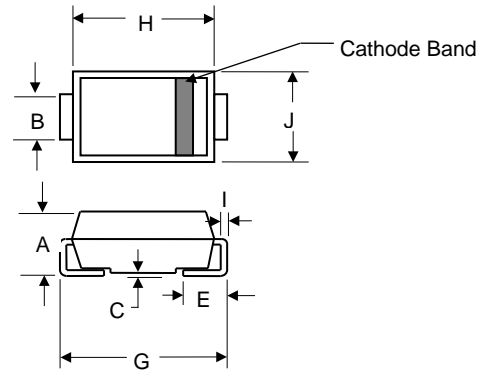


Features

- * Low profile package
- * Ideal for automated placement
- * Glass passivated junction
- * Built-in strain relief
- * Excellent clamping capability
- * Fast response time: Typically less than 1.0ps from 0 volt to BV min
- * Typical I_R less than 1 μ A above 10V



RoHS
COMPLIANT



DO-214AB (SMC)				
DIM	INCHES		MM	
	MIN	MAX	MIN	MAX
A	0.079	0.103	2.06	2.62
B	0.114	0.126	2.9	3.2
C	---	0.008	---	0.203
E	0.03	0.06	0.76	1.52
G	0.305	0.320	7.75	8.13
H	0.260	0.280	6.60	7.11
I	0.006	0.012	0.152	0.305
J	0.220	0.245	5.59	6.22

Mechanical Data

- * Case: DO-214AB (SMC)
- * Molding compound, UL flammability classification rating 94V-0
- * Moisture sensitivity level: level 1, per J-STD-020
- * Terminal: Matte tin plated leads, solderable per JESD22-B102
Meet JESD 201 class 2 whisker test
- * Polarity: Indicated by cathode band
- * Weight: 0.21 g (approximately)

Maximum Ratings And Electrical Characteristics (T_A=25°C unless otherwise noted)

PARAMETER	SYMBOL	VALUE	UNIT
Peak power dissipation at T _A =25°C, T _p =1ms (Note 1)	P _{PK}	1500	Watts
Steady state power dissipation	P _D	6.5	Watts
Peak forward surge current, 8.3 ms single half sine-wave superimposed on rated load	I _{FSM}	200	A
Maximum instantaneous forward voltage at 50 A for Unidirectional only (Note 2)	V _F	3.5 / 5.0	Volts



1.5SMC SERIES

1500W, 6.8V - 200V Surface Mount Transient Voltage Suppressors

Maximum Ratings And Electrical Characteristics (T_A=25°C unless otherwise noted)

PARAMETER	SYMBOL	VALUE	UNIT
Typical thermal resistance	R _{θJC}	15	°C/W
	R _{θJA}	50	
Operating junction temperature range	T _J	- 55 to +150	°C
Storage temperature range	T _{STG}	- 55 to +150	°C

Note 1: Non-repetitive Current Pulse Per Fig. 3 and Derated above T_A=25°C Per Fig. 2

Note 2: V_F=3.5V on 1.5SMC6.8 - 1.5SMC91 Devices and V_F=5.0V on 1.5SMC100 - 1.5SMC200 Devices

Devices for Bipolar Applications

1. For Bidirectional Use C or CA Suffix for Types 1.5SMC6.8 - Types 1.5SMC200A
2. Electrical Characteristics Apply in Both Directions

Electrical Characteristics (T_A=25°C unless otherwise noted)

UNI-DIRECTIONAL PART NO.	BI-DIRECTIONAL PART NO.	Stand-Off Voltage V _{WM} (V)	Breakdown Voltage V _{BR} (V) (Note 1)		Test Current I _T (mA)	Maximum Reverse Leakage @ V _{WM} I _D (μA)	Maximum Peak Pulse Current I _{PPM} (A) (Note 2)	Maximum Clamping Voltage @ I _{PPM} V _C (V)	Maximum Temperature Coefficient of V _{BR} (%/°C)
			Min	Max					
1.5SMC6.8	1.5SMC6.8C	5.5	6.12	7.48	10	1000	145	10.8	0.057
1.5SMC6.8A	1.5SMC6.8CA	5.8	6.46	7.14	10	1000	150	10.5	0.057
1.5SMC7.5	1.5SMC7.5C	6.05	6.75	8.25	10	500	134	11.7	0.061
1.5SMC7.5A	1.5SMC7.5CA	6.4	7.13	7.88	10	500	139	11.3	0.061
1.5SMC8.2	1.5SMC8.2C	6.63	7.38	9.02	10	200	126	12.5	0.065
1.5SMC8.2A	1.5SMC8.2CA	7.02	7.79	8.61	10	200	130	12.1	0.065
1.5SMC9.1	1.5SMC9.1C	7.37	8.19	10	1	50	114	13.8	0.068
1.5SMC9.1A	1.5SMC9.1CA	7.78	8.65	9.55	1	50	117	13.4	0.068
1.5SMC10	1.5SMC10C	8.1	9	11	1	10	105	15	0.073
1.5SMC10A	1.5SMC10CA	8.55	9.5	10.5	1	10	108	14.5	0.073
1.5SMC11	1.5SMC11C	8.92	9.9	12.1	1	1	97	16.2	0.075
1.5SMC11A	1.5SMC11CA	9.4	10.5	11.6	1	1	100	15.6	0.075
1.5SMC12	1.5SMC12C	9.72	10.8	13.2	1	1	91	17.3	0.078
1.5SMC12A	1.5SMC12CA	10.2	11.4	12.6	1	1	94	16.7	0.078
1.5SMC13	1.5SMC13C	10.5	11.7	14.3	1	1	82	19	0.081
1.5SMC13A	1.5SMC13CA	11.1	12.4	13.7	1	1	86	18.2	0.081
1.5SMC15	1.5SMC15C	12.1	13.5	16.5	1	1	71	22	0.084
1.5SMC15A	1.5SMC15CA	12.8	14.3	15.8	1	1	74	21.2	0.084
1.5SMC16	1.5SMC16C	12.9	14.4	17.6	1	1	67	23.5	0.086
1.5SMC16A	1.5SMC16CA	13.6	15.2	16.8	1	1	70	22.5	0.086



1.5SMC SERIES

1500W, 6.8V - 200V Surface Mount Transient Voltage Suppressors

Electrical Characteristics (T_A=25°C unless otherwise noted)

UNI-DIRECTIONAL PART NO.	BI-DIRECTIONAL PART NO.	Stand-Off Voltage V _{WM} (V)	Breakdown Voltage V _{BR} (V) (Note 1)		Test Current I _T (mA)	Maximum Reverse Leakage @ V _{WM} I _D (μA)	Maximum Peak Pulse Current I _{PPM} (A) (Note 2)	Maximum Clamping Voltage @ I _{PPM} V _C (V)	Maximum Temperature Coefficient of V _{BR} (%/°C)
			Min	Max					
1.5SMC18	1.5SMC18C	14.5	16.2	19.8	1	1	59	26.5	0.088
1.5SMC18A	1.5SMC18CA	15.3	17.1	18.9	1	1	60	25.5	0.088
1.5SMC20	1.5SMC20C	16.2	18	22	1	1	54	29.1	0.09
1.5SMC20A	1.5SMC20CA	17.1	19	21	1	1	56	27.7	0.09
1.5SMC22	1.5SMC22C	17.8	19.8	24.2	1	1	49	31.9	0.092
1.5SMC22A	1.5SMC22CA	18.8	20.9	23.1	1	1	51	30.6	0.092
1.5SMC24	1.5SMC24C	19.4	21.6	26.4	1	1	45	34.7	0.094
1.5SMC24A	1.5SMC24CA	20.5	22.8	25.2	1	1	47	33.2	0.094
1.5SMC27	1.5SMC27C	21.8	24.3	29.7	1	1	40	39.1	0.096
1.5SMC27A	1.5SMC27CA	23.1	25.7	28.4	1	1	42	37.5	0.096
1.5SMC30	1.5SMC30C	24.3	27	33	1	1	36	43.5	0.097
1.5SMC30A	1.5SMC30CA	25.6	28.5	31.5	1	1	38	41.4	0.097
1.5SMC33	1.5SMC33C	26.8	29.7	36.3	1	1	33	47.7	0.098
1.5SMC33A	1.5SMC33CA	28.2	31.4	34.7	1	1	34	45.7	0.098
1.5SMC36	1.5SMC36C	29.1	32.4	39.6	1	1	30	52	0.099
1.5SMC36A	1.5SMC36CA	30.8	34.2	37.8	1	1	31	49.9	0.099
1.5SMC39	1.5SMC39C	31.6	35.1	42.9	1	1	27	56.4	0.1
1.5SMC39A	1.5SMC39CA	33.3	37.1	41	1	1	29	53.9	0.1
1.5SMC43	1.5SMC43C	34.8	38.7	47.3	1	1	25	61.9	0.101
1.5SMC43A	1.5SMC43CA	36.8	40.9	45.2	1	1	26	59.3	0.101
1.5SMC47	1.5SMC47C	38.1	42.3	51.7	1	1	23	67.8	0.101
1.5SMC47A	1.5SMC47CA	40.2	44.7	49.4	1	1	24	64.8	0.101
1.5SMC51	1.5SMC51C	41.3	45.9	56.1	1	1	21	73.5	0.102
1.5SMC51A	1.5SMC51CA	43.6	48.5	53.6	1	1	22	70.1	0.102
1.5SMC56	1.5SMC56C	45.4	50.4	61.6	1	1	19	80.5	0.103
1.5SMC56A	1.5SMC56CA	47.8	53.2	58.8	1	1	20	77	0.103
1.5SMC62	1.5SMC62C	50.2	55.8	68.2	1	1	17	89	0.104
1.5SMC62A	1.5SMC62CA	53	58.9	65.1	1	1	18	85	0.104
1.5SMC68	1.5SMC68C	55.1	61.2	74.8	1	1	16	98	0.104
1.5SMC68A	1.5SMC68CA	58.1	64.6	71.4	1	1	17	92	0.104
1.5SMC75	1.5SMC75C	60.7	67.5	82.5	1	1	14	108	0.105
1.5SMC75A	1.5SMC75CA	64.1	71.3	78.8	1	1	15	103	0.105
1.5SMC82	1.5SMC82C	66.4	73.8	90.2	1	1	13	118	0.105
1.5SMC82A	1.5SMC82CA	70.1	77.9	86.1	1	1	13.9	113	0.105
1.5SMC91	1.5SMC91C	73.7	81.9	100	1	1	12	131	0.106
1.5SMC91A	1.5SMC91CA	77.8	86.5	95.5	1	1	12.6	125	0.106
1.5SMC100	1.5SMC100C	81	90	110	1	1	10.9	144	0.106
1.5SMC100A	1.5SMC100CA	85.5	95	105	1	1	11.4	137	0.106



1.5SMC SERIES

1500W, 6.8V - 200V Surface Mount Transient Voltage Suppressors

Electrical Characteristics (T_A=25°C unless otherwise noted)

UNI-DIRECTIONAL PART NO.	BI-DIRECTIONAL PART NO.	Stand-Off Voltage V _{WM} (V)	Breakdown Voltage V _{BR} (V) (Note 1)		Test Current I _T (mA)	Maximum Reverse Leakage @ V _{WM} I _D (μA)	Maximum Peak Pulse Current I _{PPM} (A) (Note 2)	Maximum Clamping Voltage @ I _{PPM} V _C (V)	Maximum Temperature Coefficient of V _{BR} (%/°C)
			Min	Max					
1.5SMC110	1.5SMC110C	89.2	99	121	1	1	9.9	158	0.107
1.5SMC110A	1.5SMC110CA	94	105	116	1	1	10.3	152	0.107
1.5SMC120	1.5SMC120C	97.2	108	132	1	1	9.1	173	0.107
1.5SMC120A	1.5SMC120CA	102	114	126	1	1	9.5	165	0.107
1.5SMC130	1.5SMC130C	105	117	143	1	1	8.4	187	0.107
1.5SMC130A	1.5SMC130CA	111	124	137	1	1	8.7	179	0.107
1.5SMC150	1.5SMC150C	121	135	165	1	1	7.3	215	0.108
1.5SMC150A	1.5SMC150CA	128	143	158	1	1	7.6	207	0.108
1.5SMC160	1.5SMC160C	130	144	176	1	1	6.8	230	0.108
1.5SMC160A	1.5SMC160CA	136	152	168	1	1	7.1	219	0.108
1.5SMC170	1.5SMC170C	138	153	187	1	1	6.4	244	0.108
1.5SMC170A	1.5SMC170CA	145	162	179	1	1	6.7	234	0.108
1.5SMC180	1.5SMC180C	146	162	198	1	1	6.1	258	0.108
1.5SMC180A	1.5SMC180CA	154	171	189	1	1	6.4	246	0.108
1.5SMC200	1.5SMC200C	162	180	220	1	1	5.4	287	0.108
1.5SMC200A	1.5SMC200CA	171	190	210	1	1	5.7	274	0.108

Notes:

1. V_{BR} measure after I_T applied for 300μs, I_T=square wave pulse or equivalent.
2. Surge current waveform per Figure. 3 and derate per Figure. 2.
3. For bipolar types having V_{WM} of 10 volts and under, the I_D limit is doubled.
4. For bidirectional use C or CA suffix for types 1.5SMC6.8 - 1.5SMC200A

Ratings and Characteristic Curves

FIG. 1 PEAK PULSE POWER RATING CURVE

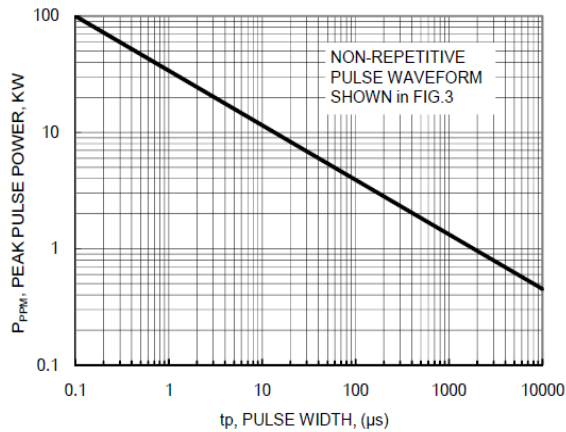


FIG. 2 PULSE DERATING CURVE

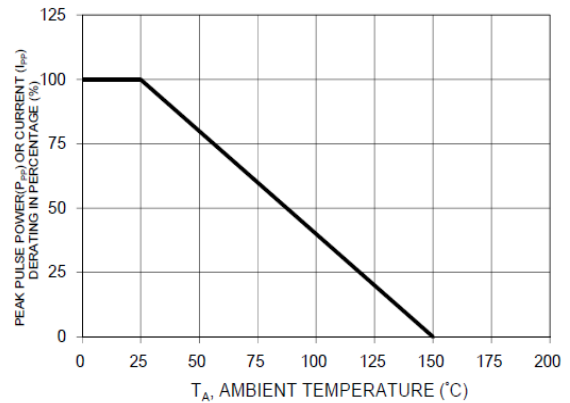


FIG. 3 CLAMPING POWER PULSE WAVEFORM

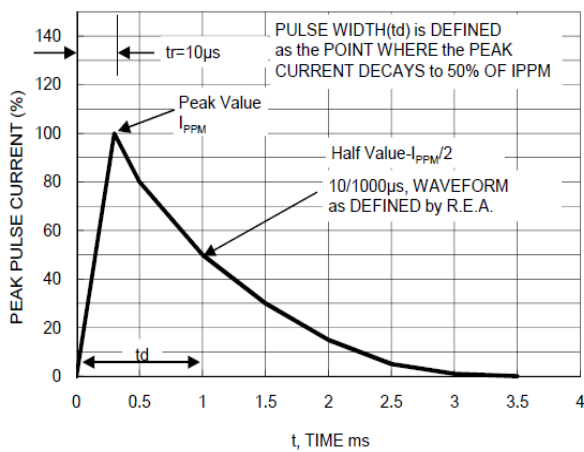


FIG. 4 MAXIMUM NON-REPETITIVE FORWARD SURGE CURRENT UNIDIRECTIONAL ONLY

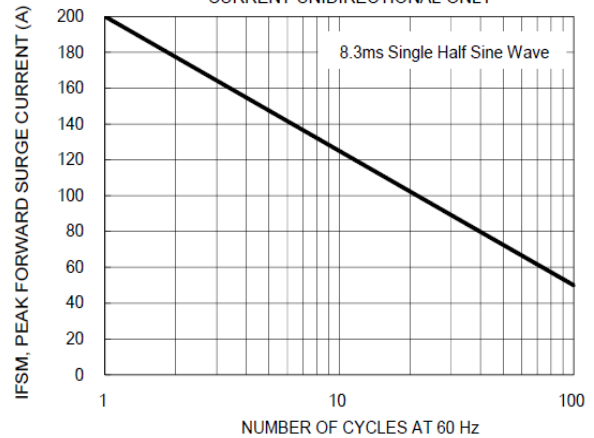
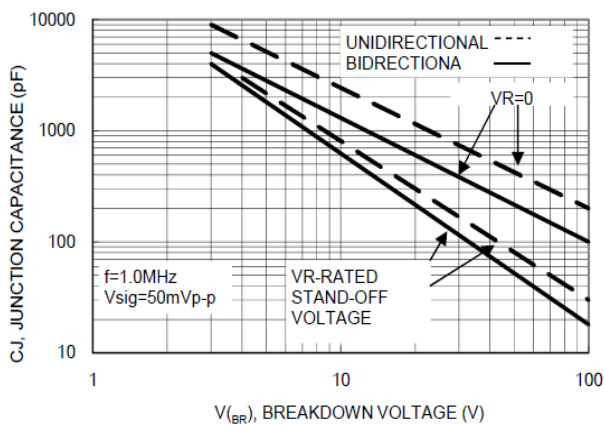


FIG. 5 TYPICAL JUNCTION CAPACITANCE





1.5SMC SERIES

1500W, 6.8V - 200V Surface Mount Transient Voltage Suppressors

Ordering Information

Part No.	Package	Packing Code	Packing
1.5SMC SERIES	DO-214AB (SMC)	R30	3000pcs/Reel

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