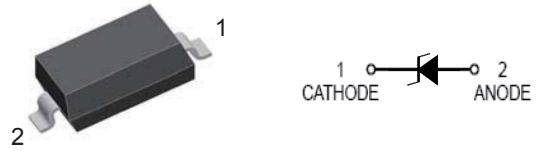


Zener Diode in SOD-123

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 25mm²
- 2) Short duration test pulse used to minimize self-heating effect
- 3) f=1KHz

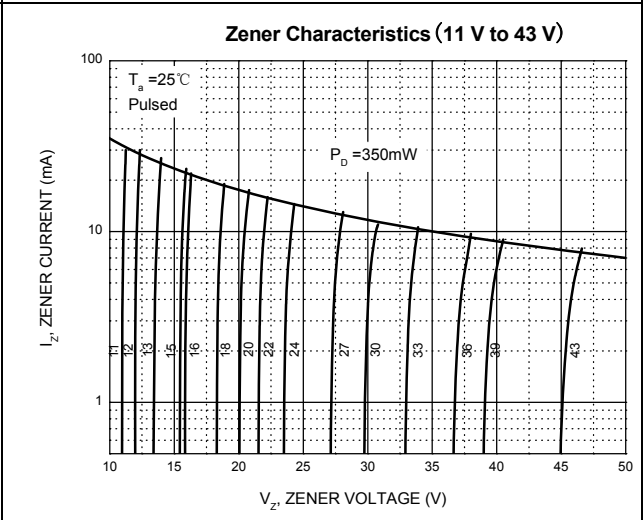
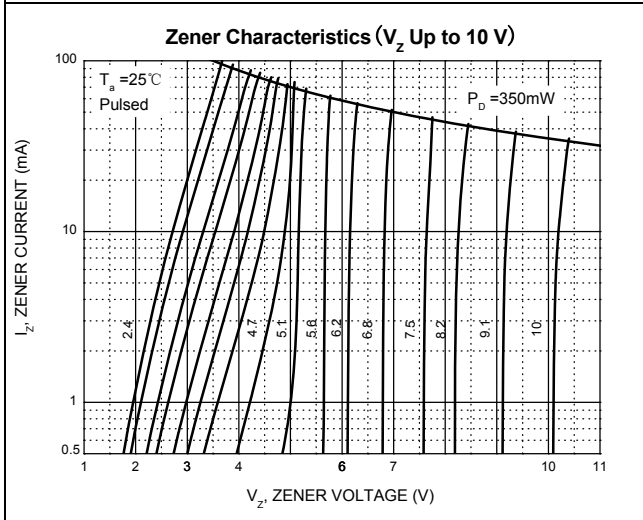
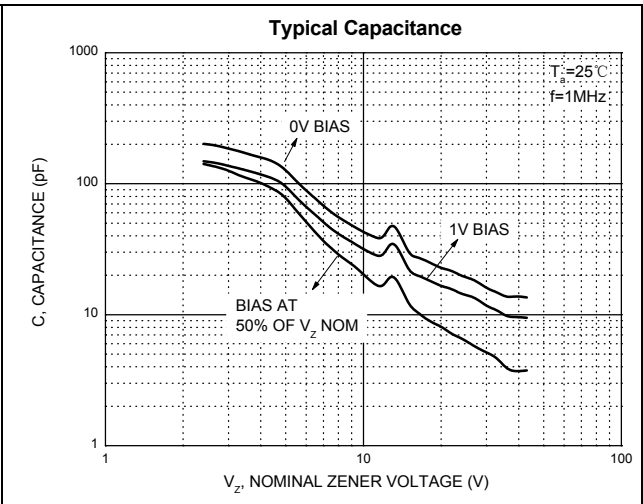
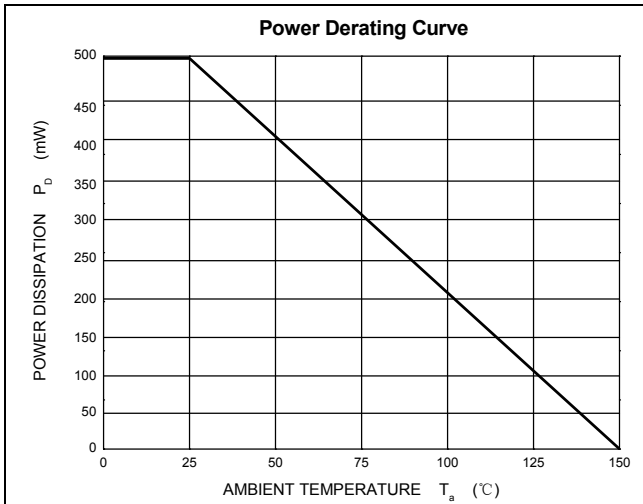
Electrical Characteristics

 (T_A = 25 °C unless otherwise specified)

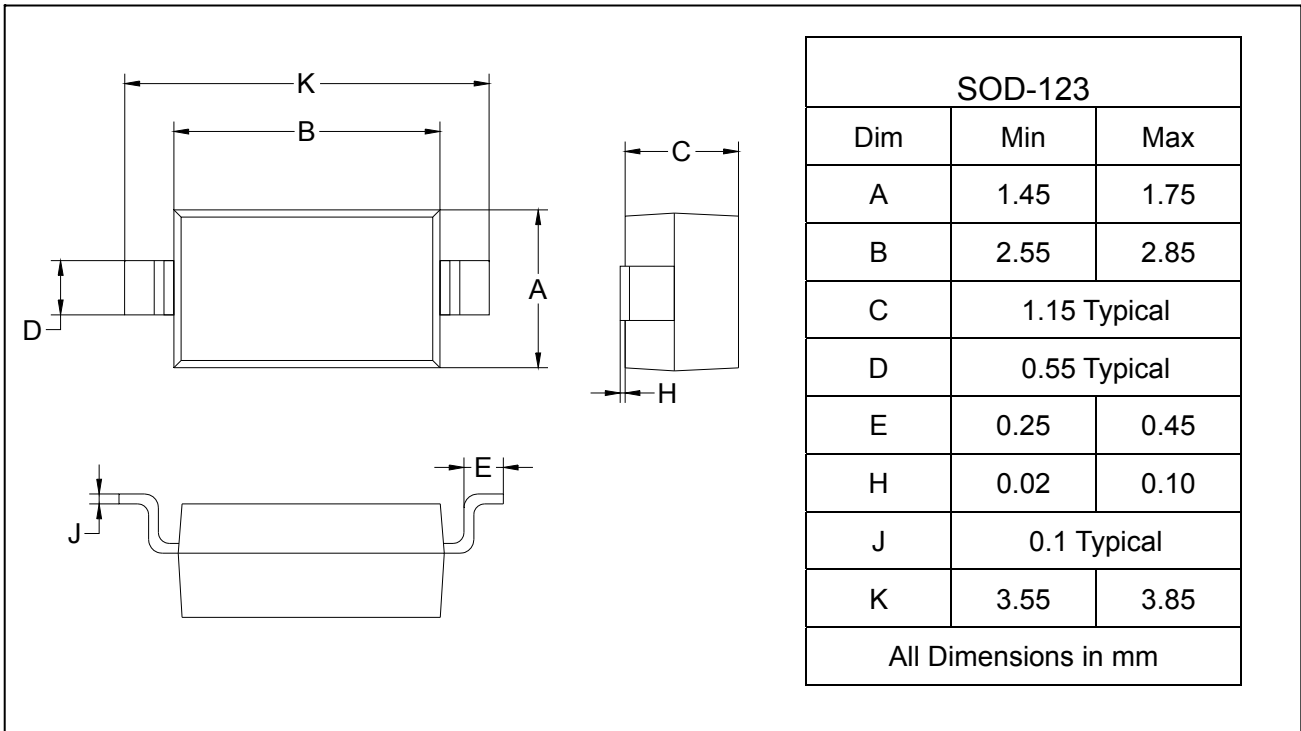
Type	Zener Voltage Range ¹⁾			Dynamic Impedance				Reverse Leakage Current	
	V _{znom}	V _{ZT}	at I _{ZT}	Z _{ZT}	at I _{ZT}	Z _{ZK}	at I _{ZK}	I _R	at V _R
	V	V	mA	Max. (Ω)	mA	Max. (Ω)	mA	Max. (μA)	V
BZT52B2V4	2.4	2.35...2.45	5	100	5	600	1	50	1
BZT52B2V7	2.7	2.65...2.75	5	100	5	600	1	20	1
BZT52B3V0	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

¹⁾ 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-2020	1.0	Initial release

CAUTION / WARNING

Information in this document is believed to be accurate and reliable. However, RDSEMI does not give any representations or warranties, expressed or implied, as to the accuracy or completeness of such information and shall have no liability for the consequences of use of such information.

Users should independently evaluate the suitability of and test each product selected for their own applications, and RDSEMI assumes no liability what's ever relating to the choice, selection or use of the RDSEMI products and services described herein.

RDSEMI reserves the right to change or update, without notice, any information contained in this publication; to change, without notice, the design, construction, processing, or specification of any product; and to discontinue or limit production or distribution of any product.

Information in this document supersedes and replaces all information previously supplied.

Products are not designed, authorized or warranted to be suitable for use in medical, military, aircraft, space or life support equipment, nor in applications where failure or malfunction of an RDSEMI product can reasonably be expected to result in personal injury, death or severe property or environmental damage. RDSEMI accepts no liability for inclusion and/or use of RDSEMI products in such equipment or applications and therefore such inclusion and/or use is at the customer's own risk.

This document as well as the item(s) described herein may be subject to export control regulations. Export might require a prior authorization from national authorities.

Resale of RDSEMI products with provisions different from the statements and/or technical features set forth in this document shall immediately void any warranty granted by RDSEMI for the RDSEMI product or service described herein and shall not create or extend in any manner whatsoever, any liability of RDSEMI.

RDSEMI expressly disclaims all implied warranties regarding the information contained herein, including, but not limited to, any implied warranties of merchantability or fitness for a particular purpose. RDSEMI only obligations are those in the RDSEMI Standard Terms and Conditions of Sale and in no case will RDSEMI be liable for any incidental, indirect, or consequential damages arising from the sale, resale, use, or misuse of its products.

Specifications are subject to change without notice
© Copyright 2020, DaJing Semiconductor
All rights reserved