

1.5SMC6.8CA  
THRU  
1.5SMC220CA

SURFACE MOUNT SILICON  
BI-DIRECTIONAL  
GLASS PASSIVATED JUNCTION  
TRANSIENT VOLTAGE SUPPRESSORS  
1500 WATT, 6.8 THRU 220 VOLT



www.centrasemi.com

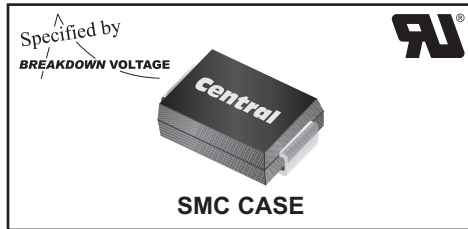
#### DESCRIPTION:

The CENTRAL SEMICONDUCTOR 1.5SMC6.8CA 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 1.5SMC6.8A 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        | BREAKDOWN VOLTAGE<br>$V_{BR} @ I_T$ |          |          | TEST CURRENT<br>$I_T$ | WORKING PEAK REVERSE VOLTAGE<br>$V_{RWM}$ | MAXIMUM REVERSE LEAKAGE CURRENT<br>$I_R @ V_{RWM}$ | MAXIMUM CLAMPING VOLTAGE<br>$V_C @ I_{PP}$ | PEAK PULSE CURRENT<br>(Note 1)<br>$I_{PP}$ | MAXIMUM TEMPERATURE COEFFICIENT<br>$\theta V_{BR}$ | MARKING CODE |
|-------------|-------------------------------------|----------|----------|-----------------------|-------------------------------------------|----------------------------------------------------|--------------------------------------------|--------------------------------------------|----------------------------------------------------|--------------|
|             | MIN<br>V                            | NOM<br>V | MAX<br>V |                       |                                           |                                                    |                                            |                                            |                                                    |              |
| 1.5SMC6.8CA | 6.45                                | 6.8      | 7.14     | 10                    | 5.8                                       | 2000                                               | 10.5                                       | 143                                        | 0.057                                              | C6V8C        |
| 1.5SMC7.5CA | 7.13                                | 7.5      | 7.88     | 10                    | 6.4                                       | 1000                                               | 11.3                                       | 132                                        | 0.061                                              | C7V5C        |
| 1.5SMC8.2CA | 7.79                                | 8.2      | 8.61     | 10                    | 7.02                                      | 400                                                | 12.1                                       | 124                                        | 0.065                                              | C8V2C        |
| 1.5SMC9.1CA | 8.65                                | 9.1      | 9.55     | 1.0                   | 7.78                                      | 100                                                | 13.4                                       | 112                                        | 0.068                                              | C9V1C        |
| 1.5SMC10CA  | 9.5                                 | 10       | 10.5     | 1.0                   | 8.55                                      | 20                                                 | 14.5                                       | 103                                        | 0.073                                              | C10C         |
| 1.5SMC11CA  | 10.5                                | 11       | 11.6     | 1.0                   | 9.4                                       | 5.0                                                | 15.6                                       | 96                                         | 0.075                                              | C11C         |
| 1.5SMC12CA  | 11.4                                | 12       | 12.6     | 1.0                   | 10.2                                      | 5.0                                                | 16.7                                       | 90                                         | 0.078                                              | C12C         |
| 1.5SMC13CA  | 12.4                                | 13       | 13.7     | 1.0                   | 11.1                                      | 5.0                                                | 18.2                                       | 82                                         | 0.081                                              | C13C         |
| 1.5SMC15CA  | 14.3                                | 15       | 15.8     | 1.0                   | 12.8                                      | 5.0                                                | 21.2                                       | 71                                         | 0.084                                              | C15C         |
| 1.5SMC16CA  | 15.2                                | 16       | 16.8     | 1.0                   | 13.6                                      | 5.0                                                | 22.5                                       | 67                                         | 0.086                                              | C16C         |
| 1.5SMC18CA  | 17.1                                | 18       | 18.9     | 1.0                   | 15.3                                      | 5.0                                                | 25.2                                       | 59.5                                       | 0.088                                              | C18C         |
| 1.5SMC20CA  | 19.0                                | 20       | 21.0     | 1.0                   | 17.1                                      | 5.0                                                | 27.7                                       | 54                                         | 0.090                                              | C20C         |
| 1.5SMC22CA  | 20.9                                | 22       | 23.1     | 1.0                   | 18.8                                      | 5.0                                                | 30.6                                       | 49                                         | 0.092                                              | C22C         |
| 1.5SMC24CA  | 22.8                                | 24       | 25.2     | 1.0                   | 20.5                                      | 5.0                                                | 33.2                                       | 45                                         | 0.094                                              | C24C         |
| 1.5SMC27CA  | 25.7                                | 27       | 28.4     | 1.0                   | 23.1                                      | 5.0                                                | 37.5                                       | 40                                         | 0.096                                              | C27C         |
| 1.5SMC30CA  | 28.5                                | 30       | 31.5     | 1.0                   | 25.6                                      | 5.0                                                | 41.4                                       | 36                                         | 0.097                                              | C30C         |
| 1.5SMC33CA  | 31.4                                | 33       | 34.7     | 1.0                   | 28.2                                      | 5.0                                                | 45.7                                       | 33                                         | 0.098                                              | C33C         |
| 1.5SMC36CA  | 34.2                                | 36       | 37.8     | 1.0                   | 30.8                                      | 5.0                                                | 49.9                                       | 30                                         | 0.099                                              | C36C         |
| 1.5SMC39CA  | 37.1                                | 39       | 41       | 1.0                   | 33.3                                      | 5.0                                                | 53.9                                       | 28                                         | 0.100                                              | C39C         |

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

R8 (11-September 2013)

1.5SMC6.8CA  
THRU  
1.5SMC220CA



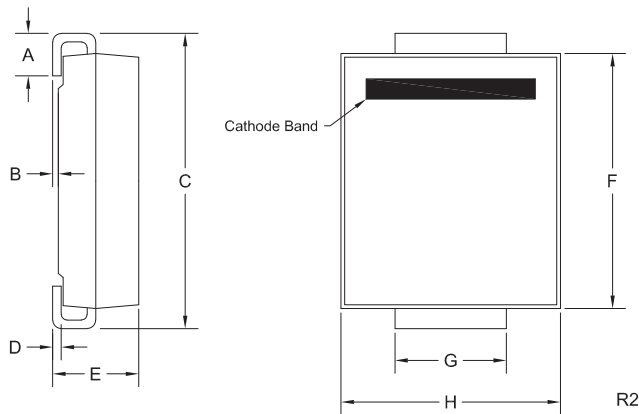
**SURFACE MOUNT SILICON  
BI-DIRECTIONAL  
GLASS PASSIVATED JUNCTION  
TRANSIENT VOLTAGE SUPPRESSORS  
1500 WATT, 6.8 THRU 220 VOLT**



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

| TYPE        | BREAKDOWN VOLTAGE<br>$V_{BR} @ I_T$ |       |       | TEST CURRENT<br>$I_T$ | WORKING PEAK REVERSE VOLTAGE<br>$V_{RWM}$ | MAXIMUM REVERSE LEAKAGE CURRENT<br>$I_R @ V_{RWM}$ | MAXIMUM CLAMPING VOLTAGE<br>$V_C @ I_{PP}$ | PEAK PULSE CURRENT<br>(Note 1)<br>$I_{PP}$ | MAXIMUM TEMPERATURE COEFFICIENT<br>$\theta V_{BR}$ | MARKING CODE |
|-------------|-------------------------------------|-------|-------|-----------------------|-------------------------------------------|----------------------------------------------------|--------------------------------------------|--------------------------------------------|----------------------------------------------------|--------------|
|             | MIN V                               | NOM V | MAX V |                       |                                           |                                                    |                                            |                                            |                                                    |              |
| 1.5SMC43CA  | 40.9                                | 43    | 45.2  | 1.0                   | 36.8                                      | 5.0                                                | 59.3                                       | 25.3                                       | 0.101                                              | C43C         |
| 1.5SMC47CA  | 44.7                                | 47    | 49.4  | 1.0                   | 40.2                                      | 5.0                                                | 64.8                                       | 23.2                                       | 0.101                                              | C47C         |
| 1.5SMC51CA  | 48.5                                | 51    | 53.6  | 1.0                   | 43.6                                      | 5.0                                                | 70.1                                       | 21.4                                       | 0.102                                              | C51C         |
| 1.5SMC56CA  | 53.2                                | 56    | 58.8  | 1.0                   | 47.8                                      | 5.0                                                | 77                                         | 19.5                                       | 0.103                                              | C56C         |
| 1.5SMC62CA  | 58.9                                | 62    | 65.1  | 1.0                   | 53.0                                      | 5.0                                                | 85                                         | 17.7                                       | 0.104                                              | C62C         |
| 1.5SMC68CA  | 64.6                                | 68    | 71.4  | 1.0                   | 58.1                                      | 5.0                                                | 92                                         | 16.3                                       | 0.104                                              | C68C         |
| 1.5SMC75CA  | 71.3                                | 75    | 78.8  | 1.0                   | 64.1                                      | 5.0                                                | 103                                        | 14.6                                       | 0.105                                              | C75C         |
| 1.5SMC82CA  | 77.9                                | 82    | 86.1  | 1.0                   | 70.1                                      | 5.0                                                | 113                                        | 13.3                                       | 0.105                                              | C82C         |
| 1.5SMC91CA  | 86.5                                | 91    | 95.5  | 1.0                   | 77.8                                      | 5.0                                                | 125                                        | 12                                         | 0.106                                              | C91C         |
| 1.5SMC100CA | 95.0                                | 100   | 105   | 1.0                   | 85.5                                      | 5.0                                                | 137                                        | 11                                         | 0.106                                              | C100C        |
| 1.5SMC110CA | 104.5                               | 110   | 115.5 | 1.0                   | 94.0                                      | 5.0                                                | 152                                        | 9.9                                        | 0.107                                              | C110C        |
| 1.5SMC120CA | 114                                 | 120   | 126   | 1.0                   | 102                                       | 5.0                                                | 165                                        | 9.1                                        | 0.107                                              | C120C        |
| 1.5SMC130CA | 123.5                               | 130   | 136.5 | 1.0                   | 111                                       | 5.0                                                | 179                                        | 8.4                                        | 0.107                                              | C130C        |
| 1.5SMC150CA | 142.5                               | 150   | 157.5 | 1.0                   | 128                                       | 5.0                                                | 207                                        | 7.2                                        | 0.108                                              | C150C        |
| 1.5SMC160CA | 152                                 | 160   | 168   | 1.0                   | 136                                       | 5.0                                                | 219                                        | 6.8                                        | 0.108                                              | C160C        |
| 1.5SMC170CA | 161.5                               | 170   | 178.5 | 1.0                   | 145                                       | 5.0                                                | 234                                        | 6.4                                        | 0.108                                              | C170C        |
| 1.5SMC180CA | 171                                 | 180   | 189   | 1.0                   | 154                                       | 5.0                                                | 246                                        | 6.1                                        | 0.108                                              | C180C        |
| 1.5SMC200CA | 190                                 | 200   | 210   | 1.0                   | 171                                       | 5.0                                                | 274                                        | 5.5                                        | 0.108                                              | C200C        |
| 1.5SMC220CA | 209                                 | 220   | 231   | 1.0                   | 185                                       | 5.0                                                |                                            | 4.6                                        | 0.108                                              | C220C        |

#### 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)

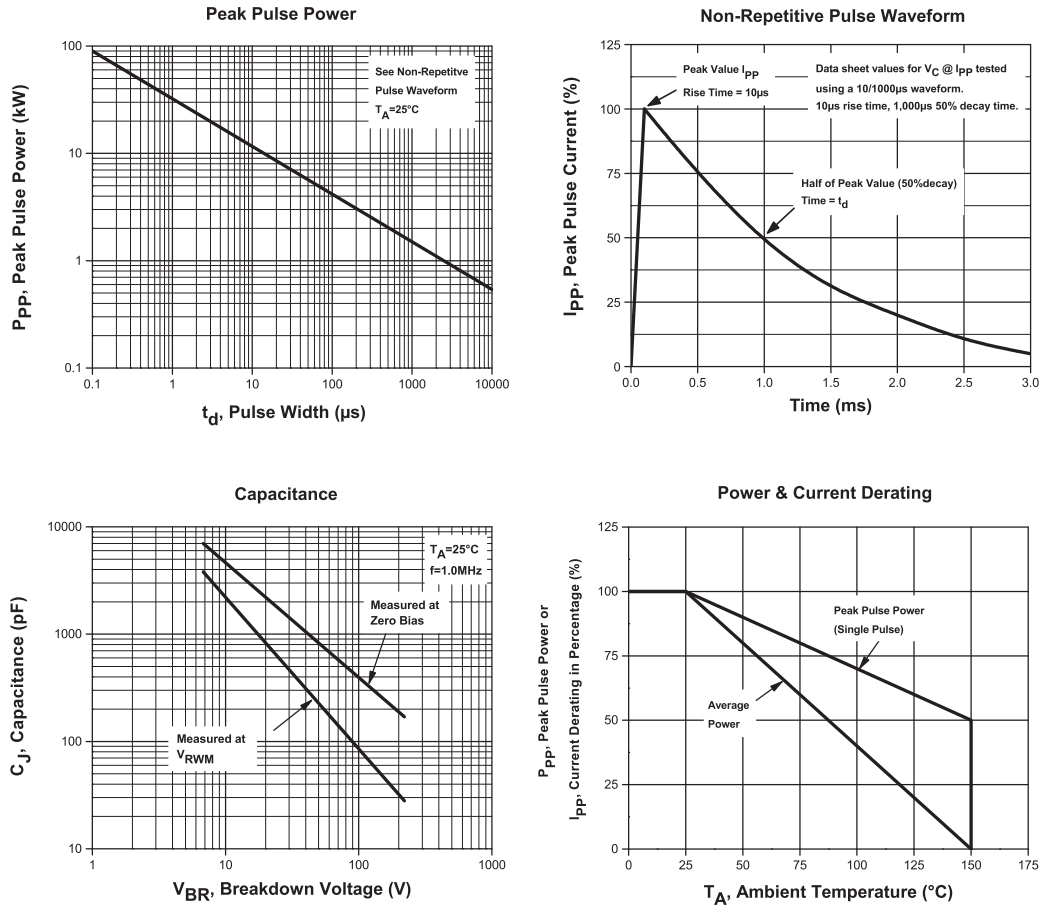
R8 (11-September 2013)

1.5SMC6.8CA  
THRU  
1.5SMC220CA

SURFACE MOUNT SILICON  
BI-DIRECTIONAL  
GLASS PASSIVATED JUNCTION  
TRANSIENT VOLTAGE SUPPRESSORS  
1500 WATT, 6.8 THRU 220 VOLT



TYPICAL ELECTRICAL CHARACTERISTICS



R8 (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

moschip.ru\_4

moschip.ru\_6

moschip.ru\_9