



REV A January 2011


Oscilent Controlled Document

Ordering Code / Part Number	Product Description
813-SL109.5M-20A	109.5 MHz IF SAW Filter 20.3 MHz Bandwidth

### Specification Contents

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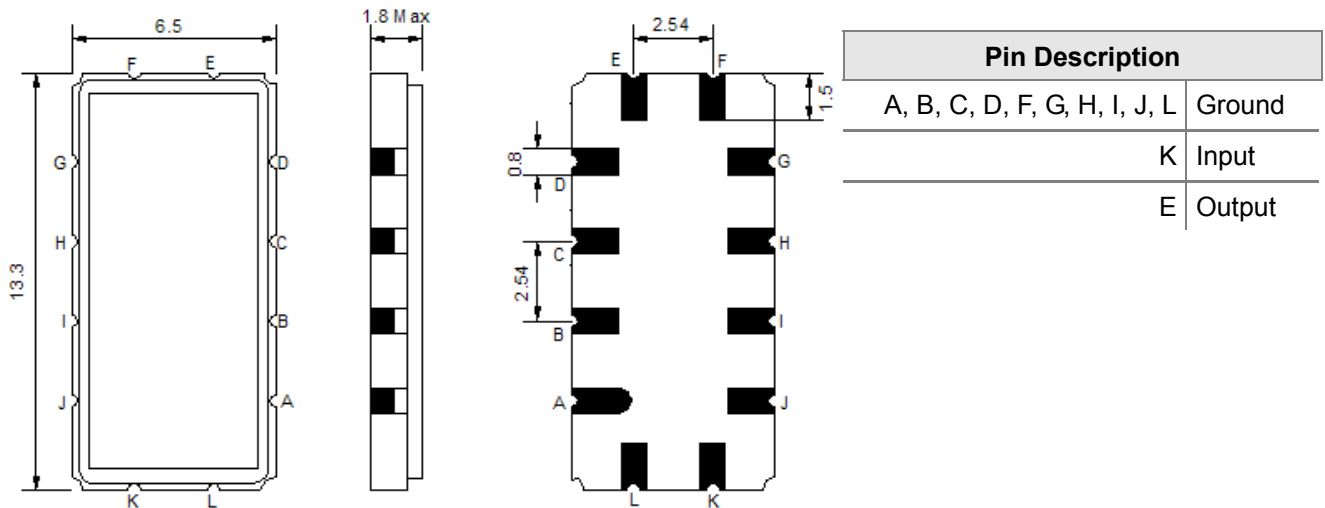
### Notes

- 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)

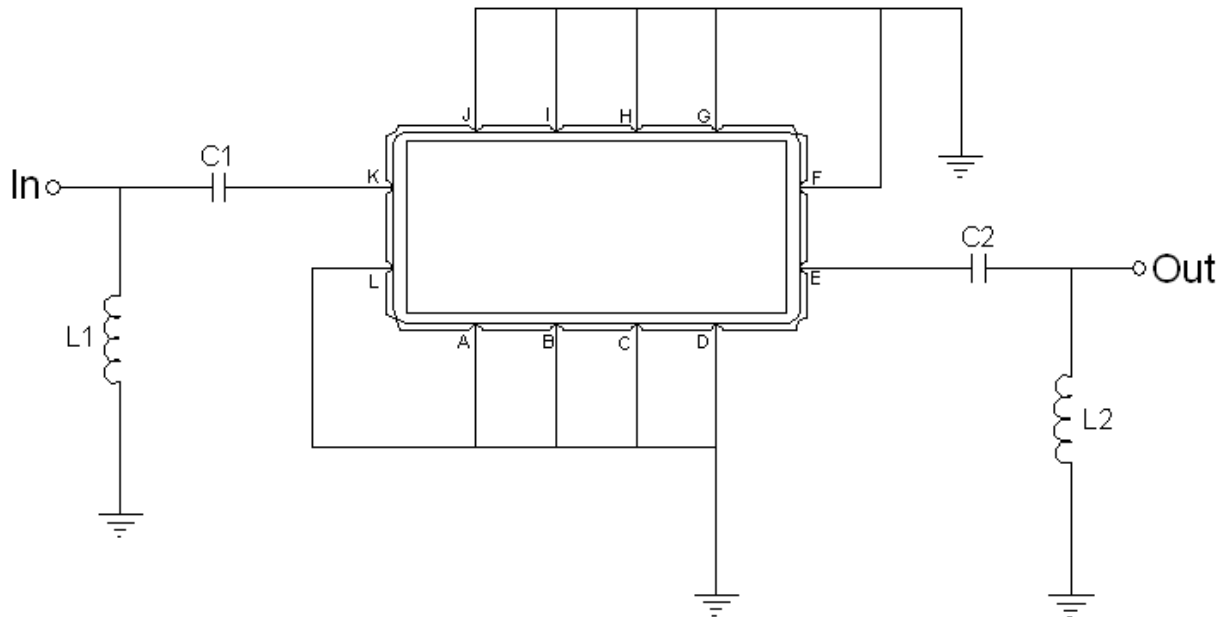




## Mechanical Dimensions (mm)



## Test Circuit



Test Fixture & Values	
Input	L1=33 nH, C1=120 pF
Output	L2=33 nH, C1=110 pF
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.

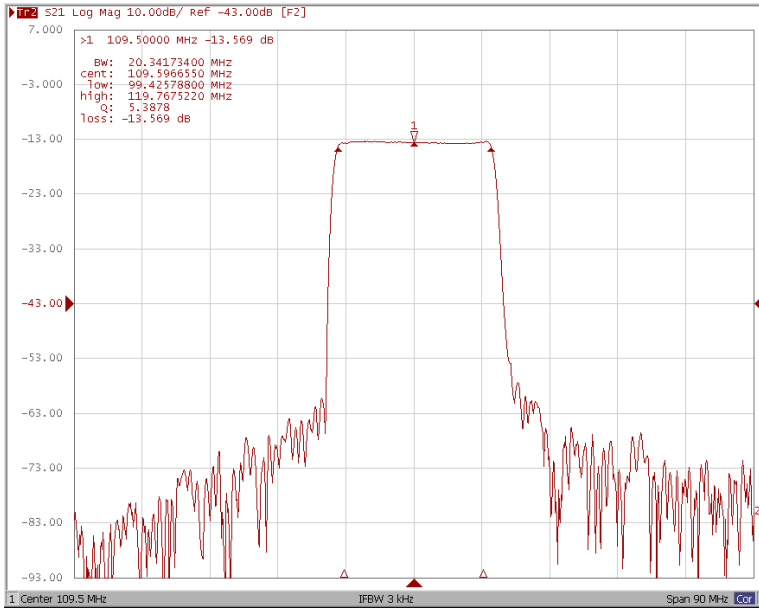
## Electrical Specification

Parameters Description	Unit	Minimum	Typical	Maximum
Center Frequency (Fo)	MHz	-	109.5	-
Insertion Loss at Fo	dB	-	13.5	15.0
Group Delay Variation (Fo±9.22MHz)	ns	-	35	80
Absolute Delay	us	-	1.16	-
Passband Ripple (Fo±9.22MHz)	dB	-	0.45	1.0
Bandwidth at -1dB	MHz	18.44	20.3	-
Bandwidth at -10dB	MHz	-	21.9	22.3
Bandwidth at -20dB	MHz	-	22.6	23.0
Bandwidth at -30dB	MHz	-	23.3	23.6
Bandwidth at -40dB	MHz	-	24.0	-
Ultimate Rejection	dB	40	45	-
Temperature Coefficient of Frequency	ppm/°C		-86	

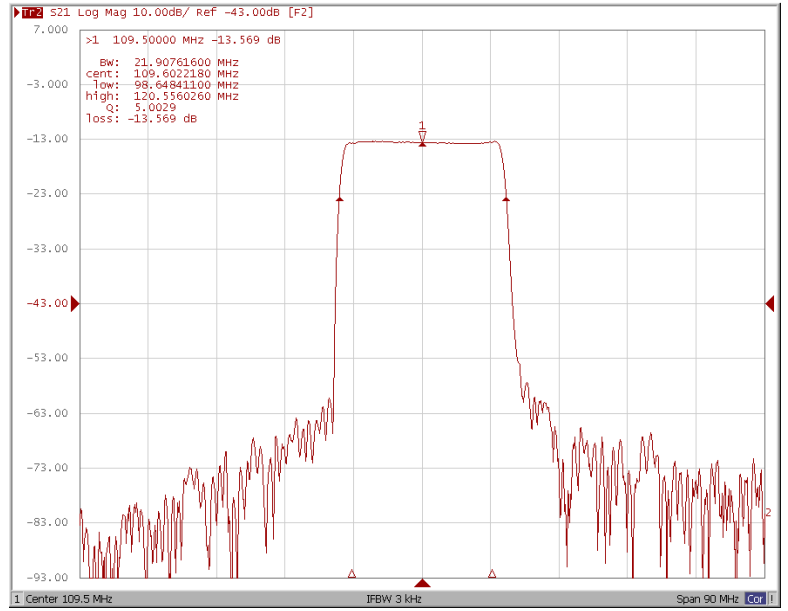


### Frequency Response

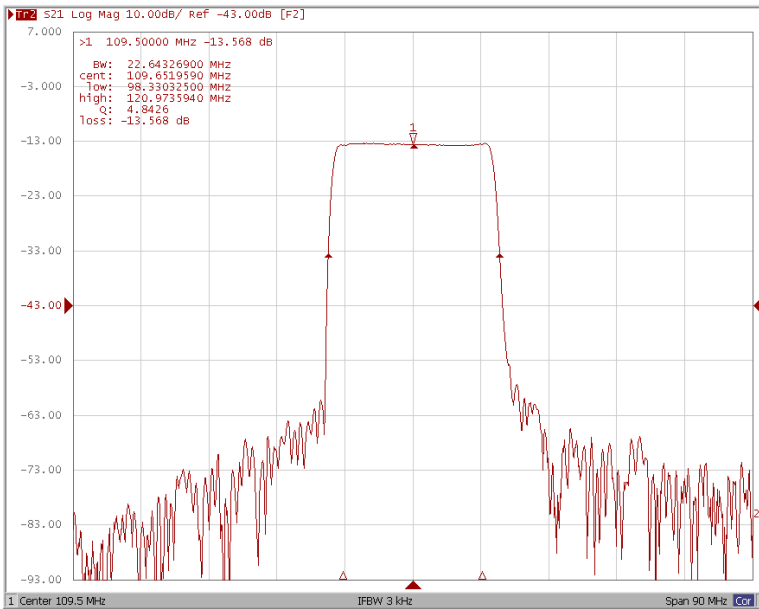
Bandwidth at -1.0 dB



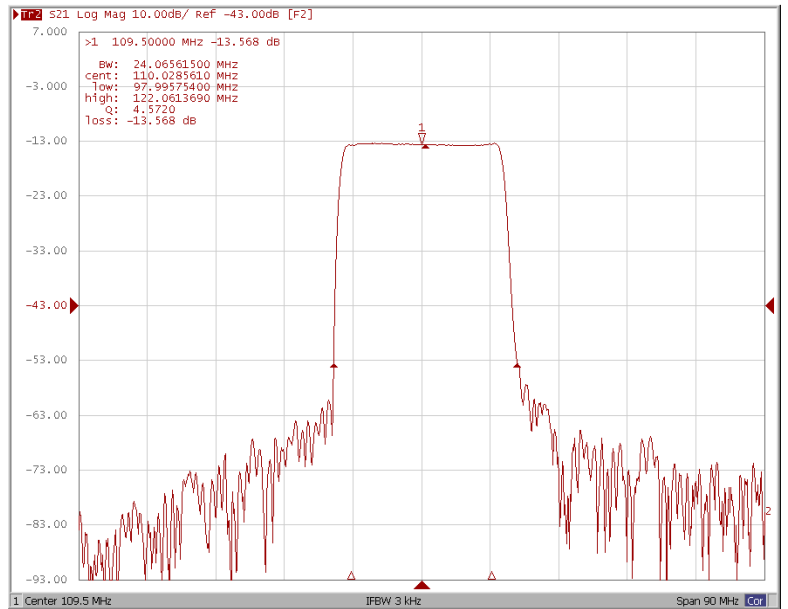
Bandwidth at -10.0 dB



Bandwidth at -20.0 dB

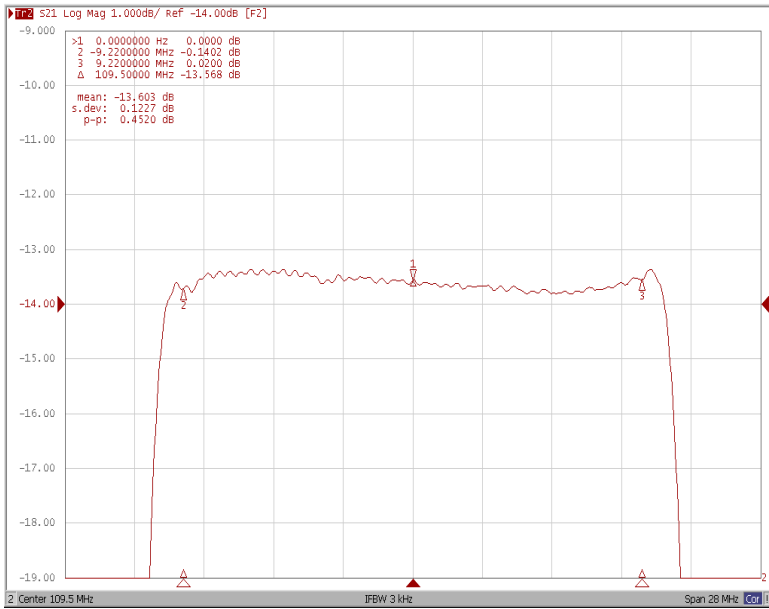


Bandwidth at -40.0 dB

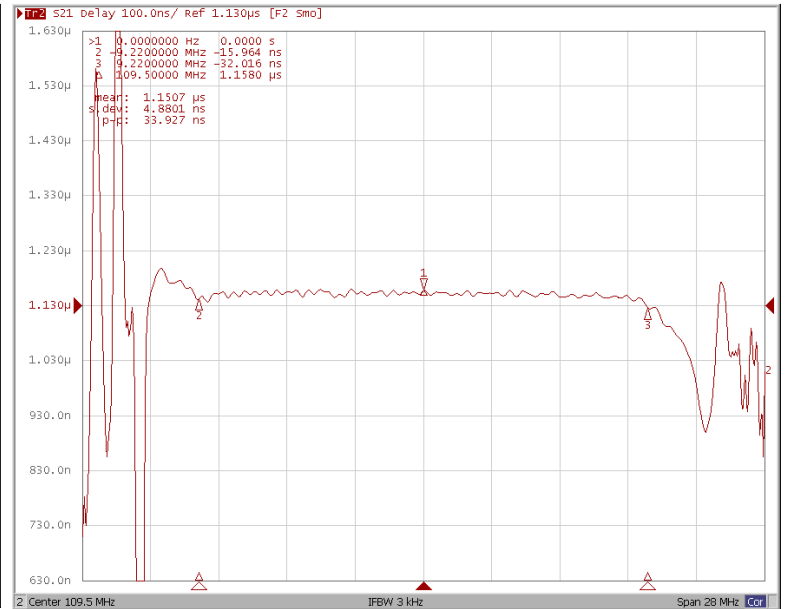




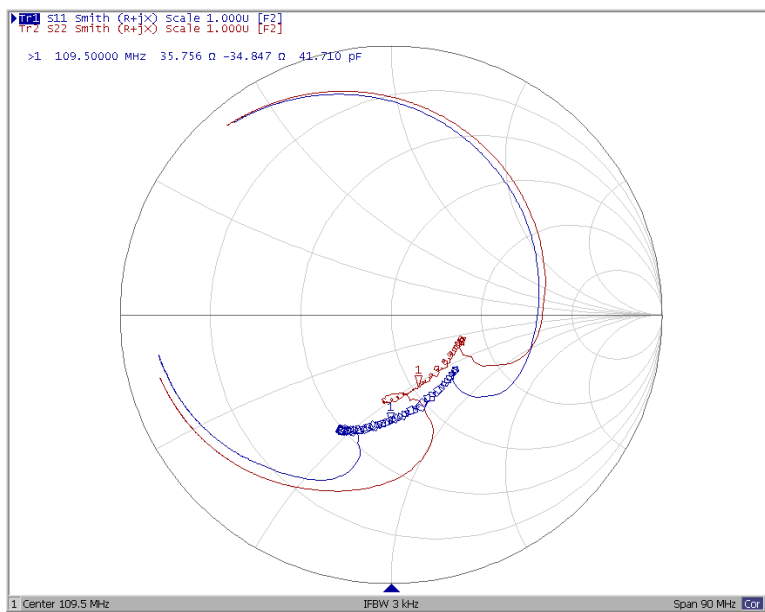
### Ripple Variation Fo±9.22MHz



### Group Delay Variation Fo±9.22MHz



### Smith Chart





### VSWR

