



*Total Solution Provider in Saw Device*

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# SA07509AD1

75.0 MHz IF SAW Filter  
9.82 MHz Bandwidth  
Revision 0: 19. Nov. 2008



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

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## □ Electrical Characteristics

### Maximum Ratings

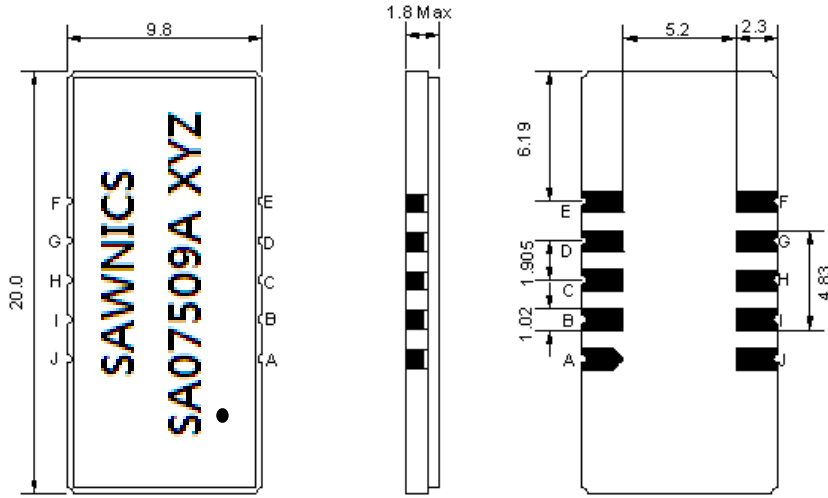
Parameters Description	Unit	Minimum	Typical	Maximum
Operation Temperature Range	°C	-	25	-
Storage Temperature Range	°C	-40	-	85
Maximum DC Voltage	V	-	-	10
Maximum Input Power	dBm	-	-	10
Source Impedance (single ended) <sup>(1)</sup>	Ω	-	50	-
Load Impedance (single ended) <sup>(1)</sup>	Ω	-	50	-
Package 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	-	75.00	-
Insertion Loss at Fo	dB	-	19.7	22.0
Group Delay Variation (Fo±4.6MHz)	ns	-	60	120
Absolute Delay	us	-	2.4	-
Passband Ripple (Fo±4.6MHz)	dB	-	0.42	0.9
Bandwidth at -1dB	MHz	-	9.82	-
Bandwidth at -55dB	MHz	-	11.90	-
Ultimate Attenuation(65.1MHz~69MHz)	-	50	55	-
Ultimate Attenuation(81MHz~84.9MHz)	-	50	60	-
Temperature coefficient	ppm/°C	-	-72	-

**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.

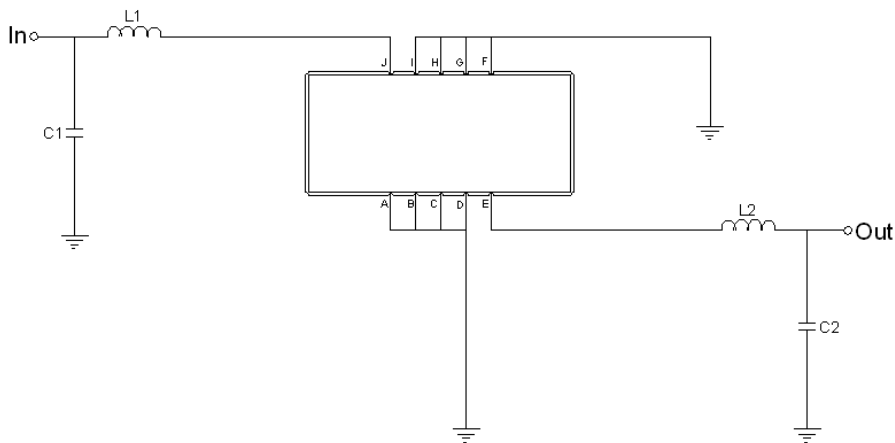
**□ Package Dimensions**



- ① SAWNICS: Brand
- ② SA07509A: 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**



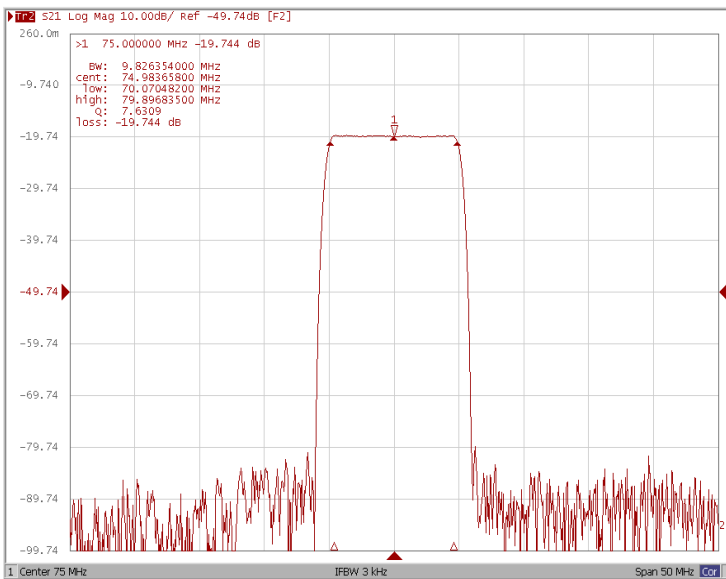
Test Fixture & Values	
Input	L1=33nH, C1=10pF
Output	L2=33nH, C2=10pF
Source/Load Impedance	50 Ω



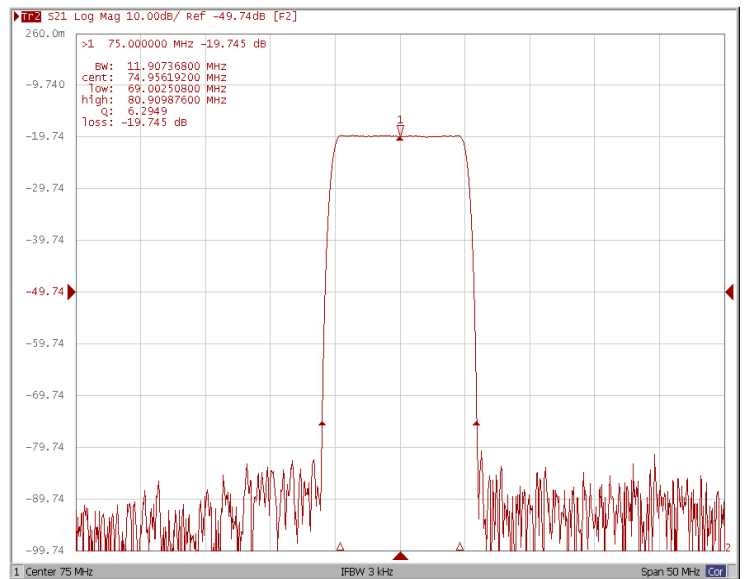
### □ Frequency Characteristics

#### Frequency Response

Bandwidth at -1.0 dB



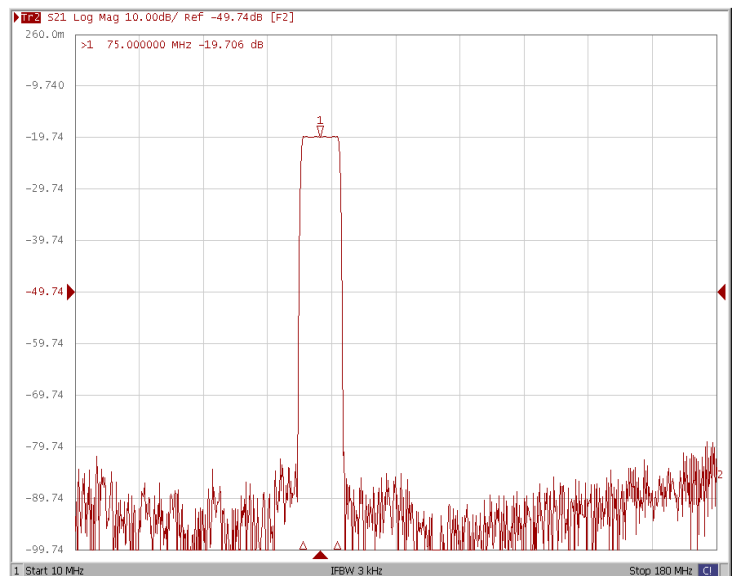
Bandwidth at -55.0 dB



Ultimate Attenuation



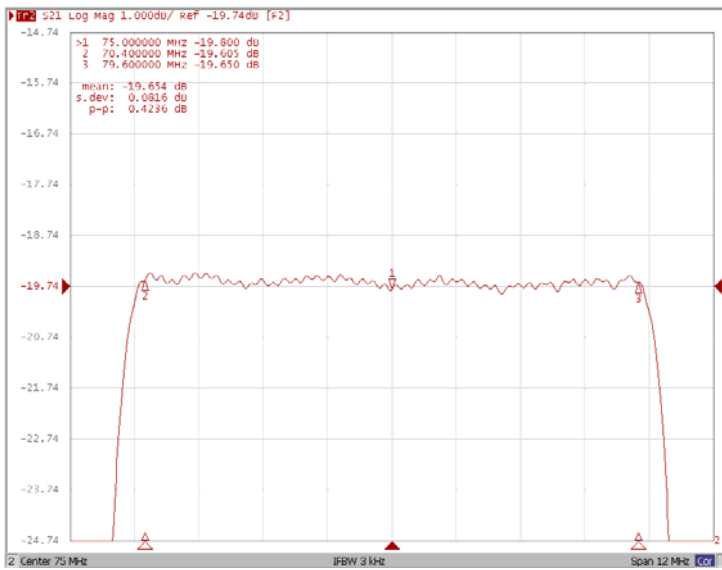
Wide Band



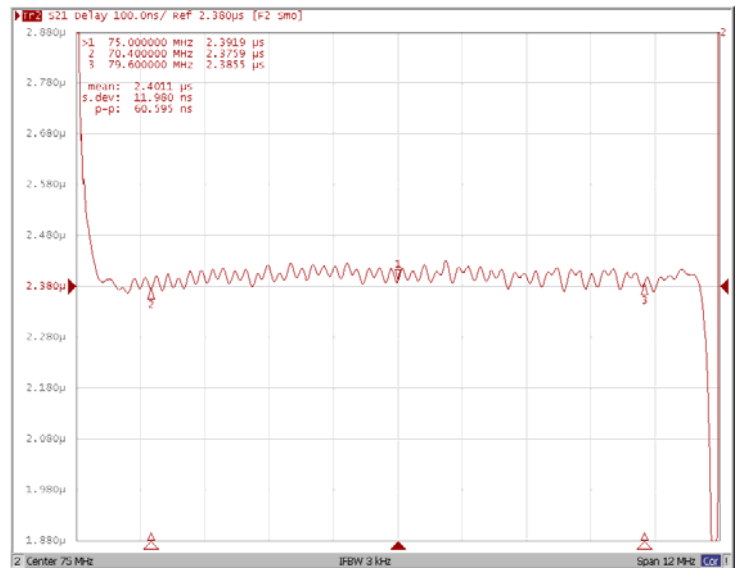
### □ Frequency Characteristics

#### Frequency Response

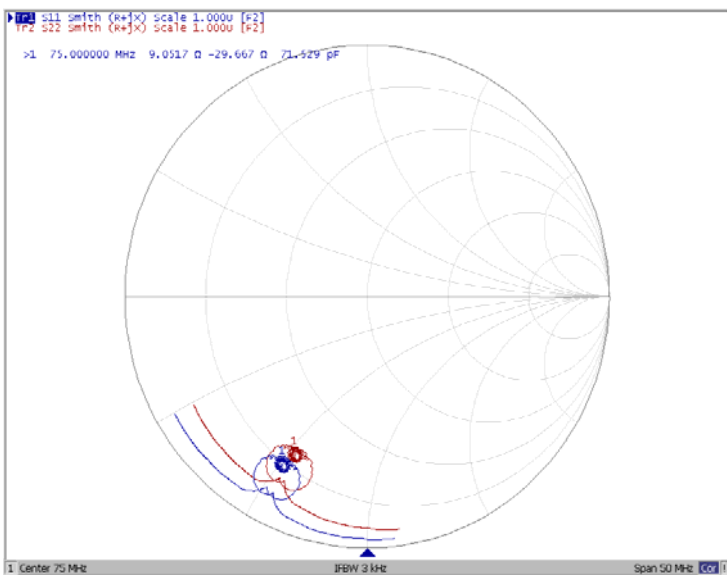
Ripple Variation  $F_o \pm 4.6\text{MHz}$



Group Delay Variation  $F_o \pm 4.6\text{MHz}$



Smith Chart



VSWR

