



The 1.5SMC series is designed specifically to protect sensitive electronic equipment from voltage transients induced by lightning and other transient voltage events.

FEATURES

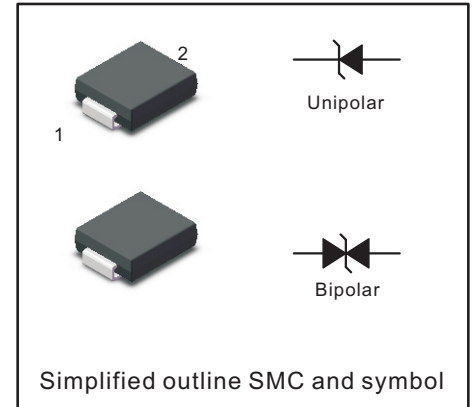
- 1500W peak pulse power capability at 10/1000 μ s waveform
- For surface mounted applications to optimize board space
- Glass passivated chip junction
- Halogen free and RoHS compliant

MECHANICAL DATA

- Case: SMC
- Terminals: Solderable per MIL-STD-750, Method 2026
- Approx. Weight: 0.22g (0.0077oz)

PINNING

PIN	DESCRIPTION
1	Cathode
2	Anode



Parameter	Symbol	Value	Unit
Peak Pulse Power Dissipation on 10/1000 us waveform	P_{PPM}	1500	W
Peak Forward Surge Current, 8.3ms Single Half Sine-Wave Superimposed on Rated Load (JEDEC Method)	I_{FSM} (UNI)	200	A
Power dissipation on Infinite heat sink at $T_A=50^{\circ}\text{C}$	P_D	6.5	W
Maximum instantaneous forward voltage at 100 A for unidirectional only	V_F	3.5	V
Peak Pulse Current on 10/1000 us waveform	I_{PPM}	See Next Table	A
Typical Thermal Resistance Junction to Ambient(Note 1)	$R_{\theta JA}$ $R_{\theta JL}$	75 15	$^{\circ}\text{C/W}$
Operating Junction Temperature and Storage Temperature Range	T_j, T_{stg}	-55 ~ +150	$^{\circ}\text{C}$

NOTES:

1. Mounted on 8 mm² (0.13mm thick) land areas.



Characteristics at Ta = 25°C

Type		Marking		Reverse Stand-off Voltage	Breakdown Voltage		Test Current	Max Clamping Voltage	Peak Pulse Current	Maximum Reverse Leakage
				V _{RMW}	V _{BR} @ I _T		I _T	V _C @ I _{PP}	I _{PP}	I _R
UNI	BI	UNI	BI	V	Min(V)	Max(V)	mA	V	A	μA
1.5SMC6.8A	1.5SMC6.8CA	6V8A	6V8C	5.8	6.46	7.14	10	10.5	142.8	1000
1.5SMC7.5A	1.5SMC7.5CA	7V5A	7V5C	6.4	7.13	7.88	10	11.3	132.7	500
1.5SMC8.2A	1.5SMC8.2CA	8V2A	8V2C	7	7.79	8.61	10	12.1	124	200
1.5SMC9.1A	1.5SMC9.1CA	9V1A	9V1C	7.8	8.65	9.56	1	13.4	111.9	50
1.5SMC10A	1.5SMC10CA	10A	10C	8.6	9.5	10.5	1	14.5	103.4	10
1.5SMC11A	1.5SMC11CA	11A	11C	9.4	10.45	11.55	1	15.6	96.1	5
1.5SMC12A	1.5SMC12CA	12A	12C	10.2	11.4	12.6	1	16.7	89.8	5
1.5SMC13A	1.5SMC13CA	13A	13C	11.1	12.35	13.65	1	18.2	82.4	5
1.5SMC15A	1.5SMC15CA	15A	15C	12.8	14.25	15.75	1	21.2	70.7	5
1.5SMC16A	1.5SMC16CA	16A	16C	13.6	15.2	16.8	1	22.5	66.7	5
1.5SMC18A	1.5SMC18CA	18A	18C	15.3	17.1	18.9	1	25.2	59.5	5
1.5SMC20A	1.5SMC20CA	20A	20C	17.1	19	21	1	27.7	54.1	5
1.5SMC22A	1.5SMC22CA	22A	22C	18.8	20.9	23.1	1	30.6	49	5
1.5SMC24A	1.5SMC24CA	24A	24C	20.5	22.8	25.2	1	33.2	45.2	5
1.5SMC27A	1.5SMC27CA	27A	27C	23.1	25.65	28.35	1	37.5	40	5
1.5SMC30A	1.5SMC30CA	30A	30C	25.6	28.5	31.5	1	41.4	36.2	5
1.5SMC33A	1.5SMC33CA	33A	33C	28.2	31.35	34.65	1	45.7	32.8	5
1.5SMC36A	1.5SMC36CA	36A	36C	30.8	34.2	37.8	1	50	30	5
1.5SMC39A	1.5SMC39CA	39A	39C	33.3	37.05	40.95	1	53.9	27.8	5
1.5SMC43A	1.5SMC43CA	43A	43C	36.8	40.85	45.15	1	59.3	25.3	5
1.5SMC47A	1.5SMC47CA	47A	47C	40.2	44.65	49.35	1	64.8	23.1	5
1.5SMC51A	1.5SMC51CA	51A	51C	43.6	48.45	53.55	1	70.1	21.4	5
1.5SMC56A	1.5SMC56CA	56A	56C	47.8	53.2	58.8	1	77	19.5	5
1.5SMC62A	1.5SMC62CA	62A	62C	53	58.9	65.1	1	85	17.6	5
1.5SMC68A	1.5SMC68CA	68A	68C	58.1	64.6	71.4	1	92	16.3	5
1.5SMC75A	1.5SMC75CA	75A	75C	64.1	71.25	78.75	1	103	14.5	5
1.5SMC85A	1.5SMC85CA	85A	85C	70.1	77.9	86.1	1	113	13.3	5
1.5SMC91A	1.5SMC91CA	91A	91C	77.8	86.45	95.35	1	125	12	5
1.5SMC100A	1.5SMC100CA	100A	100C	85.5	95	105	1	137	10.9	5
1.5SMC110A	1.5SMC110CA	110A	110C	94	104.5	115.5	1	152	9.8	5
1.5SMC120A	1.5SMC120CA	120A	120C	102	114	126	1	165	9.1	5
1.5SMC130A	1.5SMC130CA	130A	130C	111	123.5	136.5	1	179	8.4	5
1.5SMC150A	1.5SMC150CA	150A	150C	128	142.5	157.5	1	207	7.2	5
1.5SMC160A	1.5SMC160CA	160A	160C	136	152	168	1	219	6.8	5
1.5SMC170A	1.5SMC170CA	170A	170C	145	161.5	178.5	1	234	6.4	5
1.5SMC180A	1.5SMC180CA	180A	180C	154	171	189	1	246	6.1	5
1.5SMC200A	1.5SMC200CA	200A	200C	171	190	210	1	274	5.4	5
1.5SMC220A	1.5SMC220CA	220A	220C	185	209	231	1	328	4.5	5
1.5SMC250A	1.5SMC250CA	250A	250C	214	237.5	262.5	1	344	4.3	5
1.5SMC300A	1.5SMC300CA	300A	300C	256	285	315	1	414	3.6	5
1.5SMC350A	1.5SMC350CA	350A	350C	299.3	332.5	367.5	1	482	3.1	5
1.5SMC380A	1.5SMC380CA	380A	380C	324.9	361	399	1	524.4	2.8	5
1.5SMC400A	1.5SMC400CA	400A	400C	342	380	420	1	548	2.7	5
1.5SMC440A	1.5SMC440CA	440A	440C	376.2	418	462	1	602	2.4	5
1.5SMC500A	1.5SMC500CA	500A	500C	427.5	475	525	1	690	2.2	5
1.5SMC520A	1.5SMC520CA	520A	520C	444.6	494	546	1	717.6	2.1	5
1.5SMC500A	1.5SMC550CA	550A	550C	470.3	522.5	577.5	1	750	2	5
1.5SMC600A	1.5SMC600CA	600A	600C	513	570	630	1	828	1.8	5



Fig.1 Peak Pulse Power Rating Curve

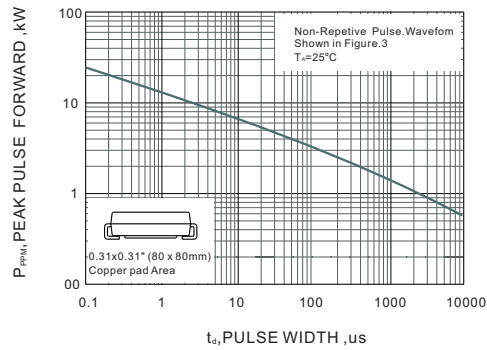


Fig.2 Pulse Waveform

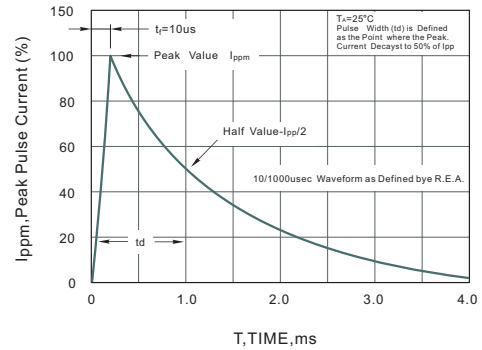


Fig.3 Forward Current Derating Curve

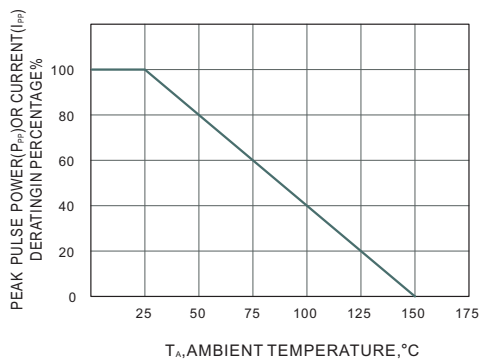


Fig.4 Typical Junction Capacitance

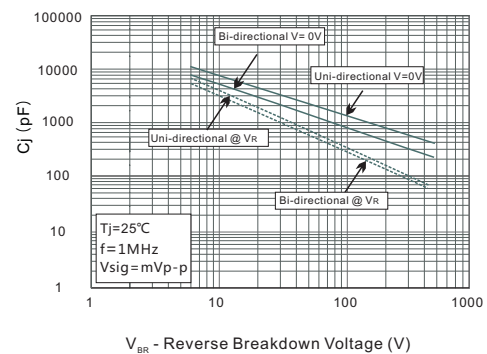
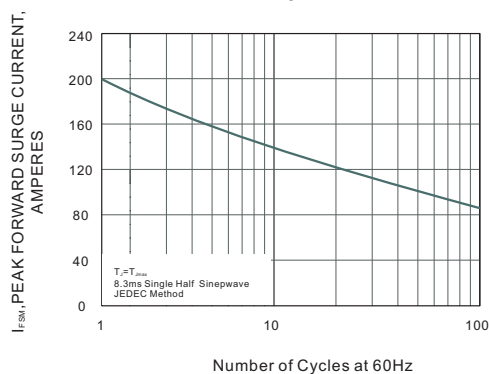


Fig.5 Maximum Non-Repetitive Peak Forward Surge Current

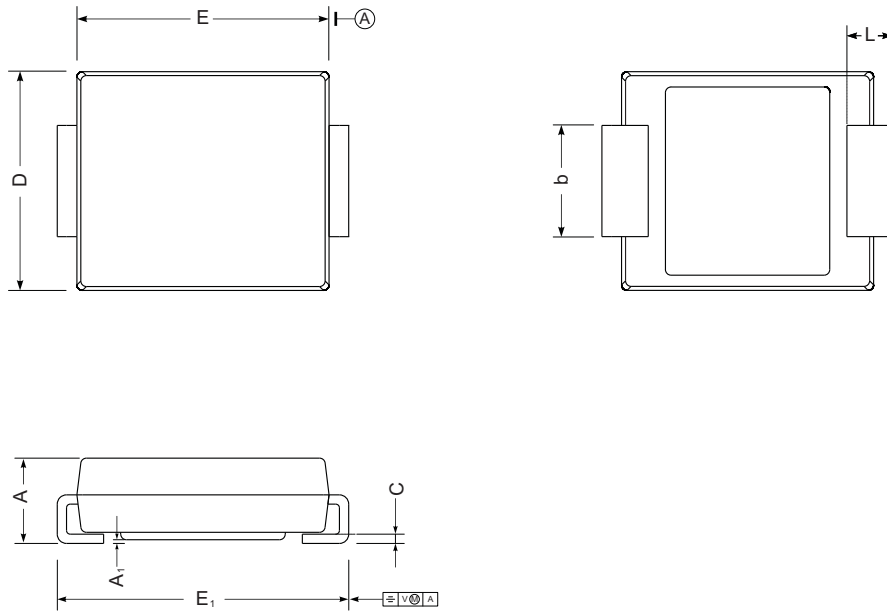




PACKAGE OUTLINE

Plastic surface mounted package; 2 leads

SMC



SMC mechanical data

UNIT		A	E	D	E ₁	A ₁	C	L	b
mm	max	2.62	7.0	6.2	8.0	0.21	0.31	1.6	3.25
	min	2.00	6.5	5.6	7.6	0.05	0.15	0.9	2.75
mil	max	103	276	244	315	8.3	12	63	128
	min	79	256	220	299	2.0	5.9	35	108

The recommended mounting pad size

