

Features

- 1 Line, Bi-directional ESD protection diode
- Excellent clamping capability
- Low load capacitance of 0.65pF maximum
- Low Leakage
- Fast response time
- ESD per IEC 61000-4-2 >15KV (air & contact model)



DFN1006

Applications

- Portable handheld devices
- Keypads, data lines, buttons
- Notebook computers
- Digital cameras
- Portable GPS
- MP3 players



Schematic Diagram

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

Parameter	Symbol	Value	Unit
Peak Pulse Power (8/20μs)	P _{PK}	80	W
Peak Pulse Current (8/20μs)	I _{PP}	4	A
ESD per IEC 61000-4-2 (Air)	V _{ESD}	±20	KV
ESD per IEC 61000-4-2 (Contact)		±15	
Operating Temperature Range	T _J	- 55 to +125	°C
Storage Temperature Range	T _{STG}	- 55 to + 150	°C

Electrical Characteristics (T_A=25°C, Unless otherwise specified)

Parameter	Symbol	Test Condition	Min	Typ	Max	Unit
Reverse Working Voltage	V _{RWM}	-	-	-	5.0	V
Breakdown Voltage	V _{BR}	I _T = 1mA	6.0	7.5	8.5	V
Reverse Leakage Current	I _R	V _{RWM} = 5.0V	-	-	0.5	μA
Clamping Voltage	V _C	I _{PP} = 1A (8x20μs pulse)	-	-	12	V
Clamping Voltage	V _C	I _{PP} = 4A (8x20μs pulse)	-	-	20	V
Junction Capacitance	C _J	V _R = 0V, f = 1MHz	-	0.35	0.4	pF

Typical Characteristic Curves

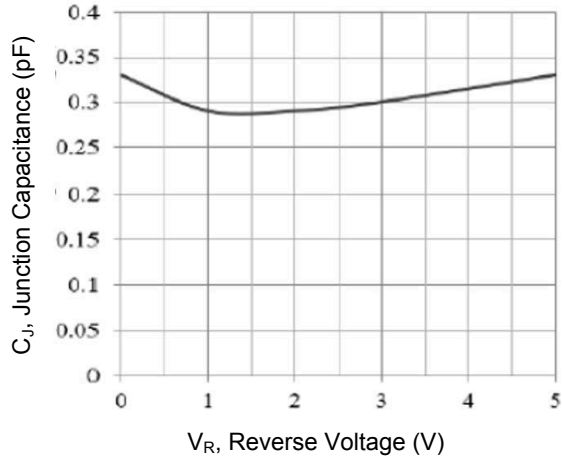


Figure 1. Junction Capacitance vs. Reverse Voltage

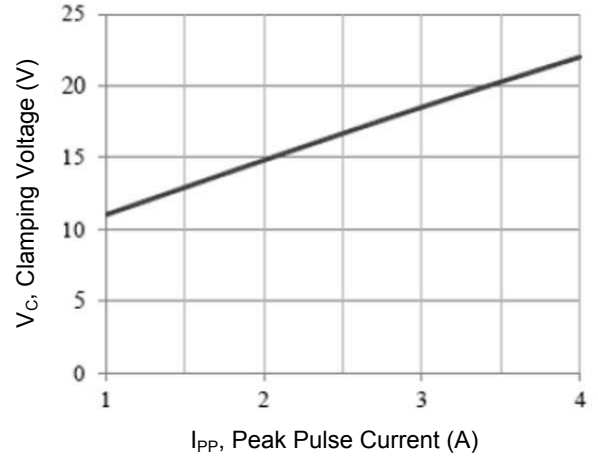


Figure 2. Clamping Voltage vs. Peak Pulse Current

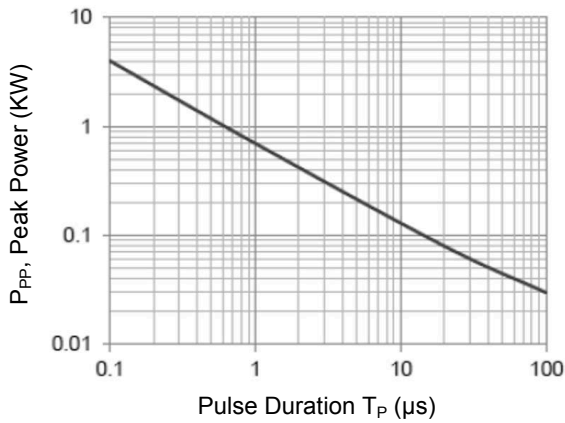


Figure 3. Peak Pulse Power vs. Pulse Time

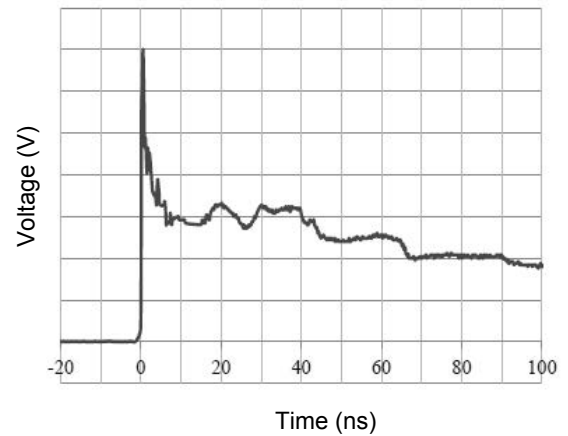


Figure 4. IEC61000-4-2 Pulse Waveform

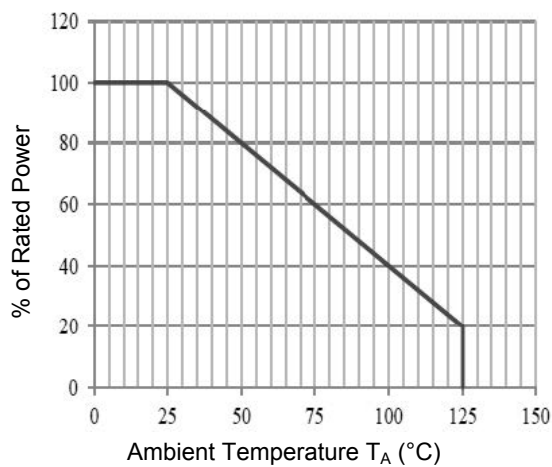


Figure 5. Power Derating Curve

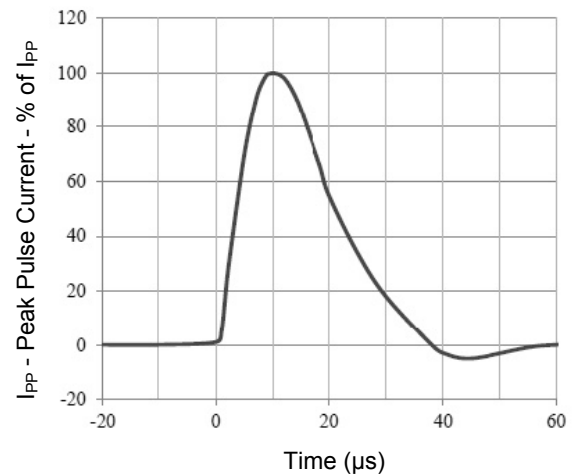
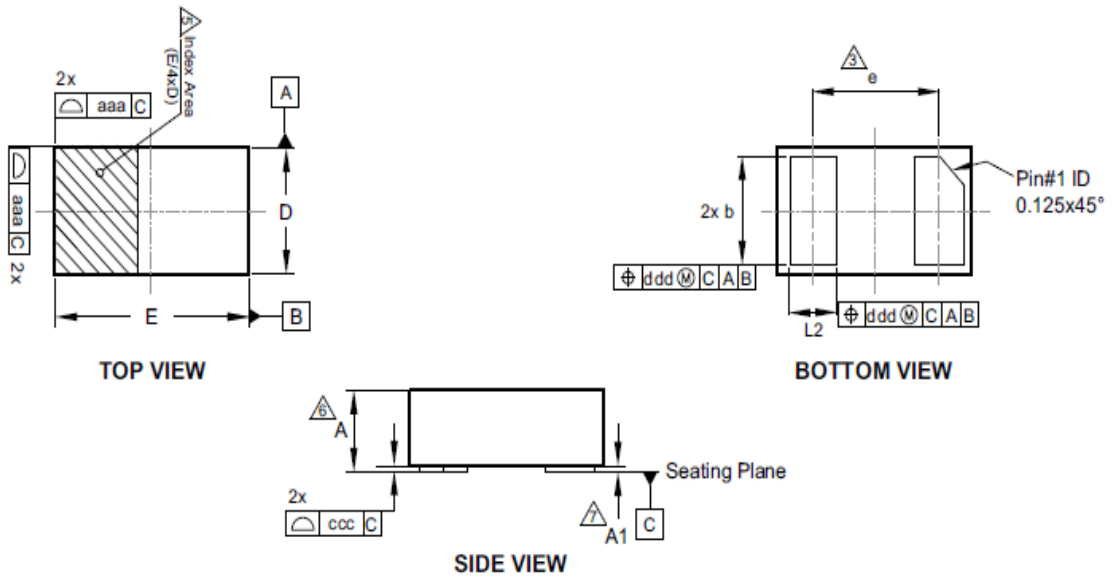


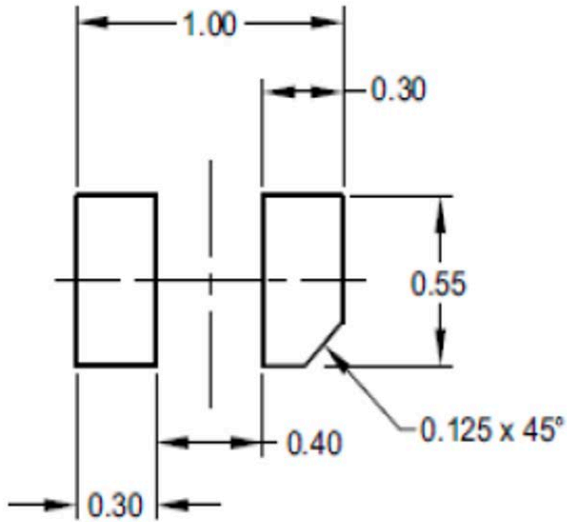
Figure 6. Pulse Waveform - 8/20 μs

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
GSEZ5B0035	DFN1006	21	Tape & Reel	12,000 pcs / Tape & Reel