

ZPD2.7 THRU ZPD51

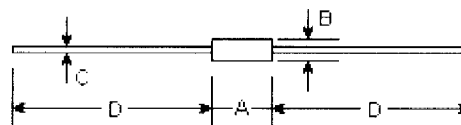
SILICON PLANAR ZENER DIODES

Features

Silicon Planar Zener Diodes

The Zener voltages are graded according to the international E 24 standard. Smaller voltage tolerances and higher Zener voltages on request.

DO-35



| DIM | DIMENSIONS | | | | Note |
|-----|------------|-------|-------|------|------|
| | inches | | mm | | |
| | Min. | Max. | Min. | Max. | |
| A | - | 0.154 | - | 3.9 | |
| B | - | 0.075 | - | 1.9 | φ |
| C | - | 0.020 | - | 0.52 | φ |
| D | 1.083 | - | 27.50 | - | |

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

| | Symbols | Values | Units |
|---|-----------|--------------------|------------------|
| Zener current see Table "Characteristics" | | | |
| Power dissipation at $T_{amb}=25^\circ\text{C}$ | P_{tot} | 500 ⁽¹⁾ | mW |
| Junction temperature | T_j | 175 | $^\circ\text{C}$ |
| Storage temperature range | T_s | -55 to +175 | $^\circ\text{C}$ |

Note:

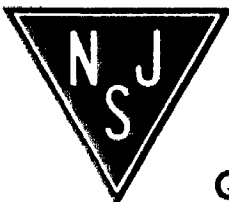
(1) Valid provided that leads at a distance of 8 mm from case are kept at ambient temperature.

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

| | Symbols | Min. | Typ. | Max. | Units |
|--|-----------|------|------|--------------------|-------|
| Thermal resistance junction to ambient Air | R_{thA} | - | - | 0.3 ⁽¹⁾ | K/mW |

Note:

(1) Valid provided that leads at a distance of 8 mm from case are kept at ambient temperature.



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Quality Semi-Conductors

| Type | Zener voltage range ¹⁾ | | | Dynamic resistance | | | Temp. coeff. of Zener Volt. at I _Z =5mA | Reverse voltage at I=100nA | Admissible Zener current ²⁾ | | | |
|--------|-----------------------------------|---|---------------|--|------|----|--|----------------------------|--|----------------|---------------------------|---------------------------|
| | V _{znom} | I _{ZT} for V _{ZT} ²⁾ | | r _{ZT} and r _{ZK} at I _{ZK} | | | | | α _{VZ} | V _R | at T _{amb} =45°C | at T _{amb} =25°C |
| | V | mA | V | Ω | Ω | mA | | | 10 ⁻⁴ /K | V | I _Z mA | I _Z mA |
| ZPD2.7 | 2.7 | 5 | 2.5 ... 2.9 | (<83) | <50 | 1 | -9 ... -4 | - | 135 | 160 | | |
| ZPD3 | 3.0 | 5 | 2.8 ... 3.2 | (<95) | <500 | 1 | -9 ... -3 | - | 117 | 140 | | |
| ZPD3.3 | 3.3 | 5 | 3.1 ... 3.5 | (<95) | <500 | 1 | -8 ... -3 | - | 109 | 130 | | |
| ZPD3.6 | 3.6 | 5 | 3.4 ... 3.8 | (<95) | <500 | 1 | -8 ... -3 | - | 101 | 120 | | |
| ZPD3.9 | 3.9 | 5 | 3.7 ... 4.1 | (<95) | <500 | 1 | -7 ... -3 | - | 92 | 110 | | |
| ZPD4.3 | 4.3 | 5 | 4.0 ... 4.6 | (<95) | <500 | 1 | -6 ... -1 | - | 85 | 100 | | |
| ZPD4.7 | 4.7 | 5 | 4.4 ... 5.0 | (<78) | <500 | 1 | -5 ... +2 | - | 76 | 90 | | |
| ZPD5.1 | 5.1 | 5 | 4.8 ... 5.4 | (<60) | <480 | 1 | -3 ... +4 | >0.8 | 67 | 80 | | |
| ZPD5.6 | 5.6 | 5 | 5.2 ... 6.0 | (<40) | <400 | 1 | -2 ... +6 | >1 | 59 | 70 | | |
| ZPD6.2 | 6.2 | 5 | 5.8 ... 6.6 | (<10) | <200 | 1 | -1 ... +7 | >2 | 54 | 64 | | |
| ZPD6.8 | 6.8 | 5 | 6.4 ... 7.2 | (<8) | <150 | 1 | +2 ... +7 | >3 | 49 | 58 | | |
| ZPD7.5 | 7.5 | 5 | 7.0 ... 7.9 | (<7) | <50 | 1 | +3 ... +7 | >5 | 44 | 53 | | |
| ZPD8.2 | 8.2 | 5 | 7.7 ... 8.7 | (<7) | <50 | 1 | +4 ... +7 | >6 | 40 | 47 | | |
| ZPD9.1 | 9.1 | 5 | 8.5 ... 9.6 | (<10) | <50 | 1 | +5 ... +8 | >7 | 36 | 43 | | |
| ZPD10 | 10 | 5 | 9.4 ... 10.6 | (<15) | <70 | 1 | +5 ... +8 | >7.5 | 33 | 40 | | |
| ZPD11 | 11 | 5 | 10.4 ... 11.6 | (<20) | <70 | 1 | +5 ... +9 | >8.5 | 30 | 36 | | |
| ZPD12 | 12 | 5 | 11.4 ... 12.7 | (<20) | <90 | 1 | +6 ... +9 | >9 | 28 | 32 | | |
| ZPD13 | 13 | 5 | 12.4 ... 14.1 | (<25) | <110 | 1 | +7 ... +9 | >10 | 25 | 29 | | |
| ZPD15 | 15 | 5 | 13.8 ... 15.6 | (<30) | <110 | 1 | +7 ... +9 | >11 | 23 | 27 | | |
| ZPD16 | 16 | 5 | 15.3 ... 17.1 | (<40) | <170 | 1 | +8 ... +9.5 | >12 | 20 | 24 | | |
| ZPD18 | 18 | 5 | 16.8 ... 19.1 | (<50) | <170 | 1 | +8 ... +9.5 | >14 | 18 | 21 | | |
| ZPD20 | 20 | 5 | 18.8 ... 21.2 | (<50) | <220 | 1 | +8 ... +10 | >15 | 17 | 20 | | |
| ZPD22 | 22 | 5 | 20.8 ... 23.3 | (<55) | <220 | 1 | +8 ... +10 | >17 | 16 | 18 | | |
| ZPD24 | 24 | 5 | 22.8 ... 25.6 | (<80) | <220 | 1 | +8 ... +10 | >18 | 13 | 16 | | |
| ZPD27 | 27 | 5 | 25.1 ... 28.9 | (<80) | <250 | 1 | +8 ... +10 | >20 | 12 | 14 | | |
| ZPD30 | 30 | 5 | 28 ... 32 | (<80) | <250 | 1 | +8 ... +10 | >22.5 | 10 | 13 | | |
| ZPD33 | 33 | 5 | 31 ... 35 | (<80) | <250 | 1 | +8 ... +10 | >25 | 9 | 12 | | |
| ZPD36 | 36 | 5 | 34 ... 38 | (<90) | <250 | 1 | +8 ... +10 | >27 | 9 | 11 | | |
| ZPD39 | 39 | 5 | 37 ... 41 | (<90) | <300 | 1 | +10 ... +12 | >29 | 8 | 10 | | |
| ZPD43 | 43 | 5 | 40 ... 46 | (<100) | <700 | 1 | +10 ... +12 | >32 | 7 | 9.2 | | |
| ZPD47 | 47 | 5 | 44 ... 50 | (<100) | <750 | 1 | +10 ... +12 | >35 | 6 | 8.5 | | |
| ZPD51 | 51 | 5 | 48 ... 54 | (<100) | <750 | 1 | +10 ... +12 | >38 | 6 | 7.8 | | |

Notes:

(1) Tested with pulses tp=20ms.

(2) Valid provided that leads are kept at ambient temperature at a distance of 8 mm from case.