



*Total Solution Provider in Saw Device*

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# SA09329BD1

93.75MHz IF SAW Filter  
30.12MHz Bandwidth  
Revision 0: 04. November. 2010



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

### Maximum Ratings

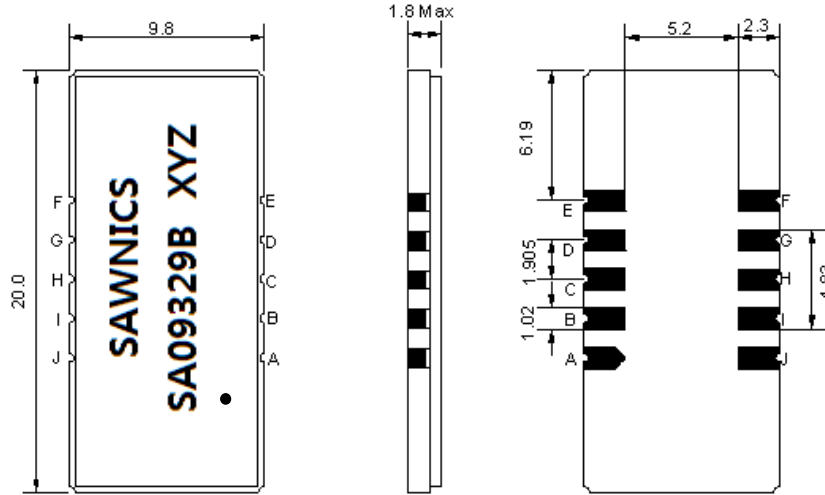
Parameters Description	Unit	Minimum	Typical	Maximum
Operation Temperature Range	°C	-30	-	+70
Storage Temperature Range	°C	-40	-	+85
Maximum DC Voltage	V	-	-	10
Maximum Input Power	dBm	-	-	10
Source Impedance (single ended) <sup>(1)</sup>	Ω	-	50	-
Load Impedance (single ended) <sup>(1)</sup>	Ω	-	50	-
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	-	93.75	-
Insertion Loss at Fo	dB	-	24.50	27.00
Group Delay Variation at Fo ± 14.22 MHz	nsec	-	26	70
Absolute Delay at Fo	usec	-	1.96	2.10
Passband Ripple Variation at Fo ± 14.22 MHz	dB	-	0.50	1.00
Bandwidth at -1dB	MHz	29.95	30.12	-
Bandwidth at -3dB	MHz	-	30.51	-
Bandwidth at -40dB	MHz	-	31.00	31.15
Ultimate Rejection	dB	50	53	-
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.

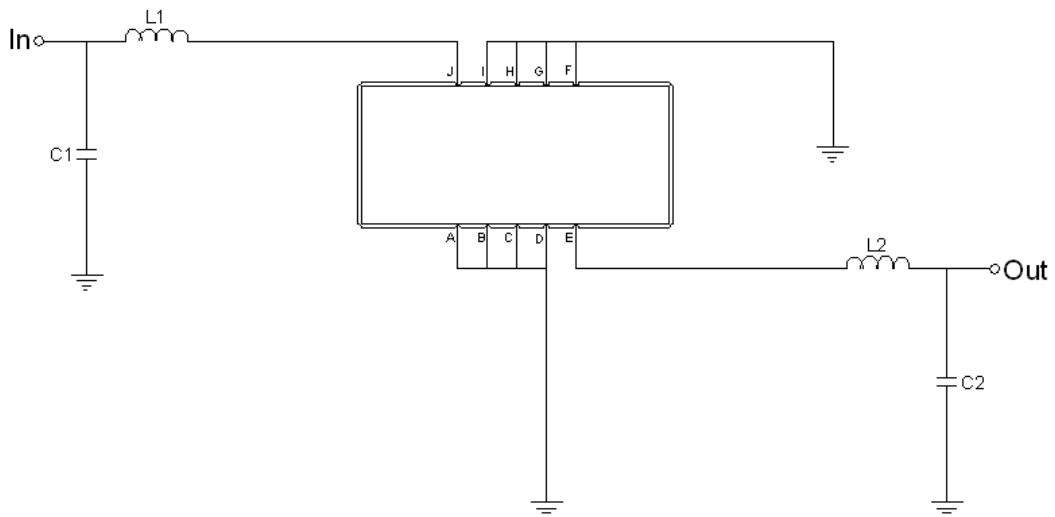
### Package Dimensions



- ① SAWNICS: Brand
- ② SA09329B: 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



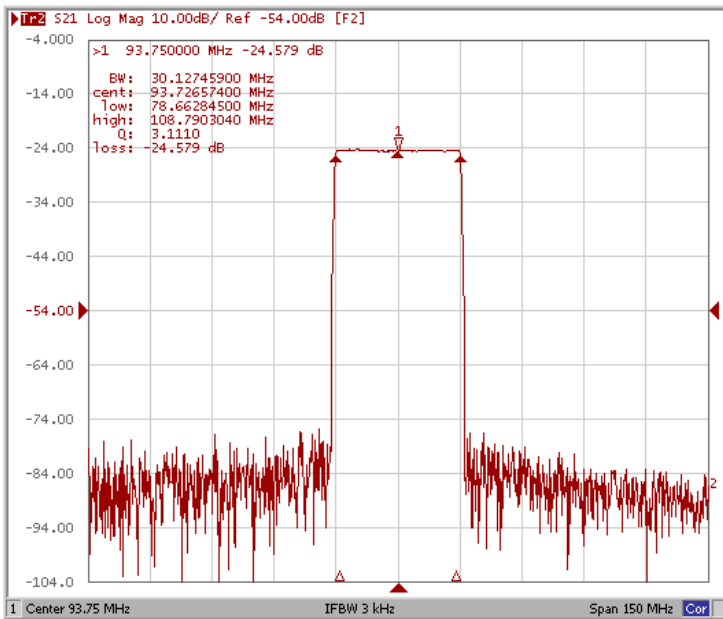
Test Fixture & Values	
Input	L1 = 120 nH, C1=18 pF
Output	L2 = 120 nH, C1=18 pF
Source/Load Impedance	50 Ω



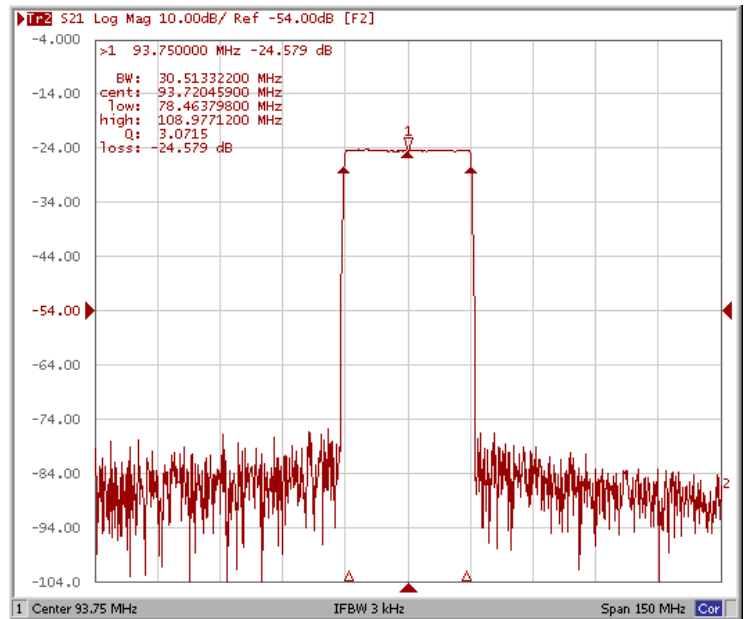
## Frequency Characteristics

### Frequency Response

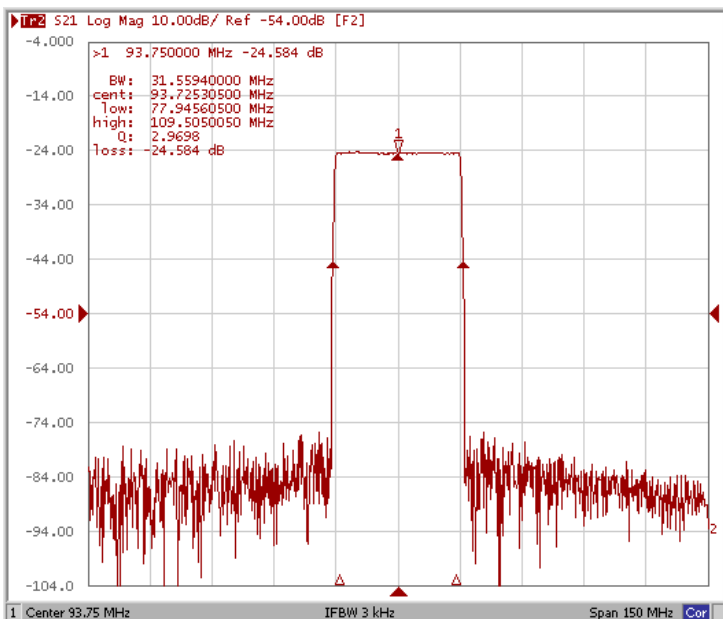
Bandwidth at -1.0 dB



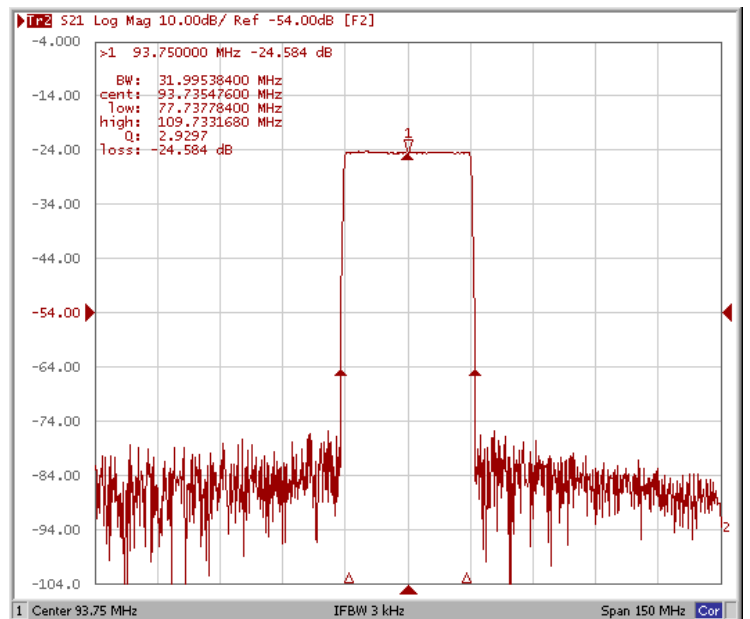
Bandwidth at -3.0 dB



Bandwidth at -20.0 dB



Bandwidth at -40.0 dB

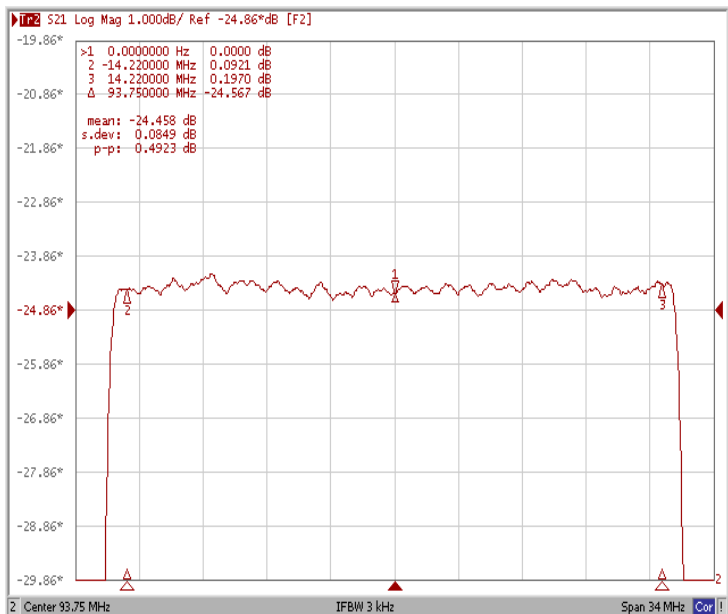




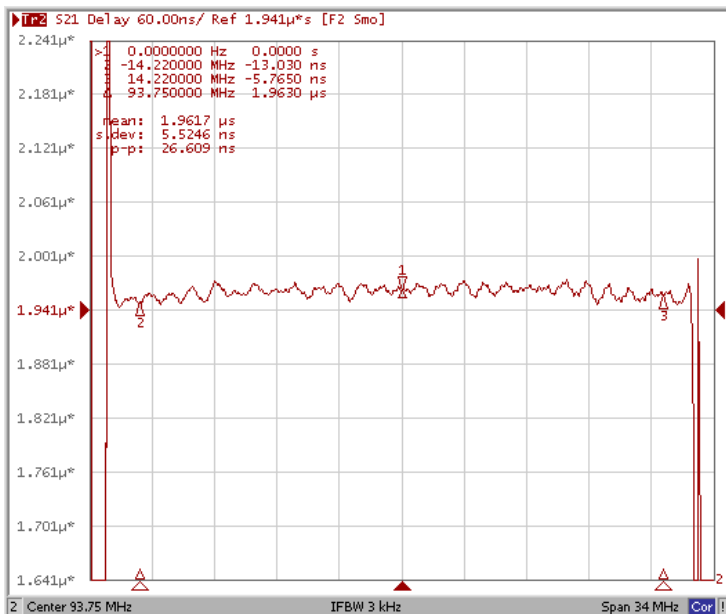
## Frequency Characteristics

### Frequency Response

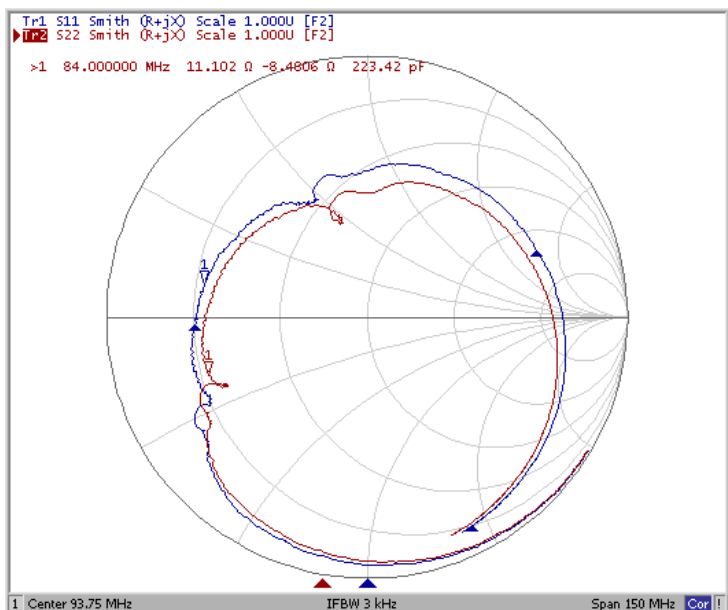
Ripple Variation  $F_o \pm 14.22\text{MHz}$



Group Delay Variation  $F_o \pm 14.22\text{MHz}$



Smith Chart



VSWR

