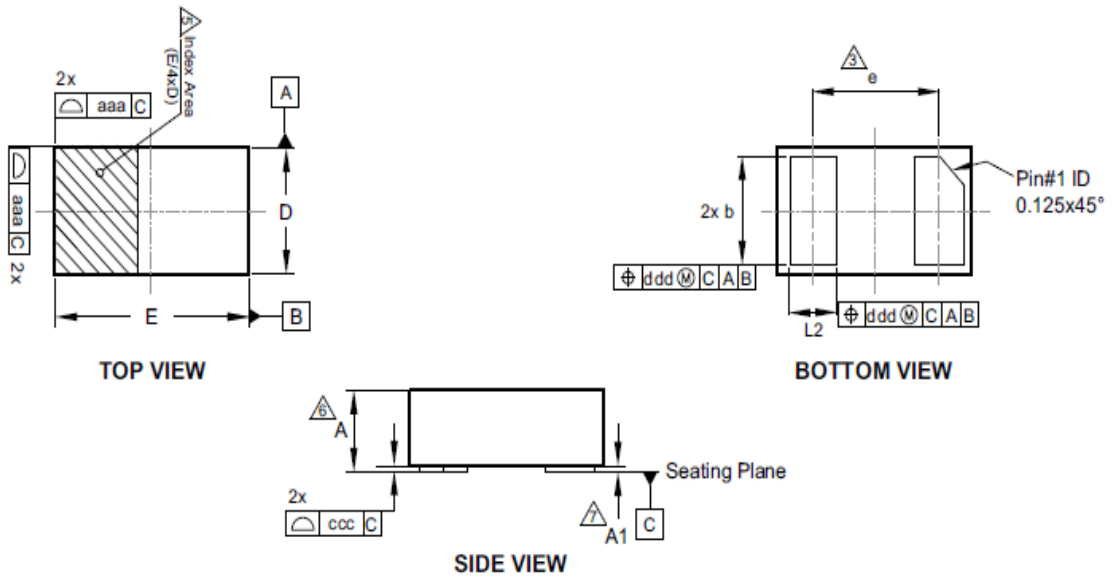


**Figure 3. Peak Pulse Power vs. Pulse Time**



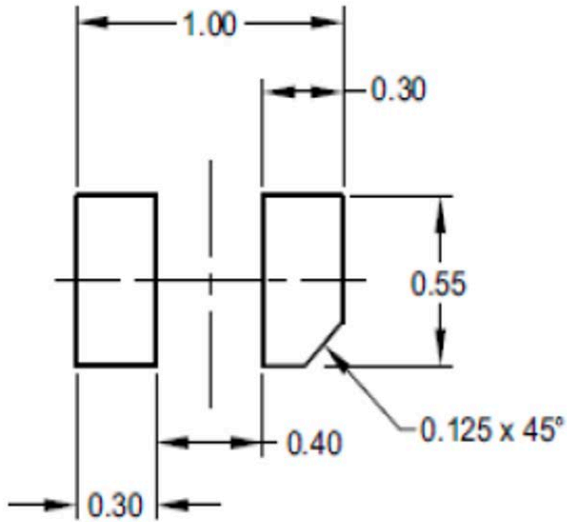
**Figure 4. IEC61000-4-2 Pulse Waveform**

**Package Outline Dimensions (DFN1006)**



Symbol	Dimensions in Millimeters			Dimensions in Inches		
	Min	Nom	Max	Min	Nom	Max
A	0.47	0.51	0.55	0.019	0.020	0.022
A1	0.00	0.02	0.05	0.000	0.001	0.002
b	0.45	0.50	0.55	0.018	0.020	0.022
D	0.60 BSC			-	0.024	-
E	1.00 BSC			-	0.039	-
e	0.65 BSC			-	0.026	-
L	0.20	0.25	0.30	0.008	0.010	0.012
aaa	-	0.05	-	-	0.002	-
ccc	-	0.03	-	-	0.001	-
ddd	-	0.10	-	-	0.004	-

**Recommended Pad Layout**



Unit: mm

**Order Information**

Device	Package	Marking	Carrier	Quantity
GSEZ5B250	DFN1006	3K	Tape & Reel	12,000 pcs / Tape & Reel