



PRODUCT SPECIFICATION

REV A January 2011

Oscilent Controlled Document

Ordering Code / Part Number	Product Description
813-SL142.5M-50A	142.5MHz IF SAW Filter 5.2MHz 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)



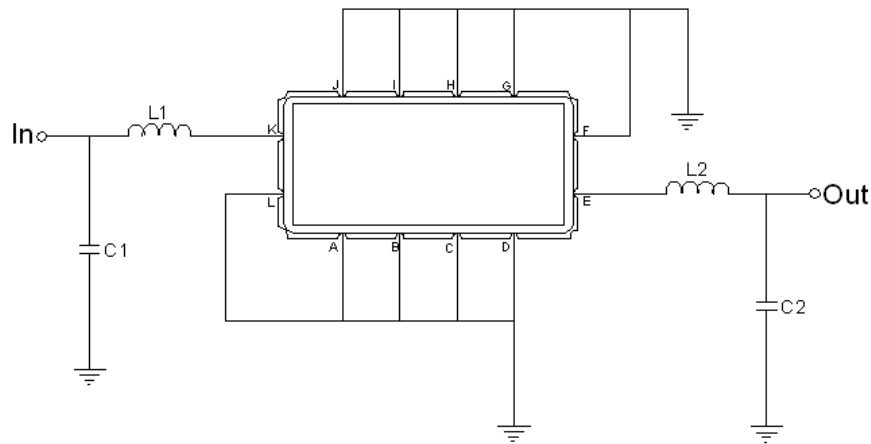


Mechanical Dimensions (mm)



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

Test Circuit



Test Fixture & Values	
Input	L1=33nH, C1=36pF
Output	L2=33nH, C1=36pF
Source/Load Impedance	50 Ω

**Maximum Ratings**

Parameters Description	Unit	Minimum	Typical	Maximum
Operating Temperature Range	°C	-30	-	+85
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	142.35	142.5	142.65
Insertion Loss at Fo	dB	-	12.7	15.0
Temperature Coefficient	ppm/°C	-	-18	-
Amplitude Ripple within fo ±2.2 MHz	dB _{p-p}	-	0.3	0.8
Group Delay Variation within fo ±2.2 MHz	nsec	-	40	80
Absolute Delay at Fo	µsec	-	1.17	-
Bandwidth at -1.0 dB	MHz	5.0	5.2	-
Bandwidth at -3.0 dB	MHz	-	5.8	-
Bandwidth at -35.0 dB	MHz	-	8.0	8.5
Relative Attenuation:				
Lower Sidelobe	dB	45	48	-
Upper Sidelobe	dB	45	48	-



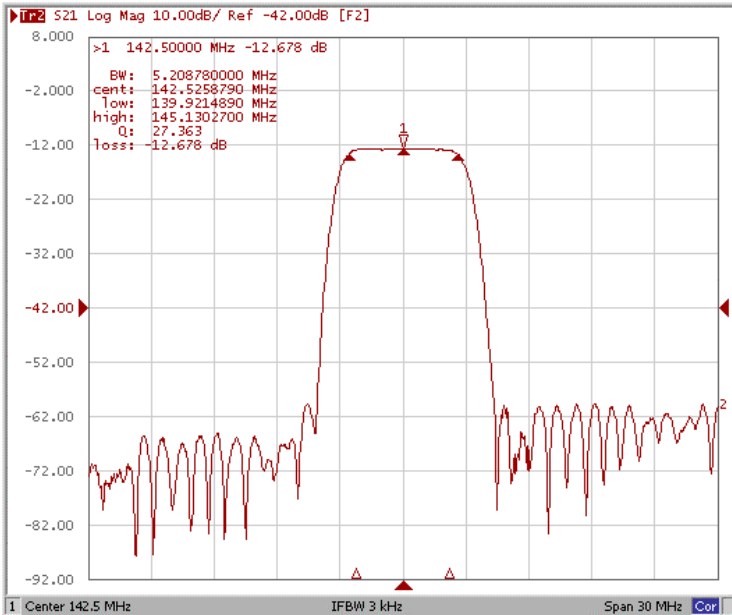
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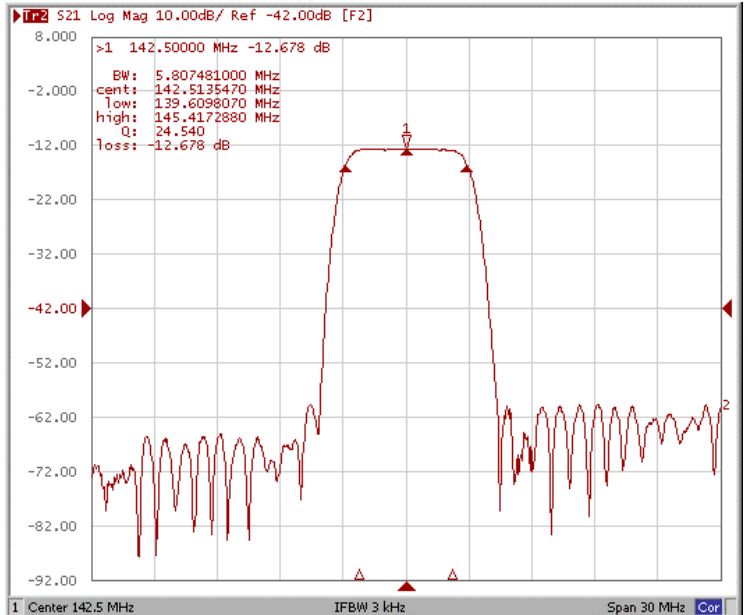
142.5MHz IF SAW Filter 5.2MHz Bandwidth

Frequency Response

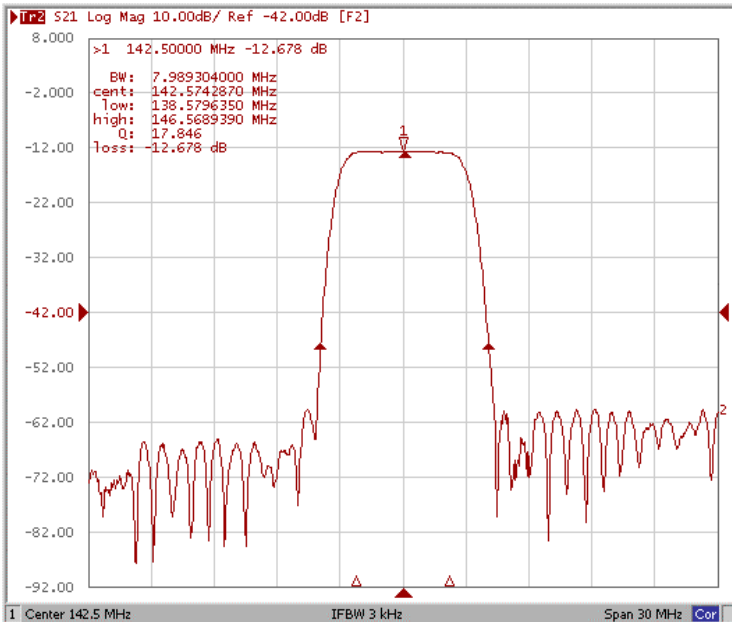
Bandwidth at -1.0 dB



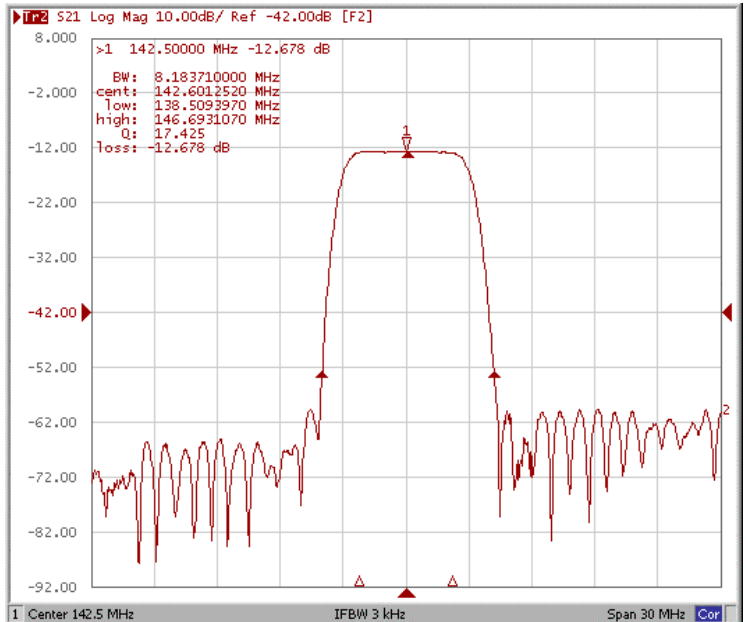
Bandwidth at -3.0 dB



Bandwidth at -35.0 dB

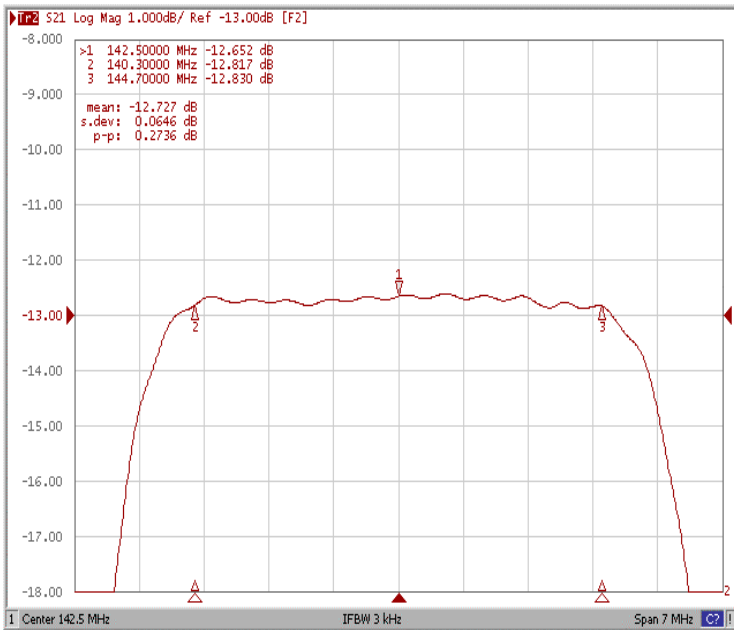


Bandwidth at -40.0 dB

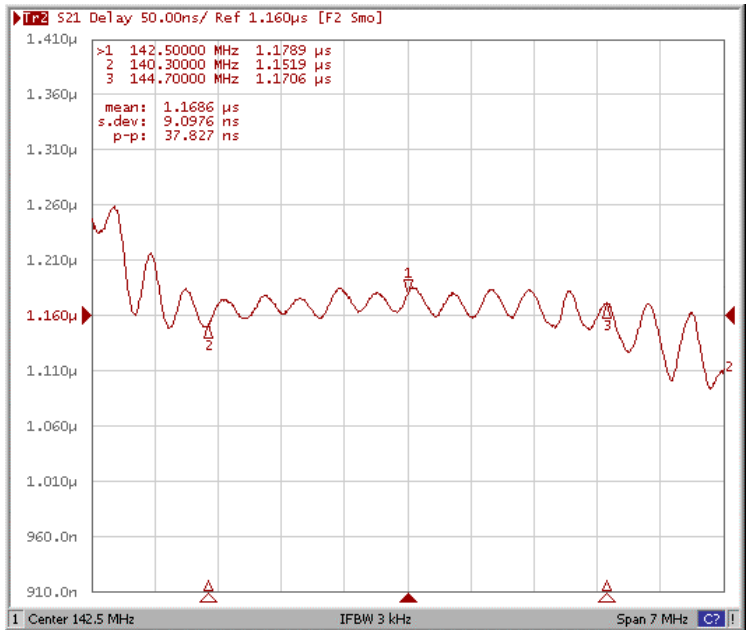




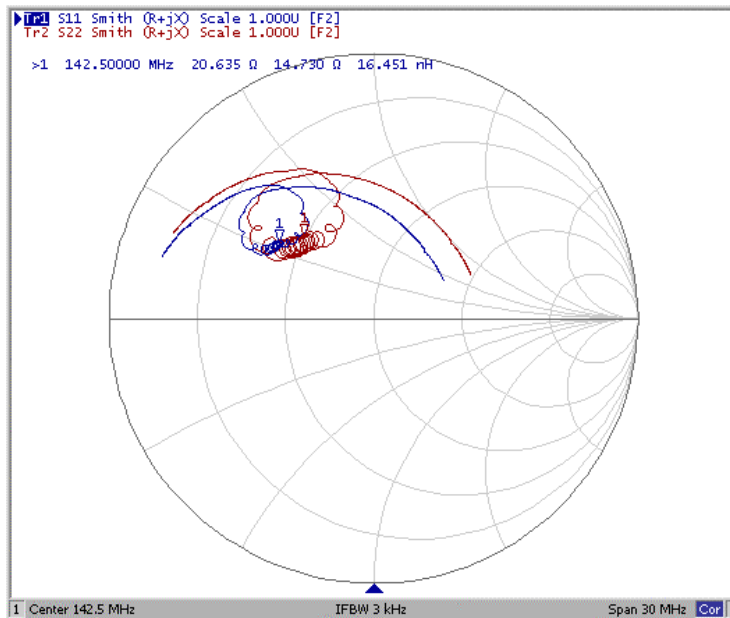
Ripple Variation Fo±2.2MHz



Group Delay Variation Fo±2.2MHz



Smith Chart





VSWR

