

# S-LTVS16H16T5G

## 1- Line Uni-directional TVS Diode

### 1. FEATURES

- 16V uni-directional ESD diode
- Low clamping voltage
- Complies with IEC 61000-4-2 standards: Air discharge:  $\pm 30\text{kV}$   
Contact discharge:  $\pm 30\text{kV}$
- We declare that the material of product compliance with RoHS requirements and Halogen Free.
- S-prefix for automotive and other applications requiring unique site and control change requirements; AEC-Q101 qualified and PPAP capable.

### 2. Applications

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

### 3. DEVICE MARKING AND ORDERING INFORMATION

Device	Marking	Shipping
S-LTVS16H16T5G	BT	8000/Tape&Reel

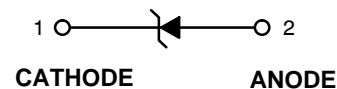
### 4. MAXIMUM RATINGS( $T_a = 25^\circ\text{C}$ )

Parameter	Symbol	Limits	Unit
IEC 61000-4-2 (ESD) Contact		$\pm 30$	kV
Air		$\pm 30$	
peak pulse power @ 8/20 $\mu\text{s}$ (Note 1)	PPP	1740	W
peak pulse current @ 8/20 $\mu\text{s}$ (Note 1)	IPP	60	A
Storage Temperature Range	Tstg	$-55 \sim +150$	$^\circ\text{C}$
Junction Temperature Range	TJ	$-55 \sim +150$	$^\circ\text{C}$

Note 1. Surge current waveform per Figure 1 according to IEC 61000-4-5.



DFN1610



#### MARKING DIAGRAM

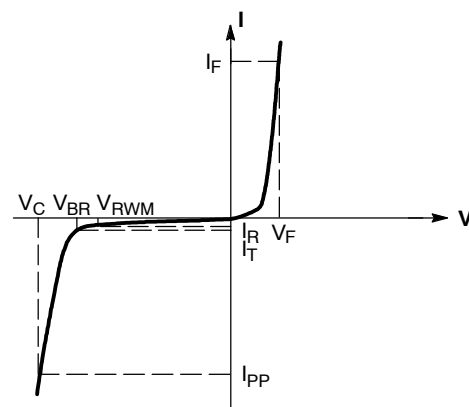


cathode

BT = Specific Device Code  
M = Month Code

## 5. ELECTRICAL CHARACTERISTICS (Ta= 25°C)

Symbol	Parameter
IPP	Maximum Reverse Peak Pulse Current
VC	Clamping Voltage @ IPP
VRWM	Working Peak Reverse Voltage
IR	Maximum Reverse Leakage Current @ VRWM
VBR	Breakdown Voltage @ IT
IT	Test Current
IF	Forward Current
VF	Forward Voltage @ IF
Ppk	Peak Power Dissipation
C	Capacitance @ VR = 0 and f = 1.0 MHz



Uni-Directional TVS

## 6. ELECTRICAL CHARACTERISTICS (Ta= 25°C)

Characteristic	Symbol	Test Condition	Min.	Typ.	Max.	Unit
Reverse stand-off voltage	VRWM				16	V
Breakdown Voltage	VBR	IT = 1mA	17.6		20	V
Reverse leakage current	IR	VR = 16V			500	nA
Forward Voltage	VF	IF = 10mA			1.2	V
Clamping Voltage(Note 1)	VC	IPP = 60A, tp=8/20μs		26.6	29	V
Junction Capacitance	Cj	VR = 0V, f = 1MHz			420	pF

Note 1.Surge current waveform per Figure 1 according to IEC 61000-4-5.

## 7. ELECTRICAL CHARACTERISTICS CURVES

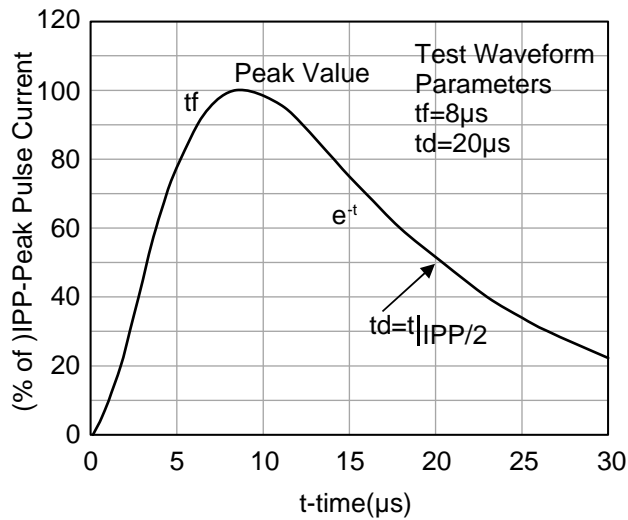


Figure 1. Pulse Waveform according to IEC 61000-4-5

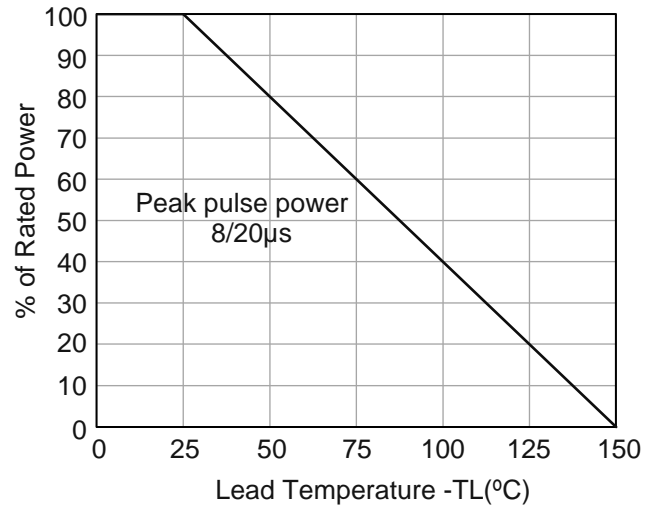


Figure 2. Power Derating Curve

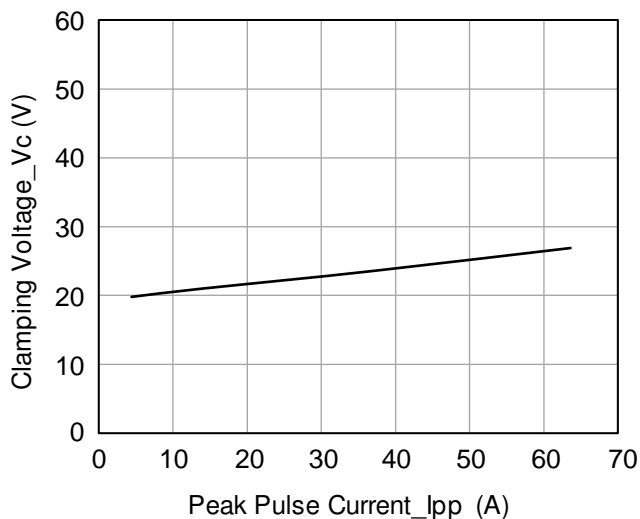


Figure 3. Clamping Voltage vs. Peak Pulse Current according to IEC 61000-4-5.

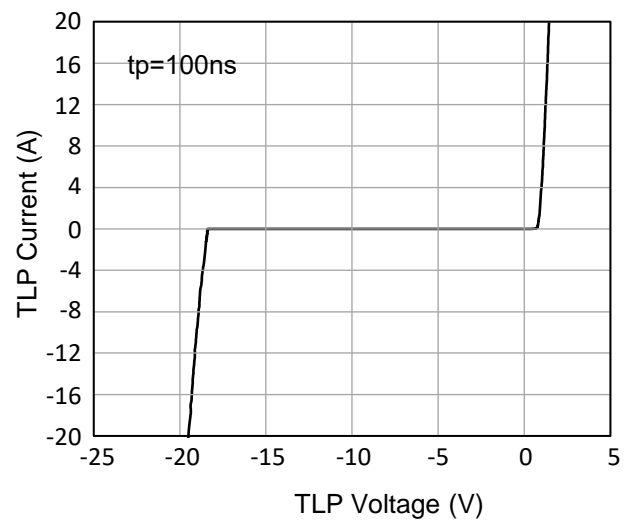


Figure 4. TLP Measurement

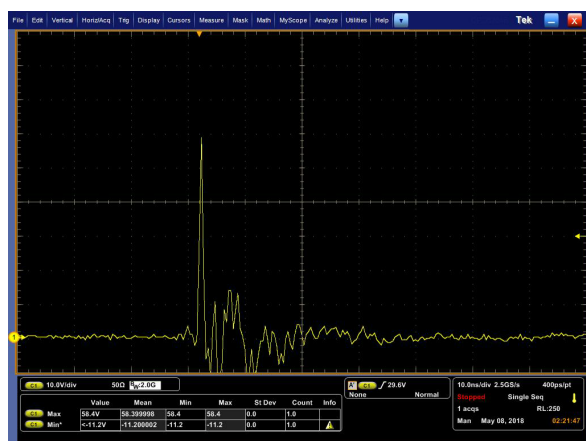


Figure 5. ESD Clamping Voltage Screenshot Positive 8 kV Contact per IEC61000-4-2

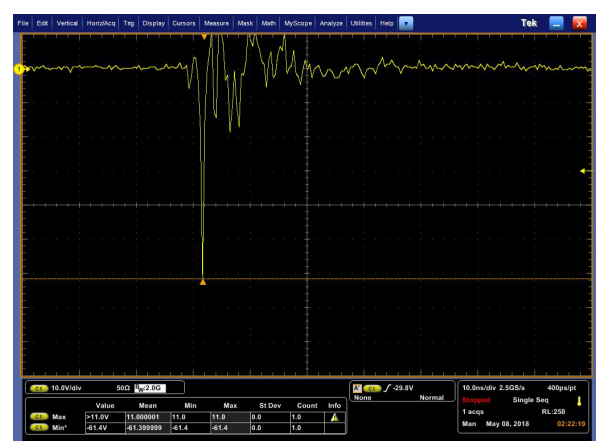
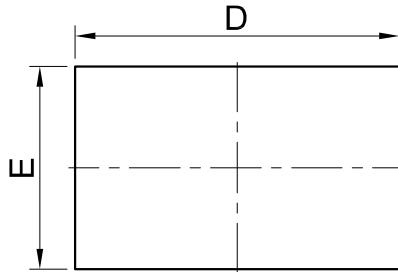
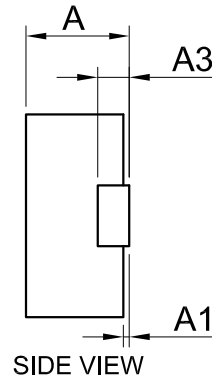


Figure 6. ESD Clamping Voltage Screenshot Negative 8 kV Contact per IEC61000-4-2

## 8.OUTLINE AND DIMENSIONS

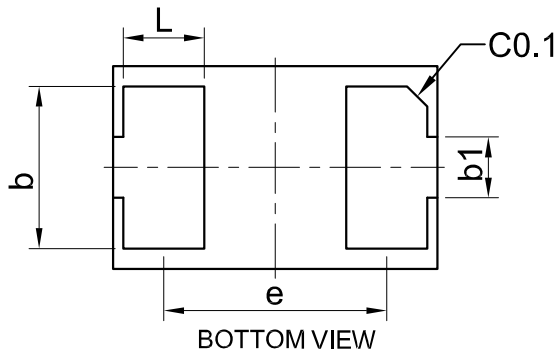


TOP VIEW



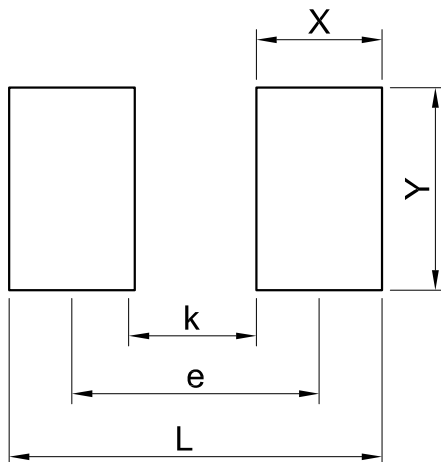
SIDE VIEW

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

## 9.SOLDERING FOOTPRINT



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

## **DISCLAIMER**

- Curve guarantee in the specification. The curve of test items with electric parameter is used as quality guarantee. The curve of test items without electric parameter is used as reference only.
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