

# SAW Bandpass Filter F433A



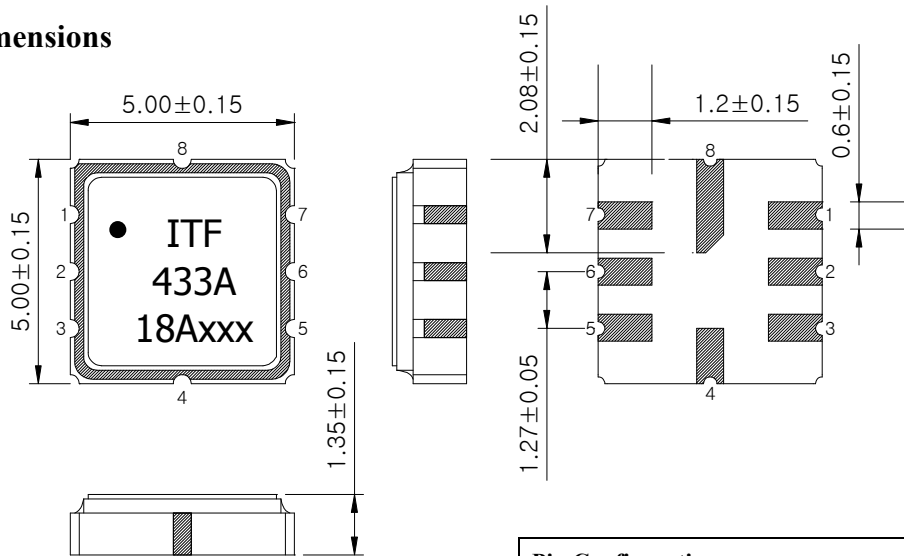
## Features

- RF bandpass filter for Remote Keyless Entry systems.
- Balanced or unbalance operation
- Ceramic Surface Mounted Device Package ( 5.0 mm × 5.0 mm )
- RoHS Compliant
- Electrostatic Sensitive Device (ESD)

**RoHS Compliant**

Tested by SGS Testing Korea

## 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
6	Output
1,3,4,5,7,8	To be grounded

## Maximum ratings

Parameter	Unit	Minimum	Typical	Maximum
Operalbe temperature range	℃	-45	25	120
Storage temperature range	℃	-45	25	120
DC voltage	V	-	-	6
Power handling capability	dBm	-	-	10

	<b>ITF Co., Ltd.</b> 102-901, Bucheon Technopark 364, Samjeong-Dong, Ojeong-Gu, Bucheon-City, Gyeonggi-Do, Korea 421-809	Part No.	F433A	
		Rev. Date	2018-06-21	
		Rev.	AS 01	1/7

# SAW Bandpass Filter F433A



## Specifications

Fc = 433.92 MHz


Operating Temperature Range : -45°C to +95°C

Typical Specification at 25°C

		Minimum	Typical	Maximum
Center frequency ( Fc )	MHz	-	433.92	-
Insertion Loss (433.78 ~ 434.06 MHz)	dB	-	2.4	3.0
Pass band (relative to $\alpha_{min}$ ) 433.78 ~ 434.06 MHz 433.74 ~ 434.10 MHz	dB	-	0.5	2.0
		-	0.8	3.0
Relative attenuation 10.00 ~ 380.00 MHz 380.00 ~ 414.00 MHz 414.00 ~ 427.00 MHz 427.00 ~ 431.52 MHz 431.52 ~ 432.90 MHz 432.90 ~ 433.10 MHz 433.10 ~ 444.50 MHz 444.50 ~ 450.00 MHz 450.00 ~ 810.00 MHz 810.00 ~ 1500.00MHz 1500.00 ~ 2500.00 MHz	dBc	55	60	-
		50	56	-
		46	52	-
		24	28	-
		15	20	-
		13	20	-
		25	30	-
		40	45	-
		45	46	-
		52	54	-
50	55	-		
Impedance for pass band matching Input : $Z_{IN} = R_{IN} \parallel C_{IN}$ Output : $Z_{OUT} = R_{OUT} \parallel C_{OUT}$	$\Omega \parallel pF$ $\Omega \parallel pF$	- -	290 $\parallel$ 1.8 290 $\parallel$ 1.8	- -

### 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

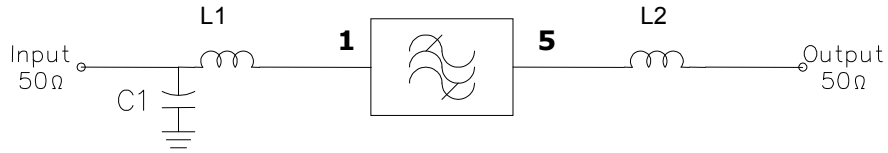
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## Matching schematic

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



$$L1 = L2 = 36 \text{ nH}, C1 = 4.3 \text{ pF}$$

(\* Note : 0805 Coilcraft CS series used for inductor )

## Marking configuration

- 1) ●
- ITF<sup>2)</sup>
- 433A<sup>3)</sup>
- 18Axxx<sup>4)</sup>

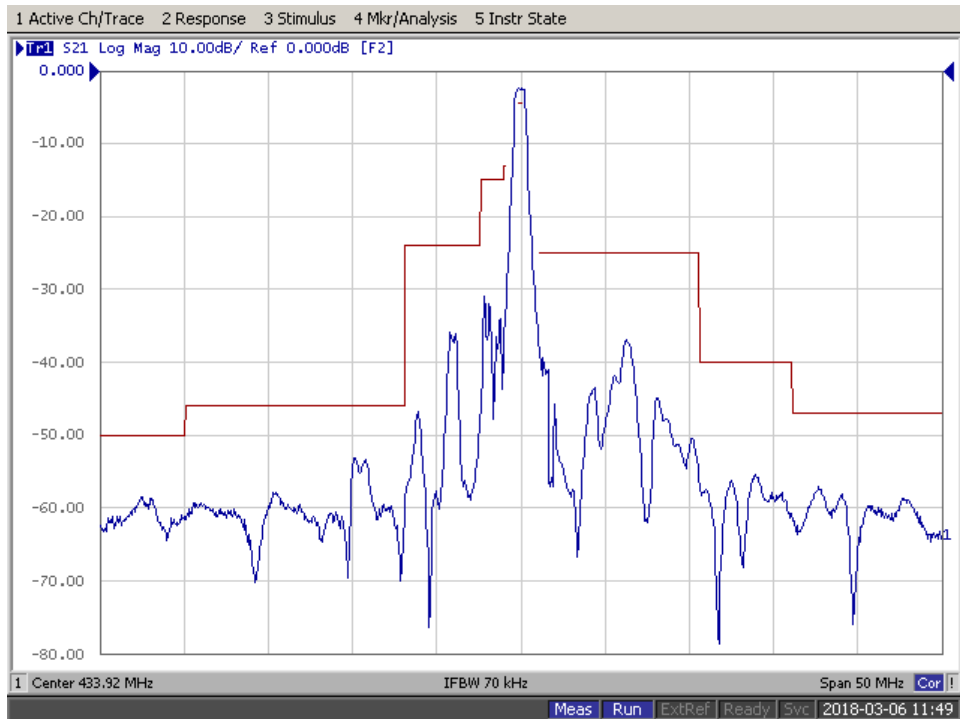
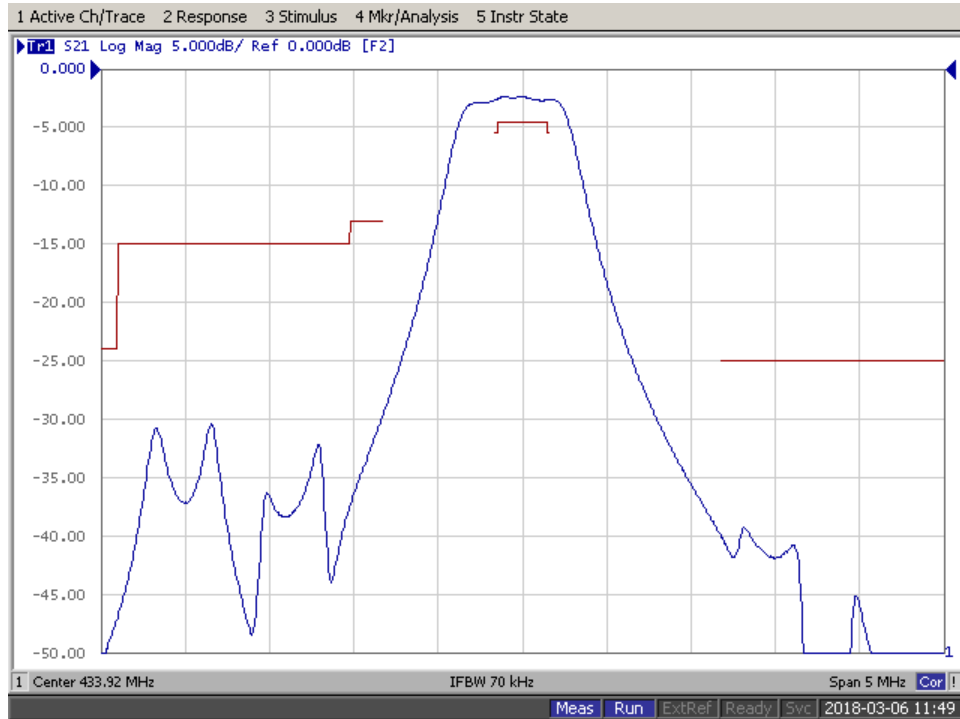
1) Pad Number 1 index
2) Manufacturer name
3) Marking
4) Lot Number


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# SAW Bandpass Filter F433A



## Frequency response ( at 25°C )

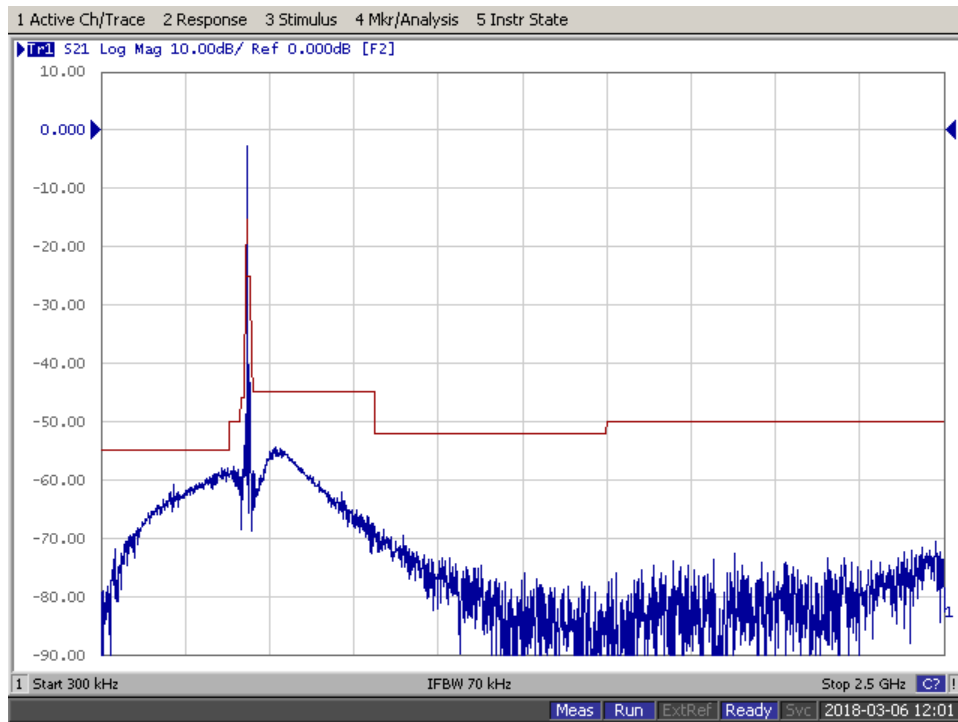



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# SAW Bandpass Filter F433A



## Frequency response ( wideband at 25°C )



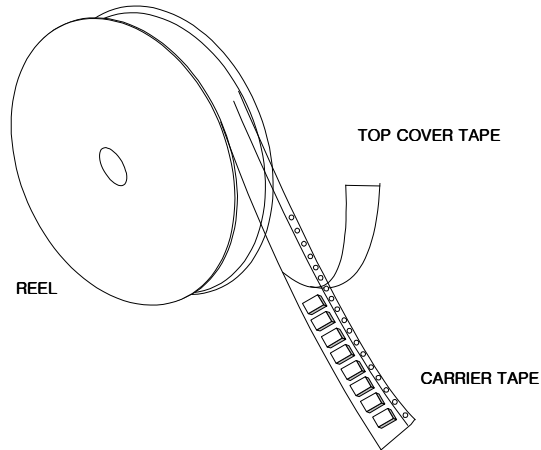
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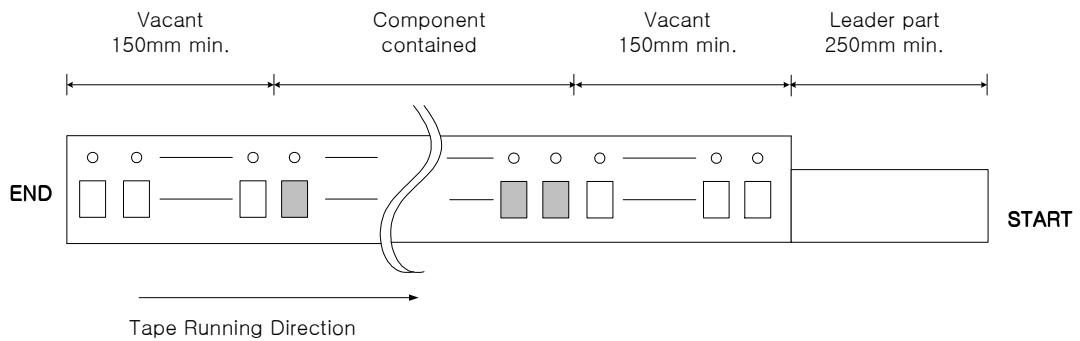
## Packing Specification

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

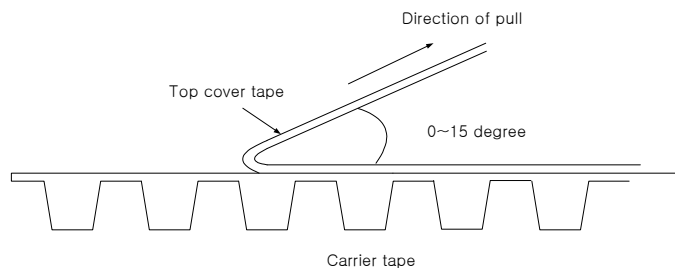


2. Tensile strength of carrier tape

4.4N/mm width

3. Top cover tape adhesion

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

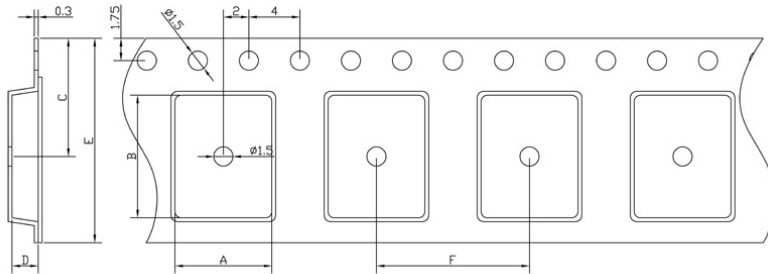


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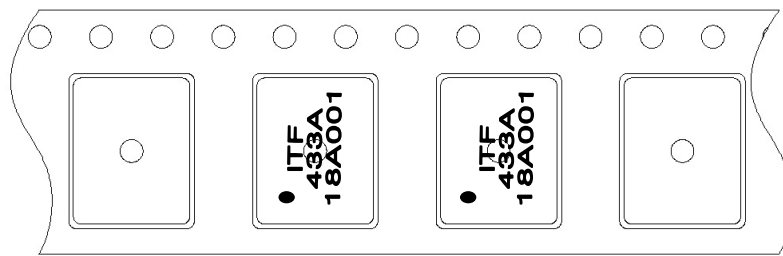


## Carrier Tape Dimensions [unit : mm]



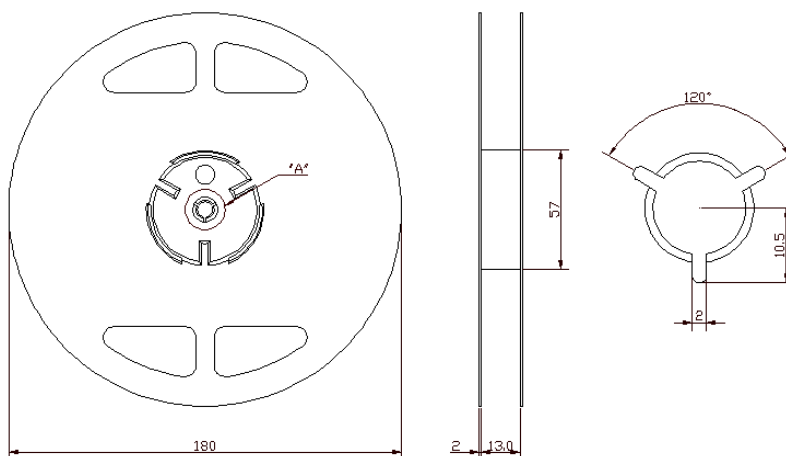
A	5.50 ± 0.1
B	5.50 ± 0.1
C	7.25 ± 0.1
D	1.95 ± 0.1
E	12.00 ± 0.1
F	8.00 ± 0.1


## Part Direction



→  
Tape Running Direction

## Reel Dimensions [unit : mm]



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