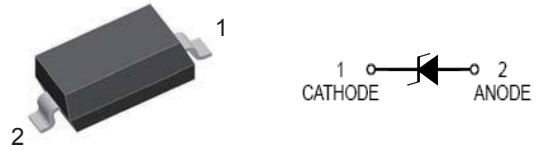


## Zener Diode in SOD-123

### Features

- Low Zener Impedance
- 500mW Power Dissipation
- High Stability and High Reliability



### Mechanical Data

- **Case:** SOD-123 (plastic package).  
Lead free; RoHS compliant
- **Molding Compound Flammability Rating:**  
UL 94 V-0
- **Terminals:** High temperature soldering guaranteed:  
260 °C/10 sec. at terminals

### Absolute Maximum Ratings

Ratings at 25 °C, ambient temperature unless otherwise specified

Characteristic	Symbol	Value	Unit
Forward Voltage (Note 2) @ $I_F = 10\text{mA}$	$V_F$	0.9	V
Power Dissipation(Note 1)	$P_d$	500	mW
Thermal Resistance from Junction to Ambient	$R_{\theta JA}$	340	°C/W
Junction Temperature	$T_j$	150	°C
Storage Temperature Range	$T_{stg}$	-55~+150	°C

- 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

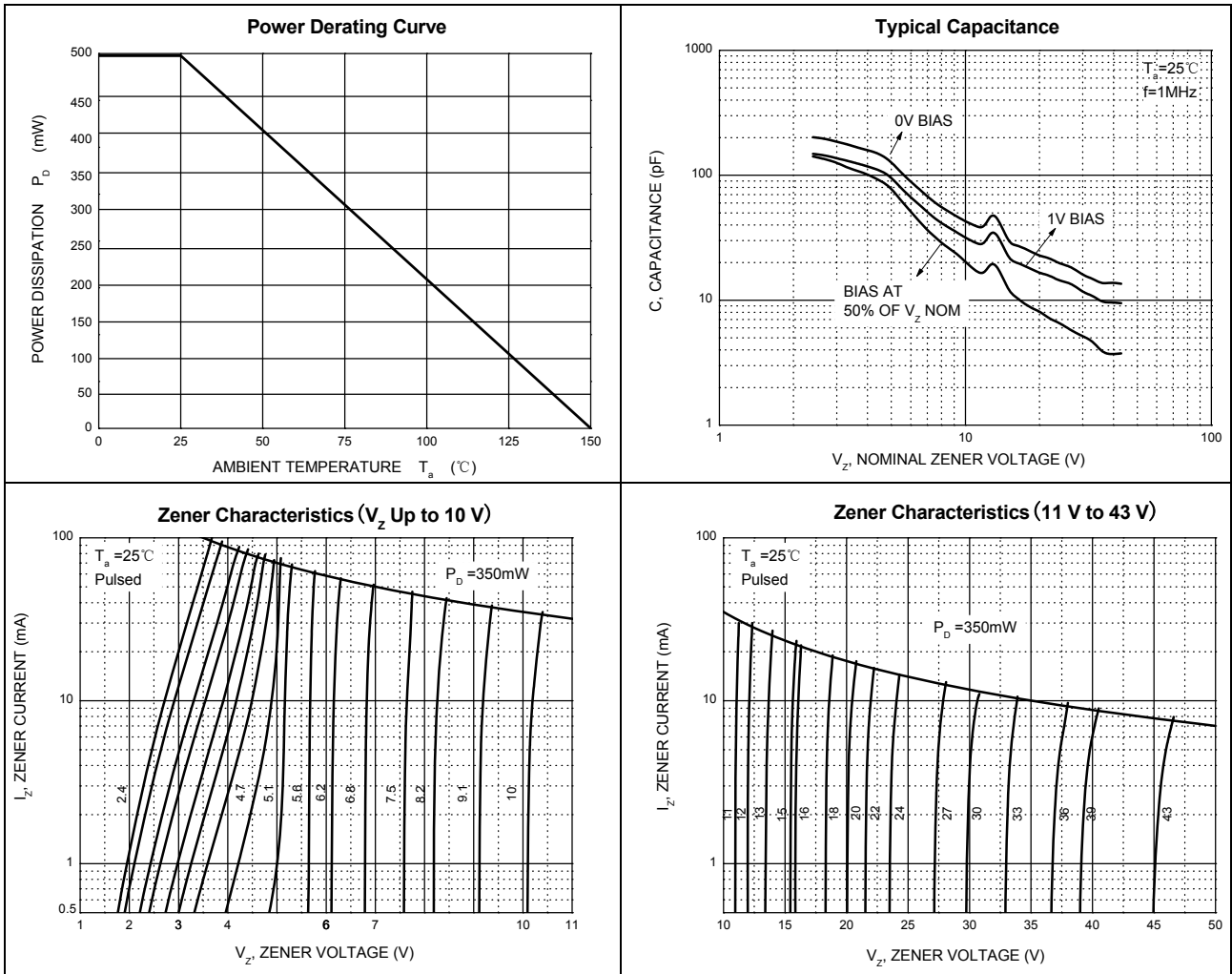
## Electrical Characteristics

( $T_A = 25\text{ °C}$  unless otherwise specified)

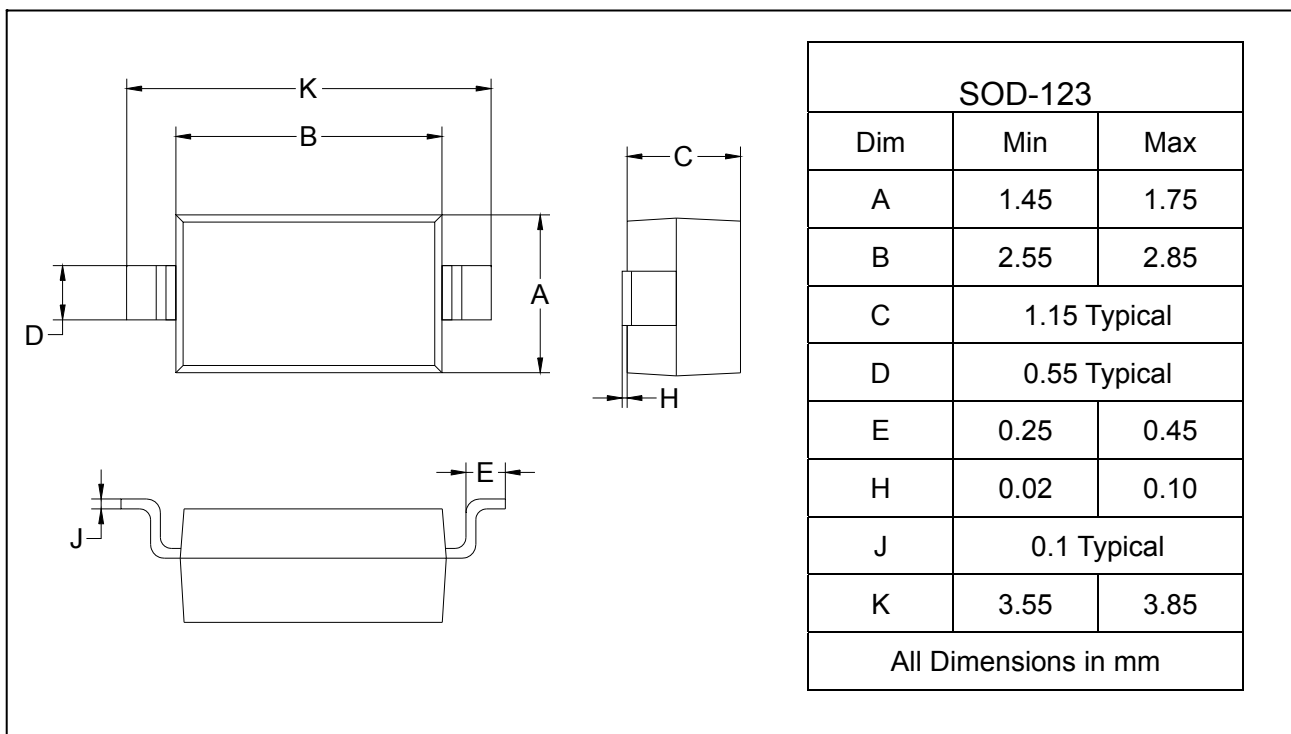
Type	Zener Voltage Range <sup>1)</sup>			Dynamic Impedance				Reverse Leakage Current	
	$V_{znom}$	$V_{ZT}$	at $I_{ZT}$	$Z_{ZT}$	at $I_{ZT}$	$Z_{ZK}$	at $I_{ZK}$	$I_R$	at $V_R$
	V	V	mA	Max. ( $\Omega$ )	mA	Max. ( $\Omega$ )	mA	Max. ( $\mu A$ )	V
BZT52B2V4	2.4	2.35...2.45	5	100	5	600	1	50	1
BZT52B2V7	2.7	2.65...2.75	5	100	5	600	1	20	1
BZT52B3V0	3.0	2.94...3.06	5	95	5	600	1	10	1
BZT52B3V3	3.3	3.23...3.37	5	95	5	600	1	5	1
BZT52B3V6	3.6	3.53...3.67	5	90	5	600	1	5	1
BZT52B3V9	3.9	3.82...3.98	5	90	5	600	1	3	1
BZT52B4V3	4.3	4.21...4.39	5	90	5	600	1	3	1
BZT52B4V7	4.7	4.61...4.79	5	80	5	500	1	3	2
BZT52B5V1	5.1	5.00...5.20	5	60	5	480	1	2	2
BZT52B5V6	5.6	5.49...5.71	5	40	5	400	1	1	2
BZT52B6V2	6.2	6.08...6.32	5	10	5	150	1	3	4
BZT52B6V8	6.8	6.66...6.94	5	15	5	80	1	2	4
BZT52B7V5	7.5	7.35...7.65	5	15	5	80	1	1	5
BZT52B8V2	8.2	8.04...8.36	5	15	5	80	1	0.7	5
BZT52B9V1	9.1	8.92...9.28	5	15	5	100	1	0.5	6
BZT52B10	10	9.8...10.2	5	20	5	150	1	0.2	7
BZT52B11	11	10.8...11.2	5	20	5	150	1	0.1	8
BZT52B12	12	11.8...12.4	5	25	5	150	1	0.1	8
BZT52B13	13	12.7...13.3	5	30	5	170	1	0.1	8
BZT52B15	15	14.7...15.3	5	30	5	200	1	0.1	10.5
BZT52B16	16	15.7...16.3	5	40	5	200	1	0.1	11.2
BZT52B18	18	17.6...18.4	5	45	5	225	1	0.1	12.6
BZT52B20	20	19.6...20.4	5	55	5	225	1	0.1	14
BZT52B22	22	21.6...22.4	5	55	5	250	1	0.1	15.4
BZT52B24	24	23.5...24.5	5	70	5	250	1	0.1	16.8
BZT52B27	27	26.5...27.5	2	80	2	300	0.5	0.1	18.9
BZT52B30	30	29.4...30.6	2	80	2	300	0.5	0.1	21
BZT52B33	33	32.3...33.7	2	80	2	325	0.5	0.1	23.1
BZT52B36	36	35.3...36.7	2	90	2	350	0.5	0.1	25.2
BZT52B39	39	38.2...39.8	2	130	2	350	0.5	0.1	27.3
BZT52B43	43	42.1...43.9	2.5	130	2	500	1	2	33
BZT52B47	47	46.1...47.9	2.5	150	2	500	1	2	36
BZT52B51	51	40.0...52.0	2.5	180	2	500	1	1	39
BZT52B56	56	54.9...57.1	2.5	180	2	500	1	1	43
BZT52B62	62	60.8...63.2	2.5	200	2	500	1	0.2	47
BZT52B68	68	66.6...69.4	2.5	250	2	500	1	0.2	52
BZT52B75	75	73.5...76.5	2.5	300	2	500	1	0.2	57

<sup>1)</sup>  $V_{ZT}$  is tested with pulses (20 ms).

**Typical Characteristics** ( $T_{amb} = 25\text{ }^{\circ}\text{C}$  unless otherwise specified)



## Package Dimensions



## Ordering information

Order code	Package	Packaging option	Base quantity	Packaging specification
BZT52Bxx	SOD-123	Tape and reel	3000pcs / reel	EIA STD RS-481

## Revision history

Date	Revision	Changes
23-May-2012	1.0	Initial release

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