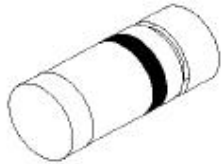


**SILICON PLANAR POWER ZENER DIODES**

**ZMY4.7 - ZMY100**



**LL-41 (MELF)  
GLASS PACKAGE**

For use in Stabilizing and Clipping Circuits with High Power Rating

Hermetically Sealed, Glass Silicon Diodes

Marking: With Cathode Band

**ABSOLUTE MAXIMUM RATINGS (T<sub>a</sub>=25°C)**

| DESCRIPTION                                    | SYMBOL           | VALUE        | UNIT |
|--|------------------|--------------|------|
| Power Dissipation                              | *P <sub>D</sub>  | 1.3          | W    |
| Non Repetitive Peak Power Dissipation, t <10ms | P <sub>zsm</sub> | 5.0          | W    |
| Junction Temperature                           | T <sub>j</sub>   | 175          | °C   |
| Storage Temperature Range                      | T <sub>stg</sub> | - 55 to +175 | °C   |

**THERMAL CHARACTERISTICS**

|                                 |                       |       |     |
|---------------------------------|-----------------------|-------|-----|
| Junction to Ambient in free air | *R <sub>th(j-a)</sub> | 115.3 | K/W |
|---------------------------------|-----------------------|-------|-----|

**ELECTRICAL CHARACTERISTICS (T<sub>a</sub>=25°C unless specified otherwise) V<sub>F</sub> <1.2V at 200mA**

| Device # | **Zener Voltage                   |      | Dynamic Resistance            | Temp. Coeff. of Zener volt.          | Test Current           | Reverse Voltage        | *Admissible Zener Current at I <sub>Z</sub> test (mA) |
|----------|-----------------------------------|------|-------------------------------|--------------------------------------|------------------------|------------------------|---|
|          | V <sub>Z</sub> at I <sub>ZT</sub> |      | at I <sub>Z</sub> test f=1kHz | at I <sub>Z</sub> test               | at I <sub>Z</sub> test | I <sub>R</sub> = 0.5mA |   |
|          | (V)                               |      | r <sub>zj</sub> (W)           | a V <sub>Z</sub> 10 <sup>-4</sup> /K | (mA)                   | V <sub>R</sub> (V)     |   |
|          | min                               | max  | max                           |                                      |                        |                        |   |
| ZMY4.7   | 4.4                               | 5.0  | 7                             | -7.....+4                            | 100                    | >0.5                   | 165   |
| ZMY5.1   | 4.8                               | 5.4  | 5                             | -6.....+5                            | 100                    | >0.7                   | 150   |
| ZMY5.6   | 5.2                               | 6.0  | 2                             | -3.....+5                            | 100                    | >1.5                   | 135   |
| ZMY6.2   | 5.8                               | 6.6  | 2                             | -1.....+6                            | 100                    | >2.0                   | 128   |
| ZMY6.8   | 6.4                               | 7.2  | 2                             | 0.....7                              | 100                    | >3.0                   | 110   |
| ZMY7.5   | 7.0                               | 7.9  | 2                             | 0.....7                              | 100                    | >5.0                   | 100   |
| ZMY8.2   | 7.7                               | 8.7  | 2                             | +3.....+8                            | 100                    | >6.0                   | 89  |
| ZMY9.1   | 8.5                               | 9.6  | 4                             | +3.....+8                            | 50                     | >7.0                   | 82  |
| ZMY10    | 9.4                               | 10.6 | 4                             | +5.....+9                            | 50                     | >7.5                   | 74  |
| ZMY11    | 10.4                              | 11.6 | 7                             | +5.....+10                           | 50                     | >8.5                   | 66  |
| ZMY12    | 11.4                              | 12.7 | 7                             | +5.....+10                           | 50                     | >9.0                   | 60  |
| ZMY13    | 12.4                              | 14.1 | 9                             | +5.....+10                           | 50                     | >10                    | 55  |
| ZMY15    | 13.8                              | 15.8 | 9                             | +5.....+10                           | 50                     | >11                    | 49  |
| ZMY16    | 15.3                              | 17.1 | 10                            | +7.....+11                           | 25                     | >12                    | 44  |
| ZMY18    | 16.8                              | 19.1 | 11                            | +7.....+11                           | 25                     | >14                    | 40  |
| ZMY20    | 18.8                              | 21.2 | 12                            | +7.....+11                           | 25                     | >15                    | 36  |
| ZMY22    | 20.8                              | 23.3 | 13                            | +7.....+11                           | 25                     | >17                    | 34  |
| ZMY24    | 22.8                              | 25.6 | 14                            | +7.....+12                           | 25                     | >18                    | 29  |
| ZMY27    | 25.1                              | 28.9 | 15                            | +7.....+12                           | 25                     | >20                    | 27  |
| ZMY30    | 28.0                              | 32.0 | 20                            | +7.....+12                           | 25                     | >22.5                  | 25  |
| ZMY33    | 31.0                              | 35.0 | 20                            | +7.....+12                           | 25                     | >25                    | 22  |
| ZMY36    | 34.0                              | 38.0 | 60                            | +7.....+12                           | 10                     | >27                    | 20  |

\*Valid provided that electrodes are kept at ambient temperature

\*\*Pulse Condition : 20ms ≤ tp ≤ 50ms

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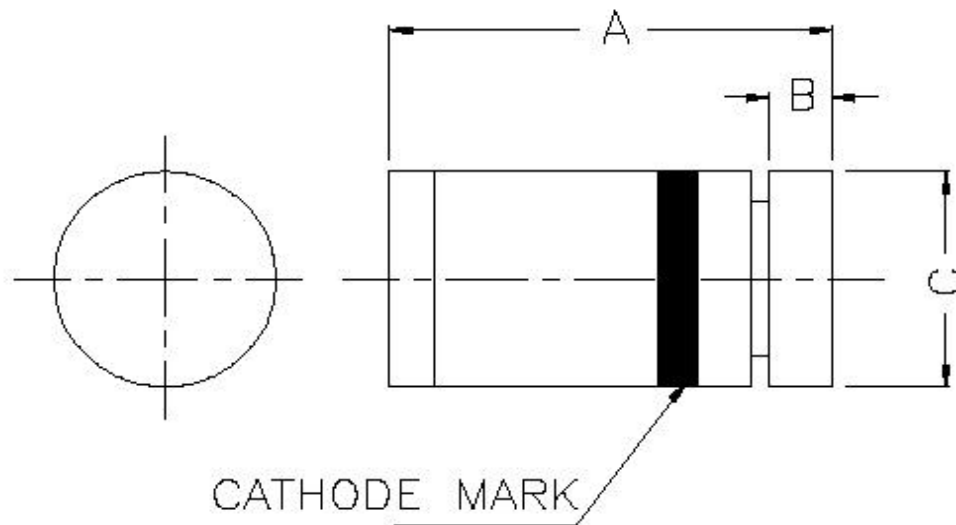
ELECTRICAL ELECTRICAL CHARACTERISTICS ( $T_a=25^\circ\text{C}$  unless specified otherwise)  $V_F < 1.2\text{V}$  at 200mA

| Device # | **Zener Voltage   |      | Dynamic Resistance | Temp. Coeff. of Zener volt. | Test Current  | Reverse Voltage      | *Admissible Zener Current |
|----------|-------------------|------|--------------------|-----------------------------|---------------|----------------------|---------------------------|
|          | $V_Z$ at $I_{ZT}$ |      | at $I_Z$ test      | at $I_Z$ test               | at $I_Z$ test | $I_R = 0.5\text{mA}$ | at $I_Z$ test             |
|          | (V)               |      | $r_{zj}$ (W)       | $a V_Z 10^{-4}/K$           | (mA)          | $V_R$ (V)            | (mA)                      |
|          | min               | max  | max                |                             |               |                      |                           |
| ZMY39    | 37.0              | 41.0 | 60                 | +8.....+12                  | 10            | >29                  | 18                        |
| ZMY43    | 40.0              | 46.0 | 80                 | +8.....+13                  | 10            | >32                  | 17                        |
| ZMY47    | 44.0              | 50.0 | 80                 | +8.....+13                  | 10            | >35                  | 15                        |
| ZMY51    | 48.0              | 54.0 | 100                | +8.....+13                  | 10            | >38                  | 14                        |
| ZMY56    | 52.0              | 60.0 | 100                | +8.....+13                  | 10            | >42                  | 13                        |
| ZMY62    | 58.0              | 66.0 | 130                | +8.....+13                  | 10            | >47                  | 11                        |
| ZMY68    | 64.0              | 72.0 | 130                | +8.....+13                  | 10            | >51                  | 10                        |
| ZMY75    | 70.0              | 79.0 | 160                | +8.....+13                  | 10            | >56                  | 9                         |
| ZMY82    | 77.0              | 88.0 | 160                | +8.....+13                  | 10            | >61                  | 8                         |
| ZMY91    | 85.0              | 96.0 | 250                | +9.....+13                  | 5             | >68                  | 7.5                       |
| ZMY100   | 94.0              | 106  | 250                | +9.....+13                  | 5             | >75                  | 7                         |

\*Valid provided that electrodes are kept at ambient temperature

\*\*Pulse Condition :  $20\text{ms} \leq t_p \leq 50\text{ms}$ 

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PACKAGE LL-41 MELF

| DIM | MIN.  | MAX.  |
|-----|-------|-------|
| A   | 4.8   | 5.2   |
| B   | 0.4   | —     |
| C   | ∅2.35 | ∅2.55 |

All dimensions are in mm

PACKING:— 5K/REEL

### Component Disposal Instructions

1. CDIL Semiconductor Devices are RoHS compliant, customers are requested to please dispose as per prevailing Environmental Legislation of their Country.
2. In Europe, please dispose as per EU Directive 2002/96/EC on Waste Electrical and Electronic Equipment (WEEE).

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### **Disclaimer**

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