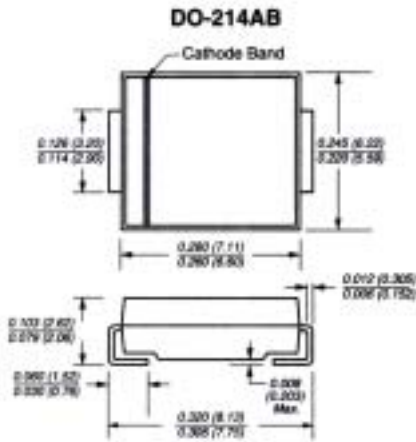


**5.0SMDJ SERIES**  
**SURFACE MOUNT TRANSIENT VOLTAGE SUPPRESSOR**  
**VOLTAGE - 20 TO 170 Volts**  
**5000Watts Peak Pulse Power**

| 5.0SMDJ<br>PART NUMBER |               | DEVICE MARKING CODE |          | REVERSE<br>STAND-<br>OFF<br>VOLTAGE<br>V <sub>RWM</sub> (V) | BREAKDO<br>WN<br>VOLTAGE<br>V <sub>BR</sub> (V)<br>MIN.@I <sub>T</sub> | BREAKDO<br>WN<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><br>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 20A            |               | 5PEW                | 5BEW     | 20.0  | 22.20  | 24.50  | 1                                      | 32.4   | 155.00  | 5   |
| 5.0SMDJ 22A            | 3.0SMCJ 22CA  | 5PEX                | 5BEX     | 22.0  | 24.40  | 26.90  | 1                                      | 35.5   | 141.00  | 5   |
| 5.0SMDJ 24A            | 3.0SMCJ 24CA  | 5PEZ                | 5BEZ     | 24.0  | 26.70  | 29.50  | 1                                      | 38.9   | 129.00  | 5   |
| 5.0SMDJ 26A            | 3.0SMCJ 26CA  | 5PFE                | 5BFE     | 26.0  | 28.90  | 31.90  | 1                                      | 42.1   | 119.00  | 5   |
| 5.0SMDJ 28A            | 3.0SMCJ 28CA  | 5PFG                | 5BFG     | 28.0  | 31.10  | 34.40  | 1                                      | 45.4   | 110.00  | 5   |
| 5.0SMDJ 30A            | 3.0SMCJ 30CA  | 5PFG                | 5BFG     | 28.0  | 31.10  | 34.40  | 1                                      | 45.4   | 110.00  | 5   |
| 5.0SMDJ 30A            | 3.0SMCJ 30CA  | 5PFK                | 5BFK     | 30.0  | 33.30  | 36.80  | 1                                      | 48.4   | 103.00  | 5   |
| 5.0SMDJ 33A            | 3.0SMCJ 33CA  | 5PFM                | 5BFM     | 33.0  | 36.70  | 40.60  | 1                                      | 53.3   | 93.90   | 5   |
| 5.0SMDJ 36A            | 3.0SMCJ 36CA  | 5PFP                | 5BFP     | 36.0  | 40.00  | 44.20  | 1                                      | 58.1   | 86.10   | 5   |
| 5.0SMDJ 40A            | 3.0SMCJ 40CA  | 5PFR                | 5BFR     | 40.0  | 44.40  | 49.10  | 1                                      | 64.5   | 77.60   | 5   |
| 5.0SMDJ 43A            | 3.0SMCJ 43CA  | 5PFT                | 5BFT     | 43.0  | 47.80  | 52.80  | 1                                      | 69.4   | 72.10   | 5   |
| 5.0SMDJ 45A            | 3.0SMCJ 45CA  | 5PFV                | 5BFV     | 45.0  | 50.00  | 55.30  | 1                                      | 72.7   | 68.80   | 5   |
| 5.0SMDJ 48A            | 3.0SMCJ 48CA  | 5PFX                | 5BFX     | 48.0  | 53.30  | 58.90  | 1                                      | 77.4   | 64.70   | 5   |
| 5.0SMDJ 51A            | 3.0SMCJ 51CA  | 5PFZ                | 5BFZ     | 51.0  | 56.70  | 62.70  | 1                                      | 82.4   | 60.70   | 5   |
| 5.0SMDJ 54A            | 3.0SMCJ 54CA  | 5RGE                | 5BGE     | 54.0  | 60.00  | 66.30  | 1                                      | 87.1   | 57.50   | 5   |
| 5.0SMDJ 58A            | 3.0SMCJ 58CA  | 5PGG                | 5BGG     | 58.0  | 64.40  | 71.20  | 1                                      | 93.6   | 53.50   | 5   |
| 5.0SMDJ 60A            | 3.0SMCJ 60CA  | 5PGK                | 5BGK     | 60.0  | 66.70  | 73.70  | 1                                      | 96.8   | 51.70   | 5   |
| 5.0SMDJ 64A            | 3.0SMCJ 64CA  | 5PGM                | 5BGM     | 64.0  | 71.10  | 78.60  | 1                                      | 103.0  | 48.60   | 5   |
| 5.0SMDJ 70A            | 3.0SMCJ 70CA  | 5PGP                | 5BGP     | 70.0  | 77.80  | 86.00  | 1                                      | 113.0  | 44.30   | 5   |
| 5.0SMDJ 75A            | 3.0SMCJ 75CA  | 5PGR                | 5BGR     | 75.0  | 83.30  | 92.10  | 1                                      | 121.0  | 41.40   | 5   |
| 5.0SMDJ 78A            | 3.0SMCJ 78CA  | 5PGT                | 5BGT     | 78.0  | 86.70  | 95.80  | 1                                      | 126.0  | 39.70   | 5   |
| 5.0SMDJ 85A            | 3.0SMCJ 85CA  | 5PGV                | 5BGV     | 85.0  | 94.40  | 104.00   | 1                                      | 137.0  | 36.50   | 5   |
| 5.0SMDJ 90A            | 3.0SMCJ 90CA  | 5PGX                | 5BGX     | 90.0  | 100.00   | 111.00   | 1                                      | 146.0  | 34.30   | 5   |
| 5.0SMDJ 100A           | 3.0SMCJ 100CA | 5PGZ                |          | 100.0   | 111.00   | 123.00   | 1                                      | 162.0  | 30.90   | 5   |
| 5.0SMDJ 110A           | 3.0SMCJ 110CA | 5PHE                |          | 110.0   | 122.00   | 135.00   | 1                                      | 177.0  | 28.30   | 5   |
| 5.0SMDJ 120A           | 3.0SMCJ 120CA | 5PHG                |          | 120.0   | 133.00   | 147.00   | 1                                      | 193.0  | 26.00   | 5   |
| 5.0SMDJ 130A           | 3.0SMCJ 130CA | 5PHK                |          | 130.0   | 144.00   | 159.00   | 1                                      | 209.0  | 24.00   | 5   |
| 5.0SMDJ 150A           | 3.0SMCJ 150CA | 5PHM                |          | 150.0   | 167.00   | 185.00   | 1                                      | 243.0  | 20.60   | 5   |
| 5.0SMDJ 160A           | 3.0SMCJ 160CA | 5PHP                |          | 160.0   | 178.00   | 197.00   | 1                                      | 259.0  | 19.30   | 5   |
| 5.0SMDJ 170A           | 3.0SMCJ 170CA | 5PHR                |          | 170.0   | 189.00   | 209.00   | 1                                      | 275.0  | 18.20   | 5   |

## 5.0SMDJ SERIES

### SURFACE MOUNT TRANSIENT VOLTAGE SUPPRESSOR VOLTAGE-20 TO 170 Volts 5000 Watt Peak Pulse Power



#### 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 BV for unidirectional types
- Typical IR less than 1uA
- High temperature soldering: 250°C/10 seconds at terminals
- Plastic package has Underwriters Laboratory Flammability 94V-0

Dimensions in inches and (millimeters)

#### MECHANICAL DATA

**Case:** JEDEC DO214AB. Molded plastic over glass passivated junction  
**Terminal:** Solder plated, 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 10/1000µs waveform (Note 1,2 ,FIG.1)  | $P_{PPM}$      | Minimum 5000 | Watts |
| Peak Pulse Current of on 10/1000µs waveform (Note 1,FIG.3)  | $I_{PPM}$      | SEE TABLE    | Amps  |
| Peak Forward Surge Current,8.3ms Single Half Sine-Wave Superimposed on Rated Load,(JEDEC Method) (Note2, 3) | $I_{FSM}$      | 300          | Amps  |
| Operating junction and Storage Temperature Range  | $T_J, T_{STG}$ | -55 to +150  |       |

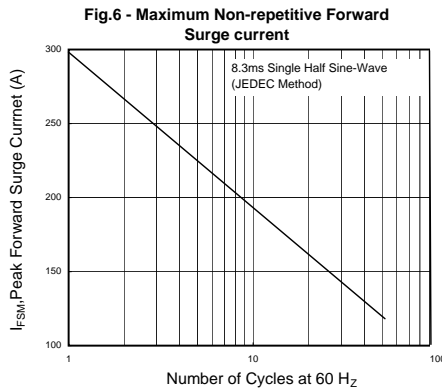
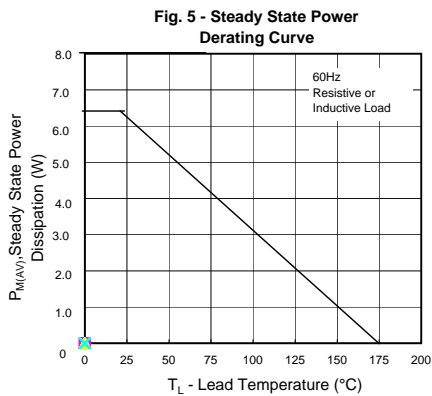
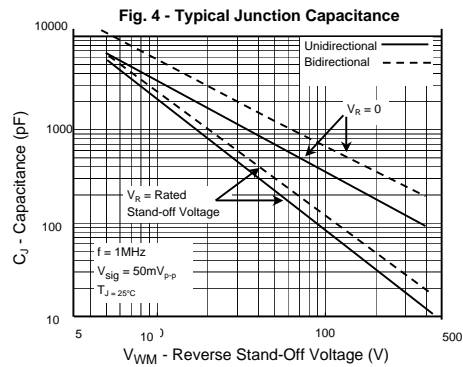
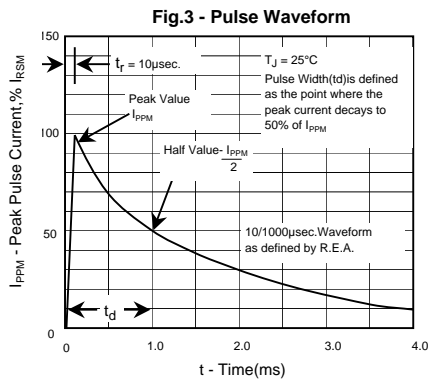
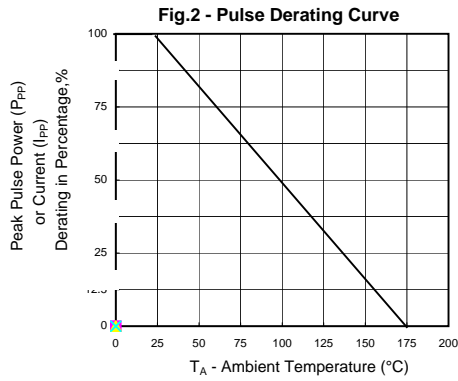
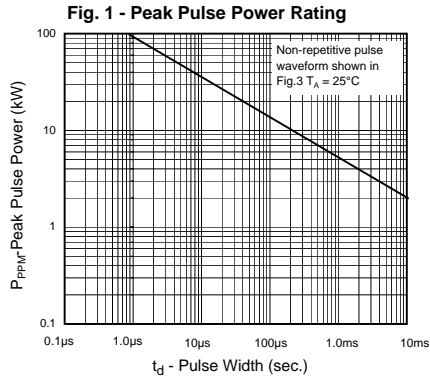
#### Notes :

- 1.Non-repetitive current pulse , per Fig. 3 and derated above  $T_A = 25$  °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.

# 5.0SMDJ SERIES

## RATINGS AND CHARACTERISTIC CURVES

**Ratings and Characteristic Curves** ( $T_A=25$  unless otherwise noted)



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