TAI-SAW TECHNOLOGY CO., LTD.
No. 3, Industrial 2nd Rd., Ping-Chen Industrial District,
Taoyuan, 324, Taiwan, R.O.C.
TEL: 886-3-4690038 FAX: 886-3-4697532
E-mail: tstsales@mail.taisaw.com Web: www.taisaw.com

Product Specifications Approval Sheet

Product Name: Filter 1842.5 / 2140MHz 75/60MHz BW Band3/ Band1 Rx SMD1.5X1.1 mm

TST Parts No.: TE0155A

Customer Part No.:_____

Customer signature required

Company:_____

Division:_____

Approved by :_____

Date:_____

Checked by:_____ Anne Chen

Approved by:_____ Andy Yu

Date:_____ 2020 , 10 , 12

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 1842.5/2140MHz 75/60MHz BW Band3/ Band1 Rx SMD1.5X1.1 mm

MODEL NO.: TE0155A REV. No.: 2.0

A. MAXIMUM RATING:

1. Input power : 10dBm
2. Maximum DC Voltage: 5V
3. Operating temperature range: -30 ℃ to +85 ℃
4. Storage temperature range: -30 ℃ to +85 ℃
5. Moisture Sensitivity Level: Level 1 (MSL 1)
6. ESD 50V(MM) 100V(HBM)

RoHS Compliant

Lead-free soldering

Electrostatic **S**ensitive **D**evice (**ESD**)

B. ELECTRICAL CHARACTERISTICS:

(Filter1) (f_{T0}=1842.5 MHz)

Parameters Description			Unit	Minimum	Typical	Maximum	Note
Insertion Loss(*1)		1805~ 1880 MHz	dB	-	2.4	3.6	
Ripple		1805~ 1880 MHz	dB		0.8	2.0	
VSWR	Input	1805~ 1880 MHz	-	-	1.6	2.0	
	Output		-	-	1.9	2.3	
Attenuation:							
1 ~ 1710 MHz			dB	15	24	-	-
95 MHz			dB	50	89	-	-
824 ~ 849 MHz			dB	39	52	-	-
832 ~ 862 MHz			dB	38	52	-	-
880 ~ 915 MHz			dB	37	50	-	-
1615 ~ 1690 MHz			dB	15	24	-	-
1710 ~ 1785 MHz			dB	15	34	-	-
			dB	28	-	-	@ 23 to 27 ° C
1712.5 ~ 1782.5 MHz			dB	20	35	-	-
1785 ~ 1790 MHz			dB	1	25	-	-
1920 ~ 1980 MHz			dB	34	37	-	-
1920 ~ 6000 MHz			dB	12	27	-	-
2400 ~ 2500 MHz			dB	32	48	-	-
2500 ~ 2570 MHz			dB	28	47	-	-
3515 ~ 3610 MHz			dB	28	42	-	-
3610 ~ 3760 MHz			dB	28	42	-	-
3760 ~ 6000 MHz			dB	12	27	-	-

4900 ~ 5950 MHz	dB	12	28	-	-
5225 ~ 5415 MHz	dB	18	35	-	-
5415 ~ 5640 MHz	dB	14	32	-	-

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

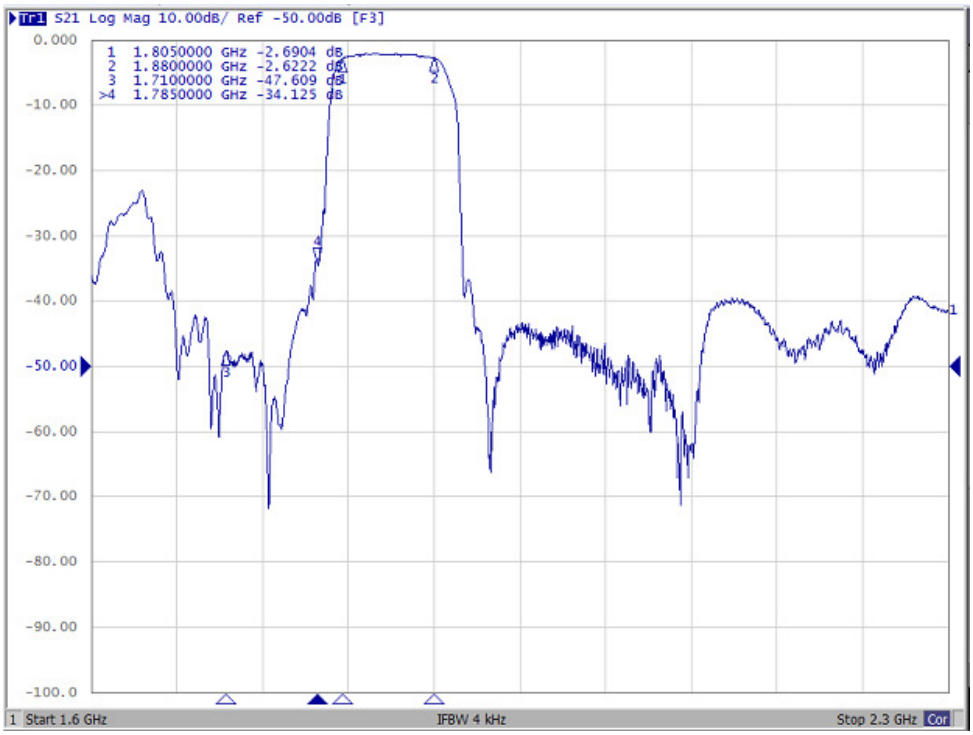
(Filter2) (f_{T0}=2140 MHz)

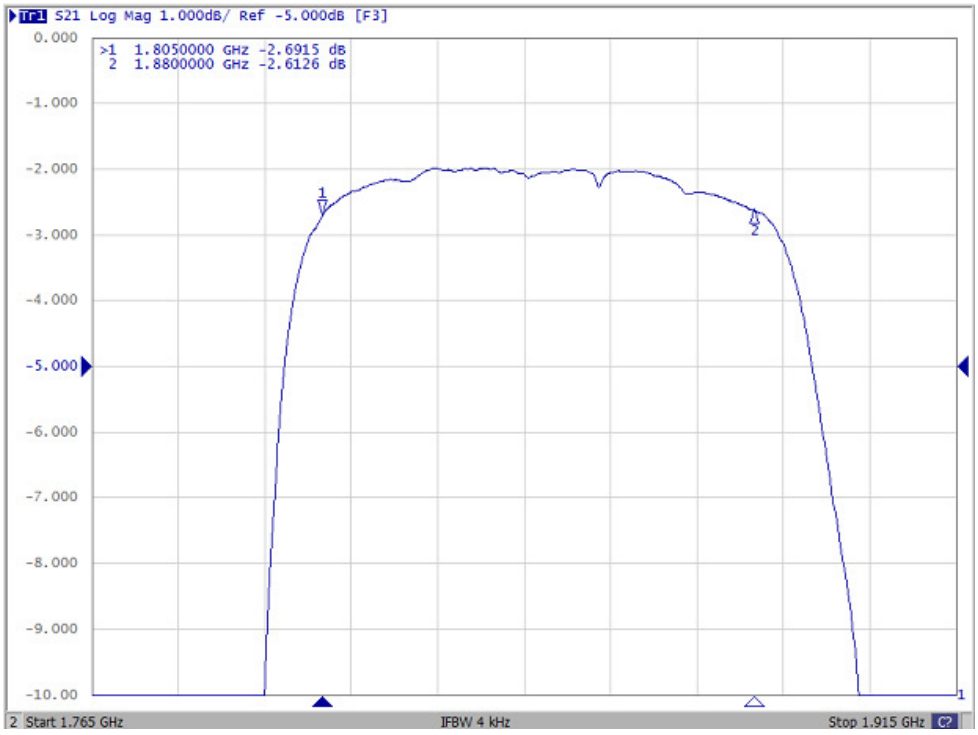
Parameters Description			**Unit**	**Minimum**	**Typical**	**Maximum**	**Note**
Insertion Loss**(*1)**		2110 ~ 2170 MHz	dB	-	2.4	3.0	
Ripple		2110 ~ 2170 MHz	dB	-	0.7	1.8	
VSWR	Input	2110 ~ 2170 MHz	-	-	1.7	2.2	
	Output		-	-	1.8	2.2	
Attenuation:							
10 ~ 1920 MHz			dB	24	34	-	-
190 MHz			dB	50	82	-	-
400 MHz			dB	50	69	-	-
699 ~ 716 MHz			dB	48	59	-	
777 ~ 787 MHz			dB	40	56	-	-
810 ~ 830 MHz			dB	45	56	-	-
814 ~ 849 MHz			dB	40	56	-	-
824 ~ 849 MHz			dB	44	56	-	-
880 ~ 915 MHz			dB	40	54		
898 ~ 925 MHz			dB	43	54		
1710 ~ 1785 MHz			dB	35	40	-	-
1730 ~ 1920 MHz			dB	28	35	-	-
1920 ~ 1980 MHz			dB	35	38	-	-
2015 ~ 2075 MHz			dB	10	14	-	
2185 ~ 6000 MHz			dB	1	3	-	-
2400 ~ 2500 MHz			dB	33	42	-	-
4030 ~ 4150 MHz			dB	26	36	-	-
4220 ~ 4340 MHz			dB	26	35	-	-
4340 ~ 6000 MHz			dB	15	23		
4900 ~ 5950 MHz			dB	15	24		

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

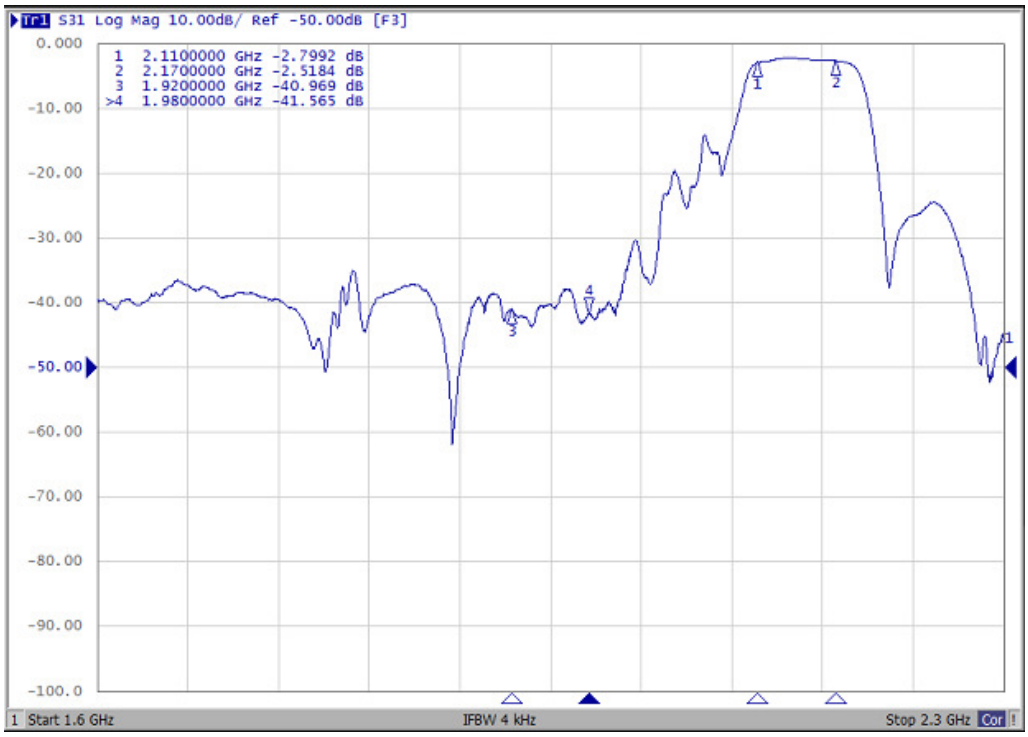
C. Frequency Characteristics:

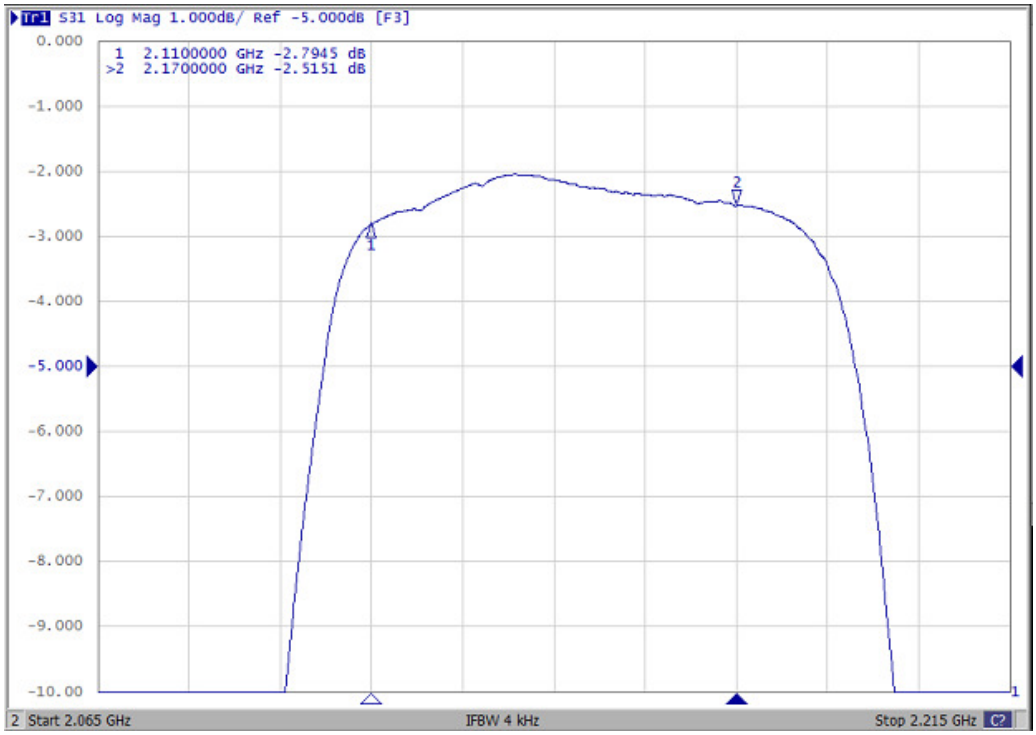
Passband (Filter1)



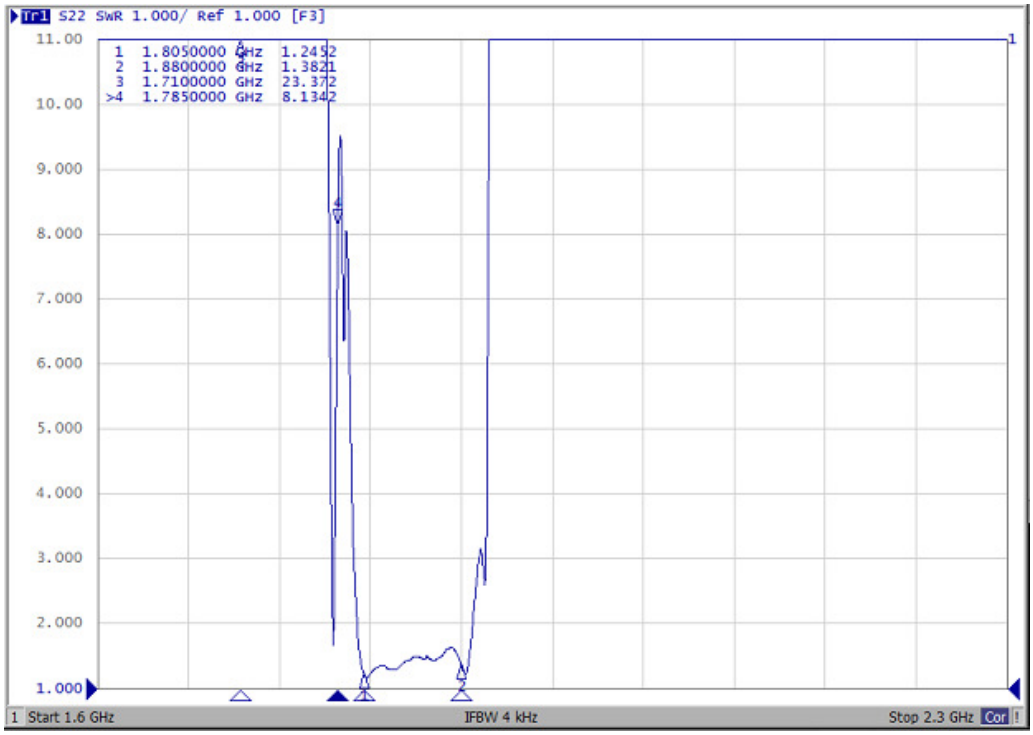


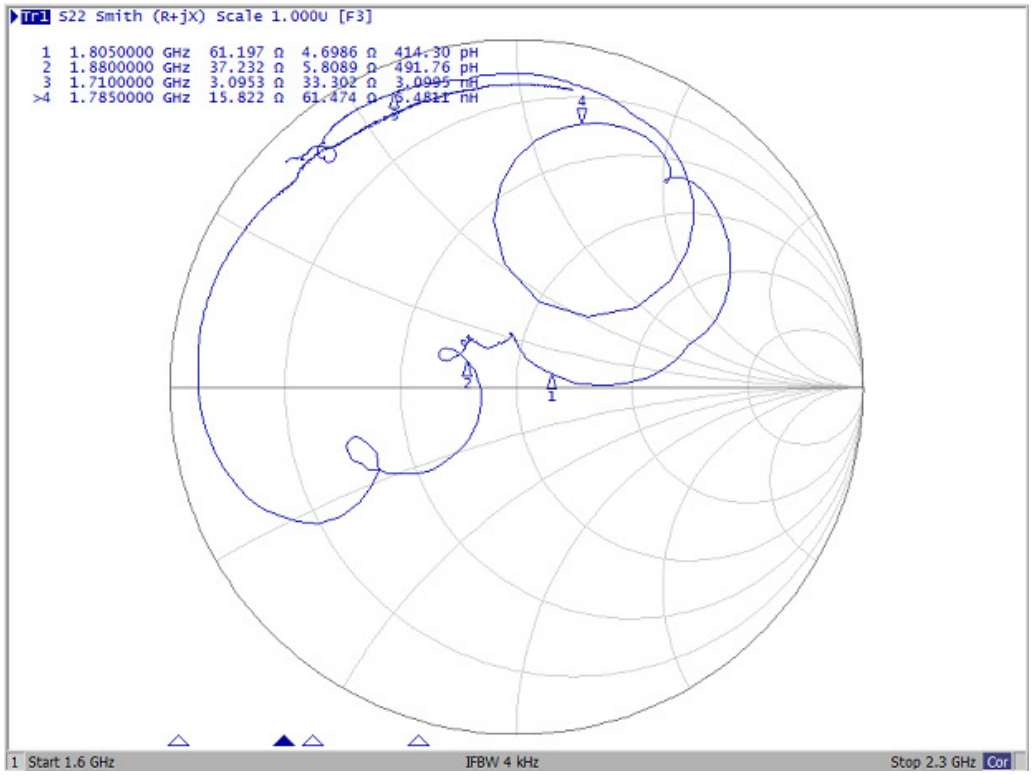
Passband (Filter2)



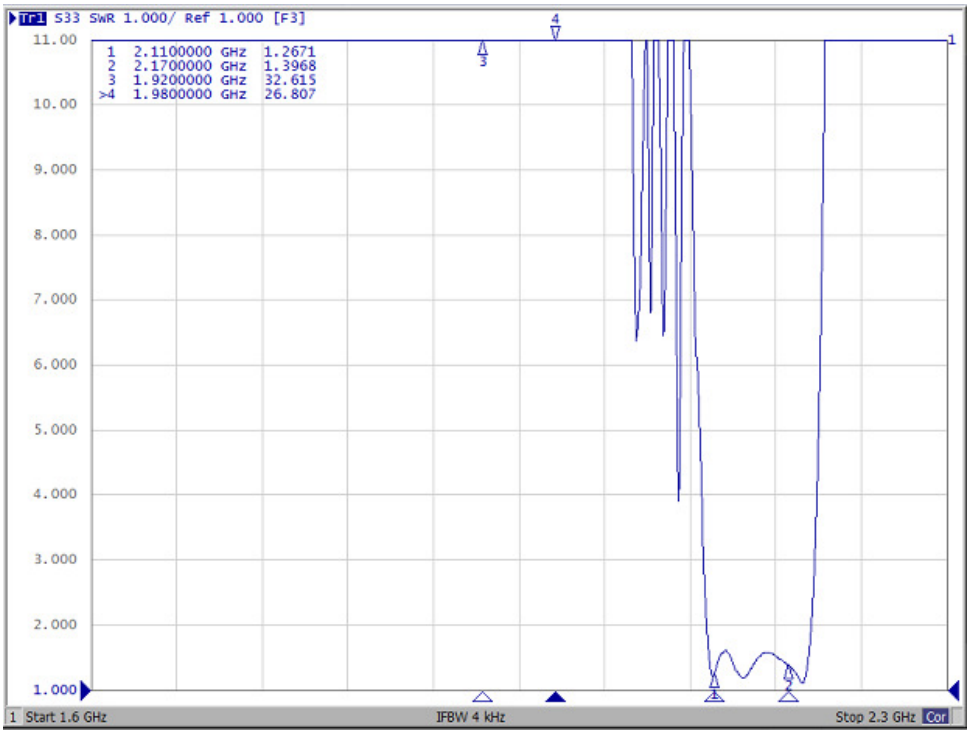


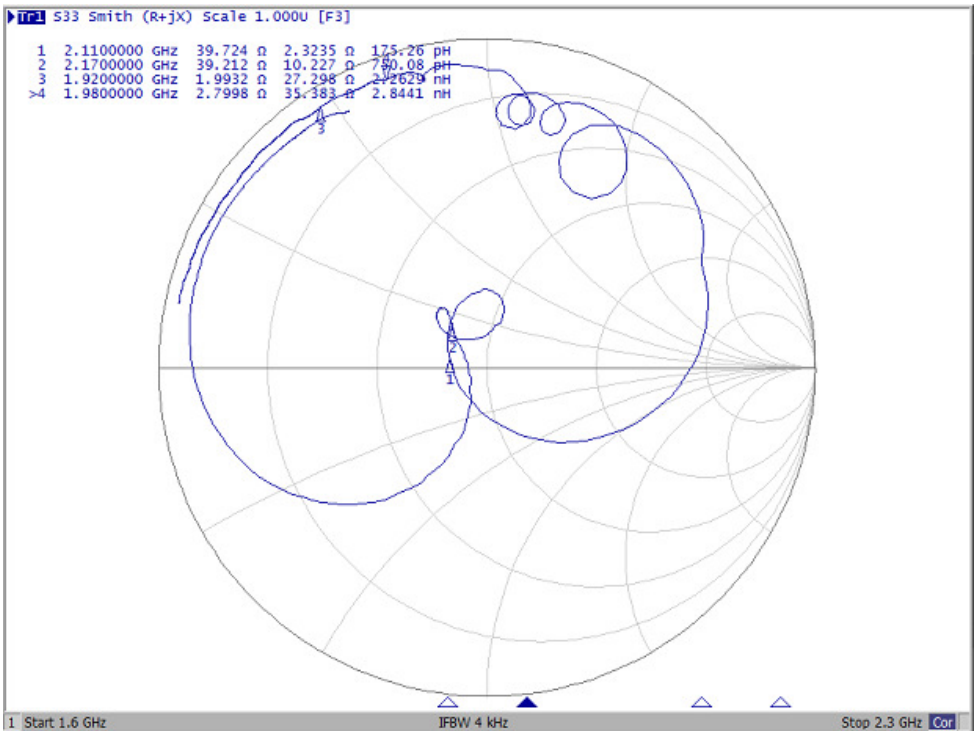
Output Port (Filter1)



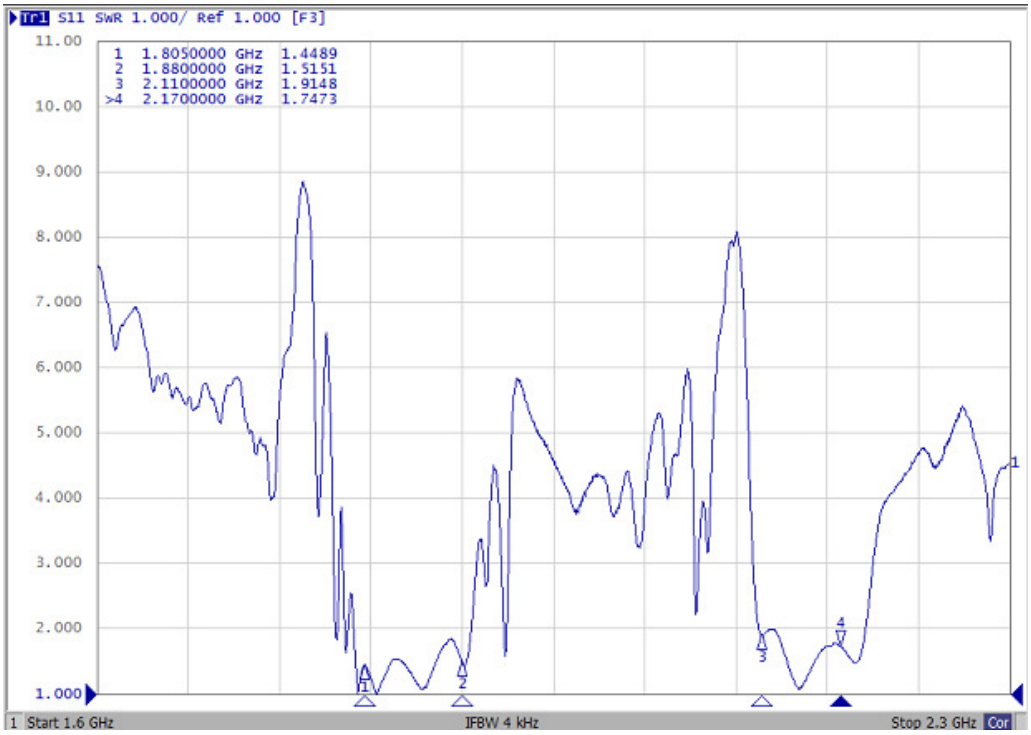


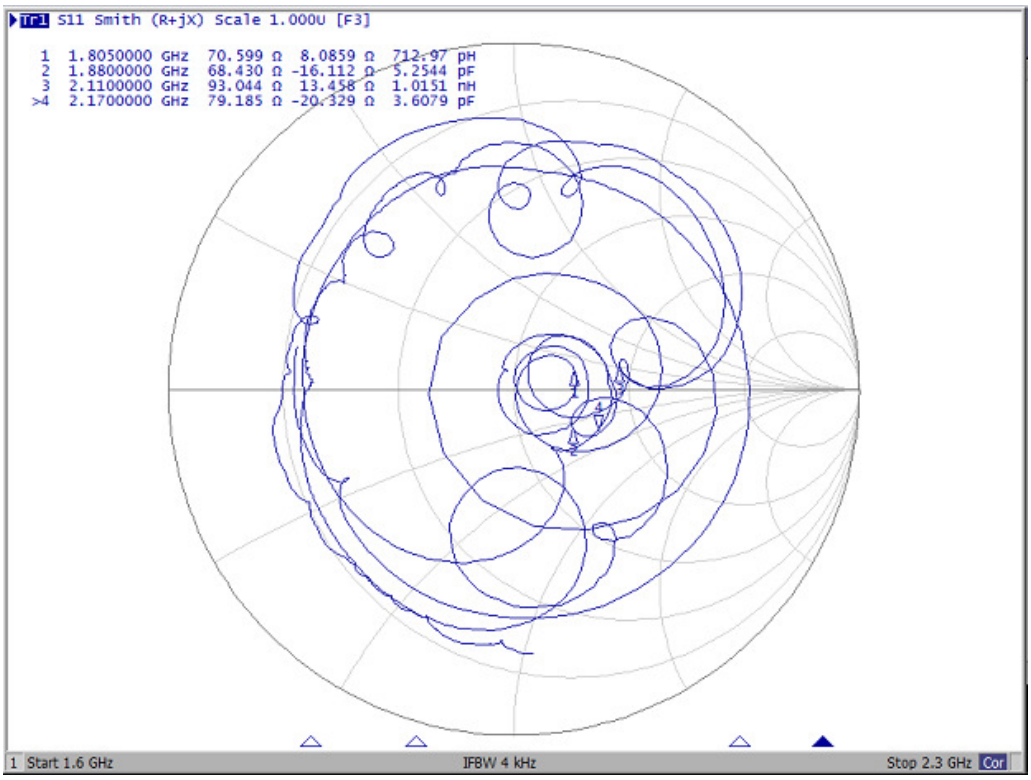
Output Port (Filter2)



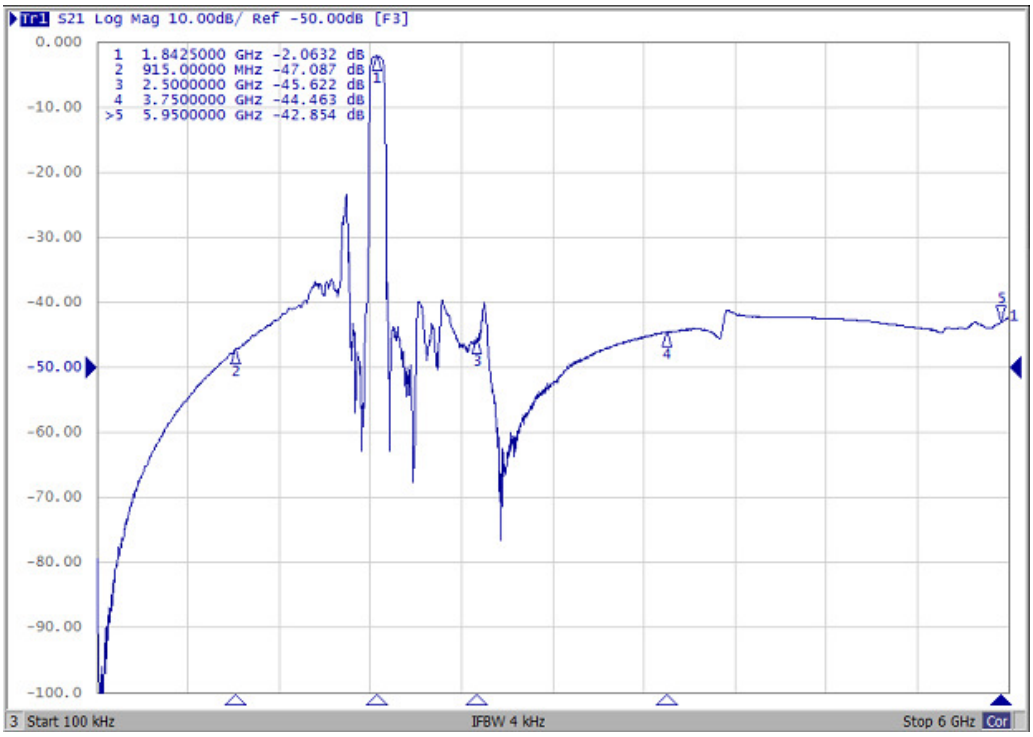


Input Port

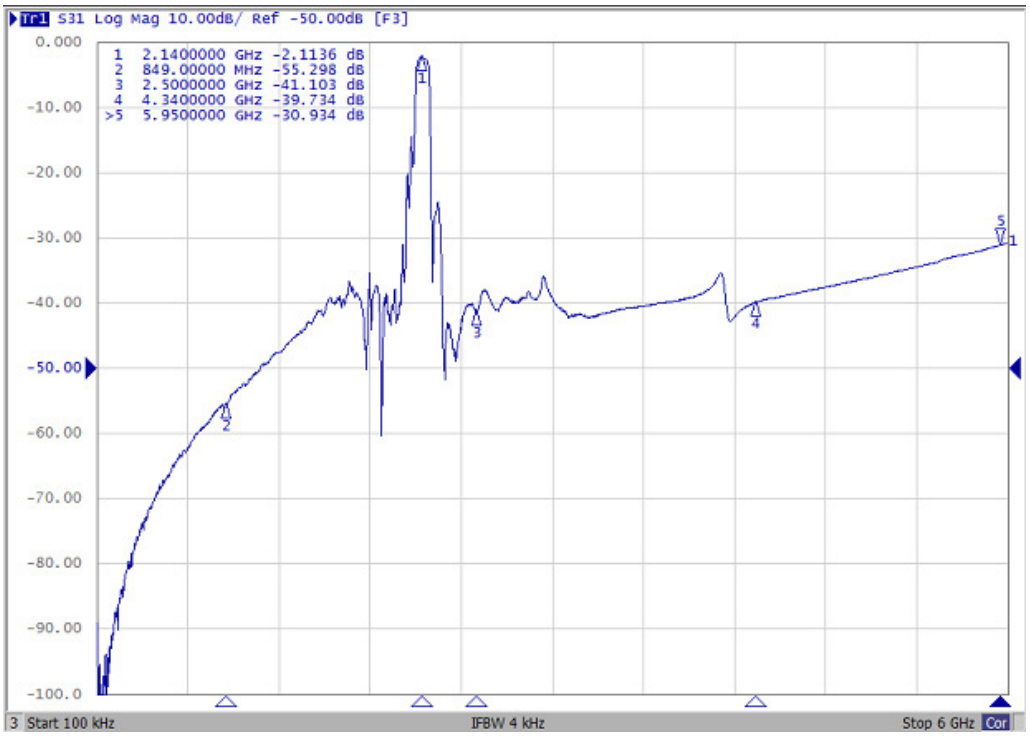

Tr1 S11 SWR 1.000/ Ref 1.000 [F3]
1 1.8050000 GHz 1.4489
2 1.8800000 GHz 1.5151
3 2.1100000 GHz 1.9148
>4 2.1700000 GHz 1.7473
11.00
10.00
9.000
8.000
7.000
6.000
5.000
4.000
3.000
2.000
1.000
1 Start 1.6 GHz
IFBW 4 kHz
Stop 2.3 GHz
Cor


Tr1 S11 Smith (R+jX) Scale 1.000U [F3]
1 1.8050000 GHz 70.599 Ω 8.0859 Ω 712.97 pH
2 1.8800000 GHz 68.430 Ω -16.112 Ω 5.2544 pF
3 2.1100000 GHz 93.044 Ω 13.458 Ω 1.0151 nH
>4 2.1700000 GHz 79.185 Ω -20.329 Ω 3.6079 pF
1 Start 1.6 GHz
IFBW 4 kHz
Stop 2.3 GHz
Cor

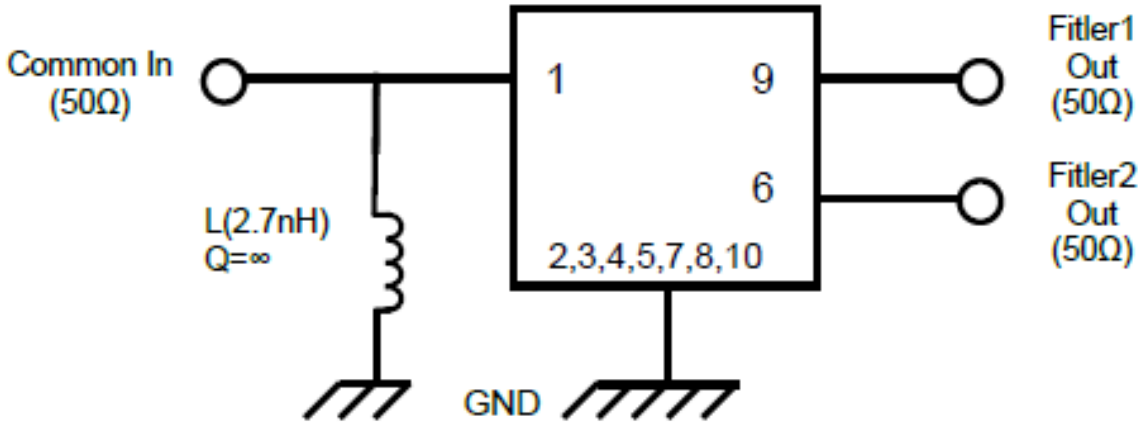
Wide span (Filter1)



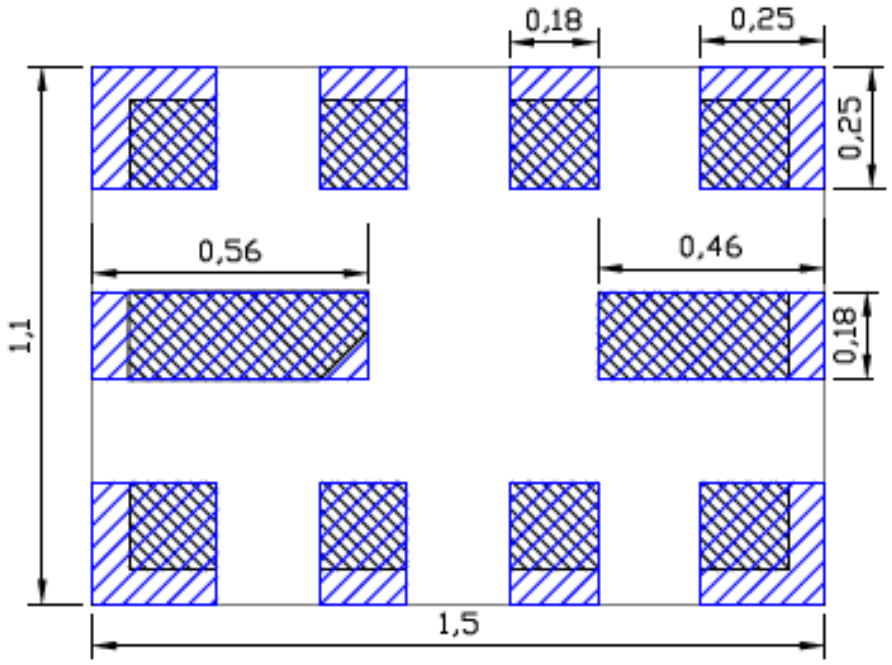
Wide span (Filter2)



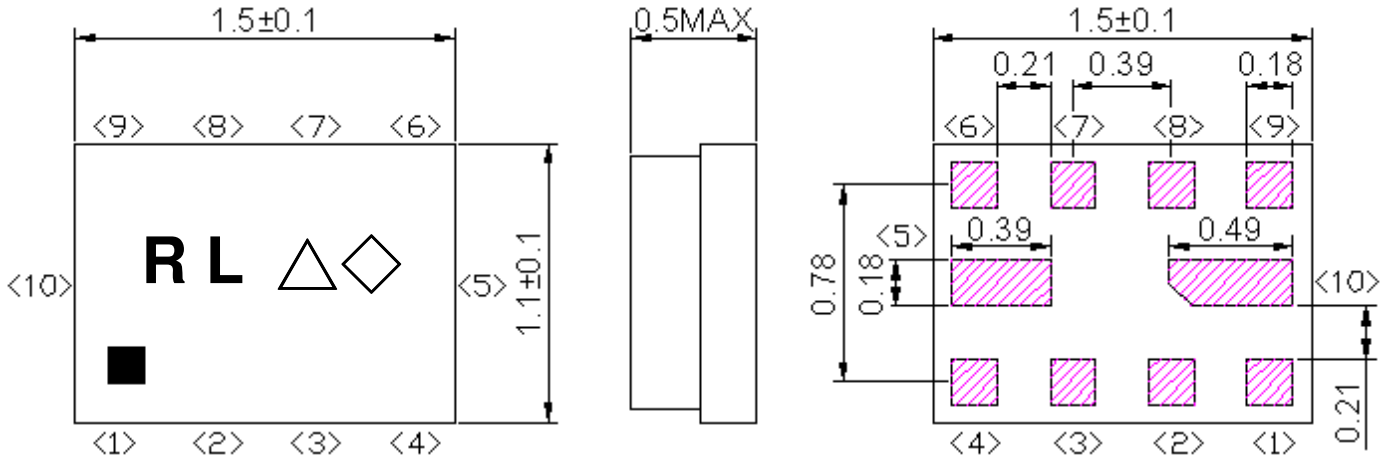
D. MEASUREMENT CIRCUIT:



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 : **RL**

△: Date code(2020 May → s ,…….., 2023 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
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
2023	a	b	c	d	e	f	g	h	j	k	l	m

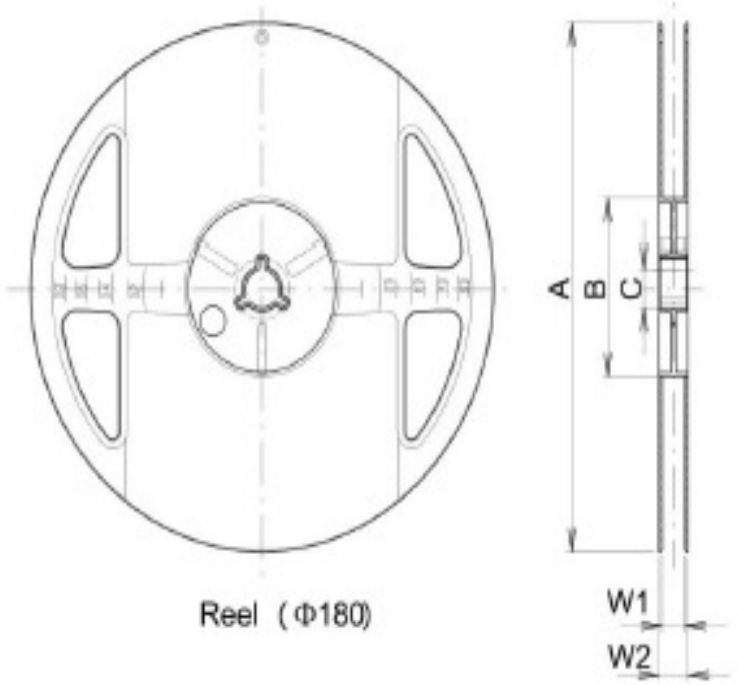
Pin assignment

Pin No.	Pin name	Description
1	In	Common Input
2	GND	Ground
3	GND	Ground
4	GND	Ground
5	GND	Ground
6	Out(Filter2)	Filter2 Output
7	GND	Ground
8	GND	Ground
9	Out(Filter1)	Filter1 Output
10	GND	Ground

F. PACKING:

1. REEL DIMENSION

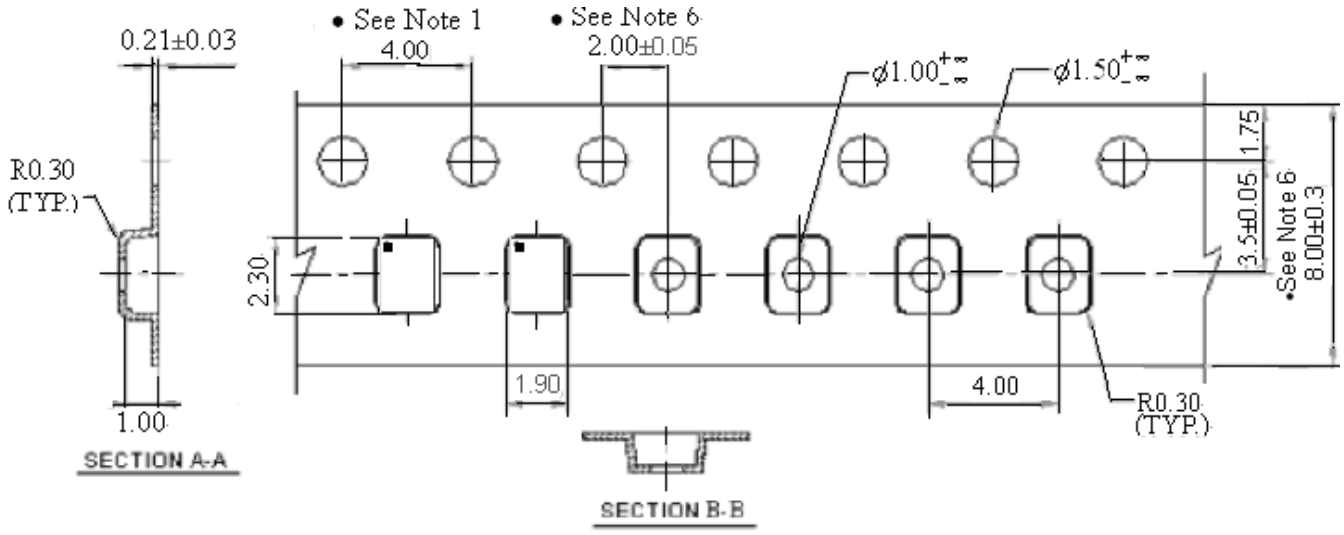
(Please refer to FR-75D10 for packing quantity)



Unit : mm

Series	Code	Quantity	A	B	C	W1	W2
CSSD1511	J	5000 pcs	180.0 +0.0/-1.5	60.0 +1.0/-0.0	13.0 ±0.2	9.0 +1.0/-0.0	11.4 ±1.0

2.TAPE DIMENSION



G. RECOMMENDED REFLOW PROFILE:

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