



TAI-SAW TECHNOLOGY CO., LTD.

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Product Specifications Approval Sheet

Product Name: BAW DPX 2535/2655 MHz Band 7 SMD 2.0x1.6 mm (BW=70 MHz)

TST Parts No.: TF0116A

Customer Part No.: _____

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

Checked by: _____ Hayley Chou *Hayley Chou*

Approved by: _____ Andy Yu *Andy Yu*

Date: _____ 2019/09/18

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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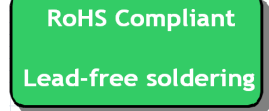
BAW DPX 2535/2655 MHz

MODEL NO.:TF0116A

REV. NO.:3.0

A. MAXIMUM RATING:

1. Input Power Level (2500~2570 MHz): 29 dBm (50k hours Max.)
2. DC Voltage: +/-5 V
3. Operating Temperature: -20 °C to +85 °C
4. Storage Temperature: -40 °C to +100 °C
5. Moisture Sensitive Level: Level 1 (MSL1)
6. ESD: 50 V(MM), 100 V(HBM)



Electrostatic Sensitive Device (ESD)

B. ELECTRICAL CHARACTERISTICS:

Terminating impedance (Tx port): 50 Ω

Terminating impedance (Rx port): 100//10nH Ω (Balanced)

Terminating impedance (Ant port): 50//2.4nH Ω

Tx to Ant

Item	Unit	Min.	Typ.	Max.
Insertion Loss (2510~2570 MHz)	dB(*1)	-	1.8	2.4
Insertion Loss (2500~2570 MHz)	dB(*1)	-	2.4	3.0
Amplitude Ripple (2500~2570 MHz)	dB	-	1.2	2.2
VSWR Tx (2500~2570 MHz)	-	-	1.8	2.3
VSWR Ant (2500~2570 MHz)	-	-	1.7	2.1
Attenuation (Reference level from 0 dB)				
10 ~ 1565.42 MHz	dB	30	38	-
1565.42 ~ 1605.886 MHz	dB	35	38	-
1605.886 ~ 1680 MHz	dB	25	37	-
1805 ~ 1880 MHz	dB	30	35	-
1900 ~ 1920 MHz	dB	30	35	-
2010 ~ 2025 MHz	dB	30	34	-
2110 ~ 2170 MHz	dB	30	34	-
2401 ~ 2473 MHz	dB(*2)	35	47	-
2456 ~ 2478 MHz	dB(*2)	30	47	-
2461 ~ 2483 MHz	dB(*2)	23	44	-
2473 ~ 2495 MHz	dB(*2)	4	10	-
2474 ~ 2500 MHz	dB	1	2	-

2590 ~ 2620 MHz	dB	1.5	5	-
2620 ~ 2690 MHz	dB	45	50	-
5000 ~ 5140 MHz	dB	35	50	-
5150 ~ 5850 MHz	dB	35	50	-
7500 ~ 7710 MHz	dB	30	45	-

Ant to Rx

Item	Unit	Min.	Typ.	Max.
Insertion Loss (2620~2690 MHz)	dB(*1)	-	2.6	3.2
Amplitude Ripple (2620~2690 MHz)	dB	-	0.6	1.5
Phase Balance (2620~2690 MHz)	deg	-19	-5/+6	+19
Amplitude Balance (2620~2690 MHz)	dB	-1.9	-0.5/+0.1	+1.9
VSWR Ant (2620~2690 MHz)	-	-	1.8	2.2
VSWR Rx (2620~2690 MHz)	-	-	1.8	2.2
Attenuation (Reference level from 0 dB)				
1 ~ 2380 MHz	dB	35	46	-
824 ~ 849 MHz	dB	53	85	-
880 ~ 915 MHz	dB	60	85	-
1710 ~ 1785 MHz	dB	50	57	-
1850 ~ 1910 MHz	dB	50	56	-
2380 ~ 2450 MHz	dB	40	46	-
2450 ~ 2484 MHz	dB	35	49	-
2500 ~ 2570 MHz	dB	45	51	-
2570 ~ 2605 MHz	dB	1.5	4	-
2775 ~ 8000 MHz	dB	20	44	-

Tx to Rx

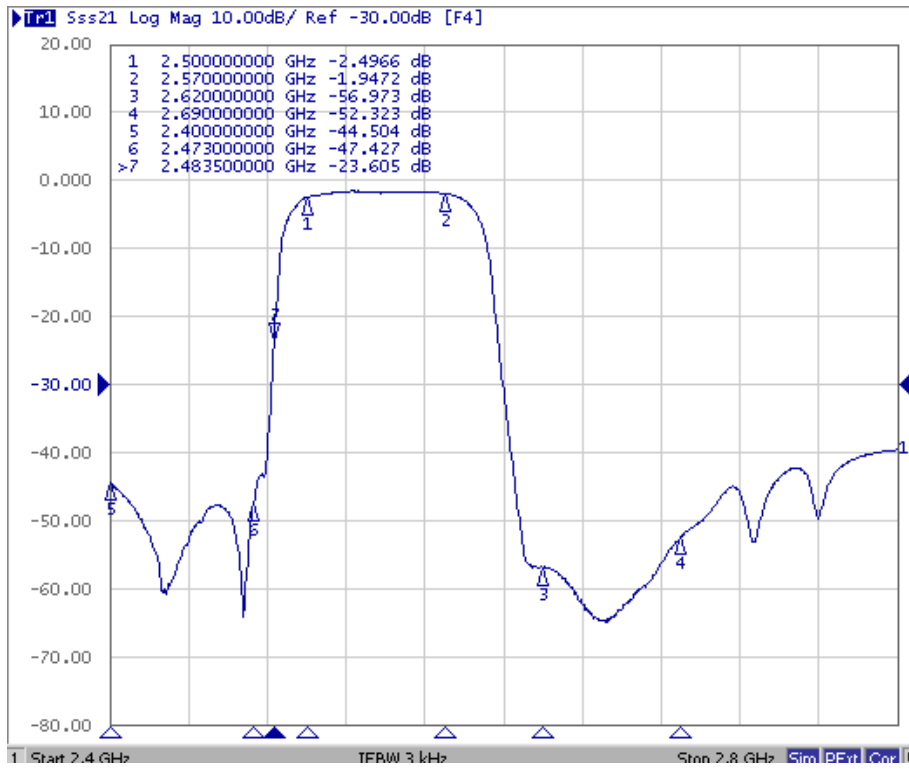
Item	Unit	Min.	Typ.	Max.	Remark	
Isolation (Reference level from 0 dB)	2500 ~ 2570 MHz	dB	52	55	-	Differential
	2500 ~ 2570 MHz	dB	38	42	-	Common mode
	2620 ~ 2690 MHz	dB	50	56	-	Differential
	1574 ~ 1577 MHz	dB	30	64	-	
	5000 ~ 5140 MHz	dB	30	50	-	
	7500 ~ 7710 MHz	dB	25	47	-	

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

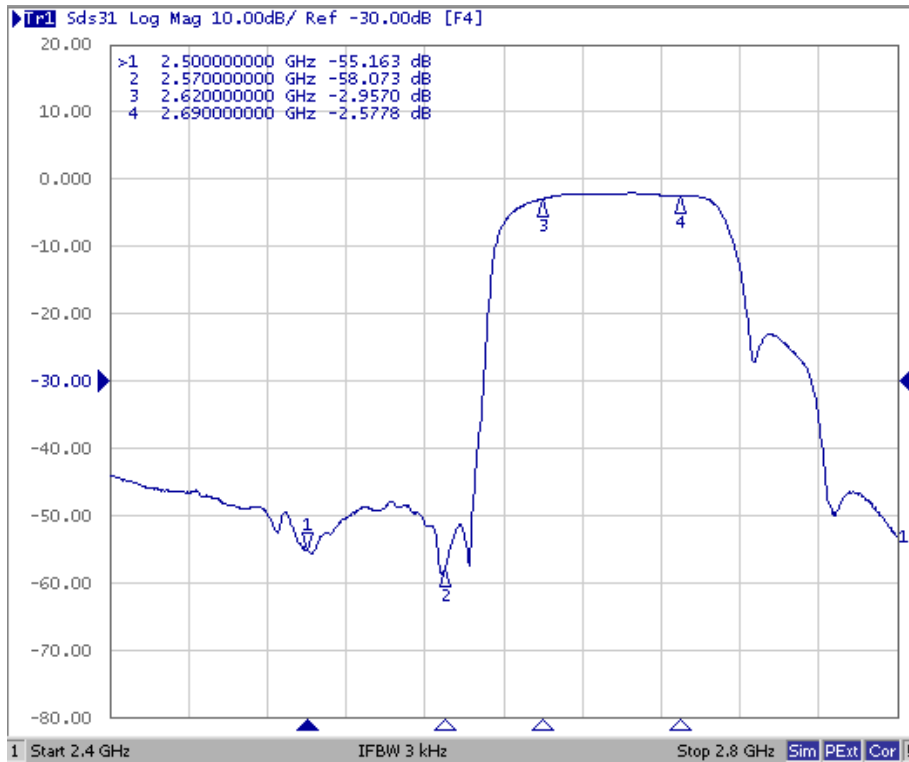
(*2) Integrated attenuation over 22 MHz BW.

C FREQUENCY CHARACTERISTICS:

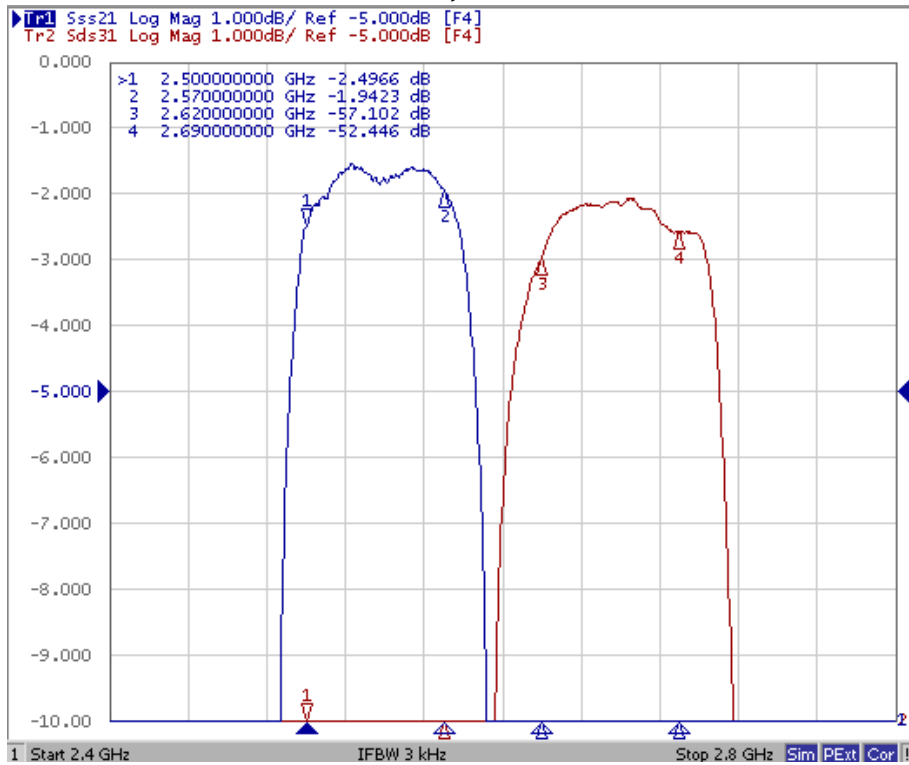
Tx to Ant



Ant to Rx



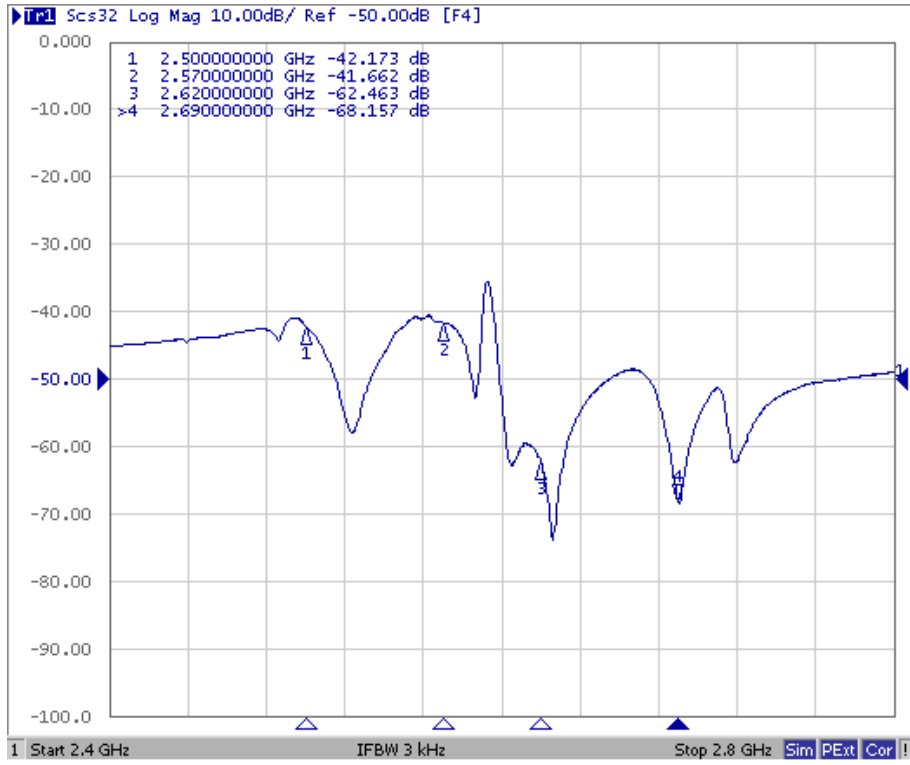
Tx to Ant, Ant to Rx



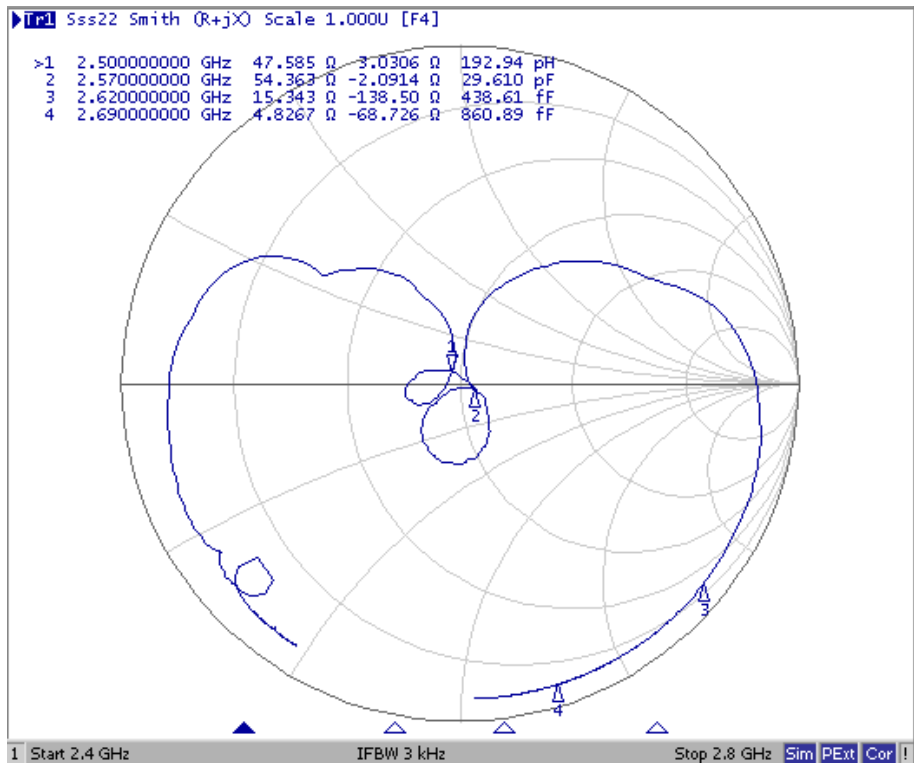
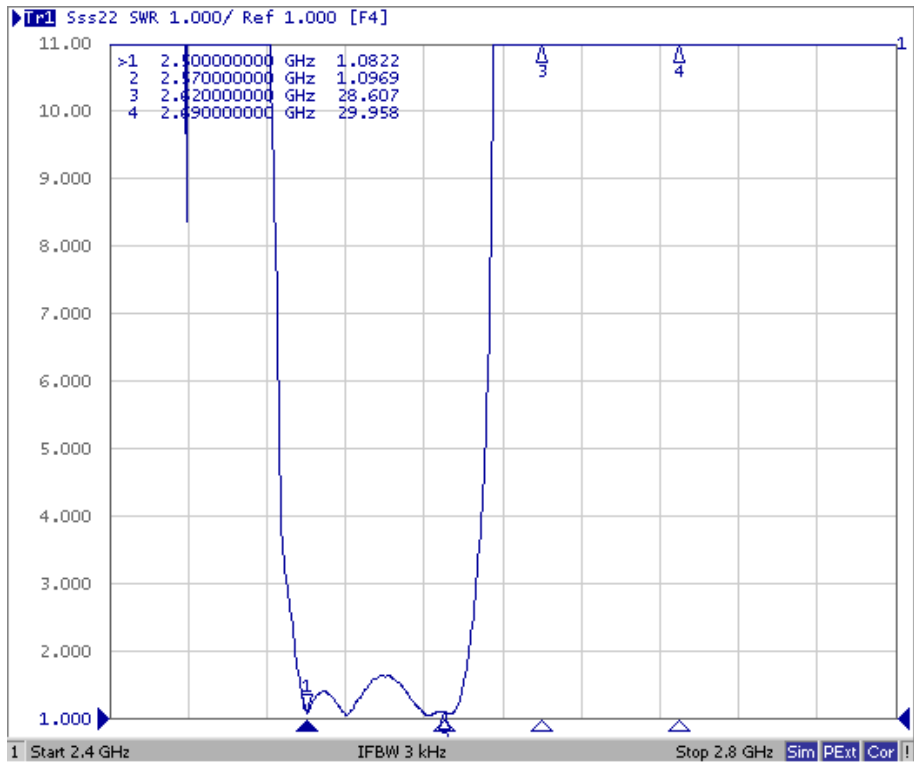
Tx to Rx Isolation



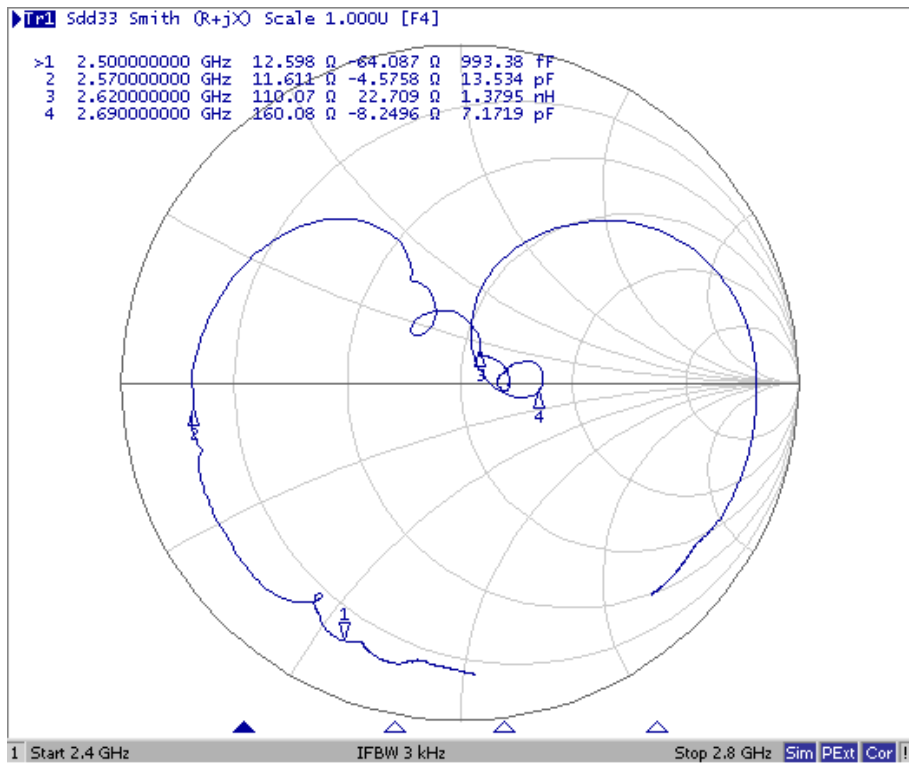
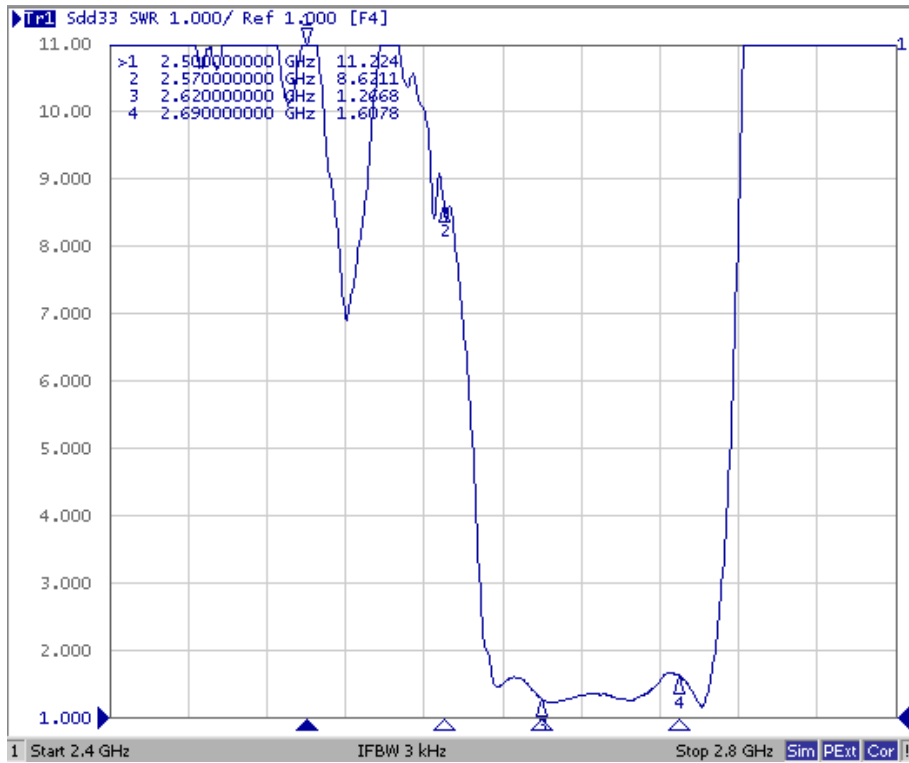
Tx to Rx Isolation (Common mode)



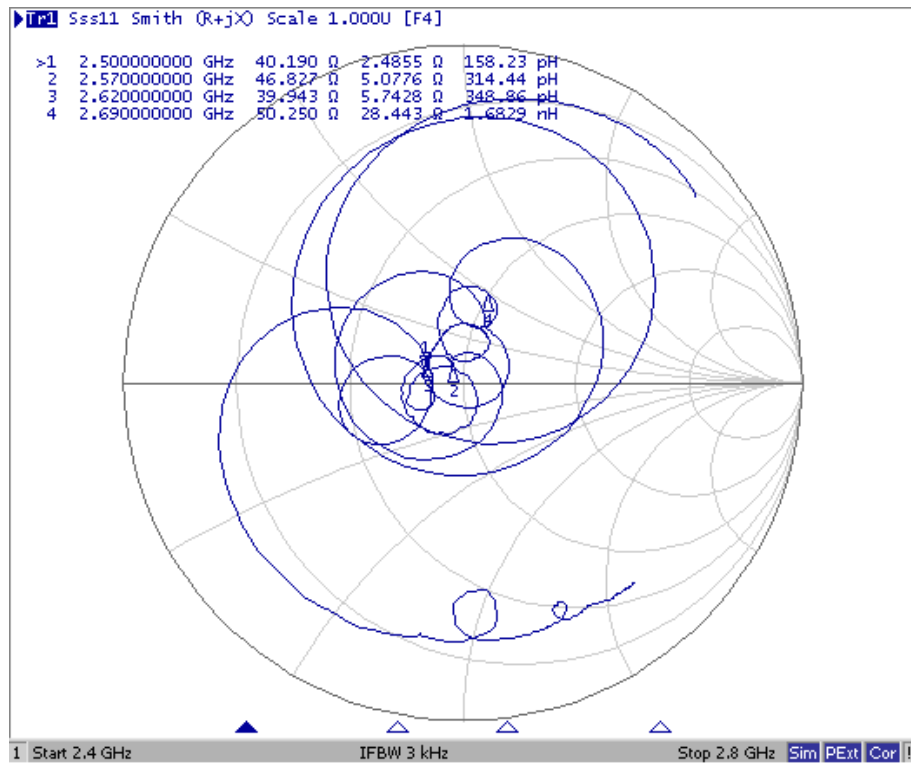
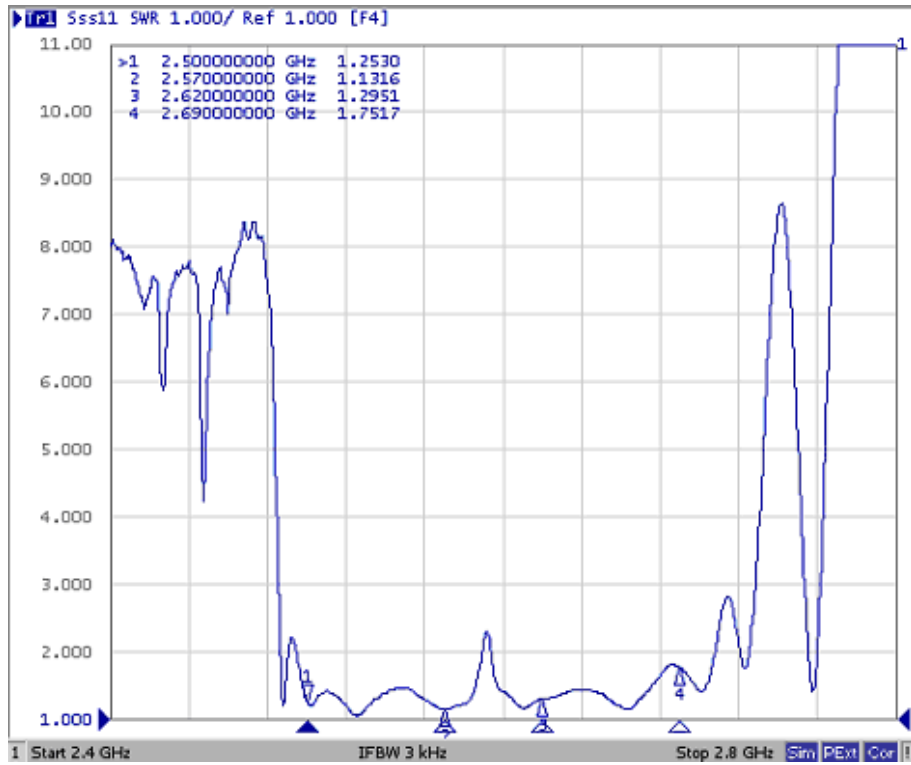
Tx Port



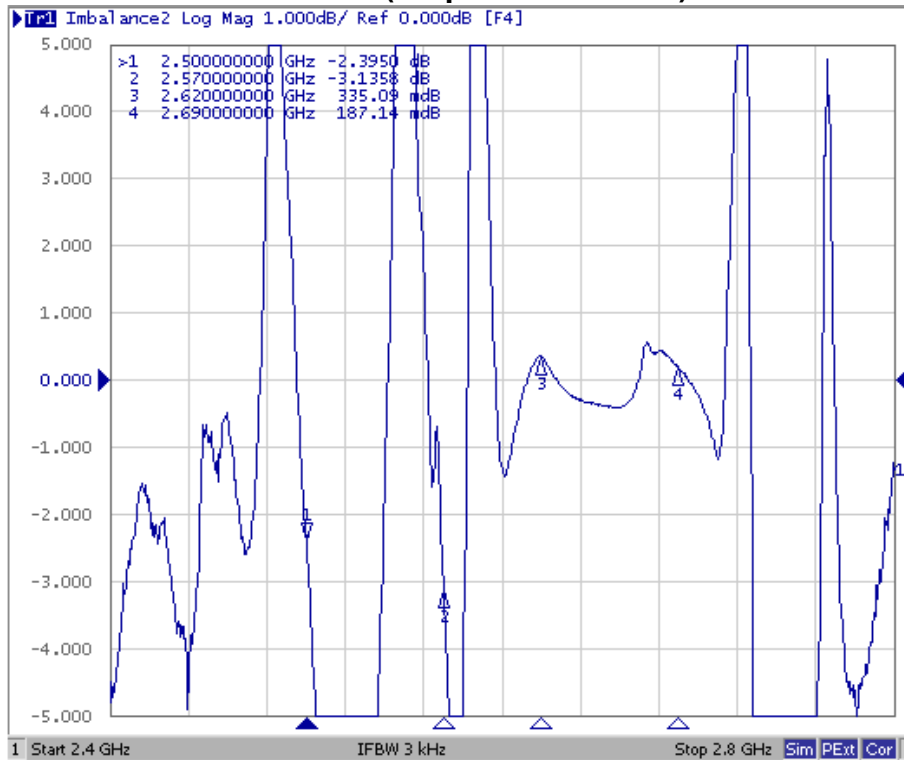
Rx Port



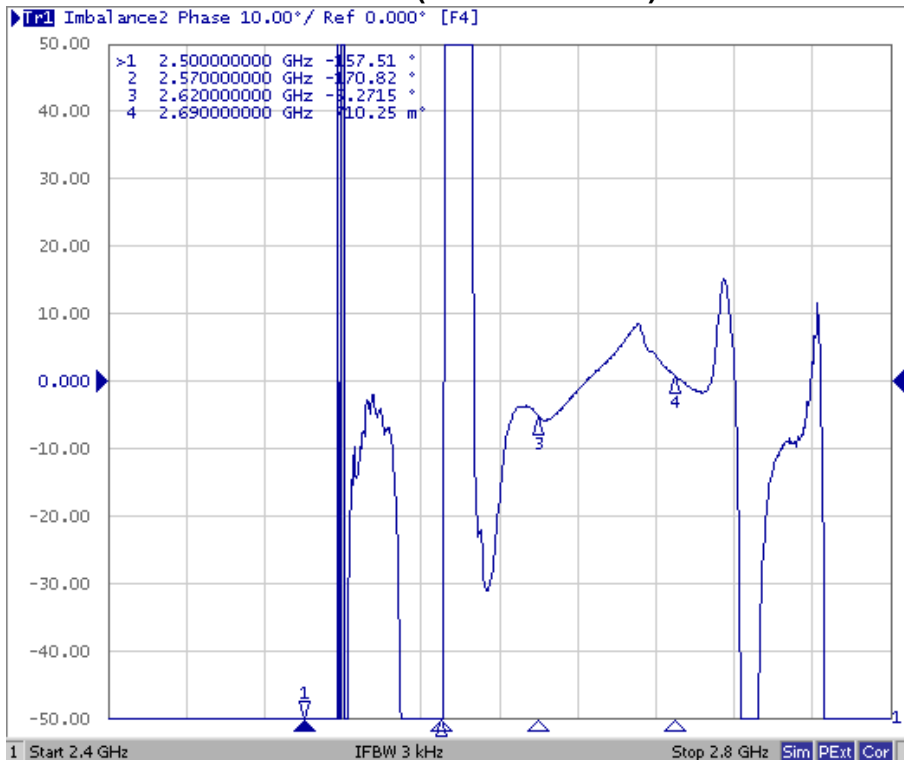
Ant Port



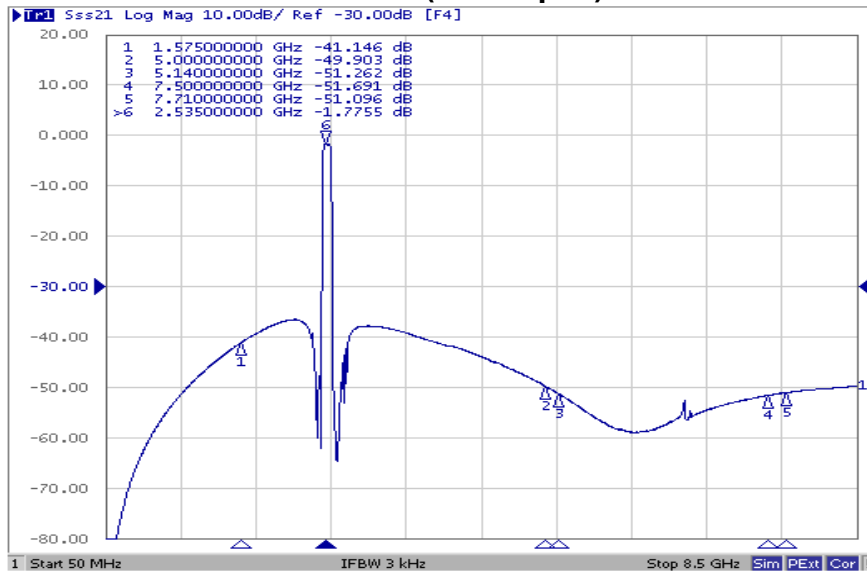
Ant to Rx (Amplitude balance)



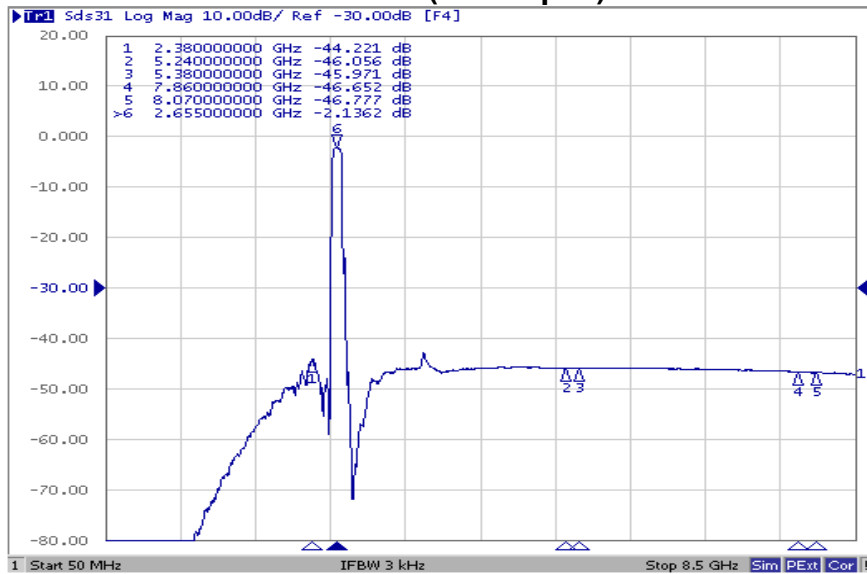
Ant to Rx (Phase balance)



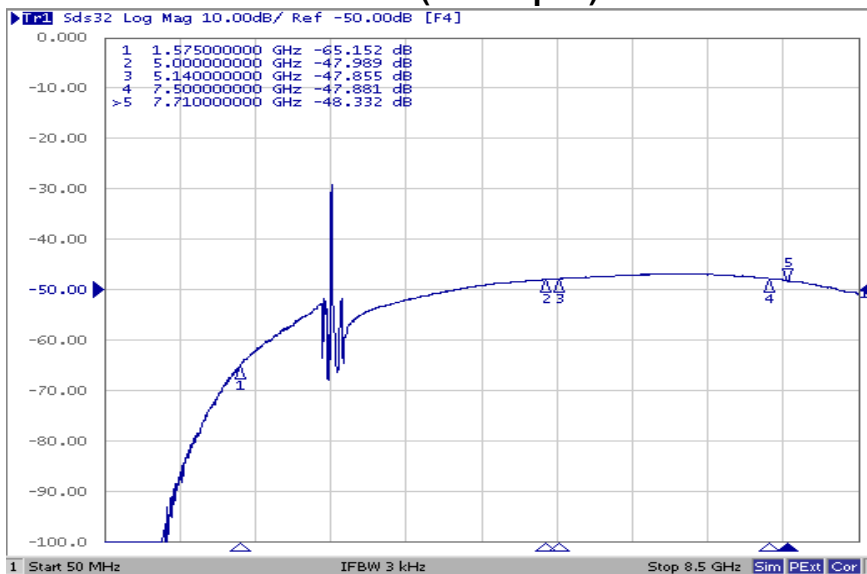
Tx to Ant (Wide span)



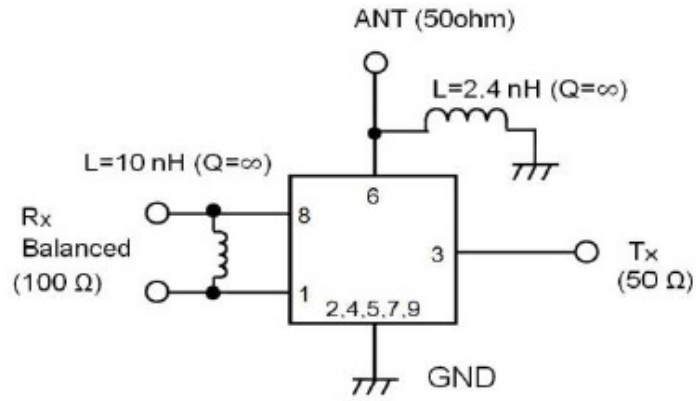
Ant to Rx (Wide span)



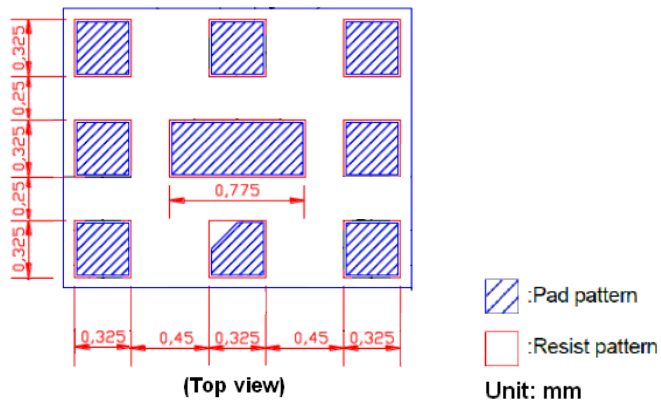
Tx to Rx (Wide span)



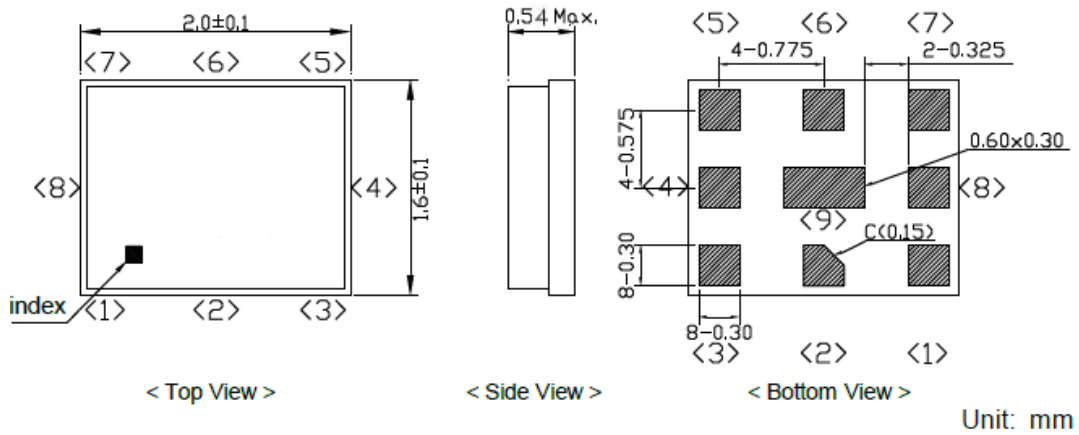
D MEASUREMENT CIRCUIT:



E. PCB Footprint:



F. OUTLINE DRAWING:



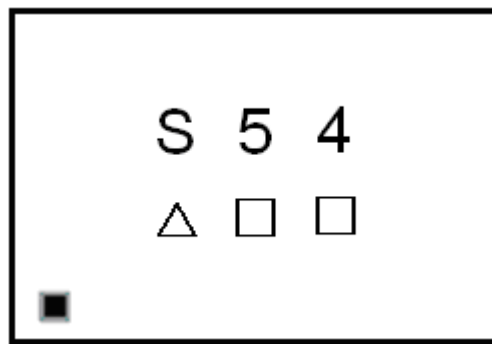
Pin Configuration

Pin No.	Symbol	Function
1	RX	Receiver (Balanced)
2	GND	Ground
3	TX	Transmitter
4	GND	Ground
5	GND	Ground
6	ANT	Antenna
7	GND	Ground
8	RX	Receiver (Balanced)
9	GND	Ground

Top View (Sample Production):



Top View (Mass Production):



△: Date Code (Fallow below table)

□: Lot No. (Indicated by 0~9 or A to Z and a to z, except I, O, i, o and l)

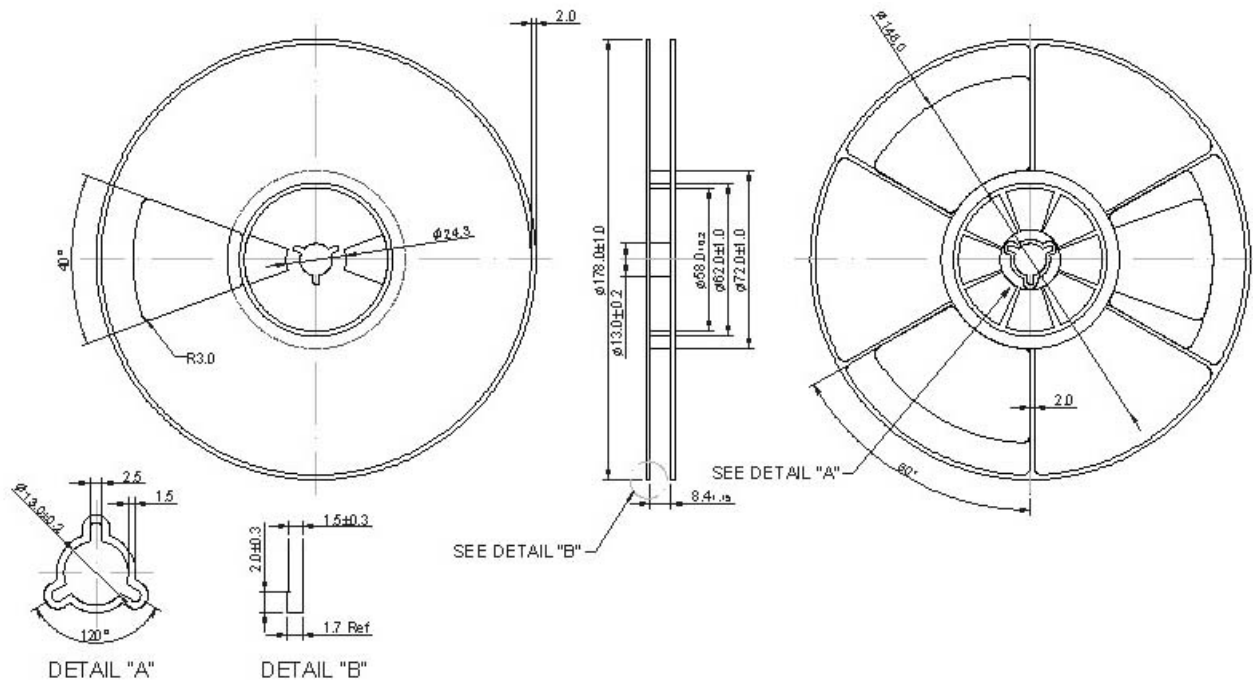
Date Code table:

Year	Jan.	Feb.	Mar.	Apr.	May	Jun.	Jul.	Aug.	Sep.	Oct.	Nov.	Dec.
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

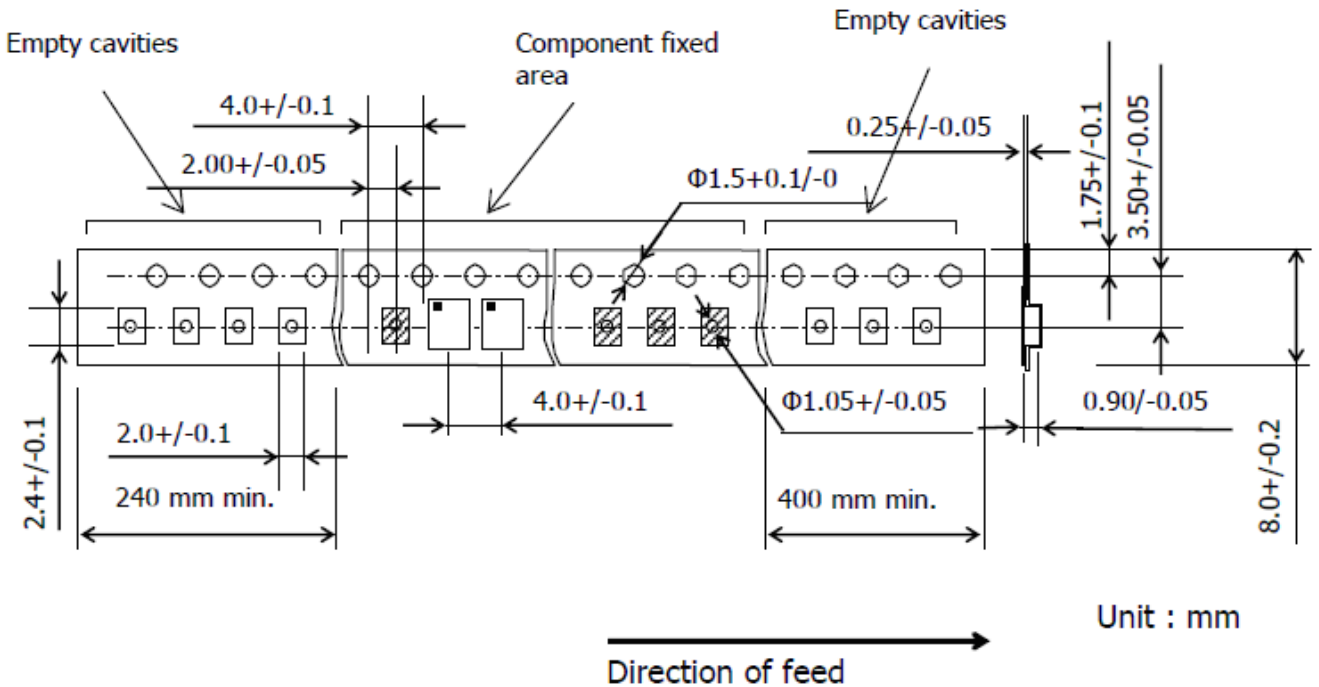
G. PACKING: (Ref: WI-75M03)

1. REEL DIMENSION

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



2. TAPE DIMENSION



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 260°C +0/-5°C peak (20~40sec).
4. Time: 2 times.

