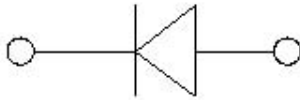
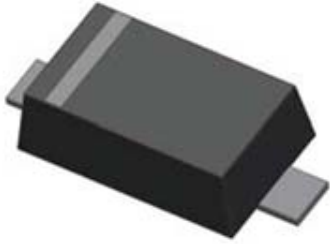


## Small Signal Zener Diodes



### Features

- Epoxy meets UL-94 V-0 flammability rating and halogen free
- Moisture Sensitivity Level 1
- Zener Voltage 3.6V~36V
- $V_z$ -tolerance  $\pm 2\%$  approximately
- ESD Rating of Class 3 ( $> 16$  kV) per Human Body Mode
- Part no. with suffix "Q" means AEC-Q101 qualified

### Applications

- General regulation functions

### Mechanical Data

- **Case:** SOD523
- **Terminals:** Tin plated leads, solderable per J-STD-002 and JESD22-B102
- **Polarity:** Cathode line denotes the cathode end

### ■ Maximum Ratings ( $T_a=25^\circ\text{C}$ Unless otherwise specified)

| PARAMETER                                     | SYMBOL          | UNIT                        | VALUE       |
|---|-----------------|-----------------------------|-------------|
| Power Dissipation                             | $P_D$           | mW                          | 250         |
| Storage Temperature Range                     | $T_{stg}$       | $^\circ\text{C}$            | -55~+150    |
| Junction Temperature                          | $T_J$           | $^\circ\text{C}$            | -55~+150    |
| Maximum Regulator Current                     | $I_{ZM}$        | mA                          | $P_D / V_z$ |
| Maximum Forward Voltage ( $I_F=10\text{mA}$ ) | $V_F$           | V                           | 0.9         |
| Thermal Resistance Junction to Ambient Air*   | $R_{\theta JA}$ | $^\circ\text{C} / \text{W}$ | 500         |

### ■ Ordering Information (Example)

| PREFERRED P/N                   | PACKING CODE | UNIT WEIGHT(g)    | MINIMUM PACKAGE(pcs) | INNER BOX QUANTITY(pcs) | OUTER CARTON QUANTITY(pcs) | DELIVERY MODE |
|---------------------------------|--------------|-------------------|----------------------|-------------------------|----------------------------|---------------|
| BZX584B3V6Q THRU<br>BZX584B36VQ | F2           | Approximate 0.002 | 8000                 | 80000                   | 320000                     | 7" reel       |



## BZX584B3V6Q THRU BZX584B36VQ

### ■ Electrical Characteristics (T<sub>a</sub>=25°C Unless otherwise specified)

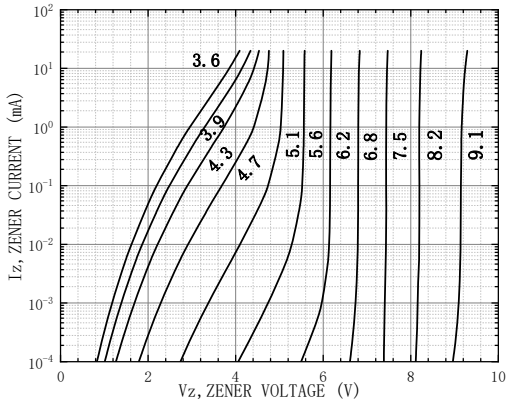
| Type Number | Device Marking | V <sub>z</sub> at I <sub>z</sub> (V) |      |       | I <sub>z</sub> | Z <sub>z</sub> (Ω)  |      | Z <sub>zk</sub> (Ω)  |      | I <sub>R</sub> (μA)@V <sub>R</sub> |                    | Typical Temperature Coefficient@ I <sub>zTC</sub> mV/°C |      | Test Current I <sub>zTC</sub> |
|-------------|----------------|--------------------------------------|------|-------|----------------|---------------------|------|----------------------|------|------------------------------------|--------------------|---|------|-------------------------------|
|             |                | min.                                 | typ. | max.  | mA             | I <sub>z</sub> (mA) | max. | I <sub>zk</sub> (mA) | max. | uA                                 | V <sub>R</sub> (V) | Min   | Max  | mA                            |
| BZX584B3V6Q | 45             | 3.53                                 | 3.6  | 3.67  | 5              | 5                   | 90   | 1.0                  | 600  | 5                                  | 1.0                | -3.5  | 0    | 5                             |
| BZX584B3V9Q | +5             | 3.82                                 | 3.9  | 3.98  | 5              | 5                   | 90   | 1.0                  | 600  | 3                                  | 1.0                | -3.5  | 0    | 5                             |
| BZX584B4V3Q | 65             | 4.21                                 | 4.3  | 4.39  | 5              | 5                   | 90   | 1.0                  | 600  | 3                                  | 1.0                | -3.5  | 0    | 5                             |
| BZX584B4V7Q | 75             | 4.61                                 | 4.7  | 4.79  | 5              | 5                   | 80   | 1.0                  | 500  | 3                                  | 2.0                | -3.5  | 0.2  | 5                             |
| BZX584B5V1Q | 85             | 5.0                                  | 5.1  | 5.2   | 5              | 5                   | 60   | 1.0                  | 480  | 2                                  | 2.0                | -2.7  | 1.2  | 5                             |
| BZX584B5V6Q | 95             | 5.49                                 | 5.6  | 5.71  | 5              | 5                   | 40   | 1.0                  | 400  | 1                                  | 2.0                | -2  | 2.5  | 5                             |
| BZX584B6V2Q | A5             | 6.08                                 | 6.2  | 6.32  | 5              | 5                   | 10   | 1.0                  | 150  | 3                                  | 4.0                | 0.4   | 3.7  | 5                             |
| BZX584B6V8Q | B5             | 6.66                                 | 6.8  | 6.94  | 5              | 5                   | 15   | 1.0                  | 80   | 2                                  | 4.0                | 1.2   | 4.5  | 5                             |
| BZX584B7V5Q | C5             | 7.35                                 | 7.5  | 7.65  | 5              | 5                   | 15   | 1.0                  | 80   | 1                                  | 5.0                | 2.5   | 5.3  | 5                             |
| BZX584B8V2Q | D5             | 8.04                                 | 8.2  | 8.36  | 5              | 5                   | 15   | 1.0                  | 80   | 0.7                                | 5.0                | 3.2   | 6.2  | 5                             |
| BZX584B9V1Q | E5             | 8.92                                 | 9.1  | 9.28  | 5              | 5                   | 15   | 1.0                  | 100  | 0.5                                | 6.0                | 3.8   | 7.0  | 5                             |
| BZX584B10VQ | F5             | 9.8                                  | 10   | 10.2  | 5              | 5                   | 20   | 1.0                  | 150  | 0.2                                | 7.0                | 4.5   | 8.0  | 5                             |
| BZX584B11VQ | G5             | 10.78                                | 11   | 11.22 | 5              | 5                   | 20   | 1.0                  | 150  | 0.1                                | 8.0                | 5.4   | 9.0  | 5                             |
| BZX584B12VQ | H5             | 11.76                                | 12   | 12.24 | 5              | 5                   | 25   | 1.0                  | 150  | 0.1                                | 8.0                | 6.0   | 10.0 | 5                             |
| BZX584B13VQ | J5             | 12.74                                | 13   | 13.3  | 5              | 5                   | 30   | 1.0                  | 170  | 0.1                                | 8.0                | 7.0   | 11.0 | 5                             |
| BZX584B15VQ | K5             | 14.7                                 | 15   | 15.3  | 5              | 5                   | 30   | 1.0                  | 200  | 0.1                                | 10.5               | 9.2   | 13.0 | 5                             |
| BZX584B16VQ | L5             | 15.68                                | 16   | 16.3  | 5              | 5                   | 40   | 1.0                  | 200  | 0.1                                | 11.2               | 10.4  | 14.0 | 5                             |
| BZX584B18VQ | M5             | 17.6                                 | 18   | 18.4  | 5              | 5                   | 45   | 1.0                  | 225  | 0.1                                | 12.6               | 12.4  | 16.0 | 5                             |
| BZX584B20VQ | N5             | 19.6                                 | 20   | 20.4  | 5              | 5                   | 55   | 1.0                  | 225  | 0.1                                | 14.0               | 14.4  | 18.0 | 5                             |
| BZX584B22VQ | P5             | 21.56                                | 22   | 22.44 | 5              | 5                   | 55   | 1.0                  | 250  | 0.1                                | 15.4               | 16.4  | 20.0 | 5                             |
| BZX584B24VQ | R5             | 23.52                                | 24   | 24.5  | 5              | 5                   | 70   | 1.0                  | 250  | 0.1                                | 16.8               | 18.4  | 22.0 | 5                             |
| BZX584B27VQ | S5             | 26.46                                | 27   | 27.54 | 2              | 2                   | 80   | 0.5                  | 300  | 0.1                                | 18.9               | 21.4  | 25.3 | 2                             |
| BZX584B30VQ | T5             | 29.4                                 | 30   | 30.6  | 2              | 2                   | 80   | 0.5                  | 300  | 0.1                                | 21.0               | 24.4  | 29.4 | 2                             |
| BZX584B33VQ | U5             | 32.34                                | 33   | 33.7  | 2              | 2                   | 80   | 0.5                  | 325  | 0.1                                | 23.1               | 27.4  | 33.4 | 2                             |
| BZX584B36VQ | V5             | 35.28                                | 36   | 36.72 | 2              | 2                   | 90   | 0.5                  | 350  | 0.1                                | 25.2               | 30.4  | 37.4 | 2                             |



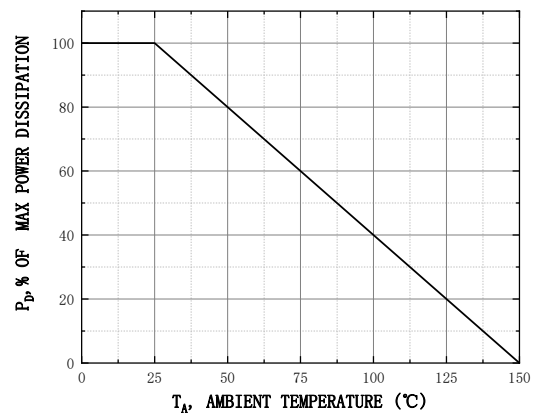
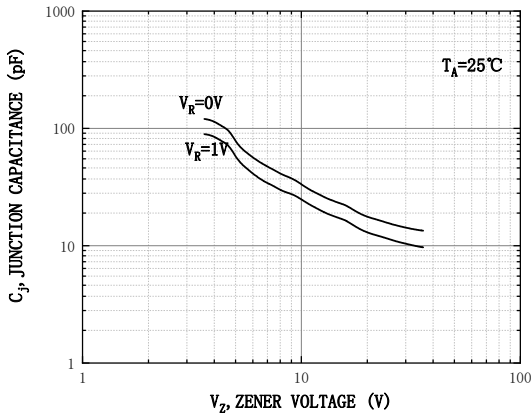
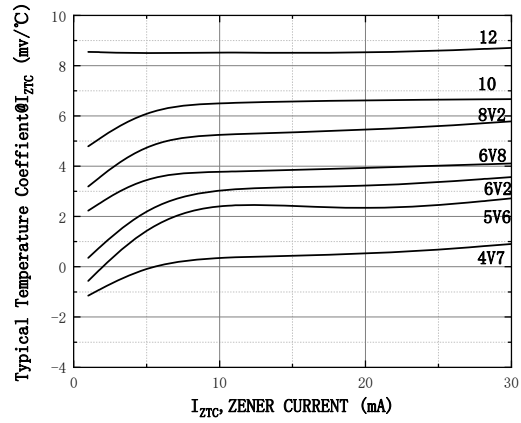
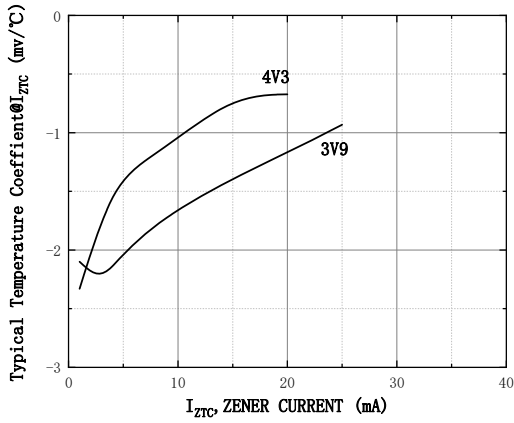
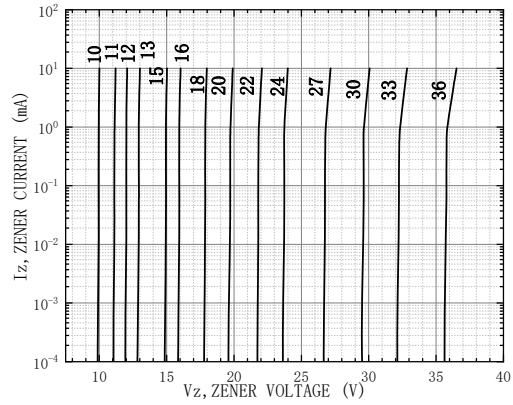
# BZX584B3V6Q THRU BZX584B36VQ

## ■ Characteristics (Typical)

ZENER BREAKDOWN CHARACTERISTICS

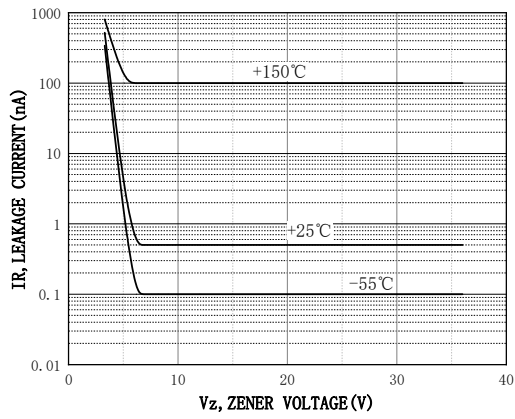


ZENER BREAKDOWN CHARACTERISTICS





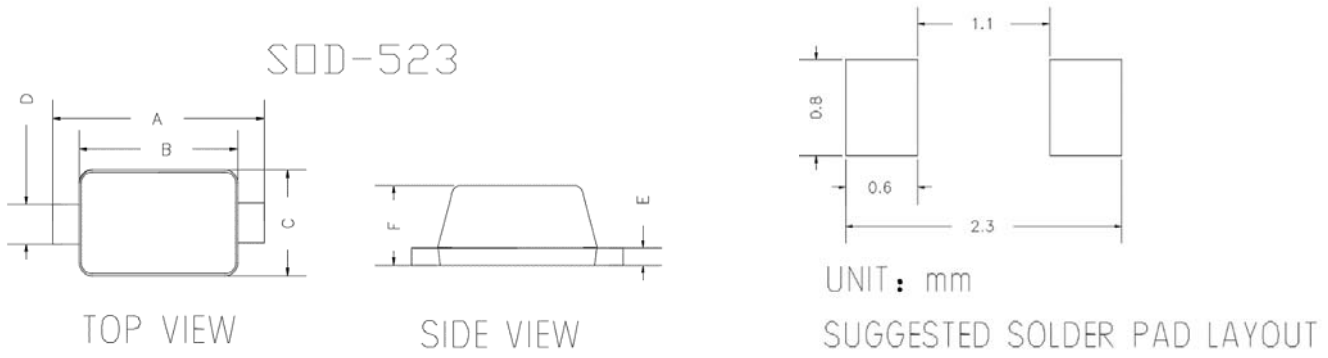
# BZX584B3V6Q THRU BZX584B36VQ





# BZX584B3V6Q THRU BZX584B36VQ

## ■ Outline Dimensions



| DIMENSIONS |        |       |       |       |
|------------|--------|-------|-------|-------|
| DIM        | INCHES |       | MM    |       |
|            | MIN    | MAX   | MIN   | MAX   |
| A          | 0.059  | 0.067 | 1.500 | 1.700 |
| B          | 0.043  | 0.051 | 1.100 | 1.300 |
| C          | 0.028  | 0.035 | 0.700 | 0.900 |
| D          | 0.010  | 0.014 | 0.250 | 0.350 |
| E          | 0.002  | 0.008 | 0.050 | 0.200 |
| F          | 0.020  | 0.028 | 0.500 | 0.700 |

## ■ Marking Information



**Note:**

1. All marking is at middle of the product body
2. All marking is in laser marking
3. XX is Marking Code
4. Body color: Black



## BZX584B3V6Q THRU BZX584B36VQ

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