



REV A January 2011

Oscilent Controlled Document

Ordering Code / Part Number	Product Description
813-SL60.0M-19A	60.0 MHz IF SAW Filter 19.6 MHz Bandwidth

### Specification Contents

- o Mechanical Dimensions
- o Test Circuit
- o Maximum Ratings
- o Electrical Specification
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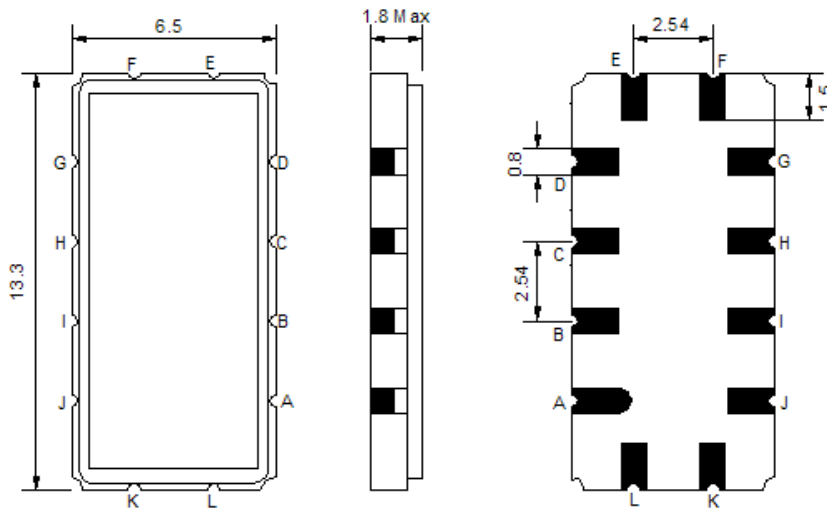
### Notes

- 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)



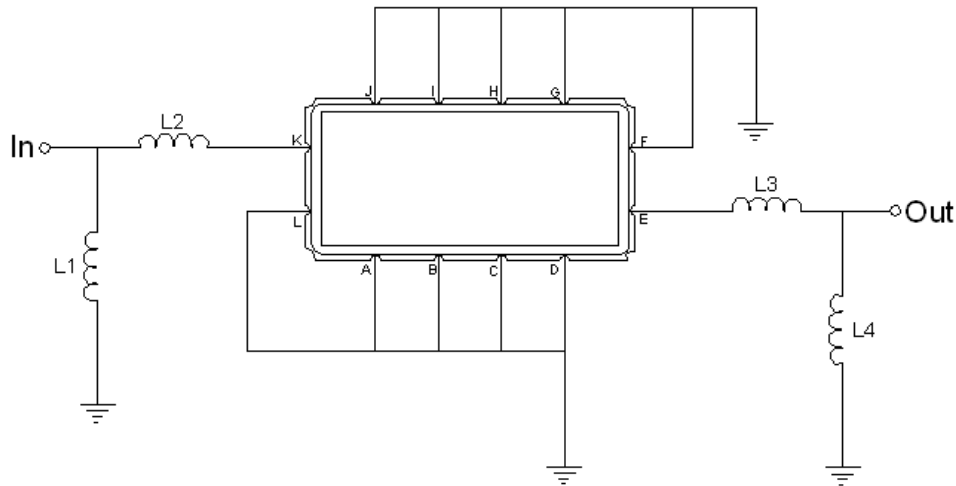


## Mechanical Dimensions (mm)



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

## Test Circuit



Test Fixture & Values	
Input	L1=82 nH, L2=22 nH
Output	L3=27 nH, L4=150 nH
Source/Load Impedance	50 Ω



## Maximum Ratings

Parameters Description	Unit	Minimum	Typical	Maximum
Operating Temperature Range	°C	0		70
Storage Temperature Range	°C	-30	-	80
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.

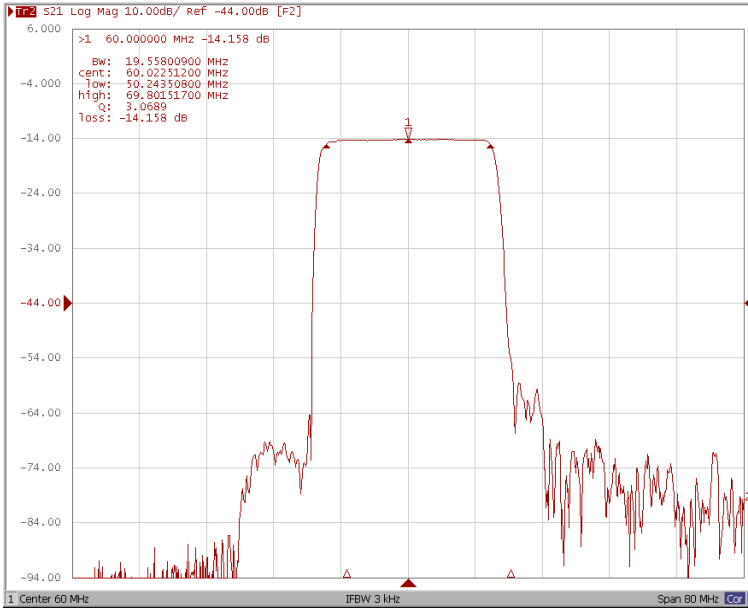
## Electrical Specification

Parameters Description	Unit	Minimum	Typical	Maximum
Center Frequency (Fo)	MHz	-	60.0	-
Insertion Loss at Fo	dB	-	14.1	16.0
Group Delay Variation (Fo±9.22MHz)	ns	-	30	80
Absolute Delay	us	-	1.34	-
Passband Ripple (Fo±9.22MHz)	dB	-	0.55	1.0
Bandwidth at -1dB	MHz	18.44	19.6	-
Bandwidth at -10dB	MHz	-	21.7	22.3
Bandwidth at -20dB	MHz	-	22.4	23.0
Bandwidth at -30dB	MHz		23.1	23.6
Bandwidth at -40B	MHz	-	23.8	-
Ultimate Rejection	dB	40	45	-
Temperature Coefficient of Frequency	ppm/°C		-86	

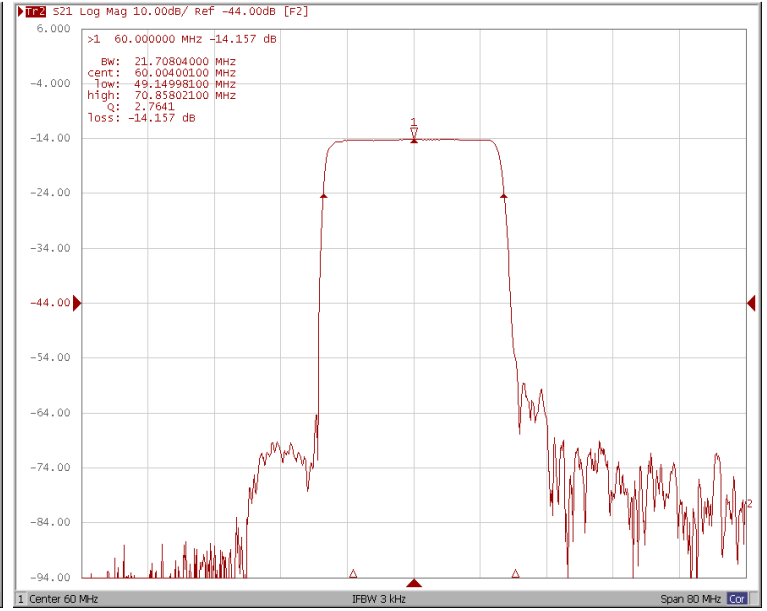


### Frequency Response

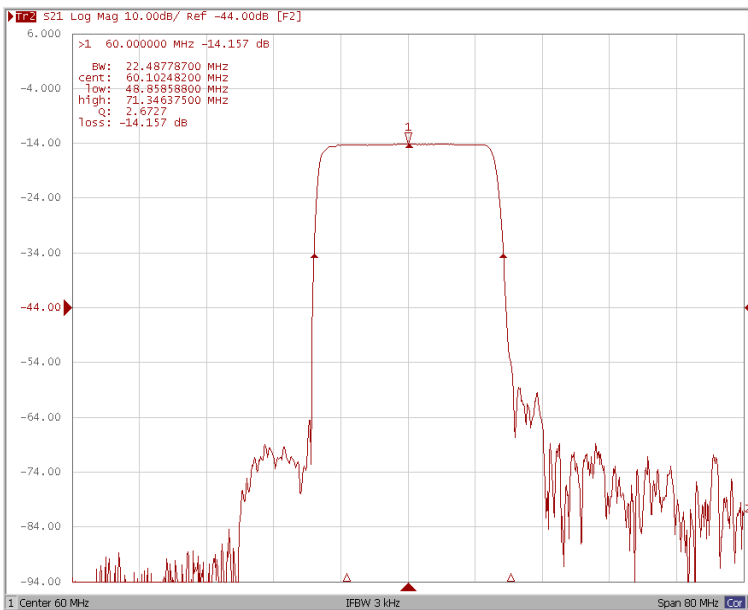
#### Bandwidth at -1.0 dB



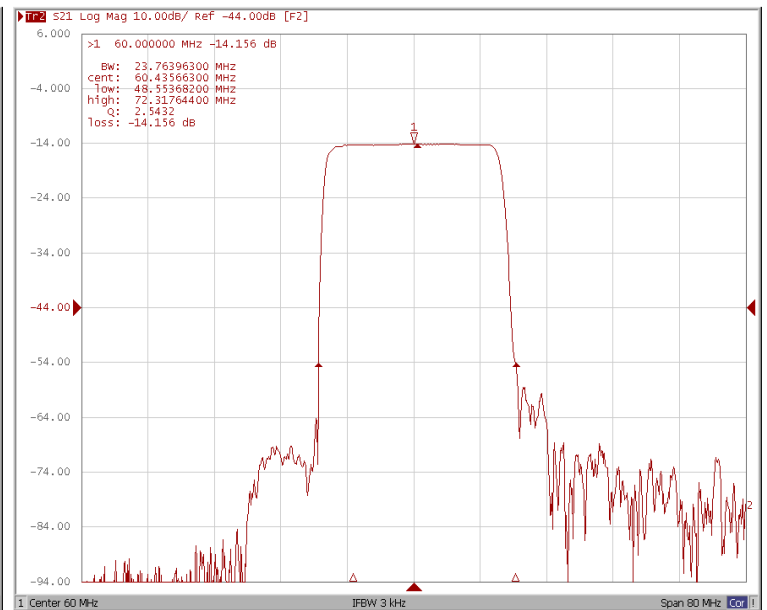
#### Bandwidth at -10.0 dB



#### Bandwidth at -20.0 dB

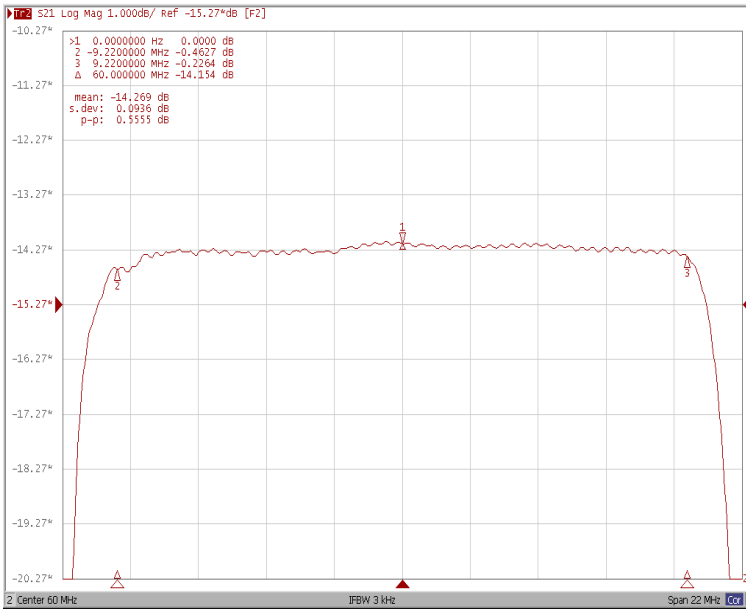


#### Bandwidth at -40.0 dB

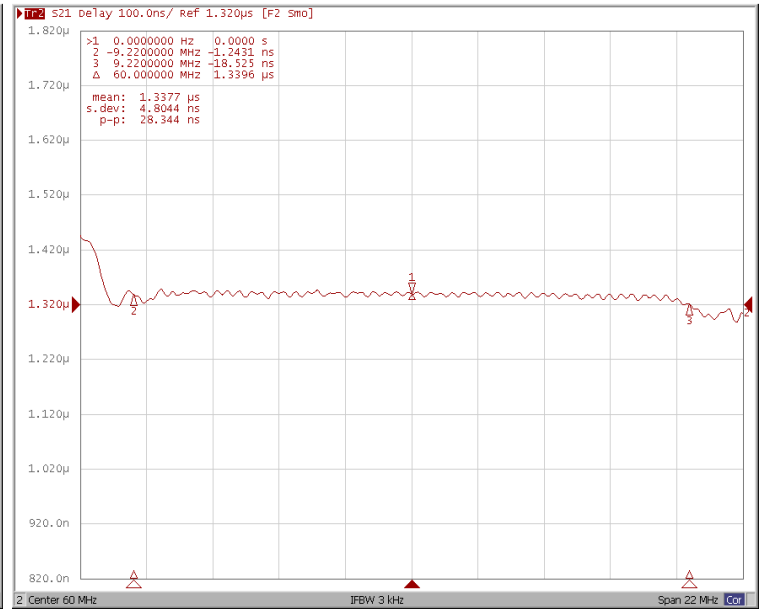




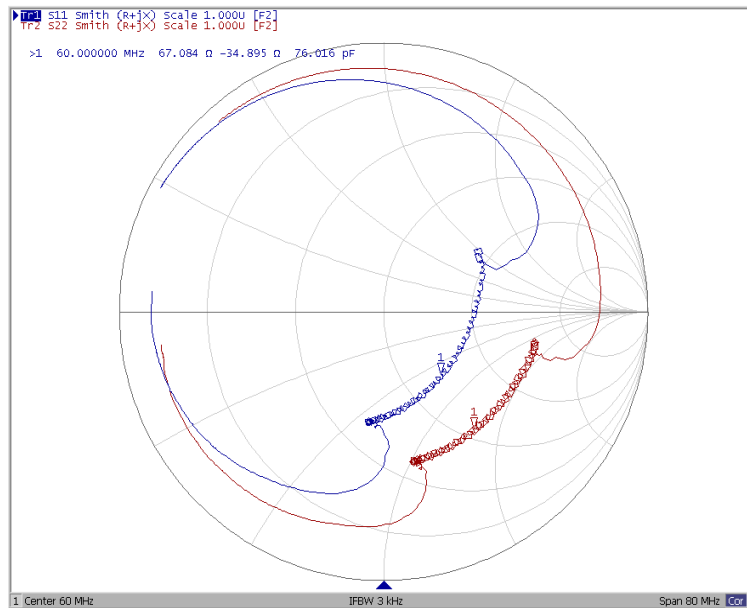
### Ripple Variation Fo±9.22MHz



### Group Delay Variation Fo±9.22MHz



### Smith Chart





### VSWR

