A1N4148WSH

SWITCHING DIODE

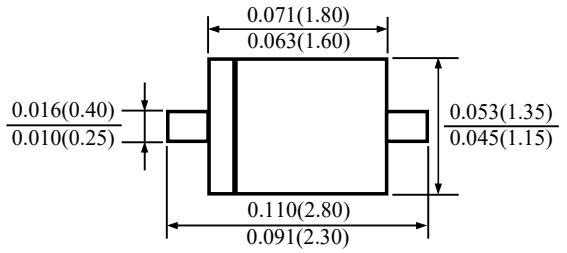
FEATURES

· Fast Switching Diode

· AEC-Q101 Qualified

· Suffix "H" indicates Halogen-free parts, ex. A1N4148WSH

SOD-323



Dimensions in inch and (millimeter)

MECHANICAL DATA

Case : SOD-323

Epoxy : UL 94V-O rate flame retardant

Polarity : Indicated by cathode band

Mounting position : Any

Maximum Ratings@T_A =25 ℃

Parameter	Symbol	Value	Unit
Peak Reverse Voltage	V_{RM}	100	V
Reverse Voltage	V_R	75	V
Average Rectified Forward Current	$I_{F(AV)}$	150	mA
Peak Surge Forward Current at t=1s at t=1μs	I_{FSM}	1 2	A
Power Dissipation	P_D	200	mW
Thermal Resistance from Junction to Ambient (Note 1)	$R_{\theta JA}$	625	℃/W
Junction Temperature	T_J	150	℃
Storage Temperature Range	T_{STG}	-65 to +150	℃

Note :

1. Device mounted on FR-4 substrate PC board, with minimum recommended pad layout.

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Electrical Characteristics@T_A=25 ℃

Parameter	Conditions	Symbol	Min.	Max.	Unit
Reverse Breakdown Voltage	I_R=1μA	$V_{(BR)R}$	75	-	V
Forward Voltage	I_F=1mA	V_F	-	0.715	V
	I_F=10mA		-	0.855	
	I_F=50mA		-	1.000	
	I_F=150mA		-	1.250	
Reverse Leakage Current	V_R=20V	I_R	-	25	nA
	V_R=75V		-	1	μA
	V_R=25V, T_J=150℃		-	30	
	V_R=75V, T_J=150℃		-	50	
Total Capacitance	V_R=0V, f=1MHz	C_T	-	2	pF
Reverse Recovery Time	I_F=10mA, I_{rr}=0.1×I_R, V_R=6V, R_L=100Ω	t_{rr}	-	4	ns

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RATINGS AND CHARACTERISTIC CURVES

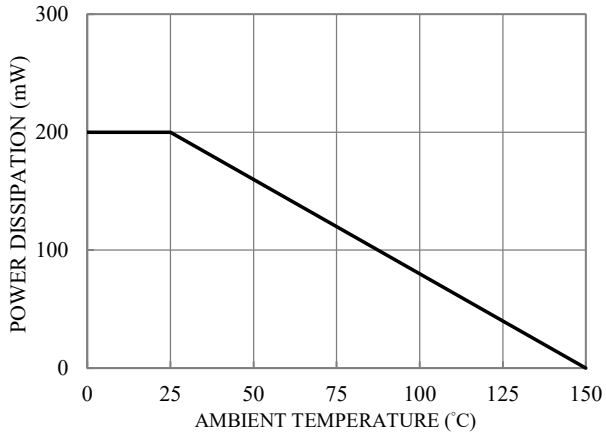

Fig.1-POWER DERATING CURVE

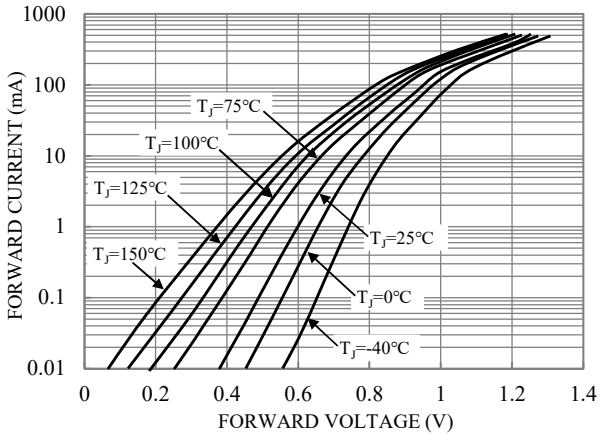

Fig.2-TYPICAL FORWARD CHARACTERISTICS

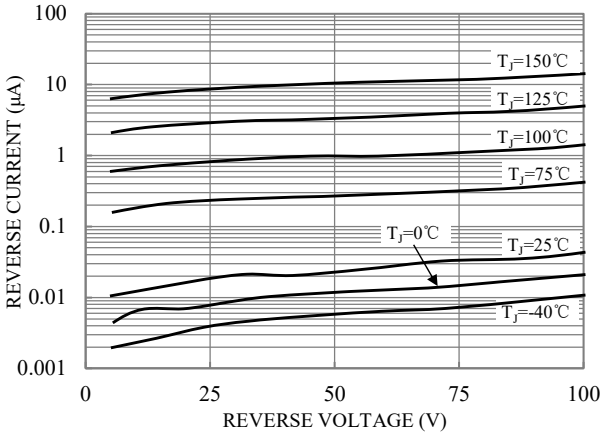

Fig.3-TYPICAL REVERSE CHARACTERISTICS

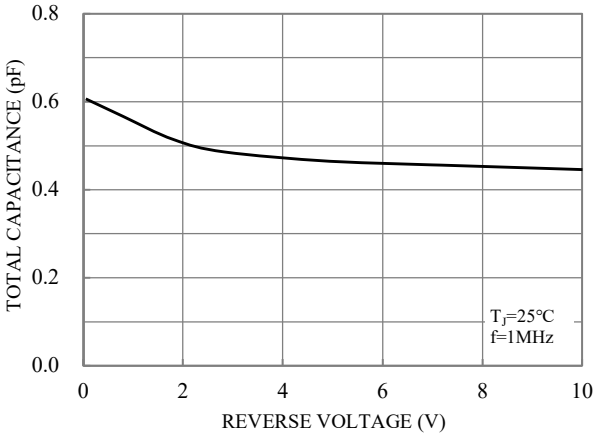

Fig.4-TOTAL CAPACITANCE VS REVERSE VOLTAGE

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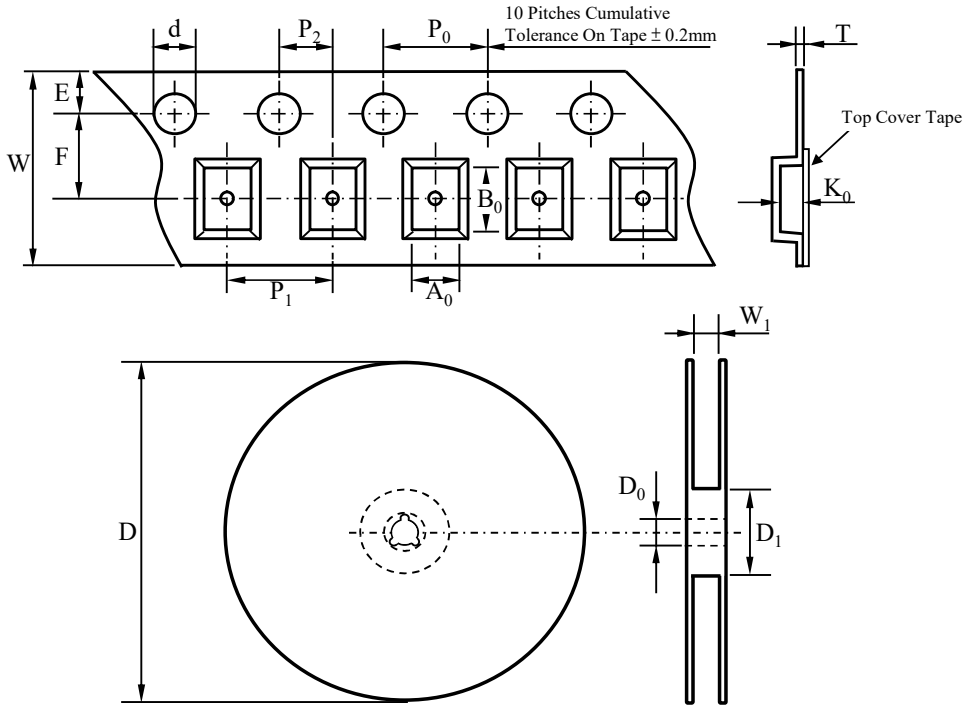
TAPE & REEL SPECIFICATION



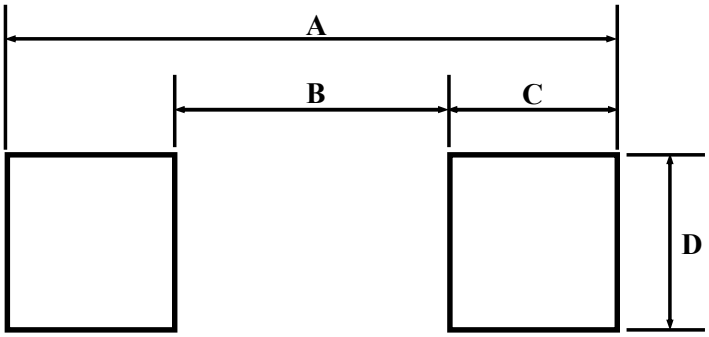
Item	Symbol	SOD-323
Carrier width	A_0	*
Carrier length	B_0	
Carrier depth	K_0	
Sprocket hole	d	1.50 ± 0.10
Reel outside diameter	D	178.00 ± 2.00
Feed hole width	D_0	13.00 ± 0.50
Reel inner diameter	D_1	MIN. 50.00
Sprocke hole position	E	1.75 ± 0.10
Punch hole position	F	3.50 ± 0.10
Sprocke hole pitch	P_0	4.00 ± 0.10
Punch hole pitch	P_1	4.00 ± 0.10
Embossment center	P_2	2.00 ± 0.10
Overall tape thickness	T	MAX. 0.60
Tape width	W	MAX. 8.30
Reel width	W1	MAX. 14.90

Note *: A_0, B_0, and K_0 are determined by component size. The clearance between the components and the cavity must be within 0.05 mm min. to 0.5 mm max.

ORDER INFORMATION

Part Number	Marking Code	Reel Size	Quantity
A1N4148WSH	W2	7"	3,000

SUGGESTED SOLDER PAD LAYOUT



Unit :mm

PACKAGE	A	B	C	D
SOD-323	2.90	1.30	0.80	0.90