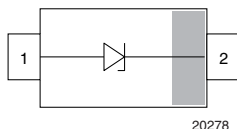
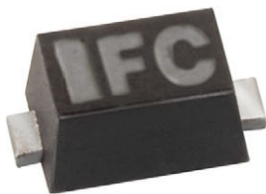


## Small Signal Zener Diodes



### FEATURES

- With the BZX584C...-V-G-Series Vishay offers a Z-diode in the tiny SOD-523 plastic package. Made for space sensitive applications the BZX584C...-V-G-Series has a Zener voltage tolerance of  $\pm 5\%$
- Material categorization:  
for definitions of compliance please see [www.vishay.com/doc?99912](http://www.vishay.com/doc?99912)



**RoHS**  
COMPLIANT  
HALOGEN  
**FREE**  
**GREEN**  
(5-2008)

### DESIGN SUPPORT TOOLS

[click logo to get started](#)

**3D**  
Models  
Available

### PRIMARY CHARACTERISTICS

| PARAMETER             | VALUE         | UNIT |
|-----------------------|---------------|------|
| $V_Z$ range nom.      | 2.4 to 51     | V    |
| Test current $I_{ZT}$ | 2; 5          | mA   |
| $V_Z$ specification   | Pulse current |      |
| Circuit configuration | Single        |      |

### ORDERING INFORMATION

| DEVICE NAME           | ORDERING CODE            | TAPED UNITS PER REEL        | MINIMUM ORDER QUANTITY |
|-----------------------|--------------------------|-----------------------------|------------------------|
| BZX584Cxxx-V-G-series | BZX584Cxxx-V-G-series-08 | 3000 (8 mm tape on 7" reel) | 3000                   |

#### Note

- xxx stands for any part number/voltage group, as shown in the table of page 2

### PACKAGE

| PACKAGE NAME | WEIGHT | MOLDING COMPOUND<br>FLAMMABILITY RATING | MOISTURE SENSITIVITY<br>LEVEL        | SOLDERING<br>CONDITIONS  |
|--------------|--------|-----------------------------------------|--------------------------------------|--------------------------|
| SOD-523      | 1.4 mg | UL 94 V-0                               | MSL level 1<br>(according J-STD-020) | 260 °C/10 s at terminals |

### ABSOLUTE MAXIMUM RATINGS ( $T_{amb} = 25\text{ °C}$ , unless otherwise specified)

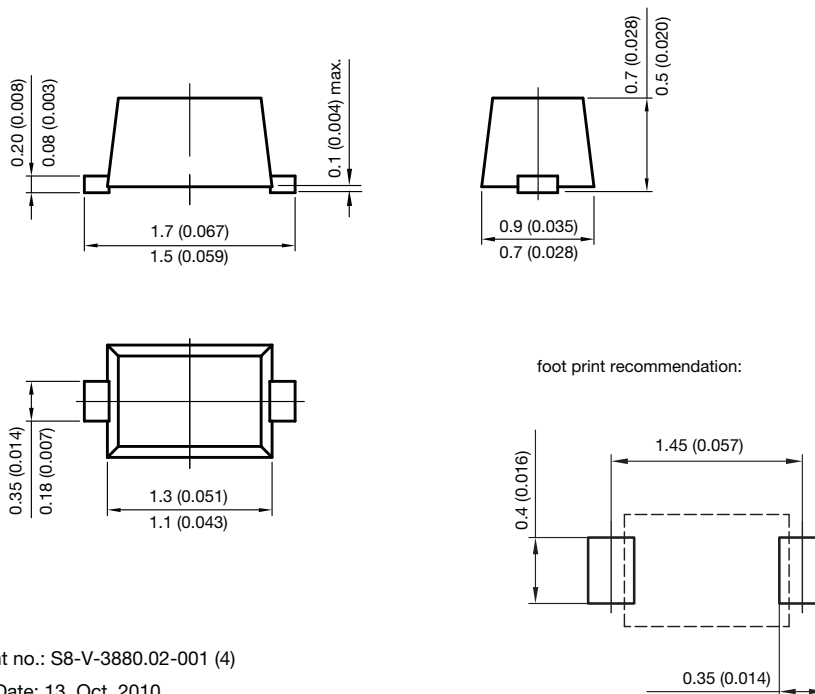
| PARAMETER                                  | TEST CONDITION                 | SYMBOL     | VALUE       | UNIT |
|--------------------------------------------|--------------------------------|------------|-------------|------|
| Power dissipation                          | Device on fiberglass substrate | $P_{tot}$  | 200         | mW   |
| Thermal resistance junction to ambient air | Device on fiberglass substrate | $R_{thJA}$ | 680         | K/W  |
| Junction temperature                       |                                | $T_j$      | 150         | °C   |
| Storage temperature range                  |                                | $T_{stg}$  | -65 to +150 | °C   |



| <b>ELECTRICAL CHARACTERISTICS</b> ( $T_{amb} = 25\text{ }^{\circ}\text{C}$ , unless otherwise specified) |              |                     |      |      |              |           |                       |                 |                    |                       |                                          |      |
|----------------------------------------------------------------------------------------------------------|--------------|---------------------|------|------|--------------|-----------|-----------------------|-----------------|--------------------|-----------------------|------------------------------------------|------|
| PART NUMBER                                                                                              | MARKING CODE | ZENER VOLTAGE RANGE |      |      | TEST CURRENT |           | REVERSE LAEKG CURRENT |                 | DYNAMIC RESISTANCE |                       | TEMPERATURE COEFFICIENT OF ZENER VOLTAGE |      |
|                                                                                                          |              | $V_Z$ at $I_{ZT1}$  |      |      | $I_{ZT1}$    | $I_{ZT2}$ | $I_R$ at $V_R$        |                 | $Z_Z$ at $I_{ZT1}$ | $Z_{ZK}$ at $I_{ZT2}$ | $\alpha_{VZ}$ at $I_{ZT1}$               |      |
|                                                                                                          |              | V                   |      |      | mA           |           | $\mu\text{A}$         | V               | $\Omega$           |                       | $10^{-4}/^{\circ}\text{C}$               |      |
|                                                                                                          |              | MIN.                | NOM. | MAX. |              |           | MAX.                  |                 | MAX.               | MAX.                  | MIN.                                     | MAX. |
| BZX584C2V4-V-G                                                                                           | .2           | 2.2                 | 2.4  | 2.6  | 5            | 1         | 50                    | 1               | 70 ( $\leq 100$ )  | 275 ( $\leq 600$ )    | -9                                       | -4   |
| BZX584C2V7-V-G                                                                                           | .3           | 2.5                 | 2.7  | 2.9  | 5            | 1         | 20                    | 1               | 75 ( $\leq 100$ )  | 300 ( $\leq 600$ )    | -9                                       | -4   |
| BZX584C3V0-V-G                                                                                           | .4           | 2.8                 | 3.0  | 3.2  | 5            | 1         | 10                    | 1               | 80 ( $\leq 95$ )   | 325 ( $\leq 600$ )    | -9                                       | -3   |
| BZX584C3V3-V-G                                                                                           | .5           | 3.1                 | 3.3  | 3.5  | 5            | 1         | 5                     | 1               | 85 ( $\leq 95$ )   | 350 ( $\leq 600$ )    | -8                                       | -3   |
| BZX584C3V6-V-G                                                                                           | .6           | 3.4                 | 3.6  | 3.8  | 5            | 1         | 5                     | 1               | 85 ( $\leq 90$ )   | 375 ( $\leq 600$ )    | -8                                       | -3   |
| BZX584C3V9-V-G                                                                                           | .7           | 3.7                 | 3.9  | 4.1  | 5            | 1         | 3                     | 1               | 85 ( $\leq 90$ )   | 400 ( $\leq 600$ )    | -7                                       | -3   |
| BZX584C4V3-V-G                                                                                           | .8           | 4                   | 4.3  | 4.6  | 5            | 1         | 3                     | 1               | 80 ( $\leq 90$ )   | 410 ( $\leq 600$ )    | -6                                       | -1   |
| BZX584C4V7-V-G                                                                                           | .9           | 4.4                 | 4.7  | 5    | 5            | 1         | 3                     | 2               | 50 ( $\leq 80$ )   | 425 ( $\leq 500$ )    | -5                                       | 2    |
| BZX584C5V1-V-G                                                                                           | .1           | 4.8                 | 5.1  | 5.4  | 5            | 1         | 2                     | 2               | 40 ( $\leq 60$ )   | 400 ( $\leq 480$ )    | -3                                       | 4    |
| BZX584C5V6-V-G                                                                                           | .0           | 5.2                 | 5.6  | 6    | 5            | 1         | 1                     | 2               | 15 ( $\leq 40$ )   | 80 ( $\leq 400$ )     | -2                                       | 6    |
| BZX584C6V2-V-G                                                                                           | .1           | 5.8                 | 6.2  | 6.6  | 5            | 1         | 3                     | 4               | 6 ( $\leq 10$ )    | 40 ( $\leq 150$ )     | -1                                       | 7    |
| BZX584C6V8-V-G                                                                                           | .2           | 6.4                 | 6.8  | 7.2  | 5            | 1         | 2                     | 4               | 6 ( $\leq 15$ )    | 30 ( $\leq 80$ )      | 2                                        | 7    |
| BZX584C7V5-V-G                                                                                           | .3           | 7                   | 7.5  | 7.9  | 5            | 1         | 1                     | 5               | 6 ( $\leq 15$ )    | 30 ( $\leq 80$ )      | 3                                        | 7    |
| BZX584C8V2-V-G                                                                                           | .4           | 7.7                 | 8.2  | 8.7  | 5            | 1         | 0.7                   | 5               | 6 ( $\leq 15$ )    | 40 ( $\leq 80$ )      | 4                                        | 7    |
| BZX584C9V1-V-G                                                                                           | .5           | 8.5                 | 9.1  | 9.6  | 5            | 1         | 0.5                   | 6               | 6 ( $\leq 15$ )    | 40 ( $\leq 100$ )     | 5                                        | 8    |
| BZX584C10-V-G                                                                                            | .6           | 9.4                 | 10   | 10.6 | 5            | 1         | 0.2                   | 7               | 8 ( $\leq 20$ )    | 50 ( $\leq 150$ )     | 5                                        | 8    |
| BZX584C11-V-G                                                                                            | .7           | 10.4                | 11   | 11.6 | 5            | 1         | 0.1                   | 8               | 10 ( $\leq 20$ )   | 50 ( $\leq 150$ )     | 5                                        | 9    |
| BZX584C12-V-G                                                                                            | .8           | 11.4                | 12   | 12.7 | 5            | 1         | 0.1                   | 8               | 10 ( $\leq 25$ )   | 50 ( $\leq 150$ )     | 6                                        | 9    |
| BZX584C13-V-G                                                                                            | .9           | 12.4                | 13   | 14.1 | 5            | 1         | 0.1                   | 8               | 10 ( $\leq 30$ )   | 50 ( $\leq 170$ )     | 7                                        | 9    |
| BZX584C15-V-G                                                                                            | .1           | 13.8                | 15   | 15.6 | 5            | 1         | 0.1                   | 8               | 10 ( $\leq 30$ )   | 50 ( $\leq 200$ )     | 7                                        | 9    |
| BZX584C16-V-G                                                                                            | .2           | 15.3                | 16   | 17.1 | 5            | 1         | 0.05                  | 0.7 $V_{Znom.}$ | 10 ( $\leq 40$ )   | 50 ( $\leq 200$ )     | 8                                        | 9.5  |
| BZX584C18-V-G                                                                                            | .3           | 16.8                | 18   | 19.1 | 5            | 1         | 0.05                  | 0.7 $V_{Znom.}$ | 10 ( $\leq 45$ )   | 50 ( $\leq 225$ )     | 8                                        | 9.5  |
| BZX584C20-V-G                                                                                            | .4           | 18.8                | 20   | 21.2 | 5            | 1         | 0.05                  | 0.7 $V_{Znom.}$ | 15 ( $\leq 55$ )   | 60 ( $\leq 225$ )     | 8                                        | 10   |
| BZX584C22-V-G                                                                                            | .5           | 20.8                | 22   | 23.3 | 5            | 1         | 0.05                  | 0.7 $V_{Znom.}$ | 20 ( $\leq 55$ )   | 60 ( $\leq 250$ )     | 8                                        | 10   |
| BZX584C24-V-G                                                                                            | .6           | 22.8                | 24   | 25.6 | 5            | 1         | 0.05                  | 0.7 $V_{Znom.}$ | 25 ( $\leq 70$ )   | 60 ( $\leq 250$ )     | 8                                        | 10   |
| BZX584C27-V-G                                                                                            | .7           | 25.1                | 27   | 28.9 | 2            | 0.5       | 0.05                  | 0.7 $V_{Znom.}$ | 25 ( $\leq 80$ )   | 65 ( $\leq 300$ )     | 8                                        | 10   |
| BZX584C30-V-G                                                                                            | .K           | 28                  | 30   | 32   | 2            | 0.5       | 0.05                  | 0.7 $V_{Znom.}$ | 30 ( $\leq 80$ )   | 70 ( $\leq 300$ )     | 8                                        | 10   |
| BZX584C33-V-G                                                                                            | .e           | 31                  | 33   | 35   | 2            | 0.5       | 0.05                  | 0.7 $V_{Znom.}$ | 35 ( $\leq 80$ )   | 75 ( $\leq 325$ )     | 8                                        | 10   |
| BZX584C36-V-G                                                                                            | .q           | 34                  | 36   | 38   | 2            | 0.5       | 0.05                  | 0.7 $V_{Znom.}$ | 35 ( $\leq 90$ )   | 80 ( $\leq 350$ )     | 8                                        | 10   |
| BZX584C39-V-G                                                                                            | .H           | 37                  | 39   | 41   | 2            | 0.5       | 0.05                  | 0.7 $V_{Znom.}$ | 40 ( $\leq 130$ )  | 80 ( $\leq 350$ )     | 10                                       | 12   |
| BZX584C43-V-G                                                                                            | .N           | 40                  | 43   | 46   | 2            | 0.5       | 0.05                  | 0.7 $V_{Znom.}$ | 45 ( $\leq 150$ )  | 85 ( $\leq 375$ )     | 10                                       | 12   |
| BZX584C47-V-G                                                                                            | .L           | 44                  | 47   | 50   | 2            | 0.5       | 0.05                  | 0.7 $V_{Znom.}$ | 50 ( $\leq 170$ )  | 85 ( $\leq 375$ )     | 10                                       | 12   |
| BZX584C51-V-G                                                                                            | .M           | 48                  | 51   | 54   | 2            | 0.5       | 0.05                  | 0.7 $V_{Znom.}$ | 60 ( $\leq 180$ )  | 85 ( $\leq 400$ )     | 10                                       | 12   |



**PACKAGE DIMENSIONS** in millimeters (inches): **SOD-523**



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