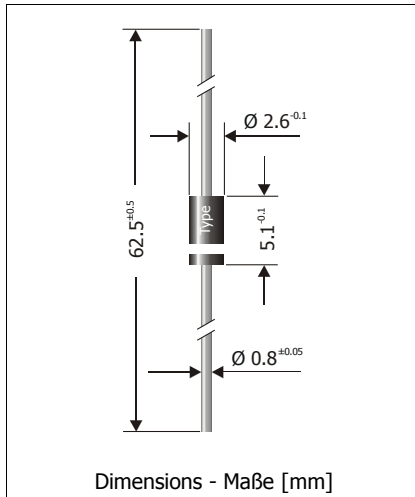



ZPY10 2% ... ZPY200 2% (1.3 W)
Silicon Power Z-Diodes (non-planar technology)
Silizium-Leistungs-Z-Dioden (flächendiffundierte Dioden)

Version 2006-06-08



| | |
|---|---|
| Maximum power dissipation Maximale Verlustleistung | 1.3 W |
| Nominal Z-voltage Nominale Z-Spannung | 10...200 V |
| Plastic case Kunststoffgehäuse | DO-41 (DO-204AL) |
| Weight approx. Gewicht ca. | 0.4 g |
| Plastic material has UL classification 94V-0 Gehäusematerial UL94V-0 klassifiziert |  |
| Standard packaging taped in ammo pack Standard Lieferform gegurtet in Ammo-Pack | |

Standard Zener voltage tolerance is graded to the international E 24 standard ($\sim \pm 5\%$).
 The devices ZPY10 2% ... ZPY200 2% are specially selected.
 Other voltage tolerances and Zener voltages on request.

Die Standard-Toleranz der Z-Spannung ist gestuft nach der internationalen Reihe E 24 ($\sim \pm 5\%$).
 Die Reihe ZPY10 2% ... ZPY200 2% ist eine Sonderselektion.
 Andere Toleranzen oder Zener-Spannungen auf Anfrage.

Maximum ratings and Characteristics**Grenz- und Kennwerte**

| | | | |
|---|--------------------------|------------------|-----------------------|
| 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} | <15 K/W |

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

1 Valid, if leads are kept at ambient temperature at a distance of 10 mm from case
 Gültig, wenn die Anschlussdrähte in 10 mm Abstand vom Gehäuse auf Umgebungstemperatur gehalten werden
 2 Tested with pulses – Gemessen mit Impulsen

Maximum ratings
Grenzwerte

| Type Typ | Zener voltage ²⁾ Zener-Spannung ²⁾ $I_Z = I_{Ztest}$ | | Test current Mess-Strom 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 / $^{\circ}$ 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] | | | | | |
| ZPY10 2% | 9.79 | 10.21 | 50 | 2 (<4) | +5...+9 | > 5 | 123 |
| ZPY11 2% | 10.79 | 11.21 | 50 | 4 (<7) | +5...+10 | > 5 | 112 |
| ZPY12 2% | 11.79 | 12.21 | 50 | 4 (<7) | +5...+10 | > 7 | 102 |
| ZPY13 2% | 12.68 | 13.32 | 50 | 5 (<10) | +5...+10 | > 7 | 92 |
| ZPY15 2% | 14.68 | 15.32 | 50 | 5 (<10) | +5...+10 | > 10 | 83 |
| ZPY16 2% | 15.68 | 16.32 | 25 | 6 (<15) | +6...+11 | > 10 | 76 |
| ZPY18 2% | 17.58 | 18.42 | 25 | 6 (<15) | +6...+11 | > 10 | 68 |
| ZPY20 2% | 19.58 | 20.42 | 25 | 6 (<15) | +6...+11 | > 10 | 61 |
| ZPY22 2% | 21.58 | 22.42 | 25 | 6 (<15) | +6...+11 | > 12 | 56 |
| ZPY24 2% | 23.48 | 24.52 | 25 | 7 (<15) | +6...+11 | > 12 | 51 |
| ZPY27 2% | 26.48 | 27.52 | 25 | 7 (<15) | +6...+11 | > 14 | 45 |
| ZPY30 2% | 29.38 | 30.62 | 25 | 8 (<15) | +6...+11 | > 14 | 41 |
| ZPY33 2% | 32.3 | 33.8 | 25 | 8 (<15) | +6...+11 | > 17 | 37 |
| ZPY36 2% | 35.2 | 36.8 | 10 | 16 (<40) | +6...+11 | > 17 | 34 |
| ZPY39 2% | 38.1 | 39.9 | 10 | 20 (<40) | +6...+11 | > 20 | 32 |
| ZPY43 2% | 42.0 | 44.0 | 10 | 24 (<45) | +7...+12 | > 20 | 28 |
| ZPY47 2% | 46.0 | 48.0 | 10 | 24 (<45) | +7...+12 | > 24 | 26 |
| ZPY51 2% | 49.9 | 52.1 | 10 | 25 (<60) | +7...+12 | > 24 | 24 |
| ZPY56 2% | 54.8 | 57.2 | 10 | 25 (<60) | +7...+12 | > 28 | 22 |
| ZPY62 2% | 60.7 | 63.3 | 10 | 25 (<80) | +8...+13 | > 28 | 20 |
| ZPY68 2% | 66.5 | 69.5 | 10 | 25 (<80) | +8...+13 | > 34 | 18 |
| ZPY75 2% | 73.4 | 76.6 | 10 | 30 (<100) | +8...+13 | > 34 | 16 |
| ZPY82 2% | 80.3 | 83.7 | 10 | 30 (<100) | +8...+13 | > 41 | 15 |
| ZPY91 2% | 89.1 | 92.9 | 5 | 40 (<200) | +9...+13 | > 41 | 14 |
| ZPY100 2% | 97.9 | 102.1 | 5 | 60 (<200) | +9...+13 | > 50 | 12 |
| ZPY110 2% | 108 | 112 | 5 | 80 (<250) | +9...+13 | > 50 | 12 |
| ZPY120 2% | 118 | 122 | 5 | 80 (<250) | +9...+13 | > 60 | 11 |
| ZPY130 2% | 127 | 133 | 5 | 90 (<300) | +9...+13 | > 60 | 10 |
| ZPY150 2% | 147 | 153 | 5 | 100 (<300) | +9...+13 | > 75 | 8 |
| ZPY160 2% | 157 | 163 | 5 | 110 (<350) | +9...+13 | > 75 | 8 |
| ZPY180 2% | 176 | 184 | 5 | 120 (<350) | +9...+13 | > 90 | 7 |
| ZPY200 2% | 196 | 204 | 5 | 150 (<350) | +9...+13 | > 90 | 6 |

1 Notes see previous page – Fußnoten siehe vorhergehende Seite