



# TAI-SAW TECHNOLOGY CO., LTD.

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

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## Product Specifications Approval Sheet

Product Description: 1222.7625 / 1575.42 MHz SAW Diplexer SMD 5.0x5.0 mm

TST Part No.: TE0131B (This part is compliant with AEC-Q200)

Customer Part No.: \_\_\_\_\_

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

Checked by: \_\_\_\_\_ David Chang *David*

Approved by: \_\_\_\_\_ Andy Yu *Andy Yu*

Date: \_\_\_\_\_ 2018/11/16

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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## 1222.7625 / 1575.42 MHz SAW Diplexer

MODEL NO.: TE0131B

REV. NO.:1

### A. MAXIMUM RATING:

1. Input Power Level: 10 dB<sub>m</sub>
2. DC voltage: 3 V
3. Operating Temperature: -55°C to +85°C
4. Storage Temperature: -55°C to +105°C
5. Moisture Sensitivity Level: Level 1(MSL1)

RoHS Compliant  
Lead free  
Lead-free soldering

Electrostatic Sensitive Device (ESD)

### B. ELECTRICAL CHARACTERISTICS:

(L1 Band GPS\_1575.42 MHz)

Item	Unit	Min.	Typ.	Max.
Center frequency <b>Fc</b>	MHz	-	1575.42	-
Insertion Loss (1574.22~1576.62 MHz) <b>IL</b>	dB	-	3.3	3.8
Amplitude Ripple (1574.22~1576.62 MHz)	dB	-	0.1	1.0
Return Loss (1574.22~1576.62 MHz)	dB	8.5	12	-
<b>Attenuation</b> (Reference level from 0 dB)				
824 ~ 960 MHz	dB	25	47	-
1500 ~ 1525.42 MHz	dB	8	19	-
1625.42 ~ 1650 MHz	dB	8	16	-
1710 ~ 2170 MHz	dB	25	34	-

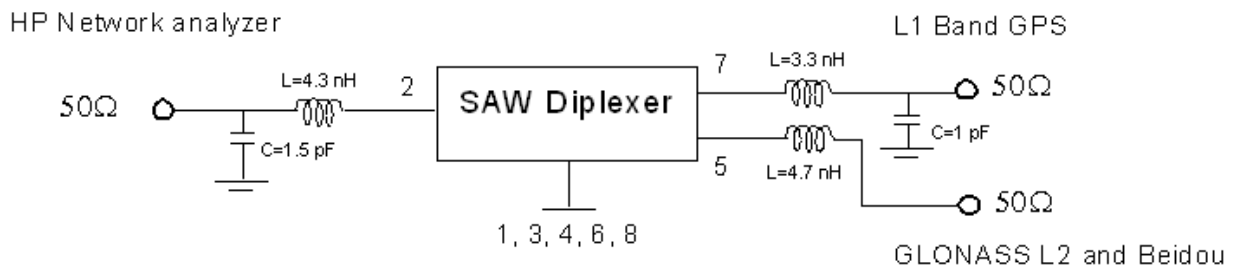
(GLONASS L2 and Beidou B2\_1222.7625 MHz)

Item	Unit	Min.	Typ.	Max.
Center frequency <b>Fc</b>	MHz	-	1222.7625	-
Insertion Loss (1196.9~1248.625 MHz) <b>IL</b>	dB	-	4.1	4.8
Amplitude Ripple (1196.9~1248.625 MHz)	dB	-	0.9	1.8
Return Loss (1196.9~1248.625 MHz)	dB	8.5	12	-
<b>Attenuation</b> (Reference level from 0 dB)				
464 ~ 600 MHz	dB	25	32	-
1110 ~ 1130 MHz	dB	16	23	-
1330 ~ 1450 MHz	dB	28	37	-
1500 ~ 1820 MHz	dB	25	30	-

**(L1 Band GPS - GLONASS L2 and Beidou B2)**

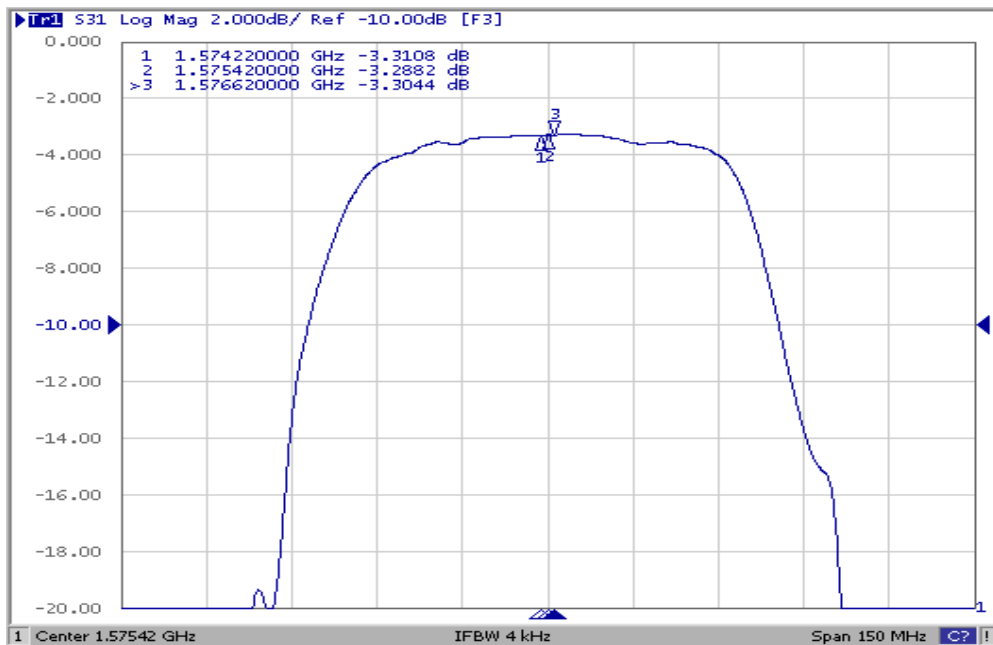
Item	Unit	Min.	Typ.	Max.
Isolation (1196.9~1248.625 MHz)	dB	22	36	-
Isolation (1574.22~1576.62 MHz)	dB	22	33	-

**C. MEASUREMENT CIRCUIT:**

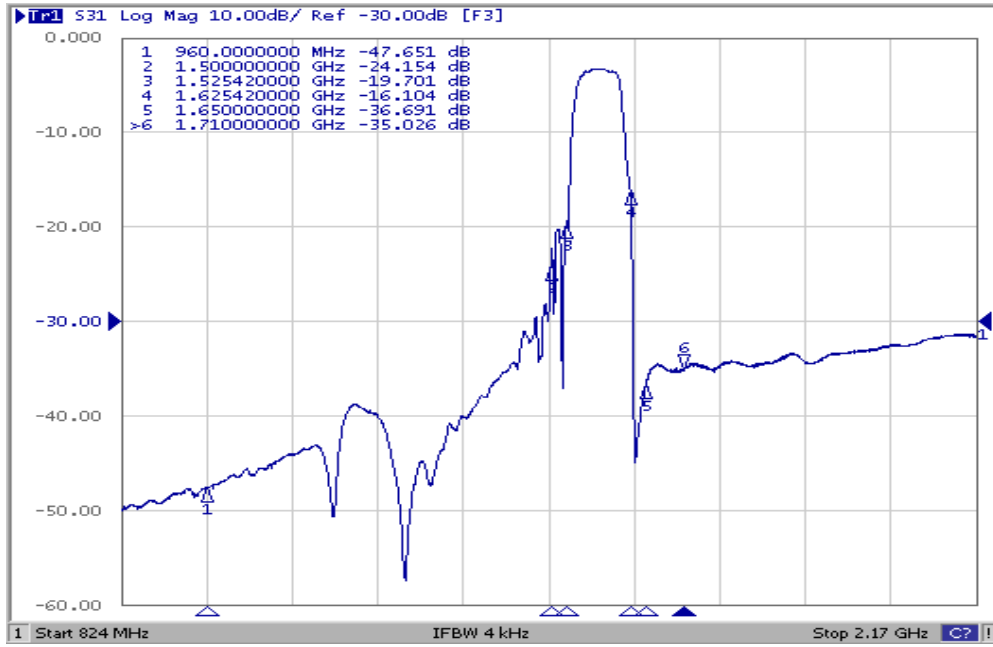


**D. Frequency Characteristics:**

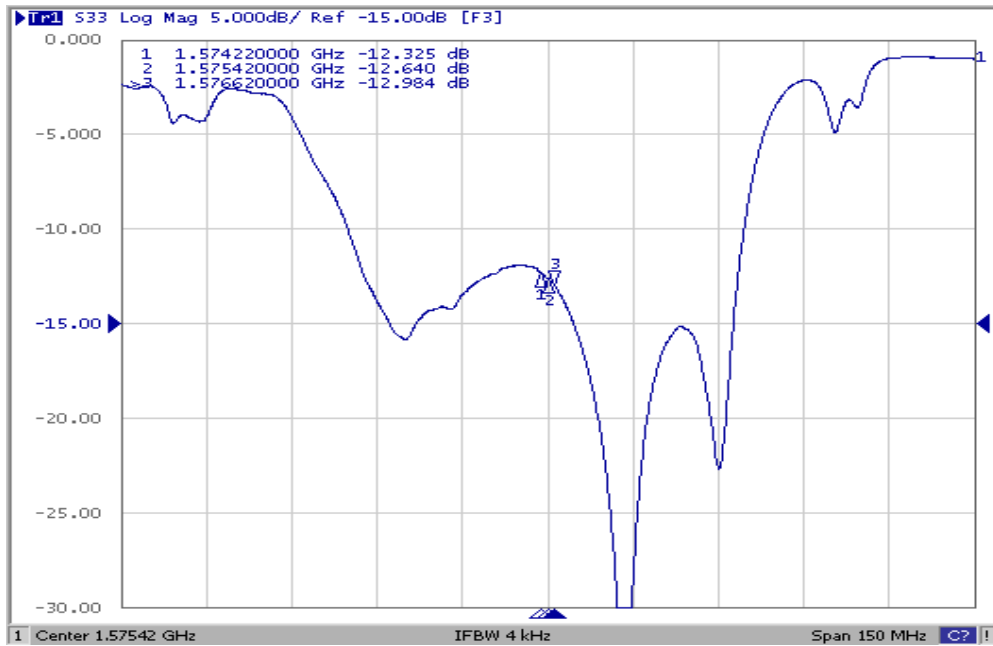
**L1 Band GPS \_ Characteristic**



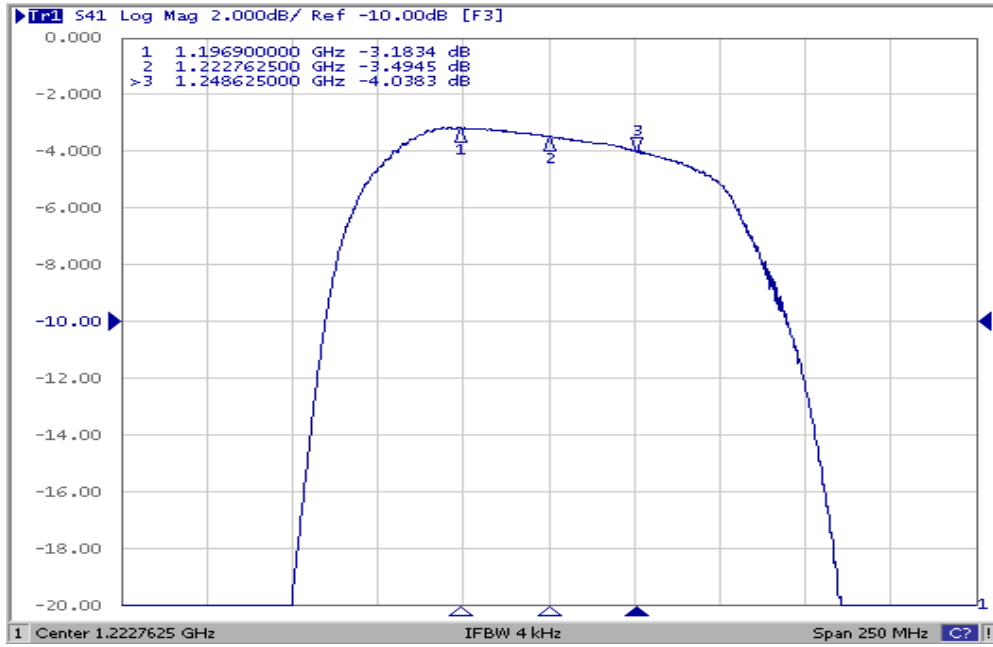
## L1 Band GPS \_ Characteristic (wideband)



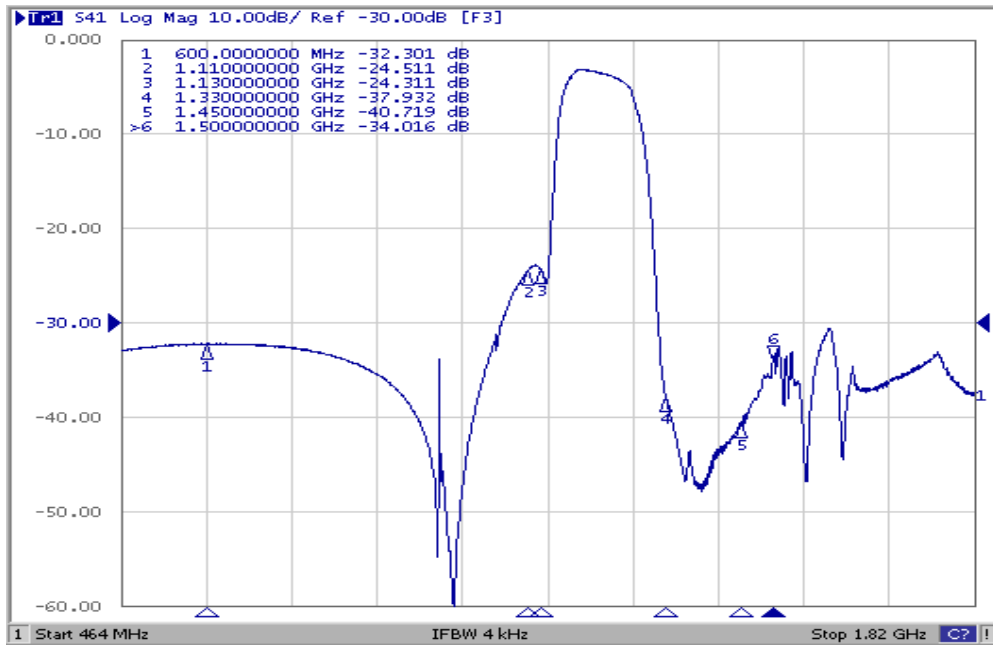
## L1 Band GPS \_ Return loss



## GLONASS L2 and Beidou B2 \_ Characteristic



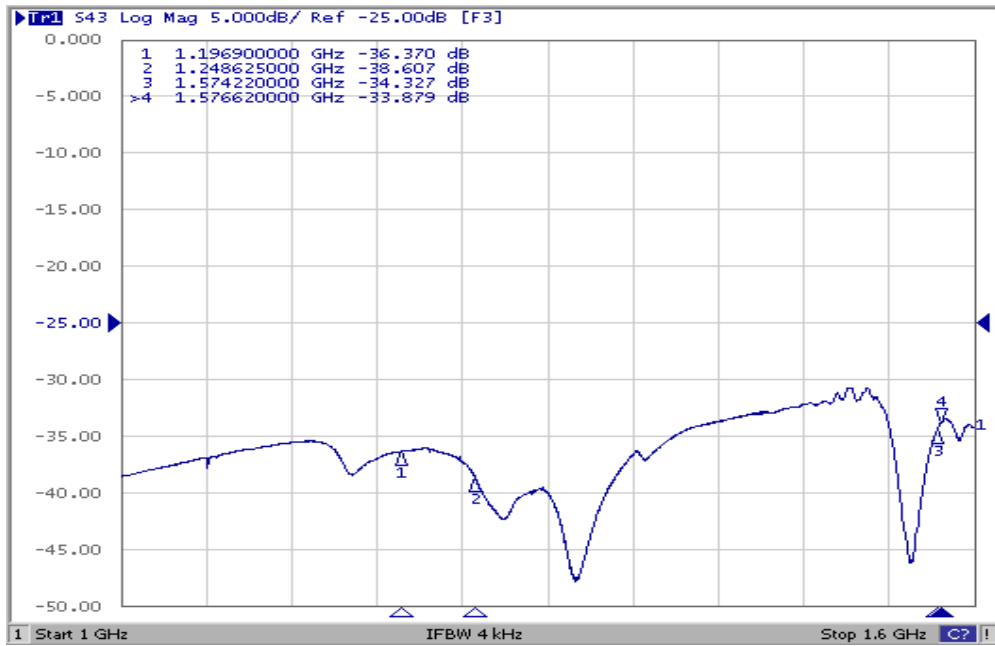
## GLONASS L2 and Beidou B2 \_ Characteristic (wideband)



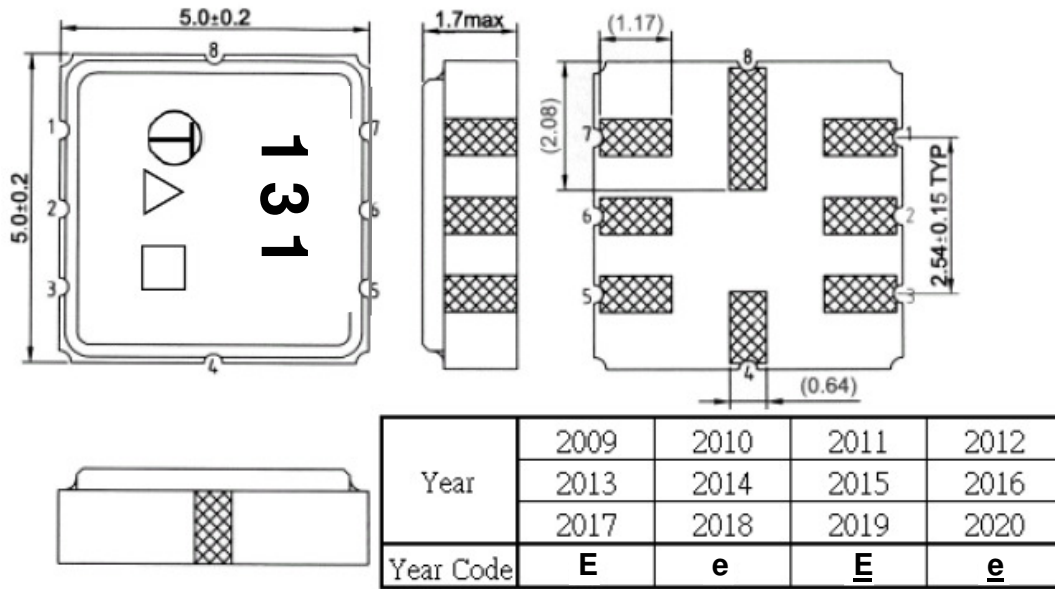
## GLONASS L2 and Beidou B2 \_ Return loss



## L1 Band GPS - GLONASS L2 and Beidou B2\_Isolation



**E. OUTLINE DRAWING:**



**#2: Input**

**#5: Band 2 Output**

**#7: Band 1 Output**

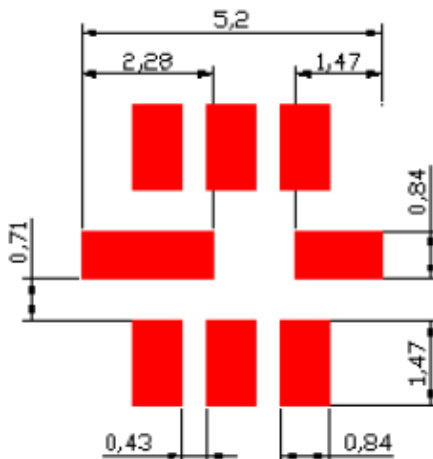
**#4, 8: Case Ground**

**#1, 3, 6: Ground**

**Unit: mm**

WK01	WK02	WK03	WK04	WK05	WK06	WK07	WK08	WK09	WK10	WK11	WK12	WK13
A	B	C	D	E	F	G	H	I	J	K	L	M
WK14	WK15	WK16	WK17	WK18	WK19	WK20	WK21	WK22	WK23	WK24	WK25	WK26
N	O	P	Q	R	S	T	U	V	W	X	Y	Z
WK27	WK28	WK29	WK30	WK31	WK32	WK33	WK34	WK35	WK36	WK37	WK38	WK39
a	b	c	d	e	f	g	h	i	j	k	l	m
WK40	WK41	WK42	WK43	WK44	WK45	WK46	WK47	WK48	WK49	WK50	WK51	WK52
n	o	p	q	r	s	t	u	v	w	x	y	z

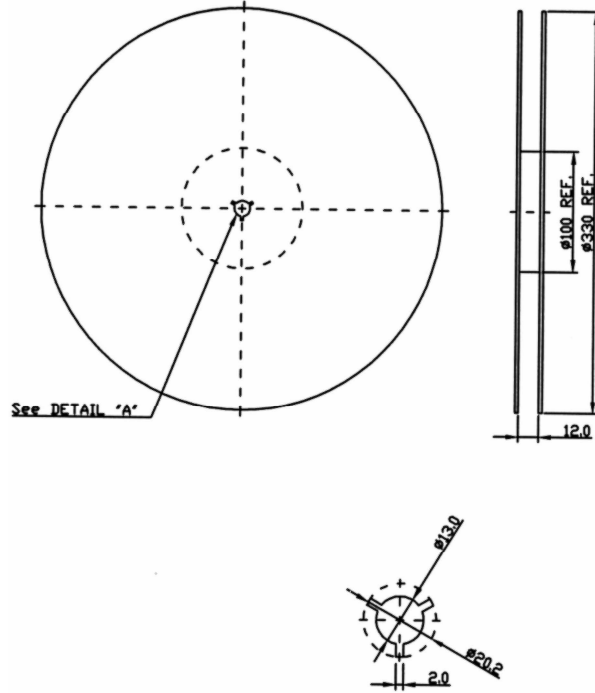
**F. OUTLINE DRAWING:**



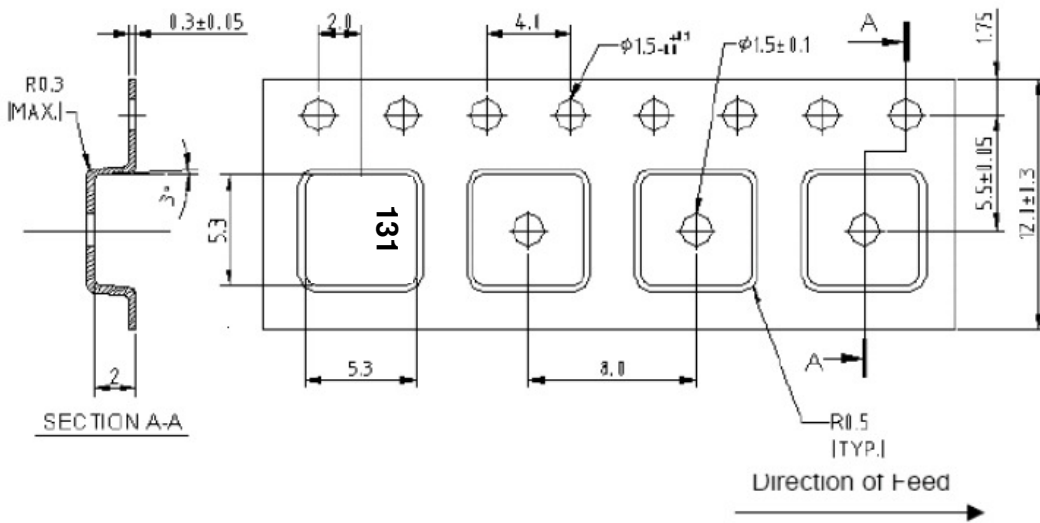
**G. PACKING: (Ref. WI-75M03)**

**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.

