SSCT12V11L2

High Power TVS Diode

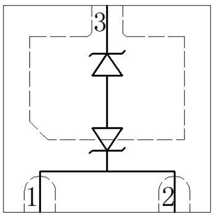
● Description

The SSCT12V11L2 is a high power TVS, 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 lines. The SSCT12V11L2 complies with the IEC 610002 (ESD) standard with ±30kV air and ±30kV contact discharge. It is assembled into a 3pin DFN20203 package. The leads are finished with NiPdAu. Each device will protect one line. The combination of small size, and high surge capability makes them ideal for use in applications such as cellular phones, LCD displays, USB, and multimedia card interfaces.

● Feature

- ✧ 3000W peak pulse power (TP = 8/20μs)
- ✧ DFN2020-3Package
- ✧ Working voltage: 12V
- ✧ Low clamping voltage
- ✧ Low capacitance
- ✧ RoHS compliant transient protection for high speed data lines to IEC61000-4-2(ESD)±30kV(air),±30kV(contact)

● PIN configuration



Topview

● Applications

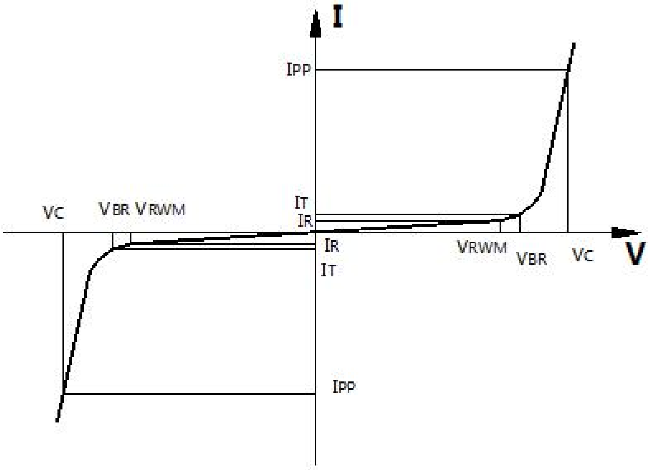
- ✧ DVI & HDMI Port Protection
- ✧ Serial and Parallel Ports
- ✧ Projection TV
- ✧ Notebooks, Desktops, Server
- ✧ USB 1.1/2.0/3.0/3.1/OTG

● Machanical data

- ✧ Lead finish:100% matte Sn(Tin)
- ✧ Mounting position: Any
- ✧ Qualified max reflow temperature:260℃
- ✧ Device meets MSL 1 requirements
- ✧ Pure tin plating: 7 ~ 17 um

Electronic Parameter

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



Absolute maximum rating @TA=25℃

Symbol	Parameter	Value	Units
P_{PP}	Peak Pulse Power（8/20µS）	250	W
T_{STG}	Storage Temperature	-55/+150	℃
T_J	Operating Temperature	-55/+150	℃

Electrical Characteristics @TA=25℃

Parameter	Symbol	Conditions	Min.	Typ.	Max.	Units
Peak Reverse Working Voltage	V_{RWM}	Any I/O to Ground		12		V
Breakdown Voltage	V_{BR}	It = 1mA Any I/O to Ground		14.53		V
Reverse Leakage Current	I_R	VRWM =12V, T=25℃			1	µA
Clamping Voltage	V_C	IPP =50A, tP = 8/20µs		20		V
Clamping Voltage	V_C	IPP=110A, tP = 8/20µs		25	27.2	V
Junction Capacitance	C_J	VR = 0V, f = 1MHz, any I/O pin to Ground		870		pF

Typical Performance Characteristics

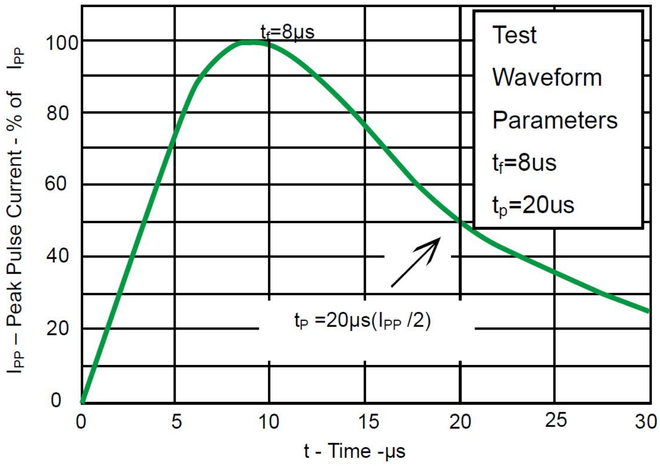


Fig 1.Pulse Waveform

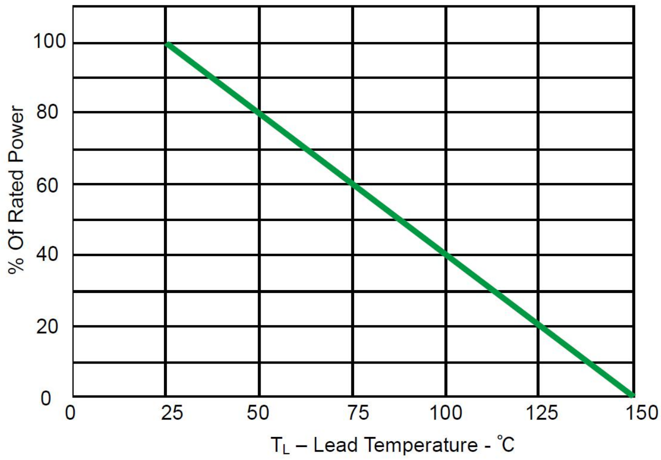
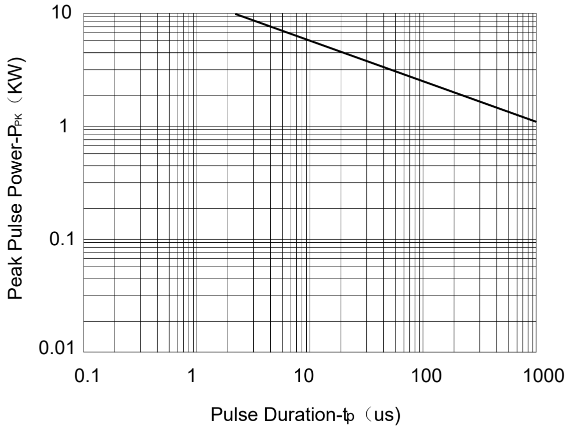


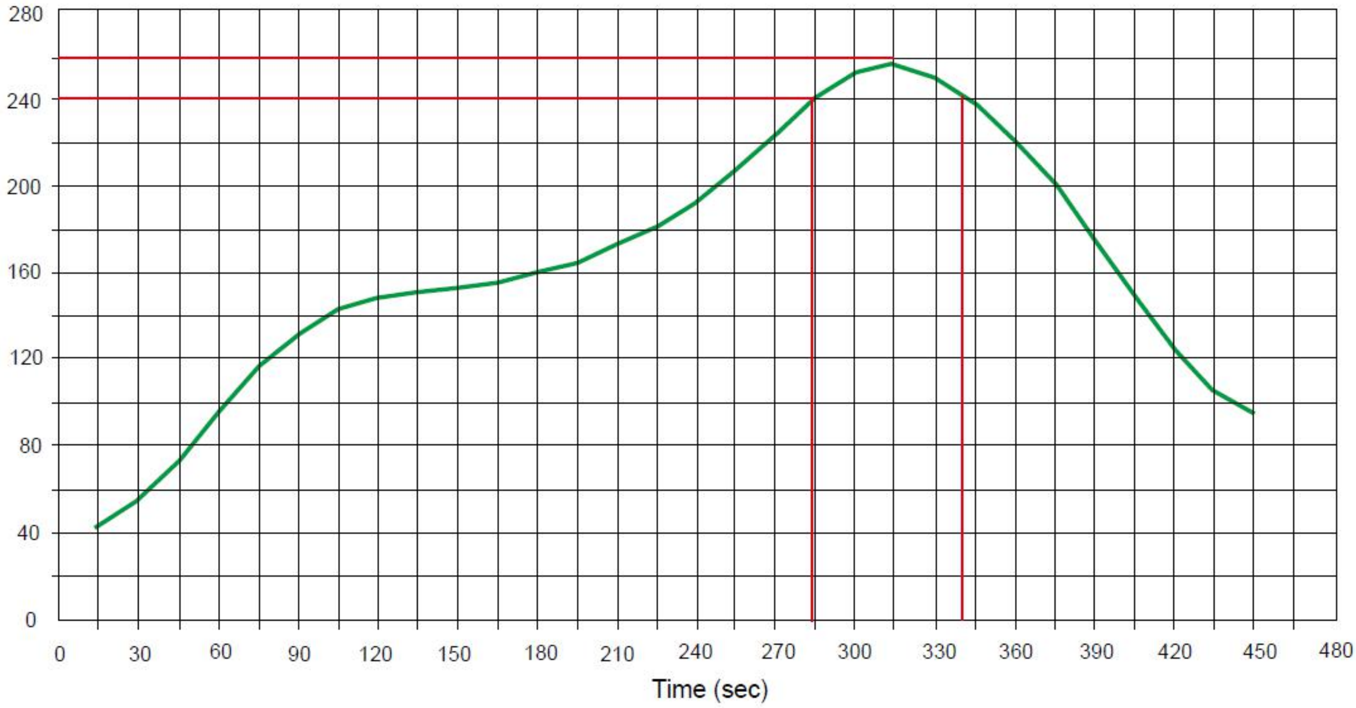
Fig 2.Power Derating Curve



Non-Repetitive Peak Pulse Power vs. Pulse Time

- ## Solder Reflow Recommendation

Peak Temp=257℃, Ramp Rate=0.802deg. ℃/sec



- **Package Information**

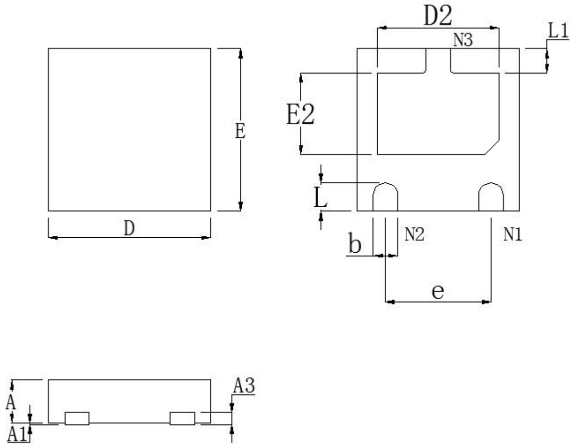
Ordering Information

Device	Package	Qty per Reel	Reel Size
SSCE12V11L2	DFN2020-3	3000	7 Inch

Mechanical Data

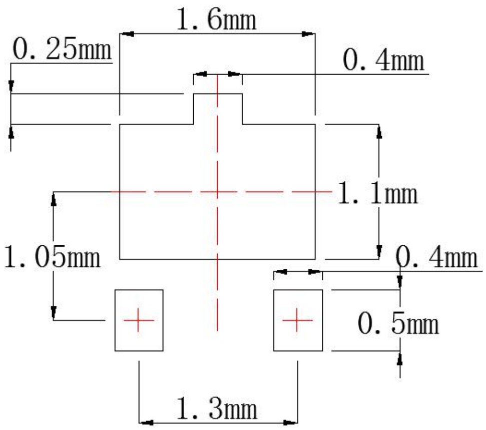
Case: DFN2020-3

Case Material: Molded Plastic. UL Flammability



DIM	Millimeters		
	Min	Nom	Max
A	0.50	0.55	0.60
A1	0.00	–	0.05
A3	0.15 REF.		
D	1.95	2.00	2.05
E	1.95	2.00	2.05
b	0.25	0.30	0.35
L	0.30	0.35	0.40
L1	0.25	0.30	0.35
D2	1.35	1.50	1.60
E2	0.85	1.00	1.10
e	1.30 BSC		

Recommended Pad outline



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