



*Total Solution Provider in Saw Device*

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# SA11002AV

110MHz IF SAW Filter  
2.18MHz Bandwidth  
Revision 0 : 06. FEB. 2008



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

### Maximum Ratings

Parameters Description	Unit	Minimum	Typical	Maximum
Operating Temperature Range	°C	-5	-	70
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	V			
Length x Width	mm <sup>2</sup>	-	13.3 x 6.5	-
Height	mm	-	-	1.8

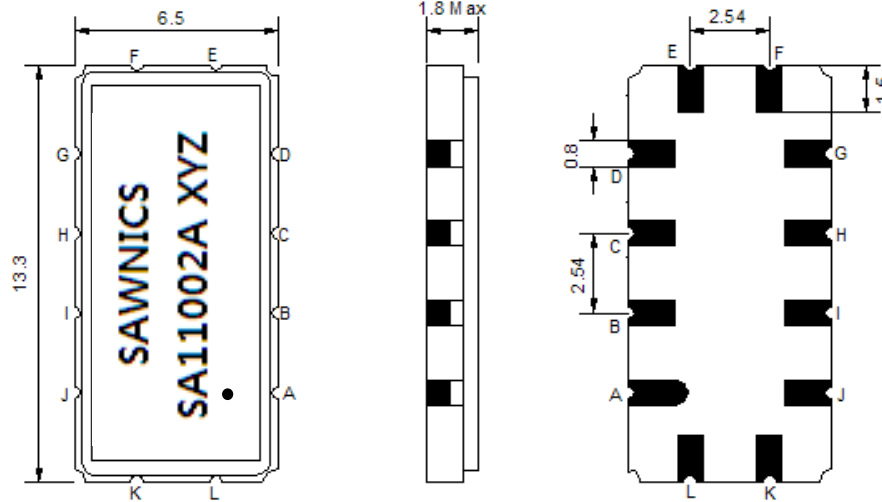
### Electrical Specification

Parameters Description	Unit	Minimum	Typical	Maximum
Center Frequency (Fo)	MHz	109.9	110.0	110.1
Insertion Loss at Fo	dB	-	20	22
Amplitude Ripple within fo ±0.9 MHz	dB <sub>p-p</sub>	-	0.3	0.9
Group Delay Variation within fo ±0.9 MHz	nsec	-	70	150
Absolute Delay at Fo	µsec	-	1.77	2.0
Bandwidth at -1.0 dB	MHz	1.80	2.18	-
Bandwidth at -3.0 dB	MHz	-	2.45	-
Bandwidth at -40.0 dB	MHz	-	3.60	3.80
Ultimate Rejection	dB	40	47	-
Temperature Coefficient	ppm/°C	-	-0.03	-

**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.

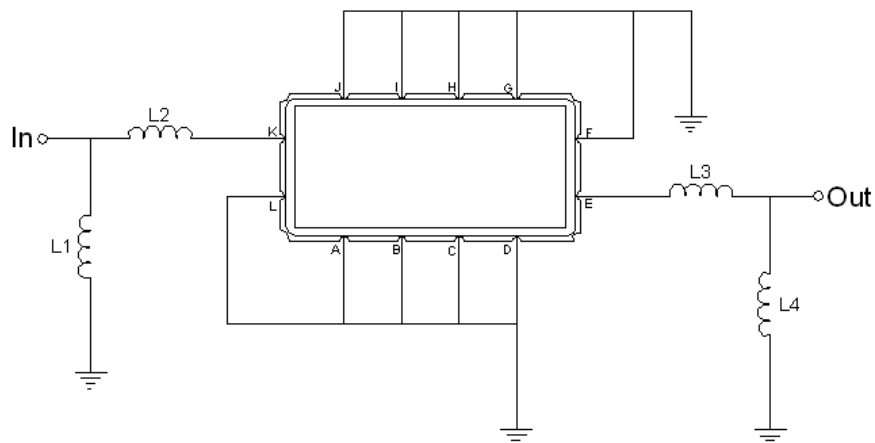
### Package Dimensions



- ① SAWNICS: Brand
- ② SA11002A: Model Name
- ③ X : Date Code (Year)
- ④ Y : Date Code (Month)
- ⑤ Z : Date Code (Date)
- : Index Dot

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

### Testing Environment



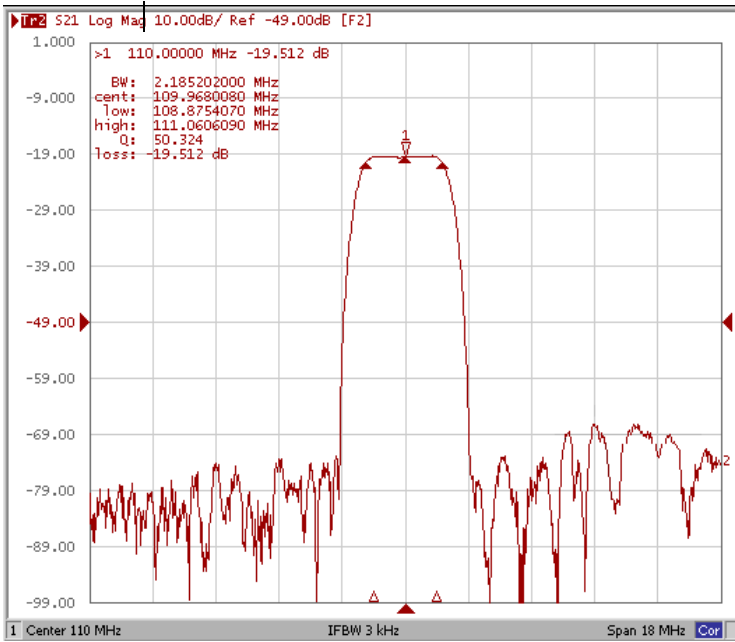
Test Fixture & Values	
Input	L1=56nH, L2=82nH
Output	L3=56nH, L4=56nH
Source/Load Impedance	50 Ω



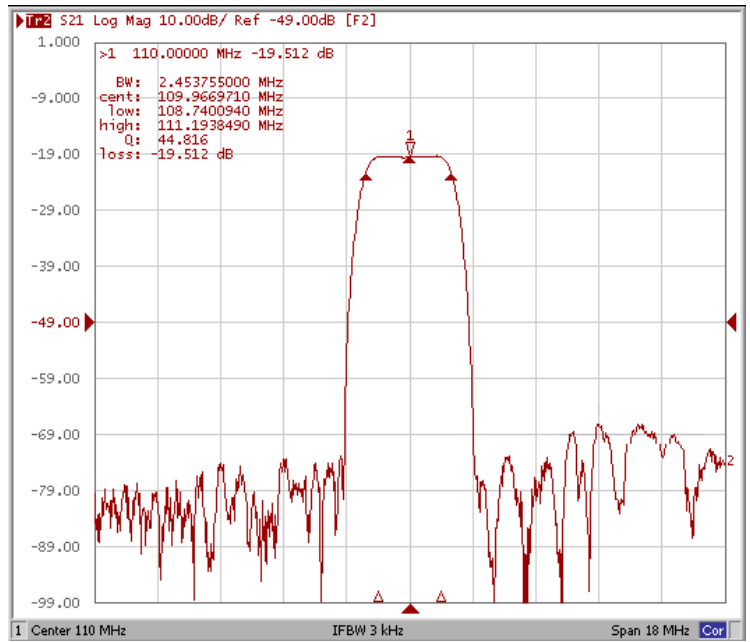
## Frequency Characteristics

### Frequency Response

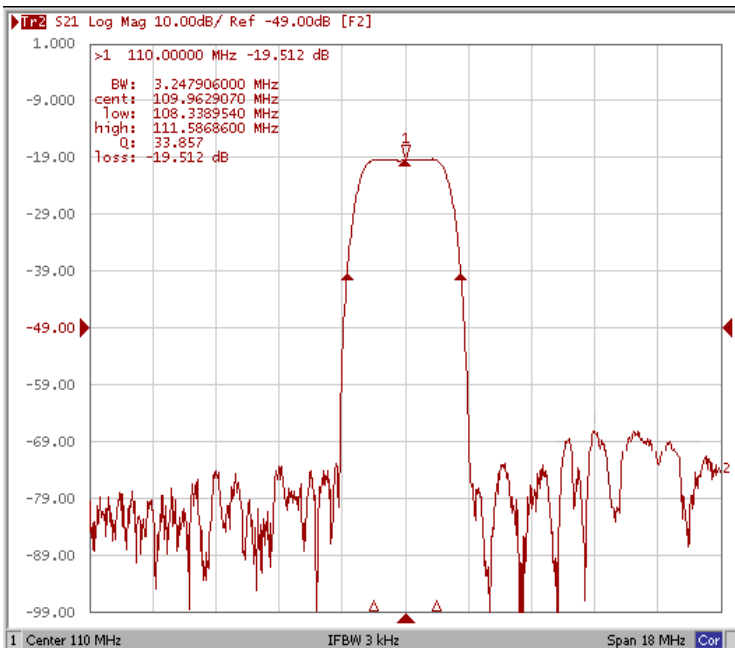
Bandwidth at -1.0 dB



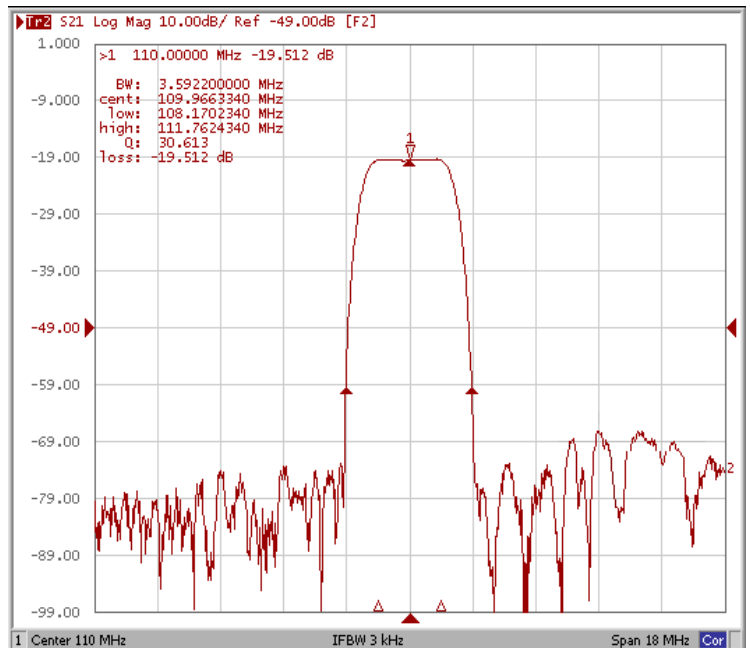
Bandwidth at -3.0 dB



Bandwidth at -20.0 dB



Bandwidth at -40.0 dB

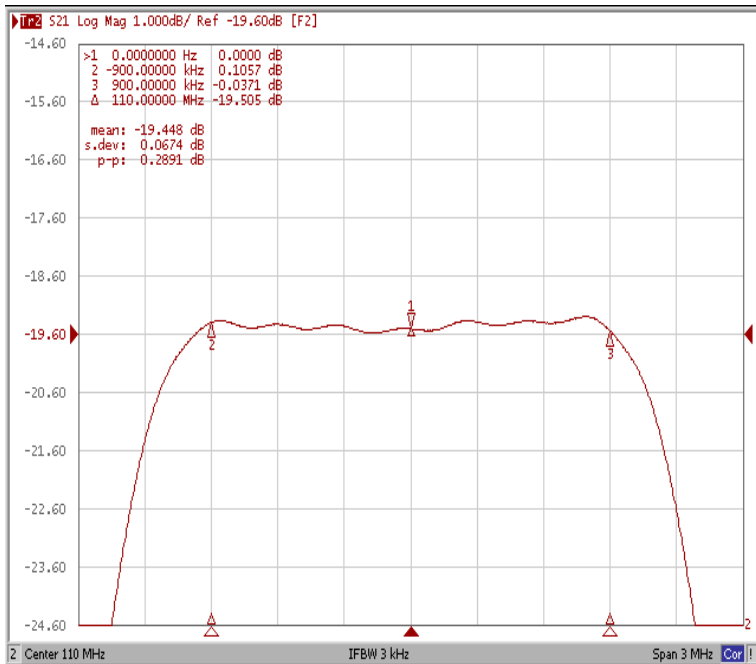




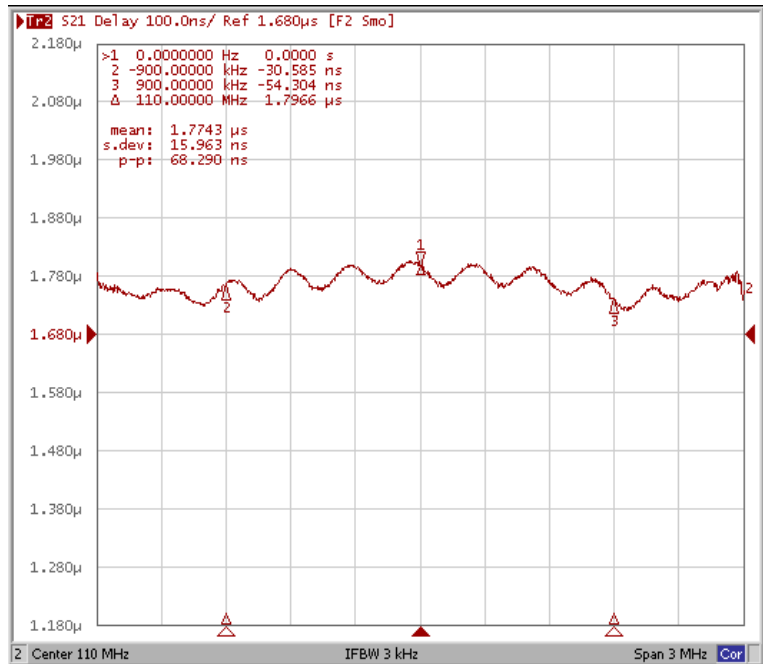
**Frequency Characteristics**

**Frequency Response**

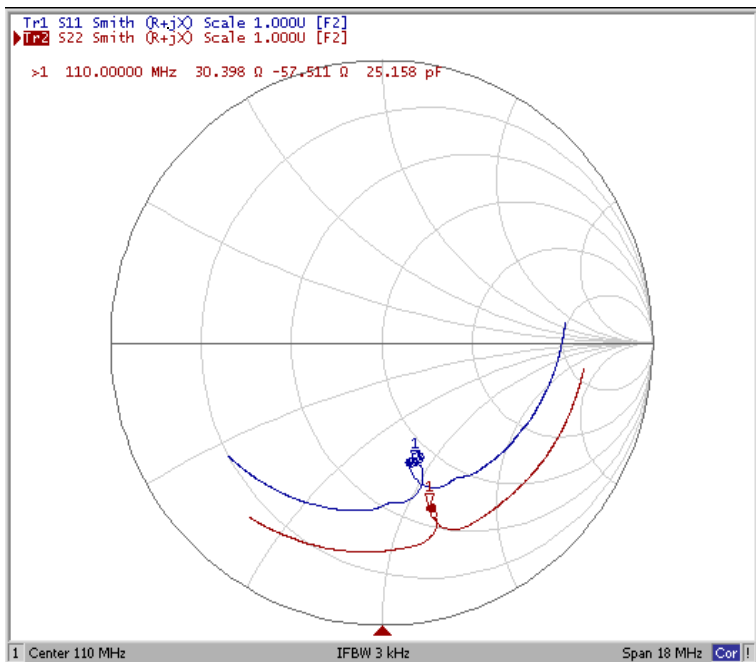
**Ripple Variation Fo±0.9MHz**



**Group Delay Variation Fo±0.9MHz**



**Smith Chart**



**SWR**

