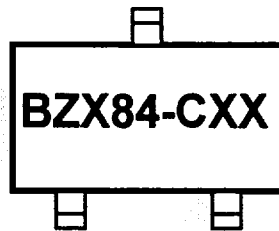


# SOT-23 SMD

## Use Advantages



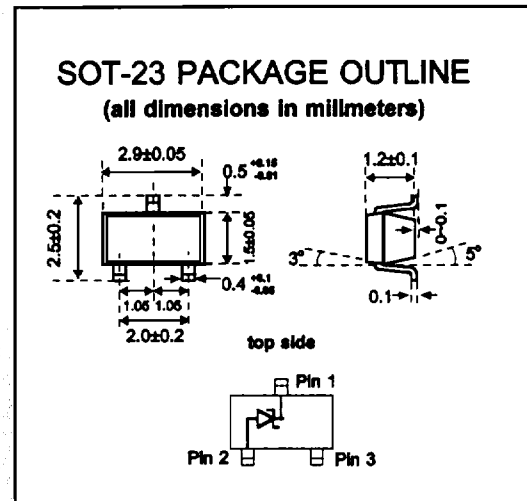
# Zener Diodes

## BZX84-C2V7 thru BZX84-C51

These Pro Electron zener diodes use lower zener test currents popular in so many of today's battery powered applications. For use in clipping and stabilizing circuits, where local protection is needed. The small size of this plastic package permits high density board designs. Compatible with all major automatic assembly equipment.

## Features

- Small size
- High quality
- Thermally matched system
- Few applications restrictions
- Thermo-compression bonding
- DO-35 axial leaded types available
- Also comes in a glass Mini Melf SMD



| Absolute Maximum Ratings                                    | Symbol    | Value             | Unit               |
|---|-----------|-------------------|--------------------|
| Power Dissipation at $T_{Amb} = 25\text{ }^{\circ}\text{C}$ | $P_{tot}$ | 350 <sup>1)</sup> | Milliwatts         |
| Junction Temperature  | $T_j$     | 175               | $^{\circ}\text{C}$ |
| Storage Temperature Range                                   | $T_s$     | -65 to +175       | $^{\circ}\text{C}$ |

| Characteristics at $T_{Amb} = 25\text{ }^{\circ}\text{C}$ | Symbol    | Max. Limit        | Unit                 |
|---|-----------|-------------------|----------------------|
| Thermal Resistance Junction to Ambient Air                | $R_{thA}$ | 420 <sup>1)</sup> | $^{\circ}\text{C/W}$ |
| Forward voltage drop at $I_F = 10\text{ mA}$              | VF        | 0.90              | Volt                 |

1) Mounted on Ceramic Substrate 10 mm x 8 mm x 0.7 mm

DETAILED SPECIFICATIONS ON REVERSE

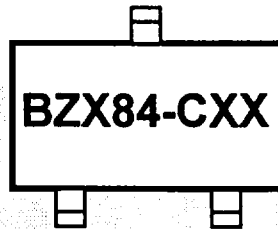


6 Lake Street  
Lawrence, MA  
USA 01841

Telephone (508) 681-0392 • FAX (508) 681-9135

\*BKC55081\*

**SOT-23 SMD**  
**BZX84-C2V7**  
 thru  
**BZX84-C51**



**Zener Diodes**  
**Detail**  
**Specifications**

| Type       | Zener Voltage Range<br>( $V_Z$ ) @ $I_{ZT}$ |     | Maximum Zener Impedance     |                               | Maximum Reverse Leakage Current |                  | Typical Temp. Coef. of Zener Voltage<br>%/°C |
|------------|---|-----|-----------------------------|-------------------------------|---------------------------------|------------------|--|
|            | Volts                                       | mA  | $Z_{zt}$ @ $I_{ZT}$<br>Ohms | $Z_{zk}$ @ 0.5* & 1mA<br>Ohms | ( $I_R$ )<br>$\mu A$            | @ $V_R$<br>Volts |  |
| BZX84-C2V7 | 2.5...2.9                                   | 5.0 | 100                         | 600                           | 20                              | 1                | 0.075  |
| BZX84-C3   | 2.8 3.2                                     | 5.0 | 95                          | 600                           | 20                              | 1                | -0.07  |
| BZX84-C3V3 | 3.1...3.5                                   | 5.0 | 95                          | 600                           | 5                               | 1                | -0.06  |
| BZX84-C3V6 | 3.4...3.8                                   | 5.0 | 90                          | 600                           | 5                               | 1                | -0.055                                       |
| BZX84-C3V9 | 3.7...4.1                                   | 5.0 | 90                          | 600                           | 3                               | 1                | -0.045                                       |
| BZX84-C4V3 | 4.0...4.6                                   | 5.0 | 90                          | 600                           | 3                               | 1                | -0.01  |
| BZX84-C4V7 | 4.4...5.0                                   | 5.0 | 80                          | 500                           | 3                               | 2                | +0.01  |
| BZX84-C5V1 | 4.8...5.4                                   | 5.0 | 60                          | 480                           | 2                               | 2                | +0.025                                       |
| BZX84-C5V6 | 5.2...6.0                                   | 5.0 | 40                          | 400                           | 1                               | 2                | +0.035                                       |
| BZX84-C6V2 | 5.8...6.6                                   | 5.0 | 10                          | 150                           | 3                               | 4                | +0.04  |
| BZX84-C6V8 | 6.4...7.2                                   | 5.0 | 15                          | 80                            | 2                               | 4                | +0.044                                       |
| BZX84-C7V5 | 7.0...7.9                                   | 5.0 | 15                          | 80                            | 1                               | 5                | +0.051                                       |
| BZX84-C8V2 | 7.7...8.7                                   | 5.0 | 15                          | 80                            | 0.7                             | 5                | +0.055                                       |
| BZX84-C9V1 | 8.5...9.6                                   | 5.0 | 15                          | 100                           | 0.5                             | 6                | +0.061                                       |
| BZX84-C10  | 9.4...10.6                                  | 5.0 | 20                          | 150                           | 0.2                             | 7                | +0.065                                       |
| BZX84-C11  | 10.4...11.6                                 | 5.0 | 20                          | 150                           | 0.1                             | 8                | +0.068                                       |
| BZX84-C12  | 11.4...12.7                                 | 5.0 | 25                          | 150                           | 0.1                             | 8                | +0.07  |
| BZX84-C13  | 12.4...14.1                                 | 5.0 | 30                          | 170                           | 0.1                             | 8                | +0.075                                       |
| BZX84-C15  | 13.8...15.8                                 | 5.0 | 30                          | 200                           | 0.05                            | $0.7V_{Z_{NOM}}$ | +0.079                                       |
| BZX84-C16  | 15.3...17.1                                 | 5.0 | 40                          | 200                           | 0.05                            | $0.7V_{Z_{NOM}}$ | +0.080                                       |
| BZX84-C18  | 16.8...19.1                                 | 5.0 | 45                          | 225                           | 0.05                            | $0.7V_{Z_{NOM}}$ | +0.083                                       |
| BZX84-C20  | 18.8...21.2                                 | 5.0 | 55                          | 225                           | 0.05                            | $0.7V_{Z_{NOM}}$ | +0.085                                       |
| BZX84-C22  | 20.8...23.3                                 | 5.0 | 55                          | 250                           | 0.05                            | $0.7V_{Z_{NOM}}$ | +0.087                                       |
| BZX84-C24  | 22.8...25.6                                 | 5.0 | 70                          | 250                           | 0.05                            | $0.7V_{Z_{NOM}}$ | +0.090                                       |
| BZX84-C27  | 25.1...28.9                                 | 2.0 | 80                          | 300*                          | 0.05                            | $0.7V_{Z_{NOM}}$ | +0.091                                       |
| BZX84-C30  | 28...32                                     | 2.0 | 80                          | 300*                          | 0.05                            | $0.7V_{Z_{NOM}}$ | +0.093                                       |
| BZX84-C33  | 31...35                                     | 2.0 | 80                          | 325*                          | 0.05                            | $0.7V_{Z_{NOM}}$ | +0.094                                       |
| BZX84-C36  | 34...38                                     | 2.0 | 90                          | 350*                          | 0.05                            | $0.7V_{Z_{NOM}}$ | +0.094                                       |
| BZX84-C39  | 37...41                                     | 2.0 | 130                         | 350*                          | 0.05                            | $0.7V_{Z_{NOM}}$ | +0.095                                       |
| BZX84-C43  | 40...46                                     | 2.0 | 150                         | 375*                          | 0.05                            | $0.7V_{Z_{NOM}}$ | +0.095                                       |
| BZX84-C47  | 44...50                                     | 2.0 | 170                         | 375*                          | 0.05                            | $0.7V_{Z_{NOM}}$ | +0.096                                       |
| BZX84-C51  | 48...54                                     | 2.0 | 180                         | 400*                          | 0.05                            | $0.7V_{Z_{NOM}}$ | +0.096                                       |

For other voltage ranges, consult factory.  
 DO-35 axial leaded and MELF SMD Glass packages available.



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