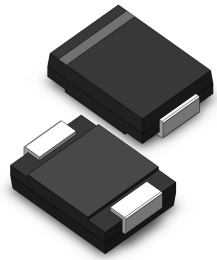
1.5SMC6.8A(CA) - 1.5SMC440A(CA)

SURFACE MOUNT TRANSIENT VOLTAGE SUPPESSOR DIODE

VOLTAGE RANGE: 6.8 - 440 V
POWER: 1500Watts



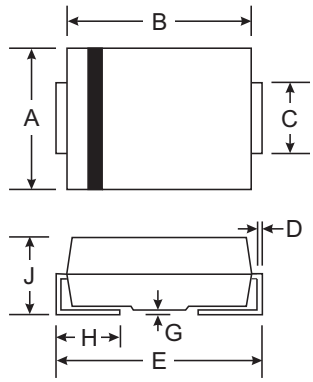
Features

- Glass Passivated Die Construction
- Uni- and Bi-Directional Versions Available
- Excellent Clamping Capability
- Fast Response Time
- Plastic Case Material has UL Flammability Classification Rating 94V-O

Mechanical Data

- Case: SMC/DO-214AB, Molded Plastic
- Terminals: Solder Plated, Solderable per MIL-STD-750, Method 2026
- Polarity: Cathode Band or Cathode Notch
- Marking: Type Number
- Weight: 0.21 grams (approx.)

RoHS COMPLIANT



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		

Maximum Ratings @ T_A = 25°C unless otherwise specified

Characteristic	Symbol	Value	Unit
Peak Pulse Power Dissipation (Non repetitive current pulse derated above T_A = 25°C) (Note 1)	P_{PK}	1500	W
Peak Forward Surge Current, 8.3ms Single Half Sine Wave Superimposed on Rated Load (JEDEC Method) (Notes 1, 2, & 3)	I_{FSM}	200	A
Steady State Power Dissipation @ T_L = 75°C	$PM_{(AV)}$	5.0	W
Instantaneous Forward Voltage @ I_{PP} = 100A (Notes 1 & 3)	V_F	See Note 5	V
Operating Temperature Range	T_j	-55 to +150	°C
Storage Temperature Range	T_{STG}	-55 to +175	°C

NOTES:1. Non-repetitive current pulse ,per Fig. 3 and derated above T_A=25℃ per Fig. 1.

2. Thermal Resistance junction to Lead.

3. 8.3ms single half-wave duty cycle=4 pulses per minutes maximum (uni-directional units only).

TYPE		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_{RWM}
(UNI)	(BI)	(UNI)	(BI)	V_{RWM}(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	GDD	BDD	5.50	6.12	7.48	10	10.8	140.7	1000.0
1.5SMC6.8A	1.5SMC6.8CA	GDE	BDE	5.80	6.45	7.14	10	10.5	144.8	1000.0
1.5SMC7.5	1.5SMC7.5C	GDH	BDH	6.05	6.75	8.25	10	11.7	129.9	500.0
1.5SMC7.5A	1.5SMC7.5CA	GDK	BDK	6.40	7.13	7.88	10	11.3	134.5	500.0
1.5SMC8.2	1.5SMC8.2C	GDL	BDL	6.63	7.38	9.02	10	12.5	121.6	200.0
1.5SMC8.2A	1.5SMC8.2CA	GDM	BDM	7.02	7.79	8.61	10	12.1	125.6	200.0
1.5SMC9.1	1.5SMC9.1C	GDN	BDN	7.37	8.19	10.0	1.0	13.8	110.1	50.0
1.5SMC9.1A	1.5SMC9.1CA	GDP	BDP	7.78	8.65	9.55	1.0	13.4	113.4	50.0
1.5SMC10	1.5SMC10C	GDQ	BDQ	8.10	9.00	11.0	1.0	15.0	101.3	10.0
1.5SMC10A	1.5SMC10CA	GDR	BDR	8.55	9.50	10.5	1.0	14.5	104.8	10.0
1.5SMC11	1.5SMC11C	GDS	BDS	8.92	9.90	12.1	1.0	16.2	93.8	5.0
1.5SMC11A	1.5SMC11CA	GDT	BDT	9.40	10.5	11.6	1.0	15.6	97.4	5.0
1.5SMC12	1.5SMC12C	GDW	BDW	9.72	10.8	13.2	1.0	17.3	87.9	5.0
1.5SMC12A	1.5SMC12CA	GBX	BDX	10.2	11.4	12.6	1.0	16.7	91.0	5.0
1.5SMC13	1.5SMC13C	GDY	BDY	10.5	11.7	14.3	1.0	19.0	80.0	5.0
1.5SMC13A	1.5SMC13CA	GDZ	BDZ	11.1	12.4	13.7	1.0	18.2	83.5	5.0
1.5SMC15	1.5SMC15C	GEF	BEF	12.1	13.5	16.5	1.0	22.0	69.1	5.0
1.5SMC15A	1.5SMC15CA	GEG	BEG	12.8	14.3	15.8	1.0	21.2	71.7	5.0
1.5SMC16	1.5SMC16C	GEL	BEL	12.9	14.4	17.6	1.0	23.5	64.7	5.0
1.5SMC16A	1.5SMC16CA	GEM	BEM	13.6	15.2	16.8	1.0	22.5	67.6	5.0
1.5SMC18	1.5SMC18C	GEN	BEN	14.5	16.2	19.8	1.0	26.5	57.4	5.0
1.5SMC18A	1.5SMC18CA	GEP	BEP	15.3	17.1	18.9	1.0	25.2	60.3	5.0
1.5SMC20	1.5SMC20C	GES	BES	16.2	18.0	22.0	1.0	29.1	52.2	5.0
1.5SMC20A	1.5SMC20CA	GET	BET	17.1	19.0	21.0	1.0	27.7	54.9	5.0
1.5SMC22	1.5SMC22C	GEU	BEU	17.8	19.8	24.2	1.0	31.9	47.6	5.0
1.5SMC22A	1.5SMC22CA	GEV	BEV	18.8	20.9	23.1	1.0	30.6	49.7	5.0
1.5SMC24	1.5SMC24C	GEW	BEW	19.4	21.6	26.4	1.0	34.7	43.8	5.0
1.5SMC24A	1.5SMC24CA	GEX	BEX	20.5	22.8	25.2	1.0	33.2	45.8	5.0
1.5SMC27	1.5SMC27C	GEY	BEY	21.8	24.3	29.7	1.0	39.1	38.9	5.0
1.5SMC27A	1.5SMC27CA	GEZ	BEZ	23.1	25.7	28.4	1.0	37.5	40.5	5.0
1.5SMC30	1.5SMC30C	GFD	BFD	24.3	27.0	33.0	1.0	43.5	34.9	5.0
1.5SMC30A	1.5SMC30CA	GFE	BFE	25.6	28.5	31.5	1.0	41.4	36.7	5.0
1.5SMC33	1.5SMC33C	GFF	BFF	26.8	29.7	36.3	1.0	47.7	31.9	5.0
1.5SMC33A	1.5SMC33CA	GFG	BFG	28.2	31.4	34.7	1.0	45.7	33.3	5.0
1.5SMC36	1.5SMC36C	GFH	BFH	29.1	32.4	39.6	1.0	52.0	29.2	5.0
1.5SMC36A	1.5SMC36CA	GFK	BFK	30.8	34.2	37.8	1.0	49.9	30.5	5.0
1.5SMC39	1.5SMC39C	GFL	BFL	31.6	35.1	42.9	1.0	56.4	27.0	5.0
1.5SMC39A	1.5SMC39CA	GFM	BFM	33.3	37.1	41.0	1.0	53.9	28.2	5.0
1.5SMC43	1.5SMC43C	GFN	BFN	34.8	38.7	47.3	1.0	61.9	24.6	5.0
1.5SMC43A	1.5SMC43CA	GFP	BFP	36.8	40.9	45.2	1.0	59.3	25.6	5.0
1.5SMC47	1.5SMC47C	GFQ	BFQ	38.1	42.3	51.7	1.0	67.8	22.4	5.0
1.5SMC47A	1.5SMC47CA	GFR	BFR	40.2	44.7	49.4	1.0	64.8	23.5	5.0
1.5SMC51	1.5SMC51C	GFS	BFS	41.3	45.9	56.1	1.0	73.5	20.7	5.0
1.5SMC51A	1.5SMC51CA	GFT	BFT	43.6	48.5	53.6	1.0	70.1	21.7	5.0
1.5SMC56	1.5SMC56C	GFU	BFU	45.4	50.4	61.6	1.0	80.5	18.9	5.0
1.5SMC56A	1.5SMC56CA	GFV	BFV	47.8	53.2	58.8	1.0	77.0	19.7	5.0

TYPE		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_{RWM}
(UNI)	(BI)	(UNI)	(BI)	V_{RWM}(V)	$V_{BR\ MIN}$(V)	$V_{BR\ MAX}$(V)	I_T (mA)	V_C(V)	I_{PP}(A)	I_R(uA)
1.5SMC62	1.5SMC62C	GJU	BJU	50.2	55.8	68.2	1.0	89.0	17.1	5.0
1.5SMC62A	1.5SMC62CA	GJV	BJV	53.0	58.9	65.1	1.0	85.0	17.9	5.0
1.5SMC68	1.5SMC68C	GFW	BFW	55.1	61.2	74.8	1.0	98.0	13.5	5.0
1.5SMC68A	1.5SMC68CA	GFX	BFX	58.1	64.6	71.4	1.0	92.0	16.5	5.0
1.5SMC75	1.5SMC75C	GFY	BFY	60.7	67.5	82.5	1.0	108	14.1	5.0
1.5SMC75A	1.5SMC75CA	GFZ	BFZ	64.1	71.3	78.8	1.0	103	14.8	5.0
1.5SMC82	1.5SMC82C	GGD	BGD	66.4	73.8	90.2	1.0	118	12.9	5.0
1.5SMC82A	1.5SMC82CA	GGE	BGE	70.1	77.9	86.1	1.0	113	13.5	5.0
1.5SMC91	1.5SMC91C	GGH	BGH	73.7	81.9	100	1.0	131	11.6	5.0
1.5SMC91A	1.5SMC91CA	GGK	BGK	77.8	86.5	95.5	1.0	125	12.2	5.0
1.5SMC100	1.5SMC100C	GGQ	BGQ	81.0	90.0	110	1.0	144	10.6	5.0
1.5SMC100A	1.5SMC100CA	GGR	BGR	85.5	95.0	105	1.0	137	11.1	5.0
1.5SMC110	1.5SMC110C	GGS	BGS	89.2	99.0	121	1.0	158	9.6	5.0
1.5SMC110A	1.5SMC110CA	GGT	BGT	94.0	105	116	1.0	152	10.0	5.0
1.5SMC120	1.5SMC120C	GGU	BGU	97.2	108	132	1.0	173	8.7	5.0
1.5SMC120A	1.5SMC120CA	GGV	BGV	102	114	126	1.0	165	9.2	5.0
1.5SMC130	1.5SMC130C	GGW	BGW	105	117	143	1.0	187	8.1	5.0
1.5SMC130A	1.5SMC130CA	GGX	BGX	111	124	137	1.0	179	8.5	5.0
1.5SMC150	1.5SMC150C	GHD	BHD	121	135	165	1.0	215	7.1	5.0
1.5SMC150A	1.5SMC150CA	GHE	BHE	128	143	158	1.0	207	7.3	5.0
1.5SMC160	1.5SMC160C	GHF	BHF	130	144	176	1.0	230	6.6	5.0
1.5SMC160A	1.5SMC160CA	GHG	BHG	136	152	168	1.0	219	6.9	5.0
1.5SMC170	1.5SMC170C	GHH	BHH	138	153	187	1.0	244	6.2	5.0
1.5SMC170A	1.5SMC170CA	GHK	BHK	145	162	179	1.0	234	6.5	5.0
1.5SMC180	1.5SMC180C	GHL	BHL	146	162	198	1.0	258	5.9	5.0
1.5SMC180A	1.5SMC180CA	GHM	BHM	154	171	189	1.0	246	6.2	5.0
1.5SMC200	1.5SMC200C	GHN	BHN	162	180	220	1.0	287	5.3	5.0
1.5SMC200A	1.5SMC200CA	GHP	BHP	171	190	210	1.0	274	5.5	5.0
1.5SMC220	1.5SMC220C	GHW	BHW	175	198	242	1.0	344	4.4	5.0
1.5SMC220A	1.5SMC220CA	GHX	BHX	185	209	231	1.0	328	4.6	5.0
1.5SMC250	1.5SMC250C	GJD	BJD	202	225	275	1.0	360	4.2	5.0
1.5SMC250A	1.5SMC250CA	GJE	BJE	214	237	263	1.0	344	4.4	5.0
1.5SMC300	1.5SMC300C	GJF	BJF	243	270	330	1.0	430	3.5	5.0
1.5SMC300A	1.5SMC300CA	GJG	BJG	256	285	315	1.0	414	3.7	5.0
1.5SMC350	1.5SMC350C	GJH	BJH	284	315	385	1.0	504	3.0	5.0
1.5SMC350A	1.5SMC350CA	GJK	BJK	300	333	368	1.0	482	3.2	5.0
1.5SMC400	1.5SMC400C	GJL	BJL	324	360	440	1.0	574	2.6	5.0
1.5SMC400A	1.5SMC400CA	GJM	BJM	342	380	420	1.0	548	2.8	5.0
1.5SMC440	1.5SMC440C	GJN	BJN	356	396	484	1.0	631	2.4	5.0
1.5SMC440A	1.5SMC440CA	GJP	BJP	376	418	462	1.0	600	2.5	5.0

Ratings and Characteristic Curves T_A=25°C unless otherwise noted

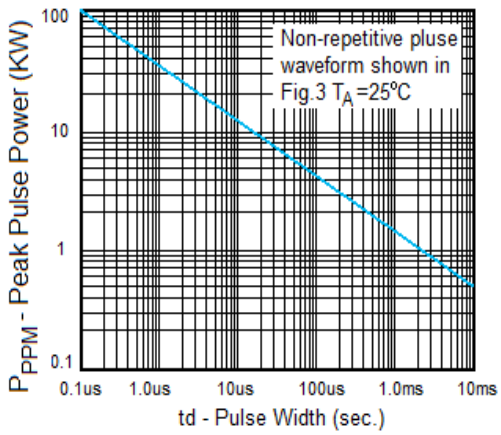


Fig. 1 Peak Pulse Power Rating

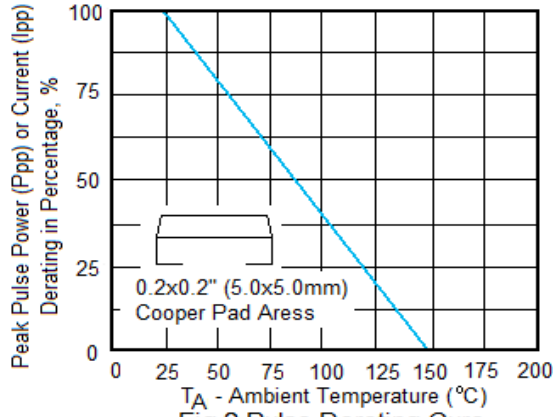


Fig.2 Pulse Derating Cure

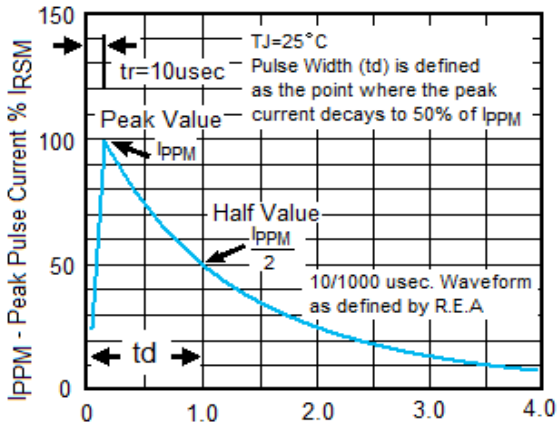


Fig.3 Pulse Waveform

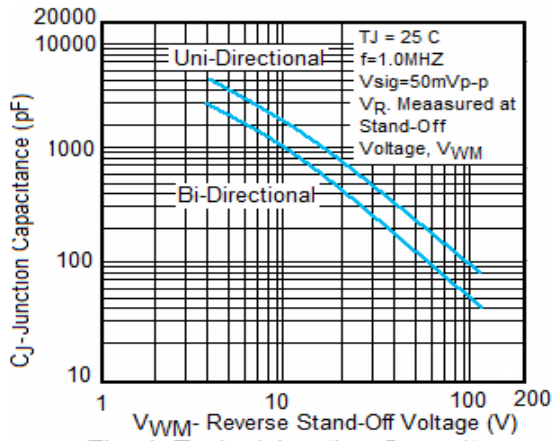


Fig. 4- Typical Junction Capacitance