

# BZX55C2V4 - BZX55C56

## Zener Diodes

Tolerance = 5%



**DO-35 Glass case**  
COLOR BAND DENOTES CATHODE

### Absolute Maximum Ratings \* T<sub>a</sub> = 25°C unless otherwise noted

| Symbol                            | Parameter                                            | Value       | Units |
|-----------------------------------|------------------------------------------------------|-------------|-------|
| P <sub>D</sub>                    | Power Dissipation<br>@ TL ≤ 75°C, Lead Length = 3/8" | 500         | mW    |
|                                   | Derate above 75°C                                    | 4.0         | mW/°C |
| T <sub>J</sub> , T <sub>STG</sub> | Operating and Storage Temperature Range              | -65 to +200 | °C    |

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

### Electrical Characteristics T<sub>a</sub> = 25°C unless otherwise noted

| Device    | V <sub>Z</sub> (V) @ I <sub>Z</sub> (Note 1) |      | Z <sub>Z</sub> @ I <sub>Z</sub><br>(Ω) | Test Current<br>I <sub>Z</sub> (mA) | I <sub>R</sub> (μA) @ V <sub>R</sub> |                        |                    | I <sub>ZM</sub> (mA)<br>(Note 2) |
|-----------|----------------------------------------------|------|----------------------------------------|-------------------------------------|--------------------------------------|------------------------|--------------------|----------------------------------|
|           | Min.                                         | Max. |                                        |                                     | T <sub>a</sub> = 25°C                | T <sub>a</sub> = 125°C | V <sub>R</sub> (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                               |
| BZX55C6V2 | 5.8                                          | 6.6  | 10                                     | 5                                   | 0.1                                  | 2                      | 2                  | 64                               |
| BZX55C6V8 | 6.4                                          | 7.2  | 8                                      | 5                                   | 0.1                                  | 2                      | 3                  | 58                               |
| BZX55C7V5 | 7.0                                          | 7.9  | 7                                      | 5                                   | 0.1                                  | 2                      | 5                  | 53                               |
| BZX55C8V2 | 7.7                                          | 8.7  | 7                                      | 5                                   | 0.1                                  | 2                      | 6                  | 47                               |
| BZX55C9V1 | 8.5                                          | 9.6  | 10                                     | 5                                   | 0.1                                  | 2                      | 7                  | 43                               |
| BZX55C10  | 9.5                                          | 10.6 | 15                                     | 5                                   | 0.1                                  | 2                      | 7.5                | 40                               |
| BZX55C11  | 10.4                                         | 11.6 | 20                                     | 5                                   | 0.1                                  | 2                      | 8.5                | 36                               |
| BZX55C12  | 11.4                                         | 12.7 | 20                                     | 5                                   | 0.1                                  | 2                      | 9                  | 32                               |
| BZX55C13  | 12.4                                         | 14.1 | 26                                     | 5                                   | 0.1                                  | 2                      | 10                 | 29                               |
| BZX55C15  | 13.8                                         | 15.6 | 30                                     | 5                                   | 0.1                                  | 2                      | 11                 | 27                               |

|          |      |      |     |     |     |    |    |     |
|----------|------|------|-----|-----|-----|----|----|-----|
| BZX55C16 | 15.3 | 17.1 | 40  | 5   | 0.1 | 2  | 12 | 24  |
| BZX55C18 | 16.8 | 19.1 | 50  | 5   | 0.1 | 2  | 14 | 21  |
| BZX55C20 | 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  |
| BZX55C43 | 40   | 46   | 90  | 2.5 | 0.1 | 5  | 32 | 9.2 |
| BZX55C47 | 44   | 50   | 110 | 2.5 | 0.1 | 5  | 35 | 8.5 |
| BZX55C51 | 48   | 54   | 125 | 2.5 | 0.1 | 10 | 38 | 7.8 |
| BZX55C56 | 52   | 60   | 135 | 2.5 | 0.1 | 10 | 42 | 7.0 |

**V<sub>F</sub> Forward Voltage = 1.3V Max. @ I<sub>F</sub> = 100mA**

**Notes:**

1. Zener Voltage (V<sub>Z</sub>)

The zener voltage is measured with the device junction in the thermal equilibrium at the lead temperature (T<sub>L</sub>) at 30°C ± 1°C and 3/8" lead length.

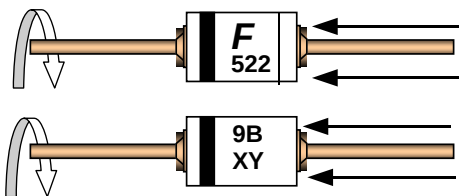
2. Maximum Zener Current Ratings (I<sub>ZM</sub>)

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.

## Top Mark Information

| Device    | Line 1 | Line 2 | Line 3 |
|-----------|--------|--------|--------|
| BZX55C2V4 | LOGO   | 5C     | 2V4    |
| BZX55C2V7 | LOGO   | 5C     | 2V7    |
| BZX55C3V0 | LOGO   | 5C     | 3V0    |
| BZX55C3V3 | LOGO   | 5C     | 3V3    |
| BZX55C3V6 | LOGO   | 5C     | 3V6    |
| BZX55C3V9 | LOGO   | 5C     | 3V9    |
| BZX55C4V3 | LOGO   | 5C     | 4V3    |
| BZX55C4V7 | LOGO   | 5C     | 4V7    |
| BZX55C5V1 | LOGO   | 5C     | 5V1    |
| BZX55C5V6 | LOGO   | 5C     | 5V6    |
| BZX55C6V2 | LOGO   | 5C     | 6V2    |
| BZX55C6V8 | LOGO   | 5C     | 6V8    |
| BZX55C7V5 | LOGO   | 5C     | 7V5    |
| BZX55C8V2 | LOGO   | 5C     | 8V2    |
| BZX55C9V1 | LOGO   | 5C     | 9V1    |
| BZX55C10  | LOGO   | 5C     | 10     |
| BZX55C11  | LOGO   | 5C     | 11     |
| BZX55C12  | LOGO   | 5C     | 12     |
| BZX55C13  | LOGO   | 5C     | 13     |
| BZX55C15  | LOGO   | 5C     | 15     |
| BZX55C16  | LOGO   | 5C     | 16     |
| BZX55C18  | LOGO   | 5C     | 18     |
| BZX55C20  | LOGO   | 5C     | 20     |
| BZX55C22  | LOGO   | 5C     | 22     |
| BZX55C24  | LOGO   | 5C     | 24     |
| BZX55C27  | LOGO   | 5C     | 27     |
| BZX55C30  | LOGO   | 5C     | 30     |
| BZX55C33  | LOGO   | 5C     | 33     |
| BZX55C36  | LOGO   | 5C     | 36     |
| BZX55C39  | LOGO   | 5C     | 39     |
| BZX55C43  | LOGO   | 5C     | 43     |
| BZX55C47  | LOGO   | 5C     | 47     |
| BZX55C51  | LOGO   | 5C     | 51     |
| BZX55C56  | LOGO   | 5C     | 56     |

## Top Mark Information (Continued)



1<sup>st</sup> line: F - Fairchild Logo

2<sup>nd</sup> line: Device Name - 4<sup>th</sup> to 5<sup>th</sup> characters of the device name.  
or 5<sup>th</sup> to 6<sup>th</sup> characters for BZXyy series

3<sup>rd</sup> line: Device Name - 6<sup>th</sup> to 7<sup>th</sup> characters of the device name.  
or Voltage rating for BZXyy series

### General Requirements:

1.0 Cathode Band

2.0 First Line: F - Fairchild Logo

3.0 Second Line: Device name - For 1Nxx series: 4<sup>th</sup> to 5<sup>th</sup> characters of the device name.

For BZxx series: 5<sup>th</sup> to 6<sup>th</sup> characters of the device name.

4.0 Third Line: Device name - For 1Nxx series: 6<sup>th</sup> to 7<sup>th</sup> characters of the device name.

For BZXyy series: Voltage rating

5.0 Devices shall be marked as required in the device specification (PID or FSC Test Spec).

6.0 Maximum no. of marking lines: 3

7.0 Maximum no. of digits per line: 2

8.0 FSC logo must be 20 % taller than the alphanumeric marking and should occupy the 2 characters of the specified line.

9.0 Marking Font: Arial (Except FSC Logo)

10.0 First character of each marking line must be aligned vertically.

11.0 All device markings must be based on Fairchild device specification.



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