

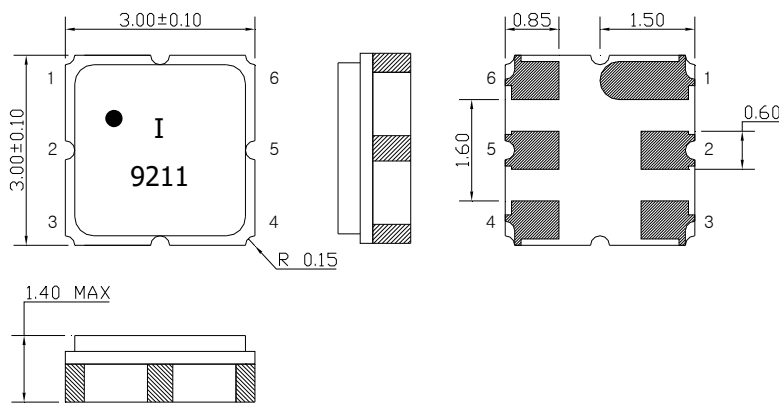
# SAW Bandpass Filter F9211



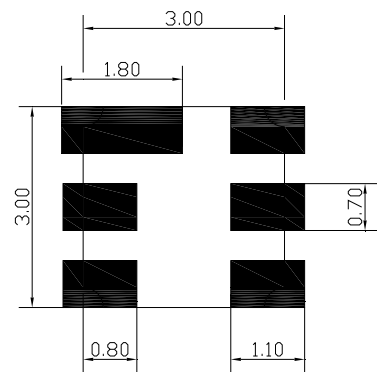
## Features

- RF band pass filter
- Usable bandwidth 13.0MHz
- No matching 50Ω single-ended operation
- Ceramic Surface Mounted Device (SMD) Package
- RoHS/RoHS2 (2015/863/EU) Compliant

## Package Dimensions



## Recommended Footprint



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
Operatable Temperature Range	°C	-40	25	85
Guaranteed performance temperature range	°C	0	25	55
Storage Temperature Range	°C	-40	-	85
Power Handling Capability (@ 55°C @ 10% duty cycle)	dBm	-	-	27

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.	F9211	
		Rev. Date	2020-06-02	
		Rev.	AS01	1/9

# SAW Bandpass Filter F9211



## Specifications

Fc = 921.5MHz


Terminating source impedance : 50Ω

Terminating load impedance : 50Ω

		Minimum	Typical	Maximum
Center Frequency (Fc)	MHz	-	921.5	-
Insertion Loss ( 915.0~928.0MHz )	dB	-	3.1	3.5
Amplitude Ripple ( 915.0~928.0MHz )	dB	-	0.75	1.0
Group Delay Variation ( 915.0~928.0MHz )	nsec	-	35	60
VSWR			1.5	2.0
Absolute Attenuation				
50.0 ~ 880.0 MHz		40	52	-
880.0 ~ 894.0 MHz		40	43	-
894.0 ~ 905.0 MHz		30	39	-
935.0 ~ 945.0 MHz	dB	20	25	-
945.0 ~ 960.0 MHz		30	45	-
960.0 ~ 2000.0 MHz		35	42	-
2000.0 ~ 2700.0 MHz		30	35	-
2700.0 ~ 3000.0 MHz		20	23	-
Temperature Coefficient of Frequency	ppm/°C	-	-36	-
Input/Output Impedance	Ohms	-	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

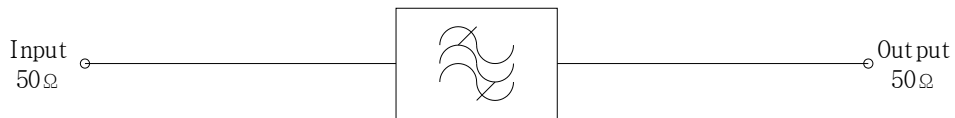
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## Matching Schematic

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



## Marking Configuration

●<sup>1)</sup>  
I<sup>2)</sup>  
9211<sup>3)</sup>

1) Pad Number 1 Index

2) Manufacturer name

3) Marking Number

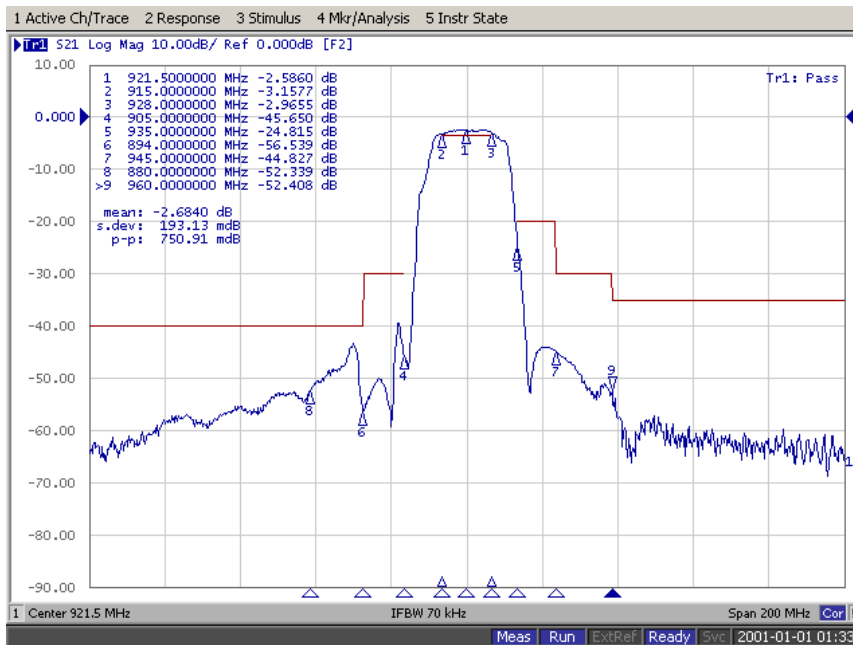
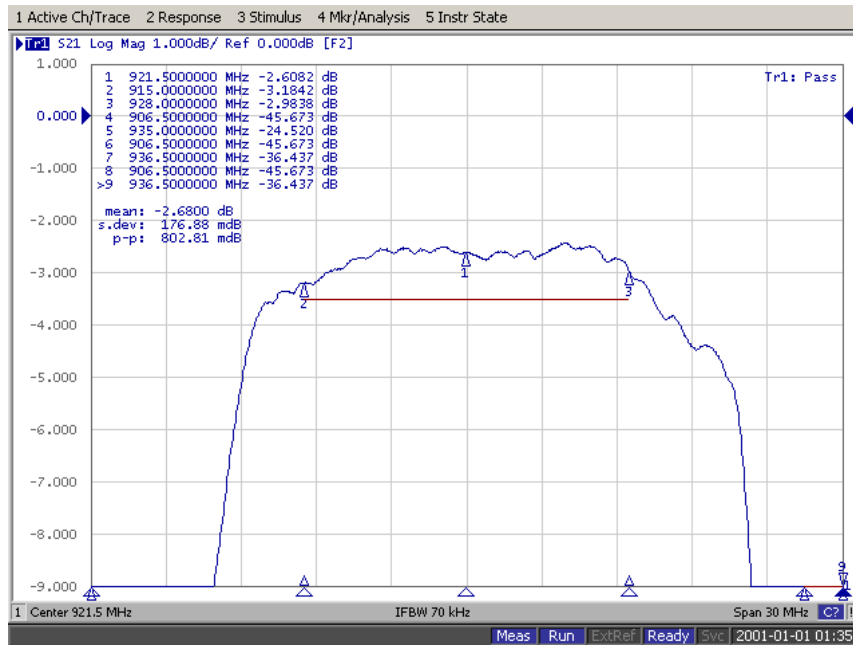
\* Ink or Laser Marking available

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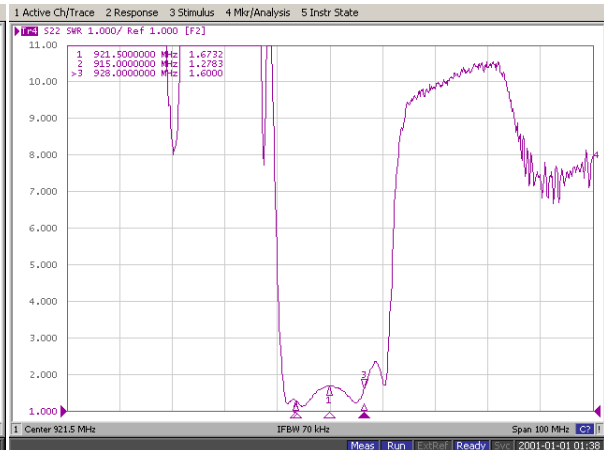
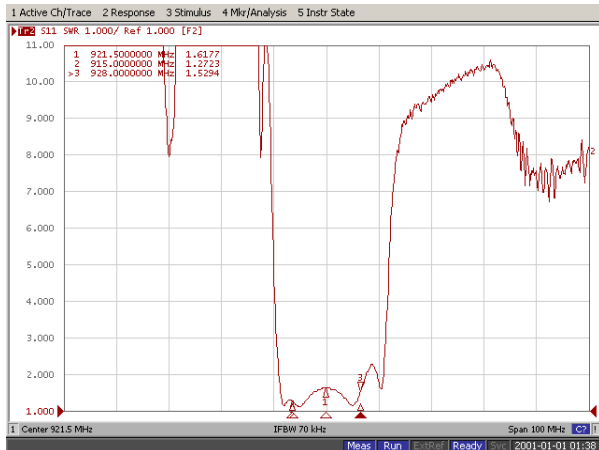
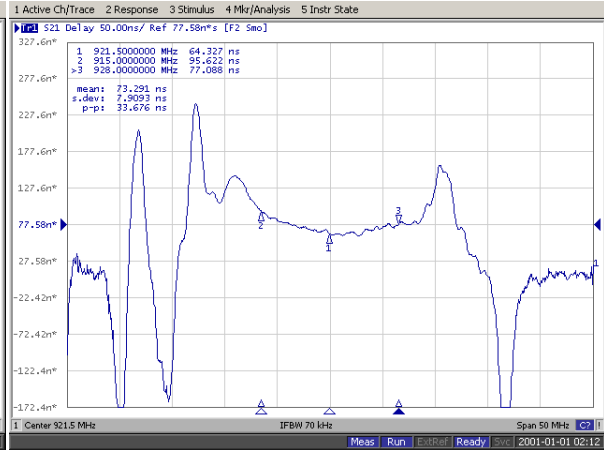
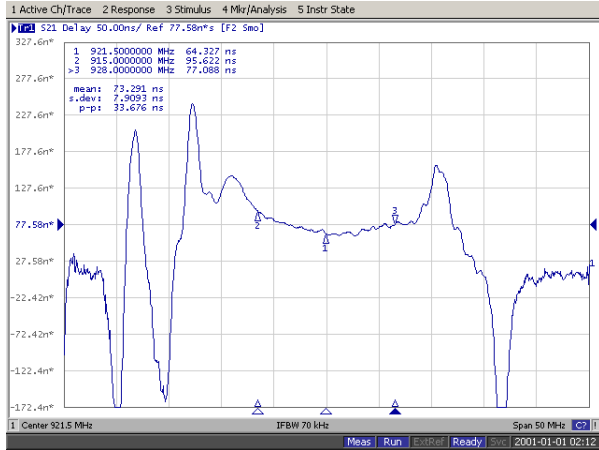


## Typical Performance ( at 25°C )



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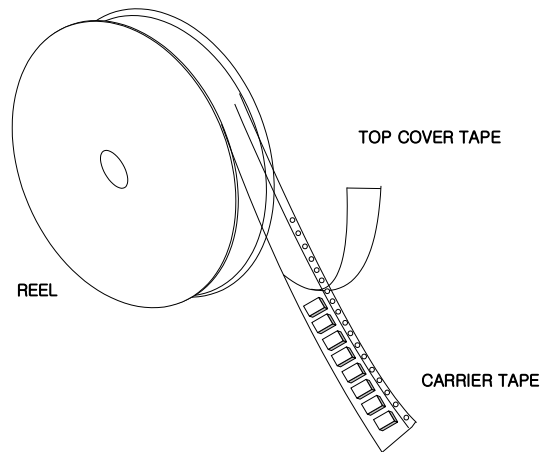
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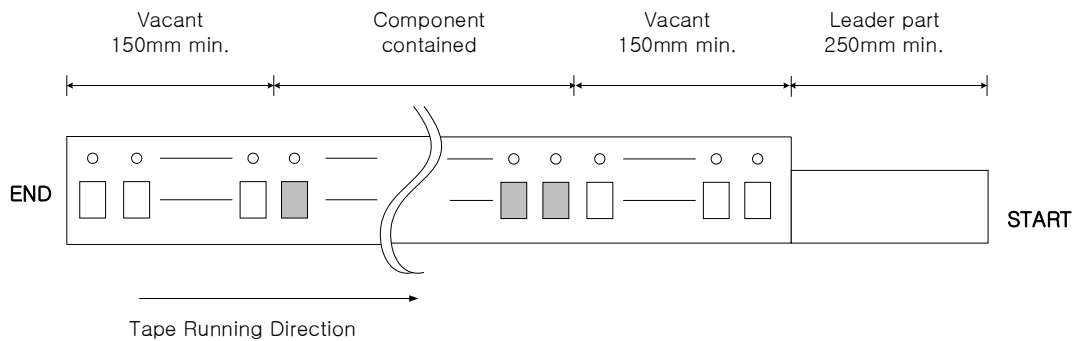
## Packing Specification

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

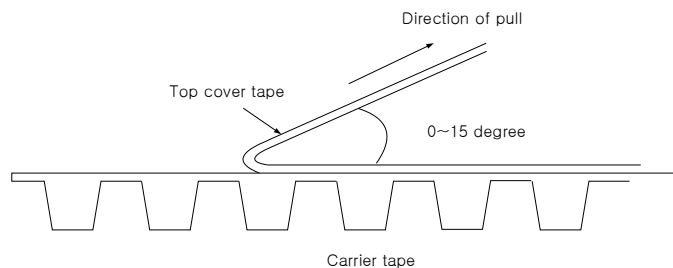


2. Tensile strength of carrier tape

4.4N/mm width

3. Top cover tape adhesion

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

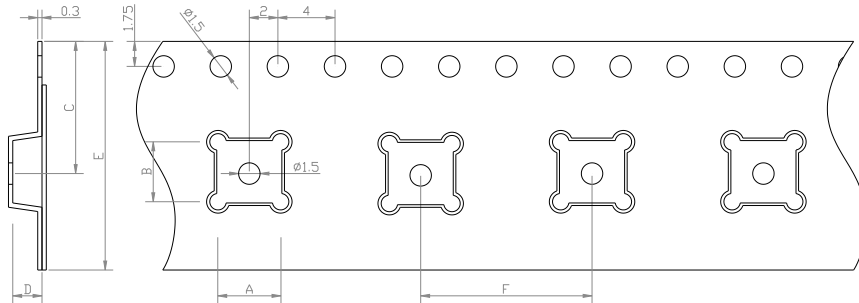


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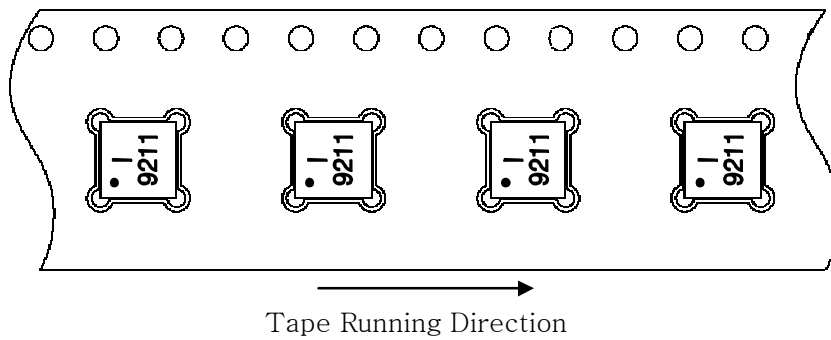


## Carrier Tape Dimensions [unit : mm]

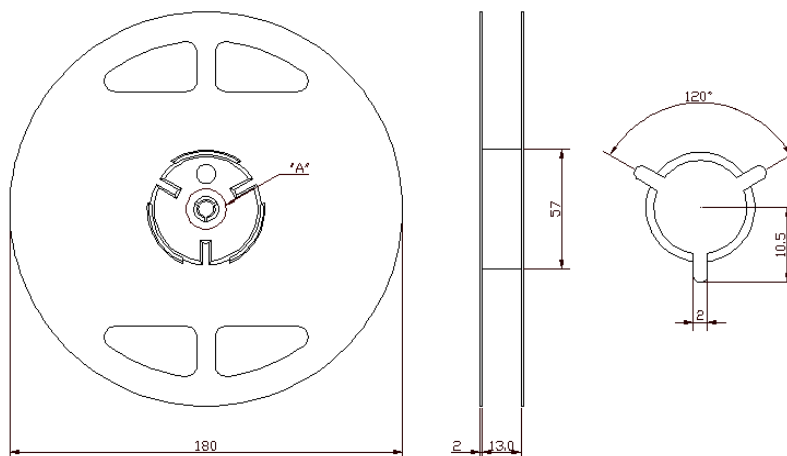


A	3.40 ± 0.1
B	3.40 ± 0.1
C	7.25 ± 0.1
D	1.70 ± 0.1
E	12.00 ± 0.1
F	8.00 ± 0.1

## Part Direction



## Reel Dimensions [unit : mm]



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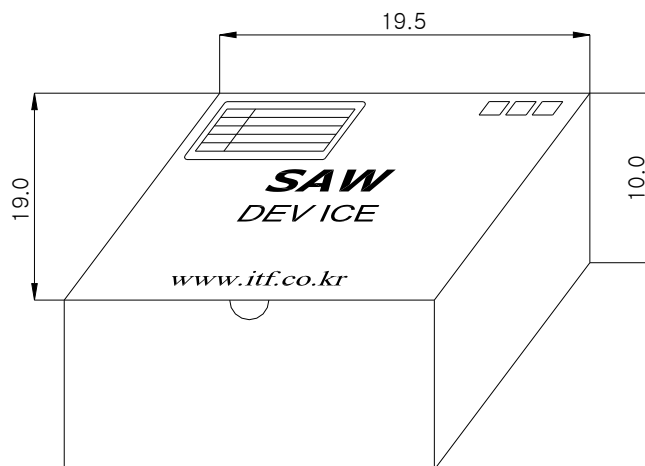
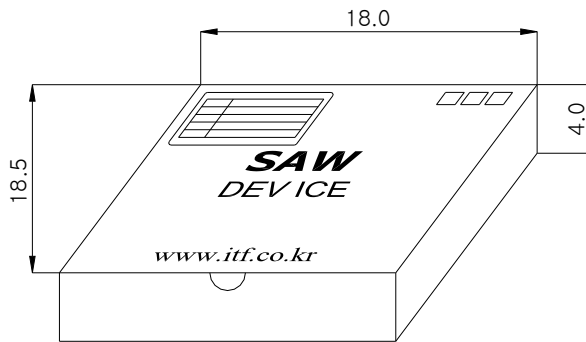
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## Label Form



## Packaging Box [unit : cm]



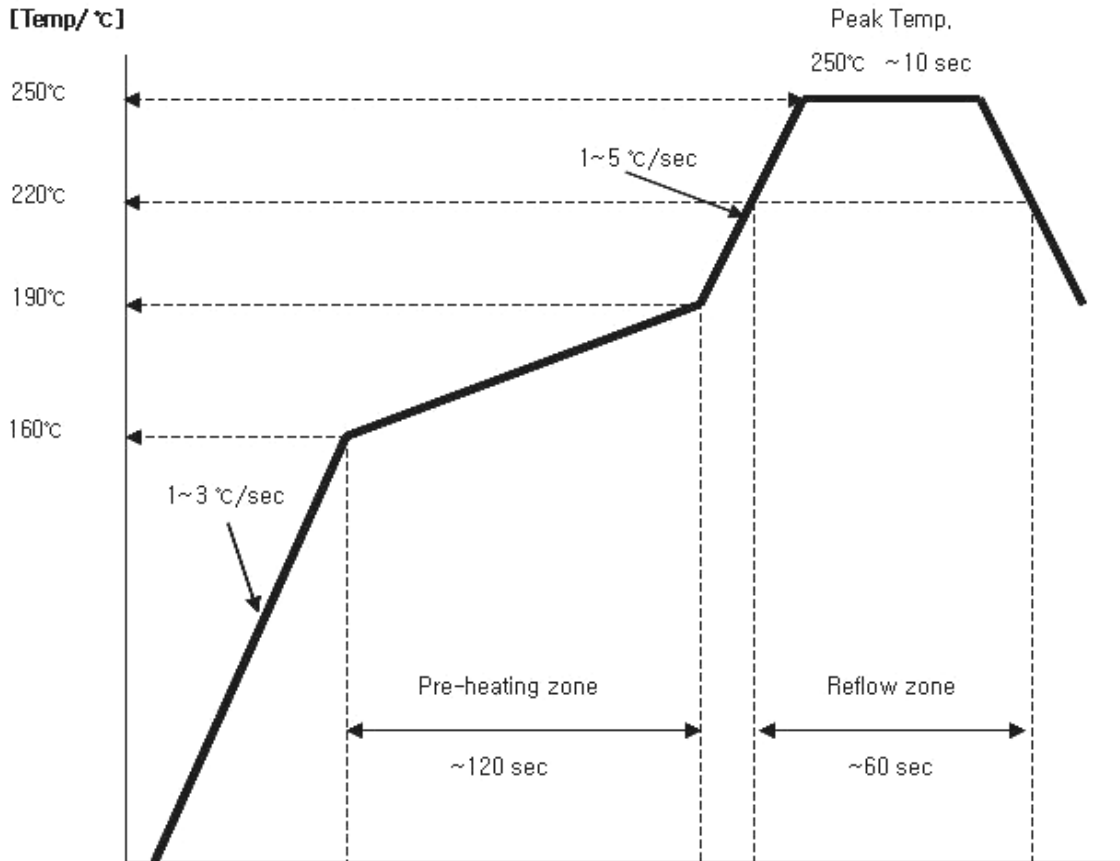
 Integrated Technology Future	<b>ITF Co., Ltd.</b> 102-901, Bucheon Technopark 364, Samjeong-Dong, Ojeong-Gu, Bucheon-City, Gyeonggi-Do, Korea 421-809	Part No.	F9211	
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## Reflow Condition



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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