Description

The BZT52BXXX is Zener Diode in a SOD-123 Plastic Package.

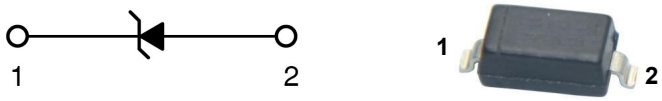
Applications

- 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

hFE Classifications&Marking

See Electrical Characteristics.

Absolute Maximum Ratings(Ta=25℃)

Parameter	Symbol	Rating	Unit
Forward Voltage (Note 2) I_F=10mA	V_F	0.9	V
Power Dissipation(Note 1)	P_D	500	mW
Typical Thermal Resistance Junction to Ambient(Note 1)	$R_{\theta JA}$	305	℃/W
Junction and Storage Temperature Range	T_j,T_{stg}	-65～150	℃

Electrical Characteristics(Ta=25℃)

Type Number	Mark-ing Code	Zener Voltage Range				Maximum Zener Impedance			Maximum Reverse Current	
		V_Z @I_{ZT}			I_{ZT}	Z_{ZT} @I_{ZT}	Z_{ZK} @I_{ZK}	I_{ZK}	I_R	@V_R
		Nom (V)	Min (V)	Max (V)	mA	Ω		mA	μA	V
BZT52B2V4	H0Z	2.4	2.35	2.45	5	94	564	1	45	1
BZT52B2V7	H1Z	2.7	2.65	2.75	5	94	564	1	18	1
BZT52B3V0	H2Z	3.0	2.94	3.06	5	89	564	1	9	1
BZT52B3V3	H3Z	3.3	3.23	3.37	5	89	564	1	4.5	1
BZT52B3V6	H4Z	3.6	3.53	3.67	5	84	564	1	4.5	1
BZT52B3V9	H5Z	3.9	3.82	3.96	5	84	564	1	2.7	1
BZT52B4V3	H6Z	4.3	4.21	4.39	5	84	564	1	2.7	1
BZT52B4V7	H7Z	4.7	4.61	4.79	5	75	564	1	2.7	2
BZT52B5V1	H8Z	5.1	5.00	5.20	5	56	470	1	1.8	2
BZT52B5V6	H9Z	5.6	5.49	5.71	5	27	451	1	0.9	2
BZT52B6V2	HAZ	6.2	6.08	6.32	5	9	376	1	2.7	4
BZT52B6V8	HBZ	6.8	6.66	6.94	5	14	141	1	1.8	4
BZT52B7V5	HCZ	7.5	7.35	7.65	5	14	75	1	0.9	5
BZT52B8V2	HDZ	8.2	8.04	8.36	5	14	75	1	0.63	5
BZT52B9V1	HEZ	9.1	8.92	9.28	5	14	94	1	0.45	6
BZT52B10	HFZ	10	9.80	10.20	5	18	141	1	0.18	7
BZT52B11	HGZ	11	10.78	11.22	5	18	141	1	0.09	8

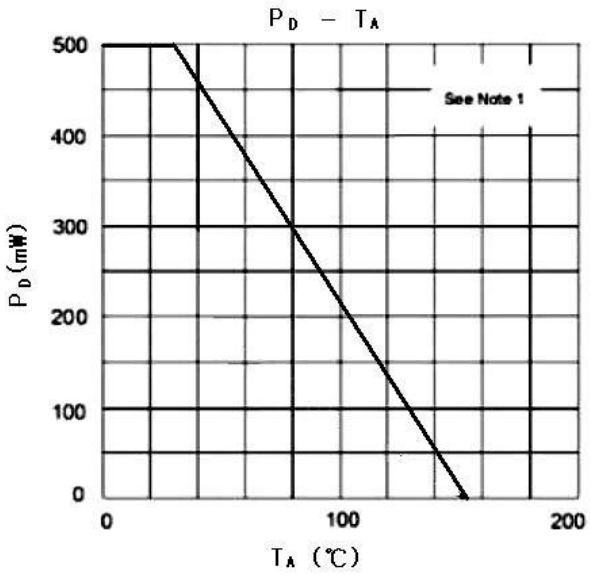
Electrical Characteristics(Ta=25℃)

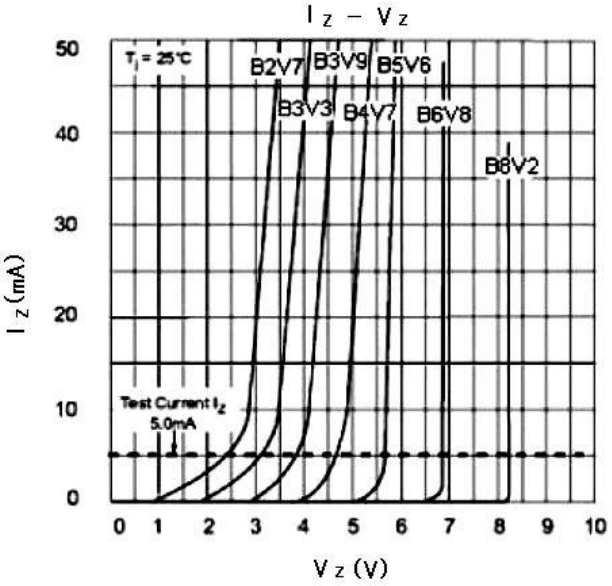
Type Number	Marking Code	Zener Voltage Range (Note 2)				Maximum Zener Impedance (Note 3)			Maximum Reverse Current	
		V_z @I_{ZT}			I_{ZT}	Z_{ZT} @I_{ZT}	Z_{ZK} @I_{ZK}	I_{ZK}	I_R	@V_R
		Nom (V)	Min (V)	Max (V)	mA	Ω		mA	uA	V
BZT52B12	HHZ	12	11.76	12.24	5	23	141	1	0.09	8
BZT52B13	HJZ	13	12.74	13.26	5	28	160	1	0.045	8
BZT52B15	HKZ	15	14.70	15.30	5	28	188	1	0.045	10.5
BZT52B16	HLZ	16	15.68	16.32	5	37	188	1	0.045	11.2
BZT52B18	HMZ	18	17.64	18.36	5	42	212	1	0.045	12.6
BZT52B20	HNZ	20	19.60	20.40	5	51	212	1	0.045	14.0
BZT52B22	HPZ	22	21.56	22.44	5	51	235	1	0.045	15.4
BZT52B24	HRZ	24	23.52	24.48	5	65	235	1	0.045	16.8
BZT52B27	HSZ	27	26.46	27.54	5	75	282	0.5	0.045	18.9
BZT52B30	HTZ	30	29.40	30.60	5	75	282	0.5	0.045	21.0
BZT52B33	HUZ	33	32.34	33.66	5	75	306	0.5	0.045	23.0
BZT52B36	HVZ	36	35.28	36.72	5	84	329	0.5	0.045	25.2
BZT52B39	HWZ	39	38.22	39.78	5	122	329	0.5	0.045	27.3

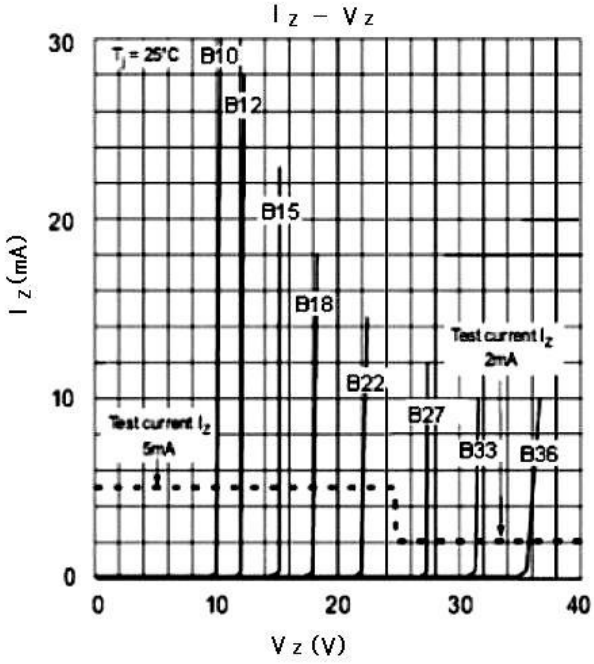
Notes:

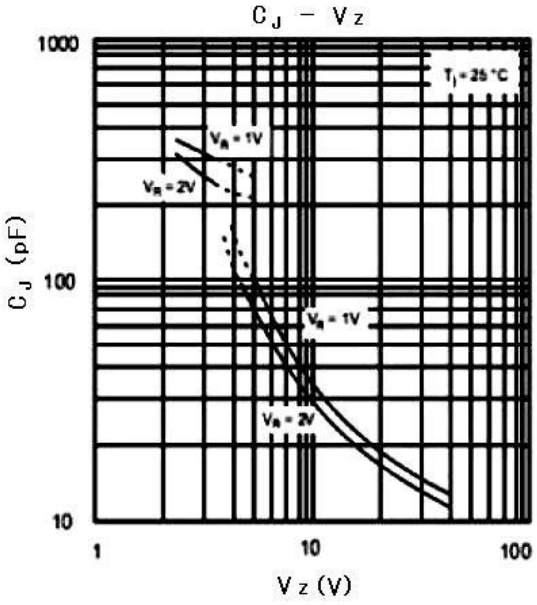
1. Device mounted on ceramic PCB; 7.6mm x 9.4mm x 0.87mm with pad areas 25mm^2.
2. Short duration test pulse used to minimize self-heating effect.
3. f = 1kHz.

Electrical Characteristic Curve









Marking Instructions

Note:

H: Company Code.

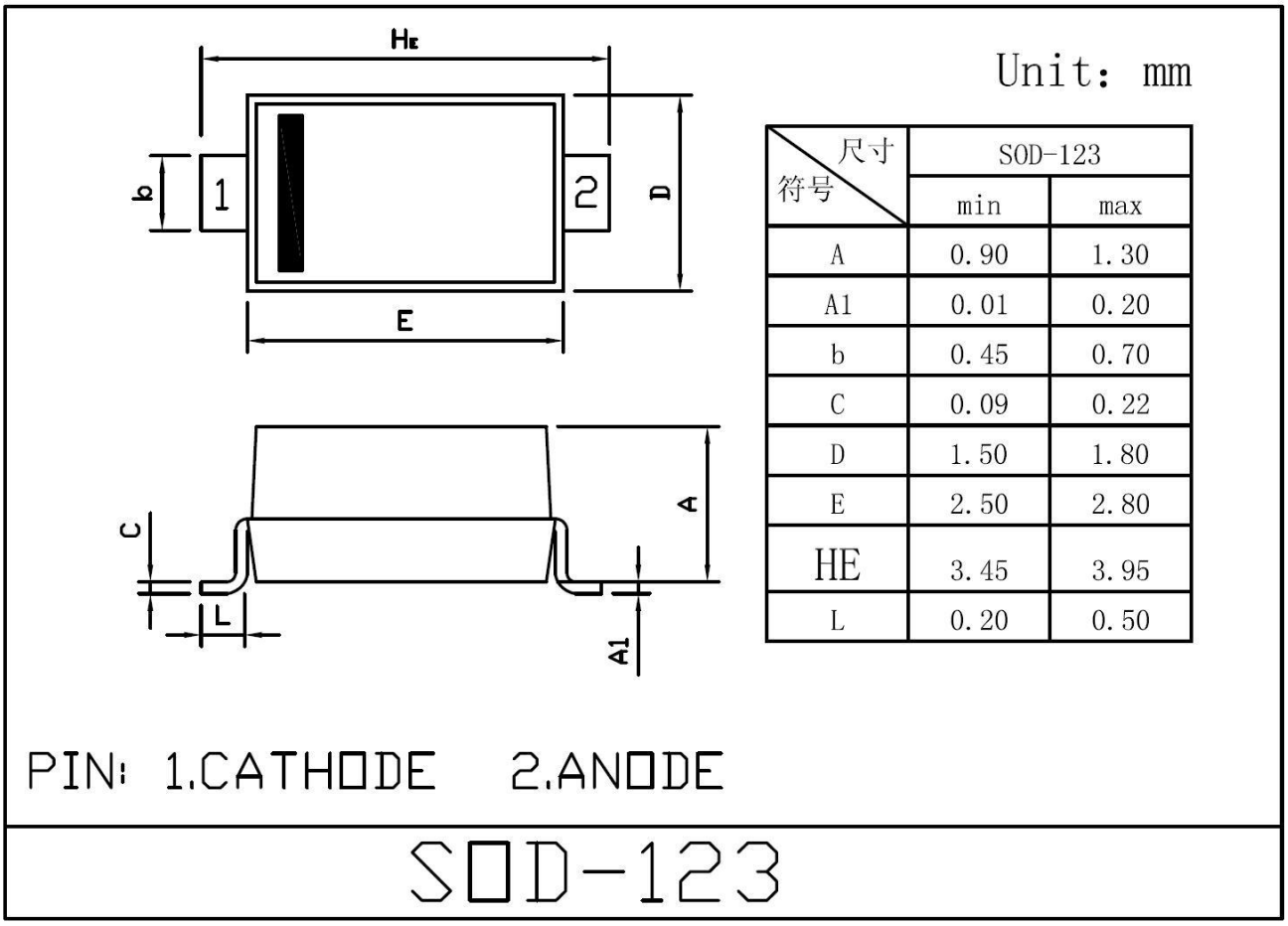
0Z: Product Type.

Packaging SPEC.

REEL

Package Type	Units					Dimension (unit：mm^3)		
	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″ ×8	180×120×180	390×385×205

Package Outline Dimensions



尺寸 / 符号	SOD-123	
	min	max
A	0.90	1.30
A1	0.01	0.20
b	0.45	0.70
C	0.09	0.22
D	1.50	1.80
E	2.50	2.80
HE	3.45	3.95
L	0.20	0.50