

Small Signal Product
2% Zener Voltage Tolerance Zener Diode
FEATURES

- Wide zener voltage range selection: 2.4V to 43V
- Surface Mount Device Type
- Moisture sensitivity level 1
- Pb free and RoHS compliant
- Green compound (Halogen free) with suffix "G" on packing code and prefix "G" on date code
- Ideal for Surface Mounted Applications


SOD-123

MECHANICAL DATA

- Case: Bend lead SOD-123 small outline plastic package
- Terminal: Matte tin plated, lead free, solderable per MIL-STD-202, Method 208 guaranteed
- High temperature soldering guaranteed: 260°C/10s
- Polarity: Indicated by cathode band

MAXIMUM RATINGS AND ELECTRICAL CHARACTERISTICS ($T_A=25^\circ\text{C}$ unless otherwise noted)			
PARAMETER	SYMBOL	VALUE	UNIT
Forward Voltage (Note2) @ $I_F = 10\text{mA}$	V_F	0.9	V
Power Dissipation (Note1)	P_D	410	mW
Thermal Resistance from Junction to Ambient	$R_{\theta JA}$	357	$^\circ\text{C/W}$
Junction Temperature	T_J	150	$^\circ\text{C}$
Storage Temperature	T_{STG}	- 55 to + 150	$^\circ\text{C}$

Notes: 1. Device mounted on ceramic PCB: 7.6mm X 9.4mm X 0.87mm with pad areas 25mm²

2. Short duration test pulse used to minimize self-heating effect

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Electrical Characteristics

(Ratings at TA=25°C ambient temperature unless otherwise specified)

Device Type	Marking code	Zener Voltage Range				Maximum Zener Impedance			Maximum Reverse Current		Typical Temperature Coefficient @ I _{ZTC}		Test Current
		V _Z @ I _{ZT}			I _{ZT}	Z _{ZT} @ I _{ZT}	Z _{Zk} @ I _{Zk}	I _{ZT}	I _R	V _R	mV/°C		
		Nom(V)	Min(V)	Max(V)	mA	Ohm		mA	uA	V	Min	Max	
BZT52B2V4-G	2WX	2.4	2.35	2.45	5	100	600	1.0	50	1.0	-3.5	0	5
BZT52B2V7-G	2W1	2.7	2.65	2.75	5	100	600	1.0	20	1.0	-3.5	0	5
BZT52B3V0-G	2W2	3	2.94	3.06	5	95	600	1.0	10	1.0	-3.5	0	5
BZT52B3V3-G	2W3	3.3	3.23	3.37	5	95	600	1.0	5	1.0	-3.5	0	5
BZT52B3V6-G	2W4	3.6	3.53	3.67	5	90	600	1.0	5	1.0	-3.5	0	5
BZT52B3V9-G	2W5	3.9	3.82	3.98	5	90	600	1.0	3	1.0	-3.5	0	5
BZT52B4V3-G	2W6	4.3	4.21	4.39	5	90	600	1.0	3	1.0	-3.5	0	5
BZT52B4V7-G	2W7	4.7	4.61	4.79	5	80	500	1.0	3	2.0	-3.5	0.2	5
BZT52B5V1-G	2W8	5.1	5.00	5.20	5	60	480	1.0	2	2.0	-2.7	1.2	5
BZT52B5V6-G	2W9	5.6	5.49	5.71	5	40	400	1.0	1	2.0	-2.0	2.5	5
BZT52B6V2-G	2WA	6.2	6.08	6.32	5	10	150	1.0	3	4.0	0.4	3.7	5
BZT52B6V8-G	2WB	6.8	6.66	6.94	5	15	80	1.0	2	4.0	1.2	4.5	5
BZT52B7V5-G	2WC	7.5	7.35	7.65	5	15	80	1.0	1	5.0	2.5	5.3	5
BZT52B8V2-G	2WD	8.2	8.04	8.36	5	15	80	1.0	0.7	5.0	3.2	6.2	5
BZT52B9V1-G	2WE	9.1	8.92	9.28	5	15	100	1.0	0.5	6.0	3.8	7.0	5
BZT52B10-G	2WF	10	9.80	10.20	5	20	150	1.0	0.2	7.0	4.5	8.0	5
BZT52B11-G	2WG	11	10.78	11.22	5	20	150	1.0	0.1	8.0	5.4	9.0	5
BZT52B12-G	2WH	12	11.76	12.24	5	25	150	1.0	0.1	8.0	6.0	10.0	5
BZT52B13-G	2WI	13	12.74	13.26	5	30	170	1.0	0.1	8.0	7.0	11.0	5
BZT52B15-G	2WJ	15	14.70	15.30	5	30	200	1.0	0.1	10.5	9.2	13.0	5
BZT52B16-G	2WK	16	15.68	16.32	5	40	200	1.0	0.1	11.2	10.4	14.0	5
BZT52B18-G	2WL	18	17.64	18.36	5	45	225	1.0	0.1	12.6	12.4	16.0	5
BZT52B20-G	2WM	20	19.60	20.40	5	55	225	1.0	0.1	14.0	14.4	18.0	5
BZT52B22-G	2WN	22	21.56	22.44	5	55	250	1.0	0.1	15.4	16.4	20.0	5
BZT52B24-G	2WO	24	23.52	24.48	5	70	250	1.0	0.1	16.8	18.4	22.0	5
BZT52B27-G	2WP	27	26.46	27.54	2	80	300	0.5	0.1	18.9	21.4	25.3	2
BZT52B30-G	2WQ	30	29.40	30.60	2	80	300	0.5	0.1	21.0	24.4	29.4	2
BZT52B33-G	2WR	33	32.34	33.66	2	80	325	0.5	0.1	23.1	27.4	33.4	2
BZT52B36-G	2WS	36	35.28	36.72	2	90	350	0.5	0.1	25.2	30.4	37.4	2
BZT52B39-G	2WT	39	38.22	39.54	2	130	350	0.5	0.1	27.3	33.4	41.2	2
BZT52B43-G	2WU	43	41.46	42.84	2	130	350	0.5	0.1	29.4	36.4	45.2	2

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RATINGS AND CHARACTERISTICS CURVES

(TA=25°C unless otherwise noted)

Fig. 1 Admissible Power Dissipation curve

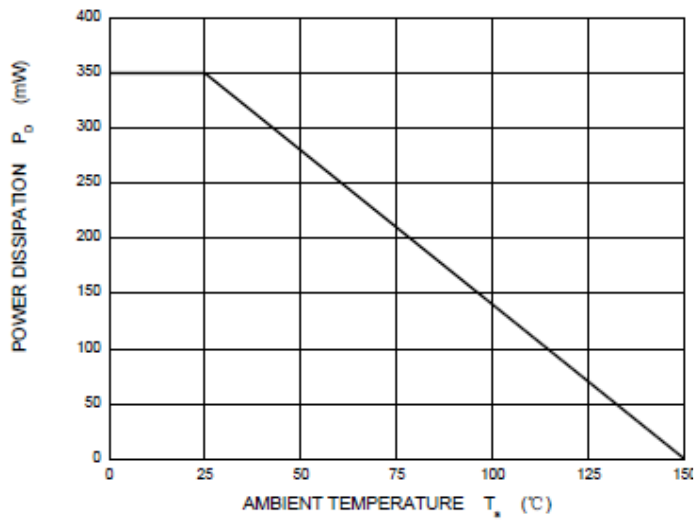


Fig. 2 Forward Characteristics

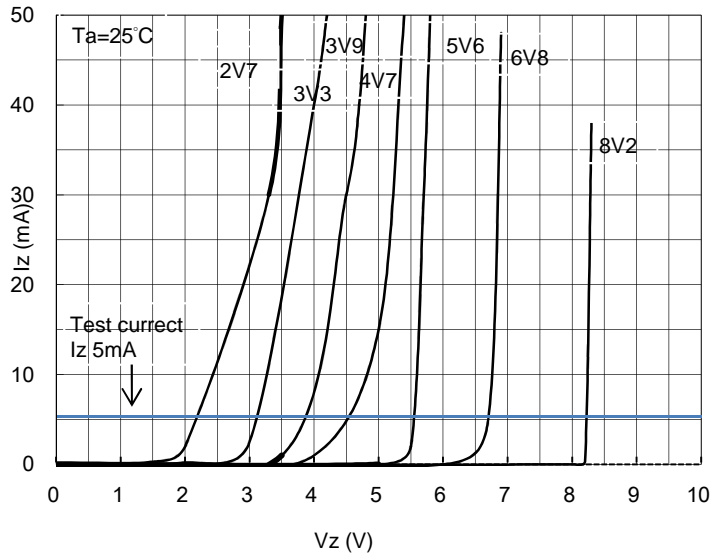
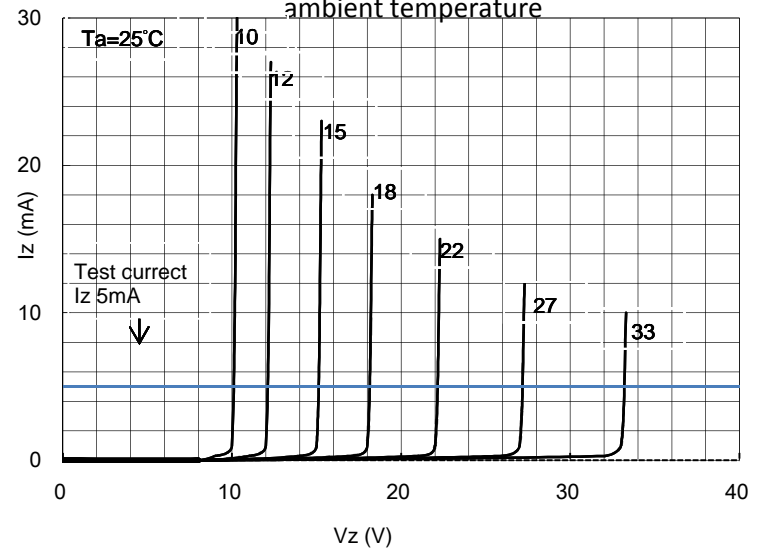


Fig. 3 Admissible power dissipation VS. ambient temperature



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ORDERING INFORMATION

PART NO.	MANUFACTURE CODE (Note1)	PACKING CODE	GREEN COMPOUND CODE	PACKAGE	PACKING
BZT52Bxxx-G (Note2)		RB	G	SOD-123	3K / 7" Reel

Note1: Manufacture special control, if empty means no special control requirement.

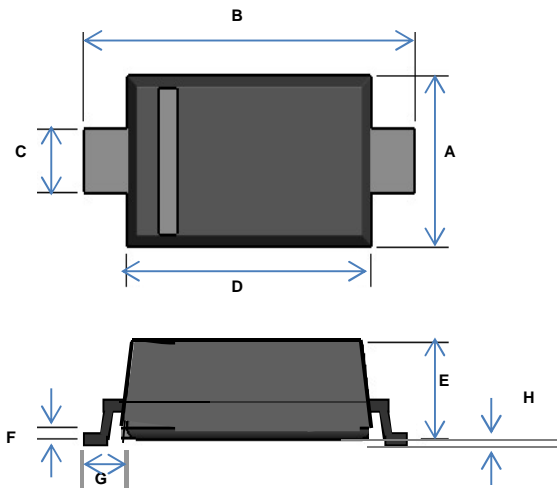
Note2: "xxx" is Device Code from "2V4" thru "43", detail could follow the previous page

EXAMPLE

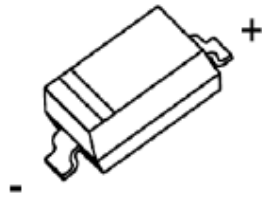
PREFERRED P/N	PART NO.	MANUFACTURE CODE	PACKING CODE	GREEN COMPOUND CODE	DESCRIPTION
BZT52B2V4-G RBG	BZT52B2V4-G		RB	G	Green compound
BZT52B2V4-G-N0 RBG	BZT52B2V4-G	N0	RB	G	Green compound

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DIMENSIONS
SOD-123



DIM.	Unit (mm)		Unit (inch)	
	Min	Max	Min	Max
A	1.40	1.80	0.055	0.071
B	3.55	3.85	0.140	0.152
C	0.45	0.70	0.018	0.028
D	2.55	2.85	0.100	0.112
E	0.95	1.35	0.037	0.053
F	0.05	0.15	0.002	0.006
G	0.50 REF		0.02 REF	
H	-	0.10	-	0.004



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