



PRODUCT SPECIFICATION

REV A January 2011

Oscilent Controlled Document

| Ordering Code / Part Number | Product Description |
|-----------------------------|--|
| 821-SL20.0M-02A | 20.0 MHz IF SAW Filter 241 kHz Bandwidth |

Specification Contents

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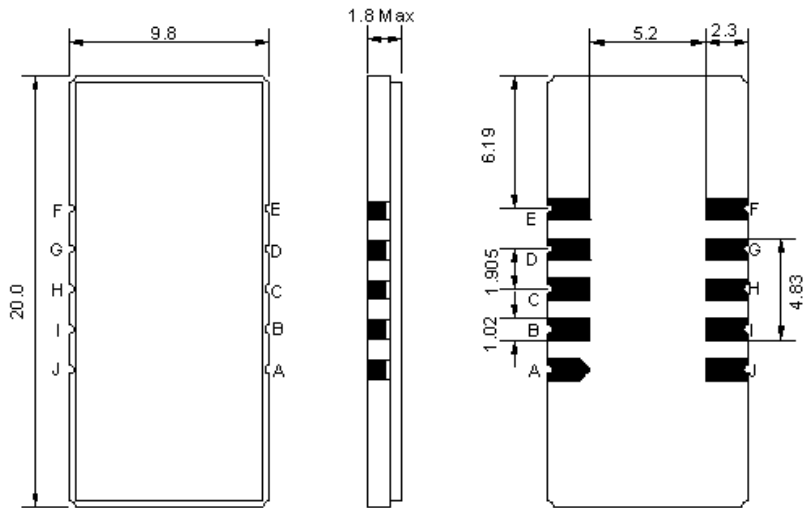
Notes

- 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)



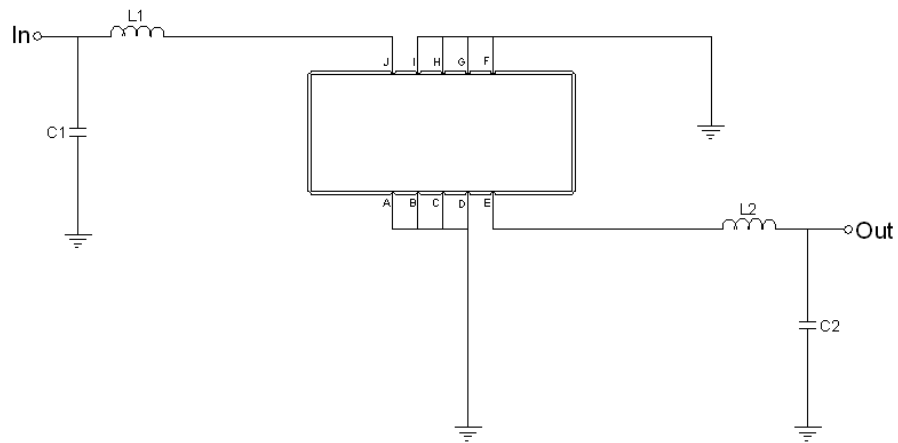


Mechanical Dimensions (mm)



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

Test Circuit



| Test Fixture & Values | |
|-----------------------|---------------------------|
| Input | L1 = 820 nH, C1 = 160 pF |
| Output | L2 = 1000 nH, C2 = 270 pF |
| Source/Load Impedance | 50 Ω |



Maximum Ratings

| Parameters Description | Unit | Minimum | Typical | Maximum |
|--|------|---------|---------|---------|
| Operating Temperature Range | °C | -20 | - | 90 |
| Storage Temperature Range | °C | -30 | - | 90 |
| 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.

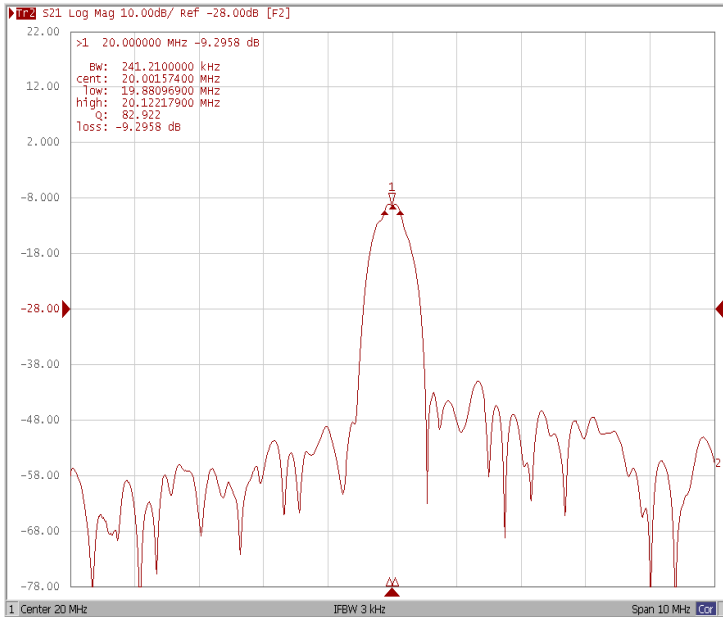
Electrical Specification

| Parameters Description | Unit | Minimum | Typical | Maximum |
|--|--------|---------|---------|---------|
| Center Frequency (Fo) | MHz | - | 20.0 | - |
| Insertion Loss at Fo | dB | - | 9.3 | 12.0 |
| Group Delay Variation at Fo ± 0.05 MHz | nsec | - | 258 | 350 |
| Absolute Delay at Fo | usec | - | 2.6 | 2.9 |
| Passband Ripple Variation at Fo ± 0.05 MHz | dB | - | 0.13 | 0.90 |
| Bandwidth at -1dB | MHz | 0.15 | 0.24 | - |
| Bandwidth at -3dB | MHz | - | 0.38 | - |
| Bandwidth at -40dB | MHz | - | 1.16 | 1.30 |
| Rejection level | dB | - | 35 | - |
| Relative Attenuation | | | | |
| DC ~ 15MHz | dB | 40 | 48 | - |
| @ 40MHz | dB | 33 | 40 | - |
| Temperature Coefficient | ppm/°C | - | -18 | - |

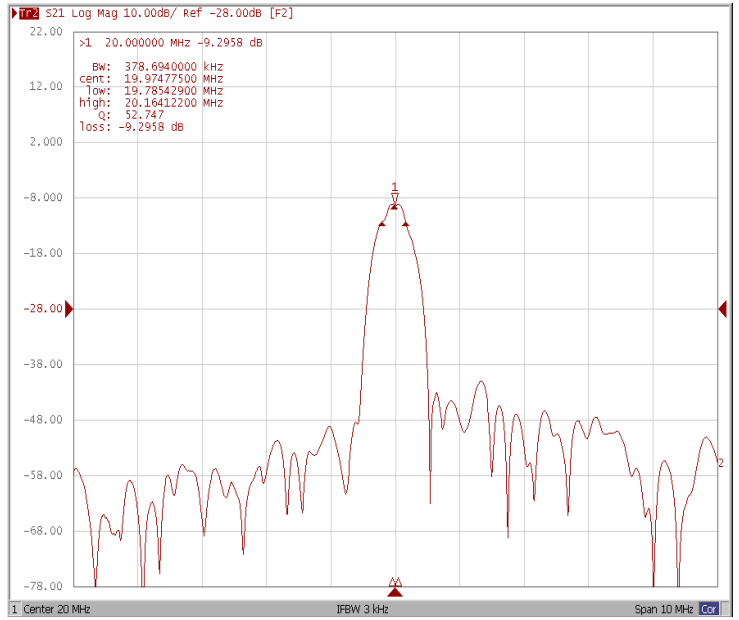


Frequency Response

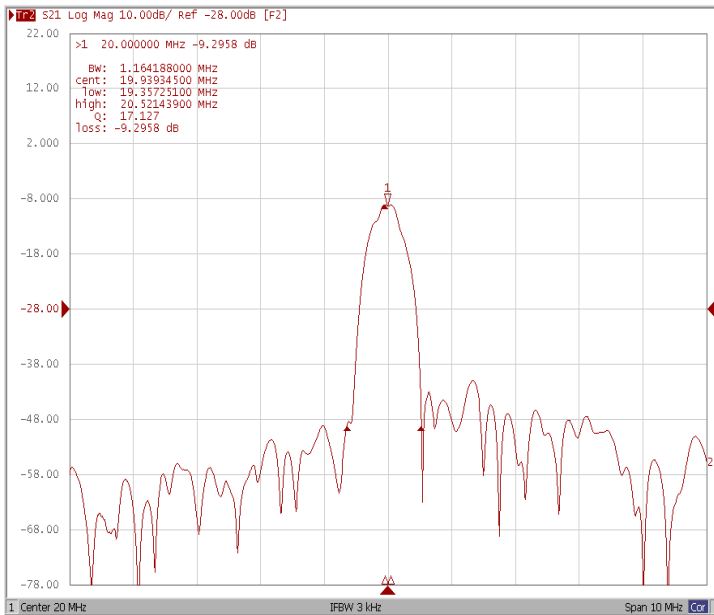
Bandwidth at -1.0 dB



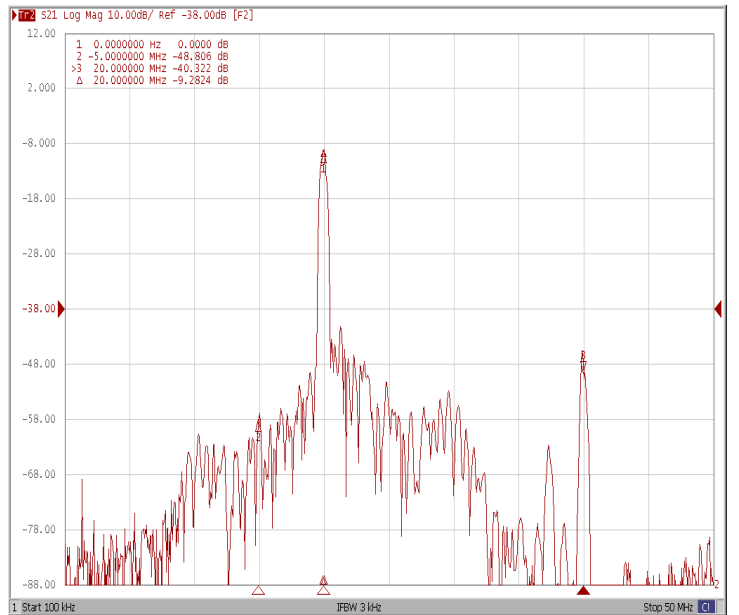
Bandwidth at -3.0 dB



Bandwidth at -40.0 dB

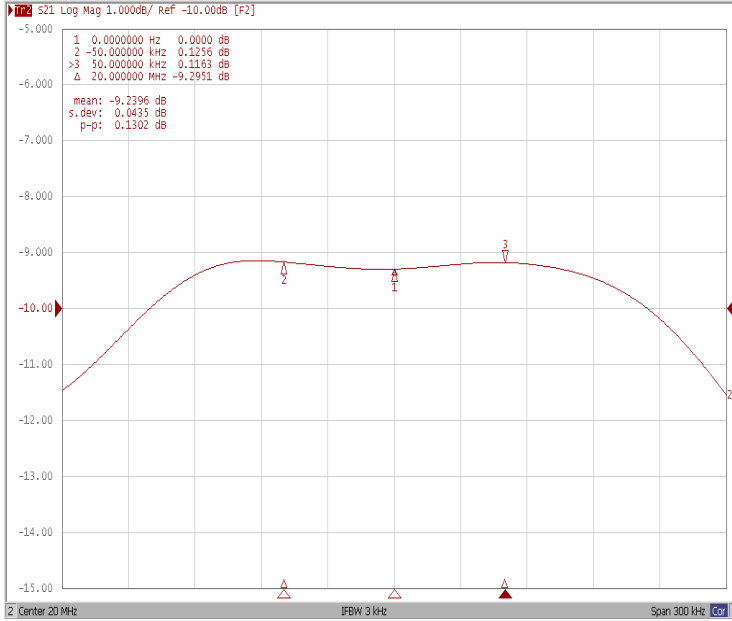


Wide-Band (DC~15MHz, @40MHz)

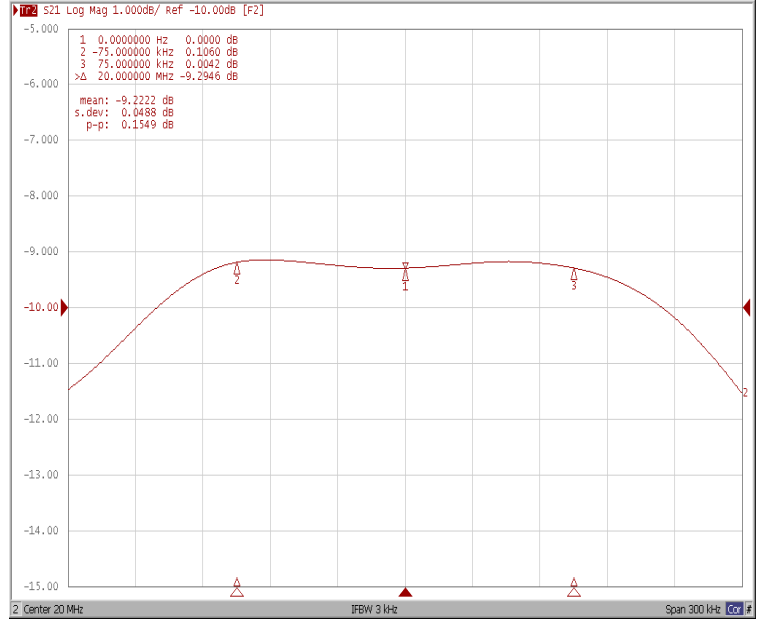




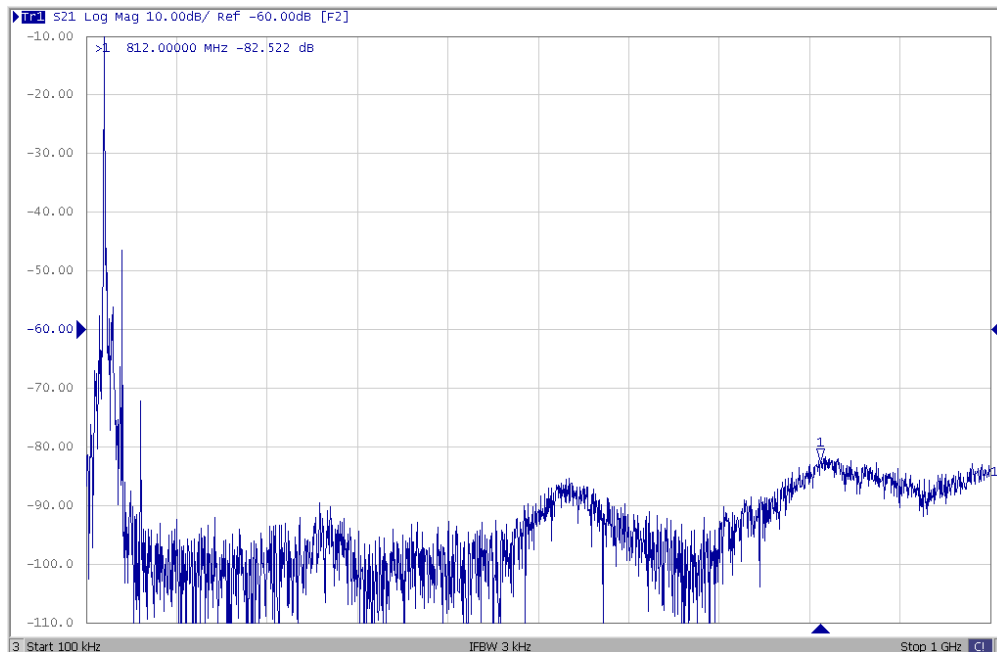
Ripple Variation Fo± 0.05MHz



Ripple Variation Fo± 0.075MHz

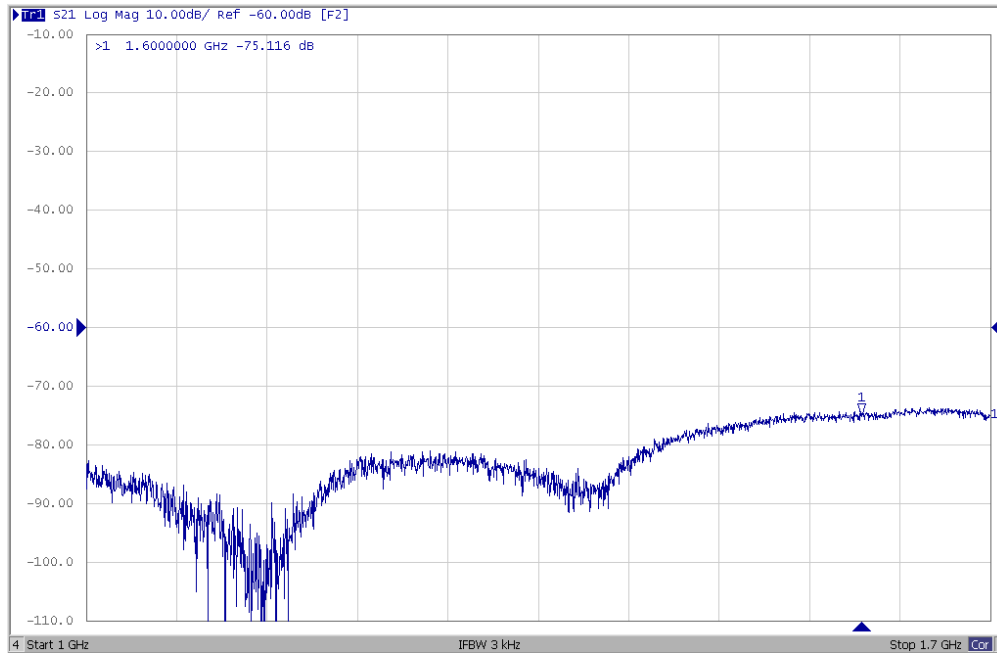


WIDE_812MHz

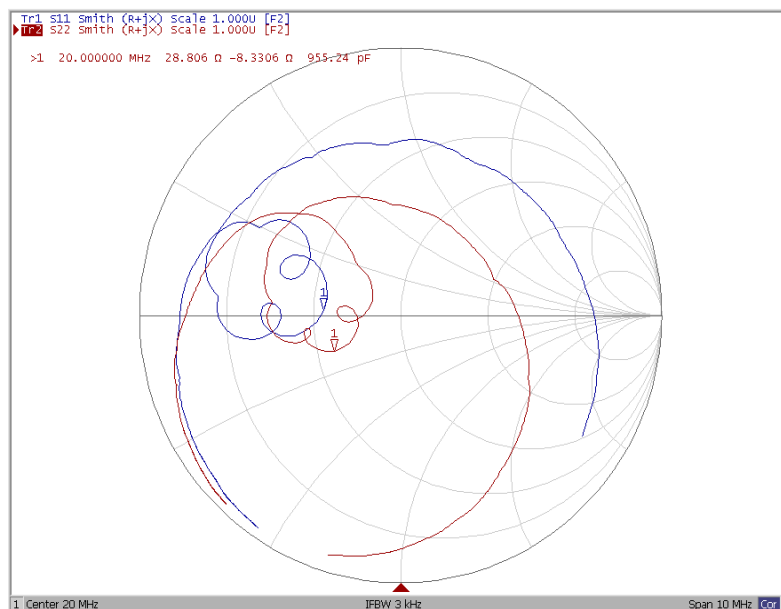




WIDE_1.6GHz

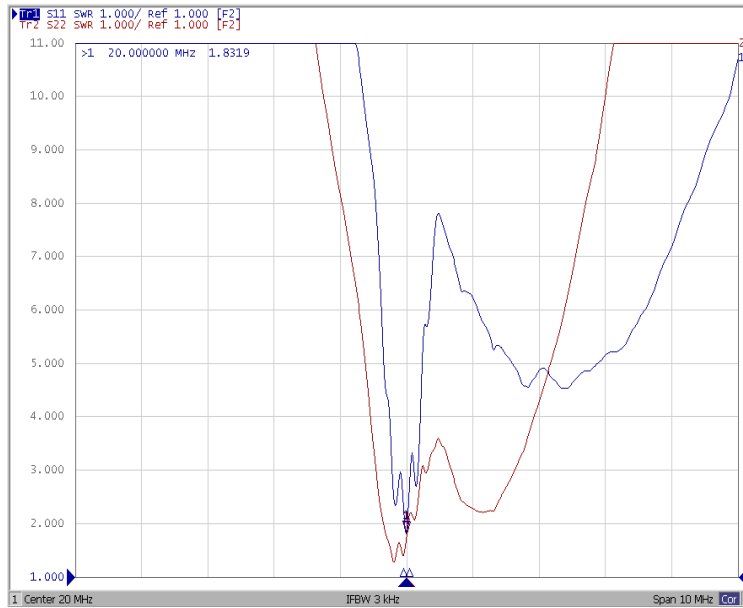


Smith Chart





VSWR





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