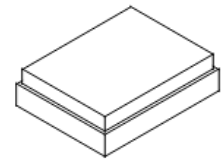


**SF2605NA**

**1745/2155 MHz  
Filter Duplexer**



**SM1814**

**MAXIMUM RATING:**

- Input power : 29dBm (Ta=+50deg C,5000h,CW )
- Maximum DC Voltage: +/-5 V
- Operating temperature range: -40 °C to +85 °C
- Storage temperature range: -40 °C to +85 °C
- Moisture Sensitivity Level: Level 1 (MSL 1)
- ESD 50V(MM) 100V(HBM)
- AEC-Q200 Qualified

**ELECTRICAL CHARACTERISTICS:**

Terminating impedance(Tx Port): 50 Ω//4.7nH (Ω) (Single-ended)

Terminating impedance(Rx Port): 50 Ω//3.6nH (Ω) (Single-ended)

Terminating impedance(Ant Port): 50//2.8nH (Ω) (Single-ended)

**Tx to ANT**

Parameters Description		Unit	Minimum	Typical	Maximum	Note	
Insertion Loss	1710.48 ~ 1779.52 MHz	dB (*1)	-	2.0	2.8	-30 °C ~+85 °C	
		dB (*1)		2.0	3.3		
Ripple	1710.48 ~ 1779.52 MHz	dB	-	1.1	1.9	-30 °C ~+85 °C	
		dB		1.1	2.3		
VSWR	Tx	1710.48 ~ 1779.52 MHz	-	-	1.7	2.1	-30 °C ~+85 °C
					1.7	2.4	
		ANT			1.6	2.1	-30 °C ~+85 °C
			-	-	1.6	2.4	

**Attenuation:**

<b>1559 ~ 1606 MHz</b>	dB	38	44	-	-30 °C ~+85 °C
	dB	35	44		
<b>2110.48 ~ 2199.52 MHz</b>	dB	45	51	-	-
<b>2400 ~ 2500 MHz</b>	dB	40	47	-	-
<b>3420 ~ 3560 MHz</b>	dB	35	41	-	-
<b>5130 ~ 5340 MHz</b>	dB	28	39		-

### ANT to Rx

Parameters Description		Unit	Minimum	Typical	Maximum	Note	
Insertion Loss	2110.48 ~ 2199.52 MHz	dB(*1)	-	2.0	2.9	-30 °C ~+85 °C	
		dB		2.0	3.3		
Ripple	2110.48 ~ 2199.52 MHz	dB	-	0.7	1.7	-30 °C ~+85 °C	
		dB		0.7	2.1		
VSWR	ANT	2110.48 ~ 2199.52 MHz	-	-	1.5	2.3	-30 °C ~+85 °C
					1.5	2.5	
	Rx			1.3	2.2	-30 °C ~+85 °C	
		-	-	1.3	2.4		
<b>Attenuation:</b>							
1710.48 ~ 1779.52 MHz		dB	45	53	-		
2400 ~ 2500 MHz		dB	33	40	-		
4220 ~ 4400 MHz		dB	33	48	-		

### Tx to Rx

Isolation	1710.48 ~ 1779.52 MHz	dB	53	57	-	
	2110.48 ~ 2199.52 MHz	dB	50	54	-	

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



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

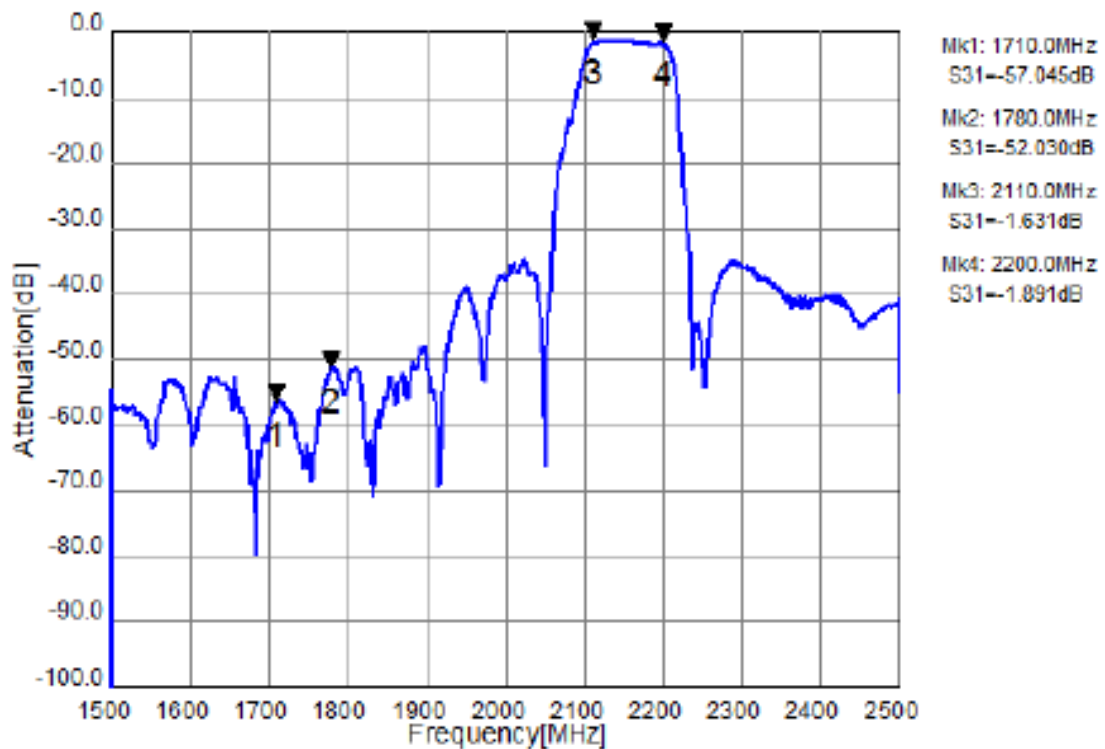
**NOTES:**

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.

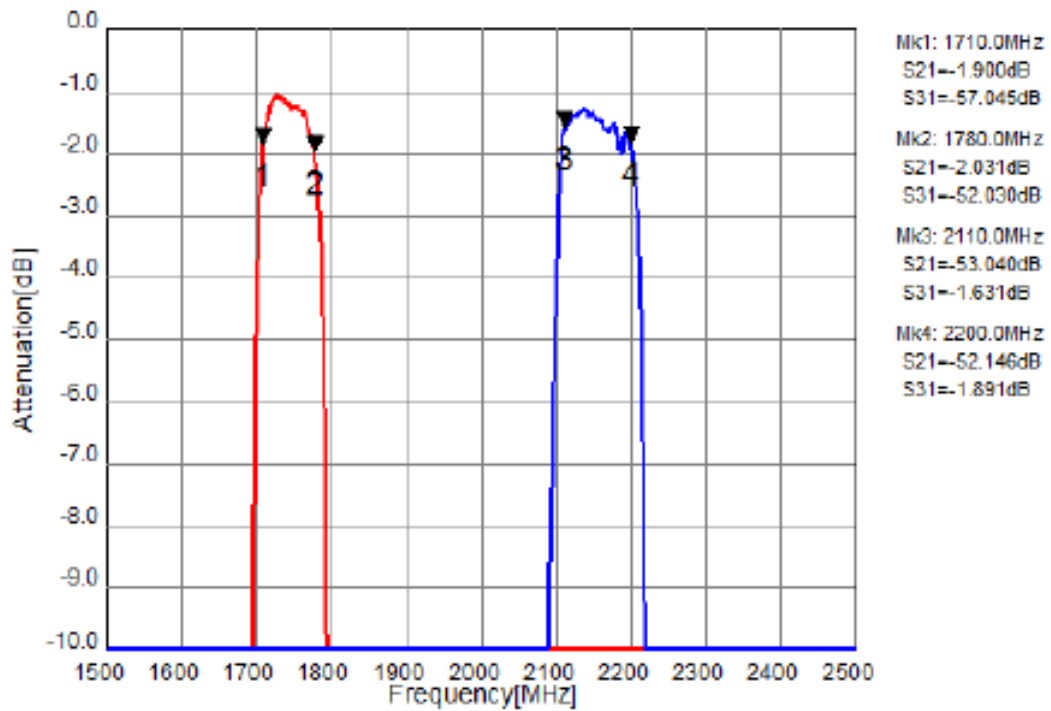
## Tx to Ant



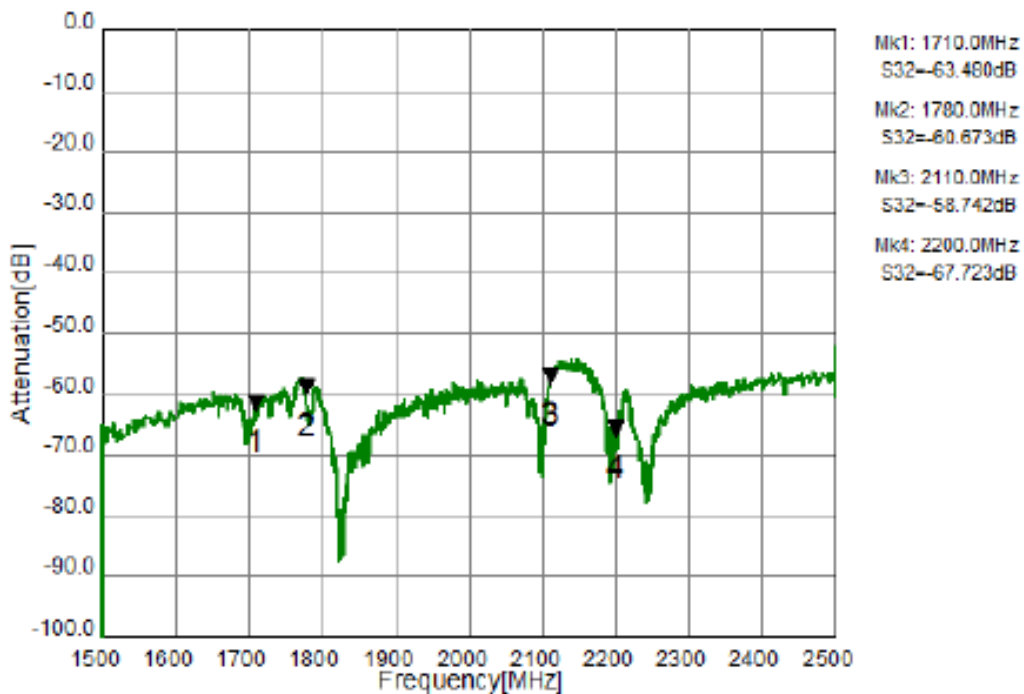
## Ant to Rx



## Tx to Ant, Ant to Rx



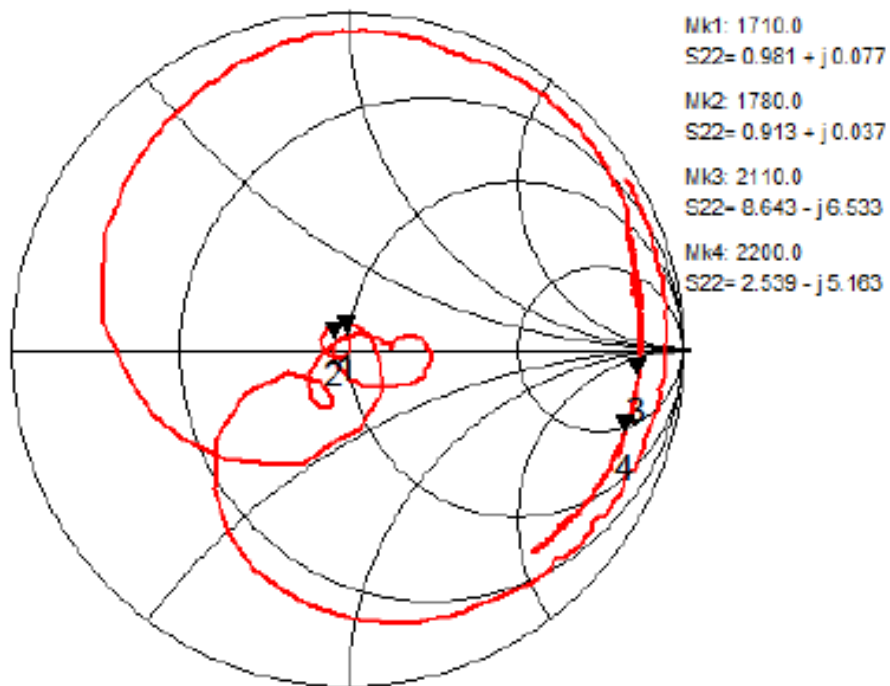
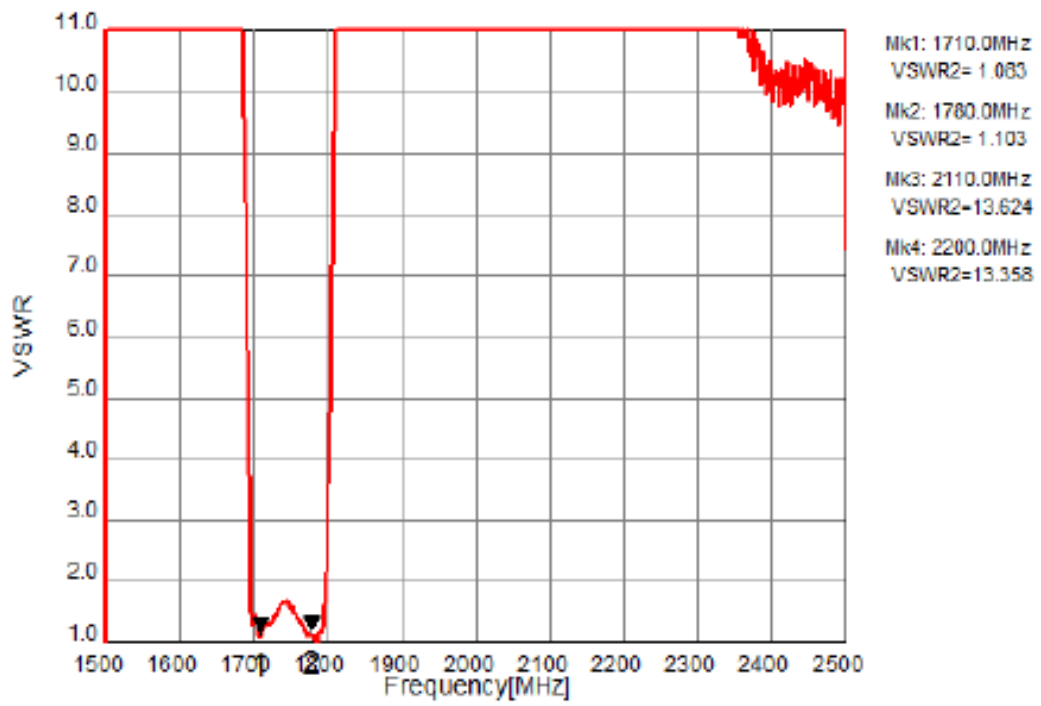
## Tx to Rx Isolation



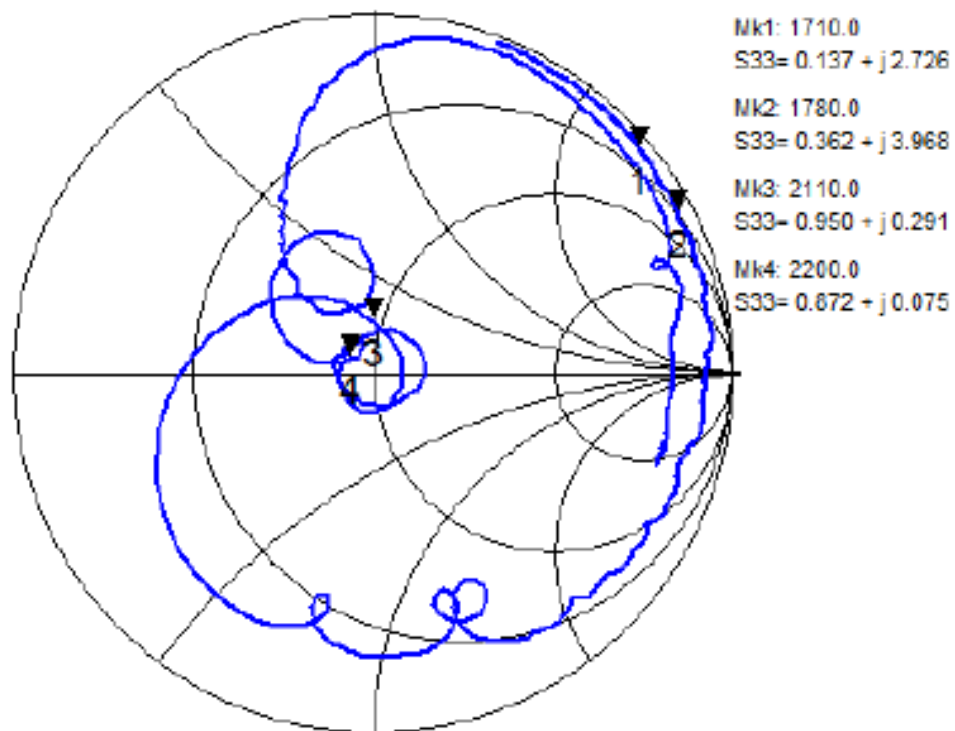
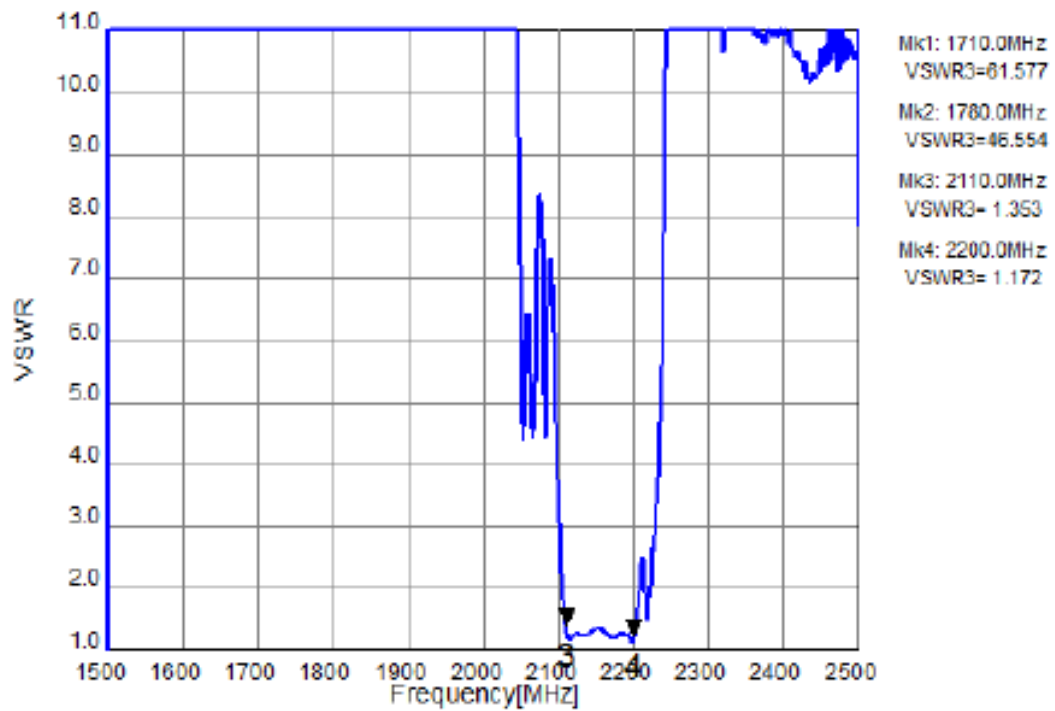
**Figure 3-2. Electrical Characteristics**

These data exclude loss that comes from the test board.

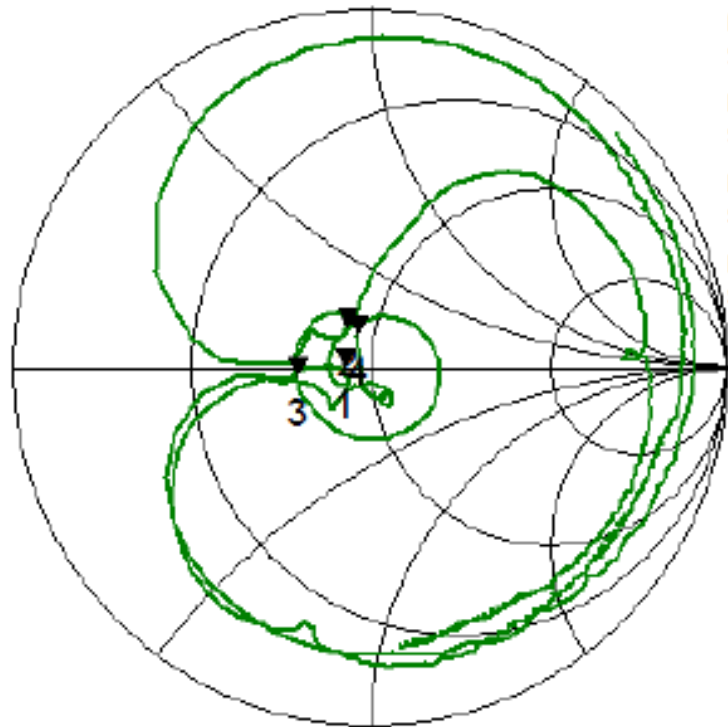
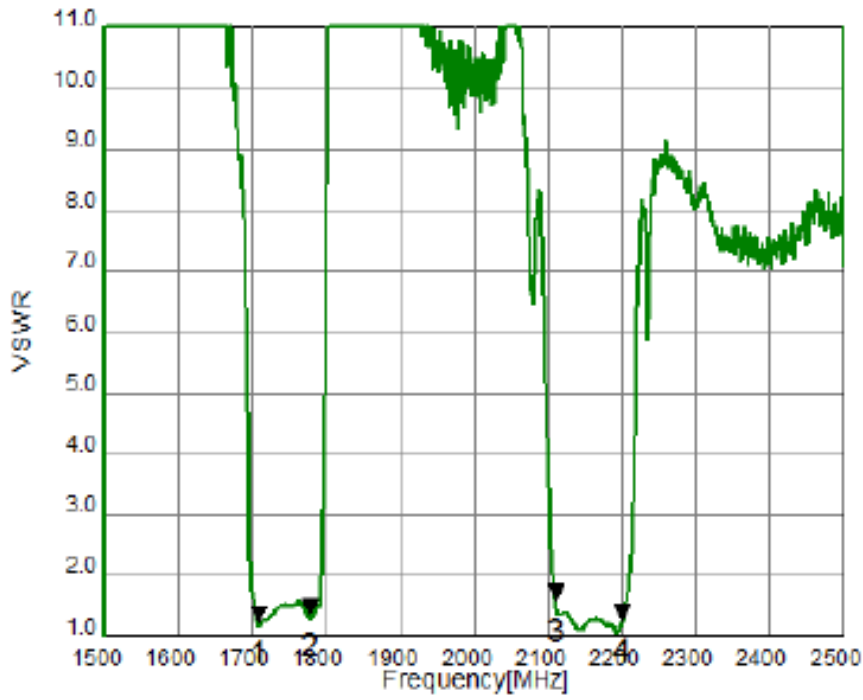
# Tx Port



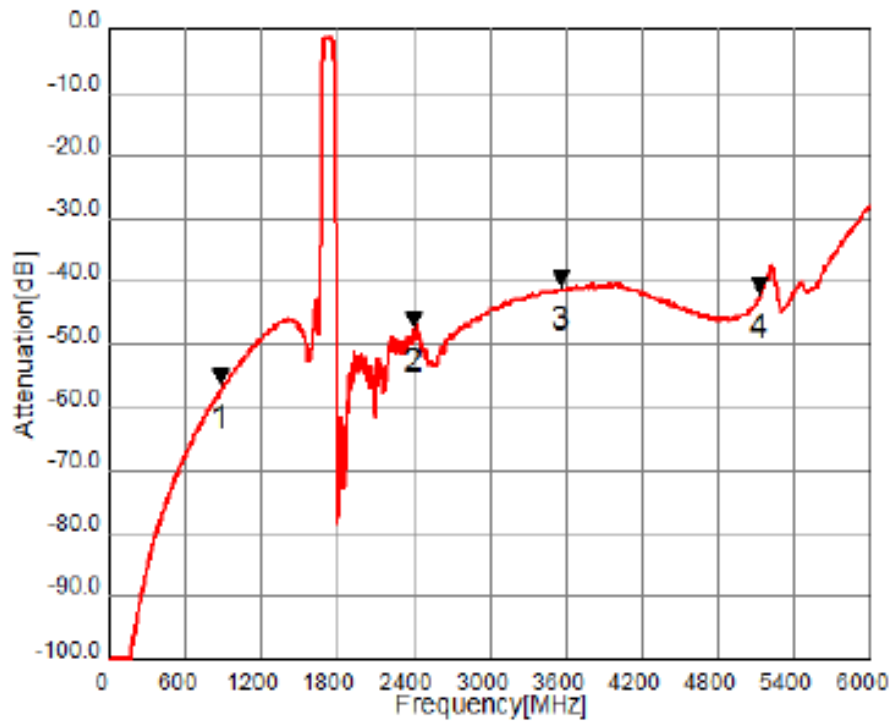
## Rx Port



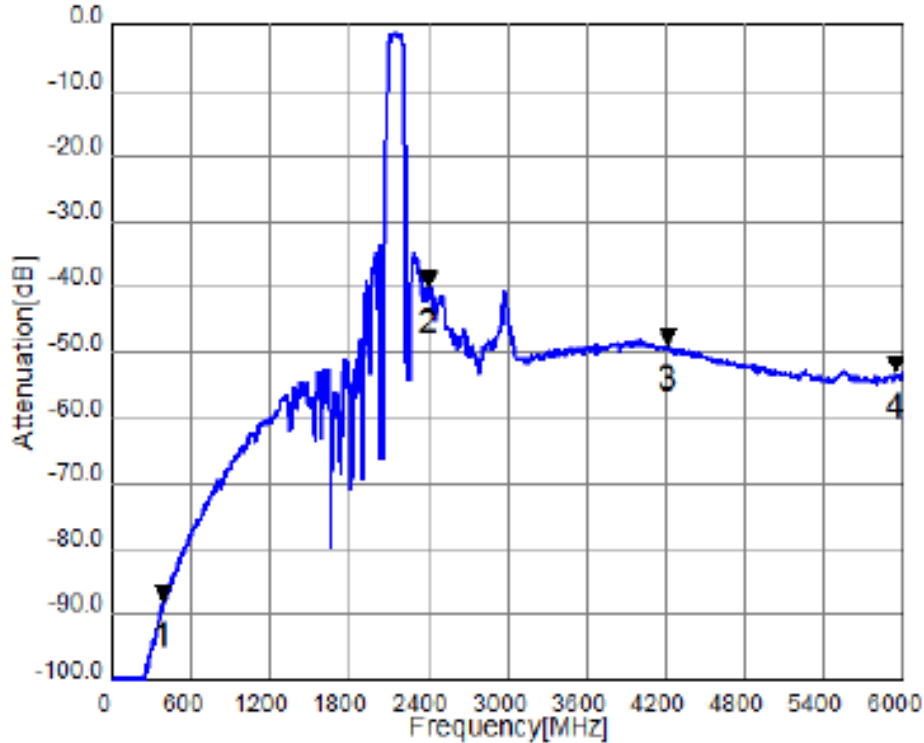
# Ant Port



## Tx to Ant(Wide span)

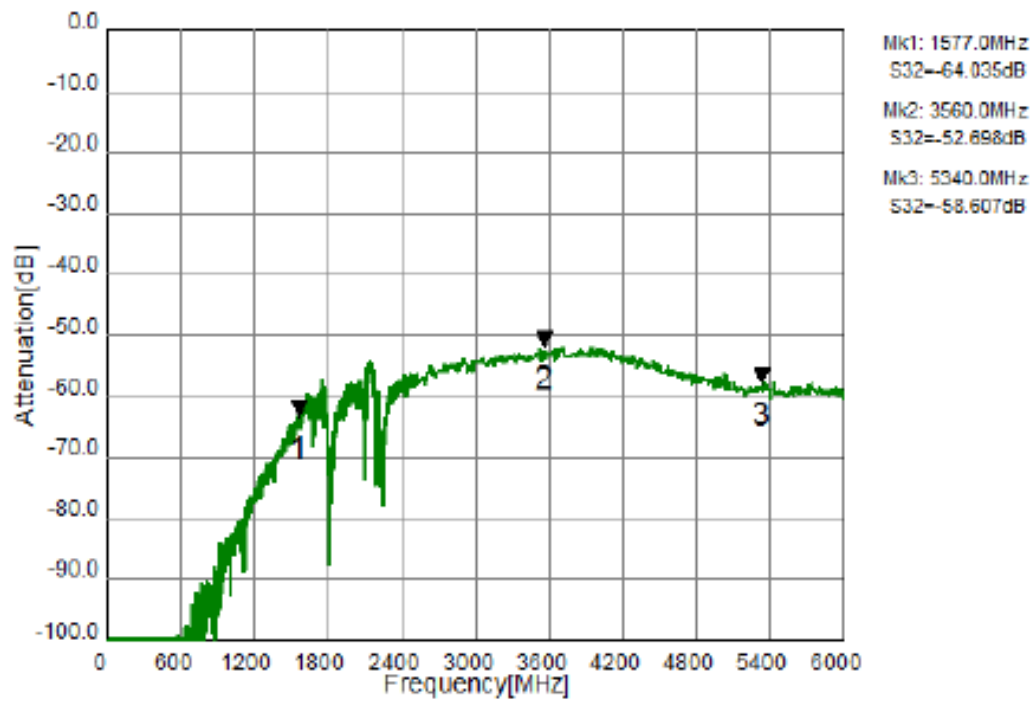


## Ant to Rx(Wide span)

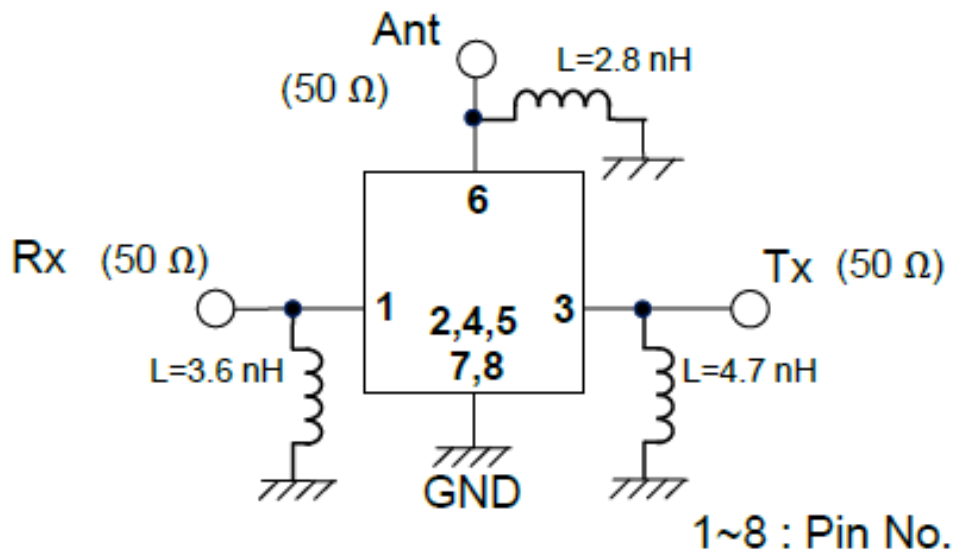




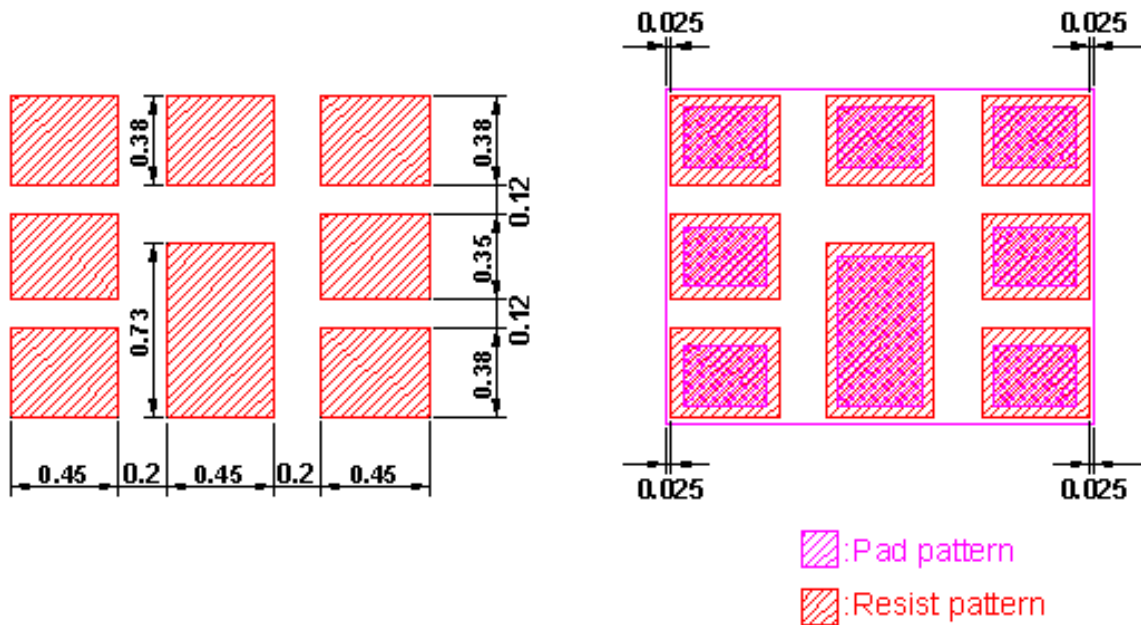
## Tx to Rx Isolation(Wide span)



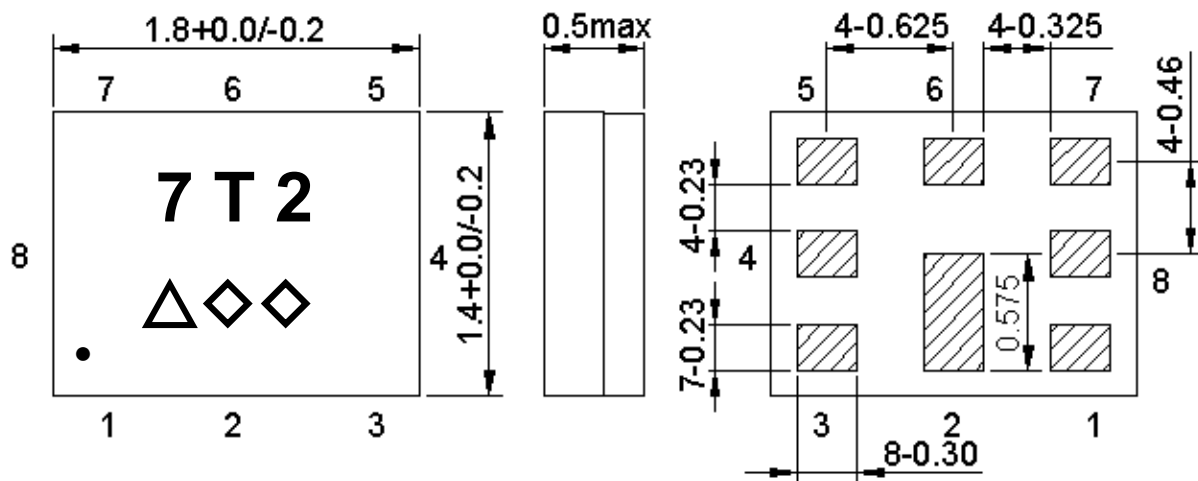
**MEASUREMENT CIRCUIT:**



**PCB Footprint:**



**OUTLINE DRAWING: (Mass Production)**



Marking name : T2

△: Date code( 2016 May → s ,....., 2020 Dec→m.)

◇◇: Lot Code.

Product Date Code. Follow below table.

Year	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
2016	n	p	q	r	s	t	u	v	w	x	y	z
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
2021	A	B	C	D	E	F	G	H	J	K	L	M

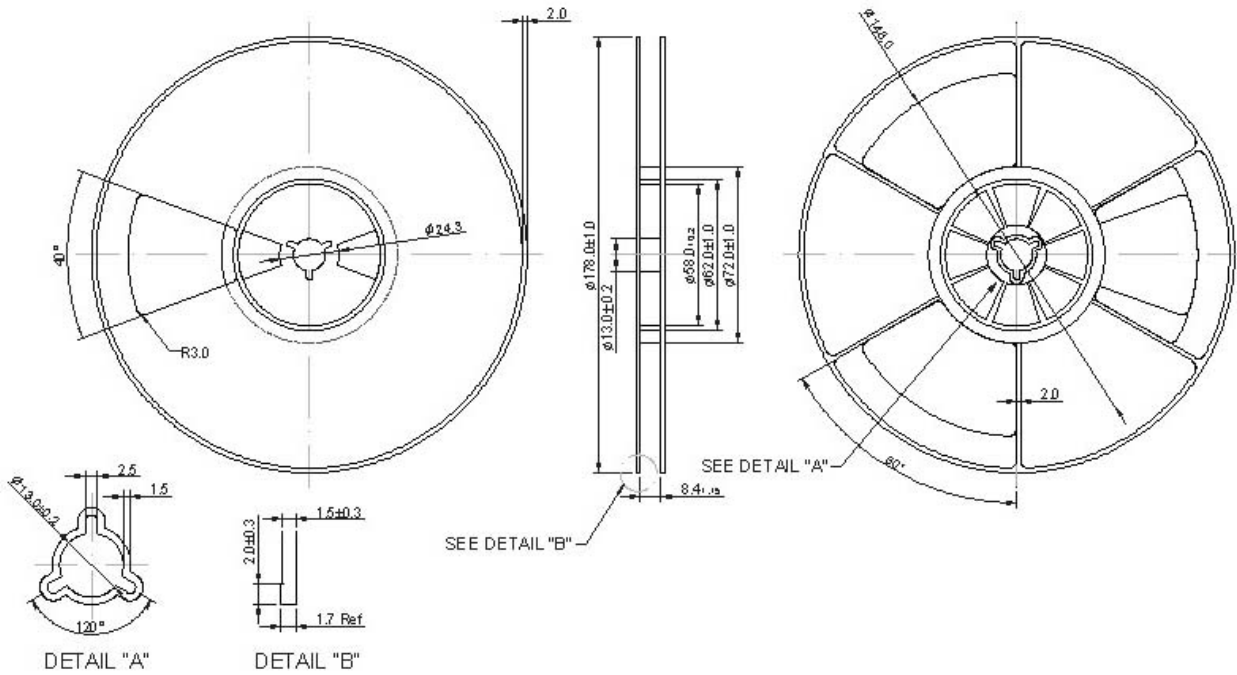
**Pin assignment**

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

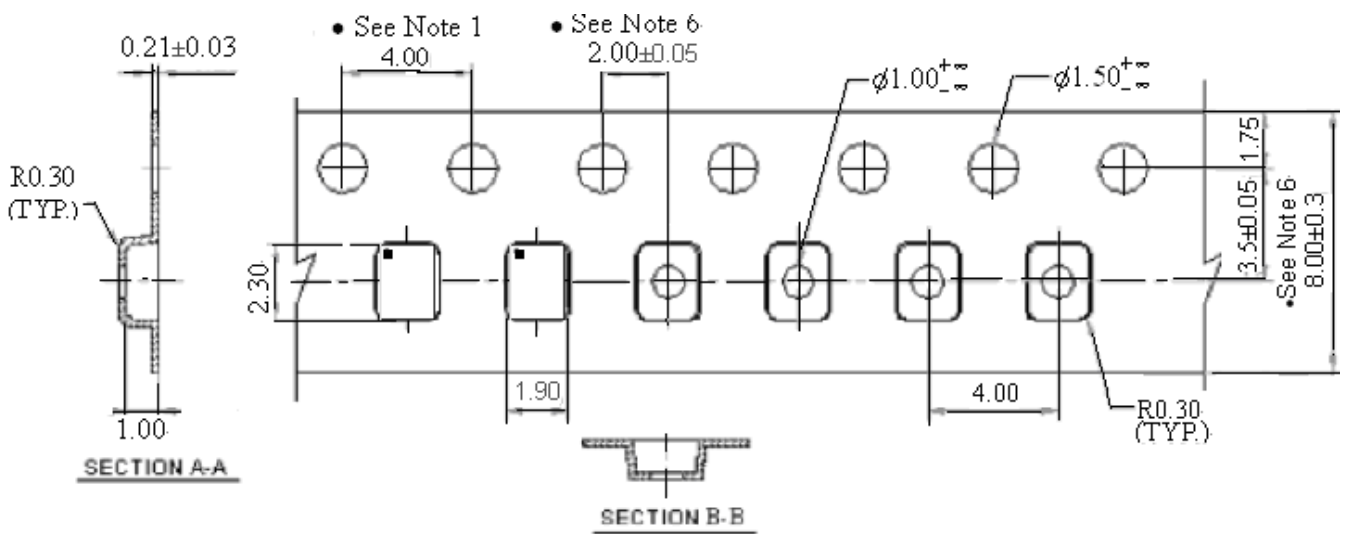
**Figure 1. Dimensions and Pin assignment**

**PACKING:  
REEL DIMENSION**

Reel Count:  
7" = 3000  
13" = 10,000



**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.

