

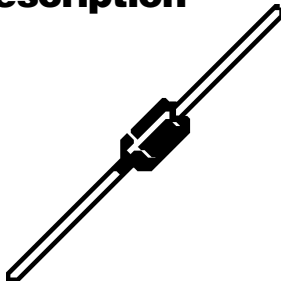


Data Sheet

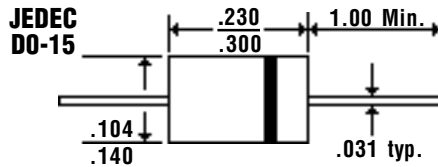
## 2 Watt ZENER DIODES (3.3V to 200V)

**BZY47C3V3...C200**

### Description



### Mechanical Dimensions

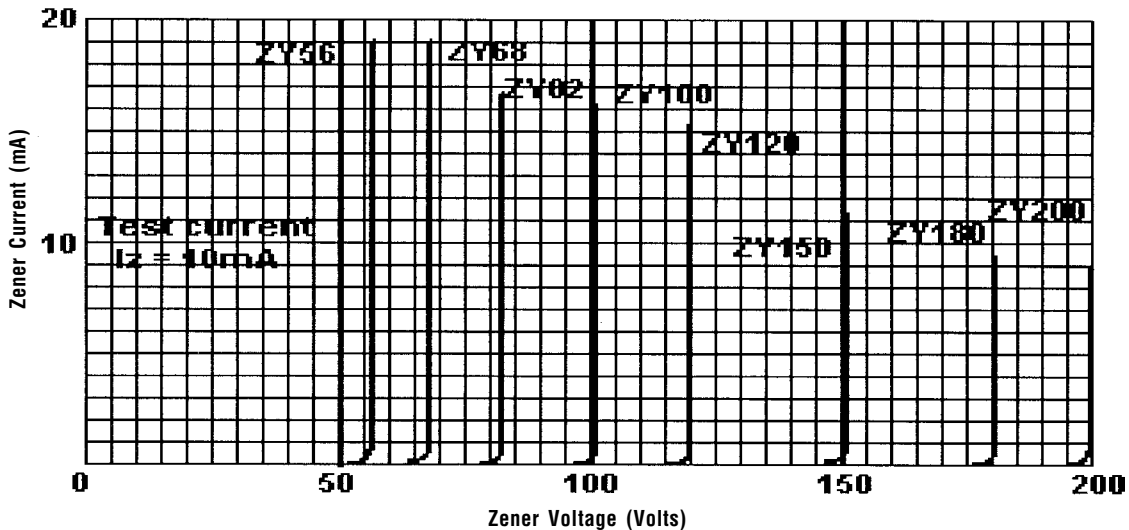


### Features

- PRO ELECTRON REGISTRATION
- WIDE VOLTAGE RANGE...3.3 to 200V
- HIGH SURGE CAPABILITY...50 W @ 10mA
- MEETS UL SPECIFICATION 94V-0

| Maximum Ratings  | BZY47C3V3...C200 | Units                       |
|--|------------------|-----------------------------|
| DC Power Dissipation with $T_A = > = 70^\circ\text{C}$ ... $P_D$ | 2.0              | W                           |
| Junction to Ambient Thermal Resistance... $R_{\theta JA}$        | 52.5             | $^\circ\text{C} / \text{W}$ |
| Lead Temperature... $T_L$  | 300              | $^\circ\text{C}$            |
| Operating & Storage Temperature Range... $T_J, T_{STRG}$         | -65 to 175       | $^\circ\text{C}$            |

### Breakdown Characteristics





Electrical Characteristics @ 25°C.

| Part#      | Zener Voltage Range | Test Current I <sub>zT</sub> | MAX. ZENER IMPEDANCE Z <sub>zt</sub> @ I <sub>zt</sub> Ohms | Typical Temp. Coeff. %/°C | MIN. REVERSE VOLTAGE I <sub>r</sub> = 1µA | MAX. REGULATOR CURRENT @ 45°C I <sub>ZR</sub> |
|------------|---------------------|------------------------------|---|---------------------------|---|---|
| BZY47-C3V3 | 3.1 - 3.5           | 100                          | 3.8   | - 0.06                    | 0.5                                       | 435   |
| BZY47-C3V6 | 3.4 - 3.8           | 100                          | 3.8   | - 0.06                    | 0.5                                       | 385   |
| BZY47-C3V9 | 3.7 - 4.1           | 100                          | 3.8   | - 0.06                    | 0.5                                       | 345   |
| BZY47-C4V3 | 4.0 - 4.6           | 100                          | 3.8   | +/- 0.03                  | 1.0                                       | 320   |
| BZY47-C4V7 | 4.4 - 5.0           | 100                          | 3.8   | +/- 0.03                  | 1.0                                       | 310   |
| BZY47-C5V1 | 4.8 - 5.4           | 100                          | 2   | +/- 0.035                 | 1.0                                       | 280   |
| BZY47-C5V6 | 5.2 - 6.0           | 100                          | 1   | +/- 0.035                 | 2.0                                       | 255   |
| BZY47-C6V2 | 5.8 - 6.6           | 100                          | 1   | +/- 0.035                 | 2.0                                       | 235   |
| BZY47-C6V8 | 6.4 - 7.2           | 100                          | 1   | +/- 0.035                 | 2.0                                       | 220   |
| BZY47-C7V5 | 7.0 - 7.9           | 100                          | 2   | +/- 0.035                 | 2.0                                       | 200   |
| BZY47-C8V2 | 7.7 - 8.7           | 50                           | 2   | +/- 0.055                 | 3.5                                       | 180   |
| BZY47-C9V1 | 8.5 - 9.6           | 50                           | 4   | +/- 0.065                 | 3.5                                       | 165   |
| BZY47-C10  | 9.4 - 10.6          | 50                           | 4   | +/- 0.070                 | 5.0                                       | 145   |
| BZY47-C11  | 10.4 - 11.6         | 50                           | 7   | +/- 0.075                 | 5.0                                       | 135   |
| BZY47-C12  | 11.4 - 12.7         | 50                           | 7   | +/- 0.075                 | 7.0                                       | 120   |
| BZY47-C13  | 12.4 - 14.1         | 50                           | 10  | +/- 0.075                 | 7.0                                       | 110   |
| BZY47-C15  | 13.8 - 15.8         | 50                           | 10  | +/- 0.075                 | 10  | 98  |
| BZY47-C16  | 15.3 - 17.1         | 25                           | 15  | +/- 0.085                 | 10  | 90  |
| BZY47-C18  | 16.8 - 19.1         | 25                           | 15  | +/- 0.085                 | 10  | 80  |
| BZY47-C20  | 18.8 - 21.2         | 25                           | 15  | +/- 0.085                 | 10  | 72  |
| BZY47-C22  | 20.8 - 23.3         | 25                           | 15  | +/- 0.085                 | 12  | 66  |
| BZY47-C24  | 22.8 - 25.6         | 25                           | 15  | +/- 0.085                 | 12  | 50  |
| BZY47-C27  | 25.1 - 28.9         | 25                           | 15  | +/- 0.085                 | 14  | 53  |
| BZY47-C30  | 28 - 32             | 25                           | 15  | +/- 0.085                 | 14  | 48  |
| BZY47-C33  | 31 - 35             | 25                           | 15  | +/- 0.085                 | 17  | 44  |
| BZY47-C36  | 34 - 38             | 10                           | 40  | +/- 0.085                 | 17  | 40  |
| BZY47-C39  | 37 - 41             | 10                           | 40  | +/- 0.085                 | 20  | 37  |
| BZY47-C43  | 40 - 46             | 10                           | 45  | +/- 0.095                 | 20  | 33  |
| BZY47-C47  | 44 - 50             | 10                           | 45  | +/- 0.095                 | 24  | 30  |
| BZY47-C51  | 48 - 54             | 10                           | 60  | +/- 0.095                 | 24  | 27  |
| BZY47-C56  | 52 - 60             | 10                           | 60  | +/- 0.095                 | 28  | 25  |
| BZY47-C62  | 58 - 66             | 10                           | 80  | +/- 0.105                 | 28  | 21  |
| BZY47-C68  | 64 - 72             | 10                           | 80  | +/- 0.105                 | 34  | 20  |
| BZY47-C75  | 70 - 79             | 10                           | 100   | +/- 0.105                 | 34  | 18  |
| BZY47-C82  | 77 - 88             | 10                           | 100   | +/- 0.105                 | 41  | 16  |
| BZY47-C91  | 85 - 96             | 5                            | 200   | +/- 0.11                  | 41  | 15  |
| BZY47-C100 | 94 - 106            | 5                            | 200   | +/- 0.11                  | 50  | 13  |
| BZY47-C110 | 104 - 116           | 5                            | 250   | +/- 0.11                  | 50  | 12  |
| BZY47-C120 | 114 - 127           | 5                            | 250   | +/- 0.11                  | 60  | 11  |
| BZY47-C130 | 124 - 141           | 5                            | 300   | +/- 0.11                  | 60  | 10  |
| BZY47-C150 | 138 - 156           | 5                            | 300   | +/- 0.11                  | 75  | 9   |
| BZY47-C160 | 153 - 171           | 5                            | 350   | +/- 0.11                  | 75  | 8.5   |
| BZY47-C180 | 168 - 191           | 5                            | 350   | +/- 0.11                  | 90  | 8.0   |
| BZY47-C200 | 188 - 212           | 5                            | 350   | +/- 0.11                  | 90  | 7.5   |