

**SURFACE MOUNT GPP
TRANSIENT VOLTAGE SUPPRESSOR
1500 WATT PEAK POWER 6.5 WATTS STEADY STATE**

FEATURES

- * Plastic package has underwriters laboratory
- * Glass passivated chip construction
- * 1500 watt surge capability at 1ms
- * Excellent clamping capability
- * Low zener impedance
- * Fast response time

MAXIMUM RATINGS AND ELECTRICAL CHARACTERISTICS

Ratings at 25 °C ambient temperature unless otherwise specified.



DO-214AB



Dimensions in inches and (millimeters)

DEVICES FOR BIPOLAR APPLICATIONS

For Bidirectional use C or CA suffix for types TFMCJ5.0 thru TFMCJ170

Electrical characteristics apply in both direction

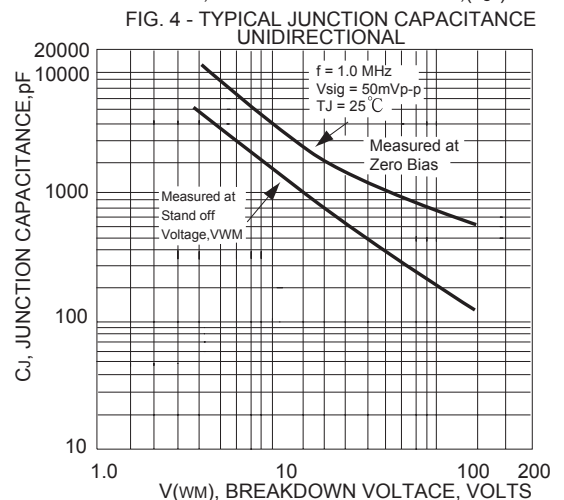
MAXIMUM RATINGS (At TA = 25°C unless otherwise noted)

| RATINGS | SYMBOL | VALUE | UNITS |
|---|----------|--------------|-------|
| Peak Power Dissipation with a 10/1000uS (Note 1,2, Fig.1) | PPPM | Minimum 1500 | Watts |
| Peak Pulse Current with a 10/1000uS waveform (Note 1, Fig.3) | IPPM | SEE TABLE 1 | Amps |
| Steady State Power Dissipation at TL = 75°C (Note 2) | PM(AV) | 6.5 | Watts |
| Peak Forward Surge Current 8.3mS single half sine-wave superimposed on rated load (JEDEC method) (Note 3,4) unidirectional only | IFSM | 200 | Amps |
| Maximum Instantaneous Forward Voltage at 100A for unidirectional only | VF | SEE NOTE 5 | Volts |
| Operating and Storage Temperature Range | TJ, TSTG | -55 to + 150 | °C |
| Thermal Resistance Junction to Ambient Air | RqJA | 75 | °C/W |
| Thermal Resistance Junction to Leads | RqJL | 15 | °C/W |

NOTES :

1. Non-repetitive current pulse, per Fig.3 and derated above TA = 25°C per Fig.2.
2. Mounted on 0.31 X 0.31" (8.0 X 8.0mm) copper pad to each terminal.
3. Lead temperature at TL = 25°C
4. Measured on 8.3mS single half sine-wave duty cycle = 4 pules per minute maximum.
5. Vf = 3.5V on TFMCJ-5.0 thru TFMCJ-90 devices and Vf = 5.0V on TFMCJ-100 thru TFMCJ-170 devices.
- 6 "Fully ROHS compliant", "100% Sn plating(Pb-free).

RATING AND CHARACTERISTIC CURVES (TFMCJ5.0 THRU TFMCJ170CA)



TRANSIENT VOLTAGE SUPPRESSORS

1500W SERIES TVS DIODES/DO-214AB (CASE 4) 1500W

| Rectron Industry No. | Rectron House No. | Breakdown Voltage | | | Reverse Stand off Voltage VWM (Volts) | Maximum Reverse Leakage at VWM ID(uA) | Maximum Peak Pulse Current IPPM (Amps) | Maximum Clamping Voltage at IPPM VC (Volts) |
|----------------------|-------------------|-------------------|------|----------|---------------------------------------|---------------------------------------|--|---|
| | | VBR (Volts) | | @IT (mA) | | | | |
| | | MIN. | MAX. | | | | | |
| SMCJ5.0 | TFMCJ5.0 | 6.40 | 7.82 | 10 | 5.0 | 1000 | 156.3 | 9.6 |
| SMCJ5.0A | TFMCJ5.0A | 6.40 | 7.07 | 10 | 5.0 | 1000 | 163.0 | 9.2 |
| SMCJ6.0 | TFMCJ6.0 | 6.67 | 8.15 | 10 | 6.0 | 1000 | 131.6 | 11.4 |
| SMCJ6.0A | TFMCJ6.0A | 6.67 | 7.37 | 10 | 6.0 | 1000 | 145.6 | 10.3 |
| SMCJ6.5 | TFMCJ6.5 | 7.22 | 8.82 | 10 | 6.5 | 500.0 | 122.0 | 12.3 |
| SMCJ6.5A | TFMCJ6.5A | 7.22 | 7.98 | 10 | 6.5 | 500.0 | 133.9 | 11.2 |
| SMCJ7.0 | TFMCJ7.0 | 7.78 | 9.51 | 10 | 7.0 | 200.0 | 112.8 | 13.3 |
| SMCJ7.0A | TFMCJ7.0A | 7.78 | 8.60 | 10 | 7.0 | 200.0 | 125.0 | 12.0 |
| SMCJ7.5 | TFMCJ7.5 | 8.33 | 10.2 | 10 | 7.5 | 100.0 | 104.9 | 14.3 |
| SMCJ7.5A | TFMCJ7.5A | 8.33 | 9.21 | 1.0 | 7.5 | 100.0 | 116.3 | 12.9 |
| SMCJ8.0 | TFMCJ8.0 | 8.89 | 10.9 | 1.0 | 8.0 | 50.0 | 100.0 | 15.0 |
| SMCJ8.0A | TFMCJ8.0A | 8.89 | 9.83 | 1.0 | 8.0 | 50.0 | 110.3 | 13.6 |
| SMCJ8.5 | TFMCJ8.5 | 9.44 | 11.5 | 1.0 | 8.5 | 25 | 94.3 | 15.9 |
| SMCJ8.5A | TFMCJ8.5A | 9.44 | 10.4 | 1.0 | 8.5 | 25 | 104.2 | 14.4 |
| SMCJ9.0 | TFMCJ9.0 | 10.0 | 12.2 | 1.0 | 9.0 | 10 | 88.8 | 16.9 |
| SMCJ9.0A | TFMCJ9.0A | 10.0 | 11.1 | 1.0 | 9.0 | 10 | 97.4 | 15.4 |
| SMCJ10 | TFMCJ10 | 11.1 | 13.6 | 1.0 | 10.0 | 5.0 | 79.8 | 18.8 |
| SMCJ10A | TFMCJ10A | 11.1 | 12.3 | 1.0 | 10.0 | 5.0 | 88.2 | 17.0 |
| SMCJ11 | TFMCJ11 | 12.2 | 14.9 | 1.0 | 11.0 | 5.0 | 74.6 | 20.1 |
| SMCJ11A | TFMCJ11A | 12.2 | 13.5 | 1.0 | 11.0 | 5.0 | 82.4 | 18.2 |
| SMCJ12 | TFMCJ12 | 13.3 | 16.3 | 1.0 | 12.0 | 5.0 | 68.2 | 22.0 |
| SMCJ12A | TFMCJ12A | 13.3 | 14.7 | 1.0 | 12.0 | 5.0 | 75.4 | 19.9 |
| SMCJ13 | TFMCJ13 | 14.4 | 17.6 | 1.0 | 13.0 | 5.0 | 63.0 | 23.8 |
| SMCJ13A | TFMCJ13A | 14.4 | 15.9 | 1.0 | 13.0 | 5.0 | 69.8 | 21.5 |
| SMCJ14 | TFMCJ14 | 15.6 | 19.1 | 1.0 | 14.0 | 5.0 | 58.1 | 25.8 |
| SMCJ14A | TFMCJ14A | 15.6 | 17.2 | 1.0 | 14.0 | 5.0 | 64.7 | 23.2 |
| SMCJ15 | TFMCJ15 | 16.7 | 20.4 | 1.0 | 15.0 | 5.0 | 55.8 | 26.9 |
| SMCJ15A | TFMCJ15A | 16.7 | 18.5 | 1.0 | 15.0 | 5.0 | 61.5 | 24.4 |
| SMCJ16 | TFMCJ16 | 17.8 | 21.8 | 1.0 | 16.0 | 5.0 | 52.1 | 28.8 |
| SMCJ16A | TFMCJ16A | 17.8 | 19.7 | 1.0 | 16.0 | 5.0 | 57.7 | 26.0 |
| SMCJ17 | TFMCJ17 | 18.9 | 23.1 | 1.0 | 17.0 | 5.0 | 49.2 | 30.5 |
| SMCJ17A | TFMCJ17A | 18.9 | 20.9 | 1.0 | 17.0 | 5.0 | 54.3 | 27.6 |
| SMCJ18 | TFMCJ18 | 20.0 | 24.4 | 1.0 | 18.0 | 5.0 | 46.6 | 32.2 |
| SMCJ18A | TFMCJ18A | 20.0 | 22.1 | 1.0 | 18.0 | 5.0 | 51.4 | 29.2 |
| SMCJ20 | TFMCJ20 | 22.2 | 27.1 | 1.0 | 20.0 | 5.0 | 41.9 | 35.8 |
| SMCJ20A | TFMCJ20A | 22.2 | 24.5 | 1.0 | 20.0 | 5.0 | 46.3 | 32.4 |
| SMCJ22 | TFMCJ22 | 24.4 | 29.8 | 1.0 | 22.0 | 5.0 | 38.1 | 39.4 |
| SMCJ22A | TFMCJ22A | 24.4 | 26.9 | 1.0 | 22.0 | 5.0 | 42.3 | 35.5 |
| SMCJ24 | TFMCJ24 | 26.7 | 32.6 | 1.0 | 24.0 | 5.0 | 34.9 | 43.0 |
| SMCJ24A | TFMCJ24A | 26.7 | 29.5 | 1.0 | 24.0 | 5.0 | 38.6 | 38.9 |
| SMCJ26 | TFMCJ26 | 28.9 | 35.3 | 1.0 | 26.0 | 5.0 | 32.2 | 46.6 |
| SMCJ26A | TFMCJ26A | 28.9 | 31.9 | 1.0 | 26.0 | 5.0 | 35.6 | 42.1 |
| SMCJ28 | TFMCJ28 | 31.1 | 38.0 | 1.0 | 28.0 | 5.0 | 30.0 | 50.1 |
| SMCJ28A | TFMCJ28A | 31.1 | 34.4 | 1.0 | 28.0 | 5.0 | 33.0 | 45.4 |
| SMCJ30 | TFMCJ30 | 33.3 | 40.7 | 1.0 | 30.0 | 5.0 | 28.0 | 53.5 |
| SMCJ30A | TFMCJ30A | 33.3 | 36.8 | 1.0 | 30.0 | 5.0 | 31.0 | 48.4 |
| SMCJ33 | TFMCJ33 | 36.7 | 44.9 | 1.0 | 33.0 | 5.0 | 25.4 | 59.0 |
| SMCJ33A | TFMCJ33A | 36.7 | 40.6 | 1.0 | 33.0 | 5.0 | 28.1 | 53.3 |
| SMCJ36 | TFMCJ36 | 40.0 | 48.9 | 1.0 | 36.0 | 5.0 | 23.3 | 64.3 |
| SMCJ36A | TFMCJ36A | 40.0 | 44.2 | 1.0 | 36.0 | 5.0 | 25.8 | 58.1 |

TRANSIENT VOLTAGE SUPPRESSORS

1500W SERIES TVS DIODES/DO-214AB (CASE 4) 1500W

| Rectron Industry No. | Rectron House No. | Breakdown Voltage | | | Reverse Stand off Voltage V _{WM} (Volts) | Maximum Reverse Leakage at V _{WM} I _D (uA) | Maximum Peak Pulse Current IPPM (Amps) | Maximum Clamping Voltage at IPPM V _C (Volts) |
|----------------------|-------------------|-------------------------|------|----------------------|---|--|--|---|
| | | V _{BR} (Volts) | | @I _T (mA) | | | | |
| | | MIN. | MAX. | | | | | |
| SMCJ40 | TFMCJ40 | 44.4 | 54.3 | 1.0 | 40 | 5.0 | 21.0 | 71.4 |
| SMCJ40A | TFMCJ40A | 44.4 | 49.1 | 1.0 | 40 | 5.0 | 23.3 | 64.5 |
| SMCJ43 | TFMCJ43 | 47.8 | 58.4 | 1.0 | 43 | 5.0 | 19.6 | 76.7 |
| SMCJ43A | TFMCJ43A | 47.8 | 52.8 | 1.0 | 43 | 5.0 | 21.6 | 69.4 |
| SMCJ45 | TFMCJ45 | 50.0 | 61.1 | 1.0 | 45 | 5.0 | 18.7 | 80.3 |
| SMCJ45A | TFMCJ45A | 50.0 | 55.3 | 1.0 | 45 | 5.0 | 20.6 | 72.7 |
| SMCJ48 | TFMCJ48 | 53.3 | 65.1 | 1.0 | 48 | 5.0 | 17.5 | 85.5 |
| SMCJ48A | TFMCJ48A | 53.3 | 58.9 | 1.0 | 48 | 5.0 | 19.4 | 77.4 |
| SMCJ51 | TFMCJ51 | 56.7 | 69.3 | 1.0 | 51 | 5.0 | 16.5 | 91.1 |
| SMCJ51A | TFMCJ51A | 56.7 | 62.7 | 1.0 | 51 | 5.0 | 18.2 | 82.4 |
| SMCJ54 | TFMCJ54 | 60.0 | 73.3 | 1.0 | 54 | 5.0 | 15.6 | 96.3 |
| SMCJ54A | TFMCJ54A | 60.0 | 66.3 | 1.0 | 54 | 5.0 | 17.2 | 87.1 |
| SMCJ58 | TFMCJ58 | 64.4 | 78.7 | 1.0 | 58 | 5.0 | 14.6 | 103 |
| SMCJ58A | TFMCJ58A | 64.4 | 71.2 | 1.0 | 58 | 5.0 | 16.0 | 93 |
| SMCJ60 | TFMCJ60 | 66.7 | 81.5 | 1.0 | 60 | 5.0 | 14.0 | 107 |
| SMCJ60A | TFMCJ60A | 66.7 | 73.7 | 1.0 | 60 | 5.0 | 15.5 | 96 |
| SMCJ64 | TFMCJ64 | 71.1 | 86.9 | 1.0 | 64 | 5.0 | 13.2 | 114 |
| SMCJ64A | TFMCJ64A | 71.1 | 78.6 | 1.0 | 64 | 5.0 | 14.6 | 103 |
| SMCJ70 | TFMCJ70 | 77.8 | 95.1 | 1.0 | 70 | 5.0 | 12.0 | 125 |
| SMCJ70A | TFMCJ70A | 77.8 | 86.0 | 1.0 | 70 | 5.0 | 13.3 | 113 |
| SMCJ75 | TFMCJ75 | 83.3 | 102 | 1.0 | 75 | 5.0 | 11.2 | 134 |
| SMCJ75A | TFMCJ75A | 83.3 | 92.1 | 1.0 | 75 | 5.0 | 12.4 | 121 |
| SMCJ78 | TFMCJ78 | 86.7 | 106 | 1.0 | 78 | 5.0 | 10.8 | 139 |
| SMCJ78A | TFMCJ78A | 86.7 | 95.8 | 1.0 | 78 | 5.0 | 11.9 | 126 |
| SMCJ85 | TFMCJ85 | 94.4 | 115 | 1.0 | 85 | 5.0 | 9.9 | 151 |
| SMCJ85A | TFMCJ85A | 94.4 | 104 | 1.0 | 85 | 5.0 | 10.9 | 137 |
| SMCJ90 | TFMCJ90 | 100 | 122 | 1.0 | 90 | 5.0 | 9.4 | 160 |
| SMCJ90A | TFMCJ90A | 100 | 111 | 1.0 | 90 | 5.0 | 10.3 | 146 |
| SMCJ100 | TFMCJ100 | 111 | 136 | 1.0 | 100 | 5.0 | 8.4 | 179 |
| SMCJ100A | TFMCJ100A | 111 | 123 | 1.0 | 100 | 5.0 | 9.3 | 162 |
| SMCJ110 | TFMCJ110 | 122 | 149 | 1.0 | 110 | 5.0 | 7.7 | 196 |
| SMCJ110A | TFMCJ110A | 122 | 135 | 1.0 | 110 | 5.0 | 8.5 | 177 |
| SMCJ120 | TFMCJ120 | 133 | 163 | 1.0 | 120 | 5.0 | 7.0 | 214 |
| SMCJ120A | TFMCJ120A | 133 | 147 | 1.0 | 120 | 5.0 | 7.8 | 193 |
| SMCJ130 | TFMCJ130 | 144 | 176 | 1.0 | 130 | 5.0 | 6.5 | 231 |
| SMCJ130A | TFMCJ130A | 144 | 159 | 1.0 | 130 | 5.0 | 7.2 | 209 |
| SMCJ150 | TFMCJ150 | 167 | 204 | 1.0 | 150 | 5.0 | 5.6 | 268 |
| SMCJ150A | TFMCJ150A | 167 | 185 | 1.0 | 150 | 5.0 | 6.2 | 243 |
| SMCJ160 | TFMCJ160 | 178 | 218 | 1.0 | 160 | 5.0 | 5.2 | 287 |
| SMCJ160A | TFMCJ160A | 178 | 197 | 1.0 | 160 | 5.0 | 5.8 | 259 |
| SMCJ170 | TFMCJ170 | 189 | 231 | 1.0 | 170 | 5.0 | 4.9 | 304 |
| SMCJ170A | TFMCJ170A | 189 | 209 | 1.0 | 170 | 5.0 | 5.5 | 275 |

- Notes :
1. V_{BR} measured after I_T applied for 300ms. I_T = square pulse or equivalent.
 2. For bidirectional use C or CA suffixs for all types (ex. SMCJ5.0C, SMCJ170CA) electrical characteristics apply in both directions.
 3. For bidirectional types having V_{WM} of 10 volts and less, the I_D limit is doubled.
 4. All devices UL listed file# E211196.

Mounting Pad Layout



Dimensions in inches and (millimeters)

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- Поставка образцов и прототипов;
- Техническая поддержка проекта;
- Защита от снятия компонента с производства.



Как с нами связаться

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