

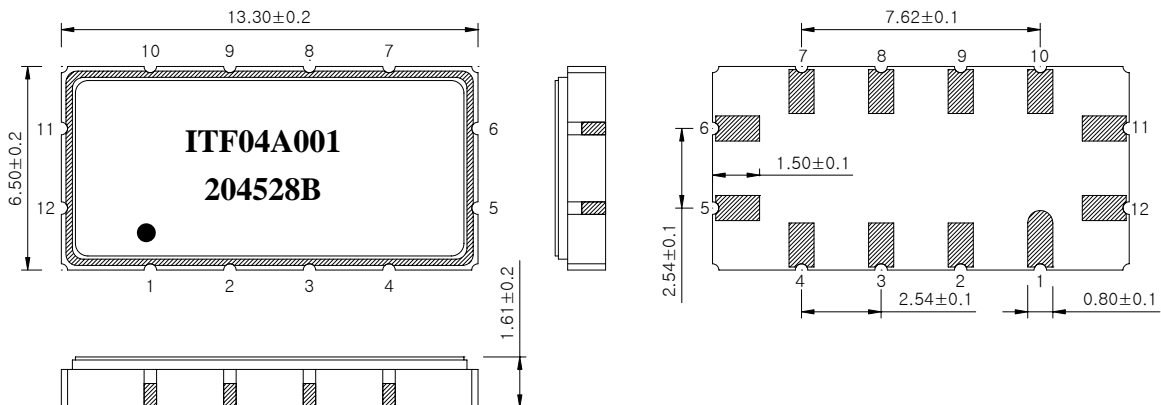
# SAW Bandpass Filter 204528B



## 1. Features

- IF Bandpass Filter
- Low-Loss Filter
- Single-Ended Operation
- Ceramic Surface Mount Device (SMD) Package
- Maximum Storage Temperature Range : -40 °C ~ 85 °C
- Electrostatics Sensitive Device (ESD)

## 2. Package Dimensions



**Package : S1365**

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

| Pad Configuration |             |
|-------------------|-------------|
| 11                | Input       |
| 5                 | Output      |
| 6, 12             | Ground      |
| Other             | Case ground |



**ITF Co., Ltd.**  
 102-901, Bucheon Technopark 364,  
 Samjeong-Dong, Ojeong-Gu, Bucheon-City,  
 Gyeonggi-Do, Korea 421-809

|           |             |     |
|-----------|-------------|-----|
| Part No.  | 204528B     |     |
| Rev. Date | 2004-04-29  |     |
| Rev.      | NJ3001-CS03 | 1/5 |

# SAW Bandpass Filter 204528B



## 3. Specifications

Fo = 160.0 MHz

Terminating source impedance : 50Ω and matching network

Terminating load impedance : 50Ω and matching network

|  |        | Minimum | Typical | Maximum |
|--|--------|---------|---------|---------|
| Center Frequency                       | MHz    | 159.8   | 160.0   | 160.2   |
| Insertion Loss                         | dB     | -       | 14.5    | 16.0    |
| 1dB Bandwidth                          | MHz    | 5.5     | 5.8     | -       |
| 3dB Bandwidth                          | MHz    | 6.2     | 6.5     | -       |
| 40dB Bandwidth                         | MHz    | -       | 9.7     | 10.5    |
| Amplitude Ripple (Fo +/- 2.5 MHz)      | dB     | -       | 0.6     | 1.0     |
| Group Delay Variation (Fo +/- 2.5 MHz) | nsec   | -       | 60      | 100     |
| Absolute Delay                         | usec   | -       | 1.0     | -       |
| Ultimate Rejection                     | dB     | 40      | 45      | -       |
| Temperature Coefficient of Frequency   | ppm/°C | -       | -23     | -       |

### Notes :

- 1) All specifications are based on the matching schematic shown below
- 2) All specifications are measured by Agilent Network analyzer and full 2 port calibration at room temperature
- 3) All attenuation measurements are measured relative to insertion loss

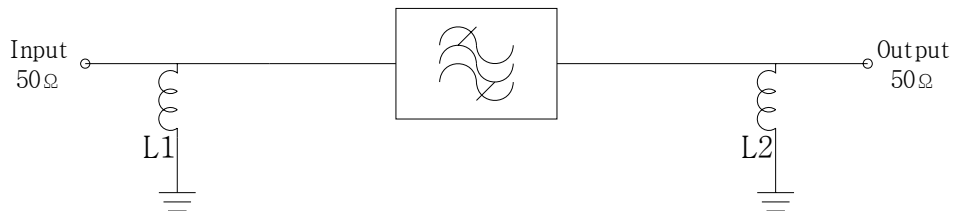
|  |   |           |             |     |
|--|---|-----------|-------------|-----|
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## 4. Matching Schematic

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



L1 = 18 nH,      L2 = 18 nH

## 5. Marking Configuration

ITF<sup>1)</sup> 04A001<sup>2)</sup>

204528B<sup>3)</sup>


●<sup>4)</sup>

1) Manufacturer name

2) Lot Number

3) Part Number

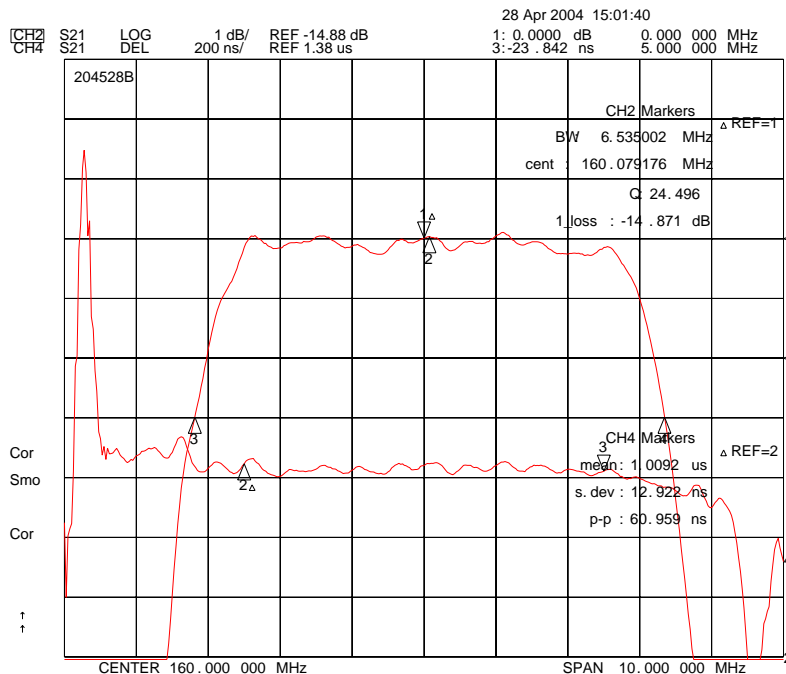
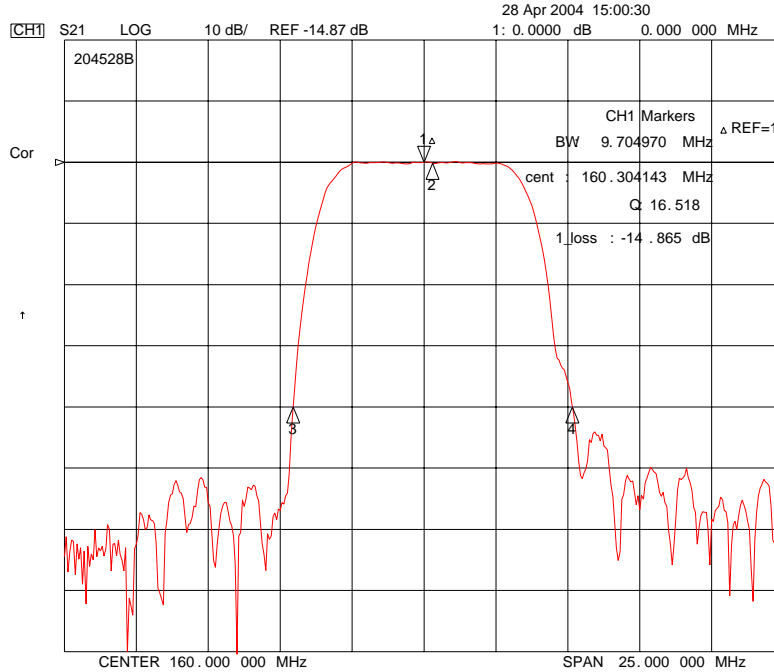
4) Pad Number 1 Index

|   |   |           |             |     |
|---|---|-----------|-------------|-----|
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## 6. Typical Performance ( at +25°C )



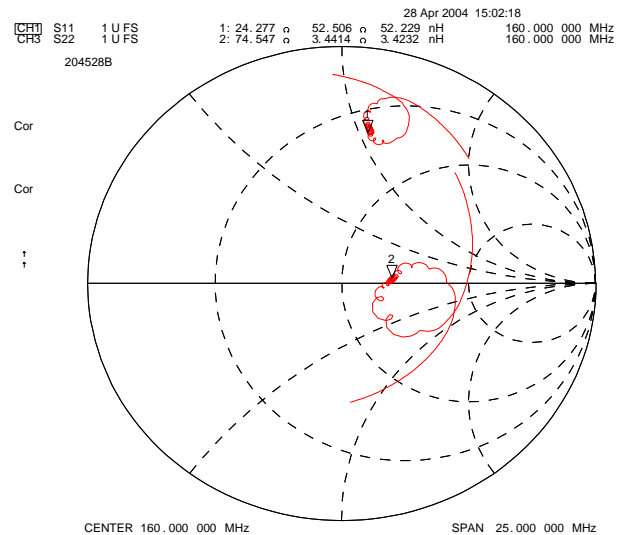
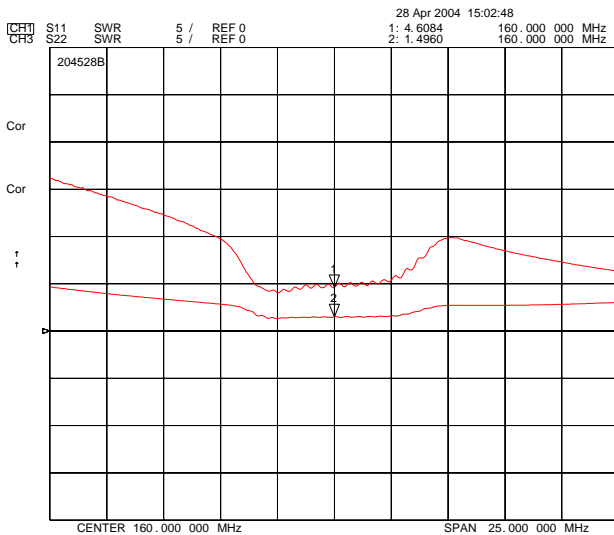
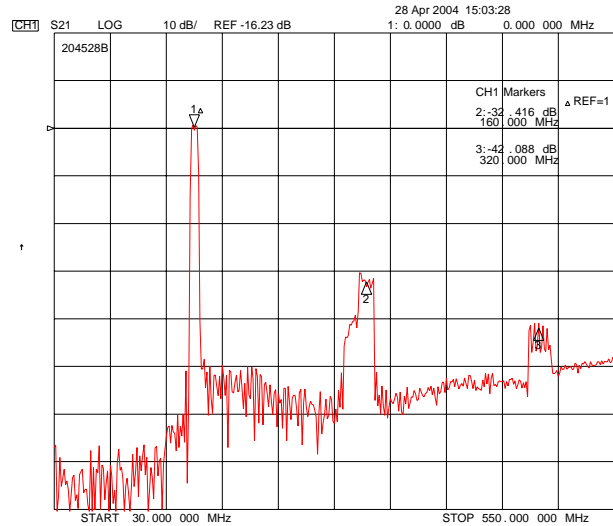
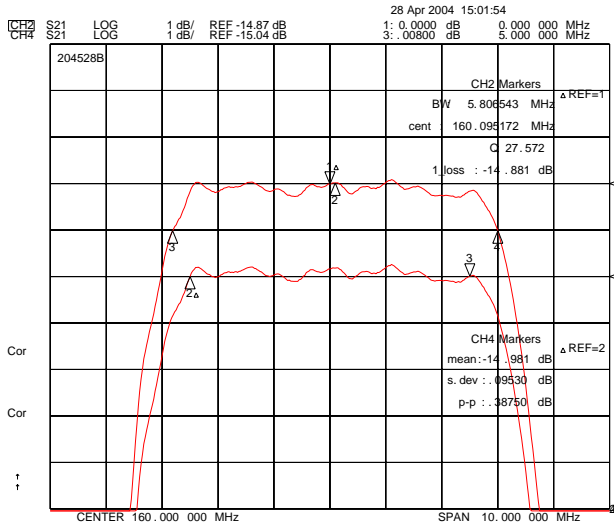
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