

DO-35 glass 0.5 Watt

ZPD2,7
thru
ZPD51

Zener Diodes

Use Advantages

This family is equivalent to the European PRO Electron types.

The specifications reflect similar low zener test currents over voltage ranges.

For use in clipping and stabilizing circuits, where real protection is needed.

Competitive glass replacement for plastic zener diodes.

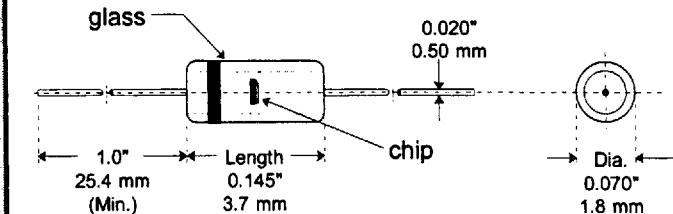
Compatible with all major automatic assembly equipment.

May be used on ceramic boards along with high temperature IR solder reflow.

Features

- Six Sigma quality
- High surge capability
- Humidity proof glass
- Metallurgically bonded
- Thermally matched system
- No applications restrictions
- BKC's Sigma Bond™ plating for problem free solderability
- Screening capability to Source Control Drawings
- LL-34/35 MELF (DO-213AA) SMD surface mount glass types available

DO-35 Glass Package
(nominal dimensions)



| Absolute Maximum Ratings | Symbol | Value | Unit |
|---|------------------|-------------|------------------|
| Power Dissipation at 3/8" from the body, $T_L = 25^\circ\text{C}$ | P_{tot} | 0.5 | Watt |
| Junction Temperature | T_J | 175 | $^\circ\text{C}$ |
| Operating and Storage Temperature Range | T_S | -55 to +175 | $^\circ\text{C}$ |

| Characteristics at $T = 25^\circ\text{C}$ | Symbol | Limit | Unit |
|--|-----------------|-----------|----------------------|
| Power derating at 3/8" from the body, $T_L = 25^\circ\text{C}$ | P_{DR} | 3.0 (Max) | mW/ $^\circ\text{C}$ |
| Forward Voltage at $I_F = 100 \text{ mA}$ | V_F | 1.5 (Max) | Volts |

LL-34/35 MELF (DO-213AA) surface mount package available,
substitute a ZMM prefix in place of ZPD.

DETAILED SPECIFICATIONS ON REVERSE



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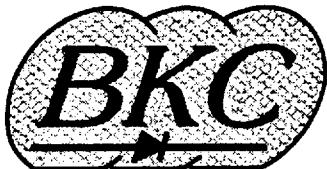
Zener Diodes

Detail Specifications

| Type | Nominal Zener Voltage | | Maximum Zener Impedance | | Maximum Reverse Leakage Current | | Maximum Zener Current (I _{ZM}) mA | Typical Temp.Coeff. of Zener Voltage %/°C |
|--------|--|-----|-------------------------------|---------------------|---------------------------------------|---------------------------|---|---|
| | (V _Z) @ I _{Zt} Volts | mA | Zzt @ I _{Zt} Ohms | Zzk @ 1.0mA Ohms | (I _R) μA | @ V _R Volts | | |
| ZPD2,7 | 2.7 | 5.0 | 83 | 500 | - | - | 160 | -0.075 |
| ZPD3 | 3.0 | 5.0 | 95 | 500 | - | - | 140 | -0.07 |
| ZPD3,3 | 3.3 | 5.0 | 95 | 500 | - | - | 130 | -0.06 |
| ZPD3,6 | 3.6 | 5.0 | 95 | 500 | - | - | 120 | -0.055 |
| ZPD3,9 | 3.9 | 5.0 | 95 | 500 | - | - | 110 | -0.045 |
| ZPD4,3 | 4.3 | 5.0 | 95 | 500 | - | - | 100 | -0.01 |
| ZPD4,7 | 4.7 | 5.0 | 78 | 500 | - | - | 90 | +0.01 |
| ZPD5,1 | 5.1 | 5.0 | 60 | 480 | 0.1 | 0.8 | 80 | +0.025 |
| ZPD5,6 | 5.6 | 5.0 | 40 | 400 | 0.1 | 1.0 | 70 | +0.035 |
| ZPD6,2 | 6.2 | 5.0 | 10 | 200 | 0.1 | 2.0 | 64 | +0.04 |
| ZPD6,8 | 6.8 | 5.0 | 8.0 | 150 | 0.1 | 3.0 | 58 | +0.044 |
| ZPD7,5 | 7.5 | 5.0 | 7.0 | 50 | 0.1 | 5.0 | 53 | +0.051 |
| ZPD8,2 | 8.2 | 5.0 | 7.0 | 50 | 0.1 | 6.0 | 47 | +0.055 |
| ZPD9,1 | 9.1 | 5.0 | 10 | 50 | 0.1 | 7.0 | 43 | +0.061 |
| ZPD10 | 10 | 5.0 | 15 | 70 | 0.1 | 7.5 | 40 | +0.065 |
| ZPD11 | 11 | 5.0 | 20 | 70 | 0.1 | 8.5 | 36 | +0.068 |
| ZPD12 | 12 | 5.0 | 20 | 90 | 0.1 | 9.0 | 32 | +0.07 |
| ZPD13 | 13 | 5.0 | 25 | 110 | 0.1 | 10 | 29 | +0.075 |
| ZPD15 | 15 | 5.0 | 30 | 110 | 0.1 | 11 | 27 | +0.079 |
| ZPD16 | 16 | 5.0 | 40 | 170 | 0.1 | 12 | 24 | +0.080 |
| ZPD18 | 18 | 5.0 | 50 | 170 | 0.1 | 14 | 21 | +0.083 |
| ZPD20 | 20 | 5.0 | 50 | 220 | 0.1 | 15 | 20 | +0.085 |
| ZPD22 | 22 | 5.0 | 55 | 220 | 0.1 | 17 | 18 | +0.087 |
| ZPD24 | 24 | 5.0 | 80 | 220 | 0.1 | 18 | 16 | +0.090 |
| ZPD27 | 27 | 5.0 | 80 | 250 | 0.1 | 20 | 14 | +0.091 |
| ZPD30 | 30 | 5.0 | 80 | 250 | 0.1 | 22.5 | 13 | +0.093 |
| ZPD33 | 33 | 5.0 | 80 | 250 | 0.1 | 25 | 12 | +0.094 |
| ZPD36 | 36 | 5.0 | 90 | 250 | 0.1 | 27 | 11 | +0.094 |
| ZPD39 | 39 | 2.0 | 90 | 300 | 0.1 | 29 | 10 | +0.095 |
| ZPD43 | 43 | 2.0 | 100 | 700 | 0.1 | 32 | 9.2 | +0.095 |
| ZPD47 | 47 | 2.0 | 100 | 750 | 0.1 | 35 | 8.5 | +0.096 |
| ZPD51 | 51 | 2.0 | 100 | 750 | 0.1 | 38 | 7.8 | +0.096 |

Voltage tolerance is ± 5 %. For other tolerances and other zener voltages, consult factory.

For an LL-34/35 Mini-MELF SMD Glass package, replace the "ZPD" prefix with "ZMM".



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