

Zeners BZX55C2V4 - BZX55C91

Absolute Maximum Ratings * $T_A = 25^\circ\text{C}$ unless otherwise noted

| Symbol | Parameter | Value | Units |
|----------------|---|-------------|----------------------|
| P_D | Power Dissipation @ $T_L \leq 75^\circ\text{C}$, Lead Length = 3/8" | 500 | mW |
| | Derate above 75°C | 4.0 | mW/ $^\circ\text{C}$ |
| T_J, T_{STG} | Operating and Storage Temperature Range | -65 to +200 | $^\circ\text{C}$ |

* These ratings are limiting values above which the serviceability of the diode may be impaired.

Tolerance = 5%



Electrical Characteristics $T_A = 25^\circ\text{C}$ unless otherwise noted

| Device | V_Z (V) @ I_Z (Note 1) | | Z_Z @ I_Z (Ω) | Test Current I_Z (mA) | I_R (μA) @ V_R | | | I_{ZM} (mA) (Note 2) |
|------------|----------------------------|------|-------------------------------|----------------------------|---------------------------------|---------------------------|-----------|---------------------------|
| | Min. | Max. | | | $T_A = 25^\circ\text{C}$ | $T_A = 125^\circ\text{C}$ | V_R (V) | |
| BZX55C2V4 | 2.28 | 2.56 | 85 | 5 | 50 | 100 | 1 | 155 |
| BZX55C2V7 | 2.50 | 2.9 | 85 | 5 | 10 | 50 | 1 | 135 |
| BZX55C3V0 | 2.8 | 3.2 | 85 | 5 | 4 | 40 | 1 | 125 |
| BZX55C3V3 | 3.1 | 3.5 | 85 | 5 | 2 | 40 | 1 | 115 |
| BZX55C3V6 | 3.4 | 3.8 | 85 | 5 | 2 | 40 | 1 | 105 |
| BZX55C3V9 | 3.7 | 4.1 | 85 | 5 | 2 | 40 | 1 | 95 |
| BZX55C4V3 | 4.0 | 4.6 | 75 | 5 | 1 | 40 | 1 | 90 |
| BZX55C4V7 | 4.4 | 5.0 | 60 | 5 | 0.5 | 10 | 1 | 85 |
| BZX55C5V1 | 4.8 | 5.4 | 35 | 5 | 0.1 | 2 | 1 | 80 |
| BZX55C5V6 | 5.2 | 6.0 | 25 | 5 | 0.1 | 2 | 1 | 70 |
| BZX55CT6V2 | 5.8 | 6.6 | 10 | 5 | 0.1 | 2 | 2 | 64 |
| BZX55CT6V8 | 6.4 | 7.2 | 8 | 5 | 0.1 | 2 | 3 | 58 |
| BZX55CT7V5 | 7.0 | 7.9 | 7 | 5 | 0.1 | 2 | 5 | 53 |
| BZX55CT8V2 | 7.7 | 8.7 | 7 | 5 | 0.1 | 2 | 6 | 47 |
| BZX55CT9V1 | 8.5 | 9.6 | 10 | 5 | 0.1 | 2 | 7 | 43 |
| BZX55CT10 | 9.5 | 10.6 | 15 | 5 | 0.1 | 2 | 7.5 | 40 |
| BZX55CT11 | 10.4 | 11.6 | 20 | 5 | 0.1 | 2 | 8.5 | 36 |
| BZX55CT12 | 11.4 | 12.7 | 20 | 5 | 0.1 | 2 | 9 | 32 |
| BZX55CT13 | 12.4 | 14.1 | 26 | 5 | 0.1 | 2 | 10 | 29 |
| BZX55CT15 | 13.8 | 15.6 | 30 | 5 | 0.1 | 2 | 11 | 27 |
| BZX55CT16 | 15.3 | 17.1 | 40 | 5 | 0.1 | 2 | 12 | 24 |
| BZX55CT18 | 16.8 | 19.1 | 50 | 5 | 0.1 | 2 | 14 | 21 |
| BZX55CT20 | 18.8 | 21.1 | 55 | 5 | 0.1 | 2 | 15 | 20 |
| BZX55C22 | 20.8 | 23.3 | 55 | 5 | 0.1 | 2 | 17 | 18 |
| BZX55C24 | 22.8 | 25.6 | 80 | 5 | 0.1 | 2 | 18 | 16 |
| BZX55C27 | 25.1 | 28.9 | 80 | 5 | 0.1 | 2 | 20 | 14 |
| BZX55C30 | 28.0 | 32.0 | 80 | 5 | 0.1 | 2 | 22 | 13 |
| BZX55C33 | 31.0 | 35.0 | 80 | 5 | 0.1 | 2 | 24 | 12 |
| BZX55C36 | 34.0 | 38.0 | 80 | 5 | 0.1 | 2 | 27 | 11 |
| BZX55C39 | 37.0 | 41.0 | 90 | 2.5 | 0.1 | 5 | 28 | 10 |

Electrical Characteristics (Continued) $T_A=25^\circ\text{C}$ unless otherwise noted

| Device | V_Z (V) @ I_Z (Note 1) | | Z_Z @ I_Z (Ω) | Test Current I_Z (mA) | I_R (μA) @ V_R | | | I_{ZM} (mA) (Note 2) |
|----------|----------------------------|------|-------------------------------|----------------------------|---------------------------------|---------------------------|-----------|---------------------------|
| | Min. | Max. | | | $T_a = 25^\circ\text{C}$ | $T_a = 125^\circ\text{C}$ | V_R (V) | |
| BZX55C43 | 40 | 46 | 90 | 5 | 0.1 | 5 | 32 | 9.2 |
| BZX55C47 | 44 | 50 | 110 | 5 | 0.1 | 5 | 35 | 8.5 |
| BZX55C51 | 48 | 54 | 125 | 5 | 0.1 | 10 | 38 | 7.8 |
| BZX55C56 | 52 | 60 | 135 | 5 | 0.1 | 10 | 42 | 7.0 |
| BZX55C62 | 58 | 66 | 150 | 5 | 0.1 | 10 | 47 | 6.4 |
| BZX55C68 | 64 | 72 | 160 | 5 | 0.1 | 10 | 51 | 5.9 |
| BZX55C75 | 70 | 80 | 170 | 5 | 0.1 | 10 | 56 | 5.3 |
| BZX55C82 | 77 | 87 | 200 | 5 | 0.1 | 10 | 62 | 4.8 |
| BZX55C91 | 85 | 96 | 250 | 1 | 0.1 | 10 | 69 | 4.3 |

 V_F Forward Voltage = 1.3V Max @ $I_F = 100\text{mA}$ **Notes:**1. Zener Voltage (V_Z)The zener voltage is measured with the device junction in the thermal equilibrium at the lead temperature (T_L) at $30^\circ\text{C} \pm 1^\circ\text{C}$ and 3/8" lead length.2. Maximum Zener Current Ratings (I_{ZM})

The maximum current handling capability on a worst case basis is limited by the actual zener voltage at the operation point and the power derating curve.

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