



# PRODUCT SPECIFICATION

REV A January 2011

Oscilent Controlled Document

| Ordering Code / Part Number | Product Description                        |
|-----------------------------|--|
| 821-IF80.1M-20B             | 80.1 MHz IF SAW Filter 20.10 MHz Bandwidth |

## Specification Contents

- o Mechanical Dimensions
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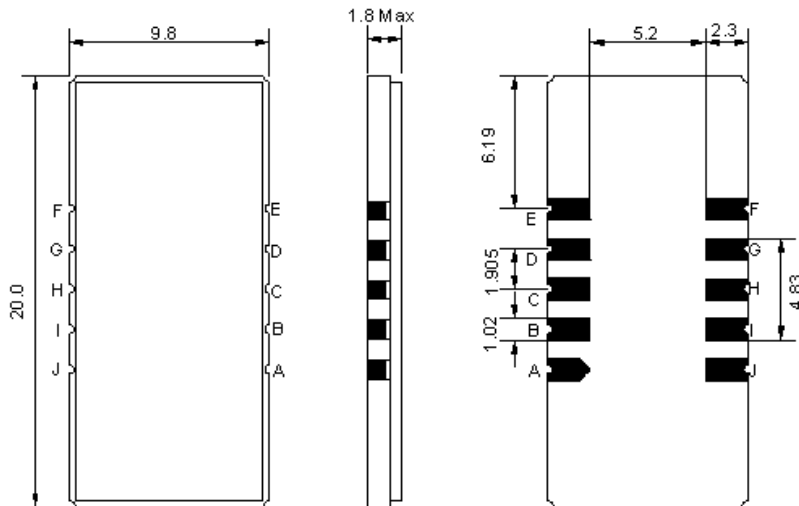
## Notes

- 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)



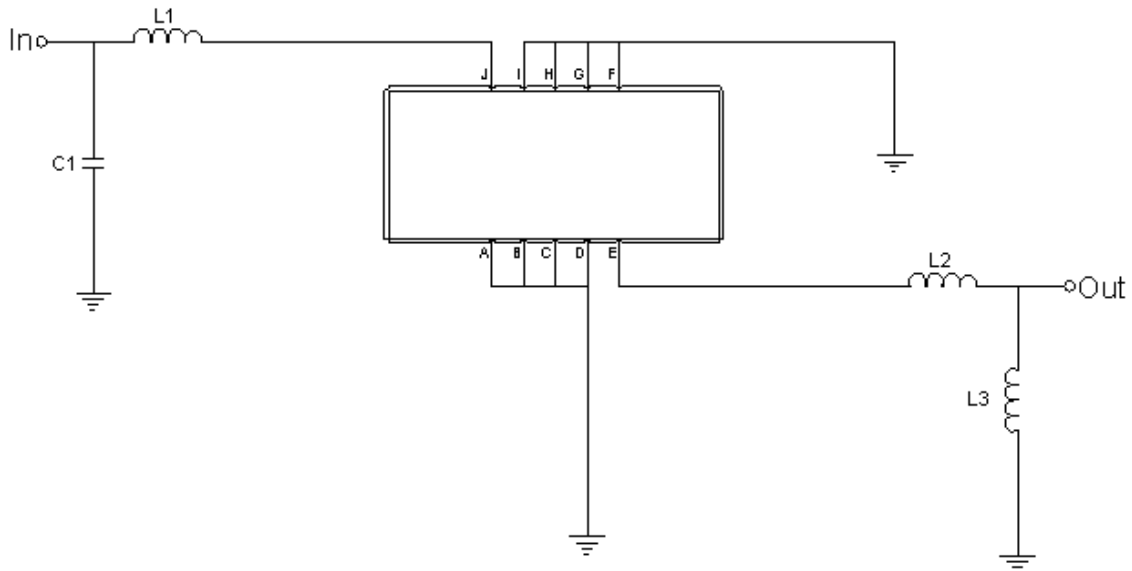


## Mechanical Dimensions (mm)



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

## Test Circuit



| Test Fixture & Values |                   |
|-----------------------|-------------------|
| Input                 | L1=150nH, C1=13pF |
| Output                | L2=56nH, C2=100nH |
| Source/Load Impedance | 50 Ω              |

**Maximum Ratings**

| Parameters Description                         | Unit | Minimum | Typical | Maximum |
|--|------|---------|---------|---------|
| Operating Temperature Range                    | °C   | -30     | -       | 80      |
| Storage Temperature Range                      | °C   | -30     | -       | 80      |
| 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.

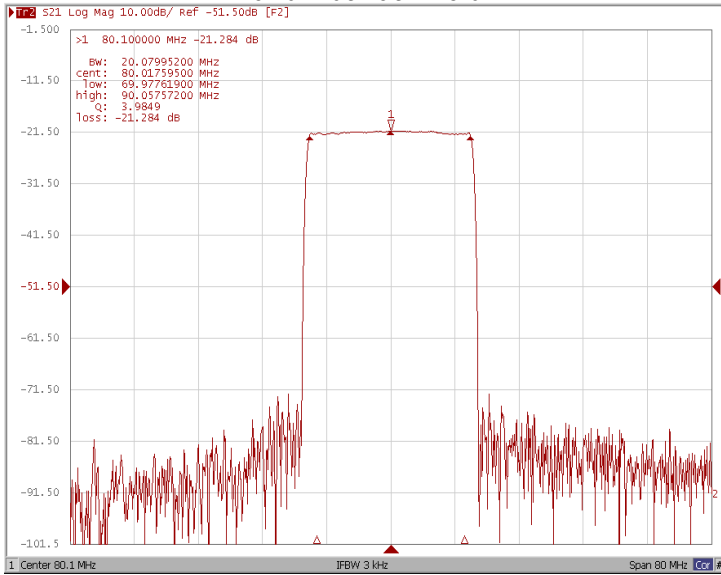
**Electrical Specification**

| Parameters Description             | Unit   | Minimum | Typical | Maximum |
|------------------------------------|--------|---------|---------|---------|
| Center Frequency (Fo)              | MHz    | 79.95   | 80.10   | 80.25   |
| Insertion Loss at Fo               | dB     | -       | 21.3    | 23.0    |
| Group Delay Variation (Fo±9.22MHz) | ns     | -       | 35      | 60      |
| Absolute Delay                     | us     | -       | 2.38    | -       |
| Passband Ripple (Fo±9.22MHz)       | dB     | -       | 0.75    | 1.00    |
| Bandwidth at -1dB                  | MHz    | 19.30   | 20.10   | -       |
| Bandwidth at -3dB                  | MHz    | -       | 20.45   | -       |
| Bandwidth at -20dB                 | MHz    | -       | 21.36   | 21.56   |
| Bandwidth at -40dB                 | MHz    | -       | 21.80   | -       |
| Ultimate Rejection                 | dB     | 50      | 52      | -       |
| Temperature coefficient            | ppm/°C | -       | -72     | -       |

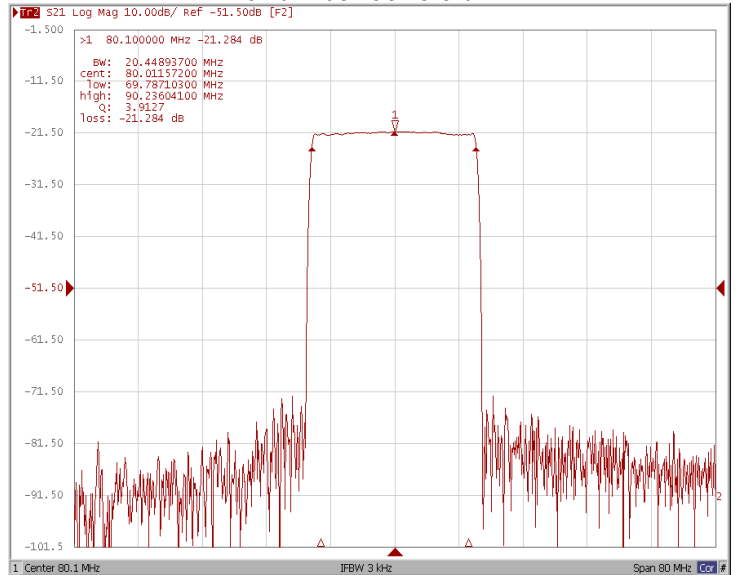


### Frequency Response

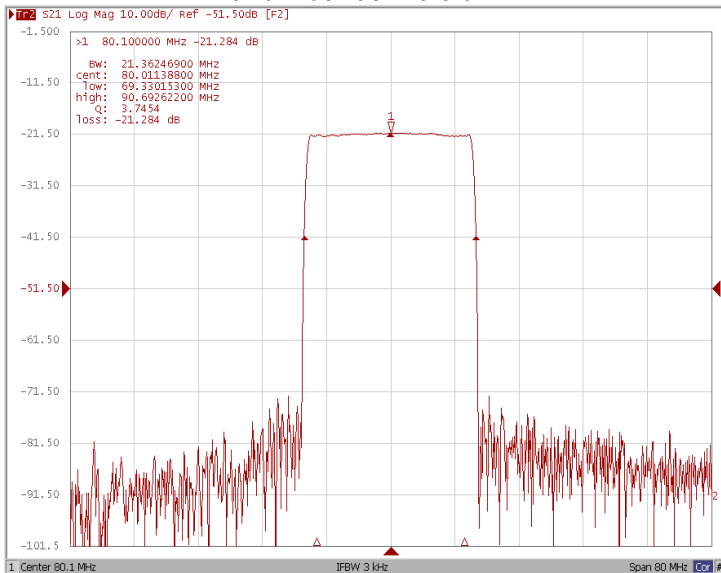
**Bandwidth at -1.0 dB**



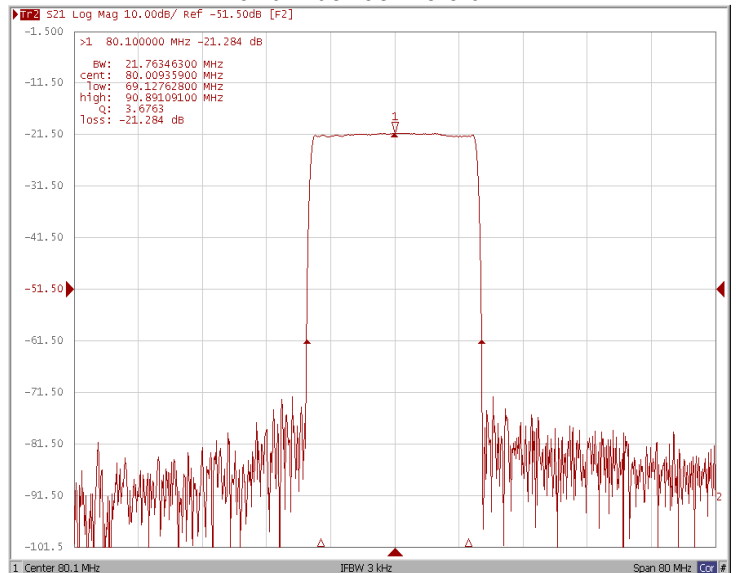
**Bandwidth at -3.0 dB**



**Bandwidth at -20.0 dB**



**Bandwidth at -40.0 dB**

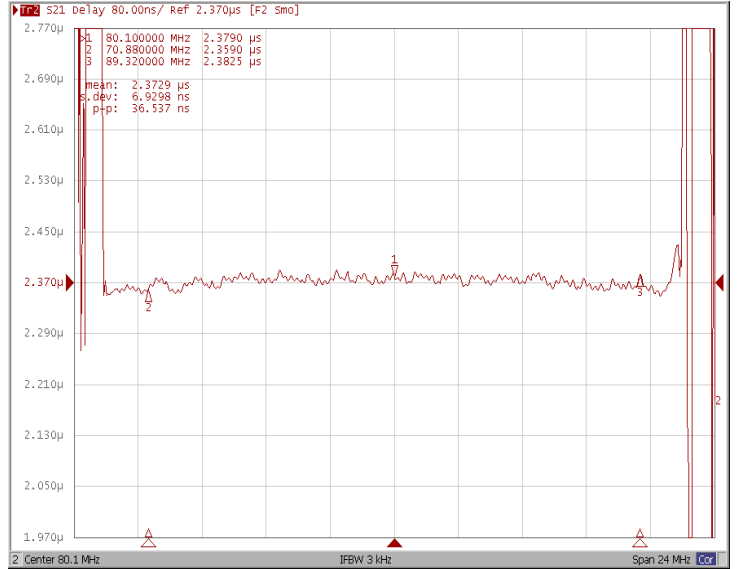




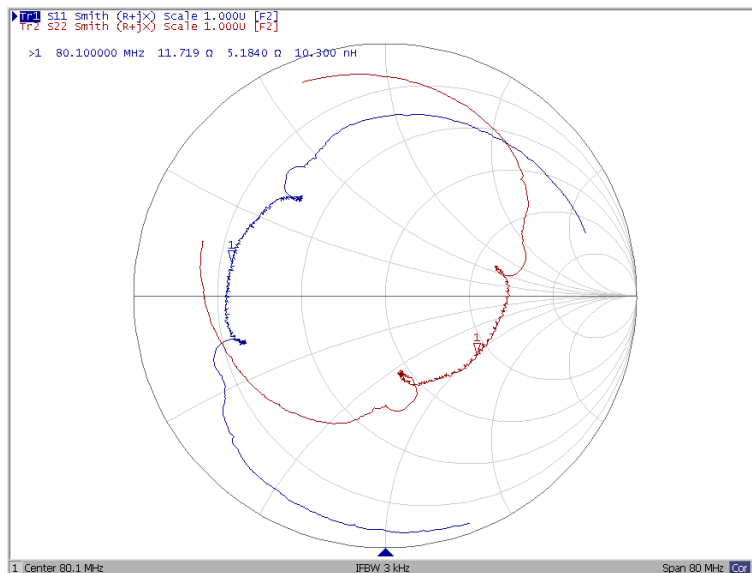
### Ripple Variation Fo±9.22MHz



### Group Delay Variation Fo±9.22MHz



### Smith Chart





### VSWR

