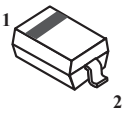
Surface Mount Zener Diodes

S-LBZT52B2V0T1G Series

Features:

*500mw Power Dissipation
*Ideal for Surface Mountted Application
*Zener Breakdown Voltage Range 2.0V to 36V
*Pb-Free package is available
*S- Prefix for Automotive and Other Applications Requiring Unique Site and Control Change Requirements; AEC-Q101 Qualified and PPAP Capable.



SOD-123

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)

Equivalent Circuit Diagram

Cathode Anode

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

Characteristics	Symbol	Value	Unit
Total Power Dissipation on FR-5 Board(1)	P_D	500	mW
Thermal Resistance Junction to Ambient Air(1)	$R_{\theta JA}$	305	°C/W
Forward Voltage @ IF=10mA	VF	0.9	V
Junction and Storage Temperature Range	T_J ,T_{STG}	-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
S-LBZT52B2V0T1G	02	S-LBZT52B9V1T1G	L2
S-LBZT52B2V2T1G	12	S-LBZT52B10T1G	05
S-LBZT52B2V4T1G	22	S-LBZT52B11T1G	15
S-LBZT52B2V7T1G	32	S-LBZT52B12T1G	25
S-LBZT52B3V0T1G	42	S-LBZT52B13T1G	35
S-LBZT52B3V3T1G	52	S-LBZT52B15T1G	45
S-LBZT52B3V6T1G	62	S-LBZT52B16T1G	55
S-LBZT52B3V9T1G	72	S-LBZT52B18T1G	65
S-LBZT52B4V3T1G	82	S-LBZT52B20T1G	75
S-LBZT52B4V7T1G	92	S-LBZT52B22T1G	85
S-LBZT52B5V1T1G	A2	S-LBZT52B24T1G	95
S-LBZT52B5V6T1G	C2	S-LBZT52B27T1G	A5
S-LBZT52B6V2T1G	E2	S-LBZT52B30T1G	C5
S-LBZT52B6V8T1G	F2	S-LBZT52B33T1G	E5
S-LBZT52B7V5T1G	H2	S-LBZT52B36T1G	F5
S-LBZT52B8V2T1G	J2	-	-

Ratings and Characteristic curves

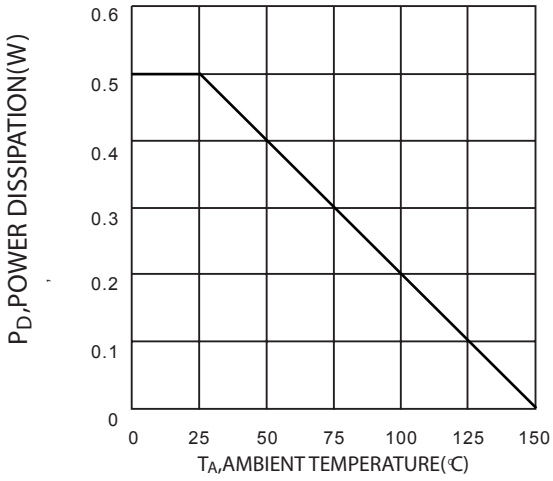


FIG. 1 Power Disspation vs Ambient temperaute

S-LBZT52B2V0T1G Series

Electrical Characteristics (T_A=25°C unless otherwise noted, V_F=0.9V Max@ I_F=10mA)

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

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ELECTRICAL CHARACTERISTIC CURVES (Ta=25°C)

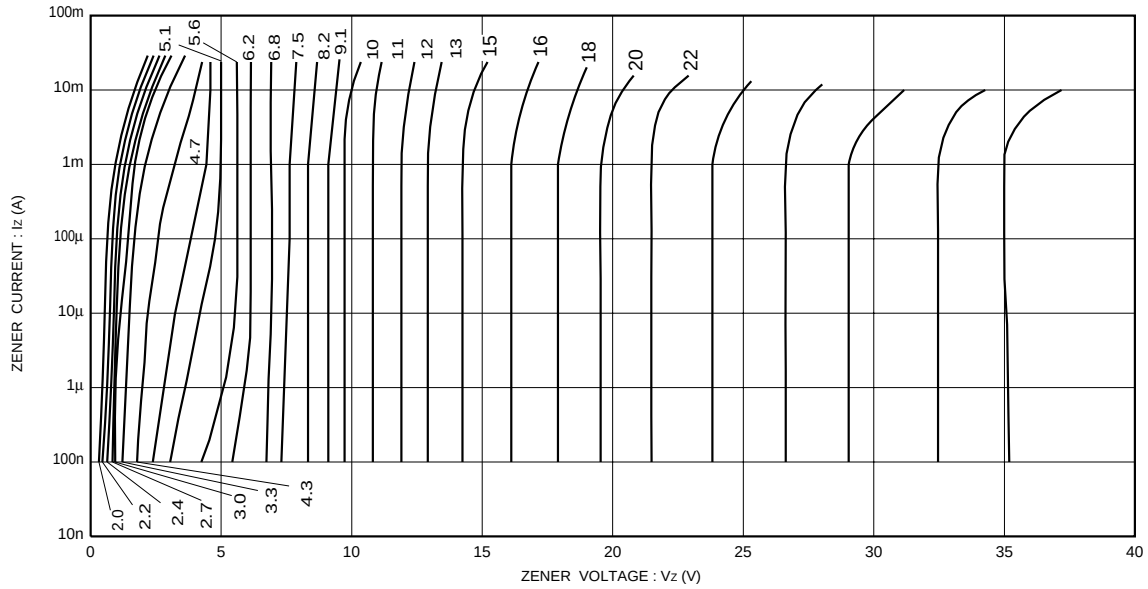


Fig.1 Zener voltage characteristics

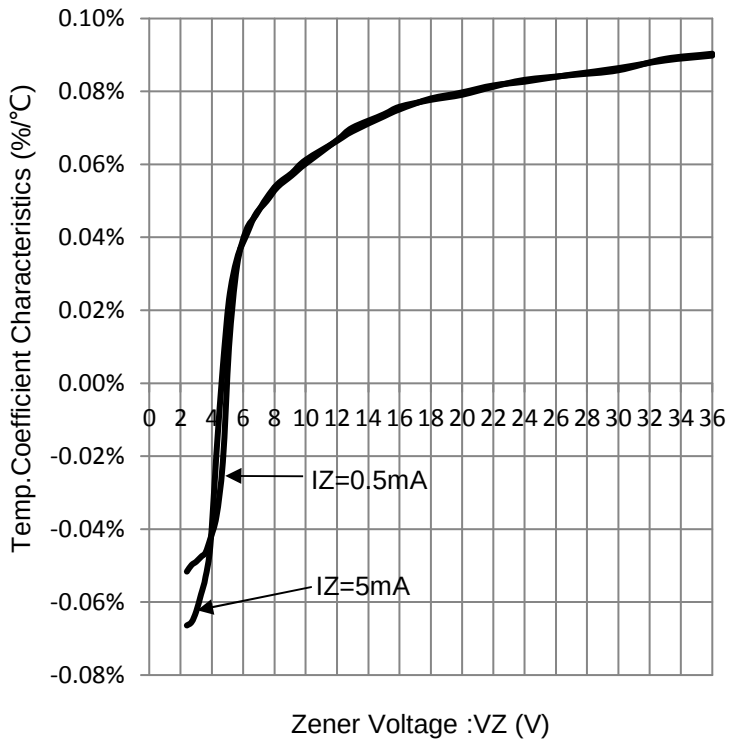
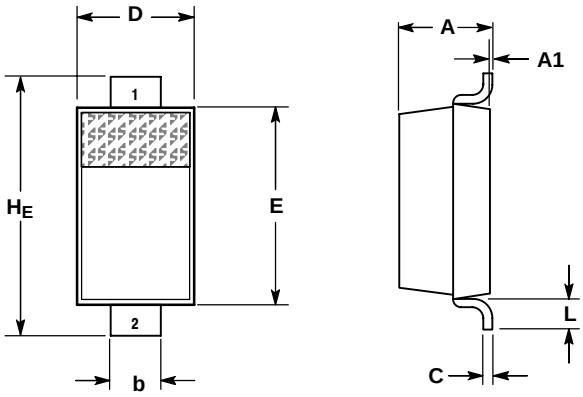


Fig.2 Zener Voltage- temp.coefficient characteristics

S-LBZT52B2V0T1G Series

SOD−123

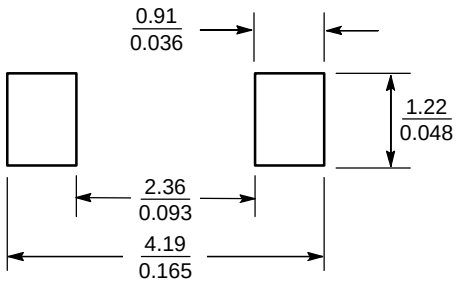


NOTES:
1. DIMENSIONING AND TOLERANCING PER ANSI Y14.5M, 1982.
2. CONTROLLING DIMENSION: INCH.

	MILLIMETERS			INCHES		
DIM	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
H_E	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 $\left(\frac{mm}{inches}\right)$

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