

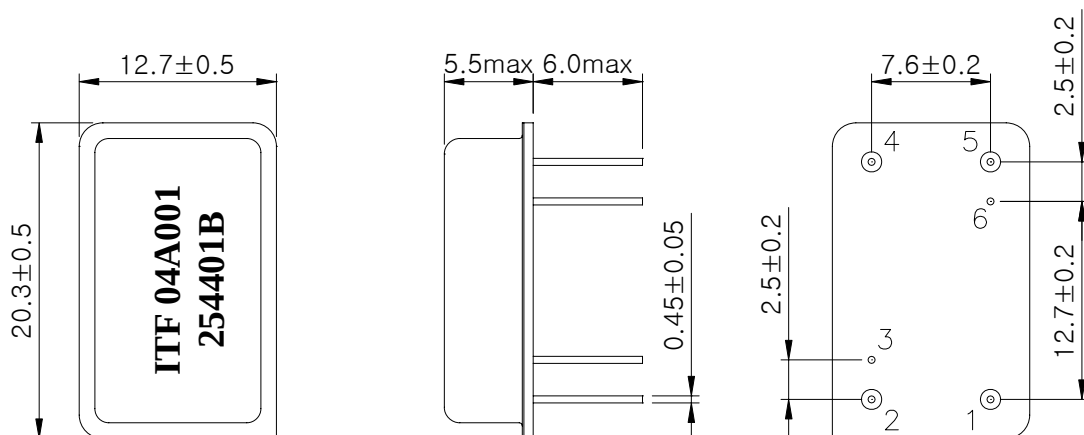
# SAW Bandpass Filter 254401B



## 1. Features

- IF bandpass filter
- High attenuation
- Single-ended operation
- DIP Package
- Maximum Storage Temperature Range : -40℃ ~ 85℃
- Electrostatics Sensitive Device (ESD)

## 2. Package Dimension



### Package : D2012

Dimensions shown are nominal in millimeters

Base : Fe(SPCC), Au plating over Ni plated

Cap : Cu & Cr Alloy, Ni Plated

Termination : Kovar, Au Plated

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

|                                                                                                                     |                                                                                                                                   |           |             |     |
|---------------------------------------------------------------------------------------------------------------------|-----------------------------------------------------------------------------------------------------------------------------------|-----------|-------------|-----|
| <br>Integrated Technology Future | <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.  | 254401B     |     |
|                                                                                                                     |                                                                                                                                   | Rev. Date | 2004-03-22  |     |
|                                                                                                                     |                                                                                                                                   | Rev.      | NM3026-CS03 | 1/5 |

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## 3. Specifications

Fo = 140 MHz

Terminating source impedance : 50Ω and matching network

Terminating load impedance : 50Ω and matching network

| Operating temperature range : -20℃ ~ +70℃ |       | Minimum | Typical | Maximum |
|-------------------------------------------|-------|---------|---------|---------|
| Center Frequency                          | MHz   | 139.75  | 140.0   | 140.25  |
| Insertion Loss                            | dB    | -       | 24.5    | 26.0    |
| 3dB Bandwidth                             | MHz   | 44      | 44.25   | -       |
| 40dB Bandwidth                            | MHz   | -       | 48.6    | 51      |
| Amplitude Ripple (Fo +/- 20 MHz)          | dB    | -       | 0.8     | 1.0     |
| Group Delay Variation (Fo +/- 20 MHz)     | nsec  | -       | 50      | 120     |
| Absolute Delay                            | usec  | -       | 1.07    | -       |
| Ultimate Rejection                        | dB    | 50      | 55      | -       |
| Temperature Coefficient of Frequency      | ppm/℃ | -       | -72     | -       |

| Operating temperature range : +25℃      |      | Minimum | Typical | Maximum |
|-----------------------------------------|------|---------|---------|---------|
| Amplitude Ripple (Fo +/- 20.5 MHz)      | dB   | -       | 0.8     | 1       |
| Group Delay Variation (Fo +/- 20.5 MHz) | nsec | -       | 50      | 120     |

### 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

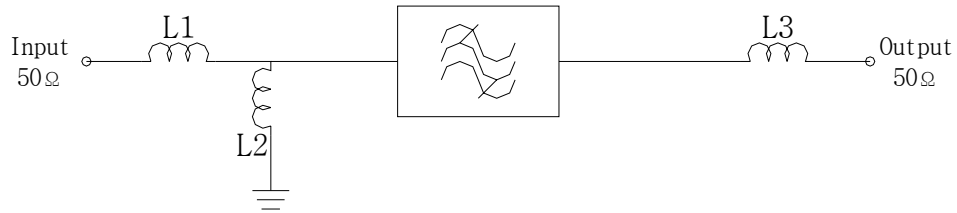
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## 4. Matching Schematic

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



L1 = 68 nH,      L3 = 56 nH  
L2 = 270 nH

## 5. Marking Configuration

ITF<sup>1)</sup> 04A001<sup>2)</sup>  
254401B<sup>3)</sup>

1) Manufacturer name

2) Lot Number

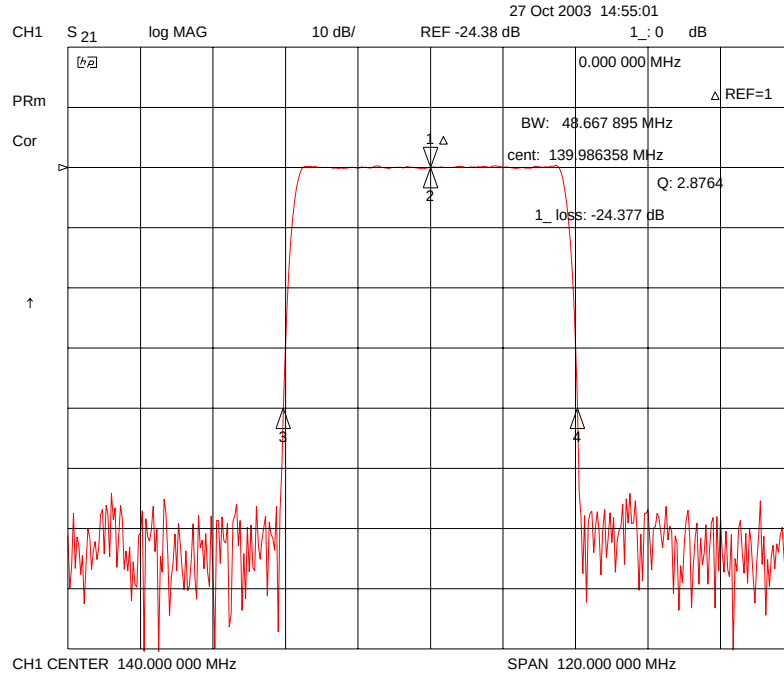
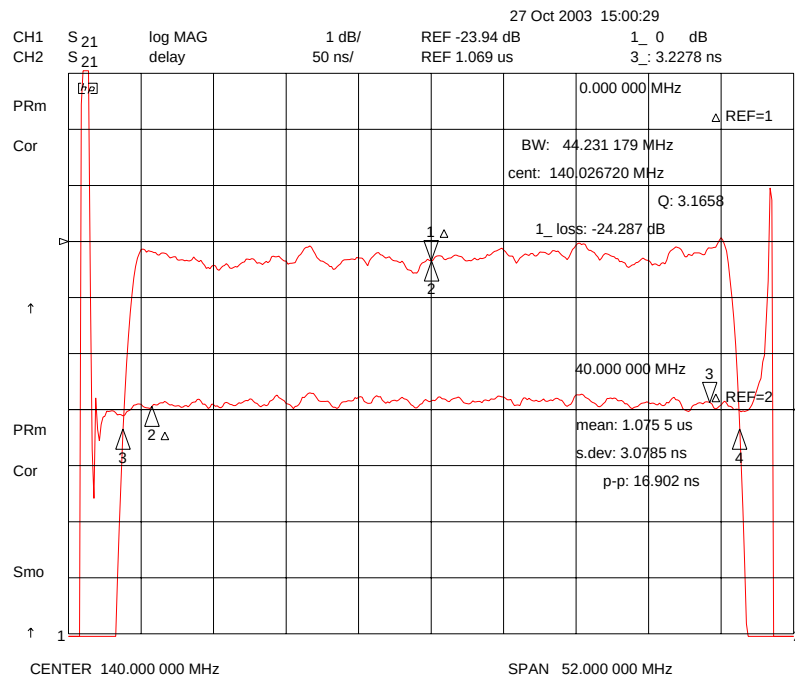
3) Part Number

|                                                                                     |                                                                                                                                   |           |             |     |
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## 6. Typical Performance ( at +25℃ )



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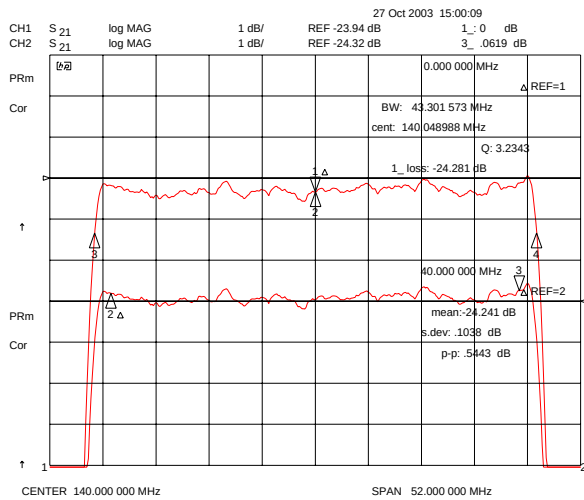
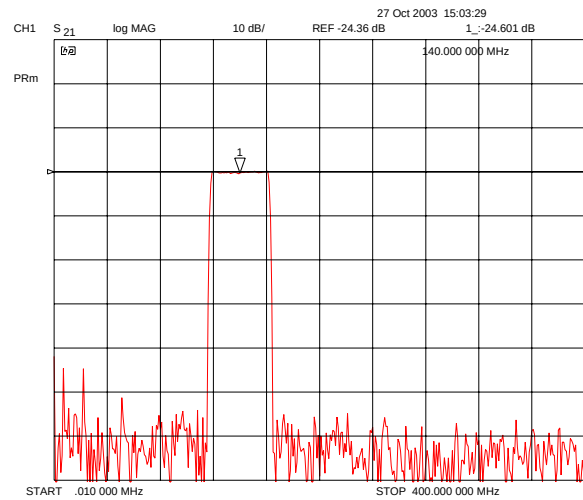
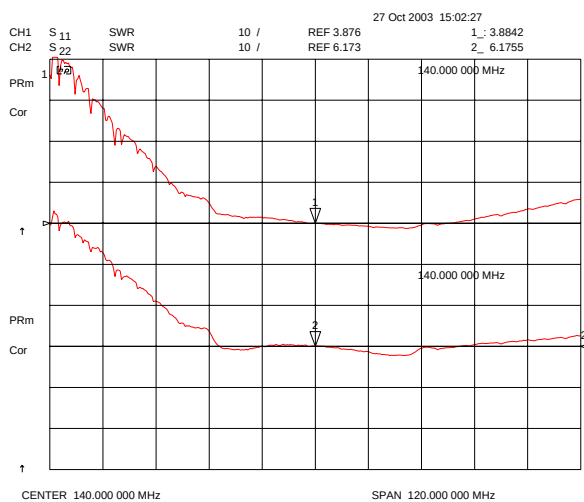
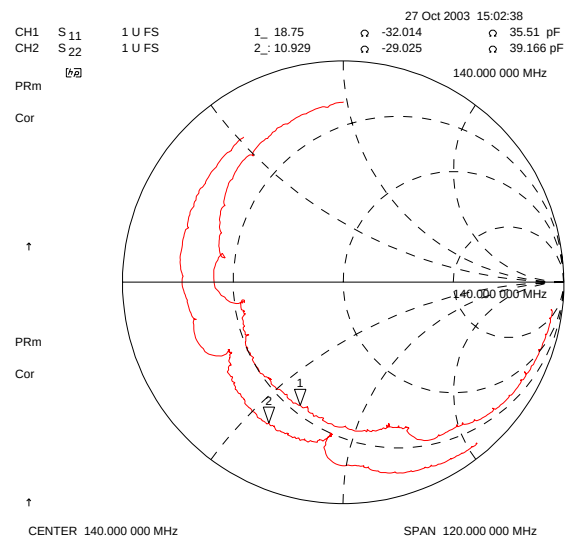
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