

### Description

The BZT52CXXX is zener diode, SOD-123 plastic package.

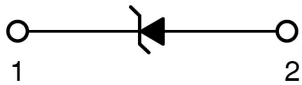
### Applications

2.4V to 39V wide zener voltage range applications.

### Features

- 500mW power dissipation
- Medium current
- Automated assembly processes
- Halogen-free product

### Equivalent Circuit & Pinning



PIN1:Cathode

PIN2:Anode

### Marking

See electrical characteristics

**Absolute Maximum Ratings(Ta=25°C)**

Parameter	Symbol	Rating	Unit
Forward Voltage (Note 2) ( I <sub>F</sub> =10mA)	V <sub>F</sub>	0.9	V
Power Dissipation(Note 1)	P <sub>D</sub>	500	mW
Typical Thermal Resistance Junction to Ambient	R <sub>θJA</sub>	305	°C/W
Junction and Storage Temperature Range	T <sub>j</sub> ,T <sub>stg</sub>	-65~150	°C

**Electrical Characteristics(Ta=25°C)**

Type Number	Mark-ing Code	Zener Voltage Range (Note 2)				Maximum Zener impedance (Note 3)			Maximum Reverse Current (Note 2)		Typical Temperature Coefficient @I <sub>ZTC</sub> mV/°C		Test Current I <sub>ZTC</sub> mA
		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	uA	V			
BZT52C2V4	HWX	2.4	2.2	2.6	5	100	600	1	50	1	-3.5	0	5
BZT52C2V7	HW1	2.7	2.5	2.9	5	100	600	1	20	1	-3.5	0	5
BZT52C3V0	HW2	3.0	2.8	3.2	5	95	600	1	10	1	-3.5	0	5
BZT52C3V3	HW3	3.3	3.1	3.5	5	95	600	1	5	1	-3.5	0	5
BZT52C3V6	HW4	3.6	3.4	3.8	5	90	600	1	5	1	-3.5	0	5
BZT52C3V9	HW5	3.9	3.7	4.1	5	90	600	1	3	1	-3.5	0	5
BZT52C4V3	HW6	4.3	4	4.6	5	90	600	1	3	1	-3.5	0	5
BZT52C4V7	HW7	4.7	4.4	5	5	80	500	1	3	2	-3.5	0.2	5
BZT52C5V1	HW8	5.1	4.8	5.4	5	60	480	1	2	2	-2.7	1.2	5
BZT52C5V6	HW9	5.6	5.2	6	5	40	400	1	1	2	-2	2.5	5
BZT52C6V2	HWA	6.2	5.8	6.6	5	10	150	1	3	4	0.4	3.7	5
BZT52C6V8	HWB	6.8	6.4	7.2	5	15	80	1	2	4	1.2	4.5	5
BZT52C7V5	HWC	7.5	7	7.9	5	15	80	1	1	5	2.5	5.3	5
BZT52C8V2	HWD	8.2	7.7	8.7	5	15	80	1	0.7	5	3.2	6.2	5
BZT52C9V1	HWE	9.1	8.5	9.6	5	15	100	1	0.5	6	3.8	7	5
BZT52C10	HWF	10	9.4	10.6	5	20	150	1	0.2	7	4.5	8	5

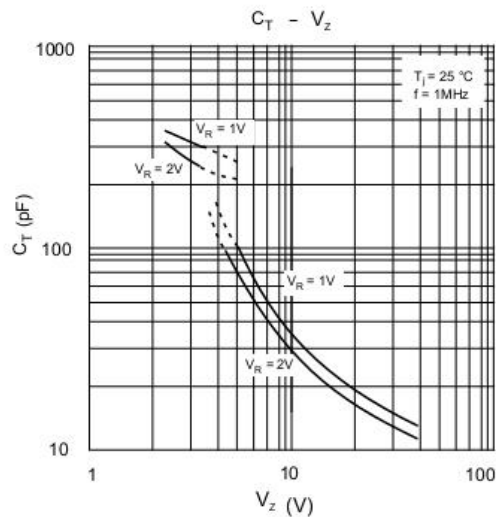
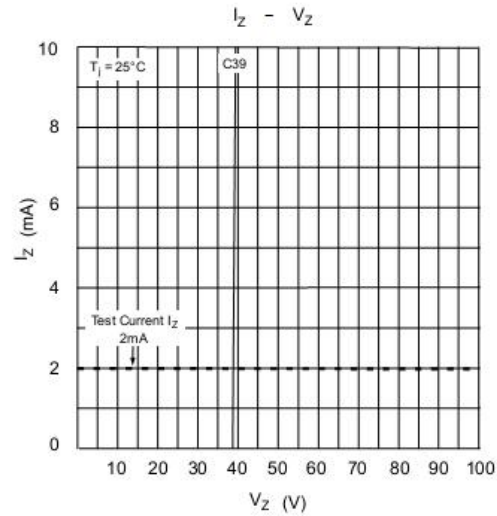
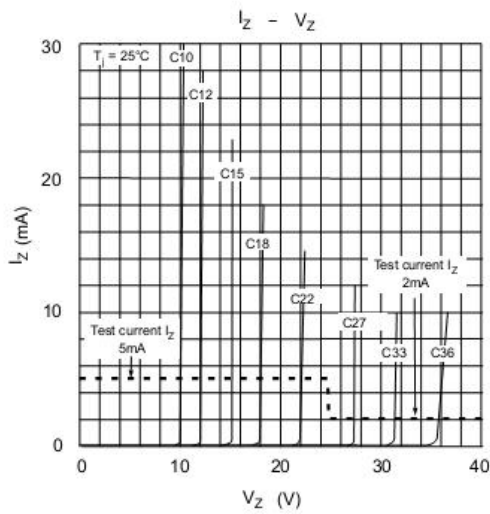
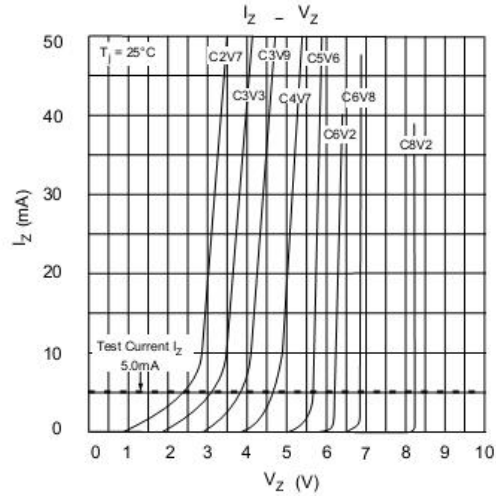
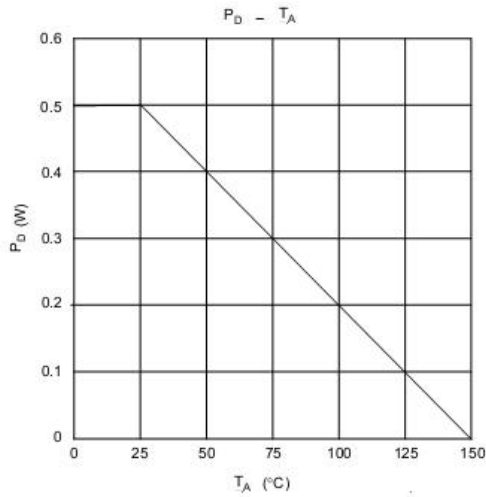
## Electrical Characteristics(Ta=25°C)

Type Number	Marking Code	Zener Voltage Range (Note 2)				Maximum Zener Impedance (Note 3)			Maximum Reverse Current (Note 2)		Typical Temperature Coefficient @I <sub>ZTC</sub> mV/°C		Test Current I <sub>ZTC</sub> mA
		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	uA	V			
BZT52C11	HWG	11	10.4	11.6	5	20	150	1	0.1	8	5.4	9	5
BZT52C12	HWH	12	11.4	12.7	5	25	150	1	0.1	8	6	10	5
BZT52C13	HWI	13	12.4	14.1	5	30	170	1	0.1	8	7	11	5
BZT52C15	HWJ	15	13.8	15.6	5	30	200	1	0.1	10.5	9.2	13	5
BZT52C16	HWK	16	15.3	17.1	5	40	200	1	0.1	11.2	10.4	14	5
BZT52C18	HWL	18	16.8	19.1	5	45	225	1	0.1	12.6	12.4	16	5
BZT52C20	HWM	20	18.8	21.2	5	55	225	1	0.1	14	14.4	18	5
BZT52C22	HWN	22	20.8	23.3	5	55	250	1	0.1	15.4	16.4	20	5
BZT52C24	HWO	24	22.8	25.6	5	70	250	1	0.1	16.8	18.4	22	5
BZT52C27	HWP	27	25.1	28.9	2	80	300	0.5	0.1	18.9	21.4	25.3	2
BZT52C30	HWQ	30	28	32	2	80	300	0.5	0.1	21	24.4	29.4	2
BZT52C33	HWR	33	31	35	2	80	325	0.5	0.1	23.1	27.4	33.4	2
BZT52C36	HWS	36	34	38	2	90	350	0.5	0.1	25.2	30.4	37.4	2
BZT52C39	HWT	39	37	41	2	130	350	0.5	0.1	27.3	33.4	41.2	2

## Notes:

1. Device mounted on ceramic PCB; 7.6mm x 9.4mm x 0.87mm with pad areas 25mm<sup>2</sup>.
2. Short duration test pulse used to minimize self-heating effect.
3. f = 1kHz.

Electrical Characteristic Curve



Marking Instructions



Note:

H: Company Code.  
WX: Product Type.

Packaging SPEC.

REEL

Package Type	Units					Dimension (unit: mm <sup>3</sup> )		
	Units/Reel	Reels/Inner Box	Units/Inner Box	Inner Boxes/Outer Box	Units/Outer Box	Reel	Inner Box	Outer Box
SOD-123	3,000	10	30,000	6	180,000	7" x8	180x120x180	390x385x205

Package Outline Dimensions

