



# BZT52BXXS

**DIODE**

## SURFACE MOUNT SILICON ZENER DIODE

### DESCRIPTION

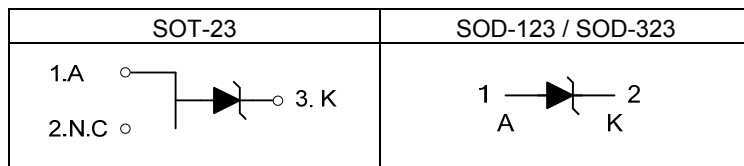
The UTC **BZT52BXXS** is a surface mount silicon Zener Diode using UTC's advanced technology to provide customers with low power dissipation.

The UTC **BZT52BXXS** is universally applied in Automated Assembly Processes.

### FEATURES

- \* Low Power Dissipation: 200mW
- \* Zener Voltage
- \* Planar Die construction

### SYMBOL

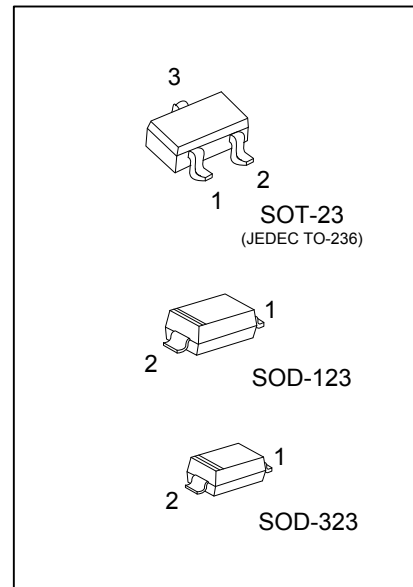


### ORDERING INFORMATION

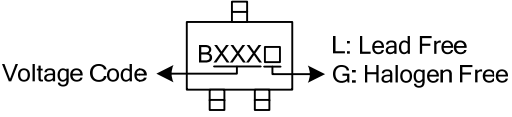
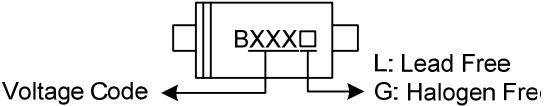
Ordering Number		Package	Pin Assignment			Packing
Lead Free	Halogen Free		1	2	3	
BZT52BXXXSL-AE3-R	BZT52BXXXSG-AE3-R	SOT-23	A	NC	K	Tape Reel
BZT52BXXXSL-CA2-R	BZT52BXXXSG-CA2-R	SOD-123	A	K	-	Tape Reel
BZT52BXXXSL-CB2-R	BZT52BXXXSG-CB2-R	SOD-323	A	K	-	Tape Reel

Note: Pin Assignment: A: Anode K: Cathode

<p>BZT52BXXXSG-AE3-R</p>	<p>(1) R: Tape Reel                  (2) AE3: SOT-23, CA2: SOD-123, CB2 : SOD-323                  (3) G: Halogen Free and Lead Free, L: Lead Free</p>
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■ MARKING INFORMATION

PACKAGE	VOLTAGE CODE		MARKING
SOT-23	2.4: 2.4V	15: 15V	 <p>Voltage Code ← BXXX □ → L: Lead Free G: Halogen Free</p>
	2.7: 2.7V	16: 16V	
	3.0: 3.0V	17: 17V	
	3.3: 3.3V	18: 18V	
	3.6: 3.6V	20: 20V	
	3.9: 3.9V	22: 22V	
	4.3: 4.3V	24: 24V	
	4.7: 4.7V	27: 27V	
	5.1: 5.1V	28: 28V	
	5.6: 5.6V	30: 30V	
	6.2: 6.2V	33: 33V	
	6.8: 6.8V	36: 36V	
	7.5: 7.5V	39: 39V	
	8.2: 8.2V	43: 43V	
SOD-123 SOD-323	8.7: 8.7V	47: 47V	 <p>Voltage Code ← BXXX □ → L: Lead Free G: Halogen Fre</p>
	9.1: 9.1V	51: 51V	
	10: 10V	56: 56V	
	11: 11V	62: 62V	
	12: 12V	68: 68V	
	13: 13V	75: 75V	
	14: 14V		

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## DIODE

### ■ ABSOLUTE MAXIMUM RATINGS ( $T_A=25^\circ\text{C}$ , unless otherwise specified)

Single phase, half wave, 60Hz, resistive or inductive load. For capacitance load, derate current by 20%.

PARAMETER		SYMBOL	RATINGS	UNIT
Forward Voltage	$I_F=10\text{mA}$	$V_F$	0.9	V
<b>Thermal characteristics</b>				
Power Dissipation ( $T_A=25^\circ\text{C}$ ) (Note 2)		$P_D$	200	mW
Junction Temperature		$T_J$	+150	$^\circ\text{C}$
Storage Temperature		$T_{STG}$	-55 ~ +150	$^\circ\text{C}$

Notes: 1. Absolute maximum ratings are those values beyond which the device could be permanently damaged.

Absolute maximum ratings are stress ratings only and functional device operation is not implied.

2. Mounted on  $5.0\text{mm}^2$  (.013mm thick) land areas.

### ■ ELECTRICAL CHARACTERISTICS ( $T_A=25^\circ\text{C}$ , unless otherwise specified)

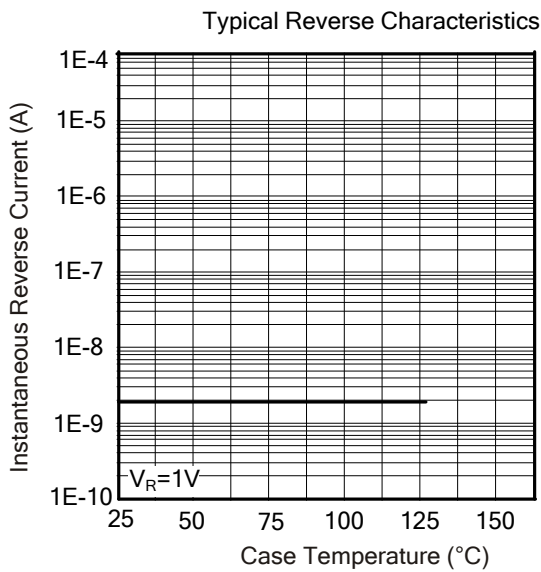
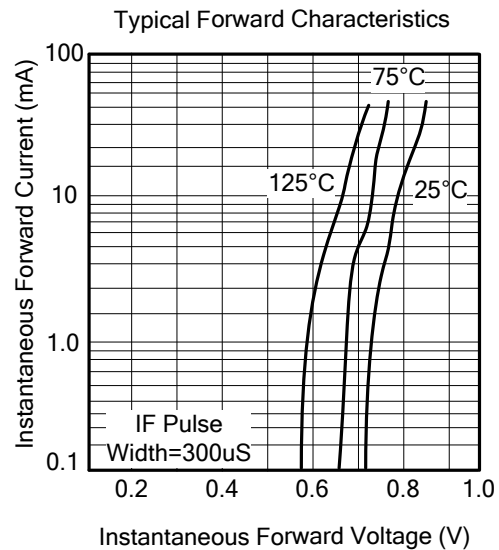
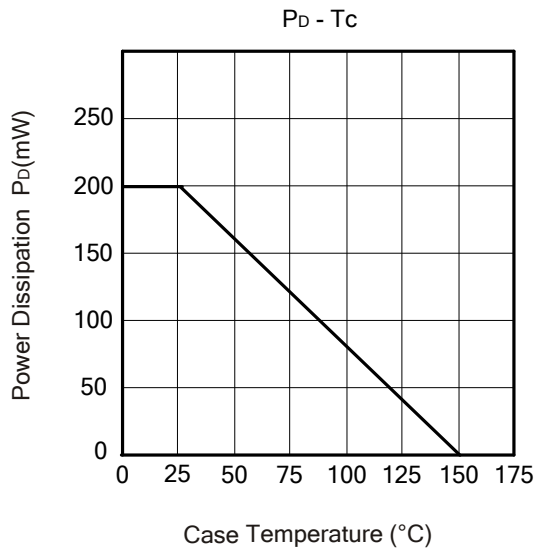
( $V_F = 0.9\text{V Max @ } I_F = 10\text{mA}$  for all types.)

Part Number	Marking Code	Nominal Zener Voltage				Max Zener Impedance				Max Reverse Leakage Current (Note)	
		$V_Z @ I_{ZT}$ (V)			$I_{ZT}$	$Z_{ZT} @ I_{ZT}$		$Z_{ZK} @ I_{ZK}$		$I_R$	@ $V_R$
		MIN	TYP	MAX	mA	( $\Omega$ )	mA	( $\Omega$ )	mA	( $\mu\text{A}$ )	(V)
BZT52B2V4S	2.4	2.35	2.4	2.45	5.0	85	5.0	600	1.00	100	1.0
BZT52B2V7S	2.7	2.64	2.7	2.75	5.0	83	5.0	600	1.00	75	1.0
BZT52B3S	3	2.94	3.0	3.06	5.0	95	5.0	600	1.00	50	1.0
BZT52B3V3S	3.3	3.23	3.3	3.37	5.0	95	5.0	600	1.00	25	1.0
BZT52B3V6S	3.6	3.52	3.6	3.67	5.0	95	5.0	600	1.00	15	1.0
BZT52B3V9S	3.9	3.82	3.9	3.98	5.0	95	5.0	600	1.00	10	1.0
BZT52B4V3S	4.3	4.21	4.3	4.39	5.0	95	5.0	600	1.00	5.0	1.0
BZT52B4V7S	4.7	4.61	4.7	4.79	5.0	78	5.0	500	1.00	5.0	1.0
BZT52B5V1S	5.1	5.00	5.1	5.20	5.0	60	5.0	480	1.00	0.1	0.8
BZT52B5V6S	5.6	5.49	5.6	5.71	5.0	40	5.0	400	1.00	0.1	1.0
BZT52B6V2S	6.2	6.08	6.2	6.32	5.0	10	5.0	150	1.00	0.1	2.0
BZT52B6V8S	6.8	6.66	6.8	6.94	5.0	8	5.0	80	1.00	0.1	3.0
BZT52B7V5S	7.5	7.35	7.5	7.65	5.0	7	5.0	80	1.00	0.1	5.0
BZT52B8V2S	8.2	8.04	8.2	8.36	5.0	7	5.0	80	1.00	0.1	6.0
BZT52B8V7S	8.7	8.53	8.7	8.87	5.0	7	5.0	100	1.00	0.1	6.5
BZT52B9V1S	9.1	8.92	9.1	9.28	5.0	10	5.0	100	1.00	0.1	7.0
BZT52B10S	10	9.80	10	10.20	5.0	15	5.0	150	1.00	0.1	7.5
BZT52B11S	11	10.78	11	11.22	5.0	20	5.0	150	1.00	0.1	8.5
BZT52B12S	12	11.76	12	12.24	5.0	20	5.0	150	1.00	0.1	9.0
BZT52B13S	13	12.74	13	13.26	5.0	25	5.0	170	1.00	0.1	10.0
BZT52B14S	14	13.72	14	14.28	5.0	25	5.0	170	1.00	0.1	10.5
BZT52B15S	15	14.70	15	15.30	5.0	30	5.0	200	1.00	0.1	11.0
BZT52B16S	16	15.68	16	16.32	5.0	40	5.0	200	1.00	0.1	12.0
BZT52B17S	17	16.66	17	17.34	5.0	40	5.0	200	1.00	0.1	13.0
BZT52B18S	18	17.64	18	18.36	5.0	50	5.0	225	1.00	0.1	14.0
BZT52B20S	20	19.60	20	20.40	5.0	50	5.0	225	1.00	0.1	15.0
BZT52B22S	22	21.56	22	22.44	5.0	55	5.0	250	1.00	0.1	17.0
BZT52B24S	24	23.52	24	24.48	5.0	80	5.0	250	1.00	0.1	18.0
BZT52B27S	27	26.46	27	27.54	5.0	80	5.0	300	1.00	0.1	20.0
BZT52B28S	28	27.44	28	28.56	5.0	80	5.0	300	1.00	0.1	22.0

■ ELECTRICAL CHARACTERISTICS (Cont.)

Part Number	Marking Code	Nominal Zener Voltage				Max Zener Impedance				Max Reverse Leakage Current (Note)	
		V <sub>Z</sub> @ I <sub>ZT</sub> (V)			I <sub>ZT</sub>	Z <sub>ZT</sub> @ I <sub>ZT</sub>		Z <sub>ZK</sub> @ I <sub>ZK</sub>		I <sub>R</sub>	@V <sub>R</sub>
		MIN	TYP	MAX	mA	(Ω)	mA	(Ω)	mA	(μA)	(V)
BZT52B30S	30	29.40	30	30.60	5.0	80	5.0	300	1.00	0.1	22.5
BZT52B33S	33	32.34	33	33.66	5.0	80	5.0	325	1.00	0.1	25.0
BZT52B36S	36	35.28	36	36.72	5.0	90	5.0	350	1.00	0.1	27.0
BZT52B39S	39	38.22	39	39.78	5.0	90	5.0	350	1.00	0.1	29.0
BZT52B43S	43	42.14	43	43.86	5.0	100	5.0	375	1.00	0.1	32.0
BZT52B47S	47	46.06	47	47.94	5.0	100	5.0	375	1.00	0.1	35.0
BZT52B51S	51	49.98	51	52.02	5.0	100	5.0	400	1.00	0.1	38.0
BZT52B56S	56	54.88	56	57.12	2.5	135	2.5	1000	1.00	0.1	42.0
BZT52B62S	62	60.76	62	63.24	2.5	150	2.5	1000	1.00	0.1	46.0
BZT52B68S	68	66.64	68	69.36	2.5	200	2.5	1000	1.00	0.1	51.0
BZT52B75S	75	73.50	75	76.50	2.5	250	2.5	1000	1.00	0.1	56.0

■ TYPICAL CHARACTERISTICS



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