

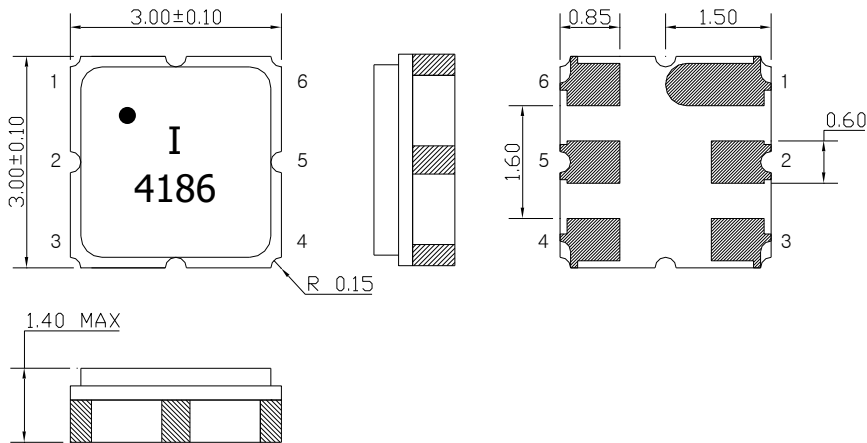
# SAW Bandpass Filter F4186



## Features

- RF bandpass filter
- Usable bandwidth 9 MHz
- 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	Case ground

## Maximum Ratings

Parameter	Unit	Minimum	Typical	Maximum
Operating Temperature Range	°C	-35	25	85
Storage Temperature Range	°C	-40	-	85
Power Handling Capability	dBm	-	-	20

Electrostatics Sensitive Device (ESD)

	<b>ITF Co., Ltd.</b> 102-901, 22, Samjak-ro, Ojeong-gu, Bucheon-si, Gyeonggi-do, Korea, 14501	Part No.	F4186	
		Rev. Date	2020-10-06	
		Rev.	NRUA05-AS08	1/7

# SAW Bandpass Filter F4186



## Specifications

Fc = 418.0MHz


Terminating source impedance : 50Ω

Terminating load impedance : 50Ω

		Minimum	Typical	Maximum
Center Frequency ( Fc )	MHz	-	418.0	-
Insertion Loss ( Fc ± 3.0 MHz )	dB	-	2.0	4.0
Amplitude Ripple ( Fc ± 3.0 MHz )	dB	-	0.5	2.0
Absolute Group Delay ( Fc )	nsec	-	90	-
Group Delay Variation ( Fc ± 3.0 MHz )	nsec	-	7	-
VSWR ( Fc ± 3.0 MHz )		-	2.0	2.5
Absolute Attenuation	dB			
368.0 MHz ~ 403.0 MHz		45	55	-
443.0 MHz ~ 468.0 MHz		45	55	-
Temperature Coefficient of Frequency	ppm/°C	-	-40	-

### 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
- 3) All attenuation measurements are measured relative to insertion loss

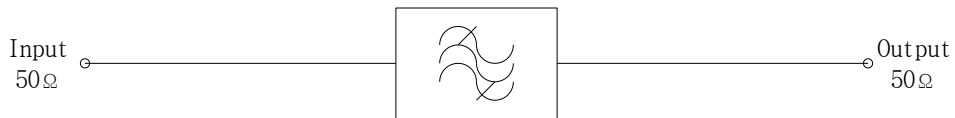
 Integrated Technology Future	<b>ITF Co., Ltd.</b> 102-901, 22, Samjak-ro, Ojeong-gu, Bucheon-si, Gyeonggi-do, Korea, 14501	Part No.	F4186	
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## Matching Schematic

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



## Marking Configuration

●<sup>1)</sup>  
I<sup>2)</sup>  
4186<sup>3)</sup>

1) Pad Number 1 Index

2) Manufacturer name

3) Marking Number

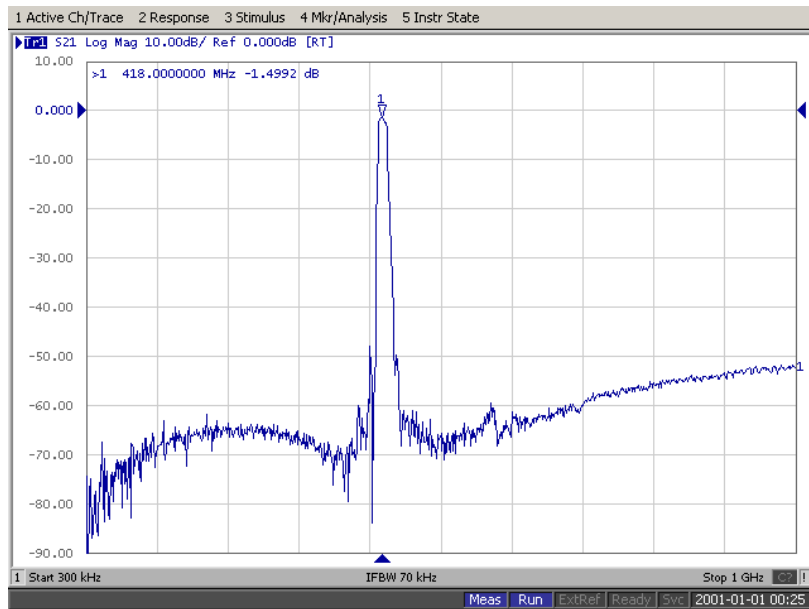
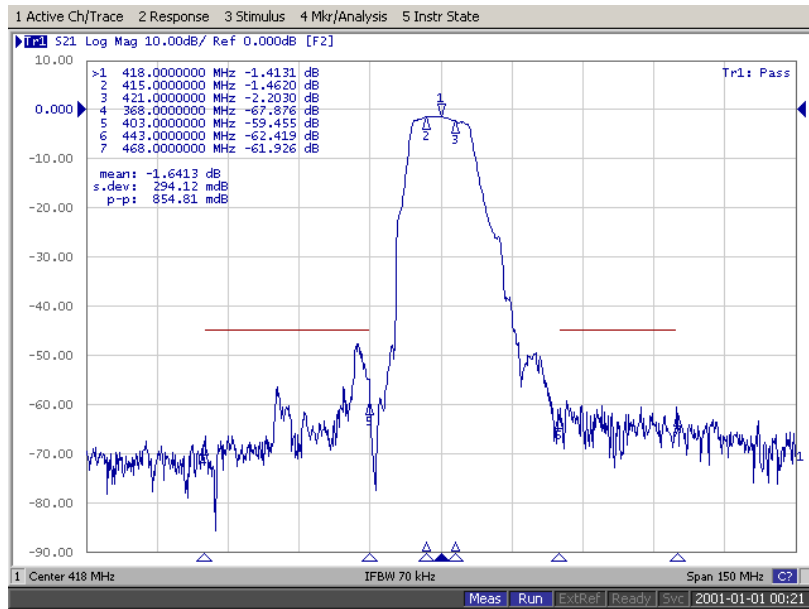
\* Ink or Laser Marking available


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## Typical Performance ( at 25°C )

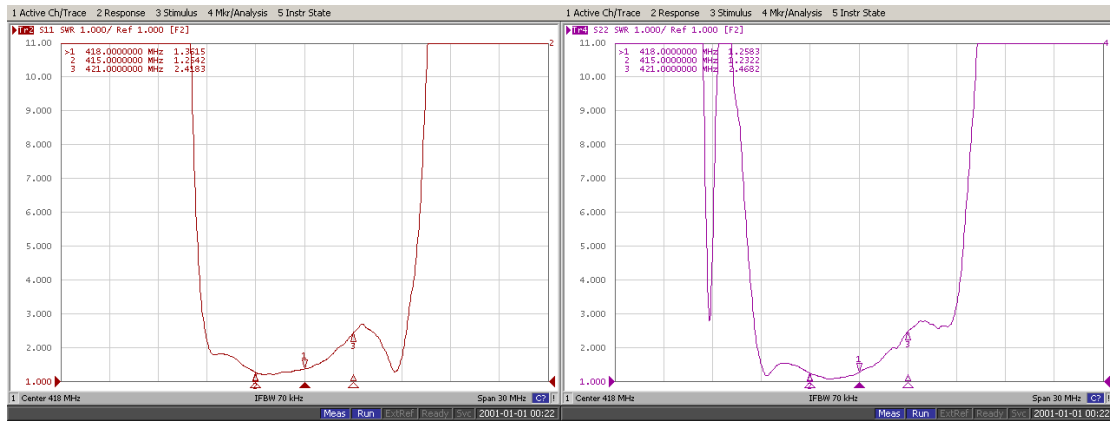


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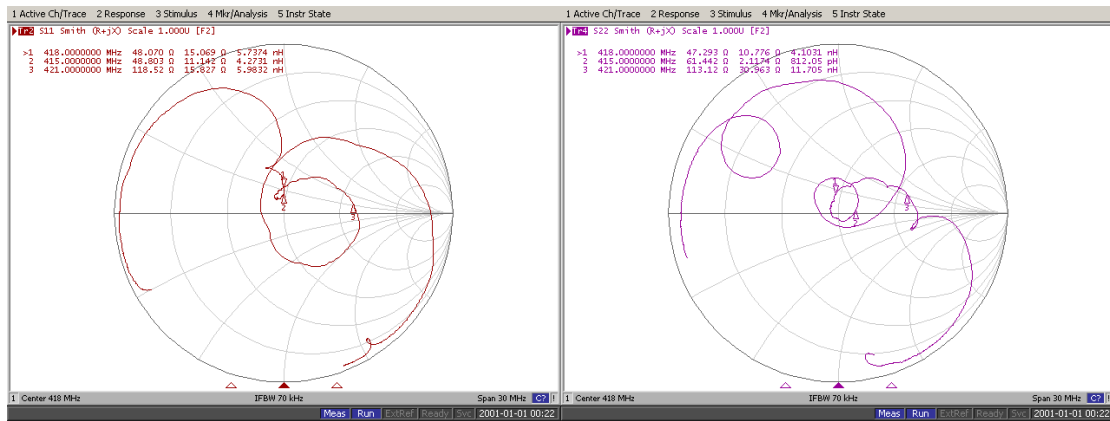
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## Input / Output VSWR Charts



## Input / Output Smith Charts



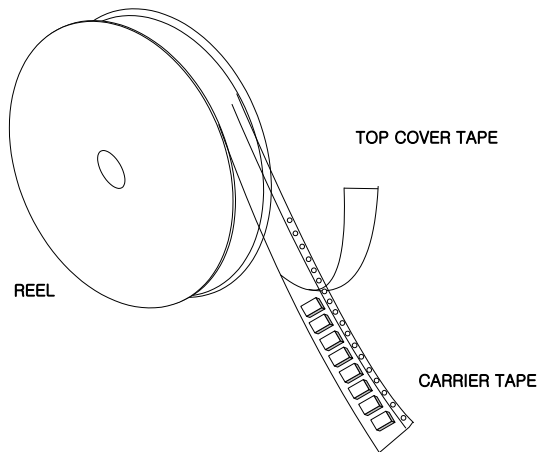
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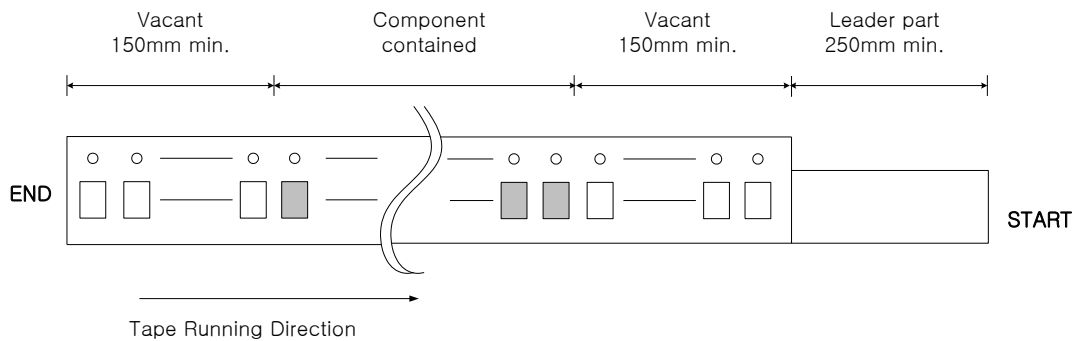
## Packing Specification

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

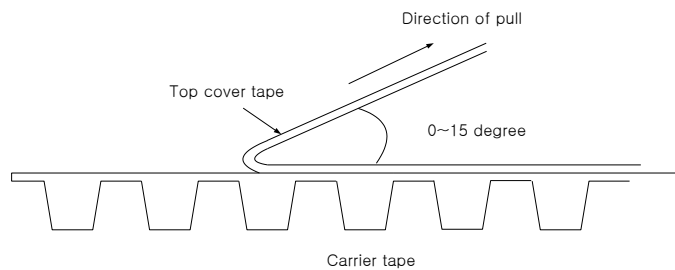


2. Tensile strength of carrier tape

4.4N/mm width

3. Top cover tape adhesion

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

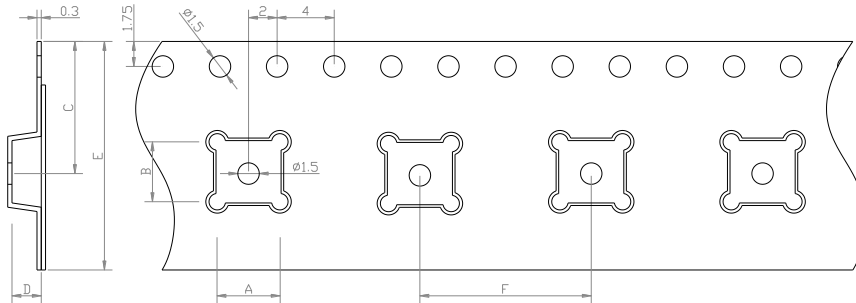


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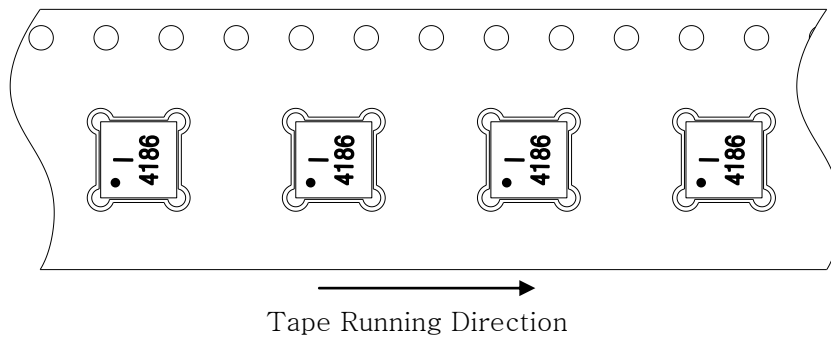


## Carrier Tape Dimensions [unit : mm]

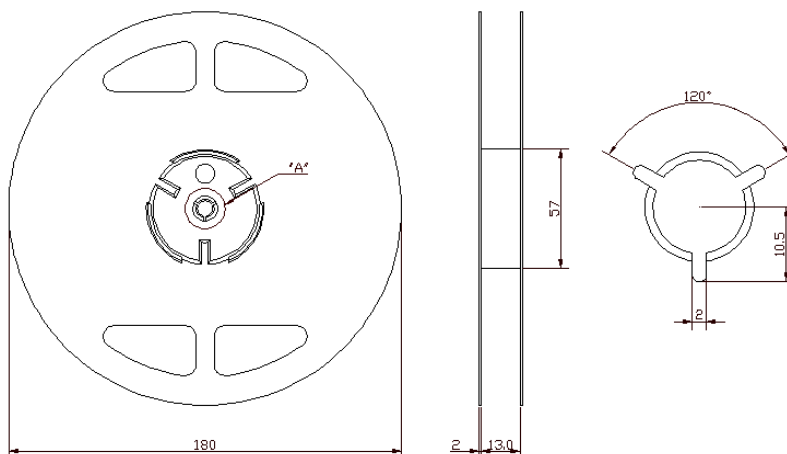


A	3.40 ± 0.1
B	3.40 ± 0.1
C	7.25 ± 0.1
D	1.70 ± 0.1
E	12.00 ± 0.1
F	8.00 ± 0.1

## Part Direction



## Reel Dimensions [unit : mm]



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