宏 迦 橙
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BZT52B2V4S THRU BZT52B43S

SURFACE MOUNT ZENER DIODES

Features

- Low Zener Impedance
- Power Dissipation of 200mW
- High Stability and High Reliability
- Meets MSL level 1, per J-STD-020, LF maximum peak of 260°C

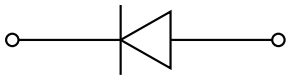
SOD-323

Applications

Zener diode is generally used as reference voltage sources in regulated power supplies or as protective diode in overvoltage protection circuits.

Mechanical Data

- Case: SOD-323
  Molding compound meets UL 94V-0 flammability rating, RoHS-compliant, halogen-free
- Terminals: Solder plated, solderable per MIL-STD-750,Method 2026
- Polarity: Cathode line denotes the cathode end

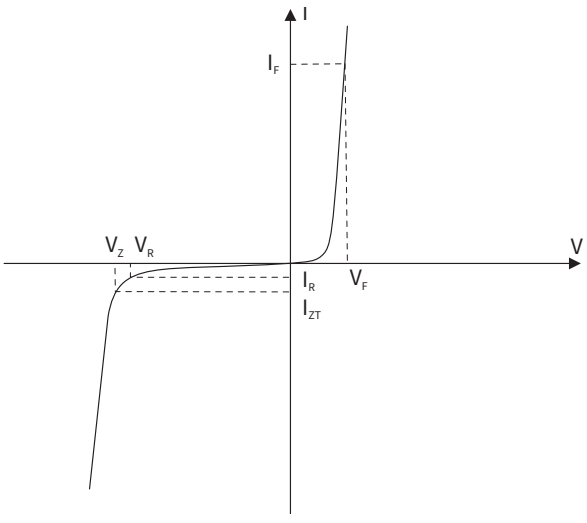


Maximum Ratings (Ta=25°C Unless otherwise specified)

PARAMETER	SYMBOL	UNIT	VALUE
Power Dissipation	P_D	mW	200
Forward Voltage @ I_F=10mA	V_F	V	0.9
Storage Temperature	T_{stg}	°C	-65 ~+150
Junction Temperature	T_j	°C	-55 ~+150
Typical Thermal Resistance	$R_{\theta J-A}$	°C /W	625

Electrical Parameter

SYMBOL	PARAMETER
V_Z	Reverse zener voltage @ I_{ZT}
I_{ZT}	Reverse current
Z_{ZT}	Maximum Zener Impedance @ I_{ZT}
I_{ZK}	Reverse Current
Z_{ZK}	Maximum Zener Impedance @ I_{ZK}
I_R	Reverse leakage current @ V_R
V_R	Reverse voltage
I_F	Forward current
V_F	Forward voltage @ I_F



Zhuhai Hongjiacheng Technology co., Ltd

Electrical Characteristics (Ta=25°C Unless otherwise specified)

Type Number	Marking	Zener Voltage Range			Maximum Zener Impedance				Maximum Reverse Current		Typical Temperature coefficent @ I_{ZTC}(mV/°C)		Test Current I_{ZTC}
		V_Z@I_{ZT} (V)			Z_{ZT}@I_{ZT}		Z_{ZK}@I_{ZK}		I_R@V_R				
		Min.	Nom.	Max.	Z_{ZT} (Ω)	I_{ZT} (mA)	Z_{ZK} (Ω)	I_{ZK} (mA)	I_R (μA)	V_R(V)	Min.	Max.	mA
BZT52B2V4S	2WX	2.35	2.4	2.45	100	5	600	1.0	50	1.0	-3.5	0	5
BZT52B2V7S	2W1	2.65	2.7	2.75	100	5	600	1.0	20	1.0	-3.5	0	5
BZT52B3V0S	2W2	2.94	3	3.06	95	5	600	1.0	10	1.0	-3.5	0	5
BZT52B3V3S	2W3	3.23	3.3	3.37	95	5	600	1.0	5	1.0	-3.5	0	5
BZT52B3V6S	2W4	3.53	3.6	3.67	90	5	600	1.0	5	1.0	-3.5	0	5
BZT52B3V9S	2W5	3.82	3.9	3.98	90	5	600	1.0	3	1.0	-3.5	0	5
BZT52B4V3S	2W6	4.21	4.3	4.39	90	5	600	1.0	3	1.0	-3.5	0	5
BZT52B4V7S	2W7	4.61	4.7	4.79	80	5	500	1.0	3	2.0	-3.5	0.2	5
BZT52B5V1S	2W8	5.00	5.1	5.20	60	5	480	1.0	2	2.0	-2.7	1.2	5
BZT52B5V6S	2W9	5.49	5.6	5.71	40	5	400	1.0	1	2.0	-2.0	2.5	5
BZT52B6V2S	2WA	6.08	6.2	6.32	10	5	150	1.0	3	4.0	0.4	3.7	5
BZT52B6V8S	2WB	6.66	6.8	6.94	15	5	80	1.0	2	4.0	1.2	4.5	5
BZT52B7V5S	2WC	7.35	7.5	7.65	15	5	80	1.0	1	5.0	2.5	5.3	5
BZT52B8V2S	2WD	8.04	8.2	8.36	15	5	80	1.0	0.7	5.0	3.2	6.2	5
BZT52B9V1S	2WE	8.92	9.1	9.28	15	5	100	1.0	0.5	6.0	3.8	7.0	5
BZT52B10S	2WF	9.80	10	10.20	20	5	150	1.0	0.2	7.0	4.5	8.0	5
BZT52B11S	2WG	10.78	11	11.22	20	5	150	1.0	0.1	8.0	5.4	9.0	5
BZT52B12S	2WH	11.76	12	12.24	25	5	150	1.0	0.1	8.0	6.0	10.0	5
BZT52B13S	2WI	12.74	13	13.26	30	5	170	1.0	0.1	8.0	7.0	11.0	5
BZT52B15S	2WJ	14.70	15	15.30	30	5	200	1.0	0.1	10.5	9.2	13.0	5
BZT52B16S	2WK	15.68	16	16.32	40	5	200	1.0	0.1	11.2	10.4	14.0	5
BZT52B18S	2WL	17.64	18	18.36	45	5	225	1.0	0.1	12.6	12.4	16.0	5
BZT52B20S	2WM	19.60	20	20.40	55	5	225	1.0	0.1	14.0	14.4	18.0	5
BZT52B22S	2WN	21.56	22	22.44	55	5	250	1.0	0.1	15.4	16.4	20.0	5
BZT52B24S	2WO	23.52	24	24.48	70	5	250	1.0	0.1	16.8	18.4	22.0	5
BZT52B27S	2WP	26.46	27	27.54	80	2	300	1.0	0.1	18.9	21.4	25.3	2
BZT52B30S	2WQ	29.40	30	30.60	80	2	300	1.0	0.1	21.0	24.4	29.4	2
BZT52B33S	2WR	32.34	33	33.66	80	2	325	1.0	0.1	23.1	27.4	33.4	2
BZT52B36S	2WS	35.28	36	36.72	90	2	350	1.0	0.1	25.2	30.4	37.4	2
BZT52B39S	2WT	38.22	39	39.78	130	2	350	1.0	0.1	27.3	33.4	41.2	2
BZT52B43S	2WU	41.16	43	43.84	100	2	700	1.0	0.1	32.0	10.0	12.0	5

Ratings And Characteristics Curves (Ta=25°C Unless otherwise specified)

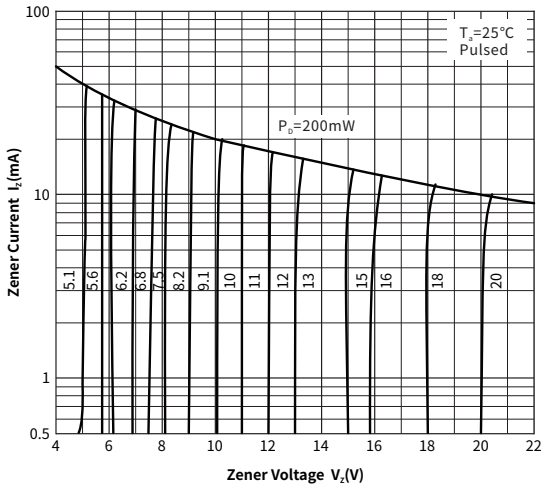


Fig. 1 Zener Characteristics(Vz 5.1V to 20V)

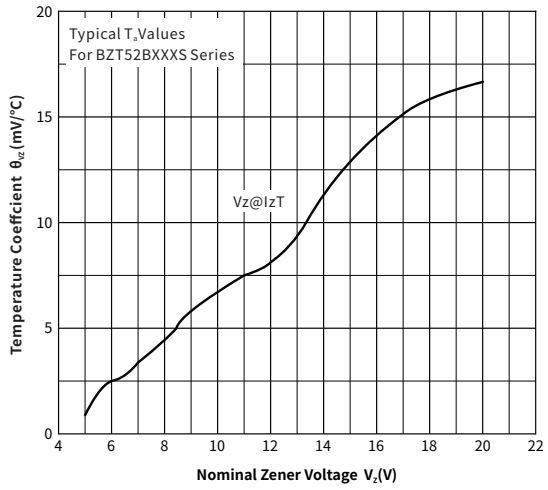


Fig. 2 Temperature Coefficients

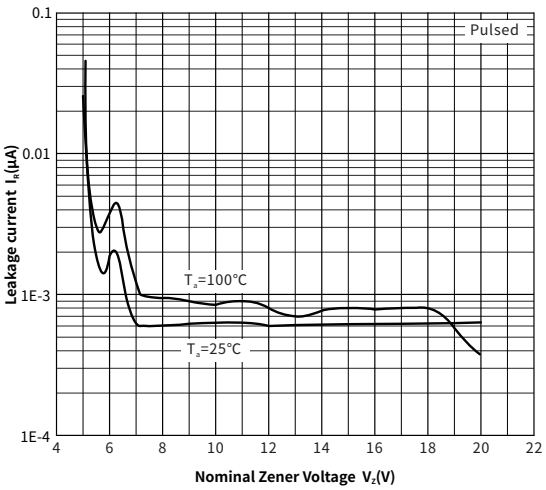


Fig.3 Typical Leakage Current

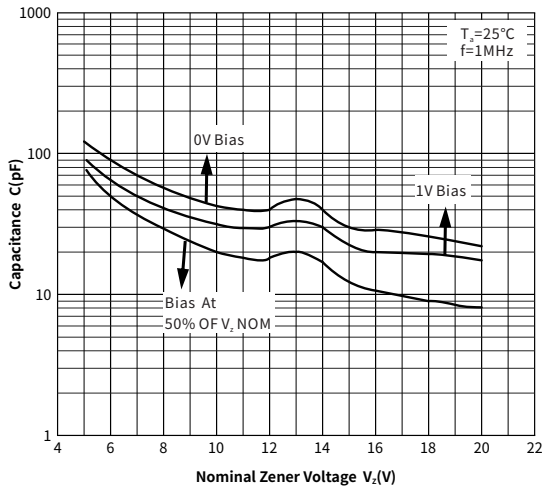


Fig.4 Typical Capacitance

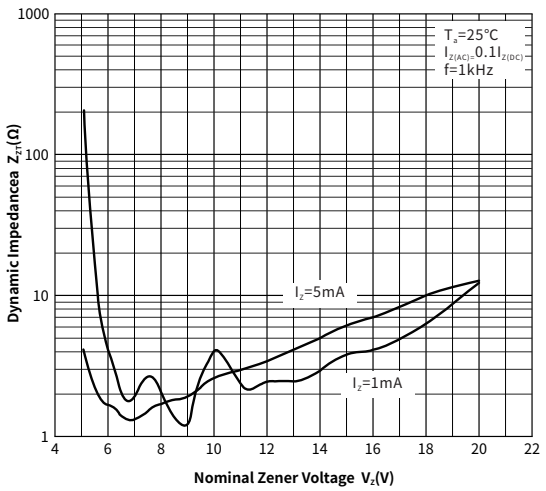


Fig.5 Effect of Zener Voltage on Zener Impedance

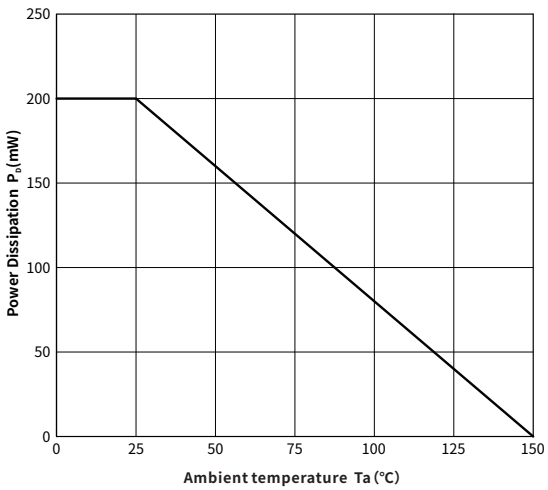
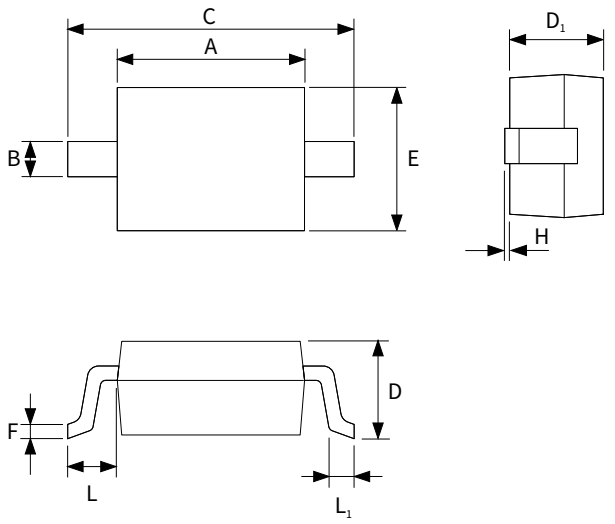


Fig.6 Power Derating Curve

Ordering Information

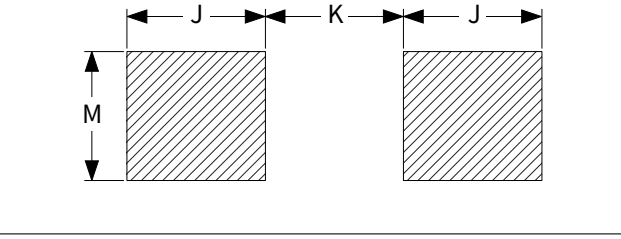
PACKAGE	PACKAGE CODE	UNIT WEIGHT(g)	REEL(pcs)	BOX(pcs)	CARTON(pcs)	DELIVERY MODE
SOD-323	R1	0.0048	3000	45000	180000	7''

Package Outline Dimensions (SOD-323)



Symbol	Dimensions			
	Millimeters		Inches	
	Min.	Max.	Min.	Max.
A	1.60	1.80	0.063	0.071
B	0.25	0.40	0.010	0.016
C	2.30	2.80	0.091	0.110
D	0.80	1.10	0.031	0.043
D_1	0.80	0.90	0.031	0.035
E	1.20	1.40	0.047	0.055
F	0.08	0.18	0.003	0.007
L	0.475REF		0.019REF	
L_1	0.25	0.40	0.010	0.016
H	-	0.14	-	0.006

Suggested Pad Layout



Symbol	Dimensions			
	Millimeters		Inches	
	Min.	Max.	Min.	Max.
J	0.80	-	0.031	-
K	-	1.40	-	0.055
M	0.80	-	0.031	-