

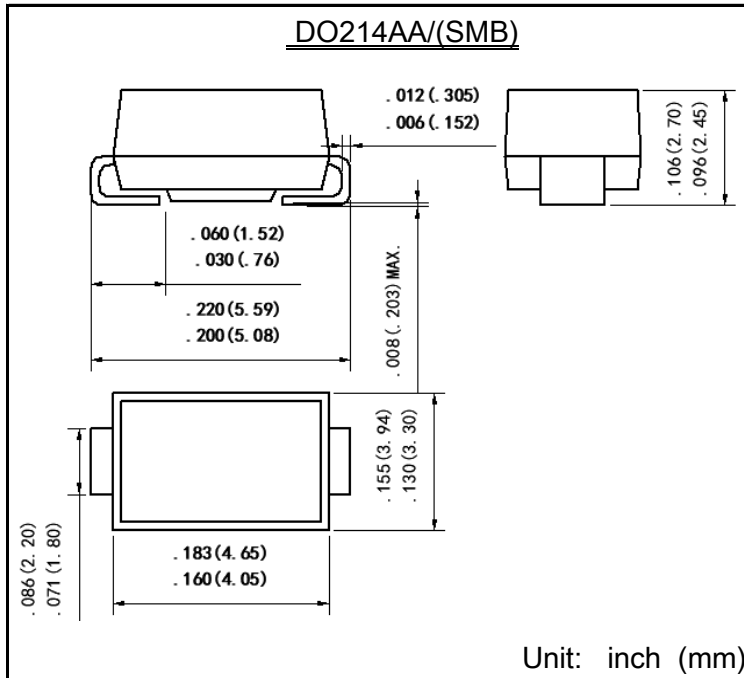


SMB15Jxx(C)A Series

Surface Mount Transient Voltage Suppressor Rectifiers

Reverse Voltage 5.0 ~ 220 V

1500 Watt Peak Pulse Power



Features

- Glass passivated chip
- 1500 W peak pulse power capability with a 10/1000 us waveform, repetitive rate (duty cycle):0.01 %
- Excellent clamping capability
- Low reverse leakage
- Very fast response time
- Lead and body according with RoHS standard

Mechanical Data

- Case: DO214AA(SMB) Molded plastic
- Lead: Solderable per MIL-STD-750, method 2026
- Epoxy: UL 94V-0 rate flame retardant
- Polarity: Color band denotes cathode end except Bipolar
- Mounting position: Any

Maximum Ratings & Characteristics Ratings at 25°C ambient temperature unless otherwise specified.

| Parameter | Symbols | Value | Unit |
|--|----------------|----------------|------|
| Peak power dissipation with a 10/1000 us waveform ⁽¹⁾ | P_{PP} | 1500 | W |
| Peak pulse current with a 10/1000 us waveform ⁽¹⁾ | I_{PP} | See Next Table | A |
| Power dissipation on infinite heatsink at $T_L = 75\text{ }^\circ\text{C}$ | P_D | 5.0 | W |
| Peak forward surge current, 8.3 ms single half sinewave unidirectional only ⁽²⁾ | I_{FSM} | 100 | A |
| Maximum instantaneous forward voltage at 50 A for unidirectional only ⁽³⁾ | V_F | 3.5/6.5 | V |
| Operating junction and storage temperature range | T_J, T_{STG} | -55 to +150 | °C |

Note:

1) Non-repetitive current pulse per Fig.5 and derated above $T_A = 25\text{ }^\circ\text{C}$ per Fig.1 ;

2) Measured on 8.3 ms single half sine-wave or equivalent square wave, duty cycle = 4 pulses per minute maximum ;

3) $V_F < 3.5\text{V}$ for devices of $V_{BR} < 200\text{V}$ and $V_F < 6.5\text{V}$ for devices of $V_{BR} > 201\text{V}$.



SMB15Jxx(C)A Series

| Part Number | | Device Marking Code | | Reverse Stand-off Voltage | Breakdown Voltage $V_{BR} @ I_T$ | | Test Current | Max. Clamping Voltage @ I_{PP} | Max. Peak Pulse Current | Max. Reverse Leakage @ V_{RWM} |
|-------------|-------------|---------------------|-----|---------------------------|----------------------------------|---------|--------------|----------------------------------|-------------------------|----------------------------------|
| UNI-POLAR | BI-POLAR | UNI | BI | $V_{RWM}(V)$ | Min.(V) | Max.(V) | $I_T(mA)$ | $V_{C MAX.}(V)$ | $I_{PP}(A)$ | $I_R(\mu A)$ |
| SMB15J5.0A | SMB15J5.0CA | GDE | BDE | 5.0 | 6.40 | 7.00 | 10 | 9.2 | 163.0 | 800 |
| SMB15J6.0A | SMB15J6.0CA | GDG | BDG | 6.0 | 6.67 | 7.37 | 10 | 10.3 | 145.7 | 800 |
| SMB15J6.5A | SMB15J6.5CA | GDK | BDK | 6.5 | 7.22 | 7.98 | 10 | 11.2 | 134.0 | 500 |
| SMB15J7.0A | SMB15J7.0CA | GDM | BDM | 7.0 | 7.78 | 8.60 | 10 | 12.0 | 125.0 | 200 |
| SMB15J7.5A | SMB15J7.5CA | GDP | BDP | 7.5 | 8.33 | 9.21 | 1 | 12.9 | 116.3 | 100 |
| SMB15J8.0A | SMB15J8.0CA | GDR | BDR | 8.0 | 8.89 | 9.83 | 1 | 13.6 | 110.3 | 50 |
| SMB15J8.5A | SMB15J8.5CA | GDT | BDT | 8.5 | 9.44 | 10.40 | 1 | 14.4 | 104.2 | 20 |
| SMB15J9.0A | SMB15J9.0CA | GDV | BDV | 9.0 | 10.00 | 11.10 | 1 | 15.4 | 97.4 | 10 |
| SMB15J10A | SMB15J10CA | GDX | BDX | 10.0 | 11.10 | 12.30 | 1 | 17.0 | 88.3 | 5 |
| SMB15J11A | SMB15J11CA | GDZ | BDZ | 11.0 | 12.20 | 13.50 | 1 | 18.2 | 82.5 | 1 |
| SMB15J12A | SMB15J12CA | GEE | BEE | 12.0 | 13.30 | 14.70 | 1 | 19.9 | 75.4 | 1 |
| SMB15J13A | SMB15J13CA | GEG | BEG | 13.0 | 14.40 | 15.90 | 1 | 21.5 | 69.8 | 1 |
| SMB15J14A | SMB15J14CA | GEK | BEK | 14.0 | 15.60 | 17.20 | 1 | 23.2 | 64.7 | 1 |
| SMB15J15A | SMB15J15CA | GEM | BEM | 15.0 | 16.70 | 18.50 | 1 | 24.4 | 61.5 | 1 |
| SMB15J16A | SMB15J16CA | GEP | BEP | 16.0 | 17.80 | 19.70 | 1 | 26.0 | 57.7 | 1 |
| SMB15J17A | SMB15J17CA | GER | BER | 17.0 | 18.90 | 20.90 | 1 | 27.6 | 54.4 | 1 |
| SMB15J18A | SMB15J18CA | GET | BET | 18.0 | 20.00 | 22.10 | 1 | 29.2 | 51.4 | 1 |
| SMB15J20A | SMB15J20CA | GEV | BEV | 20.0 | 22.20 | 24.50 | 1 | 32.4 | 46.3 | 1 |
| SMB15J22A | SMB15J22CA | GEX | BEX | 22.0 | 24.40 | 26.90 | 1 | 35.5 | 42.3 | 1 |
| SMB15J24A | SMB15J24CA | GEZ | BEZ | 24.0 | 26.70 | 29.50 | 1 | 38.9 | 38.6 | 1 |
| SMB15J26A | SMB15J26CA | GFE | BFE | 26.0 | 28.90 | 31.90 | 1 | 42.1 | 35.7 | 1 |
| SMB15J28A | SMB15J28CA | GFG | BFG | 28.0 | 31.10 | 34.40 | 1 | 45.4 | 33.1 | 1 |
| SMB15J30A | SMB15J30CA | GFK | BFK | 30.0 | 33.50 | 36.80 | 1 | 48.4 | 31.0 | 1 |
| SMB15J33A | SMB15J33CA | GFM | BFM | 33.0 | 36.70 | 40.60 | 1 | 53.3 | 28.2 | 1 |
| SMB15J36A | SMB15J36CA | GFP | BFP | 36.0 | 40.00 | 44.20 | 1 | 58.1 | 25.9 | 1 |
| SMB15J40A | SMB15J40CA | GFR | BFR | 40.0 | 44.40 | 49.10 | 1 | 64.5 | 23.3 | 1 |
| SMB15J43A | SMB15J43CA | GFT | BFT | 43.0 | 47.80 | 52.80 | 1 | 69.4 | 21.7 | 1 |
| SMB15J45A | SMB15J45CA | GFV | BFV | 45.0 | 50.00 | 55.30 | 1 | 72.7 | 20.6 | 1 |
| SMB15J48A | SMB15J48CA | GFX | BFX | 48.0 | 53.30 | 58.90 | 1 | 77.4 | 19.4 | 1 |
| SMB15J51A | SMB15J51CA | GFZ | BFZ | 51.0 | 56.70 | 62.70 | 1 | 82.4 | 18.2 | 1 |
| SMB15J54A | SMB15J54CA | GGE | BGE | 54.0 | 60.00 | 66.30 | 1 | 87.1 | 17.3 | 1 |
| SMB15J58A | SMB15J58CA | GGG | BGG | 58.0 | 64.40 | 71.20 | 1 | 93.6 | 16.1 | 1 |
| SMB15J60A | SMB15J60CA | GGK | BGK | 60.0 | 66.70 | 73.70 | 1 | 96.8 | 15.5 | 1 |
| SMB15J64A | SMB15J64CA | GGM | BGM | 64.0 | 71.10 | 78.60 | 1 | 103.0 | 14.6 | 1 |
| SMB15J70A | SMB15J70CA | GGP | BGP | 70.0 | 77.80 | 86.00 | 1 | 113.0 | 13.3 | 1 |
| SMB15J75A | SMB15J75CA | GGR | BGR | 75.0 | 83.30 | 92.10 | 1 | 121.0 | 12.4 | 1 |
| SMB15J78A | SMB15J78CA | GGT | BGT | 78.0 | 86.70 | 95.80 | 1 | 126.0 | 11.9 | 1 |
| SMB15J85A | SMB15J85CA | GGV | BGV | 85.0 | 94.4 | 104.0 | 1 | 137.0 | 11.0 | 1 |
| SMB15J90A | SMB15J90CA | GGX | BGX | 90.0 | 100.0 | 111.0 | 1 | 146.0 | 10.3 | 1 |
| SMB15J100A | SMB15J100CA | GGZ | BGZ | 100.0 | 111.0 | 123.0 | 1 | 162.0 | 9.3 | 1 |
| SMB15J110A | SMB15J110CA | GHE | BHE | 110.0 | 122.0 | 135.0 | 1 | 177.0 | 8.5 | 1 |
| SMB15J120A | SMB15J120CA | GHG | BHG | 120.0 | 133.0 | 147.0 | 1 | 193.0 | 7.8 | 1 |
| SMB15J130A | SMB15J130CA | GHK | BHK | 130.0 | 144.0 | 159.0 | 1 | 209.0 | 7.2 | 1 |
| SMB15J150A | SMB15J150CA | GHM | BHM | 150.0 | 167.0 | 185.0 | 1 | 243.0 | 6.2 | 1 |
| SMB15J160A | SMB15J160CA | GHP | BHP | 160.0 | 178.0 | 197.0 | 1 | 259.0 | 5.8 | 1 |
| SMB15J170A | SMB15J170CA | GHR | BHR | 170.0 | 189.0 | 209.0 | 1 | 275.0 | 5.5 | 1 |
| SMB15J180A | SMB15J180CA | GHT | BHT | 180.0 | 201.0 | 222.0 | 1 | 292.0 | 5.1 | 1 |
| SMB15J190A | | GHU | | 190.0 | 209.0 | 243.0 | 1 | 308.0 | 4.8 | 1 |
| SMB15J200A | | GHV | | 200.0 | 224.0 | 247.0 | 1 | 324.0 | 4.6 | 1 |
| SMB15J210A | | GHW | | 210.0 | 231.0 | 268.0 | 1 | 340.0 | 4.4 | 1 |
| SMB15J220A | | GHX | | 220.0 | 246.0 | 272.0 | 1 | 356.0 | 4.2 | 1 |

Ratings and Characteristics Curves (TA=25°C unless otherwise noted)

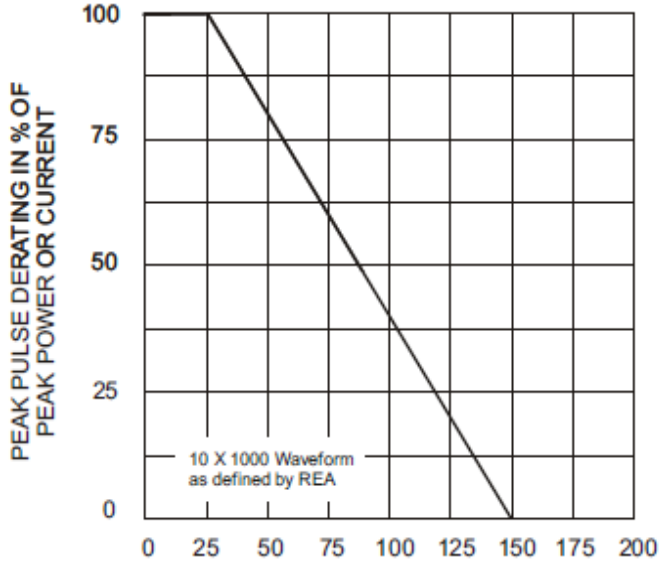


Fig. 1 - Pulse Derating Curve

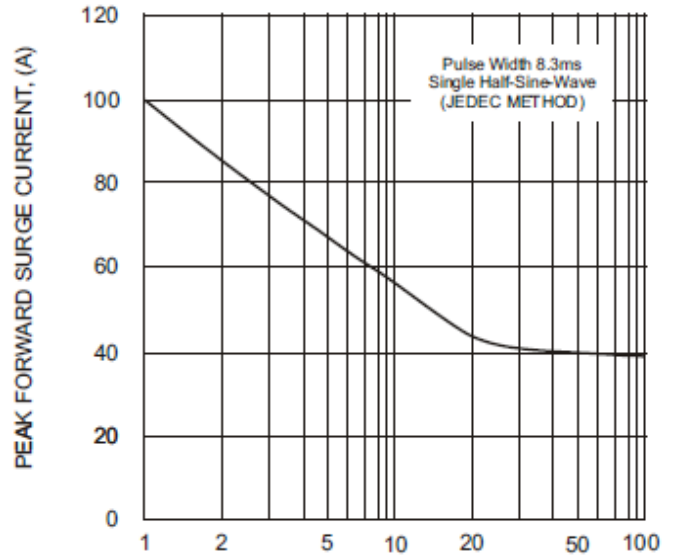


Fig. 2 - Maximum Non-Repetitive Surge Current

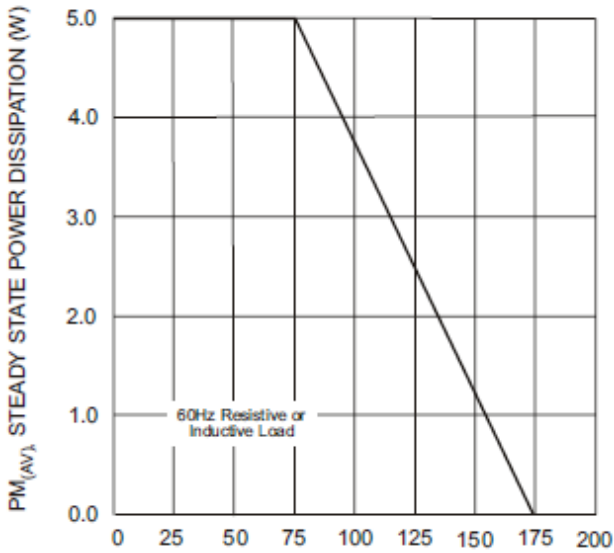


Fig. 3 - Steady State Power Derating Curve

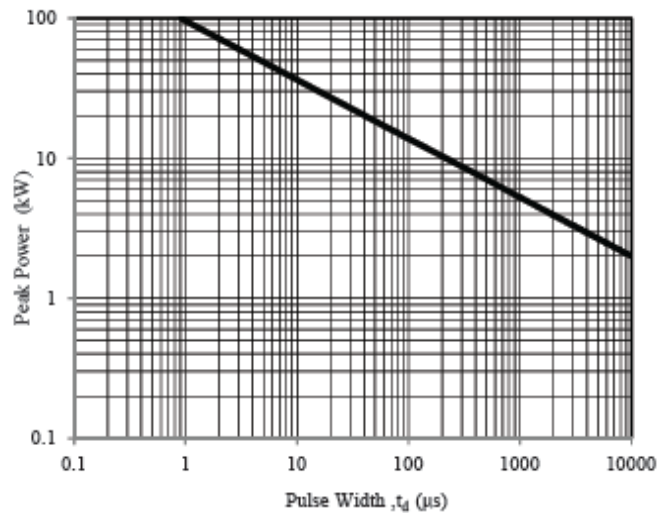


Fig. 4 - Peak Pulse Power Rating Curve

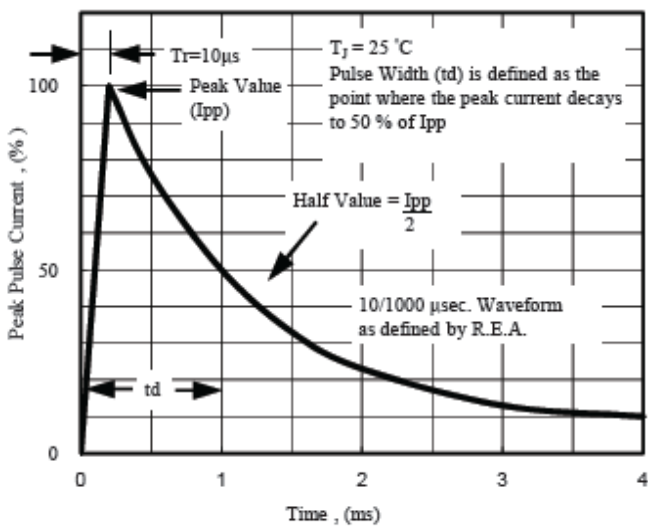


Fig. 5 - Pulse Waveform

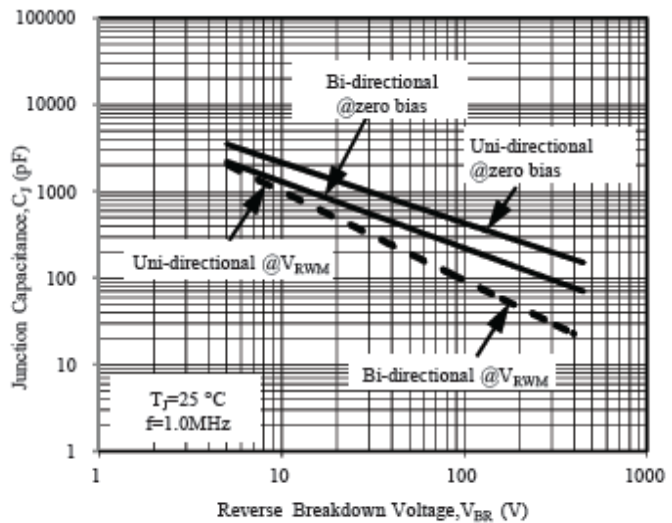


Fig. 6 - Typical Junction Capacitance

X-ON Electronics

Largest Supplier of Electrical and Electronic Components

Click to view similar products for [ESD Suppressors / TVS Diodes](#) category:

Click to view products by [ZHIDE](#) manufacturer:

Other Similar products are found below :

[60KS200C](#) [D18V0L1B2LP-7B](#) [D5V0F4U5P5-7](#) [NTE4902](#) [P4KE27CA](#) [P6KE11CA](#) [P6KE8.2A](#) [SA60CA](#) [SA64CA](#) [SMBJ12CATR](#)
[SMBJ33CATR](#) [SMBJ6.5A](#) [SMBJ8.0A](#) [ESD101-B1-02ELS](#) [E6327](#) [ESD112-B1-02EL](#) [E6327](#) [ESD7451N2T5G](#) [19180-510](#) [CPDT-5V0USP-](#)
[HF](#) [3.0SMCJ33CA-F](#) [3.0SMCJ36A-F](#) [HSPC16701B02TP](#) [JANTX1N6126A](#) [D3V3Q1B2DLP3-7](#) [D55V0M1B2WS-7](#) [SCM1293A-04SO](#)
[ESD200-B1-CSP0201](#) [E6327](#) [SM12-7](#) [CEN955](#) [W/DATA](#) [VESD12A1A-HD1-GS08](#) [CPDQC5V0-HF](#) [D1213A-01LP4-7B](#) [ESD101-B1-02EL](#)
[E6327](#) [AOZ8808DI-03](#) [5KP15A](#) [5KP48A](#) [5KP90A](#) [ESD3V3D7-TP](#) [15KPA36A-LF](#) [P4KE56CA](#) [P4KE68A](#) [P4KE91CATR](#) [P6KE120A](#)
[P6KE13CA](#) [P6KE43CA](#) [P6KE6.8CA](#) [P6KE8.2](#) [P6SMBJ20CA](#) [JANTX1N6072A](#) [SR2835ESKG](#) [SA90CA](#)