

Description

The LXT2020F12VU is an uni-directional TVS diode, utilizing leading monolithic silicon technology to provide fast re-sponse time and low ESD clamping voltage, making this device an ideal solution for protecting voltage sensitive data and power line. The LXT2020F12VU 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 LXT2020F12VU an ideal choice to protect cell phone, digital cameras, audio players and many other portable applications.

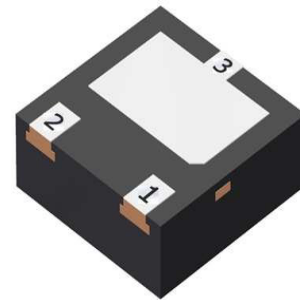
Features

- Uni-directional TVS diode
- 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

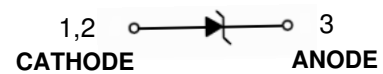
Ordering information

Device	Marking	Shipping
LXT2020F12VU	T12	3000/Tape&Reel

Package



DFN2020-3



Applications

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



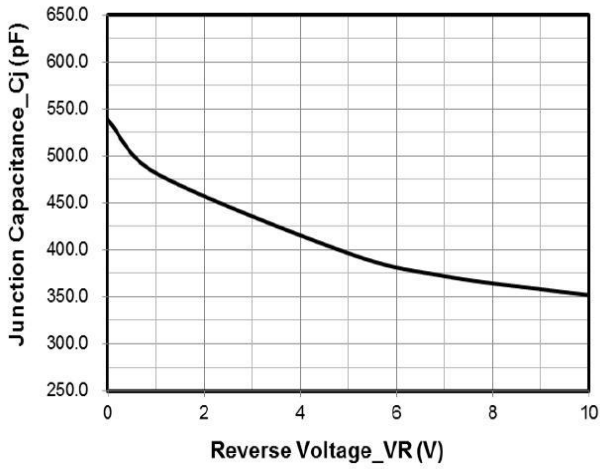
Absolute Maximum Ratings ($T_A=25^{\circ}\text{C}$ unless otherwise specified)

Parameter	Symbol	Value	Unit
Peak Pulse Power (8/20 μs)	Ppk	5600	W
Peak Pulse Current (8/20 μs)	Ipp	160	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 +150	$^{\circ}\text{C}$
Storage Temperature Range	Tstg	-55 to +150	$^{\circ}\text{C}$

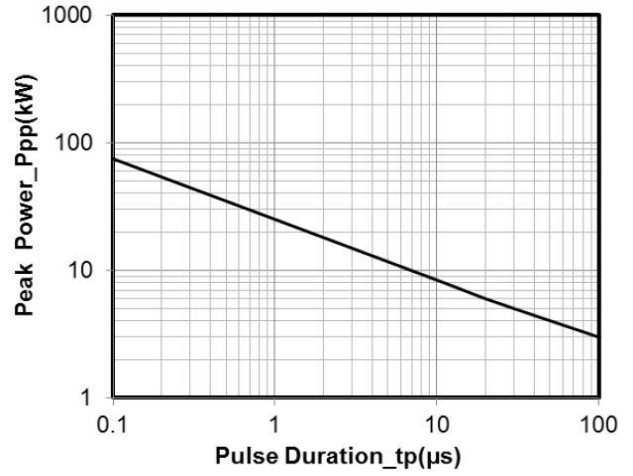
Electrical Characteristics ($T_A=25^{\circ}\text{C}$ unless otherwise specified)

Parameter	Symbol	Min	Typ	Max	Unit	Test Condition
Reverse Working Voltage	V _{RWM}			12	V	
Breakdown Voltage	V _{BR}	13		16	V	I _T = 1mA
Reverse Leakage Current	I _R			1	μA	V _R = 12V
Clamping Voltage	V _C			15	V	I _{PP} = 20A (8 x 20 μs pulse)
				35	V	I _{PP} = 160A (8 x 20 μs pulse)
Junction Capacitance	C _J		1000		pF	V _R = 0V, f = 1MHz

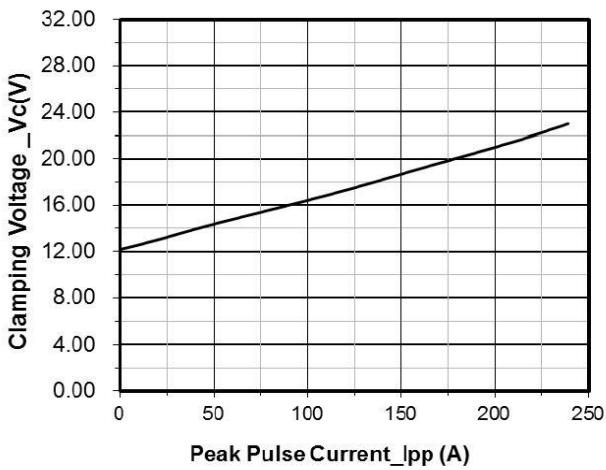
Typical Performance Characteristics (T_A=25°C unless otherwise Specified)



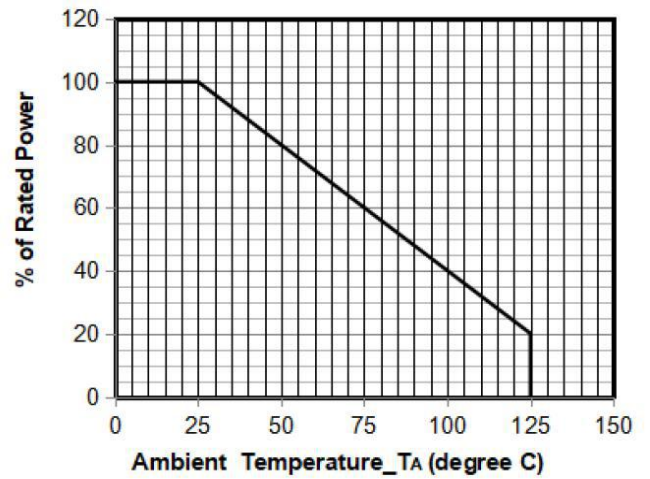
Novction Capacitance vs. Reverse Voltage



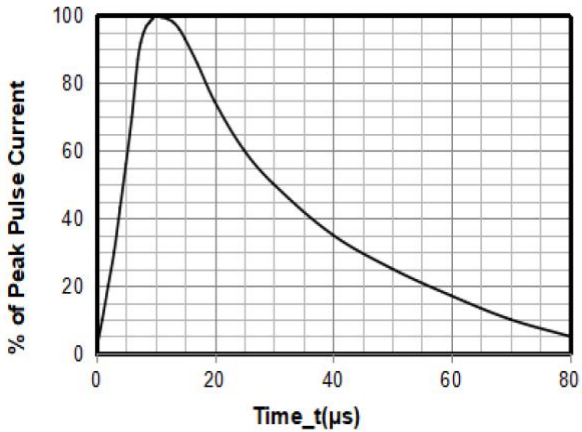
Peak Pulse Power vs. Pulse Time



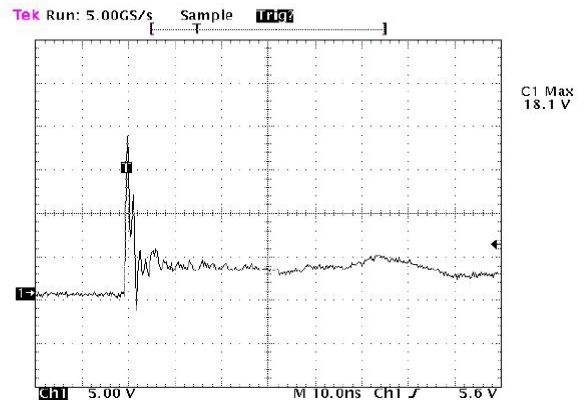
Clamping Voltage vs. Peak Pulse Current



Power Derating Curve



8 X 20μs Pulse Waveform

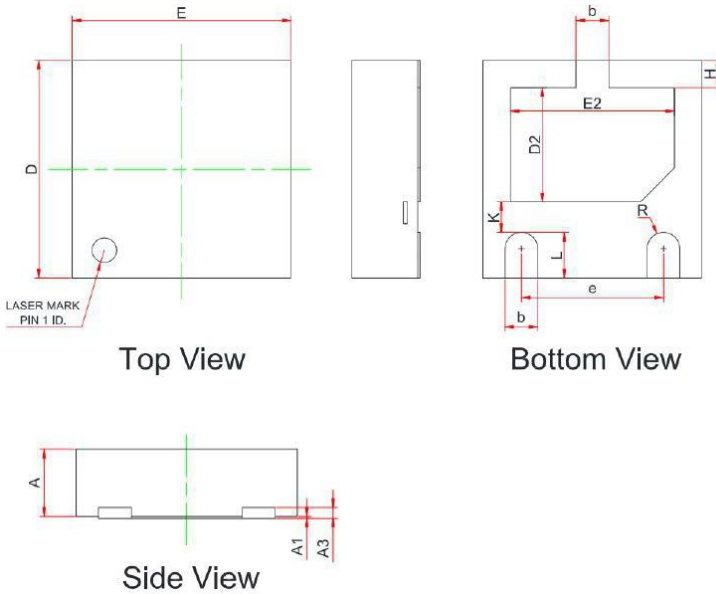


Note: Data is taken with a 10x attenuator

ESD Clamping Voltage

8 kV Contact per IEC61000-4-2

OUTLINE AND DIMENSIONS



SYM	DIMENSIONS		
	MILLIMETERS		
	MIN	NOM	MAX
A	0.55	0.60	0.65
A1	0.00	0.02	0.05
A3	0.10REF		
b	0.25	--	0.35
D	1.90	--	2.10
E	1.90	--	2.10
D2	0.95	--	1.15
E2	1.40	--	1.60
e	1.20	--	1.40
H	0.20	--	0.30
K	0.20	--	0.40
L	0.35	--	0.45
R	0.13	--	--

SOLDERING FOOTPRINT

