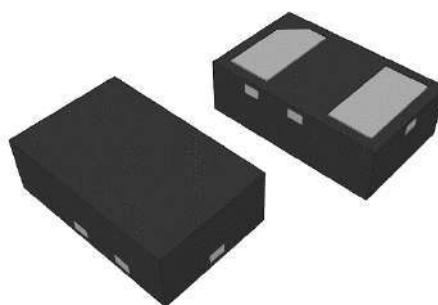


1-Line Uni-directional TVS Diode

Features

- Ultra low leakage: nA level
- Operating voltage: 20V
- Low clamping voltage
- 2-Pin leadless package
- 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) 90 A (8/20 μs)
- RoHS Compliant

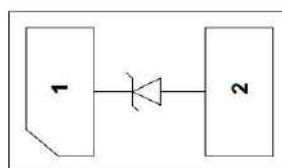
Dimensions DFN1610-2



Applications

- Cell Phone Handsets and Accessories
- Microprocessor based equipment
- Personal Digital Assistants (PDA's)
- Notebooks, Desktops, and Servers
- Portable Instrumentation
- Networking and Telecom
- Serial and Parallel Ports
- Peripherals

Pin Configuration



Mechanical Characteristics

- Package: DFN1610-2
- Lead Finish: Lead Free
- UL Flammability Classification Rating 94V-0
- Quantity Per Reel: 3,000 pcs
- Reel Size: 7 inch
- Device Marking: KHW

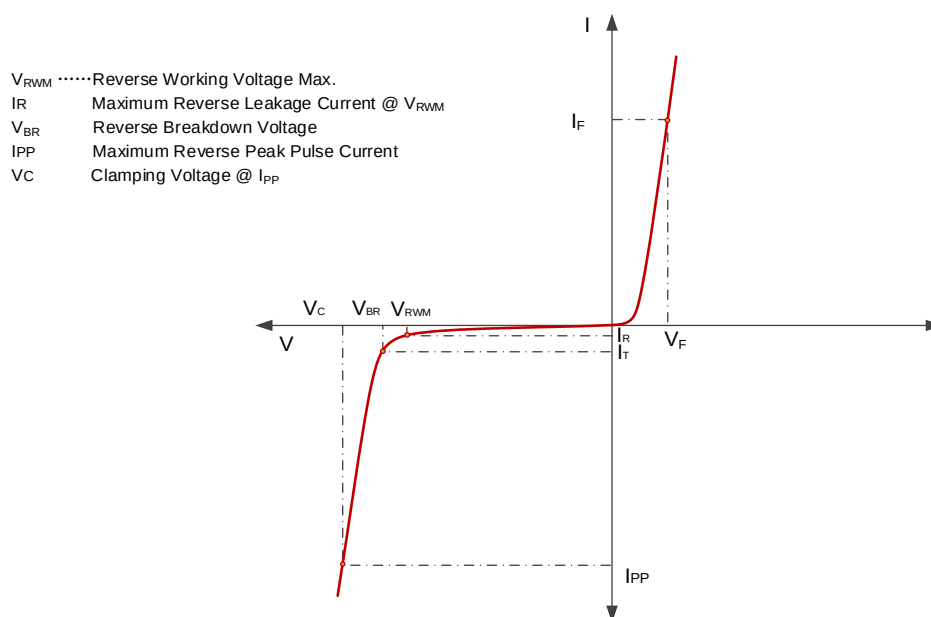
Absolute Maximum Ratings (TA=25°C unless otherwise specified)

Parameter	Symbol	Value	Unit
Peak Pulse Power (8/20 μs)	P _{pp}	2700	W
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 _{STJ}	-55 to +125	°C

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

Parameter	Symbol	Test Condition	Min	Typ	Max	Unit
Reverse Working Voltage	V_{RWM}				20	V
Breakdown Voltage	V_{BR}	$I_T = 1\text{mA}$	22.6			V
Reverse Leakage Current	I_R	$V_{RWM} = 20\text{V}$			1	μA
Clamping Voltage	V_C	$I_{PP} = 90\text{A}$ (8 x 20 μs pulse)			30	V
Junction Capacitance	C_J	$V_R = 0\text{V}$, $f = 1\text{MHz}$		260	280	pF

Electrical Parameters (TA=25°C unless otherwise specified)



Typical Performance Characteristics (TA=25°C unless otherwise specified)

Figure 1: Peak Pulse Power vs. Pulse Time

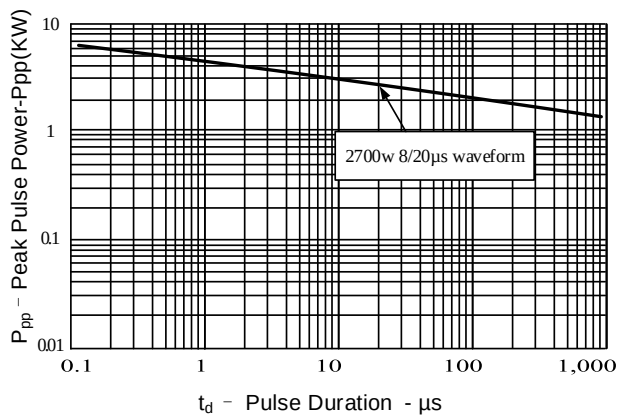


Figure 2: Power Derating Curve

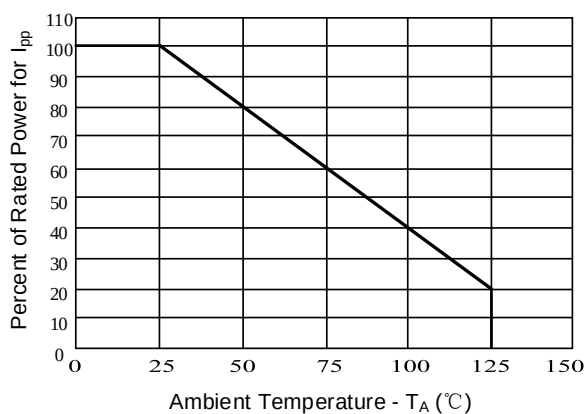


Figure3: 8x20μs Pulse Waveform

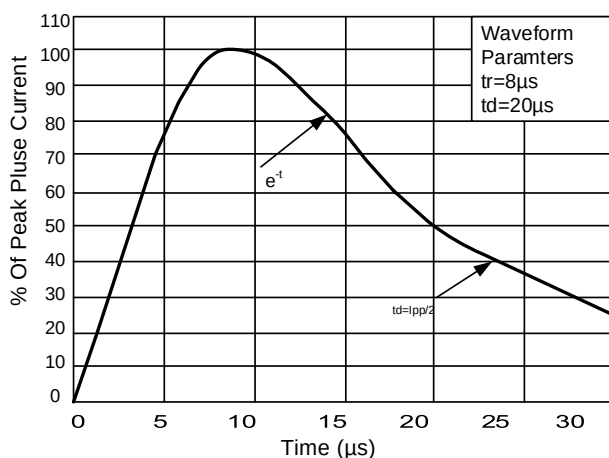
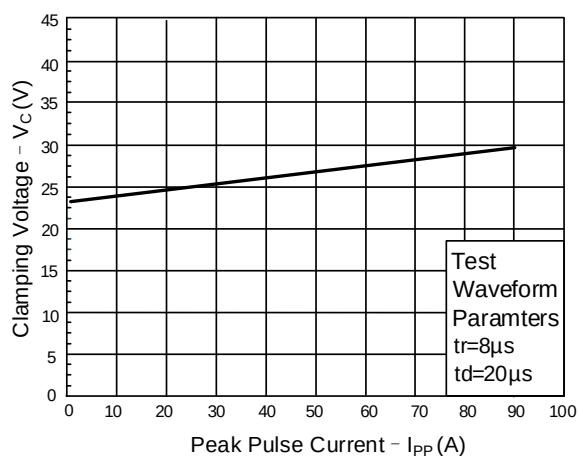
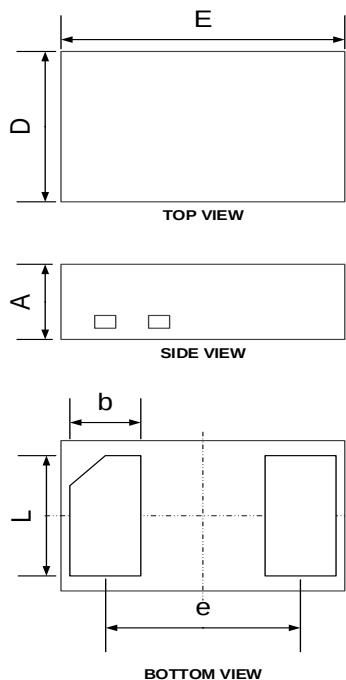


Figure 4: Clamping Voltage vs. Ipp

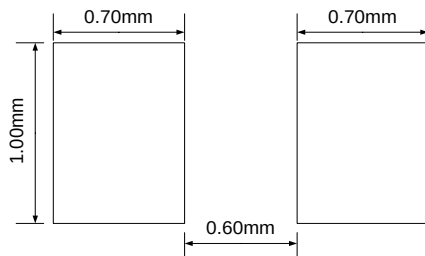


DFN1610 - 2 Package Outline Drawing



COMMON DIMENSION (mm)			
PKG	DFN1610-2		
REF.	MIN.	NOM.	MAX.
A	0.45	0.50	0.55
D	0.95	1.00	1.05
E	1.55	1.60	1.65
b	0.35	0.4	0.45
e	1.10BSC		
L	0.75	0.80	0.85

Suggested Land Pattern



* This Land Pattern is For Reference Purposes Only