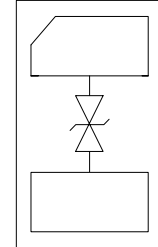


Features

- Ultra low leakage: nA level
- Operating voltage: 15V
- Low clamping voltage
- Complies with following standards:
 - IEC 61000-4-2 (ESD) immunity test
 - Air discharge: ±30kV
 - Contact discharge: ±30kV
 - IEC61000-4-5 (Lightning) 14A (8/20µs)
- RoHS compliant



DFN1006



Schematic Diagram

Applications

- Cellular handsets and accessories
- Display ports
- MDDI / MHL
- USB 2.0 / USB 3.0
- Digital visual interface (DVI)
- PCI express and serial SATA ports

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

Parameter	Symbol	Value	Unit
Peak Pulse Power (8/20µs)	P_{pk}	308	W
Peak Pulse Current (8/20µs)	I_{PP}	14	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	°C
Storage Temperature Range	T_{stg}	-55 to +150	°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}	-	-	-	15	V
Breakdown Voltage	V_{BR}	$I_T=1\text{mA}$	16	-	-	V
Reverse Leakage Current	I_R	$V_{RWM}=15\text{V}$	-	-	0.5	µA
Clamping Voltage	V_C	$I_{PP}=14\text{A}$ (8/20µs pulse)	-	-	22	V
ESD Clamping Voltage ¹	V_C	$I_{PP}=4\text{A}$, $t_p=0.2/100\text{ns}$ (TLP)	-	16.5	-	V
		$I_{PP}=16\text{A}$, $t_p=0.2/100\text{ns}$ (TLP)	-	18.6	-	V
Dynamic Resistance ²	R_{DYN}	$t_p=0.2/100\text{ns}$ (TLP)	-	0.18	-	Ohm
Junction Capacitance	C_J	$V_R=0\text{V}$, $F=1\text{MHz}$	-	0.6	0.8	pF

Note:

1. Transmission line pulse test (TLP) settings: $t_p=100\text{ns}$, $t_r=0.2\text{ns}$.
2. Dynamic resistance calculated from $ITLP=4\text{A}$ to $ITLP=16\text{A}$.

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

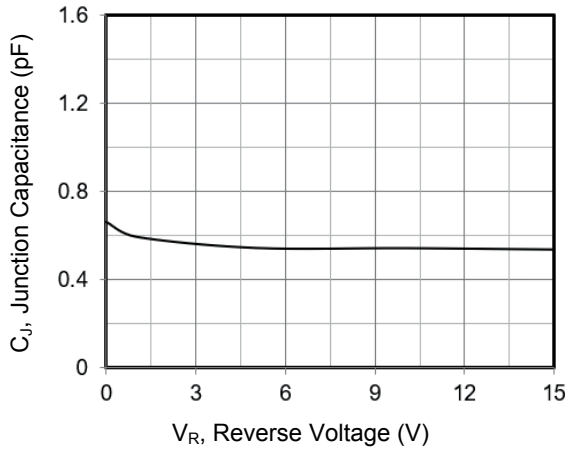


Figure 1. Junction Capacitance vs. Reverse Voltage

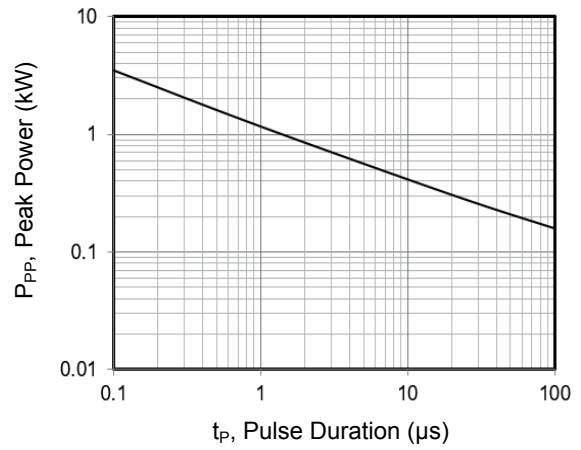


Figure 2. Peak Pulse Power vs. Pulse Time

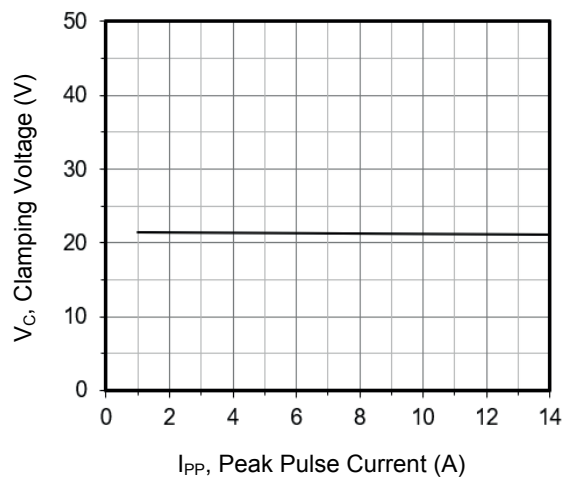


Figure 3. Clamping Voltage vs. Peak Pulse Current
 $(t_p=8/20\mu\text{s})$

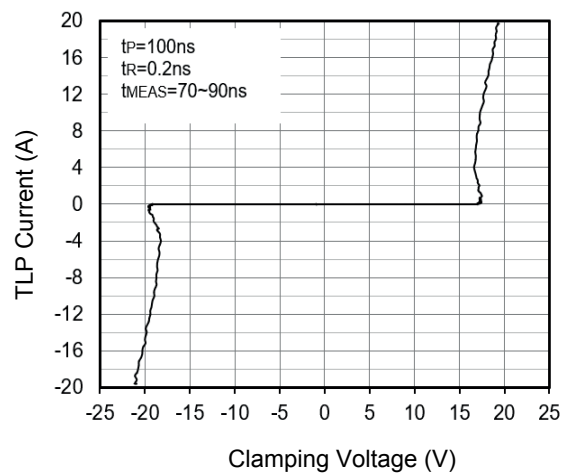


Figure 4. TLP Measurement

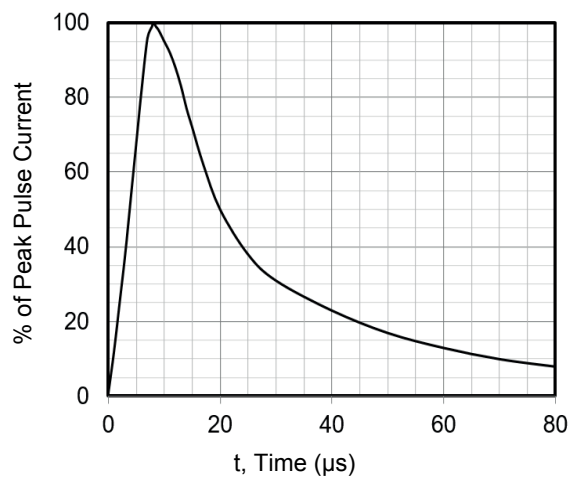


Figure 5. 8 X 20μs Pulse Waveform

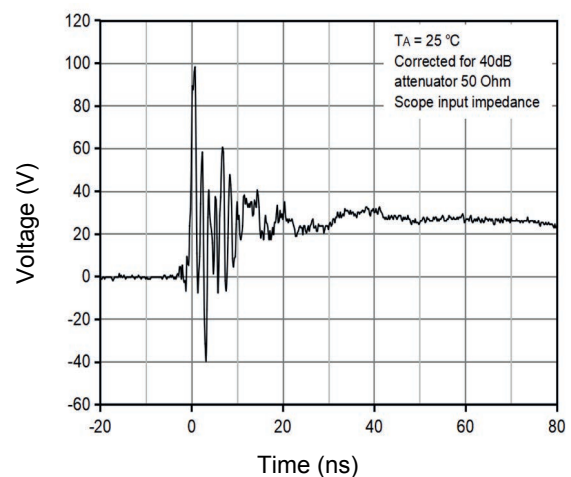
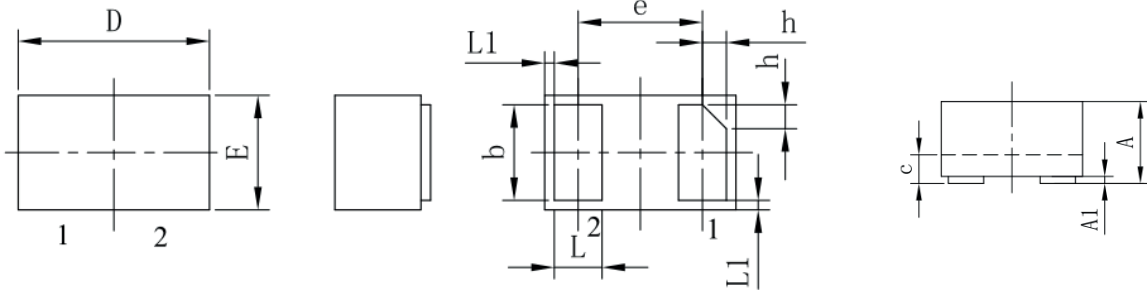


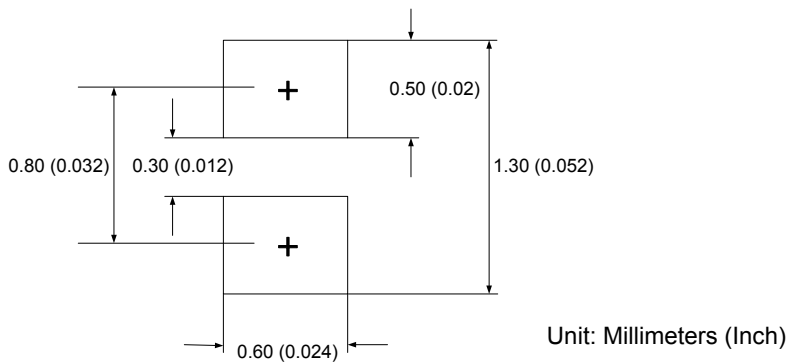
Figure 6. ESD Clamping Voltage
8 kV Contact per IEC61000-4-2

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
GSEZ15B006	DFN1006	1C	Tape & Reel	10,000pcs / Reel