

Features

- Low operating voltage: 7V
- 1800W peak pulse power (8/20 μ s)
- Ultra low leakage: nA level
- Low clamping voltage
- -IEC 61000-4-2 (ESD) immunity test
 - Air discharge: ± 30 kV
 - Contact discharge: ± 30 kV
- -IEC61000-4-4 (EFT) 40A (5/50ns)
- -IEC61000-4-5 (Lightning) 115A (8/20 μ s)
- 2-pin leadless package
- These are Pb-Free Devices
- Response Time is Typically < 1 ns

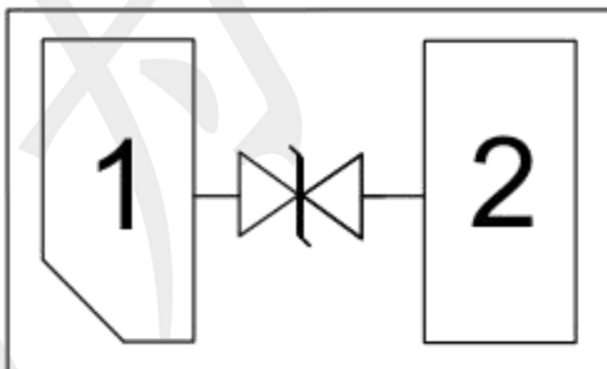
Mechanical Characteristics

- Package: DFN1610-2
- Lead Finish: Matte Tin
- Case Material: "Green" Molding Compound
- Terminal Connections: See Diagram Below
- -IEC 61000-4-2 (ESD) immunity test

Applications

- Power Management
- Industrial Application
- Power Supply Protection
- Portable Instrumentation
- Peripherals

Dimensions and Pin Configuration



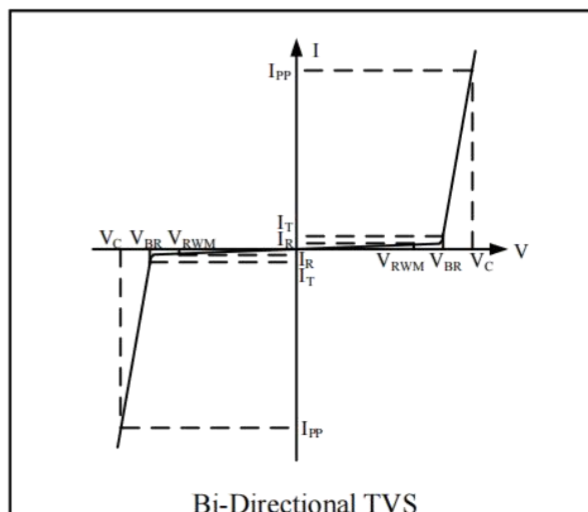
Absolute Maximum Ratings (T_{amb}=25°C unless otherwise specified)

Parameter	Symbol	Value	Unit
Peak Pulse Power (8/20μs)	P _{pk}	1800	W
Peak Pulse Current (8/20μs)	I _{pp}	115	A
ESD per IEC 61000-4-2 (Air) ESD per IEC 61000-4-2 (Contact)	VESD	±30 ±30	KV
Operating Temperature Range	T _J	-55 to +125	°C
Storage Temperature Range	T _{stg}	-55 to +150	°C

Electrical Characteristics (T_A=25°C unless otherwise specified)

Parameter	Symbol	Min	Typ	Max	Unit	Test Condition
Reverse Working Voltage	V _{RWM}	--	--	7	V	
Breakdown Voltage	V _{BR}	7.3	--	9.5	V	I _T = 1mA
Reverse Leakage Current	I _R	--	--	0.1	uA	V _{RWM} = 7V
Clamping Voltage	V _C	--	11	--	V	I _{pp} = 50A (8x 20us pulse)
Clamping Voltage	V _C	--	15	17	V	I _{pp} = 115A (8x 20us pulse)
Junction Capacitance	C _J	--	--	500	pF	V _R = 0V, f = 1MHz

Symbol	Parameter
V _{RWM}	Nominal Reverse Working Voltage
I _R	Reverse Leakage Current @ V _{RWM}
V _{BR}	Reverse Breakdown Voltage @ I _T
I _T	Test Current for Reverse Breakdown
V _C	Clamping Voltage @ I _{pp}
I _{pp}	Maximum Peak Pulse Current
C _{ESD}	Parasitic Capacitance
V _R	Reverse Voltage
f	Small Signal Frequency



Typical Performance Characteristics (TA=25°C unless otherwise Specified)

Fig1. 8/20 μ s Pulse Waveform

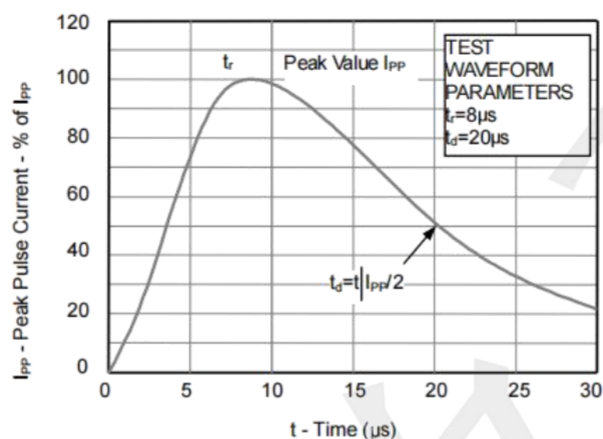


Fig2. ESD Pulse Waveform (according to IEC 61000-4-2)

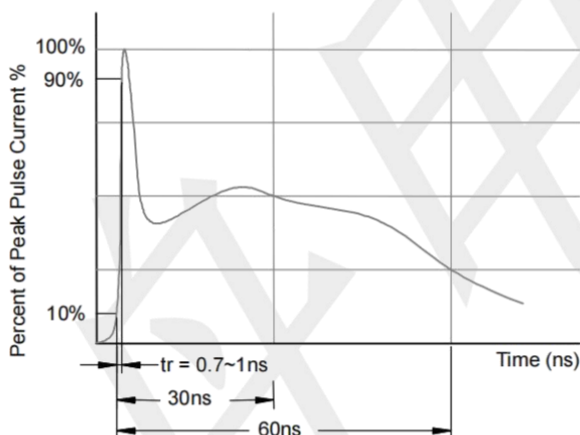
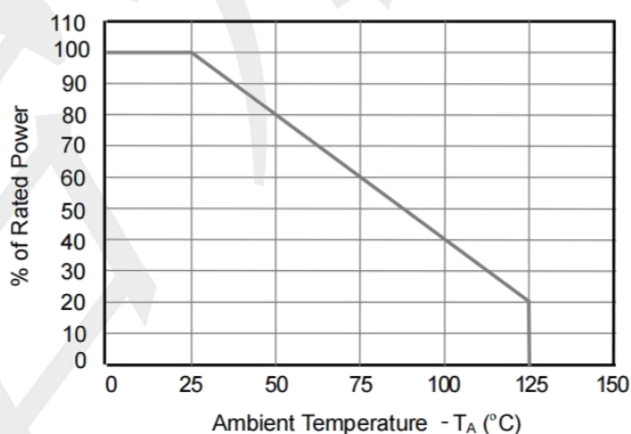
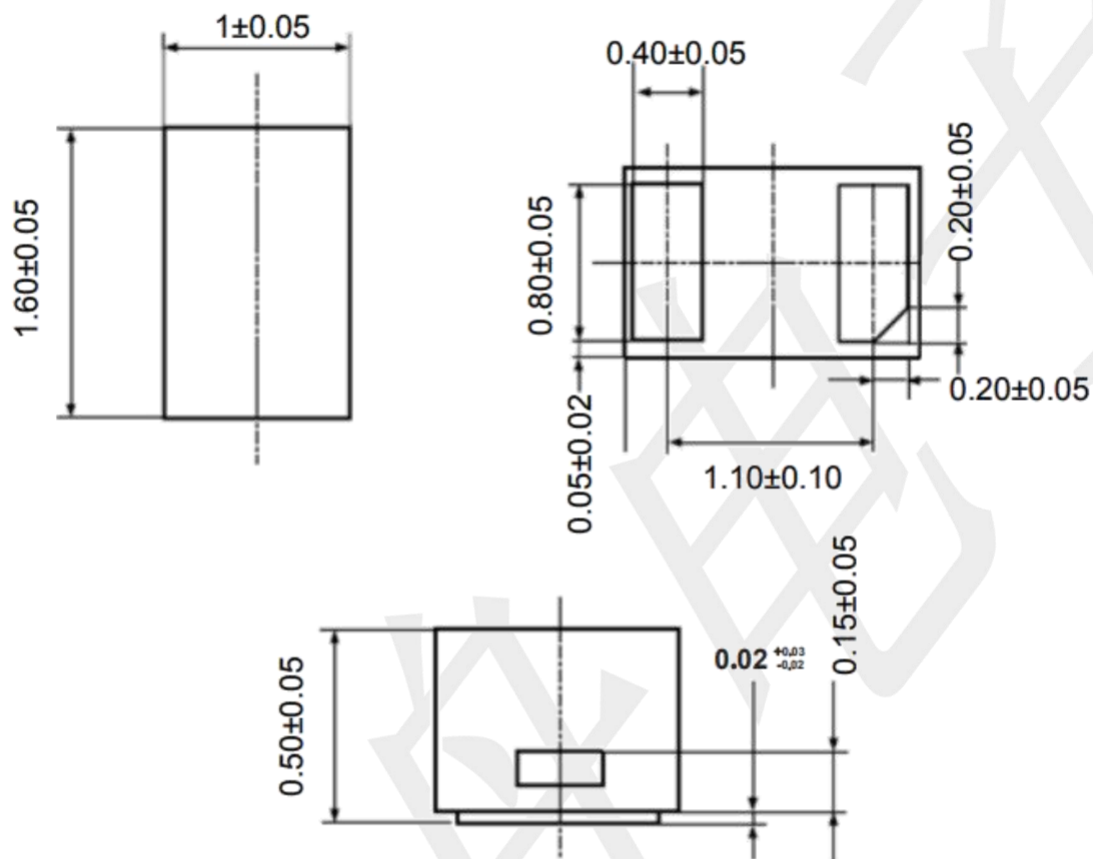


Fig3. Power Derating Curve



Package Outline Dimensions (unit: mm)

DFN1610-2



Mounting Pad Layout (unit: mm)

