

1N4148WS SURFACE MOUNT FAST SWITCHING DIODE



Features

- High Conductance
- Fast Switching Speed
- Surface Mount Package Ideally Suited for Automatic Insertion
- Small Package
- For General Purpose Switching Application
- This is a Halogen Free Device
- All SMC parts are traceable to the wafer lot
- Additional testing can be offered upon request

Schematic & Pin Configuration



Mechanical Characteristics

- Case: SOD-323, Molded plastic
- Terminals: Plated Leads Solderable per MIL-STD-202, Method 208
- Polarity: Cathode Band
- Weight: 0.04 grams(approx)

Maximum Ratings @T_A=25°C unless otherwise specified

Characteristic	Symbol	Limits	Unit
Non- Repetitive Peak Reverse Voltage	V _{RM}	100	V
Peak Repetitive Reverse Voltage Working Peak Reverse Voltage DC Blocking Voltage	V _{RRM} V _{RWM} V _R	75	V
RMS Reverse Voltage	V _{R(RMS)}	53	V
Forward Continuous Current(Note 1)	I _F	300	mA
Average Rectified Output Current(Note 1)	I _O	150	mA
Non-Repetitive Peak Forward Surge Current @t=1.0us @t=1.0s	I _{FSM}	2.0 1.0	A
Power Dissipation(Note 1)	P _D	200	mW
Typical Thermal Resistance, Junction to Ambient(Note 1)	R _{θJA}	625	°C/W
Junction and Storage Temperature Range	T _J , T _{STG}	-55 to +150	°C

Note: 1. Valid provided that terminals are kept at ambient temperature.

Electrical Characteristics @T_A=25°C unless otherwise specified

Characteristic	Symbol	Min	Max	Units	Test Condition
Forward Voltage*	V _{FM}	-	0.715 0.855 1.0 1.25	V	@I _F =1.0mA @I _F =10mA @I _F =50mA @I _F =150mA
Reverse Leakage Current*	I _{RM}	-	2.5	uA	@V _R =75V
Capacitance	C _T	-	2	pF	V _R =0V, f=1.0MHz
Reverse Recovery Time	t _{rr}	-	4	ns	I _F =I _R =10mA I _{rr} =0.1XI _R , R _L =100Ω

* Pulse width < 300 μs, duty cycle < 2%

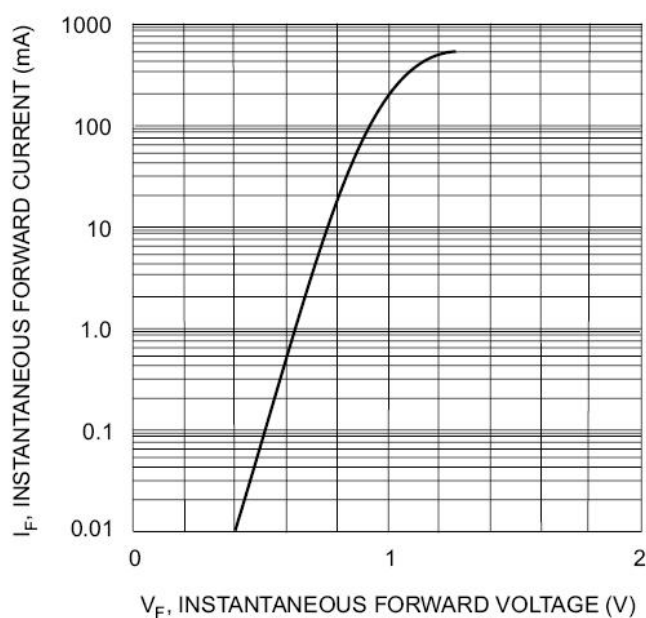
Ratings and Characteristics Curves


Fig. 1 Forward Characteristics

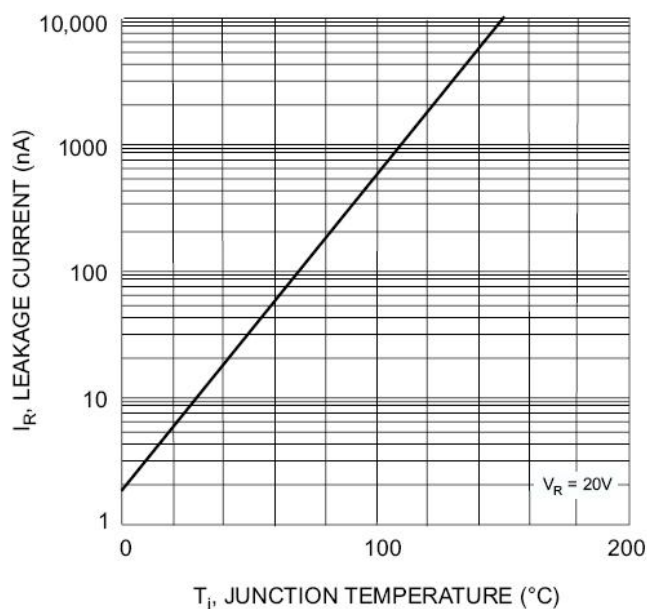


Fig. 2 Leakage Current vs Junction Temperature

Ordering Information

Device	Package	Shipping
1N4148WS	SOD-323	3000pcs / reel
1N4148WSTR	SOD-323	3000pcs / reel

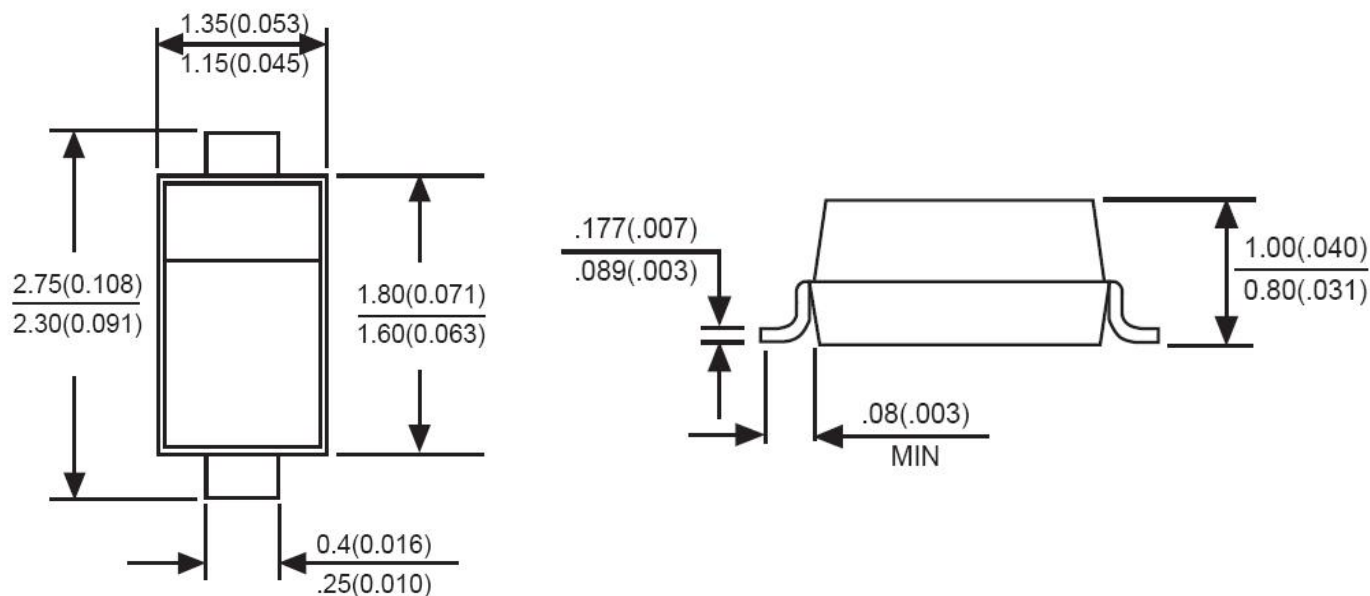
For information on tape and reel specifications, including part orientation and tape sizes, please refer to our tape and reel packaging specification.

Marking Diagram

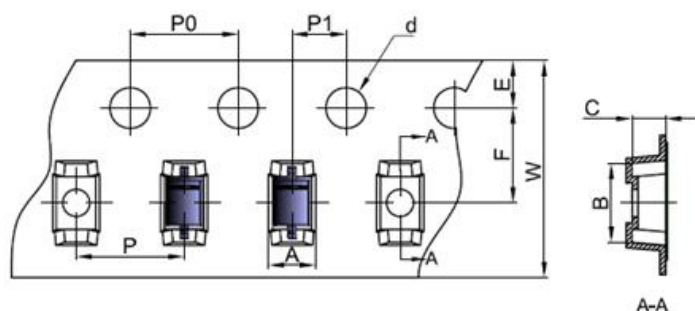


T4 = Marking Code

Mechanical Dimensions SOD-323(Inches/Millimeters)



Carrier Tape Specification SOD-323



SYMB OL	Millimeters	
	Min.	Max.
B	2.85	2.95
C	1.20	1.30
d	1.40	1.60
E	1.65	1.85
F	3.40	3.60
P	3.90	4.10
P0	3.90	4.10
P1	1.90	2.10
W	7.90	8.30

Technical Data
Data Sheet N0572, Rev. B



DISCLAIMER:

- 1- The information given herein, including the specifications and dimensions, is subject to change without prior notice to improve product characteristics. Before ordering, purchasers are advised to contact the SMC Diode Solutions sales department for the latest version of the datasheet(s).
- 2- In cases where extremely high reliability is required (such as use in nuclear power control, aerospace and aviation, traffic equipment, medical equipment, and safety equipment), safety should be ensured by using semiconductor devices that feature assured safety or by means of users' fail-safe precautions or other arrangement.
- 3- In no event shall SMC Diode Solutions be liable for any damages that may result from an accident or any other cause during operation of the user's units according to the datasheet(s). SMC Diode Solution assumes no responsibility for any intellectual property claims or any other problems that may result from applications of information, products or circuits described in the datasheets.
- 4- In no event shall SMC Diode Solutions be liable for any failure in a semiconductor device or any secondary damage resulting from use at a value exceeding the absolute maximum rating.
- 5- No license is granted by the datasheet(s) under any patents or other rights of any third party or SMC Diode Solutions.
- 6- The datasheet(s) may not be reproduced or duplicated, in any form, in whole or part, without the expressed written permission of SMC Diode Solutions.
- 7- The products (technologies) described in the datasheet(s) are not to be provided to any party whose purpose in their application will hinder maintenance of international peace and safety nor are they to be applied to that purpose by their direct purchasers or any third party. When exporting these products (technologies), the necessary procedures are to be taken in accordance with related laws and regulations..