



High-reliability discrete products  
and engineering services since 1977

# 1N4460-1N4496, 1N6485-1N6491

## 1.5 WATT GLASS ZENER DIODE

### FEATURES

- Available as "HR" (high reliability) screened per MIL-PRF-19500, JANTX level. Add "HR" suffix to base part number.
- Available as non-RoHS (Sn/Pb plating), standard, and as RoHS by adding "-PBF" suffix.

### MAXIMUM RATINGS

Operating Temperature:	-65 to +175°C
Storage Temperature:	-65 to +175°C
Power Dissipation:	1.5 Watts @ $T_A = 25^\circ\text{C}$
Thermal Resistance	42°C/W at 3/8 inch from body
Forward Voltage	1.00 V at 200 mA and 1.5 V at 1.0 A

### ELECTRICAL CHARACTERISTICS ( $T_A = 25^\circ\text{C}$ unless otherwise specified)

Type	Nominal Zener Voltage $V_Z$	Test Current $I_{ZT}$	Maximum Dynamic Impedance $Z_{ZT} @ I_{ZT}$	Maximum Knee Impedance $Z_{ZK} @ I_{ZK}$		Maximum Reverse Current $I_R @ V_R$		Maximum Continuous Current $I_{ZM}$	Surge Current 8.3 ms sq wave $I_{ZSM}$
	Volts	mA	Ohms	Ohms	mA	$\mu\text{A}$	Volts	mA	Amps
1N6485	3.3	76.0	10	400	1.0	50	1.0	433	4.2
1N6486	3.6	69.0	10	400	1.0	50	1.0	397	3.9
1N6487	3.9	64.0	9	400	1.0	35	1.0	366	3.6
1N6488	4.3	58.0	9	400	1.0	5.0	1.0	366	3.6
1N6489	4.7	53.0	8	500	1.0	4.0	1.0	304	3.0
1N6490	5.1	49.0	7	500	1.0	1.0	1.0	280	2.7
1N6491	5.6	45.0	5	600	1.0	.5	2.0	255	2.5
1N4460	6.2	40.0	4	200	1.0	10.0	3.72	230	2.3
1N4461	6.8	37.0	2.5	200	1.0	5.0	4.08	210	2.1
1N4462	7.5	34.0	2.5	400	.50	1.0	4.50	191	1.9
1N4463	8.2	31.0	3	400	.50	.50	4.92	174	1.7
1N4464	9.1	28.0	4	500	.50	.30	5.46	157	1.6
1N4465	10.0	25.0	5	500	.25	.30	8.00	143	1.4
1N4466	11.0	23.0	6	550	.25	.30	8.80	130	1.3
1N4467	12.0	21.0	7	550	.25	.20	9.60	119	1.2
1N4468	13.0	19.0	8	550	.25	.05	10.40	110	1.1
1N4469	15.0	17.0	9	600	.25	.05	12.00	95	.95
1N4470	16.0	15.5	10	600	.25	.05	12.80	90	.80
1N4471	18.0	14.0	11	650	.25	.05	14.40	79	.79
1N4472	20.0	12.5	12	650	.25	.05	16.00	71	.71
1N4473	22.0	11.5	14	650	.25	.05	17.60	65	.65
1N4474	24.0	10.5	16	700	.25	.05	19.20	60	.60
1N4475	27.0	9.5	18	700	.25	.05	21.60	53	.53
1N4476	30.0	8.5	20	750	.25	.05	24.00	48	.48
1N4477	33.0	7.5	25	800	.25	.05	26.40	43	.43



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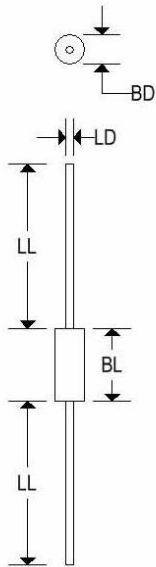
**ELECTRICAL CHARACTERISTICS** ( $T_A = 25^\circ\text{C}$  unless otherwise specified)

Type	Nominal Zener Voltage $V_Z$	Test Current $I_{ZT}$	Maximum Dynamic Impedance $Z_{ZT} @ I_{ZT}$	Maximum Knee Impedance $Z_{ZK} @ I_{ZK}$		Maximum Reverse Current $I_R @ V_R$		Maximum Continuous Current $I_{ZM}$	Surge Current 8.3 ms sq wave $I_{ZSM}$
	Volts	mA	Ohms	Ohms	mA	$\mu\text{A}$	Volts	mA	Amps
1N4478	36.0	7.0	27	850	.25	.05	28.80	40	.40
1N4479	39.0	6.5	30	900	.25	.05	31.2	37	.37
1N4480	43.0	6.0	40	950	.25	.05	34.4	33	.33
1N4481	47.0	5.5	50	1000	.25	.05	37.6	30	.30
1N4482	51.0	5.0	60	1100	.25	.05	40.8	28	.28
1N4483	56.0	4.5	70	1300	.25	.25	44.8	26	.26
1N4484	62.0	4.0	80	1500	.25	.25	49.6	23	.23
1N4485	68.0	3.7	100	1700	.25	.25	54.4	21	.21
1N4486	75.0	3.3	130	2000	.25	.25	60.4	19	.19
1N4487	82.0	3.0	160	2500	.25	.25	65.6	17	.17
1N4488	91.0	2.8	200	3000	.25	.25	72.8	16	.16
1N4489	100.0	2.5	250	3100	.25	.25	80.0	14	.14
1N4490	110.0	2.0	300	4000	.25	.25	88.0	13	.13
1N4491	120.0	2.0	400	4500	.25	.25	96.0	12	.12
1N4492	130.0	1.9	500	5000	.25	.25	104.0	11	.11
1N4493	150.0	1.7	700	6000	.25	.25	120.0	9.5	.095
1N4494	160.0	1.6	1000	6500	.25	.25	128.0	8.9	.089
1N4495	180.0	1.4	1300	7000	.25	.25	144.0	7.9	.079
1N4496	200.0	1.2	1500	8000	.25	.25	160.0	7.2	.072

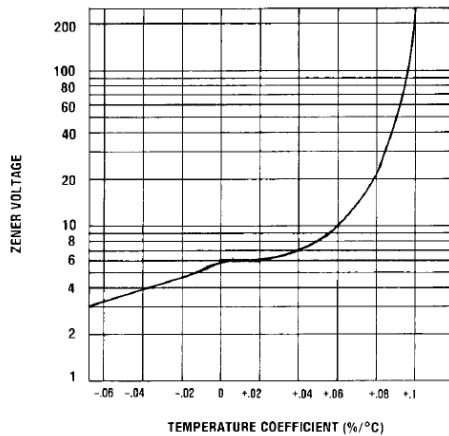
Standard tolerance is 5%. Available in  $\pm 2\%$ (C) tolerance and  $\pm 1\%$ (D) tolerance.

**MECHANICAL CHARACTERISTICS**

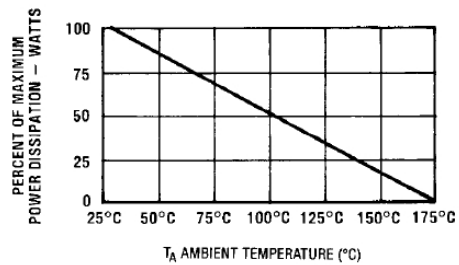
<b>Case:</b>	Digi A
<b>Marking:</b>	Body painted, alpha-numeric
<b>Polarity:</b>	Cathode band



	Digi A			
	Inches		Millimeters	
	Min	Max	Min	Max
BD	-	0.095	-	2.413
BL	-	0.180	-	4.572
LD	0.028	0.032	0.711	0.813
LL	0.700	-	17.800	-



TYPICAL TEMPERATURE COEFFICIENT CHARACTERISTICS



POWER TEMPERATURE DERATING CURVE