

A. MAXIMUM RATING:

1. Input power : 29dBm (Ta=+50deg C,50000h,CW)
2. Maximum DC Voltage: +/-5 V
3. Operating temperature range: -40 °C to +85 °C
4. Storage temperature range: -55 °C to +125 °C
5. Moisture Sensitivity Level: Level 3 (MSL 3)
6. ESD 100V(MM) 200V(HBM)

RoHS Compliant

Lead-free soldering

Electrostatic Sensitive Device (ESD)

B. 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)		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

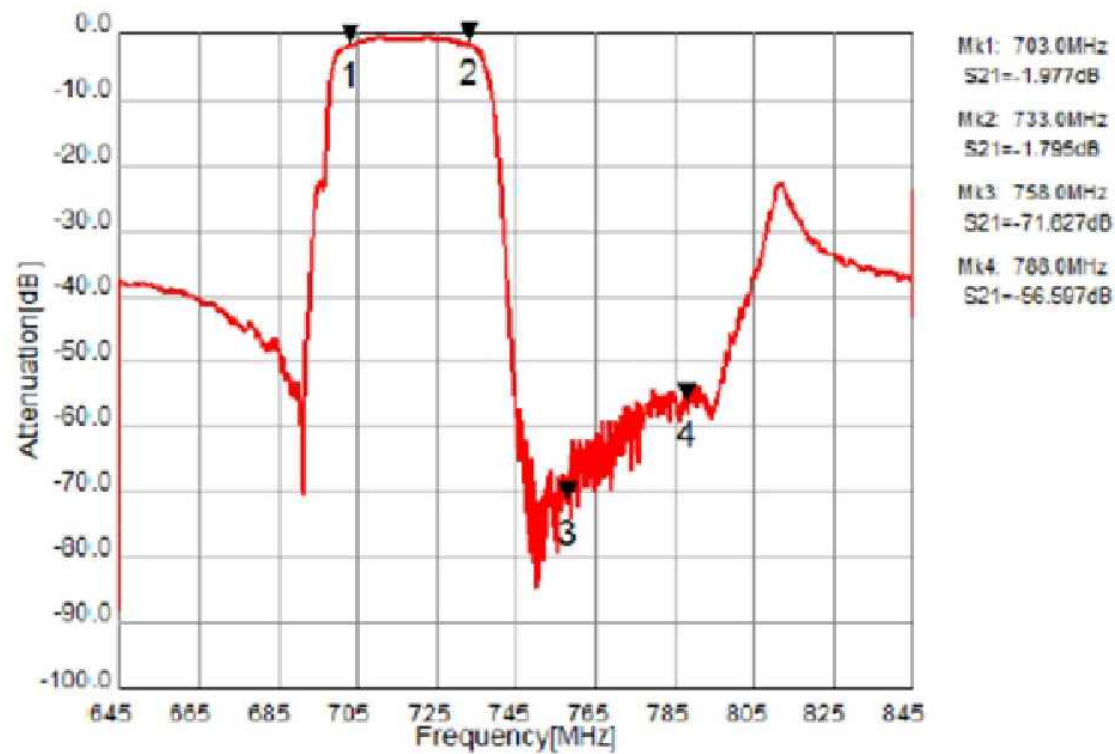
Tx to Rx

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

(*1) De-embedded test fixture.

C. Frequency Characteristics:

Tx to Ant



Ant to Rx

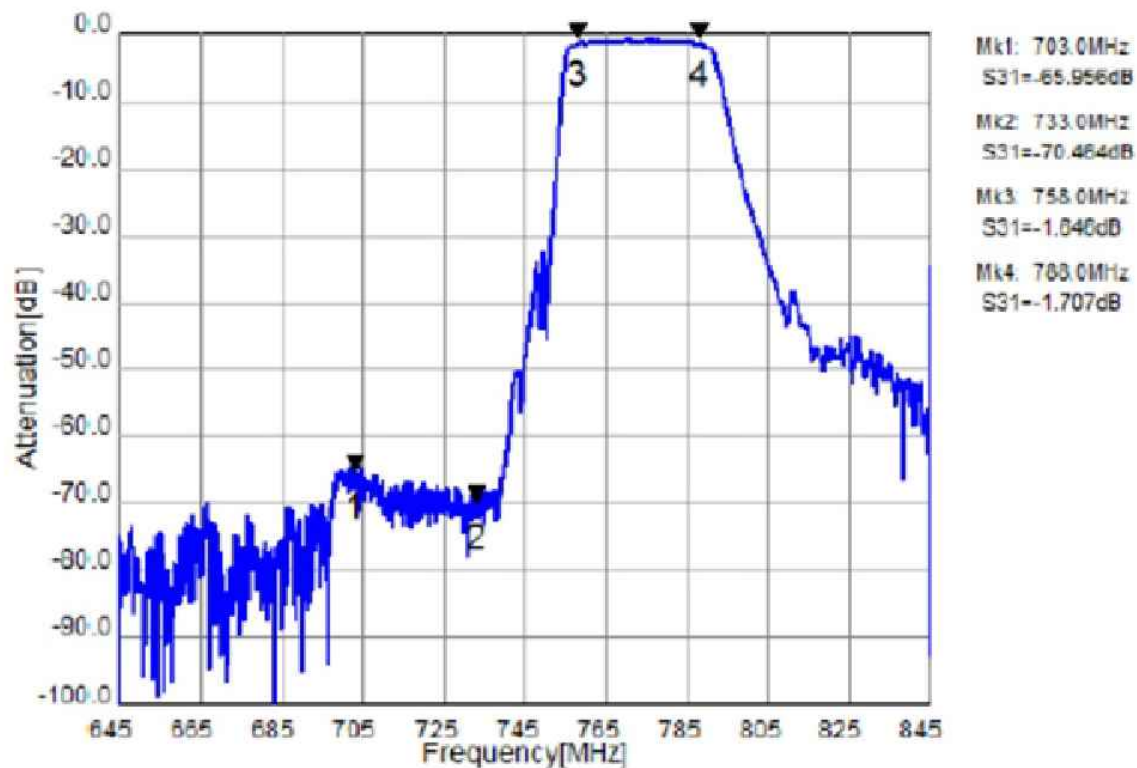
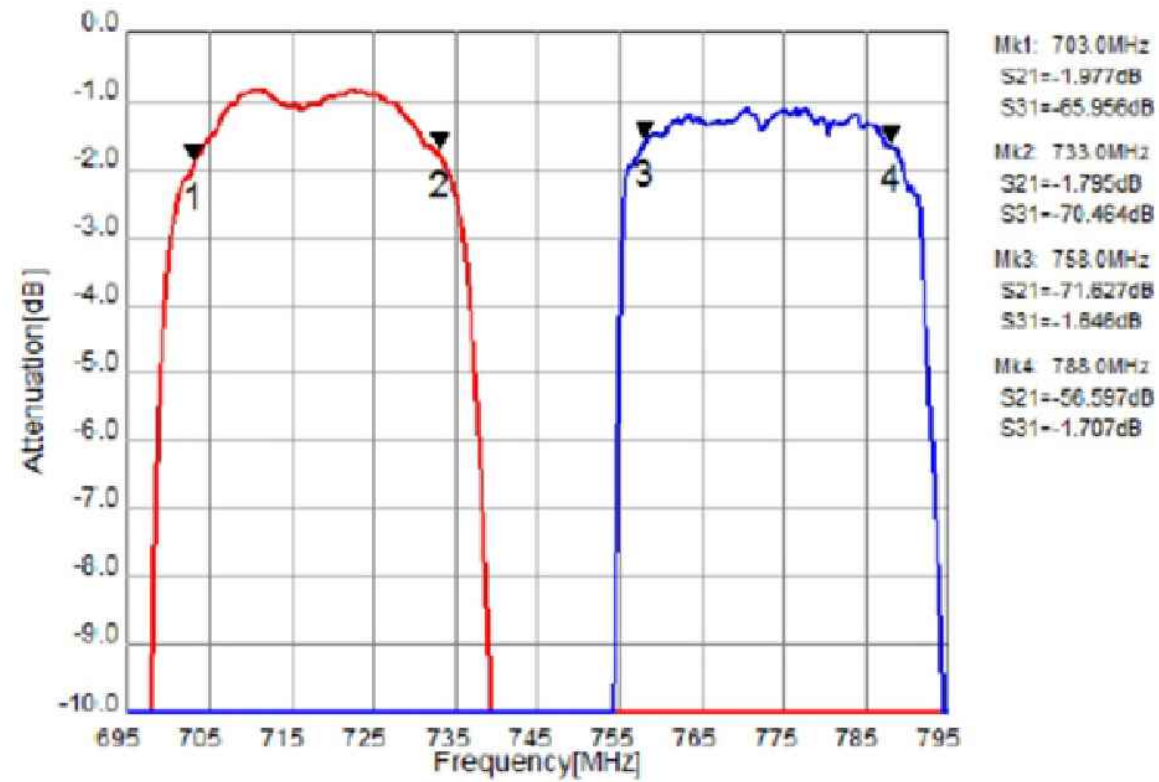


Figure 3-1. Electrical Characteristics

Tx to Ant, Ant to Rx



Tx to Rx Isolation

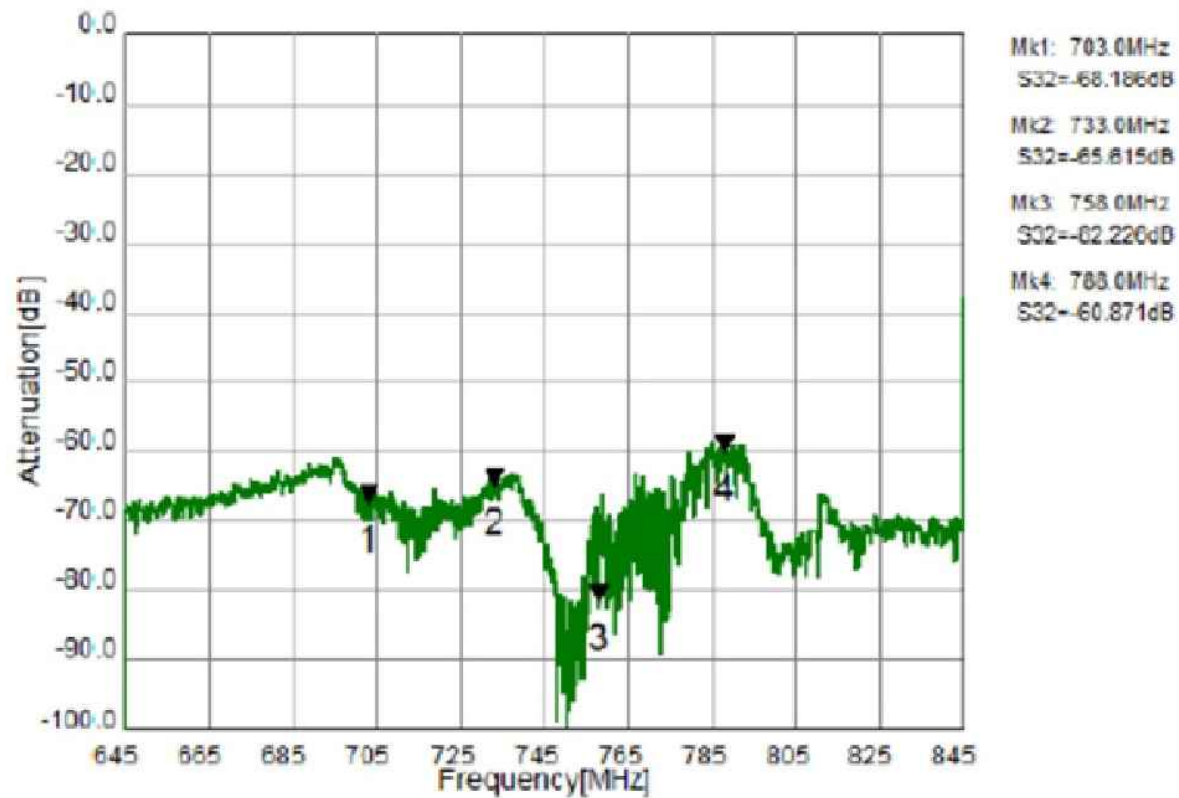


Figure 3-2. Electrical Characteristics

Tx Port

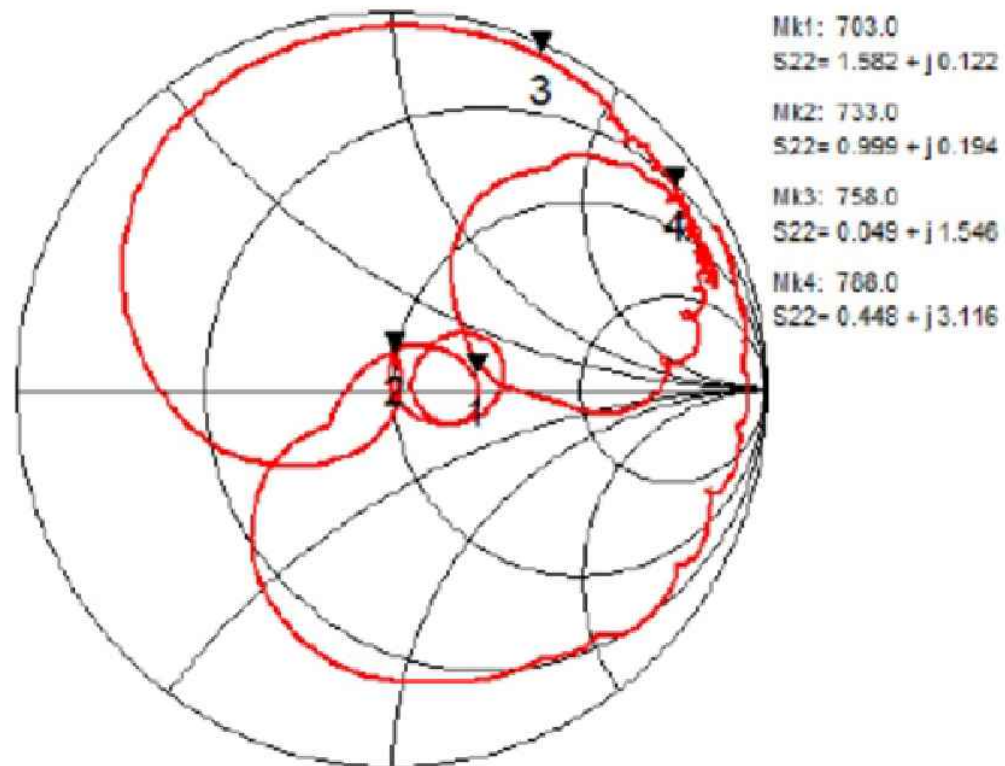
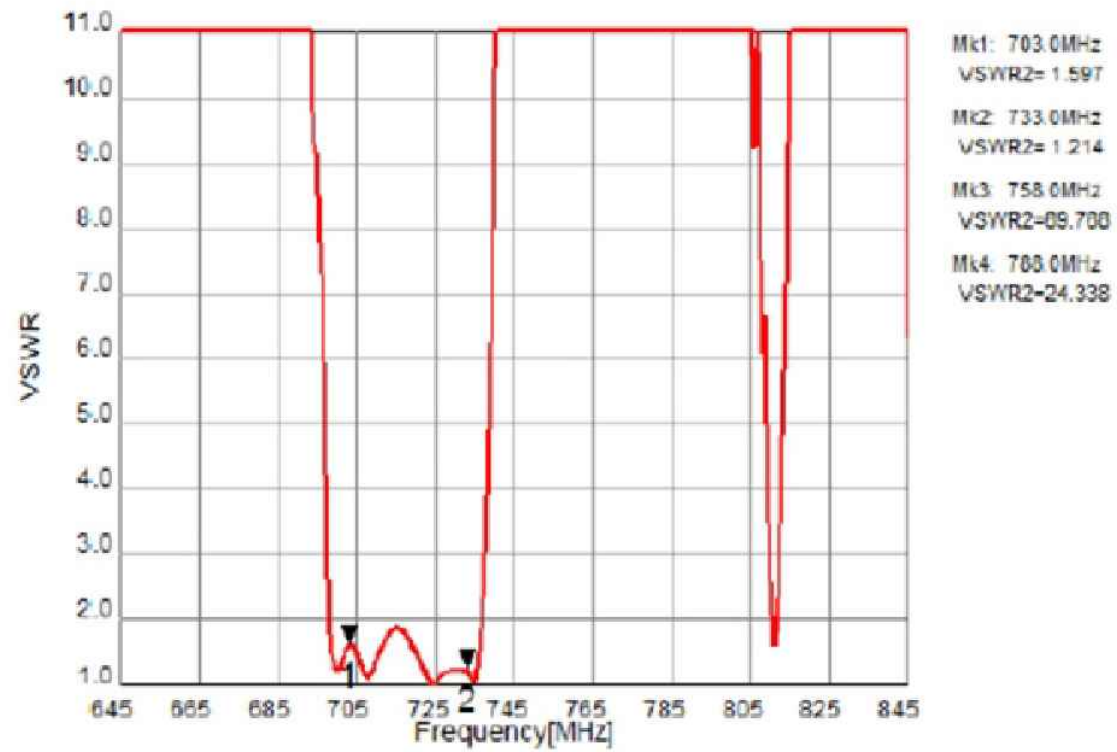


Figure 3-3. Electrical Characteristics

Rx Port

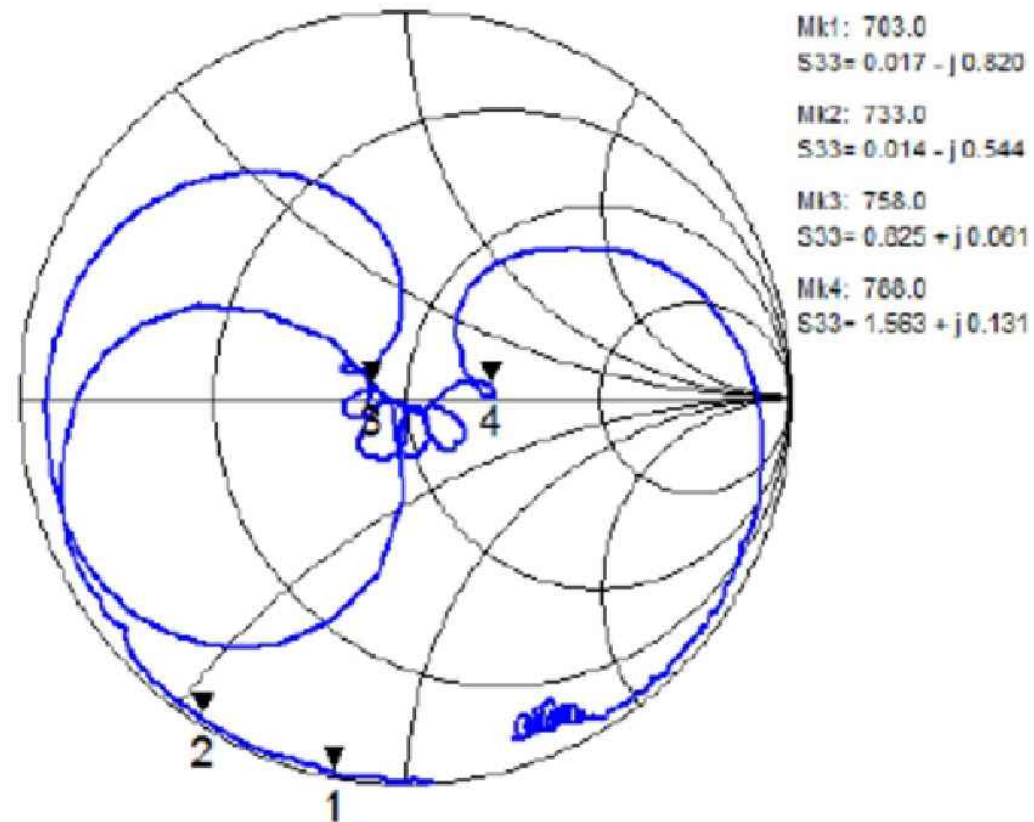
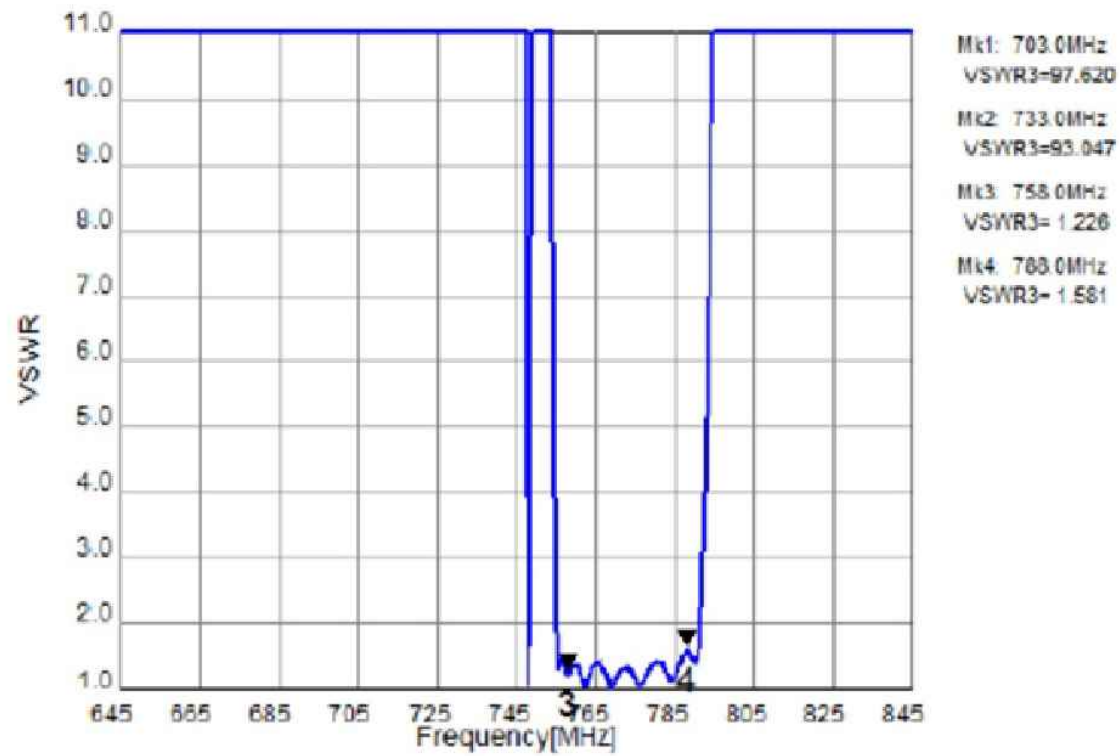


Figure 3-4. Electrical Characteristics

Ant Port

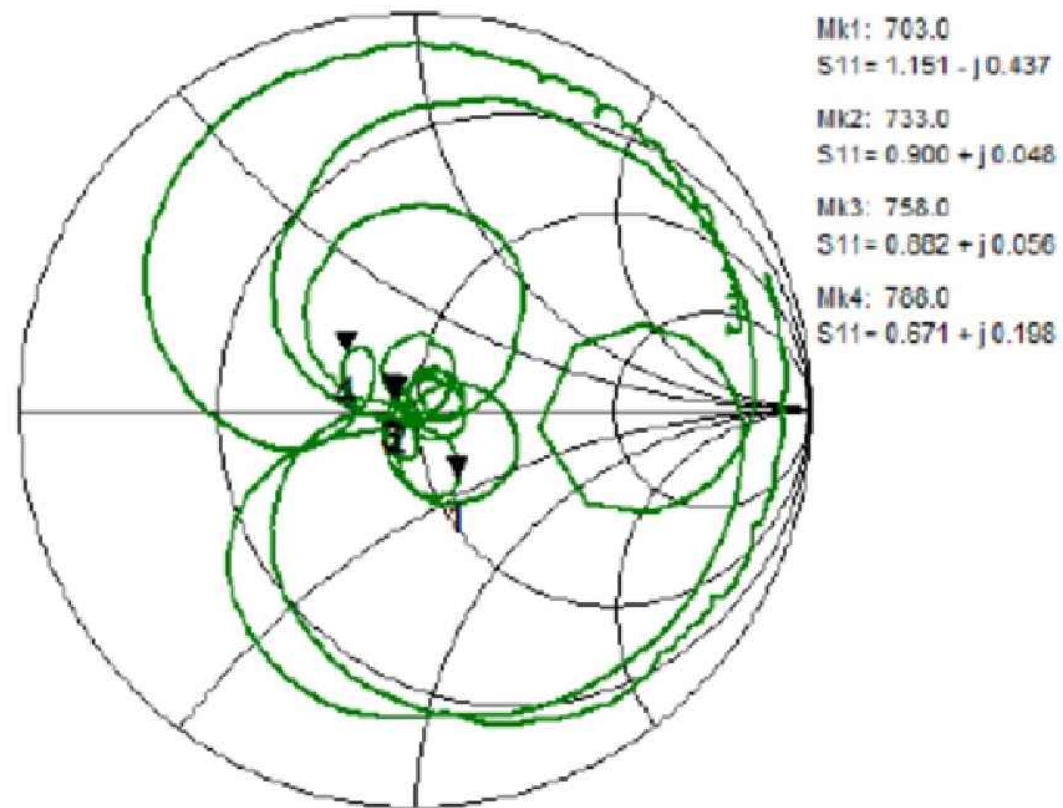
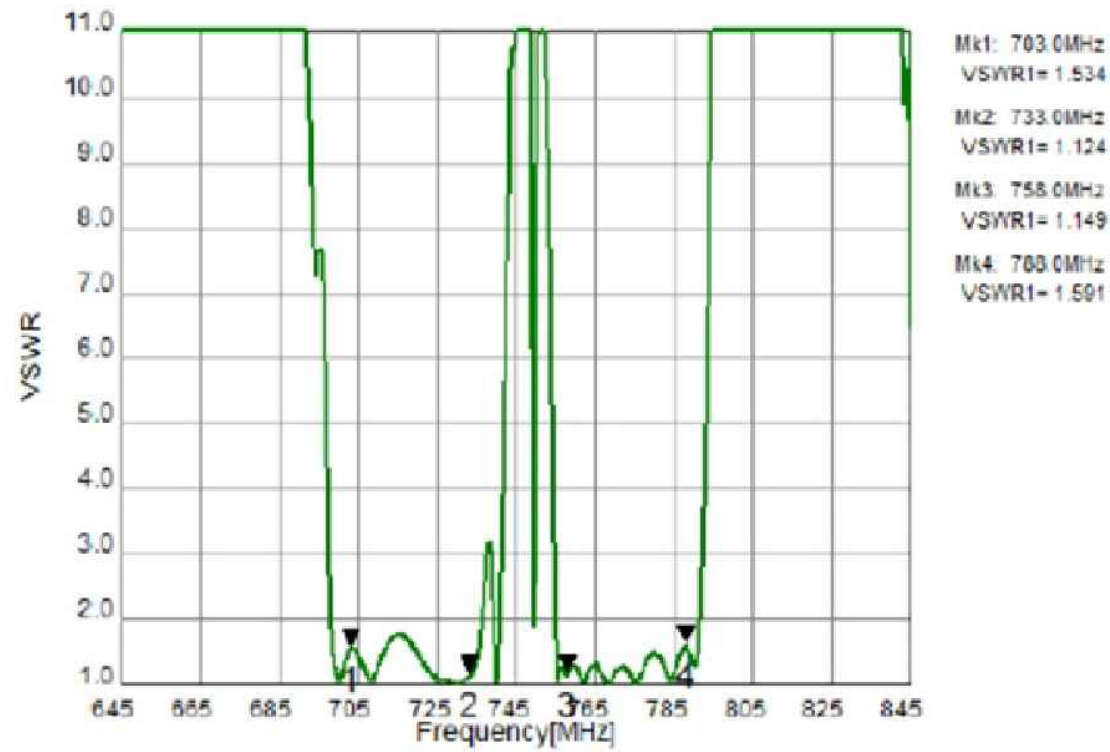
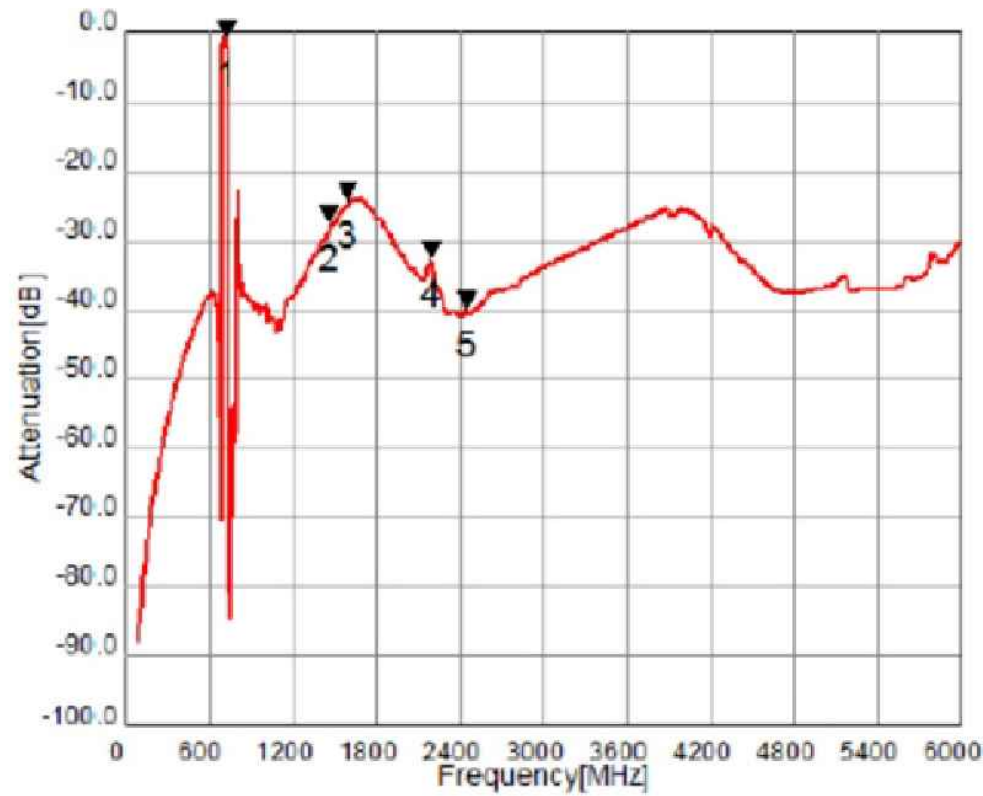


Figure 3-5. Electrical Characteristics

Tx to Ant (Wide span)



Mk1: 733.0MHz
S21=-1.795dB

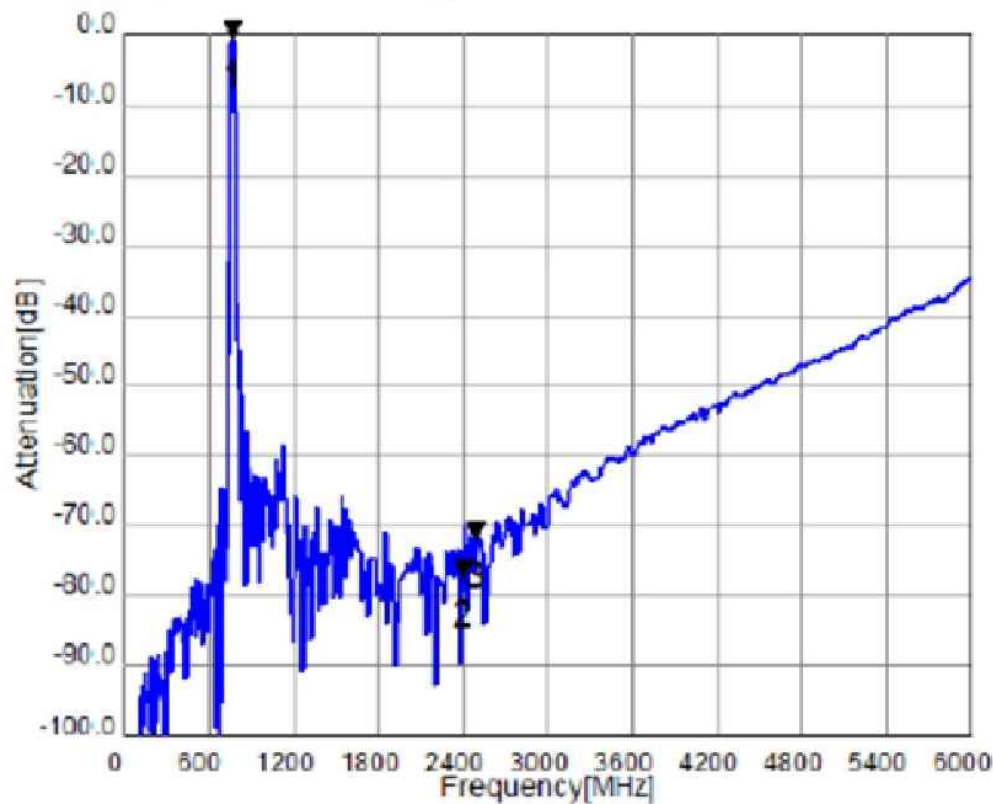
Mk2: 1466.0MHz
S21=-28.282dB

Mk3: 1800.0MHz
S21=-24.811dB

Mk4: 2199.0MHz
S21=-33.466dB

Mk5: 2450.0MHz
S21=-40.503dB

Ant to Rx (Wide span)



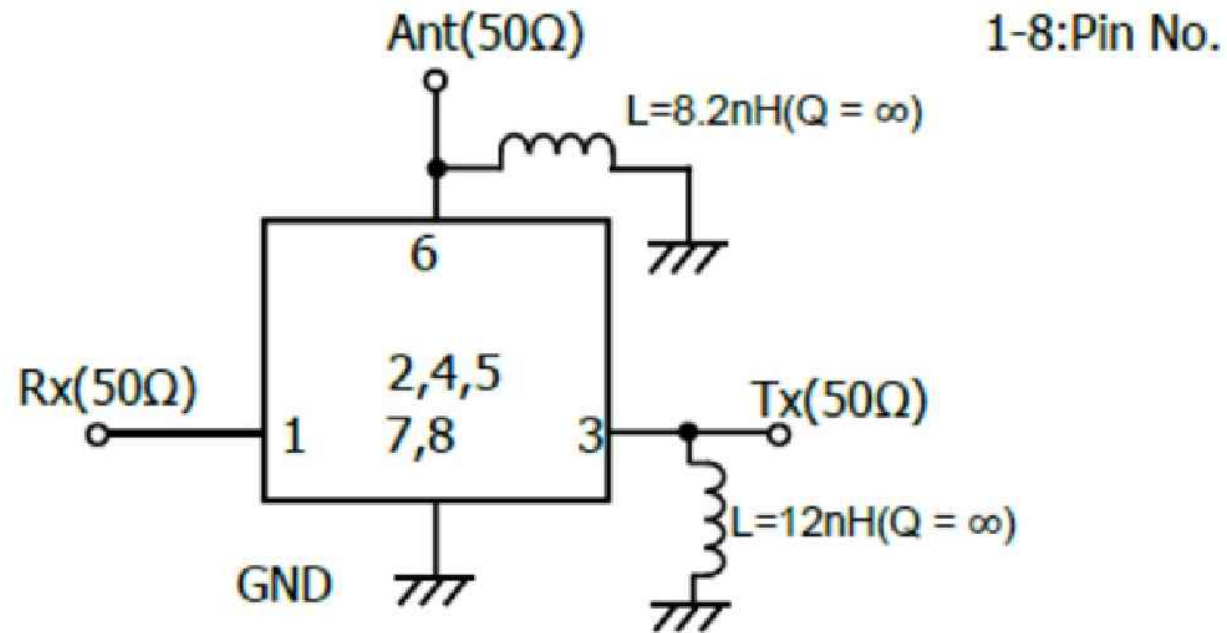
Mk1: 773.0MHz
S31=-1.312dB

Mk2: 2400.0MHz
S31=-78.016dB

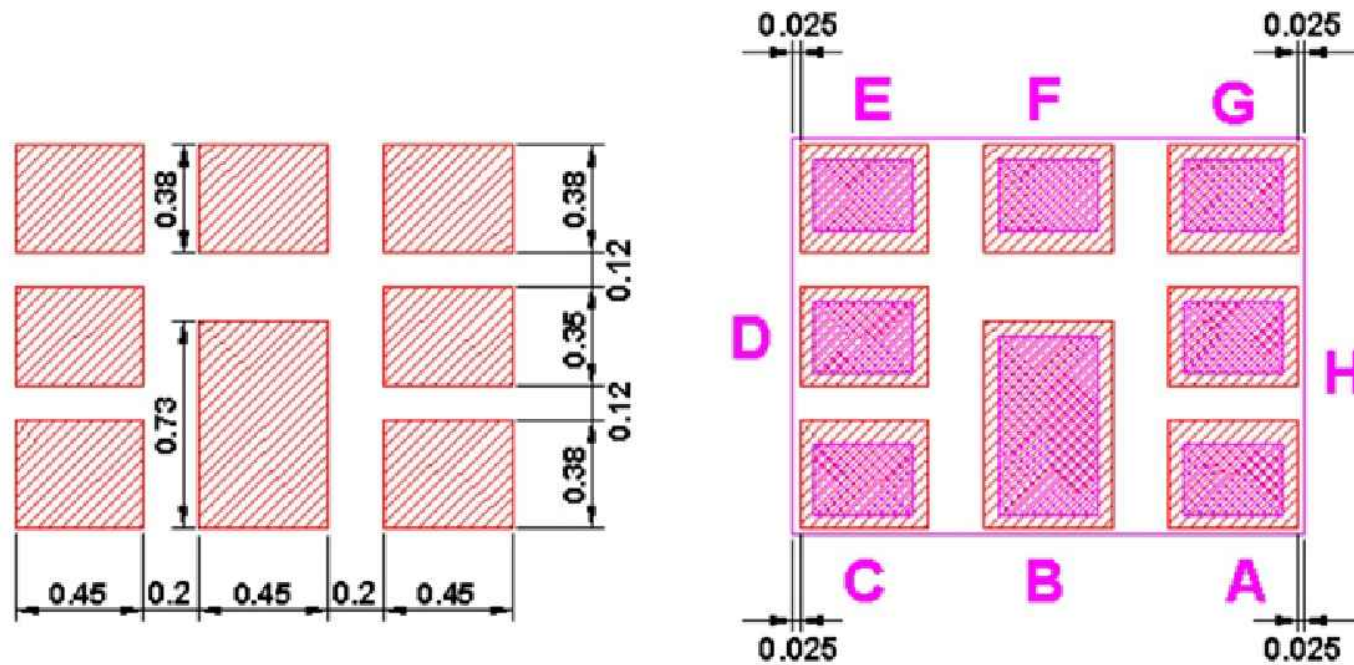
Mk3: 2500.0MHz
S31=-72.790dB

Figure 3-6. Electrical Characteristics

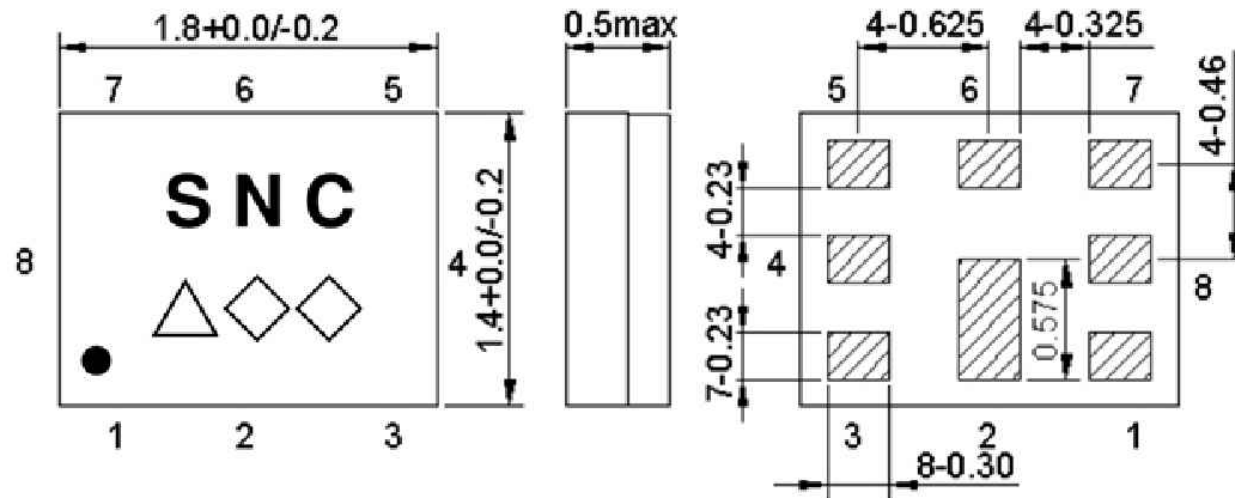
D. MEASUREMENT CIRCUIT:



PCB FOOTPRINT:



E.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

G. 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.

