



Total Solution Provider in Saw Device

SA09316AD1

93.75MHz IF SAW Filter
16.15MHz Bandwidth
Revision 0: 19. August. 2010



- 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	-	+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	D1			
Length x Width	mm ²	-	20.0 x 9.8	-
Height	mm	-	-	1.8

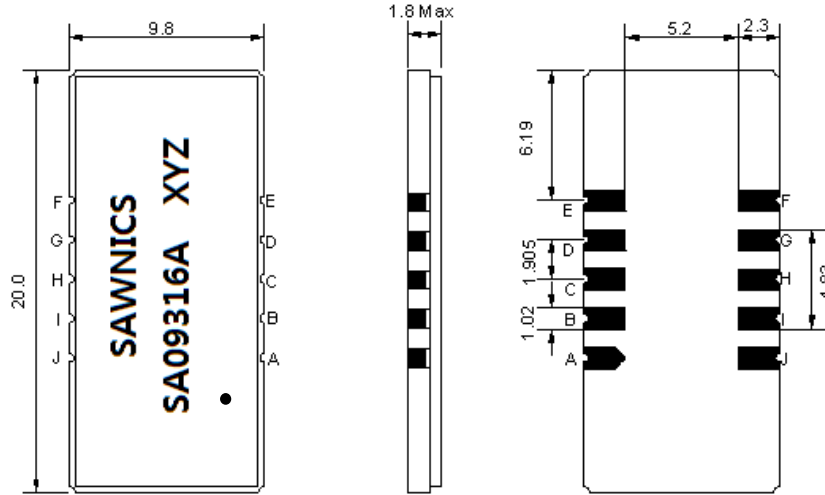
Electrical Specification

Parameters Description	Unit	Minimum	Typical	Maximum
Center Frequency (Fo)	MHz	-	93.75	-
Insertion Loss at Fo	dB	-	21.20	23.00
Group Delay Variation at Fo ± 7.48 MHz	nsec	-	37	70
Absolute Delay at Fo	usec	-	1.97	2.10
Passband Ripple Variation at Fo ± 7.48 MHz	dB	-	0.50	1.00
Bandwidth at -1dB	MHz	-	16.15	-
Bandwidth at -3dB	MHz	-	16.52	-
Bandwidth at -40dB	MHz	-	18.06	-
Ultimate Rejection	dB	50	55	-
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.

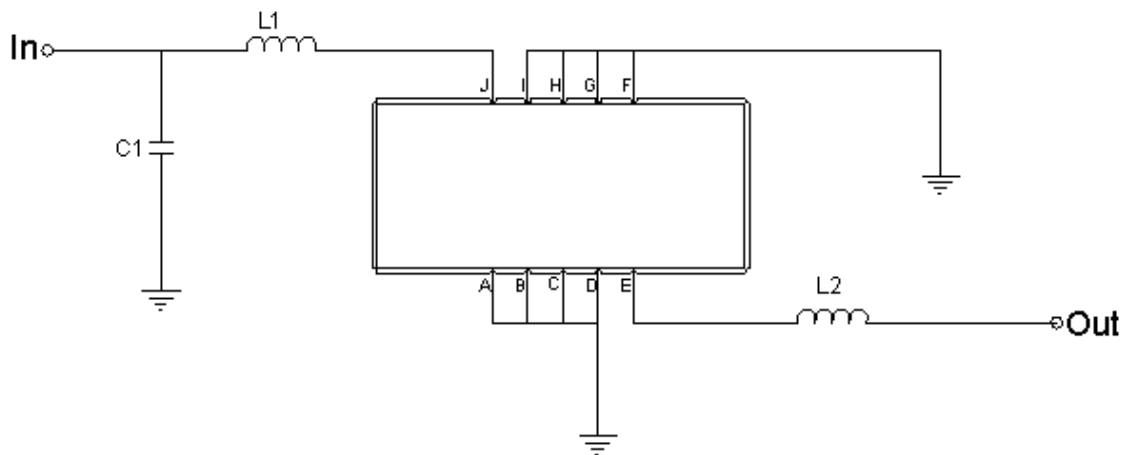
Package Dimensions



- ① SAWNICS: Brand
- ② SA09316A: 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



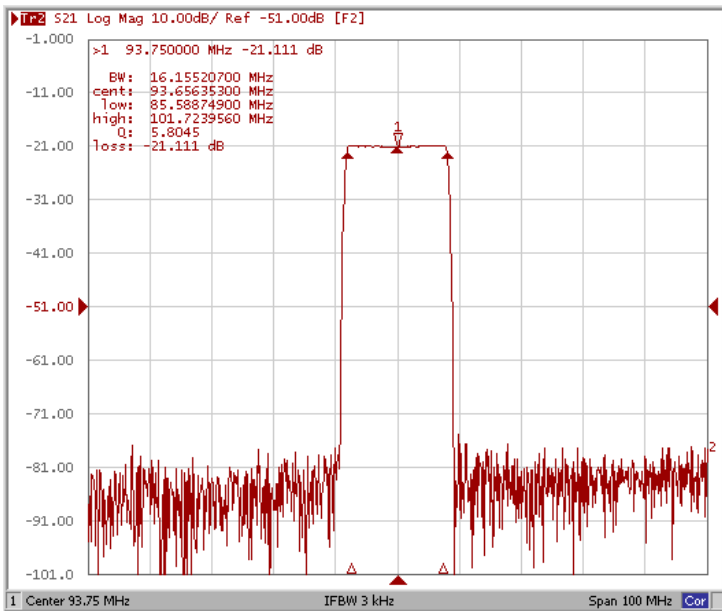
Test Fixture & Values	
Input	L1 = 56 nH, C1 = 36 pF
Output	L2 = 68 nH,
Source/Load Impedance	50 Ω



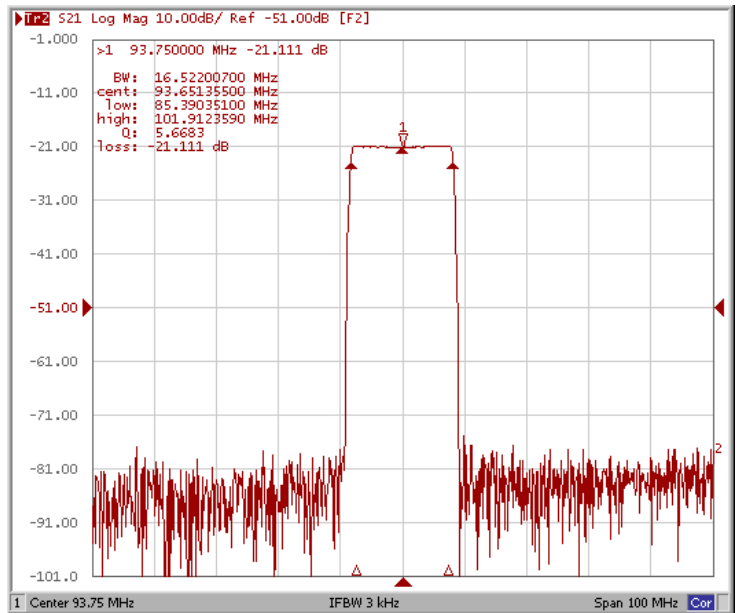
□ Frequency Characteristics

Frequency Response

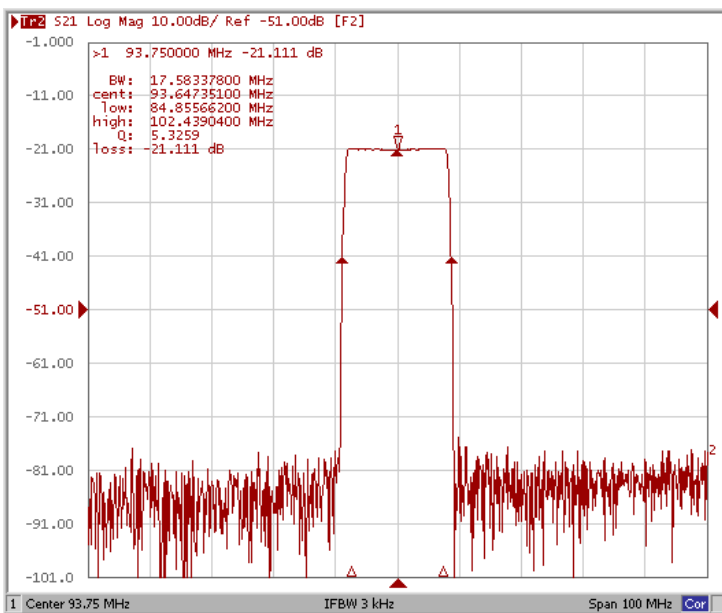
Bandwidth at -1.0 dB



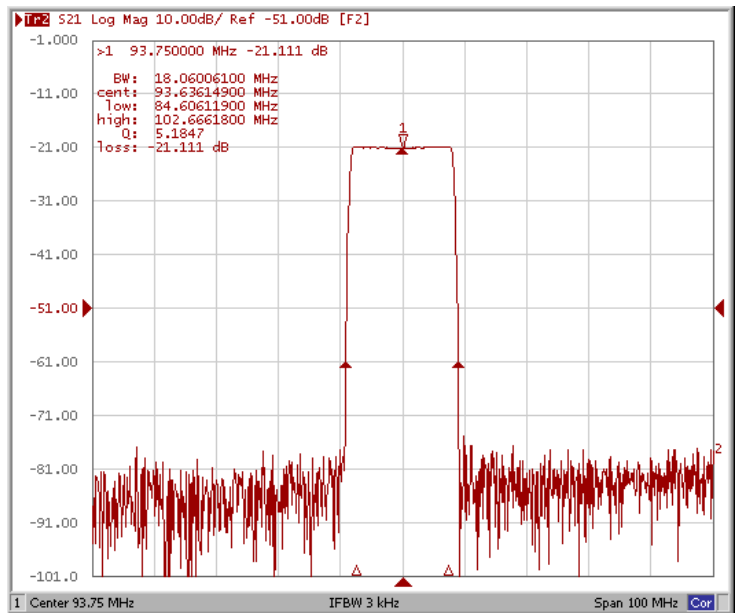
Bandwidth at -3.0 dB



Bandwidth at -20.0 dB



Bandwidth at -40.0 dB

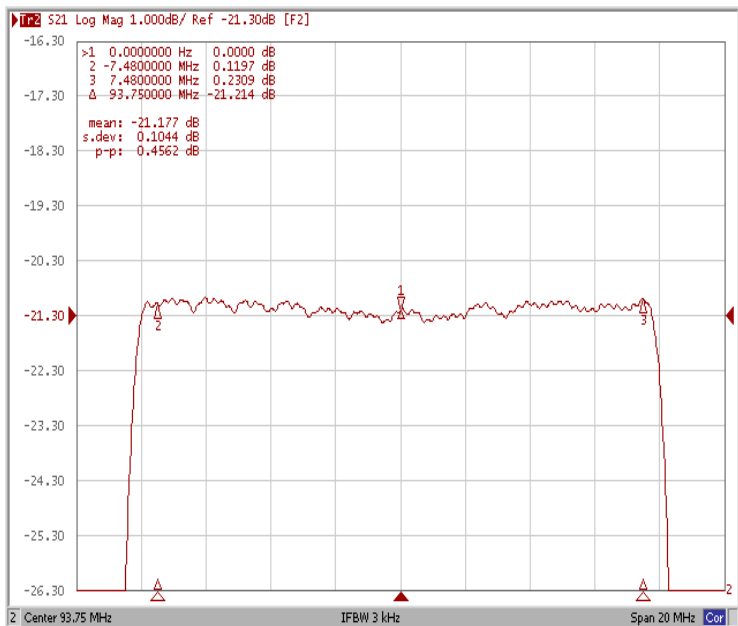




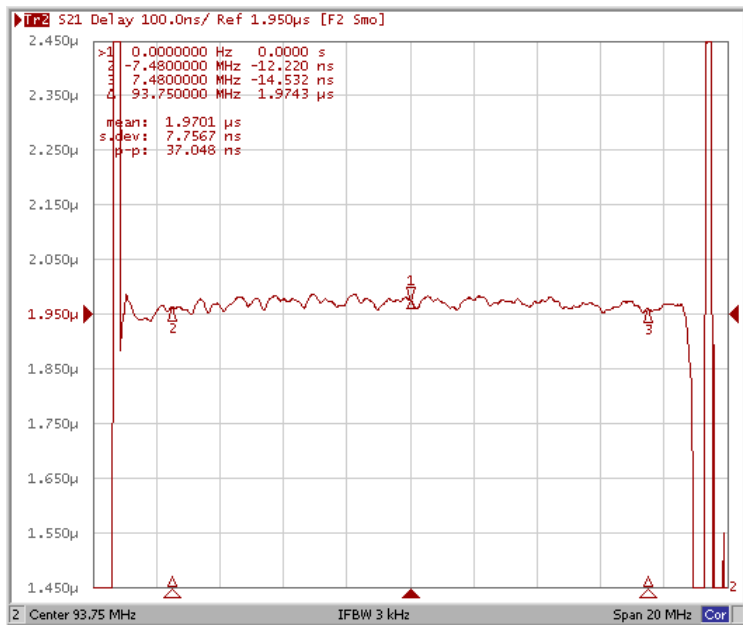
Frequency Characteristics

Frequency Response

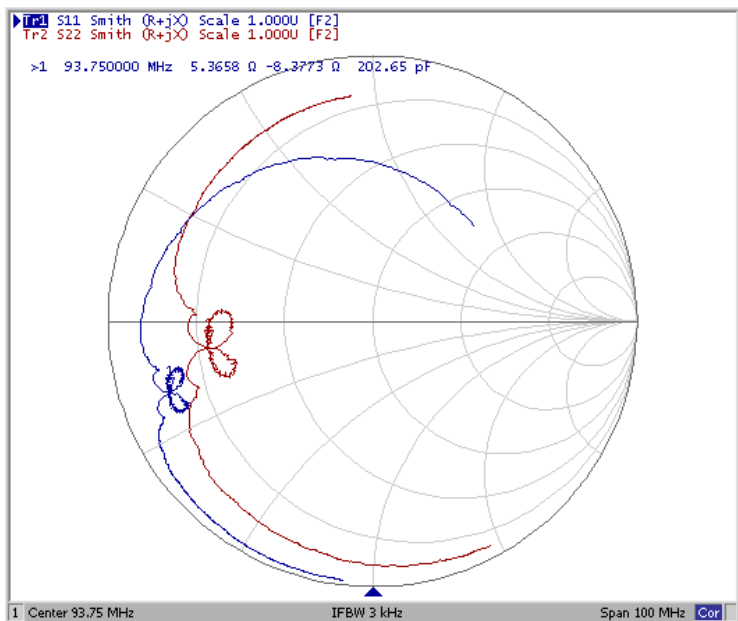
Ripple Variation Fo±7.48MHz



Group Delay Variation Fo±7.48MHz



Smith Chart



VSWR

