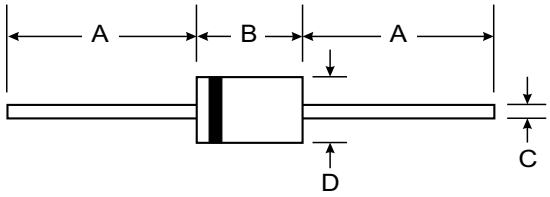
1N5344B - 1N5388B

5W ZENER DIODE

Features

- Voltage Range 8.2V - 200V
- Glass Passivated Junction
- 5W Steady State
- High Surge Capability
- ±5% Voltage Tolerance on Nominal V_Z is Standard
- 100% Tested



Mechanical Data

- Case: Molded Plastic Over Glass Passivated Junction
- Leads: Solderable per MIL-STD-202, Method 208
- Polarity: Cathode Band
- Approx. Weight: 1.2 grams

5W		
Dim	**Min**	**Max**
A	25.40	—
B	8.38	8.89
C	0.94	1.09
D	3.30	3.68
All Dimensions in mm		

Datasheet.Global

Maximum Ratings @ T_A = 25°C unless otherwise specified

	Symbol	Value	Unit
DC Power Dissipation @ T_L = 75°C 9.5mm from Body (Board Mounted)	P_d	5.0	W
Power Derating Above 75°C Lead Temperature	—	20	°C/W
Operating and Storage Temperature Range	T_j, T_{STG}	-55 to +175	°C

Notes:
1. Nominal Zener Voltage (V_Z) is read with the device in standard test clips with 3/8- to 1/2-inch spacing between clip and case of the diode. Before reading, the diode is allowed to stabilize for a period of 40 ±10 milliseconds at 25°C +8, -2°C.
2. The Zener Impedance (Z_Z or Z_{ZK}) is derived from the 60 Hz ac voltage, which results when an ac current having an rms value equal to 10% of the dc zener current (I_{ZT} or I_{ZK}) is superimposed on I_{ZT} or I_{ZK}, respectively.
3. The Surge Current (I_{ZSM}) is specified as the maximum peak of a nonrecurrent sine wave of 8.3 milliseconds duration.
4. Voltage regulation (ΔV_Z) is the difference between the voltage measured at 10% and 50% of I_{ZM}.

Electrical Characteristics @ T_A = 25°C unless otherwise specified

Part Number	Regulator Voltage (V_Z) Volts	Test Current (I_Z) mA dc	Maximum Dynamic Impedance (Z_Z) Ohms	Maximum Reverse Current (I_R) µA	I_R Test Voltage (V_R) Volts	Maximum Regulator Current (I_{ZM}) mA	Maximum Dynamic Knee Impedance (Z_{ZK} @1.0mA) Ohms	Maximum Surge Current (I_{ZSM}) Amperes	Maximum Voltage Regulation (ΔV_Z) Volts
1N5344B	8.2	150	1.5	10	6.2	580	200	10.0	0.20
1N5345B	8.7	150	2.0	10	6.6	545	200	9.5	0.20
1N5346B	9.1	150	2.0	7.5	6.9	520	150	9.2	0.22
1N5347B	10	125	2.0	5.0	7.6	475	125	8.6	0.22
1N5348B	11	125	2.5	5.0	8.4	430	125	8.0	0.25
1N5349B	12	100	2.5	2.0	9.1	395	125	7.5	0.25
1N5350B	13	100	2.5	1.0	9.9	365	100	7.0	0.25
1N5351B	14	100	2.5	1.0	10.6	340	75.0	6.7	0.25
1N5352B	15	75	2.5	1.0	11.5	315	75.0	6.3	0.25
1N5353B	16	75	2.5	1.0	12.2	295	75.0	6.0	0.30
1N5354B	17	70	2.5	0.5	12.9	280	75.0	5.8	0.35
1N5355B	18	65	2.5	0.5	13.7	264	75.0	5.5	0.40
1N5356B	19	65	3.0	0.5	14.4	250	75.0	5.3	0.40
1N5357B	20	65	3.0	0.5	15.2	237	75.0	5.1	0.40
1N5358B	22	50	3.5	0.5	16.7	216	75.0	4.7	0.45
1N5359B	24	50	3.5	0.5	18.2	198	100	4.4	0.55
1N5360B	25	50	4.0	0.5	19.0	190	110	4.3	0.55
1N5361B	27	50	5.0	0.5	20.6	176	120	4.1	0.60
1N5362B	28	50	6.0	0.5	21.2	170	130	3.9	0.60
1N5363B	30	40	8.0	0.5	22.8	158	140	3.7	0.60
1N5364B	33	40	10	0.5	25.1	144	150	3.5	0.60
1N5365B	36	30	11	0.5	27.4	132	160	3.3	0.65
1N5366B	39	30	14	0.5	29.7	122	170	3.1	0.65
1N5367B	43	30	20	0.5	32.7	110	190	2.8	0.70
1N5368B	47	25	25	0.5	35.8	100	210	2.7	0.80
1N5369B	51	25	27	0.5	38.8	93.0	230	2.5	0.90
1N5370B	56	20	35	0.5	42.6	86.0	280	2.3	1.00
1N5371B	60	20	40	0.5	45.5	79.0	350	2.2	1.20
1N5372B	62	20	42	0.5	47.1	76.0	400	2.1	1.35
1N5373B	68	20	44	0.5	51.7	70.0	500	2.0	1.50
1N5374B	75	20	45	0.5	56.0	63.0	620	1.9	1.60
1N5375B	82	15	65	0.5	62.2	58.0	720	1.8	1.80
1N5376B	87	15	75	0.5	66.0	54.5	760	1.7	2.00
1N5377B	91	15	75	0.5	69.2	52.5	760	1.6	2.20
1N5378B	100	12	90	0.5	76.0	47.5	800	1.5	2.30
1N5379B	110	12	125	0.5	83.6	43.0	1000	1.4	2.50
1N5380B	120	10	170	0.5	91.2	39.5	1150	1.3	2.50
1N5381B	130	10	190	0.5	98.8	36.6	1250	1.2	2.50
1N5382B	140	8.0	230	0.5	106	34.0	1500	1.2	2.50
1N5383B	150	8.0	330	0.5	114	31.6	1500	1.1	3.00
1N5384B	160	8.0	350	0.5	122	29.4	1650	1.1	3.00
1N5385B	170	8.0	380	0.5	129	28.0	1750	1.0	3.00
1N5386B	180	5.0	430	0.5	137	26.4	1750	1.0	4.00
1N5387B	190	5.0	450	0.5	144	25.0	1850	0.9	5.00
1N5388B	200	5.0	480	0.5	152	23.6	1850	0.9	5.00

V_F = 1.2V max at I_F = 1.0A all types.
Suffix 'B' denotes 5% tolerance which is standard.

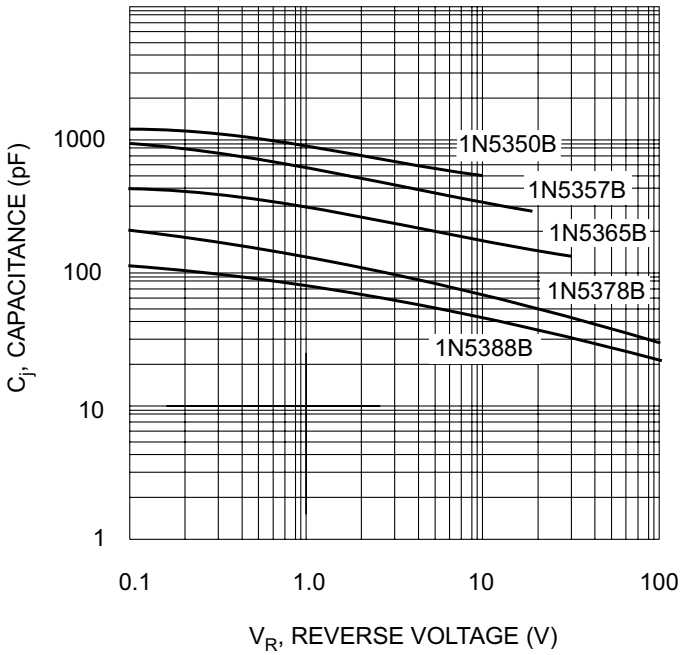


Fig. 1, Typ. Capacitance vs. Reverse Voltage

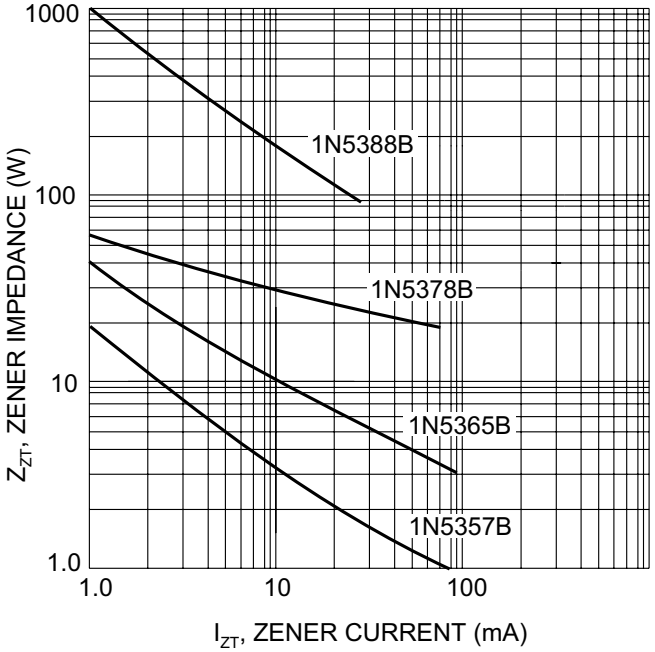


Fig. 2, Typ. Zener Impedance vs. Zener Current

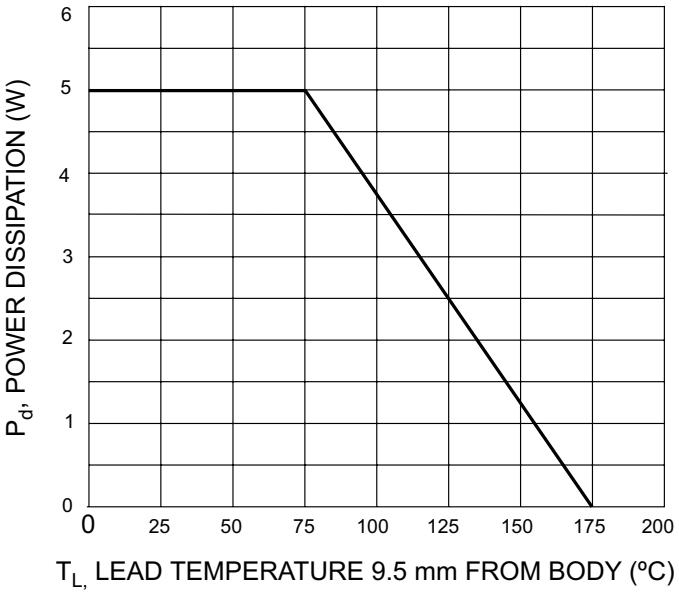


Fig. 3, Power Derating Curve