



Micro Commercial Components



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# BZT52B2V4 THRU BZT52B75

## 410 mW Zener Diode 2.4 to 75 Volts

### Features

- Planar Die Construction
- 410mW Power Dissipation on Ceramic PCB
- General Purpose Medium Current
- Ideally Suited for Automated Assembly Processes
- Case Material: Molded Plastic. UL Flammability Classification Rating 94V-0 and MSL Rating 1
- Lead Free Finish/RoHS Compliant("P" Suffix designates RoHS Compliant. See ordering information)
- Halogen free available upon request by adding suffix "-HF"

### Absolute Maximum Ratings

| Symbol           | Rating                    | Rating      | Unit |
|------------------|---------------------------|-------------|------|
| P <sub>D</sub>   | Power dissipation         | 410         | mW   |
| T <sub>J</sub>   | Junction Temperature      | -55 to +175 | °C   |
| T <sub>STG</sub> | Storage Temperature Range | -55 to +175 | °C   |

### Absolute Maximum Ratings

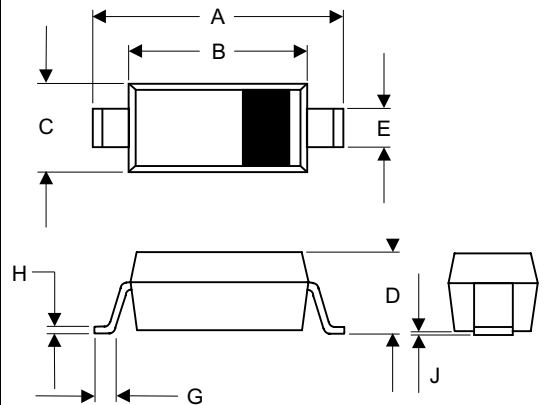
| Symbol            | Rating                                  | Rating | Unit |
|-------------------|---|--------|------|
| R <sub>thJA</sub> | Thermal Resistance Junction to Ambient* | 430    | °C/W |

\* Device mounted on ceramic PCB: 7.6mm x 9.4mm x 0.87mm with pad areas 25 mm<sup>2</sup>

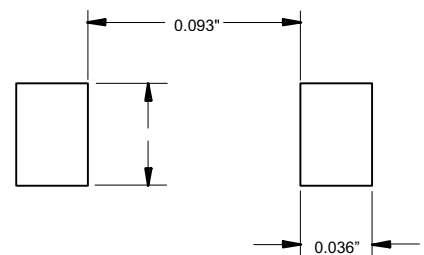
### Electrical Characteristics

| Symbol         | Rating  | Rating | Unit |
|----------------|---|--------|------|
| V <sub>F</sub> | Maximum Forward Voltage (I <sub>F</sub> =10mA <sub>dc</sub> ) | 0.9    | V    |

### SOD123



| DIM | DIMENSIONS |       |       |       | NOTE |
|-----|------------|-------|-------|-------|------|
|     | INCHES     |       | MM    |       |      |
|     | MIN        | MAX   | MIN   | MAX   |      |
| A   | .140       | .152  | 3.55  | 3.85  |      |
| B   | .100       | .112  | 2.55  | 2.85  |      |
| C   | .055       | .071  | 1.40  | 1.80  |      |
| D   | -----      | .053  | ----- | 1.35  |      |
| E   | .012       | .031  | 0.30  | .78   |      |
| G   | .006       | ----- | 0.15  | ----- |      |
| H   | -----      | .01   | ----- | .25   |      |
| J   | -----      | .006  | ----- | .15   |      |



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**Electrical Characteristics@25°C**

| Type      | ZENER VOLTAGE<br>$V_Z^{(1)}$<br>VOLTS |      |       | Maximum Zener<br>Impedance <sup>(2)</sup><br>$Z_{ZT}$ (OHMS) |      | Maximum Zener<br>Impedance <sup>(2)</sup><br>$Z_{ZK}$ (OHMS) |      | REVERSE<br>CURRENT<br>$I_R(\text{Max})@V_R$ |      | Marking |
|-----------|---------------------------------------|------|-------|--|------|--|------|---|------|---------|
|           | Min.                                  | Nom. | Max.  | $I_{ZT}$ (mA)  | Max. | $I_{ZK}$ (mA)  | Max. | uA  | V    |         |
| BZT52B2V4 | 2.35                                  | 2.4  | 2.45  | 5  | 85   | 1  | 600  | 100   | 1.0  | W1/2WX  |
| BZT52B2V7 | 2.64                                  | 2.7  | 2.75  | 5  | 83   | 1  | 600  | 75  | 1.0  | W2/2W1  |
| BZT52B3V0 | 2.94                                  | 3.0  | 3.06  | 5  | 95   | 1  | 600  | 50  | 1.0  | W3/2W2  |
| BZT52B3V3 | 3.23                                  | 3.3  | 3.37  | 5  | 95   | 1  | 600  | 25  | 1.0  | W4/2W3  |
| BZT52B3V6 | 3.52                                  | 3.6  | 3.67  | 5  | 95   | 1  | 600  | 15  | 1.0  | W5/2W4  |
| BZT52B3V9 | 3.82                                  | 3.9  | 3.98  | 5  | 95   | 1  | 600  | 10  | 1.0  | W6/2W5  |
| BZT52B4V3 | 4.21                                  | 4.3  | 4.39  | 5  | 95   | 1  | 600  | 5   | 1.0  | W7/2W6  |
| BZT52B4V7 | 4.61                                  | 4.7  | 4.79  | 5  | 78   | 1  | 500  | 5   | 2.0  | W8/2W7  |
| BZT52B5V1 | 5.0                                   | 5.1  | 5.2   | 5  | 60   | 1  | 480  | 0.1   | 0.8  | W9/2W8  |
| BZT52B5V6 | 5.49                                  | 5.6  | 5.71  | 5  | 40   | 1  | 400  | 0.1   | 1.0  | WA/2W9  |
| BZT52B6V2 | 6.08                                  | 6.2  | 6.32  | 5  | 10   | 1  | 150  | 0.1   | 2.0  | WB/2WA  |
| BZT52B6V8 | 6.66                                  | 6.8  | 6.94  | 5  | 8    | 1  | 80   | 0.1   | 3.0  | WC/2WB  |
| BZT52B7V5 | 7.35                                  | 7.5  | 7.65  | 5  | 7    | 1  | 80   | 0.1   | 5.0  | WD/2WC  |
| BZT52B8V2 | 8.04                                  | 8.2  | 8.36  | 5  | 7    | 1  | 80   | 0.1   | 6.0  | WE/2WD  |
| BZT52B9V1 | 8.92                                  | 9.1  | 9.28  | 5  | 10   | 1  | 100  | 0.1   | 7.0  | WF/2WE  |
| BZT52B10  | 9.80                                  | 10   | 10.2  | 5  | 15   | 1  | 150  | 0.1   | 7.5  | WG/2WF  |
| BZT52B11  | 10.78                                 | 11   | 11.22 | 5  | 20   | 1  | 150  | 0.1   | 8.5  | WH/2WG  |
| BZT52B12  | 11.76                                 | 12   | 12.24 | 5  | 20   | 1  | 150  | 0.1   | 9.0  | WI/2WH  |
| BZT52B13  | 12.74                                 | 13   | 13.3  | 5  | 25   | 1  | 170  | 0.1   | 10.0 | WK/2WI  |
| BZT52B15  | 14.7                                  | 15   | 15.3  | 5  | 30   | 1  | 200  | 0.1   | 11.0 | WL/2WJ  |
| BZT52B16  | 15.68                                 | 16   | 16.3  | 5  | 40   | 1  | 200  | 0.1   | 12.0 | WM/2WK  |
| BZT52B18  | 17.6                                  | 18   | 18.4  | 5  | 50   | 1  | 225  | 0.1   | 14.0 | WN/2WL  |
| BZT52B20  | 19.6                                  | 20   | 20.4  | 5  | 50   | 1  | 225  | 0.1   | 15.0 | WO/2WM  |
| BZT52B22  | 21.56                                 | 22   | 22.44 | 5  | 55   | 1  | 250  | 0.1   | 17.0 | WP/2WN  |
| BZT52B24  | 23.52                                 | 24   | 24.5  | 5  | 70   | 1  | 250  | 0.1   | 18.0 | WR/2WO  |
| BZT52B27  | 26.46                                 | 27   | 27.54 | 5  | 80   | 1  | 300  | 0.1   | 20.0 | WS/2WP  |
| BZT52B30  | 29.4                                  | 30   | 30.6  | 5  | 80   | 1  | 300  | 0.1   | 22.5 | WT/2WQ  |
| BZT52B33  | 32.34                                 | 33   | 33.7  | 5  | 80   | 1  | 325  | 0.1   | 25.0 | WU/2WR  |
| BZT52B36  | 35.28                                 | 36   | 36.72 | 5  | 90   | 1  | 350  | 0.1   | 27.0 | WW/2WS  |
| BZT52B39  | 38.22                                 | 39   | 39.8  | 5  | 90   | 1  | 350  | 0.1   | 29.0 | WX/2WT  |
| BZT52B43  | 42.14                                 | 43   | 43.86 | 5  | 100  | 1  | 375  | 0.1   | 32.0 | WY/2WU  |
| BZT52B47  | 46.06                                 | 47   | 47.94 | 5  | 100  | 1  | 375  | 0.1   | 35.0 | WZ/2WV  |
| BZT52B51  | 49.98                                 | 51   | 52.02 | 5  | 100  | 1  | 400  | 0.1   | 38.0 | XA/2X1  |
| BZT52B56  | 54.88                                 | 56   | 57.12 | 5  | 135  | 1  | 1000 | 0.1   | 42.0 | X2/2X2  |
| BZT52B62  | 60.76                                 | 62   | 63.24 | 5  | 150  | 1  | 1000 | 0.1   | 46.0 | X3/2X3  |
| BZT52B68  | 66.64                                 | 68   | 69.36 | 5  | 200  | 1  | 1000 | 0.1   | 51.0 | X4/2X4  |
| BZT52B75  | 73.50                                 | 75   | 76.50 | 5  | 250  | 1  | 1000 | 0.1   | 56.0 | X5/2X5  |

(1) Device mounted on ceramic PCB: 7.6mm x 9.4mm x 0.87mm with pad areas 25 mm<sup>2</sup>

(2) f=1KHz



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### Ordering Information :

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

Note : Adding "-HF" suffix for halogen free, eg. Part Number-TP-HF

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