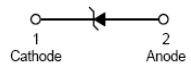
BZT52B2V0-BZT52B75

SMT-Type Zener Diode

FEATURES

- Large selection of zener voltages: 2.0V ~ 75V
- Tight voltage tolerance: ±2% for B-series
- Ultra low-profile package well suited for automated assembly
- MSL Class 1 compatible





SOD-123

APPLICATIONS

- General voltage regulation
- Mobile & handheld systems

ORDERING INFORMATION

Part Number	Marking	Package
BZT52B2V0 - BZT52B75	See Electrical Characteristics	SOD-123

MAXIMUM RATING (@ T_A = 25°C unless otherwise specified)

Parameter	Symbol	Value	Unit
Forward Voltage @ I_F=10mA	V_F	0.9	V
Power Dissipation	P_D	500	mW
Thermal Resistance (Junction-to-Ambient)	$R_{\theta JA}$	250	°C/W
Thermal Resistance (Junction-to-Case)	$R_{\theta JC}$	140	°C/W
Junction Temperature Range	T_J	-55 ~ +150	°C
Storage Temperature Range	T_{STG}	-65 ~ +150	°C

Note: These ratings are limiting values above which the serviceability of the diodes may be impaired.

BZT52B2V0-BZT52B75

SMT-Type Zener Diode

ELECTRICAL CHARACTERISTICS (@ T_A = 25°C unless otherwise specified)

Part Number	Marking Code	Zener Voltage V_Z (V)			@ I_{ZT} (mA)	Maximum Zener Impedance			Temperature Coefficient @ I_{ZT} T_C (mV/°C)		Maximum Reverse Current I_R (μA)	@ V_R (V)
		Min.	Typ.	Max.		Z_{ZT} (Ω) @ I_{ZT}	Z_{ZK} (Ω)	@ I_{ZK} (mA)	Min.	Max.		
BZT52B2V0	WX•	1.96	2.00	2.04	5	100	1000	0.5	-3.5	0.0	120.000	0.5
BZT52B2V2	WY•	2.16	2.20	2.24	5	100	1000	0.5	-3.5	0.0	120.000	0.7
BZT52B2V4	W1•	2.35	2.40	2.45	5	94	564	1.0	-3.5	0.0	45.000	1.0
BZT52B2V7	W2•	2.65	2.70	2.75	5	94	564	1.0	-3.5	0.0	18.000	1.0
BZT52B3V0	W3•	2.94	3.00	3.06	5	89	564	1.0	-3.5	0.0	9.000	1.0
BZT52B3V3	W4•	3.23	3.30	3.37	5	89	564	1.0	-3.5	0.0	4.500	1.0
BZT52B3V6	W5•	3.53	3.60	3.67	5	84	564	1.0	-3.5	0.0	4.500	1.0
BZT52B3V9	W6•	3.82	3.90	3.98	5	84	564	1.0	-3.5	0.0	2.700	1.0
BZT52B4V3	W7•	4.21	4.30	4.39	5	84	564	1.0	-3.5	0.0	2.700	1.0
BZT52B4V7	W8•	4.61	4.70	4.79	5	75	564	1.0	-3.5	0.2	2.700	2.0
BZT52B5V1	W9•	5.00	5.10	5.20	5	56	470	1.0	-2.7	1.2	1.800	2.0
BZT52B5V6	WA•	5.49	5.60	5.71	5	37	451	1.0	-2.0	2.5	0.900	2.0
BZT52B6V2	WB•	6.08	6.20	6.32	5	9	376	1.0	0.4	3.7	2.700	4.0
BZT52B6V8	WC•	6.66	6.80	6.94	5	14	141	1.0	1.2	4.5	1.800	4.0
BZT52B7V5	WD•	7.35	7.50	7.65	5	14	75	1.0	2.5	5.3	0.900	5.0
BZT52B8V2	WE•	8.04	8.20	8.36	5	14	75	1.0	3.2	6.2	0.630	5.0
BZT52B9V1	WF•	8.92	9.10	9.28	5	14	94	1.0	3.8	7.0	0.450	6.0
BZT52B10	WG•	9.80	10.00	10.20	5	18	141	1.0	4.5	8.0	0.180	7.0
BZT52B11	WH•	10.78	11.00	11.22	5	18	141	1.0	5.4	9.0	0.090	8.0
BZT52B12	WI•	11.76	12.00	12.24	5	23	141	1.0	6.0	10.0	0.090	8.0
BZT52B13	WJ•	12.74	13.00	13.26	5	28	160	1.0	7.0	11.0	0.090	8.0
BZT52B15	WK•	14.70	15.00	15.30	5	28	188	1.0	9.2	13.0	0.045	10.5
BZT52B16	WL•	15.68	16.00	16.32	5	37	188	1.0	10.4	14.0	0.045	11.2
BZT52B18	WM•	17.64	18.00	18.36	5	42	212	1.0	12.4	16.0	0.045	12.6
BZT52B20	WN•	19.60	20.00	20.40	5	51	212	1.0	14.4	18.0	0.045	14.0
BZT52B22	WO•	21.56	22.00	22.44	5	51	235	1.0	16.4	20.0	0.045	15.4
BZT52B24	WP•	23.52	24.00	24.48	5	65	235	1.0	18.4	22.0	0.045	16.8
BZT52B27	WQ•	26.46	27.00	27.54	2	75	282	0.5	21.4	25.3	0.045	18.9
BZT52B30	WR•	29.40	30.00	30.60	2	75	282	0.5	24.4	29.4	0.045	21.0
BZT52B33	WS•	32.34	33.00	33.66	2	75	306	0.5	27.4	33.4	0.045	23.0
BZT52B36	WT•	35.28	36.00	36.72	2	84	329	0.5	30.4	37.4	0.045	25.2
BZT52B39	WU•	38.22	39.00	39.78	2	122	329	0.5	33.4	41.2	0.045	27.3
BZT52B43	WV•	42.14	43.00	43.86	2	141	353	0.5	37.6	46.6	0.045	30.1
BZT52B47	WW•	46.06	47.00	47.94	2	160	353	0.5	42.0	51.8	0.045	33.0
BZT52B51	X1•	49.98	51.00	52.02	2	169	376	0.5	46.6	57.2	0.045	35.7
BZT52B56	X2•	54.88	56.00	57.12	2	200	400	0.5	52.2	63.8	0.045	39.2
BZT52B62	X3•	60.76	62.00	63.24	2	215	423	0.5	58.8	71.6	0.045	43.4
BZT52B68	X4•	66.64	68.00	69.36	2	240	447	0.5	65.6	79.8	0.045	47.6
BZT52B75	X5•	73.50	75.00	76.50	2	255	470	0.5	73.4	88.6	0.045	52.5

TYPICAL CHARACTERISTICS (@ T_A = 25°C unless otherwise specified)

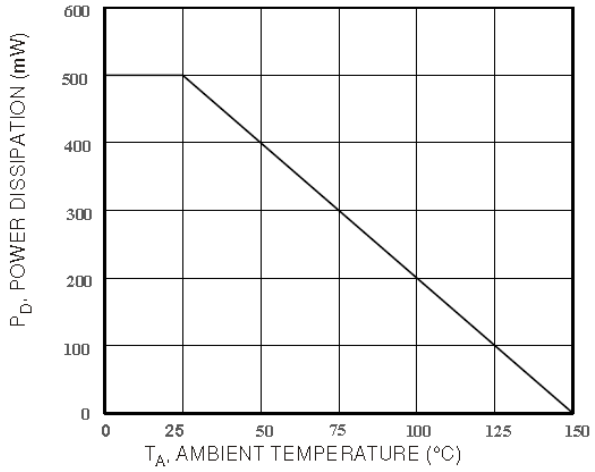


Fig. 1 Power Derating Curve

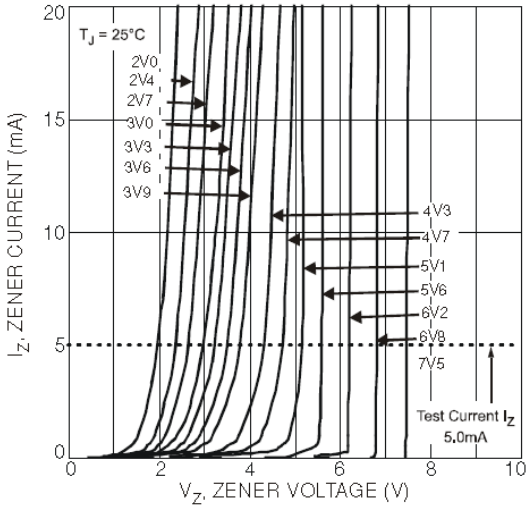


Fig. 2 Typical Zener Breakdown Characteristics

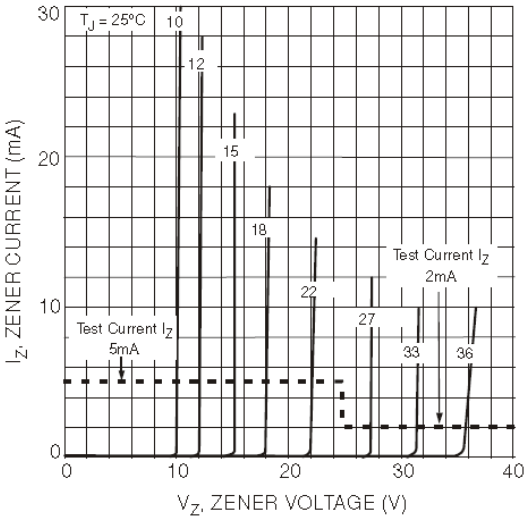


Fig. 3 Typical Zener Breakdown Characteristics

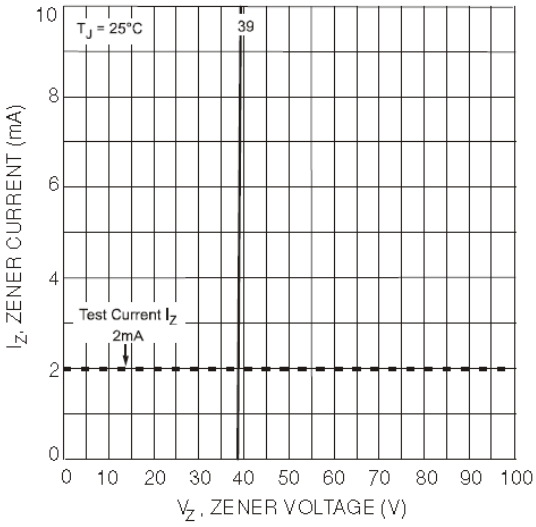


Fig. 4 Typical Zener Breakdown Characteristics

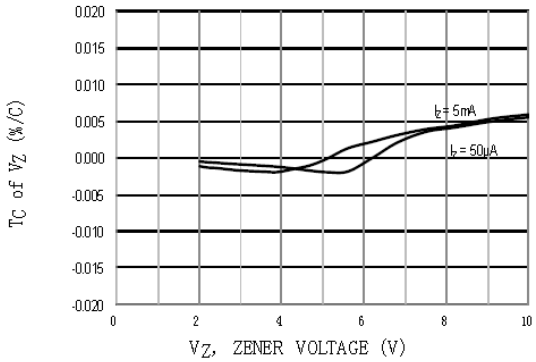


Fig. 5 Typical Temperature Coefficient of Zener Voltage

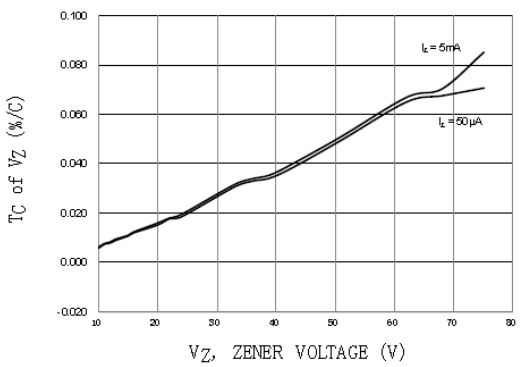


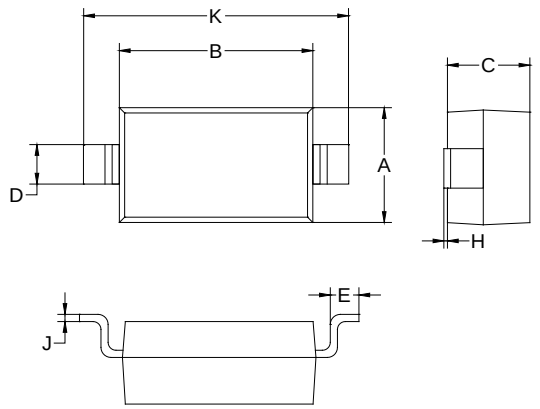
Fig. 6 Typical Temperature Coefficient of Zener Voltage

BZT52B2V0-BZT52B75

SMT-Type Zener Diode

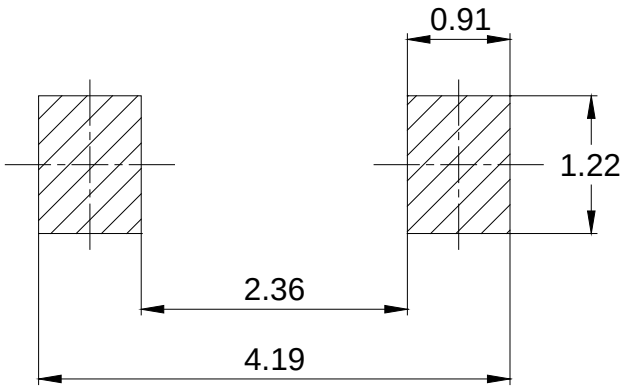
PACKAGE OUTLINE (Unit: mm)

Plastic surface mounted package



SOD-123		
Dimension	**Min.**	**Max.**
A	1.45	1.75
B	2.55	2.85
C	1.00	1.30
D	0.50	0.60
E	0.25	0.45
H	0.02	0.10
J	0.05	0.15
K	3.55	3.85

MOUNTING PAD LAYOUT (Unit: mm)



PACKAGE INFORMATION

Part Number	Package	Shipping Quantity
BZT52B2V0 - BZT52B75	SOD-123	3000pcs / Tape & Reel