

Surface Mount Zener Diodes

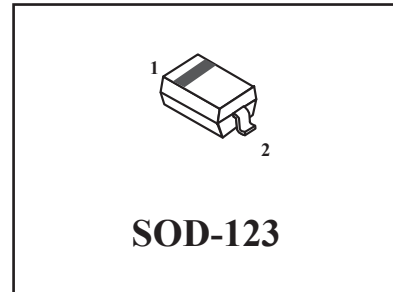
Features:

- *500mw Power Dissipation
- *Ideal for Surface Mounted Application
- *Zener Breakdown Voltage Range 2.0V to 36V
- *Pb-Free package is available
- *Compliance with RoHS requirements and Halogen Free.

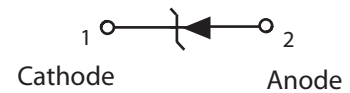
Mechanical Data:

- *Case : SOD-123 Molded plastic
- *Terminals: Solderable per MIL-STD-202, Method 208
- *Polarity: Cathode Indicated by Polarity Band
- *Marking: Marking Code (See Specific marking table)
- *Weigh: 0.01grams(approx)

LBZT52B2V0T1G Series



Equivalent Circuit Diagram



Maximum Ratings and Electrical Characteristics (TA=25 °C Unless Otherwise Noted)

Characteristics	Symbol	Value	Unit
Total Power Dissipation on FR-5 Board ⁽¹⁾	PD	500	mW
Thermal Resistance Junction to Ambient Air ⁽¹⁾	R ^θ JA	305	°C/W
Forward Voltage @ IF=10mA	VF	0.9	V
Junction and Storage Temperature Range	Tj,TSTG	-55 to +150	°C

NOTES: 1. Device mounted on ceramic PCB; 7.6mm × 9.4mm × 0.87mm with pad areas 25mm²

Device Marking Code

Device	Marking	Device	Marking
LBZT52B2V0T1G	02	LBZT52B9V1T1G	L2
LBZT52B2V2T1G	12	LBZT52B10T1G	05
LBZT52B2V4T1G	22	LBZT52B11T1G	15
LBZT52B2V7T1G	32	LBZT52B12T1G	25
LBZT52B3V0T1G	42	LBZT52B13T1G	35
LBZT52B3V3T1G	52	LBZT52B15T1G	45
LBZT52B3V6T1G	62	LBZT52B16T1G	55
LBZT52B3V9T1G	72	LBZT52B18T1G	65
LBZT52B4V3T1G	82	LBZT52B20T1G	75
LBZT52B4V7T1G	92	LBZT52B22T1G	85
LBZT52B5V1T1G	A2	LBZT52B24T1G	95
LBZT52B5V6T1G	C2	LBZT52B27T1G	A5
LBZT52B6V2T1G	E2	LBZT52B30T1G	C5
LBZT52B6V8T1G	F2	LBZT52B33T1G	E5
LBZT52B7V5T1G	H2	LBZT52B36T1G	F5
LBZT52B8V2T1G	J2	-	-

Ratings and Characteristic curves

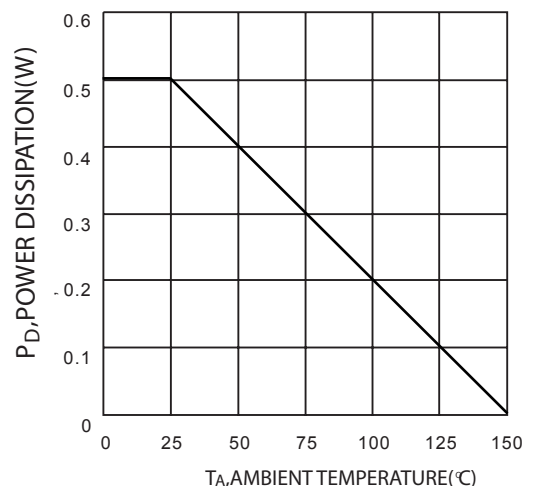


FIG. 1 Power Dissipation vs Ambient temperature

LBZT52B2V0T1G Series

Electrical Characteristics ($T_A=25^{\circ}\text{C}$ unless otherwise noted, $V_F=0.9\text{V Max@ } I_F=10\text{mA}$)

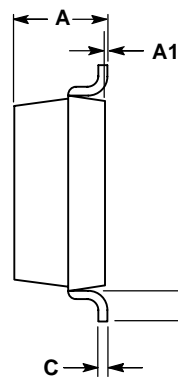
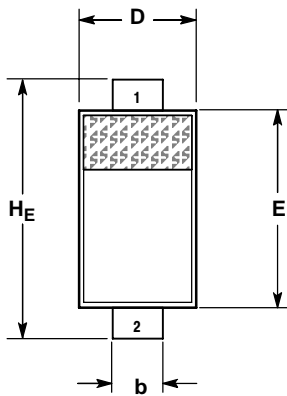
Device	Zener voltage			Operating resistance		Rising operating resistance		Reverse curre	
	$V_Z(\text{V})$			$Z_Z(\Omega)$		$Z_{zk}(\Omega)$		$I_R(\mu\text{A})$	
	Min.	Max.	I_Z (mA)	Max.	I_Z (mA)	Max.	I_Z (mA)	Max.	V_R (V)
LBZT52B2V0T1G	2.020	2.200	5	100	5	1000	0.5	120	0.5
LBZT52B2V2T1G	2.220	2.410	5	100	5	1000	0.5	120	0.7
LBZT52B2V4T1G	2.430	2.630	5	100	5	1000	0.5	100	1.0
LBZT52B2V7T1G	2.690	2.910	5	110	5	1000	0.5	100	1.0
LBZT52B3V0T1G	3.010	3.220	5	120	5	1000	0.5	50	1.0
LBZT52B3V3T1G	3.320	3.530	5	120	5	1000	0.5	20	1.0
LBZT52B3V6T1G	3.600	3.845	5	100	5	1000	1.0	10	1.0
LBZT52B3V9T1G	3.890	4.160	5	100	5	1000	1.0	5	1.0
LBZT52B4V3T1G	4.170	4.430	5	100	5	1000	1.0	5	1.0
LBZT52B4V7T1G	4.550	4.750	5	100	5	800	0.5	2	1.0
LBZT52B5V1T1G	4.980	5.200	5	80	5	500	0.5	2	1.5
LBZT52B5V6T1G	5.490	5.730	5	60	5	200	0.5	1	2.5
LBZT52B6V2T1G	6.060	6.330	5	60	5	100	0.5	1	3.0
LBZT52B6V8T1G	6.650	6.930	5	40	5	60	0.5	0.5	3.5
LBZT52B7V5T1G	7.280	7.600	5	30	5	60	0.5	0.5	4.0
LBZT52B8V2T1G	8.020	8.360	5	30	5	60	0.5	0.5	5.0
LBZT52B9V1T1G	8.850	9.230	5	30	5	60	0.5	0.5	6.0
LBZT52B10T1G	9.770	10.210	5	30	5	60	0.5	0.1	7.0
LBZT52B11T1G	10.760	11.220	5	30	5	60	0.5	0.1	8.0
LBZT52B12T1G	11.740	12.240	5	30	5	80	0.5	0.1	9.0
LBZT52B13T1G	12.910	13.490	5	37	5	80	0.5	0.1	10.0
LBZT52B15T1G	14.340	14.980	5	42	5	80	0.5	0.1	11.0
LBZT52B16T1G	15.850	16.510	5	50	5	80	0.5	0.1	12.0
LBZT52B18T1G	17.560	18.350	5	65	5	80	0.5	0.1	13.0
LBZT52B20T1G	19.520	20.390	5	85	5	100	0.5	0.1	15.0
LBZT52B22T1G	21.540	22.470	5	100	5	100	0.5	0.1	17.0
LBZT52B24T1G	23.720	24.780	5	120	5	120	0.5	0.1	19.0
LBZT52B27T1G	26.190	27.530	5	150	5	150	0.5	0.1	21.0
LBZT52B30T1G	29.190	30.690	5	200	5	200	0.5	0.1	23.0
LBZT52B33T1G	32.150	33.790	5	250	5	250	0.5	0.1	25.0
LBZT52B36T1G	35.070	36.870	5	300	5	300	0.5	0.1	27.0

Notes) 1. The Zener voltage (V_Z) is measured 40ms after power is supplied.

2. The operating resistances (Z_Z , Z_{zk}) are measured by superimposing a minute alternating current on the regulated current (I_Z).

LBZT52B2V0T1G Series

SOD-123

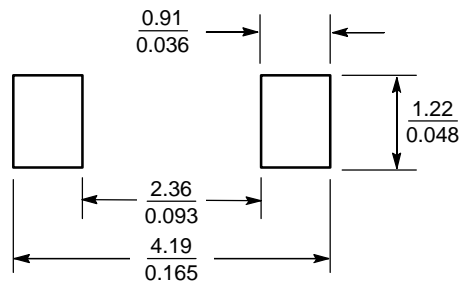


- NOTES:
 1. DIMENSIONING AND TOLERANCING PER ANSI Y14.5M, 1982.
 2. CONTROLLING DIMENSION: INCH.

DIM	MILLIMETERS			INCHES		
	MIN	NOM	MAX	MIN	NOM	MAX
A	0.94	1.17	1.35	0.037	0.046	0.053
A1	0.00	0.05	0.10	0.000	0.002	0.004
b	0.51	0.61	0.71	0.020	0.024	0.028
c	---	---	0.15	---	---	0.006
D	1.40	1.60	1.80	0.055	0.063	0.071
E	2.54	2.69	2.84	0.100	0.106	0.112
HE	3.56	3.68	3.86	0.140	0.145	0.152
L	0.25	---	---	0.010	---	---

STYLE 1:
 PIN 1. CATHODE
 2. ANODE

SOLDERING FOOTPRINT*



SCALE 10:1 (mm/inches)

DISCLAIMER

- Curve guarantee in the specification. The curve of test items with electric parameter is used as quality guarantee. The curve of test items without electric parameter is used as reference only.
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