



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 Duplexer 1950/2140 MHz Band 1 Size 1.8x1.4 mm BW 60/60 MHz

TST Part No.: TF0120EA1823

Customer Part No.: _____

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

Checked by: _____ Nina Chen *Nina Chen*

Approved by: _____ Kazuma Lee *Kazuma Lee*

Date: _____ 2022/06/20

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



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SAW Duplexer 1950/2140 MHz Band 1 Size 1.8x1.4 mm BW 60/60 MHz

MODEL NO.: TF0120EA1823

REV.1.0

A. Maximum Rating:

1. Input power : 29dBm
2. DC Voltage: 3V
3. Operating temperature range: -20 °C to +85 °C
4. Storage temperature range: -40 °C to +85 °C
5. Moisture Sensitivity Level: Level 3 (MSL 3)

RoHS Compliant
Lead free
Lead-free soldering

Electrostatic Sensitive Device (ESD)

B. Electrical Characteristics:

Tx to ANT

Parameter		Unit	Min	Typ	Max	Remarks
Insertion Loss	1920~1980MHz	dB	-	1.8	2.2	
Amplitude Ripple	1920~1980 MHz	dB	-	0.4	1.0	
VSWR	Tx	1920~1980 MHz	-	1.3	2.0	
	ANT	1920~1980 MHz	-	1.6	2.2	
Attenuation	10~1574 MHz	dB	32	36	-	
	420~494 MHz	dB	45	52	-	
	815~830 MHz	dB	37	43	-	
	824~849 MHz	dB	37	43	-	
	830~845 MHz	dB	37	43	-	
	843~894 MHz	dB	37	43	-	
	880~915 MHz	dB	35	42	-	
	925~960 MHz	dB	35	41	-	
	1226~1250 MHz	dB	32	37	-	
	1447~1462 MHz	dB	32	36	-	
	1475~1496 MHz	dB	32	36	-	
	1496~1511 MHz	dB	32	36	-	
	1559~1563 MHz	dB	32	36	-	
	1565.42~1573.37 MHz	dB	32	36	-	
	1573.37~1577.47 MHz	dB	32	36	-	
	1577.47~1585.42 MHz	dB	32	36	-	
1597.55~1605.89 MHz	dB	32	37	-		
1605.88~1805 MHz	dB	25	34	-		
1805~1865 MHz	dB	20	29	-		
1865~1880 MHz	dB	18	26	-		

Attenuation	2110~2170 MHz	dB	48	45	-	
	2400~2500 MHz	dB	35	42	-	
	2620~2690 MHz	dB	30	38	-	
	3840~3960 MHz	dB	18	26	-	
	4900~5950 MHz	dB	10	18	-	
	4905~5845 MHz	dB	10	18	-	
	7680~7920 MHz	dB	5	12	-	

ANT to Rx

Parameter		Unit	Min	Typ	Max	Remarks
Insertion Loss	2110~2170MHz	dB	-	2.3	2.6	
Amplitude Ripple	2110~2170MHz	dB	-	0.4	1.0	
VSWR	Rx		-	1.9	2.3	
	ANT		-	1.8	2.3	
Attenuation	1~1920 MHz	dB	32	42	-	
	190 MHz	dB	50	75	-	
	718~748 MHz	dB	40	52	-	
	814~849 MHz	dB	40	50	-	
	880~915 MHz	dB	40	49	-	
	1427~1447 MHz	dB	37	44	-	
	1447~1463 MHz	dB	37	44	-	
	1730~1790 MHz	dB	37	43	-	
	1710~1785 MHz	dB	37	43	-	
	1920~1980 MHz	dB	48	54	-	
	1980~2015 MHz	dB	40	46	-	
	2015~2075 MHz	dB	10	34	-	
	2255~6130 MHz	dB	23	41	-	
	2400~2500 MHz	dB	40	47	-	
	2500~2570 MHz	dB	40	47	-	
	4030~4150 MHz	dB	45	52	-	
	4220~4340 MHz	dB	45	52	-	
	4900~5950 MHz	dB	25	43	-	
	5950~6130 MHz	dB	23	41	-	
6130~6330 MHz	dB	20	38	-		
6330~6510 MHz	dB	15	36	-		

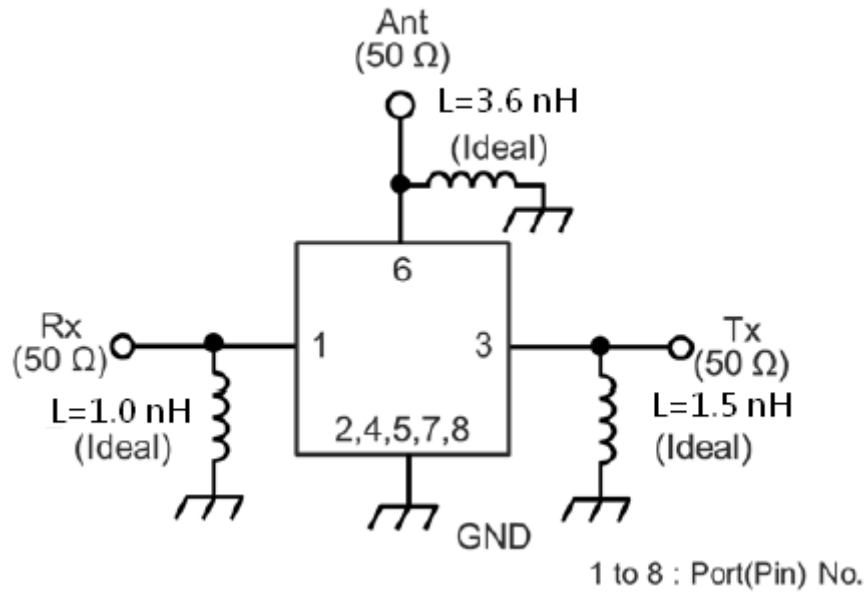
Tx to Rx

Parameter		Unit	Min	Typ	Max	Remarks
Isolation	1574~1577 MHz	dB	40	55	-	
	1920~1980 MHz	dB	50	55	-	
	2110~2170 MHz	dB	48	53	-	
	3830~3970 MHz	dB	35	48	-	
	5750~5950 MHz	dB	23	41	-	

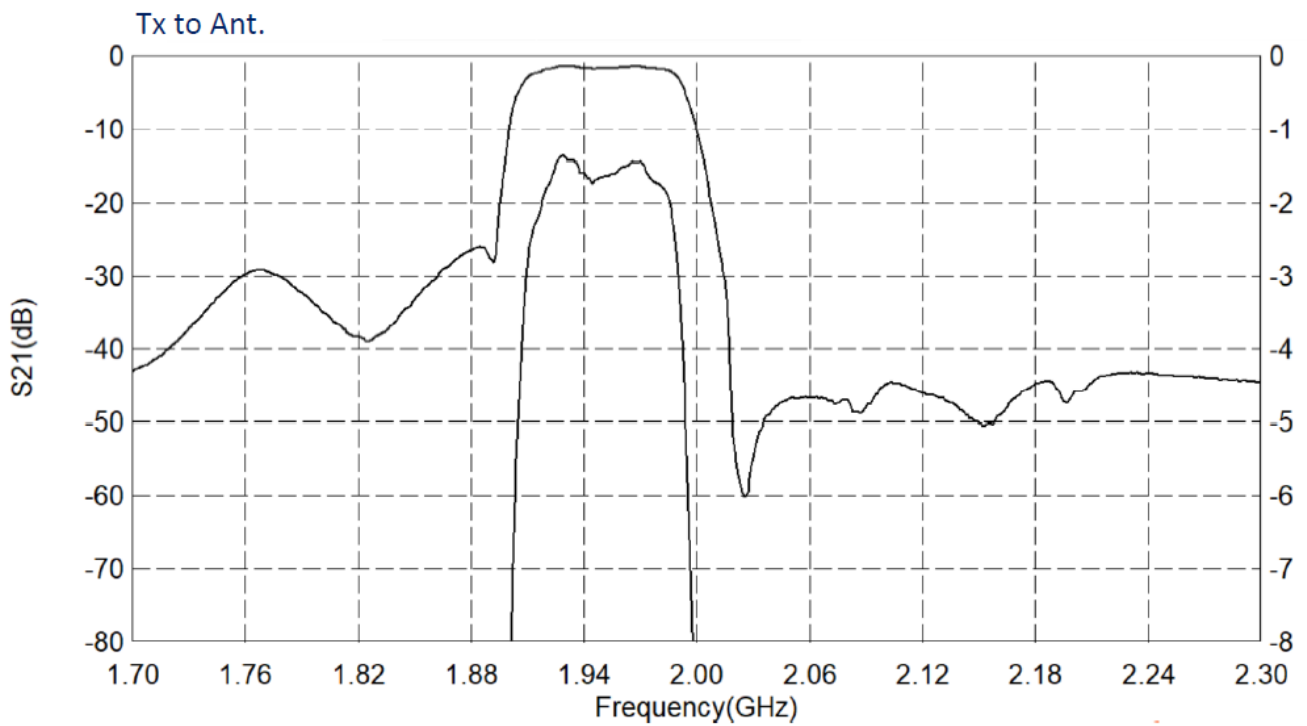
1. Min/Max specifications are guaranteed at the indicated temperature (unless otherwise noted).

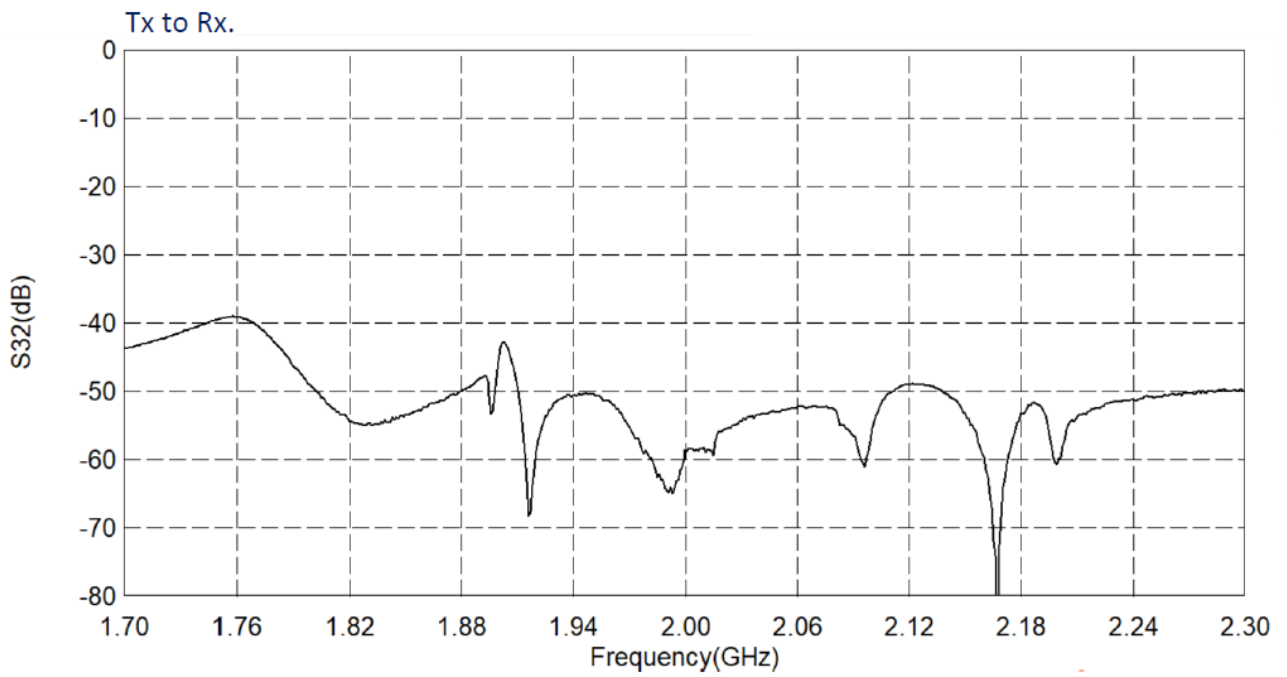
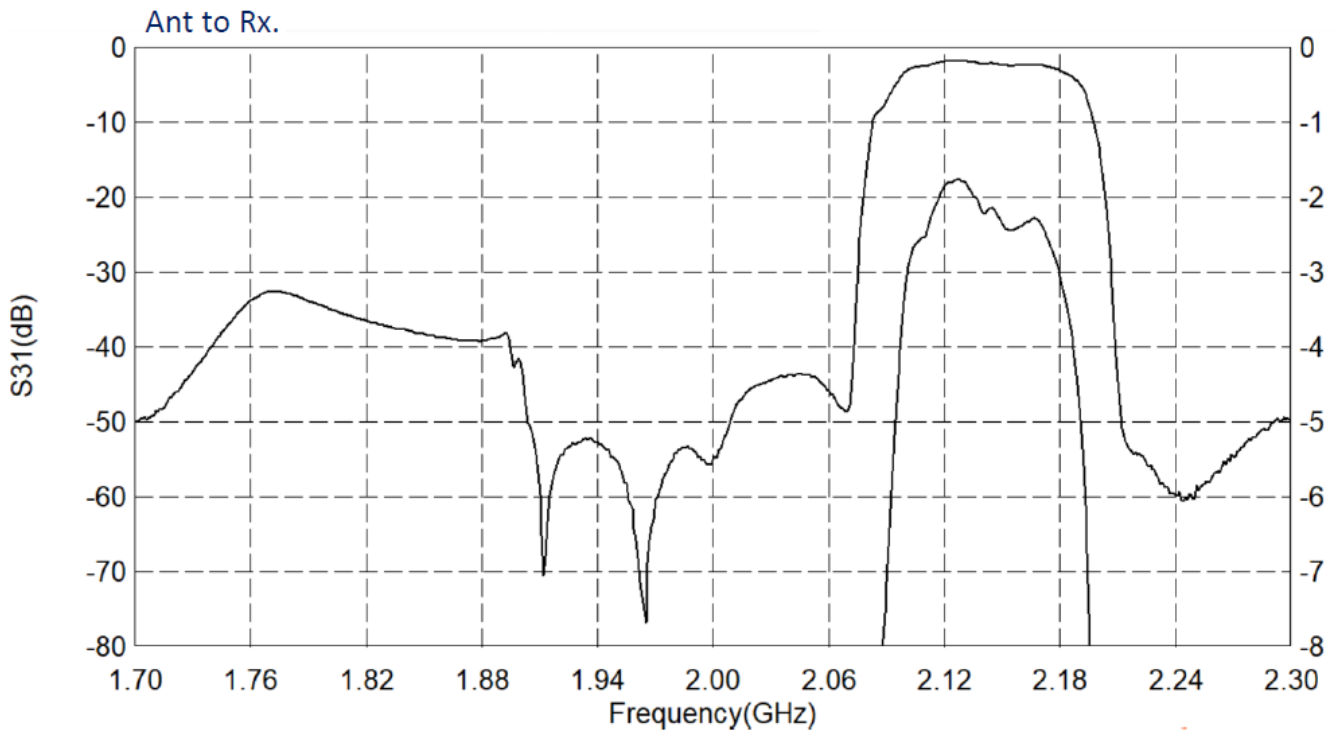
2. Typical data is the average value (arithmetic mean) of the parameter over the indicated band at +25°C

C. Measurement Circuit:

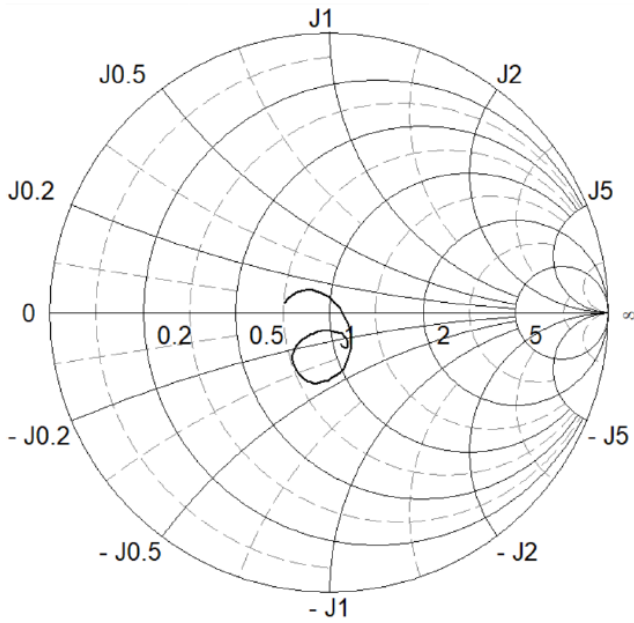


D. Frequency Characteristics:

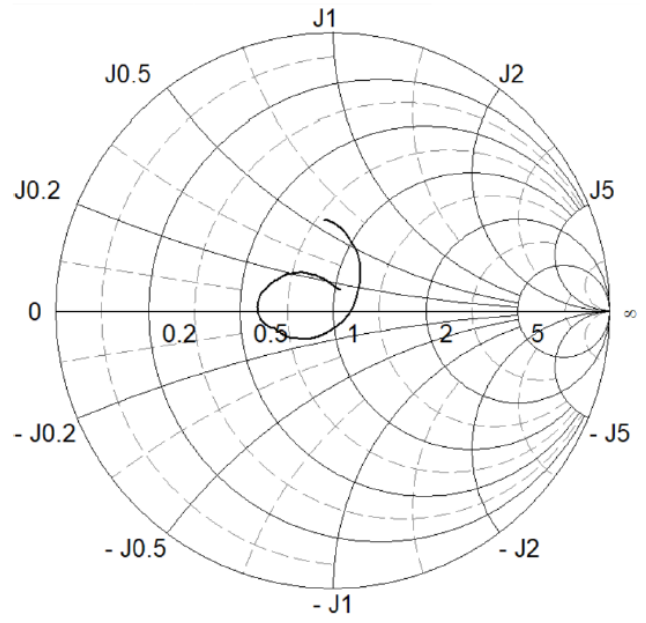




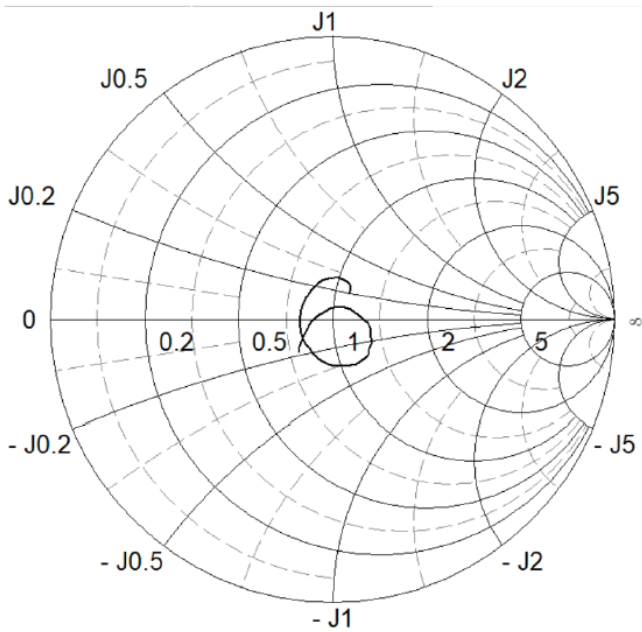
Tx Input Impedance
(1920MHz to 1980MHz)



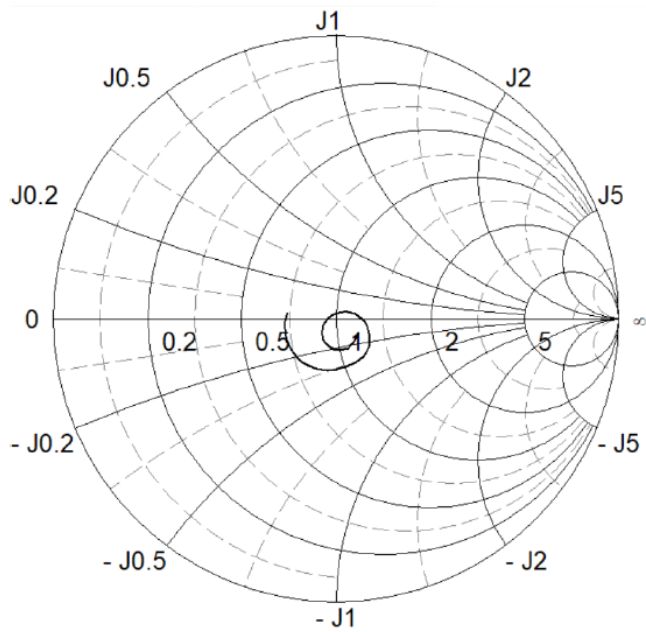
Rx Input Impedance
(2110MHz to 2170MHz)

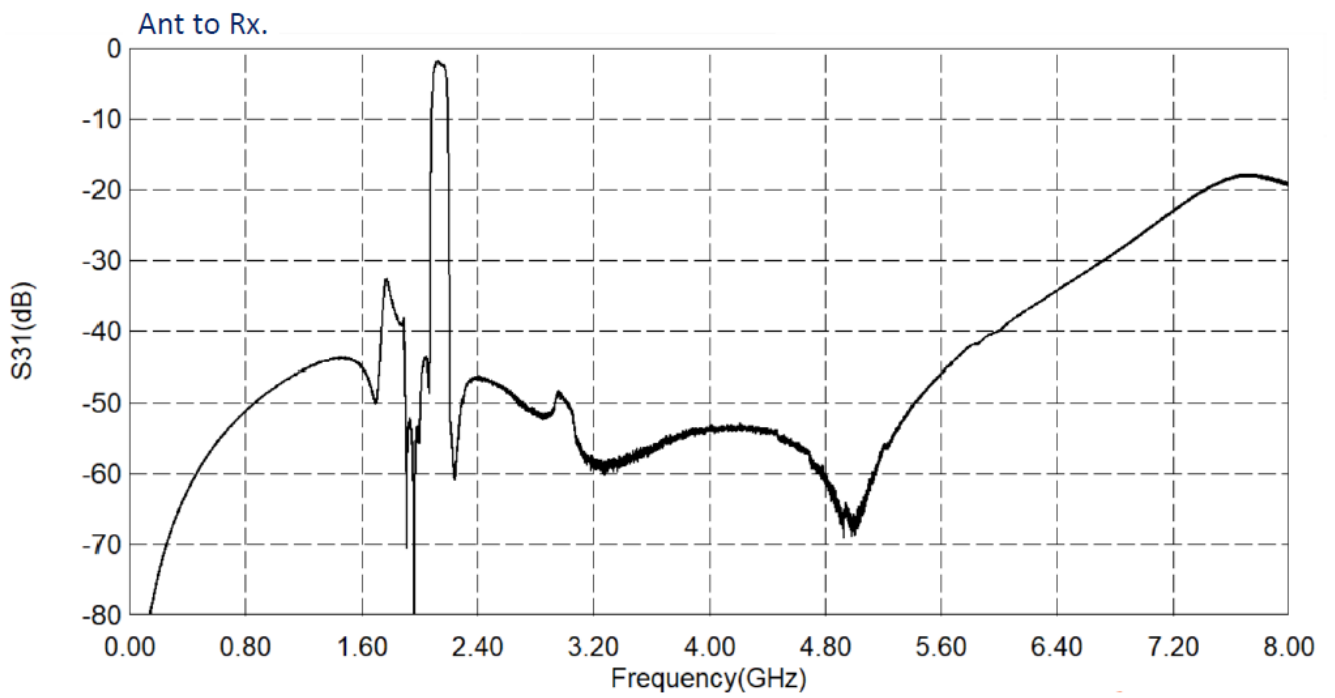
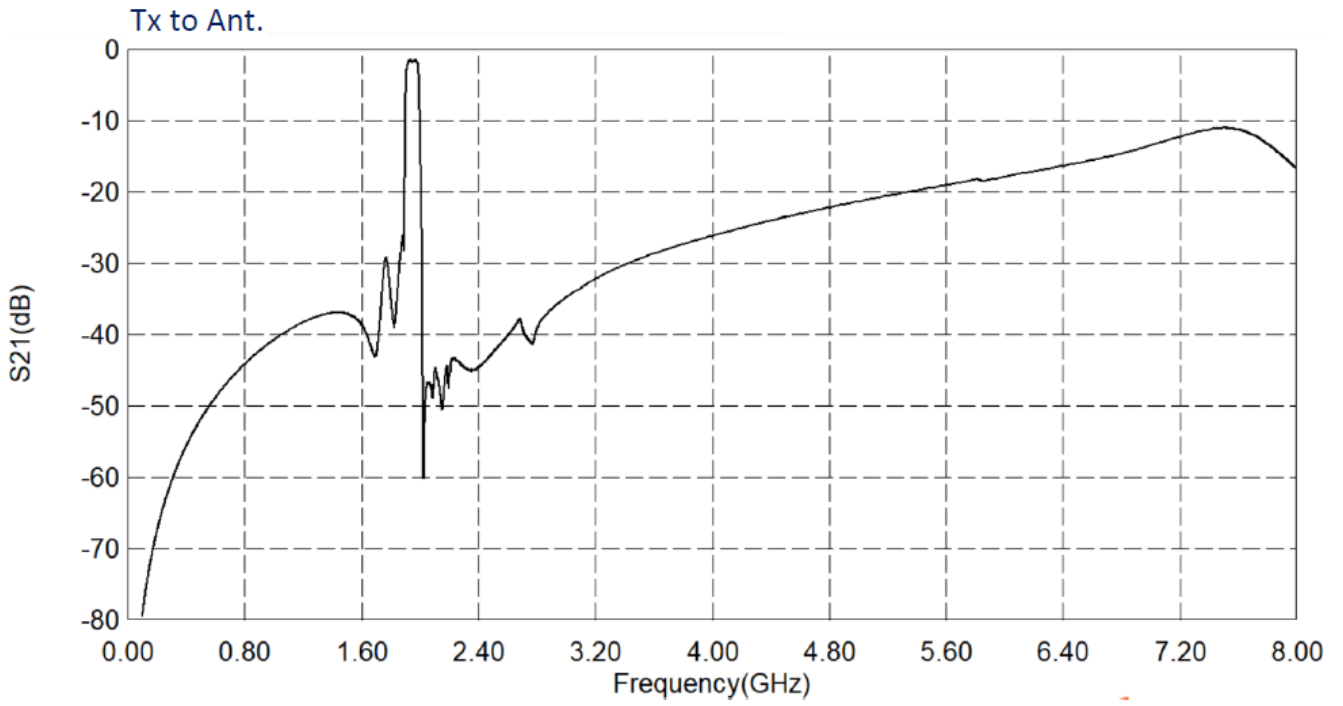


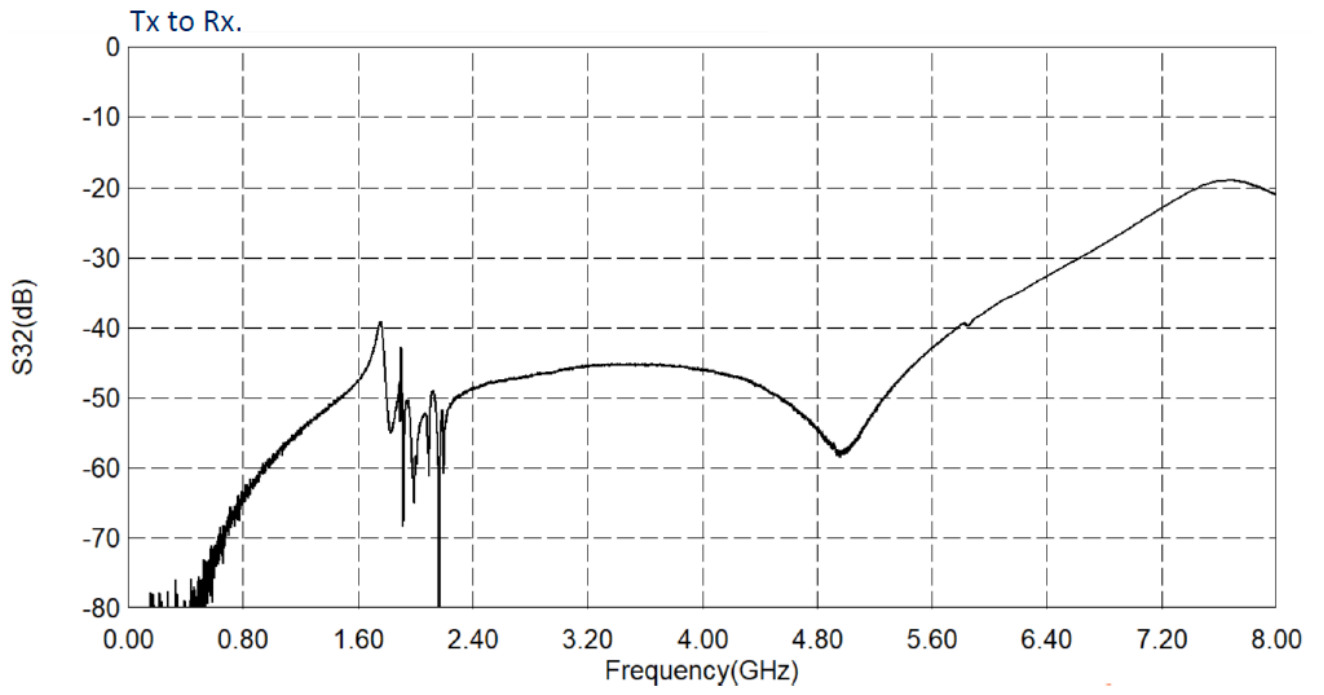
Ant Input Impedance (Tx Band)



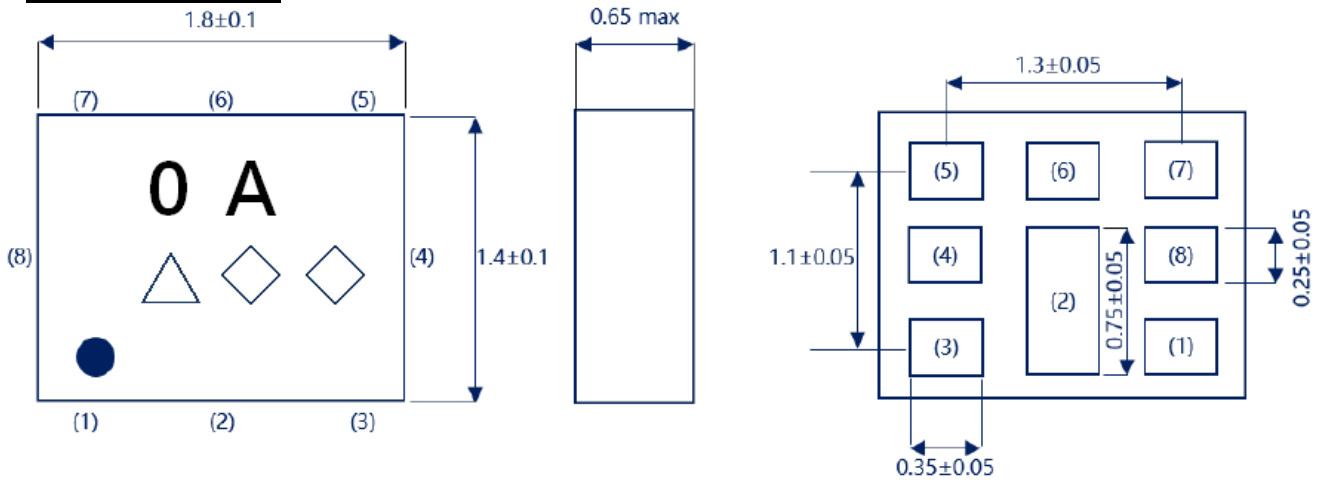
Ant Input Impedance (Rx Band)







E. Outline Drawing:



Marking name: 0A

△: Year Code.

◇ ◇: Date Code. (Month+Date)

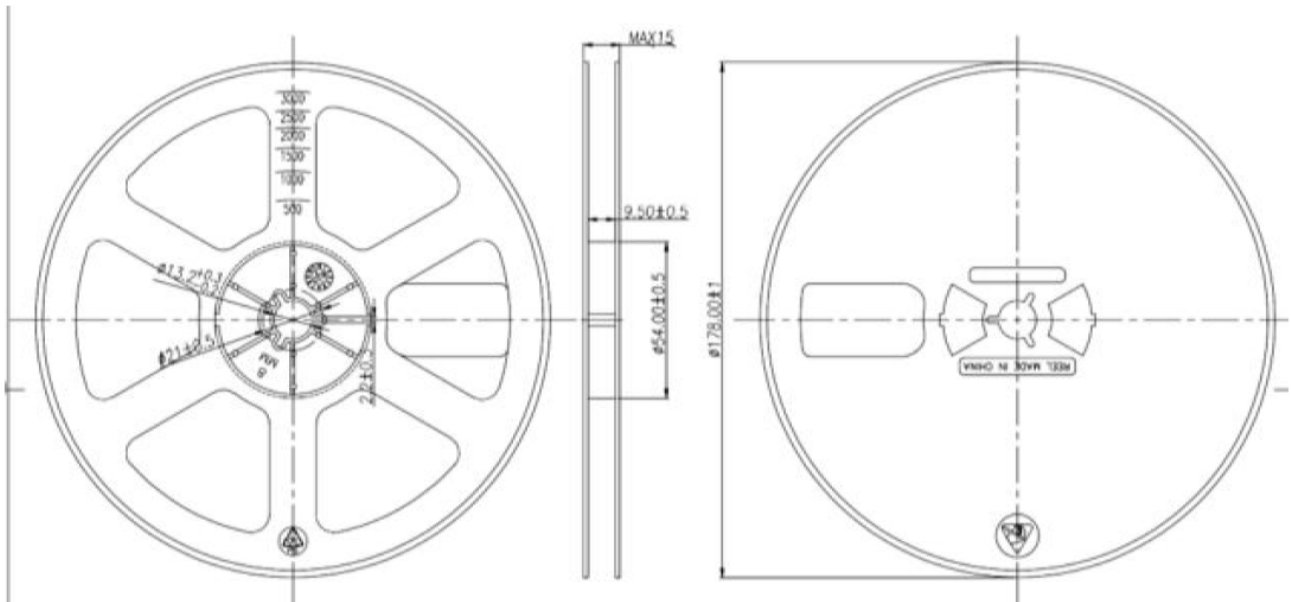
Pin Configuration	
3	Tx
1	Rx
6	Antenna
2,4,5,7,8	Ground

Follow below table.

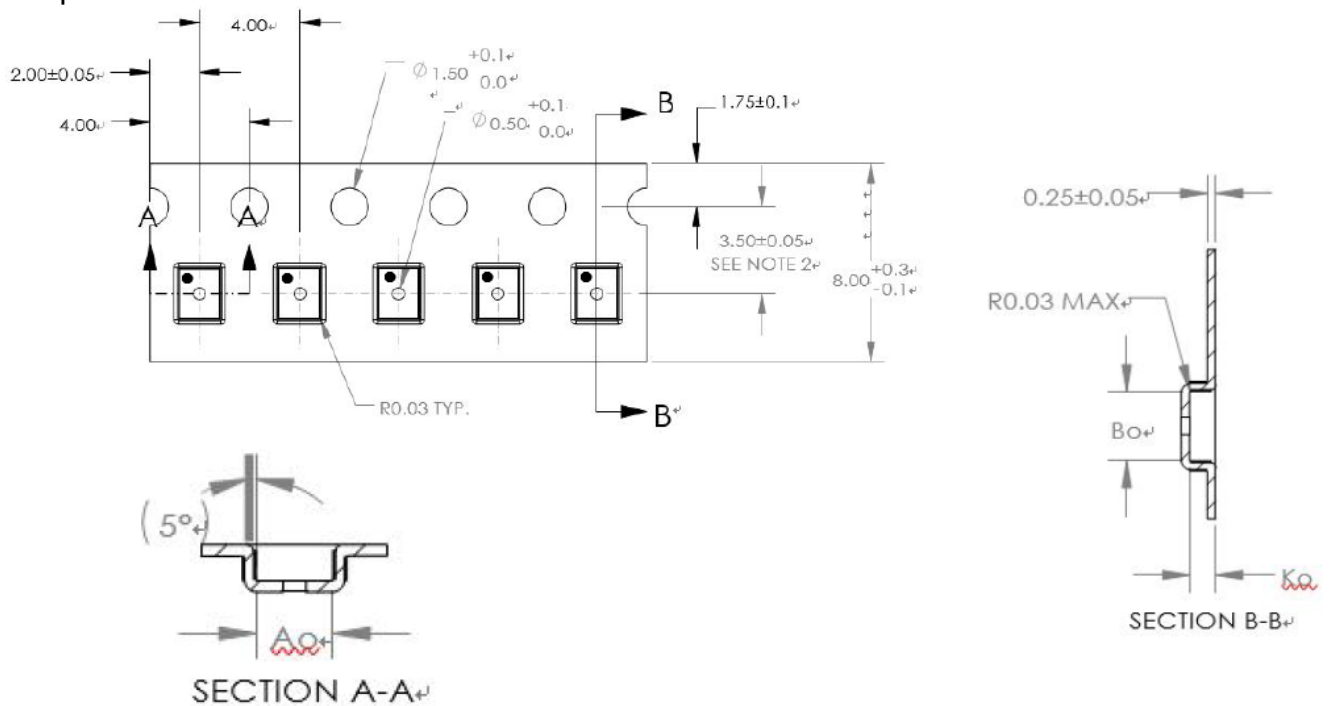
Year code												
Year	2020	2021	2022	2023	2024	2025	2026	2027	2028	2029		
Code	0	1	2	3	4	5	6	7	8	9		
Date code												
Month	1	2	3	4	5	6	7	8	9	10	11	12
2020	1	2	3	4	5	6	7	8	9	A	B	C
2021	D	E	F	G	H	J	K	L	M	N	P	Q
2022	R	S	T	U	V	W	X	Y	Z	a	b	d
2023	e	f	g	h	j	k	m	n	q	r	t	y
Date	1st	2nd	3rd	4th	5th	6th	7th	8th	9th	10th		
code	1	2	3	4	5	6	7	8	9	A		
Date	11st	12nd	13rd	14th	15th	16th	17th	18th	19th	20th		
code	B	C	D	E	F	G	H	J	K	L		
Date	21st	22nd	23rd	24th	25th	26th	27th	28th	29th	30th	31th	
code	M	N	P	Q	R	S	T	U	V	W	X	

F.Packing:

1. Reel Dimension



2. Tape Dimension



G. Recommended Solder Profile

