

Surface mount transient voltage suppressor power 3000watts

Stand-Off Voltage: 5.0V~440V

**FEATURES**

- ◆ For surface mounted applications in order to optimize board space.
- ◆ Low profile package.
- ◆ Glass passivated junction.
- ◆ Low inductance.
- ◆ 3000W peak pulse power capability at 10x1000us waveform, repetition rate {duty cycles}:0.01 %
- ◆ Plastic package has Underwriters Laboratory Flammability.
- ◆ Excellent clamping capability
- ◆ Low incremental surge resistance
- ◆ Matte Tin Lead-free Plated

**MECHANICAL DATA**

- ◆ Case: DO-214AB/SMC
- ◆ Terminals: Solderable per MIL-STD-750, Method 2026
- ◆ Approx. Weight: 0.22g / 0.0077oz

**Maximum Ratings and Electrical characteristics**

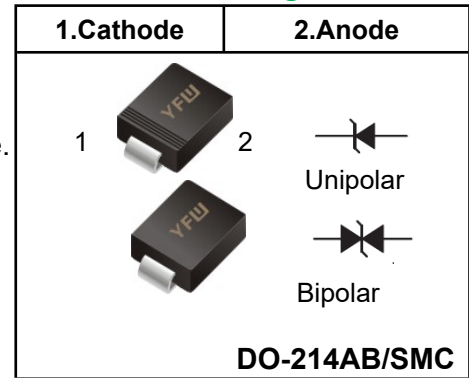
**Ratings at 25 ambient temperature unless o °C therwise specified.**

| Parameter  | Symbol                           | Value       | Unit |
|--|----------------------------------|-------------|------|
| Peak Pulse Power Dissipation at Ta=25°C by 10x1000 us waveform (Fig.1)(Note 1), (Note 2) | P <sub>PPM</sub>                 | 3000        | W    |
| Power Dissipation on infinite heat sink at TA=50°C                                       | P <sub>M(AV)</sub>               | 6.5         | W    |
| Peak Forward Surge Current, 8.3ms Single Half Sine Wave (Note 3)                         | I <sub>FSM</sub>                 | 300         | A    |
| Maximum Instantaneous Forward Voltage at 100A for Unidirectional only                    | V <sub>F</sub>                   | 3.5         | V    |
| Typical Thermal Resistance Junction to Lead  | R <sub>θJL</sub>                 | 15          | °C/W |
| Typical Thermal Resistance Junction to Ambient   | R <sub>θJA</sub>                 | 75          | °C/W |
| Operating Junction Temperature and Storage Temperature Range                             | T <sub>J</sub> ,T <sub>STG</sub> | -65 to +150 | °C   |

**NOTES:**

1. Non-repetitive current pulse . per Fig 3 and derated above Ta = 25°C per Fig. 2
2. Mounted on copper pad area of 0.31x0.31" (8.0 x 8.0mm) to each terminal
3. Measured on 8.3ms single half sine wave or equivalent square wave for unidirectional device only, duty cycle=4 per minute maximum

**Pinning**



## Characteristics at Ta = 25°C

| Type     |           | Reverse Stand-off Voltage | Breakdown Voltage                |      | Test Current | Max.Clamp Voltage | Max. Peak Pulse Current          | Max. Reverse Leakage | Package           |                      |
|----------|-----------|---------------------------|----------------------------------|------|--------------|-------------------|----------------------------------|----------------------|-------------------|----------------------|
|          |           |                           | V <sub>BR</sub> @ I <sub>T</sub> |      |              |                   |                                  |                      | SMC               |                      |
|          |           |                           | V <sup>RMW</sup>                 | Min  | Max          | I <sub>T</sub>    | V <sup>C</sup> @ I <sup>PP</sup> | I <sup>PP</sup>      | I <sub>R@VR</sub> | Device Marking Ccode |
| UNI      | BI        | V                         | V                                | V    | mA           | V                 | A                                | uA                   | UNI               | BI                   |
| SMDJ5.0A | SMDJ5.0CA | 5                         | 6.4                              | 7    | 10           | 9.2               | 326.1                            | 800                  | RDE               | DDE                  |
| SMDJ6.0A | SMDJ6.0CA | 6                         | 6.67                             | 7.37 | 10           | 10.3              | 291.3                            | 800                  | RDG               | DDG                  |
| SMDJ6.5A | SMDJ6.5CA | 6.5                       | 7.22                             | 7.98 | 10           | 11.2              | 267.9                            | 500                  | RDK               | DDK                  |
| SMDJ7.0A | SMDJ7.0CA | 7                         | 7.78                             | 8.6  | 10           | 12                | 250                              | 200                  | PDM               | DDM                  |
| SMDJ7.5A | SMDJ7.5CA | 7.5                       | 8.33                             | 9.21 | 1            | 12.9              | 232.6                            | 100                  | PDP               | DDP                  |
| SMDJ8.0A | SMDJ8.0CA | 8                         | 8.89                             | 9.83 | 1            | 13.6              | 220.6                            | 50                   | PDR               | DDR                  |
| SMDJ8.5A | SMDJ8.5CA | 8.5                       | 9.44                             | 10.4 | 1            | 14.4              | 208.3                            | 20                   | PDT               | DDT                  |
| SMDJ9.0A | SMDJ9.0CA | 9                         | 10                               | 11.1 | 1            | 15.4              | 194.8                            | 10                   | PDV               | DDV                  |
| SMDJ10A  | SMDJ10CA  | 10                        | 11.1                             | 12.3 | 1            | 17                | 176.5                            | 5                    | PDX               | DDX                  |
| SMDJ11A  | SMDJ11CA  | 11                        | 12.2                             | 13.5 | 1            | 18.2              | 164.8                            | 2                    | PDZ               | DDZ                  |
| SMDJ12A  | SMDJ12CA  | 12                        | 13.3                             | 14.7 | 1            | 19.9              | 150.8                            | 2                    | PEE               | DEE                  |
| SMDJ13A  | SMDJ13CA  | 13                        | 14.4                             | 15.9 | 1            | 21.5              | 139.5                            | 2                    | PEG               | DEG                  |
| SMDJ14A  | SMDJ14CA  | 14                        | 15.6                             | 17.2 | 1            | 23.2              | 129.3                            | 2                    | PEK               | DEK                  |
| SMDJ15A  | SMDJ15CA  | 15                        | 16.7                             | 18.5 | 1            | 24.4              | 123                              | 2                    | PEM               | DEM                  |
| SMDJ16A  | SMDJ16CA  | 16                        | 17.8                             | 19.7 | 1            | 26                | 115.4                            | 2                    | PEP               | DEP                  |
| SMDJ17A  | SMDJ17CA  | 17                        | 18.9                             | 20.9 | 1            | 27.6              | 108.7                            | 2                    | PER               | DER                  |
| SMDJ18A  | SMDJ18CA  | 18                        | 20                               | 22.1 | 1            | 29.2              | 102.7                            | 2                    | PET               | DET                  |
| SMDJ20A  | SMDJ20CA  | 20                        | 22.2                             | 24.5 | 1            | 32.4              | 92.6                             | 2                    | PEV               | DEV                  |
| SMDJ22A  | SMDJ22CA  | 22                        | 24.4                             | 26.9 | 1            | 35.5              | 84.5                             | 2                    | PEX               | DEX                  |
| SMDJ24A  | SMDJ24CA  | 24                        | 26.7                             | 29.5 | 1            | 38.9              | 77.1                             | 2                    | PEZ               | DEZ                  |
| SMDJ26A  | SMDJ26CA  | 26                        | 28.9                             | 31.9 | 1            | 42.1              | 71.3                             | 2                    | PFE               | DFE                  |
| SMDJ28A  | SMDJ28CA  | 28                        | 31.1                             | 34.4 | 1            | 45.4              | 66.1                             | 2                    | PFG               | DFG                  |
| SMDJ30A  | SMDJ30CA  | 30                        | 33.3                             | 36.8 | 1            | 48.4              | 62                               | 2                    | PFK               | DFK                  |
| SMDJ33A  | SMDJ33CA  | 33                        | 36.7                             | 40.6 | 1            | 53.3              | 56.3                             | 2                    | PFM               | DFM                  |
| SMDJ36A  | SMDJ36CA  | 36                        | 40                               | 44.2 | 1            | 58.1              | 51.6                             | 2                    | PFP               | DFP                  |
| SMDJ40A  | SMDJ40CA  | 40                        | 44.4                             | 49.1 | 1            | 64.5              | 46.5                             | 2                    | PFR               | DFR                  |
| SMDJ43A  | SMDJ43CA  | 43                        | 47.8                             | 52.8 | 1            | 69.4              | 43.2                             | 2                    | PFT               | DFT                  |
| SMDJ45A  | SMDJ45CA  | 45                        | 50                               | 55.3 | 1            | 72.7              | 41.3                             | 2                    | PFV               | DFV                  |
| SMDJ48A  | SMDJ48CA  | 48                        | 53.3                             | 58.9 | 1            | 77.4              | 38.8                             | 2                    | PFX               | DFX                  |
| SMDJ51A  | SMDJ51CA  | 51                        | 56.7                             | 62.7 | 1            | 82.4              | 36.4                             | 2                    | PFZ               | DFZ                  |
| SMDJ54A  | SMDJ54CA  | 54                        | 60                               | 66.3 | 1            | 87.1              | 34.4                             | 2                    | RGE               | DGE                  |
| SMDJ58A  | SMDJ58CA  | 58                        | 64.4                             | 71.2 | 1            | 93.6              | 32.1                             | 2                    | PGG               | DGG                  |
| SMDJ60A  | SMDJ60CA  | 60                        | 66.7                             | 73.7 | 1            | 96.8              | 31                               | 2                    | PGK               | DGK                  |
| SMDJ64A  | SMDJ64CA  | 64                        | 71.1                             | 78.6 | 1            | 103               | 29.1                             | 2                    | PGM               | DGM                  |
| SMDJ70A  | SMDJ70CA  | 70                        | 77.8                             | 86   | 1            | 113               | 26.5                             | 2                    | PGP               | DGP                  |
| SMDJ75A  | SMDJ75CA  | 75                        | 83.3                             | 92.1 | 1            | 121               | 24.8                             | 2                    | PGR               | DGR                  |
| SMDJ78A  | SMDJ78CA  | 78                        | 86.7                             | 95.8 | 1            | 126               | 23.8                             | 2                    | PGT               | DGT                  |
| SMDJ85A  | SMDJ85CA  | 85                        | 94.4                             | 104  | 1            | 137               | 21.9                             | 2                    | PGV               | DGV                  |

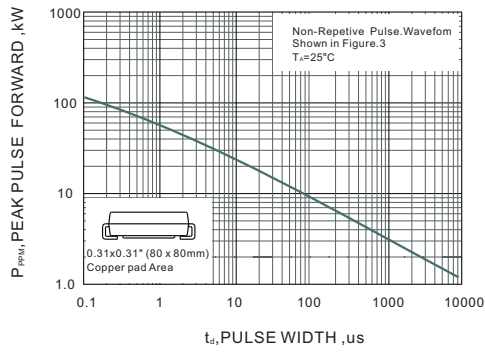
## Characteristics at Ta = 25°C

| Type     |           | Reverse Stand-off Voltage | Breakdown Voltage                |       | Test Current | Max.Clamp Voltage | Max. Peak Pulse Current          | Max. Reverse Leakage | Package |                      |
|----------|-----------|---------------------------|----------------------------------|-------|--------------|-------------------|----------------------------------|----------------------|---------|----------------------|
|          |           |                           | V <sub>BR</sub> @ I <sub>T</sub> |       |              |                   |                                  |                      | SMC     |                      |
|          |           |                           | V <sub>RMW</sub>                 | Min   | Max          | I <sub>T</sub>    | V <sub>C</sub> @ I <sub>PP</sub> | I <sub>PP</sub>      | IR@VR   | Device Marking Ccode |
| UNI      | BI        | V                         | V                                | V     | mA           | V                 | A                                | uA                   | UNI     | BI                   |
| SMDJ90A  | SMDJ90CA  | 90                        | 100                              | 111   | 1            | 146               | 20.5                             | 2                    | PGX     | DGX                  |
| SMDJ100A | SMDJ100CA | 100                       | 111                              | 123   | 1            | 162               | 18.5                             | 2                    | PGZ     | DGZ                  |
| SMDJ110A | SMDJ110CA | 110                       | 122                              | 135   | 1            | 177               | 16.9                             | 2                    | PHE     | DHE                  |
| SMDJ120A | SMDJ120CA | 120                       | 133                              | 147   | 1            | 193               | 15.5                             | 2                    | PHG     | DHG                  |
| SMDJ130A | SMDJ130CA | 130                       | 144                              | 159   | 1            | 209               | 14.4                             | 2                    | PHK     | DHK                  |
| SMDJ150A | SMDJ150CA | 150                       | 167                              | 185   | 1            | 243               | 12.3                             | 2                    | PHM     | DHM                  |
| SMDJ160A | SMDJ160CA | 160                       | 178                              | 197   | 1            | 259               | 11.6                             | 2                    | PHP     | DHP                  |
| SMDJ170A | SMDJ170CA | 170                       | 189                              | 209   | 1            | 275               | 10.9                             | 2                    | PHR     | DHR                  |
| SMDJ180  | SMDJ180C  | 180                       | 201                              | 244.8 | 1            | 322.2             | 9.31                             | 5                    | PHS     | DHS                  |
| SMDJ180A | SMDJ180CA | 180                       | 201                              | 220   | 1            | 291.6             | 10.29                            | 5                    | PHT     | DHT                  |
| SMDJ190  | SMDJ190C  | 190                       | 211.21                           | 258.4 | 1            | 340.1             | 8.82                             | 5                    | PHU     | DHU                  |
| SMDJ190A | SMDJ190CA | 190                       | 211                              | 232   | 1            | 307.8             | 9.75                             | 5                    | PHV     | DHV                  |
| SMDJ200A | SMDJ200CA | 200                       | 224                              | 247   | 1            | 324               | 9.26                             | 5                    | PHW     | DHW                  |
| SMDJ220A | SMDJ220CA | 220                       | 246                              | 272   | 1            | 356               | 8.43                             | 5                    | PHX     | DHX                  |
| SMDJ250A | SMDJ250CA | 250                       | 279                              | 309   | 1            | 405               | 7.41                             | 5                    | PHZ     | DHZ                  |
| SMDJ300A | SMDJ300CA | 300                       | 335                              | 371   | 1            | 486               | 6.17                             | 5                    | PJE     | DJE                  |
| SMDJ350A | SMDJ350CA | 350                       | 391                              | 432   | 1            | 567               | 5.29                             | 5                    | PJG     | DJG                  |
| SMDJ400A | SMDJ400CA | 400                       | 447                              | 494   | 1            | 648               | 4.63                             | 5                    | PJK     | DJK                  |
| SMDJ440A | SMDJ440CA | 440                       | 492                              | 543   | 1            | 713               | 4.21                             | 5                    | PJM     | DJM                  |

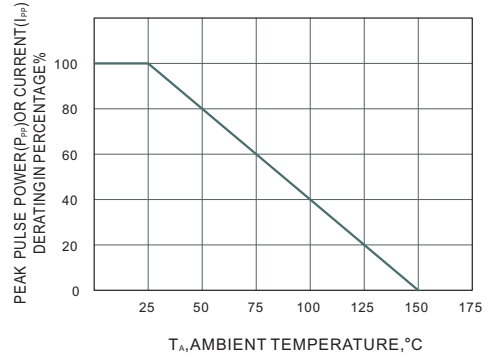
**Note:**

1. Suffix 'A' denotes 5% tolerance device. Without 'A' denotes 10% tolerance device
2. Add suffix 'C' or 'CA' after part number to specify Bi-directional devices
3. For Bi-Directional devices having V<sub>R</sub> of 10 volts and under, the I<sub>R</sub> limit is double

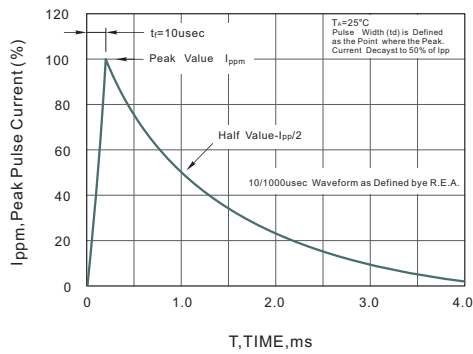
**Fig.1 Peak Pulse Power Rating Curve**



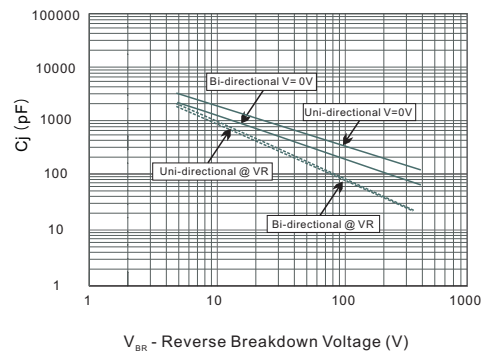
**Fig.2 Forward Current Derating Curve**



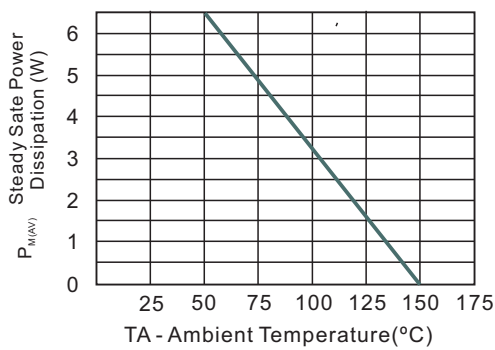
**Fig.3 Pulse Waveform**



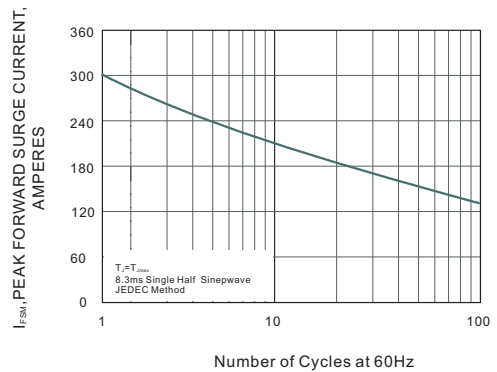
**Fig.4 Typical Junction Capacitance**



**Fig.5 Steady State Power Derating Curve**

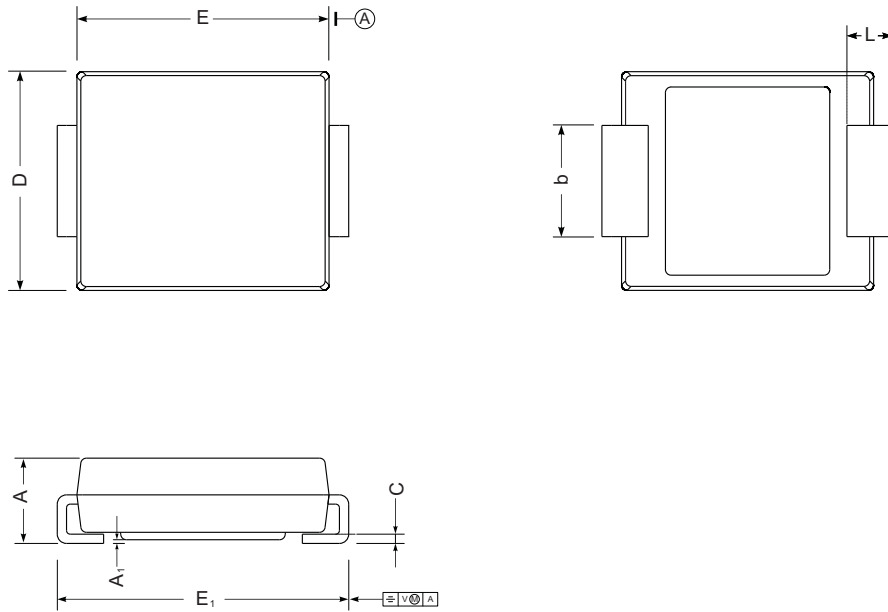


**Fig.6 Maximum Non-Repetitive Peak Forward Surge Current**



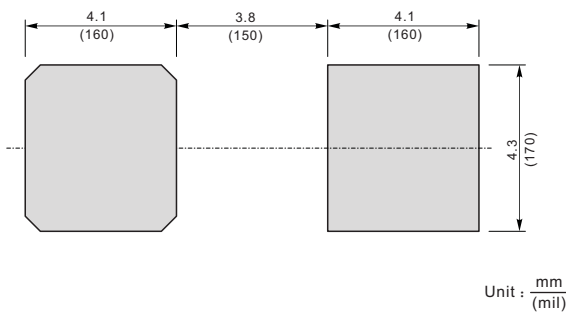
**Package Outline DO-214AB SMC**

Plastic surface mounted package; 2 leads



| UNIT |     | A    | E   | D   | E <sub>1</sub> | A <sub>1</sub> | C    | L   | b    |
|------|-----|------|-----|-----|----------------|----------------|------|-----|------|
| mm   | max | 2.62 | 7.0 | 6.2 | 8.0            | 0.21           | 0.31 | 1.6 | 3.25 |
|      | min | 2.00 | 6.5 | 5.6 | 7.6            | 0.05           | 0.15 | 0.9 | 2.75 |
| mil  | max | 103  | 276 | 244 | 315            | 8.3            | 12   | 63  | 128  |
|      | min | 79   | 256 | 220 | 299            | 2.0            | 5.9  | 35  | 108  |

**The recommended mounting pad size**



**Summary of Packing Options**

| Package      | Packing Description | Packing Quantity | Industry Standard |
|--------------|---------------------|------------------|-------------------|
| DO-214AB SMC | Tape/Reel, 13" reel | 3000             | EIA-481-1         |

单击下面可查看定价，库存，交付和生命周期等信息

[>>YFW\(佑风微\)](#)