Transient Voltage Suppressor Diode

3SMC7.5CA

(3SMC5.0 thru 3SMC170CA Series)

Breakdown-Voltage 5.0 to 170V

Peak Pulse Power 3000W

DATASHEET

OEM – Central Semiconductor Corp.

Source: Central Databook 2004

3SMC5.0CA THRU 3SMC170CA

SURFACE MOUNT BI-DIRECTIONAL GLASS PASSIVATED JUNCTION SILICON TRANSIENT VOLTAGE SUPPRESSOR 3000 WATTS, 5.0 THRU 170 VOLTS

Specified by
STAND-OFF VOLTAGE

SMC CASE

• This series is UL listed, UL file number E130224

Central™
Semiconductor Corp.

DESCRIPTION:

The CENTRAL SEMICONDUCTOR 3SMC5.0CA Series types are Surface Mount Bi-Directional Glass Passivated Junction Transient Voltage Suppressors designed to protect voltage sensitive components from high voltage transients.

THIS DEVICE IS MANUFACTURED WITH A GLASS PASSIVATED CHIP FOR OPTIMUM RELIABILITY.

Note: For Uni-directional devices, please refer to the 3SMC5.0A Series data sheet.

MARKING CODE: SEE MARKING CODE ON ELECTRICAL CHARACTERISTIC TABLE

MAXIMUM RATINGS: (T_A=25°C unless otherwise noted)

	SYMBOL		UNITS
Peak Power Dissipation	P_{DM}	3000	W
Peak Forward Surge Current (JEDEC Method)	I_{FSM}	200	A
Operating and Storage Junction Temperature	T_J,T_{stg}	-65 to +150	°C

ELECTRICAL CHARACTERISTICS: (T_A=25°C unless otherwise noted)

TYPE NO.	REVERSE STAND-OFF VOLTAGE	BREAKDOWN VOLTAGE			MAXIMUM REVERSE LEAKAGE	MAXIMUM CLAMPING VOLTAGE	MAXIMUM PEAK PULSE CURRENT	MARKING CODE
		V_{BR}		@ I_T	@ V_{RWM}	@ I_{PPM}		
	V_{RWM}	VOLTS			I_R	V_C	I_{PPM}	
	VOLTS	MIN	MAX	mA	μA	VOLTS	A	
3SMC5.0CA	5.0	6.40	7.25	10	2000	9.2	326.0	CIDE
3SMC6.0CA	6.0	6.67	7.67	10	2000	10.3	291.3	CIDG
3SMC6.5CA	6.5	7.22	8.30	10	1000	11.2	267.9	CIDK
3SMC7.0CA	7.0	7.78	8.95	10	400	12.0	250.0	CIDM
3SMC7.5CA	7.5	8.33	9.58	1.0	200	12.9	232.6	CIDP
3SMC8.0CA	8.0	8.89	10.23	1.0	100	13.6	220.6	CIDR
3SMC8.5CA	8.5	9.44	10.82	1.0	50	14.4	208.4	CIDT
3SMC9.0CA	9.0	10.0	11.5	1.0	20	15.4	194.8	CIDV
3SMC10CA	10	11.1	12.8	1.0	5.0	17.0	176.4	CIDX
3SMC11CA	11	12.2	14.0	1.0	5.0	18.2	184.8	CIDZ
3SMC12CA	12	13.3	15.3	1.0	5.0	19.9	150.6	CIEE
3SMC13CA	13	14.4	16.5	1.0	5.0	21.5	139.4	CIEG
3SMC14CA	14	15.6	17.9	1.0	5.0	23.2	129.4	CIEK
3SMC15CA	15	16.7	19.2	1.0	5.0	24.4	123.0	CIEM
3SMC16CA	16	17.8	20.5	1.0	5.0	26.0	115.4	CIEP
3SMC17CA	17	18.9	21.7	1.0	5.0	27.6	106.6	CIER
3SMC18CA	18	20.0	23.3	1.0	5.0	29.2	102.8	CIET
3SMC20CA	20	22.2	25.5	1.0	5.0	32.4	92.6	CIEV
3SMC22CA	22	24.4	28.0	1.0	5.0	35.5	84.4	CIEX
3SMC24CA	24	26.7	30.7	1.0	5.0	38.9	77.2	CIEZ

R3 (13-November 2002)

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3SMC5.0CA THRU 3SMC170CA

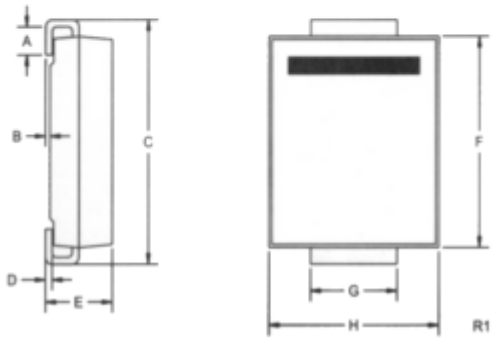
SURFACE MOUNT BI-DIRECTIONAL GLASS PASSIVATED JUNCTION SILICON TRANSIENT VOLTAGE SUPPRESSOR 3000 WATTS, 5.0 THRU 170 VOLTS

ELECTRICAL CHARACTERISTICS: Continued

TYPE NO.	REVERSE STAND-OFF VOLTAGE	BREAKDOWN VOLTAGE			MAXIMUM REVERSE LEAKAGE	MAXIMUM CLAMPING VOLTAGE	MAXIMUM PEAK PULSE CURRENT	MARKING CODE
	V_{RWM}	V_{BR}		@ I_T	@ V_{RWM}	@ I_{PPM}		
	V_{RWM}	VOLTS			I_R	V_C	I_{PPM}	
	VOLTS	MIN	MAX	mA	µA	VOLTS	A	
3SMC26CA	26	28.9	33.2	1.0	5.0	42.1	71.2	CIFE
3SMC28CA	28	31.1	35.8	1.0	5.0	45.4	66.0	CIFG
3SMC30CA	30	33.3	38.3	1.0	5.0	48.4	62.0	CIFK
3SMC33CA	33	36.7	42.2	1.0	5.0	53.3	56.2	CIFM
3SMC36CA	36	40.0	46.0	1.0	5.0	58.1	51.6	CIFP
3SMC40CA	40	44.4	51.1	1.0	5.0	64.5	46.4	CIFR
3SMC43CA	43	47.8	54.9	1.0	5.0	69.4	43.2	CIFT
3SMC45CA	45	50.0	57.5	1.0	5.0	72.7	41.2	CIFV
3SMC48CA	48	53.3	61.3	1.0	5.0	77.4	38.8	CIFX
3SMC51CA	51	56.7	65.2	1.0	5.0	82.4	36.4	CIFZ
3SMC54CA	54	60.0	69.0	1.0	5.0	87.1	34.4	CIGE
3SMC58CA	58	64.4	74.1	1.0	5.0	93.6	32.0	CIGG
3SMC60CA	60	66.7	76.7	1.0	5.0	96.8	31.0	CIGK
3SMC64CA	64	71.1	81.8	1.0	5.0	103	29.2	CIGM
3SMC70CA	70	77.8	89.5	1.0	5.0	113	26.6	CIGP
3SMC75CA	75	83.3	95.8	1.0	5.0	121	24.8	CIGR
3SMC78CA	78	86.7	99.7	1.0	5.0	126	22.8	CIGT
3SMC85CA	85	94.4	108.2	1.0	5.0	137	20.8	CIGV
3SMC90CA	90	100.0	115.5	1.0	5.0	146	20.6	CIGX
3SMC100CA	100	111.0	128.0	1.0	5.0	162	18.6	CIGZ
3SMC110CA	110	122.0	140.5	1.0	5.0	177	16.8	CIHE
3SMC120CA	120	133.0	153.0	1.0	5.0	193	15.6	CIHG
3SMC130CA	130	144.0	165.5	1.0	5.0	209	14.4	CIHK
3SMC150CA	150	167.0	192.5	1.0	5.0	243	12.4	CIHM
3SMC160CA	160	178.0	205.0	1.0	5.0	259	11.6	CIHP
3SMC170CA	170	189.0	217.5	1.0	5.0	275	11.0	CIHR

DATA SHEETS

SMC - CASE - MECHANICAL OUTLINE



DIMENSIONS				
	INCHES		MILLIMETERS	
SYMBOL	MIN	MAX	MIN	MAX
A	0.030	0.060	0.76	1.52
B	0.004	0.008	0.10	0.20
C	0.305	0.320	7.75	8.13
D	0.006	0.012	0.15	0.31
E	0.079	0.103	2.00	2.62
F	0.260	0.280	6.60	7.11
G	0.108	0.124	2.75	3.15
H	0.220	0.245	5.59	6.22

SMC (REV: R1)

R3 (13-November 2002)