

# ZMM55C – SERIES(500mW)

## SURFACE MOUNT ZENER DIODES/MINI – MELF



| Device Type  | Nominal zener Voltage<br>Vz at IzT* | Test Current<br>IzT | Maximum Zener Impedance |                  | Typical Temperature coefficient | Maximum Reverse Leakage Current |                            | Maximum Regulator Current<br>IzM |
|--------------|-------------------------------------|---------------------|-------------------------|------------------|---------------------------------|---------------------------------|----------------------------|----------------------------------|
|              |                                     |                     | ZzT at IzT              | Zzk at Izk = 1mA |                                 | IR                              | Test – Voltage<br>suffix B |                                  |
|              | Volts                               | mA                  | $\Omega$                | $\Omega$         | %/°C                            | $\mu A$                         | Volts                      | mA                               |
| ZMM55 – C2V4 | 2.28 – 2.56                         | 5                   | 85                      | 600              | – 0.070                         | 50                              | 1.0                        | 150                              |
| ZMM55 – C2V7 | 2.5 – 2.9                           | 5                   | 85                      | 600              | – 0.070                         | 10                              | 1.0                        | 135                              |
| ZMM55 – C3V0 | 2.8 – 3.2                           | 5                   | 85                      | 600              | – 0.070                         | 4                               | 1.0                        | 125                              |
| ZMM55 – C3V3 | 3.1 – 3.5                           | 5                   | 85                      | 600              | – 0.065                         | 2                               | 1.0                        | 115                              |
| ZMM55 – C3V6 | 3.4 – 3.8                           | 5                   | 85                      | 600              | – 0.060                         | 2                               | 1.0                        | 105                              |
| ZMM55 – C3V9 | 3.7 – 4.1                           | 5                   | 85                      | 600              | – 0.050                         | 2                               | 1.0                        | 95                               |
| ZMM55 – C4V3 | 4.0 – 4.6                           | 5                   | 75                      | 600              | – 0.025                         | 1                               | 1.0                        | 90                               |
| ZMM55 – C4V7 | 4.4 – 5.0                           | 5                   | 60                      | 600              | – 0.010                         | 0.5                             | 1.0                        | 85                               |
| ZMM55 – C5V1 | 4.8 – 5.4                           | 5                   | 35                      | 550              | + 0.015                         | 0.1                             | 1.0                        | 80                               |
| ZMM55 – C5V6 | 5.2 – 6.0                           | 5                   | 25                      | 450              | + 0.025                         | 0.1                             | 1.0                        | 70                               |
| ZMM55 – C6V2 | 5.8 – 6.6                           | 5                   | 10                      | 200              | + 0.035                         | 0.1                             | 2.0                        | 64                               |
| ZMM55 – C6V8 | 6.4 – 7.2                           | 5                   | 8                       | 150              | + 0.045                         | 0.1                             | 3.0                        | 58                               |
| ZMM55 – C7V5 | 7.0 – 7.9                           | 5                   | 7                       | 50               | + 0.050                         | 0.1                             | 5.0                        | 53                               |
| ZMM55 – C8V2 | 7.7 – 8.7                           | 5                   | 7                       | 50               | + 0.050                         | 0.1                             | 6.0                        | 47                               |
| ZMM55 – C9V1 | 8.5 – 9.6                           | 5                   | 10                      | 50               | + 0.060                         | 0.1                             | 7.0                        | 43                               |
| ZMM55 – C10  | 9.4 – 10.6                          | 5                   | 15                      | 70               | + 0.070                         | 0.1                             | 7.5                        | 40                               |
| ZMM55 – C11  | 10.4 – 11.6                         | 5                   | 20                      | 70               | + 0.070                         | 0.1                             | 8.5                        | 36                               |
| ZMM55 – C12  | 11.4 – 12.7                         | 5                   | 20                      | 90               | + 0.070                         | 0.1                             | 9.0                        | 32                               |
| ZMM55 – C13  | 12.4 – 14.1                         | 5                   | 26                      | 110              | + 0.070                         | 0.1                             | 10                         | 29                               |
| ZMM55 – C15  | 13.8 – 15.6                         | 5                   | 30                      | 110              | + 0.070                         | 0.1                             | 11                         | 27                               |
| ZMM55 – C16  | 15.3 – 17.1                         | 5                   | 40                      | 170              | + 0.070                         | 0.1                             | 12                         | 24                               |
| ZMM55 – C18  | 16.8 – 19.1                         | 5                   | 50                      | 170              | + 0.070                         | 0.1                             | 14                         | 21                               |
| ZMM55 – C20  | 18.8 – 21.2                         | 5                   | 55                      | 220              | + 0.070                         | 0.1                             | 15                         | 20                               |
| ZMM55 – C22  | 20.8 – 23.3                         | 5                   | 55                      | 220              | + 0.070                         | 0.1                             | 17                         | 18                               |
| ZMM55 – C24  | 22.8 – 25.6                         | 5                   | 80                      | 220              | + 0.080                         | 0.1                             | 18                         | 16                               |
| ZMM55 – C27  | 25.1 – 28.9                         | 5                   | 80                      | 220              | + 0.080                         | 0.1                             | 20                         | 14                               |
| ZMM55 – C30  | 28 – 32                             | 5                   | 80                      | 220              | + 0.080                         | 0.1                             | 22                         | 13                               |
| ZMM55 – C33  | 31 – 35                             | 5                   | 80                      | 220              | + 0.080                         | 0.1                             | 24                         | 12                               |
| ZMM55 – C36  | 34 – 38                             | 5                   | 80                      | 220              | + 0.080                         | 0.1                             | 27                         | 11                               |
| ZMM55 – C39  | 37 – 41                             | 2.5                 | 90                      | 500              | + 0.080                         | 0.1                             | 30                         | 10                               |
| ZMM55 – C43  | 40 – 46                             | 2.5                 | 90                      | 600              | + 0.080                         | 0.1                             | 33                         | 9.2                              |
| ZMM55 – C47  | 44 – 50                             | 2.5                 | 110                     | 700              | + 0.080                         | 0.1                             | 36                         | 8.5                              |

STANDARD VOLTAGE TOLERANCE IS + 5%

AND:

- SUFFIX "A" FOR  $\pm 1\%$
- SUFFIX "B" FOR  $\pm 2\%$
- SUFFIX "C" FOR  $\pm 5\%$
- SUFFIX "D" FOR  $\pm 20\%$

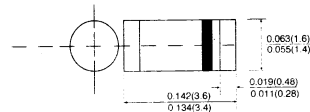
1. STANDARD ZENER DIODE 500MW  
VZ TOLERANCE =  $\pm 5\%$

2. ZMM = ZENER MINI MELF

3. VZ OF ZENER DIODE, V CODE IS  
INSTEAD OF DECIMAL POINT

e.g. .3V6 = 3.6V

\* MEASURED WITH PULSES  $T_p = 20m SEC.$



DIMENSIONS IN INCHES AND (MILLIMETER(S))



# ZMM55C – SERIES

## SURFACE MOUNT ZENER DIODES

### Absolute Maximum Ratings

|                                                     | Symbol    | Value         | Unit               |
|-----------------------------------------------------|-----------|---------------|--------------------|
| Zener Current see Table“Characteristics”            |           |               |                    |
| Power Dissipation at $T_{amb} = 25^{\circ}\text{C}$ | $P_{tot}$ | 500*          | mW                 |
| Junction Temperature                                | $T_j$     | 175           | $^{\circ}\text{C}$ |
| Storage Temperature Range                           | $T_s$     | - 55 to + 175 | $^{\circ}\text{C}$ |

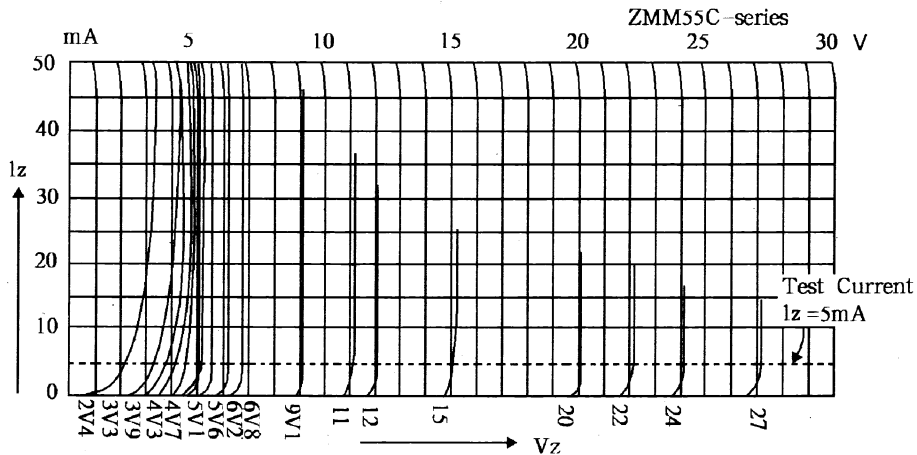
\* Valid provided that leads are kept at ambient temperature at a distance of 8mm form case

Characteristic at  $T_{amb} = 25^{\circ}\text{C}$

|                                               | Symbol    | Min. | Typ. | Max. | Unit |
|-----------------------------------------------|-----------|------|------|------|------|
| Thermal Resistance<br>Junction to Ambient Air | $R_{thA}$ | –    | –    | 0.3* | K/mW |
| Forward Voltage<br>at $I_F = 100\text{mA}$    | $V_F$     | –    | –    | 1    | V    |

\* Vaild provided that leads are kept at ambient temperature at a distance of 8mm from case.

### Breakdown characteristics



changes in the power dissipation  
due to the ambient temperature.

