

# BZT52BXXXS

Rev.1 Jan.-2024

## / Descriptions

SOD-323

Zener Diode in a SOD-323 Plastic Package.

## / Features

200mW

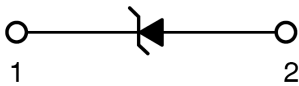
200mW power dissipation, medium current, automated assembly processes, HF Product.

## / Applications

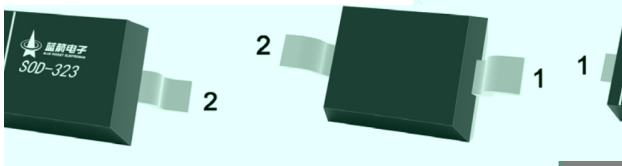
2.4V-39V

2.4V to 39V wide zener voltage range applications.

## / Equivalent Circuit



## / Pinning



PIN1:Cathode

PIN2:Anode

## / Marking

See Marking Instructions.

**/ Absolute Maximum Ratings(T5 )**

| Parameter  | Symbol         | Rating  | Unit |
|--|----------------|---------|------|
| Forward Voltage (Note 2) $I_F=10mA$                    | $V_F$          | 0.9     | V    |
| Power Dissipation(Note 1)                              | $P_D$          | 200     | mW   |
| Typical Thermal Resistance Junction to Ambient(Note 1) | $R_{JA}$       | 625     | /W   |
| Junction and Storage Temperature Range                 | $T_j, T_{stg}$ | -65 150 |      |

**/ Electrical Characteristics(T5 )**

| Type Number | Marking Code | Zener Voltage Range (Note 2) |         |         |          | Maximum Zener Impedance (Note 3) |                   |          | Maximum Reverse Current |         |
|-------------|--------------|------------------------------|---------|---------|----------|----------------------------------|-------------------|----------|-------------------------|---------|
|             |              | $V_z @ I_{ZT}$               |         |         | $I_{ZT}$ | $Z_{ZT} @ I_{ZT}$                | $Z_{ZK} @ I_{ZK}$ | $I_{ZK}$ | $I_R$                   | @ $V_R$ |
|             |              | Nom (V)                      | Min (V) | Max (V) | mA       |                                  |                   | mA       | $\mu A$                 | V       |
| BZT52B2V4S  | H0Z          | 2.4                          | 2.35    | 2.45    | 5        | 94                               | 564               | 1        | 45                      | 1       |
| BZT52B2V7S  | H1Z          | 2.7                          | 2.65    | 2.75    | 5        | 94                               | 564               | 1        | 18                      | 1       |
| BZT52B3V0S  | H2Z          | 3.0                          | 2.94    | 3.06    | 5        | 89                               | 564               | 1        | 9                       | 1       |
| BZT52B3V3S  | H3Z          | 3.3                          | 3.23    | 3.37    | 5        | 89                               | 564               | 1        | 4.5                     | 1       |
| BZT52B3V6S  | H4Z          | 3.6                          | 3.53    | 3.67    | 5        | 84                               | 564               | 1        | 4.5                     | 1       |
| BZT52B3V9S  | H5Z          | 3.9                          | 3.82    | 3.96    | 5        | 84                               | 564               | 1        | 2.7                     | 1       |
| BZT52B4V3S  | H6Z          | 4.3                          | 4.21    | 4.39    | 5        | 84                               | 564               | 1        | 2.7                     | 1       |
| BZT52B4V7S  | H7Z          | 4.7                          | 4.61    | 4.79    | 5        | 75                               | 564               | 1        | 2.7                     | 2       |
| BZT52B5V1S  | H8Z          | 5.1                          | 5.00    | 5.20    | 5        | 56                               | 470               | 1        | 1.8                     | 2       |
| BZT52B5V6S  | H9Z          | 5.6                          | 5.49    | 5.71    | 5        | 27                               | 451               | 1        | 0.9                     | 2       |
| BZT52B6V2S  | HAZ          | 6.2                          | 6.08    | 6.32    | 5        | 9                                | 376               | 1        | 2.7                     | 4       |
| BZT52B6V8S  | HBZ          | 6.8                          | 6.66    | 6.94    | 5        | 14                               | 141               | 1        | 1.8                     | 4       |
| BZT52B7V5S  | HCZ          | 7.5                          | 7.35    | 7.65    | 5        | 14                               | 75                | 1        | 0.9                     | 5       |
| BZT52B8V2S  | HDZ          | 8.2                          | 8.04    | 8.36    | 5        | 14                               | 75                | 1        | 0.63                    | 5       |
| BZT52B9V1S  | HEZ          | 9.1                          | 8.92    | 9.28    | 5        | 14                               | 94                | 1        | 0.45                    | 6       |
| BZT52B10S   | HFZ          | 10                           | 9.80    | 10.20   | 5        | 18                               | 141               | 1        | 0.18                    | 7       |
| BZT52B11S   | HGZ          | 11                           | 10.78   | 11.22   | 5        | 18                               | 141               | 1        | 0.09                    | 8       |

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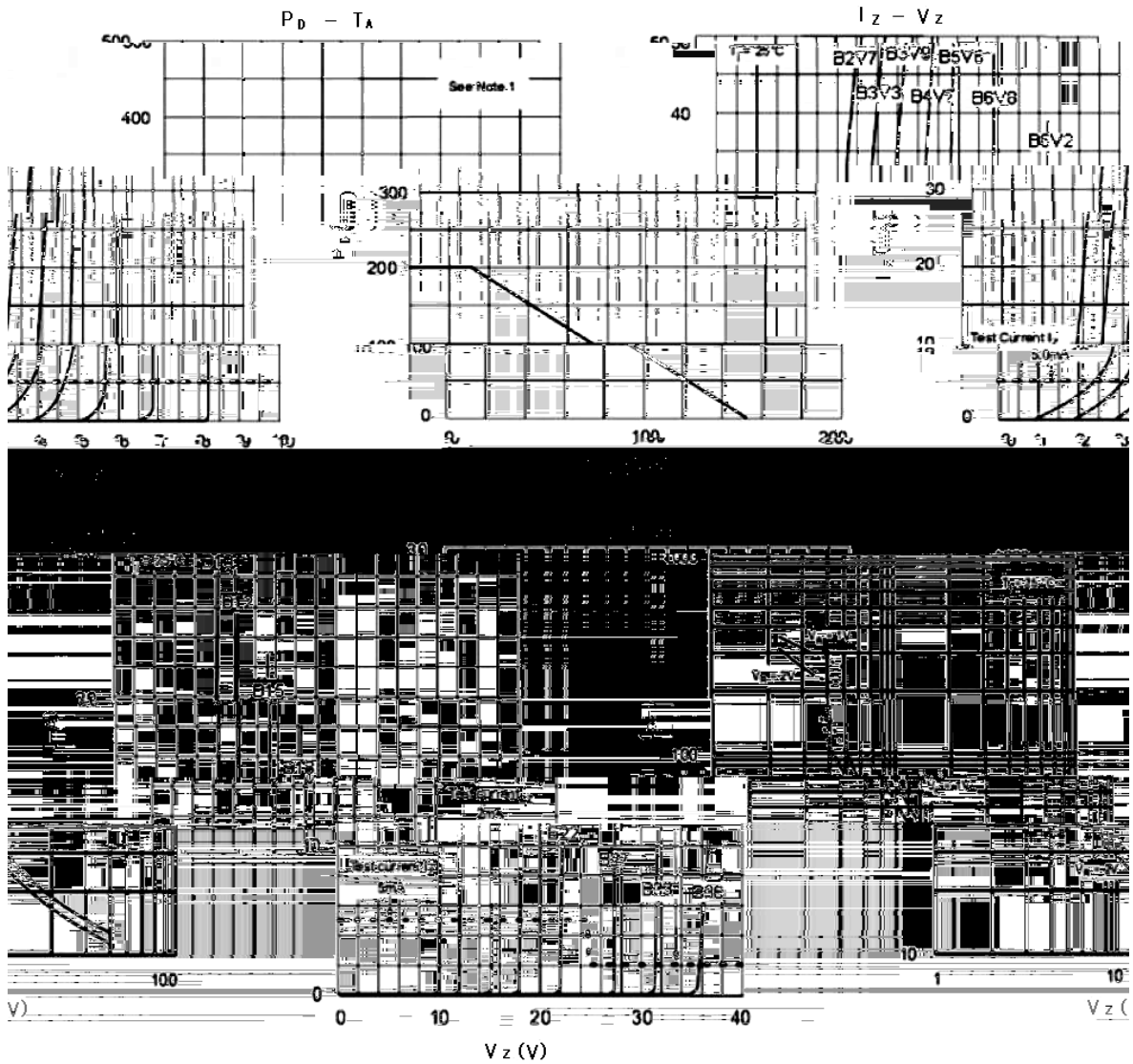


DATA SHEET

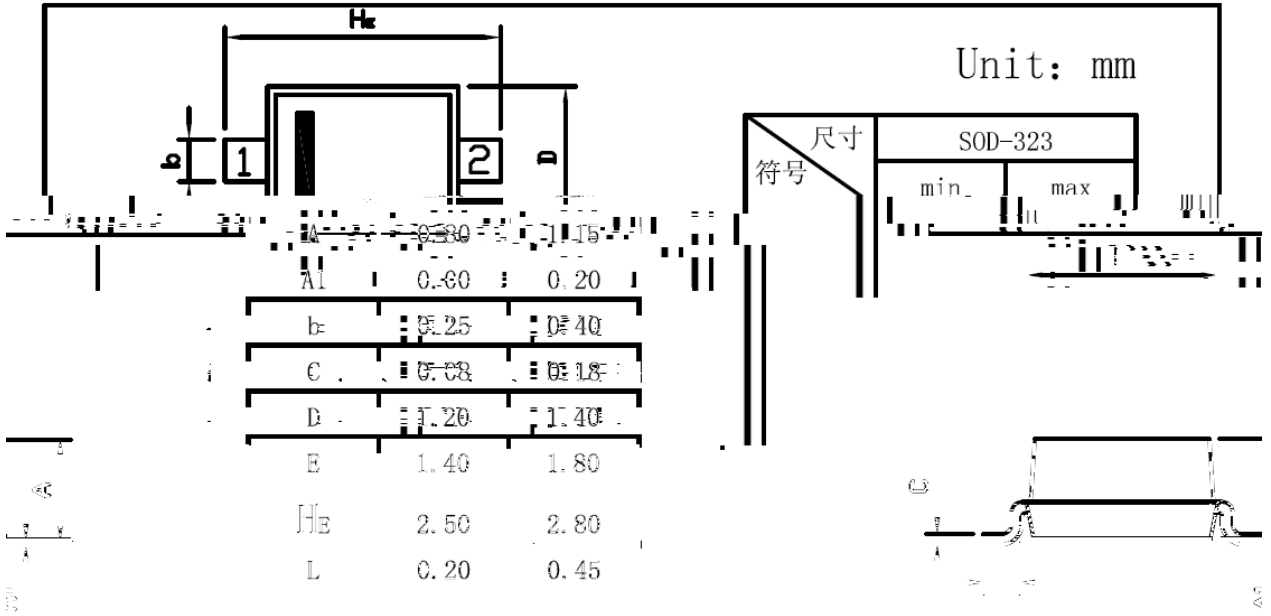
Notes:

f45.5894 775.100336w

/ Electrical Characteristic Curve



/ Package Dimensions



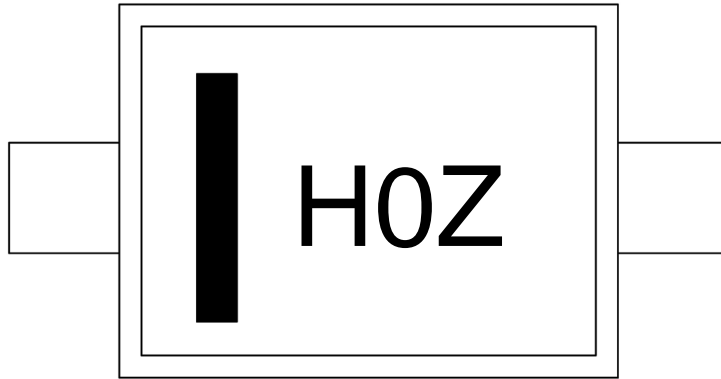
2.AN.1

SOD-323

PIN: 1 (CATHODE)



/ Marking Instructions



H

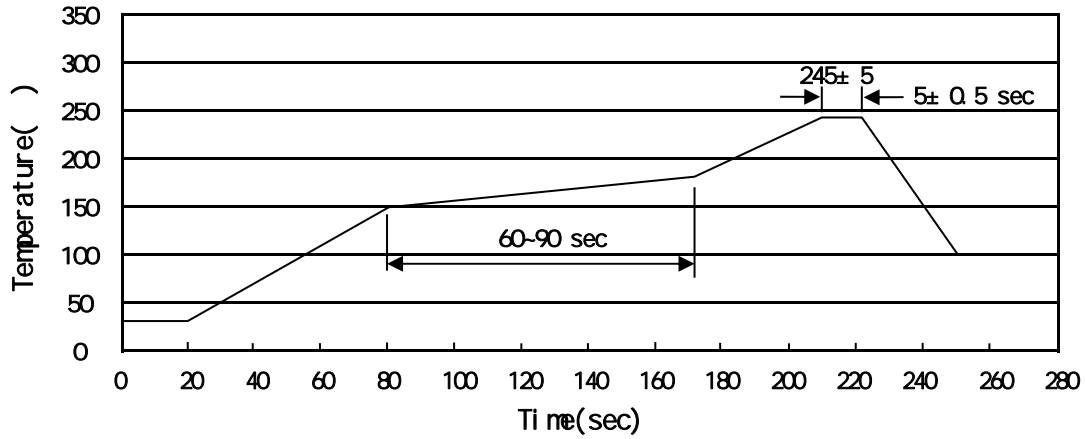
0Z

Note:

H: Company Code

0Z: Product Type Code

( ) / Temperature Profile for IR Reflow Soldering(Pb-Free)



Note:

- |   |       |     |       |          |   |
|---|-------|-----|-------|----------|---|
| 1 | 150   | 180 | 60    | 90sec;   | 1.Preheating:150~180 , Time:60~90sec.   |
| 2 | 245±5 |     | 5±0.5 | sec;     | 2.Peak Temp.:245±5 , Duration:5±0.5sec. |
| 3 |       |     | 2     | 10 /sec. | 3. Cooling Speed: 2~10 /sec.            |

/ Resistance to Soldering Heat Test Conditions

260±5                      10±1 sec.                      Temp.:260±5                      Time:10±1 sec

/ Packaging SPEC.

/ REEL

| Package Type | Units      |                 |                 |                       |                 | Dimension (unit mm <sup>3</sup> ) |             |             |
|--------------|------------|-----------------|-----------------|-----------------------|-----------------|-----------------------------------|-------------|-------------|
|              | Units/Reel | Reels/Inner Box | Units/Inner Box | Inner Boxes/Outer Box | Units/Outer Box | Reel                              | Inner Box   | Outer Box   |
| SOD-323      | 3,000      | 10              | 30,000          | 6                     | 180,000         | 7 x8                              | 180x120x180 | 390x385x205 |

/ Notices