



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 Name: SAW DPX 1880/1960 MHz Band 2 SMD 2.0x1.6 mm (BW=60 MHz)

TST Parts No.: TF0103A

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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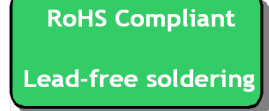
SAW DPX 1880/1960 MHz

MODEL NO.:TF0103A

REV. NO.:3.0

A. MAXIMUM RATING:

1. Input Power Level (1850.48~1909.52 MHz): 29 dBm (50k hours Max.)
2. DC Voltage: +/-5 V
3. Operating Temperature: -30 °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+2.2nHx2 Ω (Balanced)

Terminating impedance (Ant port): 50//4.3nH Ω

Tx to Ant

Item	Unit	Min.	Typ.	Max.	Remark
Insertion Loss (1850.48~1909.52 MHz)	dB(*1)	-	2.0	3.0	-20~+85 °C
Insertion Loss (1850.6~1909.4 MHz)	dB(*1)	-	2.0	3.0	-
Amplitude Ripple (1850.48~1909.52 MHz)	dB	-	1.0	2.0	-
VSWR Tx (1850.48~1909.52 MHz)	-	-	1.7	2.0	-
VSWR Ant (1850.48~1909.52 MHz)	-	-	1.5	2.0	-
Attenuation (Reference level from 0 dB)					
1570 ~ 1580 MHz	dB	40	43	-	-
1930.48 ~ 1989.52 MHz	dB	44	54	-	-20~+85 °C
1930.6 ~ 1989.4 MHz	dB	42	54	-	-
3700 ~ 3820 MHz	dB	22	33	-	-
5550 ~ 5730 MHz	dB	20	27	-	-

Ant to Rx

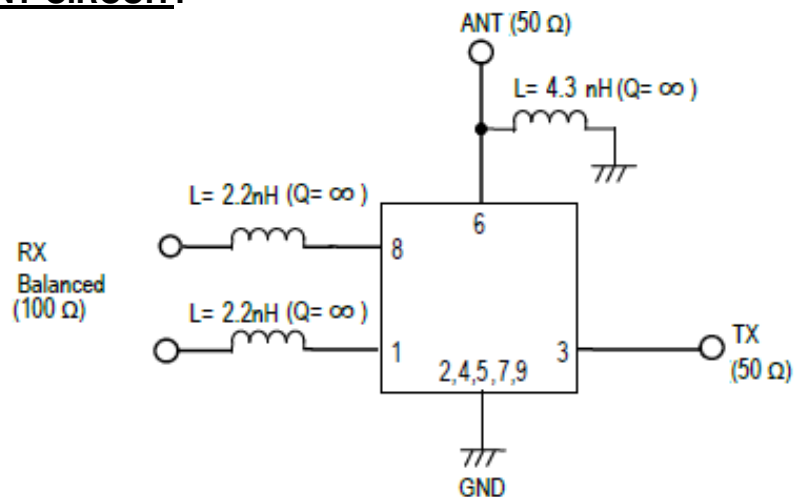
Item	Unit	Min.	Typ.	Max.	Remark
Insertion Loss (1930.48~1989.52 MHz)	dB(*1)	-	3.1	3.5	-20~+85 °C
Insertion Loss (1930.6~1989.4 MHz)	dB(*1)	-	3.1	3.5	-
Amplitude Ripple (1930.48~1989.52 MHz)	dB	-	1.6	2.2	-
Amplitude Balance (1930.48~1989.52 MHz)	dB	-1.4	-0.4/+0.4	+1.4	-
Phase Balance (1930.48~1989.52 MHz)	deg	-12	-4/+3	+12	-
VSWR Ant (1930.48~1989.52 MHz)	-	-	1.6	2.0	-
VSWR Rx (1930.48~1989.52 MHz)	-	-	1.7	2.0	-
Attenuation (Reference level from 0 dB)					
1850.48 ~ 1909.52 MHz	dB	46	53	-	-20~+85 °C
1850.6 ~ 1909.4 MHz	dB	46	53	-	-

Tx to Rx

Item	Unit	Min.	Typ.	Max.	Remark
Isolation (Reference level from 0 dB)	1850.48 ~ 1909.52 MHz	dB	53	57	-20~+85 °C
	1850.6 ~ 1909.4 MHz	dB	53	57	-
	1930.48 ~ 1989.52 MHz	dB	49	53	-20~+85 °C
	1930.6 ~ 1989.4 MHz	dB	47	53	-

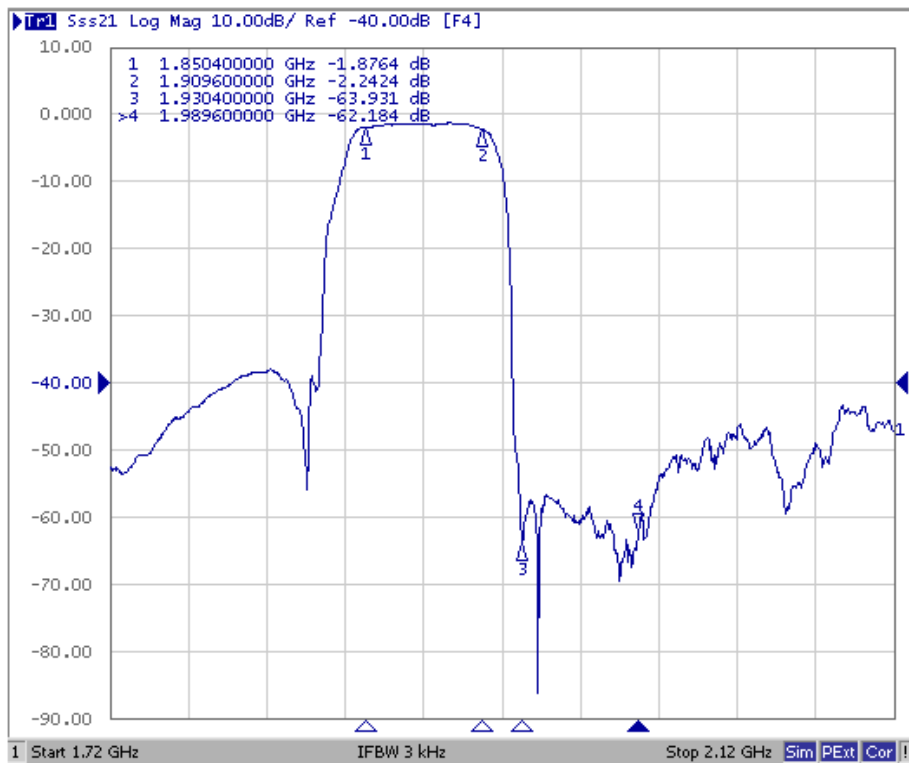
(*1) Specification of insertion loss excludes loss that comes from the test board. (Approximately 0.15 dB)

C. MEASUREMENT CIRCUIT:

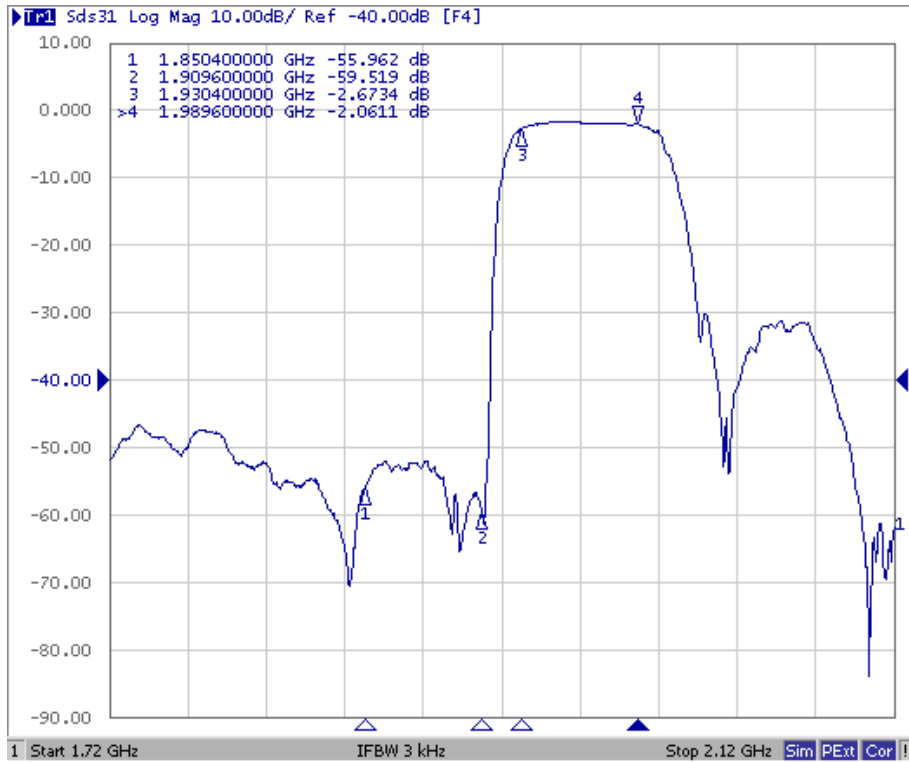


D. FREQUENCY CHARACTERISTICS:

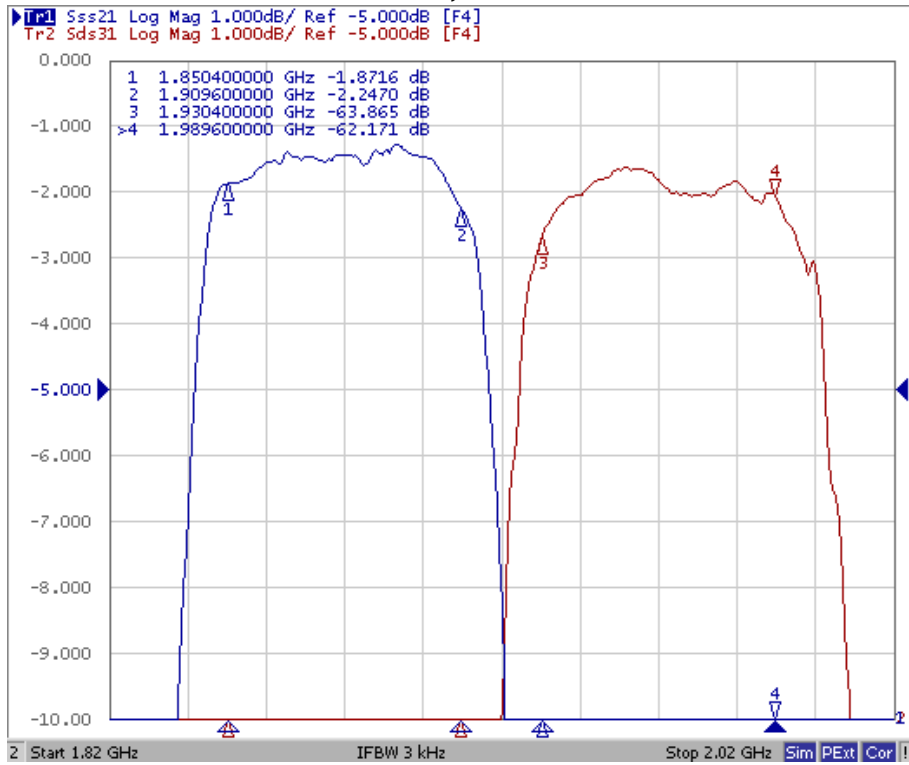
Tx to Ant



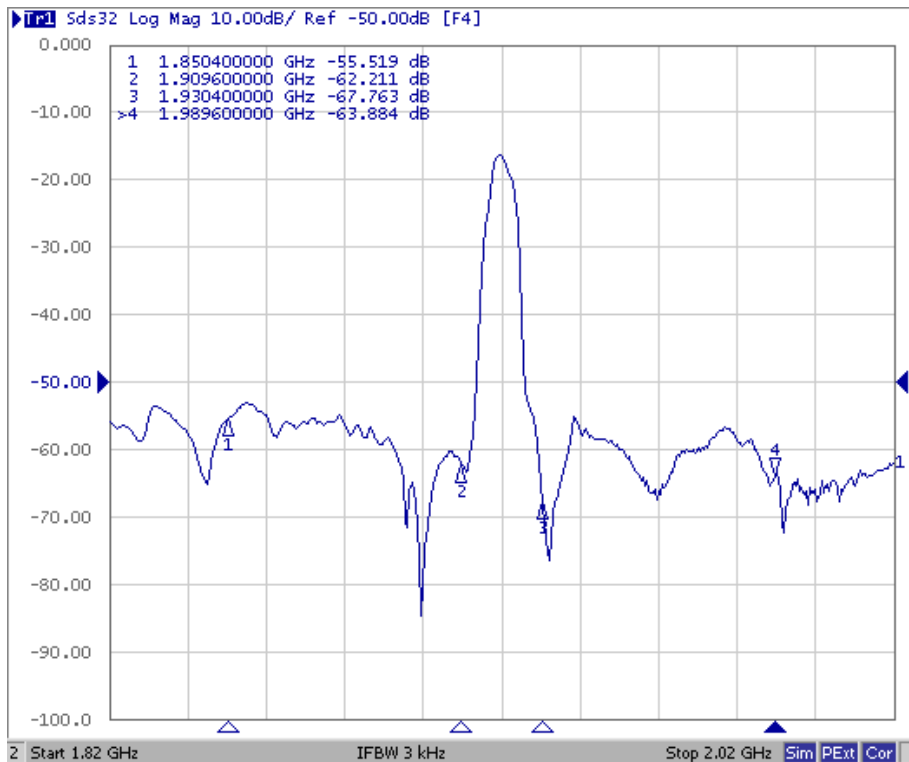
Ant to Rx



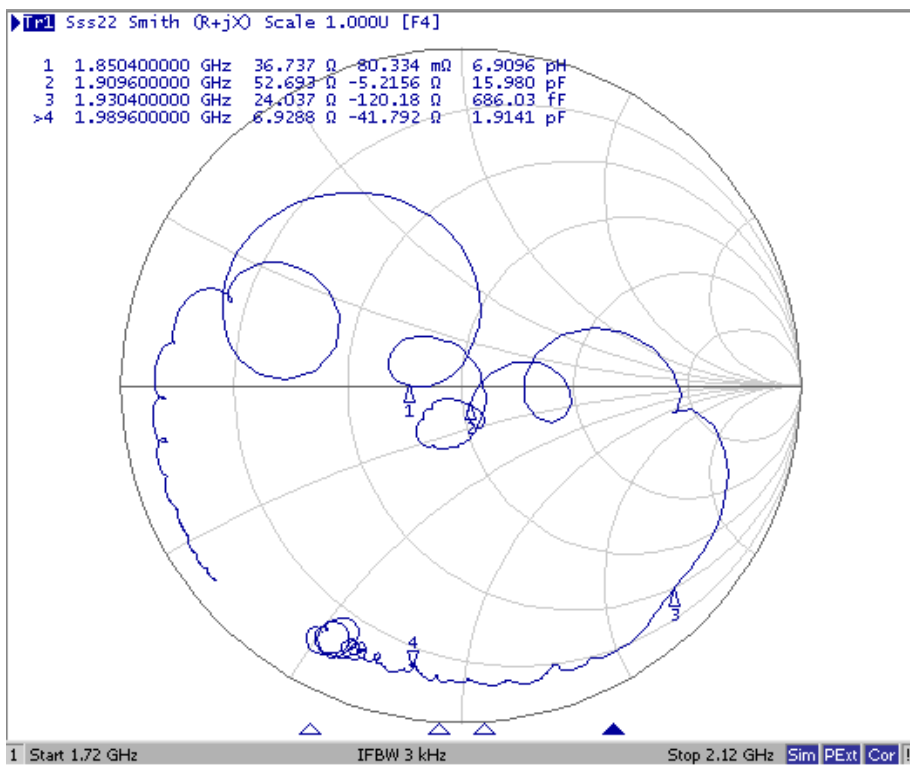
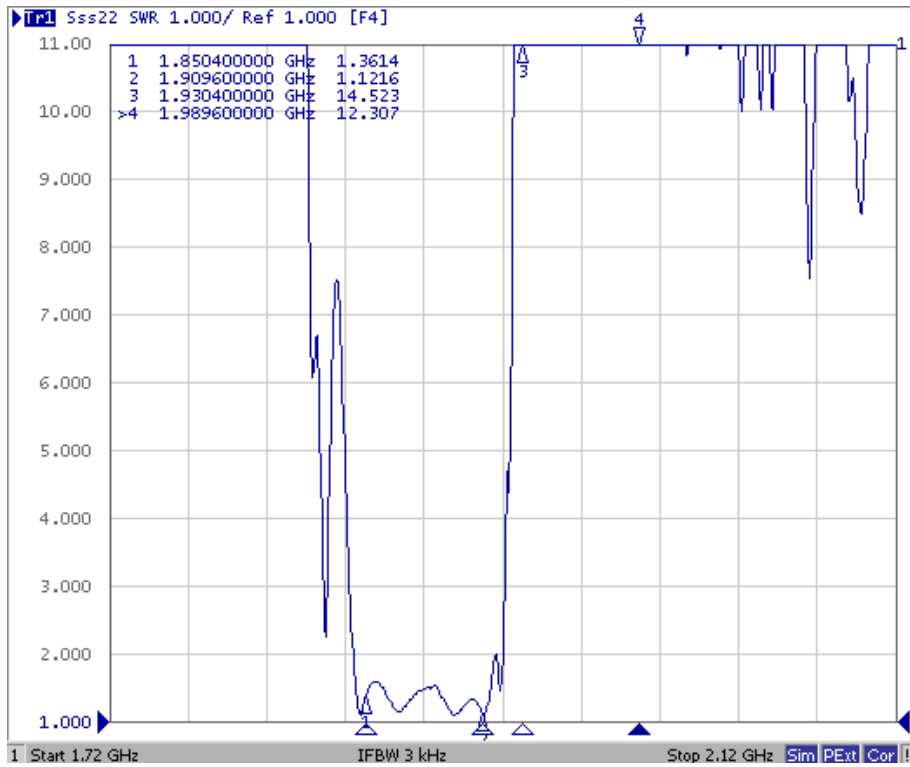
Tx to Ant, Ant to Rx



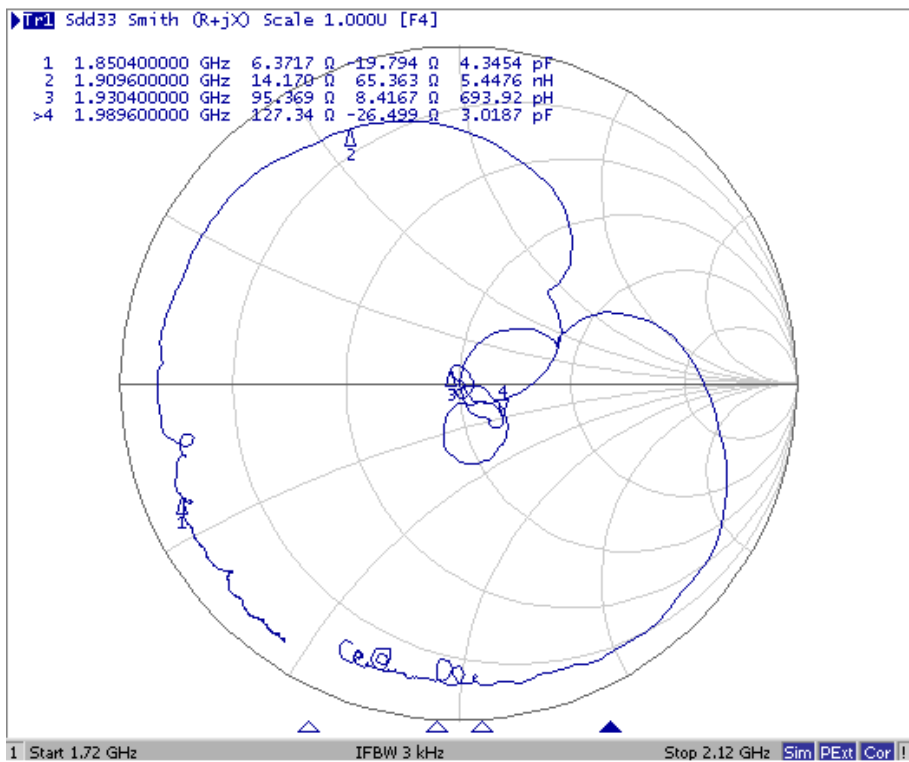
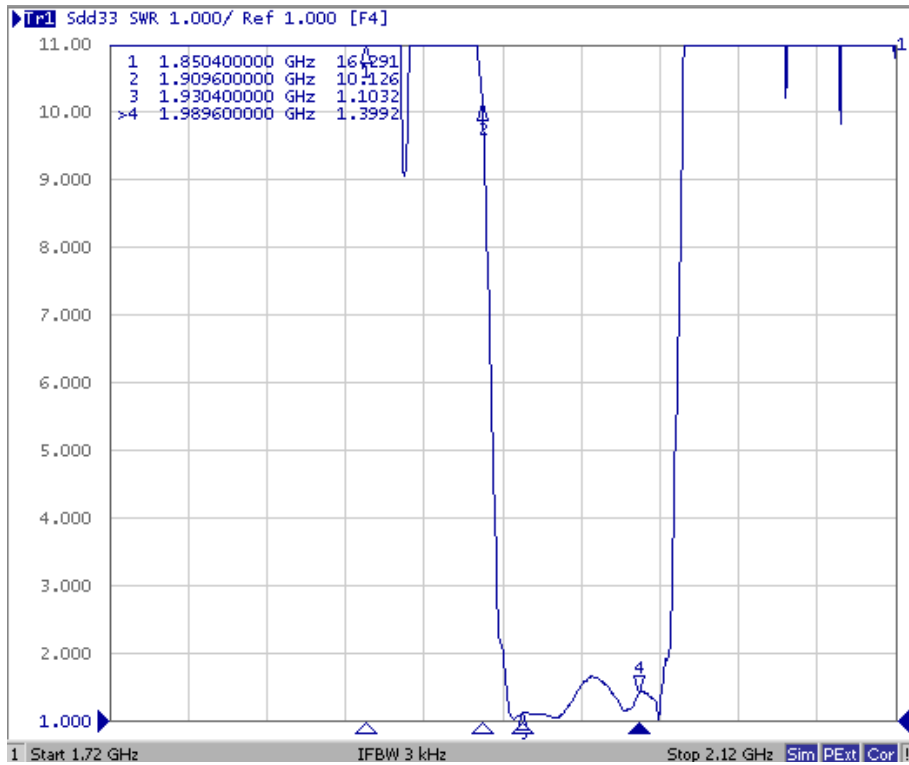
Tx to Rx Isolation



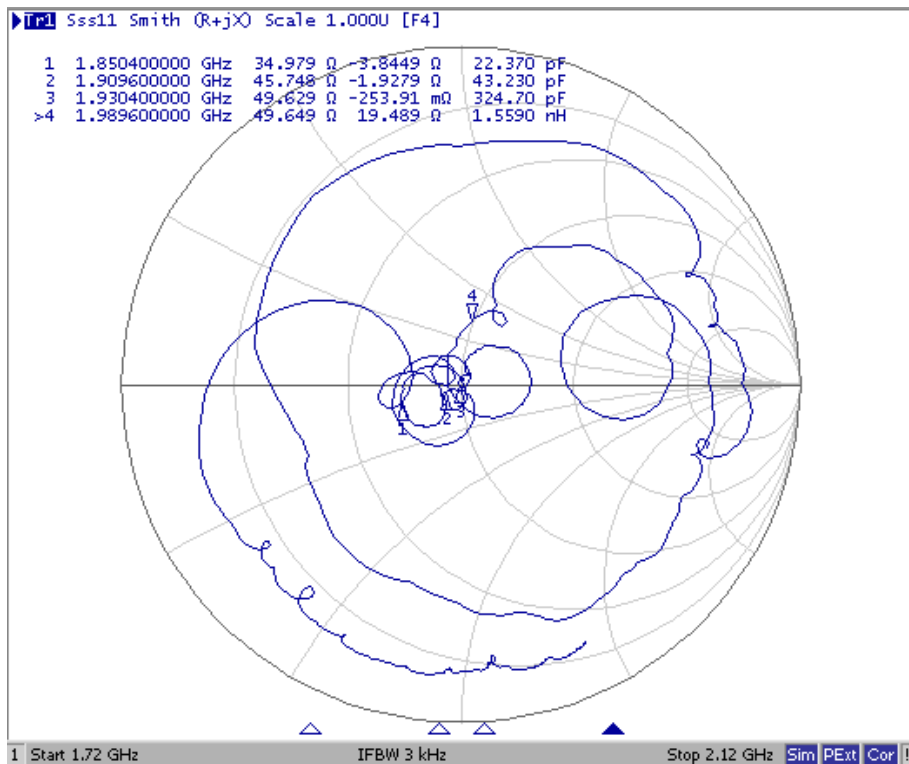
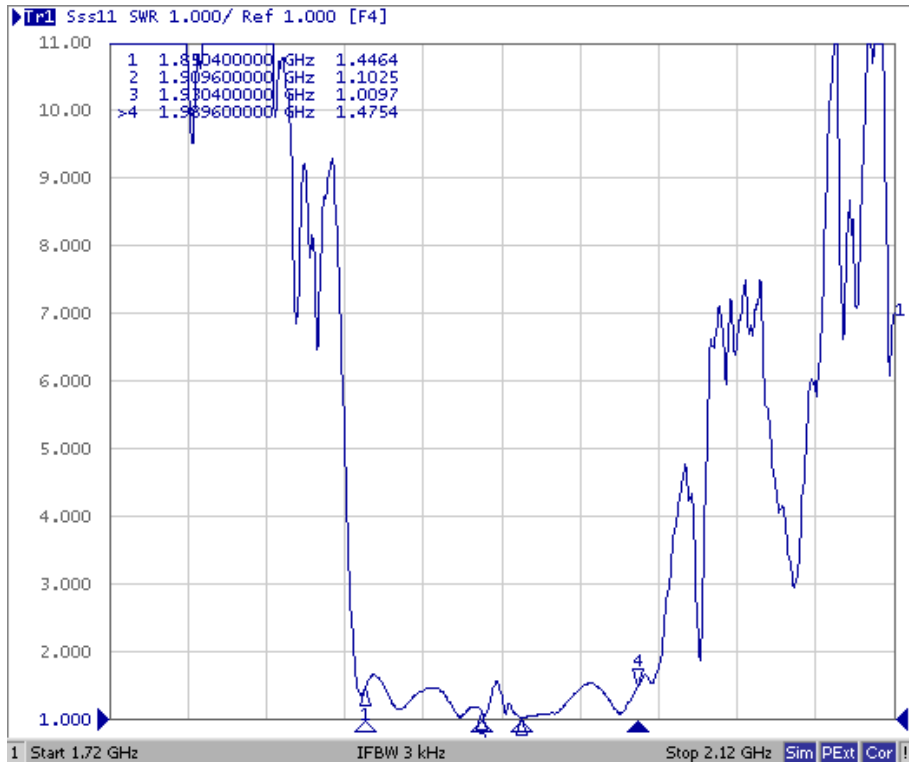
Tx Port



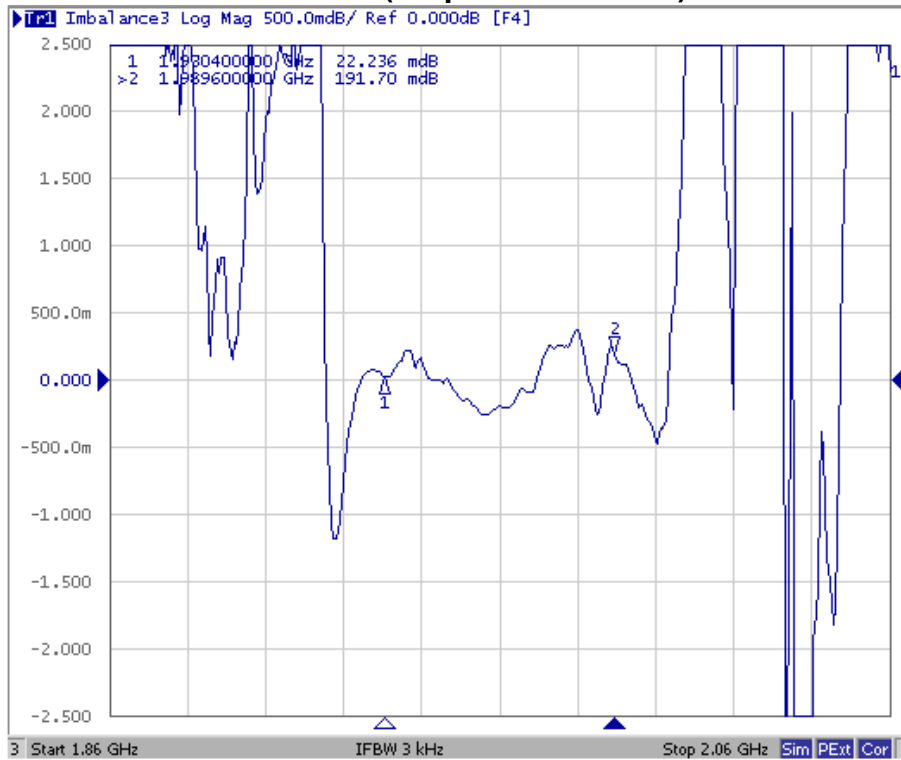
Rx Port



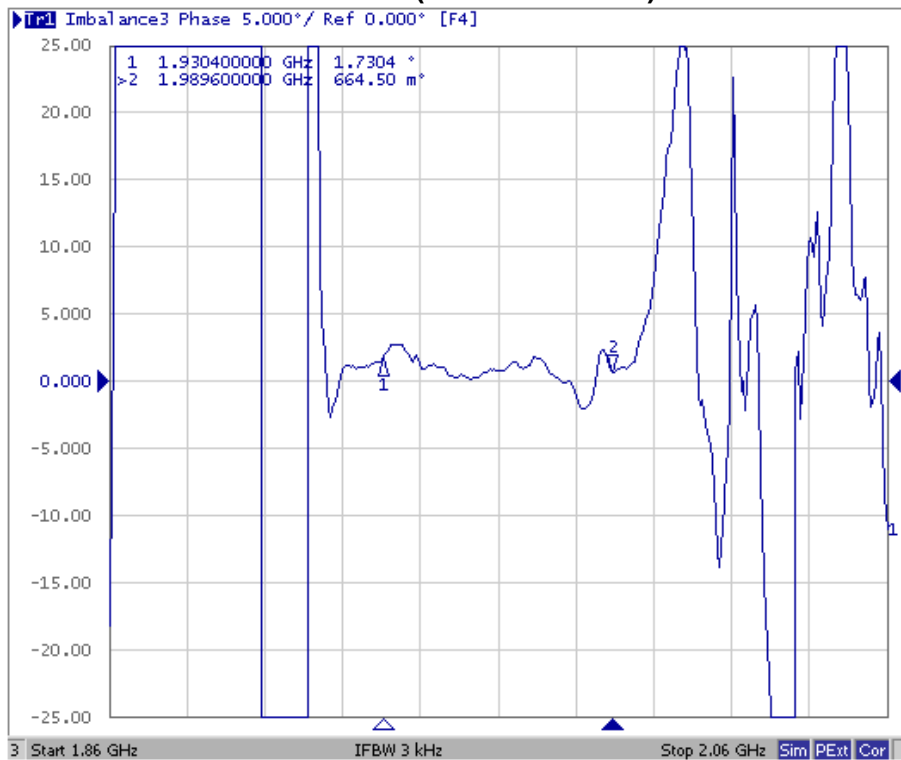
Ant Port



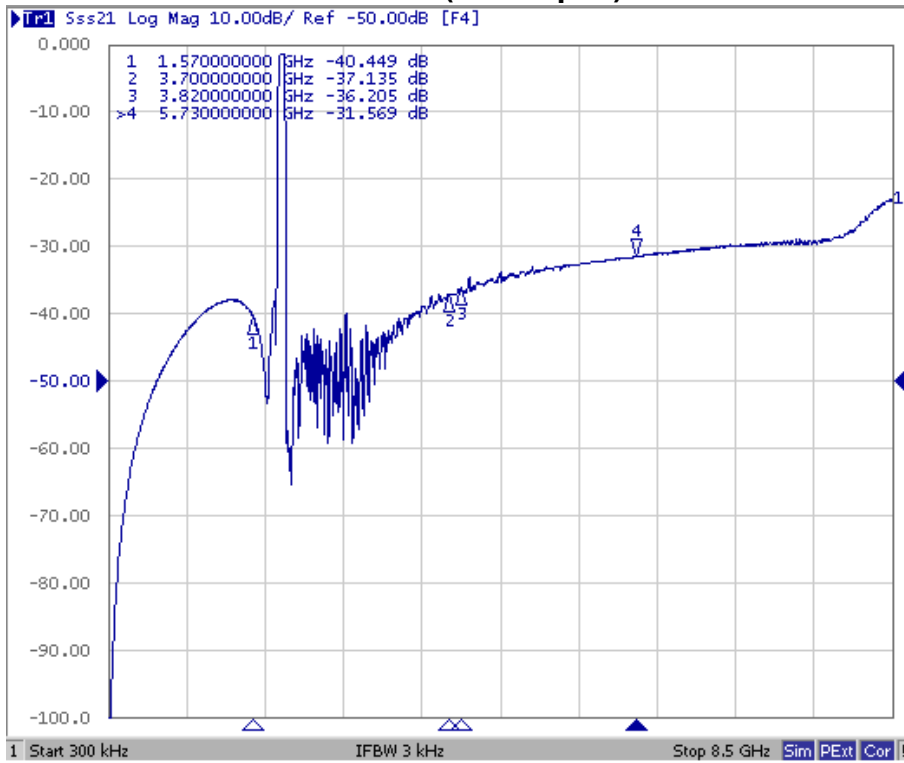
Ant to Rx (Amplitude balance)



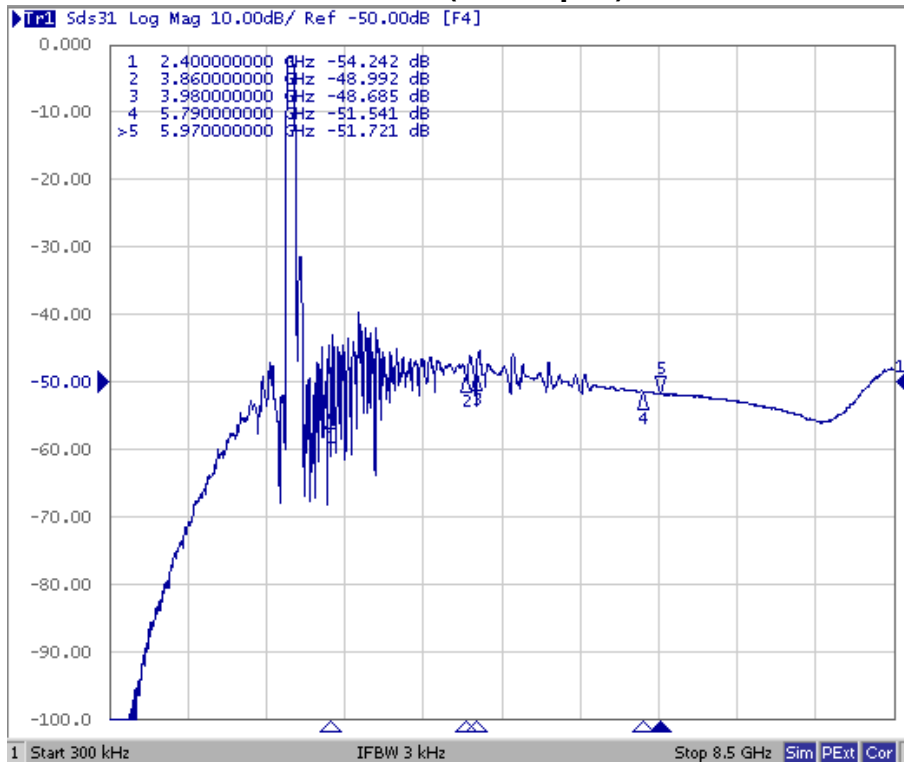
Ant to Rx (Phase balance)



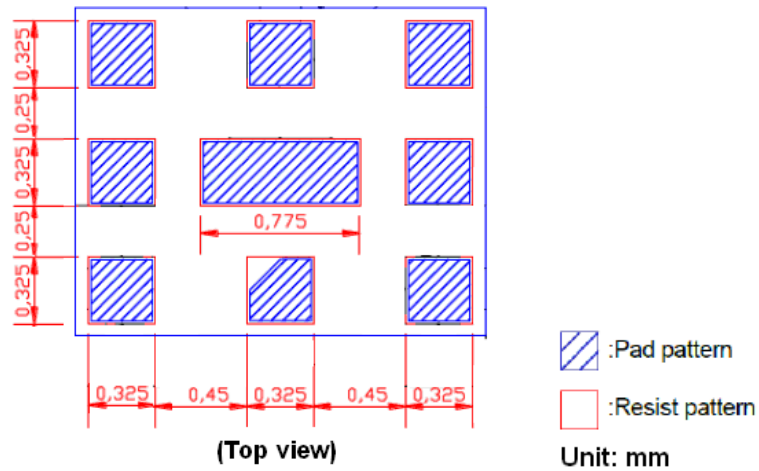
Tx to Ant (Wide span)



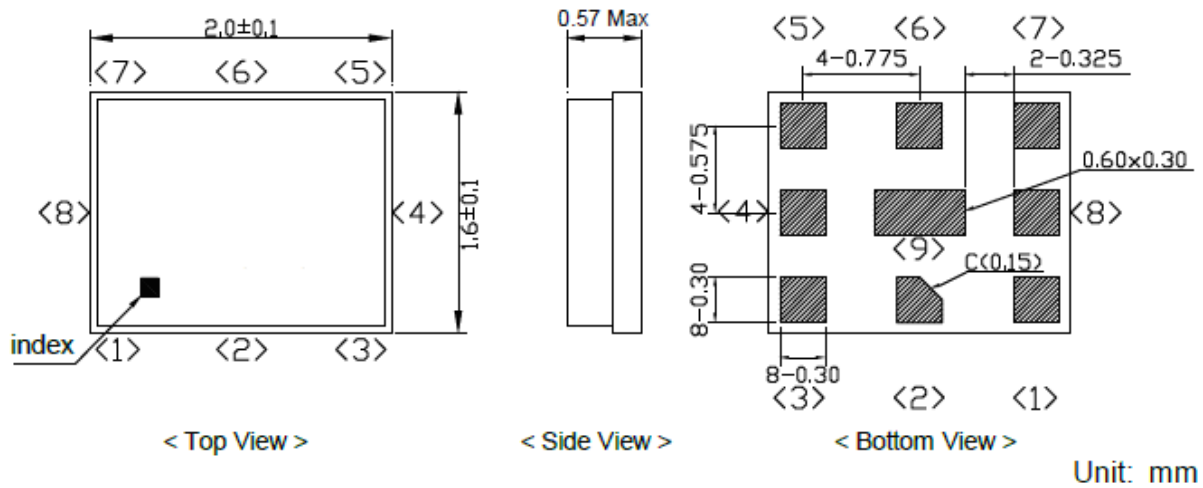
Ant to Rx (Wide span)



E. PCB Footprint:



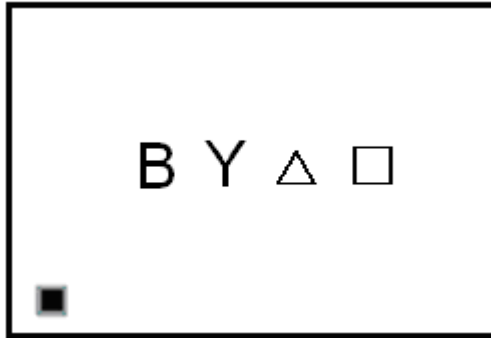
F. OUTLINE DRAWING:



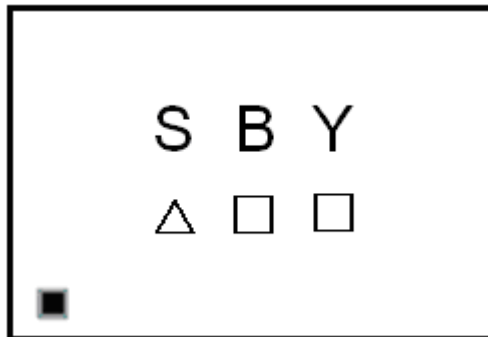
Pin Configuration

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 l, O, i, o and l)

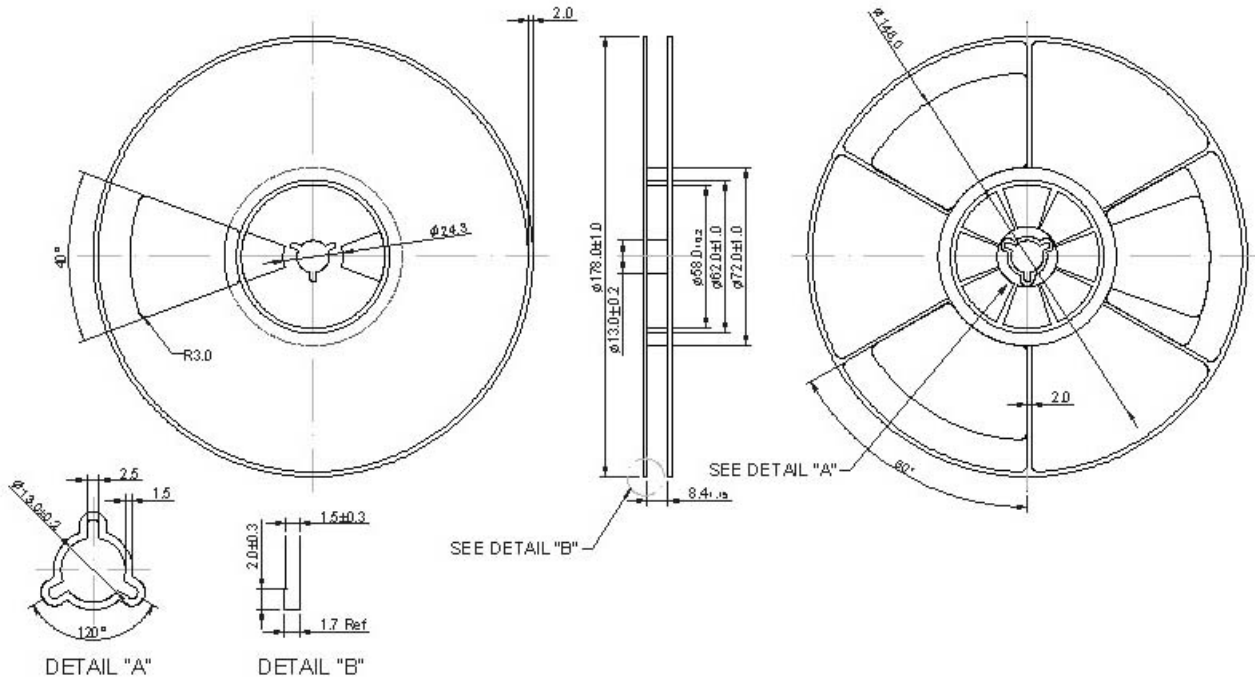
Date Code table:

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

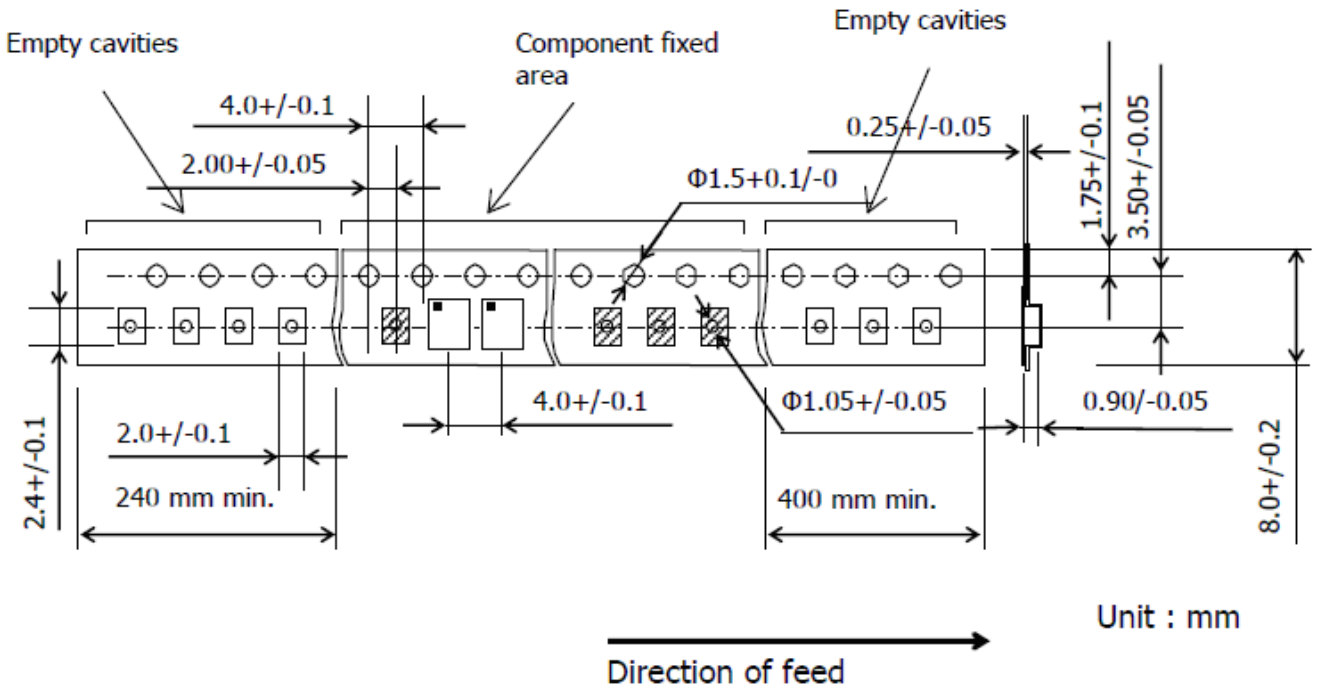
G. PACKING: (Ref: WI-75M03)

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.

