Acoustic Chip Technology
Shengxin

DATASHEET

of SAW Devices

SAW Filter

Automotive telematics

Part Number: SXCF1588RBNSS02

Center Frequency: 1588MHz

Package: SMD3030

- Package Dimensions
- Testing Environment
- Electrical Characteristics
- Frequency Characteristics
- Remark and Packing

Revision Record

Revision Number	Date	Description
SXCF1588RBNSS02_V1.0	2025-06-14	Version 1.0
SXCF1588RBNSS02_V1.1	2025-06-19	Version 1.1(DC Voltage)
SXCF1588RBNSS02_V1.2	2025-07-25	Version 1.2(Features&Marking)

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1.Features

■ Low-loss SAW filter

■ Low amplitude ripple

■ No matching network required for operation at 50Ω

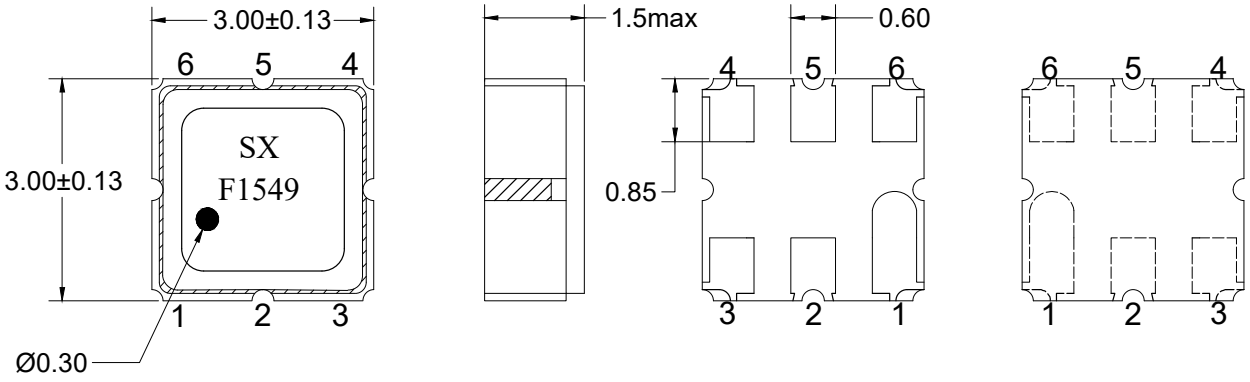
■ Ceramic package for Surface Mounted Technology (SMT)

■ Lead-free production and RoHS Compliant

■ **E**lectrostatic **S**ensitive **D**evice(ESD)

■ AEC-Q200 qualified component family
(Grade 2: -40℃ to +105℃)

2.Package Dimension(Unit: mm)



Pin Configuration	
2	Input
5	Output
1, 3, 4, 6	To Be Ground

Attention: The mark SXF1549 is for reference.

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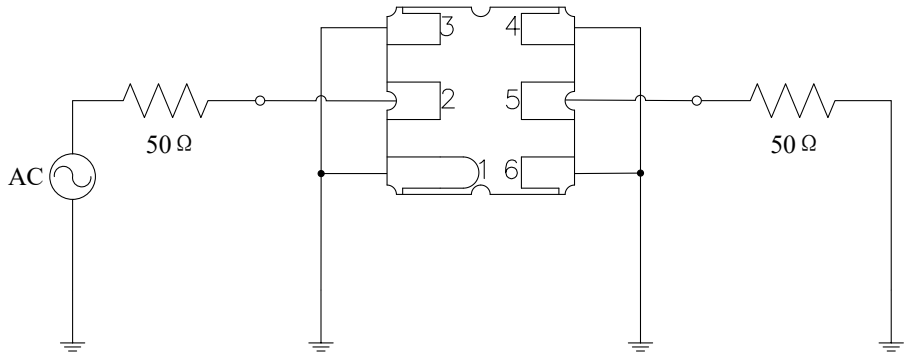
3.Measurement Circuit



4.Maximum Ratings

Rating		Value	Unit
RF Input Power	P	10	dBm
DC Voltage	V_{DC}	5	V
Operating Temperature Range	T_A	-40 ~ +105	°C
Storage Temperature Range	T_{stg}	-40 ~ +105	°C
ESD Voltage(MM)	V_{MM}	50	V
ESD Voltage(HBM)	V_{HBM}	175	V

5.Electrical Specification

Temperature range for specification: -40 to +105℃

Terminal source impedance: 50Ω

Terminal load impedance: 50Ω

Item	Frequency Range [MHz]	Characteristics			
		min.	typ.	max.	Unit
Center Frequency	-	-	1588	-	MHz
Insertion Loss	1560 - 1616	-	2.6	4.5	dB
Amplitude Ripple	1560 - 1616	-	0.8	3.5	dB
VSWR	1560 - 1616	-	2.0	2.7	-
Attenuation	100 - 1400	38	45	-	dB
	1400 - 1525	25	35	-	dB
	1645 - 1650	8	25	-	dB
	1650 - 1840	25	30	-	dB
	1840 - 2000	33	38	-	dB
	2000 - 2500	30	-	-	dB

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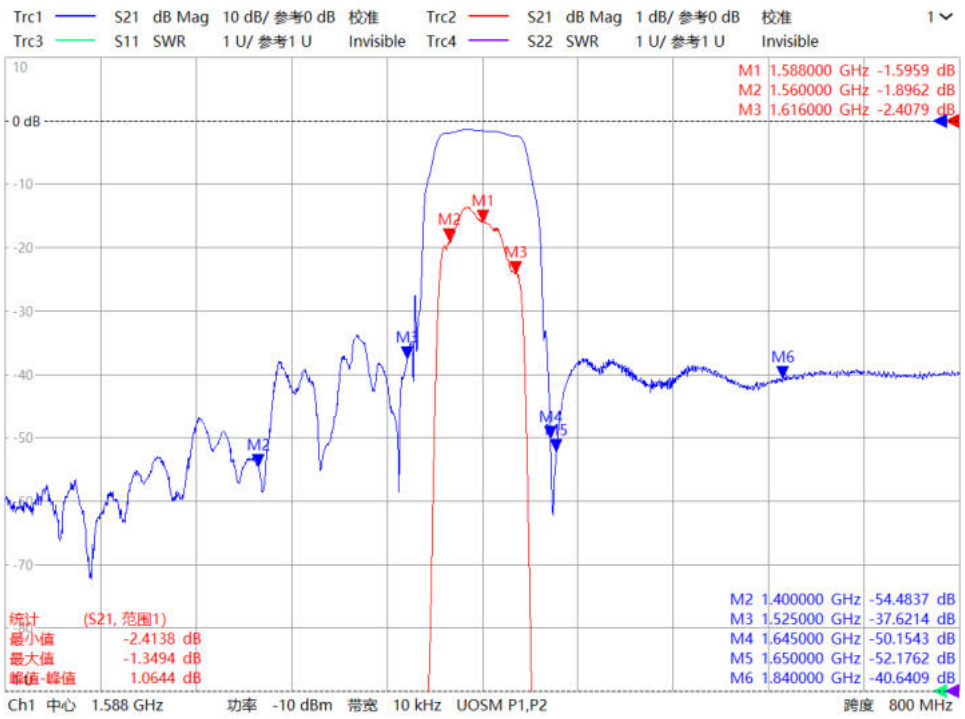
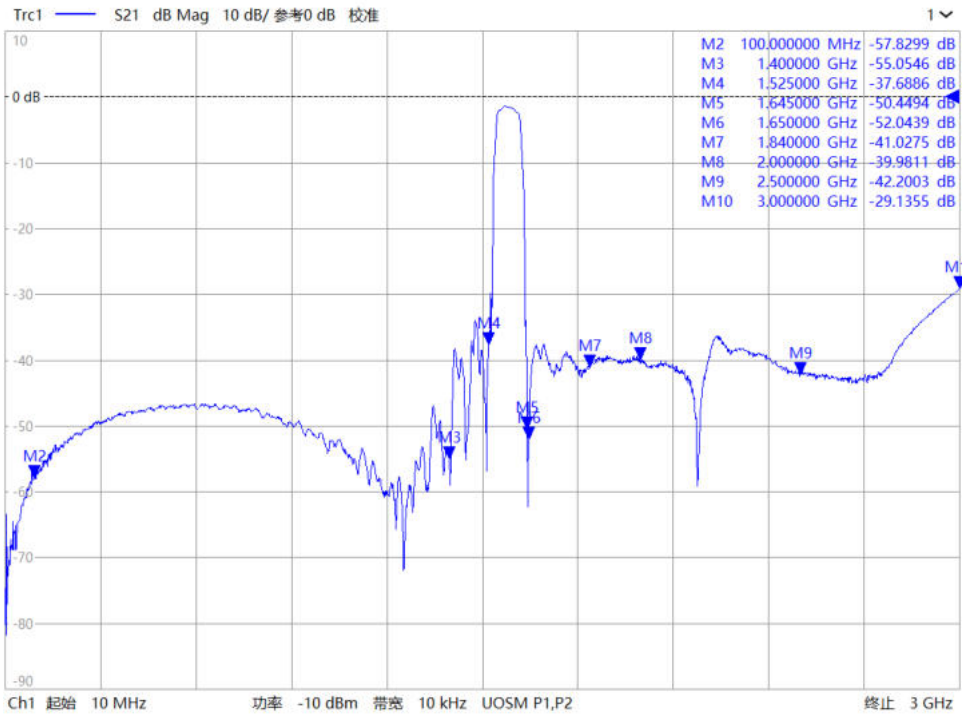
6.Frequency Characteristics

Frequency Response



Frequency Response（wideband）



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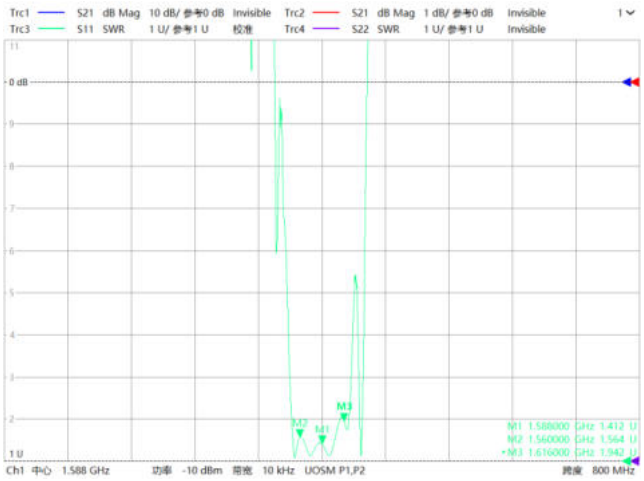
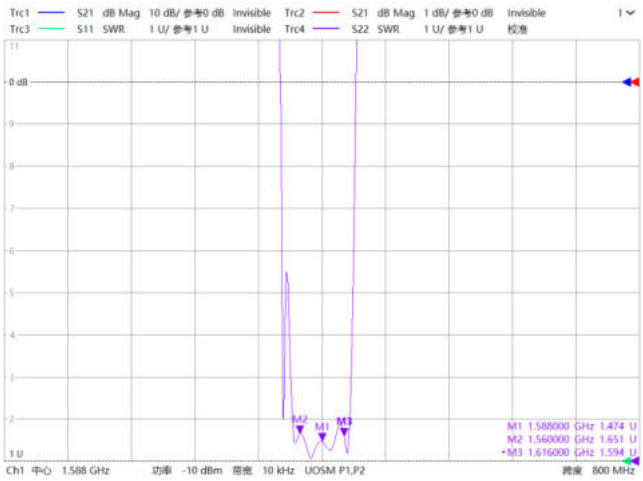
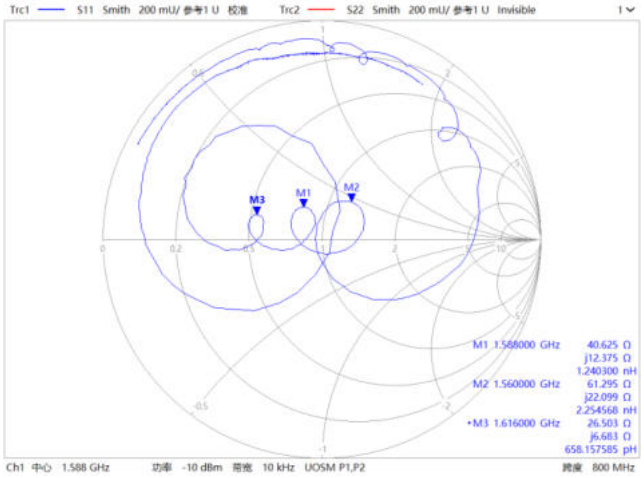
S11 VSWR



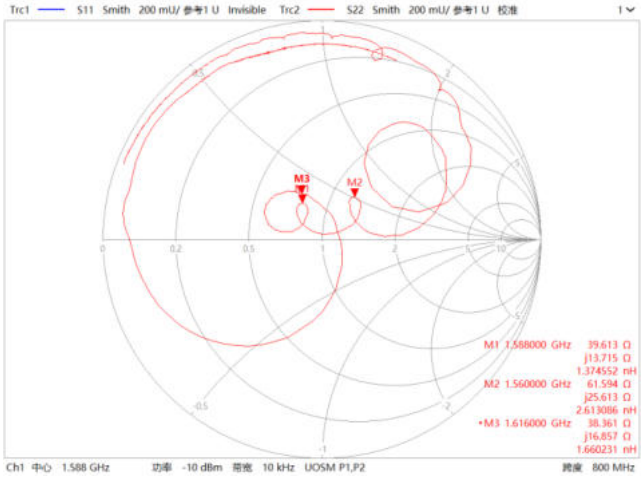
S22 VSWR



S11 Smith Chart



S22 Smith Chart



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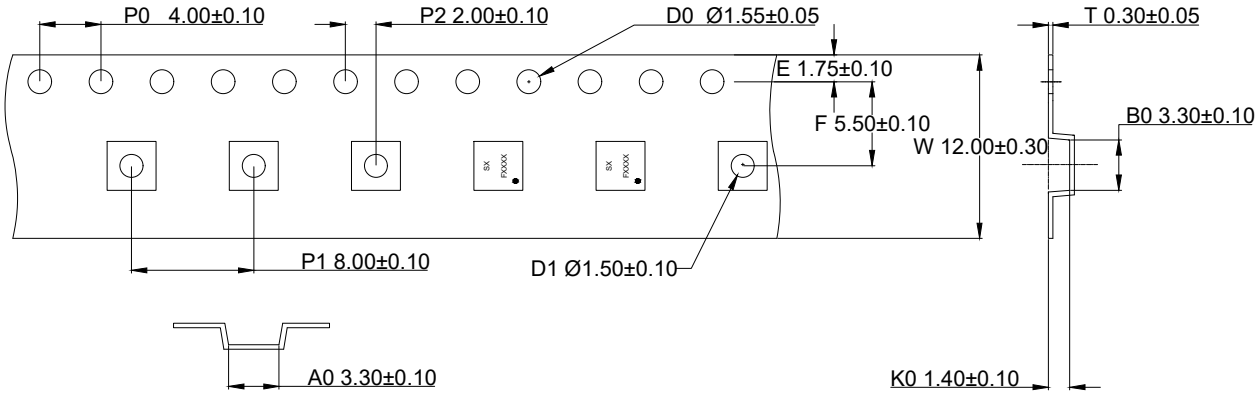
7.Remarks

1. Please be certain not to apply voltage above the rated voltage of SAW components.
2. Please be sure that the components are operated within the specified operating temperature range.
3. Abrupt temperature change shall be avoided because deterioration of the component characteristics can occur under that situation.
4. Please be careful of soldering temperature when soldering.
5. Please do not place soldering iron on the body of components.
6. Please be careful not to subject the terminals or leads of components to excessive force.

8.Packing Information

Tape：



Size	P0	P1	P2	D0	D1	E	F	W	A0	B0	K0	T
Value	4.00	8.00	2.00	Φ1.55	Φ1.50	1.75	5.50	12.00	3.30	3.30	1.40	0.30
Tolerance	±0.10	±0.10	±0.10	±0.05	±0.10	±0.10	±0.10	±0.30	±0.10	±0.10	±0.10	±0.05

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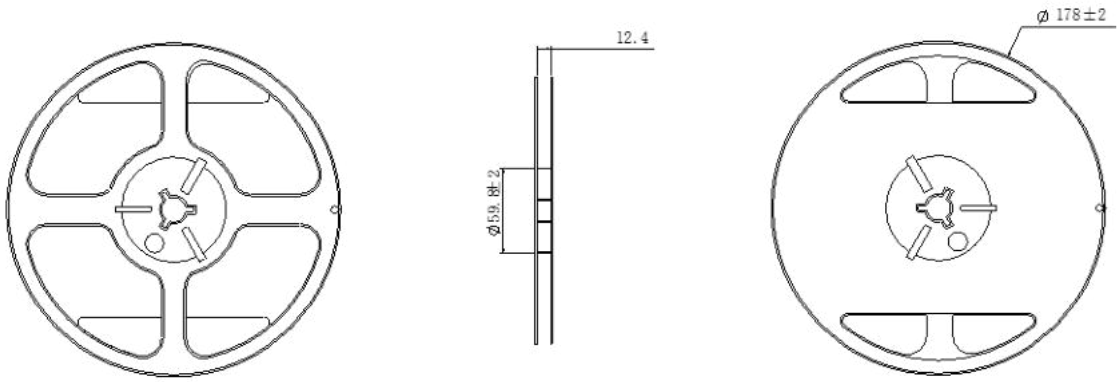
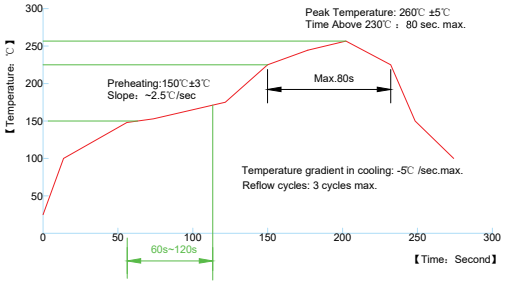
Reel：1000pcs/Reel(Standard Size)



9.Recommended Soldering Profile



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