

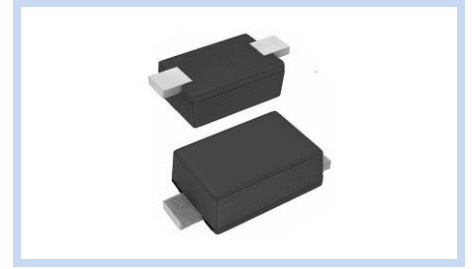
Zener Diodes SOD-323F, AEC-Q101

BZT52B-S-A Series

MERITEK

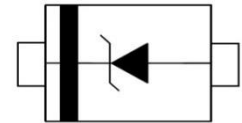
FEATURE

- Zener Voltage Range: 2.4~75V
- Zener Voltage Tolerance: $\pm 2\%$
- Power Dissipation: 200mW
- Silicon Planar Die 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



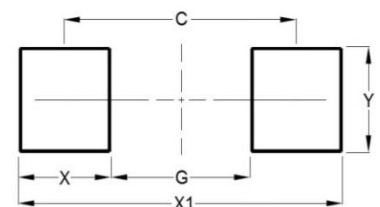
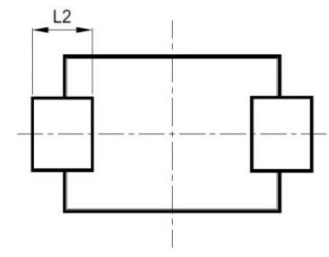
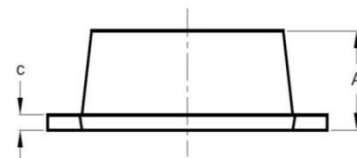
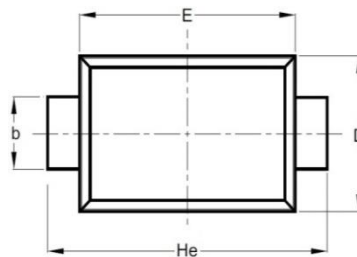
ABSOLUTE MAXIMUM RATINGS

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

Note: $T_A = 25^{\circ}\text{C}$ 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



Zener Diodes SOD-323F, AEC-Q101

BZT52B-S-A Series

MERITEK

ELECTRICAL CHARACTERISTICS

Part Number	Nominal Zener Voltage V_Z at I_{ZT}			Max Zener Impedance Z_{ZT} at I_{ZT} , Z_{ZK} at $I_{ZK}=1mA$			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)
BZT52B2V4S-A	2.4	2.35	2.45	85	5.0	600	100	1.0
BZT52B2V7S-A	2.7	2.64	2.75	83	5.0	600	75	1.0
BZT52B3V0S-A	3.0	2.94	3.06	95	5.0	600	50	1.0
BZT52B3V3S-A	3.3	3.23	3.37	95	5.0	600	25	1.0
BZT52B3V6S-A	3.6	3.52	3.67	95	5.0	600	15	1.0
BZT52B3V9S-A	3.9	3.82	3.98	95	5.0	600	10	1.0
BZT52B4V3S-A	4.3	4.21	4.39	95	5.0	600	5.0	1.0
BZT52B4V7S-A	4.7	4.61	4.79	78	5.0	500	5.0	1.0
BZT52B5V1S-A	5.1	5.00	5.20	60	5.0	480	0.1	0.8
BZT52B5V6S-A	5.6	5.49	5.71	40	5.0	400	0.1	1.0
BZT52B5V8S-A	5.8	5.68	5.92	30	5.0	300	0.1	1.5
BZT52B6V2S-A	6.2	6.08	6.32	10	5.0	150	0.1	2.0
BZT52B6V8S-A	6.8	6.66	6.94	8	5.0	80	0.1	3.0
BZT52B7V5S-A	7.5	7.35	7.65	7	5.0	80	0.1	5.0
BZT52B8V2S-A	8.2	8.04	8.36	7	5.0	80	0.1	6.0
BZT52B8V7S-A	8.7	8.53	8.87	7	5.0	100	0.1	6.5
BZT52B9V1S-A	9.1	8.92	9.28	10	5.0	100	0.1	7.0
BZT52B10S-A	10	9.80	10.20	15	5.0	150	0.1	7.5
BZT52B11S-A	11	10.78	11.22	20	5.0	150	0.1	8.5
BZT52B12S-A	12	11.76	12.24	20	5.0	150	0.1	9.0
BZT52B13S-A	13	12.74	13.26	25	5.0	170	0.1	10.0
BZT52B14S-A	14	13.72	14.28	25	5.0	170	0.1	10.5
BZT52B15S-A	15	14.70	15.30	30	5.0	200	0.1	11.0
BZT52B16S-A	16	15.68	16.32	40	5.0	200	0.1	12.0
BZT52B17S-A	17	16.66	17.34	40	5.0	200	0.1	13.0
BZT52B18S-A	18	17.64	18.36	50	5.0	225	0.1	14.0
BZT52B20S-A	20	19.60	20.40	50	5.0	225	0.1	15.0
BZT52B22S-A	22	21.56	22.44	55	5.0	250	0.1	17.0
BZT52B24S-A	24	23.52	24.48	80	5.0	250	0.1	18.0
BZT52B27S-A	27	26.46	27.54	80	5.0	300	0.1	20.0
BZT52B28S-A	28	27.44	28.56	80	5.0	300	0.1	22.0
BZT52B30S-A	30	29.40	30.60	80	5.0	300	0.1	22.5
BZT52B33S-A	33	32.34	33.66	80	5.0	325	0.1	25.0
BZT52B36S-A	36	35.28	36.72	90	5.0	350	0.1	27.0
BZT52B39S-A	39	38.22	39.78	90	5.0	350	0.1	29.0
BZT52B43S-A	43	42.14	43.86	100	5.0	375	0.1	32.0
BZT52B47S-A	47	46.06	47.94	100	5.0	375	0.1	35.0
BZT52B51S-A	51	49.98	52.02	100	5.0	400	0.1	38.0
BZT52B56S-A	56	54.88	57.12	135	2.5	1000	0.1	42.0
BZT52B62S-A	62	60.76	63.24	150	2.5	1000	0.1	46.0
BZT52B68S-A	68	66.64	69.36	200	2.5	1000	0.1	51.0
BZT52B75S-A	75	73.50	76.50	250	2.5	1000	0.1	56.0

Note:

1. $T_A=25^{\circ}C$ 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.

Zener Diodes

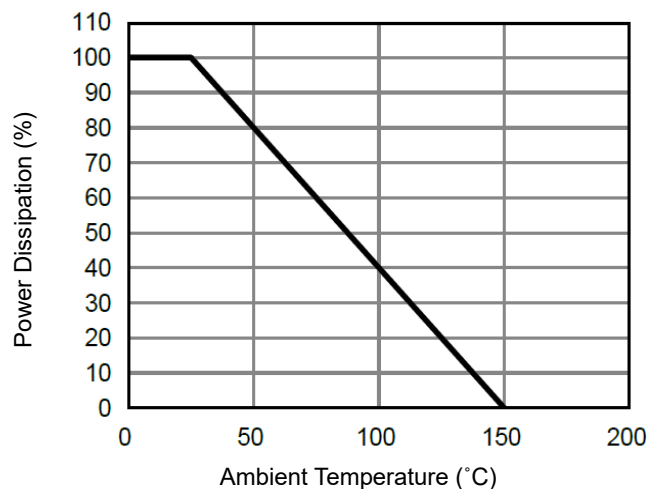
SOD-323F, AEC-Q101

BZT52B-S-A Series

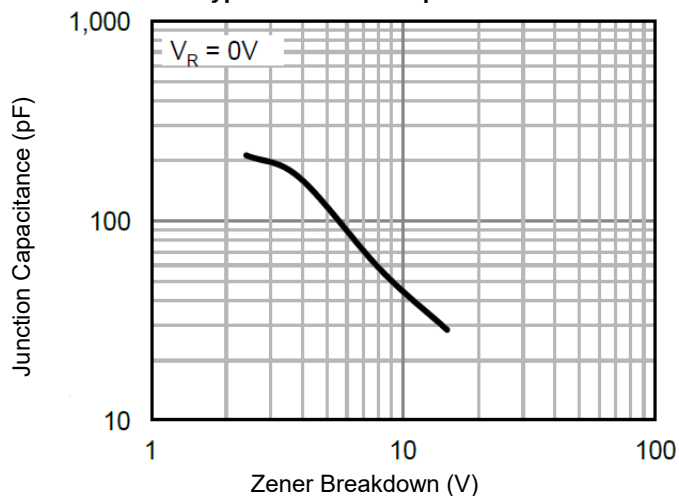
MERITEK

CHARACTERISTIC CURVES

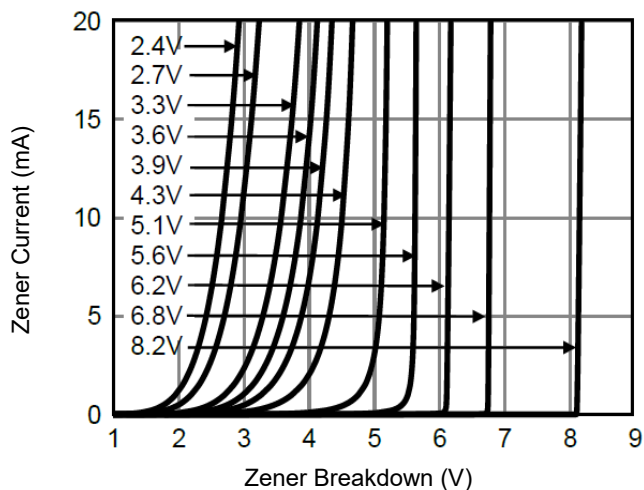
Power Derating



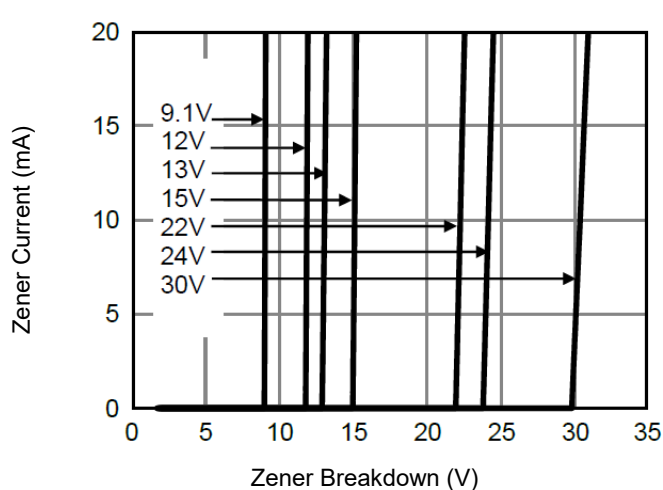
Typical Junction Capacitance



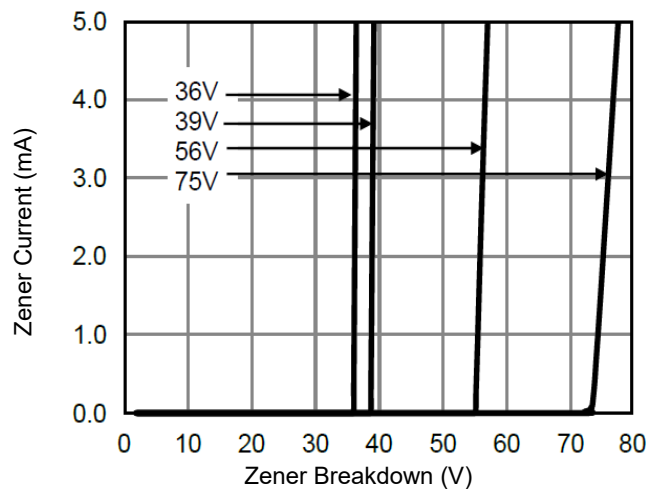
Typical Zener Breakdown



Typical Zener Breakdown



Typical Zener Breakdown



*Specifications subject to change without notice.