

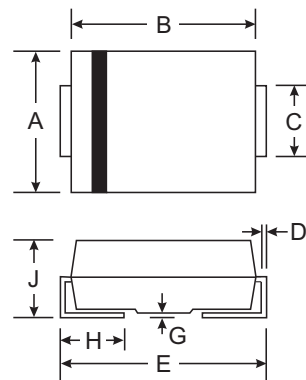
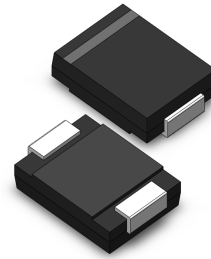
**VOLTAGE RANGE: 6.8 - 440 V**  
**POWER: 1500Watts**

### Features

- Glass Passivated Die Construction
- Uni- and Bi-Directional Versions Available
- Excellent Clamping Capability
- Fast Response Time
- Plastic Case Material has UL Flammability Classification Rating 94V-O

### Mechanical Data

- Case :DO-214AB(SMC)
- Terminals : Solder plated , solderable per MIL-STD-750, method 2026
- Marking: Date Code and Marking Code See Page 2
- Weight: 0.21 grams (approximate)



| SMC/DO-214AB         |      |      |
|----------------------|------|------|
| Dim                  | Min  | Max  |
| A                    | 5.59 | 6.22 |
| B                    | 6.60 | 7.11 |
| C                    | 2.75 | 3.18 |
| D                    | 0.15 | 0.31 |
| E                    | 7.75 | 8.13 |
| G                    | 0.10 | 0.20 |
| H                    | 0.76 | 1.52 |
| J                    | 2.00 | 2.62 |
| All Dimensions in mm |      |      |

### Maximum Ratings @ $T_A = 25^\circ\text{C}$ unless otherwise specified

| Characteristic                                                                                                         | Symbol      | Value       | Unit             |
|------------------------------------------------------------------------------------------------------------------------|-------------|-------------|------------------|
| Peak Pulse Power Dissipation<br>(Non repetitive current pulse derated above $T_A = 25^\circ\text{C}$ ) (Note 1)        | $P_{PK}$    | 1500        | W                |
| Peak Forward Surge Current, 8.3ms Single Half Sine Wave<br>Superimposed on Rated Load (JEDEC Method) (Notes 1, 2, & 3) | $I_{FSM}$   | 200         | A                |
| Steady State Power Dissipation @ $T_L = 75^\circ\text{C}$                                                              | $PM_{(AV)}$ | 5.0         | W                |
| Instantaneous Forward Voltage @ $I_{PP} = 100\text{A}$<br>(Notes 1 & 3)                                                | $V_F$       | See Note 5  | V                |
| Operating Temperature Range                                                                                            | $T_j$       | -55 to +150 | $^\circ\text{C}$ |
| Storage Temperature Range                                                                                              | $T_{STG}$   | -55 to +175 | $^\circ\text{C}$ |

NOTES:1. Non-repetitive current pulse ,per Fig. 3 and derated above  $T_A=25^\circ\text{C}$  per Fig. 1.

2. Thermal Resistance junction to Lead.

3. 8.3ms single half-wave duty cycle=4 pulses per minutes maximum (uni-directional units only).

| TYPE       |             | Reverse Stand-Off Voltage | Breakdown Voltage Min. @I <sub>T</sub> | Breakdown Voltage Max. @ I <sub>T</sub> | Test Current        | Maximum Clamping Voltage @I <sub>PP</sub> | Peak Pulse Current  | Reverse Leakage @V <sub>RWM</sub> |
|------------|-------------|---------------------------|----------------------------------------|-----------------------------------------|---------------------|-------------------------------------------|---------------------|-----------------------------------|
| (UNI)      | (BI)        | V <sub>RWM</sub> (V)      | V <sub>BR MIN</sub> (V)                | V <sub>BR MAX</sub> (V)                 | I <sub>T</sub> (mA) | V <sub>C</sub> (V)                        | I <sub>PP</sub> (A) | I <sub>R</sub> (uA)               |
| 1.5SMC6.8  | 1.5SMC6.8C  | 5.50                      | 6.12                                   | 7.48                                    | 10                  | 10.8                                      | 140.7               | 1000.0                            |
| 1.5SMC6.8A | 1.5SMC6.8CA | 5.80                      | 6.45                                   | 7.14                                    | 10                  | 10.5                                      | 144.8               | 1000.0                            |
| 1.5SMC7.5  | 1.5SMC7.5C  | 6.05                      | 6.75                                   | 8.25                                    | 10                  | 11.7                                      | 129.9               | 500.0                             |
| 1.5SMC7.5A | 1.5SMC7.5CA | 6.40                      | 7.13                                   | 7.88                                    | 10                  | 11.3                                      | 134.5               | 500.0                             |
| 1.5SMC8.2  | 1.5SMC8.2C  | 6.63                      | 7.38                                   | 9.02                                    | 10                  | 12.5                                      | 121.6               | 200.0                             |
| 1.5SMC8.2A | 1.5SMC8.2CA | 7.02                      | 7.79                                   | 8.61                                    | 10                  | 12.1                                      | 125.6               | 200.0                             |
| 1.5SMC9.1  | 1.5SMC9.1C  | 7.37                      | 8.19                                   | 10.0                                    | 1.0                 | 13.8                                      | 110.1               | 50.0                              |
| 1.5SMC9.1A | 1.5SMC9.1CA | 7.78                      | 8.65                                   | 9.55                                    | 1.0                 | 13.4                                      | 113.4               | 50.0                              |
| 1.5SMC10   | 1.5SMC10C   | 8.10                      | 9.00                                   | 11.0                                    | 1.0                 | 15.0                                      | 101.3               | 10.0                              |
| 1.5SMC10A  | 1.5SMC10CA  | 8.55                      | 9.50                                   | 10.5                                    | 1.0                 | 14.5                                      | 104.8               | 10.0                              |
| 1.5SMC11   | 1.5SMC11C   | 8.92                      | 9.90                                   | 12.1                                    | 1.0                 | 16.2                                      | 93.8                | 5.0                               |
| 1.5SMC11A  | 1.5SMC11CA  | 9.40                      | 10.5                                   | 11.6                                    | 1.0                 | 15.6                                      | 97.4                | 5.0                               |
| 1.5SMC12   | 1.5SMC12C   | 9.72                      | 10.8                                   | 13.2                                    | 1.0                 | 17.3                                      | 87.9                | 5.0                               |
| 1.5SMC12A  | 1.5SMC12CA  | 10.2                      | 11.4                                   | 12.6                                    | 1.0                 | 16.7                                      | 91.0                | 5.0                               |
| 1.5SMC13   | 1.5SMC13C   | 10.5                      | 11.7                                   | 14.3                                    | 1.0                 | 19.0                                      | 80.0                | 5.0                               |
| 1.5SMC13A  | 1.5SMC13CA  | 11.1                      | 12.4                                   | 13.7                                    | 1.0                 | 18.2                                      | 83.5                | 5.0                               |
| 1.5SMC15   | 1.5SMC15C   | 12.1                      | 13.5                                   | 16.5                                    | 1.0                 | 22.0                                      | 69.1                | 5.0                               |
| 1.5SMC15A  | 1.5SMC15CA  | 12.8                      | 14.3                                   | 15.8                                    | 1.0                 | 21.2                                      | 71.7                | 5.0                               |
| 1.5SMC16   | 1.5SMC16C   | 12.9                      | 14.4                                   | 17.6                                    | 1.0                 | 23.5                                      | 64.7                | 5.0                               |
| 1.5SMC16A  | 1.5SMC16CA  | 13.6                      | 15.2                                   | 16.8                                    | 1.0                 | 22.5                                      | 67.6                | 5.0                               |
| 1.5SMC18   | 1.5SMC18C   | 14.5                      | 16.2                                   | 19.8                                    | 1.0                 | 26.5                                      | 57.4                | 5.0                               |
| 1.5SMC18A  | 1.5SMC18CA  | 15.3                      | 17.1                                   | 18.9                                    | 1.0                 | 25.2                                      | 60.3                | 5.0                               |
| 1.5SMC20   | 1.5SMC20C   | 16.2                      | 18.0                                   | 22.0                                    | 1.0                 | 29.1                                      | 52.2                | 5.0                               |
| 1.5SMC20A  | 1.5SMC20CA  | 17.1                      | 19.0                                   | 21.0                                    | 1.0                 | 27.7                                      | 54.9                | 5.0                               |
| 1.5SMC22   | 1.5SMC22C   | 17.8                      | 19.8                                   | 24.2                                    | 1.0                 | 31.9                                      | 47.6                | 5.0                               |
| 1.5SMC22A  | 1.5SMC22CA  | 18.8                      | 20.9                                   | 23.1                                    | 1.0                 | 30.6                                      | 49.7                | 5.0                               |
| 1.5SMC24   | 1.5SMC24C   | 19.4                      | 21.6                                   | 26.4                                    | 1.0                 | 34.7                                      | 43.8                | 5.0                               |
| 1.5SMC24A  | 1.5SMC24CA  | 20.5                      | 22.8                                   | 25.2                                    | 1.0                 | 33.2                                      | 45.8                | 5.0                               |
| 1.5SMC27   | 1.5SMC27C   | 21.8                      | 24.3                                   | 29.7                                    | 1.0                 | 39.1                                      | 38.9                | 5.0                               |
| 1.5SMC27A  | 1.5SMC27CA  | 23.1                      | 25.7                                   | 28.4                                    | 1.0                 | 37.5                                      | 40.5                | 5.0                               |
| 1.5SMC30   | 1.5SMC30C   | 24.3                      | 27.0                                   | 33.0                                    | 1.0                 | 43.5                                      | 34.9                | 5.0                               |
| 1.5SMC30A  | 1.5SMC30CA  | 25.6                      | 28.5                                   | 31.5                                    | 1.0                 | 41.4                                      | 36.7                | 5.0                               |
| 1.5SMC33   | 1.5SMC33C   | 26.8                      | 29.7                                   | 36.3                                    | 1.0                 | 47.7                                      | 31.9                | 5.0                               |
| 1.5SMC33A  | 1.5SMC33CA  | 28.2                      | 31.4                                   | 34.7                                    | 1.0                 | 45.7                                      | 33.3                | 5.0                               |
| 1.5SMC36   | 1.5SMC36C   | 29.1                      | 32.4                                   | 39.6                                    | 1.0                 | 52.0                                      | 29.2                | 5.0                               |
| 1.5SMC36A  | 1.5SMC36CA  | 30.8                      | 34.2                                   | 37.8                                    | 1.0                 | 49.9                                      | 30.5                | 5.0                               |
| 1.5SMC39   | 1.5SMC39C   | 31.6                      | 35.1                                   | 42.9                                    | 1.0                 | 56.4                                      | 27.0                | 5.0                               |
| 1.5SMC39A  | 1.5SMC39CA  | 33.3                      | 37.1                                   | 41.0                                    | 1.0                 | 53.9                                      | 28.2                | 5.0                               |
| 1.5SMC43   | 1.5SMC43C   | 34.8                      | 38.7                                   | 47.3                                    | 1.0                 | 61.9                                      | 24.6                | 5.0                               |
| 1.5SMC43A  | 1.5SMC43CA  | 36.8                      | 40.9                                   | 45.2                                    | 1.0                 | 59.3                                      | 25.6                | 5.0                               |
| 1.5SMC47   | 1.5SMC47C   | 38.1                      | 42.3                                   | 51.7                                    | 1.0                 | 67.8                                      | 22.4                | 5.0                               |
| 1.5SMC47A  | 1.5SMC47CA  | 40.2                      | 44.7                                   | 49.4                                    | 1.0                 | 64.8                                      | 23.5                | 5.0                               |
| 1.5SMC51   | 1.5SMC51C   | 41.3                      | 45.9                                   | 56.1                                    | 1.0                 | 73.5                                      | 20.7                | 5.0                               |
| 1.5SMC51A  | 1.5SMC51CA  | 43.6                      | 48.5                                   | 53.6                                    | 1.0                 | 70.1                                      | 21.7                | 5.0                               |
| 1.5SMC56   | 1.5SMC56C   | 45.4                      | 50.4                                   | 61.6                                    | 1.0                 | 80.5                                      | 18.9                | 5.0                               |
| 1.5SMC56A  | 1.5SMC56CA  | 47.8                      | 53.2                                   | 58.8                                    | 1.0                 | 77.0                                      | 19.7                | 5.0                               |

| TYPE       |             | Reverse Stand-Off Voltage | Breakdown Voltage Min. @I <sub>T</sub> | Breakdown Voltage Max. @ I <sub>T</sub> | Test Current        | Maximum Clamping Voltage @I <sub>PP</sub> | Peak Pulse Current  | Reverse Leakage @V <sub>RWM</sub> |
|------------|-------------|---------------------------|----------------------------------------|-----------------------------------------|---------------------|-------------------------------------------|---------------------|-----------------------------------|
| (UNI)      | (BI)        | V <sub>RWM</sub> (V)      | V <sub>BR MIN</sub> (V)                | V <sub>BR MAX</sub> (V)                 | I <sub>T</sub> (mA) | V <sub>C</sub> (V)                        | I <sub>PP</sub> (A) | I <sub>R</sub> (uA)               |
| 1.5SMC62   | 1.5SMC62C   | 50.2                      | 55.8                                   | 68.2                                    | 1.0                 | 89.0                                      | 17.1                | 5.0                               |
| 1.5SMC62A  | 1.5SMC62CA  | 53.0                      | 58.9                                   | 65.1                                    | 1.0                 | 85.0                                      | 17.9                | 5.0                               |
| 1.5SMC68   | 1.5SMC68C   | 55.1                      | 61.2                                   | 74.8                                    | 1.0                 | 98.0                                      | 13.5                | 5.0                               |
| 1.5SMC68A  | 1.5SMC68CA  | 58.1                      | 64.6                                   | 71.4                                    | 1.0                 | 92.0                                      | 16.5                | 5.0                               |
| 1.5SMC75   | 1.5SMC75C   | 60.7                      | 67.5                                   | 82.5                                    | 1.0                 | 108                                       | 14.1                | 5.0                               |
| 1.5SMC75A  | 1.5SMC75CA  | 64.1                      | 71.3                                   | 78.8                                    | 1.0                 | 103                                       | 14.8                | 5.0                               |
| 1.5SMC82   | 1.5SMC82C   | 66.4                      | 73.8                                   | 90.2                                    | 1.0                 | 118                                       | 12.9                | 5.0                               |
| 1.5SMC82A  | 1.5SMC82CA  | 70.1                      | 77.9                                   | 86.1                                    | 1.0                 | 113                                       | 13.5                | 5.0                               |
| 1.5SMC91   | 1.5SMC91C   | 73.7                      | 81.9                                   | 100                                     | 1.0                 | 131                                       | 11.6                | 5.0                               |
| 1.5SMC91A  | 1.5SMC91CA  | 77.8                      | 86.5                                   | 95.5                                    | 1.0                 | 125                                       | 12.2                | 5.0                               |
| 1.5SMC100  | 1.5SMC100C  | 81.0                      | 90.0                                   | 110                                     | 1.0                 | 144                                       | 10.6                | 5.0                               |
| 1.5SMC100A | 1.5SMC100CA | 85.5                      | 95.0                                   | 105                                     | 1.0                 | 137                                       | 11.1                | 5.0                               |
| 1.5SMC110  | 1.5SMC110C  | 89.2                      | 99.0                                   | 121                                     | 1.0                 | 158                                       | 9.6                 | 5.0                               |
| 1.5SMC110A | 1.5SMC110CA | 94.0                      | 105                                    | 116                                     | 1.0                 | 152                                       | 10.0                | 5.0                               |
| 1.5SMC120  | 1.5SMC120C  | 97.2                      | 108                                    | 132                                     | 1.0                 | 173                                       | 8.7                 | 5.0                               |
| 1.5SMC120A | 1.5SMC120CA | 102                       | 114                                    | 126                                     | 1.0                 | 165                                       | 9.2                 | 5.0                               |
| 1.5SMC130  | 1.5SMC130C  | 105                       | 117                                    | 143                                     | 1.0                 | 187                                       | 8.1                 | 5.0                               |
| 1.5SMC130A | 1.5SMC130CA | 111                       | 124                                    | 137                                     | 1.0                 | 179                                       | 8.5                 | 5.0                               |
| 1.5SMC150  | 1.5SMC150C  | 121                       | 135                                    | 165                                     | 1.0                 | 215                                       | 7.1                 | 5.0                               |
| 1.5SMC150A | 1.5SMC150CA | 128                       | 143                                    | 158                                     | 1.0                 | 207                                       | 7.3                 | 5.0                               |
| 1.5SMC160  | 1.5SMC160C  | 130                       | 144                                    | 176                                     | 1.0                 | 230                                       | 6.6                 | 5.0                               |
| 1.5SMC160A | 1.5SMC160CA | 136                       | 152                                    | 168                                     | 1.0                 | 219                                       | 6.9                 | 5.0                               |
| 1.5SMC170  | 1.5SMC170C  | 138                       | 153                                    | 187                                     | 1.0                 | 244                                       | 6.2                 | 5.0                               |
| 1.5SMC170A | 1.5SMC170CA | 145                       | 162                                    | 179                                     | 1.0                 | 234                                       | 6.5                 | 5.0                               |
| 1.5SMC180  | 1.5SMC180C  | 146                       | 162                                    | 198                                     | 1.0                 | 258                                       | 5.9                 | 5.0                               |
| 1.5SMC180A | 1.5SMC180CA | 154                       | 171                                    | 189                                     | 1.0                 | 246                                       | 6.2                 | 5.0                               |
| 1.5SMC200  | 1.5SMC200C  | 162                       | 180                                    | 220                                     | 1.0                 | 287                                       | 5.3                 | 5.0                               |
| 1.5SMC200A | 1.5SMC200CA | 171                       | 190                                    | 210                                     | 1.0                 | 274                                       | 5.5                 | 5.0                               |
| 1.5SMC220  | 1.5SMC220C  | 175                       | 198                                    | 242                                     | 1.0                 | 344                                       | 4.4                 | 5.0                               |
| 1.5SMC220A | 1.5SMC220CA | 185                       | 209                                    | 231                                     | 1.0                 | 328                                       | 4.6                 | 5.0                               |
| 1.5SMC250  | 1.5SMC250C  | 202                       | 225                                    | 275                                     | 1.0                 | 360                                       | 4.2                 | 5.0                               |
| 1.5SMC250A | 1.5SMC250CA | 214                       | 237                                    | 263                                     | 1.0                 | 344                                       | 4.4                 | 5.0                               |
| 1.5SMC300  | 1.5SMC300C  | 243                       | 270                                    | 330                                     | 1.0                 | 430                                       | 3.5                 | 5.0                               |
| 1.5SMC300A | 1.5SMC300CA | 256                       | 285                                    | 315                                     | 1.0                 | 414                                       | 3.7                 | 5.0                               |
| 1.5SMC350  | 1.5SMC350C  | 284                       | 315                                    | 385                                     | 1.0                 | 504                                       | 3.0                 | 5.0                               |
| 1.5SMC350A | 1.5SMC350CA | 300                       | 333                                    | 368                                     | 1.0                 | 482                                       | 3.2                 | 5.0                               |
| 1.5SMC400  | 1.5SMC400C  | 324                       | 360                                    | 440                                     | 1.0                 | 574                                       | 2.6                 | 5.0                               |
| 1.5SMC400A | 1.5SMC400CA | 342                       | 380                                    | 420                                     | 1.0                 | 548                                       | 2.8                 | 5.0                               |
| 1.5SMC440  | 1.5SMC440C  | 356                       | 396                                    | 484                                     | 1.0                 | 631                                       | 2.4                 | 5.0                               |
| 1.5SMC440A | 1.5SMC440CA | 376                       | 418                                    | 462                                     | 1.0                 | 600                                       | 2.5                 | 5.0                               |

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

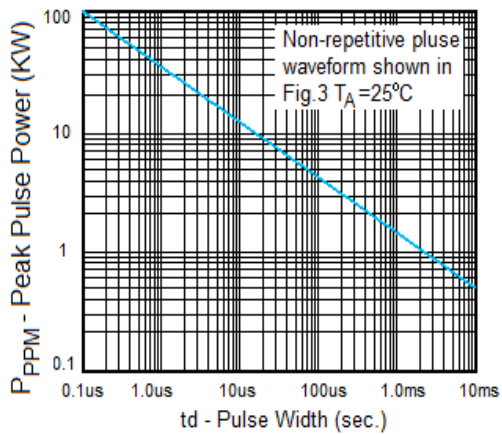


Fig. 1 Peak Pulse Power Rating

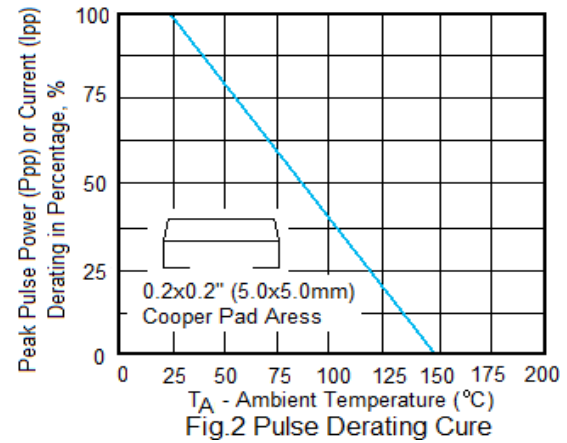


Fig.2 Pulse Derating Curve

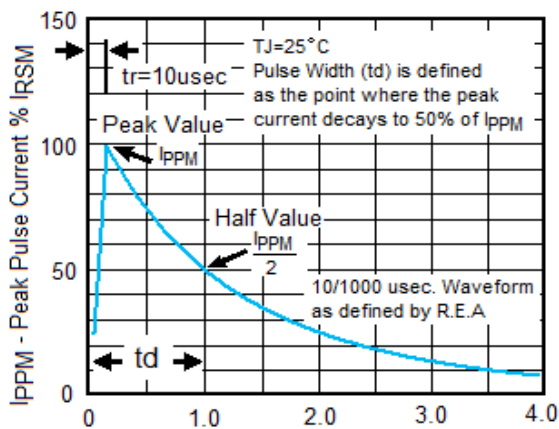


Fig.3 Pulse Waveform

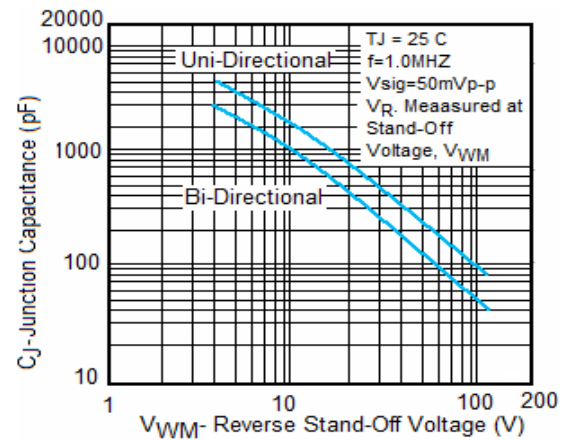


Fig. 4- Typical Junction Capacitance