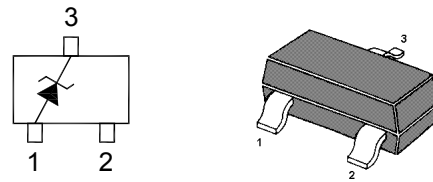


BZX84C...Series

Silicon Planar Zener Diodes

This series of Zener diodes is offered in the convenient, surface mount plastic TO-236 package. These devices are designed to provide voltage regulation with minimum space requirement. They are well suited for applications such as cellular phones, hand held portables, and high density PC boards.



1. Anode 3. Cathode
TO-236 Plastic Package

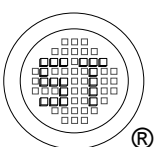
Features

- Zener breakdown voltage range - 2.0 V to 75 V
- Package designed for optimal automated board assembly
- Small package size for high density applications

Absolute Maximum Ratings ($T_a = 25^\circ\text{C}$)

| Parameter | Symbol | Value | Unit |
|---|-----------------|---------------|--------------------|
| Power Dissipation | P_D | 350 | mW |
| Thermal Resistance, Junction to Ambient ¹⁾ | $R_{\theta JA}$ | 357 | $^\circ\text{C/W}$ |
| Junction and Storage Temperature Range | T_j, T_{stg} | - 65 to + 150 | $^\circ\text{C}$ |

¹⁾ Alumina = 0.4 X 0.3 X 0.024 in, 99.5% alumina



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BZX84C...Series

Electrical Characteristics ($T_a = 25^\circ\text{C}$ unless otherwise noted, $V_F < 0.9\text{ V}$ at $I_F = 10\text{ mA}$)

| Type | Marking Code | Zener Voltage Range ¹⁾ | | | | Dynamic Impedance | | Reverse Current | |
|-----------|--------------|-----------------------------------|----------|----------|-------------|-------------------|-------------|------------------------|----------|
| | | V_{ZT} | | | at I_{ZT} | Z_{ZT} | at I_{ZT} | I_R | at V_R |
| | | Nom. (V) | Min. (V) | Max. (V) | (mA) | Max. (Ω) | (mA) | Max. (μA) | (V) |
| BZX84C2V0 | A8 | 2 | 1.8 | 2.15 | 5 | 100 | 5 | 120 | 0.5 |
| BZX84C2V2 | B8 | 2.2 | 2.08 | 2.33 | 5 | 100 | 5 | 120 | 0.7 |
| BZX84C2V4 | C8 | 2.4 | 2.2 | 2.6 | 5 | 100 | 5 | 50 | 1 |
| BZX84C2V7 | D8 | 2.7 | 2.5 | 2.9 | 5 | 100 | 5 | 20 | 1 |
| BZX84C3V0 | E8 | 3 | 2.8 | 3.2 | 5 | 95 | 5 | 10 | 1 |
| BZX84C3V3 | F8 | 3.3 | 3.1 | 3.5 | 5 | 95 | 5 | 5 | 1 |
| BZX84C3V6 | H8 | 3.6 | 3.4 | 3.8 | 5 | 90 | 5 | 5 | 1 |
| BZX84C3V9 | J8 | 3.9 | 3.7 | 4.1 | 5 | 90 | 5 | 3 | 1 |
| BZX84C4V3 | K8 | 4.3 | 4 | 4.6 | 5 | 90 | 5 | 3 | 1 |
| BZX84C4V7 | M8 | 4.7 | 4.4 | 5 | 5 | 80 | 5 | 3 | 2 |
| BZX84C5V1 | N8 | 5.1 | 4.8 | 5.4 | 5 | 60 | 5 | 2 | 2 |
| BZX84C5V6 | P8 | 5.6 | 5.2 | 6 | 5 | 40 | 5 | 1 | 2 |
| BZX84C6V2 | R8 | 6.2 | 5.8 | 6.6 | 5 | 10 | 5 | 3 | 4 |
| BZX84C6V8 | X8 | 6.8 | 6.4 | 7.2 | 5 | 15 | 5 | 2 | 4 |
| BZX84C7V5 | Y8 | 7.5 | 7 | 7.9 | 5 | 15 | 5 | 1 | 5 |
| BZX84C8V2 | Z8 | 8.2 | 7.7 | 8.7 | 5 | 15 | 5 | 0.7 | 5 |
| BZX84C9V1 | A9 | 9.1 | 8.5 | 9.6 | 5 | 15 | 5 | 0.5 | 6 |
| BZX84C10 | B9 | 10 | 9.4 | 10.6 | 5 | 20 | 5 | 0.2 | 7 |
| BZX84C11 | C9 | 11 | 10.4 | 11.6 | 5 | 20 | 5 | 0.1 | 8 |
| BZX84C12 | D9 | 12 | 11.4 | 12.7 | 5 | 25 | 5 | 0.1 | 8 |
| BZX84C13 | E9 | 13 | 12.4 | 14.1 | 5 | 30 | 5 | 0.1 | 8 |
| BZX84C15 | F9 | 15 | 13.8 | 15.6 | 5 | 30 | 5 | 0.05 | 10.5 |
| BZX84C16 | H9 | 16 | 15.3 | 17.1 | 5 | 40 | 5 | 0.05 | 11.2 |
| BZX84C18 | J9 | 18 | 16.8 | 19.1 | 5 | 45 | 5 | 0.05 | 12.6 |
| BZX84C20 | K9 | 20 | 18.8 | 21.2 | 5 | 55 | 5 | 0.05 | 14 |
| BZX84C22 | M9 | 22 | 20.8 | 23.3 | 5 | 55 | 5 | 0.05 | 15.4 |
| BZX84C24 | N9 | 24 | 22.8 | 25.6 | 5 | 70 | 5 | 0.05 | 16.8 |
| BZX84C27 | P9 | 27 | 25.1 | 28.9 | 2 | 80 | 2 | 0.05 | 18.9 |
| BZX84C30 | R9 | 30 | 28 | 32 | 2 | 80 | 2 | 0.05 | 21 |
| BZX84C33 | X9 | 33 | 31 | 35 | 2 | 80 | 2 | 0.05 | 23.1 |
| BZX84C36 | Y9 | 36 | 34 | 38 | 2 | 90 | 2 | 0.05 | 25.2 |
| BZX84C39 | Z9 | 39 | 37 | 41 | 2 | 130 | 2 | 0.05 | 27.3 |
| BZX84C43 | A0 | 43 | 40 | 46 | 2 | 150 | 2 | 0.05 | 30.1 |
| BZX84C47 | B0 | 47 | 44 | 50 | 2 | 170 | 2 | 0.05 | 32.9 |
| BZX84C51 | C0 | 51 | 48 | 54 | 2 | 180 | 2 | 0.05 | 35.7 |
| BZX84C56 | D0 | 56 | 52 | 60 | 2 | 200 | 2 | 0.05 | 39.2 |
| BZX84C62 | E0 | 62 | 58 | 66 | 2 | 215 | 2 | 0.05 | 43.4 |
| BZX84C68 | F0 | 68 | 64 | 72 | 2 | 240 | 2 | 0.05 | 47.6 |
| BZX84C75 | H0 | 75 | 70 | 79 | 2 | 255 | 2 | 0.05 | 52.5 |

¹⁾ Tested with pulses $t_p = 20\text{ ms}$.



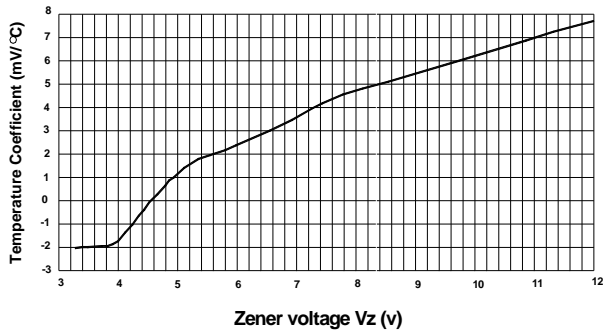
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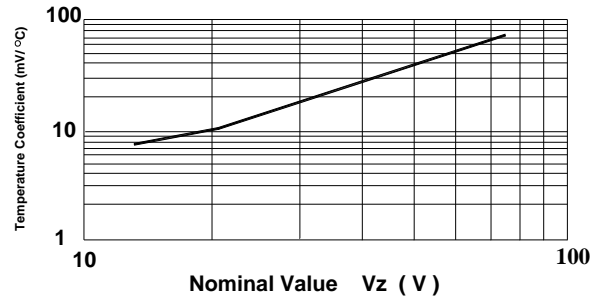
Dated: 16/03/2015 Rev: 03

BZX84C...Series

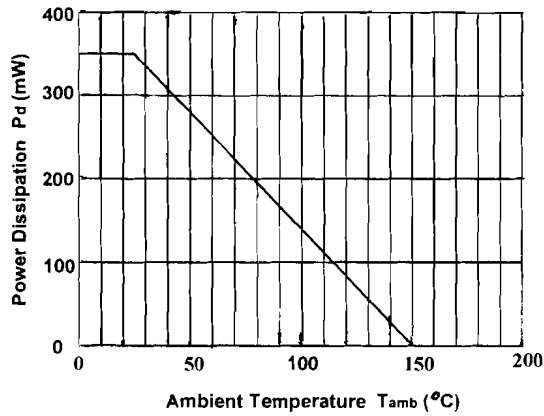
Temperature Coefficient



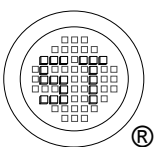
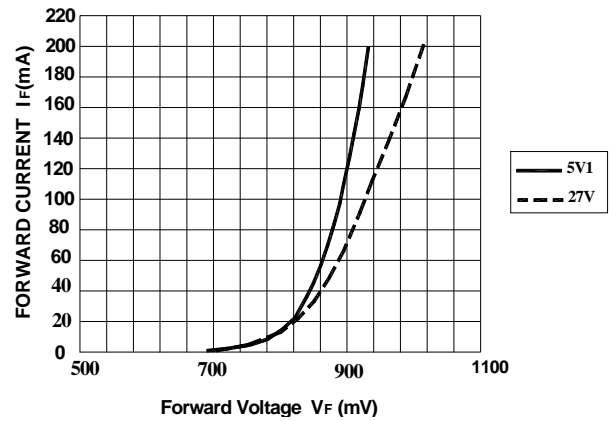
Temperature Coefficient



Power Derating Curve



Typical Forward Voltage



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