

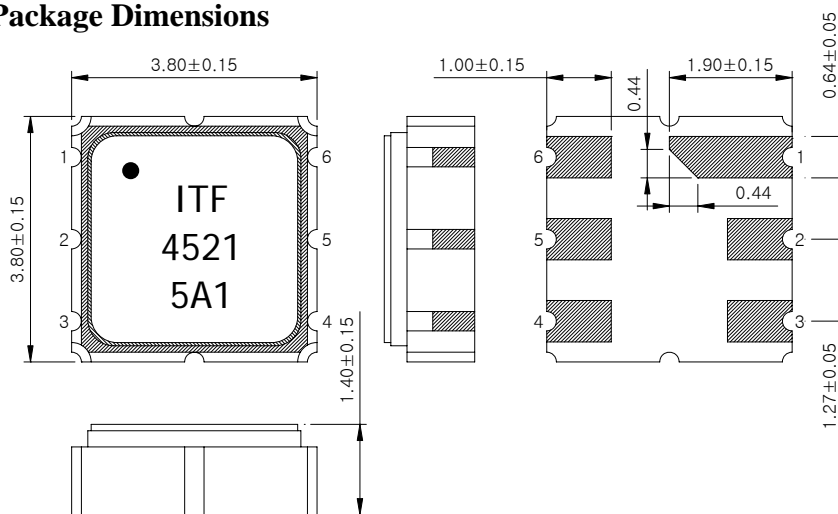
SAW Bandpass Filter F4521



Features

- RF bandpass filter for CDMA450 C-Band Tx. Part
- Usable bandwidth 5MHz (450 MHz ~ 455 MHz)
- High attenuation
- No matching 50Ω single-ended operation
- Ceramic Surface Mounted Device Package (3.8 mm × 3.8 mm)
- RoHS compliant

Package Dimensions



Dimensions shown are nominal in millimeters

Body : Al₂O₃ Ceramic

Lid : Kovar, Ni Plated

Terminations : Au plating 0.3 ~ 1.0 um, Over a 1.27 ~ 8.89 um
Ni Plating

Pin Configurations

| | |
|------------|-------------|
| 2 | Input |
| 5 | Output |
| 1, 3, 4, 6 | Case ground |

Maximum Ratings

| Parameters | Unit | Minimum | Typical | Maximum |
|-----------------------------|------|---------|---------|---------|
| Operating Temperature Range | °C | -30 | 25 | 85 |
| Storage Temperature Range | °C | -40 | - | 85 |
| Power Handling Capability | dBm | - | - | 30 |

Electrostatics Sensitive Device (ESD)

| | | | | |
|--|---|-----------|-------------|-----|
| | ITF Co., Ltd. 102-901, Bucheon Technopark 364, Samjeong-Dong, Ojeong-Gu, Bucheon-City, Gyeonggi-Do, Korea 421-809 | Part No. | F4521 | |
| | | Rev. Date | 2006-06-08 | |
| | | Rev. | NR3016-AS02 | 1/7 |

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Specifications

| | Minimum | Typical | Maximum | Unit |
|--------------------------------------|---------|---------|---------|------|
| Center Frequency (Fc) | - | 452.5 | - | MHz |
| Insertion Loss (In Fc +/- 2.5 MHz) | - | 2.0 | 2.8 | dB |
| Amplitude Ripple (In Fc +/- 2.5 MHz) | - | 0.8 | 1.2 | dB |
| VSWR (In Fc +/- 2.5 MHz) | - | 1.5 | 2.0 | |
| Relative Attenuation | | | | |
| 0.3 MHz ~ 347.5 MHz | 30 | 35 | - | dB |
| 347.5 MHz ~ 441.5 MHz | 25 | 30 | - | |
| 460.0 MHz ~ 465.0 MHz | 35 | 43 | - | |
| 465.0 MHz ~ 1700 MHz | 27 | 32 | - | |
| 1700 MHz ~ 2000 MHz | 20 | 25 | - | |
| Temperature Range (Operational) | -30 | 25 | 85 | °C |
| Input RF Power (In Fc +/- 2.5 MHz) | | | 30 | dBm |
| 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

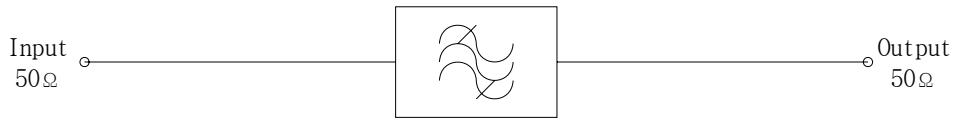
| | | | | |
|---|---|-----------|-------------|-----|
|  Integrated Technology Future | ITF Co., Ltd. 102-901, Bucheon Technopark 364, Samjeong-Dong, Ojeong-Gu, Bucheon-City, Gyeonggi-Do, Korea 421-809 | Part No. | F4521 | |
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Matching Schematic

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



Marking Configuration

- ¹⁾
ITF²⁾
4521³⁾
5A1⁴⁾

- 1) Pad Number 1 Index
- 2) Manufacturer name
- 3) Marking Number
- 4) Lot Number

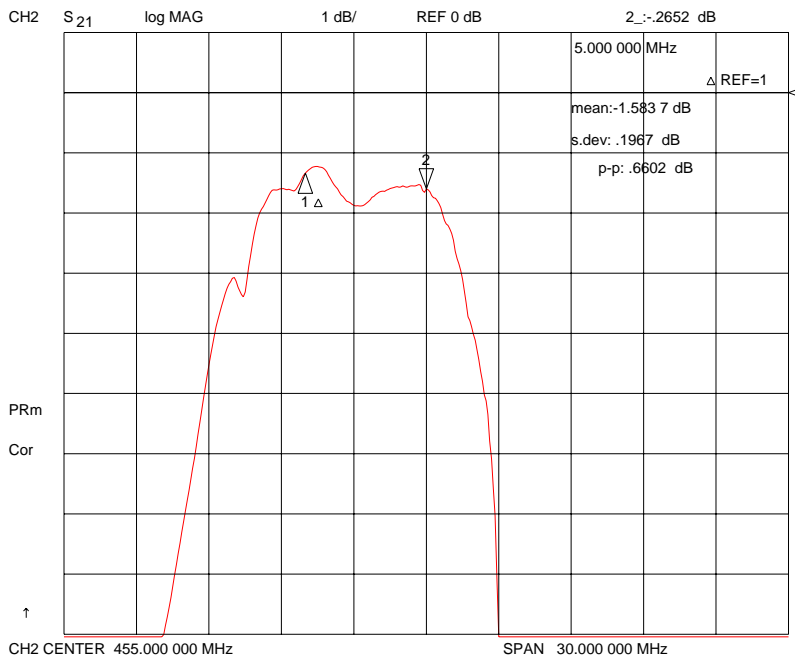
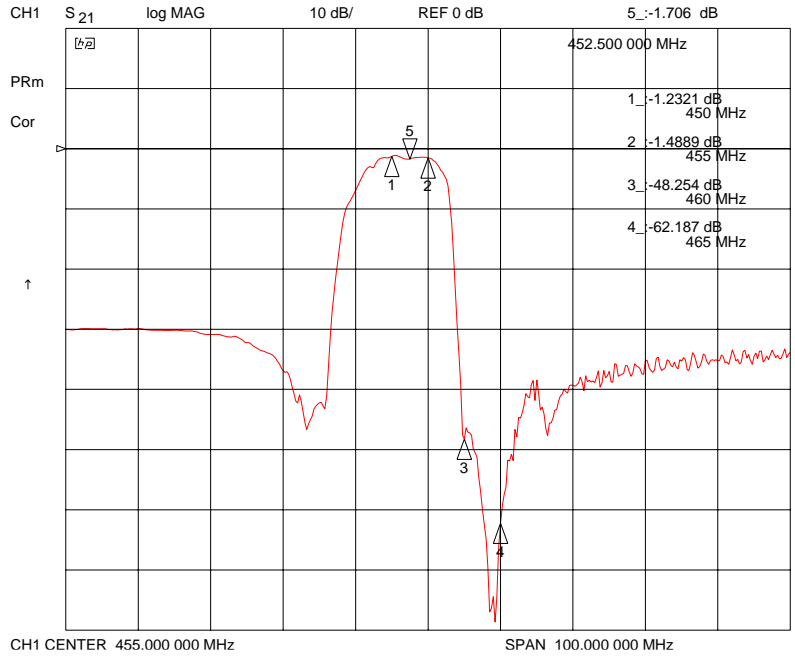
* Ink or Laser Marking available

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

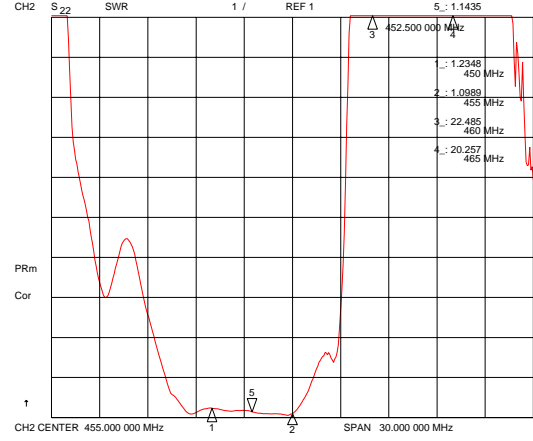
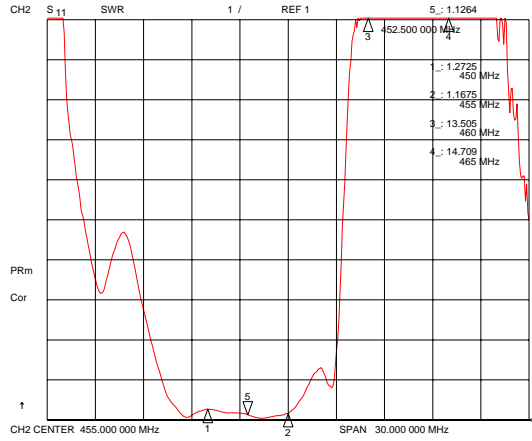


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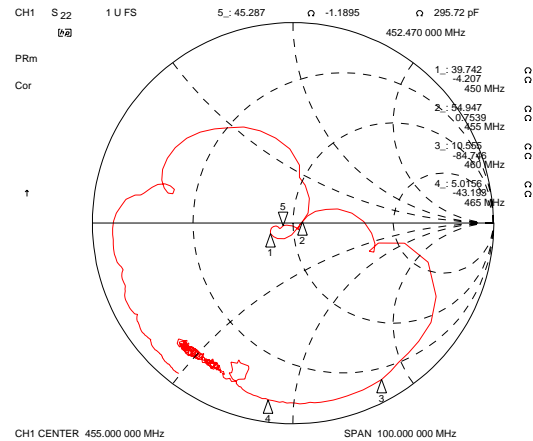
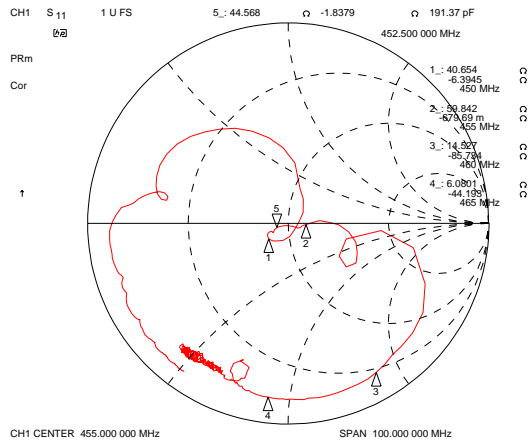
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Input / Output VSWR Charts



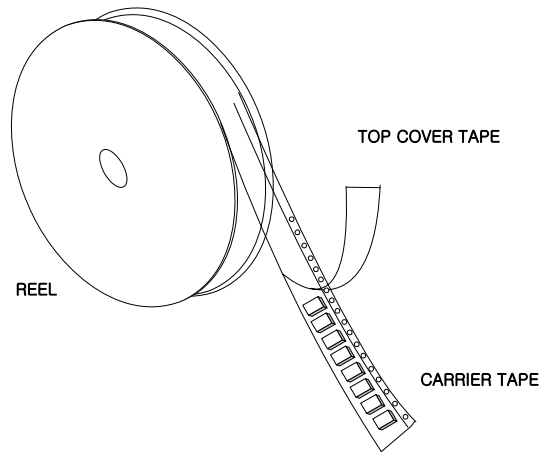
Input / Output Smith Charts



| | | | | |
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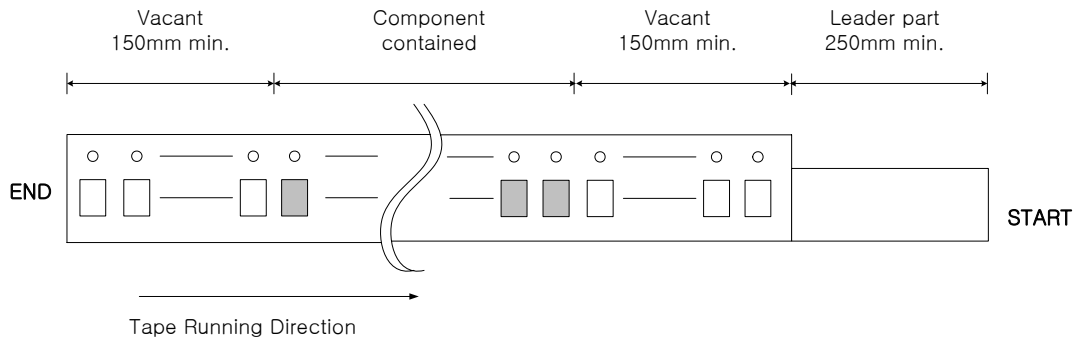
Packing Specification

1. Reeling Quantity : 3000 pcs / 13" reel (or 1000 pcs / 7" 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

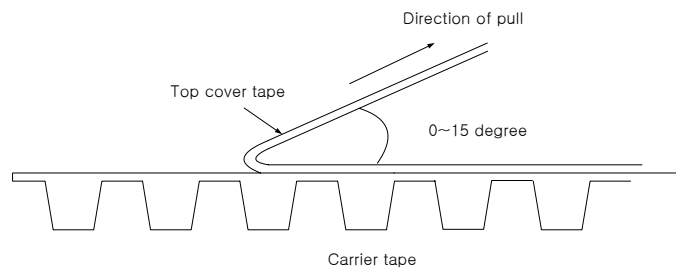


2. Tensile strength of carrier tape

4.4N/mm width

3. Top cover tape adhesion

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

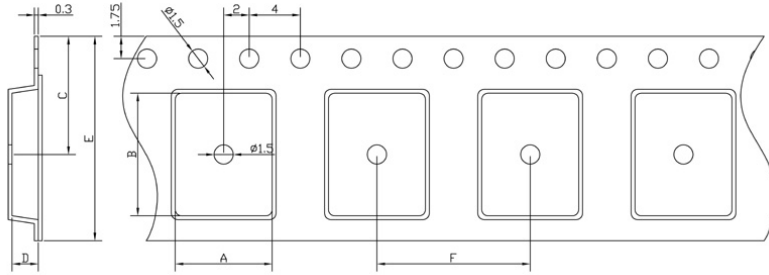


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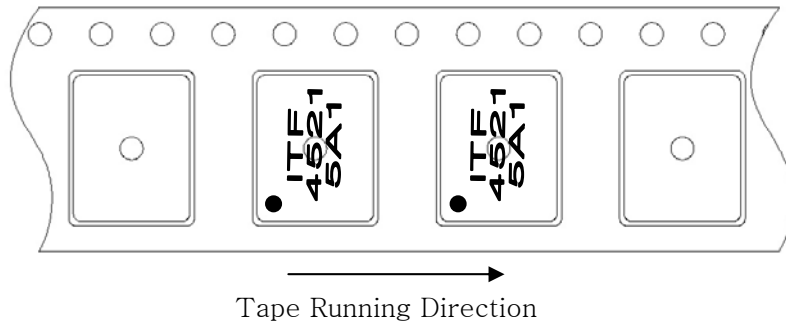


Carrier Tape Dimensions [unit : mm]

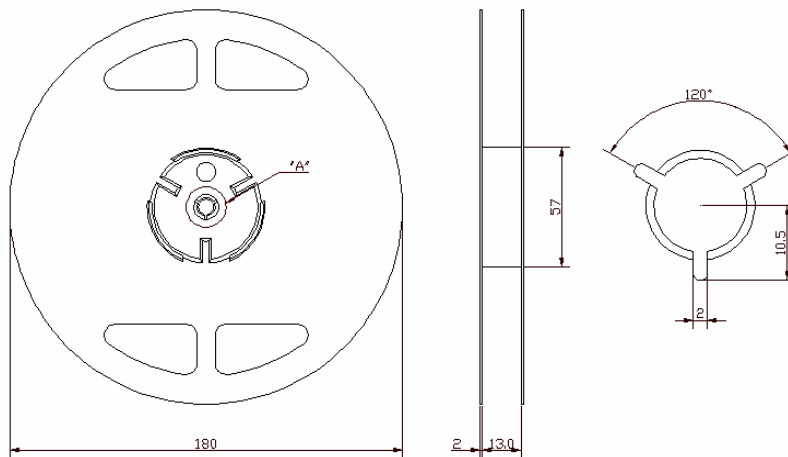


| | |
|---|-------------|
| A | 4.30 ± 0.1 |
| B | 4.30 ± 0.1 |
| C | 7.25 ± 0.1 |
| D | 1.70 ± 0.1 |
| E | 12.00 ± 0.1 |
| F | 8.00 ± 0.1 |

Part Direction



Reel Dimensions [unit : mm]



| | | | | |
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