

**BZX84C2V4
THRU
BZX84C47**

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



www.centrasemi.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: ($T_A=25^\circ\text{C}$)

Power Dissipation
Operating and Storage Junction Temperature
Thermal Resistance

SYMBOL

P_D 350
 T_J, T_{stg} -65 to +150
 θ_{JA} 357

UNITS

mW
 $^\circ\text{C}$
 $^\circ\text{C/W}$

ELECTRICAL CHARACTERISTICS: ($T_A=25^\circ\text{C}$), $V_F=0.9\text{V MAX @ } I_F=10\text{mA}$ (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} | θ_{VZ} | | | |
| | V | V | V | mA | Ω | Ω | μA | V | mA | % / $^\circ\text{C}$ | | |
| 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 |

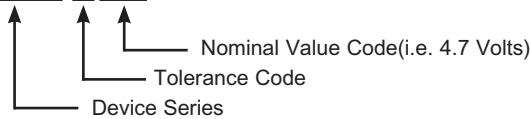
Tolerance Code

A $\pm 1\%$
B $\pm 2\%$

Tolerance

Part Number Identification

BZX84 C 4V7



**BZX84C2V4
THRU
BZX84C47**

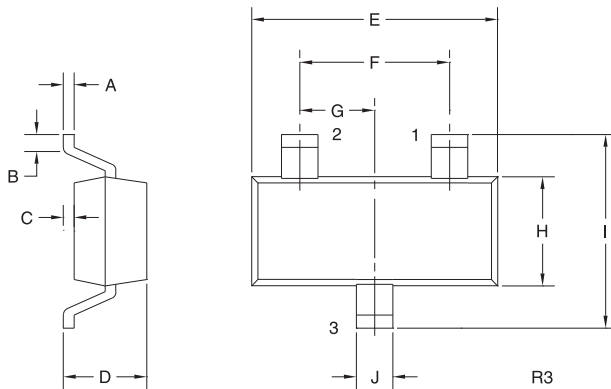
**SURFACE MOUNT
SILICON ZENER DIODE
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ELECTRICAL CHARACTERISTICS - Continued: ($T_A=25^{\circ}\text{C}$), $V_F=0.9\text{V MAX @ } I_F=10\text{mA}$ (for all types)

| TYPE | ZENER VOLTAGE $V_Z @ I_{ZT}$ | | | TEST CURRENT I_{ZT} | MAXIMUM ZENER IMPEDENCE | | | MAXIMUM REVERSE CURRENT | | MAXIMUM ZENER CURRENT I_{ZM} | MAXIMUM ZENER VOLTAGE TEMP. COEFF. $\frac{\partial V_Z}{\% / ^{\circ}\text{C}}$ | MARKING CODE |
|----------|---------------------------------|-----|------|--------------------------|-------------------------|-------------------|---------------|-------------------------|------|-----------------------------------|--|--------------|
| | MIN | NOM | MAX | | $Z_{ZT} @ I_{ZT}$ | $Z_{ZK} @ I_{ZK}$ | $I_R @ V_R$ | | | | | |
| | V | V | V | mA | Ω | Ω | μA | V | mA | % / $^{\circ}\text{C}$ | | |
| 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



| SYMBOL | INCHES | | MILLIMETERS | |
|--------|--------|-------|-------------|------|
| | 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)

OUTSTANDING SUPPORT AND SUPERIOR SERVICES



PRODUCT SUPPORT

Central's operations team provides the highest level of support to insure product is delivered on-time.

- Supply management (Customer portals)
- Inventory bonding
- Consolidated shipping options
- Custom bar coding for shipments
- Custom product packing

DESIGNER SUPPORT/SERVICES

Central's applications engineering team is ready to discuss your design challenges. Just ask.

- Free quick ship samples (2nd day air)
- Online technical data and parametric search
- SPICE models
- Custom electrical curves
- Environmental regulation compliance
- Customer specific screening
- Up-screening capabilities
- Special wafer diffusions
- PbSn plating options
- Package details
- Application notes
- Application and design sample kits
- Custom product and package development

REQUESTING PRODUCT PLATING

1. If requesting Tin/Lead plated devices, add the suffix " TIN/LEAD" to the part number when ordering (example: 2N2222A TIN/LEAD).
2. If requesting Lead (Pb) Free plated devices, add the suffix " PBFREE" to the part number when ordering (example: 2N2222A PBFREE).

CONTACT US

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