



TAI-SAW TECHNOLOGY CO., LTD.

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Product Specifications Approval Sheet

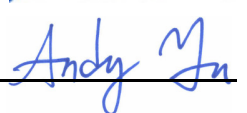
Product Name: Filter 1900 / 2017.5MHz 40/15MHz BW Band39/ Band34 SMD1.5X1.1 mm

TST Parts No.: TE0143B

Customer Part No.: _____

Customer signature required
Company: _____
Division: _____
Approved by : _____
Date: _____

Checked by: _____ Anne Chen 

Approved by: _____ Andy Yu 

Date: _____ 01, 02, 2020

1. Customer signed back is required before TST can proceed with sample build and receive orders.
2. Orders received without customer signed back will be regarded as agreement on the specifications.
3. Any specifications changes must be approved upon by both parties and a new revision of specifications shall be released to reflect the change



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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)

RoHS Compliant

Lead-free soldering

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	-	-	1.7	2.0	
	Output			1.7	2.0	
Attenuation:						
10 ~ 1795 MHz		dB	30	33	-	-
1795 ~ 1820 MHz		dB	25	27	-	-
1820 ~ 1850 MHz		dB	17	25	-	
1950 ~ 1980 MHz		dB	17	24	-	-
1980 ~ 2025 MHz		dB	20	28	-	-
2025 ~ 2400 MHz		dB	30	34	-	-
2400 ~ 2500 MHz		dB	32	38	-	-
2500 ~ 4900 MHz		dB	20	28	-	-
4900 ~ 6000 MHz		dB	20	26	-	-

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

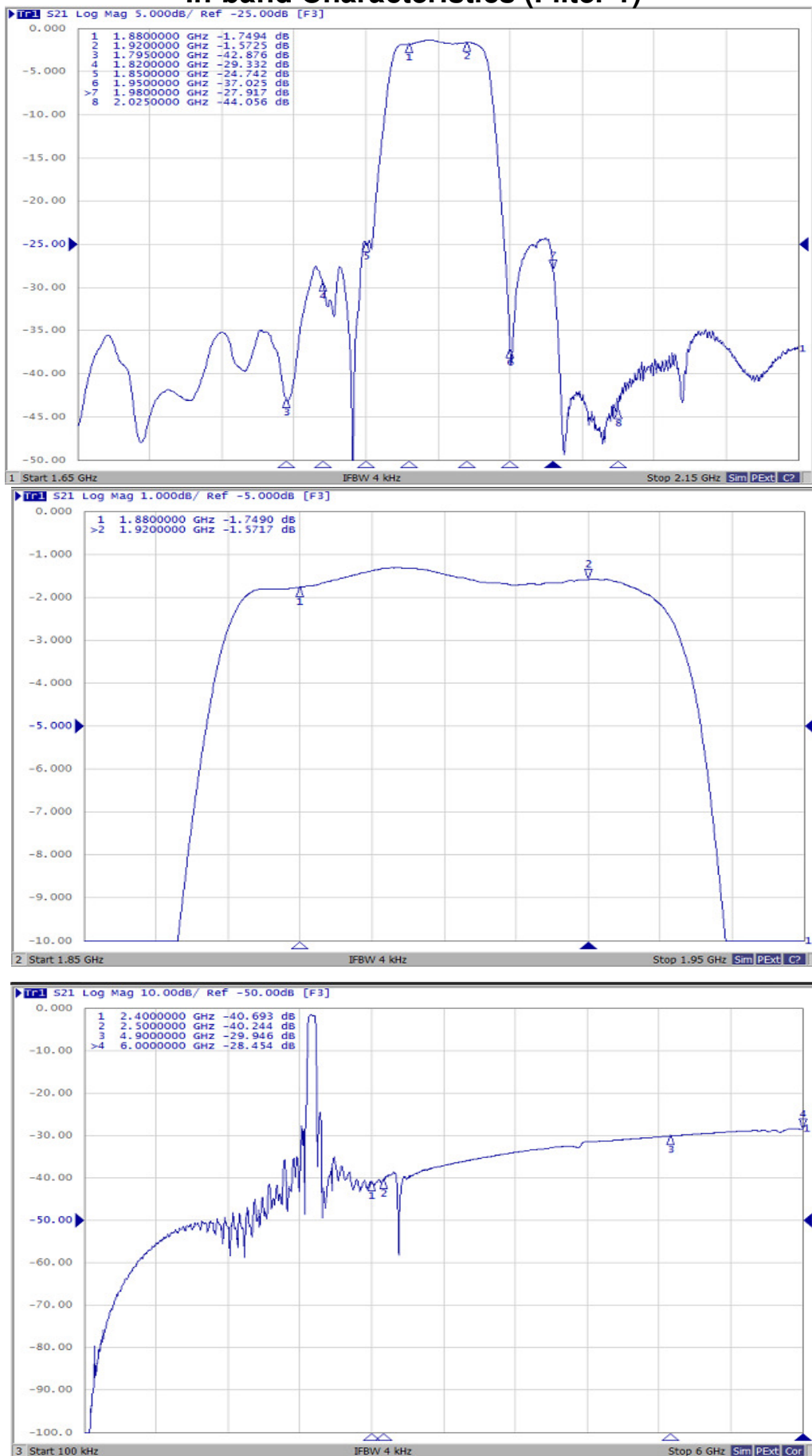
(Filter2)

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	
Attenuation:							
1 ~ 1925 MHz			dB	30	36	-	-
1925 ~ 1980 MHz			dB	18	26	-	-
2050 ~ 2085 MHz			dB	6.5	14	-	-
2085 ~ 2110 MHz			dB	25	27	-	
2110 ~ 2400 MHz			dB	27	34	-	-
2400 ~ 2500 MHz			dB	40	45	-	-
2500 ~ 4900 MHz			dB	30	36	-	-
4900 ~ 6000 MHz			dB	30	35	-	-

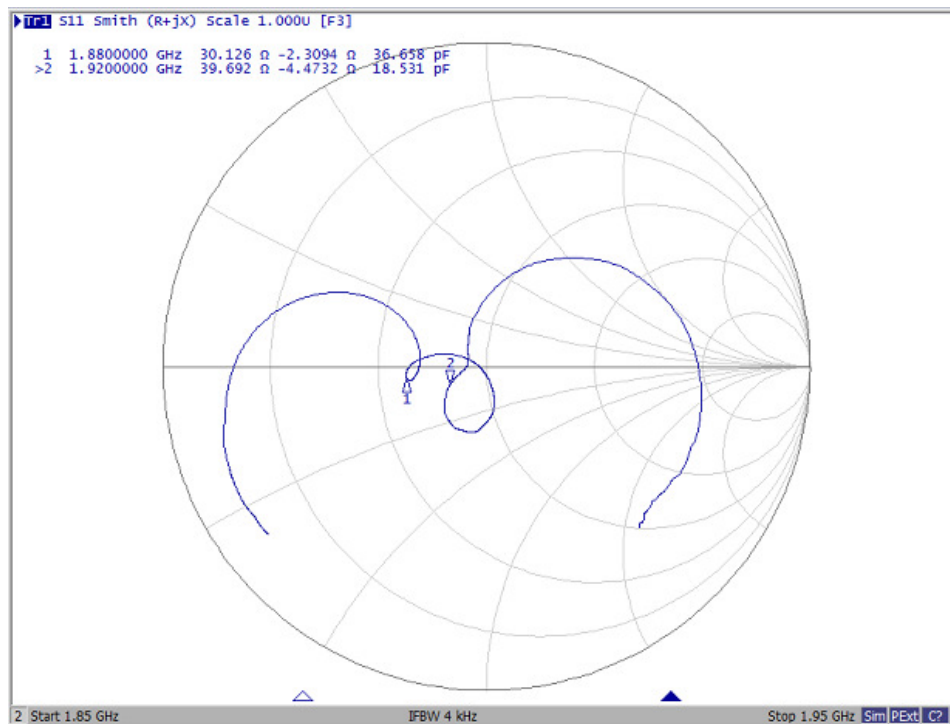
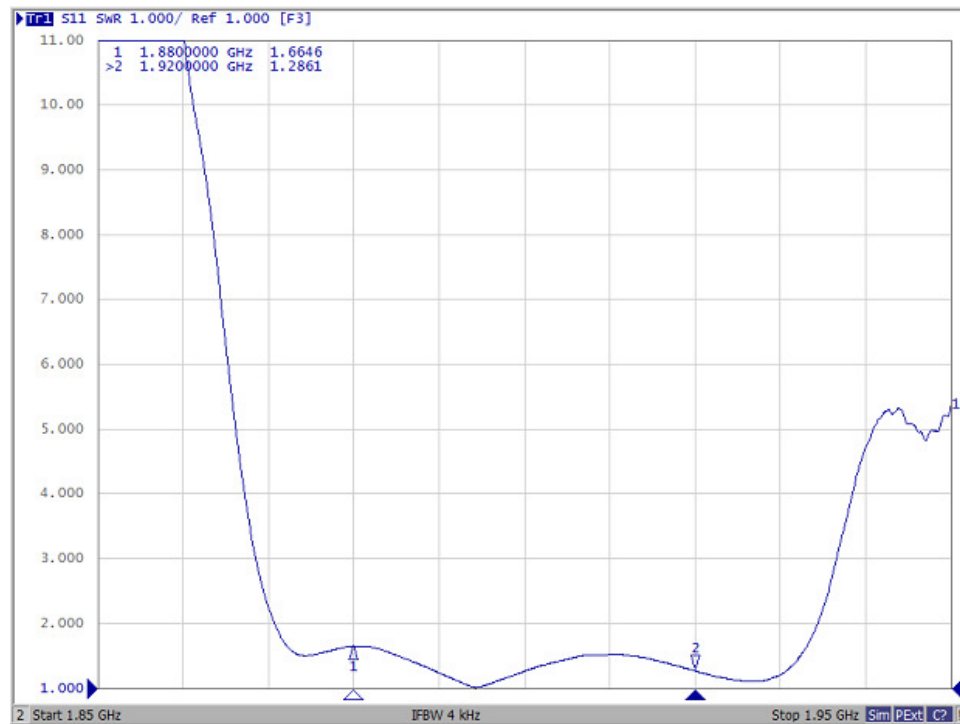
(*1) Specification of insertion loss excludes loss that comes from the test board.

C. Frequency Characteristics:

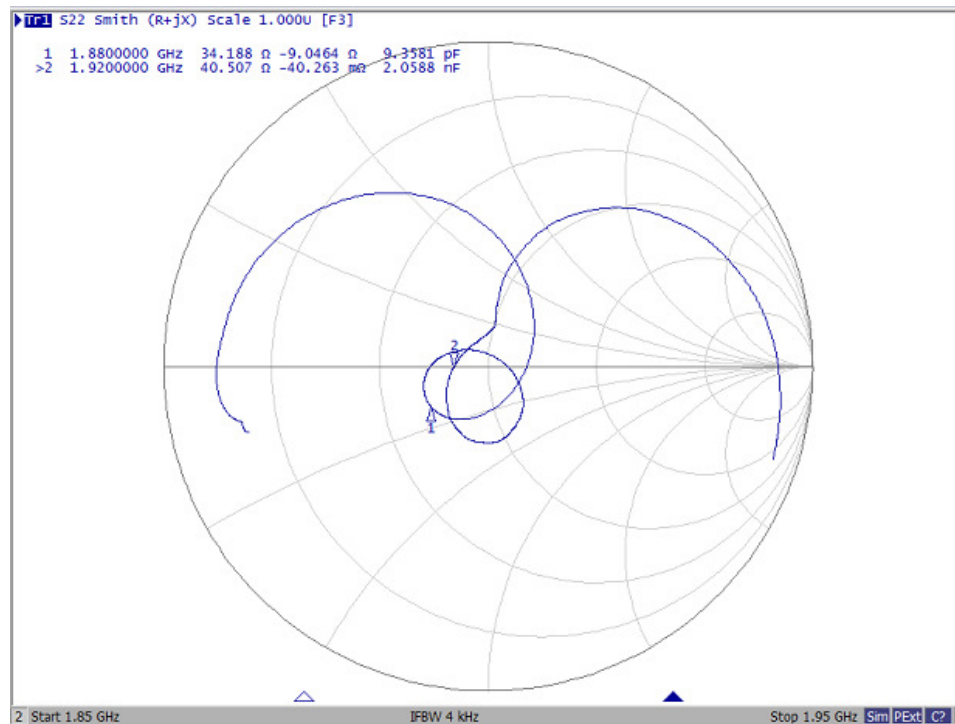
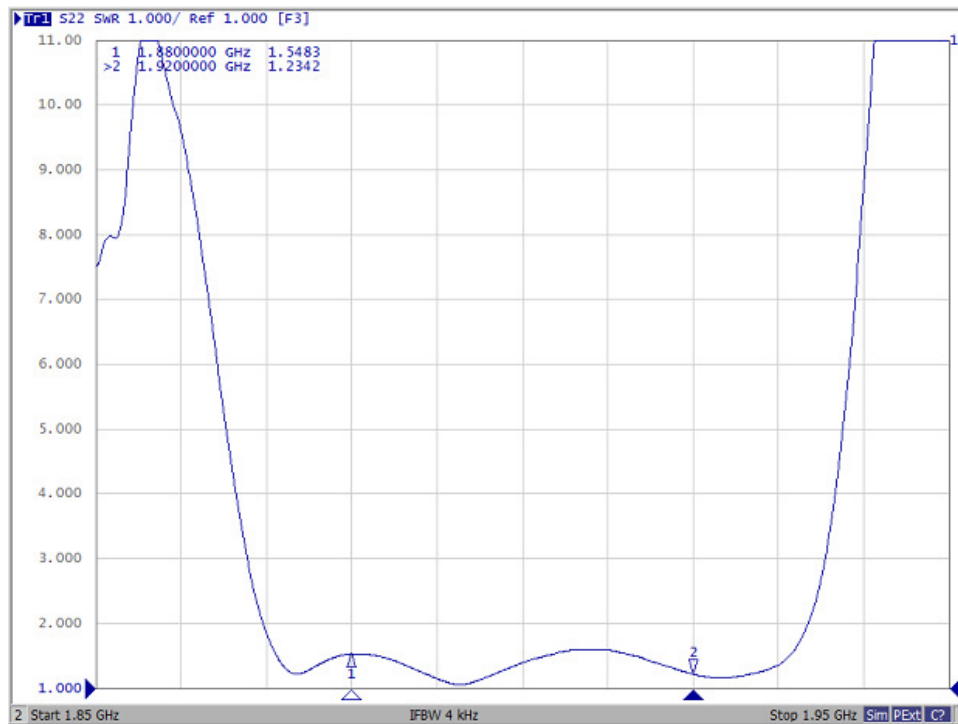
In-band Characteristics (Filter 1)



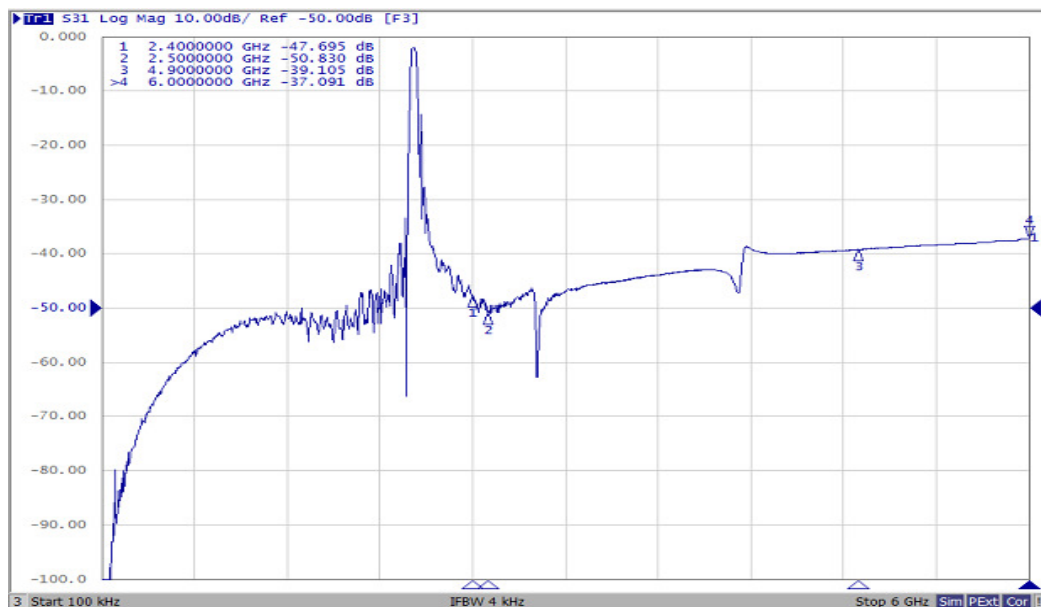
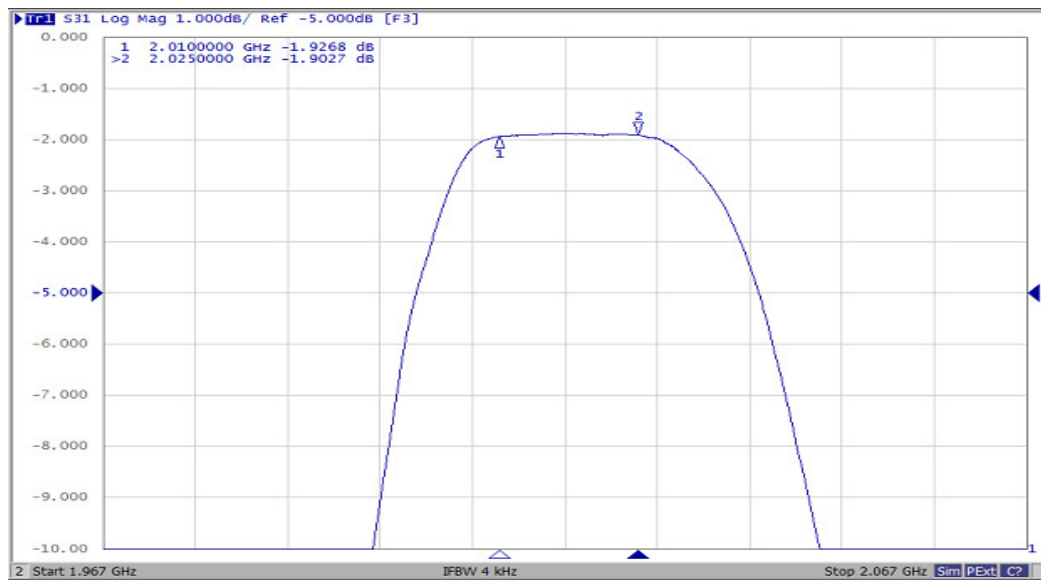
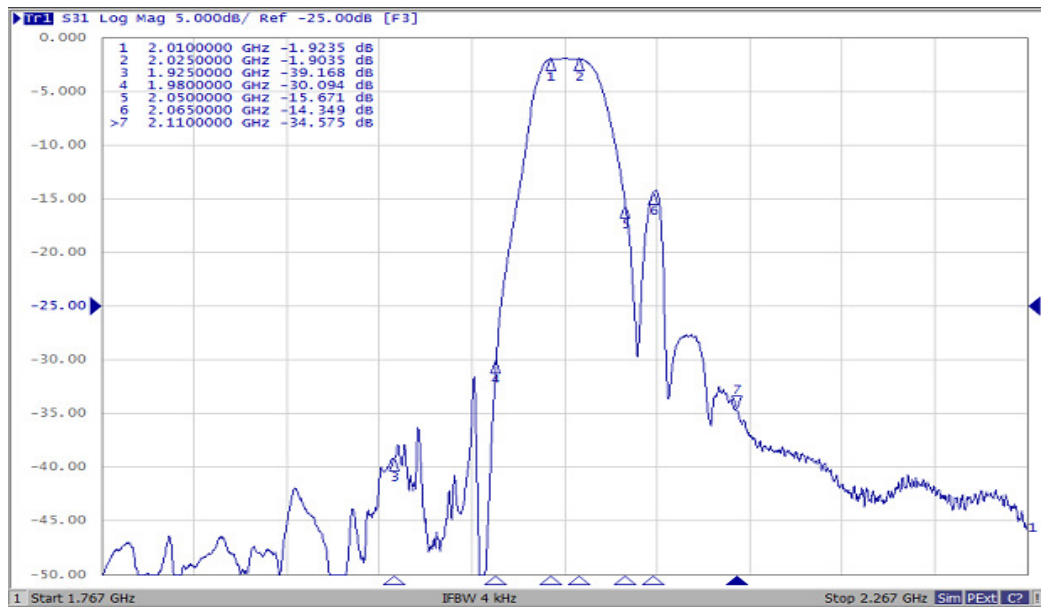
VSWR(Filter 1) S11 INTPUT



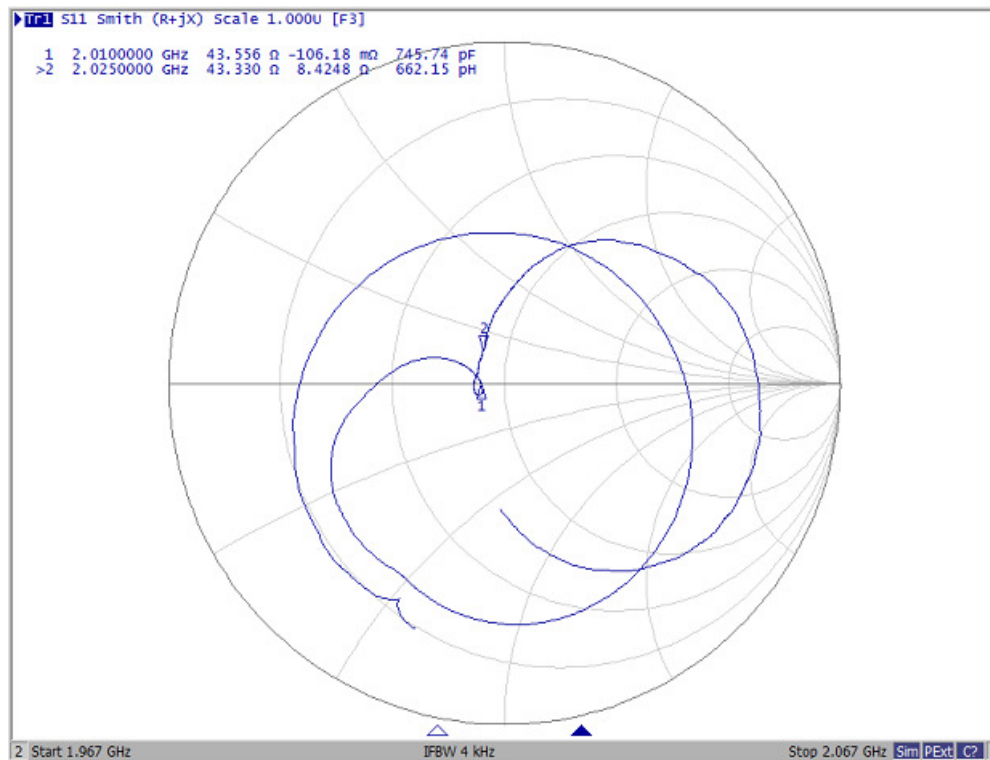
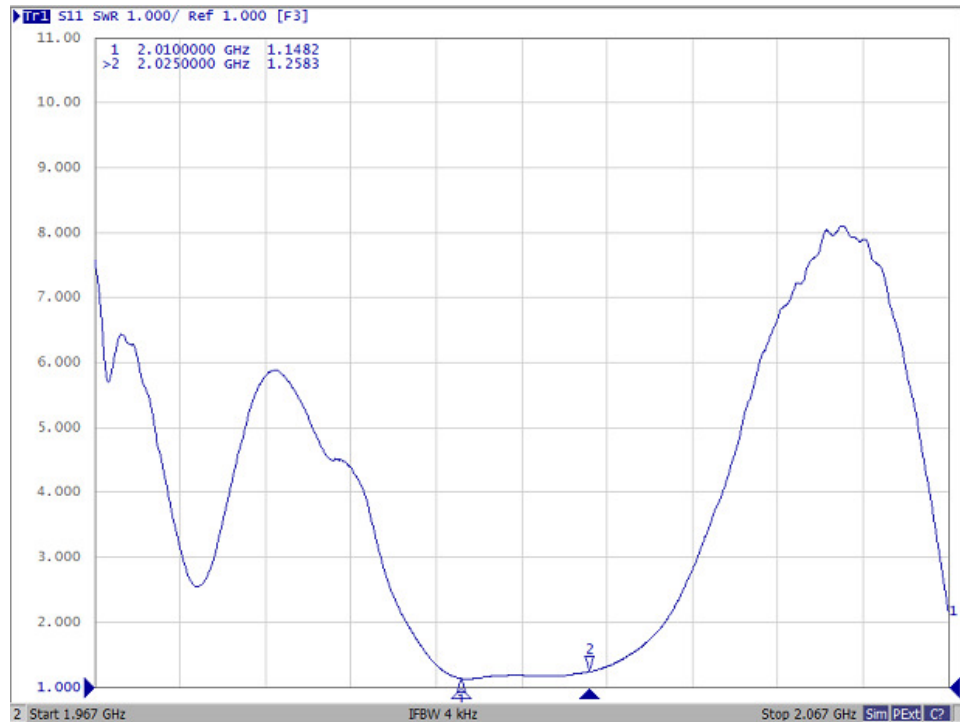
VSWR(Filter 1) S22 OUTPUT



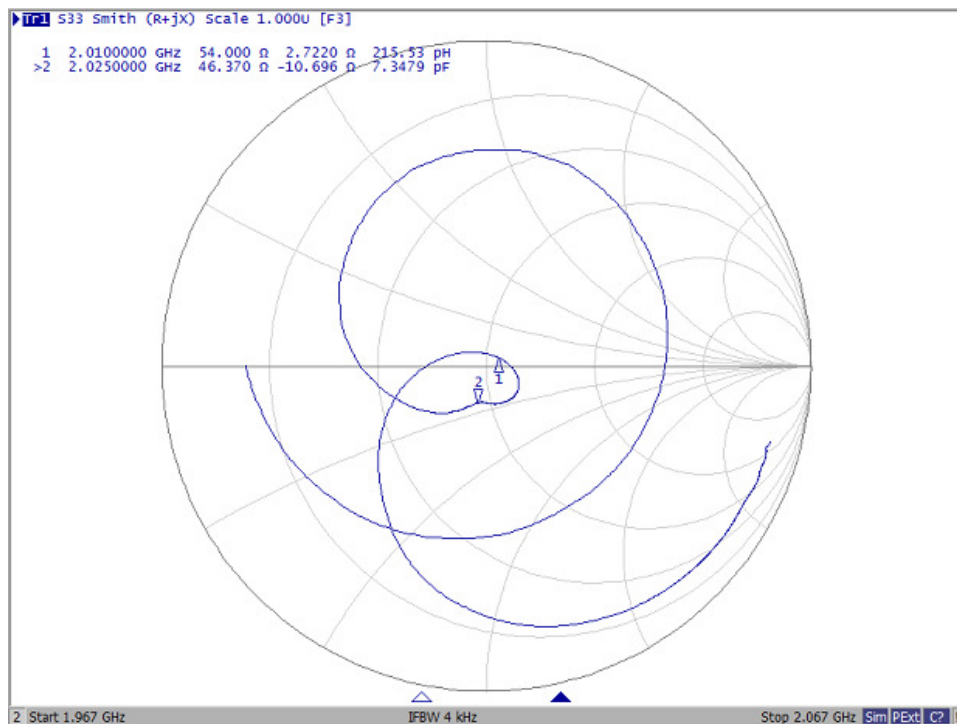
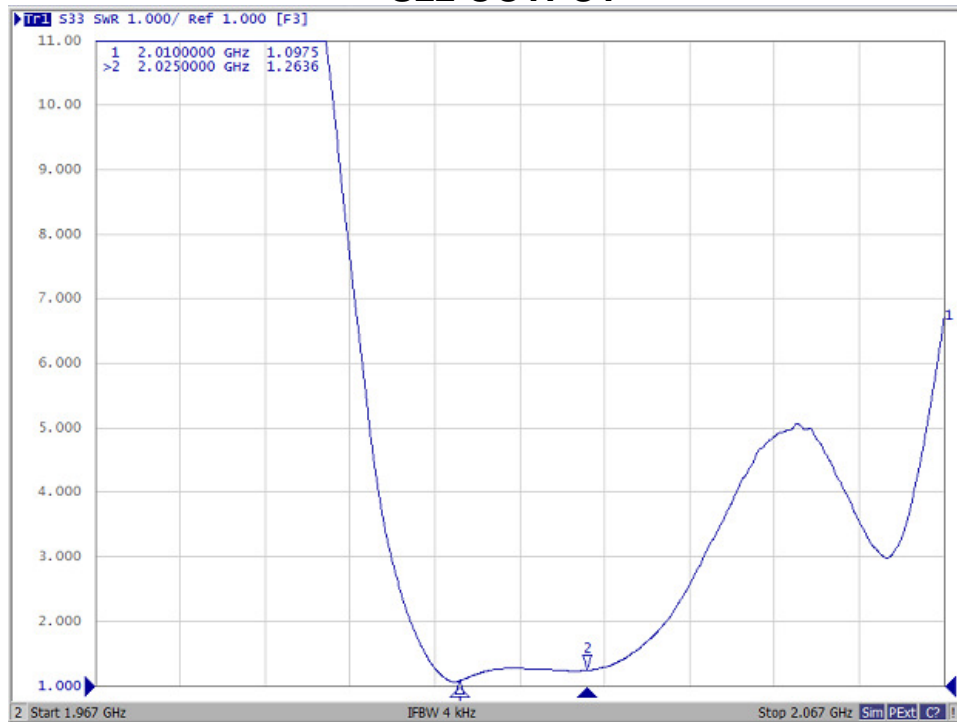
In-band Characteristics (Filter 2)



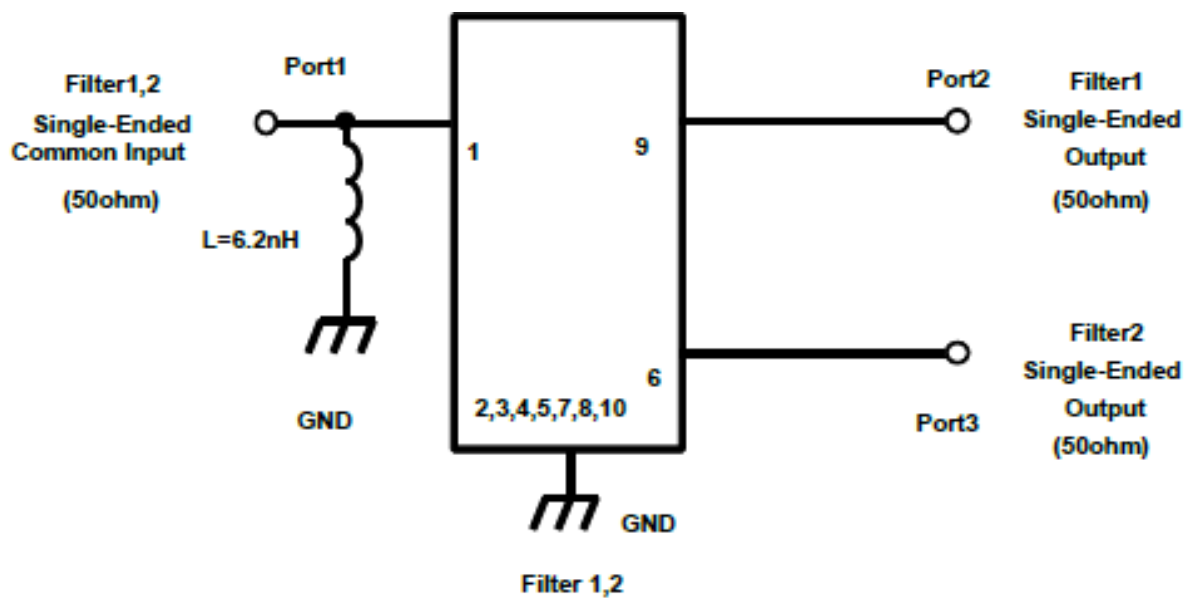
VSWR(Filter 2) S11 INPUT



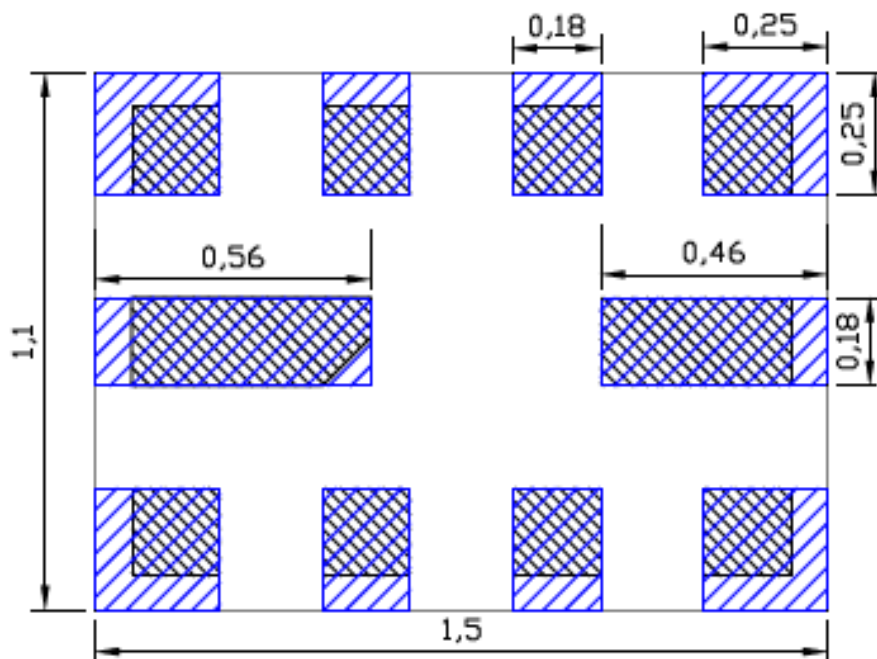
VSWR(Filter 2) S22 OUTPUT



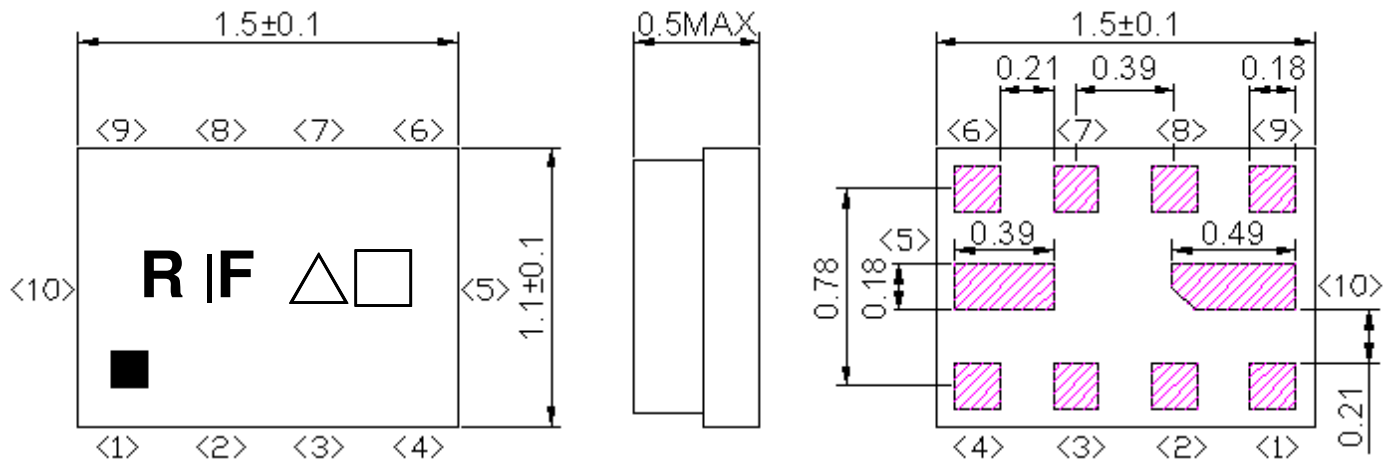
D. MEASUREMENT CIRCUIT:



D. FOOTPRINT:



E.OUTLINE DRAWING:



Not Specified Tolerance : ± 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

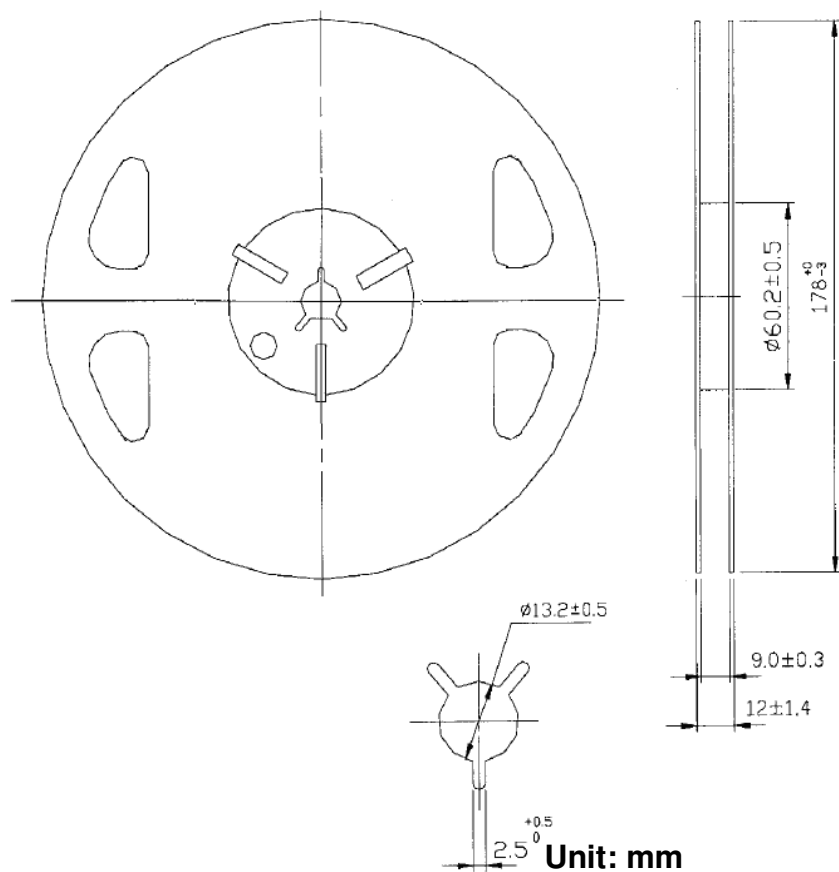
Pin No.	Pin name	Description
1	IN	Filter1,2 input pin
2	GND	Ground
3	GND	Ground
4	GND	Ground
5	GND	Ground
6	OUT	Filter2 output pin
7	GND	Ground
8	GND	Ground
9	OUT	Filter1 output pin
10	GND	Ground

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

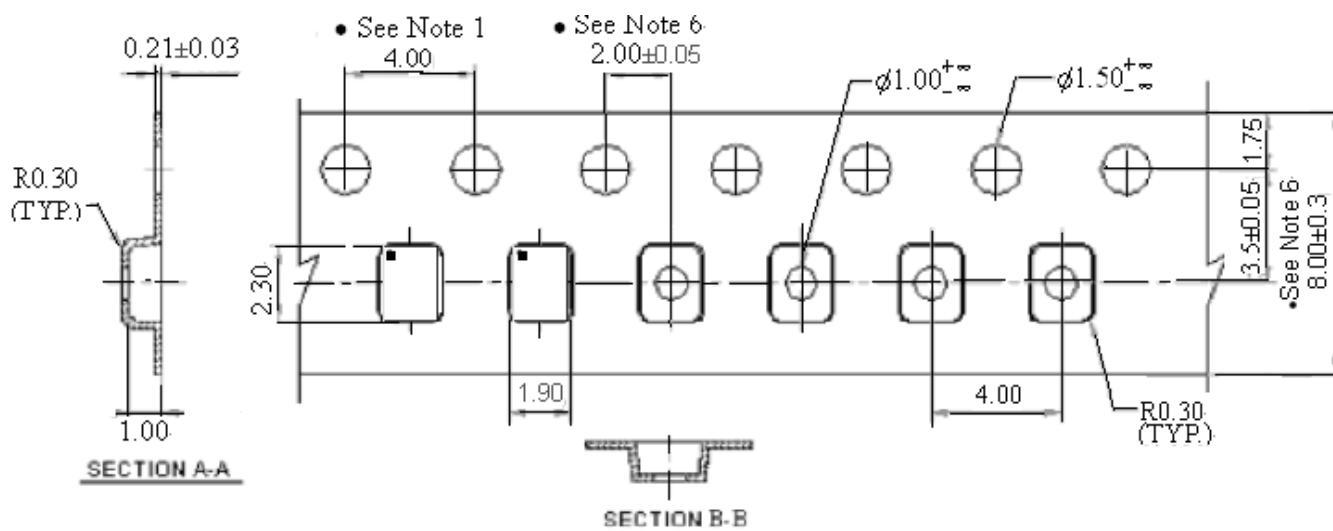
F. PACKING:

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.

