

Zener Diodes

2.4~75V 410mW SOD-123

BZT52C Series

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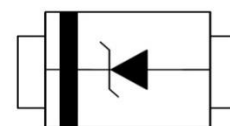
FEATURE

- Zener Voltage Range: 2.4V to 75V
- Power Dissipation: 410mW
- Silicon Planar Zener Diode in SOD-123 package
- Ideally Suited for Automated Assembly Processes
- Application: Power Management Systems, Voltage Regulation



MECHANICAL DATA

- Case: SOD-123, Molded Plastic
- Terminals: Solderable per MIL-STD-750, Method 2026
- Polarity: Band Marking denotes cathode end

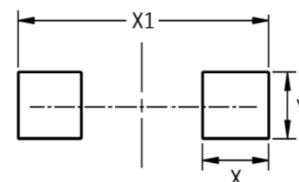
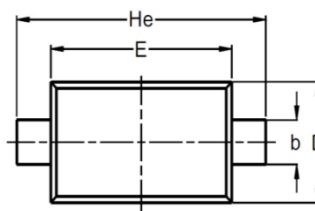
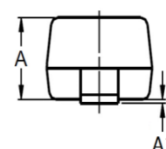


MAXIMUM RATINGS (TA=25 °C unless otherwise noted)

Parameter	Symbols	Value	Unit
Power Dissipation ^(Note 1)	P _D	410	mW
Resistance Junction to Ambient ^(Note 2)	R _{θJA}	510	°C/W
Junction Temperature	T _J	-55~+150	°C
Storage Temperature Range	T _{STG}	-55~+150	°C

DIMENSIONS AND RECOMMENDED LAND PATTERN

Item	Min (mm)	Max (mm)
A	0.95	1.35
A1	-	0.12
b	0.50	0.70
C	-	0.20
D	1.40	1.80
E	2.50	2.80
He	3.60	3.90
L	0.40	-
X	0.97	0.97
X1	3.60	3.90
Y	1.22	1.22



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ELECTRICAL CHARACTERISTICS (TA=25 °C unless otherwise noted)

Part Number	Nominal Zener Voltage V _Z at I _{ZT}			Max Zener Impedance Z _{ZT} at I _{ZT} , Z _{ZK} at I _{ZK} =1mA			Reverse Leakage Current I _R at V _R	
	Nom	Min	Max	Z _{ZT}	I _{ZT}	Z _{ZK}	I _R max	V _R
	(V)	(V)	(V)	(Ω)	(mA)	(Ω)	(μA)	(V)
BZT52C2V4	2.4	2.28	2.52	85	5.0	600	100	1.0
BZT52C2V7	2.7	2.57	2.84	83	5.0	600	75	1.0
BZT52C3	3.0	2.85	3.15	95	5.0	600	50	1.0
BZT52C3V3	3.3	3.14	3.47	95	5.0	600	25	1.0
BZT52C3V6	3.6	3.42	3.78	95	5.0	600	15	1.0
BZT52C3V9	3.9	3.71	4.10	95	5.0	600	10	1.0
BZT52C4V3	4.3	4.09	4.52	95	5.0	600	5.0	1.0
BZT52C4V7	4.7	4.47	4.94	78	5.0	500	5.0	1.0
BZT52C5V1	5.1	4.85	5.36	60	5.0	480	0.1	0.8
BZT52C5V6	5.6	5.32	5.88	40	5.0	400	0.1	1.0
BZT52C6V2	6.2	5.89	6.51	10	5.0	150	0.1	2.0
BZT52C6V8	6.8	6.46	7.14	8	5.0	80	0.1	3.0
BZT52C7V5	7.5	7.13	7.88	7	5.0	80	0.1	5.0
BZT52C8V2	8.2	7.79	8.61	7	5.0	80	0.1	6.0
BZT52C8V7	8.7	8.27	9.14	7	5.0	100	0.1	6.5
BZT52C9V1	9.1	8.65	9.56	10	5.0	100	0.1	7.0
BZT52C10	10	9.50	10.50	15	5.0	150	0.1	7.5
BZT52C11	11	10.45	11.55	20	5.0	150	0.1	8.5
BZT52C12	12	11.40	12.60	20	5.0	150	0.1	9.0
BZT52C13	13	12.35	13.65	25	5.0	170	0.1	10.0
BZT52C14	14	13.30	14.70	25	5.0	170	0.1	10.5
BZT52C15	15	14.25	15.75	30	5.0	200	0.1	11.0
BZT52C16	16	15.20	16.80	40	5.0	200	0.1	12.0
BZT52C17	17	16.15	17.85	40	5.0	200	0.1	13.0
BZT52C18	18	17.10	18.90	50	5.0	225	0.1	14.0
BZT52C20	20	19.00	21.00	50	5.0	225	0.1	15.0
BZT52C22	22	20.90	23.10	55	5.0	250	0.1	17.0
BZT52C24	24	22.80	25.20	80	5.0	250	0.1	18.0
BZT52C27	27	25.65	28.35	80	5.0	300	0.1	20.0
BZT52C28	28	26.60	29.40	80	5.0	300	0.1	22.0
BZT52C30	30	28.50	31.50	80	5.0	300	0.1	22.5
BZT52C33	33	31.35	34.65	80	5.0	325	0.1	25.0
BZT52C36	36	34.20	37.80	90	5.0	350	0.1	27.0
BZT52C39	39	37.05	40.95	90	5.0	350	0.1	29.0
BZT52C43	43	40.85	45.15	100	5.0	375	0.1	32.0
BZT52C47	47	44.65	49.35	100	5.0	375	0.1	35.0
BZT52C51	51	48.45	53.55	100	5.0	400	0.1	38.0
BZT52C56	56	53.20	58.80	135	2.5	1000	0.1	42.0
BZT52C62	62	58.90	65.10	150	2.5	1000	0.1	46.0
BZT52C68	68	64.60	71.40	200	2.5	1000	0.1	51.0
BZT52C75	75	71.25	78.75	250	2.5	1000	0.1	56.0

Notes:

1. Mounted on a FR-4 PCB, single-sided copper, with 100cm² copper pad area. 2. Mounted on a FR-4 PCB, single-sided copper, mini pad.

Zener Diodes

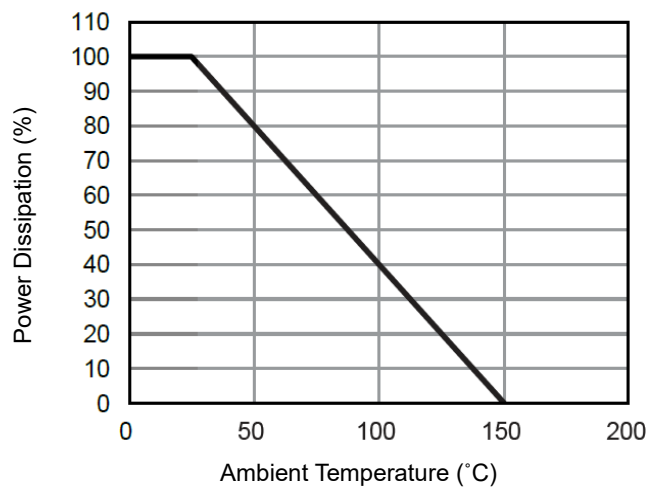
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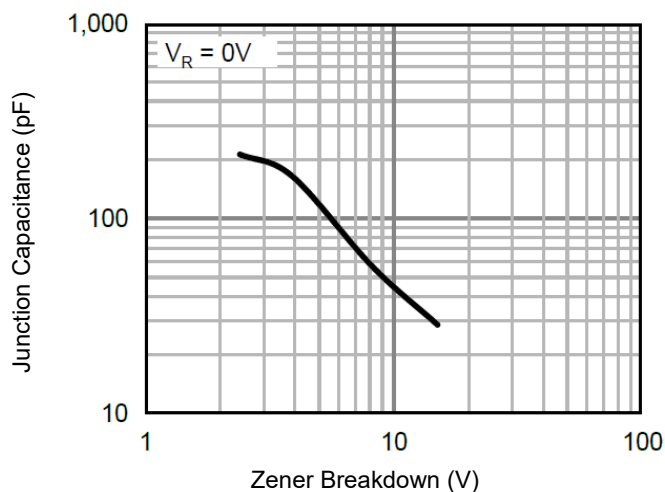
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CHARACTERISTIC CURVES

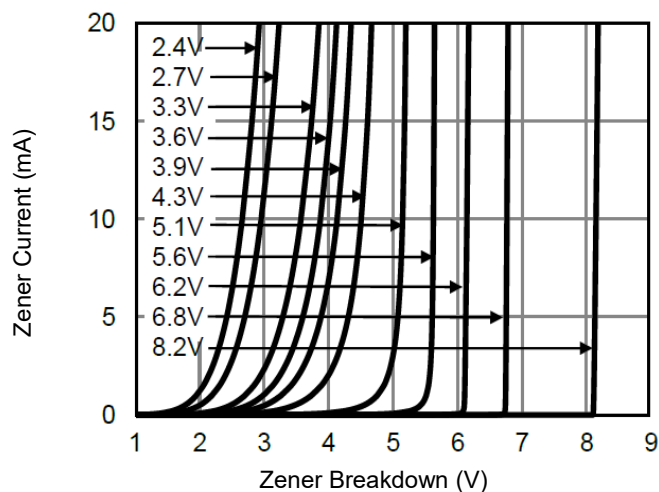
Power Derating



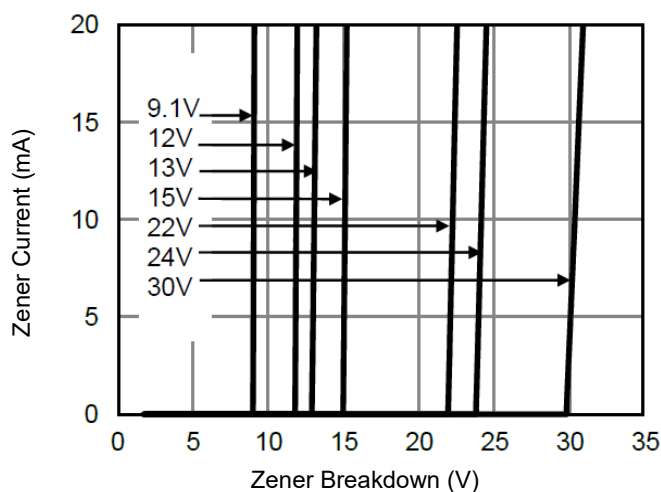
Typical Junction Capacitance



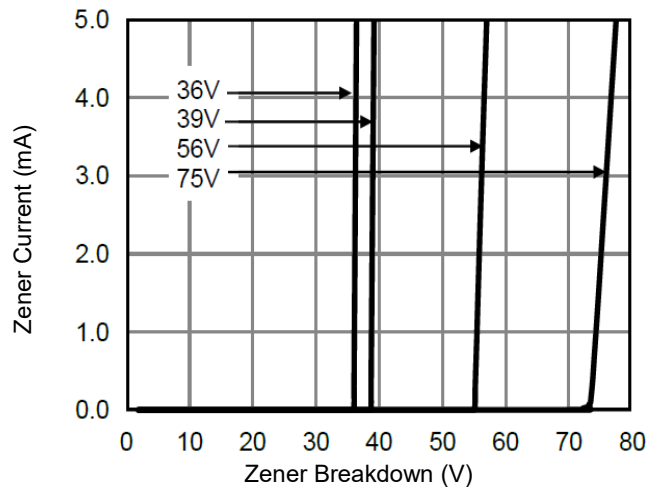
Typical Zener Breakdown



Typical Zener Breakdown



Typical Zener Breakdown



*Specifications subject to change without notice.