



*Total Solution Provider in Saw Device*

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# SF-004901-S90

49.785 MHz IF SAW Filter

20.85 MHz Bandwidth

Revision 0: 27. November. 2012



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

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## □ Electrical Characteristics

### Maximum Ratings

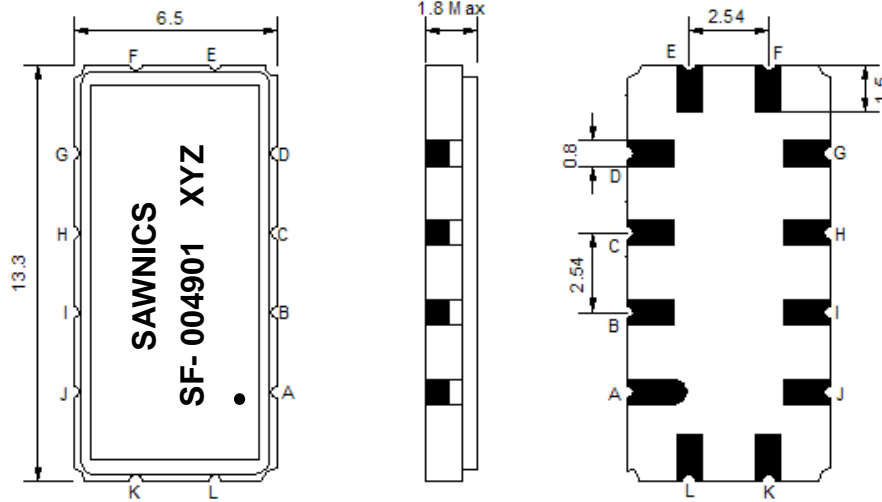
Parameters Description	Unit	Minimum	Typical	Maximum
Operation Temperature Range	°C	-	25	-
Storage Temperature Range	°C	-40	-	85
Maximum DC Voltage	V	-	-	10
Maximum Input Power	dBm	-	-	10
Source Impedance (single ended) <sup>(1)</sup>	Ω	-	50	-
Load Impedance (single ended) <sup>(1)</sup>	Ω	-	50	-
Package type & size	S90			
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	-	49.785	-
Insertion Loss at Fo	dB	-	16.5	18.5
Group Delay Variation at Fo ± 9.535 MHz	nsec	-	30	60
Absolute Delay at Fo	usec	-	0.98	1.0
Passband Ripple Variation at Fo ± 9.535 MHz	dB	-	0.35	1.00
Bandwidth at -1dB	MHz	20.40	20.85	-
Bandwidth at -3dB	MHz	-	21.75	-
Bandwidth at -40dB	MHz	-	26.50	27.00
Ultimate Rejection	dB	40	45	-
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.

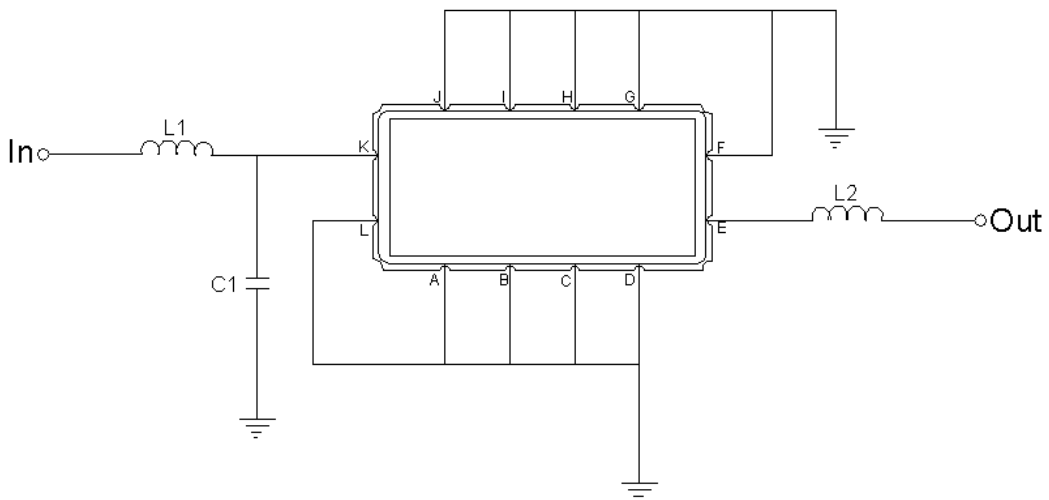
### Package Dimensions



- ① SAWNICS: Brand
- ② SF-004901: 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 = 180nH, C1=0.75pF
Output	L2 = 120nH,
Source/Load Impedance	50 Ω

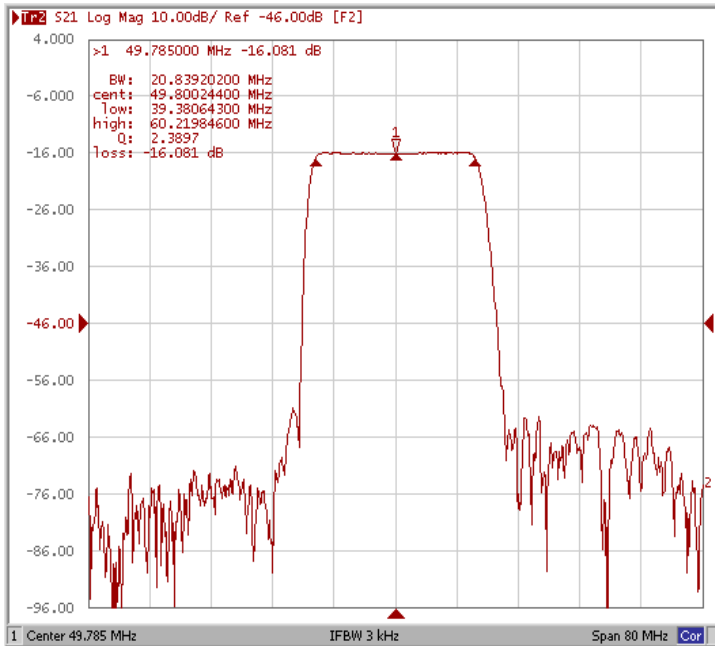


## □ Frequency Characteristics

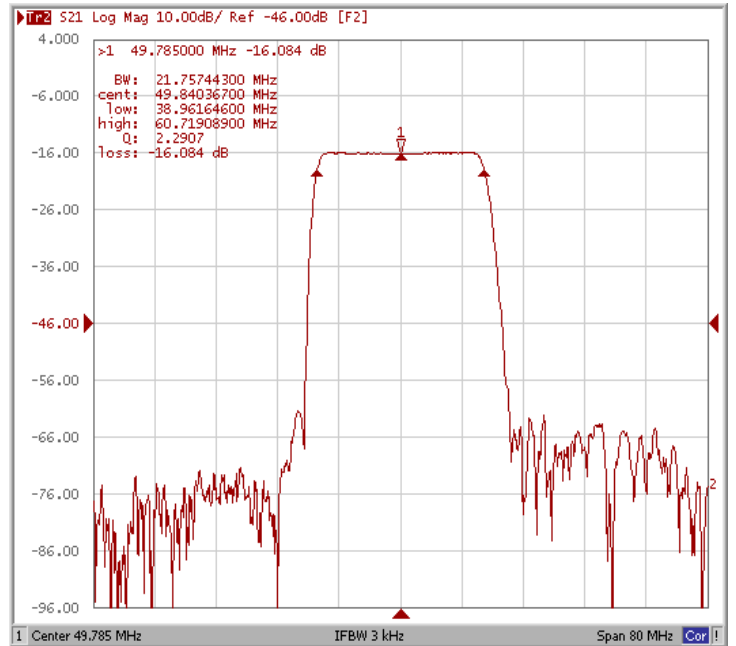
### Frequency Response

Operating Temperature : +25 °C

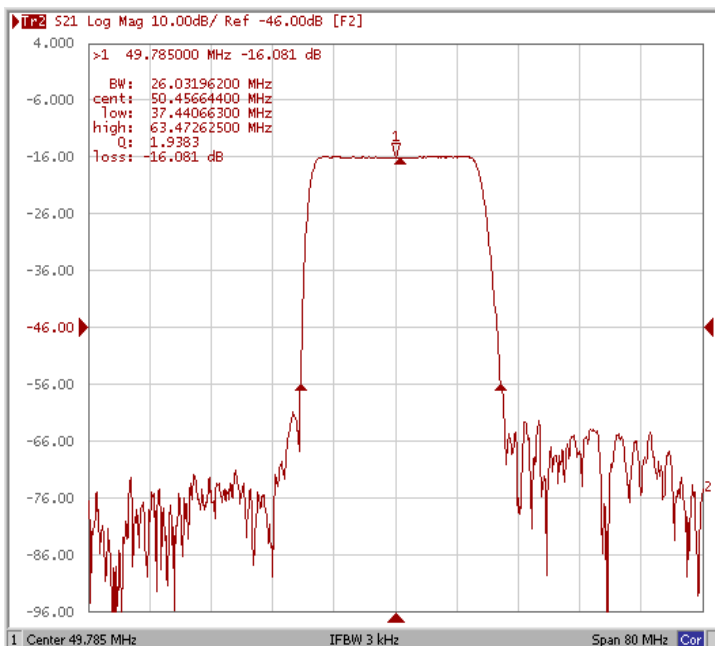
Bandwidth at -1.0 dB



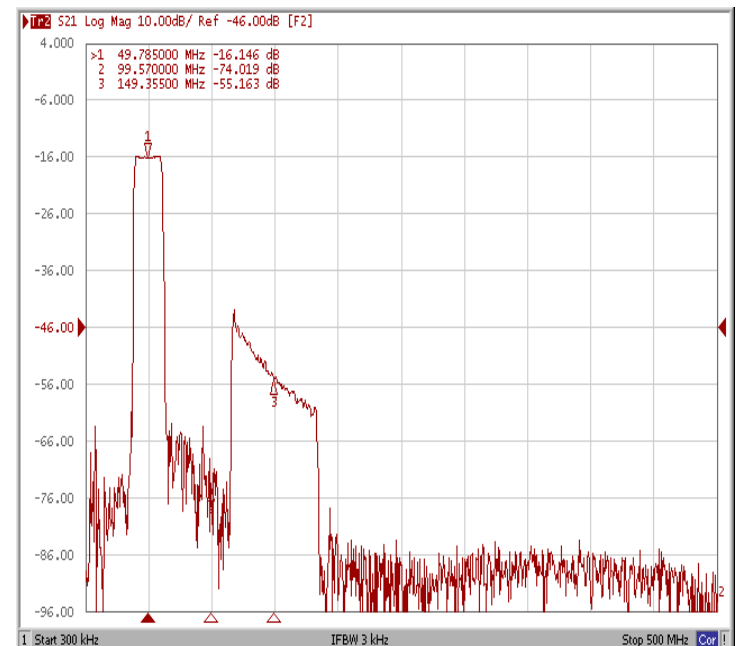
Bandwidth at -3.0 dB



Bandwidth at -40 dB



Wide-Band

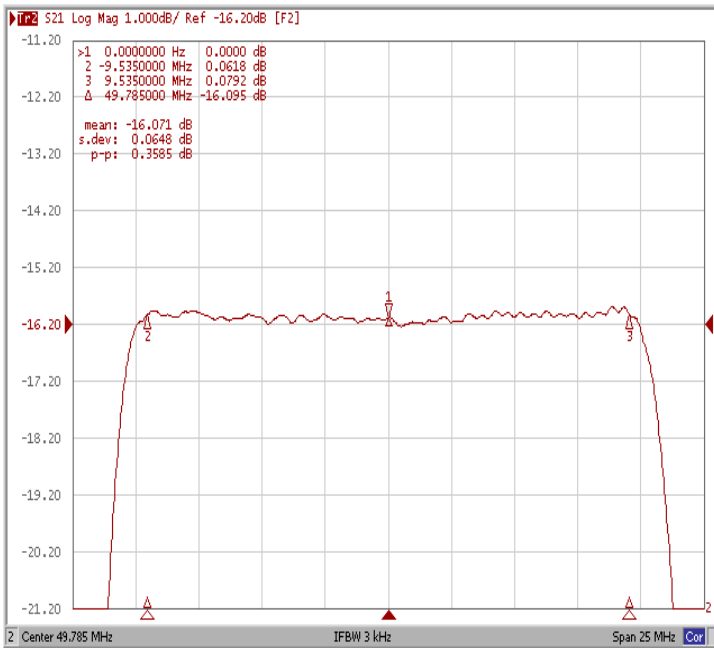




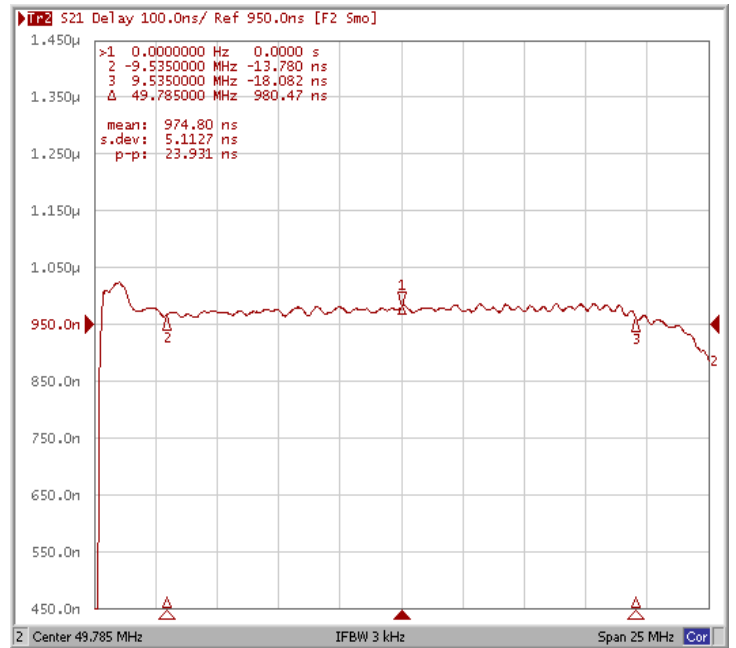
### Frequency Characteristics

#### Frequency Response

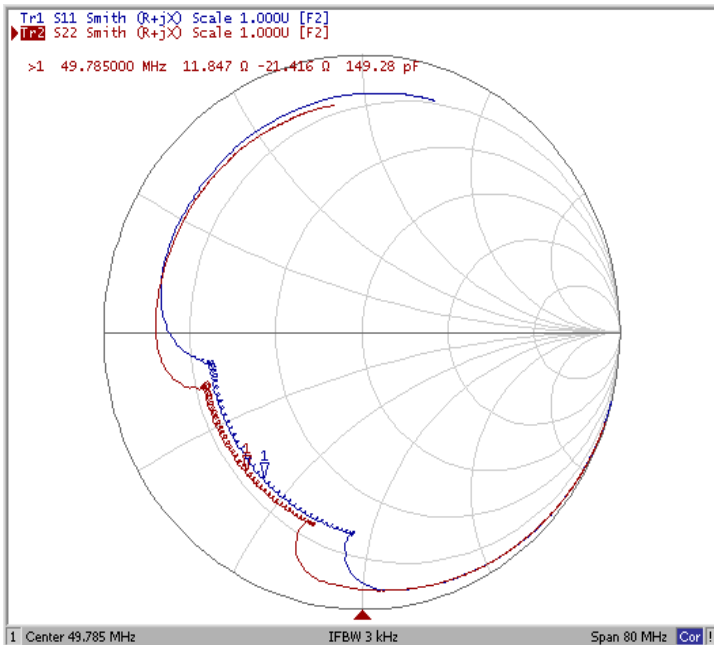
Ripple Variation Fo±9.535MHz



Group Delay Variation Fo±9.535MHz



Smith Chart



VSWR

