



REV A January 2011


Oscilent Controlled Document

Ordering Code / Part Number	Product Description
835-IF117.5M-14B	117.5MHz IF SAW Filter 14.74 MHz Bandwidth

Specification Contents

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- o Test Circuit
- o Maximum Ratings
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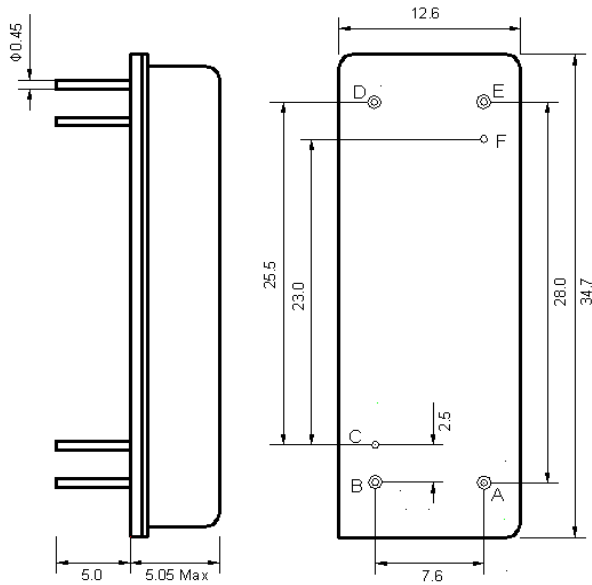
Notes

- 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)



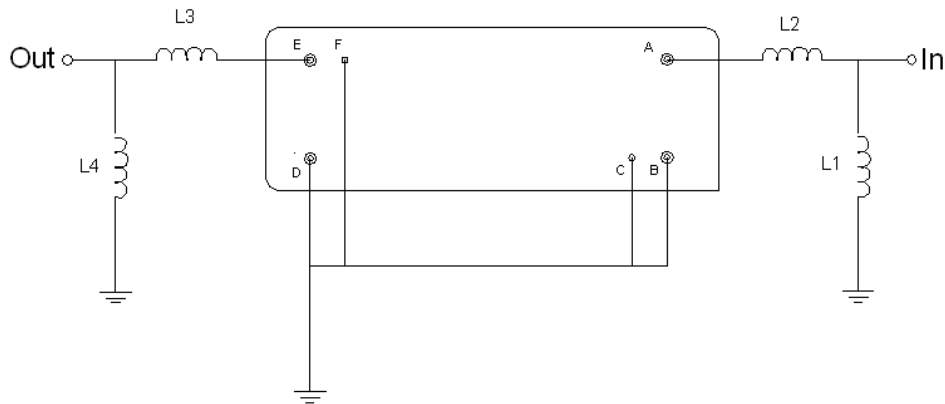


Mechanical Dimensions (mm)



Pin Description	
B, C, D, F	Ground
A	In
E	Out

Test Circuit



Test Fixture & Values	
Input	L1=27 nH, L2=5.6 nH
Output	L3=5.6 nH, L4=27 nH
Source/Load Impedance	50 Ω



Maximum Ratings

Parameters Description	Unit	Minimum	Typical	Maximum
Operating Temperature Range	°C	-20	-	70
Storage Temperature Range	°C	-20	-	70
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.

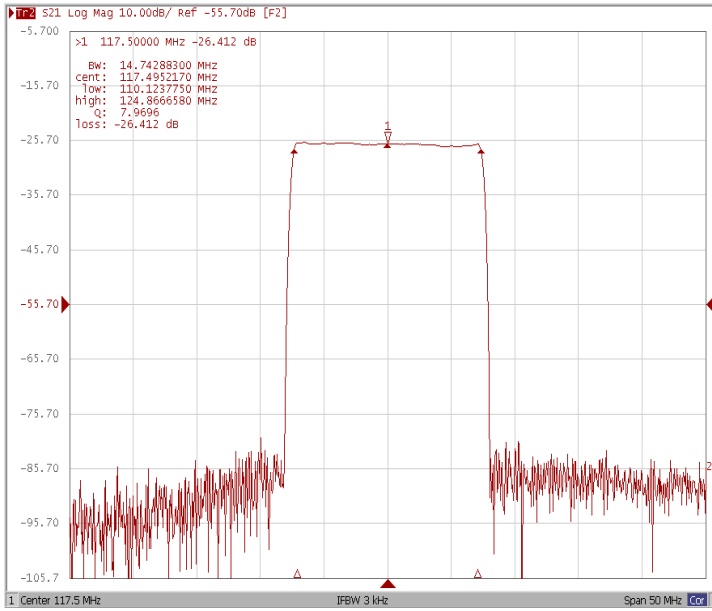
Electrical Specification

Parameters Description	Unit	Minimum	Typical	Maximum
Center Frequency (Fo)	MHz	-	117.5	-
Insertion Loss at Fo	dB	-	26.41	30.00
Group Delay Variation (Fo±7.09MHz)	ns	-	44	180
Phase Linearity (Fo±7.09MHz)	deg		9.8	13.0
Absolute Delay Time at Fo	us	-	3.97	4.20
Temperature Coefficient	ppm/°C	-	-20	-
Amplitude Ripple (Fo±7.09MHz)	dB	-	0.64	1.0
Bandwidth at -1dB	MHz	14.65	14.74	-
Bandwidth at -45dB	MHz	-	16.05	16.20
Input & Output Return Loss	dB	6.00	7.35	-
Triple transit attenuation	dBc	35	-	-
Relative Attenuation				
10MHz~105.0MHz	dBc	40	64	-
@109.84 MHz	dBc	8	9	-
@109.94 MHz	dBc	3	5	-
@125.06 MHz	dBc	3	5	-
@125.16 MHz	dBc	8	9	-
130.0MHz ~300.0MHz	dBc	40	58	-

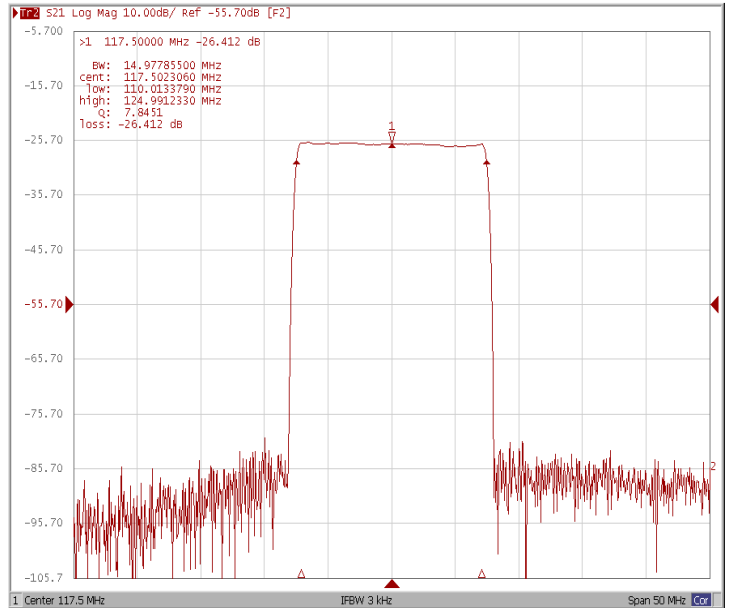


Frequency Response

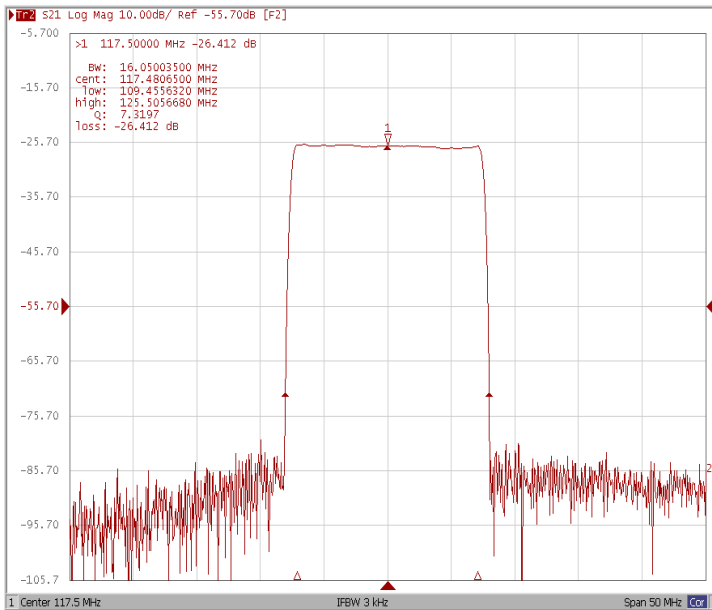
Bandwidth at -1.0 dB



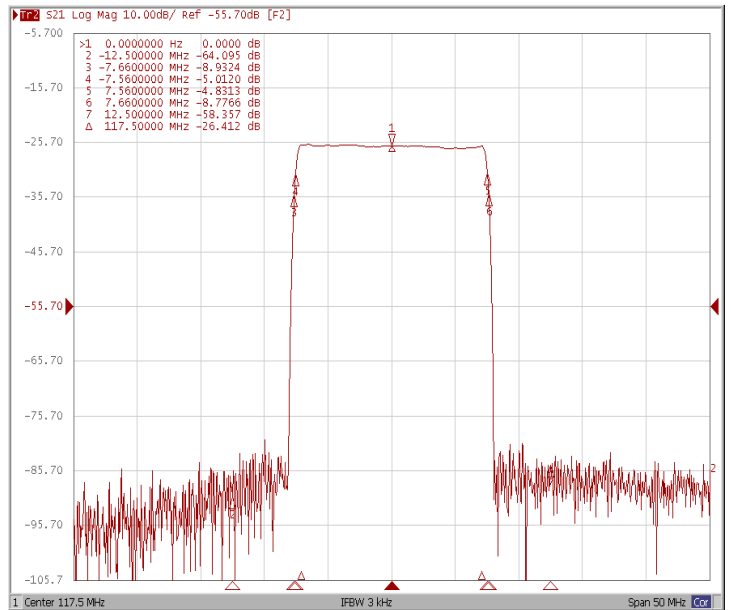
Bandwidth at -3.0 dB



Bandwidth at -45.0 dB

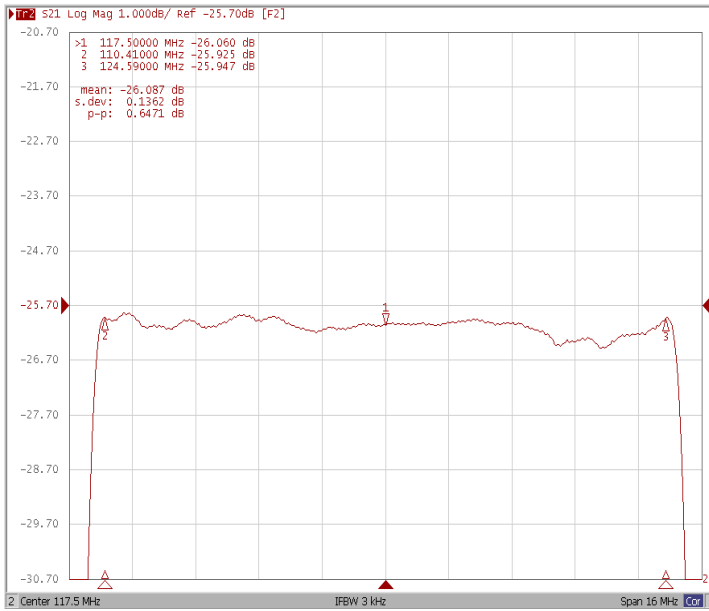


Relative Attenuation

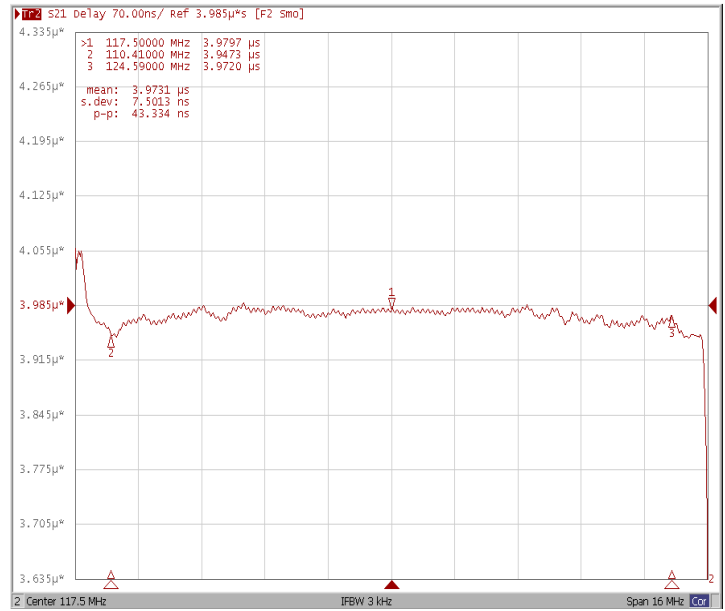




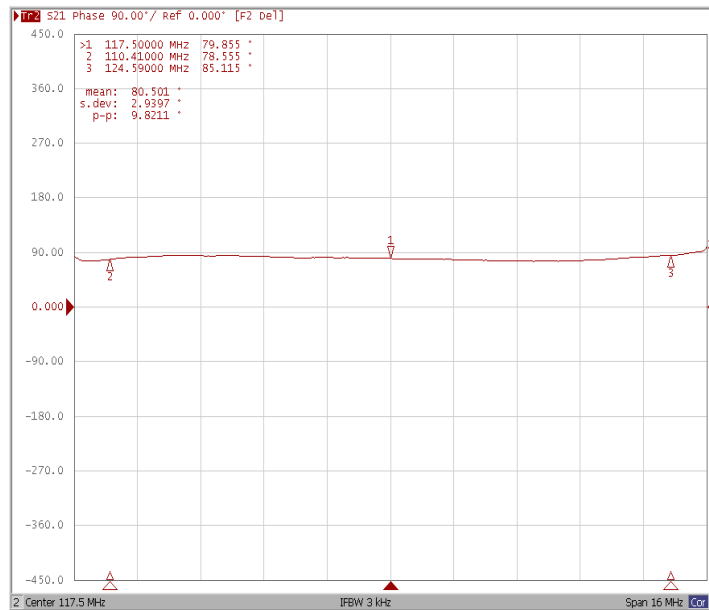
Ripple Variation $F_o \pm 7.09\text{MHz}$



Group Delay Variation $F_o \pm 7.09\text{MHz}$



Phase Linearity $F_o \pm 7.09\text{MHz}$



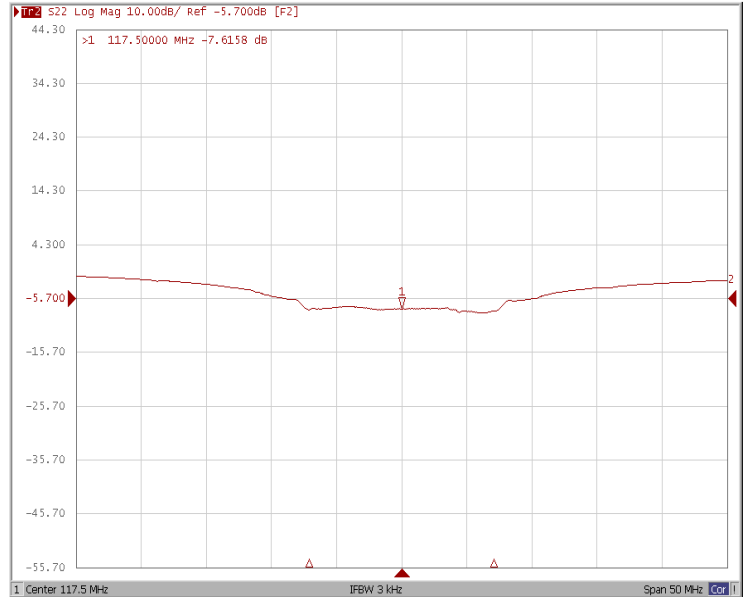


Return Loss

S11



S22

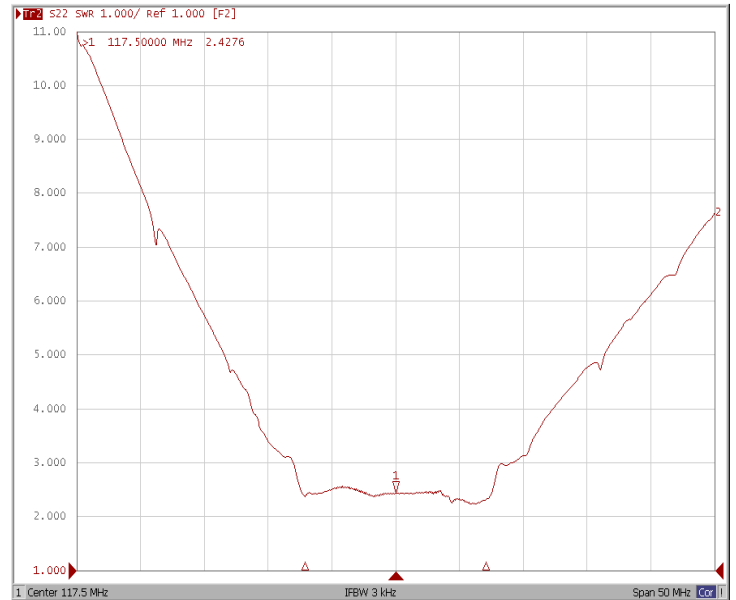


VSWR

S11



S22





Smith Chart

