**BZX84C2V4**
**THRU**
**BZX84C47**

**SURFACE MOUNT**
**SILICON ZENER DIODE**
**350mW, 2.4 THRU 47 VOLTS**




**SOT-23 CASE**

Central Semiconductor Corp.

www.centralsemi.com

**DESCRIPTION:**

The CENTRAL SEMICONDUCTOR BZX84C2V4 Series are surface mount silicon Zener diodes. These high quality voltage regulating diodes are designed for use in industrial, commercial, entertainment and computer applications.

**MARKING CODE: SEE ELECTRICAL CHARACTERISTICS TABLE**

| **MAXIMUM RATINGS:** ($T_A$=25°C) | **SYMBOL** | | **UNITS** |
|---|---|---|---|
| Power Dissipation | $P_D$ | 350 | mW |
| Operating and Storage Junction Temperature | $T_J$, $T_{stg}$ | -65 to +150 | °C |
| Thermal Resistance | $\Theta_{JA}$ | 357 | °C/W |

**ELECTRICAL CHARACTERISTICS:** ($T_A$=25°C), $V_F$=0.9V MAX @ $I_F$=10mA (for all types)

| TYPE | ZENER VOLTAGE $V_Z$ @ $I_{ZT}$ | | | TEST CURRENT | MAXIMUM ZENER IMPEDENCE | | | MAXIMUM REVERSE CURRENT | | MAXIMUM ZENER CURRENT | MAXIMUM ZENER VOLTAGE TEMP. COEFF. | MARKING CODE |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | MIN | NOM | MAX | $I_{ZT}$ | $Z_{ZT}$ @ $I_{ZT}$ | $Z_{ZK}$ @ $I_{ZK}$ | | $I_R$ @ | $V_R$ | $I_{ZM}$ | $\Theta V_Z$ | |
| | V | V | V | mA | Ω | Ω | mA | μA | V | mA | % / °C | |
| BZX84C2V4 | 2.2 | 2.4 | 2.6 | 5.0 | 100 | 600 | 1.0 | 50 | 1.0 | 104 | -0.06 | W3 |
| BZX84C2V7 | 2.5 | 2.7 | 2.9 | 5.0 | 100 | 600 | 1.0 | 20 | 1.0 | 92 | -0.06 | W4 |
| BZX84C3V0 | 2.8 | 3.0 | 3.2 | 5.0 | 95 | 600 | 1.0 | 10 | 1.0 | 83 | -0.06 | W5 |
| BZX84C3V3 | 3.1 | 3.3 | 3.5 | 5.0 | 95 | 600 | 1.0 | 5.0 | 1.0 | 76 | -0.06 | W6 |
| BZX84C3V6 | 3.4 | 3.6 | 3.8 | 5.0 | 90 | 600 | 1.0 | 5.0 | 1.0 | 69 | -0.06 | W7 |
| BZX84C3V9 | 3.7 | 3.9 | 4.1 | 5.0 | 90 | 600 | 1.0 | 3.0 | 1.0 | 64 | -0.06 | W8 |
| BZX84C4V3 | 4.0 | 4.3 | 4.6 | 5.0 | 90 | 600 | 1.0 | 3.0 | 1.0 | 58 | -0.05 | W9 |
| BZX84C4V7 | 4.4 | 4.7 | 5.0 | 5.0 | 80 | 500 | 1.0 | 3.0 | 2.0 | 53 | -0.03 | Z1 |
| BZX84C5V1 | 4.8 | 5.1 | 5.4 | 5.0 | 60 | 480 | 1.0 | 2.0 | 2.0 | 49 | 0.02 | Z2 |
| BZX84C5V6 | 5.2 | 5.6 | 6.0 | 5.0 | 40 | 400 | 1.0 | 1.0 | 2.0 | 45 | 0.03 | Z3 |
| BZX84C6V2 | 5.8 | 6.2 | 6.6 | 5.0 | 10 | 150 | 1.0 | 3.0 | 4.0 | 40 | 0.04 | Z4 |
| BZX84C6V8 | 6.4 | 6.8 | 7.2 | 5.0 | 15 | 80 | 1.0 | 2.0 | 4.0 | 37 | 0.05 | Z5 |
| BZX84C7V5 | 7.0 | 7.5 | 7.9 | 5.0 | 15 | 80 | 1.0 | 1.0 | 5.0 | 33 | 0.05 | Z6 |
| BZX84C8V2 | 7.7 | 8.2 | 8.7 | 5.0 | 15 | 80 | 1.0 | 0.7 | 5.0 | 30 | 0.06 | Z7 |
| BZX84C9V1 | 8.5 | 9.1 | 9.6 | 5.0 | 15 | 100 | 1.0 | 0.5 | 6.0 | 27 | 0.06 | Z8 |
| BZX84C10 | 9.4 | 10 | 10.6 | 5.0 | 20 | 150 | 1.0 | 0.2 | 7.0 | 25 | 0.07 | Z9 |

| **Tolerance Code** | **Tolerance** |
|---|---|
| A | ±1% |
| B | ±2% |

**Part Number Identification**

BZX84 C 4V7

- 4V7 — Nominal Value Code(i.e. 4.7 Volts)
- C — Tolerance Code
- BZX84 — Device Series

R7 (20-November 2009)

www.datasheet.wiki

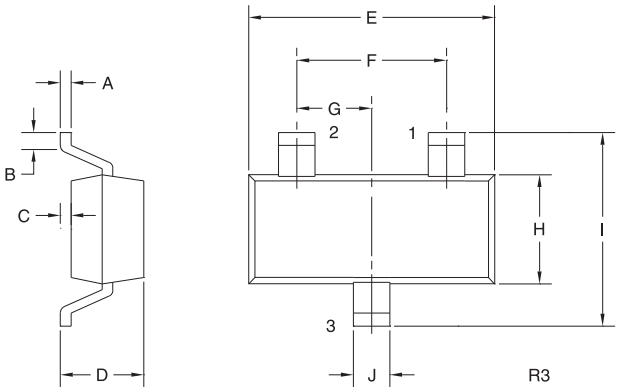
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**ELECTRICAL CHARACTERISTICS - Continued:** ($T_A$=25°C), $V_F$=0.9V MAX @ $I_F$=10mA (for all types)

| TYPE | ZENER VOLTAGE $V_Z$ @ $I_{ZT}$ | | | TEST CURRENT | MAXIMUM ZENER IMPEDENCE | | | MAXIMUM REVERSE CURRENT | | MAXIMUM ZENER CURRENT | MAXIMUM ZENER VOLTAGE TEMP. COEFF. | MARKING CODE |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | MIN | NOM | MAX | $I_{ZT}$ | $Z_{ZT}$ @ $I_{ZT}$ | $Z_{ZK}$ @ $I_{ZK}$ | | $I_R$ @ | $V_R$ | $I_{ZM}$ | $\Theta V_Z$ | |
| | V | V | V | mA | Ω | Ω | mA | μA | V | mA | % / °C | |
| BZX84C11 | 10.4 | 11 | 11.6 | 5.0 | 20 | 150 | 1.0 | 0.1 | 8.0 | 23 | 0.07 | Y1 |
| BZX84C12 | 11.4 | 12 | 12.7 | 5.0 | 25 | 150 | 1.0 | 0.1 | 8.0 | 21 | 0.07 | Y2 |
| BZX84C13 | 12.4 | 13 | 14.1 | 5.0 | 30 | 170 | 1.0 | 0.1 | 8.0 | 19 | 0.08 | Y3 |
| BZX84C15 | 13.8 | 15 | 15.6 | 5.0 | 30 | 200 | 1.0 | 0.05 | 10.5 | 17 | 0.08 | Y4 |
| BZX84C16 | 15.3 | 16 | 17.1 | 5.0 | 40 | 200 | 1.0 | 0.05 | 11.2 | 16 | 0.08 | Y5 |
| BZX84C18 | 16.8 | 18 | 19.1 | 5.0 | 45 | 225 | 1.0 | 0.05 | 12.6 | 14 | 0.08 | Y6 |
| BZX84C20 | 18.8 | 20 | 21.2 | 5.0 | 55 | 225 | 1.0 | 0.05 | 14.0 | 12 | 0.08 | Y7 |
| BZX84C22 | 20.8 | 22 | 23.3 | 5.0 | 55 | 250 | 1.0 | 0.05 | 15.4 | 11 | 0.09 | Y8 |
| BZX84C24 | 22.8 | 24 | 25.6 | 5.0 | 70 | 250 | 1.0 | 0.05 | 16.8 | 10 | 0.09 | Y9 |
| BZX84C27 | 25.1 | 27 | 28.9 | 2.0 | 80 | 300 | 0.5 | 0.05 | 18.9 | 9 | 0.09 | Y10 |
| BZX84C30 | 28.0 | 30 | 32.0 | 2.0 | 80 | 300 | 0.5 | 0.05 | 21.0 | 8 | 0.09 | Y11 |
| BZX84C33 | 31.0 | 33 | 35.0 | 2.0 | 80 | 325 | 0.5 | 0.05 | 23.1 | 7 | 0.09 | Y12 |
| BZX84C36 | 34.0 | 36 | 38.0 | 2.0 | 90 | 350 | 0.5 | 0.05 | 25.2 | 6.9 | 0.09 | Y13 |
| BZX84C39 | 37.0 | 39 | 41.0 | 2.0 | 130 | 350 | 0.5 | 0.05 | 27.3 | 6.4 | 0.09 | Y14 |
| BZX84C43 | 40.0 | 43 | 46.0 | 2.0 | 150 | 375 | 0.5 | 0.05 | 30.1 | 5.8 | 0.10 | Y15 |
| BZX84C47 | 44.0 | 47 | 50.0 | 2.0 | 170 | 375 | 0.5 | 0.05 | 32.9 | 5.3 | 0.10 | Y16 |

## SOT-23 CASE - MECHANICAL OUTLINE




| DIMENSIONS | | | | |
|---|---|---|---|---|
| | INCHES | | MILLIMETERS | |
| SYMBOL | MIN | MAX | MIN | MAX |
| A | 0.003 | 0.007 | 0.08 | 0.18 |
| B | 0.006 | - | 0.15 | - |
| C | - | 0.005 | - | 0.13 |
| D | 0.035 | 0.043 | 0.89 | 1.09 |
| E | 0.110 | 0.120 | 2.80 | 3.05 |
| F | 0.075 | | 1.90 | |
| G | 0.037 | | 0.95 | |
| H | 0.047 | 0.055 | 1.19 | 1.40 |
| I | 0.083 | 0.098 | 2.10 | 2.49 |
| J | 0.014 | 0.020 | 0.35 | 0.50 |

SOT-23 (REV: R3)

**LEAD CODE:**
1) ANODE
2) NO CONNECTION
3) CATHODE

R7 (20-November 2009)