

| Device   | Marking | Zener Voltage Range             |         |        |                       | Maximum Reverse Current |         |
|----------|---------|---------------------------------|---------|--------|-----------------------|-------------------------|---------|
|          |         | V <sub>Z</sub> @I <sub>ZT</sub> |         |        | I <sub>ZT</sub><br>uA | IR<br>uA                | VR<br>V |
|          |         | Min(V)                          | Nom (V) | Max(V) |                       |                         |         |
| MMSZ4696 | DD      | 8.65                            | 9.1     | 9.56   | 50                    | 1                       | 6.9     |
| MMSZ4697 | DE      | 9.50                            | 10.0    | 10.50  | 50                    | 1                       | 7.6     |
| MMSZ4698 | DF      | 10.45                           | 11.0    | 11.55  | 50                    | 0.05                    | 8.4     |
| MMSZ4699 | DH      | 11.40                           | 12.0    | 12.60  | 50                    | 0.05                    | 9.1     |
| MMSZ4700 | DJ      | 12.35                           | 13.0    | 13.65  | 50                    | 0.05                    | 9.8     |
| MMSZ4701 | DK      | 13.30                           | 14.0    | 14.70  | 50                    | 0.05                    | 10.6    |
| MMSZ4702 | DM      | 14.25                           | 15.0    | 15.75  | 50                    | 0.05                    | 11.4    |
| MMSZ4703 | DN      | 15.20                           | 16.0    | 16.80  | 50                    | 0.05                    | 12.1    |
| MMSZ4704 | DP      | 16.15                           | 17.0    | 17.85  | 50                    | 0.05                    | 12.9    |
| MMSZ4705 | DT      | 17.10                           | 18.0    | 18.90  | 50                    | 0.05                    | 13.6    |
| MMSZ4706 | DU      | 18.05                           | 19.0    | 19.95  | 50                    | 0.05                    | 14.4    |
| MMSZ4707 | DV      | 19.00                           | 20.0    | 21.00  | 50                    | 0.01                    | 15.2    |
| MMSZ4708 | DA      | 20.90                           | 22.0    | 23.10  | 50                    | 0.01                    | 16.7    |
| MMSZ4709 | DX      | 22.80                           | 24.0    | 25.20  | 50                    | 0.01                    | 18.2    |
| MMSZ4710 | DY      | 23.75                           | 25.0    | 26.25  | 50                    | 0.01                    | 19      |
| MMSZ4711 | EA      | 25.65                           | 27.0    | 28.35  | 50                    | 0.01                    | 20.4    |
| MMSZ4712 | EC      | 26.60                           | 28.0    | 29.40  | 50                    | 0.01                    | 21.2    |
| MMSZ4713 | ED      | 28.50                           | 30.0    | 31.50  | 50                    | 0.01                    | 22.8    |
| MMSZ4714 | EE      | 31.35                           | 33.0    | 34.65  | 50                    | 0.01                    | 25      |
| MMSZ4715 | EF      | 34.20                           | 36.0    | 37.80  | 50                    | 0.01                    | 27.3    |
| MMSZ4716 | EH      | 37.05                           | 39.0    | 40.95  | 50                    | 0.01                    | 29.6    |
| MMSZ4717 | EJ      | 40.85                           | 43.0    | 45.15  | 50                    | 0.01                    | 32.6    |

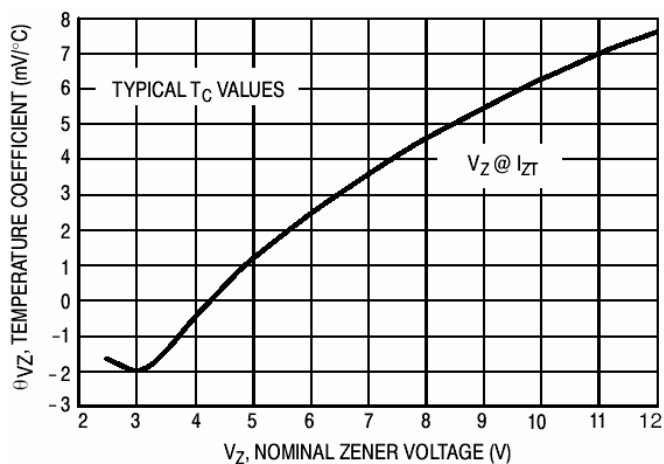


Figure 1. Temperature Coefficients  
(Temperature Range -55°C to +150°C)

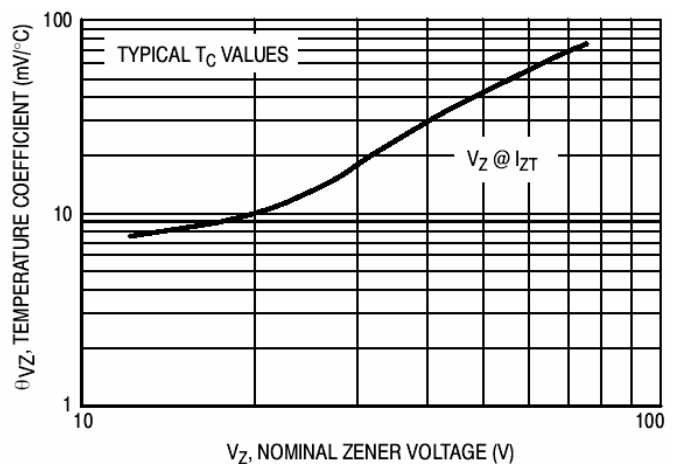


Figure 2. Temperature Coefficients  
(Temperature Range -55°C to +150°C)

## RATING AND CHARACTERISTICS CURVES (MMSZ4678 THRU MMSZ4717 )

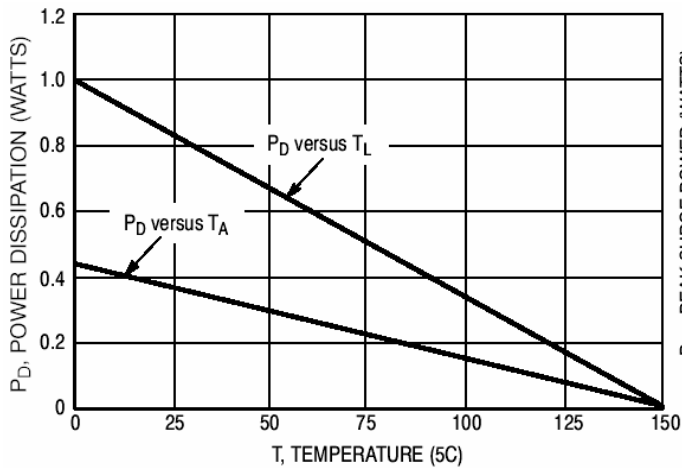


Figure 3. Steady State Power Derating

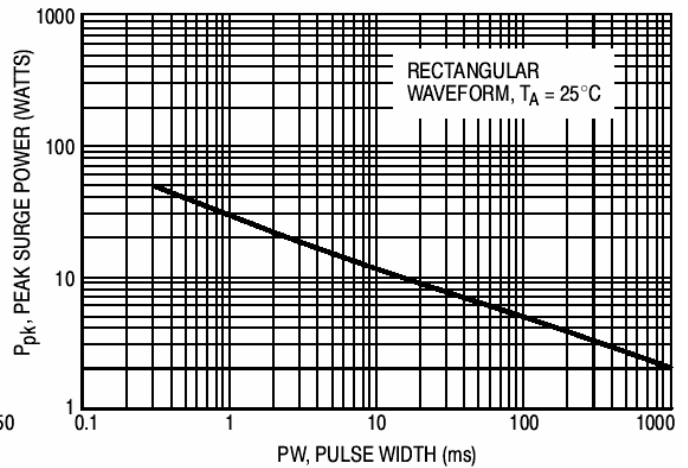


Figure 4. Maximum Nonrepetitive Surge Power

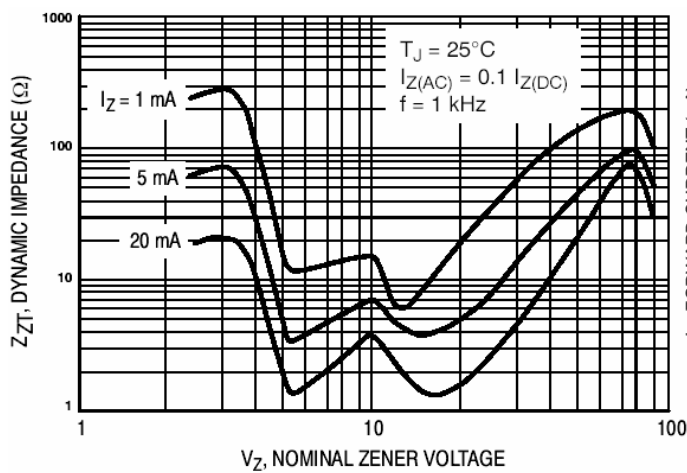


Figure 5. Effect of Zener Voltage on Zener Impedance

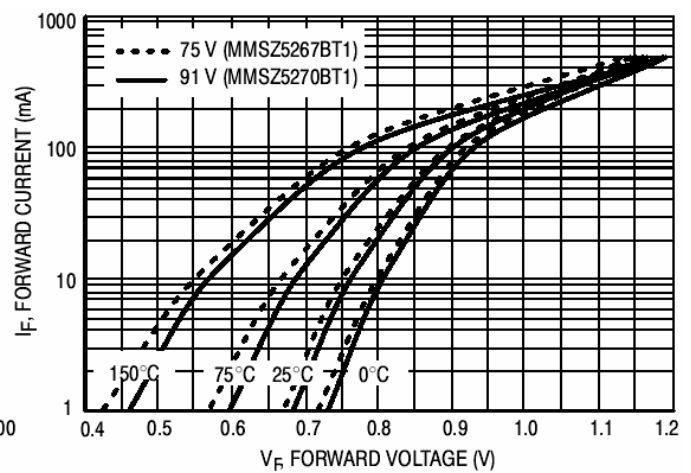


Figure 6. Typical Forward Voltage

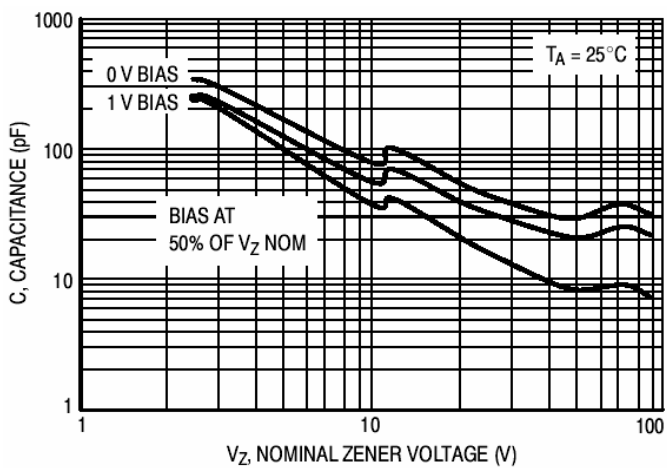


Figure 7. Typical Capacitance

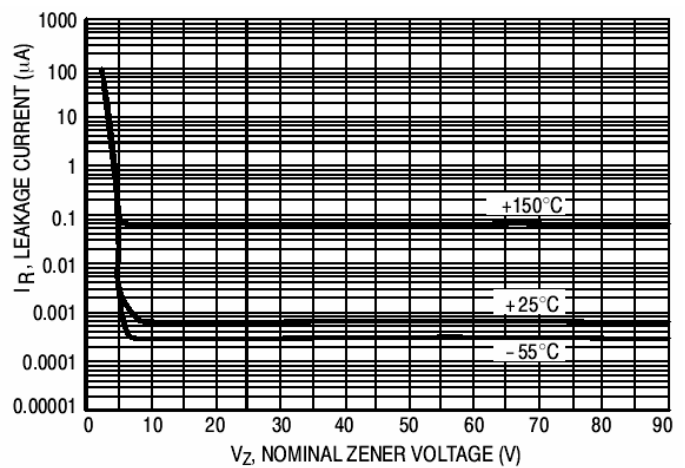


Figure 8. Typical Leakage Current

## RATING AND CHARACTERISTICS CURVES (MMSZ4678 THRU MMSZ4717 )

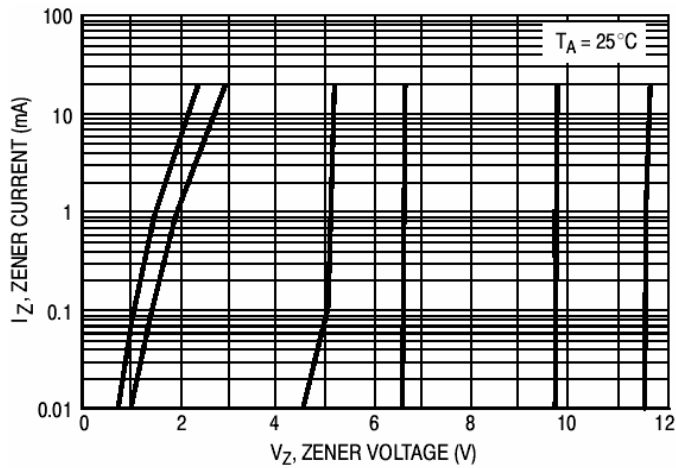


Figure 9. Zener Voltage versus Zener Current  
( $V_Z$  Up to 12 V)

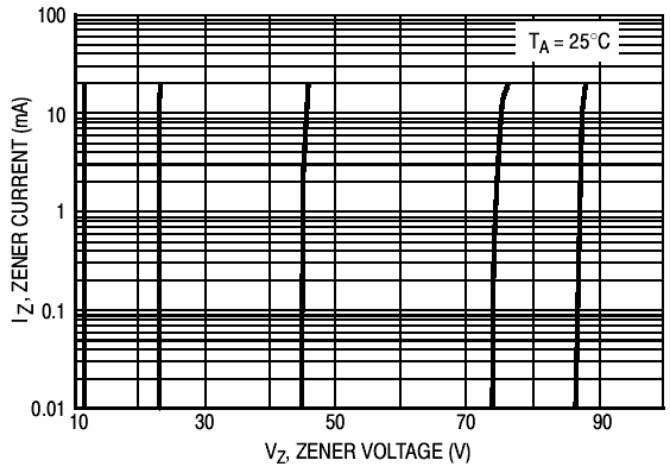
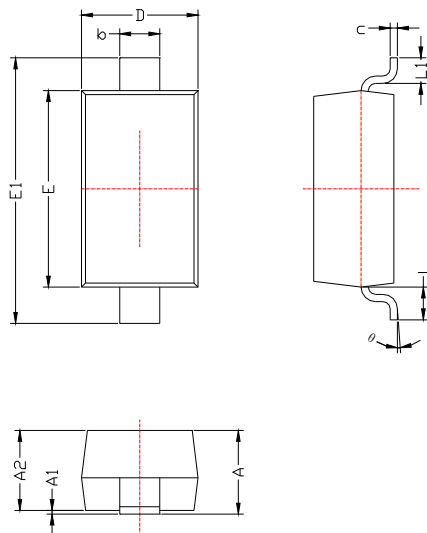


Figure 10. Zener Voltage versus Zener Current  
(12 V to 91 V)

### SOD-123 PACKAGE OUTLINE Plastic surface mounted package

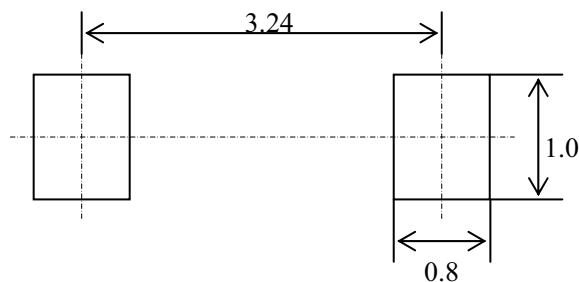


| SYMBOL | DIMENSIONS |       |
|--------|------------|-------|
|        | MIN.       | MAX.  |
| A      | 1.050      | 1.250 |
| A1     | 0.000      | 0.100 |
| A2     | 1.050      | 1.150 |
| b      | 0.450      | 0.650 |
| c      | 0.080      | 0.150 |
| D      | 1.500      | 1.700 |
| E      | 2.600      | 2.800 |
| E1     | 3.550      | 3.850 |
| L      | 0.500REF   |       |
| L1     | 0.250      | 0.450 |
| θ      | 0°         | 8°    |

### 焊盘设计参考

Precautions: PCB Design

Recommended land dimensions for SOD-123 diode. Electrode patterns for PCBs



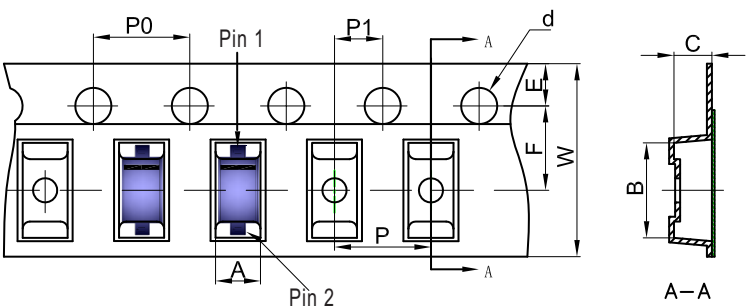
中心距: 3.24  
脚 宽: 0.55  
焊盘宽: 1.00  
脚 长: 0.50  
焊盘长: 0.80

技术要求:

- 1, 塑封体尺寸: 2.70 X 1.60
- 2: 未注公差为:  $\pm 0.05$
- 3, 所有单位: mm

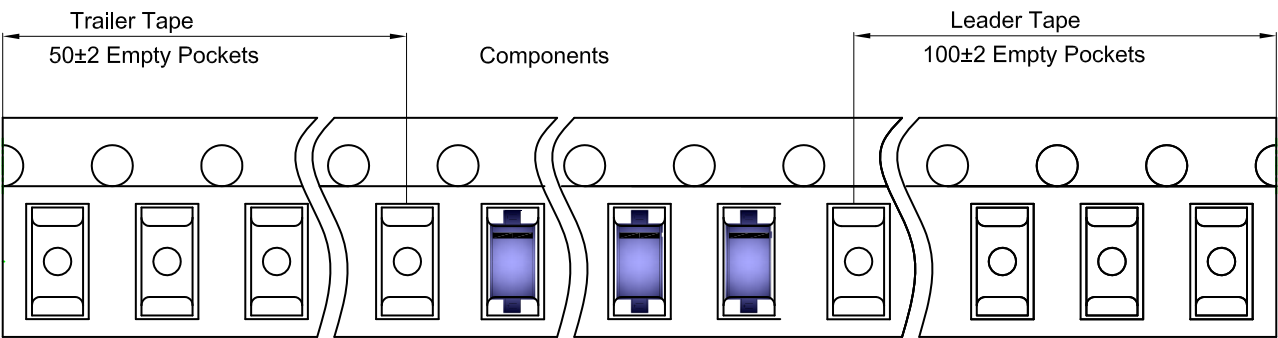
SOD-123 Tape and Reel

SOD-123 Embossed Carrier Tape

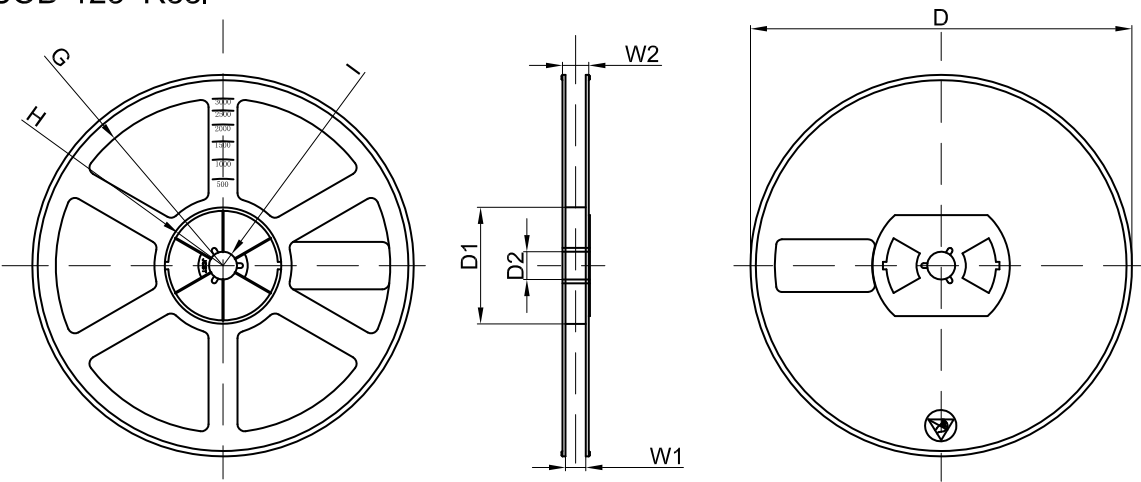


| Dimensions are in millimeter |      |      |      |       |      |      |      |      |      |      |
|------------------------------|------|------|------|-------|------|------|------|------|------|------|
| Pkg type                     | A    | B    | C    | d     | E    | F    | P0   | P    | P1   | W    |
| SOD-123                      | 1.85 | 3.95 | 1.57 | Ø1.55 | 1.75 | 3.50 | 4.00 | 4.00 | 2.00 | 8.00 |

SOD-123 Tape Leader and Trailer



SOD-123 Reel



| Dimensions are in millimeter |         |       |       |        |        |       |      |       |
|------------------------------|---------|-------|-------|--------|--------|-------|------|-------|
| Reel Option                  | D       | D1    | D2    | G      | H      | I     | W1   | W2    |
| 7"Dia                        | Ø178.00 | 54.40 | 13.00 | R78.00 | R25.60 | R6.50 | 9.50 | 12.30 |

## PACKAGING OF DIODE

### REEL PACK

| PACKAGE | PACKING CODE | REEL ( EA ) | COMPONENT SPACE(mm) | TAPE SPACE (mm) | REEL DIA (mm) | CARTON SIZE (mm) | EA PER CARTON | GROSS WEIGHT(Kg) |
|---------|--------------|-------------|---------------------|-----------------|---------------|------------------|---------------|------------------|
| SOD-123 | -T           | 3,000       | ---                 | ---             | 178           | 438*438*220      | 180,000       | 9.00             |

Visit [http:// www.rectron.com](http://www.rectron.com) for complete datasheets

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