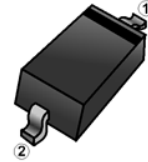


RoHS Compliant Product
A suffix of "-C" specifies halogen & lead-free

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

SOD-323



MECHANICAL DATA

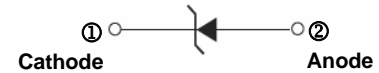
- Case: SOD-323, Molded Plastic
- Mounting Position: Any
- Polarity: As Marked

PACKAGE INFORMATION

Package	MPQ	Leader Size
SOD-323	3K	7 inch

ORDER INFORMATION

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



ABSOLUTE MAXIMUM RATINGS (T_A=25°C unless otherwise specified)

Parameter	Symbol	Ratings	Unit
Forward Voltage @ I _F =10mA	V _F	0.9	V
Power Dissipation	P _D	200	mW
Thermal Resistance from Junction-Ambient	R _{θJA}	625	°C/W
Thermal Resistance from Junction-Case	R _{θJC}	337	
Operating and Storage Temperature Range	T _J , T _{STG}	-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)

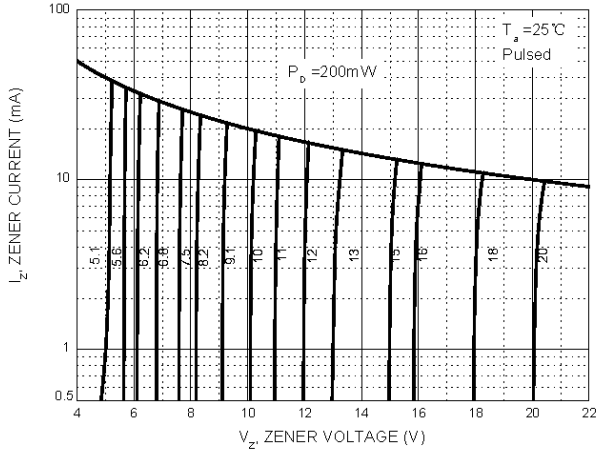
Part Number	Marking	Zener Voltage Range				Maximum Zener Impedance			Maximum Reverse Current		Typical Temperature Coefficient	
		$V_Z @ I_{ZT}$			I_{ZT}	$Z_{ZT} @ I_{ZT}$	$Z_{ZK} @ I_{ZK}$	I_{ZK}	I_R	V_R	@ I_{ZT}	
		Min.	Nom.	Max.							Min.	Max.
		V			mA	Ω		mA	μA	V	mV/°C	
BZT52B2V0SCR-C	WX ·	1.96	2	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 / 2WX	2.35	2.4	2.45	5	100	600	1	50	1	-3.5	0
BZT52B2V7SCR-C	1Z / 2W1	2.65	2.7	2.75	5	100	600	1	20	1	-3.5	0
BZT52B3V0SCR-C	2Z / 2W2	2.94	3	3.06	5	95	600	1	10	1	-3.5	0
BZT52B3V3SCR-C	3Z / 2W3	3.23	3.3	3.37	5	95	600	1	5	1	-3.5	0
BZT52B3V6SCR-C	4Z / 2W4	3.53	3.6	3.67	5	90	600	1	5	1	-3.5	0
BZT52B3V9SCR-C	5Z / 2W5	3.82	3.9	3.98	5	90	600	1	3	1	-3.5	0
BZT52B4V3SCR-C	6Z / 2W6	4.21	4.3	4.39	5	90	600	1	3	1	-3.5	0
BZT52B4V7SCR-C	7Z / 2W7	4.61	4.7	4.79	5	75	564	1	3	2	-3.5	0.2
BZT52B5V1SCR-C	8Z / 2W8	5	5.1	5.2	5	60	480	1	2	2	-2.7	1.2
BZT52B5V6SCR-C	9Z / 2W9	5.49	5.6	5.71	5	37	451	1	1	2	-2	2.5
BZT52B6V2SCR-C	AZ / 2WA	6.08	6.2	6.32	5	9	376	1	3	4	0.4	3.7
BZT52B6V8SCR-C	BZ / 2WB	6.66	6.8	6.94	5	14	141	1	2	4	1.2	4.5
BZT52B7V5SCR-C	CZ / 2WC	7.35	7.5	7.65	5	15	80	1	1	5	2.5	5.3
BZT52B8V2SCR-C	DZ / 2WD	8.04	8.2	8.36	5	15	80	1	0.7	5	3.2	6.2
BZT52B9V1SCR-C	EZ / 2WE	8.92	9.1	9.28	5	15	100	1	0.5	6	3.8	7
BZT52B10SCR-C	FZ / 2WF	9.8	10	10.2	5	20	150	1	0.2	7	4.5	8
BZT52B11SCR-C	GZ / 2WG	10.78	11	11.22	5	20	150	1	0.1	8	5.4	9
BZT52B12SCR-C	HZ / 2WH	11.76	12	12.24	5	25	150	1	0.1	8	6	10
BZT52B13SCR-C	JZ / 2WI	12.73	13	13.26	5	30	170	1	0.1	8	7	11
BZT52B15SCR-C	KZ / 2WJ	14.7	15	15.3	5	30	200	1	0.1	10.5	9.2	13
BZT52B16SCR-C	LZ / 2WK	15.68	16	16.32	5	40	200	1	0.1	11.2	10.4	14
BZT52B18SCR-C	MZ / 2WL	17.64	18	18.36	5	45	225	1	0.1	12.6	12.4	16
BZT52B20SCR-C	NZ / 2WM	19.6	20	20.4	5	55	225	1	0.1	14	14.4	18
BZT52B22SCR-C	PZ / 2WN	21.56	22	22.44	5	55	250	1	0.1	15.4	16.4	20
BZT52B24SCR-C	RZ / 2WO	23.52	24	24.48	5	70	250	1	0.1	16.8	18.4	22
BZT52B27SCR-C	SZ / 2WP	26.46	27	27.54	2	80	300	0.5	0.1	18.9	21.4	25.3
BZT52B30SCR-C	TZ / 2WQ	29.4	30	30.6	2	80	300	0.5	0.1	21	24.4	29.4

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

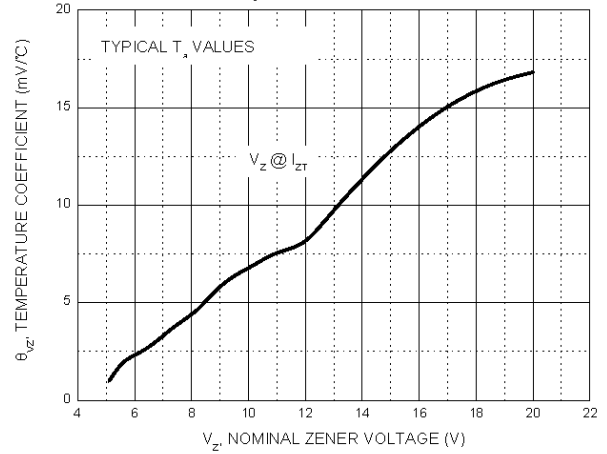
Part Number	Marking	Zener Voltage Range				Maximum Zener Impedance			Maximum Reverse Current		Typical Temperature Coefficient	
		V _Z @ I _{ZT}			I _{ZT}	Z _{ZT} @ I _{ZT}	Z _{ZK} @ I _{ZK}	I _{ZK}	I _R	V _R	@ I _{ZT}	
		Min.	Nom.	Max.							Min.	Max.
		V			mA	Ω		mA	μA	V	mV/°C	
BZT52B33SCR-C	UZ / 2WR	32.34	33	33.66	2	80	325	0.5	0.1	23	27.4	33.4
BZT52B36SCR-C	VZ / 2WS	35.28	36	36.72	2	90	350	0.5	0.1	25.2	30.4	37.4
BZT52B39SCR-C	WZ · / 2WT	38.22	39	39.78	2	130	350	0.5	0.1	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

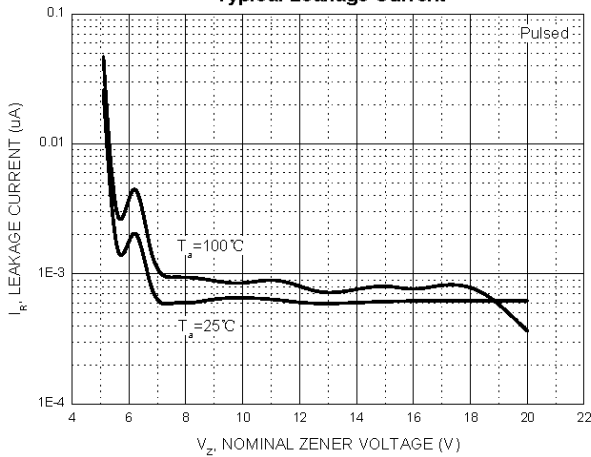
Zener Characteristics (V_z 5.1V to 20V)



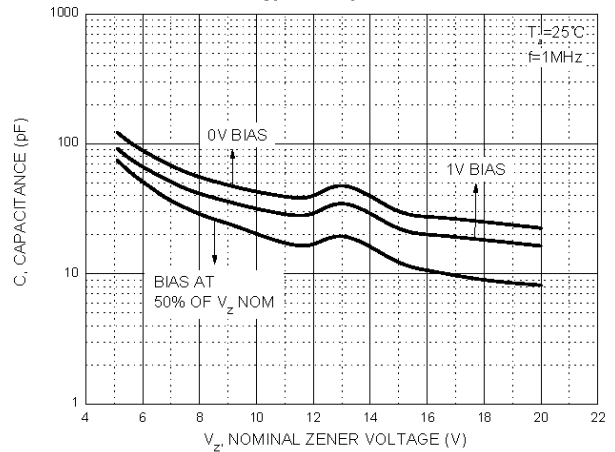
Temperature Coefficients



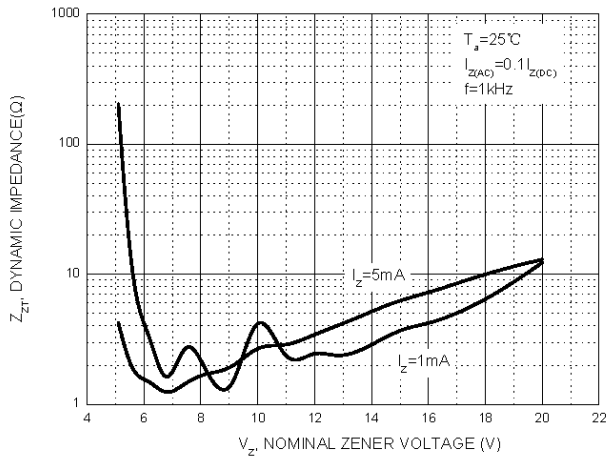
Typical Leakage Current



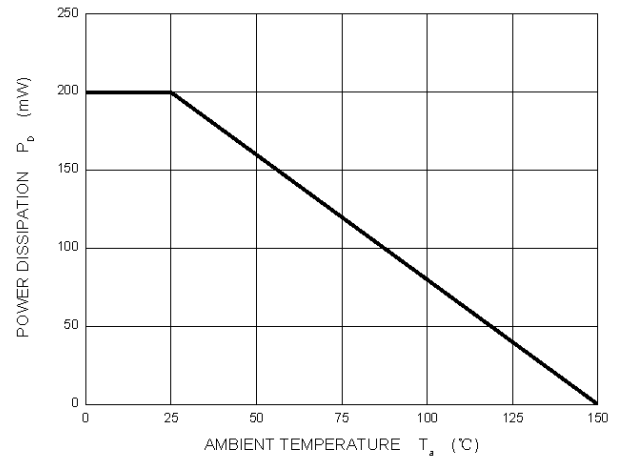
Typical Capacitance



Effect of Zener Voltage on Zener Impedance

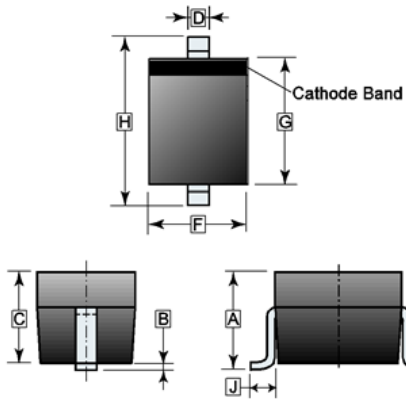


Power Derating Curve



PACKAGE OUTLINE DIMENSIONS

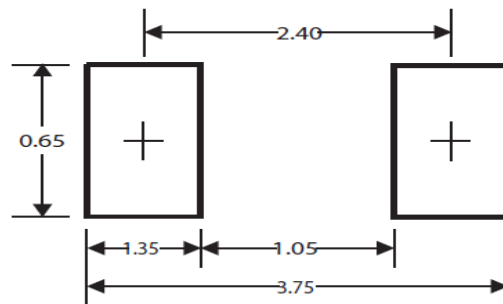
SOD-323



REF.	Millimeter	
	Min.	Max.
A	1.05 REF.	
B	0.07 REF.	
C	0.80	1.10
D	0.25	0.40
E	0.05	0.25
F	1.10	1.50
G	1.50	1.95
H	2.30	2.80
J	0.475 REF.	

MOUNTING PAD LAYOUT

SOD-323



*Dimensions in millimeters