



Total Solution Provider in Saw Device

SA09301AV

93.888 MHz IF SAW Filter
2.02 MHz Bandwidth
Revision 0 : 15. April. 2009.



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

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□ Electrical Characteristics

Maximum Ratings

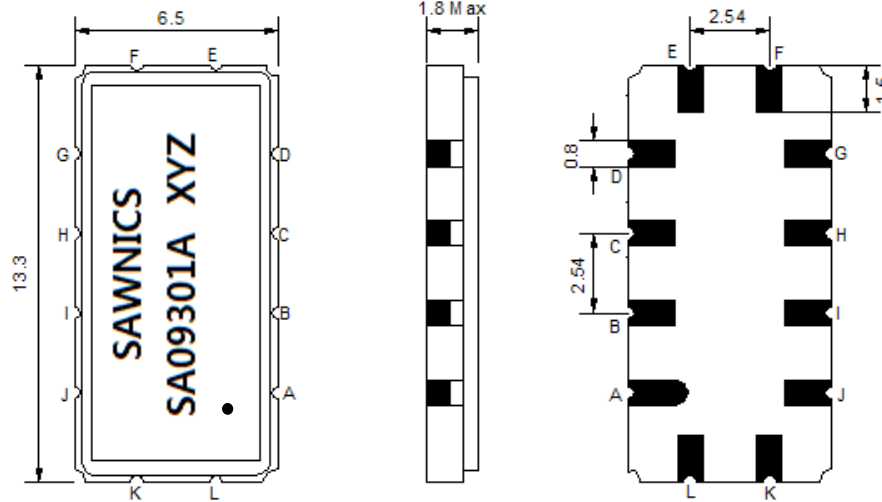
Parameters Description	Unit	Minimum	Typical	Maximum
Operating Temperature Range	°C	-20		70
Storage Temperature Range	°C	-40	-	85
Maximum DC Voltage	V	-	-	10
Maximum Input Power	dBm	-	-	10
Source Impedance (single ended) ⁽¹⁾	Ω	-	50	-
Load Impedance (single ended) ⁽¹⁾	Ω	-	50	-
Package type & size	V			
Length x Width	mm ²	-	13.3 x 6.5	-
Height	mm	-	-	1.8

Electrical Specification

Parameters Description	Unit	Minimum	Typical	Maximum
Center Frequency (Fo)	MHz	-	93.888	-
Insertion Loss at Fo	dB	-	20.1	22.0
Passband Ripple (fo ±0.768 MHz)	dB _{p-p}	-	0.3	0.8
Group Delay Variation (fo ±0.768MHz)	nsec	-	60	100
Absolute Delay at Fo	µsec	-	1.77	-
Bandwidth at -1.0 dB	MHz	1.90	2.02	-
Bandwidth at -30.0 dB	MHz	-	3.43	3.50
Relative Attenuation				
Fo +1.75MHz	dB	-	32	-
Fo -1.75MHz	dB	-	34	-
Ultimate Rejection Level	dB	45	53	-
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.

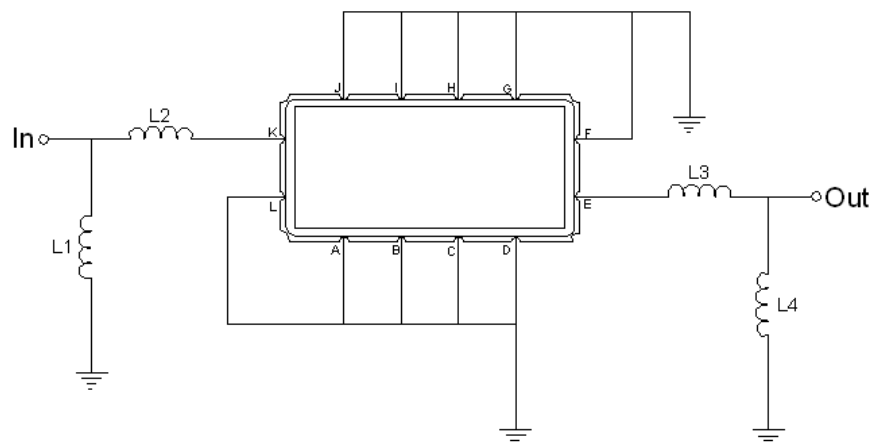
Package Dimensions



- ① SAWNICS: Brand
- ② SA09301A: 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



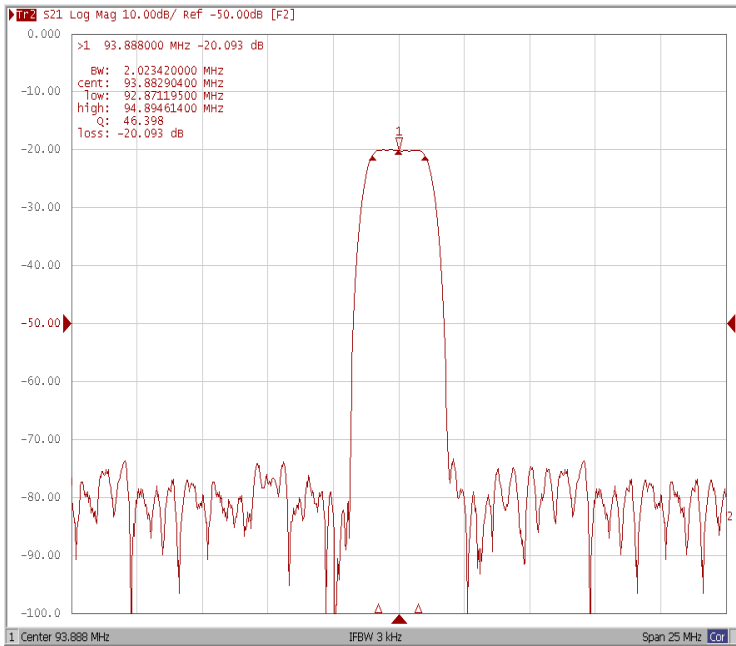
Test Fixture & Values	
Input	L1=150 nH, L2=180 nH
Output	L3=150 nH, L4=82 nH
Source/Load Impedance	50 Ω



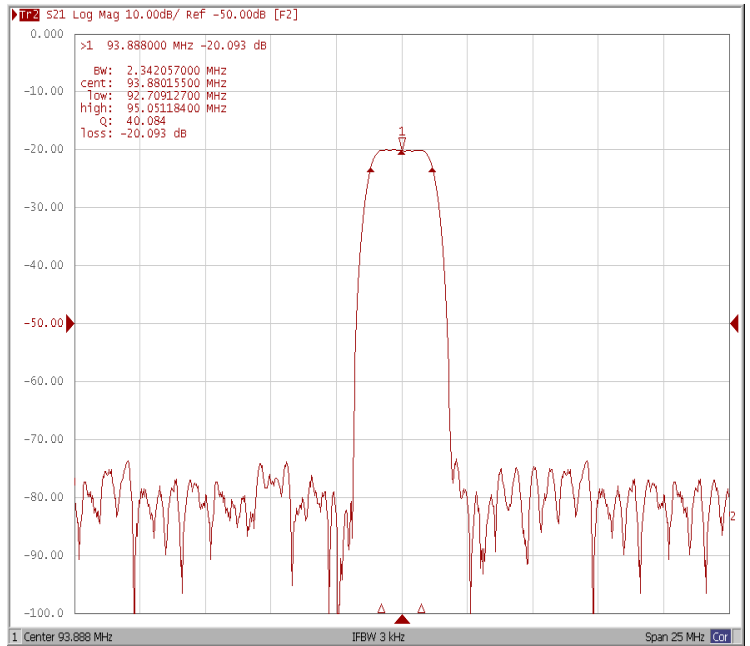
Frequency Characteristics

Frequency Response

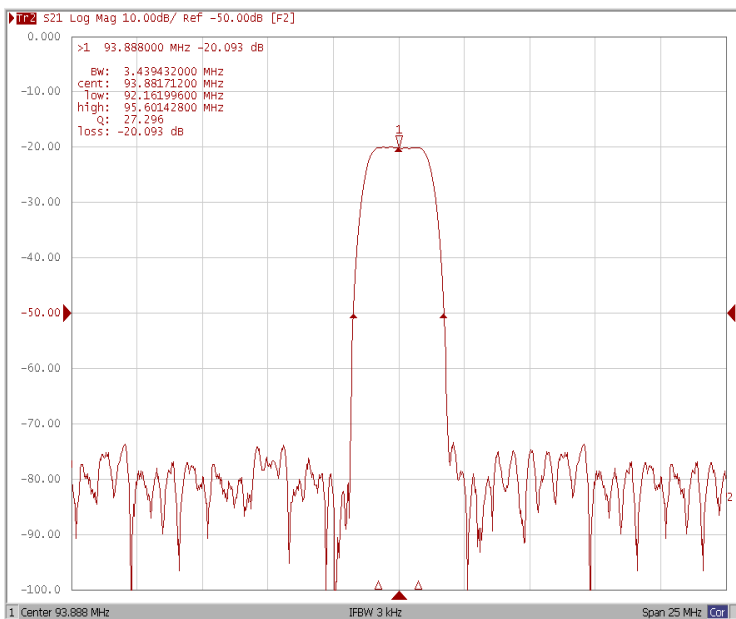
Bandwidth at -1.0 dB



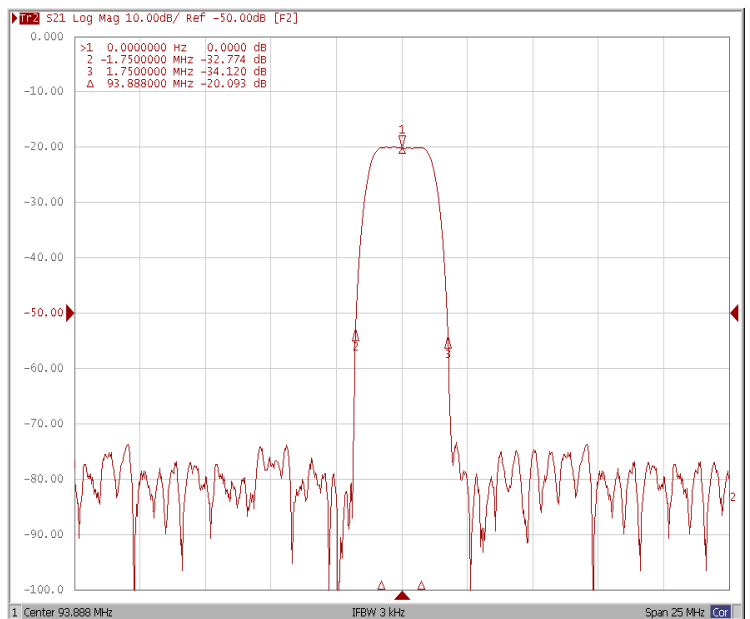
Bandwidth at -3.0 dB



Bandwidth at -30.0 dB



Relative Attenuation Fo ±1.75MHz

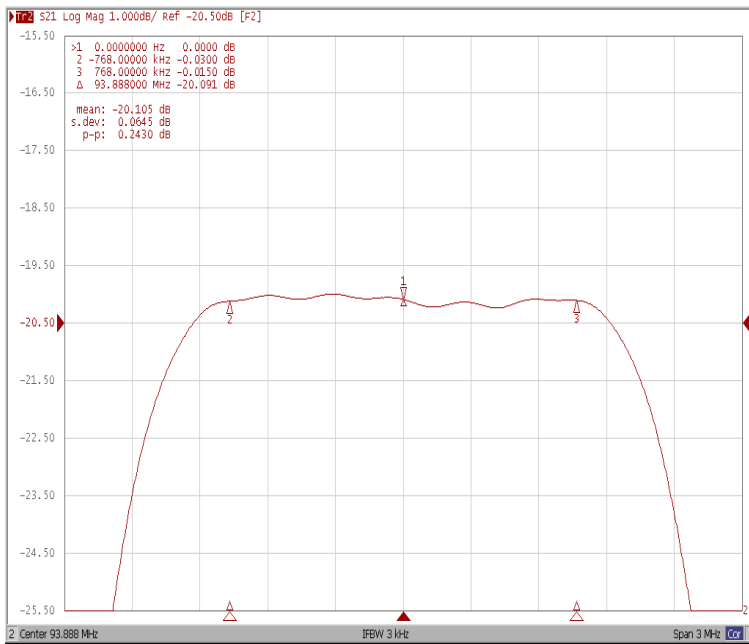




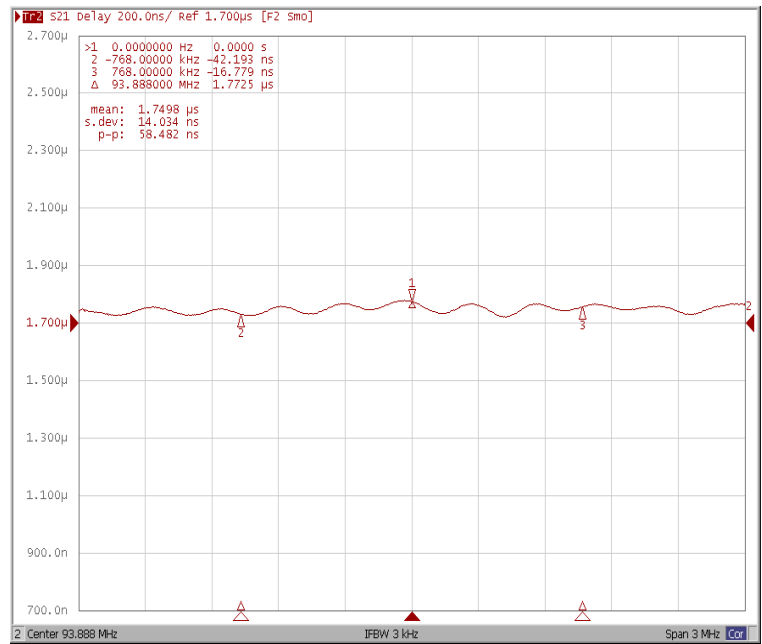
Frequency Characteristics

Frequency Response

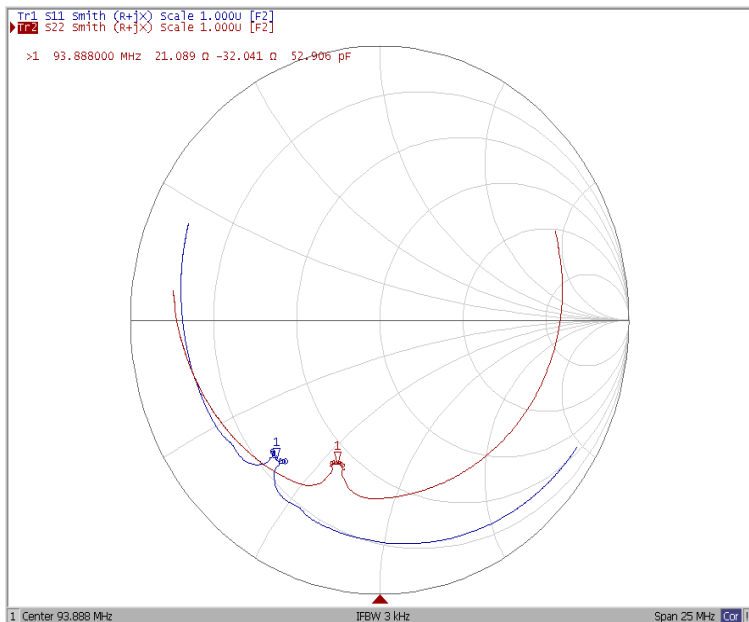
Ripple Variation Fo±0.768MHz



Group Delay Variation Fo±0.768MHz



Smith Chart



VSWR

