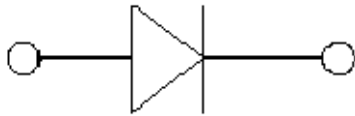


Zener Diodes



Features

- High reliability
- Very sharp reverse characteristic
- Low reverse current level



Mechanical Data

- **Package:** SOD323
- **Terminals:** Tin plated leads, solderable per J-STD-002 and JESD22-B102
- **Polarity:** Cathode line denotes the cathode end

■ Maximum Ratings (T_a=25°C Unless otherwise specified)

| PARAMETER | SYMBOL | UNIT | VALUE |
|---|------------------|-------|---------------------------------|
| Power Dissipation | P _D | mW | 200 |
| Storage Temperature Range | T _{stg} | °C | -55~+150 |
| Maximum Junction Temperature | T _J | °C | -55~+150 |
| Maximum Regulator Current | I _{ZM} | mA | P _D / V _Z |
| Maximum Forward Voltage (I _F =10mA _{dc}) | V _F | V | 0.9 |
| Thermal Resistance Junction to Ambient Air* | R _{θJA} | °C /W | 650 |

■ Ordering Information (Example)

| PREFERRED P/N | PACKING CODE | UNIT WEIGHT(g) | MINIMUM PACKAGE(pcs) | INNER BOX QUANTITY(pcs) | OUTER CARTON QUANTITY(pcs) | DELIVERY MODE |
|------------------------------|--------------|-------------------|----------------------|-------------------------|----------------------------|---------------|
| BZT52C2V4S THRU BZT52C47S | F2 | Approximate 0.004 | 3000 | 30000 | 120000 | 7" reel |



BZT52C2V4S THRU BZT52C47S

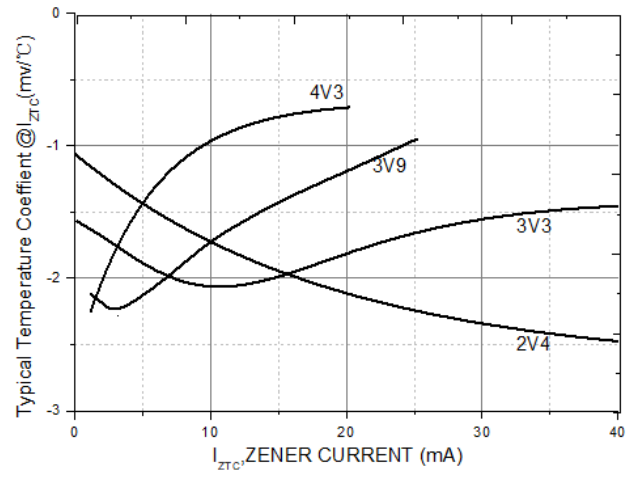
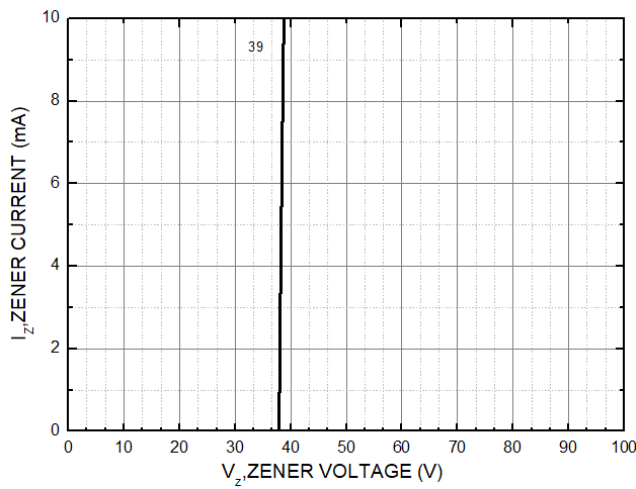
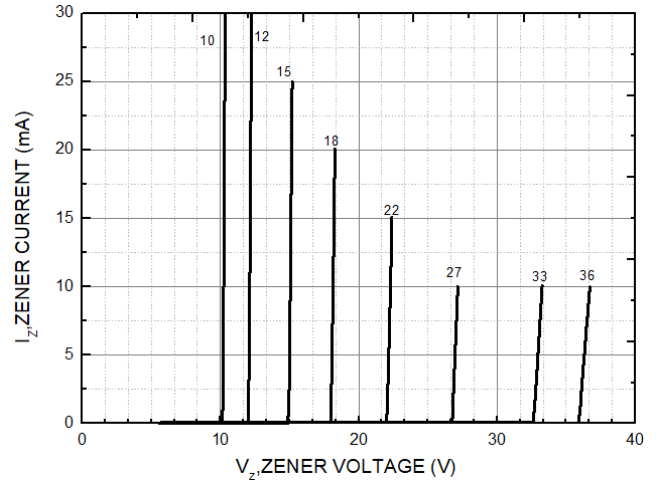
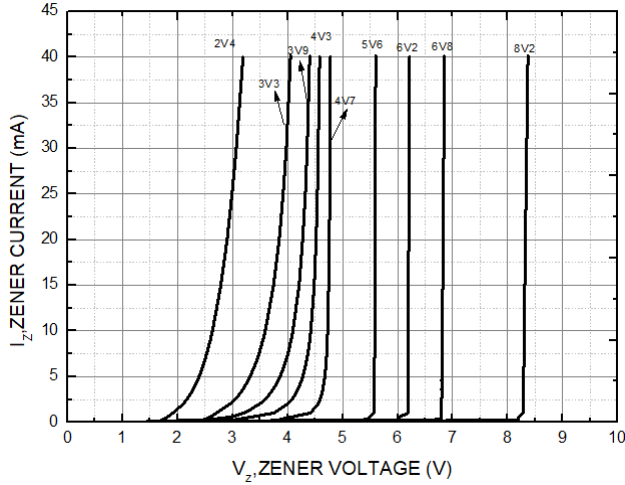
■ Electrical Characteristics (T_a=25°C Unless otherwise specified)

| Type Number | Device Marking | V _z at I _{zT} (V)* ¹ | | | Z _{zt} (Ω)* ² | | Z _{zk} (Ω)* ² | | I _R (μA)@V _R | | Typical Temperature Coefficient @I _{ZTC} | |
|-------------|----------------|---|------|-------|-----------------------------------|------|-----------------------------------|------|------------------------------------|--------------------|---|------|
| | | min. | typ. | max. | I _{zT} (mA) | max. | I _{zk} (mA) | max. | max | V _R (V) | mV/°C | |
| BZT52C2V4S | WX | 2.28 | 2.4 | 2.56 | 5 | 100 | 1.0 | 600 | 50 | 1.0 | -3.5 | 0 |
| BZT52C2V7S | W1 | 2.5 | 2.7 | 2.9 | 5 | 100 | 1.0 | 600 | 20 | 1.0 | -3.5 | 0 |
| BZT52C3V0S | W2 | 2.8 | 3.0 | 3.2 | 5 | 95 | 1.0 | 600 | 10 | 1.0 | -3.5 | 0 |
| BZT52C3V3S | W3 | 3.1 | 3.3 | 3.5 | 5 | 95 | 1.0 | 600 | 5 | 1.0 | -3.5 | 0 |
| BZT52C3V6S | W4 | 3.4 | 3.6 | 3.8 | 5 | 90 | 1.0 | 600 | 5 | 1.0 | -3.5 | 0 |
| BZT52C3V9S | W5 | 3.7 | 3.9 | 4.1 | 5 | 90 | 1.0 | 600 | 3 | 1.0 | -3.5 | 0 |
| BZT52C4V3S | W6 | 4.0 | 4.3 | 4.6 | 5 | 90 | 1.0 | 600 | 3 | 1.0 | -3.5 | 0 |
| BZT52C4V7S | W7 | 4.4 | 4.7 | 5.0 | 5 | 80 | 1.0 | 500 | 3 | 2.0 | -3.5 | 0.2 |
| BZT52C5V1S | W8 | 4.8 | 5.1 | 5.4 | 5 | 60 | 1.0 | 480 | 2 | 2.0 | -2.7 | 1.2 |
| BZT52C5V6S | W9 | 5.2 | 5.6 | 6.0 | 5 | 40 | 1.0 | 400 | 1 | 2.0 | -2.0 | 2.5 |
| BZT52C6V2S | WA | 5.8 | 6.2 | 6.6 | 5 | 10 | 1.0 | 150 | 3 | 4.0 | 0.4 | 3.7 |
| BZT52C6V8S | WB | 6.4 | 6.8 | 7.2 | 5 | 15 | 1.0 | 80 | 2 | 4.0 | 1.2 | 4.5 |
| BZT52C7V5S | WC | 7.0 | 7.5 | 7.9 | 5 | 15 | 1.0 | 80 | 1 | 5.0 | 2.5 | 5.3 |
| BZT52C8V2S | WD | 7.7 | 8.2 | 8.7 | 5 | 15 | 1.0 | 80 | 0.7 | 5.0 | 3.2 | 6.2 |
| BZT52C9V1S | WE | 8.5 | 9.1 | 9.6 | 5 | 15 | 1.0 | 100 | 0.5 | 6.0 | 3.8 | 7.0 |
| BZT52C10S | WF | 9.4 | 10 | 10.6 | 5 | 20 | 1.0 | 150 | 0.2 | 7.0 | 4.5 | 8.0 |
| BZT52C11S | WG | 10.4 | 11 | 11.6 | 5 | 20 | 1.0 | 150 | 0.1 | 8.0 | 5.4 | 9.0 |
| BZT52C12S | WH | 11.4 | 12 | 12.7 | 5 | 25 | 1.0 | 150 | 0.1 | 8.0 | 6.0 | 10.0 |
| BZT52C13S | WI | 12.4 | 13 | 14.1 | 5 | 30 | 1.0 | 170 | 0.1 | 8.0 | 7.0 | 11.0 |
| BZT52C15S | WJ | 14.25 | 15 | 15.75 | 5 | 30 | 1.0 | 200 | 0.1 | 10.5 | 9.2 | 13.0 |
| BZT52C16S | WK | 15.3 | 16 | 17.1 | 5 | 40 | 1.0 | 200 | 0.1 | 11.2 | 10.4 | 14.0 |
| BZT52C18S | WL | 16.8 | 18 | 19.1 | 5 | 45 | 1.0 | 225 | 0.1 | 12.6 | 12.4 | 16.0 |
| BZT52C20S | WM | 18.8 | 20 | 21.2 | 5 | 55 | 1.0 | 225 | 0.1 | 14.0 | 14.4 | 18.0 |
| BZT52C22S | WN | 20.8 | 22 | 23.3 | 5 | 55 | 1.0 | 250 | 0.1 | 15.4 | 16.4 | 20.0 |
| BZT52C24S | WO | 22.8 | 24 | 25.6 | 5 | 70 | 1.0 | 250 | 0.1 | 16.8 | 18.4 | 22.0 |
| BZT52C27S | WP | 25.1 | 27 | 28.9 | 2 | 80 | 0.5 | 300 | 0.1 | 18.9 | 21.4 | 25.3 |
| BZT52C30S | WQ | 28 | 30 | 32 | 2 | 80 | 0.5 | 300 | 0.1 | 21.0 | 24.4 | 29.4 |
| BZT52C33S | WR | 31 | 33 | 35 | 2 | 80 | 0.5 | 325 | 0.1 | 23.1 | 27.4 | 33.4 |
| BZT52C36S | WS | 34 | 36 | 38 | 2 | 90 | 0.5 | 350 | 0.1 | 25.2 | 30.4 | 37.4 |
| BZT52C39S | WT | 37 | 39 | 41 | 2 | 130 | 0.5 | 350 | 0.1 | 27.3 | 33.4 | 41.2 |
| BZT52C43S | WU | 40 | 43 | 46 | 5 | 100 | 1.0 | 750 | 0.1 | 32 | 10.0 | 12.0 |
| BZT52C47S | WV | 44 | 47 | 50 | 5 | 100 | 1.0 | 750 | 0.1 | 35 | 10.0 | 12.0 |



BZT52C2V4S THRU BZT52C47S

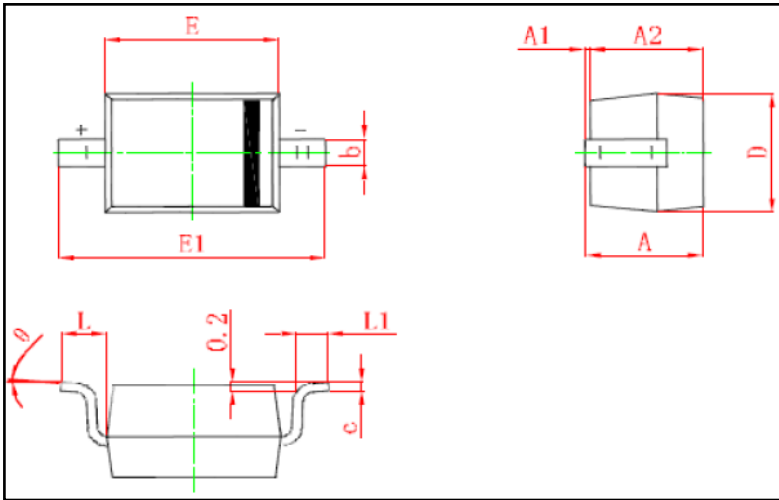
■ Characteristics (Typical)





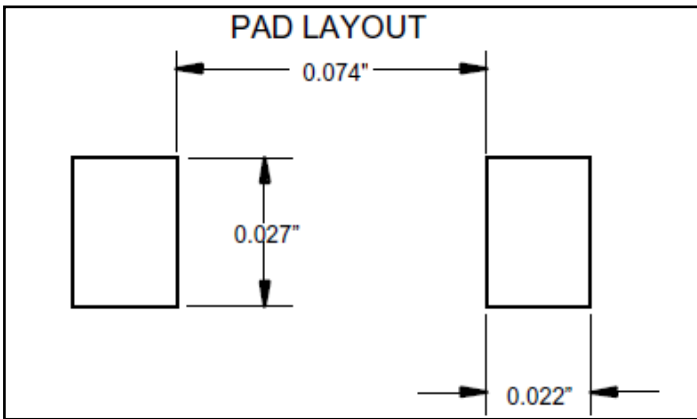
BZT52C2V4S THRU BZT52C47S

■ Outline Dimensions



| Symbol | Min. (mm) | Max. (mm) |
|----------|-----------|-----------|
| A | | 1.000 |
| A1 | 0.000 | 0.100 |
| A2 | 0.800 | 0.900 |
| b | 0.250 | 0.400 |
| c | 0.080 | 0.150 |
| D | 1.200 | 1.400 |
| E | 1.600 | 1.800 |
| E1 | 2.500 | 2.700 |
| L | 0.475REF | |
| L1 | 0.250 | 0.400 |
| θ | 0° | 8° |

■ Soldering Footprint





BZT52C2V4S THRU BZT52C47S

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