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Small Signal Product

## 5% Zener Voltage Tolerance Zener Diode

### FEATURES

- Wide zener voltage range selection: 2.4V to 43V
- Surface Mount Device Type
- Moisture sensitivity level (MSL): 1
- Compliant to RoHS Directive 2011/65/EU and in accordance to WEEE 2002/96/EC
- Halogen-free according to IEC 61249-2-21



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/
- Polarity: Indicated by cathode band

<b>MAXIMUM RATINGS AND ELECTRICAL CHARACTERISTICS</b> ( $T_A=25^\circ\text{C}$ unless otherwise noted)			
<b>PARAMETER</b>	<b>SYMBOL</b>	<b>VALUE</b>	<b>UNIT</b>
Forward Voltage (Note2) @ $I_F = 10\text{mA}$	$V_F$	0.9	V
Power Dissipation (Note1)	$P_D$	350	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 25mm<sup>2</sup>  
 2. Short duration test pulse used to minimize self-heating effect

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**ELECTRICAL CHARACTERISTICS**

 (Ratings at  $T_A=25^\circ\text{C}$  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		$I_{ZTC}$
		Nom(V)	Min(V)	Max(V)	mA	Ohm		mA	$\mu\text{A}$	V	Min	Max	mA
BZT52C2V4-G	WX	2.4	2.2	2.6	5	100	600	1.0	50	1.0	-3.5	0	5
BZT52C2V7-G	W1	2.7	2.5	2.9	5	100	600	1.0	20	1.0	-3.5	0	5
BZT52C3V0-G	W2	3.0	2.8	3.2	5	95	600	1.0	10	1.0	-3.5	0	5
BZT52C3V3-G	W3	3.3	3.1	3.5	5	95	600	1.0	5	1.0	-3.5	0	5
BZT52C3V6-G	W4	3.6	3.4	3.8	5	90	600	1.0	5	1.0	-3.5	0	5
BZT52C3V9-G	W5	3.9	3.7	4.1	5	90	600	1.0	3	1.0	-3.5	0	5
BZT52C4V3-G	W6	4.3	4	4.6	5	90	600	1.0	3	1.0	-3.5	0	5
BZT52C4V7-G	W7	4.7	4.4	5.0	5	80	500	1.0	3	2.0	-3.5	0.2	5
BZT52C5V1-G	W8	5.1	4.8	5.4	5	60	480	1.0	2	2.0	-2.7	1.2	5
BZT52C5V6-G	W9	5.6	5.2	6.0	5	40	400	1.0	1	2.0	-2.0	2.5	5
BZT52C6V2-G	WA	6.2	5.8	6.6	5	10	150	1.0	3	4.0	0.4	3.7	5
BZT52C6V8-G	WB	6.8	6.4	7.2	5	15	80	1.0	2	4.0	1.2	4.5	5
BZT52C7V5-G	WC	7.5	7.0	7.9	5	15	80	1.0	1	5.0	2.5	5.3	5
BZT52C8V2-G	WD	8.2	7.7	8.7	5	15	80	1.0	0.7	5.0	3.2	6.2	5
BZT52C9V1-G	WE	9.1	8.5	9.6	5	15	100	1.0	0.5	6.0	3.8	7.0	5
BZT52C10-G	WF	10	9.4	10.6	5	20	150	1.0	0.2	7.0	4.5	8.0	5
BZT52C11-G	WG	11	10.4	11.6	5	20	150	1.0	0.1	8.0	5.4	9.0	5
BZT52C12-G	WH	12	11.4	12.7	5	25	150	1.0	0.1	8.0	6.0	10.0	5
BZT52C13-G	WI	13	12.4	14.1	5	30	170	1.0	0.1	8.0	7.0	11.0	5
BZT52C15-G	WJ	15	13.8	15.6	5	30	200	1.0	0.1	10.5	9.2	13.0	5
BZT52C16-G	WK	16	15.3	17.1	5	40	200	1.0	0.1	11.2	10.4	14.0	5
BZT52C18-G	WL	18	16.8	19.1	5	45	225	1.0	0.1	12.6	12.4	16.0	5
BZT52C20-G	WM	20	18.8	21.2	5	55	225	1.0	0.1	14.0	14.4	18.0	5
BZT52C22-G	WN	22	20.8	23.3	5	55	250	1.0	0.1	15.4	16.4	20.0	5
BZT52C24-G	WO	24	22.8	25.6	5	70	250	1.0	0.1	16.8	18.4	22.0	5
BZT52C27-G	WP	27	25.1	28.9	2	80	300	0.5	0.1	18.9	21.4	25.3	2
BZT52C30-G	WQ	30	28.0	32.0	2	80	300	0.5	0.1	21.0	24.4	29.4	2
BZT52C33-G	WR	33	31.0	35.0	2	80	325	0.5	0.1	23.1	27.4	33.4	2
BZT52C36-G	WS	36	34.0	38.0	2	90	350	0.5	0.1	25.2	30.4	37.4	2
BZT52C39-G	WT	39	37.0	41.0	2	130	350	0.5	0.1	27.3	33.4	41.2	2
BZT52C43-G	WU	43	40.0	46.0	5	100	700	1.0	0.1	32.0	10.0	12.0	5

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**ORDERING INFORMATION**

<b>PART NO.</b>	<b>PACKING CODE</b>	<b>PACKING CODE SUFFIX</b>	<b>PACKAGE</b>	<b>PACKING</b>
BZT52Cxxx-G (Note 1, 2)	RH	G	SOD-123	3K / 7" Reel

Note 1: "xxx" is device code from "2V4" - "43"

Note 2: Whole series with green compound

**EXAMPLE**

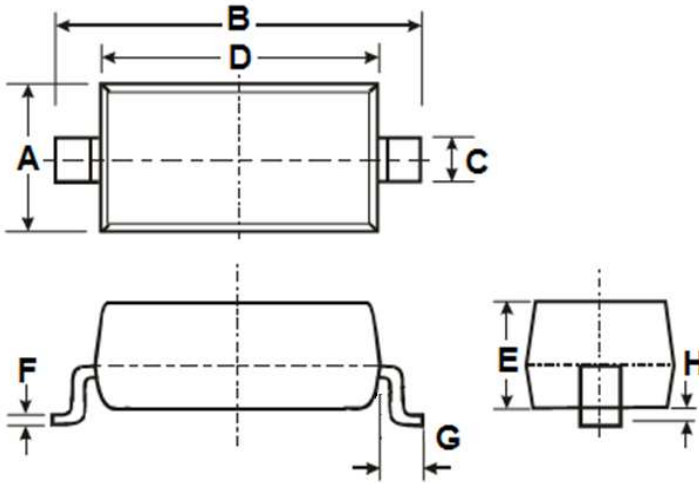
<b>EXAMPLE P/N</b>	<b>PART NO.</b>	<b>PACKING CODE</b>	<b>PACKING CODE SUFFIX</b>	<b>DESCRIPTION</b>
BZT52C2V4-G RHG	BZT52C2V4-G	RH	G	Green compound



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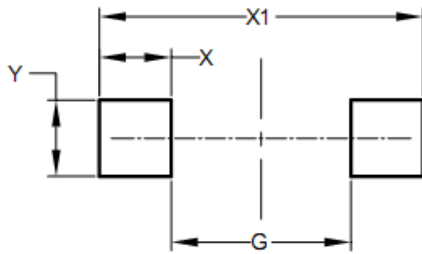
**PACKAGE OUTLINE DIMENSIONS**

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

**SUGGEST PAD LAYOUT**



DIM.	Unit (mm)		Unit (inch)	
	Min	Min	Min	Min
G	2.25		0.089	
X	0.90		0.035	
X1	4.05		0.159	
Y	0.95		0.037	

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