

1.5SMCJ5.0(A) THRU 1.5SMCJ170(A)
1.5SMCJ5.0A(CA) THRU 1.5SMCJ170A(CA)
VOLTAGE - 5.0 TO 170 VOLTS 1500 WATT PEAK POWER

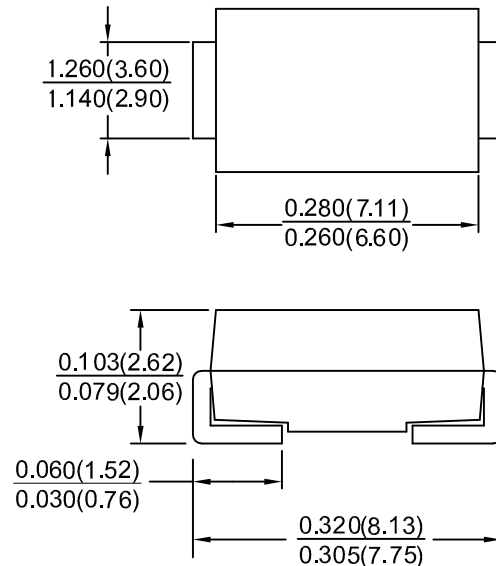
SMC/DO-214AB

FEATURES:

- Plastic package has Underwrites Laboratory Flammability Classification 94V-0
- Glass passivated junction
- Excellent clamping capability
- Low incremental surge resistance
- Fast response time : typically less than 1.0 ps from 0 volts to $V_{(BR)}$ min
- Typical I_R less than 1uA above 10V
- 1500W peak pulse power capability with a 10/1000us waveform , repetition rate (duty cycle) : 0.01%
- High temperature soldering guaranteed : 250°C /10 seconds at terminal

MECHANICAL DATA

Case: Molded plastic
 Terminals: Solder plated, Solderable per MIL-STD-705, Method 2026
 Polarity: Indicated by cathode band band
 Weight: 0.021 grams



Suffix " ", "A"
 UNIDIRECTIONAL

Suffix "C", "CA"
 DIRECTIONAL

Dimensions in inches and (millimeters)

MAXIMUM RATINGS AND ELECTRICAL CHARACTERISTICS

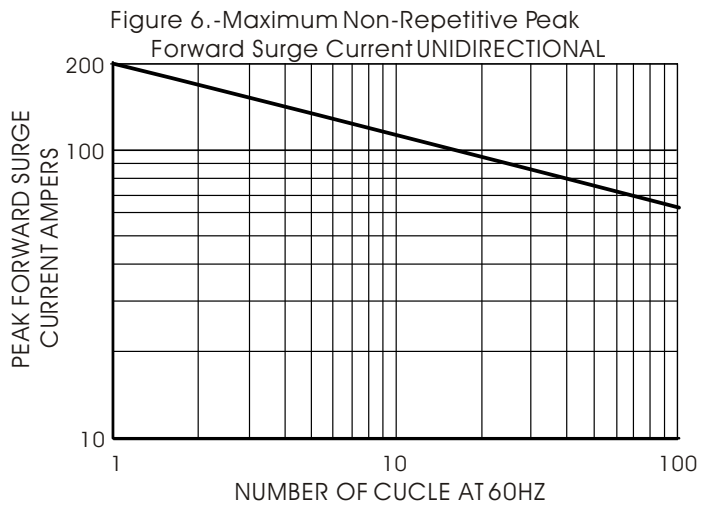
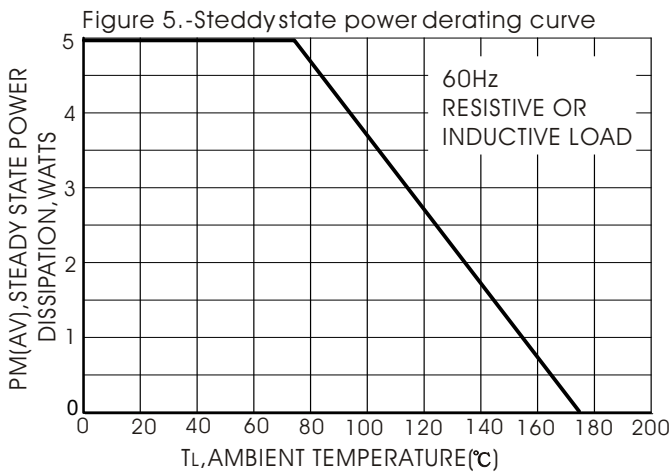
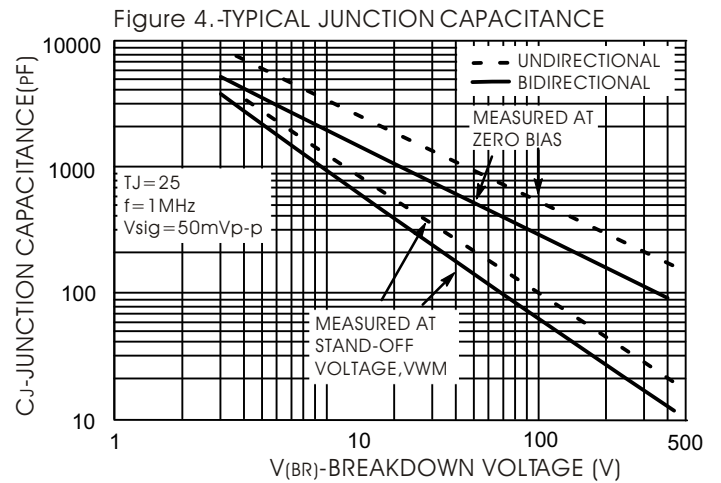
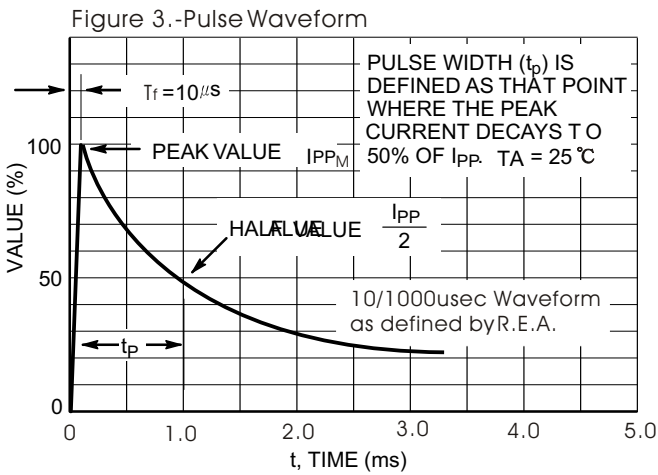
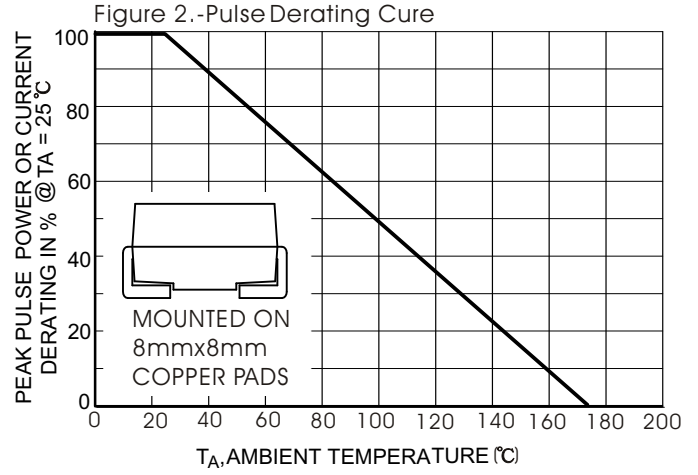
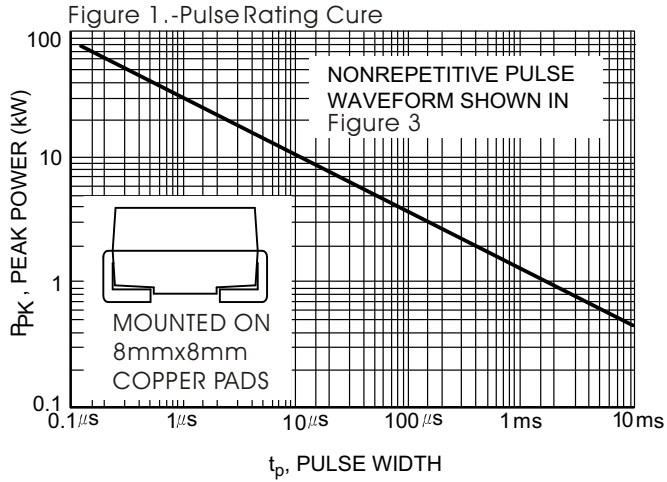
Rating at 25° C ambient temp. unless otherwise specified.
 Single phase, half sine wave, 60 Hz, resistive or inductive load.
 For capacitive load, derate current by 20 %.

Characteristic	Symbol	Value	Units
Minimum peak power dissipation on 10/1000us waveform (note1,fig.1)	P_{PK}	1500	W
Maximum peak pulse current of on 10/1000us waveform (note1,fig3)	I_{PPM}	SEE TABLE1~3	Amps
Stedy state powerdissipation at $T_L=75$ °C (note 2)	$P_{M(AV)}$	1.0	Watts
Maximum forward Surge current, 8.3ms Single Half Sine-Wave Superimposed on ratedload Unidirectional only (note 3)	I_{FSM}	200	Amps
Maximum instantaneous forward voltage at 25A for unidirectional only(note 4)	V_F	3.5/5.0	Volts
Operating and storage temperature range	T_J, T_{stg}	-55 to +175	°C

NOTES :

1. Non-repetitive current pulse, per Fig.3 and derated above $T_a=25$ °C per Fig.2
2. Mounted on 8.0mmx8.0mm copper pads to each terminal
3. Measured on 8.3mS Single half sine-wave or equivalent square wave , duty cycle = 4pulses per minute maximum for uni-directional devices only
4. $V_F=3.5V$ on 1.5SMCJ5.0 THRU 1.5SMCJ90 devices and $V_F=5.0V$ on 1.5SMCJ100 THRU 1.5SMCJ170

RATINGS AND CHARACTERISTIC CURVES 1.5SMCJ5.0(A)(C)(CA) THRU 1.5SMCJ170(A)(C)(CA)



RATINGS AND CHARACTERISTIC CURVES 1.5SMCJ5.0(A)(C)(CA) THRU 1.5SMCJ170(A)(C)(CA)

TABLE 1

Device Type	Breakdown VBR Voltage at IT(Voltage)		Test Current IT	Working Peak Reverse Voltage VRWM	Maximum Reverse Leakage at VRWM IR(μ A)	Maximum Peak Pulse Current IPPM(NOTE5)	Maximum Clamping Voltage (Vc) at IPPM(NOTE5)	Device Marking code	
	Min	Max						mA	Volts
1.5SMCJ5.0(C)	6.40	7.82	10	5.00	800	156.3	9.60	GDD	BDD
1.5SMCJ5.0A(CA)	6.40	7.07	10	5.00	800	163.0	9.20	GDE	BDE
1.5SMCJ6.0(C)	6.67	8.15	10	6.00	800	131.6	11.4	GDF	BDF
1.5SMCJ6.0A(CA)	6.67	7.37	10	6.00	800	145.6	10.3	GDG	BDG
1.5SMCJ6.5(C)	7.22	8.82	10	6.50	500	122.0	12.3	GDH	BDH
1.5SMCJ6.5A(CA)	7.22	7.98	10	6.50	500	133.9	11.2	GDK	BDK
1.5SMCJ7.0(C)	7.78	9.51	10	7.00	200	112.8	13.3	GDL	BDL
1.5SMCJ7.0A(CA)	7.78	8.60	10	7.00	200	125.0	12.0	GDM	BDM
1.5SMCJ7.5(C)	8.33	10.2	1.0	7.50	100	104.9	14.3	GDN	BDN
1.5SMCJ7.5A(CA)	8.33	9.21	1.0	7.50	100	116.3	12.9	GDP	BDP
1.5SMCJ8.0(C)	8.89	10.9	1.0	8.00	50	100.0	15.0	GDQ	BDQ
1.5SMCJ8.0A(CA)	8.89	9.83	1.0	8.00	50	110.3	13.6	GDR	BDR
1.5SMCJC8.5(C)	9.44	11.5	1.0	8.50	10	94.3	15.9	GDS	BDS
1.5SMCJ8.5(CA)	9.44	10.4	1.0	8.50	10	104.2	14.4	GDT	BDT
1.5SMCJ9.0(C)	10.0	12.2	1.0	9.00	5.0	88.8	16.9	GDU	BDU
1.5SMCJ9.0A(CA)	10.0	11.1	1.0	9.00	5.0	97.4	15.4	GDV	BDV
1.5SMCJ10(C)	11.1	13.6	1.0	10.0	5.0	79.8	18.8	GDW	BDW
1.5SMCJ10A(CA)	11.1	12.3	1.0	10.0	5.0	88.2	17.0	GDX	BDX
1.5SMCJ11(C)	12.2	14.9	1.0	11.0	5.0	74.6	20.1	GDY	BDY
1.5SMCJ11A(CA)	12.2	13.5	1.0	11.0	5.0	82.4	18.2	GDZ	BDZ
1.5SMCJ12(C)	13.3	16.3	1.0	12.0	5.0	68.2	22.0	GED	BED
1.5SMCJ12A(CA)	13.3	14.7	1.0	12.0	5.0	75.4	19.9	GEE	BEE
1.5SMCJ13(C)	14.4	17.6	1.0	13.0	5.0	63.0	23.8	GEF	BEF
1.5SMCJ13A(CA)	14.4	15.9	1.0	13.0	5.0	69.8	21.5	GEG	BEG
1.5SMCJ14(C)	15.6	19.1	1.0	14.0	5.0	58.1	25.8	GEH	BEH
1.5SMCJ14A(CA)	15.6	17.2	1.0	14.0	5.0	64.7	23.2	GEK	BEK
1.5SMCJ15(C)	16.7	20.4	1.0	15.0	5.0	55.8	26.9	GEL	BEL
1.5SMCJ15A(CA)	16.7	18.5	1.0	15.0	5.0	61.5	24.4	GEM	BEM
1.5SMCJ16(C)	17.8	21.8	1.0	16.0	5.0	52.1	28.8	GEN	BEN
1.5SMCJ16A(CA)	17.8	19.7	1.0	16.0	5.0	57.7	26.0	GEP	BEP
1.5SMCJ17(C)	18.9	23.1	1.0	17.0	5.0	49.2	30.5	GEQ	BEQ
1.5SMCJ17A(CA)	18.9	20.9	1.0	17.0	5.0	54.3	27.6	GER	BER
1.5SMCJ18(C)	20.0	24.4	1.0	18.0	5.0	46.6	32.2	GES	BES
1.5SMCJ18A(CA)	20.0	22.1	1.0	18.0	5.0	51.4	29.2	GET	BET
1.5SMCJ20(C)	22.2	27.1	1.0	20.0	5.0	41.9	35.8	GEU	BEU
1.5SMCJ20A(CA)	22.2	24.5	1.0	20.0	5.0	46.3	32.4	GEV	BEV
1.5SMCJ22(C)	24.4	29.8	1.0	22.0	5.0	38.1	39.4	GEW	BEW
1.5SMCJ22A(CA)	24.4	26.9	1.0	22.0	5.0	42.3	35.5	GEX	BEX
1.5SMCJ24(C)	26.7	32.6	1.0	24.0	5.0	34.9	43.0	GEY	BEY
1.5SMCJ24A(CA)	26.7	29.5	1.0	24.0	5.0	38.6	38.9	GEZ	BEZ
1.5SMCJ26(C)	28.9	35.3	1.0	26.0	5.0	32.2	46.6	GFD	BFD
1.5SMCJ26A(CA)	28.9	31.9	1.0	26.0	5.0	35.6	42.1	GFE	BFE

RATINGS AND CHARACTERISTIC CURVES 1.5SMCJ5.0(A)(C)(CA) THRU 1.5SMCJ170(A)(C)(CA)

TABLE 2

Device Type	Breakdown VBR Voltage at Ir		Test Current Ir mA	Working Peak Reverse Voltage VRWM Volts	Maximum Reverse Leakage at VRWM IR(μ A)	Maximum Peak Pulse Current IPPM(NOTE5) Amps	Maximum Clamping Voltage (Vc) at IPPM(NOTE5) Volts	Device Marking code	
	Min	Max						UNI	BI
1.5SMCJ28(C)	31.1	38.0	1.0	28.0	5.0	30.0	50.0	GFF	BFF
1.5SMCJ28A(CA)	31.1	34.4	1.0	28.0	5.0	33.0	45.4	GFG	BFG
1.5SMCJ30(C)	33.3	40.7	1.0	30.0	5.0	28.0	53.5	GFH	BFH
1.5SMCJ30A(CA)	33.3	36.8	1.0	30.0	5.0	31.0	48.4	GFK	BFK
1.5SMCJ33(C)	36.7	44.9	1.0	33.0	5.0	25.4	59.0	GFL	BFL
1.5SMCJ33A(CA)	36.7	40.6	1.0	33.0	5.0	28.1	53.3	GFM	BFM
1.5SMCJC36(C)	40.0	48.9	1.0	36.0	5.0	23.3	64.3	GFN	BFN
1.5SMCJ36A(CA)	40.0	44.2	1.0	36.0	5.0	25.8	58.1	GFP	BFP
1.5SMCJ40(C)	44.4	54.3	1.0	40.0	5.0	21.0	71.4	GFQ	BFQ
1.5SMCJ40A(CA)	44.4	49.1	1.0	40.0	5.0	23.3	64.5	GFR	BFR
1.5SMCJ43(C)	47.8	58.4	1.0	43.0	5.0	19.6	76.7	GFS	BFS
1.5SMCJ43A(CA)	47.8	52.8	1.0	43.0	5.0	21.6	69.4	GFT	BFT
1.5SMCJ45(C)	50.0	61.1	1.0	45.0	5.0	18.7	80.3	GFU	BFU
1.5SMCJ45(CA)	50.0	55.3	1.0	45.0	5.0	20.6	72.7	GFV	BFV
1.5SMCJ48(C)	53.3	65.1	1.0	48.0	5.0	17.5	85.5	GFW	BFW
1.5SMCJ48A(CA)	53.3	58.9	1.0	48.0	5.0	19.4	77.4	GFX	BFX
1.5SMCJ51(C)	56.7	69.3	1.0	51.0	5.0	16.5	91.1	GFY	BFY
1.5SMCJ51A(CA)	56.7	62.7	1.0	51.0	5.0	18.2	82.4	GFZ	BFZ
1.5SMCJ54(C)	60.0	73.3	1.0	54.0	5.0	15.6	96.3	GGD	BGD
1.5SMCJ54A(CA)	60.0	66.3	1.0	54.0	5.0	17.2	87.1	GGE	BGE
1.5SMCJ58(C)	64.4	78.7	1.0	58.0	5.0	14.6	103	GGF	BGF
1.5SMCJ58A(CA)	64.4	71.2	1.0	58.0	5.0	16.0	93.0	GGG	BGG
1.5SMCJ60(C)	66.7	81.5	1.0	60.0	5.0	14.0	107	GGH	BGH
1.5SMCJ60A(CA)	66.7	73.7	1.0	60.0	5.0	15.5	96.0	GGK	BGK
1.5SMCJ64(C)	71.1	86.9	1.0	64.0	5.0	13.2	114	GGL	BGL
1.5SMCJ64A(CA)	71.1	78.6	1.0	64.0	5.0	14.6	103	GGM	BGM
1.5SMCJ70(C)	77.8	95.1	1.0	70.0	5.0	12.0	125	GGN	BGN
1.5SMCJ70A(CA)	77.8	86.0	1.0	70.0	5.0	13.3	113	GGP	BGP
1.5SMCJ75(C)	83.3	102	1.0	75.0	5.0	11.2	134	GGQ	BGQ
1.5SMCJ75A(CA)	83.3	92.1	1.0	75.0	5.0	12.4	121	GGR	BGR
1.5SMCJ78(C)	86.7	106	1.0	78.0	5.0	10.8	139	GGS	BGS
1.5SMCJ78A(CA)	86.7	95.8	1.0	78.0	5.0	11.9	126	GGT	BGT
1.5SMCJ85(C)	94.4	115	1.0	85.0	5.0	9.90	151	GGU	BGU
1.5SMCJ85A(CA)	94.4	104	1.0	85.0	5.0	10.9	137	GGV	BGV
1.5SMCJ90(C)	100	122	1.0	90.0	5.0	9.40	160	GGW	BGW
1.5SMCJ90A(CA)	100	111	1.0	90.0	5.0	10.3	146	GGX	BGX
1.5SMCJ100(C)	111	136	1.0	100	5.0	8.40	179	GGY	BGY
1.5SMCJ100A(CA)	111	123	1.0	100	5.0	9.30	162	GGZ	BGZ
1.5SMCJ110(C)	122	149	1.0	110	5.0	7.70	196	GHD	BHD
1.5SMCJ110A(CA)	122	135	1.0	110	5.0	8.50	177	GHE	BHE
1.5SMCJ120(C)	133	163	1.0	120	5.0	7.00	214	GHF	BHF
1.5SMCJ120A(CA)	133	147	1.0	120	5.0	7.80	193	GHG	BHG

RATINGS AND CHARACTERISTIC CURVES 1.5SMCJ5.0(A)(C)(CA) THRU 1.5SMCJ170(A)(C)(CA)

TABLE 2

Device Type	Breakdown V _{BR} Voltage at I _T (Voltage)		Test Current I _T mA	Working Peak Reverse Voltage V _{RWM} Volts	Maximum Reverse Leakage at V _{RWM} I _R (μ A)	Maximum Peak Pulse Current I _{PPM} (NOTE5) Amps	Maximum Clamping Voltage (V _c) at I _{PPM} (NOTE5) Volts	Device Marking code	
	Min	Max						UNI	BI
1.5SMCJ130(C)	144	176	1.0	130.0	5.0	6.50	231.0	GHH	BHH
1.5SMCJ130A(CA)	144	159	1.0	130.0	5.0	7.20	209.0	GHK	BHK
1.5SMCJ150(C)	167	204	1.0	150.0	5.0	5.60	268.0	GHL	BHL
1.5SMCJ150A(CA)	167	185	1.0	150.0	5.0	6.20	243.0	GHM	BHM
1.5SMCJ160(C)	178	218	1.0	160.0	5.0	5.20	287.0	GHN	BHN
1.5SMCJ160A(CA)	178	197	1.0	160.0	5.0	5.80	259.0	GHP	BHP
1.5SMCJ170(C)	189	231	1.0	170.0	5.0	4.90	304.0	GHQ	BHQ
1.5SMCJ170A(CA)	189	209	1.0	170.0	5.0	5.50	275.0	GHR	BHR