



PRODUCT SPECIFICATION

REV A January 2011

Oscilent Controlled Document

| Ordering Code / Part Number | Product Description |
|-----------------------------|--|
| 813-IF70.1M-19C | 70.1MHz IF SAW Filter 19.82MHz Bandwidth |

Specification Contents

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

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)



Oscilent Corporation
Telephone: 1.949.252.0522
Fax: 1.949.252.0522
Email: sales@oscilent.com

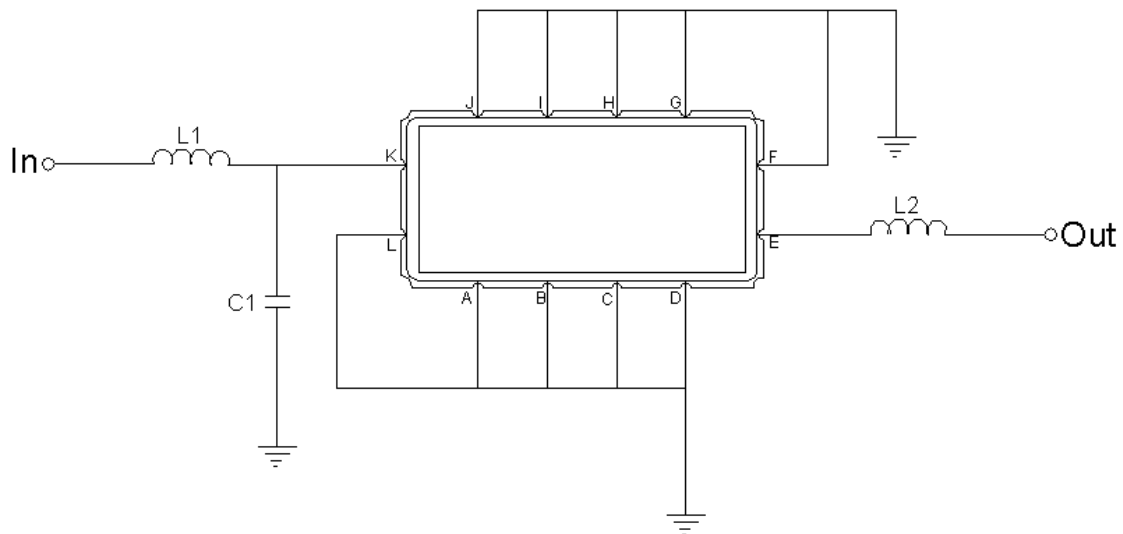


Mechanical Dimensions (mm)



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

Test Circuit



| Test Fixture & Values | |
|-----------------------|-------------------|
| Input | L1=180nH, C1=11pF |
| Output | L2=120nH |
| 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.

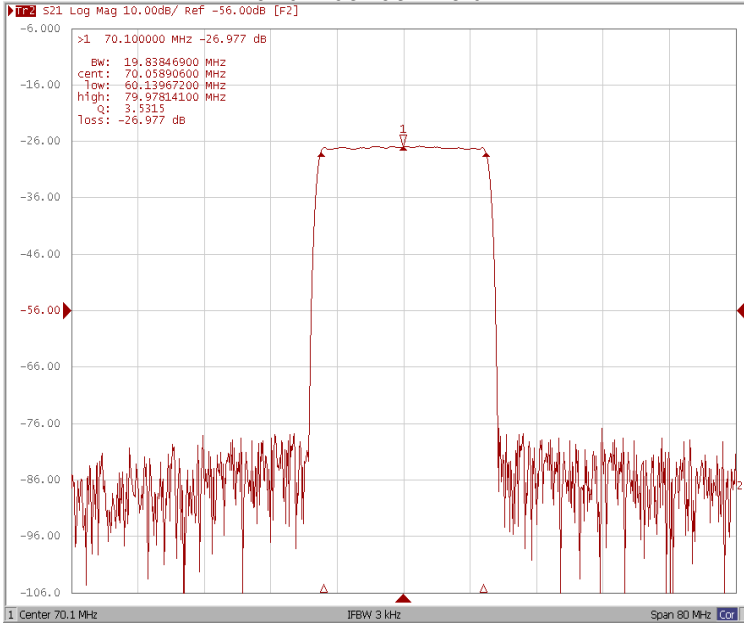
Electrical Specification

| Parameters Description | Unit | Minimum | Typical | Maximum |
|---|-------------------|---------|---------|---------|
| Center Frequency (Fo) | MHz | 70.05 | 70.1 | 70.20 |
| Insertion Loss at Fo | dB | - | 27.0 | 29.0 |
| Temperature Coefficient | ppm/°C | - | -72 | - |
| Amplitude Ripple within fo ±9.65 MHz | dB _{p-p} | - | 0.6 | 1.0 |
| Group Delay Variation within fo ±9.65 MHz | nsec | - | 30 | 80 |
| Absolute Delay at Fo | µsec | - | 1.69 | - |
| Bandwidth at -1.0 dB | MHz | 19.70 | 19.83 | - |
| Bandwidth at -3.0 dB | MHz | - | 20.36 | - |
| Bandwidth at -40.0 dB | MHz | - | 22.38 | 22.50 |
| Relative Attenuation: | | | | |
| Fo ±14.42 MHz | dB | - | 50 | - |
| Lower Sidelobe | dB | - | 50 | - |
| Upper Sidelobe | dB | - | 50 | - |

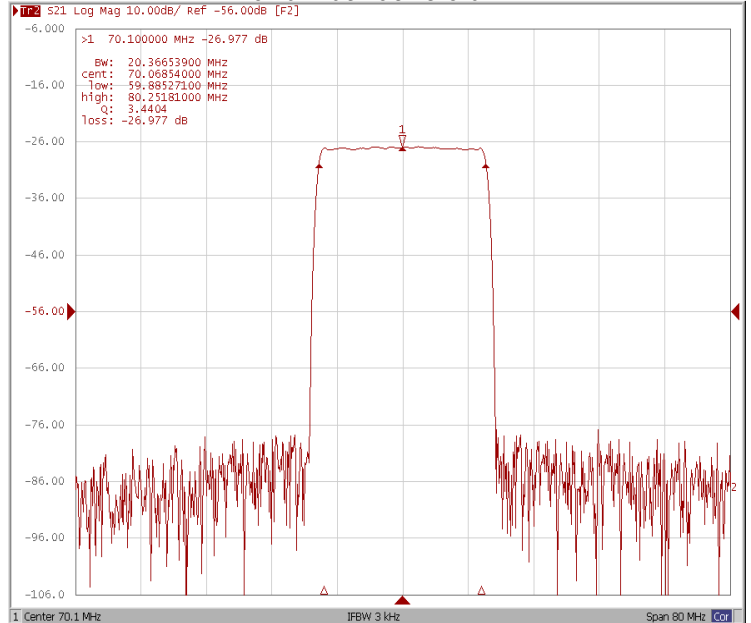


Frequency Response

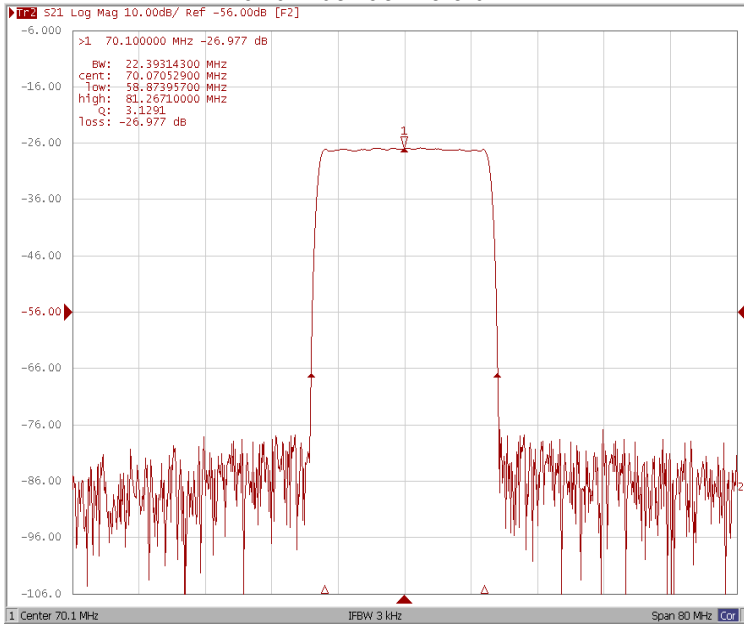
Bandwidth at -1.0 dB



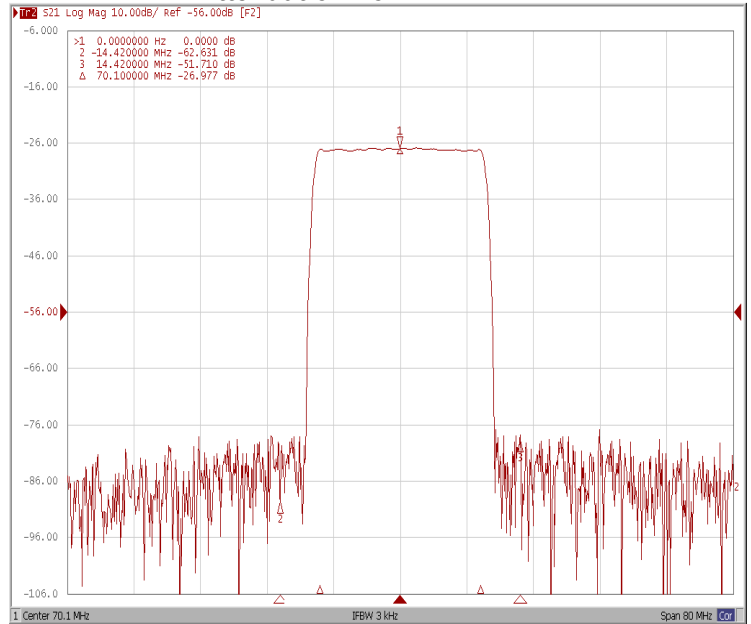
Bandwidth at -3.0 dB



Bandwidth at -40.0 dB

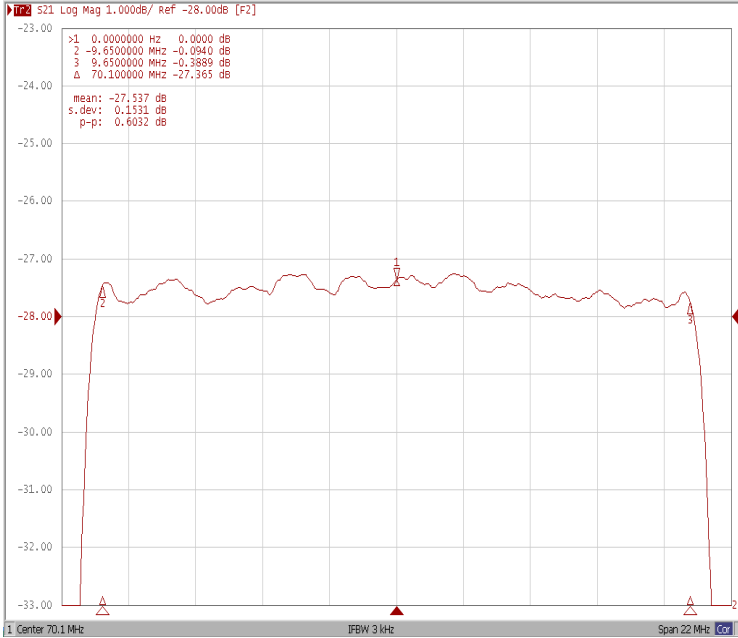


Attenuation Fo±14.42MHz

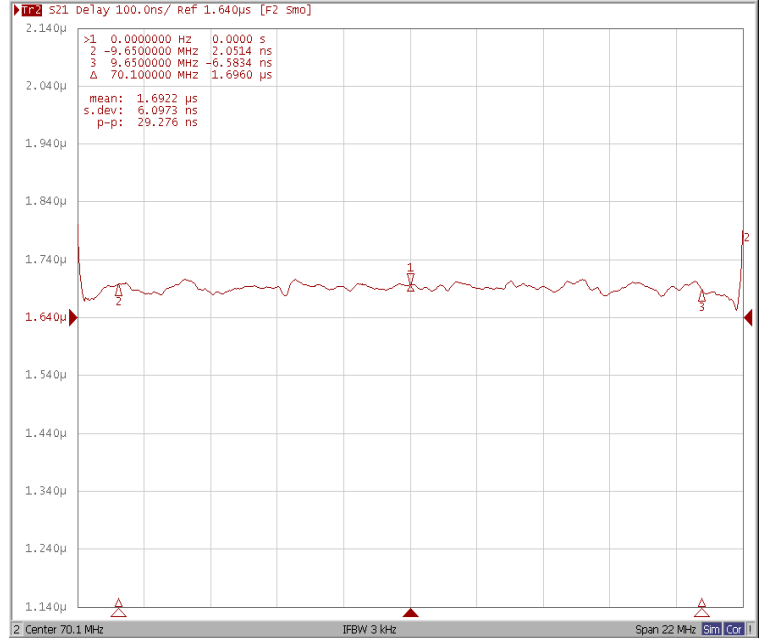




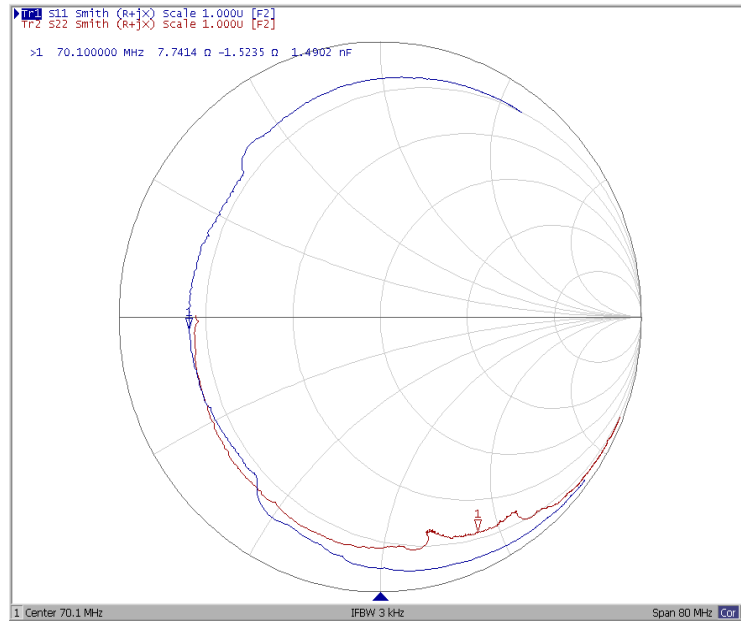
Ripple Variation Fo±9.65MHz



Group Delay Variation Fo±9.65MHz



Smith Chart





VSWR

