

SMCJ SERIES

1500W SURFACE MOUNT TRANSIENT VOLTAGE

Reverse Voltage: 5.0-440 Volts

Peak pulse power: 1500 Watts

FEATURES

- ◆ 1500W Peak Pulse Power Dissipation
- ◆ 5.0V - 440V Standoff Voltages
- ◆ 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-0

Mechanical Data

- ◆ Case: DO-214AB, Transfer Molded Epoxy
- ◆ Terminals: Solderable per MIL-STD-202, Method 208
- ◆ Also Available in Lead Free Plating (Matte Tin Finish).

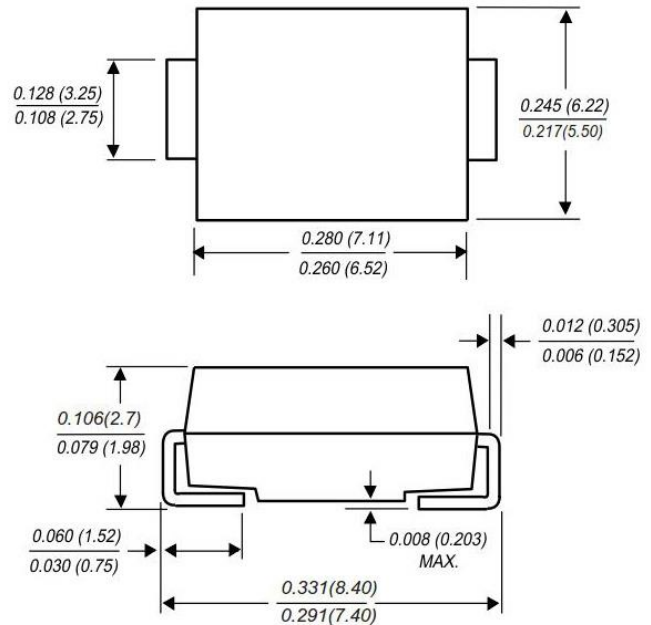
Please see Ordering Information, Note 5, on Page 4

- ◆ Polarity Indicator: Cathode Band (Note: Bi-directional devices have no polarity indicator.)

- ◆ Marking: Part NO.

- ◆ Weight: 0.22 grams (approx.)

DO-214AB (SMC)



Dimensions in inches and (millimeters)

MAXIMUM RATINGS AND ELECTRICAL CHARACTERISTICS

Ratings at 25°C ambient temperature unless otherwise specified.

	SYMBOL	VALUE	UNIT
Peak Pulse Power Dissipation (Non repetitive current pulse derated above $T_A = 25^\circ\text{C}$) (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 @ $T_L = 75^\circ\text{C}$	$PM_{(AV)}$	5.0	W
Instantaneous Forward Voltage @ $I_{PP} = 100\text{A}$ (Notes 1, 2, & 3)	V_F	3.5	V
Operating Temperature Range	T_j	-55 to + 150	°C
Storage Temperature Range	T_{STG}	-55 to + 175	°C

Notes: 1. Valid provided that terminals are kept at ambient temperature

2. Measured with 8.3ms single half sine-wave. Duty cycle = 4 pulses per minute maximum

3. Unidirectional units only

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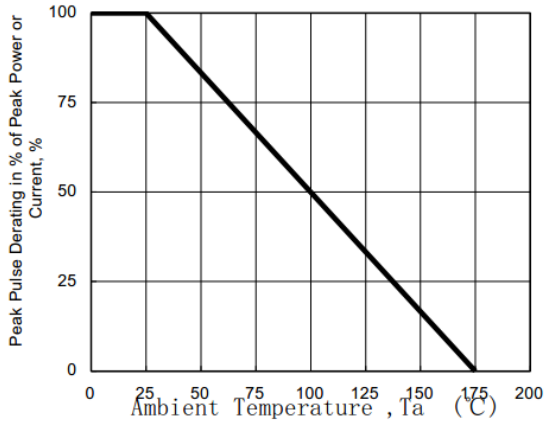


Fig. 1 - Pulse Derating Curve

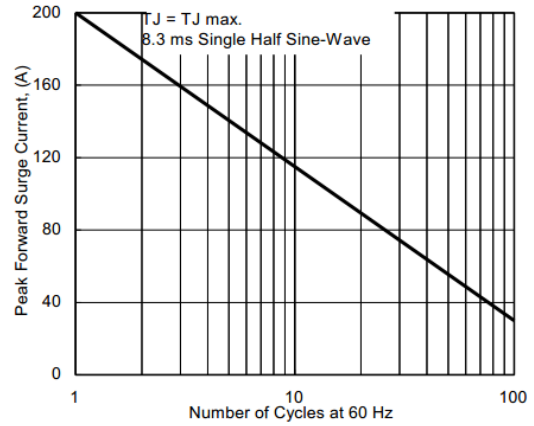


Fig. 2 - Maximum Non-Repetitive Surge Current

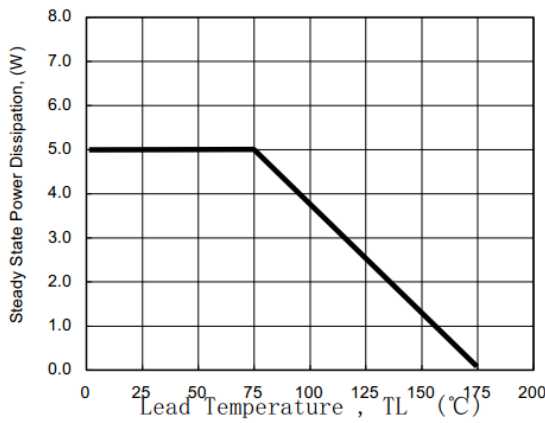


Fig. 3 - Steady State Power Derating Curve

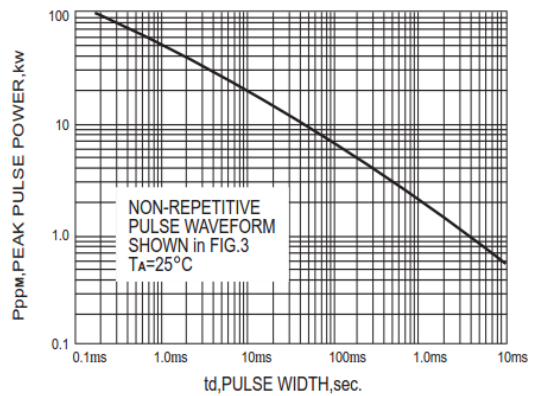


Fig. 4 - Peak Pulse Power Rating Curve

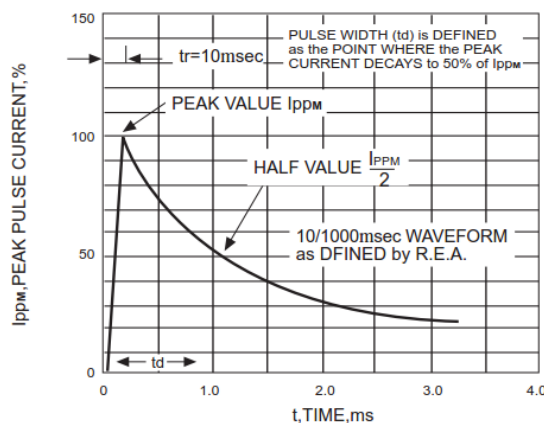


Fig. 5 - Pulse Waveform

Note: Specifications are subject to change without notice. For more detail and update, please visit our website.

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Part Number (Uni)	Part Number (Bi)	Device Marking Code		Reverse Stand off Voltage V_R (Volts)	Breakdown Voltage VBR (Volts) @ I_T		Test Current I_T (mA)	Maximum Clamping Voltage V_C @ I_{PP} (Volts)	Maximum Peak Pulse Current I_{PP} (A)	Maximum Reverse Leakage I_R @ V_R (μ A)
		UNI	BI		MIN	MAX				
SMCJ5.0A	SMCJ5.0CA	GDE	BDE	5	6.4	7	10	9.2	163	800
SMCJ6.0A	SMCJ6.0CA	GDG	BDG	6	6.67	7.37	10	10.3	145.7	800
SMCJ6.5A	SMCJ6.5CA	GDK	BDK	6.5	7.22	7.98	10	11.2	134	500
SMCJ7.0A	SMCJ7.0CA	GDM	BDM	7	7.78	8.6	10	12	125	200
SMCJ7.5A	SMCJ7.5CA	GDP	BDP	7.5	8.33	9.21	1	12.9	116.3	100
SMCJ8.0A	SMCJ8.0CA	GDR	BDR	8	8.89	9.83	1	13.6	110.3	50
SMCJ8.5A	SMCJ8.5CA	GDT	BDT	8.5	9.44	10.4	1	14.4	104.2	20
SMCJ9.0A	SMCJ9.0CA	GDV	BDV	9	10	11.1	1	15.4	97.4	10
SMCJ10A	SMCJ10CA	GDX	BDX	10	11.1	12.3	1	17	88.3	5
SMCJ11A	SMCJ11CA	GDZ	BDZ	11	12.2	13.5	1	18.2	82.5	5
SMCJ12A	SMCJ12CA	GEE	BEE	12	13.3	14.7	1	19.9	75.4	5
SMCJ13A	SMCJ13CA	GEG	BEG	13	14.4	15.9	1	21.5	69.8	5
SMCJ14A	SMCJ14CA	GEK	BEK	14	15.6	17.2	1	23.2	64.7	5
SMCJ15A	SMCJ15CA	GEM	BEM	15	16.7	18.5	1	24.4	61.5	5
SMCJ16A	SMCJ16CA	GEP	BEP	16	17.8	19.7	1	26	57.7	5
SMCJ17A	SMCJ17CA	GER	BER	17	18.9	20.9	1	27.6	54.4	5
SMCJ18A	SMCJ18CA	GET	BET	18	20	22.1	1	29.2	51.4	5
SMCJ20A	SMCJ20CA	GEV	BEV	20	22.2	24.5	1	32.4	46.3	5
SMCJ22A	SMCJ22CA	GEX	BEX	22	24.4	26.9	1	35.5	42.3	5
SMCJ24A	SMCJ24CA	GEZ	BEZ	24	26.7	29.5	1	38.9	38.6	5
SMCJ26A	SMCJ26CA	GFE	BFE	26	28.9	31.9	1	42.1	35.7	5
SMCJ28A	SMCJ28CA	GFG	BFG	28	31.1	34.4	1	45.4	33.1	5
SMCJ30A	SMCJ30CA	GFK	BFK	30	33.3	36.8	1	48.4	31	5
SMCJ33A	SMCJ33CA	GFM	BFM	33	36.7	40.6	1	53.3	28.2	5
SMCJ36A	SMCJ36CA	GFP	BFP	36	40	44.2	1	58.1	25.9	5
SMCJ40A	SMCJ40CA	GFR	BFR	40	44.4	49.1	1	64.5	23.3	5
SMCJ43A	SMCJ43CA	GFT	BFT	43	47.8	52.8	1	69.4	21.7	5
SMCJ45A	SMCJ45CA	GFV	BFV	45	50	55.3	1	72.7	20.6	5
SMCJ48A	SMCJ48CA	GFX	BFX	48	53.3	58.9	1	77.4	19.4	5
SMCJ51A	SMCJ51CA	GFZ	BFZ	51	56.7	62.7	1	82.4	18.2	5
SMCJ54A	SMCJ54CA	GGE	BGE	54	60	66.3	1	87.1	17.3	5
SMCJ58A	SMCJ58CA	GGG	BGG	58	64.4	71.2	1	93.6	16.1	5
SMCJ60A	SMCJ60CA	GGK	BGK	60	66.7	73.7	1	96.8	15.5	5
SMCJ64A	SMCJ64CA	GGM	BGM	64	71.1	78.6	1	103	14.6	5
SMCJ70A	SMCJ70CA	GGP	BGP	70	77.8	86	1	113	13.3	5
SMCJ75A	SMCJ75CA	GGR	BGR	75	83.3	92.1	1	121	12.4	5

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		UNI	BI		MIN	MAX				
SMCJ78A	SMCJ78CA	GGT	BGT	78	86.7	95.8	1	126	11.9	5
SMCJ85A	SMCJ85CA	GGV	BGV	85	94.4	104	1	137	11	5
SMCJ90A	SMCJ90CA	GGX	BGX	90	100	111	1	146	10.3	5
SMCJ100A	SMCJ100CA	GGZ	BGZ	100	111	123	1	162	9.3	5
SMCJ110A	SMCJ110CA	GHE	BHE	110	122	135	1	177	8.5	5
SMCJ120A	SMCJ120CA	GHG	BHG	120	133	147	1	193	7.8	5
SMCJ130A	SMCJ130CA	GHK	BHK	130	144	159	1	209	7.2	5
SMCJ150A	SMCJ150CA	GHM	BHM	150	167	185	1	243	6.2	5
SMCJ160A	SMCJ160CA	GHP	BHP	160	178	197	1	259	5.8	5
SMCJ170A	SMCJ170CA	GHR	BHR	170	189	209	1	275	5.5	5
SMCJ180A	SMCJ180CA	GHT	BHT	180	201	222	1	292	5.1	5
SMCJ200A	SMCJ200CA	GHV	BHV	200	224	247	1	324	4.6	5
SMCJ220A	SMCJ220CA	GHX	BHX	220	246	272	1	356	4.2	5
SMCJ250A	SMCJ250CA	GHZ	BHZ	250	279	309	1	405	3.7	5
SMCJ300A	SMCJ300CA	GJE	BJE	300	335	371	1	486	3.1	5
SMCJ350A	SMCJ350CA	GJG	BJG	350	391	432	1	567	2.6	5
SMCJ400A	SMCJ400CA	GJK	BJK	400	447	494	1	648	2.3	5
SMCJ440A	SMCJ440CA	GJM	BJM	440	492	543	1	713	2.1	5

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