

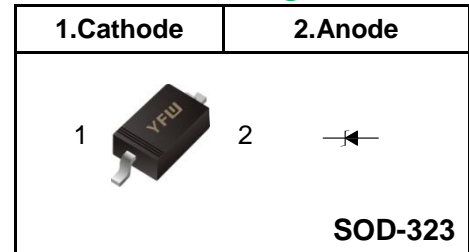
Plastic-Encapsulate Diodes

ZENER DIODE

**FEATURE**

- ◆ Planar Die Construction
- ◆ General Purpose, Medium Current
- ◆ Ideally Suited for Automated Assembly Processes
- ◆ Available in Lead Free Version

**Pinning**



**Maximum Ratings(Ta=25°C unless otherwise specified)**

| Characteristic                                   | Symbol           | Value      | Unit |
|--|------------------|------------|------|
| Forward Voltage (Note 2) @ I <sub>F</sub> = 10mA | V <sub>F</sub>   | 0.9        | V    |
| Power Dissipation(Note 1)                        | P <sub>d</sub>   | 200        | mW   |
| Thermal Resistance from Junction to Ambient      | R <sub>θJA</sub> | 625        | /W   |
| Junction Temperature                             | T <sub>j</sub>   | 150        |      |
| Storage Temperature Range                        | T <sub>stg</sub> | -55 ~ +150 |      |

## ELECTRICAL CHARACTERISTICS

Ta=25°C unless otherwise specified

| Type Number | Type Code | Zener Voltage Range (Note 2)    |        |        |                 | Maximum Zener Impedance (Note 3) |                                  |                 | Maximum Reverse Current |                | Typical Temperature Coefficient @I <sub>ZTC</sub> mV/°C |      | Test Current I <sub>ZTC</sub> mA |
|-------------|-----------|---------------------------------|--------|--------|-----------------|----------------------------------|----------------------------------|-----------------|-------------------------|----------------|---|------|----------------------------------|
|             |           | V <sub>Z</sub> @I <sub>ZT</sub> |        |        | I <sub>ZT</sub> | Z <sub>ZT</sub> @I <sub>ZT</sub> | Z <sub>ZK</sub> @I <sub>ZK</sub> | I <sub>ZK</sub> | I <sub>R</sub>          | V <sub>R</sub> | Min   | Max  |                                  |
|             |           | Nom(V)                          | Min(V) | Max(V) | mA              | Ω                                | mA                               | μA              | V                       | Min            | Max   |      |                                  |
| BZT52B2V4S  | C1        | 2.4                             | 2.35   | 2.45   | 5               | 100                              | 600                              | 1.0             | 50                      | 1.0            | -3.5  | 0    | 5                                |
| BZT52B2V7S  | D1        | 2.7                             | 2.65   | 2.75   | 5               | 100                              | 600                              | 1.0             | 20                      | 1.0            | -3.5  | 0    | 5                                |
| BZT52B3V0S  | E1        | 3.0                             | 2.94   | 3.06   | 5               | 95                               | 600                              | 1.0             | 10                      | 1.0            | -3.5  | 0    | 5                                |
| BZT52B3V3S  | F1        | 3.3                             | 3.23   | 3.37   | 5               | 95                               | 600                              | 1.0             | 5                       | 1.0            | -3.5  | 0    | 5                                |
| BZT52B3V6S  | H1        | 3.6                             | 3.53   | 3.67   | 5               | 90                               | 600                              | 1.0             | 5                       | 1.0            | -3.5  | 0    | 5                                |
| BZT52B3V9S  | J1        | 3.9                             | 3.82   | 3.98   | 5               | 90                               | 600                              | 1.0             | 3                       | 1.0            | -3.5  | 0    | 5                                |
| BZT52B4V3S  | K1        | 4.3                             | 4.21   | 4.39   | 5               | 90                               | 600                              | 1.0             | 3                       | 1.0            | -3.5  | 0    | 5                                |
| BZT52B4V7S  | M1        | 4.7                             | 4.61   | 4.79   | 5               | 80                               | 500                              | 1.0             | 3                       | 2.0            | -3.5  | 0.2  | 5                                |
| BZT52B5V1S  | N1        | 5.1                             | 5.00   | 5.20   | 5               | 60                               | 480                              | 1.0             | 2                       | 2.0            | -2.7  | 1.2  | 5                                |
| BZT52B5V6S  | P1        | 5.6                             | 5.49   | 5.71   | 5               | 40                               | 400                              | 1.0             | 1                       | 2.0            | -2.0  | 2.5  | 5                                |
| BZT52B6V2S  | R1        | 6.2                             | 6.08   | 6.32   | 5               | 10                               | 150                              | 1.0             | 3                       | 4.0            | 0.4   | 3.7  | 5                                |
| BZT52B6V8S  | X1        | 6.8                             | 6.66   | 6.94   | 5               | 15                               | 80                               | 1.0             | 2                       | 4.0            | 1.2   | 4.5  | 5                                |
| BZT52B7V5S  | Y1        | 7.5                             | 7.35   | 7.65   | 5               | 15                               | 80                               | 1.0             | 1                       | 5.0            | 2.5   | 5.3  | 5                                |
| BZT52B8V2S  | Z1        | 8.2                             | 8.04   | 8.36   | 5               | 15                               | 80                               | 1.0             | 0.7                     | 5.0            | 3.2   | 6.2  | 5                                |
| BZT52B9V1S  | A2        | 9.1                             | 8.92   | 9.28   | 5               | 15                               | 100                              | 1.0             | 0.5                     | 6.0            | 3.8   | 7.0  | 5                                |
| BZT52B10S   | B2        | 10                              | 9.80   | 10.20  | 5               | 20                               | 150                              | 1.0             | 0.2                     | 7.0            | 4.5   | 8.0  | 5                                |
| BZT52B11S   | C2        | 11                              | 10.78  | 11.22  | 5               | 20                               | 150                              | 1.0             | 0.1                     | 8.0            | 5.4   | 9.0  | 5                                |
| BZT52B12S   | D2        | 12                              | 11.76  | 12.24  | 5               | 25                               | 150                              | 1.0             | 0.1                     | 8.0            | 6.0   | 10.0 | 5                                |
| BZT52B13S   | E2        | 13                              | 12.74  | 13.26  | 5               | 30                               | 170                              | 1.0             | 0.1                     | 8.0            | 7.0   | 11.0 | 5                                |
| BZT52B15S   | F2        | 15                              | 14.70  | 15.30  | 5               | 30                               | 200                              | 1.0             | 0.1                     | 10.5           | 9.2   | 13.0 | 5                                |
| BZT52B16S   | H2        | 16                              | 15.68  | 16.32  | 5               | 40                               | 200                              | 1.0             | 0.1                     | 11.2           | 10.4  | 14.0 | 5                                |
| BZT52B18S   | J2        | 18                              | 17.64  | 18.36  | 5               | 45                               | 225                              | 1.0             | 0.1                     | 12.6           | 12.4  | 16.0 | 5                                |
| BZT52B20S   | K2        | 20                              | 19.60  | 20.40  | 5               | 55                               | 225                              | 1.0             | 0.1                     | 14.0           | 14.4  | 18.0 | 5                                |
| BZT52B22S   | M2        | 22                              | 21.56  | 22.44  | 5               | 55                               | 250                              | 1.0             | 0.1                     | 15.4           | 16.4  | 20.0 | 5                                |
| BZT52B24S   | N2        | 24                              | 23.52  | 24.48  | 5               | 70                               | 250                              | 1.0             | 0.1                     | 16.8           | 18.4  | 22.0 | 5                                |
| BZT52B27S   | P2        | 27                              | 26.46  | 27.54  | 2               | 80                               | 300                              | 0.5             | 0.1                     | 18.9           | 21.4  | 25.3 | 2                                |
| BZT52B30S   | R2        | 30                              | 29.40  | 30.60  | 2               | 80                               | 300                              | 0.5             | 0.1                     | 21.0           | 24.4  | 29.4 | 2                                |
| BZT52B33S   | X2        | 33                              | 32.34  | 33.66  | 2               | 80                               | 325                              | 0.5             | 0.1                     | 23.1           | 27.4  | 33.4 | 2                                |
| BZT52B36S   | Y2        | 36                              | 35.28  | 36.72  | 2               | 90                               | 350                              | 0.5             | 0.1                     | 25.2           | 30.4  | 37.4 | 2                                |
| BZT52B39S   | Z2        | 39                              | 38.22  | 39.78  | 2               | 130                              | 350                              | 0.5             | 0.1                     | 27.3           | 33.4  | 41.2 | 2                                |

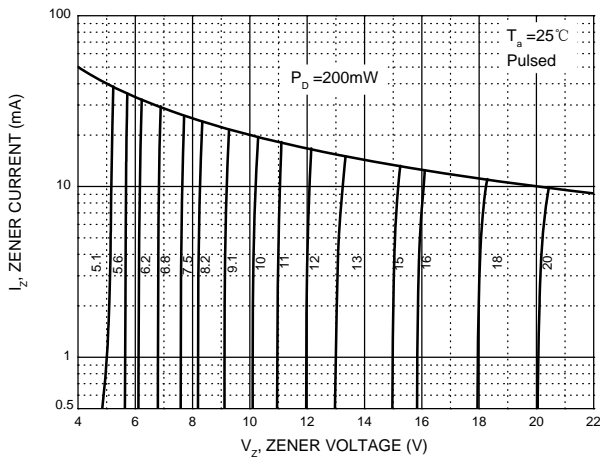
Notes:

1. Device mounted on ceramic PCB: 7.6mm x 9.4mm x 0.87mm with pad areas 25mm<sup>2</sup>.
2. Short duration test pulse used to minimize self-heating effect.
3. f = 1kHz.

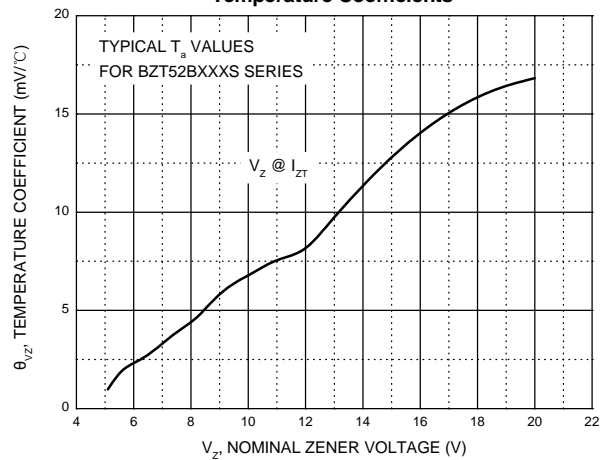
**Typical Characteristics**

Notes: Our company currently provide 5.1 v 20 V products only

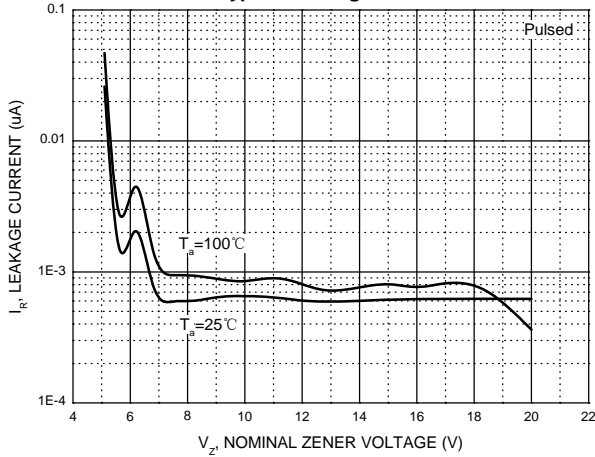
**Zener Characteristics ( $V_z$  5.1V to 20 V)**



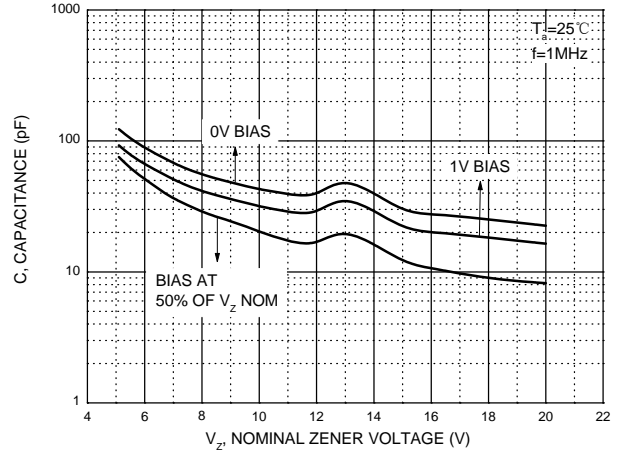
**Temperature Coefficients**



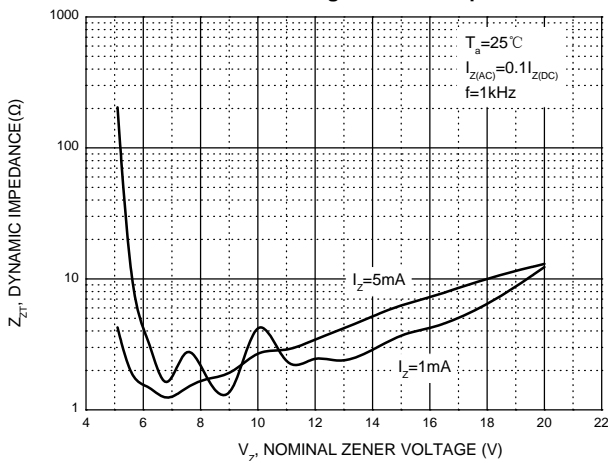
**Typical Leakage Current**



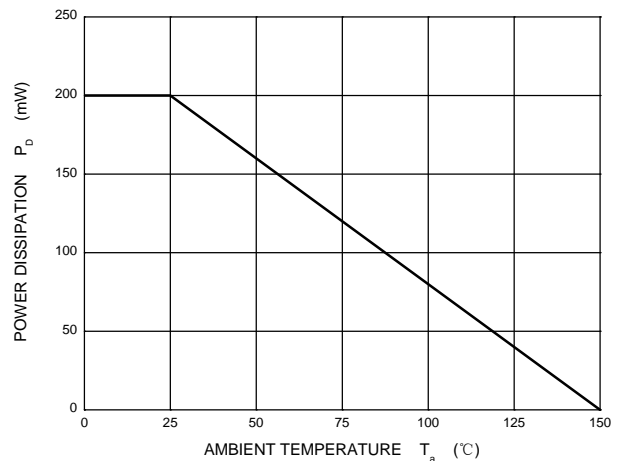
**Typical Capacitance**



**Effect of Zener Voltage on Zener Impedance**



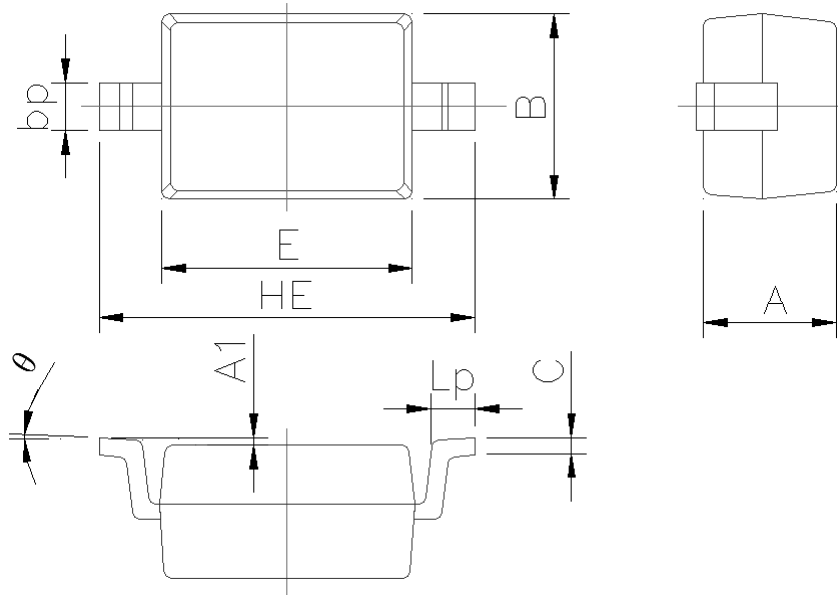
**Power Derating Curve**



**Package Outline**

**SOD-323**

Plastic surface mounted package; 2 leads



| Symbol | Dimension in Millimeters |       |
|--------|--------------------------|-------|
|        | Min                      | Max   |
| A      | 0.95                     | 1.15  |
| A1     | 0.010                    | 0.100 |
| B      | 1.20                     | 1.40  |
| bp     | 0.25                     | 0.40  |
| C      | 0.09                     | 0.150 |
| E      | 1.60                     | 1.80  |
| HE     | 2.30                     | 2.70  |
| Lp     | 0.20                     | 0.40  |
| θ      | 0°                       | 5°    |

**Summary of Packing Options**

| Package | Packing Description | Packing Quantity | Industry Standard |
|---------|---------------------|------------------|-------------------|
| SOD-323 | Tape/Reel,7"reel    | 3000             | EIA-481-1         |

单击下面可查看定价，库存，交付和生命周期等信息

[>>YFW\(佑风微\)](#)