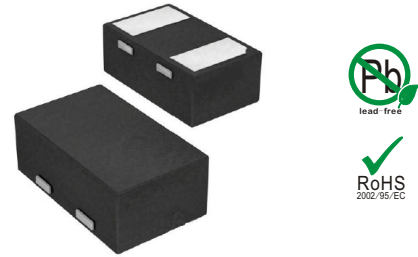


Features

- Ultra small package: 1.6X1.0X0.5mm
- Protects one data or power line
- Working voltage: 5V
- 2-pin leadless package
- RoHS compliant



IEC Compatibility (EN61000-4)

- IEC 61000-4-2 (ESD) $\pm 30\text{kV}$ contact $\pm 30\text{kV}$ air
- IEC 61000-4-5 (Lightning) 120A (8/20 μs)

DFN1610

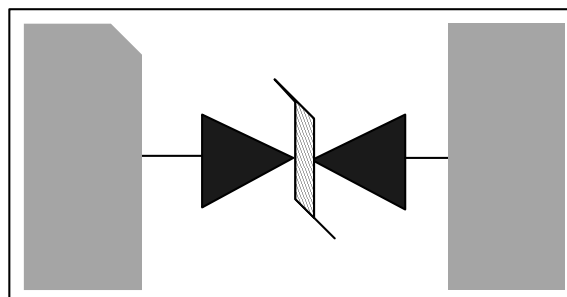
Applications

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

Mechanical Characteristics

- Lead Finish: NiPdAu
- 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

Absolute Maximum Ratings

Parameter	Symbol	Value	Unit
Peak Pulse Power ($t_p = 8/20\mu s$ waveform)	P_{PP}	1620	W
Peak Pulse Current (8/20 μs)	I_{PP}	120	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	$^{\circ}C$
Storage Temperature Range	T_{STG}	-55 to +150	$^{\circ}C$

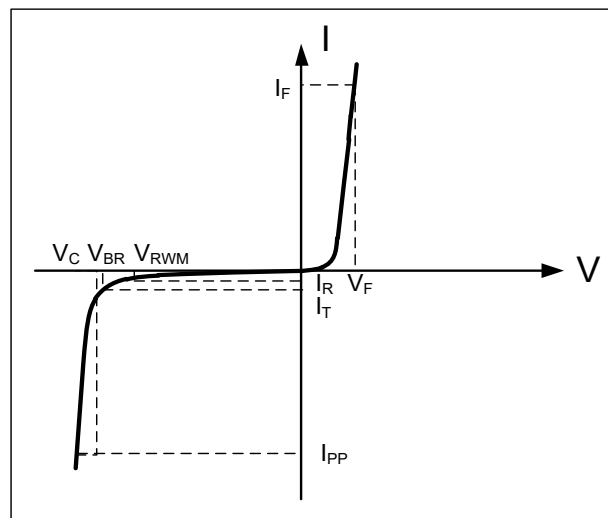
Electrical Characteristics

Parameter	Symbol	Test Condition	Min	Typ	Max	Unit
Reverse Working Voltage	V_{RWM}				5	V
Breakdown Voltage	V_{BR}	$I_T = 1mA$	6			V
Reverse Leakage Current	I_R	$V_{RWM} = 5V$			0.5	μA
Clamping Voltage	V_C	$I_{PP} = 20A$ (8 x 20 μs pulse)			8.5	V
Clamping Voltage	V_C	$I_{PP} = 120A$ (8 x 20 μs pulse)			13.5	V
Junction Capacitance	C_J	$V_R = 0V$, $f = 1MHz$			300	pF

Electrical Parameters (TA = 25 $^{\circ}C$ unless otherwise noted)

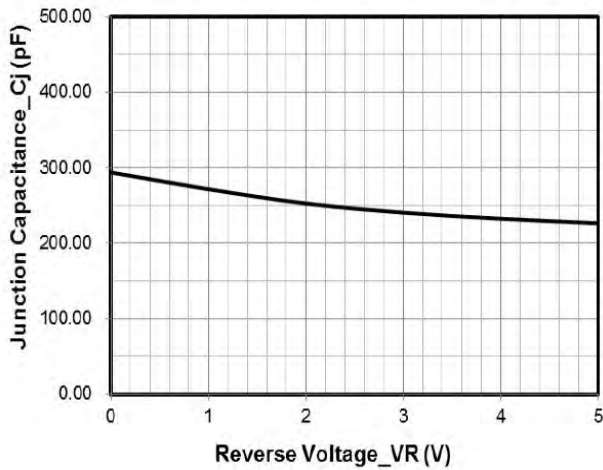
Symbol	Parameter
I_{PP}	Maximum Reverse Peak Pulse Current
V_C	Clamping Voltage @ I_{PP}
V_{RWM}	Working Peak Reverse Voltage
I_R	Maximum Reverse Leakage Current @ V_{RWM}
V_{BR}	Breakdown Voltage @ I_T
I_T	Test Current

Note.: 8/20 μs pulse waveform.

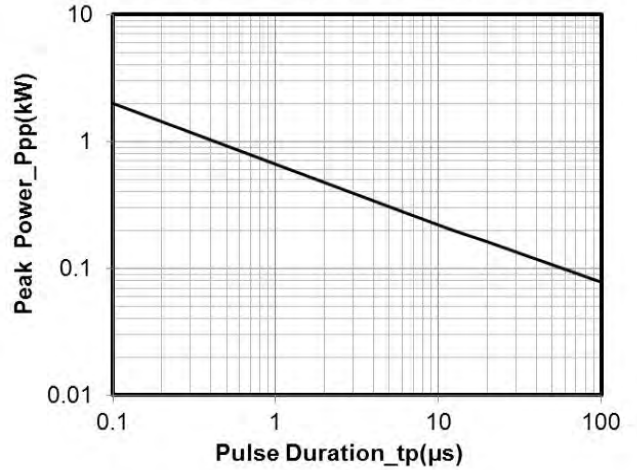


Typical Performance Characteristics

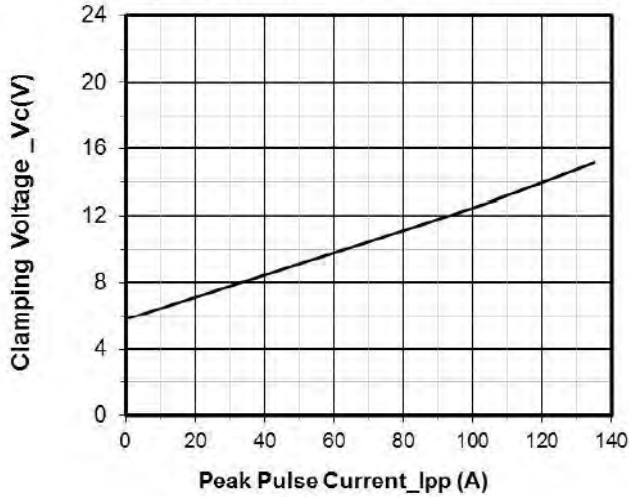
Junction Capacitance vs. Reverse Voltage



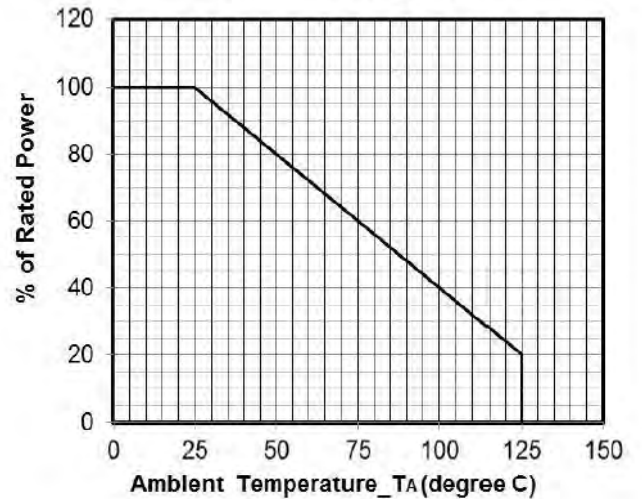
Peak Pulse Power vs. Pulse Time



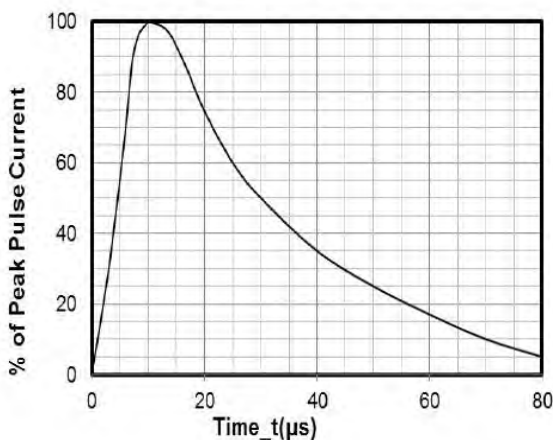
Clamping Voltage vs. Peak Pulse Current



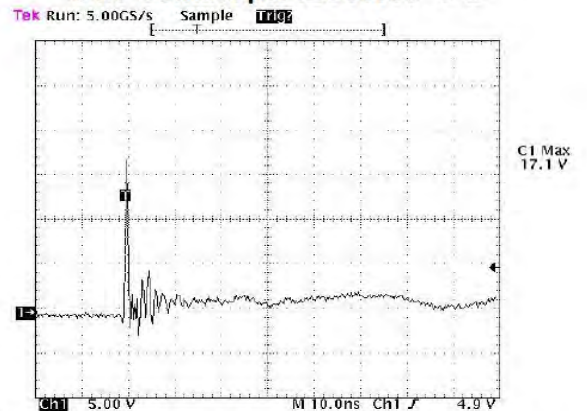
Power Derating Curve



8 X 20μs Pulse Waveform

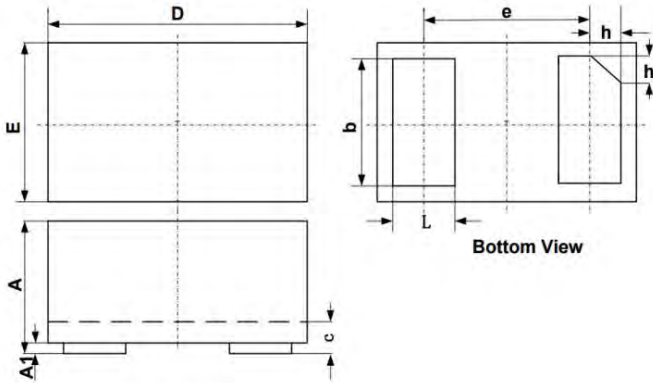


**ESD Clamping Voltage
+8 kV Contact per IEC61000-4-2**



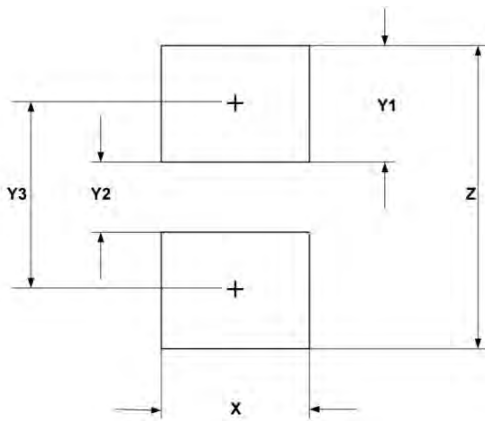
Note: Data is taken with a 10x attenuator

Package Mechanical Data



SYM	DIMENSIONS					
	MILLIMETERS			INCHES		
	MIN	NOM	MAX	MIN	NOM	MAX
A	0.450	0.500	0.550	0.018	0.020	0.022
A1	0.000	0.020	0.050	0.000	0.001	0.002
b	0.750	0.800	0.850	0.030	0.032	0.034
c	0.100	0.150	0.200	0.004	0.006	0.007
D	1.550	1.600	1.650	0.062	0.064	0.066
e	1.100 BSC			0.044 BSC		
E	0.950	1.000	1.050	0.038	0.040	0.042
L	0.350	0.400	0.450	0.014	0.016	0.018
h	0.150	0.200	0.250	0.006	0.008	0.010

Suggested Land Pattern



SYM	DIMENSIONS	
	MILLIMETERS	INCHES
X	1.000	0.040
Y1	0.620	0.025
Y2	0.600	0.024
Y3	1.220	0.049
Z	1.850	0.074

Ordering Information

Order code	Package	Base qty	Delivery mode
PTN162H300S5B162	DFN1610	3k	Tape and reel