

SSCTXXX12D1 Series

Small Surface Mount TVS Diode for ESD Protection

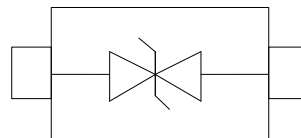
Description

The SSCTXXX12D1 is low capacitance transient voltage suppressor array for high speed data interface that designed to protect sensitive electronics from damage or latch-up due to ESD lightning, and other voltage induced transient events. All pins are rated to withstand 15kV ESD pulses using the IEC 61000-4-2 air discharge method, which can meet the requirement of level 4.

Feature

- ✧ 4800W~9000W peak pulse power ($t_P = 8/20\mu s$)
- ✧ SOD-123FL Package
- ✧ Working voltage: 7V, 12V, 15V, 24V
- ✧ Low clamping voltage
- ✧ Low capacitance
- ✧ RoHS compliant transient protection for high speed data lines to IEC61000-4-2(ESD) $\pm 15kV$ (air), $\pm 8kV$ (contact)

PIN configuration



Topview

Applications

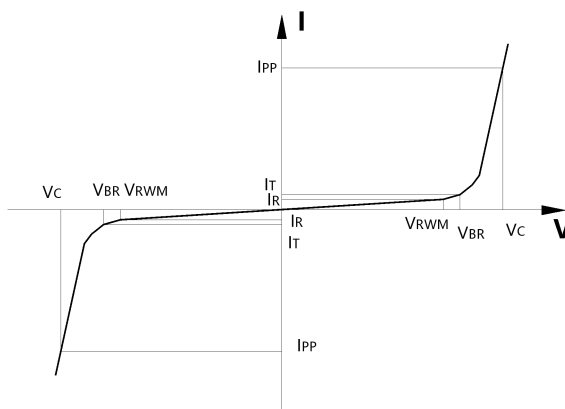
- ✧ USB 2.0 Power & Data Line Protection
- ✧ DVI & HDMI Port Protection
- ✧ Serial ATA Port Protection
- ✧ Mobile Handsets
- ✧ Digital Cameras and camcorders
- ✧ PDA & MP3 Players
- ✧ Digital TV and Set-top Boxes

Machanical data

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

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



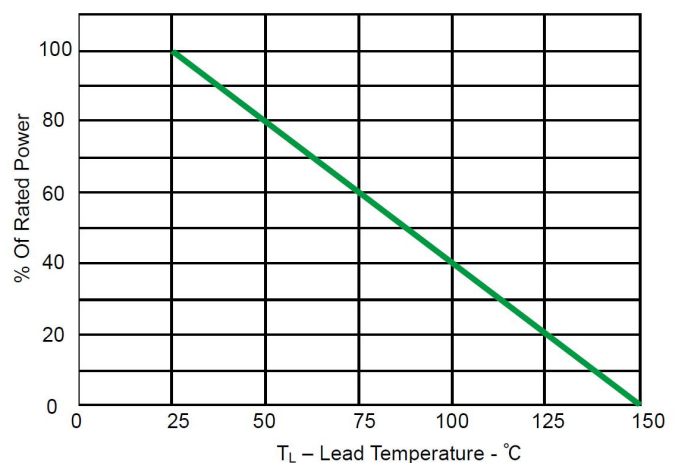
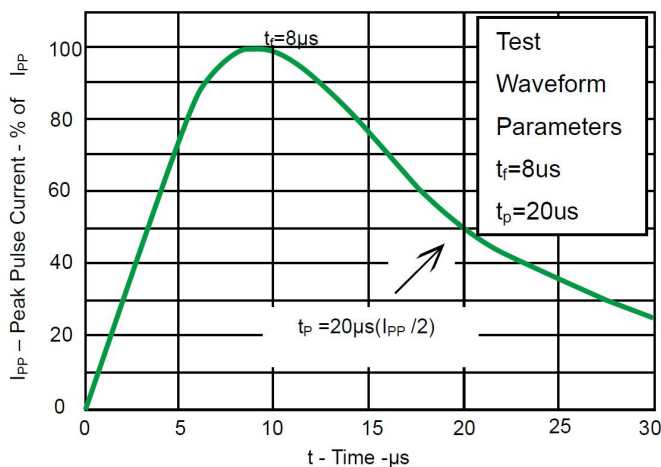
- **Absolute maximum rating @TA=25°C**

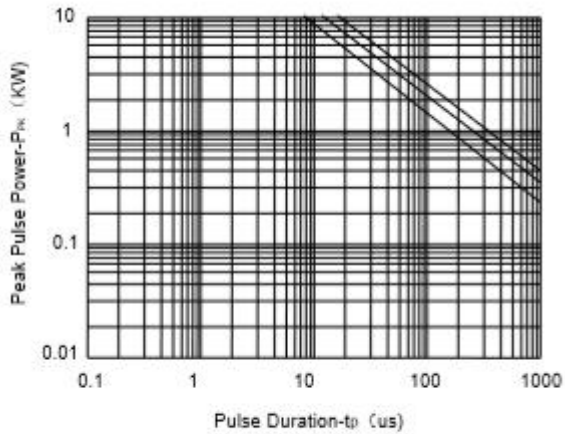
Symbol	Parameter	Value	Units
P _{PP}	Peak Pulse Power (8/20μS)	4800~9000	W
T _{STG}	Storage Temperature	-55/+150	°C
T _J	Operating Temperature	-55/+150	°C

- **Electrical Characteristics @TA=25°C**

Electrical characteristics (Tamb=25°C Unless Otherwise Specified)									
Device*	V _{RWM}	V _{BR} @ I _T (V)		I _T	I _R @ V _{RWM}	V _C (Max)	I _{PP} (Max)	Capacitance (Typ)	P _{ppp} (tp=8/20μs waveform)
	(V)	Min	Max	(mA)	(uA)	(V)	(A)	(nF)	Watts
SSCT7V012D1	7.0	8.0	10	1	5	16	300	1.12	4800
SSCT12V12D1	12	13.3	15	1	5	25	300	0.5	7500
SSCT15V12D1	15	16.7	18	1	5	27	350	0.3	9000
SSCT24V12D1	24	26.5	30	1	5	35	200	0.3	7500

- **Typical Performance Characteristics**

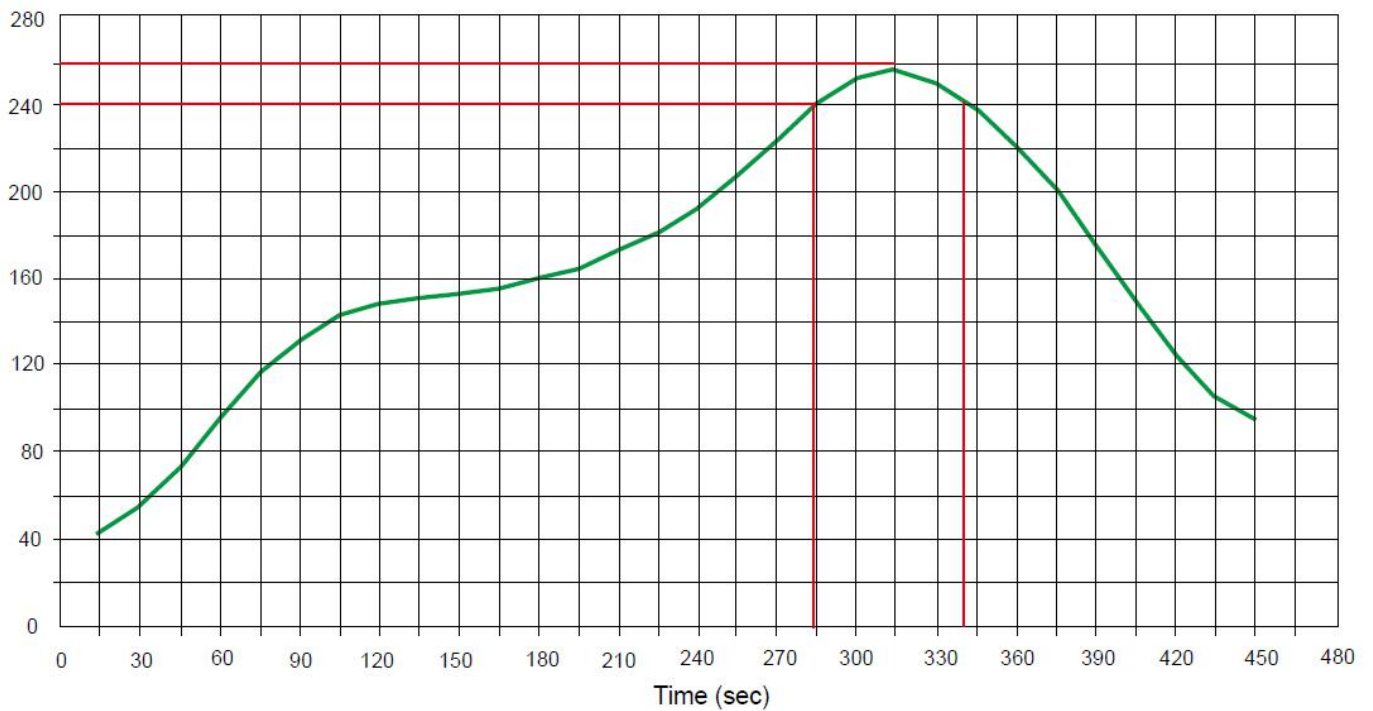




Non-Repetitive Peak Pulse Power vs. Pulse Time

● Solder Reflow Recommendation

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





SSCTXXX12D1

● Package Information

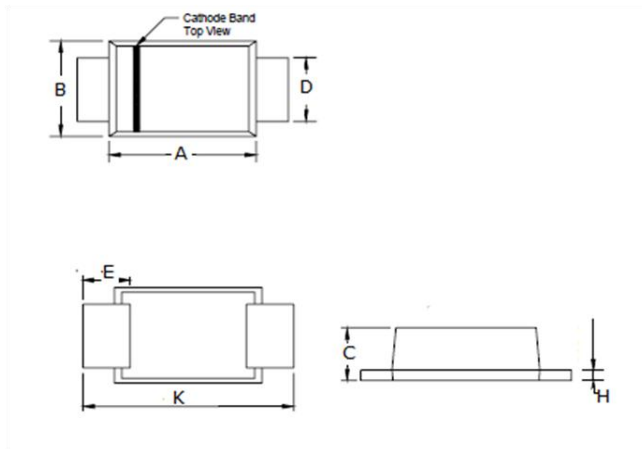
Ordering Information

Device	Package	Qty per Reel	Reel Size
SSCTXXX12D1	SOD-123FL	3000	7 Inch

Mechanical Data

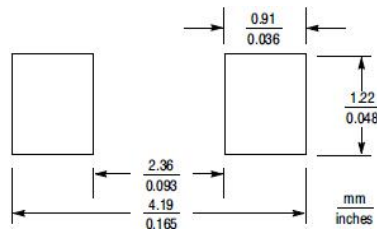
Case:SOD-123F

Case Material: Molded Plastic. UL Flammability



Dim	Millimeters	
	Min	Max
A	2.50	2.90
B	1.50	1.90
C	0.095	1.20
D	0.70	1.20
E	0.35	0.85
H	0	0.1
K	3.40	3.90

Recommended Pad outline





SSCTXXX12D1

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