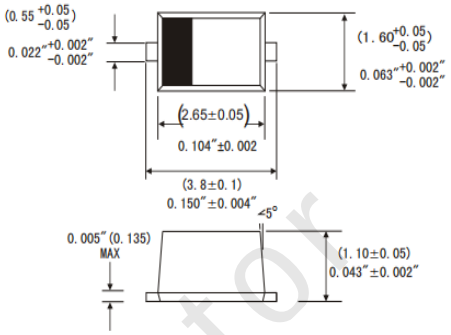
FEATURES

Large selection of zener voltages: 2.0V ~ 47V
Tight voltage tolerance: ±5% for C-series
Ultra low-profile package well suited for automated assembly
MSL Class 1 compatible

SOD-123



Dimensions in inches and (millimeters)

APPLICATIONS

General voltage regulation
Mobile & handheld systems

ORDERING INFORMATION

Part Number	Marking	Package
BZT52C2V0Q - BZT52C47Q	See Page 2	SOD-123

MAXIMUM RATING (@ T_A = 25°C unless otherwise specified)

Parameter	Symbol	Value	Unit
Forward Voltage @ I_F=10mA	V_F	0.9	V
Power Dissipation (Collector)	P_C	500	mW
Thermal Resistance (Junction-to-Ambient)	$R_{\theta JA}$	250	°C/W
Thermal Resistance (Junction-to-Case)	$R_{\theta JC}$	140	°C/W
Junction Temperature Range	T_J	-55 ~ +150	°C
Storage Temperature Range	T_{STG}	-65 ~ +150	°C

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

ELECTRICAL CHARACTERISTICS (@ T_A = 25°C unless otherwise specified)

Part Number	Marking Code	Zener Voltage V_Z (V)			@ I_{ZT} (mA)	Maximum Zener Impedance			Temperature Coefficient @ I_{ZT} T_C (mV/°C)		Maximum Reverse Current I_R (μA)	@ V_R (V)
		Min.	Typ.	Max.		Z_{ZT} (Ω) @ I_{ZT}	Z_{ZK} (Ω)	@ I_{ZK} (mA)	Min.	Max.		
BZT52C2V0Q	WY	1.90	2.00	2.10	5	100	600	1.0	-3.5	0.0	150.000	1.0
BZT52C2V2Q	22•	2.09	2.20	2.31	5	100	600	1.0	-3.5	0.0	150.000	1.0
BZT52C2V4Q	WX	2.28	2.40	2.52	5	100	600	1.0	-3.5	0.0	50.000	1.0
BZT52C2V7Q	W1	2.57	2.70	2.84	5	100	600	1.0	-3.5	0.0	20.000	1.0
BZT52C3V0Q	W2	2.85	3.00	3.15	5	95	600	1.0	-3.5	0.0	10.000	1.0
BZT52C3V3Q	W3	3.14	3.30	3.47	5	95	600	1.0	-3.5	0.0	5.000	1.0
BZT52C3V6Q	W4	3.42	3.60	3.78	5	90	600	1.0	-3.5	0.0	5.000	1.0
BZT52C3V9Q	W5	3.71	3.90	4.10	5	90	600	1.0	-3.5	0.0	3.000	1.0
BZT52C4V3Q	W6	4.09	4.30	4.52	5	90	600	1.0	-3.5	0.0	3.000	1.0
BZT52C4V7Q	W7	4.47	4.70	4.94	5	80	500	1.0	-3.5	0.0	3.000	2.0
BZT52C5V1Q	W8	4.85	5.10	5.36	5	60	480	1.0	-2.7	1.2	2.000	2.0
BZT52C5V6Q	W9	5.32	5.60	5.88	5	40	400	1.0	-2.0	2.5	1.000	2.0
BZT52C6V2Q	WA	5.89	6.20	6.51	5	10	150	1.0	0.4	3.7	3.000	4.0
BZT52C6V8Q	WB	6.46	6.80	7.14	5	15	80	1.0	1.2	4.5	2.000	4.0
BZT52C7V5Q	WC	7.13	7.50	7.88	5	15	80	1.0	2.5	5.3	1.000	5.0
BZT52C8V2Q	WD	7.79	8.20	8.61	5	15	80	1.0	3.2	6.2	0.700	5.0
BZT52C9V1Q	WE	8.65	9.10	9.56	5	15	100	1.0	3.8	7.0	0.500	6.0
BZT52C10Q	WF	9.50	10.00	10.50	5	20	150	1.0	4.5	8.0	0.200	7.0
BZT52C11Q	WG	10.45	11.00	11.55	5	20	150	1.0	5.4	9.0	0.100	8.0
BZT52C12Q	WH	11.40	12.00	12.60	5	25	150	1.0	6.0	10.0	0.100	8.0
BZT52C13Q	WI	12.35	13.00	13.65	5	30	170	1.0	7.0	11.0	0.100	8.0
BZT52C15Q	WJ	14.25	15.00	15.75	5	30	200	1.0	9.2	13.0	0.100	10.5
BZT52C16Q	WK	15.20	16.00	16.80	5	40	200	1.0	10.4	14.0	0.100	11.2
BZT52C18Q	WL	17.10	18.00	18.90	5	45	225	1.0	12.4	16.0	0.100	12.6
BZT52C20Q	WM	19.00	20.00	21.00	5	55	225	1.0	14.4	18.0	0.100	14.0
BZT52C22Q	WN	20.90	22.00	23.10	5	55	250	1.0	16.4	20.0	0.100	15.4
BZT52C24Q	WO	22.80	24.00	25.20	5	70	250	1.0	18.4	22.0	0.100	16.8
BZT52C27Q	WP	25.65	27.00	28.35	2	80	300	0.5	21.4	25.3	0.100	18.9
BZT52C30Q	WQ	28.50	30.00	31.50	2	80	300	0.5	24.4	29.4	0.100	21.0
BZT52C33Q	WR	31.35	33.00	34.65	2	80	325	0.5	27.4	33.4	0.100	23.1
BZT52C36Q	WS	34.20	36.00	37.80	2	90	350	0.5	30.4	37.4	0.100	25.2
BZT52C39Q	WT	37.05	39.00	40.95	2	130	350	0.5	33.4	41.2	0.100	27.3
BZT52C43Q	WU	40.85	43.00	45.15	2	100	700	1.0	10.0	12.0	0.100	32.0
BZT52C47Q	WV	44.65	47.00	49.35	2	100	750	1.0	10.0	12.0	0.100	35.0

TYPICAL CHARACTERISTICS (@ T_A = 25°C unless otherwise specified)

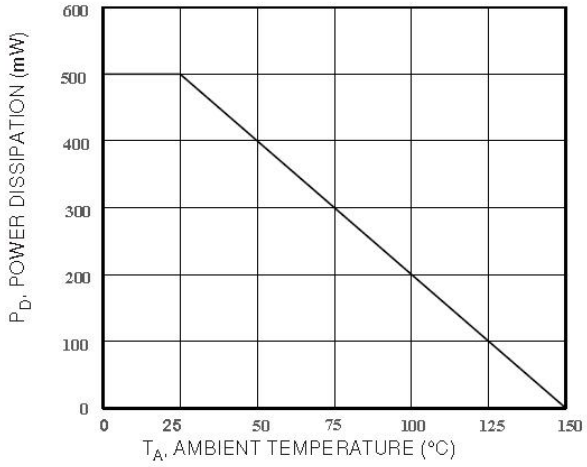


Fig. 1 Power Derating Curve

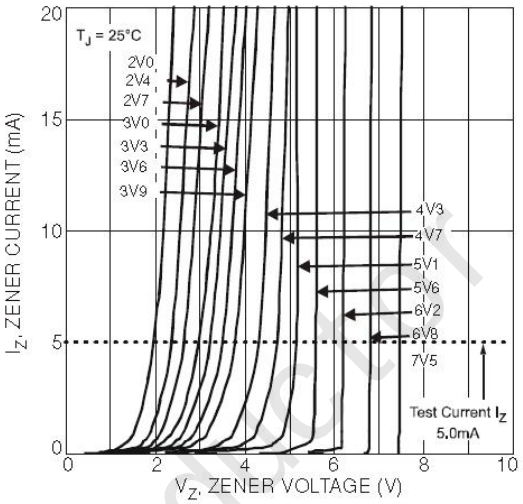


Fig. 2 Typical Zener Breakdown Characteristics

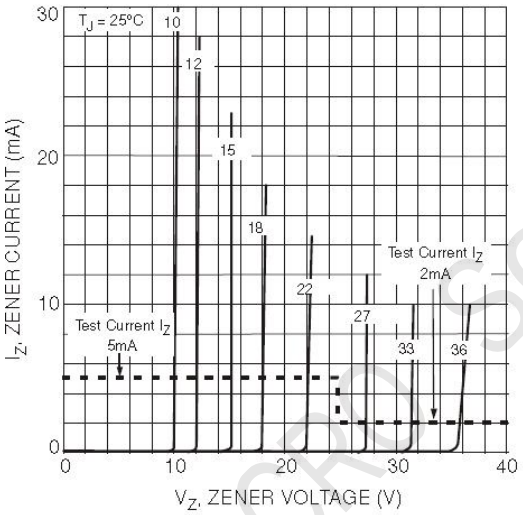


Fig. 3 Typical Zener Breakdown Characteristics

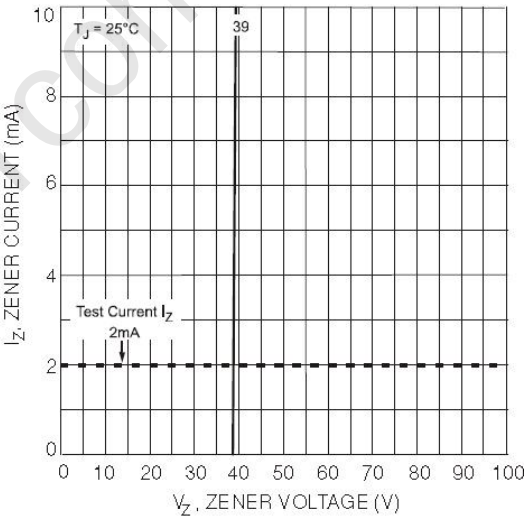


Fig. 4 Typical Zener Breakdown Characteristics

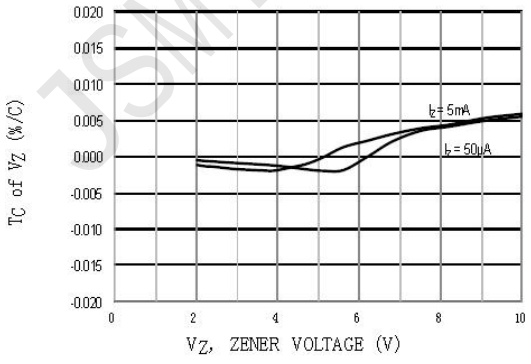


Fig. 5 Typical Temperature Coefficient of Zener Voltage

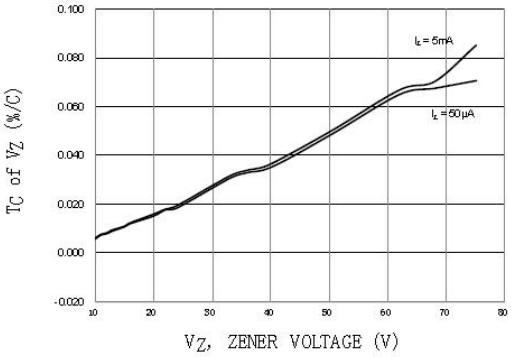


Fig. 6 Typical Temperature Coefficient of Zener Voltage