




**THE DATASHEET OF
3SMC51CA TR13**



3SMC5.0CA
THRU
3SMC170CA



**SURFACE MOUNT SILICON
BI-DIRECTIONAL
GLASS PASSIVATED JUNCTION
TRANSIENT VOLTAGE SUPPRESSORS
3000 WATT, 5.0 THRU 170 VOLT**



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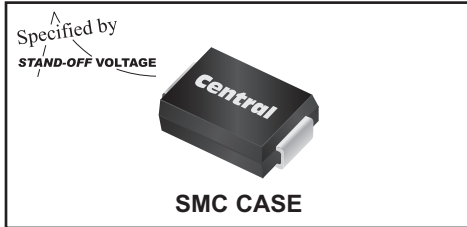
DESCRIPTION:

The CENTRAL SEMICONDUCTOR 3SMC5.0CA series devices 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: ($T_A=25^\circ\text{C}$ unless otherwise noted)

Peak Power Dissipation (Note 1)

Operating and Storage Junction Temperature

SYMBOL

P_{PK}

T_J, T_{stg}

3000

-65 to +150

UNITS

W

$^\circ\text{C}$

ELECTRICAL CHARACTERISTICS: ($T_A=25^\circ\text{C}$ unless otherwise noted)

TYPE	REVERSE STAND-OFF VOLTAGE	BREAKDOWN VOLTAGE		TEST CURRENT	MAXIMUM REVERSE LEAKAGE CURRENT	MAXIMUM CLAMPING VOLTAGE	PEAK PULSE CURRENT	MARKING CODE
	V_{RWM}	$V_{BR} @ I_T$		I_T	$I_R @ V_{RWM}$	$V_C @ I_{PP}$	(Note 1) I_{PP}	
	V	MIN V	MAX V	mA	μA	V	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	CIDXS
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
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

Note 1: Non-repetitive 10x1,000 μs pulse.

R12 (17-March 2016)

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THRU
3SMC170CA

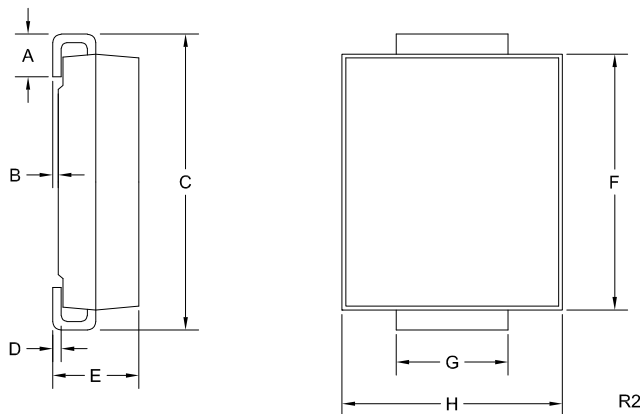
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ELECTRICAL CHARACTERISTICS - Continued: ($T_A=25^\circ\text{C}$ unless otherwise noted)

TYPE	REVERSE STAND-OFF VOLTAGE	BREAKDOWN VOLTAGE		TEST CURRENT	MAXIMUM REVERSE LEAKAGE CURRENT	MAXIMUM CLAMPING VOLTAGE	PEAK PULSE CURRENT (Note 1)	MARKING CODE
	V_{RWM}	$V_{BR} @ I_T$		I_T	$I_R @ V_{RWM}$	$V_C @ I_{PP}$	I_{PP}	
	V	MIN V	MAX V	mA	μA	V	A	
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

SMC CASE - MECHANICAL OUTLINE



SYMBOL	INCHES		MILLIMETERS	
	MIN	MAX	MIN	MAX
A	0.030	0.060	0.76	1.52
B	0.002	0.008	0.05	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	0.128	2.75	3.25
H	0.220	0.245	5.59	6.22

SMC (REV: R2)

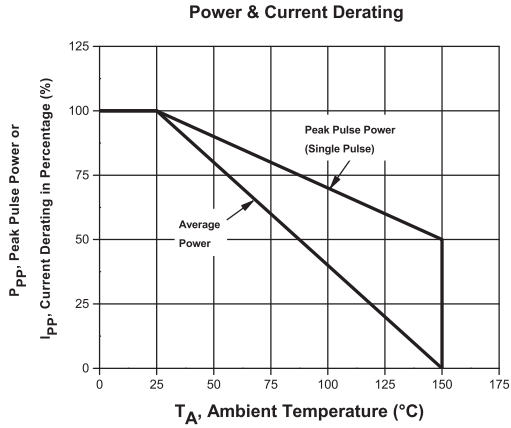
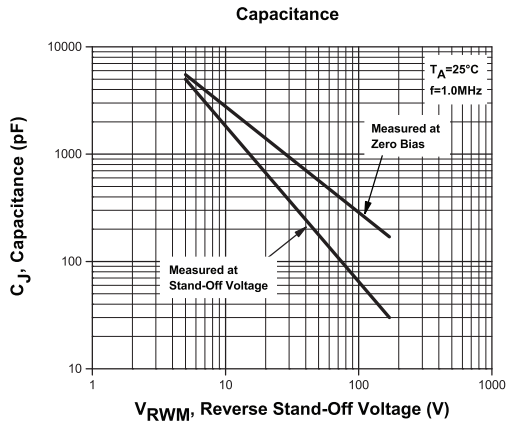
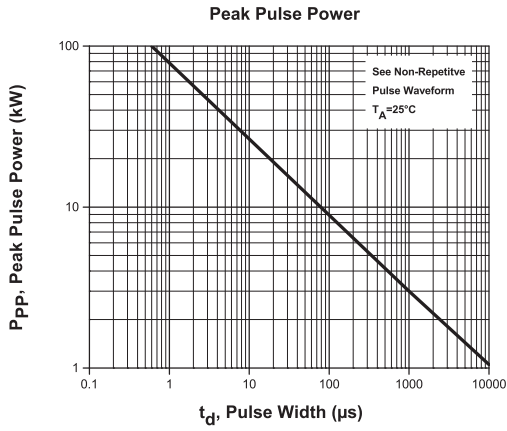
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TYPICAL ELECTRICAL CHARACTERISTICS



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OUTSTANDING SUPPORT AND SUPERIOR SERVICES



PRODUCT SUPPORT

Central's operations team provides the highest level of support to insure product is delivered on-time.

- Supply management (Customer portals)
- Inventory bonding
- Consolidated shipping options
- Custom bar coding for shipments
- Custom product packing

DESIGNER SUPPORT/SERVICES

Central's applications engineering team is ready to discuss your design challenges. Just ask.

- Free quick ship samples (2nd day air)
- Online technical data and parametric search
- SPICE models
- Custom electrical curves
- Environmental regulation compliance
- Customer specific screening
- Up-screening capabilities
- Special wafer diffusions
- PbSn plating options
- Package details
- Application notes
- Application and design sample kits
- Custom product and package development

REQUESTING PRODUCT PLATING

1. If requesting Tin/Lead plated devices, add the suffix "TIN/LEAD" to the part number when ordering (example: 2N2222A TIN/LEAD).
2. If requesting Lead (Pb) Free plated devices, add the suffix "PBFREE" to the part number when ordering (example: 2N2222A PBFREE).

CONTACT US

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