



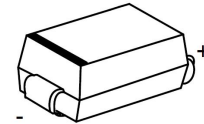
SSCTXXX7XDB Series

Surface Mount Unidirectional and Bidirectional Transient Voltage Suppressors

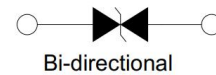
● Description

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.

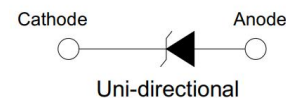
● PIN configuration



SMB/DO-214AA

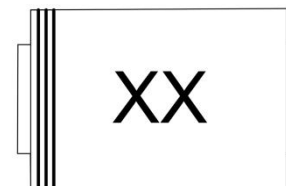


Bi-directional



Uni-directional

Circuit Diagram



Marking(Top View)

● Features

- ✧ 600W peak pulse power ($t_P = 10/1000\mu s$)
- ✧ SMB/DO-214AA Package
- ✧ Working voltage: 5-220V
- ✧ For surface mounted applications
- ✧ Reliable low cost construction utilizing molded plastic technique
- ✧ Response Time is Typically $< 1\text{ ns}$
- ✧ Uni-direction, less than 5.0ns for Bi-direction, from 0 Volts to BV min
- ✧ ESD Rating of above 16 kV per Human Body Model
- ✧ ESD Rating of above 30 kV (Contact Discharge) per IEC61000-4-2
- ✧ EFT (Electrical Fast Transients) Rating of 40 A per IEC61000-4-4

● Applications

- ✧ Hand-Held Portable Applications
- ✧ Networking and Telecom(Ethernet 10/100/1000 Base T)
- ✧ Automotive Electronics
- ✧ Serial and Parallel Ports
- ✧ Notebooks, Desktops, Servers

● Mechanical Characteristics

- ✧ Case Material: "Green" Molding Compound
- ✧ UL Flammability Classification Rating 94V-0
- ✧ Moisture Sensitivity: Level 3 per J-STD-020



● **Absolute maximum rating @T_A=25°C**

Parameter	Symbol	Value	Units
Peak Power Dissipation At T _j = 25°C, T _p = 1ms (Note 1,2)	P _{PP}	600	W
Peak Forward Surge Current 8.3ms single half sine-wave super	I _{FSM}	100	A
Lead Soldering Temperature	T _L	260 (10 sec.)	°C
Operating Temperature Range	T _J	-55 ~ 150	°C
Storage Temperature Range	T _{STG}	-55 ~ 150	°C

Stresses exceeding Maximum Ratings may damage the device. Maximum Ratings are stress ratings only. Functional operation above the Recommended Operating Conditions is not implied. Extended exposure to stresses above the Recommended Operating Conditions may affect device reliability.

1. Non-repetitive current pulse, per fig. 4 and derated above T_A = 25 C per fig. 1.
2. Thermal Resistance junction to Lead
3. 8.3ms single half-sine wave duty cycle= 4 pulses maximum per minute (unidirectional units only).
4. Ratings at 25 °C ambient temperature unless otherwise specified.
5. Single phase, half wave, 60Hz, resistive or inductive load.

● **Electrical Characteristics @T_A=25°C**

Part Number		Marking Code		V _{RWM}	V _{BR} @ I _T (V)		I _T	I _R @ V _{RWM}	V _C (Max)	I _{PP} (Max)
Uni-polar	Bi-polar	Uni	Bi	(V)	Min	Max	(mA)	(uA)	(V)	(A)
SSCT5V011DB	SSCT5V012DB	KE	AE	5.0	6.4	7.75	10	800	9.6	62.5
SSCT6V011DB	SSCT6V012DB	KG	AG	6.0	6.67	8.45	10	800	11.4	52.6
SSCT6V511DB	SSCT6V512DB	KK	AK	6.5	7.22	9.14	10	500	12.3	48.7
SSCT7V011DB	SSCT7V012DB	KM	AM	7.0	7.78	9.86	10	200	13.3	45.1
SSCT7V511DB	SSCT7V512DB	KP	AP	7.5	8.33	10.67	1	100	13.3	42
SSCT8V011DB	SSCT8V012DB	KR	AR	8.0	8.89	11.3	1	50	15	40
SSCT8V511DB	SSCT8V512DB	KT	AT	8.5	9.44	11.92	1	10	15.9	37.7
SSCT9V011DB	SSCT9V012DB	KV	AV	9.0	10.0	12.6	1	5	16.9	35.5
SSCT10V11DB	SSCT10V12DB	KX	AX	10	11.1	14.1	1	5	18.8	31.9
SSCT11V11DB	SSCT11V12DB	KZ	AZ	11	12.2	15.4	1	5	20.1	29.9
SSCT12V11DB	SSCT12V12DB	LE	BE	12	13.3	16.9	1	5	22	27.3
SSCT13V11DB	SSCT13V12DB	LG	BG	13	14.4	18.2	1	5	23.8	25.2
SSCT14V11DB	SSCT14V12DB	LK	BK	14	15.6	19.8	1	5	25.8	23.3
SSCT15V11DB	SSCT15V12DB	LM	BM	15	16.7	21.1	1	5	26.9	22.3
SSCT16V11DB	SSCT16V12DB	LP	BP	16	17.8	22.6	1	5	28.8	20.8
SSCT17V11DB	SSCT17V12DB	LR	BR	17	18.9	23.9	1	5	30.5	19.7
SSCT18V11DB	SSCT18V12DB	LT	BT	18	20.0	25.3	1	5	32.2	18.6
SSCT20V11DB	SSCT20V12DB	LV	BV	20	22.2	28.1	1	5	35.8	6.7
SSCT22V11DB	SSCT22V12DB	LX	BX	22	24.4	30.9	1	5	39.4	15.2
SSCT24V11DB	SSCT24V12DB	LZ	BZ	24	26.7	33.8	1	5	43	14

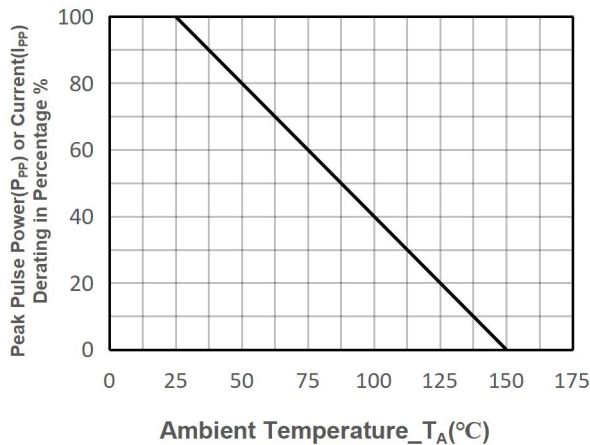


SSCTXXX7XDB

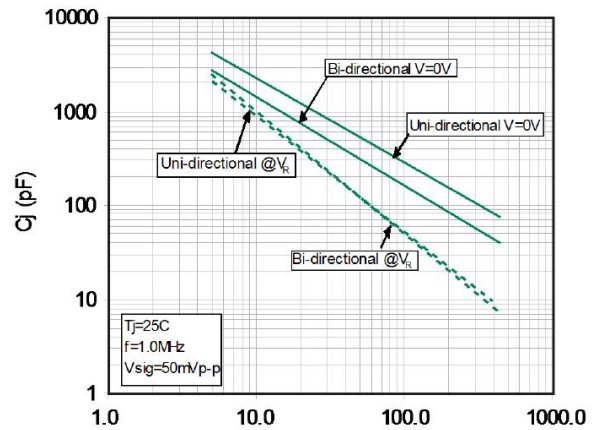
SSCT26V11DB	SSCT26V12DB	ME	CE	26	28.9	36.6	1	5	46.6	12.4
SSCT28V11DB	SSCT28V12DB	MG	CG	28	31.1	39.4	1	5	50	12
SSCT30V11DB	SSCT30V12DB	MK	CK	30	33.3	42.2	1	5	53.5	11.2
SSCT33V11DB	SSCT33V12DB	MM	CM	33	36.7	46.5	1	5	59	10.2
SSCT36V11DB	SSCT36V12DB	MP	CP	36	40.0	50.7	1	5	64.3	9.3
SSCT40V11DB	SSCT40V12DB	MR	CR	40	44.4	56.3	1	5	71.4	8.4
SSCT43V11DB	SSCT43V12DB	MT	CT	43	47.8	60.5	1	5	76.7	7.8
SSCT45V11DB	SSCT45V12DB	MV	CV	45	50.0	63.3	1	5	80.3	7.5
SSCT48V11DB	SSCT48V12DB	MX	CX	48	53.3	67.5	1	5	85.5	7
SSCT51V11DB	SSCT51V12DB	MZ	CZ	51	56.7	71.8	1	5	91.1	6.6
SSCT54V11DB	SSCT54V12DB	NE	DE	54	60.0	76	1	5	96.3	6.2
SSCT58V11DB	SSCT58V12DB	NG	DG	58	64.4	81.6	1	5	103	5.8
SSCT60V11DB	SSCT60V12DB	NK	DK	60	66.7	84.5	1	5	107	5.6
SSCT64V11DB	SSCT64V12DB	NM	DM	64	71.1	90.1	1	5	114	5.3
SSCT70V11DB	SSCT70V12DB	NP	DP	70	77.8	98.6	1	5	125	4.8
SSCT75V11DB	SSCT75V12DB	NR	DR	75	83.0	105.7	1	5	134	4.5
SSCT78V11DB	SSCT78V12DB	NT	DT	78	86.7	109.8	1	5	139	4.3
SSCT85V11DB	SSCT85V12DB	NV	DV	85	94.4	119.2	1	5	151	3.9
SSCT90V11DB	SSCT90V12DB	NX	DX	90	100	126.5	1	5	160	3.8
SSCT100V11DB	SSCT100V12DB	NZ	DZ	100	111	141	1	5	179	3.4
SSCT110V11DB	SSCT110V12DB	PE	EE	110	122	154.4	1	5	196	3
SSCT120V11DB	SSCT120V12DB	PG	EG	120	133	169	1	5	214	2.8
SSCT130V11DB	SSCT130V12DB	PK	EK	130	144	182.5	1	5	231	2.6
SSCT150V11DB	SSCT150V12DB	PM	EM	150	167	211.5	1	5	268	2.2
SSCT160V11DB	SSCT160V12DB	PP	EP	160	178	226	1	5	287	2.1
SSCT170V11DB	SSCT170V12DB	PR	ER	170	189	239.5	1	5	304	2
SSCT180V11DB	SSCT180V12DB	PT	ET	180	198	253.8	1	5	322	1.9
SSCT190V11DB	SSCT190V12DB	PV	EV	190	209	267.9	1	5	340	1.8
SSCT200V11DB	SSCT200V12DB	PX	EX	200	220	282	1	5	358	1.7
SSCT210V11DB	SSCT210V12DB	PZ	EZ	210	231	296.1	1	5	376	1.6
SSCT220V11DB	SSCT220V12DB	QE	FE	220	242	310.2	1	5	394	1.5



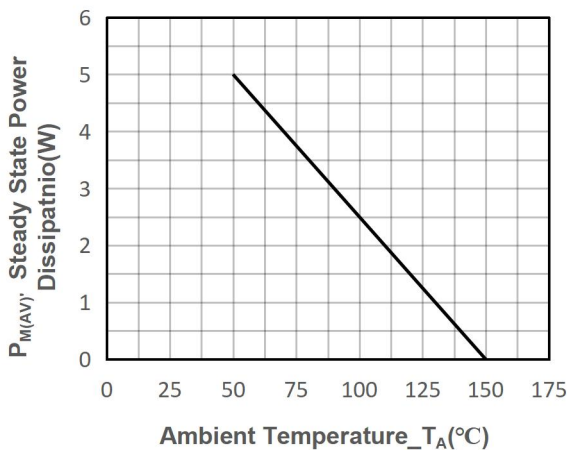
● Typical Performance Characteristics($T_A=25^{\circ}\text{C}$ unless otherwise Specified)



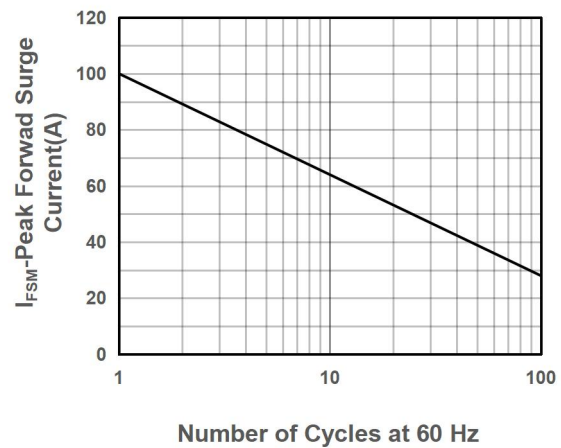
Pulse Derating Curve



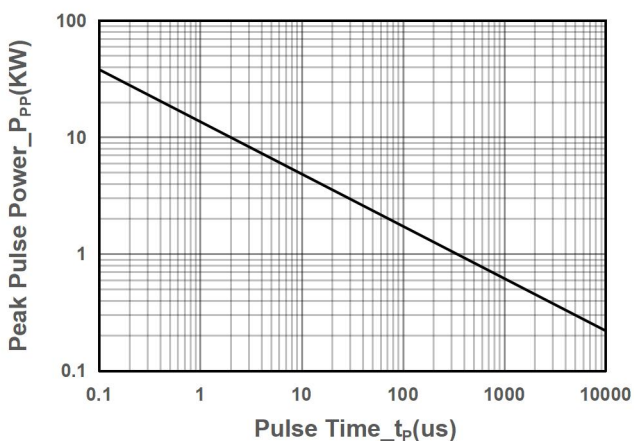
Typical Junction Capacitance



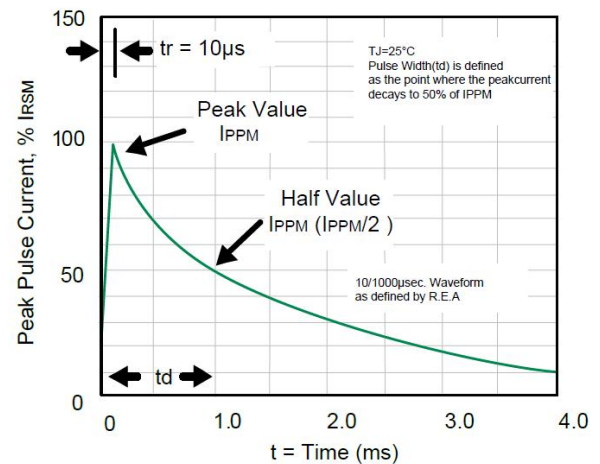
Steady State Power Dissipation Derating Curve



Peak Forward Surge Current



Peak Pulse Power vs. Pulse Time



Pulse Waveform



● Package Information

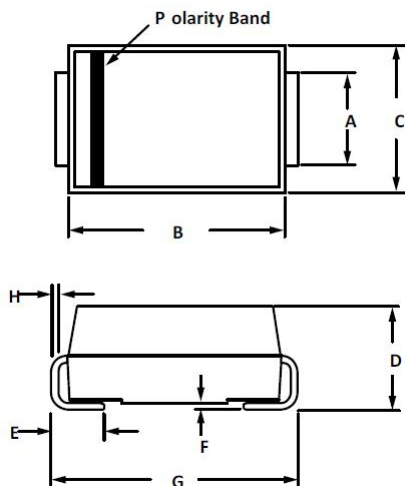
Ordering Information

Device	Package	Qty per Reel	Reel diameters(mm)
SSCTXXX7XDB	SMB/DO-214AA	3000	330

Mechanical Data

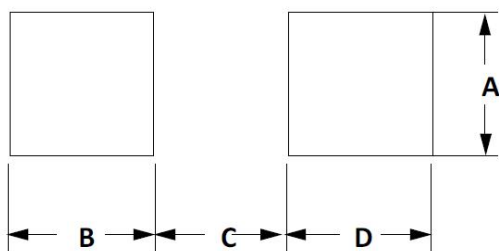
Case: SMB/DO-214AA

Case Material: Molded Plastic. UL Flammability



DIM	Millimeters	
	Min	Max
A	1.90	2.1
B	4.22	4.70
C	3.40	3.94
D	2.00	2.50
E	0.90	1.42
F	0.00	0.23
G	5.21	5.59
H	0.15	0.31

Suggested Land Pattern (Unit: mm)



DIM	Millimeters	
	Min	Max
A	2.15	-
B	1.45	-
C	-	2.55
D	1.45	-



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