

Surface Mount Zener Diodes

(Pb) Lead(Pb)-Free

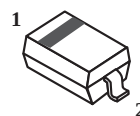
Features:

- *500mw Power Dissipation
- *Ideal for Surface Mountted Application
- *Zener Breakdown Voltage Range 2.0V to 36V

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 Table on Page 3)
- *Weigh: 0.01grams(approx)

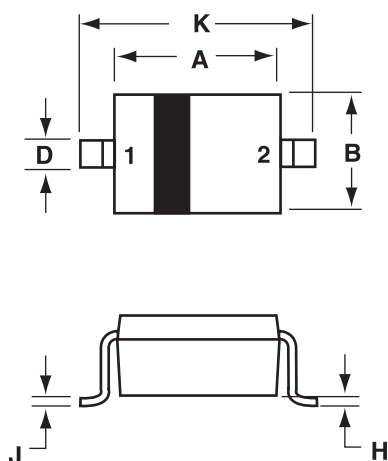
**SMALL SIGNAL
ZENER DIODES
500m WATTS**



SOD-123

SOD-123 Outline Dimensions

Unit:mm



SOD-123		
Dim	Min	Max
A	2.55	2.85
B	1.40	1.80
C	0.95	1.35
D	0.50	0.70
E	0.30 REF	
H	-	0.10
J	-	0.15
K	3.55	3.85

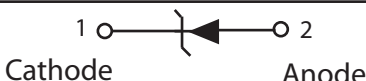
PIN 1. CATHODE
2. ANODE

Maximum Ratings and Electrical Characteristics($T_A=25^{\circ}\text{C}$ 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	$^{\circ}\text{C}/\text{W}$
Forward Voltage @ $I_F=10\text{mA}$	V_F	0.9	V
Junction Temperature Range	T_J	-55 to +125	$^{\circ}\text{C}$
Storage Temperature Range	T_{STG}	-55 to +125	$^{\circ}\text{C}$

Note 1. Device mounted on ceramic PCB; 7.6mm x 9.4mm x 0.87mm with pad areas 25mm²

Device Marking

Item	Marking	Equivalent Circuit Diagram
BZT52B2V0 Series	XX=Specific Device Code (See Table on page3)	

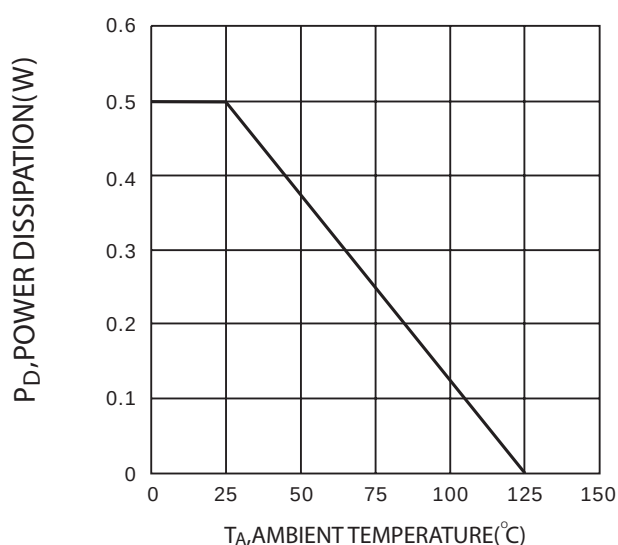
Ratings and Characteristic curves

FIG. 1 Power Dissipation vs Ambient temperature

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

Device	Marking	Zener voltage			Operating resistance		Rising operating resistance		Reverse current	
		$V_Z(\text{V})$			$Z_Z(\Omega)$		$Z_{ZK}(\Omega)$		$I_R(\mu\text{A})$	
		Min.	Max.	I_Z (mA)	Max.	I_Z (mA)	Max.	I_Z (mA)	Max.	V_R (V)
BZT52B2V0	02	2.020	2.200	5	100	5	1000	0.5	120	0.5
BZT52B2V2	12	2.220	2.410	5	100	5	1000	0.5	120	0.7
BZT52B2V4	22	2.430	2.630	5	100	5	1000	0.5	100	1.0
BZT52B2V7	32	2.690	2.910	5	110	5	1000	0.5	100	1.0
BZT52B3V0	42	3.010	3.220	5	120	5	1000	0.5	50	1.0
BZT52B3V3	52	3.320	3.530	5	120	5	1000	0.5	20	1.0
BZT52B3V6	62	3.600	3.845	5	100	5	1000	1.0	10	1.0
BZT52B3V9	72	3.890	4.160	5	100	5	1000	1.0	5	1.0
BZT52B4V3	82	4.170	4.430	5	100	5	1000	1.0	5	1.0
BZT52B4V7	92	4.550	4.750	5	100	5	800	0.5	2	1.0
BZT52B5V1	A2	4.980	5.200	5	80	5	500	0.5	2	1.5
BZT52B5V6	C2	5.490	5.730	5	60	5	200	0.5	1	2.5
BZT52B6V2	E2	6.060	6.330	5	60	5	100	0.5	1	3.0
BZT52B6V8	F2	6.650	6.930	5	40	5	60	0.5	0.5	3.5
BZT52B7V5	H2	7.280	7.600	5	30	5	60	0.5	0.5	4.0
BZT52B8V2	J2	8.020	8.360	5	30	5	60	0.5	0.5	5.0
BZT52B9V1	L2	8.850	9.230	5	30	5	60	0.5	0.5	6.0
BZT52B10	05	9.770	10.210	5	30	5	60	0.5	0.1	7.0
BZT52B11	15	10.760	11.220	5	30	5	60	0.5	0.1	8.0
BZT52B12	25	11.740	12.240	5	30	5	80	0.5	0.1	9.0
BZT52B13	35	12.910	13.490	5	37	5	80	0.5	0.1	10.0
BZT52B15	45	14.340	14.980	5	42	5	80	0.5	0.1	11.0
BZT52B16	55	15.850	16.510	5	50	5	80	0.5	0.1	12.0
BZT52B18	65	17.560	18.350	5	65	5	80	0.5	0.1	13.0
BZT52B20	75	19.520	20.390	5	85	5	100	0.5	0.1	15.0
BZT52B22	85	21.540	22.470	5	100	5	100	0.5	0.1	17.0
BZT52B24	95	23.720	24.780	5	120	5	120	0.5	0.1	19.0
BZT52B27	A5	26.190	27.530	5	150	5	150	0.5	0.1	21.0
BZT52B30	C5	29.190	30.690	5	200	5	200	0.5	0.1	23.0
BZT52B33	E5	32.150	33.790	5	250	5	250	0.5	0.1	25.0
BZT52B36	F5	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).