



Oscilent Corporation

PRODUCT SPECIFICATION

REV A January 2011

Oscilent Controlled Document

Ordering Code / Part Number	Product Description
813-SL70.0M-42A	70.0MHz IF SAW Filter 42.2MHz 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)





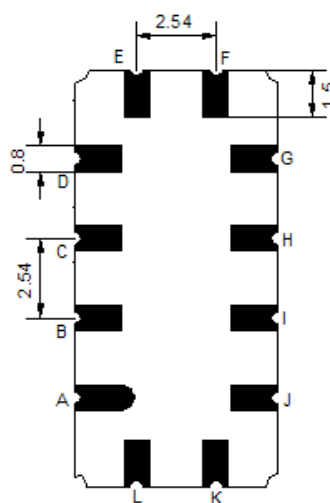
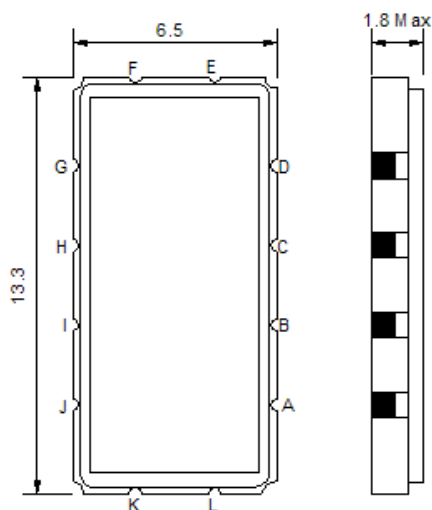
Oscilent Part Number

813-SL70.0M-42A

January 2011 Rev A

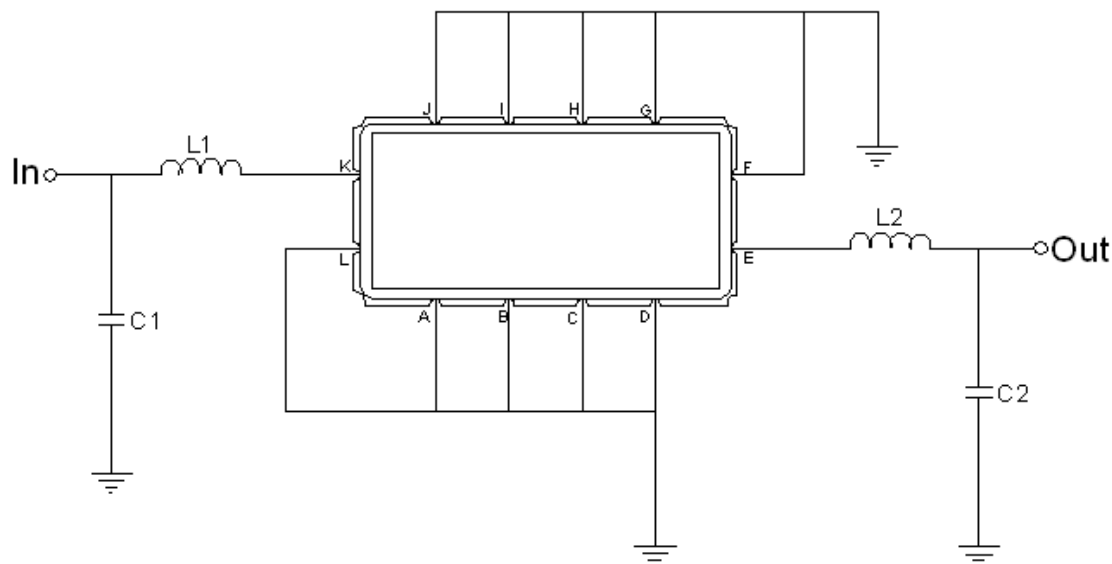
70.0MHz IF SAW Filter 42.2MHz Bandwidth

Mechanical Dimensions (mm)



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

Test Circuit



Test Fixture & Values	
Input	L1=150nH, C1=22pF
Output	L2=100nH, C2=24pF
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) ⁽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	-	70.0	-
Insertion Loss at Fo	dB	-	21.9	23.0
Temperature Coefficient	ppm/°C	-	-86	-
Amplitude Ripple within fo ±20.0 MHz	dB _{p-p}	-	0.66	1.00
Group Delay Variation within fo ±20.0 MHz	nsec	-	10	30
Absolute Delay at Fo	µsec	-	0.95	-
Bandwidth at -1.0 dB	MHz	40.00	42.20	-
Bandwidth at -3.0 dB	MHz	43.00	43.85	-
Bandwidth at -40.0 dB	MHz	-	50.00	50.80
Relative Attenuation				
0MHz ~ 45.35MHz	dB	40	45	-
97.05MHz ~ 120MHz	dB	30	35	-



Oscilent Part Number

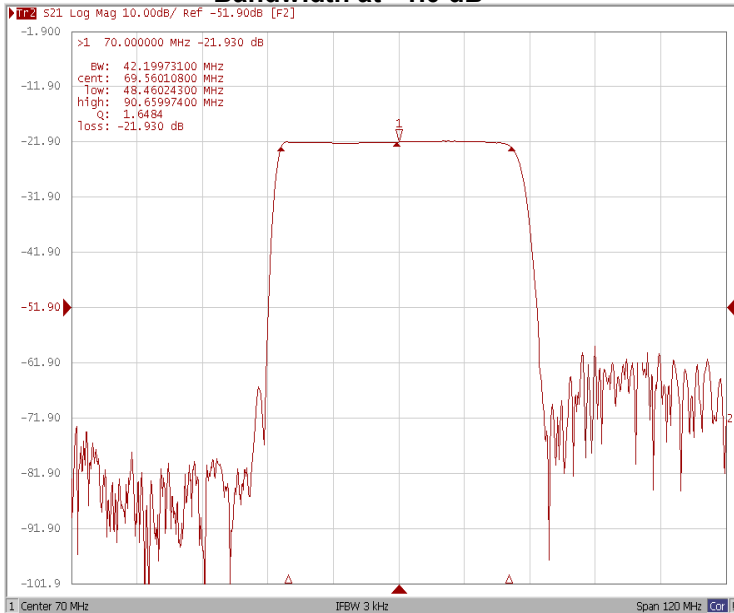
813-SL70.0M-42A

January 2011 Rev A

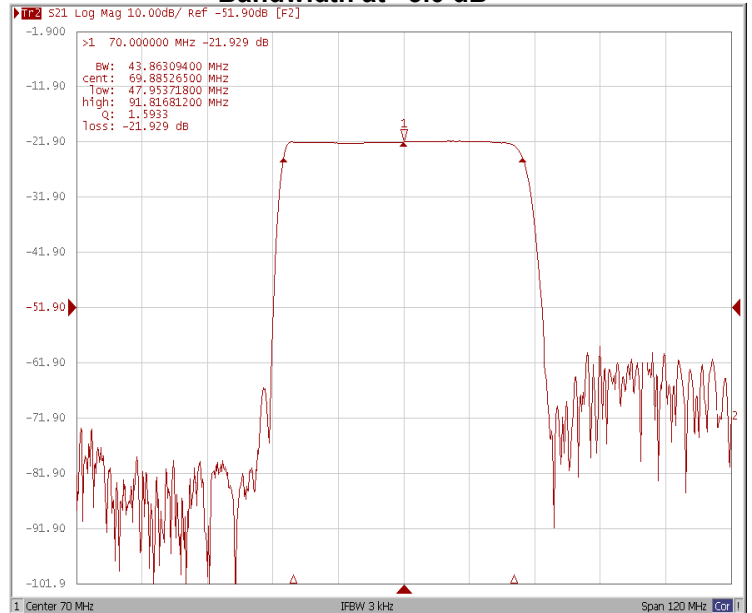
70.0MHz IF SAW Filter 42.2MHz Bandwidth

Frequency Response

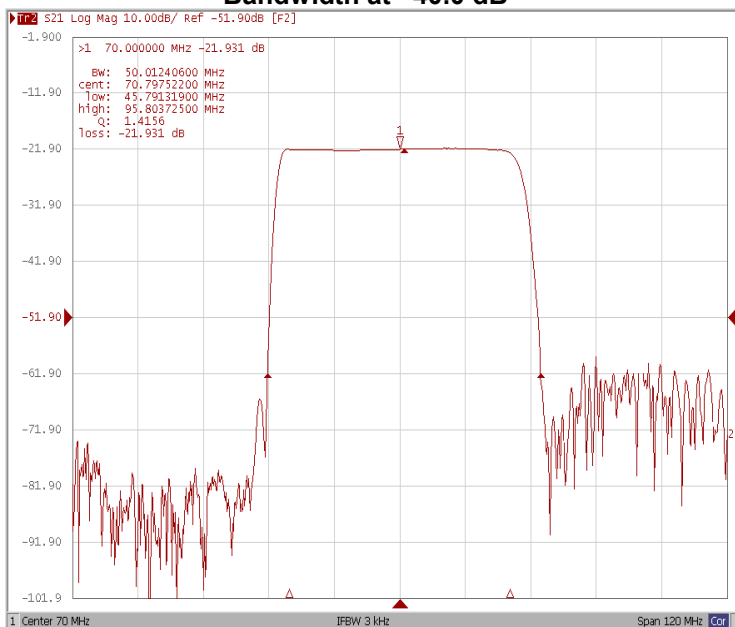
Bandwidth at -1.0 dB



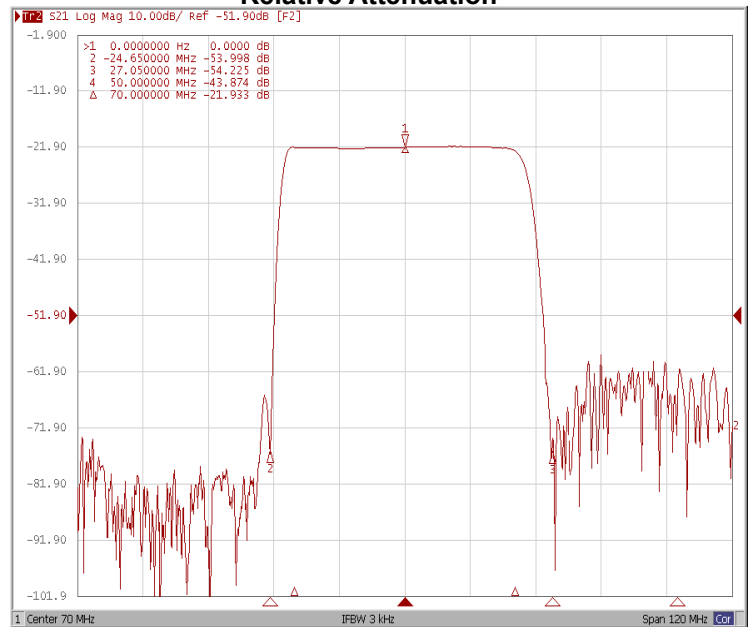
Bandwidth at -3.0 dB



Bandwidth at -40.0 dB



Relative Attenuation





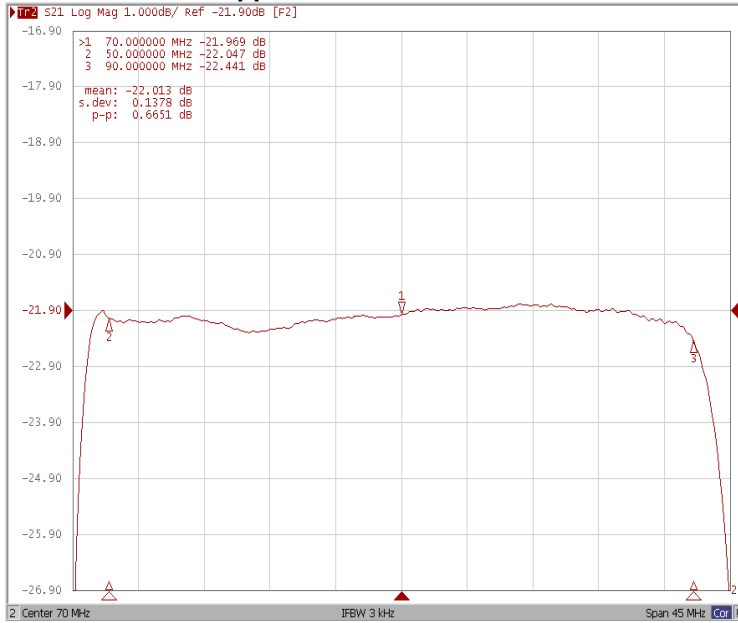
Oscilent Part Number

813-SL70.0M-42A

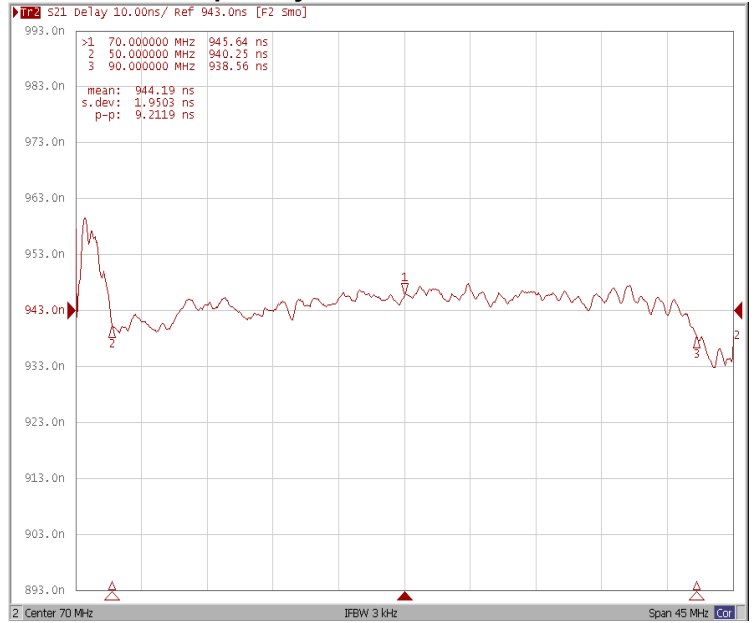
January 2011 Rev A

70.0MHz IF SAW Filter 42.2MHz Bandwidth

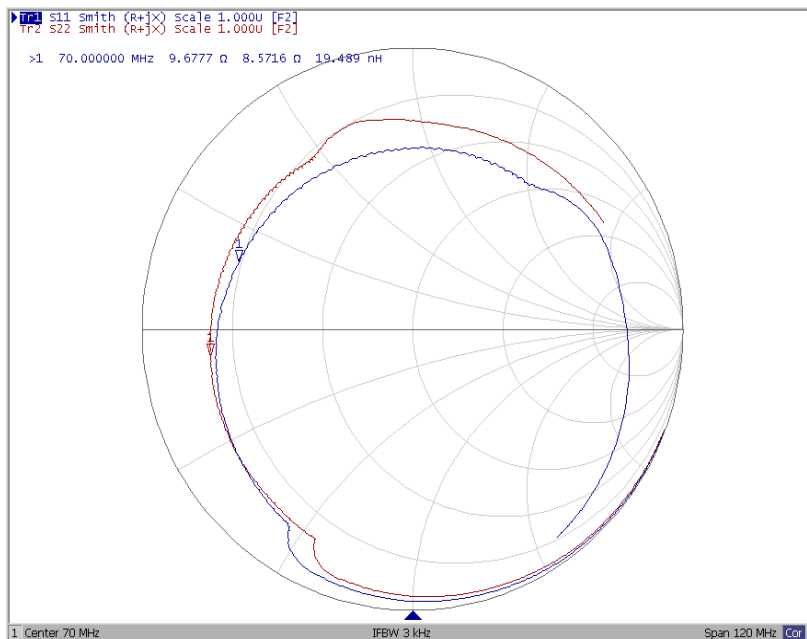
Ripple Variation Fo $\pm$ 20.0MHz



Group Delay Variation Fo $\pm$ 20.0MHz



Smith Chart





VSWR

