

Zener Diodes, AEC-Q101 2.4~75V 410mW SOD-123

BZT52C-A Series

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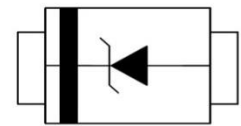
FEATURE

- 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
- AEC-Q101 Qualified



MECHANICAL DATA

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

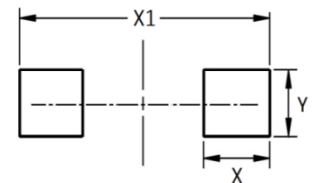
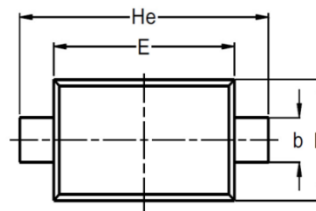
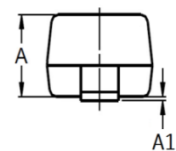
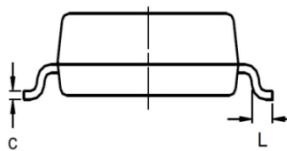


MAXIMUM RATINGS (TA=25 °C unless otherwise noted)

Parameter	Symbols	Value	Unit
Power Dissipation ^(Note 1)	P_D	410	mW
Resistance Junction to Ambient ^(Note 2)	$R_{\theta JA}$	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-A	2.4	2.28	2.52	85	5.0	600	100	1.0
BZT52C2V7-A	2.7	2.57	2.84	83	5.0	600	75	1.0
BZT52C3V0-A	3.0	2.85	3.15	95	5.0	600	50	1.0
BZT52C3V3-A	3.3	3.14	3.47	95	5.0	600	25	1.0
BZT52C3V6-A	3.6	3.42	3.78	95	5.0	600	15	1.0
BZT52C3V9-A	3.9	3.71	4.10	95	5.0	600	10	1.0
BZT52C4V3-A	4.3	4.09	4.52	95	5.0	600	5.0	1.0
BZT52C4V7-A	4.7	4.47	4.94	78	5.0	500	5.0	1.0
BZT52C5V1-A	5.1	4.85	5.36	60	5.0	480	0.1	0.8
BZT52C5V6-A	5.6	5.32	5.88	40	5.0	400	0.1	1.0
BZT52C6V2-A	6.2	5.89	6.51	10	5.0	150	0.1	2.0
BZT52C6V8-A	6.8	6.46	7.14	8	5.0	80	0.1	3.0
BZT52C7V5-A	7.5	7.13	7.88	7	5.0	80	0.1	5.0
BZT52C8V2-A	8.2	7.79	8.61	7	5.0	80	0.1	6.0
BZT52C8V7-A	8.7	8.27	9.14	7	5.0	100	0.1	6.5
BZT52C9V1-A	9.1	8.65	9.56	10	5.0	100	0.1	7.0
BZT52C10-A	10	9.50	10.50	15	5.0	150	0.1	7.5
BZT52C11-A	11	10.45	11.55	20	5.0	150	0.1	8.5
BZT52C12-A	12	11.40	12.60	20	5.0	150	0.1	9.0
BZT52C13-A	13	12.35	13.65	25	5.0	170	0.1	10.0
BZT52C14-A	14	13.30	14.70	25	5.0	170	0.1	10.5
BZT52C15-A	15	14.25	15.75	30	5.0	200	0.1	11.0
BZT52C16-A	16	15.20	16.80	40	5.0	200	0.1	12.0
BZT52C17-A	17	16.15	17.85	40	5.0	200	0.1	13.0
BZT52C18-A	18	17.10	18.90	50	5.0	225	0.1	14.0
BZT52C20-A	20	19.00	21.00	50	5.0	225	0.1	15.0
BZT52C22-A	22	20.90	23.10	55	5.0	250	0.1	17.0
BZT52C24-A	24	22.80	25.20	80	5.0	250	0.1	18.0
BZT52C27-A	27	25.65	28.35	80	5.0	300	0.1	20.0
BZT52C28-A	28	26.60	29.40	80	5.0	300	0.1	22.0
BZT52C30-A	30	28.50	31.50	80	5.0	300	0.1	22.5
BZT52C33-A	33	31.35	34.65	80	5.0	325	0.1	25.0
BZT52C36-A	36	34.20	37.80	90	5.0	350	0.1	27.0
BZT52C39-A	39	37.05	40.95	90	5.0	350	0.1	29.0
BZT52C43-A	43	40.85	45.15	100	5.0	375	0.1	32.0
BZT52C47-A	47	44.65	49.35	100	5.0	375	0.1	35.0
BZT52C51-A	51	48.45	53.55	100	5.0	400	0.1	38.0
BZT52C56-A	56	53.20	58.80	135	2.5	1000	0.1	42.0
BZT52C62-A	62	58.90	65.10	150	2.5	1000	0.1	46.0
BZT52C68-A	68	64.60	71.40	200	2.5	1000	0.1	51.0
BZT52C75-A	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.

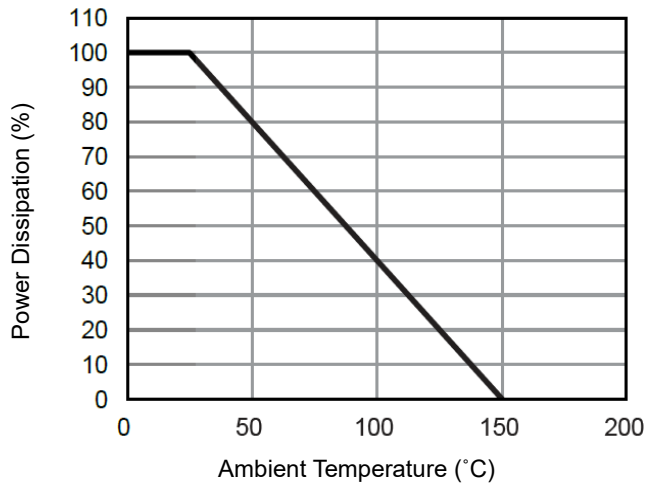
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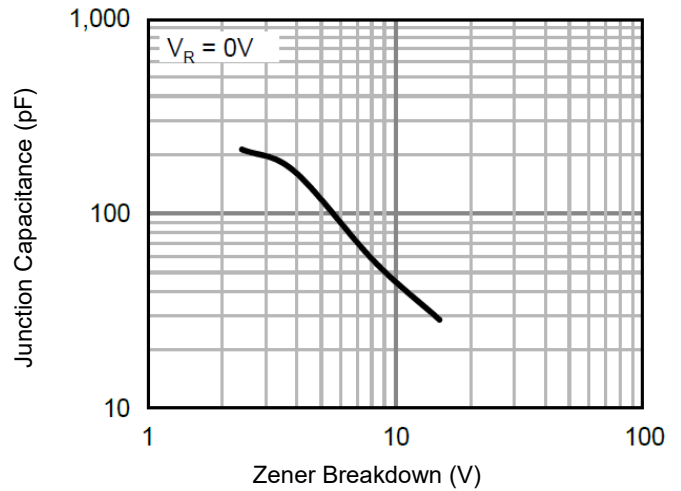
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CHARACTERISTIC CURVES

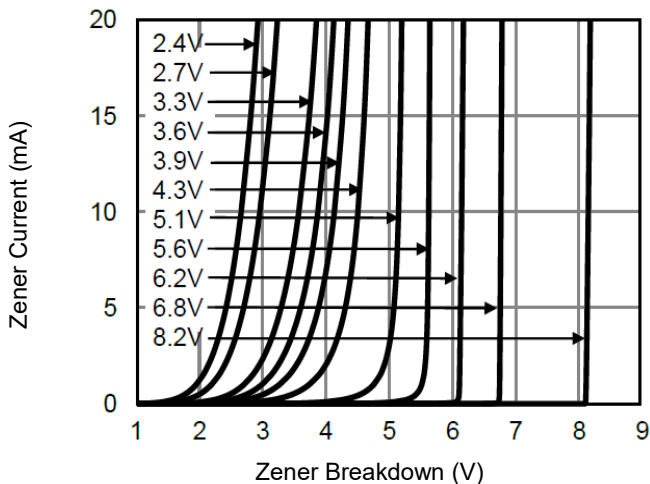
Power Derating



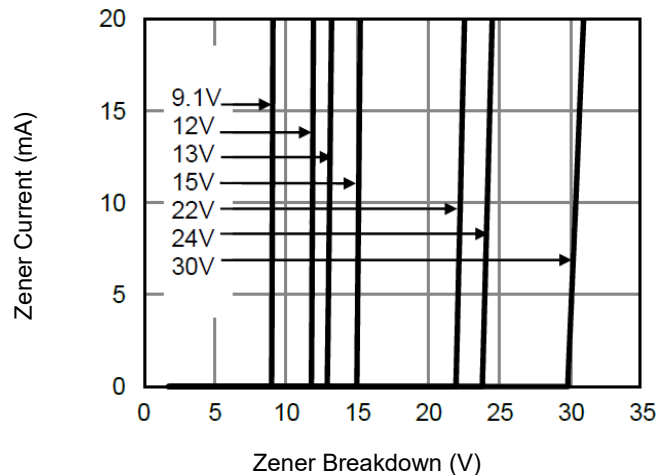
Typical Junction Capacitance



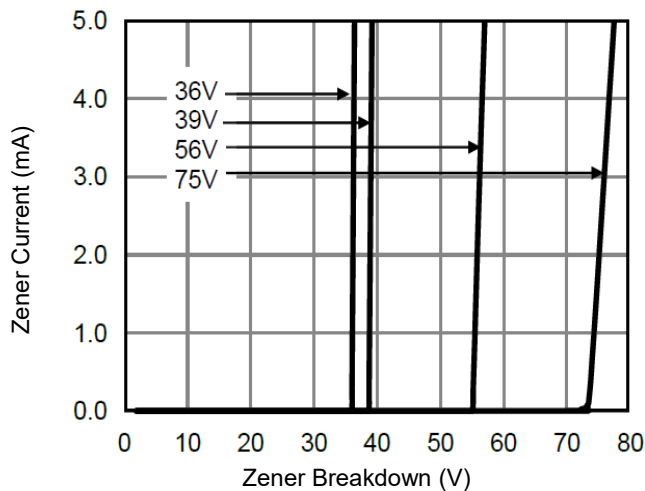
Typical Zener Breakdown



Typical Zener Breakdown



Typical Zener Breakdown



*Specifications subject to change without notice.