

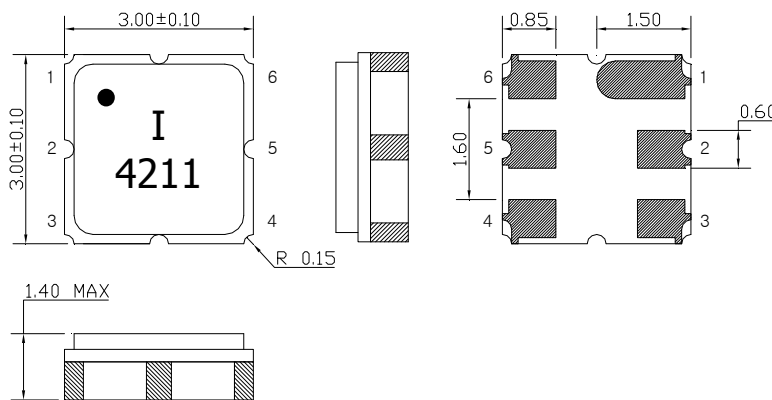
# SAW Bandpass Filter F4211



## Features

- RF bandpass filter
- No matching 50Ω single-ended operation
- Ceramic Surface Mounted Device (SMD) Package (3.0mm × 3.0mm)
- RoHS/RoHS2 (2015/863/EU) Compliant

## Package Dimensions



Dimensions shown are nominal in millimeters

Body : Al<sub>2</sub>O<sub>3</sub> Ceramic

Lid : Kovar, Ni Plated

Terminations : Au plating 0.3 ~ 1.0 um, Over a 1.27 ~ 8.89 um  
Ni Plating

### Pin Configuration

2	Input
5	Output
1, 3, 4, 6	Ground

## Maximum Ratings

Parameter	Unit	Minimum	Typical	Maximum
Operating Temperature Range	°C	-30	25	80
Storage Temperature Range	°C	-40	25	85
DC Voltage	V	-	-	7.5
Power Handling Capability	dBm	-	-	24

Electrostatics Sensitive Device (ESD)

	<b>ITF Co., Ltd.</b> 102-901, 22, Samjak-ro, Ojeong-gu, Bucheon-si, Gyeonggi-do, Korea, 14501	Part No.	F4211	
		Rev. Date	2019-07-10	
		Rev.	NRTK03-AS05	1/9

# SAW Bandpass Filter F4211




## Specifications

Fc = 421.9 MHz

		Minimum	Typical	Maximum
Center Frequency ( Fc )	MHz	-	421.9	-
Insertion Loss ( Fc ± 0.5 MHz )	dB	-	2.0	3.0
Amplitude Ripple ( Fc ± 0.5 MHz )	dB	-	0.3	1.0
VSWR ( Fc ± 0.5 MHz )		-	1.5	2.0
Absolute attenuation				
400.5 MHz	dB	45	55	-
443.3 MHz		40	50	-
Input/Output impedance	Ohm	-	50	-

### Notes :

- 1) All specifications are based on the matching schematic shown below, measured by Agilent Network analyzer and full 2 port calibration.
- 2) Electrical margin has been built into the design to account for the variations due to temperature drift and manufacturing tolerances

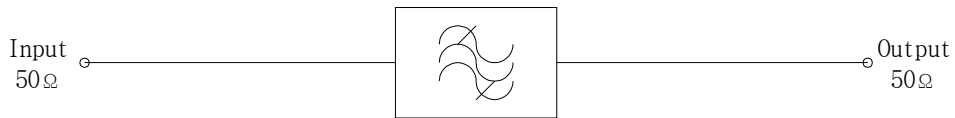
 Integrated Technology Future	<b>ITF Co., Ltd.</b> 102-901, 22, Samjak-ro, Ojeong-gu, Bucheon-si, Gyeonggi-do, Korea, 14501	Part No.	F4211	
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## Matching Schematic

( Actual matching values may vary due to PCB layout and parasitics )



## Marking Configuration

●<sup>1)</sup>  
I<sup>2)</sup>  
4211<sup>3)</sup>

1) Pad Number 1 Index

2) Manufacturer name

3) Marking Number

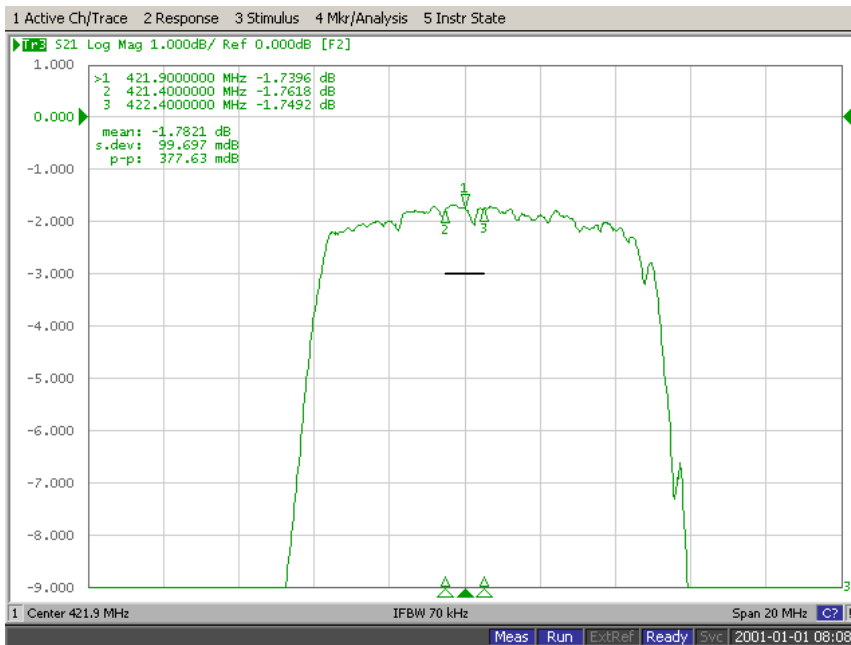
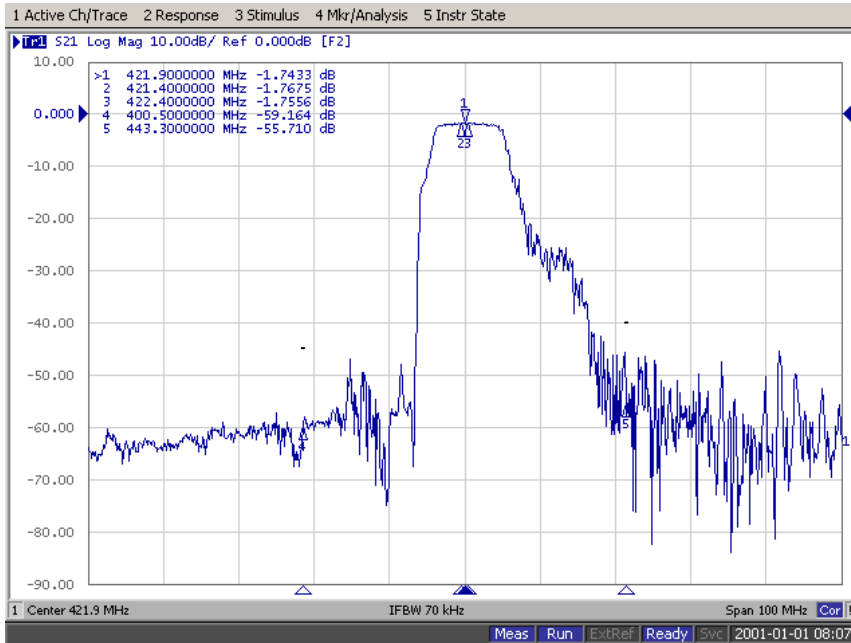
\* Ink or Laser Marking available

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# SAW Bandpass Filter F4211



## Typical Performance ( at 25°C )

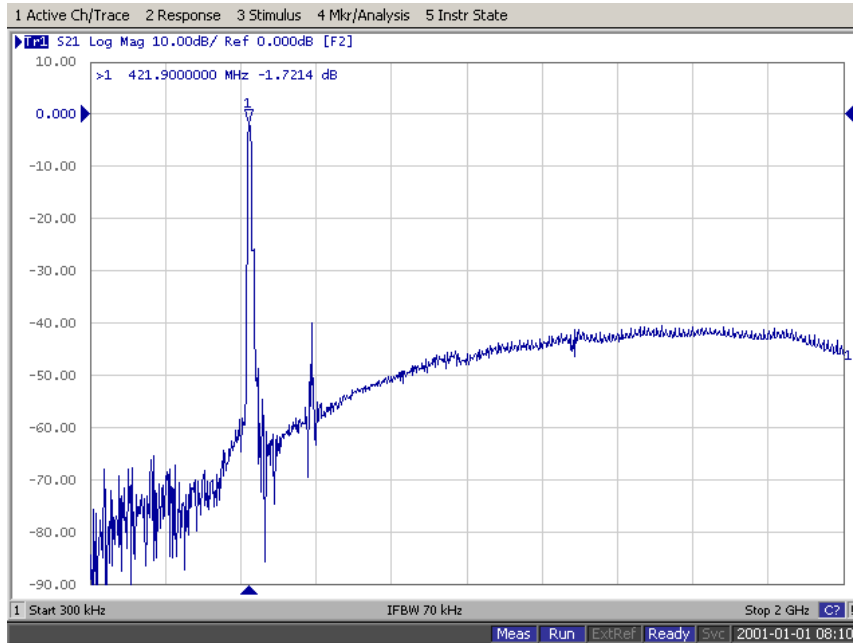



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## Typical Performance ( at 25°C )

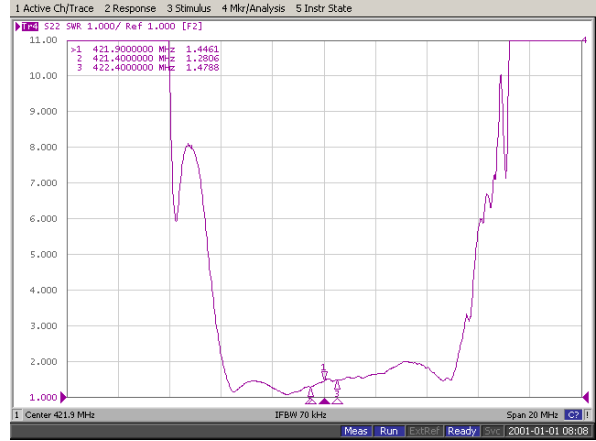
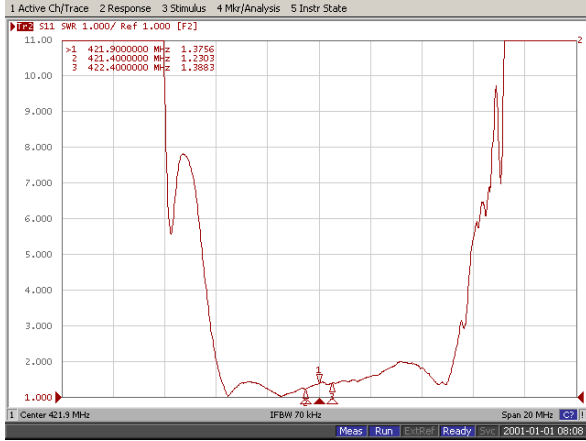


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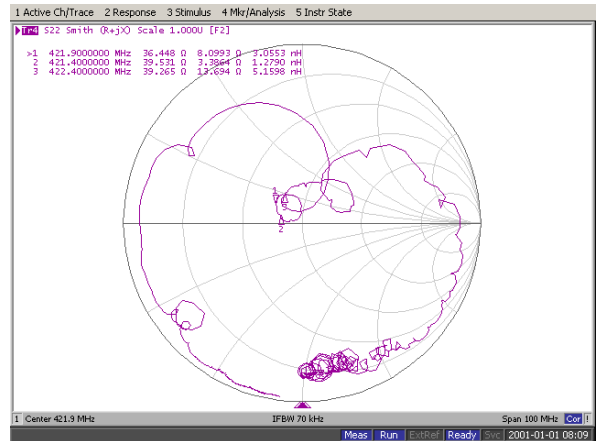
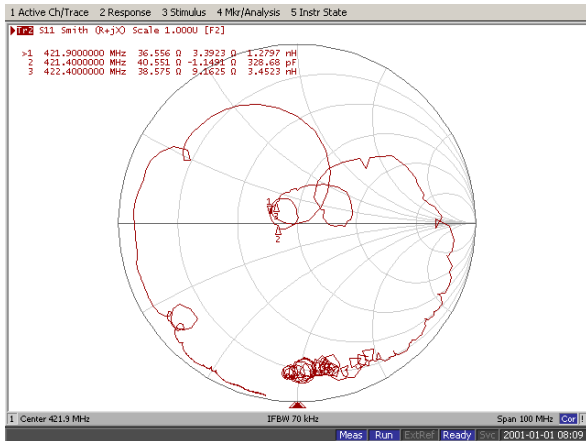
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## Input / Output VSWR Charts



## Input / Output Smith Charts



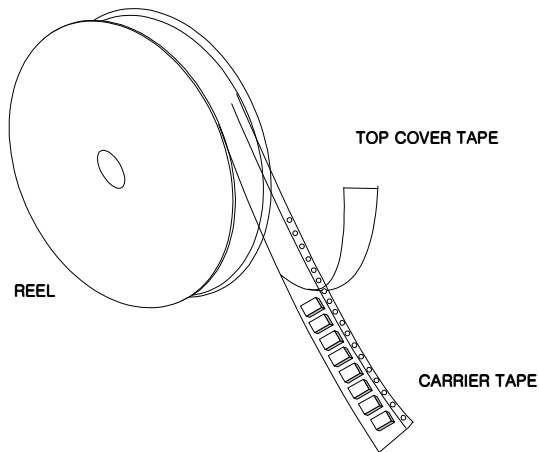
	<p align="center"><b>ITF Co., Ltd.</b> 102-901, 22, Samjak-ro, Ojeong-gu, Bucheon-si, Gyeonggi-do, Korea, 14501</p>	Part No.	F4211	
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# SAW Bandpass Filter F4211



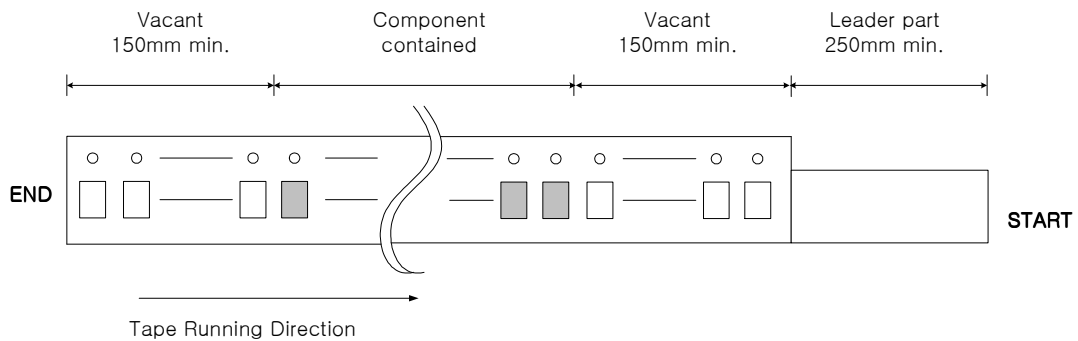
## Packing Specification

1. Reeling Quantity : 1000 pcs / reel
2. Taping Structure : The tape shall be wound around the reel in the direction shown below.



## Tape Specification

1. Leader part and vacant position specification

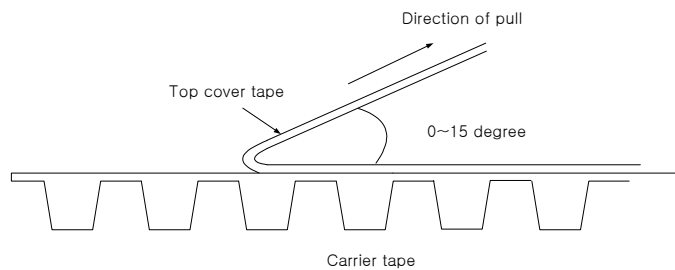


2. Tensile strength of carrier tape

4.4N/mm width

3. Top cover tape adhesion

- 1) pull off angle : 0~15°
- 2) speed : 300mm/min
- 3) force : 20~70g

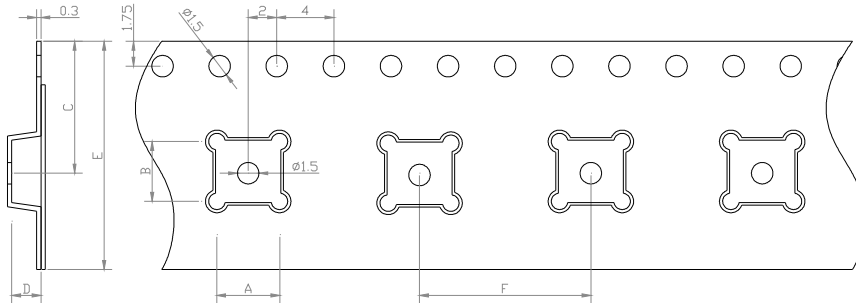


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# SAW Bandpass Filter F4211

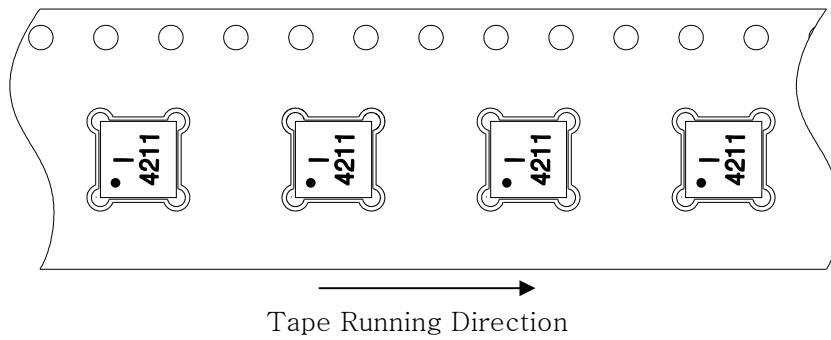


## Carrier Tape Dimensions [unit : mm]

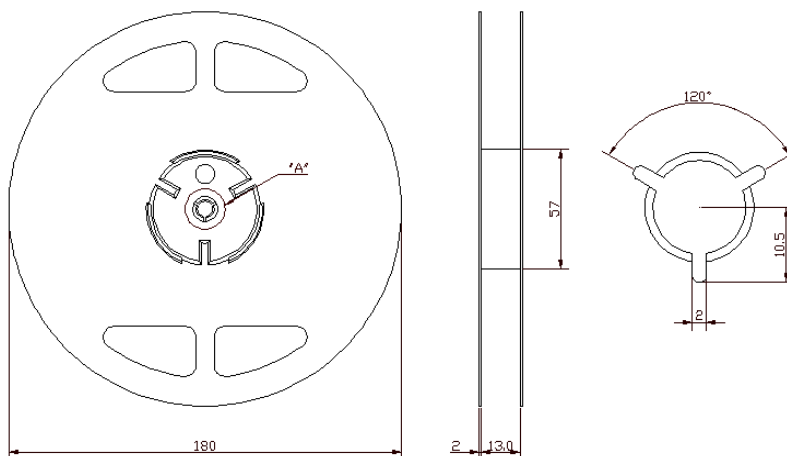


A	3.40 ± 0.1
B	3.40 ± 0.1
C	7.25 ± 0.1
D	1.70 ± 0.1
E	12.00 ± 0.1
F	8.00 ± 0.1

## Part Direction



## Reel Dimensions [unit : mm]



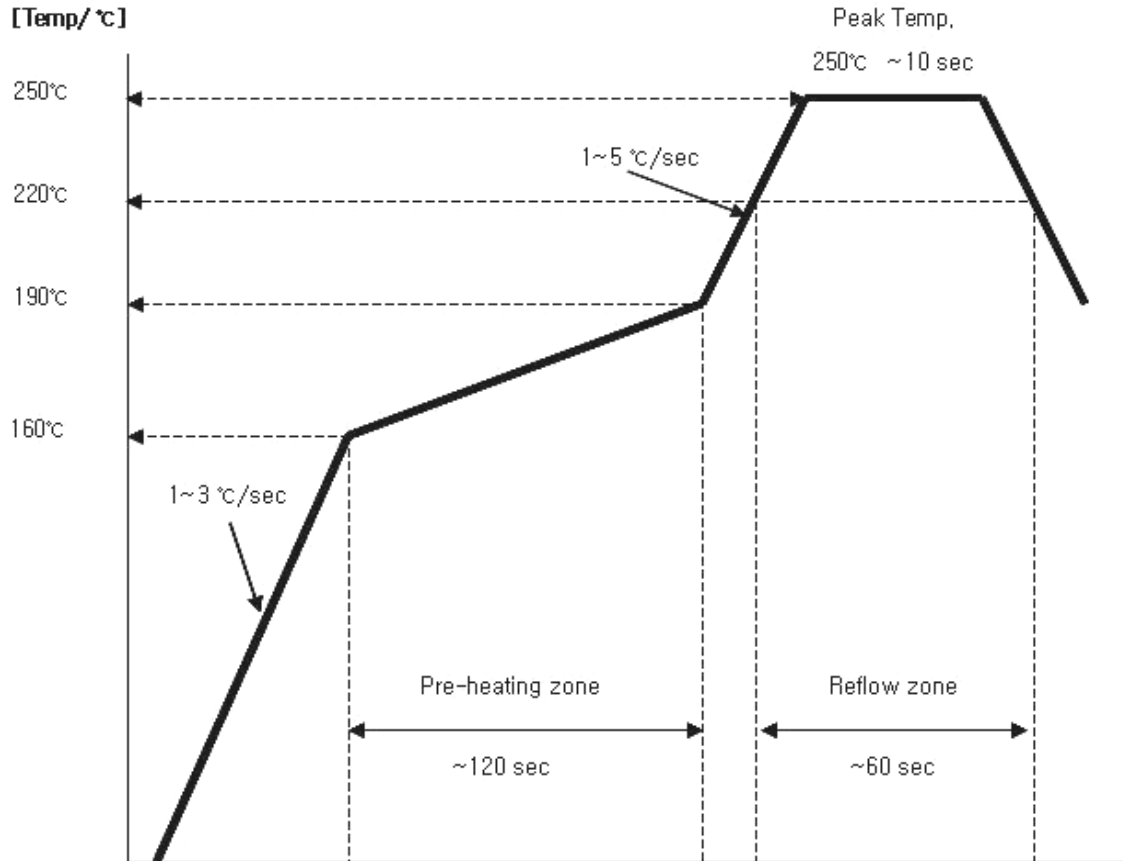
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## Reflow Condition



Comment) The quality is guaranteed under this temperature conditions on 2 times solder reflows

## Cautions

1. This is a hermetic device.

MSL (Moisture Sensitive Level) is the 1st level

2. This is an electrostatic sensitive device. Please avoid static voltage during operation and storage.

ESD (Electrostatic Discharge ) Rating is class 0. (Test : HBM-Human Body Model)

3. Ultrasonic cleaning shall be avoided.

4. This device should not be used in any type of fluid such as water, oil , organic solvent ,etc.

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