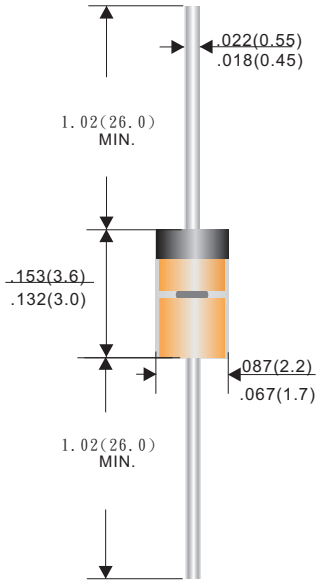
Silicon Z–Diodes

Unit: inch (mm)



Features

- Plannar Die constuction
- 500mW Power Dissipation
- Ideally Suited for Automated Assembly Processes
- V_Z–tolerance ± 5%

Applications

Voltage stabilization

MECHANICAL DATA

Approx. Weight: 0.136 grams

Absolute Maximum Ratings

T_j = 25°C

Parameter	Test Conditions	Type	Symbol	Value	Unit
Power dissipation	T_{amb}=25°C		P_{TOT}	500	mW
Z–current			I_Z	P_V/V_Z	mA
Junction temperature			T_j	175	°C
Storage temperature range			T_{stg}	–65...+175	°C

Maximum Thermal Resistance

T_j = 25°C

Parameter	Test Conditions	Symbol	Value	Unit
Junction ambient	l=9.5mm (3/8"), T_L=constant	R_{thJA}	300	K/W

Electrical Characteristics

T_j = 25°C

Parameter	Test Conditions	Type	Symbol	Min	Typ	Max	Unit
Forward voltage	I_F=200mA		V_F			1.1	V

500 mWatts Zener Diodes

Part No.	Nominal Zener Voltage			Max. Zener Impedance				Max Reverse Leakage Current		TK	Marking Code
	V_Z @ I_{ZT}			Z_{ZT} @ I_{ZT}		Z_{ZK} @ I_{ZK}		I_R @ V_R		V_Z	
	Nom. V	Min. V	Max. V	Ω	mA	Ω	mA	μA	V	%/K	
1N5221B	2.4	2.28	2.52	30	20.0	1200	0.25	100	1.0	< -0.085	1N5221B
1N5222B	2.5	2.38	2.63	30	20.0	1250	0.25	100	1.0	< -0.085	1N5222B
1N5223B	2.7	2.57	2.84	30	20.0	1300	0.25	75	1.0	< -0.080	1N5223B
1N5224B	2.8	2.66	2.94	30	20.0	1400	0.25	75	1.0	< -0.080	1N5224B
1N5225B	3.0	2.85	3.15	29	20.0	1600	0.25	50	1.0	< -0.075	1N5225B
1N5226B	3.3	3.14	3.47	28	20.0	1600	0.25	25	1.0	< -0.070	1N5226B
1N5227B	3.6	3.42	3.78	24	20.0	1700	0.25	15	1.0	< -0.065	1N5227B
1N5228B	3.9	3.71	4.10	23	20.0	1900	0.25	10	1.0	< -0.060	1N5228B
1N5229B	4.3	4.09	4.52	22	20.0	2000	0.25	5.0	1.0	<+0.050	1N5229B
1N5230B	4.7	4.47	4.94	19	20.0	1900	0.25	5.0	2.0	<+0.030	1N5230B
1N5231B	5.1	4.85	5.36	17	20.0	1600	0.25	5.0	2.0	<+0.030	1N5231B
1N5232B	5.6	5.32	5.88	11	20.0	1600	0.25	5.0	3.0	<+0.038	1N5232B
1N5233B	6.0	5.70	6.30	7	20.0	1600	0.25	5.0	3.5	<+0.038	1N5233B
1N5234B	6.2	5.89	6.51	7	20.0	1000	0.25	5.0	4.0	<+0.045	1N5234B
1N5235B	6.8	6.46	7.14	5	20.0	750	0.25	3.0	5.0	<+0.050	1N5235B
1N5236B	7.5	7.13	7.88	6	20.0	500	0.25	3.0	6.0	<+0.058	1N5236B
1N5237B	8.2	7.79	8.61	8	20.0	500	0.25	3.0	6.5	<+0.062	1N5237B
1N5238B	8.7	8.27	9.14	8	20.0	600	0.25	3.0	6.5	<+0.065	1N5238B
1N5239B	9.1	8.65	9.56	10	20.0	600	0.25	3.0	7.0	<+0.068	1N5239B
1N5240B	10.0	9.50	10.50	17	20.0	600	0.25	3.0	8.0	<+0.075	1N5240B
1N5241B	11.0	10.45	11.55	22	20.0	600	0.25	2.0	8.4	<+0.076	1N5241B
1N5242B	12.0	11.40	12.60	30	20.0	600	0.25	1.0	9.1	<+0.077	1N5242B
1N5243B	13.0	12.35	13.65	13	9.5	600	0.25	0.5	9.9	<+0.079	1N5243B
1N5244B	14.0	13.30	14.70	15	9.0	600	0.25	0.1	10.0	<+0.082	1N5244B
1N5245B	15.0	14.25	15.75	16	8.5	600	0.25	0.1	11.0	<+0.082	1N5245B
1N5246B	16.0	15.20	16.80	17	7.8	600	0.25	0.1	12.0	<+0.083	1N5246B
1N5247B	17.0	16.15	17.85	19	7.4	600	0.25	0.1	13.0	<+0.084	1N5247B
1N5248B	18.0	17.10	18.90	21	7.0	600	0.25	0.1	14.0	<+0.085	1N5248B
1N5249B	19.0	18.05	19.95	23	6.6	600	0.25	0.1	14.0	<+0.086	1N5249B
1N5250B	20.0	19.00	21.00	25	6.2	600	0.25	0.1	15.0	<+0.086	1N5250B
1N5251B	22.0	20.90	23.10	29	5.6	600	0.25	0.1	17.0	<+0.087	1N5251B
1N5252B	24.0	22.80	25.20	33	5.2	600	0.25	0.1	18.0	<+0.088	1N5252B
1N5253B	25.0	23.75	26.25	35	5.0	600	0.25	0.1	19.0	<+0.089	1N5253B
1N5254B	27.0	25.65	28.35	41	4.6	600	0.25	0.1	21.0	<+0.090	1N5254B
1N5255B	28.0	26.60	29.40	44	4.5	600	0.25	0.1	21.0	<+0.091	1N5255B
1N5256B	30.0	28.50	31.50	49	4.2	600	0.25	0.1	23.0	<+0.091	1N5256B
1N5257B	33.0	31.35	34.65	58	3.8	700	0.25	0.1	25.0	<+0.092	1N5257B
1N5258B	36.0	34.20	37.80	70	3.4	700	0.25	0.1	27.0	<+0.093	1N5258B
1N5259B	39.0	37.05	40.95	80	3.2	800	0.25	0.1	30.0	<+0.094	1N5259B
1N5260B	43.0	40.85	45.15	93	3.0	900	0.25	0.1	33.0	<+0.095	1N5260B

500 mWatts Zener Diodes

Part No.	Nominal Zener Voltage			Max. Zener Impedance				Max Reverse Leakage Current		TK	Marking Code
	V_Z @ I_{ZT}			Z_{ZT} @ I_{ZT}		Z_{ZK} @ I_{ZK}		I_R @ V_R		V_Z	
	Nom. V	Min. V	Max. V	Ω	mA	Ω	mA	μA	V	%/K	
1N5261B	47.0	44.65	49.35	150	2.7	1000	0.25	0.1	36.0	<+0.095	1N5261B
1N5262B	51.0	48.45	53.55	125	2.5	1100	0.25	0.1	39.0	<+0.096	1N5262B
1N5263B	56.0	53.20	58.80	150	2.2	1300	0.25	0.1	43.0	<+0.096	1N5263B
1N5264B	60.0	57.00	63.00	170	2.1	1400	0.25	0.1	46.0	<+0.097	1N5264B
1N5265B	62.0	58.90	65.10	185	2.0	1400	0.25	0.1	47.0	<+0.097	1N5265B
1N5266B	68.0	64.60	71.40	230	1.8	1600	0.25	0.1	52.0	<+0.097	1N5266B
1N5267B	75.0	71.25	78.75	270	1.7	1700	0.25	0.1	56.0	<+0.098	1N5267B

1) Based on dc–measurement at thermal equilibrium; lead length = 9.5mm (3/8”); thermal resistance of heat sink = 30K/W

RATING AND CHARACTERISTIC CURVES

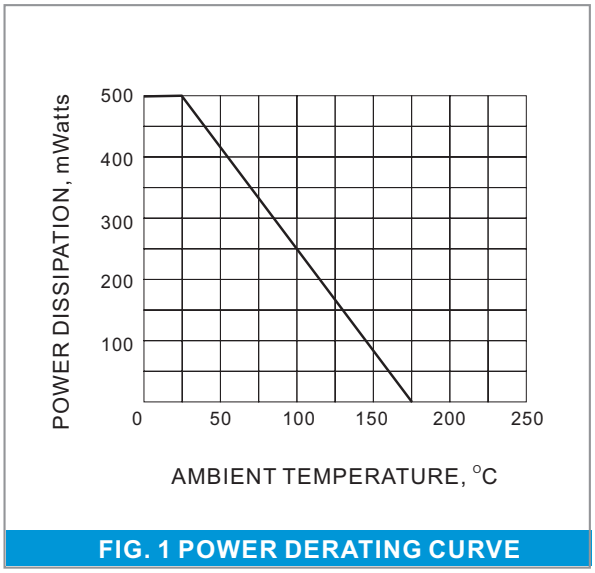


FIG. 1 POWER DERATING CURVE

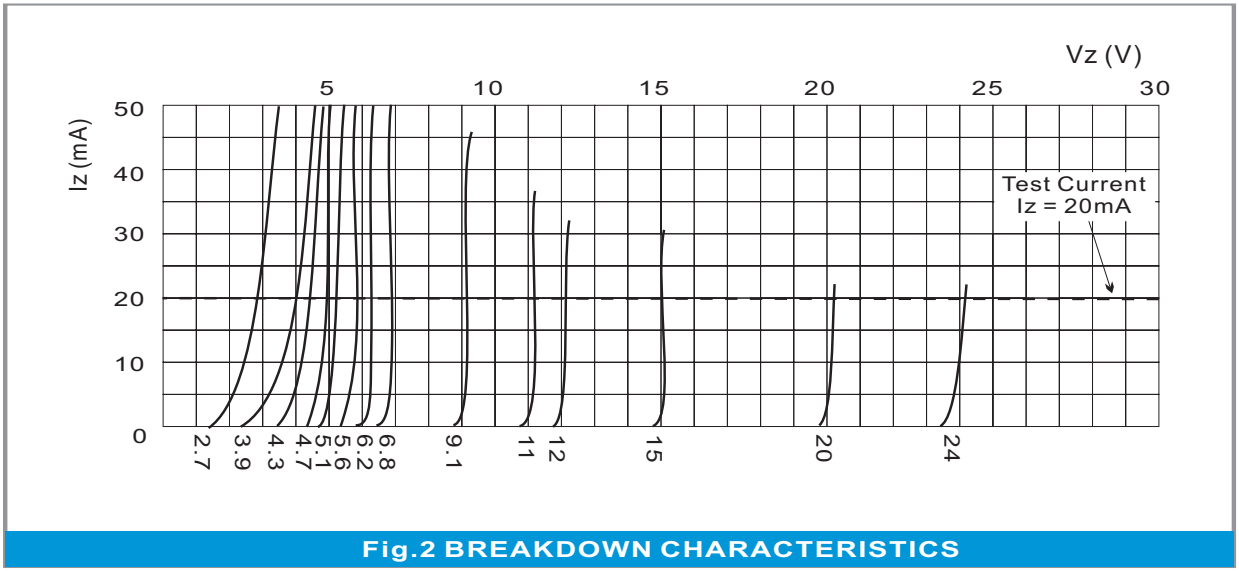


Fig.2 BREAKDOWN CHARACTERISTICS