

Zener Voltage Regulators

 Lead(Pb)-Free

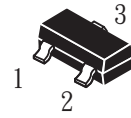
FEATURES

- Non-wire bonding structure improves
- High demand voltage range (3.6V-36V)
- This is a Pb-Free device

CONSTRUCTION

- Silicon epitaxial planar
- Pb-Free package is available**

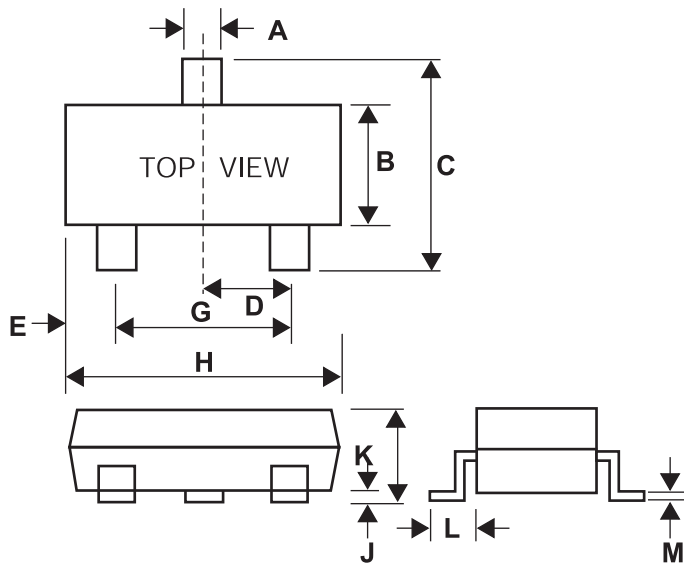
**SMALL SIGNAL
ZENER DIODES
225m WATTS**



SOT-23

SOT-23 Outline Dimensions

Unit:mm



Dim	Min	Max
A	0.35	0.51
B	1.19	1.40
C	2.10	3.00
D	0.85	1.05
E	0.46	1.00
G	1.70	2.10
H	2.70	3.10
J	0.01	0.13
K	0.89	1.10
L	0.30	0.61
M	0.076	0.25

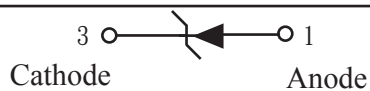
ABSOLUTE MAXIMUM RATINGS (TA=25 °C)

Parameter	Symbol	Limits	Unit
Power dissipation	P	225	mW
Junction temperature	Tj	+125	°C
Storage temperature	Tstg	-55 to+125	°C
Operating temperature	Topr	-55 to+125	°C

DEVICE MARKING CODE

Device	Marking	Device	Marking	Device	Marking
BZX84B2V0	02	BZX84B5V6	C2	BZX84B16	55
BZX84B2V2	12	BZX84B6V2	E2	BZX84B18	65
BZX84B2V4	22	BZX84B6V8	F2	BZX84B20	75
BZX84B2V7	32	BZX84B7V5	H2	BZX84B22	85
BZX84B3V0	42	BZX84B8V2	J2	BZX84B24	95
BZX84B3V3	52	BZX84B9V1	L2	BZX84B27	A5
BZX84B3V6	62	BZX84B10	05	BZX84B30	C5
BZX84B3V9	72	BZX84B11	15	BZX84B33	E5
BZX84B4V3	82	BZX84B12	25	BZX84B36	F5
BZX84B4V7	92	BZX84B13			
BZX84B5V1	A2	BZX84B15			

Equivalent Circuit Diagram



ELECTRICAL CHARACTERISTICS (Ta=25°C)

Device	Zener voltage			Operating resistance		Rising operating resistance		Reverse current	
	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)
BZX84B2V0	2.020	2.200	5	100	5	1000	0.5	120	0.5
BZX84B2V2	2.220	2.410	5	100	5	1000	0.5	120	0.7
BZX84B2V4	2.430	2.630	5	100	5	1000	0.5	100	1.0
BZX84B2V7	2.690	2.910	5	110	5	1000	0.5	100	1.0
BZX84B3V0	3.010	3.220	5	120	5	1000	0.5	50	1.0
BZX84B3V3	3.320	3.530	5	120	5	1000	0.5	20	1.0
BZX84B3V6	3.600	3.845	5	100	5	1000	1.0	10	1.0
BZX84B3V9	3.890	4.160	5	100	5	1000	1.0	5	1.0
BZX84B4V3	4.170	4.430	5	100	5	1000	1.0	5	1.0
BZX84B4V7	4.550	4.750	5	100	5	800	0.5	2	1.0
BZX84B5V1L	4.980	5.200	5	80	5	500	0.5	2	1.5
BZX84B5V6	5.490	5.730	5	60	5	200	0.5	1	2.5
BZX84B6V2	6.060	6.330	5	60	5	100	0.5	1	3.0
BZX84B6V8	6.650	6.930	5	40	5	60	0.5	0.5	3.5
BZX84B7V5	7.280	7.600	5	30	5	60	0.5	0.5	4.0
BZX84B8V2	8.020	8.360	5	30	5	60	0.5	0.5	5.0
BZX84B9V1	8.850	9.230	5	30	5	60	0.5	0.5	6.0
BZX84B10	9.770	10.210	5	30	5	60	0.5	0.1	7.0
BZX84B11	10.760	11.220	5	30	5	60	0.5	0.1	8.0
BZX84B12	11.740	12.240	5	30	5	80	0.5	0.1	9.0
BZX84B13	12.910	13.490	5	37	5	80	0.5	0.1	10.0
BZX84B15	14.340	14.980	5	42	5	80	0.5	0.1	11.0
BZX84B16	15.850	16.510	5	50	5	80	0.5	0.1	12.0
BZX84B18	17.560	18.350	5	65	5	80	0.5	0.1	13.0
BZX84B20	19.520	20.390	5	85	5	100	0.5	0.1	15.0
BZX84B22	21.540	22.470	5	100	5	100	0.5	0.1	17.0
BZX84B24	23.720	24.780	5	120	5	120	0.5	0.1	19.0
BZX84B27	26.190	27.530	5	150	5	150	0.5	0.1	21.0
BZX84B30	29.190	30.690	5	200	5	200	0.5	0.1	23.0
BZX84B33	32.150	33.790	5	250	5	250	0.5	0.1	25.0
BZX84B36	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).

ELECTRICAL CHARACTERISTIC CURVES (Ta=25°C)

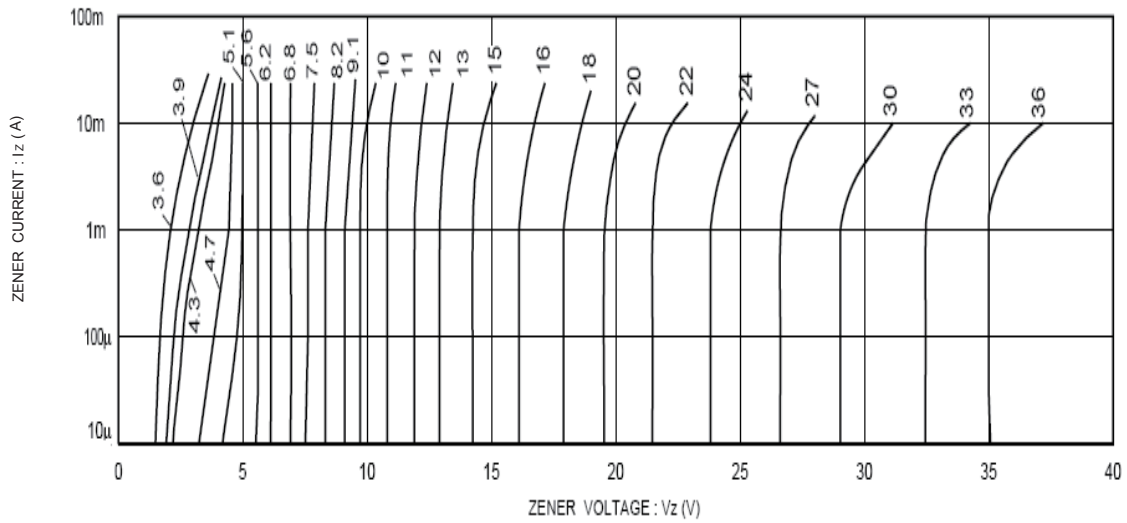


Fig.1 Zener voltage characteristics

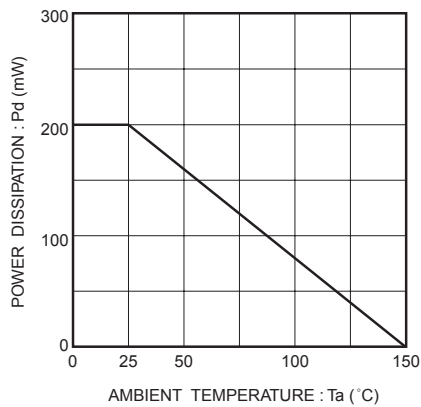


Fig.2 Derating curve

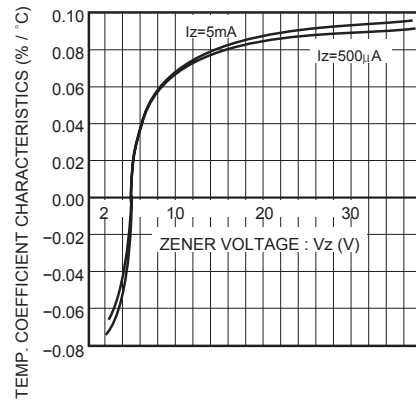


Fig.3 Zener voltage-temp. coefficient characteristics