



# PRODUCT SPECIFICATION

REV A January 2011

Oscilent Controlled Document

Ordering Code / Part Number	Product Description
835-IF160.0M-09B	60.0MHz IF SAW Filter 10.05 MHz Bandwidth

## Specification Contents

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

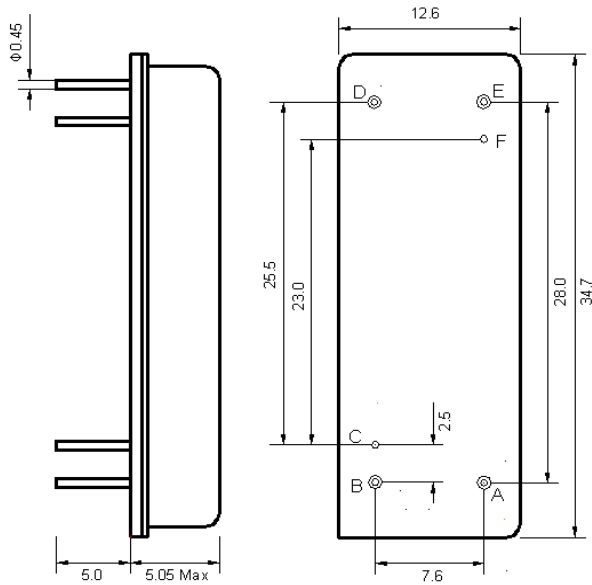
## Notes

- 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)



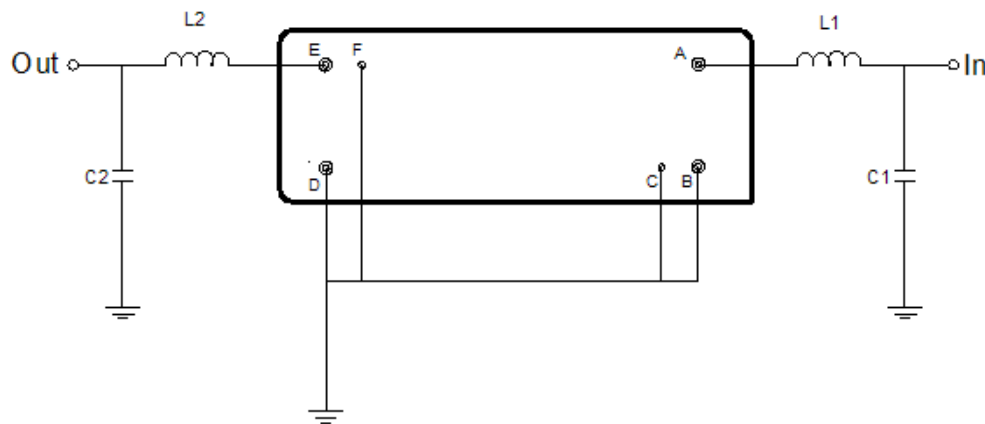


## Mechanical Dimensions (mm)



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

## Test Circuit



Test Fixture & Values	
Input	L1=33 nH, C1=36 pF
Output	L2=27 nH, C2=51 pF
Source/Load Impedance	50 $\Omega$



**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) <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.

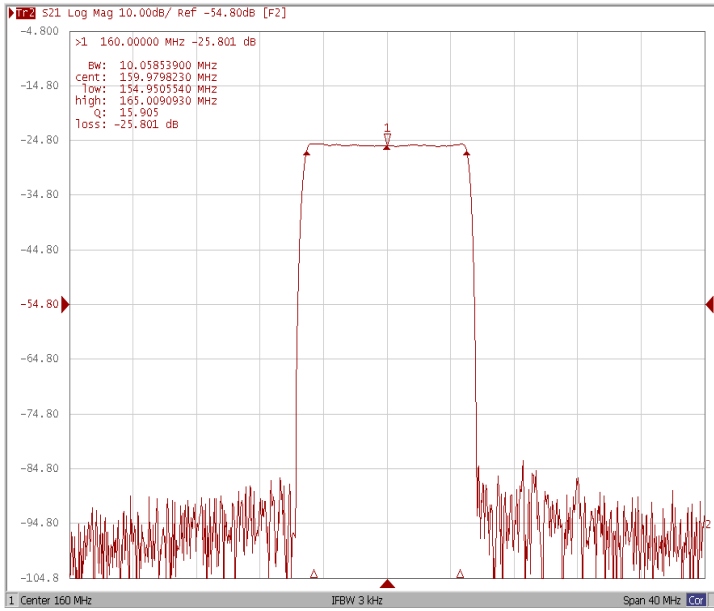
**Electrical Specification**

Parameters Description	Unit	Minimum	Typical	Maximum
Center Frequency (Fo)	MHz	-	160.0	-
Insertion Loss at Fo	dB	-	25.8	26.0
Group Delay Variation (Fo±4.59MHz)	ns	-	58	100
Phase Linearity (Fo±4.59MHz)	deg		12.7	13.0
Absolute Delay Time at Fo	us	-	3.85	4.00
Temperature Coefficient	ppm/°C	-	-20	-
Amplitude Ripple (Fo±4.59MHz)	dB	-	0.56	1.00
Bandwidth at -1dB	MHz	9.90	10.05	-
Bandwidth at -45dB	MHz	-	11.26	11.50
Input & Output Return Loss	dB	6	7	-
Triple transit attenuation	dBc	35	-	-
Relative Attenuation				
10MHz~150.0MHz	dBc	40	72	-
@154.84 MHz	dBc	2	3	-
@154.94 MHz	dBc	2	1.1	-
@165.06 MHz	dBc	2	1.8	-
@165.16 MHz	dBc	7	4.3	-
170.0MHz ~300.0MHz	dBc	40	64	-

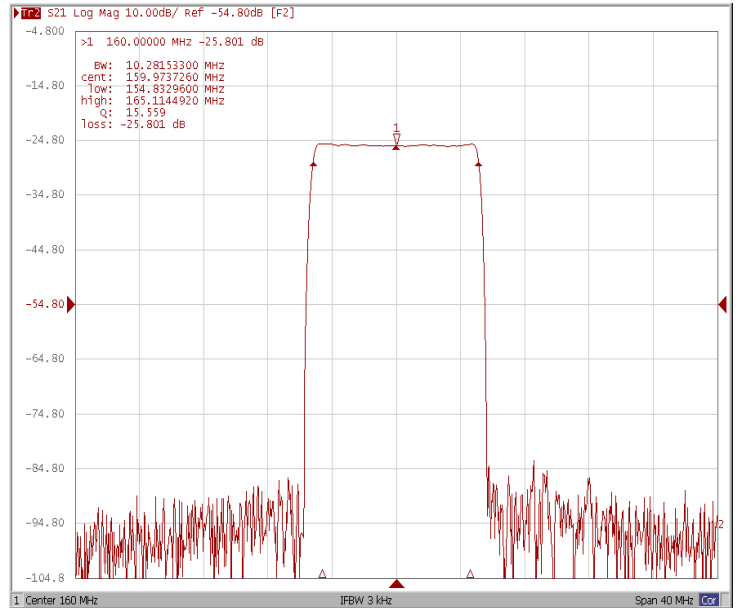


### Frequency Response

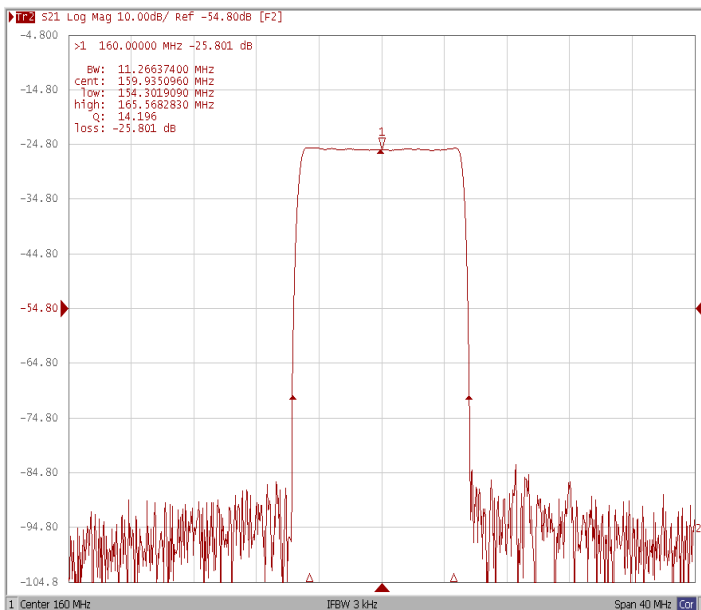
#### Bandwidth at -1.0 dB



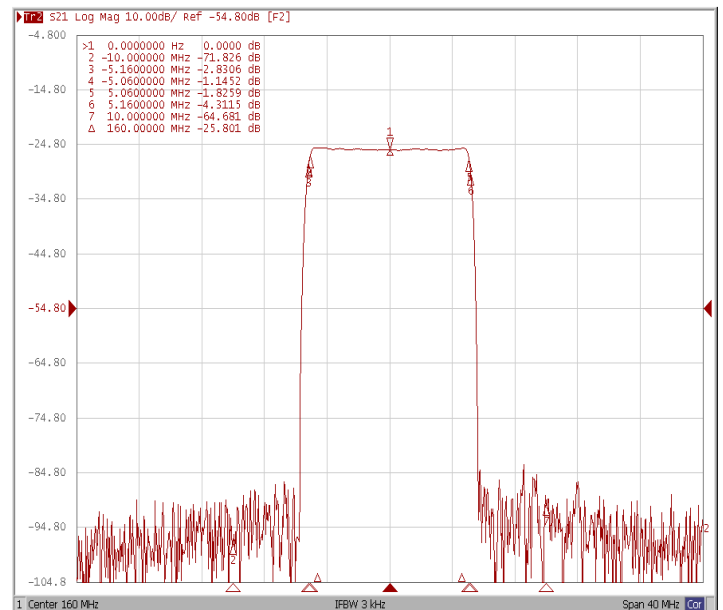
#### Bandwidth at -3.0 dB



#### Bandwidth at -45.0 dB

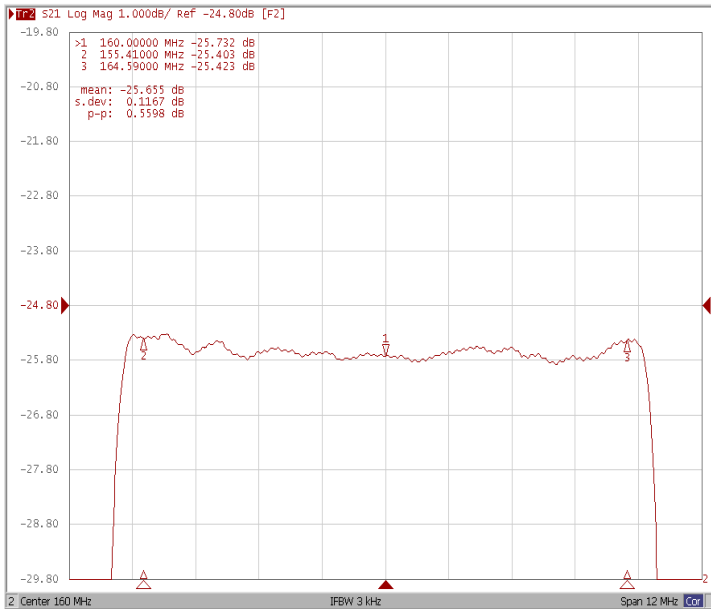


#### Relative Attenuation

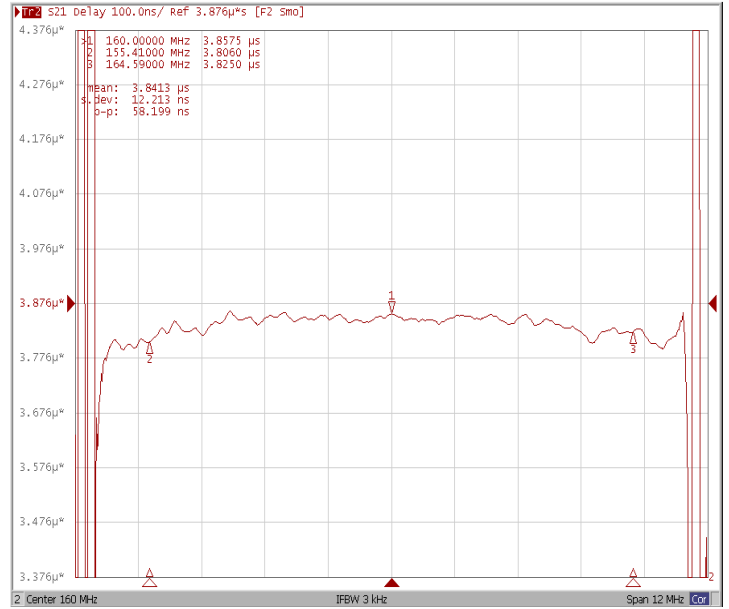




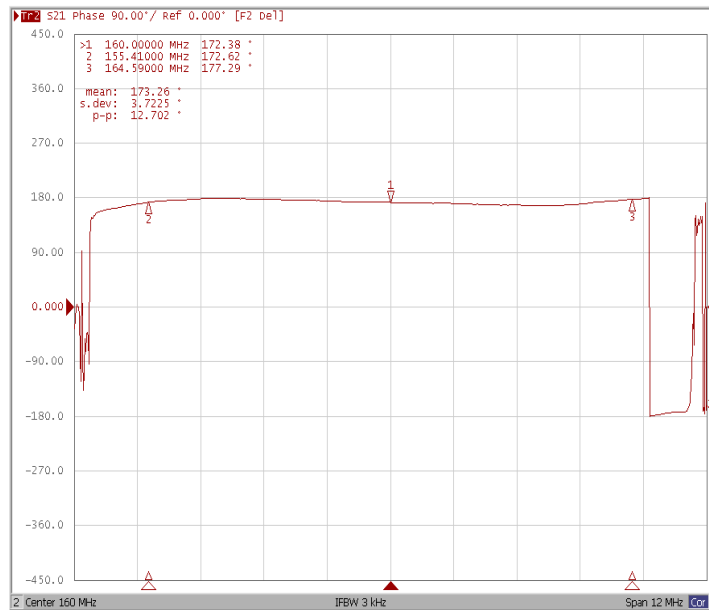
### Ripple Variation Fo±4.59MHz



### Group Delay Variation Fo±4.59MHz



### PhaseLinearity Fo±4.59MHz





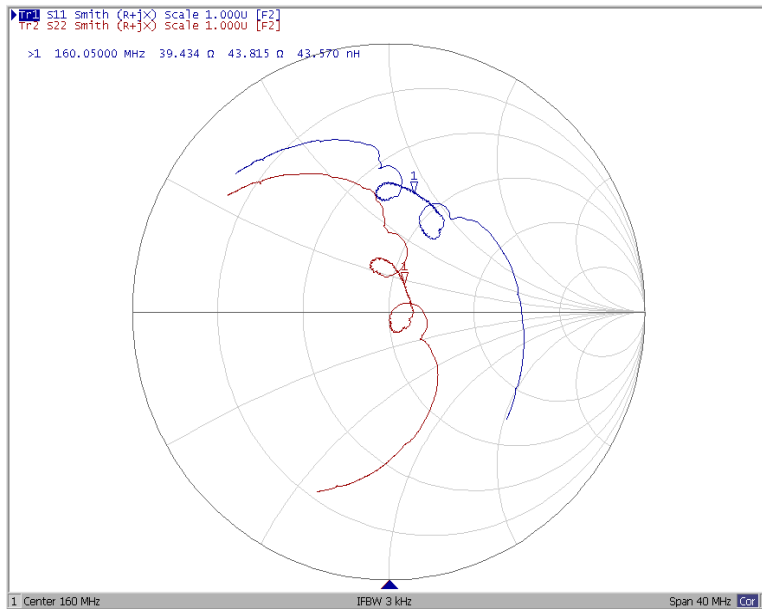
### Return Loss S11



### Return Loss S22



### Smith Chart





### VSWR

**S11**



**S22**

