

## Zeners BZX79C2V4 - BZX79C200

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

| Symbol                            | Parameter                                                        | Value       | Units |
|-----------------------------------|------------------------------------------------------------------|-------------|-------|
| P <sub>D</sub>                    | Power Dissipation<br>@ T <sub>L</sub> ≤ 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.

Tolerance = 5%



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

| Device     | Zener Voltage (Note 1) |      |                     | Z <sub>Z</sub> @ I <sub>Z</sub> (Ω) | Leakage Current     |                    | T <sub>C</sub> (mV / °C) |      | C (pF)                       |
|------------|------------------------|------|---------------------|-------------------------------------|---------------------|--------------------|--------------------------|------|------------------------------|
|            | Min.                   | Max. | I <sub>Z</sub> (mA) | Max.                                | I <sub>R</sub> (μA) | V <sub>R</sub> (V) | Min.                     | Max. | V <sub>Z</sub> = 0, f = 1MHz |
| BZX79C2V4  | 2.2                    | 2.6  | 5                   | 100                                 | 100                 | 1                  | -3.5                     | 0    | 255                          |
| BZX79C2V7  | 2.5                    | 2.9  | 5                   | 100                                 | 75                  | 1                  | -3.5                     | 0    | 230                          |
| BZX79C3V0  | 2.8                    | 3.2  | 5                   | 95                                  | 50                  | 1                  | -3.5                     | 0    | 215                          |
| BZX79C3V3  | 3.1                    | 3.5  | 5                   | 95                                  | 25                  | 1                  | -3.5                     | 0    | 200                          |
| BZX79C3V6  | 3.4                    | 3.8  | 5                   | 90                                  | 15                  | 1                  | -3.5                     | 0    | 185                          |
| BZX79C3V9  | 3.7                    | 4.1  | 5                   | 90                                  | 10                  | 1                  | -3.5                     | +0.3 | 175                          |
| BZX79C4V3  | 4                      | 4.6  | 5                   | 90                                  | 5                   | 1                  | -3.5                     | +1   | 160                          |
| BZX79C4V7  | 4.4                    | 5    | 5                   | 80                                  | 3                   | 2                  | -3.5                     | +0.2 | 130                          |
| BZX79C5V1  | 4.8                    | 5.4  | 5                   | 60                                  | 2                   | 2                  | -2.7                     | +1.2 | 110                          |
| BZX79C5V6  | 5.2                    | 6    | 5                   | 40                                  | 1                   | 2                  | -2                       | +2.5 | 95                           |
| BZX79C6V2  | 5.8                    | 6.6  | 5                   | 10                                  | 3                   | 4                  | 0.4                      | 3.7  | 90                           |
| BZX79C6V8  | 6.4                    | 7.2  | 5                   | 15                                  | 2                   | 4                  | 1.2                      | 4.5  | 85                           |
| BZX79C7V5  | 7                      | 7.9  | 5                   | 15                                  | 1                   | 5                  | 2.5                      | 5.3  | 80                           |
| BZX79C8V2  | 7.7                    | 8.7  | 5                   | 15                                  | 0.7                 | 5                  | 3.2                      | 6.2  | 75                           |
| BZX79CT9V1 | 8.5                    | 9.6  | 5                   | 15                                  | 0.5                 | 6                  | 3.8                      | 7    | 70                           |
| BZX79CT10  | 9.4                    | 10.6 | 5                   | 20                                  | 0.2                 | 7                  | 4.5                      | 8    | 70                           |
| BZX79CT11  | 10.4                   | 11.6 | 5                   | 20                                  | 0.1                 | 8                  | 5.4                      | 9    | 65                           |
| BZX79CT12  | 11.4                   | 12.7 | 5                   | 25                                  | 0.1                 | 8                  | 6                        | 10   | 65                           |
| BZX79CT13  | 12.4                   | 14.1 | 5                   | 30                                  | 0.1                 | 8                  | 7                        | 11   | 60                           |
| BZX79CT14  | 13.8                   | 15.6 | 5                   | 30                                  | 0.05                | 10.5               | 9.2                      | 13   | 55                           |
| BZX79CT16  | 15.3                   | 17.1 | 5                   | 40                                  | 0.05                | 11.2               | 10.4                     | 14   | 52                           |
| BZX79CT18  | 16.8                   | 19.1 | 5                   | 45                                  | 0.05                | 12.6               | 12.9                     | 16   | 47                           |
| BZX79CT20  | 18.8                   | 21.2 | 5                   | 55                                  | 0.05                | 14                 | 14.4                     | 18   | 36                           |
| BZX79C22   | 20.8                   | 23.3 | 5                   | 55                                  | 0.05                | 15.4               | 16.4                     | 20   | 34                           |
| BZX79C24   | 22.8                   | 25.6 | 5                   | 70                                  | 0.05                | 16.8               | 18.4                     | 22   | 33                           |
| BZX79C27   | 25.1                   | 28.9 | 2                   | 80                                  | 0.05                | 18.9               | -                        | 23.5 | 30                           |
| BZX79C30   | 28                     | 32   | 2                   | 80                                  | 0.05                | 21                 | -                        | 26   | 27                           |
| BZX79C33   | 31                     | 35   | 2                   | 80                                  | 0.05                | 23.1               | -                        | 29   | 25                           |
| BZX79C36   | 34                     | 38   | 2                   | 90                                  | 0.05                | 25.2               | -                        | 31   | 23                           |
| BZX79C39   | 37                     | 41   | 2                   | 130                                 | 0.05                | 27.3               | -                        | 34   | 21                           |

# **Electrical Characteristics** (Continued) $T_A=25^{\circ}\text{C}$ unless otherwise noted

| Device                                                                        | Zener Voltage (Note 1) |      |            | $Z_Z @ I_Z (\Omega)$ | Leakage Current |           | $T_C (mV / ^{\circ}\text{C})$ |      | C (pF)              |
|-------------------------------------------------------------------------------|------------------------|------|------------|----------------------|-----------------|-----------|-------------------------------|------|---------------------|
|                                                                               | Min.                   | Max. | $I_Z (mA)$ | Max.                 | $I_R (\mu A)$   | $V_R (V)$ | Min.                          | Max. | $V_Z = 0, f = 1MHz$ |
| BZX79C43                                                                      | 40                     | 46   | 2          | 150                  | 0.05            | 30.1      | -                             | 37   | 21                  |
| BZX79C47                                                                      | 44                     | 50   | 2          | 170                  | 0.05            | 32.9      | -                             | 40   | 19                  |
| BZX79C51                                                                      | 48                     | 54   | 2          | 180                  | 0.5             | 35.7      | -                             | 44   | 19                  |
| BZX79C56                                                                      | 52                     | 60   | 2          | 200                  | 0.05            | 39.2      | -                             | 47   | 18                  |
| BZX79C62                                                                      | 58                     | 66   | 2          | 215                  | 0.05            | 43.4      | -                             | 51   | 17                  |
| BZX79C68                                                                      | 64                     | 72   | 2          | 240                  | 0.05            | 47.6      | -                             | 56   | 17                  |
| BZX79C75                                                                      | 70                     | 79   | 2          | 255                  | 0.05            | 52.5      | -                             | 60   | 16.5                |
| BZX79C82                                                                      | 77                     | 87   | 2          | 280                  | 0.1             | 62        | 46                            | 95   | 29                  |
| BZX79C91                                                                      | 85                     | 96   | 2          | 300                  | 0.1             | 69        | 51                            | 107  | 28                  |
| BZX79C100                                                                     | 94                     | 106  | 1          | 500                  | 0.1             | 76        | 57                            | 119  | 27                  |
| BZX79C110                                                                     | 104                    | 116  | 1          | 650                  | 0.1             | 84        | 63                            | 131  | 26                  |
| BZX79C120                                                                     | 114                    | 127  | 1          | 800                  | 0.1             | 91        | 69                            | 144  | 24                  |
| BZX79C130                                                                     | 124                    | 141  | 1          | 950                  | 0.1             | 99        | 75                            | 158  | 23                  |
| BZX79C150                                                                     | 138                    | 156  | 1          | 1250                 | 0.1             | 115       | 87                            | 185  | 21                  |
| BZX79C160                                                                     | 153                    | 171  | 1          | 1400                 | 0.1             | 122       | 93                            | 200  | 20                  |
| BZX79C180                                                                     | 168                    | 191  | 1          | 1700                 | 0.1             | 137       | 105                           | 228  | 18                  |
| <b><math>V_F</math> Forward Voltage = 1.5V Max @ <math>I_F = 100mA</math></b> |                        |      |            |                      |                 |           |                               |      |                     |

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