

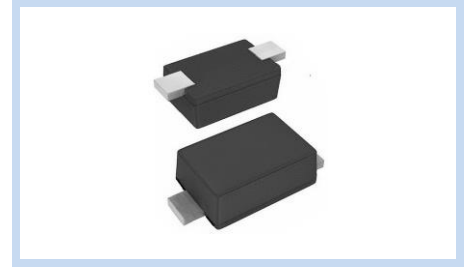
Zener Diodes SOD-323F, AEC-Q101

BZT52C-S-A Series

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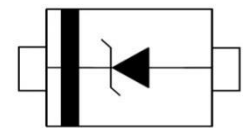
FEATURE

- Zener Voltage Range: 2.4~75V
- Zener Voltage Tolerance: $\pm 5\%$
- Power Dissipation: 200mW
- Silicon Planar Zener Diode Construction
- Ideally Suited for Automated Assembly Processes
- Application: Power Management Systems, Voltage Regulation
- AEC-Q101 Qualified



MECHANICAL DATA

- Case: SOD-323F, Molded Plastic
- Terminals: Solderable per MIL-STD-750, Method 2026
- Polarity: Band Marking Denotes Cathode End



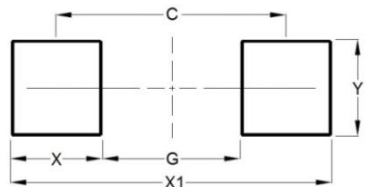
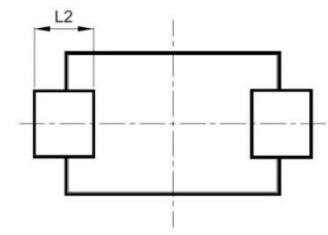
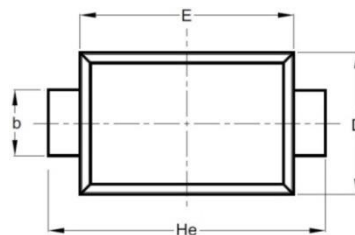
ABSOLUTE MAXIMUM RATINGS

Parameter	Symbols	Value	Unit
Power Dissipation	P_D	200	mW
Resistance Junction to Ambient	$R_{\theta JA}$	650	$^{\circ}C/W$
Junction Temperature	T_J	-55~+150	$^{\circ}C$
Storage Temperature Range	T_{STG}	-55~+150	$^{\circ}C$

Note: $T_A = 25^{\circ}C$ unless otherwise noted

DIMENSIONS AND RECOMMENDED LAND PATTERN

Item	Min (mm)	Max (mm)
A	0.70	0.90
b	0.25	0.35
C	0.05	0.15
D	1.15	1.35
E	1.75	1.95
He	2.30	2.70
L2	0.30	-
C	2.17	2.17
G	1.44	1.44
X	0.73	0.73
X1	2.90	2.90
Y	0.50	0.50



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ELECTRICAL CHARACTERISTICS

Part Number	Nominal Zener Voltage V_Z at I_{ZT}			Max Zener Impedance Z_{ZT} at I_{ZT} , Z_{ZK} at $I_{ZK}=1\text{mA}$			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)
BZT52C2V4S-A	2.4	2.28	2.52	85	5.0	600	100	1.0
BZT52C2V7S-A	2.7	2.57	2.84	83	5.0	600	75	1.0
BZT52C3V0S-A	3.0	2.85	3.15	95	5.0	600	50	1.0
BZT52C3V3S-A	3.3	3.14	3.47	95	5.0	600	25	1.0
BZT52C3V6S-A	3.6	3.42	3.78	95	5.0	600	15	1.0
BZT52C3V9S-A	3.9	3.71	4.10	95	5.0	600	10	1.0
BZT52C4V3S-A	4.3	4.09	4.52	95	5.0	600	5.0	1.0
BZT52C4V7S-A	4.7	4.47	4.94	78	5.0	500	5.0	1.0
BZT52C5V1S-A	5.1	4.85	5.36	60	5.0	480	0.1	0.8
BZT52C5V6S-A	5.6	5.32	5.88	40	5.0	400	0.1	1.0
BZT52C6V2S-A	6.2	5.89	6.51	10	5.0	150	0.1	2.0
BZT52C6V8S-A	6.8	6.46	7.14	8	5.0	80	0.1	3.0
BZT52C7V5S-A	7.5	7.13	7.88	7	5.0	80	0.1	5.0
BZT52C8V2S-A	8.2	7.79	8.61	7	5.0	80	0.1	6.0
BZT52C8V7S-A	8.7	8.27	9.14	7	5.0	100	0.1	6.5
BZT52C9V1S-A	9.1	8.65	9.56	10	5.0	100	0.1	7.0
BZT52C10S-A	10	9.50	10.50	15	5.0	150	0.1	7.5
BZT52C11S-A	11	10.45	11.55	20	5.0	150	0.1	8.5
BZT52C12S-A	12	11.40	12.60	20	5.0	150	0.1	9.0
BZT52C13S-A	13	12.35	13.65	25	5.0	170	0.1	10.0
BZT52C14S-A	14	13.30	14.70	25	5.0	170	0.1	10.5
BZT52C15S-A	15	14.25	15.75	30	5.0	200	0.1	11.0
BZT52C16S-A	16	15.20	16.80	40	5.0	200	0.1	12.0
BZT52C17S-A	17	16.15	17.85	40	5.0	200	0.1	13.0
BZT52C18S-A	18	17.10	18.90	50	5.0	225	0.1	14.0
BZT52C20S-A	20	19.00	21.00	50	5.0	225	0.1	15.0
BZT52C22S-A	22	20.90	23.10	55	5.0	250	0.1	17.0
BZT52C24S-A	24	22.80	25.20	80	5.0	250	0.1	18.0
BZT52C27S-A	27	25.65	28.35	80	5.0	300	0.1	20.0
BZT52C28S-A	28	26.60	29.40	80	5.0	300	0.1	22.0
BZT52C30S-A	30	28.50	31.50	80	5.0	300	0.1	22.5
BZT52C33S-A	33	31.35	34.65	80	5.0	325	0.1	25.0
BZT52C36S-A	36	34.20	37.80	90	5.0	350	0.1	27.0
BZT52C39S-A	39	37.05	40.95	90	5.0	350	0.1	29.0
BZT52C43S-A	43	40.85	45.15	100	5.0	375	0.1	32.0
BZT52C47S-A	47	44.65	49.35	100	5.0	375	0.1	35.0
BZT52C51S-A	51	48.45	53.55	100	5.0	400	0.1	38.0
BZT52C56S-A	56	53.20	58.80	135	2.5	1000	0.1	42.0
BZT52C62S-A	62	58.90	65.10	150	2.5	1000	0.1	46.0
BZT52C68S-A	68	64.60	71.40	200	2.5	1000	0.1	51.0
BZT52C75S-A	75	71.25	78.75	250	2.5	1000	0.1	56.0

Note:

1. $T_A=25^\circ\text{C}$ unless otherwise noted

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

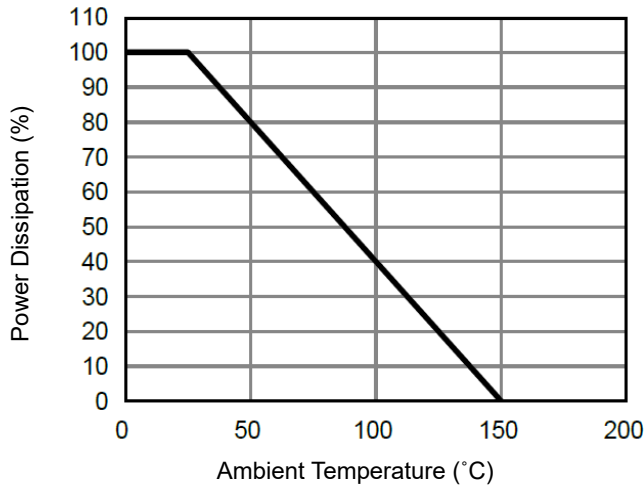
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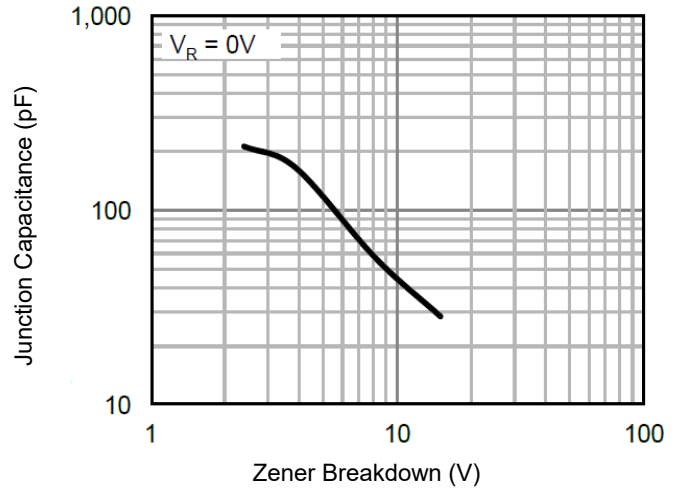
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CHARACTERISTIC CURVES

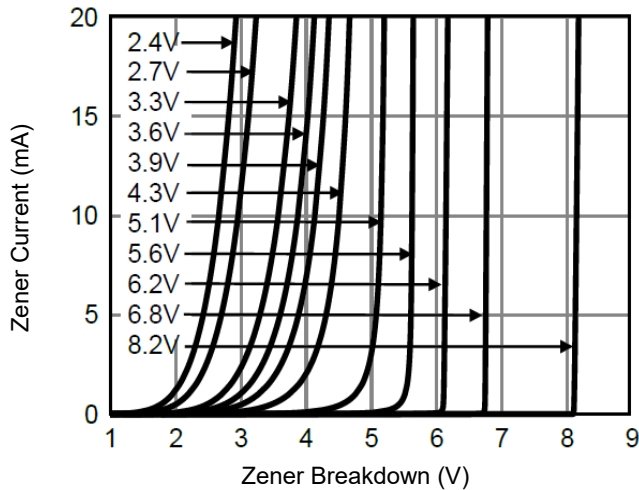
Power Derating



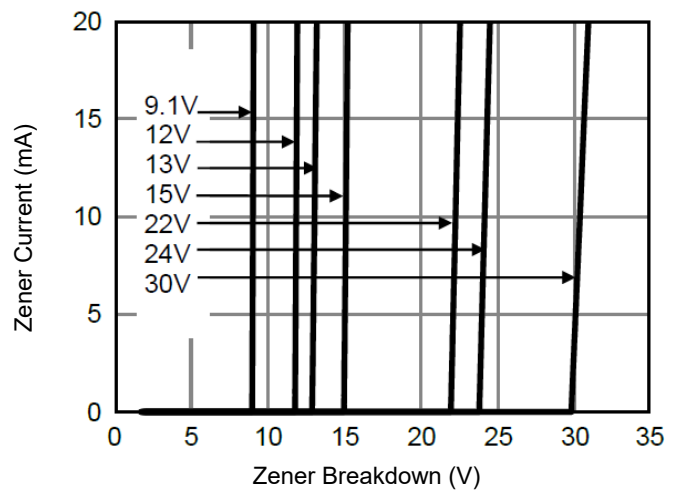
Typical Junction Capacitance



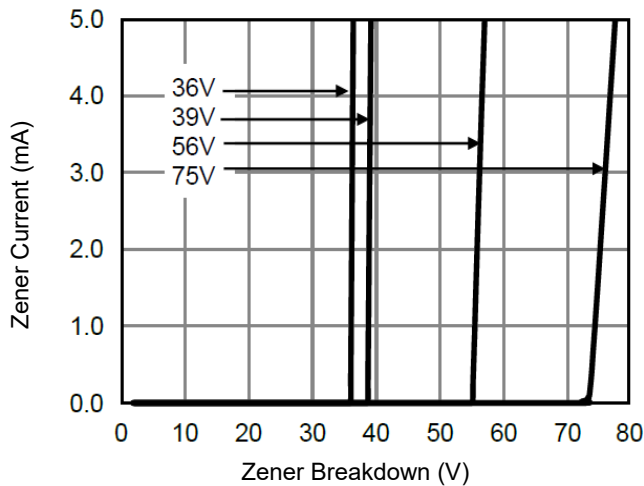
Typical Zener Breakdown



Typical Zener Breakdown



Typical Zener Breakdown



*Specifications subject to change without notice.