



# BZT52C2V4S ~ BZT52C75S

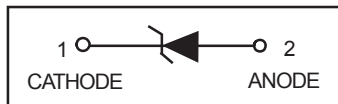
## SURFACE MOUNT ZENER DIODE

### Features

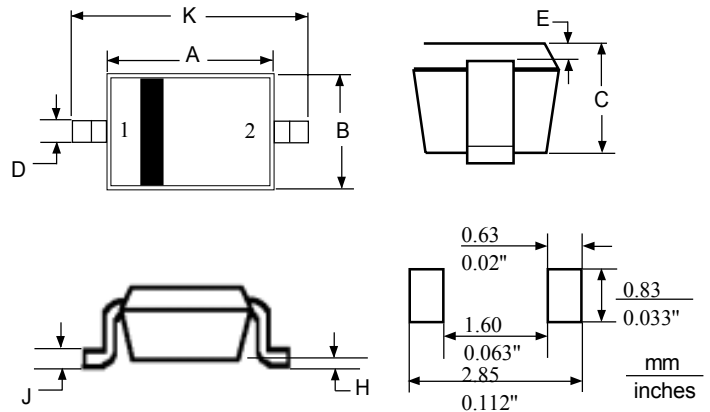
- Planar Die Construction
- Ultra-Small Surface Mount Package
- Ideally suited for Automated Assembly Processes

### Mechanical Data

- Case: SOD-323, Plastic
- Case material – UL Flammability Rating Classification 94V-0
- Moisture sensitivity: Level 1 per J-STD-020A
- Terminals: Solderable per MIL-STD-202, Method 208
- Polarity: Cathode Band
- Marking: See Below
- Weight: 0.004 grams (approx.)



### SOD-323



DIN	MILLIMETERS		INCHES	
	MIN	MAX	MIN	MAX
A	1.60	1.80	0.063	0.071
B	1.15	1.35	0.045	0.053
C	0.80	1.00	0.031	0.039
D	0.25	0.40	0.010	0.016
E	0.15 REF		0.006 REF	
H	0.00	0.10	0.0000	0.004
J	0.089	0.177	0.0035	0.0070
K	2.30	2.70	0.091	0.106

#### NOTES:

1. CONTROLLING DIMENSION: MILLIMETERS
2. LEAD THICKNESS SPECIFIED PER L/F DRAWING WITH SOLDER PLATING.

### Maximum Ratings @ $T_A=25^{\circ}\text{C}$ unless otherwise specified

Type Number	Symbol	Value	Units
Forward Voltage @ $I_F = 10\text{mA}$	VF	1.0	V
Power Dissipation (Note 1)	Pd	200	mW
Thermal Resistance Junction to Ambient Air (Note 1)	$R_{\theta JA}$	625	$^{\circ}\text{C/W}$
Operating and Storage Temperature Range	$T_J, T_{STG}$	-55 to + 150	$^{\circ}\text{C}$

- Notes:
1. Valid provided the device terminals are kept at ambient temperature.
  2. Short duration test pulse used in minimize self-heating effect.
  3.  $f = 1\text{KHz}$ .



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### Electrical Characteristics @ $T_A=25^\circ\text{C}$ unless otherwise specified

Device	Device Marking	Zener Voltage (Note 2.)				Zener Impedance			Leakage Current		$\theta V_Z$ (mV/k) @ $I_{ZT}$		C @ $V_R = 0$ f = 1 MHz pF
		$V_Z$ (Volts)			@ $I_{ZT}$	$Z_{ZT}$ @ $I_{ZT}$	$Z_{ZK}$ @ $I_{ZK}$		$I_R$ @ $V_R$		Min	Max	
		Min	Nom	Max	mA	$\Omega$	$\Omega$	mA	$\mu\text{A}$	Volts			
BZT52C2V4S	00	2.2	2.4	2.6	5	100	1000	0.5	50	1.0	-3.5	0	450
BZT52C2V7S	01	2.5	2.7	2.9	5	100	1000	0.5	20	1.0	-3.5	0	450
BZT52C3V0S	02	2.8	3.0	3.2	5	100	1000	0.5	10	1.0	-3.5	0	450
BZT52C3V3S	05	3.1	3.3	3.5	5	95	1000	0.5	5	1.0	-3.5	0	450
BZT52C3V6S	06	3.4	3.6	3.8	5	90	1000	0.5	5	1.0	-3.5	0	450
BZT52C3V9S	07	3.7	3.9	4.1	5	90	1000	0.5	3	1.0	-3.5	-2.5	450
BZT52C4V3S	08	4.0	4.3	4.6	5	90	1000	0.5	3	1.0	-3.5	0	450
BZT52C4V7S	09	4.4	4.7	5.0	5	80	800	0.5	3	2.0	-3.5	0.2	260
BZT52C5V1S	0A	4.8	5.1	5.4	5	60	800	0.5	2	2.0	-2.7	1.2	225
BZT52C5V6S	0C	5.2	5.6	6.0	5	40	700	0.5	1	2.0	-2.0	2.5	200
BZT52C6V2S	0E	5.8	6.2	6.6	5	10	100	0.5	3	4.0	0.4	3.7	185
BZT52C6V8S	0F	6.4	6.8	7.2	5	15	160	0.5	2	4.0	1.2	4.5	155
BZT52C7V5S	0G	7.0	7.5	7.9	5	15	160	0.5	1	5.0	2.5	5.3	140
BZT52C8V2S	0H	7.7	8.2	8.7	5	15	160	0.5	0.7	5.0	3.2	6.2	135
BZT52C9V1S	0K	8.5	9.1	9.6	5	15	160	0.5	0.2	7.0	3.8	7.0	130
BZT52C10S	0L	9.4	10	10.6	5	20	160	0.5	0.1	8.0	4.5	8.0	130
BZT52C11S	0M	10.4	11	11.6	5	20	160	0.5	0.1	8.0	5.4	9.0	130
BZT52C12S	0N	11.4	12	12.7	5	25	80	0.5	0.1	8.0	6.0	10	130
BZT52C13S	0P	12.4	13.25	14.1	5	30	80	0.5	0.1	8.0	7.0	11	120
BZT52C15S	0T	14.3	15	15.8	5	30	400	0.5	0.05	10.5	9.2	13	110
BZT52C16S	0U	15.3	16.2	17.1	5	40	400	0.5	0.05	11.2	10.4	14	105
BZT52C18S	0W	16.8	18	19.1	5	45	400	0.5	0.05	12.6	12.4	16	100
BZT52C20S	0Z	18.8	20	21.2	5	55	500	0.5	0.05	14.0	14.4	18	85
BZT52C22S	10	20.8	22	23.3	5	55	500	0.5	0.05	15.4	16.4	20	85
BZT52C24S	11	22.8	24.2	25.6	5	70	120	0.5	0.05	16.8	18.4	22	80
BZT52C27S	12	25.1	27	28.9	2	80	300	0.5	0.05	18.9	21.4	25.3	70
BZT52C30S	14	28	30	32	2	80	300	0.5	0.05	21.0	24.4	29.4	70
BZT52C33S	18	31	33	35	2	80	300	0.5	0.05	23.2	27.4	33.4	70
BZT52C36S	19	34	36	38	2	90	500	0.5	0.05	25.2	30.4	37.4	70
BZT52C39S	20	37	39	41	2	130	500	0.5	0.05	27.3	33.4	41.2	45
BZT52C43S	21	40	43	46	2	150	500	0.5	0.05	30.1	37.6	46.6	40
BZT52C47S	1A	44	47	50	2	170	500	0.5	0.05	32.9	42.0	51.8	40
BZT52C51S	1C	48	51	54	2	180	500	0.5	0.05	35.7	46.6	57.2	40
BZT52C56S	1D	52	56	60	2	200	500	0.5	0.05	39.2	52.2	63.8	40
BZT52C62S	1E	58	62	66	2	215	500	0.5	0.05	43.4	58.8	71.6	35
BZT52C68S	1F	64	68	72	2	240	500	0.5	0.05	47.6	65.6	79.8	35
BZT52C75S	1G	70	75	79	2	255	500	0.5	0.05	52.5	73.4	88.6	35



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## RATINGS AND CHARACTERISTIC CURVES

FIG.1- POWER DERATING CURVE

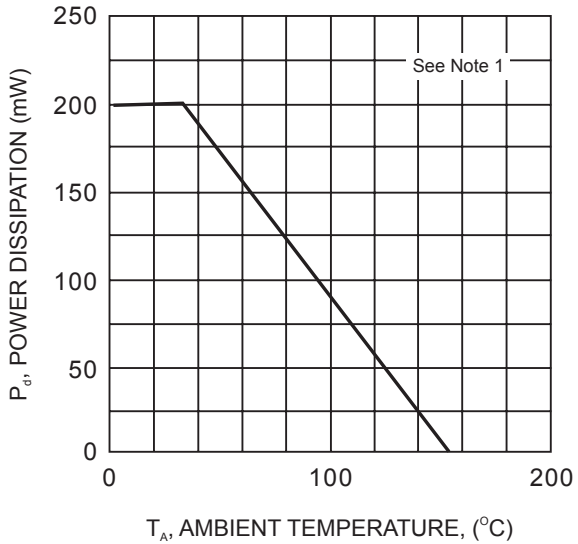


FIG.2- ZENER BREAKDOWN CHARACTERISTICS

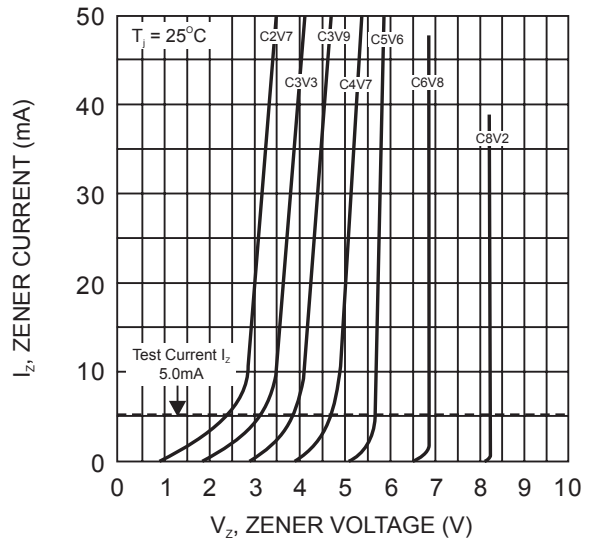


FIG.3- ZENER BREAKDOWN CHARACTERISTICS

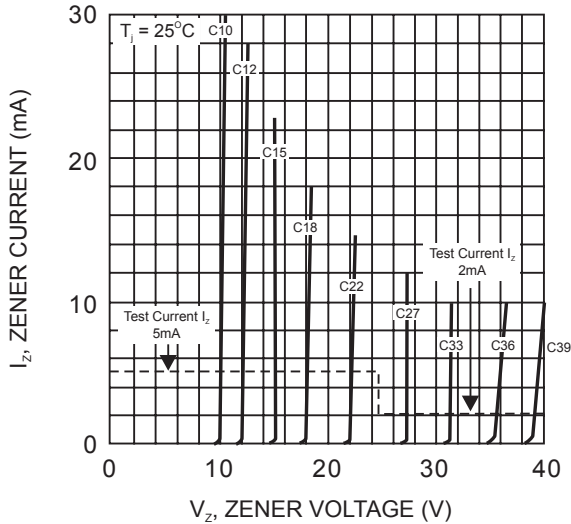


FIG.4- JUNCTION CAPACITANCE VS NOMINAL ZENER VOLTAGE

