

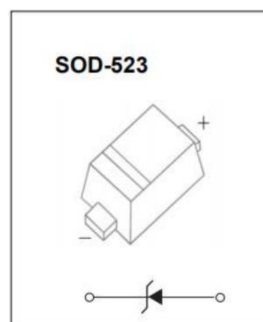
Planar Plastic Zener Diode

Version: A0 2021-07-09

Features

- 150mW Power Dissipation
- Zener Voltages From 5.1 V to 20V
- Tolerance approximately: $\pm 2\%$
- SOD-523 Small Outline Plastic Package
- Polarity: Color band denotes cathode end
- General Purpose, Medium Current
- Epoxy UL: 94V-0

Exterior



Application Information

- Cellular handsets
- Tablets
- Other portable devices

Package (top view)



Agency Approvals

Icon	Description
RoHS	Compliance with 2011/65/EU
HF	Compliance with IEC61249-2-21:2003
	Mean lead free

Schematic



Maximum Ratings(Ta=25℃ unless otherwise specified)

Parameters	Symbol	Value	Unit
Forward Voltage @IF=10mA	VF	0.9	V
Power Dissipation(Note1)	Pd	150	mW
Thermal Resistance from Junction to Ambient	RθJA	833	℃/W
Junction temperature、Storage temperature range	Tj, Tstg	-55 to +150	℃

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Part Number and Electrical Parameter (Ta=25℃ unless otherwise specified)

Part Number	Type Code	Zener Voltage(Note2)				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)	(μA)	(V)
BW-D5Z5V1T1G-2	2Z2	5.1	5.00	5.20	5	60	480	1.0	2	2.0
BW-D5Z5V6T1G-2	2Z3	5.6	5.49	5.71	5	40	400	1.0	1	2.0
BW-D5Z6V2T1G-2	2Z4	6.2	6.08	6.32	5	10	150	1.0	3	4.0
BW-D5Z6V8T1G-2	2Z5	6.8	6.66	6.94	5	15	80	1.0	2	4.0
BW-D5Z7V5T1G-2	2Z6	7.5	7.35	7.65	5	15	80	1.0	1	5.0
BW-D5Z8V2T1G-2	2Z7	8.2	8.04	8.36	5	15	80	1.0	0.7	5.0
BW-D5Z9V1T1G-2	2Z8	9.1	8.92	9.28	5	15	100	1.0	0.5	6.0
BW-D5Z10VT1G-2	2Z9	10	9.80	10.20	5	20	150	1.0	0.2	7.0
BW-D5Z11VT1G-2	2Y1	11	10.78	11.22	5	20	150	1.0	0.1	8.0
BW-D5Z12VT1G-2	2Y2	12	11.76	12.24	5	25	150	1.0	0.1	8.0
BW-D5Z13VT1G-2	2Y3	13	12.74	13.26	5	30	170	1.0	0.1	8.0
BW-D5Z15VT1G-2	2Y4	15	14.70	15.30	5	30	200	1.0	0.1	10.5
BW-D5Z16VT1G-2	2Y5	16	15.68	16.32	5	40	200	1.0	0.1	11.2
BW-D5Z18VT1G-2	2Y6	18	17.64	18.36	5	45	225	1.0	0.1	12.6
BW-D5Z20VT1G-2	2Y7	20	19.60	20.40	5	55	225	1.0	0.1	14.0

Notes:

- Valid provided that device terminals are kept at ambient temperature.
- Tested with pulses, period=5ms,pulse width =300μs.
- f=1kHz.

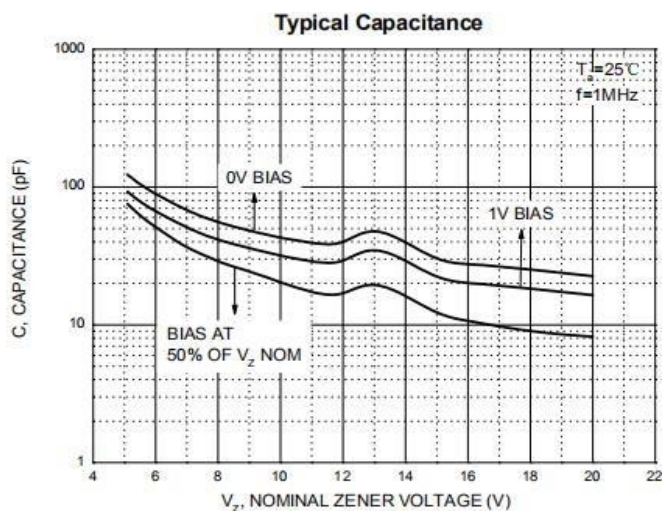
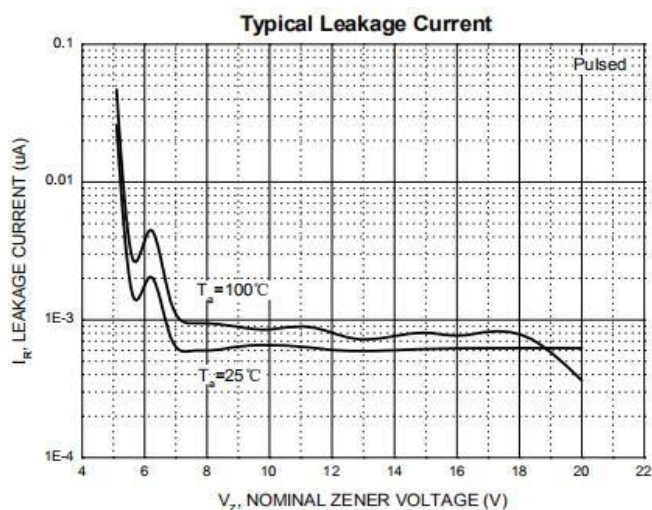
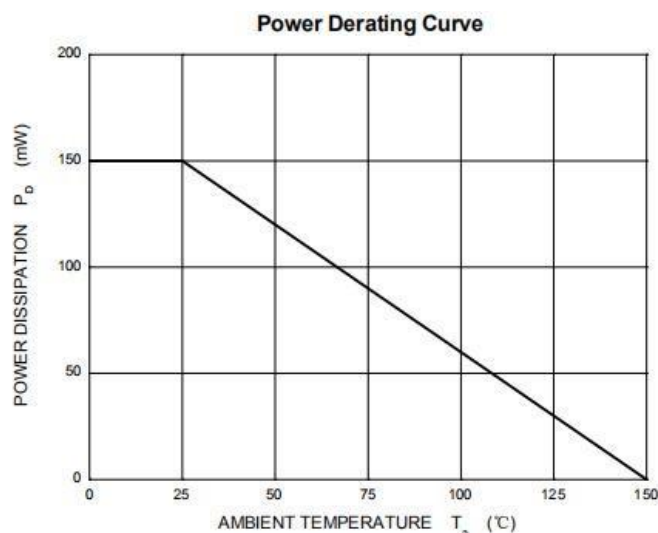
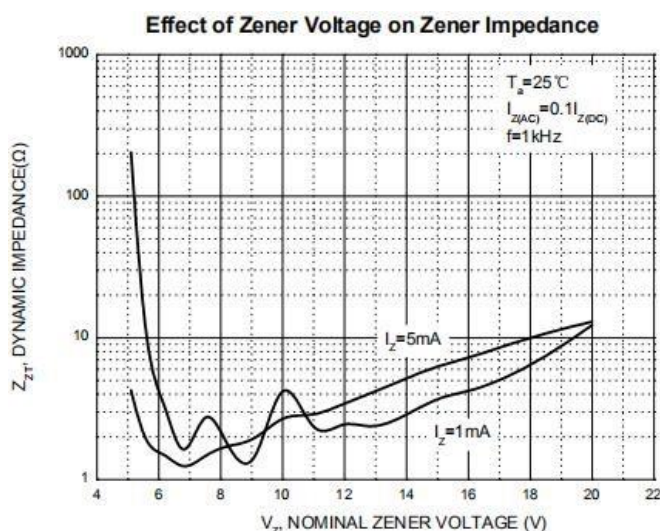
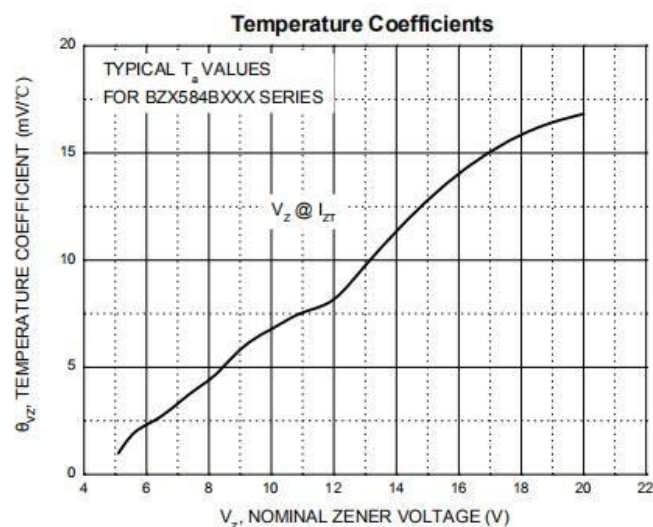
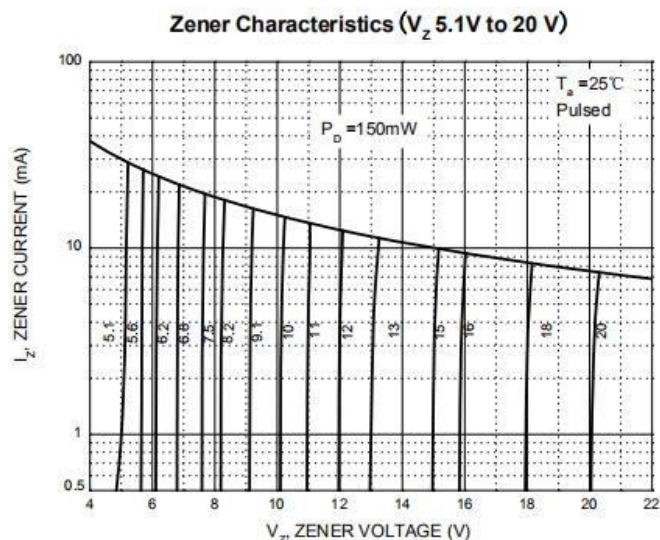
Part Numbering System

BW	D5	Z	XXX	T1	G	2
(1)	(2)	(3)	(4)	(5)	(6)	(7)

- (1) Bencent Zener Diode
- (2) Package: SOD-523
- (3) Power Dissipation: 150mW
- (4) Work Voltage: 5.1V-20V
- (5) Package type: Taping, 3K/R
- (6) Green
- (7)Tolerance of accuracy: ±2%

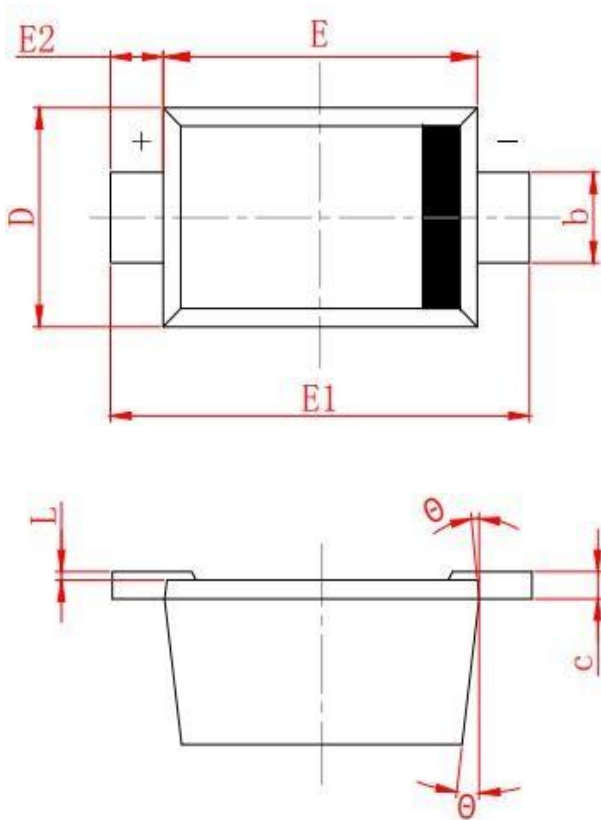
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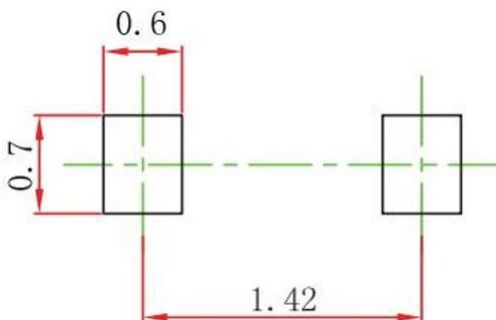
Typical Characteristics


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Product Dimensions


SYMBOL	MILLIMETER	
	MIN	MAX
A	0.530	0.730
A1	0.500	0.700
b	0.280	0.380
c	0.080	0.150
D	0.750	0.850
E	1.100	1.300
E1	1.500	1.700
E2	0.200 REF	
L	0.010	0.070
θ	7° REF	

SOD-523 Suggested Pad Layout

Notes:

1. Controlling dimension: in millimeters.
2. General tolerance: $\pm 0.05\text{mm}$.
3. The pad layout is for reference purpose only.