

**SURFACE MOUNT TRANSIENT VOLTAGE SUPPRESSOR**  
**VOLTAGE - 11 TO 170 Volts**  
**5000Watts Peak Pulse Power**

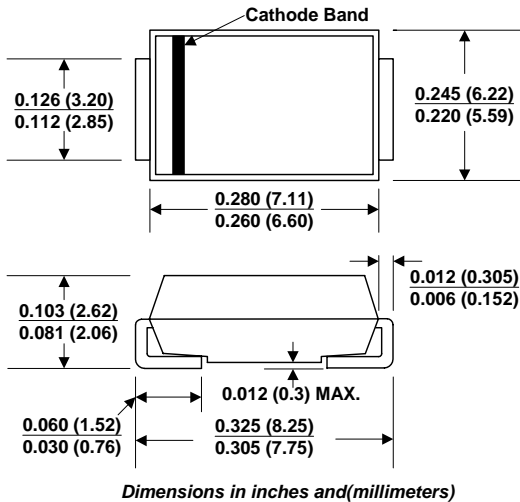
" \* " 标注为常用型号  
 " \* " Stand for commonly used models

| 5.0SMDJ<br>PART NUMBER | DEVICE<br>MARKING CODE |          | REVERSE<br>STAND-<br>OFF<br>VOLTAGE<br>V <sub>RWM</sub> (V) | BREAKDOWN<br>VOLTAGE<br>V <sub>BR</sub> (V)<br>MIN.@I <sub>T</sub> | BREAKDOWN<br>VOLTAGE<br>V <sub>BR</sub> (V)<br>MAX.@I <sub>T</sub> | TEST<br>CURRENT<br>I <sub>T</sub> (mA) | MAXIMUM<br>CLAMPING<br>VOLTAGE<br>@I <sub>pp</sub> V <sub>c</sub> (V) | PEAK<br>PULSE<br>CURRENT<br>I <sub>pp</sub> (A) | REVERSE<br>LEAKAGE<br>@ V <sub>RWM</sub><br>I <sub>R</sub> (μA) |
|------------------------|------------------------|----------|---|--|--|--|---|---|---|
|                        | Uni-polar              | Bi-polar |   |  |  |  |   |   |   |
| 5.0SMDJ 11A-CA         | 5PEN                   | 5BEN     | 11.0  | 12.20  | 13.50  | 10                                     | 18.2  | 275.00  | 800   |
| 5.0SMDJ 12A-CA         | 5PEP                   | 5BEP     | 12.0  | 13.30  | 14.70  | 10                                     | 19.9  | 252.00  | 800   |
| 5.0SMDJ 13A-CA         | 5PEQ                   | 5BEQ     | 13.0  | 14.40  | 15.90  | 10                                     | 21.5  | 233.00  | 500   |
| 5.0SMDJ 14A-CA         | 5PER                   | 5BER     | 14.0  | 15.60  | 17.20  | 10                                     | 23.2  | 216.00  | 200   |
| 5.0SMDJ 15A-CA         | 5PES                   | 5BES     | 15.0  | 16.70  | 18.50  | 1                                      | 24.4  | 205.00  | 100   |
| 5.0SMDJ 16A-CA         | 5PET                   | 5BET     | 16.0  | 17.80  | 19.70  | 1                                      | 26.0  | 193.00  | 50  |
| 5.0SMDJ 17A-CA         | 5PEU                   | 5BEU     | 17.0  | 18.90  | 20.90  | 1                                      | 27.6  | 181.00  | 20  |
| 5.0SMDJ 18A-CA         | 5PEV                   | 5BEV     | 18.0  | 20.00  | 22.10  | 1                                      | 29.2  | 172.00  | 10  |
| *5.0SMDJ 20A-CA        | 5PEW                   | 5BEW     | 20.0  | 22.20  | 24.50  | 1                                      | 32.4  | 155.00  | 2   |
| 5.0SMDJ 22A-CA         | 5PEX                   | 5BEX     | 22.0  | 24.40  | 26.90  | 1                                      | 35.5  | 141.00  | 2   |
| 5.0SMDJ 24A-CA         | 5PEZ                   | 5BEZ     | 24.0  | 26.70  | 29.50  | 1                                      | 38.9  | 129.00  | 2   |
| *5.0SMDJ 26A-CA        | 5PFE                   | 5BFE     | 26.0  | 28.90  | 31.90  | 1                                      | 42.1  | 119.00  | 2   |
| 5.0SMDJ 28A-CA         | 5PFG                   | 5BFG     | 28.0  | 31.10  | 34.40  | 1                                      | 45.4  | 110.00  | 2   |
| 5.0SMDJ 30A-CA         | 5PFK                   | 5BFK     | 30.0  | 33.30  | 36.80  | 1                                      | 48.4  | 103.00  | 2   |
| 5.0SMDJ 33A-CA         | 5PFM                   | 5BFM     | 33.0  | 36.70  | 40.60  | 1                                      | 53.3  | 93.90   | 2   |
| *5.0SMDJ 36A-CA        | 5PFP                   | 5BFP     | 36.0  | 40.00  | 44.20  | 1                                      | 58.1  | 86.10   | 2   |
| 5.0SMDJ 40A-CA         | 5PFR                   | 5BFR     | 40.0  | 44.40  | 49.10  | 1                                      | 64.5  | 77.60   | 2   |
| 5.0SMDJ 43A-CA         | 5PFT                   | 5BFT     | 43.0  | 47.80  | 52.80  | 1                                      | 69.4  | 72.10   | 2   |
| 5.0SMDJ 45A-CA         | 5PFV                   | 5BFV     | 45.0  | 50.00  | 55.30  | 1                                      | 72.7  | 68.80   | 2   |
| 5.0SMDJ 48A            | 5PFX                   |          | 48.0  | 53.30  | 58.90  | 1                                      | 77.4  | 64.70   | 2   |
| 5.0SMDJ 51A            | 5PFZ                   |          | 51.0  | 56.70  | 62.70  | 1                                      | 82.4  | 60.70   | 2   |
| 5.0SMDJ 54A            | 5RGE                   |          | 54.0  | 60.00  | 66.30  | 1                                      | 87.1  | 57.50   | 2   |
| 5.0SMDJ 58A            | 5PGG                   |          | 58.0  | 64.40  | 71.20  | 1                                      | 93.6  | 53.50   | 2   |
| 5.0SMDJ 60A            | 5PGK                   |          | 60.0  | 66.70  | 73.70  | 1                                      | 96.8  | 51.70   | 2   |
| 5.0SMDJ 64A            | 5PGM                   |          | 64.0  | 71.10  | 78.60  | 1                                      | 103.0   | 48.60   | 2   |
| 5.0SMDJ 70A            | 5PGP                   |          | 70.0  | 77.80  | 86.00  | 1                                      | 113.0   | 44.30   | 2   |
| 5.0SMDJ 75A            | 5PGR                   |          | 75.0  | 83.30  | 92.10  | 1                                      | 121.0   | 41.40   | 2   |
| 5.0SMDJ 78A            | 5PGT                   |          | 78.0  | 86.70  | 95.80  | 1                                      | 126.0   | 39.70   | 2   |
| 5.0SMDJ 85A            | 5PGV                   |          | 85.0  | 94.40  | 104.00   | 1                                      | 137.0   | 36.50   | 2   |
| 5.0SMDJ 90A            | 5PGX                   |          | 90.0  | 100.00   | 111.00   | 1                                      | 146.0   | 34.30   | 2   |
| 5.0SMDJ 100A           | 5PGZ                   |          | 100.0   | 111.00   | 123.00   | 1                                      | 162.0   | 30.90   | 2   |
| 5.0SMDJ 110A           | 5PHE                   |          | 110.0   | 122.00   | 135.00   | 1                                      | 177.0   | 28.30   | 2   |
| 5.0SMDJ 120A           | 5PHG                   |          | 120.0   | 133.00   | 147.00   | 1                                      | 193.0   | 26.00   | 2   |
| 5.0SMDJ 130A           | 5PHK                   |          | 130.0   | 144.00   | 159.00   | 1                                      | 209.0   | 24.00   | 2   |
| 5.0SMDJ 150A           | 5PHM                   |          | 150.0   | 167.00   | 185.00   | 1                                      | 243.0   | 20.60   | 2   |
| 5.0SMDJ 160A           | 5PHP                   |          | 160.0   | 178.00   | 197.00   | 1                                      | 259.0   | 19.30   | 2   |
| 5.0SMDJ 170A           | 5PHR                   |          | 170.0   | 189.00   | 209.00   | 1                                      | 275.0   | 18.20   | 2   |

For Bidirectional type having Vrwm of 20 volts and less,the Ir limit is double.

## SURFACE MOUNT TRANSIENT VOLTAGE SUPPRESSOR VOLTAGE-11 TO 170 Volts 5000 Watt Peak Pulse Power

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



Dimensions in inches and (millimeters)

### FEATURES

- ⊙ For surface mounted applications in order to optimize board space
- ⊙ Low profile package
- ⊙ Built-in strain relief
- ⊙ Glass passivated junction
- ⊙ Low inductance
- ⊙ Excellent clamping capability
- ⊙ Repetition Rate (duty cycle):0.01%
- ⊙ Fast response time: typically less than 1.0ps from 0 Volts to V(BR) for unidirectional types
- ⊙ Typical IR less than 2  $\mu$  A
- ⊙ High temperature soldering: 260°C/10 seconds at terminals
- ⊙ Plastic package has Underwriters Laboratory Flammability 94V-O
- ⊙ Pb-free plated

### MECHANICAL DATA

**Case:** JEDEC DO-214AB. Molded plastic over glass passivated junction

**Terminal:** Solderable per MIL-STD-750, Method 2026

**Polarity:** Color band denoted positive end (cathode) except Bidirectional

**Standard Packaging:** 16mm tape (EIA STD RS-481)

**Weight:** 0.007 ounce, 0.21 gram

### MAXIMUM RATINGS AND CHARACTERISTICS

Ratings at 25°C ambient temperature unless otherwise specified.

| RATING  | SYMBOL                            | VALUE           | UNITS |
|---|-----------------------------------|-----------------|-------|
| Peak Pulse Power Dissipation on 10/1000 $\mu$ s waveform (Note 1,2 ,FIG.1)                                  | P <sub>PPM</sub>                  | Minimum<br>5000 | Watts |
| Peak Pulse Current of on 10/1000 $\mu$ 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) (Note2, 3) | I <sub>FSM</sub>                  | 300             | Amps  |
| Operating junction and Storage Temperature Range  | T <sub>J</sub> , T <sub>STG</sub> | -55 to +<br>150 | °C    |

#### 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 x 8.0mm Copper Pads to each terminal
- 3.8.3ms single half sine-wave , or equivalent square wave, Duty cycle = 4 pulses per minutes maximum.

RATINGS AND CHARACTERISTIC CURVES

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

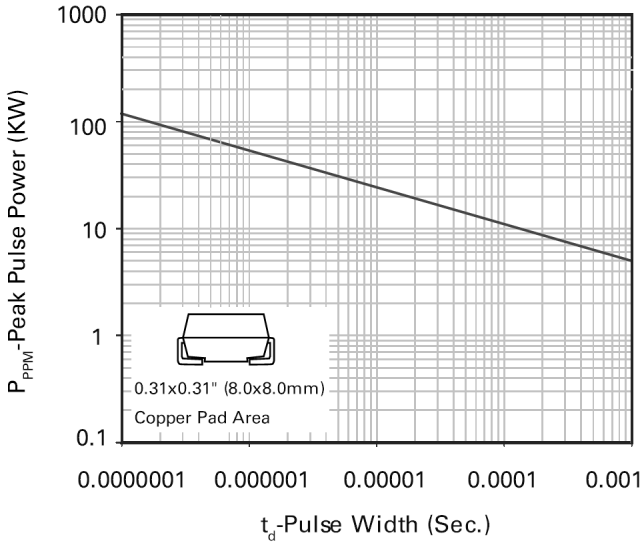


Figure 3 - Pulse Waveform

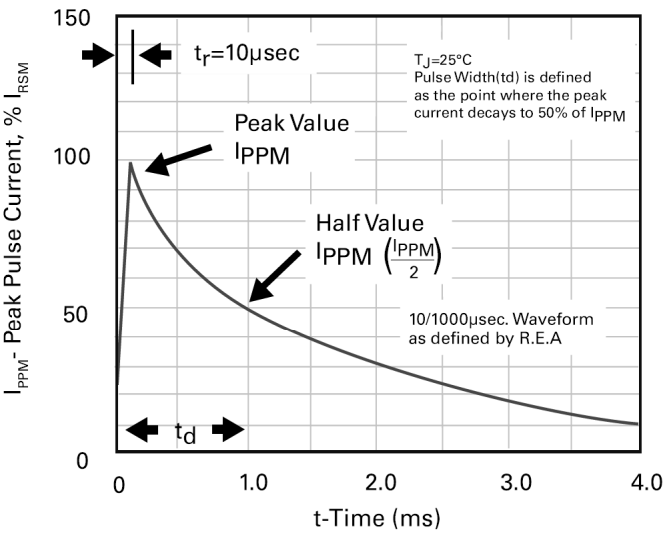


Figure 5 - Steady State Power Derating Curve

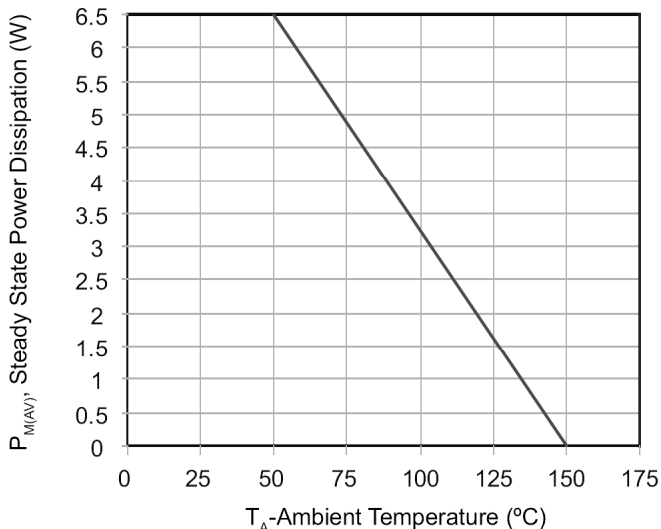


Figure 2 - Pulse Derating Curve

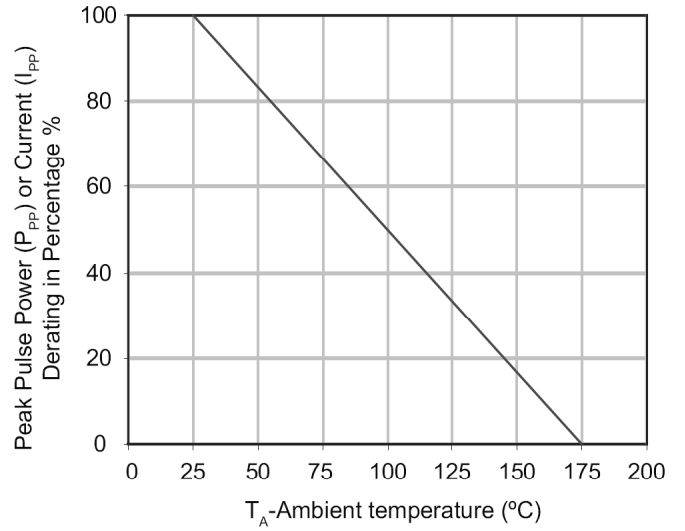


Figure 4 - Typical Junction Capacitance

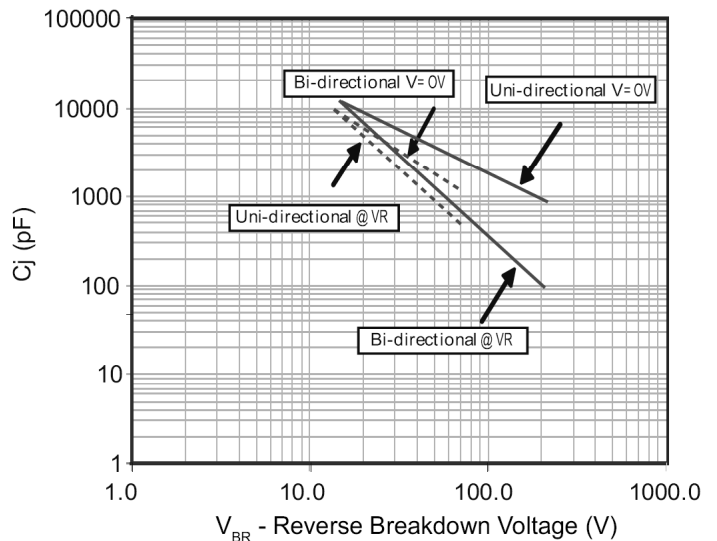


Figure 6 - Maximum Non-Repetitive Peak Forward Surge Current