

BZX55C-SERIES

ZENER DIODES

Zener Voltage: 2.4-180V Peak Pulse Power: 500mW

FEATURE

- ◆ Low zener impedance
- ◆ Low regulation factor
- ◆ Glass passivated junction
- ◆ High temperature soldering guaranteed:
260°C/10S/9.5mm lead length at 5 lbs tension

MECHANICAL DATA

Case: JEDEC DO-35(GLASS) molded glass body

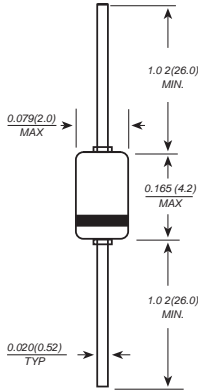
Terminals: Plated axial leads, solderable per MIL-STD 750, method 2026

Polarity: Color band denotes cathode end

Mounting Position: Any

Weight: 0.005 ounce, 0.14 grams

DO-35(GLASS)



Dimensions in inches and (millimeters)

MAXIMUM RATINGS AND ELECTRICAL CHARACTERISTICS

Ratings at 25°C ambient temperature unless otherwise specified.

| | SYMBOLS | VALUE | UNITS |
|---|------------------|--------------|-------|
| Zener Current see Table Characteristics | | | |
| Power Dissipation at Tamb=25°C(Note 1) | P _{tot} | 500 | mW |
| Junction Temperature | T _j | 200 | °C |
| Storage Temperature Range | T _{STG} | -65 to + 200 | °C |
| Thermal resistance junction ambient(Note 1) | R _{qJA} | 0.3 | K/mW |
| Forward voltage at I _F =100mA | V _F | 1.0 | V |

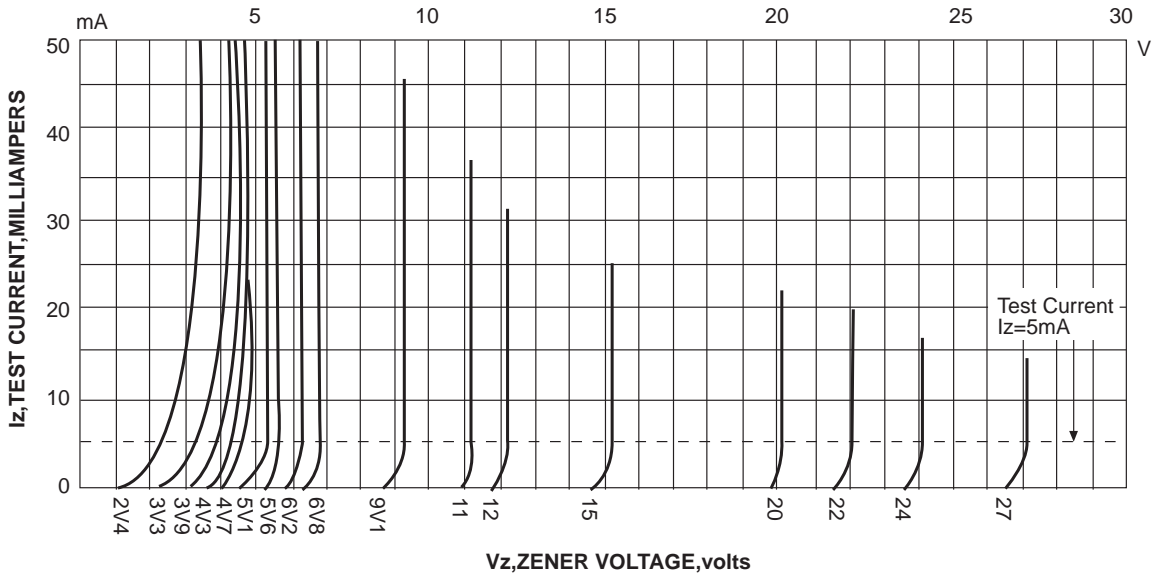
Note 1: Valid provided that leads at a distance of 10mm from case are kept at ambient temperature

ELECTRICAL CHARACTERISTICS (at TA=25°C unless otherwise noted)

| Device Type | Nominal Zener Voltage Vz@Izr | | Test Current Izr mA | Maximum Zener Impedance | | | Maximum Reverse Leakage Current | | Typical Temperature Coefficient (%/°C) | Maximum Regulator Current IzM mA |
|-------------|------------------------------|------|------------------------|-------------------------|-----------------|-----------|---------------------------------|--------------|---|-------------------------------------|
| | Min | Max | | Zzr@Izr Ohms | Zzk@Izk Ohms | Izk mA | IR nA | @VR Volts | | |
| BZX55C2V4 | 2.28 | 2.56 | 5.0 | 85 | 600 | 1.0 | 50 | 1.0 | -0.085 | 155 |
| BZX55C2V7 | 2.5 | 2.9 | 5.0 | 85 | 600 | 1.0 | 10 | 1.0 | -0.080 | 135 |
| BZX55C3V0 | 2.8 | 3.2 | 5.0 | 85 | 600 | 1.0 | 4.0 | 1.0 | -0.075 | 125 |
| BZX55C3V3 | 3.1 | 3.5 | 5.0 | 85 | 600 | 1.0 | 2.0 | 1.0 | -0.070 | 115 |
| BZX55C3V6 | 3.4 | 3.8 | 5.0 | 85 | 600 | 1.0 | 2.0 | 1.0 | -0.065 | 105 |
| BZX55C3V9 | 3.7 | 4.1 | 5.0 | 85 | 600 | 1.0 | 2.0 | 1.0 | -0.060 | 95 |
| BZX55C4C3 | 4.0 | 4.6 | 5.0 | 75 | 600 | 1.0 | 1.0 | 1.0 | ±0.055 | 90 |
| BZX55C4V7 | 4.4 | 5.0 | 5.0 | 60 | 600 | 1.0 | 0.5 | 1.0 | ±0.030 | 85 |
| BZX55C5V1 | 4.8 | 5.4 | 5.0 | 35 | 550 | 1.0 | 0.1 | 1.0 | ±0.030 | 80 |
| BZX55C5V6 | 5.2 | 6.0 | 5.0 | 25 | 450 | 1.0 | 0.1 | 1.0 | +0.038 | 70 |
| BZX55C6V2 | 5.8 | 6.6 | 5.0 | 10 | 200 | 1.0 | 0.1 | 2.0 | +0.045 | 64 |
| BZX55C6V8 | 6.4 | 7.2 | 5.0 | 8.0 | 150 | 1.0 | 0.1 | 3.0 | +0.050 | 58 |
| BZX55C7V5 | 7.0 | 7.9 | 5.0 | 7.0 | 50 | 1.0 | 0.1 | 5.0 | +0.058 | 53 |
| BZX55C8V2 | 7.7 | 8.7 | 5.0 | 7.0 | 50 | 1.0 | 0.1 | 6.2 | +0.062 | 74 |
| BZX55C9V1 | 8.5 | 9.6 | 5.0 | 10 | 50 | 1.0 | 0.1 | 6.8 | +0.068 | 43 |
| BZX55C10 | 9.4 | 10.6 | 5.0 | 15 | 70 | 1.0 | 0.1 | 7.5 | +0.075 | 40 |
| BZX55C11 | 10.4 | 11.6 | 5.0 | 20 | 70 | 1.0 | 0.1 | 8.2 | +0.076 | 36 |
| BZX55C12 | 11.4 | 12.7 | 5.0 | 20 | 90 | 1.0 | 0.1 | 9.1 | +0.077 | 32 |
| BZX55C13 | 12.4 | 14.1 | 5.0 | 26 | 110 | 1.0 | 0.1 | 10 | +0.079 | 29 |
| BZX55C15 | 13.8 | 15.6 | 5.0 | 30 | 110 | 1.0 | 0.1 | 11 | +0.082 | 27 |
| BZX55C16 | 15.3 | 17.1 | 5.0 | 40 | 170 | 1.0 | 0.1 | 12 | +0.083 | 24 |
| BZX55C18 | 16.8 | 19.1 | 5.0 | 50 | 170 | 1.0 | 0.1 | 13 | +0.085 | 21 |
| BZX55C20 | 18.8 | 21.2 | 5.0 | 55 | 220 | 1.0 | 0.1 | 15 | +0.086 | 20 |
| BZX55C22 | 20.8 | 23.3 | 5.0 | 55 | 220 | 1.0 | 0.1 | 16 | +0.087 | 18 |
| BZX55C24 | 22.8 | 25.6 | 5.0 | 80 | 220 | 1.0 | 0.1 | 18 | +0.088 | 16 |
| BZX55C27 | 25.1 | 28.9 | 5.0 | 80 | 220 | 1.0 | 0.1 | 20 | +0.090 | 14 |
| BZX55C30 | 28 | 32 | 5.0 | 80 | 220 | 1.0 | 0.1 | 22 | +0.091 | 13 |
| BZX55C33 | 31 | 35 | 5.0 | 80 | 220 | 1.0 | 0.1 | 24 | +0.092 | 12 |
| BZX55C36 | 34 | 38 | 5.0 | 80 | 220 | 1.0 | 0.1 | 27 | +0.093 | 11 |
| BZX55C39 | 37 | 41 | 2.5 | 90 | 500 | 0.5 | 0.1 | 30 | +0.094 | 10 |
| BZX55C43 | 40 | 46 | 2.5 | 90 | 600 | 0.5 | 0.1 | 33 | +0.095 | 9.2 |
| BZX55C47 | 44 | 50 | 2.5 | 110 | 700 | 0.5 | 0.1 | 36 | +0.095 | 8.5 |
| BZX55C51 | 48 | 54 | 2.5 | 125 | 700 | 0.5 | 0.1 | 39 | +0.096 | 7.8 |
| BZX55C56 | 52 | 60 | 2.5 | 135 | 1000 | 0.5 | 0.1 | 43 | +0.096 | 7.0 |
| BZX55C62 | 58 | 66 | 2.5 | 150 | 1000 | 0.5 | 0.1 | 47 | +0.096 | 6.4 |
| BZX55C68 | 64 | 72 | 2.5 | 200 | 1000 | 0.5 | 0.1 | 51 | +0.096 | 5.9 |
| BZX55C75 | 70 | 80 | 2.5 | 250 | 1500 | 0.5 | 0.1 | 56 | +0.096 | 5.3 |
| BZX55C82 | 77 | 87 | 2.5 | 300 | 2000 | 0.5 | 0.1 | 62 | +0.096 | 4.8 |
| BZX55C91 | 85 | 96 | 1.0 | 450 | 5000 | 0.1 | 0.1 | 68 | +0.096 | 4.4 |
| BZX55C100 | 94 | 106 | 1.0 | 450 | 5000 | 0.1 | 0.1 | 75 | +0.096 | 4.0 |
| BZX55C110 | 104 | 116 | 1.0 | 600 | 5000 | 0.1 | 0.1 | 82 | +0.096 | 3.6 |
| BZX55C120 | 114 | 127 | 1.0 | 800 | 5000 | 0.1 | 0.1 | 91 | +0.096 | 3.3 |
| BZX55C130 | 124 | 141 | 1.0 | 1000 | 5000 | 0.1 | 0.1 | 100 | +0.096 | 3.0 |
| BZX55C150 | 138 | 156 | 1.0 | 1200 | 5000 | 0.1 | 0.1 | 110 | +0.096 | 2.6 |
| BZX55C160 | 153 | 171 | 1.0 | 1500 | 5000 | 0.1 | 0.1 | 120 | +0.096 | 2.5 |
| BZX55C180 | 168 | 191 | 1.0 | 1800 | 5000 | 0.1 | 0.1 | 130 | +0.096 | 2.2 |
| BZX55C188 | 188 | 212 | 1.0 | 2000 | 5000 | 0.1 | 0.1 | 150 | +0.096 | 2.0 |

RATINGS AND CHARACTERISTIC CURVES BZX55-SERIES

Breakdown characteristics



Admissible power dissipation versus ambient temperature

Valid provided that leads are kept at ambient temperature at a distance of 10mm from case

