

LTVS20H20T5G

1-Line Uni-directional TVS Diode

The TVS20H20 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 TVS20H20 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 TVS20H20 an ideal choice to protect cell phone, digital cameras, audio players and many other portable applications.

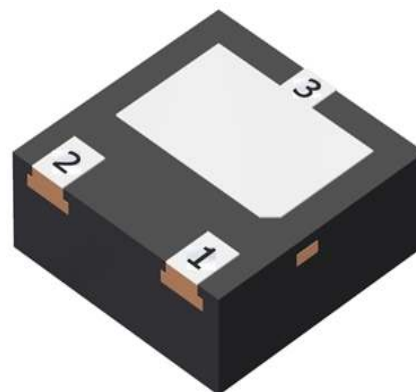
Features

- 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: $\pm 30\text{kV}$
- RoHS Compliant

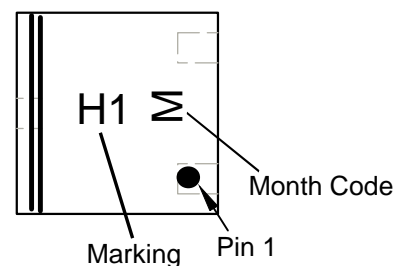
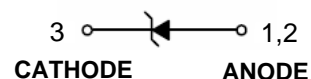
Applications

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

LTVS20H20T5G



DFN2020-3



Ordering information

Device	Marking	Shipping
LTVS20H20T5G	H1	4000/Tape&Reel

LTVS20H20T5G

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

Parameter	Symbol	Value	Unit
Peak Pulse Power (8/20 μs)	Ppk	6500	W
Peak Pulse Current (8/20 μs)	Ipp	170	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			20	V	
Breakdown Voltage	VBR	21		24	V	$I_R = 1\text{mA}$
Reverse Leakage Current	I_R			0.2	μA	$V_R = 20\text{V}$
Forward Voltage	V_F			1.2	V	$I_F = 10\text{mA}$
Clamping Voltage	V_C			31.5	V	$I_{PP} = 87\text{A}$ (8 x 20 μs pulse)
				37	V	$I_{PP} = 160\text{A}$ (8 x 20 μs pulse)
				38.5	V	$I_{PP} = 170\text{A}$ (8 x 20 μs pulse)
Junction Capacitance	CJ		1080	1200	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)

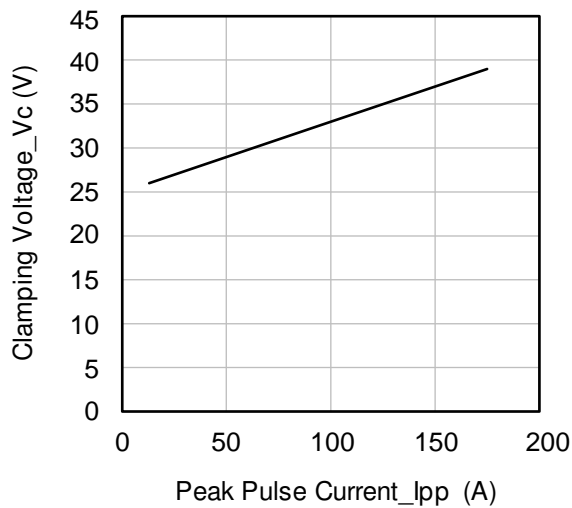


Fig 1 .Clamping Voltage vs. Peak Pulse Current

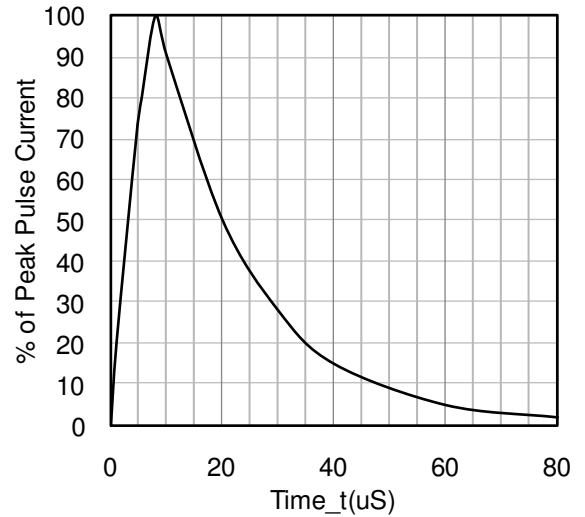
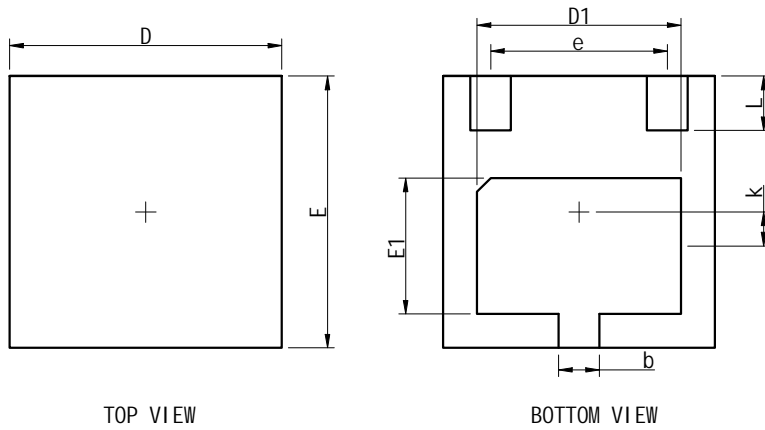


Fig 2. 8 X 20 μs Pulse Waveform

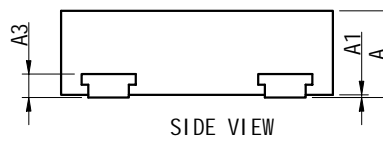
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OUTLINE AND DIMENSIONS

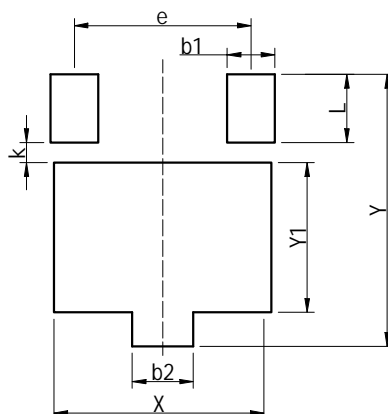
DFN2020-3



DFN2020-3			
Dim	Min.	Typ.	Max.
A	0.60	0.65	0.70
A1	0.00	0.02	0.05
A3	0.152REF.		
D	1.95	2.00	2.05
E	1.95	2.00	2.05
D1	1.45	1.50	1.55
E1	0.95	1.00	1.05
b	0.25	0.30	0.35
e	1.30TYP.		
k	0.20	0.25	0.30
L	0.35	0.40	0.45
All Dimensions in mm			



SOLDERING FOOTPRINT



DFN2020-3	
Dim	(mm)
X	1.60
Y	2.00
b1	0.35
b2	0.45
L	0.50
Y1	1.10
k	0.15
e	1.30

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