



REV A January 2011

Oscilent Controlled Document

Ordering Code / Part Number	Product Description
813-IF93.888M-01A	93.888 MHz IF SAW Filter 2.02 MHz Bandwidth

Specification Contents

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



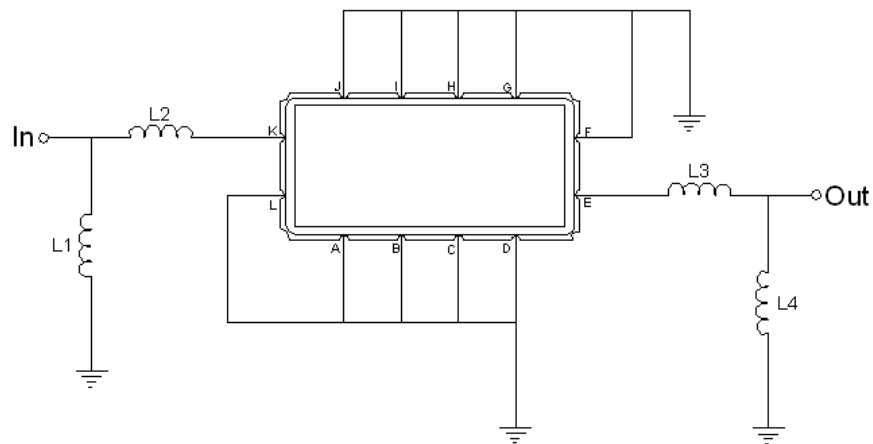


Mechanical Dimensions (mm)



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

Test Circuit



Test Fixture & Values	
Input	L1=150 nH, L2=180 nH
Output	L3=150 nH, L4=82 nH
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.

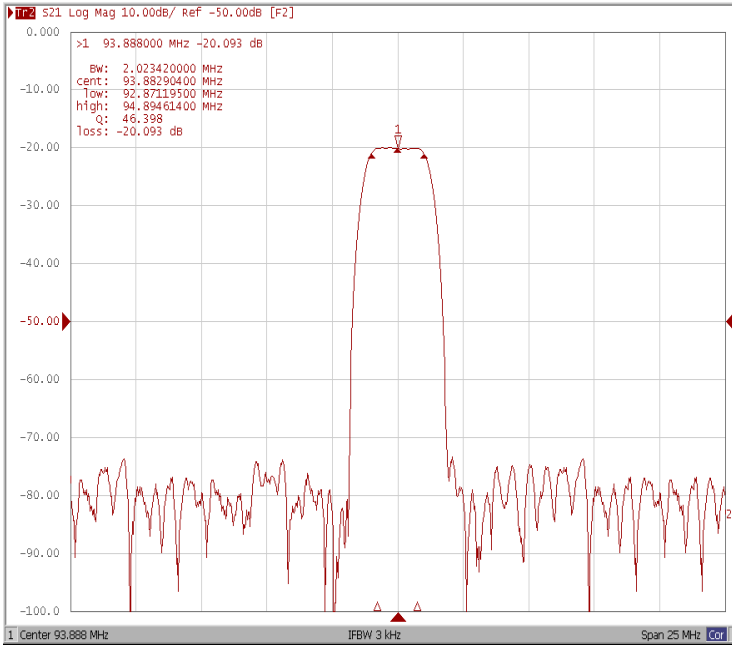
Electrical Specification

Parameters Description	Unit	Minimum	Typical	Maximum
Center Frequency (Fo)	MHz	-	93.888	-
Insertion Loss at Fo	dB	-	20.1	22.0
Passband Ripple (fo ±0.768 MHz)	dB _{p-p}	-	0.3	0.8
Group Delay Variation (fo ±0.768MHz)	nsec	-	60	100
Absolute Delay at Fo	μsec	-	1.77	-
Bandwidth at -1.0 dB	MHz	1.90	2.02	-
Bandwidth at -30.0 dB	MHz	-	3.43	3.50
Relative Attenuation				
Fo +1.75MHz	dB	-	32	-
Fo -1.75MHz	dB	-	34	-
Ultimate Rejection Level	dB	45	53	-
Temperature Coefficient	ppm/°C	-	-0.03	-

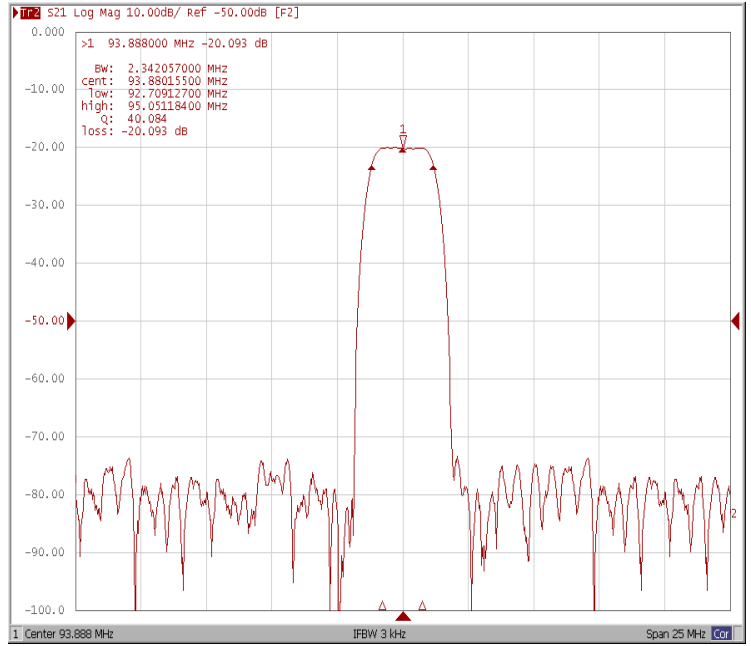


Frequency Response

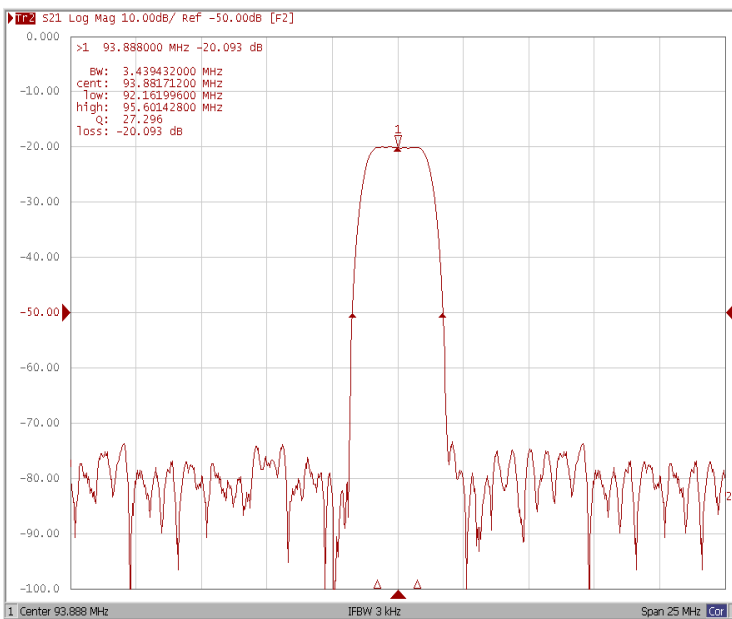
Bandwidth at -1.0 dB



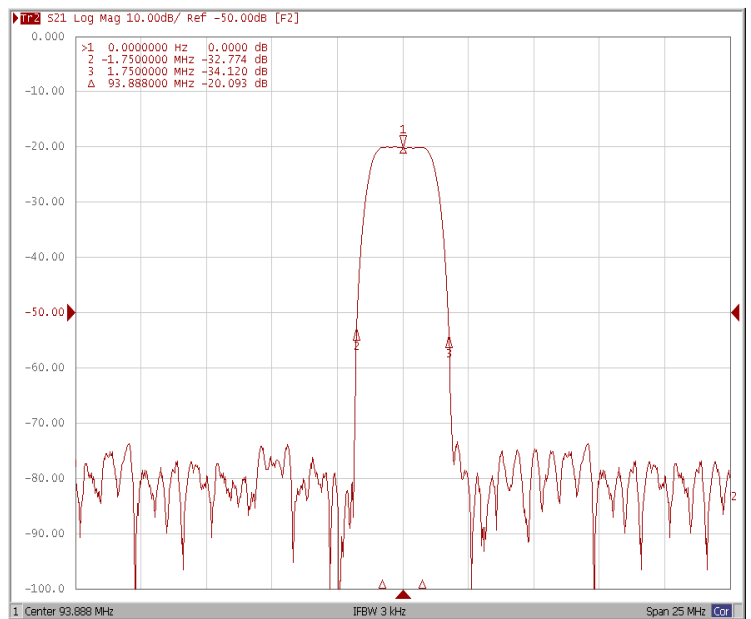
Bandwidth at -3.0 dB



Bandwidth at -30.0 dB

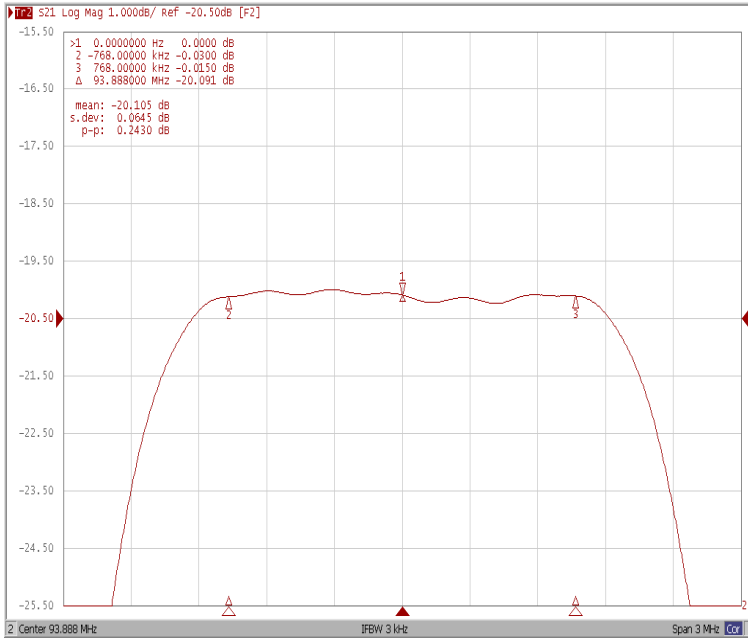


Relative Attenuation Fo ±1.75MHz

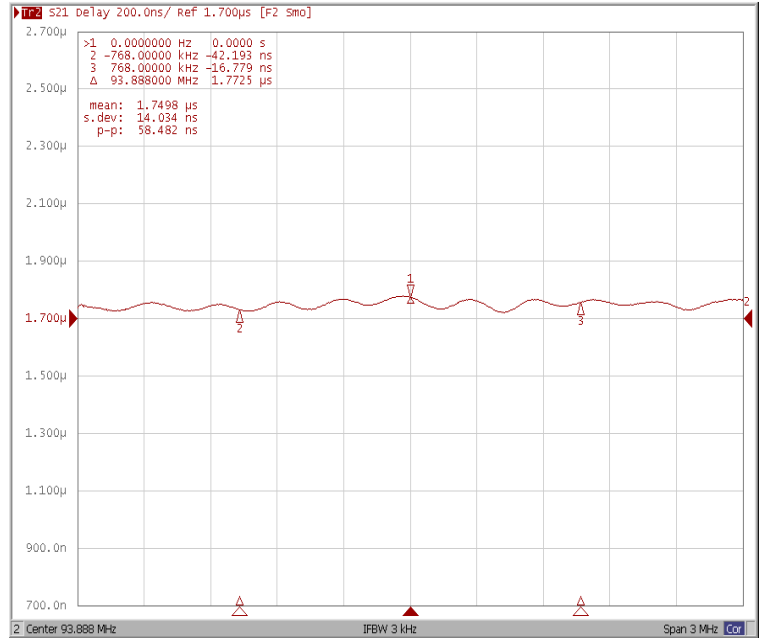




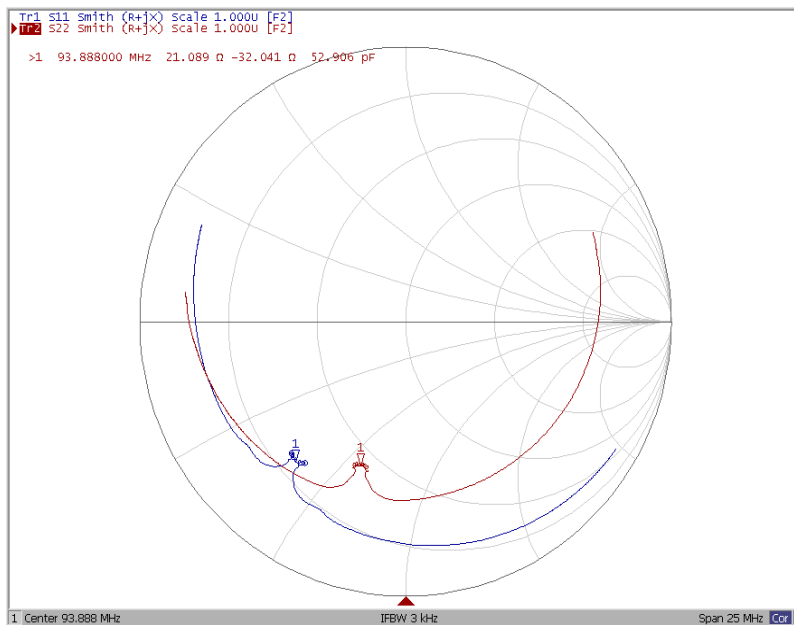
Ripple Variation Fo±0.768MHz



Group Delay Variation Fo±0.768MHz



Smith Chart





VSWR

