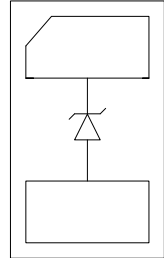


Features

- Small package: 1.6x1.0x0.5mm
- Protects one data or power line
- Operating voltage: 15V
- High peak pulse current capability
- Ultra low clamping voltage
- 2-pin leadless package
- RoHS Compliant
- Complies with following standards:
 - IEC 61000-4-2 (ESD) immunity test
 - Air discharge: ±30kV
 - Contact discharge: ±30kV
 - – IEC 61000-4-5 (Lightning) 60A (8/20µs)



DFN1610



Schematic Diagram

Applications

- Mobile phones and accessories
- Battery protection
- USB VBus
- Power line protection
- Hand held portable applications

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

Parameter	Symbol	Value	Unit
Peak Pulse Power (8/20µs)	P_{pk}	1875	W
Peak Pulse Current (8/20µs)	I_{PP}	60	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}	$I_T=1\text{mA}$	16.5	-	-	V
Reverse Leakage Current	I_R	$V_{RWM}=15\text{V}$	-	-	0.1	µA
Forward Voltage	V_F	$I_F=10\text{mA}$	-	-	1.2	V
Clamping Voltage	V_C	$I_{PP}=10\text{A}$ (8 x 20µs pulse)	-	-	22	V
		$I_{PP}=55\text{A}$ (8 x 20µs pulse)	-	-	34	
Junction Capacitance	C_J	$V_R=0\text{V}$, $F=1\text{MHz}$	-	-	450	pF

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

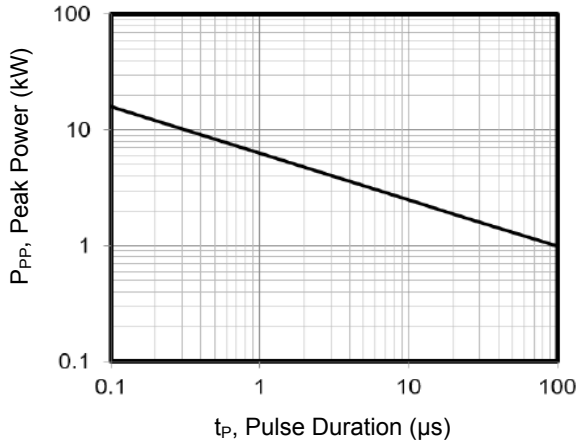


Figure 1. Peak Pulse Power vs. Pulse Time

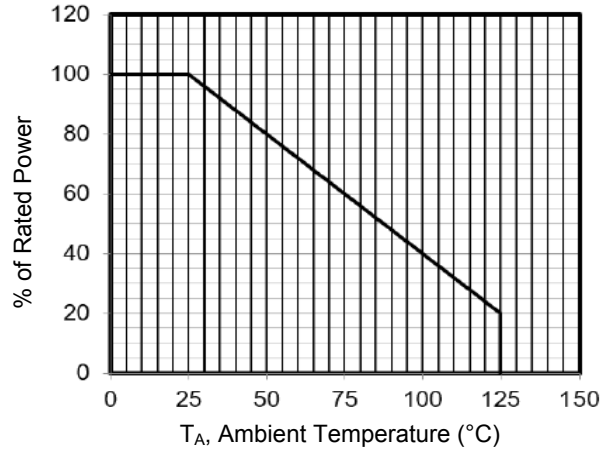


Figure 2. Power Derating Curve

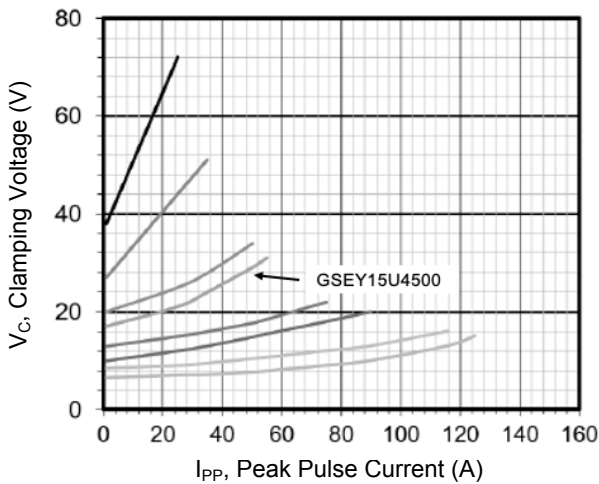


Figure 3. Clamping Voltage vs. Peak Pulse Current
($t_p = 8/20\mu\text{s}$)

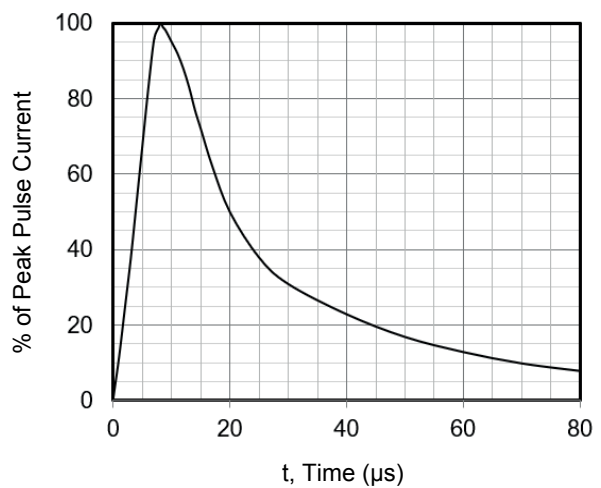


Figure 4. 8 X 20μs Pulse Waveform

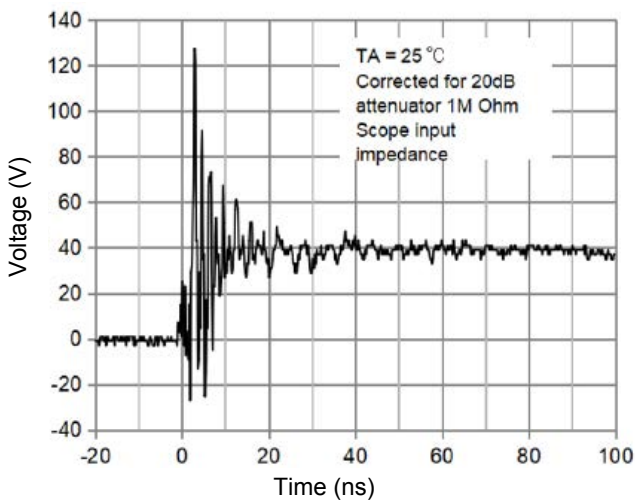


Figure 5. ESD Clamping Voltage
8 kV Contact per IEC61000-4-2

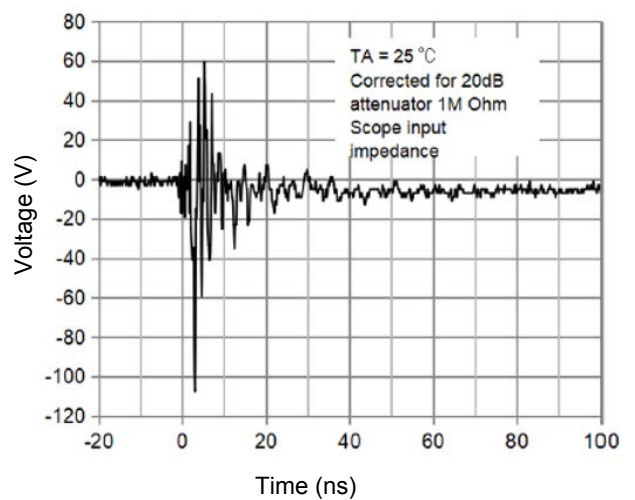
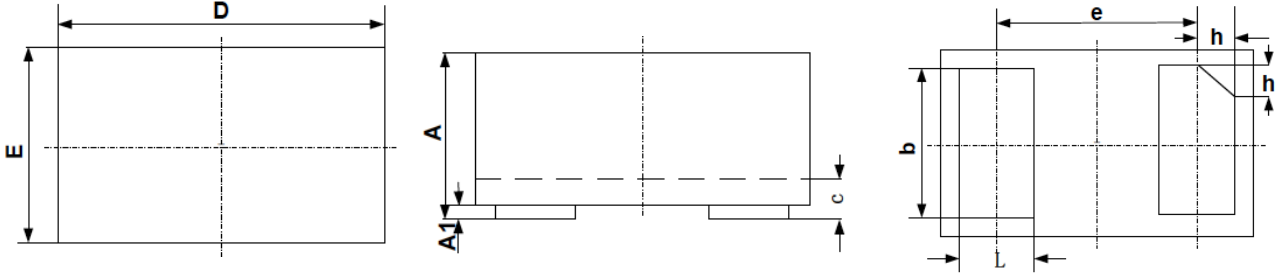


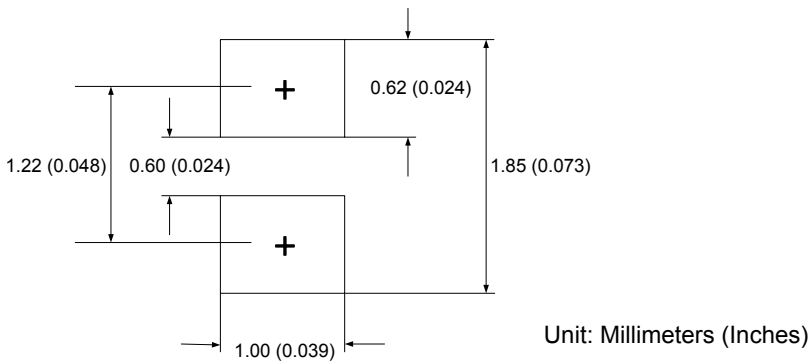
Figure 6. ESD Clamping Voltage
-8 kV Contact per IEC61000-4-2

Package Outline Dimensions (DFN1610)



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	0.75	0.85	0.030	0.033
c	0.10	0.20	0.004	0.008
D	1.55	1.65	0.061	0.065
e	1.10 BSC		0.043 BSC	
E	0.95	1.05	0.037	0.041
L	0.35	0.45	0.014	0.018
h	0.15	0.25	0.006	0.010

Recommended Pad Layout



Order Information

Device	Package	Marking	Carrier	Quantity
GSEY15U4500	DFN1610	75	Tape & Reel	3,000pcs / Reel