



**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**

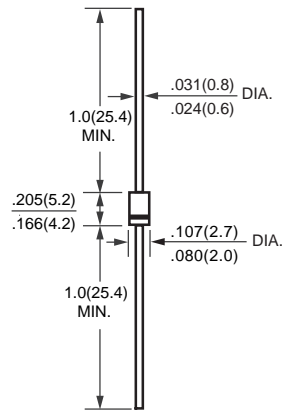
- \* Voltage Range: 6.2V to 300V
- \* Low leakage
- \* Low inductance
- \* High peak reverse power dissipation
- \* Glass passivated junction
- \* Build-in strain relief

**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



DO-41



**MAXIMUM RATINGS AND ELECTRICAL CHARACTERISTICS**

Ratings at 25 °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)	P <sub>tot</sub>	1.0	W
Peak pulse current with a 10/1000µs waveform	V <sub>F</sub>	1.2	Volts
Maximum Thermal Resistance Junction to Ambient Air (Note 2)	R <sub>θJA</sub>	170	°C/W
Junction Temperature Range	T <sub>J</sub>	-55 to +175	°C
Storage Temperature Range	T <sub>STG</sub>	-55 to +175	°C

- NOTES : 1. TL=Lead temperature at 3/8" (9.5mm) from body.  
 2. Valid provided that leads are kept at ambient temperature at a distance of 10 mm from case.

Fig. 1 - POWER TEMPERATURE DERATING CURVE

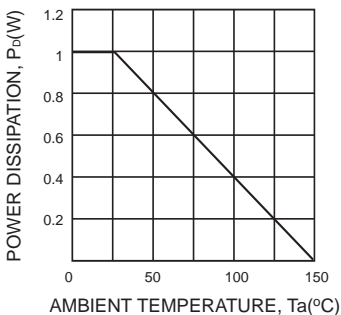


Fig. 2 - TYPICAL THERMAL RESISTANCE VERSUS LEAD LENGTH

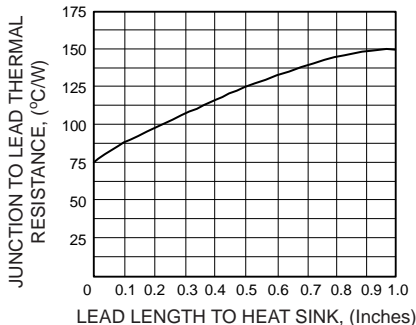
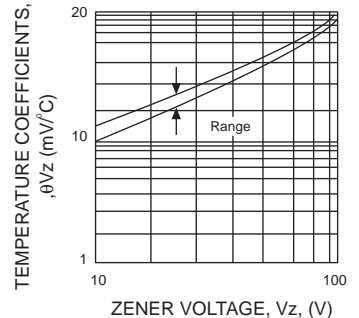


Fig. 3 - TEMPERATURE COEFFICIENTS v.s. ZENER VOLTAGE

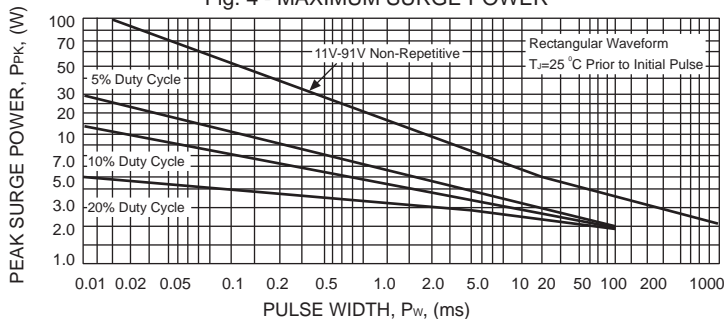


# RATING AND CHARACTERISTIC CURVES (1EZ6.2 THRU 1EZ300)

TYPE	Nominal Zener Voltage V <sub>Z</sub> @I <sub>ZT</sub>	Zener Test Current I <sub>ZT</sub> mA	Maximum Zener Impedance		I <sub>ZK</sub> mA	Maximum Reverse Leakage Current		Maximum Regulator Current I <sub>ZM</sub> mA
			Z <sub>ZT</sub> @I <sub>ZT</sub> Ohms	Z <sub>ZK</sub> @I <sub>ZK</sub> Ohms		I <sub>R</sub> uA	@V <sub>R</sub> Volts	
1EZ6.2	6.2	41.0	2.0	700	1.00	10.0	3.0	146.0
1EZ6.8	6.8	37.0	3.5	700	1.00	5.0	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	20.0	12.5	22	750	0.25	0.1	15.2	45.0
1EZ22	22.0	11.5	23	750	0.25	0.1	16.7	41.0
1EZ24	24.0	10.5	25	750	0.25	0.1	18.2	38.0
1EZ27	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	75.0	3.3	175	2000	0.25	0.1	56.0	12.0
1EZ82	82.0	3.0	200	3000	0.25	0.1	62.2	11.0
1EZ91	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	0.8	2300	9500	0.25	0.1	228.0	3.0

NOTE: Standard Zener Voltage Tolerance  $\pm 5\%$

Fig. 4 - MAXIMUM SURGE POWER



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