



*Total Solution Provider in Saw Device*

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# SA11003AD1

110.43 MHz IF SAW Filter  
3.90MHz Bandwidth  
Revision 0: 28. JUNE. 2008

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

### Maximum Ratings

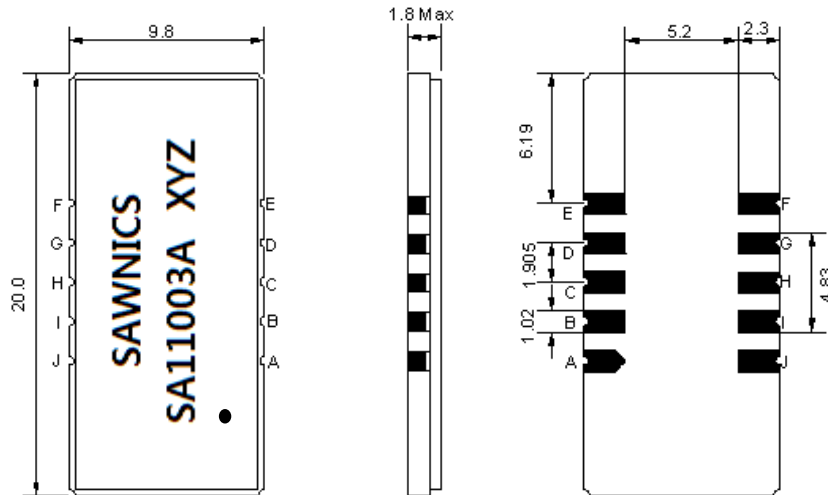
Parameters Description	Unit	Minimum	Typical	Maximum
Operation Temperature Range	°C	-30	-	80
Storage Temperature Range	°C	-40	-	85
Maximum DC Voltage	V	-	-	10
Maximum Input Power	dBm	-	-	10
Source Impedance (single ended) <sup>(1)</sup>	Ω	-	50	-
Load Impedance (single ended) <sup>(1)</sup>	Ω	-	50	-
Package 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	110.33	110.43	110.53
Insertion Loss at Fo	dB	-	20.00	21.00
Group Delay Variation	ns	-	90	200
Absolute Delay at Fo	us	-	1.64	-
Passband Ripple Variation	dB	-	0.40	0.95
Bandwidth at -1dB	MHz	-	3.90	-
Bandwidth at -3dB	MHz	4.10	4.25	-
Bandwidth at -50dB	MHz	-	5.78	6.00
Ultimate Rejection	dB	50	53	-
Temperature coefficient	ppm/°C	-	-20	-

**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.

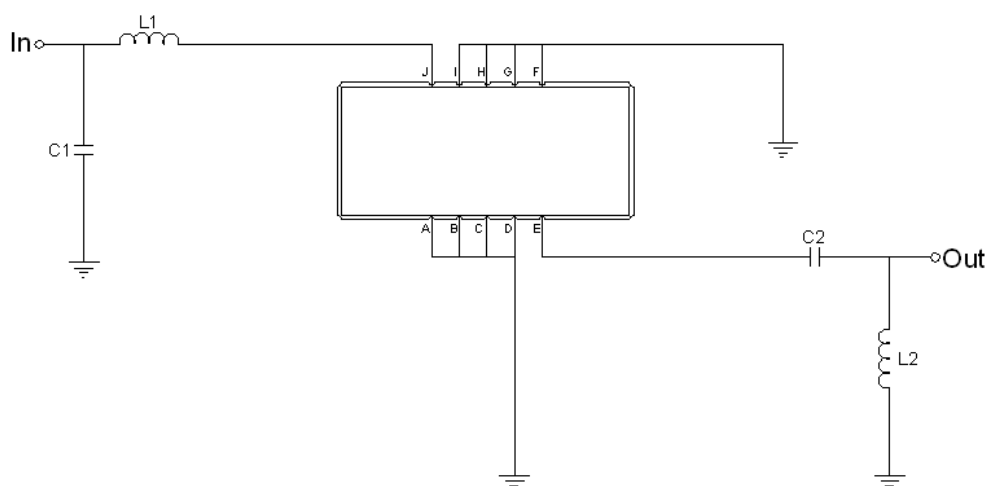
### Package Dimensions



- ① SAWNICS: Brand
- ② SA11003A: 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	Ground
J	Input
E	Output

### Testing Environment

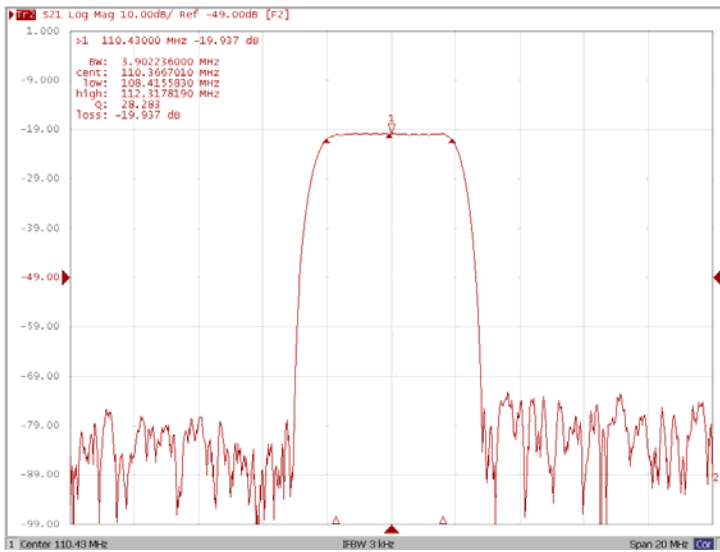


Test Fixture & Values	
Input	L1=18nH, C1=110pF
Output	L2=47nH, C2=110pF
Source/Load Impedance	50 Ω

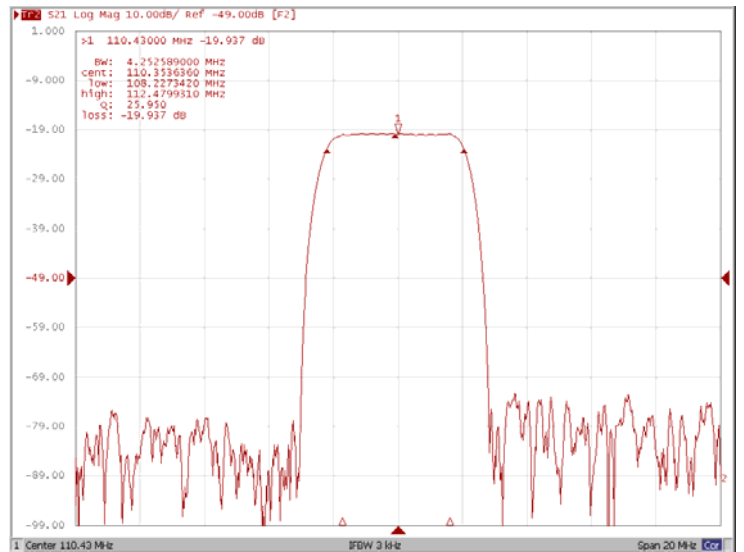
### □ Frequency Characteristics

#### Frequency Response

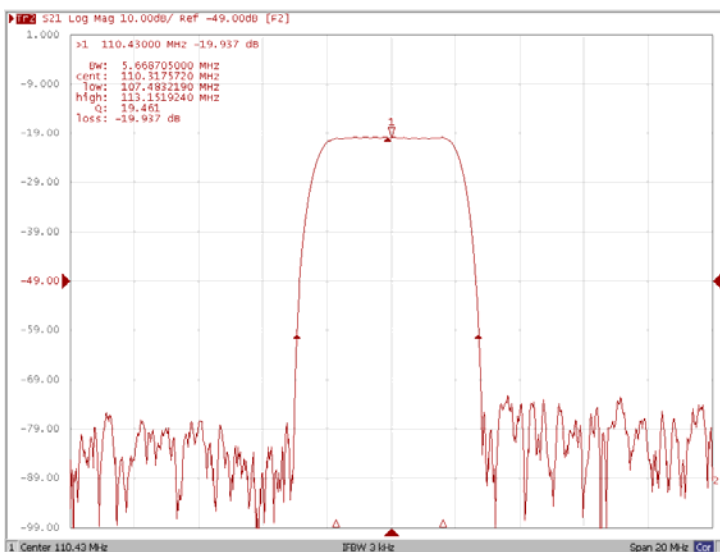
**Bandwidth at -1.0 dB**



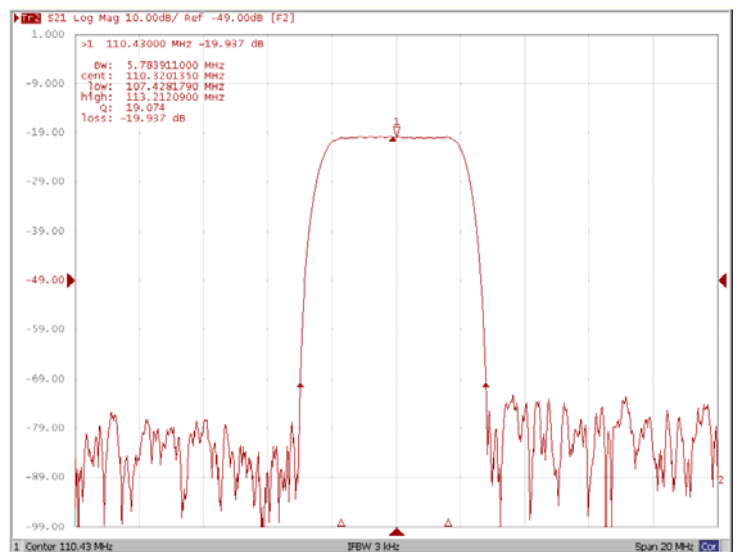
**Bandwidth at -3.0 dB**



**Bandwidth at -40.0 dB**



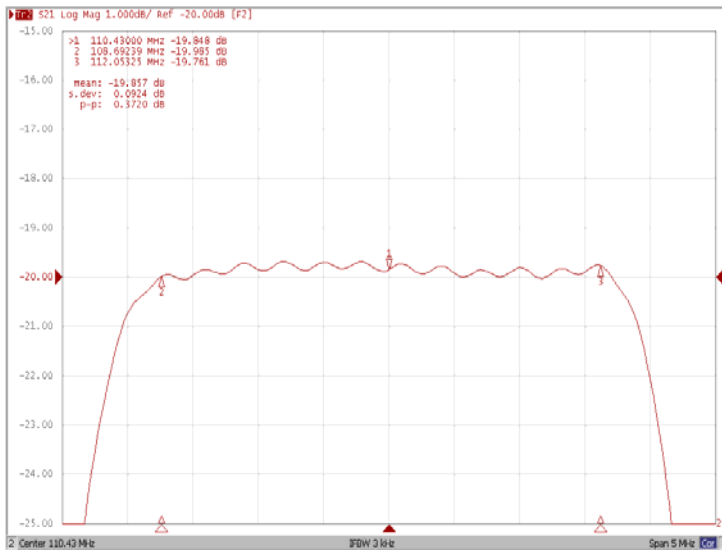
**Bandwidth at -50.0 dB**



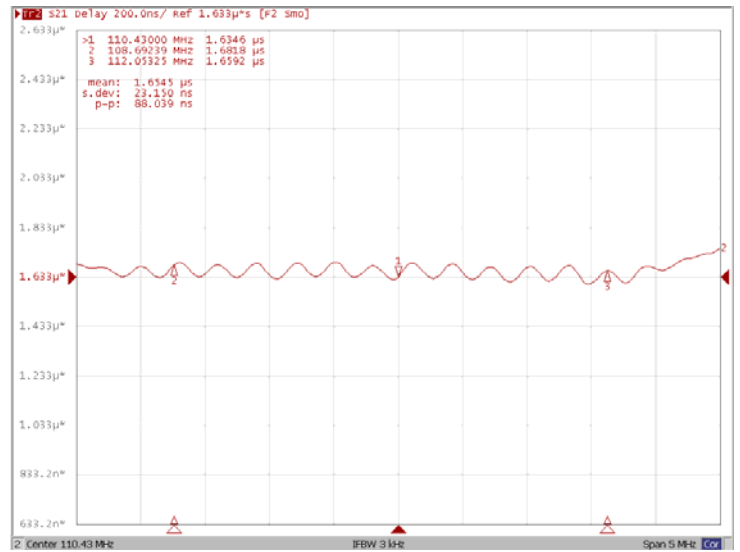
### □ Frequency Characteristics

#### Frequency Response

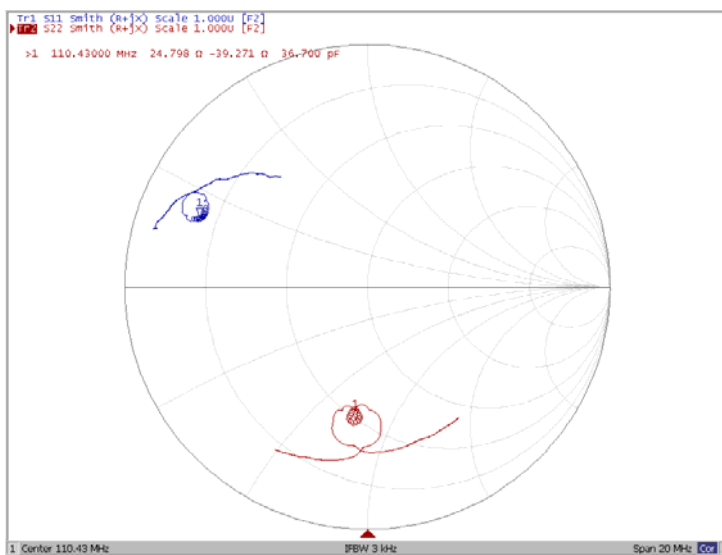
Ripple Variation



Group Delay Variation



Smith Chart



VSWR

