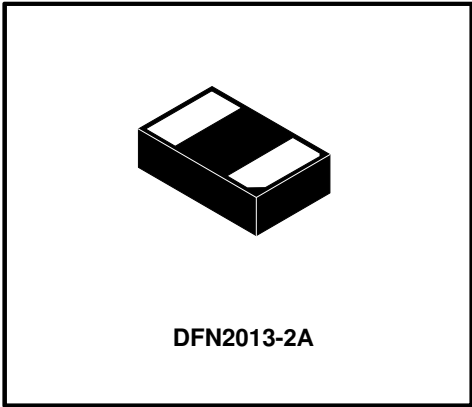


# Product Preview Transient Voltage Suppressors

LTVS2013H4.5CT5G



### Features

- Reverse stand-off voltage:  $\pm 4.5V$  Max
- Low clamping voltage
- Complies with IEC 61000-4-2 standards:  
     Air discharge:  $\pm 30kV$   
     Contact discharge:  $\pm 30kV$
- RoHS Compliant



### Ordering information

Device	Marking	Shipping
LTVS2013H4.5CT5G	3H	4000/Tape&Reel

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

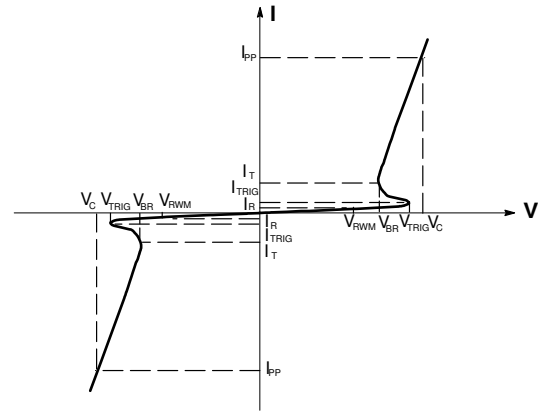
Parameter	Symbol	Value	Unit
Peak Pulse Power (8/20 $\mu s$ )	Ppk	1920	W
Peak Pulse Current (8/20 $\mu s$ )	I <sub>PP</sub>	160	A
Operating Temperature Range	T <sub>J</sub>	-55 to +125	$^{\circ}C$
Storage Temperature Range	T <sub>stg</sub>	-55 to +150	$^{\circ}C$

# LTVS2013H4.5CT5G

## ELECTRICAL CHARACTERISTICS

( $T_A = 25^\circ\text{C}$  unless otherwise noted)

Symbol	Parameter
$I_{PP}$	Maximum Reverse Peak Pulse Current
$V_C$	Clamping Voltage @ $I_{PP}$
$V_{RWM}$	Reverse standoff voltage
$I_R$	Maximum Reverse Leakage Current @ $V_{RWM}$
$V_{BR}$	Breakdown Voltage @ $I_T$
$I_T$	Test Current
$V_{TRIG}$	Reverse trigger voltage
$I_{TRIG}$	Reverse trigger current



Bi-Directional TVS

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

Parameter	Symbol	Min	Typ	Max	Unit	Test Condition
Reverse Working Voltage	$V_{RWM}$			4.5	V	
Breakdown Voltage	$V_{BR}$	4.8		6.2	V	$I_T = 1\text{ mA}$
Reverse trigger voltage	$V_{TRIG}$	5			V	$I_{TRIG} = 2\mu\text{A}$
Reverse Leakage Current	$I_R$			0.8	$\mu\text{A}$	$V_R = 4.5\text{V}$
Clamping Voltage	$V_C$			7.5	V	$I_{PP} = 36\text{A}$ (8 x 20 $\mu\text{s}$ pulse)
Clamping Voltage	$V_C$			9	V	$I_{PP} = 70\text{A}$ (8 x 20 $\mu\text{s}$ pulse)
Clamping Voltage	$V_C$			14	V	$I_{PP} = 160\text{A}$ (8 x 20 $\mu\text{s}$ pulse)
Clamping Voltage	$V_C$			6	V	$I_{TLP} = 16\text{A}$ IEC 61000-4-2 $\pm 8\text{kV}$ Pin 1 to Pin 2
Junction Capacitance	$C_J$		500	600	pF	$V_R = 0\text{V}$ , $f = 1\text{MHz}$

# LTVS2013H4.5CT5G

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

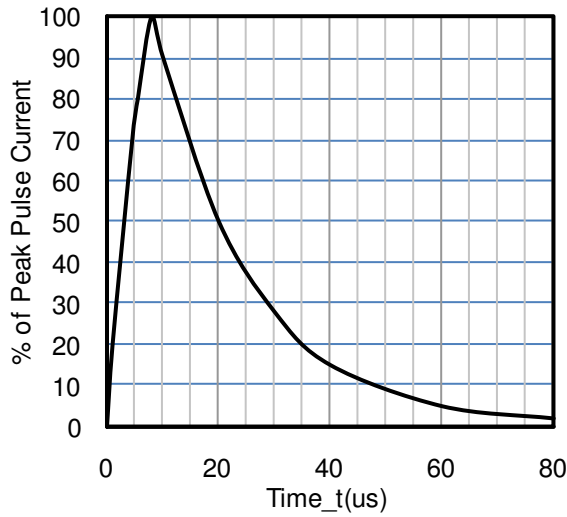


Fig1. 8/20us Pulse Waveform

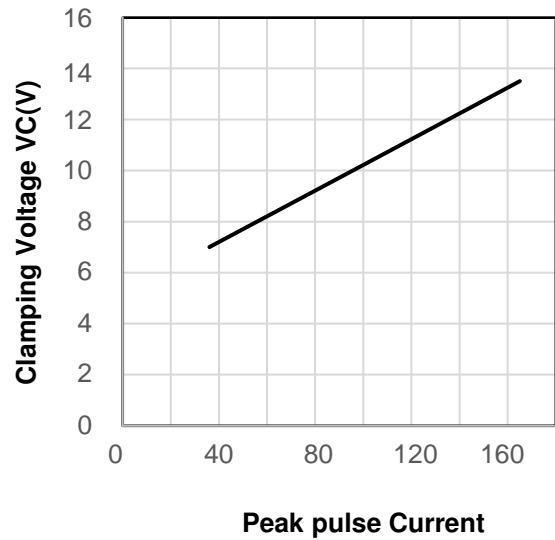


Fig2. Clamping Voltage Vs. Peak pulse Current

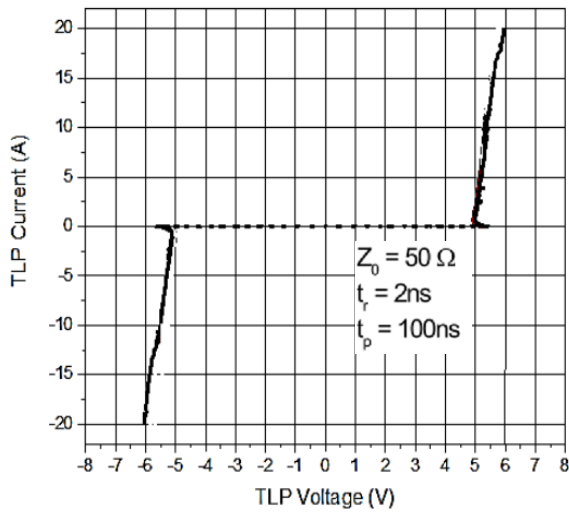


Fig3. TLP Measurement

LTVS2013H4.5CT5G



Fig4. ESD Clamping Voltage Screenshot Positive 8 kV Contact per IEC61000-4-2

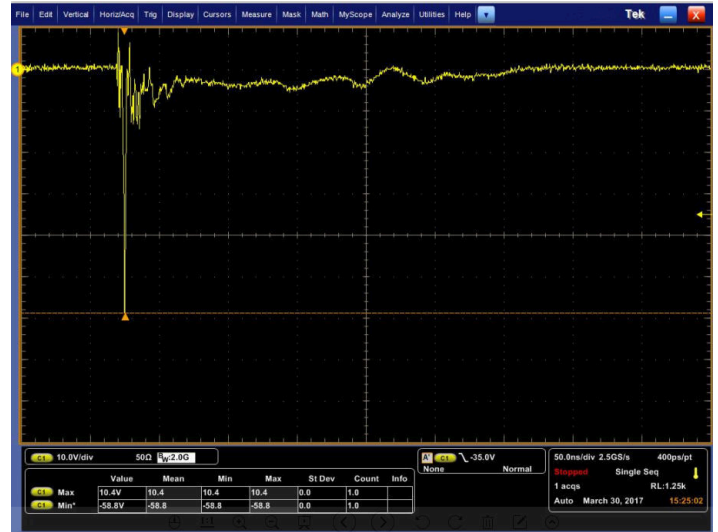
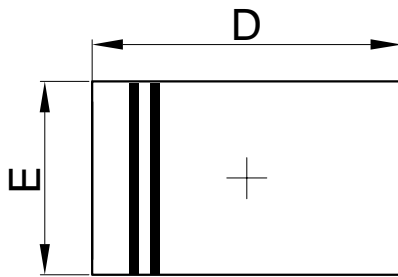


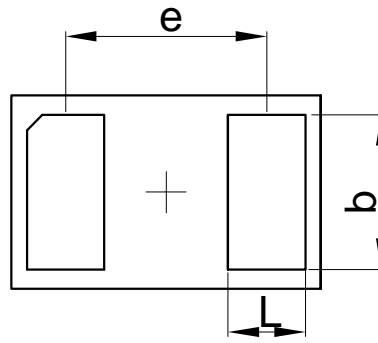
Fig5. ESD Clamping Voltage Screenshot Negative 8 kV Contact per IEC61000-4-2

LTVS2013H4.5CT5G

DFN2013-2A

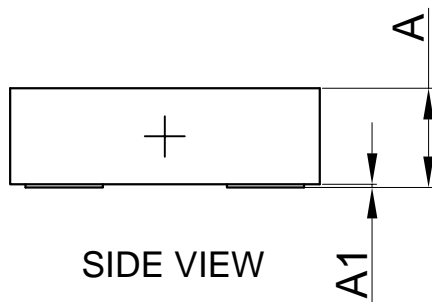


TOP VIEW



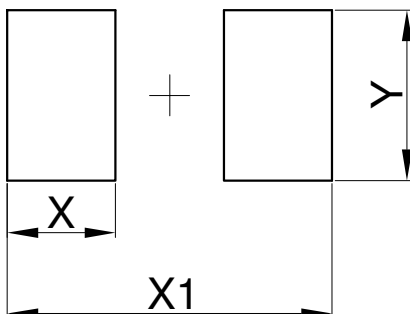
BOTTOM VIEW

DFN2013-2A			
Dim	Min	Typ	Max
A	0.57	0.62	0.67
A1	0.00	0.02	0.05
b	0.95	1.00	1.05
D	1.95	2.00	2.05
E	1.20	1.25	1.30
e	-	1.30	-
L	0.45	0.50	0.55
All Dimensions in mm			



SIDE VIEW

Suggested solder pad layout



Dimensions	(mm)
X	0.70
X1	2.10
Y	1.10