



BZX97 ...

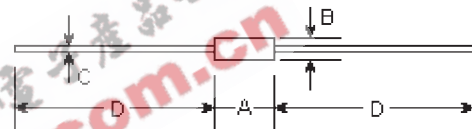
SILICON PLANAR ZENER DIODES

Features

Silicon Planar Zener Diodes

The Zener voltages are graded according to the international E 24 standard. Other voltage tolerances 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 | °C |
| Storage temperature range | T_s | -55 to +175 | °C |

Note:

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

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 |
| Forward voltage at $I_F=100\text{mA}$ | V_F | - | - | 1.0 | V |

Note:

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

| Type | Zener voltage range ¹⁾ | | | Dynamic resistance | | | Reverse leakage current | | | Temp. coefficient of Zener voltage |
|-------------|-----------------------------------|---|---------------|--|---------------------|-----|---|-----|-----|------------------------------------|
| | V _{znom} | I _{zT} for V _{zT} ³⁾ | | r _{zT} and r _{zK} at I _{zK} | | | I _R and I _R ³⁾ at V _R | | | TK _{VZ} |
| | V | mA | V | Ω | Ω | mA | nA | uA | V | %/K |
| BZX97/C 2V4 | 2.4 | 5 | 2.28 ... 2.56 | <85 | <600 | 1 | <10000 | <50 | 1 | 135 |
| BZX97/C 2V7 | 2.7 | 5 | 2.5 ... 2.9 | <85 | <600 | 1 | <10000 | <50 | 1 | 135 |
| BZX97/C 3V0 | 3.0 | 5 | 2.8 ... 3.2 | <85 | <600 | 1 | <4000 | <40 | 1 | 125 |
| BZX97/C 3V3 | 3.3 | 5 | 3.1 ... 3.5 | <85 | <600 | 1 | <2000 | <40 | 1 | 115 |
| BZX97/C 3V6 | 3.6 | 5 | 3.4 ... 3.8 | <85 | <600 | 1 | <2000 | <40 | 1 | 105 |
| BZX97/C 3V9 | 3.9 | 5 | 3.7 ... 4.1 | <85 | <600 | 1 | <2000 | <40 | 1 | 95 |
| BZX97/C 4V3 | 4.3 | 5 | 4.0 ... 4.6 | <75 | <600 | 1 | <1000 | <20 | 1 | 90 |
| BZX97/C 4V7 | 4.7 | 5 | 4.4 ... 5.0 | <60 | <600 | 1 | <500 | <10 | 1 | 85 |
| BZX97/C 5V1 | 5.1 | 5 | 4.8 ... 5.4 | <35 | <550 | 1 | <100 | <2 | 1 | 80 |
| BZX97/C 5V6 | 5.6 | 5 | 5.2 ... 6.0 | <25 | <450 | 1 | <100 | <2 | 1 | 70 |
| BZX97/C 6V2 | 6.2 | 5 | 5.8 ... 6.6 | <10 | <200 | 1 | <100 | <2 | 2 | 64 |
| BZX97/C 6V8 | 6.8 | 5 | 6.4 ... 7.2 | <8 | <150 | 1 | <100 | <2 | 3 | 58 |
| BZX97/C 7V5 | 7.5 | 5 | 7.0 ... 7.9 | <7 | <50 | 1 | <100 | <2 | 5 | 53 |
| BZX97/C 8V2 | 8.2 | 5 | 7.7 ... 8.7 | <7 | <50 | 1 | <100 | <2 | 6 | 47 |
| BZX97/C 9V1 | 9.1 | 5 | 8.5 ... 9.6 | <10 | <50 | 1 | <100 | <2 | 7 | 43 |
| BZX97/C 10 | 10 | 5 | 9.4 ... 10.6 | <15 | <70 | 1 | <100 | <2 | 7.5 | 40 |
| BZX97/C 11 | 11 | 5 | 10.4 ... 11.6 | <20 | <70 | 1 | <100 | <2 | 8.5 | 36 |
| BZX97/C 12 | 12 | 5 | 11.4 ... 12.7 | <20 | <90 | 1 | <100 | <2 | 9 | 32 |
| BZX97/C 13 | 13 | 5 | 12.4 ... 14.1 | <26 | <110 | 1 | <100 | <2 | 10 | 29 |
| BZX97/C 15 | 15 | 5 | 13.8 ... 15.6 | <30 | <110 | 1 | <100 | <2 | 11 | 27 |
| BZX97/C 16 | 16 | 5 | 15.3 ... 17.1 | <40 | <170 | 1 | <100 | <2 | 12 | 24 |
| BZX97/C 18 | 18 | 5 | 16.8 ... 19.1 | <50 | <170 | 1 | <100 | <2 | 14 | 21 |
| BZX97/C 20 | 20 | 5 | 18.8 ... 21.2 | <55 | <220 | 1 | <100 | <2 | 15 | 20 |
| BZX97/C 22 | 22 | 5 | 20.8 ... 23.3 | <55 | <220 | 1 | <100 | <2 | 17 | 18 |
| BZX97/C 24 | 24 | 5 | 22.8 ... 25.6 | <80 | <220 | 1 | <100 | <2 | 18 | 16 |
| BZX97/C 27 | 27 | 5 | 25.1 ... 28.9 | <80 | <220 | 1 | <100 | <2 | 20 | 14 |
| BZX97/C 30 | 30 | 5 | 28 ... 32 | <80 | <220 | 1 | <100 | <2 | 22 | 13 |
| BZX97/C 33 | 33 | 5 | 31 ... 35 | <80 | <220 | 1 | <100 | <2 | 24 | 12 |
| BZX97/C 36 | 36 | 5 | 34 ... 38 | <90 | <250 | 1 | <100 | <2 | 26 | 11 |
| BZX97/C 39 | 39 | 2.5 | 37 ... 41 | <100 | <600 ²⁾ | 0.5 | <100 | <2 | 28 | 10 |
| BZX97/C 43 | 43 | 2.5 | 40 ... 46 | <100 | <700 ²⁾ | 0.5 | <100 | <2 | 32 | 9.2 |
| BZX97/C 47 | 47 | 2.5 | 44 ... 50 | <120 | <1000 ²⁾ | 0.5 | <100 | <2 | 34 | 8.5 |
| BZX97/C 51 | 51 | 2.5 | 48 ... 54 | <135 | <1000 ²⁾ | 0.5 | <100 | <2 | 36 | 7.8 |

Notes:

(1) Tested with pulses tp=20ms.

(2) Measured at I_z=0.5mA

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