



*Total Solution Provider in Saw Device*

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# SA12014AD1

120.0 MHz IF SAW Filter  
14.0MHz Bandwidth  
Revision 0: 27. December. 2007

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- Electrical Characteristics
  - Package Dimensions
  - Testing Environment
  - Frequency Characteristics
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**Electrical Characteristics**

**Maximum Ratings**

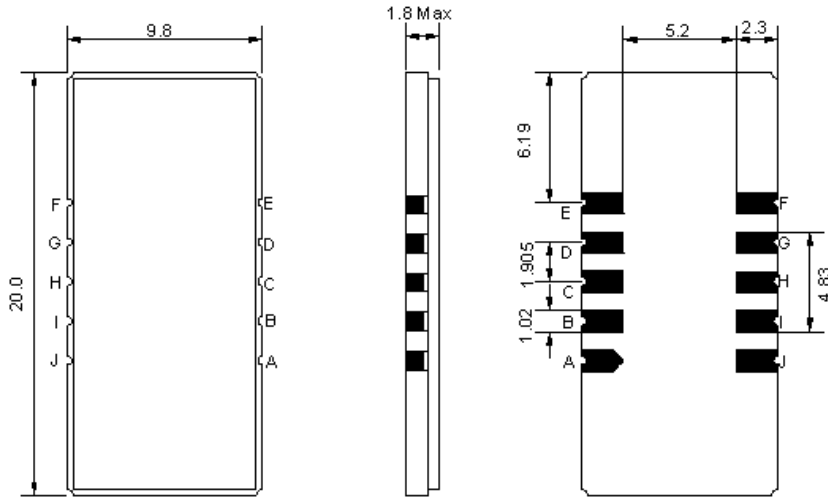
Parameters Description	Unit	Minimum	Typical	Maximum
Operation Temperature Range	°C	-30	-	80
Storage Temperature Range	°C	-40	-	85
Maximum DC Voltage	V	-	-	10
Maximum Input Power	dBm	-	-	10
Source Impedance (single ended) <sup>(1)</sup>	Ω	-	50	-
Load Impedance (single ended) <sup>(1)</sup>	Ω	-	50	-
Package type & size	D1			
Length x Width	mm <sup>2</sup>	-	20.0 x 9.8	-
Height	mm	-	-	1.8

**Electrical Specification**

Parameters Description	Unit	Minimum	Typical	Maximum
Center Frequency (Fo)	MHz	119.85	120.00	120.15
Insertion Loss at Fo	dB	-	23.3	25.5
Amplitude Ripple Variation at Fo ±7.0 MHz	dB <sub>p-p</sub>	-	0.5	1.0
Group Delay Variation at Fo ±7.0 MHz	nsec	-	45	100
Absolute Delay at Fo	µsec	-	2.34	-
Temperature Coefficient	ppm/°C	-	-72	-
Bandwidth at -1.0 dB	MHz	-	14.73	-
Bandwidth at -3.0 dB	MHz	14.80	15.00	-
Bandwidth at -40.0 dB	MHz	-	16.30	16.60
Lower Sidelobe	dB	50	55	-
Upper Sidelobe	dB	50	55	-

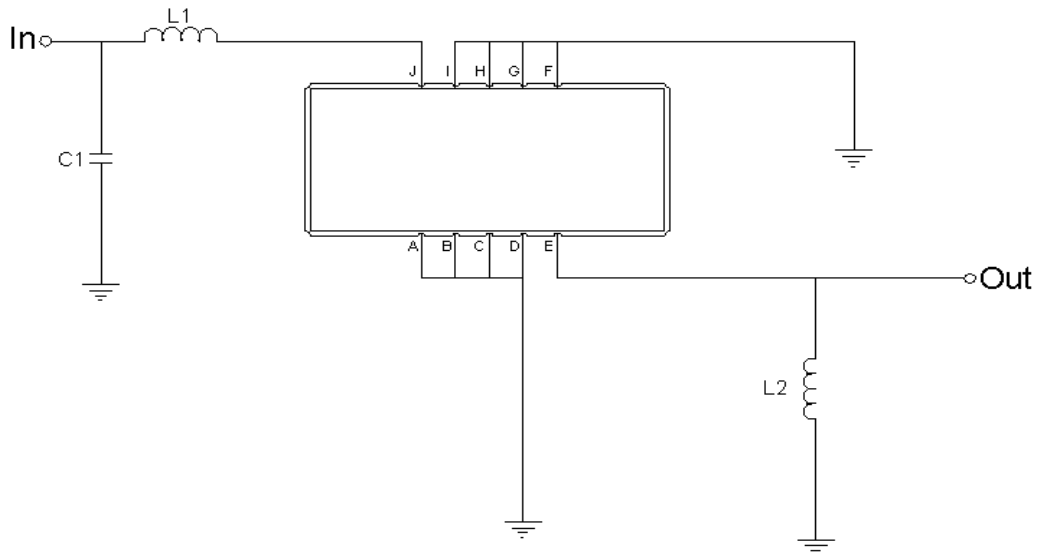
**Notes :** (1) With Matching Network (Ref. Testing Environment Circuit as shown below).  
Those impedances could be modified with different impedance values and/or structures, if necessary.

**Package Dimensions**



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

**Testing Environment**



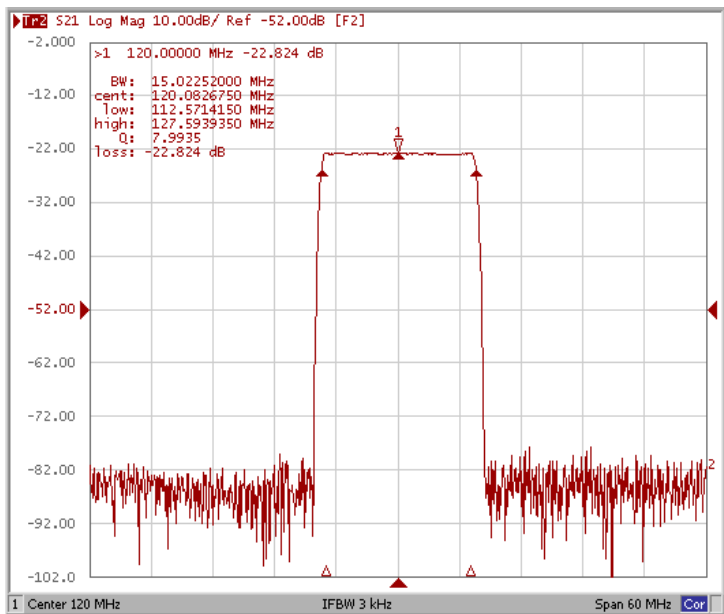
Test Fixture & Values	
Input	L1=39nH, C1=24pF
Output	L2=150nH
Source/Load Impedance	50 Ω



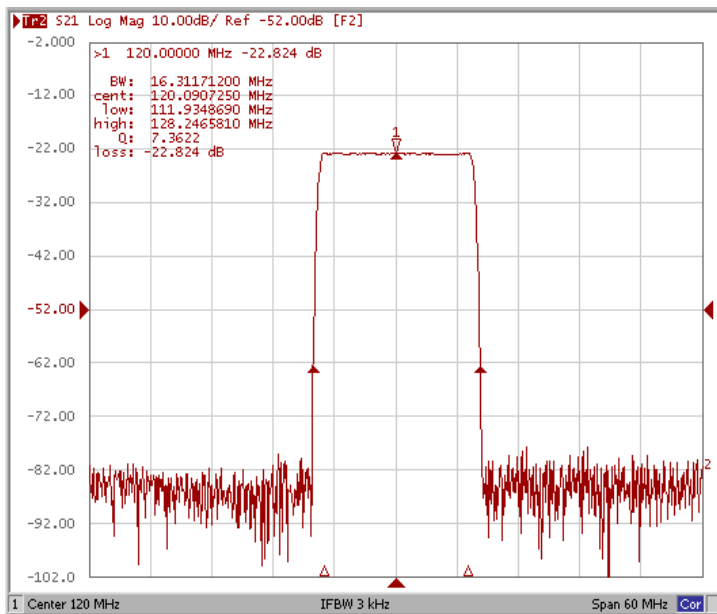
## □ Frequency Characteristics

### Frequency Response

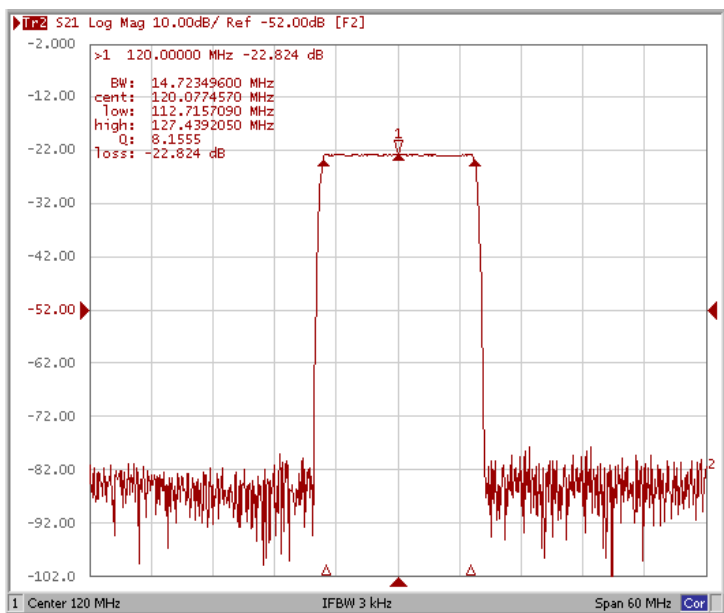
Bandwidth at -3.0 dB



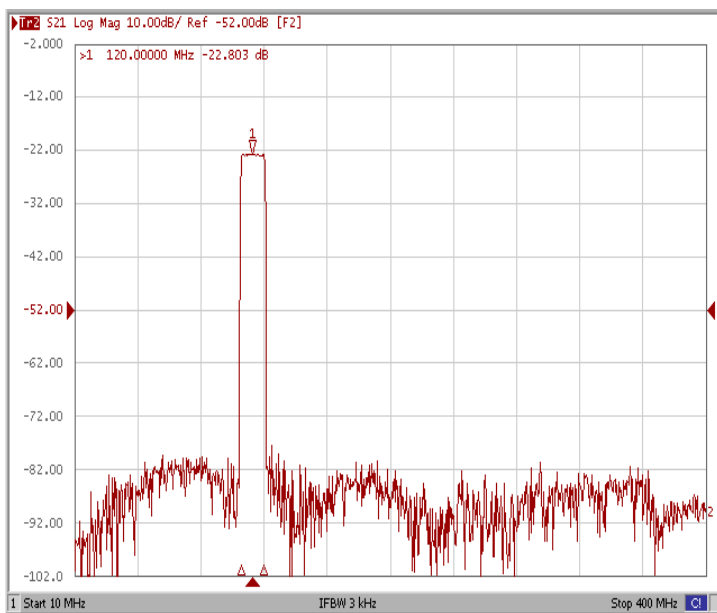
Bandwidth at -40.0 dB



Bandwidth at -1.0 dB



Wide Band

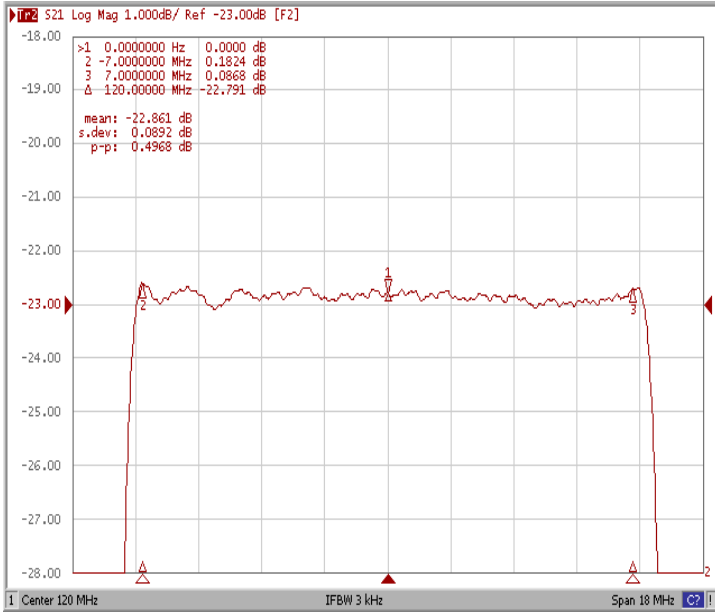




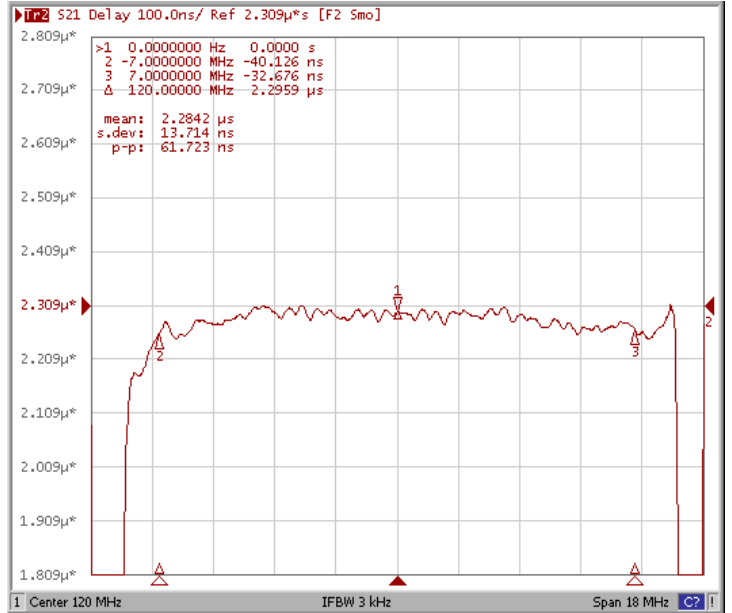
### Frequency Characteristics

#### Frequency Response

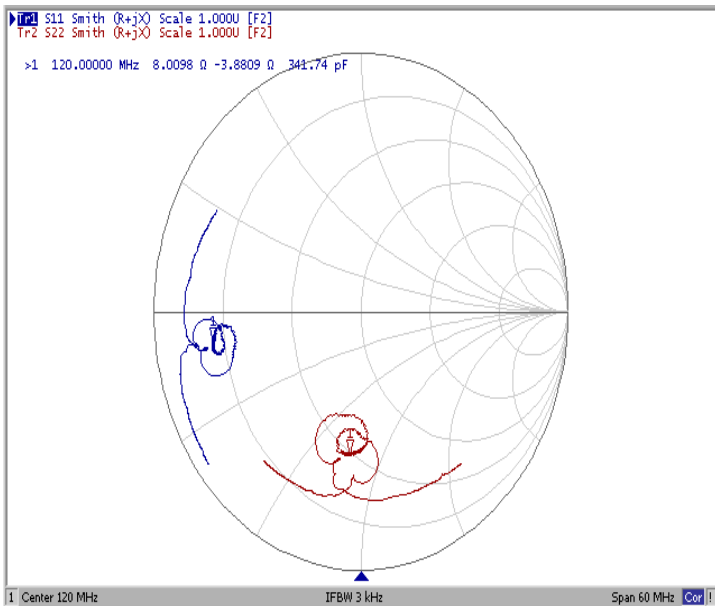
Ripple Variation



Group Delay Variation



Smith Chart



VSWR

