

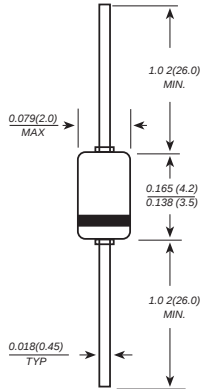


# BZX55C-SERIES

## ZENER DIODES

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

### DO-35(GLASS)



Dimensions in inches and (millimeters)

### 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

## MAXIMUM RATINGS AND ELECTRICAL CHARACTERISTICS

Ratings at 25°C ambient temperature unless otherwise specified.

| MDD Catalog Number                          | SYMBOLS          | VALUE        | UNITS |
|---------------------------------------------|------------------|--------------|-------|
| Zener Current see Table Characteristics     |                  |              |       |
| Power Dissipation at Tamb=25°C(Note 1)      | P <sub>tot</sub> | 500          | mW    |
| Junction Temperature                        | T <sub>j</sub>   | 200          | °C    |
| Storage Temperature Range                   | T <sub>STG</sub> | -65 to + 200 | °C    |
| Thermal resistance junction ambient(Note 1) | R <sub>θJA</sub> | 0.3          | K/mW  |
| Forward voltage at I <sub>F</sub> =100mA    | V <sub>F</sub>   | 1.0          | V     |

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



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

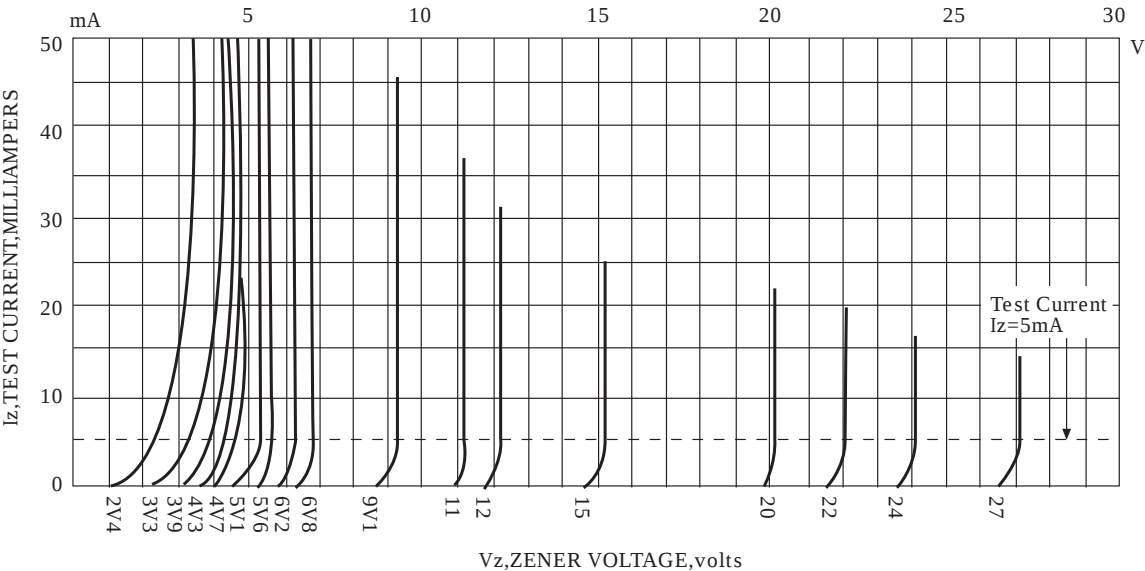
| Device Type | Nominal Zener Voltage Vz@Izr |      | Test Current Izr | Maximum Zener Impedance |         |     | Maximum Reverse Leakage Current |     | Typical Temperature Coefficient | Maximum Regulator Current IzM |
|-------------|------------------------------|------|------------------|-------------------------|---------|-----|---------------------------------|-----|---------------------------------|-------------------------------|
|             | Min                          | Max  |                  | Zzt@Izt                 | Zzk@Izk | Izk | IR                              | @VR |                                 |                               |
| 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                            |
| BZX55C4V3   | 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                           |



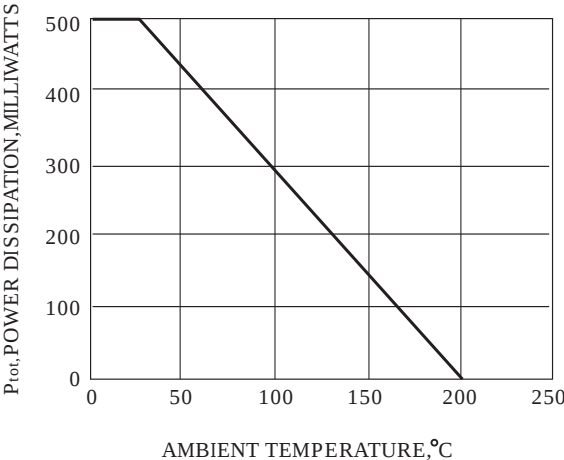
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# RATINGS AND CHARACTERISTIC CURVES BZX55-SERIES

Breakdown characteristics



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



The cruve graph is for reference only, can't be the basis for judgment(曲线图仅供参考)!

