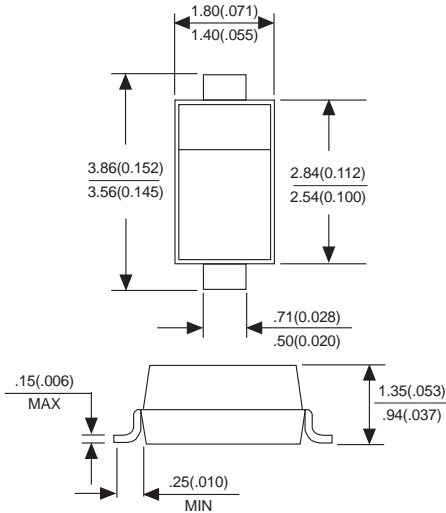


# MM1Z2B4 THRU MM1ZB75

## SILICON PLANAR ZENER DIODES

### SOD-123



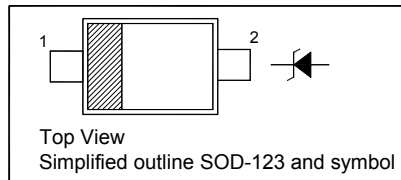
Dimensions in millimeters and (inches)

### FEATURES

- ◆ Power Dissipation: 500 mW
- ◆ Zener Voltage Tolerance:  $\pm 2\%$

### PINNING

| PIN | DESCRIPTION |
|-----|-------------|
| 1   | Cathode     |
| 2   | Anode       |



### MAXIMUM RATINGS AND ELECTRICAL CHARACTERISTICS

#### Absolute Maximum Ratings ( $T_a = 25^\circ\text{C}$ )

| Parameter                 | Symbol           | Value         | Unit             |
|---------------------------|------------------|---------------|------------------|
| Power Dissipation         | $P_{\text{tot}}$ | 500           | mW               |
| Junction Temperature      | $T_J$            | 150           | $^\circ\text{C}$ |
| Storage Temperature Range | $T_{\text{Stg}}$ | - 55 to + 150 | $^\circ\text{C}$ |

#### Characteristics at $T_a = 25^\circ\text{C}$

| Parameter                                  | Symbol           | Max. | Unit               |
|--|------------------|------|--------------------|
| Thermal Resistance Junction to Ambient Air | $R_{\text{thA}}$ | 340  | $^\circ\text{C/W}$ |
| Forward Voltage<br>at $I_F = 10\text{ mA}$ | $V_F$            | 0.9  | V                  |

## ELECTRICAL CHARACTERISTICS (at TA=25°C unless otherwise noted)

| Type    | Marking Code | Zener Voltage Range <sup>1)</sup> |                 |                    | Dynamic Impedance |                    | Reverse Leakage Current |                   |
|---------|--------------|-----------------------------------|-----------------|--------------------|-------------------|--------------------|-------------------------|-------------------|
|         |              | V <sub>znom</sub>                 | V <sub>ZT</sub> | at I <sub>ZT</sub> | Z <sub>ZT</sub>   | at I <sub>ZT</sub> | I <sub>R</sub>          | at V <sub>R</sub> |
|         |              | V                                 | V               | mA                 | Max. (Ω)          | mA                 | Max. (μA)               | V                 |
| MM1Z2B4 | 5Y1          | 2.4                               | 2.352...2.448   | 5                  | 100               | 5                  | 120                     | 1                 |
| MM1Z2B7 | 5Z1          | 2.7                               | 2.646...2.754   | 5                  | 110               | 5                  | 120                     | 1                 |
| MM1Z3B0 | 6A1          | 3.0                               | 2.94...3.06     | 5                  | 120               | 5                  | 50                      | 1                 |
| MM1Z3B3 | 6B1          | 3.3                               | 3.234...3.366   | 5                  | 130               | 5                  | 20                      | 1                 |
| MM1Z3B6 | 6C1          | 3.6                               | 3.528...3.672   | 5                  | 130               | 5                  | 10                      | 1                 |
| MM1Z3B9 | 6D1          | 3.9                               | 3.822...3.978   | 5                  | 130               | 5                  | 5                       | 1                 |
| MM1Z4B3 | 6E1          | 4.3                               | 4.214...4.386   | 5                  | 130               | 5                  | 5                       | 1                 |
| MM1Z4B7 | 6F1          | 4.7                               | 4.606...4.794   | 5                  | 130               | 5                  | 2                       | 1                 |
| MM1Z5B1 | 6G1          | 5.1                               | 4.998...5.202   | 5                  | 130               | 5                  | 2                       | 1.5               |
| MM1Z5B6 | 6H1          | 5.6                               | 5.488...5.712   | 5                  | 80                | 5                  | 1                       | 2.5               |
| MM1Z6B2 | 6J1          | 6.2                               | 6.076...6.324   | 5                  | 50                | 5                  | 1                       | 3                 |
| MM1Z6B8 | 6K1          | 6.8                               | 6.664...6.936   | 5                  | 30                | 5                  | 0.5                     | 3.5               |
| MM1Z7B5 | 6L1          | 7.5                               | 7.35...7.65     | 5                  | 30                | 5                  | 0.5                     | 4                 |
| MM1Z8B2 | 6M1          | 8.2                               | 8.036...8.364   | 5                  | 30                | 5                  | 0.5                     | 5                 |
| MM1Z9B1 | 6N1          | 9.1                               | 8.918...9.282   | 5                  | 30                | 5                  | 0.5                     | 6                 |
| MM1ZB10 | 6P1          | 10                                | 9.8...10.2      | 5                  | 30                | 5                  | 0.1                     | 7                 |
| MM1ZB11 | 6Q1          | 11                                | 10.78...11.22   | 5                  | 30                | 5                  | 0.1                     | 8                 |
| MM1ZB12 | 6R1          | 12                                | 11.76...12.24   | 5                  | 35                | 5                  | 0.1                     | 9                 |
| MM1ZB13 | 6S1          | 13                                | 12.74...13.26   | 5                  | 35                | 5                  | 0.1                     | 10                |
| MM1ZB15 | 6T1          | 15                                | 14.7...15.3     | 5                  | 40                | 5                  | 0.1                     | 11                |
| MM1ZB16 | 6U1          | 16                                | 15.68...16.32   | 5                  | 40                | 5                  | 0.1                     | 12                |
| MM1ZB18 | 6W1          | 18                                | 17.64...18.36   | 5                  | 45                | 5                  | 0.1                     | 13                |
| MM1ZB20 | 6X1          | 20                                | 19.6...20.4     | 5                  | 50                | 5                  | 0.1                     | 15                |
| MM1ZB22 | 6Y1          | 22                                | 21.56...22.44   | 5                  | 55                | 5                  | 0.1                     | 17                |
| MM1ZB24 | 6Z1          | 24                                | 23.52...24.48   | 5                  | 60                | 5                  | 0.1                     | 19                |
| MM1ZB27 | 7A1          | 27                                | 26.46...27.54   | 5                  | 70                | 2                  | 0.1                     | 21                |
| MM1ZB30 | 7B1          | 30                                | 29.4...30.6     | 5                  | 80                | 2                  | 0.1                     | 23                |
| MM1ZB33 | 7C1          | 33                                | 32.34...33.66   | 5                  | 80                | 2                  | 0.1                     | 25                |
| MM1ZB36 | 7D1          | 36                                | 35.28...36.72   | 5                  | 90                | 2                  | 0.1                     | 27                |
| MM1ZB39 | 7E1          | 39                                | 38.22...39.78   | 2.5                | 100               | 2                  | 2                       | 30                |
| MM1ZB43 | 7F1          | 43                                | 42.14...43.86   | 2.5                | 130               | 2                  | 2                       | 33                |
| MM1ZB47 | 7G1          | 47                                | 46.06...47.94   | 2.5                | 150               | 2                  | 2                       | 36                |
| MM1ZB51 | 7H1          | 51                                | 49.98...52.02   | 2.5                | 180               | 2                  | 1                       | 39                |
| MM1ZB56 | 7J1          | 56                                | 54.88...57.12   | 2.5                | 180               | 2                  | 1                       | 43                |
| MM1ZB62 | 7K1          | 62                                | 60.76...63.24   | 2.5                | 200               | 2                  | 0.2                     | 47                |
| MM1ZB68 | 7L1          | 68                                | 66.64...69.36   | 2.5                | 250               | 2                  | 0.2                     | 52                |
| MM1ZB75 | 7M1          | 75                                | 73.5...76.5     | 2.5                | 300               | 2                  | 0.2                     | 57                |

<sup>1)</sup> V<sub>Z</sub> is tested with pulses (20 ms).

# RATINGS AND CHARACTERISTIC CURVES MM1Z2B4 THRU MM1ZB75

