



*Total Solution Provider in Saw Device*

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# SA09029AV

90.0 MHz IF SAW Filter  
29.46 MHz Bandwidth  
Revision 0: 07. October. 2010

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- 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	-	25	-
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

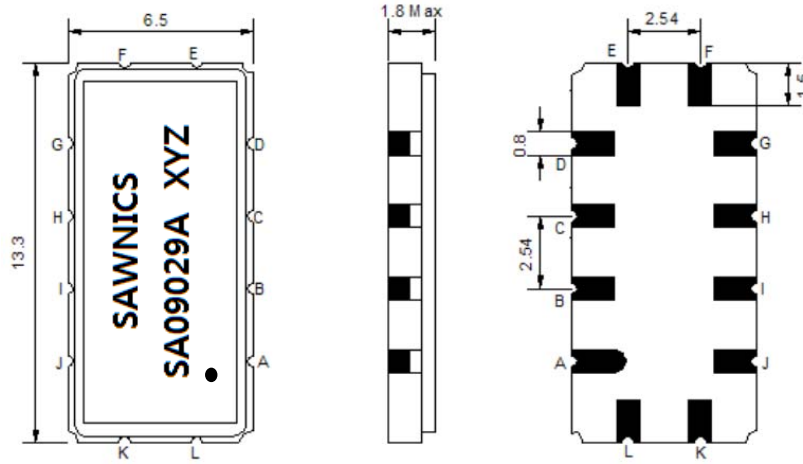
### Electrical Specification

Parameters Description	Unit	Minimum	Typical	Maximum
Center Frequency (Fo)	MHz	-	90.0	-
Insertion Loss at Fo	dB	-	25.00	27.00
Group Delay Variation (Fo±14.32MHz)	nsec	-	26	70
Absolute Delay	usec	-	1.64	-
Passband Ripple (Fo±14.32MHz)	dB	-	0.55	1.00
Bandwidth at -1dB	MHz	29.20	29.46	-
Bandwidth at -3dB	MHz	-	29.97	-
Bandwidth at -40dB	MHz	-	31.96	32.10
Ultimate Rejection	dB	45	48	-
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.

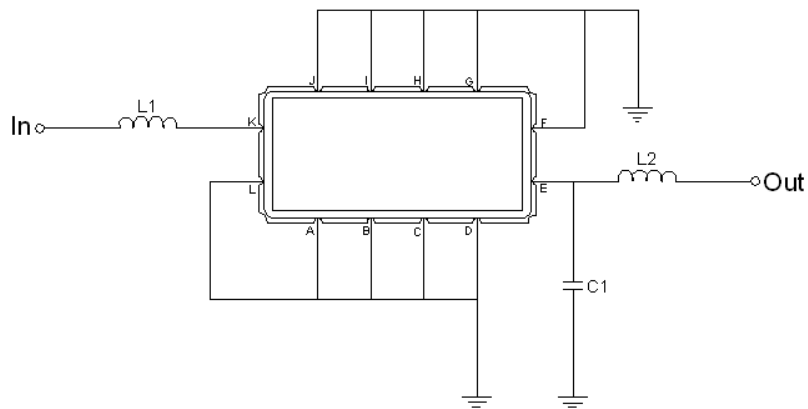
**□ Package Dimensions**



- ① SAWNICS: Brand
- ② SA09029A: 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**

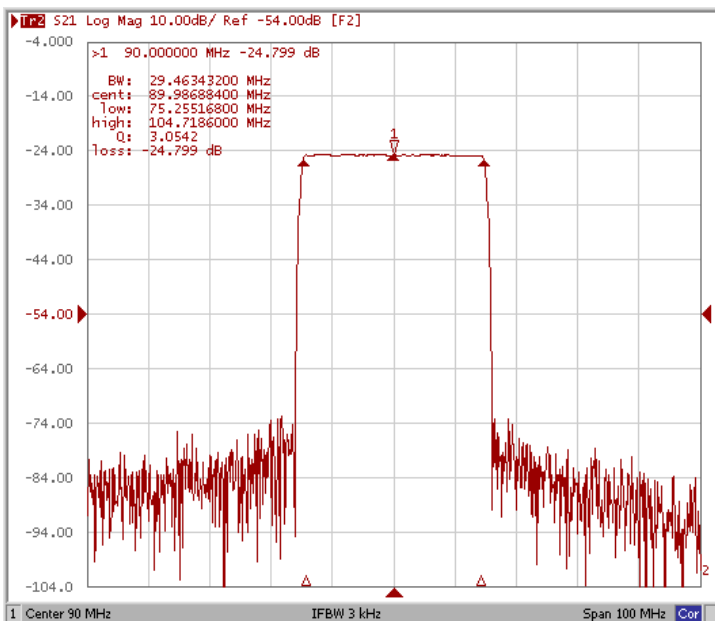


Test Fixture & Values	
Input	L1 = 150 nH
Output	L2 = 150 nH, C1 = 6 pF
Source/Load Impedance	50 Ω

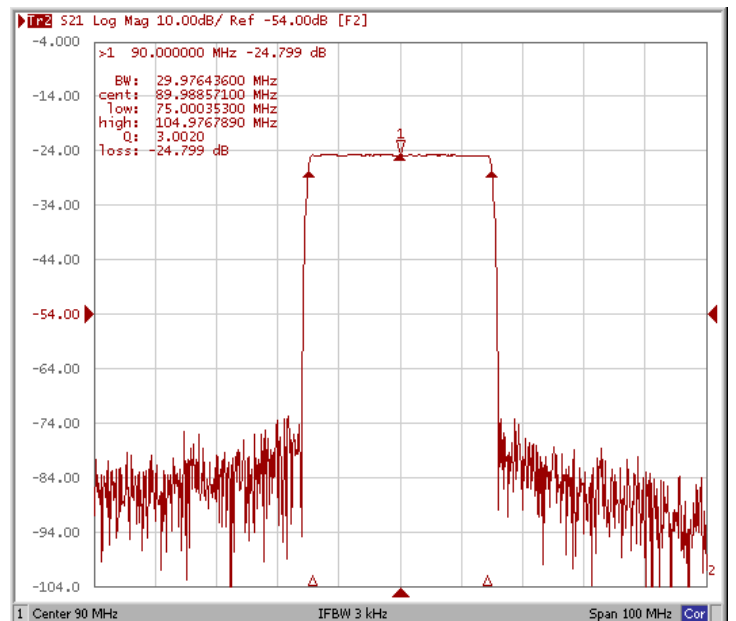
### □ Frequency Characteristics

#### Frequency Response

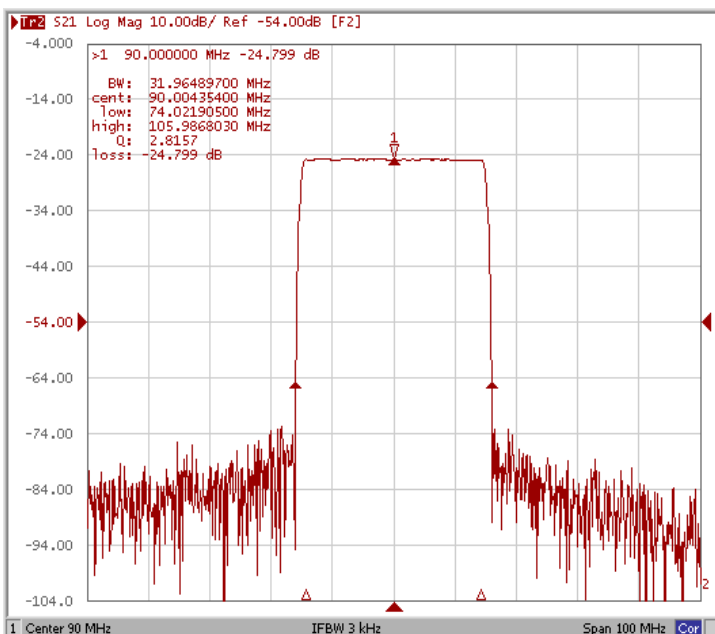
Bandwidth at -1.0 dB



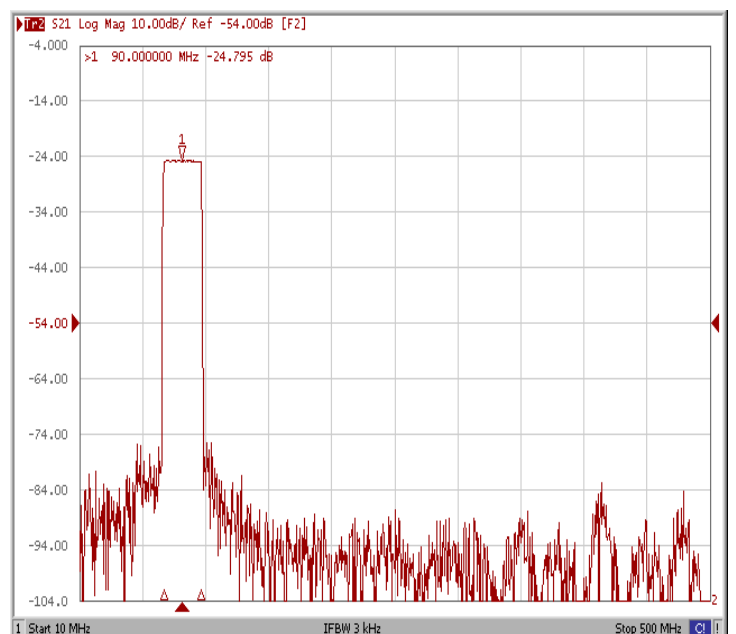
Bandwidth at -3.0 dB



Bandwidth at -40.0 dB



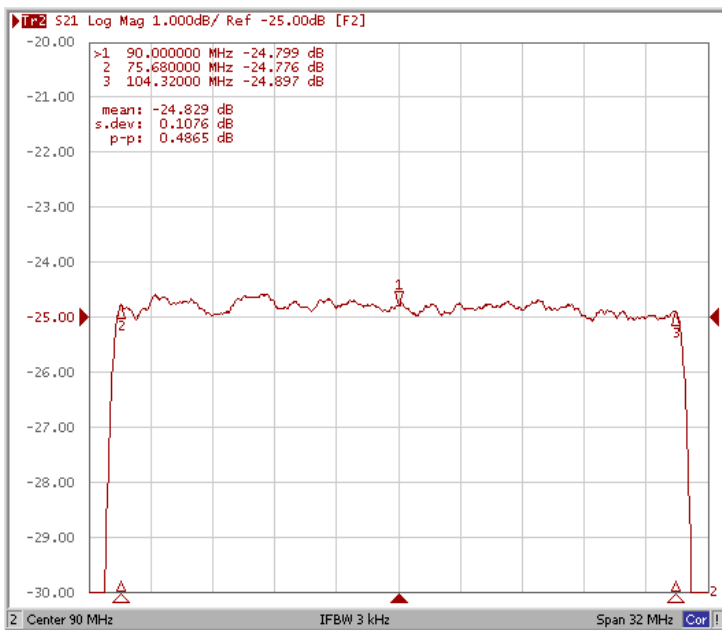
Wide Band



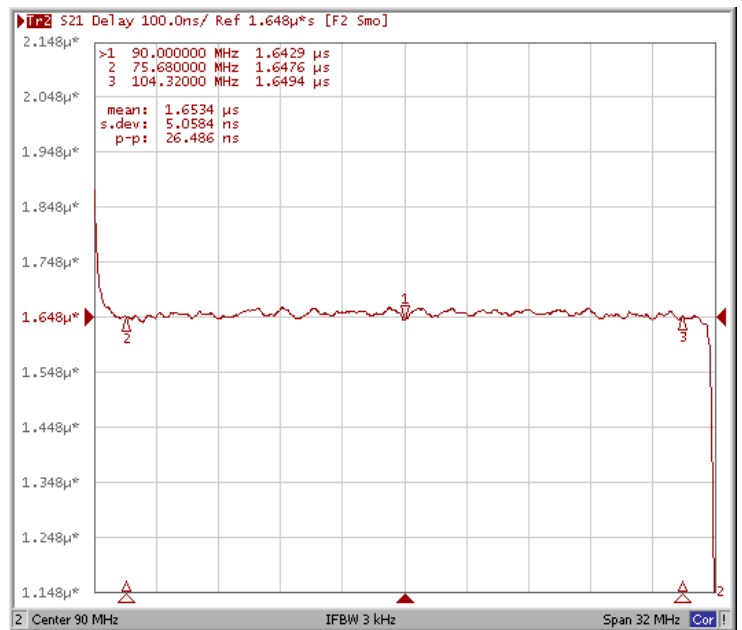
### Frequency Characteristics

#### Frequency Response

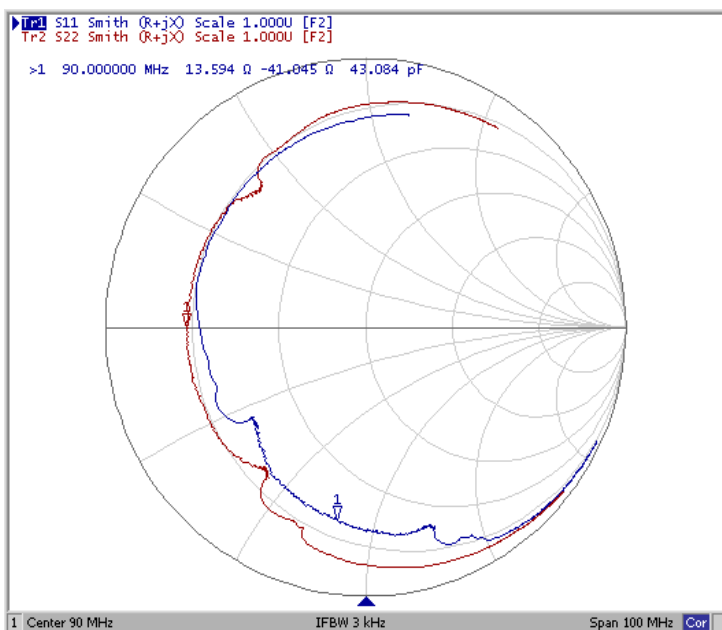
Ripple Variation  $Fo \pm 14.32\text{MHz}$



Group Delay Variation  $Fo \pm 14.32\text{MHz}$



Smith Chart



VSWR

