

BZT52CxxxS Series

Surface Mount Zener Diodes

V_Z Range: 2.4 to 51V Power Dissipation: 500mW

Features

- Ultra-Small Surface Mount Package
- Epoxy Meets UL 94 V-0 Flammability Rating
- Moisture Sensitivity Level 1
- Ideal for Automated Assembly



Package: SOD-323

Maximum Ratings (T_A=25°C unless otherwise specified)

| Symbol | Rating | Unit |
|----------------------------------|-------------|------|
| V _F | 0.9 | V |
| PD | 500 | mW |
| R _{θJA} | 305 | °C/W |
| T _J ,T _{STG} | -65 to +150 | °C |



Electrical Characteristics (T_A=25°C unless otherwise specified)

| Type Number | Marking Code | Zener Voltage Range | | | | Maximum Zener Impedance | | | Reverse Current | | Temperature Coefficient of Zener Voltage @I _{ZT} =5mA mV/°C | |
|-------------|--------------|---------------------------------|---------|---------|-----------------|----------------------------------|----------------------------------|-----------------|-----------------|-----------------|--|-----|
| | | V _Z @I _{ZT} | | | Z _{TI} | Z _{ZT} @I _{ZT} | Z _{ZK} @I _{ZK} | I _{ZK} | I _R | @V _R | Min | Max |
| | | Nom (V) | Min (V) | Max (V) | mA | Ω | mA | uA | V | | | |
| BZT52C2V4S | WX | 2.4 | 2.2 | 2.6 | 5 | 100 | 600 | 1 | 50 | 1 | -3.5 | 0 |
| BZT52C2V7S | W1 | 2.7 | 2.5 | 2.9 | 5 | 100 | 600 | 1 | 20 | 1 | -3.5 | 0 |
| BZT52C3V0S | W2 | 3 | 2.8 | 3.2 | 5 | 95 | 600 | 1 | 10 | 1 | -3.5 | 0 |
| BZT52C3V3S | W3 | 3.3 | 3.1 | 3.5 | 5 | 95 | 600 | 1 | 5 | 1 | -3.5 | 0 |
| BZT52C3V6S | W4 | 3.6 | 3.4 | 3.8 | 5 | 90 | 600 | 1 | 5 | 1 | -3.5 | 0 |
| BZT52C3V9S | W5 | 3.9 | 3.7 | 4.1 | 5 | 90 | 600 | 1 | 3 | 1 | -3.5 | 0 |
| BZT52C4V3S | W6 | 4.3 | 4 | 4.6 | 5 | 90 | 600 | 1 | 3 | 1 | -3.5 | 0 |
| BZT52C4V7S | W7 | 4.7 | 4.4 | 5 | 5 | 80 | 500 | 1 | 3 | 2 | -3.5 | 0.2 |
| BZT52C5V1S | W8 | 5.1 | 4.8 | 5.4 | 5 | 60 | 480 | 1 | 2 | 2 | -2.7 | 1.2 |
| BZT52C5V6S | W9 | 5.6 | 5.2 | 6 | 5 | 40 | 400 | 1 | 1 | 2 | -2 | 2.5 |
| BZT52C6V2S | WA | 6.2 | 5.8 | 6.6 | 5 | 10 | 150 | 1 | 3 | 4 | 0.4 | 3.7 |
| BZT52C6V8S | WB | 6.8 | 6.4 | 7.2 | 5 | 15 | 80 | 1 | 2 | 4 | 1.2 | 4.5 |
| BZT52C7V5S | WC | 7.5 | 7 | 7.9 | 5 | 15 | 80 | 1 | 1 | 5 | 2.5 | 5.3 |
| BZT52C8V2S | WD | 8.2 | 7.7 | 8.7 | 5 | 15 | 80 | 1 | 0.7 | 5 | 3.2 | 6.2 |

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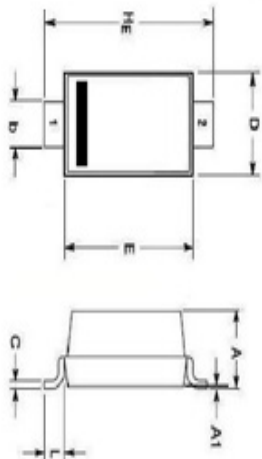
| Type Number | Marking Code | Zener Voltage Range | | | | Maximum Zener Impedance | | | Reverse Current | | Temperature Coefficient of Zener Voltage @ $I_{ZT}=5\text{mA}$ mV/°c | |
|-------------|--------------|---------------------|---------|---------|-----------------|----------------------------|----------------------------|-----------------|-----------------|-----------------|--|------|
| | | Vz @ I_{ZT} | | | Z _{T1} | Z _{ZT} @ I_{ZT} | Z _{ZK} @ I_{ZK} | I _{ZK} | I _R | @V _R | Min | Max |
| | | Nom (V) | Min (V) | Max (V) | mA | Ω | | mA | uA | V | | |
| BZT52C9V1S | WE | 9.1 | 8.5 | 9.6 | 5 | 15 | 100 | 1 | 0.5 | 6 | 3.8 | 7 |
| BZT52C10S | WF | 10 | 9.4 | 10.6 | 5 | 20 | 150 | 1 | 0.2 | 7 | 4.5 | 8 |
| BZT52C11S | WG | 11 | 10.4 | 11.6 | 5 | 20 | 150 | 1 | 0.1 | 8 | 5.4 | 9 |
| BZT52C12S | WH | 12 | 11.4 | 12.7 | 5 | 25 | 150 | 1 | 0.1 | 8 | 6 | 10 |
| BZT52C13S | WI | 13 | 12.4 | 14.1 | 5 | 30 | 170 | 1 | 0.1 | 8 | 7 | 11 |
| BZT52C15S | WJ | 15 | 13.8 | 15.6 | 5 | 30 | 200 | 1 | 0.1 | 10.5 | 9.2 | 13 |
| BZT52C16S | WK | 16 | 15.3 | 17.1 | 5 | 40 | 200 | 1 | 0.1 | 11.2 | 10.4 | 14 |
| BZT52C18S | WL | 18 | 16.8 | 19.1 | 5 | 45 | 225 | 1 | 0.1 | 12.6 | 12.4 | 16 |
| BZT52C20S | WM | 20 | 18.8 | 21.2 | 5 | 55 | 225 | 1 | 0.1 | 14 | 14.4 | 18 |
| BZT52C22S | WN | 22 | 20.8 | 23.3 | 5 | 55 | 250 | 1 | 0.1 | 15.4 | 16.4 | 20 |
| BZT52C24S | WO | 24 | 22.8 | 25.6 | 5 | 70 | 250 | 1 | 0.1 | 16.8 | 18.4 | 22 |
| BZT52C27S | WP | 27 | 25.1 | 28.9 | 2 | 80 | 300 | 0.5 | 0.1 | 18.9 | 21.4 | 25.3 |
| BZT52C30S | WQ | 30 | 28 | 32 | 2 | 80 | 300 | 0.5 | 0.1 | 21 | 24.4 | 29.4 |
| BZT52C33S | WR | 33 | 31 | 35 | 2 | 80 | 325 | 0.5 | 0.1 | 23.1 | 27.4 | 33.4 |
| BZT52C36S | WS | 36 | 34 | 38 | 2 | 90 | 350 | 0.5 | 0.1 | 25.2 | 30.4 | 37.4 |
| BZT52C39S | WT | 39 | 37 | 41 | 2 | 130 | 350 | 0.5 | 0.1 | 27.3 | 33.4 | 41.2 |
| BZT52C43S | WU | 43 | 40.0 | 46.0 | 2 | 100 | 700 | 1.0 | 0.1 | 32.0 | 10.0 | 12.0 |
| BZT52C47S | WV | 47 | 44.0 | 50.0 | 2 | 100 | 750 | 1.0 | 0.1 | 35.0 | 10.0 | 12.0 |
| BZT52C51S | WW | 51 | 48.0 | 54.0 | 2 | 100 | 750 | 1.0 | 0.1 | 38.0 | 10.0 | 12.0 |

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Product Dimensions



Unit: mm

| | SOD-323 | |
|----|---------|-------|
| | min | max |
| A | 0.80 | 1.00 |
| A1 | 0.00 | 0.10 |
| b | 0.25 | 0.40 |
| C | 0.089 | 0.177 |
| D | 1.15 | 1.35 |
| E | 1.60 | 1.80 |
| He | 2.30 | 2.70 |
| L | 0.20 | 0.40 |

PIN: 1. CATHODE 2. ANODE