

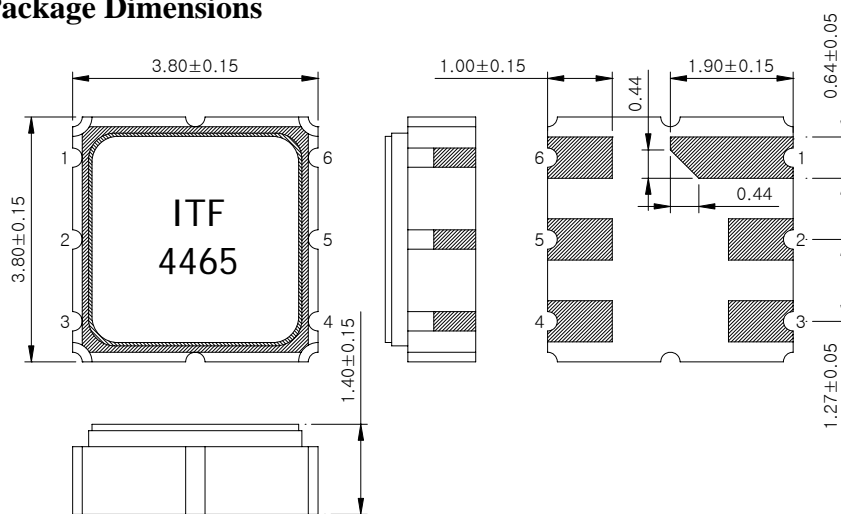
# SAW Bandpass Filter F4465



## 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 :  $Al_2O_3$  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><br>102-901, Bucheon Technopark 364,<br>Samjeong-Dong, Ojeong-Gu, Bucheon-City,<br>Gyeonggi-Do, Korea 421-809 | Part No.  | F4465       |     |
|  |   | Rev. Date | 2004-11-01  |     |
|  |   | Rev.      | NS3013-AS02 | 1/7 |

# SAW Bandpass Filter F4465



## Specifications

Fc = 446.0MHz

Terminating source impedance : 50Ω

Terminating load impedance : 50Ω

|  |        | Minimum  | Typical  | Maximum |
|--|--------|----------|----------|---------|
| Center Frequency ( Fc )  | MHz    | -        | 446.0    | -       |
| 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<br>... ~ Fc - 15 MHz<br>Fc + 25 MHz ~ ... | dB     | 45<br>45 | 50<br>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>  
4465<sup>2)</sup>

1) Manufacturer name

2) Marking Number

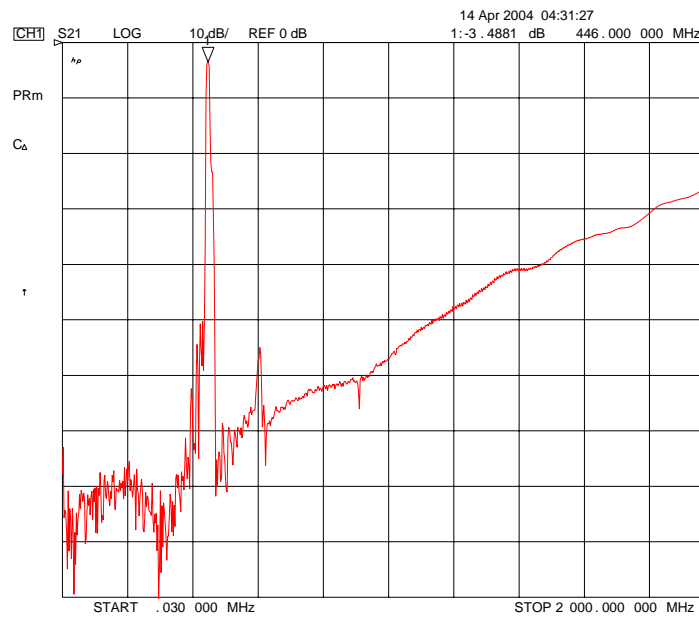
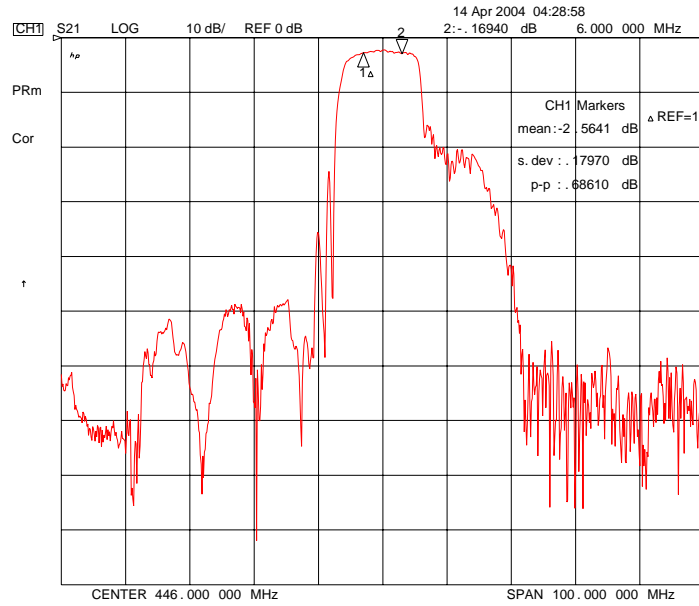
\* Ink or Laser Marking available


|  |   |           |             |     |
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## Typical Performance ( at 25°C )

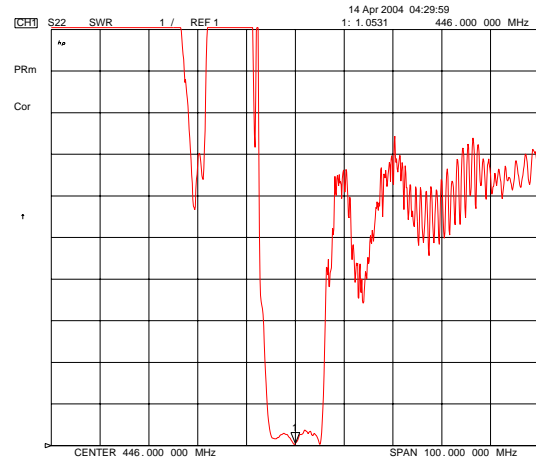
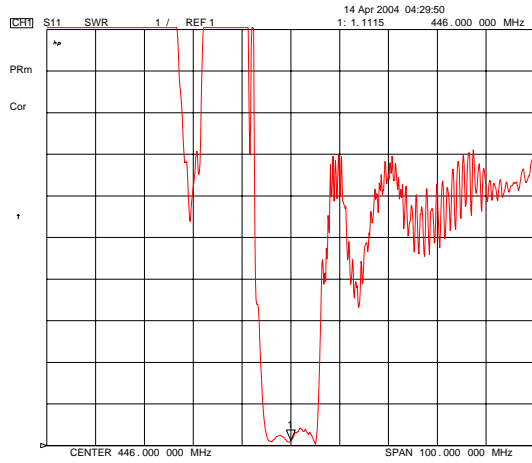


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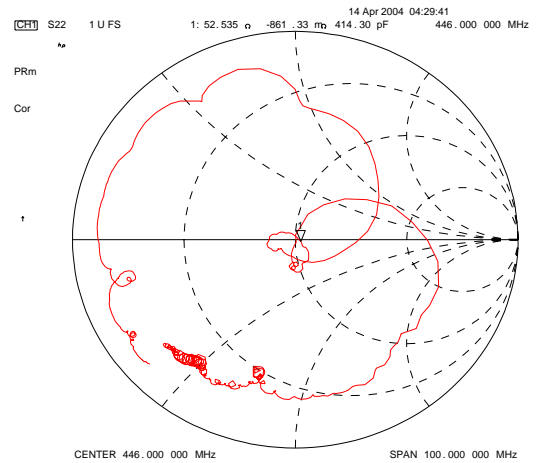
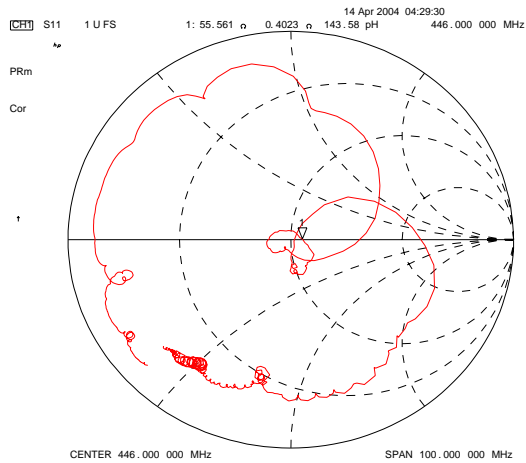
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## Input / Output VSWR Charts



## Input / Output Smith Charts



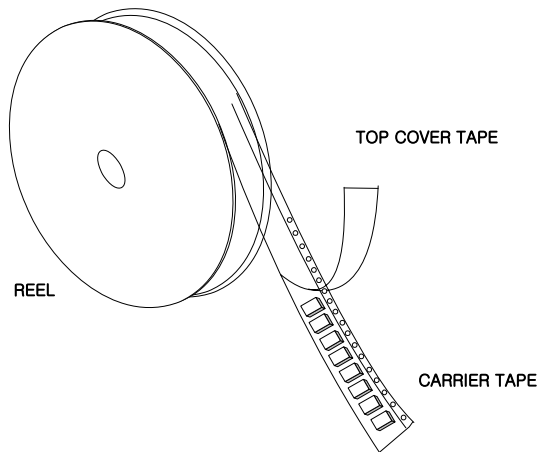
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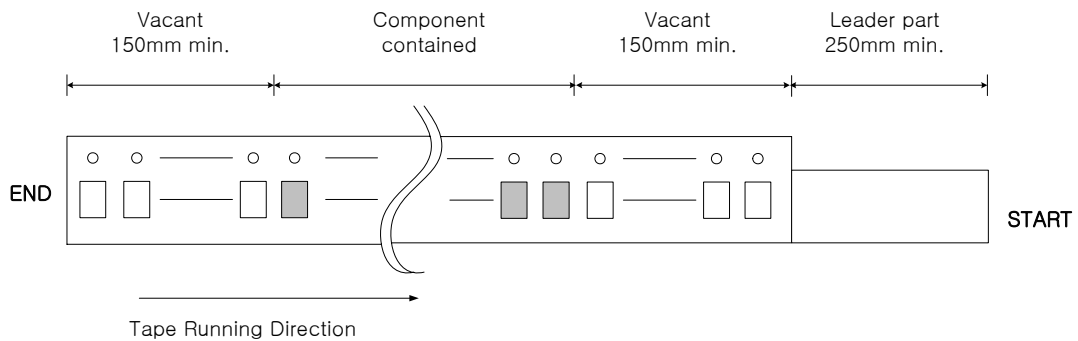
## Packing Specification

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

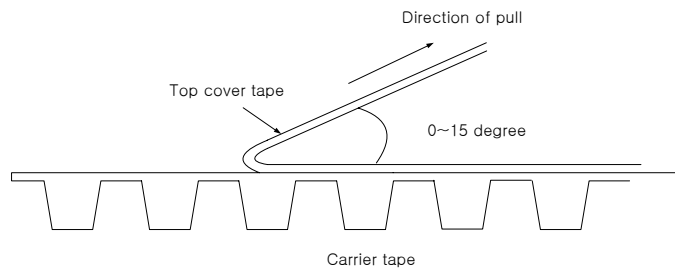


2. Tensile strength of carrier tape

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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