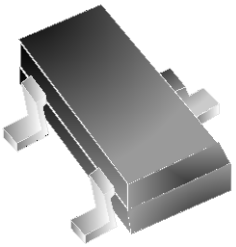
WZ5CxxxKT

ZENER DIODE

Features

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

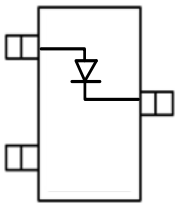


SOT-23

Mechanical Characteristics

- SOT-23 Package
- Marking : Refer to Table List
- RoHS Compliant & HF
- Device meets MSL3 requirement

Schematic & PIN Configuration



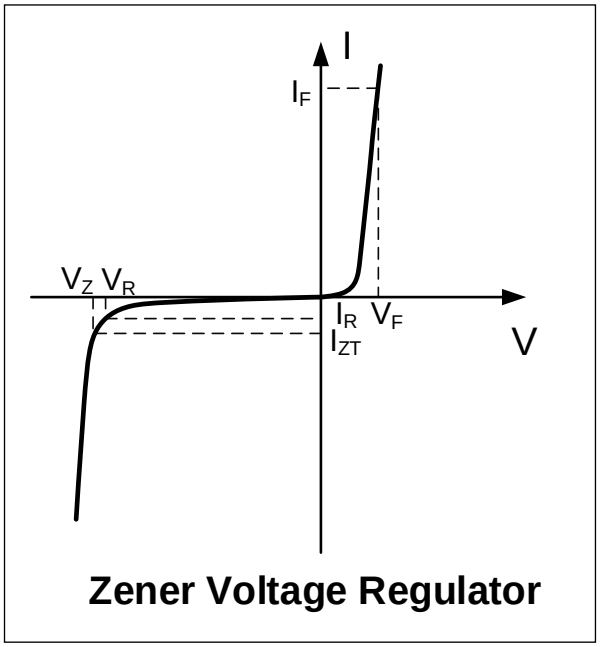
SOT-23(Top View)

Absolute Maximum Rating

Parameter	Symbol	Value	Units
Power Dissipation	P_D	350	mW
Maximum Forward Voltage @ IF=10mA	V_F	0.9	V
Peak Forward Surge Current	I_{FSM}	2	A
Junction Temperature	T_J	-55 to + 150	°C
Storage Temperature Range	T_{STG}	-55 to + 150	°C
Thermal Resistance Junction to Ambient	$R_{\theta JA}$	357	°C/W

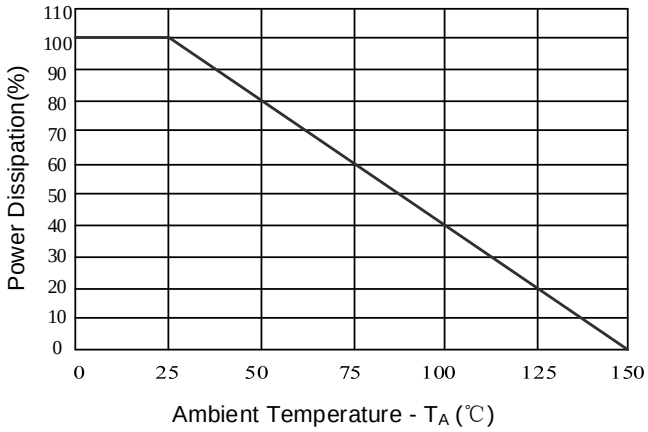
Electrical Parameters (T_a=25℃)

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

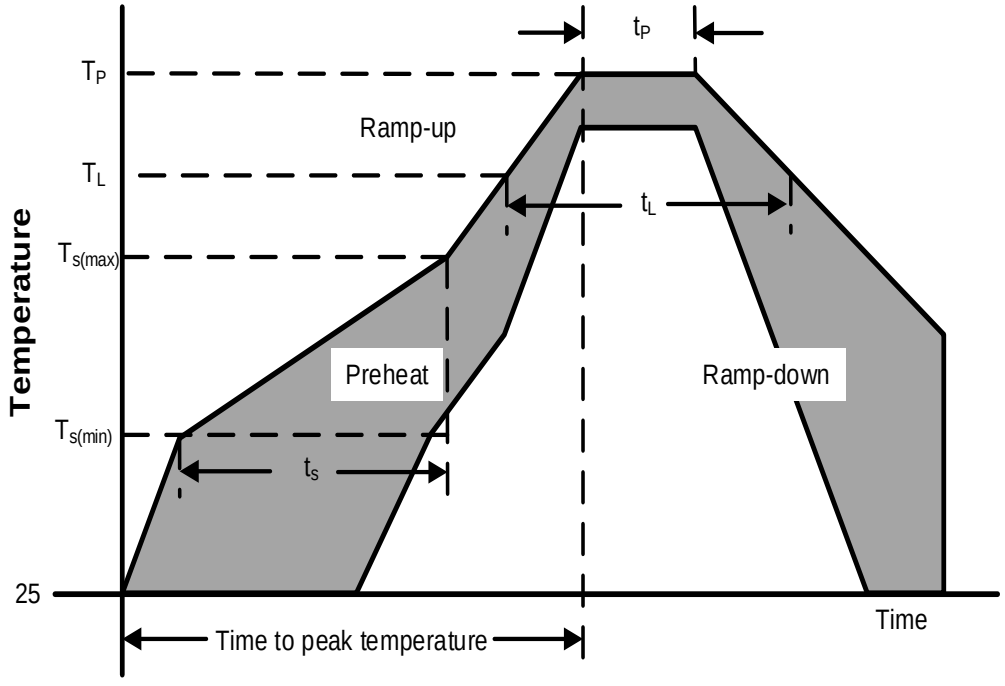


Electrical Characteristics(Ta=25°C unless otherwise noted)

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)
WZ5C2V4KT	Z11	2.4	2.2	2.6	5	100	600	1	50	1
WZ5C2V7KT	Z12	2.7	2.5	2.9	5	100	600	1	20	1
WZ5C3V0KT	Z13	3	2.8	3.2	5	95	600	1	10	1
WZ5C3V3KT	Z14	3.3	3.1	3.5	5	95	600	1	5	1
WZ5C3V6KT	Z15	3.6	3.4	3.8	5	90	600	1	5	1
WZ5C3V9KT	Z16	3.9	3.7	4.1	5	90	600	1	3	1
WZ5C4V3KT	Z17	4.3	4	4.6	5	90	600	1	3	1
WZ5C4V7KT	Z1	4.7	4.4	5	5	80	500	1	3	2
WZ5C5V1KT	Z2	5.1	4.8	5.4	5	60	480	1	2	2
WZ5C5V6KT	Z3	5.6	5.2	6	5	40	400	1	1	2
WZ5C6V2KT	Z4	6.2	5.8	6.6	5	10	150	1	3	4
WZ5C6V8KT	Z5	6.8	6.4	7.2	5	15	80	1	2	4
WZ5C7V5KT	Z6	7.5	7	7.9	5	15	80	1	1	5
WZ5C8V2KT	Z7	8.2	7.7	8.7	5	15	80	1	0.7	5
WZ5C9V1KT	Z8	9.1	8.5	9.6	5	15	100	1	0.5	6
WZ5C10VKT	Z9	10	9.4	10.6	5	20	150	1	0.2	7
WZ5C11VKT	Y1	11	10.4	11.6	5	20	150	1	0.1	8
WZ5C12VKT	Y2	12	11.4	12.7	5	25	150	1	0.1	8
WZ5C13VKT	Y3	13	12.4	14.1	5	30	170	1	0.1	8
WZ5C15VKT	Y4	15	13.8	15.8	5	30	200	1	0.05	10.5
WZ5C16VKT	Y5	16	15.3	17.1	5	40	200	1	0.05	11.2
WZ5C18VKT	Y6	18	16.8	19.1	5	45	225	1	0.05	12.6
WZ5C20VKT	Y7	20	18.8	21.2	5	55	225	1	0.05	14
WZ5C22VKT	Y8	22	20.8	23.3	5	55	250	1	0.05	15.4
WZ5C24VKT	Y9	24	22.8	25.6	5	70	250	1	0.05	16.8
WZ5C27VKT	Y10	27	25.1	28.9	2	80	300	0.5	0.05	18.9
WZ5C30VKT	Y11	30	28	32	2	80	300	0.5	0.05	21
WZ5C33VKT	Y12	33	31	35	2	80	325	0.5	0.05	23.1
WZ5C36VKT	Y13	36	34	38	2	90	350	0.5	0.05	25.2
WZ5C39VKT	Y14	39	37	41	2	130	350	0.5	0.05	27.3
WZ5C43VKT	Y15	43	40	46	2	150	375	0.5	0.05	30.1
WZ5C47VKT	Y16	47	44	50	2	170	375	0.5	0.05	32.9
WZ5C51VKT	Y17	51	48	54	2	180	400	0.5	0.05	35.7
WZ5C56VKT	Y18	56	52	60	2	200	425	0.5	0.05	39.2
WZ5C62VKT	Y19	62	58	66	2	215	450	0.5	0.05	43.4
WZ5C68VKT	Y20	68	64	72	2	240	475	0.5	0.05	47.6
WZ5C75VKT	Y21	75	70	79	2	255	500	0.5	0.05	52.5

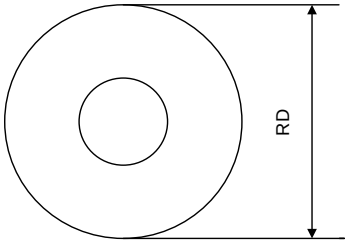
Soldering Parameters

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

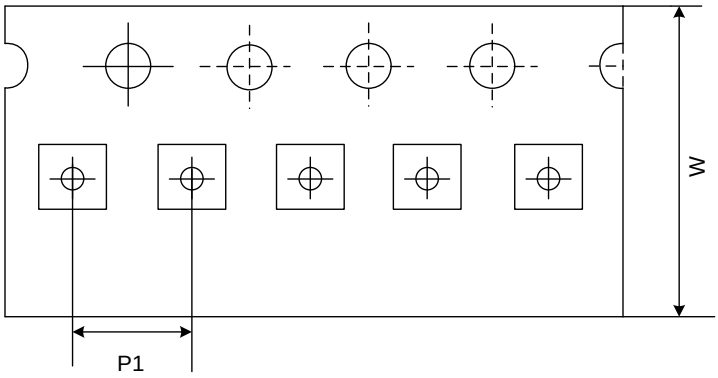


Tape And Reel Information

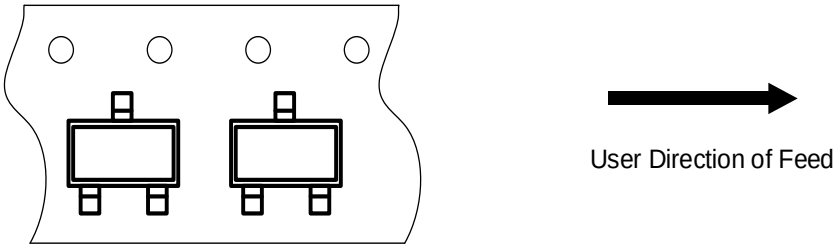
Reel Dimensions



Tape Dimensions



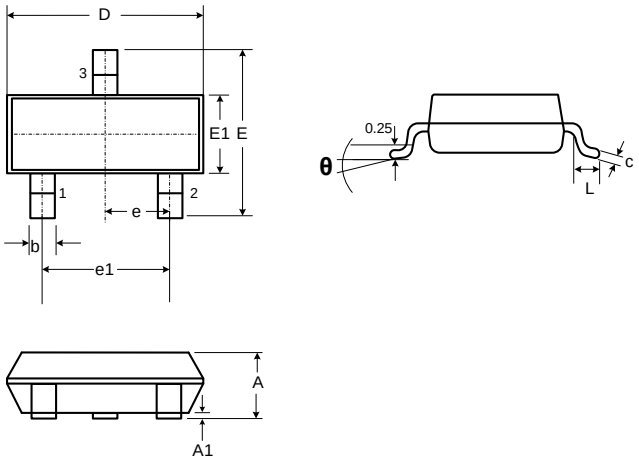
Quadrant Assignments For PIN1 Orientation In Tape

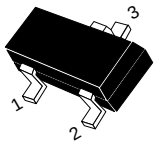


RD	Reel Dimensions	7 inch
W	Overall width of the carrier tape	8 mm
P1	Pitch between successive cavity centers	4 mm

Outline Drawing – SOT-23

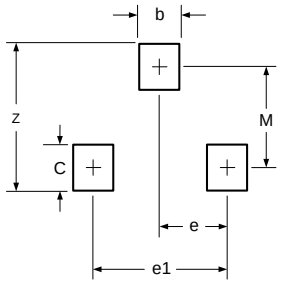
PACKAGE OUTLINE





SOT-23

SYMBOL	MILLIMETERS	
	MIN	MAX
A	0.90	1.15
A1	0.00	0.15
b	0.30	0.55
c	0.07	0.20
D	2.80	3.10
E	2.10	2.65
E1	1.20	1.40
e	0.95 BSC	
e1	1.78	2.05
L	0.30	0.50
θ	0°	8°



DIMENSIONS		
DIM	**INCHES**	**MILLIMETERS**
M	**0.0795**	**2.02**
C	**0.0315**	**0.80**
Z	**0.111**	**2.82**
e	**0.037 BSC**	**0.95 BSC**
e1	**0.075 BSC**	**1.9 BSC**
b	**0.0315**	**0.80**

Notes:
Controlling Dimension: Millimeter.

Package Information

Qty：3k/Reel

CONTACT INFORMATION

No.1001, Shiwan (7) Road, Pudong District, Shanghai, P.R.China.201207
Tel: 86-21-68969993 Fax: 86-21-50757680 Email: market@way-on.com
WAYON website: **http://www.way-on.com**
For additional information, please contact your local Sales Representative.

Product Specification Statement

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.

3. WAYON strives to provide accurate and up-to-date information to the best of our ability. However, due to technical, human, or other reasons, WAYON cannot guarantee that the information provided in the product specification is entirely accurate and error-free. WAYON shall not be held responsible for any losses or damages resulting from the use or reliance on any information in these product specifications. WAYON reserves the right to revise or update the product specification and the products at any time without prior notice, and the user's continued use of the product specification is considered an acceptance of these revisions and updates. Prior to purchasing and using the product, users should verify the above information with WAYON to ensure that the product specification is the most current, effective, and complete. If users are particularly concerned about product parameters, please consult WAYON in detail or request relevant product test reports. Any data not explicitly mentioned in the product specification shall be subject to separate agreement.

4. Users are advised to pay attention to the parameter limit values specified in the product specification and maintain a certain margin in design or application to ensure that the product does not exceed the parameter limit values defined in the product specification. This precaution should be taken to avoid exceeding one or more of the limit values, which may result in permanent irreversible damage to the product, ultimately affecting the quality and reliability of the system or equipment.

5. The design of the product is intended to meet civilian needs and is not guaranteed for use in harsh environments or precision equipment. It is not recommended for use in systems or equipment such as medical devices, aircraft, nuclear power, and similar systems, where failures in these systems or equipment could reasonably be expected to result in personal injury. WAYON shall assume no responsibility for any consequences resulting from such usage.

6. Users should also comply with relevant laws, regulations, policies, and standards when using the product specification. Users are responsible for the risks and liabilities arising from the use of the product specification and must ensure that it is not used for illegal purposes. Additionally, users should respect the intellectual property rights related to the product specification and refrain from infringing upon any third-party legal rights. WAYON shall assume no responsibility for any disputes or controversies arising from the above-mentioned issues in any form.