



*Total Solution Provider in Saw Device*

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# SA09819AF

98.15MHz IF SAW Filter

19.93MHz Bandwidth

Revision 1: 2. Dec. 2008



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

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## □ Electrical Characteristics

### Maximum Ratings

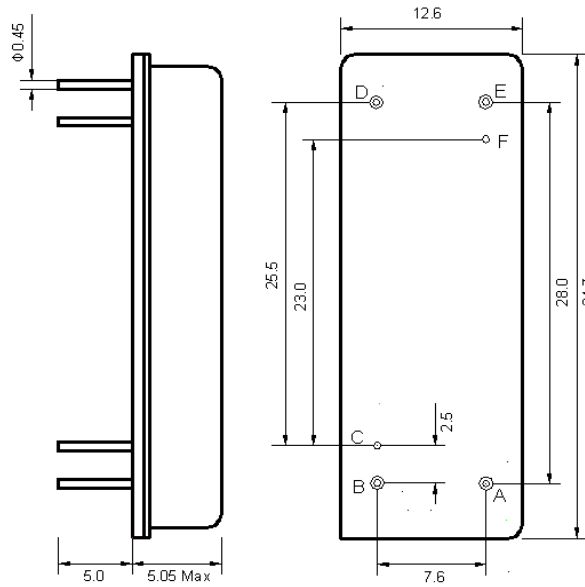
Parameters Description	Unit	Minimum	Typical	Maximum
Operation Temperature Range	°C	-15	-	70
Storage Temperature Range	°C	-40	-	85
Maximum DC Voltage	V	-	-	10
Maximum Input Power	dBm	-	-	10
Source Impedance (single ended) <sup>(1)</sup>	Ω	-	50	-
Load Impedance (single ended) <sup>(1)</sup>	Ω	-	50	-
Package type & size	F			
Length x Width	mm <sup>2</sup>	-	34.7 x 12.6	-
Height	mm	-	-	5.05

### Electrical Specification

Center Frequency (Fo)	MHz	98.13	98.15	98.22
Insertion Loss at Fo	dB	-	27.0	30.0
Group Delay Variation (88.30MHz~107.95MHz)	ns	-	50	100
Absolute Delay Time at Fo	us	-	3.56	4.50
Temperature Coefficient	ppm/°C	-	-72	-
Amplitude Ripple (88.30MHz~107.95MHz)	dB	-	0.80	1.00
Bandwidth at -1dB	MHz	19.20	19.93	-
Bandwidth at -50dB	MHz	-	21.06	21.40
Relative Attenuation (Fo+/-10.7MHz)	dB	50	55	-
Relative Attenuation (@88.1MHz)	dB	2	-	5

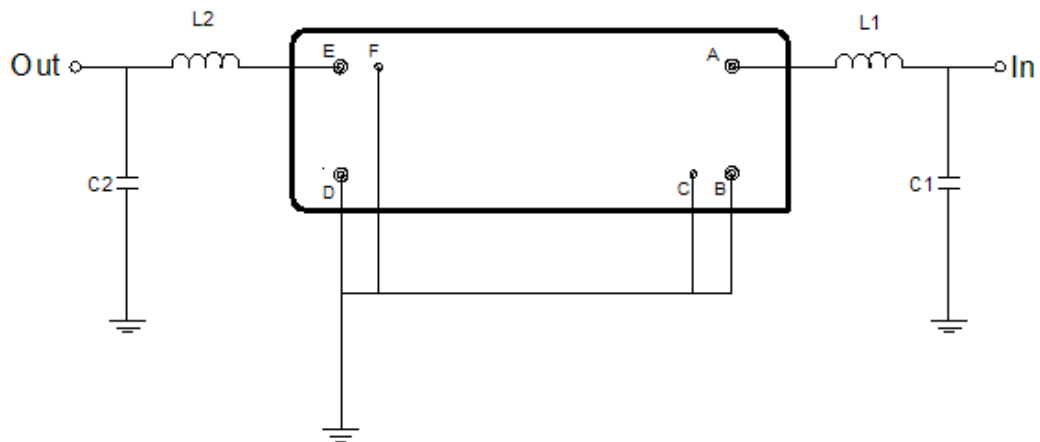
**Notes :** (1) With Matching Network (Ref. Testing Environment Circuit as shown below).  
Those impedances could be modified with different impedance values and/or structures, if necessary.

**Package Dimensions**



Pin Description	
B, C, D, F	Ground
A	Input
E	Output

**Testing Environment**



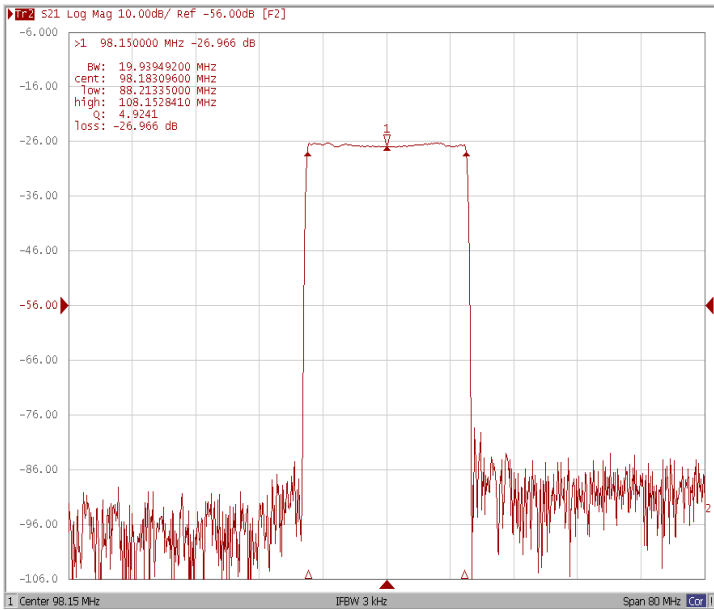
Test Fixture & Values	
Input	L1=56 nH, C1=22 pF
Output	L2=56 nH, C2=22 pF
Source/Load Impedance	50 Ω



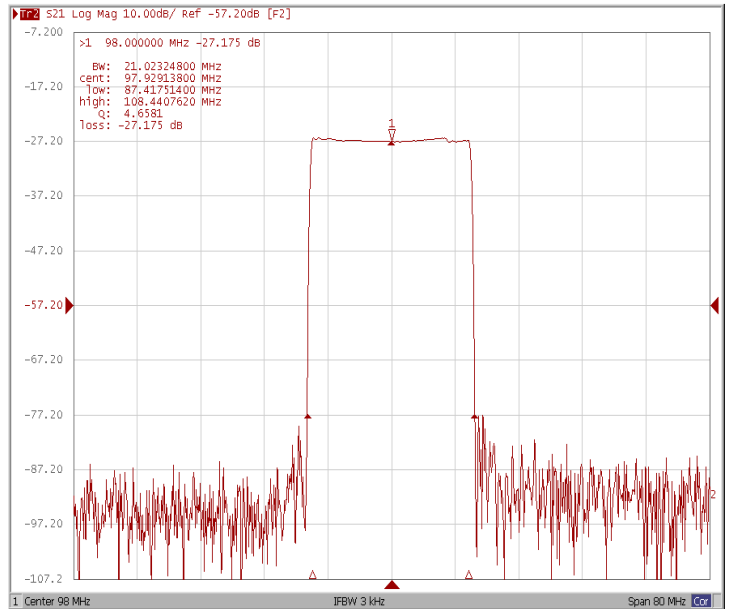
# Frequency Characteristics

## Frequency Response

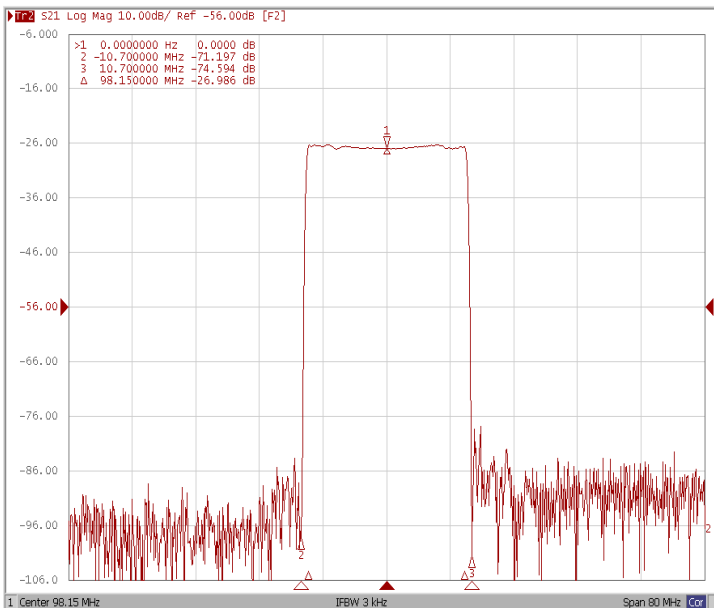
Bandwidth at -1.0 dB



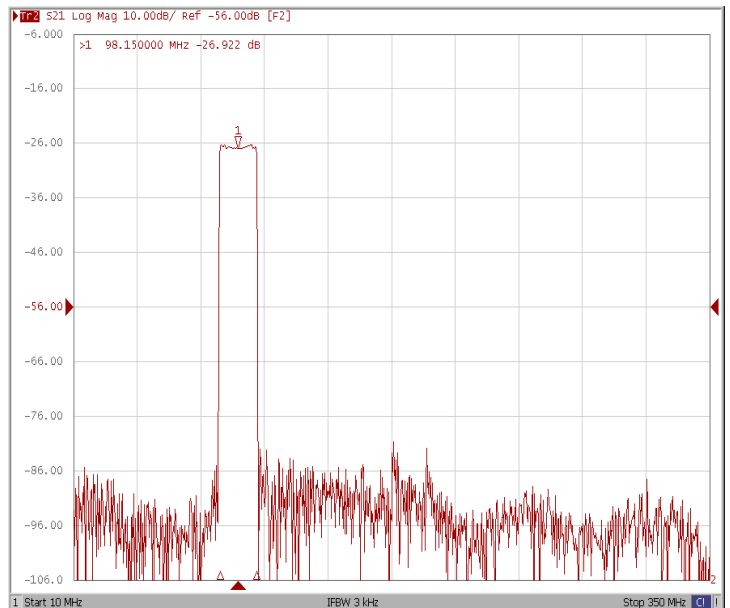
Bandwidth at -50.0 dB



Points (Fo±10.7MHz)



WIDE

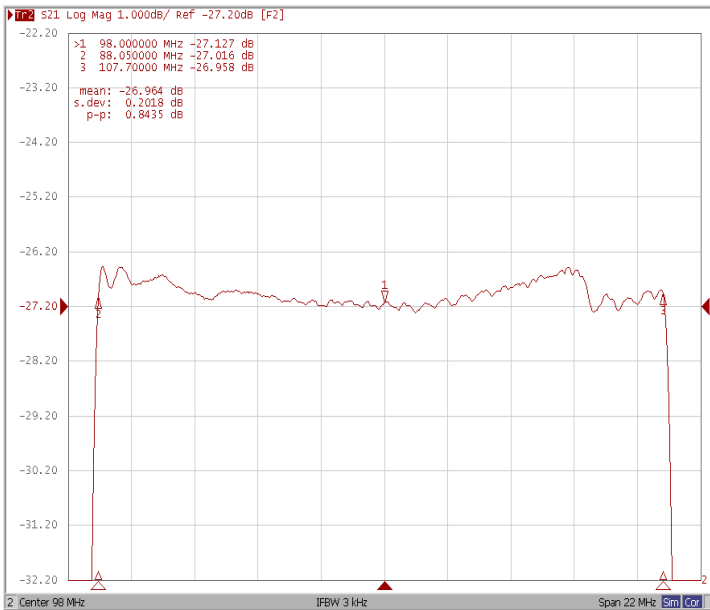




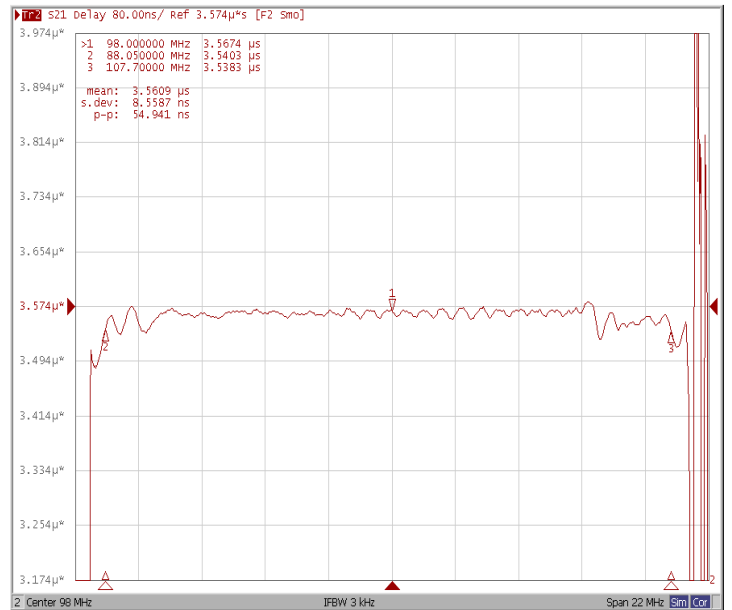
**Frequency Characteristics**

**Frequency Response**

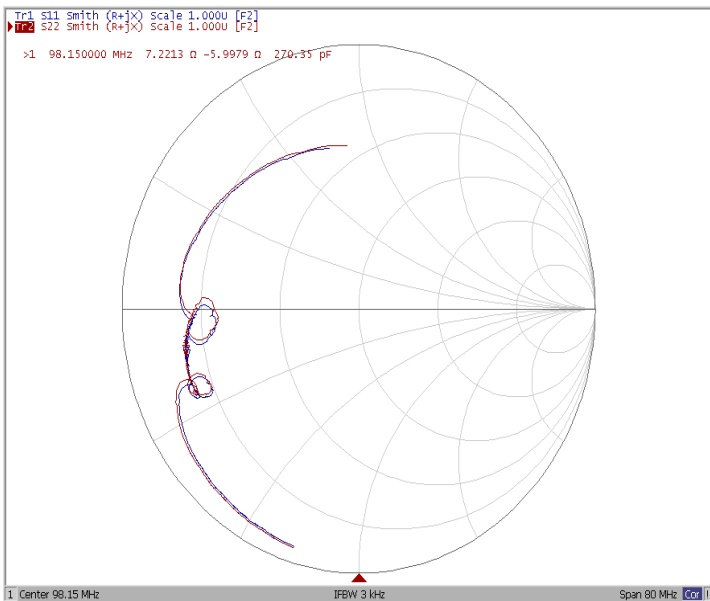
**Ripple Variation (88.30MHz~107.95MHz)**



**Group Delay Variation (88.30MHz~107.95MHz)**



**Smith Chart**



**SWR**

