

Description

The SXTVSHC3N4V5B protects sensitive semiconductor components from damage or upset due to electrostatic discharge (ESD) and other voltage induced transient events. They feature large cross-sectional area junctions for conducting high transient currents, offer desirable electrical characteristics for board level protection, such as fast response time, low operating voltage.

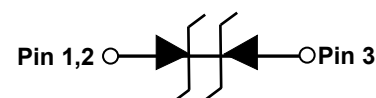
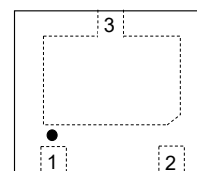
Feature

- 2800W Peak pulse power per line ($t_p = 8/20\mu s$)
- DFN2020-3L package
- Response time is typically $< 1\text{ ns}$
- Protect one I/O or power line
- Low clamping Voltage
- RoHS compliant
- Transient protection for data lines to IEC 61000-4-2(ESD)
- $\pm 30\text{KV}$ (air), $\pm 30\text{KV}$ (contact); IEC 61000-4-4 (EFT) 40A (5/50ns)

Applications

- Cell phone handsets and accessories
- Personal digital assistants (PDA's)
- Notebooks, desktops, and servers
- Portable instrumentation
- Cordless phones
- Digital cameras
- Peripherals
- MP3 players

DFN2020-3L

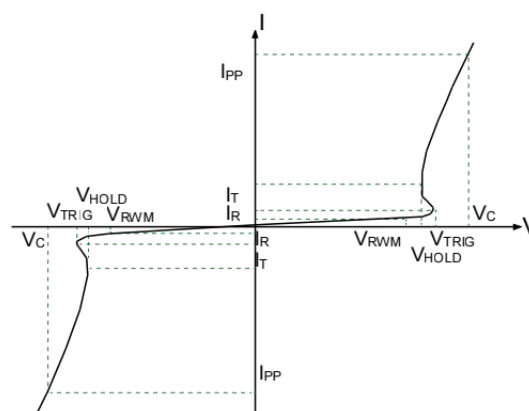


Mechanical Characteristics

- Lead finish: 100% matte Sn(Tin)
- Mounting position: Any
- Qualified max reflow temperature: 260°C

Electronics Parameter

Symbol	Parameter
V_{RWM}	Peak Reverse Working Voltage
I_R	Reverse Leakage Current @ V_{RWM}
V_{BR}	Breakdown Voltage @ I_R
I_T	Test Current
I_{PP}	Maximum Reverse Peak Pulse Current
V_C	Clamping Voltage @ I_{PP}
P_{PP}	Peak Pulse Power
C_J	Junction Capacitance



Electrical characteristics per line@25°C (unless otherwise specified)

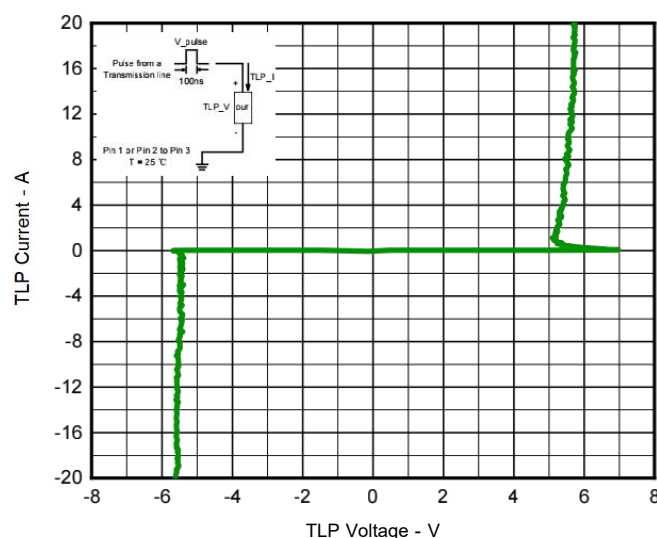
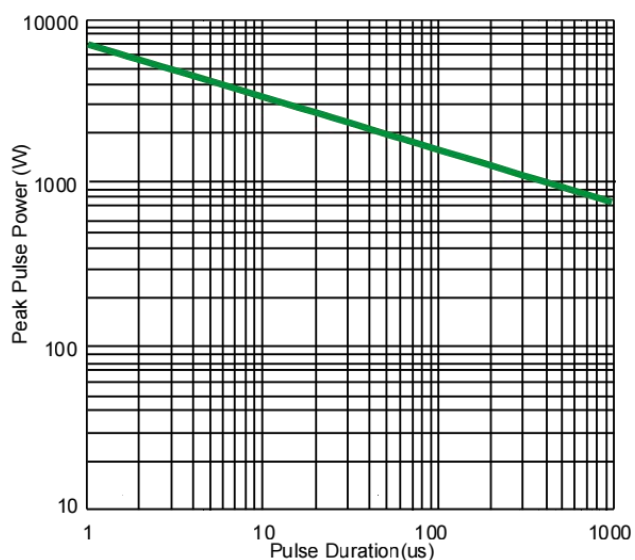
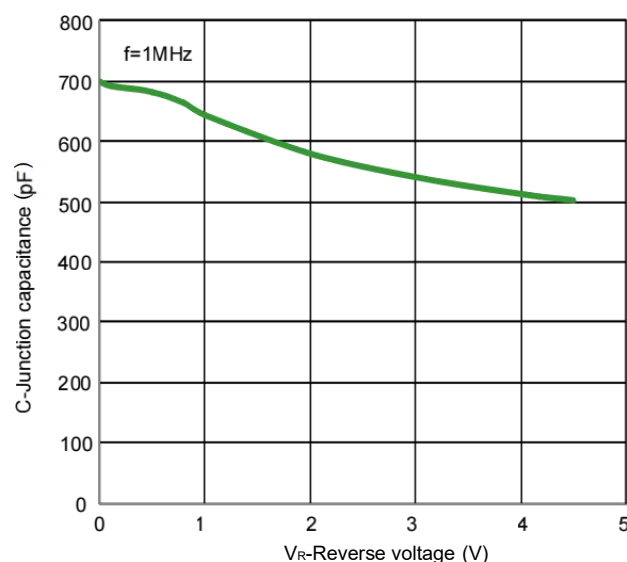
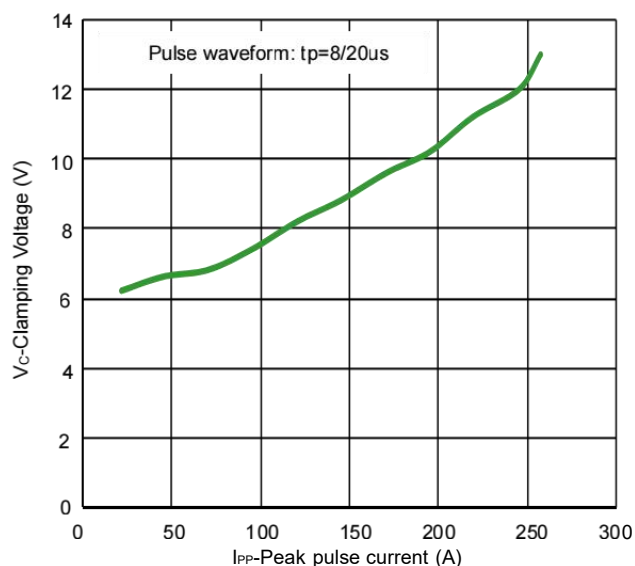
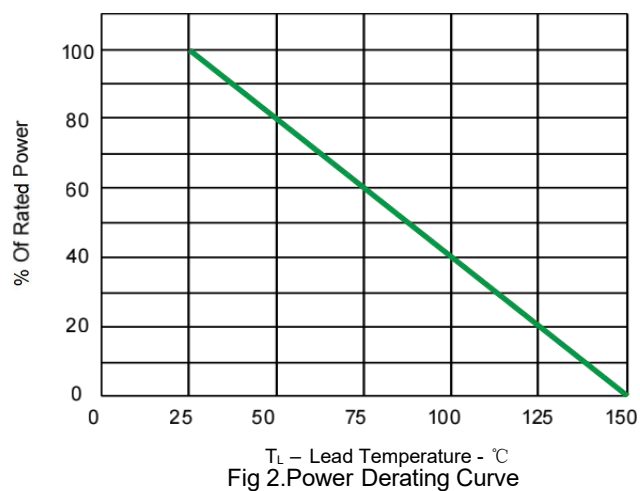
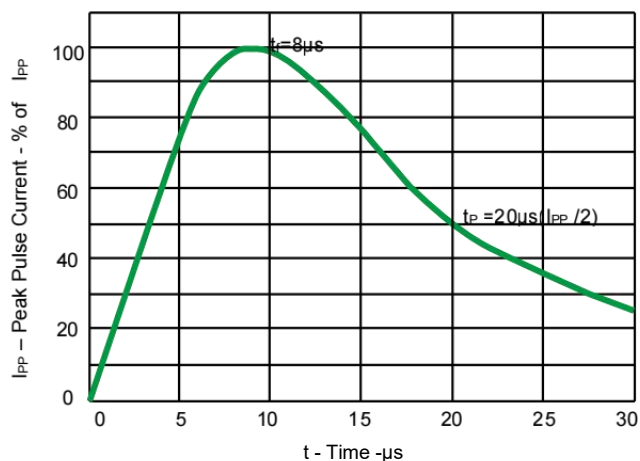
Parameter	Symbol	Conditions	Min.	Typ.	Max.	Units
Peak Reverse Working Voltage	V_{RWM}				4.5	V
Breakdown Voltage	V_{BR}	$I_T = 1\text{mA}$	4.6	5.2	6.1	V
Reverse Leakage Current	I_R	$V_{RWM} = 4.5\text{V}$			1	μA
Clamping Voltage	V_C	$I_{PP} = 20\text{A}$ $t_P = 8/20\mu\text{s}$		6	8	V
Clamping Voltage	V_C	$I_{PP} = 120\text{A}$ $t_P = 8/20\mu\text{s}$		8	10	V
Clamping Voltage	V_C	$I_{PP} = 240\text{A}$ $t_P = 8/20\mu\text{s}$		12	14	V
Junction Capacitance	C_J	$V_R = 0\text{V}$ $f = 1\text{MHz}$	500	700	900	pF

Notes : Measured from pin 1 and pin 2 to pin 3.

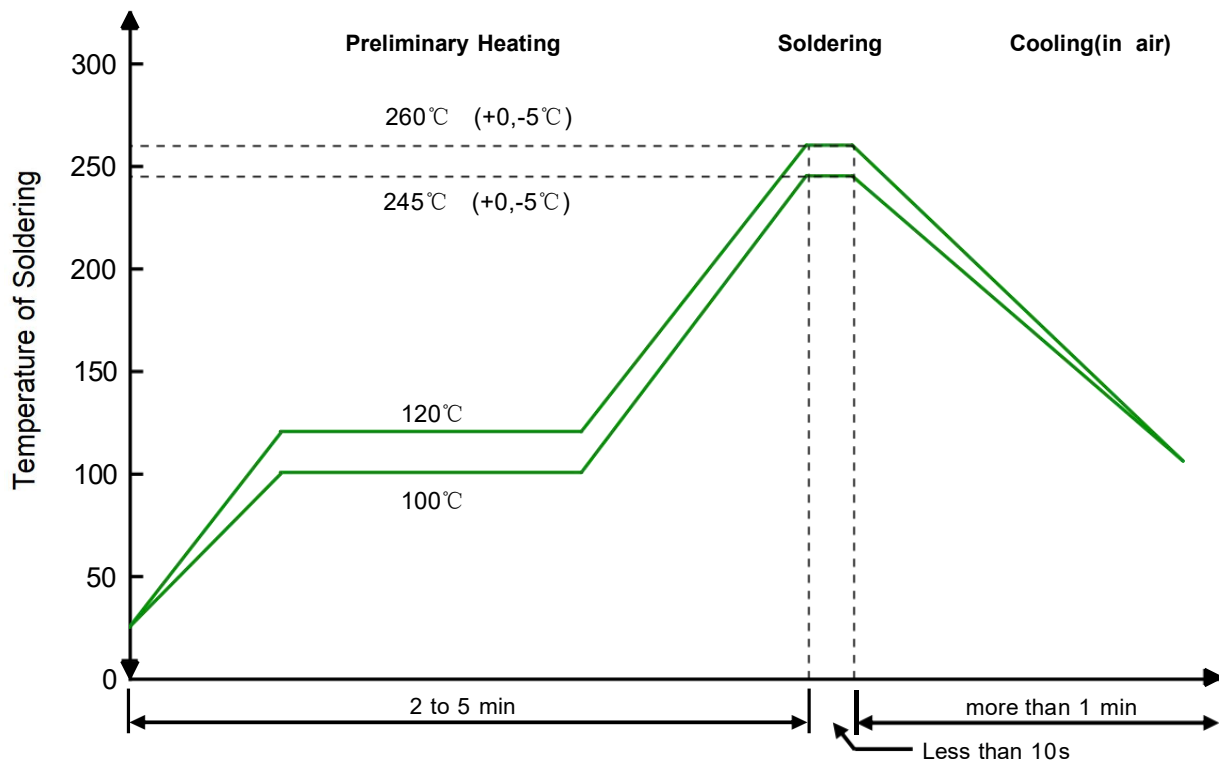
Absolute maximum rating@25°C

Rating	Symbol	Value	Units
Peak Pulse Power ($t_P = 8/20\mu\text{s}$)	P_{PP}	2800	W
Peak Pulse Current ($t_P = 8/20\mu\text{s}$)	I_{PP}	240	A
Lead Soldering Temperature	T_L	260 (10 sec)	°C
Operating Temperature	T_J	-55 to 150	°C
Storage Temperature	T_{STG}	-55 to 150	°C

Typical Characteristics



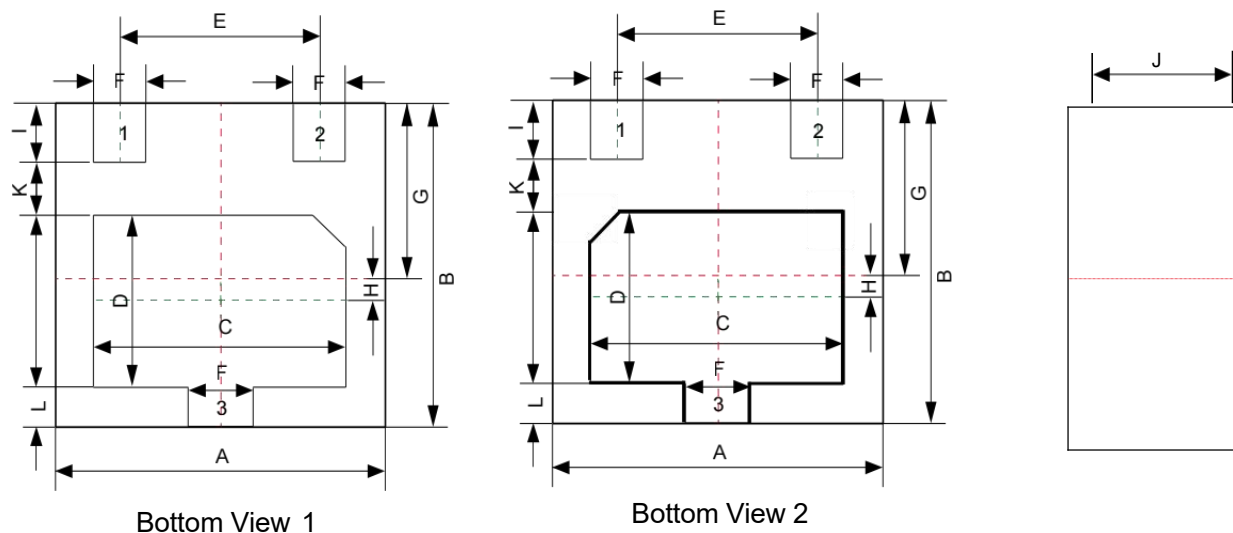
Solder Reflow Recommendation



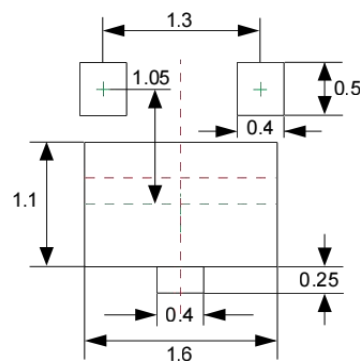
Remark: Pb free for 260°C ; Pb for 245°C .

Ordering information

Device	Package	Reel	Shipping
TAPING	DFN2020-3L (Pb-Free)	7"	3000 / Tape & Reel

Product dimension (DFN2020-3L)


Dim	Millimeters	
	MIN	MAX
A	1.90	2.10
B	1.90	2.10
C	1.40	1.60
D	0.90	1.15
E	1.30BSC	
F	0.25	0.40
G	0.90	1.10
H	0.20	0.30
I	0.32	0.48
J	0.50	0.65
K	0.20	0.45
L	0.15	0.30


Recommended Soldering Pad

Unit:mm