The SSCE3V322L1 is a bi-directional TVS diode.It is designed with AF process TVS technology to protect voltage sensitive components from ESD. Excellent clamping capability, low leakage, and fast response time provide best in class protection on designs that are exposed to ESD. Because of its small size, it is suited for use in cellular phones, MP3 players, digital cameras and many other portable applications where board space comes at a premium.

It has been specifically designed to protect sensitive components which are connected to data and transmission lines from overvoltage caused by ESD(electrostatic discharge), and EFT (electrical fast transients).

Features

- Peak Power Dissipation –80W (8 x 20 us Waveform)
- Stand-off Voltage：3.3V
- Low capacitance for high-speed interfaces
- Protects I/O Port
- Low Clamping Voltage
- Low Leakage
- Meets MSL 1 Requirements
- ROHS compliant
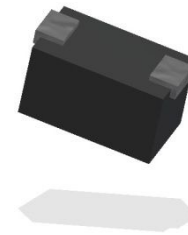
DFN0603-2L

Main applications

- High Speed Line : USB1.0/2.0,VGA
- Serial and Parallel Ports
- Notebooks, Desktops, Servers
- Projection TV
- Cellular handsets and accessories
- Portable instrumentation
- Peripherals
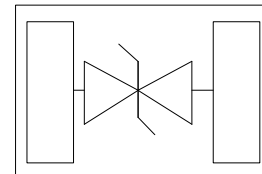
Protection solution to meet

- IEC61000-4-2 (ESD) ±30kV (air), ±30kV (contact)

Ordering Information

Device	Marking	Package	Qty per Reel	Reel Size
SSCE3V322L1	3C	DFN0603	15,000pcs	7 Inch

SSCE3V322L1

Maximum ratings (Tamb=25℃ Unless Otherwise Specified)

Parameter	Symbol	Value	Unit
Peak Pulse Power (tp=8/20μs waveform)	P_{PP}	80	Watts
Peak Pulse Current(tp=8/20μs waveform)	I_{PP}	8	A
ESD Rating per IEC61000-4-2： Contact		30	KV
Air		30	
Lead Soldering Temperature	T_L	260 (10 sec.)	℃
Operating Temperature Range	T_J	-55 ~ 125	℃
Storage Temperature Range	T_{STG}	-55 ~ 150	℃
Lead Solder Temperature − Maximum (10 Second Duration)	T_L	260	℃

## Electrical characteristics (Tamb=25℃ Unless Otherwise Specified)

Symbol	Parameter	Conditions	Min.	Typ.	Max.	Units
V_{RWM}	Reverse Working Voltage				3.3	V
V_{BR}	Breakdown Voltage	$I_T = 1mA$,	3.8			V
I_R	Reverse Leakage Current	$V_{RWM} = 3.3V$,		0.01	0.2	uA
V_C	Clamping Voltage	$I_{PP} = 1A$, tp =8/20μs,		6		V
		$I_{PP} = 5A$, tp =8/20μs,		8		V
		$I_{PP} = 8A$, tp =8/20μs,		10	12	V
C_J	Junction Capacitance	$V_R = 0V$, f = 1MHz,		13	25	pF

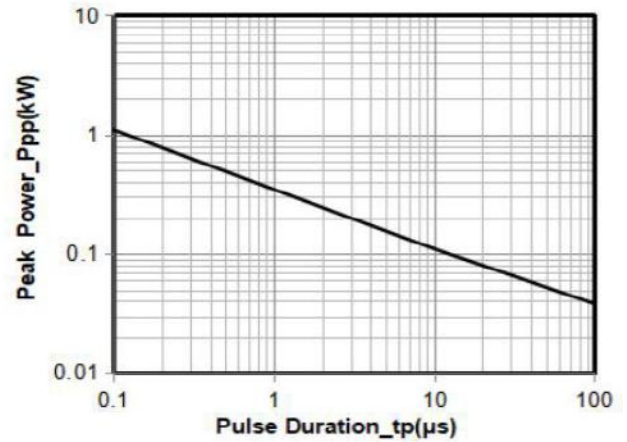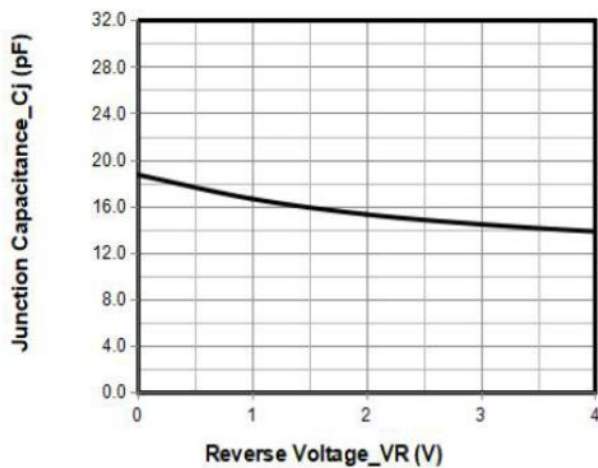| Symbol	Parameter
V_{RWM}	Working Peak Reverse Voltage
V_{BR}	Breakdown Voltage @ I_T
V_C	Clamping Voltage @ I_{PP}
I_T	Test Current
I_{RM}	Leakage current at V_{RWM}
I_{PP}	Peak pulse current
C_O	Off-state Capacitance
C_J	Junction Capacitance
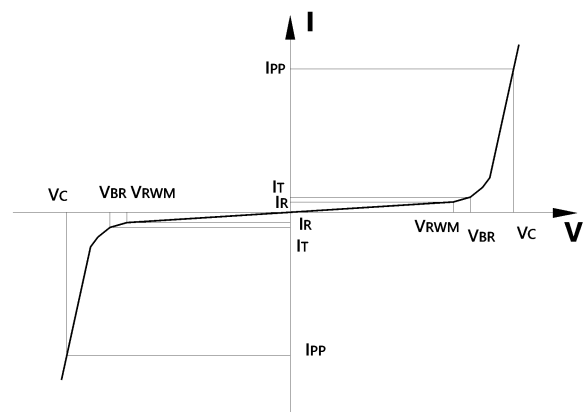
Typical electrical characterist applications
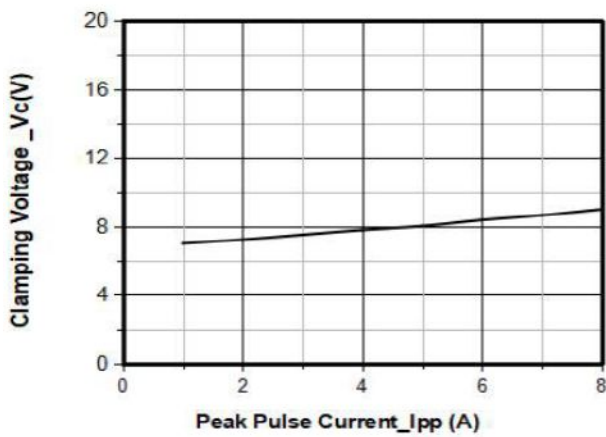
Junction Capacitance vs. Reverse Voltage
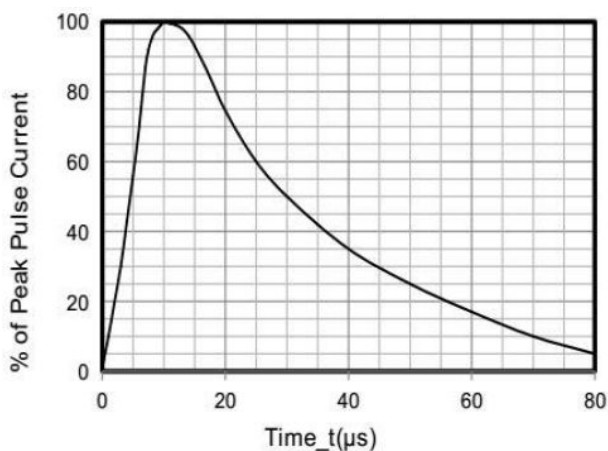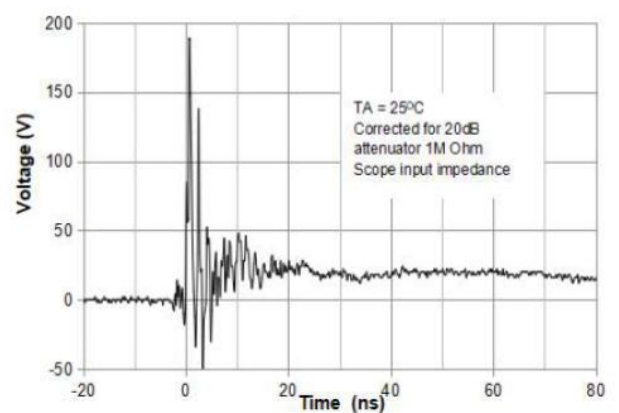

Peak Pulse Power vs. Pulse Time

Clamping Voltage vs. Peak Pulse Current
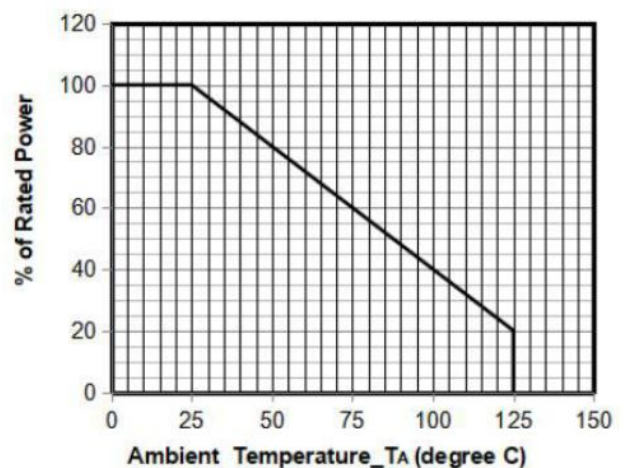
Power Derating Curve

8 X 20µs Pulse Waveform

ESD Clamping Voltage

8 kV Contact per IEC61000−4−2
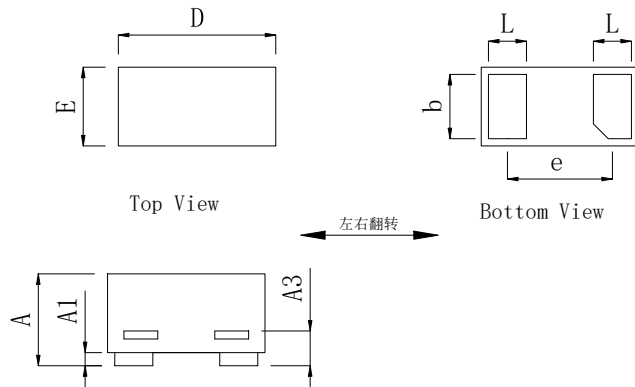
Package Information

DFN0603-2L

Mechanical Data
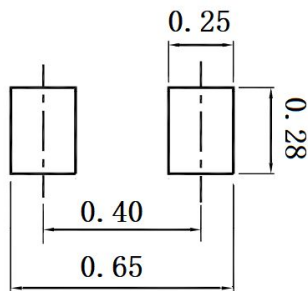
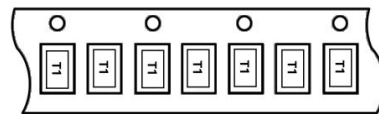Case: DFN0603-2L

Case Material: Molded Plastic. UL Flammability

Top View

Bottom View

左右翻转

DIM	Millimeters	
	Min	Max
A	0.230	0.330
A1	0.000	0.050
A3	0.102REF	
D	0.550	0.650
E	0.250	0.350
b	0.210	0.275
L	0.120	0.175
e	0.40BSC	

Recommended Pad outline

Device Orientation in Tape

DFN0603 Reel Dim

Progressive direction
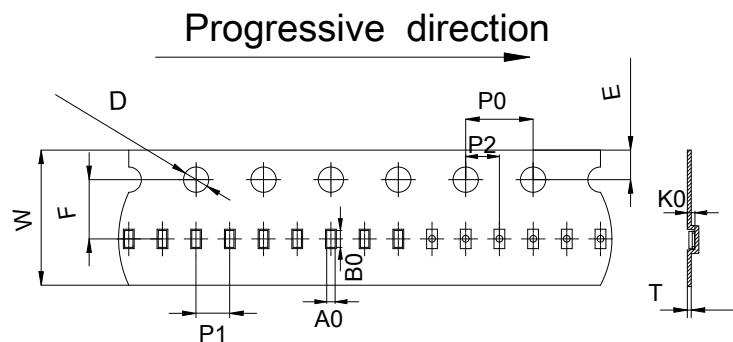
PACKAGE	W	E	F	P0	D	P2	P1	T	A0	B0	K0
DFN0603	8mm ±0.1	1.75mm ±0.1	3.5mm ±0.05	4mm ±0.1	1.5mm ±0.1	2mm ±0.05	2mm ±0.1	0.23mm ±0.02	0.34mm ±0.05	0.67mm ±0.05	0.4mm ±0.05

SSCE3V322L1

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