



Micro Commercial Components  
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## 1EZ110D5 THRU 1EZ200D5

### Features

- Zener Voltage 100V to 200V
- Silicon Planar Power Zener Diodes
- Low profile package
- Glass passivated junction

## 1.0 W Silicon Zener Diodes 100 to 200 Volts

### Mechanical Data

- Case: Molded plastic, DO-41
- Polarity: Color band denotes cathode end
- Weight: 0.012 ounce, 0.3 gram

### Maximum Ratings

|                                                                                                                 | Symbol    | Value       | Units                       |
|-----------------------------------------------------------------------------------------------------------------|-----------|-------------|-----------------------------|
| Peak Pulse Power<br>Dissipation on $T_A=50^{\circ}\text{C}$ <sup>(1)</sup><br>Derate above $50^{\circ}\text{C}$ | $P_D$     | 1.0<br>6.67 | W<br>mW/ $^{\circ}\text{C}$ |
| Junction Temperature                                                                                            | $T_J$     | 150         | $^{\circ}\text{C}$          |
| Storage Temperature Range                                                                                       | $T_{STG}$ | -55 to 150  | $^{\circ}\text{C}$          |

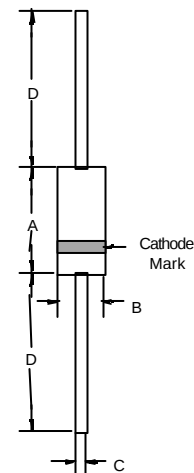
### Electrical Characteristics @ $25^{\circ}\text{C}$ Unless Otherwise Specified

|                                                 | Symbol | Value | Unit |
|-------------------------------------------------|--------|-------|------|
| Peak Forward Surge Current <sup>(2)</sup>       | IFSM   | 10    | A    |
| Maximum Forward Voltage<br>@ $I_F=200\text{mA}$ | $V_F$  | 1.2   | V    |

#### NOTE:

- (1) Mounted on 5.0mm<sup>2</sup> (.013mm thick) land areas.
- (2) Measured on 8.0ms, single half sine-wave or equivalent square wave, duty cycle=4 pulses per minute maximum.

### DO-41



| DIMENSIONS |        |       |       |       |          |
|------------|--------|-------|-------|-------|----------|
| DIM        | INCHES |       | MM    |       | NOTE     |
|            | MIN    | MAX   | MIN   | MAX   |          |
| A          | 0.160  | 0.205 | 4.10  | 5.20  |          |
| B          | 0.080  | 0.107 | 2.00  | 2.70  | Diameter |
| C          | 0.028  | 0.034 | 0.71  | 0.86  | Diameter |
| D          | 1.000  | ----- | 25.40 | ----- |          |

1EZ110D5 thru 1EZ200D5

| MCC PART<br>NUMBER | ZENER VOLTAGE<br>@TEST CURRENT <sup>(1,2)</sup> |          | MAXIMUM ZENER IMPEDANCE <sup>(3)</sup> |          |          | LEAKAGE CURRENT |       | TYPICAL<br>TEMP.<br>COEFFICIENT |
|--------------------|-------------------------------------------------|----------|----------------------------------------|----------|----------|-----------------|-------|---------------------------------|
|                    | $V_Z$                                           | $I_{ZT}$ | $Z_{ZT}$                               | $Z_{ZK}$ | $I_{ZK}$ | $I_R$           | $V_R$ |                                 |
|                    | V                                               | mA       | Ohms                                   | Ohms     | mA       | $\mu$ A         | V     |                                 |
| 1EZ110D5           | 110                                             | 2.3      | 450                                    | 4000     | 0.25     | 5.0             | 83.6  | +0.095                          |
| 1EZ120D5           | 120                                             | 2.0      | 550                                    | 4500     | 0.25     | 5.0             | 91.2  | +0.095                          |
| 1EZ130D5           | 130                                             | 1.9      | 700                                    | 5000     | 0.25     | 5.0             | 98.8  | +0.095                          |
| 1EZ140D5           | 140                                             | 1.8      | 900                                    | 5500     | 0.25     | 5.0             | 106.4 | +0.095                          |
| 1EZ150D5           | 150                                             | 1.7      | 1000                                   | 6000     | 0.25     | 5.0             | 114.0 | +0.095                          |
| 1EZ160D5           | 160                                             | 1.6      | 1100                                   | 6500     | 0.25     | 5.0             | 121.6 | +0.095                          |
| 1EZ170D5           | 170                                             | 1.5      | 1150                                   | 6800     | 0.25     | 5.0             | 129.2 | +0.095                          |
| 1EZ180D5           | 180                                             | 1.4      | 1200                                   | 7000     | 0.25     | 5.0             | 136.8 | +0.095                          |
| 1EZ190D5           | 190                                             | 1.3      | 1350                                   | 7500     | 0.25     | 5.0             | 144.4 | +0.095                          |
| 1EZ200D5           | 200                                             | 1.2      | 1500                                   | 8000     | 0.25     | 5.0             | 152.0 | +0.100                          |

Note:

- (1) Specials Available Include:
  - A: Nominal zener voltages between the voltages shown and tighter voltage Tolerances.
  - B: Matched sets.
- (2) Zener Voltage ( $V_Z$ ) Measurement. Guarantess the zener voltage when measured at 90 seconds while maintaining the lead temperature ( $T_L$ ) at  $30^\circ\text{C} + \text{or} - 1^\circ\text{C}$ , from the diode body.
- (3) Zener Impedance ( $Z_Z$ ) Derivation. The zener impedance is derived from the 60 cycle ac voltage, which results when an ac current having an rms value equal to 10% of the dc zener current ( $I_{ZT}$  or  $I_{ZK}$ ) is superimposed on  $I_{ZT}$  or  $I_{ZK}$ .

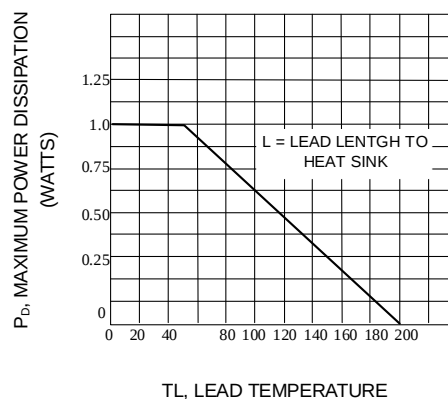


Fig. 1-POWER TEMPERATURE DERATING CURVE

1EZ110D5 thru 1EZ200D5

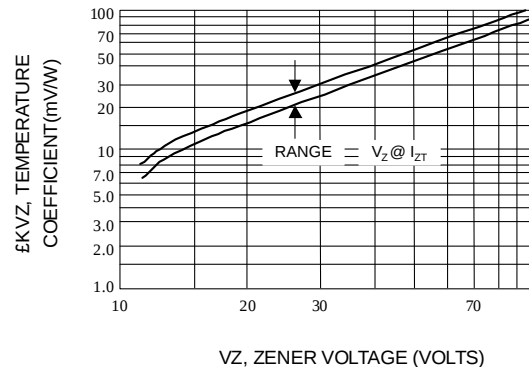


Fig. 2-TEMPERATURE COEFFICIENTS

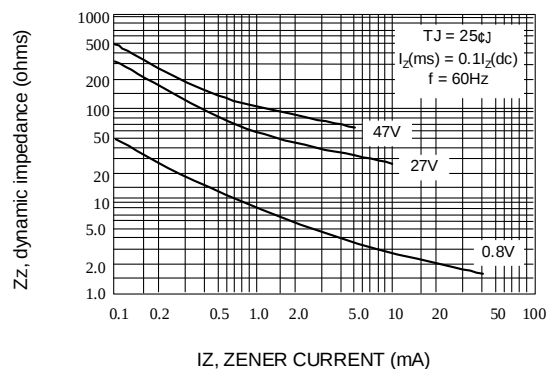


Fig. 3-EFFECT OF ZENER CURRENT ON ZENER IMPEDANCE