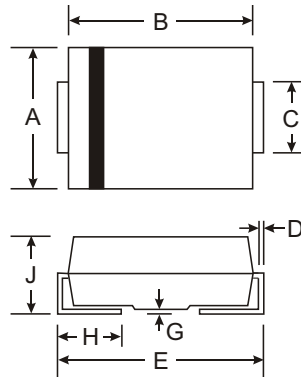


Features

- 1500W Peak Pulse Power Dissipation
- 5.0V - 170V Standoff Voltages
- Glass Passivated Die Construction
- Uni- and Bi-Directional Versions Available
- Excellent Clamping Capability
- Fast Response Time
- Plastic Case Material has UL Flammability Classification Rating 94V-0

Mechanical Data

- Case: SMC, Transfer Molded Epoxy
- Terminals: Solderable per MIL-STD-202, Method 208
- Polarity Indicator: Cathode Band (Note: Bi-directional devices have no polarity indicator.)
- Marking: Date Code and Marking Code See Page 3
- Weight: 0.21 grams (approx.)
- Ordering Info: See Page 3



| SMC | | |
|----------------------|------|------|
| Dim | Min | Max |
| A | 5.59 | 6.22 |
| B | 6.60 | 7.11 |
| C | 2.75 | 3.18 |
| D | 0.15 | 0.31 |
| E | 7.75 | 8.13 |
| G | 0.10 | 0.20 |
| H | 0.76 | 1.52 |
| J | 2.00 | 2.62 |
| All Dimensions in mm | | |

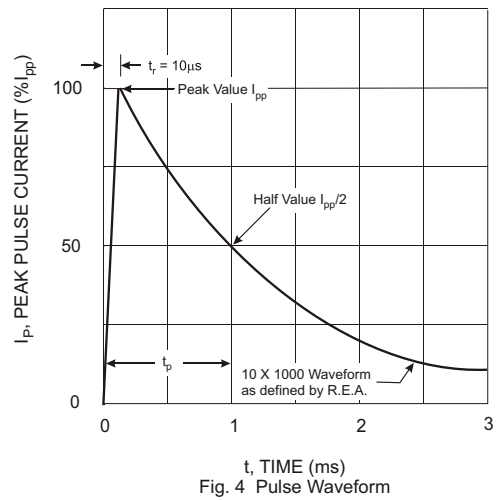
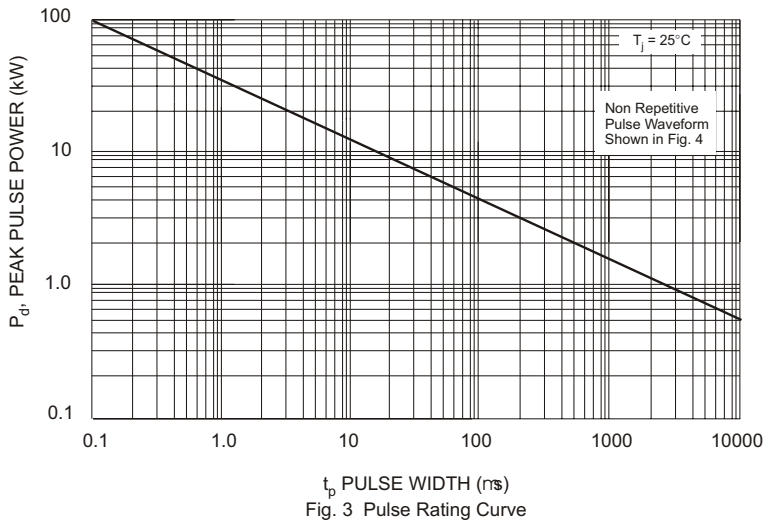
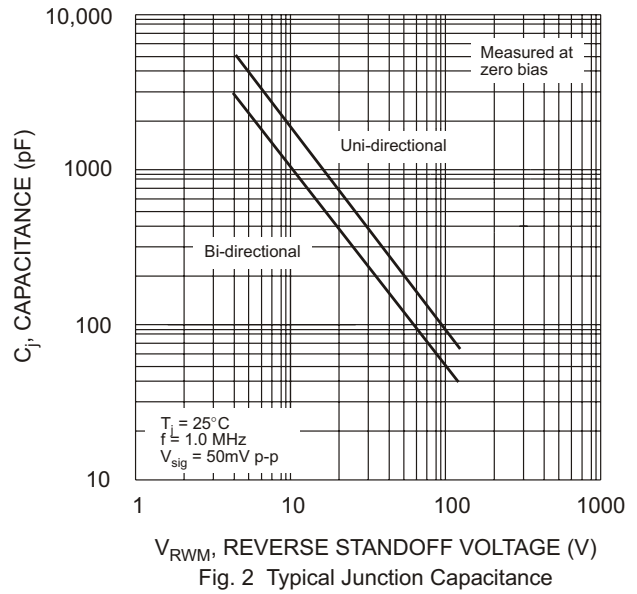
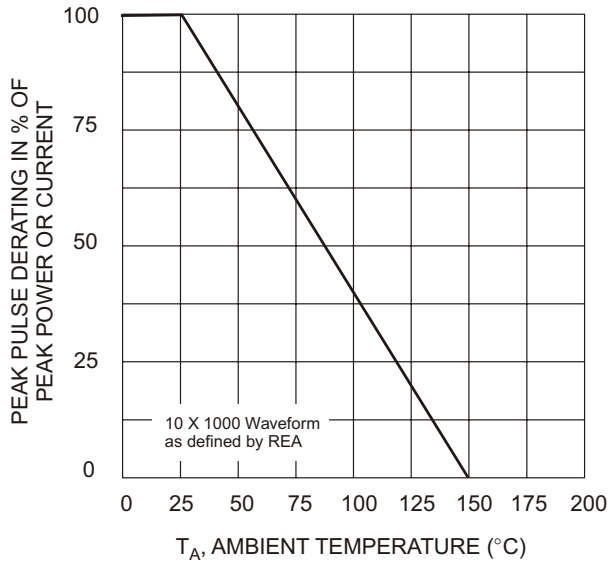
Maximum Ratings @ $T_A = 25^\circ\text{C}$ unless otherwise specified

| Characteristic | Symbol | Value | Unit |
|--|----------------|-------------|------------------|
| Peak Pulse Power Dissipation (Non repetitive current pulse derated above $T_A = 25^\circ\text{C}$) (Note 1) | P_{PK} | 1500 | W |
| Peak Forward Surge Current, 8.3ms Single Half Sine Wave Superimposed on Rated Load (JEDEC Method) (Notes 1, 2, & 3) | I_{FSM} | 200 | A |
| Instantaneous Forward Voltage @ $I_{PP} = 35\text{A}$ (Notes 1, 2, & 3) | V_F | 3.5 | V |
| Operating and Storage Temperature Range | T_J, T_{STG} | -55 to +150 | $^\circ\text{C}$ |

- Notes:
1. Valid provided that terminals are kept at ambient temperature.
 2. Measured with 8.3ms single half sine-wave. Duty cycle = 4 pulses per minute maximum.
 3. Unidirectional units only.

| Part Number Add C For Bi-Directional (Note 4) | Reverse Standoff Voltage V_{RWM} (V) | Breakdown Voltage V_{BR} @ I_T (Note 5) | | Test Current I_T (mA) | Max. Reverse Leakage @ V_{RWM} (Note 6) I_R (μ A) | Max. Clamping Voltage @ I_{PP} V_C (V) | Max. Peak Pulse Current I_{PP} (A) | Marking Code | |
|--|---|---|---------|-------------------------------|---|--|---|--------------|------|
| | | Min (V) | Max (V) | | | | | BI- | UNI- |
| SMCJ5.0(C)A | 5.0 | 6.40 | 7.25 | 10 | 1000 | 9.2 | 163.0 | BDE | GDE |
| SMCJ6.0(C)A | 6.0 | 6.67 | 7.67 | 10 | 1000 | 10.3 | 145.6 | BDG | GDG |
| SMCJ6.5(C)A | 6.5 | 7.22 | 8.30 | 10 | 500 | 11.2 | 133.9 | BDK | GDK |
| SMCJ7.0(C)A | 7.0 | 7.78 | 8.95 | 10 | 200 | 12.0 | 125.0 | BDM | GDM |
| SMCJ7.5(C)A | 7.5 | 8.33 | 9.58 | 1.0 | 100 | 12.9 | 116.3 | BDP | GDP |
| SMCJ8.0(C)A | 8.0 | 8.89 | 10.23 | 1.0 | 50 | 13.6 | 110.3 | BDR | GDR |
| SMCJ8.5(C)A | 8.5 | 9.44 | 10.82 | 1.0 | 20 | 14.4 | 104.2 | BDT | GDT |
| SMCJ9.0(C)A | 9.0 | 10.00 | 11.50 | 1.0 | 10 | 15.4 | 97.4 | BDV | GDV |
| SMCJ10(C)A | 10.0 | 11.10 | 12.80 | 1.0 | 5.0 | 17.0 | 88.2 | BDX | GDX |
| SMCJ11(C)A | 11.0 | 12.20 | 14.40 | 1.0 | 5.0 | 18.2 | 82.4 | BDZ | GDZ |
| SMCJ12(C)A | 12.0 | 13.30 | 15.30 | 1.0 | 5.0 | 19.9 | 75.3 | BEE | GEE |
| SMCJ13(C)A | 13.0 | 14.40 | 16.50 | 1.0 | 5.0 | 21.5 | 69.7 | BEG | GEG |
| SMCJ14(C)A | 14.0 | 15.60 | 17.90 | 1.0 | 5.0 | 23.2 | 64.7 | BEK | GEK |
| SMCJ15(C)A | 15.0 | 16.70 | 19.20 | 1.0 | 5.0 | 24.4 | 61.5 | BEM | GEM |
| SMCJ16(C)A | 16.0 | 17.80 | 20.50 | 1.0 | 5.0 | 26.0 | 57.7 | BEP | GEP |
| SMCJ17(C)A | 17.0 | 18.90 | 21.70 | 1.0 | 5.0 | 27.6 | 53.3 | BER | GER |
| SMCJ18(C)A | 18.0 | 20.00 | 23.30 | 1.0 | 5.0 | 29.2 | 51.4 | BET | GET |
| SMCJ20(C)A | 20.0 | 22.20 | 25.50 | 1.0 | 5.0 | 32.4 | 46.3 | BEV | GEV |
| SMCJ22(C)A | 22.0 | 24.40 | 28.00 | 1.0 | 5.0 | 35.5 | 42.2 | BEX | GEX |
| SMCJ24(C)A | 24.0 | 26.70 | 30.70 | 1.0 | 5.0 | 38.9 | 38.6 | BEZ | GEZ |
| SMCJ26(C)A | 26.0 | 28.90 | 33.20 | 1.0 | 5.0 | 42.1 | 35.6 | BFE | GFE |
| SMCJ28(C)A | 28.0 | 31.10 | 35.80 | 1.0 | 5.0 | 45.4 | 33.0 | BFG | GFG |
| SMCJ30(C)A | 30.0 | 33.30 | 38.30 | 1.0 | 5.0 | 48.4 | 31.0 | BFK | GFK |
| SMCJ33(C)A | 33.0 | 36.70 | 42.20 | 1.0 | 5.0 | 53.3 | 28.1 | BFM | GFM |
| SMCJ36(C)A | 36.0 | 40.00 | 46.00 | 1.0 | 5.0 | 58.1 | 25.8 | BFP | GFP |
| SMCJ40(C)A | 40.0 | 44.40 | 51.10 | 1.0 | 5.0 | 64.5 | 23.2 | BFR | GFR |
| SMCJ43(C)A | 43.0 | 47.80 | 54.90 | 1.0 | 5.0 | 69.4 | 21.6 | BFT | GFT |
| SMCJ45(C)A | 45.0 | 50.00 | 57.50 | 1.0 | 5.0 | 72.7 | 20.6 | BFV | GFV |
| SMCJ48(C)A | 48.0 | 53.30 | 61.30 | 1.0 | 5.0 | 77.4 | 19.4 | BFX | GFX |
| SMCJ51(C)A | 51.0 | 56.70 | 65.20 | 1.0 | 5.0 | 82.4 | 18.2 | BFZ | GFZ |
| SMCJ54(C)A | 54.0 | 60.00 | 69.00 | 1.0 | 5.0 | 87.1 | 17.2 | BGE | GGE |
| SMCJ58(C)A | 58.0 | 64.40 | 74.60 | 1.0 | 5.0 | 93.6 | 16.0 | BGG | GGG |
| SMCJ60(C)A | 60.0 | 66.70 | 76.70 | 1.0 | 5.0 | 96.8 | 15.5 | BGK | GGK |
| SMCJ64(C)A | 64.0 | 71.10 | 81.80 | 1.0 | 5.0 | 103.0 | 14.6 | BGM | GGM |
| SMCJ70(C)A | 70.0 | 77.80 | 89.50 | 1.0 | 5.0 | 113.0 | 13.3 | BGP | GGP |
| SMCJ75(C)A | 75.0 | 83.30 | 95.80 | 1.0 | 5.0 | 121.0 | 12.4 | BGR | GGR |
| SMCJ78(C)A | 78.0 | 86.70 | 99.70 | 1.0 | 5.0 | 126.0 | 11.4 | BGT | GGT |
| SMCJ85(C)A | 85.0 | 94.40 | 108.20 | 1.0 | 5.0 | 137.0 | 10.4 | BGV | GGV |
| SMCJ90(C)A | 90.0 | 100.00 | 115.50 | 1.0 | 5.0 | 146.0 | 10.3 | BGX | GGX |
| SMCJ100(C)A | 100.0 | 111.00 | 128.00 | 1.0 | 5.0 | 162.0 | 9.3 | BGZ | GGZ |
| SMCJ110(C)A | 110.0 | 122.00 | 140.50 | 1.0 | 5.0 | 177.0 | 8.4 | BHE | GHE |
| SMCJ120(C)A | 120.0 | 133.00 | 153.00 | 1.0 | 5.0 | 193.0 | 7.9 | BHG | GHG |
| SMCJ130(C)A | 130.0 | 144.00 | 165.50 | 1.0 | 5.0 | 209.0 | 7.2 | BHK | GHK |
| SMCJ150(C)A | 150.0 | 167.00 | 192.50 | 1.0 | 5.0 | 243.0 | 6.2 | BHM | GHM |
| SMCJ160(C)A | 160.0 | 178.00 | 205.00 | 1.0 | 5.0 | 259.0 | 5.8 | BHP | GHP |
| SMCJ170(C)A | 170.0 | 189.00 | 217.50 | 1.0 | 5.0 | 275.0 | 5.5 | BHR | GHR |

- Notes: 4. Suffix C denotes Bi-directional device.
5. V_{BR} measured with I_T current pulse = 300 μ s
6. For Bi-Directional devices having V_{RWM} of 10V and under, the I_R is doubled.

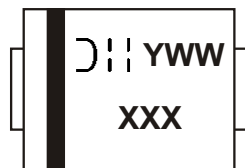


Ordering Information (Note 4)

| Device | Packaging | Shipping |
|----------------|-----------|------------------|
| SMCJXXX(C)A-13 | SMC | 5000/Tape & Reel |

Notes: 4. For Packaging Details, go to our website at <http://www.diodes.com/datasheets/ap02007.pdf>.

Marking Information



XXX = Product type marking code (See Page 2)
 D: = Manufacturers' code marking
 YWW = Date code marking
 Y = Last digit of year ex: 2 for 2002
 WW = Week code 01 to 52