

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

## FEATURES

- Zener Voltages from 2V~75V
- Tight Voltage Tolerance:  $\pm 5\%$  for C-series
- MSL Class 1 Compatible
- Ultra Low-Profile Package Well Suited for Automated Assembly
- Qualified to AEC-Q101 standards for high reliability

## MECHANICAL DATA

- Case: SOD-323, Molded Plastic
- Mounting Position: Any
- Polarity: As Marked

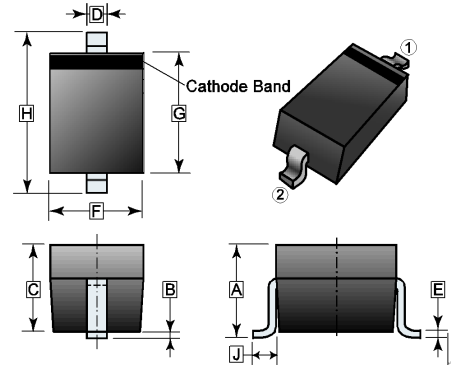
## PACKAGE INFORMATION

Package	MPQ	Leader Size
SOD-323	3K	7 inch

## ORDER INFORMATION

Part Number	Type
BZT52CxxxSCR-C	Lead (Pb)-free and Halogen-free

### SOD-323



REF.	Millimeter		REF.	Millimeter	
	Min.	Max.		Min.	Max.
A	1.05	REF.	F	1.15	1.45
B	0.20	REF.	G	1.60	1.90
C	0.80	1.00	H	2.25	2.75
D	0.25	0.40	J	0.475	REF.
E	0.05	0.20			



## 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	$P_D$	200	mW
Thermal Resistance from Junction-Ambient	$R_{\theta JA}$	625	$^\circ\text{C/W}$
Thermal Resistance from Junction-Case	$R_{\theta JC}$	337	
Operating and Storage Temperature Range	$T_J, T_{STG}$	-55~150	$^\circ\text{C}$

Note:

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

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

Part Number	Marking	Zener Voltage Range				Maximum Zener Impedance			Maximum Reverse Current		Typical Temperature Coefficient	
		$V_Z @ I_{ZT}$			$I_{ZT}$	$Z_{ZT} @ I_{ZT}$	$Z_{ZK} @ I_{ZK}$	$I_{ZK}$	$I_R$	$V_R$	@ $I_{ZT}$	
		Min.	Nom.	Max.							Min.	Max.
		V			mA	$\Omega$		mA	$\mu\text{A}$	V	mV/ $^\circ\text{C}$	
BZT52C2V0SCR-C	WY ·	1.9	2	2.1	5	100	600	1	150	1	-3.5	0
BZT52C2V2SCR-C	22 ·	2.09	2.2	2.31	5	100	600	1	150	1	-3.5	0
BZT52C2V4SCR-C	WX	2.2	2.4	2.6	5	100	600	1	50	1	-3.5	0
BZT52C2V7SCR-C	W1	2.5	2.7	2.9	5	100	600	1	20	1	-3.5	0
BZT52C3V0SCR-C	W2	2.8	3	3.2	5	95	600	1	10	1	-3.5	0
BZT52C3V3SCR-C	W3	3.1	3.3	3.5	5	95	600	1	5	1	-3.5	0
BZT52C3V6SCR-C	W4	3.4	3.6	3.8	5	90	600	1	5	1	-3.5	0
BZT52C3V9SCR-C	W5	3.7	3.9	4.1	5	90	600	1	3	1	-3.5	0
BZT52C4V3SCR-C	W6	4	4.3	4.6	5	90	600	1	3	1	-3.5	0
BZT52C4V7SCR-C	W7	4.4	4.7	5	5	80	500	1	3	2	-3.5	0
BZT52C5V1SCR-C	W8	4.8	5.1	5.4	5	60	480	1	2	2	-2.7	1.2
BZT52C5V6SCR-C	W9	5.2	5.6	6	5	40	400	1	1	2	-2	2.5
BZT52C6V2SCR-C	WA	5.8	6.2	6.6	5	10	150	1	3	4	0.4	3.7
BZT52C6V8SCR-C	WB	6.4	6.8	7.2	5	15	80	1	2	4	1.2	4.5
BZT52C7V5SCR-C	WC	7	7.5	7.9	5	15	80	1	1	5	2.5	5.3
BZT52C8V2SCR-C	WD	7.7	8.2	8.7	5	15	80	1	0.7	5	3.2	6.2
BZT52C9V1SCR-C	WE	8.5	9.1	9.6	5	15	100	1	0.5	6	3.8	7
BZT52C10SCR-C	WF	9.4	10	10.6	5	20	150	1	0.2	7	4.5	8
BZT52C11SCR-C	WG	10.4	11	11.6	5	20	150	1	0.1	8	5.4	9
BZT52C12SCR-C	WH	11.4	12	12.7	5	25	150	1	0.1	8	6	10
BZT52C13SCR-C	WI	12.4	13	14.1	5	30	170	1	0.1	8	7	11
BZT52C15SCR-C	WJ	13.8	15	15.6	5	30	200	1	0.1	10.5	9.2	13
BZT52C16SCR-C	WK	15.3	16	17.1	5	40	200	1	0.1	11.2	10.4	14
BZT52C18SCR-C	WL	16.8	18	19.1	5	45	225	1	0.1	12.6	12.4	16
BZT52C20SCR-C	WM	18.8	20	21.2	5	55	225	1	0.1	14	14.4	18
BZT52C22SCR-C	WN	20.8	22	23.3	5	55	250	1	0.1	15.4	16.4	20
BZT52C24SCR-C	WO	22.8	24	25.6	5	70	250	1	0.1	16.8	18.4	22
BZT52C27SCR-C	WP	25.1	27	28.9	2	80	300	0.5	0.1	18.9	21.4	25.3
BZT52C30SCR-C	WQ	28	30	32	2	80	300	0.5	0.1	21	24.4	29.4

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

Part Number	Marking	Zener Voltage Range				Maximum Zener Impedance			Maximum Reverse Current		Typical Temperature Coefficient	
		$V_z @ I_{zT}$			$I_{zT}$	$Z_{zT} @ I_{zT}$	$Z_{zK} @ I_{zK}$	$I_{zK}$	$I_R$	$V_R$	@ $I_{zT}$	
		Min.	Nom.	Max.							Min.	Max.
		V			mA	$\Omega$	mA	$\mu\text{A}$	V	mV/ $^\circ\text{C}$		
BZT52C33SCR-C	WR	31	33	35	2	80	325	0.5	0.1	23.1	27.4	33.4
BZT52C36SCR-C	WS	34	36	38	2	90	350	0.5	0.1	25.2	30.4	37.4
BZT52C39SCR-C	WT	37	39	41	2	130	350	0.5	0.1	27.3	33.4	41.2
BZT52C43SCR-C	WU	40	43	46	2	100	700	1	0.1	32	10	12
BZT52C47SCR-C	WV	44	47	50	2	100	750	1	0.1	35	10	12
BZT52C51SCR-C	WW	48	51	54	2	100	750	1	0.1	38	10	12
BZT52C56SCR-C	WX ·	53.2	56	58.8	2	200	400	0.5	0.045	39.2	10	12
BZT52C62SCR-C	WY ·	58.9	62	65.1	2	215	423	0.5	0.045	43.4	10	12
BZT52C68SCR-C	WZ	64.6	68	71.4	2	240	447	0.5	0.045	47.6	10	12
BZT52C75SCR-C	6H	71.25	75	78.75	2	255	470	0.5	0.045	52.5	10	12

**CHARACTERISTIC CURVES**

Fig. 1 Power Derating Curve

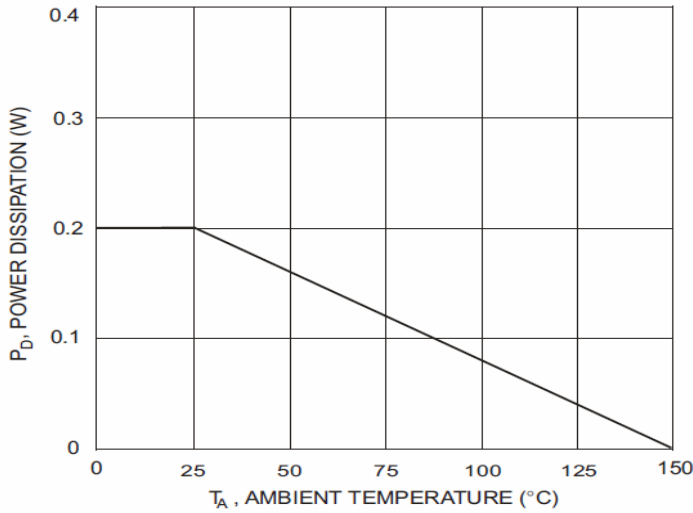


Fig. 2 Typical Zener Breakdown Characteristics

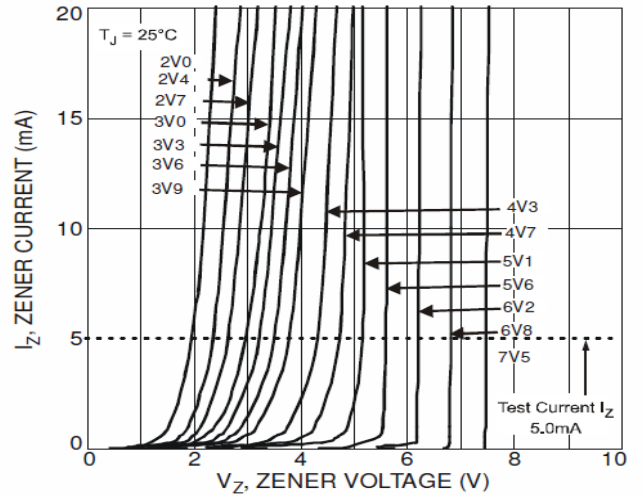


Fig. 3 Typical Zener Breakdown Characteristics

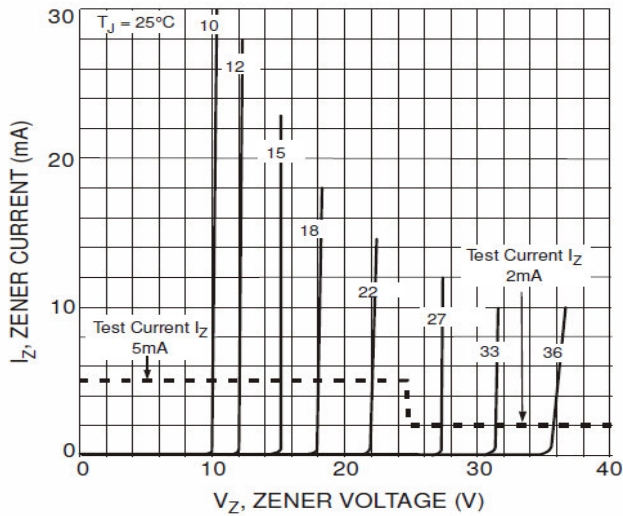


Fig. 4 Typical Zener Breakdown Characteristics

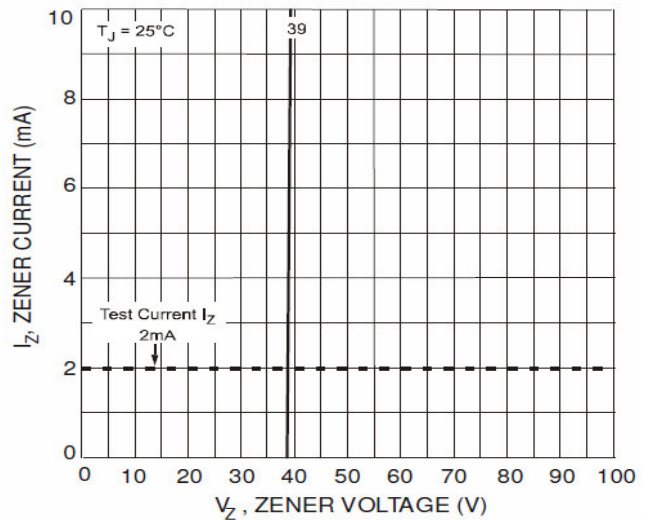


Fig. 5- Typical Temperature Coefficient of Zener Voltage

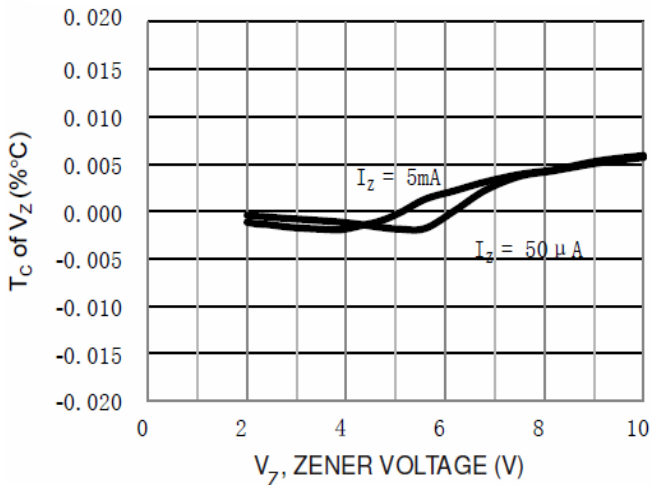


Fig. 6- Typical Temperature Coefficient of Zener Voltage

