

RoHS Compliant Product  
A suffix of "-C" specifies halogen & lead-free

## FEATURES

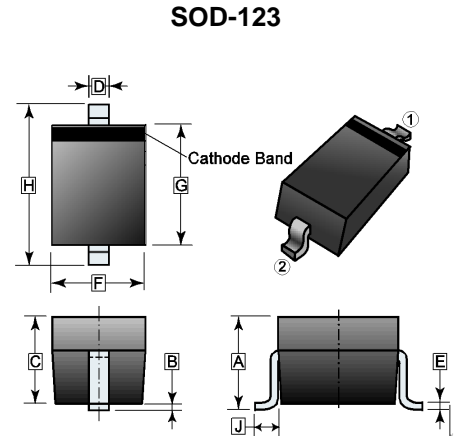
- Zener Voltages from 2V~75V
- Planar Die Construction
- Tight Voltage Tolerance:  $\pm 2\%$  for B-series
- General Purpose, Medium Current
- MSL Class 1 Compatible
- Ideally Suited for Automated Assembly Processes

## MECHANICAL DATA

- Case: SOD-123, Molded Plastic
- Mounting Position: Any
- Polarity: As Marked

## PACKAGE INFORMATION

Package	MPQ	Leader Size
SOD-123	3K	7 inch



REF.	Millimeter		REF.	Millimeter	
	Min.	Max.		Min.	Max.
A	1.15 REF.		F	1.45	1.80
B	0.10 REF.		G	2.55	2.85
C	1.00	1.30	H	3.55	3.85
D	0.30	0.78	J	0.50 REF.	
E	0.05	0.25			

## ORDER INFORMATION

Part Number	Type
BXT52Bxxx-C	Lead (Pb)-free and Halogen-free



## ABSOLUTE MAXIMUM RATINGS ( $T_A=25^\circ\text{C}$ unless otherwise specified)

Parameter	Symbol	Ratings	Unit
Forward Voltage @ $I_F=10\text{mA}$	$V_F$	0.9	V
Power Dissipation	$P_D$	500	mW
Thermal Resistance from Junction-Ambient	$R_{\theta JA}$	305	$^\circ\text{C/W}$
Thermal Resistance from Junction-Case	$R_{\theta JC}$	180	
Operating and Storage Temperature Range	$T_J, T_{STG}$	150, -65~150	$^\circ\text{C}$

Note:

1. Device mounted on ceramic PCB, 7.6mm x 9.4mm x 0.87mm with pad areas 25mm<sup>2</sup>

**ELECTRICAL CHARACTERISTICS** ( $T_A=25^\circ\text{C}$  unless otherwise specified)

Part Number	Marking	Zener Voltage Range			Maximum Zener Impedance			Maximum Reverse Current		Test Current $I_{ZTC}$	Typical Temperature Coefficient		
		$V_Z @ I_{ZT}$			$I_{ZT}$	$Z_{ZT} @ I_{ZT}$	$Z_{ZK} @ I_{ZK}$	$I_R$	$V_R$		@ $I_{ZT}$		
		Min.	Nom.	Max.							Min.	Max.	
		V			mA	$\Omega$	mA	$\mu\text{A}$	V	mA	mV/ $^\circ\text{C}$		
BXT52B2V0-C	WX ·	1.96	2	2.04	5	100	1000	0.5	120	0.5	5	-3.5	0
BXT52B2V2-C	WY ·	2.156	2.2	2.244	5	100	1000	0.5	120	0.7	5	-3.5	0
BXT52B2V4-C	W1 ·	2.35	2.4	2.45	5	85	600	1	45	1	5	-3.5	0
BXT52B2V7-C	W2 ·	2.65	2.7	2.75	5	83	500	1	18	1	5	-3.5	0
BXT52B3V0-C	W3 ·	2.94	3	3.06	5	95	500	1	9	1	5	-3.5	0
BXT52B3V3-C	W4 ·	3.23	3.3	3.37	5	95	500	1	4.5	1	5	-3.5	0
BXT52B3V6-C	W5 ·	3.53	3.6	3.67	5	95	500	1	4.5	1	5	-3.5	0
BXT52B3V9-C	W6 ·	3.82	3.9	3.98	5	95	500	1	2.7	1	5	-3.5	0
BXT52B4V3-C	W7 ·	4.21	4.3	4.39	5	95	500	1	2.7	1	5	-3.5	0
BXT52B4V7-C	W8 ·	4.61	4.7	4.79	5	78	500	1	2.7	2	5	-3.5	0
BXT52B5V1-C	W9 ·	5	5.1	5.2	5	60	480	1	1.8	2	5	-2.7	1.2
BXT52B5V6-C	WA ·	5.49	5.6	5.71	5	40	400	1	0.9	2	5	-2	2.5
BXT52B6V2-C	WB ·	6.08	6.2	6.32	5	10	200	1	2.7	4	5	0.4	3.7
BXT52B6V8-C	WC ·	6.66	6.8	6.94	5	8	150	1	1.8	4	5	1.2	4.5
BXT52B7V5-C	WD ·	7.35	7.5	7.65	5	7	50	1	0.9	5	5	2.5	5.3
BXT52B8V2-C	WE ·	8.04	8.2	8.36	5	7	50	1	0.63	5	5	3.2	6.2
BXT52B9V1-C	WF ·	8.92	9.1	9.28	5	10	50	1	0.45	6	5	3.8	7
BXT52B10-C	WG ·	9.8	10	10.2	5	15	70	1	0.18	7	5	4.5	8
BXT52B11-C	WH ·	10.78	11	11.22	5	20	70	1	0.09	8	5	5.4	9
BXT52B12-C	WI ·	11.76	12	12.24	5	20	90	1	0.09	8	5	6	10
BXT52B13-C	WJ ·	12.74	13	13.26	5	25	110	1	0.09	8	5	7	11
BXT52B15-C	WK ·	14.7	15	15.3	5	30	110	1	0.045	10.5	5	9.2	13
BXT52B16-C	WL ·	15.68	16	16.32	5	40	170	1	0.045	11.2	5	10.4	14
BXT52B18-C	WM ·	17.64	18	18.36	5	50	170	1	0.045	12.6	5	12.4	16
BXT52B20-C	WN ·	19.6	20	20.4	5	50	220	1	0.045	14	5	14.4	18
BXT52B22-C	WO ·	21.56	22	22.44	5	55	220	1	0.045	15.4	5	16.4	20
BXT52B24-C	WP ·	23.52	24	24.48	5	80	220	1	0.045	16.8	5	18.4	22
BXT52B27-C	WQ ·	26.46	27	27.54	2	80	250	1	0.045	18.9	2	21.4	25.3
BXT52B30-C	WR ·	29.4	30	30.6	2	80	250	1	0.045	21	2	24.4	29.4
BXT52B33-C	WS ·	32.34	33	33.66	2	80	250	1	0.045	23	2	27.4	33.4
BXT52B36-C	WT ·	35.28	36	36.72	2	90	250	1	0.045	25.2	2	30.4	37.4
BXT52B39-C	WU ·	38.22	39	39.78	2	90	300	1	0.045	27.3	2	33.4	41.2

**ELECTRICAL CHARACTERISTICS** ( $T_A=25^\circ\text{C}$  unless otherwise specified)

Part Number	Marking	Zener Voltage Range			$I_{ZT}$	Maximum Zener Impedance			Maximum Reverse Current		Test Current $I_{ZTC}$	Typical Temperature Coefficient	
		$V_Z @ I_{ZT}$				$Z_{ZT} @ I_{ZT}$	$Z_{ZK} @ I_{ZK}$	$I_{ZK}$	$I_R$	$V_R$		@ $I_{ZT}$	
		Min.	Nom.	Max.								Min.	Max.
		V				mA	$\Omega$	mA	$\mu\text{A}$	V		mA	mV/ $^\circ\text{C}$
BXT52B43-C	WV ·	42.14	43	43.86	2	100	700	1	0.045	30.1	5	10	12
BXT52B47-C	WW ·	46.06	47	47.94	2	100	750	1	0.045	33	5	10	12
BXT52B51-C	X1 ·	49.98	51	52.02	2	100	750	1	0.045	35.7	5	10	12
BXT52B56-C	X2 ·	54.88	56	57.12	2	200	400	0.5	0.045	39.2	5	10	12
BXT52B62-C	X3 ·	60.76	62	63.24	2	215	423	0.5	0.045	43.4	5	10	12
BXT52B68-C	X4 ·	66.64	68	69.36	2	240	447	0.5	0.045	47.6	5	10	12
BXT52B75-C	X5 ·	73.5	75	76.5	2	255	470	0.5	0.045	52.5	5	10	12

**CHARACTERISTIC CURVES**

Fig. 1 Power Dissipation vs Ambient Temperature

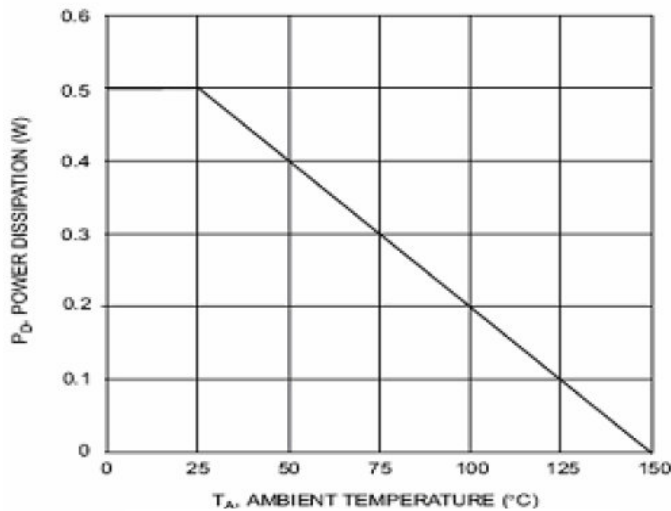


Fig. 2 Zener Breakdown Characteristics

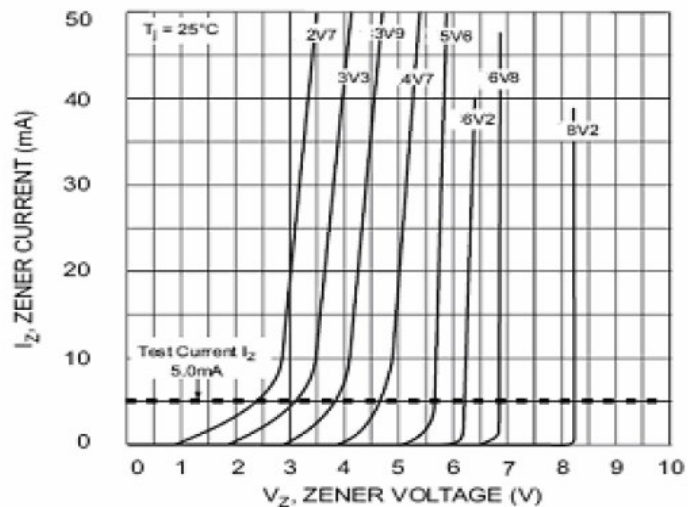


Fig. 3 Zener Breakdown Characteristics

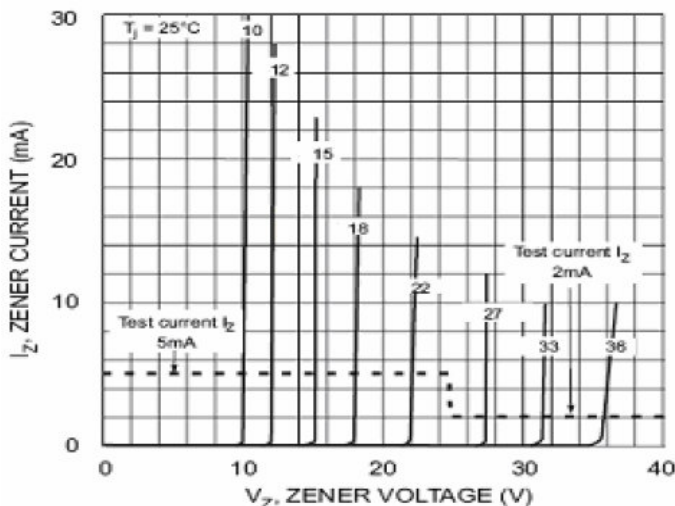
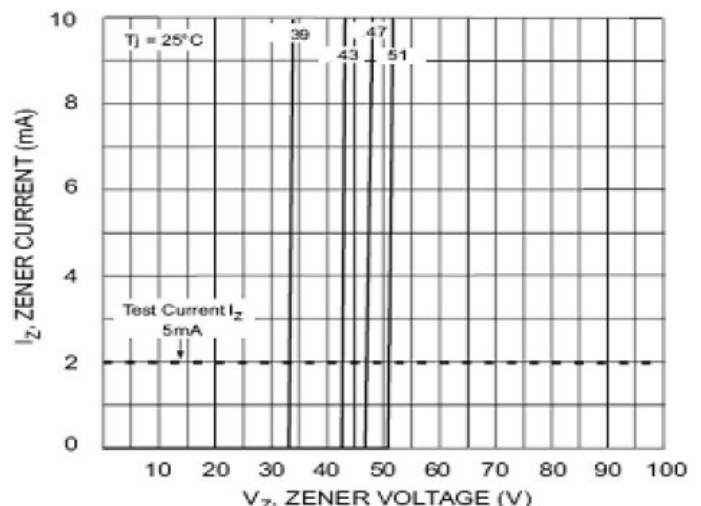


Fig. 4 Zener Breakdown Characteristics



**CHARACTERISTIC CURVES**

Fig. 5 Junction Capacitance vs Nominal Zener Voltage

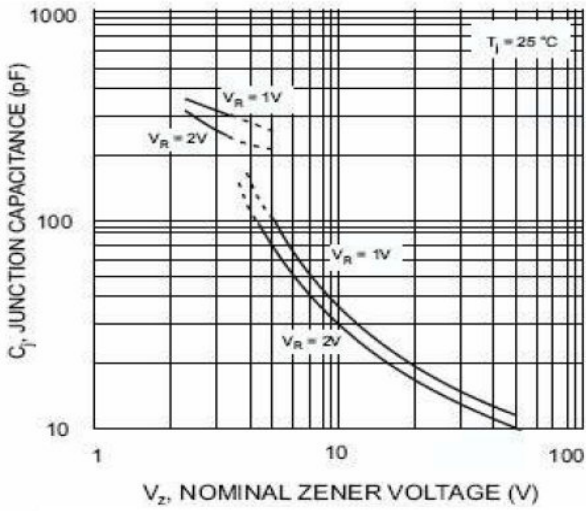


Fig. 6 Typical Temperature Coefficient of Zener Voltage

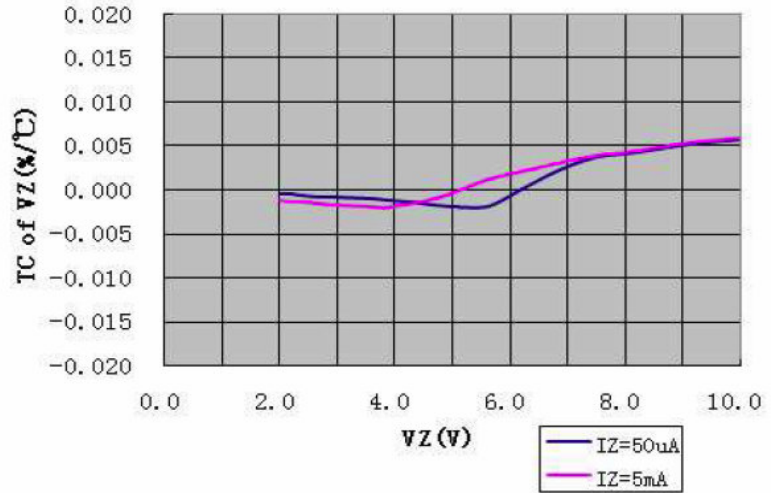


Fig. 7 Typical Temperature Coefficient of Zener Voltage

