

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

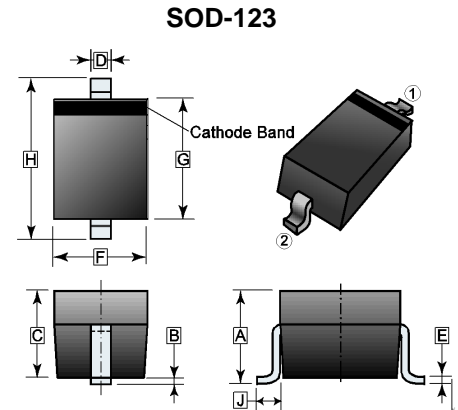
- Case: SOD-123, Molded Plastic
- Mounting Position: Any
- Polarity: As Marked

PACKAGE INFORMATION

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

ORDER INFORMATION

Part Number	Type
BZT52BxxxCR-C	Lead (Pb)-free and Halogen-free



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/ $^\circ\text{C}$	
BZT52B2V0CR-C	WX ·	1.96	2	2.04	5	100	1000	0.5	120	0.5	-3.5	0
BZT52B2V2CR-C	WY ·	2.16	2.2	2.24	5	100	1000	0.5	120	0.7	-3.5	0
BZT52B2V4CR-C	W1 ·	2.35	2.4	2.45	5	94	564	1	45	1	-3.5	0
BZT52B2V7CR-C	W2 ·	2.65	2.7	2.75	5	94	564	1	18	1	-3.5	0
BZT52B3V0CR-C	W3 ·	2.94	3	3.06	5	89	564	1	9	1	-3.5	0
BZT52B3V3CR-C	W4 ·	3.23	3.3	3.37	5	89	564	1	4.5	1	-3.5	0
BZT52B3V6CR-C	W5 ·	3.53	3.6	3.67	5	84	564	1	4.5	1	-3.5	0
BZT52B3V9CR-C	W6 ·	3.82	3.9	3.98	5	84	564	1	2.7	1	-3.5	0
BZT52B4V3CR-C	W7 ·	4.21	4.3	4.39	5	84	564	1	2.7	1	-3.5	0
BZT52B4V7CR-C	W8 ·	4.61	4.7	4.79	5	75	564	1	2.7	2	-3.5	0.2
BZT52B5V1CR-C	W9 ·	5	5.1	5.2	5	56	470	1	1.8	2	-2.7	1.2
BZT52B5V6CR-C	WA ·	5.49	5.6	5.71	5	37	451	1	0.9	2	-2	2.5
BZT52B6V2CR-C	WB ·	6.08	6.2	6.32	5	9	376	1	2.7	4	0.4	3.7
BZT52B6V8CR-C	WC ·	6.66	6.8	6.94	5	14	141	1	1.8	4	1.2	4.5
BZT52B7V5CR-C	WD ·	7.35	7.5	7.65	5	14	75	1	0.9	5	2.5	5.3
BZT52B8V2CR-C	WE ·	8.04	8.2	8.36	5	14	75	1	0.63	5	3.2	6.2
BZT52B9V1CR-C	WF ·	8.92	9.1	9.28	5	14	94	1	0.45	6	3.8	7
BZT52B10CR-C	WG ·	9.8	10	10.2	5	18	141	1	0.18	7	4.5	8
BZT52B11CR-C	WH ·	10.78	11	11.22	5	18	141	1	0.09	8	5.4	9
BZT52B12CR-C	WI ·	11.76	12	12.24	5	23	141	1	0.09	8	6	10
BZT52B13CR-C	WJ ·	12.74	13	13.26	5	28	160	1	0.09	8	7	11
BZT52B15CR-C	WK ·	14.7	15	15.3	5	28	188	1	0.045	10.5	9.2	13
BZT52B16CR-C	WL ·	15.68	16	16.32	5	37	188	1	0.045	11.2	10.4	14
BZT52B18CR-C	WM ·	17.64	18	18.36	5	42	212	1	0.045	12.6	12.4	16
BZT52B20CR-C	WN ·	19.6	20	20.4	5	51	212	1	0.045	14	14.4	18
BZT52B22CR-C	WO ·	21.56	22	22.44	5	51	235	1	0.045	15.4	16.4	20
BZT52B24CR-C	WP ·	23.52	24	24.48	5	65	235	1	0.045	16.8	18.4	22
BZT52B27CR-C	WQ ·	26.46	27	27.54	2	75	282	0.5	0.045	18.9	21.4	25.3
BZT52B30CR-C	WR ·	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	Ω	mA	μA	V	mV/ $^\circ\text{C}$		
BZT52B33CR-C	WS ·	32.34	33	33.66	2	75	306	0.5	0.045	23	27.4	33.4
BZT52B36CR-C	WT ·	35.28	36	36.72	2	84	329	0.5	0.045	25.2	30.4	37.4
BZT52B39CR-C	WU ·	38.22	39	39.78	2	122	329	0.5	0.045	27.3	33.4	41.2
BZT52B43CR-C	WV ·	42.14	43	43.86	2	141	353	0.5	0.045	30.1	10	12
BZT52B47CR-C	WW ·	46.06	47	47.94	2	160	353	0.5	0.045	33	10	12
BZT52B51CR-C	X1 ·	49.98	51	52.02	2	169	376	0.5	0.045	35.7	10	12
BZT52B56CR-C	X2 ·	54.88	56	57.12	2	200	400	0.5	0.045	39.2	10	12
BZT52B62CR-C	X3 ·	60.76	62	63.24	2	215	423	0.5	0.045	43.4	10	12
BZT52B68CR-C	X4 ·	66.64	68	69.36	2	240	447	0.5	0.045	47.6	10	12
BZT52B75CR-C	X5 ·	73.5	75	76.5	2	255	470	0.5	0.045	52.5	10	12

CHARACTERISTIC CURVES

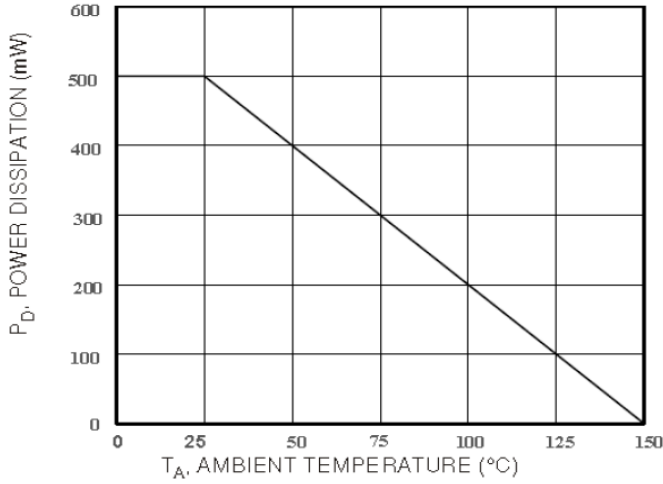


Fig. 1 Power Derating Curve

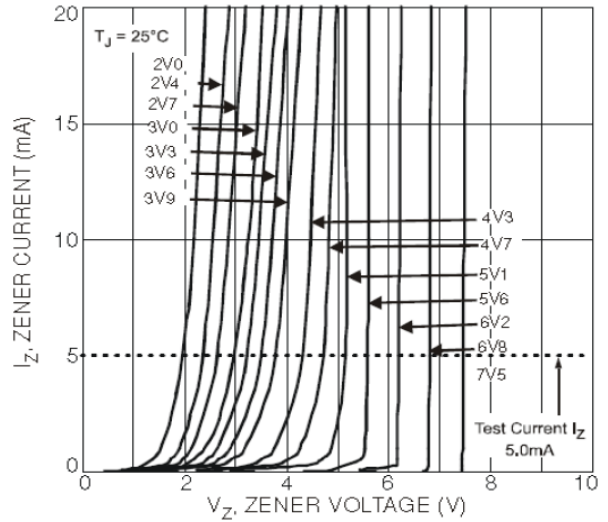


Fig. 2 Typical Zener Breakdown Characteristics

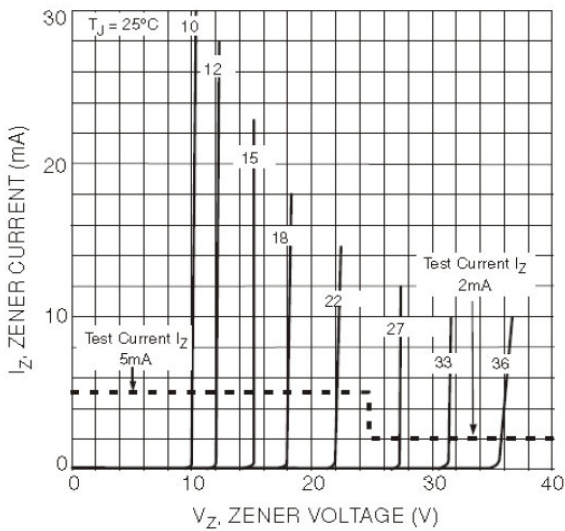


Fig. 3 Typical Zener Breakdown Characteristics

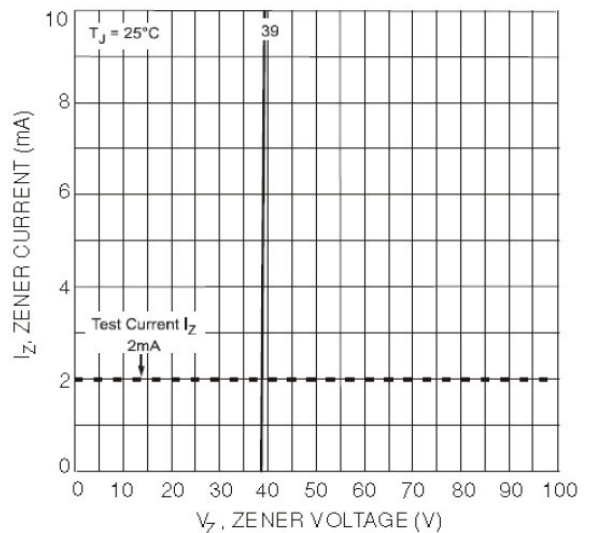


Fig. 4 Typical Zener Breakdown Characteristics

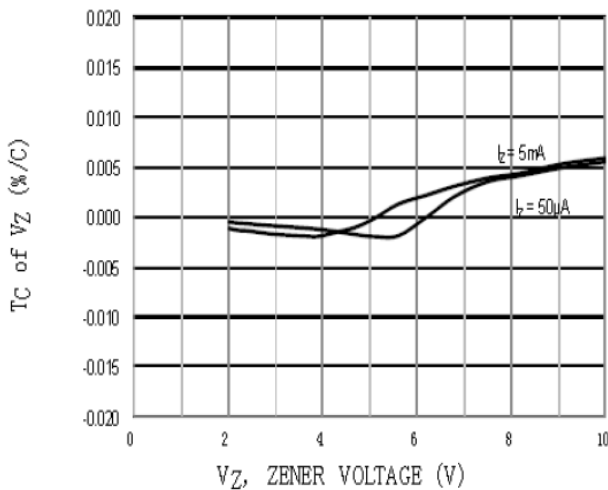


Fig. 5 Typical Temperature Coefficient of Zener Voltage

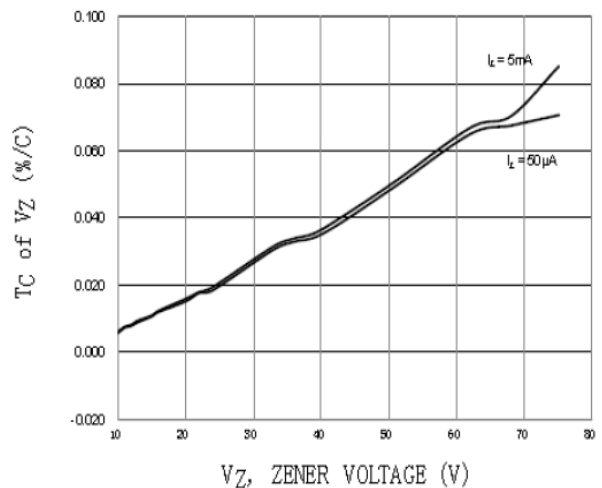


Fig. 6 Typical Temperature Coefficient of Zener Voltage