

Features

- Ultra low leakage: nA level
- Operating voltage: 12V
- Low clamping voltage
- Complies with following standards:
 - IEC 61000-4-2 (ESD) immunity test
 - Air discharge: $\pm 30\text{kV}$
 - Contact discharge: $\pm 30\text{kV}$
 - IEC61000-4-5 (Lightning) 200A (8/20 μs)
- RoHS Compliant

Mechanical Characteristics

- Package: DFN2X2-3
- Lead Finish: Matte Tin
- Case Material: "Green" Molding Compound.
- UL Flammability Classification Rating 94V-0
- Moisture Sensitivity: Level 3 per J-STD-020
- Shipping Qty :3000pcs/7Inch Tape & Reel

Applications

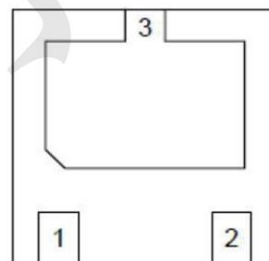
- Power Management
- Industrial Application
- Power Supply Protection

Dimensions and Pin Configuration

Marking:T12



Circuit Diagram



Transparent top view

Pin Schematic

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

Parameter	Symbol	Value	Unit
Peak Pulse Power (tp=8/20μs waveform)	P _{pp}	6000	W
Peak Pulse Current (8/20μs)	I _{pp}	200	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	°C
Storage Temperature Range	T _{stg}	-55 to +150	°C

Electrical Characteristics (TA=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			1.0	μA	V _{RWM} = 12V
Clamping Voltage	V _C			15	V	I _{PP} = 20A(8x20μspulse)
Clamping Voltage	V _C			30	V	I _{PP} = 200A (8 x 20μs pulse)
Junction Capacitance	C _J		680		pF	V _R = 0V, f = 1MHz

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

Fig1. 8/20 μs Pulse Waveform

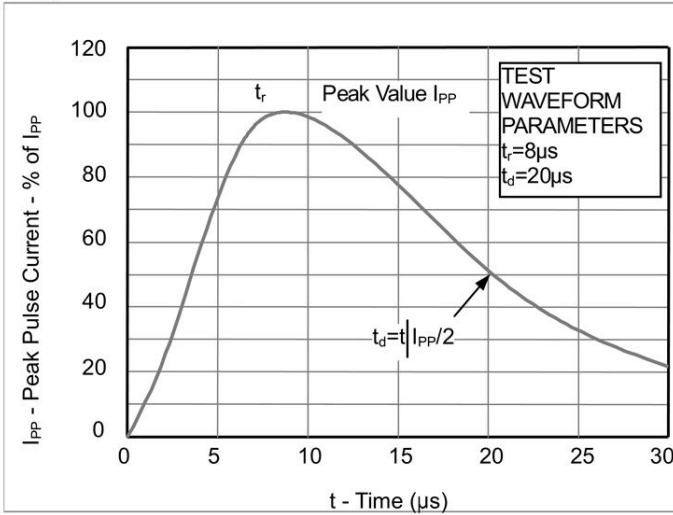


Fig2. ESD Pulse Waveform (according to IEC 61000-4-2)

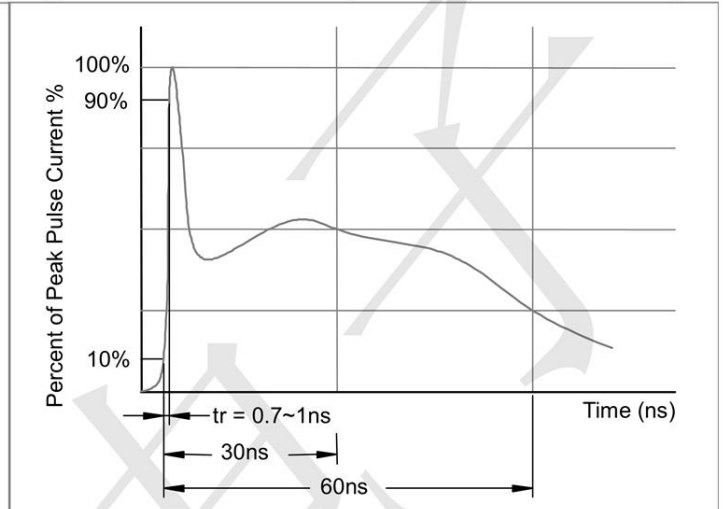
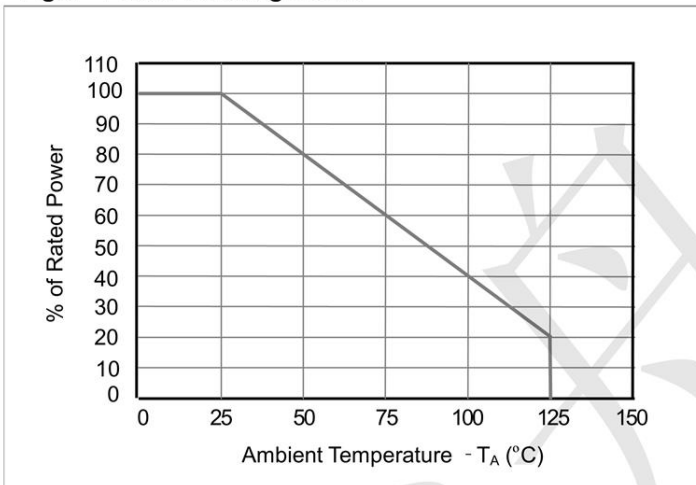
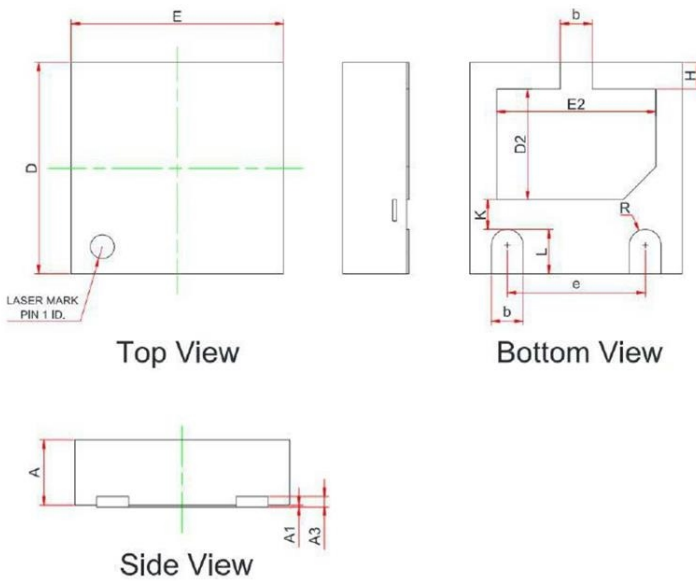


Fig3. Power Derating Curve



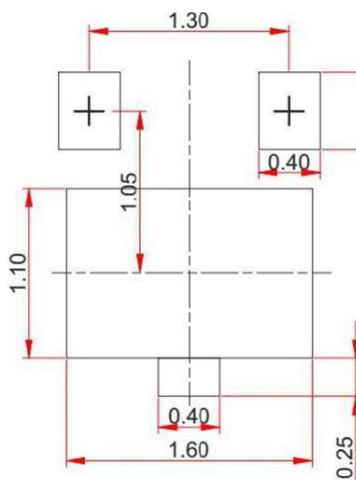
Outline Drawing - DFN2X2-3



DIM	INCHES		MILLIMETERS	
	MIN	NOM	MAX	MIN NOM MAX
A	.031	-	.048	0.80 - 1.22
A1	.000	-	.006	0.013 - 0.15
A2	.029	.035	.042	0.75 0.90 1.07
b	.011	-	.020	0.30 - 0.51
b1	.029	-	.037	0.76 - 0.94
c	.003	-	.008	0.08 - 0.20
D	.110	.114	.120	2.80 2.90 3.04
E	.082	.093	.104	2.10 2.37 2.64
E1	.047	.051	.055	1.20 1.30 1.40
e	.075	-	-	1.92 BSC
e1	.008	-	-	0.20 BSC
L	.015	.020	.024	0.40 0.50 0.60
L1	-	(.021)	-	(0.54)
N	4	-	-	4
φ	0°	-	8°	0° - 8°
aaa	.006	-	-	0.15
bbb	.008	-	-	0.20
ccc	.004	-	-	0.10

SYM	DIMENSIONS		
	MILLIMETERS		
	MIN	NOM	MAX
A	0.55	0.60	0.65
A1	0.00	0.02	0.05
A3	0.10REF		
b	0.25	--	0.35
D	1.90	--	2.10
E	1.90	--	2.10
D2	0.95	--	1.15
E2	1.40	--	1.60
e	1.20		1.40
H	0.20	--	0.30
K	0.20		0.40
L	0.35	--	0.45
R	0.13	--	--

Land Pattern -DFN2X2-3



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