

Features

- Ultra low leakage: nA level
- Operating voltage: 12V
- Low clamping voltage
- 2-pin leadless package
- Complies with following standards:
 - IEC 61000-4-2 (ESD) immunity test
Air discharge: $\pm 30\text{kV}$
Contact discharge: $\pm 30\text{kV}$
 - IEC61000-4-4 (EFT) 80A (5/50ns)
 - IEC61000-4-5 (Lightning)70A (8/20 μs)
- RoHS Compliant

Applications

- Mobile Phones and Accessories
- Battery Protection
- USB VBus
- Power Line Protection
- Hand Held Portable Applications

Mechanical Characteristics

- Package: DFN1610-2
- Case Material: "Green" Molding Compound.
- UL Flammability Classification Rating 94V-0
- Quantity Per Reel:3,000pcs
- Reel Size:7 inch
- Device Marking: 12P

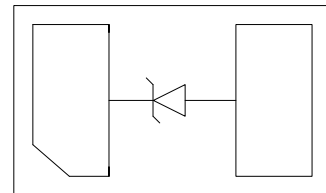
Absolute Maximum Ratings (Tamb=25°C unless otherwise specified)

Parameter	Symbol	Value	Unit
Peak Pulse Power (8/20 μs pulse)	P _{pk}	1800	W
Peak Pulse Current (8/20 μs pulse)	I _{pp}	70	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	-40 to +125	°C
Storage Temperature Range	T _{stg}	-55 to +150	°C

Dimensions DFN1610-2



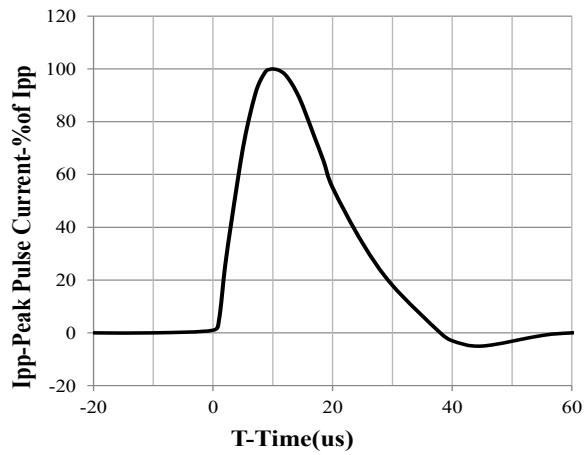
Pin Configuration



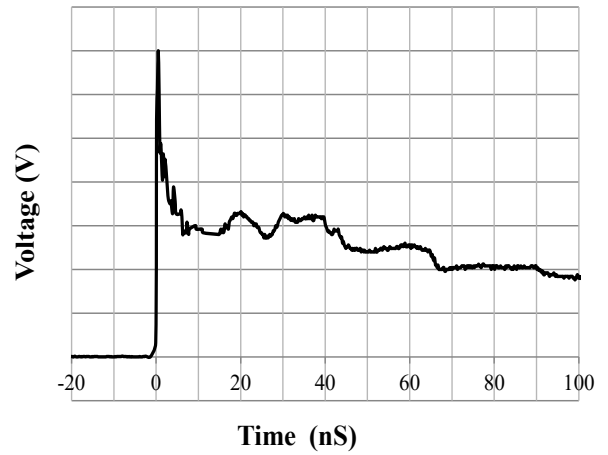
Electrical Characteristics ($T_A=25^{\circ}\text{C}$ unless otherwise specified)

Parameter	Symbol	Test Condition	Min	Typ	Max	Unit
Reverse Working Voltage	V_{RWM}				12	V
Breakdown Voltage	V_{BR}	$I_T = 1\text{mA}$	13	14.5	17	V
Reverse Leakage Current	I_R	$V_{RWM} = 12\text{V}$		10	100	nA
Clamping Voltage	V_C	$I_{PP} = 1\text{A}$ (8 / 20 μs pulse)			18	V
Clamping Voltage	V_C	$I_{PP} = 35\text{A}$ (8 / 20 μs pulse)		18	22	V
Clamping Voltage	V_C	$I_{PP} = 70\text{A}$ (8 / 20 μs pulse)		21.8	26	V
Junction Capacitance	C_J	$V_R = 0\text{V}$, $f = 1\text{MHz}$,		400	600	pF

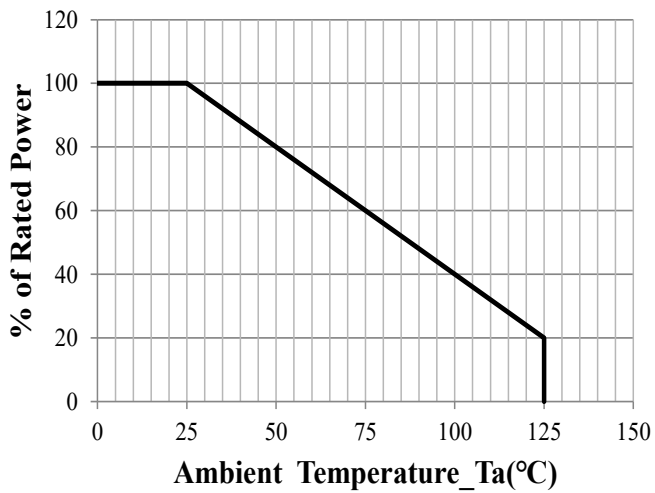
Typical Performance Characteristics ($T_A=25^{\circ}\text{C}$ unless otherwise Specified)



8 / 20us Pulse Waveform

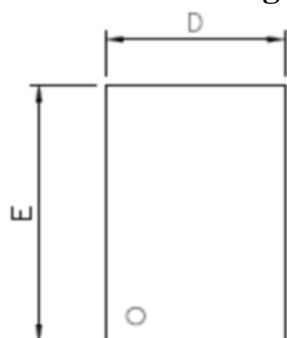


IEC61000-4-2 Pulse Waveform

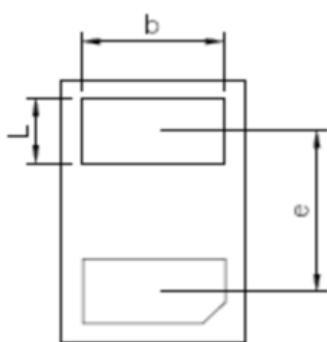


Power Derating Curve

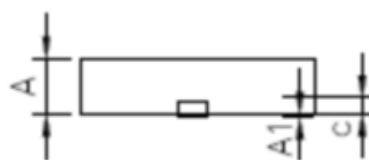
DFN1610-2 Package Outline Drawing



TOP VIEW

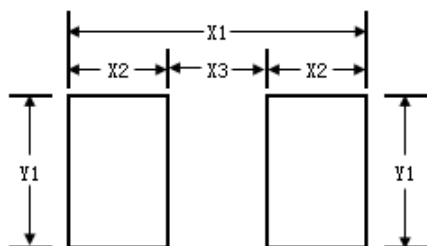


BOTTOM VIEW



SIDE VIEW

Suggested Land Pattern



SYM	DIMENSIONS	
	MILLIMETERS	INCHES
X1	1.700	0.0669
X2	0.600	0.0236
X3	0.500	0.0197
Y1	1.000	0.0394

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