



# MM5Z2V0 THRU MM5Z75

## Silicon Planar Zener Diodes

### Features

- Standard Zener Breakdown Voltage Range 2.0V to 75V
- Steady State Power Rating of 200mW

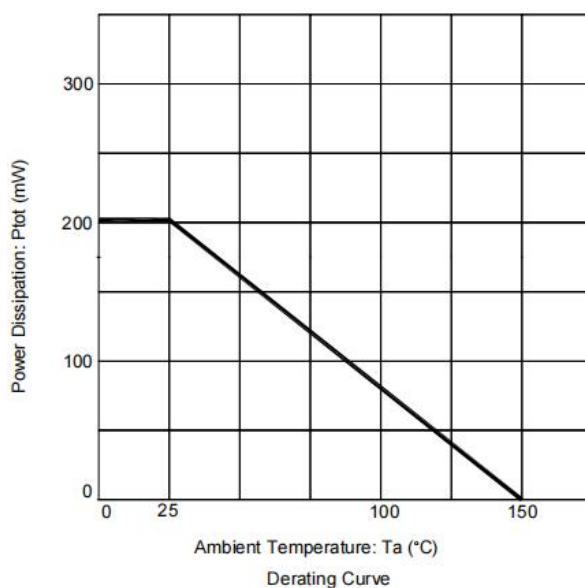
### Absolute Maximum Ratings ( $T_A=25^{\circ}\text{C}$ )

| Parameter                               | Symbol                | Value    | Unit               |
|-----------------------------------------|-----------------------|----------|--------------------|
| Total Device Dissipation                | $P_{\text{tot}}$      | 200      | mW                 |
| Operating and Storage Temperature Range | $T_J, T_{\text{STG}}$ | -65~+150 | $^{\circ}\text{C}$ |

### Characteristics ( $T_A=25^{\circ}\text{C}$ )

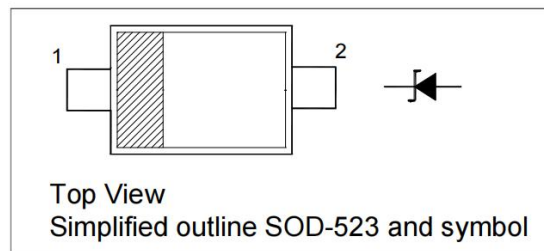
| Parameter                            | Symbol | Value | Unit |
|--------------------------------------|--------|-------|------|
| Forward Voltage at $I_F=10\text{mA}$ | $V_F$  | 0.9   | V    |

### Typical Characteristics



### PINNING

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





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## Electrical Characteristics (T<sub>A</sub>=25°C)

| Type    | Marking | Zener Voltage Range <sup>(1)</sup>    |     |      |                 | Zener Impedance |                 |                    | Leakage Current                     |                |
|---------|---------|---------------------------------------|-----|------|-----------------|-----------------|-----------------|--------------------|-------------------------------------|----------------|
|         |         | V <sub>ZT</sub> (at I <sub>ZT</sub> ) |     |      | I <sub>ZT</sub> | Z <sub>ZT</sub> | Z <sub>ZK</sub> | at I <sub>ZK</sub> | I <sub>R</sub> (at V <sub>R</sub> ) | V <sub>R</sub> |
|         |         | Min                                   | Nom | Max  | mA              | Ω               | Ω               | mA                 | uA                                  | V              |
| MM5Z2V0 | WY      | 1.8                                   | 2.0 | 2.15 | 5               | 100             | -               | -                  | 120                                 | 0.5            |
| MM5Z2V2 | WZ      | 2.08                                  | 2.2 | 2.33 | 5               | 100             | -               | -                  | 120                                 | 0.7            |
| MM5Z2V4 | 00      | 2.2                                   | 2.4 | 2.6  | 5               | 100             | 1000            | 1                  | 120                                 | 1              |
| MM5Z2V7 | 01      | 2.5                                   | 2.7 | 2.9  | 5               | 100             | 1000            | 1                  | 120                                 | 1              |
| MM5Z3V0 | 02      | 2.8                                   | 3.0 | 3.2  | 5               | 100             | 1000            | 1                  | 50                                  | 1              |
| MM5Z3V3 | 05      | 3.1                                   | 3.3 | 3.5  | 5               | 95              | 1000            | 1                  | 20                                  | 1              |
| MM5Z3V6 | 06      | 3.4                                   | 3.6 | 3.8  | 5               | 90              | 1000            | 1                  | 10                                  | 1              |
| MM5Z3V9 | 07      | 3.7                                   | 3.9 | 4.1  | 5               | 90              | 1000            | 1                  | 5                                   | 1              |
| MM5Z4V3 | 08      | 4                                     | 4.3 | 4.6  | 5               | 90              | 1000            | 1                  | 5                                   | 1              |
| MM5Z4V7 | 09      | 4.4                                   | 4.7 | 5    | 5               | 80              | 800             | 1                  | 2                                   | 1              |
| MM5Z5V1 | 0A      | 4.8                                   | 5.1 | 5.4  | 5               | 60              | 500             | 1                  | 2                                   | 1.5            |
| MM5Z5V6 | 0C      | 5.2                                   | 5.6 | 6    | 5               | 40              | 200             | 1                  | 1                                   | 2.5            |
| MM5Z6V2 | 0E      | 5.8                                   | 6.2 | 6.6  | 5               | 10              | 100             | 1                  | 1                                   | 3              |
| MM5Z6V8 | 0F      | 6.4                                   | 6.8 | 7.2  | 5               | 15              | 160             | 1                  | 0.5                                 | 3.5            |
| MM5Z7V5 | 0G      | 7                                     | 7.5 | 7.9  | 5               | 15              | 160             | 1                  | 0.5                                 | 4              |
| MM5Z8V2 | 0H      | 7.7                                   | 8.2 | 8.7  | 5               | 15              | 160             | 1                  | 0.5                                 | 5              |
| MM5Z9V1 | 0K      | 8.5                                   | 9.1 | 9.6  | 5               | 15              | 160             | 1                  | 0.5                                 | 6              |
| MM5Z10  | 0L      | 9.4                                   | 10  | 10.6 | 5               | 20              | 160             | 1                  | 0.1                                 | 7              |



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|        |    |      |    |      |   |     |     |   |     |    |
|--------|----|------|----|------|---|-----|-----|---|-----|----|
| MM5Z11 | 0M | 10.4 | 11 | 11.6 | 5 | 20  | 80  | 1 | 0.1 | 8  |
| MM5Z12 | 0N | 11.4 | 12 | 12.7 | 5 | 25  | 80  | 1 | 0.1 | 9  |
| MM5Z13 | 0P | 12.4 | 13 | 14.1 | 5 | 30  | 80  | 1 | 0.1 | 10 |
| MM5Z15 | 0T | 14.3 | 15 | 15.8 | 5 | 30  | 80  | 1 | 0.1 | 11 |
| MM5Z16 | 0U | 15.3 | 16 | 17.1 | 2 | 40  | 80  | 1 | 0.1 | 12 |
| MM5Z18 | 0W | 16.8 | 18 | 19.1 | 2 | 45  | 80  | 1 | 0.1 | 13 |
| MM5Z20 | 0Z | 18.8 | 20 | 21.2 | 2 | 55  | 100 | 1 | 0.1 | 15 |
| MM5Z22 | 10 | 20.8 | 22 | 23.3 | 2 | 55  | 100 | 1 | 0.1 | 17 |
| MM5Z24 | 11 | 22.8 | 24 | 25.6 | 2 | 70  | 120 | 1 | 0.1 | 19 |
| MM5Z27 | 12 | 25.1 | 27 | 28.9 | 2 | 80  | 300 | 1 | 0.1 | 21 |
| MM5Z30 | 14 | 28   | 30 | 32   | 2 | 80  | 300 | 1 | 0.1 | 23 |
| MM5Z33 | 18 | 31   | 33 | 35   | 2 | 80  | 300 | 1 | 0.1 | 25 |
| MM5Z36 | 19 | 34   | 36 | 38   | 2 | 90  | 500 | 1 | 0.1 | 27 |
| MM5Z39 | 20 | 37   | 39 | 41   | 2 | 130 | 500 | 1 | 2   | 30 |
| MM5Z43 | 21 | 40   | 43 | 46   | 1 | 150 | 500 | 1 | 2   | 33 |
| MM5Z47 | 1A | 44   | 47 | 50   | 1 | 170 | 500 | 1 | 2   | 36 |
| MM5Z51 | 1C | 48   | 51 | 54   | 1 | 180 | 500 | 1 | 1   | 39 |
| MM5Z56 | 1D | 52   | 56 | 60   | 1 | 200 | 500 | 1 | 1   | 43 |
| MM5Z62 | 1E | 58   | 62 | 66   | 1 | 215 | 500 | 1 | 0.2 | 47 |
| MM5Z68 | 1F | 64   | 68 | 72   | 1 | 240 | 500 | 1 | 0.2 | 52 |
| MM5Z75 | 1G | 70   | 75 | 79   | 1 | 255 | 500 | 1 | 0.2 | 57 |

Note: (1) Tested with pulses  $t_p = 20\text{ms}$

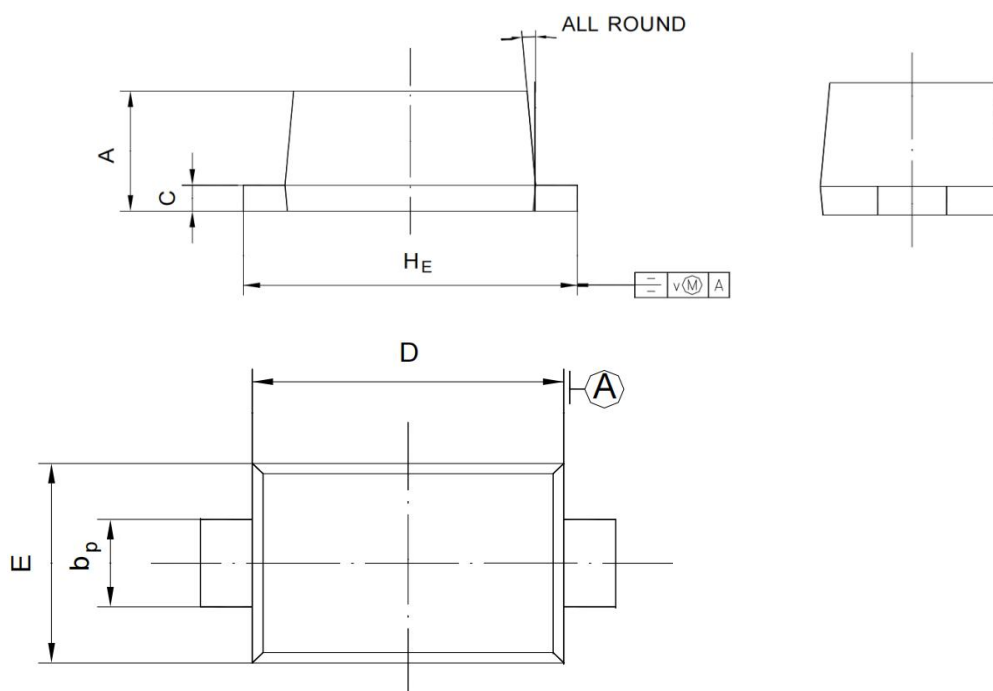


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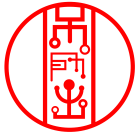
## Package Information

### SOD-523

### Dimensions in mm



| Unit | A            | b <sub>p</sub> | C              | D            | E            | H <sub>E</sub> | V   |    |
|------|--------------|----------------|----------------|--------------|--------------|----------------|-----|----|
| mm   | 0.70<br>0.60 | 0.4<br>0.3     | 0.135<br>0.100 | 1.25<br>1.15 | 0.85<br>0.75 | 1.7<br>1.5     | 0.1 | 5° |



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