



Micro Commercial Components



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20736 Marilla Street Chatsworth
CA 91311
Phone: (818) 701-4933
Fax: (818) 701-4939

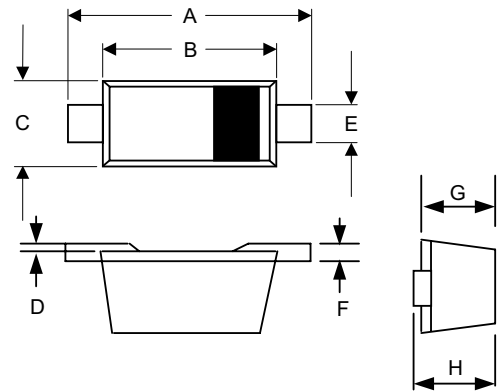
BZT52C2V4T THRU BZT52C39T

**200 mW
Zener Diode
2.4 to 39 Volts**

Features

- Planar Die Construction
- 200mW 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)
- Halogen free available upon request by adding suffix "-HF"

SOD523



Absolute Maximum Ratings

| Symbol | Parameter | Rating | Unit |
|-----------|---------------------------|-------------|------|
| P_D | Power dissipation | 200 | mW |
| T_J | Junction Temperature | -65 to +150 | °C |
| T_{STG} | Storage Temperature Range | -65 to +150 | °C |

Absolute Maximum Ratings

| Symbol | Parameter | Rating | Unit |
|------------|--|--------|------|
| R_{thJA} | Thermal Resistance Junction to Ambient | 625 | °C/W |

| 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

| Symbol | Parameter | Rating | Unit |
|--------|---|--------|------|
| V_F | Maximum Forward Voltage ($I_F=10mA_{dc}$) | 0.9 | V |

ELECTRICAL CHARACTERISTICS @25°C

| Type | ZENER VOLTAGE $V_Z^{(1)}$ VOLTS | | | Maximum Zener Impedance ⁽²⁾ Z_{ZT} (OHMS) | | Maximum Zener Impedance ⁽²⁾ Z_{ZK} (OHMS) | | REVERSE CURRENT I_R (Max) @ V_R | | Typical Temperature Coefficient @ I_{ZTC} | | Marking |
|------------|---------------------------------------|-----|------|--|------|--|------|---|------|--|------|---------|
| | Min. | Nom | Max. | I_{ZT} (mA) | Max. | I_{ZK} (mA) | Max. | μA | 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





TM

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Ordering Information :

| Device | Packing |
|----------------|-----------------------|
| Part Number-TP | Tape&Reel: 8Kpcs/Reel |

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

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