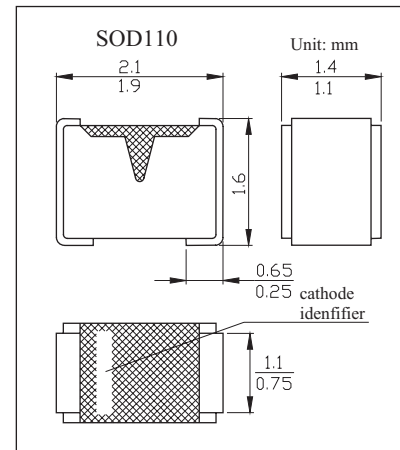


## Zener Diodes

### BZX284 Series



#### ■ Features

- Total Power Dissipation: Max. 400mW
- Two Tolerance Series:  $\pm 2\%$  and  $\pm 5\%$
- Working Voltage Range: Nom. 2.4 to 75V

#### ■ Absolute Maximum Ratings (Ta = 25°C)

| Parameter                               | Symbol           | Rating      | Unit |
|---|------------------|-------------|------|
| Total Power Dissipation                 | P <sub>tot</sub> | 400         | mW   |
| Continuous Forward Current              | I <sub>F</sub>   | 250         | mA   |
| Forward Voltage @ I <sub>F</sub> = 10mA | V <sub>F</sub>   | 0.9         | V    |
| Junction temperature                    | T <sub>j</sub>   | 150         | °C   |
| Storage temperature                     | T <sub>stg</sub> | -65 to +150 | °C   |

#### ■ Electrical Characteristics (Ta = 25°C)

| BZX284<br>B or C<br>XXX | Working voltage<br>V <sub>Z</sub> (V)<br>@ I <sub>Z</sub> = 5mA |      |         |      | Differential resistance<br>R <sub>dif</sub> (Ω) |      |                        |      | Temp.<br>Coeff.<br>S <sub>Z</sub> (mV/K)<br>@ I <sub>Z</sub> = 2mA | Diode Cap.<br>C <sub>d</sub> (pF)<br>@<br>f = 1MHz;<br>V <sub>R</sub> = 0V | Non-repetitive<br>peak reverse<br>current<br>I <sub>ZSM</sub> (A)<br>@ t <sub>p</sub> = 100 μs | Marking |      |     |     |
|-------------------------|---|------|---------|------|---|------|------------------------|------|--|--|--|---------|------|-----|-----|
|                         | ±2% (B)   |      | ±5% (C) |      | @ I <sub>Z</sub> = 1mA                          |      | @ I <sub>Z</sub> = 5mA |      |  |  |  | Max.    | Max. | ±2% | ±5% |
|                         | Min.  | Max. | Min.    | Max. | Typ.  | Max. | Typ.                   | Max. |  |  |  |         |      |     |     |
| 2V4                     | 2.35  | 2.45 | 2.2     | 2.6  | 275   | 400  | 70                     | 100  | -1.6   | 450  | 12.0   | WO      | YO   |     |     |
| 2V7                     | 2.65  | 2.75 | 2.5     | 2.9  | 300   | 450  | 75                     | 100  | -2.0   | 440  | 12.0   | WP      | YP   |     |     |
| 3V0                     | 2.94  | 3.06 | 2.8     | 3.2  | 325   | 500  | 80                     | 95   | -2.1   | 425  | 12.0   | WQ      | YQ   |     |     |
| 3V3                     | 3.23  | 3.37 | 3.1     | 3.5  | 350   | 500  | 85                     | 95   | -2.4   | 410  | 12.0   | WR      | YR   |     |     |
| 3V6                     | 3.53  | 3.67 | 3.4     | 3.8  | 375   | 500  | 85                     | 90   | -2.4   | 390  | 12.0   | WS      | YS   |     |     |
| 3V9                     | 3.82  | 3.98 | 3.7     | 4.1  | 400   | 500  | 85                     | 90   | -2.5   | 370  | 12.0   | WT      | YT   |     |     |
| 4V3                     | 4.21  | 4.39 | 4.0     | 4.6  | 410   | 600  | 80                     | 90   | -2.5   | 350  | 12.0   | WU      | YU   |     |     |
| 4V7                     | 4.61  | 4.79 | 4.4     | 5.0  | 425   | 500  | 50                     | 80   | -1.4   | 325  | 12.0   | WV      | YV   |     |     |
| 5V1                     | 5.00  | 5.20 | 4.8     | 5.4  | 400   | 480  | 40                     | 60   | -0.8   | 300  | 12.0   | WW      | YW   |     |     |
| 5V6                     | 5.49  | 5.71 | 5.2     | 6.0  | 80  | 400  | 15                     | 40   | 1.2  | 275  | 12.0   | WX      | YX   |     |     |

## BZX284 Series

| BZX284<br>B or C<br>XXX | Working voltage<br>$V_z$ (V)<br>@ $I_z = 5\text{mA}$ |       |               |      | Differential resistance<br>$R_{dif}$ ( $\Omega$ ) |      |                      |      | Temp.<br>Coeff.<br>$S_z$ (mV/K)<br>@ $I_z = 2\text{mA}$ | Diode Cap.<br>$C_d$ (pF)<br>@<br>$f = 1\text{MHz};$<br>$V_R = 0\text{V}$ | Non-repetitive<br>peak reverse<br>current<br>$I_{zSM}$ (A)<br>@ $t_p = 100\mu\text{s}$ | Marking |      |      |           |           |
|-------------------------|--|-------|---------------|------|---|------|----------------------|------|---|--|--|---------|------|------|-----------|-----------|
|                         | $\pm 2\%$ (B)  |       | $\pm 5\%$ (C) |      | @ $I_z = 1\text{mA}$                              |      | @ $I_z = 5\text{mA}$ |      |   |  |  | Typ.    | Max. | Max. | $\pm 2\%$ | $\pm 5\%$ |
|                         | Min.   | Max.  | Min.          | Max. | Typ.  | Max. | Typ.                 | Max. |   |  |  |         |      |      |           |           |
| 6V2                     | 6.08   | 6.32  | 5.8           | 6.6  | 40  | 150  | 6                    | 10   | 2.3   | 250  | 12.0   | WY      | YY   |      |           |           |
| 6V8                     | 6.66   | 6.94  | 6.4           | 7.2  | 30  | 80   | 6                    | 15   | 3.0   | 215  | 12.0   | WZ      | YYZ  |      |           |           |
| 7V5                     | 7.35   | 7.65  | 7.0           | 7.9  | 15  | 80   | 2                    | 10   | 4.0   | 170  | 4.0  | XA      | ZA   |      |           |           |
| 8V2                     | 8.04   | 8.36  | 7.7           | 8.7  | 20  | 80   | 2                    | 10   | 4.6   | 150  | 4.0  | XB      | ZB   |      |           |           |
| 9V1                     | 8.92   | 9.28  | 8.5           | 9.6  | 20  | 100  | 2                    | 10   | 5.5   | 120  | 3.0  | XC      | ZC   |      |           |           |
| 10                      | 9.80   | 10.20 | 9.4           | 10.6 | 20  | 150  | 2                    | 10   | 6.4   | 110  | 3.0  | XD      | ZD   |      |           |           |
| 11                      | 10.80  | 11.20 | 10.4          | 11.6 | 25  | 150  | 2                    | 10   | 7.4   | 108  | 2.5  | XE      | ZE   |      |           |           |
| 12                      | 11.80  | 12.20 | 11.4          | 12.7 | 25  | 150  | 2                    | 10   | 8.4   | 105  | 2.5  | XF      | ZF   |      |           |           |
| 13                      | 12.70  | 13.30 | 12.4          | 14.1 | 25  | 170  | 2                    | 10   | 9.4   | 103  | 2.5  | XG      | ZG   |      |           |           |
| 15                      | 14.70  | 15.30 | 13.8          | 15.6 | 25  | 200  | 3                    | 15   | 11.4  | 99   | 2.0  | XH      | ZH   |      |           |           |
| 16                      | 15.70  | 16.30 | 15.3          | 17.1 | 25  | 200  | 4                    | 20   | 12.4  | 97   | 1.5  | XI      | ZI   |      |           |           |
| 18                      | 17.60  | 18.40 | 16.8          | 19.1 | 25  | 225  | 4                    | 20   | 14.4  | 93   | 1.5  | XJ      | ZJ   |      |           |           |
| 20                      | 19.60  | 20.40 | 18.8          | 21.2 | 30  | 225  | 4                    | 20   | 16.4  | 88   | 1.5  | XK      | ZK   |      |           |           |
| 22                      | 21.60  | 22.40 | 20.8          | 23.3 | 30  | 250  | 5                    | 25   | 18.4  | 84   | 1.25   | XL      | ZL   |      |           |           |
| 24                      | 23.50  | 24.50 | 22.8          | 25.6 | 30  | 250  | 6                    | 30   | 20.4  | 80   | 1.25   | XM      | ZM   |      |           |           |
| 27                      | 26.50  | 27.50 | 25.1          | 28.9 | 35  | 250  | 8                    | 40   | 23.4  | 73   | 1.0  | XN      | ZN   |      |           |           |
| 30                      | 29.40  | 30.60 | 28.0          | 32.0 | 35  | 250  | 10                   | 40   | 26.6  | 66   | 1.0  | XO      | ZO   |      |           |           |
| 33                      | 32.30  | 33.70 | 31.0          | 35.0 | 40  | 275  | 11                   | 40   | 29.7  | 60   | 0.9  | XP      | ZP   |      |           |           |
| 36                      | 35.30  | 36.70 | 34.0          | 38.0 | 40  | 300  | 15                   | 60   | 33.0  | 59   | 0.8  | XQ      | ZQ   |      |           |           |
| 39                      | 38.20  | 39.80 | 37.0          | 41.0 | 40  | 300  | 25                   | 75   | 36.4  | 58   | 0.7  | XR      | ZR   |      |           |           |
| 43                      | 42.10  | 43.90 | 40.0          | 46.0 | 45  | 325  | 30                   | 80   | 41.2  | 56   | 0.6  | XS      | ZS   |      |           |           |
| 47                      | 46.10  | 47.90 | 44.0          | 50.0 | 45  | 325  | 30                   | 90   | 46.1  | 55   | 0.5  | XT      | ZT   |      |           |           |
| 51                      | 50.00  | 52.00 | 48.0          | 54.0 | 45  | 350  | 35                   | 110  | 51.0  | 52   | 0.4  | XU      | ZU   |      |           |           |
| 56                      | 54.90  | 57.10 | 52.0          | 60.0 | 50  | 375  | 40                   | 120  | 57.0  | 49   | 0.3  | XV      | ZV   |      |           |           |
| 62                      | 60.80  | 63.20 | 58.0          | 66.0 | 60  | 400  | 50                   | 140  | 64.4  | 44   | 0.3  | XW      | ZW   |      |           |           |
| 68                      | 66.60  | 69.40 | 64.0          | 72.0 | 75  | 400  | 55                   | 160  | 71.7  | 40   | 0.25   | XX      | ZX   |      |           |           |
| 75                      | 73.50  | 76.50 | 70.0          | 79.0 | 85  | 400  | 70                   | 175  | 80.2  | 35   | 0.2  | XY      | ZY   |      |           |           |