



PRODUCT SPECIFICATION

REV A January 2011


Oscilent Controlled Document

Ordering Code / Part Number	Product Description
813-SL60.0M-22A	60.0MHz IF SAW Filter 22.37MHz Bandwidth

Specification Contents

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

Notes

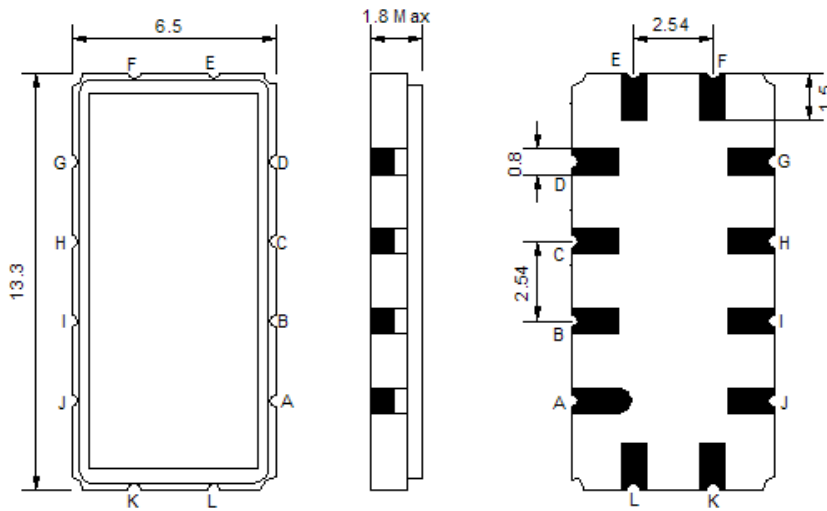
- o Electrostatic Sensitive Device (ESD) 
- o Avoid excessive ultrasonic exposure
- o Solderability compatible with JEDEC J-STD-020C Pb-free process, 260°C peak reflow temperature
- o This product complies with EU directive 2002/95/EC (RoHS compliance)



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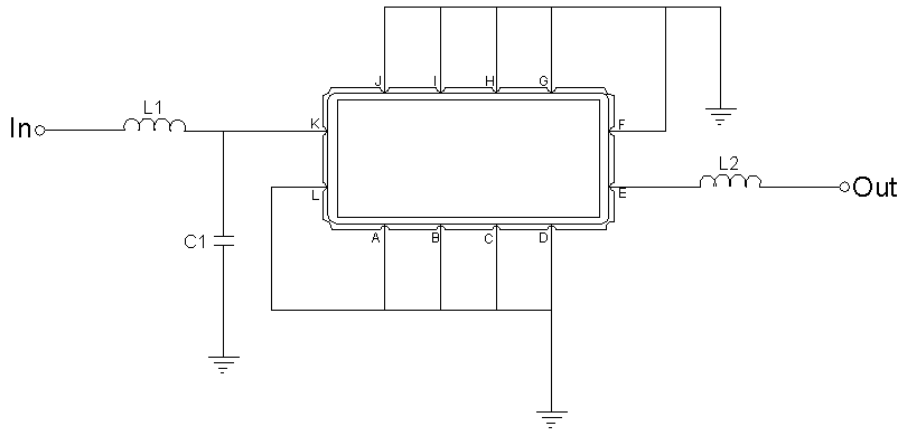


Mechanical Dimensions (mm)



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

Test Circuit



Test Fixture & Values	
Input	L1 = 220 nH, C1=6.8pF
Output	L2 = 150 nH
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.

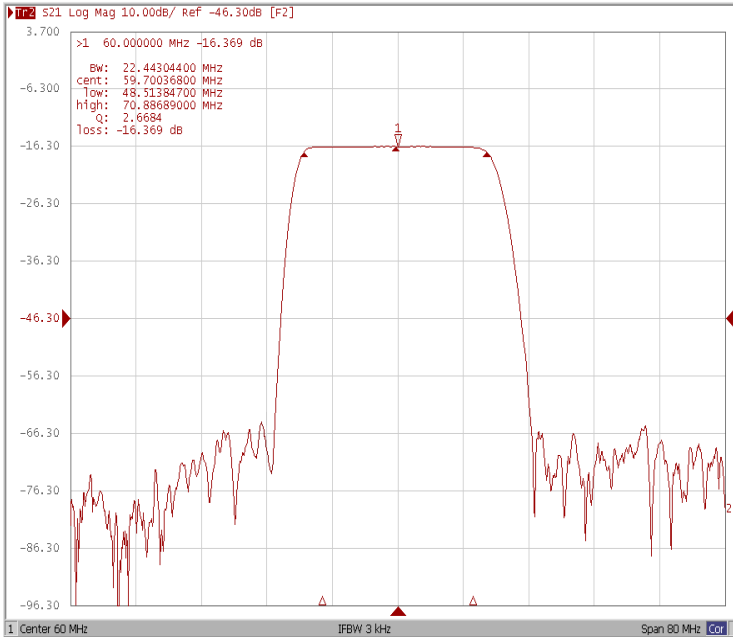
Electrical Specification

Parameters Description	Unit	Minimum	Typical	Maximum
Center Frequency (Fo)	MHz	59.90	60.00	60.10
Insertion Loss at Fo	dB	-	16.40	18.00
Group Delay Variation (Fo±9.22MHz)	ns	-	10	30
Absolute Delay Time at Fo	us	-	0.68	-
Temperature Coefficient	ppm/°C	-	-86	-
Amplitude Ripple (Fo±9.22MHz)	dB	-	0.21	0.80
Bandwidth at -1dB	MHz	-	22.44	-
Bandwidth at -3dB	MHz	23.50	23.98	-
Bandwidth at -30dB	MHz	-	29.33	-
Bandwidth at -40dB	MHz	-	30.38	30.70
Ultimate Rejection	dB	40	45	-

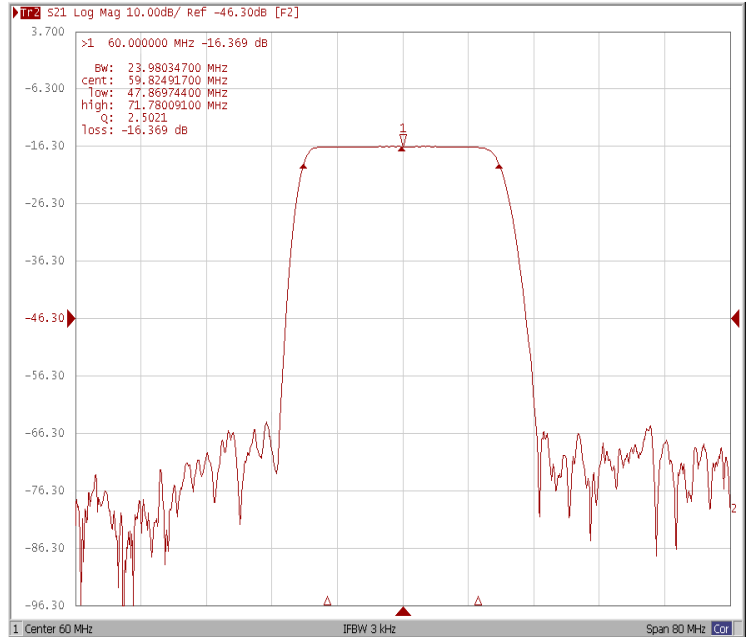


Frequency Response

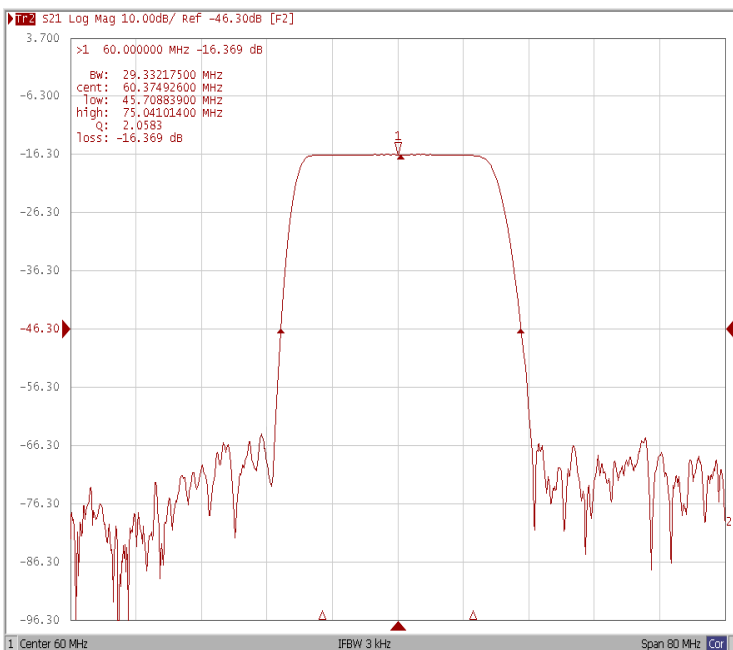
Bandwidth at -1.0 dB



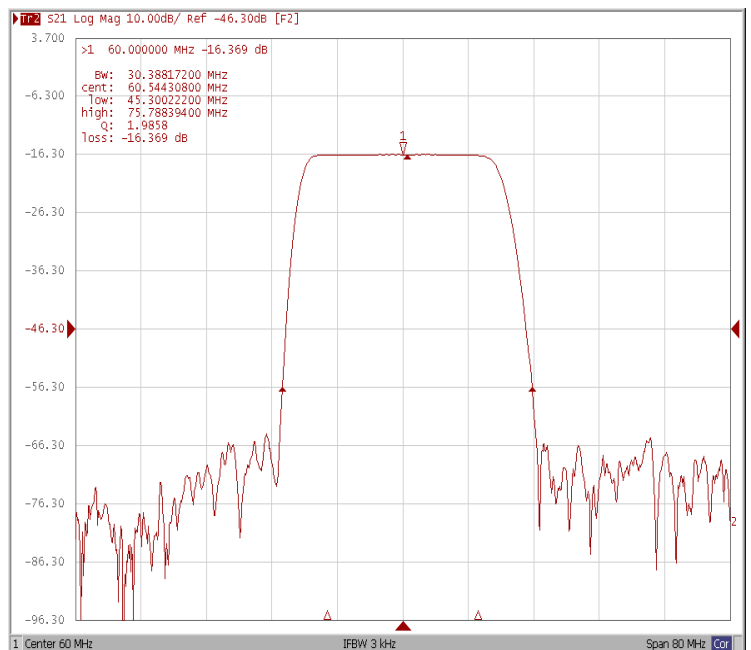
Bandwidth at -3.0 dB



Bandwidth at -30.0 dB



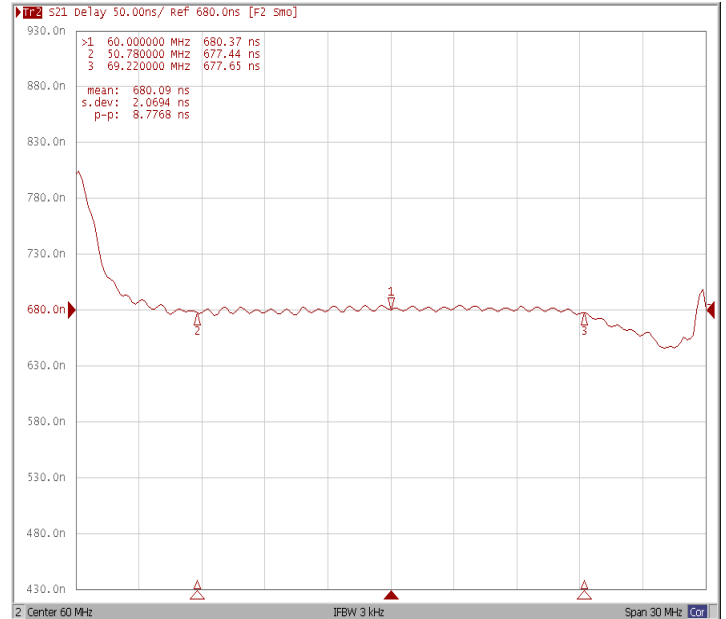
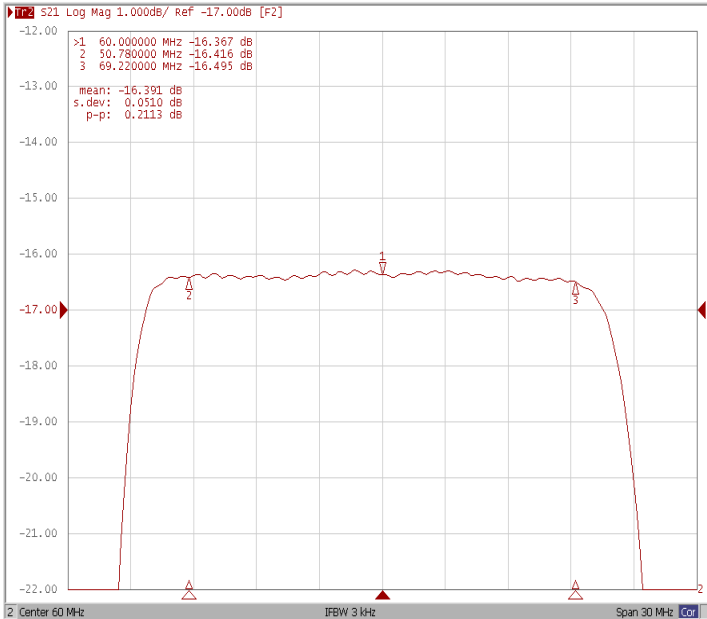
Bandwidth at -40.0 dB



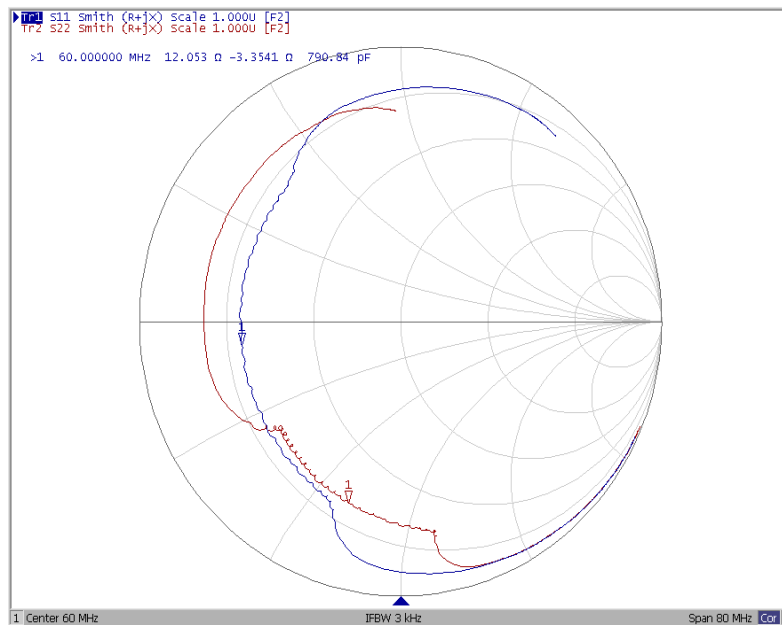


Ripple Variation $F_o \pm 9.22\text{MHz}$

Group Delay Variation $F_o \pm 9.22\text{MHz}$



Smith Chart





VSWR

