High Capacitance Series
ESD Protection

PTN162H550M6B220

Features

- 2200Watts peak pulse power (tp = 8/20μs)
- Tiny DFN1610 package
- Bidirectional configurations
- Solid-state silicon-avalanche technology
- Low clamping voltage
- Low leakage current

DFN1610

IEC COMPATIBILITY (EN61000-4)

- **IEC 61000-4-2 ±30kV contact ±30kV air**
- **IEC 61000-4-4 (EFT) 40A (5/50ns)**
- **IEC 61000-4-5 (Lightning) 160A (8/20μs)**

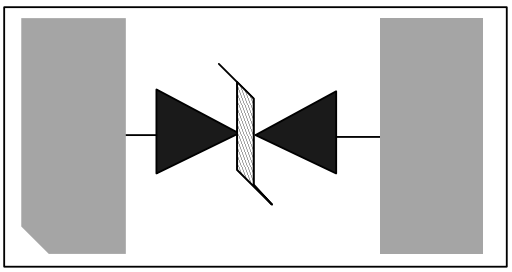
Applications

- Cell Phone Handsets and Accessories
- Microprocessor based equipment
- Personal Digital Assistants (PDA's)
- Notebooks, Desktops, and Servers
- Portable Instrumentation

Mechanical Characteristics

- DFN1610 package
- Molding compound flammability rating: UL 94V-0
- Packaging: Tape and Reel
- RoHS/WEEE Compliant

Schematic & PIN Configuration



DFN1610

Absolute Maximum Rating

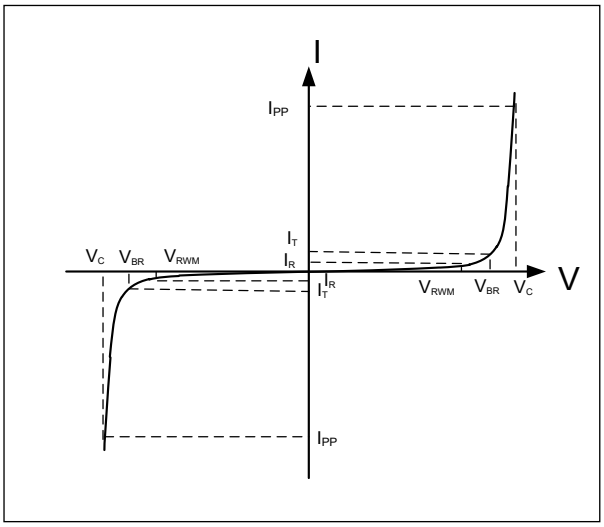
Rating	Symbol	Value	Units
Peak Pulse Power (t_p =8/20μs)	P_{PP}	2200	Watts
Peak Pulse Current (t_p =8/20μs) (note1)	I_{pp}	160	A
ESD per IEC 61000-4-2 (Air) ESD per IEC 61000-4-2 (Contact)	V_{ESD}	30 30	kV
Lead Soldering Temperature	T_L	260(10seconds)	℃
Junction Temperature	T_J	-55 to + 125	℃
Storage Temperature	T_{stg}	-55 to + 125	℃

Electrical Characteristics

Parameter	Symbol	Conditions	Min	Typical	Max	Units
Reverse Stand-Off Voltage	V_{RWM}				6.8	V
Reverse Breakdown Voltage	V_{BR}	I_T=1mA	7.0			V
Reverse Leakage Current	I_R	V_{RWM}=6.8V,T=25℃			1	μA
Peak Pulse Current	I_{PP}	tp =8/20μs		160		A
Clamping Voltage	V_C	I_{PP}=160A,t_p=8/20μs		14		V
Junction Capacitance	C_j	V_R = 0V, f = 1MHz		550		pF

Electrical Parameters (TA = 25°C unless otherwise noted)

Symbol	Parameter
I_{PP}	Maximum Reverse Peak Pulse Current
V_C	Clamping Voltage @ I_{PP}
V_{RWM}	Working Peak Reverse Voltage
I_R	Maximum Reverse Leakage Current @ V_{RWM}
V_{BR}	Breakdown Voltage @ I_T
I_T	Test Current



Note:. 8/20μs pulse waveform.

Typical Characteristics

Figure 1: Peak Pulse Power vs. Pulse Time

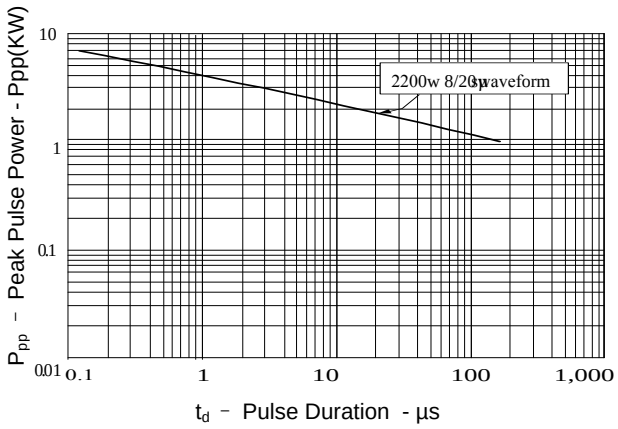


Figure 2: Power Derating Curve

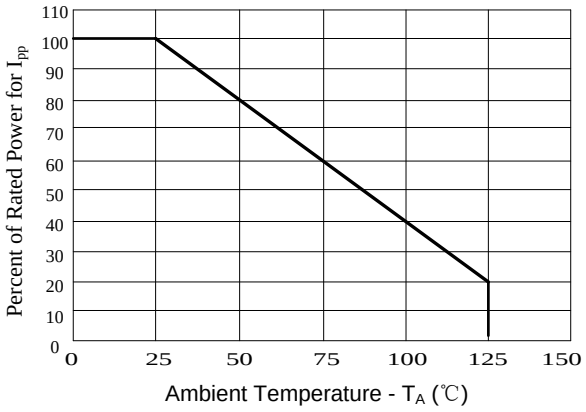


Figure3: Pulse Waveform

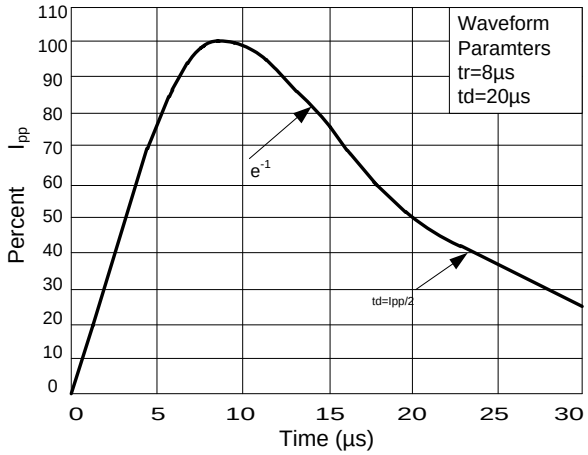
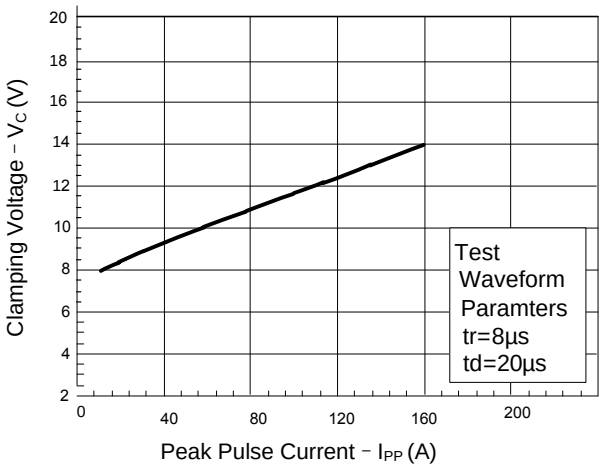
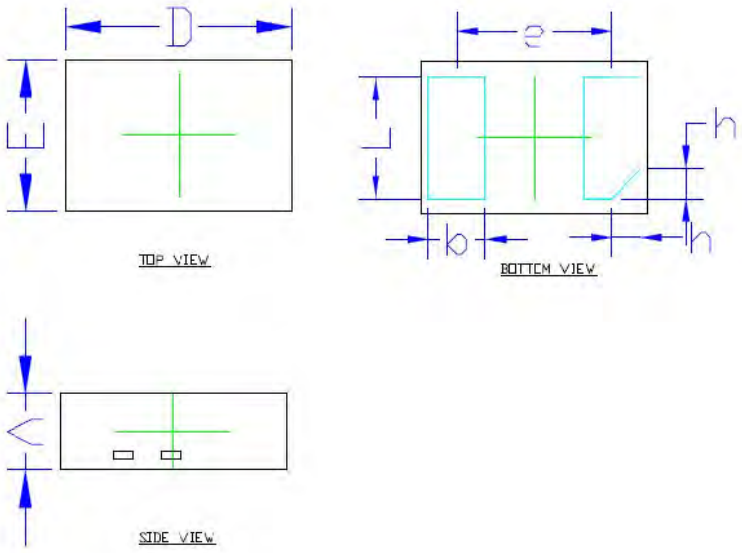


Figure 4: Clamping Voltage vs.Ipp

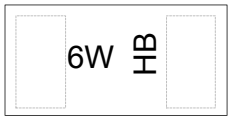


Outline Drawing – DFN1610



SYMBOL	MILLIMETER		
	MIN	NOM	MAX
A	0.45	0.50	0.55
D	1.55	1.60	1.65
E	0.95	1.00	1.05
b	0.35	0.40	0.45
L	0.75	0.80	0.85
e	1.10BSC		
h	0.15	0.20	0.25

Marking



Ordering information

Order code	Package	Base qty	Delivery mode
PTN162H550M6B220	DFN1610	10k	Tape and reel