PRODUCT SPECIFICATION

REV A January 2011

Oscilent Controlled Document

Ordering Code / Part Number	Product Description
813-IF120.0M-19A	120.0 MHz IF SAW Filter 19.9 MHz Bandwidth

Specification Contents

Notes

- Electrostatic Sensitive Device (ESD)
- Avoid excessive ultrasonic exposure
- Solderability compatible with JEDEC J-STD-020C Pb-free process, 260°C peak reflow temperature
- This product complies with EU directive 2002/95/EC (RoHS compliance)

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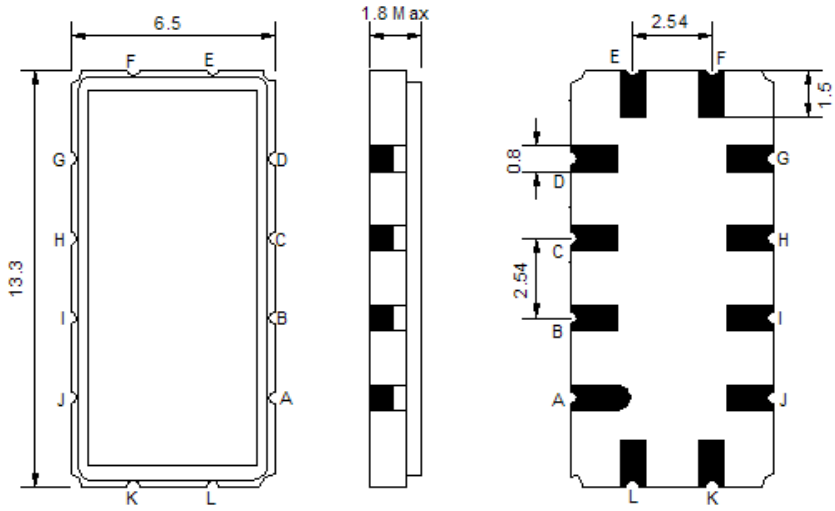
Oscilent Part Number

813-IF120.0M-19A

January 2011 Rev A

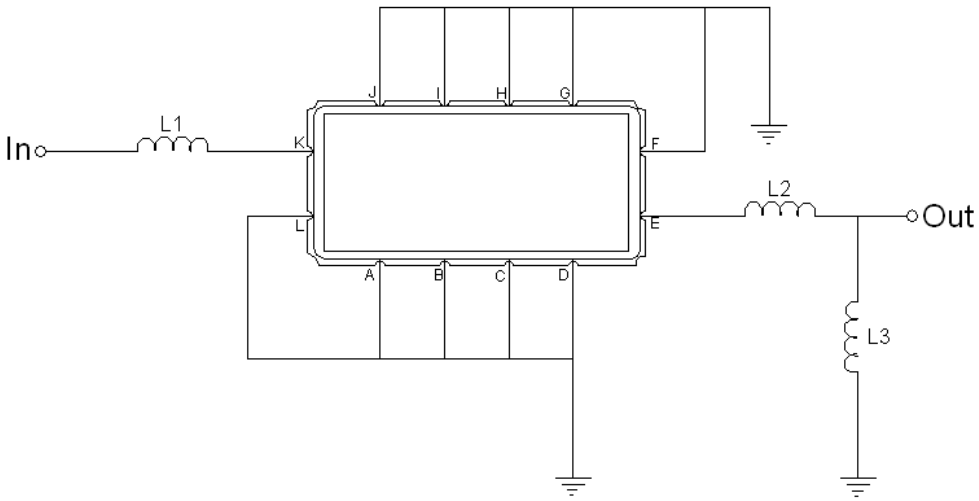
120.0 MHz IF SAW Filter 19.9 MHz Bandwidth

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	-40	-	85
Storage Temperature Range	°C	-45	-	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	-

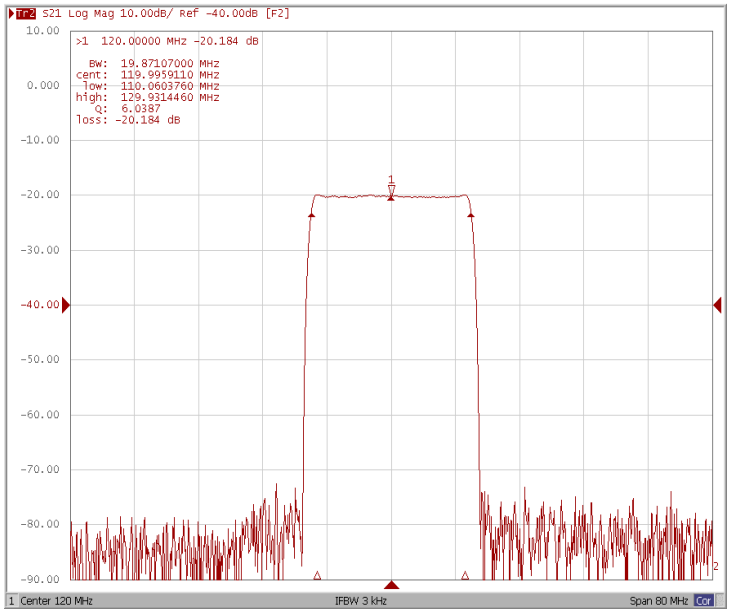
Notes: With Matching Network (Ref. Testing Environment Circuit as shown above).
Those impedances could be modified with different impedance values and/or structures, if necessary.

Electrical Specification

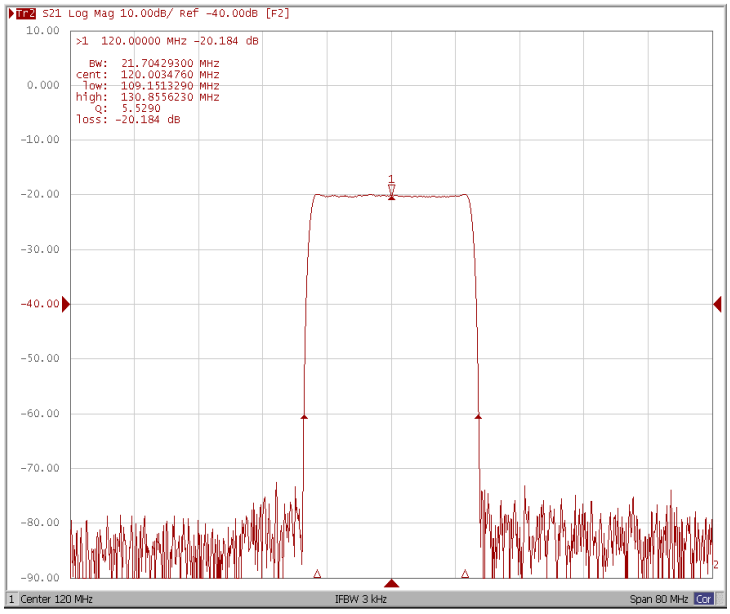
Parameters Description	Unit	Minimum	Typical	Maximum
Center Frequency (Fo)	MHz	-	120.00	-
Insertion Loss at Fo	dB	-	20.20	22.0
Group Delay Variation (Fo±9.22MHz)	ns	-	35	80
Absolute Delay	us	-	1.52	-
Passband Ripple (Fo±9.22MHz)	dB	-	0.62	1.00
Bandwidth at -1dB	MHz	-	19.44	-
Bandwidth at -3dB	MHz	19.60	19.90	-
Bandwidth at -40dB	MHz	-	21.70	22.00
Ultimate Rejection	dB	48	53	-
Relative Attenuation Fo±10.8MHz	dB	20	33	

Frequency Response

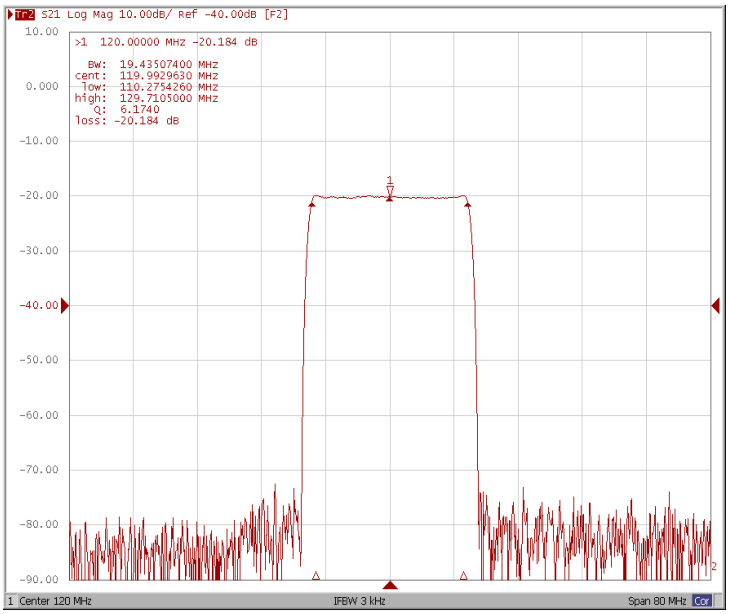
Bandwidth at –3.0 dB



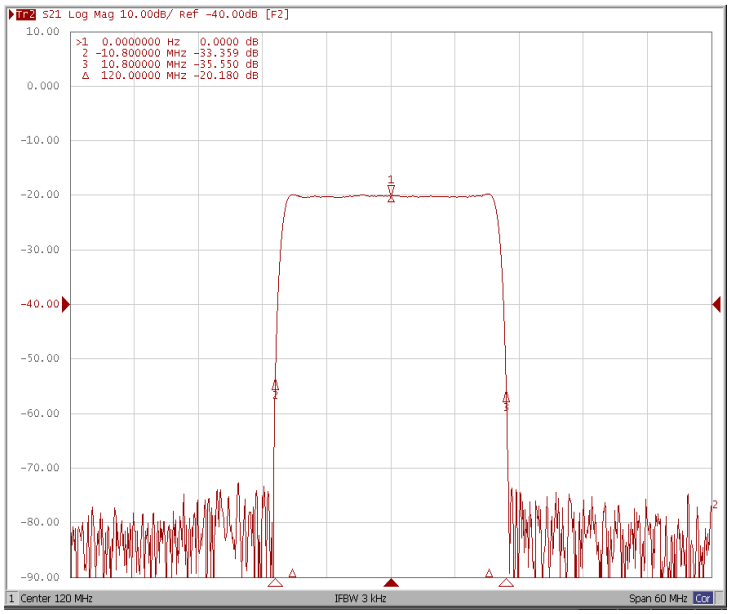
Bandwidth at –40.0 dB



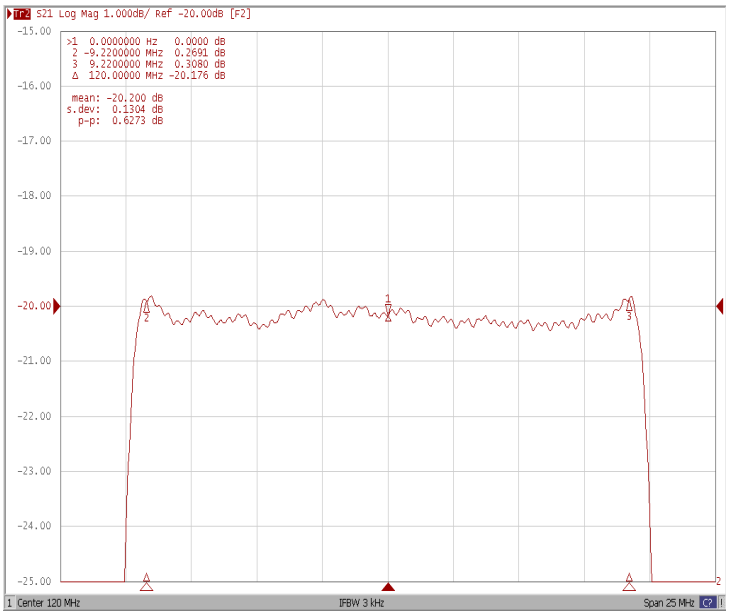
Bandwidth at –1.0 dB



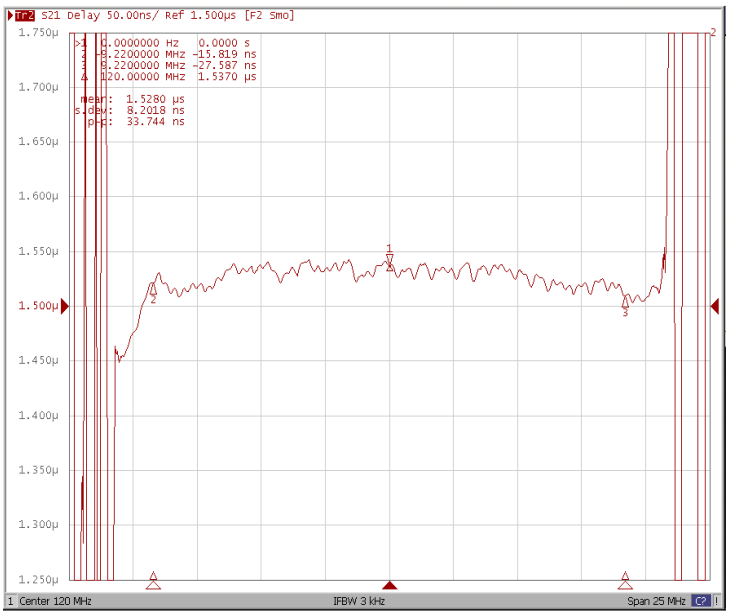
Relative Attenuation Fo±10.8MHz



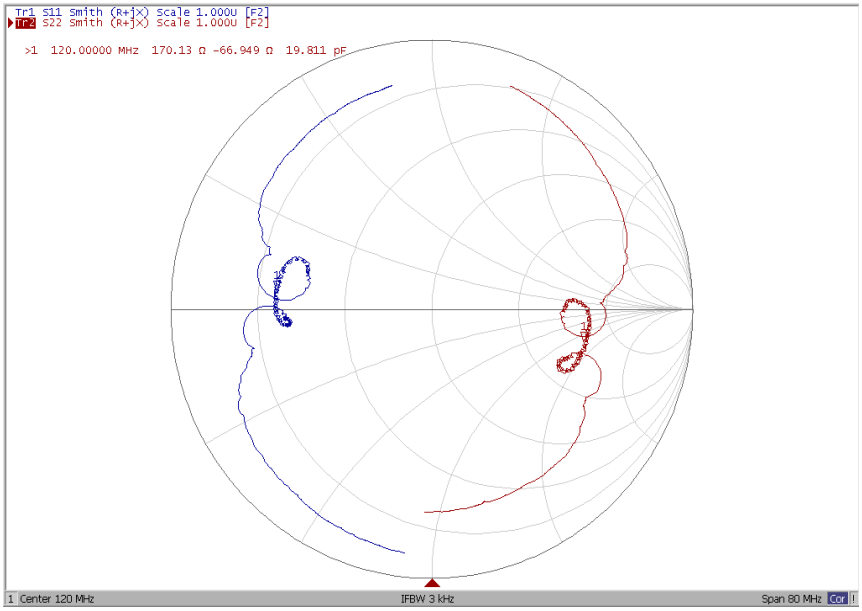
Ripple Variation



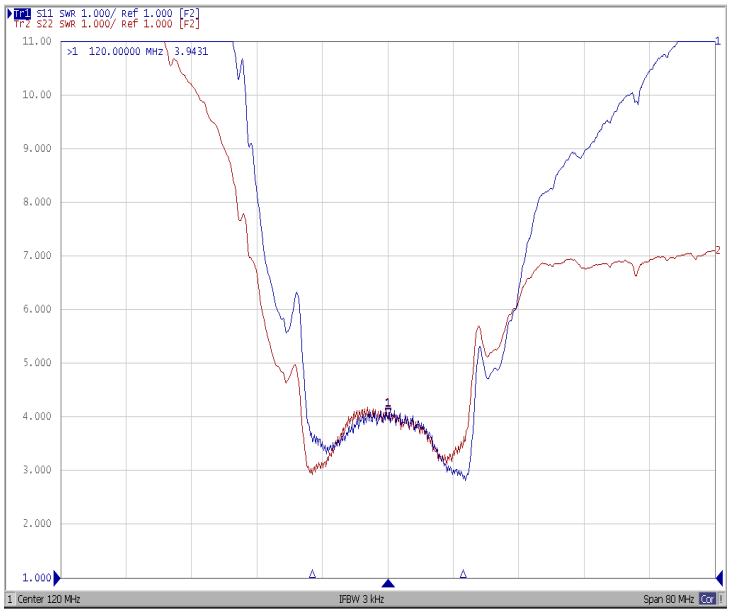
Group Delay Variation



Smith Chart



VSWR


Tr1 S11 SWR 1.000/ Ref 1.000 [F2]
Tr2 S22 SWR 1.000/ Ref 1.000 [F2]
>1 120.00000 MHz 3.9431
11.00
10.00
9.000
8.000
7.000
6.000
5.000
4.000
3.000
2.000
1.000
1 Center 120 MHz
IFBW 3 kHz
Span 80 MHz