NextGen Components,Inc.

PART CODE: SDF866M5DX8043

SPECIFICATION SHEET

SPECIFICATION SHEET NO.	R0607-SDF866M5DX8043	
DATE	June 7, 2024	
REVISION	A1	Updated With Most Recent Data
DESCRIPTION AND MAIN PARAMETRICS	SMD SAW Filter L3.0*W3.0*H1.25mm 3030 Type 6 Pads SDF Series 866.5000MHz, Case Code: 3030/DCC6C, Insertion Loss (IL): 2.7dB Typical, 3dB Bandwidth (BW_{3dB}): 7.0MHz Min. Operating Temp. Range: -40°C ~+85°C, Reflow Profile Condition 260 °C Package in Tape/Reel, 1000pcs/Reel, REACH/RoHS III Complaint	
CUSTOMER		
CUSTOMER PART NO.		
CROSS REF. PART NO.		
ORIGINAL MFG/PART NO.	TGS/SDF 866M5 DX8043 TLF	
PART CODE	SDF866M5DX8043	

VENDOR APPROVE			
Issued/Checked/Approved			
DATE: June 7, 2024			

CUSTOMER APPROVE
DATE:

NextGen Components,Inc.

PART CODE: **SDF866M5DX8043**

SMD SAW FILTER CASE TYPE 3030/DCC6C SDF SERIES

MAIN FEATURE

- SMD SAW Filter L3.0*W3.0*H1.25mm Case Code 3030/DCC6C, 6 Pads
- Low-loss SAW Components and Low Amplitude Ripple
- Sharp Rejection As Both Out-bands
- Usable Passband 7.0MHz
- Electronic Sensitive Device (ESD)
- REACH/RoHS III Complaint
- Cross Main Competitor Parts in Market

APPLICATION

- Bluetooth, Wireless Communication,
- Communication Electronics

ELECTRICAL CHARACTERISTICS

- See Page 4

HOW TO ORDER

- Please Follow Up Part Code Guide And Indicate Pat Code When You Order Or RFQ For Custom Specification

PART CODE GUIDE

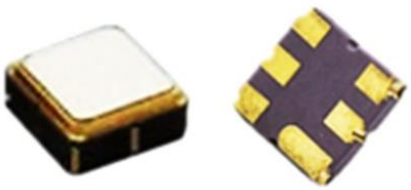
RFQ
Request For Quotation

CODE	NAME	KEY SPECIFICATION OPTION
SDF	Product Series Code	SMD SAW Filter Case Code 3030/DCC6C, 6 Pads Dimension L3.0*W3.0*H1.25mm
866M5	Frequency Range Code	866M5: 866.5000MHz
DX	Internal Control Code	Custom letter A~Z, a-z or Digits (0-9)
8043	Specification Code	Custom letter A~Z, a-z or Digits (0-9), see Page 4 for detail Parameter

SMD SAW FILTER CASE TYPE 3030/DCC6C SDF SERIES

DIMENSION (Unit: mm)

Image for reference



Marking

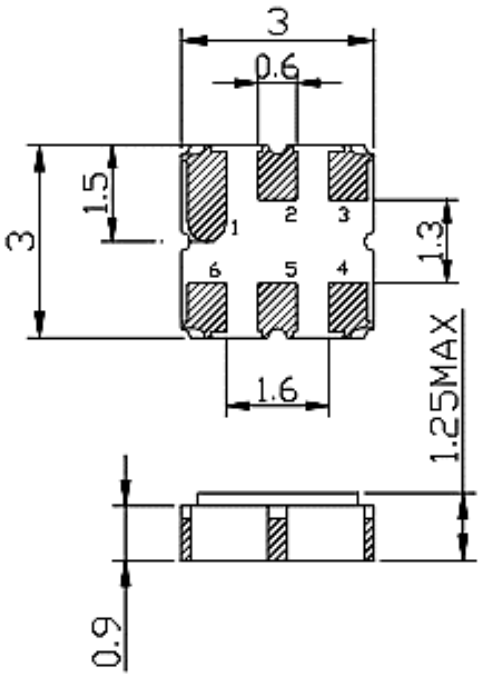
Line 1: Internal Control Code

Line 2: ● Pin 1 + Special Ccode

SDF series

L3.0*W3.0*H1.25mm

3030 /DCC6C Type

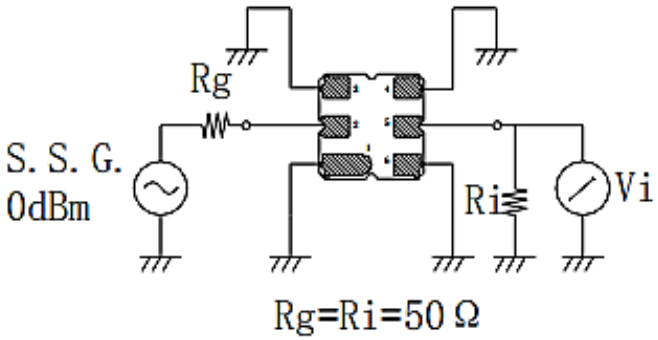


Pin Configuration

Pin No.	Description
2	Input
5	Output
1,3,4,6	Ground

Test Circuit

(Bottom View)



SMD SAW FILTER CASE TYPE 3030/DCC6C SDF SERIES

MAXIMUM RATINGS - @ 25 °C

PARAMETER	SYMBOLS	VALUE	UNITS
DC Voltage	V_{DC}	5.0	V
Operation Temperature	T_J	-40 to +85	°C
Storage Temperature	T_{STG}	-40 to +85	°C
RF Power Dissipation	P	20	dBm

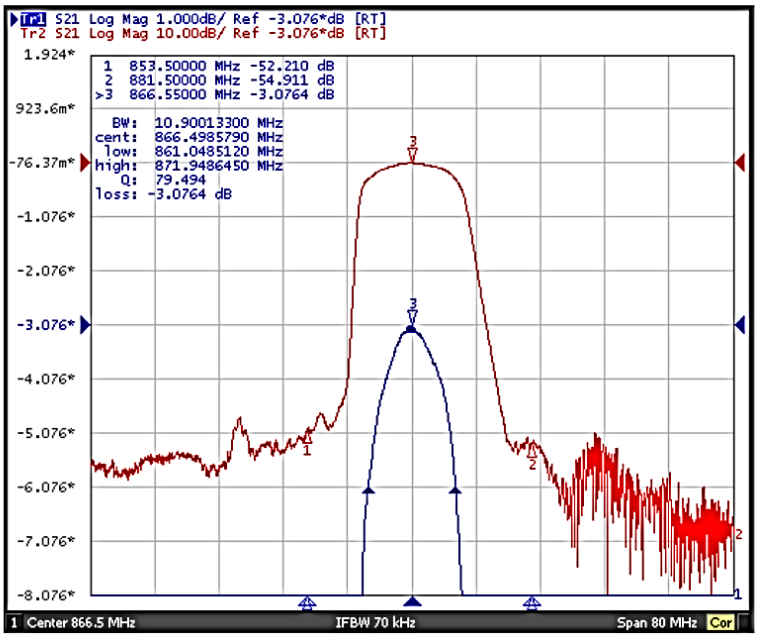
ELECTRICAL CHARACTERISTICS

1) Test Temperature: 25℃±2℃ 2) Terminating Source Impedance: 50Ω 3) Terminating Load Impedance: 50Ω

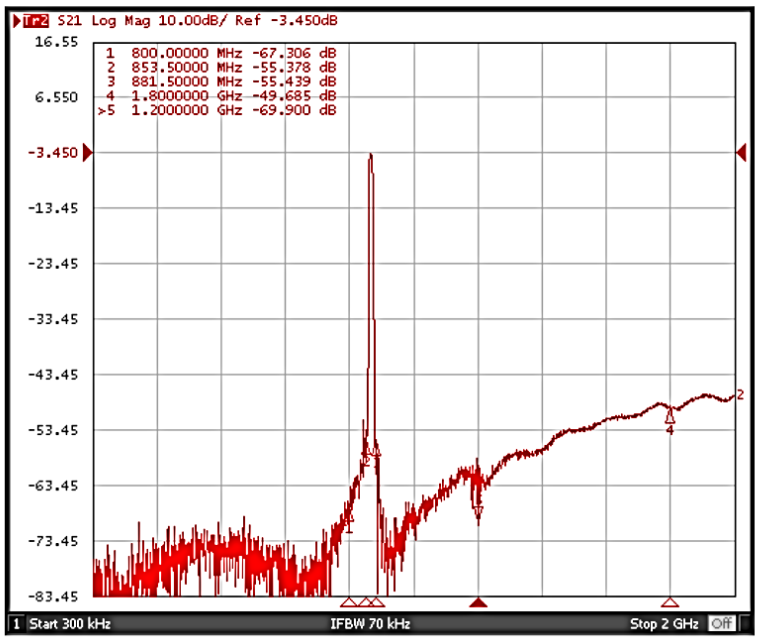
PARAMETER		SYMBOLS	VALUE			UNIT
			MIN.	TYP.	MAX.	
Center Frequency		fc	-	866.50	-	MHz
Insertion Loss(min)		IL	-	2.7	3.5	dB
Amplitude Ripple (p-p)		△α	-	0.3	1.0	dB
3 dB Bandwidth		BW_{3dB}	7.0	10.5		MHz
Group Delay Ripple 863- 870MHz		GDR	-	30	100	ns
Absolute Attenuation	DC - 800MHz	α	50	55	-	dB
	800 - 853.5MHz		40	45	-	dB
	881.5 - 1200MHz		50	55	-	dB
	1200- 2000MHz		40	45	-	dB
Input VSWR	863- 870MHz		-	1.5:1	2.0:1	/
Output VSWR	863 - 870MHz		-	1.5:1	2.0:1	/

FREQUENCY CHARACTERISTIC CURVES - For Reference Only

Frequency Response



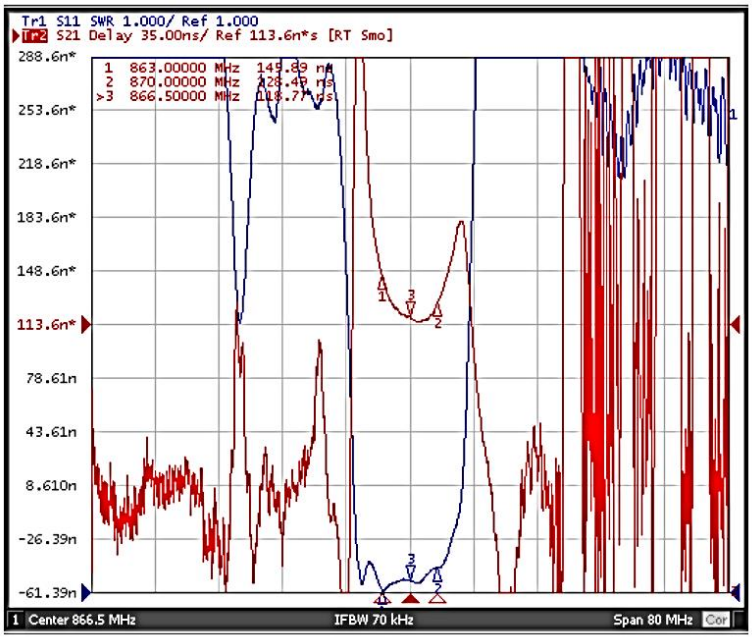
Frequency Response（wideband）



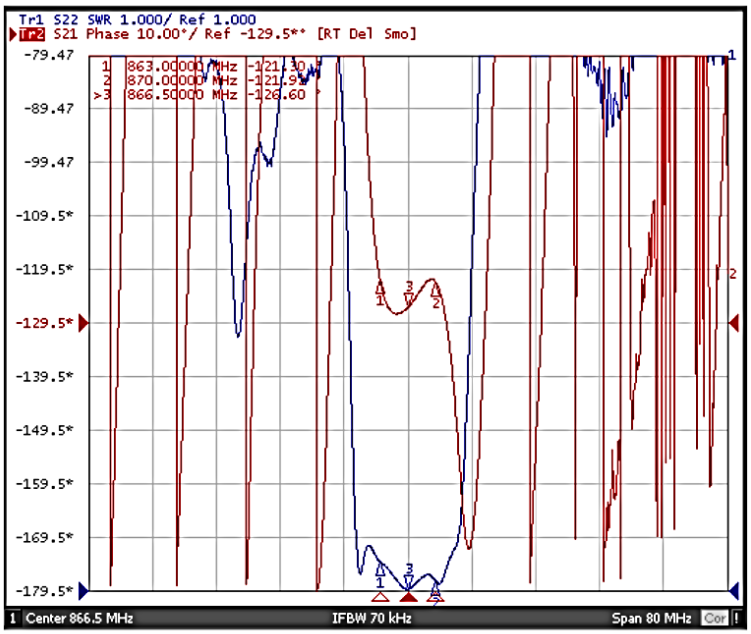
SMD SAW FILTER CASE TYPE 3030/DCC6C SDF SERIES

FREQUENCY CHARACTERISTIC CURVES - For Reference Only

Delay Ripple & S11 VSWR

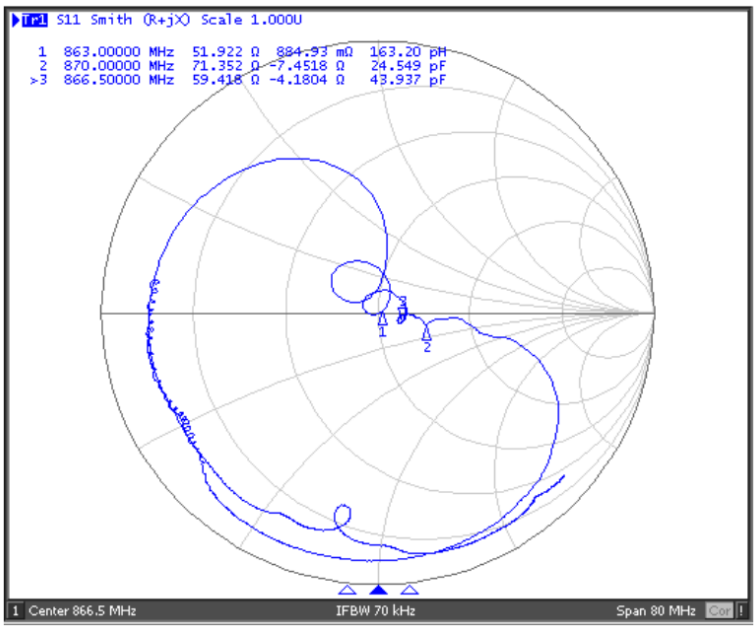


Phase Linearity & S22 VSWR

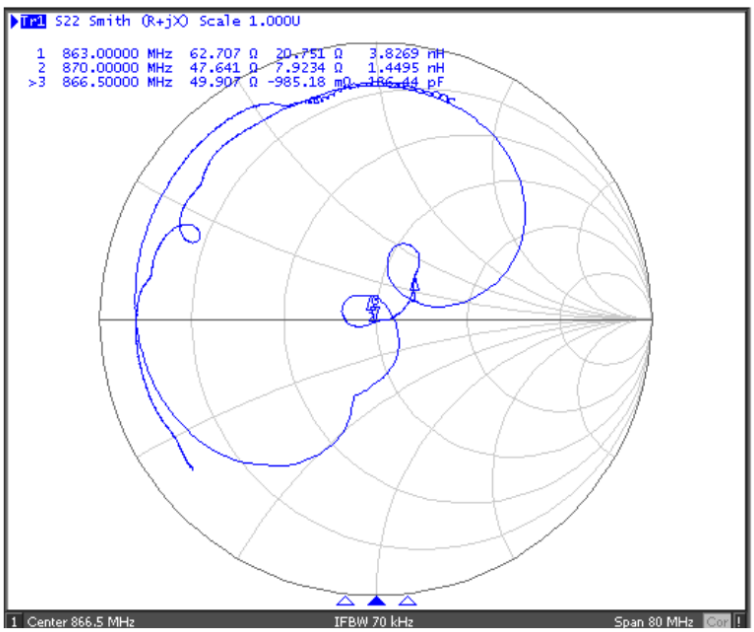


FREQUENCY CHARACTERISTIC CURVES - For Reference Only

S11 Smith Chart



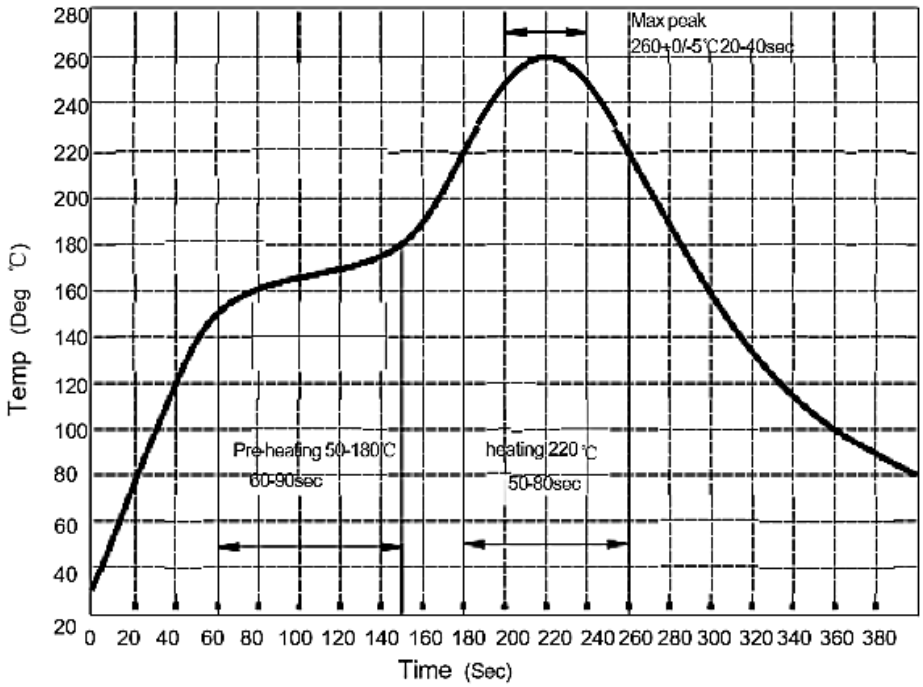
S22 Smith Chart



RELIABILITY

TEST ITEMS	TEST METHOD AND CONDITIONS	REQUIREMENT
Temperature Storage	1. Temperature: 85℃±2℃ , Duration: 250h , Recovery time: 2h±0.5h 2. Temperature: –55℃±3℃ , Duration: 250h ,Recovery time: 2h±0.5h	It shall remain electrical performance after tests
Humidity Test	Conditions: 60℃±2℃ , 90~95% RH Duration: 250h	
Thermal Shock	Heat cycle conditions: TA=-55℃±3℃, TB=85℃±2℃, t1=t2=30min, Switch time: ≤3min, Cycle time: 100 times, Recovery time: 2h±0.5h.	
Vibration Fatigue	Frequency of vibration: 10~55Hz Amplitude:1.5mm Directions: X,Y and Z Duration: 2h	
Drop Test	Cycle time: 10 times Height: 1.0m	
Solderability	Temperature: 245℃±5℃ Duration: 3.0s--5.0s Depth: DIP--2/3 , SMD--1/5	
Resistance to Soldering Heat	1) Thickness of PCB:1mm , Solder condition: 260℃±5℃ , Duration: 10±1s 2) Temperature of Soldering Iron: 350℃±10℃ , Duration: 3~4s , Recovery time : 2 ± 0.5h	

RECOMMENDED REFLOW SOLDERING DIAGRAM- For Reference Only



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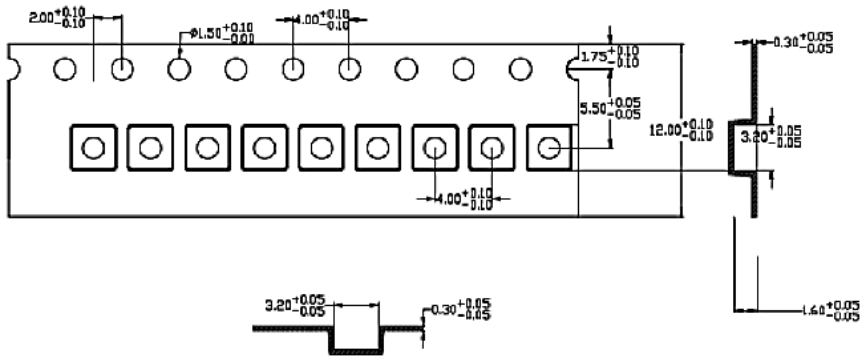
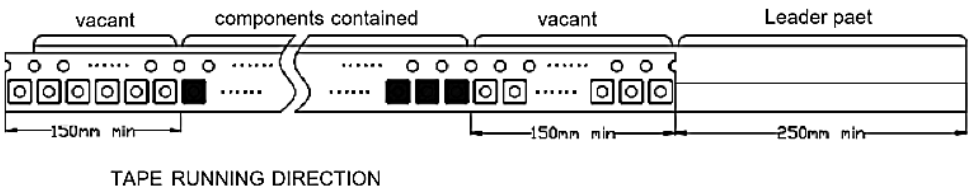
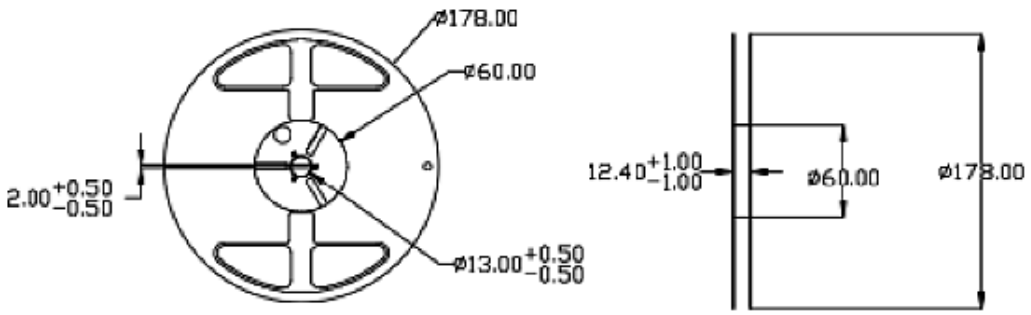
TAPE DIMENSION - Unit: mm, 1000pcs/Reel



CARRIER TAPE -Unit: mm



REEL DIMENSION - Unit: mm



CAUTION

1. As a result of the particularity of inner structure of SAW products, it easy to be breakdown by electrostatic, so we should pay attention to ESD protect in the test.
2. Static voltage between signal load and ground may cause deterioration and destruction of the component. Please avoid static voltage.
3. Ultrasonic cleaning may cause deterioration and destruction of the component. Please avoid ultrasonic cleaning.
4. Only leads of component may be soldered. Please avoid soldering another part of component.
5. There is a close relationship between the device's performance and matching network. The specifications of this device are based on the test circuit shown above. L and C values may change depending on board layout. Values shown are intended as a guide only.
6. The temperature of manual welding should not exceed 300 ℃.
7. The specifications of this device are based on the test circuit shown above and subject to change or obsolescence without notice.
8. All equipment designs utilizing this product must be approved by the appropriate government agency prior to manufacture or sale.
9. Our liability is only assumed for the Surface Acoustic Wave (SAW) component(s) perse, not for applications, processes and circuits implemented within components or assemblies.
10. For questions on technology, prices and delivery, please contact our sales offices or e-mail: sales@NextGenComponent.com.

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.
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