


SPECIFICATION SHEET NO.	S0319 - SXF0070RKNSS16	
ORIGINAL MFG/PART NO.	Shengxin SAW/SXF0070RKNSS10	
NEXTGEN PART CODE	SXF0070RKNSS16	Indicate This Code For RFQ /Order
DATE	Mar. 19, 2025	
REVISION	A2	Updated With Most Recent Data
DESCRIPTION AND MAIN PARBMETRICS	<p>SMD SAW Filter, 12 Pads, 1365 Type, SXF Series, Case Code QCC12</p> <p>Case Dimension L13.3*W6.50*H2.0mm</p> <p>Center Frequency 70.00MHz; Insertion Loss: 12dB Typical, 14dB Max.</p> <p>Bandwith 0.8MHz</p> <p>Operating Temp. Range -20°C ~ +70°C</p> <p>Reflow Profile Condition 260°C Max.</p> <p>Package in Tape/Reel, 1000pcs/Reel</p> <p>REACH/RoHS/RoHS III Compliant</p>	
CUSTOMER		
CUSTOMER PART NUMBER		
CROSS REF. PART NUMBER		
MEMO		

VENDOR APPROVE			
Issued/Checked/Approved			
			
Effective Date: Mar. 19, 2025			

CUSTOMER APPROVE
Date:

MAIN FEATURE

- SMD SAW Filter 1365 Type 12 Pads
- Dimension L13.3*W6.50*H2.0mm
- Low-loss SAW Component
- Low Amplitude Ripple
- Sharp Rejections At Both Out-bands
- Bandwidth 0.8MHz
- Package Code QCC12
- Ceramic Package For Surface Mounted Technology (SMT)
- Electrostatic Sensitive Device (ESD)
- Moisture Sensitivity Level (MSL) 1
- Short Lead Time
- Cross Competitors Parts And More
- REACH/RoHS/RoHS III Compliant

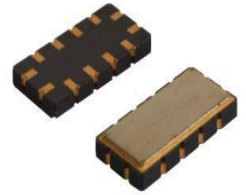


Image shown is a representation only. Exact specifications should be obtained from the product dimension.



APPLICATION

- Bluetooth, Wireless Communication Set
- Communication Electronics
- GPS, Remote Control Application

ELECTRICAL CHARACTERISTICS

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

HOW TO ORDER

- Please Follow Up Part Code Guide And Indicate NextGen Part Code SXF0070RKNSS16 For RFQ and Order.

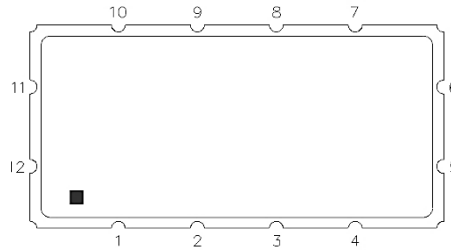
PART CODE GUIDE

RFQ
[Request For Quotation](#)

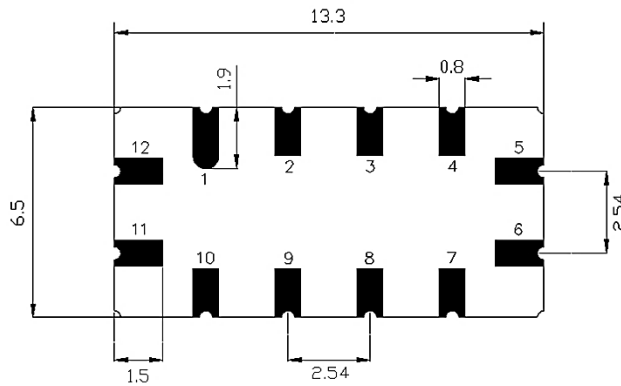
CODE	NAME	KEY SPECIFICATION OPTION
SXF	Series Code	SMD SAW Filter
0070R	Frequency Range Code	0070R: 70.0MHz or Custom Frequency Range
KNS	Internal Control Code	Letter A~Z, a~z or Digits (1-9)
S16	Dimension Code	S16: Case Dimension L13.3*W6.50*H2.0mm, 12 Pads, 1365 Type Case Code QCC12
XX	Special/Custom Parameters Code	Blank: N/A XX: Letter A~Z, a~z or Digits (0~9) for Special/Custom Parameters

DIMENSION - Unit: mm, L13.3*W6.50*H2.00mm

Top View

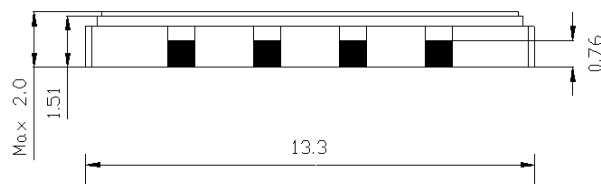


Bottom View



PIN CONFIGURATION	
11	Input
12	Input Ground
5	Output
6	Output Ground
1,2,3,4,7,8,9,10	Ground

Side View



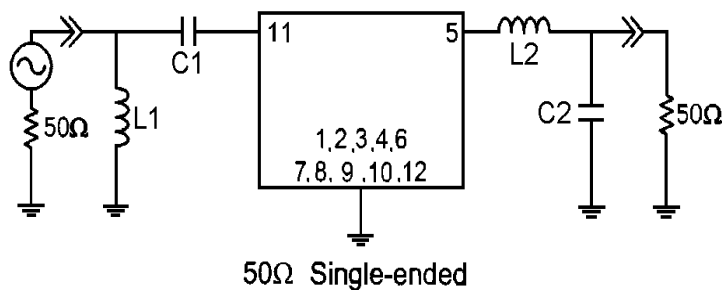
MAX. RATING & CHARACTERISTICS - At 25±2°C Ambient Temperature Unless Otherwise Specified.

PARAMETER	SYMBOLS	VALUE	UNITS
RF Power Level	P	10	dBm
DC Voltage	V _{DC}	±30	V
Operating Temperature Range	T _A	-20 to +70	°C
Storage Temperature Range	T _{stg}	-40 to +85	°C

ELECTRONICAL CHARACTERISTICS - At 25±2°C Ambient Temperature Unless Otherwise Specified.

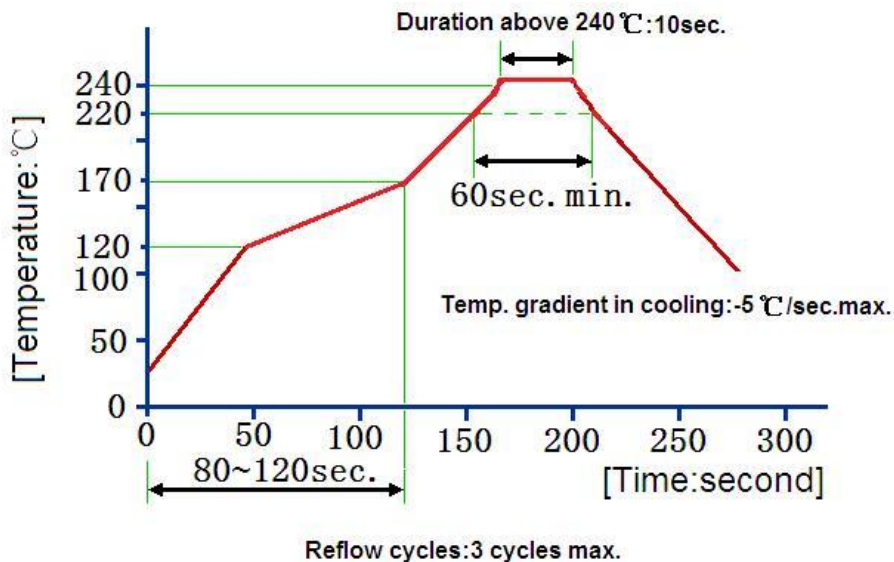
PARAMETER	SYMBOLS	CHARACTERISTICS			
		MIN.	TYPICAL	MAX.	UNIT
Center Frequency	FC	69.99	70	70.01	MHz
Insertion Loss	IL	-	12	4	dB
1 dB Bandwidth	BW _{1dB}	0.8	0.85	-	MHz
3 dB Bandwidth	BW _{3dB}	-	1.32	-	MHz
40 dB Bandwidth	BW _{40dB}	-	3.28	3.5	MHz
Passband Ripple		-	0.5	1.0	dB
Group Delay Variation		-	80	160	nsec
Absolute Delay Time		-	1.25	-	μsec
Ultimate Attenuation		40	47	-	dB
Substrate Material & T.C.F		112-LiTaO ₃ / -18			ppm/°C
Terminating Impedance		50			ohm

MEASUREMENT CIRCUIT – FOR REFERENCE ONLY

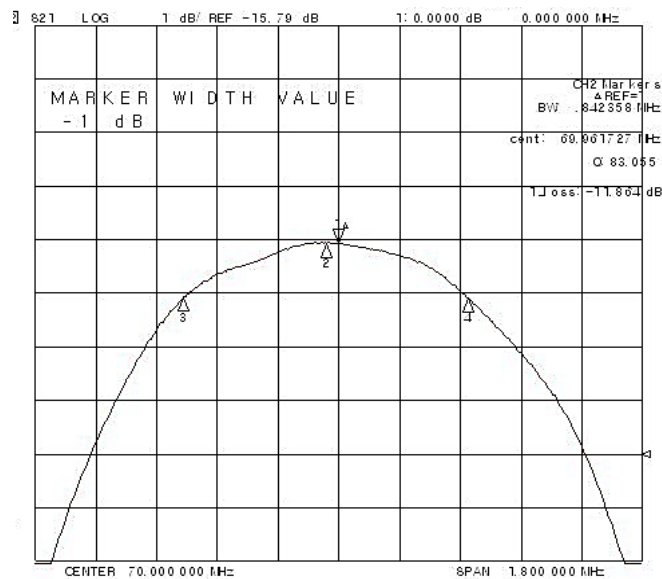
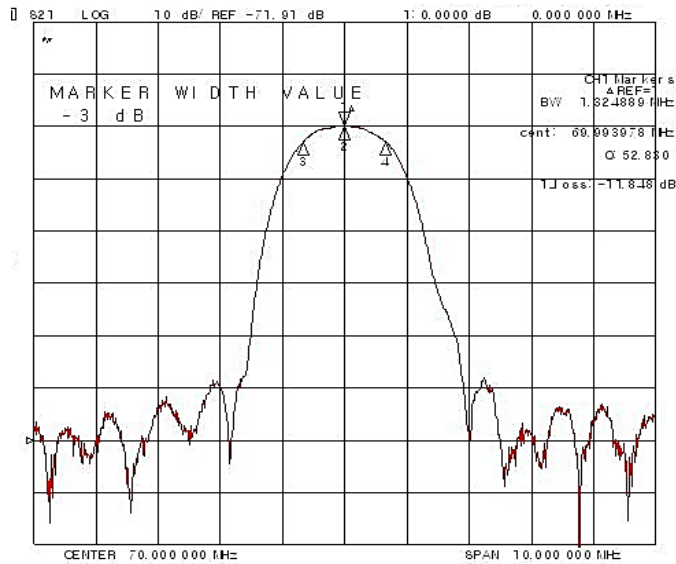


- $L1=120\text{nH}$, $L2=68\text{nH}$, $C1=270\text{pF}$, $C2=16\text{pF}$
- Source / Load Impedance = 50Ω
- Ambient Temperature = 25°C

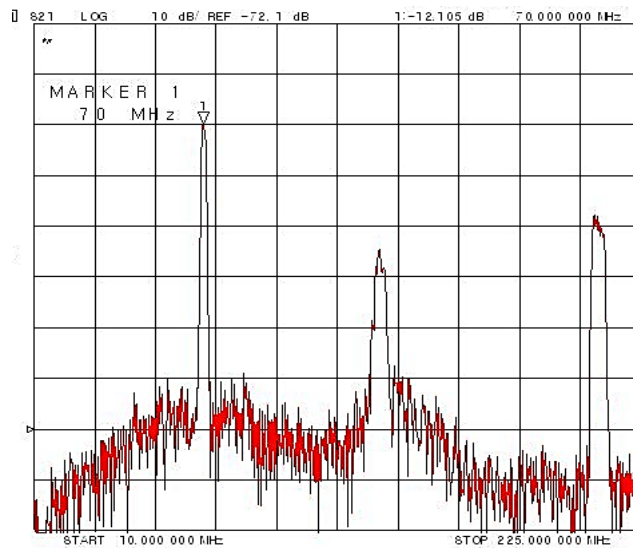
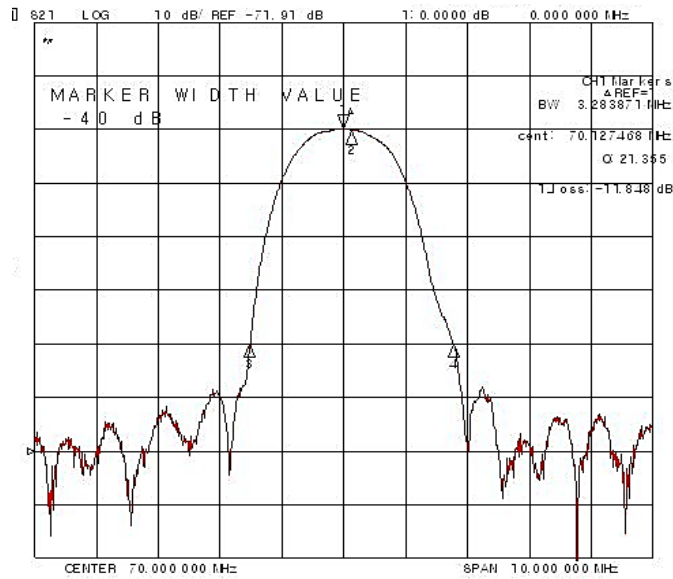
RECOMMENDED SOLDERING PROFILE – FOR REFERENCE ONLY



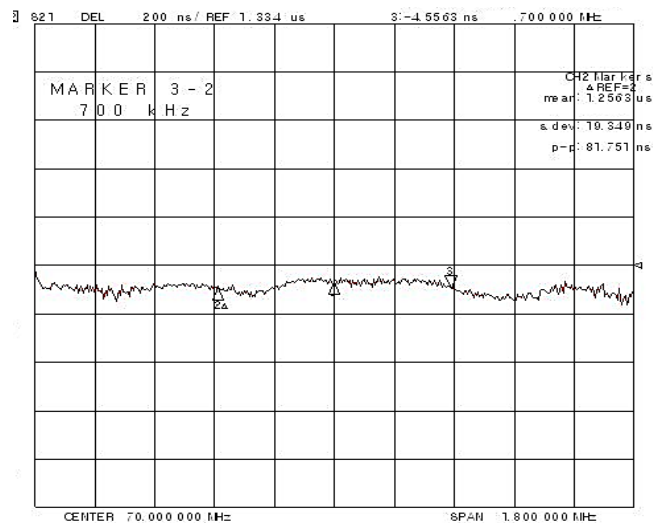
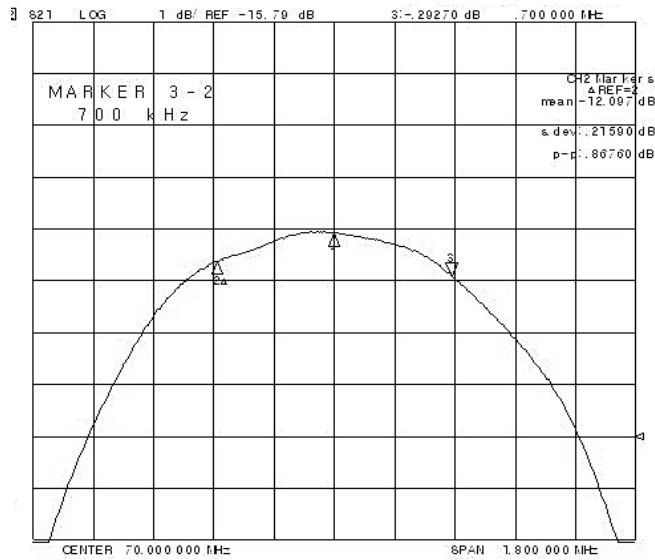
FREQUENCY CHARACTERISTICS – FOR REFERENCE ONLY



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FREQUENCY CHARACTERISTICS – FOR REFERENCE ONLY



RELIABILITY CHARACTERISTICS

TEST ITEMS	TEST METHOD AND CONDITIONS
High Temperature Storage	<ul style="list-style-type: none"> Temperature: $85^{\circ}\text{C} \pm 2^{\circ}\text{C}$, Duration: 250h , Recovery time: $2\text{h} \pm 0.5\text{h}$ Temperature: $-40^{\circ}\text{C} \pm 3^{\circ}\text{C}$, Duration: 250h ,Recovery time: $2\text{h} \pm 0.5\text{h}$
Humidity Test	<ul style="list-style-type: none"> Conditions: $60^{\circ}\text{C} \pm 2^{\circ}\text{C}$, 90~95% RH, Duration: 250h
Thermal Shock	<ul style="list-style-type: none"> Heat cycle conditions: $\text{TA} = -40^{\circ}\text{C} \pm 3^{\circ}\text{C}$, $\text{TB} = 85^{\circ}\text{C} \pm 2^{\circ}\text{C}$, $t_1 = t_2 = 30\text{min}$, Switch time: $\leq 3\text{min}$, Cycle time: 100 times, Recovery time: $2\text{h} \pm 0.5\text{h}$.
Vibration Fatigue	<ul style="list-style-type: none"> Frequency of vibration: 10~55Hz, Amplitude:1.5mm Directions: X,Y and Z, Duration: 2h
Drop Test	<ul style="list-style-type: none"> Cycle time: 10 times, Height: 1.0m
Solderability	<ul style="list-style-type: none"> Temperature: $245^{\circ}\text{C} \pm 5^{\circ}\text{C}$, Duration: 3.0s--5.0s, Depth: DIP--2/3 , SMD--1/5
Resistance to Soldering Heat	<ul style="list-style-type: none"> Thickness of PCB:1mm , Solder condition: $260^{\circ}\text{C} \pm 5^{\circ}\text{C}$, Duration: $10 \pm 1\text{s}$ Temperature of Soldering Iron: $350^{\circ}\text{C} \pm 10^{\circ}\text{C}$, Duration: 3~4s , Recovery time : $2 \pm 0.5\text{h}$
Remarks	<ul style="list-style-type: none"> 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. Static voltage between signal load and ground may cause deterioration and destruction of the component. Please avoid static voltage. Ultrasonic cleaning may cause deterioration and destruction of the component. Please avoid ultrasonic cleaning. Only leads of component may be soldered. Please avoid soldering another part of component. 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.

Technical drawing of a circular part with a central hole. The drawing includes a top view (left) and a side view (right).

Top View (Left): Shows a circle with a central hole. The outer diameter is labeled $\phi 20.2$ and the inner diameter is labeled $\phi 13.0$. A dimension of 2.0 is indicated at the bottom.

Side View (Right): Shows a cross-section of the part. The outer diameter is labeled $\phi 330$ RFF. The inner diameter is labeled $\phi 100$ RFF. A dimension of 24.0 is indicated at the bottom.

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 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 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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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.