

# SK3120R

**MSL 3 Device**

**B12, RF-Rx SAW Filter Revision  
0 : April 2020**



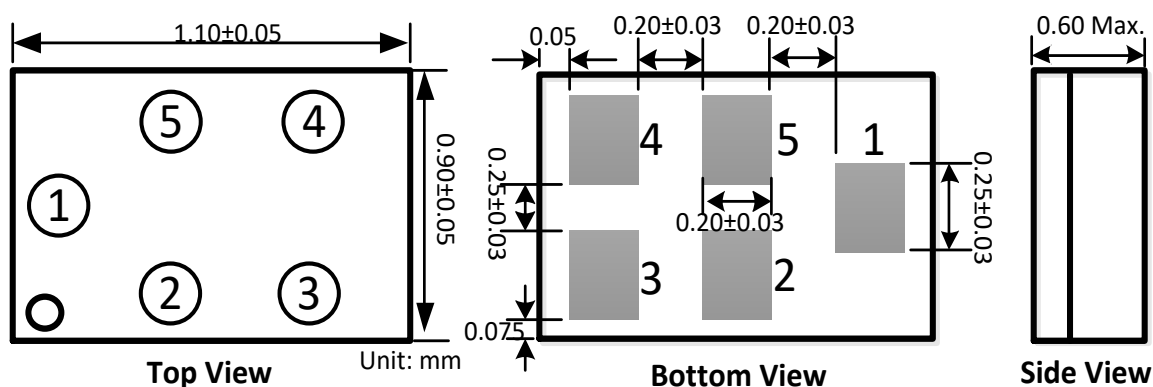
- Description**
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## A. Description

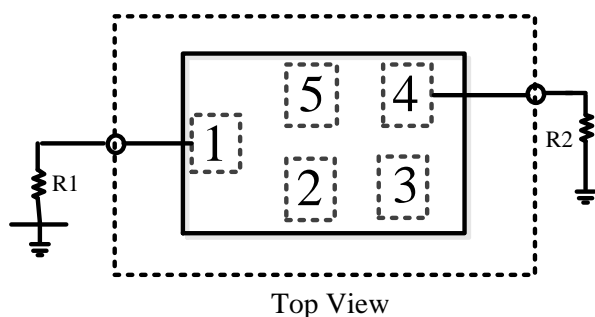
SK3120R is a high-performance Surface Acoustic Wave (SAW) Bandpass filter optimized for B12 operating in the range of 729-746MHz. It is designed to provide both low insertion loss in the Band 12 and high rejection in the adjacent cellular Bands for mobile devices.

SK3120R uses advanced Chip Scale Package (CSP) technology and is housed in an industry-standard, 5-pin 1.1mm x 0.9mm package with a low profile of 0.6mm max.

## B. Package & Dimensions:



## C. Test Circuit



### Pin configuration

- 1. Input (recommended)
- 4. Output (recommended)
- 2, 3, 5 To be grounded

R1: 50 Ohm	L1: NC
R2: 50 Ohm	L1: NC

## D. Absolute Maximum Ratings

Parameter	Rating	Unit
Operating Temperature	-35 to +85	°C
Storage Temperature	-40 to +85	°C
Maximum Input Power	+15	dBm
Maximum DC Voltage	5	V

## E. Electrical Specifications

(At  $T_a=25^{\circ}\text{C}$ , unless otherwise specified, as measured on the the evaluation board of SK3120R with feed line loss de-embedded.)

Parameter	Conditions	Min	Typ.	Max	Unit	
Insertion Loss	729 - 746 MHz	-	1.7	2.2	dB	
Passband Ripple	729 - 746 MHz	-	0.4	1.2	dB	
Attenuation	1 - 698 MHz	40	47	-	dB	
	698 - 716 MHz	45	52	-	dB	
	716 - 722 MHz	15	35	-	dB	
	722 - 727 MHz	3.0	6.0	-	dB	
	776 - 793 MHz	28	30	-	dB	
	793 - 805 MHz	30	35	-	dB	
	814 - 6000 MHz	25	30	-	dB	
VSWR(input)	729 - 746 MHz	-	1.6	1.9	-	
VSWR(output)	729 - 746 MHz	-	1.6	1.9	-	

## F. Frequency Characteristics

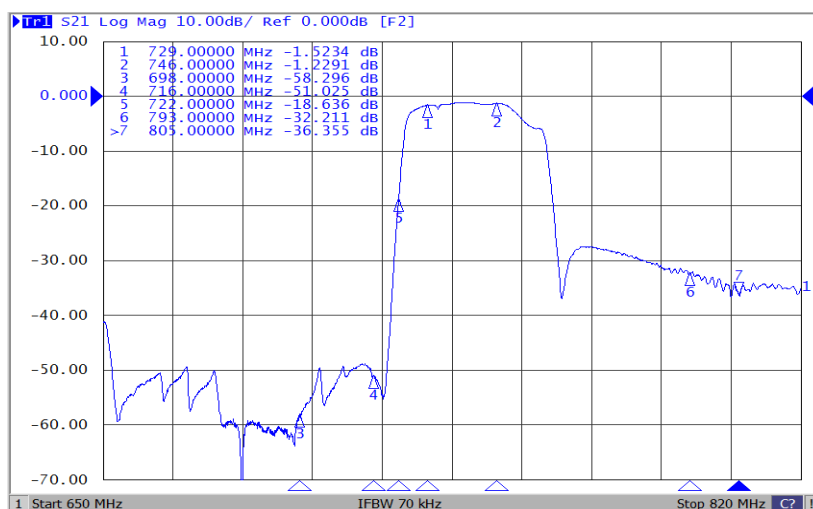


Fig. 1 |S21|

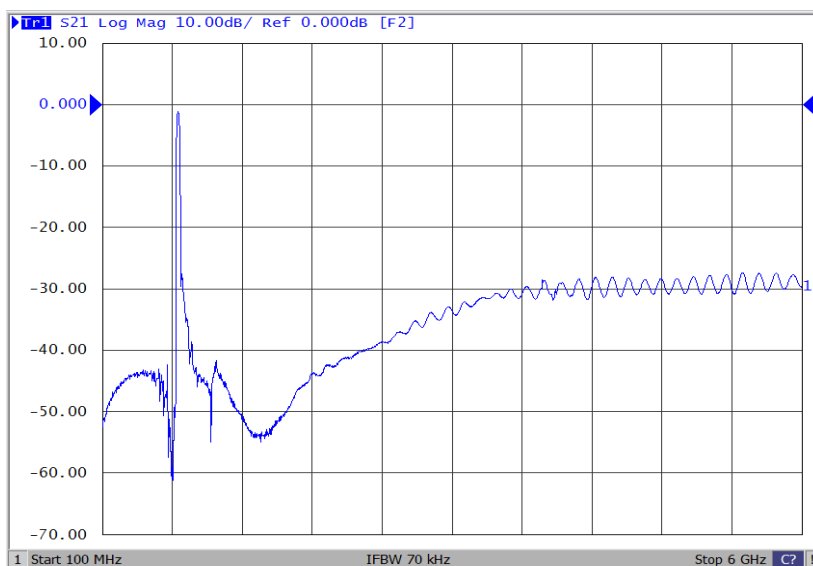


Fig. 2 Wide Band |S21|

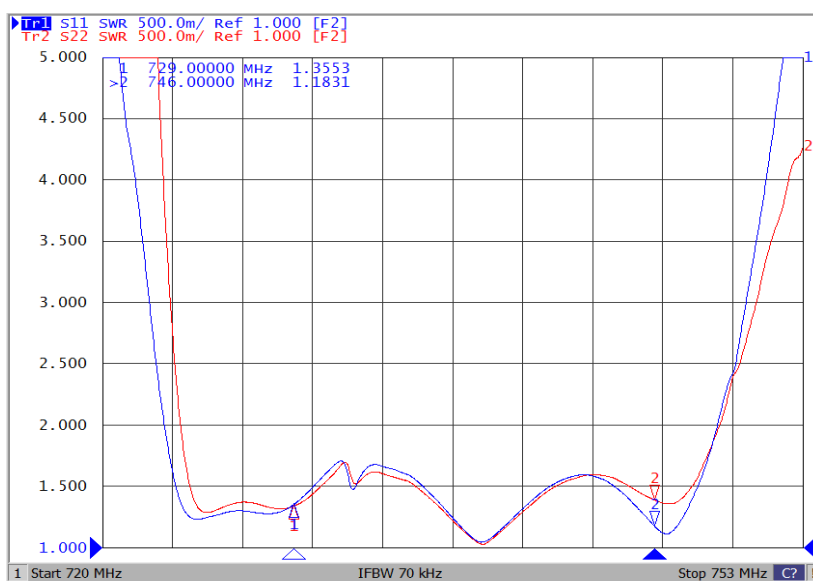


Fig. 3 VSWR

## G. Packaging

Tensile Strength of Carrier Tape: Carrier tape 10N or more; Cover tape 5N or more.  
 Packaging quantities: 5000 PCS / Reel.

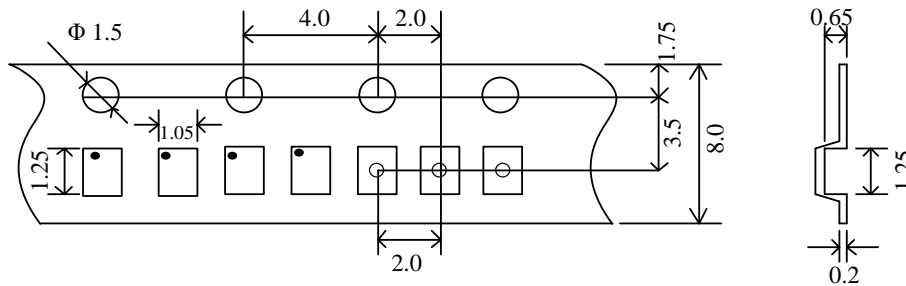
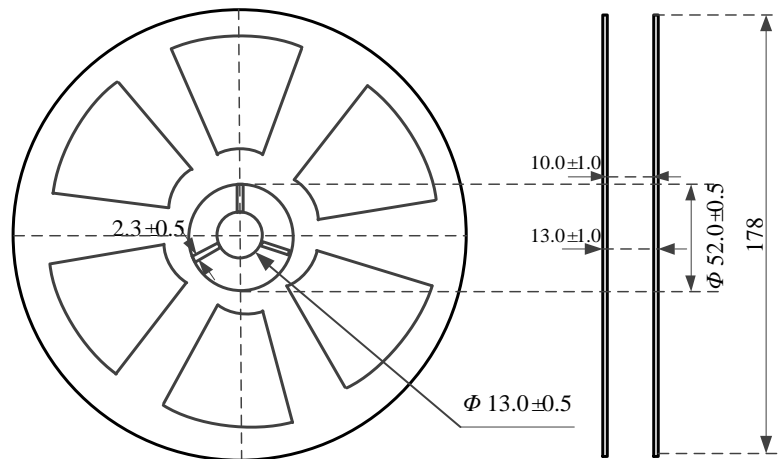


Fig. 4 Dimensions of the Tape (mm)



Φ 178 Reel Dimension

Fig. 5 Dimensions of the Reel (mm)

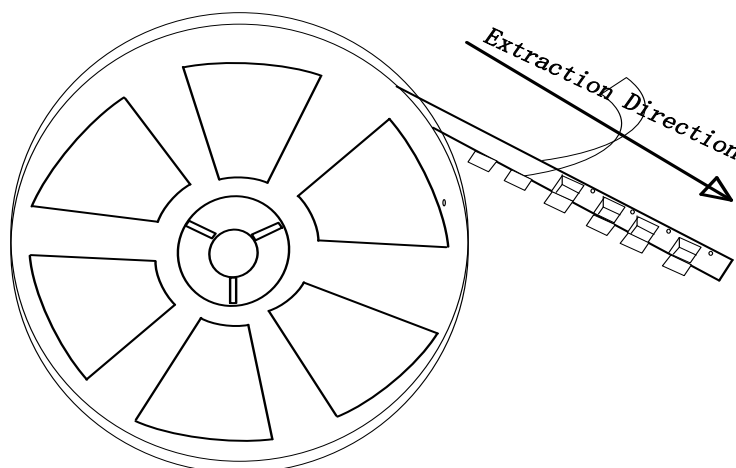
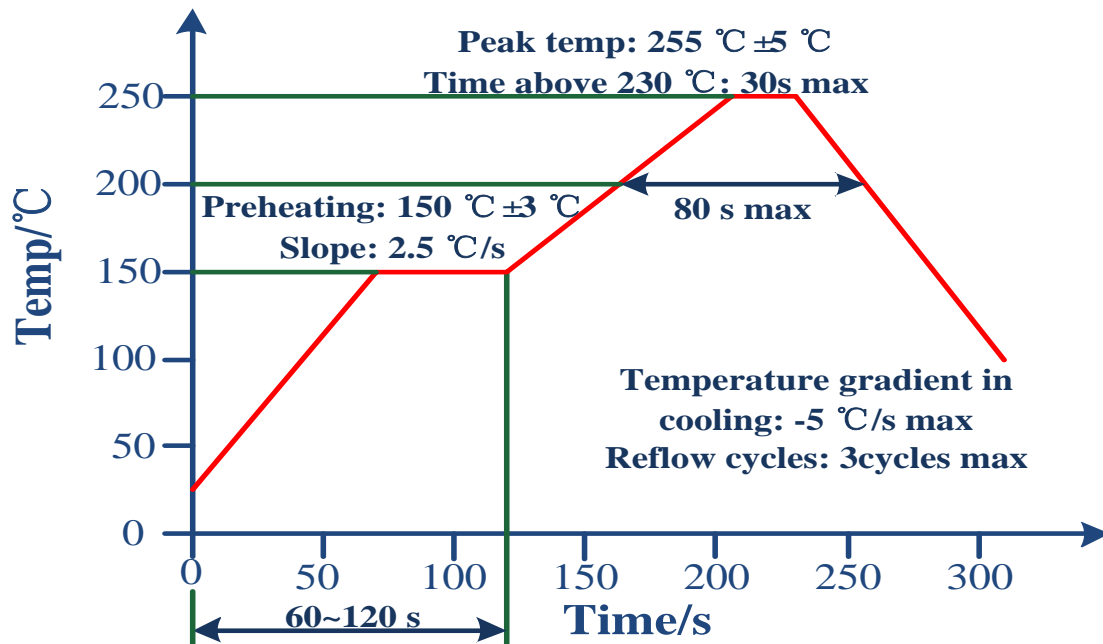


Fig. 6 Drawing Direction

## H. Recommended Soldering Profile



## I. Important Notice

- SAW devices should not be used in any type of fluid such as water, oil, organic solvent, etc.
- Do not operate outside the recommended operating temperature range.
- Sudden change of temperature shall be avoided, deterioration of the characteristics may occur.
- Be careful of temperature and duration when soldering.
- Do not place soldering iron on the body.
- Be careful not to subject for excessive force.
- SAW devices are electrostatic sensitive. Please avoid static voltage during operation and storage.
- Ultrasonic cleaning shall be avoided. Ultrasonic vibration may cause destruction.
- ROHS compliance.
- ESD (Electrostatic Discharge) sensitive device.

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