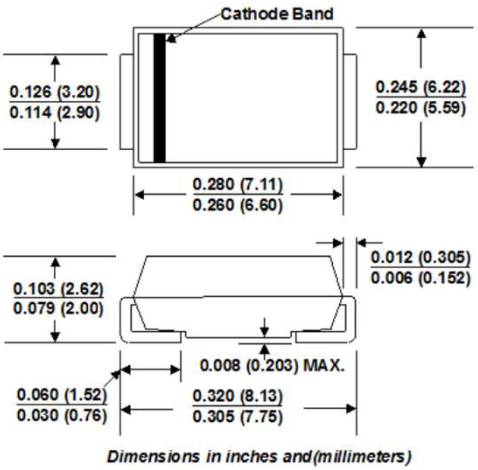
1.5SMC SERIES

GLASS PASSOVATED JUNCTION TRANSIENT VOLTAGE SUPPRESSOR

VOLTAGE - 6.8 to 550 Volts

1500 Watt Peak Pulse Power

DO-214AB (SMC J-Bend)



Dimensions in inches and(millimeters)

FEATURES

◎ For surface mounted applications in order to optimize board space
◎ Halogen-Free
◎ RoHS compliant
◎ Typical maximum temperature coefficient $\triangle V_{BR}$=0.1%xV_{BR}@25℃x$\triangle$T
◎ Low profile package
◎ Built-in strain relief
◎ Glass passivated junction
◎ Low inductance
◎ Excellent clamping capability
◎ Repetition Rate(duty cycle):0.05%
◎ Fast response time: typically less than 1.0ps from 0 Volts to BV
◎ Typical IR less than 1μA above 12V
◎ IEC-61000-4-2 ESD 30kV(Air), 30kV (Contact)
◎ High temperature soldering: 260°C/40 seconds at terminals
◎ Matte Tin Lead-free plated

MECHANICAL DATA

Case: JEDEC DO214AB. Molded plastic over glass passivated junction
Terminal: Solderable per MIL-STD-750, Method 2026
Polarity: Color band denotes positive end (cathode) except Bidirectional
Standard Packaging: 16mm tape(EIA STD RS-481)
Weight: 0.007ounce, 0.21gram

MAXIMUM RATINGS AND CHARACTERISTICS

Ratings at 25℃ ambient temperature unless otherwise specified.

RATING	SYMBOL	VALUE	UNITS
Peak Pulse Power Dissipation on 10/1000μs waveform (Note 1,FIG.1)	P_{PPM}	Minimum 1500	Watts
Peak Pulse Current of on 10/1000μs waveform (Note 1,FIG.3)	I_{PPM}	SEE TABLE 1	Amps
Peak Forward Surge Current,8.3ms Single Half Sine-Wave Superimposed on Rated Load,(JEDEC Method) (Note 3)	I_{FSM}	200	Amps
Operating junction and Storage Temperature Range	T_J , T_{STG}	-55 to + 150	℃

Notes :
1.Non-repetitive current pulse , per Fig. 3 and derated above T_A = 25℃ per Fig. 2 .
2.Mounted on 8.0mm x 8.0mm Copper Pads to each terminal
3.8.3ms single half sine-wave , or equivalent square wave, Duty cycle = 4 pulses per minutes maximum.

1.5SMC SERIES

GLASS PASSOVATED JUNCTION TRANSIENT VOLTAGE SUPPRESSOR

VOLTAGE - 6.8 to 550 Volts

1500 Watt Peak Pulse Power

1.5SMC PART NUMBER		MARKING CODE		REVERSE STAND- OFF VOLTAGE V_{RWM}(V)	BREAKDOWN VOLTAGE V_{BR}(V) @I_T		TEST CURRENT I_T (mA)	MAXIMUN CLAMPING VOLTAGE @Ipp Vc(V) (10/1000uS)	PEAK PULSE CURRENT Ipp (A) (10/1000uS)	MAXIMUM CLAMPING VOLTAGE @Ipp Vc(V) (8/20uS)	PEAK PULSE CURRENT Ipp (A) (8/20uS)	REVERSE LEAKAGE @ V_{RWM} I_R(μA)
UNI- POLAR	BI-POLAR	UNI	BI		MIN	MAX						
1.5SMC 6.8A	1.5SMC 6.8CA	6V8A	6V8C	5.8	6.45	7.14	10	10.5	144.80	13.7	724.0	1000.0
1.5SMC 7.5A	1.5SMC 7.5CA	7V5A	7V5C	6.4	7.13	7.88	10	11.3	134.50	14.7	672.5	500.0
1.5SMC 8.2A	1.5SMC 8.2CA	8V2A	8V2C	7.1	7.79	8.61	10	12.1	125.60	15.7	628.0	200.0
1.5SMC 9.1A	1.5SMC 9.1CA	9V1A	9V1C	7.8	8.65	9.55	1	13.4	113.40	17.4	567.0	50.0
1.5SMC 10A	1.5SMC 10CA	10A	10C	8.6	9.50	10.50	1	14.5	104.80	18.9	524.0	10.0
1.5SMC 11A	1.5SMC 11CA	11A	11C	9.4	10.50	11.60	1	15.6	97.40	20.3	487.0	5.0
1.5SMC 12A	1.5SMC 12CA	12A	12C	10.2	11.40	12.60	1	16.7	91.00	21.7	455.0	5.0
1.5SMC 13A	1.5SMC 13CA	13A	13C	11.1	12.40	13.70	1	18.2	83.50	23.7	417.5	1.0
1.5SMC 15A	1.5SMC 15CA	15A	15C	12.8	14.30	15.80	1	21.2	71.70	27.6	358.5	1.0
1.5SMC 16A	1.5SMC 16CA	16A	16C	13.6	15.20	16.80	1	22.5	67.60	29.3	338.0	1.0
1.5SMC 18A	1.5SMC 18CA	18A	18C	15.3	17.10	18.90	1	25.2	60.30	32.8	301.5	1.0
1.5SMC 20A	1.5SMC 20CA	20A	20C	17.1	19.00	21.00	1	27.7	54.90	36.0	274.5	1.0
1.5SMC 22A	1.5SMC 22CA	22A	22C	18.8	20.90	23.10	1	30.6	49.70	39.8	248.5	1.0
1.5SMC 24A	1.5SMC 24CA	24A	24C	20.5	22.80	25.20	1	33.2	45.80	43.2	229.0	1.0
1.5SMC 27A	1.5SMC 27CA	27A	27C	23.1	25.70	28.40	1	37.5	40.50	48.8	202.5	1.0
1.5SMC 30A	1.5SMC 30CA	30A	30C	25.6	28.50	31.50	1	41.4	36.70	53.8	183.5	1.0
1.5SMC 33A	1.5SMC 33CA	33A	33C	28.2	31.40	34.70	1	45.7	33.30	59.4	166.5	1.0
1.5SMC 36A	1.5SMC 36CA	36A	36C	30.8	34.20	37.80	1	49.9	30.50	64.9	152.5	1.0
1.5SMC 39A	1.5SMC 39CA	39A	39C	33.3	37.10	41.00	1	53.9	28.20	70.1	141.0	1.0
1.5SMC 43A	1.5SMC 43CA	43A	43C	36.8	40.90	45.20	1	59.3	25.60	77.1	128.0	1.0
1.5SMC 47A	1.5SMC 47CA	47A	47C	40.2	44.70	49.40	1	64.8	23.50	84.2	117.5	1.0
1.5SMC 51A	1.5SMC 51CA	51A	51C	43.6	48.50	53.60	1	70.1	21.70	91.1	108.5	1.0
1.5SMC 56A	1.5SMC 56CA	56A	56C	47.8	53.20	58.80	1	77.0	19.70	100.1	98.5	1.0
1.5SMC 62A	1.5SMC 62CA	62A	62C	53.0	58.90	65.10	1	85.0	17.90	110.5	89.5	1.0
1.5SMC 68A	1.5SMC 68CA	68A	68C	58.1	64.60	71.40	1	92.0	16.50	119.6	82.5	1.0
1.5SMC 75A	1.5SMC 75CA	75A	75C	64.1	71.30	78.80	1	103.0	14.80	133.9	74.0	1.0
1.5SMC 82A	1.5SMC 82CA	82A	82C	70.1	77.90	86.10	1	113.0	13.50	146.9	67.5	1.0
1.5SMC 91A	1.5SMC 91CA	91A	91C	77.8	86.50	95.50	1	125.0	12.20	162.5	61.0	1.0
1.5SMC 100A	1.5SMC 100CA	100A	100C	85.5	95.00	105.00	1	137.0	11.10	178.1	55.5	1.0
1.5SMC 110A	1.5SMC 110CA	110A	110C	94.0	105.00	116.00	1	152.0	10.00	197.6	50.0	1.0
1.5SMC 120A	1.5SMC 120CA	120A	120C	102.0	114.00	126.00	1	165.0	9.20	214.5	46.0	1.0
1.5SMC 130A	1.5SMC 130CA	130A	130C	111.0	124.00	137.00	1	179.0	8.50	232.7	42.5	1.0
1.5SMC 150A	1.5SMC 150CA	150A	150C	128.0	143.00	158.00	1	207.0	7.30	269.1	36.5	1.0
1.5SMC 160A	1.5SMC 160CA	160A	160C	136.0	152.00	168.00	1	219.0	6.90	284.7	34.5	1.0
1.5SMC 170A	1.5SMC 170CA	170A	170C	145.0	162.00	179.00	1	234.0	6.50	304.2	32.5	1.0
1.5SMC 180A	1.5SMC 180CA	180A	180C	154.0	171.00	189.00	1	246.0	6.20	319.8	31.0	1.0
1.5SMC 200A	1.5SMC 200CA	200A	200C	171.0	190.00	210.00	1	274.0	5.50	356.2	27.5	1.0
1.5SMC 220A	1.5SMC 220CA	220A	220C	185.0	209.00	231.00	1	328.0	4.60	426.4	23.0	1.0
1.5SMC 250A	1.5SMC 250CA	250A	250C	214.0	237.00	263.00	1	344.0	4.40	447.2	22.0	1.0
1.5SMC 300A	1.5SMC 300CA	300A	300C	256.0	285.00	315.00	1	414.0	3.70	538.2	18.5	1.0
1.5SMC 350A	1.5SMC 350CA	350A	350C	300.0	332.00	368.00	1	482.0	3.20	626.6	16.0	1.0
1.5SMC 400A	1.5SMC 400CA	400A	400C	342.0	380.00	420.00	1	548.0	2.80	712.4	14.0	1.0
1.5SMC 440A	1.5SMC 440CA	440A	440C	376.0	418.00	462.00	1	602.0	2.50	782.6	12.5	1.0
1.5SMC 480A	1.5SMC 480CA	480A	480C	408.0	456.00	504.00	1	658.0	2.30	855.4	11.5	1.0
1.5SMC 510A	1.5SMC 510CA	510A	510C	434.0	485.00	535.00	1	698.0	2.15	907.4	10.8	1.0
1.5SMC 530A	1.5SMC 530CA	530A	530C	477.0	503.50	556.50	1	725.0	2.10	942.5	10.5	1.0
1.5SMC 540A	1.5SMC 540CA	540A	540C	486.0	513.00	567.00	1	740.0	2.03	962.0	10.2	1.0
1.5SMC 550A	1.5SMC 550CA	550A	550C	495.0	522.50	577.50	1	760.0	2.00	988.0	10.0	1.0

For bidirectional type having Vrwm of 10 volts and less, the IR limit is double.

RATINGS AND CHARACTERISTIC CURVES

Ratings and Characteristic Curves(T_A=25℃ unless otherwise noted)

Fig. 1 - Peak Pulse Power Rating

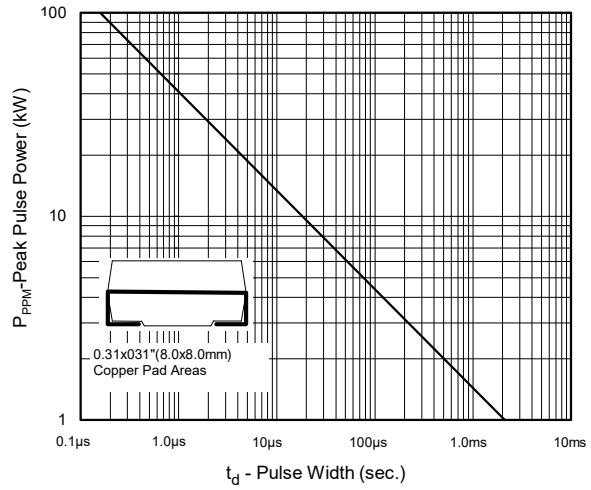


Fig.2 - Pulse Derating Curve

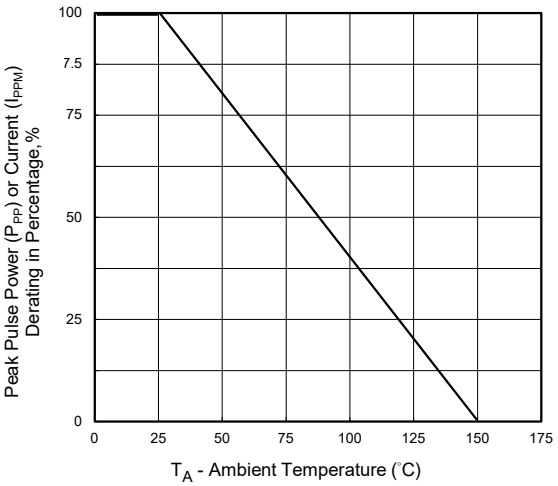


Fig.3 - Pulse Waveform

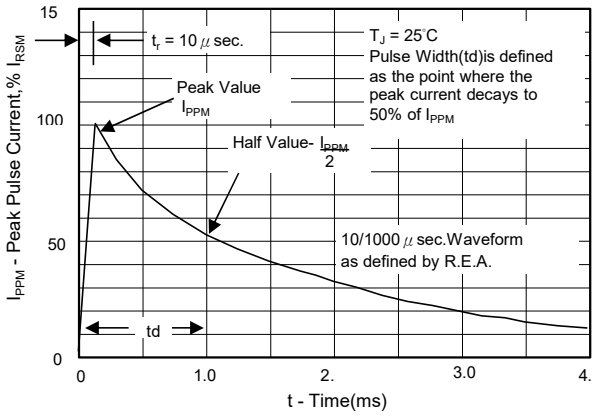


Fig. 4 - Typical Junction Capacitance

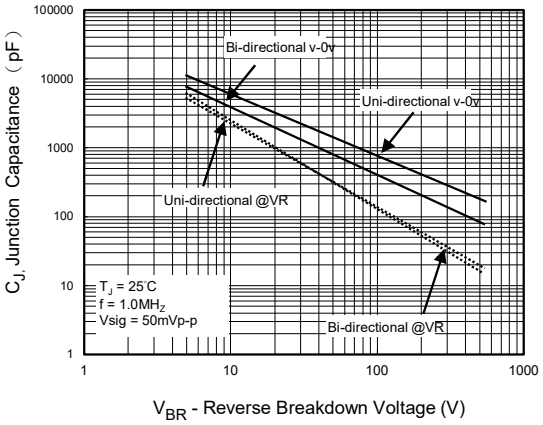


Fig. 5 - Steady State Power Derating Curve

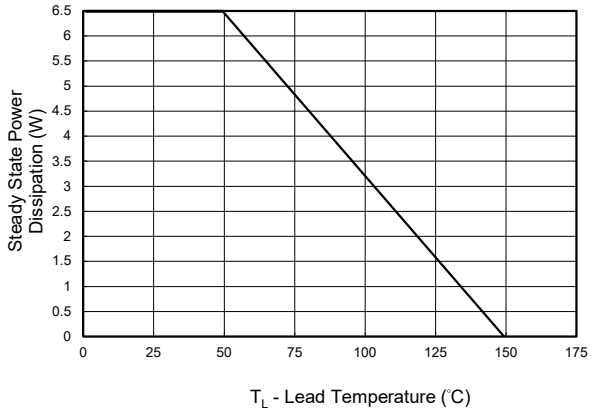
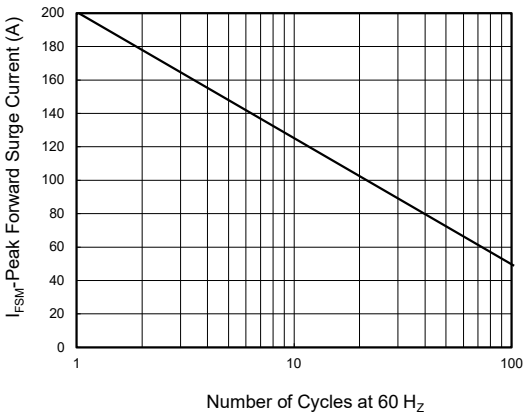


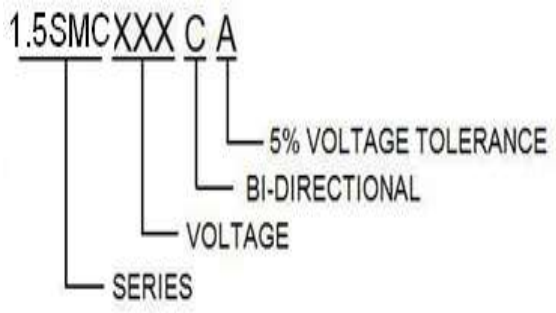
Fig.6 - Maximum Non-repetitive Forward Surge current uni-directional only



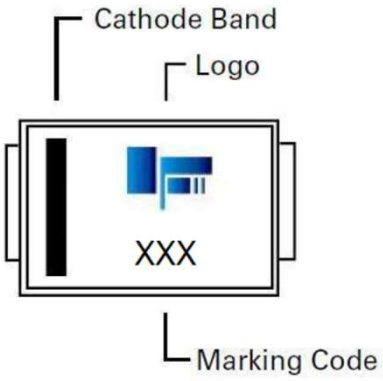
1.5SMC SERIES

SURFACE MOUNT TRANSIENT VOLTAGE SUPPRESSOR

Part Numbering System



Part Marking System



Packaging

Part number	Component Package	Quantity	Packaging Option	Packaging Specification
1.5SMCxxxXX	DO-214AB	3000	Tape & Reel - 16mm/13" tape	EIA STD RS-481
1.5SMCxxxXX	DO-214AB	500	Tape & Reel - 16mm/ 7" tape	EIA STD RS-481