



SSCT12V12D1 Series

Small Surface Mount TVS Diode for ESD Protection

● Description

The SSCT12V12D1 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.

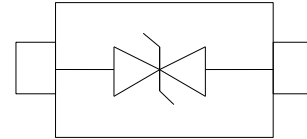
● Feature

- ✧ 4500W peak pulse power (tP = 8/20μs)
- ✧ SOD-123FL Package
- ✧ Working voltage: 12V
- ✧ Low clamping voltage
- ✧ Low capacitance
- ✧ RoHS compliant transient protection for high speed data lines to IEC61000-4-2(ESD)±15kV(air), ±8kV(contact)

● 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

● PIN configuration



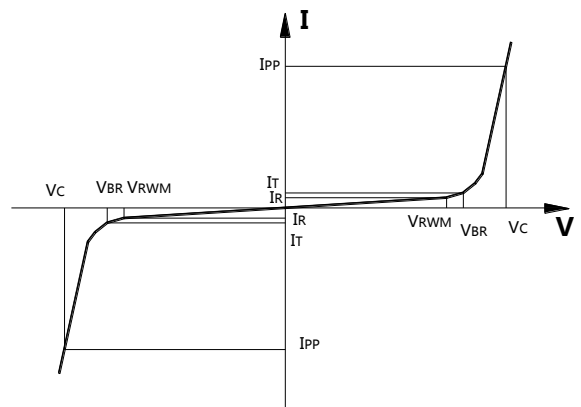
Topview

● 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

● Mechanical 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





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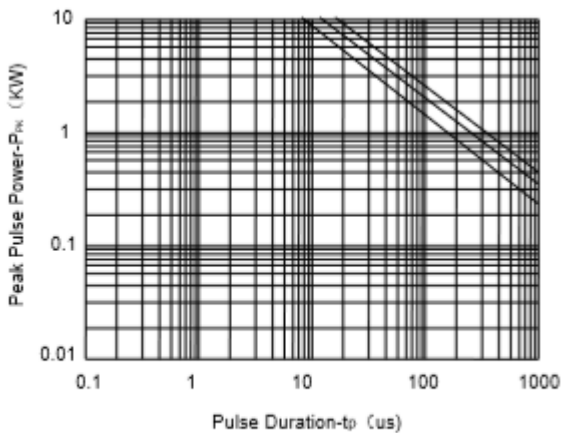
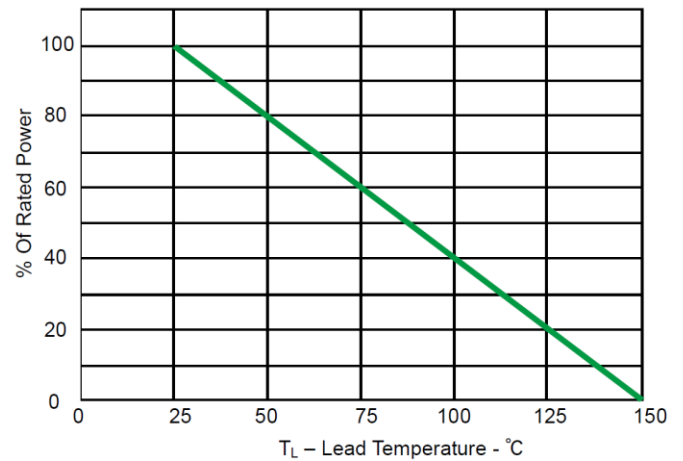
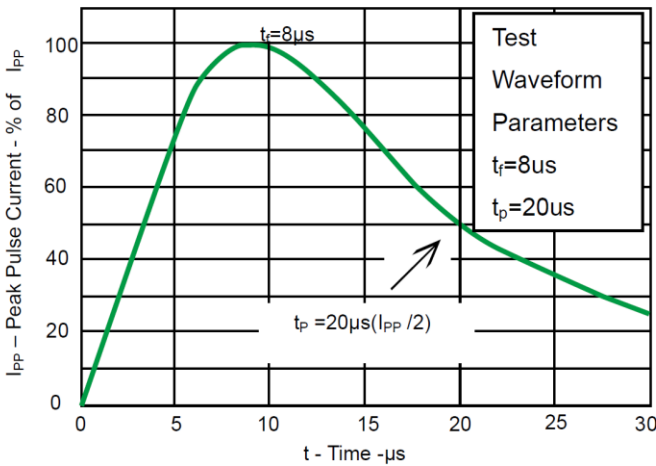
- **Absolute maximum rating @TA=25°C**

Symbol	Parameter	Value	Units
P _{pp}	Peak Pulse Power (8/20μS)	4500	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
SSCT12V12D1	12	13.3	15	1	5	30	200	0.5	4500

- **Typical Performance Characteristics**



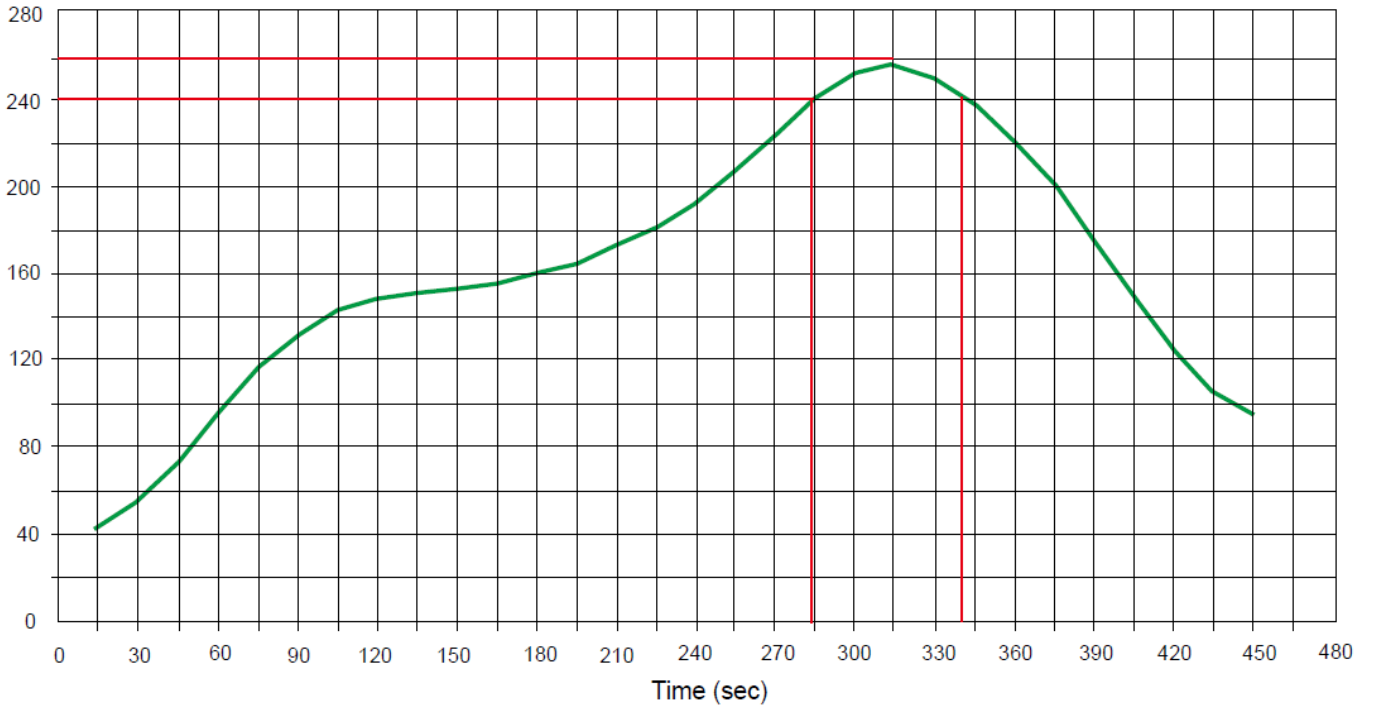
Non-Repetitive Peak Pulse Power vs. Pulse Time



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- **Solder Reflow Recommendation**

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





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- **Package Information**

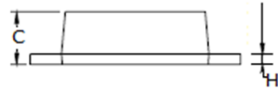
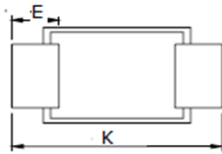
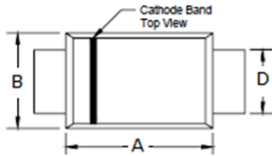
Ordering Information

Device	Package	Qty per Reel	Reel Size
SSCT12V12D1	SOD-123FL	3000	7 Inch

Mechanical Data

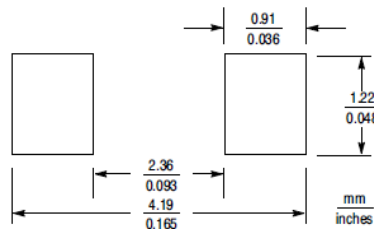
Case:SOD-123F

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





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