

Preliminary



# BZT52C2V4S - BZT52C75S

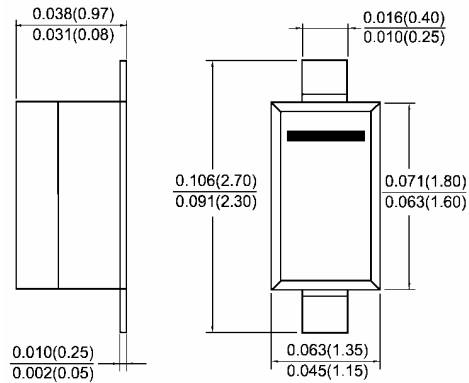
0.2W Plastic-Encapsulate Zener Diode

**SOD-323F**



## Features

- ✧ Wide zener voltage range selection, 2.0V to 75V
- ✧ VZ tolerance selection of  $\pm 5\%$  (C series)
- ✧ Flat lead SOD-323 small outline plastic package
- ✧ Surface device type mounting
- ✧ Moisture sensitivity level 1
- ✧ Clip bonding construction, good thermal capability
- ✧ RoHS compliant
- ✧ Matte Tin(Sn) lead finish
- ✧ Band indicates cathode



## Maximum Ratings and Electrical Characteristics

Rating at 25°C ambient temperature unless otherwise specified.

Type Number	Symbol	Value	Units
Forward Voltage @ $I_F = 10\text{mA}$	$V_F$	1.0	V
Power Dissipation (Note 1)	$P_d$	200	mW
Thermal Resistance Junction to Ambient Air (Note 1)	$R_{\theta JA}$	625	°C/W
Operating and Storage Temperature Range	$T_J, T_{STG}$	-65 to + 150	°C

Version: B08

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

Type Number (Note 1)	Marking Code	Zener Voltage Range(Note 2)				Maximum Zener Impedance (Note 3)			Maximum Reverse Current		VF @ IF	
		Vz @ Izt			IZT mA	ZZT @ IZT Ohms	ZZK @ IZK		IR uA	VR V	VF Max.(V)	IF mA
		Nom (V)	Min (V)	Max (V)			Ohms	mA				
BZT52C2V4S	Z0	2.4	2.28	2.52	5	100	564	1.0	45	1.0	1.0	10
BZT52C2V7S	Z1	2.7	2.57	2.84	5	100	564	1.0	18	1.0	1.0	10
BZT52C3V0S	Z2	3	2.9	3.2	5	100	564	1.0	9	1.0	1.0	10
BZT52C3V3S	Z3	3.3	3.14	3.47	5	95	564	1.0	4.5	1.0	1.0	10
BZT52C3V6S	Z4	3.6	3.42	3.78	5	90	564	1.0	4.5	1.0	1.0	10
BZT52C3V9S	Z5	3.9	3.71	4.1	5	90	564	1.0	2.7	1.0	1.0	10
BZT52C4V3S	Z6	4.3	4.09	4.52	5	90	564	1.0	2.7	1.0	1.0	10
BZT52C4V7S	Z7	4.7	4.47	4.94	5	80	470	1.0	2.7	2.0	1.0	10
BZT52C5V1S	Z8	5.1	4.85	5.36	5	60	451	1.0	1.8	2.0	1.0	10
BZT52C5V6S	Z9	5.6	5.32	5.88	5	40	376	1.0	0.9	2.0	1.0	10
BZT52C6V2S	ZA	6.2	5.89	6.51	5	10	151	1.0	2.7	4.0	1.0	10
BZT52C6V8S	ZB	6.8	6.46	7.14	5	15	75	1.0	1.8	4.0	1.0	10
BZT52C7V5S	ZC	7.5	7.11	7.86	5	15	75	1.0	0.9	5.0	1.0	10
BZT52C8V2S	ZD	8.2	7.79	8.61	5	15	75	1.0	0.63	5.0	1.0	10
BZT52C9V1S	ZE	9.1	8.65	9.56	5	15	94	1.0	0.45	6.0	1.0	10
BZT52C10S	ZF	10	9.5	10.5	5	20	141	1.0	0.18	7.0	1.0	10
BZT52C11S	ZG	11	10.45	11.55	5	20	141	1.0	0.09	8.0	1.0	10
BZT52C12S	ZH	12	11.4	12.6	5	25	141	1.0	0.09	8.0	1.0	10
BZT52C13S	ZJ	13	12.35	13.65	5	30	160	1.0	0.09	8.0	1.0	10
BZT52C15S	ZK	15	14.25	15.75	5	30	188	1.0	0.045	10.5	1.0	10
BZT52C16S	ZL	16	15.2	16.8	5	40	188	1.0	0.045	11.2	1.0	10
BZT52C18S	ZM	18	17.1	18.9	5	45	212	1.0	0.045	12.6	1.0	10
BZT52C20S	ZN	20	19	21	5	55	212	1.0	0.045	14.0	1.0	10
BZT52C22S	ZP	22	20.9	23.1	5	55	235	1.0	0.045	15.4	1.0	10
BZT52C24S	ZR	24	22.8	25.2	5	70	235	1.0	0.045	16.8	1.0	10
BZT52C27S	ZS	27	25.65	28.35	2	80	282	0.5	0.045	18.9	1.0	10
BZT52C30S	ZT	30	28.5	31.5	2	80	282	0.5	0.045	21.0	1.0	10
BZT52C33S	ZU	33	31.35	34.65	2	80	306	0.5	0.045	23.0	1.0	10
BZT52C36S	ZV	36	34.2	37.8	2	90	329	0.5	0.045	25.2	1.0	10
BZT52C39S	ZW	39	37.05	40.95	2	130	329	0.5	0.045	27.3	1.0	10
BZT52C43S	ZX	43	40.85	45.15	2	150	353	0.5	0.045	30.1	1.0	10
BZT52C47S	ZY	47	44.65	49.35	2	170	353	0.5	0.045	33.0	1.0	10
BZT52C51S	Z-	51	48.45	53.55	2	180	376	0.5	0.045	35.7	1.0	10
BZT52C56S	Z=	56	53.2	58.8	2	200	400	0.5	0.045	39.2	1.0	10
BZT52C62S	Z≡	62	58.9	65.1	2	215	423	0.5	0.045	43.4	1.0	10
BZT52C68S	Z>	68	64.6	71.4	2	240	447	0.5	0.045	47.6	1.0	10
BZT52C75S	Z<	75	71.25	78.75	2	255	470	0.5	0.045	52.5	1.0	10

- Notes:
1. The Zener Voltage (Vz) is tested under pulse condition of 10mS.
  2. The device numbers listed have a standard tolerance on the nominal zener voltage of ±5%.
  3. For detailed information on price, availability and delivery of nominal zener voltages between the voltages shown and lighter voltage tolerances.
  4. The zener impedance is derived from the 60-cycle ac voltage, which results when an ac current having an ms value equal to 10% of the dc zener current (IZT or IZK) is superimposed to IZT or IZK.

### RATINGS AND CHARACTERISTIC CURVES (BZT52C2V4S THRU BZT52C75S)

FIG.1- POWER DERATING CURVE

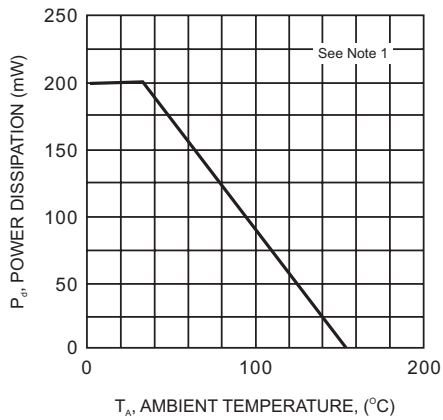


FIG.2- ZENER BREAKDOWN CHARACTERISTICS

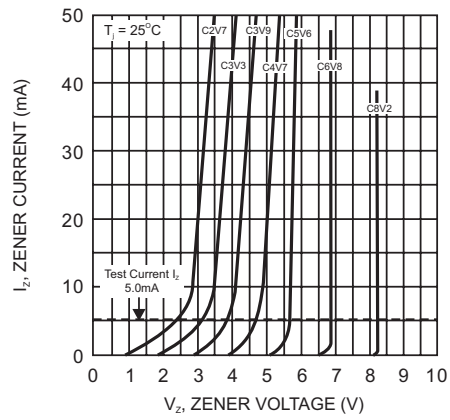


FIG.3- ZENER BREAKDOWN CHARACTERISTICS

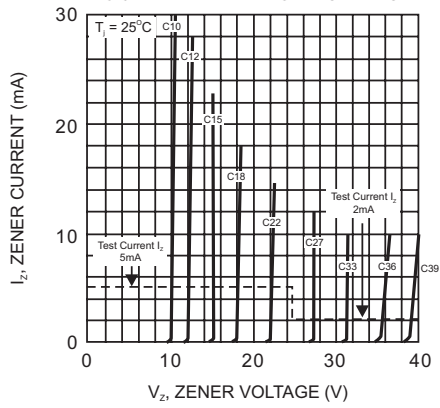


FIG.4- JUNCTION CAPACITANCE VS NOMINAL ZENER VOLTAGE

