SPECIFICATION SHEET

SMD SCHOTTKY BARRIER RECTIFIERS SOD-123FL DSL2 SERIES

SPECIFICATION SHEET NO.	S1024 – DSL22S0000S020	
ORIGINAL MFG/PART NO.	MDD Diodes/DSL22-S	
NEXTGEN PART CODE	DSL22S0000S020	Indicate This Code For RFQ /Order
DATE	Oct. 24, 2025	
REVISION	A3	Updated With Most Recent Data
DESCRIPTION AND MAIN PARAMETRICS	SMD Schottky Barrier Rectifier 2 Pads, Case SOD-123FL, DSL2 Series, Average Forward Rectified Current (I_{AV}) 2.0A Max. Repetitive Peak Reverse Voltage (V_{RRM}) 20V Max. RMS Voltage (V_{RMS}) 14V Max. Operating Junction Temperature Range (TJ): -55°C ~+125°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 Mandy Xu · Ruby Zhang · Jack Zhang (NextGen Components, Inc.)
Effective Date: Oct. 24, 2025

CUSTOMER APPROVE
Date:

MAIN FEATURE

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

- The Plastic Package Carries Underwriters Laboratory Flammability Classification 94V-0
- Low Power Loss and High Efficiency
- Metal Silicon Junction and Majority Carrier Conduction
- Built-in Strain Relief and Ideal For Automated Placement
- High Forward Surge Current Capability
- High Temperature Soldering Guaranteed: 250° C/10 Seconds At Terminals
- Surface Mount Package Ideally Suited for Automatic Insertion
- Cross Main Competitor Parts in Market
- RoHS/RoHS III compliant, RoHS Annex III lead Exemption (Exempt per RoHS EU 2015/863) and Halogen Free (HF)

APPLICATION

- For SMD Application

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 DSL22S0000S020 For RFQ and Order.

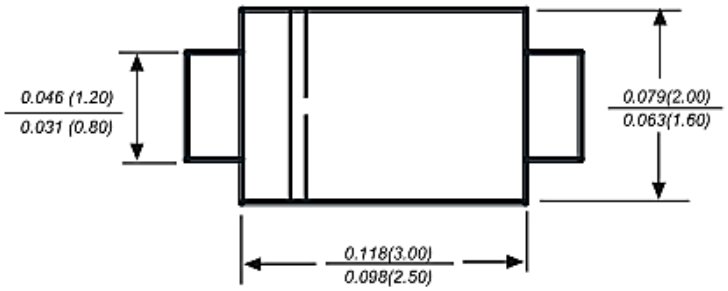
PART CODE GUIDE

RFQ
Request For Quotation

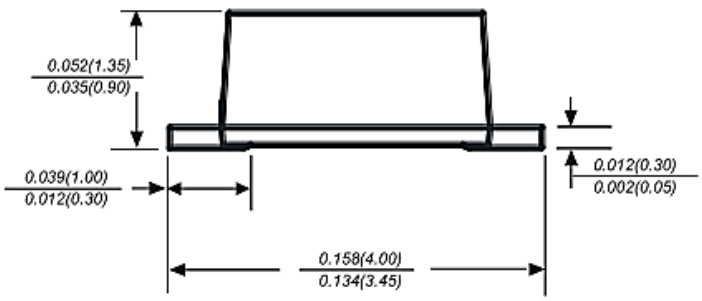
CODE	NAME	KEY SPECIFICATION OPTION
DSL2	Product Series Code	SMD Schottky Barrier Rectifier, Forward Rectified Current 2.0A
2	Max. Repetitive Peak Reverse Voltage Code	2: 20V ; 3: 30V; 4: 40V ; 5: 50V ; 6: 60V.; 8: 80V; 10: 100V ; 150: 150V ; 200: 200V.
S0000S	Internal Control Code	S0000S: Letter A~Z, a-z or Digits (0-9)
020	Max. DC Blocking Voltage Code	020: 20V; 030: 30V. ; 040: 40V; 050: 50V; 060: 60V; 080: 80V; 100: 100V; 150: 150V; 200: 200V.
XX	Special/Custom Parameters	Blank: N/A; XX: Letter A~Z, a~z or digits (0~9) for Special/Custom Parameters

DIMENSION - Unit: Inch (mm), Case SOD-123FL Outline

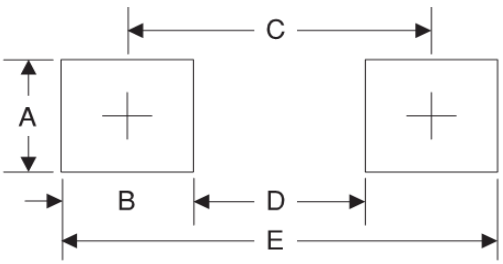
Top View



Side View



Recommend Pad Layout



SYMBOL	A	B	C	D	E
Unit (inch)	0.047	0.047	0.126	0.079	0.173
Unit (mm)	1.20	1.20	3.20	2.0	4.4

MECHANICAL DATA

CASE	TERMINALS	POLARITY	MOUNTING POSITION	WEIGHT PER PIECE	MARKING
JEDEC SOD-123FL Molded Plastic Body	Solder plated, Solderable per MIL-STD-750, Method 2026	Color band denotes cathode end Mounting	Any	0.0007 Ounce, 0.02 Grams	L22S

MAX. RATINGS & ELECTRICAL CHARACTERISTICS

- Ratings at 25 °C ambient temperature unless otherwise specified.
- Single phase half-wave 60Hz, resistive or inductive load, for capacitive load current derate by 20%.

PARAMETER	SYMBOLS	VALUE	UNITS
Maximum Repetitive Peak Reverse Voltage	V_{RRM}	20	V
Maximum RMS Voltage	V_{RMS}	14	V
Maximum DC Blocking Voltage	V_{DC}	20	V
Maximum Average Forward Rectified Current At TL (Note 1)	$I_{(AV)}$	2.0	A
Peak Forward Surge Current 8.3ms Single Half Sine-wave Superimposed On Rated Load (JEDEC Method)	I_{FSM}	40	A
Typical Junction Capacitance (Note 1)	C_J	110	pF
Typical Thermal Resistance (Note 2)	$R_{\Theta JA}$	95	°C/W
Operating Junction Temperature Range	T_J	-55 to +125	°C
Storage Temperature Range	T_{STG}	-55 to +150	°C

Note:

1. Measured at 1MHz And Applied Reverse Voltage Of 4.0V D.C
2. P.C.B. Mounted With 0.2”x0.2”(5.0 x 5.0 mm) Copper Pad Areas

ELECTRICAL CHARACTERISTICS - Ratings at Ta=25 °C ambient temperature unless otherwise specified.

PARAMETER	SYMBOLS	VALUE			UNIT	CONDITION
		MIN.	TYP.	MAX.		
Reverse Voltage Leakage Current	I_R	-	-	0.5	mA	T_A = 25°C
		-	-	10	mA	T_A = 125°C
Forward Voltage	V_F	-	0.3	0.31	V	I_F=0.5A
		-	-	0.35	V	I_F=1.0A
		-	-	0.45	V	I_F=2.0A

RATINGS & CHARACTERISTIC CURVES - For Reference Only

Fig.1 Forward Current Derating Curve

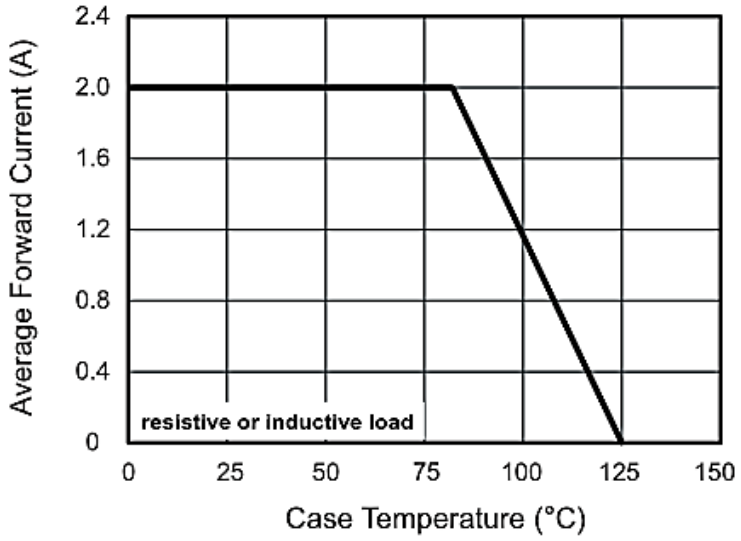
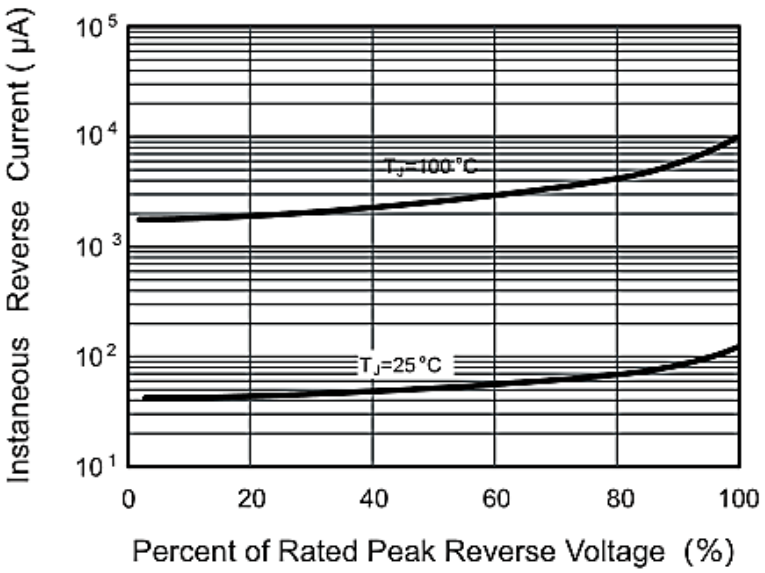


Fig.2 Typical Reverse Characteristics



RATINGS & CHARACTERISTIC CURVES - For Reference Only

Fig.3 Typical Forward Characteristic

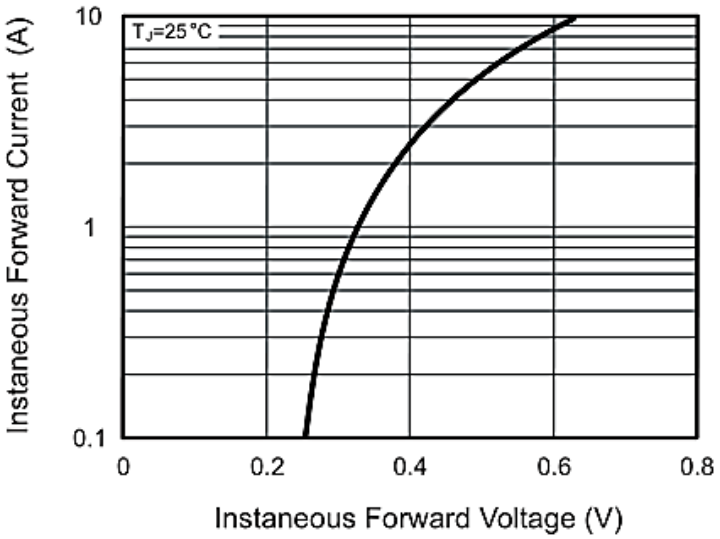
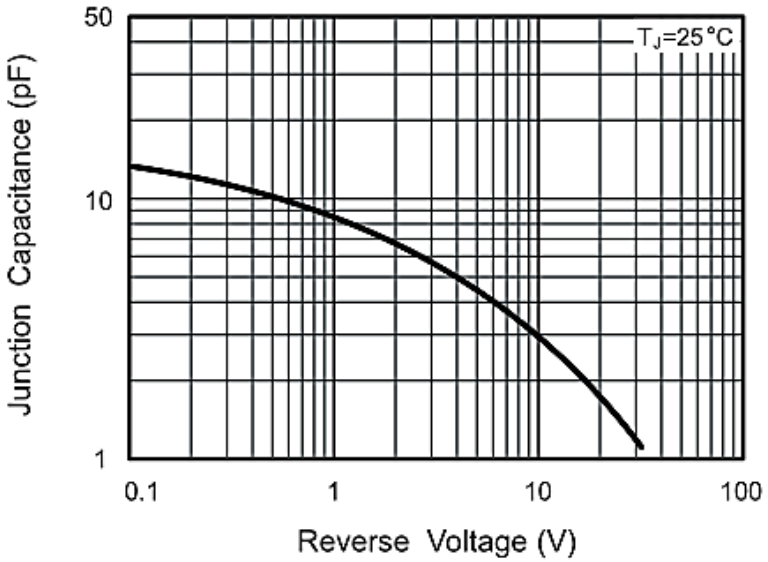
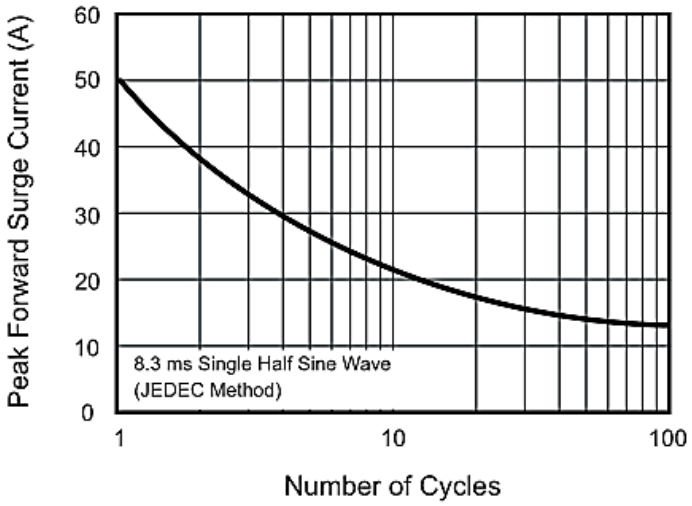


Fig.4 Typical Junction Capacitance

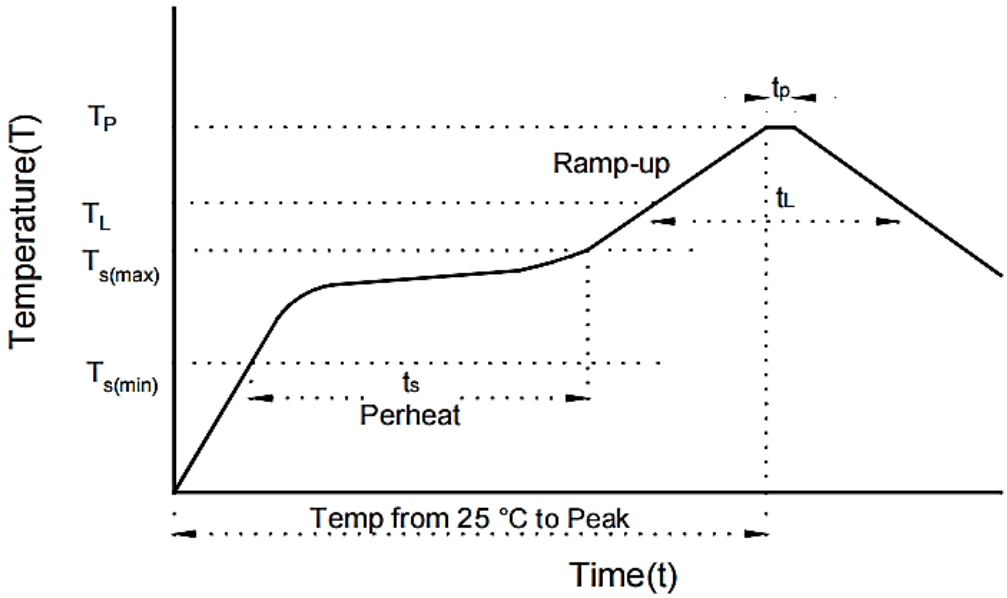


RATINGS & CHARACTERISTIC CURVES - For Reference Only

Fig.5 Maximum Non-Repetitive Peak Forward Surge Current

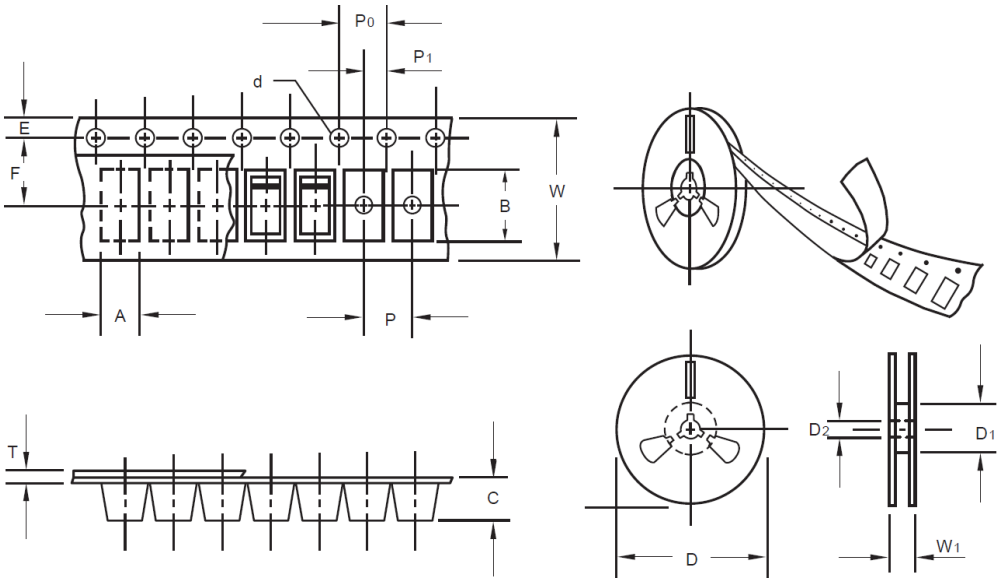


SUGGESTED REFLOW PROFILE - For Reference Only



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-123FL
Carrier width	A	0.1	2.1
Carrier Length	B	0.1	4.0
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.	50.0
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	10.5
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.