



# 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
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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)



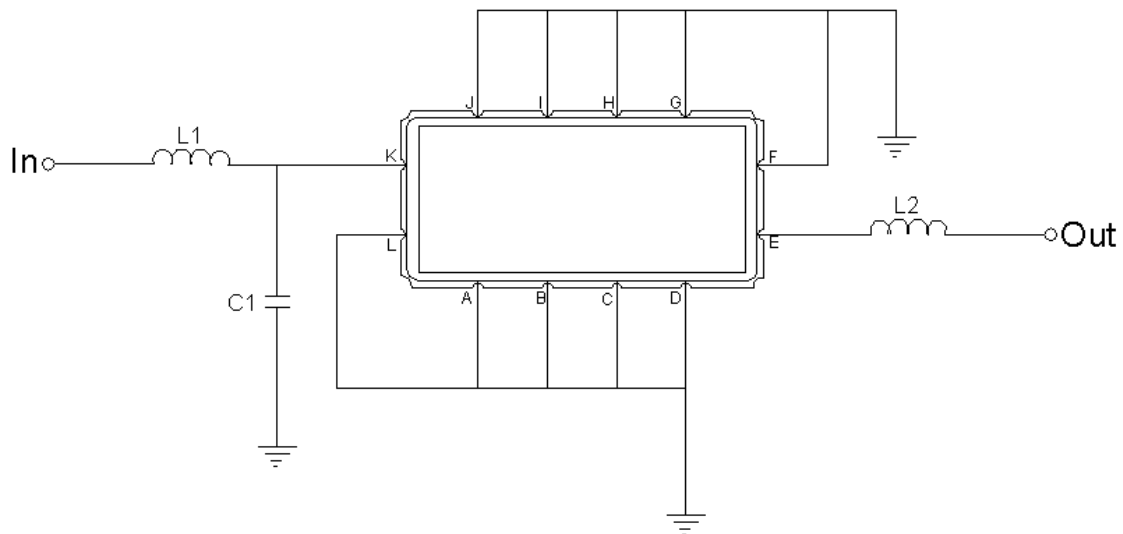


## Mechanical Dimensions (mm)



| Pin Description              |        |
|------------------------------|--------|
| A, B, C, D, F, G, H, I, 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) <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.

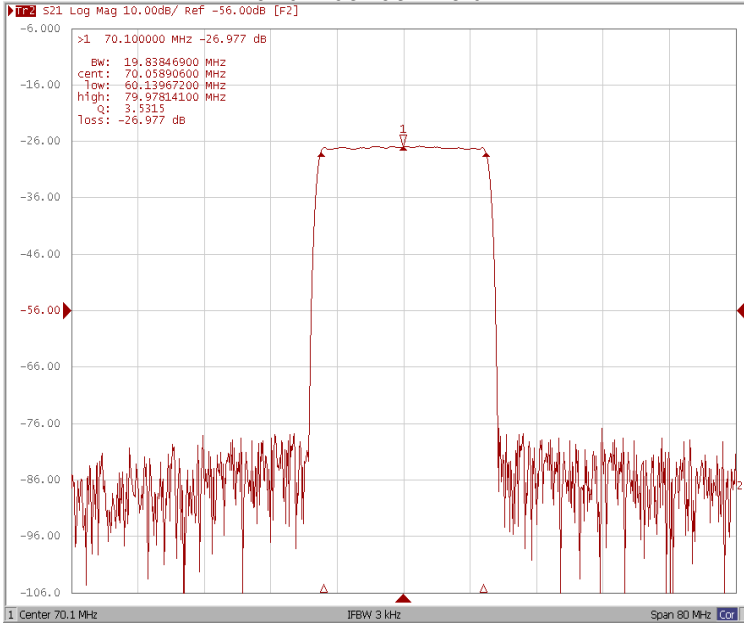
## Electrical Specification

| Parameters Description                    | Unit              | Minimum | Typical | Maximum |
|---|-------------------|---------|---------|---------|
| Center Frequency (Fo)                     | MHz               | 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 <sub>p-p</sub> | -       | 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      | -       |

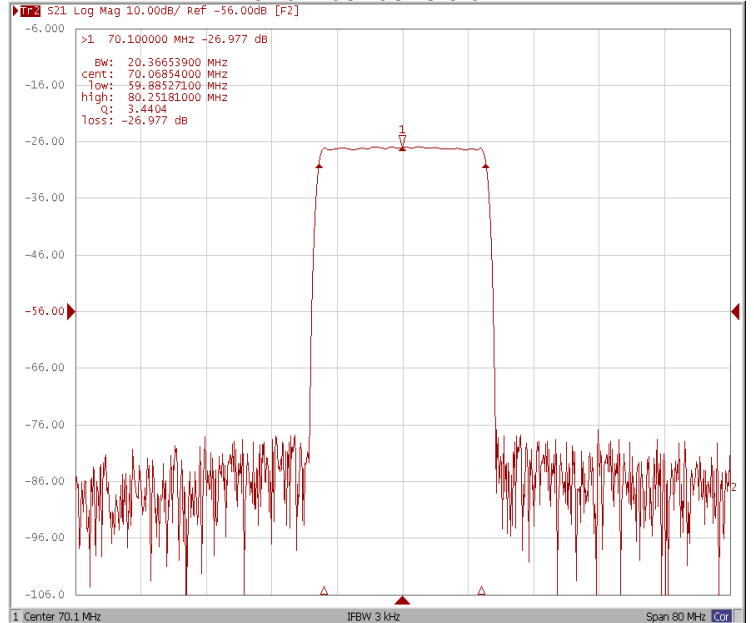


## Frequency Response

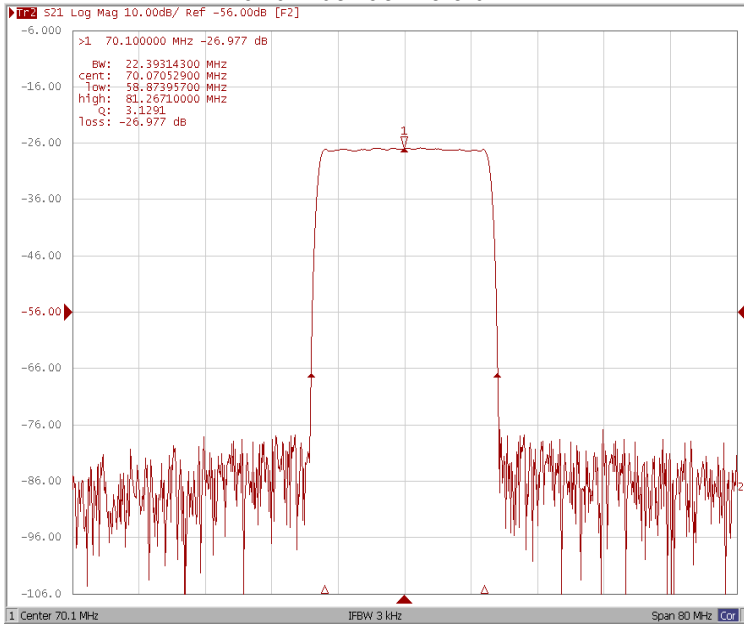
### Bandwidth at -1.0 dB



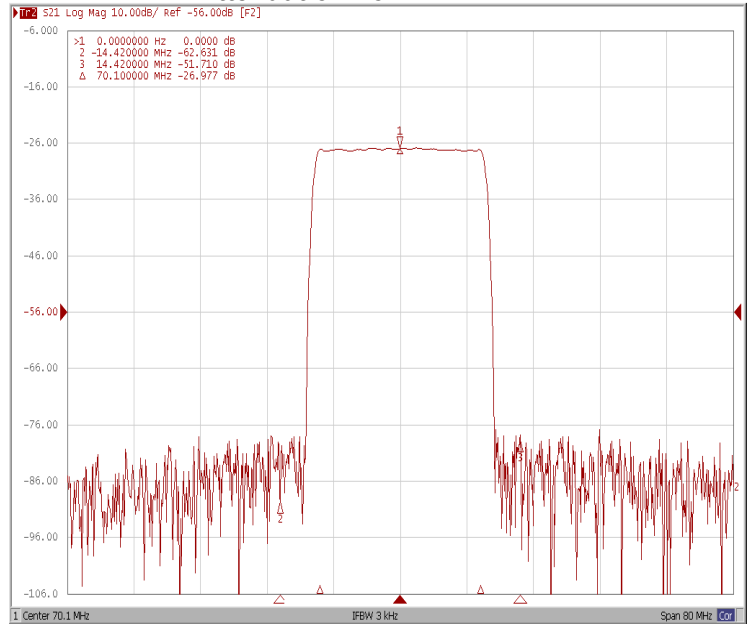
### Bandwidth at -3.0 dB



### Bandwidth at -40.0 dB

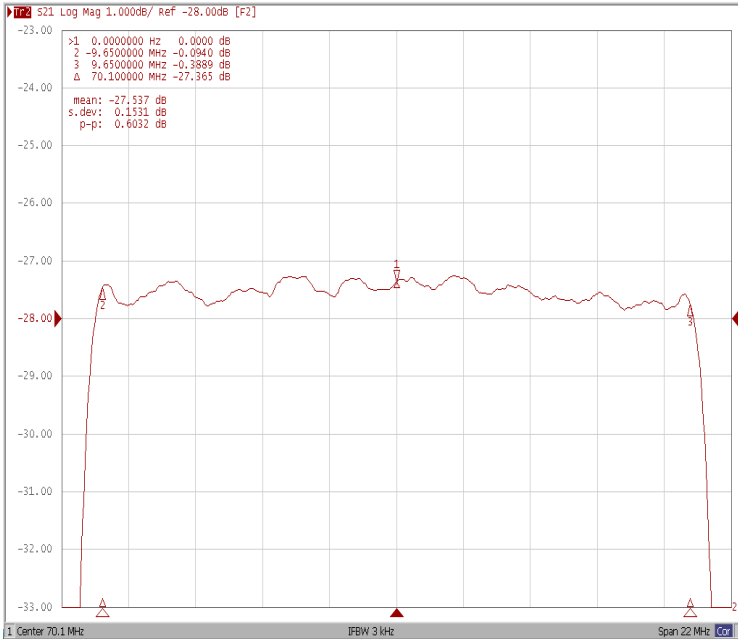


### Attenuation Fo±14.42MHz

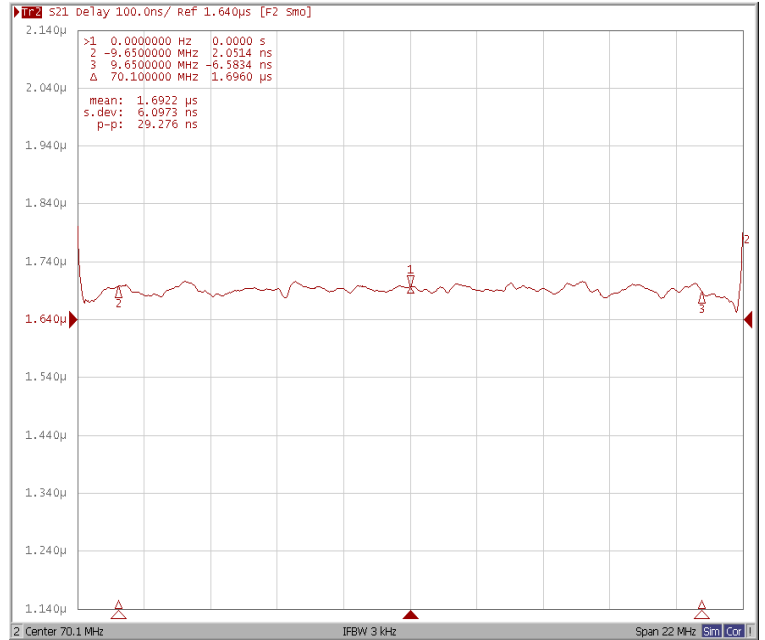




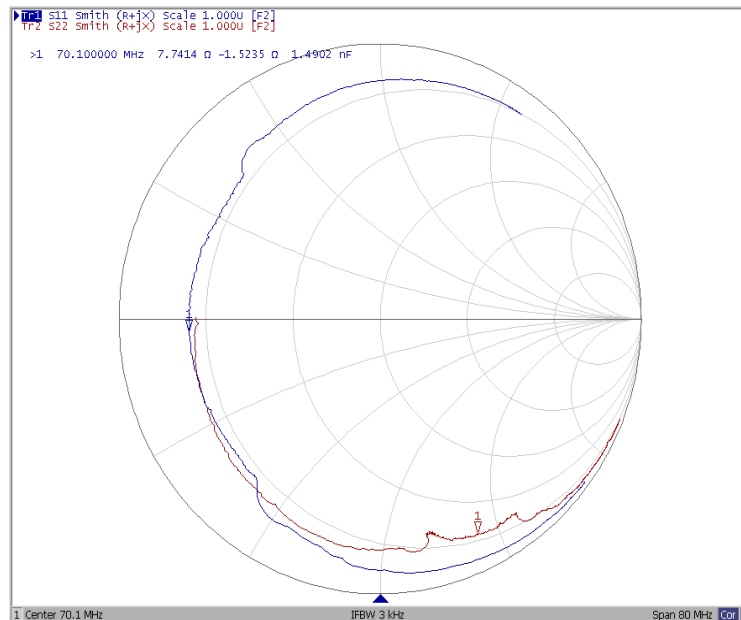
### Ripple Variation Fo±9.65MHz



### Group Delay Variation Fo±9.65MHz



### Smith Chart





### VSWR

