

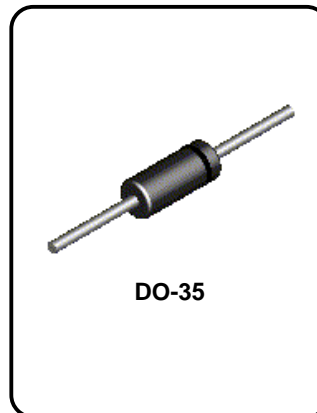
## BZX55C 3V3 - 33 Series Half Watt Zeners

### Absolute Maximum Ratings\*

TA = 25°C unless otherwise noted

Tolerance: C = 5%

| Parameter   | Value       | Units |
|---|-------------|-------|
| Storage Temperature Range                         | -65 to +200 | °C    |
| Maximum Junction Operating Temperature            | + 200       | °C    |
| Lead Temperature (1/16" from case for 10 seconds) | + 230       | °C    |
| Total Device Dissipation                          | 500         | mW    |
| Derate above 25°C                                 | 4.0         | mW/°C |
| Surge Power**                                     | 30          | W     |



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

\*\*Non-recurrent square wave PW= 8.3 ms, TA= 50 degrees C.

#### NOTES:

1) These ratings are based on a maximum junction temperature of 200 degrees C.

2) These are steady state limits. The factory should be consulted on applications involving pulsed or low duty cycle operations.

### Electrical Characteristics

TA = 25°C unless otherwise noted

| Device     | V <sub>Z</sub><br>(V) |      | Z <sub>Z</sub><br>(Ω) | I <sub>ZT</sub><br>(mA) | Z <sub>ZK</sub><br>(Ω) | I <sub>ZT</sub><br>(mA) | V <sub>R</sub><br>(V) | I <sub>R</sub><br>(μA) | I <sub>R</sub><br>(μA) | T <sub>C</sub><br>(%/°C) | I <sub>ZM</sub><br>(mA) |
|------------|-----------------------|------|-----------------------|-------------------------|------------------------|-------------------------|-----------------------|------------------------|------------------------|--------------------------|-------------------------|
|            | MIN                   | MAX  |                       |                         |                        |                         |                       |                        |                        |                          |                         |
| BZX55C 3V3 | 3.1                   | 3.5  | 85                    | 5.0                     | 600                    | 1.0                     | 1.0                   | 2.0                    | 40                     | - 0.060                  | 115                     |
| BZX55C 3V6 | 3.4                   | 3.8  | 85                    | 5.0                     | 600                    | 1.0                     | 1.0                   | 2.0                    | 40                     | - 0.055                  | 105                     |
| BZX55C 3V9 | 3.7                   | 4.1  | 85                    | 5.0                     | 600                    | 1.0                     | 1.0                   | 2.0                    | 40                     | - 0.050                  | 95                      |
| BZX55C 4V3 | 4.0                   | 4.6  | 75                    | 5.0                     | 600                    | 1.0                     | 1.0                   | 1.0                    | 20                     | - 0.040                  | 90                      |
| BZX55C 4V7 | 4.4                   | 5.0  | 60                    | 5.0                     | 600                    | 1.0                     | 1.0                   | 0.5                    | 10                     | - 0.020                  | 85                      |
| BZX55C 5V1 | 4.8                   | 5.4  | 35                    | 5.0                     | 550                    | 1.0                     | 1.0                   | 0.1                    | 2.0                    | +0.010                   | 80                      |
| BZX55C 5V6 | 5.2                   | 6.0  | 25                    | 5.0                     | 450                    | 1.0                     | 1.0                   | 0.1                    | 2.0                    | +0.025                   | 70                      |
| BZX55C 6V2 | 5.8                   | 6.6  | 10                    | 5.0                     | 200                    | 1.0                     | 2.0                   | 0.1                    | 2.0                    | +0.032                   | 64                      |
| BZX55C 6V8 | 6.4                   | 7.2  | 8.0                   | 5.0                     | 150                    | 1.0                     | 3.0                   | 0.1                    | 2.0                    | +0.040                   | 58                      |
| BZX55C 7V5 | 7.0                   | 7.9  | 7.0                   | 5.0                     | 50                     | 1.0                     | 5.0                   | 0.1                    | 2.0                    | +0.045                   | 53                      |
| BZX55C 8V2 | 7.7                   | 8.7  | 7.0                   | 5.0                     | 50                     | 1.0                     | 6.2                   | 0.1                    | 2.0                    | +0.048                   | 47                      |
| BZX55C 9V1 | 8.5                   | 9.6  | 10                    | 5.0                     | 50                     | 1.0                     | 6.8                   | 0.1                    | 2.0                    | +0.050                   | 43                      |
| BZX55C 10  | 9.4                   | 10.6 | 15                    | 5.0                     | 70                     | 1.0                     | 7.5                   | 0.1                    | 2.0                    | +0.055                   | 40                      |
| BZX55C 11  | 10.4                  | 11.6 | 20                    | 5.0                     | 70                     | 1.0                     | 8.2                   | 0.1                    | 2.0                    | +0.060                   | 36                      |
| BZX55C 12  | 11.4                  | 12.7 | 20                    | 5.0                     | 90                     | 1.0                     | 9.1                   | 0.1                    | 2.0                    | +0.065                   | 32                      |
| BZX55C 13  | 12.4                  | 14.1 | 26                    | 5.0                     | 110                    | 1.0                     | 10                    | 0.1                    | 2.0                    | 0.070                    | 29                      |
| BZX55C 15  | 13.8                  | 15.6 | 30                    | 5.0                     | 110                    | 1.0                     | 11                    | 0.1                    | 2.0                    | 0.070                    | 27                      |
| BZX55C 16  | 15.3                  | 17.1 | 40                    | 5.0                     | 170                    | 1.0                     | 12                    | 0.1                    | 2.0                    | 0.075                    | 24                      |
| BZX55C 18  | 16.8                  | 19.1 | 50                    | 5.0                     | 170                    | 1.0                     | 13                    | 0.1                    | 2.0                    | 0.075                    | 21                      |
| BZX55C 20  | 18.8                  | 21.1 | 55                    | 5.0                     | 220                    | 1.0                     | 15                    | 0.1                    | 2.0                    | 0.080                    | 20                      |
| BZX55C 22  | 20.8                  | 23.3 | 55                    | 5.0                     | 220                    | 1.0                     | 16                    | 0.1                    | 2.0                    | 0.080                    | 18                      |
| BZX55C 24  | 22.8                  | 25.6 | 80                    | 5.0                     | 220                    | 1.0                     | 18                    | 0.1                    | 2.0                    | 0.080                    | 16                      |
| BZX55C 27  | 25.1                  | 28.9 | 80                    | 5.0                     | 220                    | 1.0                     | 20                    | 0.1                    | 2.0                    | 0.085                    | 14                      |
| BZX55C 30  | 28.0                  | 32.0 | 80                    | 5.0                     | 220                    | 1.0                     | 22                    | 0.1                    | 2.0                    | 0.085                    | 13                      |
| BZX55C 33  | 31.0                  | 35.0 | 80                    | 5.0                     | 220                    | 1.0                     | 24                    | 0.1                    | 2.0                    | 0.085                    | 12                      |

V<sub>F</sub> Forward Voltage = 1.0 V Maximum @ I<sub>F</sub> = 100 mA for all BZX 55 series

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