

## Electrical Characteristics @ T<sub>A</sub> = 25°C unless otherwise specified

| Type Number<br>(Note 6) | Marking Codes | Zener Voltage Range<br>(Note 2)  |         |         |                 | Maximum Zener Impedance (Note 4)  |                                   |                 | Maximum Reverse Current<br>(Note 2) |                  | Typical Temperature Coefficient<br>@ I <sub>ZT</sub> mV/°C |      | Test Current<br>I <sub>ZT</sub> |
|-------------------------|---------------|----------------------------------|---------|---------|-----------------|-----------------------------------|-----------------------------------|-----------------|-------------------------------------|------------------|------------------------------------------------------------|------|---------------------------------|
|                         |               | V <sub>Z</sub> @ I <sub>ZT</sub> |         |         | I <sub>ZT</sub> | Z <sub>ZT</sub> @ I <sub>ZT</sub> | Z <sub>ZK</sub> @ I <sub>ZK</sub> | I <sub>ZK</sub> | I <sub>R</sub>                      | @ V <sub>R</sub> | Min                                                        | Max  |                                 |
|                         |               | Nom (V)                          | Min (V) | Max (V) | mA              | Ω                                 | mA                                | uA              | V                                   | mA               |                                                            |      |                                 |
| BZT52C2V0               | WY, <u>WY</u> | 2.0                              | 1.91    | 2.09    | 5               | 100                               | 600                               | 1.0             | 150                                 | 1.0              | -3.5                                                       | 0    | 5                               |
| BZT52C2V4               | WX, <u>WX</u> | 2.4                              | 2.2     | 2.6     | 5               | 100                               | 600                               | 1.0             | 50                                  | 1.0              | -3.5                                                       | 0    | 5                               |
| BZT52C2V7               | W1, <u>W1</u> | 2.7                              | 2.5     | 2.9     | 5               | 100                               | 600                               | 1.0             | 20                                  | 1.0              | -3.5                                                       | 0    | 5                               |
| BZT52C3V0               | W2, <u>W2</u> | 3.0                              | 2.8     | 3.2     | 5               | 95                                | 600                               | 1.0             | 10                                  | 1.0              | -3.5                                                       | 0    | 5                               |
| BZT52C3V3               | W3, <u>W3</u> | 3.3                              | 3.1     | 3.5     | 5               | 95                                | 600                               | 1.0             | 5.0                                 | 1.0              | -3.5                                                       | 0    | 5                               |
| BZT52C3V6               | W4, <u>W4</u> | 3.6                              | 3.4     | 3.8     | 5               | 90                                | 600                               | 1.0             | 5.0                                 | 1.0              | -3.5                                                       | 0    | 5                               |
| BZT52C3V9               | W5, <u>W5</u> | 3.9                              | 3.7     | 4.1     | 5               | 90                                | 600                               | 1.0             | 3.0                                 | 1.0              | -3.5                                                       | 0    | 5                               |
| BZT52C4V3               | W6, <u>W6</u> | 4.3                              | 4.0     | 4.6     | 5               | 90                                | 600                               | 1.0             | 3.0                                 | 1.0              | -3.5                                                       | 0    | 5                               |
| BZT52C4V7               | W7, <u>W7</u> | 4.7                              | 4.4     | 5.0     | 5               | 80                                | 500                               | 1.0             | 3.0                                 | 2.0              | -3.5                                                       | 0.2  | 5                               |
| BZT52C5V1               | W8, <u>W8</u> | 5.1                              | 4.8     | 5.4     | 5               | 60                                | 480                               | 1.0             | 2.0                                 | 2.0              | -2.7                                                       | 1.2  | 5                               |
| BZT52C5V6               | W9, <u>W9</u> | 5.6                              | 5.2     | 6.0     | 5               | 40                                | 400                               | 1.0             | 1.0                                 | 2.0              | -2                                                         | 2.5  | 5                               |
| BZT52C6V2               | WA, <u>WA</u> | 6.2                              | 5.8     | 6.6     | 5               | 10                                | 150                               | 1.0             | 3.0                                 | 4.0              | 0.4                                                        | 3.7  | 5                               |
| BZT52C6V8               | WB, <u>WB</u> | 6.8                              | 6.4     | 7.2     | 5               | 15                                | 80                                | 1.0             | 2.0                                 | 4.0              | 1.2                                                        | 4.5  | 5                               |
| BZT52C7V5               | WC, <u>WC</u> | 7.5                              | 7.0     | 7.9     | 5               | 15                                | 80                                | 1.0             | 1.0                                 | 5.0              | 2.5                                                        | 5.3  | 5                               |
| BZT52C8V2               | WD, <u>WD</u> | 8.2                              | 7.7     | 8.7     | 5               | 15                                | 80                                | 1.0             | 0.7                                 | 5.0              | 3.2                                                        | 6.2  | 5                               |
| BZT52C9V1               | WE, <u>WE</u> | 9.1                              | 8.5     | 9.6     | 5               | 15                                | 100                               | 1.0             | 0.5                                 | 6.0              | 3.8                                                        | 7.0  | 5                               |
| BZT52C10                | WF, <u>WF</u> | 10                               | 9.4     | 10.6    | 5               | 20                                | 150                               | 1.0             | 0.2                                 | 7.0              | 4.5                                                        | 8.0  | 5                               |
| BZT52C11                | WG, <u>WG</u> | 11                               | 10.4    | 11.6    | 5               | 20                                | 150                               | 1.0             | 0.1                                 | 8.0              | 5.4                                                        | 9.0  | 5                               |
| BZT52C12                | WH, <u>WH</u> | 12                               | 11.4    | 12.7    | 5               | 25                                | 150                               | 1.0             | 0.1                                 | 8.0              | 6.0                                                        | 10.0 | 5                               |
| BZT52C13                | WI, <u>WI</u> | 13                               | 12.4    | 14.1    | 5               | 30                                | 170                               | 1.0             | 0.1                                 | 8.0              | 7.0                                                        | 11.0 | 5                               |
| BZT52C15                | WJ, <u>WJ</u> | 15                               | 13.8    | 15.6    | 5               | 30                                | 200                               | 1.0             | 0.1                                 | 10.5             | 9.2                                                        | 13.0 | 5                               |
| BZT52C16                | WK, <u>WK</u> | 16                               | 15.3    | 17.1    | 5               | 40                                | 200                               | 1.0             | 0.1                                 | 11.2             | 10.4                                                       | 14.0 | 5                               |
| BZT52C18                | WL, <u>WL</u> | 18                               | 16.8    | 19.1    | 5               | 45                                | 225                               | 1.0             | 0.1                                 | 12.6             | 12.4                                                       | 16.0 | 5                               |
| BZT52C20                | WM, <u>WM</u> | 20                               | 18.8    | 21.2    | 5               | 55                                | 225                               | 1.0             | 0.1                                 | 14.0             | 14.4                                                       | 18.0 | 5                               |
| BZT52C22                | WN, <u>WN</u> | 22                               | 20.8    | 23.3    | 5               | 55                                | 250                               | 1.0             | 0.1                                 | 15.4             | 16.4                                                       | 20.0 | 5                               |
| BZT52C24                | WO, <u>WO</u> | 24                               | 22.8    | 25.6    | 5               | 70                                | 250                               | 1.0             | 0.1                                 | 16.8             | 18.4                                                       | 22.0 | 5                               |
| BZT52C27                | WP, <u>WP</u> | 27                               | 25.1    | 28.9    | 2               | 80                                | 300                               | 0.5             | 0.1                                 | 18.9             | 21.4                                                       | 25.3 | 2                               |
| BZT52C30                | WQ, <u>WQ</u> | 30                               | 28.0    | 32.0    | 2               | 80                                | 300                               | 0.5             | 0.1                                 | 21.0             | 24.4                                                       | 29.4 | 2                               |
| BZT52C33                | WR, <u>WR</u> | 33                               | 31.0    | 35.0    | 2               | 80                                | 325                               | 0.5             | 0.1                                 | 23.1             | 27.4                                                       | 33.4 | 2                               |
| BZT52C36                | WS, <u>WS</u> | 36                               | 34.0    | 38.0    | 2               | 90                                | 350                               | 0.5             | 0.1                                 | 25.2             | 30.4                                                       | 37.4 | 2                               |
| BZT52C39                | WT, <u>WT</u> | 39                               | 37.0    | 41.0    | 2               | 130                               | 350                               | 0.5             | 0.1                                 | 27.3             | 33.4                                                       | 41.2 | 2                               |

- Notes:
1. Device mounted on ceramic PCB; 7.6mm x 9.4mm x 0.87mm with pad areas 25mm<sup>2</sup>.
  2. Short duration test pulse used to minimize self-heating effect.
  3. No purposefully added lead.
  4. f = 1kHz.

## Ordering Information (Note 5 & 6)

| Device           | Packaging | Shipping         |
|------------------|-----------|------------------|
| (Type Number)-7* | SOD-123   | 3000/Tape & Reel |

\* Add "-7" to the appropriate type number in Table 1 above example: 6.2V Zener = BZT52C6V2-7.

- Notes:
5. For Packaging Details, go to our website at <http://www.diodes.com/datasheets/ap02007.pdf>.
  6. For Lead Free/RoHS Compliant version part number, please add "-F" suffix to the part number above. Example: BZT52C2V0-7-F.

