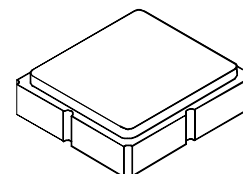


# SF2461E

## 1582.5/1189 MHz SAW Filter



SM3030-8

- **Low-loss SAW Diplexer**
- **3.0 x 3.0 mm Surface-mount Package**
- **Complies with Directive 2002/95/EC (RoHS)**
- **Moisture Sensitivity Level: 1**
- **AEC-Q200 Qualified**

Maximum Rating	Value	Units
Input Power Level	+10	dBm
DC Voltage	6	V
Operable Temperature Range	-45 to +125	°C
Specification Temperature Range	-40 to +95	°C
Tape and Reel Storage Temperature Range	-40 to +95	°C
Solder Reflow Temperature, 5 cycles maximum	260° C for 10 sec	

Characteristic L1_1582.5 MHz	Sym	Note	Min	Typ	Max	Units
Center Frequency				1582.5		MHz
Insertion Loss 1559 to 1606 MHz				4.8	6.5	dB
Amplitude Ripple 1559 to 1606 MHz				1.4	2.5	
Group Delay Variation 1559 to 1606 MHz				13	30	ns
Attenuation, 0 dB reference						dB
658 to 703 MHz			30	40		
703 to 915 MHz			30	40		
1427.9 to 1462.9 MHz			30	43		
1695 to 3800 MHz			30	37		
5150 to 5925 MHz			30	58		
Characteristic L5_1189 MHz	Sym	Note	Min	Typ	Max	Units
Center Frequency	$f_C$			1189		MHz
Insertion Loss, 1164 to 1214 MHz	$IL_{MAX}$			3.6	6.5	dB
Amplitude Ripple, 1164 to 1214 MHz				1.4	2.5	
Group Delay Variation, 1164 to 1214 MHz				11	35	ns
Attenuation, 0 dB Reference						dB
658 to 703 MHz			30	54		
703 to 915 MHz			30	45		
1427.9 to 1462.9 MHz			30	37		
1695 to 1710 MHz			30	35		
1710 to 1785 MHz			32	36		
1850 to 2690 MHz			22	32		
3400 to 3800 MHz			34	43		
5150 to 5925 MHz			30	61		
L1 - L5						
Item						dB
Isolation 1164 to 1214 MHz			30	38		
Isolation 1559 to 1606 MHz			30	37		

Case Style	SM3030-8 3.0 x 3.0 mm Nominal Footprint	
Lid Symbolization, Y=year, WW=week, S=shift, dot=pin 1 indicator	A3, YWWS	
Standard Reel Quantity	Reel Size 7 inch	500 Pieces/Reel
	Reel Size 13 inch	3000 Pieces/Reel

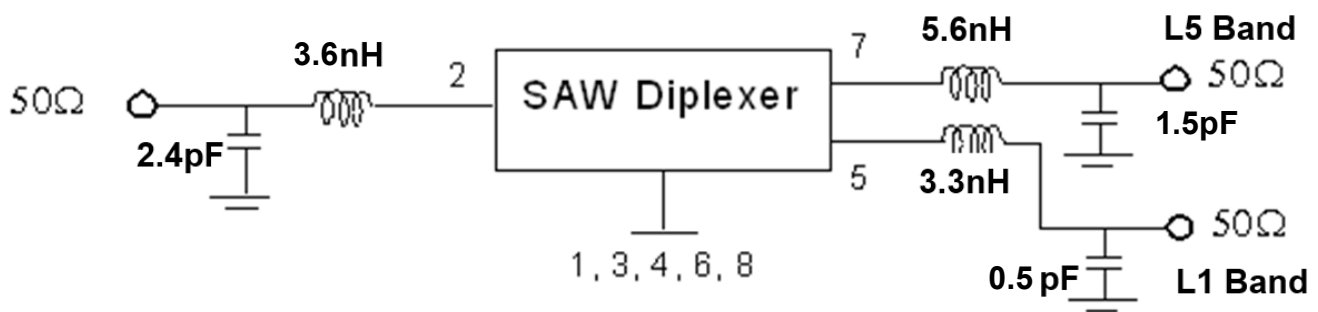


**CAUTION: Electrostatic Sensitive Device. Observe precautions for handling.**

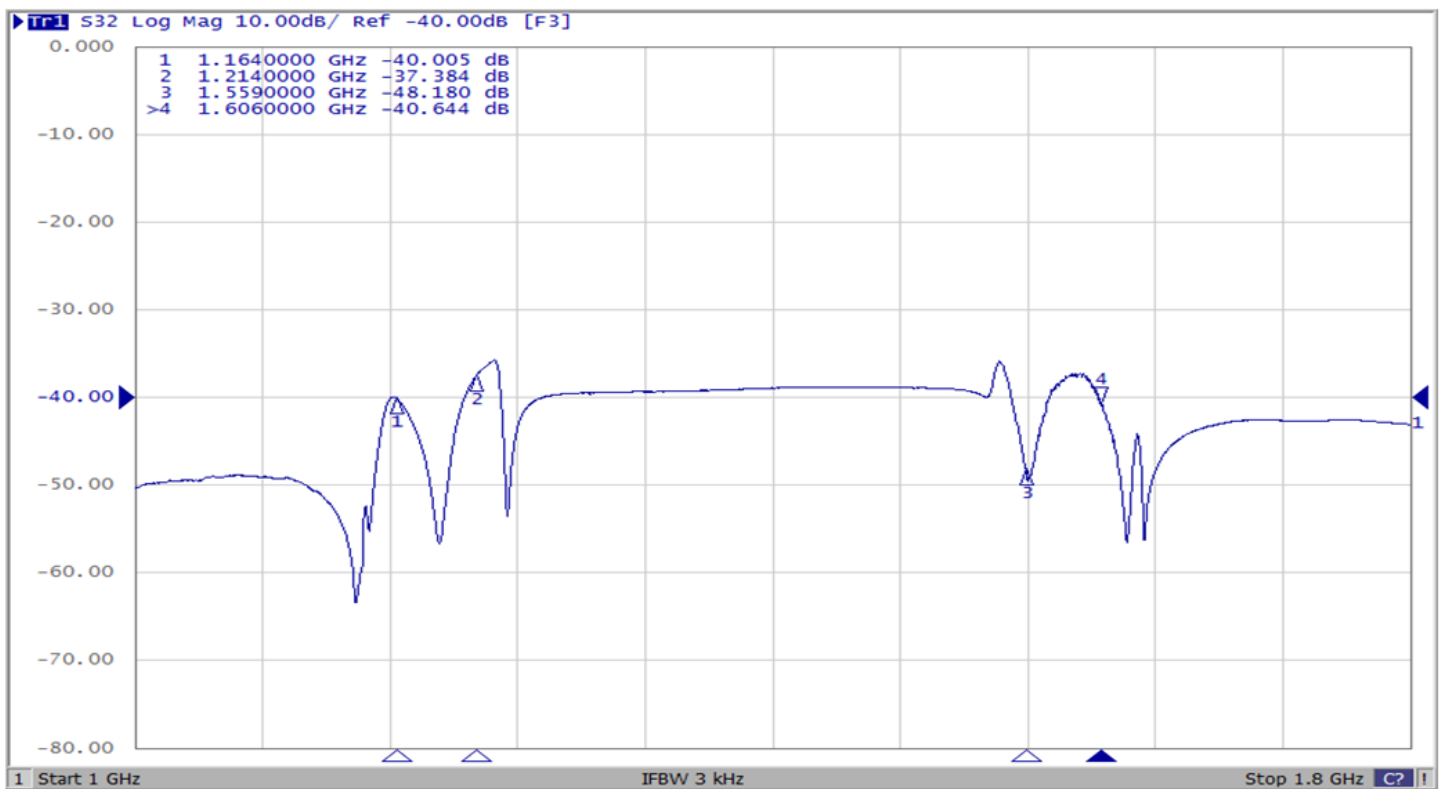
**NOTES:**

1. The design, manufacturing process, and specifications of this device are subject to change.
2. US or International patents may apply.
3. RoHS compliant from the first date of manufacture.

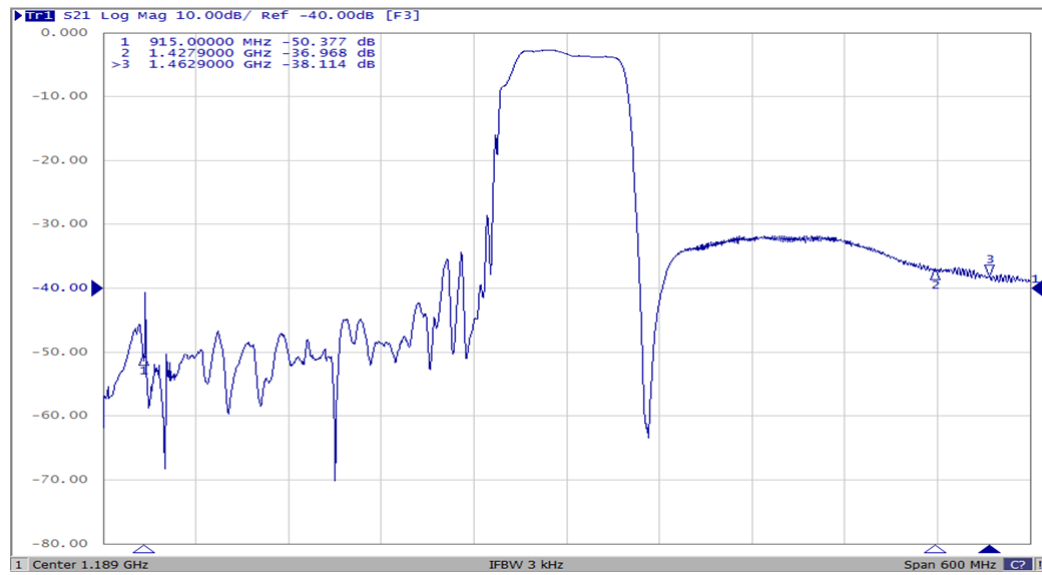
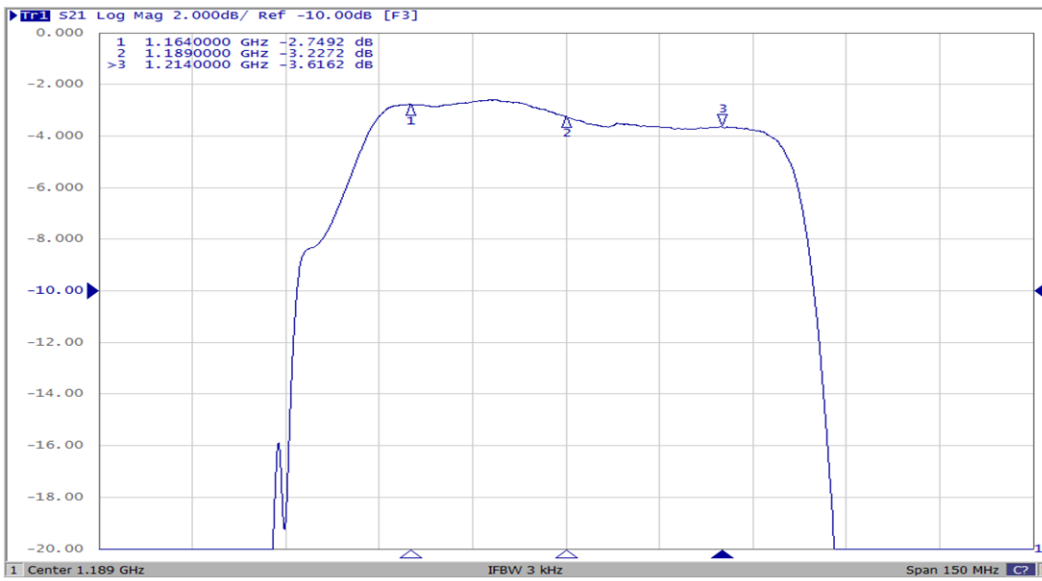
## Test Circuit



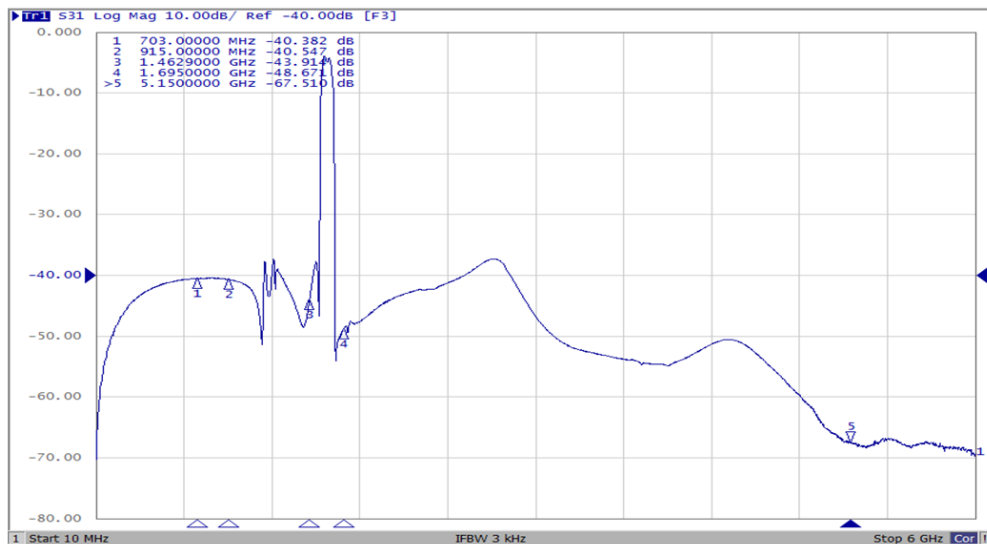
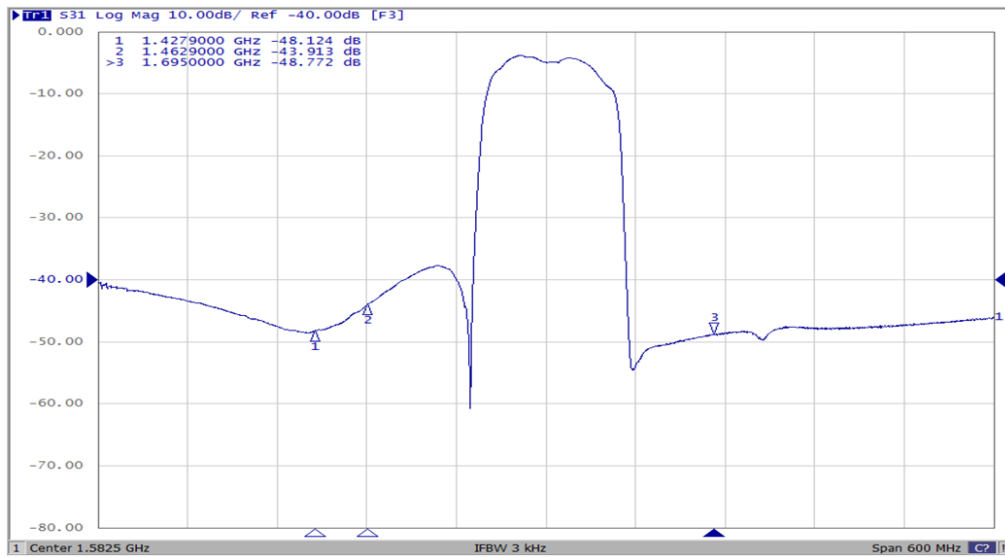
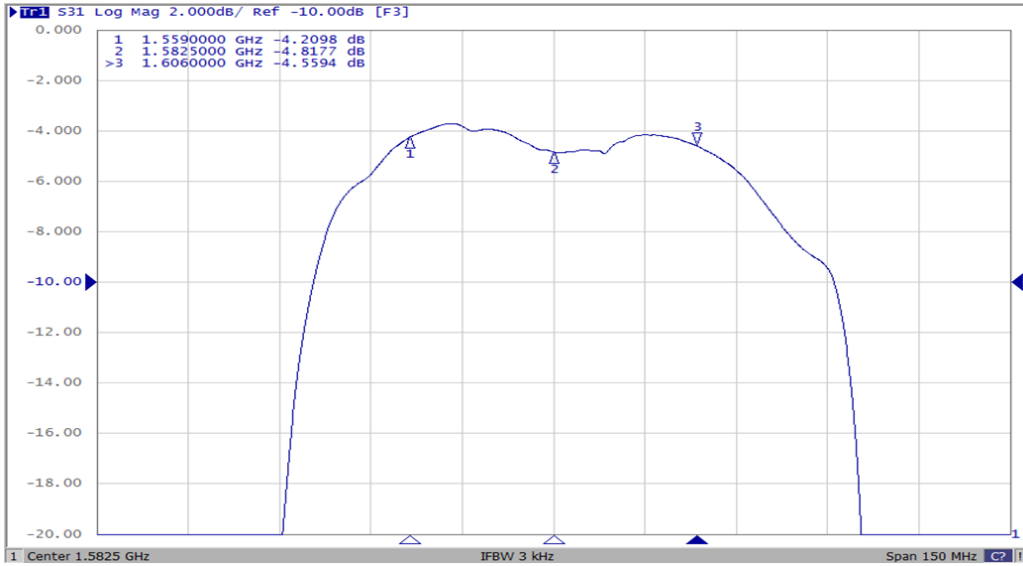
## L1 - L5 Isolation



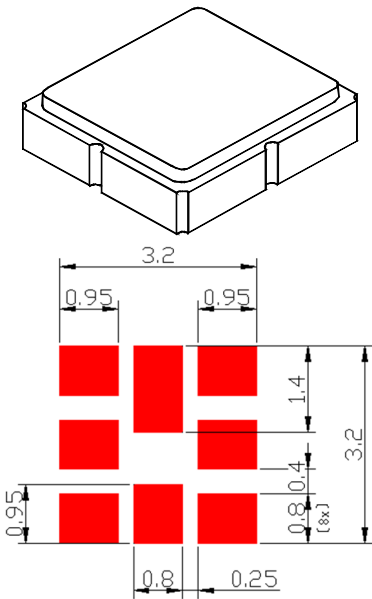
# L1 Characteristics



# L5 Characteristics



## 8-Terminal Ceramic Surface-Mount Case 3.0 x 3.0 mm Nominal Footprint



**PCB Footprint Top View**  
(dimensions in millimeters)

### Case and PCB Footprint Dimensions

Dimension	mm			Inches		
	Min	Nom	Max	Min	Nom	Max
A	2.87	3.00	3.13	0.113	0.118	0.123
B	2.87	3.00	3.13	0.113	0.118	0.123
C	-	-	1.40	-	-	0.055
D	0.79	0.92	1.05	0.031	0.036	0.041
E	0.62	0.75	0.88	0.024	0.029	0.034
F	0.47	0.60	0.73	0.018	0.024	0.029
G	0.47	0.60	0.73	0.018	0.024	0.029
H	1.07	1.20	1.33	0.042	0.047	0.052

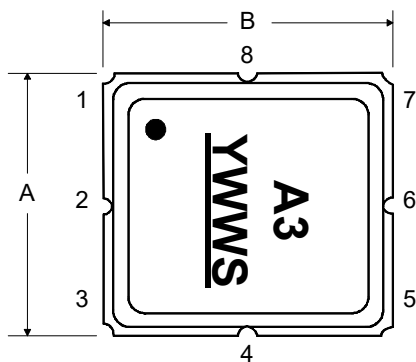
### Test Circuit

Connection	Terminals
Input	2
L1 Band Output	5
L5 Band Output	7
Ground	1, 3, 4, 6, 8

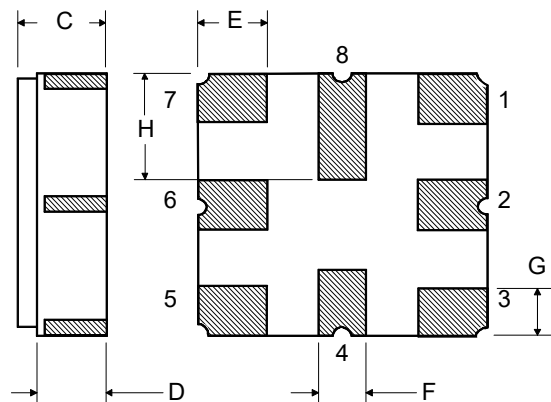
### Case Materials

Materials	
Solder Pad Plating	0.3 to 1.0 $\mu\text{m}$ Gold over 1.27 to 8.89 $\mu\text{m}$ Nickel
Lid Plating	2.0 to 3.0 $\mu\text{m}$ Nickel
Body	$\text{Al}_2\text{O}_3$ Ceramic

### TOP VIEW

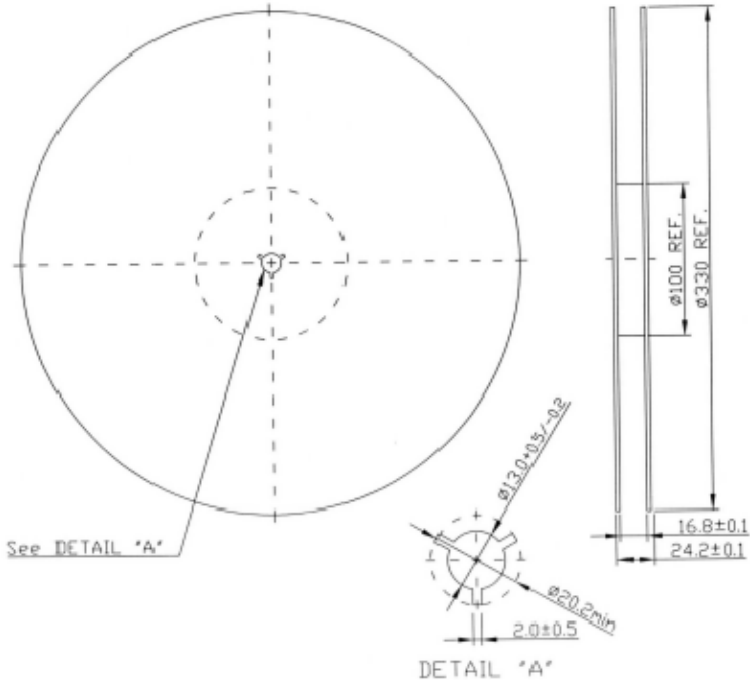


### BOTTOM VIEW



# Tape and Reel Specifications

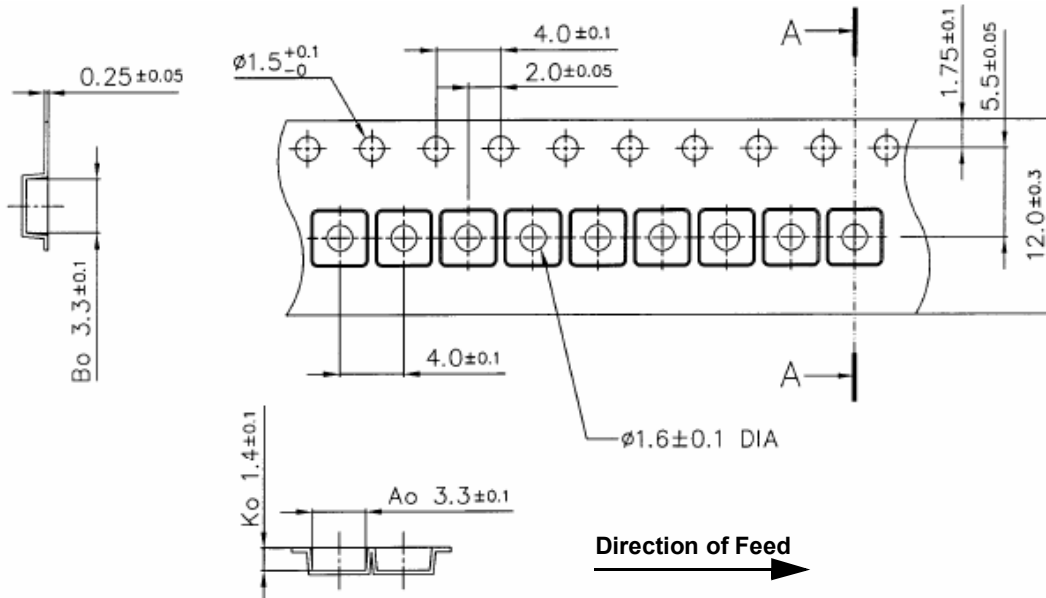
Tape and Reel Standard per ANSI/EIA-481



"B" Nominal Size		Quantity Per Reel
Inches	millimeters	
7	178	500
13	330	3000

Carrier Tape Dimensions	
Ao	3.30 mm
Bo	3.30 mm
Ko	1.4 mm
Pitch	4.0 mm
W	12.0 mm

## COMPONENT ORIENTATION and DIMENSIONS



## 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 (10 seconds).
4. Time: 5 times maximum.

