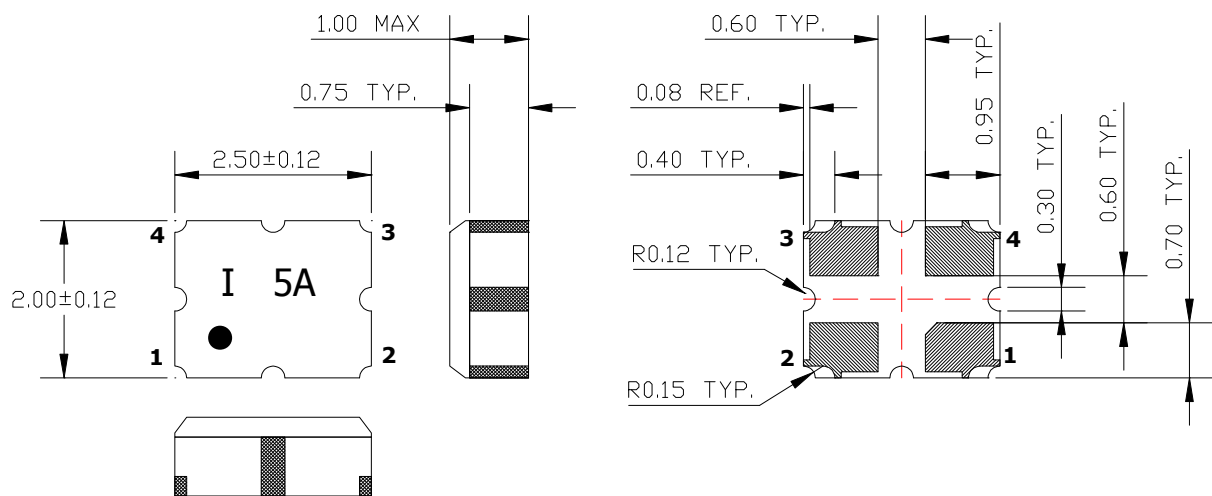




**SAW**  
DEVICE

- GPS applications
- Usable bandwidth of 2 MHz
- No impedance matching require for operation at 50  $\Omega$
- SMD Package 2.5 mm  $\times$  2.0 mm  $\times$  1.0 mm
- Single-ended Operation



Body : Al<sub>2</sub>O<sub>3</sub> Ceramic  
Lid : Kovar, Ni Plated  
Terminations : Au plating 0.5 ~ 1.0 um, Over a 2.0 ~ 6.0 um  
Ni Plating

| Pin Configuration |        |
|-------------------|--------|
| 1                 | Input  |
| 3                 | Output |
| 2, 4              | Ground |

| Parameter                   | Unit | Minimum | Typical | Maximum |
|-----------------------------|------|---------|---------|---------|
| Operating Temperature Range | °C   | -40     | 25      | 95      |
| Storage Temperature Range   | °C   | -40     | -       | 105     |
| Power Handling Capability   | dBm  | -       | 10      | -       |

Electrostatics Sensitive Device (**ESD**)

|                                                                                                                                                                                                                          |           |             |     |
|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-----------|-------------|-----|
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|                                                                                                                                                                                                                          | Rev. Date | 2007-10-16  |     |
|                                                                                                                                                                                                                          | Rev.      | NG4003-AS03 | 1/7 |

# SAW Bandpass Filter F1G52



## Specifications

$F_c = 1575.42 \text{ MHz}$

Terminating source impedance :  $50\Omega$

Terminating load impedance :  $50\Omega$

|                                              |        | Minimum | Typical | Maximum |
|----------------------------------------------|--------|---------|---------|---------|
| Center Frequency                             | MHz    | -       | 1575.42 | -       |
| Insertion Loss ( $F_o \pm 1 \text{ MHz}$ )   | dB     | -       | 1.5     | 2.2     |
| Amplitude Ripple ( $F_o \pm 1 \text{ MHz}$ ) | dB p-p | -       | 0.1     | 1.0     |
| Relative Attenuation                         | dB     |         |         |         |
| D.C. ~ 1400 MHz                              |        | 35.0    | 37.0    | -       |
| 1400 ~ 1475 MHz                              |        | 30.0    | 34.0    | -       |
| 1475 ~ 1525 MHz                              |        | 25.0    | 37.0    | -       |
| 1625 ~ 1640 MHz                              |        | 30.0    | 45.0    | -       |
| 1640 ~ 2000 MHz                              |        | 32.0    | 34.0    | -       |
| 2000 ~ 3000 MHz                              |        | 20.0    | 28.0    | -       |
| VSWR (1574.42 ~ 1576.42 MHz)                 | -      | -       | 1.2     | 2.0     |

### 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

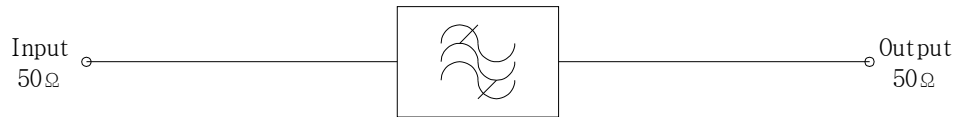
|                                                                                     |                                                                                                                                   |           |             |     |
|-------------------------------------------------------------------------------------|-----------------------------------------------------------------------------------------------------------------------------------|-----------|-------------|-----|
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|                                                                                     |                                                                                                                                   | Rev. Date | 2007-10-16  |     |
|                                                                                     |                                                                                                                                   | Rev.      | NG4003-AS03 | 2/7 |

# SAW Bandpass Filter F1G52



## Matching Schematic

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



## Marking Configuration

I<sup>1)</sup> 5A<sup>2)</sup>

● 3)

1) Manufacturer name

2) Marking Number

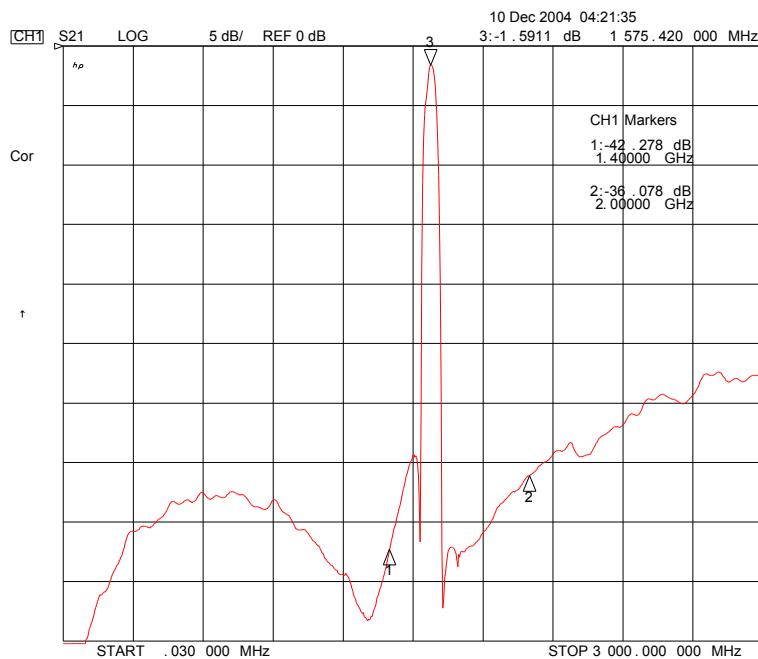
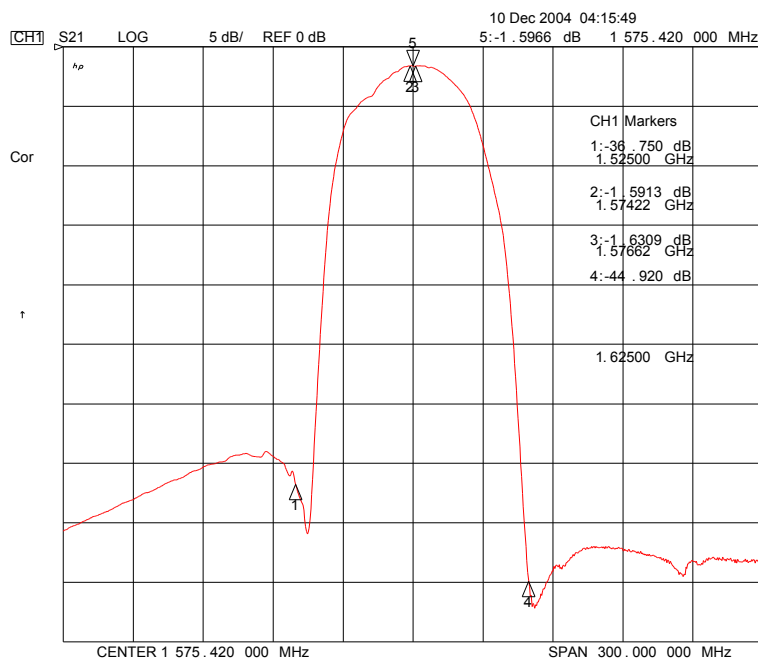
3) Pad Num 1 Index

|                                                                                       |                                                                                                                                   |           |             |     |
|---------------------------------------------------------------------------------------|-----------------------------------------------------------------------------------------------------------------------------------|-----------|-------------|-----|
| The logo for ITF Co., Ltd., featuring the letters 'ITF' in a stylized, colorful font. | <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.  | F1G52       |     |
|                                                                                       |                                                                                                                                   | Rev. Date | 2007-10-16  |     |
|                                                                                       |                                                                                                                                   | Rev.      | NG4003-AS03 | 3/7 |

# SAW Bandpass Filter F1G52



Typical Performance ( at 25°C )

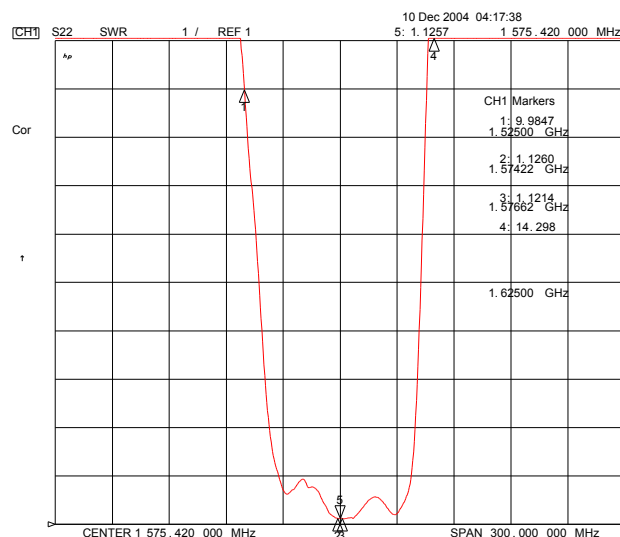
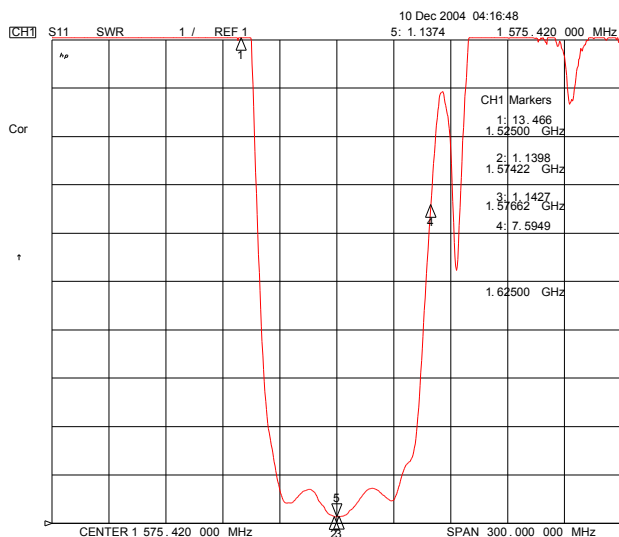


|  |                                                                                                                                   |           |             |     |
|--|-----------------------------------------------------------------------------------------------------------------------------------|-----------|-------------|-----|
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|  |                                                                                                                                   | Rev. Date | 2007-10-16  |     |
|  |                                                                                                                                   | Rev.      | NG4003-AS03 | 4/7 |

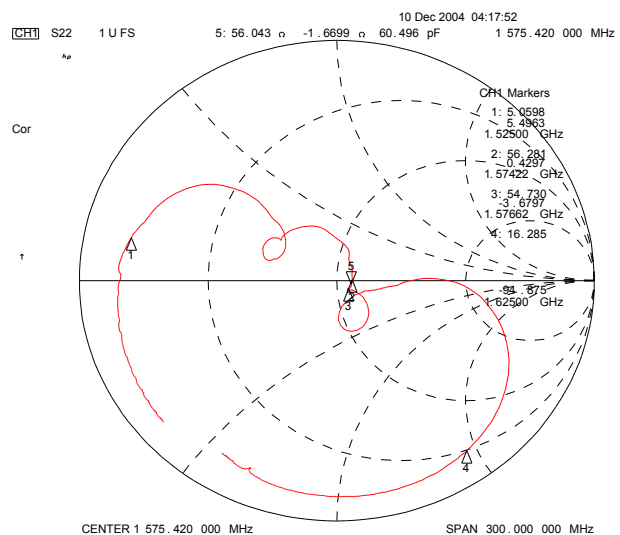
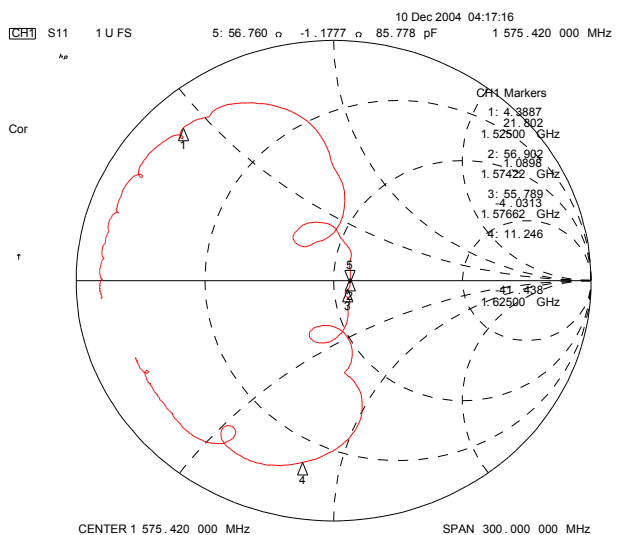
# SAW Bandpass Filter F1G52



## Input / Output VSWR Charts



## Input / Output Smith Charts



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Part No.

F1G52

Rev. Date

2007-10-16

Rev.

NG4003-AS03

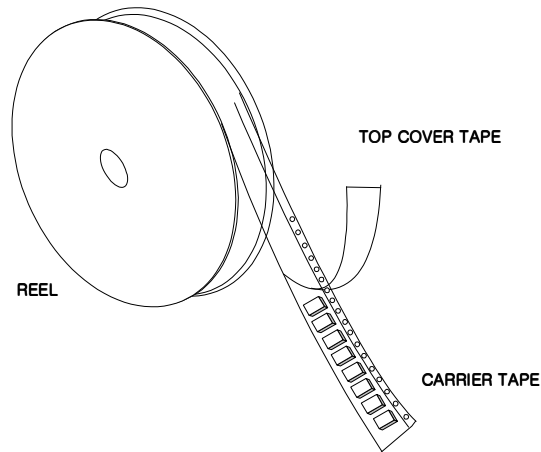
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# SAW Bandpass Filter F1G52



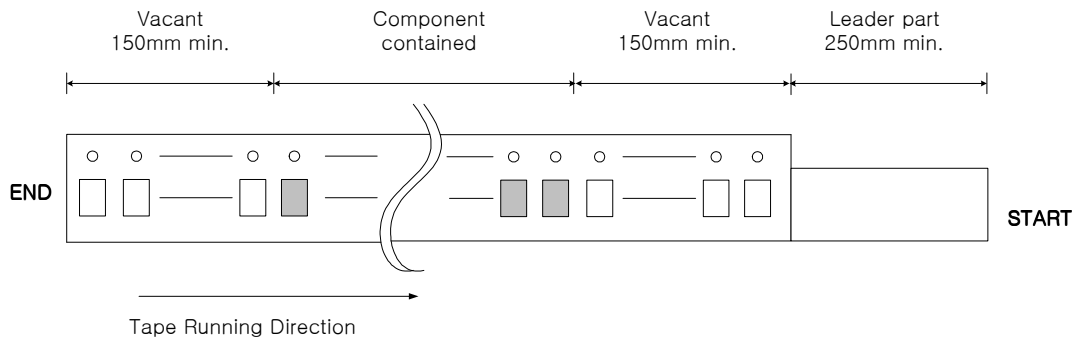
## Packing Specification

1. Reeling Quantity : 3,000 pcs / reel (or 1,000 pcs / reel, 2,000 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

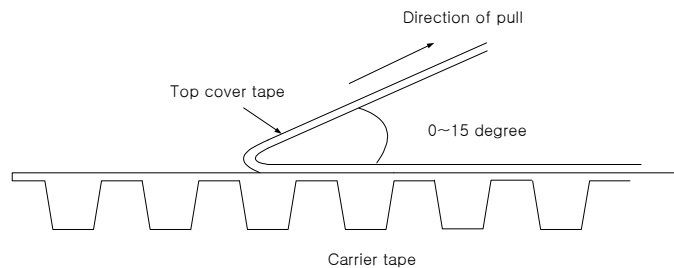


2. Tensile strength of carrier tape

4.4N/mm width

3. Top cover tape adhesion

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

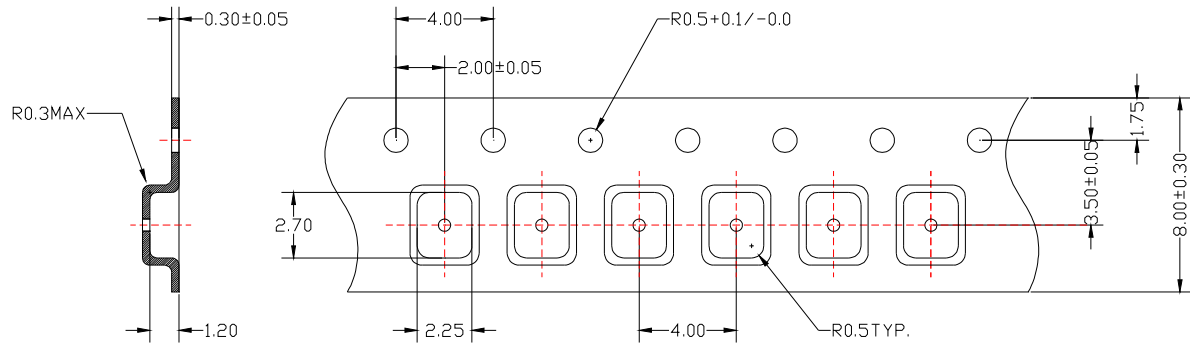


|  |                                                                                                                                   |           |             |     |
|--|-----------------------------------------------------------------------------------------------------------------------------------|-----------|-------------|-----|
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|  |                                                                                                                                   | Rev. Date | 2007-10-16  |     |
|  |                                                                                                                                   | Rev.      | NG4003-AS03 | 6/7 |

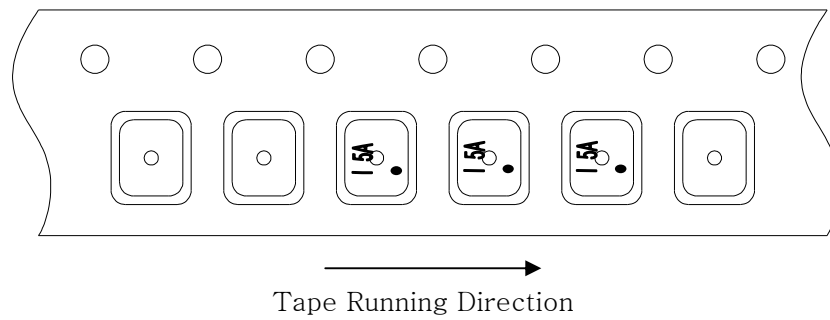
# SAW Bandpass Filter F1G52



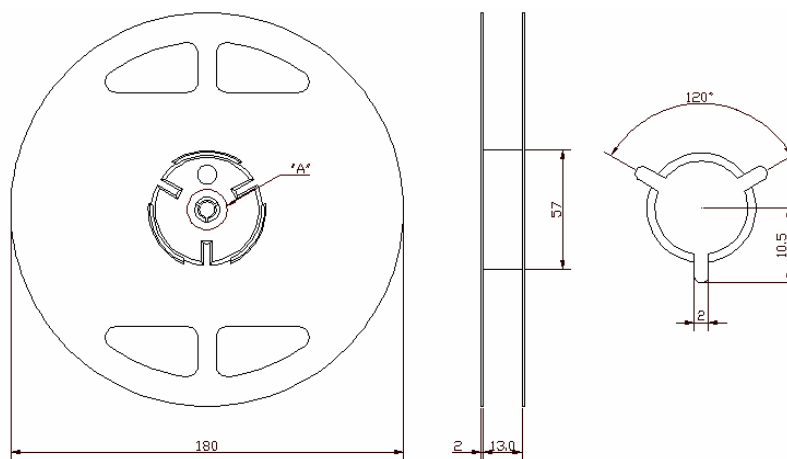
## Carrier Tape Dimensions [unit : mm]



## Part Direction



## Reel Dimensions [unit : mm]



|  |                                                                                                                                   |           |             |     |
|--|-----------------------------------------------------------------------------------------------------------------------------------|-----------|-------------|-----|
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|  |                                                                                                                                   | Rev. Date | 2007-10-16  |     |
|  |                                                                                                                                   | Rev.      | NG4003-AS03 | 7/7 |