



TAI-SAW TECHNOLOGY CO., LTD.

No. 3, Industrial 2nd Rd., Ping-Chen Industrial District,
Taoyuan, 324, Taiwan, R.O.C.

TEL: 886-3-4690038 FAX: 886-3-4697532

E-mail: tstsales@mail.taisaw.com Web: www.taisaw.com

Product Specifications Approval Sheet

Product Description: SAW DPX 1880/1960 MHz Band 2 SMD 1.6X1.2 mm (BW=59.5MHz)

TST Part No.: TF0219AA0031

Customer Part No.: _____

Customer signature required
Company: _____
Division: _____
Approved by : _____
Date: _____

Checked by: _____ Nina Chen *Nina Chen*

Approved by: _____ Kazuma Lee *Kazuma Lee*

Date: _____ 2022/05/05

1. Customer signed back is required before TST can proceed with sample build and receive orders.
2. Orders received without customer signed back will be regarded as agreement on the specifications.
3. Any specifications changes must be approved upon by both parties and a new revision of specifications shall be released to reflect the change



TAI-SAW TECHNOLOGY CO., LTD.

No. 3, Industrial 2nd Rd., Ping-Chen Industrial District,
Taoyuan, 324, Taiwan, R.O.C.

TEL: 886-3-4690038 FAX: 886-3-4697532

E-mail: tstsales@mail.taisaw.com Web: www.taisaw.com

SAW DPX 1880/1960 MHz Band 2 SMD 1.6X1.2 mm (BW=59.5 MHz)

MODEL NO.:TF0219AA0031

REV.1.0

A. Maximum Rating:

1. Input power : 30dBm (Ta=+50°C,5000hmax,CW)
2. Maximum DC Voltage: 5V
3. Operating temperature range: -30 °C to +85 °C
4. Storage temperature range: -40 °C to +100 °C
5. Moisture Sensitivity Level: Level 1 (MSL 1)
6. ESD 50V(MM) 100V(HBM)



Electrostatic Sensitive Device (ESD)

B. Electrical Characteristics:

Terminating impedance (Tx Port): 50+2.0nH Ω(Single-ended)

Terminating impedance (Rx Port): 50//25nH Ω (Single-ended)

Terminating impedance (Ant Port): 50//5.0nH Ω (Single-ended)

Tx to ANT (f_{T0}=1880 MHz)

Parameters Description		Unit	Min	Typ	Max	Remarks
Insertion Loss	1850.25~1909.75MHz	dB	-	1.7	2.4	
Amplitude ripple	1850.25~1909.75MHz	dB	-	1.2	2.0	
VSWR	Tx	1850.25~1909.75MHz	-	-	1.4	1.8
	Ant	1850.25~1909.75MHz	-	-	1.4	1.8
Attenuation:						
1570 ~ 1580 MHz		dB	35	40	-	
1932.5 ~ 1987.5 MHz		dB(*1)	44	-	-	-30 to -20°C
		dB(*1)	50	55	-	-20 to +85°C
3700 ~ 3820 MHz		dB	25	30	-	
5550 ~ 5730 MHz		dB	25	30	-	

ANT to Rx ($f_{T0}=1960$ MHz)

Parameters Description		Unit	Min	Typ	Max	Remarks
Insertion Loss	1930.25 ~ 1989.75 MHz	dB	-	-	3.2	-30 to -20°C
		dB		2.2	3.1	-20 to +85°C
Amplitude ripple	1930.25 ~ 1989.75 MHz	dB	-	-	2.6	-30 to -20°C
		dB		1.6	2.5	-20 to +85°C
VSWR	ANT	1930.25 ~ 1989.75 MHz	-	1.7	2.1	
	Rx		-	1.7	2.1	

Attenuation:

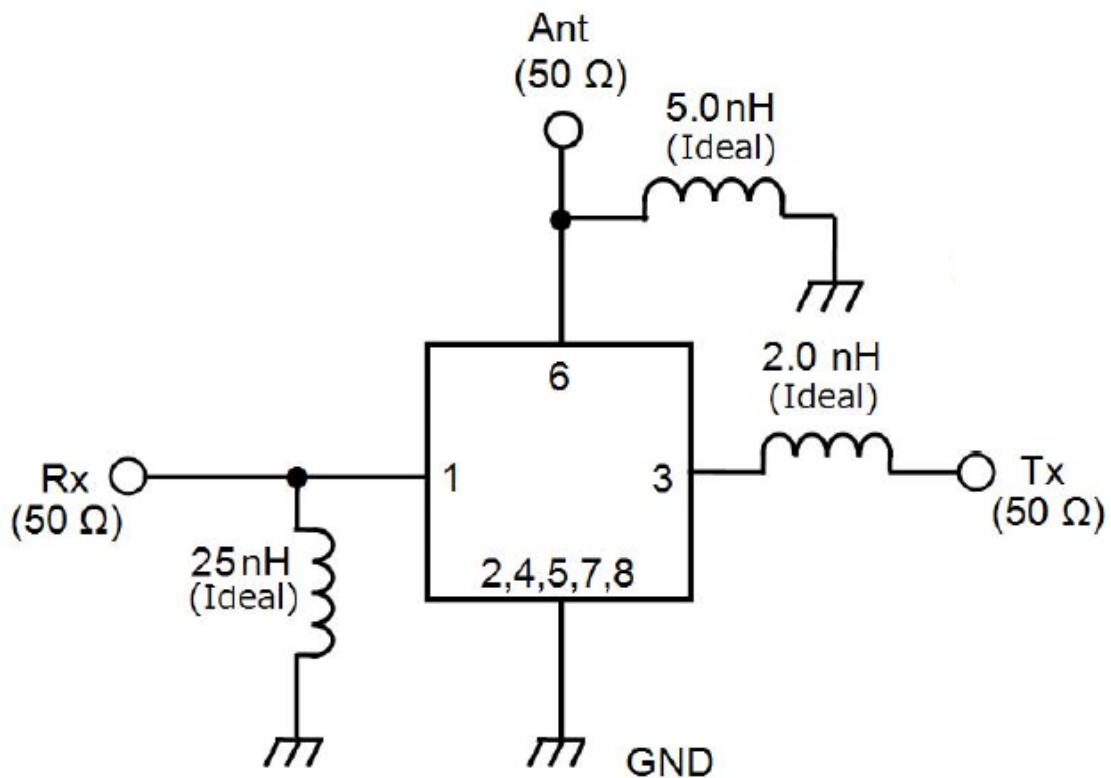
1852.5 ~ 1907.5 MHz	dB(*1)	55	58	-	
---------------------	--------	----	----	---	--

Tx to Rx

Isolation	1852.5 ~ 1907.5MHz	dB(*1)	56	59	-	
	1932.5 ~ 1987.5 MHz	dB(*1)	48	-	-	-30 to -20°C
		dB(*1)	50	54	-	-20 to +85°C

(*1) Integrated attenuation over 5MHz CH BW.

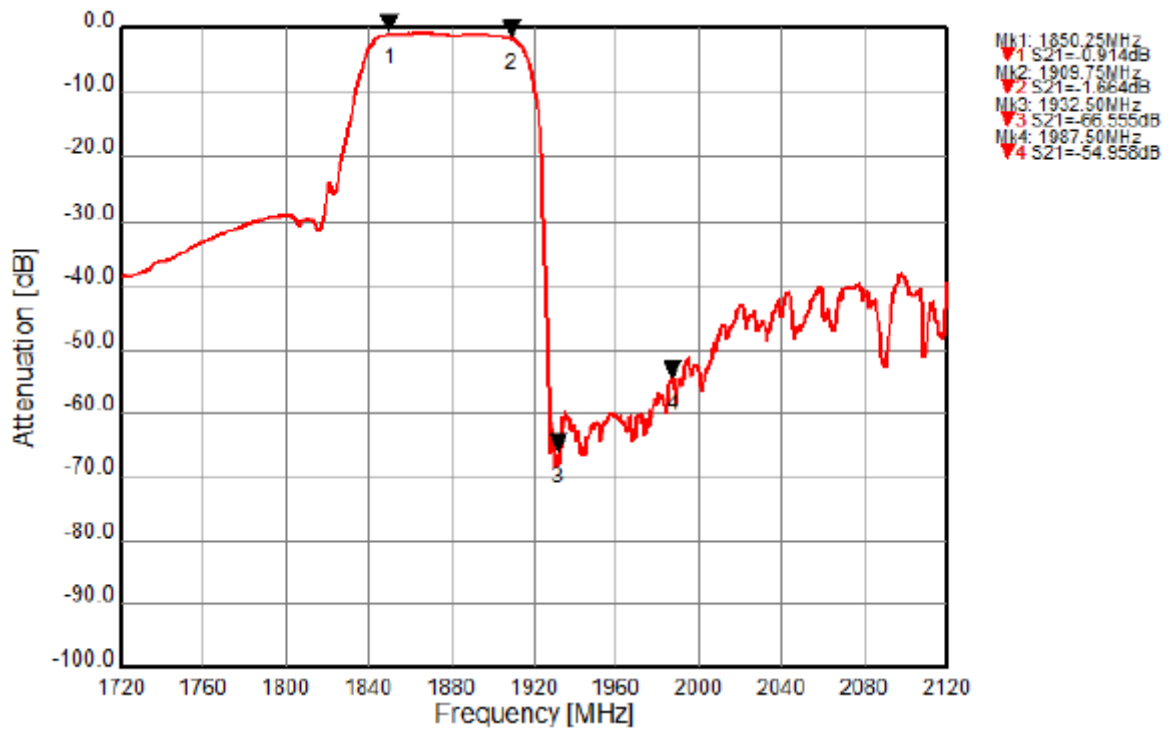
C. Measurement Circuit:



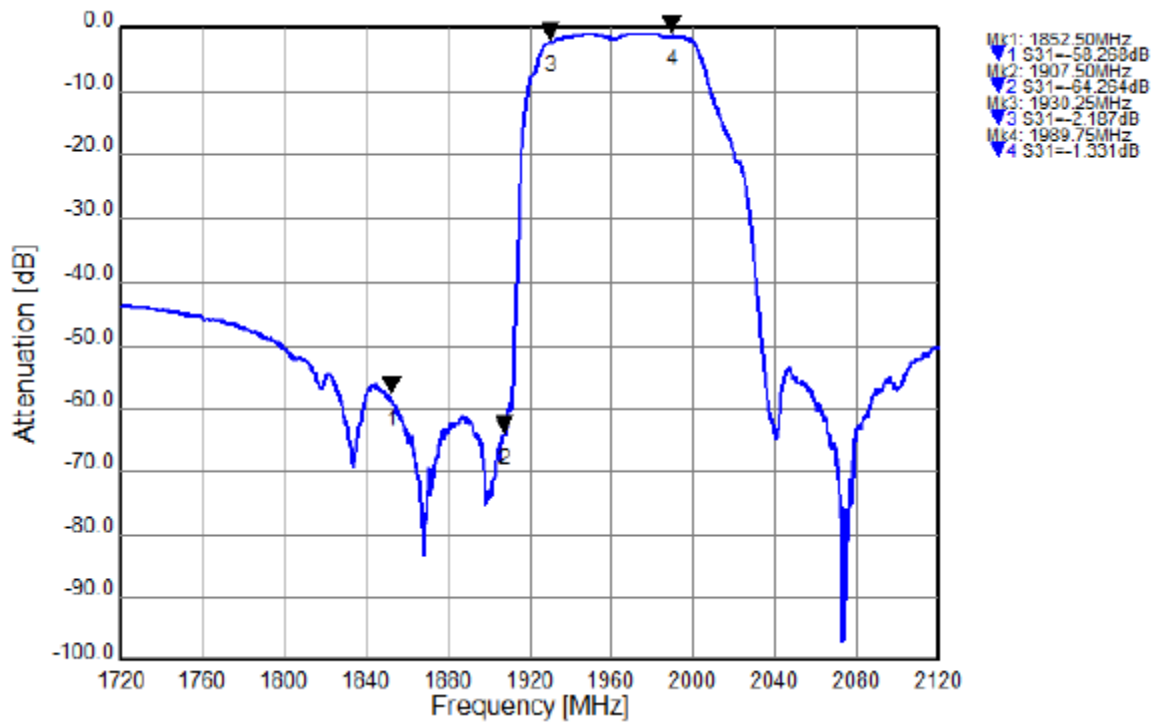
1 to 8: Pin No.

D. Frequency Characteristics:

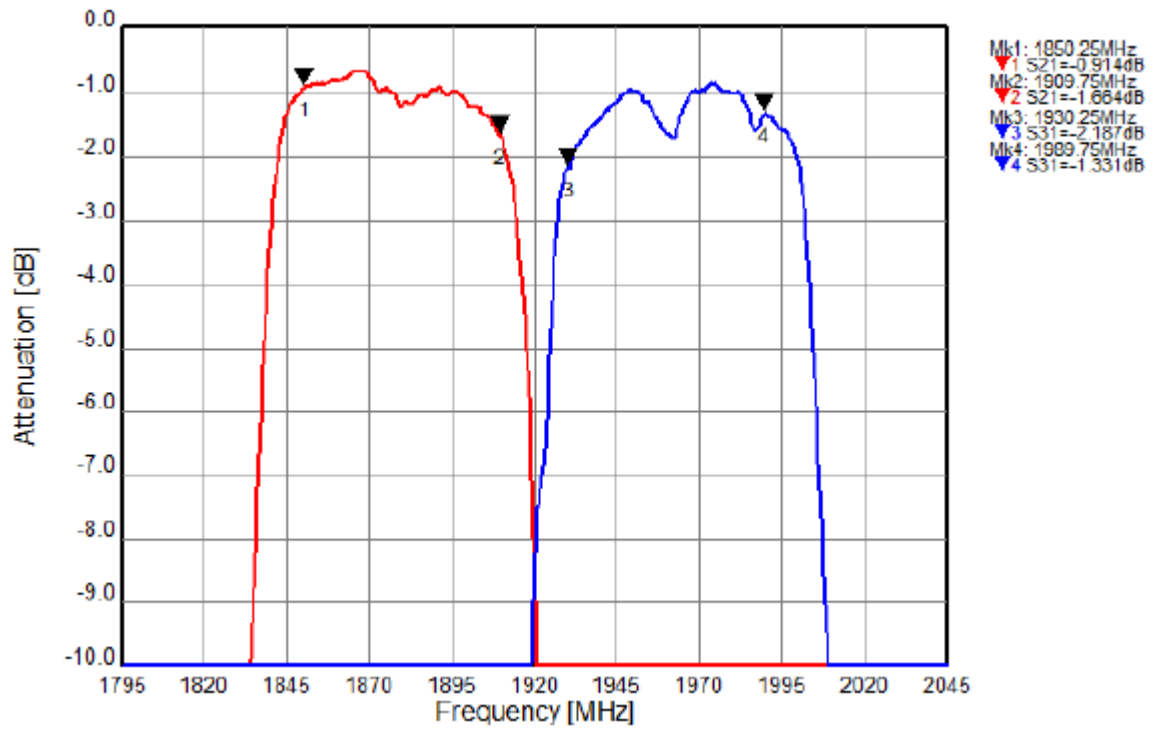
Tx to Ant



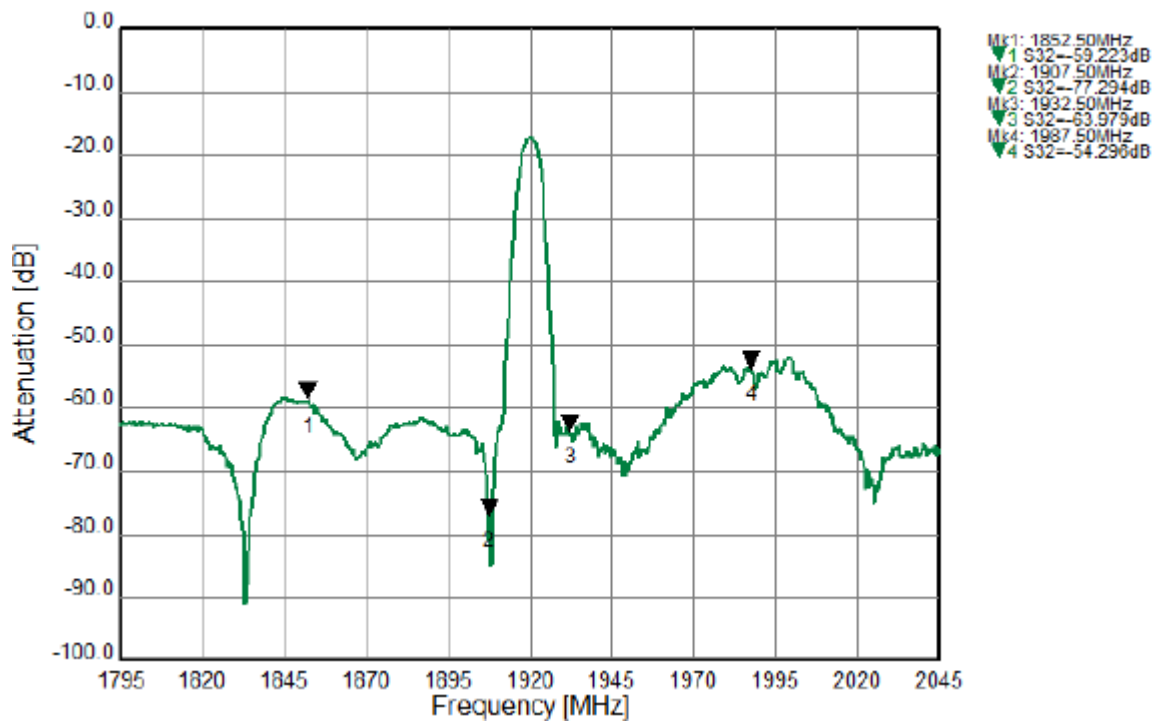
Ant to Rx



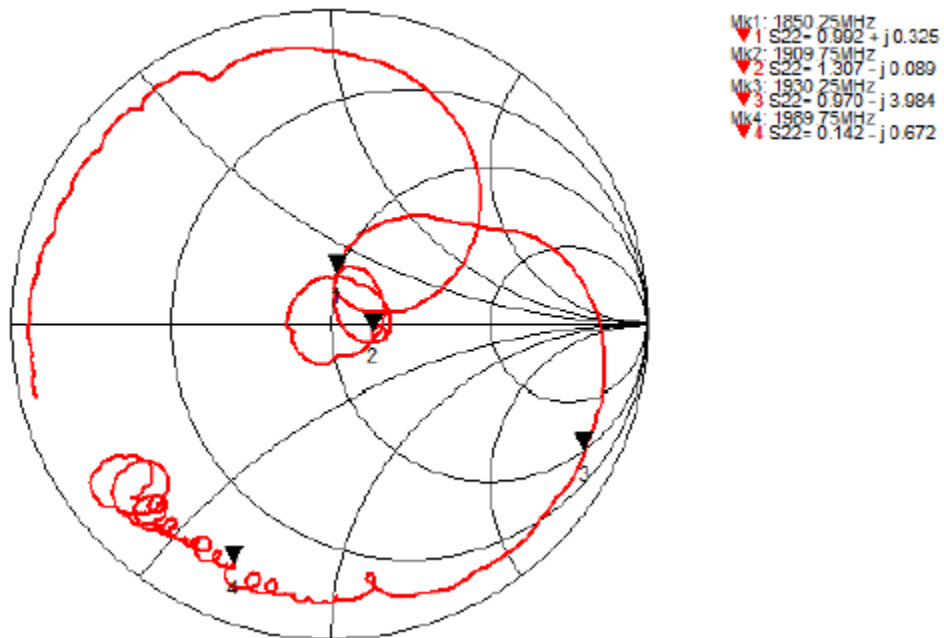
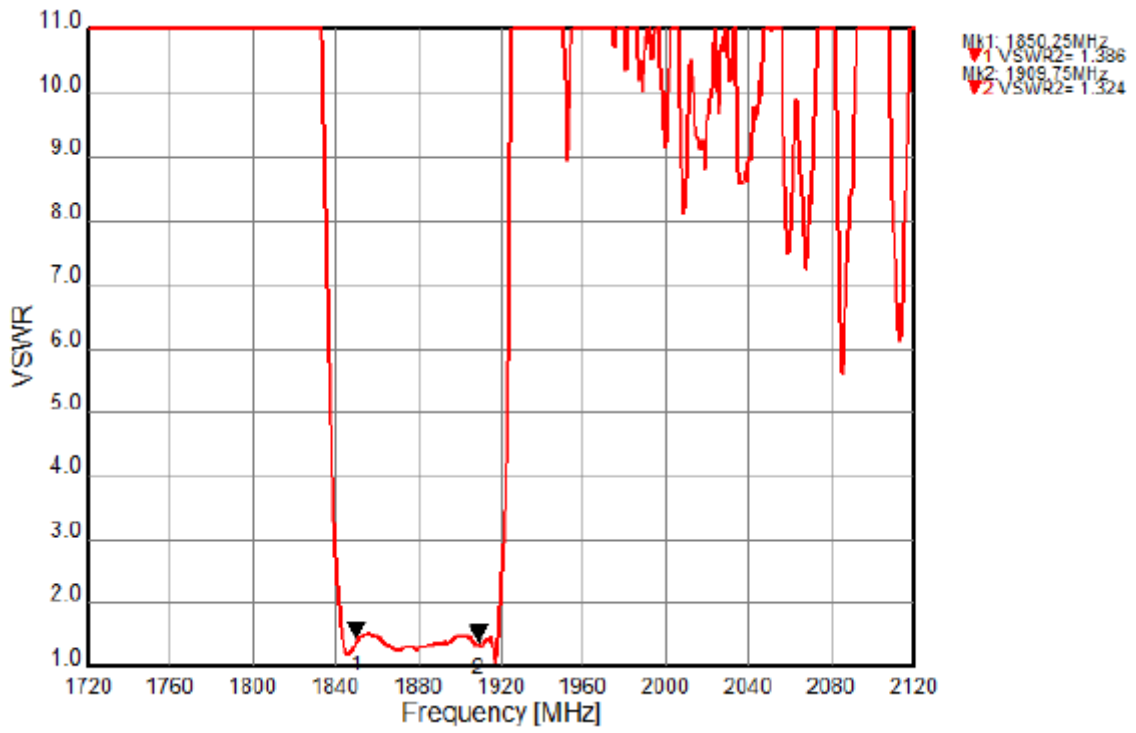
Tx to Ant ,Ant to Rx



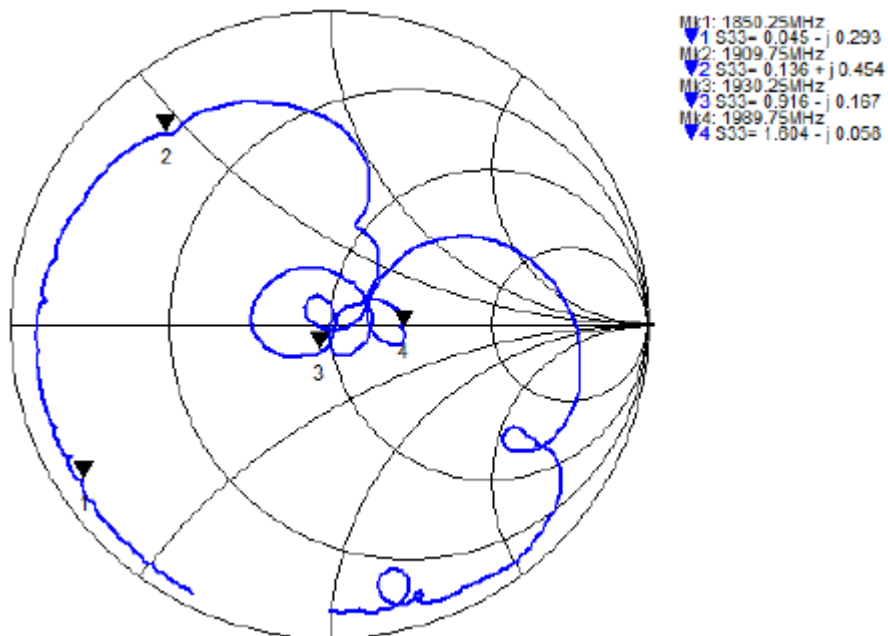
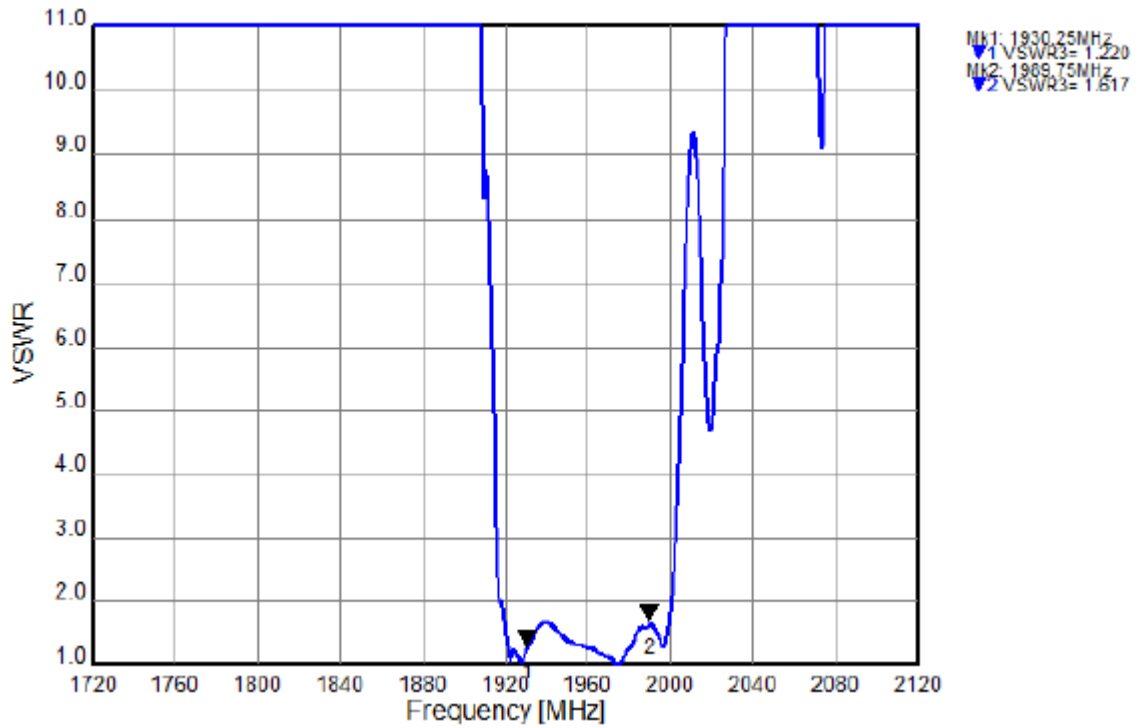
Tx to Rx Isolation



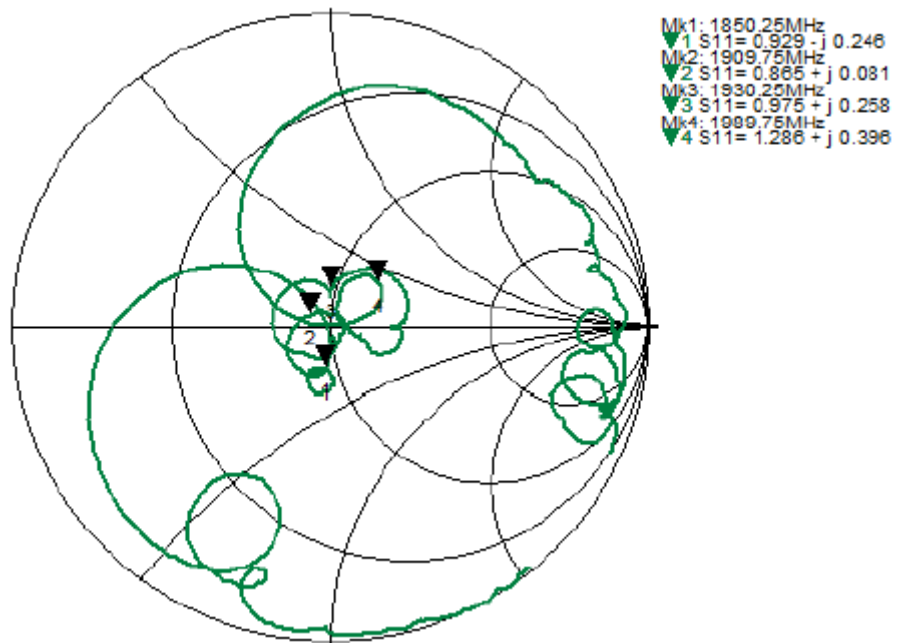
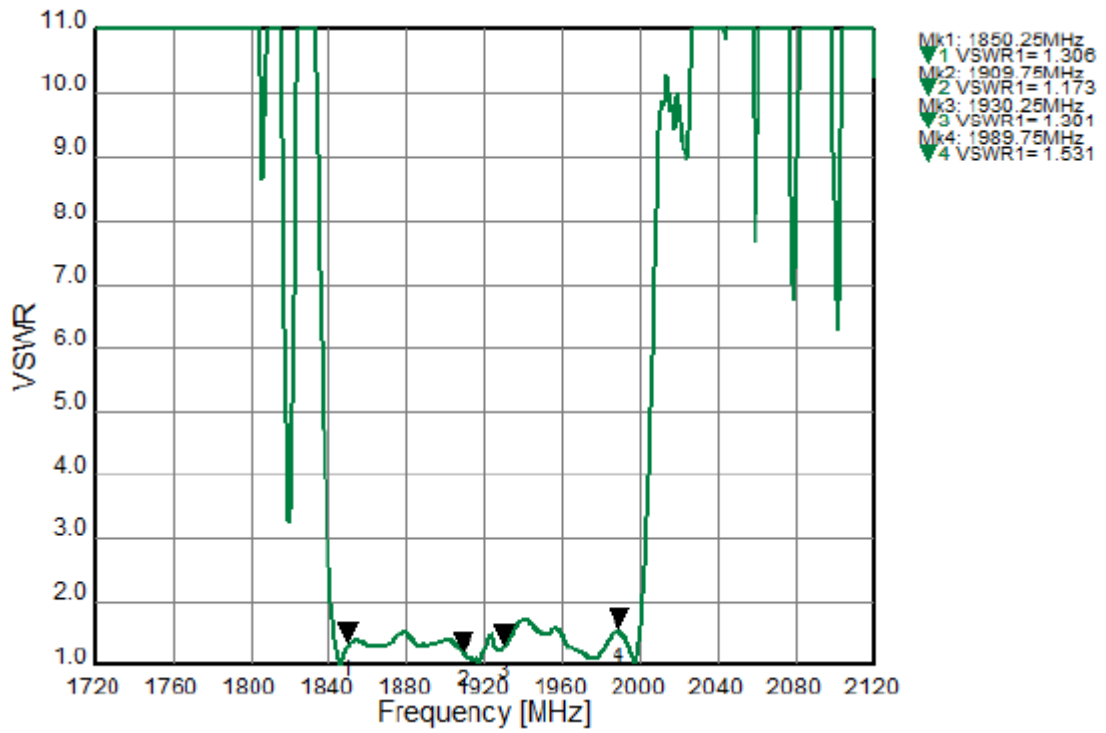
Tx Port



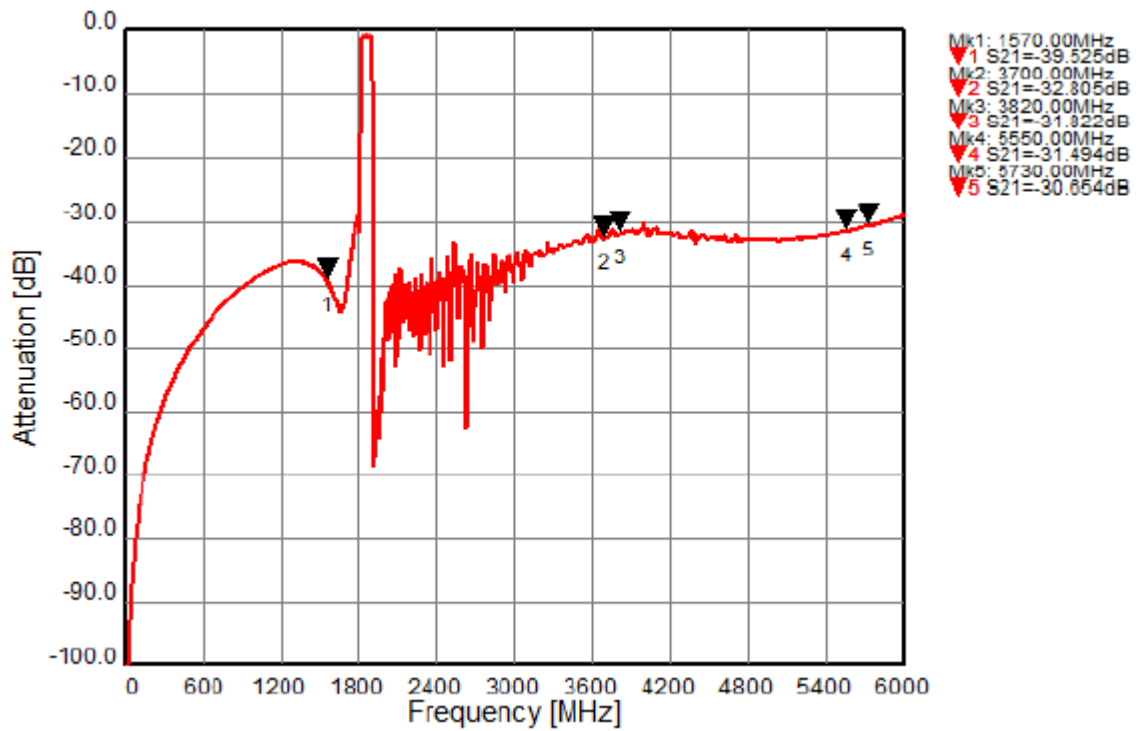
Rx Port



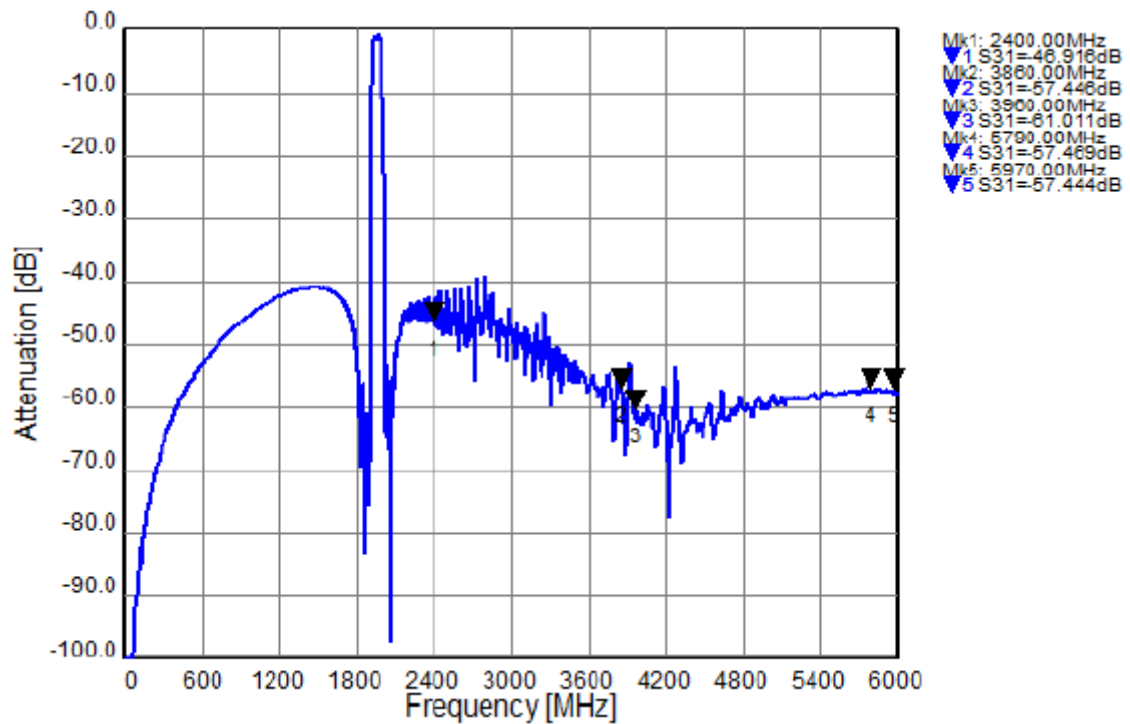
Ant Port



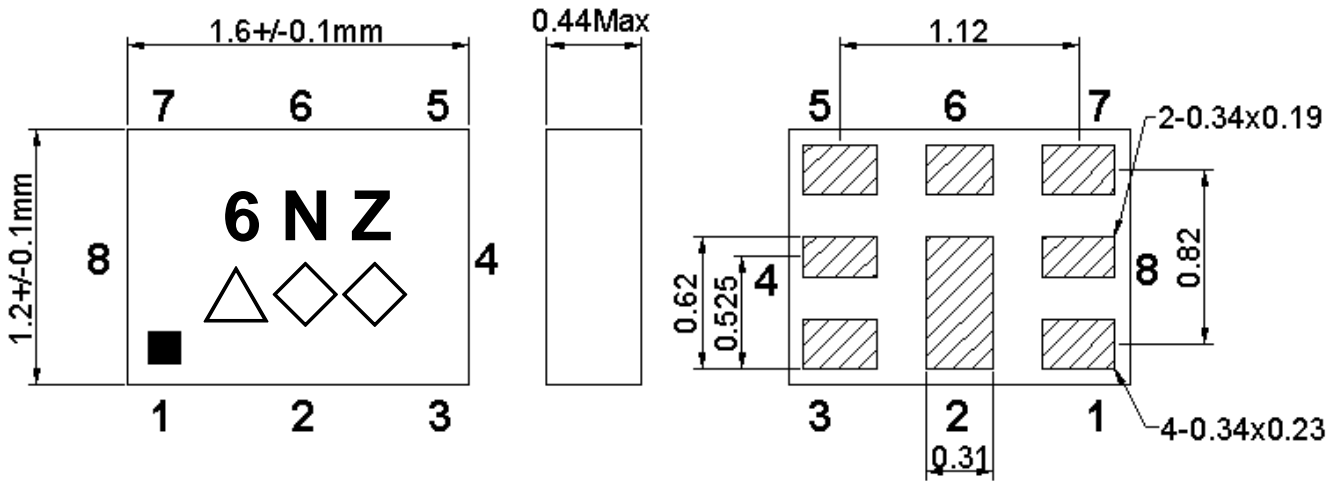
Tx to Ant (Wide span)



Ant to Rx (Wide span)



E. Outline Drawing:



Not Specified Tolerance : $\pm 0.05 \text{ mm}$

Coplanarity : 0.1 mm max.

1 to 8 : Pin No.

Unit : mm

Marking name : **6NZ**

△: Date code(2021 May → E ,....., 2023 Dec→m.)

◇◇: Lot Code.

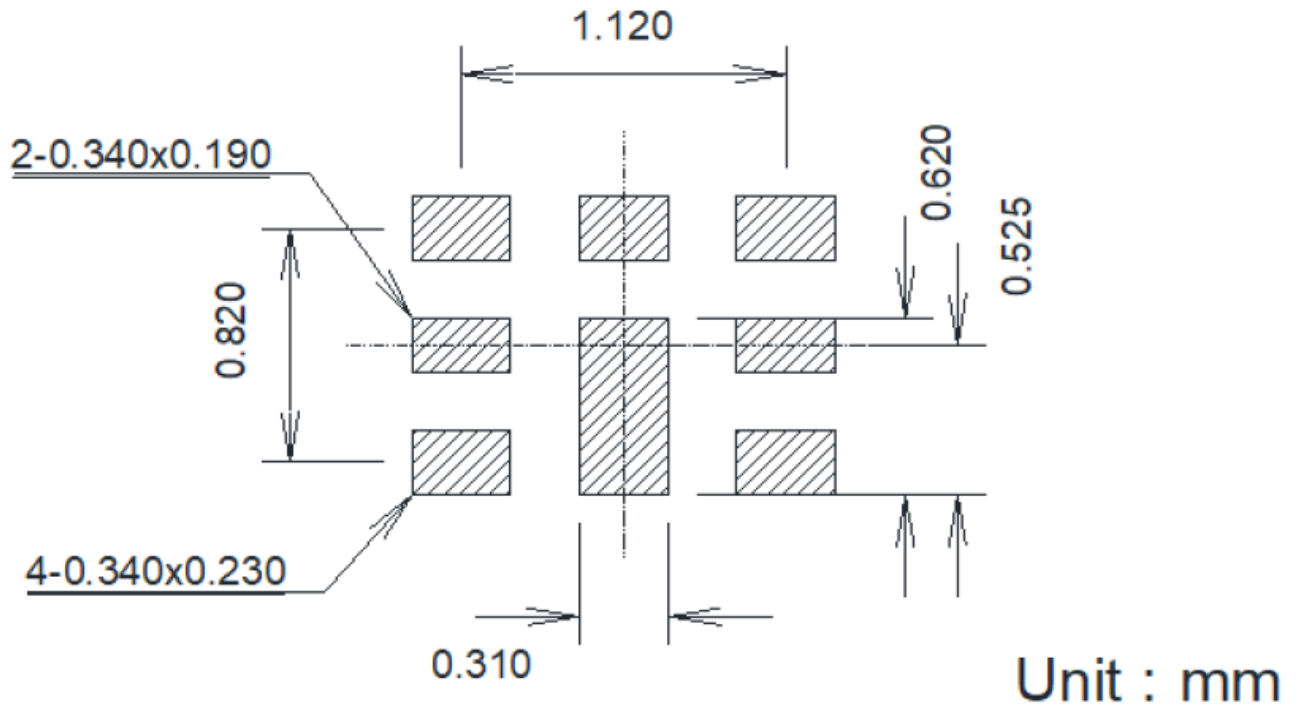
Product Date Code. Follow below table. **(4-year cycle)**

Year	Jan.	Feb.	Mar.	Apr.	May	Jun.	Jul.	Aug.	Sep.	Oct.	Nov.	Dec.
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
2024	n	p	q	r	s	t	u	v	w	x	y	z
2025												
2026												
2027												
2028												

Pin Configuration

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

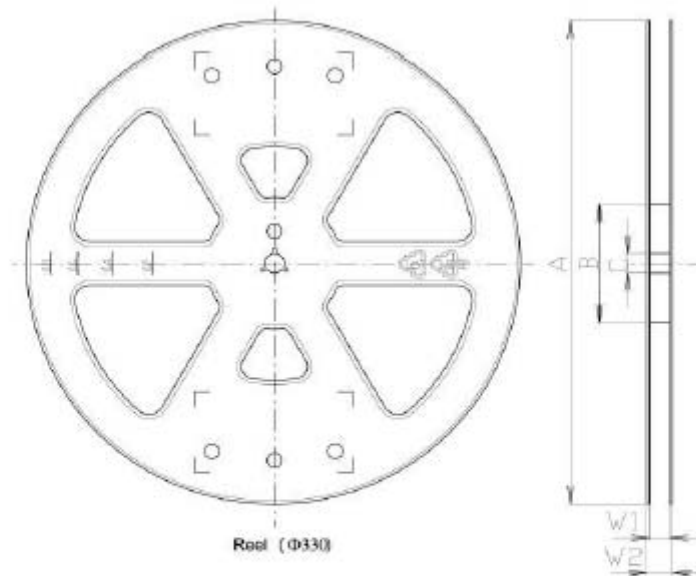
F. PCB Footprint:



G. Packing:

1. Reel Dimension

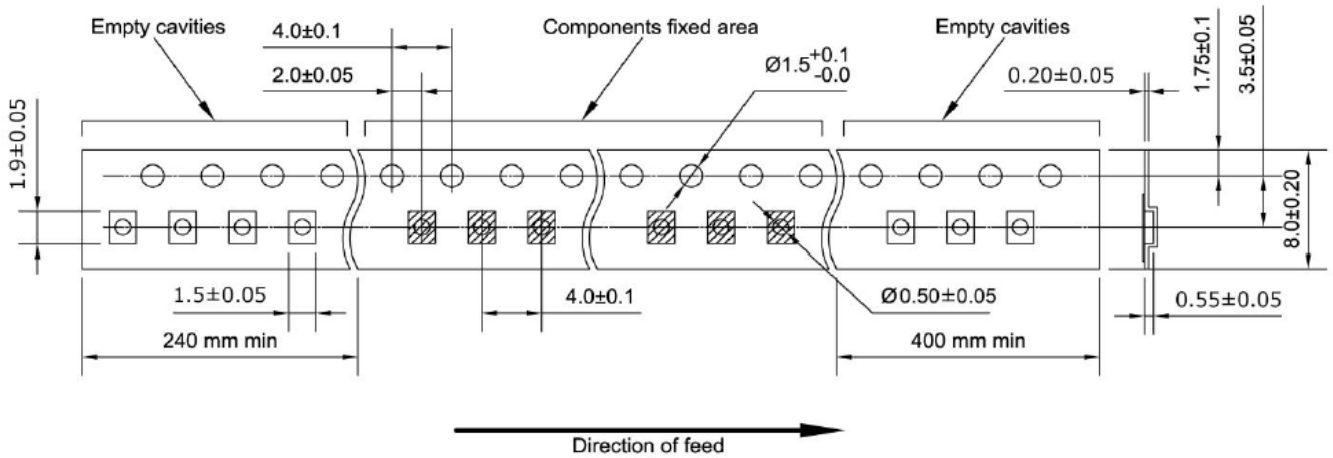
(Please refer to FR-75D10 for packing quantity)



Order	Code	Quantity (pcs./reel)	A	B	C	W1	W2	Tape Pitch
Standard	Y	15,000	φ330	φ100	φ13 ±0.2	9.4 ±1.0	13.4 ±1.0	4.0 ±0.1
Option	Z	3,000	φ180	φ60	φ13 ±0.2	9 +1.0/-0.0	11.4 ±1.0	4.0 ±0.1

Unit:mm

2. Tape Dimension



H. 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 245~260°C peak (min. 10sec).
4. Time : 2 times.

