

## Surface mount zener diode

## BZT52C2V0S-BZT52C75S

### FEATURES

- Planar die construction
- General purpose, medium current
- Ideally suited for automated assembly processes

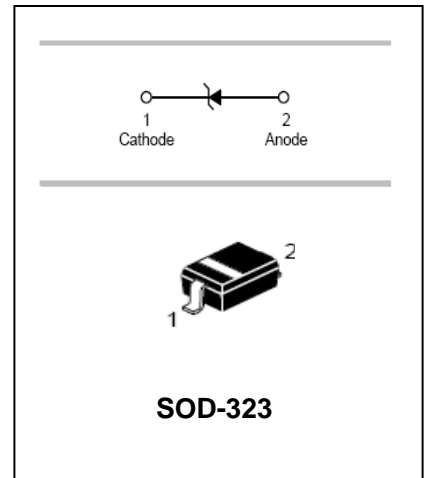


Lead-free



### APPLICATIONS

- Zener diode
- Ultra-small surface mount package



### ORDERING INFORMATION

Type No.	Marking	Package Code
BZT52C2V0S-BZT52C75S□	See table 2	SOD-323

- : none is for Lead Free package;  
“G” is for Halogen Free package.

### MAXIMUM RATING @ Ta=25°C unless otherwise specified

Characteristic	Symbol	Value	Unit
Forward Voltage @ I <sub>F</sub> =10mA	V <sub>F</sub>	0.9	V
Power Dissipation	P <sub>d</sub>	200	mW
Thermal resistance, junction to ambient air	R <sub>θJA</sub>	625	°C/W
Thermal Resistance Junction-to-Case	R <sub>θJC</sub>	400	°C/W
Junction temperature	T <sub>j</sub>	150	°C
Storage temperature range	T <sub>stg</sub>	-65 to +150	°C

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

Surface mount zener diode

BZT52C2V0S-BZT52C75S

ELECTRICAL CHARACTERISTICS @ Ta=25°C unless otherwise specified

Type Number	Marking Code	Zener Voltage Range				Maximum Zener Impedance			Maximum Reverse Current		Temperature Coefficient of zener voltage @ I <sub>ZTC</sub> mV/°C	
		V <sub>Z</sub> @I <sub>ZT</sub>			I <sub>ZT</sub>	Z <sub>ZT</sub> @I <sub>ZT</sub>	Z <sub>ZK</sub> @I <sub>ZK</sub>	I <sub>ZK</sub>	I <sub>R</sub>	@V <sub>R</sub>	Min	Max
		Nom(V)	Min(V)	Max(V)	mA	Ω		mA	μA	V		
BZT52C2V0S	WY	2.0	1.91	2.09	5	100	600	1.0	150	1.0	-3.5	0
BZT52C2V4S	WX	2.4	2.2	2.60	5	100	600	1.0	50	1.0	-3.5	0
BZT52C2V7S	W1	2.7	2.5	2.9	5	100	600	1.0	20	1.0	-3.5	0
BZT52C3V0S	W2	3.0	2.8	3.2	5	95	600	1.0	10	1.0	-3.5	0
BZT52C3V3S	W3	3.3	3.1	3.5	5	95	600	1.0	5	1.0	-3.5	0
BZT52C3V6S	W4	3.6	3.4	3.8	5	90	600	1.0	5	1.0	-3.5	0
BZT52C3V9S	W5	3.9	3.7	4.1	5	90	600	1.0	3	1.0	-3.5	0
BZT52C4V3S	W6	4.3	4.0	4.6	5	90	600	1.0	3	1.0	-3.5	0
BZT52C4V7S	W7	4.7	4.4	5.0	5	80	500	1.0	3	2.0	-3.5	0.2
BZT52C5V1S	W8	5.1	4.8	5.4	5	60	480	1.0	2	2.0	-2.7	1.2
BZT52C5V6S	W9	5.6	5.2	6.0	5	40	400	1.0	1	2.0	-2.0	2.5
BZT52C6V2S	WA	6.2	5.8	6.6	5	10	150	1.0	3	4.0	0.4	3.7
BZT52C6V8S	WB	6.8	6.4	7.2	5	15	80	1.0	2	4.0	1.2	4.5
BZT52C7V5S	WC	7.5	7.0	7.9	5	15	80	1.0	1	5.0	2.5	5.3
BZT52C8V2S	WD	8.2	7.7	8.7	5	15	80	1.0	0.7	5.0	3.2	6.2
BZT52C9V1S	WE	9.1	8.5	9.6	5	15	100	1.0	0.5	6.0	3.8	7.0
BZT52C10S	WF	10	9.4	10.6	5	20	150	1.0	0.2	7.0	4.5	8.0
BZT52C11S	WG	11	10.4	11.6	5	20	150	1.0	0.1	8.0	5.4	9.0
BZT52C12S	WH	12	11.4	12.7	5	25	150	1.0	0.1	8.0	6.0	10.0
BZT52C13S	WI	13	12.4	14.1	5	30	170	1.0	0.1	8.0	7.0	11.0
BZT52C15S	WJ	15	13.8	15.6	5	30	200	1.0	0.1	10.5	9.2	13.0
BZT52C16S	WK	16	15.3	17.1	5	40	200	1.0	0.1	11.2	10.4	14.0
BZT52C18S	WL	18	16.8	19.1	5	45	225	1.0	0.1	12.6	12.4	16.0
BZT52C20S	WM	20	18.8	21.2	5	55	225	1.0	0.1	14.0	14.4	18.0
BZT52C22S	WN	22	20.8	23.3	5	55	250	1.0	0.1	15.4	16.4	20.0
BZT52C24S	WO	24	22.8	25.6	5	70	250	1.0	0.1	16.8	18.4	22.0
BZT52C27S	WP	27	25.1	28.9	2	80	300	0.5	0.1	18.9	21.4	25.3
BZT52C30S	WQ	30	28.0	32.0	2	80	300	0.5	0.1	21.0	24.4	29.4
BZT52C33S	WR	33	31.0	35.0	2	80	325	0.5	0.1	23.1	27.4	33.4
BZT52C36S	WS	36	34.0	38.0	2	90	350	0.5	0.1	25.2	30.4	37.4
BZT52C39S	WT	39	37.0	41.0	2	130	350	0.5	0.1	27.3	33.4	41.2
BZT52C43S	WU	43	40.0	46.0	2	100	700	1.0	0.1	32	10.0	12.0
BZT52C47S	WV	47	44.0	50.0	2	100	750	1.0	0.1	35	10.0	12.0
BZT52C51S	WW	51	48.0	54.0	2	100	750	1.0	0.1	38	10.0	12.0

## Surface mount zener diode

## BZT52C2V0S-BZT52C75S

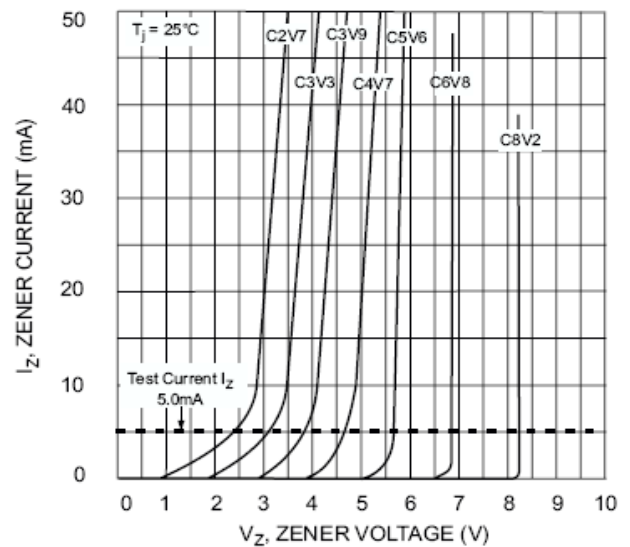
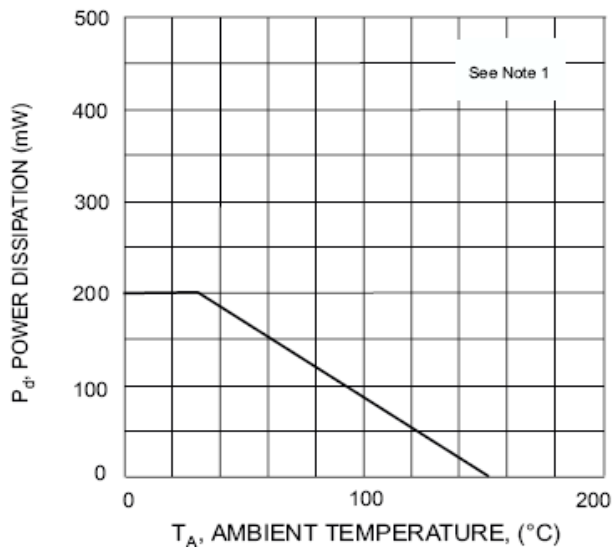
Type Number	Marking Code	Zener Voltage Range				Maximum Zener Impedance			Maximum Reverse		Temperature Coefficient of zener voltage @ $I_{ZTC}$ mV/°C	
		$V_Z@I_{ZT}$			$I_{ZT}$	$Z_{ZT}@I_{ZT}$	$Z_{ZK}@I_{ZK}$	$I_{ZK}$	$I_R$	@ $V_R$	Min	Max
		Nom(V)	Min(V)	Max(V)	mA	$\Omega$	mA	$\mu A$	V			
BZT52C56S	WX	56	53.2	58.8	2	200	400	0.5	0.045	39.2	10.0	12.0
BZT52C62S	WY	62	58.9	65.1	2	215	423	0.5	0.045	43.4	10.0	12.0
BZT52C68S	WZ	68	64.6	71.4	2	240	447	0.5	0.045	47.6	10.0	12.0
BZT52C75S	6H	75	71.25	78.75	2	255	470	0.5	0.045	52.5	10.0	12.0

Notes: 1. Valid provided that device terminals are kept at ambient temperature.

2. Tested with pulses, period=5ms, pulse width = 300 $\mu$ s.

3. f = 1KHz.

### TYPICAL CHARACTERISTICS @ $T_a=25^\circ C$ unless otherwise specified



**Surface mount zener diode**

**BZT52C2V0S-BZT52C75S**

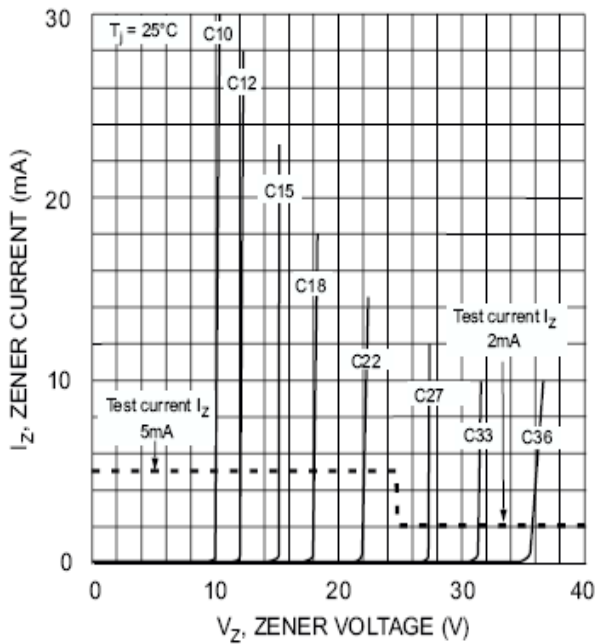


Fig. 3 Zener Breakdown Characteristics

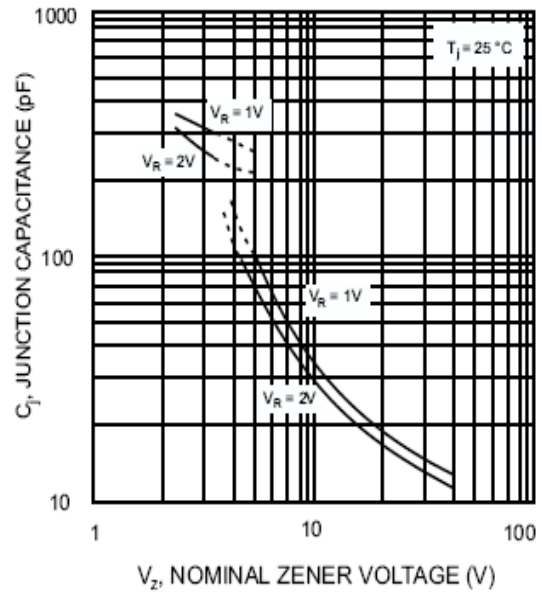
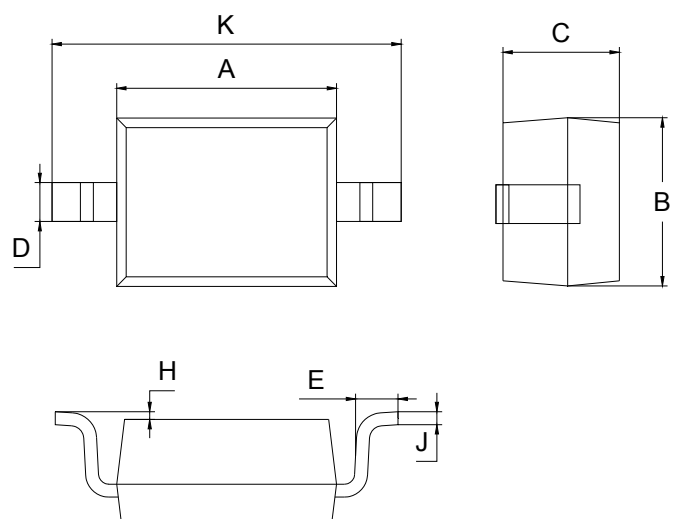


Fig. 4 Junction Capacitance vs Nominal Zener Voltage

**PACKAGE OUTLINE**

Plastic surface mounted package

SOD-323



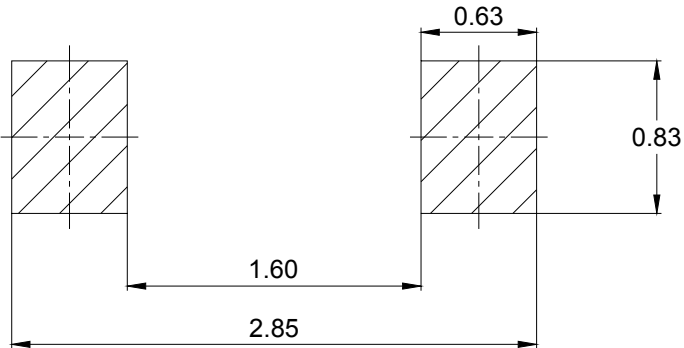
SOD-323		
Dim	Min	Max
A	1.60	1.80
B	1.20	1.40
C	0.80	0.90
D	0.25	0.35
E	0.22	0.42
H	0.02	0.10
J	0.05	0.15
K	2.55	2.75

All Dimensions in mm

## Surface mount zener diode

## BZT52C2V0S-BZT52C75S

### SOLDERING FOOTPRINT



Unit : mm

### PACKAGE INFORMATION

Device	Package	Shipping
BZT52C2V0S-BZT52C75S	SOD-323	3000/Tape&Reel

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