

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

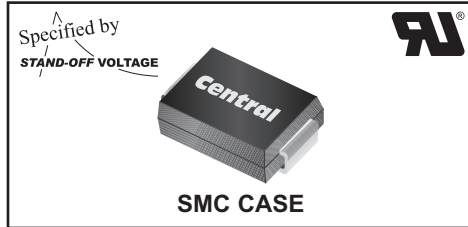
#### DESCRIPTION:

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**



• This series is UL listed, UL file number E130224

**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<br>STAND-OFF<br>VOLTAGE | BREAKDOWN<br>VOLTAGE |          | TEST<br>CURRENT | MAXIMUM<br>REVERSE<br>LEAKAGE<br>CURRENT | MAXIMUM<br>CLAMPING<br>VOLTAGE | PEAK<br>PULSE<br>CURRENT<br>(Note 1) | MARKING<br>CODE |
|-----------|---------------------------------|----------------------|----------|-----------------|------------------------------------------|--------------------------------|--------------------------------------|-----------------|
|           | $V_{RWM}$                       | $V_{BR} @ I_T$       |          | $I_T$           | $I_R @ V_{RWM}$                          | $V_C @ I_{pp}$                 | $I_{pp}$                             |                 |
|           | V                               | MIN<br>V             | MAX<br>V | mA              | $\mu\text{A}$                            | 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            |

Notes: (1) Non-repetitive 10x1,000 $\mu\text{s}$  pulse.

R7 (11-September 2013)

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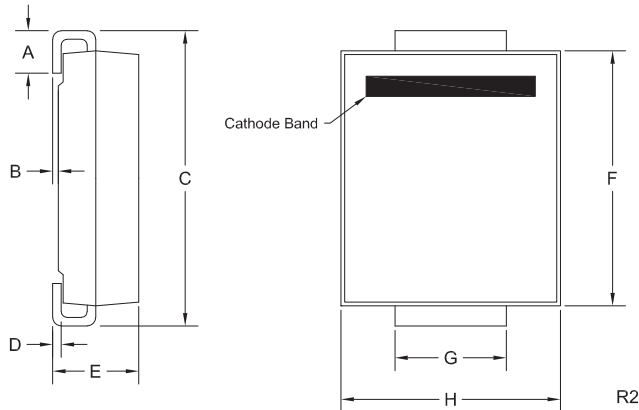
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**ELECTRICAL CHARACTERISTICS - Continued:** ( $T_A=25^{\circ}\text{C}$  unless otherwise noted)

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

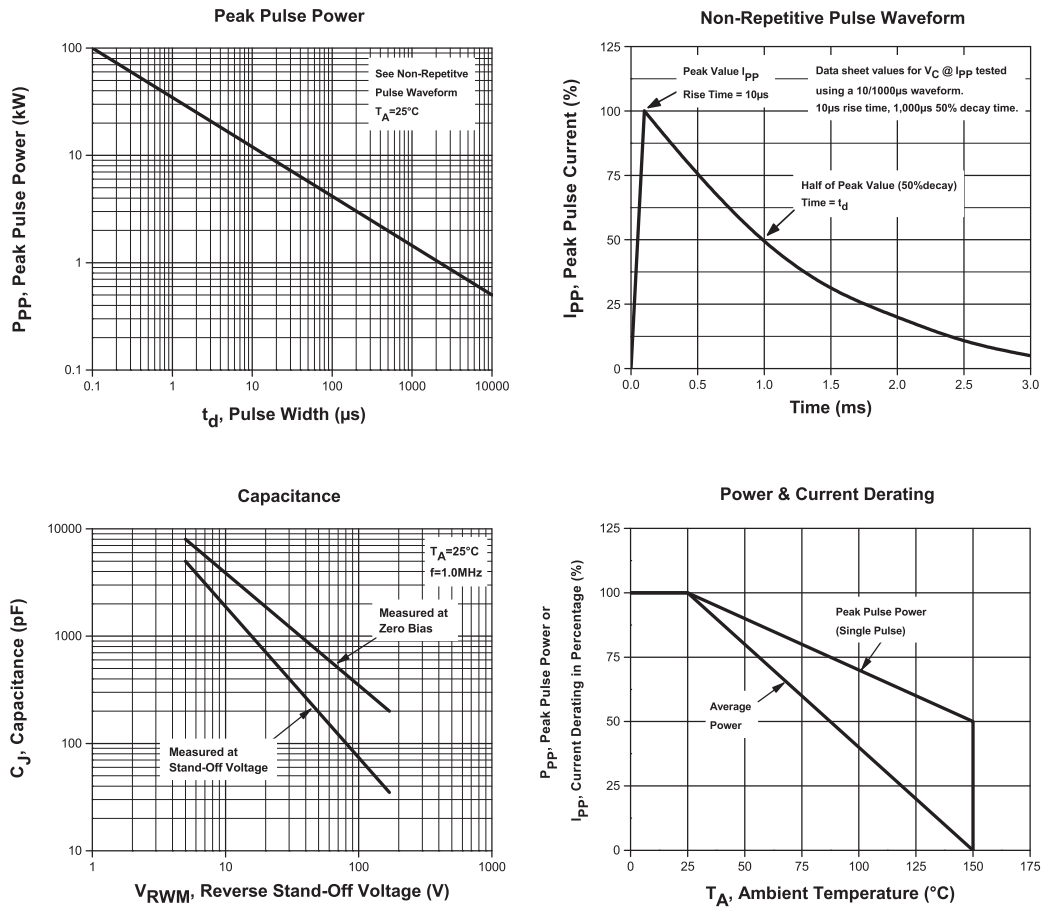
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### TYPICAL ELECTRICAL CHARACTERISTICS



R7 (11-September 2013)

## Данный компонент на территории Российской Федерации

**Вы можете приобрести в компании MosChip.**

Для оперативного оформления запроса Вам необходимо перейти по данной ссылке:

<http://moschip.ru/get-element>

Вы можете разместить у нас заказ для любого Вашего проекта, будь то серийное производство или разработка единичного прибора.

В нашем ассортименте представлены ведущие мировые производители активных и пассивных электронных компонентов.

Нашей специализацией является поставка электронной компонентной базы двойного назначения, продукции таких производителей как XILINX, Intel (ex.ALTERA), Vicor, Microchip, Texas Instruments, Analog Devices, Mini-Circuits, Amphenol, Glenair.

Сотрудничество с глобальными дистрибьюторами электронных компонентов, предоставляет возможность заказывать и получать с международных складов практически любой перечень компонентов в оптимальные для Вас сроки.

На всех этапах разработки и производства наши партнеры могут получить квалифицированную поддержку опытных инженеров.

Система менеджмента качества компании отвечает требованиям в соответствии с ГОСТ Р ИСО 9001, ГОСТ РВ 0015-002 и ЭС РД 009

### Офис по работе с юридическими лицами:

105318, г.Москва, ул.Щербаковская д.3, офис 1107, 1118, ДЦ «Щербаковский»

Телефон: +7 495 668-12-70 (многоканальный)

Факс: +7 495 668-12-70 (доб.304)

E-mail: [info@moschip.ru](mailto:info@moschip.ru)

Skype отдела продаж:

moschip.ru

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