

Features

- 2000W peak pulse power ($t_p=8/20\mu s$)
- DFN1610 package
- Fast response time, typically $< 1\text{ ns}$
- Excellent clamping voltage
- Low leakage current
- IEC 61000-4-2 $\pm 30\text{kV}$ (Air) ESD protection
- IEC 61000-4-2 $\pm 30\text{kV}$ (Contact) ESD protection
- IEC 61000-4-5 100A (8/20us) SURGE protection
- IEC 61000-4-4 40A (5/50ns) EFT protection



DFN1610



Schematic Diagram

Applications

- USB Vbus
- Power Line
- Power Management

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

Parameter	Symbol	Value	Unit
Peak Pulse Power ($T_p=8/20\mu s$)	P_{PP}	2000	W
Peak Pulse Current ($T_p=8/20\mu s$)	I_{PP}	100	A
Operating Temperature	T_J	-55 to +125	$^\circ\text{C}$
Storage Temperature	T_{STG}	-55 to +150	$^\circ\text{C}$

Electrical Characteristics ($T_A=25^\circ\text{C}$, Unless otherwise specified)

Parameter	Symbol	Conditions	Min	Typ	Max	Unit
Reverse Stand-off Voltage	V_{RWM}		-	-	5	V
Reverse Breakdown Voltage	V_{BR}	$I_T=1\text{mA}$	5.7	-	7	V
Reverse Leakage Current	I_R	$V_R=5\text{V}$	-	-	0.5	μA
Clamping Voltage ¹	V_C	$I_{pp}=100\text{A}$	-	15	18	V
Junction Capacitance	C_J	$V_R=0\text{V}, f=1\text{MHz}$	-	700	850	pF

Note1: IEC61000-4-5

Typical Characteristic Curves

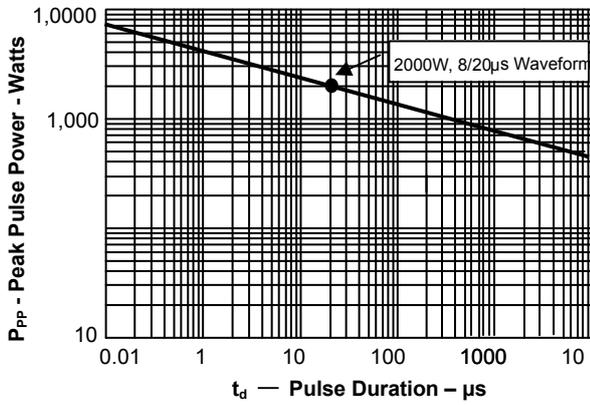


Fig.1 Peak Pulse Power VS Pulse Time

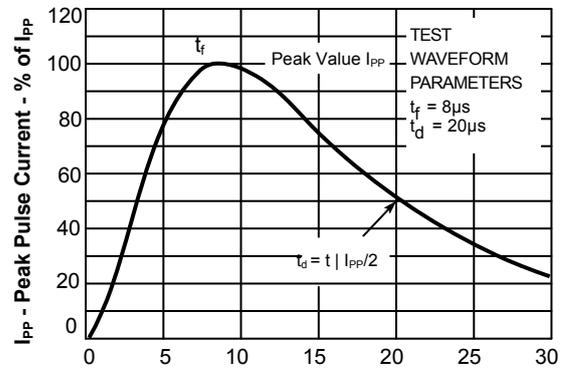


Fig.2 Pulse WaveForm-8/20µs

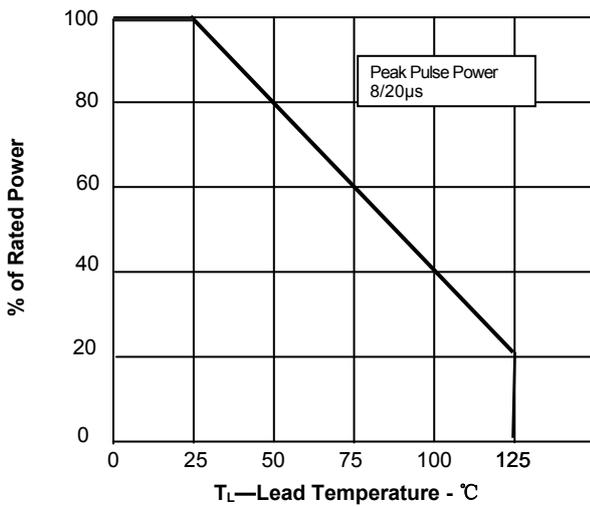


Fig.3 Power Derating Curve

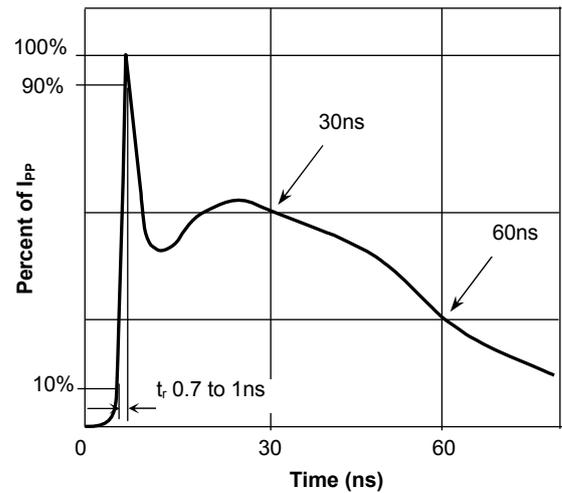
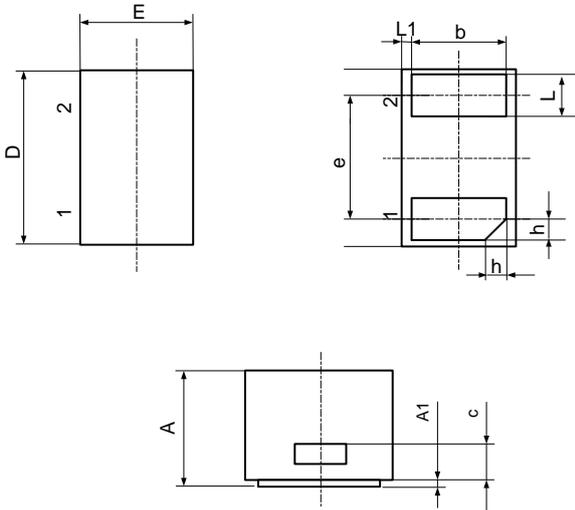


Fig.4 Pulse Waveform-ESD(IEC61000-4-2)

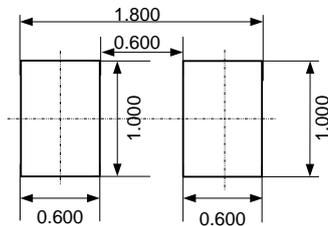
Package Outline Dimensions

DFN1610



SYMBOL	DIMENSIONS		
	MILLIMETER		
	MIN	NOM	MAX
A	0.450	0.500	0.550
A1	0.000	0.020	0.050
b	0.750	0.800	0.850
c	0.10	0.150	0.200
D	1.550	1.600	1.650
e	1.1BSC		
E	0.950	1.000	1.050
L	0.350	0.400	0.450
L1	0.05REF		
h	0.150	0.200	0.250

Recommended Pad Layout (Unit in mm)



Order Information

Device	Package	Marking	Carrier	Quantity	HSF Status
GSEY5U850	DFN1610	4.5P	Tape & Reel	3,000pcs / Reel	RoHS compliant