



SSCTXXX3XD1

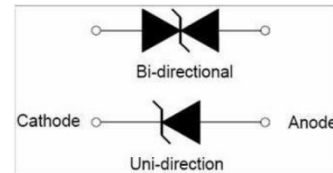
SSCTXXX3XD1 Series

200W Transient Voltage Suppressor

● Description

TVS diodes can be used in a wide range of applications which like consumer electronic products, automotive industries, munitions, telecommunications, aerospace industries, and intelligent control systems.

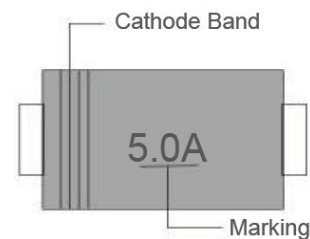
● PIN configuration



Top view

● Feature

- ✧ Glass passivated or planar junction
- ✧ Excellent clamping capability
- ✧ Repetition rate (duty cycle): 0.01%
- ✧ Low profile package and low inductance
- ✧ 200W Peak Pulse power capability at $10 \times 1000 \mu s$ waveform.
- ✧ Fast response time: typically less than 1.0ps from 0V to VBR min.
- ✧ High temperature soldering: 260°C/10s at terminals.
- ✧ Plastic package has Underwriters Laboratory Flammability 94V-0.
- ✧ For surface mounted applications in order to optimize board space.



Marking

● Mechanical data

- ✧ Package: SOD-123FL
- ✧ Case Material: “Green” MoldingCompound.
- ✧ UL Flammability Classification Rating 94V-0
- ✧ Polarity: Color band denotes cathode except bi-directional models
- ✧ Weight: 0.017g

● Applications

- ✧ I/O Interface
- ✧ DVI & HDMI Port Protection
- ✧ AC/DC Power supply
- ✧ Mobile Handsets
- ✧ Digital Cameras and camcorders
- ✧ Low frequency signal transmission line (RS232, RS485, etc.)
- ✧ Digital TV and Set-top Boxes



SSCTXXX3XD1

● Absolute maximum rating @TA=25°C

Symbol	Parameter	Value	Units
P _{PP}	Peak pulse power dissipation on 10/1000 μs waveform	200	W
P _{M(AV)}	Steady state power dissipation at T _L =75°C	2.8	W
V _F	Maximum Instantaneous Forward Voltage at 30A for Unidirectional	5.0	V
T _{STG}	Storage Temperature	-55/+150	°C
T _J	Operating Temperature	-55/+150	°C

● Electrical Characteristics @TA=25°C

Part Number		Marking		V _R	I _{R@V_R}	V _{BR@I_T}		I _T	V _{C@I_{PP}}	I _{PP} ①
Uni-Polar	Bi-Polar	Uni	Bi	V	μA	Min(V)	Max(V)	mA	max(V)	A
SSCT5V031D1	SSCT5V032D1	5.0A	5.0CA	5.0	400	6.40	7.00	10	9.2	21.70
SSCT6V031D1	SSCT6V032D1	6.0A	6.0CA	6.0	400	6.67	7.37	10	10.3	19.40
SSCT6V531D1	SSCT6V532D1	6.5A	6.5CA	6.5	250	7.22	7.98	10	11.2	17.90
SSCT7V031D1	SSCT7V032D1	7.0A	7.0CA	7.0	100	7.78	8.60	10	12.0	16.70
SSCT7V531D1	SSCT7V532D1	7.5A	7.5CA	7.5	50	8.33	9.21	1	12.9	15.50
SSCT8V031D1	SSCT8V032D1	8.0A	8.0CA	8.0	25	8.89	9.83	1	13.6	14.70
SSCT8V531D1	SSCT8V532D1	8.5A	8.5CA	8.5	10	9.44	10.40	1	14.4	13.90
SSCT9V031D1	SSCT9V032D1	9.0A	9.0CA	9.0	5	10.00	11.10	1	15.4	13.00
SSCT10V31D1	SSCT10V32D1	10A	10CA	10.0	2.5	11.10	12.30	1	17.0	11.80
SSCT11V31D1	SSCT11V32D1	11A	11CA	11.0	2.5	12.20	13.50	1	18.2	11.00
SSCT12V31D1	SSCT12V32D1	12A	12CA	12.0	2.5	13.30	14.70	1	18.9	10.10
SSCT13V31D1	SSCT13V32D1	13A	13CA	13.0	1	14.40	15.90	1	21.5	9.30
SSCT14V31D1	SSCT14V32D1	14A	14CA	14.0	1	15.60	17.20	1	23.2	8.6
SSCT15V31D1	SSCT15V32D1	15A	15CA	15.0	1	16.70	18.50	1	24.4	8.2
SSCT16V31D1	SSCT16V32D1	16A	16CA	16.0	1	17.80	19.70	1	26.0	7.7
SSCT17V31D1	SSCT17V32D1	17A	17CA	17.0	1	18.90	20.90	1	27.6	7.2
SSCT18V31D1	SSCT18V32D1	18A	18CA	18.0	1	20.00	22.10	1	29.2	6.8
SSCT20V31D1	SSCT20V32D1	20A	20CA	20.0	1	22.20	24.50	1	32.4	6.2
SSCT22V31D1	SSCT22V32D1	22A	22CA	22.0	1	24.40	26.90	1	35.5	5.6
SSCT24V31D1	SSCT24V32D1	24A	24CA	24.0	1	26.70	29.50	1	38.9	5.1
SSCT26V31D1	SSCT26V32D1	26A	26CA	26.0	1	28.90	31.90	1	42.1	4.8
SSCT28V31D1	SSCT28V32D1	28A	28CA	28.0	1	31.10	34.40	1	45.4	4.4
SSCT30V31D1	SSCT30V32D1	30A	30CA	30.0	1	33.30	36.80	1	48.4	4.1
SSCT33V31D1	SSCT33V32D1	33A	33CA	33.0	1	36.70	40.60	1	53.3	3.8
SSCT36V31D1	SSCT36V32D1	36A	36CA	36.0	1	40.00	44.20	1	58.1	3.4
SSCT40V31D1	SSCT40V32D1	40A	40CA	40.0	1	44.40	49.10	1	64.5	3.1
SSCT43V31D1	SSCT43V32D1	43A	43CA	43.0	1	47.80	52.80	1	69.4	2.9



SSCTXXX3XD1

Part Number		Marking		V_R	$I_R@V_R$	$V_{BR}@I_T$		I_T	$V_C@I_{PP}$	$I_{PP}①$
Uni-Polar	Bi-Polar	Uni	Bi	V	μA	Min(V)	Max(V)	mA	max(V)	A
SSCT45V31D1	SSCT45V32D1	45A	45CA	45.0	1	50.00	55.30	1	72.7	2.8
SSCT48V31D1	SSCT48V32D1	48A	48CA	48.0	1	53.30	58.90	1	77.4	2.6
SSCT51V31D1	SSCT51V32D1	51A	51CA	51.0	1	56.70	62.70	1	82.4	2.4
SSCT54V31D1	SSCT54V32D1	54A	54CA	54.0	1	60.00	66.30	1	87.1	2.3
SSCT58V31D1	SSCT58V32D1	58A	58CA	58.0	1	64.40	71.20	1	93.6	2.1
SSCT60V31D1	SSCT60V32D1	60A	60CA	60.0	1	66.70	73.70	1	96.8	1.8
SSCT64V31D1	SSCT64V32D1	64A	64CA	64.0	1	71.10	78.60	1	103.0	1.7
SSCT70V31D1	SSCT70V32D1	70A	70CA	70.0	1	77.80	86.00	1	113.0	1.5
SSCT75V31D1	SSCT75V32D1	75A	75CA	75.0	1	83.30	92.10	1	121.0	1.4
SSCT78V31D1	SSCT78V32D1	78A	78CA	78.0	1	86.70	95.80	1	126.0	3.2
SSCT85V31D1	SSCT85V32D1	85A	85CA	85.0	1	94.40	104.0	1	137.0	2.9
SSCT90V31D1	SSCT90V32D1	90A	90CA	90.0	1	100.0	111.0	1	146.0	2.8
SSCT100V31D1	SSCT100V32D1	100A	100CA	100.0	1	111.0	123.0	1	162.0	2.5
SSCT110V31D1	SSCT110V32D1	110A	110CA	110.0	1	122.0	135.0	1	177.0	2.3
SSCT120V31D1	SSCT120V32D1	120A	120CA	120.0	1	133.0	147.0	1	193.0	2.1
SSCT130V31D1	SSCT130V32D1	130A	130CA	130.0	1	144.0	159.0	1	209.0	1.9
SSCT150V31D1	SSCT150V32D1	150A	150CA	150.0	1	167.0	185.0	1	243.0	1.7
SSCT160V31D1	SSCT160V32D1	160A	160CA	160.0	1	178.0	197.0	1	259.0	1.6
SSCT170V31D1	SSCT170V32D1	170A	170CA	170.0	1	189.0	209.0	1	275.0	1.5
SSCT180V31D1	SSCT180V32D1	180A	180CA	180.0	1	201.1	222.0	1	292.0	1.4
SSCT190V31D1	SSCT190V32D1	190A	190CA	190.0	1	211.0	243.0	1	308.0	1.3

① Surge waveform: 10/1000 μs

V_R : Stand-off Voltage -- Maximum voltage that can be applied

V_{BR} : Breakdown Voltage

V_C : Clamping Voltage -- Peak voltage measured across the suppressor at a specified I_{PP}

I_R : Reverse Leakage Current

● Ratings And V-I Characteristics Curves @ $T_A=25^\circ C$

FIG.1:V- I curve characteristics (Uni-directional)

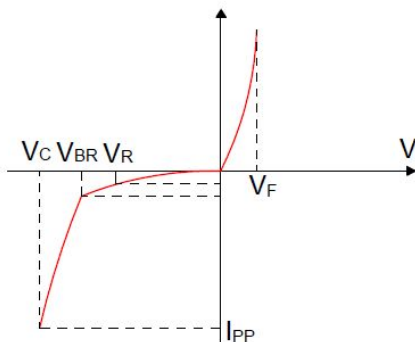
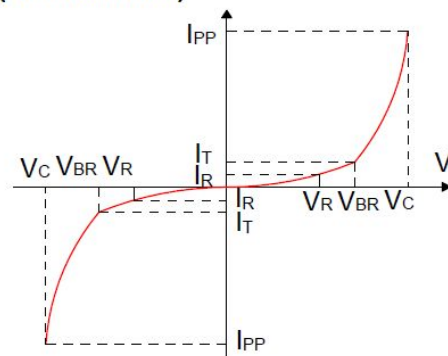


FIG.2:V- I curve characteristics (Bi-directional)





SSCTXXX3XD1

● Typical Performance Characteristics

Figure 1: Peak Pulse Power Rating Curve

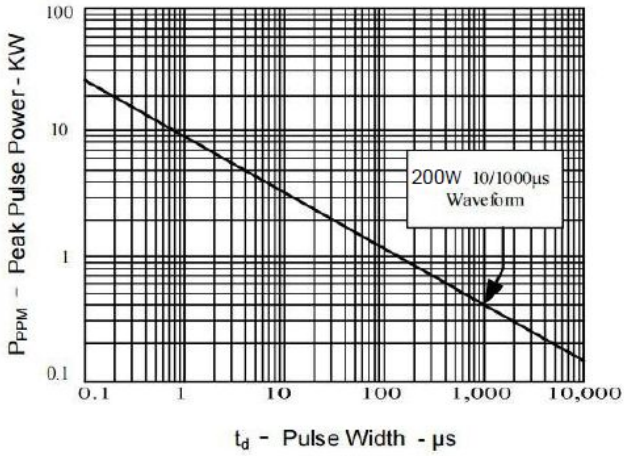


Figure 2: Pulse Derating Curve

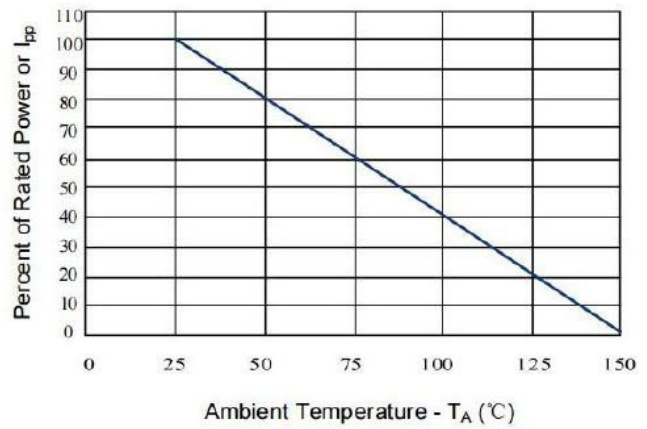


Figure 3: Pulse Waveform

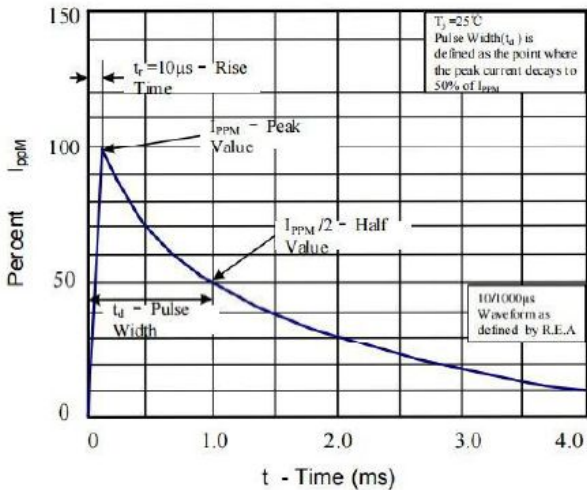


Figure 4: Typical Junction Capacitance

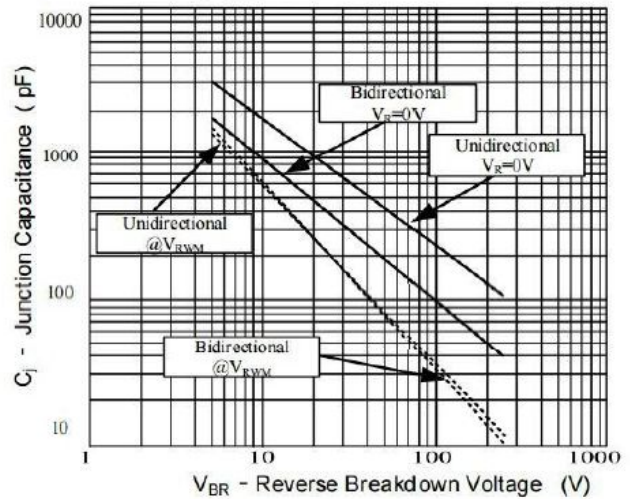


Figure 5: Steady State Power Dissipation Derating Curve

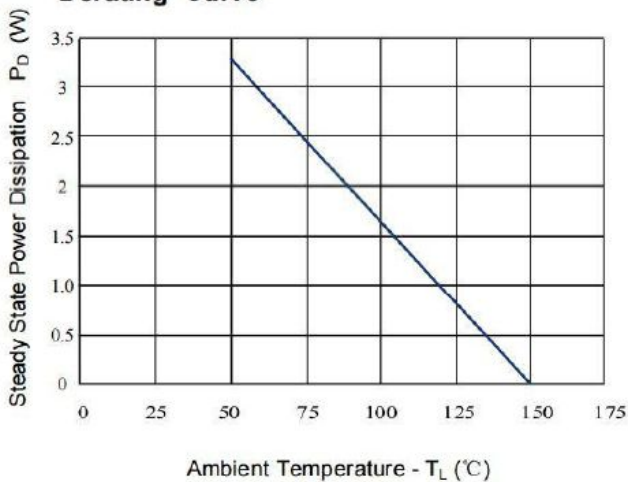
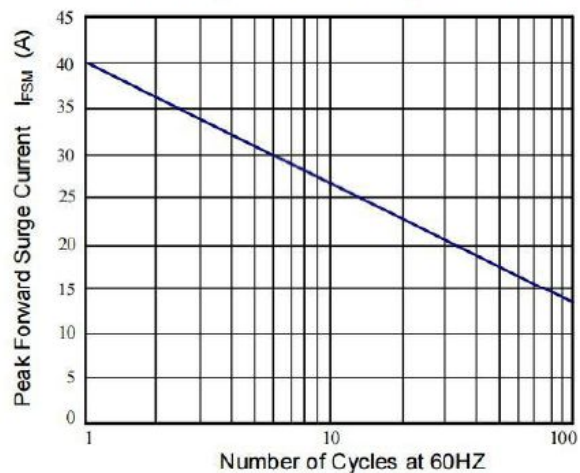


Figure 6: Maximum Non-Repetitive Forward Surge Current Only Unidirectional





SSCTXXX3XD1

- **Package Information**

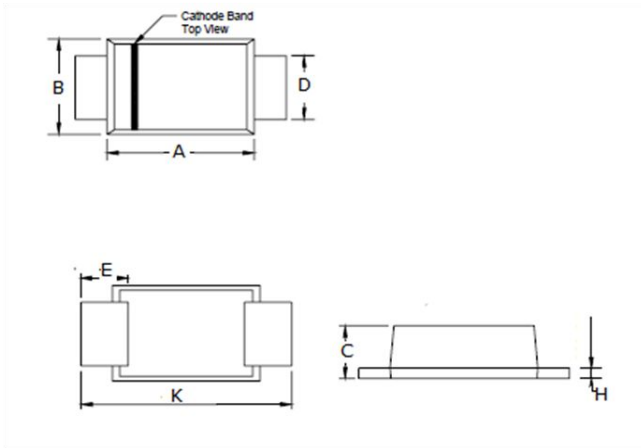
Ordering Information

Device	Package	Qty per Reel	Reel Size
SSCTXXX3XD1	SOD-123FL	3000	7 Inch

Mechanical Data

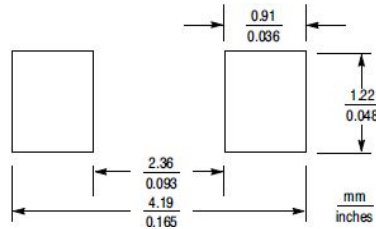
Case:SOD-123FL

Case Material: Molded Plastic. UL Flammability



Dim	Millimeters	
	Min	Max
A	2.5	3.0
B	1.5	1.9
C	0.9	1.1
D	0.70	1.1
E	0.45	0.95
H	0.05	0.26
K	3.40	4.0

Recommended Pad outline





SSCTXXX3XD1

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