



YENYO

# 3.0SMCJ SERIES

Surface Mount Transient Voltage Suppressor

## Features

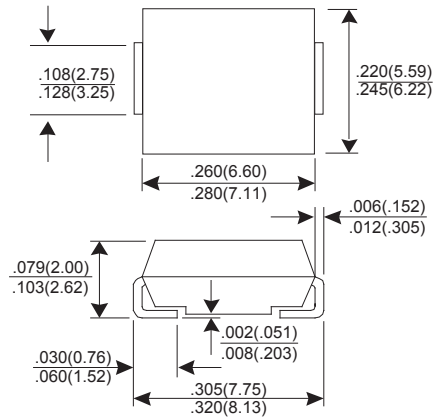
- ★ For surface mounted applications
- ★ Reliable low cost construction utilizing molded plastic technique
- ★ Plastic material has UL flammability classification 94V-0
- ★ Typical IR less than 1uA above 10V
- ★ Fast response time: typically less than 1.0 ns for Uni-direction, less than 5.0ns for Bi-direction, from 0Volts to BV min

## Mechanical Data

- ★ Case: Molded plastic SMC/DO-214AB
- ★ Polarity: by cathode band denotes uni-directional device none cathode band denotes bi-directional device
- ★ Weight: 0.21 gram

**Stand-off Voltage 5.0 to 220 V  
Power Dissipation 3000 Watts**

### SMC/DO-214AB



Dimensions in inches and (millimeters)

## MAXIMUM RATINGS AND ELECTRICAL CHARACTERISTICS

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

PARAMETER	SYMBOL	VALUE	UNIT
Peak Power Dissipation at TA=25°C TP=1ms (Note 1,2)	PPK	Minimum 3000	Watts
Peak Forward Surge Current, 8.3ms single Half sine-wave super imposed on rated load (Note 3) (JEDEC method)	IFSM	100	A
Steady State Power Dissipation at TA=75°C	PM(AV)	8.0	Watts
Maximum Instantaneous forward voltage at 35A for unidirectional devices only (Note 3)	VF	3.5	V
Operating Junction and Storage Temperature Range	TJ, TSTG	-55 to +150	°C

NOTES : (1) Non-repetitive current pulse, per fig. 3 and derated above TA=25°C per fig. 1.  
(2) Thermal Resistance junction to ambient.  
(3) 8.3ms single half-sine wave duty cycle= 4pulses maximum per minute(unidirectional units only).

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Part No.	Absolute Maximum Rating (Ta=25 C)					Electrical Characteristics (Ta=25 C)				
	VRWM (V)	VBR Min (V)	VBR Max (V)	IT (mA)	IFSM (A) @8.3ms	Max Vc		IR @VRWM (uA)	Marking Code	
						(V)	Ipp(A)		UNI	BI
3.0SMCJ5.0	5.00	6.40	7.55	10	250	9.6	312.5	1000	HDD	IDD
3.0SMCJ5.0A	5.00	6.40	7.25	10	250	9.2	326.0	1000	HDE	IDE
3.0SMCJ6.0	6.00	6.67	8.45	10	250	11.4	263.2	1000	HDF	IDF
3.0SMCJ6.0A	6.00	6.67	7.67	10	250	10.3	291.3	1000	HDG	IDG
3.0SMCJ6.5	6.50	7.22	9.14	10	250	12.3	243.9	500	HDH	IDH
3.0SMCJ6.5A	6.50	7.22	8.30	10	250	11.2	267.9	500	HDK	IDK
3.0SMCJ7.0	7.00	7.78	9.86	1	250	13.3	225.6	200	HDL	IDL
3.0SMCJ7.0A	7.00	7.78	8.95	1	250	12.0	250.0	200	HDM	IDM
3.0SMCJ7.5	7.50	8.33	10.67	1	250	14.3	209.8	100	HDN	IDN
3.0SMCJ7.5A	7.50	8.33	9.58	1	250	12.9	232.6	100	HDP	IDP
3.0SMCJ8.0	8.00	8.89	11.30	1	250	15.0	200.0	50	HDQ	IDQ
3.0SMCJ8.0A	8.00	8.89	10.23	1	250	13.6	220.6	50	HDR	IDR
3.0SMCJ8.5	8.50	9.44	11.9	1	250	15.9	188.8	25	HDS	IDS
3.0SMCJ8.5A	8.50	9.44	10.8	1	250	14.4	208.4	25	HDT	IDT
3.0SMCJ9.0	9.00	10.00	12.6	1	250	16.9	177.4	10	HDU	IDU
3.0SMCJ9.0A	9.00	10.00	11.5	1	250	15.4	194.8	10	HDV	IDV
3.0SMCJ10	10.00	11.10	14.1	1	250	18.8	159.6	5	HDW	IDW
3.0SMCJ10A	10.00	11.10	12.8	1	250	17.0	176.4	5	HDX	IDX
3.0SMCJ11	11.00	12.20	15.4	1	250	20.1	149.2	5	HDY	IDY
3.0SMCJ11A	11.00	12.20	14.0	1	250	18.2	184.8	5	HDZ	IDZ
3.0SMCJ12	12.00	13.30	16.9	1	250	22.0	136.4	5	HED	IED
3.0SMCJ12A	12.00	13.30	15.3	1	250	19.9	150.6	5	HEE	IEE
3.0SMCJ13	13.00	14.40	18.2	1	250	23.8	126.0	5	HEF	IEF
3.0SMCJ13A	13.00	14.40	16.5	1	250	21.5	139.4	5	HEG	IEG
3.0SMCJ14	14.00	15.60	19.8	1	250	25.8	116.2	5	HEH	IEH
3.0SMCJ14A	14.00	15.60	17.9	1	250	23.2	129.4	5	HEK	IEK
3.0SMCJ15	15.00	16.70	21.1	1	250	26.9	111.6	5	HEL	IEL
3.0SMCJ15A	15.00	16.70	19.2	1	250	24.4	123.0	5	HEM	IEM
3.0SMCJ16	16.00	17.80	22.6	1	250	28.8	104.2	5	HEN	IEN
3.0SMCJ16C)A	16.00	17.80	20.5	1	250	26.0	115.4	5	HEP	IEP
3.0SMCJ17	17.00	18.90	23.9	1	250	30.5	98.4	5	HEQ	IEQ
3.0SMCJ17A	17.00	18.90	21.7	1	250	27.6	106.6	5	HER	IER
3.0SMCJ18	18.00	20.00	25.3	1	250	32.2	93.2	5	HES	IES
3.0SMCJ18A	18.00	20.00	23.3	1	250	29.2	102.8	5	HET	IET
3.0SMCJ20	20.00	22.20	28.1	1	250	35.8	83.8	5	HEU	IEU
3.0SMCJ20A	20.00	22.20	25.5	1	250	32.4	92.6	5	HEV	IEV
3.0SMCJ22	22.00	24.40	30.9	1	250	39.4	76.2	5	HEW	IEW
3.0SMCJ22A	22.00	24.40	28.0	1	250	35.5	84.4	5	HEX	IEX
3.0SMCJ24	24.00	26.70	33.8	1	250	43.0	69.8	5	HEY	IEY
3.0SMCJ24A	24.00	26.70	30.7	1	250	38.9	77.2	5	HEZ	IEZ
3.0SMCJ26	26.00	28.90	36.6	1	250	46.6	64.4	5	HFD	IFD
3.0SMCJ26A	26.00	28.90	33.2	1	250	42.1	71.2	5	HFE	IFE
3.0SMCJ28	28.00	31.10	39.4	1	250	50.0	60.0	5	HFF	IFF
3.0SMCJ28A	28.00	31.10	35.8	1	250	45.4	66.0	5	HFG	IFG
3.0SMCJ30	30.00	33.30	42.2	1	250	53.5	56.0	5	HFH	IFH
3.0SMCJ30A	30.00	33.30	38.3	1	250	48.4	62.0	5	HFK	IFK
3.0SMCJ33	33.00	36.70	46.5	1	250	59.0	50.4	5	HFL	IFL
3.0SMCJ33A	33.00	36.70	42.2	1	250	53.3	56.2	5	HFM	IFM
3.0SMCJ36	36.00	40.00	50.7	1	250	64.3	46.6	5	HFN	IFN
3.0SMCJ36A	36.00	40.00	46.0	1	250	58.1	51.6	5	HFP	IFP
3.0SMCJ40	40.00	44.40	56.3	1	250	71.4	42.0	5	HFQ	IFQ
3.0SMCJ40A	40.00	44.40	51.1	1	250	64.5	46.4	5	HFR	IFR
3.0SMCJ43	43.00	47.80	60.5	1	250	76.7	39.2	5	HFS	IFS
3.0SMCJ43A	43.00	47.80	54.9	1	250	69.4	43.2	5	HFT	IFT
3.0SMCJ45	45.00	50.00	63.3	1	250	80.3	37.4	5	HFU	IFU
3.0SMCJ45A	45.00	50.00	57.5	1	250	72.7	41.2	5	HFV	IFV

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	VRWM (V)	VBR Min (V)	VBR Max (V)	IT (mA)	IFSM (A) @8.3ms	Max Vc		IR @VRWM (uA)	Marking Code	
						(V)	Ipp(A)		UNI	BI
3.0SMCJ48	48.00	53.30	67.5	1	250	85.5	35.0	5	HFW	IFW
3.0SMCJ48A	48.00	53.30	61.3	1	250	77.4	38.8	5	HFX	IFX
3.0SMCJ51	51.00	56.70	71.8	1	250	91.1	37.0	5	HFY	IFY
3.0SMCJ51A	51.00	56.70	65.2	1	250	82.4	36.4	5	HFZ	IFZ
3.0SMCJ54	54.00	60.00	76.0	1	250	96.3	31.2	5	HGD	IGD
3.0SMCJ54A	54.00	60.00	69.0	1	250	87.1	34.4	5	HGE	IGE
3.0SMCJ58	58.00	64.40	81.6	1	250	103.0	39.2	5	HGF	IGF
3.0SMCJ58A	58.00	64.40	74.1	1	250	93.6	32.0	5	HGG	IGG
3.0SMCJ60	60.00	66.70	84.5	1	250	107.0	28.0	5	HGH	IGH
3.0SMCJ60A	60.00	66.70	76.7	1	250	96.8	31.0	5	HGK	IGK
3.0SMCJ64	64.00	71.10	90.1	1	250	114.0	26.4	5	HGL	IGL
3.0SMCJ64A	64.00	71.10	81.8	1	250	103.0	29.2	5	HGM	IGM
3.0SMCJ70	70.00	77.80	98.6	1	250	125.0	24.0	5	HGN	IGN
3.0SMCJ70A	70.00	77.80	89.5	1	250	113.0	26.6	5	HGP	IGP
3.0SMCJ75	75.00	83.30	105.7	1	250	134.0	22.4	5	HGQ	IGQ
3.0SMCJ75A	75.00	83.30	95.8	1	250	121.0	24.8	5	HGR	IGR
3.0SMCJ78	78.00	86.70	109.8	1	250	139.0	21.6	5	HGS	IGS
3.0SMCJ78A	78.00	86.70	99.7	1	250	126.0	22.8	5	HGT	IGT
3.0SMCJ85	85.00	94.40	119.2	1	250	151.0	19.8	5	HGU	IGU
3.0SMCJ85A	85.00	94.40	108.2	1	250	137.0	20.8	5	HGV	IGV
3.0SMCJ90	90.00	100.00	126.5	1	250	160.0	18.8	5	HGW	IGW
3.0SMCJ90A	90.00	100.00	115.5	1	250	146.0	20.6	5	HGX	IGX
3.0SMCJ100	100.00	111.00	141.0	1	250	179.0	16.6	5	HGY	IGY
3.0SMCJ100A	100.00	111.00	128.0	1	250	162.0	18.6	5	HGZ	IGZ
3.0SMCJ110	110.00	122.00	154.5	1	250	196.0	15.4	5	HHH	IHH
3.0SMCJ110A	110.00	122.00	140.5	1	250	177.0	16.8	5	HHE	IHE
3.0SMCJ120	120.00	133.00	169.0	1	250	214.0	14.0	5	HHF	IHF
3.0SMCJ120A	120.00	133.00	153.0	1	250	193.0	15.6	5	HHG	IHG
3.0SMCJ130	130.00	144.00	182.5	1	250	231.0	13.0	5	HHH	IHH
3.0SMCJ130A	130.00	144.00	165.5	1	250	209.0	14.4	5	HHK	IHK
3.0SMCJ150	150.00	167.00	211.5	1	250	268.0	11.2	5	HHL	IHL
3.0SMCJ150A	150.00	167.00	192.5	1	250	243.0	12.4	5	HHM	IHM
3.0SMCJ160	160.00	178.00	226.0	1	250	287.0	10.4	5	HHN	IHN
3.0SMCJ160A	160.00	178.00	205.0	1	250	259.0	11.6	5	HHP	IHP
3.0SMCJ170	170.00	189.00	239.5	1	250	304.0	9.8	5	HHQ	IHQ
3.0SMCJ170A	170.00	189.00	217.5	1	250	275.0	11.0	5	HHR	IHR
3.0SMCJ180	180.00	198.00	253.8	1	250	322.0	9.3	5	HHS	IHS
3.0SMCJ180A	180.00	198.00	230.4	1	250	292.0	10.3	5	HHT	IHT
3.0SMCJ190	190.00	209.00	267.9	1	250	340.0	8.8	5	HHU	IHU
3.0SMCJ190A	190.00	209.00	243.2	1	250	308.0	9.7	5	HHV	IHV
3.0SMCJ200	200.00	220.00	282.0	1	250	358.0	8.4	5	HHW	IHW
3.0SMCJ200A	200.00	220.00	256.0	1	250	324.0	9.3	5	HHX	IHX
3.0SMCJ210	210.00	231.00	296.1	1	250	376.0	7.8	5	HHY	IHY
3.0SMCJ210A	210.00	231.00	268.8	1	250	340.0	8.8	5	HHZ	IHZ
3.0SMCJ220	220.00	242.00	310.2	1	250	394.0	7.6	5	HID	IID
3.0SMCJ220A	220.00	242.00	281.6	1	250	356.0	8.4	5	HIE	IIE

Suffix A: 5%

Suffix C: Bi-Directional

For the bidirection typ having Vrwm of 10 volts and less, the IR limit is doubled.

# RATINGS AND CHARACTERISTIC CURVES 3.0SMCJ SERIES

FIG.1 - PULSE DERATING CURVE

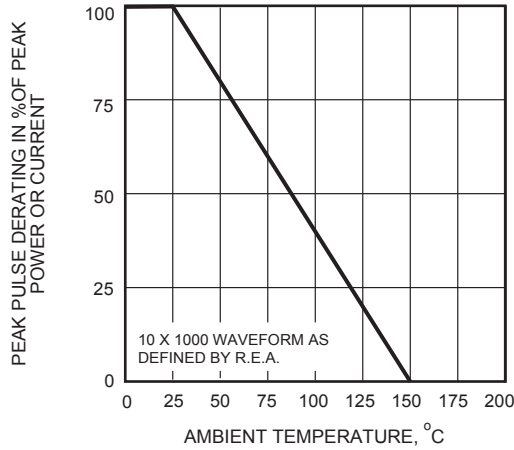


FIG.2 - TYPICAL REVERSE CHARACTERISTICS

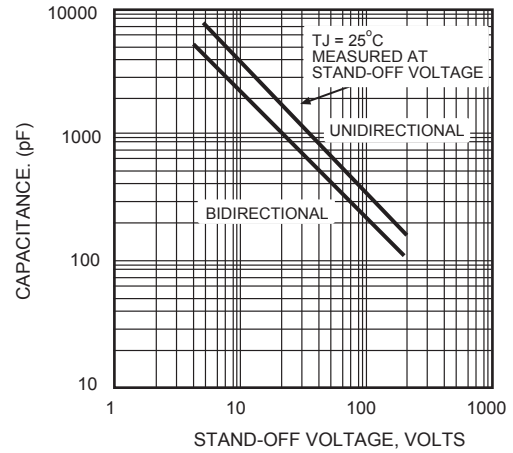


FIG.3 - PULSE RATING CURVE

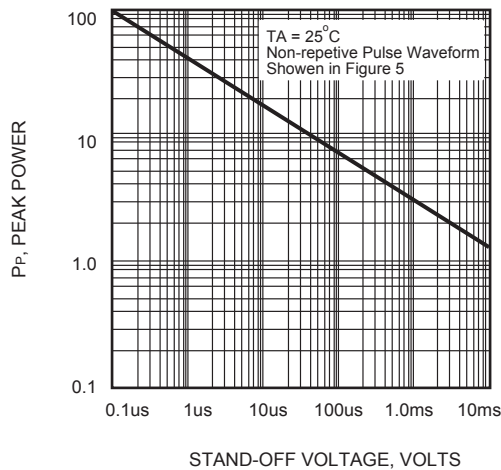


FIG.4 - STEADY STATE POWER DERATING CURVE

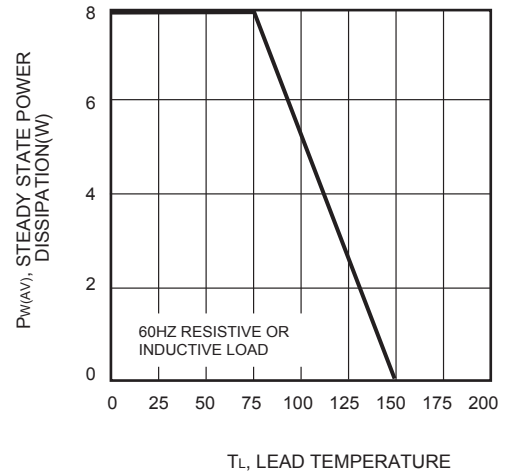


FIG.5 - PULSE WAVEFORM

