



# BZX84B2V4 SERIES

## SURFACE MOUNT SILICON ZENER DIODES

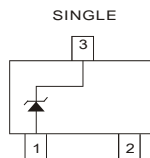
**VOLTAGE** 2.4 to 75 Volt **POWER** 410 mWatt

### FEATURES

- Planar Die construction
- 410mW 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

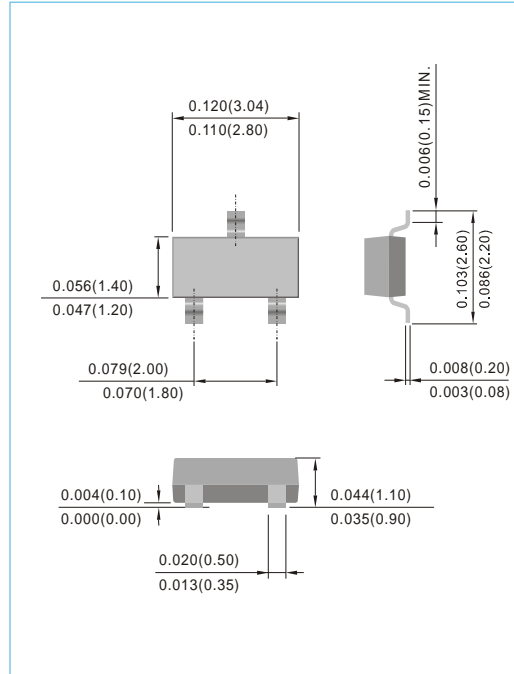
### MECHANICAL DATA

- Case: SOT-23, Molded Plastic
- Terminals: Solderable per MIL-STD-750, Method 2026
- Polarity: See Diagram Below
- Approx. Weight: 0.0003 ounces, 0.0084 grams



### SOT-23

Unit : inch(mm)



## MAXIMUM RATINGS AND ELECTRICAL CHARACTERISTICS

| Parameter  | Symbol         | Value       | Units |
|--|----------------|-------------|-------|
| Maximum Power Dissipation (Notes A) at 25°C      | P <sub>D</sub> | 410         | mW    |
| Operating Junction and Storage Temperature Range | T <sub>J</sub> | -55 to +150 | °C    |

### NOTES :

A. Mounted on 5mm<sup>2</sup>(0.013mm thick) land areas.



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| 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    |              |
| 410 mWatts Zener Diodes |                                  |        |        |                                   |     |                                   |      |                                 |      |              |
| BZX84B2V4               | 2.4                              | 2.35   | 2.45   | 100                               | 5.0 | 600                               | 1.00 | 50                              | 1.0  | W1           |
| BZX84B2V7               | 2.7                              | 2.64   | 2.75   | 100                               | 5.0 | 600                               | 1.00 | 20                              | 1.0  | W2           |
| BZX84B3                 | 3.0                              | 2.94   | 3.06   | 95                                | 5.0 | 600                               | 1.00 | 10                              | 1.0  | W3           |
| BZX84B3V3               | 3.3                              | 3.23   | 3.37   | 95                                | 5.0 | 600                               | 1.00 | 5.0                             | 1.0  | W4           |
| BZX84B3V6               | 3.6                              | 3.52   | 3.67   | 90                                | 5.0 | 600                               | 1.00 | 5.0                             | 1.0  | W5           |
| BZX84B3V9               | 3.9                              | 3.82   | 3.98   | 90                                | 5.0 | 600                               | 1.00 | 3.0                             | 1.0  | W6           |
| BZX84B4V3               | 4.3                              | 4.21   | 4.39   | 90                                | 5.0 | 600                               | 1.00 | 3.0                             | 1.0  | W7           |
| BZX84B4V7               | 4.7                              | 4.61   | 4.79   | 80                                | 5.0 | 500                               | 1.00 | 3.0                             | 2.0  | W8           |
| BZX84B5V1               | 5.1                              | 5.00   | 5.20   | 60                                | 5.0 | 480                               | 1.00 | 2.0                             | 2.0  | W9           |
| BZX84B5V6               | 5.6                              | 5.49   | 5.71   | 40                                | 5.0 | 400                               | 1.00 | 1.0                             | 2.0  | WA           |
| BZX84B6V2               | 6.2                              | 6.08   | 6.32   | 10                                | 5.0 | 150                               | 1.00 | 3.0                             | 4.0  | WB           |
| BZX84B6V8               | 6.8                              | 6.66   | 6.94   | 15                                | 5.0 | 80                                | 1.00 | 2.0                             | 4.0  | WC           |
| BZX84B7V5               | 7.5                              | 7.35   | 7.65   | 15                                | 5.0 | 80                                | 1.00 | 1.0                             | 5.0  | WD           |
| BZX84B8V2               | 8.2                              | 8.04   | 8.36   | 15                                | 5.0 | 80                                | 1.00 | 0.7                             | 5.0  | WE           |
| BZX84B8V7               | 8.7                              | 8.53   | 8.87   | 15                                | 5.0 | 100                               | 1.00 | 0.7                             | 5.0  | 87C          |
| BZX84B9V1               | 9.1                              | 8.92   | 9.28   | 15                                | 5.0 | 100                               | 1.00 | 0.5                             | 6.0  | WF           |
| BZX84B10                | 10                               | 9.80   | 10.20  | 20                                | 5.0 | 150                               | 1.00 | 0.2                             | 7.0  | WG           |
| BZX84B11                | 11                               | 10.78  | 11.22  | 20                                | 5.0 | 150                               | 1.00 | 0.1                             | 8.0  | WH           |
| BZX84B12                | 12                               | 11.76  | 12.24  | 25                                | 5.0 | 150                               | 1.00 | 0.1                             | 8.0  | WI           |
| BZX84B13                | 13                               | 12.74  | 13.26  | 30                                | 5.0 | 170                               | 1.00 | 0.1                             | 8.0  | WK           |
| BZX84B14                | 14                               | 13.72  | 14.28  | 30                                | 5.0 | 170                               | 1.00 | 0.1                             | 10.0 | WJ           |
| BZX84B15                | 15                               | 14.70  | 15.30  | 30                                | 5.0 | 200                               | 1.00 | 0.1                             | 10.5 | WL           |
| BZX84B16                | 16                               | 15.68  | 16.32  | 40                                | 5.0 | 200                               | 1.00 | 0.1                             | 11.2 | WM           |
| BZX84B17                | 17                               | 16.66  | 17.34  | 40                                | 5.0 | 200                               | 1.00 | 0.1                             | 12.2 | 17C          |
| BZX84B18                | 18                               | 17.64  | 18.36  | 45                                | 5.0 | 225                               | 1.00 | 0.1                             | 12.6 | WN           |
| BZX84B20                | 20                               | 19.60  | 20.40  | 55                                | 5.0 | 225                               | 1.00 | 0.1                             | 14.0 | WO           |
| BZX84B22                | 22                               | 21.56  | 22.44  | 55                                | 5.0 | 250                               | 1.00 | 0.1                             | 15.4 | WP           |
| BZX84B24                | 24                               | 23.52  | 24.48  | 70                                | 5.0 | 250                               | 1.00 | 0.1                             | 16.8 | WR           |
| BZX84B27                | 27                               | 26.46  | 27.54  | 80                                | 5.0 | 300                               | 1.00 | 0.1                             | 18.9 | WS           |
| BZX84B28                | 28                               | 27.44  | 28.56  | 80                                | 5.0 | 300                               | 1.00 | 0.1                             | 20.5 | 28C          |
| BZX84B30                | 30                               | 29.40  | 30.60  | 80                                | 5.0 | 300                               | 1.00 | 0.1                             | 21.0 | WT           |
| BZX84B33                | 33                               | 32.34  | 33.66  | 80                                | 5.0 | 325                               | 1.00 | 0.1                             | 23.1 | WU           |
| BZX84B36                | 36                               | 35.28  | 36.72  | 90                                | 5.0 | 350                               | 1.00 | 0.1                             | 25.2 | WW           |
| BZX84B39                | 39                               | 38.22  | 39.78  | 130                               | 5.0 | 350                               | 1.00 | 0.1                             | 27.3 | WX           |
| BZX84B43                | 43                               | 42.14  | 43.86  | 150                               | 5.0 | 375                               | 1.00 | 0.1                             | 30.1 | WY           |
| BZX84B47                | 47                               | 46.06  | 47.94  | 170                               | 5.0 | 375                               | 1.00 | 0.1                             | 32.9 | WZ           |
| BZX84B51                | 51                               | 49.98  | 52.02  | 100                               | 5.0 | 400                               | 1.00 | 0.1                             | 38.0 | XA           |
| BZX84B56                | 56                               | 54.88  | 57.12  | 135                               | 2.5 | 1000                              | 1.00 | 0.1                             | 42.0 | X2           |
| BZX84B62                | 62                               | 60.76  | 63.24  | 150                               | 2.5 | 1000                              | 1.00 | 0.1                             | 46.0 | X3           |
| BZX84B68                | 68                               | 66.64  | 69.36  | 200                               | 2.5 | 1000                              | 1.00 | 0.1                             | 51.0 | X4           |
| BZX84B75                | 75                               | 73.50  | 76.50  | 250                               | 2.5 | 1000                              | 1.00 | 0.1                             | 56.0 | X5           |



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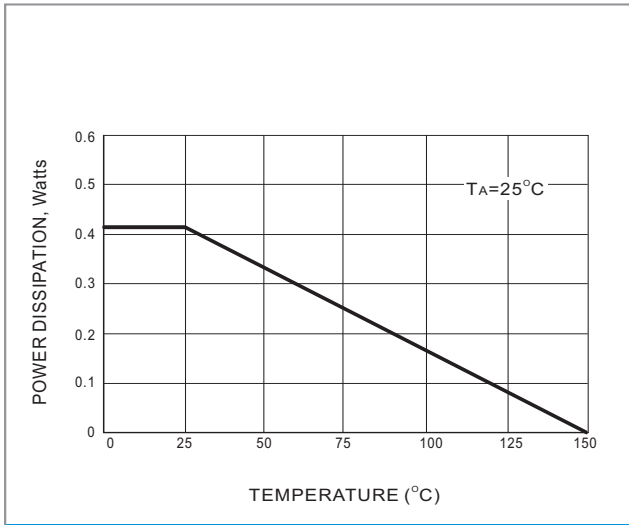


Fig.1 STEADY STATE POWER DERATING

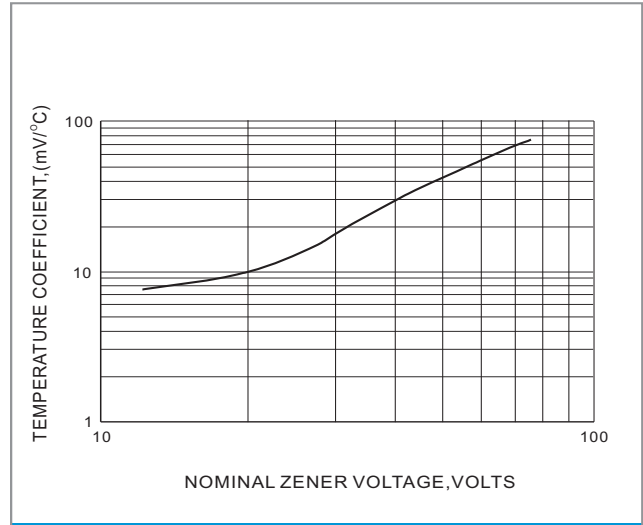


Fig.2 TEMPERATURE COEFFICIENTS

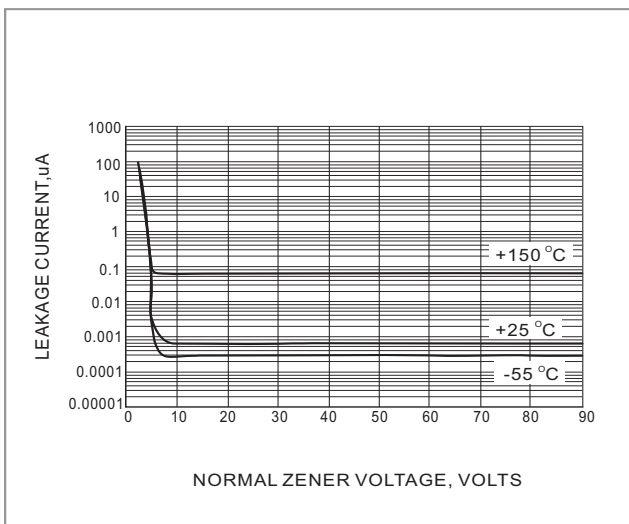


Fig.3 TYPICAL LEAKAGE CURRENT

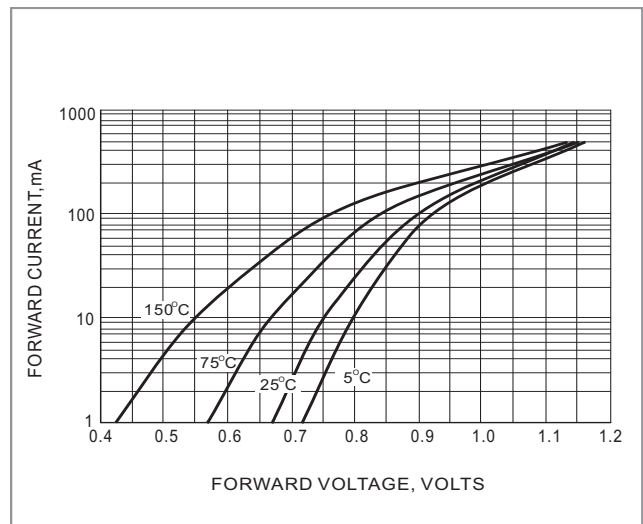


Fig.4 TYPICAL FORWARD VOLTAGE

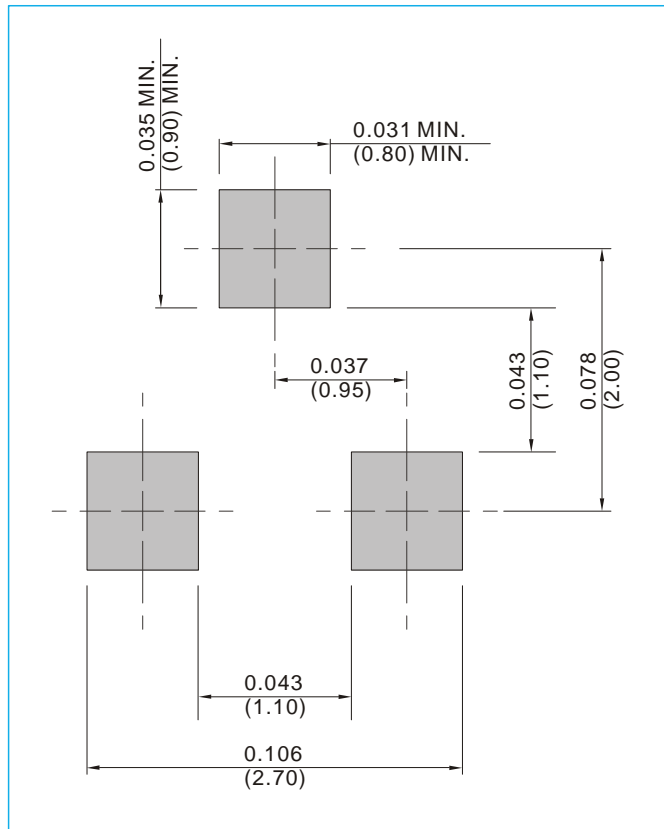


# BZX84B2V4 SERIES

## MOUNTING PAD LAYOUT

**SOT-23**

Unit : inch(mm)



## ORDER INFORMATION

- Packing information
  - T/R - 12K per 13" plastic Reel
  - T/R - 3K per 7" plastic Reel



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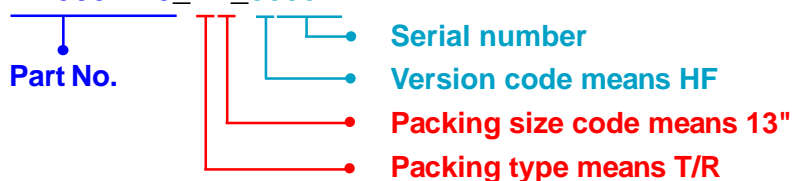
### Part No\_packing code\_Version

BZX84B2V4\_R1\_00001

BZX84B2V4\_R2\_00001

For example :

**RB500V-40\_R2\_00001**



| Packing Code <b>XX</b>               |                      |                                  |                      | Version Code <b>XXXXX</b> |                      |                                       |
|--------------------------------------|----------------------|----------------------------------|----------------------|---------------------------|----------------------|---------------------------------------|
| Packing type                         | 1 <sup>st</sup> Code | Packing size code                | 2 <sup>nd</sup> Code | HF or RoHS                | 1 <sup>st</sup> Code | 2 <sup>nd</sup> ~5 <sup>th</sup> Code |
| Tape and Ammunition Box (T/B)        | A                    | N/A                              | 0                    | HF                        | 0                    | serial number                         |
| Tape and Reel (T/R)                  | R                    | 7"                               | 1                    | RoHS                      | 1                    | serial number                         |
| Bulk Packing (B/P)                   | B                    | 13"                              | 2                    |                           |                      |                                       |
| Tube Packing (T/P)                   | T                    | 26mm                             | X                    |                           |                      |                                       |
| Tape and Reel (Right Oriented) (TRR) | S                    | 52mm                             | Y                    |                           |                      |                                       |
| Tape and Reel (Left Oriented) (TRL)  | L                    | PANASERT T/B CATHODE UP (PBCU)   | U                    |                           |                      |                                       |
| FORMING                              | F                    | PANASERT T/B CATHODE DOWN (PBCD) | D                    |                           |                      |                                       |



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