

## 350mW Surface Mount Zener Diode BZX84C2V4-BZX84C51

### FEATURES

- Planar Die Construction.
- 350mw Power Dissipation.
- Zener Voltages From 2.4V -51V
- Ideally Suited For Automated Assembly Prcesses.

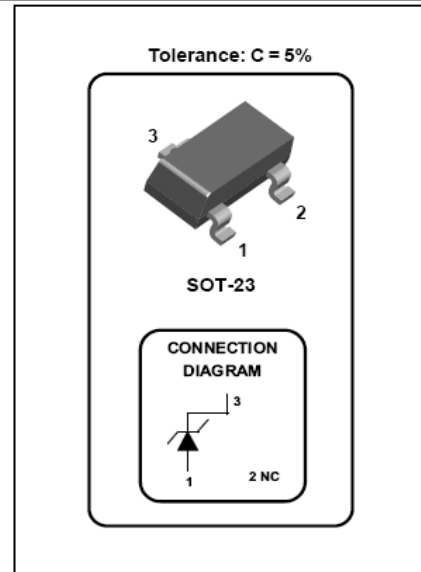


### APPLICATIONS

- 350Mw Surface mount zener diode

### ORDERING INFORMATION

| Type No.           | Marking            | Package Code |
|--------------------|--------------------|--------------|
| BZX84C2V4-BZX84C51 | See Table on page2 | SOT-23       |



### MAXIMUM RATING @ Ta=25°C unless otherwise specified

| Characteristic                              | Symbol                            | Value      | Unit |
|---|-----------------------------------|------------|------|
| Forward Voltage@I <sub>F</sub> =10mA        | V <sub>F</sub>                    | 0.9        | V    |
| Power Dissipation                           | P <sub>d</sub>                    | 350        | mW   |
| Thermal Resistance, Junction to Ambient Air | R <sub>θjA</sub>                  | 357        | °C/W |
| Operating and Storage Temperature Range     | T <sub>j</sub> , T <sub>stg</sub> | -65 to+150 | °C   |

Notes: 1. Valid provided that device terminals are kept at ambient temperature.

2. Tested with pulses, 300µs pulse width, period = 5ms.

3. f = 1KHz.

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ELECTRICAL CHARACTERISTICS @ Ta=25°C unless otherwise specified

| Type Number | Marking Code | Zener Voltage Range             |        |        |                 | Maximum Zener Impedance          |                                  |      | Maximum Reverse Current |                | Typical Temperature Coefficient @ I <sub>ZT</sub> mV/°C |     |
|-------------|--------------|---------------------------------|--------|--------|-----------------|----------------------------------|----------------------------------|------|-------------------------|----------------|---|-----|
|             |              | V <sub>Z</sub> @I <sub>ZT</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> | Min   | Max |
|             |              | Nom(V)                          | Min(V) | Max(V) | (mA)            | (Ω)                              | (Ω)                              | (mA) | (μA)                    | (V)            |   |     |
| BZX84C2V4   | Z11          | 2.4                             | 2.2    | 2.6    | 5.0             | 100                              | 600                              | 1.0  | 50                      | 1.0            | -3.5  | 0   |
| BZX84C2V7   | Z12          | 2.7                             | 2.5    | 2.9    | 5.0             | 100                              | 600                              | 1.0  | 20                      | 1.0            | -3.5  | 0   |
| BZX84C3V0   | Z13          | 3.0                             | 2.8    | 3.2    | 5.0             | 95                               | 600                              | 1.0  | 10                      | 1.0            | -3.5  | 0   |
| BZX84C3V3   | Z14          | 3.3                             | 3.1    | 3.5    | 5.0             | 95                               | 600                              | 1.0  | 5.0                     | 1.0            | -3.5  | 0   |
| BZX84C3V6   | Z15          | 3.6                             | 3.4    | 3.8    | 5.0             | 90                               | 600                              | 1.0  | 5.0                     | 1.0            | -3.5  | 0   |
| BZX84C3V9   | Z16          | 3.9                             | 3.7    | 4.1    | 5.0             | 90                               | 600                              | 1.0  | 3.0                     | 1.0            | -3.5  | 0   |
| BZX84C4V3   | Z17          | 4.3                             | 4.0    | 4.6    | 5.0             | 90                               | 600                              | 1.0  | 3.0                     | 1.0            | -3.5  | 0   |
| BZX84C4V7   | Z1           | 4.7                             | 4.4    | 5.0    | 5.0             | 80                               | 500                              | 1.0  | 3.0                     | 2.0            | -3.5  | 0.2 |
| BZX84C5V1   | Z2           | 5.1                             | 4.8    | 5.4    | 5.0             | 60                               | 480                              | 1.0  | 2.0                     | 2.0            | -2.7  | 1.2 |
| BZX84C5V6   | Z3           | 5.6                             | 5.2    | 6.0    | 5.0             | 40                               | 400                              | 1.0  | 1.0                     | 2.0            | -2.0  | 2.5 |
| BZX84C6V2   | Z4           | 6.2                             | 5.8    | 6.6    | 5.0             | 10                               | 150                              | 1.0  | 3.0                     | 4.0            | 0.4   | 3.7 |
| BZX84C6V8   | Z5           | 6.8                             | 6.4    | 7.2    | 5.0             | 15                               | 80                               | 1.0  | 2.0                     | 4.0            | 1.2   | 4.5 |
| BZX84C7V5   | Z6           | 7.5                             | 7.0    | 7.9    | 5.0             | 15                               | 80                               | 1.0  | 1.0                     | 5.0            | 2.5   | 5.3 |
| BZX84C8V2   | Z7           | 8.2                             | 7.7    | 8.7    | 5.0             | 15                               | 80                               | 1.0  | 0.7                     | 5.0            | 3.2   | 6.2 |
| BZX84C9V1   | Z8           | 9.1                             | 8.5    | 9.6    | 5.0             | 15                               | 100                              | 1.0  | 0.5                     | 6.0            | 3.8   | 7.0 |
| BZX84C10    | Z9           | 10                              | 9.4    | 10.6   | 5.0             | 20                               | 150                              | 1.0  | 0.2                     | 7.0            | 4.5   | 8.0 |
| BZX84C11    | Y1           | 11                              | 10.4   | 11.6   | 5.0             | 20                               | 150                              | 1.0  | 0.1                     | 8.0            | 5.4   | 9.0 |

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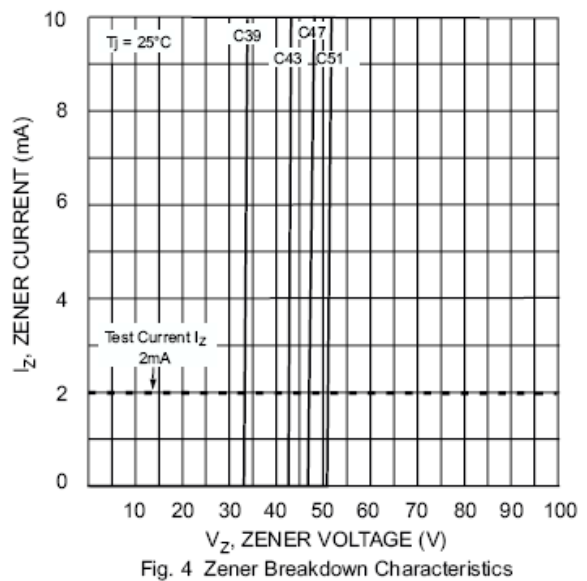
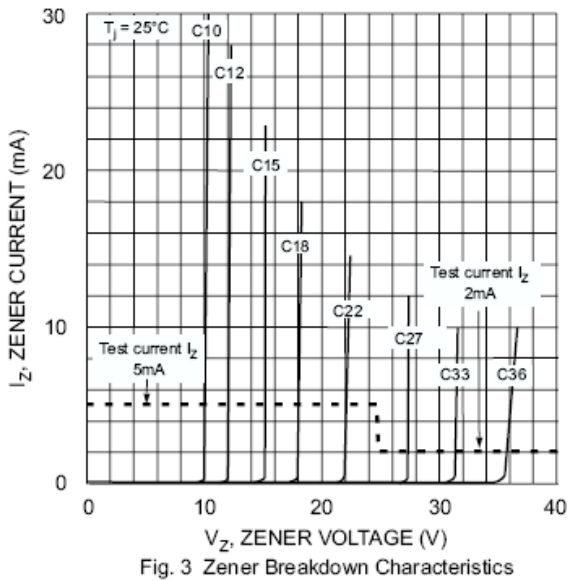
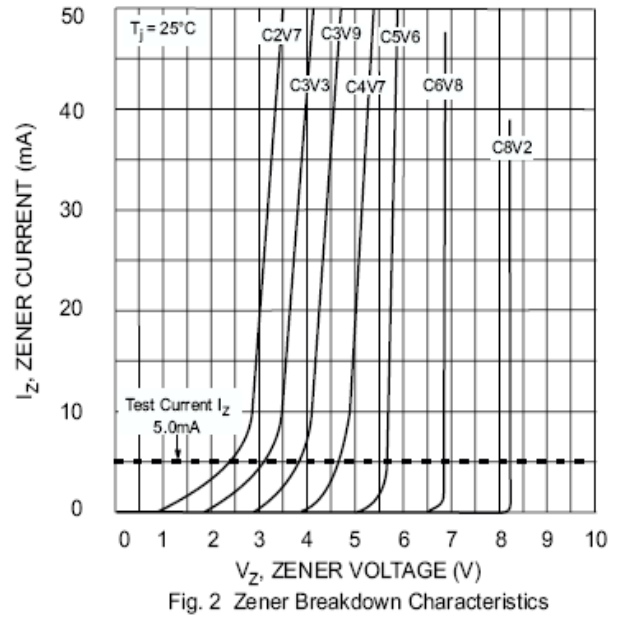
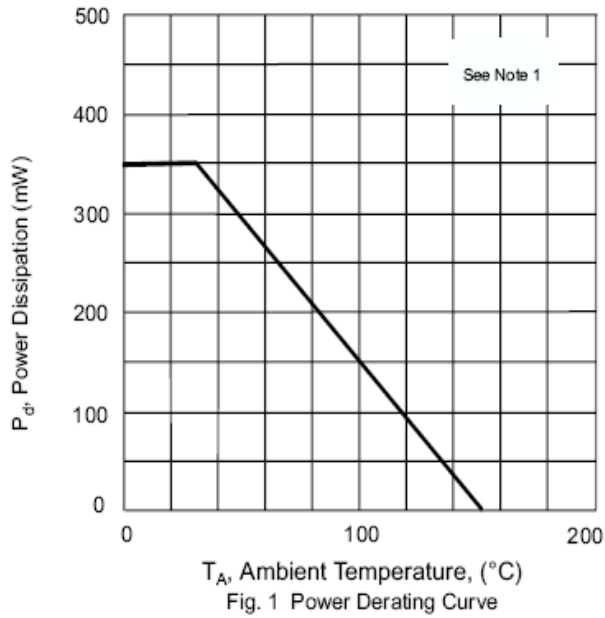
## 350mW Surface Mount Zener Diode BZX84C2V4-BZX84C51

| Type Number | Marking Code | Zener Voltage Range             |        |        |                 | Maximum Zener Impedance          |                                  |      | Maximum Reverse Current |                | Typical Temperature Coefficient @I <sub>ZT</sub><br>mV/°C |      |
|-------------|--------------|---------------------------------|--------|--------|-----------------|----------------------------------|----------------------------------|------|-------------------------|----------------|---|------|
|             |              | V <sub>Z</sub> @I <sub>ZT</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> | Min   | Max  |
|             |              | Nom(V)                          | Min(V) | Max(V) | (mA)            | (Ω)                              | (Ω)                              | (mA) | (μA)                    | (V)            |   |      |
| BZX84C12    | Y2           | 12                              | 11.4   | 12.7   | 5.0             | 25                               | 150                              | 1.0  | 0.1                     | 8.0            | 6.0   | 10.0 |
| BZX84C13    | Y3           | 13                              | 12.4   | 14.1   | 5.0             | 30                               | 170                              | 1.0  | 0.1                     | 8.0            | 7.0   | 11.0 |
| BZX84C15    | Y4           | 15                              | 13.8   | 15.6   | 5.0             | 30                               | 200                              | 1.0  | 0.1                     | 10.5           | 9.2   | 13.0 |
| BZX84C16    | Y5           | 16                              | 15.3   | 17.1   | 5.0             | 40                               | 200                              | 1.0  | 0.1                     | 11.2           | 10.4  | 14.0 |
| BZX84C18    | Y6           | 18                              | 16.8   | 19.1   | 5.0             | 45                               | 225                              | 1.0  | 0.1                     | 12.6           | 12.4  | 16.0 |
| BZX84C20    | Y7           | 20                              | 18.8   | 21.2   | 5.0             | 55                               | 225                              | 1.0  | 0.1                     | 14.0           | 14.4  | 18.0 |
| BZX84C22    | Y8           | 22                              | 20.8   | 23.3   | 5.0             | 55                               | 250                              | 1.0  | 0.1                     | 15.4           | 16.4  | 20.0 |
| BZX84C24    | Y9           | 24                              | 22.8   | 25.6   | 5.0             | 70                               | 250                              | 1.0  | 0.1                     | 16.8           | 18.4  | 22.0 |
| BZX84C27    | Y10          | 27                              | 25.1   | 28.9   | 2.0             | 80                               | 300                              | 0.5  | 0.1                     | 18.9           | 21.4  | 25.3 |
| BZX84C30    | Y11          | 30                              | 28.0   | 32.0   | 2.0             | 80                               | 300                              | 0.5  | 0.1                     | 21.0           | 24.4  | 29.4 |
| BZX84C33    | Y12          | 33                              | 31.0   | 35.0   | 2.0             | 80                               | 325                              | 0.5  | 0.1                     | 23.1           | 27.4  | 33.4 |
| BZX84C36    | Y13          | 36                              | 34.0   | 38.0   | 2.0             | 90                               | 350                              | 0.5  | 0.1                     | 25.2           | 30.4  | 37.4 |
| BZX84C39    | Y14          | 39                              | 37.0   | 41.0   | 2.0             | 130                              | 350                              | 0.5  | 0.1                     | 27.3           | 33.4  | 41.2 |
| BZX84C43    | Y15          | 43                              | 40.0   | 46.0   | 2.0             | 150                              | 375                              | 0.5  | 0.1                     | 30.1           | 10.0  | 12.0 |
| BZX84C47    | Y16          | 47                              | 44.0   | 50.0   | 2.0             | 170                              | 375                              | 0.5  | 0.1                     | 32.9           | 10.0  | 12.0 |
| BZX84C51    | Y17          | 51                              | 48.0   | 54.0   | 2.0             | 180                              | 400                              | 0.5  | 0.1                     | 35.7           | 10.0  | 12.0 |

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TYPICAL CHARACTERISTICS @  $T_a=25^\circ\text{C}$  unless otherwise specified



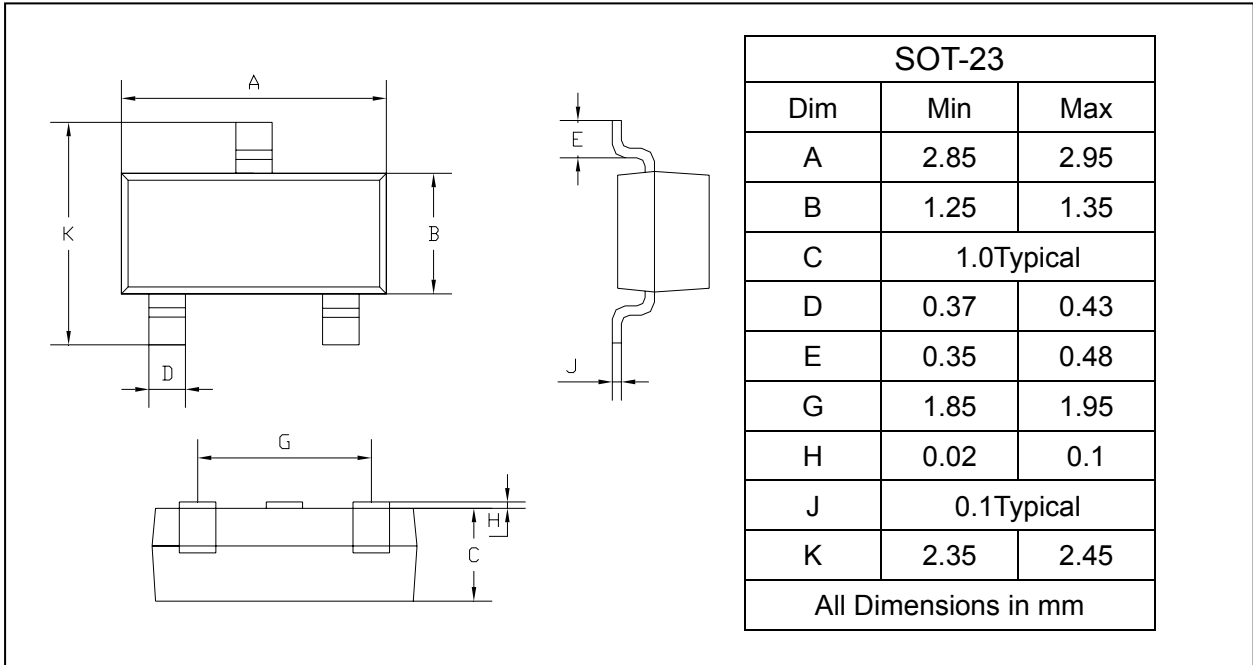
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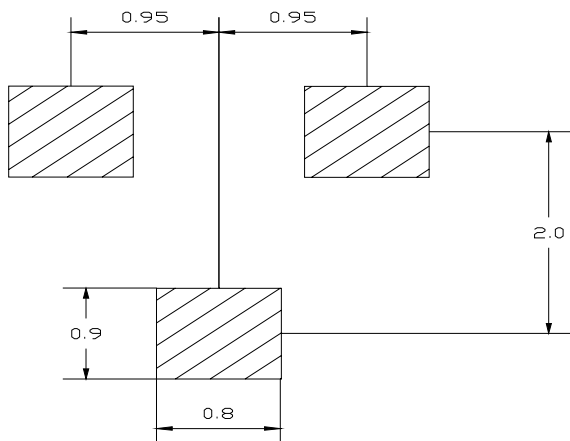
### PACKAGE OUTLINE

Plastic surface mounted package

SOT-23



### SOLDERING FOOTPRINT



Unit : mm

### PACKAGE INFORMATION

| Device             | Package | Shipping       |
|--------------------|---------|----------------|
| BZX84C2V4-BZX84C51 | SOT-23  | 3000/Tape&Reel |