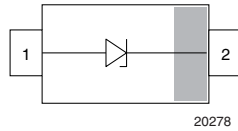




**THE DATASHEET OF  
BZX584C3V6-V-G-08**



## 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)



### DESIGN SUPPORT TOOLS

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| PRIMARY CHARACTERISTICS      |               |      |
|------------------------------|---------------|------|
| PARAMETER                    | VALUE         | UNIT |
| V <sub>Z</sub> range nom.    | 2.4 to 51     | V    |
| Test current I <sub>ZT</sub> | 2; 5          | mA   |
| V <sub>Z</sub> 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 FLAMMABILITY RATING | MOISTURE SENSITIVITY LEVEL        | SOLDERING CONDITIONS     |
| SOD-523      | 1.4 mg | UL 94 V-0                            | MSL level 1 (according J-STD-020) | 260 °C/10 s at terminals |

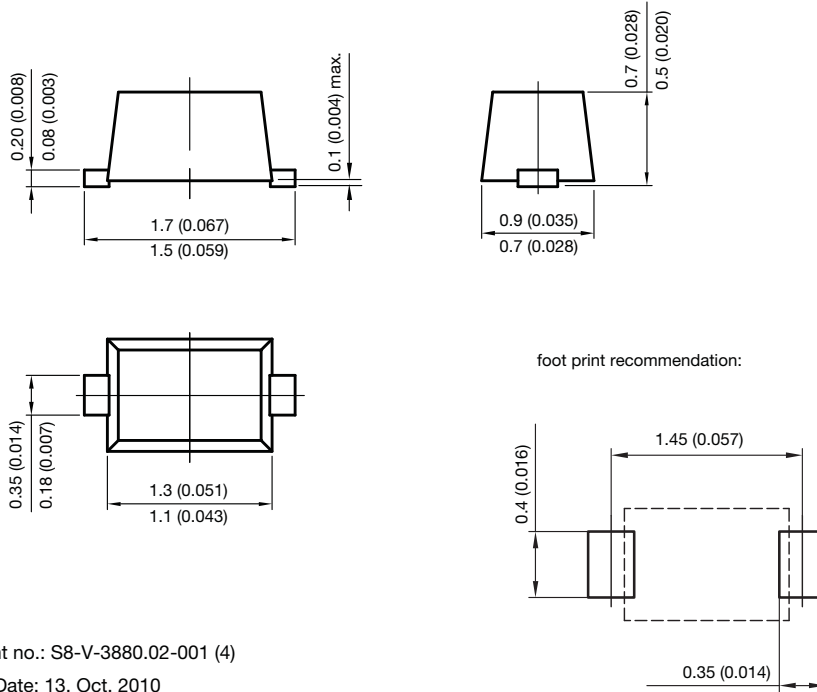
| ABSOLUTE MAXIMUM RATINGS (T <sub>amb</sub> = 25 °C, unless otherwise specified) |                                |                   |             |      |
|---|--------------------------------|-------------------|-------------|------|
| PARAMETER   | TEST CONDITION                 | SYMBOL            | VALUE       | UNIT |
| Power dissipation   | Device on fiberglass substrate | P <sub>tot</sub>  | 200         | mW   |
| Thermal resistance junction to ambient air                                      | Device on fiberglass substrate | R <sub>thJA</sub> | 680         | K/W  |
| Junction temperature  |                                | T <sub>j</sub>    | 150         | °C   |
| Storage temperature range   |                                | T <sub>stg</sub>  | -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 LAKEGE 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  | .8           | 28                  | 30   | 32   | 2            | 0.5       | 0.05                   | 0.7 $V_{Znom.}$ | 30 ( $\leq 80$ )   | 70 ( $\leq 300$ )     | 8  | 10   |
| BZX584C33-V-G  | .9           | 31                  | 33   | 35   | 2            | 0.5       | 0.05                   | 0.7 $V_{Znom.}$ | 35 ( $\leq 80$ )   | 75 ( $\leq 325$ )     | 8  | 10   |
| BZX584C36-V-G  | .0           | 34                  | 36   | 38   | 2            | 0.5       | 0.05                   | 0.7 $V_{Znom.}$ | 35 ( $\leq 90$ )   | 80 ( $\leq 350$ )     | 8  | 10   |
| BZX584C39-V-G  | .1           | 37                  | 39   | 41   | 2            | 0.5       | 0.05                   | 0.7 $V_{Znom.}$ | 40 ( $\leq 130$ )  | 80 ( $\leq 350$ )     | 10                                       | 12   |
| BZX584C43-V-G  | .2           | 40                  | 43   | 46   | 2            | 0.5       | 0.05                   | 0.7 $V_{Znom.}$ | 45 ( $\leq 150$ )  | 85 ( $\leq 375$ )     | 10                                       | 12   |
| BZX584C47-V-G  | .3           | 44                  | 47   | 50   | 2            | 0.5       | 0.05                   | 0.7 $V_{Znom.}$ | 50 ( $\leq 170$ )  | 85 ( $\leq 375$ )     | 10                                       | 12   |
| BZX584C51-V-G  | .4           | 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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