Zener diode

Features

1. Low profile package
2. Excellent clamping capability
3. Glass passivated junction
4. V_Z-tolerance±5%

Applications

Voltage stabilization

Absolute Maximum Ratings

T_j=25℃

Parameter	Test Conditions	Type	Symbol	Value	Unit
Power dissipation	T_{amb}≤75℃		P_V	5	W
Z-current			I_Z	P_V/V_Z	mA
Junction temperature			T_j	150	℃
Storage temperature range			T_{stg}	-65~+150	℃

Stresses exceeding maximum ratings may damage the device. Maximum ratings are stress ratings only. Functional operation above the recommended operating conditions is not implied. Extended exposure to stresses above the recommended operating conditions may affect device reliability.

Electrical Characteristics

T_j=25℃

Parameter	Test Conditions	Type	Symbol	Min	Typ	Max	Unit
Forward voltage	I_F=1A		V_F			1.2	V

Type	V_{Znom} 1)	I_{ZT} for Z_{ZT}		Z_{ZK} @ I_{ZK}=1mA	I_R @ V_R		I_R 2)	ΔV_Z 3)	I_{ZM} 4)
	V	mA	Ω	Ω	μA	V	A	V	mA
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
1N5340B	6.0	200	1	300	1	3	12.7	0.19	790
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

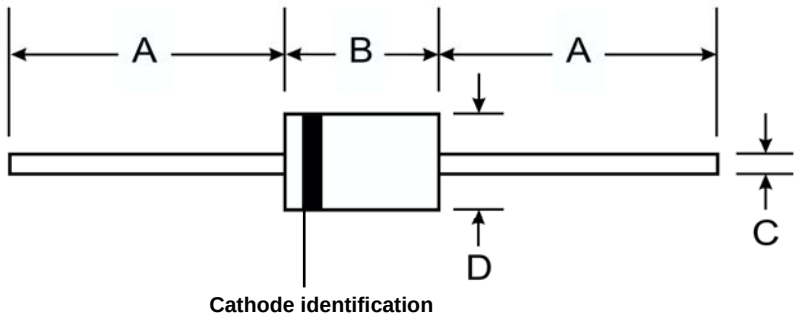
1) Zener voltage (Vz): Based on DC-measurement at thermal equilibrium while maintaining the lead temperature (T_L) at 25℃, 9.5mm (3/8") from the diode body.

2) Surge current (I_R) is specified as the maximum allowable peak, non-recurrent square-wave current with a plus width, PW, of 8.3 ms.

3) Voltage regulation (ΔV_Z): Test conditions for voltage regulation are as below, Vz measurements are made at 10% and then at 50% of the Iz max value listed in the electrical characteristics table. The test current time duration for each Vz measurements is 40±10 ms. (TA=25℃ +8, -2℃)

4) Maximum regulator current (I_{ZM}): The maximum current shown is based on the maximum voltage of a 5% type unit; therefore, it applies only to the B-suffix device. The actual I_{ZM} for any device may not exceed the value of 5 watts divided by the actual Vz of the device. T_L=75℃ at 9.5mm (3/8") from the diode body.

Dimensions in mm



DIMENSIONS				
DIM	INCHES		MM	
	MIN	MAX	MIN	MAX
A	1.000	---	25.40	---
B	0.230	0.300	5.80	7.60
C	0.026	0.034	0.70	0.90
D	0.104	0.140	2.60	3.60

Case: molded plastic DO-15
Polarity: cathode band
Marking: type number

Marking