



*Total Solution Provider in Saw Device*

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# SA12019AV

120.0 MHz IF SAW Filter  
19.9 MHz Bandwidth  
Revision 0: 21. NOV. 2007



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

### Maximum Ratings

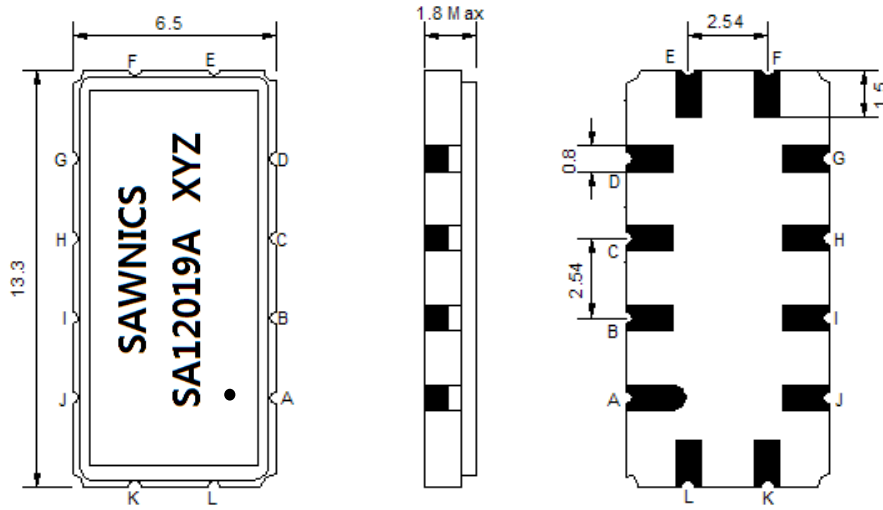
Parameters Description	Unit	Minimum	Typical	Maximum
Operation Temperature Range	°C	-40	-	85
Storage Temperature Range	°C	-45	-	85
Maximum DC Voltage	V	-	-	10
Maximum Input Power	dBm	-	-	10
Source Impedance (single ended) <sup>(1)</sup>	Ω	-	50	-
Load Impedance (single ended) <sup>(1)</sup>	Ω	-	50	-
Package 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	-	120.00	-
Insertion Loss at Fo	dB	-	20.20	22.0
Group Delay Variation (Fo±9.22MHz)	ns	-	35	80
Absolute Delay	us	-	1.52	-
Passband Ripple (Fo±9.22MHz)	dB	-	0.62	1.00
Bandwidth at -1dB	MHz	-	19.44	-
Bandwidth at -3dB	MHz	19.60	19.90	-
Bandwidth at -40dB	MHz	-	21.70	22.00
Ultimate Rejection	dB	48	53	-
Relative Attenuation Fo±10.8MHz	dB	20	33	-
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.

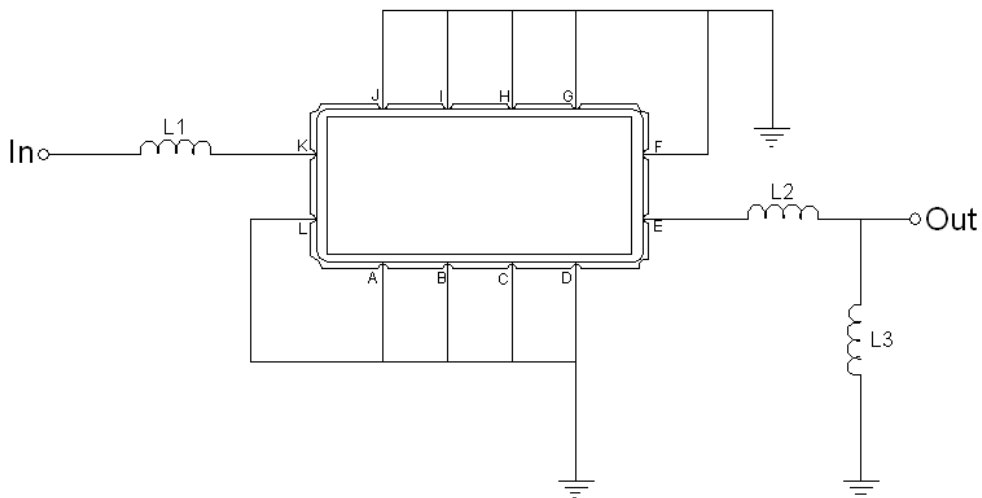
**Package Dimensions**



- ① SAWNICS: Brand
- ② SA12019A: 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**

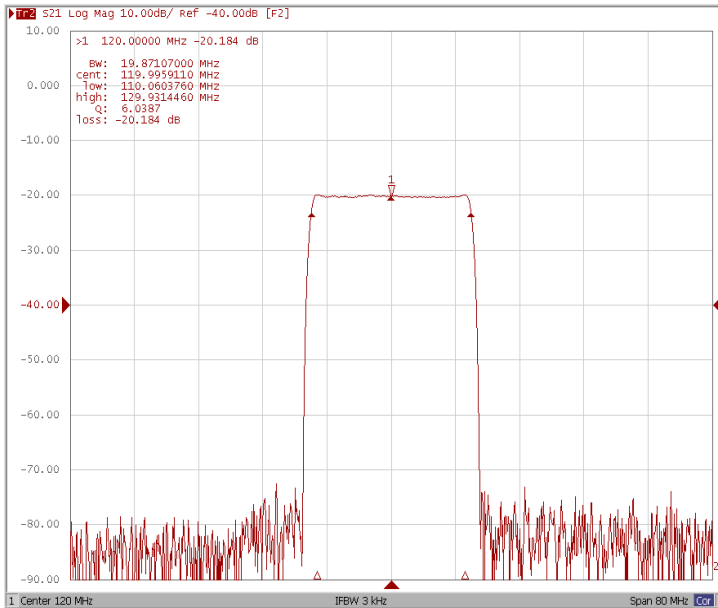


Test Fixture & Values	
Input	L1=68 nH
Output	L2=2.7nH, L3=68nH
Source/Load Impedance	50 Ω

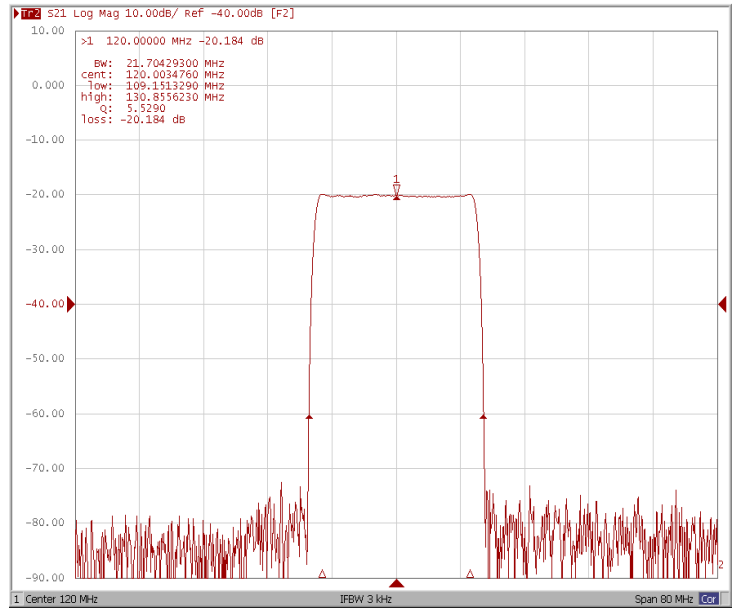
### □ Frequency Characteristics

#### Frequency Response

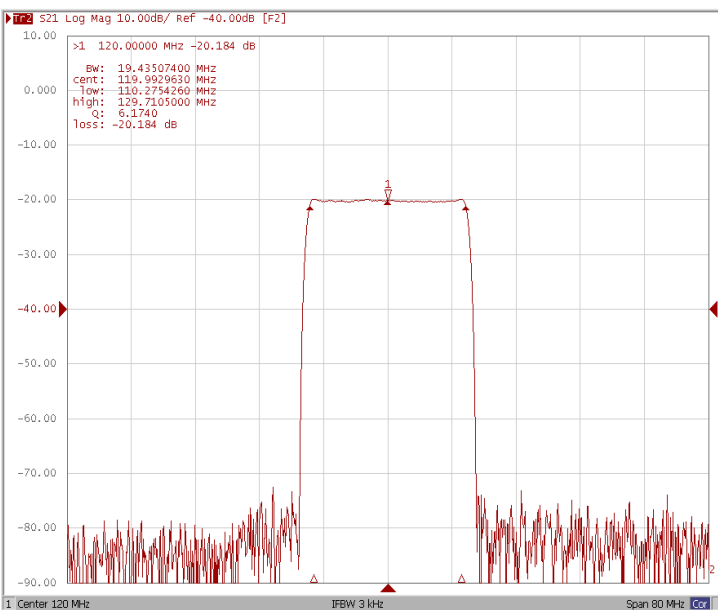
**Bandwidth at -3.0 dB**



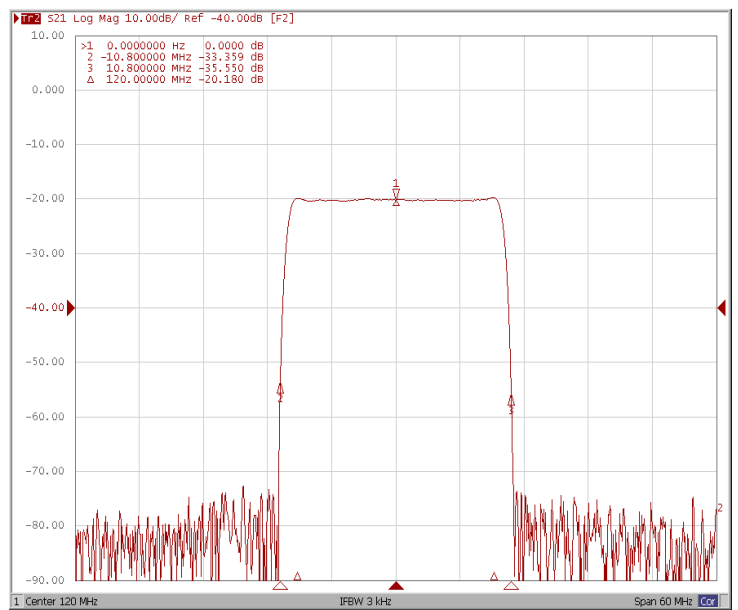
**Bandwidth at -40.0 dB**



**Bandwidth at -1.0 dB**



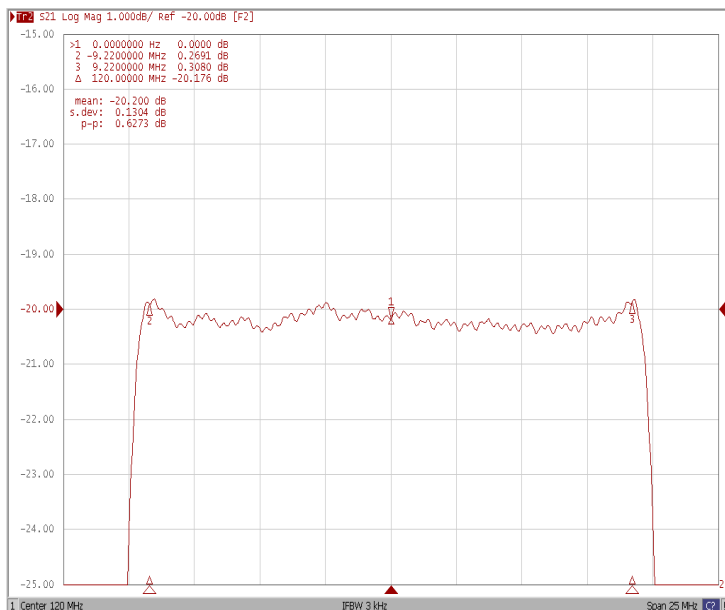
**Relative Attenuation  $F_o \pm 10.8$  MHz**



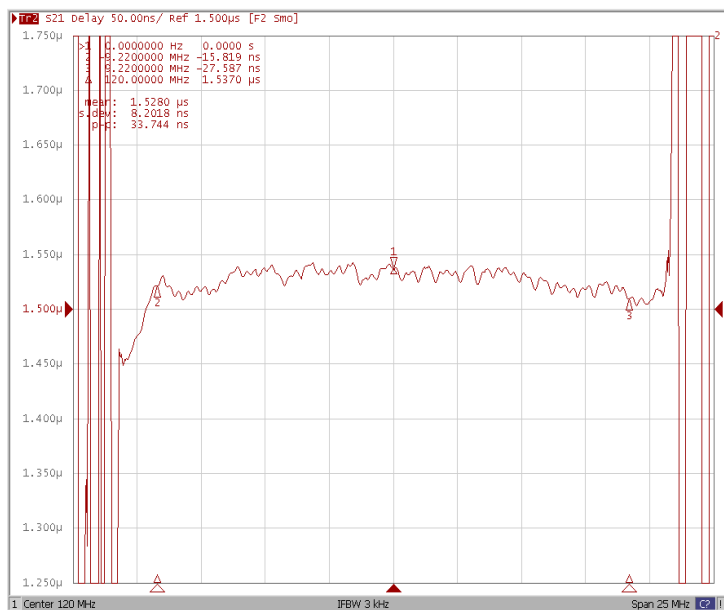
### Frequency Characteristics

#### Frequency Response

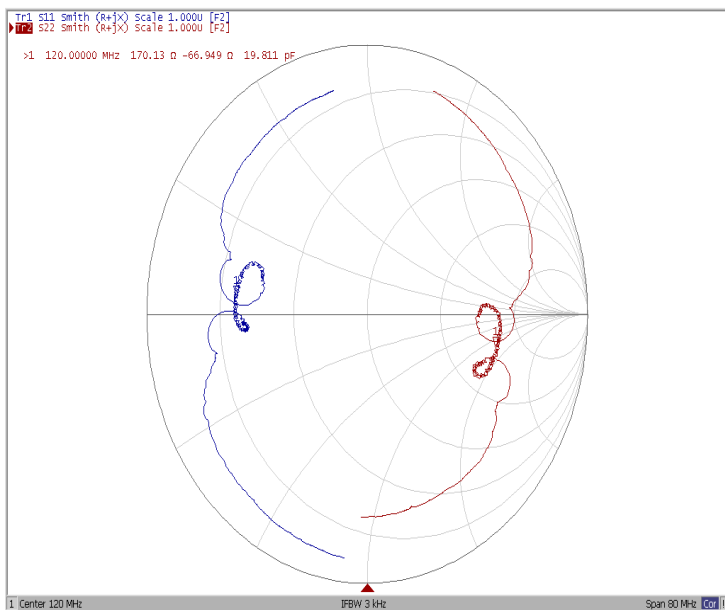
Ripple Variation



Group Delay Variation



Smith Chart



VSWR

