

DC COMPONENTS CO., LTD.

RECTIFIER SPECIALISTS

1EZ6.2 THRU 1EZ300

TECHNICAL SPECIFICATIONS OF GLASS PASSIVATED JUNCTION ZENER DIODES

VOLTAGE RANGE - 6.2 to 300 Volts

POWER - 1.0 Watt

FEATURES

- * Voltage Range: 6.2V to 300V
- * Low leakage
- * Low inductance
- * High peak reverse power disspation
- * Glass passivated junction
- * Build-in strain relief

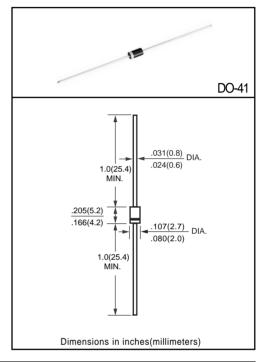
MECHANICAL DATA

- * Case: Molded plastic
- * Epoxy: UL 94V-0 rate flame retardant
- * Lead: MIL-STD-202E, Method 208 guaranteed
- * Polarity: Color band denotes cathode end
- * Mounting position: Any
- * Weight: 0.33 gram

MAXIMUM RATINGS AND ELECTRICAL CHARACTERISTICS

Ratings at 25 $^{\circ}\text{C}$ ambient temperature unless otherwise specified. Single phase, half wave, 60 Hz, resistive or inductive load.

For capacitive load, derate current by 20%.



| | SYMBOL | VALUE | UNITS |
|---|--------|-------------|-------|
| Maximum Power Dissipation @TL=50°C (Note 1) | Ptot | 1.0 | W |
| Peak pulse current with a 10/1000μs waveform | VF | 1.2 | Volts |
| Maximum Thermal Resistance Junction to Ambient Air (Note 2) | RθJA | 170 | °C/W |
| Junction Temperature Range | TJ | -55 to +175 | °C |
| Storage Temperature Range | TSTG | -55 to +175 | ပ္ |

NOTES: 1. TL=Lead temperature at 3/8" (9.5mm) from body.

Fig. 1 - POWER TEMPERATURE DERATING CURVE

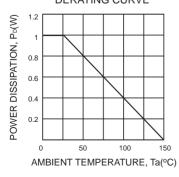


Fig. 2 - TYPICAL THERMAL RESISTANCE VERSUS LEAD LENGTH

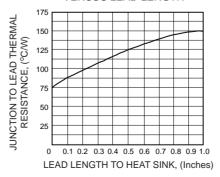
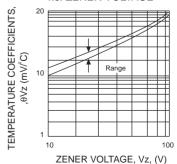


Fig. 3 - TEMPERATURE COEFFICIENTS v.s. ZENER VOLTAGE



ZENER VOLIAGE, VZ, (V)

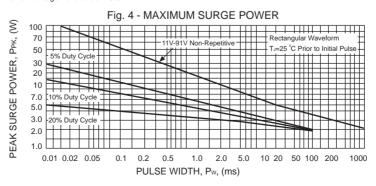
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^{2.} Valid provided that leads are kept at ambient temperature at a distance of 10 mm form case.

RATING AND CHARACTERISTIC CURVES (1EZ6.2 THRU 1EZ300)

| | Nominal Zener | Zener Test | Maximum Zener | | lzĸ | Maximum Reverse | | Maximum Regulator |
|------------------|------------------|---------------|----------------------------------|--------------|--------------|-----------------|--------------|----------------------|
| TYPE Voltag | | Current | Impedance | | 、 | Leakage Current | | Current |
| | Vz@lzT | IZT m ^ | Z _{ZT@} l _{ZT} | ZZK@IZK | m A | IR | @VR | IZM mA |
| 1EZ6.2 | 6.2 | mA 41.0 | Ohms 2.0 | Ohms 700 | mA 1.00 | uA 10.0 | Volts | 146.0 |
| 1EZ6.2 1EZ6.8 | 6.8 | 37.0 | 3.5 | 700 | 1.00 | 5.0 | 3.0 4.0 | 133.0 |
| 1EZ7.5 | 7.5 | 34.0 | 4.0 | 700 | 0.50 | 5.0 | 5.0 | 121.0 |
| 1EZ8.2 | 8.2 | 31.0 | 4.5 | 700 | 0.50 | 5.0 | 6.0 | 110.0 |
| 1EZ9.1 | 9.1 | 28.0 | 5.0 | 700 | 0.50 | 0.5 | 7.0 | 100.0 |
| 1EZ10 | 10.0 | 25.0 | 7.0 | 700 | 0.25 | 0.5 | 7.6 | 91.0 |
| 1EZ11 | 11.0 | 23.0 | 8.0 | 700 | 0.25 | 0.1 | 8.4 | 83.0 |
| 1EZ12 | 12.0 | 21.0 | 9.0 | 700 | 0.25 | 0.1 | 9.1 | 76.0 |
| 1EZ13 | 13.0 | 19.0 | 10 | 700 | 0.25 | 0.1 | 9.9 | 69.0 |
| 1EZ15 | 15.0 | 17.0 | 14 | 700 | 0.25 | 0.1 | 11.4 | 61.0 |
| 1EZ16 | 16.0 | 15.5 | 16 | 700 | 0.25 | 0.1 | 12.2 | 57.0 |
| 1EZ18 | 18.0 | 14.0 | 20 | 750 | 0.25 | 0.1 | 13.7 | 50.0 |
| 1EZ20 1EZ22 | 20.0 22.0 | 12.5 11.5 | 22 23 | 750 750 | 0.25 0.25 | 0.1 | 15.2 16.7 | 45.0 41.0 |
| 1EZ22 1EZ24 | 24.0 | 10.5 | 25 | 750 750 | 0.25 | 0.1 | 18.2 | 38.0 |
| 1EZ24 | 27.0 | 9.5 | 35 | 750 | 0.25 | 0.1 | 20.6 | 34.0 |
| 1EZ30 | 30.0 | 8.5 | 40 | 1000 | 0.25 | 0.1 | 22.8 | 30.0 |
| 1EZ33 | 33.0 | 7.5 | 45 | 1000 | 0.25 | 0.1 | 25.1 | 27.0 |
| 1EZ36 | 36.0 | 7.0 | 50 | 1000 | 0.25 | 0.1 | 27.4 | 25.0 |
| 1EZ39 | 39.0 | 6.5 | 60 | 1000 | 0.25 | 0.1 | 29.7 | 23.0 |
| 1EZ43 | 43.0 | 6.0 | 70 | 1500 | 0.25 | 0.1 | 32.7 | 22.0 |
| 1EZ47 | 47.0 | 5.5 | 80 | 1500 | 0.25 | 0.1 | 35.8 | 19.0 |
| 1EZ51 | 51.0 | 5.0 | 95 | 1500 | 0.25 | 0.1 | 38.8 | 18.0 |
| 1EZ56 | 56.0 | 4.5 | 110 | 2000 | 0.25 | 0.1 | 42.6 | 16.0 |
| 1EZ62 | 62.0 | 4.0 | 125 | 2000 | 0.25 | 0.1 | 47.1 | 14.0 |
| 1EZ68 | 68.0 | 3.7 | 150 | 2000 | 0.25 | 0.1 | 51.7 | 13.0 |
| 1EZ75 1EZ82 | 75.0 82.0 | 3.3 | 175 200 | 2000 3000 | 0.25 0.25 | 0.1 | 56.0 62.2 | 12.0 11.0 |
| 1EZ02 | 91.0 | 2.8 | 250 | 3000 | 0.25 | 0.1 | 69.2 | 10.0 |
| 1EZ100 | 100.0 | 2.5 | 350 | 3000 | 0.25 | 0.1 | 76.0 | 9.0 |
| 1EZ110 | 110.0 | 2.3 | 450 | 4000 | 0.25 | 0.1 | 83.6 | 8.6 |
| 1EZ120 | 120.0 | 2.0 | 550 | 4500 | 0.25 | 0.1 | 91.2 | 7.8 |
| 1EZ130 | 130.0 | 1.9 | 700 | 5000 | 0.25 | 0.1 | 98.8 | 7.0 |
| 1EZ150 | 150.0 | 1.7 | 1000 | 6000 | 0.25 | 0.1 | 114.0 | 6.4 |
| 1EZ160 | 160.0 | 1.6 | 1100 | 6500 | 0.25 | 0.1 | 121.6 | 5.8 |
| 1EZ180 | 180.0 | 1.4 | 1200 | 7000 | 0.25 | 0.1 | 136.8 | 5.2 |
| 1EZ200 | 200.0 | 1.2 | 1900 | 9990 | 0.25 | 0.1 | 152.0 | 4.7 |
| 1EZ220 | 220.0 | 1.0 | 1600 | 8000 | 0.25 | 0.1 | 167.2 | 4.0 |
| 1EZ240 | 240.0 | 0.9 | 1800 | 8500 | 0.25 | 0.1 | 182.4 | 3.8 |
| 1EZ250 | 250.0 | 0.9 | 2000 | 9000 | 0.25 | 0.1 | 190.0 | 3.6 |
| 1EZ270 | 270.0 | 0.8 | 2100 | 9000 | 0.25 | 0.1 | 205.0 | 3.3 |
| 1EZ300 | 300.0 | 8.0 | 2300 | 9500 | 0.25 | 0.1 | 228.0 | 3.0 |

NOTE: Standard Zener Voltage Tolerance ± 5%



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