



PRODUCT SPECIFICATION

REV A January 2011

Oscilent Controlled Document

| Ordering Code / Part Number | Product Description |
|-----------------------------|---|
| 821-IF70.0M-07A | 70.0 MHz IF SAW Filter 7.28 MHz Bandwidth |

Specification Contents

- o Mechanical Dimensions
- o Test Circuit
- o Maximum Ratings
- o Electrical Specification
- o Frequency Response
- o Smith Chart
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Notes

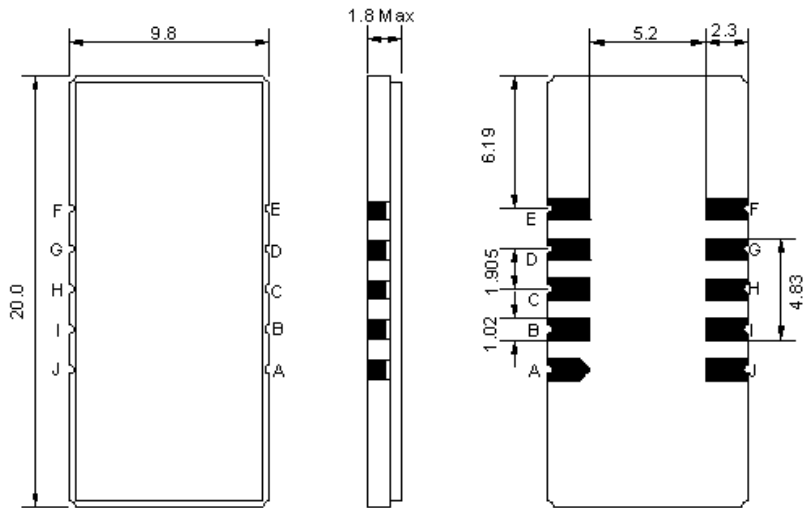
- o Electrostatic Sensitive Device (ESD) 
- o Avoid excessive ultrasonic exposure
- o Solderability compatible with JEDEC J-STD-020C Pb-free process, 260°C peak reflow temperature
- o This product complies with EU directive 2002/95/EC (RoHS compliance)



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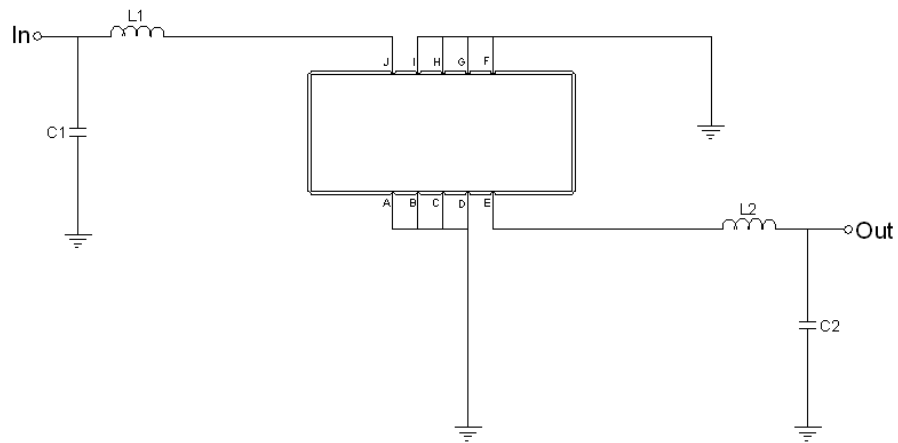


Mechanical Dimensions (mm)



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

Test Circuit



| Test Fixture & Values | |
|-----------------------|-------------------------|
| Input | L1 = 180 nH, C1 = 43 pF |
| Output | L2 = 220 nH, C2 = 36 pF |
| Source/Load Impedance | 50 Ω |



Maximum Ratings

| Parameters Description | Unit | Minimum | Typical | Maximum |
|--|------|---------|---------|---------|
| Operating Temperature Range | °C | - | 25 | - |
| Storage Temperature Range | °C | -40 | - | 85 |
| Maximum DC Voltage | V | - | - | 10 |
| Maximum Input Power | dBm | - | - | 10 |
| Source Impedance (single ended) ⁽¹⁾ | Ω | - | 50 | - |
| Load Impedance (single ended) ⁽¹⁾ | 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.

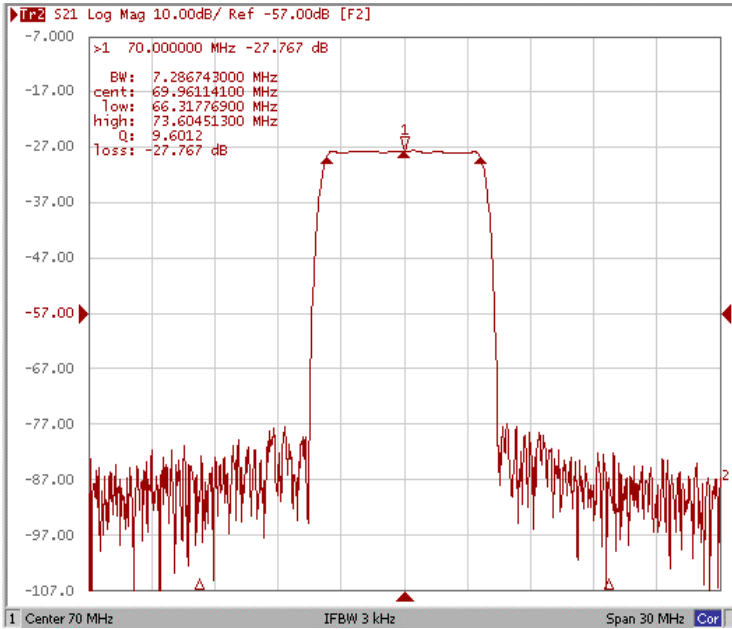
Electrical Specification

| Parameters Description | Unit | Minimum | Typical | Maximum |
|--|--------|---------|---------|---------|
| Center Frequency (Fo) | MHz | - | 70.0 | - |
| Insertion Loss at Fo | dB | - | 27.7 | 29.0 |
| Group Delay Variation at Fo ±3.5 MHz | nsec | - | 50 | 100 |
| Absolute Delay at Fo | usec | - | 3.36 | - |
| Passband Ripple Variation at Fo ±3.5 MHz | dB | - | 0.55 | 1.0 |
| Bandwidth at -1dB | MHz | - | 7.28 | - |
| Bandwidth at -10dB | MHz | - | 8.09 | - |
| Bandwidth at -20dB | MHz | - | 8.46 | - |
| Bandwidth at -25dB | MHz | - | 8.59 | - |
| Bandwidth at -35dB | MHz | - | 8.78 | - |
| Ultimate Rejection | dB | 45 | 50 | - |
| Temperature Coefficient | ppm/°C | - | -20 | - |

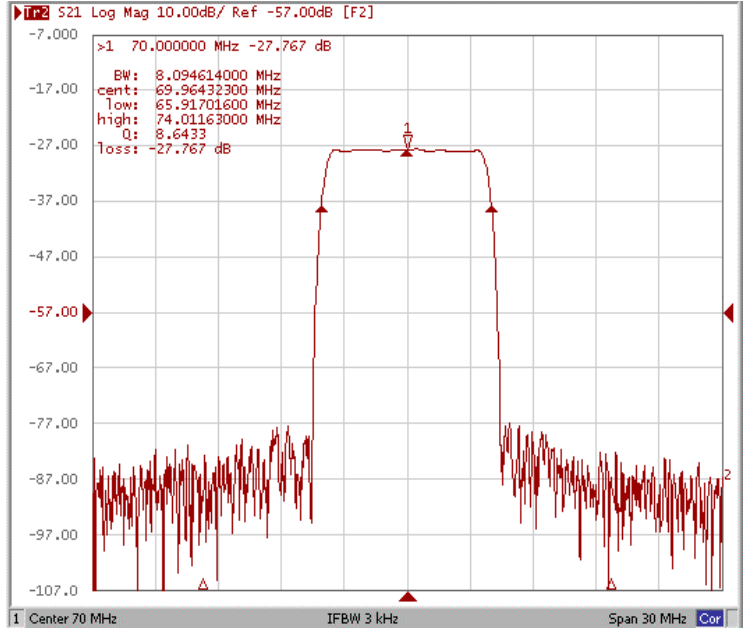


Frequency Response

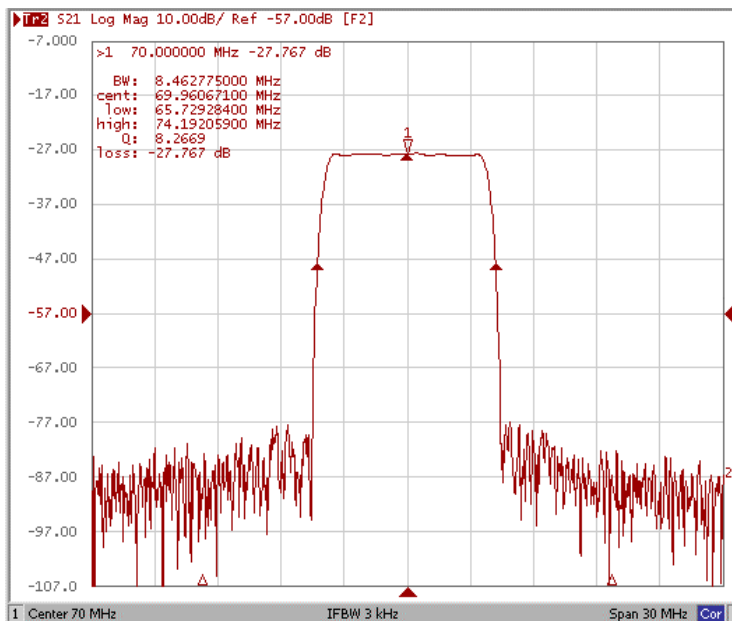
Bandwidth at -1.0 dB



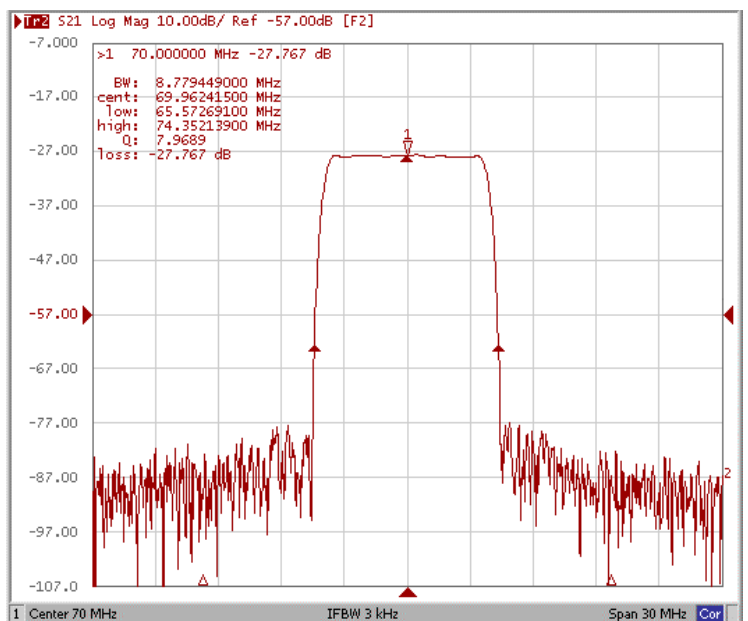
Bandwidth at -10.0 dB



Bandwidth at -20.0 dB

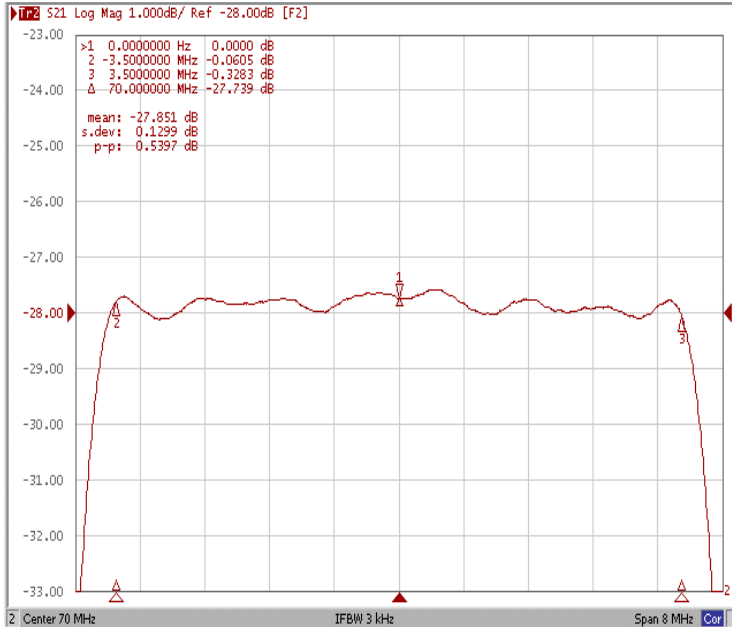


Bandwidth at -35.0 dB

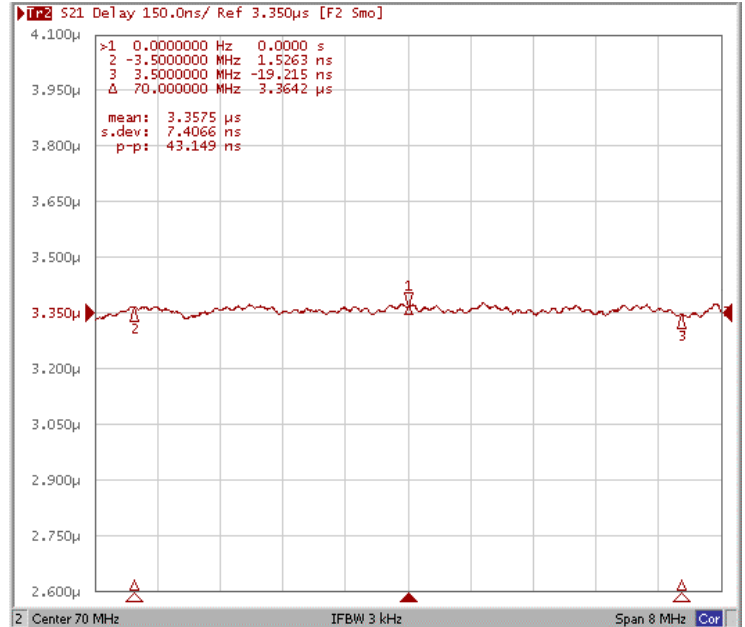




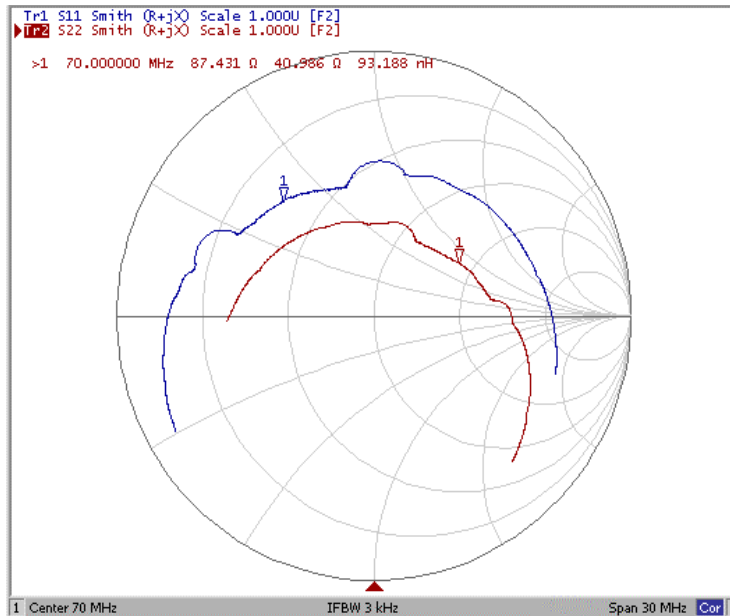
Ripple Variation Fo±3.5MHz



Group Delay Variation Fo±3.5MHz



Smith Chart





VSWR

