

1.5SMC6.8A  
THRU  
1.5SMC220A



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



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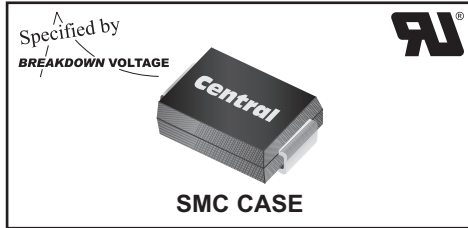
**DESCRIPTION:**

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>$I_T$<br>mA | WORKING PEAK REVERSE VOLTAGE<br>$V_{RWM}$<br>V | MAXIMUM REVERSE LEAKAGE CURRENT<br>$I_R @ V_{RWM}$<br>$\mu\text{A}$ | MAXIMUM REVERSE SURGE CURRENT (Note 1)<br>$I_{RSM}$<br>A | MAXIMUM REVERSE VOLTAGE<br>$V_{RSM} @ I_{RSM}$<br>V | MAXIMUM TEMPERATURE COEFFICIENT<br>$\theta_{V_{BR}}$<br>% / $^\circ\text{C}$ | MARKING CODE |
|------------|-------------------|-------|-------|-----------------------------|--|---|--|---|--|--------------|
|            | $V_{BR} @ I_T$    |       |       |                             |  |   |  |   |  |              |
|            | MIN V             | NOM V | MAX V |                             |  |   |  |   |  |              |
| 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.

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**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)

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### TYPICAL ELECTRICAL CHARACTERISTICS



R7 (11-September 2013)

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- Supply management (Customer portals)
- Inventory bonding
- Consolidated shipping options
- Custom bar coding for shipments
- Custom product packing

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- Package details
- Application notes
- Application and design sample kits
- Custom product and package development

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### CONTACT US

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- 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;
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- Подбор аналогов;
- Консультации по применению компонента;
- Поставка образцов и прототипов;
- Техническая поддержка проекта;
- Защита от снятия компонента с производства.



#### Как с нами связаться

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