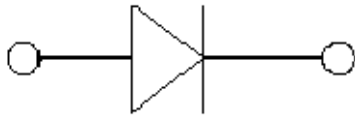


## Zener Diodes



### 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<sub>a</sub>=25°C Unless otherwise specified)

| PARAMETER                                      | SYMBOL           | UNIT  | VALUE                           |
|--|------------------|-------|---------------------------------|
| Power Dissipation                              | P <sub>D</sub>   | mW    | 200                             |
| Storage Temperature Range                      | T <sub>stg</sub> | °C    | -55~+150                        |
| Maximum Junction Temperature                   | T <sub>J</sub>   | °C    | -55~+150                        |
| Maximum Regulator Current                      | I <sub>ZM</sub>  | mA    | P <sub>D</sub> / V <sub>Z</sub> |
| Maximum Forward Voltage (I <sub>F</sub> =10mA) | V <sub>F</sub>   | V     | 0.9                             |
| Thermal Resistance Junction to Ambient Air*    | R <sub>θJA</sub> | °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<br>BZT52C47S | F2           | Approximate 0.004 | 3000                 | 30000                   | 120000                     | 7" reel       |



# BZT52C2V4S THRU BZT52C47S

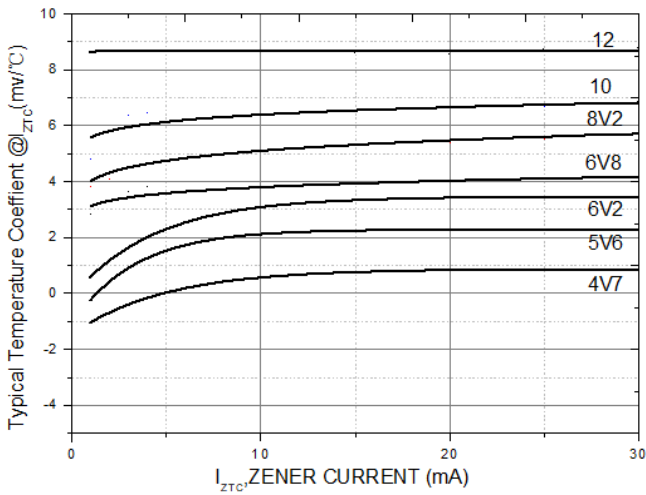
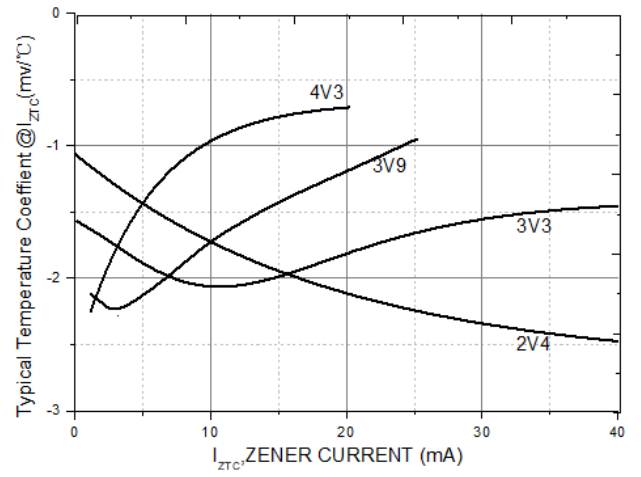
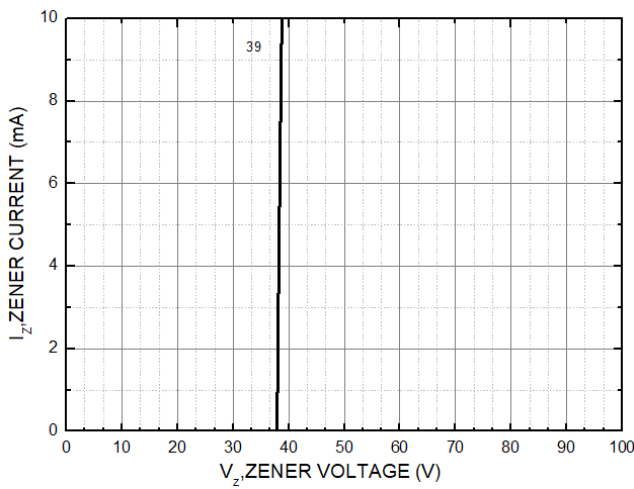
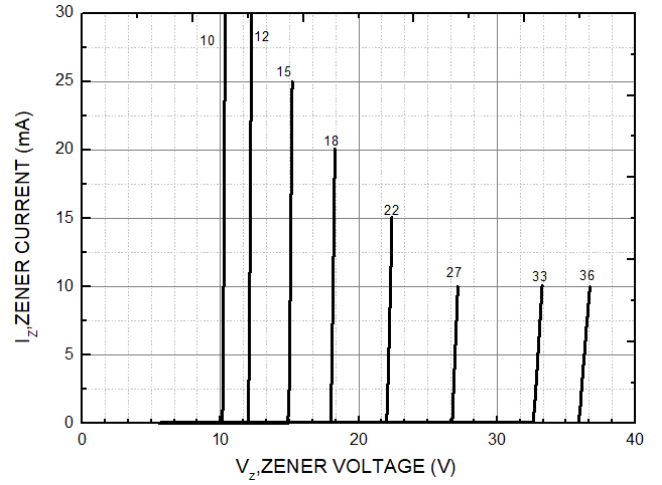
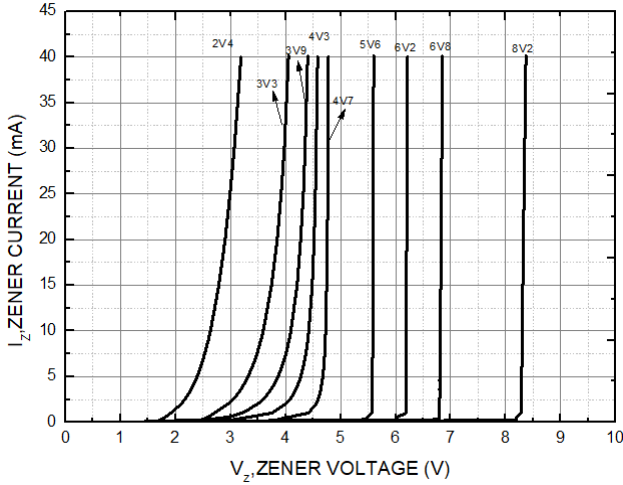
## ■ Electrical Characteristics (T<sub>a</sub>=25°C Unless otherwise specified)

| Type Number | Device Marking | V <sub>z</sub> at I <sub>zT</sub> (V)* <sup>1</sup> |      |       | Z <sub>zt</sub> (Ω)* <sup>2</sup> |      | Z <sub>zk</sub> (Ω)* <sup>2</sup> |      | I <sub>R</sub> (μA)@V <sub>R</sub> |                    | Typical Temperature Coefficient @I <sub>ZTC</sub> |      |
|-------------|----------------|---|------|-------|-----------------------------------|------|-----------------------------------|------|------------------------------------|--------------------|---|------|
|             |                | min.  | typ. | max.  | I <sub>zT</sub> (mA)              | max. | I <sub>zk</sub> (mA)              | max. | max                                | V <sub>R</sub> (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

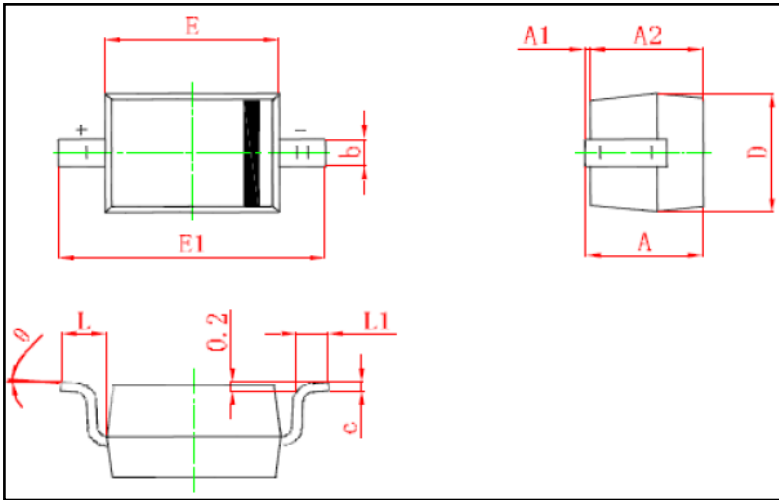
## ■ Characteristics (Typical)





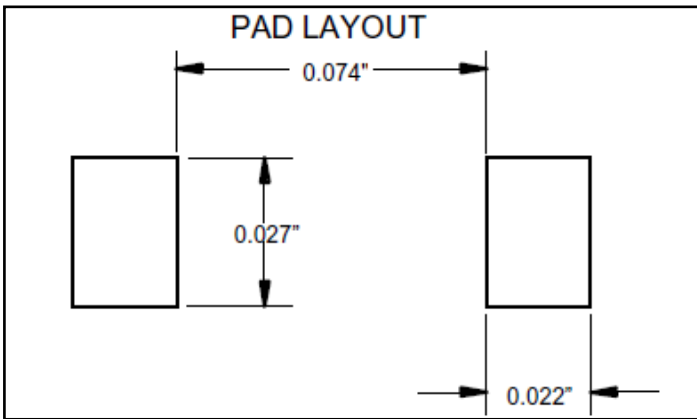
# BZT52C2V4S THRU BZT52C47S

## ■ 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     |
| $\theta$ | 0°        | 8°        |

## ■ Soldering Footprint





## BZT52C2V4S THRU BZT52C47S

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