THE DATASHEET OF

1N5337B

ELECTRONICS, INC.
44 FARRAND STREET
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1N5333B thru 1N5388B
Zener Diode, 5 Watt
±5% Tolerance

Features:

- Zener Voltage: 3.3V to 200V
- High Surge Current Capability

Absolute Maximum Ratings:

DC Power Dissipation (T_L = +75°C, Lead Length = 3/8"), P_D 5W
Derate Above 75°C . . . . . 40mW/°C
Forward Voltage (I_F = 1A), V_F 1.2V
Operating Junction Temperature Range, T_J . . . . . –55° to +150°C
Storage Temperature Range, T_{stg} . . . . . –55° to +150°C

Electrical Characteristics: (T_A = +25°C unless otherwise specified)

Device Number	Nominal Zener Voltage V_Z @ I_{ZT} (Note 1)	Test Current I_{ZT}	Max Zener Impedance		Max Reverse Leakage Current		Max Surge Current i_r (Note 2)	Max Voltage Regulation ΔV_Z (Note 3)	Max Regulator Current I_{ZM}
			Z_{ZT} @ I_{ZT} (Note 1)	Z_{ZK} @ I_{ZK} = 1mA (Note 1)	I_R	@ V_R			
	Volts	mA	Ω	Ω	μA	Volts	Amps	Volt	mA
1N5333B	3.3	380	3.0	400	300	1	20	0.85	1440
1N5334B	3.6	350	2.5	500	150	1	18.7	0.8	1320
1N5335B	3.9	320	2	500	50	1	17.6	0.54	1220
1N5336B	4.3	290	2	500	10	1	16.4	0.49	1100
1N5337B	4.7	260	2	450	5	1	15.3	0.44	1010
1N5338B	5.1	240	1.5	400	1	1	14.4	0.39	930
1N5339B	5.6	220	1	400	1	2	13.4	0.25	865

Note 1 Test conditions for zener voltage and impedance are as follows: I_Z is applied 40 ±10ms prior to reading. Mounting contacts are located 3/8" to 1/2" from the inside edge of mounting clips to the body of the diode (T_A = +25°C +8°, –2°C).

Note 2 Surge current is specified as the maximum allowable peak, non–recurrent square–wave current with a pulse width, PW, of 8.3ms. Mounting contact located as specified in Note 1.

Note 3 Test conditions for voltage regulation are as follows: V_Z measurements are made at 10% and then at 50% of the I_Z max value listed in the "Electrical Characteristic" table. The test current time duration for each V_Z measurement is 40 ±10ms (T_A = +25°C +8°, –2°C). Mounting contact located as specified in Note 1.

Electrical Characteristics (Cont'd): (T_A = +25°C unless otherwise specified)

Device Number	Nominal Zener Voltage V_Z @ I_{ZT} (Note 1)	Test Current I_{ZT}	Max Zener Impedance		Max Reverse Leakage Current		Max Surge Current i_r (Note 2)	Max Voltage Regulation ΔV_Z (Note 3)	Max Regulator Current I_{ZM}
			Z_{ZT} @ I_{ZT} (Note 1)	Z_{ZK} @ I_{ZK} = 1mA (Note 1)	I_R	@ V_R			
	Volts	mA	Ω	Ω	μA	Volts	Amps	Volt	mA
1N5341B	6.2	200	1	200	1	3	12.4	0.1	765
1N5342B	6.8	175	1	200	10	5.2	11.5	0.15	700
1N5343B	7.5	175	1.5	200	10	5.7	10.7	0.15	630
1N5344B	8.2	150	1.5	200	10	6.2	10	0.2	580
1N5345B	8.7	150	2	200	10	6.6	9.5	0.2	545
1N5346B	9.1	150	2	150	7.5	6.9	9.2	0.22	520
1N5347B	10	125	2	125	5	7.6	8.6	0.22	475
1N5348B	11	125	2.5	125	5	8.4	8	0.25	430
1N5349B	12	100	2.5	125	2	9.1	7.5	0.25	395
1N5350B	13	100	2.5	100	1	9.9	7	0.25	365
1N5351B	14	100	2.5	75	1	10.6	6.7	0.25	340
1N5352B	15	75	2.5	75	1	11.5	6.3	0.25	315
1N5353B	16	75	2.5	75	1	12.2	6	0.3	295
1N5354B	17	70	2.5	75	0.5	12.9	5.8	0.35	280
1N5355B	18	65	2.5	75	0.5	13.7	5.5	0.4	265
1N5356B	19	65	3	75	0.5	14.4	5.3	0.4	250
1N5357B	20	65	3	75	0.5	15.2	5.1	0.4	237
1N5358B	22	50	3.5	75	0.5	16.7	4.7	0.45	216
1N5359B	24	50	3.5	100	0.5	18.2	4.4	0.55	198
1N5360B	25	50	4	110	0.5	19	4.3	0.55	190
1N5361B	27	50	5	120	0.5	20.6	4.1	0.6	176
1N5362B	28	50	6	130	0.5	21.2	3.9	0.6	170
1N5363B	30	40	8	140	0.5	22.8	3.7	0.6	158
1N5364B	33	40	10	150	0.5	25.1	3.5	0.6	144
1N5365B	36	30	11	160	0.5	27.4	3.3	0.65	132
1N5366B	39	30	14	170	0.5	29.7	3.1	0.65	122
1N5367B	43	30	20	190	0.5	32.7	2.8	0.7	110
1N5368B	47	25	25	210	0.5	35.8	2.7	0.8	100
1N5369B	51	25	27	230	0.5	38.8	2.5	0.9	93
1N5370B	56	20	35	280	0.5	42.6	2.3	1	86
1N5371B	60	20	40	350	0.5	42.5	2.2	1.2	79
1N5372B	62	20	42	400	0.5	47.1	2.1	1.35	76
1N5373B	68	20	44	500	0.5	51.7	2	1.5	70

Note 1 Test conditions for zener voltage and impedance are as follows: I_Z is applied 40 ±10ms prior to reading. Mounting contacts are located 3/8" to 1/2" from the inside edge of mounting clips to the body of the diode (T_A = +25°C +8°, −2°C).

Note 2 Surge current is specified as the maximum allowable peak, non−recurrent square−wave current with a pulse width, PW, of 8.3ms. Mounting contact located as specified in Note 1.

Note 3 Test conditions for voltage regulation are as follows: V_Z measurements are made at 10% and then at 50% of the I_Z max value listed in the "Electrical Characteristic" table. The test current time duration for each V_Z measurement is 40 ±10ms (T_A = +25°C +8°, −2°C). Mounting contact located as specified in Note 1.

Electrical Characteristics (Cont'd): (T_A = +25°C unless otherwise specified)

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			Z_{ZT} @ I_{ZT} (Note 1)	Z_{ZK} @ I_{ZK} = 1mA (Note 1)	I_R	@ V_R			
	Volts	mA	Ω	Ω	μA	Volts	Amps	Volt	mA
1N5374B	75	20	45	620	0.5	56	1.9	1.6	63
1N5375B	82	15	65	720	0.5	62.2	1.8	1.8	58
1N5376B	87	15	75	760	0.5	66	1.7	2	54.5
1N5377B	91	15	75	760	0.5	69.2	1.6	2.2	52.5
1N5378B	100	12	90	800	0.5	76	1.5	2.5	47.5
1N5379B	110	12	125	1000	0.5	83.6	1.4	2.5	43
1N5380B	120	10	170	1150	0.5	91.2	1.3	2.5	39.5
1N5381B	130	10	190	1250	0.5	98.8	1.2	2.5	36.6
1N5382B	140	8	230	1500	0.5	106	1.2	2.5	34
1N5383B	150	8	330	1500	0.5	114	1.1	3	31.6
1N5384B	160	8	350	1650	0.5	122	1.1	3	29.4
1N5385B	170	8	380	1750	0.5	129	1	3	28
1N5386B	180	5	430	1750	0.5	137	1	4	26.4
1N5387B	190	5	450	1850	0.5	144	0.9	5	25
1N5388B	200	5	480	1850	0.5	152	0.9	5	23.6

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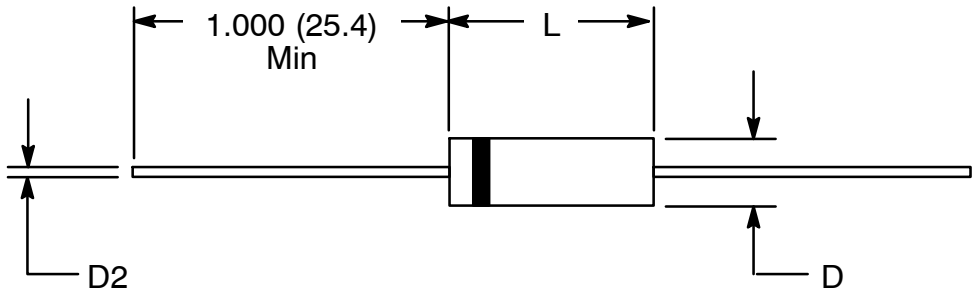

Color Band Denotes Cathode

	DO−15		DO−201	
Dim	Min	Max	Min	Max
L	.216 (5.50)	.300 (7.62)	.283 (7.20)	.374 (9.50)
D	.102 (2.60)	.142 (3.60)	.189 (4.80)	.209 (5.30)
D2	.028 (0.71)	.034 (0.864)	.037 (0.94)	.042 (1.07)

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