



# PRODUCT SPECIFICATION

REV A January 2011

Oscilent Controlled Document

Ordering Code / Part Number	Product Description
821-IF120.0M-19D	20.0 MHz IF SAW Filter 19.35 MHz Bandwidth

## Specification Contents

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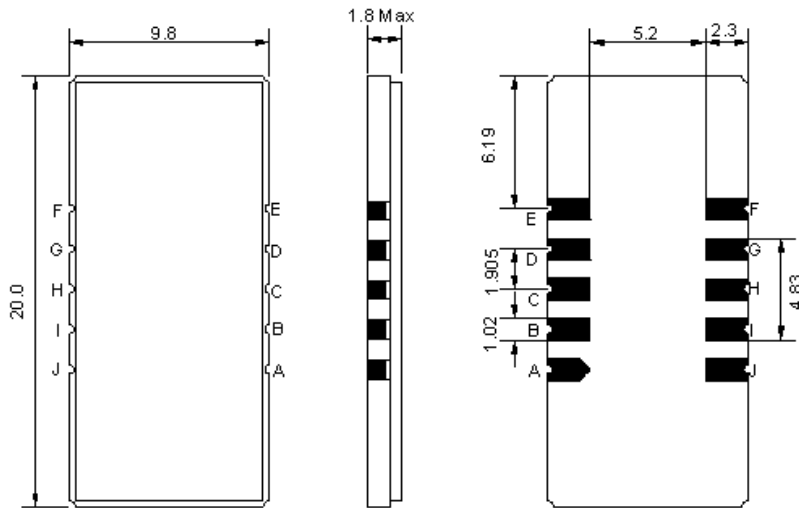
## Notes

- 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)



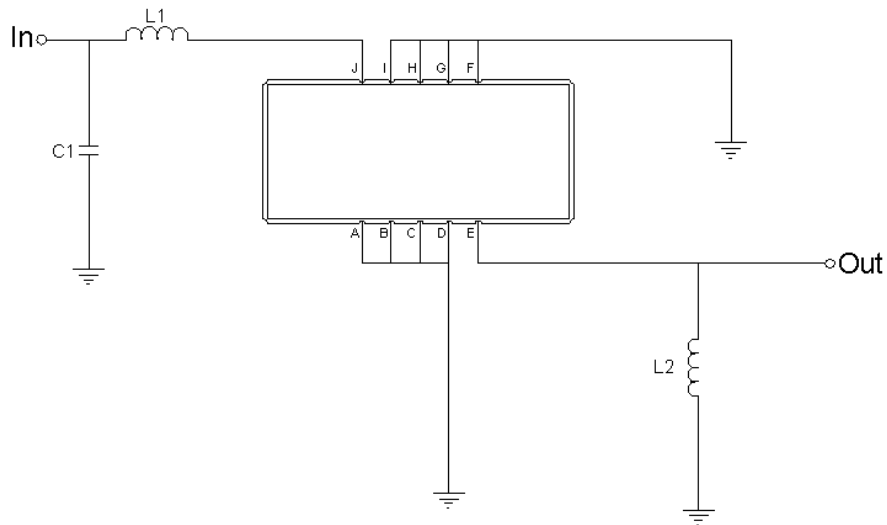


## Mechanical Dimensions (mm)



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

## Test Circuit



Test Fixture & Values	
Input	L1=56nH, C1=12pF
Output	L2=68nH
Source/Load Impedance	50 Ω



## Maximum Ratings

Parameters Description	Unit	Minimum	Typical	Maximum
Operating Temperature Range	°C	-10	-	70
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.

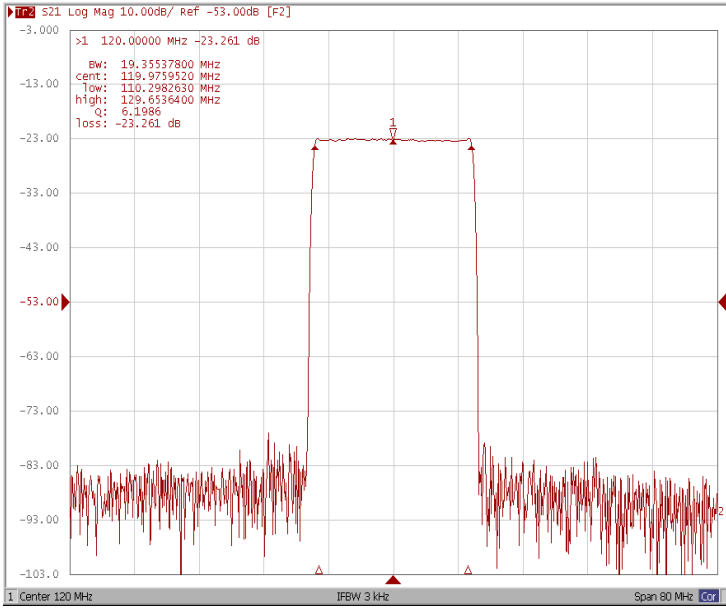
## Electrical Specification

Parameters Description	Unit	Minimum	Typical	Maximum
Center Frequency (Fo)	MHz	-	120.0	-
Insertion Loss at Fo	dB	-	23.20	25.00
Group Delay Variation (Fo±9.22MHz)	nsec	-	60	90
Absolute Delay	usec	-	2.25	2.50
Passband Ripple (Fo±9.22MHz)	dB	-	0.55	1.00
Bandwidth at -1dB	MHz	19.20	19.35	-
Bandwidth at -3dB	MHz	-	19.60	-
Bandwidth at -40dB	MHz	-	20.80	20.95
Bandwidth at -50dB	MHz	-	20.95	-
Ultimate Rejection	dB	50	55	-
Temperature coefficient	ppm/°C	-	-72	-

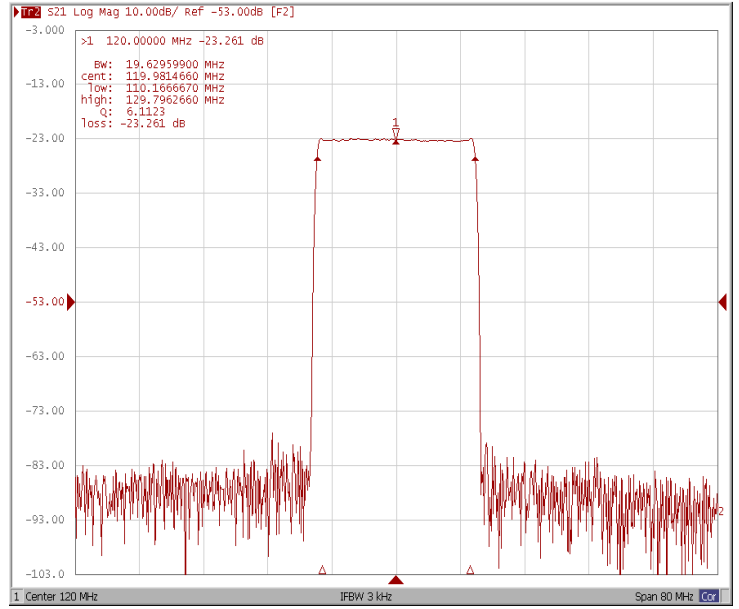


## Frequency Response

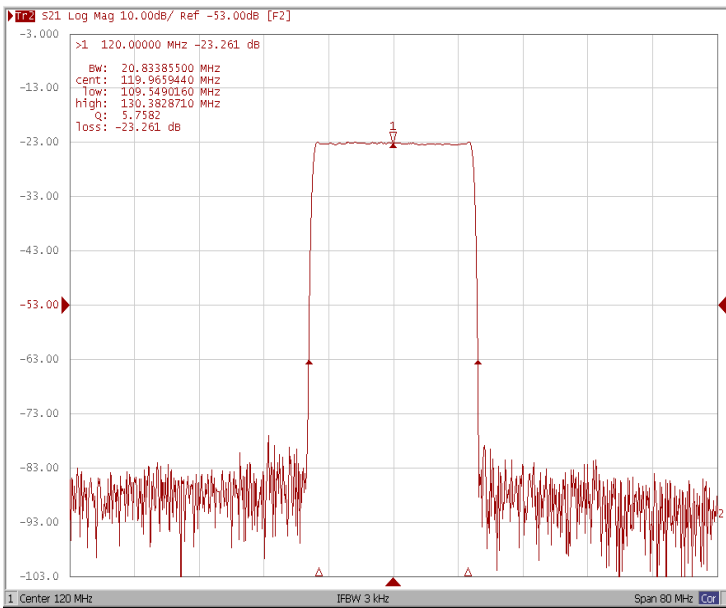
### Bandwidth at -1.0 dB



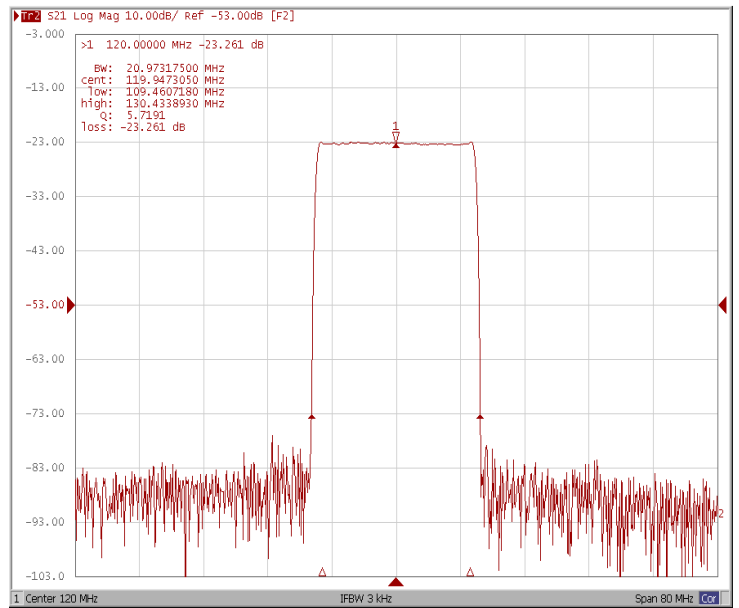
### Bandwidth at -3.0 dB



### Bandwidth at -40.0 dB

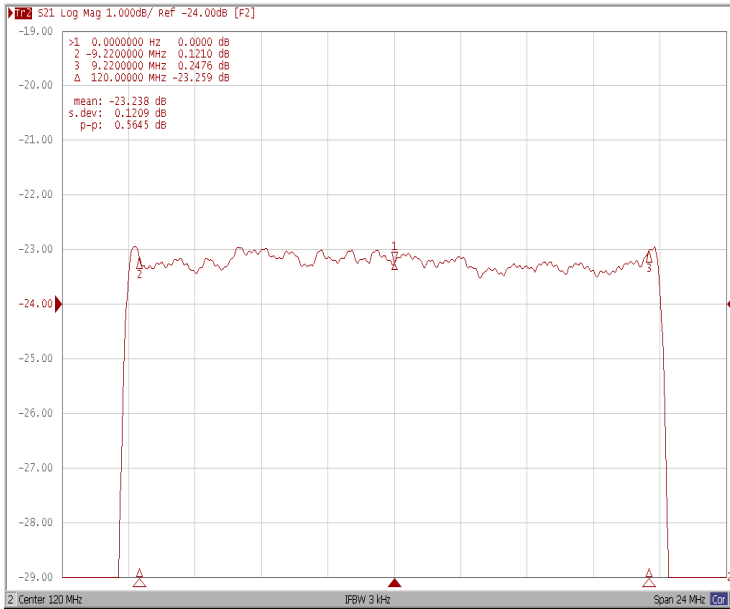


### Bandwidth at -50.0 dB

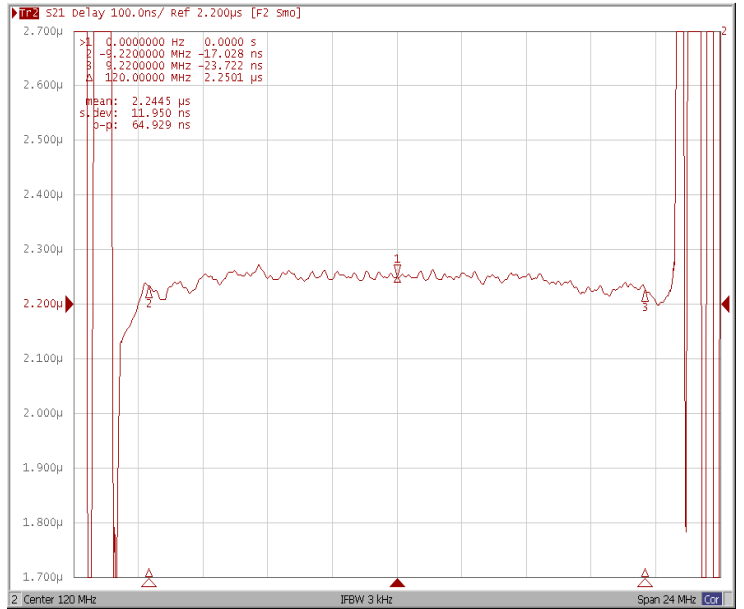




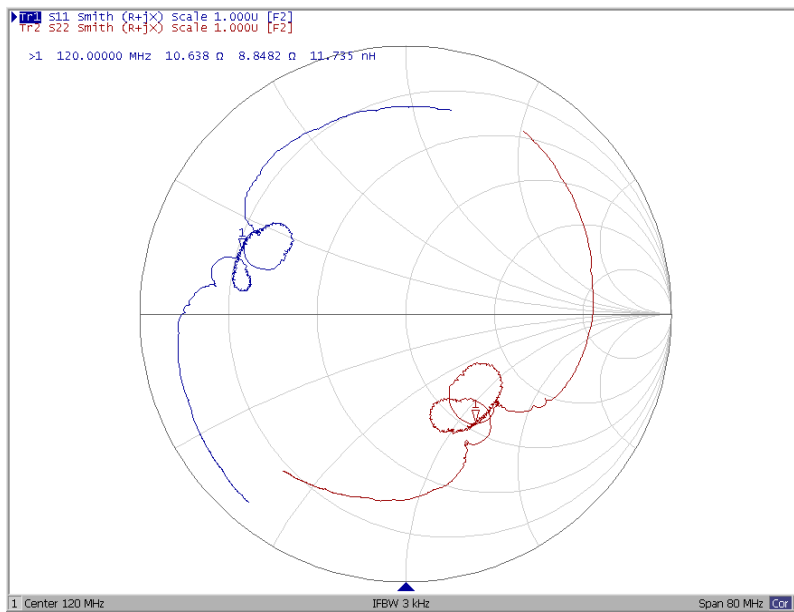
### Ripple Variation $F_o \pm 9.22\text{MHz}$



### Group Delay Variation $F_o \pm 9.22\text{MHz}$



### Smith Chart





### VSWR

