

## Features

- Ultra small package: 2.0x2.0x0.5mm
- Ultra low capacitance:800pF Max
- Low operating voltage: 24V
- Complies with following standards:
  - IEC 61000-4-2 (ESD) immunity test  
Air discharge:  $\pm 30\text{kV}$   
Contact discharge:  $\pm 30\text{kV}$
  - IEC 61000-4-4 (EFT) 80A (5/50ns)
  - IEC61000-4-5 (Lightning)120A (8/20 $\mu\text{s}$ )
- RoHS Compliant

## Mechanical Characteristics

- Package: DFN2020-3
- Lead Finish: Matte Tin
- Case Material: "Green" Molding Compound.
- Moisture Sensitivity: Level 3 per J-STD-020
- Terminal Connections: See Diagram Below

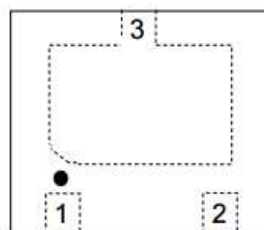
## Applications

- Cell Phone Handsets and Accessories
- Personal Digital Assistants (PDA's)
- Notebooks, Desktops, and Servers
- Portable Instrumentation
- Serial and Parallel Ports.

## Ordering Information

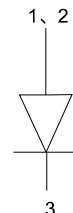
Part Number	Qty per Reel	Reel Size
TPTVS2491D3	3000	7"

## Dimensions and Pin Configuration



DFN2x2-3L

Top view



**Marking: T24**

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

Parameter	Symbol	Value	Unit
Peak Pulse Power (8/20μs)	Ppk	6000	W
Peak Pulse Current (8/20μs)	Ipp	120	A
ESD per IEC 61000-4-2 (Air)	VESD	±30	kV
ESD per IEC 61000-4-2 (Contact)		±30	
Operating Temperature Range	TJ	-55 to +125	°C
Storage Temperature Range	Tstg	-55 to +150	°C

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

Parameter	Symbol	Min	Typ	Max	Unit	Test Condition
Reverse Working Voltage	VRWM			24	V	
Breakdown Voltage	VBR	26	27	30	V	IT = 1mA
Reverse Leakage Current	IR			1	uA	VRWM = 24V
Clamping Voltage	VC			50	V	Ipp=50A(8x 20us pulse)
Clamping Voltage	VC			60	V	Ipp=120A(8x 20us pulse)
Junction Capacitance	CJ			800	pF	VR = 0V, f = 1MHz

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

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

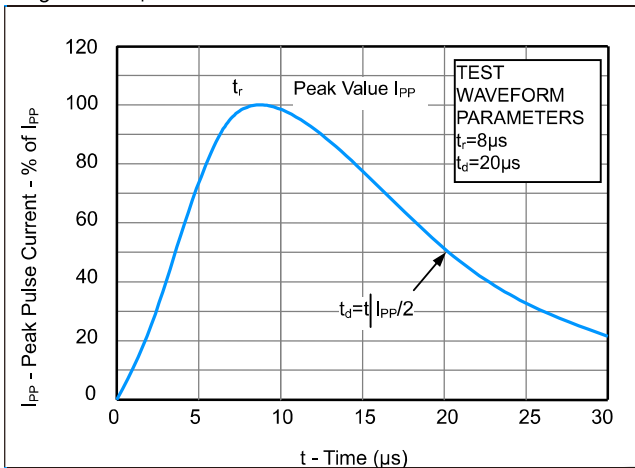


Fig2. ESD Pulse Waveform (according to IEC 61000-4-2)

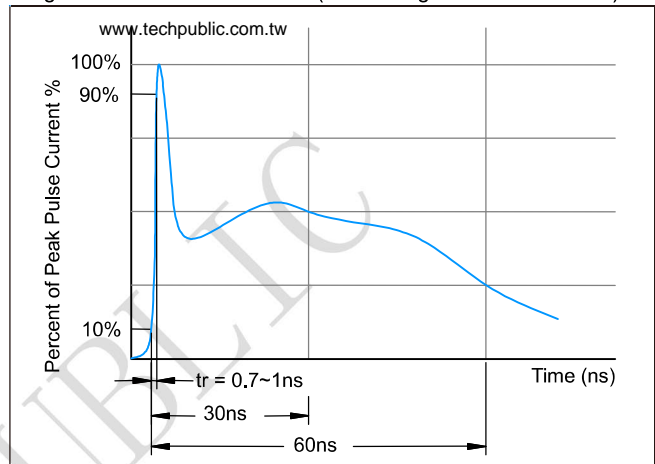
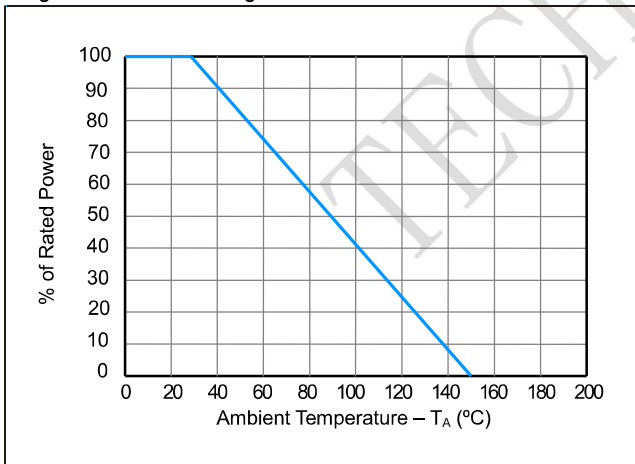
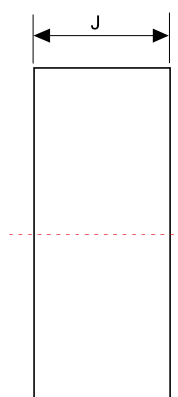
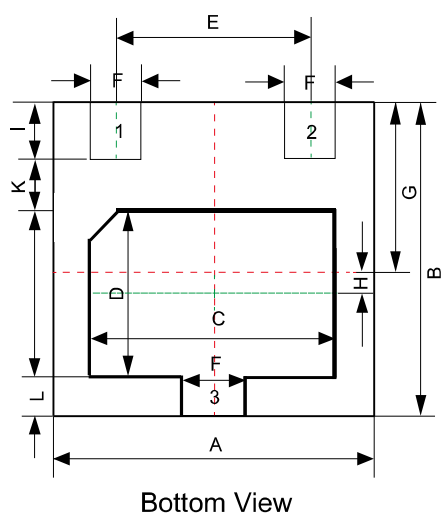


Fig3. Power Derating Curve

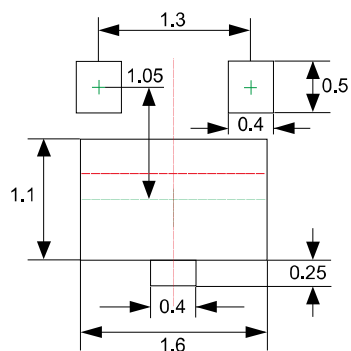


## Outline Drawing - DFN2020-3



Dim	Millimeters	
	MIN	MAX
A	1.90	2.10
B	1.90	2.10
C	1.40	1.60
D	0.90	1.15
E	1.30BSC	
F	0.25	0.40
G	0.90	1.10
H	0.20	0.30
I	0.32	0.48
J	0.50	0.65
K	0.20	0.45
L	0.15	0.30

## Land Pattern - DFN2020-3



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