

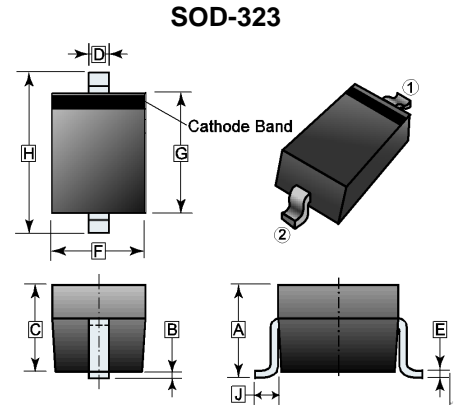
RoHS Compliant Product  
A suffix of "-C" specifies halogen & lead-free

## FEATURES

- Zener Voltages from 2V~75V
- Tight Voltage Tolerance:  $\pm 2\%$  for B-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



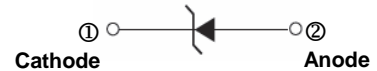
REF.	Millimeter		REF.	Millimeter	
	Min.	Max.		Min.	Max.
A	1.05	REF.	F	1.15	1.45
B	0.20	REF.	G	1.60	1.90
C	0.80	1.00	H	2.25	2.75
D	0.25	0.40	J	0.475	REF.
E	0.05	0.20			

## PACKAGE INFORMATION

Package	MPQ	Leader Size
SOD-323	3K	7 inch

## ORDER INFORMATION

Part Number	Type
BZT52BxxxSCR-C	Lead (Pb)-free and Halogen-free



## ABSOLUTE MAXIMUM RATINGS (T<sub>A</sub>=25°C unless otherwise specified)

Parameter	Symbol	Ratings	Unit
Forward Voltage @ I <sub>F</sub> =10mA	V <sub>F</sub>	0.9	V
Power Dissipation	P <sub>D</sub>	200	mW
Thermal Resistance from Junction-Ambient	R <sub>θJA</sub>	625	°C/W
Thermal Resistance from Junction-Case	R <sub>θJC</sub>	337	
Operating and Storage Temperature Range	T <sub>J</sub> , T <sub>STG</sub>	-55~150	°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		
		$V_Z @ I_{ZT}$			$I_{ZT}$	$Z_{ZT} @ I_{ZT}$	$Z_{ZK} @ I_{ZK}$	$I_{R}$	$V_R$	@ $I_{ZT}$		
		Min.	Nom.	Max.						Min.	Max.	
		V			mA	$\Omega$		mA	$\mu\text{A}$	V	mV/ $^\circ\text{C}$	
BZT52B2V0SCR-C	WX	1.96	2	2.04	5	100	1000	0.5	120	0.5	-3.5	0
BZT52B2V2SCR-C	22	2.16	2.2	2.24	5	100	1000	0.5	120	0.7	-3.5	0
BZT52B2V4SCR-C	0Z	2.35	2.4	2.45	5	94	564	1	45	1	-3.5	0
BZT52B2V7SCR-C	1Z	2.65	2.7	2.75	5	94	564	1	18	1	-3.5	0
BZT52B3V0SCR-C	2Z	2.94	3	3.06	5	89	564	1	9	1	-3.5	0
BZT52B3V3SCR-C	3Z	3.23	3.3	3.37	5	89	564	1	4.5	1	-3.5	0
BZT52B3V6SCR-C	4Z	3.53	3.6	3.67	5	84	564	1	4.5	1	-3.5	0
BZT52B3V9SCR-C	5Z	3.82	3.9	3.98	5	84	564	1	2.7	1	-3.5	0
BZT52B4V3SCR-C	6Z	4.21	4.3	4.39	5	84	564	1	2.7	1	-3.5	0
BZT52B4V7SCR-C	7Z	4.61	4.7	4.79	5	75	564	1	2.7	2	-3.5	0.2
BZT52B5V1SCR-C	8Z	5	5.1	5.2	5	56	470	1	1.8	2	-2.7	1.2
BZT52B5V6SCR-C	9Z	5.49	5.6	5.71	5	37	451	1	0.9	2	-2	2.5
BZT52B6V2SCR-C	AZ	6.08	6.2	6.32	5	9	376	1	2.7	4	0.4	3.7
BZT52B6V8SCR-C	BZ	6.66	6.8	6.94	5	14	141	1	1.8	4	1.2	4.5
BZT52B7V5SCR-C	CZ	7.35	7.5	7.65	5	14	75	1	0.9	5	2.5	5.3
BZT52B8V2SCR-C	DZ	8.04	8.2	8.36	5	14	75	1	0.63	5	3.2	6.2
BZT52B9V1SCR-C	EZ	8.92	9.1	9.28	5	14	94	1	0.45	6	3.8	7
BZT52B10SCR-C	FZ	9.8	10	10.2	5	18	141	1	0.18	7	4.5	8
BZT52B11SCR-C	GZ	10.78	11	11.22	5	18	141	1	0.09	8	5.4	9
BZT52B12SCR-C	HZ	11.76	12	12.24	5	23	141	1	0.09	8	6	10
BZT52B13SCR-C	JZ	12.74	13	13.26	5	28	160	1	0.09	8	7	11
BZT52B15SCR-C	KZ	14.7	15	15.3	5	28	188	1	0.045	10.5	9.2	13
BZT52B16SCR-C	LZ	15.68	16	16.32	5	37	188	1	0.045	11.2	10.4	14
BZT52B18SCR-C	MZ	17.64	18	18.36	5	42	212	1	0.045	12.6	12.4	16
BZT52B20SCR-C	NZ	19.6	20	20.4	5	51	212	1	0.045	14	14.4	18
BZT52B22SCR-C	PZ	21.56	22	22.44	5	51	235	1	0.045	15.4	16.4	20
BZT52B24SCR-C	RZ	23.52	24	24.48	5	65	235	1	0.045	16.8	18.4	22
BZT52B27SCR-C	SZ	26.46	27	27.54	2	75	282	0.5	0.045	18.9	21.4	25.3
BZT52B30SCR-C	TZ	29.4	30	30.6	2	75	282	0.5	0.045	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/ $^\circ\text{C}$		
BZT52B33SCR-C	UZ	32.34	33	33.66	2	75	306	0.5	0.045	23	27.4	33.4
BZT52B36SCR-C	VZ	35.28	36	36.72	2	84	329	0.5	0.045	25.2	30.4	37.4
BZT52B39SCR-C	WZ	38.22	39	39.78	2	122	329	0.5	0.045	27.3	33.4	41.2
BZT52B43SCR-C	XZ	42.14	43	43.86	2	141	353	0.5	0.045	30.1	10	12
BZT52B47SCR-C	YZ	46.06	47	47.94	2	160	353	0.5	0.045	33	10	12
BZT52B51SCR-C	ZZ	49.98	51	52.02	2	169	376	0.5	0.045	35.7	10	12
BZT52B56SCR-C	X2	54.88	56	57.12	2	200	400	0.5	0.045	39.2	10	12
BZT52B62SCR-C	X3	60.76	62	63.24	2	215	423	0.5	0.045	43.4	10	12
BZT52B68SCR-C	X4	66.64	68	69.36	2	240	447	0.5	0.045	47.6	10	12
BZT52B75SCR-C	X5	73.5	75	76.5	2	255	470	0.5	0.045	52.5	10	12

**CHARACTERISTIC CURVES**

Fig. 1 Power Derating Curve

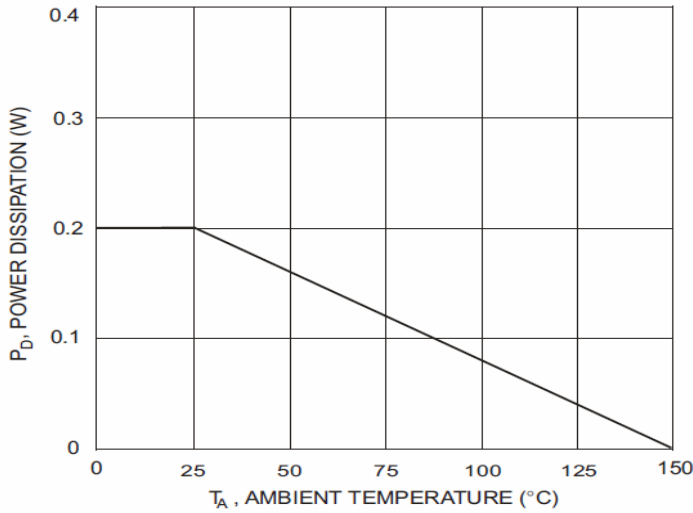


Fig. 2 Typical Zener Breakdown Characteristics

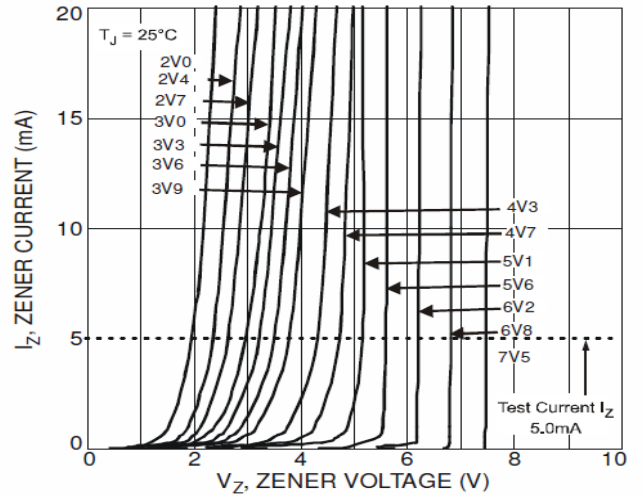


Fig. 3 Typical Zener Breakdown Characteristics

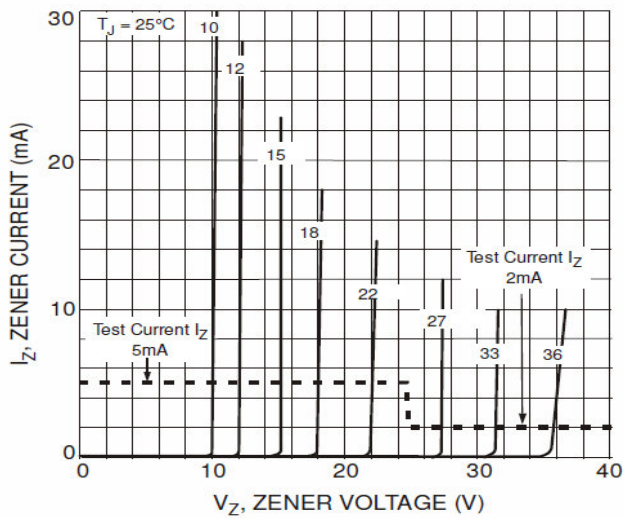


Fig. 4 Typical Zener Breakdown Characteristics

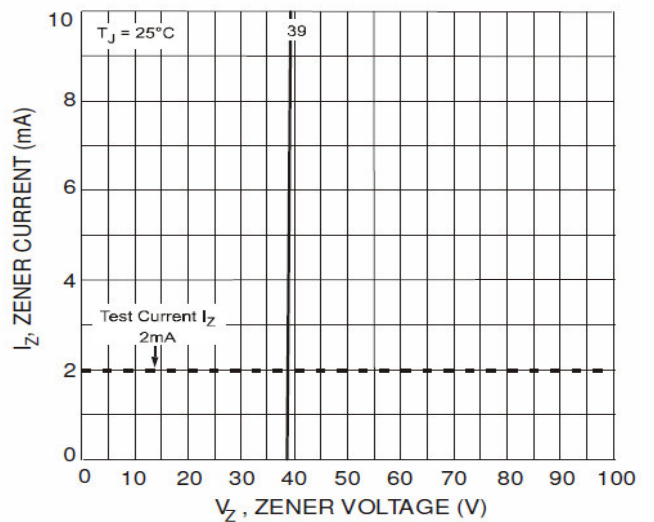


Fig. 5- Typical Temperature Coefficient of Zener Voltage

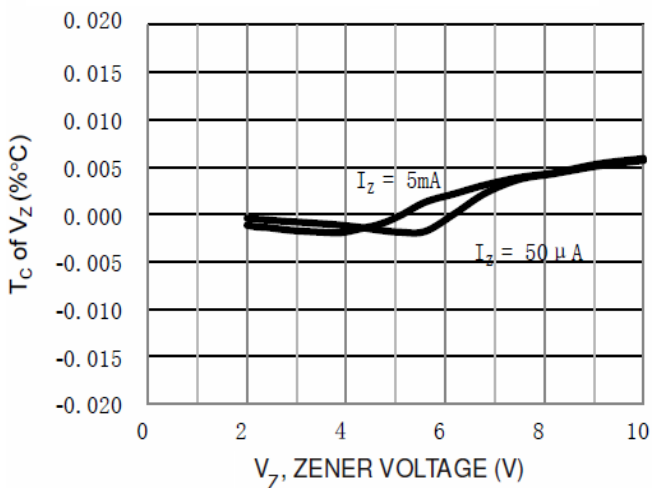


Fig. 6- Typical Temperature Coefficient of Zener Voltage

