



REV A January 2011

Oscilent Controlled Document

Ordering Code / Part Number	Product Description
813-IF120.1M-19C	120.1MHz IF SAW Filter 19.96MHz Bandwidth

Specification Contents

- o Mechanical Dimensions
- o Test Circuit
- o Maximum Ratings
- o Electrical Specification
- o Frequency Response
- o Smith Chart
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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)



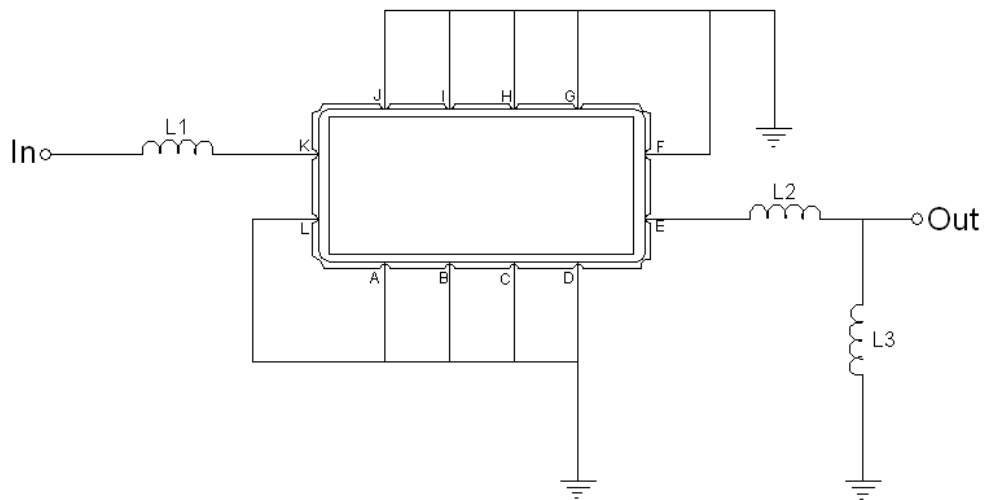


Mechanical Dimensions (mm)



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

Test Circuit



Test Fixture & Values	
Input	L1=68 nH
Output	L2=2.7nH, L3=68nH
Source/Load Impedance	50 Ω



Maximum Ratings

Parameters Description	Unit	Minimum	Typical	Maximum
Operating Temperature Range	°C	-20	-	+70
Storage Temperature Range	°C	-40	-	+85
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.

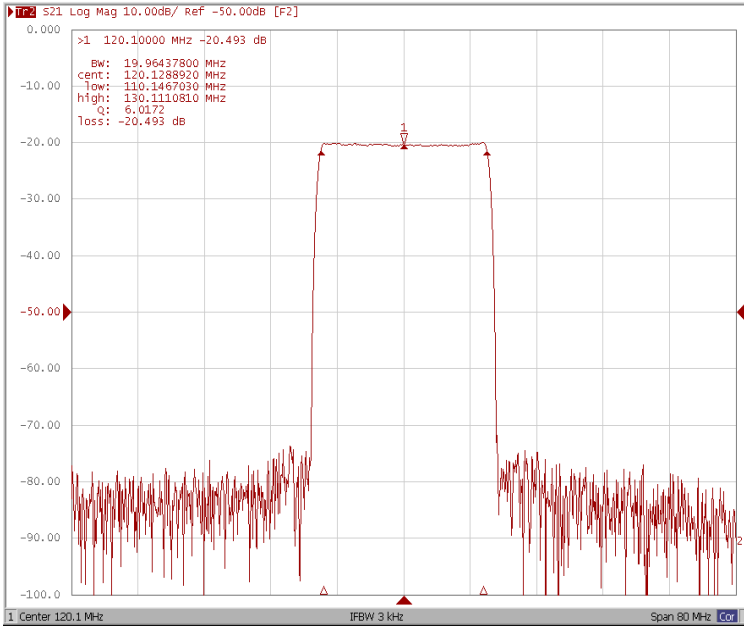
Electrical Specification

Parameters Description	Unit	Minimum	Typical	Maximum
Center Frequency (Fo)	MHz	120.05	120.1	120.20
Insertion Loss at Fo	dB	-	20.5	23.0
Temperature Coefficient	ppm/°C	-	-72	-
Amplitude Ripple within fo ±9.65 MHz	dB _{p-p}	-	0.65	1.0
Group Delay Variation within fo ±9.65 MHz	nsec	-	50	80
Absolute Delay at Fo	µsec	-	1.60	-
Bandwidth at -1.0 dB	MHz	19.80	19.96	-
Bandwidth at -3.0 dB	MHz	-	20.35	-
Bandwidth at -40.0 dB	MHz	-	22.02	22.2
Relative Attenuation:				
Fo ±14.42 MHz	dB	-	55	-
Lower Sidelobe	dB	-	52	-
Upper Sidelobe	dB	-	52	-

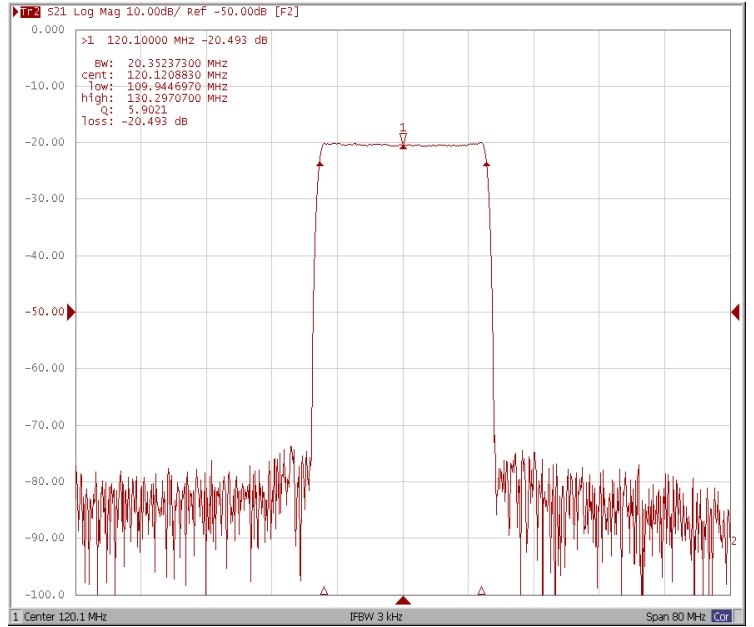


Frequency Response

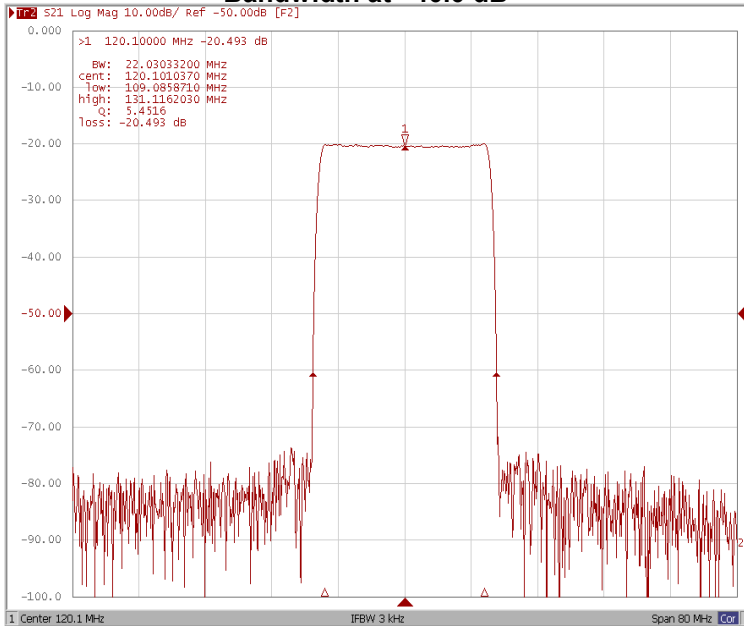
Bandwidth at -1.0 dB



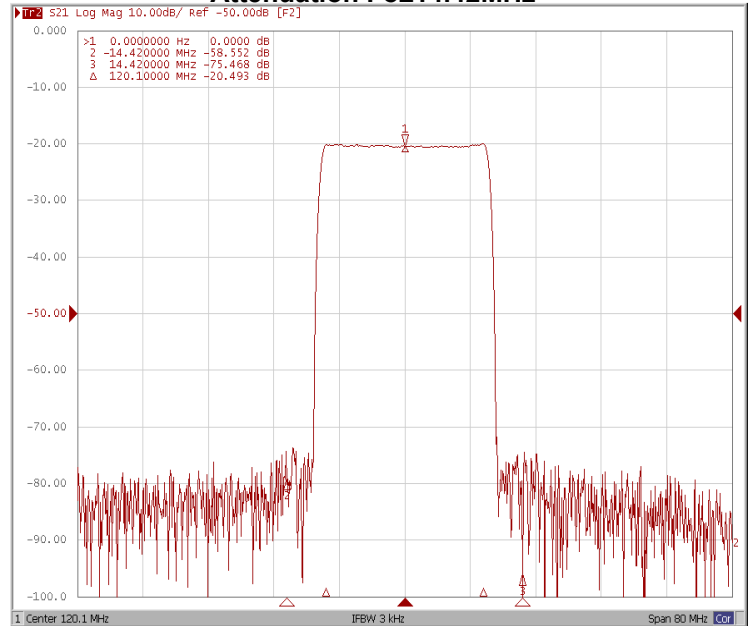
Bandwidth at -3.0 dB



Bandwidth at -40.0 dB



Attenuation Fo±14.42MHz

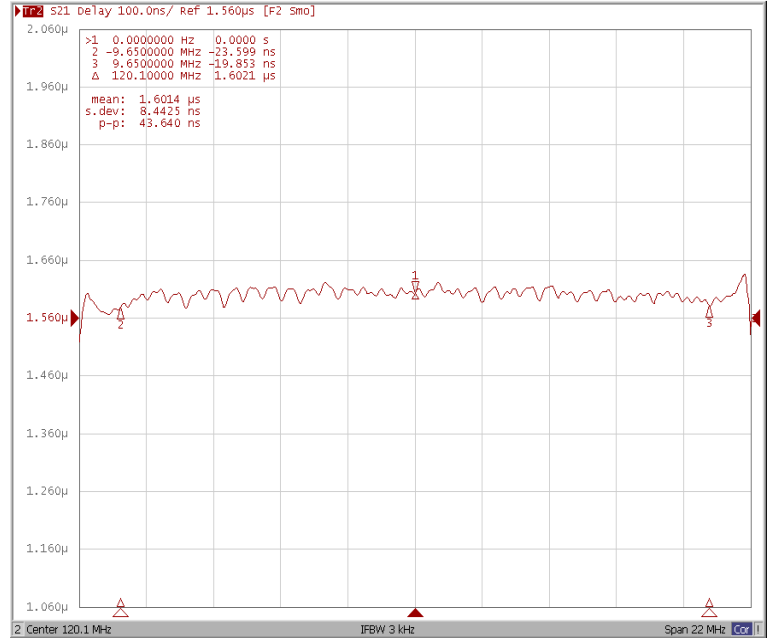




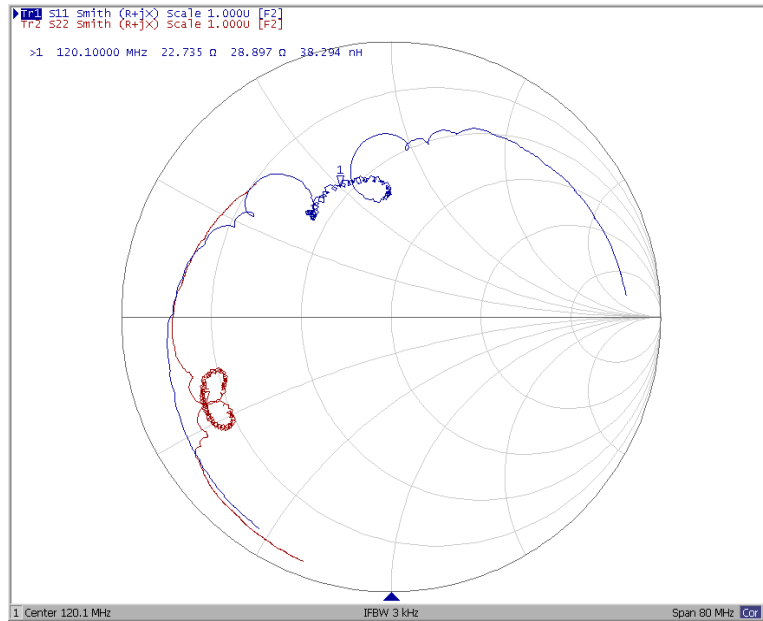
Ripple Variation $F_o \pm 9.65\text{MHz}$



Group Delay Variation $F_o \pm 9.65\text{MHz}$



Smith Chart





VSWR

