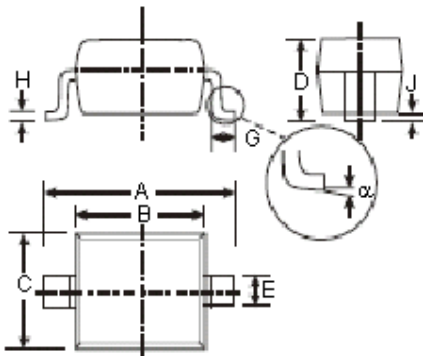




### Features:

- Planar Die Construction.
- Ultra-Small Surface Mount Package.
- Ideally suited for Automated Assembly Processes.
- Also Available in Lead Free Version.

### SOD-323



Dimensions : Millimetres

Dimensions	Minimum	Maximum
A	2.30	2.70
B	1.60	1.80
C	1.20	1.40
D	1.05 Typical	
E	0.25	0.35
G	0.20	0.40
H	0.10	0.15
J	0.05 Typical	
$\alpha$	0°	8°

Dimensions : Millimetres

### 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.
Also Available in Lead Free Plating	: (Matte Tin Finish). Please see Ordering Information, Note 6, on Page 2.
Polarity	: Cathode Band.
Marking	: See Sheet 2.
Weight	: 0.004 grams (approx.).

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

Characteristic	Symbol	Value	Unit
Forward Voltage (Note 2) at $I_F = 10\text{mA}$	$V_F$	0.9	V
Power Dissipation (Note 1)	$P_d$	200	mW
Thermal Resistance, Junction to Ambient Air (Note 1)	$R_{\theta JA}$	625	$^\circ\text{C/W}$
Operating and Storage Temperature Range	$T_J, T_{STG}$	-65 to +150	$^\circ\text{C}$

Notes: 1. Part mounted on FR-4 PC board with recommended pad layout, as per <http://www.diodes.com/datasheets/ap02001.pdf>.  
2. Short duration test pulse used in minimize self-heating effect.

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

Marking Code	Zener Voltage Range (Note 2)				Maximum Zener Impedance (Note 3)			Maximum Reverse Current (Note 2)		Temperature Coefficient of Zener Voltage at $I_{ZT} = 5\text{mA}$ mV/°C		Part Number
	$V_Z$ at $I_{ZT}$			$I_{ZT}$	$Z_{ZT}$ at $I_{ZT}$	$Z_{ZK}$ at $I_{ZK}$	$I_{ZK}$	$I_R$	$V_R$	Minimum	Maximum	
	Nom (V)	Minimum (V)	Maximum (V)	(mA)	$\Omega$	mA	$\mu\text{A}$	V				
W3	3.3	3.1	3.5	5	95	600	1.0	5	1.0	-3.5	0	BZT52C3V3S
W4	3.6	3.4	3.8	5	90	600	1.0	5	1.0	-3.5	0	BZT52C3V6S
W5	3.9	3.7	4.1	5	90	600	1.0	3	1.0	-3.5	0	BZT52C3V9S
W6	4.3	4.0	4.6	5	90	600	1.0	3	1.0	-3.5	0	BZT52C4V3S
W7	4.7	4.4	5.0	5	80	500	1.0	3	2.0	-3.5	0.2	BZT52C4V7S
W8	5.1	4.8	5.4	5	60	480	1.0	2	2.0	-2.7	1.2	BZT52C5V1S
W9	5.6	5.2	6.0	5	40	400	1.0	1	2.0	-2.0	2.5	BZT52C5V6S
WA	6.2	5.8	6.6	5	10	150	1.0	3	4.0	0.4	3.7	BZT52C6V2S
WC	7.5	7.0	7.9	5	15	80	1.0	1	5.0	2.5	5.3	BZT52C7V5S
WD	8.2	7.7	8.7	5	15	80	1.0	0.7	5.0	3.2	6.2	BZT52C8V2S
WE	9.1	8.5	9.6	5	15	100	1.0	0.5	6.0	3.8	7.0	BZT52C9V1S
WF	10	9.4	10.6	5	20	150	1.0	0.2	7.0	4.5	8.0	BZT52C10S
WH	12	11.4	12.7	5	25	150	1.0	0.1	8.0	6.0	10.0	BZT52C12S
WI	13	12.4	14.1	5	30	170	1.0	0.1	8.0	7.0	11.0	BZT52C13S
WJ	15	13.8	15.6	5	30	200	1.0	0.1	10.5	9.2	13.0	BZT52C15S
WK	16	15.3	17.1	5	40	200	1.0	0.1	11.2	10.4	14.0	BZT52C16S
WL	18	16.8	19.1	5	45	225	1.0	0.1	12.6	12.4	16.0	BZT52C18S
WM	20	18.8	21.2	5	55	225	1.0	0.1	14.0	14.4	18.0	BZT52C20S
WN	22	20.8	23.3	5	55	250	1.0	0.1	15.4	16.4	20.0	BZT52C22S
WO	24	22.8	25.6	5	70	250	1.0	0.1	16.8	18.4	22.0	BZT52C24S
WP	27	25.1	28.9	2	80	300	0.5	0.1	18.9	21.4	25.3	BZT52C27S
WQ	30	28.0	32.0	2	80	300	0.5	0.1	21.0	24.4	29.4	BZT52C30S
WR	33	31.0	35.0	2	80	325	0.5	0.1	23.1	27.4	33.4	BZT52C33S
WS	36	34.0	38.0	2	90	350	0.5	0.1	25.2	30.4	37.4	BZT52C36S
WT	39	37.0	41.0	2	130	350	0.5	0.1	27.3	33.4	41.2	BZT52C39S

Notes : 2. Short duration test pulse used to minimize self-heating effect.  
3.  $f = 1\text{kHz}$ .

## Ordering Information (Note 4)

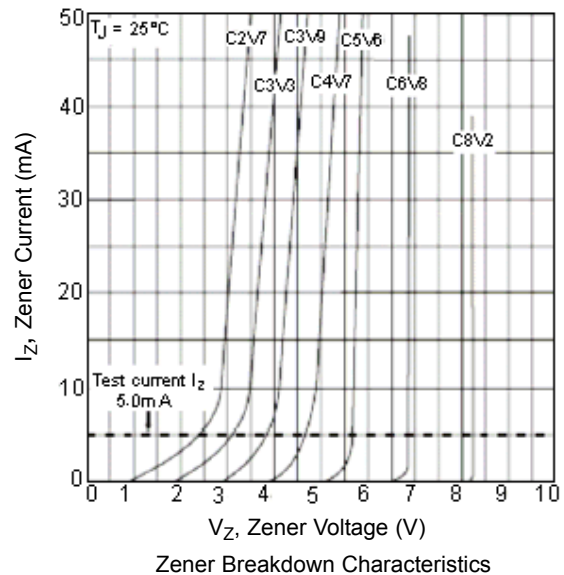
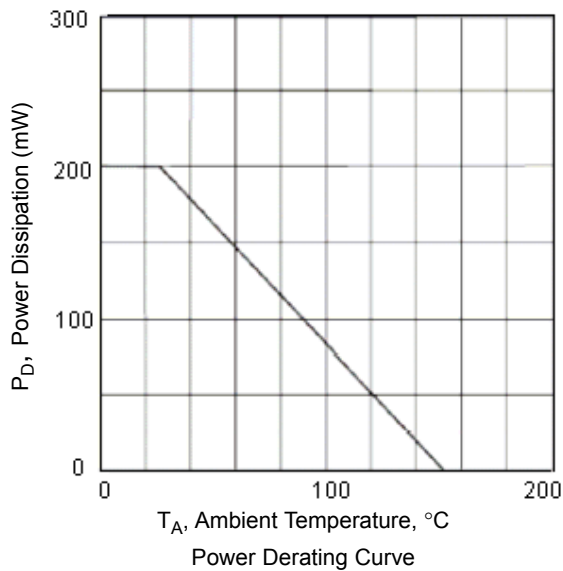
Device	Packaging	Shipping
(Type Number)-7*	SOD-323	3000/Tape & Reel

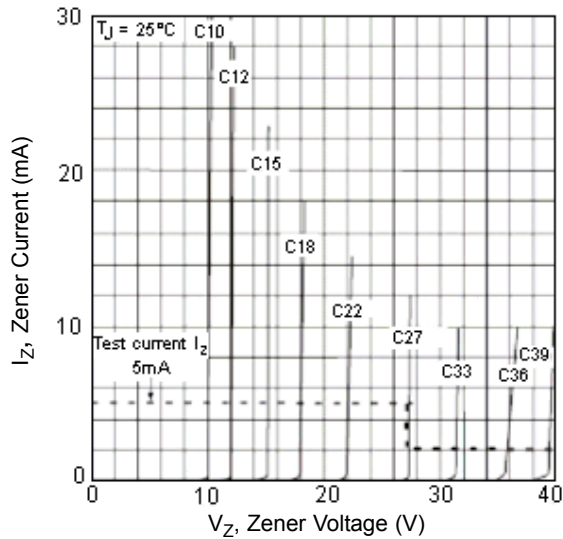
- Notes :
- \*Add "7" to the appropriate type number in Table 1 above example: 6.2V Zener = BZT52C6V2S-7.
  - For Packaging Details, go to our website at: <http://www.diodes.com/datasheets/ap02007.pdf>.
  - For Lead Free version (with Lead Free terminal finish) part number, please add '-F' suffix to part number above.  
Example: BZT52C39S-7-F.

## Marking Information

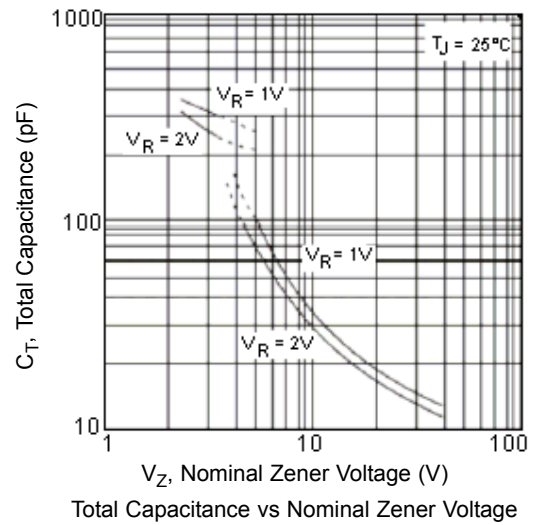


XX = Product Type Marking Code  
(See Table Above)





Zener Breakdown Characteristics



Total Capacitance vs Nominal Zener Voltage

## Part Number Table

Description	Part Number
DIODE, ZENER 0.2W SOD-323	BZT52C3V3S
	BZT52C3V6S
	BZT52C3V9S
	BZT52C4V3S
	BZT52C4V7S
	BZT52C5V1S
	BZT52C5V6S
	BZT52C6V2S
	BZT52C7V5S
	BZT52C8V2S
	BZT52C9V1S
	BZT52C10S
	BZT52C12S
	BZT52C13S
	BZT52C15S
	BZT52C16S
	BZT52C18S
	BZT52C20S
	BZT52C22S
	BZT52C24S
BZT52C27S	
BZT52C30S	
BZT52C33S	
BZT52C36S	
BZT52C39S	

# Diode, Zener



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