

1.5SMC6.8A~1.5SMC550CA

SURFACE MOUNT TRANSIENT VOLTAGE SUPPRESSOR POWER 1500 Watt

BREAK DOWN VOLTAGE 6.8 to 550 Volt

SMC / DO-214AB

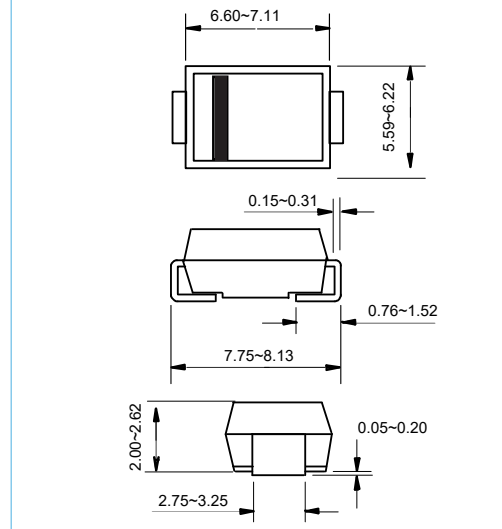
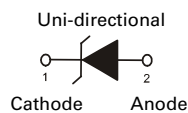
Unit:mm

FEATURES

- Glass passivated junction
- Low inductance
- Plastic Material has UL Flammability Classification 94V-0
- Fast response time: typically less than 1.0ps from 0V to BV min
- High temperature soldering : 260°C /10 seconds at terminals
- ESD IEC-61000-4-2 Air $\pm 30\text{kV}$, Contact $\pm 30\text{kV}$
- Lead free in compliance with EU RoHS 2.0

MECHANICAL DATA

- Case: JEDEC DO-214AC,Molded plastic over passivated junction.
- Polarity: Color band denotes cathode end



For Uni-directional use A Suffix for types 1.5SMC6.8A thru types 1.5SMC550A.
For Bi-directional use CA Suffix for types 1.5SMC6.8CA thru types 1.5SMC550CA.

MAXIMUM RATINGS AND ELECTRICAL CHARACTERISTICS

Ratings at 25°C ambient temperature unless otherwise specified.

Rating	Symbol	Value	Units
Peak Pulse Power Dissipation on $T_A = 25^\circ\text{C}$ (Notes 1,2,4, Fig.1)	P_{PP}	1500	Watts
Steady State Power Dissipation	$P_{M(AV)}$	6.5	W
Peak Forward Surge Current per Fig.5 (Notes 3)	I_{FSM}	200	Amps
Peak Pulse Current on $t_p=10/1000\mu\text{s}$ waveform (Notes 1)Fig.3	I_{PPM}	see Table 1	Amps
Typical Thermal Resistance Junction to Air (Notes 2)	$R_{\theta JA}$	75	$^\circ\text{C} / \text{W}$
Operating Junction and Storage Temperature Range	T_J, T_{STG}	-55 to +150	$^\circ\text{C}$

NOTES :

1. Non-repetitive current pulse, per Fig.3 and derated above $T_A = 25^\circ\text{C}$ per Fig. 2.
2. Mounted on 5mm² copper pads to each terminal.
3. 8.3ms single half sine-wave, or equivalent square wave, duty cycle = 4 pulses per minutes maximum.
4. Peak pulse power waveform is 10/1000 μs .
5. A transient suppressor is selected according to the working peak reverse voltage (V_{RWM}), which should be equal to or greater than the DC or continuous peak operating voltage level.

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ELECTRICAL CHARACTERISTICS @25°C

Part Number (Uni)	Part Number (Bi)	Marking		Reverse Stand off Voltage V_R (Volts)	Breakdown Voltage V_{BR} (Volts) @ I_T		Test Current I_T (mA)	Maximum Clamping Voltage V_C @ I_{pp} (V)	Maximum Peak Pulse Current I_{pp} (A)	Maximum Reverse Leakage I_R @ V_R (μA)
		UNI	BI		MIN	MAX				
1.5SMC6.8A	1.5SMC6.8CA	6V8A	6V8C	5.80	6.45	7.14	10	10.5	144.8	1000
1.5SMC7.5A	1.5SMC7.5CA	7V5A	7V5C	6.40	7.13	7.88	10	11.3	134.5	500
1.5SMC8.2A	1.5SMC8.2CA	8V2A	8V2C	7.02	7.79	8.61	10	12.1	125.6	200
1.5SMC9.1A	1.5SMC9.1CA	9V1A	9V1C	7.78	8.65	9.50	1	13.4	113.4	50
1.5SMC10A	1.5SMC10CA	10A	10C	8.55	9.50	10.50	1	14.5	104.8	10
1.5SMC11A	1.5SMC11CA	11A	11C	9.40	10.50	11.60	1	15.6	97.4	5
1.5SMC12A	1.5SMC12CA	12A	12C	10.20	11.40	12.60	1	16.7	91.0	5
1.5SMC13A	1.5SMC13CA	13A	13C	11.10	12.40	13.70	1	18.2	83.5	1
1.5SMC15A	1.5SMC15CA	15A	15C	12.80	14.30	15.80	1	21.2	71.7	1
1.5SMC16A	1.5SMC16CA	16A	16C	13.60	15.20	16.80	1	22.5	67.6	1
1.5SMC18A	1.5SMC18CA	18A	18C	15.30	17.10	18.90	1	25.2	60.3	1
1.5SMC20A	1.5SMC20CA	20A	20C	17.10	19.00	21.00	1	27.7	54.9	1
1.5SMC22A	1.5SMC22CA	22A	22C	18.80	20.90	23.10	1	30.6	49.7	1
1.5SMC24A	1.5SMC24CA	24A	24C	20.50	22.80	25.20	1	33.2	45.8	1
1.5SMC27A	1.5SMC27CA	27A	27C	23.10	25.70	28.40	1	37.5	40.5	1
1.5SMC30A	1.5SMC30CA	30A	30C	25.60	28.50	31.50	1	41.4	36.7	1
1.5SMC33A	1.5SMC33CA	33A	33C	28.20	31.40	34.70	1	45.7	33.3	1
1.5SMC36A	1.5SMC36CA	36A	36C	30.80	34.20	37.80	1	49.9	30.5	1
1.5SMC39A	1.5SMC39CA	39A	39C	33.30	37.10	41.00	1	53.9	28.2	1
1.5SMC43A	1.5SMC43CA	43A	43C	36.80	40.90	45.20	1	59.3	25.6	1
1.5SMC47A	1.5SMC47CA	47A	47C	40.20	44.70	49.40	1	64.8	23.5	1
1.5SMC51A	1.5SMC51CA	51A	51C	43.60	48.50	53.60	1	70.1	21.7	1
1.5SMC56A	1.5SMC56CA	56A	56C	47.80	53.20	58.80	1	77.0	19.7	1
1.5SMC62A	1.5SMC62CA	62A	62C	53.00	58.90	65.10	1	85.0	17.9	1
1.5SMC68A	1.5SMC68CA	68A	68C	58.10	64.60	71.40	1	92.0	16.5	1
1.5SMC75A	1.5SMC75CA	75A	75C	64.10	71.30	78.80	1	103.0	14.8	1
1.5SMC82A	1.5SMC82CA	82A	82C	70.10	77.90	86.10	1	113.0	13.5	1
1.5SMC91A	1.5SMC91CA	91A	91C	77.80	86.50	95.50	1	125.0	12.2	1
1.5SMC100A	1.5SMC100CA	100A	100C	85.50	95.00	105.00	1	137.0	11.1	1
1.5SMC110A	1.5SMC110CA	110A	110C	94.00	105.00	116.00	1	152.0	10.0	1
1.5SMC120A	1.5SMC120CA	120A	120C	102.00	114.00	126.00	1	165.0	9.2	1
1.5SMC130A	1.5SMC130CA	130A	130C	111.00	124.00	137.00	1	179.0	8.5	1
1.5SMC150A	1.5SMC150CA	150A	150C	128.00	143.00	158.00	1	207.0	7.3	1
1.5SMC160A	1.5SMC160CA	160A	160C	136.00	152.00	168.00	1	219.0	6.9	1
1.5SMC170A	1.5SMC170CA	170A	170C	145.00	162.00	179.00	1	234.0	6.5	1
1.5SMC180A	1.5SMC180CA	180A	180C	154.00	171.00	189.00	1	246.0	6.2	1
1.5SMC200A	1.5SMC200CA	200A	200C	171.00	190.00	210.00	1	274.0	5.5	1
1.5SMC220A	1.5SMC220CA	220A	220C	185.00	209.00	231.00	1	328.0	4.6	1
1.5SMC250A	1.5SMC250CA	250A	250C	214.00	237.00	263.00	1	344.0	4.4	1
1.5SMC300A	1.5SMC300CA	300A	300C	256.00	285.00	315.00	1	414.0	3.7	1
1.5SMC350A	1.5SMC350CA	350A	350C	300.00	332.00	368.00	1	482.0	3.2	1
1.5SMC400A	1.5SMC400CA	400A	400C	342.00	380.00	420.00	1	548.0	2.8	1
1.5SMC440A	1.5SMC440CA	440A	440C	376.00	418.00	462.00	1	602.0	2.5	1
1.5SMC480A	1.5SMC480CA	480A	480C	408.00	456.00	504.00	1	658.0	2.3	1
1.5SMC510A	1.5SMC510CA	510A	510C	434.00	485.00	535.00	1	698.0	2.1	1
1.5SMC530A	1.5SMC530CA	530A	530C	451.00	503.50	556.50	1	725.0	2.1	1
1.5SMC540A	1.5SMC540CA	540A	540C	460.00	513.00	567.00	1	740.0	2.0	1
1.5SMC550A	1.5SMC550CA	550A	550C	468.00	522.50	577.50	1	760.0	2.0	1

1.5SMC6.8A~1.5SMC550CA

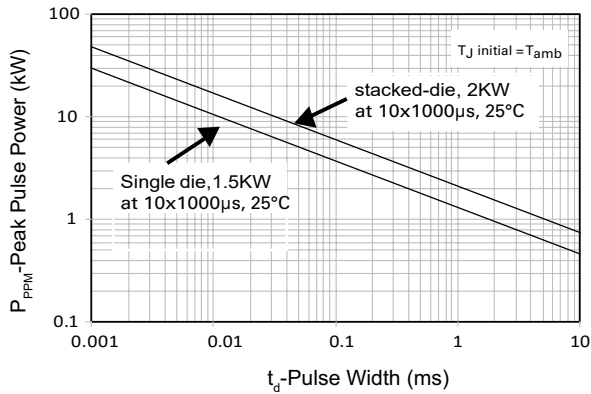


Fig.1 Pulse Power Rating Curve

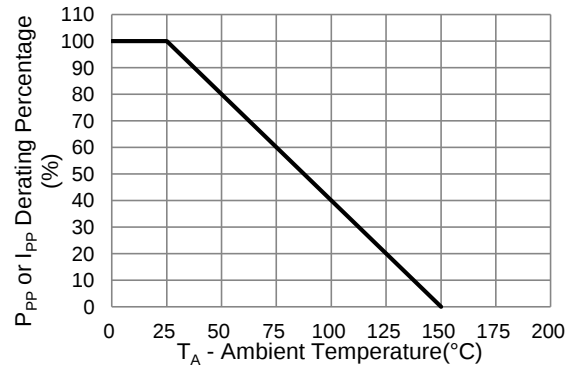


Fig.2 Derating Curve

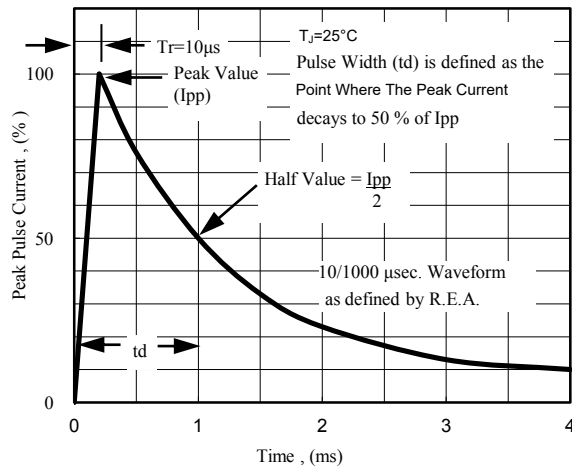


Fig. 3 - Pulse Waveform

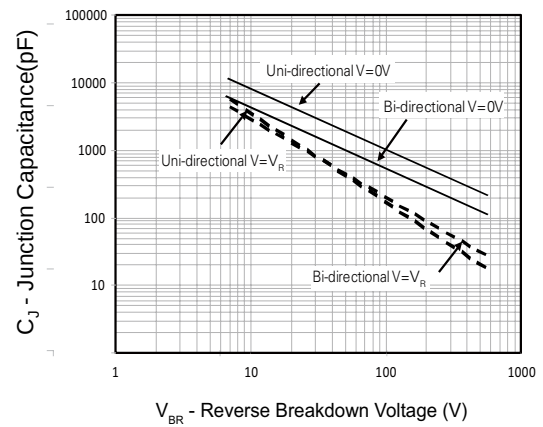


Fig.4 Typical Capacitance

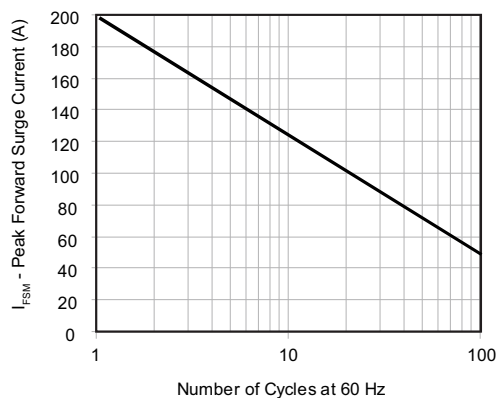


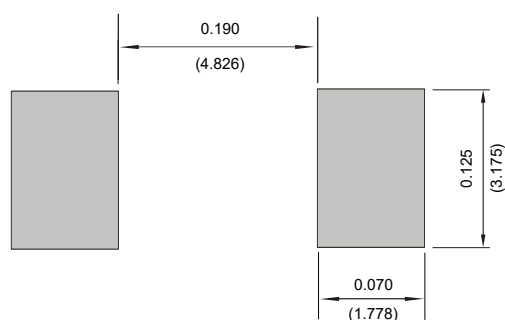
Fig.5 Maximum Non-Repetitive Peak Forward Surge Current

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MOUNTING PAD LAYOUT

SMC / DO-214AB

Unit:Inch(mm)



ORDER INFORMATION

- Packing information

Part Number	Case	Reel Size	QUANTITY
1.5SMC6.8A~1.5SMC550CA	SMC	13 Inch	3000