



*Total Solution Provider in Saw Device*

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# SL110AS

110.0MHz IF SAW Bandpass Filter  
Revision 2: 3. January. 2008



- 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	-20	-	85
Storage Temperature Range	°C	-40	-	105
Maximum DC Voltage	V	-	-	3
Maximum Input Power	dBm	-	-	20
Source Impedance (Balanced) <sup>(1)</sup>	Ω	-	1000	-
Load Impedance (Balanced) <sup>(1)</sup>	Ω	-	500	-
Package type & size	S			
Length x Width	mm <sup>2</sup>	-	7.0 x 5.0	-
Height	mm	-	-	1.8

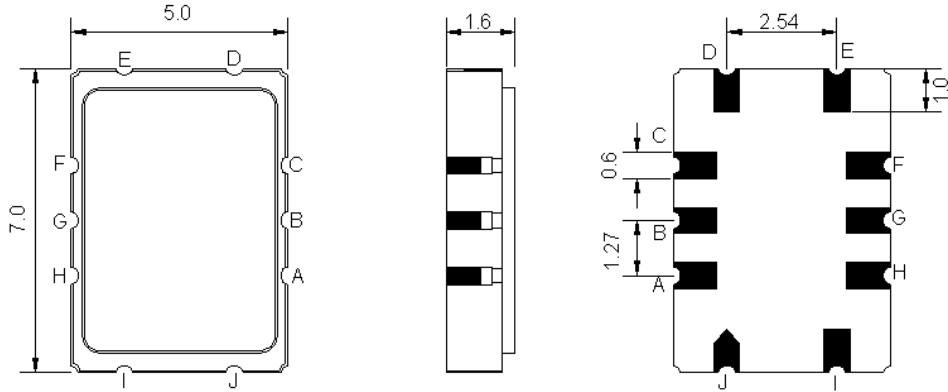
### Electrical Specification

Parameters Description	Unit	Minimum	Typical	Maximum
Center Frequency (Fo)	MHz	-	110.0	-
Insertion Loss at Fo	dB	-	10.0	11.5
Amplitude Ripple (Fo ± 0.3 MHz)	dB <sub>p-p</sub>	-	0.55	1.0
Phase Linearity (Fo±0.615MHz)	deg RMS	-	3.5	4.5
Phase Linearity (Fo±0.620MHz)	deg RMS	-	3.5	4.5
Temperature Coefficient	ppm/°C	-	-0.03	-
Bandwidth at -5.0 dB	MHz	±0.630	±0.660	-
Bandwidth at -33.0 dB	MHz	-	±0.890	-
<b>Template on the amplitude, reference is loss at Fc</b>				
Attenuation at Fc ± 0.9MHz	dB	32	35	
Attenuation at Fc ± 1.7MHz	dB	33	36	
Attenuation at Fc ± 2MHz	dB	35	37	
Attenuation at Fc ± 9MHz	dB	45	48	

**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.

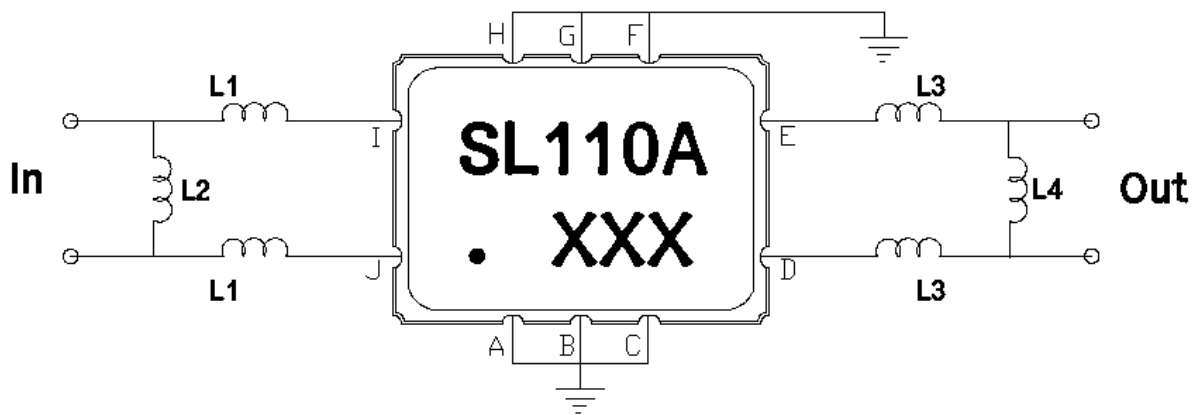
**Package Dimensions**



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

**Testing Environment**

Matching Network for 1000Ω/500Ω Balanced Configuration



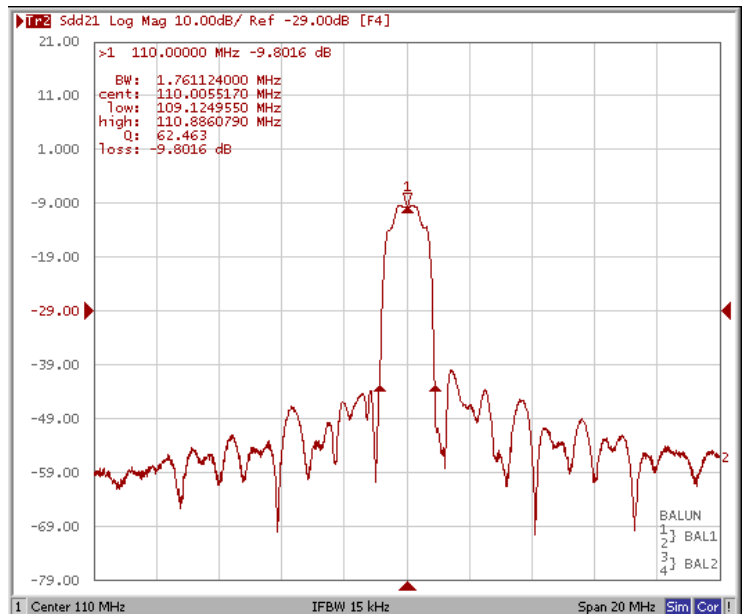
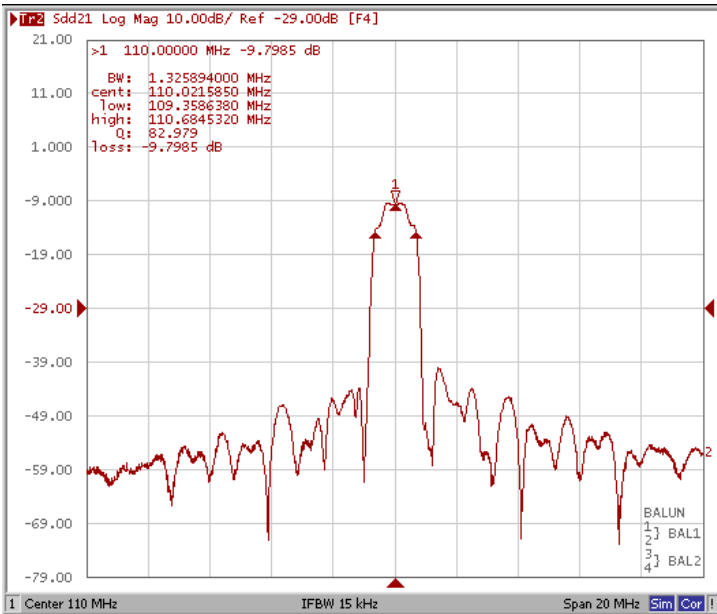
Test Fixture & Values	
Input	L1=27 nH , L2=180 nH, Q>35
Output	L3=33 nH , L4=150 nH, Q>35
Source/Load Impedance	1000/500 Ω

### Frequency Characteristics

#### Frequency Response

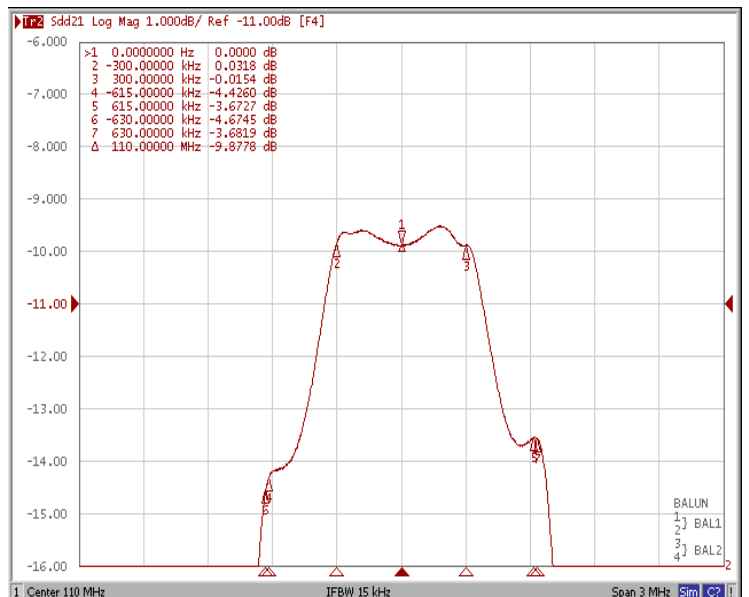
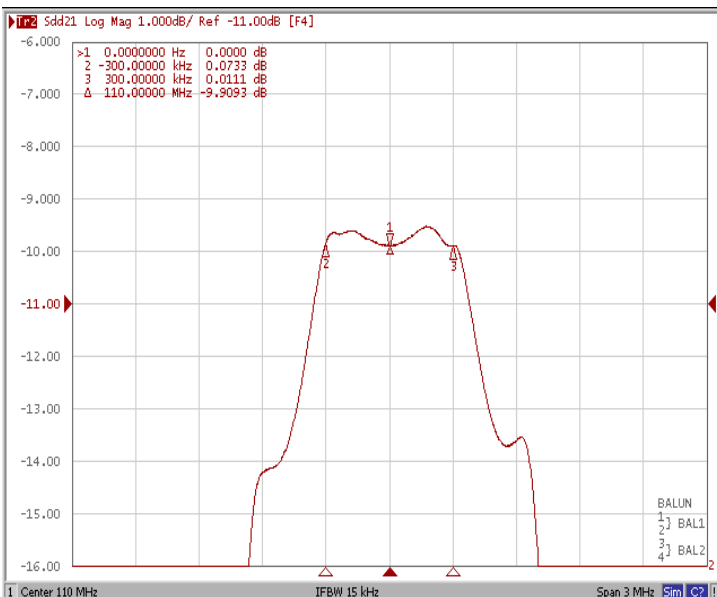
Bandwidth at -5.0 dB

Bandwidth at -33.0 dB



AmplitudeRipple(Fo±0.3MHz)

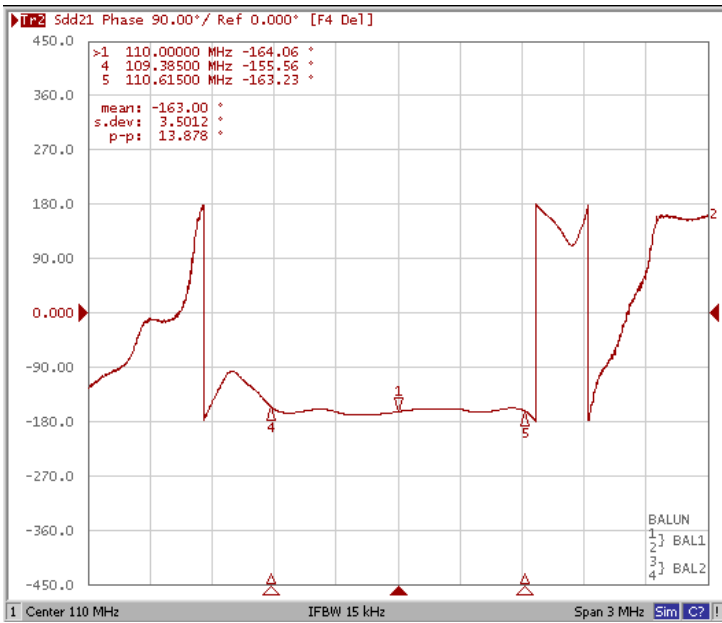
Attenuation



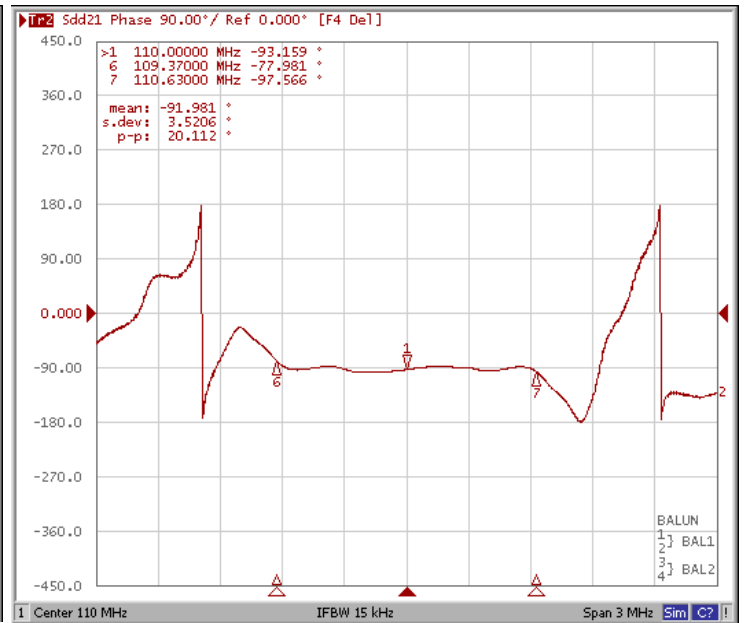
### Frequency Characteristics

#### Frequency Response

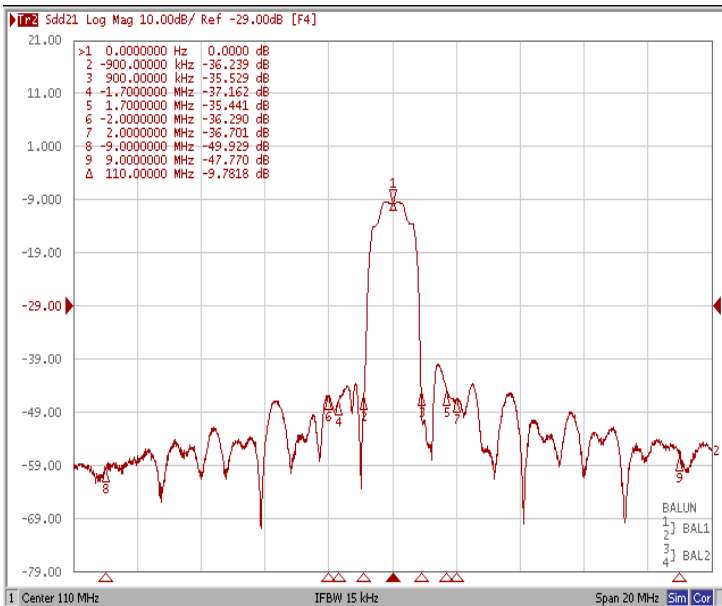
Phase Linearity(Fo±0.615MHz)



Phase Linearity(Fo±0.620MHz)



Attenuation



Smith Chart

