

### FEATURES

- \* Ideal for surface mount applications
- \* Easy pick and place
- \* High temperature soldering guaranteed:  
260°C / 10 seconds at terminals

### MECHANICAL DATA

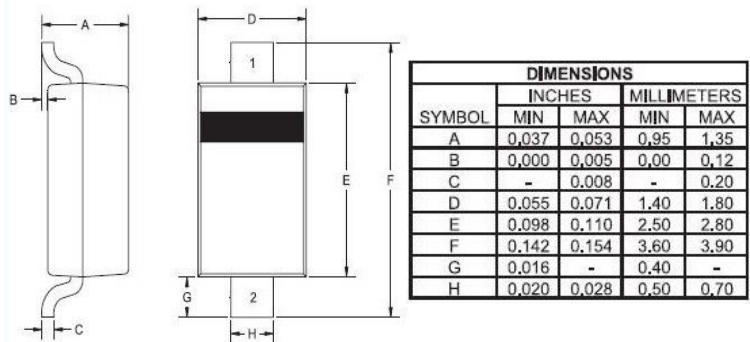
- \* Case: Molded plastic
- \* Epoxy: UL 94V-0 rate flame retardant
- \* Metallurgically bonded construction
- \* Polarity: Color band denotes cathode end
- \* Mounting position: Any

### VOLTAGE RANGE

2.0 to 75 Volts

500mW

SOD123



### MAXIMUM RATINGS AND ELECTRICAL CHARACTERISTICS

Rating 25°C ambient temperature unless otherwise specified.  
Single phase half wave, 60Hz, resistive or inductive load.  
For capacitive load, derate current by 20%.

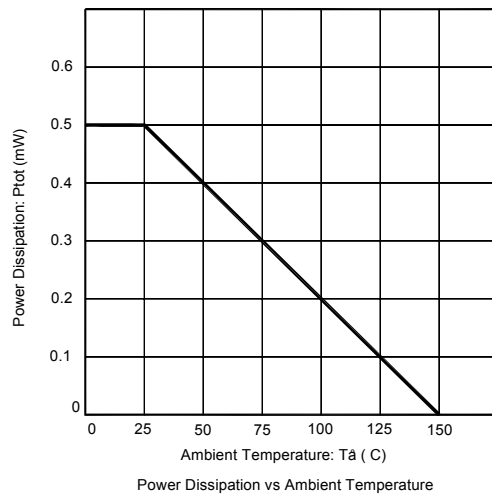
#### Absolute Maximum Ratings (T<sub>a</sub> = 25°C)

| Parameter                 | Symbol           | Value         | Unit |
|---------------------------|------------------|---------------|------|
| Power Dissipation         | P <sub>tot</sub> | 500           | mW   |
| Junction Temperature      | T <sub>J</sub>   | 150           | °C   |
| Storage Temperature Range | T <sub>stg</sub> | - 65 to + 150 | °C   |

#### Characteristics at T<sub>a</sub> = 25°C

| Parameter                                    | Symbol           | Max. | Unit |
|--|------------------|------|------|
| Thermal Resistance Junction to Ambient Air   | R <sub>thA</sub> | 340  | °C/W |
| Forward Voltage<br>at I <sub>F</sub> = 10 mA | V <sub>F</sub>   | 0.9  | V    |

# BZT52C2V0 THRU BZT52C75



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## Characteristics at Ta = 25°C

| Type      | Marking | Zener Voltage Range <sup>(2)</sup>     |           |           |                 | Maximum Zener <sup>(3)</sup><br>Impedance |                 |                                  |                 | Reverse Current <sup>(2)</sup> |                 |
|-----------|---------|--|-----------|-----------|-----------------|---|-----------------|----------------------------------|-----------------|--------------------------------|-----------------|
|           |         | V <sub>ZT</sub> ( at I <sub>ZT</sub> ) |           |           | I <sub>ZT</sub> | Z <sub>ZT</sub> @I <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 ( V )                              | Nom ( V ) | Max ( V ) | (mA)            | (Ω)                                       | (mA)            | (Ω)                              | (mA)            | μA                             | V               |
| BZT52C2V0 | WY      | 1.91                                   | 2.0       | 2.09      | 5               | 100                                       | 5               | 600                              | 1               | 150                            | 1.0             |
| BZT52C2V4 | WX      | 2.2                                    | 2.4       | 2.6       | 5               | 100                                       | 5               | 600                              | 1               | 50                             | 1.0             |
| BZT52C2V7 | W1      | 2.5                                    | 2.7       | 2.9       | 5               | 100                                       | 5               | 600                              | 1               | 20                             | 1.0             |
| BZT52C3V0 | W2      | 2.8                                    | 3.0       | 3.2       | 5               | 95  | 5               | 600                              | 1               | 10                             | 1.0             |
| BZT52C3V3 | W3      | 3.1                                    | 3.3       | 3.5       | 5               | 95  | 5               | 600                              | 1               | 5.0                            | 1.0             |
| BZT52C3V6 | W4      | 3.4                                    | 3.6       | 3.8       | 5               | 90  | 5               | 600                              | 1               | 5.0                            | 1.0             |
| BZT52C3V9 | W5      | 3.7                                    | 3.9       | 4.1       | 5               | 90  | 5               | 600                              | 1               | 3.0                            | 1.0             |
| BZT52C4V3 | W6      | 4                                      | 4.3       | 4.6       | 5               | 90  | 5               | 600                              | 1               | 3.0                            | 1.0             |
| BZT52C4V7 | W7      | 4.4                                    | 4.7       | 5         | 5               | 80  | 5               | 500                              | 1               | 3.0                            | 2.0             |
| BZT52C5V1 | W8      | 4.8                                    | 5.1       | 5.4       | 5               | 60  | 5               | 480                              | 1               | 2.0                            | 2.0             |
| BZT52C5V6 | W9      | 5.2                                    | 5.6       | 6         | 5               | 40  | 5               | 400                              | 1               | 1.0                            | 2.0             |
| BZT52C6V2 | WA      | 5.8                                    | 6.2       | 6.6       | 5               | 10  | 5               | 150                              | 1               | 3.0                            | 4.0             |
| BZT52C6V8 | WB      | 6.4                                    | 6.8       | 7.2       | 5               | 15  | 5               | 80                               | 1               | 2.0                            | 4.0             |
| BZT52C7V5 | WC      | 7                                      | 7.5       | 7.9       | 5               | 15  | 5               | 80                               | 1               | 1.0                            | 5.0             |
| BZT52C8V2 | WD      | 7.7                                    | 8.2       | 8.7       | 5               | 15  | 5               | 80                               | 1               | 0.7                            | 5.0             |
| BZT52C9V1 | WE      | 8.5                                    | 9.1       | 9.6       | 5               | 15  | 5               | 100                              | 1               | 0.5                            | 6.0             |
| BZT52C10  | WF      | 9.4                                    | 10        | 10.6      | 5               | 20  | 5               | 150                              | 1               | 0.2                            | 7.0             |
| BZT52C11  | WG      | 10.4                                   | 11        | 11.6      | 5               | 20  | 5               | 150                              | 1               | 0.1                            | 8.0             |
| BZT52C12  | WH      | 11.4                                   | 12        | 12.7      | 5               | 25  | 5               | 150                              | 1               | 0.1                            | 8.0             |
| BZT52C13  | WI      | 12.4                                   | 13        | 14.1      | 5               | 30  | 5               | 170                              | 1               | 0.1                            | 8.0             |
| BZT52C15  | WJ      | 13.8                                   | 15        | 15.6      | 5               | 30  | 5               | 200                              | 1               | 0.1                            | 10.5            |
| BZT52C16  | WK      | 15.3                                   | 16        | 17.1      | 5               | 40  | 5               | 200                              | 1               | 0.1                            | 11.2            |
| BZT52C18  | WL      | 16.8                                   | 18        | 19.1      | 5               | 45  | 5               | 225                              | 1               | 0.1                            | 12.6            |
| BZT52C20  | WM      | 18.8                                   | 20        | 21.2      | 5               | 55  | 5               | 225                              | 1               | 0.1                            | 14.0            |
| BZT52C22  | WN      | 20.8                                   | 22        | 23.3      | 5               | 55  | 5               | 250                              | 1               | 0.1                            | 15.4            |
| BZT52C24  | WO      | 22.8                                   | 24        | 25.6      | 5               | 70  | 5               | 250                              | 1               | 0.1                            | 16.8            |
| BZT52C27  | WP      | 25.1                                   | 27        | 28.9      | 2               | 80  | 2               | 300                              | 0.5             | 0.1                            | 18.9            |
| BZT52C30  | WQ      | 28                                     | 30        | 32        | 2               | 80  | 2               | 300                              | 0.5             | 0.1                            | 21.0            |
| BZT52C33  | WR      | 31                                     | 33        | 35        | 2               | 80  | 2               | 325                              | 0.5             | 0.1                            | 23.1            |
| BZT52C36  | WS      | 34                                     | 36        | 38        | 2               | 90  | 2               | 350                              | 0.5             | 0.1                            | 25.2            |
| BZT52C39  | WT      | 37                                     | 39        | 41        | 2               | 130                                       | 2               | 350                              | 0.5             | 0.1                            | 27.3            |
| BZT52C43  | 6A      | 40                                     | 43        | 46        | 2.5             | 130                                       | 2               | 500                              | 1               | 2                              | 33              |
| BZT52C47  | 6B      | 44                                     | 47        | 50        | 2.5             | 150                                       | 2               | 500                              | 1               | 2                              | 36              |
| BZT52C51  | 6C      | 48                                     | 51        | 54        | 2.5             | 180                                       | 2               | 500                              | 1               | 1                              | 37              |
| BZT52C56  | 6D      | 52                                     | 56        | 60        | 2.5             | 180                                       | 2               | 500                              | 1               | 1                              | 43              |
| BZT52C62  | 6E      | 58                                     | 62        | 66        | 2.5             | 200                                       | 2               | 500                              | 1               | 0.2                            | 47              |
| BZT52C68  | 6F      | 64                                     | 68        | 72        | 2.5             | 250                                       | 2               | 500                              | 1               | 0.2                            | 52              |
| BZT52C75  | 6H      | 70                                     | 75        | 79        | 2.5             | 300                                       | 2               | 500                              | 1               | 0.2                            | 57              |

<sup>1)</sup> V<sub>ZT</sub> is tested with pulses (20 ms).