



REV A January 2011

Oscilent Controlled Document

| Ordering Code / Part Number | Product Description                      |
|-----------------------------|--|
| 821-IF70.0M-14A             | 70.0 MHz IF SAW Filter 14.0MHz Bandwidth |

### Specification Contents

- o Mechanical Dimensions
- o Test Circuit
- o Maximum Ratings
- o Electrical Specification
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### Notes

- o Electrostatic Sensitive Device (ESD) 
- o Avoid excessive ultrasonic exposure
- o Solderability compatible with JEDEC J-STD-020C Pb-free process, 260°C peak reflow temperature
- o This product complies with EU directive 2002/95/EC (RoHS compliance)



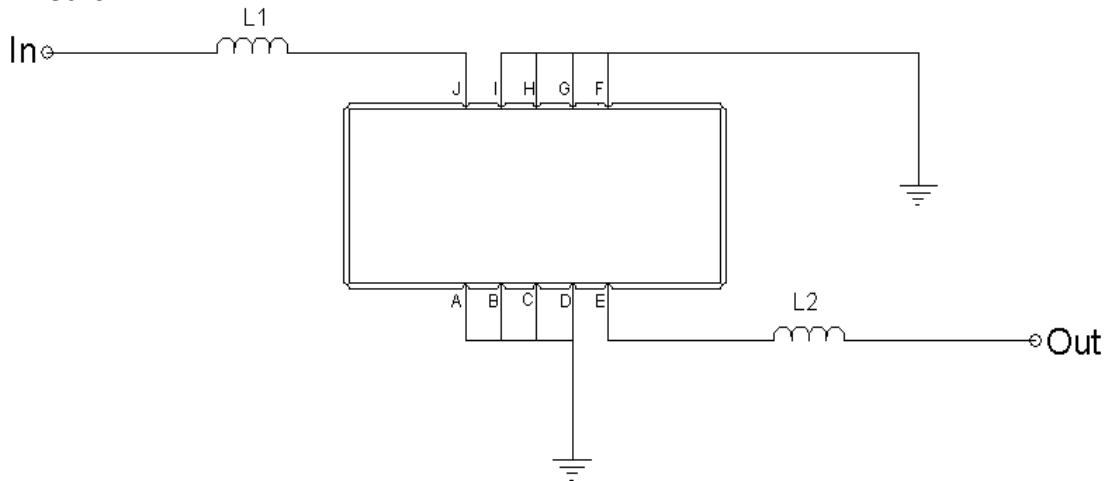


## Mechanical Dimensions (mm)



| Pin Description        |        |
|------------------------|--------|
| A, B, C, D, F, G, H, I | Ground |
| J                      | Input  |
| E                      | Output |

## Test Circuit



| Test Fixture & Values |          |
|-----------------------|----------|
| Input                 | L1=180nH |
| Output                | L2=100nH |
| Source/Load Impedance | 50 Ω     |



## Maximum Ratings

| Parameters Description                         | Unit | Minimum | Typical | Maximum |
|--|------|---------|---------|---------|
| Operating Temperature Range                    | °C   | -30     | -       | 80      |
| Storage Temperature Range                      | °C   | -40     | -       | 85      |
| Maximum DC Voltage                             | V    | -       | -       | 10      |
| Maximum Input Power                            | dBm  | -       | -       | 10      |
| Source Impedance (single ended) <sup>(1)</sup> | Ω    | -       | 50      | -       |
| Load Impedance (single ended) <sup>(1)</sup>   | Ω    | -       | 50      | -       |

Notes: With Matching Network (Ref. Testing Environment Circuit as shown above).

Those impedances could be modified with different impedance values and/or structures, if necessary.

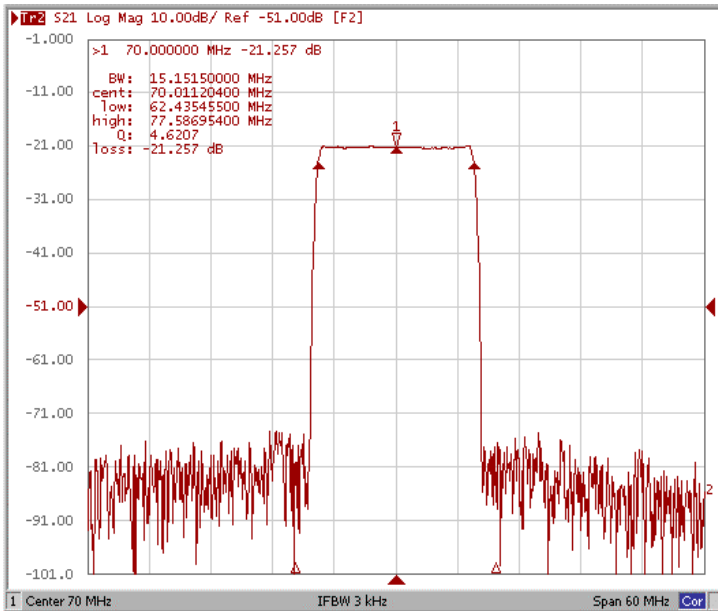
## Electrical Specification

| Parameters Description                    | Unit              | Minimum | Typical | Maximum |
|---|-------------------|---------|---------|---------|
| Center Frequency (Fo)                     | MHz               | 69.90   | 70.00   | 70.10   |
| Insertion Loss at Fo                      | dB                | -       | 21.0    | 24.0    |
| Amplitude Ripple Variation at Fo ±7.0 MHz | dB <sub>p-p</sub> | -       | 0.55    | 1.0     |
| Group Delay Variation at Fo ±7.0 MHz      | nsec              | -       | 50      | 100     |
| Absolute Delay at Fo                      | μsec              | -       | 2.34    | -       |
| Temperature Coefficient                   | ppm/°C            | -       | -72     | -       |
| Bandwidth at -1.0 dB                      | MHz               | -       | 14.82   | -       |
| Bandwidth at -3.0 dB                      | MHz               | 14.90   | 15.15   | -       |
| Bandwidth at -40.0 dB                     | MHz               | -       | 16.48   | 16.80   |
| Lower Sidelobe                            | dB                | 50      | 55      | -       |
| Upper Sidelobe                            | dB                | 50      | 55      | -       |

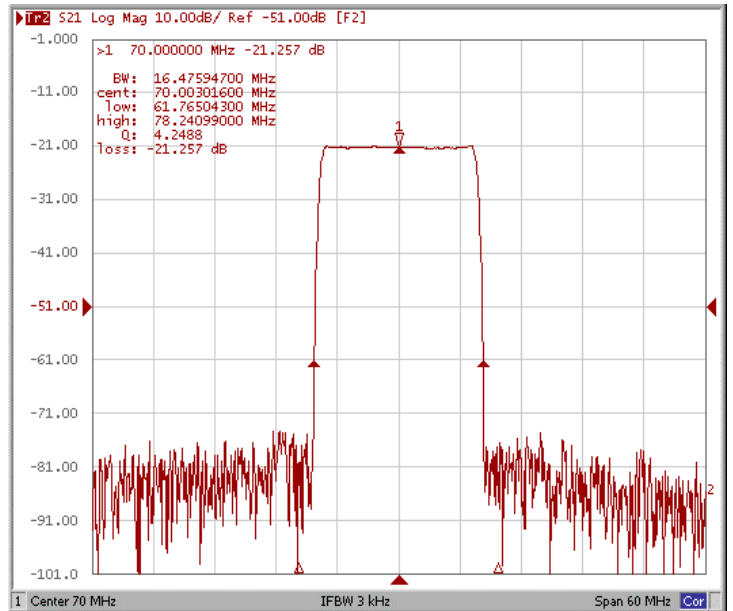


## Frequency Response

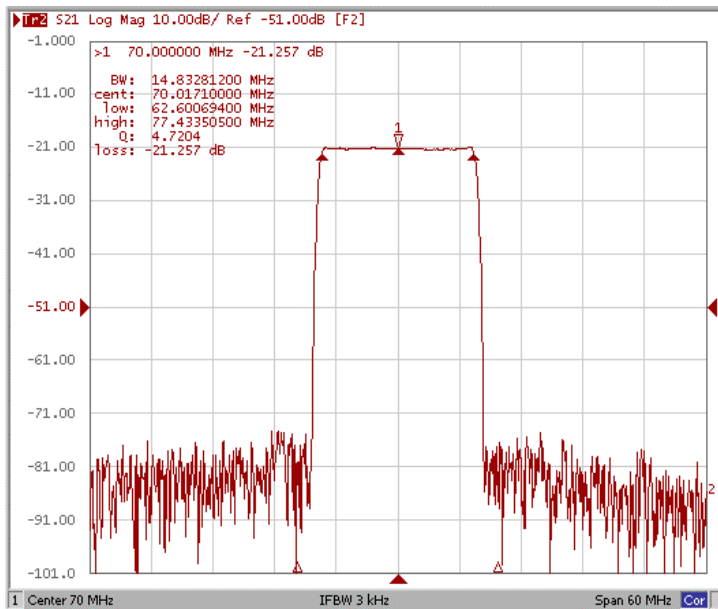
### Bandwidth at -3.0 dB



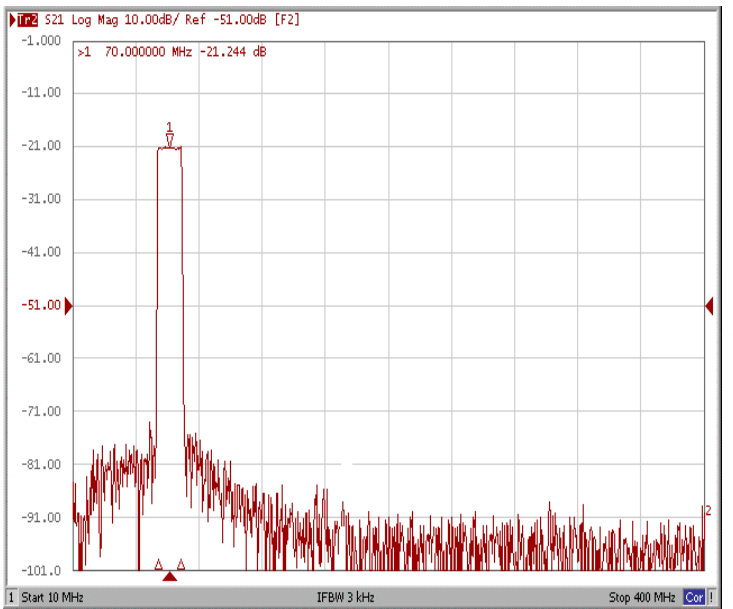
### Bandwidth at -40.0 dB



### Bandwidth at -1.0 dB

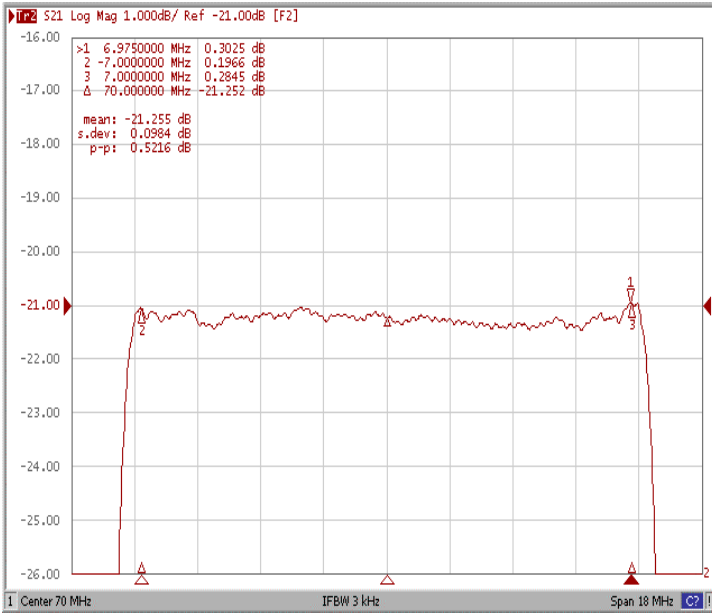


### Wide Band

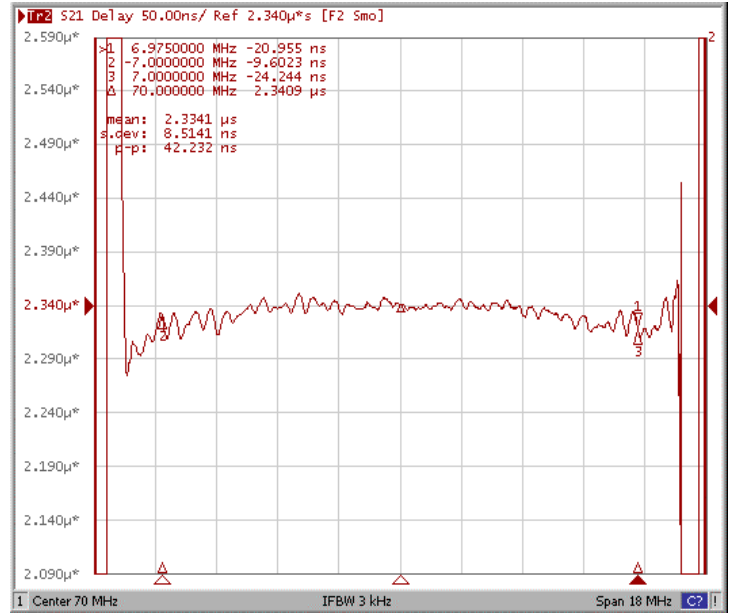




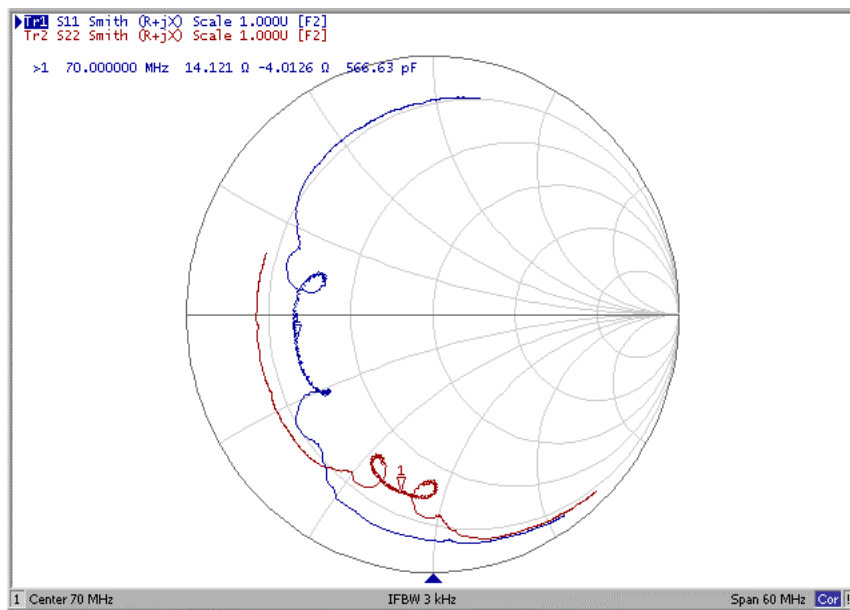
### Ripple Variation



### Group Delay Variation



### Smith Chart





### VSWR

