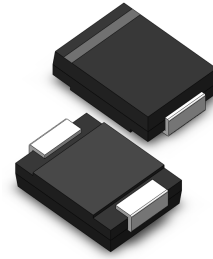


**VOLTAGE RANGE: 6.8 - 440V**  
**POWER: 3000Watts**

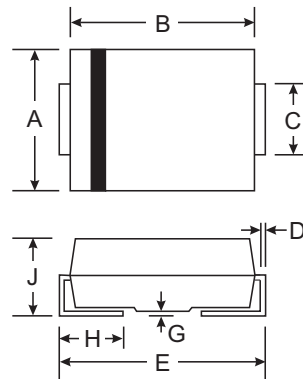
### Features

- 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 |      |      |



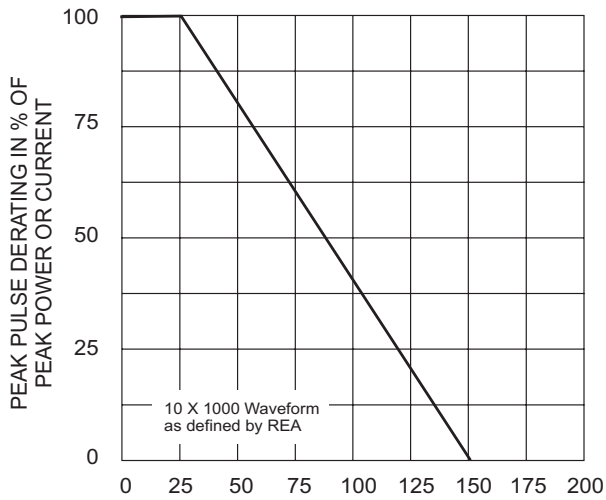
### Maximum Ratings and Electrical Characteristics @ $T_A=25^\circ\text{C}$ unless otherwise specified

| Characteristic   | Symbol         | Value       | Unit             |
|--|----------------|-------------|------------------|
| Peak Pulse Power Dissipation 10/1000 $\mu\text{S}$ Waveform (Note 1, 2) Figure 3                             | PPPM           | 3000        | W                |
| Peak Pulse Current on 10/1000 $\mu\text{S}$ Waveform (Note 1) Figure 4                                       | IPPM           | See Table 1 | A                |
| Peak Forward Surge Current 8.3ms Single Half Sine-Wave Superimposed on Rated Load (JEDEC Method) (Note 2, 3) | IFSM           | 100         | A                |
| Operating and Storage Temperature Range  | $T_j, T_{STG}$ | -55 to +150 | $^\circ\text{C}$ |

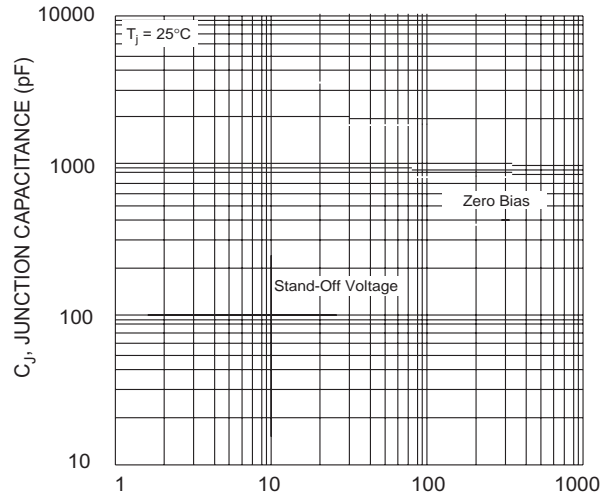
- Note: 1. Non-repetitive current pulse, per Figure 4 and derated above  $T_A = 25^\circ\text{C}$  per Figure 1.  
 2. Mounted on 8.0mm<sup>2</sup> copper pads to each terminal.  
 3. Measured on 8.3ms single half sine-wave or equivalent square wave, duty cycle = 4 pulses per minutes maximum.

| 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> (μA)               |
| 3.0SMC6.8  | 3.0SMC6.8C  | 5.50                      | 6.12                                   | 7.48                                    | 10.0                | 10.8                                      | 277.8               | 1000.0                            |
| 3.0SMC6.8A | 3.0SMC6.8CA | 5.80                      | 6.45                                   | 7.14                                    | 10.0                | 10.5                                      | 285.7               | 1000.0                            |
| 3.0SMC7.5  | 3.0SMC7.5C  | 6.05                      | 6.75                                   | 8.25                                    | 10.0                | 11.7                                      | 256.4               | 500.0                             |
| 3.0SMC7.5A | 3.0SMC7.5CA | 6.40                      | 7.13                                   | 7.88                                    | 10.0                | 11.3                                      | 265.5               | 500.0                             |
| 3.0SMC8.2  | 3.0SMC8.2C  | 6.63                      | 7.38                                   | 9.02                                    | 10.0                | 12.5                                      | 240.0               | 200.0                             |
| 3.0SMC8.2A | 3.0SMC8.2CA | 7.02                      | 7.79                                   | 8.61                                    | 10.0                | 12.1                                      | 247.9               | 200.0                             |
| 3.0SMC9.1  | 3.0SMC9.1C  | 7.37                      | 8.19                                   | 10.0                                    | 1.0                 | 13.8                                      | 217.4               | 50.0                              |
| 3.0SMC9.1A | 3.0SMC9.1CA | 7.78                      | 8.65                                   | 9.55                                    | 1.0                 | 13.4                                      | 223.9               | 50.0                              |
| 3.0SMC10   | 3.0SMC10C   | 8.10                      | 9.00                                   | 11.0                                    | 1.0                 | 15.0                                      | 200.0               | 10.0                              |
| 3.0SMC10A  | 3.0SMC10CA  | 8.55                      | 9.50                                   | 10.5                                    | 1.0                 | 14.5                                      | 206.9               | 10.0                              |
| 3.0SMC11   | 3.0SMC11C   | 8.92                      | 9.90                                   | 12.1                                    | 1.0                 | 16.2                                      | 185.2               | 5.0                               |
| 3.0SMC11A  | 3.0SMC11CA  | 9.40                      | 10.5                                   | 11.6                                    | 1.0                 | 15.6                                      | 192.3               | 5.0                               |
| 3.0SMC12   | 3.0SMC12C   | 9.72                      | 10.8                                   | 13.2                                    | 1.0                 | 17.3                                      | 173.4               | 5.0                               |
| 3.0SMC12A  | 3.0SMC12CA  | 10.2                      | 11.4                                   | 12.6                                    | 1.0                 | 16.7                                      | 179.6               | 5.0                               |
| 3.0SMC13   | 3.0SMC13C   | 10.5                      | 11.7                                   | 14.3                                    | 1.0                 | 19.0                                      | 157.9               | 5.0                               |
| 3.0SMC13A  | 3.0SMC13CA  | 11.1                      | 12.4                                   | 13.7                                    | 1.0                 | 18.2                                      | 164.8               | 5.0                               |
| 3.0SMC15   | 3.0SMC15C   | 12.1                      | 13.5                                   | 16.5                                    | 1.0                 | 22.0                                      | 136.4               | 5.0                               |
| 3.0SMC15A  | 3.0SMC15CA  | 12.8                      | 14.3                                   | 15.8                                    | 1.0                 | 21.2                                      | 141.5               | 5.0                               |
| 3.0SMC16   | 3.0SMC16C   | 12.9                      | 14.4                                   | 17.6                                    | 1.0                 | 23.5                                      | 127.7               | 5.0                               |
| 3.0SMC16A  | 3.0SMC16CA  | 13.6                      | 15.2                                   | 16.8                                    | 1.0                 | 22.5                                      | 133.3               | 5.0                               |
| 3.0SMC18   | 3.0SMC18C   | 14.5                      | 16.2                                   | 19.8                                    | 1.0                 | 26.5                                      | 113.2               | 5.0                               |
| 3.0SMC18A  | 3.0SMC18CA  | 15.3                      | 17.1                                   | 18.9                                    | 1.0                 | 25.2                                      | 119.0               | 5.0                               |
| 3.0SMC20   | 3.0SMC20CA  | 16.2                      | 18.0                                   | 22.0                                    | 1.0                 | 29.1                                      | 103.1               | 5.0                               |
| 3.0SMC20A  | 3.0SMC20CA  | 17.1                      | 19.0                                   | 21.0                                    | 1.0                 | 27.7                                      | 108.3               | 5.0                               |
| 3.0SMC22   | 3.0SMC22C   | 17.8                      | 19.8                                   | 24.2                                    | 1.0                 | 31.9                                      | 94.0                | 5.0                               |
| 3.0SMC22A  | 3.0SMC22CA  | 18.8                      | 20.9                                   | 23.1                                    | 1.0                 | 30.6                                      | 98.0                | 5.0                               |
| 3.0SMC24   | 3.0SMC24C   | 19.4                      | 21.6                                   | 26.4                                    | 1.0                 | 34.7                                      | 86.5                | 5.0                               |
| 3.0SMC24A  | 3.0SMC24CA  | 20.5                      | 22.8                                   | 25.2                                    | 1.0                 | 33.2                                      | 90.4                | 5.0                               |
| 3.0SMC27   | 3.0SMC27C   | 21.8                      | 24.3                                   | 29.7                                    | 1.0                 | 39.1                                      | 76.7                | 5.0                               |
| 3.0SMC27A  | 3.0SMC27CA  | 23.1                      | 25.7                                   | 28.4                                    | 1.0                 | 37.5                                      | 80.0                | 5.0                               |
| 3.0SMC30   | 3.0SMC30C   | 24.3                      | 27.0                                   | 33.0                                    | 1.0                 | 43.5                                      | 69.0                | 5.0                               |
| 3.0SMC30A  | 3.0SMC30CA  | 25.6                      | 28.5                                   | 31.5                                    | 1.0                 | 41.4                                      | 72.5                | 5.0                               |
| 3.0SMC33   | 3.0SMC33C   | 26.8                      | 29.7                                   | 36.3                                    | 1.0                 | 47.7                                      | 62.9                | 5.0                               |
| 3.0SMC33A  | 3.0SMC33CA  | 28.2                      | 31.4                                   | 34.7                                    | 1.0                 | 45.7                                      | 65.6                | 5.0                               |
| 3.0SMC36   | 3.0SMC36C   | 29.1                      | 32.4                                   | 39.6                                    | 1.0                 | 52.0                                      | 57.7                | 5.0                               |
| 3.0SMC36A  | 3.0SMC36CA  | 30.8                      | 34.2                                   | 37.8                                    | 1.0                 | 49.9                                      | 60.1                | 5.0                               |
| 3.0SMC39   | 3.0SMC39C   | 31.6                      | 35.1                                   | 42.9                                    | 1.0                 | 56.4                                      | 53.2                | 5.0                               |
| 3.0SMC39A  | 3.0SMC39CA  | 33.3                      | 37.1                                   | 41.0                                    | 1.0                 | 53.9                                      | 55.7                | 5.0                               |
| 3.0SMC43   | 3.0SMC43C   | 34.8                      | 38.7                                   | 47.3                                    | 1.0                 | 61.9                                      | 48.5                | 5.0                               |
| 3.0SMC43A  | 3.0SMC43CA  | 36.8                      | 40.9                                   | 45.2                                    | 1.0                 | 59.3                                      | 50.6                | 5.0                               |
| 3.0SMC47   | 3.0SMC47C   | 38.1                      | 42.3                                   | 51.7                                    | 1.0                 | 67.8                                      | 44.2                | 5.0                               |
| 3.0SMC47A  | 3.0SMC47CA  | 40.2                      | 44.7                                   | 49.4                                    | 1.0                 | 64.8                                      | 46.3                | 5.0                               |
| 3.0SMC51   | 3.0SMC51C   | 41.3                      | 45.9                                   | 56.1                                    | 1.0                 | 73.5                                      | 40.8                | 5.0                               |
| 3.0SMC51A  | 3.0SMC51CA  | 43.6                      | 48.5                                   | 53.6                                    | 1.0                 | 70.1                                      | 42.8                | 5.0                               |

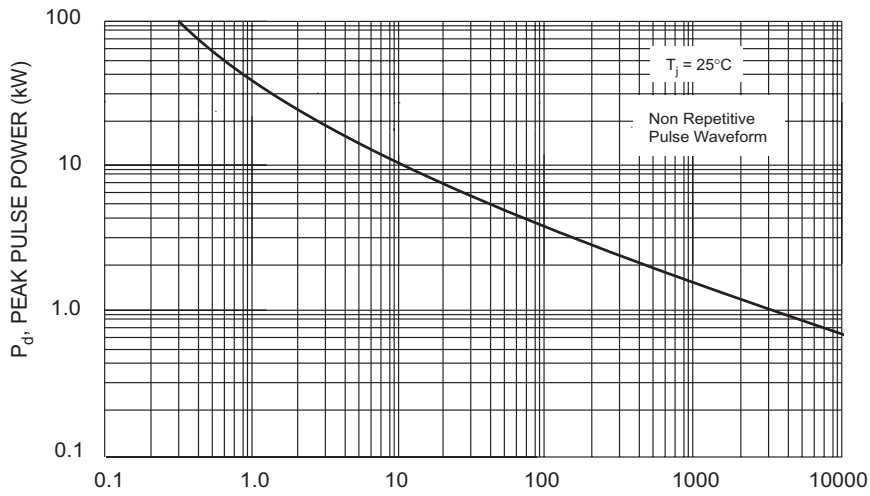
| TYPE       |             | Reverse Stand-Off Voltage | Breakdown Voltage Min. @I <sub>T</sub> | Breakdown Voltage Max. @ I <sub>T</sub> | Test Current        | Maximum Clamping Voltage @I <sub>PP</sub> | Peak Pulse Current  | Reverse Leakage @V <sub>RWM</sub> |
|------------|-------------|---------------------------|--|---|---------------------|---|---------------------|-----------------------------------|
| (UNI)      | (BI)        | V <sub>RWM</sub> (V)      | V <sub>BR</sub> MIN(V)                 | V <sub>BR</sub> MAX(V)                  | I <sub>T</sub> (mA) | V <sub>C</sub> (V)                        | I <sub>PP</sub> (A) | I <sub>R</sub> (uA)               |
| 3.0SMC56   | 3.0SMC56C   | 45.4                      | 50.4                                   | 61.6                                    | 1.0                 | 80.5                                      | 37.3                | 5.0                               |
| 3.0SMC56A  | 3.0SMC56CA  | 47.8                      | 53.2                                   | 58.8                                    | 1.0                 | 77.0                                      | 39.0                | 5.0                               |
| 3.0SMC62   | 3.0SMC62C   | 50.2                      | 55.8                                   | 68.2                                    | 1.0                 | 89.0                                      | 33.7                | 5.0                               |
| 3.0SMC62A  | 3.0SMC62CA  | 53.0                      | 58.9                                   | 65.1                                    | 1.0                 | 85.0                                      | 35.3                | 5.0                               |
| 3.0SMC68   | 3.0SMC68C   | 55.1                      | 61.2                                   | 74.8                                    | 1.0                 | 98.0                                      | 30.6                | 5.0                               |
| 3.0SMC68A  | 3.0SMC68CA  | 58.1                      | 64.6                                   | 71.4                                    | 1.0                 | 92.0                                      | 32.6                | 5.0                               |
| 3.0SMC75   | 3.0SMC75C   | 60.7                      | 67.5                                   | 82.5                                    | 1.0                 | 108                                       | 27.8                | 5.0                               |
| 3.0SMC75A  | 3.0SMC75CA  | 64.1                      | 71.3                                   | 78.8                                    | 1.0                 | 103                                       | 29.1                | 5.0                               |
| 3.0SMC82   | 3.0SMC82C   | 66.4                      | 73.8                                   | 90.2                                    | 1.0                 | 118                                       | 25.4                | 5.0                               |
| 3.0SMC82A  | 3.0SMC82CA  | 70.1                      | 77.9                                   | 86.1                                    | 1.0                 | 113                                       | 26.5                | 5.0                               |
| 3.0SMC91   | 3.0SMC91C   | 73.7                      | 81.9                                   | 100                                     | 1.0                 | 131                                       | 22.9                | 5.0                               |
| 3.0SMC91A  | 3.0SMC91CA  | 77.8                      | 86.5                                   | 95.5                                    | 1.0                 | 125                                       | 24.0                | 5.0                               |
| 3.0SMC100  | 3.0SMC100C  | 81.0                      | 90.0                                   | 110                                     | 1.0                 | 144                                       | 20.8                | 5.0                               |
| 3.0SMC100A | 3.0SMC100CA | 85.5                      | 95.0                                   | 105                                     | 1.0                 | 137                                       | 21.9                | 5.0                               |
| 3.0SMC110  | 3.0SMC110C  | 89.2                      | 99.0                                   | 121                                     | 1.0                 | 158                                       | 19.0                | 5.0                               |
| 3.0SMC110A | 3.0SMC110CA | 94.0                      | 105                                    | 116                                     | 1.0                 | 152                                       | 19.7                | 5.0                               |
| 3.0SMC120  | 3.0SMC120C  | 97.2                      | 108                                    | 132                                     | 1.0                 | 173                                       | 17.3                | 5.0                               |
| 3.0SMC120A | 3.0SMC120CA | 102                       | 114                                    | 126                                     | 1.0                 | 165                                       | 18.2                | 5.0                               |
| 3.0SMC130  | 3.0SMC130C  | 105                       | 117                                    | 143                                     | 1.0                 | 187                                       | 16.0                | 5.0                               |
| 3.0SMC130A | 3.0SMC130CA | 111                       | 124                                    | 137                                     | 1.0                 | 179                                       | 16.8                | 5.0                               |
| 3.0SMC150  | 3.0SMC150C  | 121                       | 135                                    | 165                                     | 1.0                 | 215                                       | 14.0                | 5.0                               |
| 3.0SMC150A | 3.0SMC150CA | 128                       | 143                                    | 158                                     | 1.0                 | 207                                       | 14.5                | 5.0                               |
| 3.0SMC160  | 3.0SMC160C  | 130                       | 144                                    | 176                                     | 1.0                 | 230                                       | 13.0                | 5.0                               |
| 3.0SMC160A | 3.0SMC160CA | 136                       | 152                                    | 168                                     | 1.0                 | 219                                       | 13.7                | 5.0                               |
| 3.0SMC170  | 3.0SMC170C  | 138                       | 153                                    | 187                                     | 1.0                 | 244                                       | 12.3                | 5.0                               |
| 3.0SMC170A | 3.0SMC170CA | 145                       | 162                                    | 179                                     | 1.0                 | 234                                       | 12.8                | 5.0                               |
| 3.0SMC180  | 3.0SMC180C  | 146                       | 162                                    | 198                                     | 1.0                 | 258                                       | 11.6                | 5.0                               |
| 3.0SMC180A | 3.0SMC180CA | 154                       | 171                                    | 189                                     | 1.0                 | 246                                       | 12.2                | 5.0                               |
| 3.0SMC200  | 3.0SMC200C  | 162                       | 180                                    | 220                                     | 1.0                 | 287                                       | 10.5                | 5.0                               |
| 3.0SMC200A | 3.0SMC200CA | 171                       | 190                                    | 210                                     | 1.0                 | 274                                       | 10.9                | 5.0                               |
| 3.0SMC220  | 3.0SMC220C  | 175                       | 198                                    | 242                                     | 1.0                 | 344                                       | 8.7                 | 5.0                               |
| 3.0SMC220A | 3.0SMC220CA | 185                       | 209                                    | 231                                     | 1.0                 | 328                                       | 9.1                 | 5.0                               |
| 3.0SMC250  | 3.0SMC250C  | 202                       | 225                                    | 275                                     | 1.0                 | 360                                       | 8.3                 | 5.0                               |
| 3.0SMC250A | 3.0SMC250CA | 214                       | 237                                    | 263                                     | 1.0                 | 344                                       | 8.7                 | 5.0                               |
| 3.0SMC300  | 3.0SMC300C  | 243                       | 270                                    | 330                                     | 1.0                 | 430                                       | 7.0                 | 5.0                               |
| 3.0SMC300A | 3.0SMC300CA | 256                       | 285                                    | 315                                     | 1.0                 | 414                                       | 7.2                 | 5.0                               |
| 3.0SMC350  | 3.0SMC350C  | 284                       | 315                                    | 385                                     | 1.0                 | 504                                       | 6.0                 | 5.0                               |
| 3.0SMC350A | 3.0SMC350CA | 300                       | 333                                    | 368                                     | 1.0                 | 482                                       | 6.2                 | 5.0                               |
| 3.0SMC400  | 3.0SMC400C  | 324                       | 360                                    | 440                                     | 1.0                 | 574                                       | 5.2                 | 5.0                               |
| 3.0SMC400A | 3.0SMC400CA | 342                       | 380                                    | 420                                     | 1.0                 | 548                                       | 5.5                 | 5.0                               |
| 3.0SMC440  | 3.0SMC440C  | 356                       | 396                                    | 484                                     | 1.0                 | 631                                       | 4.8                 | 5.0                               |
| 3.0SMC440A | 3.0SMC440CA | 376                       | 418                                    | 462                                     | 1.0                 | 600                                       | 5.0                 | 5.0                               |



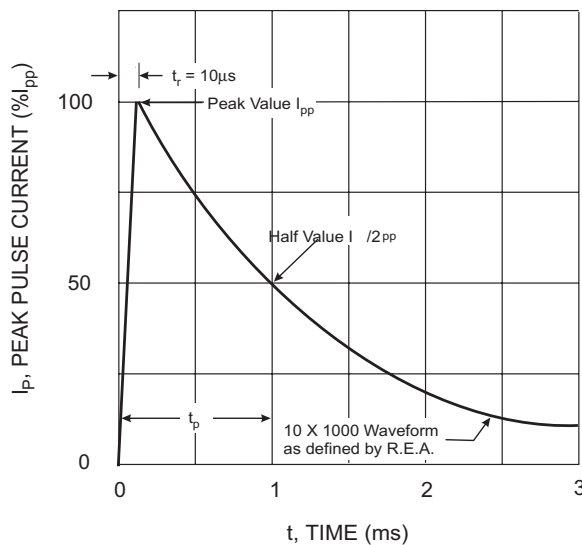
$T_A$ , AMBIENT TEMPERATURE ( $^{\circ}C$ )  
Fig. 1 Pulse Derating Curve



$V_{WM}$ , STANDOFF VOLTAGE (V)  
Fig. 2 Typical Junction Capacitance



$t_p$  PULSE WIDTH ( $\mu s$ )  
Fig. 3 Pulse Rating Curve



t, TIME (ms)  
Fig. 4 Pulse Waveform