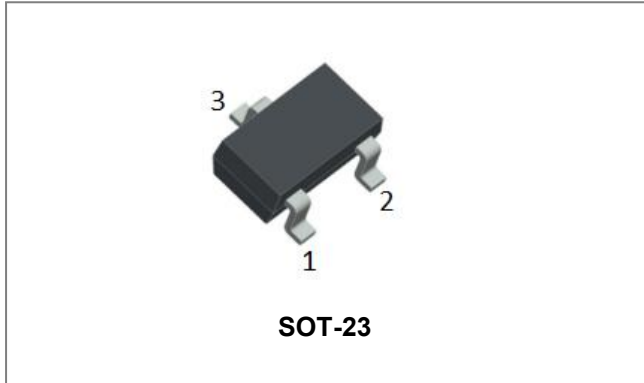


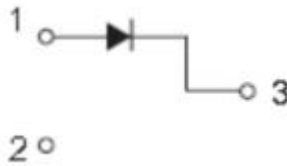
BZX84C2V4-BZX84C51 ZENER DIODE



Features

- Planar Die Construction
- 350mW Power Dissipation
- 2.4V- 51V Nominal Zener Voltage
- 5% Standard Vz Tolerance
- Designed for Surface Mount Application
- Plastic Material — UL Recognition Flammability Classification 94V-O
- “-A” is an AEC-Q101 qualified device
- This is a Halogen Free Device
- All SMC parts are traceable to the wafer lot
- Additional testing can be offered upon request

Schematic & Pin Configuration



Mechanical Characteristics

- Case: SOT-23, Molded Plastic
- Terminals: Plated leads Solderable per MIL-STD-750, Method 2026
- Mounting Position: Any
- Weight: 0.008g

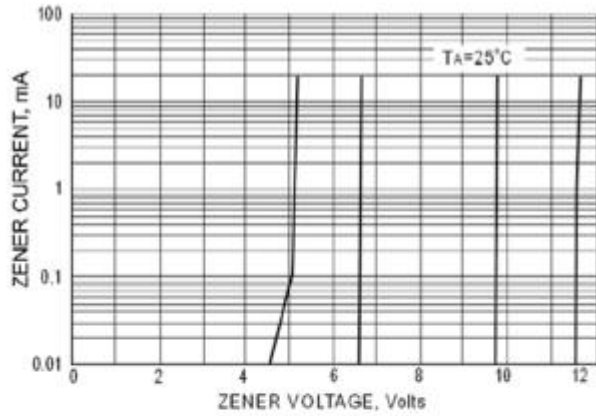
Maximum Ratings@ $T_A=25^\circ\text{C}$ unless otherwise specified

| Parameter | Symbol | Value | Units |
|--|-----------------|------------|--------------------|
| Power Dissipation | P_D | 350 | mW |
| Typical Thermal Resistance, Junction to Ambient | $R_{\theta JA}$ | 357 | $^\circ\text{C/W}$ |
| Operating Junction and Storage Temperature Range | T_J, T_{STG} | -55 to 150 | $^\circ\text{C}$ |

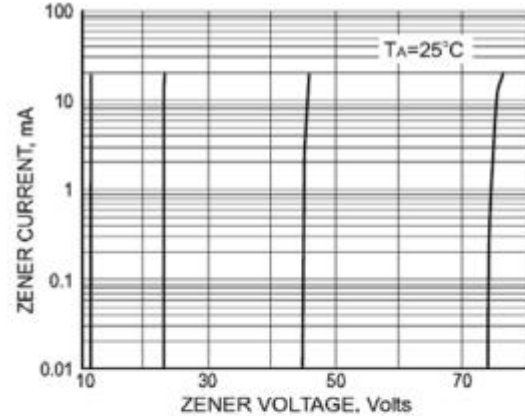
Electrical Characteristics @ $T_A=25^{\circ}\text{C}$ unless otherwise specified

| Part Number | Marking | Nominal Zener Voltage | | | Max. Zener Impedance | | | | Max.Reverse Leakage Current | |
|-------------|---------|------------------------|-------|-------|----------------------|----|-------------------|----|-----------------------------|-------|
| | | $V_Z(V) @ I_{ZT}^{-1}$ | | | $Z_{ZT} @ I_{ZT}$ | | $Z_{ZK} @ I_{ZK}$ | | $I_R @ V_R$ | |
| | | Nom. | Min. | Max. | Ohm | mA | Ohm | mA | μA | V |
| BZX84C2V4 | W1/Z11 | 2.4 | 2.28 | 2.52 | 100 | 5 | 600 | 1 | 50 | 1.0 |
| BZX84C2V7 | W2/Z12 | 2.7 | 2.5 | 2.9 | 100 | 5 | 600 | 1 | 20 | 1.0 |
| BZX84C3V0 | W3/Z13 | 3 | 2.8 | 3.2 | 95 | 5 | 600 | 1 | 10 | 1.0 |
| BZX84C3V3 | W4/Z14 | 3.3 | 3.1 | 3.5 | 95 | 5 | 600 | 1 | 5 | 1.0 |
| BZX84C3V6 | W5/Z15 | 3.6 | 3.4 | 3.8 | 90 | 5 | 600 | 1 | 5 | 1.0 |
| BZX84C3V9 | W6/Z16 | 3.9 | 3.7 | 4.1 | 90 | 5 | 600 | 1 | 3 | 1.0 |
| BZX84C4V3 | W7/Z17 | 4.3 | 4 | 4.6 | 90 | 5 | 600 | 1 | 3 | 1.0 |
| BZX84C4V7 | W8/Z1 | 4.7 | 4.4 | 5 | 80 | 5 | 500 | 1 | 3 | 2.0 |
| BZX84C5V1 | W9/Z2 | 5.1 | 4.8 | 5.4 | 60 | 5 | 480 | 1 | 2 | 2.0 |
| BZX84C5V6 | WA/Z3 | 5.6 | 5.2 | 6 | 40 | 5 | 400 | 1 | 1 | 2.0 |
| BZX84C6V2 | WB/Z4 | 6.2 | 5.8 | 6.6 | 10 | 5 | 150 | 1 | 3 | 4.0 |
| BZX84C6V8 | WC/Z5 | 6.8 | 6.4 | 7.2 | 15 | 5 | 80 | 1 | 2 | 4.0 |
| BZX84C7V5 | WD/Z6 | 7.5 | 7 | 7.9 | 15 | 5 | 80 | 1 | 1 | 5.0 |
| BZX84C8V2 | WE/Z7 | 8.2 | 7.7 | 8.7 | 15 | 5 | 80 | 1 | 0.7 | 5.0 |
| BZX84C9V1 | WF/Z8 | 9.1 | 8.5 | 9.6 | 15 | 5 | 100 | 1 | 0.5 | 6.0 |
| BZX84C10 | WG/Z9 | 10 | 9.4 | 10.6 | 20 | 5 | 150 | 1 | 0.2 | 7.0 |
| BZX84C11 | WH/Y1 | 11 | 10.4 | 11.6 | 20 | 5 | 150 | 1 | 0.1 | 8.0 |
| BZX84C12 | WI/Y2 | 12 | 11.4 | 12.7 | 25 | 5 | 150 | 1 | 0.1 | 8.0 |
| BZX84C13 | WK/Y3 | 13 | 12.4 | 14.1 | 30 | 5 | 170 | 1 | 0.1 | 8.0 |
| BZX84C15 | WL/Y4 | 15 | 13.8 | 15.6 | 30 | 5 | 200 | 1 | 0.1 | 10.5 |
| BZX84C16 | WM /Y5 | 16 | 15.3 | 17.1 | 40 | 5 | 200 | 1 | 0.1 | 11.2 |
| BZX84C18 | WN/Y6 | 18 | 16.8 | 19.1 | 45 | 5 | 225 | 1 | 0.1 | 12.6 |
| BZX84C20 | WO/Y7 | 20 | 18.8 | 21.2 | 55 | 5 | 225 | 1 | 0.1 | 14.0 |
| BZX84C22 | WP/Y8 | 22 | 20.8 | 23.3 | 55 | 5 | 250 | 1 | 0.1 | 15.4 |
| BZX84C24 | WR/Y9 | 24 | 22.8 | 25.6 | 70 | 5 | 250 | 1 | 0.1 | 16.8 |
| BZX84C27 | WS/Y10 | 27 | 25.1 | 28.9 | 80 | 2 | 300 | 1 | 0.1 | 18.9 |
| BZX84C30 | WT /Y11 | 30 | 28 | 32 | 80 | 2 | 300 | 1 | 0.1 | 21.0 |
| BZX84C33 | WU/Y12 | 33 | 31 | 35 | 80 | 2 | 325 | 1 | 0.1 | 23.1 |
| BZX84C36 | WW/Y13 | 36 | 34 | 38 | 90 | 2 | 350 | 1 | 0.1 | 25.2 |
| BZX84C39 | WX/Y14 | 39 | 37 | 41 | 130 | 2 | 350 | 1 | 0.1 | 27.3 |
| BZX84C43 | WY/Y15 | 43 | 40.85 | 45.15 | 150 | 5 | 375 | 1 | 0.1 | 30.10 |
| BZX84C47 | WZ/Y16 | 47 | 44.65 | 49.35 | 170 | 5 | 375 | 1 | 0.1 | 32.90 |
| BZX84C51 | XA/Y17 | 51 | 48.45 | 53.55 | 100 | 5 | 400 | 1 | 0.1 | 35.70 |

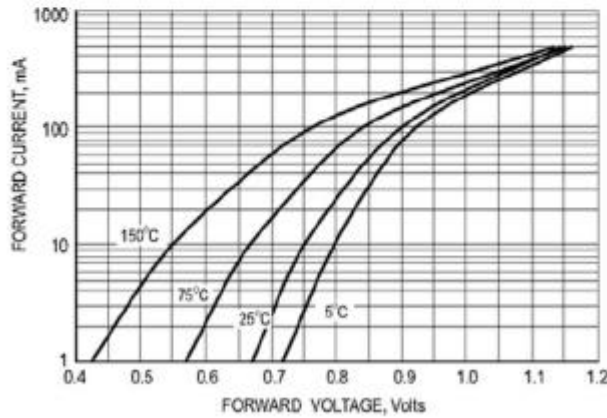
Ratings and Characteristics Curves



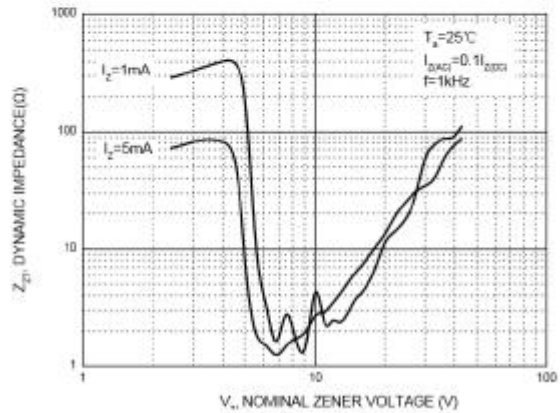
ZENER BREAKDOWN CHARACTERISTIC



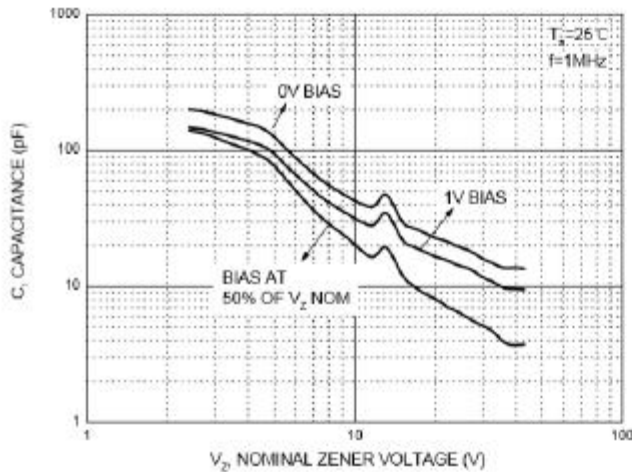
ZENER BREAKDOWN CHARACTERISTICS



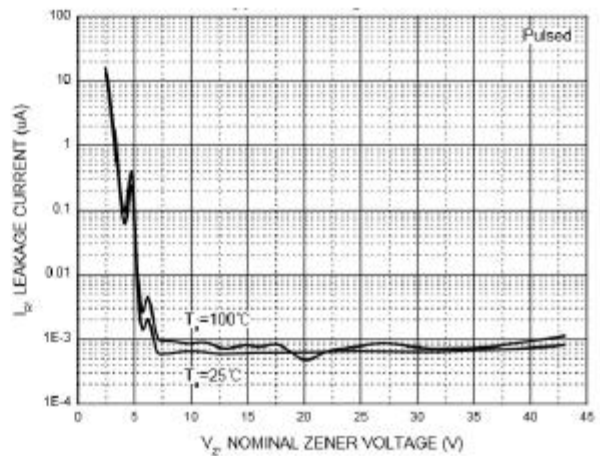
TYPICAL FORWARD VOLTAGE



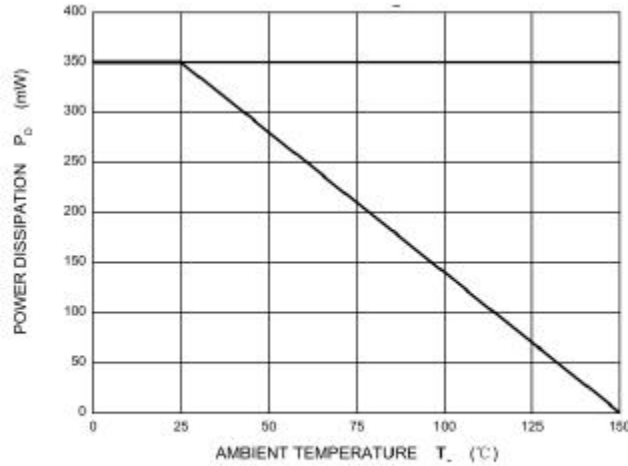
Effect of Zener Voltage on Zener Impedance



Typical Capacitance



Typical Leakage Current



POWER DISSIPATION VS. AMBIENT TEMP

Ordering Information

| Device | Package | Shipping |
|------------------------|---------|----------------|
| BZX84C2V4- BZX84C51 | SOT-23 | 3000pcs / reel |

For information on tape and reel specifications, including part orientation and tape sizes, please refer to our tape and reel packaging specification.

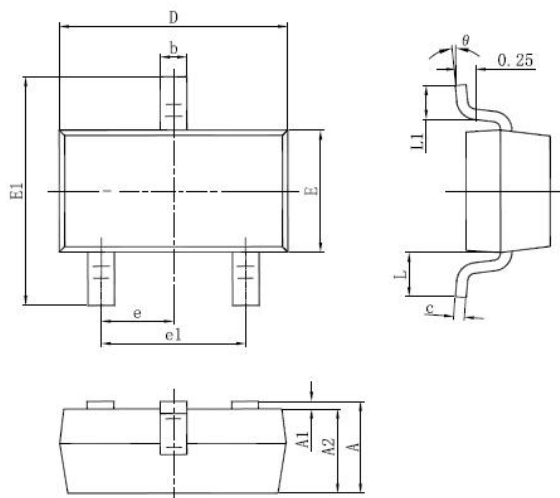
Marking Diagram



Z11 = Marking Code

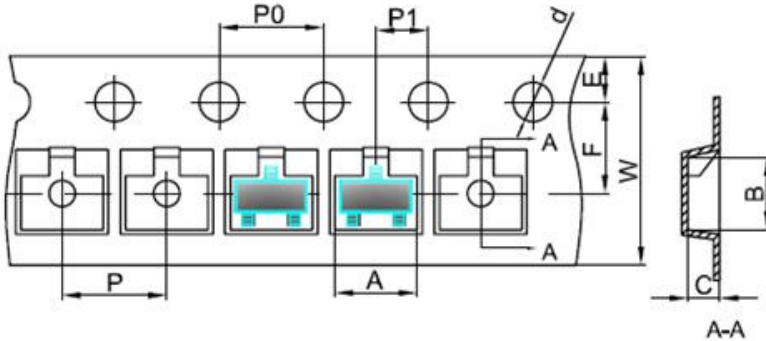
Note: If date code is before 2016 year, please contact with factory about marking.

Mechanical Dimensions SOT-23



| SYMBOL | Millimeters | | Inches | |
|----------|-------------|-------|------------|-------|
| | MIN. | MAX. | MIN. | MAX. |
| A | 0.890 | 1.150 | 0.035 | 0.045 |
| A1 | 0.000 | 0.100 | 0.000 | 0.004 |
| A2 | 0.900 | 1.050 | 0.035 | 0.041 |
| b | 0.300 | 0.500 | 0.012 | 0.020 |
| c | 0.076 | 0.170 | 0.003 | 0.007 |
| D | 2.650 | 3.050 | 0.104 | 0.120 |
| E | 1.190 | 1.400 | 0.047 | 0.055 |
| E1 | 2.100 | 2.550 | 0.083 | 0.100 |
| e | 0.950 TYP. | | 0.037 TYP. | |
| e1 | 1.780 | 2.050 | 0.070 | 0.081 |
| L | 0.550 REF. | | 0.022 REF. | |
| L1 | 0.300 | 0.500 | 0.012 | 0.020 |
| θ | 0° | 8° | 0° | 8° |

Carrier Tape Specification SOT-23



| SYMBOL | Millimeters | |
|--------|-------------|------|
| | Min. | Max. |
| A | 3.05 | 3.25 |
| B | 2.67 | 2.87 |
| C | 1.12 | 1.32 |
| d | 1.40 | 1.60 |
| E | 1.65 | 1.85 |
| F | 3.40 | 3.60 |
| P | 3.90 | 4.10 |
| P0 | 3.90 | 4.10 |
| P1 | 1.90 | 2.10 |
| W | 7.90 | 8.30 |

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