Zibo Seno Electronic Engineering Co., Ltd.

淄博圣诺

1.5SMC SERIES

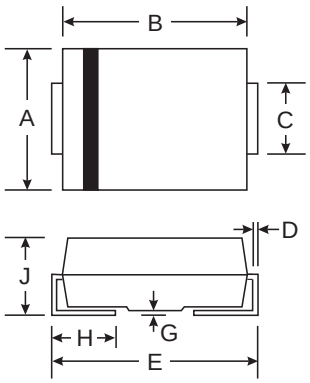
6.8 to 440Volts 1500Watts SMD TRANSIENT VOLTAGE SUPPRESSORS

Features

- Glass Passivated Die Construction
- 1500W Peak Pulse Power Dissipation
- 6.8V-440V Standoff Voltage
- Uni- and Bi-Directional Versions Available
- Excellent Clamping Capability
- Fast Response Time
- Plastic Case Material has UL Flammability

Mechanical Data

- Case: SMC/DO-214AB Molded Plastic
- Terminals:Solderable per MIL-STD-202, Method 208
- Polarity: Cathode Band or Cathode Notch
- Marking:
  Unidirectional – Device Code and Cathode Band
  Bidirectional – Device Code Only
- Weight: 0.21 grams (approx.)
- **Lead Free: For RoHS / Lead Free Version**



SMC/DO-214AB		
Dim	**Min**	**Max**
A	5.59	6.22
B	6.60	7.11
C	2.75	3.18
D	0.15	0.31
E	7.75	8.13
G	0.10	0.20
H	0.76	1.52
J	2.00	2.62
All Dimensions in mm		

"C" Suffix Designates Bi-directional Devices
"A" Suffix Designates 5% Tolerance Devices
No Suffix Designates 10% Tolerance Devices

Maximum Ratings and Electrical Characteristics @T_A=25°C unless otherwise specified

Characteristic	Symbol	Value	Unit
Peak Pulse Power Dissipation at T_A = 25°C (Note 1, 2, 5) Figure 3	P_{PPM}	1500	W
Peak Forward Surge Current (Note 3)	I_{FSM}	200	A
Peak Pulse Current on 10/1000μS Waveform (Note 1) Figure 1	I_{PPM}	See Table 1	A
Steady State Power Dissipation (Note 2, 4)	$P_{M(AV)}$	5.0	W
Operating and Storage Temperature Range	T_j, T_{STG}	-55 to +150	°C

Note: 1. Non-repetitive current pulse, per Figure 1 and derated above T_A = 25°C per Figure 4.
2. Mounted on 40mm^2 copper pad.
3. 8.3ms single half sine-wave duty cycle = 4 pulses per minutes maximum.
4. Lead temperature at 75°C = T_L.
5. Peak pulse power waveform is 10/1000μS.

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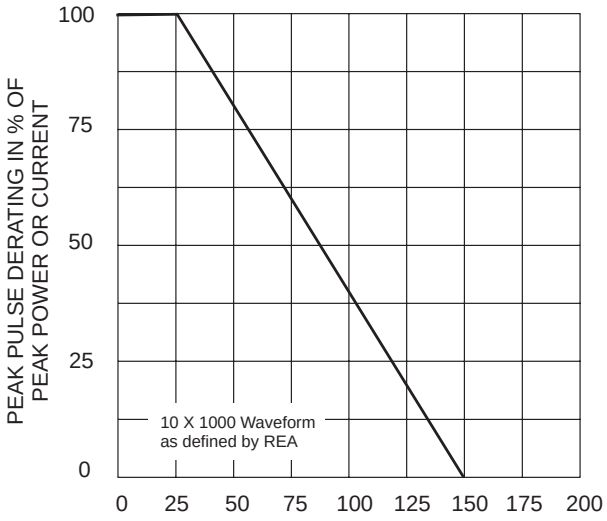


Fig. 1 Pulse Derating Curve

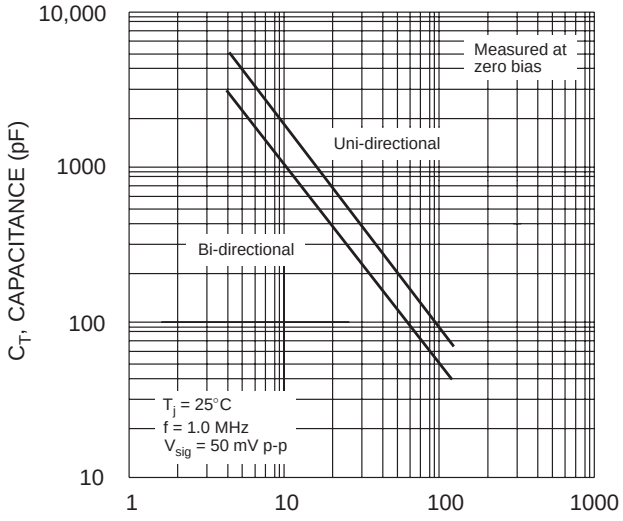


Fig. 2 Typical Total Capacitance

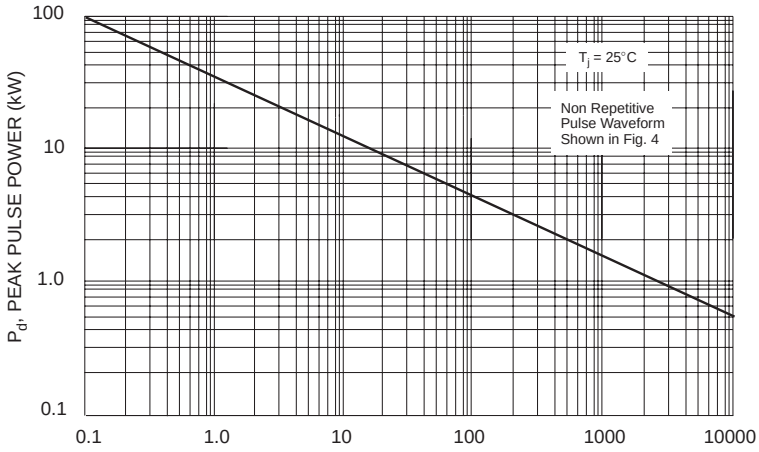


Fig. 3 Pulse Rating Curve

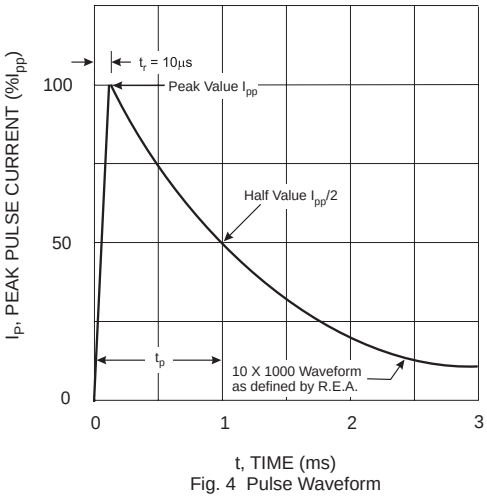


Fig. 4 Pulse Waveform

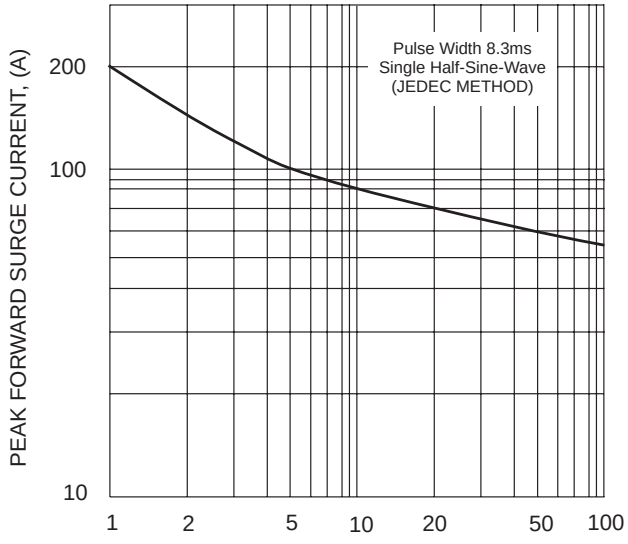


Fig. 5, Maximum Non-Repetitive Surge Current

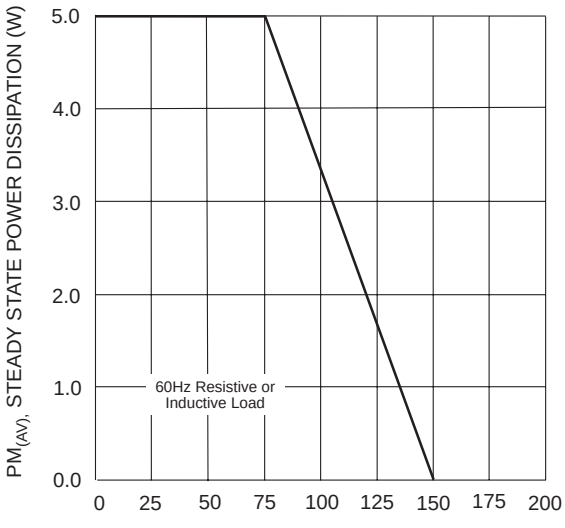


Fig. 6 Steady State Power Derating Curve

Alldatasheet

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UNI/BI-DIRECTIONAL 6.8 to 440Volts 1500W SMD TRANSIENT VOLTAGE SUPPRESSORS

Type Number		Marking		Reverse Stand-Off Voltage	Breakdown Voltage Min. @I_T	Breakdown Voltage Max. @ I_T	Test Current	Maximum Clamping Voltage @I_{PP}	Peak Pulse Current	Reverse Leakage @V_{RMW}
(Uni)	(Bi)	(Uni)	(Bi)	V_{RMW}(V)	$V_{BR\ MIN}$(V)	$V_{BR\ MAX}$(V)	I_T (mA)	V_C(V)	I_{PP}(A)	I_R(uA)
1.5SMC6.8	1.5SMC6.8C	6V8	6V8C	5.50	6.12	7.48	10	10.8	140.7	1000.0
1.5SMC6.8A	1.5SMC6.8CA	6V8A	6V8CA	5.80	6.45	7.14	10	10.5	144.8	1000.0
1.5SMC7.5	1.5SMC7.5C	7V5	7V5C	6.05	6.75	8.25	10	11.7	129.9	500.0
1.5SMC7.5A	1.5SMC7.5CA	7V5A	7V5CA	6.40	7.13	7.88	10	11.3	134.5	500.0
1.5SMC8.2	1.5SMC8.2C	8V2	8V2C	6.63	7.38	9.02	10	12.5	121.6	200.0
1.5SMC8.2A	1.5SMC8.2CA	8V2A	8V2CA	7.02	7.79	8.61	10	12.1	125.6	200.0
1.5SMC9.1	1.5SMC9.1C	9V1	9V1C	7.37	8.19	10.0	1.0	13.8	110.1	50.0
1.5SMC9.1A	1.5SMC9.1CA	9V1A	9V1CA	7.78	8.65	9.55	1.0	13.4	113.4	50.0
1.5SMC10	1.5SMC10C	10	10C	8.10	9.00	11.0	1.0	15.0	101.3	10.0
1.5SMC10A	1.5SMC10CA	10A	10CA	8.55	9.50	10.5	1.0	14.5	104.8	10.0
1.5SMC11	1.5SMC11C	11	11C	8.92	9.90	12.1	1.0	16.2	93.8	5.0
1.5SMC11A	1.5SMC11CA	11A	11CA	9.40	10.5	11.6	1.0	15.6	97.4	5.0
1.5SMC12	1.5SMC12C	12	12C	9.72	10.8	13.2	1.0	17.3	87.9	5.0
1.5SMC12A	1.5SMC12CA	12A	12CA	10.2	11.4	12.6	1.0	16.7	91.0	5.0
1.5SMC13	1.5SMC13C	13	13C	10.5	11.7	14.3	1.0	19.0	80.0	5.0
1.5SMC13A	1.5SMC13CA	13A	13CA	11.1	12.4	13.7	1.0	18.2	83.5	5.0
1.5SMC15	1.5SMC15C	15	15C	12.1	13.5	16.5	1.0	22.0	69.1	5.0
1.5SMC15A	1.5SMC15CA	15A	15CA	12.8	14.3	15.8	1.0	21.2	71.7	5.0
1.5SMC16	1.5SMC16C	16	16C	12.9	14.4	17.6	1.0	23.5	64.7	5.0
1.5SMC16A	1.5SMC16CA	16A	16CA	13.6	15.2	16.8	1.0	22.5	67.6	5.0
1.5SMC18	1.5SMC18C	18	18C	14.5	16.2	19.8	1.0	26.5	57.4	5.0
1.5SMC18A	1.5SMC18CA	18A	18CA	15.3	17.1	18.9	1.0	25.2	60.3	5.0
1.5SMC20	1.5SMC20C	20	20C	16.2	18.0	22.0	1.0	29.1	52.2	5.0
1.5SMC20A	1.5SMC20CA	20A	20CA	17.1	19.0	21.0	1.0	27.7	54.9	5.0

Notes: 1. Suffix C denotes Bi-directional device.
2. V_{BR} measured with I_T current pulse = 300μs.
3. For Bi-Directional devices having V_{RWM} of 10V and under, the I_R is doubled.

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(Uni)	(Bi)	(Uni)	(Bi)	V_{RMW}(V)	$V_{BR\ MIN}$(V)	$V_{BR\ MAX}$(V)	I_T (mA)	V_C(V)	I_{PP}(A)	I_R(uA)
1.5SMC22	1.5SMC22C	22	22C	17.8	19.8	24.2	1.0	31.9	47.6	5.0
1.5SMC22A	1.5SMC22CA	22A	22CA	18.8	20.9	23.1	1.0	30.6	49.7	5.0
1.5SMC24	1.5SMC24C	24	24C	19.4	21.6	26.4	1.0	34.7	43.8	5.0
1.5SMC24A	1.5SMC24CA	24A	24CA	20.5	22.8	25.2	1.0	33.2	45.8	5.0
1.5SMC27	1.5SMC27C	27	27C	21.8	24.3	29.7	1.0	39.1	38.9	5.0
1.5SMC27A	1.5SMC27CA	27A	27CA	23.1	25.7	28.4	1.0	37.5	40.5	5.0
1.5SMC30	1.5SMC30C	30	30C	24.3	27.0	33.0	1.0	43.5	34.9	5.0
1.5SMC30A	1.5SMC30CA	30A	30CA	25.6	28.5	31.5	1.0	41.4	36.7	5.0
1.5SMC33	1.5SMC33C	33	33C	26.8	29.7	36.3	1.0	47.7	31.9	5.0
1.5SMC33A	1.5SMC33CA	33A	33CA	28.2	31.4	34.7	1.0	45.7	33.3	5.0
1.5SMC36	1.5SMC36C	36	36C	29.1	32.4	39.6	1.0	52.0	29.2	5.0
1.5SMC36A	1.5SMC36CA	36A	36CA	30.8	34.2	37.8	1.0	49.9	30.5	5.0
1.5SMC39	1.5SMC39C	39	39C	31.6	35.1	42.9	1.0	56.4	27.0	5.0
1.5SMC39A	1.5SMC39CA	39A	39CA	33.3	37.1	41.0	1.0	53.9	28.2	5.0
1.5SMC43	1.5SMC43C	43	43C	34.8	38.7	47.3	1.0	61.9	24.6	5.0
1.5SMC43A	1.5SMC43CA	43A	43CA	36.8	40.9	45.2	1.0	59.3	25.6	5.0
1.5SMC47	1.5SMC47C	47	47C	38.1	42.3	51.7	1.0	67.8	22.4	5.0
1.5SMC47A	1.5SMC47CA	47A	47CA	40.2	44.7	49.4	1.0	64.8	23.5	5.0
1.5SMC51	1.5SMC51C	51	51C	41.3	45.9	56.1	1.0	73.5	20.7	5.0
1.5SMC51A	1.5SMC51CA	51A	51CA	43.6	48.5	53.6	1.0	70.1	21.7	5.0
1.5SMC56	1.5SMC56C	56	56C	45.4	50.4	61.6	1.0	80.5	18.9	5.0
1.5SMC56A	1.5SMC56CA	56A	56CA	47.8	53.2	58.8	1.0	77.0	19.7	5.0
1.5SMC62	1.5SMC62C	62	62C	50.2	55.8	68.2	1.0	89.0	17.1	5.0
1.5SMC62A	1.5SMC62CA	62A	62CA	53.0	58.9	65.1	1.0	85.0	17.9	5.0
1.5SMC68	1.5SMC68C	68	68C	55.1	61.2	74.8	1.0	98.0	13.5	5.0
1.5SMC68A	1.5SMC68CA	68A	68CA	58.1	64.6	71.4	1.0	92.0	16.5	5.0
1.5SMC75	1.5SMC75C	75	75C	60.7	67.5	82.5	1.0	108	14.1	5.0
1.5SMC75A	1.5SMC75CA	75A	75CA	64.1	71.3	78.8	1.0	103	14.8	5.0
1.5SMC82	1.5SMC82C	82	82C	66.4	73.8	90.2	1.0	118	12.9	5.0
1.5SMC82A	1.5SMC82CA	82A	82CA	70.1	77.9	86.1	1.0	113	13.5	5.0
1.5SMC91	1.5SMC91C	91	91C	73.7	81.9	100	1.0	131	11.6	5.0
1.5SMC91A	1.5SMC91CA	91A	91CA	77.8	86.5	95.5	1.0	125	12.2	5.0
1.5SMC100	1.5SMC100C	100	100C	81.0	90.0	110	1.0	144	10.6	5.0
1.5SMC100A	1.5SMC100CA	100A	100CA	85.5	95.0	105	1.0	137	11.1	5.0
1.5SMC110	1.5SMC110C	110	110C	89.2	99.0	121	1.0	158	9.6	5.0
1.5SMC110A	1.5SMC110CA	110A	110CA	94.0	105	116	1.0	152	10.0	5.0

Notes: 1. Suffix C denotes Bi-directional device.
2. V_{BR} measured with I_T current pulse = 300μs.
3. For Bi-Directional devices having V_{RWM} of 10V and under, the I_R is doubled.

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(Uni)	(Bi)	(Uni)	(Bi)	V_{RMW}(V)	$V_{BR\ MIN}$(V)	$V_{BR\ MAX}$(V)	I_T (mA)	V_C(V)	I_{PP}(A)	I_R(uA)
1.5SMC120	1.5SMC120C	120	120C	97.2	108	132	1.0	173	8.7	5.0
1.5SMC120A	1.5SMC120CA	120A	120CA	102	114	126	1.0	165	9.2	5.0
1.5SMC130	1.5SMC130C	130	130C	105	117	143	1.0	187	8.1	5.0
1.5SMC130A	1.5SMC130CA	130A	130CA	111	124	137	1.0	179	8.5	5.0
1.5SMC150	1.5SMC150C	150	150C	121	135	165	1.0	215	7.1	5.0
1.5SMC150A	1.5SMC150CA	150A	150CA	128	143	158	1.0	207	7.3	5.0
1.5SMC160	1.5SMC160C	160	160C	130	144	176	1.0	230	6.6	5.0
1.5SMC160A	1.5SMC160CA	160A	160CA	136	152	168	1.0	219	6.9	5.0
1.5SMC170	1.5SMC170C	170	170C	138	153	187	1.0	244	6.2	5.0
1.5SMC170A	1.5SMC170CA	170A	170CA	145	162	179	1.0	234	6.5	5.0
1.5SMC180	1.5SMC180C	180	180C	146	162	198	1.0	258	5.9	5.0
1.5SMC180A	1.5SMC180CA	180A	180CA	154	171	189	1.0	246	6.2	5.0
1.5SMC200	1.5SMC200C	200	200C	162	180	220	1.0	287	5.3	5.0
1.5SMC200A	1.5SMC200CA	200A	200CA	171	190	210	1.0	274	5.5	5.0
1.5SMC220	1.5SMC220C	220	220C	175	198	242	1.0	344	4.4	5.0
1.5SMC220A	1.5SMC220CA	220A	220CA	185	209	231	1.0	328	4.6	5.0
1.5SMC250	1.5SMC250C	250	250C	202	225	275	1.0	360	4.2	5.0
1.5SMC250A	1.5SMC250CA	250A	250CA	214	237	263	1.0	344	4.4	5.0
1.5SMC300	1.5SMC300C	300	300C	243	270	330	1.0	430	3.5	5.0
1.5SMC300A	1.5SMC300CA	300A	300CA	256	285	315	1.0	414	3.7	5.0
1.5SMC350	1.5SMC350C	350	350C	284	315	385	1.0	504	3.0	5.0
1.5SMC350A	1.5SMC350CA	350A	350CA	300	333	368	1.0	482	3.2	5.0
1.5SMC400	1.5SMC400C	400	400C	324	360	440	1.0	574	2.6	5.0
1.5SMC400A	1.5SMC400CA	400A	400CA	342	380	420	1.0	548	2.8	5.0
1.5SMC440	1.5SMC440C	440	440C	356	396	484	1.0	631	2.4	5.0
1.5SMC440A	1.5SMC440CA	440A	440CA	376	418	462	1.0	600	2.5	5.0

Notes: 1. Suffix C denotes Bi-directional device.
2. V_{BR} measured with I_T current pulse = 300μs.
3. For Bi-Directional devices having V_{RWM} of 10V and under, the I_R is doubled.

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