



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
- o Electrical Specification
- o Frequency Response
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- 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)



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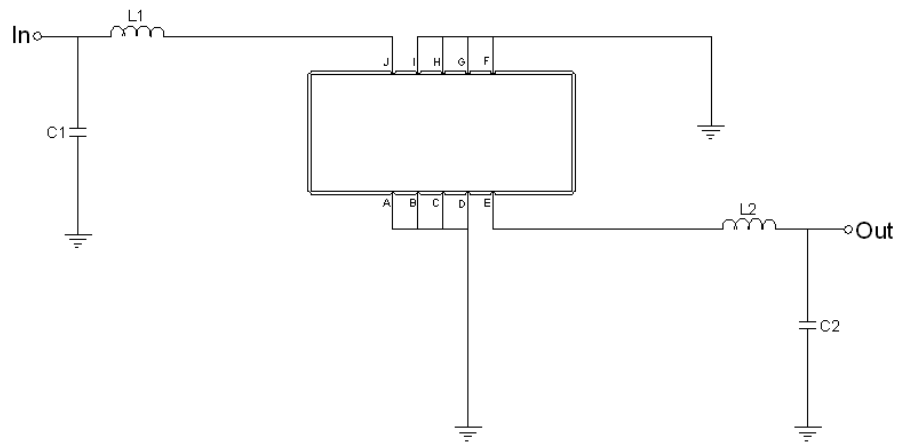


Mechanical Dimensions (mm)



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

Test Circuit



Test Fixture & Values	
Input	L1 = 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.

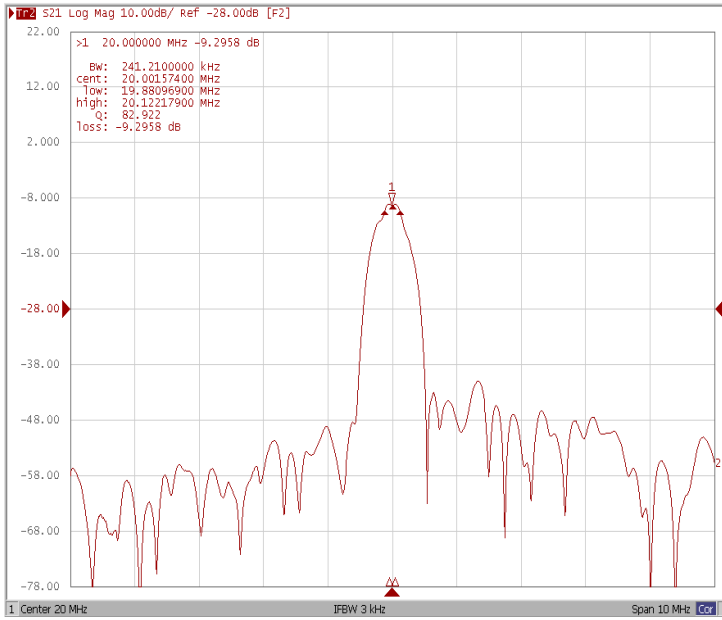
Electrical Specification

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	-

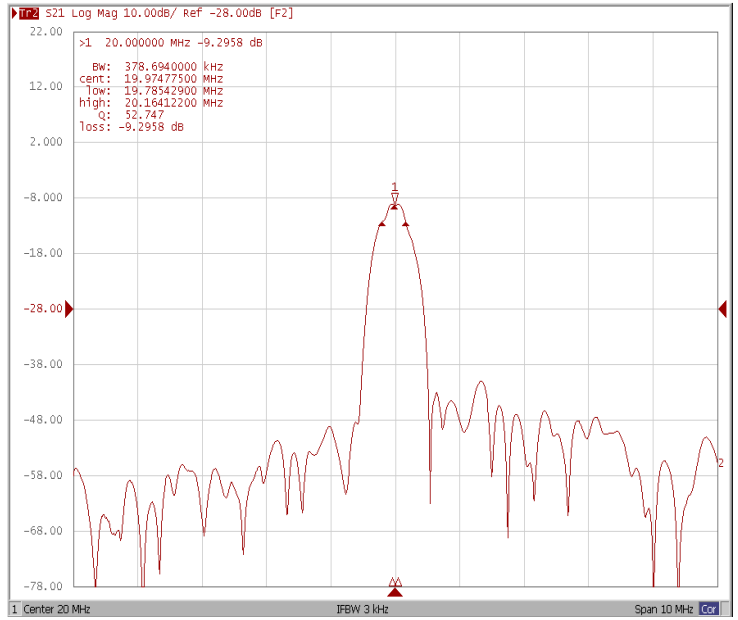


Frequency Response

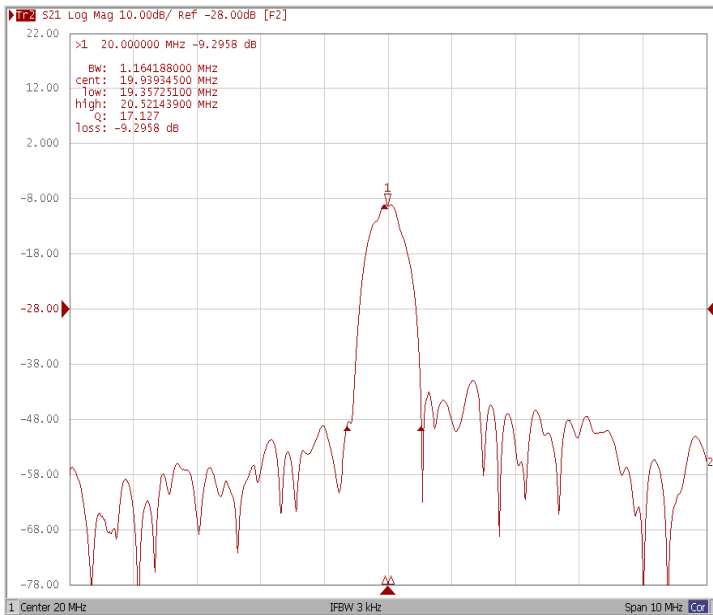
Bandwidth at -1.0 dB



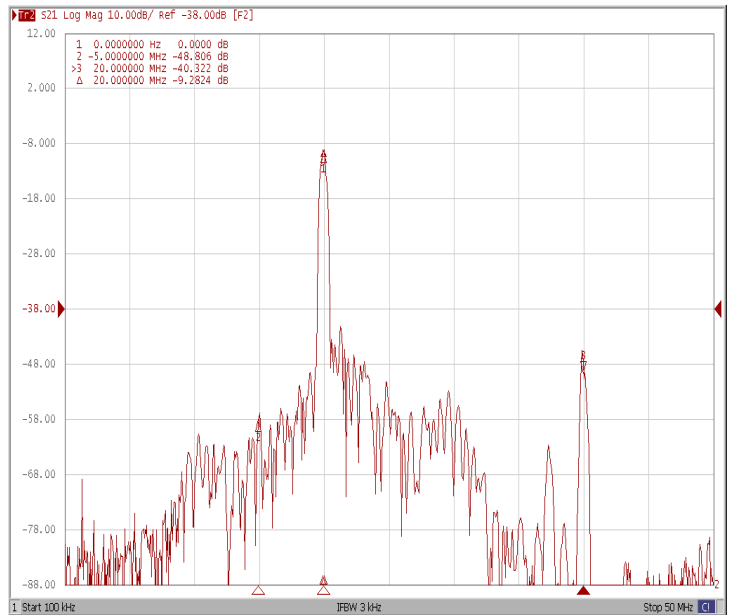
Bandwidth at -3.0 dB



Bandwidth at -40.0 dB

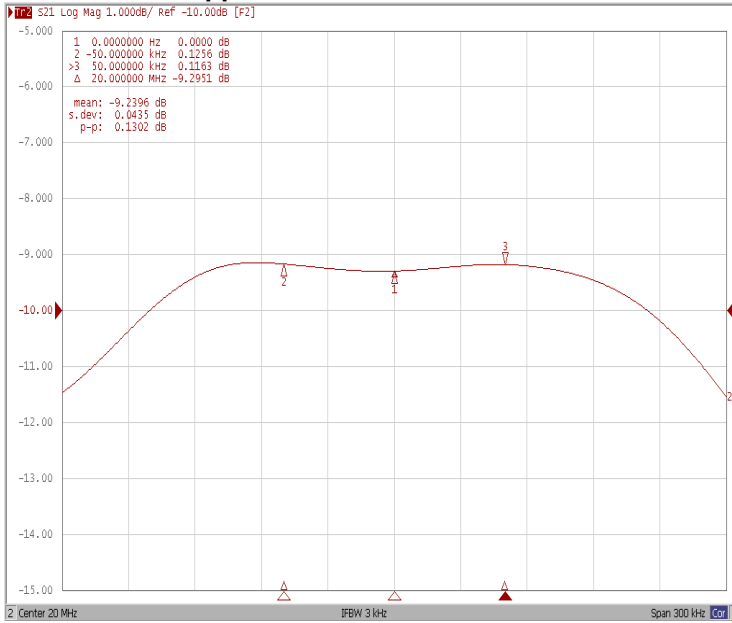


Wide-Band (DC~15MHz, @40MHz)

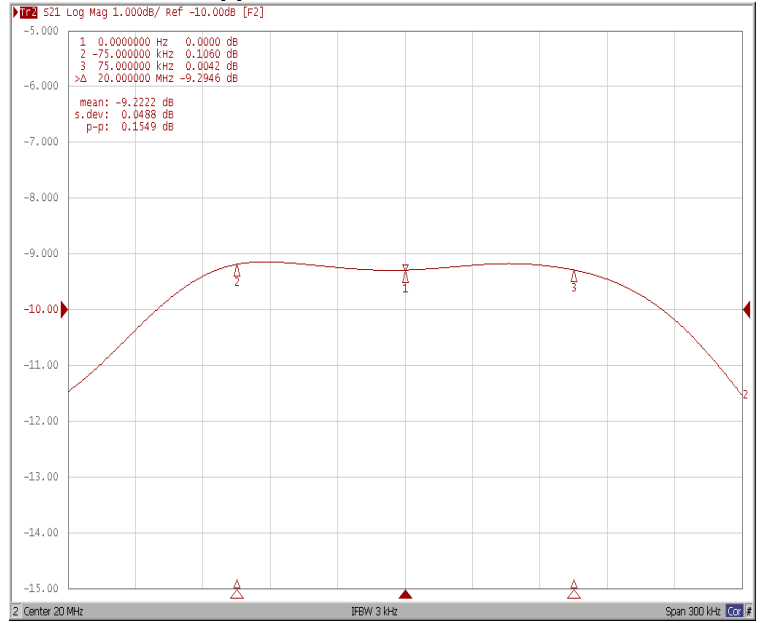




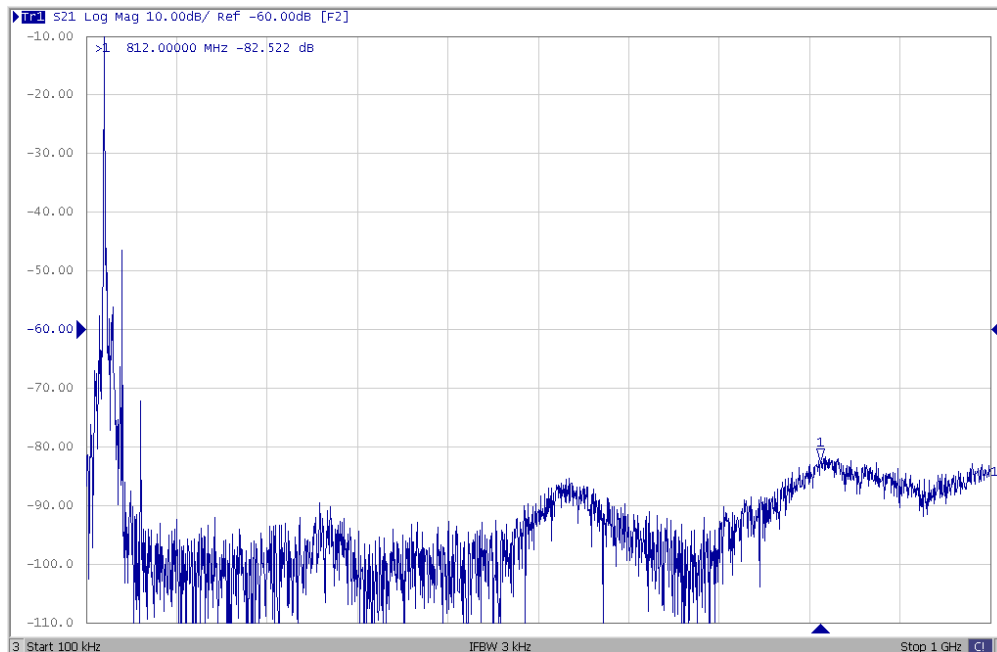
Ripple Variation Fo± 0.05MHz



Ripple Variation Fo± 0.075MHz

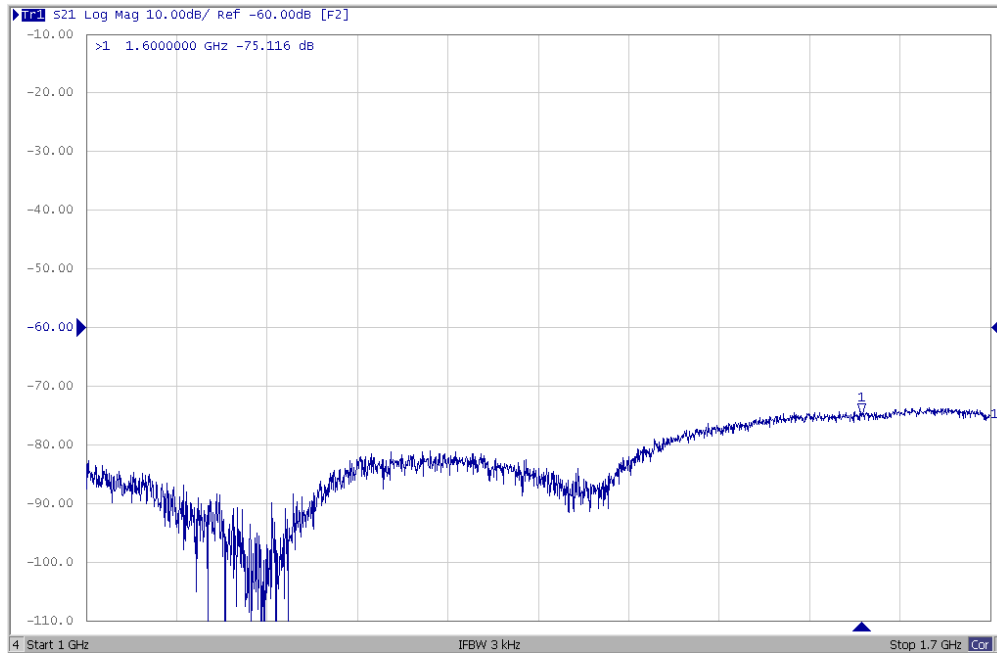


WIDE_812MHz

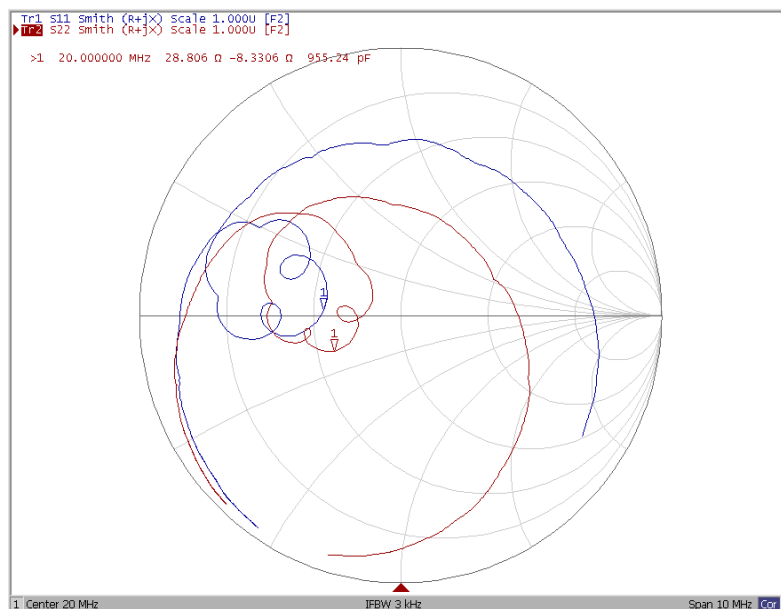




WIDE_1.6GHz

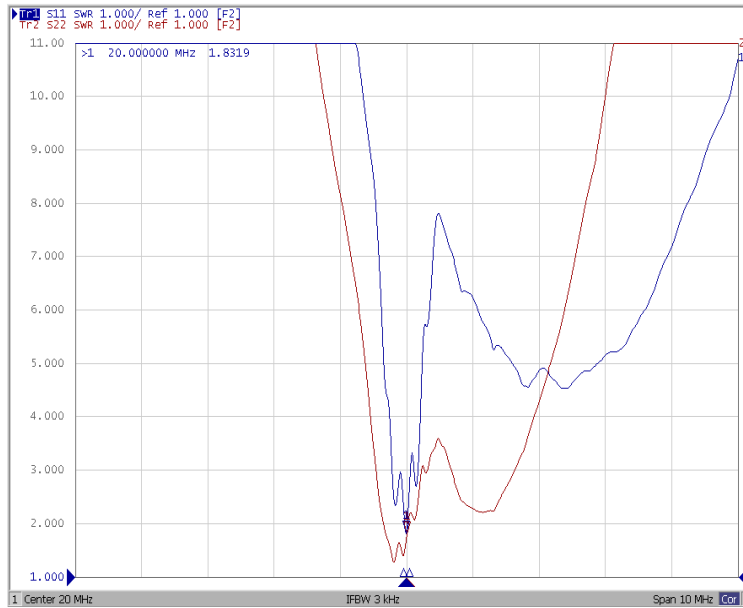


Smith Chart





VSWR





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