



# PRODUCT SPECIFICATION

REV A January 2011

Oscilent Controlled Document

Ordering Code / Part Number	Product Description
813-IF120.0M-14B	20.1 MHz IF SAW Filter 14.82 MHz Bandwidth

## Specification Contents

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

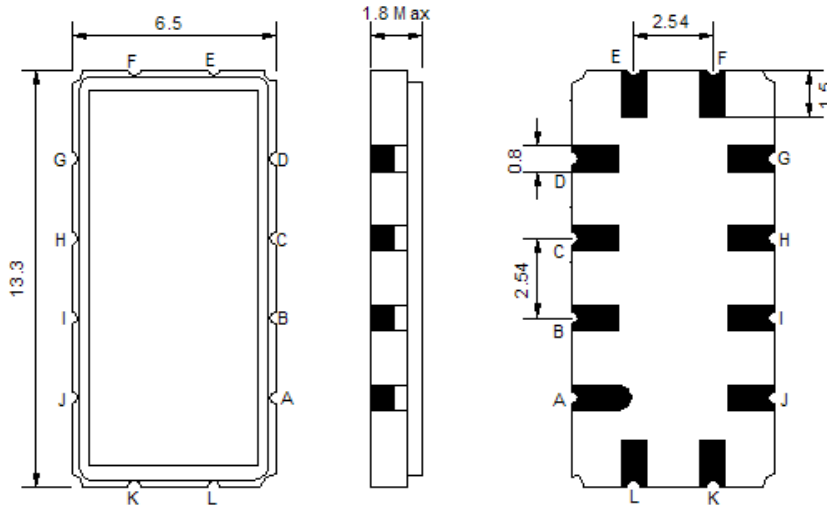
## Notes

- 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)



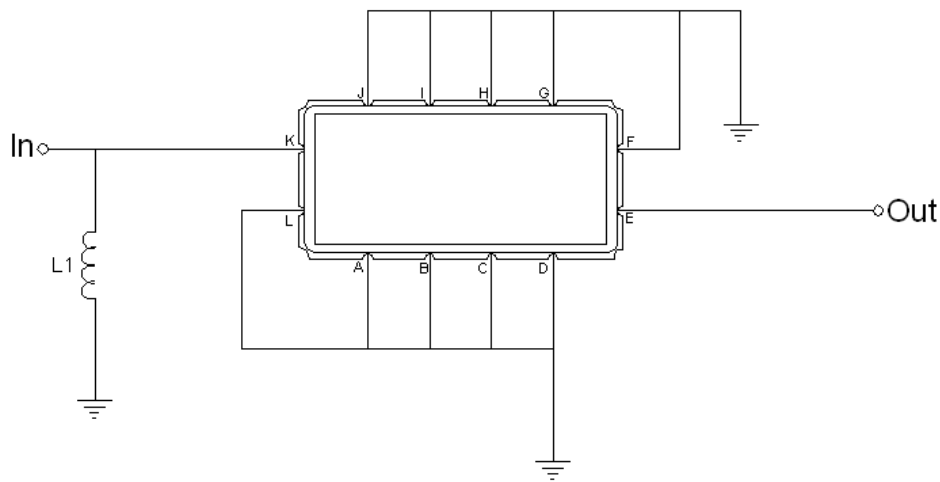


## Mechanical Dimensions (mm)



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

## Test Circuit



Test Fixture & Values	
Input	L1 = 33 nH
Output	
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) <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.

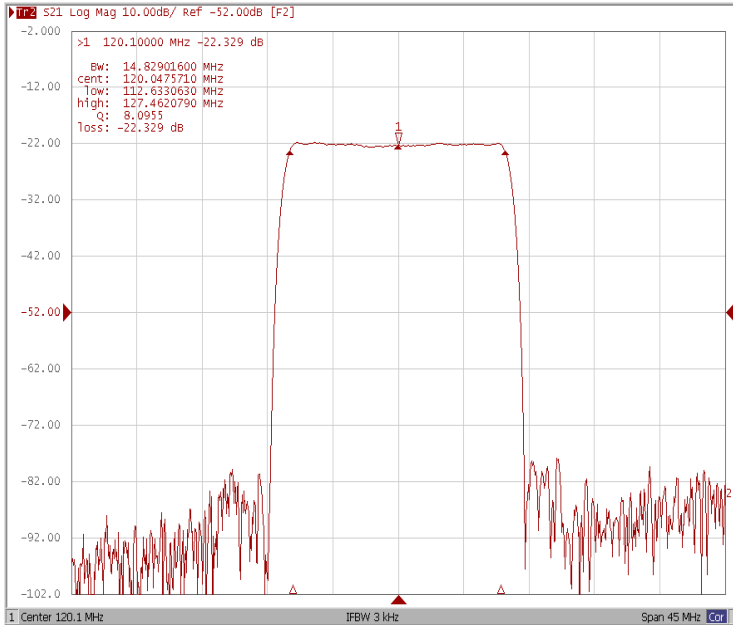
## Electrical Specification

Parameters Description	Unit	Minimum	Typical	Maximum
Center Frequency (Fo)	MHz	-	120.1	-
Insertion Loss at Fo	dB	-	22.3	24.0
Group Delay Variation (Fo±7.15MHz)	nsec	-	47	70
Absolute Delay at Fo	usec	-	1.56	-
Passband Ripple Variation (Fo±7.15MHz)	dB	-	0.87	1.0
Bandwidth at -1dB	MHz	14.70	14.82	-
Bandwidth at -3dB	MHz	-	15.25	-
Bandwidth at -40dB	MHz	-	17.13	17.2
Ultimate Rejection	dB	48	53	-
Relative attenuation				
Fo±8.3MHz	dB	15	20	-
Temperature Coefficient	ppm/°C	-	-72	-

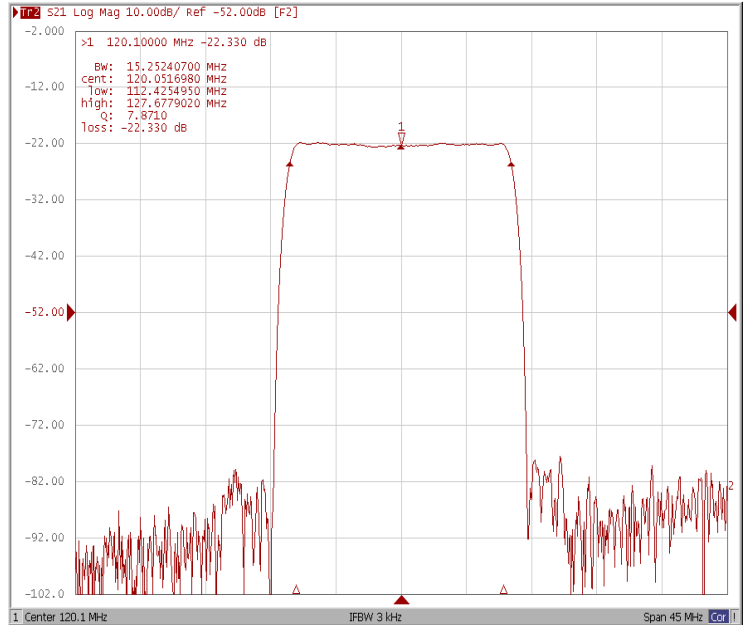


## Frequency Response

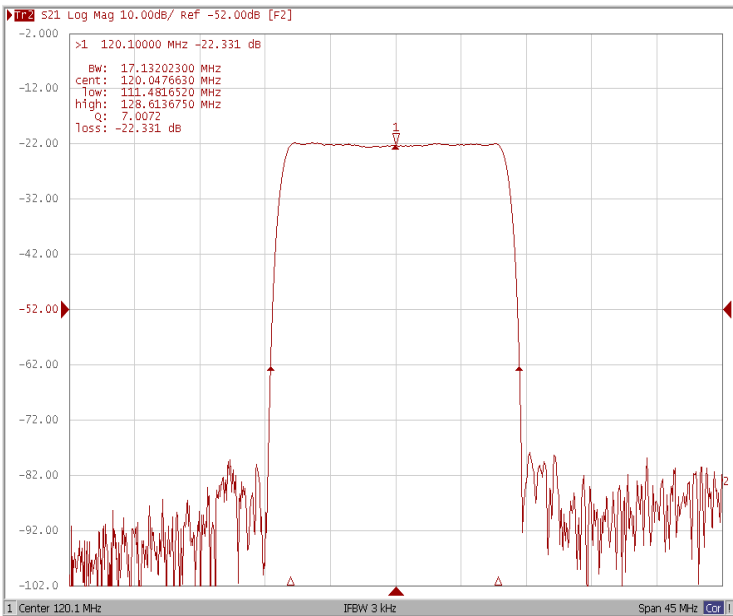
### Bandwidth at -1.0 dB



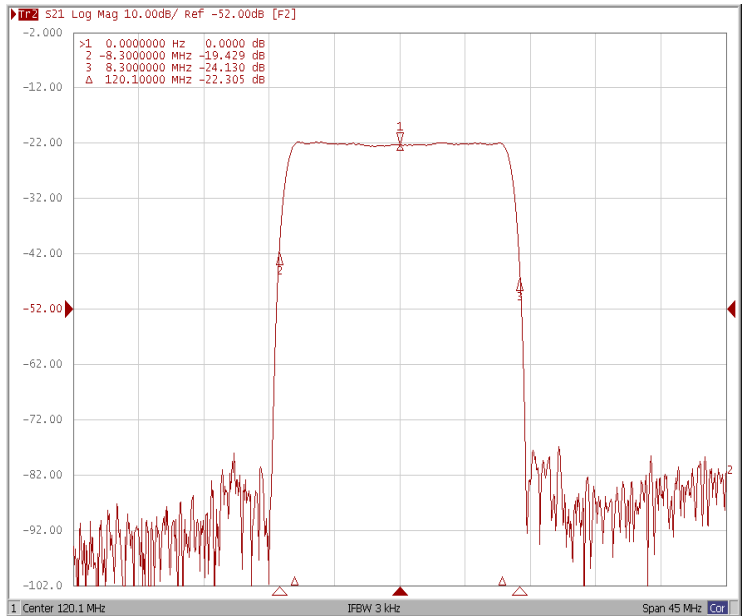
### Bandwidth at -3.0 dB



### Bandwidth at -40.0 dB

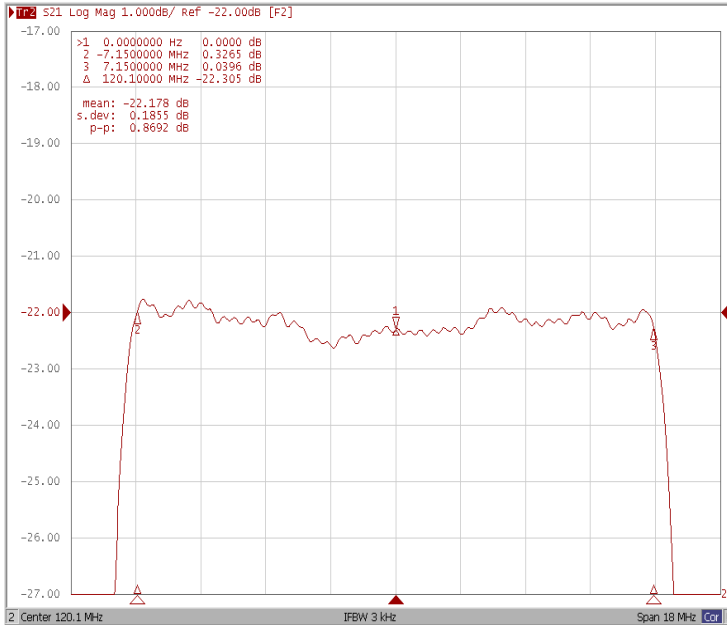


### Relative Attenuation

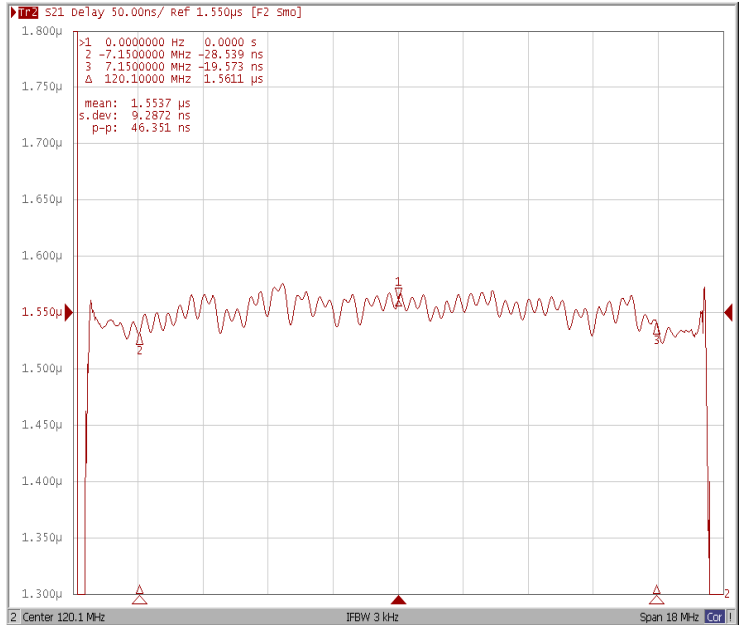




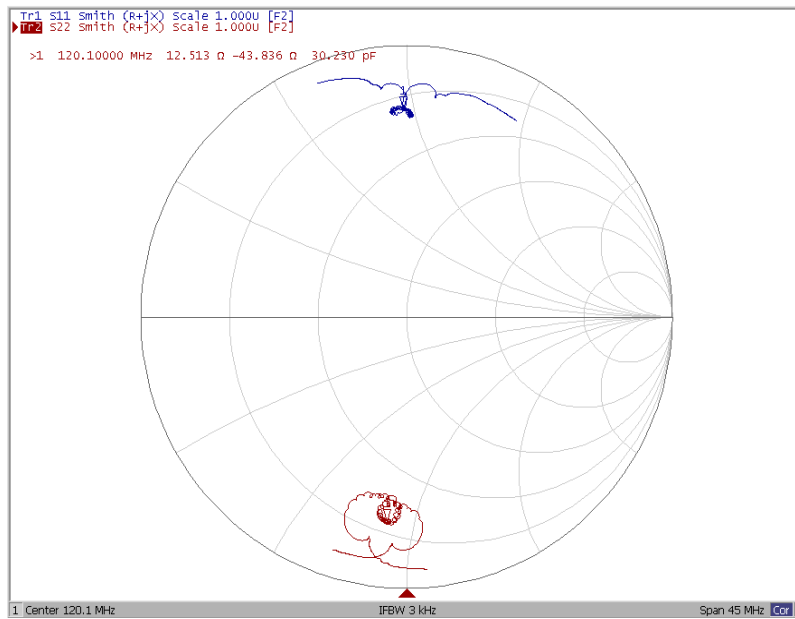
### Ripple Variation $F_o \pm 7.15\text{MHz}$



### Group Delay Variation $F_o \pm 7.15\text{MHz}$



### Smith Chart





### VSWR

