

## Features

- Standard Vz Tolerance is  $\pm 2\%$
- Planar Die Construction
- 200mW Power Dissipation
- Ideally Suited for Automated Assembly Processes
- Halogen Free Available Upon Request By Adding Suffix "-HF"
- Moisture Sensitivity Level 1
- Epoxy Meets UL 94 V-0 Flammability Rating
- Lead Free Finish/RoHS Compliant t ("P" Suffix Designates RoHS Compliant. See Ordering Information)

## Maximum Ratings

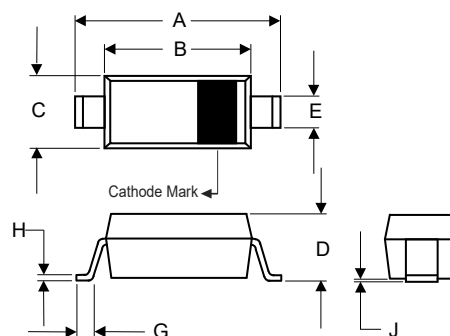
- Operating Junction Temperature Range:  $-55^{\circ}\text{C}$  to  $+150^{\circ}\text{C}$
- Storage Temperature Range:  $-55^{\circ}\text{C}$  to  $+150^{\circ}\text{C}$
- Thermal Resistance :  $625^{\circ}\text{C/W}$  Junction to Ambient

| Parameter               | Symbol | Rating | Conditions        |
|-------------------------|--------|--------|-------------------|
| Power Dissipation       | $P_D$  | 200mW  | Note 1            |
| Maximum Forward Voltage | $V_F$  | 0.9V   | $I_F=10\text{mA}$ |

Note: 1. Mounted on  $5.0\text{mm}^2$  (0.013mm thick) land areas.

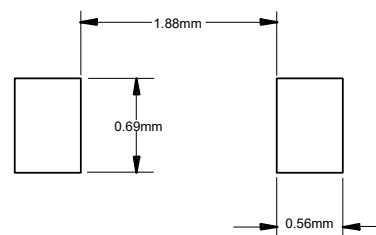
**200 mW  
Zener Diode  
3.0 to 75 Volts**

## SOD-323



| DIM | INCHES |       | MM    |      | NOTE |
|-----|--------|-------|-------|------|------|
|     | MIN    | MAX   | MIN   | MAX  |      |
| A   | 0.090  | 0.107 | 2.30  | 2.70 |      |
| B   | 0.063  | 0.071 | 1.60  | 1.80 |      |
| C   | 0.045  | 0.053 | 1.15  | 1.35 |      |
| D   | 0.031  | 0.045 | 0.80  | 1.15 |      |
| E   | 0.010  | 0.016 | 0.25  | 0.40 |      |
| G   | 0.004  | 0.018 | 0.10  | 0.45 |      |
| H   | 0.004  | 0.010 | 0.10  | 0.25 |      |
| J   | -----  | 0.006 | ----- | 0.15 |      |

## Suggested Solder Pad Layout



Electrical Characteristics @ 25°C Unless Otherwise Specified

| MCC<br>Part Number | Nominal Zener Voltage |        |         | Maximum<br>Zener<br>Impedance |          | Maximum<br>Zener Impedance |          | Maximum<br>Reverse Current<br>$I_R(\text{Max}) @ V_R$ |       | Marking<br>Code |
|--------------------|-----------------------|--------|---------|-------------------------------|----------|----------------------------|----------|-------------------------------------------------------|-------|-----------------|
|                    | $V_Z @ I_{ZT}$        |        |         | $Z_{ZT} @ I_{ZT}$             | $I_{ZT}$ | $Z_{ZK} @ I_{ZK}$          | $I_{ZK}$ | $I_R$                                                 | $V_R$ |                 |
|                    | Min.(V)               | Nom(V) | Max.(V) | $\Omega$                      | mA       | $\Omega$                   | mA       | $\mu\text{A}$                                         | V     |                 |
| BZT52B3V0JS        | 2.94                  | 3.0    | 3.06    | 89                            | 5.0      | 564                        | 1.00     | 9.0                                                   | 1.0   | 2Z              |
| BZT52B3V3JS        | 3.23                  | 3.3    | 3.37    | 89                            | 5.0      | 564                        | 1.00     | 4.5                                                   | 1.0   | 3Z              |
| BZT52B3V6JS        | 3.53                  | 3.6    | 3.67    | 84                            | 5.0      | 564                        | 1.00     | 4.5                                                   | 1.0   | 4Z              |
| BZT52B3V9JS        | 3.82                  | 3.9    | 3.98    | 84                            | 5.0      | 564                        | 1.00     | 2.7                                                   | 1.0   | 5Z              |
| BZT52B4V3JS        | 4.21                  | 4.3    | 4.39    | 84                            | 5.0      | 564                        | 1.00     | 2.7                                                   | 1.0   | 6Z              |
| BZT52B4V7JS        | 4.61                  | 4.7    | 4.79    | 75                            | 5.0      | 564                        | 1.00     | 2.7                                                   | 2.0   | 7Z              |
| BZT52B5V1JS        | 5.00                  | 5.1    | 5.20    | 60                            | 5.0      | 480                        | 1.00     | 2.0                                                   | 2.0   | 2W8/8Z          |
| BZT52B5V6JS        | 5.49                  | 5.6    | 5.71    | 40                            | 5.0      | 400                        | 1.00     | 1.0                                                   | 2.0   | 2W9/9Z          |
| BZT52B6V2JS        | 6.08                  | 6.2    | 6.32    | 10                            | 5.0      | 150                        | 1.00     | 3.0                                                   | 4.0   | 2WA/AZ          |
| BZT52B6V8JS        | 6.66                  | 6.8    | 6.94    | 15                            | 5.0      | 141                        | 1.00     | 2.0                                                   | 4.0   | 2WB/BZ          |
| BZT52B7V5JS        | 7.35                  | 7.5    | 7.65    | 15                            | 5.0      | 80                         | 1.00     | 1.0                                                   | 5.0   | 2WC/CZ          |
| BZT52B8V2JS        | 8.04                  | 8.2    | 8.36    | 15                            | 5.0      | 80                         | 1.00     | 0.7                                                   | 5.0   | 2WD/DZ          |
| BZT52B9V1JS        | 8.92                  | 9.1    | 9.28    | 15                            | 5.0      | 100                        | 1.00     | 0.5                                                   | 6.0   | 2WE/EZ          |
| BZT52B10JS         | 9.80                  | 10     | 10.20   | 20                            | 5.0      | 150                        | 1.00     | 0.2                                                   | 7.0   | 2WF/FZ          |
| BZT52B11JS         | 10.78                 | 11     | 11.22   | 20                            | 5.0      | 150                        | 1.00     | 0.1                                                   | 8.0   | 2WG/GZ          |
| BZT52B12JS         | 11.76                 | 12     | 12.24   | 25                            | 5.0      | 150                        | 1.00     | 0.1                                                   | 8.0   | 2WH/HZ          |
| BZT52B13JS         | 12.74                 | 13     | 13.26   | 30                            | 5.0      | 170                        | 1.00     | 0.1                                                   | 8.0   | 2W I/JZ         |
| BZT52B15JS         | 14.70                 | 15     | 15.30   | 30                            | 5.0      | 200                        | 1.00     | 0.1                                                   | 10.5  | 2WJ/KZ          |
| BZT52B16JS         | 15.68                 | 16     | 16.32   | 40                            | 5.0      | 200                        | 1.00     | 0.1                                                   | 11.2  | 2WK/LZ          |
| BZT52B18JS         | 17.64                 | 18     | 18.36   | 45                            | 5.0      | 225                        | 1.00     | 0.1                                                   | 12.6  | 2WL/MZ          |
| BZT52B20JS         | 19.60                 | 20     | 20.40   | 55                            | 5.0      | 225                        | 1.00     | 0.1                                                   | 14.0  | 2WM/NZ          |
| BZT52B22JS         | 21.56                 | 22     | 22.44   | 51                            | 5.0      | 235                        | 1.00     | 0.045                                                 | 15.4  | PZ              |
| BZT52B24JS         | 23.52                 | 24     | 24.48   | 65                            | 5.0      | 235                        | 1.00     | 0.045                                                 | 16.8  | RZ              |
| BZT52B27JS         | 26.46                 | 27     | 27.54   | 75                            | 5.0      | 282                        | 0.50     | 0.045                                                 | 18.9  | SZ              |
| BZT52B30JS         | 29.40                 | 30     | 30.60   | 75                            | 5.0      | 282                        | 0.50     | 0.045                                                 | 21.0  | TZ              |
| BZT52B33JS         | 32.34                 | 33     | 33.66   | 75                            | 5.0      | 306                        | 0.50     | 0.045                                                 | 23.0  | UZ              |
| BZT52B36JS         | 35.28                 | 36     | 36.72   | 84                            | 5.0      | 329                        | 0.50     | 0.045                                                 | 25.2  | VZ              |
| BZT52B39JS         | 38.22                 | 39     | 39.78   | 122                           | 5.0      | 329                        | 0.50     | 0.045                                                 | 27.3  | WZ              |
| BZT52B43JS         | 42.14                 | 43     | 43.86   | 141                           | 5.0      | 353                        | 0.50     | 0.045                                                 | 30.1  | XZ              |
| BZT52B47JS         | 46.06                 | 47     | 47.94   | 160                           | 5.0      | 353                        | 0.50     | 0.045                                                 | 33.0  | YZ              |
| BZT52B51JS         | 49.98                 | 51     | 52.02   | 169                           | 5.0      | 376                        | 0.50     | 0.045                                                 | 35.7  | ZZ              |
| BZT52B56JS         | 54.88                 | 56     | 57.12   | 135                           | 2.5      | 1000                       | 1.00     | 0.100                                                 | 42.0  | X2              |
| BZT52B62JS         | 60.76                 | 62     | 63.24   | 150                           | 2.5      | 1000                       | 1.00     | 0.100                                                 | 46.0  | X3              |
| BZT52B68JS         | 66.64                 | 68     | 69.36   | 200                           | 2.5      | 1000                       | 1.00     | 0.100                                                 | 51.0  | X4              |
| BZT52B75JS         | 73.50                 | 75     | 76.50   | 250                           | 2.5      | 1000                       | 1.00     | 0.100                                                 | 56.0  | X5              |

## Curve Characteristics

Fig. 1 - Power Derating Curve

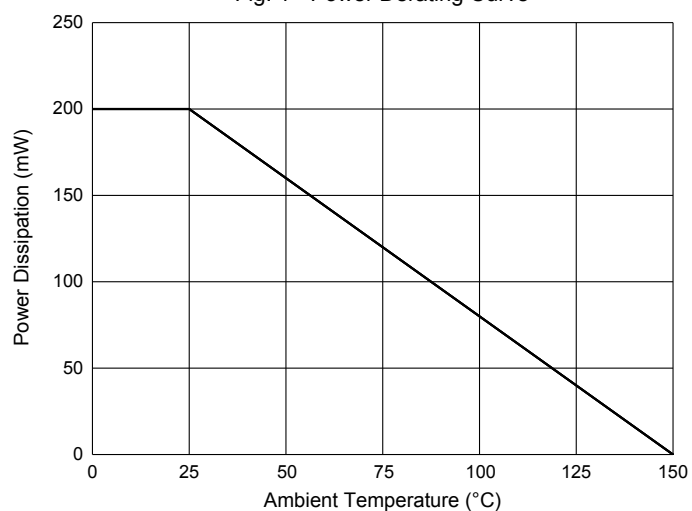
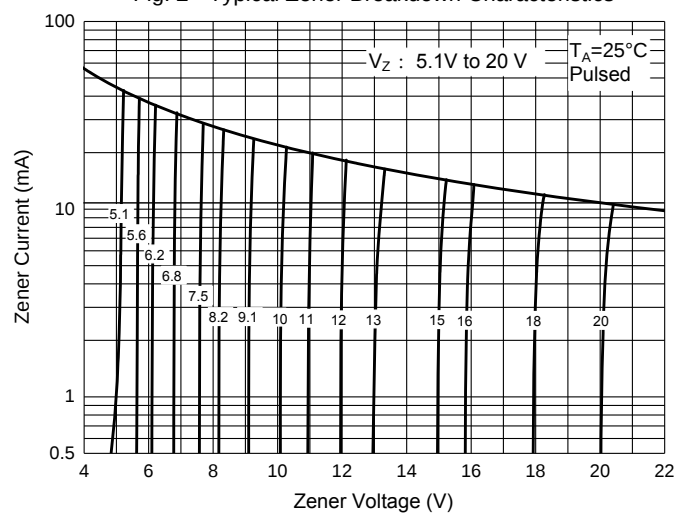


Fig. 2 - Typical Zener Breakdown Characteristics



## Ordering Information

| Device         | Packing              |
|----------------|----------------------|
| Part Number-TP | Tape&Reel:3Kpcs/Reel |

Note : Adding "-HF" Suffix For Halogen Free, eg. Part Number-TP-HF

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