

| Part Number<br>Add C For<br>Bi-Directional<br>(Note 5) | Reverse<br>Standoff<br>Voltage | Breakdown<br>Voltage<br>V <sub>BR</sub> @ I <sub>T</sub> (Note 6) |         | Test<br>Current     | Max. Reverse<br>Leakage @<br>V <sub>RWM</sub> (Note 7) | Max. Clamping<br>Voltage @ I <sub>pp</sub> | Max. Peak Pulse<br>Current<br>I <sub>pp</sub> | Marking Code |      |
|--------------------------------------------------------|--------------------------------|-------------------------------------------------------------------|---------|---------------------|--------------------------------------------------------|--------------------------------------------|-----------------------------------------------|--------------|------|
|                                                        | V <sub>RWM</sub> (V)           | Min (V)                                                           | Max (V) | I <sub>T</sub> (mA) | I <sub>R</sub> ( A)                                    | V <sub>C</sub> (V)                         | (A)                                           | BI-          | UNI- |
| SMBJ5.0(C)A                                            | 5.0                            | 6.40                                                              | 7.23    | 10                  | 800                                                    | 9.2                                        | 65.2                                          | AE           | KE   |
| SMBJ6.0(C)A                                            | 6.0                            | 6.67                                                              | 7.67    | 10                  | 800                                                    | 10.3                                       | 58.3                                          | AG           | KG   |
| SMBJ6.5(C)A                                            | 6.5                            | 7.22                                                              | 8.30    | 10                  | 500                                                    | 11.2                                       | 53.6                                          | AK           | KK   |
| SMBJ7.0(C)A                                            | 7.0                            | 7.78                                                              | 8.95    | 10                  | 200                                                    | 12.0                                       | 50.0                                          | AM           | KM   |
| SMBJ7.5(C)A                                            | 7.5                            | 8.33                                                              | 9.58    | 1.0                 | 100                                                    | 12.9                                       | 46.5                                          | AP           | KP   |
| SMBJ8.0(C)A                                            | 8.0                            | 8.89                                                              | 10.23   | 1.0                 | 50                                                     | 13.6                                       | 44.1                                          | AR           | KR   |
| SMBJ8.5(C)A                                            | 8.5                            | 9.44                                                              | 10.82   | 1.0                 | 10                                                     | 14.4                                       | 41.7                                          | AT           | KT   |
| SMBJ9.0(C)A                                            | 9.0                            | 10.00                                                             | 11.50   | 1.0                 | 5.0                                                    | 15.4                                       | 39.0                                          | AV           | KV   |
| SMBJ10(C)A                                             | 10.0                           | 11.10                                                             | 12.80   | 1.0                 | 5.0                                                    | 17.0                                       | 35.3                                          | AX           | KX   |
| SMBJ11(C)A                                             | 11.0                           | 12.20                                                             | 14.40   | 1.0                 | 5.0                                                    | 18.2                                       | 33.0                                          | AZ           | KZ   |
| SMBJ12(C)A                                             | 12.0                           | 13.30                                                             | 15.30   | 1.0                 | 5.0                                                    | 19.9                                       | 30.2                                          | BE           | LE   |
| SMBJ13(C)A                                             | 13.0                           | 14.40                                                             | 16.50   | 1.0                 | 5.0                                                    | 21.5                                       | 27.9                                          | BG           | LG   |
| SMBJ14(C)A                                             | 14.0                           | 15.60                                                             | 17.90   | 1.0                 | 5.0                                                    | 23.2                                       | 25.8                                          | BK           | LK   |
| SMBJ15(C)A                                             | 15.0                           | 16.70                                                             | 19.20   | 1.0                 | 5.0                                                    | 24.4                                       | 24.0                                          | BM           | LM   |
| SMBJ16(C)A                                             | 16.0                           | 17.80                                                             | 20.50   | 1.0                 | 5.0                                                    | 26.0                                       | 23.1                                          | BP           | LP   |
| SMBJ17(C)A                                             | 17.0                           | 18.90                                                             | 21.70   | 1.0                 | 5.0                                                    | 27.6                                       | 21.7                                          | BR           | LR   |
| SMBJ18(C)A                                             | 18.0                           | 20.00                                                             | 23.30   | 1.0                 | 5.0                                                    | 29.2                                       | 20.5                                          | BT           | LT   |
| SMBJ20(C)A                                             | 20.0                           | 22.20                                                             | 25.50   | 1.0                 | 5.0                                                    | 32.4                                       | 18.5                                          | BV           | LV   |
| SMBJ22(C)A                                             | 22.0                           | 24.40                                                             | 28.00   | 1.0                 | 5.0                                                    | 35.5                                       | 16.9                                          | BX           | LX   |
| SMBJ24(C)A                                             | 24.0                           | 26.70                                                             | 30.70   | 1.0                 | 5.0                                                    | 38.9                                       | 15.4                                          | BZ           | LZ   |
| SMBJ26(C)A                                             | 26.0                           | 28.90                                                             | 33.20   | 1.0                 | 5.0                                                    | 42.1                                       | 14.2                                          | CE           | ME   |
| SMBJ28(C)A                                             | 28.0                           | 31.10                                                             | 35.80   | 1.0                 | 5.0                                                    | 45.4                                       | 13.2                                          | CG           | MG   |
| SMBJ30(C)A                                             | 30.0                           | 33.30                                                             | 38.30   | 1.0                 | 5.0                                                    | 48.4                                       | 12.4                                          | CK           | MK   |
| SMBJ33(C)A                                             | 33.0                           | 36.70                                                             | 42.20   | 1.0                 | 5.0                                                    | 53.3                                       | 11.3                                          | CM           | MM   |
| SMBJ36(C)A                                             | 36.0                           | 40.00                                                             | 46.00   | 1.0                 | 5.0                                                    | 58.1                                       | 10.3                                          | CP           | MP   |
| SMBJ40(C)A                                             | 40.0                           | 44.40                                                             | 51.10   | 1.0                 | 5.0                                                    | 64.5                                       | 9.3                                           | CR           | MR   |
| SMBJ43(C)A                                             | 43.0                           | 47.80                                                             | 54.90   | 1.0                 | 5.0                                                    | 69.4                                       | 8.6                                           | CT           | MT   |
| SMBJ45(C)A                                             | 45.0                           | 50.00                                                             | 57.50   | 1.0                 | 5.0                                                    | 72.7                                       | 8.3                                           | CV           | MV   |
| SMBJ48(C)A                                             | 48.0                           | 53.30                                                             | 61.30   | 1.0                 | 5.0                                                    | 77.4                                       | 7.7                                           | CX           | MX   |
| SMBJ51(C)A                                             | 51.0                           | 56.70                                                             | 65.20   | 1.0                 | 5.0                                                    | 82.4                                       | 7.3                                           | CZ           | MZ   |
| SMBJ54(C)A                                             | 54.0                           | 60.00                                                             | 69.00   | 1.0                 | 5.0                                                    | 87.1                                       | 6.9                                           | DE           | NE   |
| SMBJ58(C)A                                             | 58.0                           | 64.40                                                             | 74.60   | 1.0                 | 5.0                                                    | 93.6                                       | 6.4                                           | DG           | NG   |
| SMBJ60(C)A                                             | 60.0                           | 66.70                                                             | 76.70   | 1.0                 | 5.0                                                    | 96.8                                       | 6.2                                           | DK           | NK   |
| SMBJ64(C)A                                             | 64.0                           | 71.10                                                             | 81.80   | 1.0                 | 5.0                                                    | 103.0                                      | 5.8                                           | DM           | NM   |
| SMBJ70(C)A                                             | 70.0                           | 77.80                                                             | 89.50   | 1.0                 | 5.0                                                    | 113.0                                      | 5.3                                           | DP           | NP   |
| SMBJ75(C)A                                             | 75.0                           | 83.30                                                             | 95.80   | 1.0                 | 5.0                                                    | 121.0                                      | 4.9                                           | DR           | NR   |
| SMBJ78(C)A                                             | 78.0                           | 86.70                                                             | 99.70   | 1.0                 | 5.0                                                    | 126.0                                      | 4.7                                           | DT           | NT   |
| SMBJ85(C)A                                             | 85.0                           | 94.40                                                             | 108.20  | 1.0                 | 5.0                                                    | 137.0                                      | 4.4                                           | DV           | NV   |
| SMBJ90(C)A                                             | 90.0                           | 100.0                                                             | 115.50  | 1.0                 | 5.0                                                    | 146.0                                      | 4.1                                           | DX           | NX   |
| SMBJ100(C)A                                            | 100.0                          | 111.0                                                             | 128.00  | 1.0                 | 5.0                                                    | 162.0                                      | 3.7                                           | DZ           | NZ   |
| SMBJ110(C)A                                            | 110.0                          | 122.0                                                             | 140.00  | 1.0                 | 5.0                                                    | 177.0                                      | 3.4                                           | EE           | PE   |
| SMBJ120(C)A                                            | 120.0                          | 133.0                                                             | 153.00  | 1.0                 | 5.0                                                    | 193.0                                      | 3.1                                           | EG           | PG   |
| SMBJ130(C)A                                            | 130.0                          | 144.0                                                             | 165.50  | 1.0                 | 5.0                                                    | 209.0                                      | 2.9                                           | EK           | PK   |
| SMBJ150(C)A                                            | 150.0                          | 167.0                                                             | 192.50  | 1.0                 | 5.0                                                    | 243.0                                      | 2.5                                           | EM           | PM   |
| SMBJ160(C)A                                            | 160.0                          | 178.0                                                             | 205.00  | 1.0                 | 5.0                                                    | 259.0                                      | 2.3                                           | EP           | PP   |
| SMBJ170(C)A                                            | 170.0                          | 189.0                                                             | 217.50  | 1.0                 | 5.0                                                    | 275.0                                      | 2.2                                           | ER           | PR   |

Notes: 5. Suffix C denotes Bi-directional device.  
6. V<sub>BR</sub> measured with I<sub>T</sub> current pulse = 300 s  
7. For Bi-Directional devices having V<sub>RWM</sub> of 10V and under, the I<sub>R</sub> is doubled.

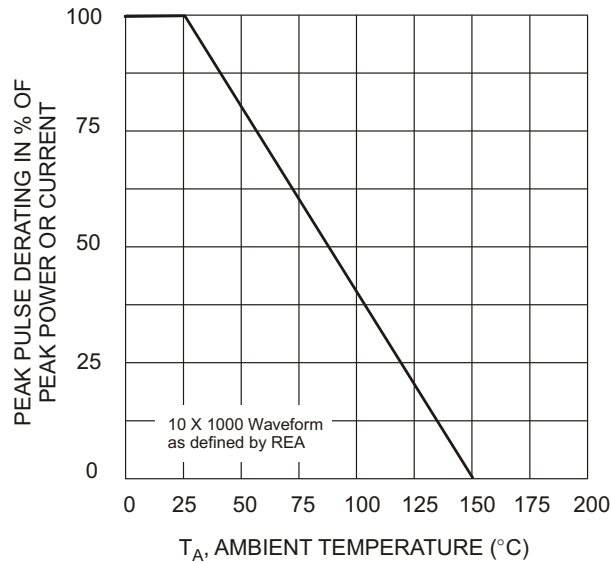


Fig. 1 Pulse Derating Curve

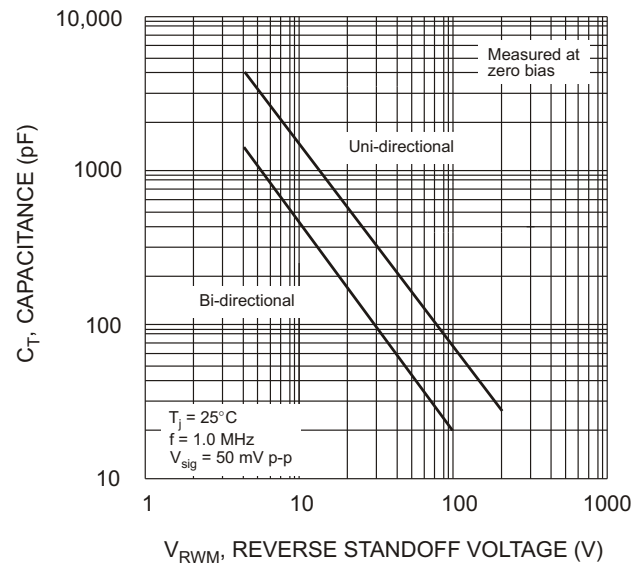


Fig. 2 Typical Total Capacitance

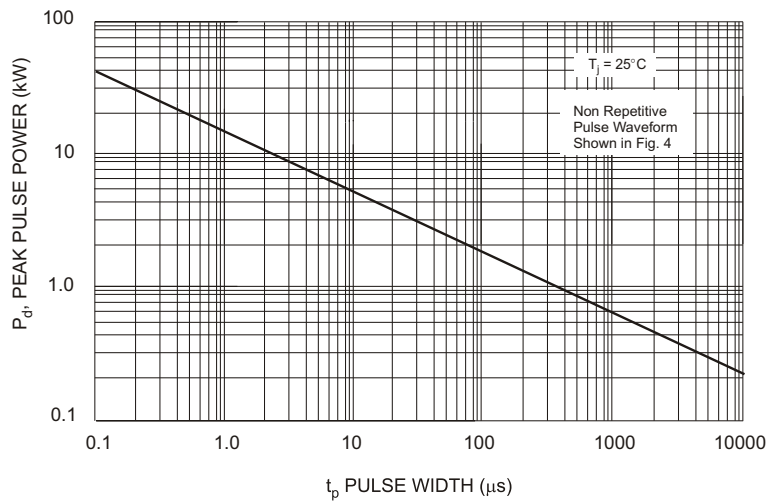


Fig. 3 Pulse Rating Curve

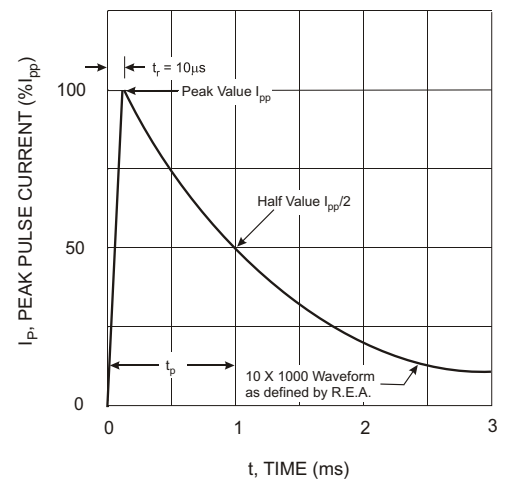


Fig. 4 Pulse Waveform

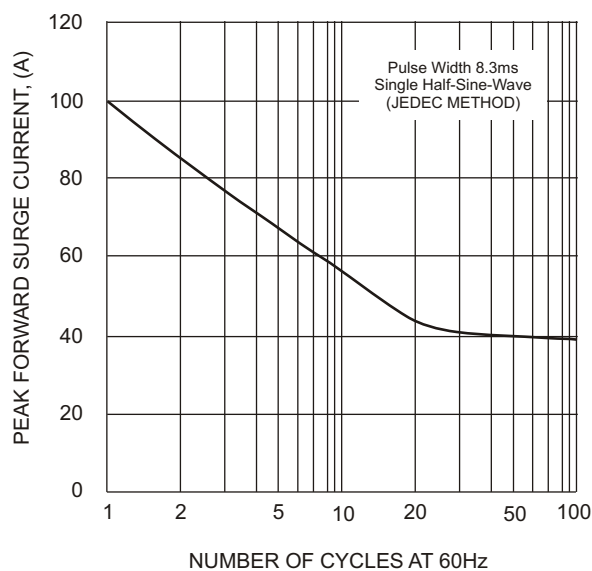


Fig. 5, Maximum Non-Repetitive Surge Current

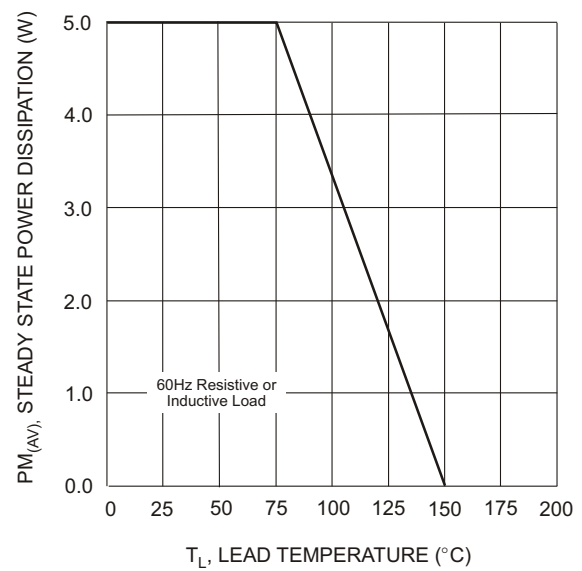


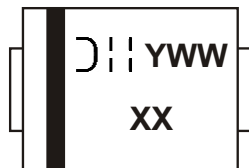
Fig. 6 Steady State Power Derating Curve

## Ordering Information (Note 8)

| Device         | Packaging | Shipping         |
|----------------|-----------|------------------|
| SMBJXXX(C)A-13 | SMB       | 5000/Tape & Reel |

Notes: 8. For Packaging Details, go to our website at <http://www.diodes.com/datasheets/ap02007.pdf>.  
9. For Lead Free Finish/RoHS Compliant version part number, please add "-F" suffix to the part number above. Example: SMBJ170A-13-F.

## Marking Information



XX = 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