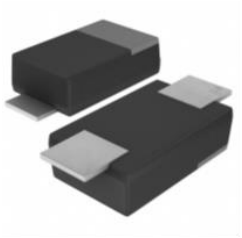
WZSMF47xxA

Surface Mount Silicon Zener Diodes

Features

- For surface mounted applications
- Low profile package
- Easy to pick and place
- High peak reverse power dissipation
- Low Zener impedance
- Built-in strain relief
- RoHS & HF compliant
- MSL: Level 1



SOD-123FL

Mechanical Characteristics

- Case: SOD-123FL, molded plastic body
- Mounting position: any
- Polarity: Color band denotes cathode end

Absolute Maximum Rating			
Rating	**Symbol**	**Value**	**Units**
Power Dissipation on infinite heat sink T_L = 75 °C	P_D	1.0	W
Maximum forward voltage at if=200mA	VF	1.2	V
Operating Junction Temperature range	T_J	-55 to + 150	℃
Storage temperature range	T_{STG}	-55 to + 150	℃

Note:

(1) TL=Lead temperature at 3/8" (9.5mm)from body.

(2) Ratings at 25 ambient temperature unless otherwise specified.

Electrical characteristics(TA=25℃ unless otherwise noted)

Part Number	Device Marking Code	Nominal Zener Voltage @I_T			I_{ZT}(mA)	Maximum Zener Impedance			Maximum Reverse Leakage Current		Maximum DC Zener Current
		$V_{Z\ AVE.}$(V)	$V_{Z\ MIN.}$(V)	$V_{Z\ MAX.}$(V)		$Z_{ZT\ MAX.}$(Ω) @I_{ZT}	$Z_{ZK\ MAX.}$(Ω) @I_{ZK}	I_{ZK}(mA)	I_R(uA) @V_R	V_R(V)	I_{ZM}(mA)
WZSMF4727A	27A	3.0	2.85	3.15	80.0	15	400	1.00	100.0	1.0	301.0
WZSMF4728A	28A	3.3	3.14	3.47	76.0	10	400	1.00	100.0	1.0	274.0
WZSMF4729A	29A	3.6	3.42	3.78	69.0	10	400	1.00	100.0	1.0	251.0
WZSMF4730A	30A	3.9	3.71	4.10	64.0	9	400	1.00	50.0	1.0	232.0
WZSMF4731A	31A	4.3	4.09	4.52	58.0	9	400	1.00	10.0	1.0	210.0
WZSMF4732A	32A	4.7	4.47	4.94	53.0	8	500	1.00	10.0	1.0	192.0
WZSMF4733A	33A	5.1	4.85	5.36	49.0	7	550	1.00	10.0	1.0	177.0
WZSMF4734A	34A	5.6	5.32	5.88	45.0	5	600	1.00	10.0	2.0	161.0
WZSMF4735A	35A	6.2	5.89	6.51	41.0	2	700	1.00	10.0	3.0	146.0
WZSMF4736A	36A	6.8	6.46	7.14	37.0	4	700	1.00	10.0	4.0	133.0
WZSMF4737A	37A	7.5	7.13	7.88	34.0	4	700	0.50	10.0	5.0	121.0
WZSMF4738A	38A	8.2	7.79	8.61	31.0	5	700	0.50	10.0	6.0	110.0
WZSMF4739A	39A	9.1	8.65	9.56	28.0	5	700	0.50	10.0	7.0	100.0
WZSMF4740A	40A	10.0	9.50	10.50	25.0	7	700	0.25	10.0	7.6	91.0
WZSMF4741A	41A	11.0	10.45	11.55	23.0	8	700	0.25	0.5	8.4	83.0
WZSMF4742A	42A	12.0	11.40	12.60	21.0	9	700	0.25	0.5	9.1	76.0
WZSMF4743A	43A	13.0	12.35	13.65	19.0	10	700	0.25	0.5	9.9	69.0
WZSMF4744A	44A	15.0	14.25	15.75	17.0	14	700	0.25	0.5	11.4	61.0
WZSMF4745A	45A	16.0	15.20	16.80	15.5	16	700	0.25	0.5	12.2	57.0
WZSMF4746A	46A	18.0	17.10	18.90	14.0	20	750	0.25	0.5	13.7	50.0
WZSMF4747A	47A	20.0	19.00	21.00	12.5	22	750	0.25	0.5	15.2	45.0
WZSMF4748A	48A	22.0	20.90	23.10	11.5	23	750	0.25	0.5	16.7	41.0
WZSMF4749A	49A	24.0	22.80	25.20	10.5	25	750	0.25	0.5	18.2	38.0
WZSMF4750A	50A	27.0	25.65	28.35	9.5	35	750	0.25	0.5	20.6	34.0
WZSMF4751A	51A	30.0	28.50	31.50	8.5	40	1000	0.25	0.5	22.8	30.0
WZSMF4752A	52A	33.0	31.35	34.65	7.5	45	1000	0.25	0.5	25.1	27.0
WZSMF4753A	53A	36.0	34.20	37.80	7.0	50	1000	0.25	0.5	27.4	25.0
WZSMF4754A	54A	39.0	37.05	40.95	6.5	60	1000	0.25	0.5	29.7	23.0
WZSMF4755A	55A	43.0	40.85	45.15	6.0	70	1500	0.25	0.5	32.7	22.0
WZSMF4756A	56A	47.0	44.65	49.35	5.5	80	1500	0.25	0.5	35.8	19.0
WZSMF4757A	57A	51.0	48.45	53.55	5.0	95	1500	0.25	0.5	38.8	18.0
WZSMF4758A	58A	56.0	53.20	58.80	4.5	110	2000	0.25	0.5	42.6	16.0
WZSMF4759A	59A	62.0	58.90	65.10	4.0	125	2000	0.25	0.5	47.1	14.0
WZSMF4760A	60A	68.0	64.60	71.40	3.7	150	2000	0.25	0.5	51.7	13.0
WZSMF4761A	61A	75.0	71.25	78.75	3.3	175	2000	0.25	0.5	56.0	12.0
WZSMF4762A	62A	82.0	77.90	86.10	3.0	200	3000	0.25	0.5	62.2	11.0
WZSMF4763A	63A	91.0	86.45	95.55	2.8	250	3000	0.25	0.5	69.2	10.0
WZSMF4764A	64A	100.0	95.00	105.00	2.5	350	3000	0.25	0.5	76.0	9.0
WZSMF4765A	65A	110.0	104.50	115.50	2.3	450	4000	0.25	0.5	83.6	8.6
WZSMF4766A	66A	120.0	114.00	126.00	2.0	550	4500	0.25	0.5	91.2	7.8
WZSMF4767A	67A	130.0	123.50	136.50	1.9	700.0	5000	0.25	0.5	98.8	7.0
WZSMF4768A	68A	150.0	142.50	157.50	1.7	1000	6000	0.25	0.5	114.0	6.4
WZSMF4769A	69A	160.0	152.00	168.00	1.6	1100	6500	0.25	0.5	121.6	5.8
WZSMF4770A	70A	180.0	171.00	189.00	1.4	1200	7000	0.25	0.5	136.8	5.2
WZSMF4771A	71A	200.0	190.00	210.00	1.2	1900	9990	0.25	0.5	152.0	4.7
WZSMF4772A	72A	210.0	199.50	220.50	1.0	2000	9990	0.25	0.5	160.0	4.0

WZSMF4773A	73A	220.0	209.00	231.00	1.0	2000	9990	0.25	0.5	168.0	4.0
WZSMF4774A	74A	240.0	228.00	252.00	0.9	1800.0	8500.0	0.25	0.5	182.4	3.8
WZSMF4775A	75A	250.0	237.50	262.50	0.9	2000.0	9000.0	0.25	0.5	190.0	3.6
WZSMF4776A	76A	270.0	256.50	283.50	0.8	2100.0	9000.0	0.25	0.5	205.0	3.3
WZSMF4777A	77A	300.0	285.00	315.00	0.8	2300.0	9500.0	0.25	0.5	228.0	3.0
WZSMF4778A	78A	330.0	313.50	346.50	0.7	2500.0	9500.0	0.25	0.5	250.2	2.7

Electrical Characteristics Curves

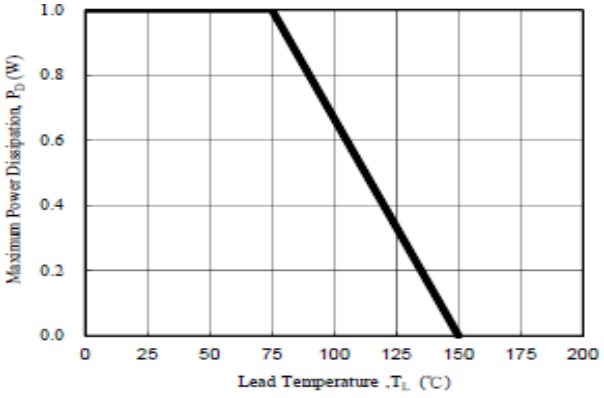


Fig. 1 - Power Temperature Derating Curve

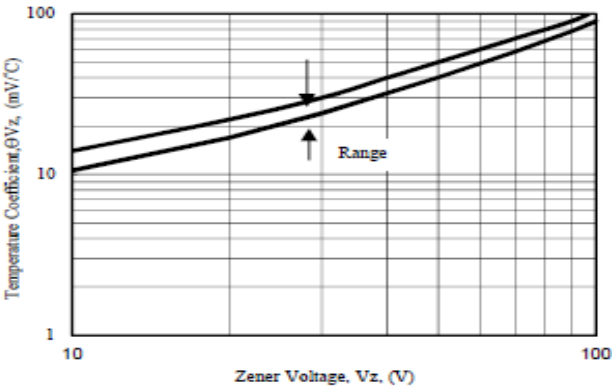


Fig. 2 - Temperature Coefficients v.s. Zener Voltage

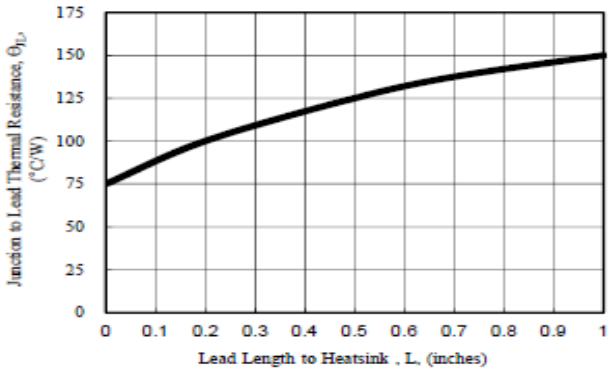
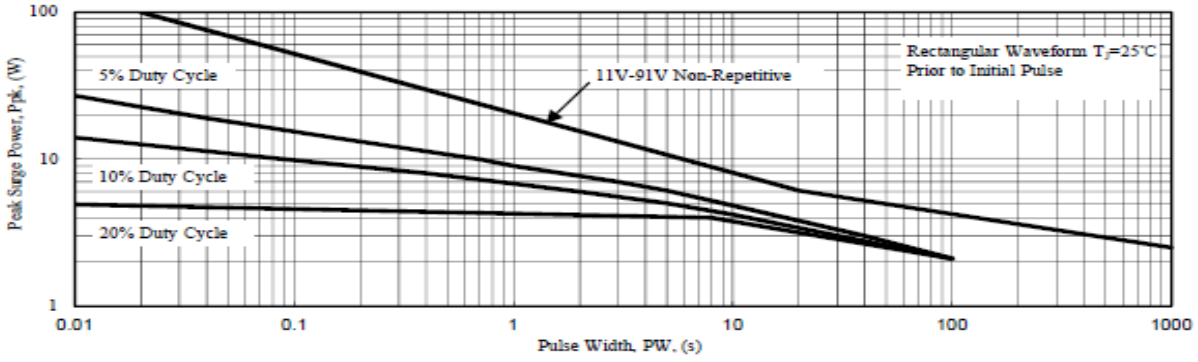


Fig. 3 - Typical Thermal Resistance v.s. Lead Length

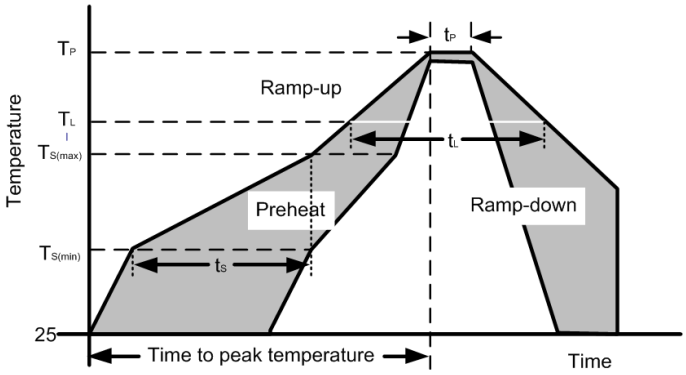


Fg. 4 - Maximum Surge Power

Note: The above typical parameters or typical characteristics are only indicative and do not make specific guarantees. If detailed values are required, additional communication and provision are required.

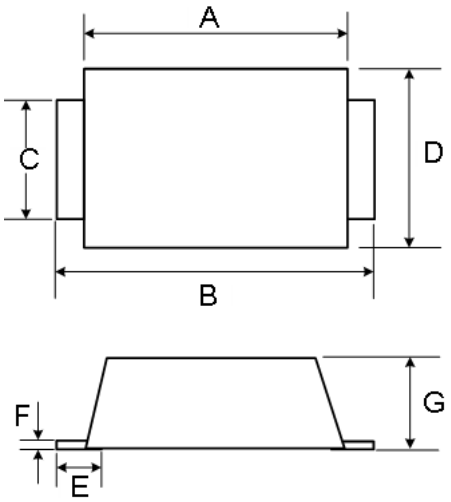
Soldering Parameters

Reflow Condition		
Pre Heat	Temperature Min ($T_{s(min)}$)	150°C
	Temperature Max ($T_{s(max)}$)	200°C
	Time (min to max) (t_s)	60-190 s
Average ramp up rate (Liquidus Temp) (T_L) to peak		3°C/s max
Ts(max) to TL - Ramp-up Rate		3°C/s max
Reflow	Temperature (T_L) (Liquidus)	217°C
	Temperature (t_L)	60-150 s
Peak Temperature (T_P)		$260^{+0/-5}$ °C
Time within actual peak Temperature (t_p)		20-40 s
Ramp-down Rate		5°C/s max
Time 25°C to peak Temperature (T_P)		8 minutes Max.
Do not exceed		260°C

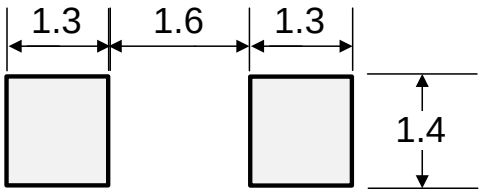


Outline Drawing – SOD-123FL

Ref.（mm）	Millimeters	
	Min.	Max.
A	2.50	3.10
B	3.40	3.95
C	0.70	1.10
D	1.50	2.00
E	0.35	0.95
F	0.05	0.26
G	0.90	1.40



Recommended Solder Pad Layout



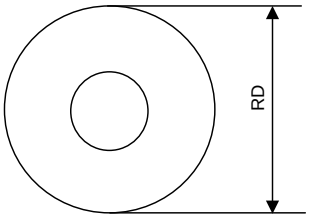
Dimensions in mm

Package Information

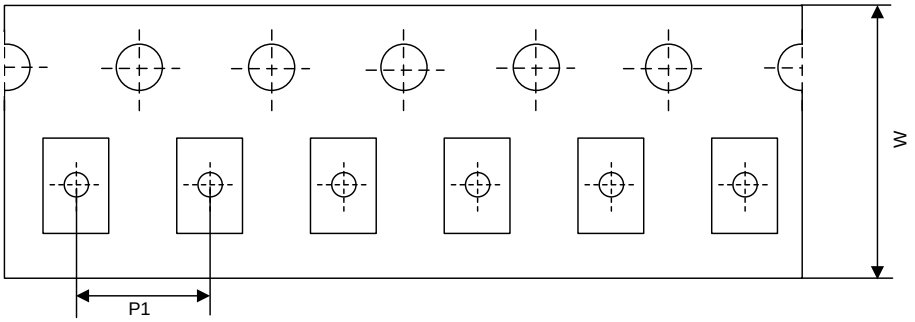
Package Type	Description	Quantity（pcs）
SOD-123FL	Tape & Reel Pack	3000

Tape and Reel Information

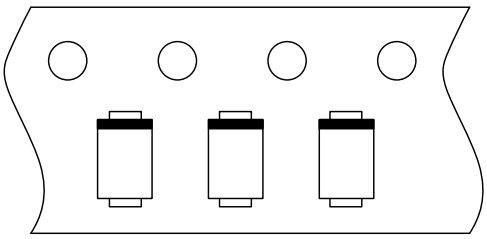
Reel Dimensions



Tape Dimensions



Quadrant Assignments for PIN1 Orientation in tape





User Direction of Feed

Top View

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

Contact Information

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Product Specification Statement

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.

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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