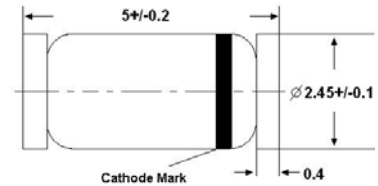


Silicon Planar Power Zener Diodes

for use in stabilizing and clipping circuits with high power rating. The Zener voltages are graded according to the international E 24 standard. Other tolerances and higher Zener voltages are upon request.

LL-41



Glass case MELF
Dimensions in mm

Absolute Maximum Ratings ($T_a = 25\text{ }^\circ\text{C}$)

| Parameter | Symbol | Value | Unit |
|---|-----------|-------------------|------------------|
| Power Dissipation | P_{tot} | 1.3 ¹⁾ | W |
| Junction Temperature | T_j | 200 | $^\circ\text{C}$ |
| Storage Temperature Range | T_{stg} | - 55 to + 200 | $^\circ\text{C}$ |
| ¹⁾ Valid provided that electrodes are kept at ambient temperature. | | | |

Characteristics at $T_a = 25\text{ }^\circ\text{C}$

| Parameter | Symbol | Max. | Unit |
|---|-----------|-------------------|------|
| Thermal Resistance Junction to Ambient Air | R_{thA} | 130 ¹⁾ | K/W |
| Forward Voltage at $I_F = 200\text{ mA}$ | V_F | 1.2 | V |
| ¹⁾ Valid provided that electrodes are kept at ambient temperature. | | | |



Characteristics at $T_a = 25\text{ °C}$

| Type | Zener Voltage Range ¹⁾ | | | Dynamic Resistance | | | Reverse Current | | Temp. Coefficient of Zener Voltage TKvz (%/K) |
|----------|-----------------------------------|-------------|-------------|--------------------|-------------------|-------------|-----------------|----------|--|
| | V_{znom} | V_{ZT} | at I_{ZT} | Z_{ZT} | Z_{ZK} | at I_{ZK} | I_R | at V_R | |
| | (V) | (V) | (mA) | Max. (Ω) | Max. (Ω) | (mA) | Max. (μ A) | (V) | |
| ZM85C2V7 | 2.7 | 2.5...2.9 | 80 | 20 | 400 | 1 | 150 | 1 | -0.08...-0.05 |
| ZM85C3V0 | 3 | 2.8...3.2 | 80 | 20 | 400 | 1 | 100 | 1 | -0.08...-0.05 |
| ZM85C3V3 | 3.3 | 3.1...3.5 | 70 | 20 | 400 | 1 | 40 | 1 | -0.08...-0.05 |
| ZM85C3V6 | 3.6 | 3.4...3.8 | 60 | 15 | 500 | 1 | 20 | 1 | -0.08...-0.05 |
| ZM85C3V9 | 3.9 | 3.7...4.1 | 60 | 15 | 500 | 1 | 10 | 1 | -0.07...-0.02 |
| ZM85C4V3 | 4.3 | 4...4.6 | 50 | 13 | 500 | 1 | 3 | 1 | -0.07...+0.01 |
| ZM85C4V7 | 4.7 | 4.4...5 | 45 | 13 | 600 | 1 | 3 | 1 | -0.03...+0.04 |
| ZM85C5V1 | 5.1 | 4.8...5.4 | 45 | 10 | 500 | 1 | 1 | 1.5 | -0.01...+0.04 |
| ZM85C5V6 | 5.6 | 5.2...6 | 45 | 7 | 400 | 1 | 1 | 2 | 0...+0.045 |
| ZM85C6V2 | 6.2 | 5.8...6.6 | 35 | 4 | 300 | 1 | 1 | 3 | +0.01...+0.055 |
| ZM85C6V8 | 6.8 | 6.4...7.2 | 35 | 3.5 | 300 | 1 | 1 | 4 | +0.015...+0.06 |
| ZM85C7V5 | 7.5 | 7...7.9 | 35 | 3 | 200 | 0.5 | 1 | 4.5 | +0.02...+0.065 |
| ZM85C8V2 | 8.2 | 7.7...8.7 | 25 | 5 | 200 | 0.5 | 1 | 6.2 | 0.03...0.07 |
| ZM85C9V1 | 9.1 | 8.5...9.6 | 25 | 5 | 200 | 0.5 | 1 | 6.8 | 0.035...0.075 |
| ZM85C10 | 10 | 9.4...10.6 | 25 | 7 | 200 | 0.5 | 0.5 | 7 | 0.04...0.08 |
| ZM85C11 | 11 | 10.4...11.6 | 20 | 8 | 300 | 0.5 | 0.5 | 8.2 | 0.045...0.08 |
| ZM85C12 | 12 | 11.4...12.7 | 20 | 9 | 350 | 0.5 | 0.5 | 9.1 | 0.045...0.085 |
| ZM85C13 | 13 | 12.4...14.1 | 20 | 10 | 400 | 0.5 | 0.5 | 10 | 0.05...0.085 |
| ZM85C15 | 15 | 13.8...15.6 | 15 | 15 | 500 | 0.5 | 0.5 | 11 | 0.055...0.09 |
| ZM85C16 | 16 | 15.3...17.1 | 15 | 15 | 500 | 0.5 | 0.5 | 12 | 0.055...0.09 |
| ZM85C18 | 18 | 16.8...19.1 | 15 | 20 | 500 | 0.5 | 0.5 | 13 | 0.06...0.09 |
| ZM85C20 | 20 | 18.8...21.2 | 10 | 24 | 600 | 0.5 | 0.5 | 15 | 0.06...0.09 |
| ZM85C22 | 22 | 20.8...23.3 | 10 | 25 | 600 | 0.5 | 0.5 | 16 | 0.06...0.095 |
| ZM85C24 | 24 | 22.8...25.6 | 10 | 25 | 600 | 0.5 | 0.5 | 18 | 0.06...0.095 |
| ZM85C27 | 27 | 25.1...28.9 | 8 | 30 | 750 | 0.25 | 0.5 | 20 | 0.06...0.095 |
| ZM85C30 | 30 | 28...32 | 8 | 30 | 1000 | 0.25 | 0.5 | 22 | 0.06...0.095 |
| ZM85C33 | 33 | 31...35 | 8 | 35 | 1000 | 0.25 | 0.5 | 24 | 0.06...0.095 |
| ZM85C36 | 36 | 34...38 | 8 | 40 | 1000 | 0.25 | 0.5 | 27 | 0.06...0.095 |
| ZM85C39 | 39 | 37...41 | 6 | 50 | 1000 | 0.25 | 0.5 | 30 | 0.06...0.095 |
| ZM85C43 | 43 | 40...46 | 6 | 50 | 1000 | 0.25 | 0.5 | 33 | 0.06...0.095 |
| ZM85C47 | 47 | 44...50 | 4 | 90 | 1500 | 0.25 | 0.5 | 36 | 0.06...0.095 |
| ZM85C51 | 51 | 48...54 | 4 | 115 | 1500 | 0.25 | 0.5 | 39 | 0.06...0.095 |
| ZM85C56 | 56 | 52...60 | 4 | 120 | 2000 | 0.25 | 0.5 | 43 | 0.06...0.095 |
| ZM85C62 | 62 | 58...66 | 4 | 125 | 2000 | 0.25 | 0.5 | 47 | 0.06...0.095 |
| ZM85C68 | 68 | 64...72 | 4 | 130 | 2000 | 0.25 | 0.5 | 51 | 0.06...0.095 |
| ZM85C75 | 75 | 70...79 | 4 | 135 | 2000 | 0.25 | 0.5 | 56 | 0.06...0.095 |

¹⁾ Tested with pulses $t_p = 20\text{ ms}$.

