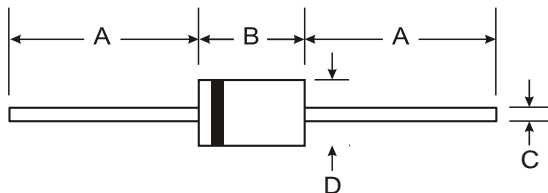




常州飞尔泰半导体科技有限公司

BZX55C Series

500mW ZENER DIODE



| DO-35 | | |
|----------------------|-------|------|
| Dim | Min | Max |
| A | 25.40 | — |
| B | — | 4.00 |
| C | — | 0.60 |
| D | — | 2.00 |
| All Dimensions in mm | | |

Features

- Very Sharp Reverse Characteristic
- Low Reverse Current Level
- Very High Stability
- Low Noise

Mechanical Data

- Case: DO-35, Glass
- Terminals: Solderable per MIL-STD-202, Method 208
- Polarity: Cathode Band
- Approx. Weight: 0.13 grams

Maximum Ratings @ $T_A = 25^\circ\text{C}$ unless otherwise specified

| Characteristic | Symbol | Value | Unit | Test Condition |
|---|-----------------|-------------|------------------|---|
| Power Dissipation | P_d | 500 | mW | Lead length = 4.0mm, $T_L = 25^\circ\text{C}$ |
| Zener Current | I_Z | P_d/V_Z | mA | |
| Thermal Resistance, Junction to Ambient Air | $R_{\theta JA}$ | 300 | K/W | Lead length = 4.0mm, $T_L = \text{constant}$ |
| Forward Voltage | V_F | 1.5 | V | $I_F = 200\text{mA}$ |
| Operating and Storage Temperature Range | T_j, T_{STG} | -65 to +175 | $^\circ\text{C}$ | |



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Electrical Characteristics @ T_A = 25°C unless otherwise specified

| Type Number | Nominal Zener Voltage | | Zener Voltage Range | Zener Impedance | Zener Impedance | | Leakage Current @ V _R | | | Temperature Coefficient (%/K) |
|-------------|----------------------------------|------|----------------------------------|-----------------------------------|-----------------------------------|------|----------------------------------|--------------------------|----------------|----------------------------------|
| | V _Z @ I _{ZT} | | V _Z @ I _{ZT} | Z _{KT} @ I _{ZT} | Z _{KT} @ I _{ZK} | | I _R @ T=25°C | I _R @ T=150°C | V _R | |
| | (V) | (mA) | (V) | (ϕ) | (ϕ) | (mA) | (μ A) | (μ A) | (V) | |
| BZX55C2V4 | 2.4 | 5.0 | 2.28 to 2.56 | < 85 | < 600 | 1.0 | < 50 | < 100 | 1.0 | -0.09 to -0.06 |
| BZX55C2V7 | 2.7 | 5.0 | 2.5 to 2.9 | < 85 | < 600 | 1.0 | < 10 | < 50 | 1.0 | -0.09 to -0.06 |
| BZX55C3V0 | 3.0 | 5.0 | 2.8 to 3.2 | < 85 | < 600 | 1.0 | < 4.0 | < 40 | 1.0 | -0.08 to -0.05 |
| BZX55C3V3 | 3.3 | 5.0 | 3.1 to 3.5 | < 85 | < 600 | 1.0 | < 2.0 | < 40 | 1.0 | -0.08 to -0.05 |
| BZX55C3V6 | 3.6 | 5.0 | 3.4 to 3.8 | < 85 | < 600 | 1.0 | < 2.0 | < 40 | 1.0 | -0.08 to -0.05 |
| BZX55C3V9 | 3.9 | 5.0 | 3.7 to 4.1 | < 85 | < 600 | 1.0 | < 2.0 | < 40 | 1.0 | -0.08 to -0.05 |
| BZX55C4V3 | 4.3 | 5.0 | 4.0 to 4.6 | < 75 | < 600 | 1.0 | < 1.0 | < 20 | 1.0 | -0.06 to -0.03 |
| BZX55C4V7 | 4.7 | 5.0 | 4.4 to 5.0 | < 60 | < 600 | 1.0 | < 0.5 | < 10 | 1.0 | -0.05 to +0.02 |
| BZX55C5V1 | 5.1 | 5.0 | 4.8 to 5.4 | < 35 | < 550 | 1.0 | < 0.1 | < 2.0 | 1.0 | -0.02 to +0.02 |
| BZX55C5V6 | 5.6 | 5.0 | 5.2 to 6.0 | < 25 | < 450 | 1.0 | < 0.1 | < 2.0 | 1.0 | -0.05 to +0.05 |
| BZX55C6V2 | 6.2 | 5.0 | 5.8 to 6.6 | < 10 | < 200 | 1.0 | < 0.1 | < 2.0 | 2.0 | 0.03 to 0.06 |
| BZX55C6V8 | 6.8 | 5.0 | 6.4 to 7.2 | < 8.0 | < 150 | 1.0 | < 0.1 | < 2.0 | 3.0 | 0.03 to 0.07 |
| BZX55C7V5 | 7.5 | 5.0 | 7.0 to 7.9 | < 7.0 | < 50 | 1.0 | < 0.1 | < 2.0 | 5.0 | 0.03 to 0.07 |
| BZX55C8V2 | 8.2 | 5.0 | 7.7 to 8.7 | < 7.0 | < 50 | 1.0 | < 0.1 | < 2.0 | 6.2 | 0.03 to 0.08 |
| BZX55C9V1 | 9.1 | 5.0 | 8.5 to 9.6 | < 10 | < 50 | 1.0 | < 0.1 | < 2.0 | 6.8 | 0.03 to 0.09 |
| BZX55C10 | 10 | 5.0 | 9.4 to 10.6 | < 15 | < 70 | 1.0 | < 0.1 | < 2.0 | 7.5 | 0.03 to 0.10 |
| BZX55C11 | 11 | 5.0 | 10.4 to 11.6 | < 20 | < 70 | 1.0 | < 0.1 | < 2.0 | 8.2 | 0.03 to 0.11 |
| BZX55C12 | 12 | 5.0 | 11.4 to 12.7 | < 20 | < 90 | 1.0 | < 0.1 | < 2.0 | 9.1 | 0.03 to 0.11 |
| BZX55C13 | 13 | 5.0 | 12.4 to 14.1 | < 26 | < 110 | 1.0 | < 0.1 | < 2.0 | 10 | 0.03 to 0.11 |
| BZX55C15 | 15 | 5.0 | 13.8 to 15.6 | < 30 | < 110 | 1.0 | < 0.1 | < 2.0 | 11 | 0.03 to 0.11 |
| BZX55C16 | 16 | 5.0 | 15.3 to 17.1 | < 40 | < 170 | 1.0 | < 0.1 | < 2.0 | 12 | 0.03 to 0.11 |
| BZX55C18 | 18 | 5.0 | 16.8 to 19.1 | < 50 | < 170 | 1.0 | < 0.1 | < 2.0 | 13 | 0.03 to 0.11 |
| BZX55C20 | 20 | 5.0 | 18.8 to 21.2 | < 55 | < 220 | 1.0 | < 0.1 | < 2.0 | 15 | 0.03 to 0.11 |
| BZX55C22 | 22 | 5.0 | 20.8 to 23.3 | < 55 | < 220 | 1.0 | < 0.1 | < 2.0 | 16 | 0.04 to 0.12 |
| BZX55C24 | 24 | 5.0 | 22.8 to 25.6 | < 80 | < 220 | 1.0 | < 0.1 | < 2.0 | 18 | 0.04 to 0.12 |
| BZX55C27 | 27 | 5.0 | 25.1 to 28.9 | < 80 | < 220 | 1.0 | < 0.1 | < 2.0 | 20 | 0.04 to 0.12 |
| BZX55C30 | 30 | 5.0 | 28 to 32 | < 80 | < 220 | 1.0 | < 0.1 | < 2.0 | 22 | 0.04 to 0.12 |
| BZX55C33 | 33 | 5.0 | 31 to 35 | < 80 | < 220 | 1.0 | < 0.1 | < 2.0 | 24 | 0.04 to 0.12 |
| BZX55C36 | 36 | 5.0 | 34 to 38 | < 80 | < 220 | 1.0 | < 0.1 | < 2.0 | 27 | 0.04 to 0.12 |
| BZX55C39 | 39 | 2.5 | 37 to 41 | < 90 | < 500 | 0.5 | < 0.1 | < 5.0 | 30 | 0.04 to 0.12 |
| BZX55C43 | 43 | 2.5 | 40 to 46 | < 90 | < 600 | 0.5 | < 0.1 | < 5.0 | 33 | 0.04 to 0.12 |
| BZX55C47 | 47 | 2.5 | 44 to 50 | < 110 | < 700 | 0.5 | < 0.1 | < 5 | 36 | 0.04 to 0.12 |
| BZX55C51 | 51 | 2.5 | 48 to 54 | < 125 | < 700 | 0.5 | < 0.1 | < 10 | 39 | 0.04 to 0.12 |
| BZX55C56 | 56 | 2.5 | 52 to 60 | < 135 | < 1000 | 0.5 | < 0.1 | < 10 | 43 | 0.04 to 0.12 |
| BZX55C62 | 62 | 2.5 | 58 to 66 | < 150 | < 1000 | 0.5 | < 0.1 | < 10 | 47 | 0.04 to 0.12 |
| BZX55C68 | 68 | 2.5 | 64 to 72 | < 200 | < 1000 | 0.5 | < 0.1 | < 10 | 51 | 0.04 to 0.12 |
| BZX55C75 | 75 | 2.5 | 70 to 79 | < 250 | < 1500 | 0.5 | < 0.1 | < 10 | 56 | 0.04 to 0.12 |



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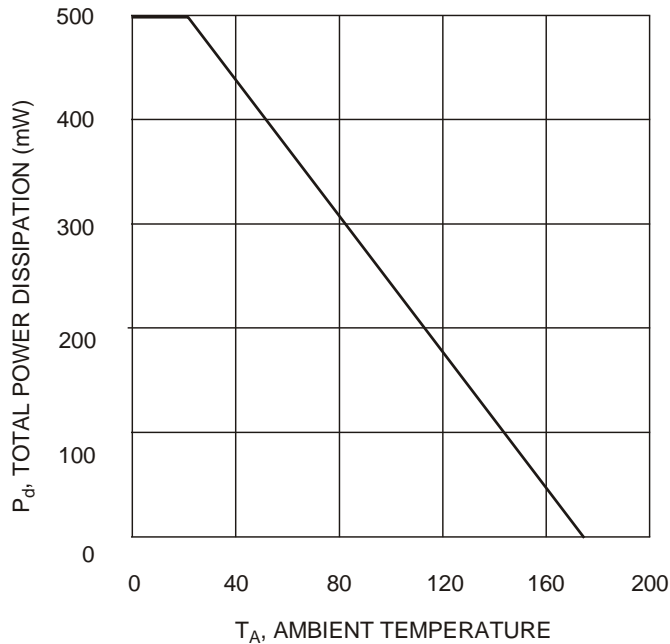


Fig. 1, Power Dissipation vs Ambient Temperature

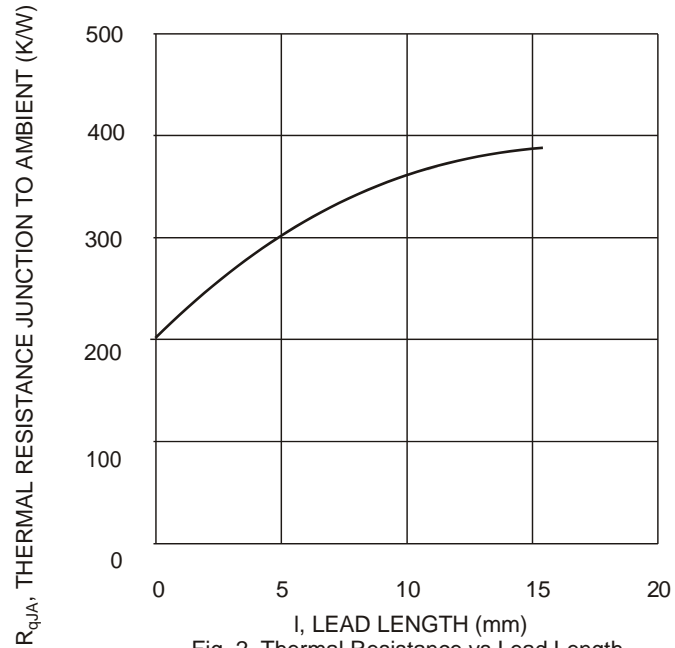


Fig. 2, Thermal Resistance vs Lead Length

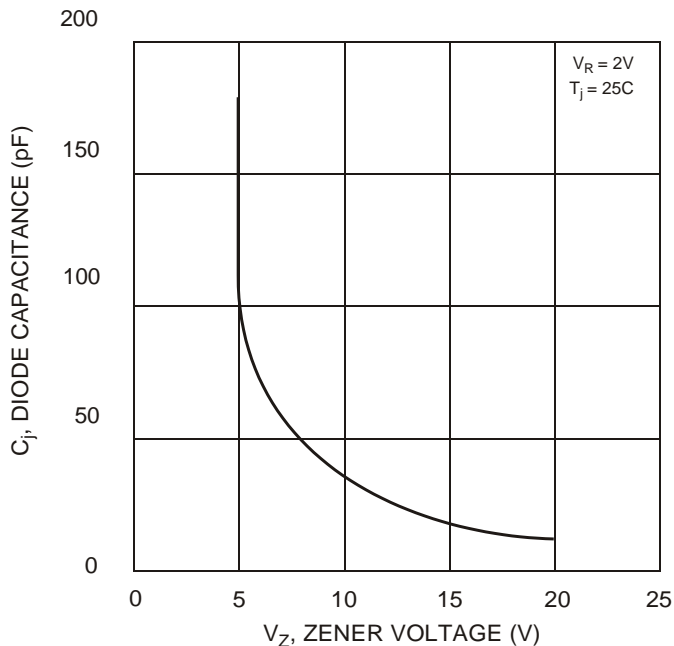


Fig. 3, Diode Capacitance vs Zener Voltage

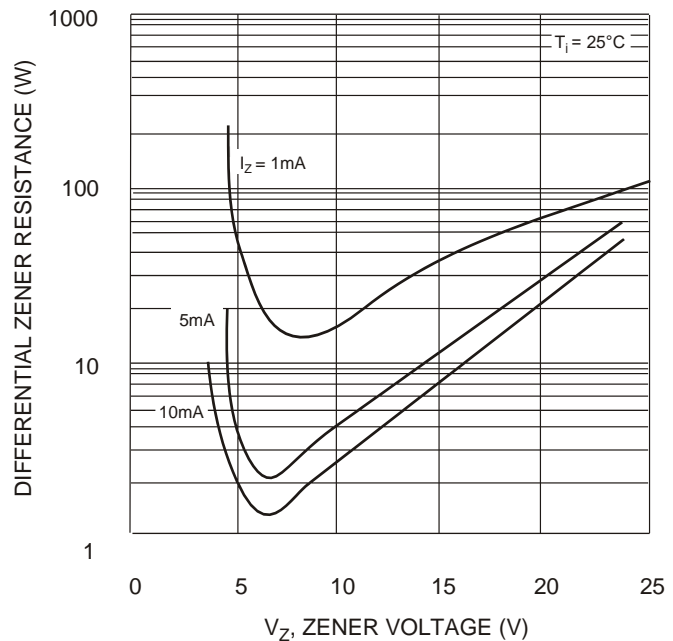


Fig. 4, Differential Zener Impedance



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