

SMCJ*** CA Series

SURFACE MOUNT TRANSIENT VOLTAGE SUPPRESSOR
VOLTAGE 5 TO 440 Volts, 1500 Watt Peak Pulse Power

1. FEATURES

- We declare that the material of product compliance with RoHS requirements and Halogen Free.
- Plastic package has Underwriters Laboratory Flammability Classification 94V-O
- For surface mounted applications in order to optimize board space
- Low profile package
- Built-in strain relief
- Glass passivated junction
- Low inductance
- Excellent clamping capability
- Repetition Rate (duty cycle):0.01%
- Fast response time: typically less than 1.0ps
- High temperature soldering guaranteed:
260°C/10 seconds,
- Weight: 0.26g



2. MECHANICAL DATA

Case: JEDEC DO-214AB (SMC)

Terminals: Plated leads, solderable per MIL-STD-202, Method 208

Polarity: Without Color band denoted cathode

Mounting Position: Any

3. MAXIMUM RATINGS(Ta = 25°C)

Ratings at 25°C ambient temperature unless otherwise specified.

Single phase, half wave, 60Hz, resistive or inductive load.

For capacitive load, derate current by 20%.

RATING	Symbol	VALUE	UNITS
Peak Power Dissipation at T _A =25°C, T _P =1ms(Note 1)	P _{PPM}	Minimum1500	Watts
Steady State Power Dissipation at T _L =75°C(Note 2)	P _{M(AV)}	6.5	Watts
Operating Temperature Range	T _J	-55 to +150	°C
Storage Temperature Range	T _{STG}	-55 to +150	°C

NOTES:

1. Non-repetitive current pulse, per Fig. 3 and derated above TA=25°C per Fig. 2.
2. Mounted on 0.31 x 0.31" (8.0 x 8.0mm) copper pads to each terminal.
3. 8.3ms single half sine-wave, duty cycle= 4 pulses per minu

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Bi-Directional Part Number	Device marking code	Reverse Stand-off Voltage VRWM (V)	Breakdown Voltage VBR (V) Min. @IT	Breakdown Voltage VBR (V) Max. @IT	Test Current IT (mA)	Maximum Clamping Voltage @IPP VC (V)	Peak Pulse Current Ipp (A)	Reverse Leakage @VRWM IR (uA)
SMCJ5.0CA	SMCJ5.0CA	5.0	6.40	7.07	10	9.2	163.0	1000
SMCJ6.0CA	SMCJ6.0CA	6.0	6.67	7.37	10	10.3	145.6	1000
SMCJ6.5CA	SMCJ6.5CA	6.5	7.22	7.98	10	11.2	133.9	500
SMCJ7.0CA	SMCJ7.0CA	7.0	7.78	8.60	10	12.0	125.0	200
SMCJ7.5CA	SMCJ7.5CA	7.5	8.33	9.21	1	12.9	116.3	100
SMCJ8.0CA	SMCJ8.0CA	8.0	8.89	9.83	1	13.6	110.3	50
SMCJ8.5CA	SMCJ8.5CA	8.5	9.44	10.40	1	14.4	104.2	20
SMCJ9.0CA	SMCJ9.0CA	9.0	10.0	11.1	1	15.4	97.4	10
SMCJ10CA	SMCJ10CA	10	11.1	12.3	1	17.0	88.2	5
SMCJ11CA	SMCJ11CA	11	12.2	13.5	1	18.2	82.4	5
SMCJ12CA	SMCJ12CA	12	13.3	14.7	1	19.9	75.4	5
SMCJ13CA	SMCJ13CA	13	14.4	15.9	1	21.5	69.8	1
SMCJ14CA	SMCJ14CA	14	15.6	17.2	1	23.2	64.7	1
SMCJ15CA	SMCJ15CA	15	16.7	18.5	1	24.4	61.5	1
SMCJ16CA	SMCJ16CA	16	17.8	19.7	1	26.0	57.7	1
SMCJ17CA	SMCJ17CA	17	18.9	20.9	1	27.6	54.3	1
SMCJ18CA	SMCJ18CA	18	20.0	22.1	1	29.2	51.4	1
SMCJ20CA	SMCJ20CA	20	22.2	24.5	1	32.4	46.3	1
SMCJ22CA	SMCJ22CA	22	24.4	26.9	1	35.5	42.3	1
SMCJ24CA	SMCJ24CA	24	26.7	29.5	1	38.9	38.6	1
SMCJ26CA	SMCJ26CA	26	28.9	31.9	1	42.1	35.6	1
SMCJ28CA	SMCJ28CA	28	31.1	34.4	1	45.4	33.0	1
SMCJ30CA	SMCJ30CA	30	33.3	36.8	1	48.4	31.0	1
SMCJ33CA	SMCJ33CA	33	36.7	40.6	1	53.3	28.1	1
SMCJ36CA	SMCJ36CA	36	40.0	44.2	1	58.1	25.8	1
SMCJ40CA	SMCJ40CA	40	44.4	49.1	1	64.5	23.3	1
SMCJ43CA	SMCJ43CA	43	47.8	52.8	1	69.4	21.6	1
SMCJ45CA	SMCJ45CA	45	50.0	55.3	1	72.7	20.6	1
SMCJ48CA	SMCJ48CA	48	53.3	58.9	1	77.4	19.4	1
SMCJ51CA	SMCJ51CA	51	56.7	62.7	1	82.4	18.2	1
SMCJ54CA	SMCJ54CA	54	60.0	66.3	1	87.1	17.2	1
SMCJ58CA	SMCJ58CA	58	64.4	71.2	1	93.6	16.0	1
SMCJ60CA	SMCJ60CA	60	66.7	73.7	1	96.8	15.5	1
SMCJ64CA	SMCJ64CA	64	71.1	78.6	1	103	14.6	1
SMCJ70CA	SMCJ70CA	70	77.8	86.0	1	113	13.3	1
SMCJ75CA	SMCJ75CA	75	83.3	92.1	1	121	12.4	1
SMCJ78CA	SMCJ78CA	78	86.7	95.8	1	126	11.9	1
SMCJ85CA	SMCJ85CA	85	94.4	104.0	1	137	10.9	1
SMCJ90CA	SMCJ90CA	90	100	111	1	146	10.3	1
SMCJ100CA	SMCJ100CA	100	111	123	1	162	9.3	1
SMCJ110CA	SMCJ110CA	110	122	135	1	177	8.5	1
SMCJ120CA	SMCJ120CA	120	133	147	1	193	7.8	1
SMCJ130CA	SMCJ130CA	130	144	159	1	209	7.2	1
SMCJ150CA	SMCJ150CA	150	167	185	1	243	6.2	1
SMCJ160CA	SMCJ160CA	160	178	197	1	259	5.8	1
SMCJ170CA	SMCJ170CA	170	189	209	1	275	5.5	1
SMCJ180CA	SMCJ180CA	180	198	221	1	291	5.2	1
SMCJ190CA	SMCJ190CA	190	209	233	1	307	4.9	1
SMCJ200CA	SMCJ200CA	200	220	246	1	324	4.6	1
SMCJ220CA	SMCJ220CA	220	246	272	1	356	4.2	1
SMCJ250CA	SMCJ250CA	250	279	309	1	405	3.7	1
SMCJ300CA	SMCJ300CA	300	335	371	1	486	3.1	1
SMCJ350CA	SMCJ350CA	350	391	432	1	567	2.65	1
SMCJ400CA	SMCJ400CA	400	447	494	1	648	2.31	1
SMCJ440CA	SMCJ440CA	440	492	543	1	713	2.10	1

5. ELECTRICAL CHARACTERISTICS CURVES

Fig. 1-Peak Pulse Power Rating Curve

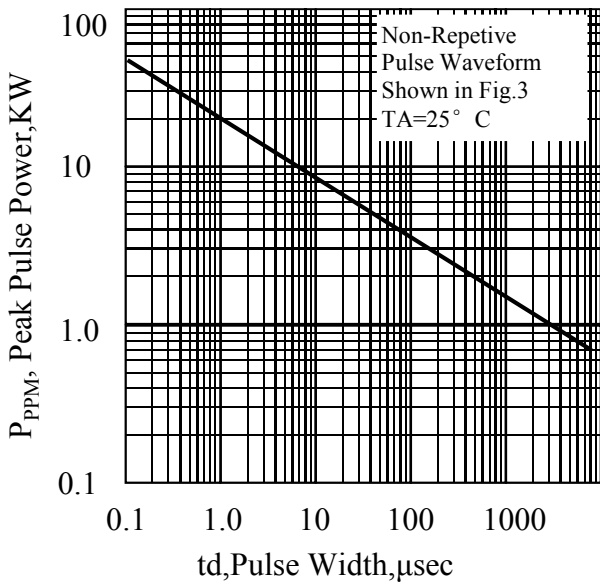


Fig. 2-Pulse Derating Curve

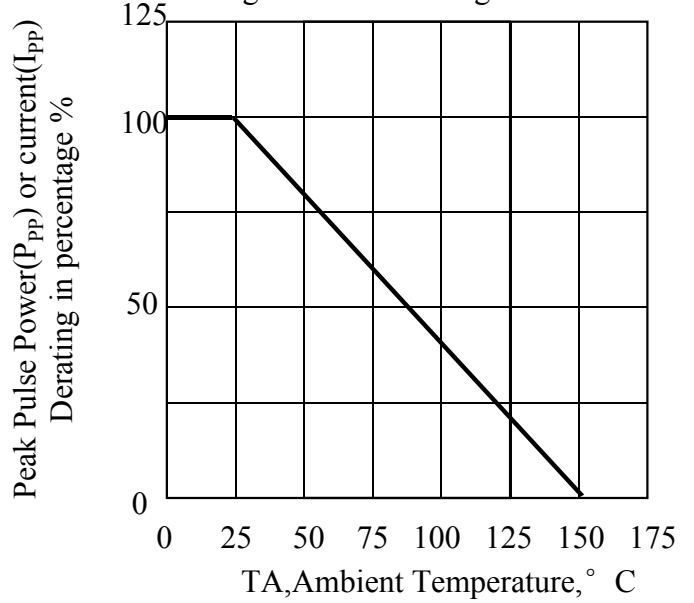


Fig. 3-Pulse Waveform

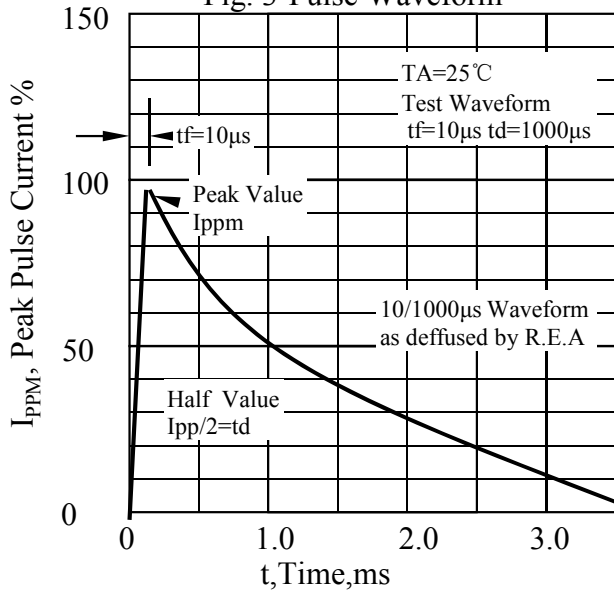
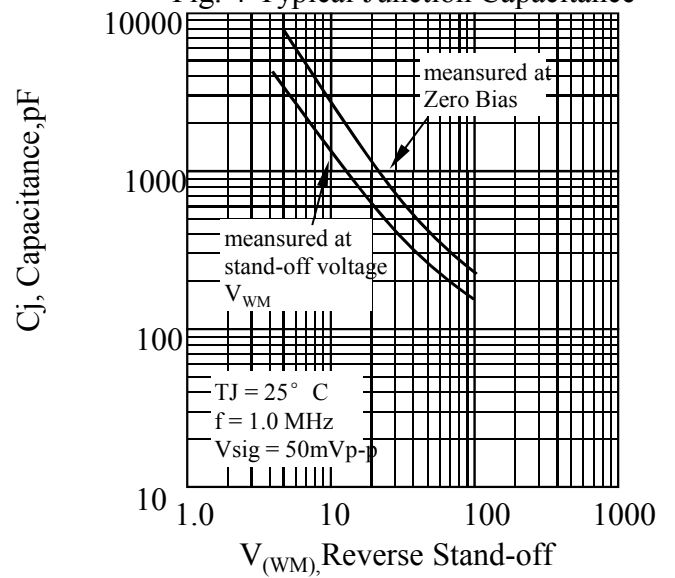
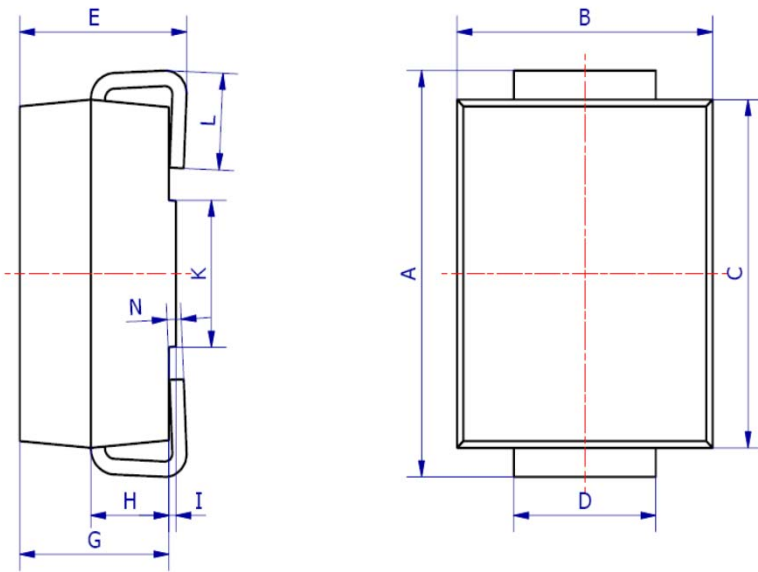


Fig. 4-Typical Junction Capacitance

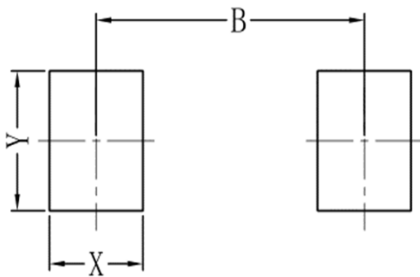


6. OUTLINE AND DIMENSIONS



SMC			
DIM	Min	Max	Typ.
A	7.70	8.30	8.00
B	5.85	6.25	6.05
C	6.65	7.05	6.85
D	2.80	3.20	3.00
E	2.45	2.85	2.65
G	2.10	2.50	2.30
H	1.00	1.40	1.20
I	0.05	0.15	0.10
K	4.30	4.70	4.50
L	1.00	1.50	1.25
N	0.10	0.30	0.20
All Dimensions in mm			

7. SOLDERING FOOTPRINT



SMC	
DIM	(mm)
X	1.60
Y	3.30
B	6.60