

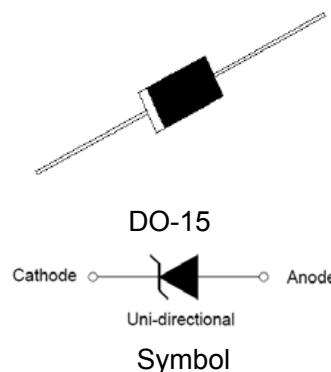


Zener Diodes 1N5348B~1N5388B Series

Rev.1.0

FEATURE

- ✧ Silicon power zener diodes.
- ✧ Low zener impedance.
- ✧ Voltage range includes breakdown voltages from 11V to 200V with $\pm 5\%$ for 1N5348B~1N5388B series.
- ✧ Zener and surge current specification
- ✧ For use in stabilizing and clamping circuits with high power rating.

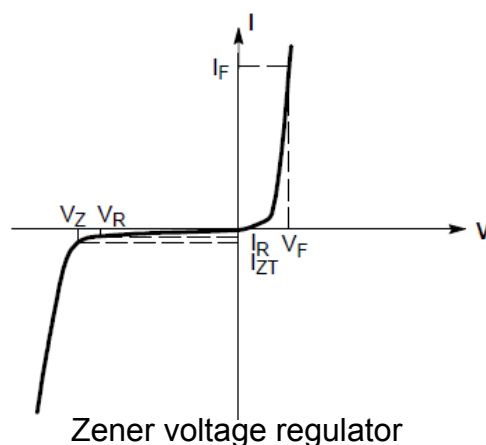


ABSOLUTE MAXIMUM RATINGS AND THERMAL CHARACTERISTICS

Parameter	Symbol	Max Value	Unit
Total power dissipation @ $T_L=75^\circ\text{C}$	P_D	5000	mW
Junction temperature	T_J	175	$^\circ\text{C}$
Storage temperature range	T_S	-55 to +175	$^\circ\text{C}$
Operating temperature range	T_{op}	-55 to +175	$^\circ\text{C}$

ELECTRICAL CHARACTERISTICS ($T_A=25^\circ\text{C}$)

Symbol	Parameter
V_Z	Reverse zener voltage at I_{zt}
I_{zt}	Reverse current
I_R	Reverse leakage current at V_R
V_R	Reverse voltage
I_F	Forward current
V_F	Forward voltage at I_F



ELECTRICAL CHARACTERISTICS ($T_A=25^{\circ}\text{C}$ unless otherwise noted)Maximum $V_F=1.2\text{V}$ at $I_F=1\text{A}$

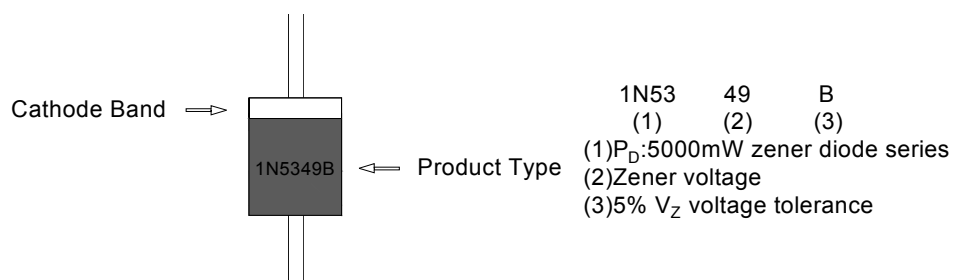
Type number	Zener voltage range at I_{zt}				Maximum zener impedance			Maximum reverse leakage current		Marking code
	Nom (Volts)	Min (Volts)	Max (Volts)	I_{zt} (mA)	Z_{zt} (Ω)	Z_{zk} (Ω)	I_{zk} (mA)	I_R (μA)	V_R (Volts)	
1N5348B	11	10.45	11.55	125	2.5	125	1	5.0	8.4	1N5348B
1N5349B	12	11.40	12.60	100	2.5	125	1	2.0	9.1	1N5349B
1N5350B	13	12.35	13.65	100	2.5	100	1	1.0	9.9	1N5350B
1N5351B	14	13.30	14.70	100	2.5	75	1	1.0	10.6	1N5351B
1N5352B	15	14.25	15.75	75	2.5	75	1	1.0	11.5	1N5352B
1N5353B	16	15.20	16.80	75	2.5	75	1	1.0	12.2	1N5353B
1N5354B	17	16.15	17.85	70	2.5	75	1	0.5	12.9	1N5354B
1N5355B	18	17.10	18.90	65	2.5	75	1	0.5	13.7	1N5355B
1N5356B	19	18.05	19.95	65	3.0	75	1	0.5	14.4	1N5356B
1N5357B	20	19.00	21.00	65	3.0	75	1	0.5	15.2	1N5357B
1N5358B	22	20.90	23.10	50	3.5	75	1	0.5	16.7	1N5358B
1N5359B	24	22.80	25.20	50	3.5	100	1	0.5	18.2	1N5359B
1N5360B	25	23.75	26.25	50	4.0	110	1	0.5	19.0	1N5360B
1N5361B	27	25.65	28.35	50	5.0	120	1	0.5	20.6	1N5361B
1N5362B	28	26.60	29.40	50	6.0	130	1	0.5	21.2	1N5362B
1N5363B	30	28.50	31.50	40	8.0	140	1	0.5	22.8	1N5363B
1N5364B	33	31.35	34.65	40	10	150	1	0.5	25.1	1N5364B
1N5365B	36	34.20	37.80	30	11	160	1	0.5	27.4	1N5365B
1N5366B	39	37.05	40.95	30	14	170	1	0.5	29.7	1N5366B
1N5367B	43	40.85	45.15	30	20	190	1	0.5	32.7	1N5367B
1N5368B	47	44.65	49.35	25	25	210	1	0.5	35.8	1N5368B
1N5369B	51	48.45	53.55	25	27	230	1	0.5	38.8	1N5369B
1N5370B	56	53.20	58.80	20	35	280	1	0.5	42.6	1N5370B
1N5371B	60	57.00	63.00	20	40	350	1	0.5	45.5	1N5371B
1N5372B	62	58.90	65.10	20	42	400	1	0.5	47.1	1N5372B
1N5373B	68	64.60	71.40	20	44	500	1	0.5	51.7	1N5373B
1N5374B	75	71.25	78.75	20	45	620	1	0.5	56.0	1N5374B
1N5375B	82	77.90	86.10	15	65	720	1	0.5	62.2	1N5375B
1N5376B	87	82.65	91.35	15	75	760	1	0.5	66.0	1N5376B
1N5377B	91	86.45	95.55	15	75	760	1	0.5	69.2	1N5377B
1N5378B	100	95.00	105.00	12	90	800	1	0.5	76.0	1N5378B
1N5379B	110	104.50	115.50	12	125	1000	1	0.5	83.6	1N5379B
1N5380B	120	114.00	126.00	10	170	1150	1	0.5	91.2	1N5380B
1N5381B	130	123.50	136.50	10	190	1250	1	0.5	98.8	1N5381B

ELECTRICAL CHARACTERISTICS ($T_A=25^{\circ}\text{C}$ unless otherwise noted, continued)Maximum $V_F=1.2\text{V}$ at $I_F=1\text{A}$

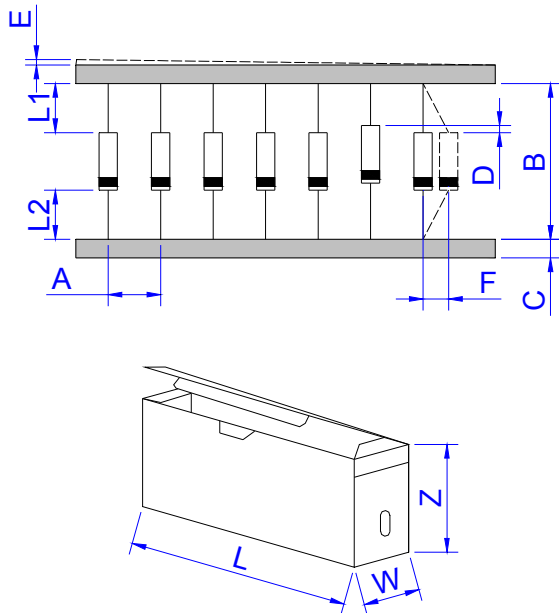
Type number	Zener voltage range at I_{zt}				Maximum zener impedance			Maximum reverse leakage current		Marking code
	Nom (Volts)	Min (Volts)	Max (Volts)	I_{zt} (mA)	Z_{zt} (Ω)	Z_{zk} (Ω)	I_{zk} (mA)	I_R (μA)	V_R (Volts)	
1N5382B	140	133.00	147.00	8.0	230	1500	1	0.5	106	1N5382B
1N5383B	150	142.50	157.50	8.0	330	1500	1	0.5	114	1N5383B
1N5384B	160	152.00	168.00	8.0	350	1650	1	0.5	122	1N5384B
1N5385B	170	161.50	178.50	8.0	380	1750	1	0.5	129	1N5385B
1N5386B	180	171.00	189.00	5.0	430	1750	1	0.5	137	1N5386B
1N5387B	190	180.50	199.50	5.0	450	1850	1	0.5	144	1N5387B
1N5388B	200	190.00	210.00	5.0	480	1850	1	0.5	152	1N5388B

PACKAGE MECHANICAL DATA

Ref.	Dimensions			
	Millimeters		Inches	
	Min.	Max.	Min.	Max.
A	25.40	-	1.000	-
B	5.80	7.62	0.228	0.300
C	0.56	0.89	0.022	0.035
D	2.60	3.60	0.102	0.142

MARKING & ORDERING INFORMATION

TAPE AND BOX SPECIFICATION-DO-15



Ref.	Dimensions	
	Millimeters	Inches
A	5.0±0.5	0.197±0.020
B	53.0±1.5	2.087±0.059
C	6.0±0.5	0.236±0.020
D	1.2(MAX)	0.047(MAX)
E	0.8(MAX)	0.031(MAX)
F	1.5(MAX)	0.059(MAX)
L1-L2	1.0(MAX)	0.039(MAX)
W	80±5.0	3.150±0.197
L	250±5.0	9.843±0.197
Z	115±5.0	4.528±0.197

Part No.	UNIT WEIGHT (g/PCS) typ.	Case Type	Quantity (pcs)	Packing Option
1N5348B~1N5388B	0.42	DO-15/DO-204AC	2000	Box

RATINGS AND CHARACTERISTICS CURVES (T_A=25°C, unless otherwise noted)

Fig.1 Power dissipation vs lead temperature

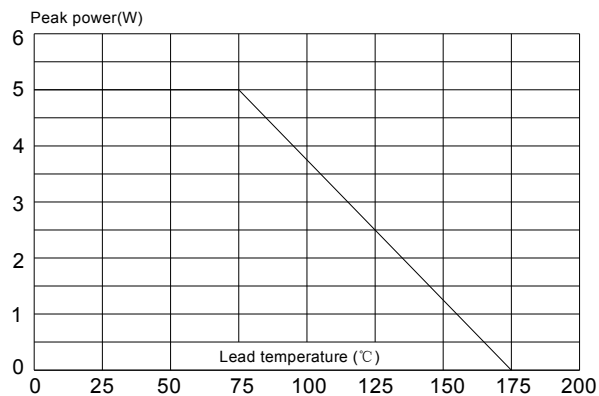


Fig.2 Zener breakdown characteristics

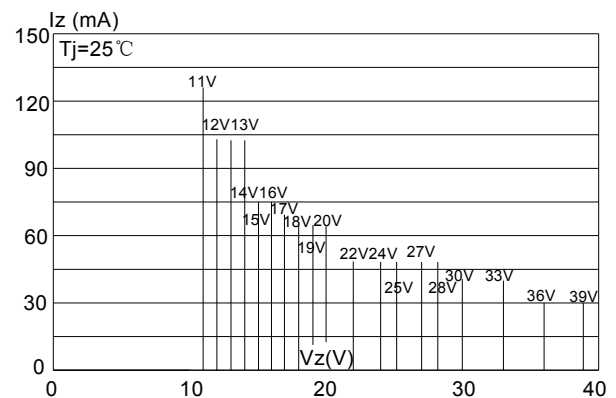


Fig.3 Zener breakdown characteristics

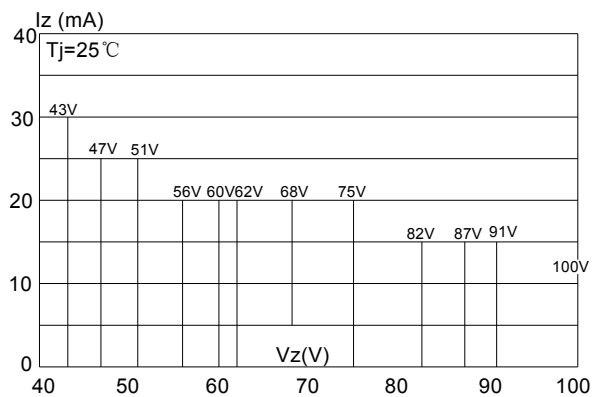
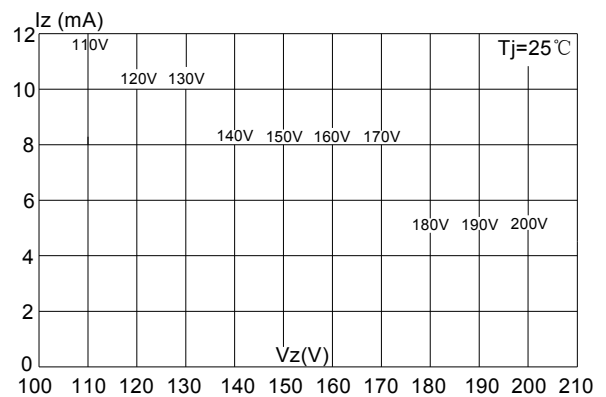


Fig.4 Zener breakdown characteristics



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