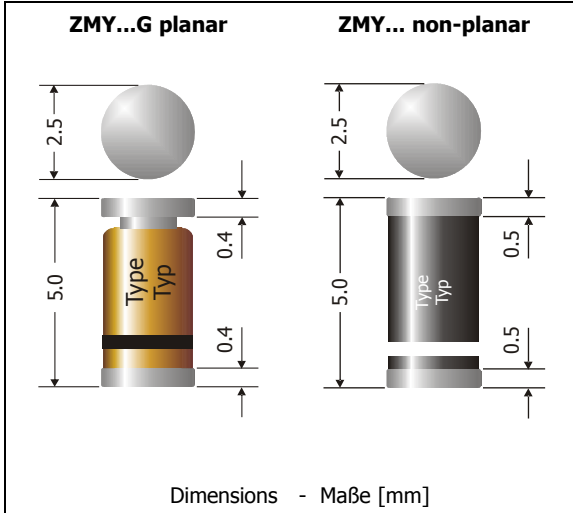


**ZMY3.0G ... ZMY9.1G (1.0 W),
ZMY1, ZMY10 ... ZMY200 (1.3 W)**

**Surface Mount Silicon-Zener Diodes
Si-Zener-Dioden für die Oberflächenmontage**

Version 2013-04-30



ZMY3.0G ... ZMY9.1G

Nominal Z-voltage – Nominale Z-Spannung 3.0...9.1 V

Glass case – Glasgehäuse MELF DO-213AB

ZMY1, ZMY10 ... ZMY200

Nominal Z-voltage – Nominale Z-Spannung 10...200 V

Plastic case – Kunststoffgehäuse MELF DO-213AB

Weight approx. – Gewicht ca. 0.12 g

Plastic material has UL classification 94V-0
Gehäusematerial UL94V-0 klassifiziert

Standard packaging taped and reeled
Standard Lieferform gegurtet auf Rolle



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

| | | ZMY3.0G ... ZMY9.1G | |
|---|--------------------------|-------------------------------|-------------------------|
| Power dissipation – Verlustleistung | $T_A = 25^\circ\text{C}$ | P_{tot} | 1.0 W ¹⁾ |
| Junction temperature – Sperrschichttemperatur | | T_J | -50...+175°C |
| Storage temperature – Lagerungstemperatur | | T_S | -50...+175°C |
| Thermal resistance junction to ambient air Wärmewiderstand Sperrschicht – umgebende Luft | | R_{thA} | < 150 K/W ¹⁾ |
| Thermal resistance junction to terminal Wärmewiderstand Sperrschicht – Anschluss | | R_{thT} | < 70 K/W |
| | | ZMY1, ZMY10 ... ZMY200 | |
| Power dissipation – Verlustleistung | $T_A = 50^\circ\text{C}$ | P_{tot} | 1.3 W ¹⁾ |
| Non repetitive peak power dissipation, t < 10 ms Einmalige Impuls-Verlustleistung, t < 10 ms | $T_A = 25^\circ\text{C}$ | P_{ZSM} | 40 W |
| Junction temperature – Sperrschichttemperatur | | T_J | -50...+150°C |
| Storage temperature – Lagerungstemperatur | | T_S | -50...+175°C |
| Thermal resistance junction to ambient air Wärmewiderstand Sperrschicht – umgebende Luft | | R_{thA} | < 45 K/W ¹⁾ |
| Thermal resistance junction to terminal Wärmewiderstand Sperrschicht – Anschluss | | R_{thT} | < 10 K/W |

1 Mounted on P.C. board with 50 mm² copper pads at each terminal
Montage auf Leiterplatte mit 50 mm² Kupferbelag (Löt-pad) an jedem Anschluss

2 Tested with pulses – Gemessen mit Impulsen

3 The ZMY1 is a diode operated in forward mode. Hence, the index of all parameters should be "F" instead of "Z".

Maximum ratings
Grenzwerte

| Type Typ | Zener voltage ²⁾ Zener-Spannung ²⁾ $I_Z = I_{Ztest}$ | | Test current Meßstrom I_{Ztest} [mA] | Dynamic resistance Diff. Widerstand $I_{Ztest} / f = 1 \text{ kHz}$ r_{zj} [Ω] | Temp. Coeffic. of Z-voltage ...der Z-Spannung α_{vz} [$10^{-4} / ^\circ\text{C}$] | Reverse volt. Sperrspanng. $I_R = 1 \mu\text{A}$ V_R [V] | Z-current ¹⁾ Z-Strom ¹⁾ $T_A = 50^\circ\text{C}$ I_{Zmax} [mA] |
|--------------------|--|----------------|--|--|---|---|---|
| | V_{zmin} [V] | V_{zmax} [V] | | | | | |
| ZMY1 ³⁾ | 0.71 | 0.82 | 100 | 0.5 (<1) | -26...-16 | - | 1000 |
| ZMY3.0G | 2.8 | 3.2 | 100 | 5 (<8) | -8...+1 | - | 313 |
| ZMY3.3G | 3.1 | 3.5 | 100 | 5 (<8) | -8...+1 | > 0.7 / 150 μA | 286 |
| ZMY3.6G | 3.4 | 3.8 | 100 | 5 (<8) | -8...+1 | > 0.7 / 100 μA | 263 |
| ZMY3.9G | 3.7 | 4.1 | 100 | 4 (<7) | -7...+2 | > 0.7 / 100 μA | 244 |
| ZMY4.3G | 4.0 | 4.6 | 100 | 4 (<7) | -7...+3 | > 0.7 / 50 μA | 217 |
| ZMY4.7G | 4.4 | 5.0 | 100 | 4 (<7) | -7...+4 | > 0.7 / 10 μA | 200 |
| ZMY5.1G | 4.8 | 5.4 | 100 | 2 (<5) | -6...+5 | > 0.7 / 10 μA | 185 |
| ZMY5.6G | 5.2 | 6.0 | 100 | 1 (<2) | -3...+5 | > 0.5 / 3 μA | 167 |
| ZMY6.2G | 5.8 | 6.6 | 100 | 1 (<2) | -1...+6 | > 1.5 / 500 nA | 152 |
| ZMY6.8G | 6.4 | 7.2 | 100 | 1 (<2) | 0...+7 | > 2 / 500 nA | 139 |
| ZMY7.5G | 7.0 | 7.9 | 100 | 1 (<2) | 0...+7 | > 3 / 500 nA | 127 |
| ZMY8.2G | 7.7 | 8.7 | 100 | 1 (<2) | +3...+8 | > 6 / 500 nA | 115 |
| ZMY9.1G | 8.5 | 9.6 | 50 | 2 (<4) | +3...+8 | > 7 / 500 nA | 104 |
| ZMY10 | 9.4 | 10.6 | 50 | 2 (<4) | +5...+9 | > 5 | 123 |
| ZMY11 | 10.4 | 11.6 | 50 | 4 (<7) | +5...+10 | > 5 | 112 |
| ZMY12 | 11.4 | 12.7 | 50 | 4 (<7) | +5...+10 | > 7 | 102 |
| ZMY13 | 12.4 | 14.1 | 50 | 5 (<10) | +5...+10 | > 7 | 92 |
| ZMY15 | 13.8 | 15.6 | 50 | 5 (<10) | +5...+10 | > 10 | 83 |
| ZMY16 | 15.3 | 17.1 | 25 | 6 (<15) | +6...+11 | > 10 | 76 |
| ZMY18 | 16.8 | 19.1 | 25 | 6 (<15) | +6...+11 | > 10 | 68 |
| ZMY20 | 18.8 | 21.2 | 25 | 6 (<15) | +6...+11 | > 10 | 61 |
| ZMY22 | 20.8 | 23.3 | 25 | 6 (<15) | +6...+11 | > 12 | 56 |
| ZMY24 | 22.8 | 25.6 | 25 | 7 (<15) | +6...+11 | > 12 | 51 |
| ZMY27 | 25.1 | 28.9 | 25 | 7 (<15) | +6...+11 | > 14 | 45 |
| ZMY30 | 28 | 32 | 25 | 8 (<15) | +6...+11 | > 14 | 41 |
| ZMY33 | 31 | 35 | 25 | 8 (<15) | +6...+11 | > 17 | 37 |
| ZMY36 | 34 | 38 | 10 | 16 (<40) | +6...+11 | > 17 | 34 |
| ZMY39 | 37 | 41 | 10 | 20 (<40) | +6...+11 | > 20 | 32 |
| ZMY43 | 40 | 46 | 10 | 24 (<45) | +7...+12 | > 20 | 28 |
| ZMY47 | 44 | 50 | 10 | 24 (<45) | +7...+12 | > 24 | 26 |
| ZMY51 | 48 | 54 | 10 | 25 (<60) | +7...+12 | > 24 | 24 |
| ZMY56 | 52 | 60 | 10 | 25 (<60) | +7...+12 | > 28 | 22 |
| ZMY62 | 58 | 66 | 10 | 25 (<80) | +8...+13 | > 28 | 20 |
| ZMY68 | 64 | 72 | 10 | 25 (<80) | +8...+13 | > 34 | 18 |
| ZMY75 | 70 | 79 | 10 | 30 (<100) | +8...+13 | > 34 | 16 |
| ZMY82 | 77 | 88 | 10 | 30 (<100) | +8...+13 | > 41 | 15 |
| ZMY91 | 85 | 96 | 5 | 40 (<200) | +9...+13 | > 41 | 14 |
| ZMY100 | 94 | 106 | 5 | 60 (<200) | +9...+13 | > 50 | 12 |
| ZMY110 | 104 | 116 | 5 | 80 (<250) | +9...+13 | > 50 | 11 |
| ZMY120 | 114 | 127 | 5 | 80 (<250) | +9...+13 | > 60 | 10 |
| ZMY130 | 124 | 141 | 5 | 90 (<300) | +9...+13 | > 60 | 9 |
| ZMY150 | 138 | 156 | 5 | 100 (<300) | +9...+13 | > 75 | 8 |
| ZMY160 | 153 | 171 | 5 | 110 (<350) | +9...+13 | > 75 | 8 |
| ZMY180 | 168 | 191 | 5 | 120 (<350) | +9...+13 | > 90 | 7 |
| ZMY200 | 188 | 212 | 5 | 150 (<350) | +9...+13 | > 90 | 6 |

Die ZMY1 ist eine in Durchlass betriebene Si-Diode. Bei allen Kenn- und Grenzwerten ist der Index "F" statt "Z" zu setzen

