



Micro Commercial Components



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# BZT52C2V4T THRU BZT52C39T

## 100 mW Zener Diode 2.4 to 39 Volts

### Features

- Planar Die Construction
- 100mW Power Dissipation
- Epoxy meets UL 94 V-0 flammability rating
- Moisture Sensitivity Level 1
- Lead Free Finish/RoHS Compliant ("P" Suffix designates RoHS Compliant. See ordering information)

### Absolute Maximum Ratings

| Symbol           | Parameter                 | Rating      | Unit |
|------------------|---------------------------|-------------|------|
| P <sub>D</sub>   | Power dissipation         | 100         | mW   |
| T <sub>J</sub>   | Junction Temperature      | -65 to +175 | °C   |
| T <sub>STG</sub> | Storage Temperature Range | -65 to +175 | °C   |

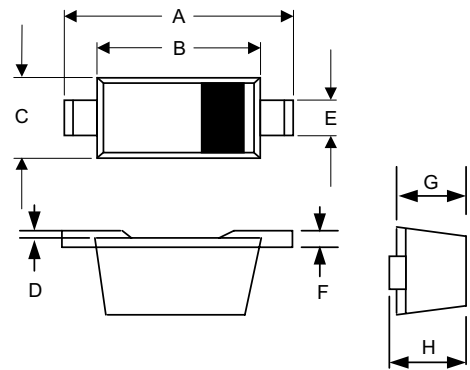
### Absolute Maximum Ratings

| Symbol            | Parameter                              | Rating | Unit |
|-------------------|--|--------|------|
| R <sub>thJA</sub> | Thermal Resistance Junction to Ambient | 625    | °C/W |

### Electrical Characteristics

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

### SOD523



| DIM | INCHES |      | MM   |      | NOTE |
|-----|--------|------|------|------|------|
|     | MIN    | MAX  | MIN  | MAX  |      |
| A   | .059   | .067 | 1.50 | 1.70 |      |
| B   | .043   | .051 | 1.10 | 1.30 |      |
| C   | .030   | .033 | 0.75 | 0.85 |      |
| D   | .001   | .003 | 0.01 | 0.07 |      |
| E   | .010   | .014 | 0.25 | 0.35 |      |
| F   | .003   | .006 | 0.08 | 0.15 |      |
| G   | .020   | .028 | 0.50 | 0.70 |      |
| H   | .020   | .031 | 0.51 | 0.77 |      |

**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) @ $V_R$ |      | Typical<br>Temperature<br>Coefficient<br>@ $I_{ZTC}$ |      | Marking |
|------------|---------------------------------------|------|------|--|------|--|------|---|------|--|------|---------|
|            | Min.                                  | Nom. | Max. | $I_{ZT}$ (mA)  | Max. | $I_{ZK}$ (mA)  | Max. | $\mu$ A                                   | V    | mV/°C  |      |         |
| BZT52C2V4T | 2.28                                  | 2.4  | 2.56 | 5  | 100  | 1.0  | 600  | 50  | 1.0  | -3.5   | 0    | Z11     |
| BZT52C2V7T | 2.5                                   | 2.7  | 2.9  | 5  | 100  | 1.0  | 600  | 20  | 1.0  | -3.5   | 0    | Z12     |
| BZT52C3V0T | 2.8                                   | 3.0  | 3.2  | 5  | 95   | 1.0  | 600  | 10  | 1.0  | -3.5   | 0    | Z13     |
| BZT52C3V3T | 3.1                                   | 3.3  | 3.5  | 5  | 95   | 1.0  | 600  | 5   | 1.0  | -3.5   | 0    | Z14     |
| BZT52C3V6T | 3.4                                   | 3.6  | 3.8  | 5  | 90   | 1.0  | 600  | 5   | 1.0  | -3.5   | 0    | Z15     |
| BZT52C3V9T | 3.7                                   | 3.9  | 4.1  | 5  | 90   | 1.0  | 600  | 3   | 1.0  | -3.5   | 0    | Z16     |
| BZT52C4V3T | 4.0                                   | 4.3  | 4.6  | 5  | 90   | 1.0  | 600  | 3   | 1.0  | -3.5   | 0    | Z17     |
| BZT52C4V7T | 4.4                                   | 4.7  | 5.0  | 5  | 80   | 1.0  | 500  | 3   | 2.0  | -3.5   | 0.2  | Z1      |
| BZT52C5V1T | 4.8                                   | 5.1  | 5.4  | 5  | 60   | 1.0  | 480  | 2   | 2.0  | -2.7   | 1.2  | Z2      |
| BZT52C5V6T | 5.2                                   | 5.6  | 6.0  | 5  | 40   | 1.0  | 400  | 1   | 2.0  | -2.0   | 2.5  | Z3      |
| BZT52C6V2T | 5.8                                   | 6.2  | 6.6  | 5  | 10   | 1.0  | 150  | 3   | 4.0  | 0.4  | 3.7  | Z4      |
| BZT52C6V8T | 6.4                                   | 6.8  | 7.2  | 5  | 15   | 1.0  | 80   | 2   | 4.0  | 1.2  | 4.5  | Z5      |
| BZT52C7V5T | 7.0                                   | 7.5  | 7.9  | 5  | 15   | 1.0  | 80   | 1   | 5.0  | 2.5  | 5.3  | Z6      |
| BZT52C8V2T | 7.7                                   | 8.2  | 8.7  | 5  | 15   | 1.0  | 80   | 0.7                                       | 5.0  | 3.2  | 6.2  | Z7      |
| BZT52C9V1T | 8.5                                   | 9.1  | 9.6  | 5  | 15   | 1.0  | 100  | 0.5                                       | 6.0  | 3.8  | 7.0  | Z8      |
| BZT52C10T  | 9.4                                   | 10   | 10.6 | 5  | 20   | 1.0  | 150  | 0.2                                       | 7.0  | 4.5  | 8.0  | Z9      |
| BZT52C11T  | 10.4                                  | 11   | 11.6 | 5  | 20   | 1.0  | 150  | 0.1                                       | 8.0  | 5.4  | 9.0  | Y1      |
| BZT52C12T  | 11.4                                  | 12   | 12.7 | 5  | 25   | 1.0  | 150  | 0.1                                       | 8.0  | 6.0  | 10.0 | Y2      |
| BZT52C13T  | 12.4                                  | 13   | 14.1 | 5  | 30   | 1.0  | 170  | 0.1                                       | 8.0  | 7.0  | 11.0 | Y3      |
| BZT52C15T  | 13.8                                  | 15   | 15.6 | 5  | 30   | 1.0  | 200  | 0.1                                       | 10.5 | 9.2  | 13.0 | Y4      |
| BZT52C16T  | 15.3                                  | 16   | 17.1 | 5  | 40   | 1.0  | 200  | 0.1                                       | 11.2 | 10.4   | 14.0 | Y5      |
| BZT52C18T  | 16.8                                  | 18   | 19.1 | 5  | 45   | 1.0  | 225  | 0.1                                       | 12.6 | 12.4   | 16.0 | Y6      |
| BZT52C20T  | 18.8                                  | 20   | 21.2 | 5  | 55   | 1.0  | 225  | 0.1                                       | 14.0 | 14.4   | 18.0 | Y7      |
| BZT52C22T  | 20.8                                  | 22   | 23.3 | 5  | 55   | 1.0  | 250  | 0.1                                       | 15.4 | 16.4   | 20.0 | Y8      |
| BZT52C24T  | 22.8                                  | 24   | 25.6 | 5  | 70   | 1.0  | 250  | 0.1                                       | 16.8 | 18.4   | 22.0 | Y9      |
| BZT52C27T  | 25.1                                  | 27   | 28.9 | 2  | 80   | 0.5  | 300  | 0.1                                       | 18.9 | 21.4   | 25.3 | Y10     |
| BZT52C30T  | 28                                    | 30   | 32   | 2  | 80   | 0.5  | 300  | 0.1                                       | 21.0 | 24.4   | 29.4 | Y11     |
| BZT52C33T  | 31                                    | 33   | 35   | 2  | 80   | 0.5  | 325  | 0.1                                       | 23.1 | 27.4   | 33.4 | Y12     |
| BZT52C36T  | 34                                    | 36   | 38   | 2  | 90   | 0.5  | 350  | 0.1                                       | 25.2 | 30.4   | 37.4 | Y13     |
| BZT52C39T  | 37                                    | 39   | 41   | 2  | 130  | 0.5  | 350  | 0.1                                       | 27.3 | 33.4   | 41.2 | Y14     |

(1) Tested with pulses, period = 5ms, pulse width=300us

(2) f=1KHz



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### Ordering Information :

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

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