

LTVS2018H22T5G

/S-LTVS2018H22T5G

1-Line Uni-directional TVS Diode

The TVS2018H22T5G 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 TVS2018H22 complies with the IEC 61000-4-2 (ESD) standard with $\pm 30\text{kV}$ air and $\pm 30\text{kV}$ contact discharge. The high ESD surge protection make TVS2018H22 an ideal choice to protect cell phone, digital cameras, audio players and many other portable applications.

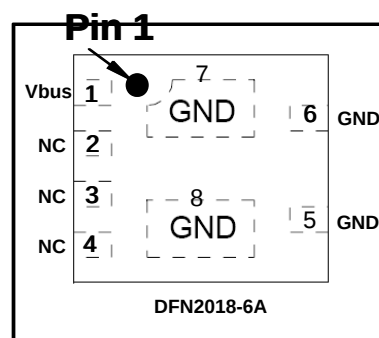
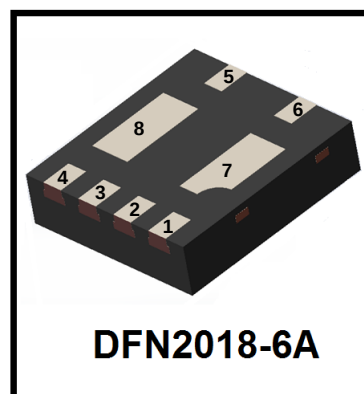
Features

- Protects one data or power line
- Low clamping voltage
- Complies with following standards:
 - IEC 61000-4-2 (ESD) immunity test
 - 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.

Applications

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

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Ordering information

Device	Marking	Shipping
LTVS2018H22T5G	H22	3000/Tape&Reel
S-LTVS2018H22T5G	H22	3000/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	5000	W
Peak Pulse Current (8/20 μs)	Ipp	150	A
ESD per IEC 61000-4-2 (Air) ESD per IEC 61000-4-2 (Contact)	VESD	± 30 ± 30	kV
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			22	V	
Breakdown Voltage	VBR	24	25	26	V	$I_R = 1\text{mA}$
Reverse Leakage Current	I_R			0.1	μA	$V_R = 22\text{V}$
Forward Voltage	V_F			1.2	V	$I_F = 10\text{mA}$
Clamping Voltage	V_C			35	V	$I_{PP} = 100\text{A}$ (8 x 20 μs pulse)
Junction Capacitance	CJ		1000		pF	$V_R = 0\text{V}$, $f = 1\text{MHz}$

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

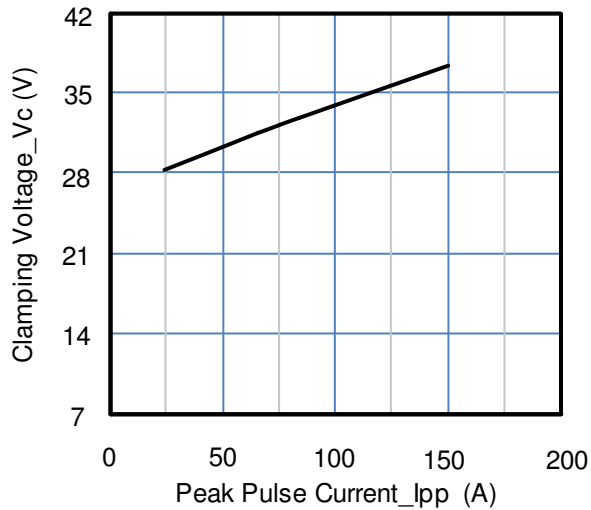


Fig 1 .Clamping Voltage vs. Peak Pulse Current

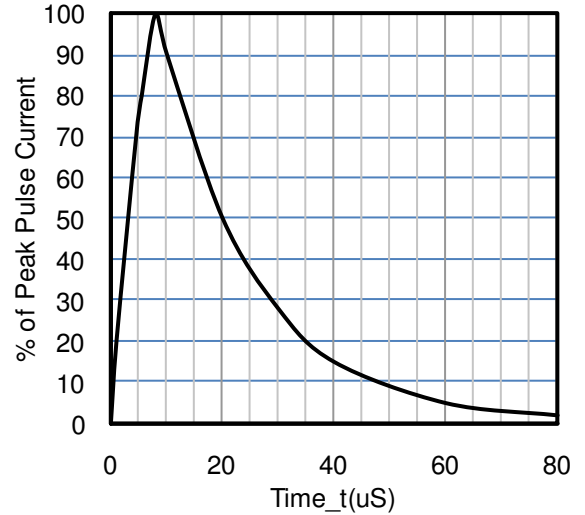
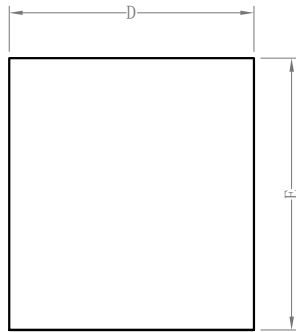


Fig 2. 8 X 20uS Pulse Waveform

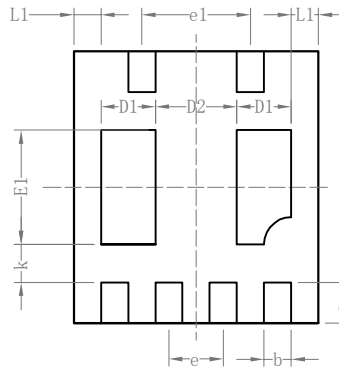
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OUTLINE AND DIMENSIONS

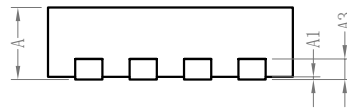
DFN2018-6A



Top View



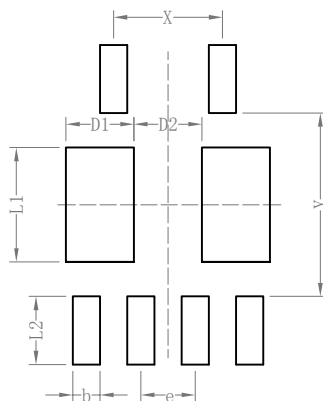
Bottom View



Side View

DFN2018			
Dim	Min.	Typ.	Max.
A	0.48	0.53	0.58
A1	0.00	0.02	0.05
A3	0.152REF.		
D	1.75	1.80	1.85
E	1.95	2.00	2.05
D1	0.35	0.40	0.45
E1	0.79	0.84	0.89
D2	0.55	0.60	0.65
b	0.15	0.20	0.25
e	0.40TYP.		
e1	0.80TYP.		
k	0.20MIN.		
L	0.25	0.30	0.35
L1	0.15	0.20	0.25
All Dimensions in mm			

SOLDERING FOOTPRINT



DFN2018	
Dim	(mm)
X	0.80
Y	1.35
L1	0.840
L2	0.50
D1	0.50
D2	0.50
b	0.20
e	0.40

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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