BZX84B2V4-BZX84B39

Zener Diode

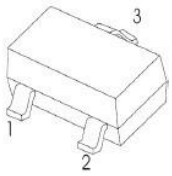
Features

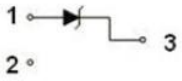
Low Zener Impedance
300mW; Power Dissipation of 300mW
High Stability and High Reliability

Mechanical Data

SOT-23 Small Outline Plastic Package
Polarity: Color band denotes cathode end
Epoxy UL: 94V-0
Mounting Position: Any

SOT-23





Maximum Ratings & Thermal Characteristics (Ratings at 25℃ ambient temperature unless otherwise specified.)

Parameters	Symbol	Value	Unit
Power Dissipation.(Note 1)	Pd	300	mW
Forward Voltage @IF=10mA.(Note 2)	Vf	0.9	V
Junction temperature	Tj	150	°C
Storage temperature range	Ts	-65-+150	℃
Thermal resistance junction to ambient	R_{thJA}	417	K/W

NOTES:
1) Valid provided that device terminals are kept at ambient temperature.
2) Test with pulse, period=5ms, pulse width=300us.
3) f=1KHz

Electrical Characteristics (Ratings at 25℃ ambient temperature unless otherwise specified).

PART NUMBER	MARKING CODE	ZENER VOLTAGE RANGE			TEST CURRENT		REVERSE LEAKAGE CURRENT		DYNAMIC RESISTANCE f = 1 kHz	
		V_Z at I_{ZT1}			I_{ZT1}	I_{ZT2}	I_R at V_R		Z_Z at I_{ZT1}	Z_{ZK} at I_{ZT2}
		V			mA		μA	V		
		MIN.	NOM.	MAX.					MAX.	MAX.
BZX84B2V4	2Z11	2.35	2.4	2.45	5	1	50	1	100	275
BZX84B2V7	2Z12	2.65	2.7	2.75	5	1	20	1	100	600
BZX84B3V0	2Z13	2.94	3.0	3.06	5	1	10	1	95	600
BZX84B3V3	2Z14	3.23	3.3	3.37	5	1	5	1	95	600
BZX84B3V6	2Z15	3.53	3.6	3.67	5	1	5	1	90	600
BZX84B3V9	2Z16	3.82	3.9	3.98	5	1	3	1	90	600
BZX84B4V3	2Z17	4.21	4.3	4.39	5	1	3	1	90	600
BZX84B4V7	2Z1	4.61	4.7	4.79	5	1	3	2	80	500
BZX84B5V1	2Z2	5.0	5.1	5.2	5	1	2	2	60	480
BZX84B5V6	2Z3	5.49	5.6	5.71	5	1	1	2	40	400
BZX84B6V2	2Z4	6.08	6.2	6.32	5	1	3	4	10	150
BZX84B6V8	2Z5	6.66	6.8	6.94	5	1	2	4	15	80
BZX84B7V5	2Z6	7.35	7.5	7.65	5	1	1	5	15	80
BZX84B8V2	2Z7	8.04	8.2	8.36	5	1	0.7	5	15	80
BZX84B9V1	2Z8	8.92	9.1	9.28	5	1	0.5	6	15	100
BZX84B10	2Z9	9.8	10	10.2	5	1	0.2	7	20	150
BZX84B11	2Y1	10.8	11	11.2	5	1	0.1	8	20	150
BZX84B12	2Y2	11.8	12	12.2	5	1	0.1	8	25	150
BZX84B13	2Y3	12.7	13	13.3	5	1	0.1	8	30	170

Electrical Characteristics (Ratings at 25℃ ambient temperature unless otherwise specified).

BZX84B15	2Y4	14.7	15	15.3	5	1	0.05	10.5	30	200
BZX84B16	2Y5	15.7	16	16.3	5	1	0.05	11.2	40	200
BZX84B18	2Y6	17.6	18	18.4	5	1	0.05	12.6	45	225
BZX84B20	2Y7	19.6	20	20.4	5	1	0.05	14	55	225
BZX84B22	2Y8	21.6	22	22.4	5	1	0.05	15.4	55	250
BZX84B24	2Y9	23.5	24	24.5	5	1	0.05	16.8	70	250
BZX84B27	2Y10	26.5	27	27.5	2	0.5	0.05	18.9	80	300
BZX84B30	2Y11	29.4	30	30.6	2	0.5	0.05	21	80	300
BZX84B33	2Y12	32.3	33	33.7	2	0.5	0.05	23.1	80	325
BZX84B36	2Y13	35.3	36	36.7	2	0.5	0.05	25.2	90	350
BZX84B39	2Y14	38.2	39	39.8	2	0.5	0.05	27.3	130	350

Typical Characteristics at Tj=constant (pulsed)

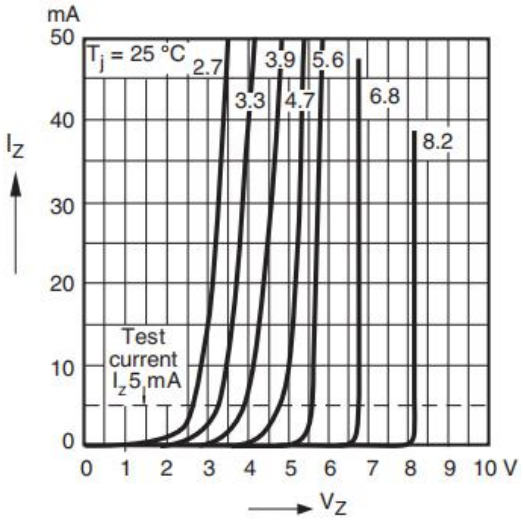


Fig.1-Zener Characteristic1

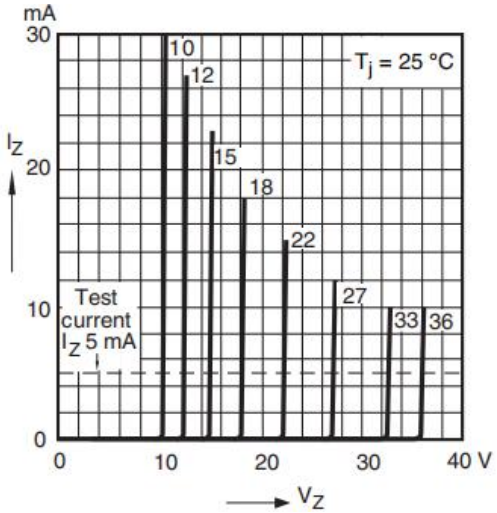


Fig.2-Zener Characteristic2

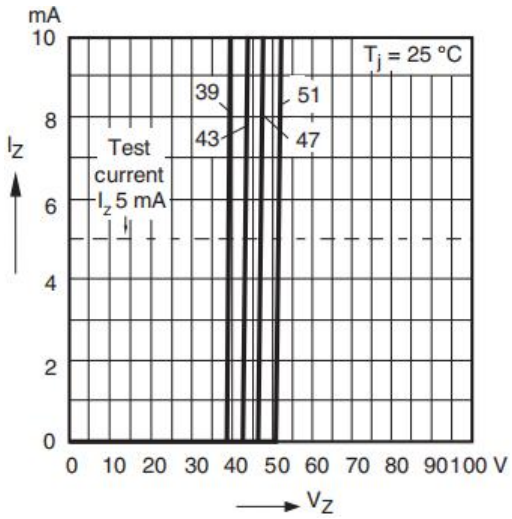


Fig.3-Zener Characteristic3

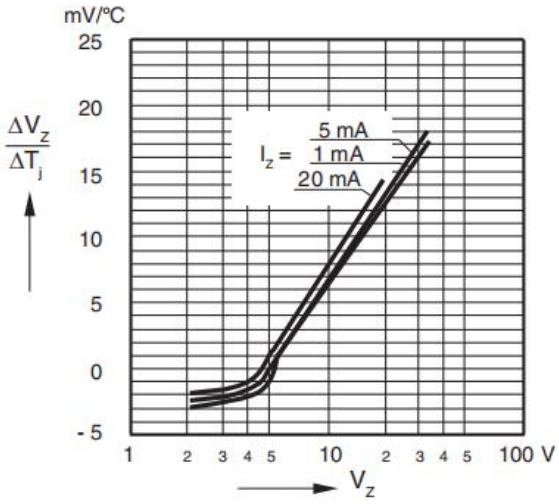


Fig.4-Temperature Dependence of Zener Voltage vs.Zener Voltage

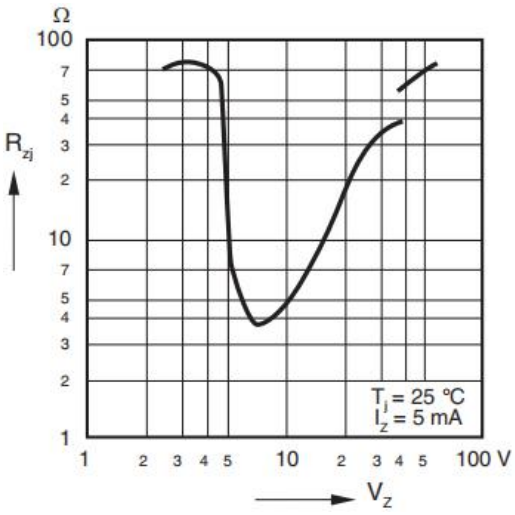


Fig.5-Dynamic Resistance vs. Zener Voltage

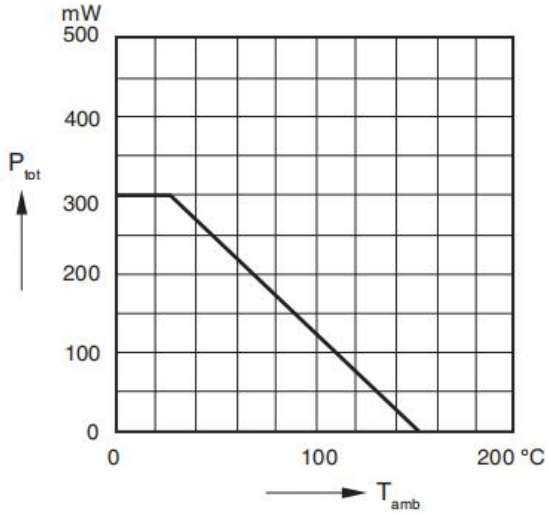
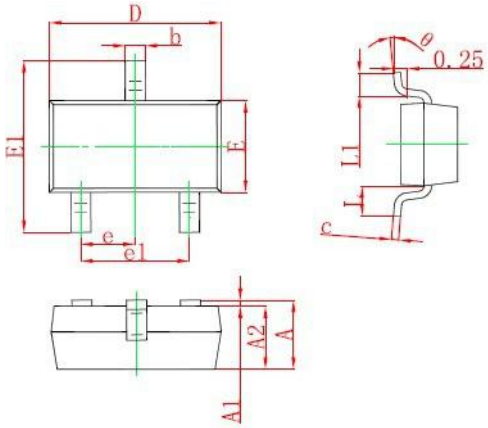


Fig.6-Power Dissipation vs. Ambient Temperature

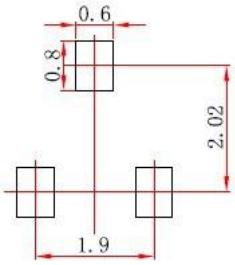
SOT-23 PACKAGE OUTLINE Plastic surface mounted package



Symbol	Dimensions In Millimeters		Dimensions In Inches	
	Min	Max	Min	Max
A	0.900	1.150	0.035	0.045
A1	0.000	0.100	0.000	0.004
A2	0.900	1.050	0.035	0.041
b	0.300	0.500	0.012	0.020
c	0.080	0.150	0.003	0.006
D	2.800	3.000	0.110	0.118
E	1.200	1.400	0.047	0.055
E1	2.250	2.550	0.089	0.100
e	0.950 TYP		0.037 TYP	
e1	1.800	2.000	0.071	0.079
L	0.550 REF		0.022 REF	
L1	0.300	0.500	0.012	0.020
θ	0°	8°	0°	8°

Precautions: PCB Design

Recommended land dimensions for SOT-23 diode. Electrode patterns for PCBs



Note:
1.Controlling dimension:In millimeters.
2.General tolerance:± 0.05mm.
3.The pad layout is for reference purposes only.

Ordering Information

Package	Reel	Reel Size	Box	Box Size(mm)	Carton	Carton Size(mm)
SOT-23	3000pcs	7inch	45,000pcs	203×203×195	180,000pcs	438×438×220