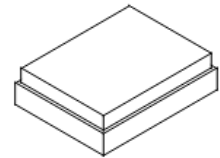


SF2596NA

**782/751 MHz
Filter Duplexer**



SM1814

MAXIMUM RATING:

- Input power : 29dBm (Ta=+50deg C,50000h,CW)
- Maximum DC Voltage: +/-5 V
- Operating temperature range: -40 °C to +85 °C
- Storage temperature range: -55 °C to +125 °C
- Moisture Sensitivity Level: Level 1 (MSL 1)
- ESD 100V(MM) 200V(HBM)
- AEC-Q200 Qualified

ELECTRICAL CHARACTERISTICS:

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

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

Terminating impedance(Ant Port): 50//12nH ($\Omega=\infty$) (Single-ended)

Tx to ANT

Parameters Description		Unit	Minimum	Typical	Maximum	Note
Insertion Loss	777 ~ 787 MHz	Db(*1)	-	1.9	2.5	
Ripple	777 ~ 787 MHz	dB	-	0.8	1.6	
VSWR	Tx	-	-	1.6	2.0	
	ANT	-	-	1.6	2.0	
Attenuation:						
746 ~ 756 MHz		dB	44	51	-	-
758 ~ 768 MHz		dB	10	32	-	-
768 ~ 775 MHz		dB	1	2.5	-	-
1554 ~ 1565 MHz		dB	41	46	-	-
1565 ~ 1607 MHz		dB	41	46		-
2331 ~ 2361 MHz		dB	35	53		-
2400 ~ 2484 MHz		dB	40	50		-
3108 ~ 3148 MHz		dB	23	28		
4900 ~ 5950 MHz		dB	8	12		

ANT to Rx

Parameters Description		Unit	Minimum	Typical	Maximum	Note
Insertion Loss	746 ~ 756 MHz	dB(*1)	-	1.7	2.3	
Ripple)	746 ~ 756 MHz	dB	-	0.4	1.0	
VSWR	ANT	-	-	1.4	2.0	
	Rx	-	-	1.5	2.0	
Attenuation:						
777 ~ 787 MHz		dB	50	62	-	
2400 ~ 2500 MHz		dB	40	45	-	
787 ~ 6000 MHz		dB	23	28	-	

Tx to Rx

Isolation	746 ~ 756 MHz	dB	52	58	-	
	777 ~ 787 MHz	dB	56	61	-	

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



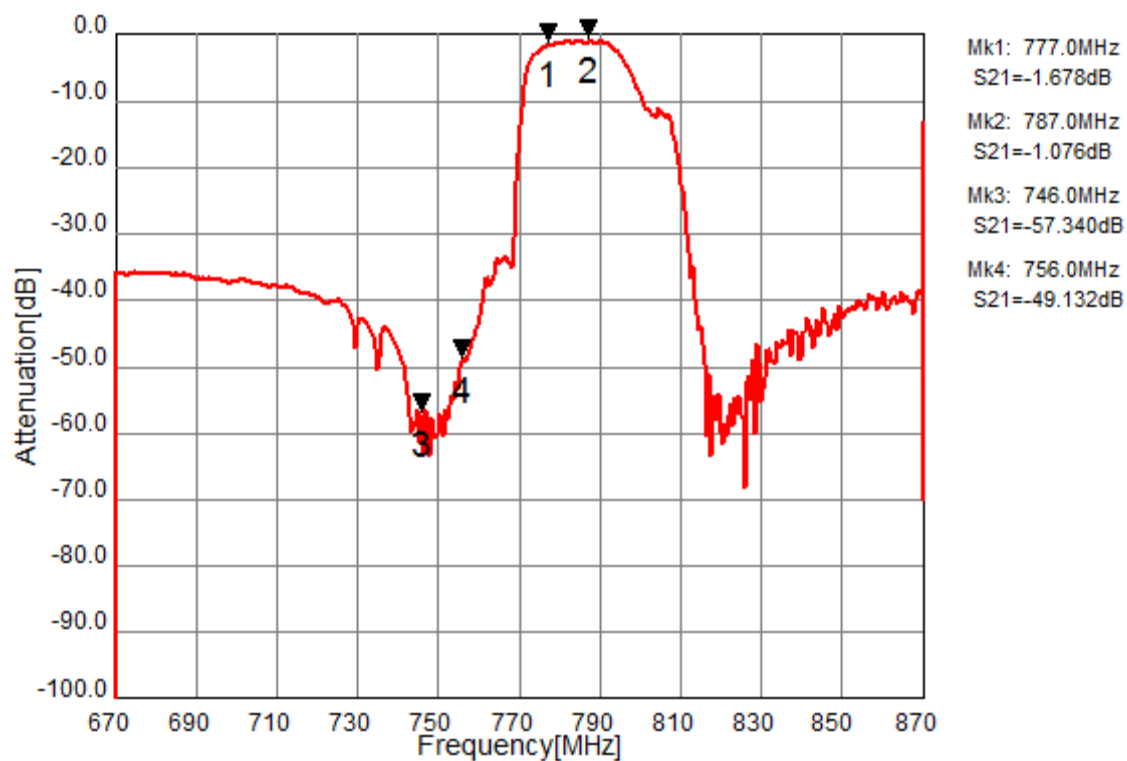
CAUTION: Electrostatic Sensitive Device. Observe precautions for handling.

NOTES:

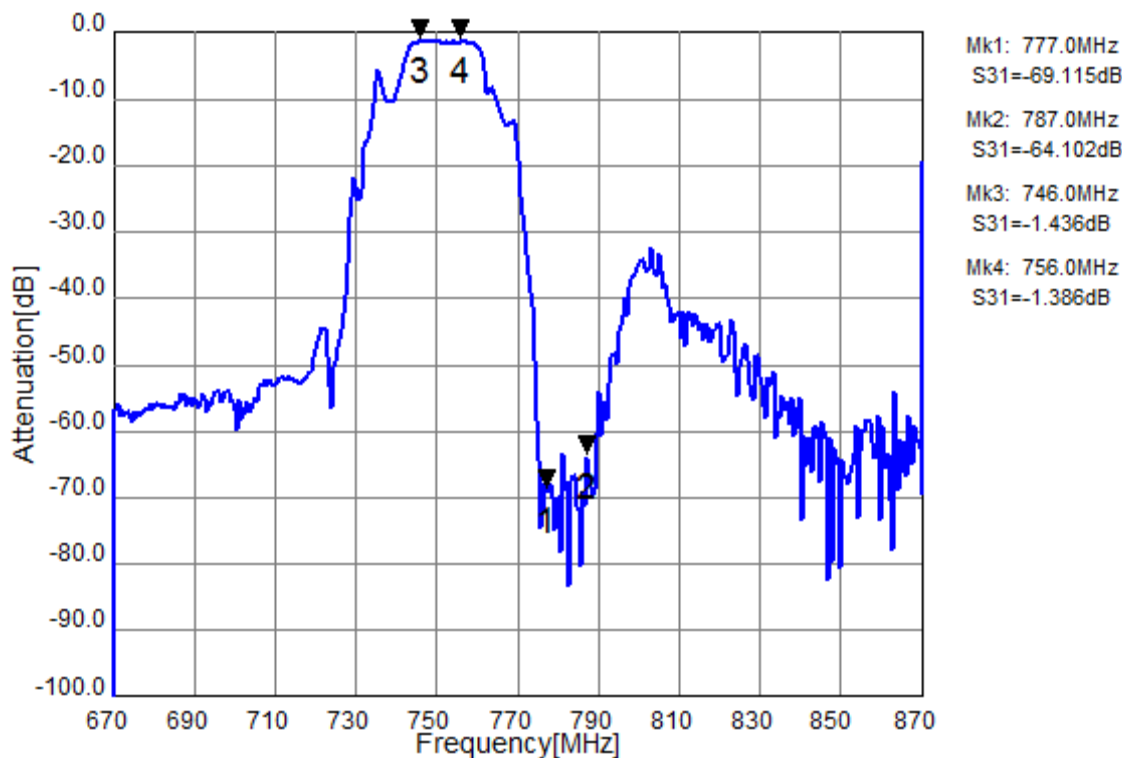
1. The design, manufacturing process, and specifications of this device are subject to change.
2. US or International patents may apply.
3. RoHS compliant from the first date of manufacture.

Frequency Characteristics:

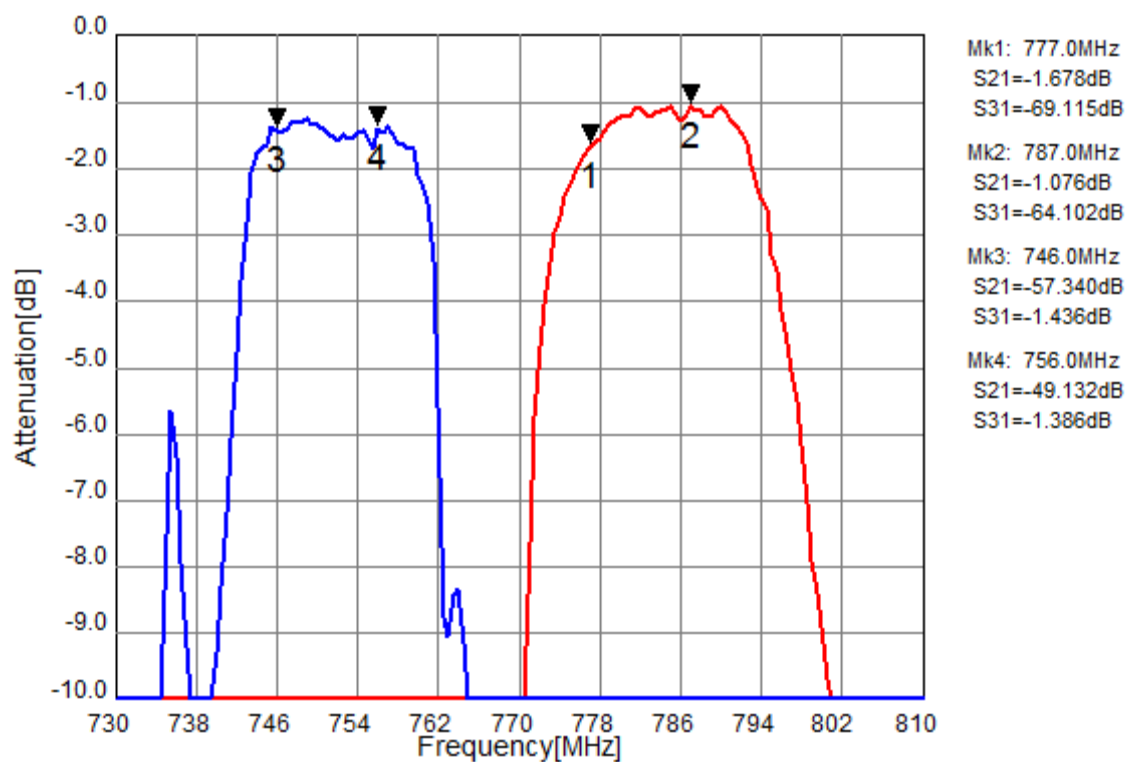
Tx to Ant



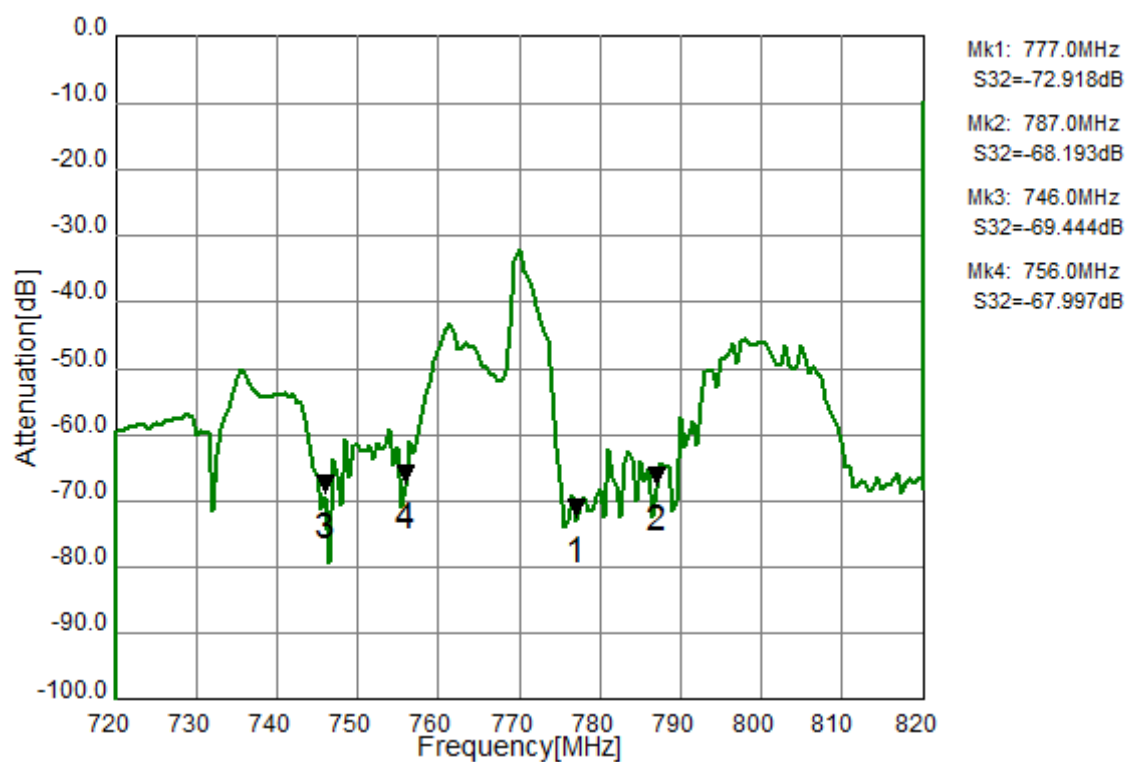
Ant to Rx



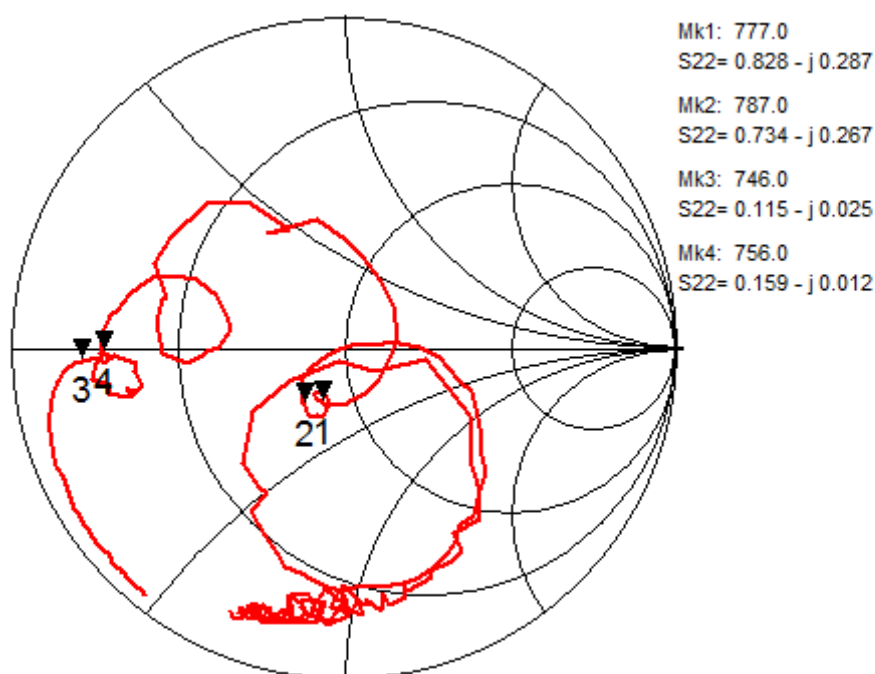
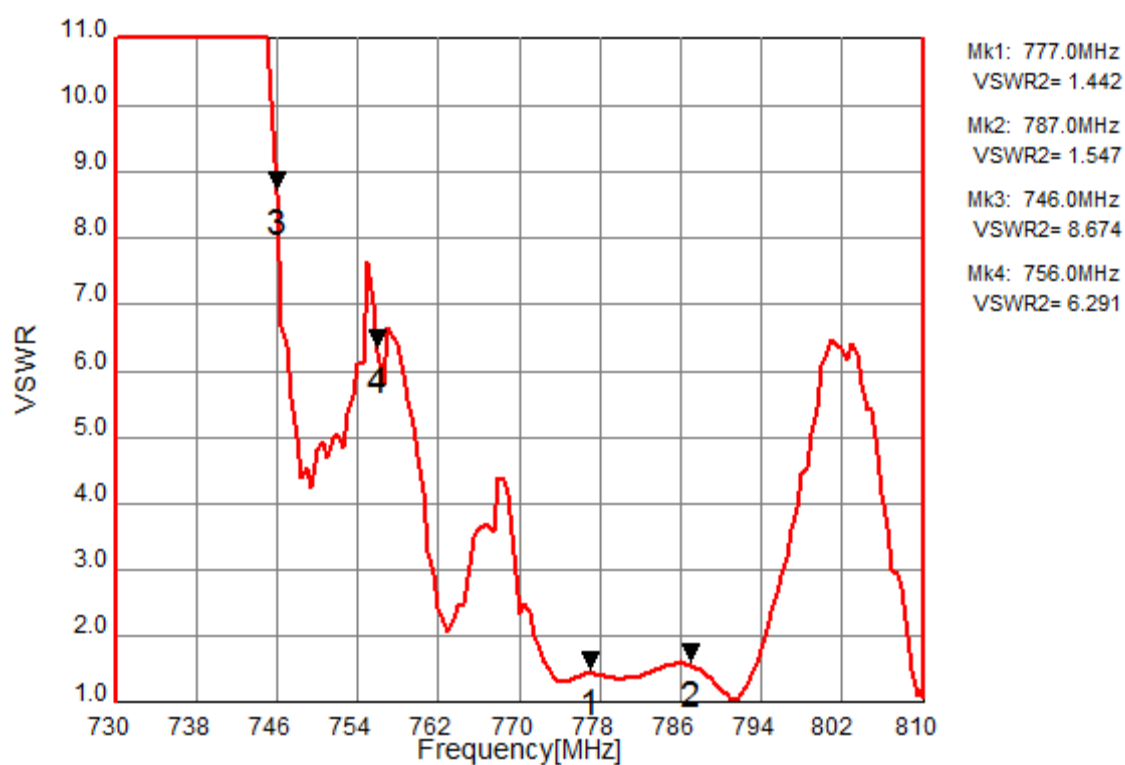
Tx to Ant, Ant to Rx



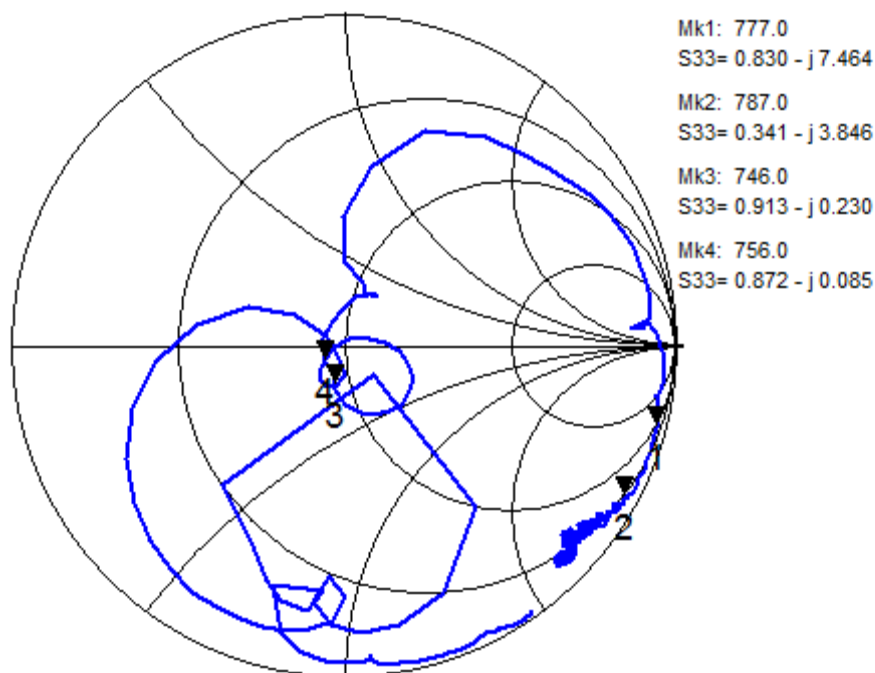
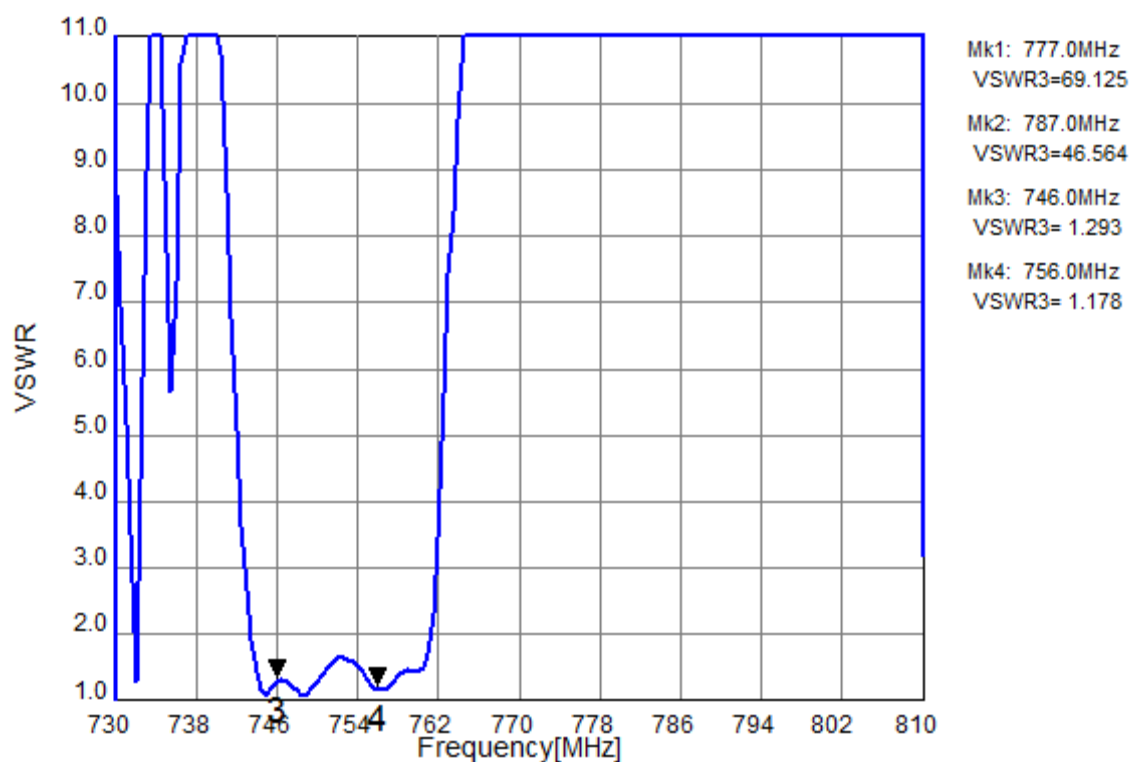
Tx to Rx Isolation



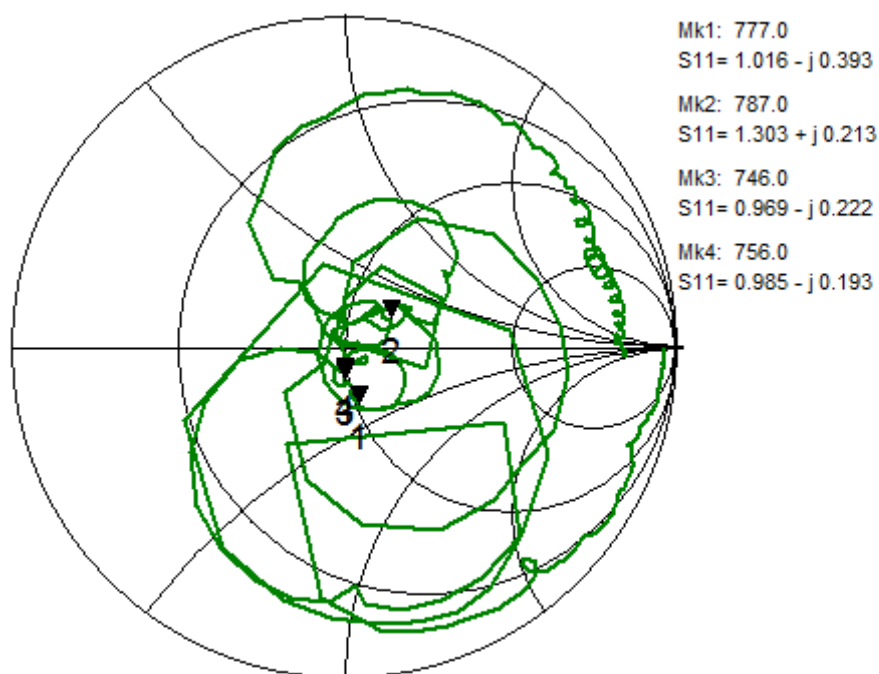
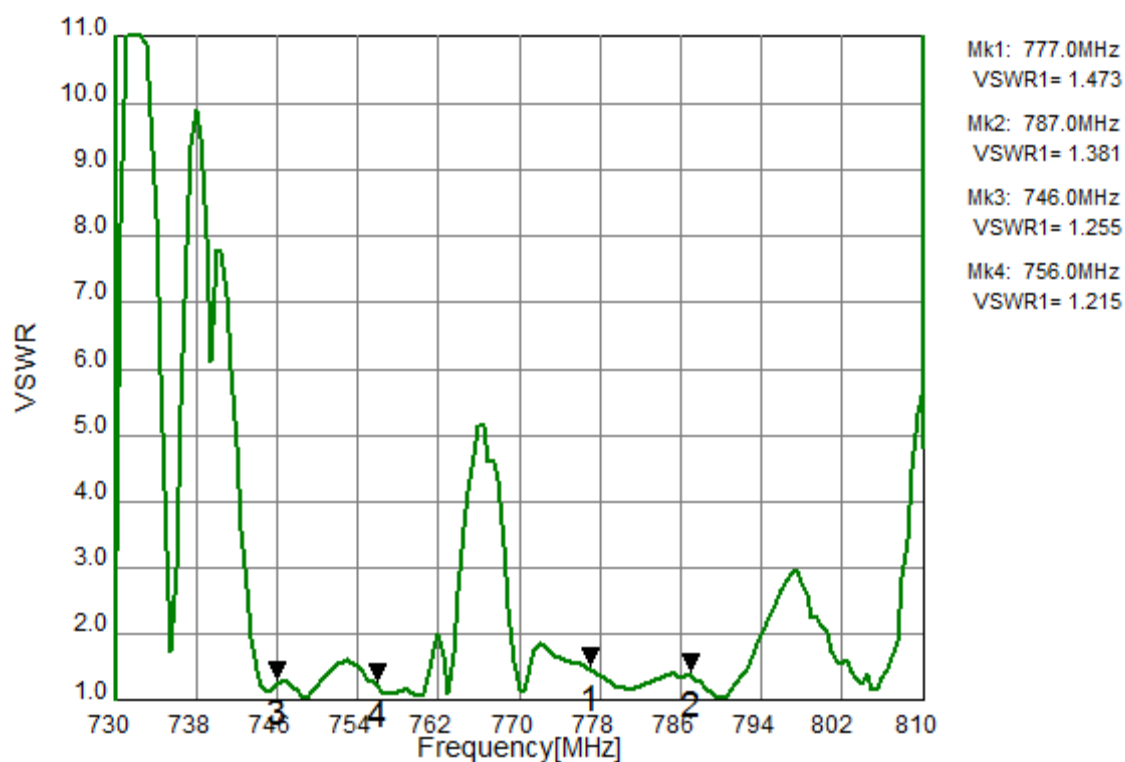
Tx Port



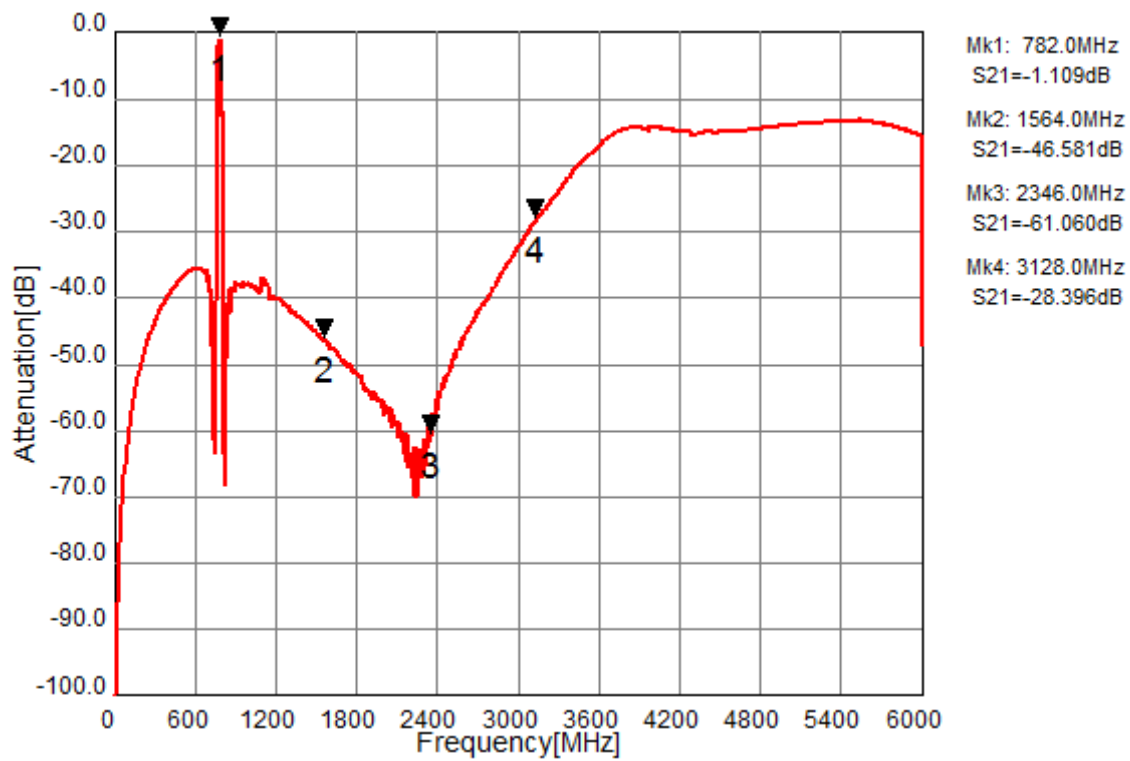
Rx Port



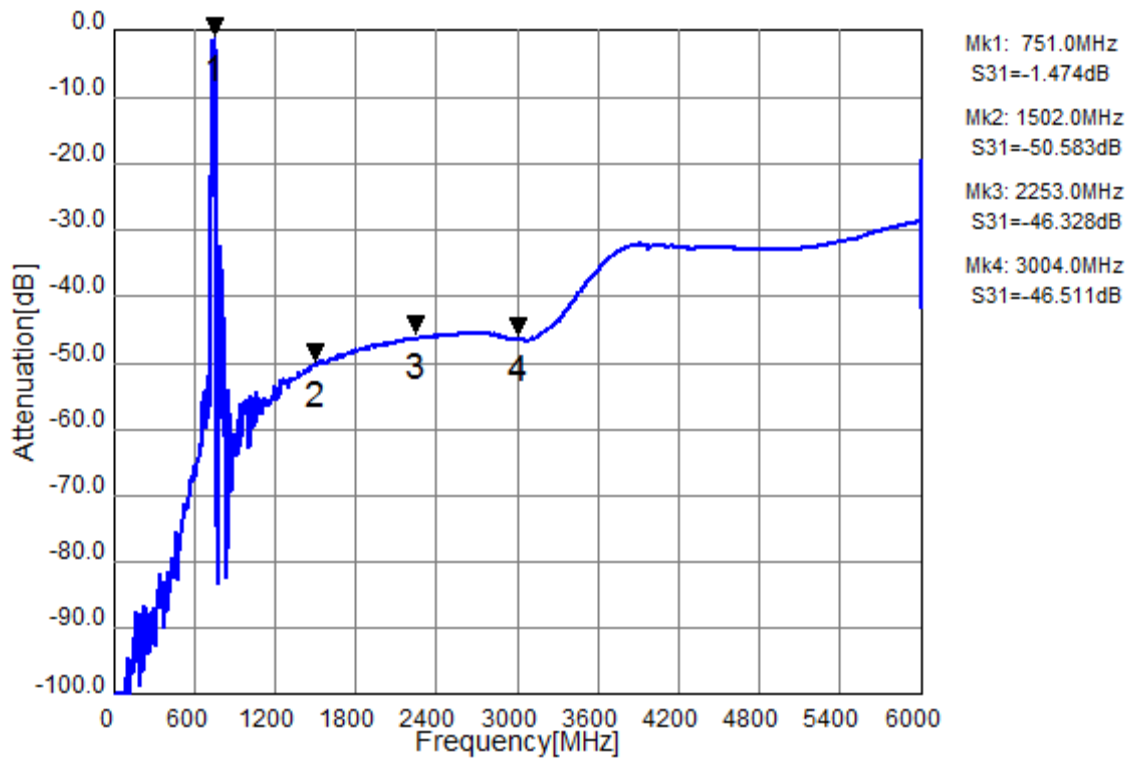
Ant Port



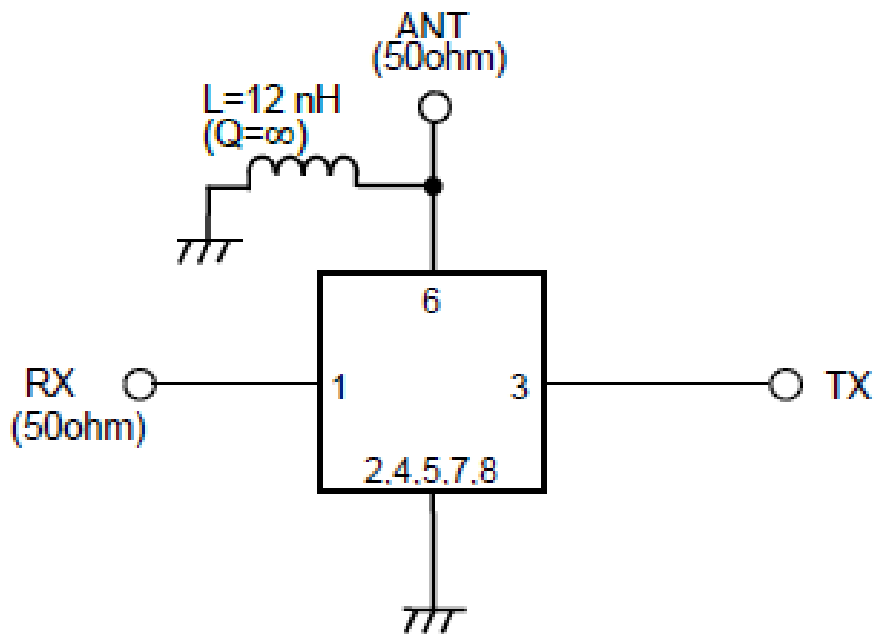
Tx to Ant (Wide span)



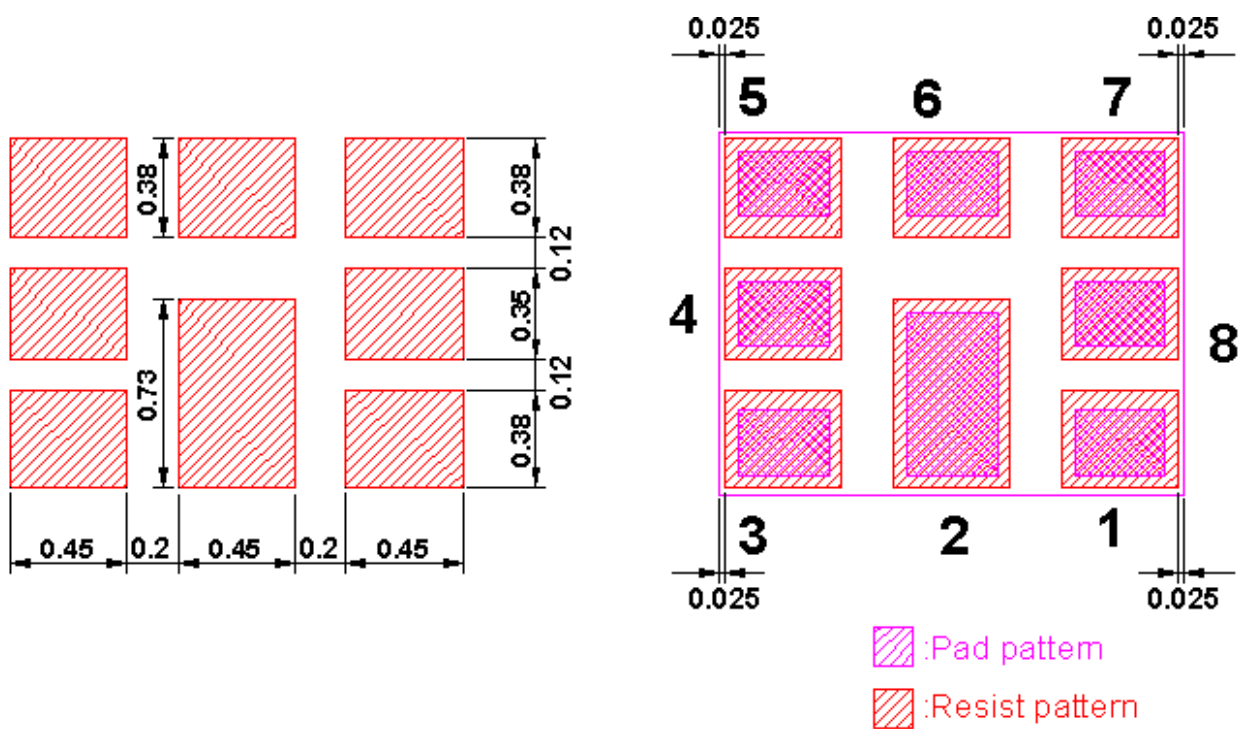
Ant to Rx (Wide span)



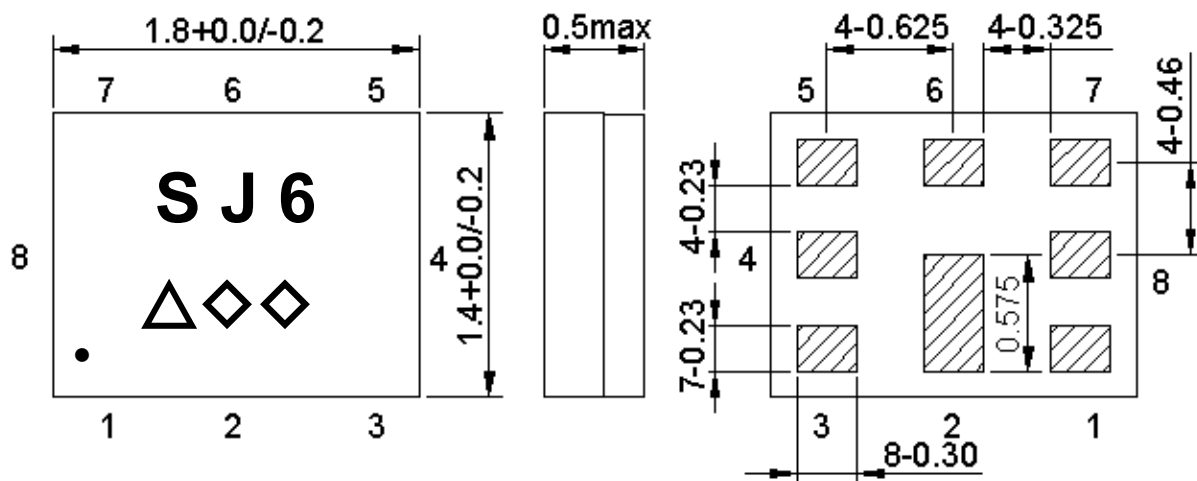
MEASUREMENT CIRCUIT:



FOOTPRINT:



OUTLINE DRAWING: (Mass Production)

Marking name : **J6**

Δ : Date code(2016 May $\rightarrow$ s ,....., 2019 Dec $\rightarrow$ 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
2020	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
2018	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

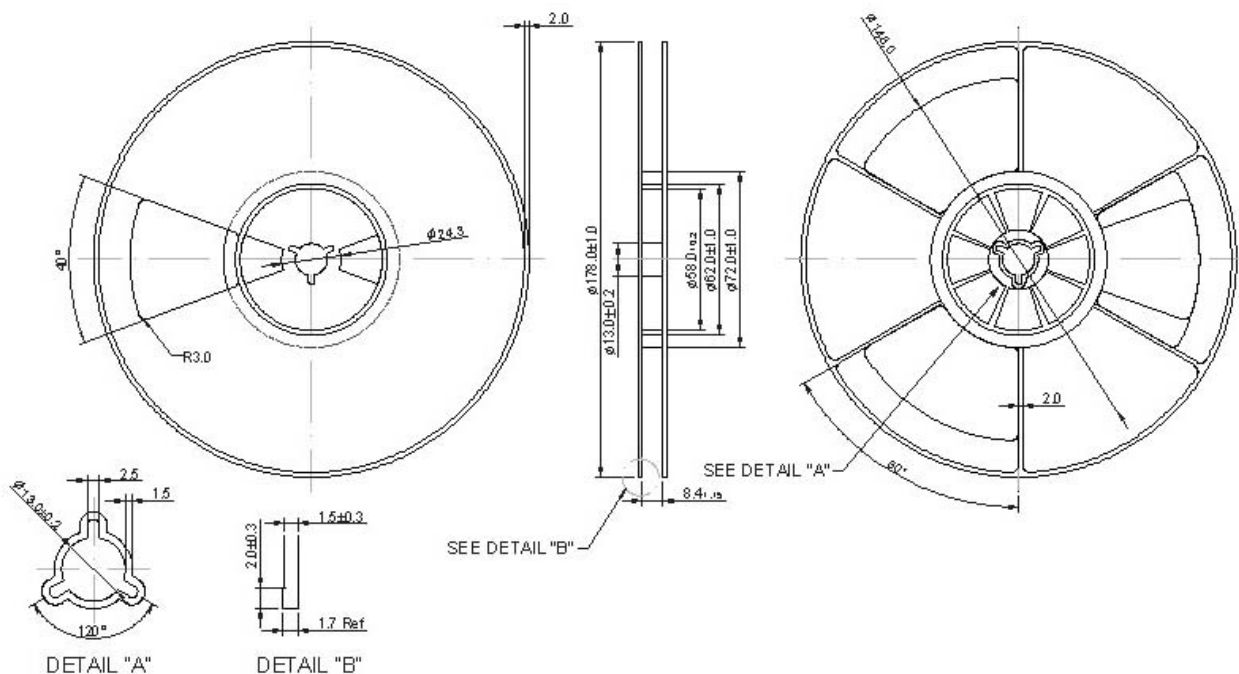
Pin Configuration

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

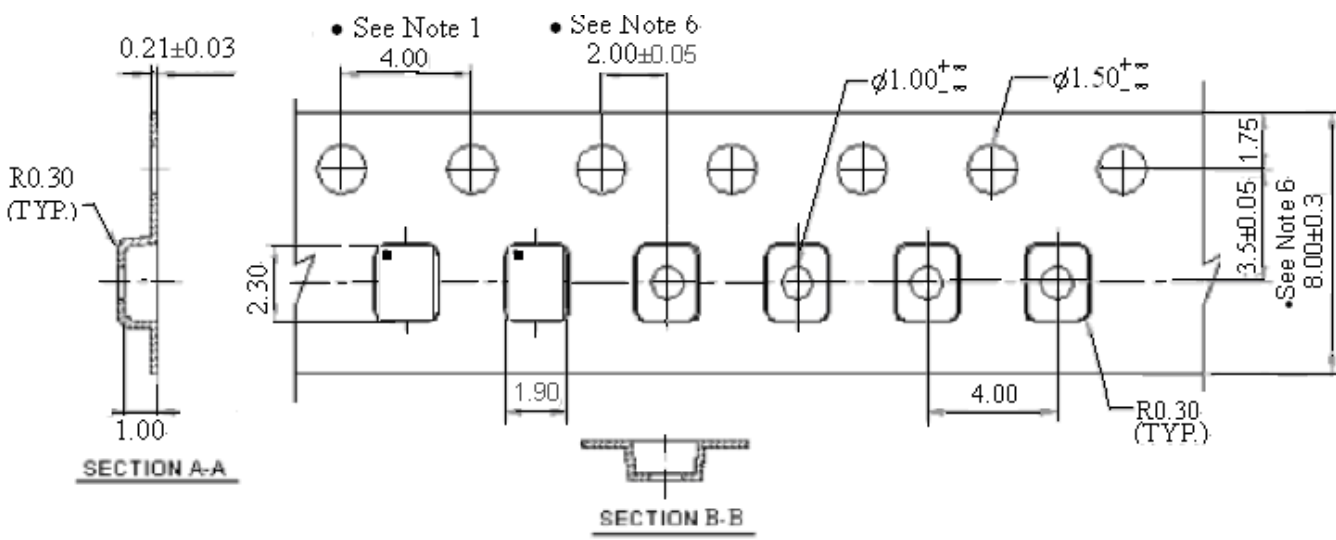
Figure 1. Dimensions and Pin assignment

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.

