

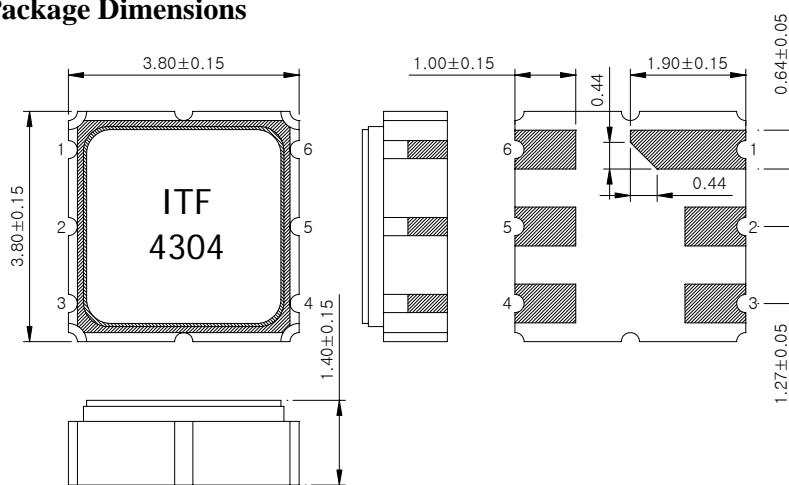
# SAW Bandpass Filter F4304



## Features

- RF bandpass filter
- High attenuation
- Usable bandwidth 4MHz
- No matching 50Ω single-ended operation
- Ceramic Surface Mounted Device (SMD) Package

## Package Dimensions



Dimensions shown are nominal in millimeters

Body :  $\text{Al}_2\text{O}_3$  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	-10	25	60
Storage Temperature Range	°C	-40	-	85
Power Handling Capability	dBm	-	-	-

Electrostatics Sensitive Device (ESD)

	<b>ITF Co., Ltd.</b> 102-901, Bucheon Technopark 364, Samjeong-Dong, Ojeong-Gu, Bucheon-City, Gyeonggi-Do, Korea 421-809	Part No.	F4304	
		Rev. Date	2004-11-01	
		Rev.	NS3010-AS02	1/7

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## Specifications

Fc = 430.0MHz

Terminating source impedance : 50Ω

Terminating load impedance : 50Ω

		Minimum	Typical	Maximum
Center Frequency ( Fc )	MHz	-	430.0	-
Insertion Loss (Fc +/- 2.0 MHz)	dB	-	3.0	4.0
Amplitude Ripple (Fc +/- 2.0 MHz)	dB	-	1.0	2.0
Absolute Group Delay at Fc	nsec	-	120	-
Group Delay Variation (Fc +/- 2.0 MHz)	nsec	-	50	-
VSWR (Fc +/- 2.0 MHz)		-	1.5	2.0
Relative Attenuation ... ~ Fc - 15 MHz Fc + 25 MHz ~ ...	dB	45 45	50 50	-
Temperature Coefficient of Frequency	ppm/°C	-	-32	-

### 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

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## Matching Schematic

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



## Marking Configuration

ITF<sup>1)</sup>  
4304<sup>2)</sup>

1) Manufacturer name

2) Marking Number

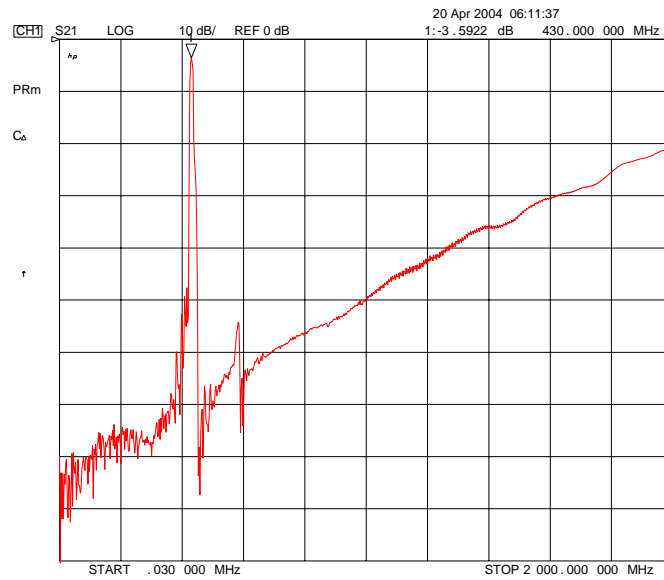
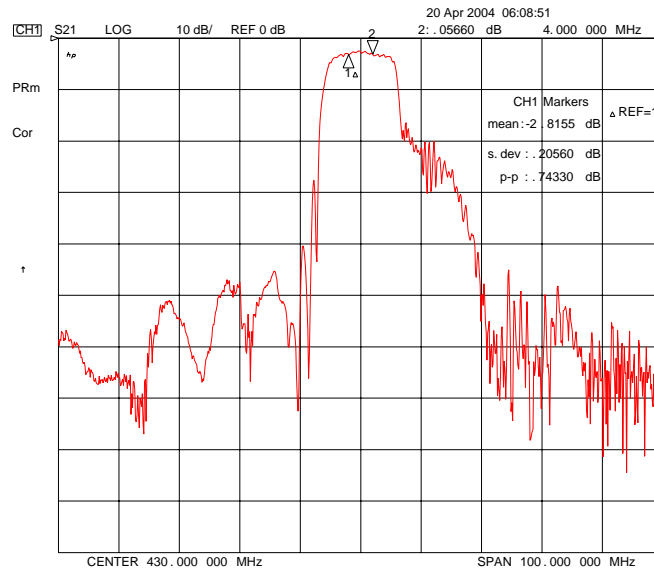
\* Ink or Laser Marking available


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## Typical Performance ( at 25°C )

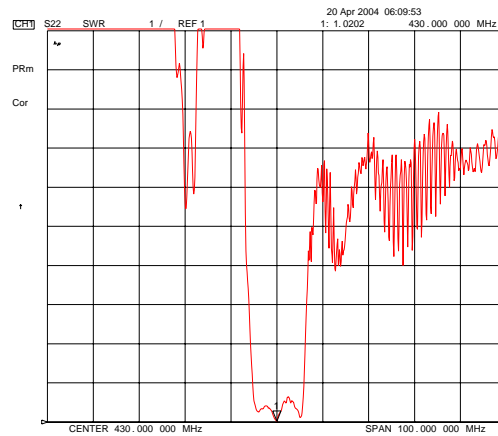
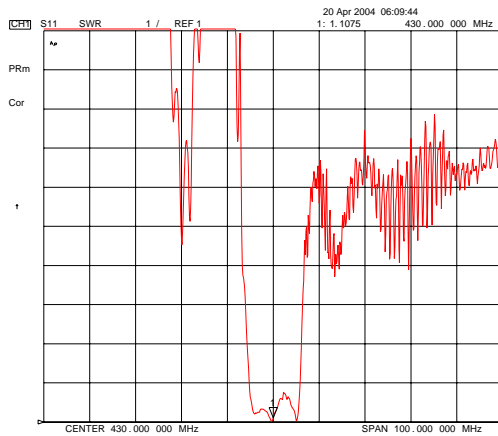


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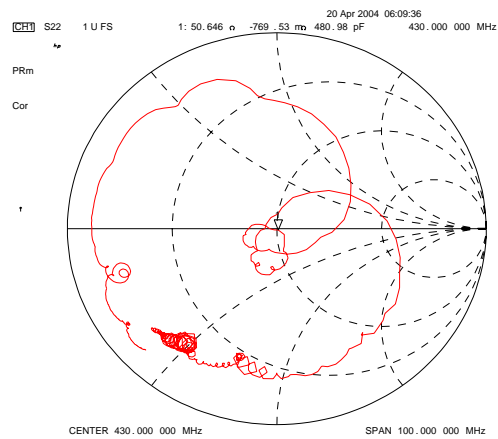
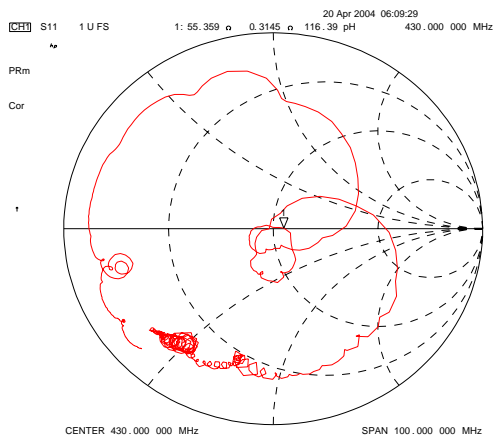
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## Input / Output VSWR Charts



## Input / Output Smith Charts



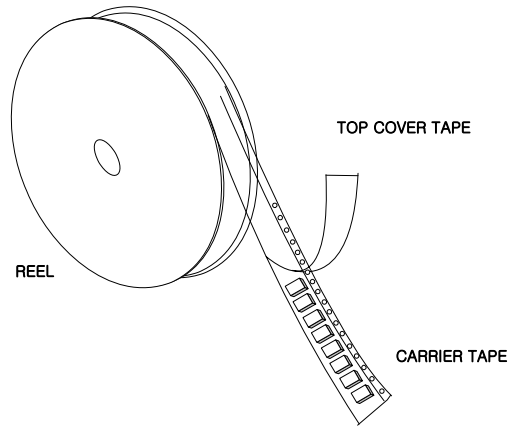
	<b>ITF Co., Ltd.</b> 102-901, Bucheon Technopark 364, Samjeong-Dong, Ojeong-Gu, Bucheon-City, Gyeonggi-Do, Korea 421-809	Part No.	F4304	
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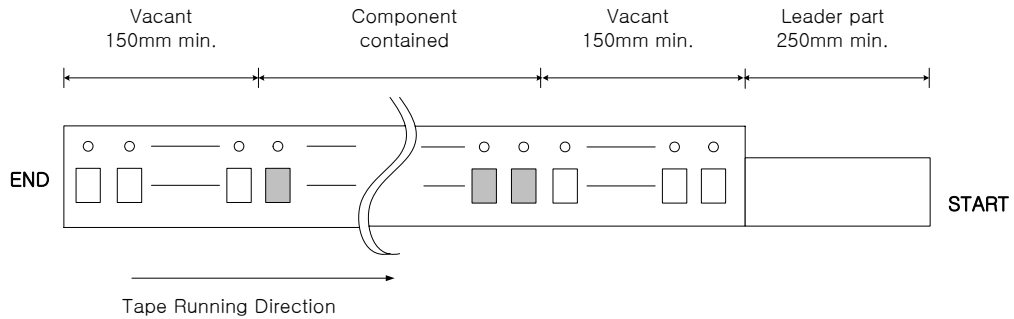
## Packing Specification

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

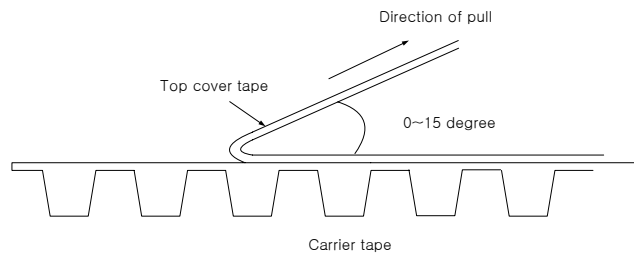


### 2. Tensile strength of carrier tape

4.4N/mm width

### 3. Top cover tape adhesion

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

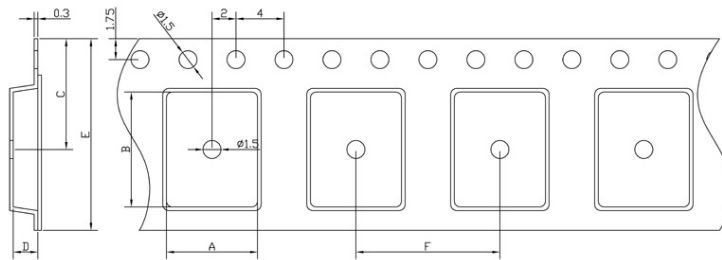


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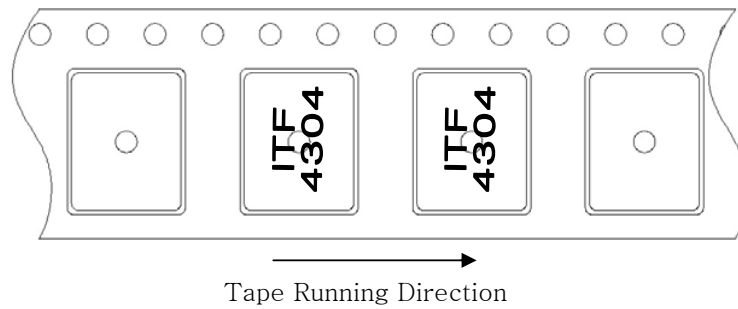


## Carrier Tape Dimensions [unit : mm]

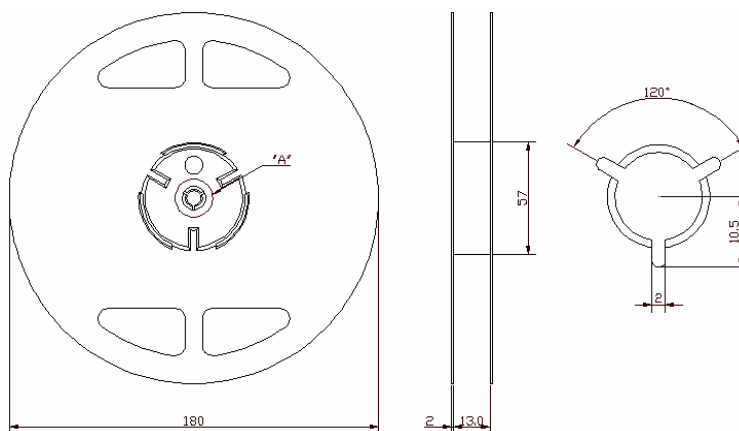


A	4.30 ± 0.1
B	4.30 ± 0.1
C	7.25 ± 0.1
D	1.70 ± 0.1
E	12.00 ± 0.1
F	8.00 ± 0.1

## Part Direction



## Reel Dimensions [unit : mm]



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