

# SAW DPX 710/740 MHz

MODEL NO.:TF0108A

REV. NO.:3.0

## A. MAXIMUM RATING:

1. Input Power Level (704~716 MHz): 29 dBm (50k hours Max.)
2. DC Voltage: +/-5 V
3. Operating Temperature: -20 °C to +85 °C
4. Storage Temperature: -40 °C to +100 °C
5. Moisture Sensitive Level: Level 1 (MSL1)
6. ESD: 100 V(MM), 200 V(HBM)



Electrostatic Sensitive Device (ESD)

## B. ELECTRICAL CHARACTERISTICS:

Terminating impedance (Tx port): 50 Ω

Terminating impedance (Rx port): 50 Ω

Terminating impedance (Ant port): 50//12nH Ω

### Tx to Ant

Item	Unit	Min.	Typ.	Max.
Insertion Loss (704~716 MHz)	dB(*1)	-	1.6	2.5
Amplitude Ripple (704~716 MHz)	dB	-	0.5	1.2
VSWR Ant (704~716 MHz)	-	-	1.6	2.0
VSWR Tx (704~716 MHz)	-	-	1.6	2.0
<b>Attenuation</b> (Reference level from 0 dB)				
10 ~ 670 MHz	dB	30	38	-
670 ~ 698 MHz	dB	1	5.5	-
722 ~ 728 MHz	dB	2	7.9	-
730 ~ 734 MHz	dB	17	34	-
734 ~ 746 MHz	dB	45	58	-
746 ~ 768 MHz	dB	30	45	-
768 ~ 805 MHz	dB	25	40	-
869 ~ 894 MHz	dB	30	38	-
1408 ~ 1432 MHz	dB	25	42	-
1565.42 ~ 1573.374 MHz	dB	40	44	-
1573.374 ~ 1577.466 MHz	dB	40	44	-
1577.466 ~ 1585.42 MHz	dB	40	44	-
1597.5515 ~ 1605.886 MHz	dB	40	44	-
1805 ~ 1880 MHz	dB	30	42	-

1930 ~ 1990 MHz	dB	30	44	-
2110 ~ 2155 MHz	dB	45	47	-
2155 ~ 2170 MHz	dB	30	48	-
2400 ~ 2484 MHz	dB	35	52	-
2816 ~ 2864 MHz	dB	15	56	-
4900 ~ 5850 MHz	dB	5	13	-

#### Ant to Rx

Item	Unit	Min.	Typ.	Max.
<b>Insertion Loss (734~746 MHz)</b>	dB(+1)	-	1.8	2.5
<b>Amplitude Ripple (734~746 MHz)</b>	dB	-	0.5	1.2
<b>VSWR Ant (734~746 MHz)</b>	-	-	1.5	2.0
<b>VSWR Rx (734~746 MHz)</b>	-	-	1.5	2.0
<b>Attenuation (Reference level from 0 dB)</b>				
1 ~ 704 MHz	dB	40	63	-
30 MHz	dB	50	100	-
704 ~ 716 MHz	dB	50	60	-
716 ~ 727 MHz	dB	20	36	-
727 ~ 728 MHz	dB	10	29	-
776 ~ 793 MHz	dB	35	50	-
793 ~ 805 MHz	dB	35	51	-
814 ~ 4000 MHz	dB	40	50	-
4000 ~ 6000 MHz	dB	35	39	-
2202 ~ 2238 MHz	dB	40	53	-
2400 ~ 2500 MHz	dB	40	51	-
6606 ~ 6714 MHz	dB	30	39	-
7340 ~ 7460 MHz	dB	25	39	-
8074 ~ 8206 MHz	dB	20	38	-
8808 ~ 8952 MHz	dB	20	38	-
9542 ~ 9698 MHz	dB	15	39	-
10276 ~ 10444 MHz	dB	15	38	-
11010 ~ 11190 MHz	dB	15	40	-
11744 ~ 11936 MHz	dB	15	41	-
12478 ~ 12682 MHz	dB	15	40	-

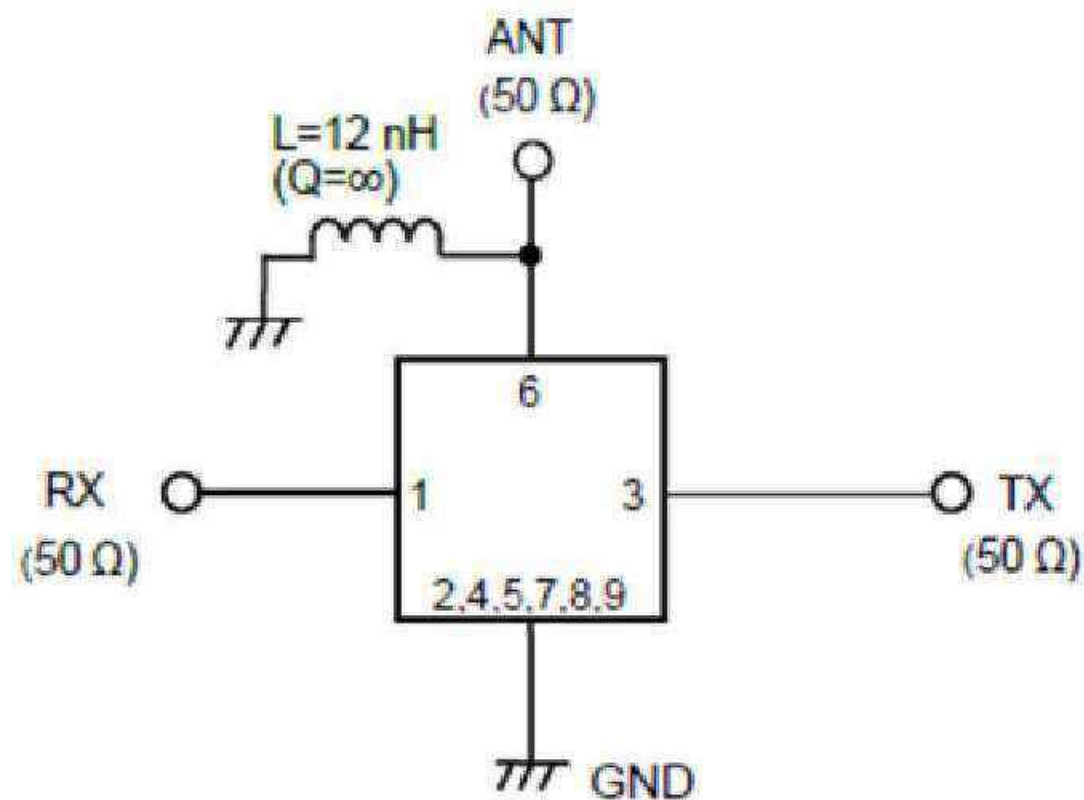


### Tx to Rx

Item	Unit	Min.	Typ.	Max.	
Isolation (Reference level from 0 dB)	704 ~ 716 MHz	dB	57	61	-
	734 ~ 738 MHz	dB	60	67	-
	738 ~ 742 MHz	dB	60	66	-
	742 ~ 746 MHz	dB	55	63	-
	1408 ~ 1432 MHz	dB	30	60	-
	2112 ~ 2148 MHz	dB	30	53	-
	2816 ~ 2864 MHz	dB	30	49	-

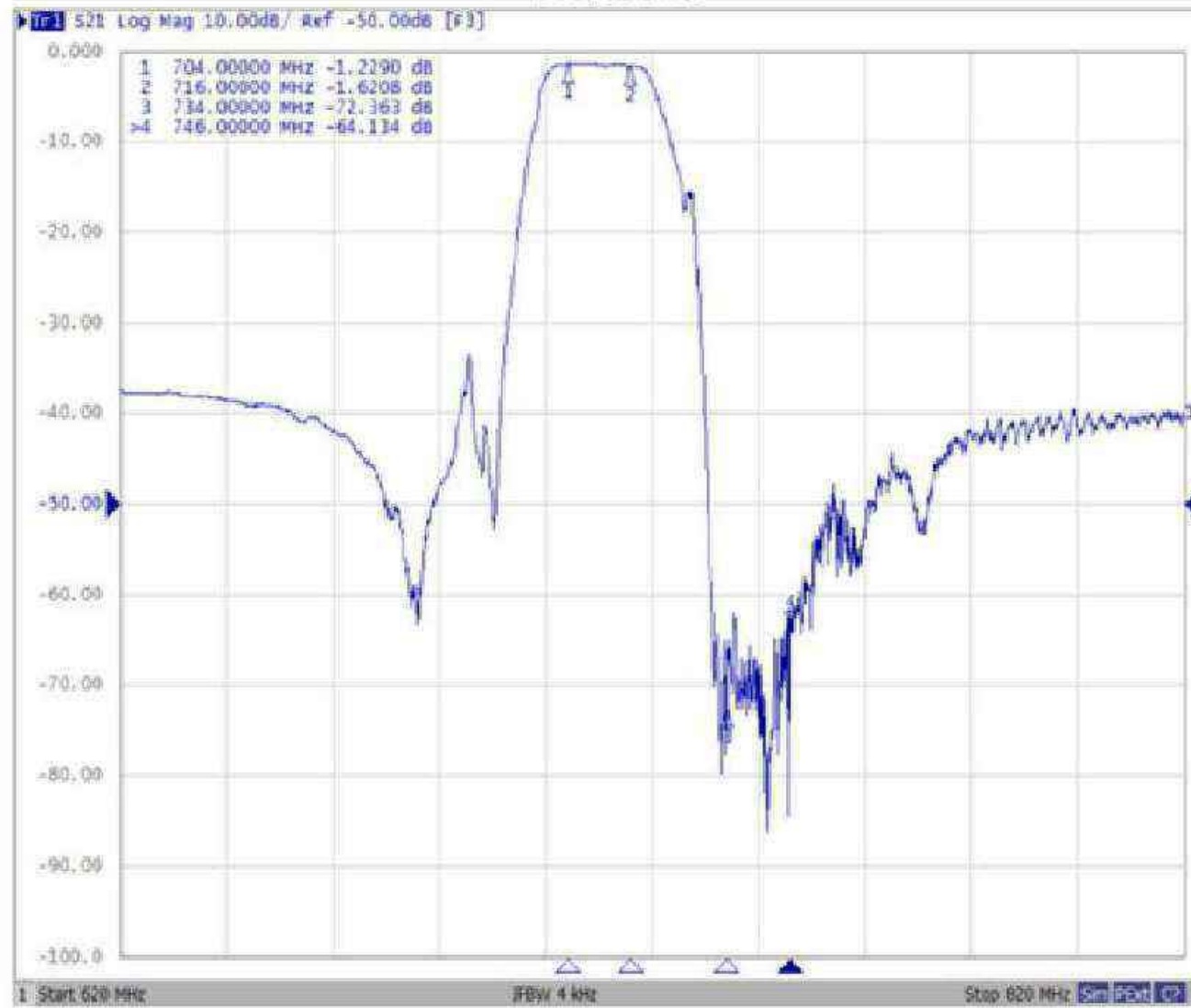
(\*1) Specification of insertion loss excludes loss that comes from the test board.

### C. MEASUREMENT CIRCUIT:



## D. FREQUENCY CHARACTERISTICS:

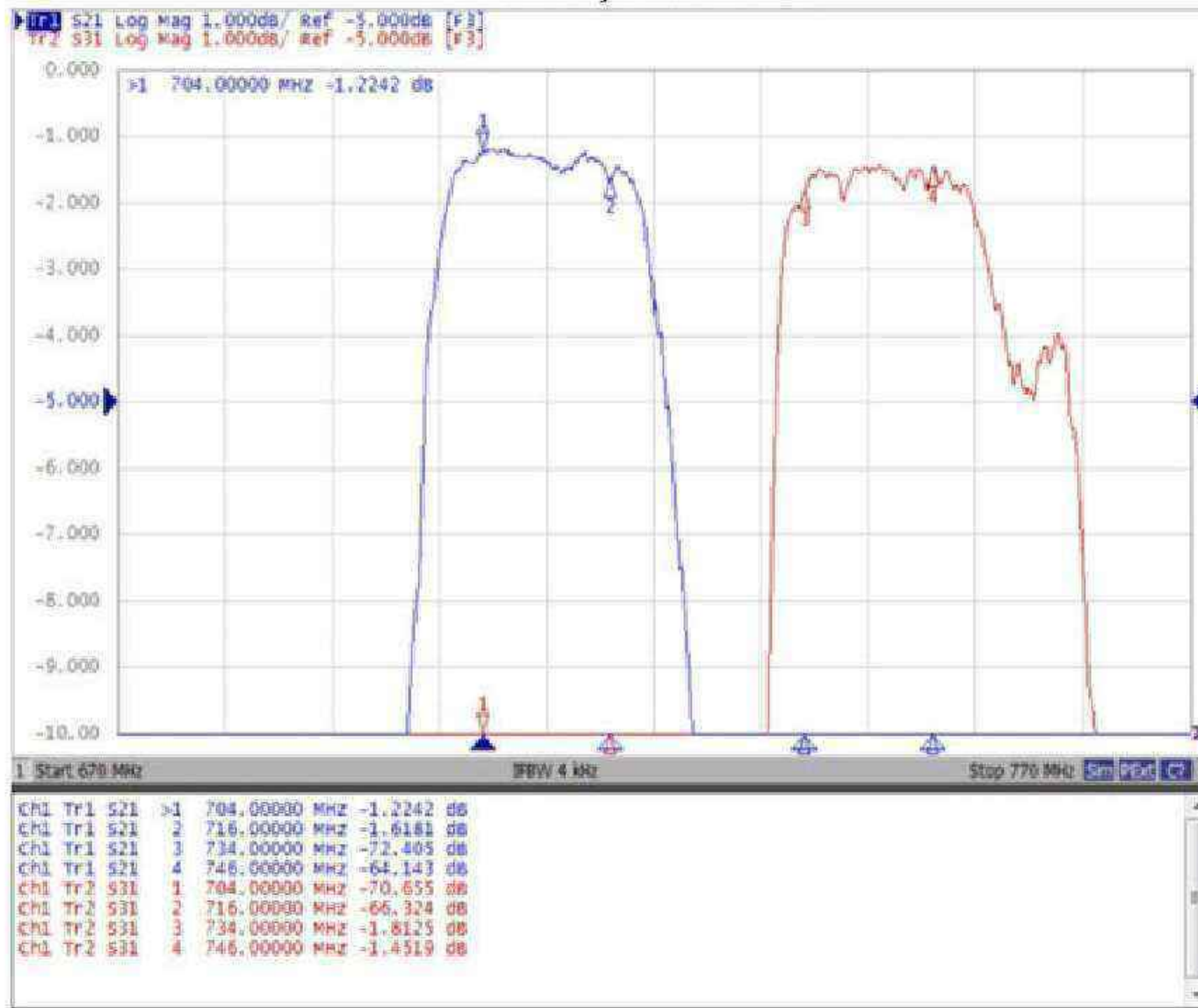
### Tx to Ant



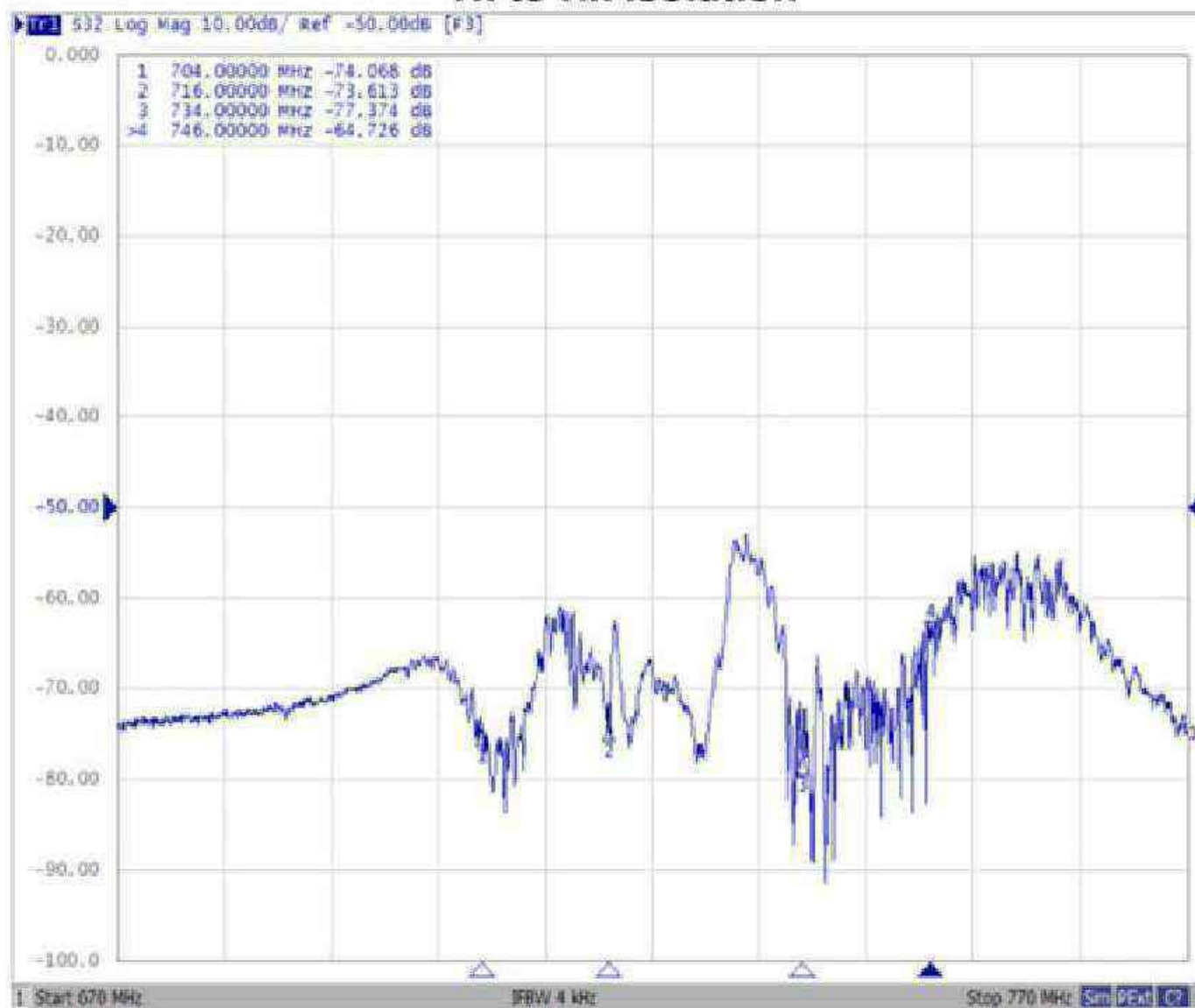
### Ant to Rx



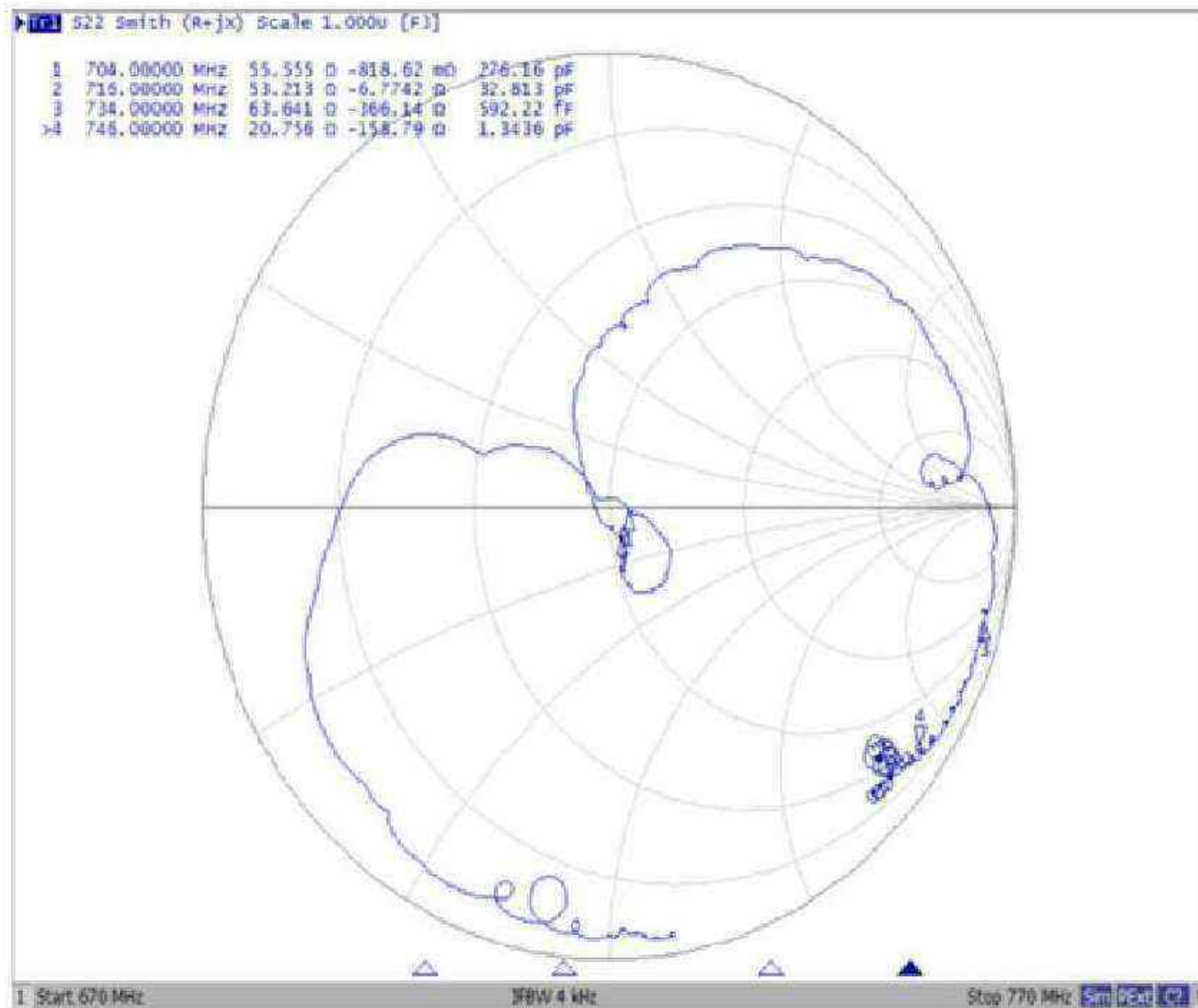
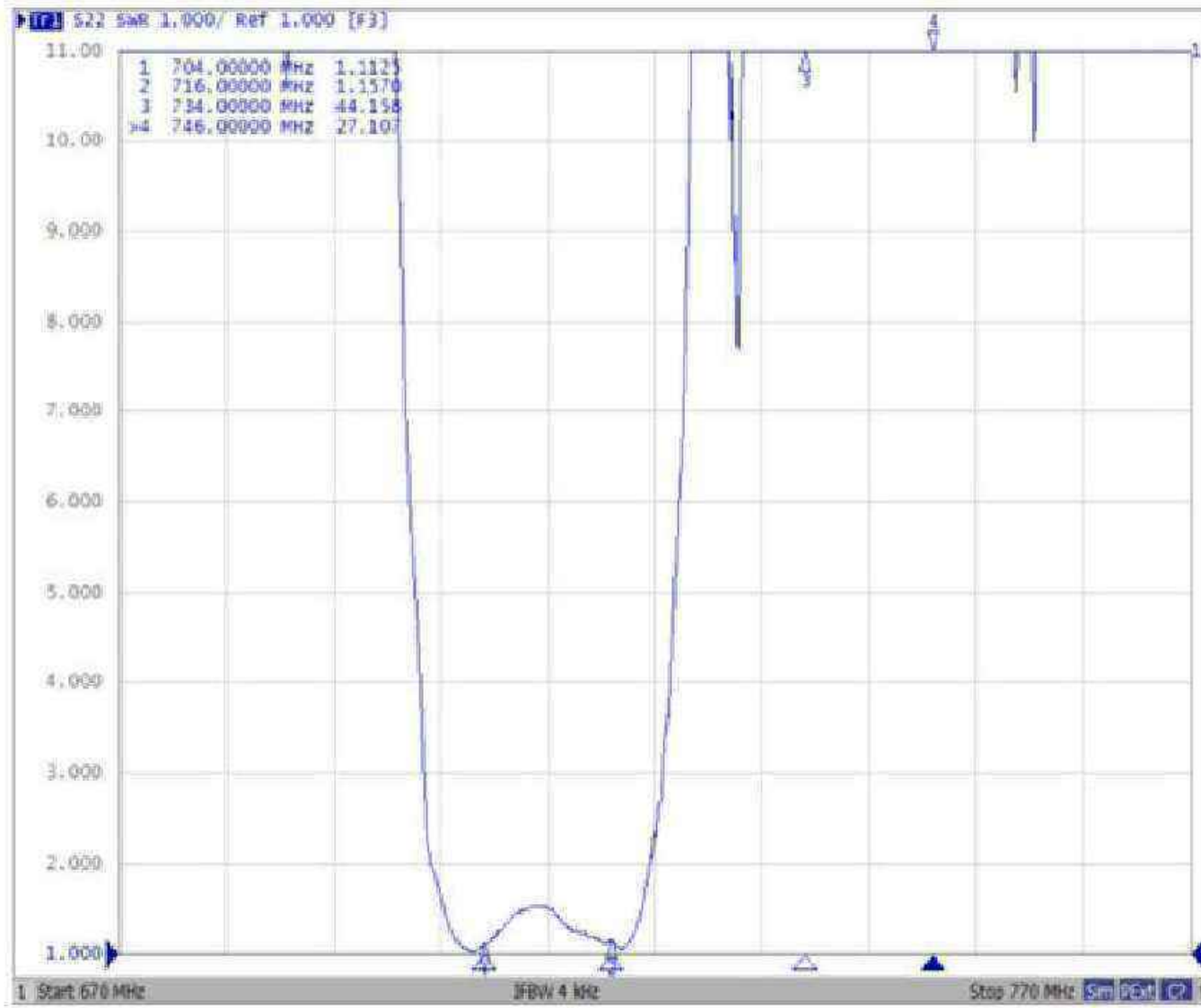
## Tx to Ant, Ant to Rx



## Tx to Rx Isolation

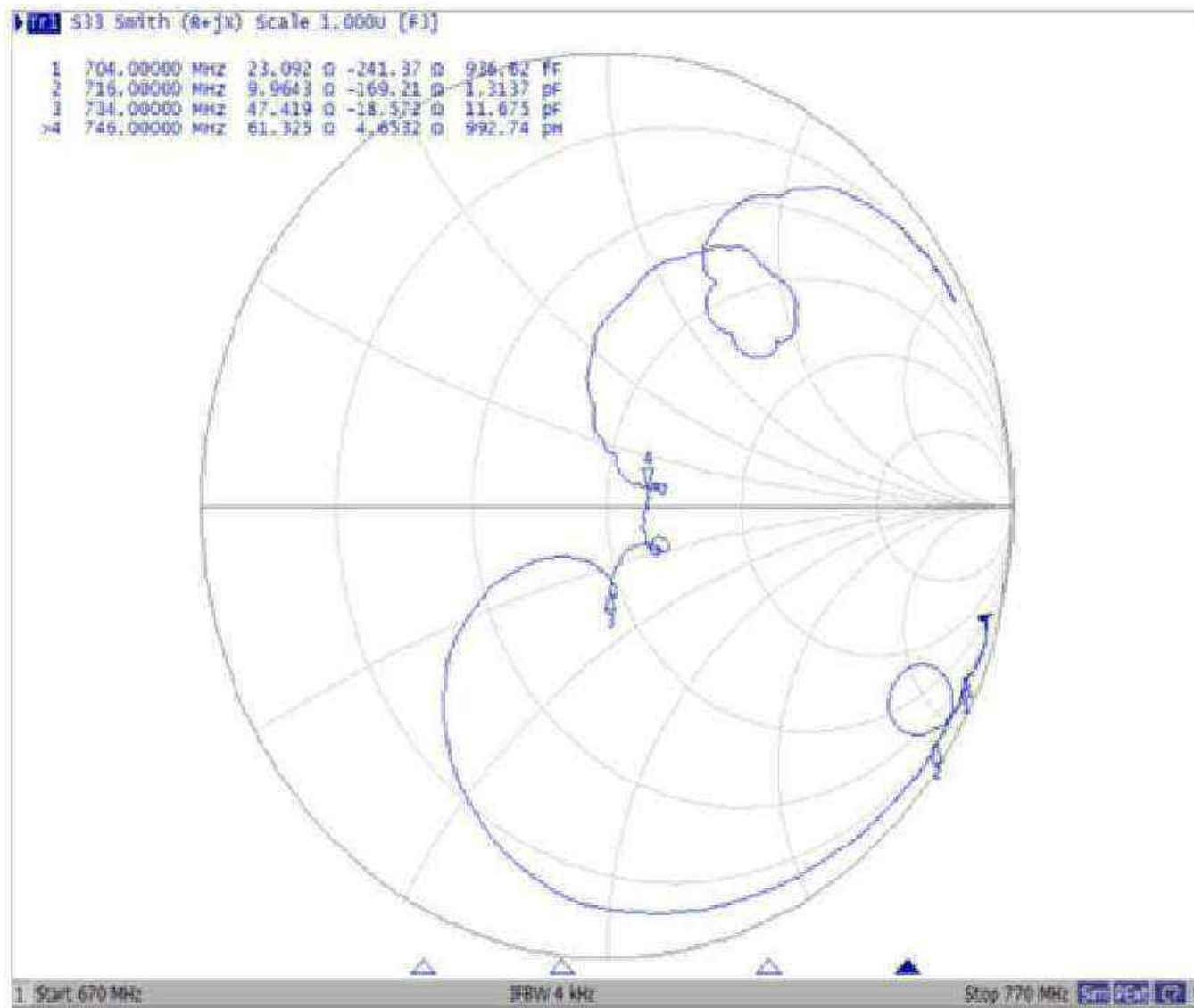
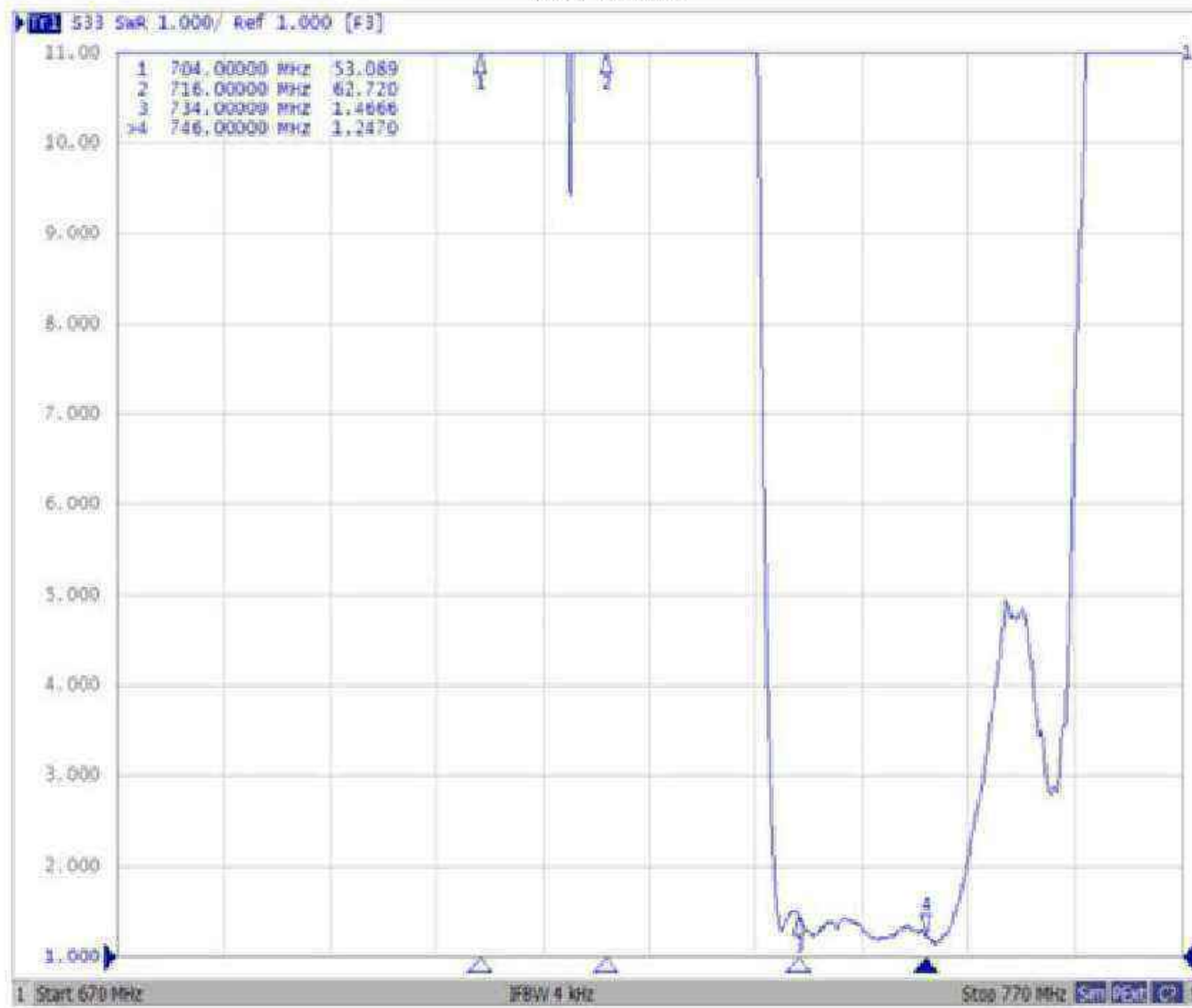


# Tx Port

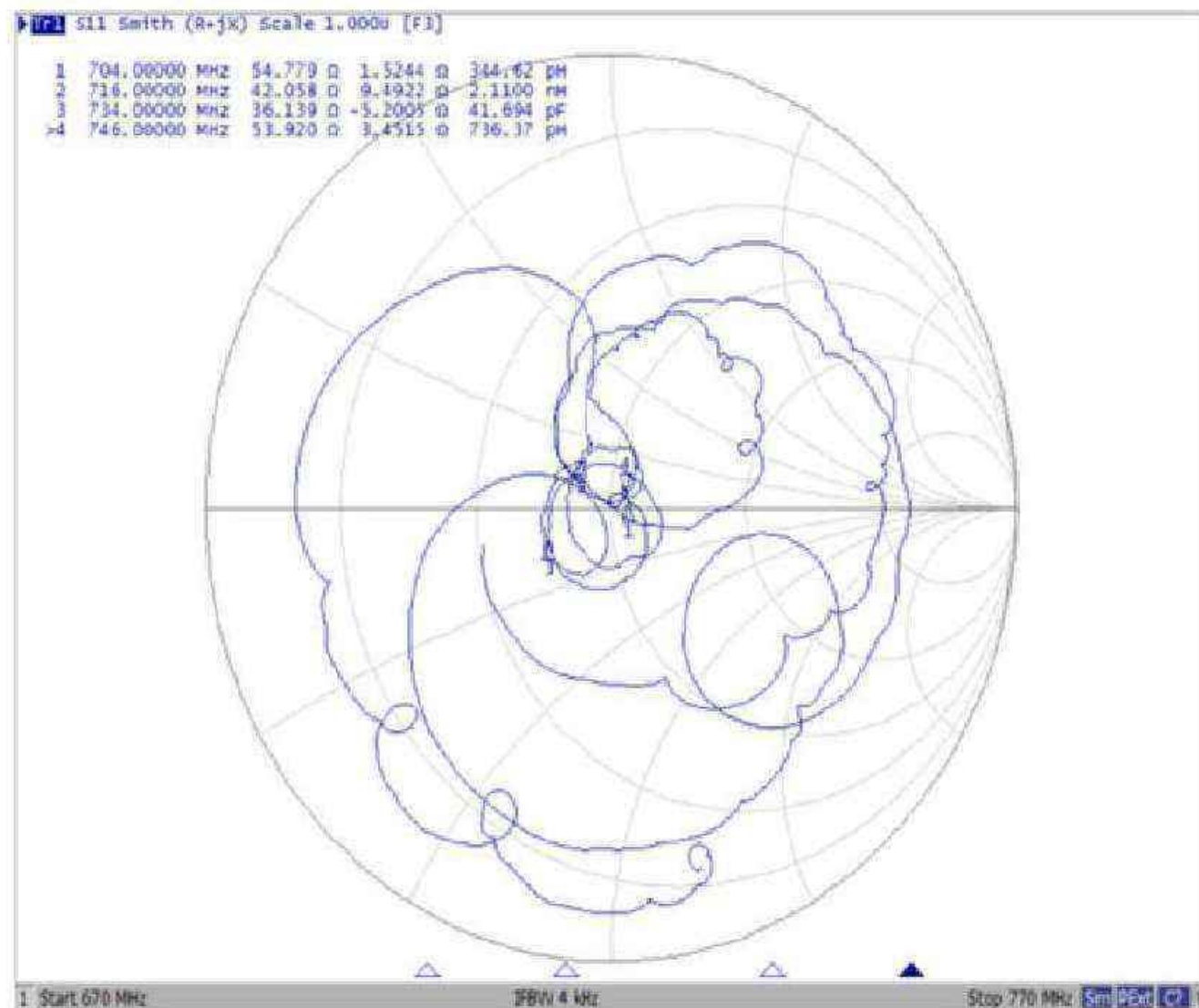
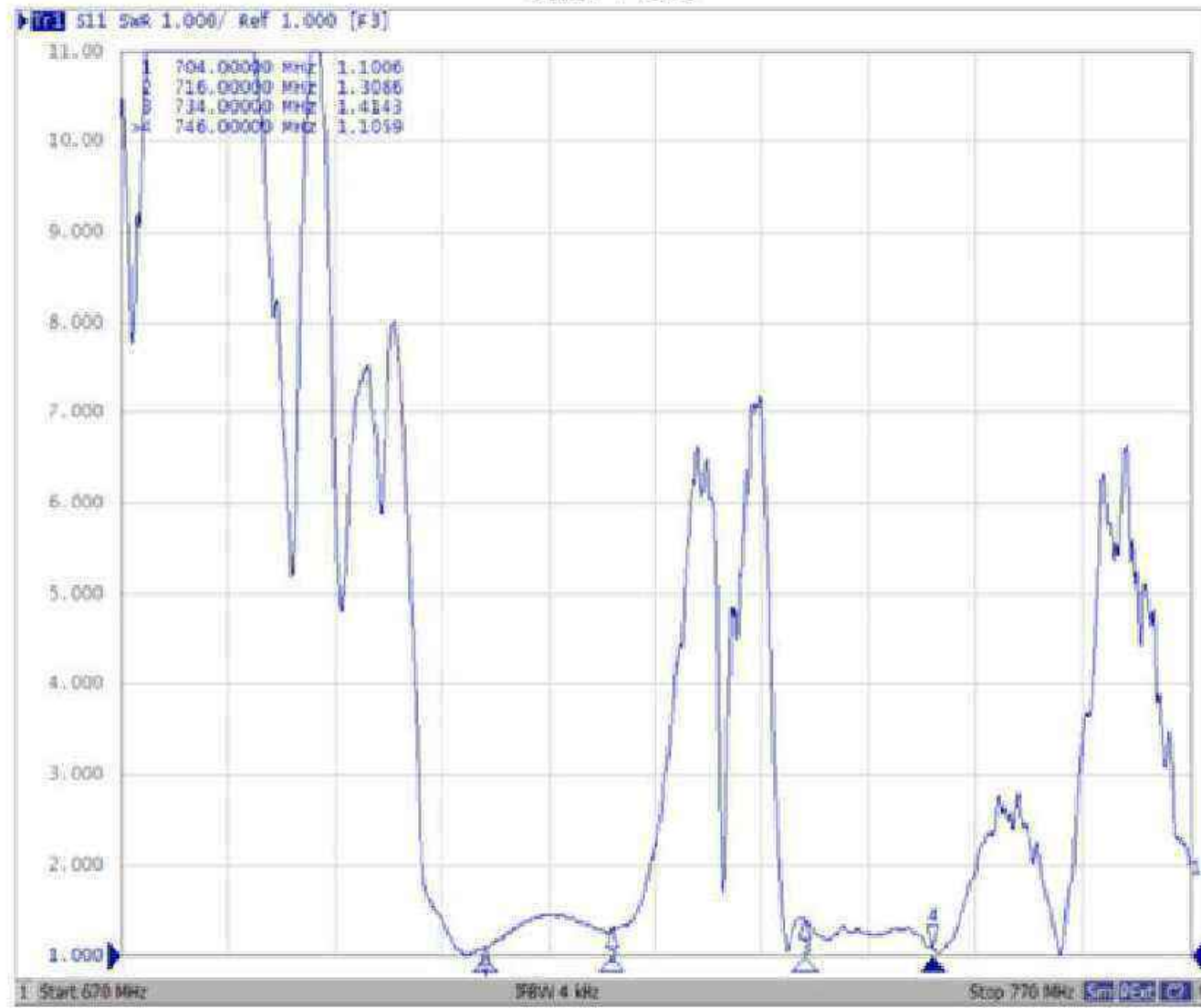




# Rx Port

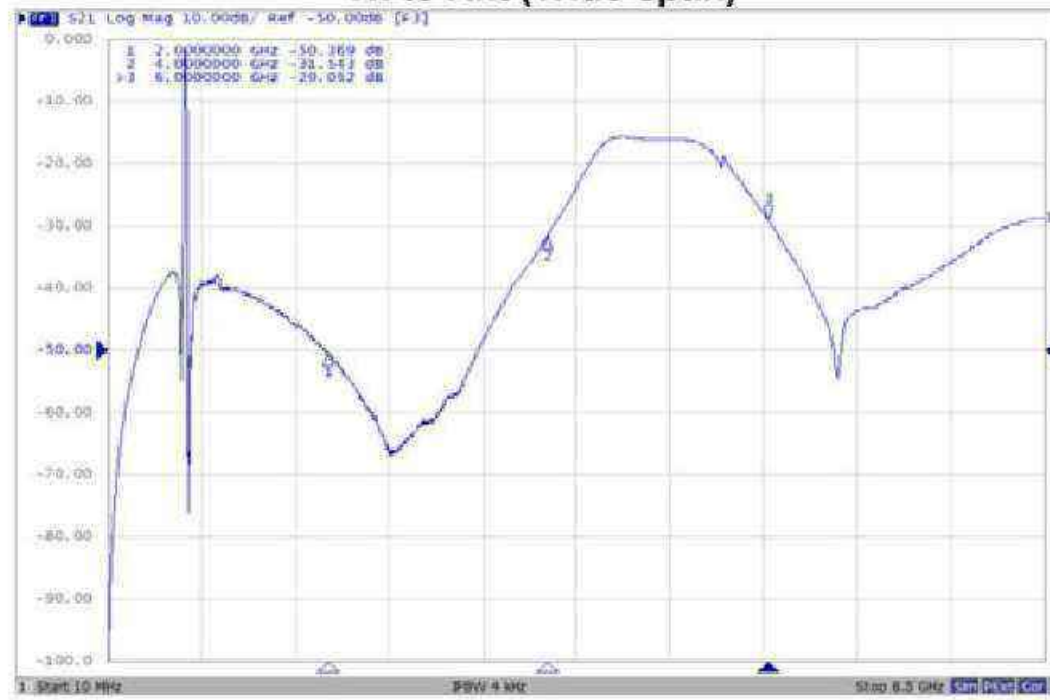


# Ant Port

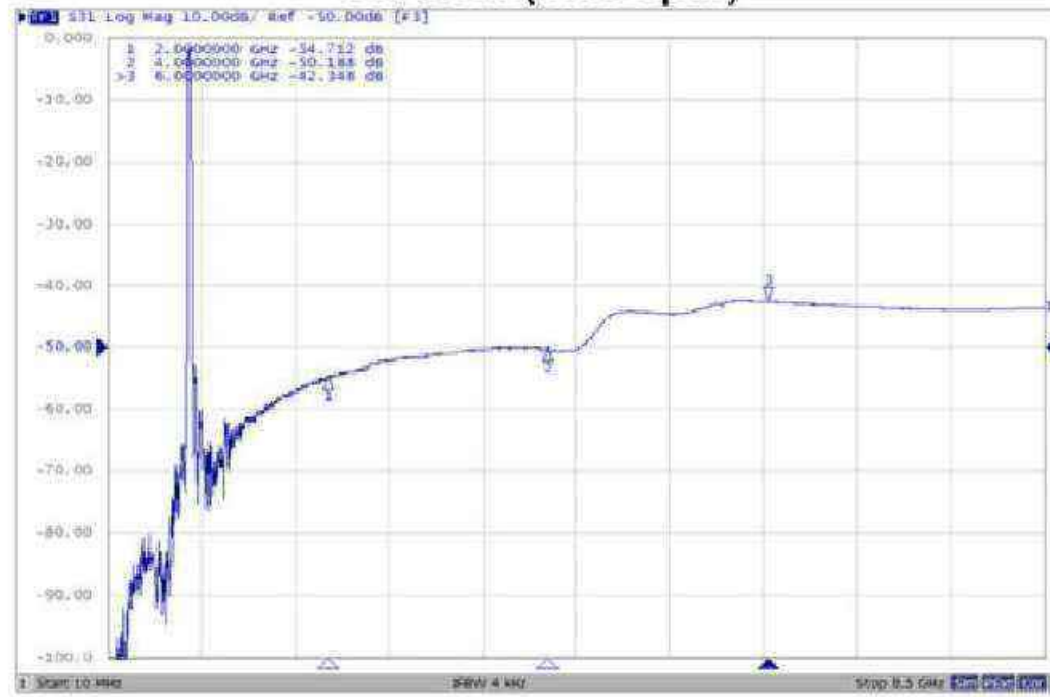




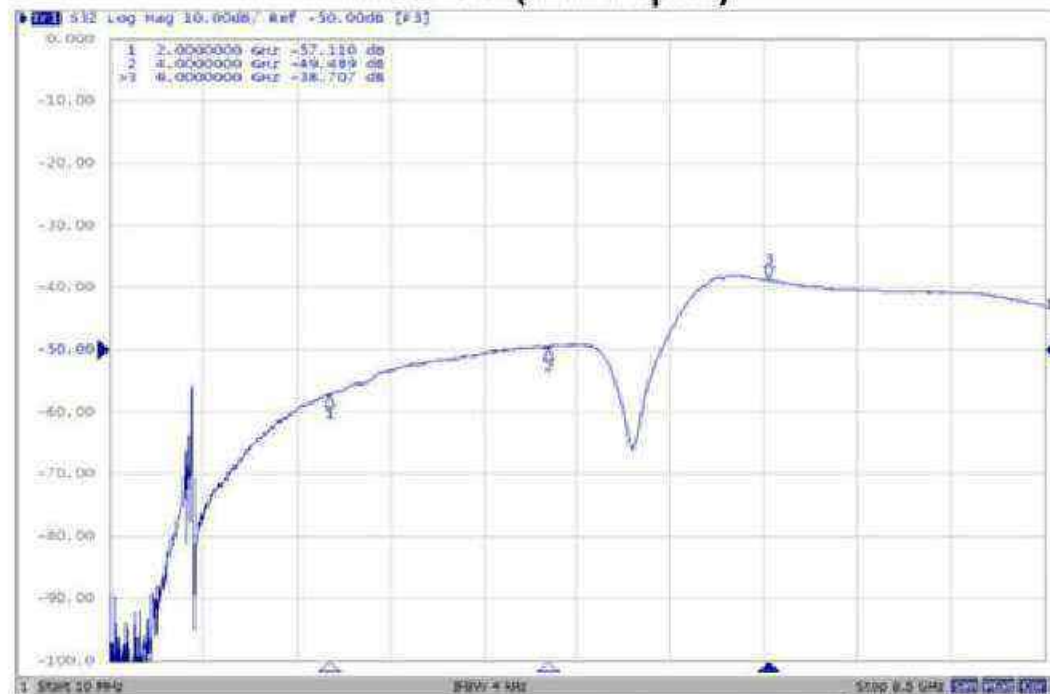
### Tx to Ant (Wide span)



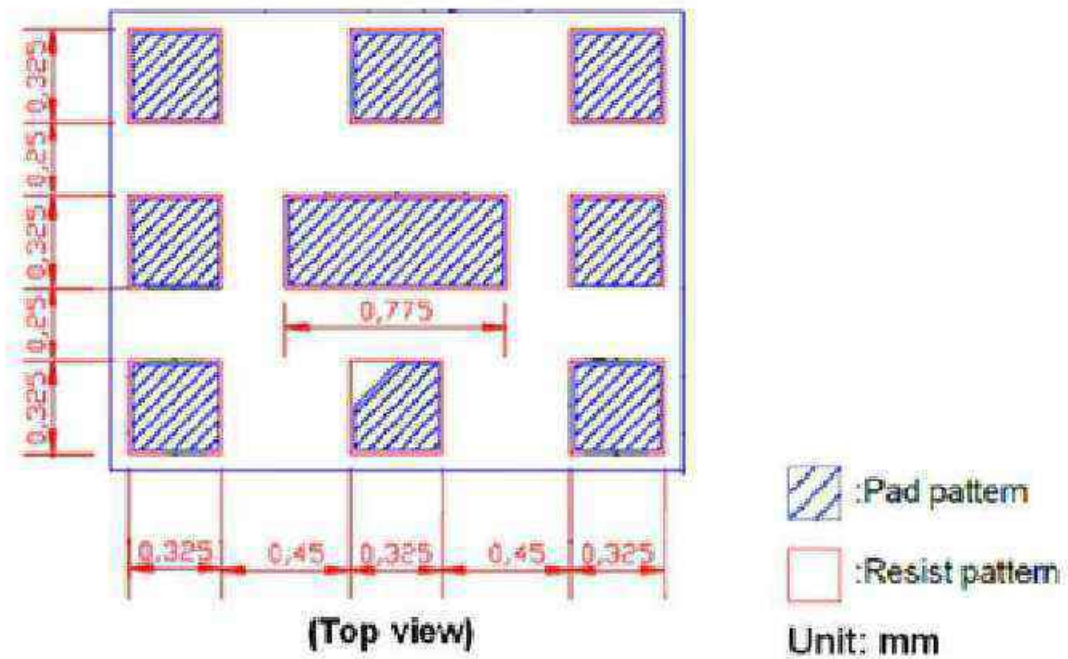
### Ant to Rx (Wide span)



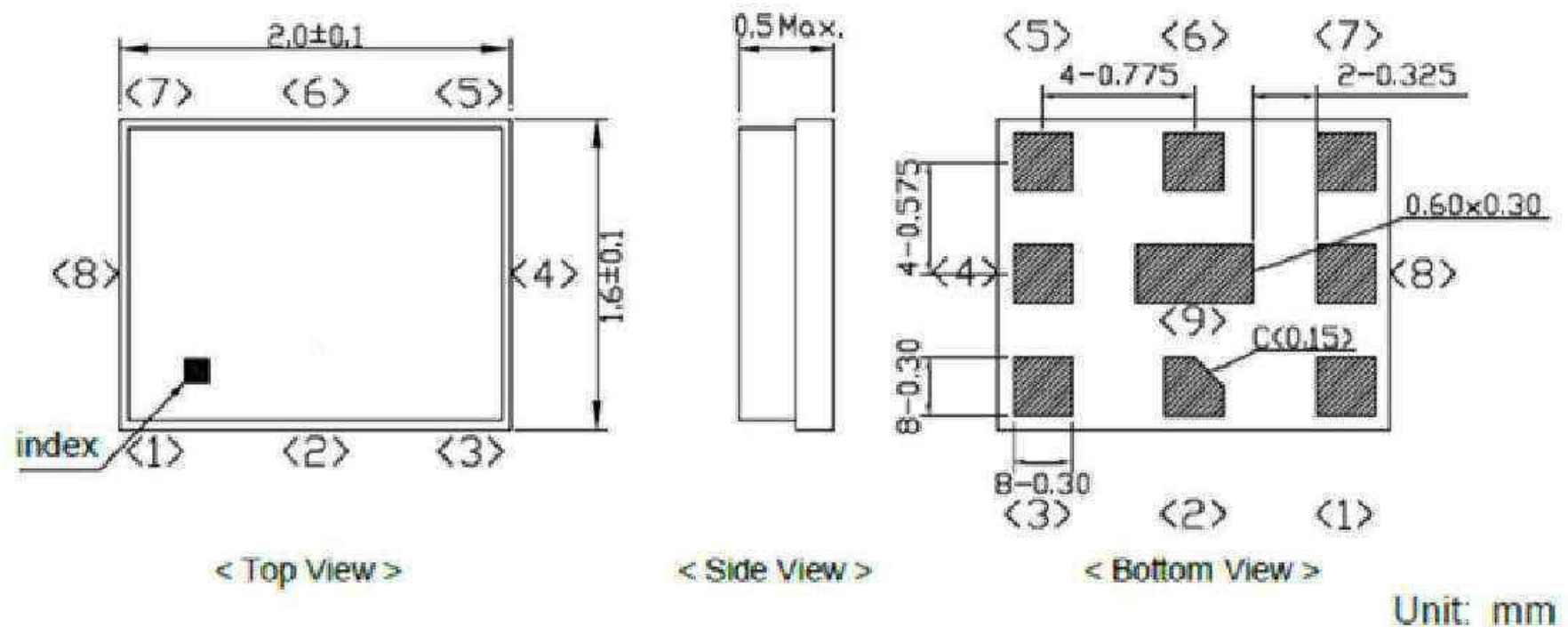
### Tx to Rx (Wide span)



### E. PCB Footprint:



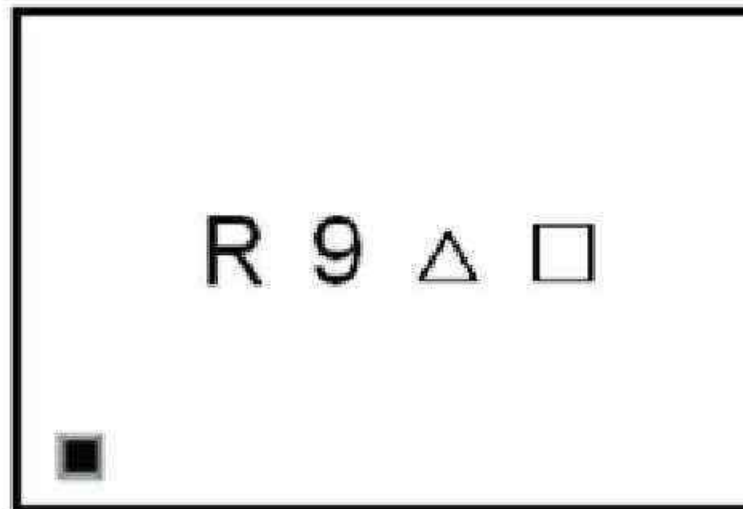
### F. OUTLINE DRAWING:



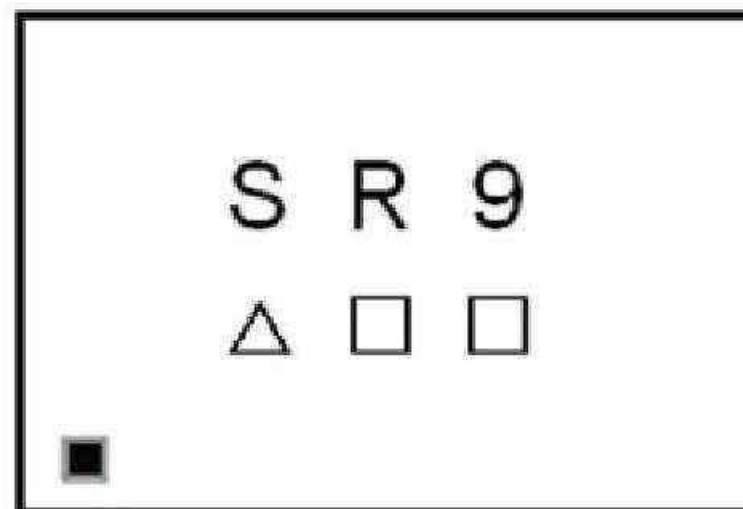
### Pin Configuration

Pin No.	Pin name	Description
1	Rx	Receiver Pin
2	GND	Ground Pin
3	Tx	Transmitter Pin
4	GND	Ground Pin
5	GND	Ground Pin
6	ANT	Antenna Pin
7	GND	Ground Pin
8	GND	Ground Pin
9	GND	Ground Pin

**Top View (Sample Production):**



**Top View (Mass Production):**



Δ: Date Code (Follow below table)

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

Date Code table:

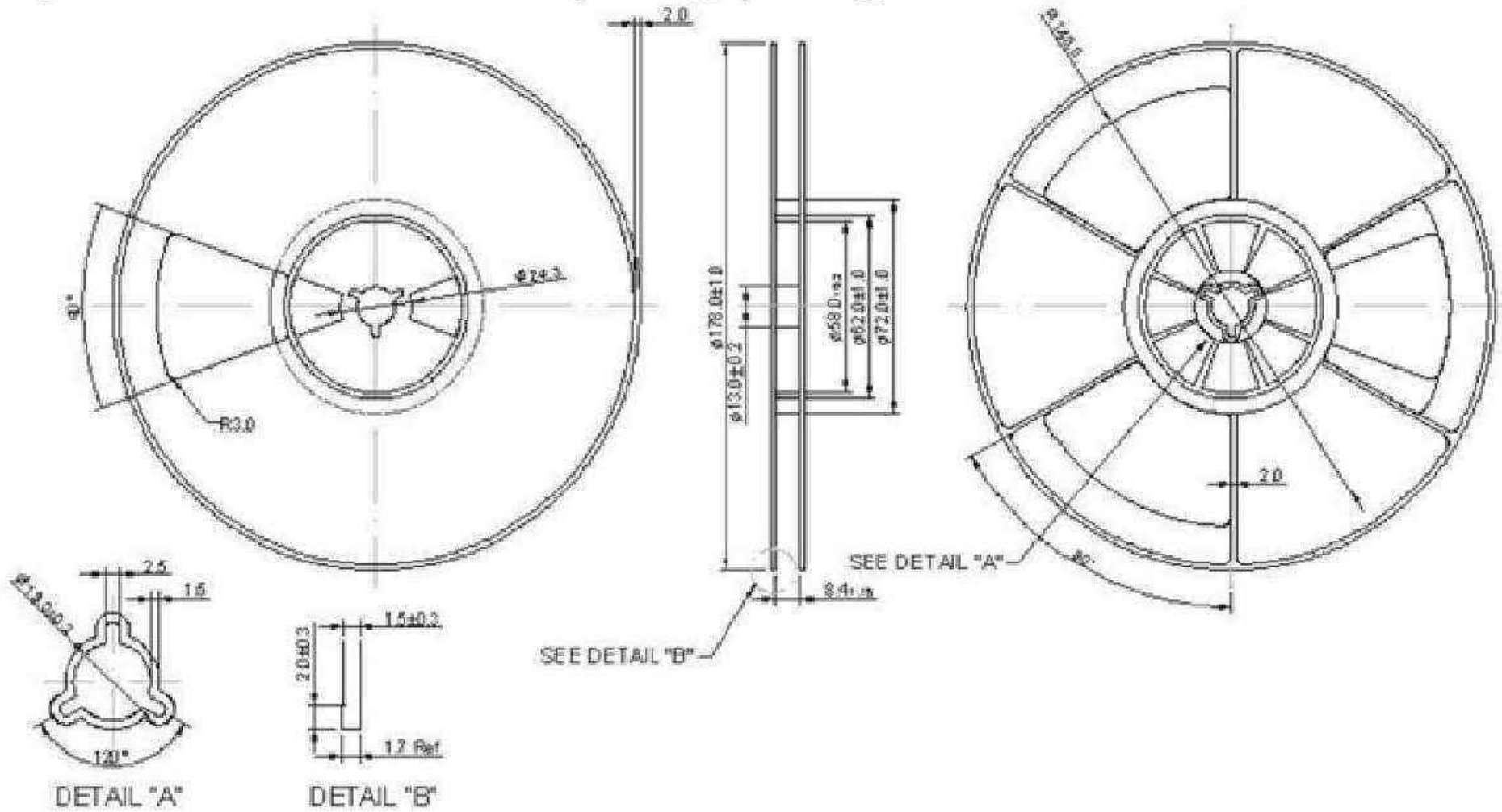
Year	Jan.	Feb.	Mar.	Apr.	May	Jun.	Jul.	Aug.	Sep.	Oct.	Nov.	Dec.
2017	A	B	C	D	E	F	G	H	J	K	L	M
2018	N	P	Q	R	S	T	U	V	W	X	Y	Z
2019	a	b	c	d	e	f	g	h	j	k	l	m
2020	n	p	q	r	s	t	u	v	w	x	y	z



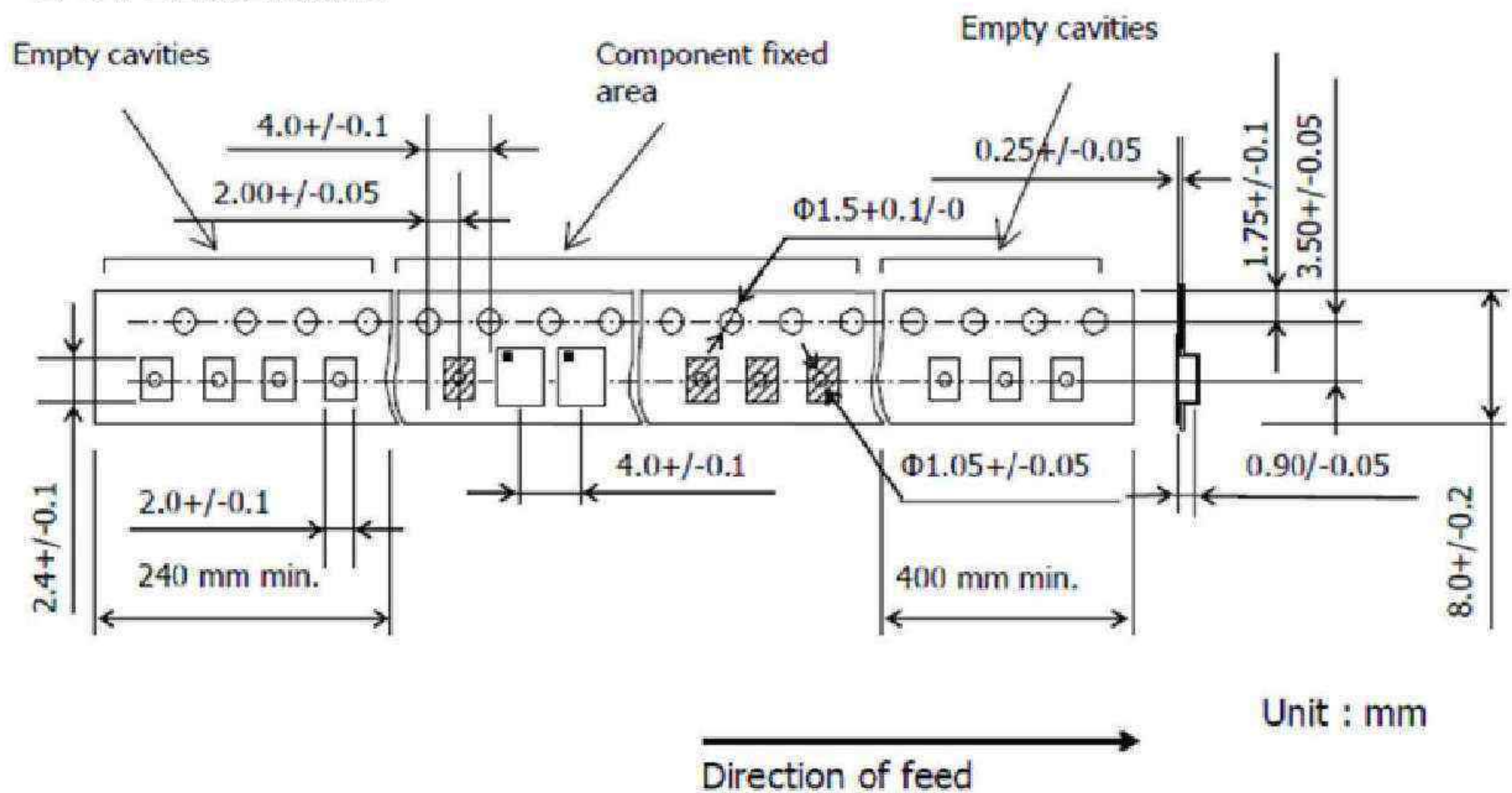
**G. PACKING:** (Ref: WI-75M03)

**1. REEL DIMENSION**

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



**2. TAPE DIMENSION**



### H. 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.

