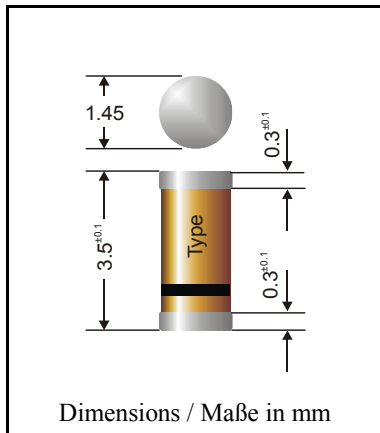


Surface mount
Silicon Planar Zener Diodes

Silizium-Planar-Zener-Dioden
für die Oberflächenmontage



| | |
|----------------------------------------|----------------|
| Maximum power dissipation | 500 mW |
| Maximale Verlustleistung | |
| Nominal Z-voltage | 1...100 V |
| Nominale Z-Spannung | |
| Glass case MiniMELF | SOD-80 |
| Glasgehäuse MiniMELF | DO-213AA |
| Weight approx. – Gewicht ca. | 0.05 g |
| Standard packaging taped and reeled | see page 18 |
| Standard Lieferform gegurtet auf Rolle | siehe Seite 18 |

Standard Zener voltage tolerance is graded to the international E 24 (~5%) standard. Other voltage tolerances and higher Zener voltages on request.
Die Toleranz der Zener-Spannung ist in der Standard-Ausführung gestuft nach der internationalen Reihe E 24 (~5%). Andere Toleranzen oder höhere Arbeitsspannungen auf Anfrage.

Maximum ratings and Characteristics

Grenz- und Kennwerte

| | | | |
|---------------------------------------------------------|--------------------------|------------------|-------------------------|
| Power dissipation | $T_A = 25^\circ\text{C}$ | P_{tot} | 500 mW ¹⁾ |
| Verlustleistung | | | |
| Operating junction temperature – Sperrschichttemperatur | | T_j | - 50...+175°C |
| Storage temperature – Lagerungstemperatur | | T_s | - 50...+175°C |
| Thermal resistance junction to ambient air | | R_{thA} | < 300 K/W ¹⁾ |
| Wärmewiderstand Sperrschicht – umgebende Luft | | | |

Zener voltages see table on next page – Zener-Spannungen siehe Tabelle auf der nächsten Seite

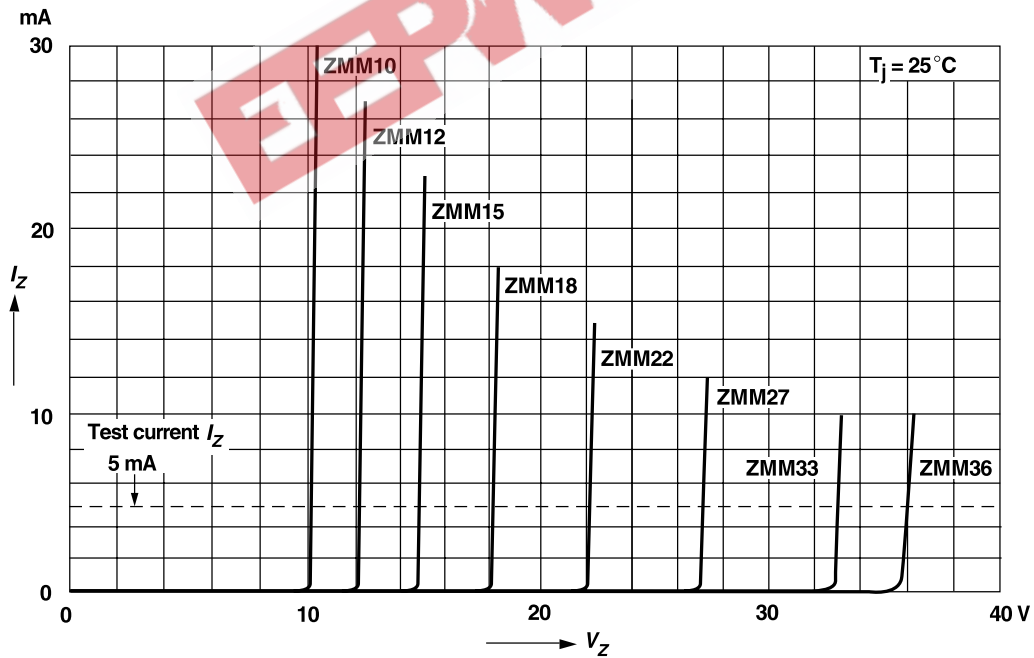
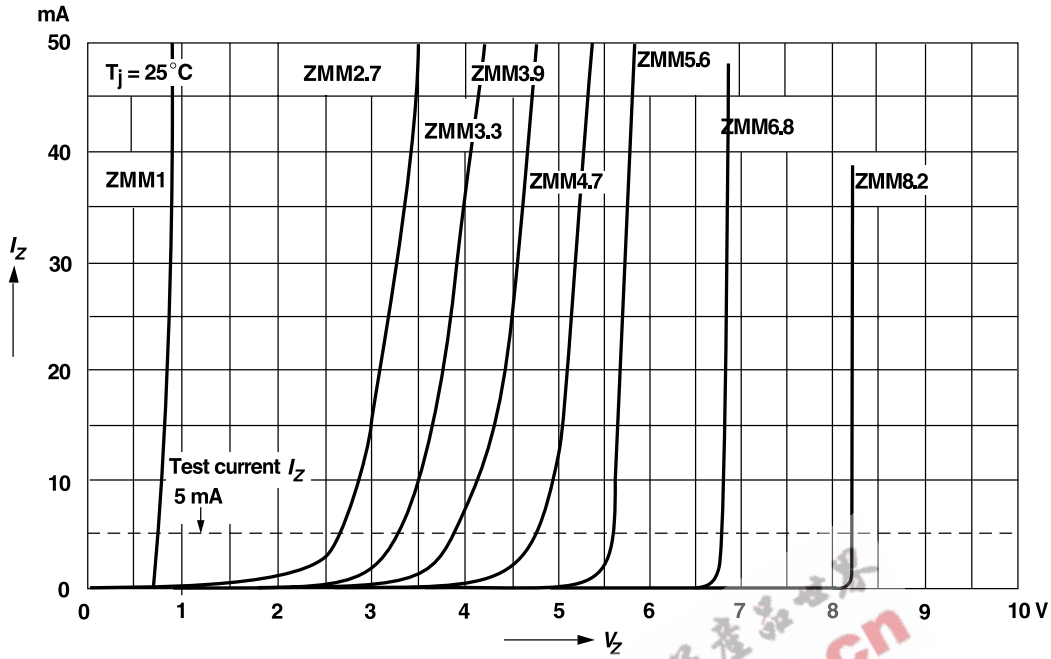
¹⁾ Mounted on P.C. board with 25 mm² copper pads at each terminal
Montage auf Leiterplatte mit 25 mm² Kupferbelag (Lötpad) an jedem Anschluß
²⁾ Tested with pulses $t_p = 20$ ms – Gemessen mit Impulsen $t_p = 20$ ms
³⁾ The ZMM 1 is a diode operated in forward. Hence, the index of all parameters should be “F” instead of “Z”.
The cathode, indicated by the blue ring is to be connected to the negative pole.
Die ZMM 1 ist eine in Durchlaß betriebene Si-Diode. Daher ist bei allen Kenn- und Grenzwerten der Index “F” anstatt “Z” zu setzten. Die durch den blauen Ring gekennzeichnete Kathode ist mit dem Minuspol zu verbinden.

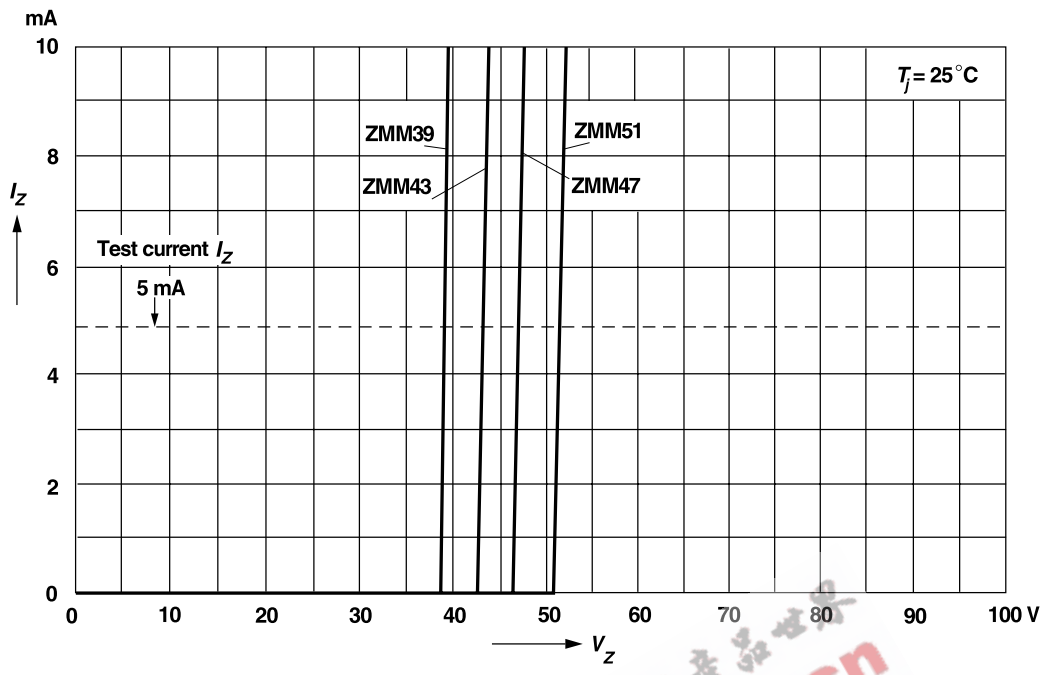
Maximum ratings
Grenzwerte

| Type Typ | Zener voltage ¹⁾ Zener-Spannung ¹⁾ I _Z = 5 mA V _{Zmin} [V] V _{Zmax} | | Dynamic resistance Inhär. diff. Widerstand r _{Zj} [Ω] at f = 1 kHz I _Z = 5 mA I _Z = 1 mA | | Temp. Coeffiz. of Z-voltage ...der Z-spanng. α _{VZ} [10 ⁻⁴ /°C] | Reverse volt. Sperrspanng. I _R = 100 nA V _R [V] | Z-current ²⁾ Z-Strom ²⁾ T _A = 25 °C I _{Zmax} [mA] |
|---------------------|---------------------------------------------------------------------------------------------------------------------------------|------|----------------------------------------------------------------------------------------------------------------------------------|--------|----------------------------------------------------------------------------------------------|--------------------------------------------------------------------------------|------------------------------------------------------------------------------------------------------|
| ZMM 1 ³⁾ | 0.71 | 0.82 | < 8 | < 50 | -26...-23 | – | 400 |
| ZMM 2.4 | 2.28 | 2.56 | < 85 | < 600 | -9...-6 | 1 (50μA) | 195 |
| ZMM 2.7 | 2.5 | 2.9 | < 85 | < 600 | -9...-6 | 1 (10μA) | 172 |
| ZMM 3.0 | 2.8 | 3.2 | < 85 | < 600 | -8...-5 | 1 (4μA) | 156 |
| ZMM 3.3 | 3.1 | 3.5 | < 85 | < 600 | -8...-5 | 1 (2μA) | 143 |
| ZMM 3.6 | 3.4 | 3.8 | < 85 | < 600 | -8...-5 | 1 (2μA) | 132 |
| ZMM 3.9 | 3.7 | 4.1 | < 85 | < 600 | -8...-5 | 1 (2μA) | 122 |
| ZMM 4.3 | 4.0 | 4.6 | < 75 | < 600 | -6...-3 | 1 (1μA) | 109 |
| ZMM 4.7 | 4.4 | 5.0 | < 60 | < 600 | -5...+2 | 1 (0.5μA) | 100 |
| ZMM 5.1 | 4.8 | 5.4 | < 35 | < 550 | -2...+2 | 1 | 93 |
| ZMM 5.6 | 5.2 | 6.0 | < 25 | < 450 | -5...+5 | 1 | 83 |
| ZMM 6.2 | 5.8 | 6.6 | < 10 | < 200 | +3...+6 | 2 | 76 |
| ZMM 6.8 | 6.4 | 7.2 | < 8 | < 150 | +3...+7 | 3 | 69 |
| ZMM 7.5 | 7.0 | 7.9 | < 7 | < 50 | +3...+7 | 5 | 63 |
| ZMM 8.2 | 7.7 | 8.7 | < 7 | < 50 | +3...+8 | 6 | 57 |
| ZMM 9.1 | 8.5 | 9.6 | < 10 | < 50 | +3...+9 | 7 | 52 |
| ZMM 10 | 9.4 | 10.6 | < 15 | < 70 | +3...+10 | 7 | 47 |
| ZMM 11 | 10.4 | 11.6 | < 20 | < 70 | +3...+11 | 8 | 43 |
| ZMM 12 | 11.4 | 12.7 | < 20 | < 90 | +3...+11 | 9 | 39 |
| ZMM 13 | 12.4 | 14.1 | < 26 | < 110 | +3...+11 | 10 | 35 |
| ZMM 15 | 13.8 | 15.6 | < 30 | < 110 | +3...+11 | 11 | 32 |
| ZMM 16 | 15.3 | 17.1 | < 40 | < 170 | +3...+11 | 12 | 29 |
| ZMM 18 | 16.8 | 19.1 | < 50 | < 170 | +3...+11 | 13 | 26 |
| ZMM 20 | 18.8 | 21.2 | < 55 | < 220 | +3...+11 | 15 | 24 |
| ZMM 22 | 20.8 | 23.3 | < 55 | < 220 | +4...+12 | 16 | 21 |
| ZMM 24 | 22.8 | 25.6 | < 80 | < 220 | +4...+12 | 18 | 20 |
| ZMM 27 | 25.1 | 28.9 | < 80 | < 220 | +4...+12 | 20 | 17 |
| ZMM 30 | 28 | 32 | < 80 | < 220 | +4...+12 | 22 | 16 |
| ZMM 33 | 31 | 35 | < 80 | < 220 | +4...+12 | 24 | 14 |
| ZMM 36 | 34 | 38 | < 80 | < 220 | +4...+12 | 27 | 13 |
| ZMM 39 | 37 | 41 | < 90 | < 500 | +4...+12 | 30 | 12 |
| ZMM 43 | 40 | 46 | < 90 | < 500 | +4...+12 | 33 | 11 |
| ZMM 47 | 44 | 50 | <110 | < 600 | +4...+12 | 36 | 10 |
| ZMM 51 | 48 | 54 | < 125 | < 700 | +4...+12 | 39 | 9 |
| ZMM 56 | 52 | 60 | < 135 | < 700 | +4...+12 | 43 | 8 |
| ZMM 62 | 58 | 66 | < 150 | < 1000 | +4...+12 | 47 | 8 |
| ZMM 68 | 64 | 72 | < 200 | < 1000 | +4...+12 | 51 | 7 |
| ZMM 75 | 70 | 79 | < 250 | < 1000 | +4...+12 | 56 | 6 |
| ZMM 82 | 77 | 88 | < 300 | < 1500 | +5...+12 | 62 | 6 |
| ZMM 91 | 85 | 96 | < 450 | < 2000 | +5...+12 | 68 | 5 |
| ZMM 100 | 94 | 106 | < 450 | < 5000 | +5...+12 | 75 | 5 |

¹⁾ Notes see previous page – Fußnoten siehe vorhergehende Seite

Breakdown characteristics (typical values), current pulsed
Abbruchkennlinien (typische Werte), Strom gepulst





EEPW 电子产品世界 .com.cn