

**SF2539LA**

**1747.5 MHz  
SAW Filter**



**SM1109-5**

#### MAXIMUM RATING:

- Maximum Input Power: 10 dBm (in passband)
- DC voltage: +/-5 V
- Operating Temperature: -40 °C to +85 °C
- Storage Temperature: -40 °C to +100 °C
- Moisture Sensitivity Level: Level 1 (MSL 1)
- ESD: 50 V(MM), 100 V(HBM)
- AEC-Q200 Qualified

#### ELECTRICAL CHARACTERISTICS:

Terminating source impedance:  $Z_s = 50//7.5nH \Omega$  (Single-ended)

Terminating load impedance:  $Z_L = 50//6.8nH \Omega$  (Single-ended)

Parameters Description	Unit	Min.	Typ.	Max.	Remarks
<b>Center Frequency</b> <b>Fc</b>	MHz	-	1747.5	-	-
<b>Insertion Loss</b> (1710~1785 MHz) <b>IL</b>	dB(*1)	-	2.1	2.4	at 25°C
		-	-	3.0	-
<b>Amplitude Ripple</b> (1710~1785 MHz)	dB	-	1.0	1.5	at 25°C
		-	-	2.0	-
<b>VSWR</b> (1710~1785 MHz)	-	-	1.8	2.2	-
<b>Attenuation</b> (Reference level from 0 dB)					
DC ~ 1570 MHz	dB	25	36	-	-
1570 ~ 1580 MHz	dB	35	41	-	-
1805 ~ 1880 MHz	dB	15	22	-	at 25°C
		8	-	-	-
1930 ~ 2400 MHz	dB	25	34	-	-
2400 ~ 3000 MHz	dB	15	32	-	-
3000 ~ 4000 MHz	dB	10	27	-	-
4000 ~ 6000 MHz	dB	5	21	-	-

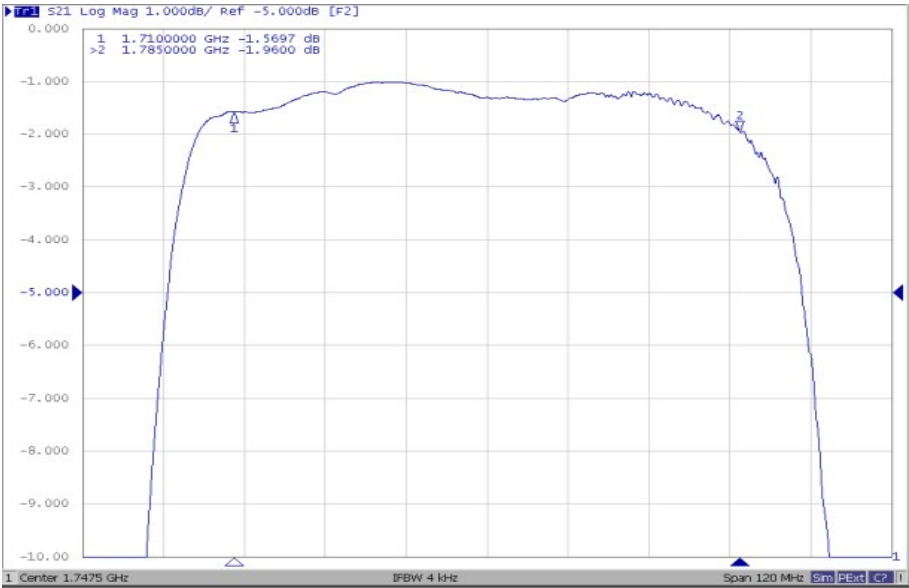
(\*1) Specification of insertion loss includes loss that comes from the test board. (Approximately 0.15 dB)



**CAUTION: Electrostatic Sensitive Device. Observe precautions for handling.**

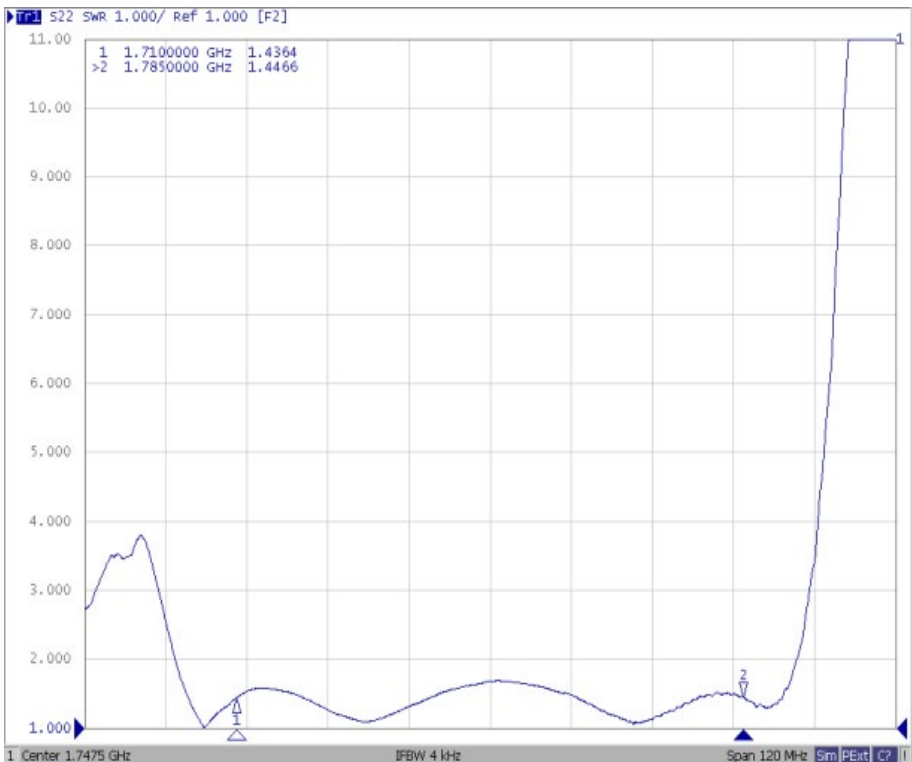
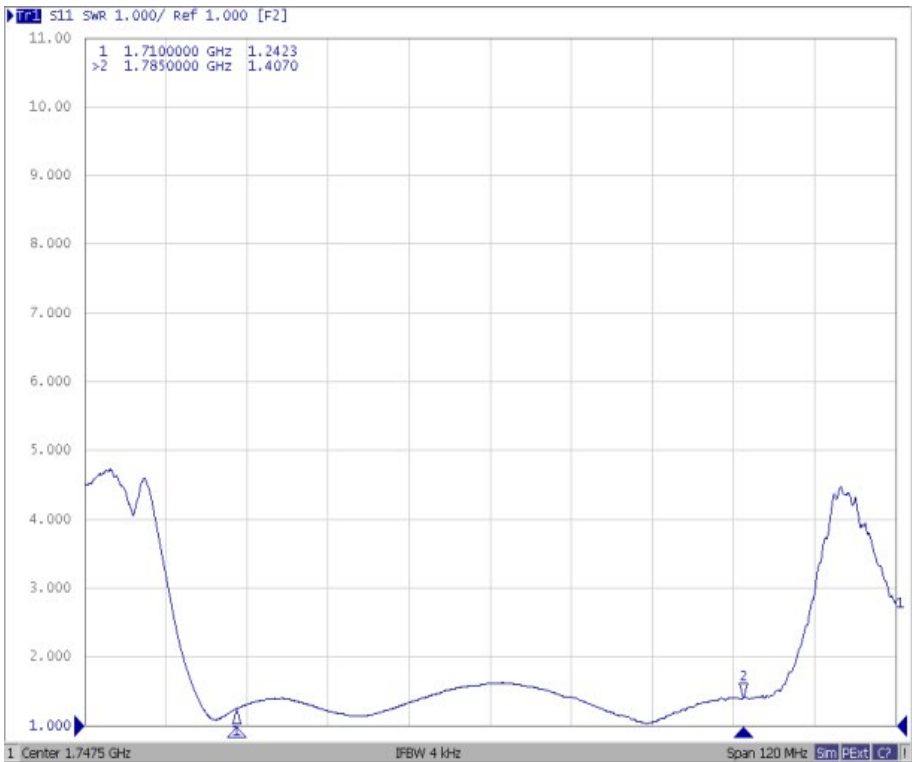
1. The design, manufacturing process, and specifications of this device are subject to change.
2. US or International patents may apply.
3. RoHS compliant from the first date of manufacture.

FREQUENCY CHARACTERISTICS:

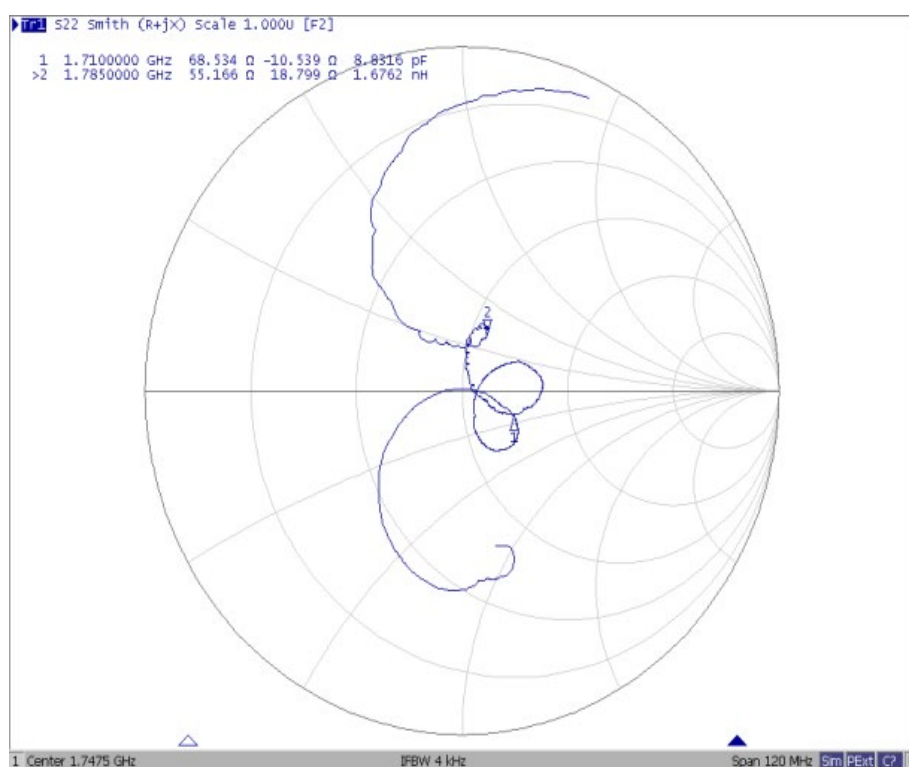
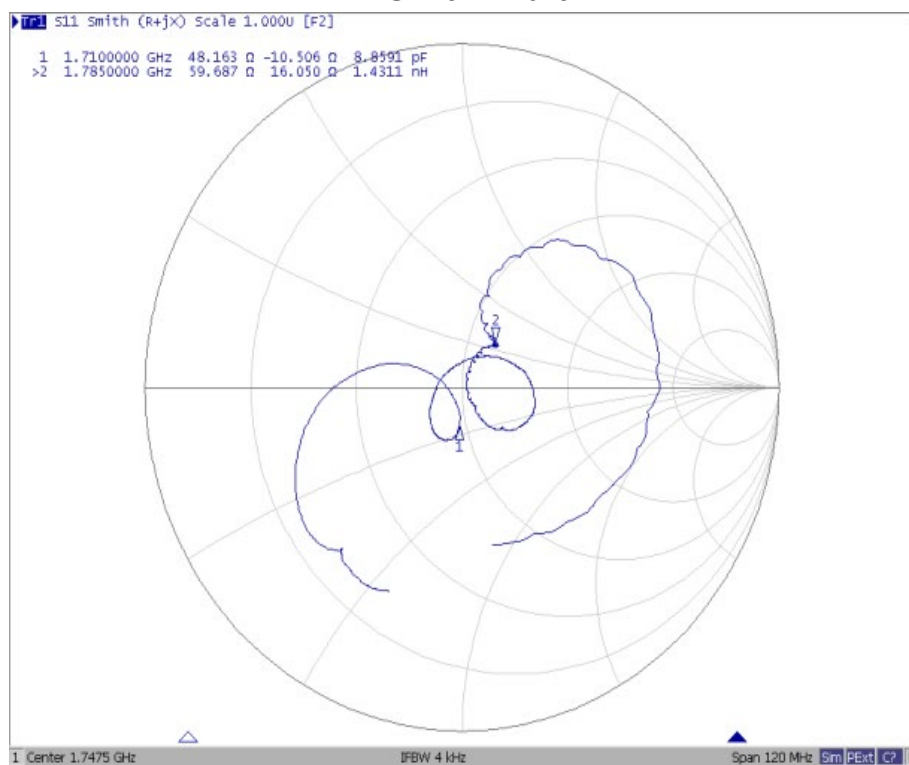


Reflection Functions:

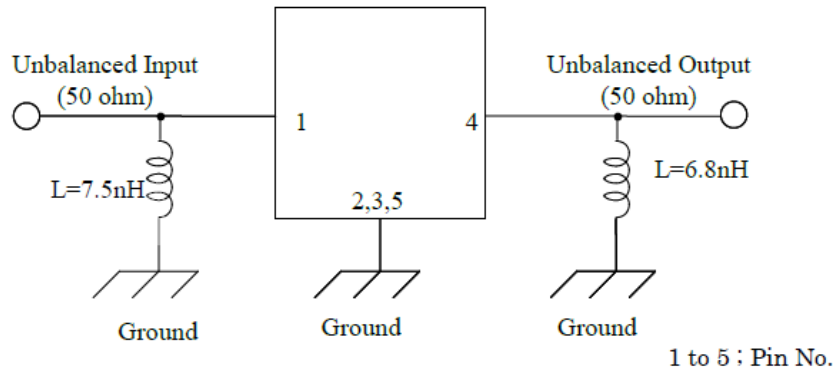
VSWR



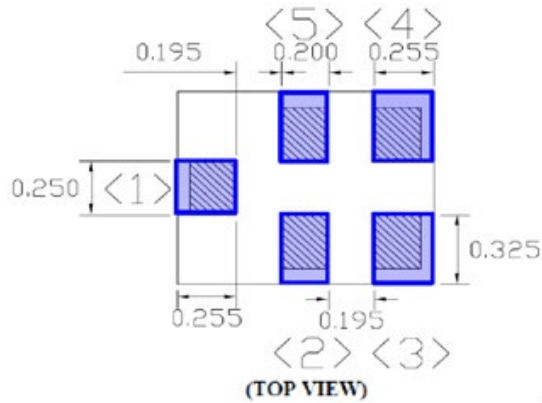
## Smith Chart



### MEASUREMENT CIRCUIT:

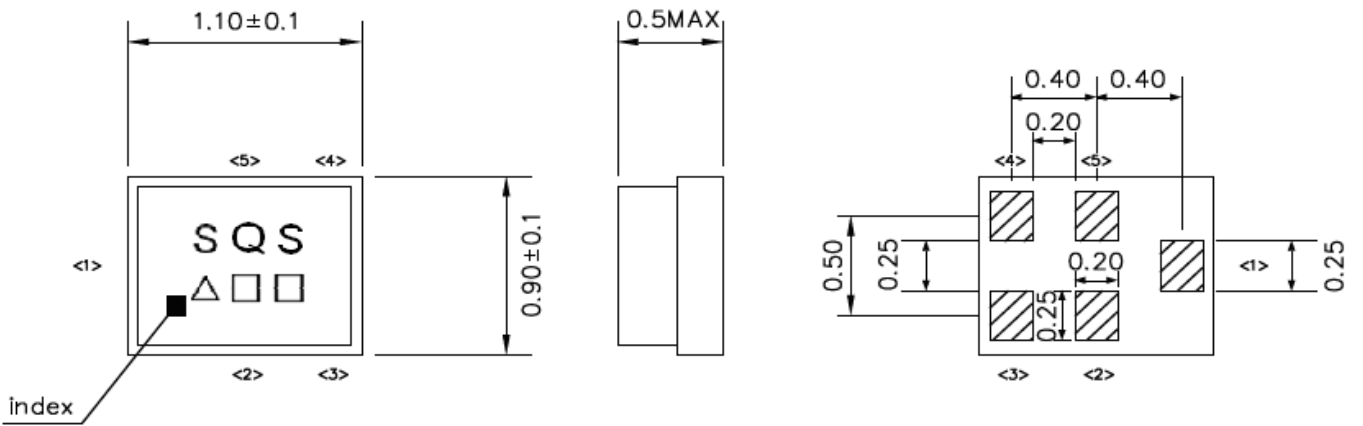


### PCB Footprint:



### OUTLINE DRAWING (Mass Production):

Device size: 1.1typ. x 0.9typ. x 0.5max.



Unit : mm

## Pin Configuration

Pin No.	Symbol	Function
1	IN	Unbalanced pin
2	GND	Ground
3	GND	Ground
4	OUT	Unbalanced pin
5	GND	Ground

△ : Date Code

□ : Lot No. (Indicated by 0~9 or A to Z and a to z, except I, O, i, o and l)

**Date Code:**

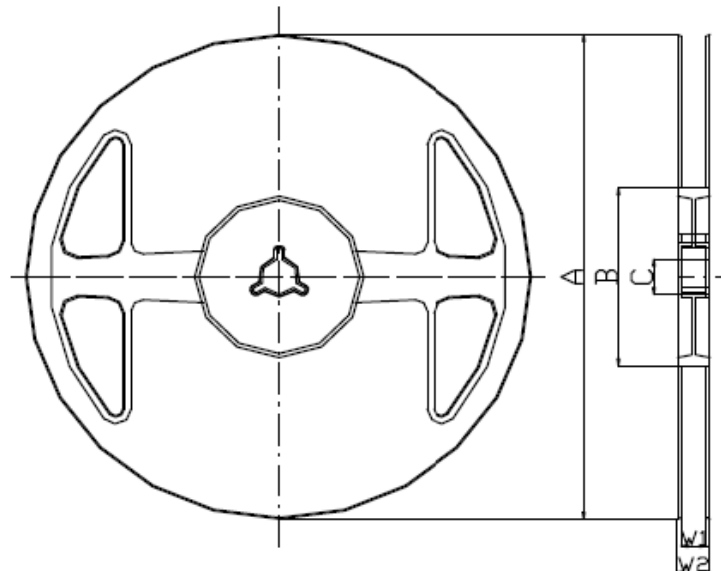
Year	Jan.	Feb.	Mar.	Apr.	May	Jun.	Jul.	Aug.	Sep.	Oct.	Nov.	Dec.
2017	A	B	C	D	E	F	G	H	J	K	L	M
2018	N	P	Q	R	S	T	U	V	W	X	Y	Z
2019	a	b	c	d	e	f	g	h	j	k	l	m
2020	n	p	q	r	s	t	u	v	w	x	y	z

**PACKING:**

1. REEL DIMENSION

Reel count:

7" = 5000



**Materials of Reel**

Material : Polystyrene + Carbon

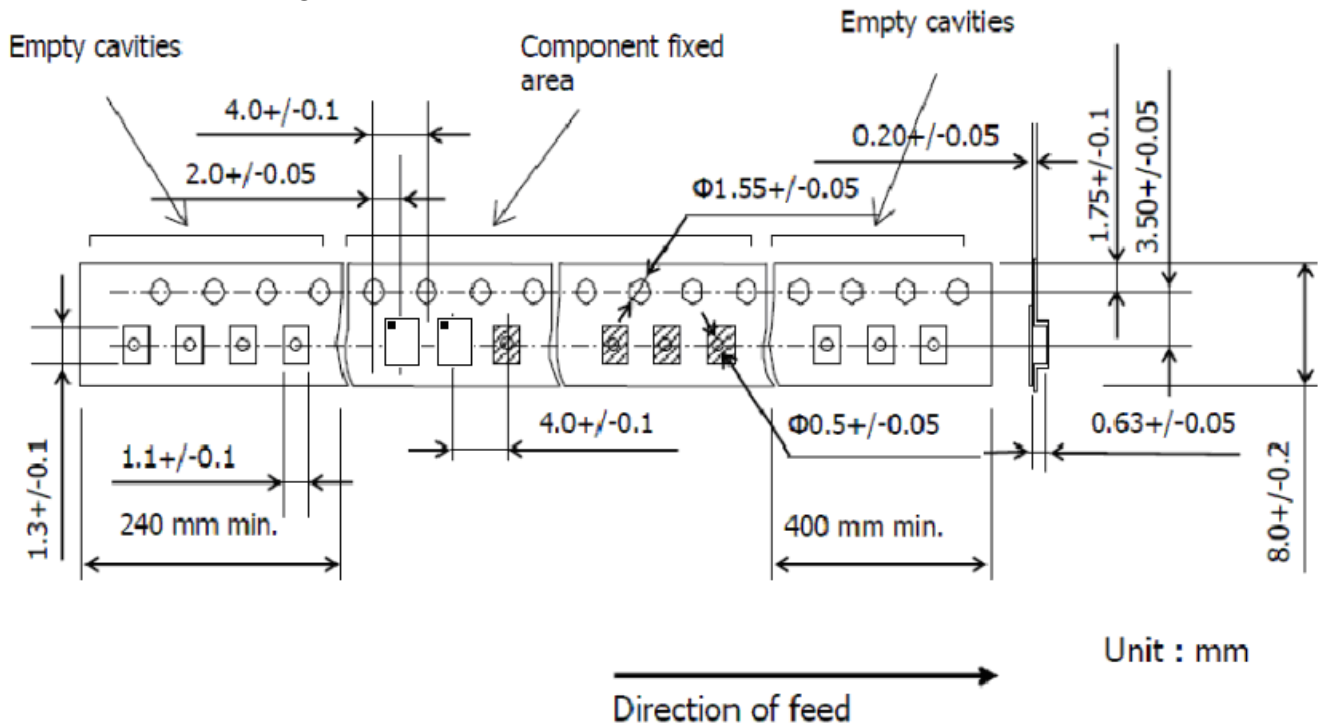
Color : Black

Surface resistance (reference value) :  $10^9 \Omega/\text{sq}$  Max.

Unit : mm

A	B	C	W1	W2
$\phi 180.0 +0.0/-1.5$	$\phi 66.0 +/-0.5$	$\phi 13.0 +/-0.2$	$9.0 +1.0/-0.0$	$11.4 +/-1.0$

## 2. TAPE DIMENSION



### Recommended Reflow Profile:

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.

