Certificate Number: Q10561

Certificate Number: E17276

# BZX79C Series

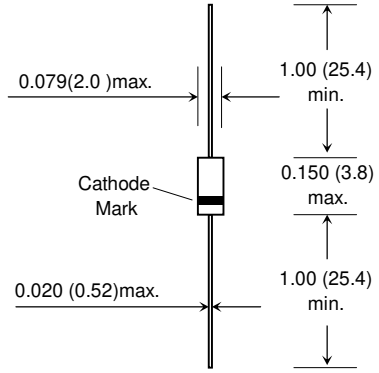
## ZENER DIODES

$V_Z$ : 2.4 to 75V
$P_D$ : 500mW

**FEATURES :**
- Higher zener voltages available on request.
- Standard zener voltage tolerance is ± 5%
- Other tolerances are available upon request.
- Pb / RoHS Free

**MECHANICAL DATA :**
**Case:** DO-35 Glass Case
**Weight:** approx. 0.13g

**DO - 35 Glass**
**(DO-204AH)**




**Dimensions in inches and ( millimeters )**

## Maximum Ratings and Thermal Characteristics

Rating at 25 °C ambient temperature unless otherwise specified.

| Parameter | Symbol | Value | Unit |
|---|---|---|---|
| Zener Current see Table "Characteristics" | | | |
| Forward Voltage at $I_F$ = 10 mA. | $V_F$ | 0.9 | V |
| Power Dissipation at $T_L$ = 25°C | $P_D$ | 500(1) | mW |
| Thermal Resistance Junction to Ambient Air | $R_{\theta JA}$ | 300(1) | °C/W |
| Continuous Forward Current | $I_F$ | 250 | mA |
| Peak reverse power dissipation (non-repetitive) tp = 100µs square wave | $P_{ZSM}$ | 40 | W |
| Junction temperature | $T_J$ | -65 to + 200 | °C |
| Storage temperature range | $T_S$ | -65 to + 200 | °C |

Note:

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

## ELECTRICAL CHARACTERISTICS (Rating at 25°C ambient temperature unless otherwise specified)

| Type Number | Zener Voltage $V_Z$ @ $I_{ZT}$ | | Maximum Zener Impedance , f = 1kHz | | | Maximum Reverse Leakage Current | | Temp. coefficient of Zener Voltage | Admissible Zener Current | Maximum Capacitance |
|---|---|---|---|---|---|---|---|---|---|---|
| | Nom[1] (V) | $I_{ZT}$ (mA) | $Z_{ZT}$ @ $I_{ZT}$ (Ohms) | $Z_{Zk}$ @ $I_{ZK}$ (Ohms) | $I_{ZK}$ (mA) | $I_R$ (μA) | at $V_R$ (V) | $\alpha_{mvz}$(% / °C) | $I_Z$ (mA) | $V_R$=0, f=1MHz (pF) |
| **BZX79C2V4** | 2.4 | 5 | 100 | 600 | 1 | 50 | 1 | -0.08...-0.06 | 167 | 450 |
| **BZX79C2V7** | 2.7 | 5 | 100 | 600 | 1 | 20 | 1 | -0.08...-0.06 | 135 | 450 |
| **BZX79C3V0** | 3.0 | 5 | 95 | 600 | 1 | 10 | 1 | -0.08...-0.05 | 125 | 450 |
| **BZX79C3V3** | 3.3 | 5 | 95 | 600 | 1 | 5 | 1 | -0.08...-0.05 | 115 | 450 |
| **BZX79C3V6** | 3.6 | 5 | 90 | 600 | 1 | 5 | 1 | -0.08...-0.04 | 105 | 450 |
| **BZX79C3V9** | 3.9 | 5 | 90 | 600 | 1 | 3 | 1 | -0.07...-0.03 | 95 | 450 |
| **BZX79C4V3** | 4.3 | 5 | 90 | 600 | 1 | 3 | 1 | -0.04...-0.01 | 90 | 450 |
| **BZX79C4V7** | 4.7 | 5 | 80 | 500 | 1 | 3 | 1 | -0.03...+0.01 | 85 | 300 |
| **BZX79C5V1** | 5.1 | 5 | 60 | 480 | 1 | 2 | 1 | -0.02...+0.05 | 80 | 300 |
| **BZX79C5V6** | 5.6 | 5 | 40 | 400 | 1 | 1 | 1 | -0.01...+0.06 | 70 | 300 |
| **BZX79C6V2** | 6.2 | 5 | 10 | 150 | 1 | 3 | 2 | 0.00...0.07 | 64 | 200 |
| **BZX79C6V8** | 6.8 | 5 | 15 | 80 | 1 | 2 | 3 | 0.01...0.08 | 58 | 200 |
| **BZX79C7V5** | 7.5 | 5 | 15 | 80 | 1 | 1 | 5 | 0.01...0.09 | 53 | 150 |
| **BZX79C8V2** | 8.2 | 5 | 15 | 80 | 1 | 0.7 | 6 | 0.01...0.09 | 47 | 150 |
| **BZX79C9V1** | 9.1 | 5 | 15 | 100 | 1 | 0.5 | 7 | 0.02...0.10 | 43 | 150 |
| **BZX79C10** | 10 | 5 | 20 | 150 | 1 | 0.2 | 7.5 | 0.03...0.11 | 40 | 90 |
| **BZX79C11** | 11 | 5 | 20 | 150 | 1 | 0.1 | 8.5 | 0.03...0.11 | 36 | 85 |
| **BZX79C12** | 12 | 5 | 25 | 150 | 1 | 0.1 | 9 | 0.03...0.11 | 32 | 85 |
| **BZX79C13** | 13 | 5 | 30 | 170 | 1 | 0.1 | 10 | 0.03...0.11 | 29 | 80 |
| **BZX79C15** | 15 | 5 | 30 | 200 | 1 | 0.05 | 11 | 0.03...0.11 | 27 | 75 |
| **BZX79C16** | 16 | 5 | 40 | 200 | 1 | 0.05 | 12 | 0.03...0.11 | 24 | 75 |
| **BZX79C18** | 18 | 5 | 45 | 225 | 1 | 0.05 | 14 | 0.03...0.11 | 21 | 70 |
| **BZX79C20** | 20 | 5 | 55 | 225 | 1 | 0.05 | 15 | 0.03...0.11 | 20 | 60 |
| **BZX79C22** | 22 | 5 | 55 | 250 | 1 | 0.05 | 17 | 0.03...0.11 | 18 | 60 |
| **BZX79C24** | 24 | 5 | 70 | 250 | 1 | 0.05 | 18 | 0.04...0.12 | 16 | 55 |
| **BZX79C27** | 27 | 2 | 80 | 300 | 0.5 | 0.05 | 20 | 0.04...0.12 | 14 | 50 |
| **BZX79C30** | 30 | 2 | 80 | 300 | 0.5 | 0.05 | 22 | 0.04...0.12 | 13 | 50 |
| **BZX79C33** | 33 | 2 | 80 | 325 | 0.5 | 0.05 | 24 | 0.04...0.12 | 12 | 45 |
| **BZX79C36** | 36 | 2 | 90 | 350 | 0.5 | 0.05 | 27 | 0.04...0.12 | 11 | 45 |
| **BZX79C39** | 39 | 2 | 130 | 350 | 0.5 | 0.05 | 28 | 0.04...0.12 | 10 | 45 |
| **BZX79C43** | 43 | 2 | 150 | 375 | 0.5 | 0.05 | 32 | 0.04...0.12 | 9.2 | 40 |
| **BZX79C47** | 47 | 2 | 170 | 375 | 0.5 | 0.05 | 35 | 0.04...0.12 | 8.5 | 40 |
| **BZX79C51** | 51 | 2 | 180 | 400 | 0.5 | 0.05 | 38 | 0.04...0.12 | 7.8 | 40 |
| **BZX79C56** | 56 | 2 | 200 | 425 | 0.5 | 0.05 | 39 | 0.1(typ.) | 7.1 | 40 |
| **BZX79C62** | 62 | 2 | 215 | 450 | 0.5 | 0.05 | 43 | 0.1(typ.) | 6.4 | 35 |
| **BZX79C68** | 68 | 2 | 240 | 475 | 0.5 | 0.05 | 48 | 0.1(typ.) | 5.8 | 35 |
| **BZX79C75** | 75 | 2 | 255 | 500 | 0.5 | 0.05 | 53 | 0.1(typ.) | 5.3 | 35 |

**Notes** (1) Tested with pulses tp = 5 ms

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

(3) The type number listed have a standard tolerance on the nominal zener voltage of ± 5%.

For ± 2% tolerance altered the sixth letter of type from "C" to be "B"