

Features

- Low operating voltage: 12V
- 2600W 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) 65A (8/20 μ s)
- 2-pin leadless package
- These are Pb-Free Devices
- Response Time is Typically < 1 ns

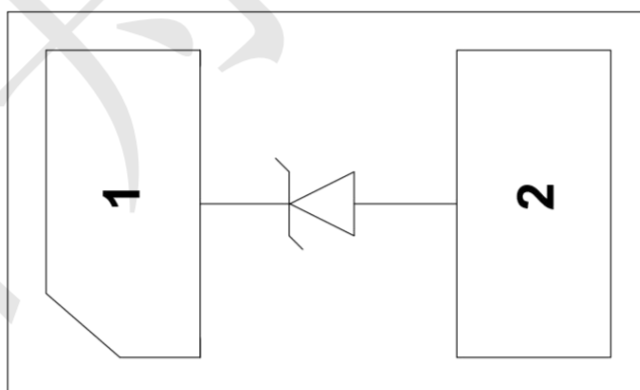
Mechanical Characteristics

- 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



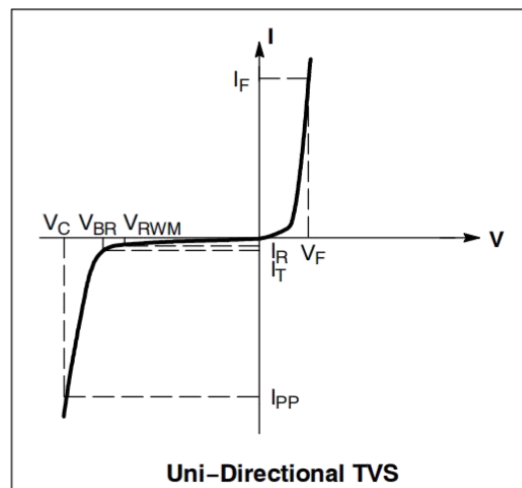
Absolute Maximum Ratings (T_{amb}=25°C unless otherwise specified)

Parameter	Symbol	Value	Unit
Peak Pulse Power (8/20μs)	P _{pk}	2600	W
Peak Pulse Current (8/20μs)	I _{pp}	65	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}	--	--	12	V	
Breakdown Voltage	V _{BR}	13.3	14.4	16	V	I _T = 1mA
Reverse Leakage Current	I _R	--	--	1	uA	V _{RWM} = 12V
Forward Voltage	V _F	--	0.7	1.25	V	I _F = 10mA
Clamping Voltage	V _C	--	20	--	V	I _{pp} = 50A (8x 20us pulse)
Clamping Voltage	V _C	--	30	40	V	I _{pp} = 65A (8x 20us pulse)
Junction Capacitance	C _J	--	360	450	pF	V _R = 0V, f = 1MHz

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
I _F	Forward Current
V _F	Forward Voltage @ I _F
P _{pk}	Peak Power Dissipation
C	Capacitance @ V _R = 0 and f = 1.0 MHz



Characteristic Curves

Fig1. 8/20 μ s Pulse Waveform

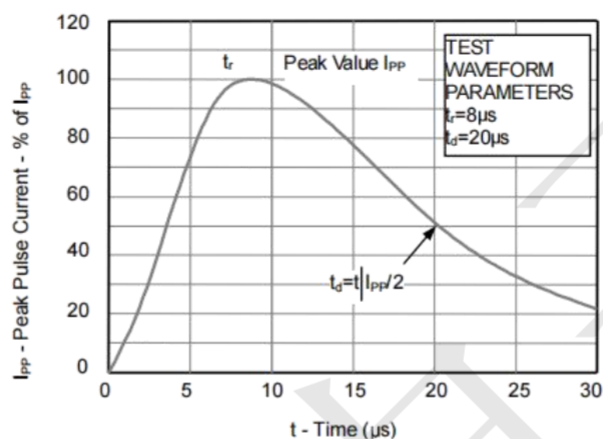


Fig2. ESD Pulse Waveform (according to IEC 61000-4-2)

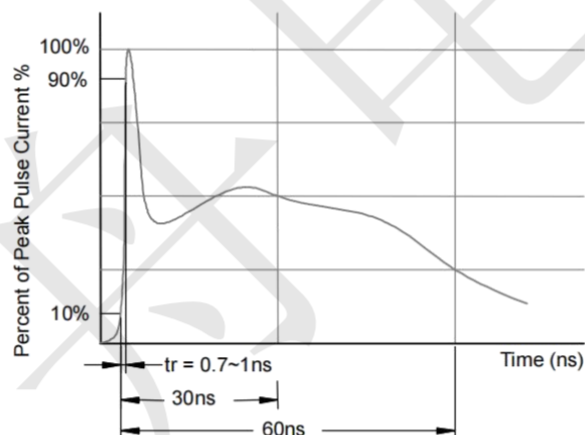
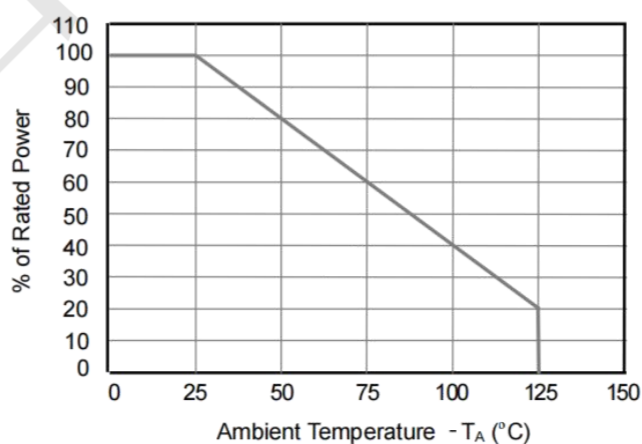
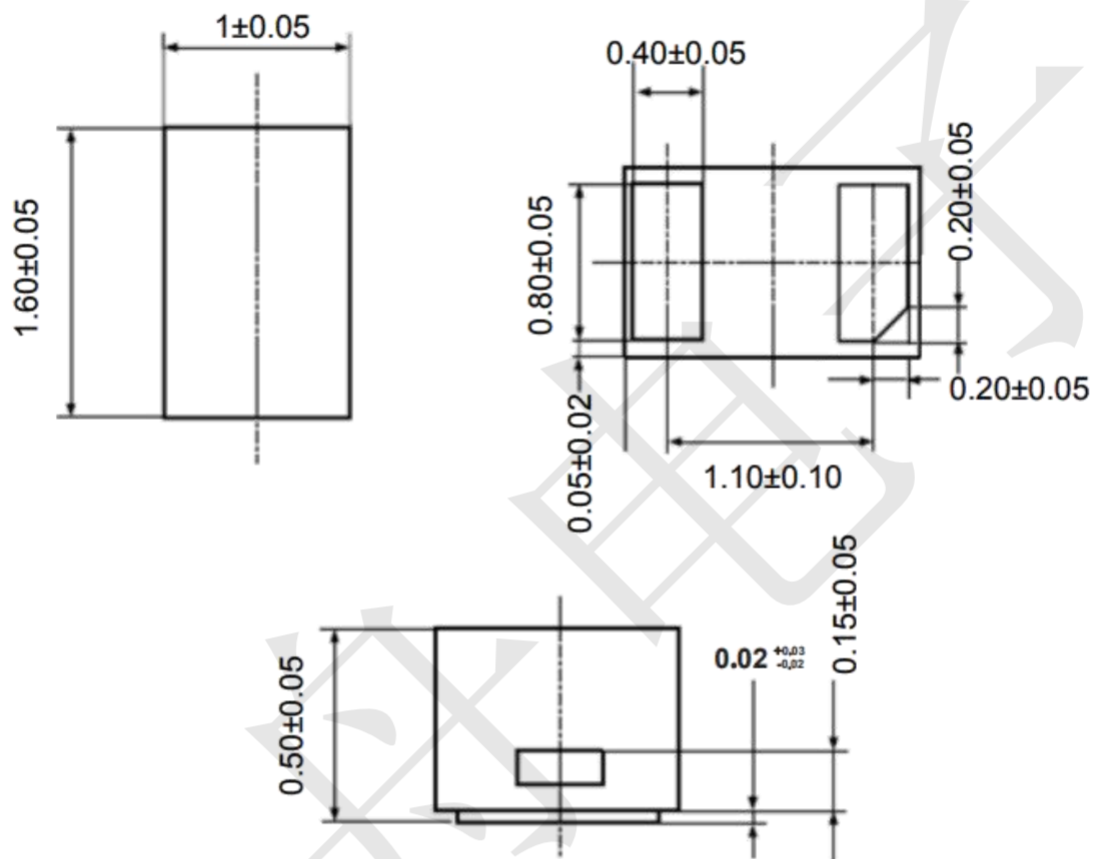


Fig3. Power Derating Curve



Package Outline Dimensions (unit: mm)

DFN1610



Mounting Pad Layout (unit: mm)

