

## 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 $\mu\text{s}$ )
- RoHS Compliant

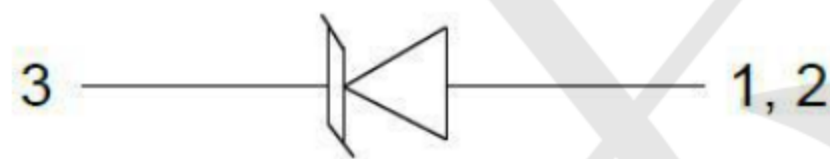
## Mechanical Characteristics

- 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

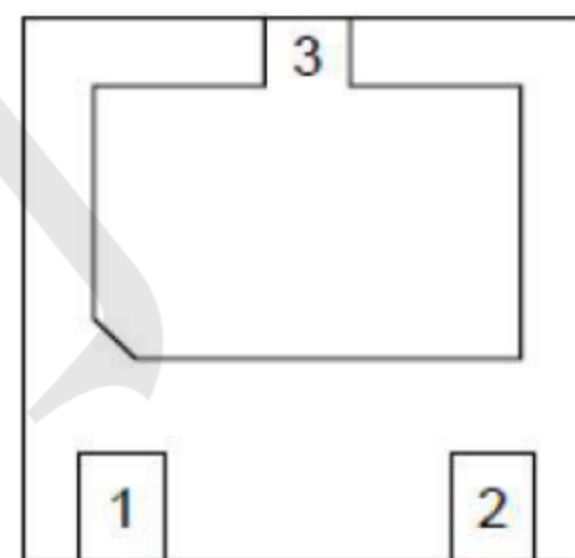
## Applications

- Power Management
- Industrial Application
- Power Supply Protection

## Dimensions and Pin Configuration



Circuit Diagram



Transparent top view

Pin Schematic

**Marking:T12**

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

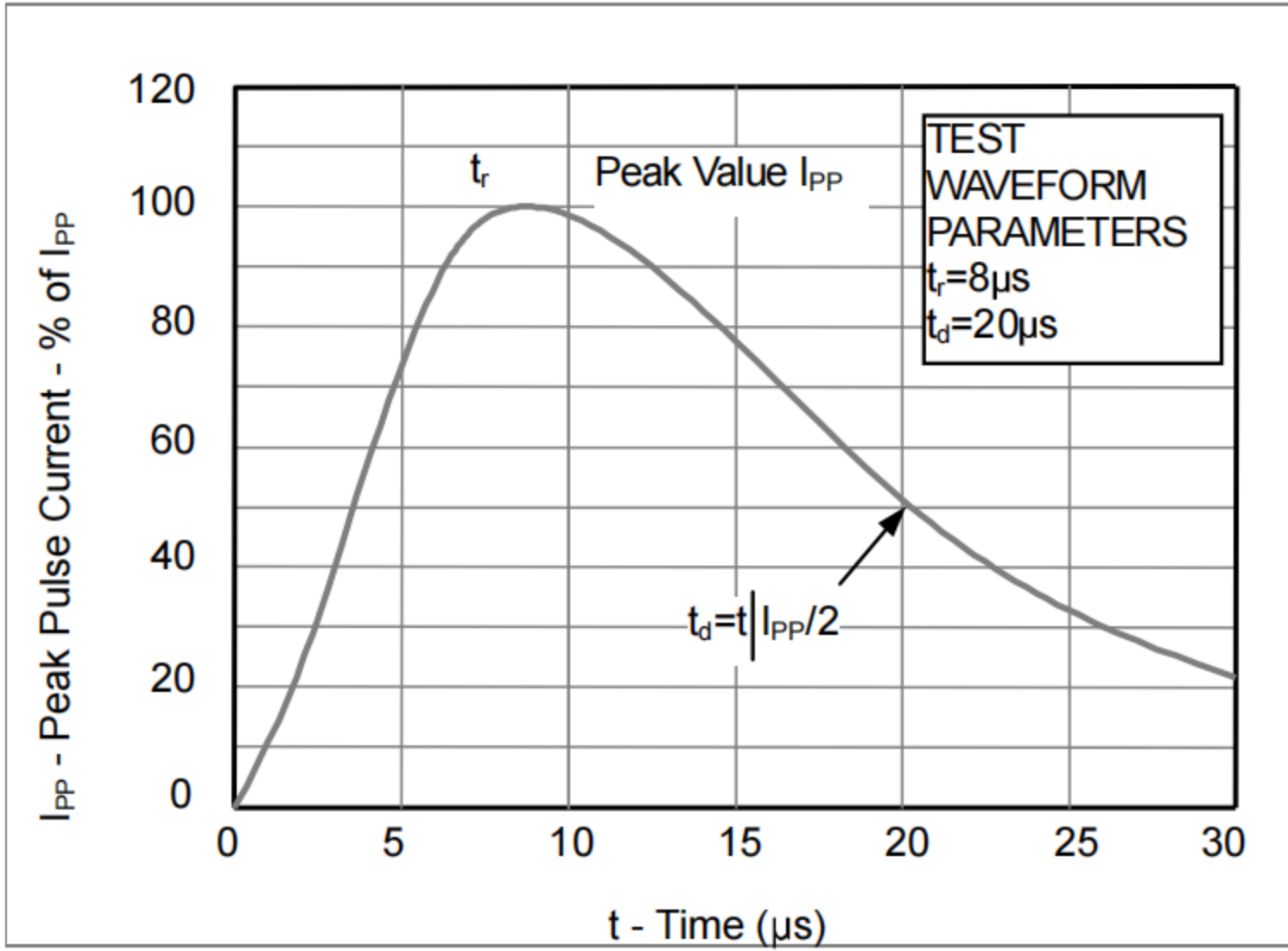
Parameter	Symbol	Value	Unit
Peak Pulse Power (tp=8/20μs waveform)	P <sub>pp</sub>	6000	W
Peak Pulse Current (8/20μs)	I <sub>pp</sub>	200	A
ESD per IEC 61000-4-2 (Air)	VESD	±30	kV
ESD per IEC 61000-4-2 (Contact)		±30	
Operating Temperature Range	T <sub>J</sub>	-55 to +125	°C
Storage Temperature Range	T <sub>stg</sub>	-55 to +150	°C

**Electrical Characteristics** (TA=25°C unless otherwise specified)

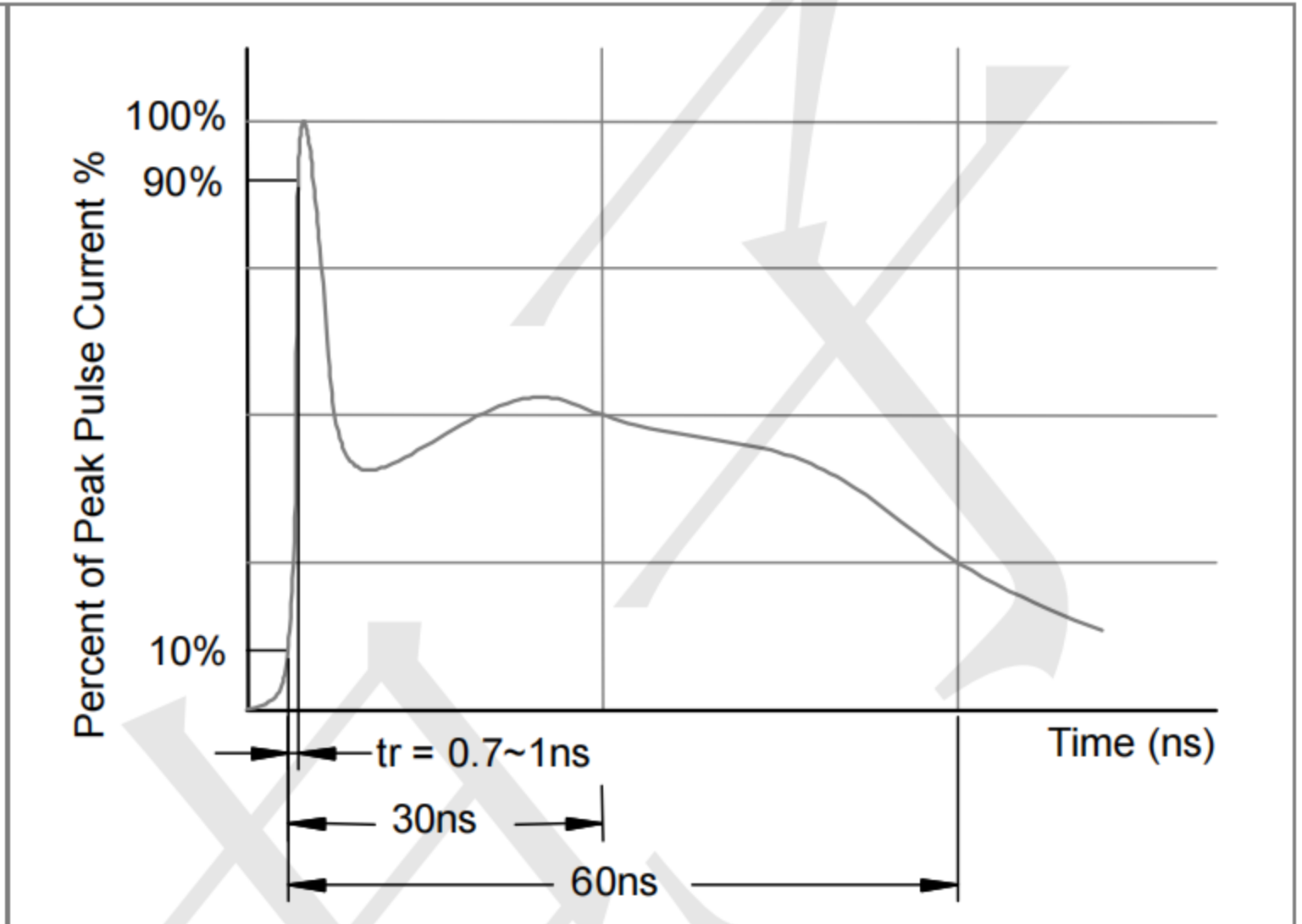
Parameter	Symbol	Min	Typ	Max	Unit	Test Condition
Reverse Working Voltage	V <sub>RWM</sub>			12	V	
Breakdown Voltage	V <sub>BR</sub>	13			V	I <sub>T</sub> = 1mA
Reverse Leakage Current	I <sub>R</sub>			1.0	μA	V <sub>RWM</sub> = 12V
Clamping Voltage	V <sub>C</sub>			15	V	I <sub>PP</sub> = 20A(8x20μspulse)
Clamping Voltage	V <sub>C</sub>			30	V	I <sub>PP</sub> = 200A (8 x 20μs pulse)
Junction Capacitance	C <sub>J</sub>			1500	pF	V <sub>R</sub> = 0V, f = 1MHz

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

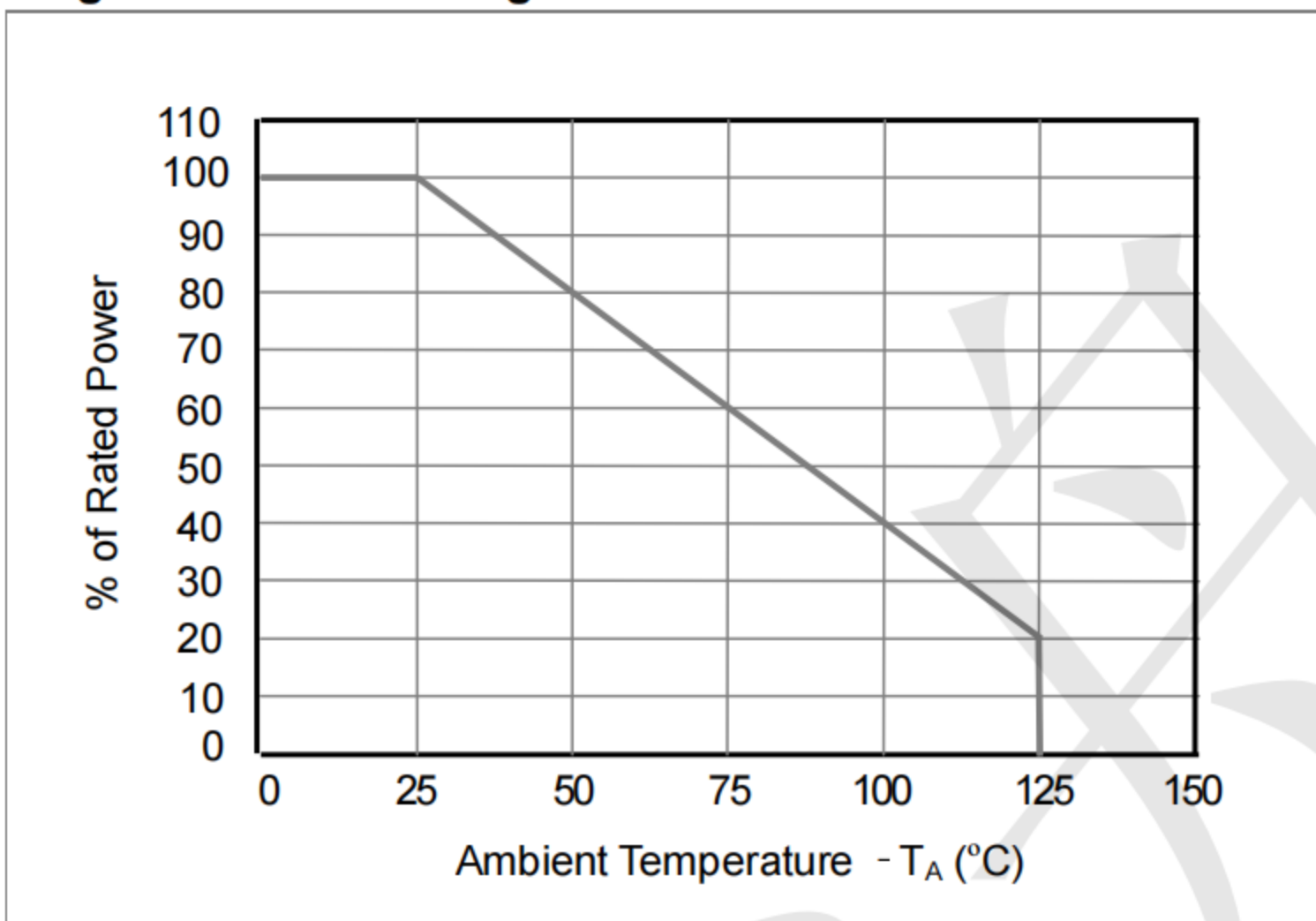
**Fig1. 8/20 $\mu\text{s}$  Pulse Waveform**



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

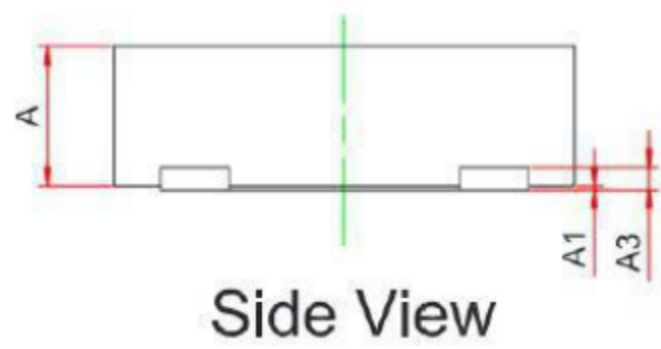
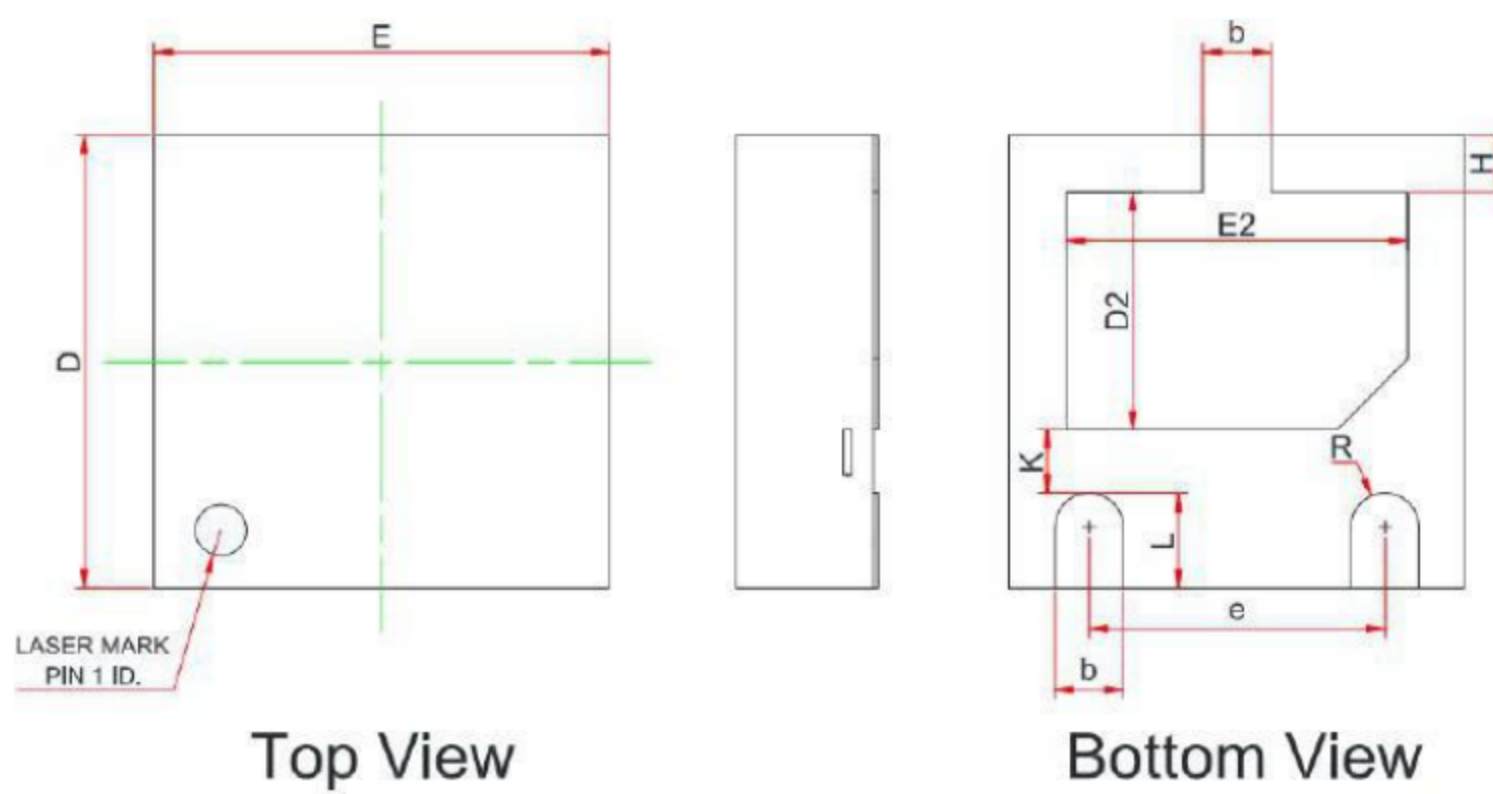


**Fig3. Power Derating Curve**





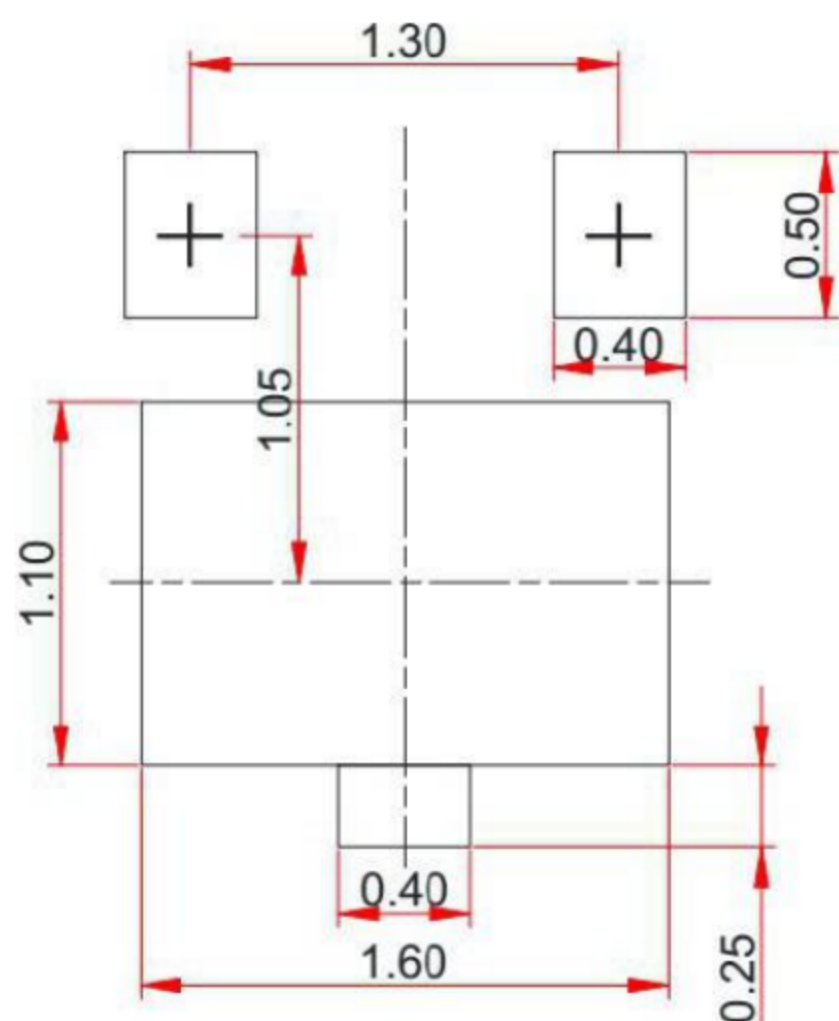
**Outline Drawing - DFN2X2-3**



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	(0.021)			(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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