

FEATURES

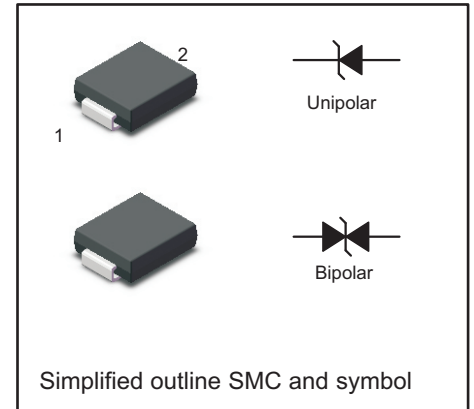
- 1500W peak pulse power capability at 10/1000 μ s waveform
- For surface mounted applications to optimize board space
- Glass passivated chip junction
- Halogen free and RoHS compliant

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



Maximum Ratings and Electrical characteristics

Ratings at 25°C ambient temperature unless otherwise specified.

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 2)	$R_{\theta JA}$ $R_{\theta JC}$ $R_{\theta JL}$	37 10 13	$^\circ\text{C/W}$
Operating Junction Temperature and Storage Temperature Range	T_j, T_{stg}	-55 ~ +150	$^\circ\text{C}$

NOTES:

1. Non-repetitive current pulse, per Fig.3 and derated above $T_A = 25^\circ\text{C}$ per Fig. 2.
2. P.C.B. mounted with 1.5" X 1.5" (3.81 X 3.81 cm) copper pad areas.
3. Measured on 8.3ms, single half sine-wave or equivalent square wave, duty cycle=4 pulses per minute maximum.

Characteristics at Ta = 25°C

Table 1

Type		Marking		V _{RMW}	Breakdown Voltage		Test Current	Max. Reverse Leakage	Max.Clamp Voltage	Max. Peak Pulse Current
					V _{BR} @ I _T					
					Min	Max	I _T	IR@VR	V _c @ I _{PP}	I _{PP}
UNI	BI	UNI	BI	V	V	V	mA	uA	V	A
SMCJ5.0A	SMCJ5.0CA	GDE	BDE	5	6.4	7	10	800	9.2	163
SMCJ6.0A	SMCJ6.0CA	GDG	BDG	6	6.67	7.37	10	800	10.3	145.7
SMCJ6.5A	SMCJ6.5CA	GDK	BDK	6.5	7.22	7.98	10	500	11.2	134
SMCJ7.0A	SMCJ7.0CA	GDM	BDM	7	7.78	8.6	10	200	12	125
SMCJ7.5A	SMCJ7.5CA	GDP	BDP	7.5	8.33	9.21	1	100	12.9	116.3
SMCJ8.0A	SMCJ8.0CA	GDR	BDR	8	8.89	9.83	1	50	13.6	110.3
SMCJ8.5A	SMCJ8.5CA	GDT	BDT	8.5	9.44	10.4	1	20	14.4	104.2
SMCJ9.0A	SMCJ9.0CA	GDV	BDV	9	10	11.1	1	10	15.4	97.4
SMCJ10A	SMCJ10CA	GDX	BDX	10	11.1	12.3	1	5	17	88.3
SMCJ11A	SMCJ11CA	GDZ	BDZ	11	12.2	13.5	1	1	18.2	82.5
SMCJ12A	SMCJ12CA	GEE	BEE	12	13.3	14.7	1	1	19.9	75.4
SMCJ13A	SMCJ13CA	GEG	BEG	13	14.4	15.9	1	1	21.5	69.8
SMCJ14A	SMCJ14CA	GEK	BEK	14	15.6	17.2	1	1	23.2	64.7
SMCJ15A	SMCJ15CA	GEM	BEM	15	16.7	18.5	1	1	24.4	61.5
SMCJ16A	SMCJ16CA	GEP	BEP	16	17.8	19.7	1	1	26	57.7
SMCJ17A	SMCJ17CA	GER	BER	17	18.9	20.9	1	1	27.6	54.4
SMCJ18A	SMCJ18CA	GET	BET	18	20	22.1	1	1	29.2	51.4
SMCJ20A	SMCJ20CA	GEV	BEV	20	22.2	24.5	1	1	32.4	46.3
SMCJ22A	SMCJ22CA	GEX	BEX	22	24.4	26.9	1	1	35.5	42.3
SMCJ24A	SMCJ24CA	GEZ	BEZ	24	26.7	29.5	1	1	38.9	38.6
SMCJ26A	SMCJ26CA	GFE	BFE	26	28.9	31.9	1	1	42.1	35.7
SMCJ28A	SMCJ28CA	GFG	BFG	28	31.1	34.4	1	1	45.4	33.1
SMCJ30A	SMCJ30CA	GFK	BFK	30	33.3	36.8	1	1	48.4	31
SMCJ33A	SMCJ33CA	GFM	BFM	33	36.7	40.6	1	1	53.3	28.2
SMCJ36A	SMCJ36CA	GFP	BFP	36	40	44.2	1	1	58.1	25.9
SMCJ40A	SMCJ40CA	GFR	BFR	40	44.4	49.1	1	1	64.5	23.3
SMCJ43A	SMCJ43CA	GFT	BFT	43	47.8	52.8	1	1	69.4	21.7
SMCJ45A	SMCJ45CA	GFV	BFV	45	50	55.3	1	1	72.7	20.6
SMCJ48A	SMCJ48CA	GFX	BFX	48	53.3	58.9	1	1	77.4	19.4
SMCJ51A	SMCJ51CA	GFZ	BFZ	51	56.7	62.7	1	1	82.4	18.2
SMCJ54A	SMCJ54CA	GGE	BGE	54	60	66.3	1	1	87.1	17.3
SMCJ58A	SMCJ58CA	GGG	BGG	58	64.4	71.2	1	1	93.6	16.1
SMCJ60A	SMCJ60CA	G GK	BGK	60	66.7	73.7	1	1	96.8	15.5
SMCJ64A	SMCJ64CA	GGM	BGM	64	71.1	78.6	1	1	103	14.6
SMCJ70A	SMCJ70CA	G GP	BGP	70	77.8	86	1	1	113	13.3
SMCJ75A	SMCJ75CA	G GR	BGR	75	83.3	92.1	1	1	121	12.4
SMCJ78A	SMCJ78CA	G GT	BGT	78	86.7	95.8	1	1	126	11.9
SMCJ85A	SMCJ85CA	G GV	BGV	85	94.4	104	1	1	137	11
SMCJ90A	SMCJ90CA	G GX	BGX	90	100	111	1	1	146	10.3
SMCJ100A	SMCJ100CA	G GZ	BGZ	100	111	123	1	1	162	9.3
SMCJ110A	SMCJ110CA	G HE	BHE	110	122	135	1	1	177	8.5
SMCJ120A	SMCJ120CA	G HG	BHG	120	133	147	1	1	193	7.8
SMCJ130A	SMCJ130CA	G HK	BHK	130	144	159	1	1	209	7.2
SMCJ150A	SMCJ150CA	G HM	BHM	150	167	185	1	1	243	6.2
SMCJ160A	SMCJ160CA	G HP	BHP	160	178	197	1	1	259	5.8
SMCJ170A	SMCJ170CA	G HR	BHR	170	189	209	1	1	275	5.5
SMCJ180A	SMCJ180CA	G HT	BHT	180	201	222	1	1	292	5.1

Characteristics at Ta = 25°C

Table 1

Type		Marking		V _{RMW}	Breakdown Voltage		Test Current	Max. Reverse Leakage	Max. Clamp Voltage	Max. Peak Pulse Current
					V _{BR} @ I _T					
					Min	Max	I _T	IR@VR	V _C @ I _{PP}	I _{PP}
UNI	BI	UNI	BI	V	V	V	mA	μA	V	A
SMCJ200A	SMCJ200CA	GHV	BHV	200	224	247	1	1	324	4.6
SMCJ220A	SMCJ220CA	GHX	BHX	220	246	272	1	1	356	4.2
SMCJ250A	SMCJ250CA	GHZ	BHZ	250	279	309	1	1	405	3.7
SMCJ300A	SMCJ300CA	GJE	BJE	300	335	371	1	1	486	3.1
SMCJ350A	SMCJ350CA	GJG	BJG	350	391	432	1	1	567	2.6
SMCJ400A	SMCJ400CA	GJK	BJK	400	447	494	1	1	648	2.3
SMCJ440A	SMCJ440CA	GJM	BJM	440	492	543	1	1	713	2.1

Fig.1 Peak Pulse Power Rating Curve

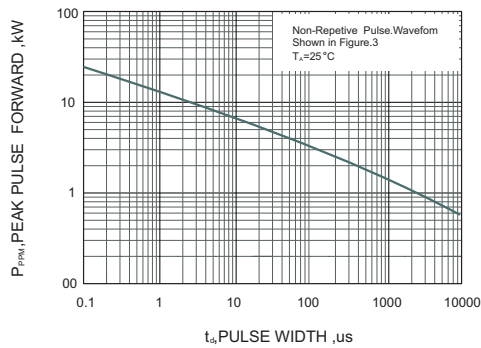


Fig.2 Forward Current Derating Curve

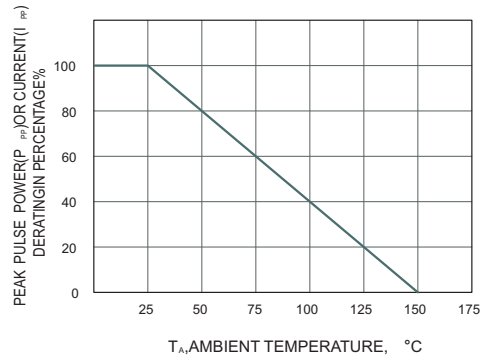


Fig.3 Pulse Waveform

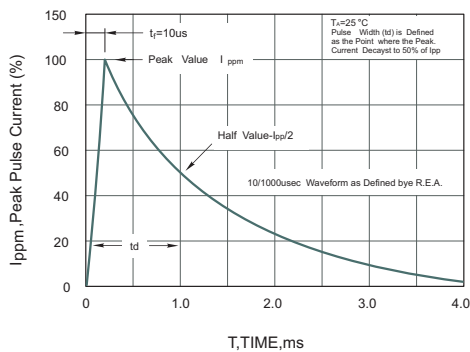
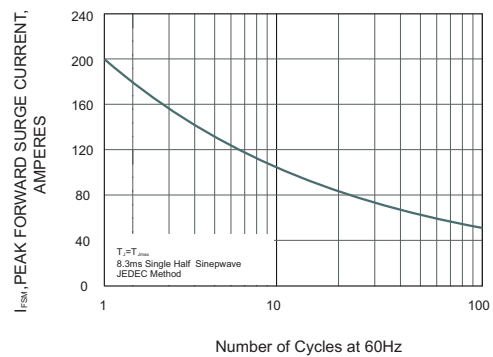


Fig.4 Maximum Non-Repetitive Peak Forward Surge Current

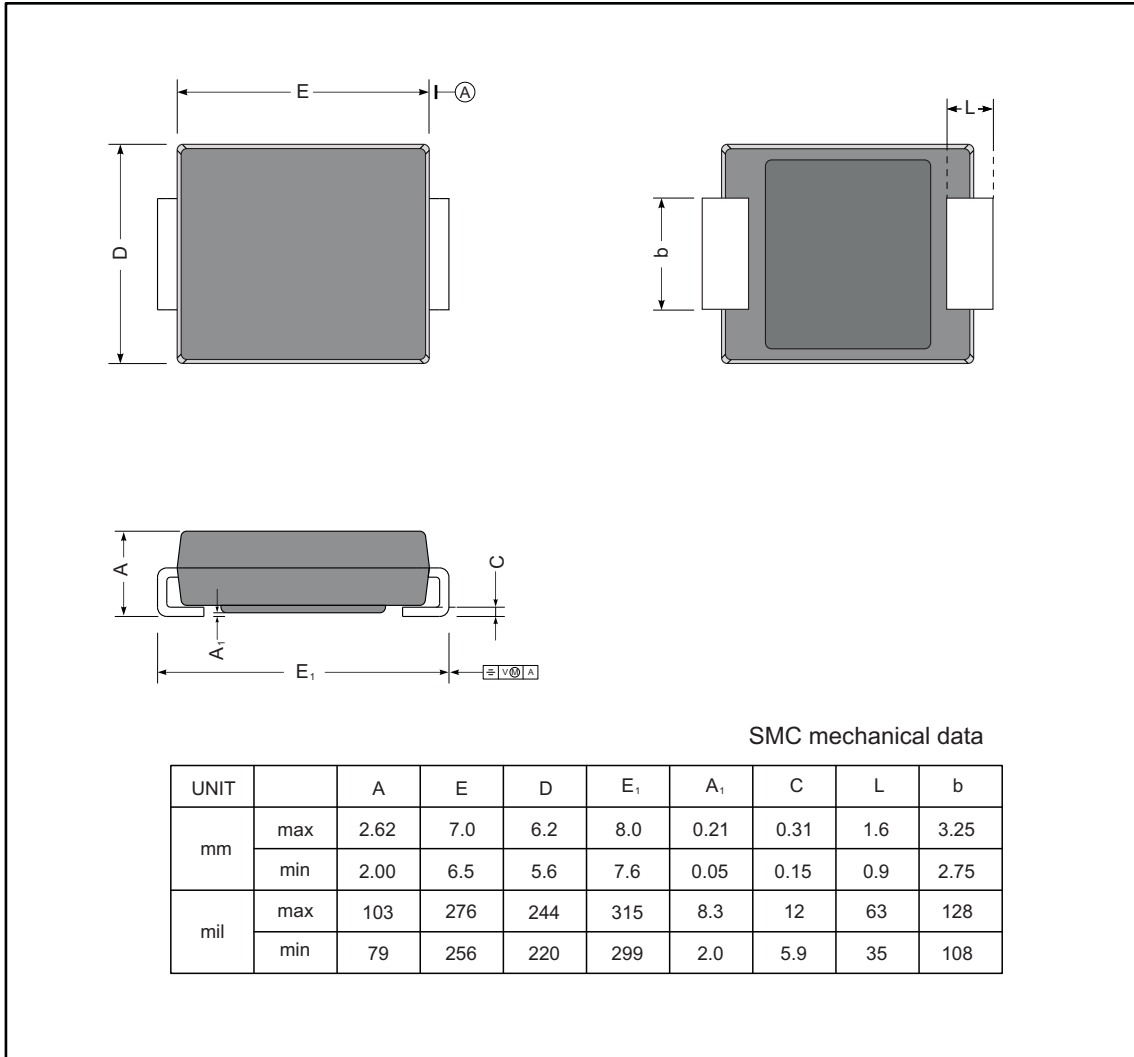


PACKAGE OUTLINE

Plastic surface mounted package; 2 leads

SMCJ Series

SMC



The recommended mounting pad size

