

Features

- Low operating voltage: 12V
- Ultra low leakage: nA level
- Low clamping voltage
- -IEC 61000-4-2 (ESD) immunity test
 - Air discharge: $\pm 30\text{kV}$
 - Contact discharge: $\pm 30\text{kV}$
- -IEC61000-4-5 (Lightning) 200A (8/20ns)
- 3-pin leadless package
- These are Pb-Free Devices
- Response Time is Typically $< 1\text{ ns}$

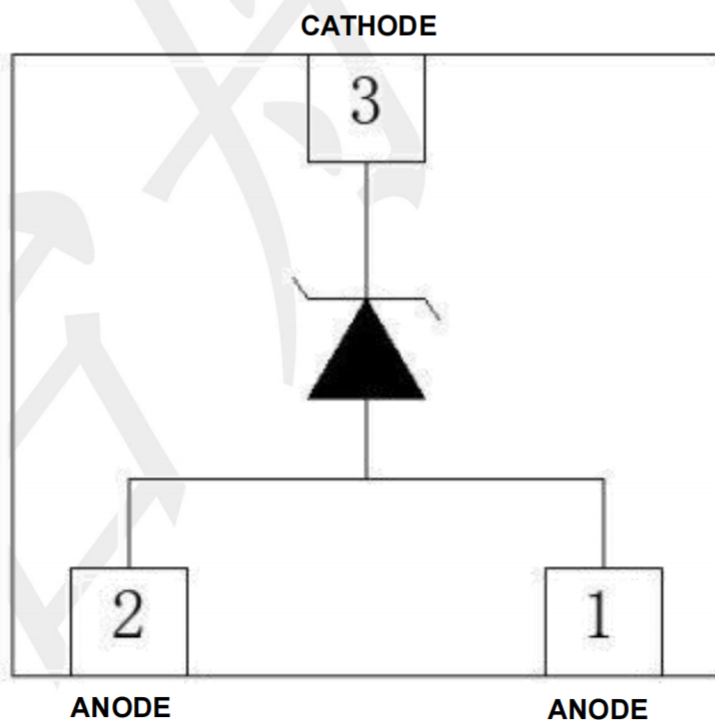
Mechanical Characteristics

- Package: DFN2X2-3
- 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
- Peripherals

Dimensions and Pin Configuration



Marking:T12

DFN2X2-3

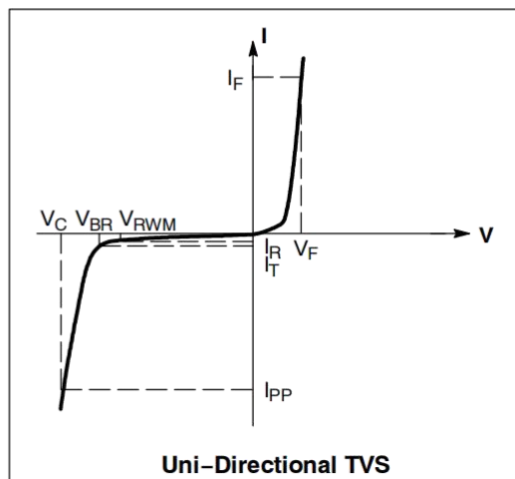
Absolute Maximum Ratings (T_{amb}=25°C unless otherwise specified)

Parameter	Symbol	Value	Unit
Peak Pulse Power (8/20μs)	P _{pk}	6000	W
Peak Pulse Current (8/20μs)	I _{pp}	200	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	--	--	V	I _T = 1mA
Reverse Leakage Current	I _R	--	--	1	uA	V _{RWM} =7V
Forward voltage	V _F	--	0.8	1.2	V	I _F =10mA
Clamping Voltage	V _C	--	--	15	V	I _{pp} =20A(8x 20us pulse)
Clamping Voltage	V _C	--	--	20	V	I _{pp} =80A(8x 20us pulse)
Clamping Voltage	V _C	--	25	30	V	I _{pp} =200A(8x 20us pulse)
Junction Capacitance	C _J	--	--	1500	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

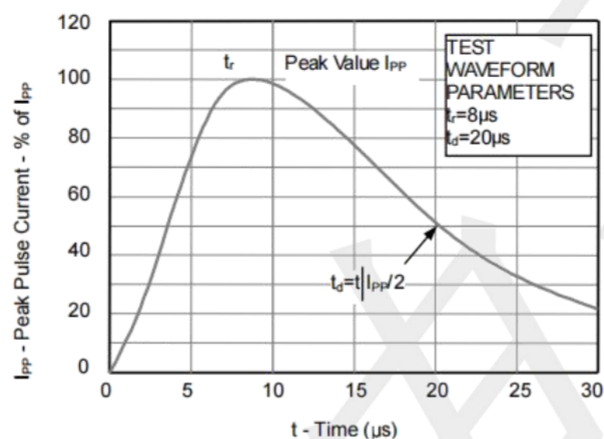


Fig2. ESD Pulse Waveform (according to IEC 61000-4-2)

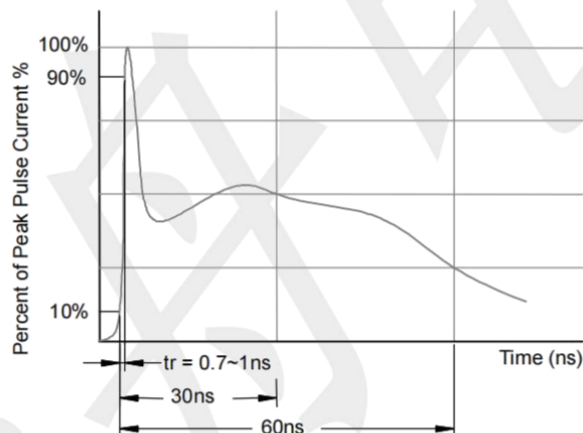
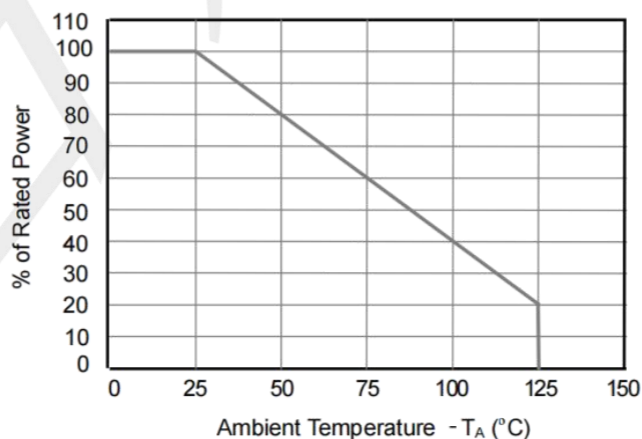
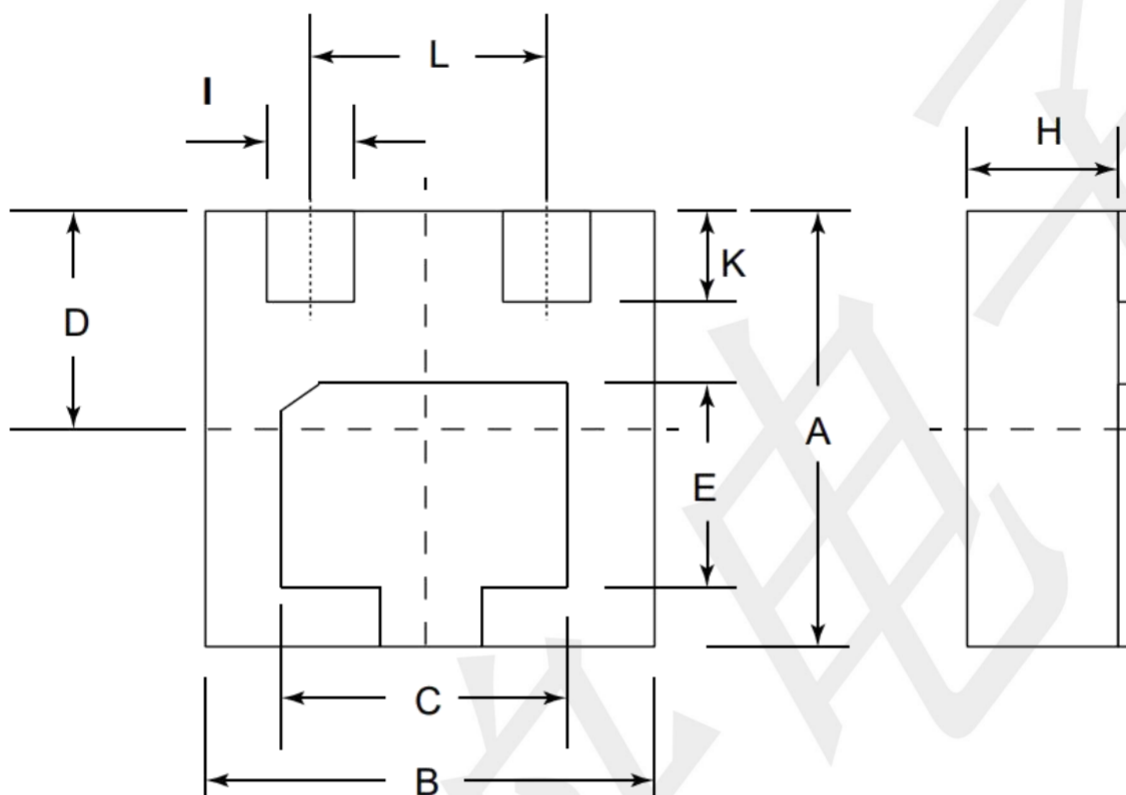


Fig3. Power Derating Curve



Package Outline Dimensions (unit: mm)

DFN2X2-3



DIM	Millimeters		
	Min	Nom	Max
A	1.90	2.00	2.10
B	1.90	2.00	2.10
C	1.40	1.50	1.60
D	0.95	1.0	1.05
E	0.90	1.00	1.10
H			0.65
L		1.3	
I	0.25	0.30	0.35
K	0.35	0.40	0.45