

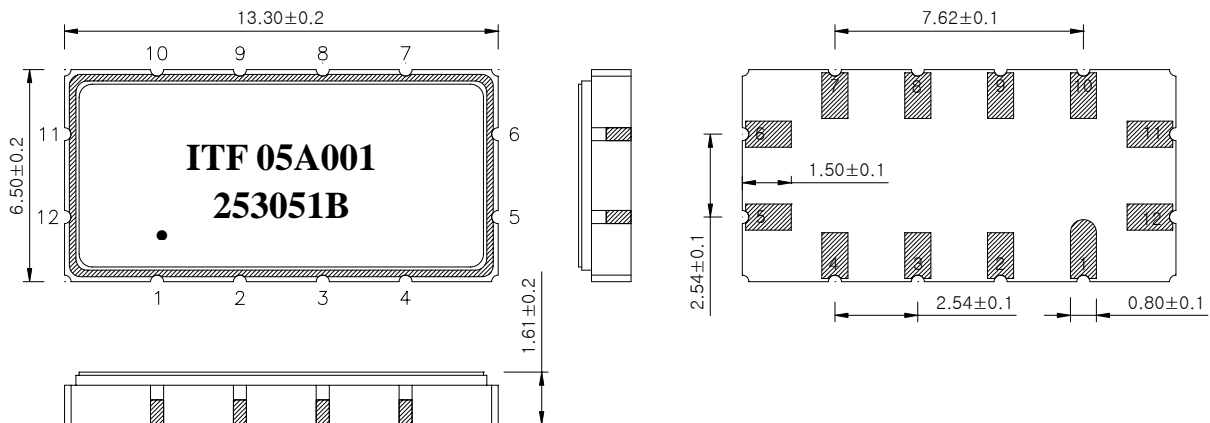
# SAW Bandpass Filter 253051B



## 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 Dimension



**Package : S1365**

Dimensions shown are nominal in millimeters

Body : Al<sub>2</sub>O<sub>3</sub>

Lid : Kovar, Ni Plated

Termination : Au plating 0.3 ~ 1.0um, over a 1.27 ~ 8.89um Ni Plating

### Pin Configuration

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



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| Part No.  | 253051B     |     |
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## 3. Specifications

F<sub>o</sub> = 125 MHz

Terminating source impedance : 50Ω and matching network

Terminating load impedance : 50Ω and matching network

| Operating temperature range : -25℃ ~ +75℃           |        | Minimum | Typical | Maximum |
|---|--------|---------|---------|---------|
| Center Frequency                                    | MHz    | 124.6   | 125.0   | 125.4   |
| Insertion Loss                                      | dB     | -       | 11.5    | 13.5    |
| 1dB Bandwidth                                       | MHz    | 28.5    | 29.7    | -       |
| 3dB Bandwidth                                       | MHz    | -       | 30.5    | -       |
| 40dB Bandwidth                                      | MHz    | -       | 35.2    | 36.0    |
| Amplitude Ripple (F <sub>o</sub> +/- 13.5 MHz)      | dB     | -       | 0.7     | 1.0     |
| Group Delay Variation (F <sub>o</sub> +/- 13.5 MHz) | nsec   | -       | 35      | 50      |
| Absolute Delay                                      | usec   | -       | 0.68    | -       |
| Relative Attenuation                                |        |         |         |         |
| 0.0 ~ 105.0 MHz                                     | dB     | 40      | 45      | -       |
| 147.0 ~ 320.0 MHz                                   | dB     | 40      | 45      | -       |
| 320.0 ~ 500.0 MHz                                   | dB     | 30      | 35      | -       |
| Temperature Coefficient of Frequency                | ppm/°C | -       | -86     | -       |

| Room temperature : + 25 ℃                            |      | Minimum | Typical | Maximum |
|--|------|---------|---------|---------|
| Center Frequency                                     | MHz  | 125.85  | 125.0   | 125.15  |
| Insertion Loss                                       | dB   |         | 11.5    | 13.0    |
| Amplitude Ripple (F <sub>o</sub> +/- 13.75 MHz)      | dB   | -       | 0.7     | 1.0     |
| Group Delay Variation (F <sub>o</sub> +/- 13.75 MHz) | nsec | -       | 35      | 50      |

|  |   |           |             |     |
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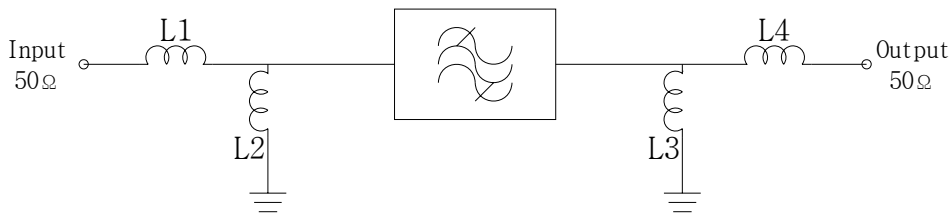


**Notes :**

- 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
- 3) Electrical margin has been built into the design to account for the variations due to temperature drift and manufacturing tolerances
- 4) All attenuation measurements are measured relative to insertion loss

## 4. Matching Schematic

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



L1 = 15 nH, L2 = 39 nH

L3 = 22 nH, L4 = 18 nH

## 5. Marking Configuration

ITF<sup>1)</sup> 05A001<sup>2)</sup>

253051B<sup>3)</sup>

● 4)

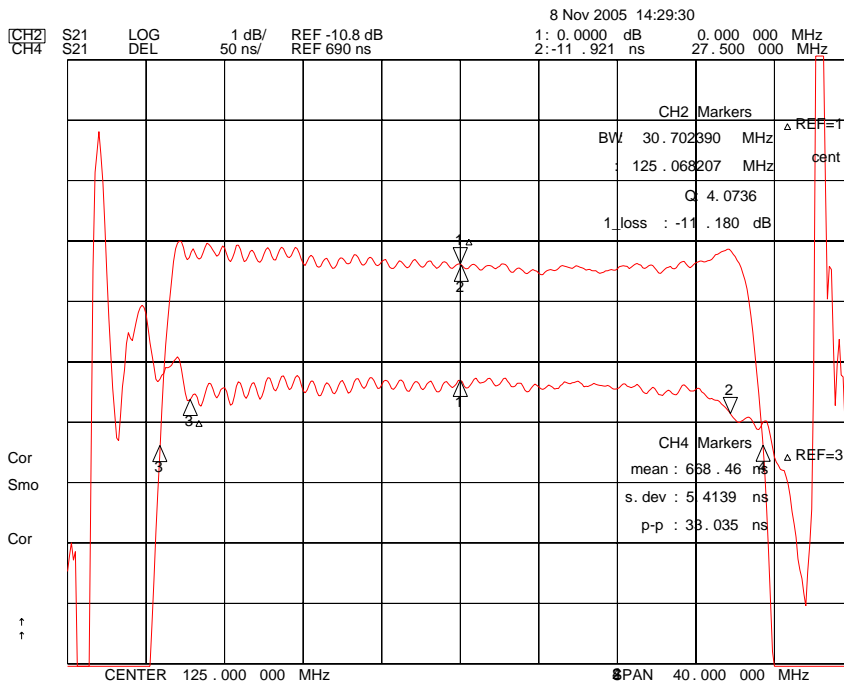
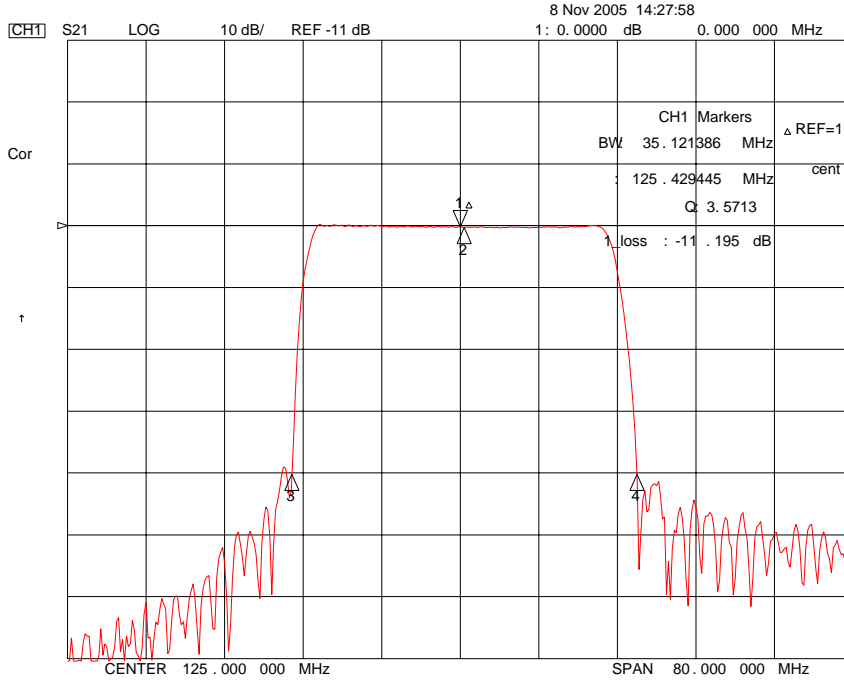
- 1) Manufacturer name
- 2) Lot Number
- 3) Part Number
- 4) Pad Number 1 Index

|  |   |           |             |     |
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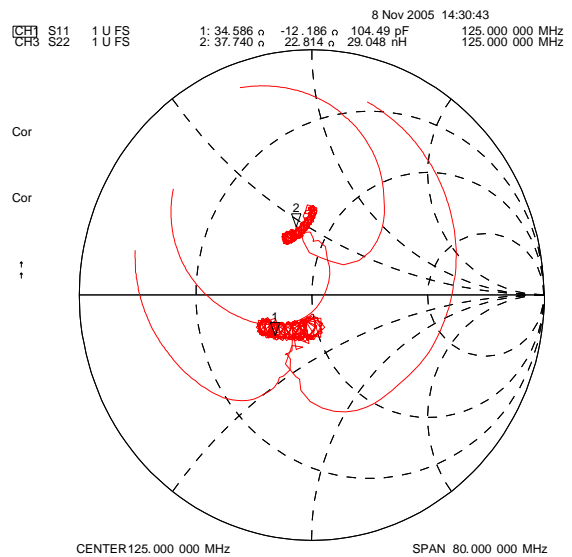
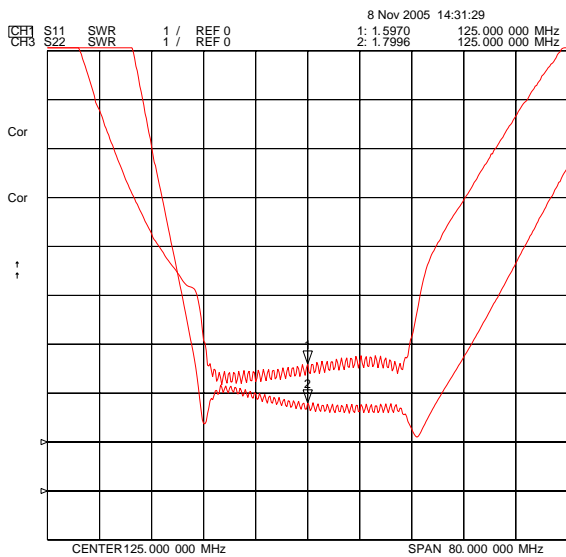
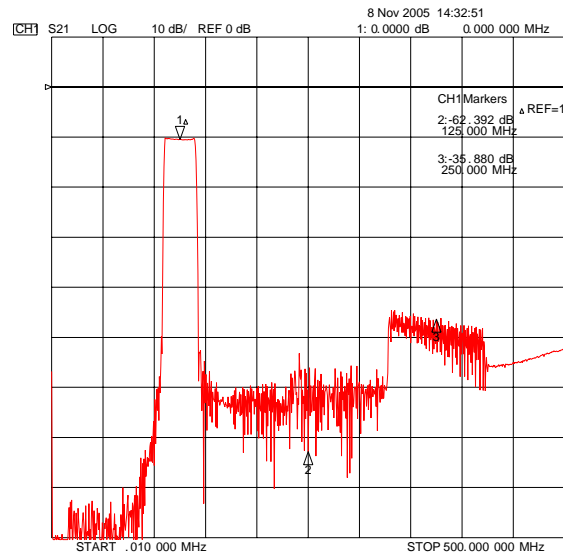
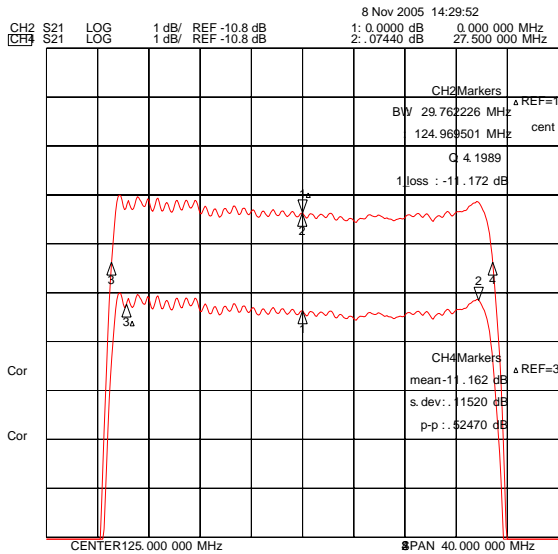


## 6. Typical Performance ( at +25°C )



|  |   |           |             |     |
|--|---|-----------|-------------|-----|
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