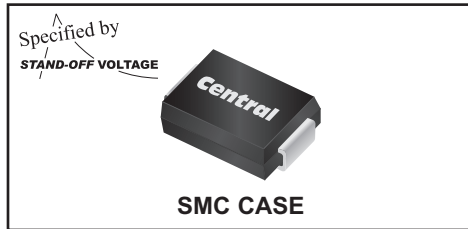


1SMC5.0CA
THRU
1SMC170CA

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



www.centrasemi.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: ($T_A=25^\circ\text{C}$ unless otherwise noted)

Peak Power Dissipation (Note 1)

Operating and Storage Junction Temperature

SYMBOL

P_{PK} 1500
 T_J, T_{stg} -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 (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	
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 10x1,000 μs pulse.

R8 (17-March 2016)

**1SMC5.0CA
THRU
1SMC170CA**

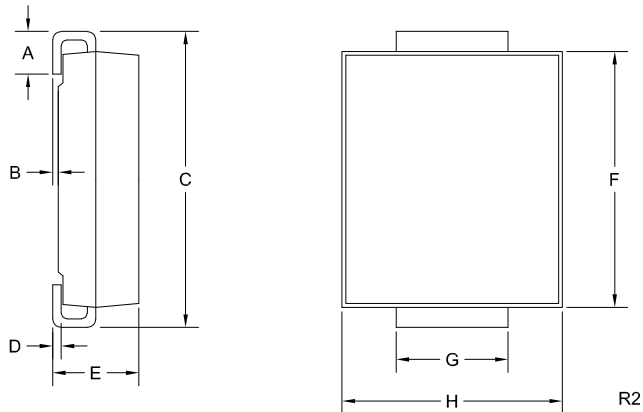
**SURFACE MOUNT SILICON
BI-DIRECTIONAL
GLASS PASSIVATED JUNCTION
TRANSIENT VOLTAGE SUPPRESSORS
1500 WATT, 5.0 THRU 170 VOLT**



ELECTRICAL CHARACTERISTICS - Continued: (T_A=25°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	
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				
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)

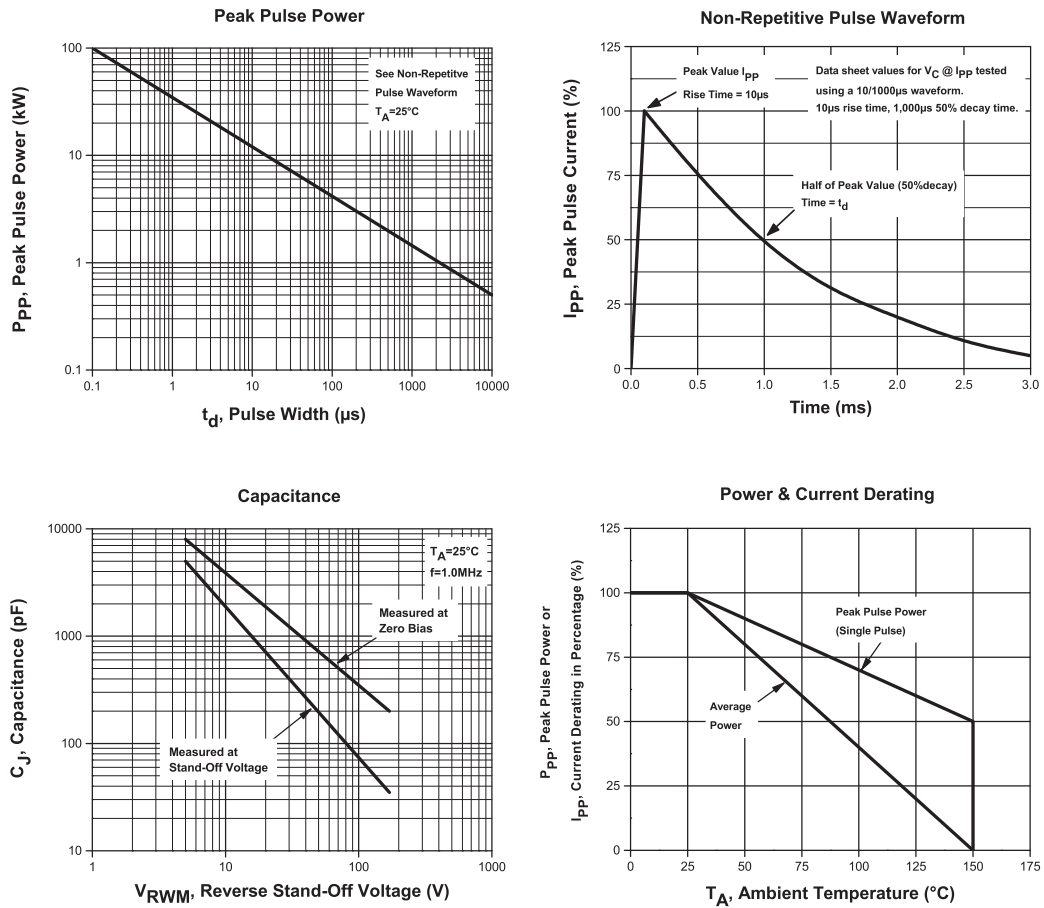
R8 (17-March 2016)

1SMC5.0CA
THRU
1SMC170CA

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



TYPICAL ELECTRICAL CHARACTERISTICS



R8 (17-March 2016)



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

CONTACT US

Corporate Headquarters & Customer Support Team

Central Semiconductor Corp.
145 Adams Avenue
Hauppauge, NY 11788 USA
Main Tel: (631) 435-1110
Main Fax: (631) 435-1824
Support Team Fax: (631) 435-3388
www.centalsemi.com

Worldwide Field Representatives:
www.centalsemi.com/wwreps

Worldwide Distributors:
www.centalsemi.com/wwdistributors

For the latest version of Central Semiconductor's **LIMITATIONS AND DAMAGES DISCLAIMER**, which is part of Central's Standard Terms and Conditions of sale, visit: www.centalsemi.com/terms

Mouser Electronics

Authorized Distributor

Click to View Pricing, Inventory, Delivery & Lifecycle Information:

Central Semiconductor:

[1SMC58CA](#) [1SMC170CA](#) [1SMC58A TR13](#) [1SMC170A TR13](#) [1SMC160CA TR13](#) [1SMC11CA TR13](#) [1SMC22CA TR13](#) [1SMC130CA TR13](#) [1SMC7.5CA TR13](#) [1SMC33CA TR13](#) [1SMC48CA TR13](#) [1SMC8.5CA TR13](#) [1SMC6.0CA TR13](#) [1SMC85CA TR13](#) [1SMC70CA TR13](#) [1SMC10CA TR13](#) [1SMC64CA TR13](#) [1SMC28CA TR13](#) [1SMC18CA TR13](#) [1SMC8.0CA TR13](#) [1SMC45CA TR13](#) [1SMC24CA TR13](#) [1SMC14CA TR13](#) [1SMC17CA TR13](#) [1SMC51CA TR13](#) [1SMC120CA TR13](#) [1SMC54CA TR13](#) [1SMC5.0CA TR13](#) [1SMC110CA TR13](#) [1SMC12CA TR13](#) [1SMC13CA TR13](#) [1SMC20CA TR13](#) [1SMC36CA TR13](#) [1SMC40CA TR13](#) [1SMC15CA TR13](#) [1SMC6.5CA TR13](#) [1SMC90CA TR13](#) [1SMC78CA TR13](#) [1SMC7.0CA TR13](#) [1SMC16CA TR13](#) [1SMC30CA TR13](#) [1SMC26CA TR13](#) [1SMC60CA TR13](#) [1SMC75CA TR13](#) [1SMC100CA TR13](#) [1SMC150CA TR13](#) [1SMC43CA TR13](#) [1SMC9.0CA TR13](#) [1SMC58CA TR13](#) [1SMC170CA TR13](#) [1SMC58CA BK](#)