



TAI-SAW TECHNOLOGY CO., LTD.

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Product Specification Approval Sheet

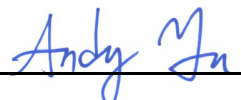
Product Name: BAW DPX 2535/2655 MHz LTE Band 7 SMD 1.8X1.4 mm (BW=70 MHz)

TST Parts No.:TF0124AA

Customer Parts No.:_____

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

Checked by:_____ Anne Chen 

Approved by:_____ Andy Yu 

Date:_____ 04/01/2020

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 changes.



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BAW DPX 2535/2655 MHz Band 7 SMD 1.8X1.4 mm (BW=70 MHz)

MODEL NO.: TF0124AA

REV. NO.: 1

A. MAXIMUM RATING:

1. Operating temperature range: -30 °C to +85 °C
2. Storage temperature range: -40 °C to +100 °C
3. Input power : 29dBm (Ta=+50deg C,2500~2570MHz,5Khours CW)

Ant port and Rx port : loaded at 50Ω

Electrostatic Sensitive Device (ESD)

Input time:5000hmx.

4. Maximum DC Voltage: 0 V
5. Moisture Sensitivity Level: Level 1
6. ESD 50V(MM) 100V(HBM)

B. ELECTRICAL CHARACTERISTICS:

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

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

Terminating impedance (Ant Port): 50//3.2nH Ω (Single-ended)

Tx to ANT (f_{T0}=2535 MHz)

Parameters Description		Unit	Min	Typ	Max	Remarks
Insertion Loss	2500~2570MHz	dB(*1)	-	2.0	2.8	
Ripple	2500~2570MHz	dB	-	1.2	2.2	
Ripple(any 5MHz)	2500~2570MHz	dB		0.5	1.0	
VSWR	ANT	2500~2570MHz	-	1.7	2.3	
	Tx		-	1.6	2.0	
Attenuation:						
10~1565.42 MHz		dB	35	39	-	
832~862 MHz		dB	45	50	-	
1226~1250 MHz		dB	40	43	-	
1559~1563 MHz		dB	35	39	-	
1565.42~1573.374 MHz		dB	35	39	-	
1573.374~1577.466 MHz		dB	35	39		
1577.466~1585.42 MHz		dB	35	39		
1597.5515~1605.886 MHz		dB	35	39		
1605.886~1680 MHz		dB	35	39		
1710~1785 MHz		dB	33	37		
1805~1880 MHz		dB	33	36		
1900~1920 MHz		dB	33	36		

RoHS Compliant

Lead-free soldering

2010~2025 MHz	dB	33	36		
2110~2170 MHz	dB	33	35		
2402~2470 MHz	dB(*2)	40	47		
2440~2460 MHz	dB(*2)	40	47		
2452~2474 MHz	dB(*2)	36	47		
2402~2467 MHz	dB(*3)	40	46		
2474~2500 MHz	dB	1	2.3		
2595~2620 MHz	dB	5	33		
	dB	13	33		Ta=+15 to +70°C
2620~2690 MHz	dB	45	52		
4900~5950 MHz	dB	40	46		
5000~5140 MHz	dB	40	46		
5100~5280 MHz	dB	40	47		
7500~7710 MHz	dB	35	45		

ANT to Rx (f_{T0}=2655 MHz)

Parameters Description		Unit	Min	Typ	Max	Remarks
Insertion Loss	2620~2690 MHz	dB(*1)	-	2.0	2.5	Ta=-20 to +85°C
		dB(*1)		2.0	2.8	
Ripple	2620~2690 MHz	dB		0.8	1.8	
VSWR	ANT	-		1.6	2.0	
	Rx			1.6	2.0	
Attenuation:						
1~2500 MHz		dB	40	44	-	
45 MHz		dB	60	99	-	
718~748 MHz		dB	50	58		
814~849 MHz		dB	50	55		
832~862 MHz		dB	50	55		
880~915 MHz		dB	50	54		
1710~1785 MHz		dB	40	45		
1920~1980 MHz		dB	40	44		
2400~2500 MHz		dB	40	48		
2402~2470 MHz		dB	42	48		
2500~2570 MHz		dB	45	50		
2570~2600 MHz		dB	1	8		
2755~2790 MHz		dB	37	64		
2775~6000 MHz		dB	40	48		
4900~5300 MHz		dB	40	55		
5300~5950 MHz		dB	40	52		
7620~7830 MHz		dB	40	48		
7860~8070 MHz		dB	40	48		

Tx to Rx

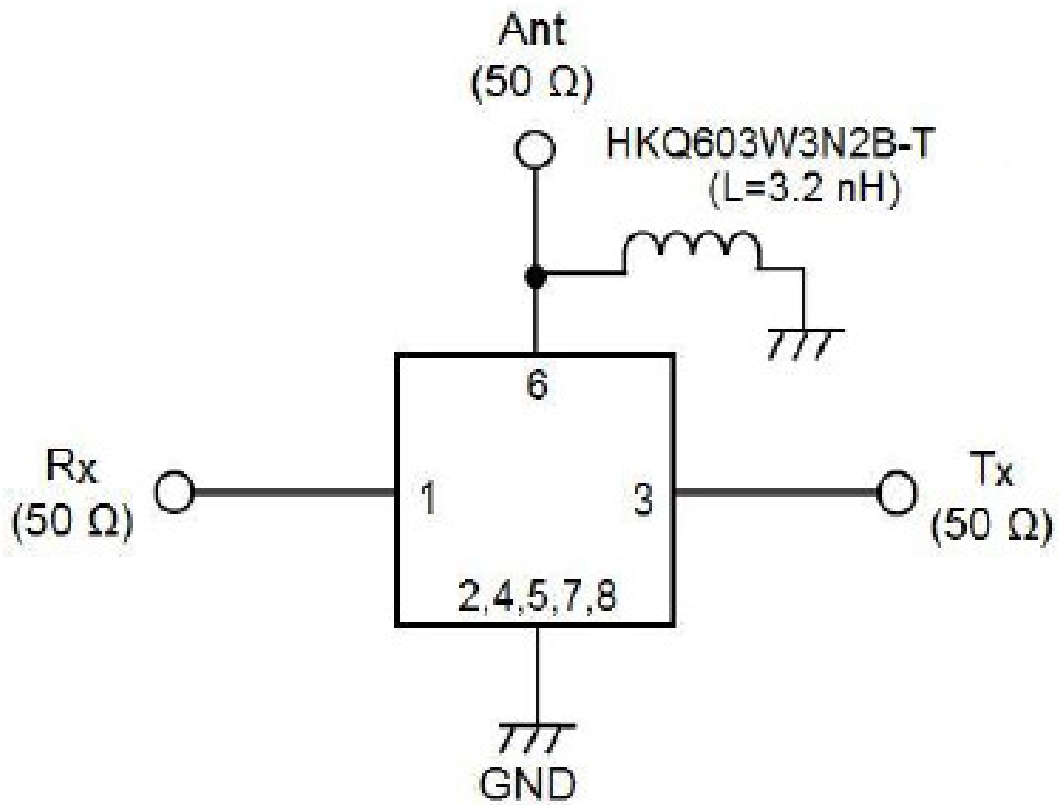
Isolation	2500~2570 MHz	dB	55	58	-	
	2620~2690 MHz	dB	52	55		
	1574~1577 MHz	dB	50	70		
	5000~5140 MHz	dB	40	48		
	7500~7710MHz	dB	35	45		

(*1) Specification of insertion loss excludes loss that comes from the test board.

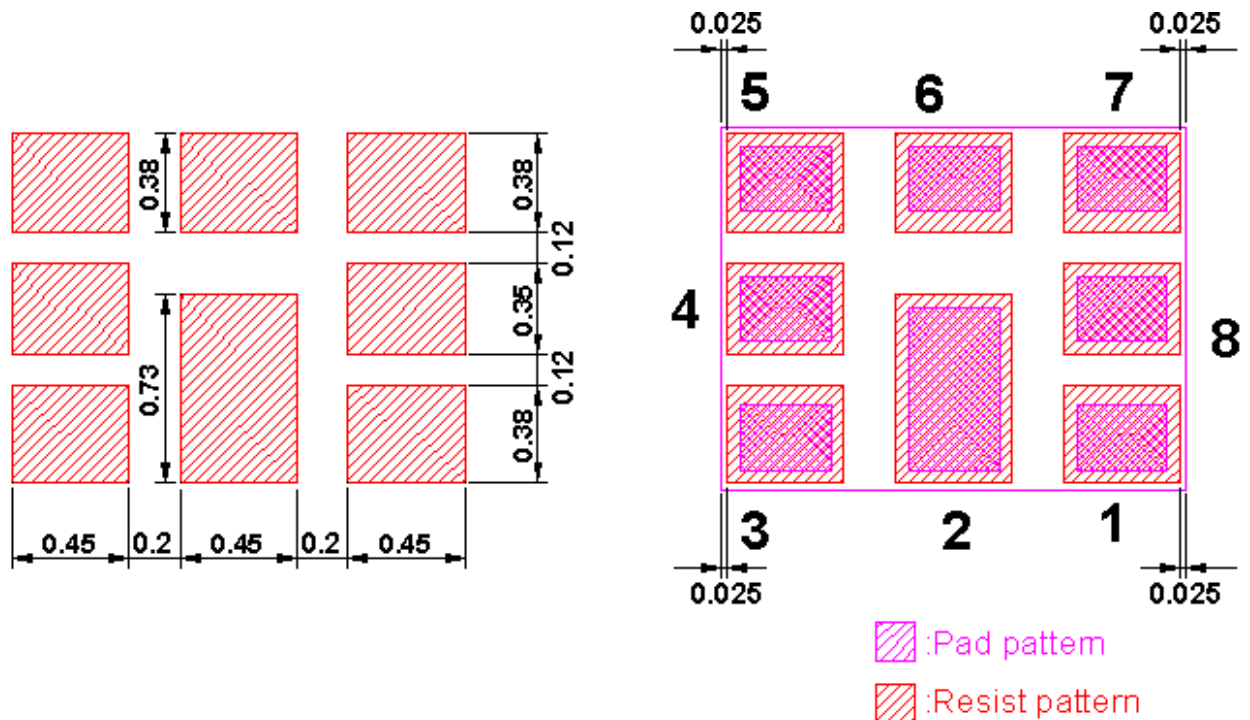
(*2) Integrated attenuation per 22MHz

(*3) Integrated attenuation per 18MHz

C. Evaluation Circuit

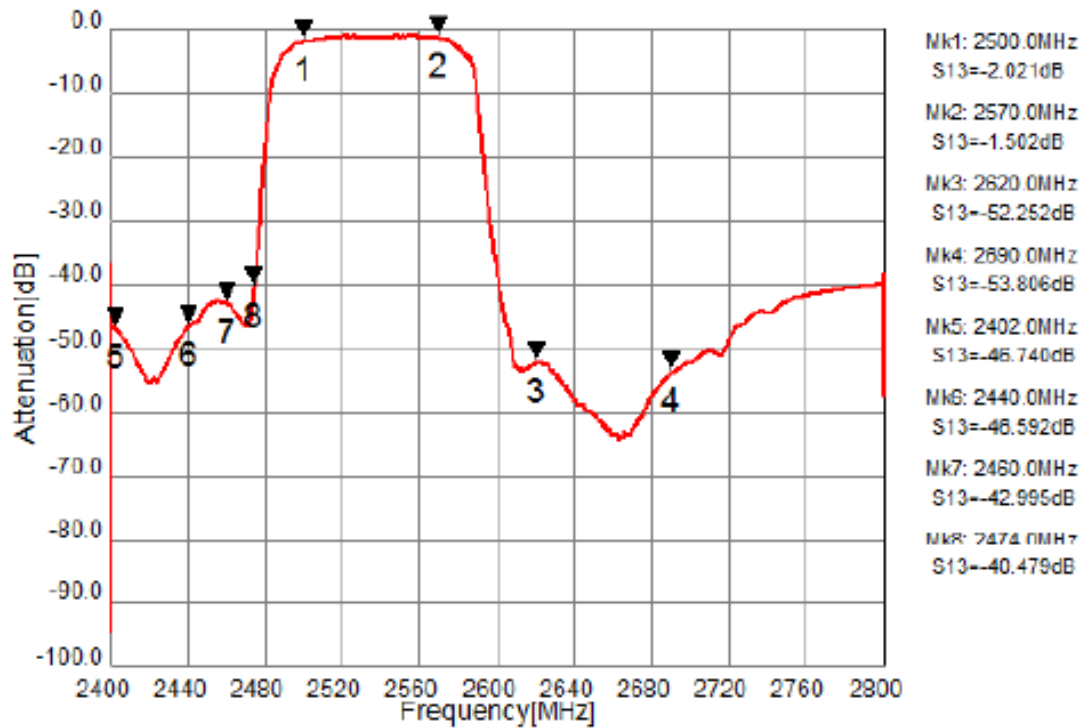


D. FOOTPRINT:

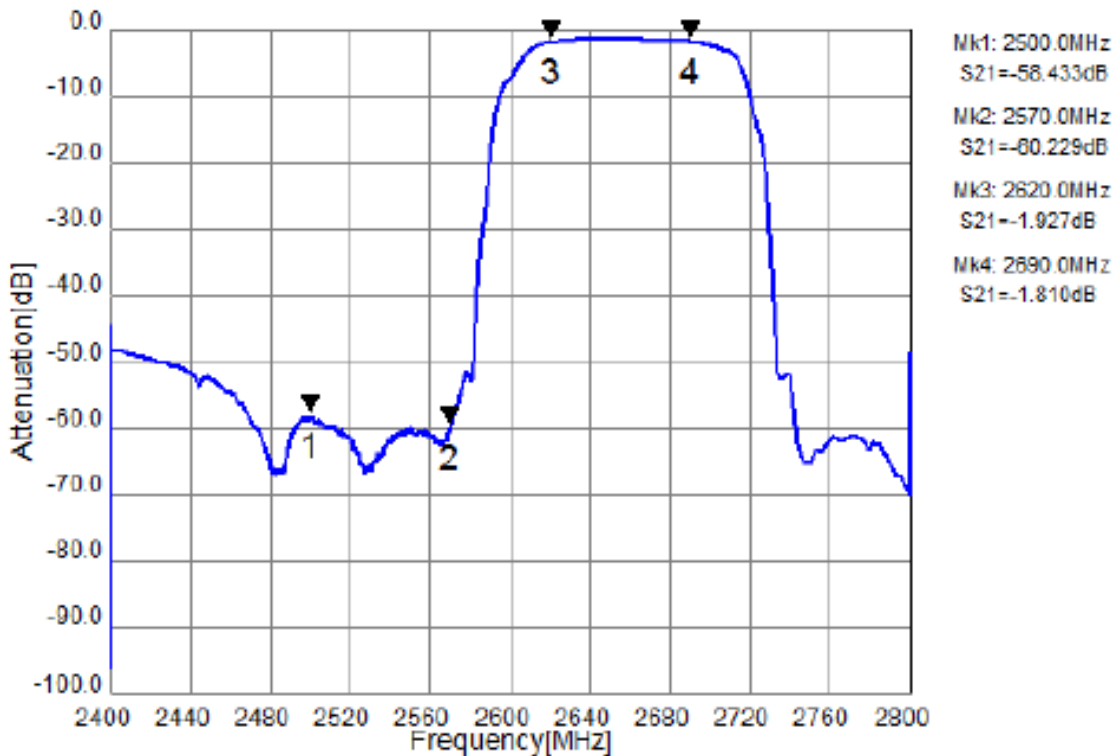


E. FREQUENCY CHARACTERISTICS:

Tx to Ant

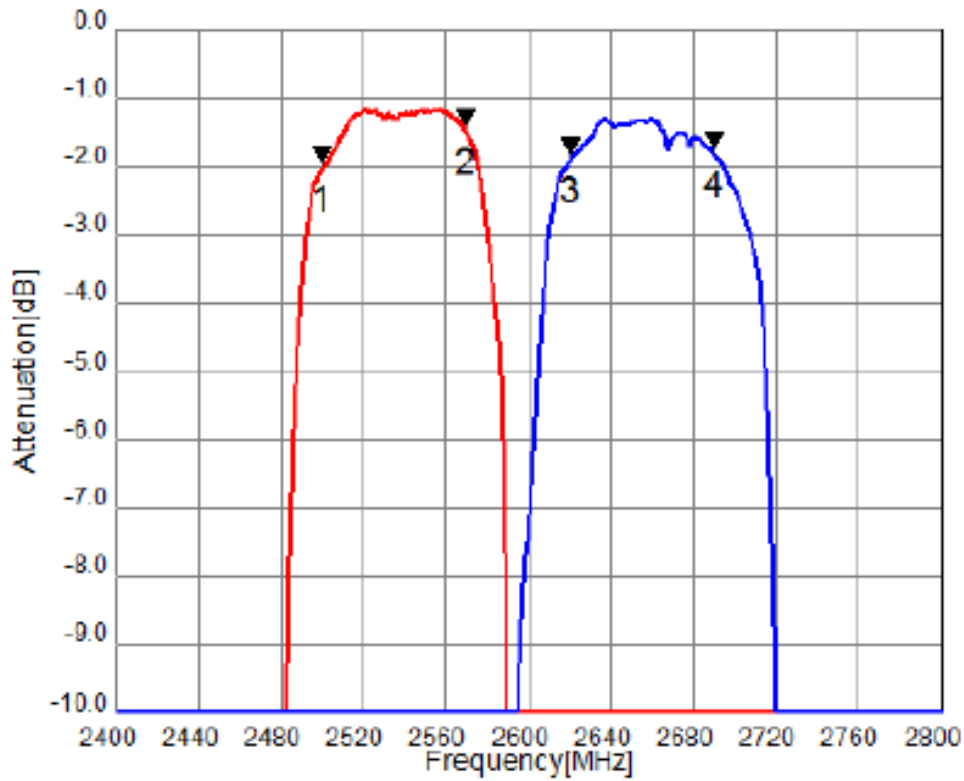


Ant to Rx

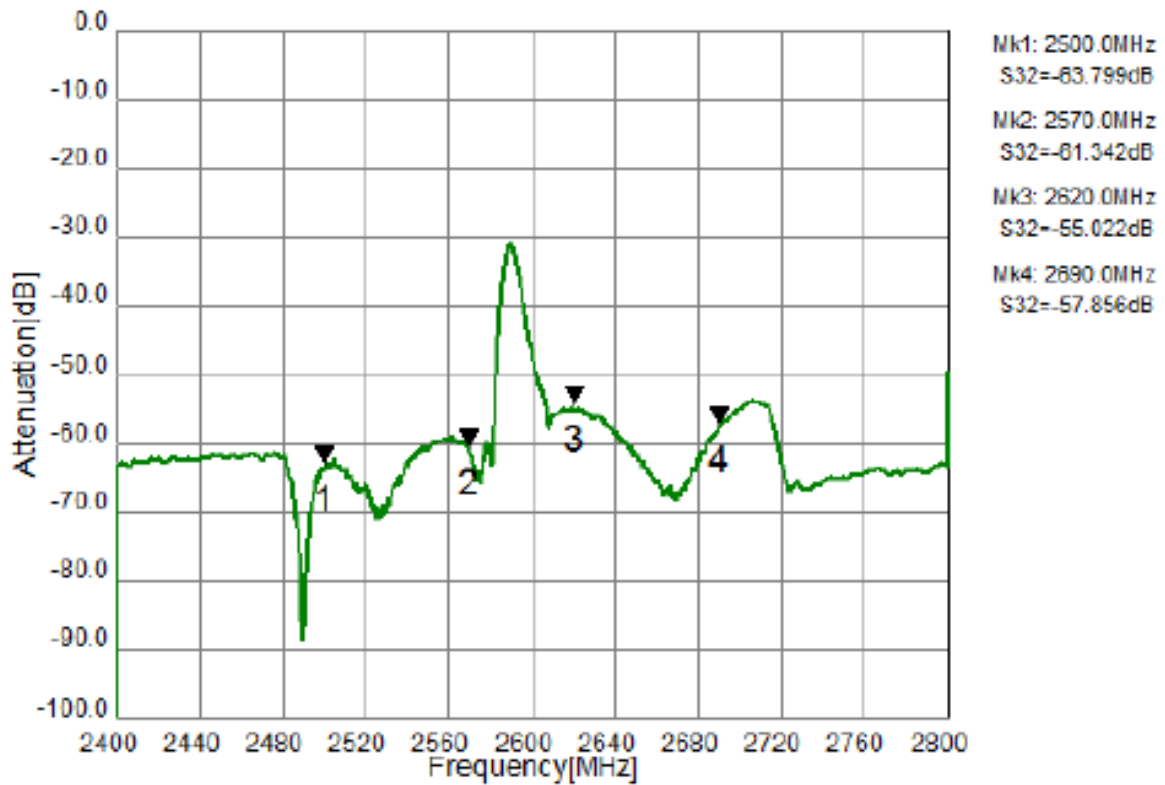


These data **exclude** loss that comes from the test board.

Tx to Ant, Ant to Rx

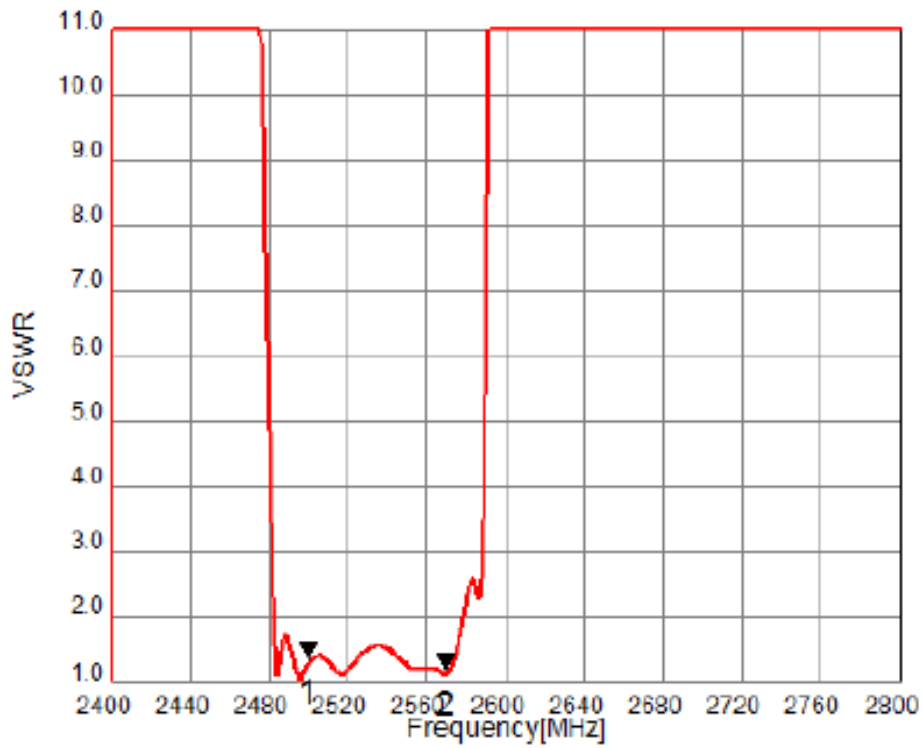


Tx to Rx Isolation



These data **exclude** loss that comes from the test board

Tx Port

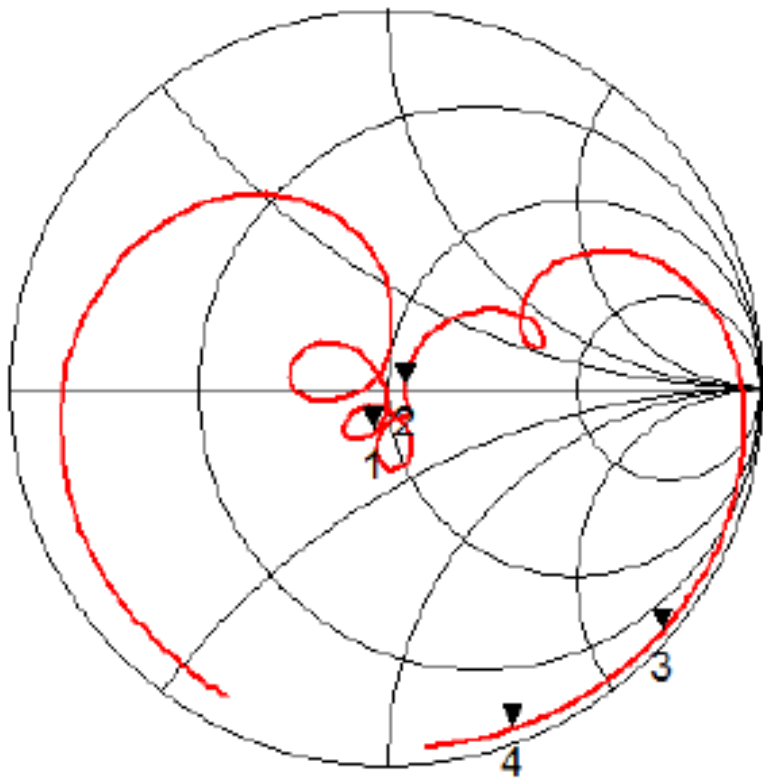


Mk1: 2500.0MHz
VSWR3= 1.264

Mk2: 2570.0MHz
VSWR3= 1.108

Mk3: 2620.0MHz
VSWR3=75.373

Mk4: 2690.0MHz
VSWR3=51.206



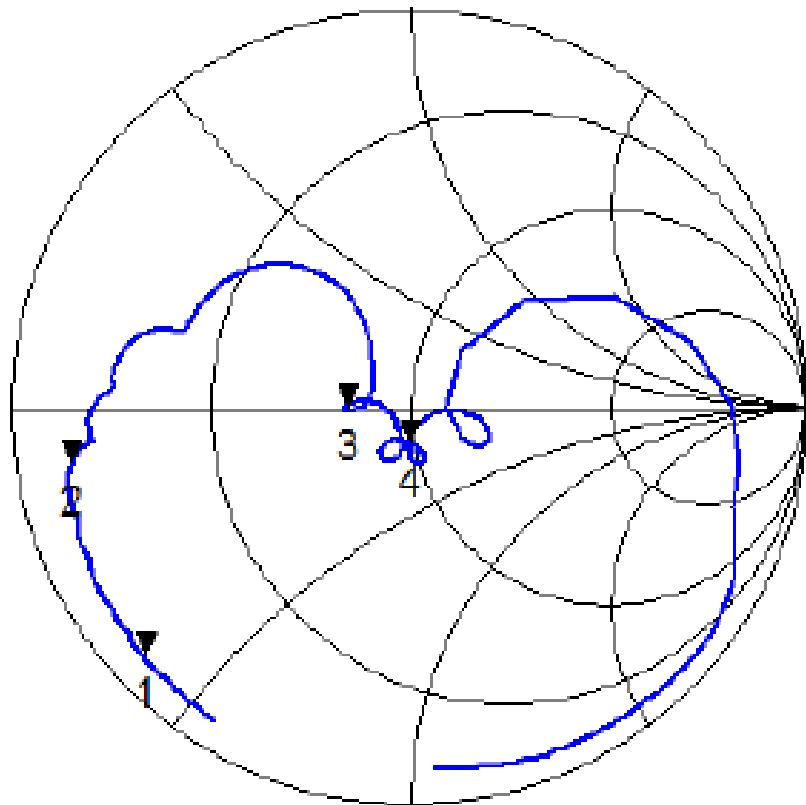
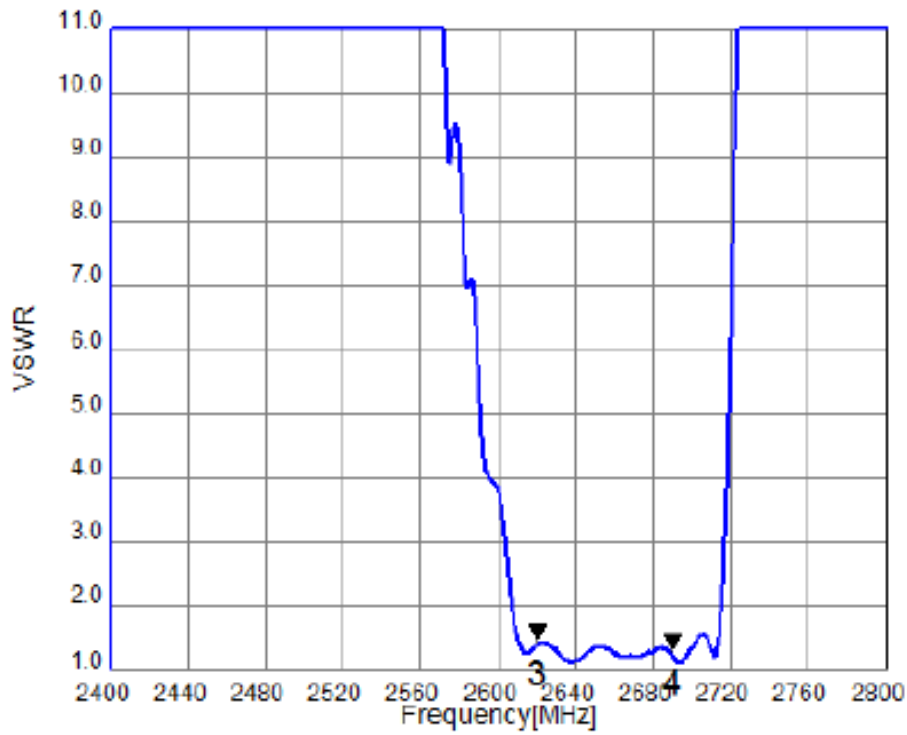
Mk1: 2500.0
S33= 0.899 - j 0.215

Mk2: 2570.0
S33= 1.108 + j 0.005

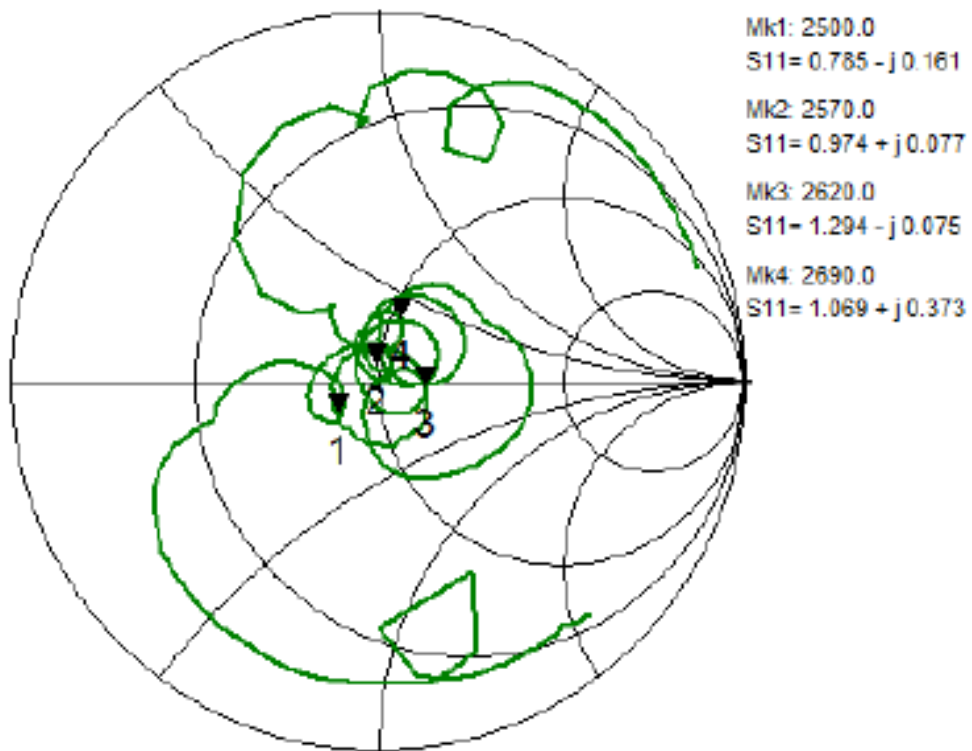
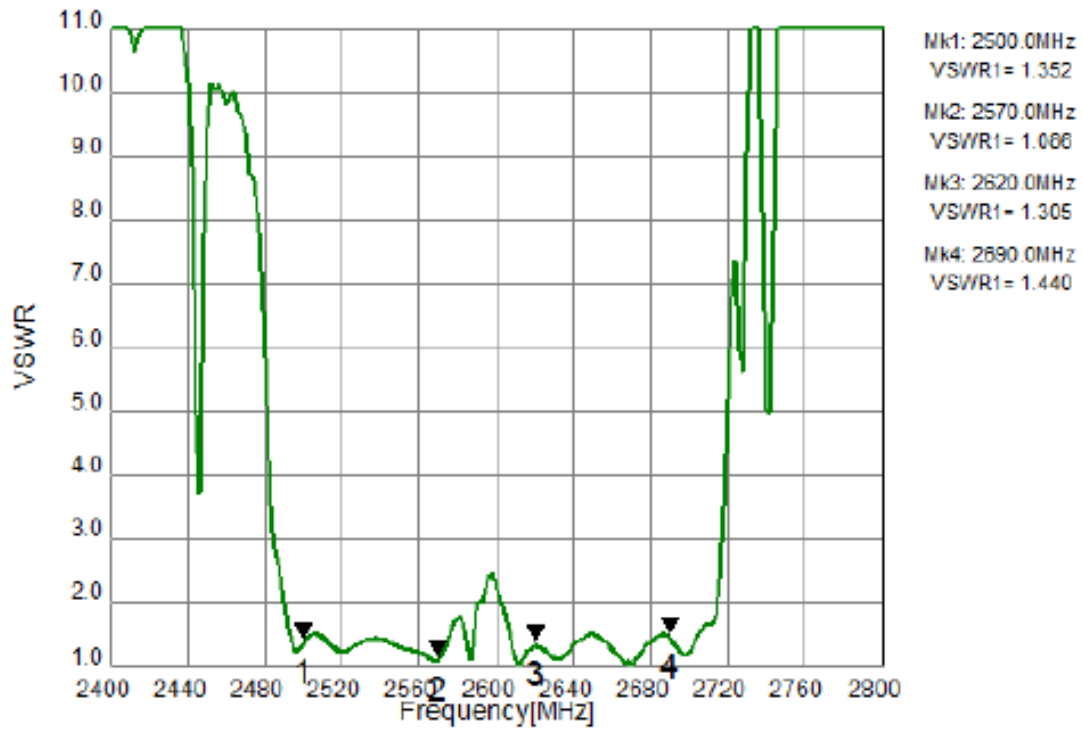
Mk3: 2620.0
S33= 0.106 - j 2.639

Mk4: 2690.0
S33= 0.060 - j 1.434

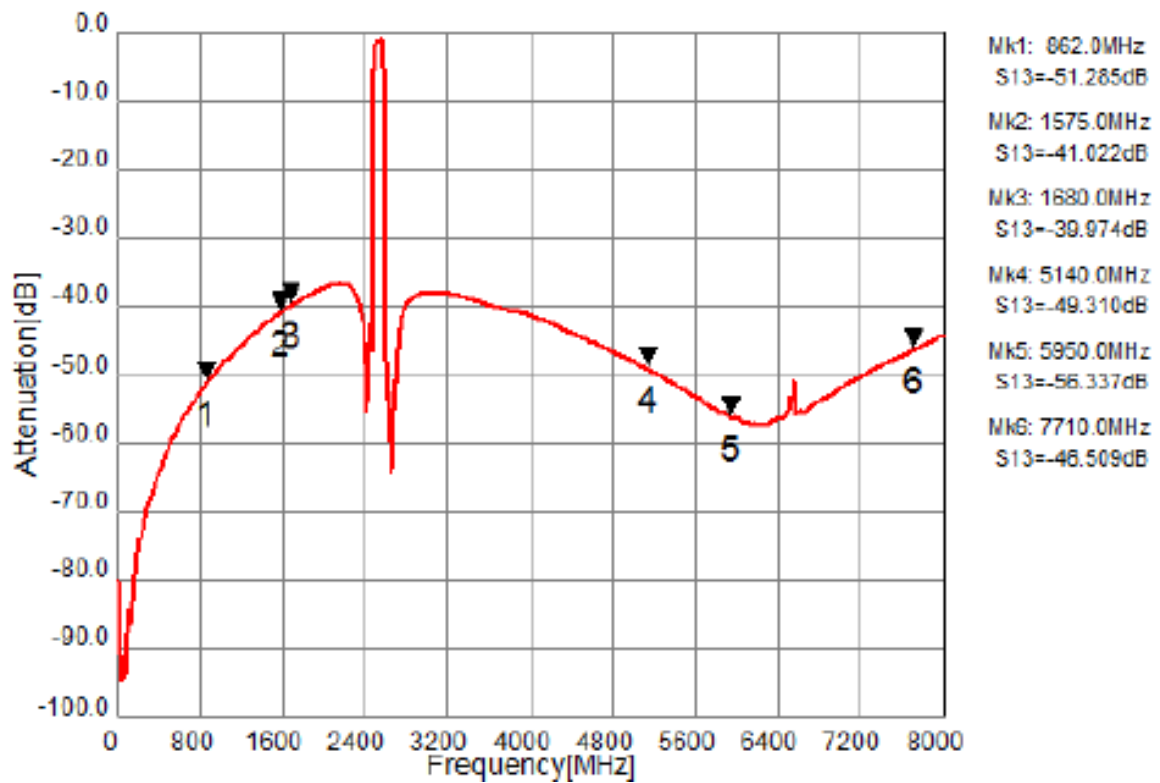
Rx Port



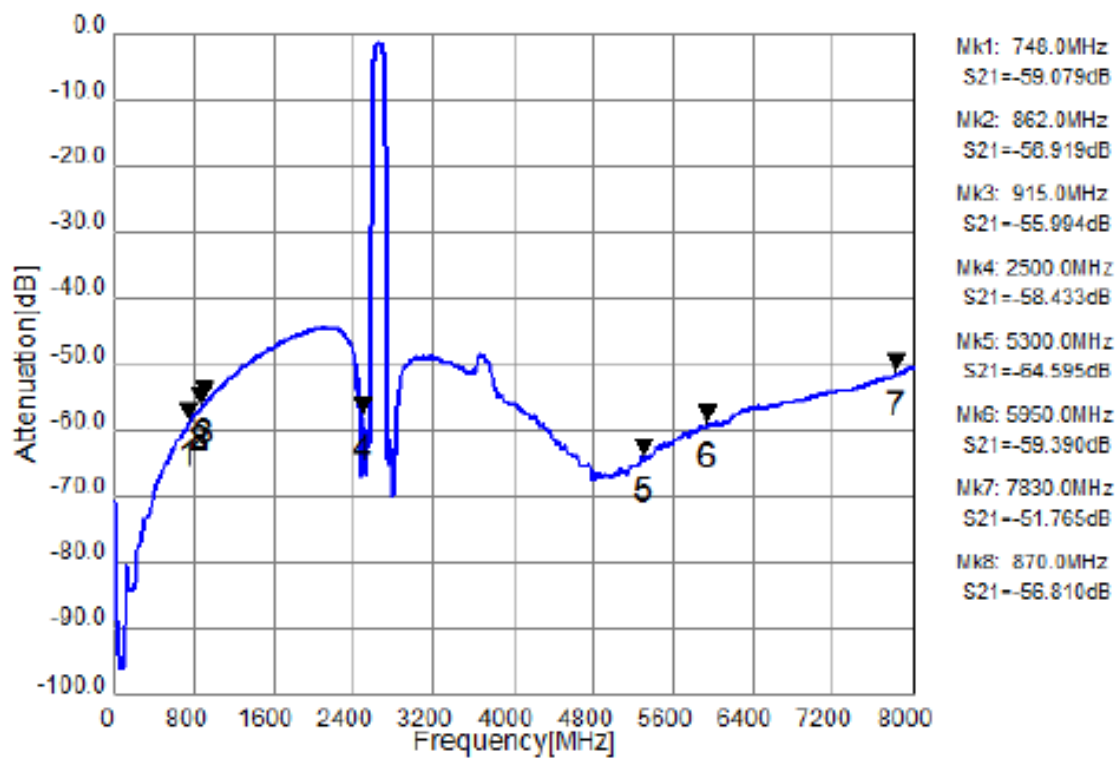
Ant Port



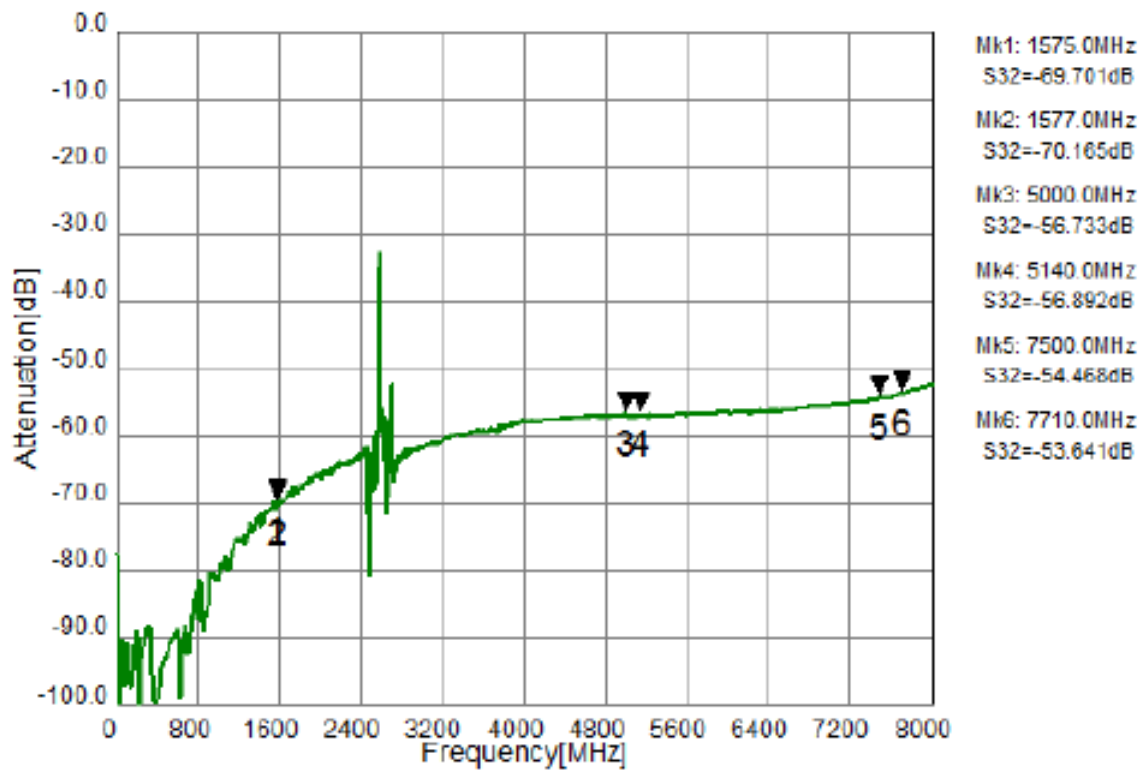
Tx to Ant (Wide Span)



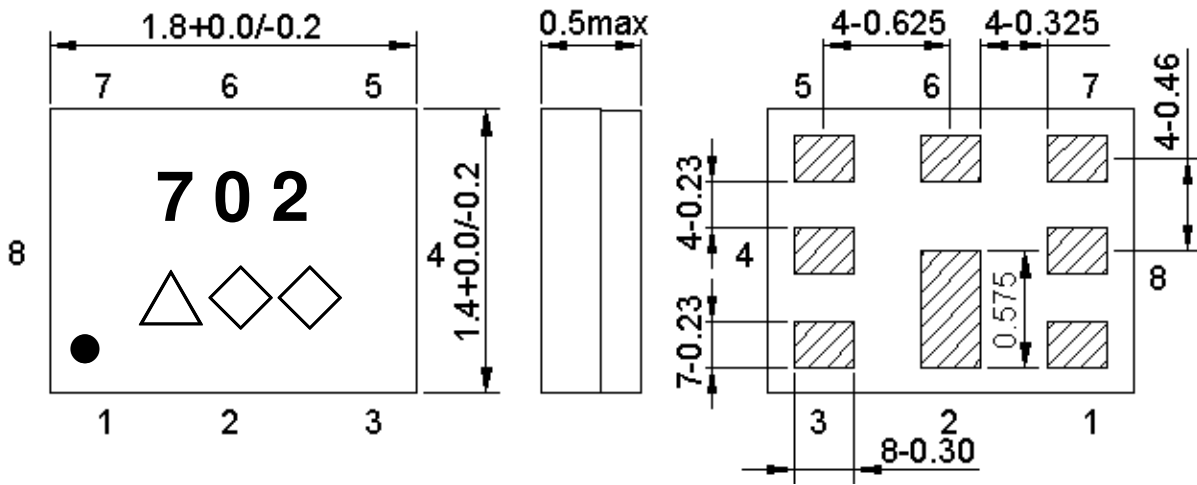
Ant to Rx (Wide Span)



Tx to Rx Isolation (Wide Span)



F.OUTLINE DRAWIN: (Mass Production)



Marking name : 702

△: Date code(2019 May → m ,....., 2021 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
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
2022	N	P	Q	R	S	T	U	V	W	X	Y	Z

Pin Configuration

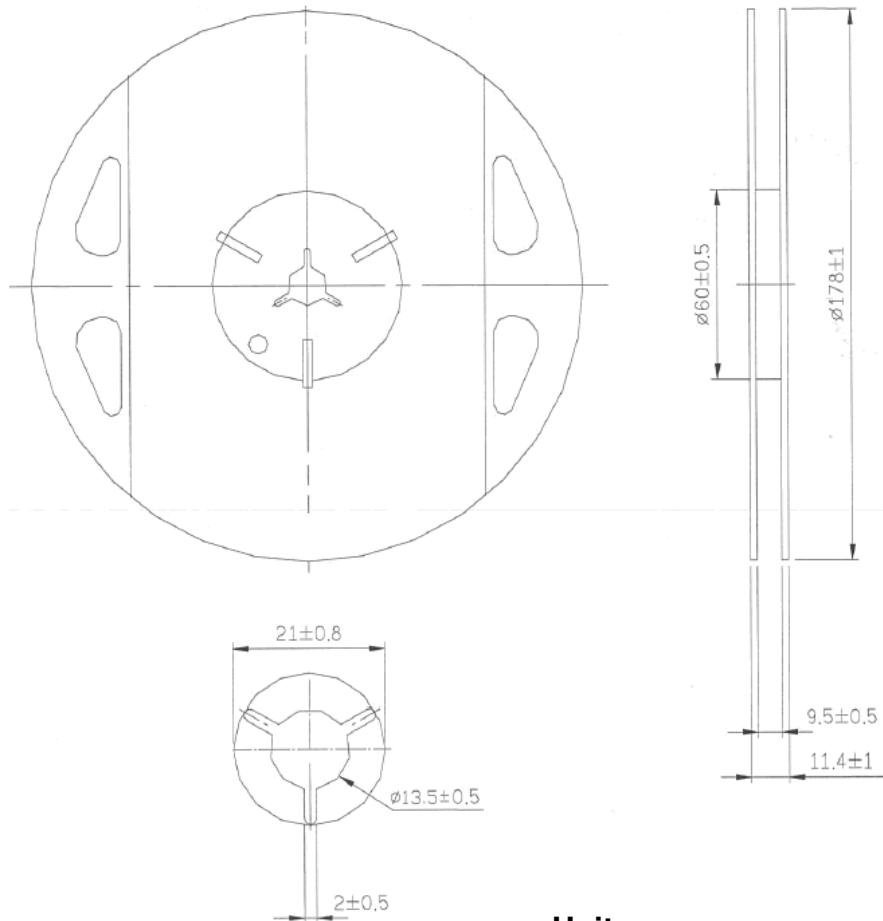
Pin No.	Pin name	Description
1	Rx	Receiver Pin
2	GND	Ground Pin
3	Tx	Transmitter Pin
4	GND	Ground Pin
5	GND	Ground Pin
6	ANT	Antenna Pin
7	GND	Ground Pin
8	GND	Ground Pin

Figure 1. Dimensions and Pin assignment

G. PACKING:

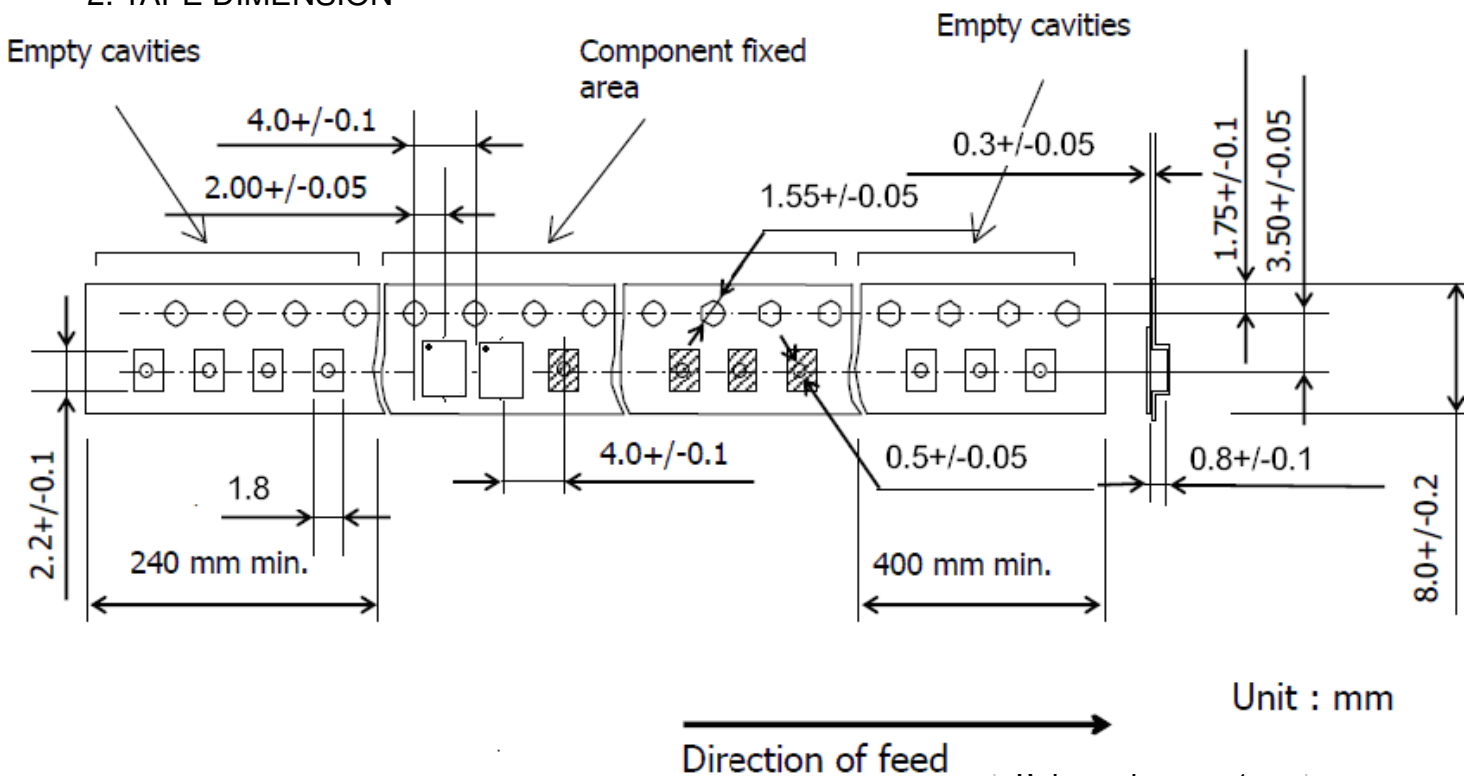
1. REEL DIMENSION

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



Unit: mm

2. TAPE DIMENSION



Unit : mm

Direction of feed

Release document

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

