

1-Line Uni-directional TVS Diode

Features

- 1800W peak pulse power (8/20 μ s)
- Low leakage: nA level
- Low operating voltage: 24V
- Ultra low clamping voltage
- One power line protects
- Complies with following standards:
 - IEC 61000-4-2 (ESD) immunity test
 - Air discharge: ± 30 kV
 - Contact discharge: ± 30 kV
 - IEC61000-4-5 (Lightning) 34A (8/20 μ s)
- RoHS Compliant

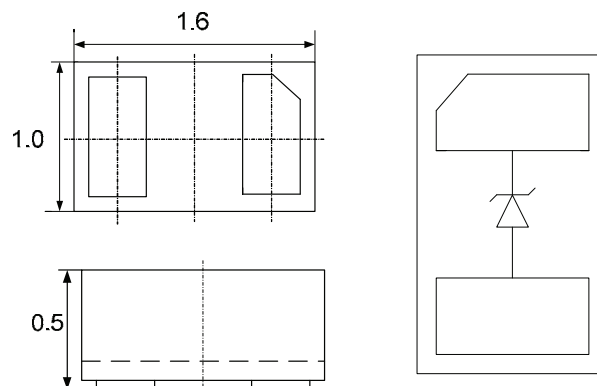
Mechanical Characteristics

- Package DFN1610-2
- Ultra low leakage: nA level
- Case Material: “Green” Molding Compound.
- UL Flammability Classification Rating 94V-0
- Moisture Sensitivity: Level 3 per J-STD-020
- Shipping Qty :3000/7Inch Tape & Reel

Applications

- Power Management
- Industrial Application
- Power Supply Protection
- Many other portable devices

Dimensions and Pin Configuration





FTVS2471P

Absolute Maximum Ratings ($T_A = 25^\circ\text{C}$ unless otherwise specified)

Parameter	Symbol	Value	Unit
Peak Pulse Power (8/20 μs)	Ppk	1800	W
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	$^\circ\text{C}$
Storage Temperature Range	Tstg	-55 to +150	$^\circ\text{C}$

Electrical Characteristics ($T_A = 25^\circ\text{C}$ unless otherwise specified)

Parameter	Symbol	Min	Typ	Max	Unit	Test Condition
Reverse Working Voltage	VRWM			24	V	
Breakdown Voltage	VBR	26.7			V	$I_T = 1\text{mA}$
Reverse Leakage Current	I_R			0.1	μA	$VRWM = 24\text{V}$
Forward Voltage	V_F			1.2	V	$I_F = 10\text{mA}$
Peak Pulse Current	I_{PP}			35	A	$t_p = 8/20\mu\text{s}$
Clamping Voltage	V_C			42	V	$I_{PP} = 10\text{A}$ (8 x 20 μs pulse)
Clamping Voltage	V_C			54	V	$I_{PP} = 35\text{A}$ (8 x 20 μs pulse)
Junction Capacitance	C_J			200	pF	$V_R = 0\text{V}$, $f = 1\text{MHz}$

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

Fig1. 8/20 μs Pulse Waveform

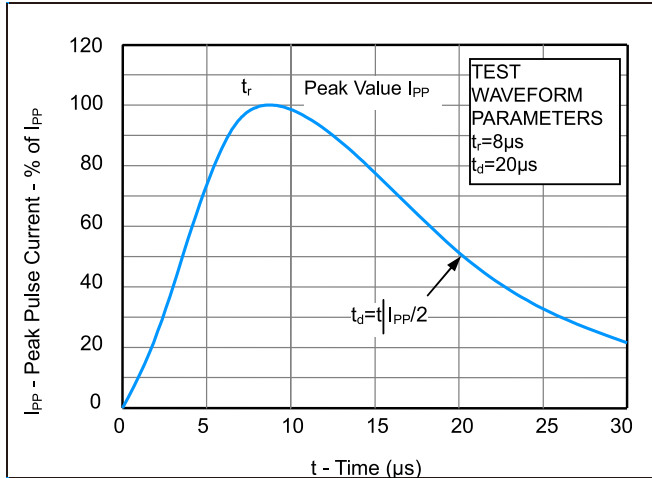


Fig2. ESD Pulse Waveform (according to IEC 61000-4-2)

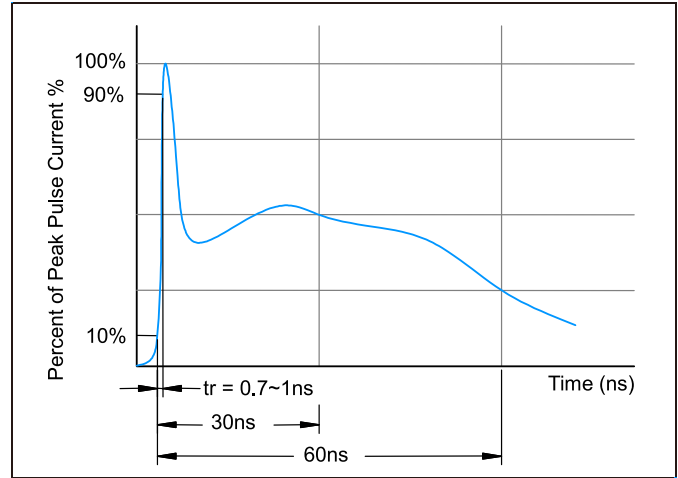
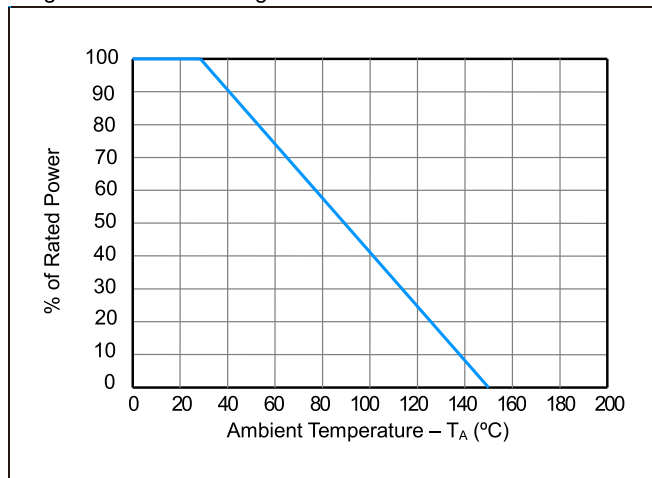


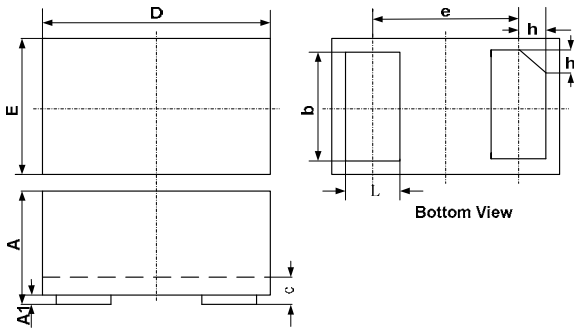
Fig3. Power Derating Curve





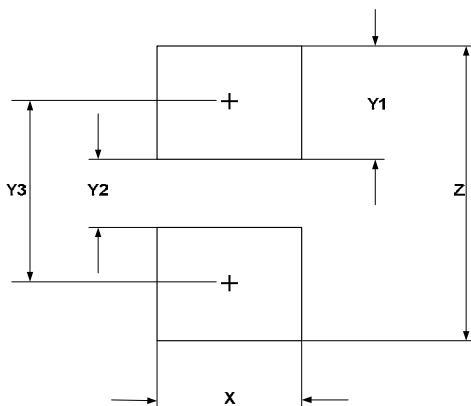
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DFN1610-2 Package Outline Drawing



SYM	DIMENSIONS					
	MILLIMETERS			INCHES		
	MIN	NOM	MAX	MIN	NOM	MAX
A	0.45	0.50	0.55	0.018	0.020	0.022
A1	0.00	0.02	0.05	0.000	0.001	0.002
b	0.75	0.80	0.85	0.030	0.032	0.034
c	0.10	0.15	0.20	0.004	0.006	0.008
D	1.55	1.60	1.65	0.062	0.064	0.066
e	1.10 BSC			0.044 BSC		
E	0.95	1.00	1.05	0.038	0.040	0.042
L	0.35	0.40	0.45	0.014	0.016	0.018
h	0.15	0.20	0.25	0.006	0.008	0.010

Suggested Land Pattern



SYM	DIMENSIONS	
	MILLIMETERS	INCHES
X	1.00	0.040
Y1	0.62	0.025
Y2	0.60	0.024
Y3	1.22	0.049
Z	1.85	0.074