



Micro Commercial Components



Micro Commercial Components  
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## BZT52B2V4 THRU BZT52B75

### 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 |
|-----------|---------------------------|-------------|------|
| $P_D$     | Power dissipation         | 410         | mW   |
| $T_J$     | Junction Temperature      | -55 to +175 | °C   |
| $T_{STG}$ | Storage Temperature Range | -55 to +175 | °C   |

### Absolute Maximum Ratings

| Symbol     | Rating                                  | Rating | Unit |
|------------|-----------------------------------------|--------|------|
| $R_{thJA}$ | Thermal Resistance Junction to Ambient* | 430    | °C/W |

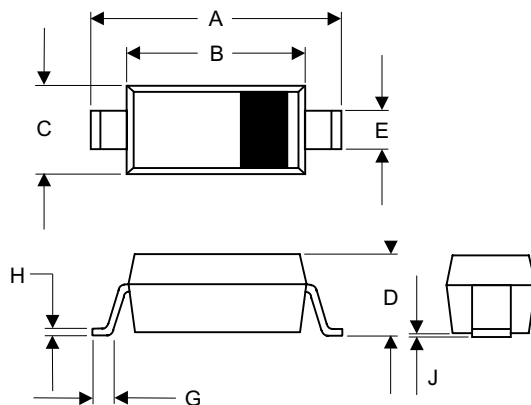
\* Device mounted on ceramic PCB: 7.6mm x 9.4mm x 0.87mm with pad areas 25 mm<sup>2</sup>

### Electrical Characteristics

| Symbol | Rating                                     | Rating | Unit |
|--------|--------------------------------------------|--------|------|
| $V_F$  | Maximum Forward Voltage<br>( $I_F=100mA$ ) | 0.9    | V    |

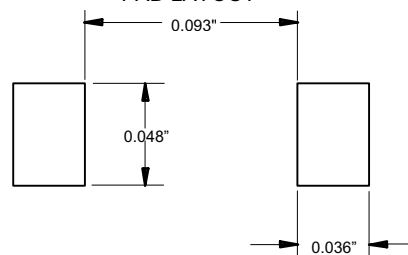
**410 mW  
Zener Diode  
2.4 to 75 Volts**

### SOD123



| DIMENSIONS |        |      |      |      |      |
|------------|--------|------|------|------|------|
| DIM        | INCHES |      | MM   |      | NOTE |
|            | 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  |      |

#### SUGGESTED SOLDER PAD LAYOUT



**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>$I_R$ (Max)@ $V_R$ |      | Marking |
|-----------|---------------------------------------|------|-------|--------------------------------------------------------------|------|--------------------------------------------------------------|------|------------------------------------------|------|---------|
|           | Min.                                  | Nom. | Max.  | $I_{ZT}$ (mA)                                                | Max. | $I_{ZK}$ (mA)                                                | Max. | $\mu A$                                  | V    |         |
| BZT52B2V4 | 2.35                                  | 2.4  | 2.45  | 5                                                            | 85   | 1                                                            | 600  | 100                                      | 1.0  | W1      |
| BZT52B2V7 | 2.64                                  | 2.7  | 2.75  | 5                                                            | 83   | 1                                                            | 600  | 75                                       | 1.0  | W2      |
| BZT52B3V0 | 2.94                                  | 3.0  | 3.06  | 5                                                            | 95   | 1                                                            | 600  | 50                                       | 1.0  | W3      |
| BZT52B3V3 | 3.23                                  | 3.3  | 3.37  | 5                                                            | 95   | 1                                                            | 600  | 25                                       | 1.0  | W4      |
| BZT52B3V6 | 3.52                                  | 3.6  | 3.67  | 5                                                            | 95   | 1                                                            | 600  | 15                                       | 1.0  | W5      |
| BZT52B3V9 | 3.82                                  | 3.9  | 3.98  | 5                                                            | 95   | 1                                                            | 600  | 10                                       | 1.0  | W6      |
| 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  | 9.8                                   | 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      |
| BZT52B47  | 46.06                                 | 47   | 47.94 | 5                                                            | 100  | 1                                                            | 375  | 0.1                                      | 35.0 | WZ      |
| BZT52B51  | 49.98                                 | 51   | 52.02 | 5                                                            | 100  | 1                                                            | 400  | 0.1                                      | 38.0 | XA      |
| BZT52B56  | 54.88                                 | 56   | 57.12 | 5                                                            | 135  | 1                                                            | 1000 | 0.1                                      | 42.0 | X2      |
| BZT52B62  | 60.76                                 | 62   | 63.24 | 5                                                            | 150  | 1                                                            | 1000 | 0.1                                      | 46.0 | X3      |
| BZT52B68  | 66.64                                 | 68   | 69.36 | 5                                                            | 200  | 1                                                            | 1000 | 0.1                                      | 51.0 | X4      |
| BZT52B75  | 73.50                                 | 75   | 76.50 | 5                                                            | 250  | 1                                                            | 1000 | 0.1                                      | 56.0 | X5      |

(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



TM

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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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