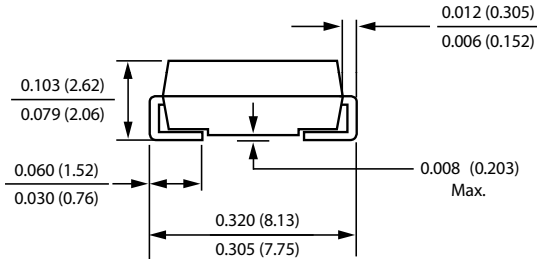
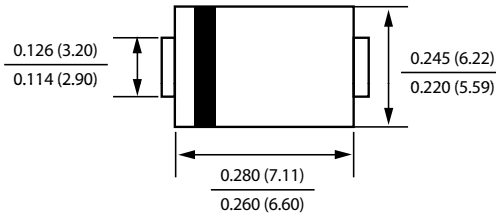




1.5SMC SERIES



Transient Voltage Suppressors(1500W)



DO-214AB(SMC)

Dimensions in inches and (millimeters)



Ordering Information	
Part Number	Compound
1.5SMC SERIES	General
1.5SMC SERIES-H	Halogen Free
1.5SMC SERIES-Q	Automotive

PRIMARY CHARACTERISTICS	
V_{BR}	6.8~600V
P_{PPM}	1500W
P_D	6.5W
T_J max	150°C

Features

- Glass passivated chip
- 1500 W peak pulse power capability with a 10/1000 μ s waveform, repetitive rate (duty cycle):0.01 %
- Low leakage
- Uni and Bidirectional unit
- Excellent clamping capability
- Very fast response time
- RoHS compliant
- AEC-Q101 Qualified

Mechanical Date

- Case: DO-214AB(SMC)
- Epoxy: UL 94V-0 rate flame retardant
- Lead: Solderable per MIL-STD-750, method 2026
- Polarity: Color band denotes cathode end except Bipolar
- Weight: 0.231 grams (approximate)

MAXIMUM RATINGS AND ELECTRICAL CHARACTERISTICS

Parameter	Symbol	Value	UNIT
Peak power dissipation with a 10/1000 μ s waveform ⁽¹⁾	P_{PP}	1500	W
Peak pulse current with a 10/1000 μ s waveform ⁽¹⁾	I_{PP}	See Next Table	A
Power dissipation on infinite heatsink at $T_L = 75^\circ\text{C}$	P_D	6.5	W
Peak forward surge current, 8.3 ms single half sine-wave unidirectional only ⁽²⁾	I_{FSM}	200	A
Maximum instantaneous forward voltage at 25 A for unidirectional only ⁽³⁾	V_F	3.5 / 5.0	V
Operating junction and storage temperature range	T_J, T_{STG}	-55 to +150	°C

Note:

(1)Non-repetitive current pulse per Fig.5 and derated above $T_A = 25^\circ\text{C}$ per Fig.1

(2)Measured on 8.3 ms single half sine-wave or equivalent square wave, duty cycle = 4 pulses per minute maximum

(3) $V_F < 3.5\text{V}$ for devices of $V_{BR} < 200\text{V}$ and $V_F < 5.0\text{V}$ for devices of $V_{BR} > 201\text{V}$



1.5SMC SERIES



Transient Voltage Suppressors(1500W)

Part Number		Marking		Reverse Stand-off Voltage	Breakdown Voltage Min@I _T	Breakdown Voltage Max@I _T	Test Current	Max Clamping Voltage	Peak Pulse Current	Reverse Leakage I _R @V _{RR}
DIRECTIONAL				V _{RRM}	V _{BR}	V _{BR}	I _T	V _C	I _{PP}	I _R
UNI	BI	UNI	BI	V	V	V	mA	V	A	uA
1.5SMC6.8A	1.5SMC6.8CA	6V8A	6V8C	5.80	6.46	7.14	10.0	10.5	142.86	1000
1.5SMC7.5A	1.5SMC7.5CA	7V5A	7V5C	6.40	7.13	7.88	10.0	11.3	132.74	500
1.5SMC8.2A	1.5SMC8.2CA	8V2A	8V2C	7.02	7.79	8.61	10.0	12.1	123.97	200
1.5SMC9.1A	1.5SMC9.1CA	9V1A	9V1C	7.80	8.65	9.56	1.0	13.4	111.94	50
1.5SMC10A	1.5SMC10CA	10A	10C	8.60	9.50	10.50	1.0	14.5	103.45	10
1.5SMC11A	1.5SMC11CA	11A	11C	9.40	10.45	11.55	1.0	15.6	96.15	5
1.5SMC12A	1.5SMC12CA	12A	12C	10.20	11.40	12.60	1.0	16.7	89.82	5
1.5SMC13A	1.5SMC13CA	13A	13C	11.10	12.35	13.65	1.0	18.2	82.42	5
1.5SMC15A	1.5SMC15CA	15A	15C	12.80	14.25	15.75	1.0	21.2	70.75	5
1.5SMC16A	1.5SMC16CA	16A	16C	13.60	15.20	16.80	1.0	22.5	66.67	5
1.5SMC18A	1.5SMC18CA	18A	18C	15.30	17.10	18.90	1.0	25.2	59.52	5
1.5SMC20A	1.5SMC20CA	20A	20C	17.10	19.00	21.00	1.0	27.7	54.15	5
1.5SMC22A	1.5SMC22CA	22A	22C	18.80	20.90	23.10	1.0	30.6	49.02	5
1.5SMC24A	1.5SMC24CA	24A	24C	20.50	22.80	25.20	1.0	33.2	45.18	5
1.5SMC27A	1.5SMC27CA	27A	27C	23.10	25.65	28.35	1.0	37.5	40.00	5
1.5SMC30A	1.5SMC30CA	30A	30C	25.60	28.50	31.50	1.0	41.4	36.23	5
1.5SMC33A	1.5SMC33CA	33A	33C	28.20	31.35	34.65	1.0	45.7	32.82	5
1.5SMC36A	1.5SMC36CA	36A	36C	30.80	34.20	37.80	1.0	49.9	30.06	5
1.5SMC39A	1.5SMC39CA	39A	39C	33.30	37.05	40.95	1.0	53.9	27.83	5
1.5SMC43A	1.5SMC43CA	43A	43C	36.80	40.85	45.15	1.0	59.3	25.30	5
1.5SMC47A	1.5SMC47CA	47A	47C	40.20	44.65	49.35	1.0	64.8	23.15	5
1.5SMC51A	1.5SMC51CA	51A	51C	43.60	48.45	53.55	1.0	70.1	21.40	5
1.5SMC56A	1.5SMC56CA	56A	56C	47.80	53.20	58.80	1.0	77.0	19.48	5
1.5SMC62A	1.5SMC62CA	62A	62C	53.00	58.90	65.10	1.0	85.0	17.65	5
1.5SMC68A	1.5SMC68CA	68A	68C	58.10	64.60	71.40	1.0	92.0	16.30	5
1.5SMC75A	1.5SMC75CA	75A	75C	64.10	71.25	78.75	1.0	103.0	14.56	5
1.5SMC82A	1.5SMC82CA	82A	82C	70.10	77.90	86.10	1.0	113.0	13.27	5
1.5SMC91A	1.5SMC91CA	91A	91C	77.80	86.45	95.55	1.0	125.0	12.00	5
1.5SMC100A	1.5SMC100CA	100A	100C	85.50	95.00	105.00	1.0	137.0	10.95	5
1.5SMC110A	1.5SMC110CA	110A	110C	94.00	104.50	115.50	1.0	152.0	9.87	5
1.5SMC120A	1.5SMC120CA	120A	120C	102.00	114.00	126.00	1.0	165.0	9.09	5
1.5SMC130A	1.5SMC130CA	130A	130C	111.00	123.50	136.50	1.0	179.0	8.38	5
1.5SMC150A	1.5SMC150CA	150A	150C	128.00	142.50	157.50	1.0	207.0	7.25	5
1.5SMC160A	1.5SMC160CA	160A	160C	136.00	152.00	168.00	1.0	219.0	6.85	5
1.5SMC170A	1.5SMC170CA	170A	170C	145.00	161.50	178.50	1.0	234.0	6.41	5
1.5SMC180A	1.5SMC180CA	180A	180C	154.00	171.00	189.00	1.0	246.0	6.10	5
1.5SMC200A	1.5SMC200CA	200A	200C	171.00	190.00	210.00	1.0	274.0	5.47	5
1.5SMC220A	1.5SMC220CA	220A	220C	185.00	209.00	231.00	1.0	328.0	4.57	5
1.5SMC250A	1.5SMC250CA	250A	250C	214.00	237.50	262.50	1.0	344.0	4.36	5
1.5SMC300A	1.5SMC300CA	300A	300C	256.00	285.00	315.00	1.0	414.0	3.62	5
1.5SMC350A	1.5SMC350CA	350A	350C	299.30	332.50	367.50	1.0	482.0	3.11	5



1.5SMC SERIES



Transient Voltage Suppressors(1500W)

Part Number		Marking		Reverse Stand-off Voltage	Breakdown Voltage Min@I _T	Breakdown Voltage Max@I _T	Test Current	Max Clamping Voltage	Peak Pulse Current	Reverse Leakage I _R @V _{RR}
DIRECTIONAL				V _{RRM}	V _{BR}	V _{BR}	I _T	V _C	I _{PP}	I _R
UNI	BI	UNI	BI	V	V	V	mA	V	A	uA
1.5SMC380A	1.5SMC380CA	380A	380C	324.90	361.00	399.00	1.0	524.4	2.86	5
1.5SMC400A	1.5SMC400CA	400A	400C	342.00	380.00	420.00	1.0	548.0	2.72	5
1.5SMC440A	1.5SMC440CA	440A	440C	376.20	418.00	462.00	1.0	602.0	2.47	5
1.5SMC500A	1.5SMC500CA	450A	450C	427.50	475.00	525.00	1.0	690.0	2.17	5
1.5SMC520A	1.5SMC520CA	552A	520C	444.60	494.00	546.00	1.0	717.6	2.09	5
1.5SMC550A	1.5SMC550CA	550A	550C	470.30	522.50	577.50	1.0	759.0	1.98	5
1.5SMC600A	1.5SMC600CA	600A	600C	513.00	570.00	630.00	1.0	828.0	1.81	5

Note:

1. Suffix 'A ' denotes 5% tolerance device.
2. For Bi-Directional devices having VR of 10volts and under, the IR limit is double.
3. Add suffix 'CA' after part number to specify Bi-directional devices.



Fig. 1 - Pulse Derating Curve

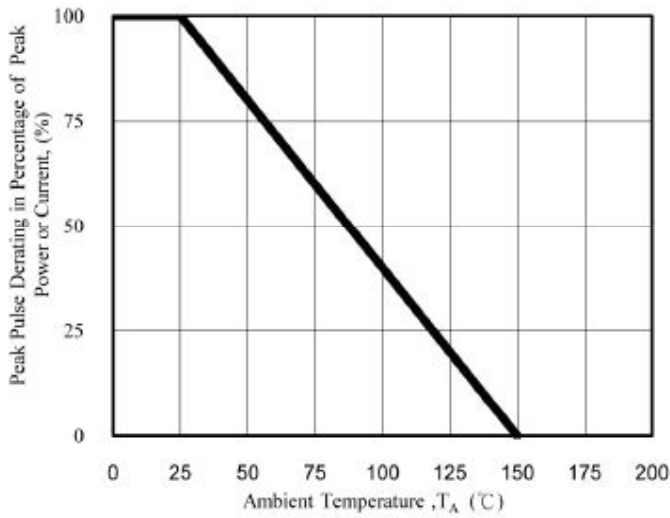


Fig. 2 - Maximum Non-Repetitive Surge Current

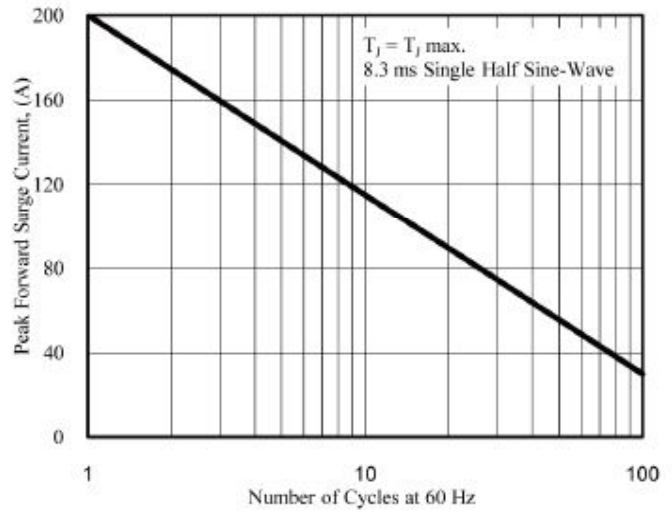


Fig. 3 - Steady State Power Derating Curve

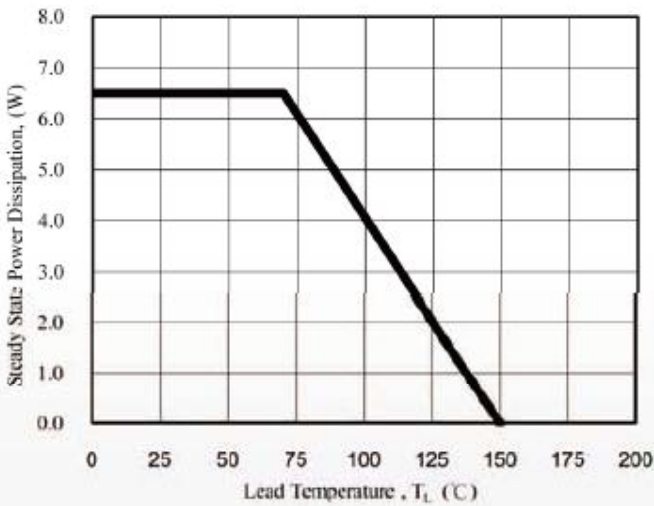


Fig. 4 - Peak Pulse Power Rating Curve

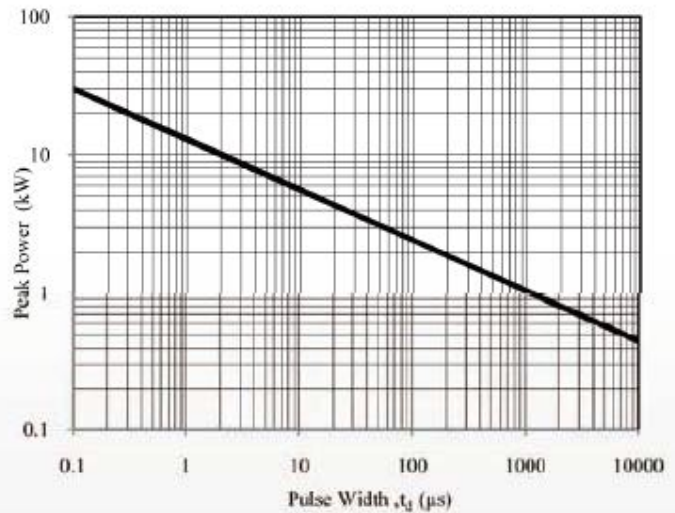


Fig. 5 - Pulse Waveform

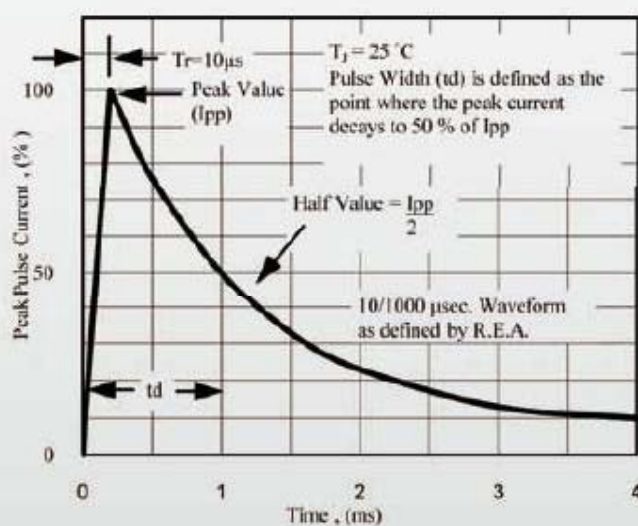


Fig. 6 - Typical junction Capacitance

