



1.5SMCJ5.0 THRU 1.5SMCJ440CA

SURFACE MOUNT TRANSIENT VOLTAGE SUPPRESSOR

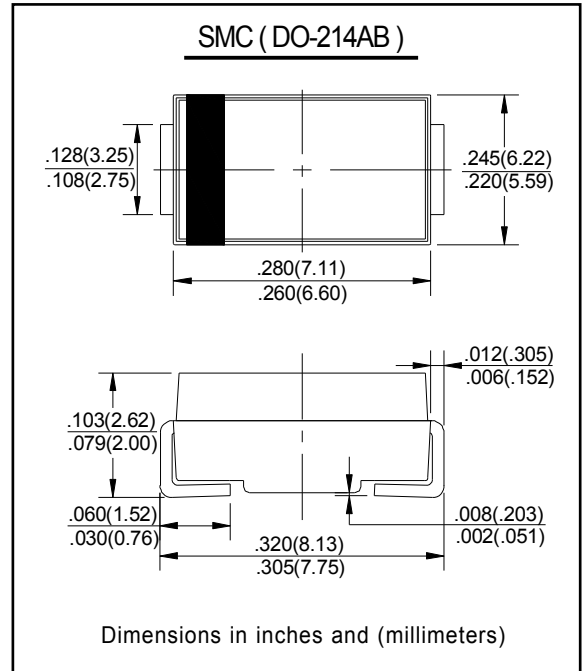
Stand - Off Voltage - 5.0 to 440 Volts Peak Pulse Power - 1500 Watt

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-0

MECHANICAL DATA

- Case: SMC/DO-214AB, Molded Plastic
- Terminals: Solder Plated, Solderable per MIL-STD-750, Method 2026
- Polarity: Cathode Band Except Bi-Directional
- Marking: Device Code
- Weight: 0.21 grams (approx.)



Maximum Ratings and Electrical Characteristics @ $T_A=25^\circ\text{C}$ unless otherwise specified

Characteristic	Symbol	Value	Unit
Peak Pulse Power Dissipation 10/1000 μS Waveform (Note 1, 2) Figure 3	PPPM	1500 Minimum	W
Peak Pulse Current on 10/1000 μS Waveform (Note 1) Figure 4	IPPM	See Table 1	A
Peak Forward Surge Current 8.3ms Single Half Sine-Wave Superimposed on Rated Load (JEDEC Method) (Note 2, 3)	IFSM	200	A
Operating and Storage Temperature Range	T_j, T_{STG}	-55 to +150	$^\circ\text{C}$

- Note: 1. Non-repetitive current pulse per Figure 4 and derated above $T_A = 25^\circ\text{C}$ per Figure 1.
 2. Mounted on 5.0mm² (0.013mm thick) land area.
 3. Measured on 8.3ms single half sine-wave or equivalent square wave, duty cycle = 4 pulses per minutes maximum.



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1.5SMCJ PART NUMBER		DEVICE MARKING CODE		REVERS E STAND- OFF VOLTAGE $V_{RWM}(V)$	BREAKDOW N VOLTAGE $V_{BR}(V)$ MIN.@ I_T	BREAKDOW N VOLTAGE $V_{BR}(V)$ MAX.@ I_T	TEST CURRENT I_T (mA)	MAXIMUN CLAMPING VOLTAGE @ I_{pp} $V_c(V)$	PEAK PULSE CURREN T I_{pp} (A)	REVERS E LEAKAGE @ V_{RWM} $I_R(\mu A)$
UNI- POLAR	BI-POLAR	UNI	BI							
SMCJ5.0A	SMCJ5.0CA	GDE	BDE	5.0	6.40	7.00	10	9.2	163.0	800
SMCJ6.0A	SMCJ6.0CA	GDG	BDG	6.0	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	134.0	500
SMCJ7.0A	SMCJ7.0CA	GDM	BDM	7.0	7.78	8.60	10	12.0	125.0	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	8.0	8.89	9.83	1	13.6	110.3	50
SMCJ8.5A	SMCJ8.5CA	GDT	BDT	8.5	9.44	10.40	1	14.4	104.2	20
SMCJ9.0A	SMCJ9.0CA	GDV	BDV	9.0	10.00	11.10	1	15.4	97.4	10
SMCJ10A	SMCJ10CA	GDX	BDX	10.0	11.10	12.30	1	17.0	88.3	5
SMCJ11A	SMCJ11CA	GDZ	BDZ	11.0	12.20	13.50	1	18.2	82.5	5
SMCJ12A	SMCJ12CA	GEE	BEE	12.0	13.30	14.70	1	19.9	75.4	5
SMCJ13A	SMCJ13CA	GEG	BEG	13.0	14.40	15.90	1	21.5	69.8	5
SMCJ14A	SMCJ14CA	GEK	BEK	14.0	15.60	17.20	1	23.2	64.7	5
SMCJ15A	SMCJ15CA	GEM	BEM	15.0	16.70	18.50	1	24.4	61.5	5
SMCJ16A	SMCJ16CA	GEP	BEP	16.0	17.80	19.70	1	26.0	57.7	5
SMCJ17A	SMCJ17CA	GER	BER	17.0	18.90	20.90	1	27.6	54.4	5
SMCJ18A	SMCJ18CA	GET	BET	18.0	20.00	22.10	1	29.2	51.4	5
SMCJ20A	SMCJ20CA	GEV	BEV	20.0	22.20	24.50	1	32.4	46.3	5
SMCJ22A	SMCJ22CA	GEX	BEX	22.0	24.40	26.90	1	35.5	42.3	5
SMCJ24A	SMCJ24CA	GEZ	BEZ	24.0	26.70	29.50	1	38.9	38.6	5
SMCJ26A	SMCJ26CA	GFE	BFE	26.0	28.90	31.90	1	42.1	35.7	5
SMCJ28A	SMCJ28CA	GFG	BFG	28.0	31.10	34.40	1	45.4	33.1	5
SMCJ30A	SMCJ30CA	GFK	BFK	30.0	33.30	36.80	1	48.4	31.0	5
SMCJ33A	SMCJ33CA	GFM	BFM	33.0	36.70	40.60	1	53.3	28.2	5
SMCJ36A	SMCJ36CA	GFP	BFP	36.0	40.00	44.20	1	58.1	25.9	5
SMCJ40A	SMCJ40CA	GFR	BFR	40.0	44.40	49.10	1	64.5	23.3	5
SMCJ43A	SMCJ43CA	GFT	BFT	43.0	47.80	52.80	1	69.4	21.7	5
SMCJ45A	SMCJ45CA	GFV	BFV	45.0	50.00	55.30	1	72.7	20.6	5
SMCJ48A	SMCJ48CA	GFX	BFX	48.0	53.30	58.90	1	77.4	19.4	5
SMCJ51A	SMCJ51CA	GFZ	BFZ	51.0	56.70	62.70	1	82.4	18.2	5
SMCJ54A	SMCJ54CA	GGE	BGE	54.0	60.00	66.30	1	87.1	17.3	5
SMCJ58A	SMCJ58CA	GGG	BGG	58.0	64.40	71.20	1	93.6	16.1	5
SMCJ60A	SMCJ60CA	G GK	B GK	60.0	66.70	73.70	1	96.8	15.5	5
SMCJ64A	SMCJ64CA	G GM	B GM	64.0	71.10	78.60	1	103.0	14.6	5
SMCJ70A	SMCJ70CA	G GP	B GP	70.0	77.80	86.00	1	113.0	13.3	5
SMCJ75A	SMCJ75CA	G GR	B GR	75.0	83.30	92.10	1	121.0	12.4	5
SMCJ78A	SMCJ78CA	G GT	B GT	78.0	86.70	95.80	1	126.0	11.9	5
SMCJ85A	SMCJ85CA	G GV	B GV	85.0	94.40	104.00	1	137.0	11.0	5
SMCJ90A	SMCJ90CA	G GX	B GX	90.0	100.00	111.00	1	146.0	10.3	5
SMCJ100A	SMCJ100CA	G GZ	B GZ	100.0	111.00	123.00	1	162.0	9.3	5
SMCJ110A	SMCJ110CA	G HE	B HE	110.0	122.00	135.00	1	177.0	8.5	5
SMCJ120A	SMCJ120CA	G HG	B HG	120.0	133.00	147.00	1	193.0	7.8	5
SMCJ130A	SMCJ130CA	G HK	B HK	130.0	144.00	159.00	1	209.0	7.2	5
SMCJ150A	SMCJ150CA	G HM	B HM	150.0	167.00	185.00	1	243.0	6.2	5
SMCJ160A	SMCJ160CA	G HP	B HP	160.0	178.00	197.00	1	259.0	5.8	5
SMCJ170A	SMCJ170CA	G HR	B HR	170.0	189.00	209.00	1	275.0	5.5	5
SMCJ180A	SMCJ180CA	G HT	B HT	180.0	201.00	222.00	1	292.0	5.1	5
SMCJ200A	SMCJ200CA	G HV	B HV	200.0	224.00	247.00	1	324.0	4.6	5
SMCJ220A	SMCJ220CA	G HX	B HX	220.0	246.00	272.00	1	356.0	4.2	5
SMCJ250A	SMCJ250CA	G HZ	B HZ	250.0	279.00	309.00	1	405.0	3.7	5
SMCJ300A	SMCJ300CA	G JE	B JE	300.0	335.00	371.00	1	486.0	3.1	5
SMCJ350A	SMCJ350CA	G JG	B JG	350.0	391.00	432.00	1	567.0	2.6	5
SMCJ400A	SMCJ400CA	G JK	B JK	400.0	447.00	494.00	1	648.0	2.3	5
SMCJ440A	SMCJ440CA	G JM	B JM	440.0	492.00	543.00	1	713.0	2.1	5

For bidirectional type having V_{RWM} of 10 volts and less, the IR limit is double.

For parts without A, the V_{BR} is $\pm 10\%$



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RATINGS AND CHARACTERISTIC CURVES

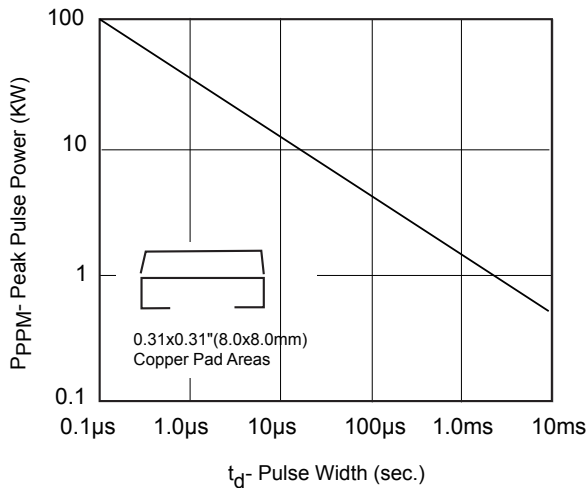


Fig.1 Peak Pulse Power Rating

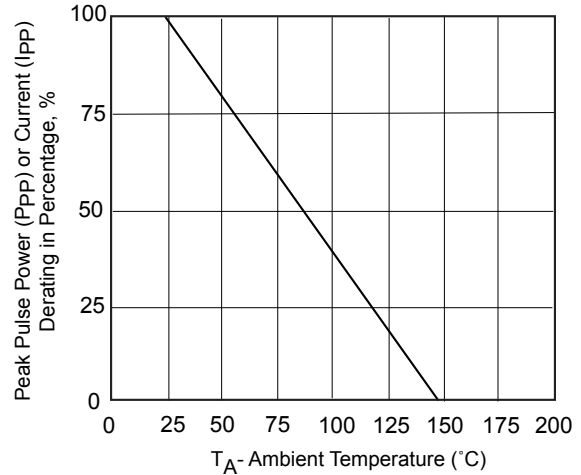


Fig.2 Pulse Derating Curve

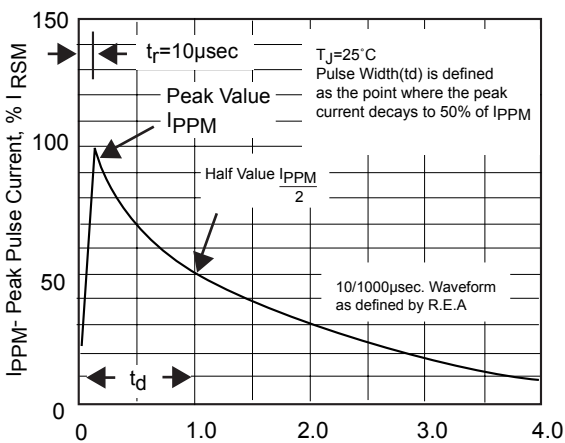


Fig.3 Pulse Waveform

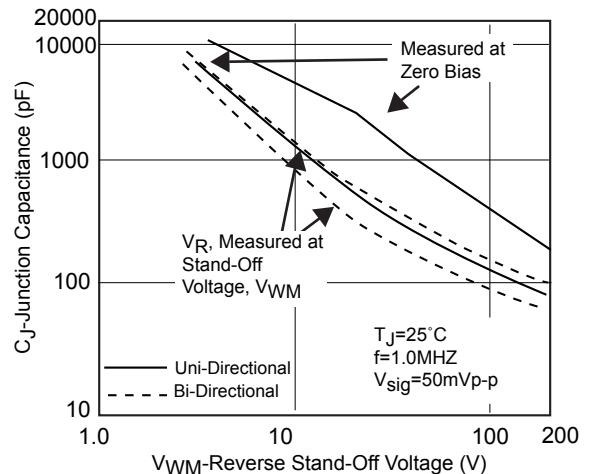


Fig.4 Typical Junction Capacitance

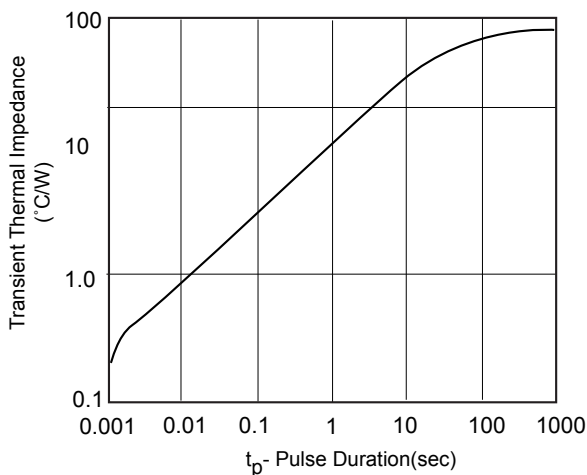


Fig.5 Typ. Transient Thermal Impedance

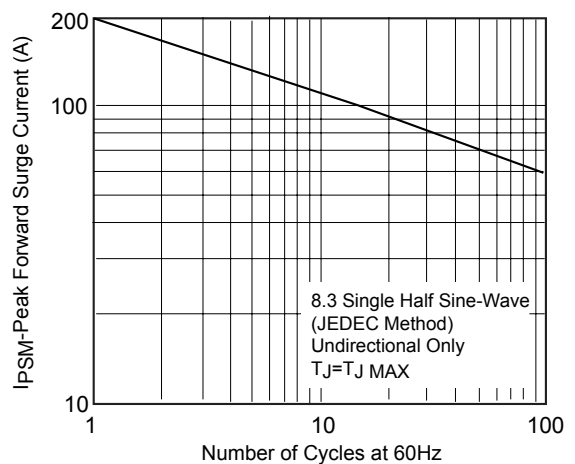


Fig.6 Maximum Non-Repetitive Peak Forward Surge Current