

# 1.5SMC SERIES

## GLASS PASSOVATED JUNCTION TRANSIENT VOLTAGE SUPPRESSOR

VOLTAGE - 6.8 to 91 Volts

1500 Watts Peak Power

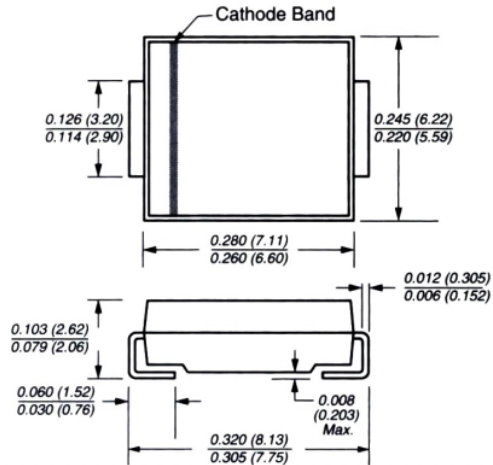
| 1.5SMC<br>PART<br>NUMBER | MARKING<br>CODE |              | REVERSE<br>STAND-<br>OFF<br>VOLTAGE<br>$V_{RWM}(V)$ | BREAKDOWN<br>VOLTAGE<br>$V_{BR}(V)$<br>MIN.@ $I_T$ | BREAKDOWN<br>VOLTAGE<br>$V_{BR}(V)$<br>MAX.@ $I_T$ | TEST<br>CURRENT<br>$I_T$ (mA) | MAXIMUM<br>CLAMPING<br>VOLTAGE<br>@ $I_{pp}$ $V_c(V)$ | PEAK<br>PULSE<br>CURRENT<br>$I_{pp}$ (A) | REVERSE<br>LEAKAGE<br>@ $V_{RWM}$<br>$I_R(\mu A)$ |
|--------------------------|-----------------|--------------|---|--|--|-------------------------------|---|--|---|
|                          | UNI-<br>POLAR   | BI-<br>POLAR |   |  |  |                               |   |  |   |
| 1.5SMC 6.8A              | 6V8A            | 6V8C         | 5.80  | 6.45   | 7.14   | 10                            | 10.5  | 143.0                                    | 1000  |
| 1.5SMC 7.5A              | 7V5A            | 7V5C         | 6.40  | 7.13   | 7.88   | 10                            | 11.3  | 133.0                                    | 500   |
| 1.5SMC 8.2A              | 8V2A            | 8V2C         | 7.02  | 7.79   | 8.61   | 10                            | 12.1  | 124.0                                    | 200   |
| 1.5SMC 9.1A              | 9V1A            | 9V1C         | 7.78  | 8.65   | 9.50   | 1                             | 13.4  | 112.0                                    | 50  |
| 1.5SMC 10A               | 10A             | 10C          | 8.55  | 9.50   | 10.50  | 1                             | 14.5  | 103.0                                    | 10  |
| 1.5SMC 11A               | 11A             | 11C          | 9.40  | 10.50  | 11.60  | 1                             | 15.6  | 96.2                                     | 5   |
| 1.5SMC 12A               | 12A             | 12C          | 10.20   | 11.40  | 12.60  | 1                             | 16.7  | 89.8                                     | 5   |
| 1.5SMC 13A               | 13A             | 13C          | 11.10   | 12.40  | 13.70  | 1                             | 18.2  | 82.4                                     | 5   |
| 1.5SMC 15A               | 15A             | 15C          | 12.80   | 14.30  | 15.80  | 1                             | 21.2  | 70.8                                     | 5   |
| 1.5SMC 16A               | 16A             | 16C          | 13.60   | 15.20  | 16.80  | 1                             | 22.5  | 66.7                                     | 5   |
| 1.5SMC 18A               | 18A             | 18C          | 15.30   | 17.10  | 18.90  | 1                             | 25.2  | 59.5                                     | 5   |
| 1.5SMC 20A               | 20A             | 20C          | 17.10   | 19.00  | 21.00  | 1                             | 27.7  | 54.2                                     | 5   |
| 1.5SMC 22A               | 22A             | 22C          | 18.80   | 20.90  | 23.10  | 1                             | 30.6  | 49.0                                     | 5   |
| 1.5SMC 24A               | 24A             | 24C          | 20.50   | 22.80  | 25.20  | 1                             | 33.2  | 45.2                                     | 5   |
| 1.5SMC 27A               | 27A             | 27C          | 23.10   | 25.70  | 28.40  | 1                             | 37.5  | 40.0                                     | 5   |
| 1.5SMC 30A               | 30A             | 30C          | 25.60   | 28.50  | 31.50  | 1                             | 41.4  | 36.2                                     | 5   |
| 1.5SMC 33A               | 33A             | 33C          | 28.20   | 31.40  | 34.70  | 1                             | 45.7  | 32.8                                     | 5   |
| 1.5SMC 36A               | 36A             | 36C          | 30.80   | 34.20  | 37.80  | 1                             | 49.9  | 30.1                                     | 5   |
| 1.5SMC 39A               | 39A             | 39C          | 33.30   | 37.10  | 41.00  | 1                             | 53.9  | 27.8                                     | 5   |
| 1.5SMC 43A               | 43A             | 43C          | 36.80   | 40.90  | 45.20  | 1                             | 59.3  | 25.3                                     | 5   |
| 1.5SMC 47A               | 47A             | 47C          | 40.20   | 44.70  | 49.40  | 1                             | 64.8  | 23.1                                     | 5   |
| 1.5SMC 51A               | 51A             | 51C          | 43.60   | 48.50  | 53.60  | 1                             | 70.1  | 21.4                                     | 5   |
| 1.5SMC 56A               | 56A             | 56C          | 47.80   | 53.20  | 58.80  | 1                             | 77.0  | 19.5                                     | 5   |
| 1.5SMC 62A               | 62A             | 62C          | 53.00   | 58.90  | 65.10  | 1                             | 85.0  | 17.6                                     | 5   |
| 1.5SMC 68A               | 68A             | 68C          | 58.10   | 64.60  | 71.40  | 1                             | 92.0  | 16.3                                     | 5   |
| 1.5SMC 75A               | 75A             | 75C          | 64.10   | 71.30  | 78.80  | 1                             | 103.0   | 14.6                                     | 5   |
| 1.5SMC 82A               | 82A             | 82C          | 70.10   | 77.90  | 86.10  | 1                             | 113.0   | 13.3                                     | 5   |
| 1.5SMC 91A               | 91A             | 91C          | 77.80   | 86.50  | 95.50  | 1                             | 125.0   | 12.0                                     | 5   |

For bidirectional type having  $V_{RWM}$  of 10 volts and less, the IR limit is double.

## 1.5SMC SERIES

### SURFACE MOUNT TRANSIENT VOLTAGE SUPPRESSOR VOLTAGE-6.8 TO 91 Volts 1500 Watt Peak Pulse Power

#### DO-214AB (SMC J-Bend)



Dimensions in inches and (millimeters)

#### FEATURES

- For surface mounted applications in order to optimize board
- Low profile package
- Built-in strain relief
- Glass passivated junction
- Low inductance
- Excellent clamping capability
- Repetition Rate(duty cycle):0.05%
- Fast response time: typically less than 1.0ps from 0 Volts to BV min.
- Typical IR less than 1mA above 10V
- High temperature soldering: 250°C/10 seconds at terminals

#### MECHANICAL DATA

- Case:** JEDEC DO214AB. Molded plastic over glass passivated junction
- Terminal:** Solder plated, solderable per MIL-STD-750, Method 2026
- Polarity:** Color band denotes positive end (cathode) except Bidirectional
- Standard Packaging:** 16mm tape(EIA STD RS-481)
- Weight:** 0.007ounce, 0.21gram

#### DEVICES FOR BIPOLAR APPLICATION

For Bidirectional use Suffix CA for types 1.5SMC6.8CA thru types 1.5SMC91CA  
Electrical characteristics apply in both directions

#### MAXIMUM RATINGS AND CHARACTERISTICS

Ratings at 25 °C ambient temperature unless otherwise specified.

| RATING  | SYMBOL                            | VALUE           | UNITS |
|---|-----------------------------------|-----------------|-------|
| Peak Pulse Power Dissipation on 10/1000 s waveform (Note 1,FIG.1)   | P <sub>PPM</sub>                  | Minimum<br>1500 | Watts |
| Peak Pulse Current of on 10/1000 s waveform (Note 1,FIG.3)  | I <sub>PPM</sub>                  | SEE<br>TABLE 1  | Amps  |
| Peak Forward Surge Current,8.3ms Single Half Sine-Wave Superimposed on Rated Load,(JEDEC Method) (Note 3) | I <sub>FSM</sub>                  | 200             | Amps  |
| Operating junction and Storage Temperature Range  | T <sub>J</sub> , T <sub>STG</sub> | -55 to +<br>150 |       |

#### Notes :

- 1.Non-repetitive current pulse , per Fig. 3 and derated above T<sub>A</sub> = 25 °C per Fig. 2 .
- 2.Mounted on 8.0mm<sup>2</sup> Copper Pads to each terminal
- 3.8.3ms single half sine-wave , or equivalent square wave, Duty cycle = 4 pulses per minutes maximum.

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## RATINGS AND CHARACTERISTIC CURVES

### Ratings and Characteristic Curves ( $T_A=25^\circ\text{C}$ unless otherwise noted)

