



**DC COMPONENTS CO., LTD.**

RECTIFIER SPECIALISTS

**BZX55C2V4**

**THRU**

**BZX55C39**

**TECHNICAL SPECIFICATIONS OF GLASS SILICON ZENER DIODES**

**FEATURES**

- \* Voltage Range: 2.4V to 39V
- \* Double slug type construction

**MECHANICAL DATA**

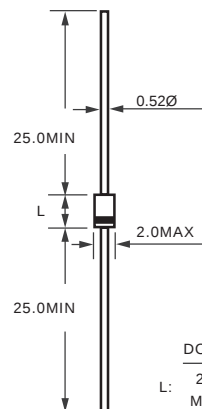
- \* Case: Glass sealed case
- \* Lead: MIL-STD-202E, Method 208 guaranteed
- \* Polarity: Color band denotes cathode end
- \* Mounting position: Any
- \* Weight: 0.13 gram

**MAXIMUM RATINGS AND ELECTRICAL CHARACTERISTICS**

Ratings at 25 °C ambient temperature unless otherwise specified.  
Single phase, half wave, 60 Hz, resistive or inductive load.  
For capacitive load, derate current by 20%.



**DO-34/DO-35**



Dimensions in millimeters

|                                               | SYMBOL           | VALUE                        | UNITS                         |
|-----------------------------------------------|------------------|------------------------------|-------------------------------|
| Zener Current see Table "Characteristics"     |                  |                              |                               |
| Power Dissipation at Tamb=25°C                | P <sub>tot</sub> | 500 <sup>(1)</sup>           | mW                            |
| Junction Temperature                          | T <sub>j</sub>   | 175                          | °C                            |
| Storage Temperature Range                     | T <sub>stg</sub> | -55 to + 175                 | °C                            |
| Thermal Resistance<br>Junction to Ambient Air | R <sub>thA</sub> | -<br>-<br>0.3 <sup>(1)</sup> | K/mW<br>Typ.<br>Min.<br>Max.  |
| Forward Voltage<br>at I <sub>F</sub> =100mA   | V <sub>F</sub>   | -<br>-<br>1                  | Volts<br>Typ.<br>Min.<br>Max. |

1)Valid Provided that leads are kept at ambient temperature at a distance of 8 mm from case.

NOTE: 1.Standard Zener Voltage Tolerance  $\pm 5\%$

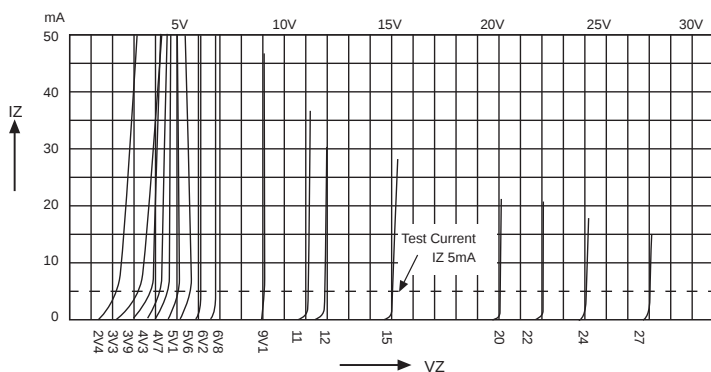
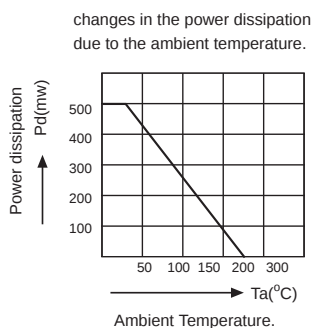
2.Suffix "M" stands for "DO-34" package.(e.g.:BZX55C2V4M, BZX55C39M)

## RATING AND CHARACTERISTIC CURVES (BZX55C SERIES)

| TYPE      | Nominal Zener Voltage<br>VZ@IZT |      | Zener Test Current<br>IZT<br>mA | Maximum Zener Impedance |         | IZK<br>mA | Maximum Reverse Leakage Current |       | Typical Temperature Coefficient<br>% / °C | Maximum Regulator Current<br>IZM<br>mA |
|-----------|---------------------------------|------|---------------------------------|-------------------------|---------|-----------|---------------------------------|-------|-------------------------------------------|----------------------------------------|
|           | Min                             | Max  |                                 | ZZT@IZT                 | ZZT@IZK |           | IR                              | @VR   |                                           |                                        |
|           |                                 |      |                                 | Ohms                    | Ohms    |           | uA                              | Volts |                                           |                                        |
| BZX55C2V4 | 2.28                            | 2.56 | 5                               | 85                      | 600     | 1         | 50                              | 1     | -0.085                                    | 155                                    |
| BZX55C2V7 | 2.5                             | 2.9  | 5                               | 85                      | 600     | 1         | 10                              | 1     | -0.080                                    | 135                                    |
| BZX55C3V0 | 2.8                             | 3.2  | 5                               | 85                      | 600     | 1         | 4                               | 1     | -0.075                                    | 125                                    |
| BZX55C3V3 | 3.1                             | 3.5  | 5                               | 85                      | 600     | 1         | 2                               | 1     | -0.070                                    | 115                                    |
| BZX55C3V6 | 3.4                             | 3.8  | 5                               | 85                      | 600     | 1         | 2                               | 1     | -0.065                                    | 105                                    |
| BZX55C3V9 | 3.7                             | 4.1  | 5                               | 85                      | 600     | 1         | 2                               | 1     | -0.060                                    | 95                                     |
| BZX55C4V3 | 4.0                             | 4.6  | 5                               | 75                      | 600     | 1         | 1                               | 1     | ±0.055                                    | 90                                     |
| BZX55C4V7 | 4.4                             | 5.0  | 5                               | 60                      | 600     | 1         | 0.5                             | 1     | ±0.030                                    | 85                                     |
| BZX55C5V1 | 4.8                             | 5.4  | 5                               | 35                      | 550     | 1         | 0.1                             | 1     | ±0.030                                    | 80                                     |
| BZX55C5V6 | 5.2                             | 6.0  | 5                               | 25                      | 450     | 1         | 0.1                             | 1     | +0.038                                    | 70                                     |
| BZX55C6V2 | 5.8                             | 6.6  | 5                               | 10                      | 200     | 1         | 0.1                             | 2     | +0.045                                    | 64                                     |
| BZX55C6V8 | 6.4                             | 7.2  | 5                               | 8                       | 150     | 1         | 0.1                             | 3     | +0.050                                    | 58                                     |
| BZX55C7V5 | 7.0                             | 7.9  | 5                               | 7                       | 50      | 1         | 0.1                             | 5     | +0.058                                    | 53                                     |
| BZX55C8V2 | 7.7                             | 8.7  | 5                               | 7                       | 50      | 1         | 0.1                             | 6.2   | +0.062                                    | 74                                     |
| BZX55C9V1 | 8.5                             | 9.6  | 5                               | 10                      | 50      | 1         | 0.1                             | 6.8   | +0.068                                    | 43                                     |
| BZX55C10  | 9.4                             | 10.6 | 5                               | 15                      | 70      | 1         | 0.1                             | 7.5   | +0.075                                    | 40                                     |
| BZX55C11  | 10.4                            | 11.6 | 5                               | 20                      | 70      | 1         | 0.1                             | 8.2   | +0.076                                    | 36                                     |
| BZX55C12  | 11.4                            | 12.7 | 5                               | 20                      | 90      | 1         | 0.1                             | 9.1   | +0.077                                    | 32                                     |
| BZX55C13  | 12.4                            | 14.1 | 5                               | 26                      | 110     | 1         | 0.1                             | 10    | +0.079                                    | 29                                     |
| BZX55C15  | 13.8                            | 15.6 | 5                               | 30                      | 110     | 1         | 0.1                             | 11    | +0.082                                    | 27                                     |
| BZX55C16  | 15.3                            | 17.1 | 5                               | 40                      | 170     | 1         | 0.1                             | 12    | +0.083                                    | 24                                     |
| BZX55C18  | 16.8                            | 19.1 | 5                               | 50                      | 170     | 1         | 0.1                             | 12    | +0.085                                    | 21                                     |
| BZX55C20  | 18.8                            | 21.2 | 5                               | 55                      | 220     | 1         | 0.1                             | 15    | +0.086                                    | 20                                     |
| BZX55C22  | 20.8                            | 23.3 | 5                               | 55                      | 220     | 1         | 0.1                             | 16    | +0.087                                    | 18                                     |
| BZX55C24  | 22.8                            | 25.6 | 5                               | 80                      | 220     | 1         | 0.1                             | 18    | +0.088                                    | 16                                     |
| BZX55C27  | 25.1                            | 28.9 | 5                               | 80                      | 220     | 1         | 0.1                             | 20    | +0.090                                    | 14                                     |
| BZX55C30  | 28                              | 32   | 5                               | 80                      | 220     | 1         | 0.1                             | 22    | +0.091                                    | 13                                     |
| BZX55C33  | 31                              | 35   | 5                               | 80                      | 220     | 1         | 0.1                             | 24    | +0.092                                    | 12                                     |
| BZX55C36  | 34                              | 38   | 5                               | 80                      | 220     | 1         | 0.1                             | 27    | +0.093                                    | 11                                     |
| BZX55C39  | 37                              | 41   | 2.5                             | 90                      | 500     | 0.5       | 0.1                             | 30    | +0.094                                    | 10                                     |

### Breakdown characteristic

BZX55-SERIES



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