

Features

- Low leakage current
- Low clamping voltage
- Working voltage: 7V
- 2-pin leadless package
- RoHS Compliant



DFN1610-2L

IEC COMPATIBILITY (EN61000-4)

- IEC 61000-4-2 $\pm 30\text{kV}$ contact $\pm 30\text{kV}$ air
- IEC 61000-4-5 (Lightning) 115A (8/20 μs)

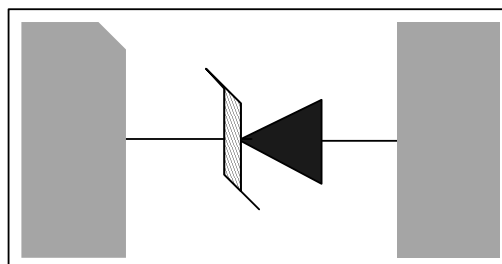
Applications

- Mobile Phones
- Battery Protection
- Power Line Protection
- Vbat pin for Mobile Devices
- Hand Held Portable Applications

Mechanical Characteristics

- Package: DFN1610-2 (1.6x1.0x0.5mm)
- Case Material: "Green" Molding Compound.
- UL Flammability Classification Rating 94V-0
- Moisture Sensitivity: Level 3 per J-STD-020
- Terminal Connections: See Diagram Below

Schematic & PIN Configuration



DFN1610-2L

Absolute Maximum Rating

Rating	Symbol	Value	Units
Peak Pulse Power ($t_p = 8/20\mu s$)	P_{PP}	2300	Watts
Peak Pulse Current ($t_p = 8/20\mu s$)	I_{pp}	115	A
ESD per IEC 61000-4-2 (Air) ESD per IEC 61000-4-2 (Contact)	V_{ESD}	30 30	kV
Junction Temperature	T_J	-55 to + 125	°C
Storage Temperature	T_{stg}	-55 to + 125	°C

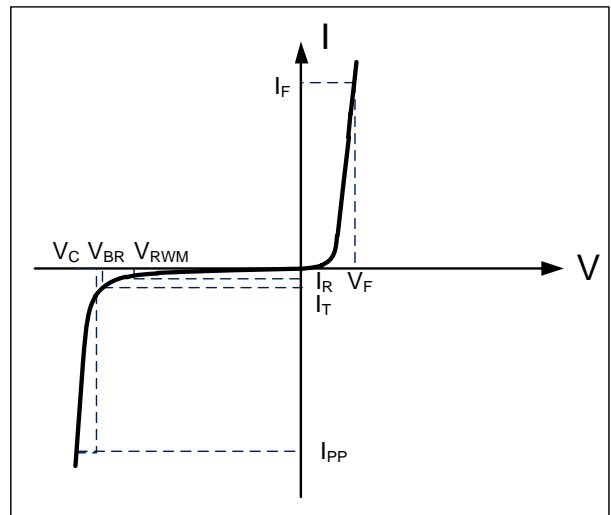
Electrical Characteristics

Parameter	Test Condition	Symbol	Min	Typ	Max	Unit
Reverse Working Voltage		V_{RWM}			7	V
Breakdown Voltage	$I_T = 1mA$	V_{BR}	7.5		10	V
Reverse Leakage Current	$V_{RWM} = 7V$	I_R			0.5	uA
Clamping Voltage	$I_{PP} = 10A$ (8 x 20 μs pulse)	V_C			10	V
Clamping Voltage	$I_{PP} = 115A$ (8 x 20 μs pulse)	V_C			20	V
Junction Capacitance	$V_R = 0V$, $f = 1MHz$	C_J			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: 8/20 μs pulse waveform.



Typical Characteristics

FIG1: Power rating derating curve

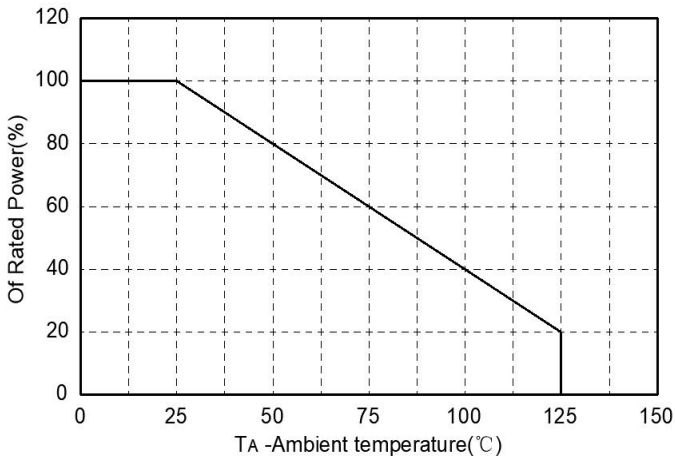


FIG2: pulse Waveform

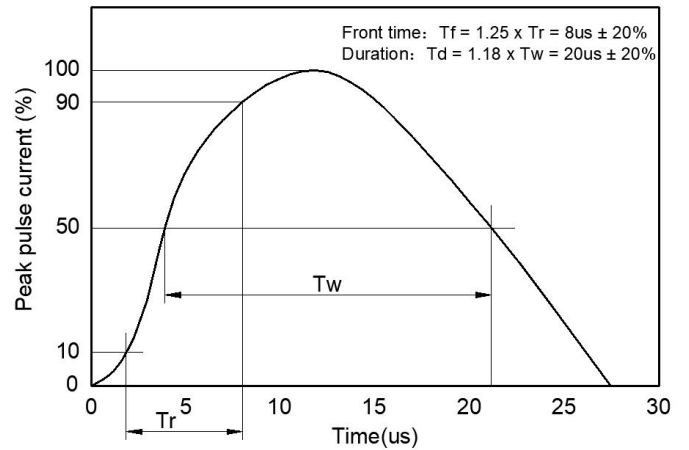


FIG3: Capacitance between terminals characteristics

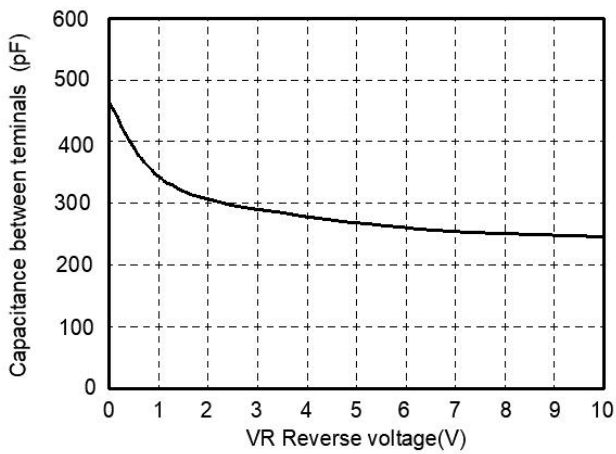
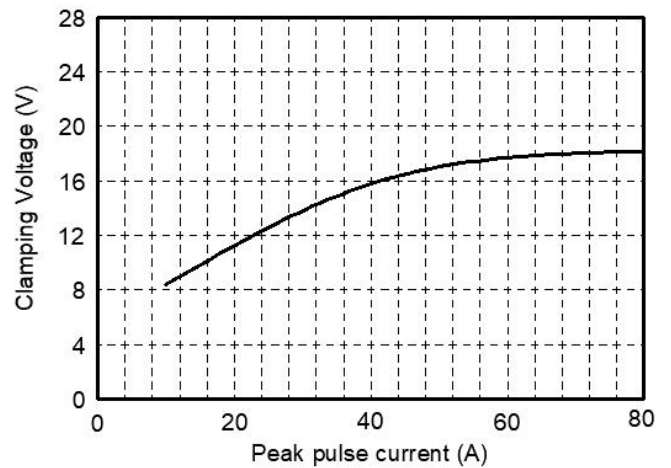
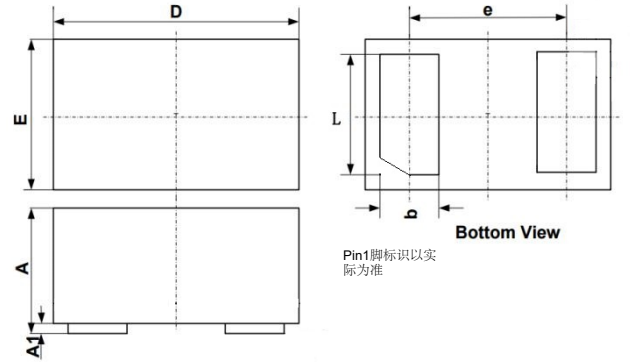


FIG4: Clamping Voltage vs. Peak Pulse Current



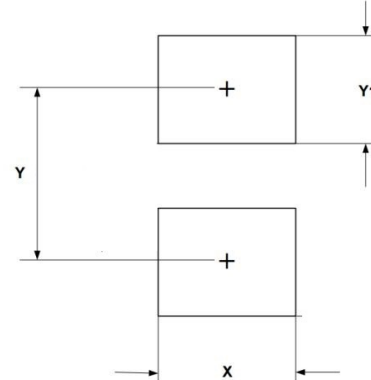
Outline Drawing

SYM	DIMENSIONS			
	MILLIMETERS		INCHES	
	MIN	MAX	MIN	MAX
A	0.50	0.65	0.020	0.026
A1	0.00	0.05	0.000	0.002
b	0.35	0.45	0.013	0.017
D	1.50	1.70	0.059	0.066
e	1.05BSC		0.041BSC	
E	0.90	1.10	0.035	0.043
L	0.75	0.95	0.029	0.037

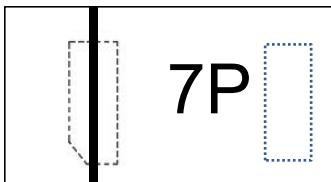


Suggested Land Pattern

SYM	DIMENSIONS	
	MILLIMETERS	INCHES
X	1.00	0.039
Y	1.20	0.047
Y1	0.60	0.024



Marking



7P=Marking Code

Ordering information

Order code	Package	Base qty	Delivery mode
PTN162H550S7C230	DFN1610-2L	3k	Tape and reel