# THE DATASHEET OF

# SMBJ110CA-TP

| | |
|---|---|
| | E480232 |

## Features

- For Surface Mount Applicationsin Order to Optimize Board Space
- Low Inductance
- Fast Response Time: Typical Less than 1ps From 0V to $V_{BR}$ min
- Halogen Free. “Green” Device (Note 1)
- Moisture Sensitivity Level 1
- Epoxy Meets UL 94 V-0 Flammability Rating
- Lead Free Finish/RoHS Compliant (Note 2) ("P" Suffix Designates RoHS Compliant. See Ordering Information)
- For Bidirectional Devices Add “C” To The Suffix of The Part Number: i.e.SMBJ5.0CA for 5% Tolerance

## Mechanical Data

- Polarity: Color Band Denotes Positive end( cathode) Except Bi-directional Types
- Maximum Soldering Temperature:260°C for 10 Seconds
- Terminals: Solderable Per MIL-STD-750, Method 2026

## Maximum Ratings

- Operating Junction Temperature Range: -55°C to +175°C
- Storage Temperature Range: -55°C to +175°C
- Thermal Resistance :20°C/W Junction to Lead
- Thermal Resistance :25°C/W Junction to Case
- Thermal Resistance :100°C/W Junction to Ambient

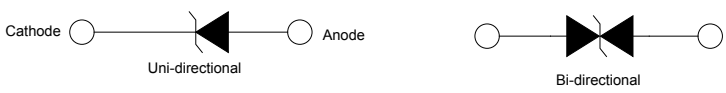
### Electrical Characteristics @ 25°C Unless Otherwise Specified

| | | | |
|---|---|---|---|
| Peak Pulse Power Surge Current on 10/1000μs Waveform | $I_{PP}$ | See the Table | Note 3 |
| Peak Pulse Power Dissipation | $P_{PP}$ | 600W | Note 3,4,5 |
| Steady State Power Dissipation | $P_{M(AV)}$ | 5.0W | Note 6 |
| Peak Forward Surge Current | $I_{FSM}$ | 100A | 8.3 ms Single Half Sine-Wave Unidirectional Only |

**NOTES:**

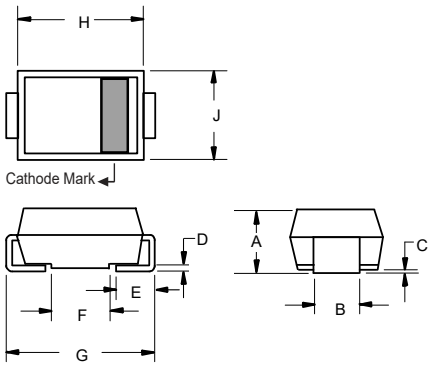
1. Halogen free "Green"products are defined as those which contain <900ppm bromine, <900ppm chlorine (<1500ppm total Br + Cl) and <1000ppm antimony compounds.
2. High Temperature Solder Exemption Applied, see EU Directive Annex 7a.
3. Non-repetitive current pulse, per Fig.3 and derated above $T_A$=25 °C per Fig.4
4. Mounted on 5.0mm² copper pads to each terminal.
5. Peak pulse current waveform is 10/1000us, with maximum duty Cycle of 0.01%.
6. Power dissipation, on infinite heat sink at $T_L$=75°C

Pin Configuration:



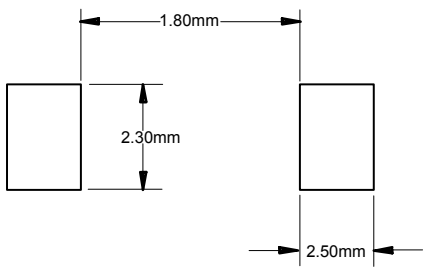

# 600 Watt TVS
# 5.0 to 440 Volts

## SMB (DO-214AA)
## (LEAD FRAME)




| DIMENSIONS | | | | | |
|---|---|---|---|---|---|
| DIM | INCHES | | MM | | NOTE |
| | MIN | MAX | MIN | MAX | |
| A | 0.079 | 0.103 | 2.00 | 2.62 | |
| B | 0.075 | 0.087 | 1.91 | 2.21 | |
| C | 0.002 | 0.008 | 0.05 | 0.20 | |
| D | 0.006 | 0.012 | 0.15 | 0.31 | |
| E | 0.030 | 0.060 | 0.76 | 1.52 | |
| F | 0.065 | 0.091 | 1.65 | 2.32 | |
| G | 0.200 | 0.220 | 5.08 | 5.59 | |
| H | 0.160 | 0.191 | 4.06 | 4.85 | |
| J | 0.130 | 0.155 | 3.30 | 3.94 | |

**Suggested Solder Pad Layout**



## Electrical Characteristics @ 25°C Unless Otherwise Specified

| MCC PART NUMBER | REVERSE STAND-OFF VOLTAGE $V_{WM}$ | BREAKDOWN VOLTAGE $V_{(BR)}$ @$I_T$ (VOLTS) | | | MAXIMUM CLAMPING VOLTAGE@$I_{PP}$ | PEAK PULSE CURRENT $I_{PP}$ | MAXIMUM REVERSE LEAKAGE @ $V_{WM}$ $I_D$ | MARKING CODE |
|---|---|---|---|---|---|---|---|---|
| | VOLTS | MIN | MAX | $I_T$(mA) | VOLTS | (AMPS) | (μA) | |
| SMBJ5.0 | 5.0 | 6.40 | 7.30 | 10 | 9.6 | 62.5 | 800 | KD |
| SMBJ5.0A | 5.0 | 6.40 | 7.00 | 10 | 9.2 | 65.2 | 800 | KE |
| SMBJ6.0 | 6.0 | 6.67 | 8.15 | 10 | 11.4 | 52.6 | 800 | KF |
| SMBJ6.0A | 6.0 | 6.67 | 7.37 | 10 | 10.3 | 58.3 | 800 | KG |
| SMBJ6.5 | 6.5 | 7.22 | 8.82 | 10 | 12.3 | 48.7 | 500 | KH |
| SMBJ6.5A | 6.5 | 7.22 | 7.98 | 10 | 11.2 | 53.6 | 500 | KK |
| SMBJ7.0 | 7.0 | 7.78 | 9.51 | 10 | 13.3 | 45.1 | 200 | KL |
| SMBJ7.0A | 7.0 | 7.78 | 8.60 | 10 | 12.0 | 50.0 | 200 | KM |
| SMBJ7.5 | 7.5 | 8.33 | 10.2 | 1 | 14.3 | 42.0 | 100 | KN |
| SMBJ7.5A | 7.5 | 8.33 | 9.21 | 1 | 12.9 | 46.5 | 100 | KP |
| SMBJ8.0 | 8.0 | 8.89 | 10.9 | 1 | 15.0 | 40.0 | 50 | KQ |
| SMBJ8.0A | 8.0 | 8.89 | 9.83 | 1 | 13.6 | 44.1 | 50 | KR |
| SMBJ8.5 | 8.5 | 9.44 | 11.5 | 1 | 15.9 | 37.7 | 10 | KS |
| SMBJ8.5A | 8.5 | 9.44 | 10.4 | 1 | 14.4 | 41.7 | 10 | KT |
| SMBJ9.0 | 9.0 | 10.0 | 12.2 | 1 | 16.9 | 35.5 | 5 | KU |
| SMBJ9.0A | 9.0 | 10.0 | 11.1 | 1 | 15.4 | 39.0 | 5 | KV |
| SMBJ10 | 10 | 11.1 | 13.6 | 1 | 18.8 | 31.9 | 1 | KW |
| SMBJ10A | 10 | 11.1 | 12.3 | 1 | 17.0 | 35.3 | 1 | KX |
| SMBJ11 | 11 | 12.2 | 14.9 | 1 | 20.1 | 29.9 | 1 | KY |
| SMBJ11A | 11 | 12.2 | 13.5 | 1 | 18.2 | 33.0 | 1 | KZ |
| SMBJ12 | 12 | 13.3 | 16.3 | 1 | 22.0 | 27.3 | 1 | LD |
| SMBJ12A | 12 | 13.3 | 14.7 | 1 | 19.9 | 30.2 | 1 | LE |
| SMBJ13 | 13 | 14.4 | 17.6 | 1 | 23.8 | 25.2 | 1 | LF |
| SMBJ13A | 13 | 14.4 | 15.9 | 1 | 21.5 | 27.9 | 1 | LG |
| SMBJ14 | 14 | 15.6 | 19.1 | 1 | 25.8 | 23.3 | 1 | LH |
| SMBJ14A | 14 | 15.6 | 17.2 | 1 | 23.2 | 25.8 | 1 | LK |
| SMBJ15 | 15 | 16.7 | 20.4 | 1 | 26.9 | 22.3 | 1 | LL |
| SMBJ15A | 15 | 16.7 | 18.5 | 1 | 24.4 | 24.0 | 1 | LM |
| SMBJ16 | 16 | 17.8 | 21.8 | 1 | 28.8 | 20.8 | 1 | LN |
| SMBJ16A | 16 | 17.8 | 19.7 | 1 | 26.0 | 23.1 | 1 | LP |
| SMBJ17 | 17 | 18.9 | 23.1 | 1 | 30.5 | 19.7 | 1 | LQ |
| SMBJ17A | 17 | 18.9 | 20.9 | 1 | 27.6 | 21.7 | 1 | LR |
| SMBJ18 | 18 | 20.0 | 24.4 | 1 | 32.2 | 18.6 | 1 | LS |
| SMBJ18A | 18 | 20.0 | 22.1 | 1 | 29.2 | 20.5 | 1 | LT |
| SMBJ20 | 20 | 22.2 | 27.1 | 1 | 35.8 | 16.7 | 1 | LU |
| SMBJ20A | 20 | 22.2 | 24.5 | 1 | 32.4 | 18.5 | 1 | LV |
| SMBJ22 | 22 | 24.4 | 29.8 | 1 | 39.4 | 15.2 | 1 | LW |
| SMBJ22A | 22 | 24.4 | 26.9 | 1 | 35.5 | 16.9 | 1 | LX |
| SMBJ24 | 24 | 26.7 | 32.6 | 1 | 43.0 | 14.0 | 1 | LY |
| SMBJ24A | 24 | 26.7 | 29.5 | 1 | 38.9 | 15.4 | 1 | LZ |
| SMBJ26 | 26 | 28.9 | 35.3 | 1 | 46.6 | 12.4 | 1 | MD |
| SMBJ26A | 26 | 28.9 | 31.9 | 1 | 42.1 | 14.2 | 1 | ME |
| SMBJ28 | 28 | 31.1 | 38.0 | 1 | 50.0 | 12.0 | 1 | MF |
| SMBJ28A | 28 | 31.1 | 34.4 | 1 | 45.4 | 13.2 | 1 | MG |
| SMBJ30 | 30 | 33.3 | 40.7 | 1 | 53.5 | 11.2 | 1 | MH |
| SMBJ30A | 30 | 33.3 | 36.8 | 1 | 48.4 | 12.4 | 1 | MK |

For parts without A, the VBR is +10%.

## Electrical Characteristics @ 25°C Unless Otherwise Specified

| MCC PART NUMBER | REVERSE STAND-OFF VOLTAGE $V_{WM}$ | BREAKDOWN VOLTAGE $V_{(BR)}$ @$I_T$ (VOLTS) | | | MAXIMUM CLAMPING VOLTAGE@$I_{PP}$ | PEAK PULSE CURRENT $I_{PP}$ | MAXIMUM REVERSE LEAKAGE @ $V_{WM}$ $I_D$ | MARKING CODE |
|---|---|---|---|---|---|---|---|---|
| | VOLTS | MIN | MAX | $I_T$(mA) | VOLTS | (AMPS) | (μA) | |
| SMBJ33 | 33 | 36.7 | 44.9 | 1 | 59.0 | 10.2 | 1 | ML |
| SMBJ33A | 33 | 36.7 | 40.6 | 1 | 53.3 | 11.3 | 1 | MM |
| SMBJ36 | 36 | 40.0 | 48.9 | 1 | 64.3 | 9.3 | 1 | MN |
| SMBJ36A | 36 | 40.0 | 44.2 | 1 | 58.1 | 10.3 | 1 | MP |
| SMBJ40 | 40 | 44.4 | 54.3 | 1 | 71.4 | 8.4 | 1 | MQ |
| SMBJ40A | 40 | 44.4 | 49.1 | 1 | 64.5 | 9.3 | 1 | MR |
| SMBJ43 | 43 | 47.8 | 58.4 | 1 | 76.7 | 7.8 | 1 | MS |
| SMBJ43A | 43 | 47.8 | 52.8 | 1 | 69.4 | 8.6 | 1 | MT |
| SMBJ45 | 45 | 50.0 | 61.1 | 1 | 80.3 | 7.5 | 1 | MU |
| SMBJ45A | 45 | 50.0 | 55.3 | 1 | 72.7 | 8.3 | 1 | MV |
| SMBJ48 | 48 | 53.3 | 65.1 | 1 | 85.5 | 7.0 | 1 | MW |
| SMBJ48A | 48 | 53.3 | 58.9 | 1 | 77.4 | 7.7 | 1 | MX |
| SMBJ51 | 51 | 56.7 | 69.3 | 1 | 91.1 | 6.6 | 1 | MY |
| SMBJ51A | 51 | 56.7 | 62.7 | 1 | 82.4 | 7.3 | 1 | MZ |
| SMBJ54 | 54 | 60.0 | 73.3 | 1 | 96.3 | 6.2 | 1 | ND |
| SMBJ54A | 54 | 60.0 | 66.3 | 1 | 87.1 | 6.9 | 1 | NE |
| SMBJ58 | 58 | 64.4 | 78.7 | 1 | 103 | 5.8 | 1 | NF |
| SMBJ58A | 58 | 64.4 | 71.2 | 1 | 93.6 | 6.4 | 1 | NG |
| SMBJ60 | 60 | 66.7 | 81.5 | 1 | 107 | 5.6 | 1 | NH |
| SMBJ60A | 60 | 66.7 | 73.7 | 1 | 96.8 | 6.2 | 1 | NK |
| SMBJ64 | 64 | 71.1 | 86.9 | 1 | 114 | 5.3 | 1 | NL |
| SMBJ64A | 64 | 71.1 | 78.6 | 1 | 103 | 5.8 | 1 | NM |
| SMBJ70 | 70 | 77.8 | 95.1 | 1 | 125 | 4.8 | 1 | NN |
| SMBJ70A | 70 | 77.8 | 86.0 | 1 | 113 | 5.3 | 1 | NP |
| SMBJ75 | 75 | 83.3 | 102 | 1 | 134 | 4.5 | 1 | NQ |
| SMBJ75A | 75 | 83.3 | 92.1 | 1 | 121 | 4.9 | 1 | NR |
| SMBJ78 | 78 | 86.7 | 106 | 1 | 139 | 4.3 | 1 | NS |
| SMBJ78A | 78 | 86.7 | 95.8 | 1 | 126 | 4.7 | 1 | NT |
| SMBJ85 | 85 | 94.4 | 115 | 1 | 151 | 3.9 | 1 | NU |
| SMBJ85A | 85 | 94.4 | 104 | 1 | 137 | 4.4 | 1 | NV |
| SMBJ90 | 90 | 100 | 122 | 1 | 160 | 3.8 | 1 | NW |
| SMBJ90A | 90 | 100 | 111 | 1 | 146 | 4.1 | 1 | NX |
| SMBJ100 | 100 | 111 | 136 | 1 | 179 | 3.4 | 1 | NY |
| SMBJ100A | 100 | 111 | 123 | 1 | 162 | 3.7 | 1 | NZ |
| SMBJ110 | 110 | 122 | 149 | 1 | 196 | 3.0 | 1 | PD |
| SMBJ110A | 110 | 122 | 135 | 1 | 177 | 3.4 | 1 | PE |
| SMBJ120 | 120 | 133 | 163 | 1 | 214 | 2.8 | 1 | PF |
| SMBJ120A | 120 | 133 | 147 | 1 | 193 | 3.1 | 1 | PG |
| SMBJ130 | 130 | 144 | 176 | 1 | 231 | 2.6 | 1 | PH |
| SMBJ130A | 130 | 144 | 159 | 1 | 209 | 2.9 | 1 | PK |
| SMBJ150 | 150 | 167 | 204 | 1 | 268 | 2.2 | 1 | PL |
| SMBJ150A | 150 | 167 | 185 | 1 | 243 | 2.5 | 1 | PM |
| SMBJ160 | 160 | 178 | 218 | 1 | 287 | 2.1 | 1 | PN |
| SMBJ160A | 160 | 178 | 197 | 1 | 259 | 2.3 | 1 | PP |
| SMBJ170 | 170 | 189 | 231 | 1 | 304 | 2.0 | 1 | PQ |
| SMBJ170A | 170 | 189 | 209 | 1 | 275 | 2.2 | 1 | PR |
| SMBJ180A | 180 | 201 | 222 | 1 | 292 | 2.1 | 1 | PT |

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## Electrical Characteristics @ 25°C Unless Otherwise Specified

| MCC PART NUMBER | REVERSE STAND-OFF VOLTAGE $V_{WM}$ | BREAKDOWN VOLTAGE $V_{(BR)}$ @$I_T$ (VOLTS) | | | MAXIMUM CLAMPING VOLTAGE@$I_{PP}$ | PEAK PULSE CURRENT $I_{PP}$ | MAXIMUM REVERSE LEAKAGE @ $V_{WM}$ $I_D$ | MARKING CODE |
|---|---|---|---|---|---|---|---|---|
| | VOLTS | MIN | MAX | $I_T$(mA) | VOLTS | (AMPS) | (μA) | |
| SMBJ200A | 200 | 224 | 247 | 1 | 324 | 1.9 | 1 | PV |
| SMBJ220A | 220 | 246 | 272 | 1 | 356 | 1.7 | 1 | PX |
| SMBJ250A | 250 | 279 | 309 | 1 | 405 | 1.5 | 1 | PZ |
| SMBJ300A | 300 | 335 | 371 | 1 | 486 | 1.3 | 1 | QE |
| SMBJ350A | 350 | 391 | 432 | 1 | 567 | 1.1 | 1 | QG |
| SMBJ400A | 400 | 447 | 494 | 1 | 648 | 0.9 | 1 | QK |
| SMBJ440A | 440 | 492 | 543 | 1 | 713 | 0.9 | 1 | QM |
| SMBJ5.0C | 5.0 | 6.40 | 7.30 | 10 | 9.6 | 62.5 | 800 | AD |
| SMBJ5.0CA | 5.0 | 6.40 | 7.00 | 10 | 9.2 | 65.2 | 800 | AE |
| SMBJ6.0C | 6.0 | 6.67 | 8.15 | 10 | 11.4 | 52.6 | 800 | AF |
| SMBJ6.0CA | 6.0 | 6.67 | 7.37 | 10 | 10.3 | 58.3 | 800 | AG |
| SMBJ6.5C | 6.5 | 7.22 | 8.82 | 10 | 12.3 | 48.7 | 500 | AH |
| SMBJ6.5CA | 6.5 | 7.22 | 7.98 | 10 | 11.2 | 53.6 | 500 | AK |
| SMBJ7.0C | 7.0 | 7.78 | 9.51 | 10 | 13.3 | 45.1 | 200 | AL |
| SMBJ7.0CA | 7.0 | 7.78 | 8.60 | 10 | 12.0 | 50.0 | 200 | AM |
| SMBJ7.5C | 7.5 | 8.33 | 10.2 | 1 | 14.3 | 42.0 | 100 | AN |
| SMBJ7.5CA | 7.5 | 8.33 | 9.21 | 1 | 12.9 | 46.5 | 100 | AP |
| SMBJ8.0C | 8.0 | 8.89 | 10.9 | 1 | 15.0 | 40.0 | 50 | AQ |
| SMBJ8.0CA | 8.0 | 8.89 | 9.83 | 1 | 13.6 | 44.1 | 50 | AR |
| SMBJ8.5C | 8.5 | 9.44 | 11.5 | 1 | 15.9 | 37.7 | 10 | AS |
| SMBJ8.5CA | 8.5 | 9.44 | 10.4 | 1 | 14.4 | 41.7 | 10 | AT |
| SMBJ9.0C | 9.0 | 10.0 | 12.2 | 1 | 16.9 | 35.5 | 5 | AU |
| SMBJ9.0CA | 9.0 | 10.0 | 11.1 | 1 | 15.4 | 39.0 | 5 | AV |
| SMBJ10C | 10 | 11.1 | 13.6 | 1 | 18.8 | 31.9 | 1 | AW |
| SMBJ10CA | 10 | 11.1 | 12.3 | 1 | 17.0 | 35.3 | 1 | AX |
| SMBJ11C | 11 | 12.2 | 14.9 | 1 | 20.1 | 29.9 | 1 | AY |
| SMBJ11CA | 11 | 12.2 | 13.5 | 1 | 18.2 | 33.0 | 1 | AZ |
| SMBJ12C | 12 | 13.3 | 16.3 | 1 | 22.0 | 27.3 | 1 | BD |
| SMBJ12CA | 12 | 13.3 | 14.7 | 1 | 19.9 | 30.2 | 1 | BE |
| SMBJ13C | 13 | 14.4 | 17.6 | 1 | 23.8 | 25.2 | 1 | BF |
| SMBJ13CA | 13 | 14.4 | 15.9 | 1 | 21.5 | 27.9 | 1 | BG |
| SMBJ14C | 14 | 15.6 | 19.1 | 1 | 25.8 | 23.3 | 1 | BH |
| SMBJ14CA | 14 | 15.6 | 17.2 | 1 | 23.2 | 25.8 | 1 | BK |
| SMBJ15C | 15 | 16.7 | 20.4 | 1 | 26.9 | 22.3 | 1 | BL |
| SMBJ15CA | 15 | 16.7 | 18.5 | 1 | 24.4 | 24.0 | 1 | BM |
| SMBJ16C | 16 | 17.8 | 21.8 | 1 | 28.8 | 20.8 | 1 | BN |
| SMBJ16CA | 16 | 17.8 | 19.7 | 1 | 26.0 | 23.1 | 1 | BP |
| SMBJ17C | 17 | 18.9 | 23.1 | 1 | 30.5 | 19.7 | 1 | BQ |
| SMBJ17CA | 17 | 18.9 | 20.9 | 1 | 27.6 | 21.7 | 1 | BR |
| SMBJ18C | 18 | 20.0 | 24.4 | 1 | 32.2 | 18.6 | 1 | BS |
| SMBJ18CA | 18 | 20.0 | 22.1 | 1 | 29.2 | 20.5 | 1 | BT |
| SMBJ20C | 20 | 22.2 | 27.1 | 1 | 35.8 | 16.7 | 1 | BU |
| SMBJ20CA | 20 | 22.2 | 24.5 | 1 | 32.4 | 18.5 | 1 | BV |
| SMBJ22C | 22 | 24.4 | 29.8 | 1 | 39.4 | 15.2 | 1 | BW |
| SMBJ22CA | 22 | 24.4 | 26.9 | 1 | 35.5 | 16.9 | 1 | BX |
| SMBJ24C | 24 | 26.7 | 32.6 | 1 | 43.0 | 14.0 | 1 | BY |
| SMBJ24CA | 24 | 26.7 | 29.5 | 1 | 38.9 | 15.4 | 1 | BZ |

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## Electrical Characteristics @ 25°C Unless Otherwise Specified

| MCC PART NUMBER | REVERSE STAND-OFF VOLTAGE $V_{WM}$ | BREAKDOWN VOLTAGE $V_{(BR)}$ @$I_T$ (VOLTS) | | | MAXIMUM CLAMPING VOLTAGE@$I_{PP}$ | PEAK PULSE CURRENT $I_{PP}$ | MAXIMUM REVERSE LEAKAGE @ $V_{WM}$ $I_D$ | MARKING CODE |
|---|---|---|---|---|---|---|---|---|
| | VOLTS | MIN | MAX | $I_T$(mA) | VOLTS | (AMPS) | (μA) | |
| SMBJ26C | 26 | 28.9 | 35.3 | 1 | 46.6 | 12.4 | 1 | CD |
| SMBJ26CA | 26 | 28.9 | 31.9 | 1 | 42.1 | 14.2 | 1 | CE |
| SMBJ28C | 28 | 31.1 | 38.0 | 1 | 50.0 | 12.0 | 1 | CF |
| SMBJ28CA | 28 | 31.1 | 34.4 | 1 | 45.4 | 13.2 | 1 | CG |
| SMBJ30C | 30 | 33.3 | 40.7 | 1 | 53.5 | 11.2 | 1 | CH |
| SMBJ30CA | 30 | 33.3 | 36.8 | 1 | 48.4 | 12.4 | 1 | CK |
| SMBJ33C | 33 | 36.7 | 44.9 | 1 | 59.0 | 10.2 | 1 | CL |
| SMBJ33CA | 33 | 36.7 | 40.6 | 1 | 53.3 | 11.3 | 1 | CM |
| SMBJ36C | 36 | 40.0 | 48.9 | 1 | 64.3 | 9.3 | 1 | CN |
| SMBJ36CA | 36 | 40.0 | 44.2 | 1 | 58.1 | 10.3 | 1 | CP |
| SMBJ40C | 40 | 44.4 | 54.3 | 1 | 71.4 | 8.4 | 1 | CQ |
| SMBJ40CA | 40 | 44.4 | 49.1 | 1 | 64.5 | 9.3 | 1 | CR |
| SMBJ43C | 43 | 47.8 | 58.4 | 1 | 76.7 | 7.8 | 1 | CS |
| SMBJ43CA | 43 | 47.8 | 52.8 | 1 | 69.4 | 8.6 | 1 | CT |
| SMBJ45C | 45 | 50.0 | 61.1 | 1 | 80.3 | 7.5 | 1 | CU |
| SMBJ45CA | 45 | 50.0 | 55.3 | 1 | 72.7 | 8.3 | 1 | CV |
| SMBJ48C | 48 | 53.3 | 65.1 | 1 | 85.5 | 7.0 | 1 | CW |
| SMBJ48CA | 48 | 53.3 | 58.9 | 1 | 77.4 | 7.7 | 1 | CX |
| SMBJ51C | 51 | 56.7 | 69.3 | 1 | 91.1 | 6.6 | 1 | CY |
| SMBJ51CA | 51 | 56.7 | 62.7 | 1 | 82.4 | 7.3 | 1 | CZ |
| SMBJ54C | 54 | 60.0 | 73.3 | 1 | 96.3 | 6.2 | 1 | DD |
| SMBJ54CA | 54 | 60.0 | 66.3 | 1 | 87.1 | 6.9 | 1 | DE |
| SMBJ58C | 58 | 64.4 | 78.7 | 1 | 103 | 5.8 | 1 | DF |
| SMBJ58CA | 58 | 64.4 | 71.2 | 1 | 93.6 | 6.4 | 1 | DG |
| SMBJ60C | 60 | 66.7 | 81.5 | 1 | 107 | 5.6 | 1 | DH |
| SMBJ60CA | 60 | 66.7 | 73.7 | 1 | 96.8 | 6.2 | 1 | DK |
| SMBJ64C | 64 | 71.1 | 86.9 | 1 | 114 | 5.3 | 1 | DL |
| SMBJ64CA | 64 | 71.1 | 78.6 | 1 | 103 | 5.8 | 1 | DM |
| SMBJ70C | 70 | 77.8 | 95.1 | 1 | 125 | 4.8 | 1 | DN |
| SMBJ70CA | 70 | 77.8 | 86.0 | 1 | 113 | 5.3 | 1 | DP |
| SMBJ75C | 75 | 83.3 | 102 | 1 | 134 | 4.5 | 1 | DQ |
| SMBJ75CA | 75 | 83.3 | 92.1 | 1 | 121 | 4.9 | 1 | DR |
| SMBJ78C | 78 | 86.7 | 106 | 1 | 139 | 4.3 | 1 | DS |
| SMBJ78CA | 78 | 86.7 | 95.8 | 1 | 126 | 4.7 | 1 | DT |
| SMBJ85C | 85 | 94.4 | 115 | 1 | 151 | 3.9 | 1 | DU |
| SMBJ85CA | 85 | 94.4 | 104 | 1 | 137 | 4.4 | 1 | DV |
| SMBJ90C | 90 | 100 | 122 | 1 | 160 | 3.8 | 1 | DW |
| SMBJ90CA | 90 | 100 | 111 | 1 | 146 | 4.1 | 1 | DX |
| SMBJ100C | 100 | 111 | 136 | 1 | 179 | 3.4 | 1 | DY |
| SMBJ100CA | 100 | 111 | 123 | 1 | 162 | 3.7 | 1 | DZ |
| SMBJ110C | 110 | 122 | 149 | 1 | 196 | 3.0 | 1 | ED |
| SMBJ110CA | 110 | 122 | 135 | 1 | 177 | 3.4 | 1 | EE |
| SMBJ120C | 120 | 133 | 163 | 1 | 214 | 2.8 | 1 | EF |
| SMBJ120CA | 120 | 133 | 147 | 1 | 193 | 3.1 | 1 | EG |
| SMBJ130C | 130 | 144 | 176 | 1 | 231 | 2.6 | 1 | EH |
| SMBJ130CA | 130 | 144 | 159 | 1 | 209 | 2.9 | 1 | EK |
| SMBJ150C | 150 | 167 | 204 | 1 | 268 | 2.2 | 1 | EL |

For parts without A, the VBR is +10%.

## Electrical Characteristics @ 25°C Unless Otherwise Specified

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|---|---|---|---|---|---|---|---|---|
| | VOLTS | MIN | MAX | $I_T$(mA) | VOLTS | (AMPS) | (μA) | |
| SMBJ150CA | 150 | 167 | 185 | 1 | 243 | 2.5 | 1 | EM |
| SMBJ160C | 160 | 178 | 218 | 1 | 287 | 2.1 | 1 | EN |
| SMBJ160CA | 160 | 178 | 197 | 1 | 259 | 2.3 | 1 | EP |
| SMBJ170C | 170 | 189 | 231 | 1 | 304 | 2.0 | 1 | EQ |
| SMBJ170CA | 170 | 189 | 209 | 1 | 275 | 2.2 | 1 | ER |
| SMBJ180CA | 180 | 201 | 222 | 1 | 292 | 2.1 | 1 | ET |
| SMBJ200CA | 200 | 224 | 247 | 1 | 324 | 1.9 | 1 | EV |
| SMBJ220CA | 220 | 246 | 272 | 1 | 356 | 1.7 | 1 | EX |
| SMBJ250CA | 250 | 279 | 309 | 1 | 405 | 1.5 | 1 | EZ |
| SMBJ300CA | 300 | 335 | 371 | 1 | 486 | 1.3 | 1 | FE |
| SMBJ350CA | 350 | 391 | 432 | 1 | 567 | 1.1 | 1 | FG |
| SMBJ400CA | 400 | 447 | 494 | 1 | 648 | 0.9 | 1 | FK |
| SMBJ440CA | 440 | 492 | 543 | 1 | 713 | 0.9 | 1 | FM |

For parts without A, the VBR is +10%.

## Curve Characteristics

Fig. 1 - Peak Pulse Power Rating Curve

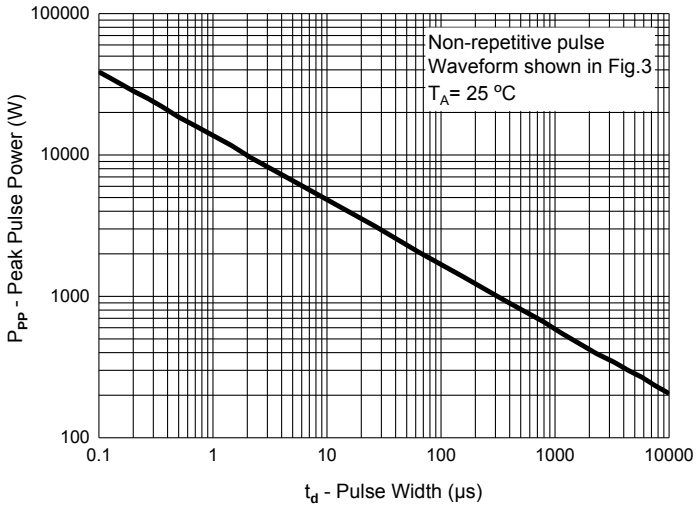



Fig. 2 - Typical Junction Capacitance

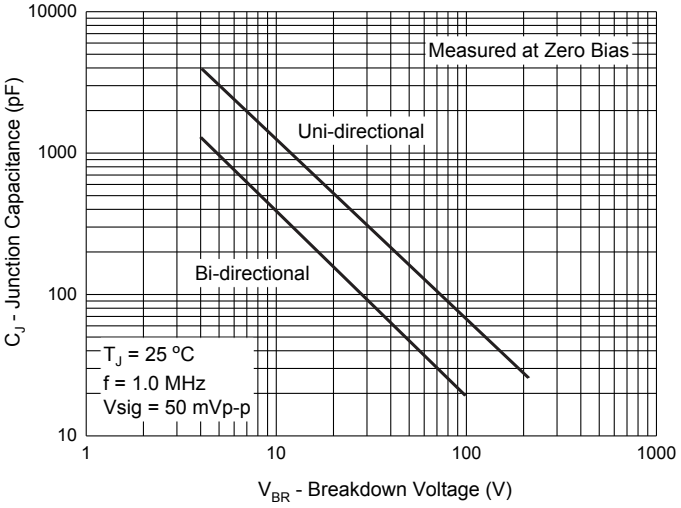



Fig. 3 - Pulse Waveform

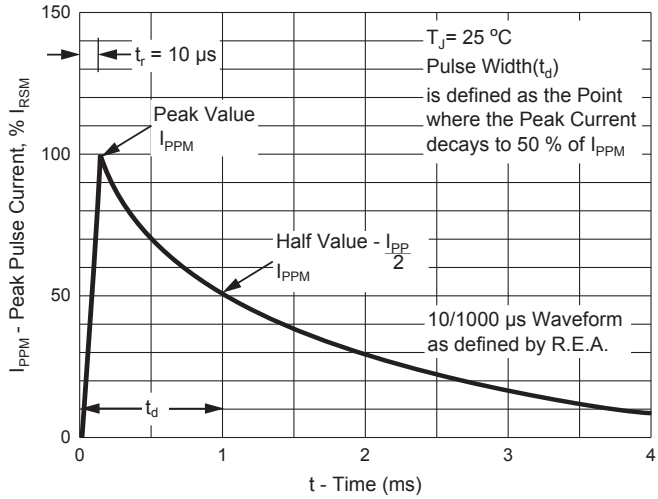



Fig. 4 - Pulse Derating Curve

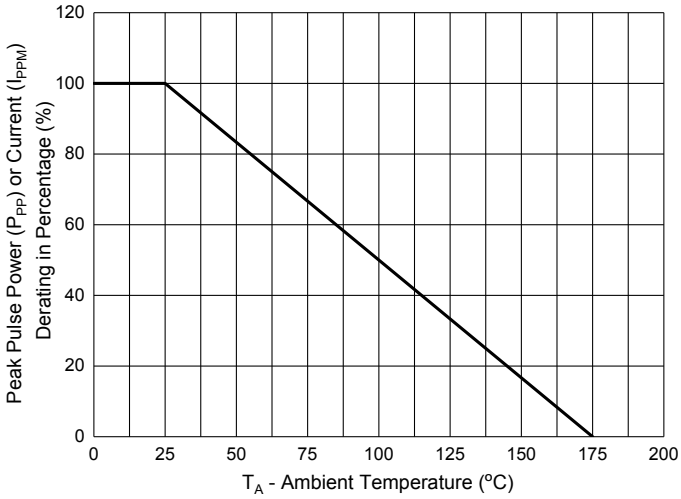



Fig. 5 - Maximum Non-Repetitive Peak Forward Surge Current

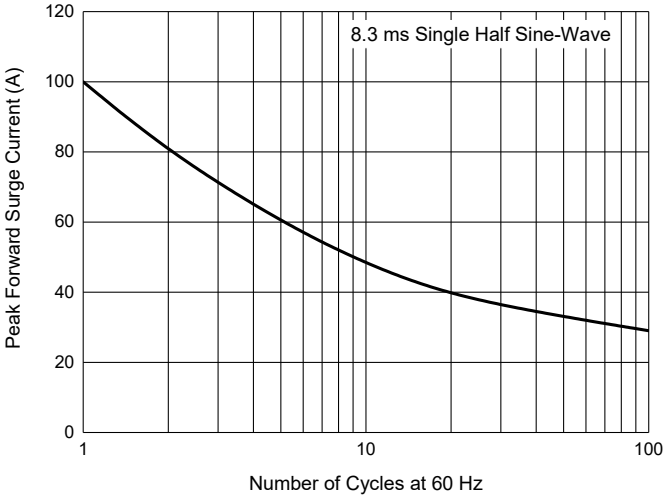
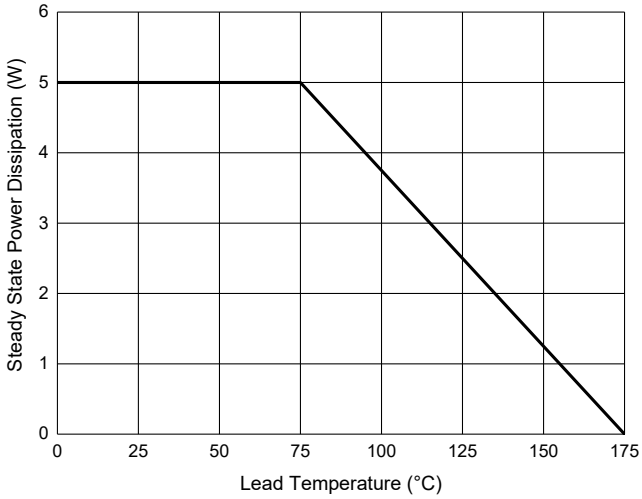



Fig. 6 - Steady State Power Dissipation



## Ordering Information

| Device | Packing |
|---|---|
| Part Number-TP | Tape&Reel:3Kpcs/Reel |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