

LTVS16D18H12T5G

1-Line Uni-directional TVS Diode

The TVS16D18 is an uni-directional TVS diode, utilizing leading monolithic silicon technology to provide fast response time and low ESD clamping voltage, making this device an ideal solution for protecting voltage sensitive data and power line. The TVS16D18 complies with the IEC 61000-4-2 (ESD) standard with $\pm 30\text{kV}$ air and $\pm 30\text{kV}$ contact discharge. It is assembled into an ultra-small 1.6x1.0x0.5mm lead-free DFN package. The small size and high ESD surge protection make TVS16D18 an ideal choice to protect cell phone, digital cameras, audio players and many other portable applications.

Features

- Ultra small package: 1.6x1.0x0.5mm
- Protects one data or power line
- 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: $\pm 30\text{kV}$
 - IEC61000-4-4 (EFT) 80A (5/50ns)
 - IEC61000-4-5 (Lightning) 80A (8/20 μs)
- RoHS Compliant

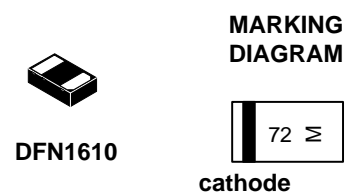
Applications

- Mobile Phones
- Battery Protection
- Power Line Protection
- Vbat pin for Mobile Devices
- Hand Held Portable Applications

Mechanical Characteristics

- Package: DFN1610-2
- Case Material: "Green" Molding Compound.
- UL Flammability Classification Rating 94V-0
- Moisture Sensitivity: Level 1 per J-STD-020

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72 = Specific Device Code
M = Month Code

Ordering information

Device	Marking	Shipping
LTVS16D18H12T5G	72	8000/Tape&Reel

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

Parameter	Symbol	Value	Unit
Peak Pulse Power (8/20 μs)	Ppk	1500	W
Peak Pulse Current (8/20 μs)	Ipp	80	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	$^{\circ}\text{C}$
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	11		12	V	
Breakdown Voltage	VBR	12.5	13.5	15.5	V	IT = 1mA
Reverse Leakage Current	IR			0.5	μA	VR = 12V
Forward Voltage	VF		1.0	1.2	V	IF = 10mA
Clamping Voltage	VC			16	V	I _{PP} = 10A (8 x 20 μs pulse)
Clamping Voltage	VC			23.5	V	I _{PP} = 60A (8 x 20 μs pulse)
Junction Capacitance	CJ		250		pF	VR = 0V, f = 1MHz

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Typical Performance Characteristics (T_A=25°C unless otherwise Specified)

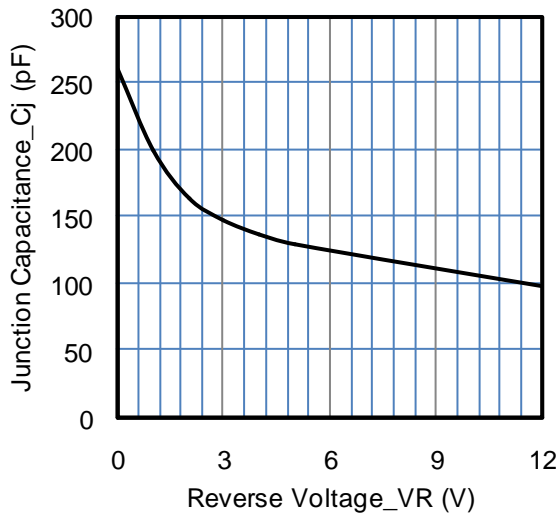


Fig1. Junction Capacitance vs. Reverse Voltage

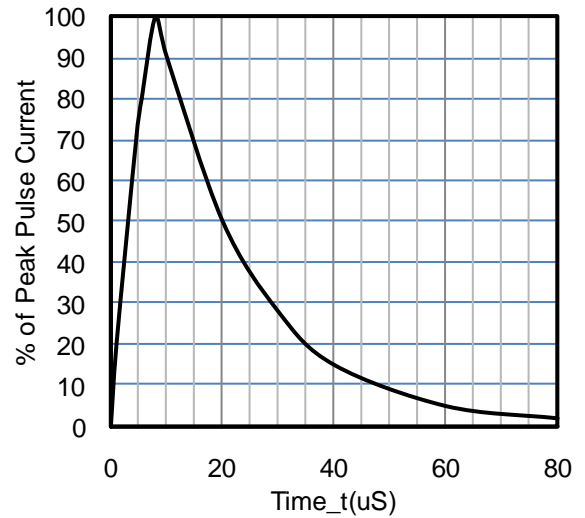


Fig 2. 8 X 20uS Pulse Waveform

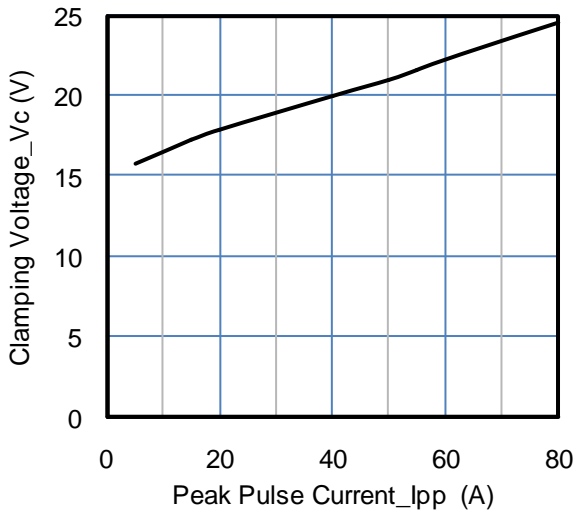


Fig3. Clamping Voltage vs. Peak Pulse Current

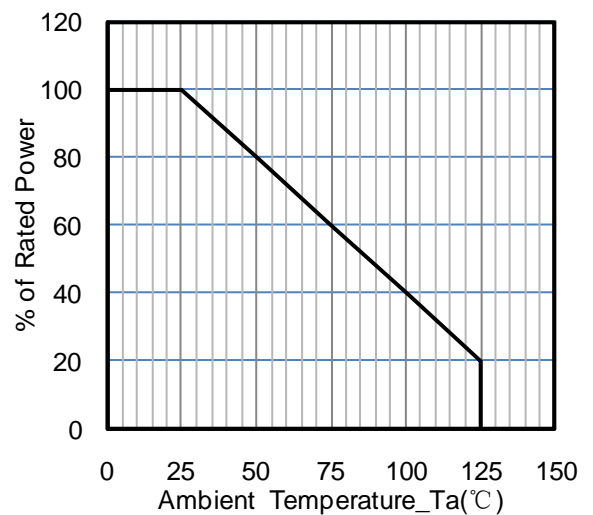


Fig4. Power Derating Curve

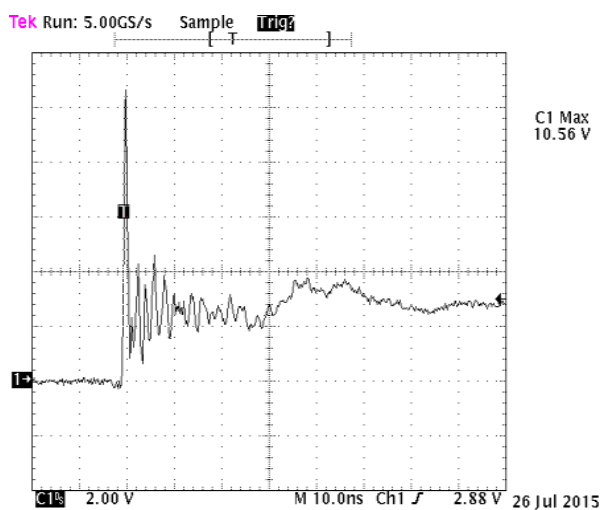


Fig 5. ESD Clamping Voltage
Positive 8 kV Contact per IEC61000-4-2

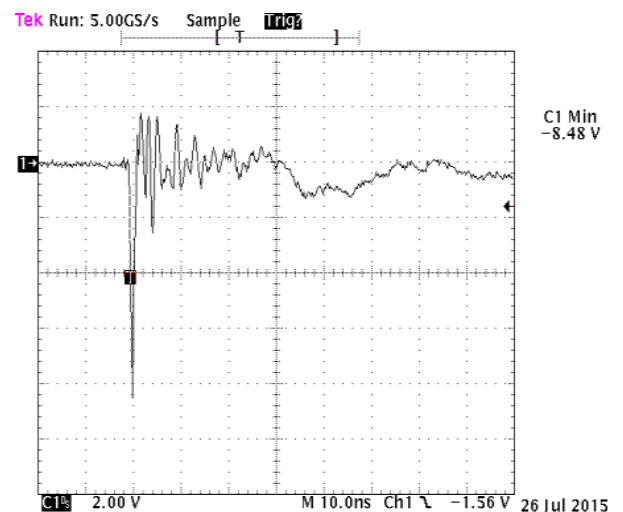
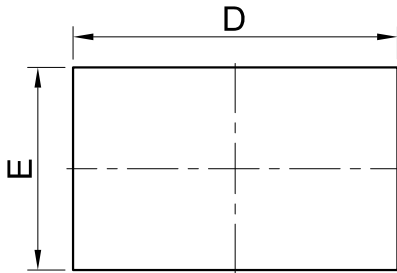


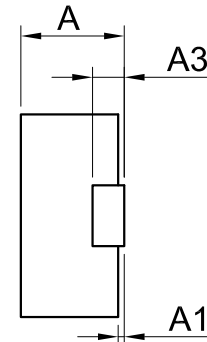
Fig 6. ESD Clamping Voltage
Negative 8 kV Contact per IEC61000-4-2

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OUTLINE AND DIMENSIONS

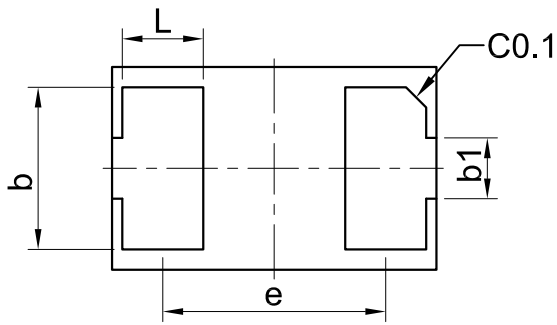


TOP VIEW



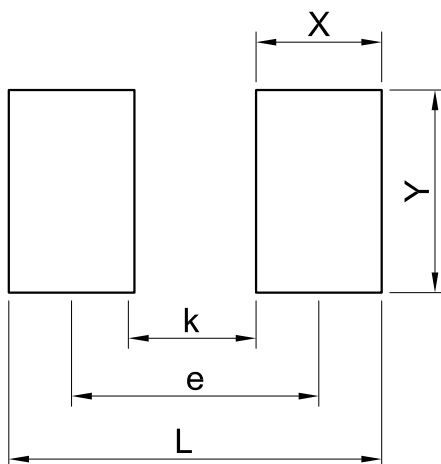
SIDE VIEW

DFN1610			
DIM	MIN	NOR	MAX
A	0.46	0.51	0.56
A1	0.01	0.03	0.05
b	0.75	0.80	0.85
b1	0.25	0.30	0.35
D	1.55	1.60	1.65
E	0.95	1.00	1.05
e	1.10BSC		
L	0.35	0.40	0.45
A3	0.127REF.		
All Dimensions in mm			



BOTTOM VIEW

SOLDERING FOOTPRINT



DFN1610	
DIM	(mm)
X	0.62
Y	1.00
L	1.84
e	1.22
K	0.60

单击下面可查看定价，库存，交付和生命周期等信息

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