



1.5SMCJ8.5AS ~ 1.5SMCJ220CAS Series

Transient Voltage Suppressor

Recongnized File # E210467 (1.5SMCJ8.5AS ~ 1.5SMCJ170CAS Series)

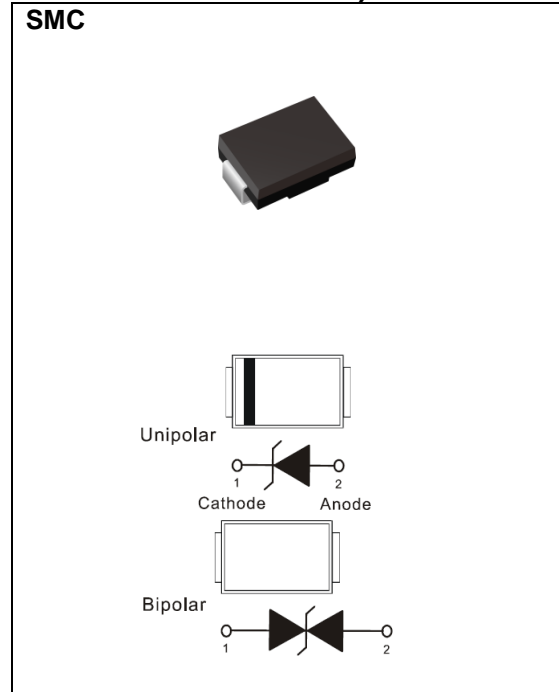
Voltage 8.5~220 V **Power** 1500 W

Features

- Fast response time
- Low incremental surge resistance
- Ultra thin profile package for space constrained utilization
- High temperature soldering : 260°C/10 seconds at terminals
- Lead free in compliance with EU RoHS 2.0
- Green molding compound as per IEC 61249 standard

Mechanical Data

- Case: Molded plastic, SMC
- Terminals: Solder plated, solderable per MIL-STD-750, Method 2026
- Approx. Weight: 0.0082 ounces, 0.2325 grams



Maximum Ratings and Thermal Characteristics (T_A = 25 °C unless otherwise noted)

| PARAMETER | SYMBOL | LIMIT | UNITS |
|---|------------------------------------|-------------|-------|
| Peak Pulse Power Dissipation(tp = 10 / 1000 us) | P _{PP} ^{(1) (2)} | 1500 | W |
| Peak Pulse Current on tp = 10 / 1000 us waveform ^(Fig.2) | I _{PPM} ⁽¹⁾ | See table 1 | A |
| Power Dissipation on Infinite Heat Sink at T _L = 50 °C | P _D | 6.5 | W |
| ESD IEC61000-4-2(Air) | V _{ESD} | ±30 | kV |
| ESD IEC61000-4-2(Contact) | V _{ESD} | ±30 | kV |
| Typical Thermal Resistance Junction to Ambient | R _{θJA} ⁽³⁾ | 125 | °C/W |
| Operating Junction Temperature Range | T _J | -55~150 | °C |
| Storage Temperature Range | T _{STG} | -55~150 | °C |



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Electrical Characteristics (T_A = 25 °C unless otherwise noted)

| Part Number | | V _{RWM} | V _{BR} | | | I _R | | V _{C@IPP} | | Marking Code | |
|------------------------------------|---------------|------------------|-----------------|-------|----------------|-------------------|----|--------------------|-------|--------------|---------|
| | | | Min. | Max. | I _T | @V _{RWM} | | | | | |
| UNI | BI | V | V | V | mA | UNI | BI | V | A | UNI | BI |
| 1500W Transient Voltage Suppressor | | | | | | | | | | | |
| 1.5SMCJ8.5AS | 1.5SMCJ8.5CAS | 8.5 | 9.44 | 10.82 | 1 | 25 | 50 | 14.4 | 104.2 | C8V5AS | C8V5CAS |
| 1.5SMCJ9.0AS | 1.5SMCJ9.0CAS | 9 | 10 | 11.5 | 1 | 10 | 20 | 15.4 | 97.4 | C9V0AS | C9V0CAS |
| 1.5SMCJ10AS | 1.5SMCJ10CAS | 10 | 11.1 | 12.8 | 1 | 5 | 5 | 17 | 88.2 | C10AS | C10CAS |
| 1.5SMCJ11AS | 1.5SMCJ11CAS | 11 | 12.2 | 14 | 1 | 1 | 1 | 18.2 | 82.4 | C11AS | C11CAS |
| 1.5SMCJ12AS | 1.5SMCJ12CAS | 12 | 13.3 | 15.3 | 1 | 1 | 1 | 19.9 | 75.3 | C12AS | C12CAS |
| 1.5SMCJ13AS | 1.5SMCJ13CAS | 13 | 14.4 | 16.5 | 1 | 1 | 1 | 21.5 | 69.7 | C13AS | C13CAS |
| 1.5SMCJ14AS | 1.5SMCJ14CAS | 14 | 15.6 | 17.9 | 1 | 1 | 1 | 23.2 | 64.7 | C14AS | C14CAS |
| 1.5SMCJ15AS | 1.5SMCJ15CAS | 15 | 16.7 | 19.2 | 1 | 1 | 1 | 24.4 | 61.5 | C15AS | C15CAS |
| 1.5SMCJ16AS | 1.5SMCJ16CAS | 16 | 17.8 | 20.5 | 1 | 1 | 1 | 26 | 57.7 | C16AS | C16CAS |
| 1.5SMCJ17AS | 1.5SMCJ17CAS | 17 | 18.9 | 21.7 | 1 | 1 | 1 | 27.6 | 53.3 | C17AS | C17CAS |
| 1.5SMCJ18AS | 1.5SMCJ18CAS | 18 | 20 | 23.3 | 1 | 1 | 1 | 29.2 | 51.4 | C18AS | C18CAS |
| 1.5SMCJ20AS | 1.5SMCJ20CAS | 20 | 22.2 | 25.5 | 1 | 1 | 1 | 32.4 | 46.3 | C20AS | C20CAS |
| 1.5SMCJ22AS | 1.5SMCJ22CAS | 22 | 24.4 | 28 | 1 | 1 | 1 | 35.5 | 42.2 | C22AS | C22CAS |
| 1.5SMCJ24AS | 1.5SMCJ24CAS | 24 | 26.7 | 30.7 | 1 | 1 | 1 | 38.9 | 38.6 | C24AS | C24CAS |
| 1.5SMCJ26AS | 1.5SMCJ26CAS | 26 | 28.9 | 33.2 | 1 | 1 | 1 | 42.1 | 35.6 | C26AS | C26CAS |
| 1.5SMCJ28AS | 1.5SMCJ28CAS | 28 | 31.1 | 35.8 | 1 | 1 | 1 | 45.4 | 33 | C28AS | C28CAS |
| 1.5SMCJ30AS | 1.5SMCJ30CAS | 30 | 33.3 | 38.3 | 1 | 1 | 1 | 48.4 | 31 | C30AS | C30CAS |
| 1.5SMCJ33AS | 1.5SMCJ33CAS | 33 | 36.7 | 42.2 | 1 | 1 | 1 | 53.3 | 28.1 | C33AS | C33CAS |
| 1.5SMCJ36AS | 1.5SMCJ36CAS | 36 | 40 | 46 | 1 | 1 | 1 | 58.1 | 25.8 | C36AS | C36CAS |
| 1.5SMCJ40AS | 1.5SMCJ40CAS | 40 | 44.4 | 51.1 | 1 | 1 | 1 | 64.5 | 23.2 | C40AS | C40CAS |
| 1.5SMCJ43AS | 1.5SMCJ43CAS | 43 | 47.8 | 55 | 1 | 1 | 1 | 69.4 | 21.6 | C43AS | C43CAS |
| 1.5SMCJ45AS | 1.5SMCJ45CAS | 45 | 50 | 57.5 | 1 | 1 | 1 | 72.7 | 20.6 | C45AS | C45CAS |
| 1.5SMCJ48AS | 1.5SMCJ48CAS | 48 | 53.3 | 61.3 | 1 | 1 | 1 | 77.4 | 19.4 | C48AS | C48CAS |
| 1.5SMCJ51AS | 1.5SMCJ51CAS | 51 | 56.7 | 65.2 | 1 | 1 | 1 | 82.4 | 18.2 | C51AS | C51CAS |
| 1.5SMCJ54AS | 1.5SMCJ54CAS | 54 | 60 | 69 | 1 | 1 | 1 | 87.1 | 17.2 | C54AS | C54CAS |
| 1.5SMCJ58AS | 1.5SMCJ58CAS | 58 | 64.4 | 74.1 | 1 | 1 | 1 | 93.6 | 16 | C58AS | C58CAS |
| 1.5SMCJ60AS | 1.5SMCJ60CAS | 60 | 66.7 | 76.7 | 1 | 1 | 1 | 96.8 | 15.5 | C60AS | C60CAS |
| 1.5SMCJ64AS | 1.5SMCJ64CAS | 64 | 71.1 | 81.8 | 1 | 1 | 1 | 103 | 14.6 | C64AS | C64CAS |
| 1.5SMCJ70AS | 1.5SMCJ70CAS | 70 | 77.8 | 89.5 | 1 | 1 | 1 | 113 | 13.3 | C70AS | C70CAS |



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Electrical Characteristics (T_A = 25 °C unless otherwise noted)

| Part Number | | V _{RWM} | V _{BR} | | | I _R | | V _{C@I_{PP}} | | Marking Code | |
|------------------------------------|---------------|------------------|-----------------|-------|----------------|--------------------|----|-------------------------------|------|--------------|---------|
| | | | Min. | Max. | I _T | @ V _{RWM} | uA | | | | |
| UNI | BI | V | V | V | mA | UNI | BI | V | A | UNI | BI |
| 1500W Transient Voltage Suppressor | | | | | | | | | | | |
| 1.5SMCJ75AS | 1.5SMCJ75CAS | 75 | 83.3 | 95.8 | 1 | 1 | 1 | 121 | 12.4 | C75AS | C75CAS |
| 1.5SMCJ78AS | 1.5SMCJ78CAS | 78 | 86.7 | 99.7 | 1 | 1 | 1 | 126 | 11.4 | C78AS | C78CAS |
| 1.5SMCJ85AS | 1.5SMCJ85CAS | 85 | 94.4 | 108.2 | 1 | 1 | 1 | 137 | 10.4 | C85AS | C85CAS |
| 1.5SMCJ90AS | 1.5SMCJ90CAS | 90 | 100 | 115.5 | 1 | 1 | 1 | 146 | 10.3 | C90AS | C90CAS |
| 1.5SMCJ100AS | 1.5SMCJ100CAS | 100 | 111 | 128 | 1 | 1 | 1 | 162 | 9.3 | C100AS | C100CAS |
| 1.5SMCJ110AS | 1.5SMCJ110CAS | 110 | 122 | 140.5 | 1 | 1 | 1 | 177 | 8.4 | C110AS | C110CAS |
| 1.5SMCJ120AS | 1.5SMCJ120CAS | 120 | 133 | 153 | 1 | 1 | 1 | 193 | 7.9 | C120AS | C120CAS |
| 1.5SMCJ130AS | 1.5SMCJ130CAS | 130 | 144 | 165.5 | 1 | 1 | 1 | 209 | 7.2 | C130AS | C130CAS |
| 1.5SMCJ150AS | 1.5SMCJ150CAS | 150 | 167 | 192.5 | 1 | 1 | 1 | 243 | 6.2 | C150AS | C150CAS |
| 1.5SMCJ160AS | 1.5SMCJ160CAS | 160 | 178 | 205 | 1 | 1 | 1 | 259 | 5.8 | C160AS | C160CAS |
| 1.5SMCJ170AS | 1.5SMCJ170CAS | 170 | 189 | 217.5 | 1 | 1 | 1 | 275 | 5.5 | C170AS | C170CAS |
| 1.5SMCJ180AS | 1.5SMCJ180CAS | 180 | 198 | 230.4 | 1 | 1 | 1 | 292 | 5.1 | C180AS | C180CAS |
| 1.5SMCJ190AS | 1.5SMCJ190CAS | 190 | 209 | 243.2 | 1 | 1 | 1 | 308 | 4.8 | C190AS | C190CAS |
| 1.5SMCJ200AS | 1.5SMCJ200CAS | 200 | 220 | 256 | 1 | 1 | 1 | 324 | 4.6 | C200AS | C200CAS |
| 1.5SMCJ210AS | 1.5SMCJ210CAS | 210 | 231 | 268.8 | 1 | 1 | 1 | 340 | 4.4 | C210AS | C210CAS |
| 1.5SMCJ220AS | 1.5SMCJ220CAS | 220 | 242 | 281.6 | 1 | 1 | 1 | 356 | 4.2 | C220AS | C220CAS |

Notes :

1. Non-repetitive current pulse, per Fig.3 and derated above T_A=25°C per Fig.2
2. Mounted on 100cm² copper pads to each terminal
3. Mounted on a FR4 PCB, single-sided copper, standard footprint



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TYPICAL CHARACTERISTIC CURVES

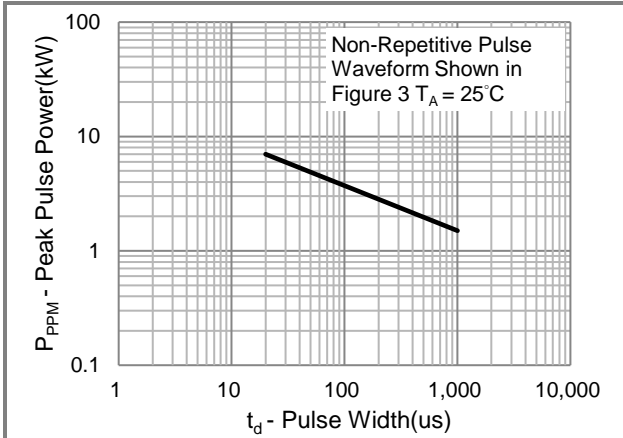


Fig.1 Pulse Power Rating Curve



Fig.2 Derating Curve

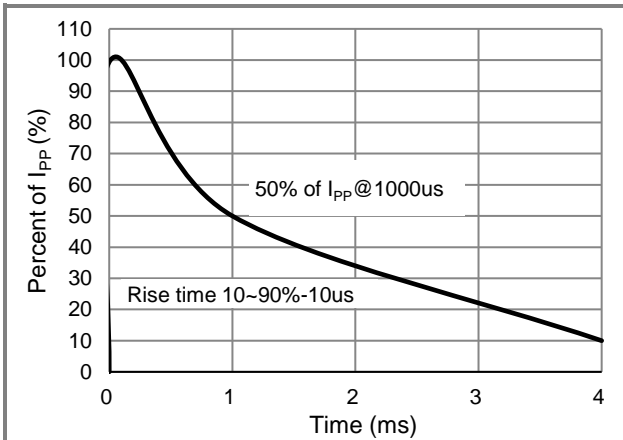


Fig.3 10/1000us Pulse Waveform

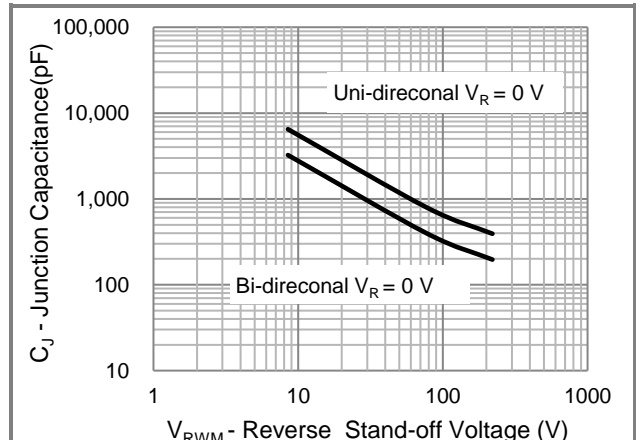


Fig.4 Typical Capacitance



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Part No. Packing Code Version

| Part No. Packing Code | Package Type | Packing Type | Marking | Version |
|------------------------|--------------|--------------------|-----------|--------------------------------|
| 1.5SMCJxxxxAS_R1_00001 | SMC | 0.8K pcs / 7" reel | See Table | Halogen free RoHS compliant |

Packaging Information & Mounting Pad Layout

