

**2140 MHz
SAW Filter**



SM1109-5

MAXIMUM RATING:

- Operating temperature range: -30 °C to +85 °C
- Storage temperature range: -40 °C to +85 °C
- Maximum Input Power: +10 dBm
- Maximum DC Voltage: +/-0 V
- Moisture Sensitivity Level: Level 3
- ESD 50V(MM) 100V(HBM)

ELECTRICAL CHARACTERISTICS:

Terminating source impedance: $Z_s = 50 \Omega$ (Single-ended)

Terminating load impedance: $Z_L = 50 \Omega$ (Single-ended)

Parameters Description			Unit	Minimum	Typical	Maximum
Center Frequency			MHz	-	2140	-
Insertion Loss	2110~2170 MHz		dB	-	1.9	3.0
	2110~2155 MHz		dB	-	1.9	2.5
Amplitude Ripple	2110~2170 MHz		dBp-p	-	0.6	2.0
	2110~2155 MHz		dBp-p	-	0.6	1.5
VSWR	Input	2110~2170 MHz	-	-	1.8	2.2
	Output	2110~2155 MHz	-	-	1.8	2.2
Attenuation:						
50-1710 MHz			dB	35	43	-
1710-1755 MHz			dB	40	47	-
1920-1980 MHz			dB	35	40	-
4220-4340 MHz			dB	25	33	-

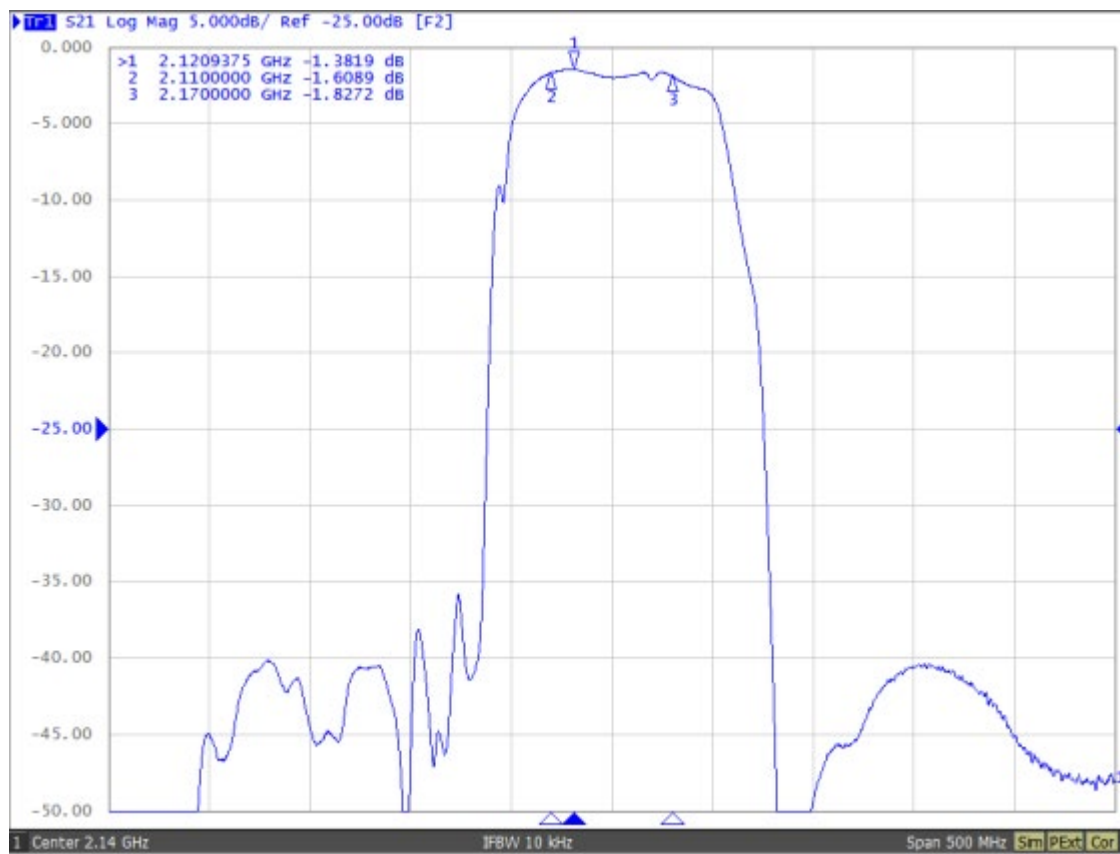


CAUTION: Electrostatic Sensitive Device. Observe precautions for handling.

1. The design, manufacturing process, and specifications of this device are subject to change.
2. US or International patents may apply.
3. RoHS compliant from the first date of manufacture.

FREQUENCY CHARACTERISTICS:

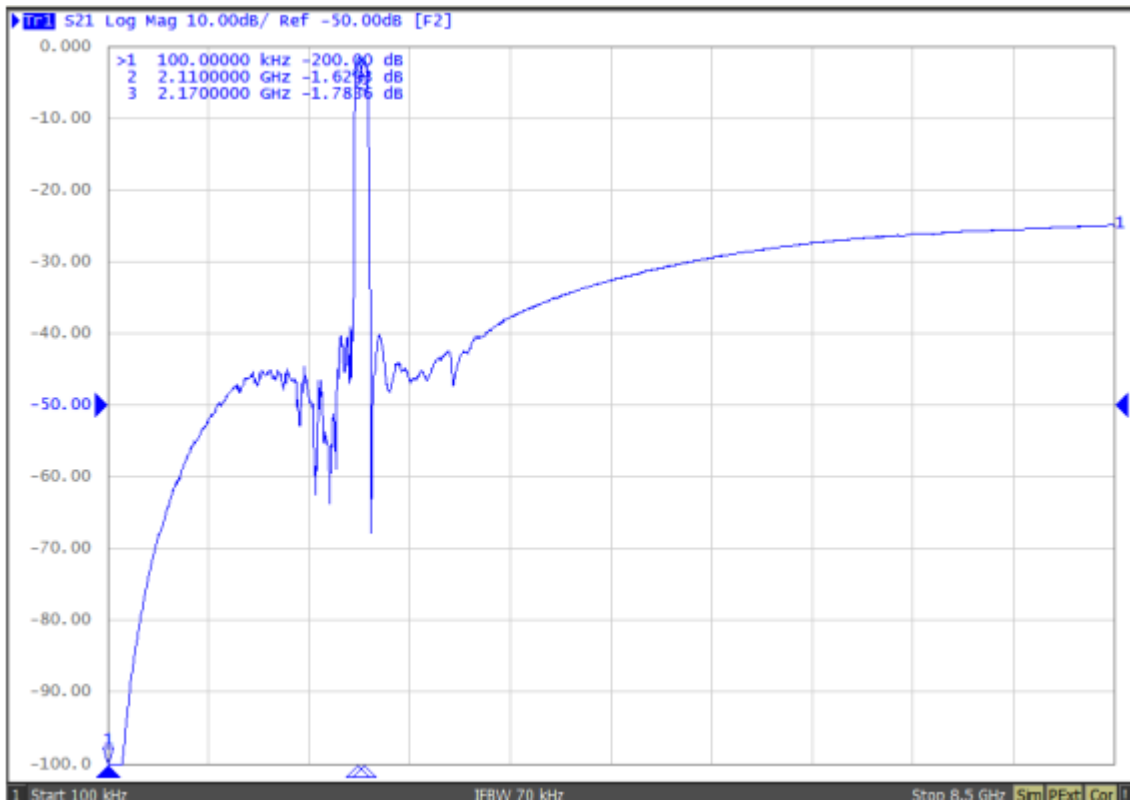
S21 response: (span 500MHz)



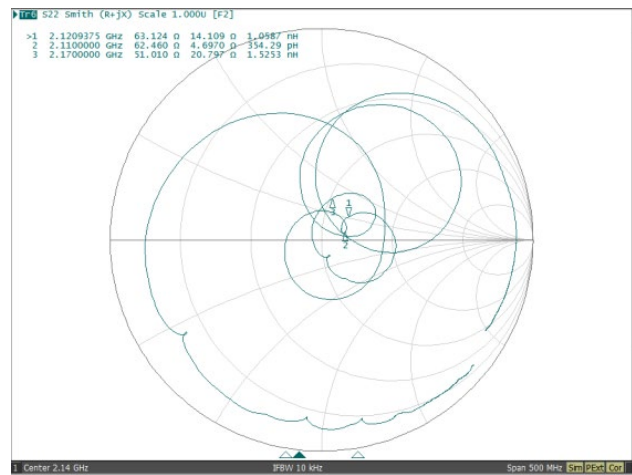
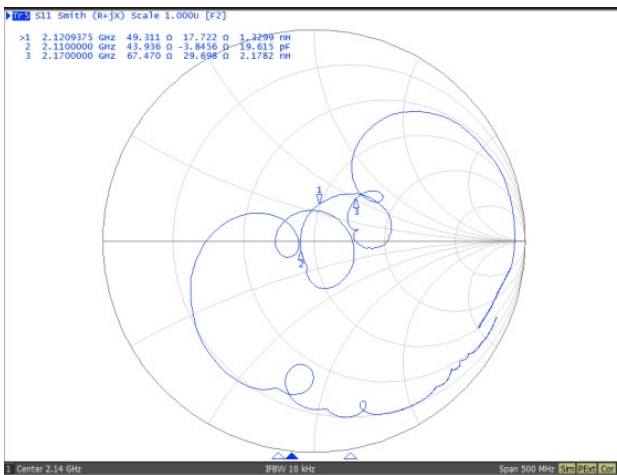
S21 response: (span 200MHz)



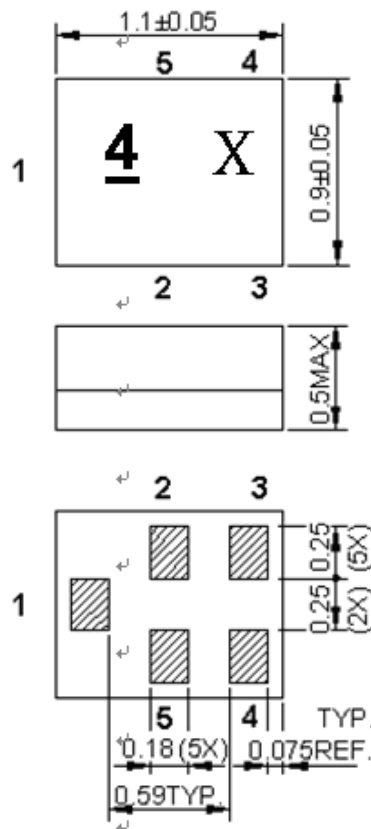
S21 response: (span 4.5GHz)



S11/S22 response :



OUTLINE DRAWING:



All tolerances are ± 0.05 mm unless otherwise specified
Coplanarity : 0.1 mm max.

1 to 5 : Pin No.

Unit : mm

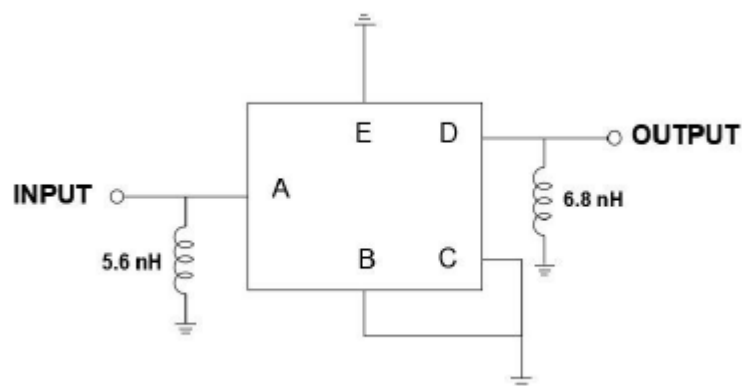
Pin No.	Symbol	Function
1	IN	Input
2	GND	Ground
3	GND	Ground
4	OUT	Output
5	GND	Ground

Marking Descriptions:

4 : Series Number

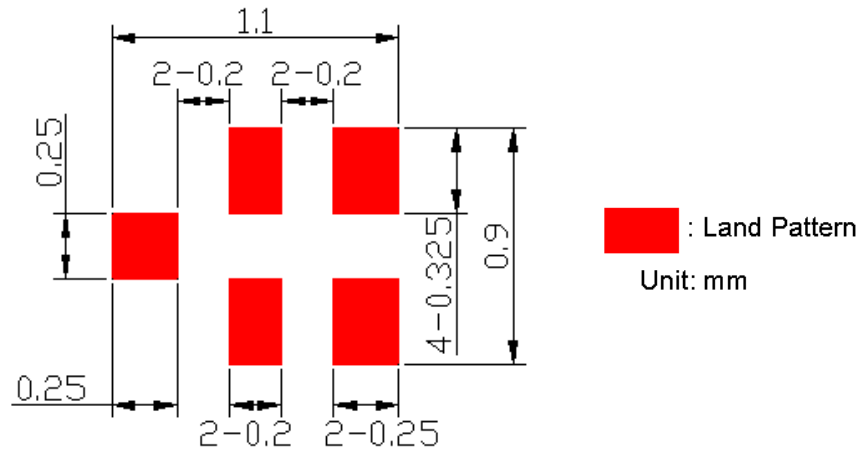
X : Year/Month Code (Follow the table)

MEASUREMENT CIRCUIT:



Source & Load Impedance: $50\ \Omega$

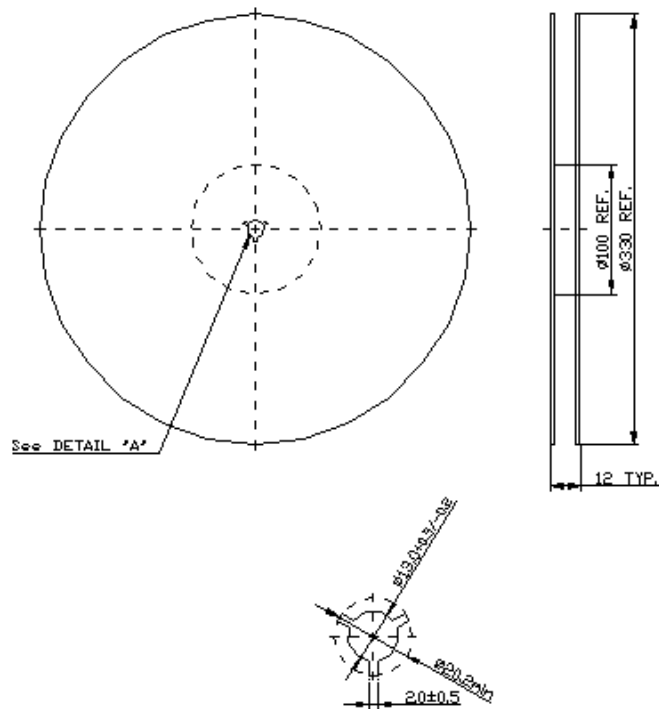
PCB Footprint :



PACKING:

1. REEL DIMENSION

Reel Count: 7" = 5000



0.2±0.05

4.0±0.1

2.0±0.05

1.75±0.1

3.5±0.05

8.0±0.2

4.0±0.1

0.5±0.05

1.5±0.1

SECTION A-A

SECTION B-B

Direction of

1. Preheating shall be fixed at 150~180°C for 60~90 seconds.
2. Ascending time to preheating temperature 150°C shall be 30 seconds min.
3. Heating shall be fixed at 220°C for 50~80 seconds and at 260°C+0/-5°C peak (20~40sec).
4. Time: 2 times.

