



# PRODUCT SPECIFICATION

REV A January 2011

Oscilent Controlled Document

| Ordering Code / Part Number | Product Description                        |
|-----------------------------|--|
| 821-IF160.0M-15A            | 60.0 MHz IF SAW Filter 16.02 MHz Bandwidth |

## Specification Contents

- o Mechanical Dimensions
- o Test Circuit
- o Maximum Ratings
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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)



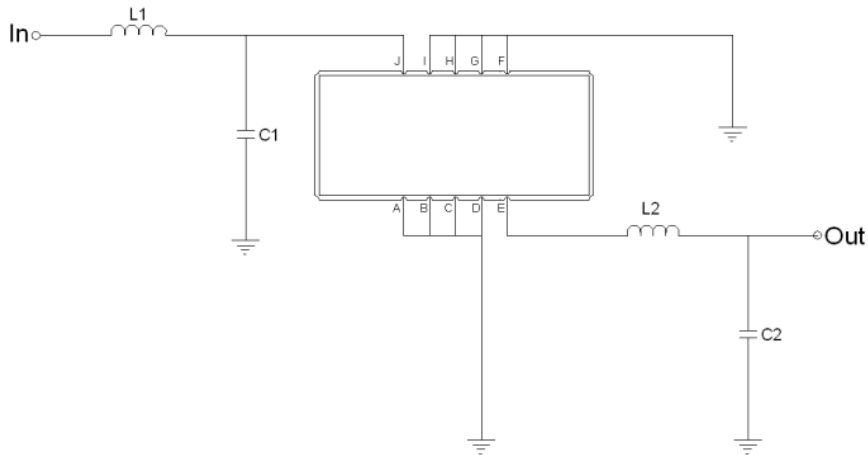


## Mechanical Dimensions (mm)



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

## Test Circuit



| Test Fixture & Values |                        |
|-----------------------|------------------------|
| Input                 | L1 = 18 nH, C1 = 3 pF  |
| Output                | L2 = 28 nH, C2 = 15 pF |
| Source/Load Impedance | 50 Ω                   |



## Maximum Ratings

| Parameters Description                         | Unit | Minimum | Typical | Maximum |
|--|------|---------|---------|---------|
| Operating Temperature Range                    | °C   | -5      | -       | 70      |
| 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.

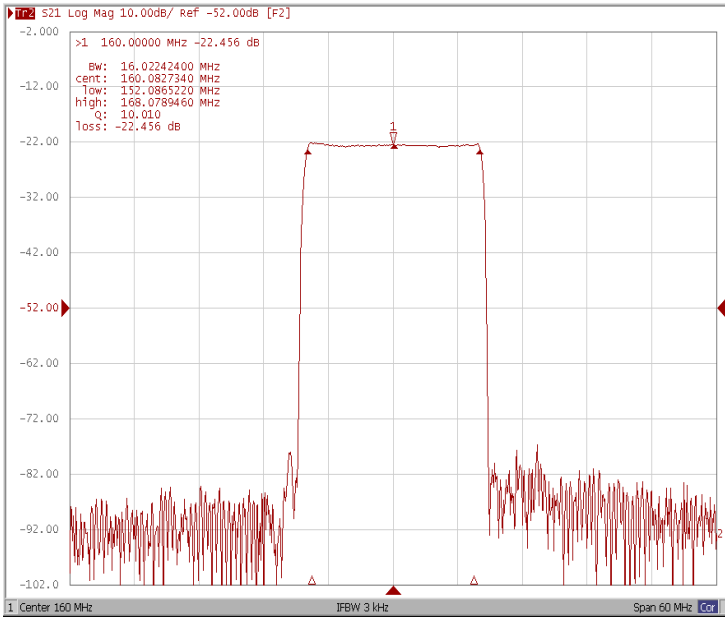
## Electrical Specification

| Parameters Description                     | Unit   | Minimum | Typical | Maximum |
|--|--------|---------|---------|---------|
| Center Frequency (Fo)                      | MHz    | -       | 160.0   | -       |
| Insertion Loss at Fo                       | dB     | -       | 22.7    | 24.5    |
| Group Delay Variation at Fo ± 7.47 MHz     | nsec   | -       | 63      | 90      |
| Absolute Delay at Fo                       | usec   | -       | 2.31    | -       |
| Passband Ripple Variation at Fo ± 7.47 MHz | dB     | -       | 0.69    | 1.00    |
| Bandwidth at -1dB                          | MHz    | 15.85   | 16.02   | -       |
| Bandwidth at -3dB                          | MHz    | -       | 16.29   | -       |
| Bandwidth at -40dB                         | MHz    | -       | 17.53   | 17.65   |
| Ultimate Rejection                         | dB     | -       | 55      | -       |
| Temperature Coefficient                    | ppm/°C | -       | -72     | -       |

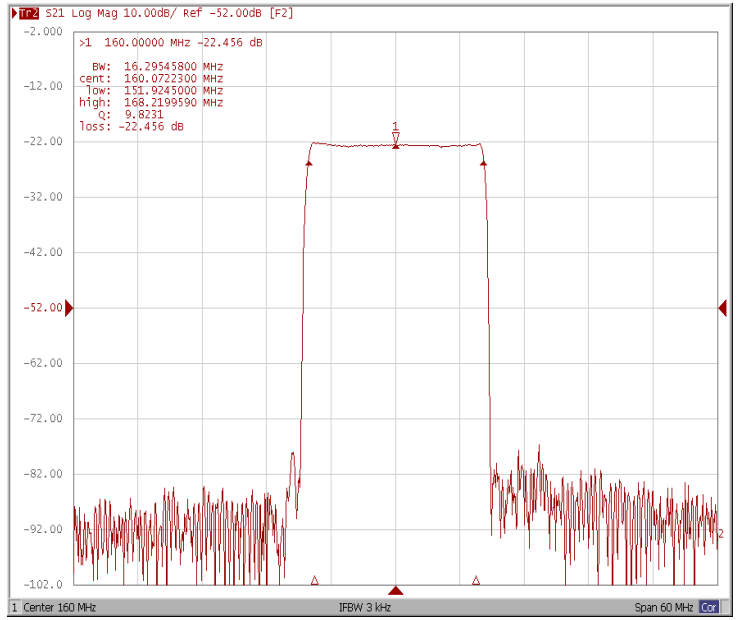


### Frequency Response

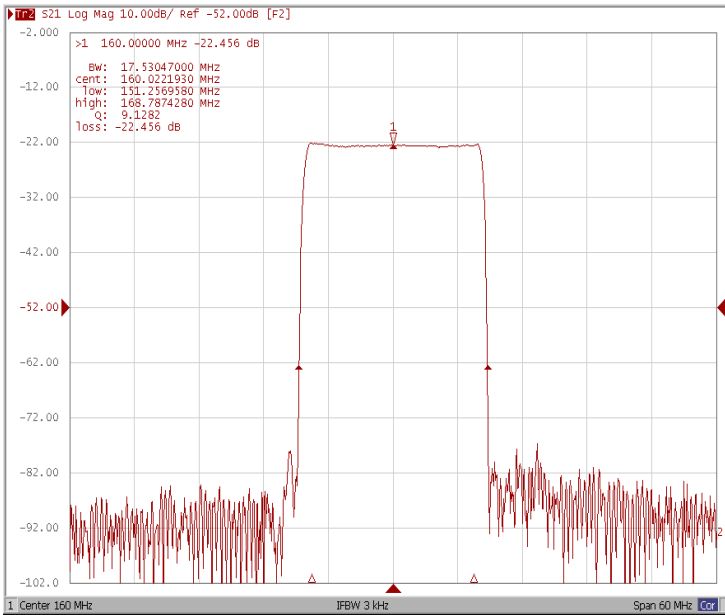
#### Bandwidth at -1.0 dB



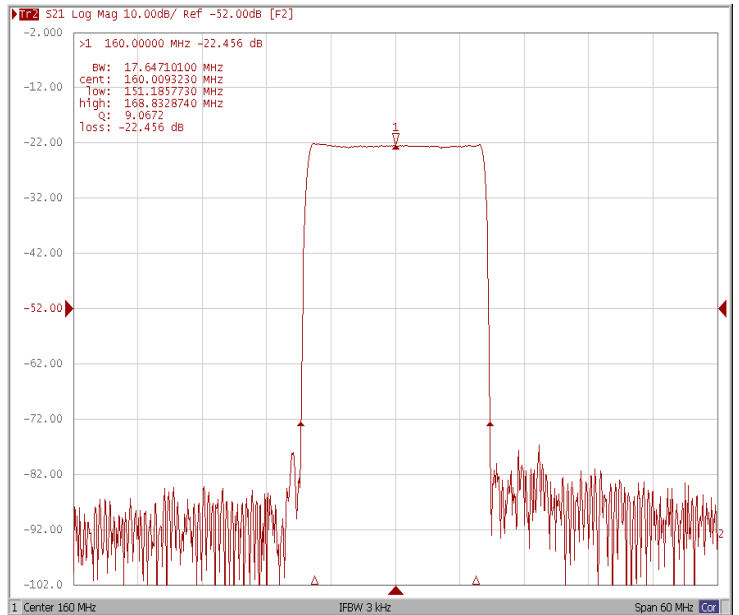
#### Bandwidth at -3.0 dB



#### Bandwidth at -40.0 dB



#### Bandwidth at -50.0 dB

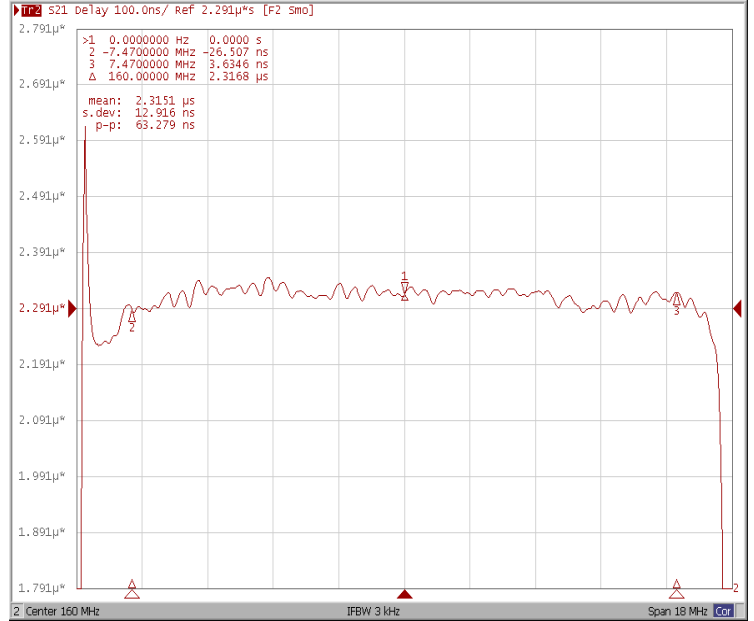




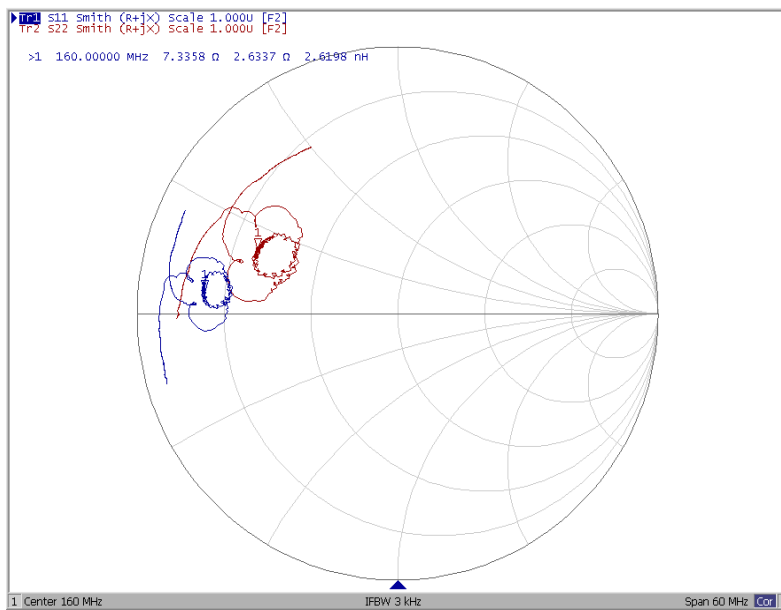
### Ripple Variation Fo±7.47 MHz



### Group Delay Variation Fo±7.47MHz



### Smith Chart





### VSWR

