



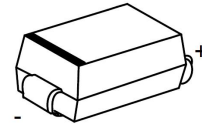
SSCTXXX7XDB Series

Surface Mount Unidirectional and Bidirectional Transient Voltage Suppressors

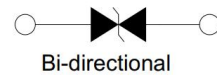
● Description

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.

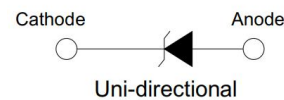
● PIN configuration



SMB/DO-214AA

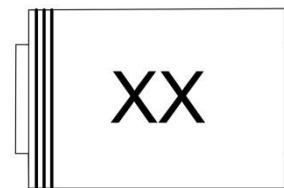


Bi-directional



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)
SSCT5V071DB	SSCT5V072DB	KE	AE	5.0	6.4	7.75	10	800	9.6	62.5
SSCT6V071DB	SSCT6V072DB	KG	AG	6.0	6.67	8.45	10	800	11.4	52.6
SSCT6V571DB	SSCT6V572DB	KK	AK	6.5	7.22	9.14	10	500	12.3	48.7
SSCT7V071DB	SSCT7V072DB	KM	AM	7.0	7.78	9.86	10	200	13.3	45.1
SSCT7V571DB	SSCT7V572DB	KP	AP	7.5	8.33	10.67	1	100	13.3	42
SSCT8V071DB	SSCT8V072DB	KR	AR	8.0	8.89	11.3	1	50	15	40
SSCT8V571DB	SSCT8V572DB	KT	AT	8.5	9.44	11.92	1	10	15.9	37.7
SSCT9V071DB	SSCT9V072DB	KV	AV	9.0	10.0	12.6	1	5	16.9	35.5
SSCT10V71DB	SSCT10V72DB	KX	AX	10	11.1	14.1	1	5	18.8	31.9
SSCT11V71DB	SSCT11V72DB	KZ	AZ	11	12.2	15.4	1	5	20.1	29.9
SSCT12V71DB	SSCT12V72DB	LE	BE	12	13.3	16.9	1	5	22	27.3
SSCT13V71DB	SSCT13V72DB	LG	BG	13	14.4	18.2	1	5	23.8	25.2
SSCT14V71DB	SSCT14V72DB	LK	BK	14	15.6	19.8	1	5	25.8	23.3
SSCT15V71DB	SSCT15V72DB	LM	BM	15	16.7	21.1	1	5	26.9	22.3
SSCT16V71DB	SSCT16V72DB	LP	BP	16	17.8	22.6	1	5	28.8	20.8
SSCT17V71DB	SSCT17V72DB	LR	BR	17	18.9	23.9	1	5	30.5	19.7
SSCT18V71DB	SSCT18V72DB	LT	BT	18	20.0	25.3	1	5	32.2	18.6
SSCT20V71DB	SSCT20V72DB	LV	BV	20	22.2	28.1	1	5	35.8	6.7
SSCT22V71DB	SSCT22V72DB	LX	BX	22	24.4	30.9	1	5	39.4	15.2
SSCT24V71DB	SSCT24V72DB	LZ	BZ	24	26.7	33.8	1	5	43	14

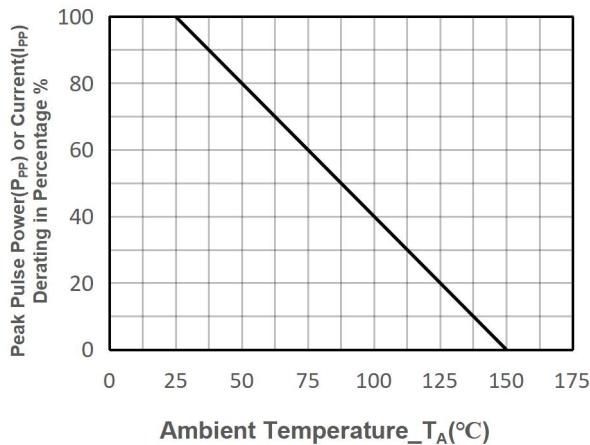


SSCTXXX7XDB

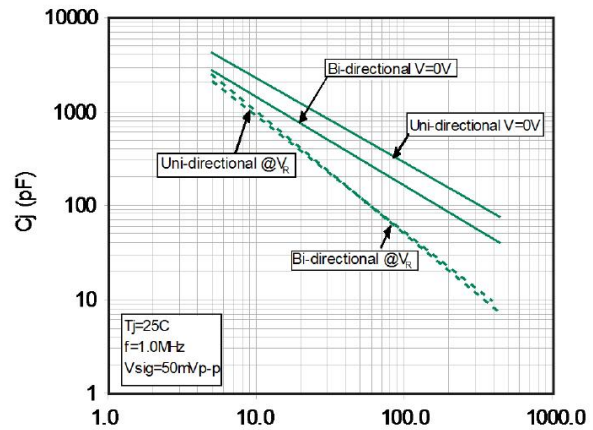
SSCT26V71DB	SSCT26V72DB	ME	CE	26	28.9	36.6	1	5	46.6	12.4
SSCT28V71DB	SSCT28V72DB	MG	CG	28	31.1	39.4	1	5	50	12
SSCT30V71DB	SSCT30V72DB	MK	CK	30	33.3	42.2	1	5	53.5	11.2
SSCT33V71DB	SSCT33V72DB	MM	CM	33	36.7	46.5	1	5	59	10.2
SSCT36V71DB	SSCT36V72DB	MP	CP	36	40.0	50.7	1	5	64.3	9.3
SSCT40V71DB	SSCT40V72DB	MR	CR	40	44.4	56.3	1	5	71.4	8.4
SSCT43V71DB	SSCT43V72DB	MT	CT	43	47.8	60.5	1	5	76.7	7.8
SSCT45V71DB	SSCT45V72DB	MV	CV	45	50.0	63.3	1	5	80.3	7.5
SSCT48V71DB	SSCT48V72DB	MX	CX	48	53.3	67.5	1	5	85.5	7
SSCT51V71DB	SSCT51V72DB	MZ	CZ	51	56.7	71.8	1	5	91.1	6.6
SSCT54V71DB	SSCT54V72DB	NE	DE	54	60.0	76	1	5	96.3	6.2
SSCT58V71DB	SSCT58V72DB	NG	DG	58	64.4	81.6	1	5	103	5.8
SSCT60V71DB	SSCT60V72DB	NK	DK	60	66.7	84.5	1	5	107	5.6
SSCT64V71DB	SSCT64V72DB	NM	DM	64	71.1	90.1	1	5	114	5.3
SSCT70V71DB	SSCT70V72DB	NP	DP	70	77.8	98.6	1	5	125	4.8
SSCT75V71DB	SSCT75V72DB	NR	DR	75	83.0	105.7	1	5	134	4.5
SSCT78V71DB	SSCT78V72DB	NT	DT	78	86.7	109.8	1	5	139	4.3
SSCT85V71DB	SSCT85V72DB	NV	DV	85	94.4	119.2	1	5	151	3.9
SSCT90V71DB	SSCT90V72DB	NX	DX	90	100	126.5	1	5	160	3.8
SSCT10071DB	SSCT10072DB	NZ	DZ	100	111	141	1	5	179	3.4
SSCT11071DB	SSCT11072DB	PE	EE	110	122	154.4	1	5	196	3
SSCT12071DB	SSCT12072DB	PG	EG	120	133	169	1	5	214	2.8
SSCT13071DB	SSCT13072DB	PK	EK	130	144	182.5	1	5	231	2.6
SSCT15071DB	SSCT15072DB	PM	EM	150	167	211.5	1	5	268	2.2
SSCT16071DB	SSCT16072DB	PP	EP	160	178	226	1	5	287	2.1
SSCT17071DB	SSCT17072DB	PR	ER	170	189	239.5	1	5	304	2
SSCT18071DB	SSCT18072DB	PT	ET	180	198	253.8	1	5	322	1.9
SSCT19071DB	SSCT19072DB	PV	EV	190	209	267.9	1	5	340	1.8
SSCT20071DB	SSCT20072DB	PX	EX	200	220	282	1	5	358	1.7
SSCT21071DB	SSCT21072DB	PZ	EZ	210	231	296.1	1	5	376	1.6
SSCT22071DB	SSCT22072DB	QE	FE	220	242	310.2	1	5	394	1.5



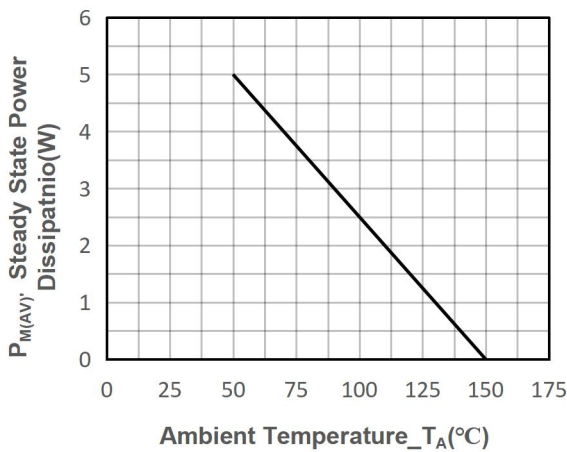
● Typical Performance Characteristics($T_A=25^{\circ}\text{C}$ unless otherwise Specified)



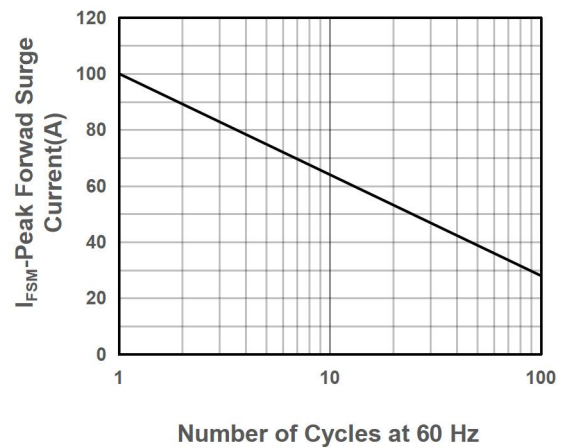
Pulse Derating Curve



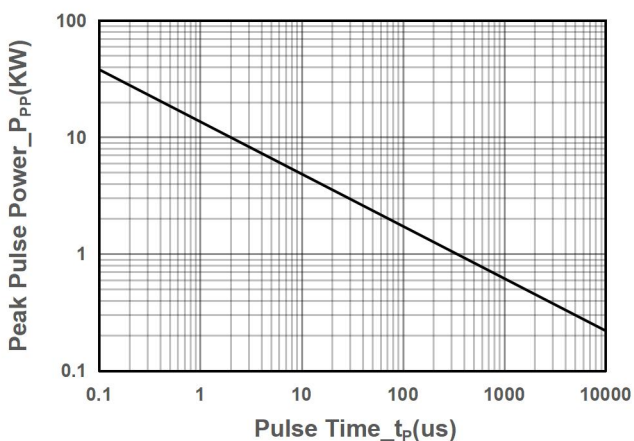
Typical Junction Capacitance



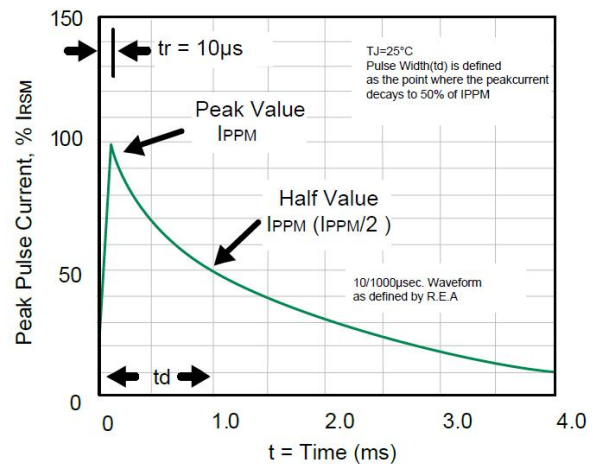
Steady State Power Dissipation Derating Curve



Peak Forward Surge Current



Peak Pulse Power vs. Pulse Time



Pulse Waveform



● Package Information

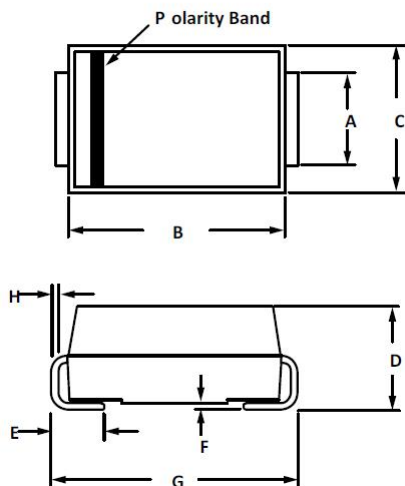
Ordering Information

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

Mechanical Data

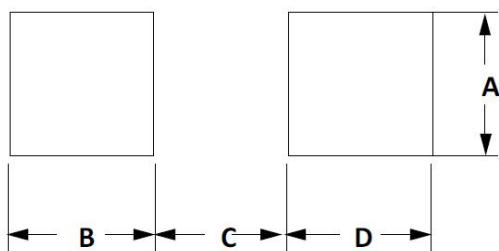
Case: SMB/DO-214AA

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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