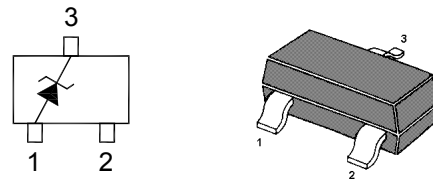


# BZX84C...Series

## 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

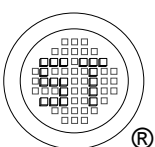
### Features

- 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



**SEMTECH ELECTRONICS LTD.**



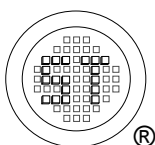
Dated: 16/03/2015 Rev: 03

# 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  $t_p = 20\text{ ms}$ .



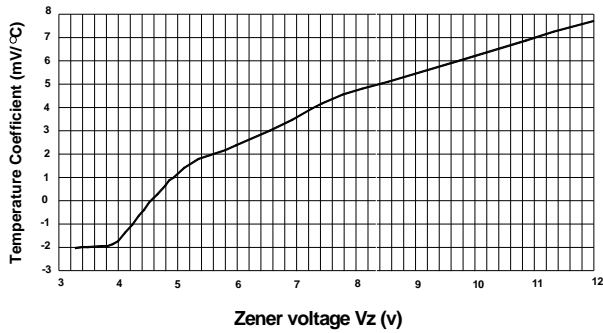
**SEMTECH ELECTRONICS LTD.**



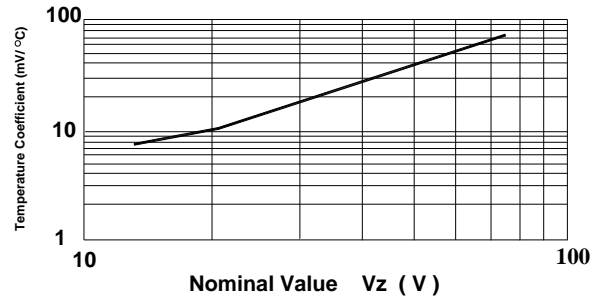
Dated: 16/03/2015 Rev: 03

# BZX84C...Series

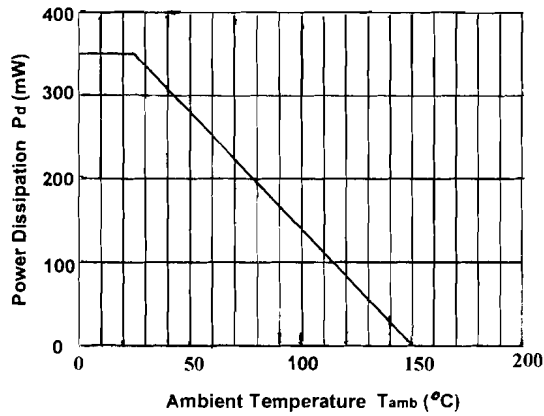
Temperature Coefficient



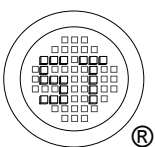
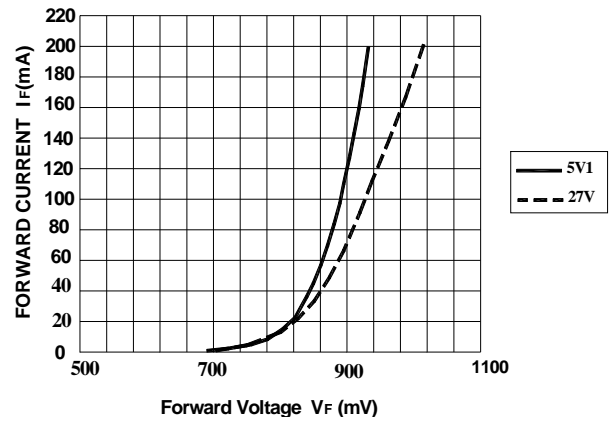
Temperature Coefficient



Power Derating Curve



Typical Forward Voltage



**SEMTECH ELECTRONICS LTD.**



## X-ON Electronics

Largest Supplier of Electrical and Electronic Components

*Click to view similar products for [Zener Diodes](#) category:*

*Click to view products by [Semtech](#) manufacturer:*

Other Similar products are found below :

[RKZ13B2KG#P1](#) [DL5234B](#) [EDZTE6113B](#) [1N4682](#) [1N4691](#) [1N4693](#) [1N4732A](#) [1N4736A](#) [1N4750A](#) [1N4759ARL](#) [1N5241B](#) [1N5365B](#)  
[1N5369B](#) [1N747A](#) [1N959B](#) [1N964B](#) [1N966B](#) [1N968B](#) [1N972B](#) [NTE5121A](#) [NTE5147A](#) [NTE5152A](#) [NTE5155A](#) [NTE5164A](#)  
[JANS1N4974US](#) [1N4692](#) [1N4700](#) [1N4702](#) [1N4704](#) [1N4711](#) [1N4714](#) [1N4737A](#) [1N4745ARL](#) [1N4752A](#) [1N4752ARL](#) [1N4760ARL](#)  
[1N5221B](#) [1N5236B](#) [1N5241BTR](#) [1N5242BTR](#) [1N5350B](#) [1N5352B](#) [1N961BRR1](#) [1N964BRL](#) [RKZ5.1BKU#P6](#) [3SMAJ5946B-TP](#)  
[3SMAJ5950B-TP](#) [3SMBJ5925B-TP](#) [441774C](#) [BZX84C3V9](#)