

## Features

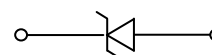
- 130 Watts peak pulse power ( $t_p=8/20\mu s$ )
- DFN1006 package
- Unidirectional configurations
- Solid-state silicon-avalanche technology
- Low clamping voltage
- Low leakage current
- Protection one data/power line to:  
 IEC 61000-4-2  $\pm 30kV$  contact  $\pm 30kV$  air  
 IEC 61000-4-4 (EFT) 40A (5/50ns)
- IEC 61000-4-5 (Lightning) 8.7A (8/20 $\mu s$ )
- RoHS compliant



DFN1006

## Applications

- Audio line, speaker, headset, microphone protection
- Human interface devices (keyboard, touchpad, buttons)
- DC power line protection



Schematic Diagram

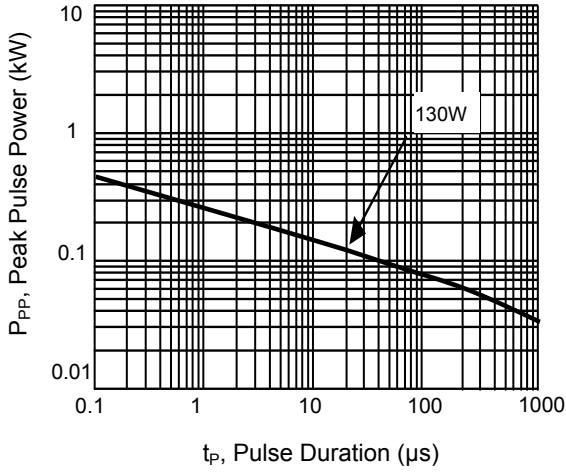
## Absolute Maximum Ratings ( $T_A=25^\circ C$ unless otherwise specified)

Parameter	Symbol	Value	Unit
Peak Pulse Power ( $T_p=8/20\mu s$ )	$P_{PP}$	130	W
Peak Pulse Current ( $T_p=8/20\mu s$ )	$I_{PP}$	8.7	A
ESD per IEC 61000-4-2 (Air)	$V_{ESD}$	$\pm 30$	kV
ESD per IEC 61000-4-2 (Contact)		$\pm 30$	
Operating Temperature Range	$T_J$	-55 to +125	$^\circ C$
Storage Temperature Range	$T_{stg}$	-55 to +150	$^\circ C$

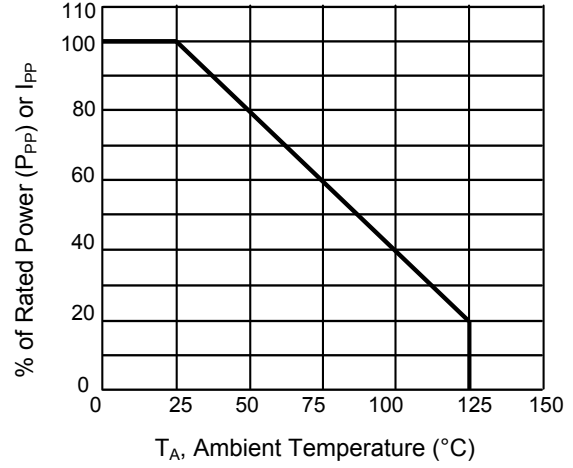
## Electrical Characteristics ( $T_A=25^\circ C$ unless otherwise specified)

Parameter	Symbol	Condition	Min	Typ	Max	Unit
Reverse Stand-Off Voltage	$V_{RWM}$	-	-	-	5.0	V
Reverse Breakdown Voltage	$V_{BR}$	$I_T=1mA$	6.0	6.8	8.5	V
Reverse Leakage Current	$I_R$	$V_R=5.0V$	-	-	1	$\mu A$
Clamping Voltage (IEC 61000-4-5)	$V_C$	$I_{PP}=8.7A$	-	12.3	15	V
Trigger Voltage (IEC 61000-4-2)	$V_T$	$V_{ESD}=8kV$	-	90	-	V
Clamping Voltage (IEC 61000-4-2)	$V_C$	$V_{ESD}=8kV$	-	15	-	V
Junction Capacitance	$C_J$	$V_R=0V, F=1MHz$	-	53	-	pF

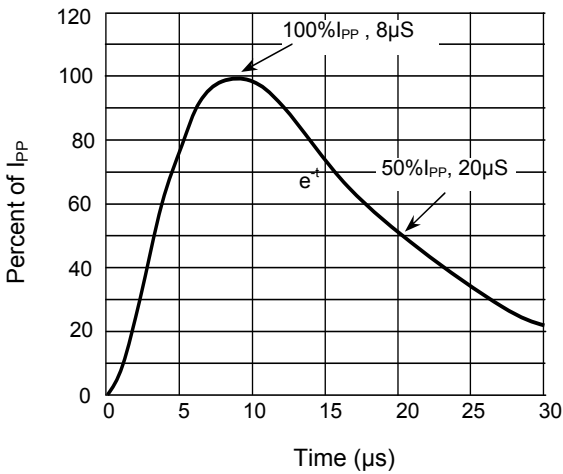
**Typical Characteristic Curves**



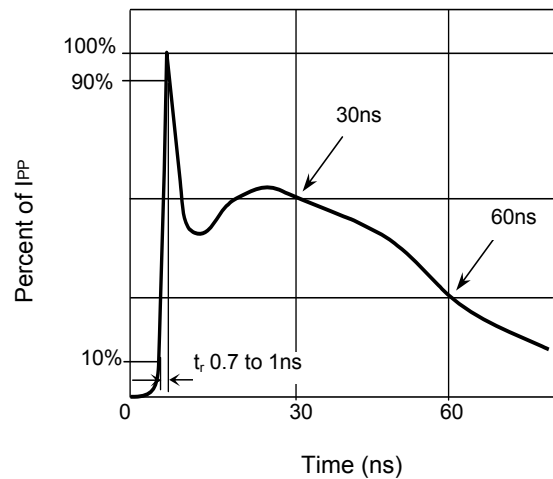
**Figure 1. Peak Pulse Power Rating Curve**



**Figure 2. Pulse Derating Curve**

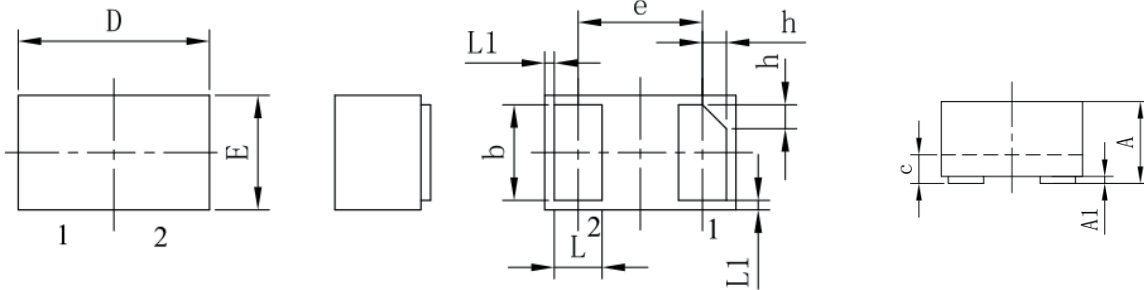


**Figure 3. Pulse Waveform-8/20μs**



**Figure 4. Pulse Waveform-ESD (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

**Order Information**

Device	Package	Marking	Carrier	Quantity
GSES5VD1006-2U	DFN1006	5U	Tape & Reel	10,000pcs / Reel