



*Total Solution Provider in Saw Device*

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# SL15311AS1

153.50MHz IF SAW Filter  
11.20 MHz Bandwidth  
Revision 0: 4. May. 2011

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- Electrical Characteristics
  - Package Dimensions
  - Testing Environment
  - Frequency Characteristics
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## □ Electrical Characteristics

### Maximum Ratings

Parameters Description	Unit	Minimum	Typical	Maximum
Operation Temperature Range	°C	-40	-	85
Storage Temperature Range	°C	-40	-	85
Maximum DC Voltage	V	-	-	10
Maximum Input Power	dBm	-	-	10
Source Impedance (Balanced) <sup>(1)</sup>	Ω	-	50	-
Load Impedance (Balanced) <sup>(1)</sup>	Ω	-	50	-
Package type & size	S1			
Length x Width	mm <sup>2</sup>	-	7.0 x 5.0	-
Height	mm	-	-	1.8

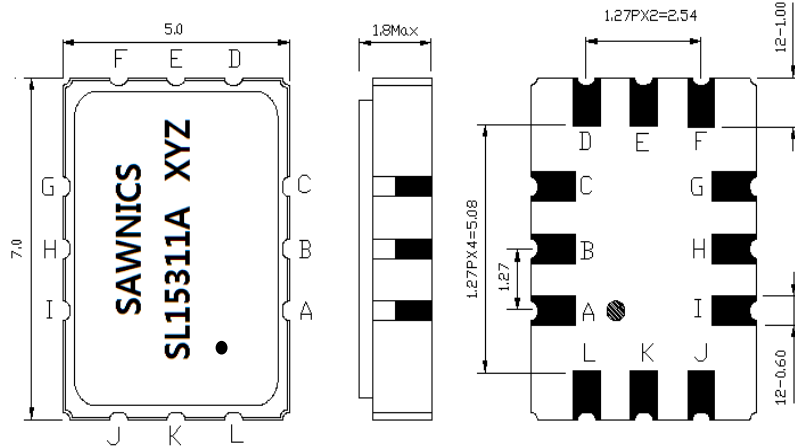
### Electrical Specification

Parameters Description	Unit	Minimum	Typical	Maximum
Center Frequency (Fo)	MHz	-	153.50	-
Insertion Loss at Fo	dB	-	14.70	17.00
Amplitude Ripple at Fo ± 4.50MHz	dB <sub>p-p</sub>	-	0.40	1.0
Group Delay Variation at Fo ± 4.50MHz	ns	-	26	60
Absolute Delay at Fo	μs	-	0.72	-
Temperature Coefficient	ppm/°C	-	-20	-
Bandwidth at -1.0 dB	MHz	11.00	11.20	-
Bandwidth at -3.0 dB	MHz	-	12.30	-
Bandwidth at -40.0 dB	MHz	-	16.75	17.00
Ultimate Rejection	dB	-	43	-

**Notes :** (1) With Matching Network (Ref. Testing Environment Circuit as shown below).

Those impedances could be modified with different impedance values and/or structures, if necessary.

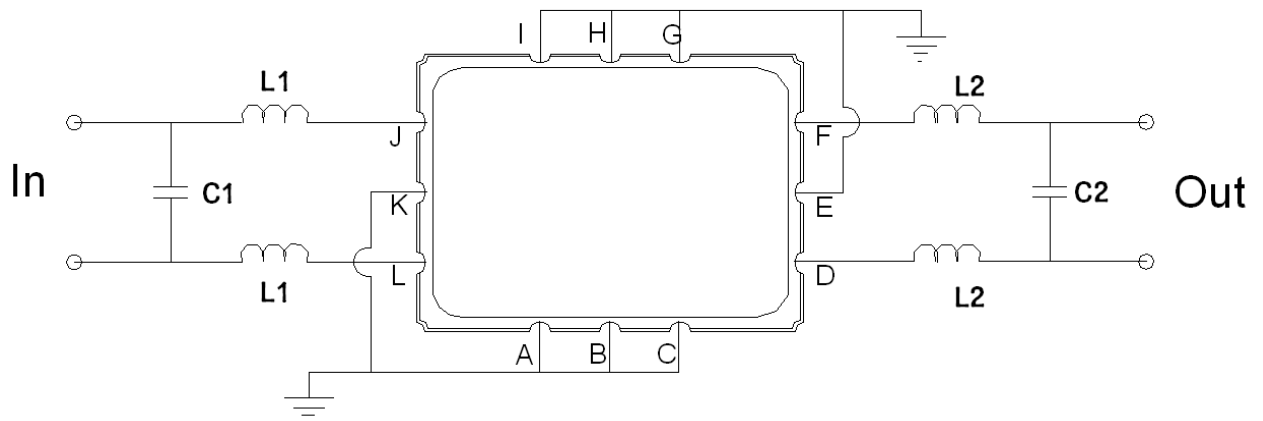
### Package Dimensions



- ① SAWNICS: Brand
- ② SL15311A: Model Name
- ③ X : Date Code (Year)
- ④ Y : Date Code (Month)
- ⑤ Z : Date Code (Date)
- : Index Dot

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

### Testing Environment

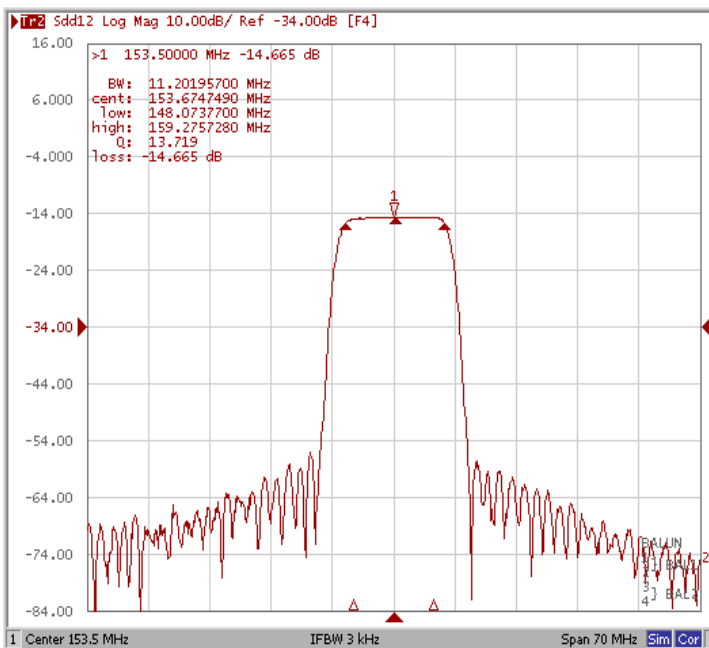


Test Fixture & Values	
Input	L1=39 nH, C1=27pF
Output	L2=47 nH, C2=24pF
Source/Load Impedance	50 Ω

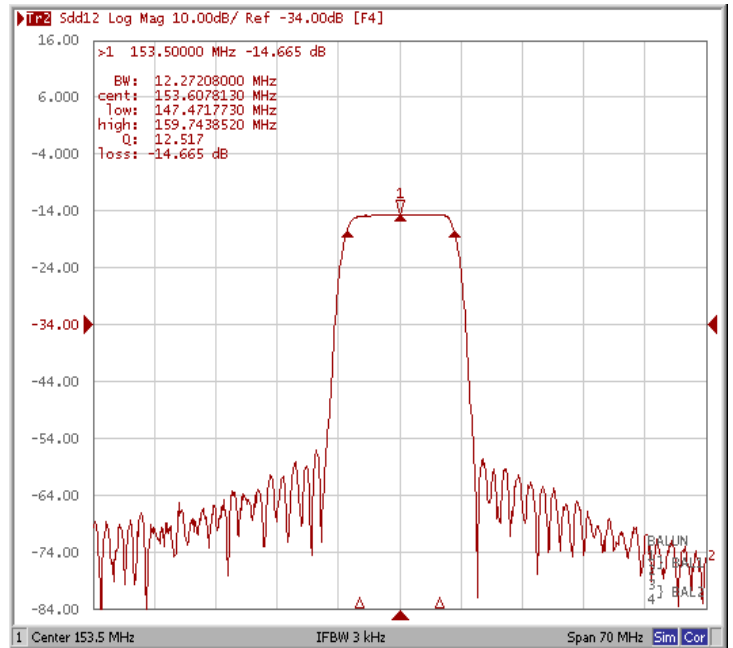
### □ Frequency Characteristics

#### Frequency Response

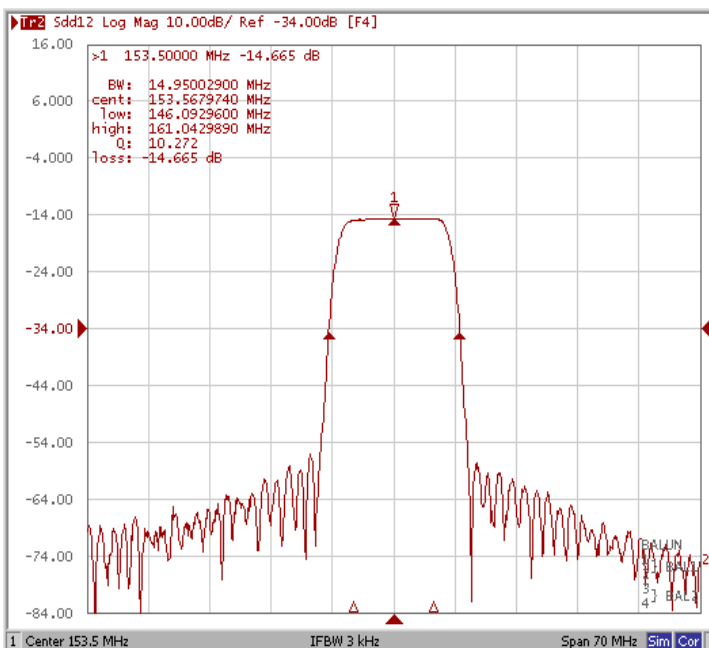
**Bandwidth at -1.0 dB**



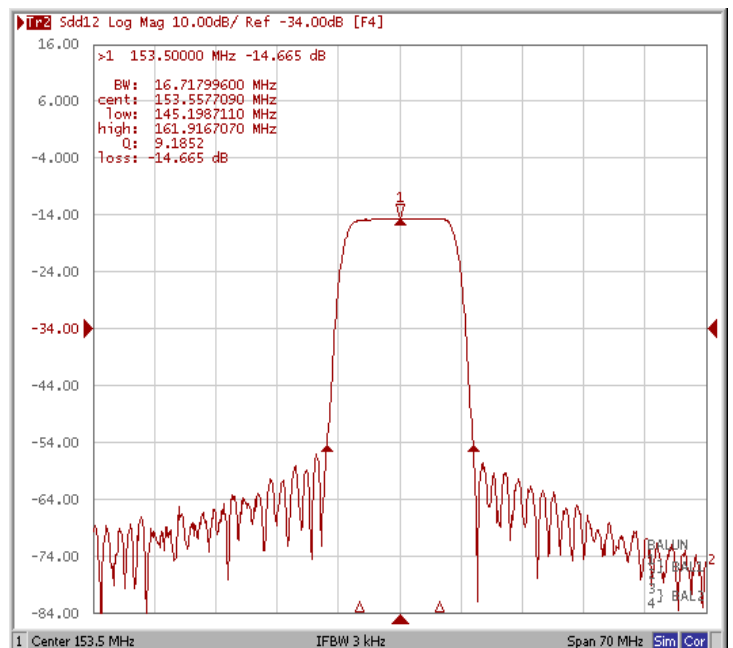
**Bandwidth at -3.0 dB**



**Bandwidth at -20.0 dB**



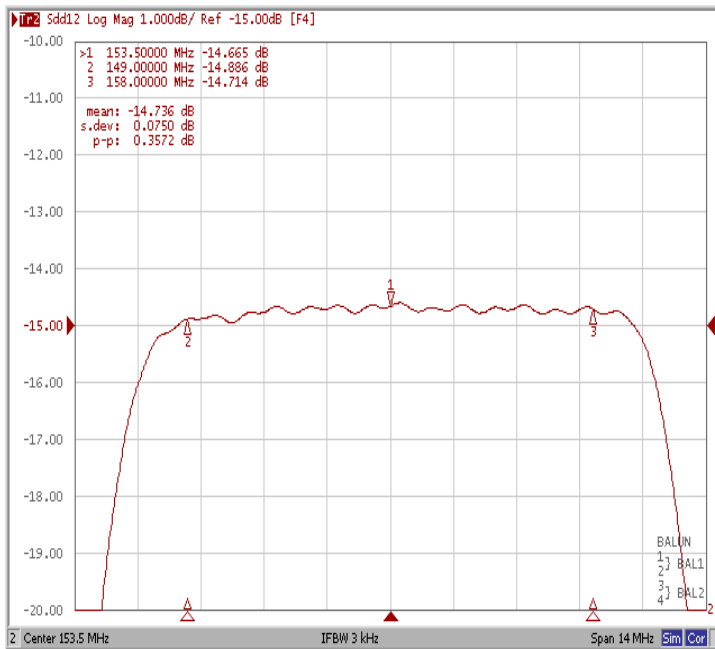
**Bandwidth at -40.0 dB**



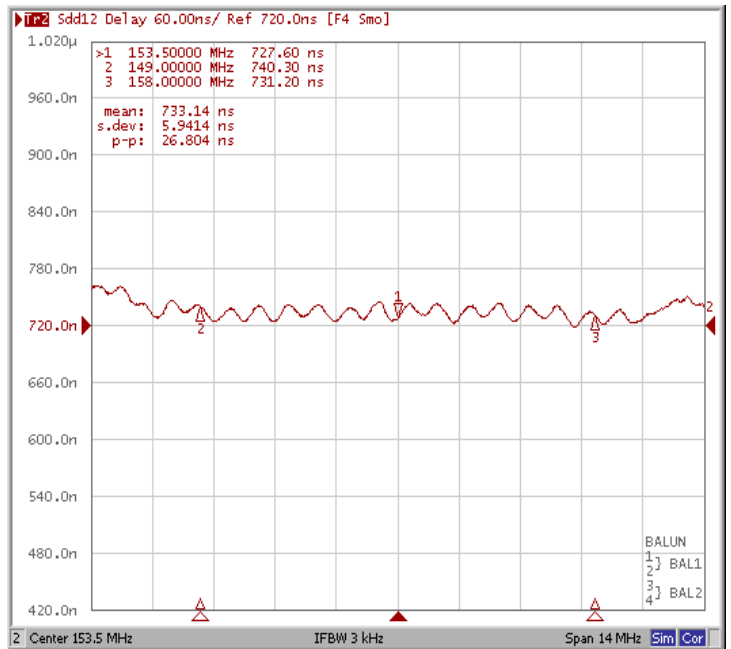
### □ Frequency Characteristics

#### Frequency Response

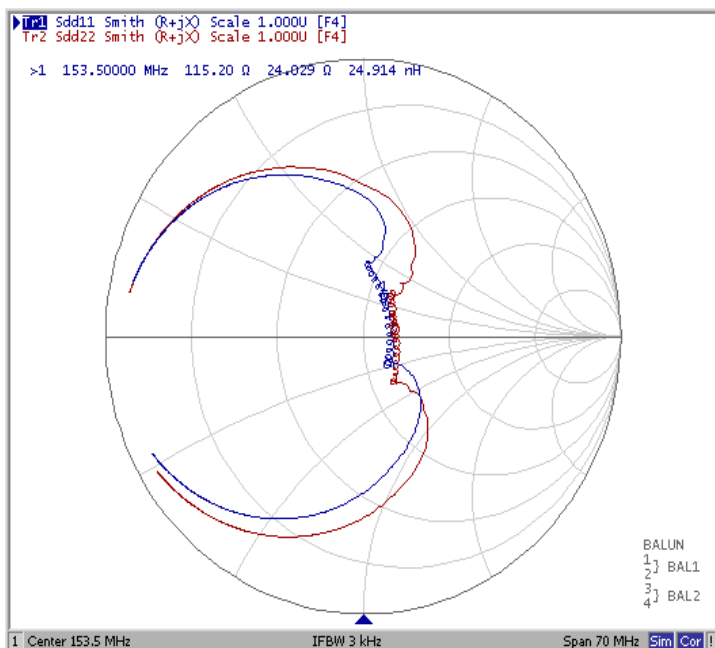
Ripple Variation at Fo ±4.5MHz



Group Delay Variation at Fo ±4.5MHz



Smith Chart



VSWR

