SPECIFICATION SHEET

SMD FAST SWITHING DIODES CASE SOD-323 1N4 SERIES

SPECIFICATION SHEET NO.	S0510 – 1N4148WS00S0T4	
ORIGINAL MFG/PART NO.	MDD Diodes/1N4148WS/SOD323148WSST4	
NEXTGEN PART CODE	1N4148WS00S0T4	Indicate This Code For RFQ /Order
DATE	May. 10, 2025	
REVISION	A3	Updated With Most Recent Data
DESCRIPTION AND MAIN PARAMETRICS	SMD Fast Switching Diodes, Case SOD-323 1N4 Series, 2 Pads Reverse Voltage: 100V Max. Forward Current 0.15A Max. Junction Temp. Range -55°C ~+150°C Package in Tape/Reel, 3000pcs/Reel RoHS/RoHS III compliant, RoHS Annex III lead Exemption (Exempt per RoHS EU 2015/863) and Halogen Free (HF)	
CUSTOMER		
CUSTOMER PART NUMBER		
CROSS REF. PART NUMBER		
MEMO		

VENDOR APPROVE
Issued/Checked/Approved NextGen Components, Inc. Mandy Xu NextGen Components, Inc. Ruby Zhang NextGen Components, Inc. Jack Zhang
Effective Date: May. 10, 2025

CUSTOMER APPROVE
Date:

MAIN FEATURE

Image shown is a representation only. Exact specifications should be obtained from the product dimension.

- Fast Switching Speed
- Case Type SOD-323
- Surface Mount Package Ideally Suited For Automatic Insertion
- High Conductance
- Meet MSL 1 Requirement
- Cross Competitors Parts and More.
- RoHS/RoHS III compliant, RoHS Annex III lead Exemption (Exempt per RoHS EU 2015/863) and Halogen Free (HF)

APPLICATION

- For General Purpose Switching Applications

ELECTRICAL CHARACTERISTICS

- See Page 5 ~ Page 6.
- All Products Parameters are Subject To NextGen Components' Final Confirmation.

HOW TO ORDER

- Please Follow Up Part Code Guide And Indicate NextGen Part Code 1N4148WS00S0T4 For RFQ and Order.

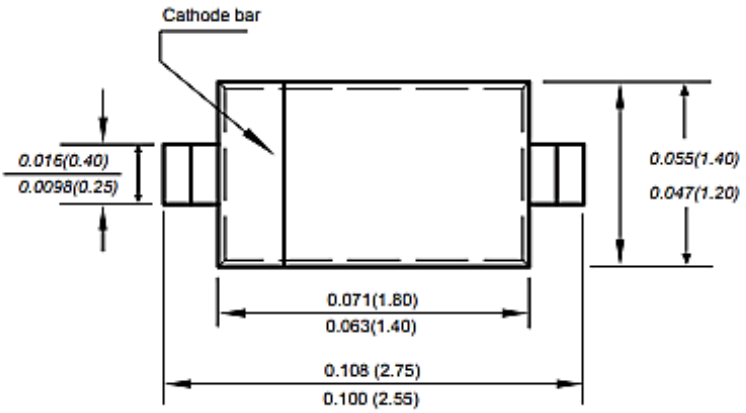
PART CODE GUIDE

RFQ
Request For Quotation

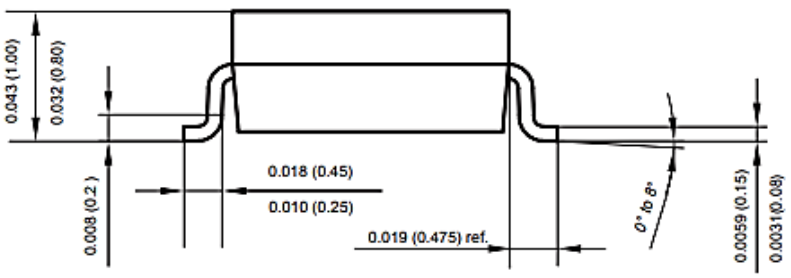
CODE	NAME	KEY SPECIFICATION OPTION
1N4	Product Series Code	SMD Fast Switching Diodes, 2 Pads
148WS	Parameters Code	Letter or Digits (A~Z, a~z or 0~9)
00S0	Internal Control Code	Letter or Digits (A~Z, a~z or 0~9)
T4	Marking Code	Marking “T4”
XX	Special/Custom Parameters Code	Letter or Digits (A~Z, a~z or 0~9) for Special Parametric; Blank: N/A

DIMENSION - Unit: mm, Case SOD-323, Inch/mm

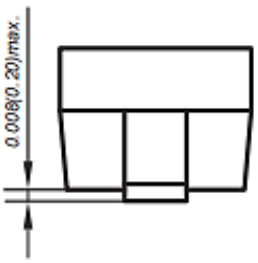
Top View



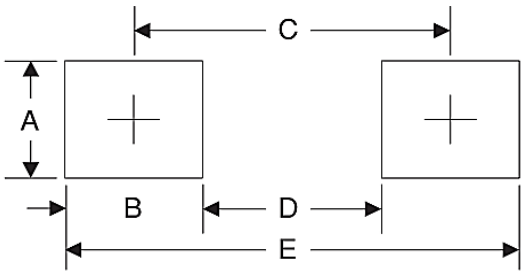
Side View



Side View



Recommend Pad Layout - Tolerance: ±0.05mm



Symbol	Unit (inch)	Unit (mm)
A	0.028	0.7
B	0.028	0.7
C	0.085	2.15
D	0.057	1.45
E	0.112	2.85

MECHANICAL CHARACTERISTICS

CASE	FLAMMABILITY RATING	TERMINALS	MARKING
JEDEC SOD-323 molded plastic body	UL 94V-0	Solder plated, solderable per MIL-STD-750,Method 2026	T4

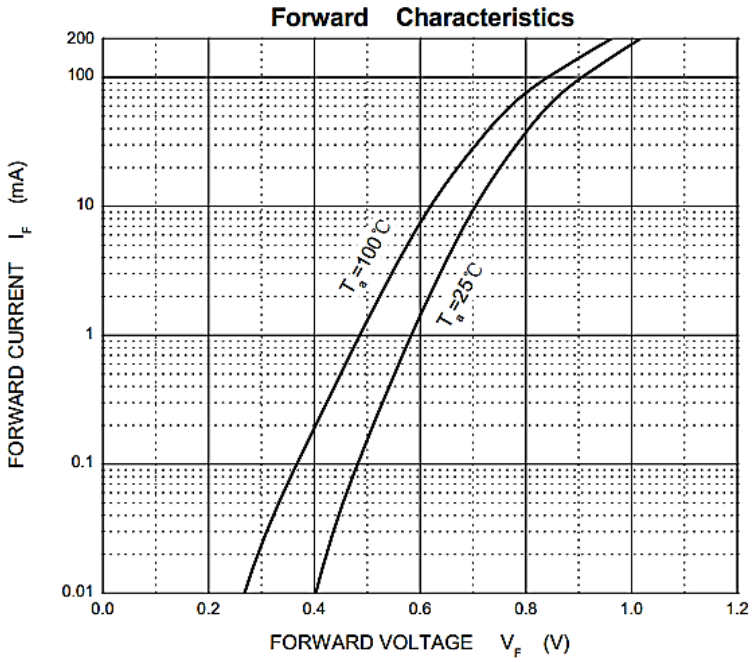
ABSOLUTE MAX. RATING - T_A=25°C unless otherwise specified, For Reference Only

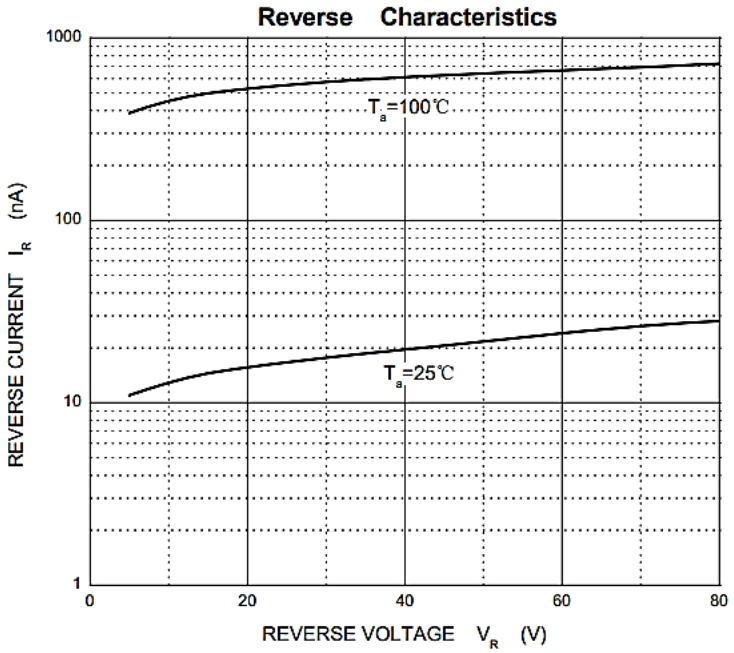
PARAMETER		SYMBOLS	VALUE	UNITS
Maximum Repetitive Peak Reverse Voltage		V_{RRM}	100	V
Maximum RMS Voltage		V_{RMS}	75	V
Reverse Breakdown Voltage at I_R=1μA		$V_{(BR)R}$	75	V
Forward Continuous Current		I_{FM}	300	mA
Average Rectified Output Current		I_O	150	mA
Peak Forward Current	at 1s	I_{FSM}	0.5	A
	at 1ms		1	
	at 1us		4	
Power Dissipation		Pd	400	mW
Thermal Resistance Junction To Ambient		$R_{\Theta JA}$	250	°C/W
Junction and Storage Temperature Range		T_J,T_{STG}	-55 ~+ 150	°C

CHARACTERISTICS- T_A=25℃ unless otherwise specified, For Reference Only

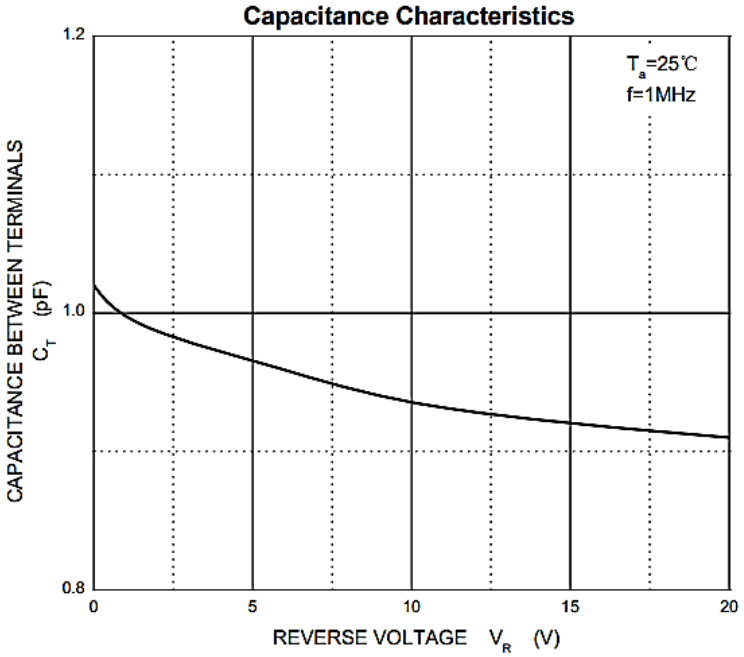
PARAMETER	SYMBOLS	VALUE			UNITS	CONDITIONS
		Min.	Typ.	Max.		
Forward Voltage	V_{F1}			0.715	V	I_F= 1.0mA
	V_{F2}			0.855	V	I_F= 10 mA
	V_{F3}			1.0	V	I_F = 50 mA
	V_{F4}			1.25	V	I_F= 150mA
Reverse Current	I_{R1}			0.025	μA	at V_R= 20 V, T_j= 25°C
	I_{R2}			1.0	μA	at V_R= 75 V, T_j= 25°C
	I_{R3}			30	μA	at V_R= 25 V, T_j= 150°C
	I_{R4}			50	μA	at V_R= 75V, T_j= 150°C
Capacitance Between Terminals	C_T			2	pF	V_R=0V, f=1.0MHz
Reverse Recovery Time	t_{rr}			4	ns	I_F=I_R=10mA Irr=0.1XI_R, R_L=100Ω

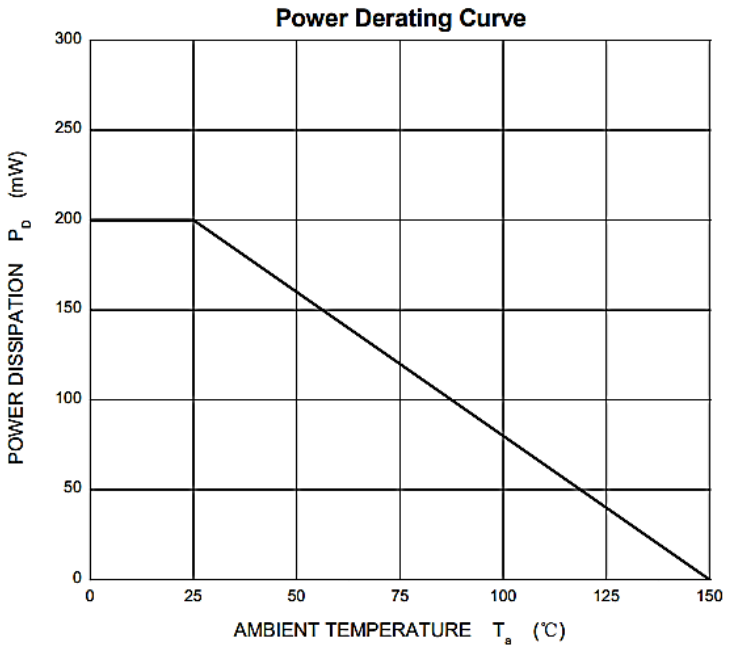
RATINGS AND CHARACTERISTICS CURVES- For Reference Only, Ta=25℃ Unless Otherwise Specified.



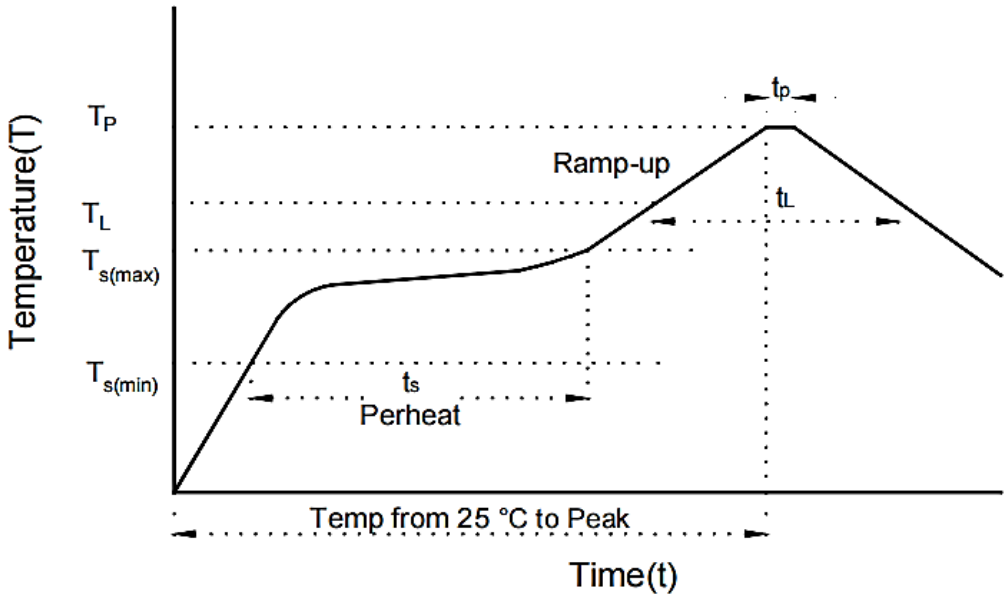


RATINGS AND CHARACTERISTICS CURVES- For Reference Only, Ta=25℃ Unless Otherwise Specified.



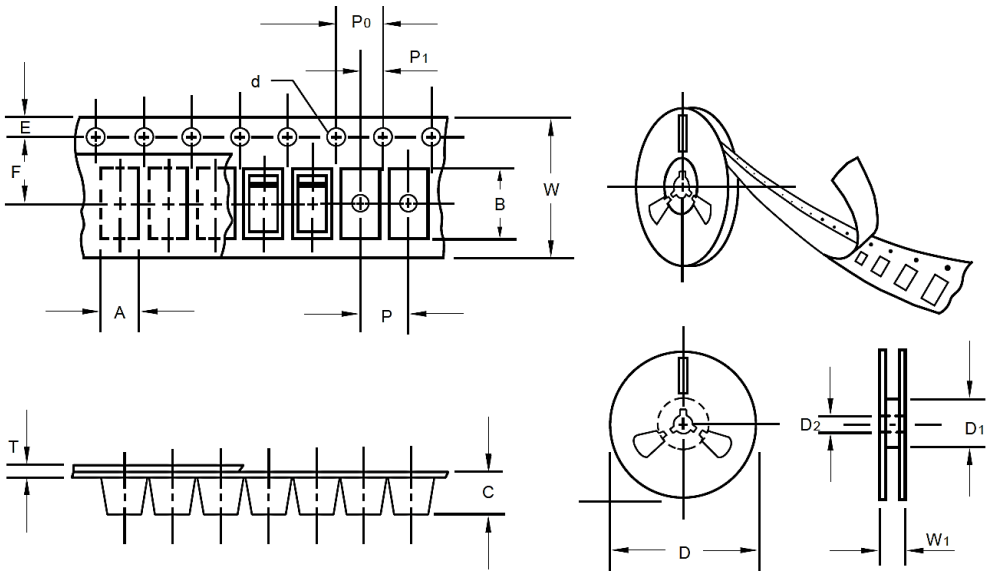


SUGGESTED REFLOW PROFILE - For Reference Only



PROFILE FEATURE		PB-FREE ASSEMBLY
Average Ramp-up Rate (T_L Max to T_p)		3°C/second Max
Preheat	Temperature Min (T_s Min.)	150°C
	Temperature Max (T_s Max.)	200°C
	Time (t_s Min. to t_s Max.)	60 ~ 180 seconds
Time maintained above	Temperature (T_L)	217°C
	Time (t_L)	60 ~ 150 seconds
Peak/Classification Temperature (T_p)		260 °C
Time within 5°C of actual Peak Temperature (t_p)		10 seconds Max.
Ramp-down Rate		6 °C /Second Max.
Time 25 °C to Peak Temperature		8 Minutes Max.
Suggest reflow times		3 Times Max.

TAPE/REEL - Unit: mm, All Devices are packed in accordance with EIA standard RS-481-A and specifications



ITEM	SYMBOL	TOLERANCE	SOD-323
Carrier width	A	0.1	2.10
Carrier Length	B	0.1	4.00
Carrier Depth	C	0.1	1.60
Sprocket hole	d	0.05	1.55
7”Reel outside diameter	D	2	178
7”Reel inner diameter	D1	Min.	50
Feed hole diameter	D2	0.5	13
Sprocket hole position	E	0.1	1.75
Punch hole position	F	0.1	3.5
Punch hole pitch	P	0.1	4
Sprocket hole pitch	P0	0.1	4
Embossment center	P1	0.1	2
Overall tape thickness	T	0.1	0.25
Tape width	W	0.3	8.15
Reel width	W1	1	10.50
Qty. Per Reel (pcs)	3000		

IMPORTANT NOTES AND DISCLAIMER

1. ROHS COMPLIANCE: The levels of RoHS restricted materials in this product are below the maximum concentration values (also referred to as the threshold limits) permitted for such substances, or are used in an exempted application, in accordance with EU RoHS Directive (EU) 2015/863 EC (RoHS3). RoHS Test Report for this product can be obtained can be obtained at Download Center.
2. REACH COMPLIANCE: REACH substances of high concern (SVHCs) information is available for this product. Since the European Chemical Agency (ECHA) has published notice of their intent to frequently revise the SVHC listing for the foreseeable future, REACH Test Report for this product can be obtained can be obtained at Download Center.
3. All Product parametric performance is indicated in the Electrical Characteristics for the listed herein test conditions, unless otherwise noted. Product performance may not be indicated by the Electrical Characteristics if operated under different conditions.
4. NextGen Component, Inc (*NextGen*) reserves the right to make changes to this document and its products and specifications at any time without notice. Customers should obtain and confirm the latest product information and specifications before final design, purchase or use.
5. *NextGen* makes no warranty, representation or guarantee regarding the suitability of its products for any particular purpose, not does *NextGen* assume any liability for application assistance or customer product design.
6. *NextGen* does not warrant or accept any liability with products which are purchased or used for any unintended or unauthorized application. No license is granted by implication or otherwise under any intellectual property rights of NextGen.
7. *NextGen* products are not authorized for use as critical components in life support devices or systems without express written approval by *NextGen.*
8. *NextGen* requires that customers first obtain an RMA (Returned Merchandise Authorization) number prior to returning any products. Returns must be made within 30 days of the date of invoice, be in the original packaging, unused and like-new condition. At the time of quoting or purchasing, a product may say that it is Non-Cancelable/ Non-Returnable (NCNR). These products are not returnable and not refundable.