

SM1612-4

Maximum Rating:

- Input Power Level: 30dBm.
- DC Voltage : 0 V
- Operating Temperature: -30°C to +85°C
- Storage Temperature: -40°C to +100°C
- Moisture Sensitivity Level: Level 1 (**MSL 1**)

Electrical Characteristics:

Tx to Ant

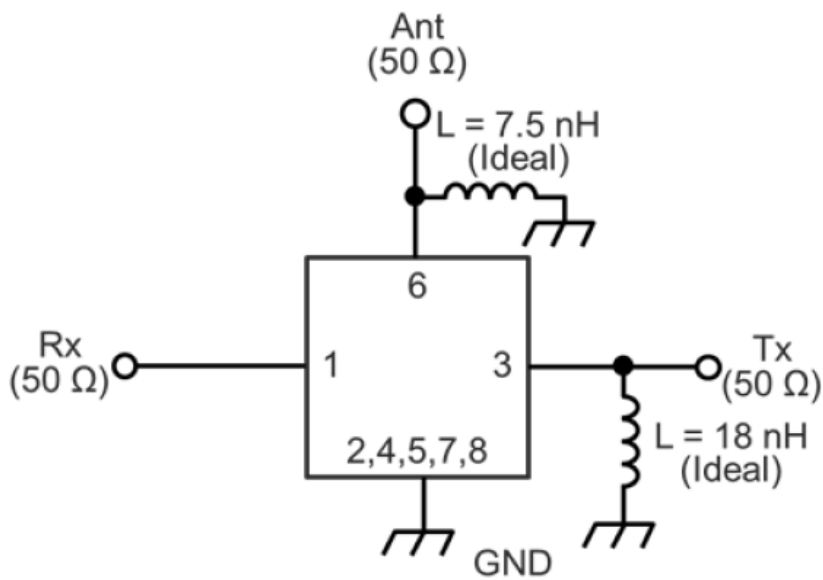
Item		Unit	Min	Typ	Max	Remarks
Center frequency		MHz		836.5		
Insertion Loss	824-849MHz	dB	-	1.3	1.8	
Amplitude Ripple	824-849MHz	dB	-	0.5	1.2	
VSWR	Tx		-	1.5	2.0	
	Ant		-	1.5	2.0	
Attenuation	DC-750MHz	dB	27	35	-	
	779-804MHz	dB	30	43	-	
	860-870MHz	dB	3	8	-	
	869-894MHz	dB	52	58	-	
	1574-1577 MHz	dB	40	47	-	
	1648-1698 MHz	dB	40	49	-	
	2400-2494 MHz	dB	35	40	-	
	2494-2547 MHz	dB	30	38	-	

Ant to Rx

Item		Unit	Min	Typ	Max	Remarks
Center frequency		MHz		881.5		
Insertion Loss	869-894 MHz	dB	-	1.6	2.3	
Amplitude Ripple	869-894 MHz	dB	-	0.4	1.2	
VSWR	Tx		-	1.5	2.0	
	Ant		-	1.6	2.0	
Attenuation	779-804 MHz	dB	50	62	-	
	824-849 MHz	dB	50	62	-	

Item		Unit	Min	Typ	Max	Remarks
Tx to Rx	Isolation	824-849 MHz	dB	58	62	-
		869-894 MHz	dB	54	59	-
Terminating Impedance	Tx port	Ω	50//18nH			
	Rx port	Ω	50			
	Ant port	Ω	50//7.5nH			
DC Impedance to ground		M Ω	100			Device only

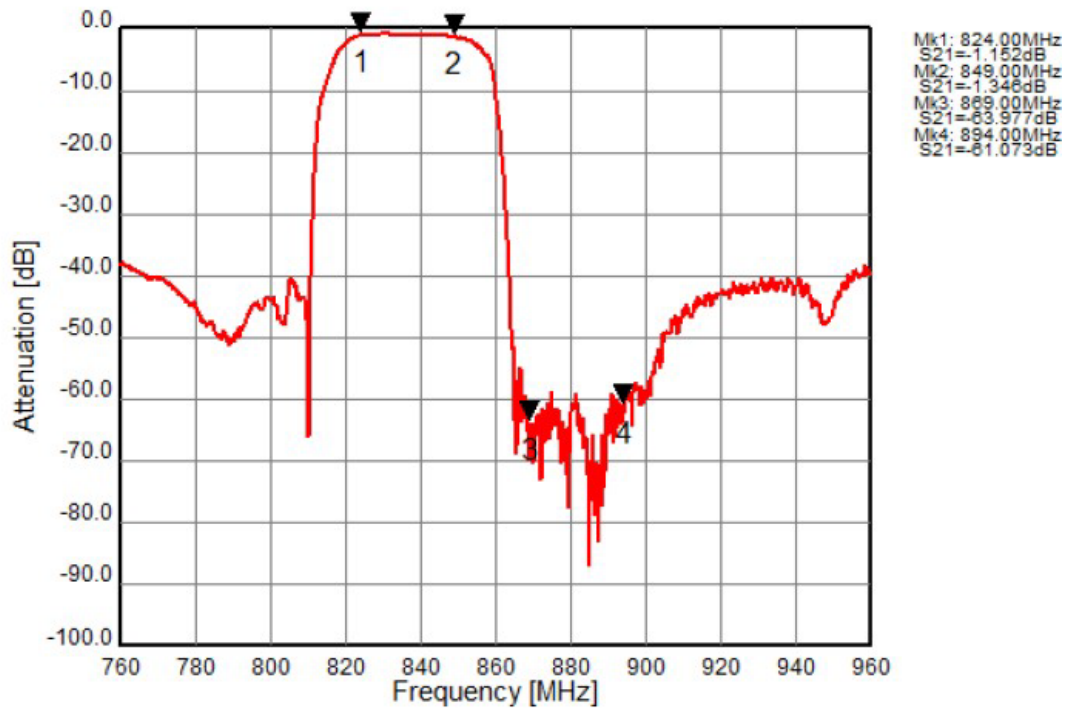
Schematic



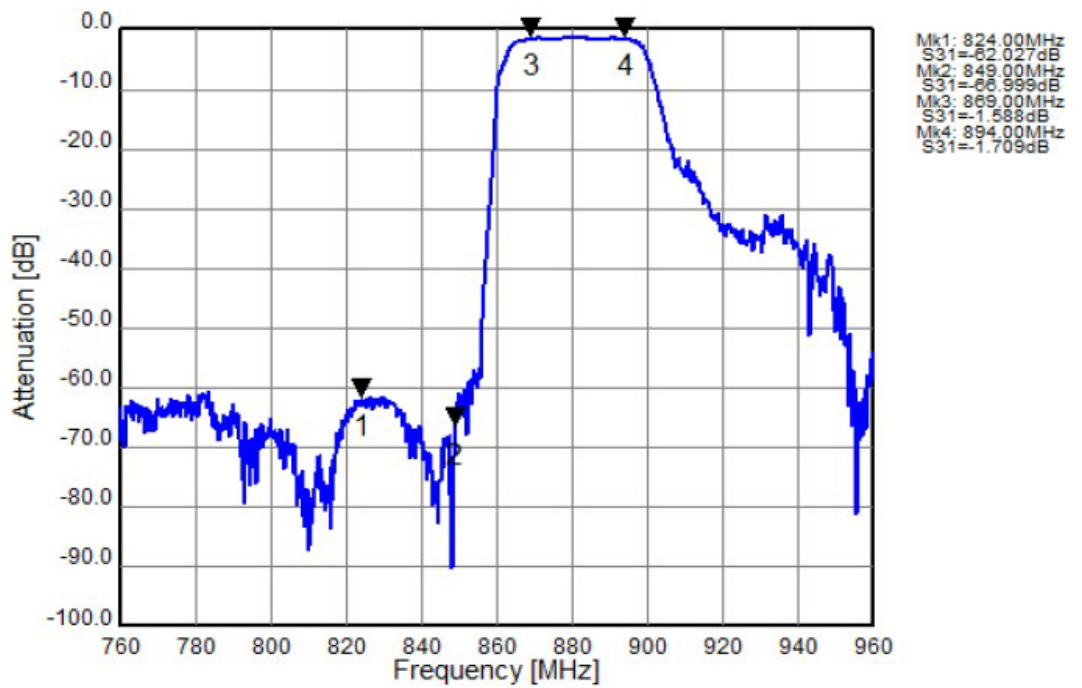
1 to 8 : Pin No.

Performance Plots

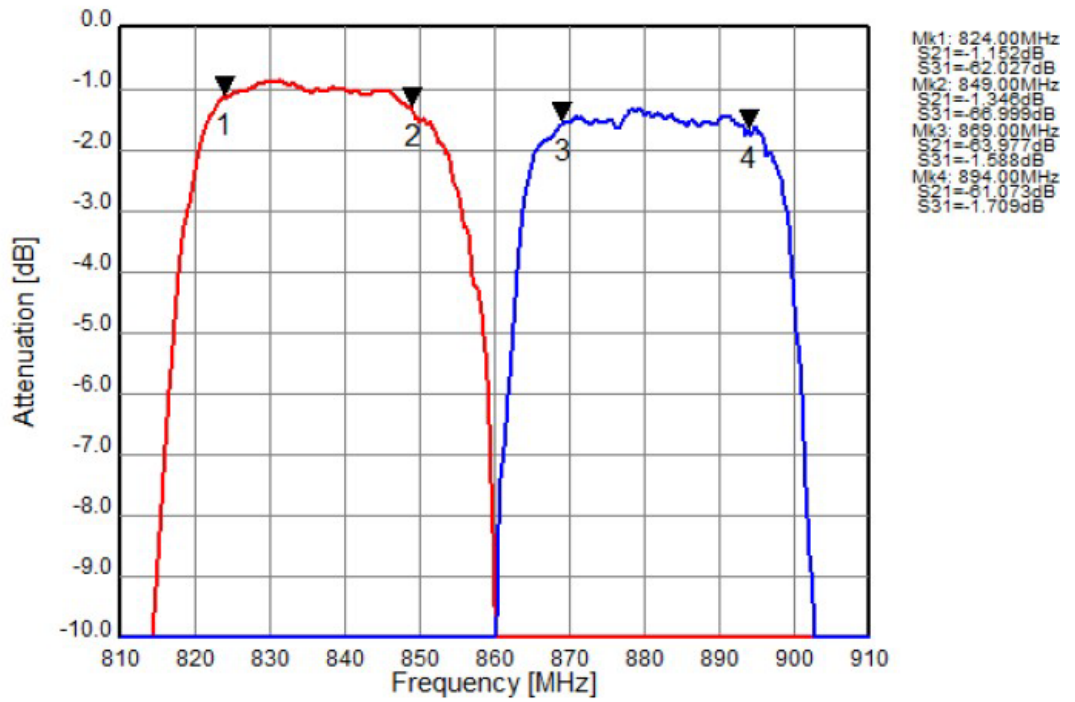
Tx to Ant



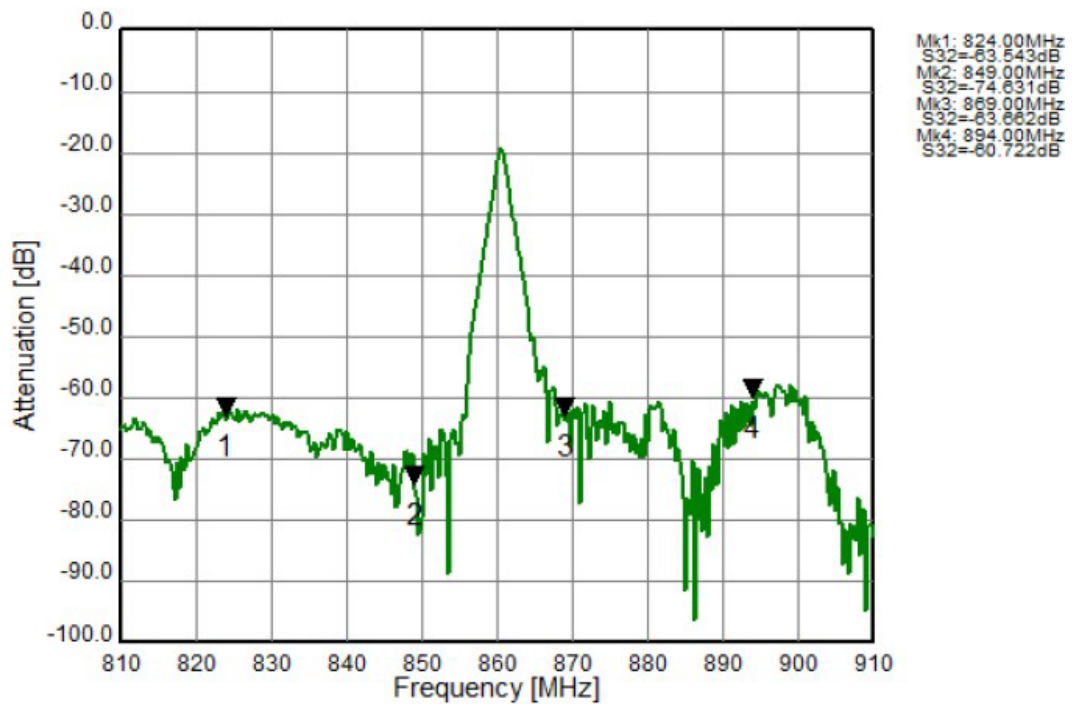
Ant to Rx



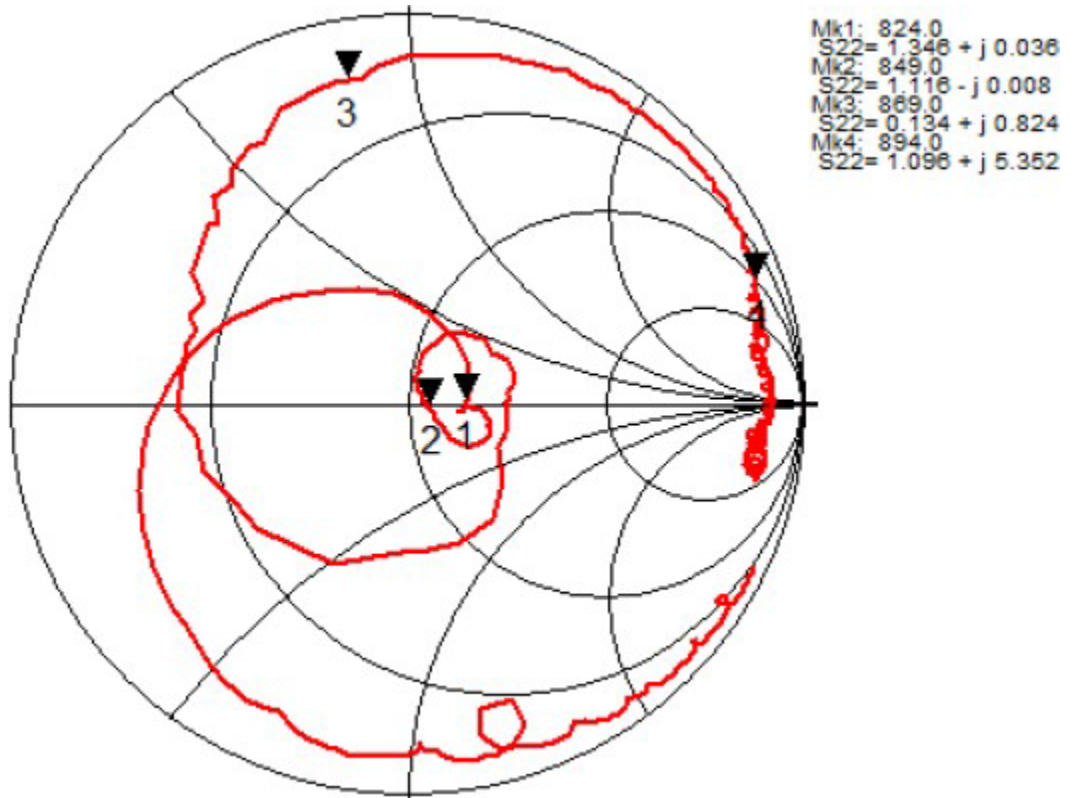
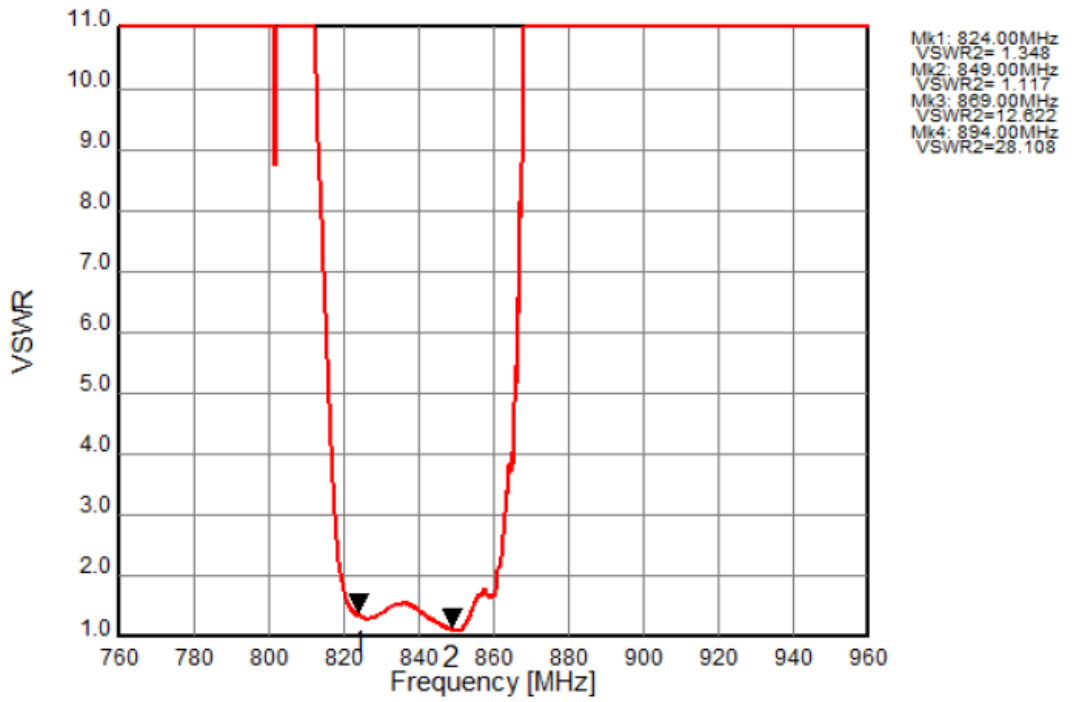
Tx to Ant, Ant to Rx



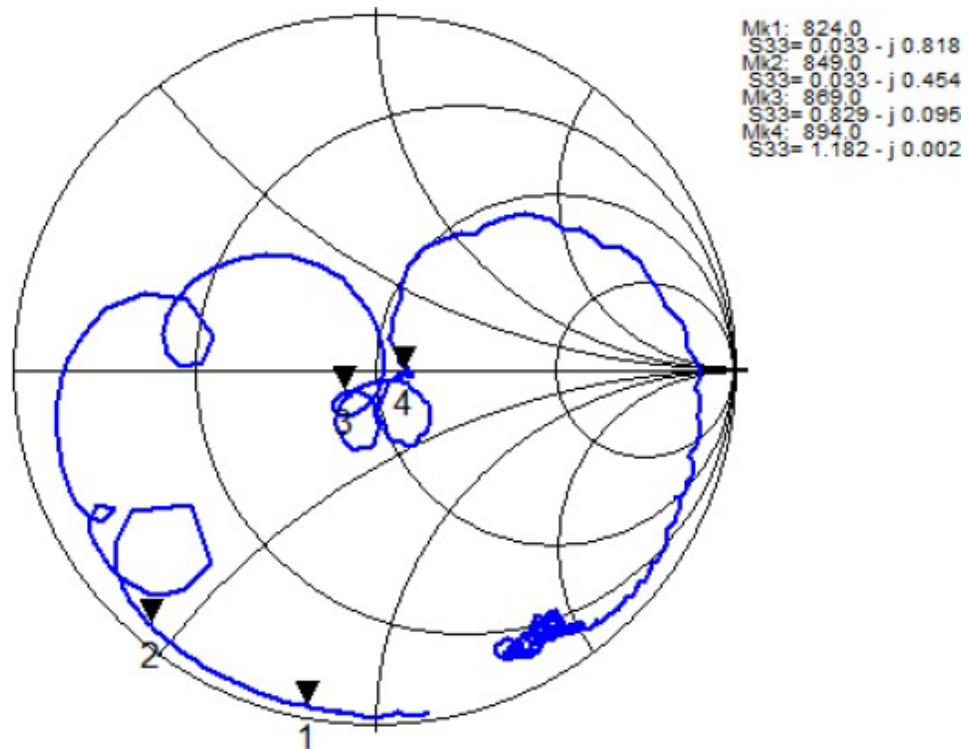
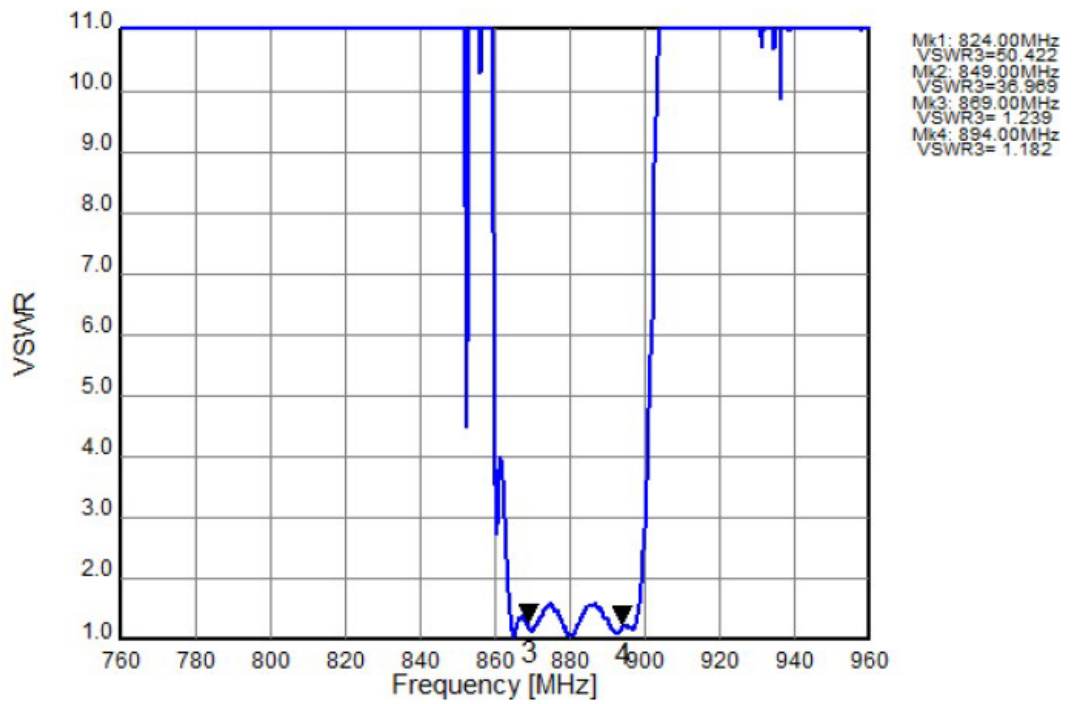
Tx to Rx Isolation



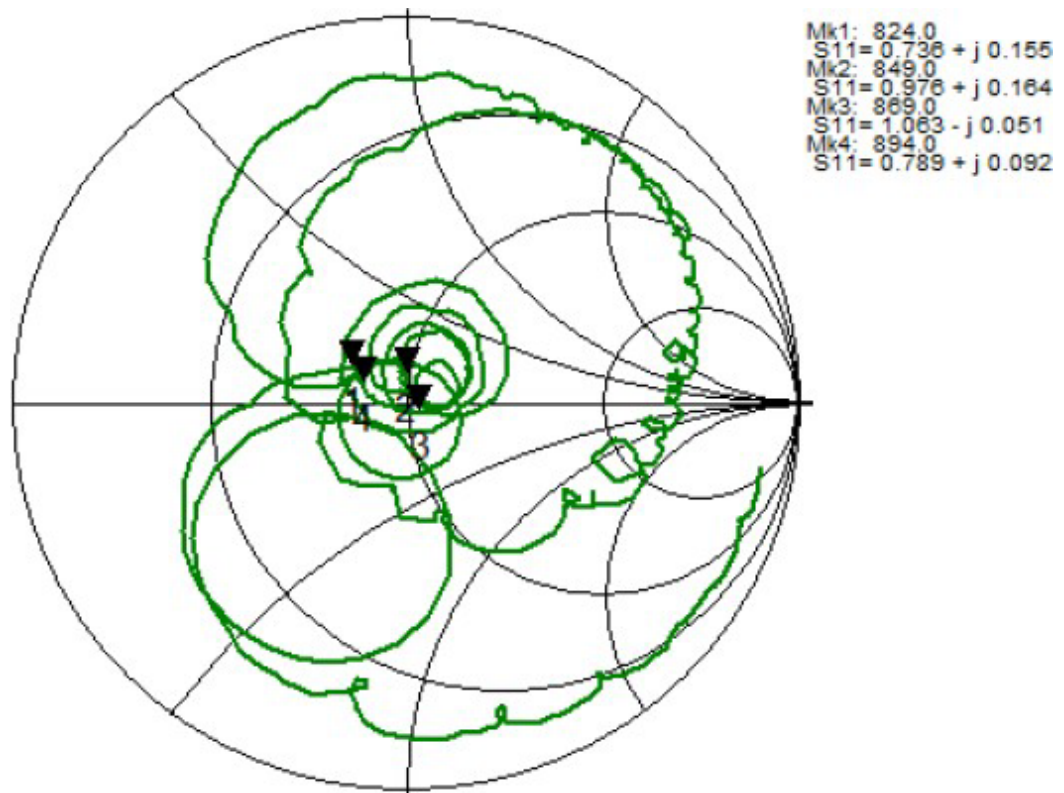
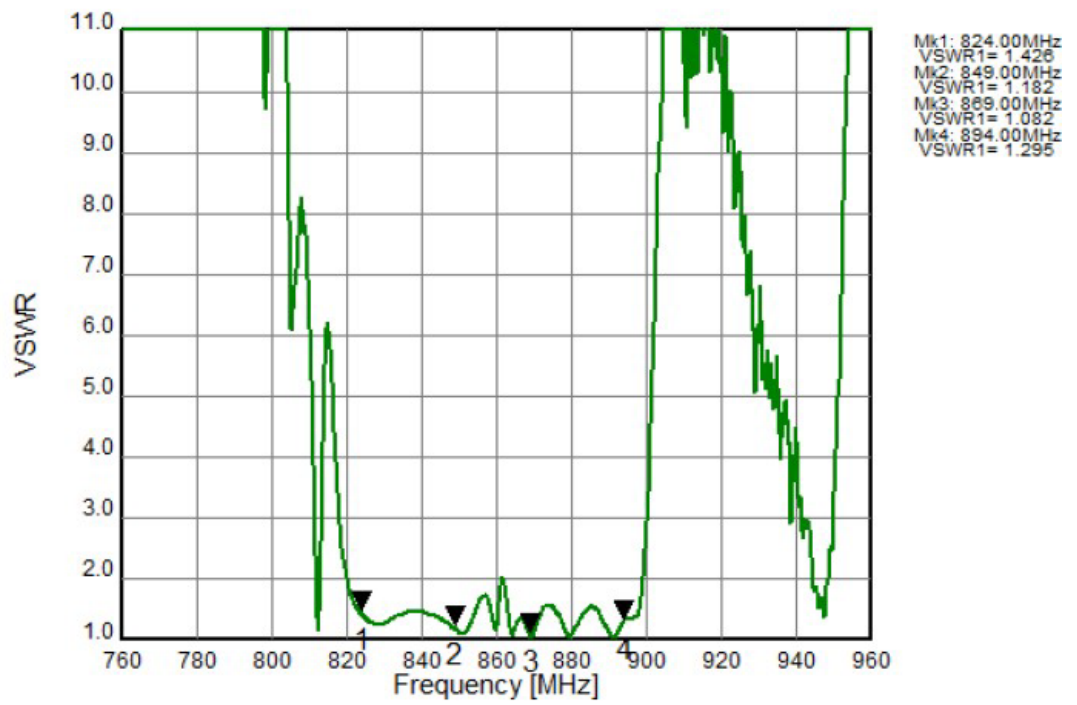
Tx Port



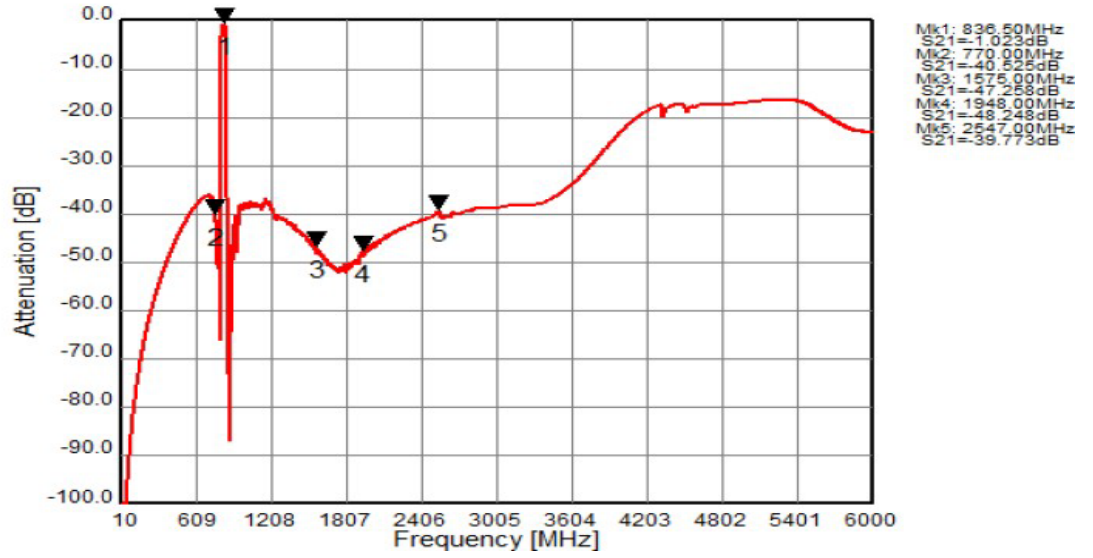
Rx Port



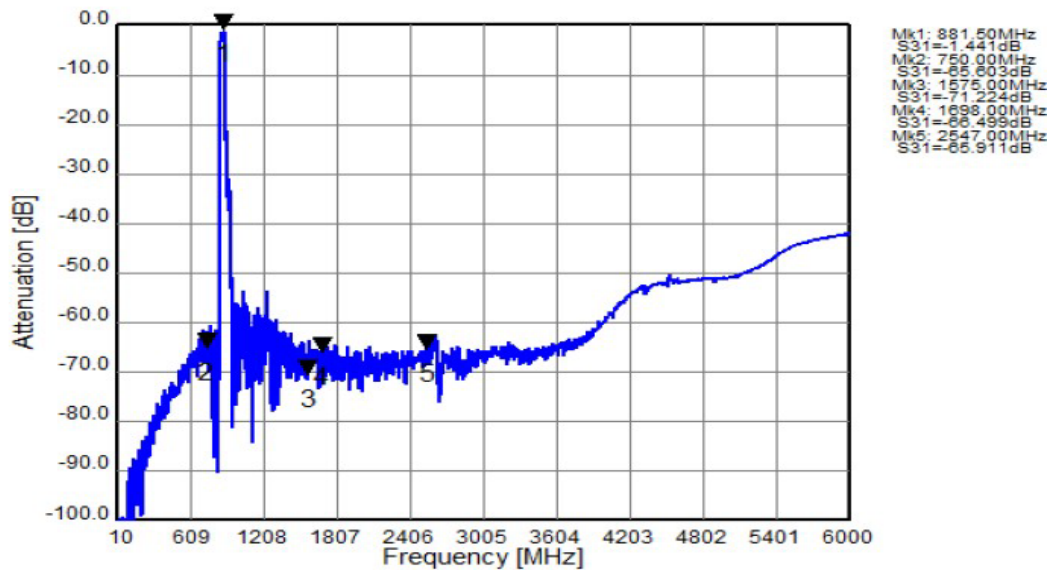
Ant Port



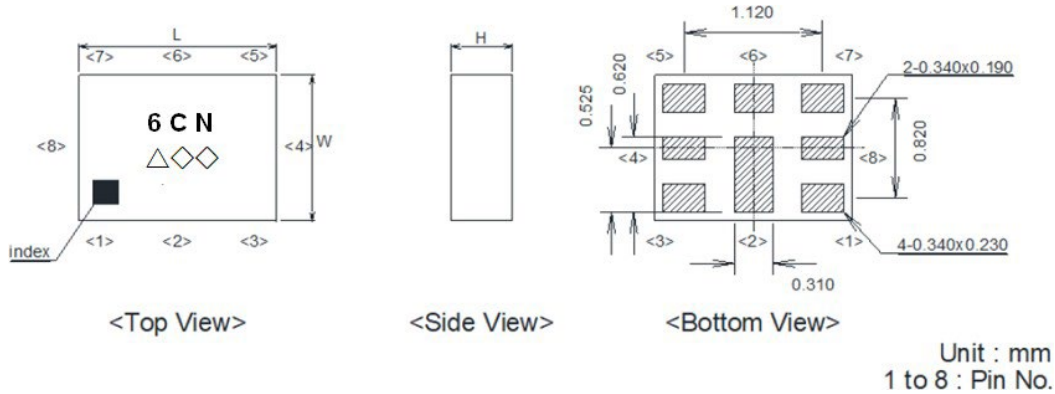
Tx to Ant (Wide Span)



Ant to Rx (Wide Span)



Package Drawing and Pin Description



Marking name: 6CN(Part Symbol)

△: Trace Code.(2020 May → s,....., 2023 Dec → m)

◇◇: Lot Code.

Product Trace Code.Follow below table.(4-year cycle)

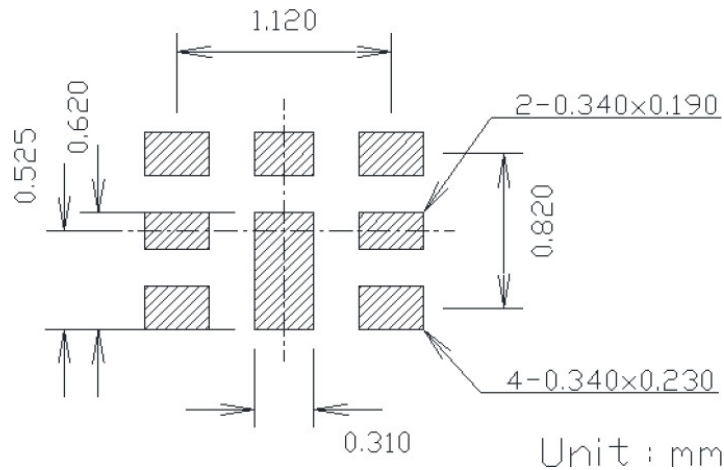
L = 1.6 +/- 0.1 mm

W = 1.2 +/- 0.1 mm

H = 0.44 mm Max

Year	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
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
2022	N	P	Q	R	S	T	U	V	W	X	Y	Z
2023	a	b	c	d	e	f	g	h	j	k	l	m

PCB Mounting Pattern



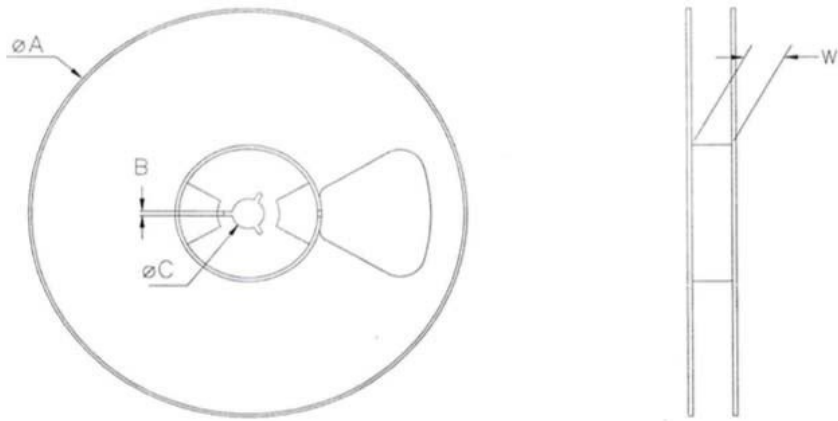
Pin No.	Symbol	Function
1	Rx	Receiver
2	GND	Ground
3	Tx	Transmitter
4	GND	Ground
5	GND	Ground
6	Ant	Antenna
7	GND	Ground
8	GND	Ground

Notes:

- All units are in mm unless otherwise stated
- General Tolerance
 - Linear: X.XXX = ±0.050mm
 - X.XX = ±0.10mm
- Terminations
 - Au: 0.10 um min.
 - Pd: 0.10 um min.
 - Ni: 2-5 um
- Pin 1 indicated by 0.100 mm Chamfer

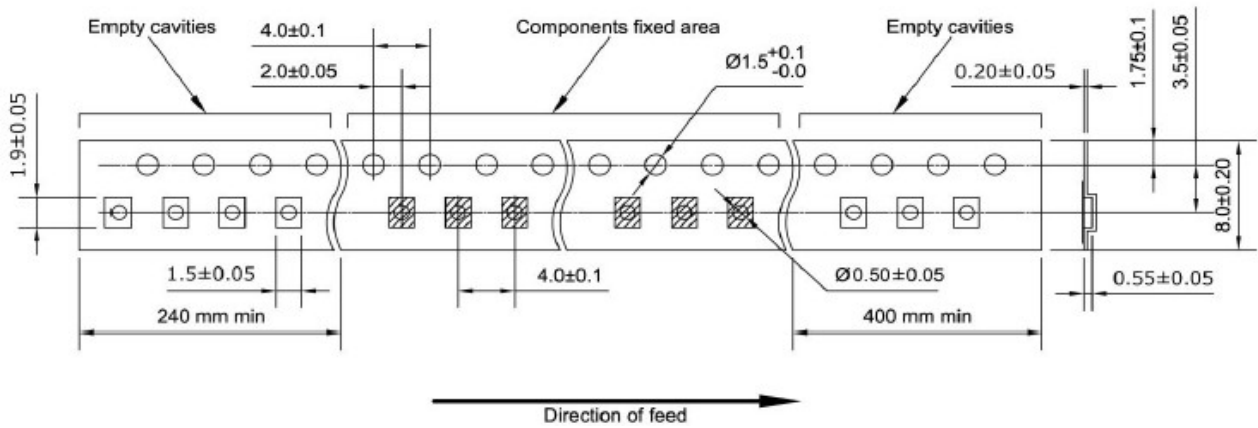
Reel Dimension

Reel Count:
 7" = 3000
 13" = 15,000



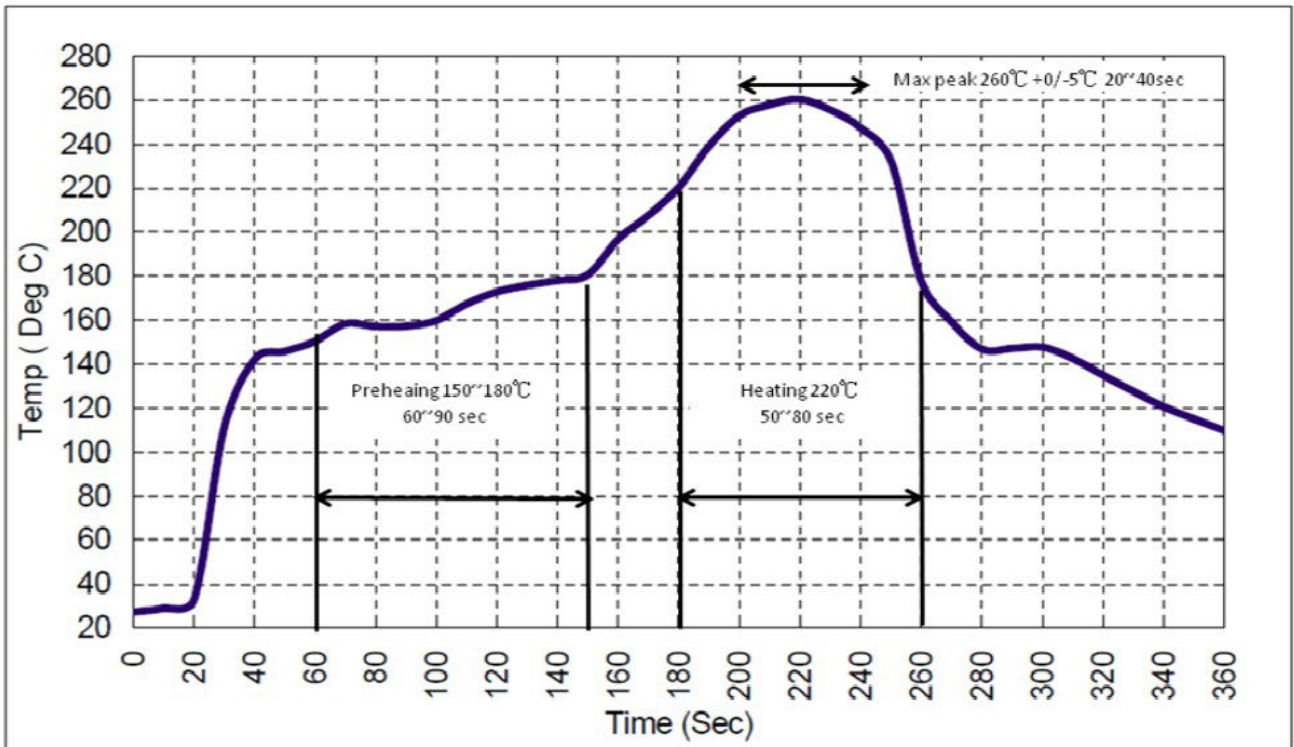
Item	Parameters	Method	Min	Max
1	ϕA (180mm + 0 / - 2.0)	Caliper	178.96	179.00
2	B (1.5mm Min)	Caliper	2.33	2.36
3	ϕC (13.0mm + 0.5 / - 0.2)	Caliper	13.26	13.29
4	W1 (8.40mm + 1.5 / - 0)	Caliper	9.24	9.27
5	Surface Resistivity (10^{11} Max) ohms / sq	S.R meter	10^9	10^{10}
6	Visual		PASS	

Dimensions of Tape (Standard)



Recommended Solder 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.



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. This component was always RoHS compliant from the first date of manufacture.