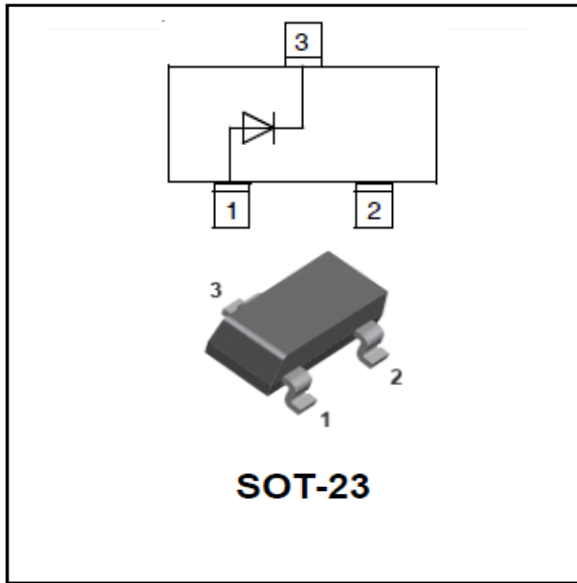


Zener Diodes



Features

- High reliability
- Very sharp reverse characteristic
- Low reverse current level
- Zener Voltage 2.4V~47V

Mechanical Data

- **Package:** SOT-23
- Molding compound meets UL 94 V-0 flammability rating, RoHS-compliant, halogen-free
- **Terminals:** Tin plated leads, solderable per J-STD-002 and JESD22-B102

■ Limiting Values (Absolute Maximum Rating, Ta=25°C Unless otherwise specified)

| Characteristic | Symbol | Value | Units |
|--|-------------------|----------|-------|
| Maximum Forward Voltage@I _F =10mA | V _F | 0.9 | V |
| Power Dissipation | P _D | 350 | mW |
| Peak Forward Surge Current* | I _{FSM} | 2.0 | A |
| Thermal Resistance | R _{thJA} | 357 | °C /W |
| Operation Temperature | T _J | -55~+150 | °C |
| Storage Temperature Range | T _{STG} | -55~+150 | °C |

*Measured on 8.3ms, single half sine-wave

■ Ordering Information (Example)

| PREFERRED P/N | PACKING CODE | UNIT WEIGHT(g) | MINIMUM PACKAGE(pcs) | INNER BOX QUANTITY(pcs) | OUTER CARTON QUANTITY(pcs) | DELIVERY MODE |
|-------------------------|--------------|-------------------|----------------------|-------------------------|----------------------------|---------------|
| BZX84C2V4 THRU BZX84C47 | F2 | Approximate 0.008 | 3000 | 30000 | 120000 | 7" reel |



BZX84C2V4 THRU BZX84C47

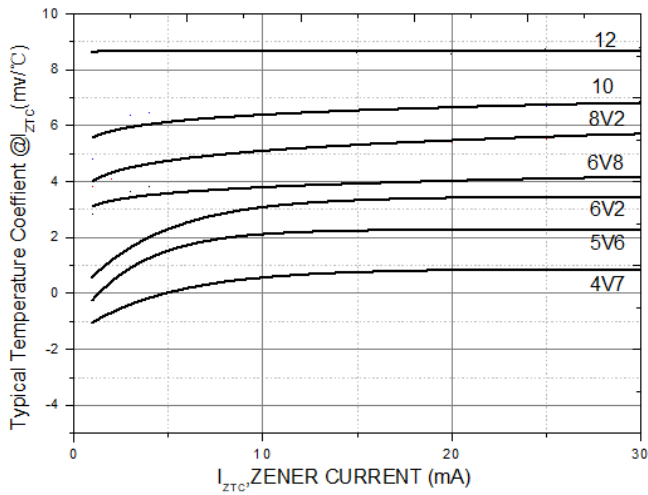
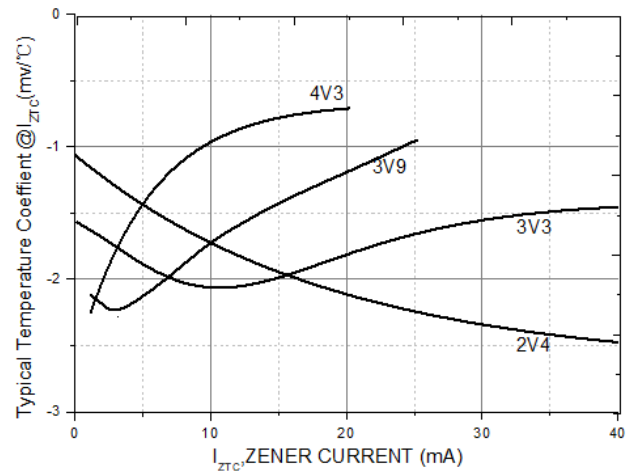
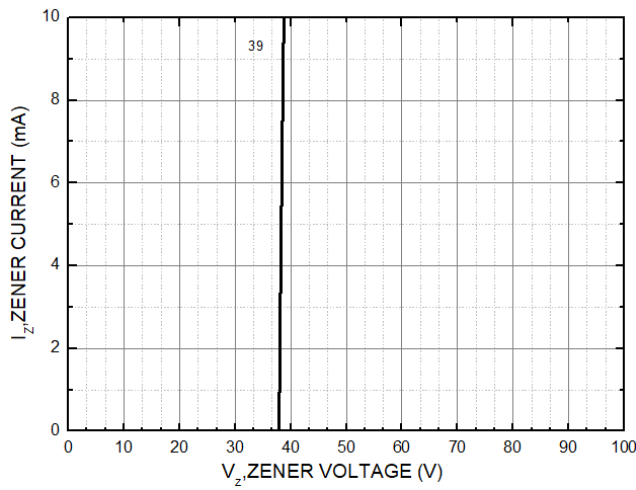
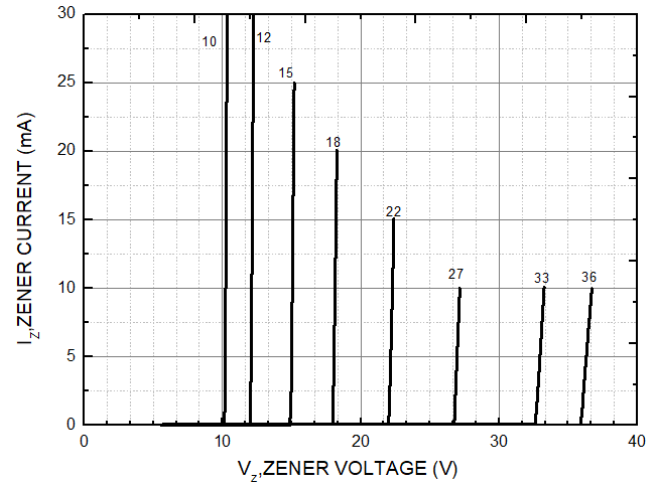
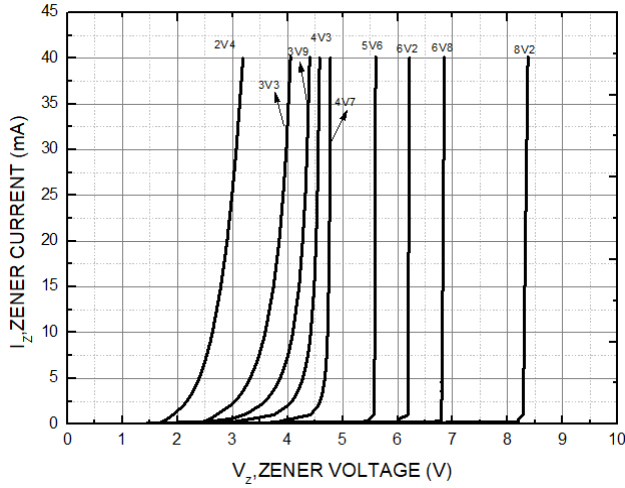
■Electrical Characteristics (T_a=25°C Unless otherwise specified)

| Type Number | Marking Code | Nominal Zener Voltage | | | Maximum Zener Impedance | | | | Max Reverse Leakage Current | |
|-------------|--------------|---------------------------------------|------|-------|----------------------------------|----------------------|----------------------------------|----------------------|-------------------------------------|--------------------|
| | | V _Z at I _{ZT} (V) | | | Z _{ZT} @I _{ZT} | | Z _{Zk} @I _{Zk} | | I _R (uA)@ V _R | |
| | | Min. | Typ. | Max. | Z _{ZT} (Ω) | I _{ZT} (mA) | Z _{Zk} (Ω) | I _{Zk} (mA) | Max | V _R (V) |
| BZX84C2V4 | Z11 | 2.28 | 2.4 | 2.52 | 100 | 5 | 600 | 1 | 50 | 1 |
| BZX84C2V7 | Z12 | 2.5 | 2.7 | 2.9 | 100 | 5 | 600 | 1 | 20 | 1 |
| BZX84C3V0 | Z13 | 2.8 | 3.0 | 3.2 | 95 | 5 | 600 | 1 | 10 | 1 |
| BZX84C3V3 | Z14 | 3.1 | 3.3 | 3.5 | 95 | 5 | 600 | 1 | 5 | 1 |
| BZX84C3V6 | Z15 | 3.4 | 3.6 | 3.8 | 90 | 5 | 600 | 1 | 5 | 1 |
| BZX84C3V9 | Z16 | 3.7 | 3.9 | 4.1 | 90 | 5 | 600 | 1 | 3 | 1 |
| BZX84C4V3 | Z17 | 4.0 | 4.3 | 4.6 | 90 | 5 | 600 | 1 | 3 | 1 |
| BZX84C4V7 | Z1 | 4.4 | 4.7 | 5.0 | 80 | 5 | 500 | 1 | 3 | 2 |
| BZX84C5V1 | Z2 | 4.8 | 5.1 | 5.4 | 60 | 5 | 480 | 1 | 2 | 2 |
| BZX84C5V6 | Z3 | 5.2 | 5.6 | 6.0 | 40 | 5 | 400 | 1 | 1 | 2 |
| BZX84C6V2 | Z4 | 5.8 | 6.2 | 6.6 | 10 | 5 | 150 | 1 | 3 | 4 |
| BZX84C6V8 | Z5 | 6.4 | 6.8 | 7.2 | 15 | 5 | 80 | 1 | 2 | 4 |
| BZX84C7V5 | Z6 | 7.0 | 7.5 | 7.9 | 15 | 5 | 80 | 1 | 1 | 5 |
| BZX84C8V2 | Z7 | 7.7 | 8.2 | 8.7 | 15 | 5 | 80 | 1 | 0.7 | 5 |
| BZX84C9V1 | Z8 | 8.5 | 9.1 | 9.6 | 15 | 5 | 100 | 1 | 0.5 | 6 |
| BZX84C10 | Z9 | 9.4 | 10 | 10.6 | 20 | 5 | 150 | 1 | 0.2 | 7 |
| BZX84C11 | Y1 • | 10.4 | 11 | 11.6 | 20 | 5 | 150 | 1 | 0.1 | 8 |
| BZX84C12 | Y2 • | 11.4 | 12 | 12.7 | 25 | 5 | 150 | 1 | 0.1 | 8 |
| BZX84C13 | Y3 | 12.4 | 13 | 14.1 | 30 | 5 | 170 | 1 | 0.1 | 8 |
| BZX84C15 | Y4 | 14.25 | 15 | 15.75 | 30 | 5 | 200 | 1 | 0.1 | 10.5 |
| BZX84C16 | Y5 | 15.3 | 16 | 17.1 | 40 | 5 | 200 | 1 | 0.1 | 11.2 |
| BZX84C18 | Y6 • | 16.8 | 18 | 19.1 | 45 | 5 | 225 | 1 | 0.1 | 12.6 |
| BZX84C20 | Y7 | 18.8 | 20 | 21.2 | 55 | 5 | 225 | 1 | 0.1 | 14 |
| BZX84C22 | Y8 | 20.8 | 22 | 23.3 | 55 | 5 | 250 | 1 | 0.1 | 15.4 |
| BZX84C24 | Y9 | 22.8 | 24 | 25.6 | 70 | 5 | 250 | 1 | 0.1 | 16.8 |
| BZX84C27 | Y10 | 25.1 | 27 | 28.9 | 80 | 2 | 300 | 1 | 0.1 | 18.9 |
| BZX84C30 | Y11 • | 28 | 30 | 32 | 80 | 2 | 300 | 1 | 0.1 | 21.0 |
| BZX84C33 | Y12 | 31 | 33 | 35 | 80 | 2 | 325 | 1 | 0.1 | 23.1 |
| BZX84C36 | Y13 | 34 | 36 | 38 | 90 | 2 | 350 | 1 | 0.1 | 25.2 |
| BZX84C39 | Y14 | 37 | 39 | 41 | 130 | 2 | 350 | 1 | 0.1 | 27.3 |
| BZX84C43 | Y15 | 40.85 | 43 | 45.15 | 150 | 5 | 375 | 1 | 0.1 | 30.1 |
| BZX84C47 | Y16 | 44.65 | 47 | 49.35 | 170 | 5 | 375 | 1 | 0.1 | 32.9 |



BZX84C2V4 THRU BZX84C47

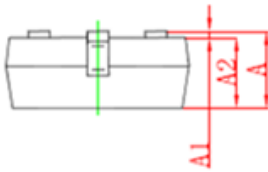
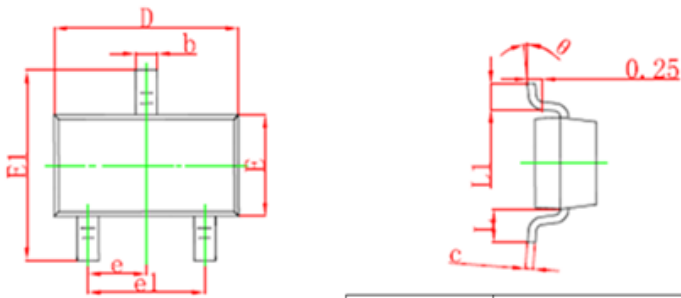
■ Characteristics (Typical)





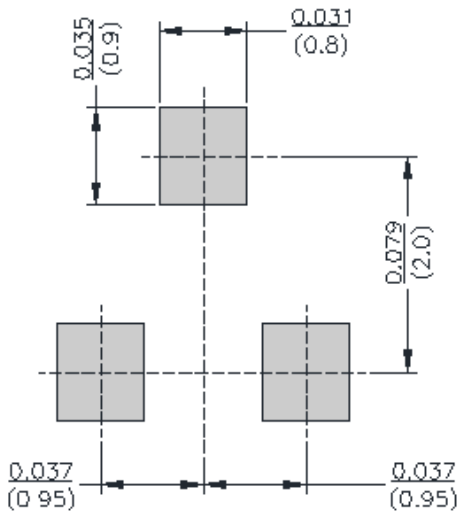
BZX84C2V4 THRU BZX84C47

■SOT-23 Package Outline Dimensions



| Symbol | Dimensions In Millimeters | | Dimensions In Inches | |
|--------|---------------------------|-------|----------------------|-------|
| | Min | Max | Min | Max |
| A | 0.900 | 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 | 0.100 | 0.200 | 0.004 | 0.008 |
| D | 2.800 | 3.000 | 0.110 | 0.118 |
| E | 1.200 | 1.400 | 0.047 | 0.055 |
| E1 | 2.250 | 2.550 | 0.089 | 0.100 |
| e | 0.950TYP | | 0.037TYP | |
| e1 | 1.800 | 2.000 | 0.071 | 0.079 |
| L | 0.550REF | | 0.022REF | |
| L1 | 0.300 | 0.500 | 0.012 | 0.020 |
| ø | 0° | 8° | 0° | 8° |

■SOT-23Suggested Pad Layout





BZX84C2V4 THRU BZX84C47

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