

SAW Filter 1900/2017.5MHz 40/15MHz BW Band39/ Band34 SMD1.5X1.1 mm

MODEL NO.: TE0143B

REV. No.: 1.0

**A. MAXIMUM RATING:**

1. Input power : 10dBm
2. Maximum DC Voltage: 5V
3. Operating temperature range: -40 °C to +85 °C
4. Storage temperature range: -40 °C to +85 °C
5. Moisture Sensitivity Level: Level 1 (MSL 1)
6. ESD 50V(MM) 100V(HBM)



Electrostatic Sensitive Device (ESD)

**B. ELECTRICAL CHARACTERISTICS:**

(Filter1)

Parameters Description		Unit	Minimum	Typical	Maximum	Note
Insertion Loss(*1)		1880 ~ 1920 MHz	dB	-	1.5	2.3
VSWR	Input	1880~ 1920 MHz	-	-	1.7	2.0
	Output				1.7	2.0
<b>Attenuation:</b>						
<b>10 ~ 1795 MHz</b>		dB	30	33	-	-
<b>1795 ~ 1820 MHz</b>		dB	25	27	-	-
<b>1820 ~ 1850 MHz</b>		dB	17	25	-	-
<b>1950 ~ 1980 MHz</b>		dB	17	24	-	-
<b>1980 ~ 2025 MHz</b>		dB	20	28	-	-
<b>2025 ~ 2400 MHz</b>		dB	30	34	-	-
<b>2400 ~ 2500 MHz</b>		dB	32	38	-	-
<b>2500 ~ 4900 MHz</b>		dB	20	28	-	-
<b>4900 ~ 6000 MHz</b>		dB	20	26	-	-

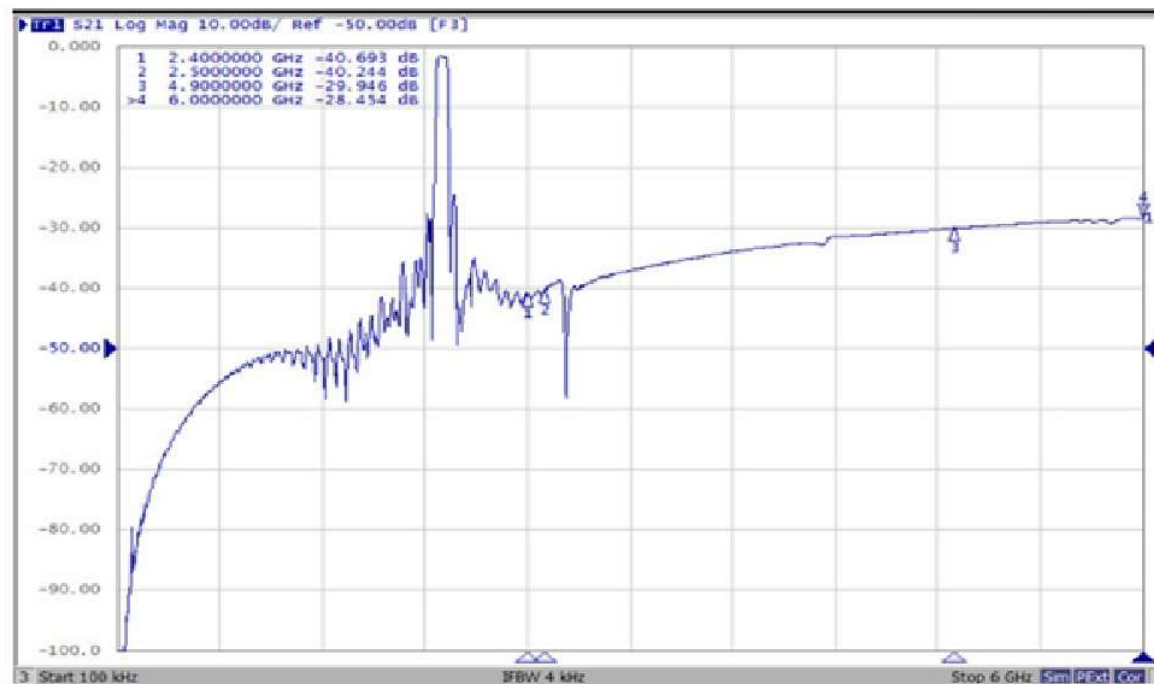
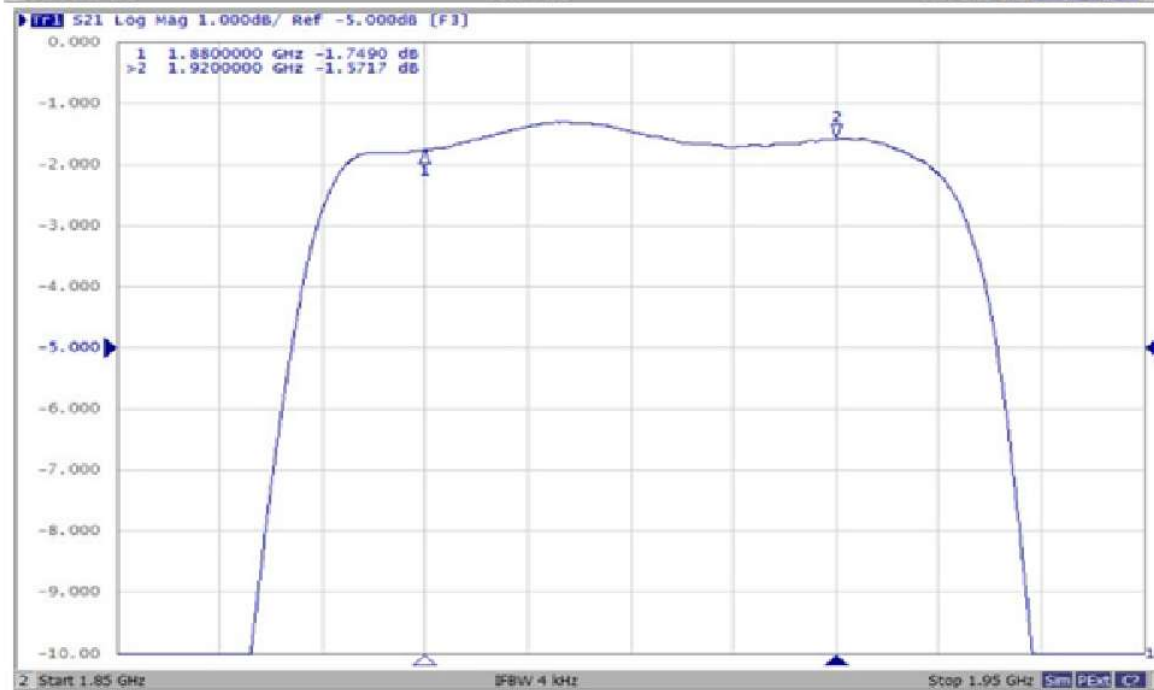
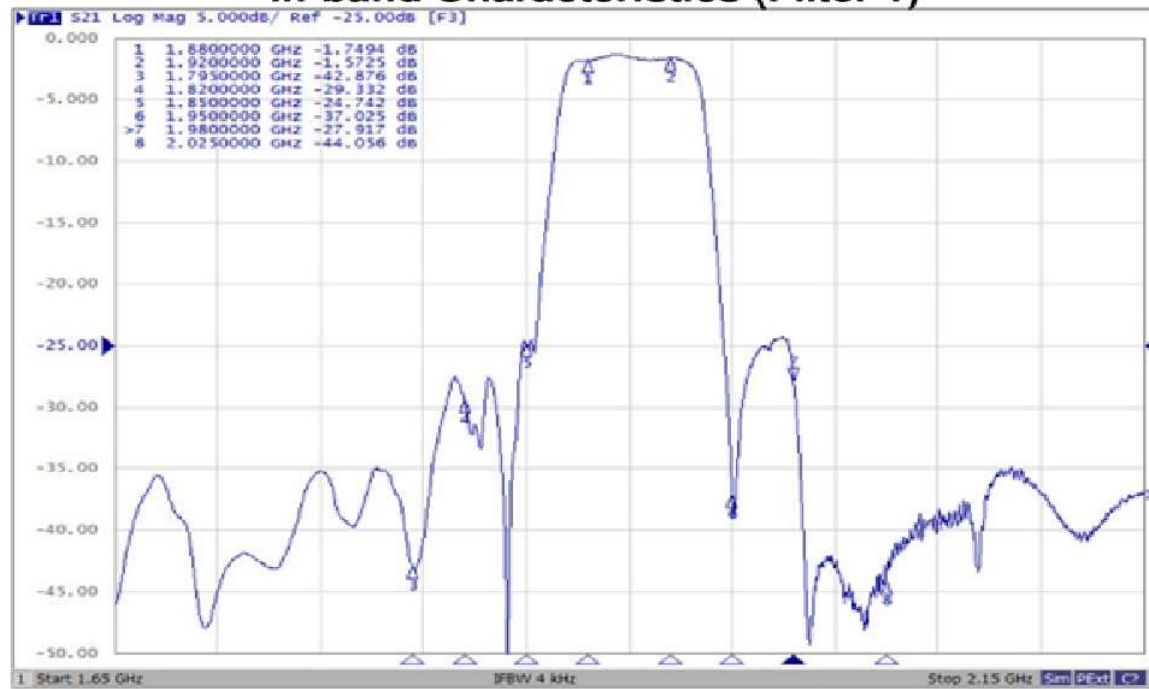
(\*1) Specification of insertion loss excludes loss that comes from the test board.

Parameters Description		Unit	Minimum	Typical	Maximum	Note	
Insertion Loss(*1)		2010 ~ 2025 MHz	dB	-	1.8	3.4	
VSWR	Input	2010 ~ 2025 MHz	-	-	1.4	2.0	
	Output		-	-	1.4	2.0	
<b>Attenuation:</b>							
<b>1 ~ 1925 MHz</b>			dB	30	36	-	-
<b>1925 ~ 1980 MHz</b>			dB	18	26	-	-
<b>2050 ~ 2085 MHz</b>			dB	6.5	14	-	-
<b>2085 ~ 2110 MHz</b>			dB	25	27	-	
<b>2110 ~ 2400 MHz</b>			dB	27	34	-	-
<b>2400 ~ 2500 MHz</b>			dB	40	45	-	-
<b>2500 ~ 4900 MHz</b>			dB	30	36	-	-
<b>4900 ~ 6000 MHz</b>			dB	30	35	-	-

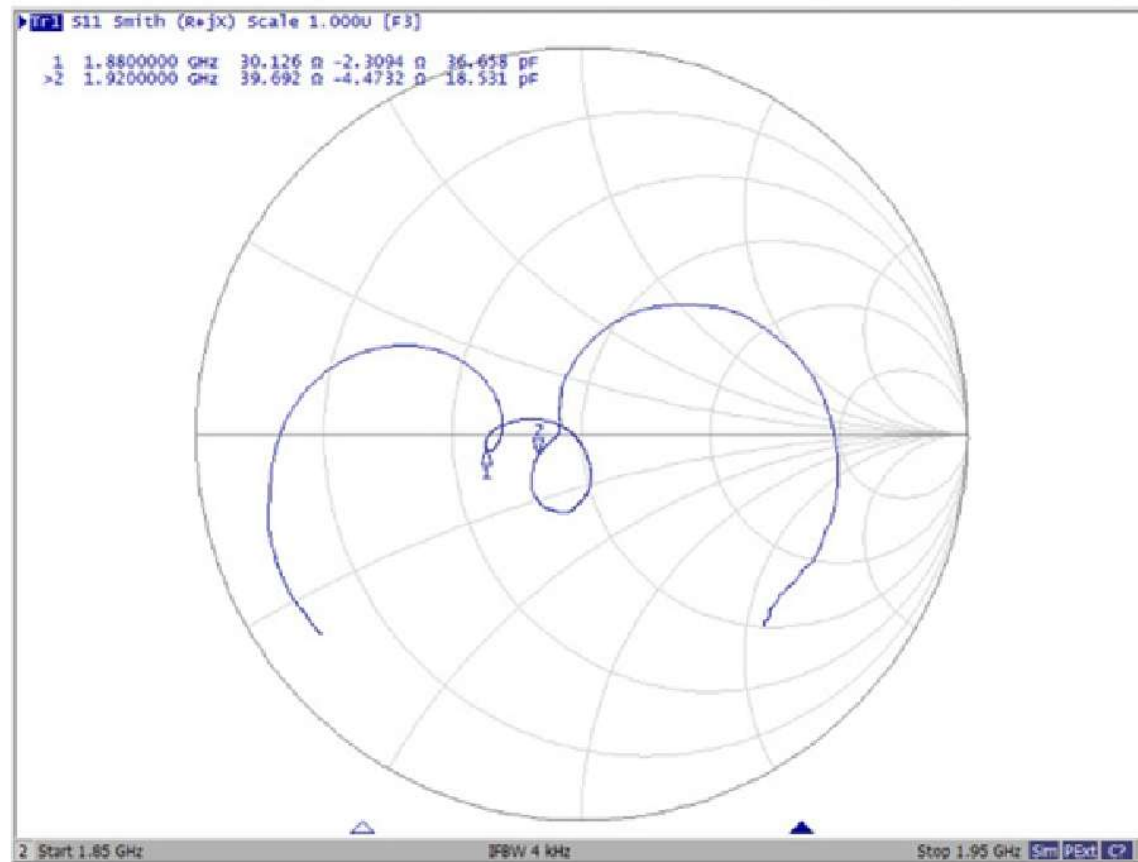
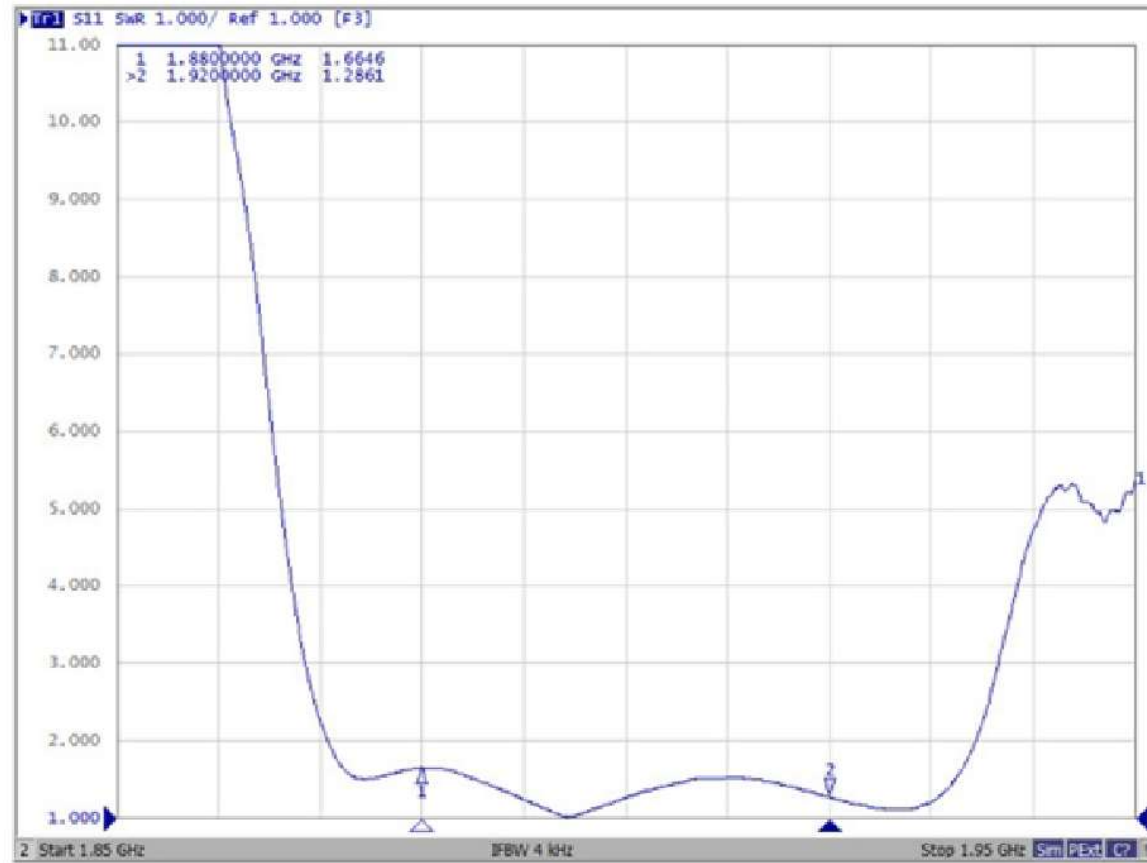
(\*1) Specification of insertion loss excludes loss that comes from the test board.

### C. Frequency Characteristics:

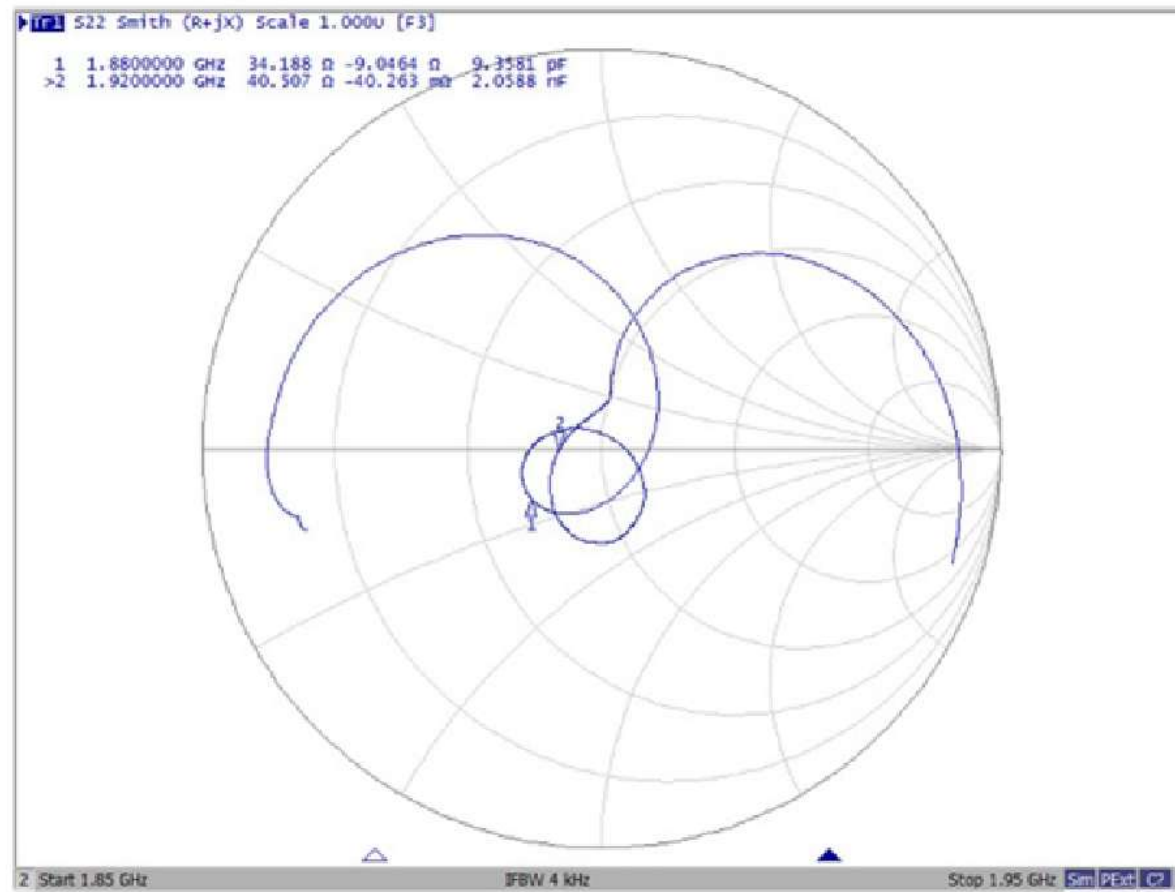
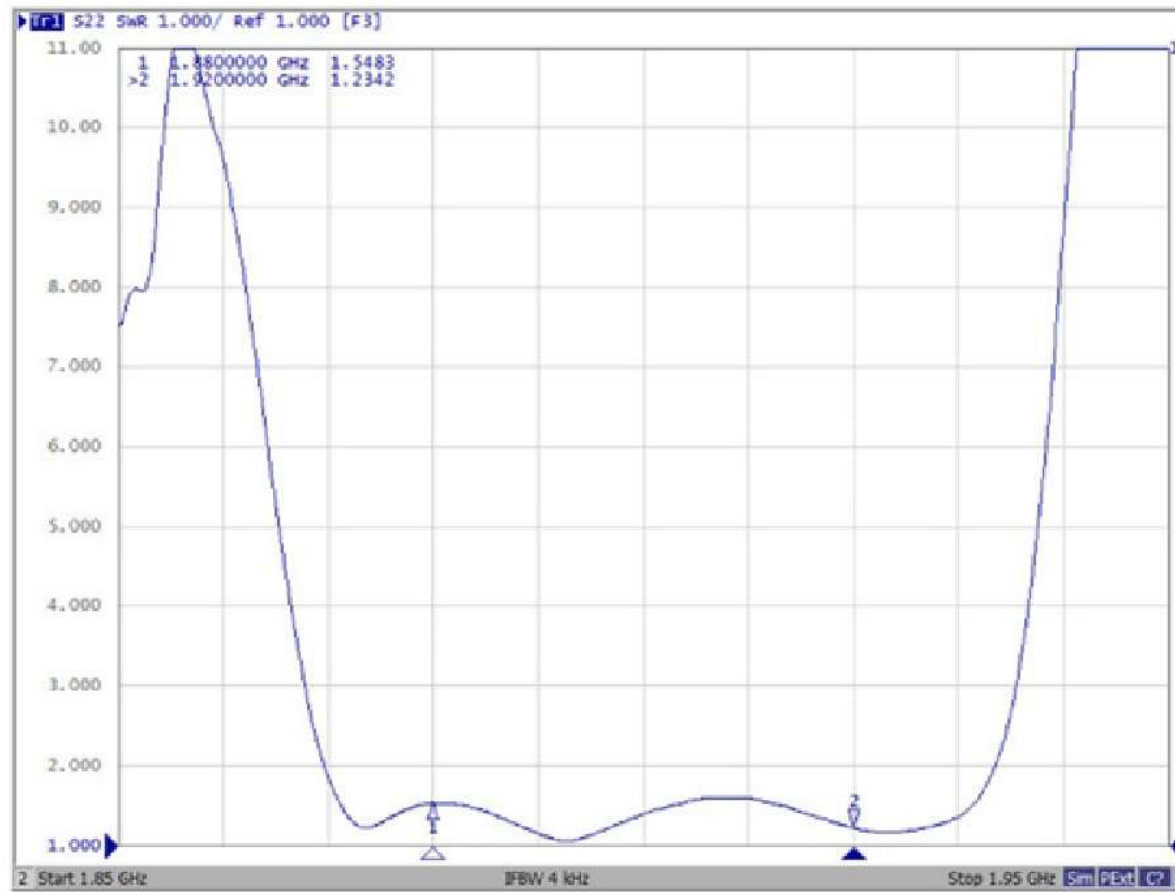
#### In-band Characteristics (Filter 1)



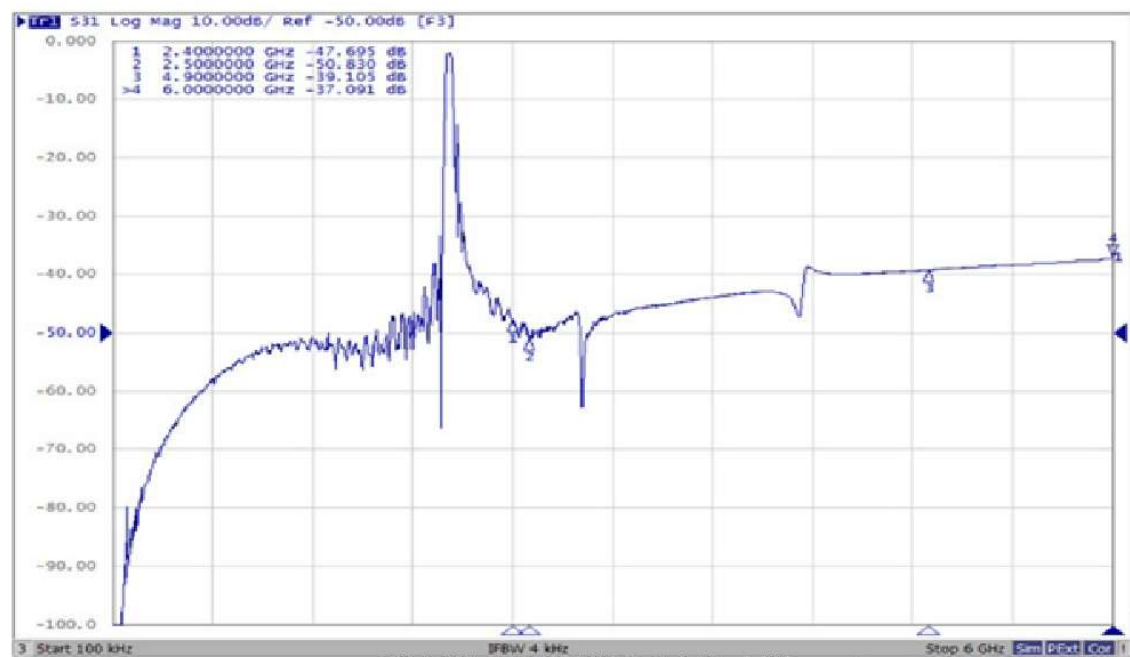
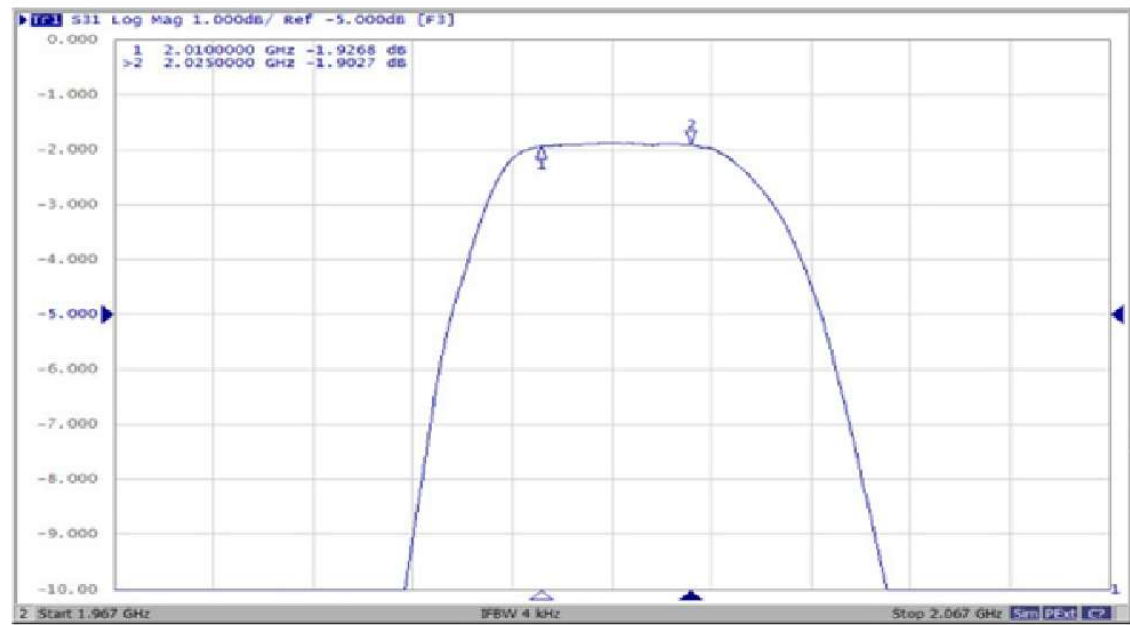
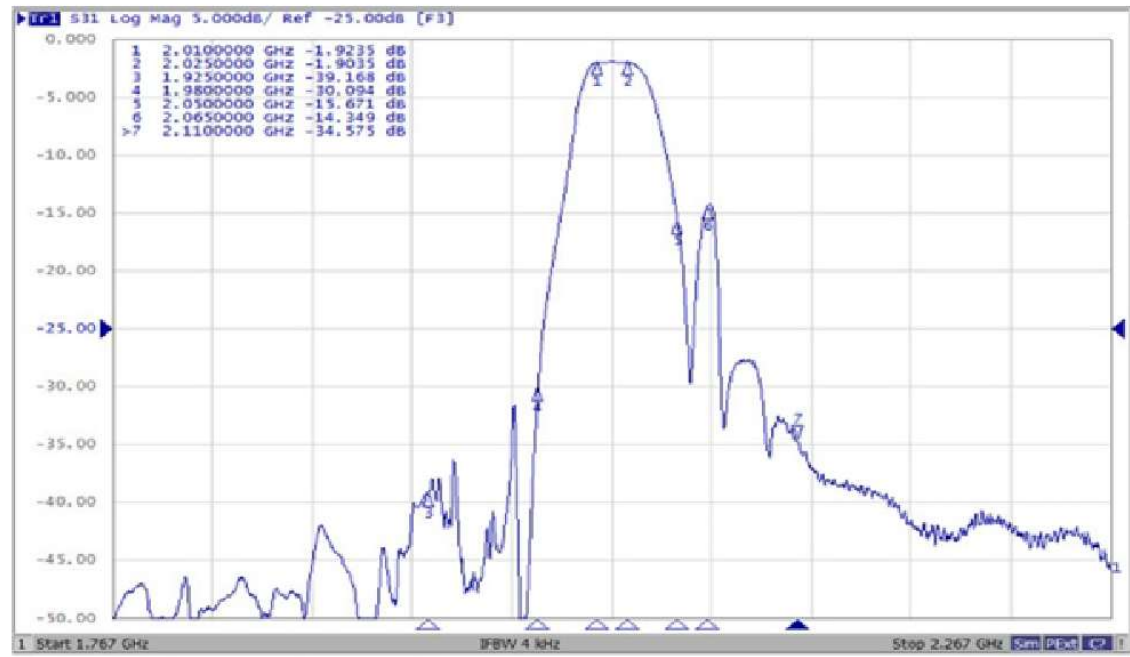
# VSWR(Filter 1) S11 INPUT



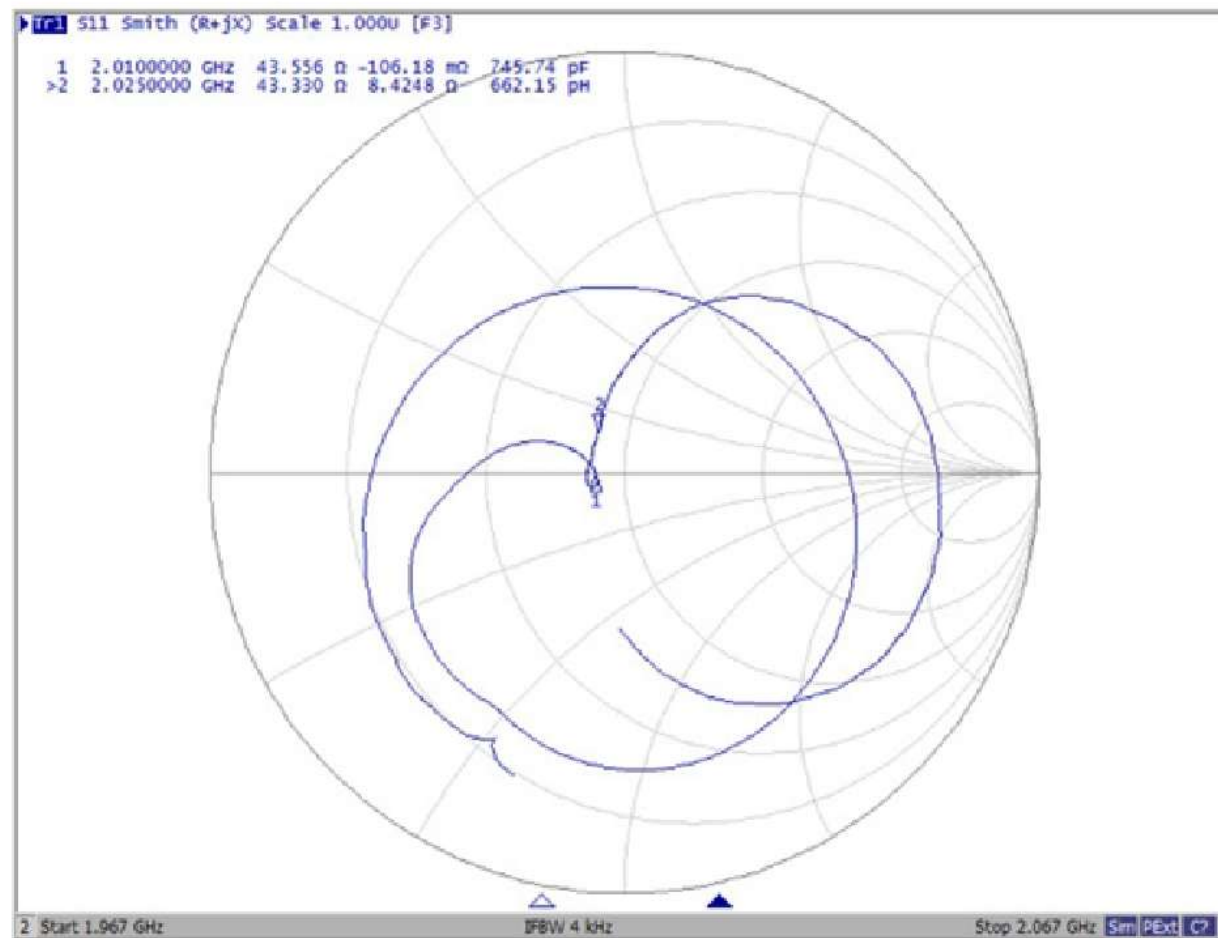
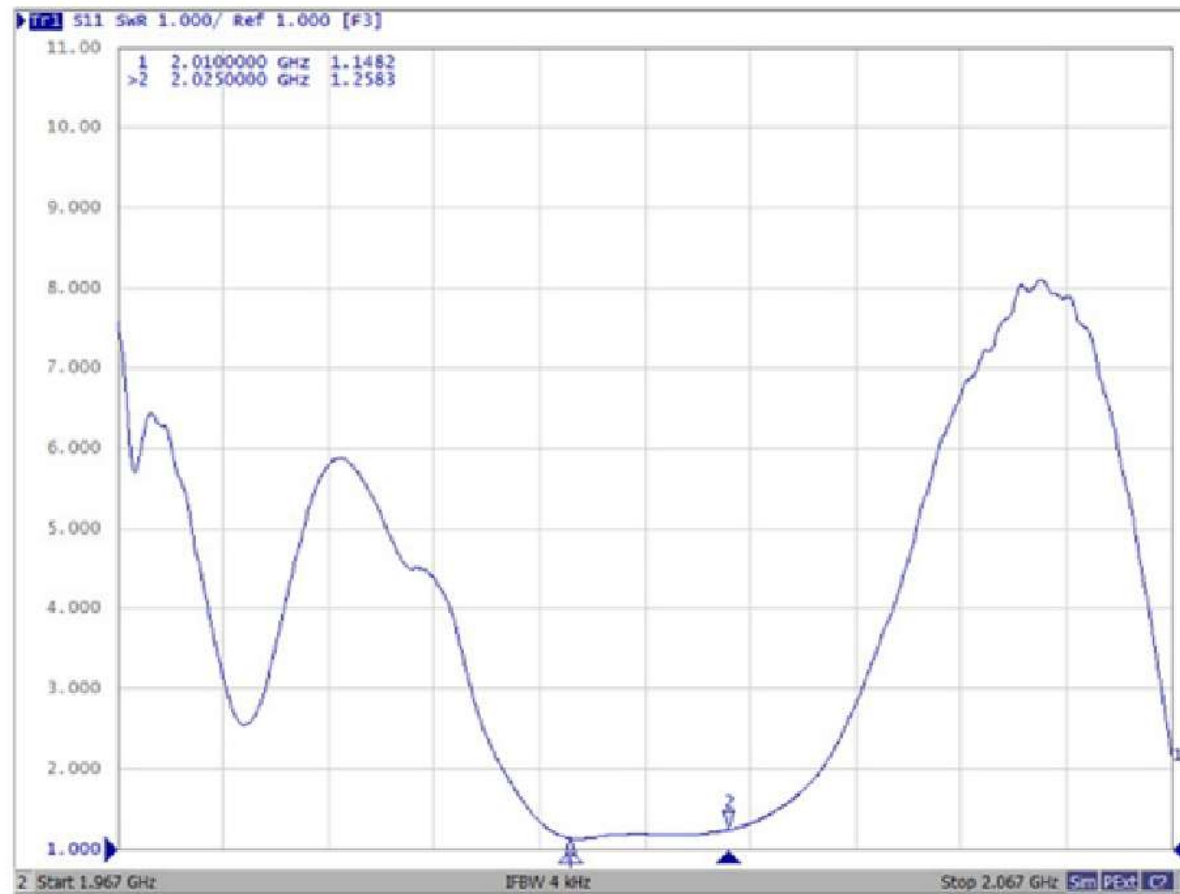
# VSWR(Filter 1) S22 OUTPUT



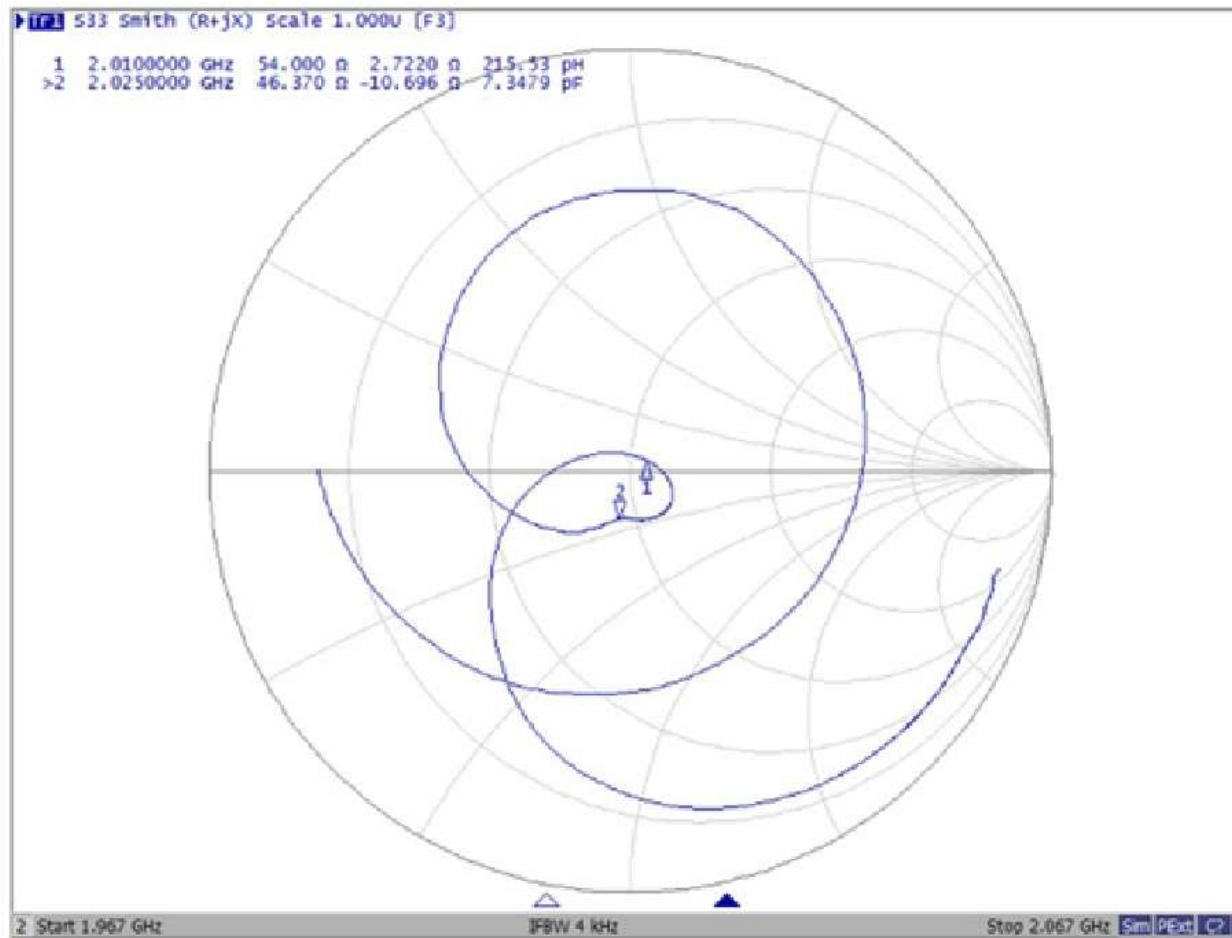
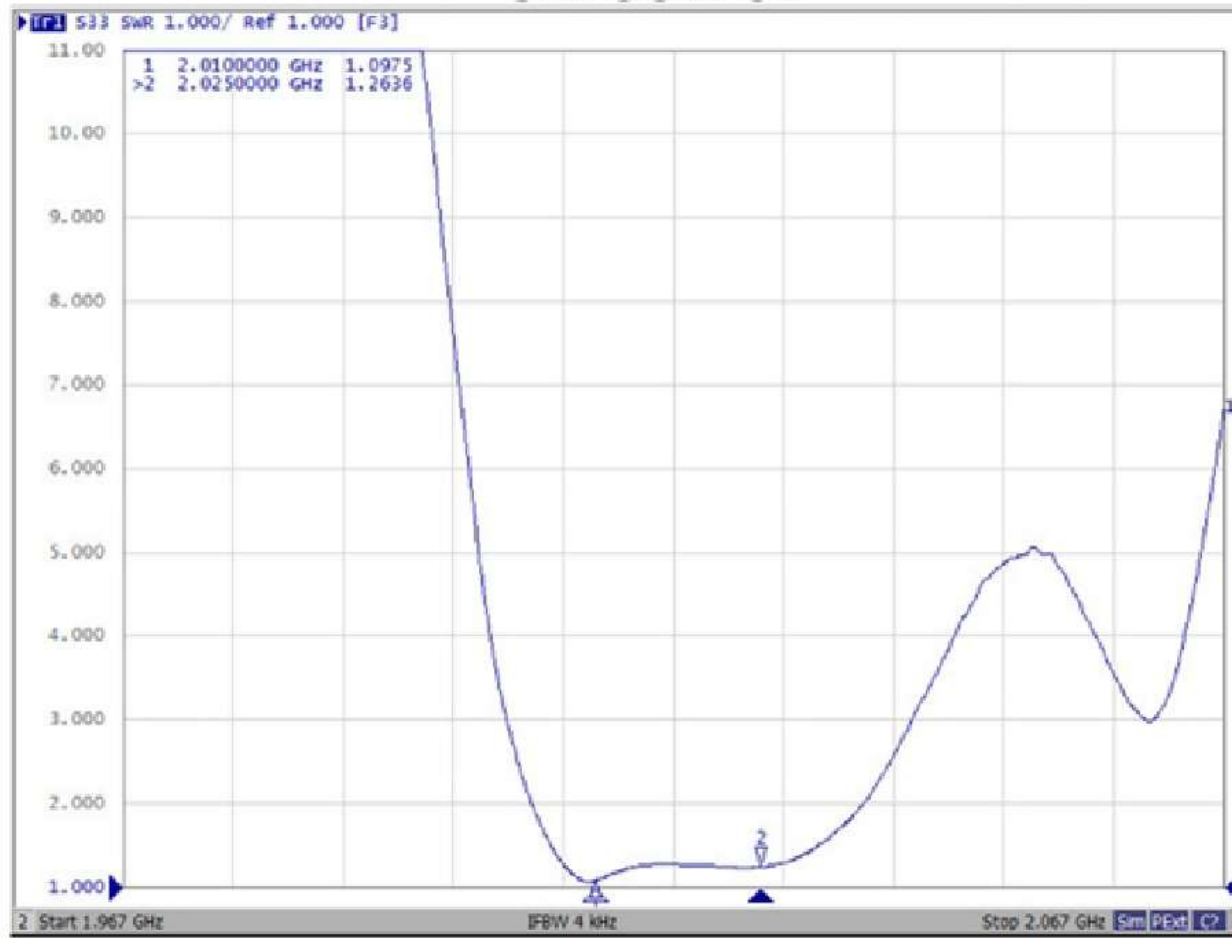
## In-band Characteristics (Filter 2)



## VSWR(Filter 2) S11 INPUT

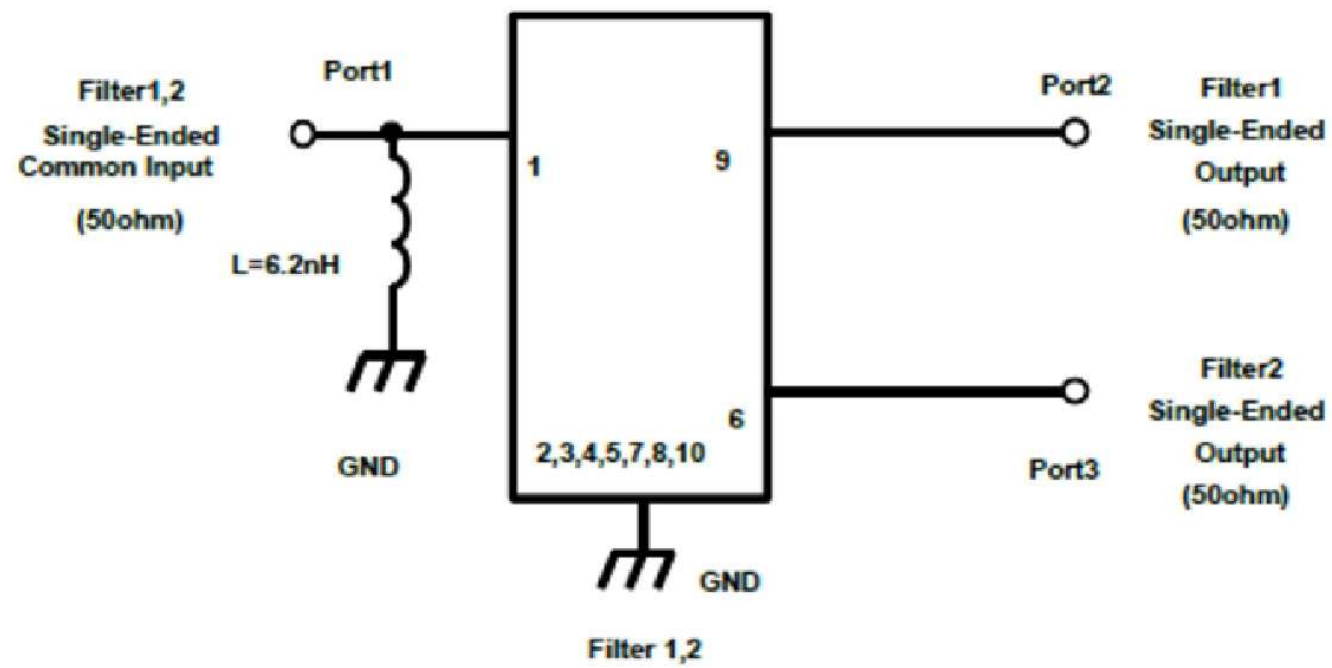


# VSWR(Filter 2) S22 OUTPUT

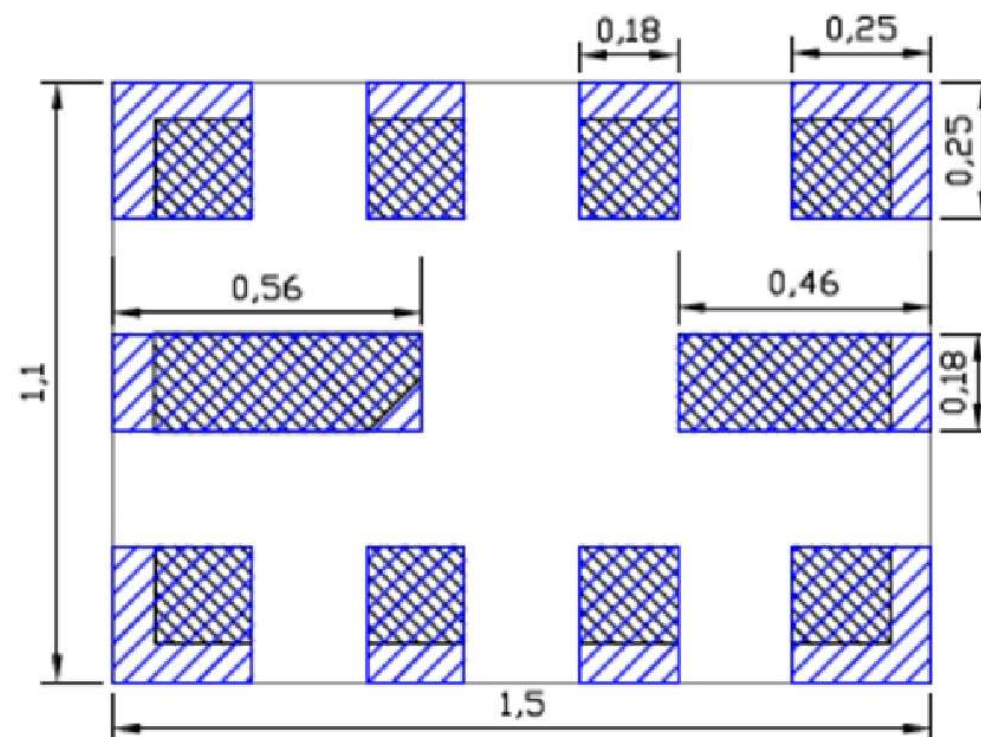




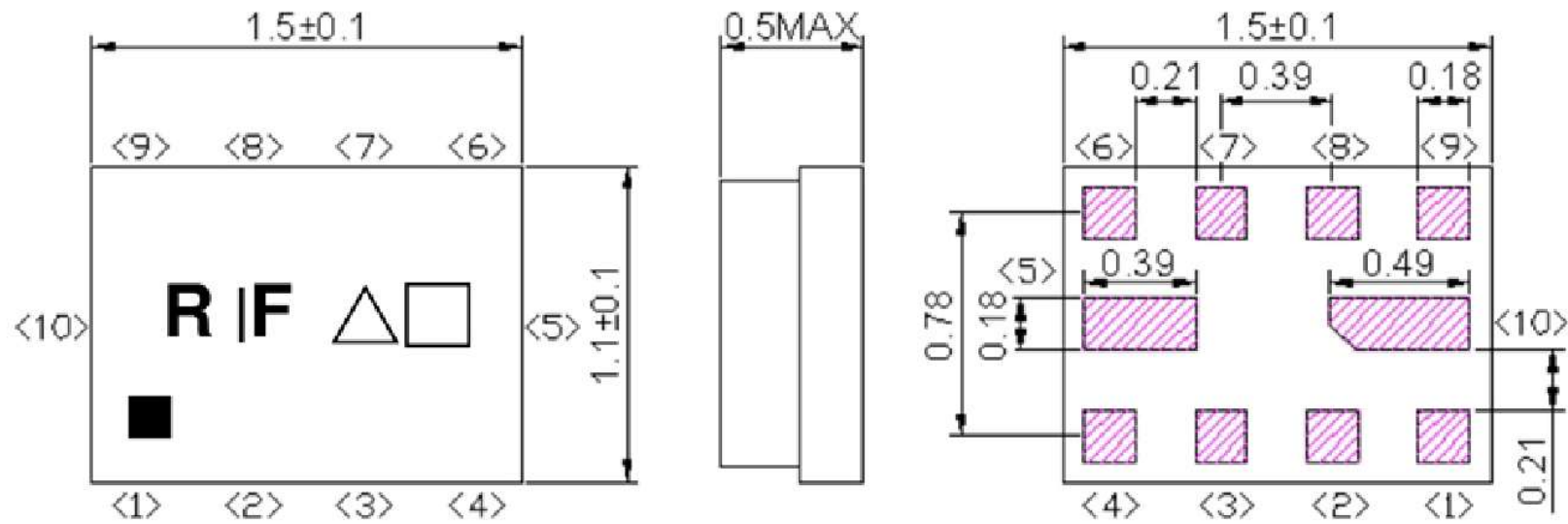
#### D. MEASUREMENT CIRCUIT:



#### D. FOOTPRINT:



**E.OUTLINE DRAWING:**



Not Specified Tolerance :  $\pm 0.10$  mm  
 Coplanarity :  $0.1$  mm max.  
 A to H : Pin No.  
 Unit : mm

Marking name : **RF**

△: Date code( 2016 May → s ,....., 2019 Dec→m.)

□: Lot Code.

Product Date Code. Follow below table. (4-year cycle)

Year	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
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
2021	A	B	C	D	E	F	G	H	J	K	L	M
2022	N	P	Q	R	S	T	U	V	W	X	Y	Z

**Pin Configuration**

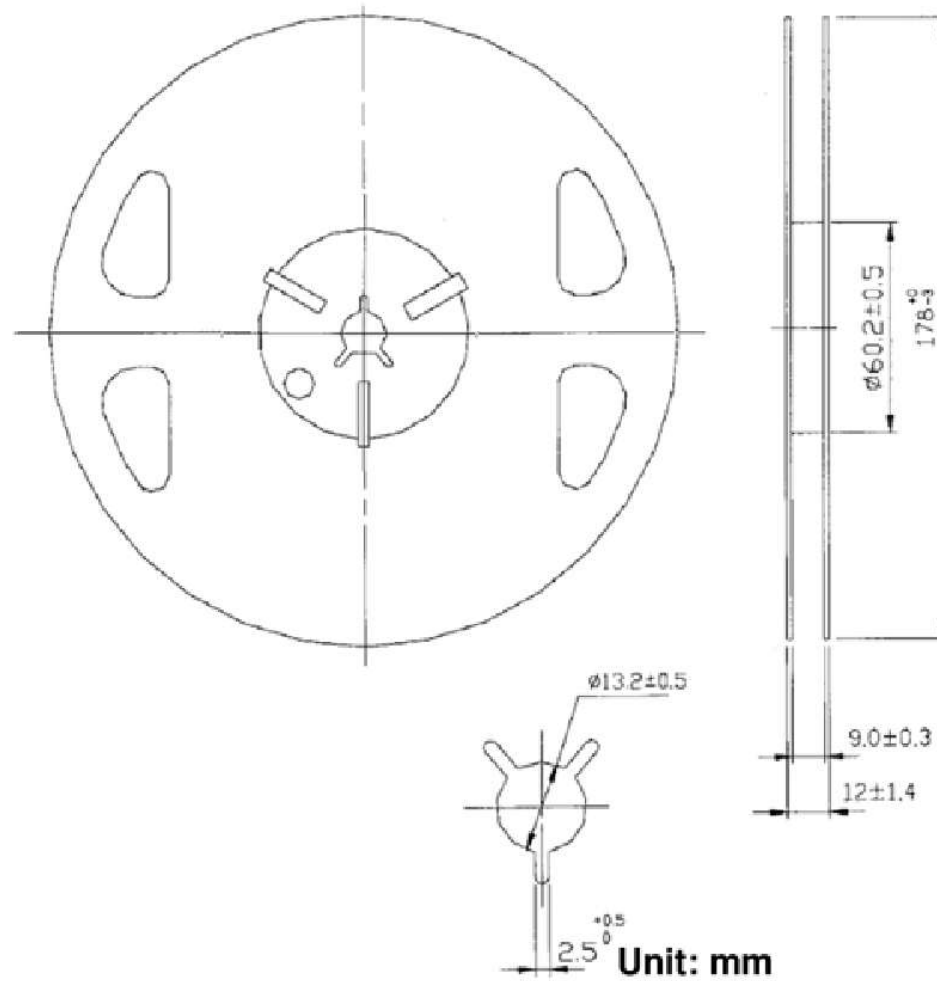
Pin No.	Pin name	Description
1	IN	Filter1,2 input pin
2	GND	Ground
3	GND	Ground
4	GND	Ground
5	GND	Ground
6	OUT	Filter2 output pin
7	GND	Ground
8	GND	Ground
9	OUT	Filter1 output pin
10	GND	Ground

Filter No.	Passband(MHz)	System
1	1880 ~ 1920	Band39
2	2010 ~ 2025	Band34

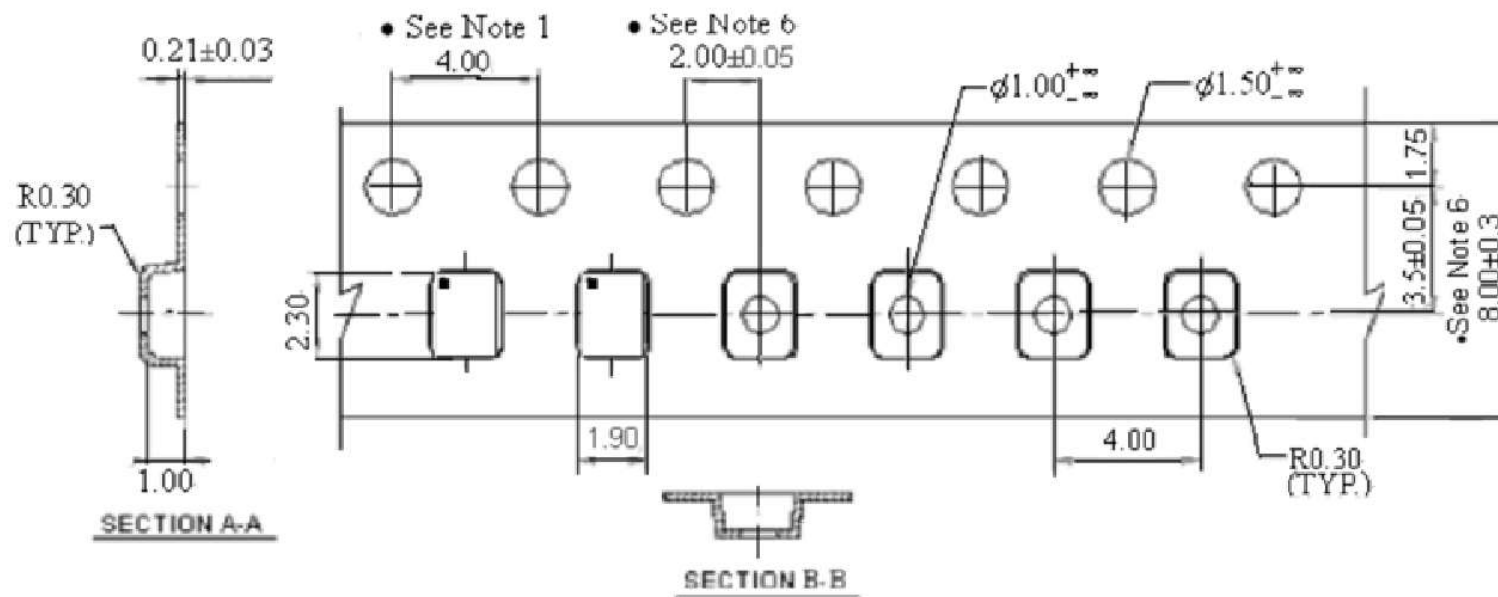
**F. PACKING:**

**1. REEL DIMENSION**

(Please refer to FR-75D10 for packing quantity)



**2. TAPE DIMENSION**



## G. 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.

