

1.5SMC6.8A  
THRU  
1.5SMC220A



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



www.centrasemi.com

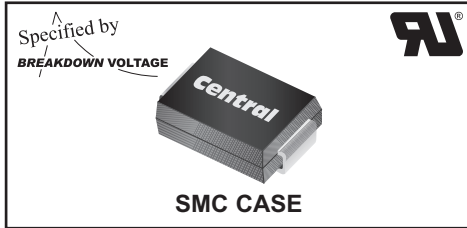
**DESCRIPTION:**

The CENTRAL SEMICONDUCTOR 1.5SMC6.8A series devices are surface mount uni-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 bi-directional devices, please refer to the 1.5SMC6.8CA 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)  
Peak Forward Surge Current (JEDEC Method)  
Operating and Storage Junction Temperature

**SYMBOL**

$P_{PK}$  1500  
 $I_{FSM}$  200  
 $T_J, T_{stg}$  -65 to +150

**UNITS**

W  
A  
 $^\circ\text{C}$

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

| TYPE       | BREAKDOWN VOLTAGE |       |       | TEST CURRENT<br>$I_T$ | WORKING PEAK REVERSE VOLTAGE<br>$V_{RWM}$ | MAXIMUM REVERSE LEAKAGE CURRENT<br>$I_R @ V_{RWM}$ | MAXIMUM REVERSE SURGE CURRENT (Note 1)<br>$I_{RSM}$ | MAXIMUM REVERSE VOLTAGE<br>$V_{RSM} @ I_{RSM}$ | MAXIMUM TEMPERATURE COEFFICIENT<br>$\theta_{V_{BR}}$ | MARKING CODE |
|------------|-------------------|-------|-------|-----------------------|---|--|---|--|--|--------------|
|            | $V_{BR} @ I_T$    |       |       |                       |   |  |   |  |  |              |
|            | MIN V             | NOM V | MAX V | mA                    | V   | $\mu\text{A}$                                      | A   | V  | % / $^\circ\text{C}$                                 |              |
| 1.5SMC6.8A | 6.45              | 6.8   | 7.14  | 10                    | 5.8                                       | 1000   | 143   | 10.5   | 0.057  | C6V8A        |
| 1.5SMC7.5A | 7.13              | 7.5   | 7.88  | 10                    | 6.4                                       | 500  | 132   | 11.3   | 0.061  | C7V5A        |
| 1.5SMC8.2A | 7.79              | 8.2   | 8.61  | 10                    | 7.02                                      | 200  | 124   | 12.1   | 0.065  | C8V2A        |
| 1.5SMC9.1A | 8.65              | 9.1   | 9.55  | 1.0                   | 7.78                                      | 50   | 112   | 13.4   | 0.068  | C9V1A        |
| 1.5SMC10A  | 9.5               | 10    | 10.5  | 1.0                   | 8.55                                      | 10   | 103   | 14.5   | 0.073  | C10A         |
| 1.5SMC11A  | 10.5              | 11    | 11.6  | 1.0                   | 9.4                                       | 5  | 96  | 15.6   | 0.075  | C11A         |
| 1.5SMC12A  | 11.4              | 12    | 12.6  | 1.0                   | 10.2                                      | 5  | 90  | 16.7   | 0.078  | C12A         |
| 1.5SMC13A  | 12.4              | 13    | 13.7  | 1.0                   | 11.1                                      | 5  | 82  | 18.2   | 0.081  | C13A         |
| 1.5SMC15A  | 14.3              | 15    | 15.8  | 1.0                   | 12.8                                      | 5  | 71  | 21.2   | 0.084  | C15A         |
| 1.5SMC16A  | 15.2              | 16    | 16.8  | 1.0                   | 13.6                                      | 5  | 67  | 22.5   | 0.086  | C16A         |
| 1.5SMC18A  | 17.1              | 18    | 18.9  | 1.0                   | 15.3                                      | 5  | 59.5  | 25.2   | 0.088  | C18A         |
| 1.5SMC20A  | 19.0              | 20    | 21.0  | 1.0                   | 17.1                                      | 5  | 54  | 27.7   | 0.090  | C20A         |
| 1.5SMC22A  | 20.9              | 22    | 23.1  | 1.0                   | 18.8                                      | 5  | 49  | 30.6   | 0.092  | C22A         |
| 1.5SMC24A  | 22.8              | 24    | 25.2  | 1.0                   | 20.5                                      | 5  | 45  | 33.2   | 0.094  | C24A         |
| 1.5SMC27A  | 25.7              | 27    | 28.4  | 1.0                   | 23.1                                      | 5  | 40  | 37.5   | 0.096  | C27A         |
| 1.5SMC30A  | 28.5              | 30    | 31.5  | 1.0                   | 25.6                                      | 5  | 36  | 41.4   | 0.097  | C30A         |
| 1.5SMC33A  | 31.4              | 33    | 34.7  | 1.0                   | 28.2                                      | 5  | 33  | 45.7   | 0.098  | C33A         |
| 1.5SMC36A  | 34.2              | 36    | 37.8  | 1.0                   | 30.8                                      | 5  | 30  | 49.9   | 0.099  | C36A         |
| 1.5SMC39A  | 37.1              | 39    | 41    | 1.0                   | 33.3                                      | 5  | 28  | 53.9   | 0.100  | C39A         |

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

1.5SMC6.8A  
THRU  
1.5SMC220A



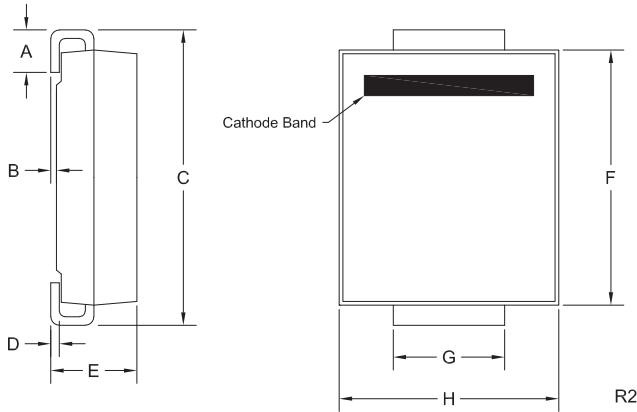
**SURFACE MOUNT SILICON  
UNI-DIRECTIONAL  
GLASS PASSIVATED JUNCTION  
TRANSIENT VOLTAGE SUPPRESSORS  
1500 WATT, 6.8 THRU 220 VOLT**



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

| TYPE       | BREAKDOWN VOLTAGE |       |       | TEST CURRENT | WORKING PEAK REVERSE VOLTAGE | MAXIMUM REVERSE LEAKAGE CURRENT  | MAXIMUM REVERSE SURGE CURRENT (Note 1) | MAXIMUM REVERSE VOLTAGE  | MAXIMUM TEMPERATURE COEFFICIENT         | MARKING CODE |
|------------|-------------------|-------|-------|--------------|------------------------------|----------------------------------|--|--------------------------|---|--------------|
|            | $V_{BR} @ I_T$    |       |       |              |                              |                                  |  |                          |   |              |
|            | MIN V             | NOM V | MAX V | $I_T$<br>mA  | $V_{RWM}$<br>V               | $I_R @ V_{RWM}$<br>$\mu\text{A}$ | $I_{RSM}$<br>A                         | $V_{RSM} @ I_{RSM}$<br>V | $\theta V_{BR}$<br>% / $^\circ\text{C}$ |              |
| 1.5SMC43A  | 40.9              | 43    | 45.2  | 1.0          | 36.8                         | 5                                | 25.3                                   | 59.3                     | 0.101                                   | C43A         |
| 1.5SMC47A  | 44.7              | 47    | 49.4  | 1.0          | 40.2                         | 5                                | 23.2                                   | 64.8                     | 0.101                                   | C47A         |
| 1.5SMC51A  | 48.5              | 51    | 53.6  | 1.0          | 43.6                         | 5                                | 21.4                                   | 70.1                     | 0.102                                   | C51A         |
| 1.5SMC56A  | 53.2              | 56    | 58.8  | 1.0          | 47.8                         | 5                                | 19.5                                   | 77                       | 0.103                                   | C56A         |
| 1.5SMC62A  | 58.9              | 62    | 65.1  | 1.0          | 53.0                         | 5                                | 17.7                                   | 85                       | 0.104                                   | C62A         |
| 1.5SMC68A  | 64.6              | 68    | 71.4  | 1.0          | 58.1                         | 5                                | 16.3                                   | 92                       | 0.104                                   | C68A         |
| 1.5SMC75A  | 71.3              | 75    | 78.8  | 1.0          | 64.1                         | 5                                | 14.6                                   | 103                      | 0.105                                   | C75A         |
| 1.5SMC82A  | 77.9              | 82    | 86.1  | 1.0          | 70.1                         | 5                                | 13.3                                   | 113                      | 0.105                                   | C82A         |
| 1.5SMC91A  | 86.5              | 91    | 95.5  | 1.0          | 77.8                         | 5                                | 12                                     | 125                      | 0.106                                   | C91A         |
| 1.5SMC100A | 95.0              | 100   | 105   | 1.0          | 85.5                         | 5                                | 11                                     | 137                      | 0.106                                   | C100A        |
| 1.5SMC110A | 104.5             | 110   | 115.5 | 1.0          | 94.0                         | 5                                | 9.9                                    | 152                      | 0.107                                   | C110A        |
| 1.5SMC120A | 114               | 120   | 126   | 1.0          | 102                          | 5                                | 9.1                                    | 165                      | 0.107                                   | C120A        |
| 1.5SMC130A | 123.5             | 130   | 136.5 | 1.0          | 111                          | 5                                | 8.4                                    | 179                      | 0.107                                   | C130A        |
| 1.5SMC150A | 142.5             | 150   | 157.5 | 1.0          | 128                          | 5                                | 7.2                                    | 207                      | 0.108                                   | C150A        |
| 1.5SMC160A | 152               | 160   | 168   | 1.0          | 136                          | 5                                | 6.8                                    | 219                      | 0.108                                   | C160A        |
| 1.5SMC170A | 161.5             | 170   | 178.5 | 1.0          | 145                          | 5                                | 6.4                                    | 234                      | 0.108                                   | C170A        |
| 1.5SMC180A | 171               | 180   | 189   | 1.0          | 154                          | 5                                | 6.1                                    | 246                      | 0.108                                   | C180A        |
| 1.5SMC200A | 190               | 200   | 210   | 1.0          | 171                          | 5                                | 5.5                                    | 274                      | 0.108                                   | C200A        |
| 1.5SMC220A | 209               | 220   | 231   | 1.0          | 185                          | 5                                | 4.6                                    | 328                      | 0.108                                   | C220A        |

**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)

R7 (11-September 2013)

1.5SMC6.8A  
THRU  
1.5SMC220A



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



### TYPICAL ELECTRICAL CHARACTERISTICS



R7 (11-September 2013)

## 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 (2<sup>nd</sup> 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.centrasemi.com](http://www.centrasemi.com)

**Worldwide Field Representatives:**  
[www.centrasemi.com/wwreps](http://www.centrasemi.com/wwreps)

**Worldwide Distributors:**  
[www.centrasemi.com/wwdistributors](http://www.centrasemi.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.centrasemi.com/terms](http://www.centrasemi.com/terms)



Компания «ЭлектроПласт» предлагает заключение долгосрочных отношений при поставках импортных электронных компонентов на взаимовыгодных условиях!

Наши преимущества:

- Оперативные поставки широкого спектра электронных компонентов отечественного и импортного производства напрямую от производителей и с крупнейших мировых складов;
- Поставка более 17-ти миллионов наименований электронных компонентов;
- Поставка сложных, дефицитных, либо снятых с производства позиций;
- Оперативные сроки поставки под заказ (от 5 рабочих дней);
- Экспресс доставка в любую точку России;
- Техническая поддержка проекта, помощь в подборе аналогов, поставка прототипов;
- Система менеджмента качества сертифицирована по Международному стандарту ISO 9001;
- Лицензия ФСБ на осуществление работ с использованием сведений, составляющих государственную тайну;
- Поставка специализированных компонентов (Xilinx, Altera, Analog Devices, Intersil, Interpoint, Microsemi, Aeroflex, Peregrine, Syfer, Eurofarad, Texas Instrument, Miteq, Cobham, E2V, MA-COM, Hittite, Mini-Circuits, General Dynamics и др.);

Помимо этого, одним из направлений компании «ЭлектроПласт» является направление «Источники питания». Мы предлагаем Вам помощь Конструкторского отдела:

- Подбор оптимального решения, техническое обоснование при выборе компонента;
- Подбор аналогов;
- Консультации по применению компонента;
- Поставка образцов и прототипов;
- Техническая поддержка проекта;
- Защита от снятия компонента с производства.



#### Как с нами связаться

**Телефон:** 8 (812) 309 58 32 (многоканальный)

**Факс:** 8 (812) 320-02-42

**Электронная почта:** [org@eplast1.ru](mailto:org@eplast1.ru)

**Адрес:** 198099, г. Санкт-Петербург, ул. Калинина, дом 2, корпус 4, литера А.