SSCEXXX11D3 Series

Micro Packaged TVS Diodes for ESD Protection

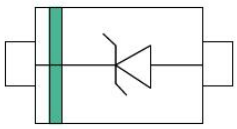
The SSCEXXX11D3 Series is designed to protect voltage sensitive components from ESD. Excellent clamping capability, low leakage, and fast response time provide best in class protection on designs that are exposed to ESD. Because of its small size, it is suited for use in cellular phones, MP3 players, digital cameras and many other portable applications where board space comes at a premium.

This series 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).

Feature

- 200W peak pulse power (TP = 8/20μs)
- SOD-523 Package
- Working voltage: 3.3V to 36V
- Low clamping voltage
- Low capacitance
- Device Meets MSL 1 Requirements
- Low Body Height: 1.68mg
- Solid-state silicon avalanche technology
- ROHS compliant

PIN configuration



Topview

Applications

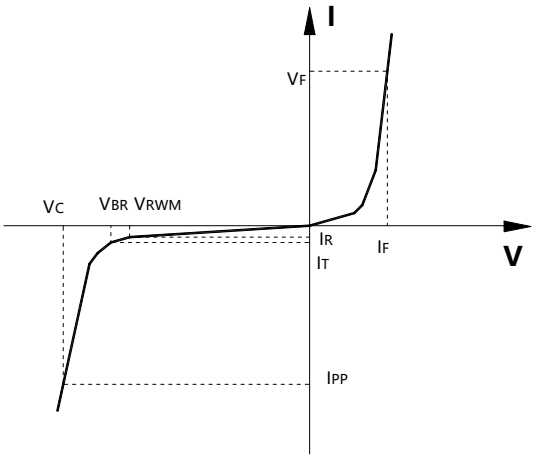
- USB 2.0 Power & Data Line Protection
- DVI & HDMI Port Protection
- Serial ATA Port Protection
- Mobile Handsets
- Digital Cameras and camcorders
- PDA & MP3 Players
- Digital TV and Set-top Boxes

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）	200	W
T_{STG}	Storage Temperature	-55/+150	℃
T_J	Operating Temperature	-55/+150	℃

Electrical Characteristics @TA=25℃

Electrical characteristics (Tamb=25℃ Unless Otherwise Specified)							
Device	Marking Code	V_{RWM}	I_R @ V_{RWM}	V_{BR} @ 1 mA	V_C	Capacitance	
				(Volts)	@ 1 A	@ V_R = 0 V, 1 MHz (pF)	
		(V)	(uA)	Min	(V)	Typ	Max
SSCE3V311D3	ZE	3.30	20	4.00	7.50	40	55
SSCE5V011D3	ZF	5.00	2	6.00	9.80	36	45
SSCE7V011D3	ZH	7.00	2	9.00	9.20	70	85
SSCE12V11D3	MA	12.0	2	13.1	17.8	35	45
SSCE15V11D3	ZN	15.0	2	16.7	24.0	35	45
SSCE24V11D3	ZQ	24.0	2	26.7	43.0	30	45
SSCE36V11D3	ZL	36.0	2	40.0	69.5	28	40

- **Typical Performance Characteristics**

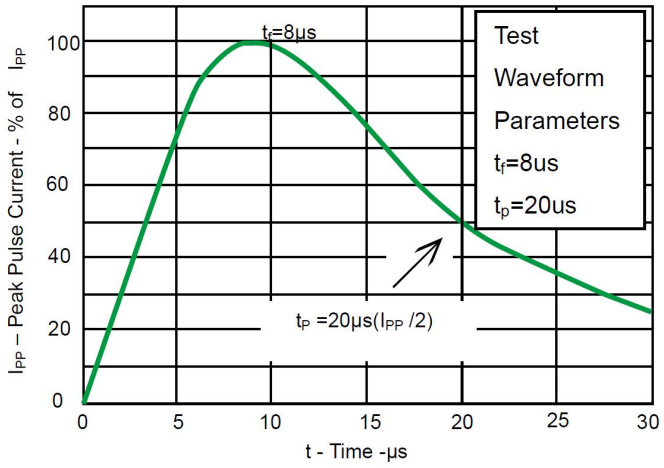


Fig 1.Pulse Waveform

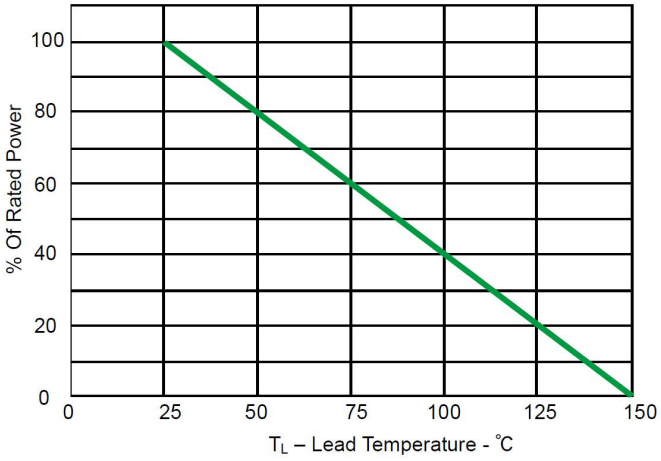
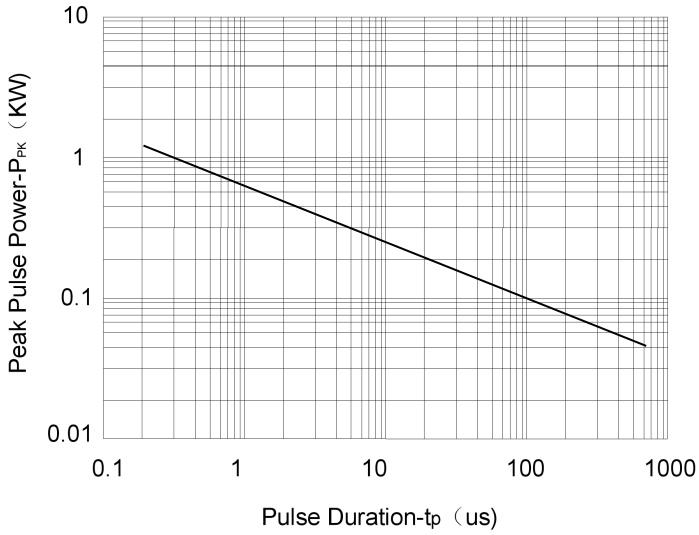


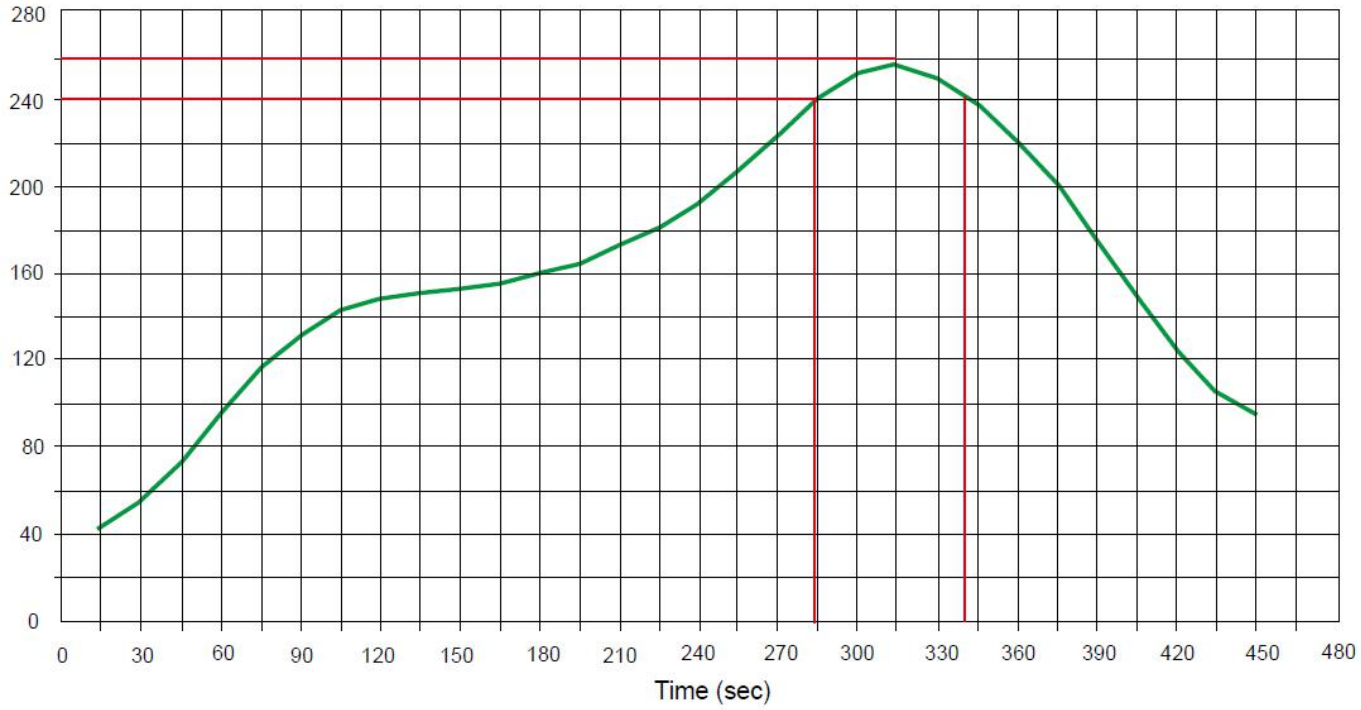
Fig 2.Power Derating Curve



Non-Repetitive Peak Pulse Power vs. Pulse Time

- **Solder Reflow Recommendation**

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



- **Package Information**

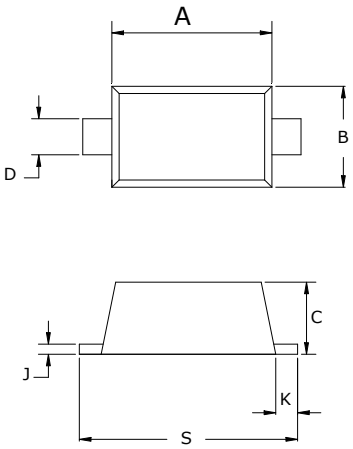
Ordering Information

Device	Package	Qty per Reel	Reel Size
SSCEXXX11D3	SOD-523	3000	7 Inch

Mechanical Data

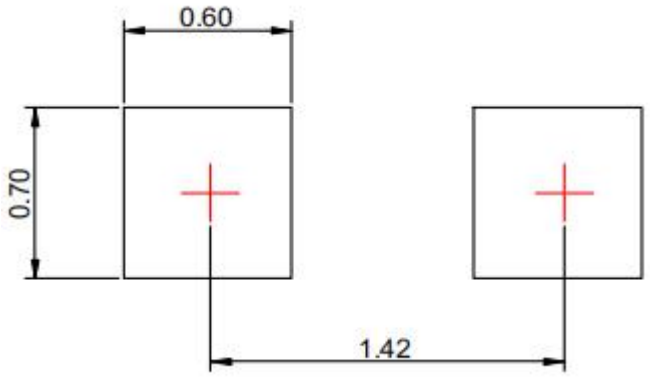
Case: SOD-523

Case Material: Molded Plastic. UL Flammability



Dim	Millimeters	
	Min	Max
A	1.10	1.30
B	0.75	0.85
C	0.51	0.70
D	0.25	0.35
J	0.08	0.15
K	0.15	0.25
S	1.50	1.70

Recommended Pad outline



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