

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

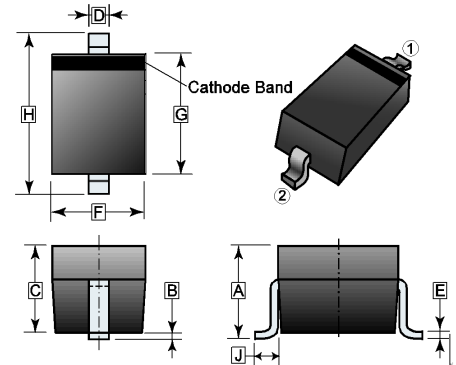
PACKAGE INFORMATION

Package	MPQ	Leader Size
SOD-123	3K	7' inch

ORDER INFORMATION

Part Number	Type
BZT52CxxxCR-C	Lead (Pb)-free and Halogen-free

SOD-123



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			



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

Parameter	Symbol	Value	Unit
Forward Voltage @ I _F =10mA	V _F	0.9	V
Power Dissipation	P _D	500	mW
Thermal Resistance Junction-Ambient	R _{θJA}	250	°C / W
Thermal Resistance Junction-Case	R _{θJC}	140	
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/ $^\circ\text{C}$	
BZT52C2V0CR-C	WY	1.90	2	2.10	5	100	600	1	150	1	-3.5	0
BZT52C2V2CR-C	22	2.09	2.2	2.31	5	100	600	1	150	1	-3.5	0
BZT52C2V4CR-C	WX	2.28	2.4	2.52	5	100	600	1	50	1	-3.5	0
BZT52C2V7CR-C	W1	2.57	2.7	2.84	5	100	600	1	20	1	-3.5	0
BZT52C3V0CR-C	W2	2.85	3	3.15	5	95	600	1	10	1	-3.5	0
BZT52C3V3CR-C	W3	3.14	3.3	3.47	5	95	600	1	5	1	-3.5	0
BZT52C3V6CR-C	W4	3.42	3.6	3.78	5	90	600	1	5	1	-3.5	0
BZT52C3V9CR-C	W5	3.71	3.9	4.10	5	90	600	1	3	1	-3.5	0
BZT52C4V3CR-C	W6	4.09	4.3	4.52	5	90	600	1	3	1	-3.5	0
BZT52C4V7CR-C	W7	4.47	4.7	4.94	5	80	500	1	3	2	-3.5	0
BZT52C5V1CR-C	W8	4.85	5.1	5.36	5	60	480	1	2	2	-2.7	1.2
BZT52C5V6CR-C	W9	5.32	5.6	5.88	5	40	400	1	1	2	-2	2.5
BZT52C6V2CR-C	WA	5.89	6.2	6.51	5	10	150	1	3	4	0.4	3.7
BZT52C6V8CR-C	WB	6.46	6.8	7.14	5	15	80	1	2	4	1.2	4.5
BZT52C7V5CR-C	WC	7.13	7.5	7.88	5	15	80	1	1	5	2.5	5.3
BZT52C8V2CR-C	WD	7.79	8.2	8.61	5	15	80	1	0.7	5	3.2	6.2
BZT52C9V1CR-C	WE	8.65	9.1	9.56	5	15	100	1	0.5	6	3.8	7
BZT52C10CR-C	WF	9.50	10	10.50	5	20	150	1	0.2	7	4.5	8
BZT52C11CR-C	WG	10.45	11	11.55	5	20	150	1	0.1	8	5.4	9
BZT52C12CR-C	WH	11.40	12	12.60	5	25	150	1	0.1	8	6	10
BZT52C13CR-C	WI	12.35	13	13.65	5	30	170	1	0.1	8	7	11
BZT52C15CR-C	WJ	14.25	15	15.75	5	30	200	1	0.1	10.5	9.2	13
BZT52C16CR-C	WK	15.20	16	16.80	5	40	200	1	0.1	11.2	10.4	14
BZT52C18CR-C	WL	17.10	18	18.90	5	45	225	1	0.1	12.6	12.4	16
BZT52C20CR-C	WM	19.00	20	21.00	5	55	225	1	0.1	14	14.4	18
BZT52C22CR-C	WN	20.90	22	23.10	5	55	250	1	0.1	15.4	16.4	20
BZT52C24CR-C	WO	22.80	24	25.20	5	70	250	1	0.1	16.8	18.4	22
BZT52C27CR-C	WP	25.65	27	28.35	2	80	300	0.5	0.1	18.9	21.4	25.3
BZT52C30CR-C	WQ	28.50	30	31.50	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		
BZT52C33CR-C	WR	31.35	33	34.65	2	80	325	0.5	0.1	23.1	27.4	33.4
BZT52C36CR-C	WS	34.20	36	37.80	2	90	350	0.5	0.1	25.2	30.4	37.4
BZT52C39CR-C	WT	37.05	39	40.95	2	130	350	0.5	0.1	27.3	33.4	41.2
BZT52C43CR-C	WU	40.85	43	45.15	2	100	700	1	0.1	32	10	12
BZT52C47CR-C	WV	44.65	47	49.35	2	100	750	1	0.1	35	10	12
BZT52C51CR-C	WW	48.45	51	53.55	2	100	750	1	0.1	38	10	12
BZT52C56CR-C	WX	53.20	56	58.80	2	200	400	0.5	0.045	39.2	10	12
BZT52C62CR-C	6E	58.90	62	65.10	2	215	423	0.5	0.045	43.4	10	12
BZT52C68CR-C	6F	64.60	68	71.40	2	240	447	0.5	0.045	47.6	10	12
BZT52C75CR-C	6H	71.25	75	78.75	2	255	470	0.5	0.045	52.5	10	12

CHARACTERISTIC CURVES

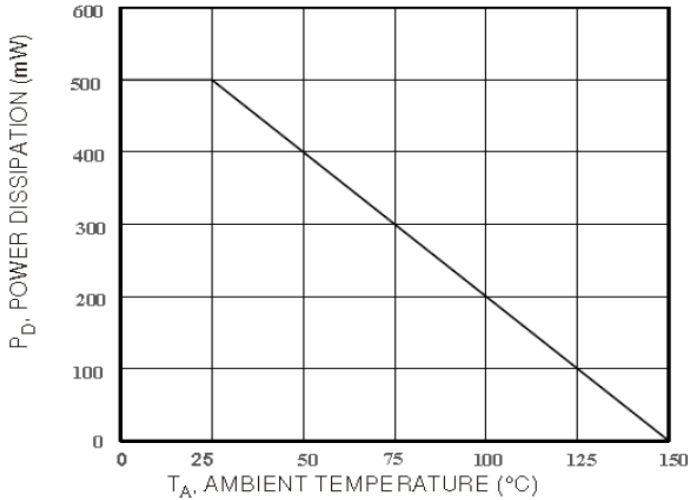


Fig. 1 Power Derating Curve

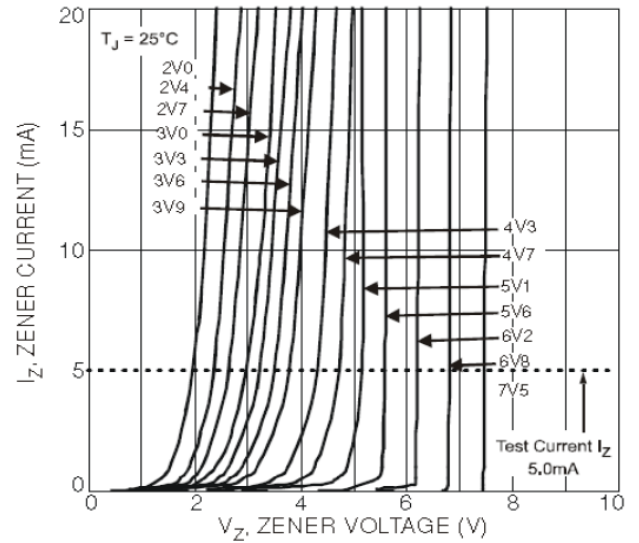


Fig. 2 Typical Zener Breakdown Characteristics

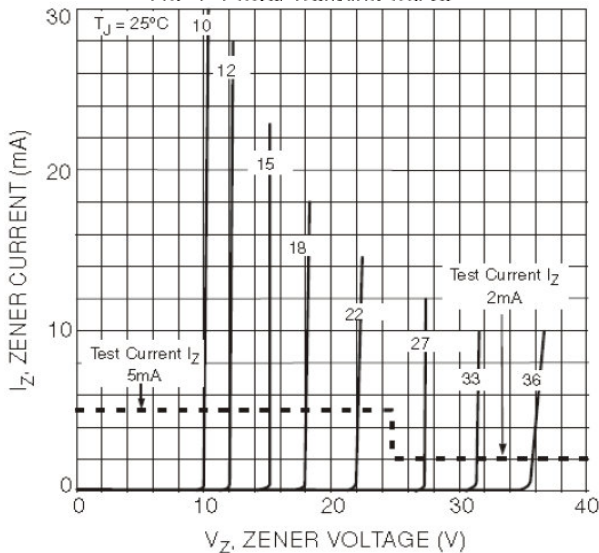


Fig. 3 Typical Zener Breakdown Characteristics

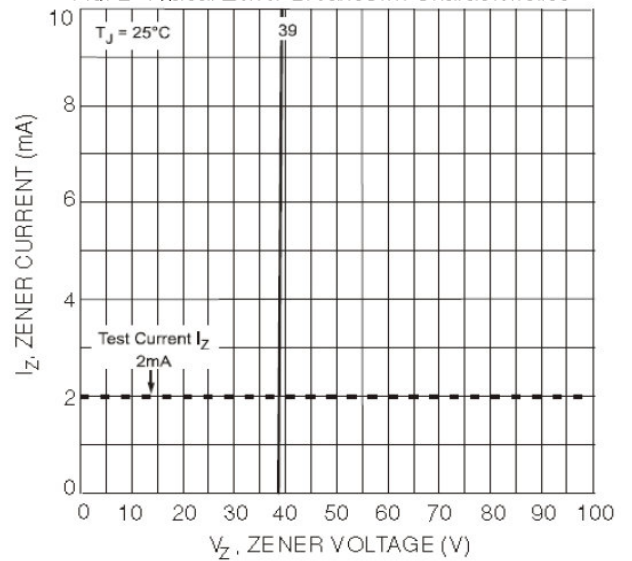


Fig. 4 Typical Zener Breakdown Characteristics

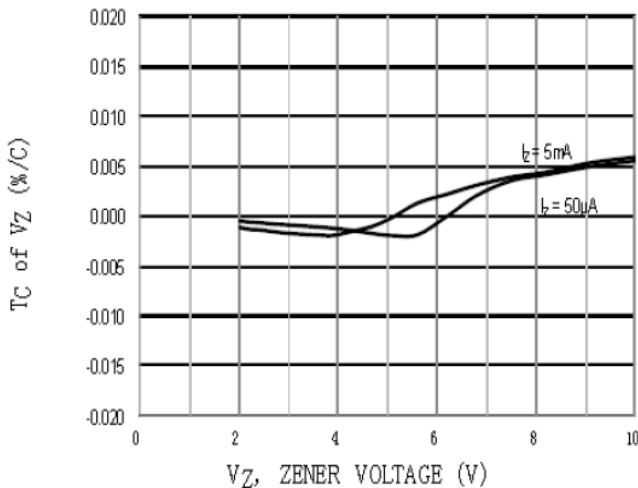


Fig. 5 Typical Temperature Coefficient of Zener Voltage

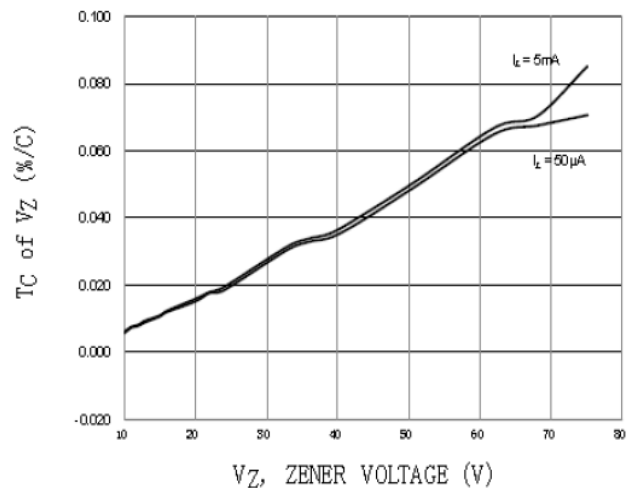


Fig. 6 Typical Temperature Coefficient of Zener Voltage