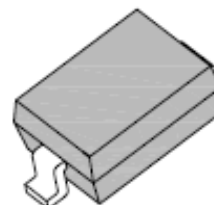


## 500mW Two Terminals SMD Zener Diodes

### Features

- Silicon Planar Zener Construction
- 500mW Power Dissipation
- Zener Voltage 3.0v to 75v
- Standard Zener Voltage Tolerance is  $\pm 5\%$  with a "B" suffix
- Ideal Suited for Automated Assembly Processes
- RoHS Compliance



SOD-123



### Mechanical Data

|                        |                                           |
|------------------------|-------------------------------------------|
| <b>Case:</b>           | SOD-123, molded plastic                   |
| <b>Epoxy:</b>          | Plastic package has UL flammability 94V-0 |
| <b>Terminals:</b>      | Solderable per MIL-STD-750, Method 2026   |
| <b>Polarity:</b>       | Color band denotes cathode                |
| <b>Approx. Weight:</b> | 0.01 grams                                |

### Maximum Ratings ( $T_{Ambient}=25^{\circ}\text{C}$ unless noted otherwise)

| Symbol                  | Description                                | Value      | Unit | Conditions                     |
|-------------------------|--------------------------------------------|------------|------|--------------------------------|
| <b>P<sub>tot</sub></b>  | Power Dissipation                          | 500        | mW   | T <sub>A</sub> =25 °C (Note 1) |
| <b>R<sub>thJA</sub></b> | Thermal Resistance Junction to Ambient Air | 340        | °C/W | (Note 2)                       |
| <b>T<sub>J</sub></b>    | Max. Junction Temperature                  | 150        | °C   |                                |
| <b>T<sub>stg</sub></b>  | Storage Temperature Range                  | -55 to 150 | °C   |                                |

**Note:** 1. Mounted on 5.0mm<sup>2</sup>(.013mm thick) land areas.  
2. On FR-4 or FR-5 board with minimum recommended solder pad layout.

## 500mW Two Terminals SMD Zener Diodes

### MMSZ5225B – MMSZ5267B

#### Electrical Characteristics ( $T_{Ambient}=25^{\circ}C$ unless noted otherwise)

| Part NO.  | Marking Code | Normal Zener Voltage @ I <sub>ZT</sub> |       |       | Test Current | Max. Zener impedance |                                   |                                   | Max. Reverse Leakage Current I <sub>R</sub> @ V <sub>R</sub> |                    |
|-----------|--------------|----------------------------------------|-------|-------|--------------|----------------------|-----------------------------------|-----------------------------------|--------------------------------------------------------------|--------------------|
|           |              | V <sub>Z</sub> (V)                     |       |       |              | I <sub>ZT</sub> (mA) | Z <sub>ZT</sub> @ I <sub>ZT</sub> | Z <sub>zk</sub> @ I <sub>zk</sub> |                                                              |                    |
|           |              | Nom.                                   | Min.  | Max.  | Ω            |                      | Ω                                 | mA                                | I <sub>R</sub> (μA)                                          | V <sub>R</sub> (V) |
| MMSZ5225B | C5           | 3.0                                    | 2.85  | 3.15  | 20           | 30                   | 1600                              | 0.25                              | 50                                                           | 1.0                |
| MMSZ5226B | D1           | 3.3                                    | 3.14  | 3.47  | 20           | 28                   | 1600                              | 0.25                              | 25                                                           | 1.0                |
| MMSZ5227B | D2           | 3.6                                    | 3.42  | 3.78  | 20           | 24                   | 1700                              | 0.25                              | 15                                                           | 1.0                |
| MMSZ5228B | D3           | 3.9                                    | 3.71  | 4.10  | 20           | 23                   | 1900                              | 0.25                              | 10                                                           | 1.0                |
| MMSZ5229B | D4           | 4.3                                    | 4.09  | 4.52  | 20           | 22                   | 2000                              | 0.25                              | 5.0                                                          | 1.0                |
| MMSZ5230B | D5           | 4.7                                    | 4.47  | 4.94  | 20           | 19                   | 1900                              | 0.25                              | 5.0                                                          | 2.0                |
| MMSZ5231B | E1           | 5.1                                    | 4.85  | 5.36  | 20           | 17                   | 1600                              | 0.25                              | 5.0                                                          | 2.0                |
| MMSZ5232B | E2           | 5.6                                    | 5.32  | 5.88  | 20           | 11                   | 1600                              | 0.25                              | 5.0                                                          | 3.0                |
| MMSZ5233B | E3           | 6.0                                    | 5.70  | 6.30  | 20           | 7                    | 1600                              | 0.25                              | 5.0                                                          | 3.5                |
| MMSZ5234B | E4           | 6.2                                    | 5.89  | 6.51  | 20           | 7                    | 1000                              | 0.25                              | 5.0                                                          | 4.0                |
| MMSZ5235B | E5           | 6.8                                    | 6.46  | 7.14  | 20           | 5                    | 750                               | 0.25                              | 3.0                                                          | 5.0                |
| MMSZ5236B | F1           | 7.5                                    | 7.13  | 7.88  | 20           | 6                    | 500                               | 0.25                              | 3.0                                                          | 6.0                |
| MMSZ5237B | F2           | 8.2                                    | 7.79  | 8.61  | 20           | 8                    | 500                               | 0.25                              | 3.0                                                          | 6.5                |
| MMSZ5238B | F3           | 8.7                                    | 8.27  | 9.14  | 20           | 8                    | 600                               | 0.25                              | 3.0                                                          | 6.5                |
| MMSZ5239B | F4           | 9.1                                    | 8.65  | 9.56  | 20           | 10                   | 600                               | 0.25                              | 3.0                                                          | 7.0                |
| MMSZ5240B | F5           | 10                                     | 9.50  | 10.50 | 20           | 17                   | 600                               | 0.25                              | 3.0                                                          | 8.0                |
| MMSZ5241B | H1           | 11                                     | 10.45 | 11.55 | 20           | 22                   | 600                               | 0.25                              | 2.0                                                          | 8.4                |
| MMSZ5242B | H2           | 12                                     | 11.40 | 12.60 | 20           | 30                   | 600                               | 0.25                              | 1.0                                                          | 9.1                |
| MMSZ5243B | H3           | 13                                     | 12.35 | 13.65 | 9.5          | 13                   | 600                               | 0.25                              | 0.5                                                          | 9.9                |
| MMSZ5244B | H4           | 14                                     | 13.30 | 14.70 | 9.0          | 15                   | 600                               | 0.25                              | 0.1                                                          | 10                 |
| MMSZ5245B | H5           | 15                                     | 14.25 | 15.75 | 8.5          | 16                   | 600                               | 0.25                              | 0.1                                                          | 11                 |
| MMSZ5246B | J1           | 16                                     | 15.20 | 16.80 | 7.8          | 17                   | 600                               | 0.25                              | 0.1                                                          | 12                 |
| MMSZ5247B | J2           | 17                                     | 16.15 | 17.85 | 7.4          | 19                   | 600                               | 0.25                              | 0.1                                                          | 13                 |
| MMSZ5248B | J3           | 18                                     | 17.10 | 18.90 | 7.0          | 21                   | 600                               | 0.25                              | 0.1                                                          | 14                 |
| MMSZ5249B | J4           | 19                                     | 18.05 | 19.95 | 6.6          | 23                   | 600                               | 0.25                              | 0.1                                                          | 14                 |
| MMSZ5250B | J5           | 20                                     | 19.00 | 21.00 | 6.2          | 25                   | 600                               | 0.25                              | 0.1                                                          | 15                 |
| MMSZ5251B | K1           | 22                                     | 20.90 | 23.10 | 5.6          | 29                   | 600                               | 0.25                              | 0.1                                                          | 17                 |
| MMSZ5252B | K2           | 24                                     | 22.80 | 25.20 | 5.2          | 33                   | 600                               | 0.25                              | 0.1                                                          | 18                 |
| MMSZ5253B | K3           | 25                                     | 23.75 | 26.25 | 5.0          | 35                   | 600                               | 0.25                              | 0.1                                                          | 19                 |
| MMSZ5254B | K4           | 27                                     | 25.65 | 28.35 | 4.6          | 41                   | 600                               | 0.25                              | 0.1                                                          | 21                 |
| MMSZ5255B | K5           | 28                                     | 26.60 | 29.40 | 4.5          | 44                   | 600                               | 0.25                              | 0.1                                                          | 21                 |
| MMSZ5256B | M1           | 30                                     | 28.50 | 31.50 | 4.2          | 49                   | 600                               | 0.25                              | 0.1                                                          | 23                 |

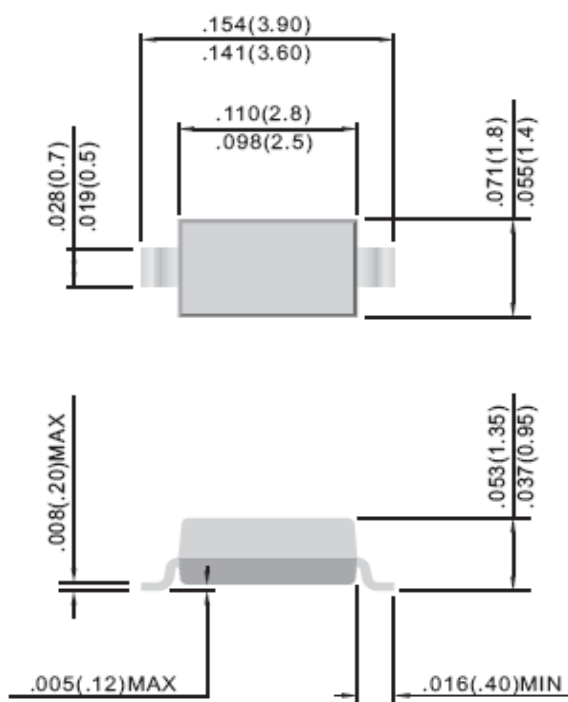
## 500mW Two Terminals SMD Zener Diodes

### MMSZ5225B – MMSZ5267B

| Part NO.  | Marking Code | Normal Zener Voltage @ I <sub>ZT</sub> |       |       | Test Current | Max. Zener impedance |                                   |                                   | Max. Reverse Leakage Current I <sub>R</sub> @ V <sub>R</sub> |                    |
|-----------|--------------|----------------------------------------|-------|-------|--------------|----------------------|-----------------------------------|-----------------------------------|--------------------------------------------------------------|--------------------|
|           |              | V <sub>Z</sub> (V)                     |       |       |              | I <sub>ZT</sub> (mA) | Z <sub>ZT</sub> @ I <sub>ZT</sub> | Z <sub>Zk</sub> @ I <sub>zk</sub> |                                                              |                    |
|           |              | Nom.                                   | Min.  | Max.  | Ω            |                      | Ω                                 | mA                                | I <sub>R</sub> (μA)                                          | V <sub>R</sub> (V) |
| MMSZ5257B | M2           | 33                                     | 31.35 | 34.65 | 3.8          | 58                   | 700                               | 0.25                              | 0.1                                                          | 25                 |
| MMSZ5258B | M3           | 36                                     | 34.20 | 37.80 | 3.4          | 70                   | 700                               | 0.25                              | 0.1                                                          | 27                 |
| MMSZ5259B | M4           | 39                                     | 37.05 | 40.95 | 3.2          | 80                   | 800                               | 0.25                              | 0.1                                                          | 30                 |
| MMSZ5260B | M5           | 43                                     | 40.85 | 45.15 | 3.0          | 93                   | 900                               | 0.25                              | 0.1                                                          | 33                 |
| MMSZ5261B | N1           | 47                                     | 44.65 | 49.35 | 2.7          | 105                  | 1000                              | 0.25                              | 0.1                                                          | 36                 |
| MMSZ5262B | N2           | 51                                     | 48.45 | 53.55 | 2.5          | 125                  | 1100                              | 0.25                              | 0.1                                                          | 39                 |
| MMSZ5263B | N3           | 56                                     | 53.20 | 58.80 | 2.2          | 150                  | 1300                              | 0.25                              | 0.1                                                          | 43                 |
| MMSZ5264B | N4           | 60                                     | 57.00 | 63.00 | 2.1          | 170                  | 1400                              | 0.25                              | 0.1                                                          | 46                 |
| MMSZ5265B | N5           | 62                                     | 58.90 | 65.10 | 2.0          | 185                  | 1400                              | 0.25                              | 0.1                                                          | 47                 |
| MMSZ5266B | P1           | 68                                     | 64.60 | 71.40 | 1.8          | 230                  | 1600                              | 0.25                              | 0.1                                                          | 52                 |
| MMSZ5267B | P2           | 75                                     | 71.25 | 78.75 | 1.7          | 270                  | 1700                              | 0.25                              | 0.1                                                          | 56                 |

### Dimensions in inch (mm)

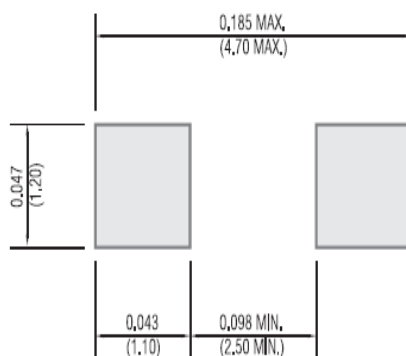
#### SOD-123



## 500mW Two Terminals SMD Zener Diodes

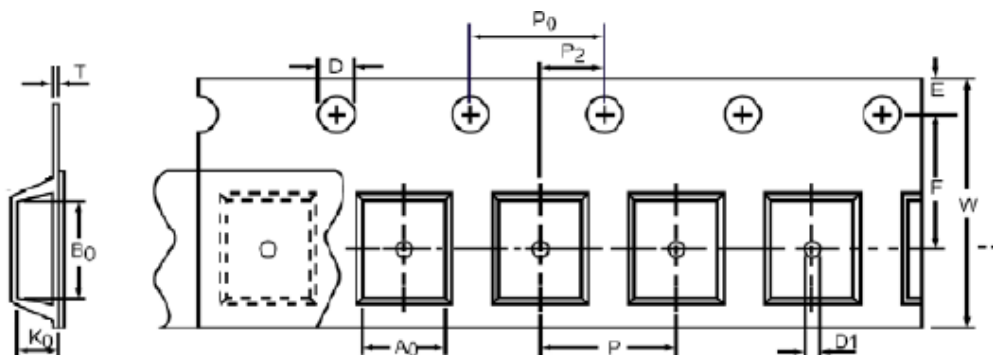
### MMSZ5225B – MMSZ5267B

#### Mounting Pad Layout in inch (mm)



#### Packing Information:

##### Carrier Tape Dimensions (in mm)



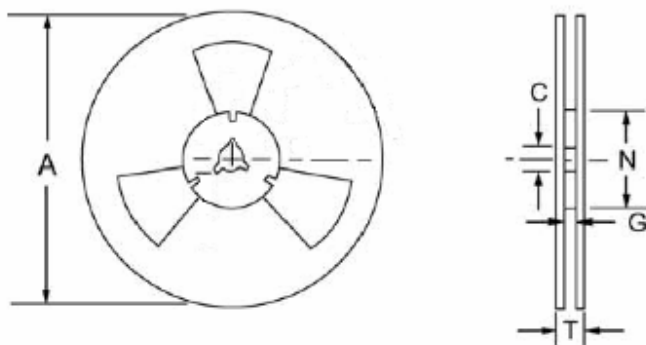
| Product Type | A0            | B0        | K0        | D         | P0       | P        |
|--------------|---------------|-----------|-----------|-----------|----------|----------|
|              | See Note      |           |           | 1.55±0.05 | 4.0±0.1  | 4.0±0.1  |
| SOD-123      | W             | E         | T         | D1        | F        | P2       |
|              | 8.0+0.15/-0.3 | 1.75±0.10 | 0.20±0.05 | 1.0±0.1   | 3.5±0.05 | 2.0±0.05 |

**Note:** Symbol A0, B0, K0 are determined by the maximum dimensions of the component size.  
The clearance between the component and the cavity must be within  
0.05 mm (0.002") min. to 0.50 mm (0.02") max. for 8 mm tape.

## 500mW Two Terminals SMD Zener Diodes

### MMSZ5225B – MMSZ5267B

#### Reel Dimensions (in mm)



| A         | C        | G        | N       | T         |
|-----------|----------|----------|---------|-----------|
| 178.0±2.0 | 13.5±1.0 | 9.9 max. | 50 min. | 14.4 max. |

#### Packing Quantity Information:

| Quantity         | PCS per Inner Box | PCS per Carton |
|------------------|-------------------|----------------|
| TR70 Tape & Reel | 3000/Reel         | 240000         |

#### Carton Size Information:

| Cartoon Size        |
|---------------------|
| 390X270X400 (in mm) |

## 500mW Two Terminals SMD Zener Diodes

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### MMSZ5225B – MMSZ5267B

#### How to contact us

##### **US HEADQUARTERS**

28040 WEST HARRISON PARKWAY, VALENCIA, CA 91355-4162

Tel: (800) TAITRON (800) 824-8766 (661) 257-6060

Fax: (800) TAITFAX (800) 824-8329 (661) 257-6415

Email: [taitron@taitroncomponents.com](mailto:taitron@taitroncomponents.com)

Http://[www.taitroncomponents.com](http://www.taitroncomponents.com)

##### **TAITRON COMPONENTS MEXICO, S.A .DE C.V.**

BOULEVARD CENTRAL 5000 INTERIOR 5 PARQUE INDUSTRIAL ATITALAQUIA, HIDALGO C.P.  
42970 MEXICO

Tel: +52-55-5560-1519

Fax: +52-55-5560-2190

##### **TAITRON COMPONENTS INCORPORATED REPRESENTAÇÕES DO BRASIL LTDA**

RUA DOMINGOS DE MORAIS, 2777, 2.ANDAR, SALA 24 SAÚDE - SÃO PAULO-SP 04035-001 BRAZIL

Tel: +55-11-5574-7949

Fax: +55-11-5572-0052

##### **TAITRON COMPONENTS INCORPORATED, SHANGHAI REPRESENTATIVE OFFICE**

METROBANK PLAZA, 1160 WEST YAN' AN ROAD, SUITE 1503, SHANGHAI, 200052, CHINA

Tel: +86-21-5424-9942

Fax: +86-21-5424-9931