



REV A January 2011

Oscilent Controlled Document

Ordering Code / Part Number	Product Description
813-IF70.0M-19D	70.0MHz IF SAW Filter 19.48MHz Bandwidth

Specification Contents

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

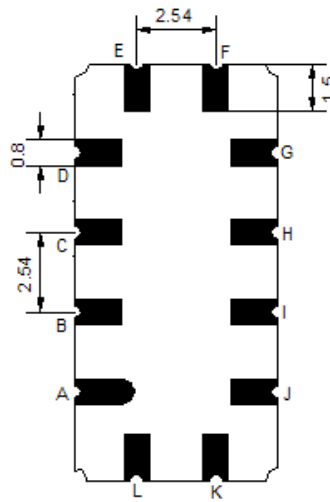
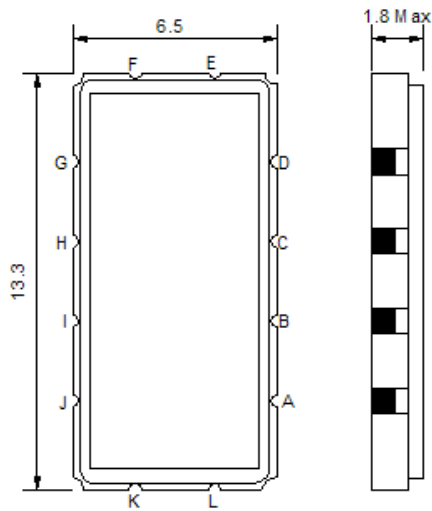
Notes

- 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)



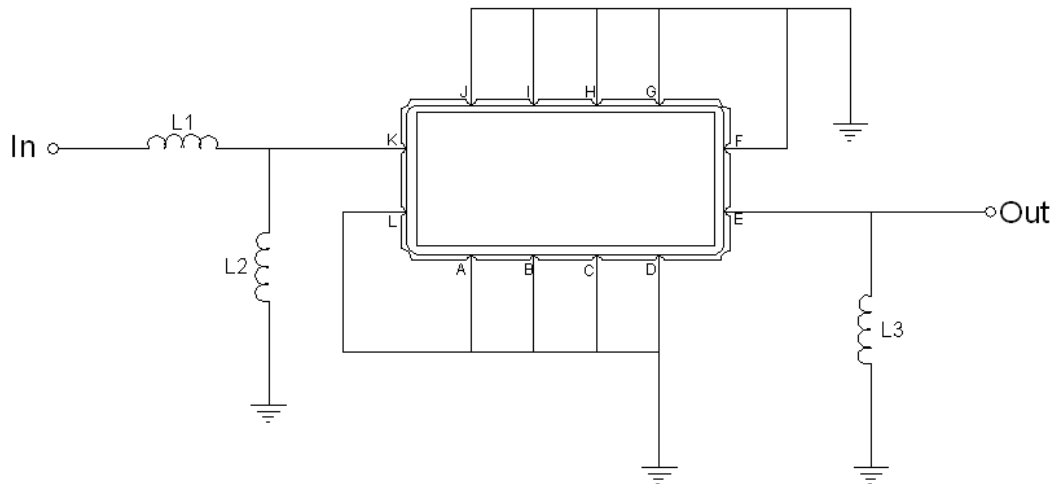


Mechanical Dimensions (mm)



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

Test Circuit



Test Fixture & Values	
Input	L1=22nH, L2=82nH
Output	L3=100nH
Source/Load Impedance	50 Ω



Maximum Ratings

Parameters Description	Unit	Minimum	Typical	Maximum
Operating Temperature Range	°C	-	25	-
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.

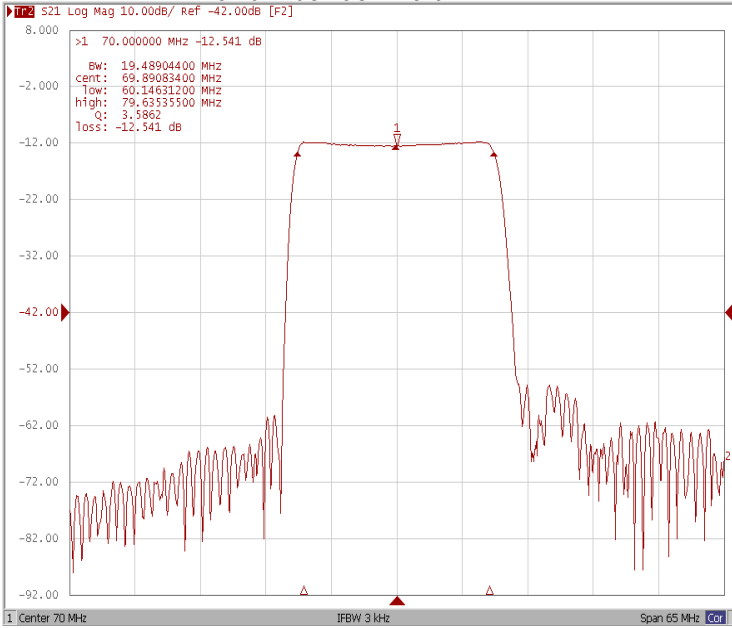
Electrical Specification

Parameters Description	Unit	Minimum	Typical	Maximum
Center Frequency (Fo)	MHz	-	70.0	-
Insertion Loss at Fo	dB	-	12.5	15.0
Bandwidth at -1.0 dB	MHz	19.00	19.48	-
Bandwidth at -3.0 dB	MHz	-	20.05	-
Bandwidth at -40.0 dB	MHz	-	23.00	23.25
Amplitude Ripple (Fo ±9.375 MHz)	dB _{p-p}	-	0.79	1.00
Group Delay Variation (Fo ±9.375 MHz)	nsec	-	48	80
Absolute Delay at Fo	μsec	-	1.15	-
Ultimate Rejection	dB	40	43	-
Relative Attenuation:				
Fc +10.8 MHz	dB	15	15	-
Fc -10.8 MHz	dB	15	18	-
Temperature Coefficient of Frequency (TCF)	ppm/°C	-	-86	-

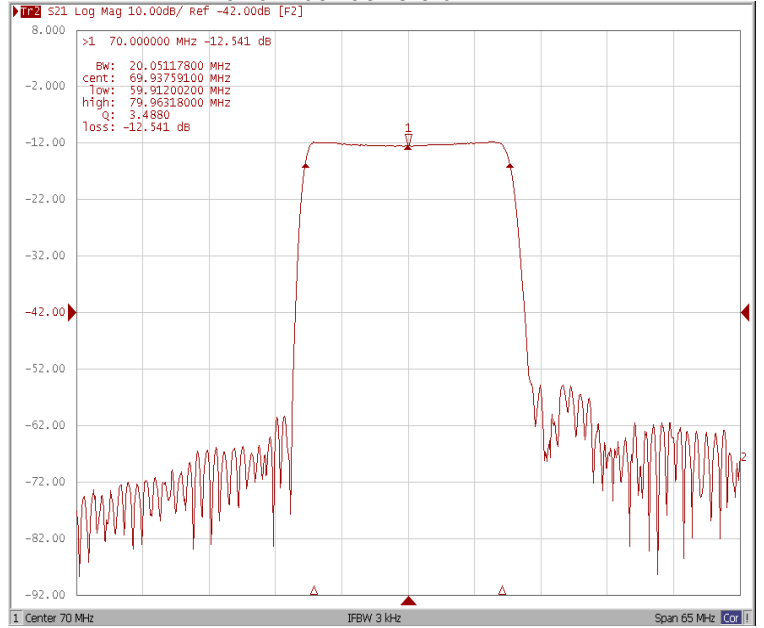


Frequency Response

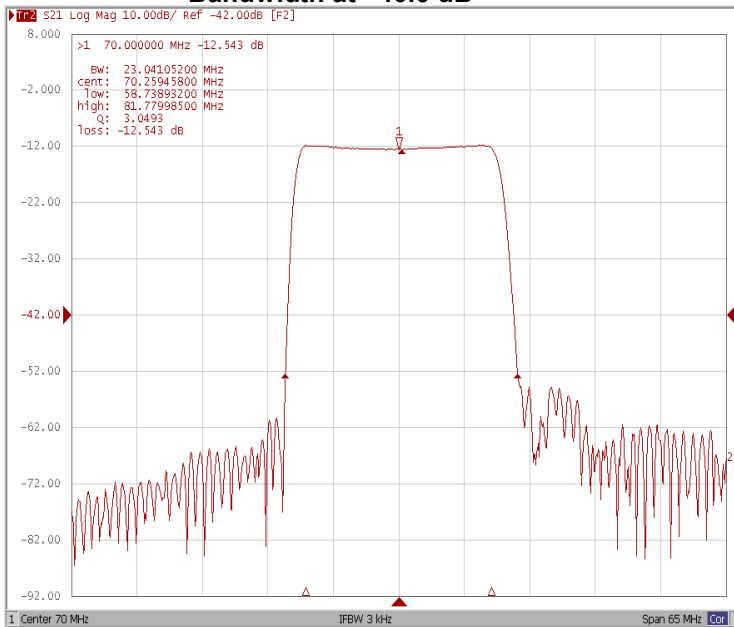
Bandwidth at -1.0 dB



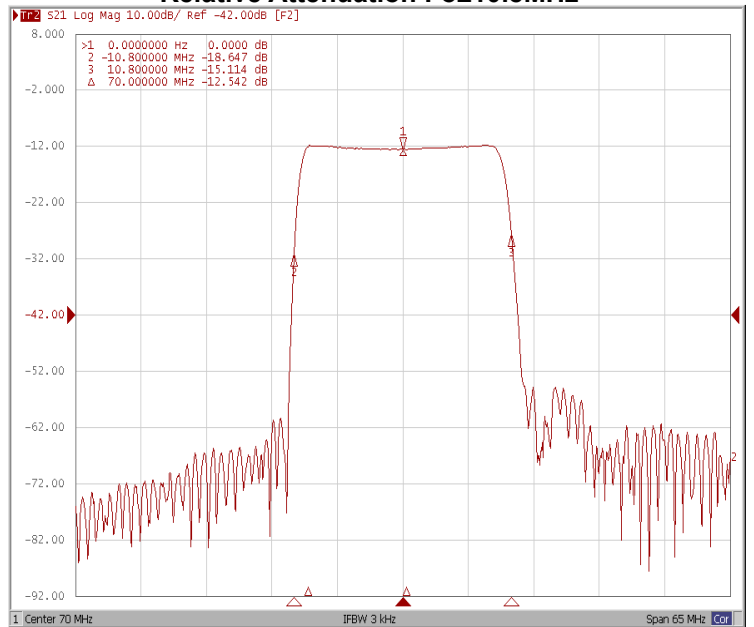
Bandwidth at -3.0 dB



Bandwidth at -40.0 dB

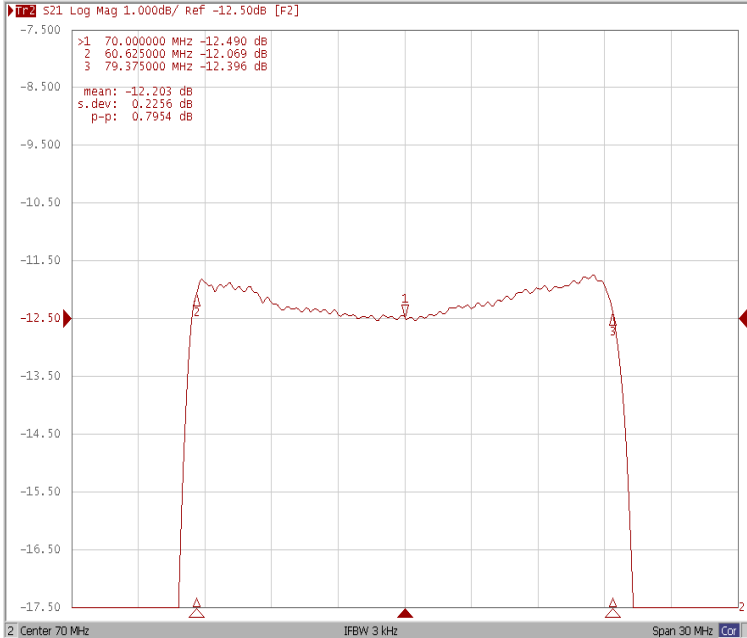


Relative Attenuation Fo±10.8MHz

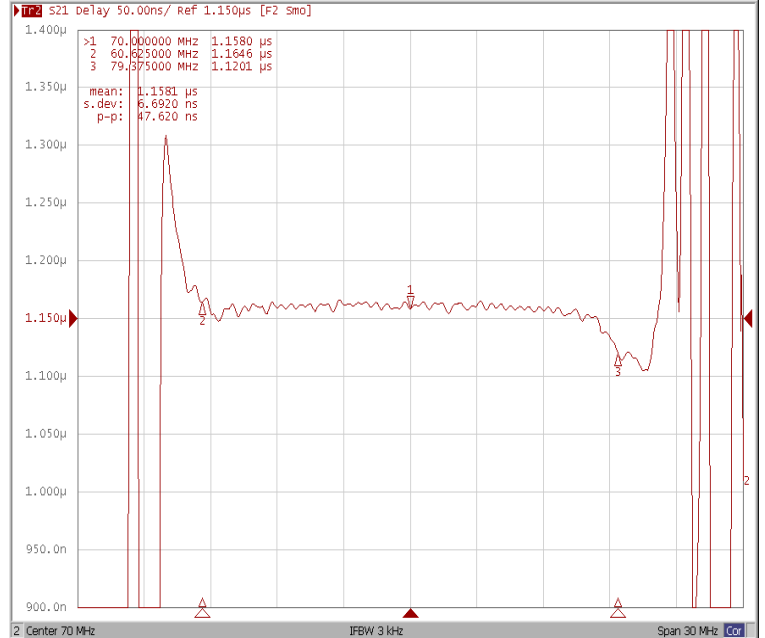




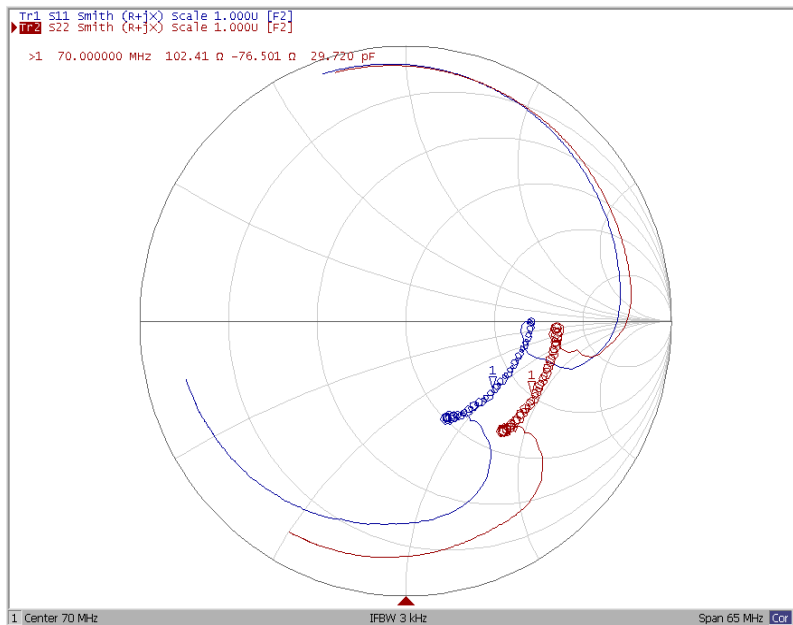
Ripple Variation Fo±9.375MHz



Group Delay Variation Fo±9.375MHz



Smith Chart





VSWR

