



Oscilent Corporation

PRODUCT SPECIFICATION

REV A January 2011

Oscilent Controlled Document

Ordering Code / Part Number	Product Description
835-SL100.5M-03A	100.0MHz IF SAW Filter 3.07 MHz Bandwidth

Specification Contents

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



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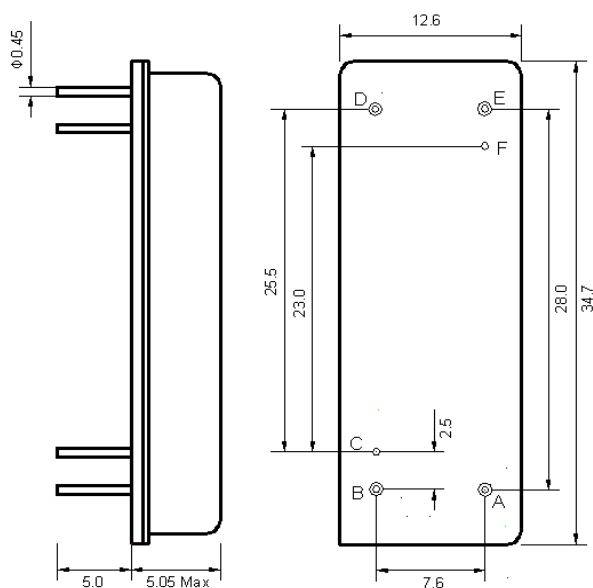
Oscilent Part Number

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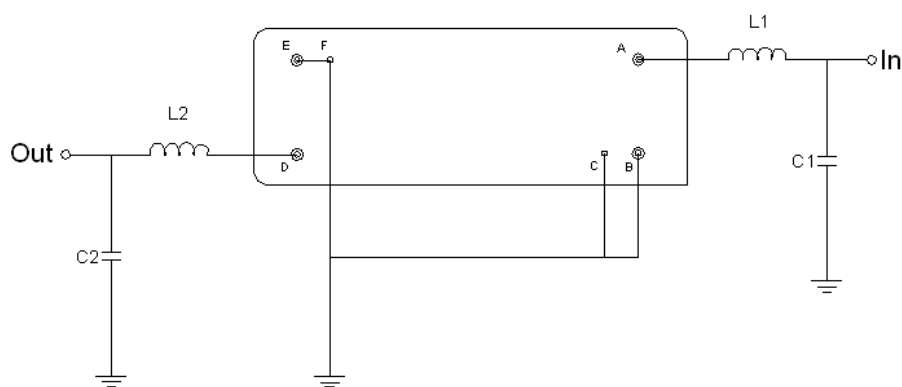
Mechanical Dimensions (mm)



Pin Description

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

Test Circuit



Test Fixture & Values

Input	L1=100 nH Q > 40, C1=75 pF
Output	L2=82 nH Q > 40, C2=150 pF
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	-	-	28
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	-	100.5	-
Insertion Loss at Fo	dB	-	23.50	25.00
Group Delay Variation (Fo±1.44MHz)	ns	-	147	180
Phase Linearity (Fo±1.44MHz)	deg		6.5	10
Absolute Delay Time at Fo	us	-	4.78	4.85
Temperature Coefficient	ppm/°C	-	-0.03	-
Amplitude Ripple (Fo±1.44MHz)	dB	-	0.50	1.10
Bandwidth at -1dB	MHz	2.88	3.07	-
Bandwidth at -45dB	MHz	-	3.75	4.00
Input & Output Return Loss	dB	-	9	
Triple transit attenuation	dBc	35	-	-
Relative Attenuation				
10MHz~95.0MHz	dBc	45	55	-
@98.49 MHz	dBc	40	56	-
@98.59 MHz	dBc	33	52	-
@102.41 MHz	dBc	33	52	-
@102.51 MHz	dBc	40	52	-
105.0MHz ~300.0MHz	dBc	45	47	-



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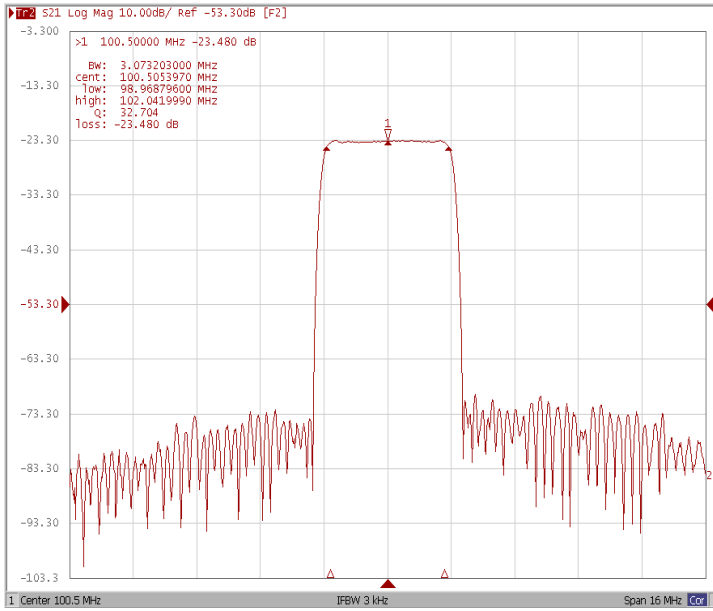
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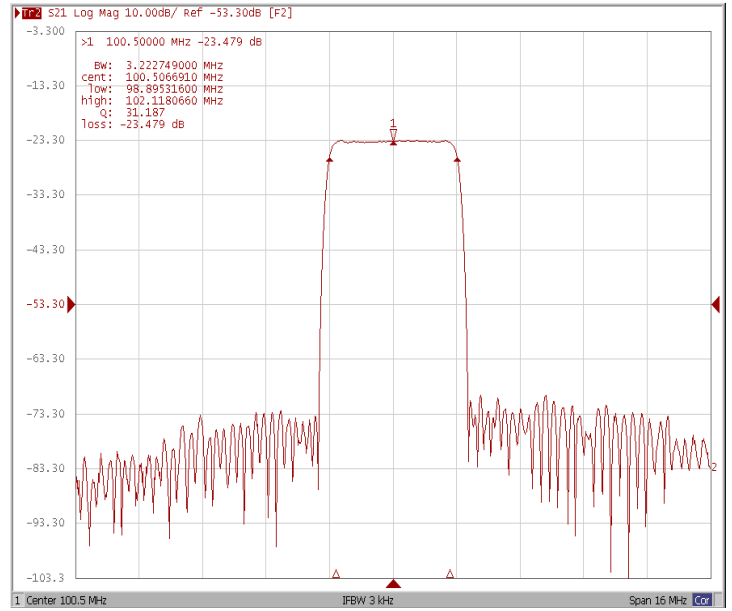
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Frequency Response

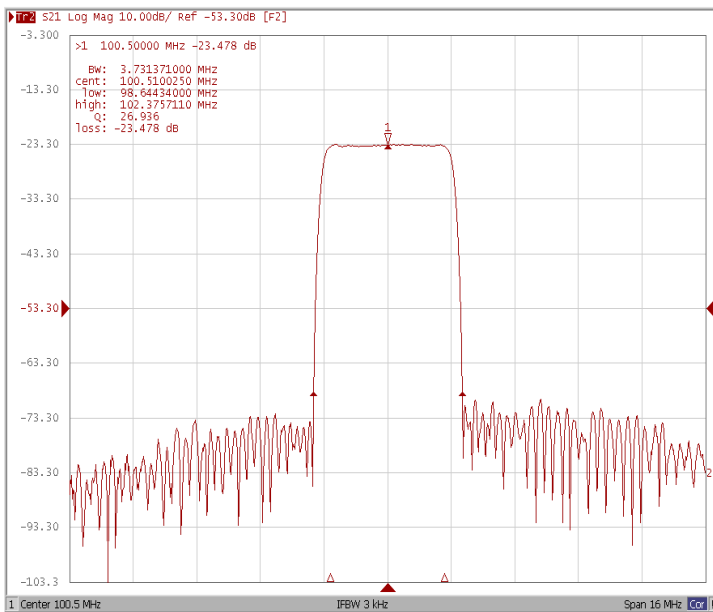
Bandwidth at -1.0 dB



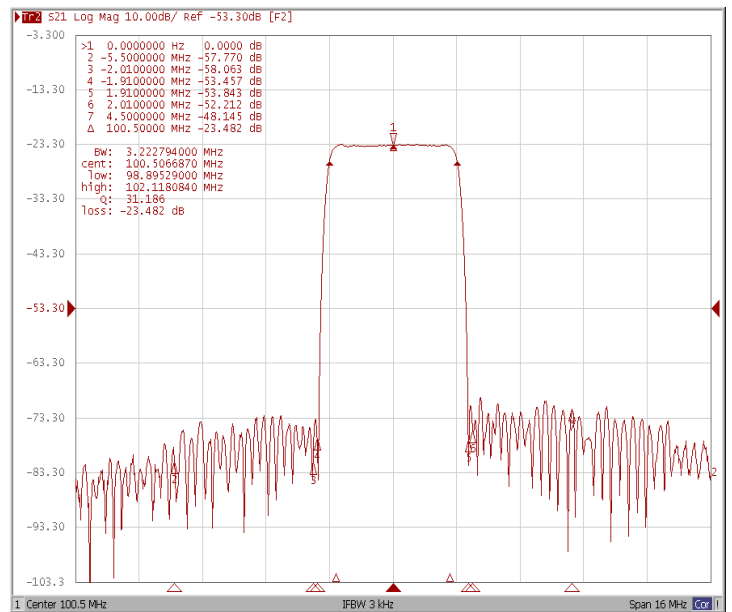
Bandwidth at -3.0 dB



Bandwidth at -45.0 dB



Relative Attenuation





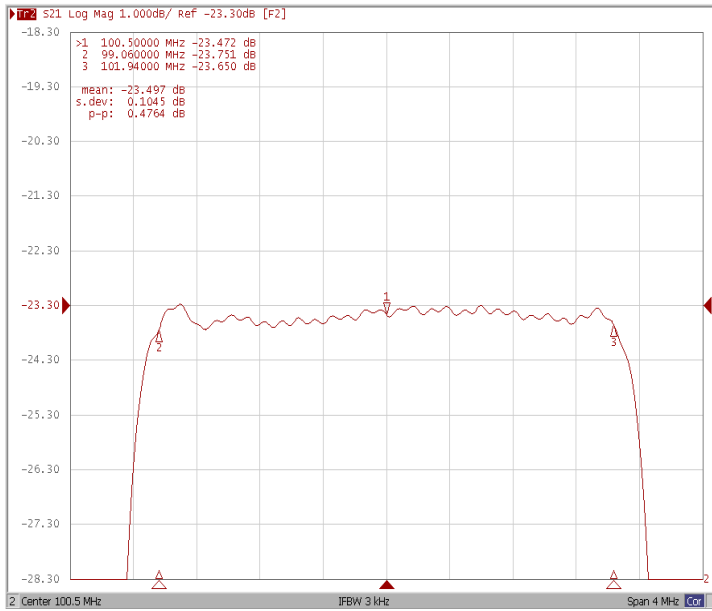
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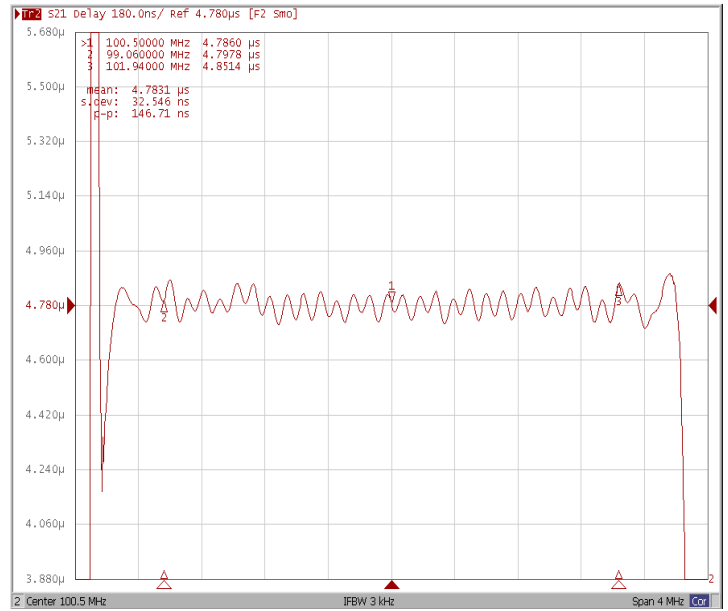
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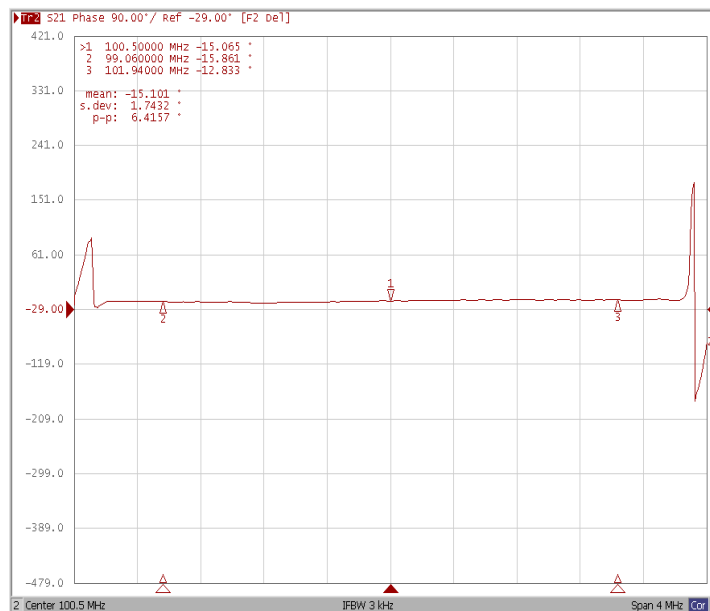
Ripple Variation Fo±1.44MHz



Group Delay Variation Fo±1.44MHz

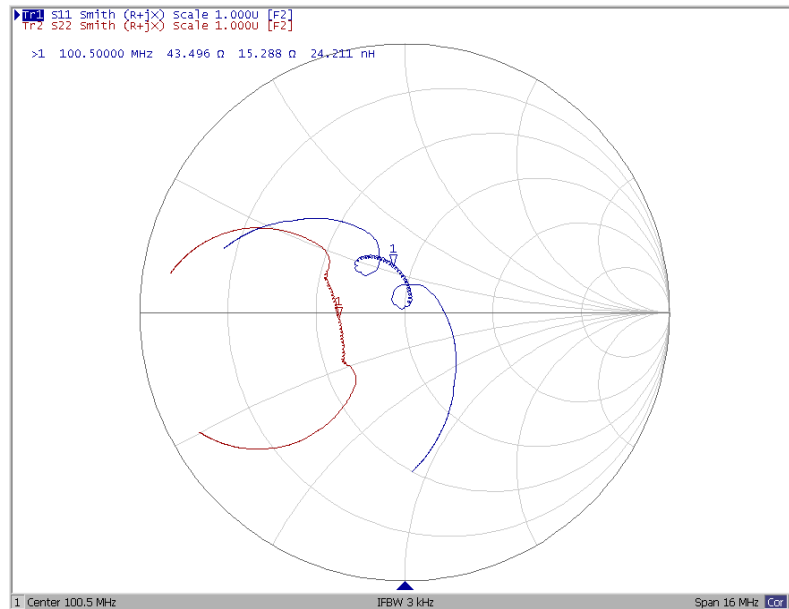


Phase Linearity Fo±1.44MHz



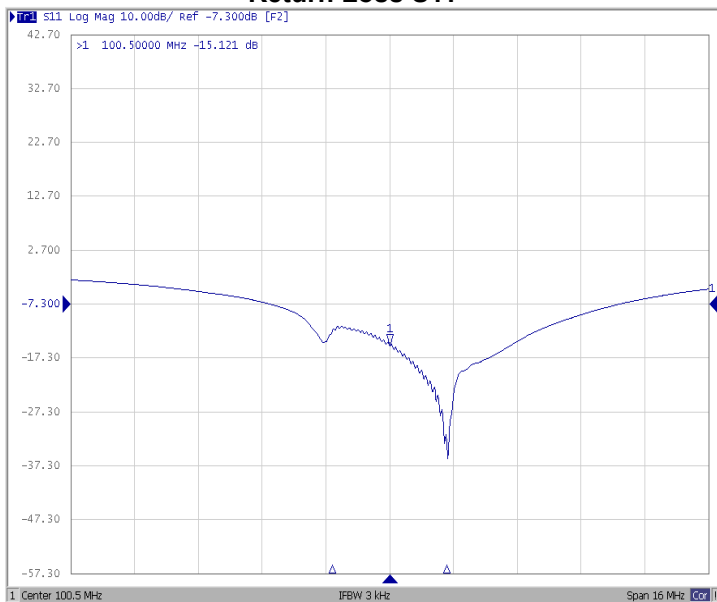


Smith Chart

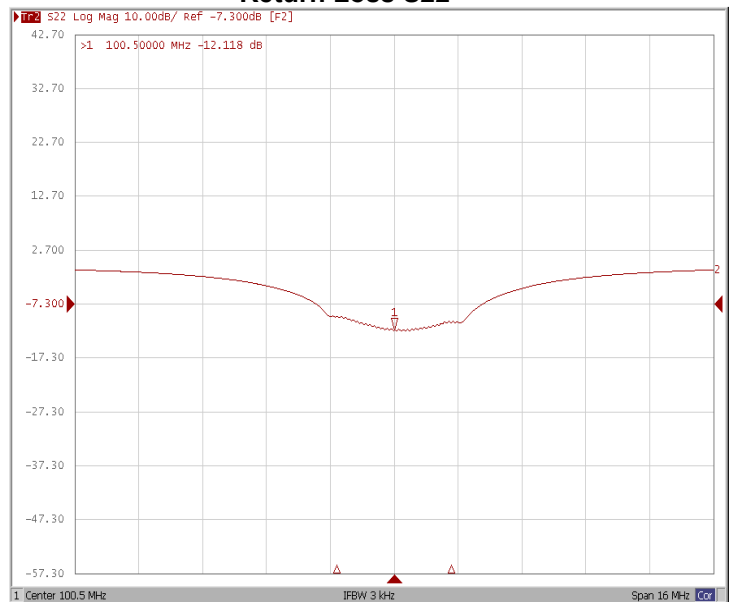


Return Loss

Return Loss S11



Return Loss S22





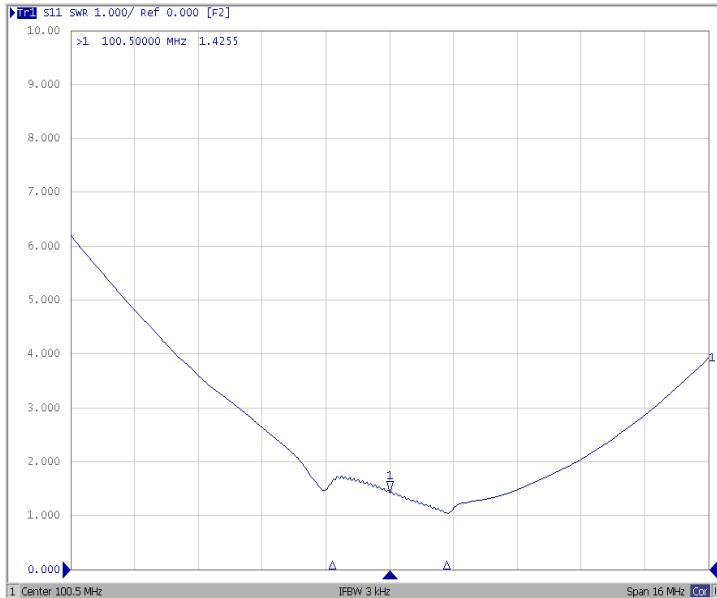
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VSWR

VSWR S11



VSWR S22

