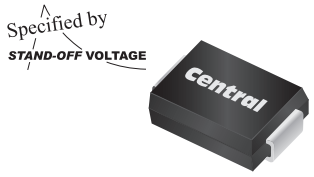
THE DATASHEET OF

1SMC15CA TR13

1SMC5.0CA
THRU
1SMC170CA

SURFACE MOUNT SILICON
BI-DIRECTIONAL
GLASS PASSIVATED JUNCTION
TRANSIENT VOLTAGE SUPPRESSORS
1500 WATT, 5.0 THRU 170 VOLT



SMC CASE

Central Semiconductor Corp.

www.centralsemi.com

DESCRIPTION:

The CENTRAL SEMICONDUCTOR 1SMC5.0CA 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 1SMC5.0A series data sheet.

MARKING CODE: SEE ELECTRICAL CHARACTERISTICS TABLE

MAXIMUM RATINGS: (T_A=25°C unless otherwise noted)	**SYMBOL**		**UNITS**
Peak Power Dissipation (Note 1)	P_{PK}	1500	W
Operating and Storage Junction Temperature	T_J, T_{stg}	-65 to +150	°C

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

TYPE	REVERSE STAND-OFF VOLTAGE V_{RWM}	BREAKDOWN VOLTAGE V_{BR} @ I_T		TEST CURRENT I_T	MAXIMUM REVERSE LEAKAGE CURRENT I_R @ V_{RWM}	MAXIMUM CLAMPING VOLTAGE V_C @ I_{PP}	PEAK PULSE CURRENT (Note 1) I_{PP}	MARKING CODE
	V	MIN V	MAX V	mA	µA	V	A	
1SMC5.0CA	5.0	6.40	7.25	10	1000	9.2	163	CBDE
1SMC6.0CA	6.0	6.67	7.67	10	1000	10.3	145.6	CBDG
1SMC6.5CA	6.5	7.22	8.30	10	500	11.2	133.9	CBDK
1SMC7.0CA	7.0	7.78	8.95	10	200	12	125	CBDM
1SMC7.5CA	7.5	8.33	9.58	1.0	100	12.9	116.3	CBDP
1SMC8.0CA	8.0	8.89	10.23	1.0	50	13.6	110.3	CBDR
1SMC8.5CA	8.5	9.44	10.82	1.0	20	14.4	104.2	CBDT
1SMC9.0CA	9.0	10	11.5	1.0	10	15.4	97.4	CBDV
1SMC10CA	10	11.1	12.8	1.0	5.0	17	88.2	CBDX
1SMC11CA	11	12.2	14	1.0	5.0	18.2	82.4	CBDZ
1SMC12CA	12	13.3	15.3	1.0	5.0	19.9	75.3	CBEE
1SMC13CA	13	14.4	16.5	1.0	5.0	21.5	69.7	CBEG
1SMC14CA	14	15.6	17.9	1.0	5.0	23.2	64.7	CBEK
1SMC15CA	15	16.7	19.2	1.0	5.0	24.4	61.5	CBEM
1SMC16CA	16	17.8	20.5	1.0	5.0	26	57.7	CBEP
1SMC17CA	17	18.9	21.7	1.0	5.0	27.6	53.3	CBER
1SMC18CA	18	20	23.3	1.0	5.0	29.2	51.4	CBET
1SMC20CA	20	22.2	25.5	1.0	5.0	32.4	46.3	CBEV
1SMC22CA	22	24.4	28	1.0	5.0	35.5	42.2	CBEX
1SMC24CA	24	26.7	30.7	1.0	5.0	38.9	38.6	CBEZ
1SMC26CA	26	28.9	33.2	1.0	5.0	42.1	35.6	CBFE
1SMC28CA	28	31.1	35.8	1.0	5.0	45.4	33	CBFG
1SMC30CA	30	33.3	38.3	1.0	5.0	48.4	31	CBFK

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

R8 (17-March 2016)

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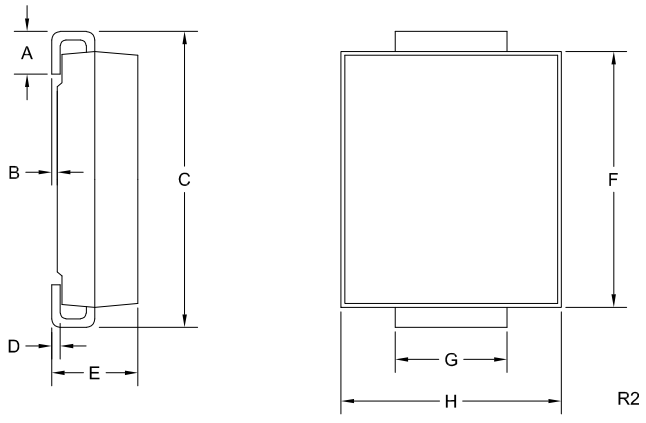
ELECTRICAL CHARACTERISTICS - Continued: (T_A=25°C unless otherwise noted)

TYPE	REVERSE STAND-OFF VOLTAGE V_{RWM}	BREAKDOWN VOLTAGE V_{BR} @ I_T		TEST CURRENT I_T	MAXIMUM REVERSE LEAKAGE CURRENT I_R @ V_{RWM}	MAXIMUM CLAMPING VOLTAGE V_C @ I_{PP}	PEAK PULSE CURRENT (Note 1) I_{PP}	MARKING CODE
	V	MIN V	MAX V	mA	µA	V	A	
1SMC33CA	33	36.7	42.2	1.0	5.0	53.3	28.1	CBFM
1SMC36CA	36	40	46	1.0	5.0	58.1	25.8	CBFP
1SMC40CA	40	44.4	51.1	1.0	5.0	64.5	23.2	CBFR
1SMC43CA	43	47.8	54.9	1.0	5.0	69.4	21.6	CBFT
1SMC45CA	45	50	57.5	1.0	5.0	72.7	20.6	CBFV
1SMC48CA	48	53.3	61.3	1.0	5.0	77.4	19.4	CBFX
1SMC51CA	51	56.7	65.2	1.0	5.0	82.4	18.2	CBFZ
1SMC54CA	54	60	69	1.0	5.0	87.1	17.2	CBGE
1SMC58CA	58	64.4	74.1	1.0	5.0	93.6	16	CBGG
1SMC60CA	60	66.7	76.7	1.0	5.0	96.8	15.5	CBGK
1SMC64CA	64	71.1	81.8	1.0	5.0	103	14.6	CBGM
1SMC70CA	70	77.8	89.5	1.0	5.0	113	13.3	CBGP
1SMC75CA	75	83.3	95.8	1.0	5.0	121	12.4	CBGR
1SMC78CA	78	86.7	99.7	1.0	5.0	126	11.4	CBGT
1SMC85CA	85	94.4	108.2	1.0	5.0	137	10.4	CBGV
1SMC90CA	90	100	115.5	1.0	5.0	146	10.3	CBGX
1SMC100CA	100	111	128	1.0	5.0	162	9.3	CBGZ
1SMC110CA	110	122	140.5	1.0	5.0	177	8.4	CBHE
1SMC120CA	120	133	153	1.0	5.0	193	7.9	CBHG
1SMC130CA	130	144	165.5	1.0	5.0	209	7.2	CBHK
1SMC150CA	150	167	192.5	1.0	5.0	243	6.2	CBHM
1SMC160CA	160	178	205	1.0	5.0	259	5.8	CBHP
1SMC170CA	170	189	217.5	1.0	5.0	275	5.5	CBHR

SMC CASE - MECHANICAL OUTLINE



DIMENSIONS				
	INCHES		MILLIMETERS	
SYMBOL	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)

R8 (17-March 2016)

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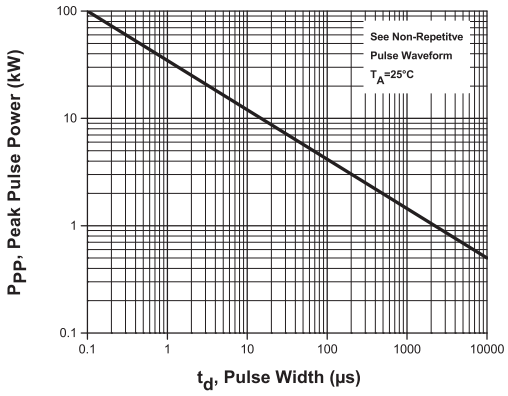
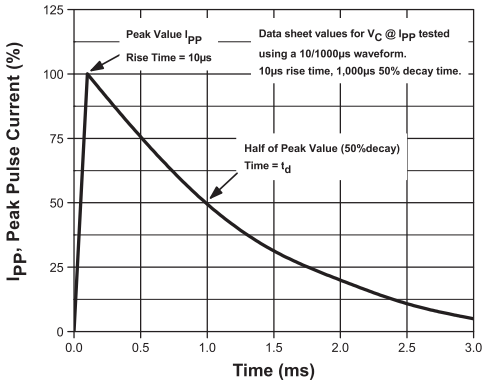
TYPICAL ELECTRICAL CHARACTERISTICS

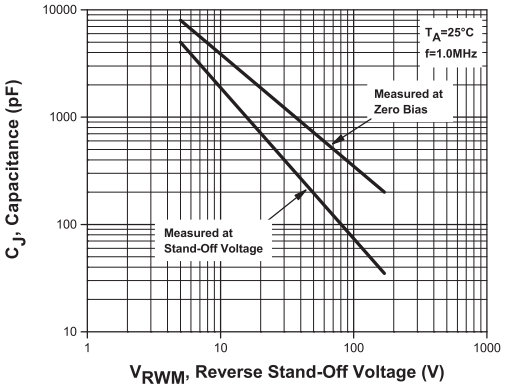
Peak Pulse Power



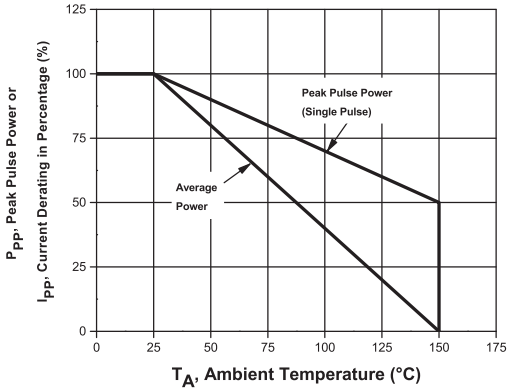
Non-Repetitive Pulse Waveform



Capacitance



Power & Current Derating



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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