



REV A January 2011

Oscilent Controlled Document

Ordering Code / Part Number	Product Description
821-IF85.1M-20E	85.10 MHz IF SAW Filter 20.10 MHz Bandwidth

### Specification Contents

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

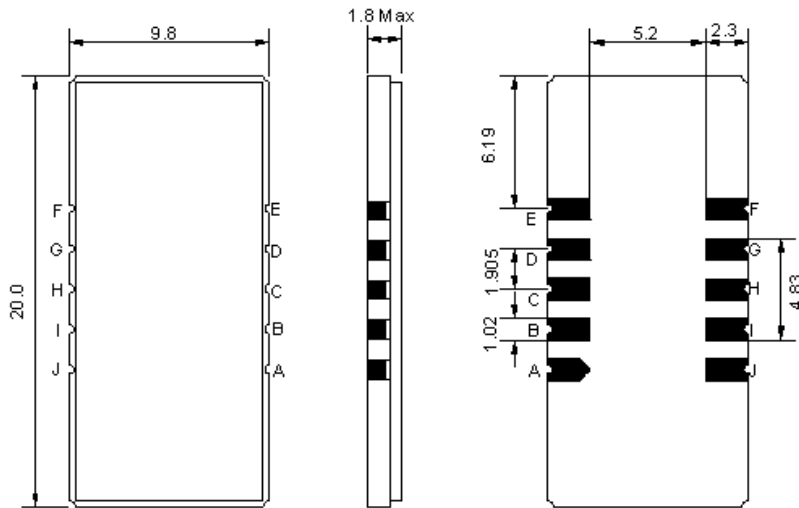
### Notes

- 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)



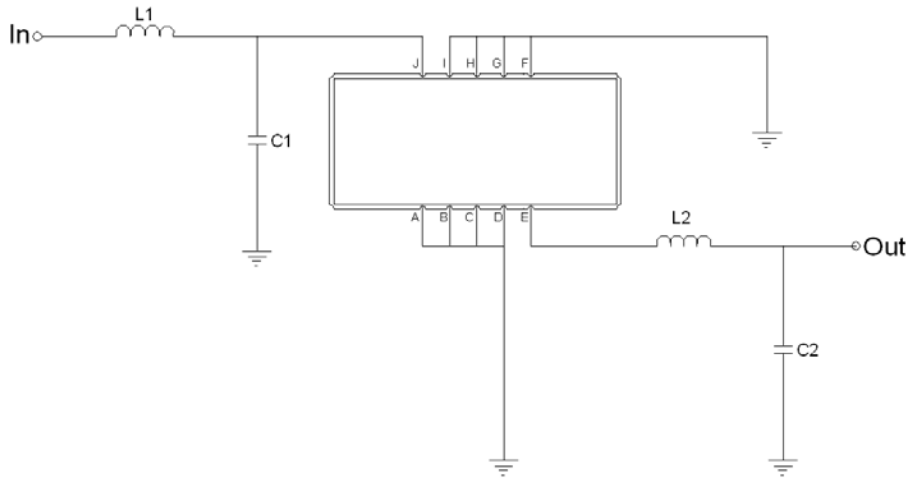


## Mechanical Dimensions (mm)



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

## Test Circuit



Test Fixture & Values	
Input	L1 = 100 nH, C1 = 3pF
Output	L2 = 120 nH, C2 = 36pF
Source/Load Impedance	50 Ω



## Maximum Ratings

Parameters Description	Unit	Minimum	Typical	Maximum
Operating Temperature Range	°C	-30	-	80
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.

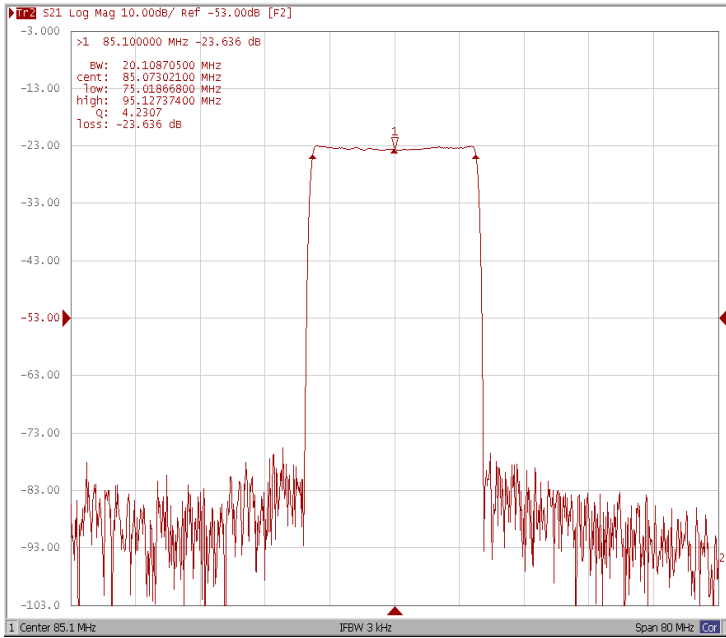
## Electrical Specification

Parameters Description	Unit	Minimum	Typical	Maximum
Center Frequency (Fo)	MHz	-	85.10	-
Insertion Loss at Fo	dB	-	23.6	25.5
Group Delay Variation (Fo±9.42MHz)	nsec	-	39	80
Absolute Delay at Fo	usec	-	2.13	-
Passband Ripple Variation (Fo±9.42MHz)	dB	-	0.56	0.95
Bandwidth at -1dB	MHz	19.90	20.10	-
Bandwidth at -10dB	MHz	-	20.95	-
Bandwidth at -20dB	MHz	-	21.35	-
Bandwidth at -40dB	MHz	-	21.78	21.95
Ultimate Rejection	dB	50	53	-
Temperature Coefficient	ppm/°C	-	-72	-



## Frequency Response

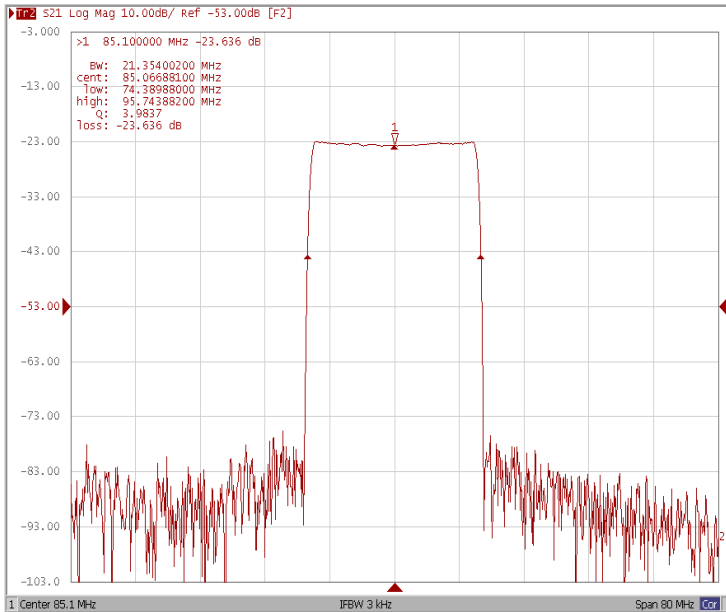
### Bandwidth at -1.0 dB



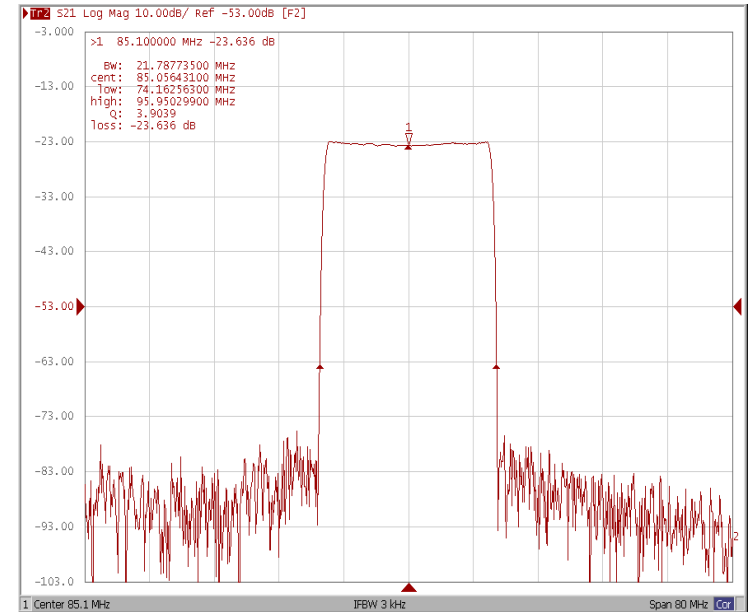
### Bandwidth at -10.0 dB



### Bandwidth at -20.0 dB

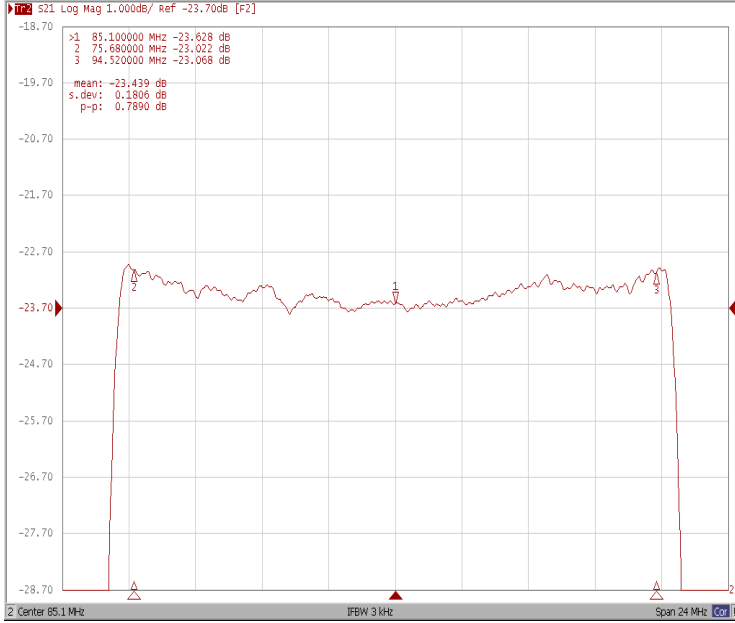


### Bandwidth at -40.0 dB

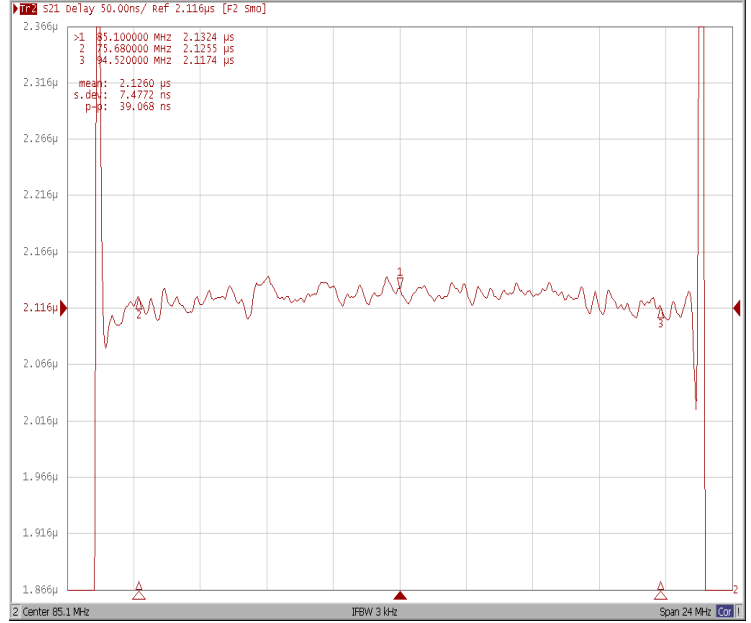




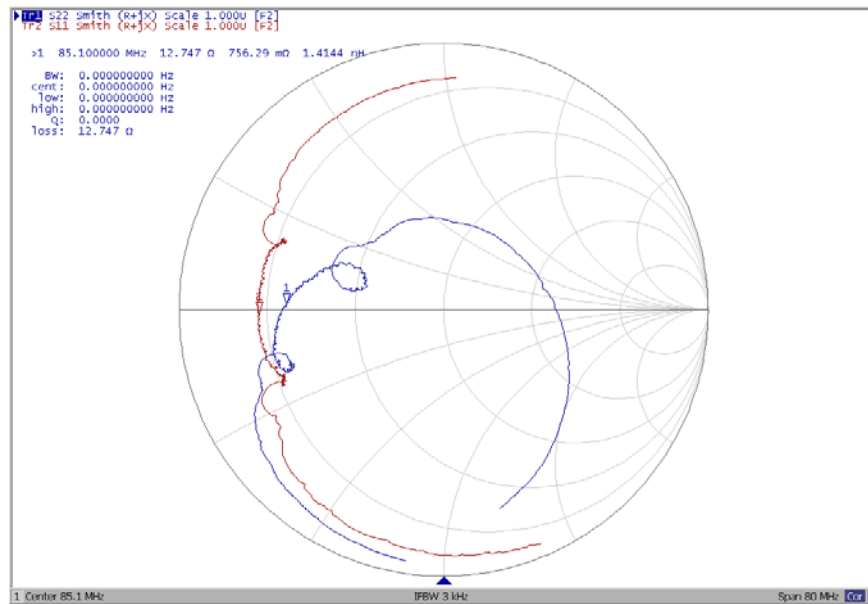
### Ripple Variation Fo±9.42MHz



### Group Delay Variation Fo±9.42MHz



### Smith Chart





### VSWR

