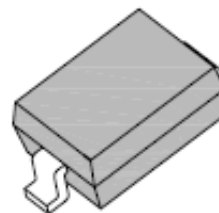


500mW Two Terminals SMD Zener Diodes

Features

- Silicon Planar Zener Construction
- 500mW Power Dissipation
- Zener Voltage 4.3V to 43V
- RoHS Compliance

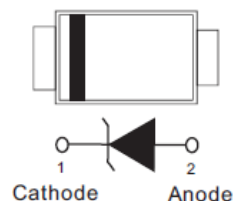


SOD-123



Mechanical Data

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



Maximum Ratings *(T_{Ambient}=25°C unless noted otherwise)*

| Symbol | Description | Value | Unit | Conditions |
|-------------------------|--|------------|------|------------------------------|
| P_{tot} | Power Dissipation | 500 | mW | T _L =75 °C (Note) |
| R_{thJA} | Thermal Resistance Junction to Ambient Air | 340 | °C/W | |
| R_{thJL} | Thermal Resistance Junction to Lead | 150 | °C/W | |
| T_J | Max. Junction Temperature | 150 | °C | |
| T_{STG} | Storage Temperature Range | -55 to 150 | °C | |

Note: Mounted FR-5 PCB with minimum recommend pad layout.

500mW Two Terminals SMD Zener Diodes

MMSZ4687 - MMSZ4717

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

| Part NO. | Marking Code | Nominal Zener Voltage @ I _{ZT} | | | Test Current | Max. Reverse Leakage Current I _R @ V _R | |
|----------|--------------|---|------|------|--------------|--|---------------------|
| | | V _Z (V) | | | | I _{ZT} (mA) | I _R (μA) |
| | | Nom. | Min. | Max. | | | |
| MMSZ4687 | CP | 4.3 | 4.09 | 4.52 | 0.05 | 4.00 | 2.0 |
| MMSZ4688 | CT | 4.7 | 4.47 | 4.94 | 0.05 | 10.0 | 3.0 |
| MMSZ4689 | CU | 5.1 | 4.85 | 5.36 | 0.05 | 10.0 | 3.0 |
| MMSZ4690 | CV | 5.6 | 5.32 | 5.88 | 0.05 | 10.0 | 4.0 |
| MMSZ4691 | CA | 6.2 | 5.89 | 6.51 | 0.05 | 10.0 | 5.0 |
| MMSZ4692 | CX | 6.8 | 6.46 | 7.14 | 0.05 | 10.0 | 5.1 |
| MMSZ4693 | CY | 7.5 | 7.13 | 7.88 | 0.05 | 10.0 | 5.7 |
| MMSZ4694 | CZ | 8.2 | 7.79 | 8.61 | 0.05 | 1.00 | 6.2 |
| MMSZ4695 | DC | 8.7 | 8.27 | 9.14 | 0.05 | 1.00 | 6.6 |
| MMSZ4696 | DD | 9.1 | 8.65 | 9.56 | 0.05 | 1.00 | 6.9 |
| MMSZ4697 | DE | 10 | 9.5 | 10.5 | 0.05 | 1.00 | 7.6 |
| MMSZ4698 | DF | 11 | 10.5 | 11.6 | 0.05 | 0.05 | 8.4 |
| MMSZ4699 | DH | 12 | 11.4 | 12.6 | 0.05 | 0.05 | 9.1 |
| MMSZ4700 | DJ | 13 | 12.4 | 13.7 | 0.05 | 0.05 | 9.8 |
| MMSZ4701 | DK | 14 | 13.3 | 14.7 | 0.05 | 0.05 | 10.6 |
| MMSZ4702 | DM | 15 | 14.3 | 15.8 | 0.05 | 0.05 | 11.4 |
| MMSZ4703 | DN | 16 | 15.2 | 16.8 | 0.05 | 0.05 | 12.1 |
| MMSZ4704 | DP | 17 | 16.2 | 17.9 | 0.05 | 0.05 | 12.9 |
| MMSZ4705 | DT | 18 | 17.1 | 18.9 | 0.05 | 0.05 | 13.6 |
| MMSZ4706 | DU | 19 | 18.1 | 20.0 | 0.05 | 0.05 | 14.4 |
| MMSZ4707 | DV | 20 | 19.0 | 21.0 | 0.05 | 0.01 | 15.2 |
| MMSZ4708 | DA | 22 | 20.9 | 23.1 | 0.05 | 0.01 | 16.7 |
| MMSZ4709 | DZ | 24 | 22.8 | 25.2 | 0.05 | 0.01 | 18.2 |
| MMSZ4710 | DY | 25 | 23.8 | 26.3 | 0.05 | 0.01 | 19.0 |
| MMSZ4711 | EA | 27 | 25.7 | 28.4 | 0.05 | 0.01 | 20.4 |
| MMSZ4712 | EC | 28 | 26.6 | 29.4 | 0.05 | 0.01 | 21.2 |
| MMSZ4713 | ED | 30 | 28.5 | 31.5 | 0.05 | 0.01 | 22.8 |
| MMSZ4714 | EE | 33 | 31.4 | 34.7 | 0.05 | 0.01 | 25.0 |
| MMSZ4715 | EF | 36 | 34.2 | 37.8 | 0.05 | 0.01 | 27.3 |
| MMSZ4716 | EH | 39 | 37.1 | 41.0 | 0.05 | 0.01 | 29.6 |
| MMSZ4717 | EJ | 43 | 40.9 | 45.2 | 0.05 | 0.01 | 32.6 |

MMSZ4687 – MMSZ4717

Typical Characteristics Curves

Fig.1- Power Derating Curve

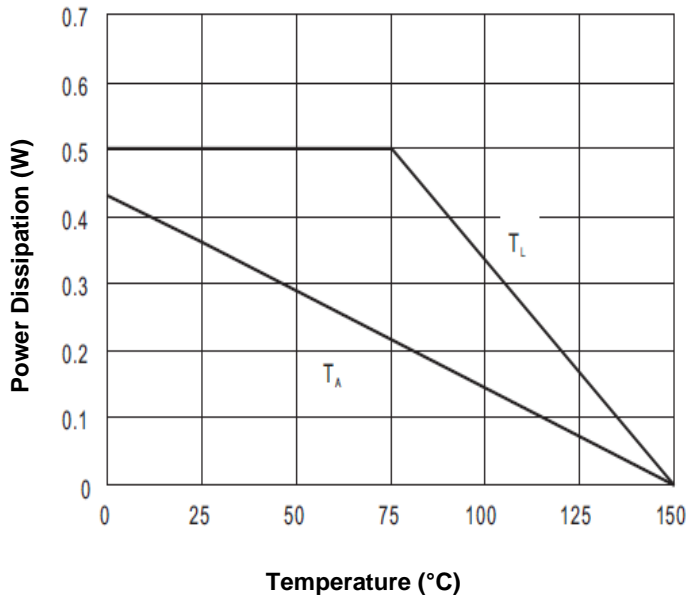


Fig.2- Typical Junction capacitance

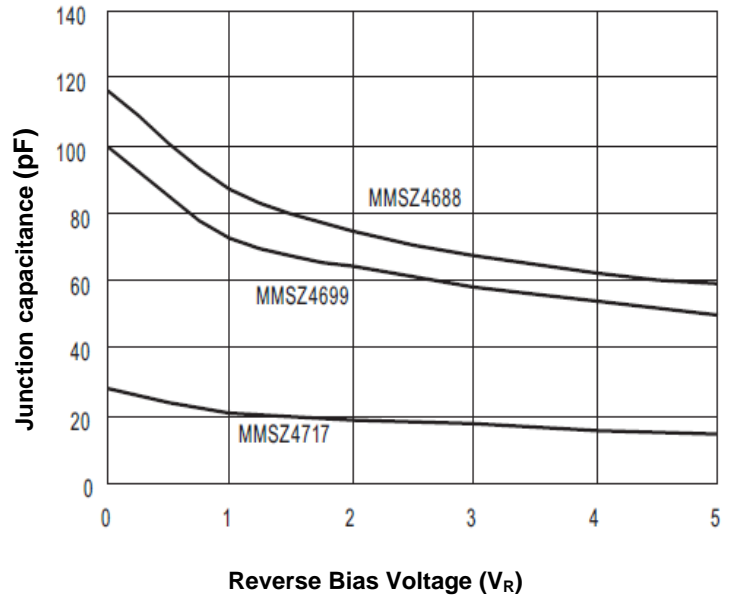


Fig.3- Typical Reverse Characteristics

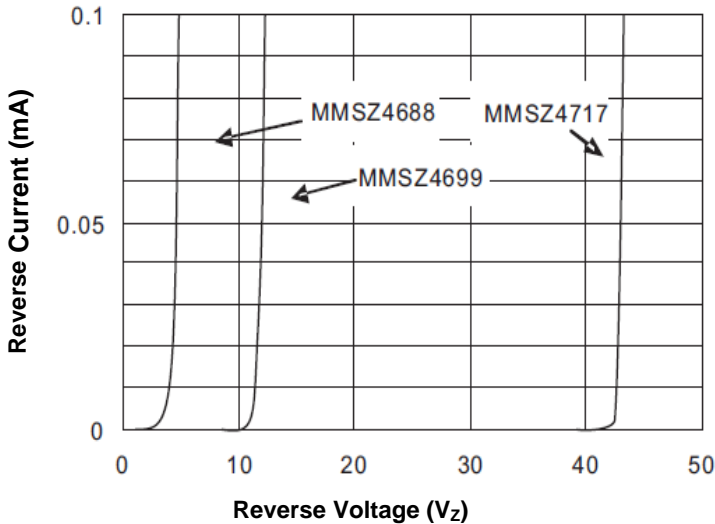
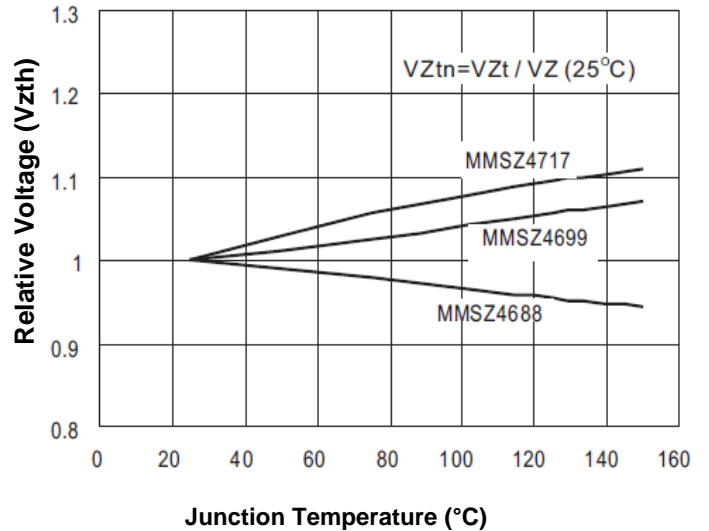


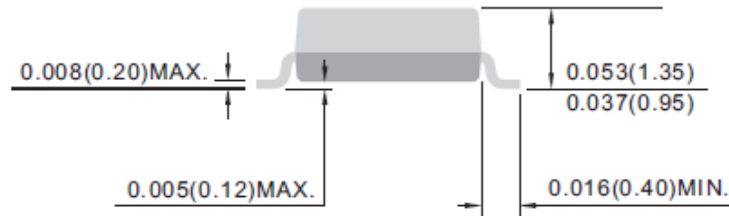
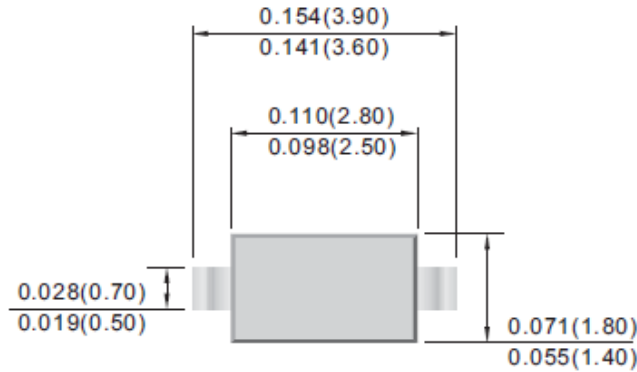
Fig.4- Junction Temperature of Working Voltage vs. Junction Temperature



500mW Two Terminals SMD Zener Diodes

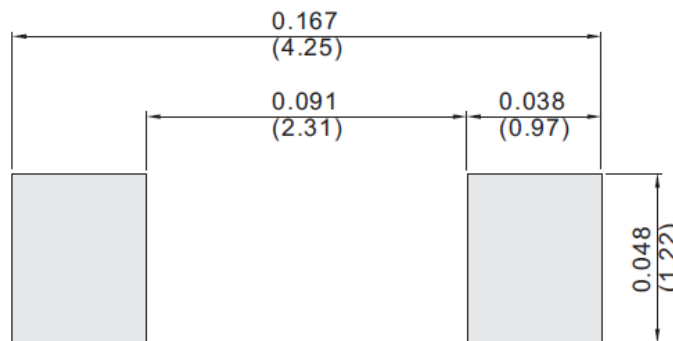
MMSZ4687 – MMSZ4717

Dimensions in inch (mm)



SOD-123

Mounting Pad Layout in inch (mm)

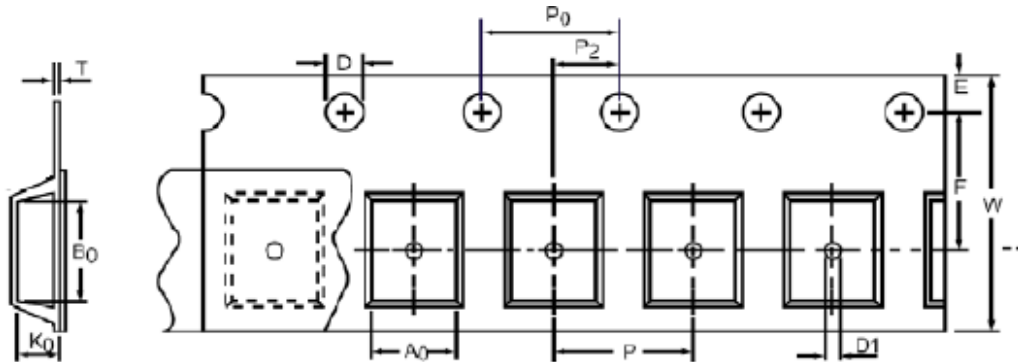


500mW Two Terminals SMD Zener Diodes

MMSZ4687 – MMSZ4717

Packing Information:

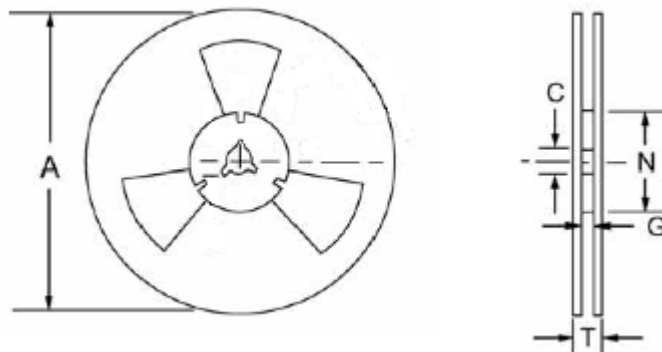
Carrier Tape Dimensions (in mm)



| 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.

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. |

500mW Two Terminals SMD Zener Diodes

MMSZ4687 – MMSZ4717

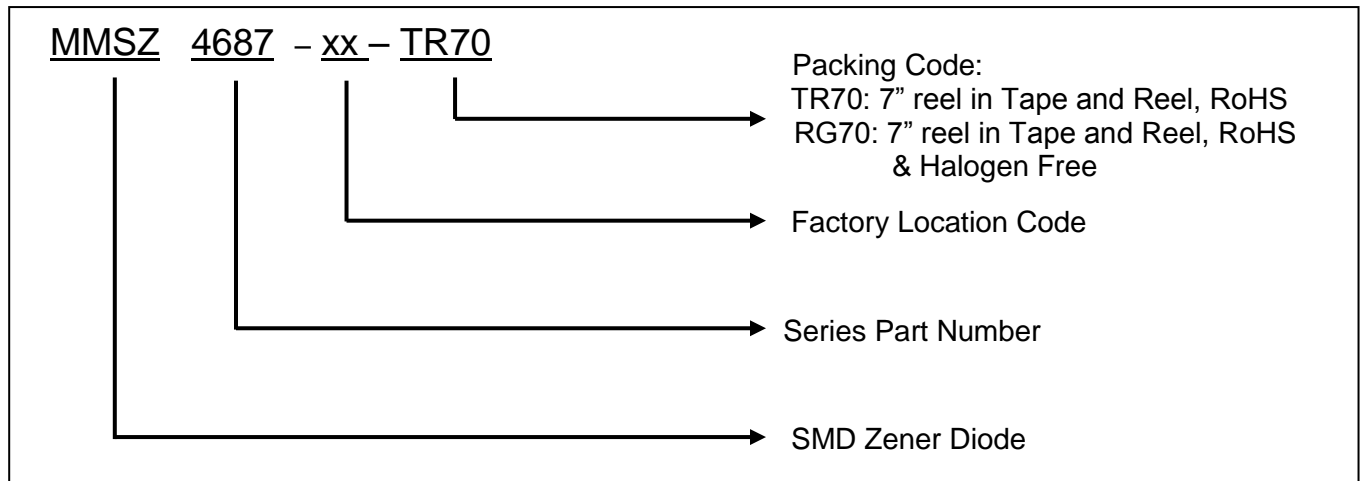
Packing Quantity Information:

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

Carton Size Information:

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

Ordering Information



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