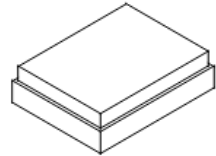


SF2603NA

**718/773 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//12nH Ω (Single-ended)

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

Terminating impedance(Ant Port): 50//8.2nH Ω (Single-ended)

Tx to ANT

Parameters Description		Unit	Minimum	Typical	Maximum	Note
Insertion Loss	703 ~ 733 MHz	dB(*1)	-	2.0	2.9	
	703.25 ~ 732.75 MHz			2.0	2.7	
Ripple		dB	-	1.3	2.4	
VSWR	Tx	-	-	1.9	2.2	
	ANT	-	-	1.8	2.1	
Attenuation:						
10 ~ 694 MHz		dB	18	30	-	-
694 ~ 698 MHz		dB	3.0	11	-	-
758 ~ 788 MHz		dB	47	54	-	Rx
1406 ~ 1466 MHz		dB	23	29	-	2fo
1565 ~ 1606 MHz		dB	20	24		GPS
2109 ~ 2199 MHz		dB	30	34		3fo
2400 ~ 2500 MHz		dB	35	40		ISM

ANT to Rx

Parameters Description		Unit	Minimum	Typical	Maximum	Note
Insertion Loss	758 ~ 788 MHz	dB(*1)	-	1.8	2.6	
	758.25 ~ 787.75 MHz			1.7	2.4	
Ripple)	758 ~ 788 MHz	dB	-	0.9	2.0	
VSWR	ANT	-	-	1.8	2.0	
	Rx	-	-	1.8	2.0	
Attenuation:						
703 ~ 733 MHz		dB	50	64	-	Tx-
2400 ~ 2500 MHz		dB	30	68	-	ISM

Tx to Rx

Isolation	703 ~ 733 MHz	dB	60	63	-	Tx
	758 ~ 788 MHz	dB	55	58	-	Rx

(*1) De-embedded test fixture.



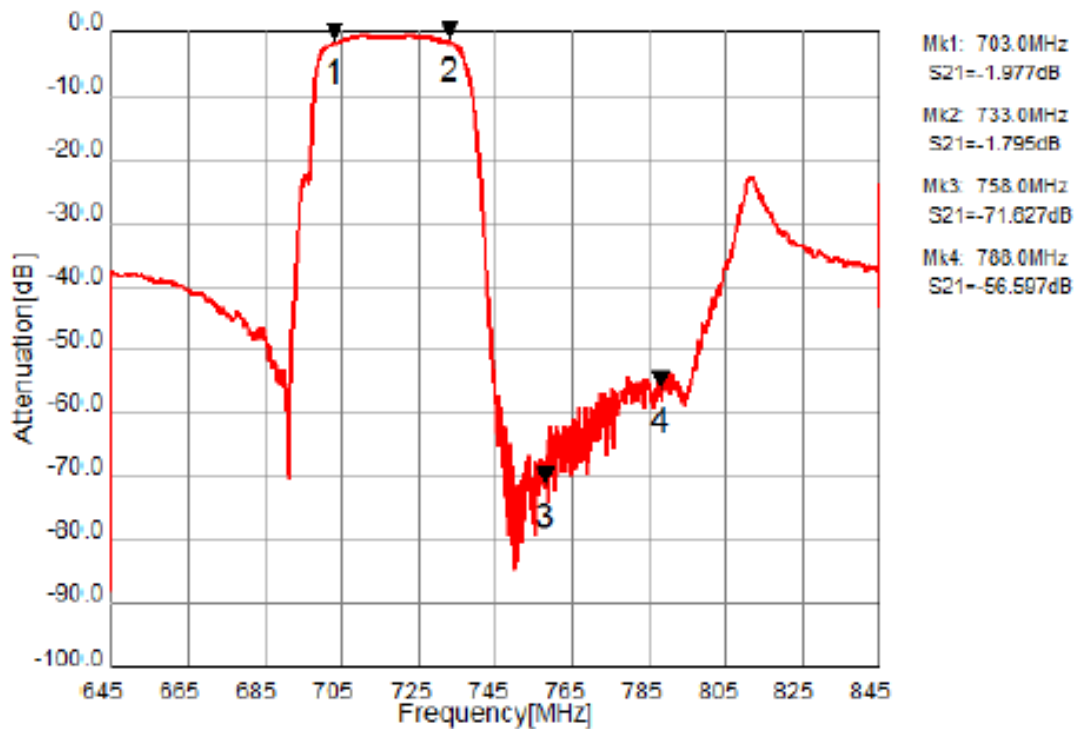
CAUTION: Electrostatic Sensitive Device. Observe precautions for handling.

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

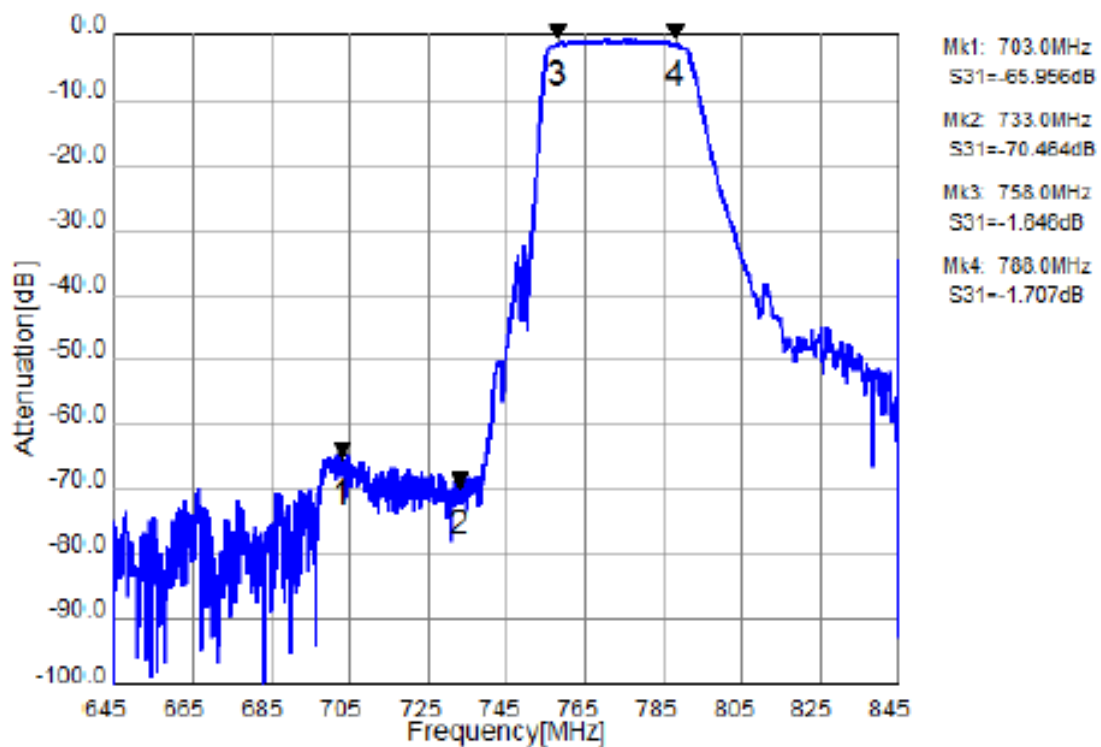
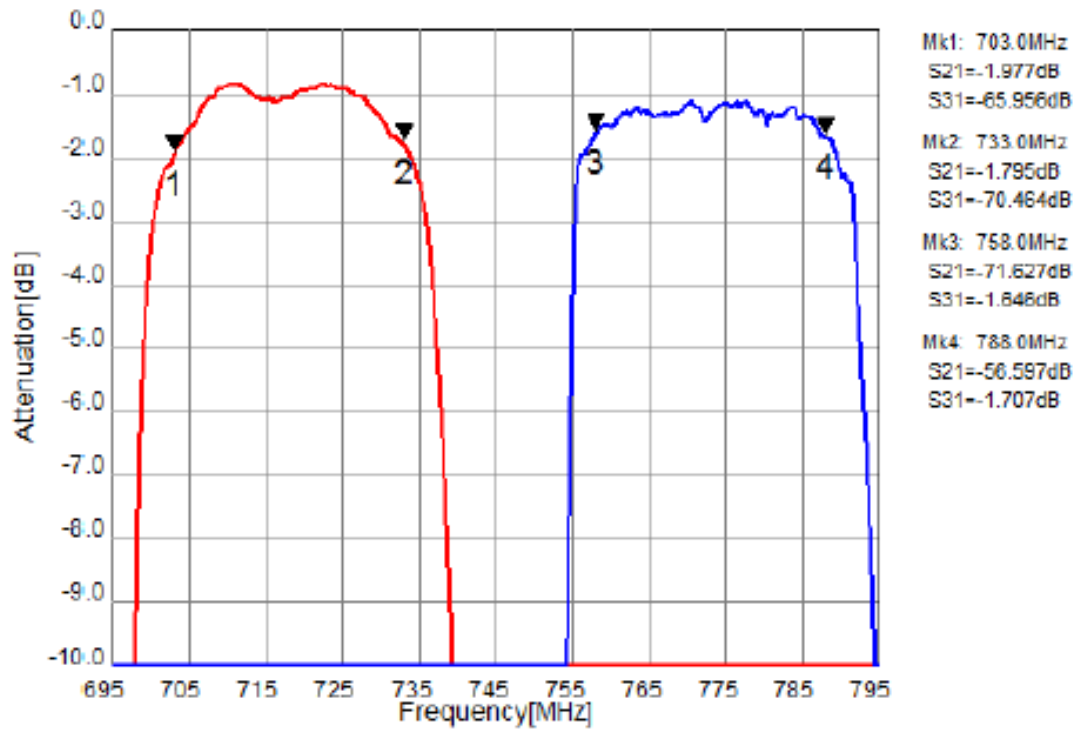


Figure 3-1. Electrical Characteristics

Tx to Ant, Ant to Rx



Tx to Rx Isolation

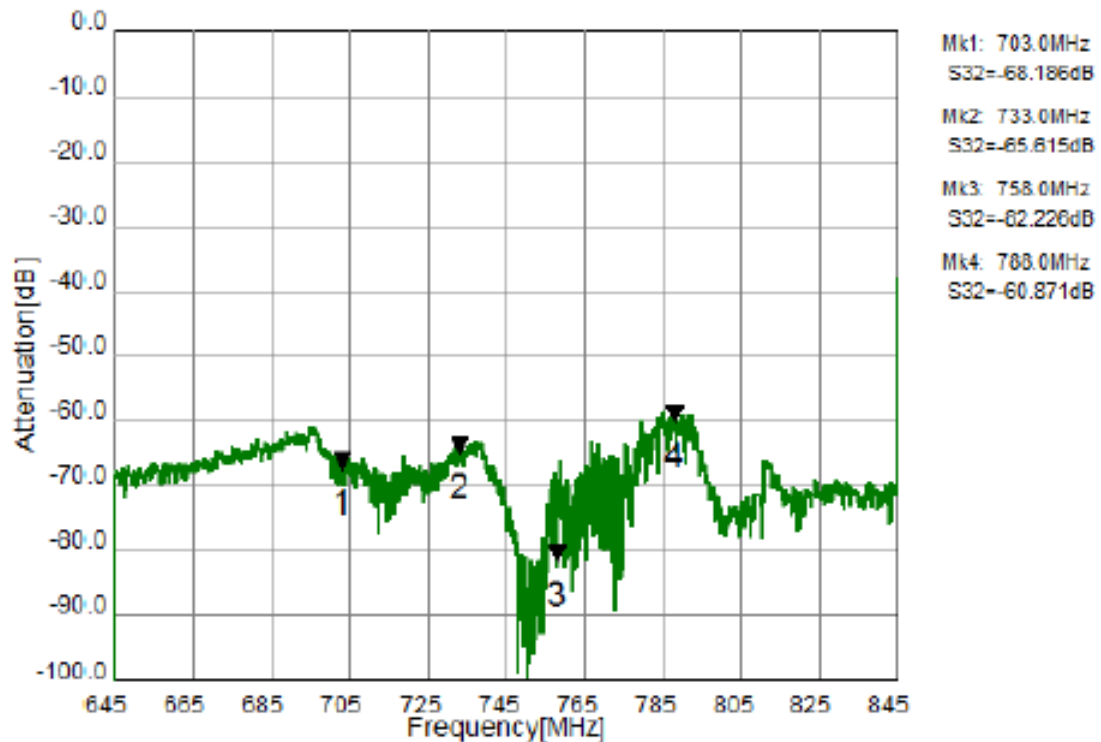


Figure 3-2. Electrical Characteristics

Tx Port

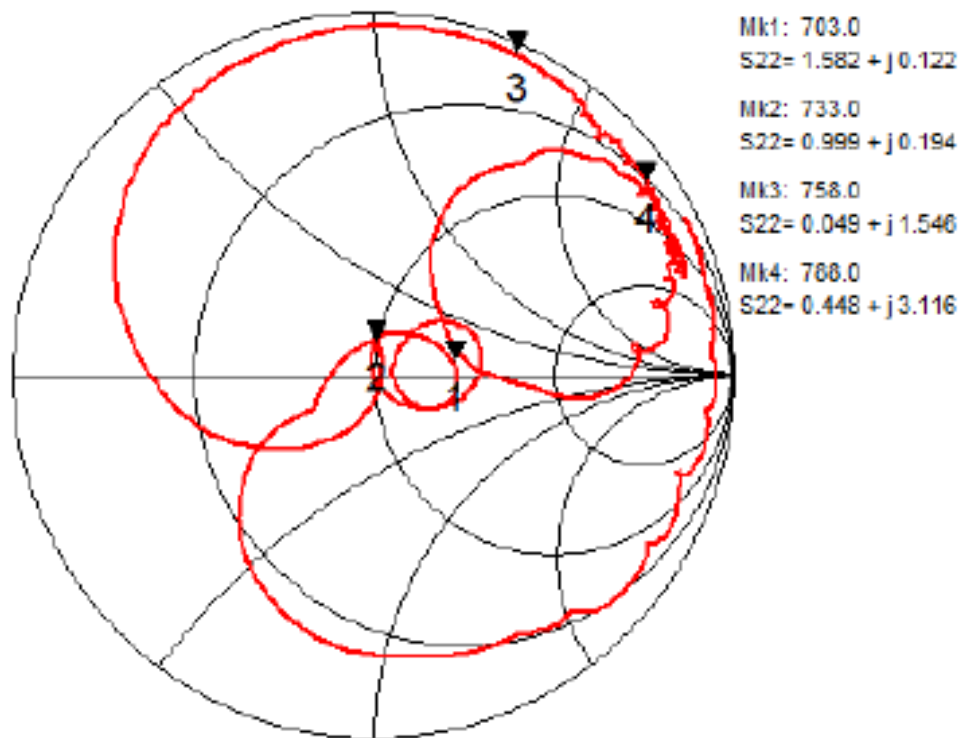
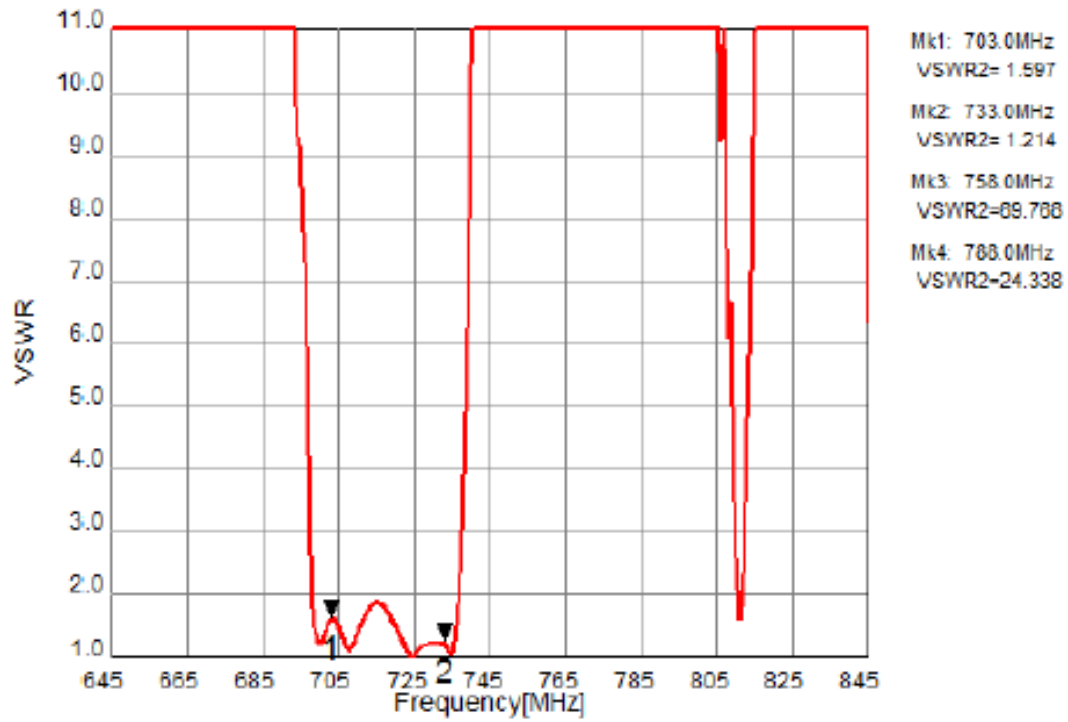


Figure 3-3. Electrical Characteristics

Rx Port

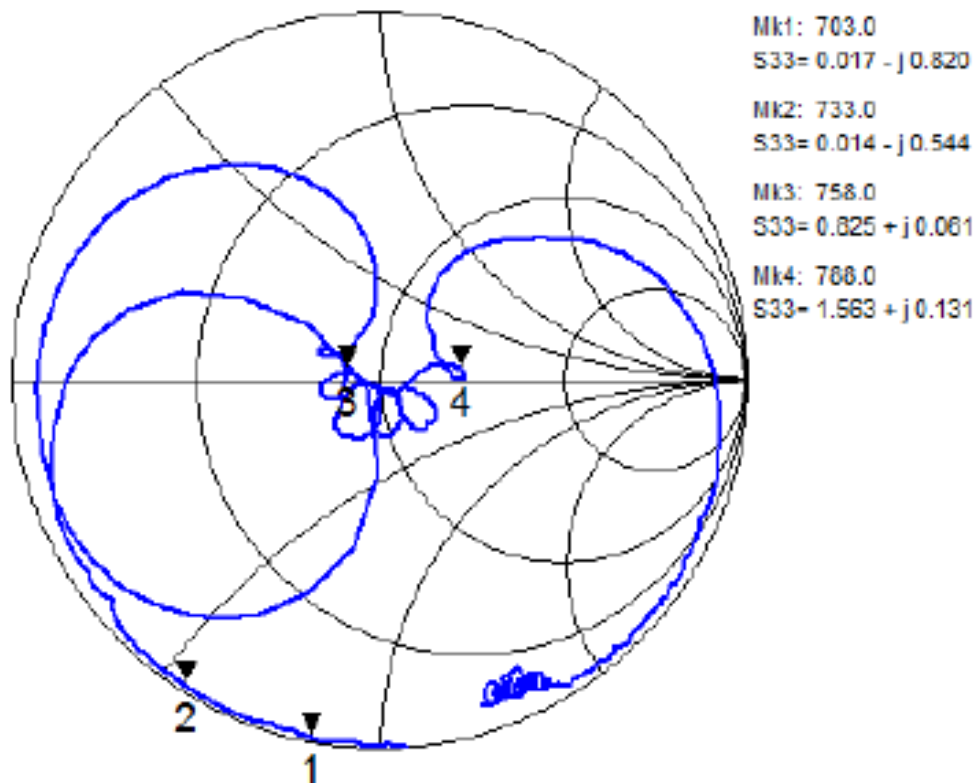
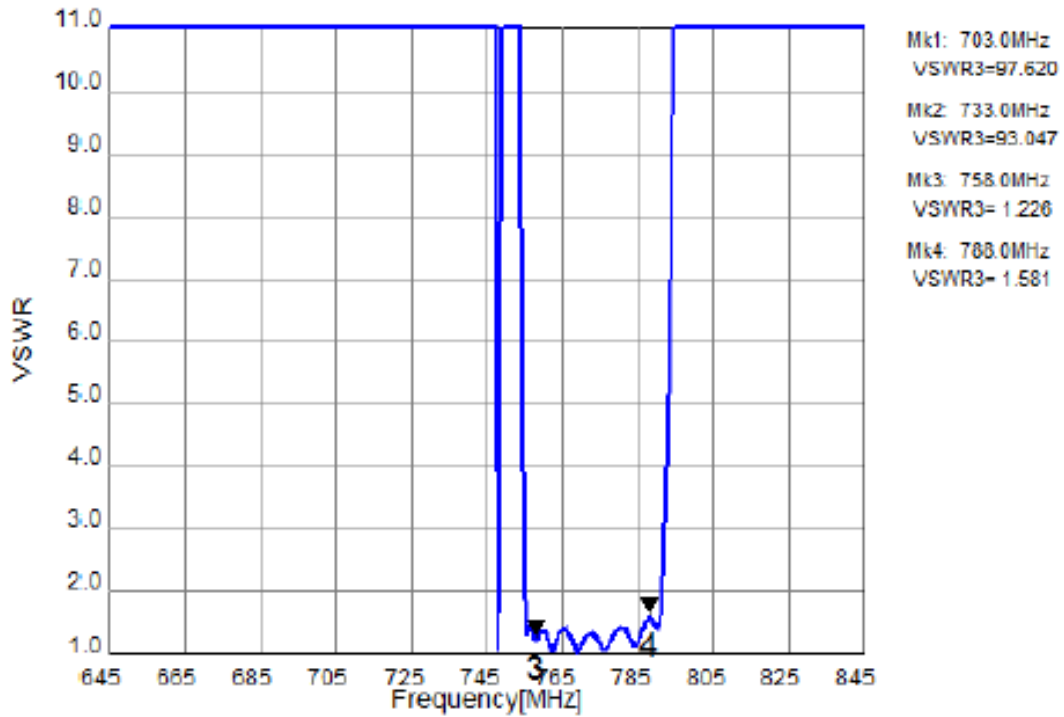


Figure 3-4. Electrical Characteristics

Ant Port

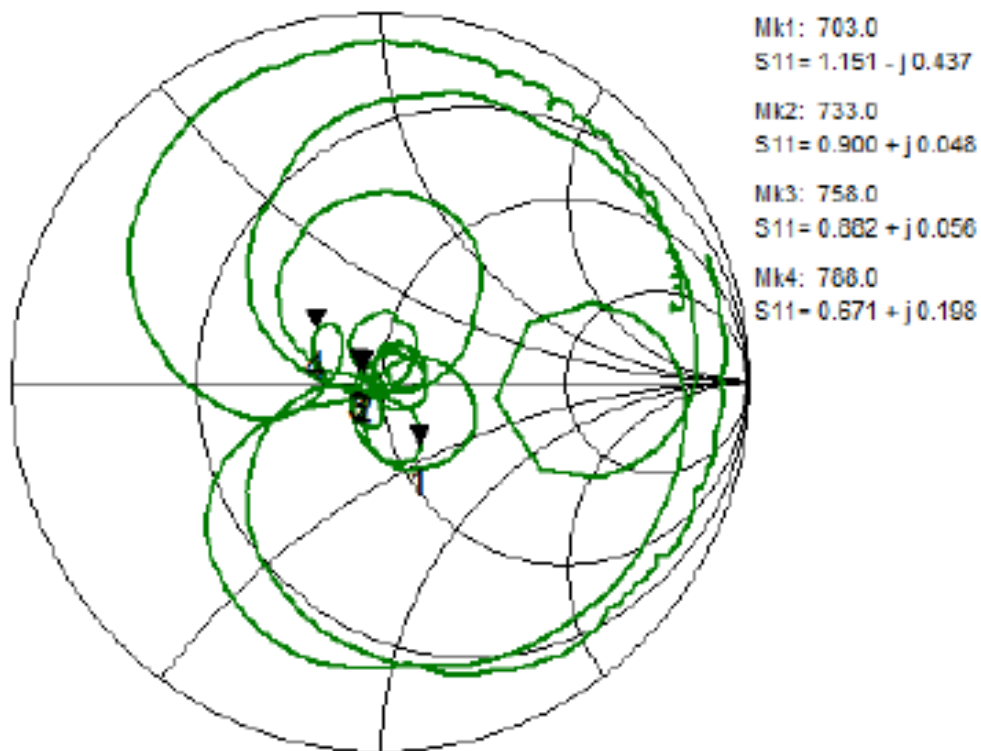
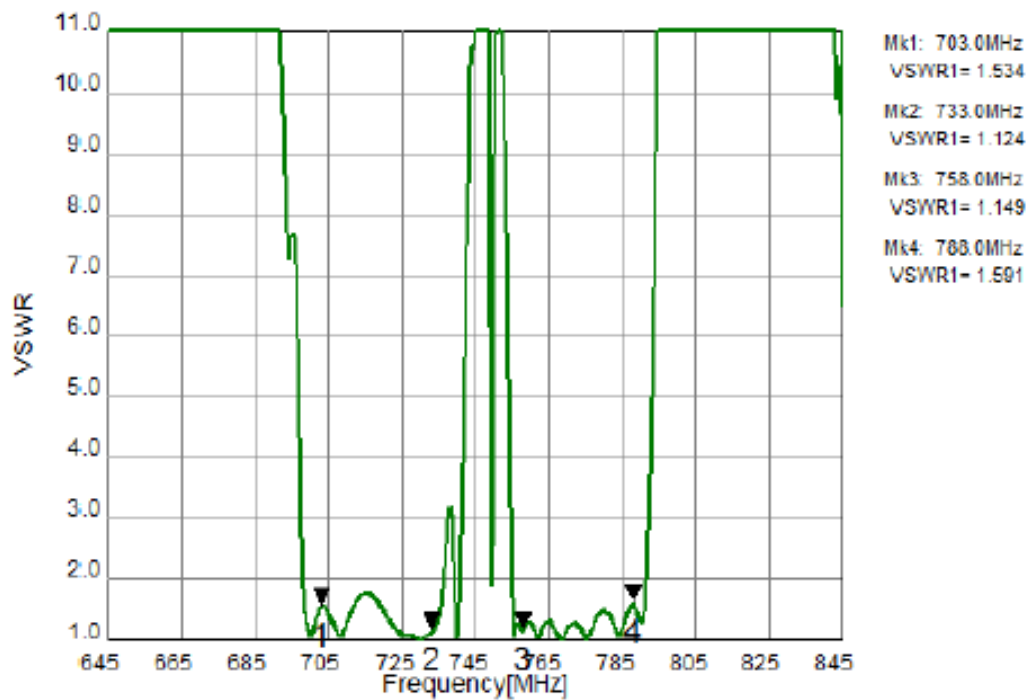
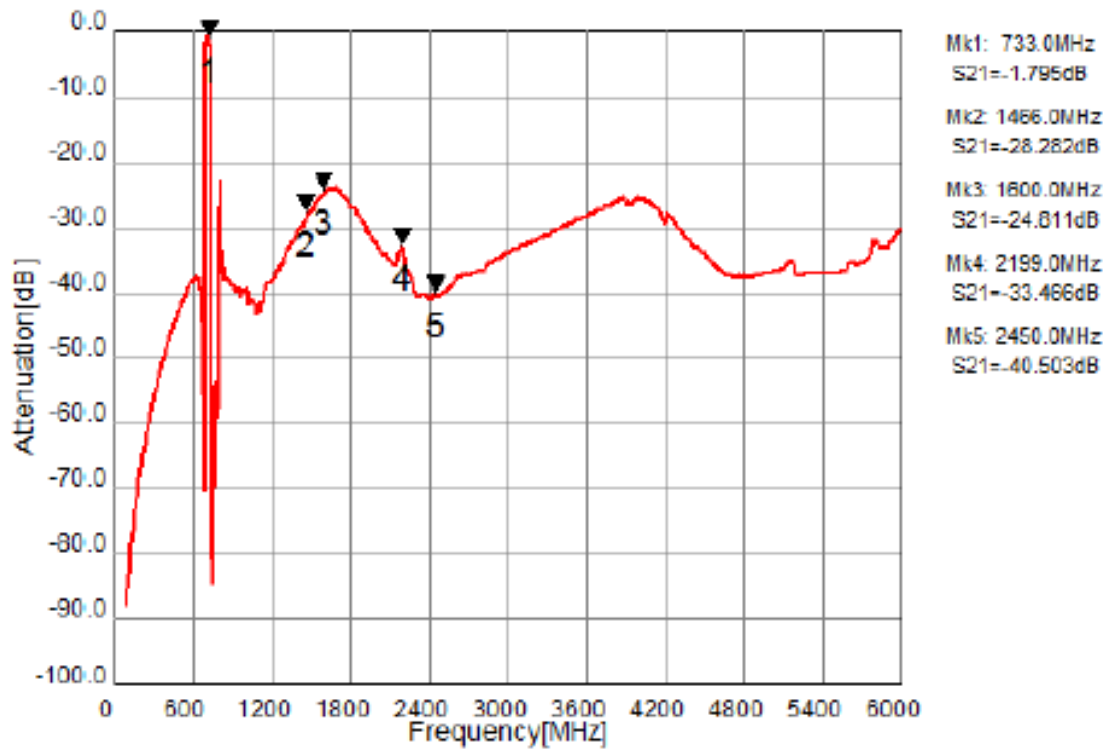


Figure 3-5. Electrical Characteristics

Tx to Ant (Wide span)



Ant to Rx (Wide span)

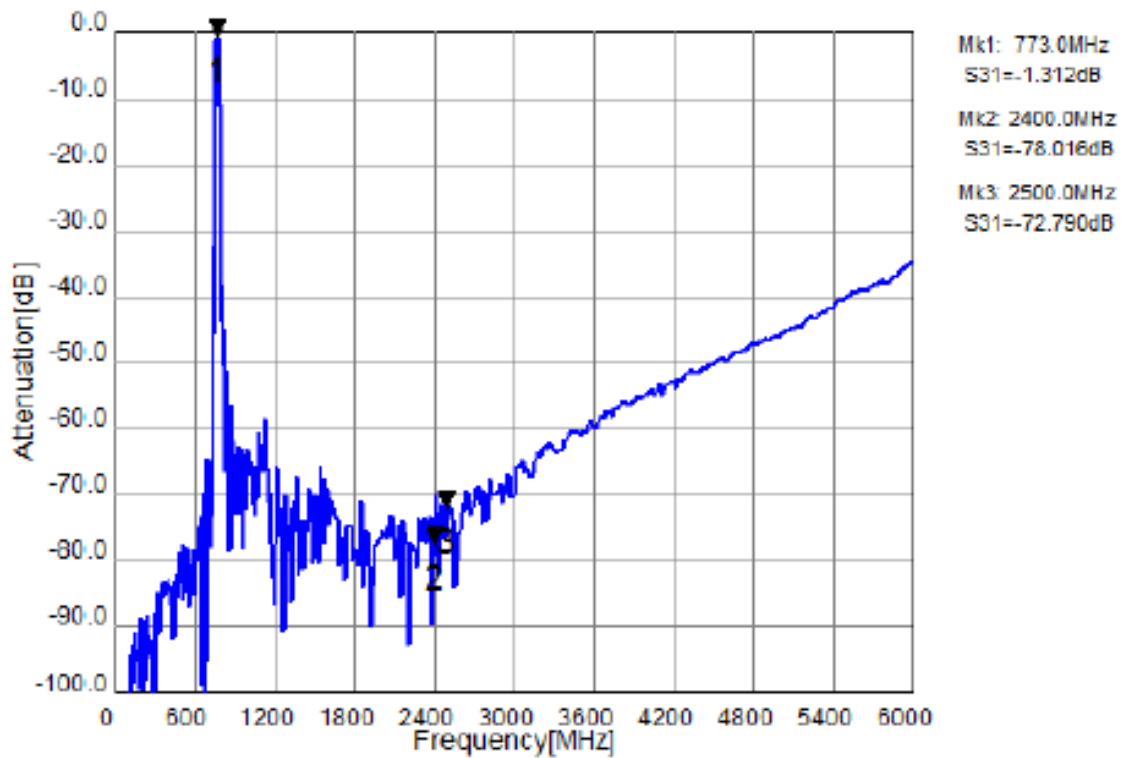
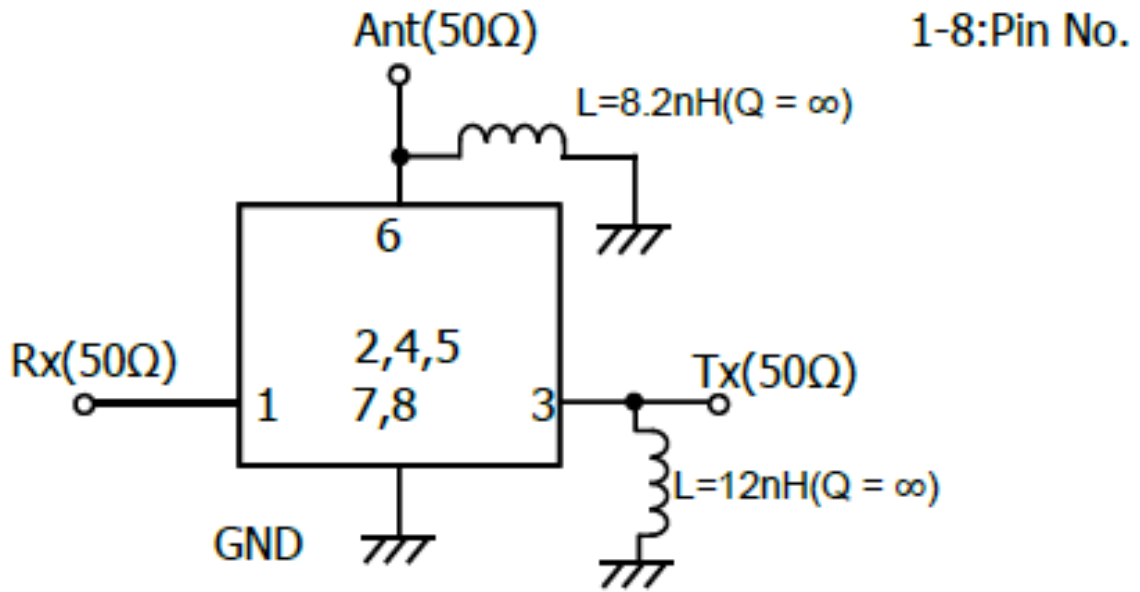
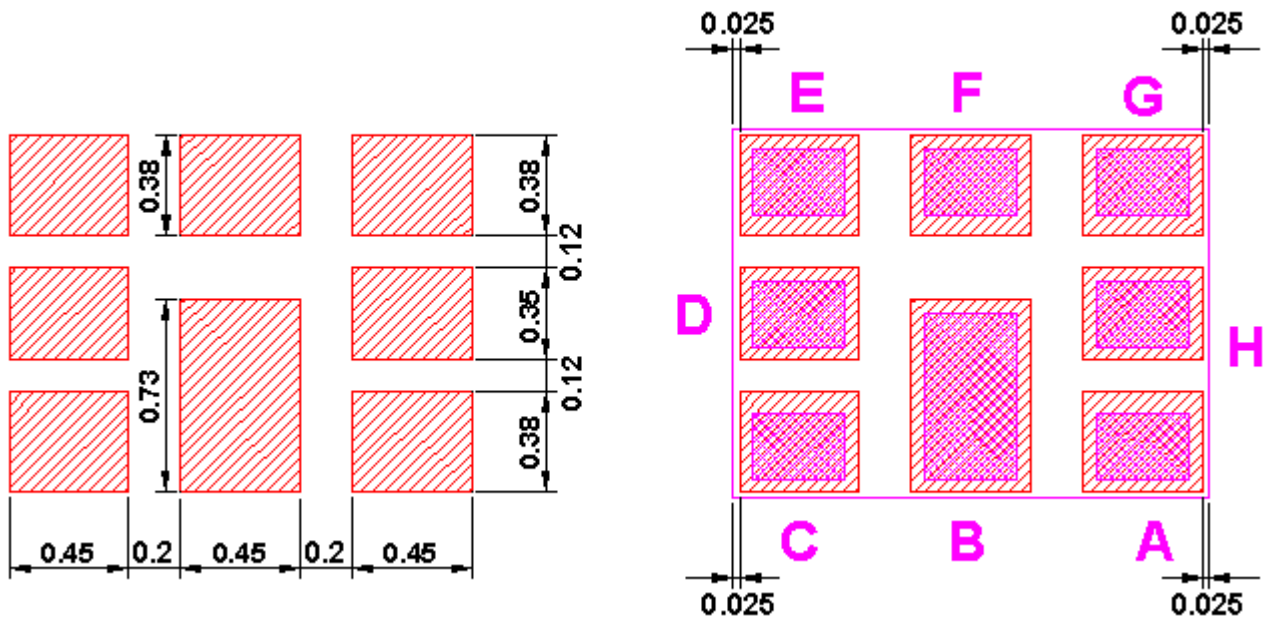


Figure 3-6. Electrical Characteristics

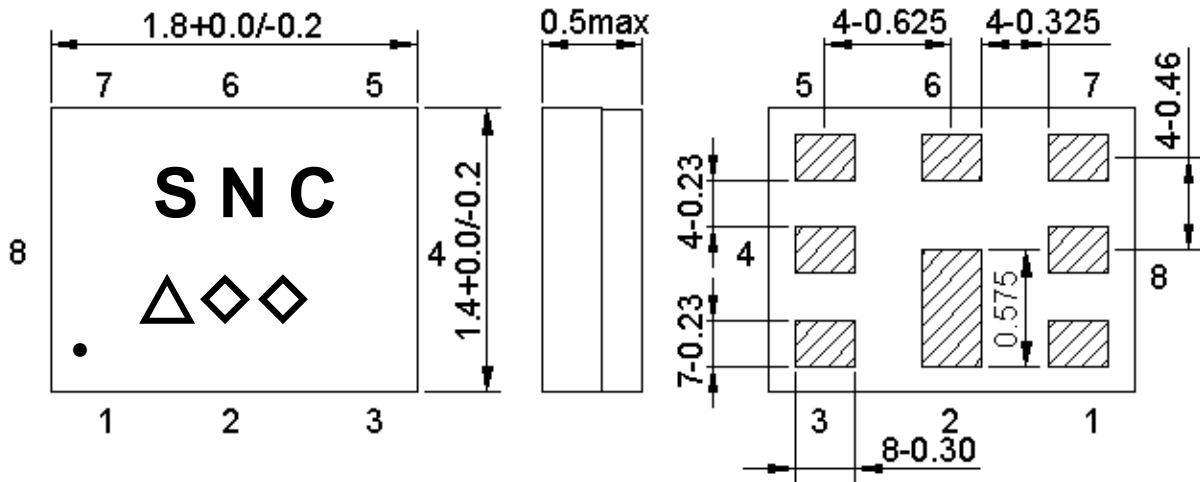
MEASUREMENT CIRCUIT:



PCB FOOTPRINT:



OUTLINE DRAWING: (Mass Production)



Marking name : NC

△: Date code(2016 May → s ,....., 2019 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

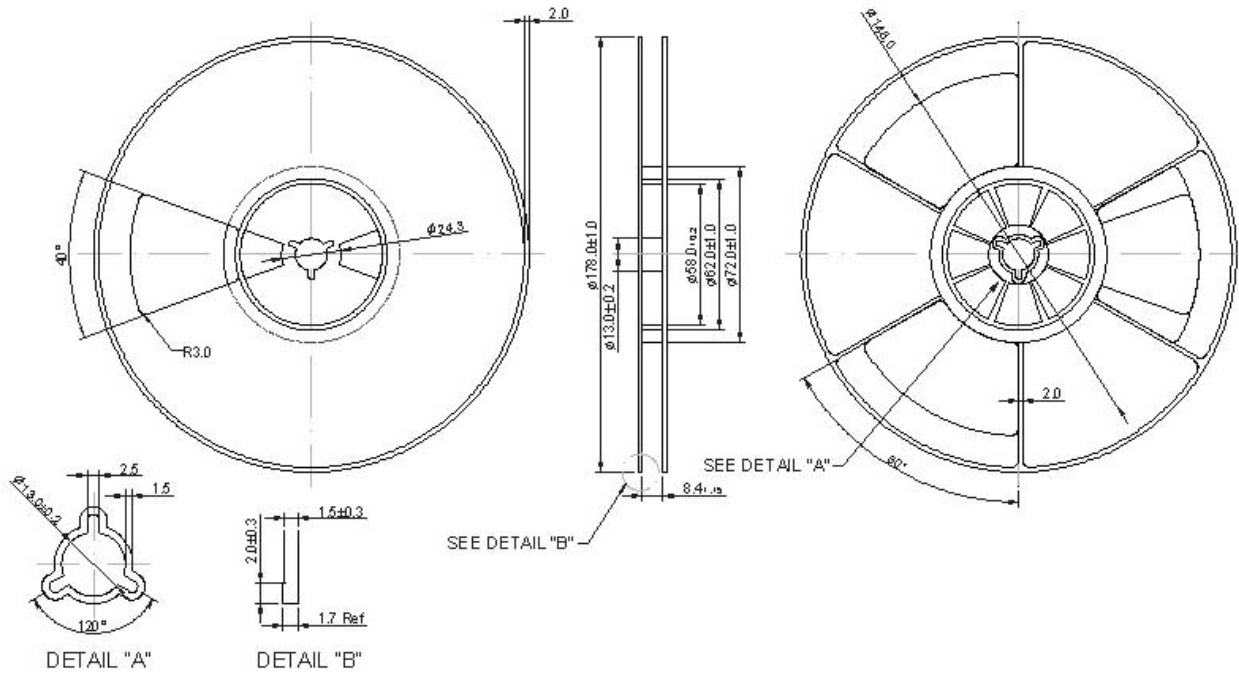
Pin assignment

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

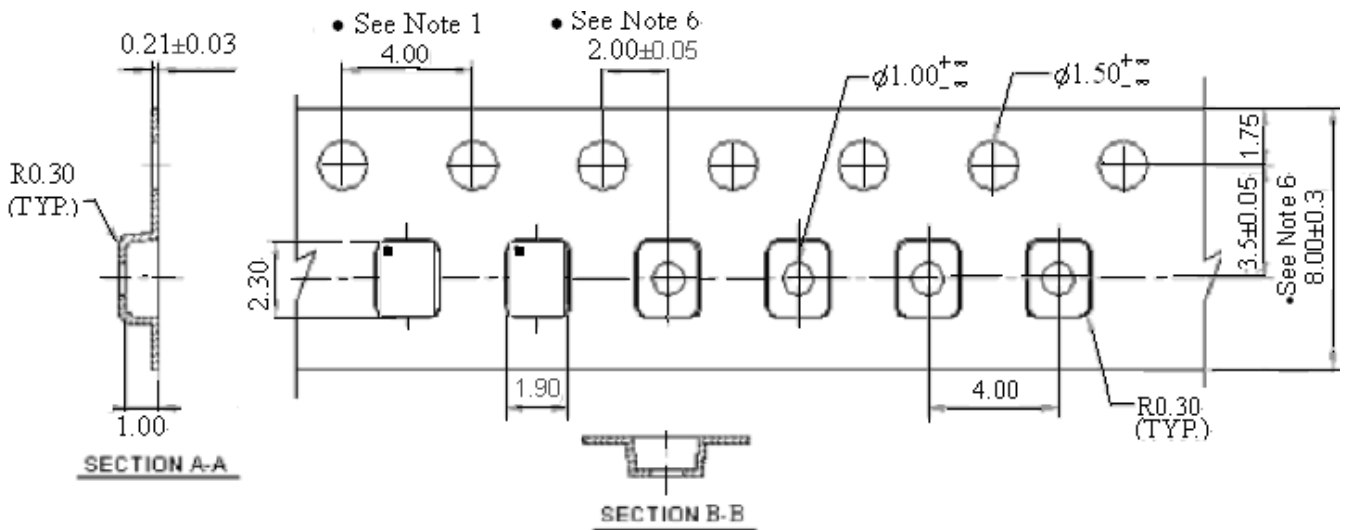
Figure 1. Dimensions and Pin assignment

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.

