PRODUCT SPECIFICATION

REV A January 2011

Oscilent Controlled Document

Ordering Code / Part Number	Product Description
813-IF110.0M-02A	110MHz IF SAW Filter 2.18MHz Bandwidth

Specification Contents

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

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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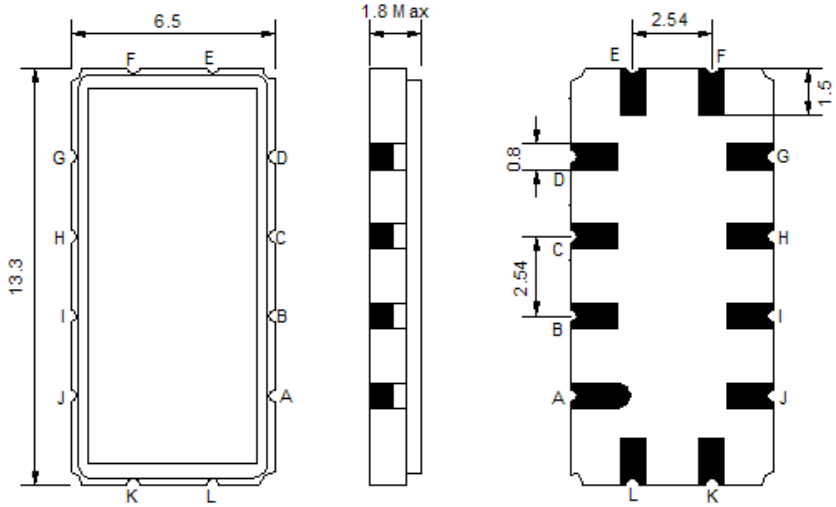
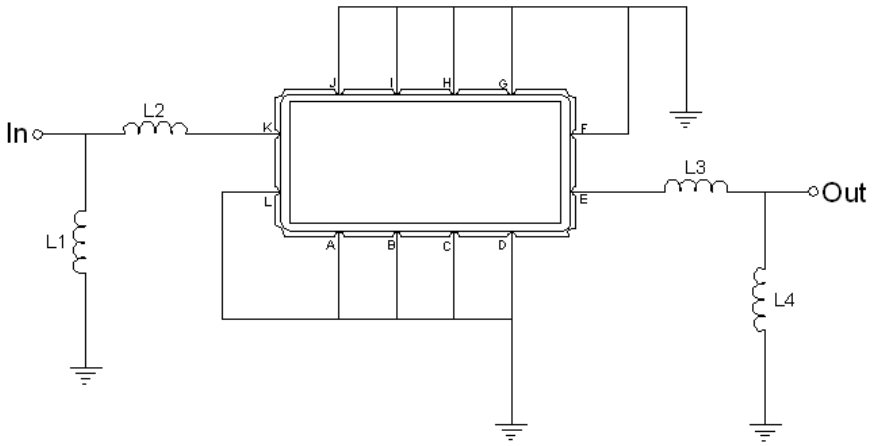
Mechanical Dimensions (mm)



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

Test Circuit



Test Fixture & Values	
Input	L1=56nH, L2=82nH
Output	L3=56nH, L4=56nH
Source/Load Impedance	50 Ω

Maximum Ratings

Parameters Description	Unit	Minimum	Typical	Maximum
Operating Temperature Range	°C	-5	-	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	-

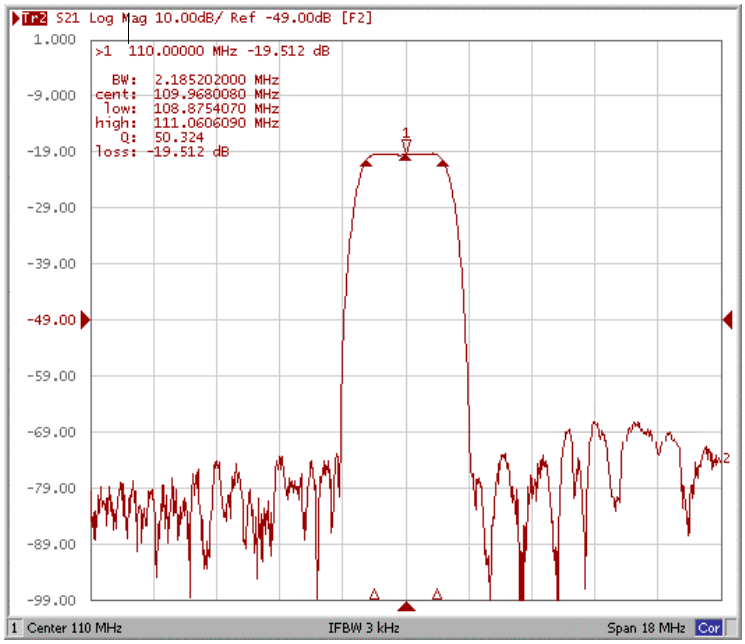
Notes: With Matching Network (Ref. Testing Environment Circuit as shown above).
Those impedances could be modified with different impedance values and/or structures, if necessary.

Electrical Specification

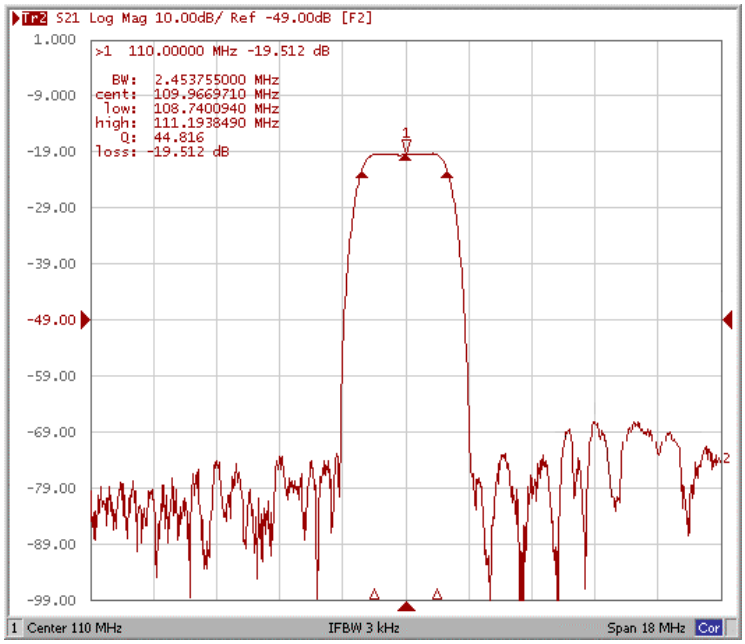
Parameters Description	Unit	Minimum	Typical	Maximum
Center Frequency (Fo)	MHz	109.9	110.0	110.1
Insertion Loss at Fo	dB	-	20	22
Amplitude Ripple within fo ±0.9 MHz	dB_{p-p}	-	0.3	0.9
Group Delay Variation within fo ±0.9 MHz	nsec	-	70	150
Absolute Delay at Fo	µsec	-	1.77	2.0
Bandwidth at –1.0 dB	MHz	1.80	2.18	-
Bandwidth at –3.0 dB	MHz	-	2.45	-
Bandwidth at –40.0 dB	MHz	-	3.60	3.80
Ultimate Rejection	dB	40	47	-
Temperature Coefficient	ppm/°C	-	-0.03	-

Frequency Response

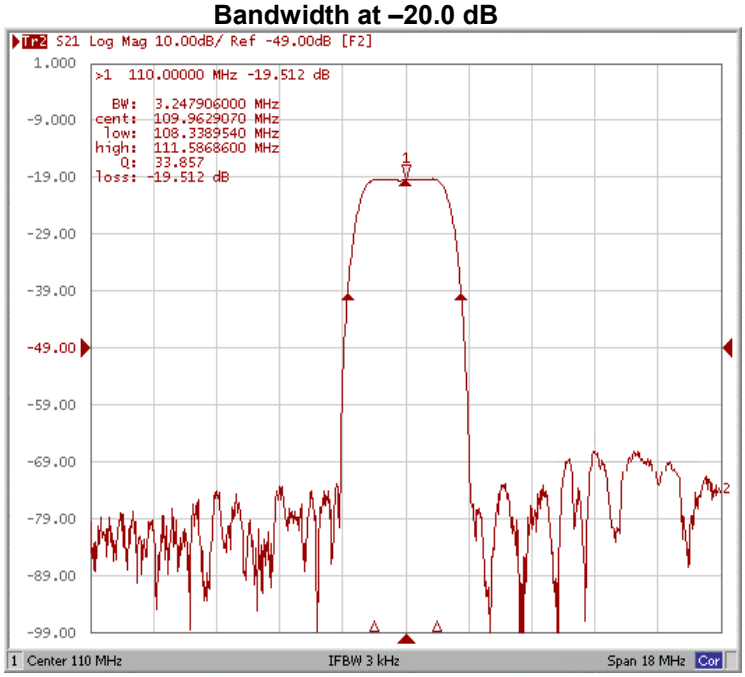
Bandwidth at –1.0 dB



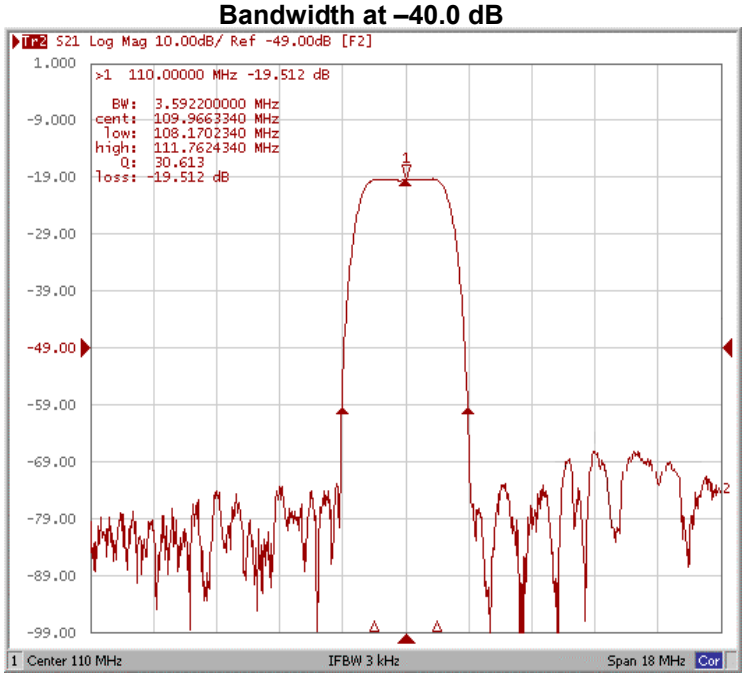
Bandwidth at –3.0 dB



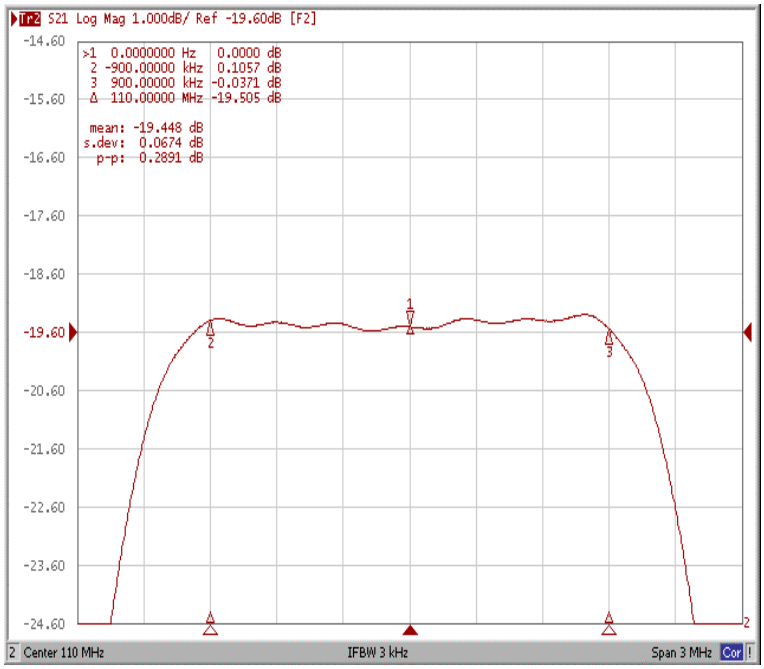
Bandwidth at –20.0 dB



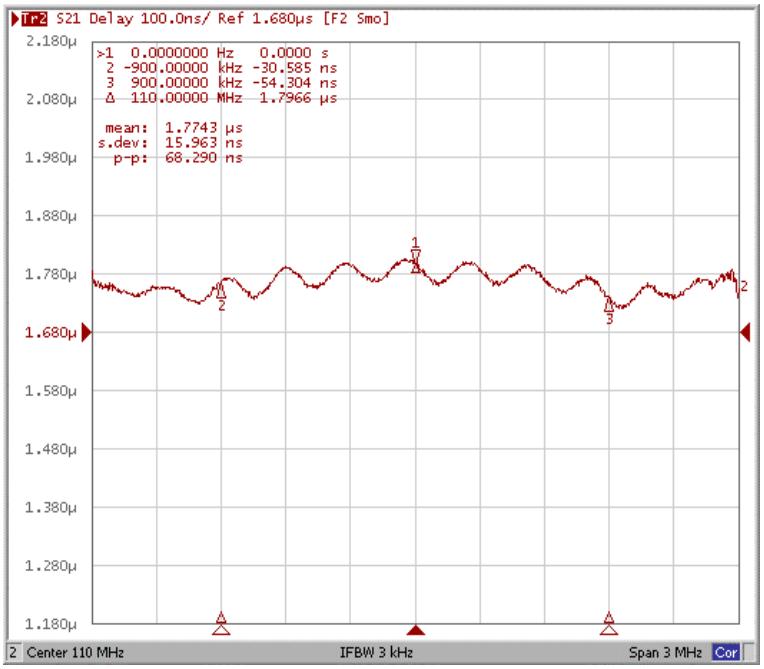
Bandwidth at –40.0 dB



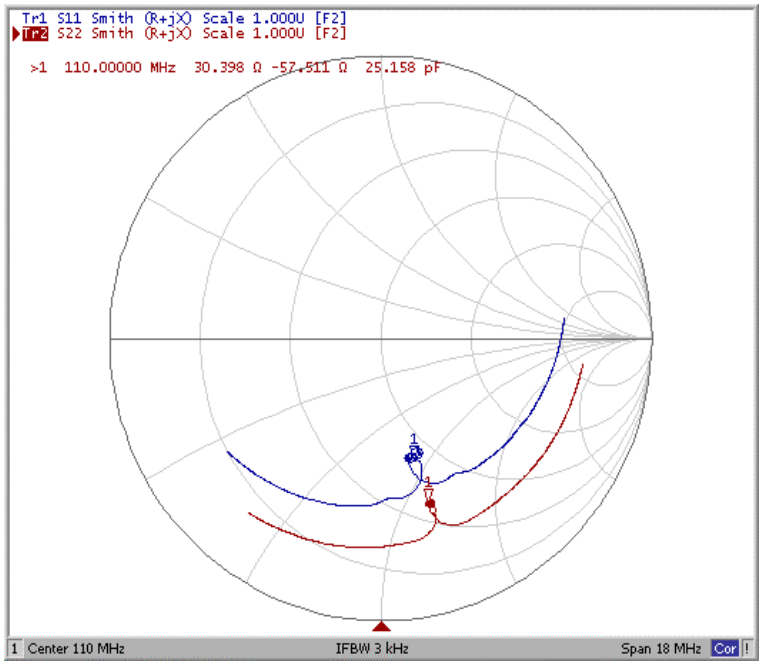
Ripple Variation Fo±0.9MHz



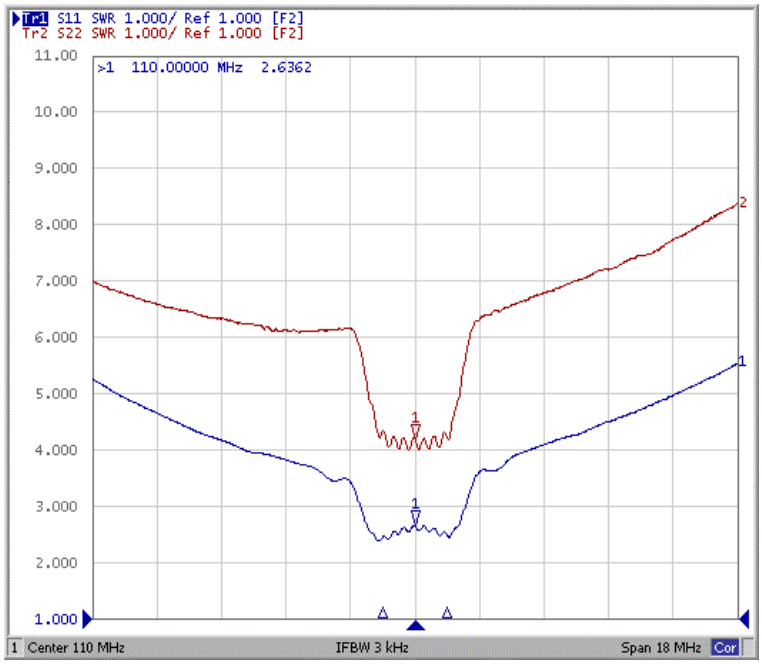
Group Delay Variation Fo±0.9MHz



Smith Chart



VSWR


Tr1 S11 SWR 1.000/ Ref 1.000 [F2]
Tr2 S22 SWR 1.000/ Ref 1.000 [F2]
>1 110.00000 MHz 2.6362
11.00
10.00
9.000
8.000
7.000
6.000
5.000
4.000
3.000
2.000
1.000
1 Center 110 MHz
IFBW 3 kHz
Span 18 MHz
Cor