

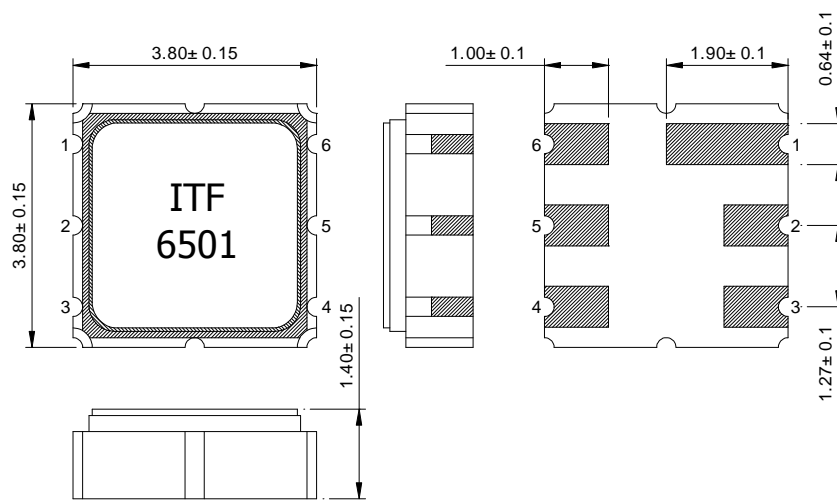
# SAW Bandpass Filter F6501



## Features

- RF bandpass filter
- High attenuation
- No matching 50Ω single-ended operation
- Ceramic Surface Mounted Device (SMD) Package
- RoHS Compliant

## 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   | -40     | 25      | 85      |
| Storage Temperature Range   | °C   | -40     | 25      | 85      |
| Power Handling Capability   | dBm  | -       | -       | 10      |

Electrostatics Sensitive Device (ESD)

|   |   |           |             |     |
|---|---|-----------|-------------|-----|
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|   |   | Rev. Date | 2012-09-27  |     |
|   |   | Rev.      | NSNI04-AS01 | 1/8 |

# SAW Bandpass Filter F6501




## Specifications

Fc = 650 MHz

|                                       | Minimum | Typical | Maximum | Unit  |
|---------------------------------------|---------|---------|---------|-------|
| Center Frequency ( Fc )               | -       | 650     | -       | MHz   |
| Insertion Loss (648 ~ 652 MHz)        | -       | 2.5     | 4.0     | dB    |
| Amplitude Ripple (648 ~ 652 MHz)      | -       | 0.5     | 1.0     | dBp-p |
| Absolute Group Delay (Fc)             | -       | 100     | -       | nsec  |
| Group Delay Variation (648 ~ 652 MHz) | -       | 50      | -       | nsec  |
| VSWR (648 ~ 652 MHz)                  | -       | 1.5     | 2.0     |       |
| Relative Attenuation                  |         |         |         |       |
| 0.3 ~ 600 MHz                         | 40      | 55      | -       | dB    |
| 668 ~ 1150 MHz                        | 40      | 50      | -       |       |
| 1150 ~ 1500 MHz                       | 35      | 45      | -       |       |
| 1500 ~ 2500 MHz                       | 30      | 40      | -       |       |
| Input/Output Impedance                |         | 50      |         | Ohms  |

### 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

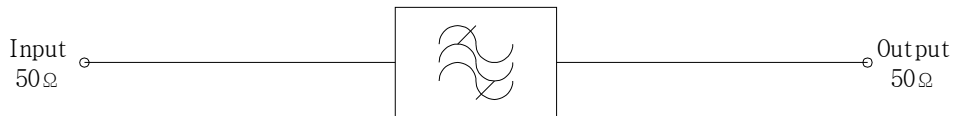
|   |   |           |             |     |
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# SAW Bandpass Filter F6501



## Matching Schematic


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



## Marking Configuration

ITF<sup>1)</sup>  
6501<sup>2)</sup>

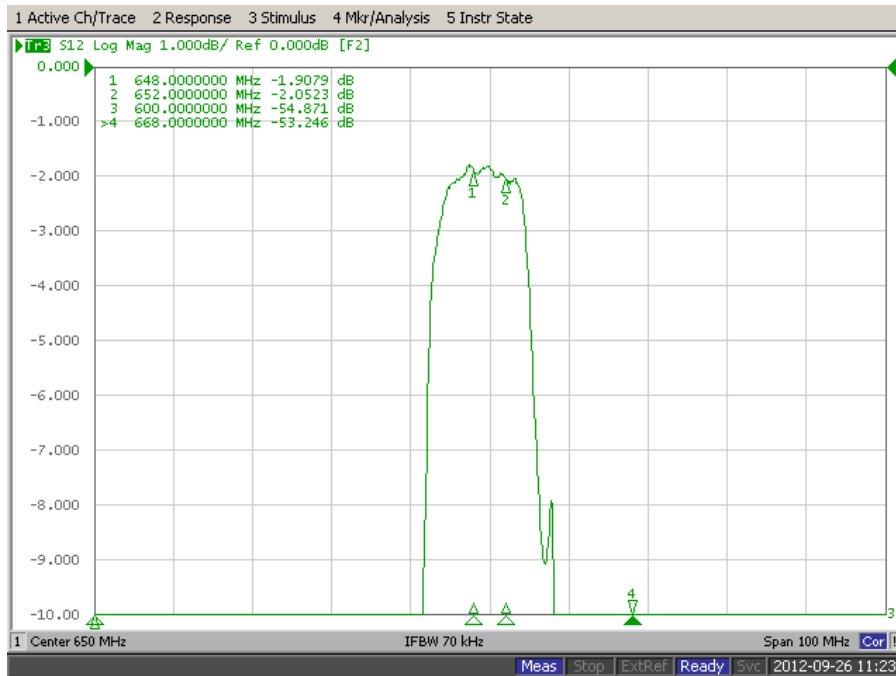
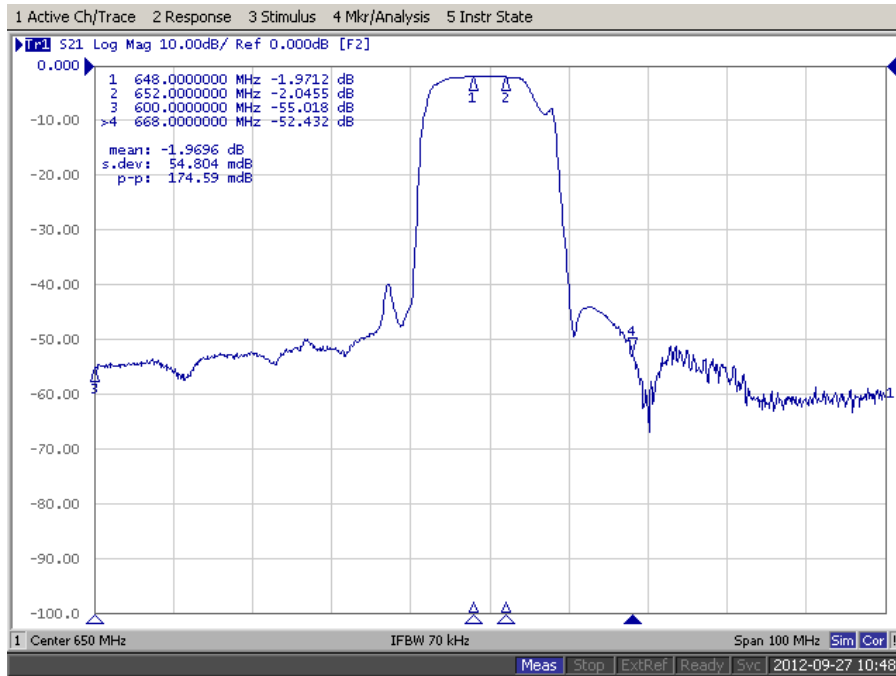
- 1) Manufacturer name
- 2) Marking Number

|   |   |           |             |     |
|---|---|-----------|-------------|-----|
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# SAW Bandpass Filter F6501



## Typical Performance ( at 25°C )

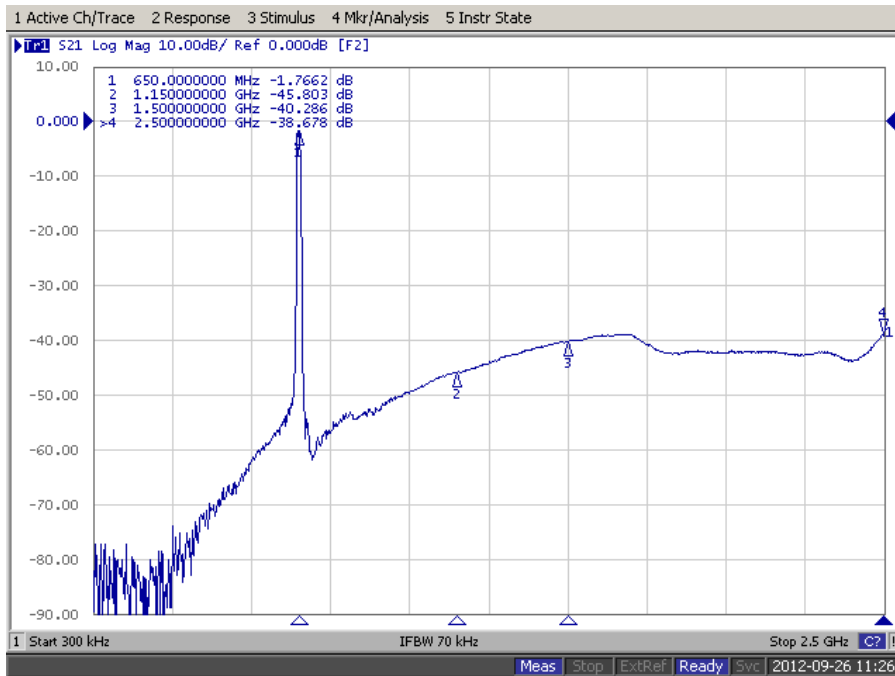
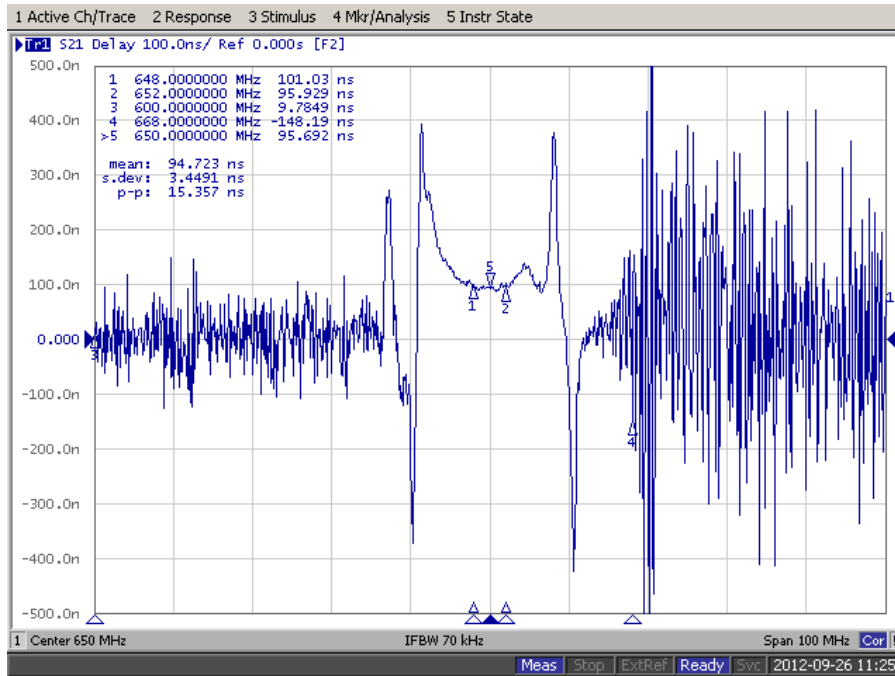


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# SAW Bandpass Filter F6501



## Typical Performance ( at 25°C )



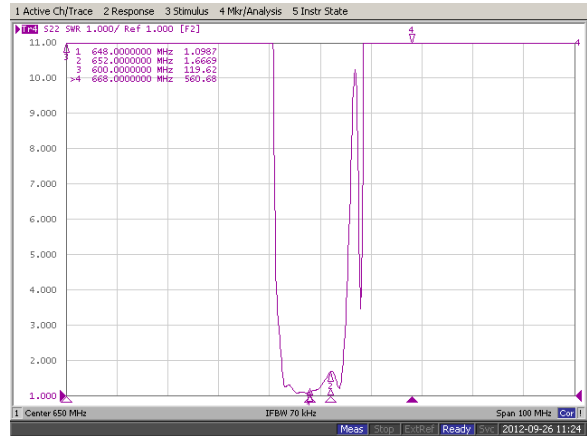
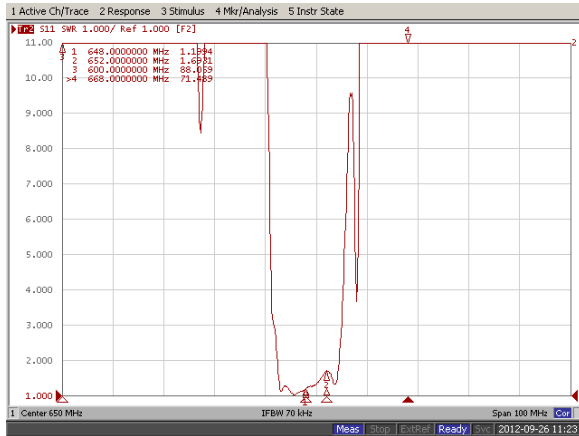
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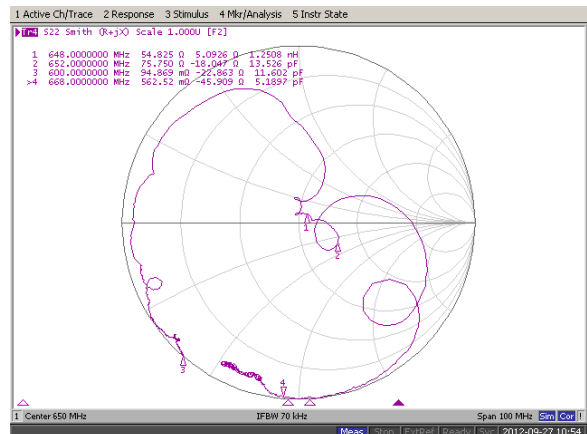
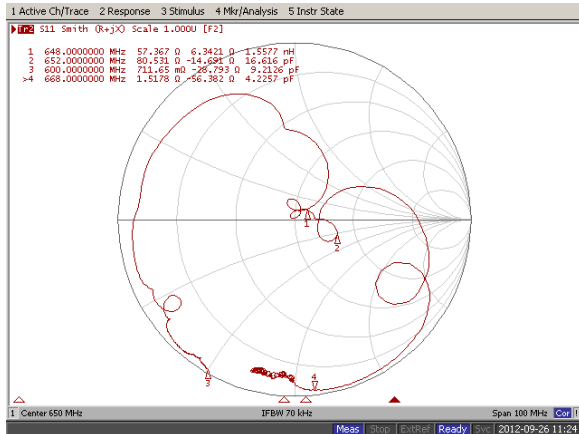
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## Input / Output VSWR Charts



## Input / Output Smith Charts



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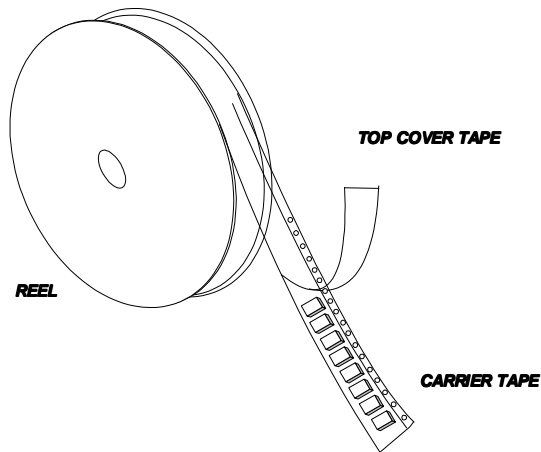
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# SAW Bandpass Filter F6501



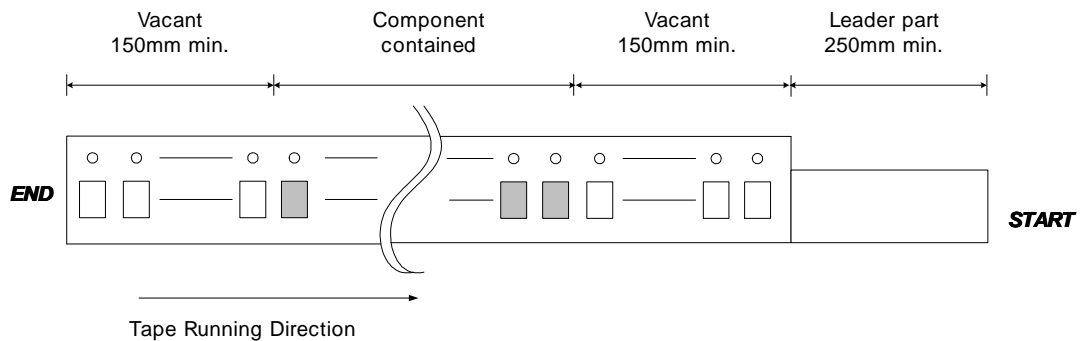
## Packing Specification

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

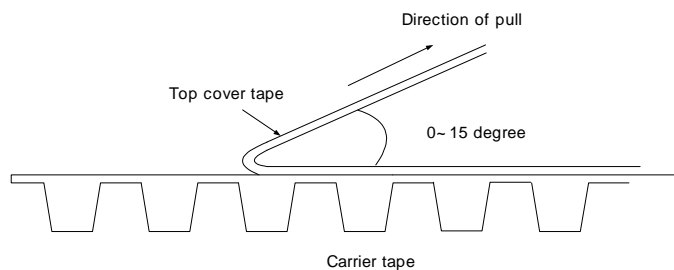


2. Tensile strength of carrier tape

4.4N/mm width

3. Top cover tape adhesion

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

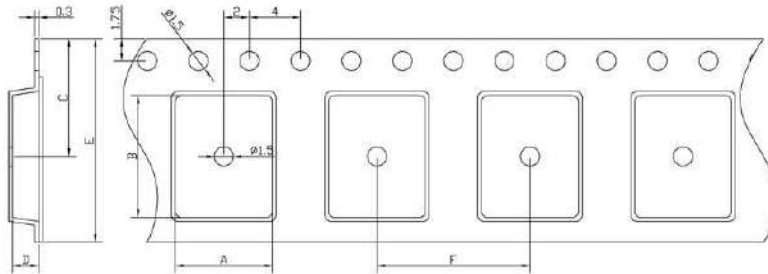


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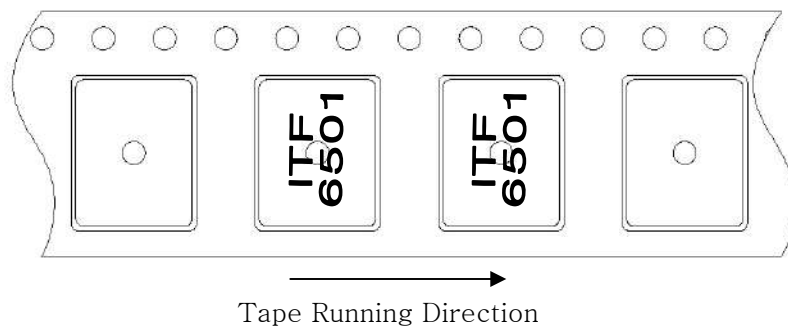


## Carrier Tape Dimensions [unit : mm]

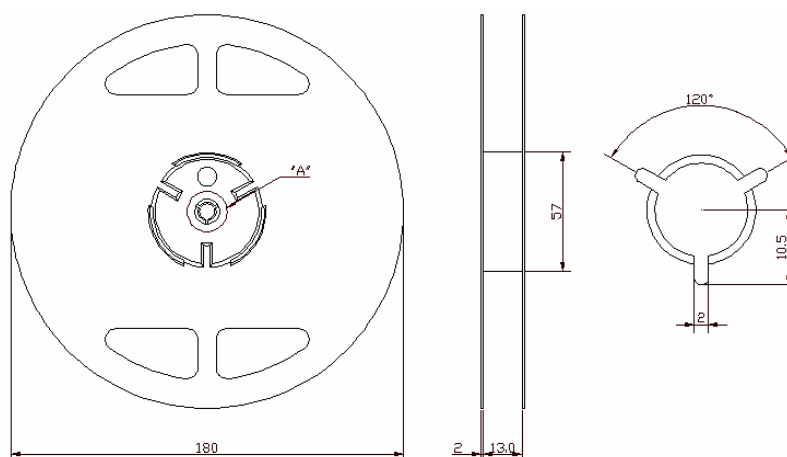


|   |             |
|---|-------------|
| A | 4.30 ± 0.1  |
| B | 4.30 ± 0.1  |
| C | 7.25 ± 0.1  |
| D | 1.70 ± 0.1  |
| E | 12.00 ± 0.1 |
| F | 8.00 ± 0.1  |

## Part Direction



## Reel Dimensions [unit : mm]



|  |   |           |             |     |
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