

## MM1Z4689 - MM1Z4717

$V_Z$  : 5.1 to 43 V

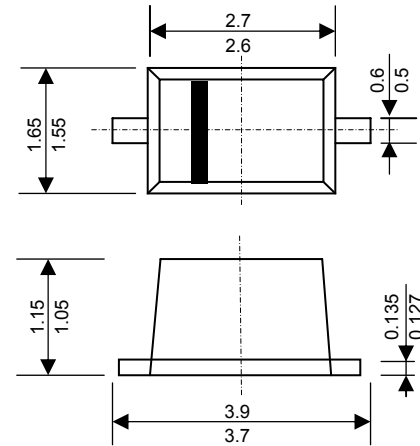
$P_D$  : 500 mW

### FEATURES :

- \* Total Power Dissipation 500 mW
- \* Wide Zener Reverse Voltage Range 5.1 V to 43 V
- \* Package Designed for Optimal Automated Board Assembly
- \* Small Package Size for High Density Applications
- \* Pb / RoHS Free

## ZENER DIODES

### SOD-123



Dimensions in millimeters

### MECHANICAL DATA :

- \* Case : SOD-123
- \* Weight : 0.01 gram (approximately)

### Absolute Maximum Ratings (Ta = 25 °C)

| Parameter                                | Symbol    | Value        | Unit |
|------------------------------------------|-----------|--------------|------|
| Total Power Dissipation                  | $P_D$     | 500          | mW   |
| Maximum Forward Voltage at $I_F = 10$ mA | $V_F$     | 0.9          | V    |
| Junction Temperature                     | $T_J$     | 150          | °C   |
| Storage Temperature Range                | $T_{STG}$ | -55 to + 150 | °C   |

## ELECTRICAL CHARACTERISTICS<sub>(Ta = 25 °C)</sub>

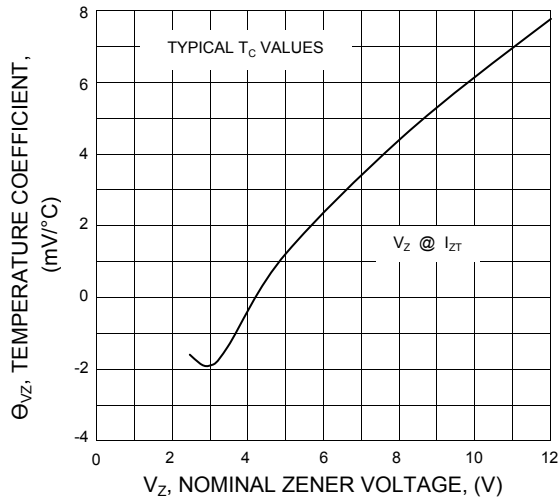
| Type No. | Marking | Zener Voltage <sup>(1)</sup> |      |       | Test Current | Maximum Reverse Leakage Current |       |
|----------|---------|------------------------------|------|-------|--------------|---------------------------------|-------|
|          |         | $V_Z$ @ $I_{ZT}$ (V)         |      |       | $I_{ZT}$     | $I_R$ @                         | $V_R$ |
|          |         | Min.                         | Nom. | Max.  | ( $\mu A$ )  | ( $\mu A$ )                     | (V)   |
| MM1Z4689 | BX      | 4.85                         | 5.1  | 5.36  | 50           | 10                              | 3.0   |
| MM1Z4690 | BY      | 5.32                         | 5.6  | 5.88  | 50           | 10                              | 4.0   |
| MM1Z4691 | BZ      | 5.89                         | 6.2  | 6.51  | 50           | 10                              | 5.0   |
| MM1Z4692 | CA      | 6.46                         | 6.8  | 7.14  | 50           | 10                              | 5.1   |
| MM1Z4693 | CB      | 7.13                         | 7.5  | 7.88  | 50           | 10                              | 5.7   |
| MM1Z4694 | CC      | 7.79                         | 8.2  | 8.61  | 50           | 1.0                             | 6.2   |
| MM1Z4696 | CE      | 8.65                         | 9.1  | 9.56  | 50           | 1.0                             | 6.9   |
| MM1Z4697 | CF      | 9.50                         | 10   | 10.50 | 50           | 1.0                             | 7.6   |
| MM1Z4698 | CH      | 10.45                        | 11   | 11.50 | 50           | 0.05                            | 8.4   |
| MM1Z4699 | CJ      | 11.40                        | 12   | 12.60 | 50           | 0.05                            | 9.1   |
| MM1Z4700 | CK      | 12.35                        | 13   | 13.65 | 50           | 0.05                            | 9.8   |
| MM1Z4702 | CN      | 14.25                        | 15   | 15.75 | 50           | 0.05                            | 11.4  |
| MM1Z4703 | CP      | 15.20                        | 16   | 16.80 | 50           | 0.05                            | 12.1  |
| MM1Z4705 | CX      | 17.10                        | 18   | 18.90 | 50           | 0.05                            | 13.6  |
| MM1Z4707 | CZ      | 19.00                        | 20   | 21.00 | 50           | 0.01                            | 15.2  |
| MM1Z4708 | DA      | 20.90                        | 22   | 23.10 | 50           | 0.01                            | 16.7  |
| MM1Z4709 | DB      | 22.80                        | 24   | 25.20 | 50           | 0.01                            | 18.2  |
| MM1Z4711 | DD      | 25.65                        | 27   | 28.35 | 50           | 0.01                            | 20.4  |
| MM1Z4713 | DF      | 28.50                        | 30   | 31.50 | 50           | 0.01                            | 22.8  |
| MM1Z4714 | DH      | 31.35                        | 33   | 34.65 | 50           | 0.01                            | 25.0  |
| MM1Z4715 | DJ      | 34.20                        | 36   | 37.80 | 50           | 0.01                            | 27.3  |
| MM1Z4716 | DK      | 37.05                        | 39   | 40.95 | 50           | 0.01                            | 29.6  |
| MM1Z4717 | DM      | 40.85                        | 43   | 45.15 | 50           | 0.01                            | 32.6  |

### Notes :

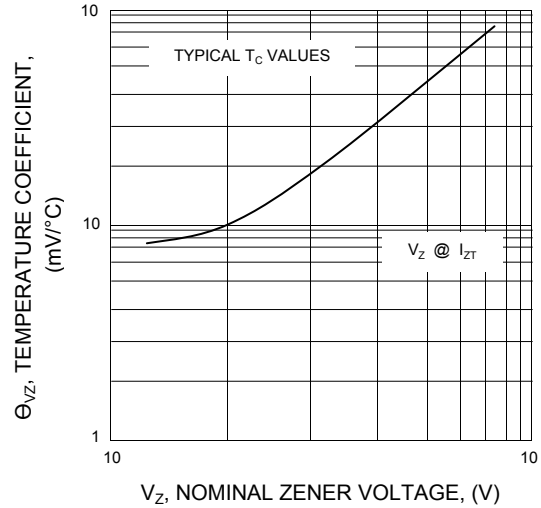
(1) Tested with pulses  $t_p = 20$  ms

## RATING AND CHARACTERISTIC CURVES ( MM1Z4689 - MM1Z4717 )

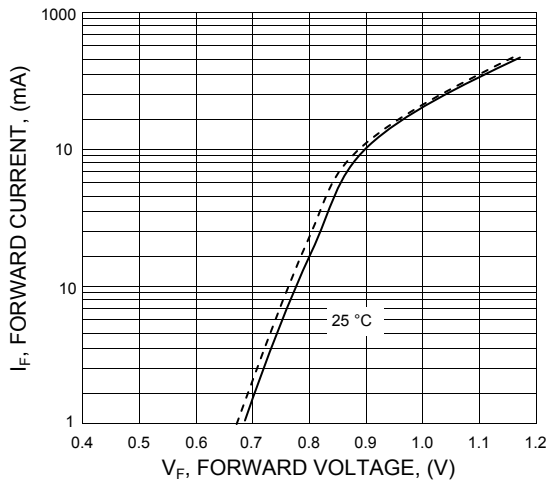
**FIG.1 - TEMPERATURE COEFFICIENTS**  
(TEMPERATURE RANGE - 55 °C to +150 °C)



**FIG.2 - TEMPERATURE COEFFICIENTS**  
(TEMPERATURE RANGE - 55 °C to +150 °C)



**FIG.3 - TYPICAL FORWARD VOLTAGE**



**FIG.4 - MAXIMUM NON-REPETITIVE SURGE POWER**

