



REV A January 2011


Oscilent Controlled Document

Ordering Code / Part Number	Product Description
821-IF120.0M-E	120MHz IF SAW Filter 9.54MHz Bandwidth

Specification Contents

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

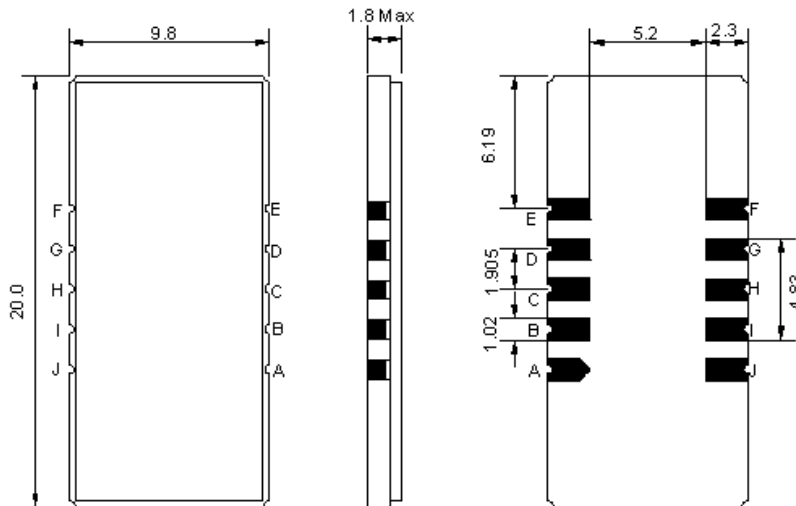
Notes

- 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)



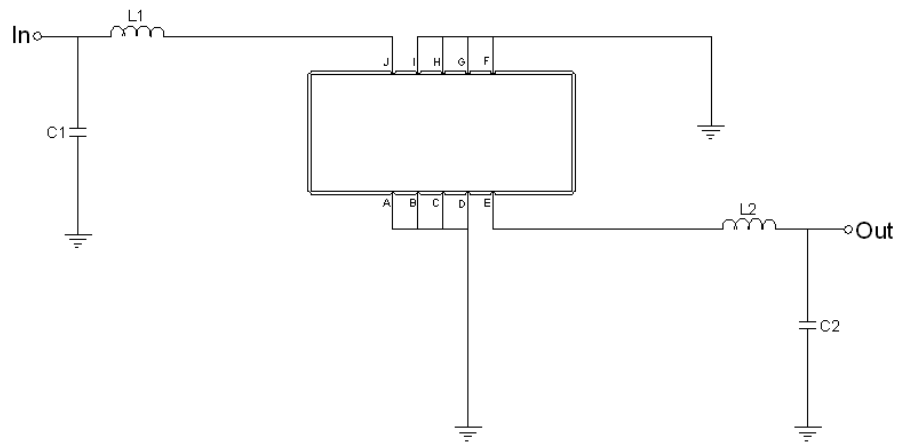


Mechanical Dimensions (mm)



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

Test Circuit



Test Fixture & Values	
Input	L1= 56 nH, C1= 43 pF
Output	L2= 56 nH, C2= 43 pF
Source/Load Impedance	50 Ω



Maximum Ratings

Parameters Description	Unit	Minimum	Typical	Maximum
Operating Temperature Range	°C	-10	-	50
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.

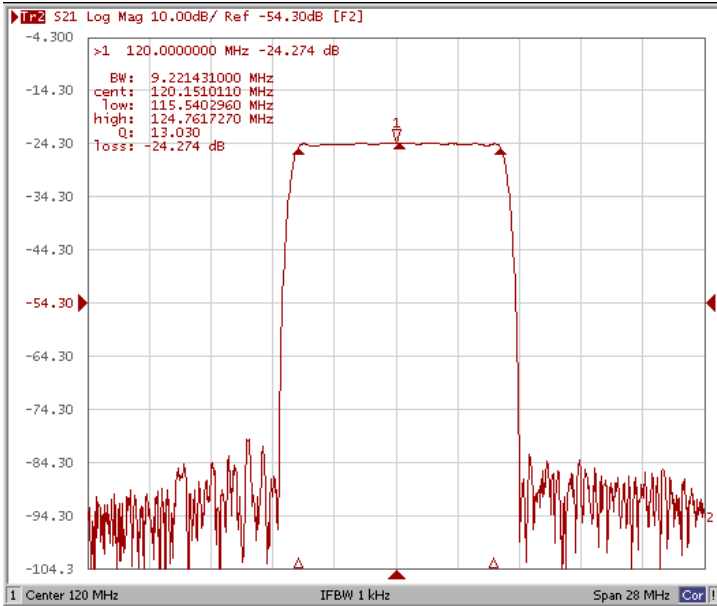
Electrical Specification

Parameters Description	Unit	Minimum	Typical	Maximum
Center Frequency (Fo)	MHz	-	120.0	-
Insertion Loss at Fo	dB	-	24.4	26.0
Amplitude Ripple within fo ±4.4MHz	dB _{p-p}	-	0.6	1.0
Group Delay Variation within fo ±4.4 MHz	nsec	-	30	80
Absolute Delay at Fo	µsec	-	3.17	-
Temperature Coefficient	ppm/°C	-	-23	-
Bandwidth at -1.0 dB	MHz	9.0	9.24	-
Bandwidth at -3.0 dB	MHz	-	9.54	-
Bandwidth at -10.0 dB	MHz	-	10.01	10.1
Bandwidth at -25.0 dB	MHz	-	10.5	11.7
Bandwidth at -40.0 dB	MHz	-	10.75	-
Lower Sidelobe	dB	50	56	-
Upper Sidelobe	dB	50	56	-

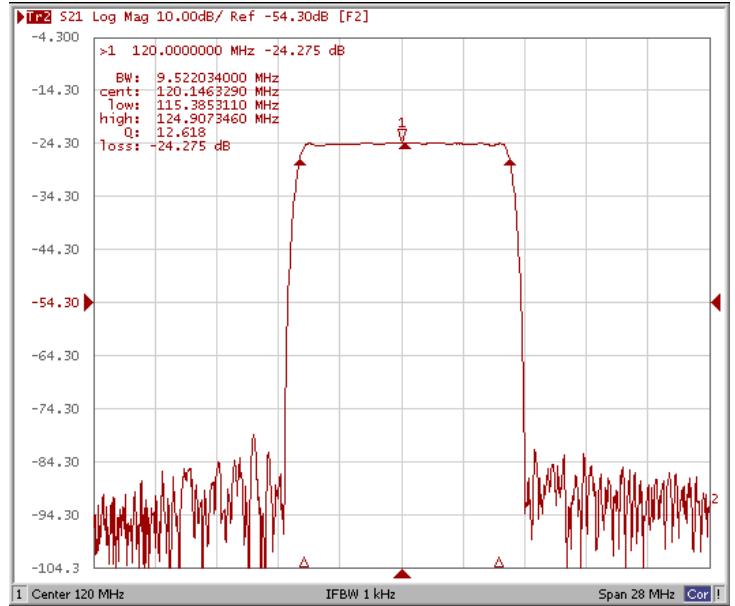


Frequency Response

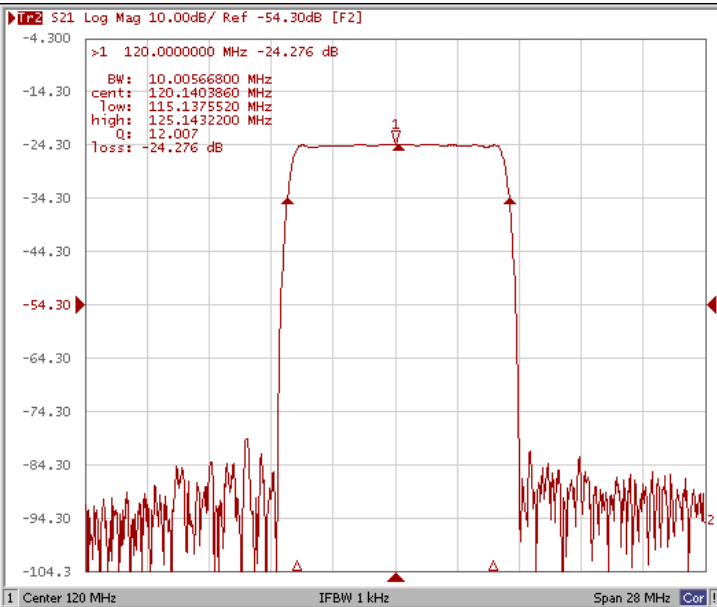
Bandwidth at -1.0 dB



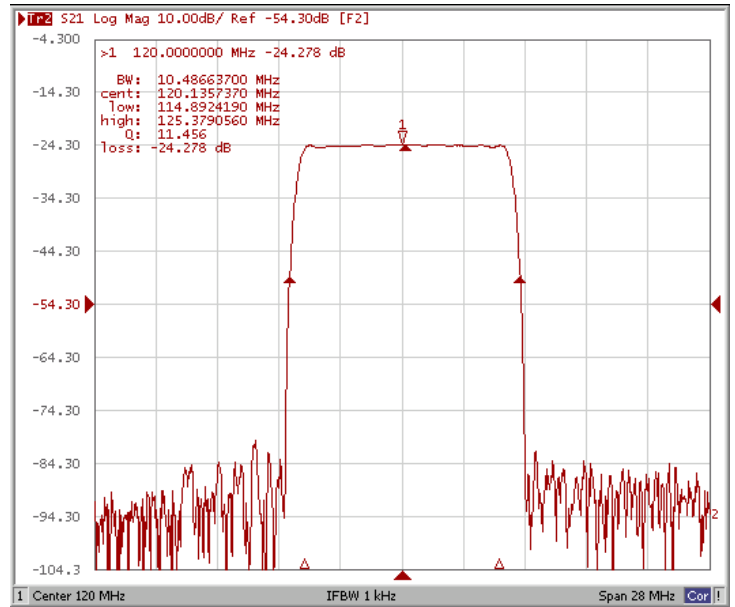
Bandwidth at -3.0 dB



Bandwidth at -10.0 dB

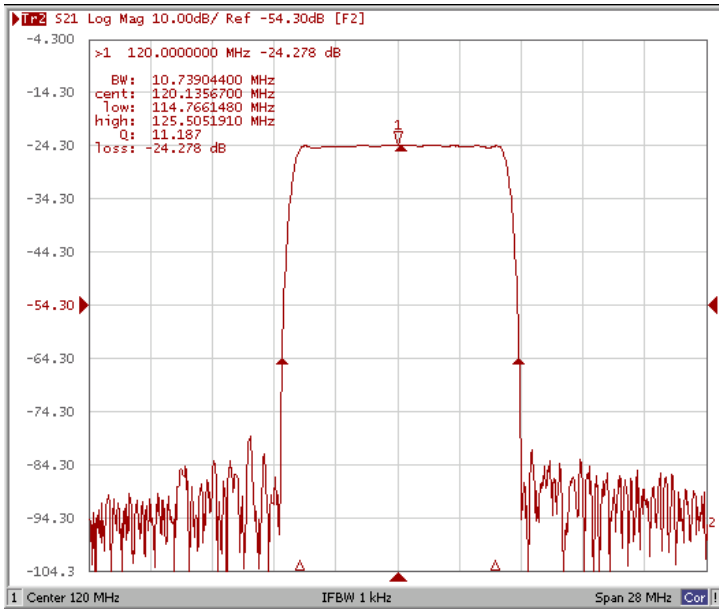


Bandwidth at -25.0 dB

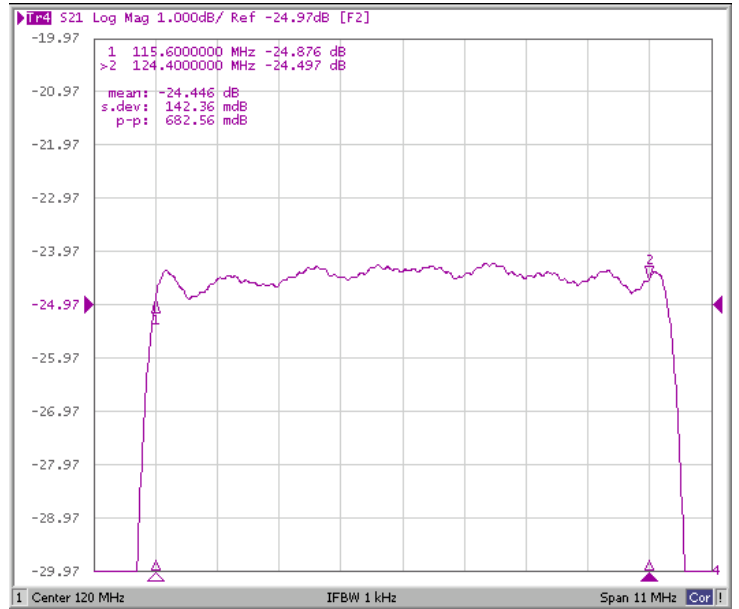




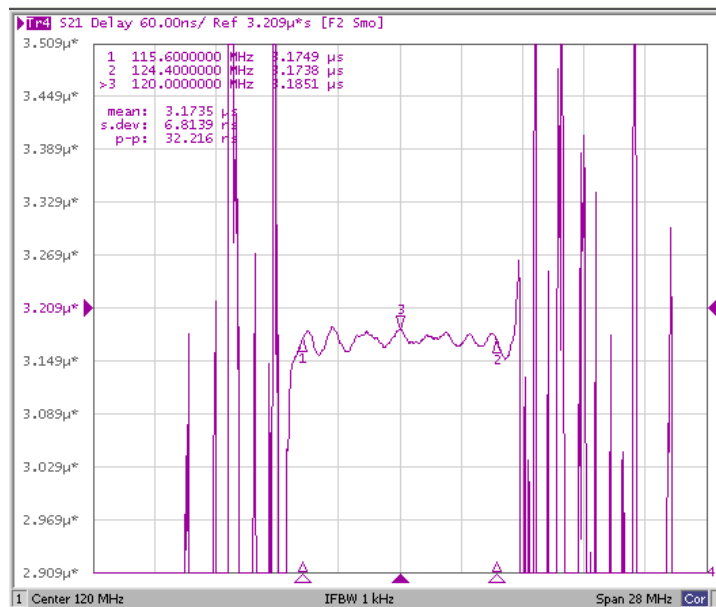
Bandwidth at -40.0 dB



Ripple



Group Delay Variation





Smith Chart

