

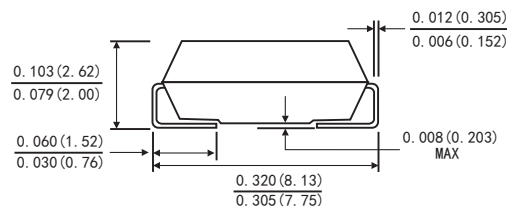
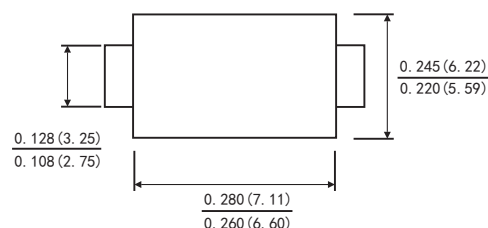
## FEATURES

- 1500 Watts Pulse capability
- Excellent clamping capability
- Low incremental surge resistance
- Fast response time
- High temperature soldering guaranteed: 260°C/10 seconds at terminals
- Component in accordance to RoHS 2011/65/EU
- AEC-Q101 qualified and PPAP capable



AEC-Q101 Qualified

## SMC(DO-214AB)



## MECHANICAL DATA

- Case: JEDEC SMC(DO-214AB) molded plastic body
- Terminals: Solder Plated
- Polarity: By cathode band denotes uni-directional device, none cathode band denotes bi-directional device.

## DEVICES FOR BIDIRECTIONAL APPLICATIONS

Dimensions in inches and (millimeters)

1. For bi-directional use C suffix for Types .
2. Electrical characteristics apply in both directions.

## MAXIMUM RATINGS AND ELECTRICAL CHARACTERISTICS

(Rating at 25°C ambient temperature unless otherwise specified)

	Symbols	Value	Units
Peak Pulse Power Dissipation at on 10/1000μs Waveform (Note 1.2)	P <sub>PK</sub>	1500	Watts
Peak forward surge current, 8.3ms single half sine-wave superimposed on rated load (JEDEC method) (Note 2)	I <sub>FSM</sub>	200	Amps
Operating junction and storage temperature range	T <sub>J</sub> , T <sub>STG</sub>	-55 to 150	°C

Note: 1. Non repetitive current pulse and derated above T<sub>A</sub>=25°C

2. Measured on 8.3ms single half sine-wave or equivalent square wave, duty cycle=4 pulses per minute maximum

# RATINGS AND CHARACTERISTIC CURVES (SMCJ SERIES)

Part number		Reverse Standoff Voltage VRWM (Volts)	Breakdown Voltage VBR (Volts)		Test Current (mA)	Maximum Clamping Voltage VC@Ipp (Volts)	Maximum Peak Pulse Current Ipp(A)	Maximum Reverse Leakage IR@VRWM (μA)
UNI	BI		MIN	MAX				
SMCJ5.0A-V	SMCJ5.0CA-V	5	6.40	7.07	10	9.6	163.0	500
SMCJ6.0A-V	SMCJ6.0CA-V	6	6.67	7.37	10	10.3	145.6	500
SMCJ6.5A-V	SMCJ6.5CA-V	6.5	7.22	7.98	10	11.2	133.9	300
SMCJ7.0A-V	SMCJ7.0CA-V	7	7.78	8.60	10	12.0	125.0	200
SMCJ7.5A-V	SMCJ7.5CA-V	7.5	8.33	9.21	1	12.9	116.3	100
SMCJ8.0A-V	SMCJ8.0CA-V	8	8.89	9.83	1	13.6	110.3	50
SMCJ8.5A-V	SMCJ8.5CA-V	8.5	9.44	10.40	1	14.4	104.2	30
SMCJ9.0A-V	SMCJ9.0CA-V	9	10.00	11.10	1	15.4	97.4	30
SMCJ10A-V	SMCJ10CA-V	10	11.10	12.30	1	17.0	88.2	5
SMCJ11A-V	SMCJ11CA-V	11	12.20	13.50	1	18.2	82.4	1
SMCJ12A-V	SMCJ12CA-V	12	13.30	14.70	1	19.9	75.4	1
SMCJ13A-V	SMCJ13CA-V	13	14.40	15.90	1	21.5	69.8	1
SMCJ14A-V	SMCJ14CA-V	14	15.60	17.20	1	23.2	64.7	1
SMCJ15A-V	SMCJ15CA-V	15	16.70	18.50	1	24.4	61.5	1
SMCJ16A-V	SMCJ16CA-V	16	17.80	19.70	1	26.0	57.7	1
SMCJ17A-V	SMCJ17CA-V	17	18.90	20.90	1	27.6	54.3	1
SMCJ18A-V	SMCJ18CA-V	18	20.00	22.10	1	29.2	51.4	1
SMCJ20A-V	SMCJ20CA-V	20	22.20	24.50	1	32.4	46.3	1
SMCJ22A-V	SMCJ22CA-V	22	24.40	26.90	1	35.5	42.3	1
SMCJ24A-V	SMCJ24CA-V	24	26.70	29.50	1	38.9	38.6	1
SMCJ26A-V	SMCJ26CA-V	26	28.90	31.90	1	42.1	35.6	1
SMCJ28A-V	SMCJ28CA-V	28	31.10	34.40	1	45.4	33.0	1
SMCJ30A-V	SMCJ30CA-V	30	33.30	36.80	1	48.4	31.0	1
SMCJ33A-V	SMCJ33CA-V	33	36.70	40.60	1	53.3	28.1	1
SMCJ36A-V	SMCJ36CA-V	36	40.00	44.20	1	58.1	25.8	1
SMCJ40A-V	SMCJ40CA-V	40	44.40	49.10	1	64.5	23.3	1
SMCJ43A-V	SMCJ43CA-V	43	47.80	52.80	1	69.4	21.6	1
SMCJ45A-V	SMCJ45CA-V	45	50.00	55.30	1	72.7	20.6	1
SMCJ48A-V	SMCJ48CA-V	48	53.30	58.90	1	77.4	19.4	1
SMCJ51A-V	SMCJ51CA-V	51	56.70	62.70	1	82.4	18.2	1
SMCJ54A-V	SMCJ54CA-V	54	60.00	66.30	1	87.1	17.2	1
SMCJ58A-V	SMCJ58CA-V	58	64.40	71.20	1	93.6	16.0	1
SMCJ60A-V	SMCJ60CA-V	60	66.70	73.70	1	96.8	15.5	1
SMCJ64A-V	SMCJ64CA-V	64	71.10	78.60	1	103.0	14.6	1

## RATINGS AND CHARACTERISTIC CURVES (SMCJ SERIES)

SMCJ70A-V	SMCJ70CA-V	70	77.80	86.00	1	113.0	13.3	1
SMCJ75A-V	SMCJ75CA-V	75	83.30	92.10	1	121.0	12.4	1
SMCJ78A-V	SMCJ78CA-V	78	86.70	95.80	1	126.0	11.9	1
SMCJ85A-V	SMCJ85CA-V	85	94.40	104.00	1	137.0	10.9	1
SMCJ90A-V	SMCJ90CA-V	90	100.0	111.00	1	146.0	10.3	1
SMCJ100A-V	SMCJ100CA-V	100	111.0	123.00	1	162.0	9.3	1
SMCJ110A-V	SMCJ110CA-V	110	122.0	135.00	1	177.0	8.5	1
SMCJ120A-V	SMCJ120CA-V	120	133.0	147.00	1	193.0	7.8	1
SMCJ130A-V	SMCJ130CA-V	130	144.0	159.00	1	209.0	7.2	1
SMCJ150A-V	SMCJ150CA-V	150	167.0	185.00	1	243.0	6.2	1
SMCJ160A-V	SMCJ160CA-V	160	178.0	197.00	1	259.0	5.8	1
SMCJ170A-V	SMCJ170CA-V	170	189.0	209.00	1	275.0	5.5	1
SMCJ180A-V	SMCJ180CA-V	180	201.0	222.00	1	292.0	5.2	1
SMCJ190A-V	SMCJ190CA-V	190	211.0	233.00	1	306.0	4.9	1
SMCJ200A-V	SMCJ200CA-V	200	224.0	247.00	1	324.0	4.7	1
SMCJ210A-V	SMCJ210CA-V	210	233.0	258.00	1	324.0	4.4	1
SMCJ220A-V	SMCJ220CA-V	220	246.0	272.00	1	356.0	4.2	1
SMCJ250A-V	SMCJ250CA-V	250	279.0	309.00	1	405.0	3.7	2
SMCJ300A-V	SMCJ300CA-V	300	335.0	371.00	1	486.0	3.1	2
SMCJ350A-V	SMCJ350CA-V	350	391.0	432.00	1	567.0	2.7	2
SMCJ400A-V	SMCJ400CA-V	400	447.0	494.00	1	648.0	2.3	2
SMCJ440A-V	SMCJ440CA-V	440	489.0	543.00	1	710.0	2.1	2

For Bi-directional type having VRWM of 10 Volts and less, the IR limit is double

1.A transient suppressor is normally selected according to the working peak reverse voltage (VRWM), which should be equal to or greater than the DC or continuous peak operating voltage level.

2.VBR measured at pulse test current IT at an ambient temperature of 25°C.

3.Surge current waveform per Figure 2 and derate per Figure 3

# RATINGS AND CHARACTERISTIC CURVES (SMCJ SERIES)

FIG. 1-PEAK PULSE POWER CURVE

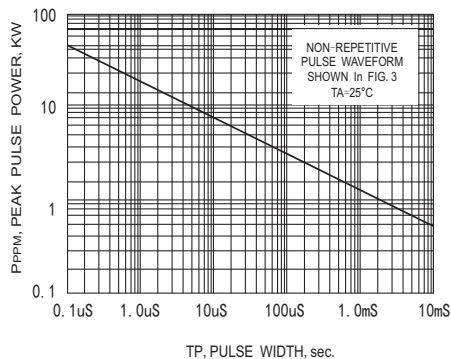


FIG. 2-PULSE DERATING CURVE

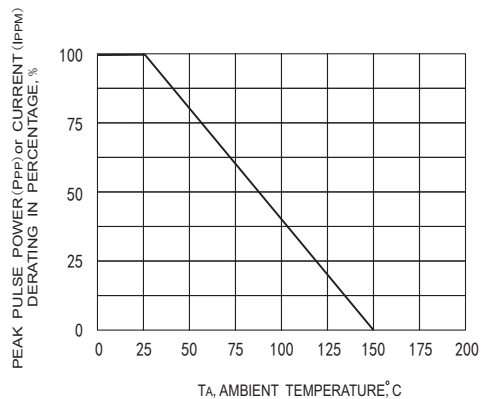


FIG. 3-PULSE WAVEFORM

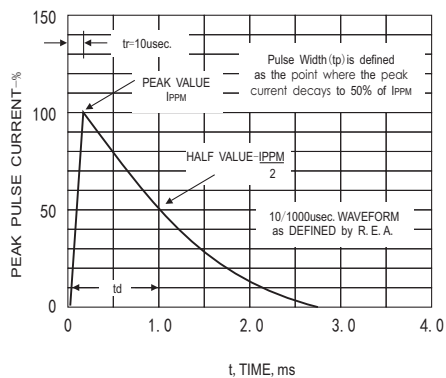


FIG. 4-MAXIMUM NON-REPETITIVE PEAK FORWARD SURGE CURRENT

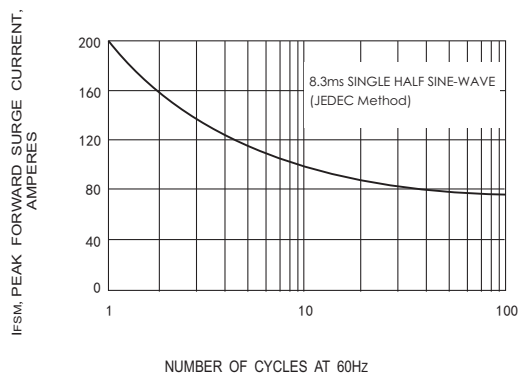


FIG. 5-Steady State Power Derating Curve

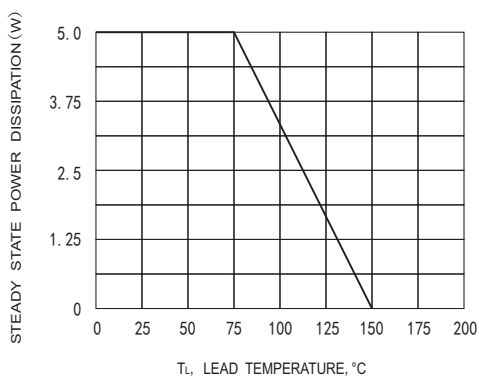


FIG. 6-TYPICAL JUNCTION CAPACITANCE

