



*Total Solution Provider in Saw Device*

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# SA09201AV

92.160 MHz IF SAW Filter  
2.06 MHz Bandwidth  
Revision 0 : 15. April. 2009.



- Electrical Characteristics
  - Package Dimensions
  - Testing Environment
  - Frequency Characteristics
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**SAWNICS Inc.**

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## □ Electrical Characteristics

### Maximum Ratings

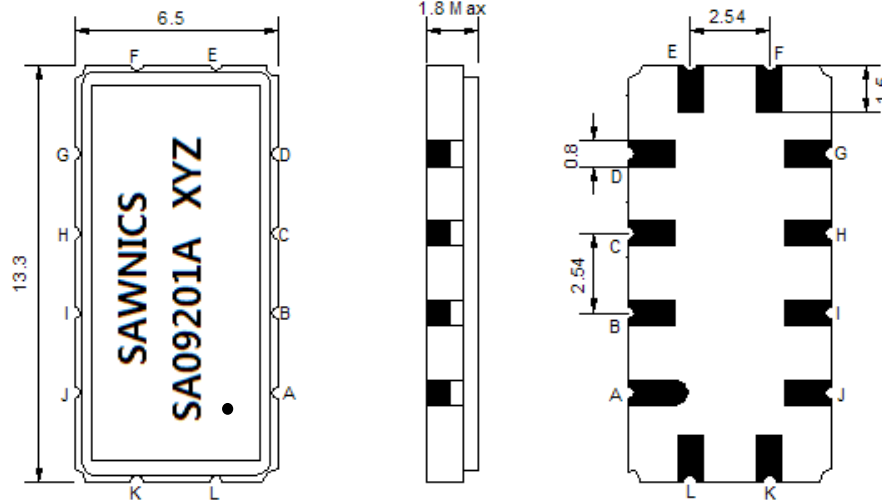
Parameters Description	Unit	Minimum	Typical	Maximum
Operating Temperature Range	°C	-20		70
Storage Temperature Range	°C	-40	-	85
Maximum DC Voltage	V	-	-	10
Maximum Input Power	dBm	-	-	10
Source Impedance (single ended) <sup>(1)</sup>	Ω	-	50	-
Load Impedance (single ended) <sup>(1)</sup>	Ω	-	50	-
Package 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	-	92.160	-
Insertion Loss at Fo	dB	-	20.0	22.0
Passband Ripple (fo ±0.768 MHz)	dB <sub>p-p</sub>	-	0.3	0.8
Group Delay Variation (fo ±0.768MHz)	nsec	-	45	100
Absolute Delay at Fo	µsec	-	1.73	-
Bandwidth at -1.0 dB	MHz	1.90	2.06	-
Bandwidth at -30.0 dB	MHz	-	3.44	3.50
<b>Relative Attenuation</b>				
Fo +1.75MHz	dB	-	32	-
Fo -1.75MHz	dB	-	34	-
Ultimate Rejection Level	dB	45	50	-
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.

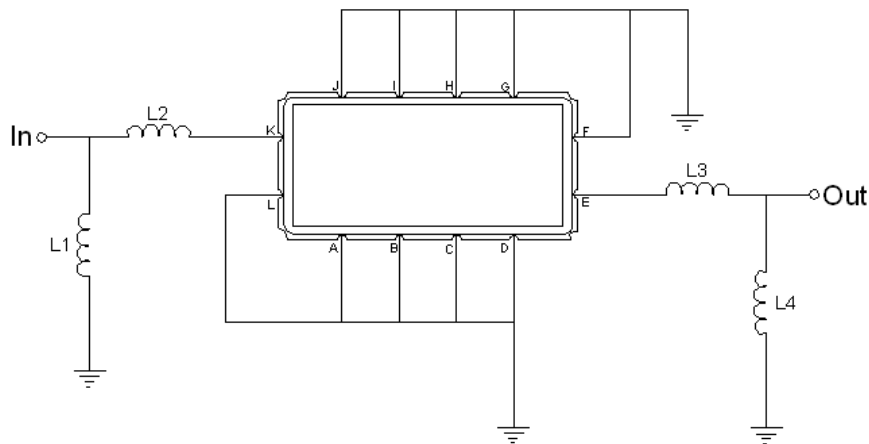
### Package Dimensions



- ① SAWNICS: Brand
- ② SA09201A: 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

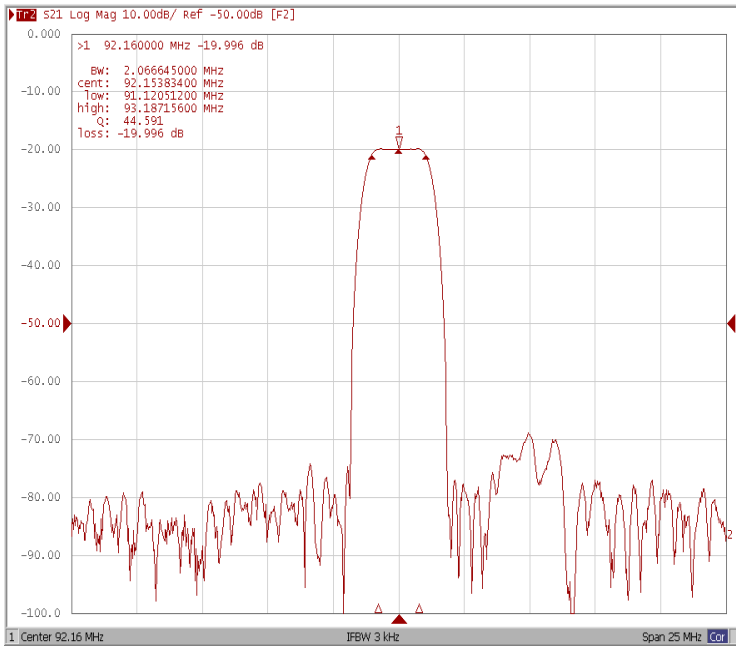


Test Fixture & Values	
Input	L1=150 nH, L2=180 nH
Output	L3=150 nH, L4=82 nH
Source/Load Impedance	50 Ω

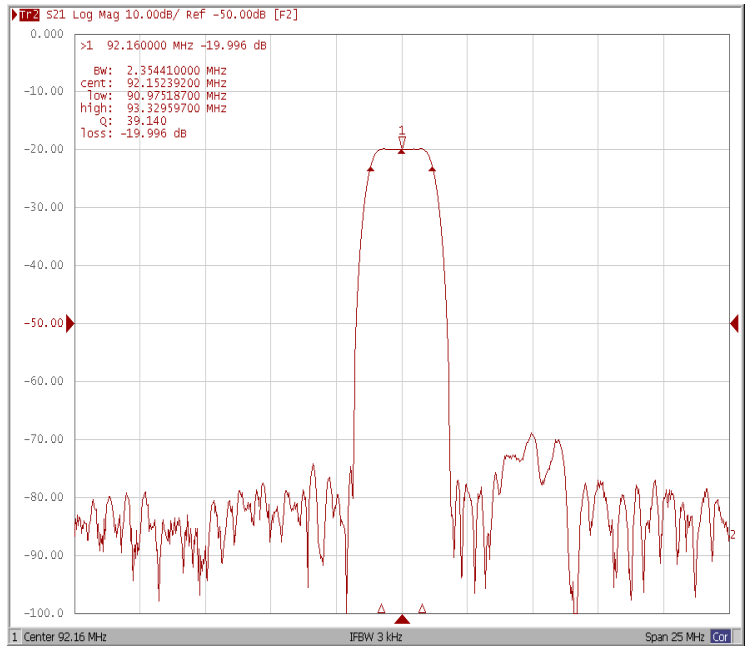
### Frequency Characteristics

#### Frequency Response

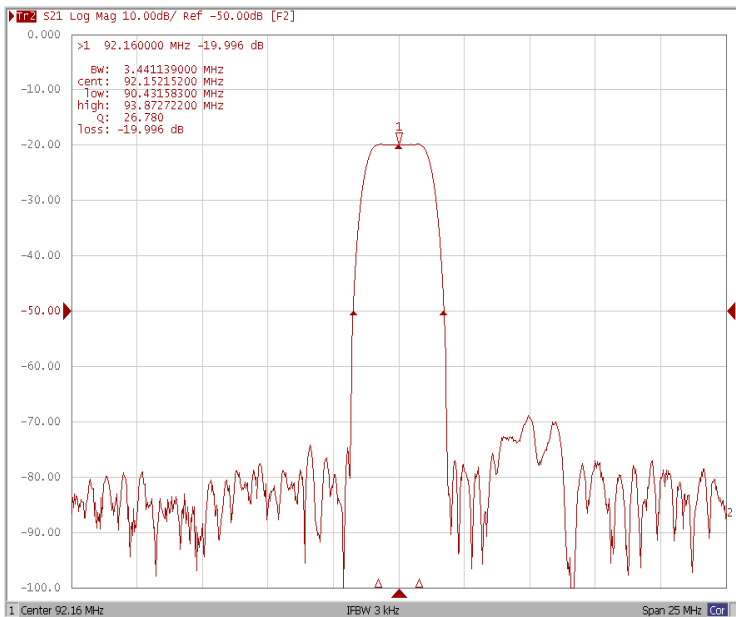
**Bandwidth at -1.0 dB**



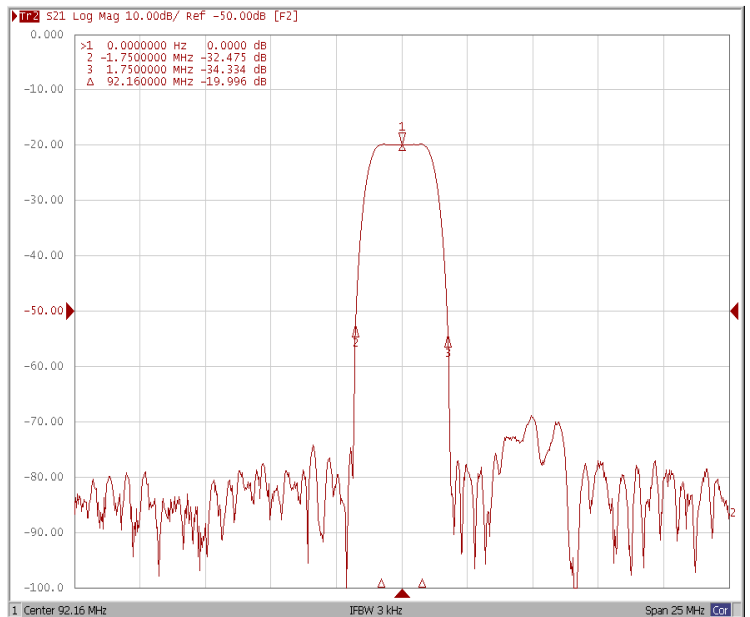
**Bandwidth at -3.0 dB**



**Bandwidth at -30.0 dB**



**Relative Attenuation Fo ±1.75MHz**

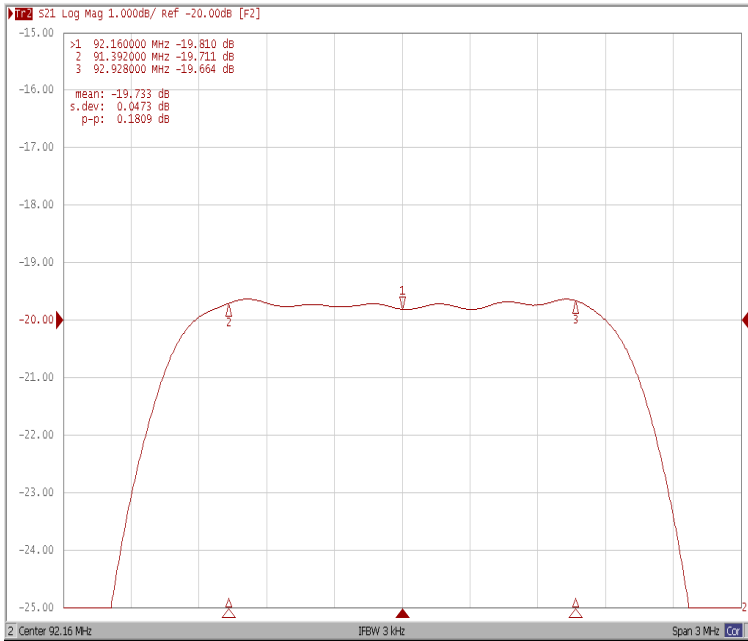




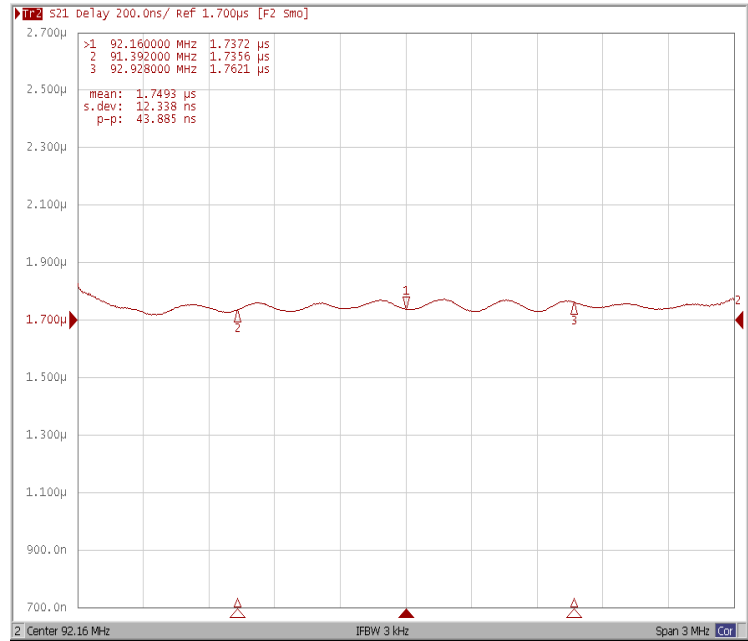
**□ Frequency Characteristics**

**Frequency Response**

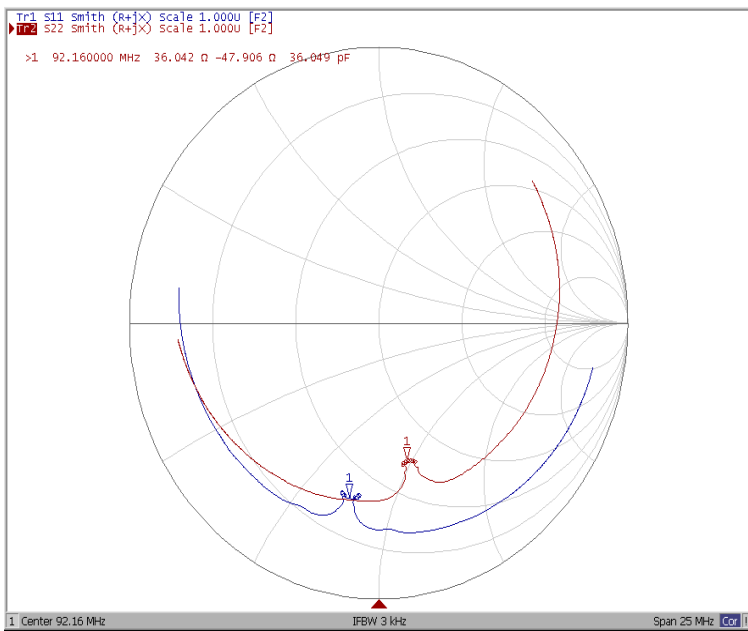
**Ripple Variation Fo±0.768MHz**



**Group Delay Variation Fo±0.768MHz**



**Smith Chart**



**VSWR**

