



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: 240 MHz 4.5MHzBW SMD 13.3mm x 6.5 mm SAW IF Filter

TST Parts No.: TB1181A

Customer Parts No.: _____

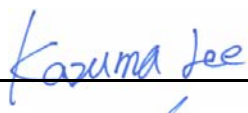
Customer signature required

Company: _____

Division: _____

Approved by : _____

Date: _____

Checked by: _____ Kazuma Lee 

Approval by: _____ Bob Chau 

Date: _____ 05 / 25 / 2015

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.



TAI-SAW TECHNOLOGY CO., LTD.

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

TEL: 886-3-4690038

FAX: 886-3-4697532

E-mail: tstsales3@mail.taisaw.com Web: www.taisaw.com

SAW Filter 240MHz 4.5MHz BW (SMD 13.3×6.5 mm)

MODEL NO.: TB1181A

REV. NO.1

A. MAXIMUM RATING:

1. Operating temperature range: -40°C to 85°C
2. Storage temperature range: -40°C to 85°C
3. Input Power Level : 10 dBm
4. Maximum DC Voltage : 10V

RoHS Compliant
Lead free
Lead-free soldering

Electrostatic Sensitive Device

B. CHARACTERISTICS:

Ambient Temperature: 25°C

Item	Unit	Min.	Type.	Max.
Center frequency, Fc	MHz	239.75	240	240.25
Insertion Loss, IL	dB	-	18.5	20.5
-1dB bandwidth	MHz	4.5	4.9	-
-30dB bandwidth	MHz	-	5.8	6.1
Passband Ripple Fc+/- 2.1MHz	dB	-	0.5	1.0
Group Delay variation Fc+/- 2.25MHz	ns		160	300
Attenuation:(Reference level from Min IL)				
10MHz ~ 230MHz	dB	38	42	-
230MHz ~ 236MHz	dB	34	37	-
Fc+/- 3.0MHz	dB	-	34	-
244MHz ~ 250MHz	dB	34	37	-
250MHz ~ 500MHz	dB	38	45	-
Temperature Coefficient	ppm/°C ²	-	-0.036	-
Source Impedance	Ohm	-	50	-
Load Impedance	Ohm	-	50	-

C. FREQUENCY CHARACTERISTICS:

(1) Narrow band Response:

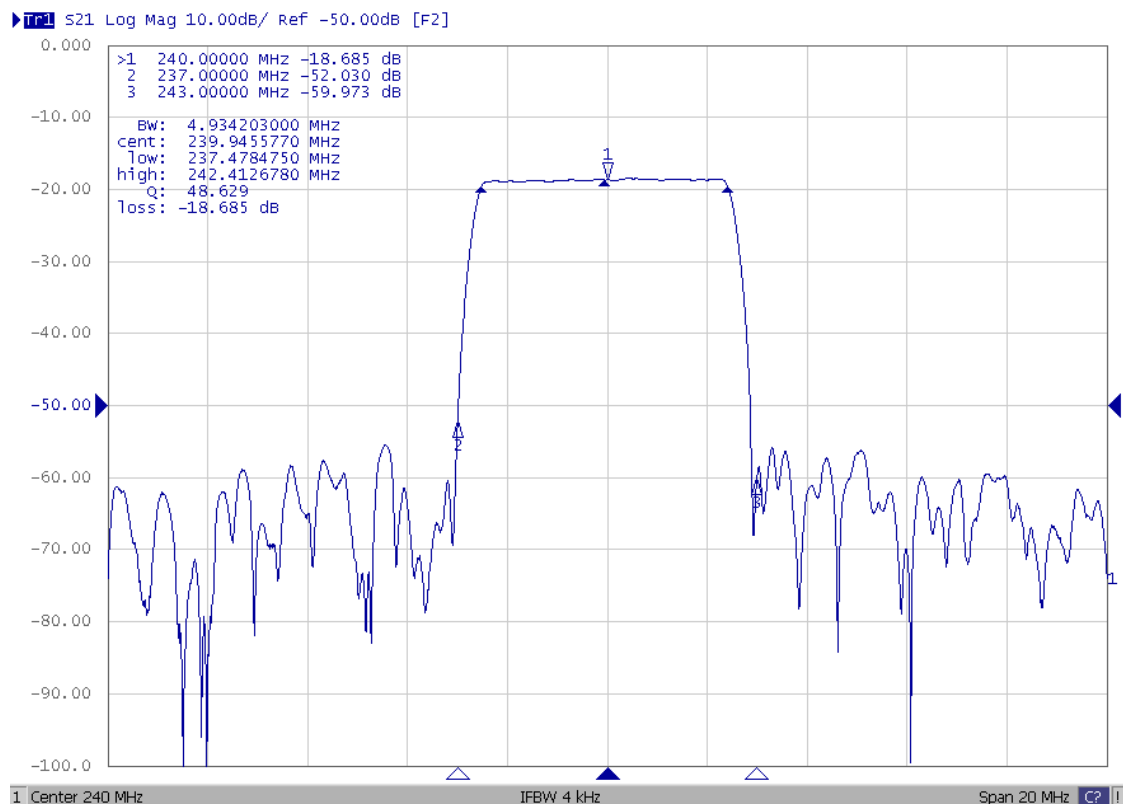


Fig1. Horizontal: 2MHz/Div Vertical: 10dB/Div

(2) Pass band Response and Group Delay Response:

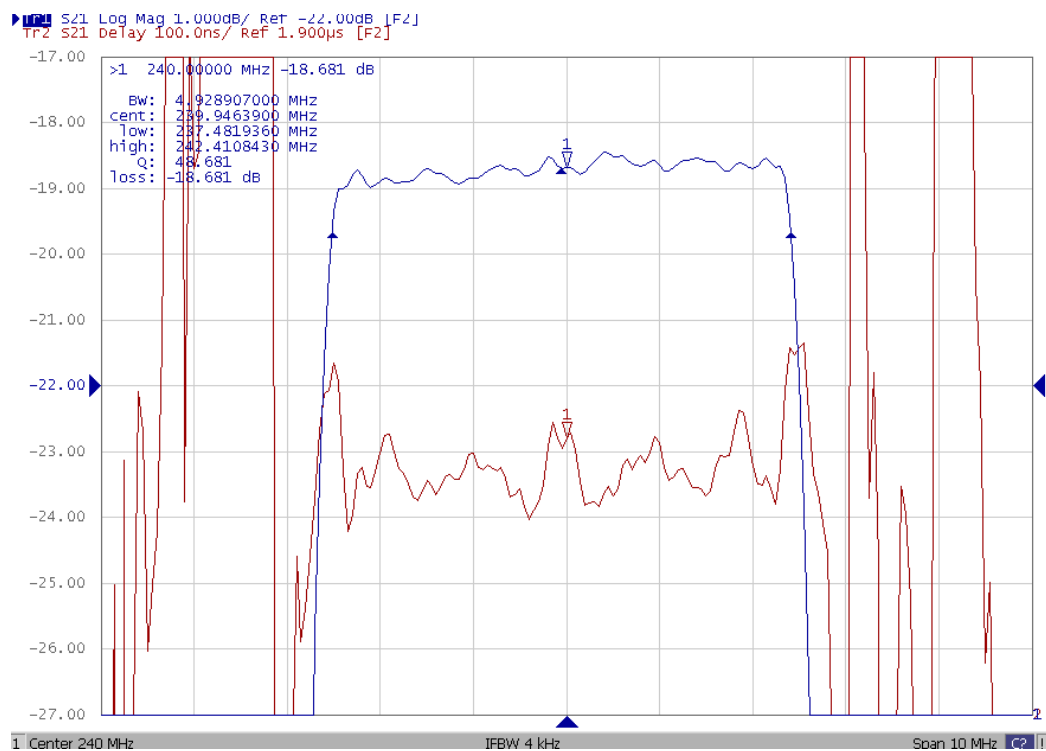
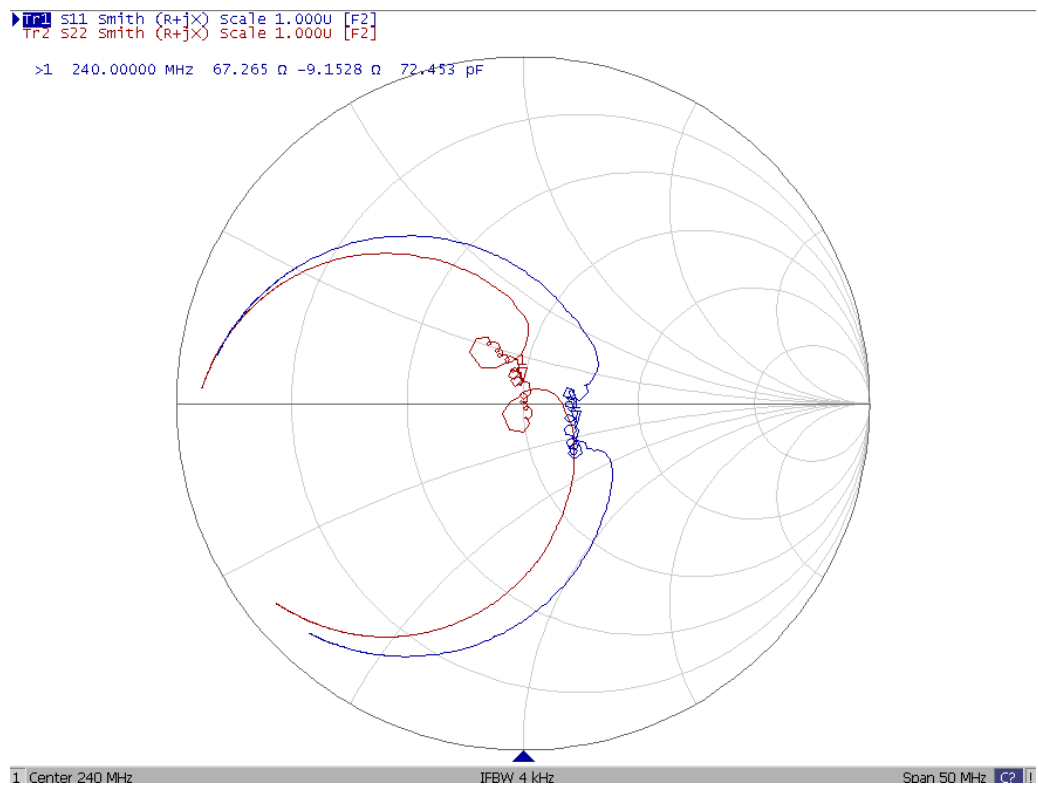


Fig2. Horizontal: 1MHz/Div Vertical: 1dB/Div
Vertical: 100ns/Div

(3) Smith Chart:



(4) Wide band Response:

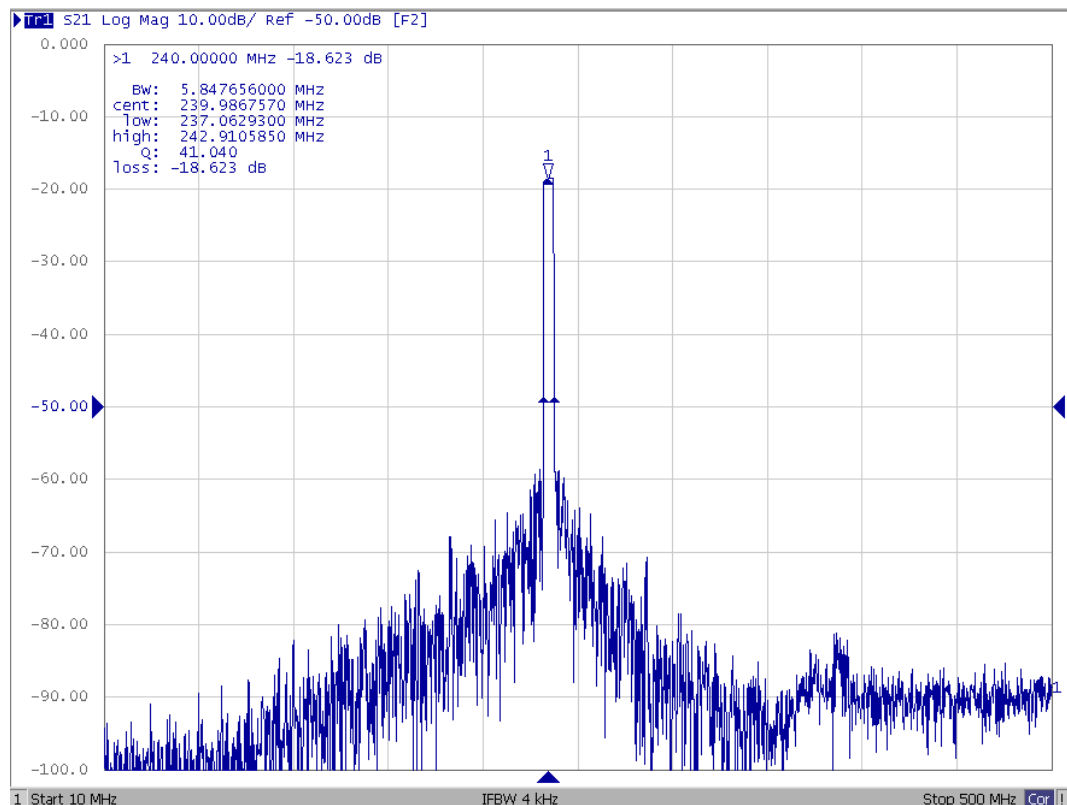
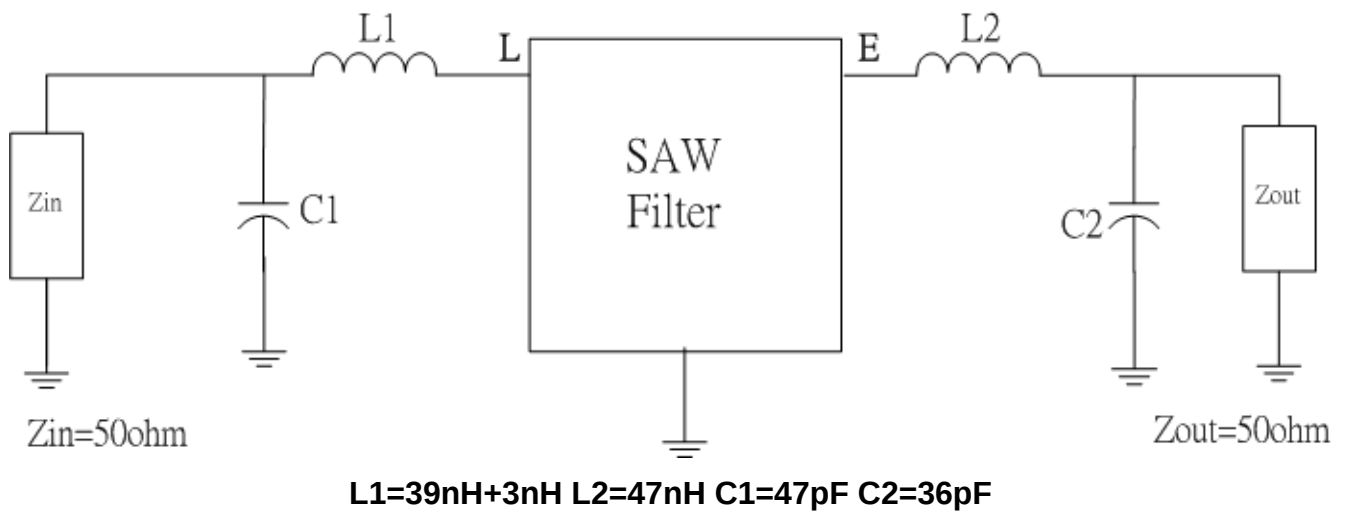
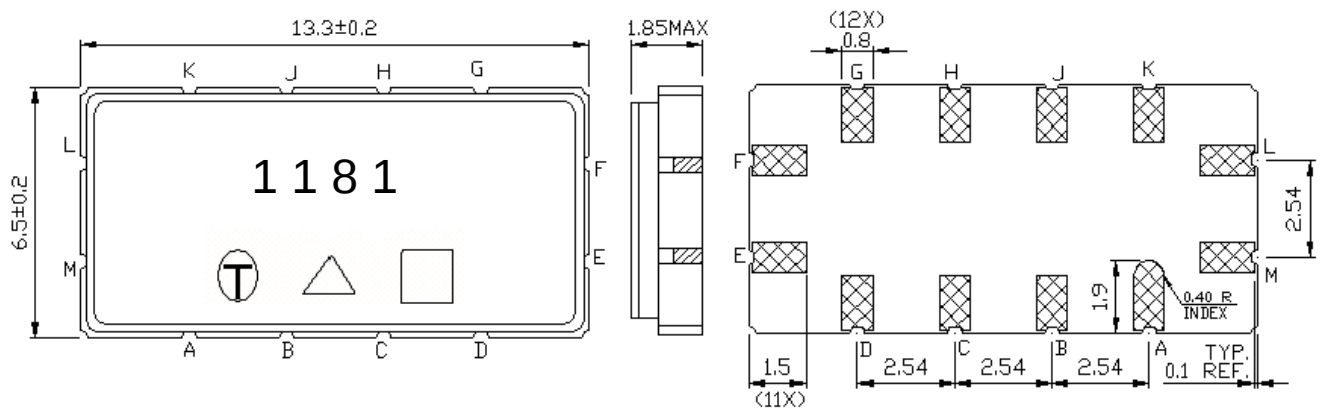


Fig4. Horizontal: 50MHz/Div Vertical: 10dB/Div

D. MATCHING CIRCUIT:



E. OUTLINE DRAWING:



#L : Input

#M : Input Ground

#E : Output

#F : Output Ground

#A,B,C,D,G,H,J,K : Ground

□ : Week Code

Unit: mm

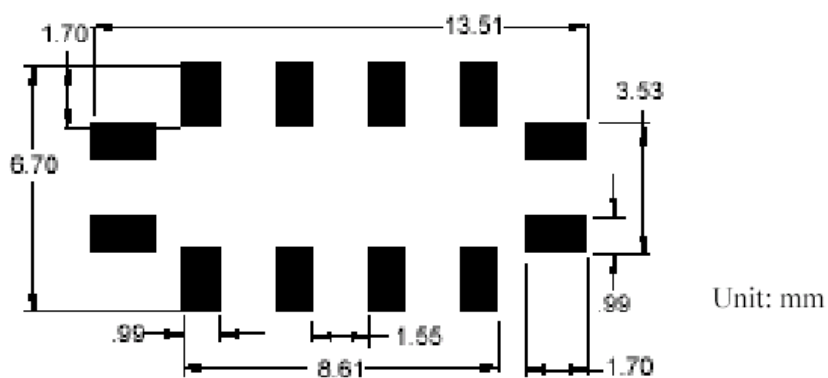
△ : Product / Year Code

Year	2013 2017	2014 2018	2015 2019	2016 2020
Product Code	B	b	<u>B</u>	<u>b</u>

Week Code Table

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

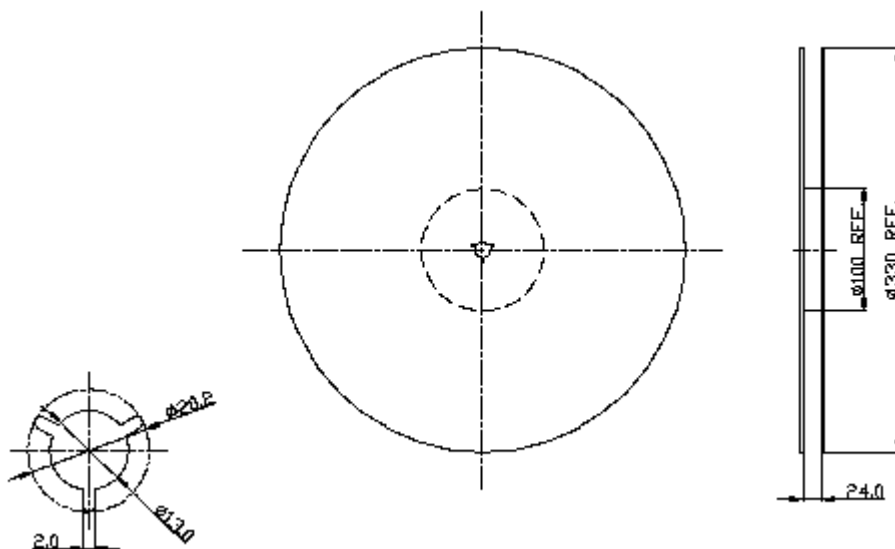
F. PCB FOOTPRINT



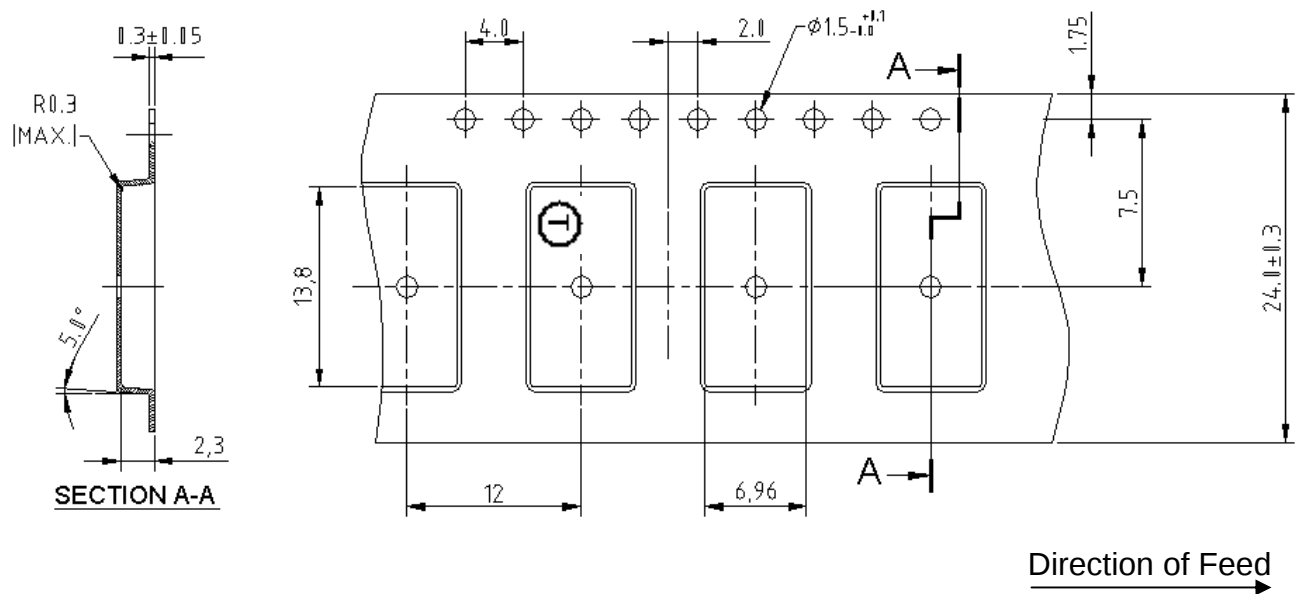
G. PACKING:

1. REEL DIMENSION

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



2. TAPE DIMENSION



H. RECOMMENDED REFLOW PROFILE:

1. Preheating shall be fixed at $150 \sim 180^\circ\text{C}$ 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 $245 \sim 260^\circ\text{C}$ peak (min. 10sec).
4. Time : 2 times.

