



1.5SMCJ5.0A-AU~1.5SMCJ70CA-AU

SURFACE MOUNT TRANSIENT VOLTAGE SUPPRESSOR PEAK PULSE POWER 1500 Watt

STAND-OFF VOLTAGE

5 to 70 Volt

SMC / DO-214AB

Unit : inch(mm)

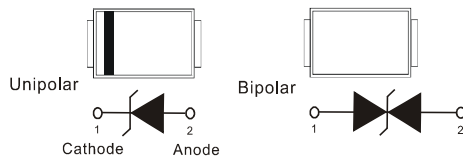
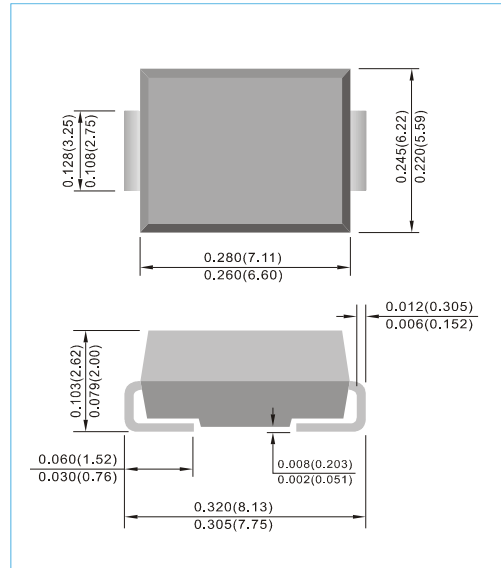
Recongized File # E210467

FEATURES

- Plastic package has Underwriters Laboratory Flammability Classification 94V-O
- ESD IEC-61000-4-2 Air \pm 30kV, Contact \pm 30kV
- For surface mounted applications in order to optimize board space.
- Low inductance
- High temperature soldering : 260°C /10 seconds at terminals
- AEC-Q101 qualified
- Lead free in compliance with EU RoHS 2.0
- Green molding compound as per IEC 61249 standard

MECHANICAL DATA

- Case: JEDEC DO-214AB, Molded plastic over passivated junction.
- Terminals: Solder plated, solderable per MIL-STD-750, Method 2026
- Polarity: Color band denotes cathode end
- Standard Packaging: 16mm tape (EIA-481)
- Weight: 0.0082 ounce, 0.2325 gram



DEVICES FOR BIPOLAR APPLICATIONS

For Bidirectional use C or CA Suffix for types 1.5SMCJ5.0 thru types 1.5SMCJ70.
 Electrical characteristics apply in both directions.

MAXIMUM RATINGS AND CHARACTERISTICS

Rating at 25°C ambient temperature unless otherwise specified. Resistive or inductive load, 60Hz.
 For Capacitive load derate current by 20%.

| Rating | Symbol | Value | Units |
|--|-----------------|----------------------|-----------------------------|
| Peak Power Dissipation at $T_A = 25^\circ\text{C}$, $t_p = 1\text{ms}$ (Notes 1) | P_{PP} | 1500 | W |
| Power Dissipation on Infinite Heat Sink at $T_L = 50^\circ\text{C}$ | P_D | 6.5 | Watts |
| Peak Pulse Current on $t_p = 10/1000\mu\text{s}$ waveform (Notes 1) | I_{PPM} | See table | A |
| Typical Thermal Resistance Junction to Air (Notes 2) | $R_{\theta JA}$ | 50 | $^\circ\text{C} / \text{W}$ |
| Peak Forward Surge Current, 8.3ms Single Half Sine-Wave Superimposed on Rated Load (Notes 3) | I_{FSM} | 200 | A |
| ESD IEC-61000-4-2 (Air) ESD IEC-61000-4-2 (Contact) | V_{ESD} | ± 30 ± 30 | kV |
| Operating Junction and Storage Temperature Range | T_J, T_{STG} | -55 to +150 | $^\circ\text{C}$ |

NOTES :

1. Non-repetitive current pulse, per Fig. 3 and derated above $T_A = 25^\circ\text{C}$ per Fig. 2.
2. Mounted on 2mm² (0.013mm thick) land areas.
3. Measured on 8.3ms, single half sine-wave or equivalent square wave, duty cycle = 4 pulses per minutes maximum.
4. A transient suppressor is selected according to the working peak reverse voltage (V_{RWM}), which should be equal to or greater than the DC or continuous peak operating voltage level.



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| Part Number | | Reverse Stand-off Voltage | Breakdown Voltage | | Test Current | Reverse Leakage | | Max. Clamp Voltage 10/1000µs | Peak Pulse Current 10/1000µs | Marking Code | |
|------------------------------------|-----------------|---------------------------|----------------------------------|-------|--------------|-----------------------------------|------|------------------------------|------------------------------|--------------|------|
| | | | V _{BR} @ I _T | | | I _R @ V _{RWM} | | | | | |
| | | | Min. | Max. | | UNI | BI | | | | |
| UNI | BI | V | V | V | mA | µA | µA | V | A | UNI | BI |
| 1500W Transient Voltage Suppressor | | | | | | | | | | | |
| 1.5SMCJ5.0A-AU | 1.5SMCJ5.0CA-AU | 5 | 6.4 | 7.25 | 10 | 1000 | 2000 | 9.2 | 163 | GDE | BDE |
| 1.5SMCJ6.0A-AU | 1.5SMCJ6.0CA-AU | 6 | 6.67 | 7.67 | 10 | 1000 | 2000 | 10.3 | 145.6 | GDG | BDG |
| 1.5SMCJ6.5A-AU | 1.5SMCJ6.5CA-AU | 6.5 | 7.22 | 8.3 | 10 | 500 | 1000 | 11.2 | 133.9 | GDK | BDK |
| 1.5SMCJ7.0A-AU | 1.5SMCJ7.0CA-AU | 7 | 7.78 | 8.95 | 10 | 200 | 400 | 12 | 125 | GDM | BDM |
| 1.5SMCJ7.5A-AU | 1.5SMCJ7.5CA-AU | 7.5 | 8.33 | 9.58 | 1 | 100 | 200 | 12.9 | 116.3 | GDP | BDP |
| 1.5SMCJ8.0A-AU | 1.5SMCJ8.0CA-AU | 8 | 8.89 | 10.23 | 1 | 50 | 100 | 13.6 | 110.3 | GDR | BDR |
| 1.5SMCJ8.5A-AU | 1.5SMCJ8.5CA-AU | 8.5 | 9.44 | 10.82 | 1 | 25 | 50 | 14.4 | 104.2 | GDT | BDT |
| 1.5SMCJ9.0A-AU | 1.5SMCJ9.0CA-AU | 9 | 10 | 11.5 | 1 | 10 | 20 | 15.4 | 97.4 | GDV | BDV |
| 1.5SMCJ10A-AU | 1.5SMCJ10CA-AU | 10 | 11.1 | 12.8 | 1 | 5 | 5 | 17 | 88.2 | GDX | BDX |
| 1.5SMCJ11A-AU | 1.5SMCJ11CA-AU | 11 | 12.2 | 14 | 1 | 1 | 1 | 18.2 | 82.4 | GDZ | BDZ |
| 1.5SMCJ12A-AU | 1.5SMCJ12CA-AU | 12 | 13.3 | 15.3 | 1 | 1 | 1 | 19.9 | 75.3 | GEE | BEE |
| 1.5SMCJ13A-AU | 1.5SMCJ13CA-AU | 13 | 14.4 | 16.5 | 1 | 1 | 1 | 21.5 | 69.7 | GEG | BEG |
| 1.5SMCJ14A-AU | 1.5SMCJ14CA-AU | 14 | 15.6 | 17.9 | 1 | 1 | 1 | 23.2 | 64.7 | GEK | BEK |
| 1.5SMCJ15A-AU | 1.5SMCJ15CA-AU | 15 | 16.7 | 19.2 | 1 | 1 | 1 | 24.4 | 61.5 | GEM | BEM |
| 1.5SMCJ16A-AU | 1.5SMCJ16CA-AU | 16 | 17.8 | 20.5 | 1 | 1 | 1 | 26 | 57.7 | GEP | BEP |
| 1.5SMCJ17A-AU | 1.5SMCJ17CA-AU | 17 | 18.9 | 21.7 | 1 | 1 | 1 | 27.6 | 53.3 | GER | BER |
| 1.5SMCJ18A-AU | 1.5SMCJ18CA-AU | 18 | 20 | 23.3 | 1 | 1 | 1 | 29.2 | 51.4 | GET | BET |
| 1.5SMCJ20A-AU | 1.5SMCJ20CA-AU | 20 | 22.2 | 25.5 | 1 | 1 | 1 | 32.4 | 46.3 | GEV | BEV |
| 1.5SMCJ22A-AU | 1.5SMCJ22CA-AU | 22 | 24.4 | 28 | 1 | 1 | 1 | 35.5 | 42.2 | GEX | BEX |
| 1.5SMCJ24A-AU | 1.5SMCJ24CA-AU | 24 | 26.7 | 30.7 | 1 | 1 | 1 | 38.9 | 38.6 | GEZ | BEZ |
| 1.5SMCJ26A-AU | 1.5SMCJ26CA-AU | 26 | 28.9 | 33.2 | 1 | 1 | 1 | 42.1 | 35.6 | GFE | BFE |
| 1.5SMCJ28A-AU | 1.5SMCJ28CA-AU | 28 | 31.1 | 35.8 | 1 | 1 | 1 | 45.4 | 33 | GFG | BFG |
| 1.5SMCJ30A-AU | 1.5SMCJ30CA-AU | 30 | 33.3 | 38.3 | 1 | 1 | 1 | 48.4 | 31 | GFK | BFK |
| 1.5SMCJ33A-AU | 1.5SMCJ33CA-AU | 33 | 36.7 | 42.2 | 1 | 1 | 1 | 53.3 | 28.1 | GFM | BFM |
| 1.5SMCJ36A-AU | 1.5SMCJ36CA-AU | 36 | 40 | 46 | 1 | 1 | 1 | 58.1 | 25.8 | GFP | BFP |
| 1.5SMCJ40A-AU | 1.5SMCJ40CA-AU | 40 | 44.4 | 51.1 | 1 | 1 | 1 | 64.5 | 23.2 | GFR | BFR |
| 1.5SMCJ43A-AU | 1.5SMCJ43CA-AU | 43 | 47.8 | 55 | 1 | 1 | 1 | 69.4 | 21.6 | GFT | BFT |
| 1.5SMCJ45A-AU | 1.5SMCJ45CA-AU | 45 | 50 | 57.5 | 1 | 1 | 1 | 72.7 | 20.6 | GFV | BFV |
| 1.5SMCJ48A-AU | 1.5SMCJ48CA-AU | 48 | 53.3 | 61.3 | 1 | 1 | 1 | 77.4 | 19.4 | GFX | BFX |
| 1.5SMCJ51A-AU | 1.5SMCJ51CA-AU | 51 | 56.7 | 65.2 | 1 | 1 | 1 | 82.4 | 18.2 | GFZ | BFZ |
| 1.5SMCJ54A-AU | 1.5SMCJ54CA-AU | 54 | 60 | 69 | 1 | 1 | 1 | 87.1 | 17.2 | GGE | BGE |
| 1.5SMCJ58A-AU | 1.5SMCJ58CA-AU | 58 | 64.4 | 74.1 | 1 | 1 | 1 | 93.6 | 16 | GGG | BGG |
| 1.5SMCJ60A-AU | 1.5SMCJ60CA-AU | 60 | 66.7 | 76.7 | 1 | 1 | 1 | 96.8 | 15.5 | GGK | BG K |
| 1.5SMCJ64A-AU | 1.5SMCJ64CA-AU | 64 | 71.1 | 81.8 | 1 | 1 | 1 | 103 | 14.6 | GGM | BGM |
| 1.5SMCJ70A-AU | 1.5SMCJ70CA-AU | 70 | 77.8 | 89.5 | 1 | 1 | 1 | 113 | 13.3 | GGP | BGP |



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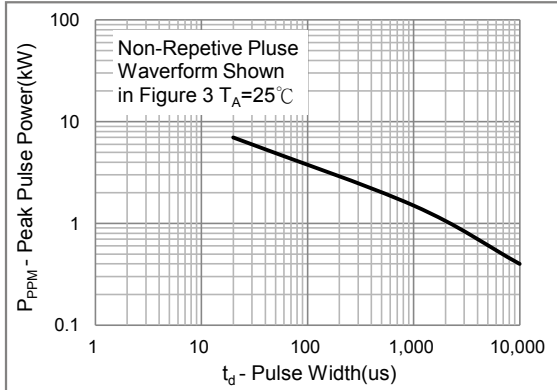


Fig.1 Peak Pulse Power Rating Curve



Fig.2 Derating Curve

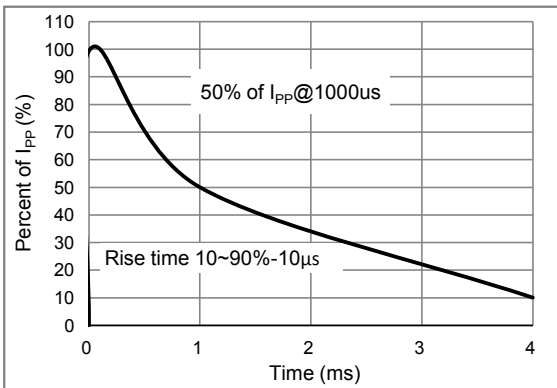


Fig.3 10/1000us Pulse Waveform

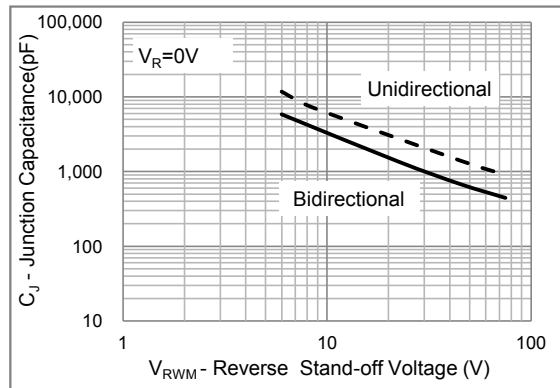
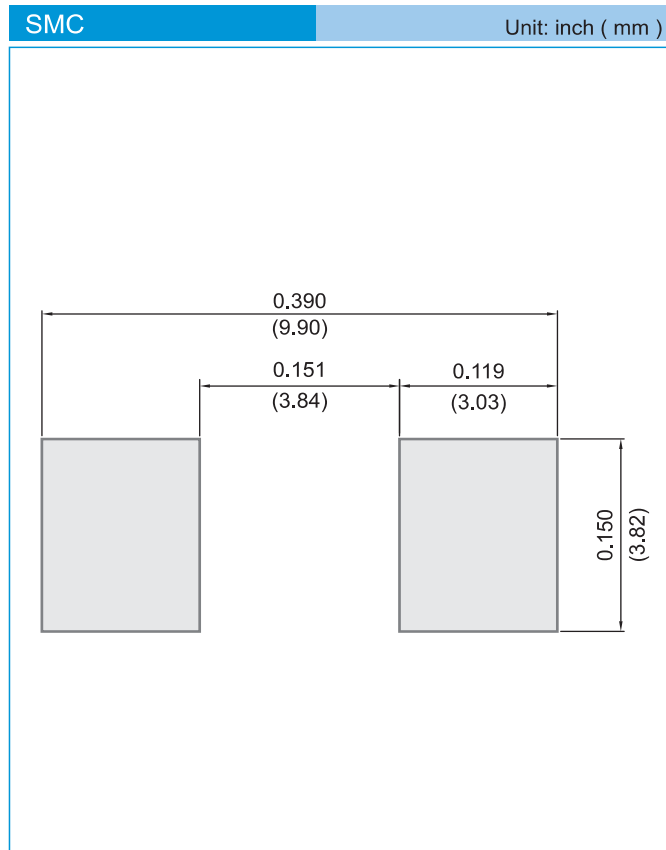


Fig.4 Typical Capacitance



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MOUNTING PAD LAYOUT



ORDER INFORMATION

- Packing information
T/R - 3K per 13" plastic Reel
T/R - 0.8K per 7" plastic Reel



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Part No._packing code_Version

1.5SMCJ5.0A-AU_R1_000A1

1.5SMCJ5.0A-AU_R2_000A1

For example :

RB500V-40_R2_00001



| Packing Code XX | | | | Version Code XXXXX | | |
|--------------------------------------|----------------------|----------------------------------|----------------------|---------------------------|----------------------|---------------------------------------|
| Packing type | 1 st Code | Packing size code | 2 nd Code | HF or RoHS | 1 st Code | 2 nd ~5 th Code |
| Tape and Ammunition Box (T/B) | A | N/A | 0 | HF | 0 | serial number |
| Tape and Reel (T/R) | R | 7" | 1 | RoHS | 1 | serial number |
| Bulk Packing (B/P) | B | 13" | 2 | | | |
| Tube Packing (T/P) | T | 26mm | X | | | |
| Tape and Reel (Right Oriented) (TRR) | S | 52mm | Y | | | |
| Tape and Reel (Left Oriented) (TRL) | L | PANASERT T/B CATHODE UP (PBCU) | U | | | |
| FORMING | F | PANASERT T/B CATHODE DOWN (PBCD) | D | | | |



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