

2W AXIAL LEAD ZENER DIODES, 11V – 330V

Diagram illustrating the dimensions of a 2W Axial Lead Zener Diode. The dimensions are labeled as follows:

- A: Total length (2 PL)
- B: Case length
- C: Lead length
- D: Lead diameter

Value Inch[mm]		
Dim.	Min.	Max.
A	1.000[25.40]	---
B	0.166[4.22]	0.205[5.21]
C	0.080[2.03]	0.107[2.72]
D	0.028[0.71]	0.034[0.86]

PRODUCT FEATURES

1. FLAMMABILITY CLASSIFICATION 94V-0
2. GLASS PASSIVATED CHIP CONSTRUCTION
3. WIDE ZENER VOLTAGE RANGE FROM 11V TO 330V
4. LOW ZENER IMPEDANCE
5. POLARITY: INDICATED BY CATHODE BAND
6. MOLDED PLASTIC CASE DO-41
7. DIMENSIONS IN INCHES AND (MILLIMETERS)
8. LEADS: SOLDERABILITY PER MIL-STD-202 METHOD 208
9. WEIGHT: 0.33 GRAMS
10. RoHS COMPLIANT. ADD SUFFIX "-H" FOR HALOGEN FREE PART. i.e. Z20-11B-H.

ELECTRICAL CHARACTERISTICS

MAXIMUM RATINGS (T_A =25°C UNLESS OTHERWISE NOTED)

PARAMETER	SYMBOL	MIN.	TYP.	MAX.	UNIT
POWER DISSIPATION	P _D			2.0	W
OPERATING TEMPERATURE	T _J	-55		+150	°C
STORAGE TEMPERATURE	T _{STG}	-65		+175	°C

Part No.	Marking code	Zener			Test Current	Zener Impedance			Leakage Current	
		V _z @ I _{zT} (Volts)			I _{zT}	Z _{zT} @ I _{zT}	Z _{zK} @ I _{zK}	I _{zK}	I _R	V _R
		Min.	Nom.	Max.	mA	(Ω)Max	(Ω)Max	mA	(uA)Max	Volts
Z20-11B	Z20-11B	10.45	11	11.55	45.5	4.0	700	0.25	1.0	8.4
Z20-12B	Z20-12B	11.40	12	12.60	41.5	4.5	700	0.25	1.0	9.1
Z20-13B	Z20-13B	12.35	13	13.65	38.5	5.0	700	0.25	0.5	9.9
Z20-14B	Z20-14B	13.30	14	14.70	35.7	5.5	700	0.25	0.5	10.6
Z20-15B	Z20-15B	14.25	15	15.75	33.4	7.0	700	0.25	0.5	11.4
Z20-16B	Z20-16B	15.20	16	16.80	31.2	8.0	700	0.25	0.5	12.2
Z20-17B	Z20-17B	16.15	17	17.85	29.4	9.0	750	0.25	0.5	13.0
Z20-18B	Z20-18B	17.10	18	18.90	27.8	10.0	750	0.25	0.5	13.7
Z20-19B	Z20-19B	18.05	19	19.95	26.3	11.0	750	0.25	0.5	14.4
Z20-20B	Z20-20B	19.00	20	21.00	25.0	11.0	750	0.25	0.5	15.2
Z20-22B	Z20-22B	20.90	22	23.10	22.8	12.0	750	0.25	0.5	16.7
Z20-24B	Z20-24B	22.80	24	25.20	20.8	13.0	750	0.25	0.5	18.2
Z20-27B	Z20-27B	25.65	27	28.35	18.5	18.0	750	0.25	0.5	20.6



Z20-11B THRU Z20-330B SPECIFICATION

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Part No.	Marking code	Zener			Test Current	Zener Impedance			Leakage Current	
		V _Z @ I _{ZT} (Volts)			I _{ZT}	Z _{ZT} @ I _{ZT}	Z _{ZK} @ I _{ZK}	I _{ZK}	I _R	V _R
		Min.	Nom.	Max.	mA	(Ω)Max	(Ω)Max	mA	(uA)Max	Volts
Z20-28B	Z20-28B	26.60	28	29.40	17.0	19.0	750	0.25	0.5	21.0
Z20-30B	Z20-30B	28.50	30	31.50	16.6	20.0	1000	0.25	0.5	22.5
Z20-33B	Z20-33B	31.35	33	34.65	15.1	23.0	1000	0.25	0.5	25.1
Z20-36B	Z20-36B	34.20	36	37.80	13.9	25.0	1000	0.25	0.5	27.4
Z20-39B	Z20-39B	37.05	39	40.95	12.8	30.0	1500	0.25	0.5	29.7
Z20-43B	Z20-43B	40.85	43	45.15	11.6	35.0	1500	0.25	0.5	32.7
Z20-47B	Z20-47B	44.65	47	49.35	10.6	40.0	1500	0.25	0.5	35.8
Z20-51B	Z20-51B	48.45	51	53.55	9.8	48.0	1500	0.25	0.5	38.8
Z20-56B	Z20-56B	53.20	56	58.80	9.0	55.0	2000	0.25	0.5	42.6
Z20-62B	Z20-62B	58.90	62	65.10	8.1	60.0	2000	0.25	0.5	47.1
Z20-68B	Z20-68B	64.60	68	71.40	7.4	75.0	2000	0.25	0.5	51.7
Z20-75B	Z20-75B	71.25	75	78.75	6.7	90.0	2000	0.25	0.5	56.0
Z20-82B	Z20-82B	77.90	82	86.10	6.1	100	3000	0.25	0.5	62.2
Z20-91B	Z20-91B	86.45	91	95.55	5.5	125	3000	0.25	0.5	69.2
Z20-100B	Z20-100B	95.00	100	105.00	5.0	750	5000	0.25	0.5	75
Z20-110B	Z20-110B	104.50	110	115.50	5.0	750	5000	0.25	0.5	80
Z20-115B	Z20-115B	109.25	115	120.75	5.0	750	5000	0.25	0.5	85
Z20-120B	Z20-120B	114.00	120	126.00	5.0	850	5000	0.25	0.5	90
Z20-130B	Z20-130B	123.50	130	136.50	5.0	1000	5000	0.25	0.5	95
Z20-140B	Z20-140B	133.00	140	147.00	5.0	1200	5000	0.25	0.5	105
Z20-150B	Z20-150B	142.50	150	157.50	5.0	1300	5000	0.25	0.5	110
Z20-160B	Z20-160B	152.00	160	168.00	5.0	1500	5000	0.25	0.5	120
Z20-170B	Z20-170B	161.50	170	178.50	5.0	2200	5000	0.25	0.5	130
Z20-180B	Z20-180B	171.00	180	189.00	5.0	2200	5000	0.25	0.5	140
Z20-190B	Z20-190B	180.50	190	199.50	5.0	2500	5000	0.25	0.5	150
Z20-200B	Z20-200B	190.00	200	210.00	5.0	2500	8000	0.25	0.5	165
Z20-210B	Z20-210B	199.50	210	220.50	5.0	5000	9000	0.25	0.5	165
Z20-220B	Z20-220B	209.00	220	231.00	5.0	5000	8000	0.25	0.5	170
Z20-230B	Z20-230B	218.50	230	241.50	5.0	5000	9000	0.25	0.5	175
Z20-240B	Z20-240B	228.00	240	252.00	5.0	5000	8000	0.25	0.5	180
Z20-250B	Z20-250B	237.50	250	262.50	5.0	5000	9000	0.25	0.5	190
Z20-260B	Z20-260B	247.00	260	273.00	5.0	5000	8000	0.25	0.5	195
Z20-270B	Z20-270B	256.50	270	283.50	5.0	5000	9000	0.25	0.5	200
Z20-280B	Z20-280B	266.00	280	294.00	5.0	5000	8000	0.25	0.5	210
Z20-290B	Z20-290B	275.50	290	304.50	5.0	5000	9000	0.25	0.5	215
Z20-300B	Z20-300B	285.00	300	315.00	5.0	5000	9000	0.25	0.5	220
Z20-310B	Z20-310B	294.50	310	325.50	5.0	5000	9500	0.25	0.5	225
Z20-320B	Z20-320B	304.00	320	336.00	5.0	5000	9500	0.25	0.5	233
Z20-330B	Z20-330B	313.50	330	346.50	5.0	5000	9500	0.25	0.5	240

Note : Suffix B denotes 5% tolerance of Zener voltage



RATINGS AND CHARACTERISTIC CURVES

FIG. 1-TYPICAL THERMAL RESPONSE L

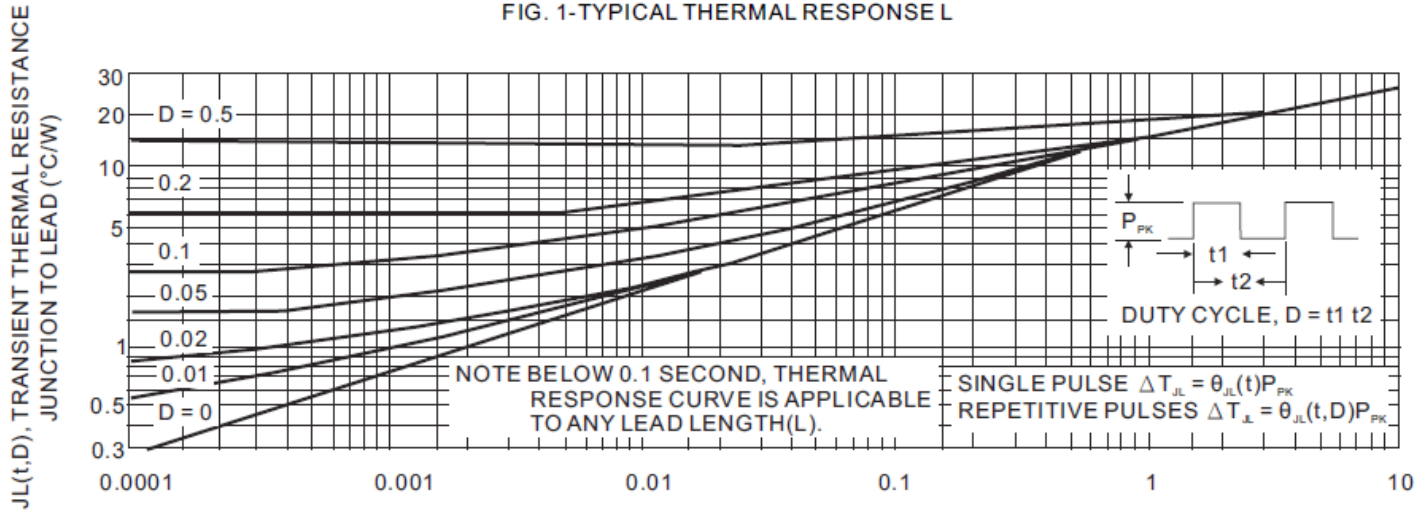


FIG. 2-MAXIMUM SURGE POWER

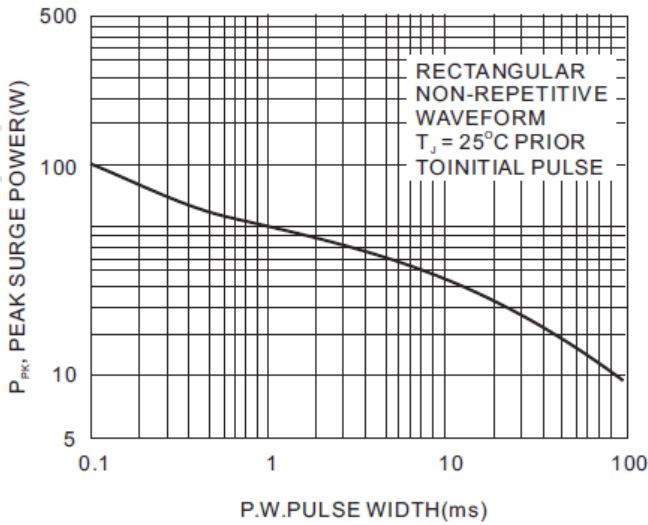
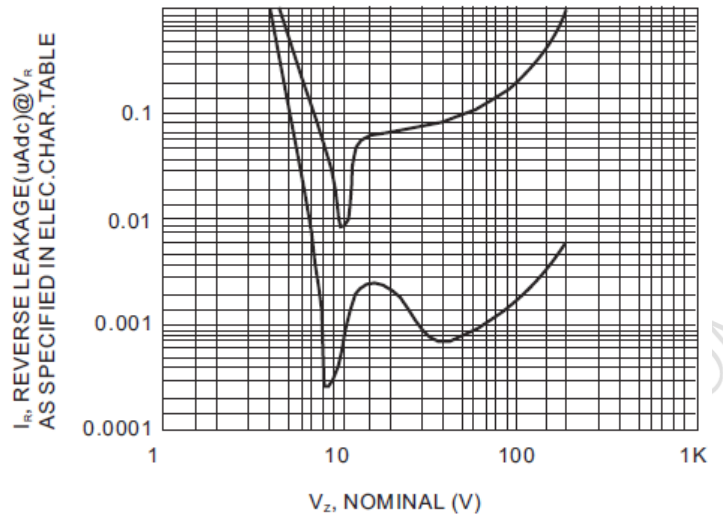


FIG. 3-TYPICAL REVERSE LEAKAGE





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FIG. 4-UNITS TO 12 VOLTS

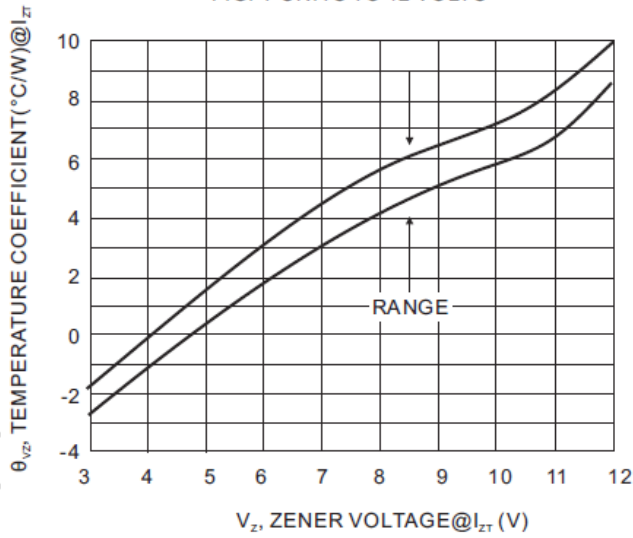


FIG. 5-UNIT 10 TO 200 VOLTS

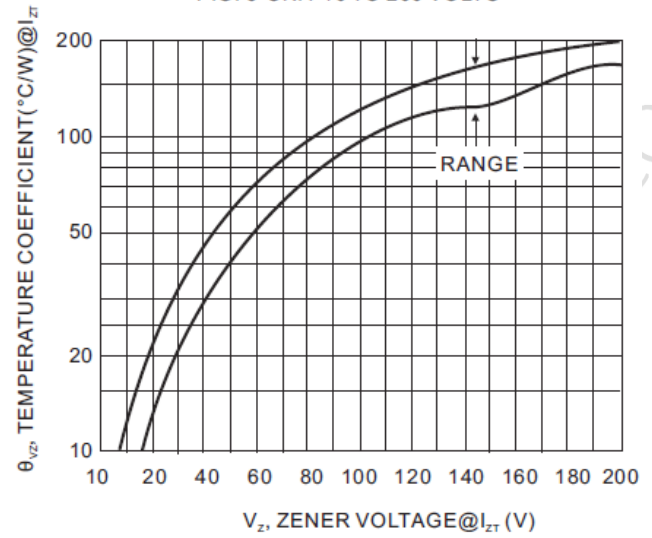


FIG. 6- $V_z = 3.9$ THRU 10 VOLTS

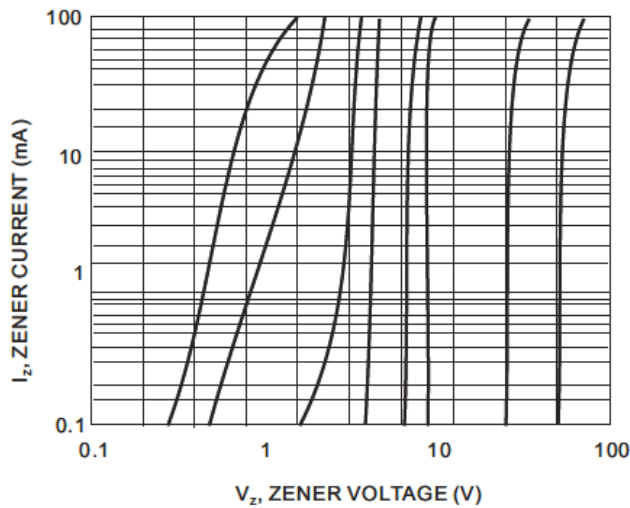


FIG. 7- $V_z = 12$ THRU 82 VOLTS

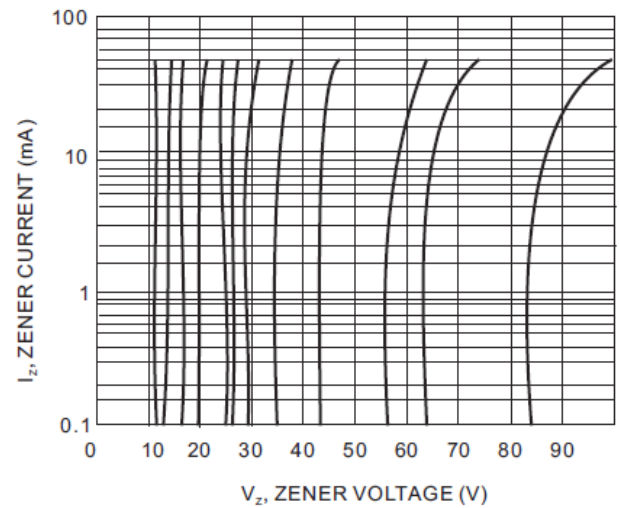


FIG. 8- $V_z = 100$ THRU 200 VOLTS

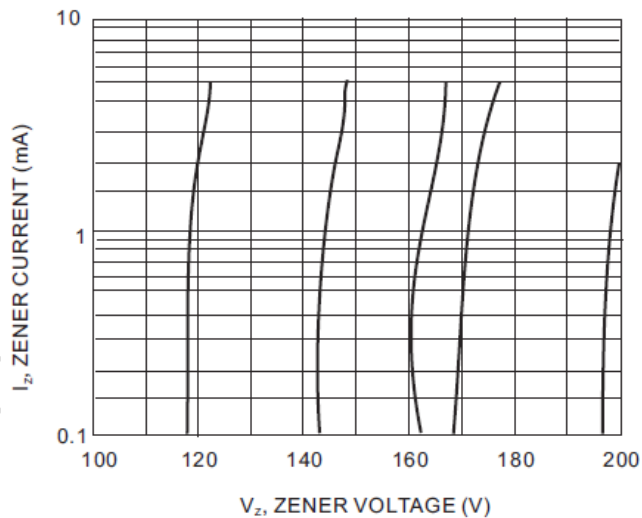


FIG. 9-TYPICAL THERMAL RESISTANCE

