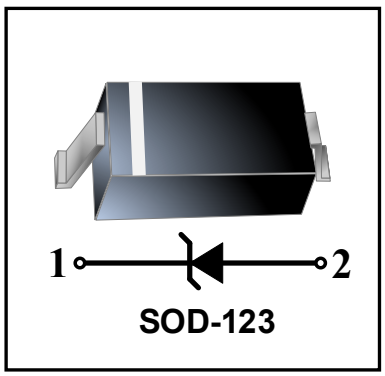
WZ5BxxxD1-AT

ZENER DIODE



Features

- Constant Voltage Control
- Planar Die Construction
- Zener Voltages From 2.4V-75V
- AEC-Q101 Qualified

Mechanical Characteristics

- SOD-123 Package
- Marking : Refer to Table List
- RoHS Compliant & HF
- Device meets MSL1 requirement

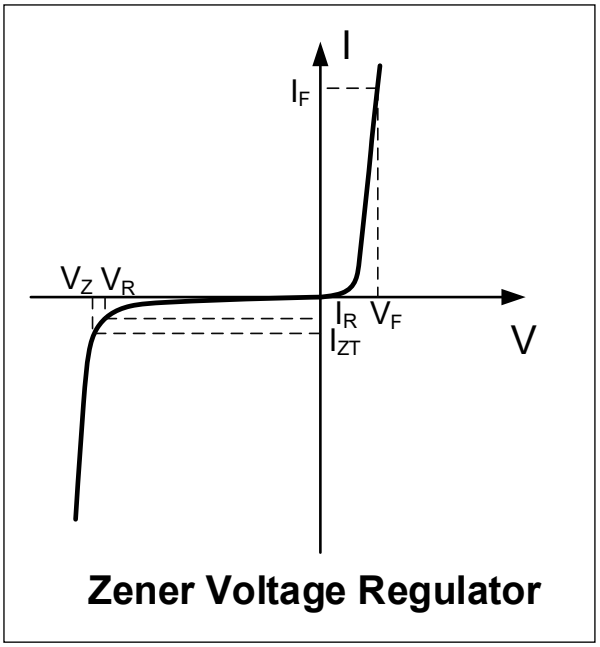
Absolute Maximum Rating (T_a=25°C unless otherwise noted)

Parameter	Symbol	Value	Units
Forward Voltage @ I_F = 10mA	V_F	0.9	V
Power Dissipation	P_D	500	mW
Thermal Resistance from Junction to Ambient	$R_{\theta JA}$	250	°C/W
Junction Temperature	T_J	-55 to +150	°C
Storage Temperature	T_{STG}	-55 to +150	°C

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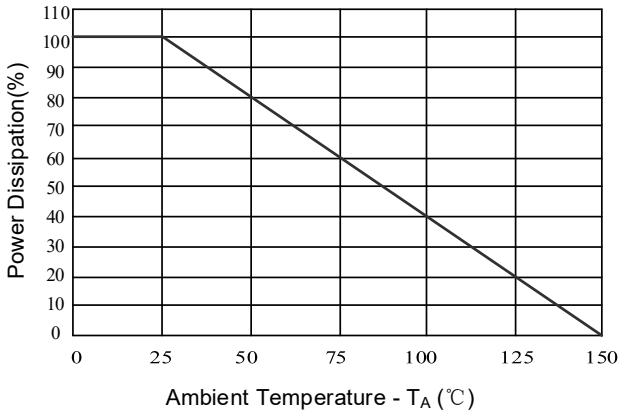
Electrical Parameters (T_a=25℃)

Symbol	Parameter
I_{ZT}	Reverse Current
V_Z	Reverse Zener Voltage @ I_{ZT}
V_R	Reverse Voltage
I_R	Reverse Leakage Current @ V_R
I_F	Forward Current
V_F	Forward Voltage @ I_F



Typical Characteristics

Figure 1: Power Derating Curve



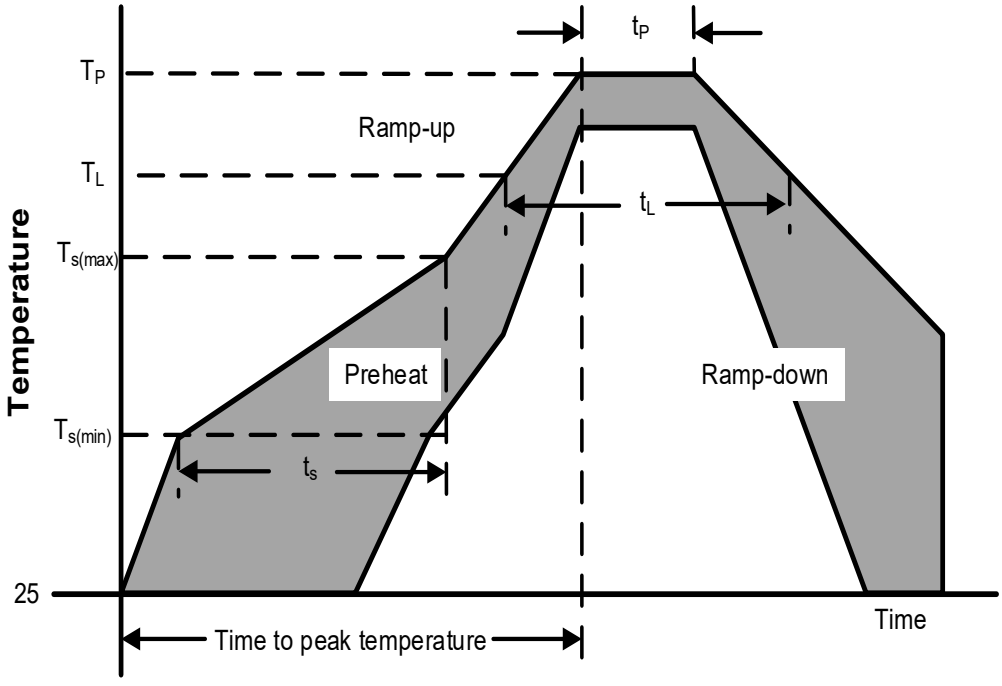
Electrical Characteristics

Type Number	Marking	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)	(Ω)	(mA)	(μA)	(V)
WZ5B2V4D1-AT	2WX	2.4	2.35	2.45	5	100	600	1	50	1
WZ5B2V7D1-AT	2W1	2.7	2.65	2.75	5	100	600	1	20	1
WZ5B3V0D1-AT	2W2	3	2.94	3.06	5	95	600	1	10	1
WZ5B3V3D1-AT	2W3	3.3	3.23	3.37	5	95	600	1	5	1
WZ5B3V6D1-AT	2W4	3.6	3.53	3.67	5	90	600	1	5	1
WZ5B3V9D1-AT	2W5	3.9	3.82	3.98	5	90	600	1	3	1
WZ5B4V3D1-AT	2W6	4.3	4.21	4.39	5	90	600	1	3	1
WZ5B4V7D1-AT	2W7	4.7	4.6	4.8	5	80	500	1	3	2
WZ5B5V1D1-AT	2W8	5.1	4.99	5.21	5	60	480	1	2	2
WZ5B5V6D1-AT	2W9	5.6	5.48	5.72	5	40	400	1	1	2
WZ5B6V2D1-AT	2WA	6.2	6.07	6.33	5	10	150	1	3	4
WZ5B6V8D1-AT	2WB	6.8	6.66	6.94	5	15	80	1	2	4
WZ5B7V5D1-AT	2WC	7.5	7.35	7.65	5	15	80	1	1	5
WZ5B8V2D1-AT	2WD	8.2	8.03	8.37	5	15	80	1	0.7	5
WZ5B9V1D1-AT	2WE	9.1	8.91	9.29	5	15	100	1	0.5	6
WZ5B10VD1-AT	2WF	10	9.8	10.2	5	20	150	1	0.2	7
WZ5B11VD1-AT	2WG	11	10.78	11.22	5	20	150	1	0.1	8
WZ5B12VD1-AT	2WH	12	11.76	12.24	5	25	150	1	0.1	8
WZ5B13VD1-AT	2WI	13	12.74	13.26	5	30	170	1	0.1	8
WZ5B15VD1-AT	2WJ	15	14.7	15.3	5	30	200	1	0.05	10.5
WZ5B16VD1-AT	2WK	16	15.68	16.32	5	40	200	1	0.05	11.2
WZ5B18VD1-AT	2WL	18	17.64	18.36	5	45	225	1	0.05	12.6
WZ5B20VD1-AT	2WM	20	19.6	20.4	5	55	225	1	0.05	14
WZ5B22VD1-AT	2WN	22	21.56	22.44	5	55	250	1	0.05	15.4
WZ5B24VD1-AT	2WO	24	23.52	24.48	5	70	250	1	0.05	16.8
WZ5B27VD1-AT	2WP	27	26.46	27.54	2	80	300	0.5	0.05	18.9
WZ5B30VD1-AT	2WQ	30	29.4	30.6	2	80	300	0.5	0.05	21
WZ5B33VD1-AT	2WR	33	32.34	33.66	2	80	325	0.5	0.05	23.1
WZ5B36VD1-AT	2WS	36	35.28	36.72	2	90	350	0.5	0.05	25.2
WZ5B39VD1-AT	2WT	39	38.22	39.78	2	130	350	0.5	0.05	27.3
WZ5B43VD1-AT	2WU	43	42.14	43.86	2	150	375	0.5	0.05	30.1
WZ5B47VD1-AT	2WV	47	46.06	47.94	2	170	375	0.5	0.05	32.9
WZ5B51VD1-AT	2X1	51	49.98	52.02	2	180	400	0.5	0.05	35.7
WZ5B56VD1-AT	2X2	56	54.88	57.12	2	200	425	0.5	0.05	39.2
WZ5B62VD1-AT	2X3	62	60.76	63.24	2	215	450	0.5	0.05	43.4
WZ5B68VD1-AT	2X4	68	66.64	69.36	2	240	475	0.5	0.05	47.6
WZ5B75VD1-AT	2X5	75	73.5	76.5	2	255	500	0.5	0.05	52.5

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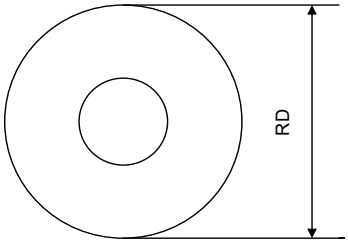
Soldering Parameters

Reflow Condition		Pb – Free assembly
Pre Heat	Temperature Min ($T_{s(min)}$)	150°C
	Temperature Max ($T_{s(max)}$)	200°C
	Time (min to max) (ts)	60 – 190 secs
Average ramp up rate (Liquidus Temp) (T_L) to peak		5°C/second max
$T_{S(max)}$ to T_L——Ramp-up Rate		5°C/second max
Reflow	Temperature (T_L) (Liquidus)	217°C
	Temperature (t_L)	60 – 150 seconds
Peak Temperature (T_P)		260+0/-5 °C
Time within actual peak Temperature (t_p)		20 – 40 seconds
Ramp-down Rate		5°C/second max
Time 25°C to peak Temperature (T_P)		8 minutes Max.
Do not exceed		280°C

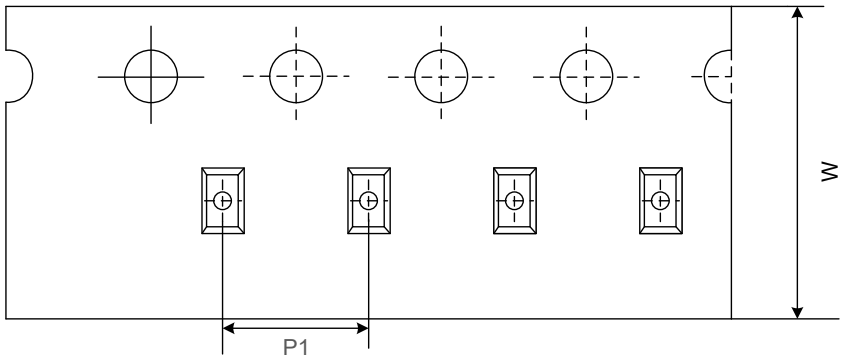


Tape And Reel Information

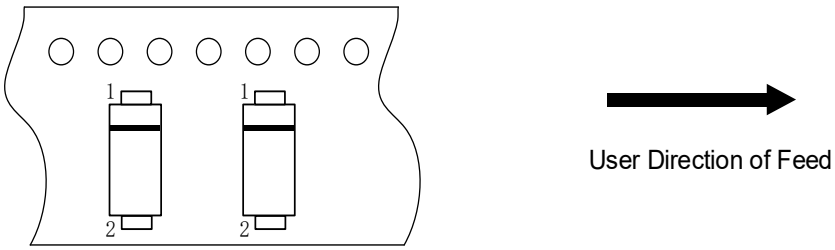
Reel Dimensions



Tape Dimensions



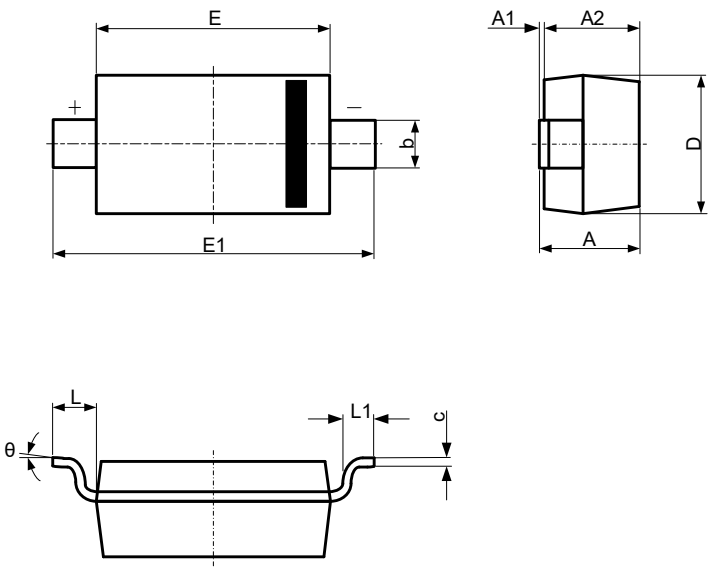
Quadrant Assignments For PIN1 Orientation In Tape

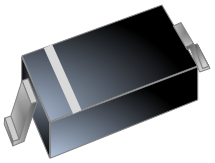


RD	Reel Dimensions	7 inch
W	Overall width of the carrier tape	8 mm
P1	Pitch between successive cavity centers	4 mm

Outline Drawing –SOD-123

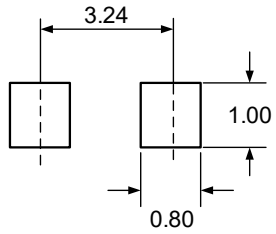
PACKAGE OUTLINE





SOD-123

SYMBOL	MILLIMETERS	
	MIN	MAX
A	1.050	1.250
A1	0.000	0.100
A2	1.050	1.150
b	0.450	0.650
c	0.080	0.150
D	1.500	1.700
E	2.600	2.800
E1	3.550	3.850
L	0.500 REF	
L1	0.250	0.450
θ	0°	8°



DIMENSIONS: MILLIMETERS

Notes

Controlling Dimensions in Millimeters.

Package Information

Qty：3k/Reel

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For additional information, please contact your local Sales Representative.

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1. The product specification aims to provide users with a reference regarding various product parameters, performance, and usage. It presents certain aspects of the product's performance in graphical form and is intended solely for users to select product and make product comparisons, enabling users to better understand and evaluate the characteristics and advantages of the product. It does not constitute any commitment, warranty, or guarantee.

2. The product parameters described in the product specification are numerical values, characteristics, and functions obtained through actual testing or theoretical calculations of the product in an independent or ideal state. Due to the complexity of product applications and variations in test conditions and equipment, there may be slight fluctuations in parameter test values. WAYON shall not guarantee that the actual performance of the product when installed in the customer's system or equipment will be entirely consistent with the product specification, especially concerning dynamic parameters. It is recommended that users consult with professionals for product selection and system design. Users should also thoroughly validate and assess whether the actual parameters and performance when installed in their respective systems or equipment meet their requirements or expectations. Additionally, users should exercise caution in verifying product compatibility issues, and WAYON assumes no responsibility for the application of the product.

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