

# BZT52-C2V4S SERIES

## SURFACE MOUNT SILICON ZENER DIODES

**VOLTAGE** 2.4 to 75 Volt **POWER** 200 mWatt

**SOD-323**

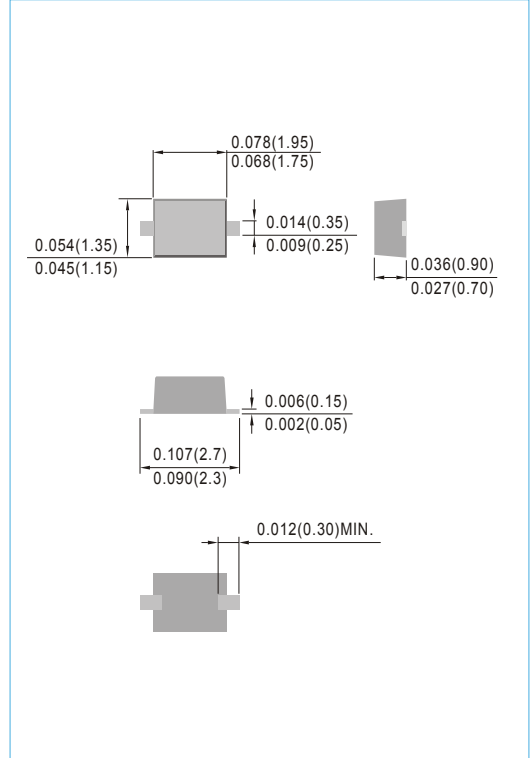
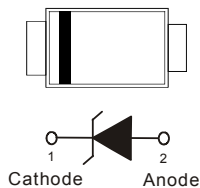
Unit : inch(mm)

### FEATURES

- Planar Die construction
- 200mW Power Dissipation
- Zener Voltages from 2.4~75V
- Ideally Suited for Automated Assembly Processes
- Lead free in compliance with EU RoHS 2.0
- Green molding compound as per IEC 61249 standard

### MECHANICAL DATA

- Case: SOD-323, Molded Plastic
- Terminals: Solderable per MIL-STD-750, Method 2026
- Approx. Weight: 0.00014 ounces, 0.0041 grams
- Polarity : Color band cathode



### MAXIMUM RATINGS AND ELECTRICAL CHARACTERISTICS (T<sub>A</sub>=25°C unless otherwise noted)

| PARAMETER                                                    | SYMBOL           | VALUE       | UNITS |
|--------------------------------------------------------------|------------------|-------------|-------|
| Power Dissipation (Notes A) at T <sub>A</sub> = 25°C         | P <sub>D</sub>   | 200         | mW    |
| Typical Thermal Resistance                                   | R <sub>θJA</sub> | 650         | °C/W  |
| Operating Junction Temperature and Storage Temperature Range | T <sub>J</sub>   | -55 to +150 | °C    |

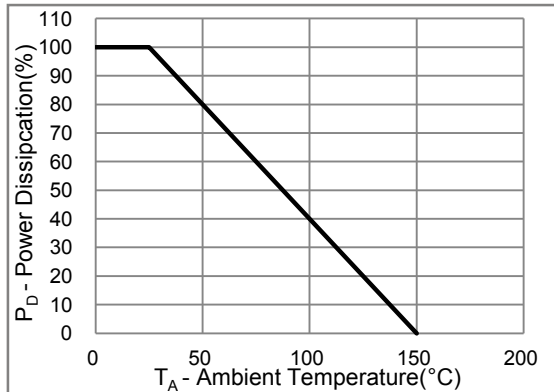
### NOTES :

- Mounted on a FR-4 PCB, single-sided copper, with 100cm<sup>2</sup> copper pad area
- Mounted on a FR-4 PCB, single-sided copper, mini pad

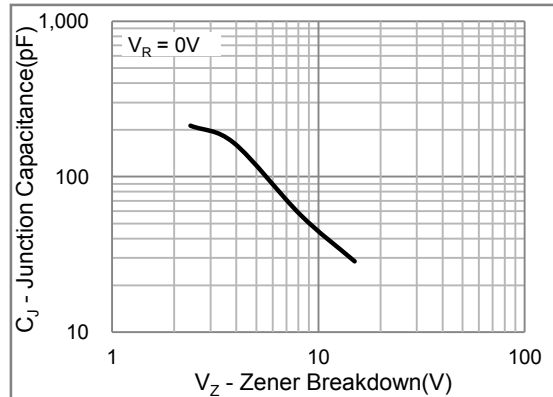
## BZT52-C2V4S SERIES

| Part Number             | Nominal Zener Voltage            |        |        | Max. Zener Impedance              |     |                                   |      | Max Reverse Leakage Current     |      | Marking Code |
|-------------------------|----------------------------------|--------|--------|-----------------------------------|-----|-----------------------------------|------|---------------------------------|------|--------------|
|                         | V <sub>Z</sub> @ I <sub>ZT</sub> |        |        | Z <sub>ZT</sub> @ I <sub>ZT</sub> |     | Z <sub>ZK</sub> @ I <sub>ZK</sub> |      | I <sub>R</sub> @ V <sub>R</sub> |      |              |
|                         | Nom. V                           | Min. V | Max. V | Ω                                 | mA  | Ω                                 | mA   | μA                              | V    |              |
| 200 mWatts Zener Diodes |                                  |        |        |                                   |     |                                   |      |                                 |      |              |
| BZT52-C2V4S             | 2.4                              | 2.28   | 2.52   | 85                                | 5.0 | 600                               | 1.00 | 100                             | 1.0  | W1           |
| BZT52-C2V7S             | 2.7                              | 2.57   | 2.84   | 83                                | 5.0 | 600                               | 1.00 | 75                              | 1.0  | W2           |
| BZT52-C3S               | 3.0                              | 2.85   | 3.15   | 95                                | 5.0 | 600                               | 1.00 | 50                              | 1.0  | W3           |
| BZT52-C3V3S             | 3.3                              | 3.14   | 3.47   | 95                                | 5.0 | 600                               | 1.00 | 25                              | 1.0  | W4           |
| BZT52-C3V6S             | 3.6                              | 3.42   | 3.78   | 95                                | 5.0 | 600                               | 1.00 | 15                              | 1.0  | W5           |
| BZT52-C3V9S             | 3.9                              | 3.71   | 4.10   | 95                                | 5.0 | 600                               | 1.00 | 10                              | 1.0  | W6           |
| BZT52-C4V3S             | 4.3                              | 4.09   | 4.52   | 95                                | 5.0 | 600                               | 1.00 | 5.0                             | 1.0  | W7           |
| BZT52-C4V7S             | 4.7                              | 4.47   | 4.94   | 78                                | 5.0 | 500                               | 1.00 | 5.0                             | 1.0  | W8           |
| BZT52-C5V1S             | 5.1                              | 4.85   | 5.36   | 60                                | 5.0 | 480                               | 1.00 | 0.1                             | 0.8  | W9           |
| BZT52-C5V6S             | 5.6                              | 5.32   | 5.88   | 40                                | 5.0 | 400                               | 1.00 | 0.1                             | 1.0  | WA           |
| BZT52-C6V2S             | 6.2                              | 5.89   | 6.51   | 10                                | 5.0 | 150                               | 1.00 | 0.1                             | 2.0  | WB           |
| BZT52-C6V8S             | 6.8                              | 6.46   | 7.14   | 8                                 | 5.0 | 80                                | 1.00 | 0.1                             | 3.0  | WC           |
| BZT52-C7V5S             | 7.5                              | 7.13   | 7.88   | 7                                 | 5.0 | 80                                | 1.00 | 0.1                             | 5.0  | WD           |
| BZT52-C8V2S             | 8.2                              | 7.79   | 8.61   | 7                                 | 5.0 | 80                                | 1.00 | 0.1                             | 6.0  | WE           |
| BZT52-C8V7S             | 8.7                              | 8.27   | 9.14   | 7                                 | 5.0 | 100                               | 1.00 | 0.1                             | 6.5  | 87C          |
| BZT52-C9V1S             | 9.1                              | 8.65   | 9.56   | 10                                | 5.0 | 100                               | 1.00 | 0.1                             | 7.0  | WF           |
| BZT52-C10S              | 10                               | 9.50   | 10.50  | 15                                | 5.0 | 150                               | 1.00 | 0.1                             | 7.5  | WG           |
| BZT52-C11S              | 11                               | 10.45  | 11.55  | 20                                | 5.0 | 150                               | 1.00 | 0.1                             | 8.5  | WH           |
| BZT52-C12S              | 12                               | 11.40  | 12.60  | 20                                | 5.0 | 150                               | 1.00 | 0.1                             | 9.0  | WI           |
| BZT52-C13S              | 13                               | 12.35  | 13.65  | 25                                | 5.0 | 170                               | 1.00 | 0.1                             | 10.0 | WK           |
| BZT52-C14S              | 14                               | 13.30  | 14.70  | 25                                | 5.0 | 170                               | 1.00 | 0.1                             | 10.5 | WJ           |
| BZT52-C15S              | 15                               | 14.25  | 15.75  | 30                                | 5.0 | 200                               | 1.00 | 0.1                             | 11.0 | WL           |
| BZT52-C16S              | 16                               | 15.20  | 16.80  | 40                                | 5.0 | 200                               | 1.00 | 0.1                             | 12.0 | WM           |
| BZT52-C17S              | 17                               | 16.15  | 17.85  | 40                                | 5.0 | 200                               | 1.00 | 0.1                             | 13.0 | 17C          |
| BZT52-C18S              | 18                               | 17.10  | 18.90  | 50                                | 5.0 | 225                               | 1.00 | 0.1                             | 14.0 | WN           |
| BZT52-C20S              | 20                               | 19.00  | 21.00  | 50                                | 5.0 | 225                               | 1.00 | 0.1                             | 15.0 | WO           |
| BZT52-C22S              | 22                               | 20.90  | 23.10  | 55                                | 5.0 | 250                               | 1.00 | 0.1                             | 17.0 | WP           |
| BZT52-C24S              | 24                               | 22.80  | 25.20  | 80                                | 5.0 | 250                               | 1.00 | 0.1                             | 18.0 | WR           |
| BZT52-C27S              | 27                               | 25.65  | 28.35  | 80                                | 5.0 | 300                               | 1.00 | 0.1                             | 20.0 | WS           |
| BZT52-C28S              | 28                               | 26.60  | 29.40  | 80                                | 5.0 | 300                               | 1.00 | 0.1                             | 22.0 | 28C          |
| BZT52-C30S              | 30                               | 28.50  | 31.50  | 80                                | 5.0 | 300                               | 1.00 | 0.1                             | 22.5 | WT           |
| BZT52-C33S              | 33                               | 31.35  | 34.65  | 80                                | 5.0 | 325                               | 1.00 | 0.1                             | 25.0 | WU           |
| BZT52-C36S              | 36                               | 34.20  | 37.80  | 90                                | 5.0 | 350                               | 1.00 | 0.1                             | 27.0 | WW           |
| BZT52-C39S              | 39                               | 37.05  | 40.95  | 90                                | 5.0 | 350                               | 1.00 | 0.1                             | 29.0 | WX           |
| BZT52-C43S              | 43                               | 40.85  | 45.15  | 100                               | 5.0 | 375                               | 1.00 | 0.1                             | 32.0 | WY           |
| BZT52-C47S              | 47                               | 44.65  | 49.35  | 100                               | 5.0 | 375                               | 1.00 | 0.1                             | 35.0 | WZ           |
| BZT52-C51S              | 51                               | 48.45  | 53.55  | 100                               | 5.0 | 400                               | 1.00 | 0.1                             | 38.0 | XA           |
| BZT52-C56S              | 56                               | 53.20  | 58.80  | 135                               | 2.5 | 1000                              | 1.00 | 0.1                             | 42.0 | X2           |
| BZT52-C62S              | 62                               | 58.90  | 65.10  | 150                               | 2.5 | 1000                              | 1.00 | 0.1                             | 46.0 | X3           |
| BZT52-C68S              | 68                               | 64.60  | 71.40  | 200                               | 2.5 | 1000                              | 1.00 | 0.1                             | 51.0 | X4           |
| BZT52-C75S              | 75                               | 71.25  | 78.75  | 250                               | 2.5 | 1000                              | 1.00 | 0.1                             | 56.0 | X5           |

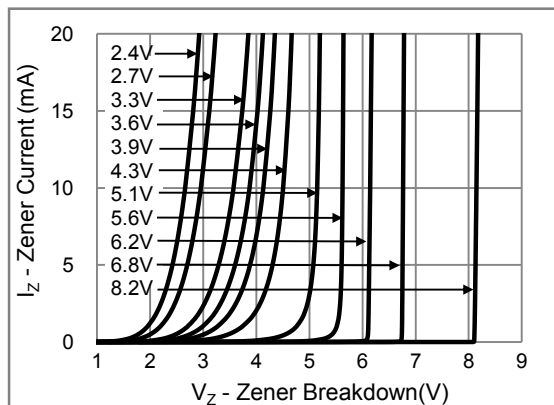
## BZT52-C2V4S SERIES



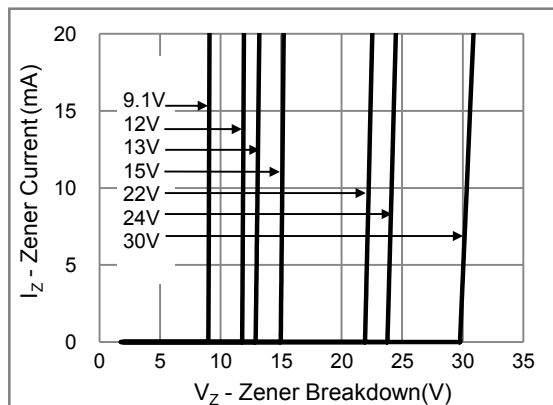
**Fig.1 Power Derating Curve**



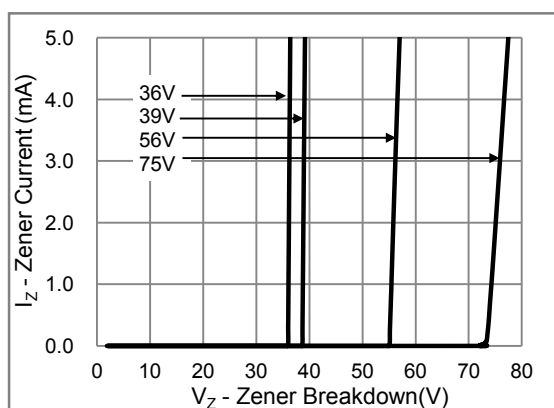
**Fig.2 Typical Junction Capacitance**



**Fig.3 Typical Zener Breakdown**



**Fig.4 Typical Zener Breakdown**



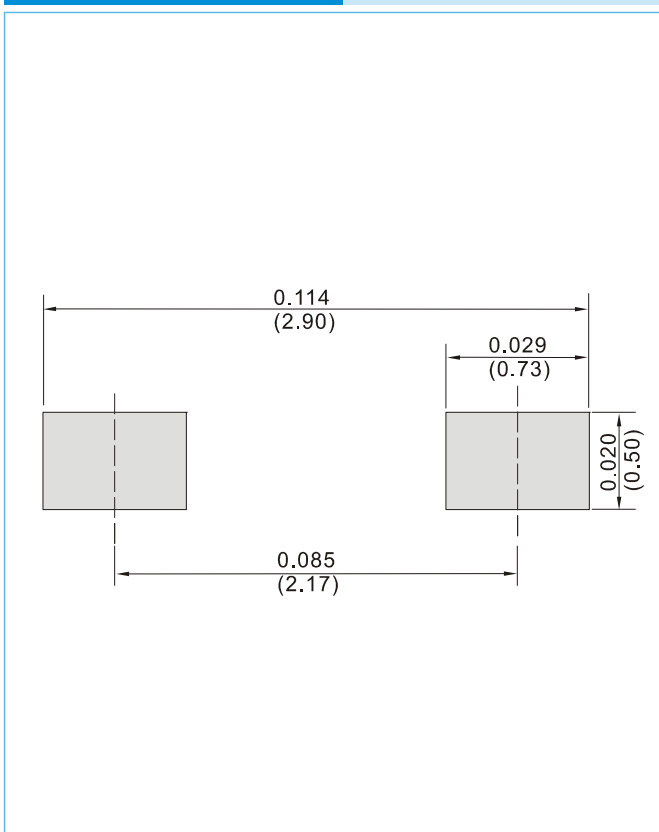
**Fig.5 Typical Zener Breakdown**

## BZT52-C2V4S SERIES

### MOUNTING PAD LAYOUT

**SOD-323**

Unit : inch(mm)



### ORDER INFORMATION

- Packing information
  - T/R - 12K per 13" plastic Reel
  - T/R - 5K per 7" plastic Reel

## BZT52-C2V4S SERIES

---

### Disclaimer

- Reproducing and modifying information of the document is prohibited without permission from Panjit International Inc..
- Panjit International Inc. reserves the rights to make changes of the content herein the document anytime without notification. Please refer to our website for the latest document.
- Panjit International Inc. disclaims any and all liability arising out of the application or use of any product including damages incidentally and consequentially occurred.
- Panjit International Inc. does not assume any and all implied warranties, including warranties of fitness for particular purpose, non-infringement and merchantability.
- Applications shown on the herein document are examples of standard use and operation. Customers are responsible in comprehending the suitable use in particular applications. Panjit International Inc. makes no representation or warranty that such applications will be suitable for the specified use without further testing or modification.
- The products shown herein are not designed and authorized for equipments requiring high level of reliability or relating to human life and for any applications concerning life-saving or life-sustaining, such as medical instruments, transportation equipment, aerospace machinery et cetera. Customers using or selling these products for use in such applications do so at their own risk and agree to fully indemnify Panjit International Inc. for any damages resulting from such improper use or sale.
- Since Panjit uses lot number as the tracking base, please provide the lot number for tracking when complaining.

# Mouser Electronics

Authorized Distributor

Click to View Pricing, Inventory, Delivery & Lifecycle Information:

[Panjit:](#)

[BZT52-C6V8S\\_R1\\_00001](#) [BZT52-C6V8S\\_R1\\_10001](#) [BZT52-C6V8S\\_R2\\_00001](#) [BZT52-C6V8S\\_R2\\_10001](#)