

LBZT52B18T1G

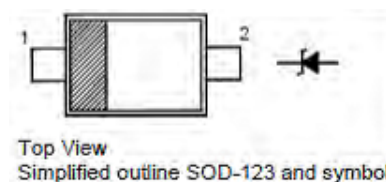
SILICON PLANAR ZENER DIODES

Features

- Total power dissipation: Max. 500 mW
- Small plastic package suitable for surface mounted design
- Tolerance approximately $\pm 5\%$

PINNING

PIN	DESCRIPTION
1	Cathode
2	Anode



Absolute Maximum Ratings ($T_a = 25^\circ\text{C}$)

Parameter	Symbol	Value	Unit
Power Dissipation	P_{tot}	500	mW
Junction Temperature	T_j	150	$^\circ\text{C}$
Storage Temperature Range	T_{Stg}	- 55 to + 150	$^\circ\text{C}$

Characteristics at $T_a = 25^\circ\text{C}$

Parameter	Symbol	Max.	Unit
Thermal Resistance Junction to Ambient Air	$R_{\theta JA}$	350	$^\circ\text{C/W}$
Forward Voltage at $I_F = 10\text{ mA}$	V_F	0.9	V

Characteristics at $T_a = 25\text{ °C}$

Type	Zener Voltage Range ¹⁾			Dynamic Impedance ²⁾			Reverse Current	
	V_{znom} V	I_{ZT}	for V_{ZT}	Z_{ZT}	Z_{ZK}	at I_{ZK}	I_R	at V_R
		mA	V	Ω (Max.)	Ω (Max.)	mA	μA (Max.)	V
LBZT52B2V4T1G	2.4	20	2.28...2.52	30	1200	0.25	100	1
LBZT52B2V7T1G	2.7	20	2.57...2.84	30	1300	0.25	75	1
LBZT52B3V0T1G	3.0	20	2.85...3.15	29	1600	0.25	50	1
LBZT52B3V3T1G	3.3	20	3.14...3.47	28	1600	0.25	25	1
LBZT52B3V6T1G	3.6	20	3.42...3.78	24	1700	0.25	15	1
LBZT52B3V9T1G	3.9	20	3.71...4.1	23	1900	0.25	10	1
LBZT52B4V3T1G	4.3	20	4.09...4.52	22	2000	0.25	5	1
LBZT52B4V7T1G	4.7	20	4.47...4.94	19	1900	0.25	5	2
LBZT52B5V1T1G	5.1	20	4.85...5.36	17	1600	0.25	5	2
LBZT52B5V6T1G	5.6	20	5.32...5.88	11	1600	0.25	5	3
LBZT52B6V2T1G	6.2	20	5.89...6.51	7	1000	0.25	5	4
LBZT52B6V8T1G	6.8	20	6.46...7.14	5	750	0.25	3	5
LBZT52B7V5T1G	7.5	20	7.13...7.88	6	500	0.25	3	6
LBZT52B8V2T1G	8.2	20	7.79...8.61	8	500	0.25	3	6.5
LBZT52B9V1T1G	9.1	20	8.65...9.56	10	600	0.25	3	7
LBZT52B10T1G	10	20	9.5...10.5	17	600	0.25	3	8
LBZT52B11T1G	11	20	10.45...11.55	22	600	0.25	2	8.4
LBZT52B12T1G	12	20	11.4...12.6	30	600	0.25	1	9.1
LBZT52B13T1G	13	9.5	12.35...13.65	13	600	0.25	0.5	9.9
LBZT52B15T1G	15	8.5	14.25...15.75	16	600	0.25	0.1	11
LBZT52B16T1G	16	7.8	15.2...16.8	17	600	0.25	0.1	12
LBZT52B18T1G	18	7	17.1...18.9	21	600	0.25	0.1	14
LBZT52B19T1G	19	6.6	18.05...19.95	23	600	0.25	0.1	14
LBZT52B20T1G	20	6.2	19...21	25	600	0.25	0.1	15
LBZT52B22T1G	22	5.6	20.9...23.1	29	600	0.25	0.1	17
LBZT52B24T1G	24	5.2	22.8...25.2	33	600	0.25	0.1	18
LBZT52B25T1G	25	5	23.75...26.25	35	600	0.25	0.1	19
LBZT52B27T1G	27	4.6	25.65...28.35	41	600	0.25	0.1	21
LBZT52B30T1G	30	4.2	28.5...31.5	49	600	0.25	0.1	23
LBZT52B33T1G	33	3.8	31.35...34.65	58	700	0.25	0.1	25
LBZT52B36T1G	36	3.4	34.2...37.8	70	700	0.25	0.1	27
LBZT52B39T1G	39	3.2	37.05...40.95	80	800	0.25	0.1	30
LBZT52B43T1G	43	3	40.85...45.15	93	900	0.25	0.1	33
LBZT52B47T1G	47	2.7	44.65...49.35	105	1000	0.25	0.1	36
LBZT52B51T1G	51	2.5	48.45...53.55	125	1100	0.25	0.1	39
LBZT52B56T1G	56	2.2	53.2...58.8	150	1300	0.25	0.1	43
LBZT52B62T1G	62	2	58.9...65.1	185	1400	0.25	0.1	47
LBZT52B68T1G	68	1.8	64.6...71.4	230	1600	0.25	0.1	52
LBZT52B75T1G	75	1.7	71.25...78.75	270	1700	0.25	0.1	56

¹⁾ V_Z is tested with pulses (20 ms)

²⁾ Z_{ZT} and Z_{ZK} are measured by dividing the AC voltage drop across the device by the AC current applied. The specified limits are for $I_{Z(AC)} = 0.1 I_{Z(DC)}$ with the AC frequency = 1 KHz.

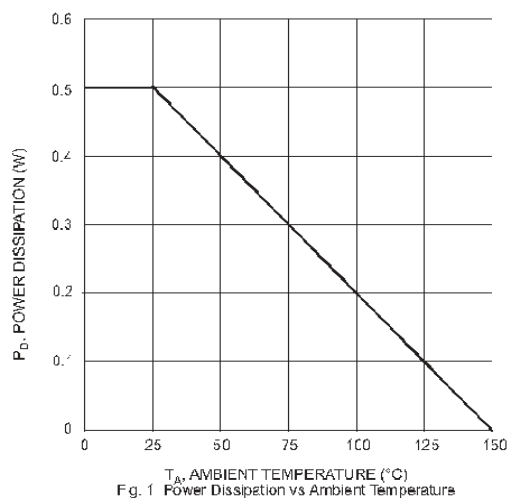


Fig. 1 Power Dissipation vs Ambient Temperature

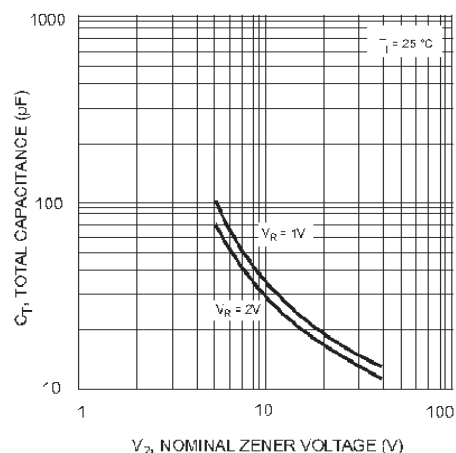


Fig. 2 Total Capacitance vs Nominal Zener Voltage

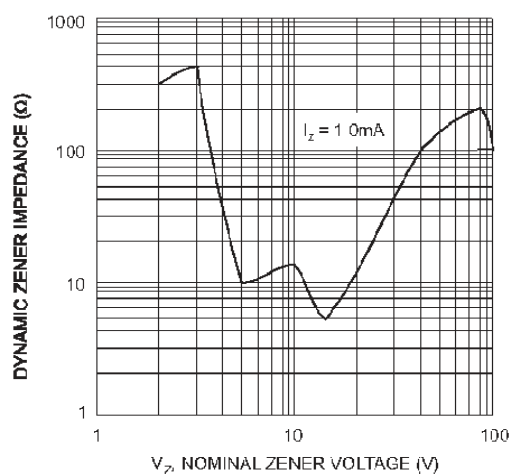


Fig. 3 Zener Voltage vs Zener Impedance

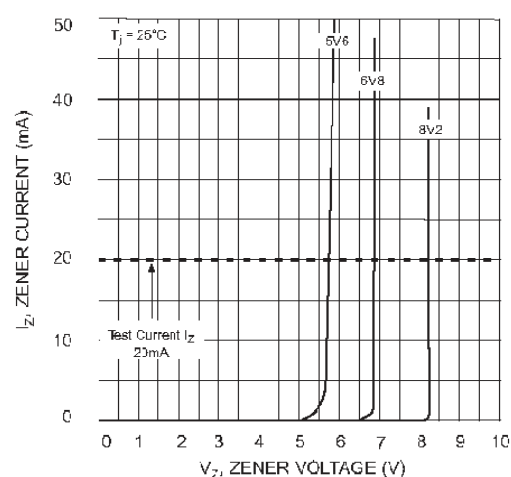


Fig. 4 Zener Breakdown Characteristics

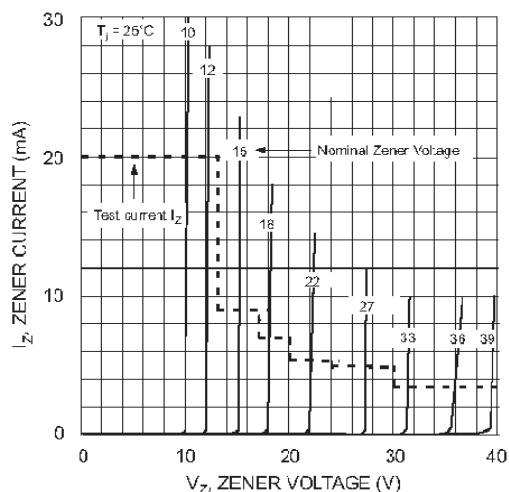


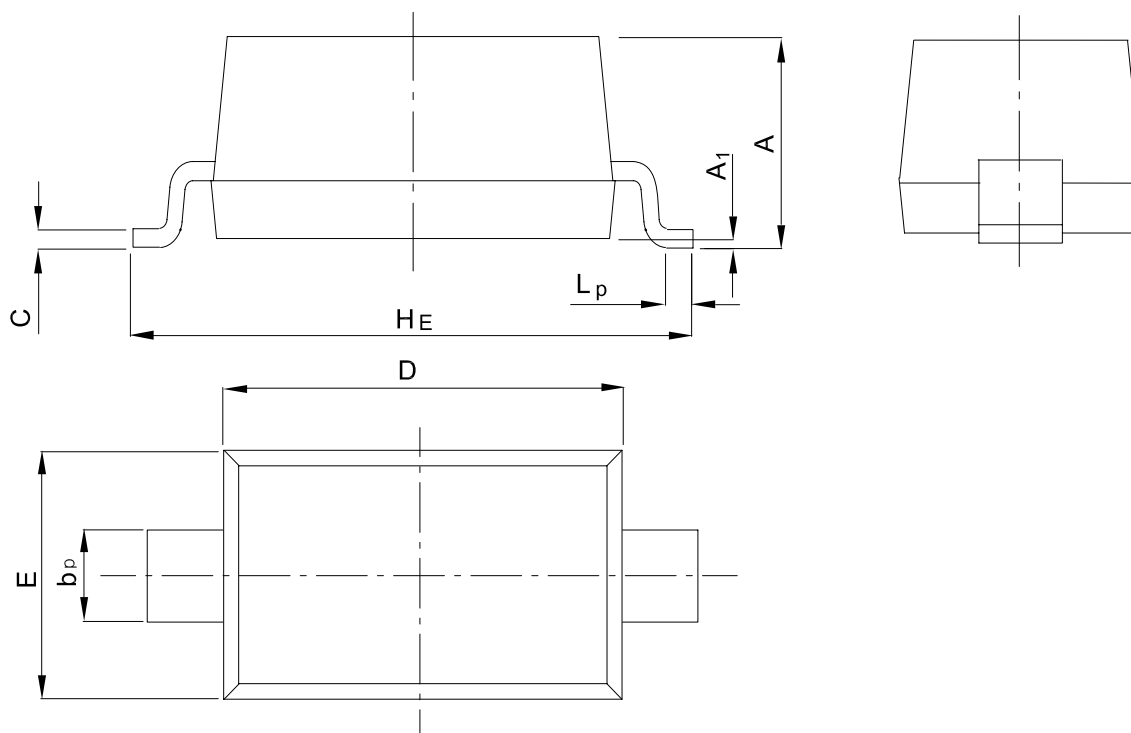
Fig. 5 Zener Breakdown Characteristics

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PACKAGE OUTLINE

Plastic surface mounted package; 2 leads

SOD-123



UNIT	A	bp	C	D	E	HE	A1	Lp
mm	1.20	0.60	0.135	2.75	1.65	3.85	0.10	0.50
	0.90	0.50	0.100	2.55	1.55	3.55	0.01	0.20

