

### FEATURES AND BENEFITS

Product Summary		
$P_D$	200mW	@25 °C
$V_F$	0.9V	@10mA
$V_{RRM}$	2.4 – 75V	@25 °C

SOD-323



- Constant Voltage control
- Wide Voltage Range Selection 2.4V to 75V
- RoHS Compliant / Green EMC UL Flammability Classification Rating 94V-0
- Matte Tin (Sn) Lead finish Solderable per MIL-STD-202, Method 208
- Moisture Sensitivity: Level 1 per J-STD-020
- Weight: 0.004 grams (Approximate)

### Maximum Ratings (TA = 25 °C unless otherwise noted)

PARAMETER	SYMBOL	VALUE	UNIT
Power Dissipation	$P_{TM}$	200	mW
Forward Voltage @ $I_F=10mA$	$V_F$	0.9	V
Junction Temperature	$T_J$	150	°C
Storage Temperature	$T_{STG}$	-55 to +150	°C

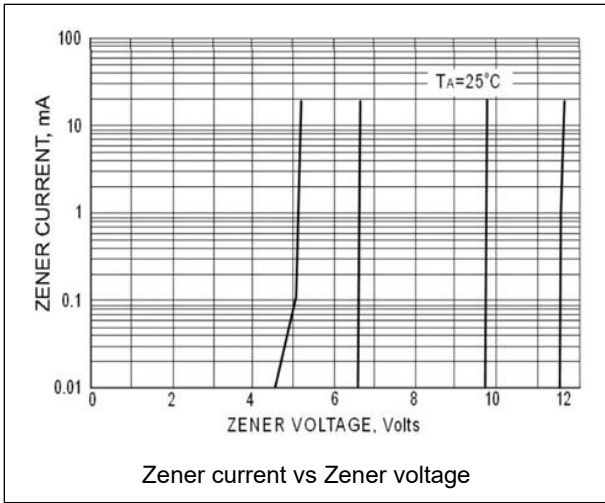
### ELECTRICAL CHARACTERISTICS (TA = 25 °C unless otherwise noted)

\*1 Pulse width = 10 ms

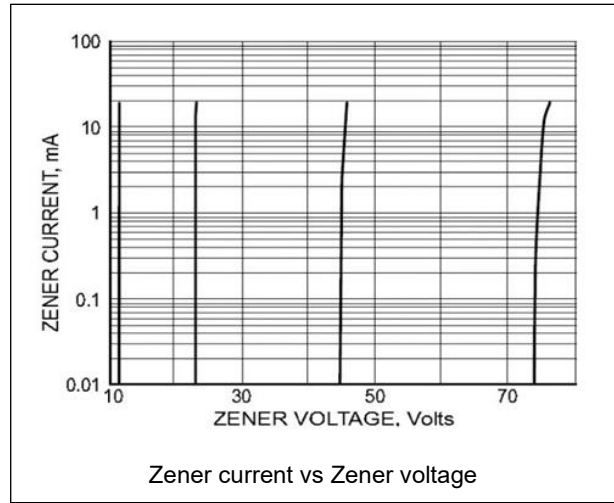
Type Number	Device Marking	$V_Z$ (V) *1			$I_{ZT}$ mA	$Z_{ZT}@I_{ZT}$ $\Omega$	$Z_{ZK}@I_{ZK}$ $\Omega$	$I_{ZK}$ (mA)	$I_R$ ( $\mu A$ )	$V_R$ (V)
		Nom(V)	Min(V)	Max(V)						
BZT52C2V4S	WX	2.4	2.28	2.52	5	100	600	1.0	50	1.0
BZT52C2V7S	W1	2.7	2.57	2.84	5	100	600	1.0	20	1.0
BZT52C3V0S	W2	3.0	2.85	3.15	5	95	600	1.0	10	1.0
BZT52C3V3S	W3	3.3	3.14	3.47	5	95	600	1.0	5	1.0
BZT52C3V6S	W4	3.6	3.42	3.78	5	90	600	1.0	5	1.0
BZT52C3V9S	W5	3.9	3.71	4.10	5	90	600	1.0	3	1.0
BZT52C4V3S	W6	4.3	4.09	4.52	5	90	600	1.0	3	1.0
BZT52C4V7S	W7	4.7	4.47	4.94	5	80	500	1.0	3	2.0
BZT52C5V1S	W8	5.1	4.85	5.36	5	60	480	1.0	2	2.0

Type Number	Device Marking	V <sub>Z</sub> (V) *1			I <sub>ZT</sub>	Z <sub>ZT</sub> @I <sub>ZT</sub>	Z <sub>ZK</sub> @I <sub>ZK</sub>	I <sub>ZK</sub> (mA)	I <sub>R</sub> (uA)	V <sub>R</sub> (V)
		Nom(V)	Min(V)	Max(V)	mA	Ω				
BZT52C5V6S	W9	5.6	5.32	5.88	5	40	400	1.0	1	2.0
BZT52C6V2S	WA	6.2	5.89	6.51	5	10	150	1.0	3	4.0
BZT52C6V8S	WB	6.8	6.46	7.14	5	15	80	1.0	2	4.0
BZT52C7V5S	WC	7.5	7.13	7.88	5	15	80	1.0	1	5.0
BZT52C8V2S	WD	8.2	7.79	8.61	5	15	80	1.0	0.7	5.0
BZT52C9V1S	WE	9.1	8.65	9.56	5	15	100	1.0	0.5	6.0
BZT52C10S	WF	10.0	9.50	10.50	5	20	150	1.0	0.2	7.0
BZT52C11S	WG	11.0	10.45	11.55	5	20	150	1.0	0.1	8.0
BZT52C12S	WH	12.0	11.40	12.60	5	25	150	1.0	0.1	8.0
BZT52C13S	WI	13.0	12.35	13.65	5	30	170	1.0	0.1	8.0
BZT52C15S	WJ	15.0	14.25	15.75	5	30	200	1.0	0.1	10.5
BZT52C16S	WK	16.0	15.20	16.80	5	40	200	1.0	0.1	11.2
BZT52C18S	WL	18.0	17.10	18.90	5	45	225	1.0	0.1	12.6
BZT52C20S	WM	20.0	19.00	21.00	5	55	225	1.0	0.1	14.0
BZT52C22S	WN	22.0	20.90	23.10	5	55	250	1.0	0.1	15.4
BZT52C24S	WO	24.0	22.80	25.20	5	70	250	1.0	0.1	16.8
BZT52C27S	WP	27.0	25.65	28.35	2	80	300	0.5	0.1	18.9
BZT52C30S	WQ	30.0	28.50	31.50	2	80	300	0.5	0.1	21.0
BZT52C33S	WR	33.0	31.35	34.65	2	80	325	0.5	0.1	23.1
BZT52C36S	WS	36.0	34.20	37.80	2	90	350	0.5	0.1	25.2
BZT52C39S	WT	39.0	37.05	40.95	2	130	350	0.5	0.1	27.3
BZT52C43S	WU	43.0	40.85	45.15	2	130	350	0.5	0.1	29.4
BZT52C47S	WV	47.0	44.65	49.35	2	170	1000	0.25	0.1	36
BZT52C51S	X1	51	48.45	53.55	2	180	1300	0.25	0.1	39
BZT52C56S	X2	56	53.20	58.80	2	200	1400	0.25	0.1	43
BZT52C62S	X3	62	58.90	65.10	2	225	1400	0.25	0.1	47
BZT52C68S	X4	68	64.60	71.40	2	240	1600	0.25	0.1	52
BZT52C75S	X5	75	71.25	78.75	2	265	1700	0.25	0.1	56

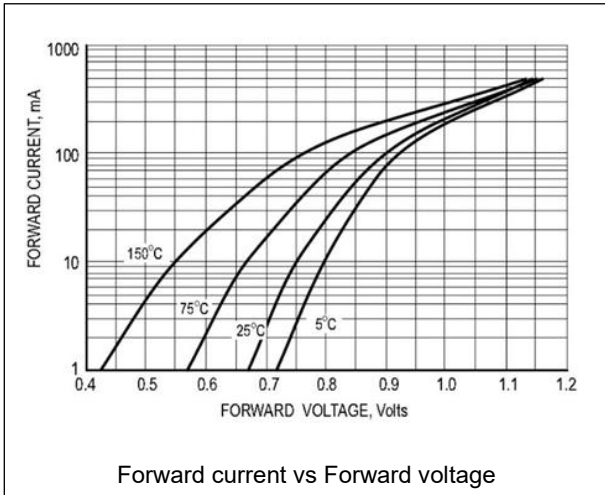
### RATING AND CHARACTERISTICS CURVES



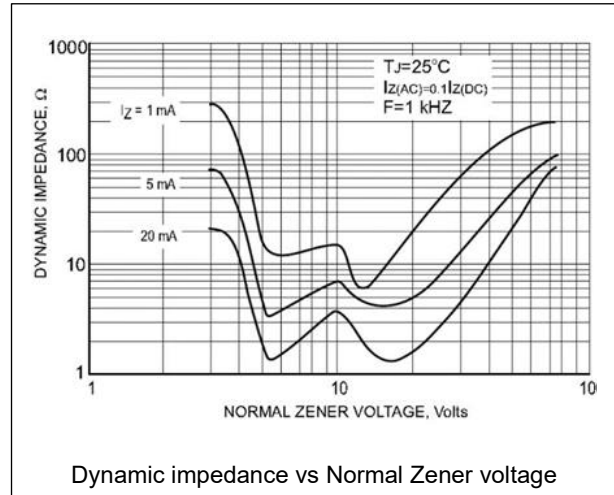
Zener current vs Zener voltage



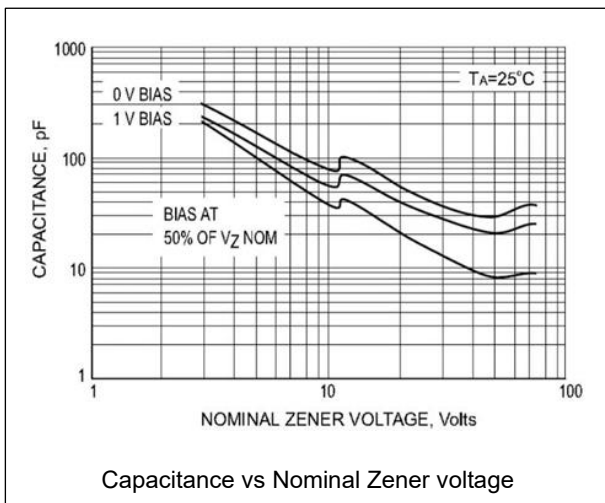
Zener current vs Zener voltage



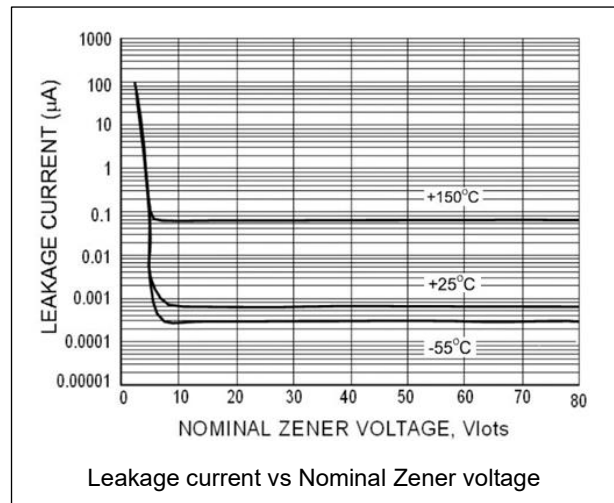
Forward current vs Forward voltage



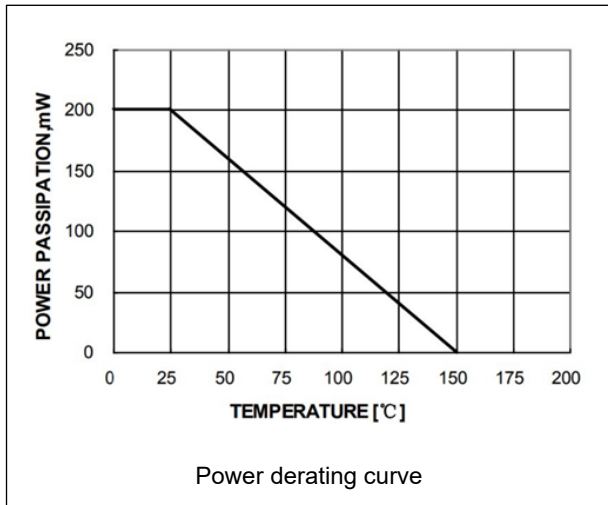
Dynamic impedance vs Normal Zener voltage



Capacitance vs Nominal Zener voltage

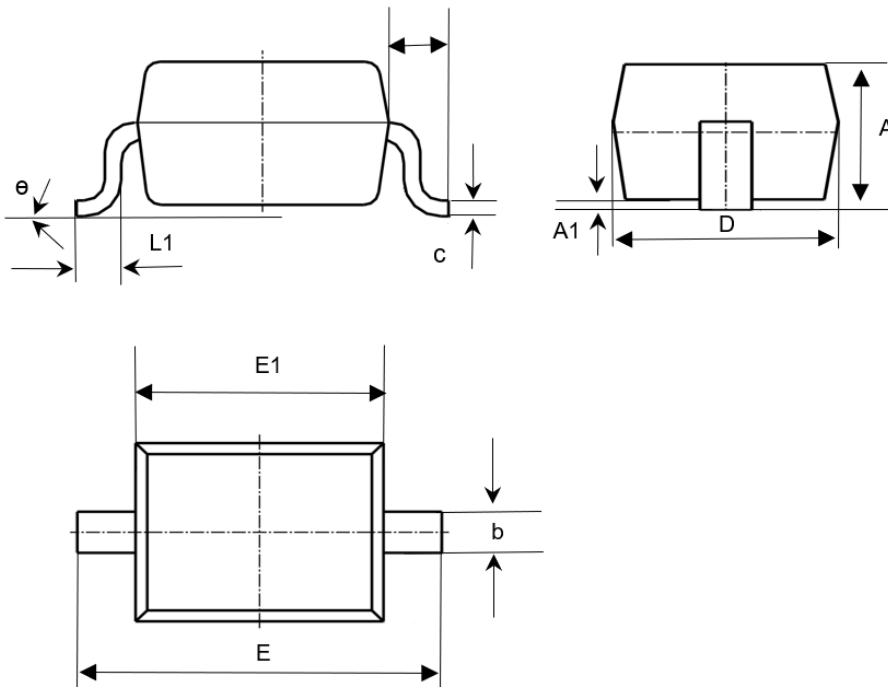


Leakage current vs Nominal Zener voltage



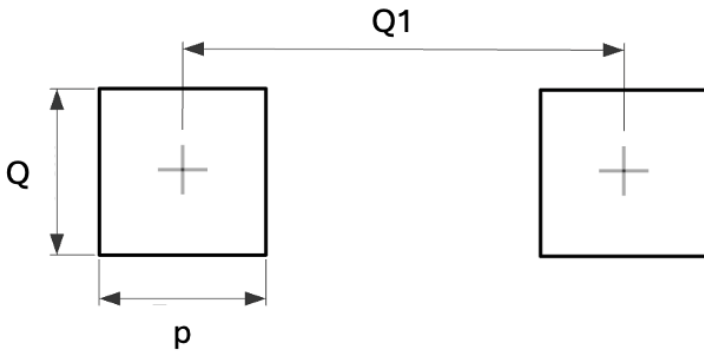
### PACKAGE OUTLINE DIMENSIONS

SOD-323



Symbol	MIN	MAX
A	-	1.00
A1	0.00	0.10
b	0.25	0.35
c	0.08	0.15
D	1.20	1.40
E	2.30	2.70
E1	1.60	1.80
L	0.475REF	
L1	0.25	0.4
$\theta$	0°	8°
Unit: mm		

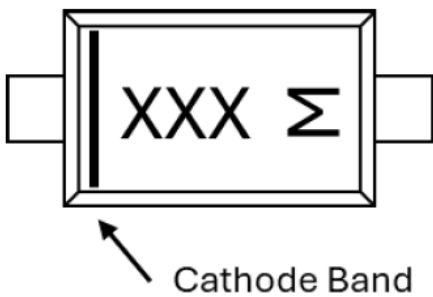
### SUGGESTED PAD LAYOUT



Symbol	Typ
Q1	2.15
Q	0.7
p	0.7
Unit: mm	

### DEVICE MARKING CODE AND ORDERING INFORMATION

DEVICE	Marking	Quantity	Packing
BZT52C series	Refer to Device Marking	3000/7"Reel	Tape & Reel



XXX: Product Marking Code

Σ : Date Code (Rotate 90° counterclockwise)

Odd Year	Even Year
1	E
2	F
3	H
4	J
5	K
6	L
7	N
8	P
9	U
T	X
V	Y
C	Z

#### NOTICE:

AZUREMOTO'S PRODUCTS ARE NOT AUTHORIZED FOR USE AS COMPONENTS IN ANY LIFE SUPPORT DEVICES OR SYSTEMS. AZUREMOTO RESERVES THE RIGHT TO MAKE CHANGES WITHOUT FURTHER NOTICE TO ANY PRODUCTS HEREIN TO IMPROVE RELIABILITY OR RUGGEDNESS.