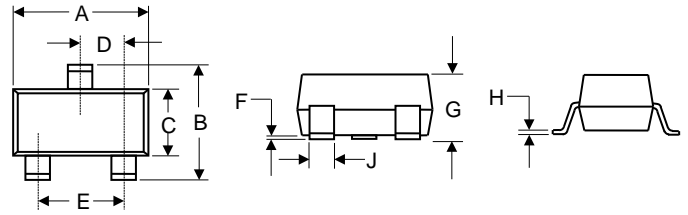
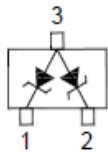


### Features

- \* Zener breakdown voltage range - 2.4 V to 75 V
- \* Package designed for optimal automated board assembly
- \* Small package size for high density applications



**RoHS**  
COMPLIANT



1. Cathode
2. Cathode
3. Anode

| SOT-23 |        |       |      |      |
|--------|--------|-------|------|------|
| DIM    | INCHES |       | MM   |      |
|        | MIN    | MAX   | MIN  | MAX  |
| A      | 0.110  | 0.120 | 2.80 | 3.04 |
| B      | 0.087  | 0.102 | 2.20 | 2.60 |
| C      | 0.047  | 0.055 | 1.20 | 1.40 |
| D      | 0.035  | 0.04  | 0.89 | 1.02 |
| E      | 0.070  | 0.080 | 1.78 | 2.04 |
| F      | ---    | 0.004 | ---  | 0.10 |
| G      | 0.035  | 0.047 | 0.89 | 1.20 |
| H      | 0.003  | 0.008 | 0.08 | 0.19 |
| J      | 0.015  | 0.02  | 0.37 | 0.51 |

### Maximum Ratings (TA=25°C unless otherwise noted)

| Parameter   | Symbol                            | Value         | Unit |
|---|-----------------------------------|---------------|------|
| Power Dissipation                                     | P <sub>D</sub>                    | 350           | mW   |
| Thermal Resistance, Junction to Ambient <sup>1)</sup> | R <sub>θJA</sub>                  | 357           | °C/W |
| Junction and Storage Temperature Range                | T <sub>j</sub> / T <sub>stg</sub> | - 65 to + 150 | °C   |

Note:

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

### Characteristics (TA=25°C unless otherwise noted)

| Parameter                                 | Symbol         | Max. | Unit |
|---|----------------|------|------|
| Forward Voltage at I <sub>F</sub> = 10 mA | V <sub>F</sub> | 0.9  | V    |

### Electrical Characteristics (T<sub>A</sub>=25°C unless otherwise noted)

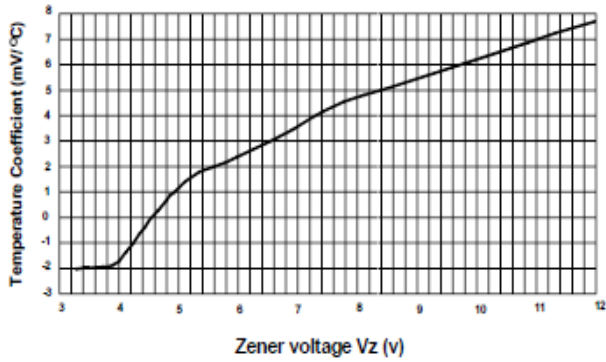
| Type        | Marking Code | Zener Voltage Range <sup>1)</sup> |          |          |                    | Dynamic Resistance |                    | Reverse Leakage Current |                   |
|-------------|--------------|-----------------------------------|----------|----------|--------------------|--------------------|--------------------|-------------------------|-------------------|
|             |              | V <sub>Z</sub>                    |          |          | at I <sub>ZT</sub> | Z <sub>ZT</sub>    | at I <sub>ZT</sub> | I <sub>R</sub>          | at V <sub>R</sub> |
|             |              | Nom. (V)                          | Min. (V) | Max. (V) | mA                 | Max. (Ω)           | mA                 | Max. (μA)               | V                 |
| BZX84C2V4CA | 7H           | 2.4                               | 2.2      | 2.6      | 5                  | 100                | 5                  | 50                      | 1                 |
| BZX84C2V7CA | 7J           | 2.7                               | 2.5      | 2.9      | 5                  | 100                | 5                  | 20                      | 1                 |
| BZX84C3V0CA | MR           | 3                                 | 2.8      | 3.2      | 5                  | 95                 | 5                  | 10                      | 1                 |
| BZX84C3V3CA | MX           | 3.3                               | 3.1      | 3.5      | 5                  | 95                 | 5                  | 5                       | 1                 |
| BZX84C3V6CA | MY           | 3.6                               | 3.4      | 3.8      | 5                  | 90                 | 5                  | 5                       | 1                 |
| BZX84C3V9CA | MZ           | 3.9                               | 3.7      | 4.1      | 5                  | 90                 | 5                  | 3                       | 1                 |
| BZX84C4V3CA | NA           | 4.3                               | 4        | 4.6      | 5                  | 90                 | 5                  | 3                       | 1                 |
| BZX84C4V7CA | NB           | 4.7                               | 4.4      | 5        | 5                  | 80                 | 5                  | 3                       | 2                 |
| BZX84C5V1CA | NC           | 5.1                               | 4.8      | 5.4      | 5                  | 60                 | 5                  | 2                       | 2                 |
| BZX84C5V6CA | ND           | 5.6                               | 5.2      | 6        | 5                  | 40                 | 5                  | 1                       | 2                 |
| BZX84C6V2CA | NE           | 6.2                               | 5.8      | 6.6      | 5                  | 10                 | 5                  | 3                       | 4                 |
| BZX84C6V8CA | NF           | 6.8                               | 6.4      | 7.2      | 5                  | 15                 | 5                  | 2                       | 4                 |
| BZX84C7V5CA | NH           | 7.5                               | 7        | 7.9      | 5                  | 15                 | 5                  | 1                       | 5                 |
| BZX84C8V2CA | NJ           | 8.2                               | 7.7      | 8.7      | 5                  | 15                 | 5                  | 0.7                     | 5                 |
| BZX84C9V1CA | NK           | 9.1                               | 8.5      | 9.6      | 5                  | 15                 | 5                  | 0.5                     | 6                 |
| BZX84C10CA  | NM           | 10                                | 9.4      | 10.6     | 5                  | 20                 | 5                  | 0.2                     | 7                 |
| BZX84C11CA  | NN           | 11                                | 10.4     | 11.6     | 5                  | 20                 | 5                  | 0.1                     | 8                 |
| BZX84C12CA  | NP           | 12                                | 11.4     | 12.7     | 5                  | 25                 | 5                  | 0.1                     | 8                 |
| BZX84C13CA  | NX           | 13                                | 12.4     | 14.1     | 5                  | 30                 | 5                  | 0.1                     | 8                 |
| BZX84C15CA  | NY           | 15                                | 14.3     | 15.8     | 5                  | 30                 | 5                  | 0.05                    | 10.5              |
| BZX84C16CA  | NZ           | 16                                | 15.3     | 17.1     | 5                  | 40                 | 5                  | 0.05                    | 11.2              |
| BZX84C18CA  | PA           | 18                                | 16.8     | 19.1     | 5                  | 45                 | 5                  | 0.05                    | 12.6              |
| BZX84C20CA  | PB           | 20                                | 18.8     | 21.2     | 5                  | 55                 | 5                  | 0.05                    | 14                |
| BZX84C22CA  | PC           | 22                                | 20.8     | 23.3     | 5                  | 55                 | 5                  | 0.05                    | 15.4              |
| BZX84C24CA  | PD           | 24                                | 22.8     | 25.6     | 5                  | 70                 | 5                  | 0.05                    | 16.8              |
| BZX84C27CA  | PE           | 27                                | 25.1     | 28.9     | 2                  | 80                 | 2                  | 0.05                    | 18.9              |
| BZX84C30CA  | PF           | 30                                | 28       | 32       | 2                  | 80                 | 2                  | 0.05                    | 21                |
| BZX84C33CA  | PH           | 33                                | 31       | 35       | 2                  | 80                 | 2                  | 0.05                    | 23.1              |
| BZX84C36CA  | PJ           | 36                                | 34       | 38       | 2                  | 90                 | 2                  | 0.05                    | 25.2              |
| BZX84C39CA  | PM           | 39                                | 37       | 41       | 2                  | 130                | 2                  | 0.05                    | 27.3              |
| BZX84C43CA  | PN           | 43                                | 40       | 46       | 2                  | 150                | 2                  | 0.05                    | 30.1              |
| BZX84C47CA  | PP           | 47                                | 44       | 50       | 2                  | 170                | 2                  | 0.05                    | 32.9              |
| BZX84C51CA  | 7K           | 51                                | 48       | 54       | 2                  | 180                | 2                  | 0.05                    | 35.7              |
| BZX84C56CA  | 7M           | 56                                | 52       | 60       | 2                  | 200                | 2                  | 0.05                    | 39.2              |
| BZX84C62CA  | 7N           | 62                                | 58       | 66       | 2                  | 215                | 2                  | 0.05                    | 43.4              |
| BZX84C68CA  | 7P           | 68                                | 64       | 72       | 2                  | 240                | 2                  | 0.05                    | 47.6              |
| BZX84C75CA  | 7R           | 75                                | 70       | 79       | 2                  | 255                | 2                  | 0.05                    | 52.5              |

Note:

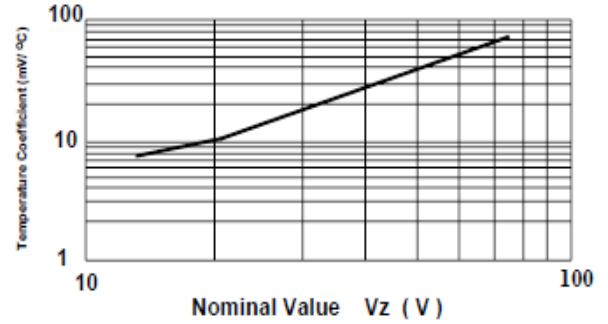
1) Tested with pulses t<sub>p</sub> = 20 ms.

### Ratings and Characteristic Curves

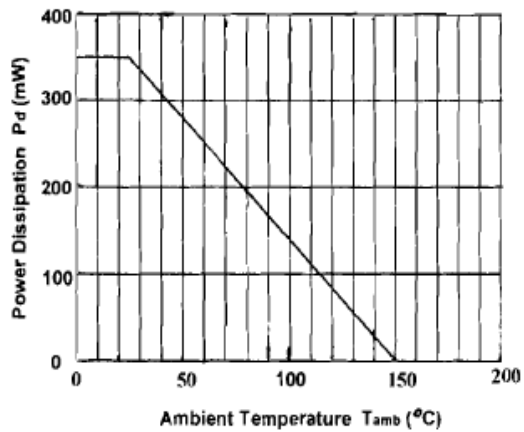
Temperature Coefficient



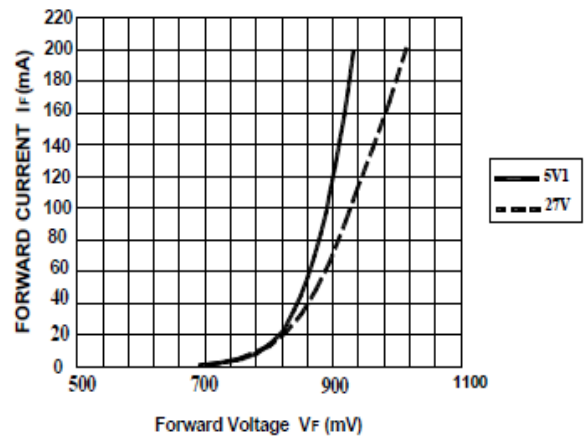
Temperature Coefficient



Power Derating Curve



Typical Forward Voltage





## BZX84C...CA Series Silicon Planar Zener Diodes

### Ordering Information

| Part No.           | Package | Packing Code | Packing      |
|--------------------|---------|--------------|--------------|
| BZX84C...CA Series | SOT-23  | R30          | 3000pcs/Reel |

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