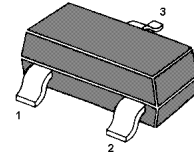
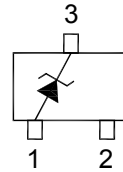


# BZX84C...Series

## 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

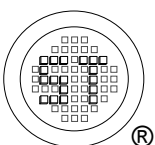
### Features

- 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 <sup>1)</sup> | $R_{\theta JA}$ | 357           | $^\circ\text{C/W}$ |
| Junction and Storage Temperature Range                | $T_j, T_{stg}$  | - 65 to + 150 | $^\circ\text{C}$   |

<sup>1)</sup> Alumina = 0.4 X 0.3 X 0.024 in, 99.5% alumina



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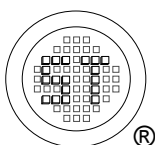
Dated: 16/03/2015 Rev: 03

# 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 <sup>1)</sup> |          |          |             | 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. ( $\Omega$ ) | (mA)        | Max. ( $\mu\text{A}$ ) | (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     |

<sup>1)</sup> Tested with pulses  $t_p = 20\text{ ms}$ .

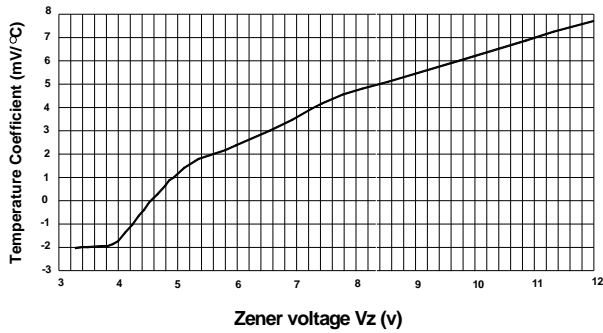


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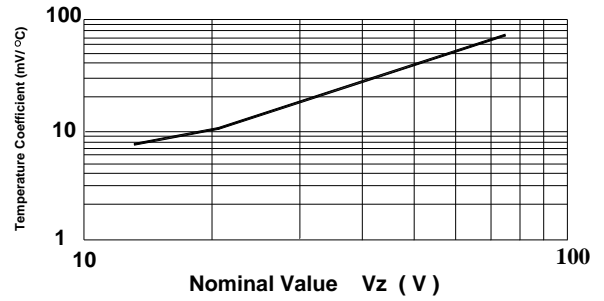


# BZX84C...Series

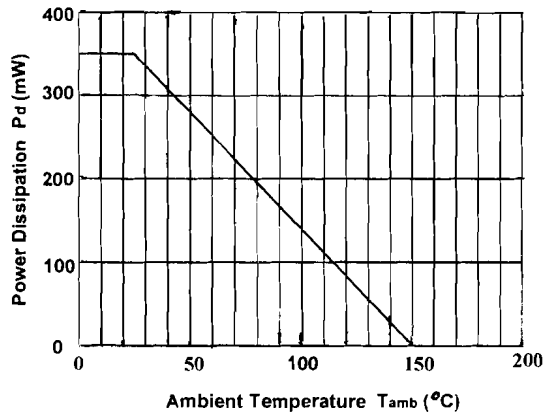
Temperature Coefficient



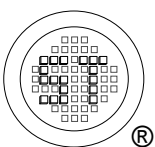
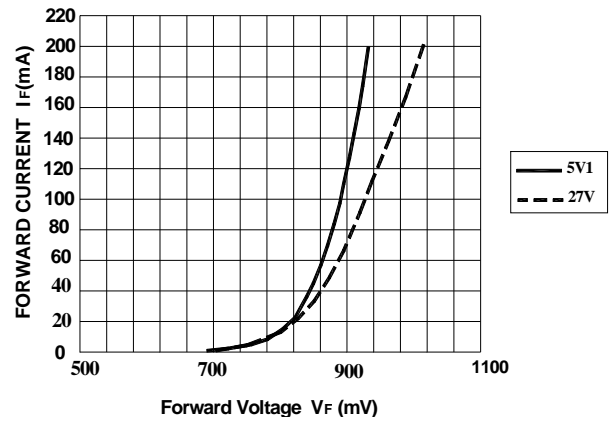
Temperature Coefficient



Power Derating Curve



Typical Forward Voltage



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