



*Total Solution Provider in Saw Device*

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# SA12011BV

120.0MHz IF SAW Filter  
11.47MHz Bandwidth  
Revision 0 : 6. March. 2008



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

### Maximum Ratings

Parameters Description	Unit	Minimum	Typical	Maximum
Operating Temperature Range	°C	+20	-	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	V			
Length x Width	mm <sup>2</sup>	-	13.3 x 6.5	-
Height	mm	-	-	1.8

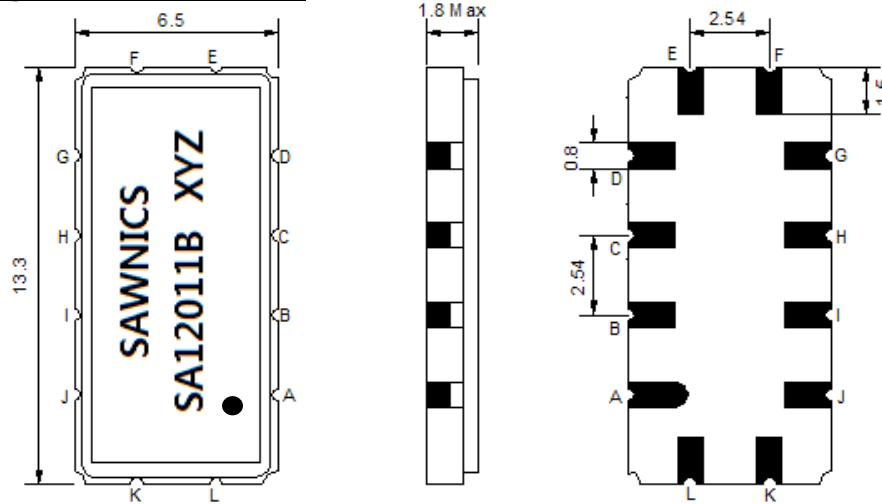
### Electrical Specification

Parameters Description	Unit	Minimum	Typical	Maximum
Center Frequency (Fo)	MHz	-	120.0	-
Insertion Loss at Fo	dB	-	25.4	27.0
Temperature Coefficient	ppm/°C	-	-18	-
Amplitude Ripple within fo ±5.5 MHz	dB <sub>p-p</sub>	-	0.45	1.0
Group Delay Variation within fo ±5.5 MHz	nsec	-	30	70
Absolute Delay at Fo	µsec	-	2.16	-
Bandwidth at -1.0 dB	MHz	11.00	11.47	-
Bandwidth at -3.0 dB	MHz	-	12.10	-
Bandwidth at -40.0 dB	MHz	-	14.57	-
<b>Relative Attenuation:</b>				
Fo ±7.5 MHz	dB	45	50	
Lower Sidelobe	dB	50	55	-
Upper Sidelobe	dB	50	55	-

**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.

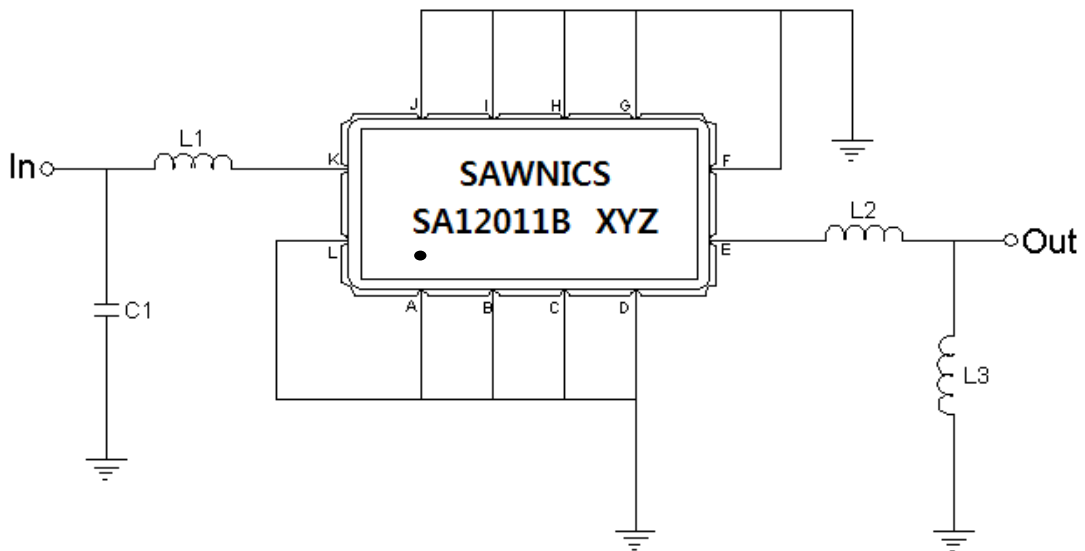
### Package Dimensions



- ① SAWNICS: Brand
- ② SA12011B: 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

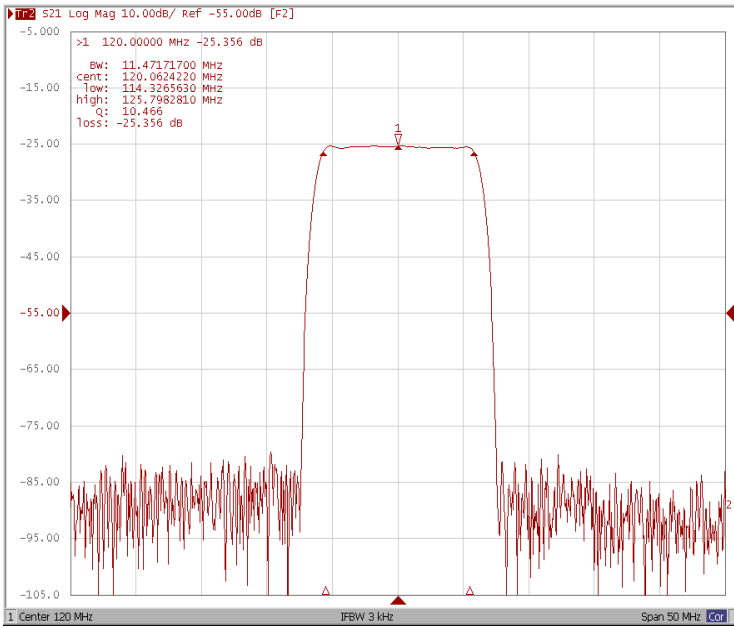


Test Fixture & Values	
Input	L1=82nH, C1=14pF
Output	L2=33nH, L3=39nH
Source/Load Impedance	50 Ω

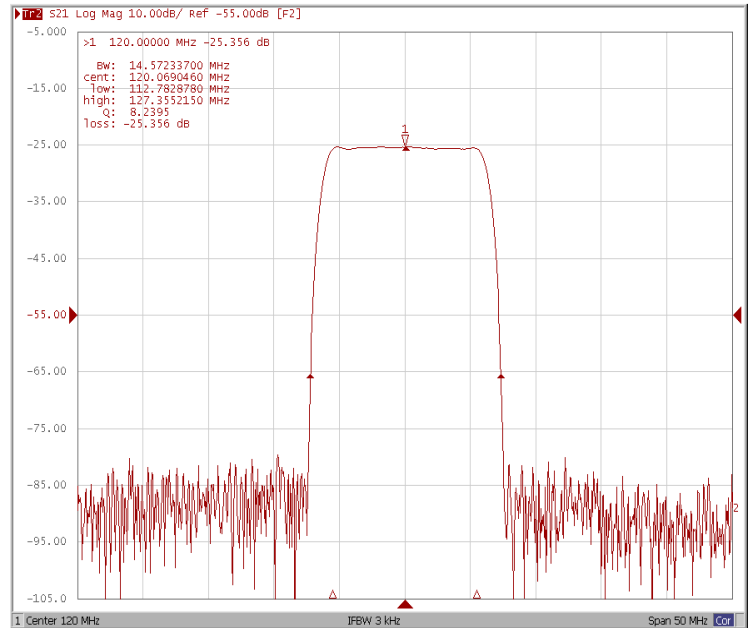
### Frequency Characteristics

#### Frequency Response

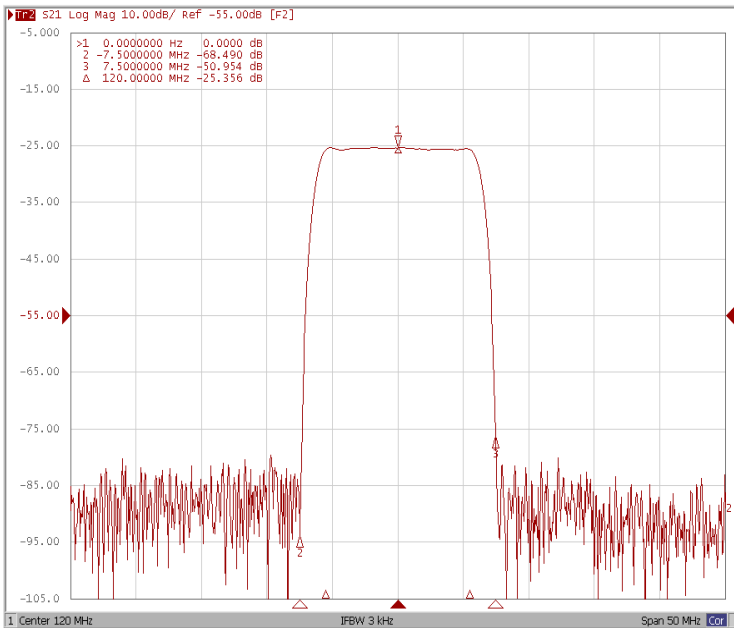
Bandwidth at -1.0 dB



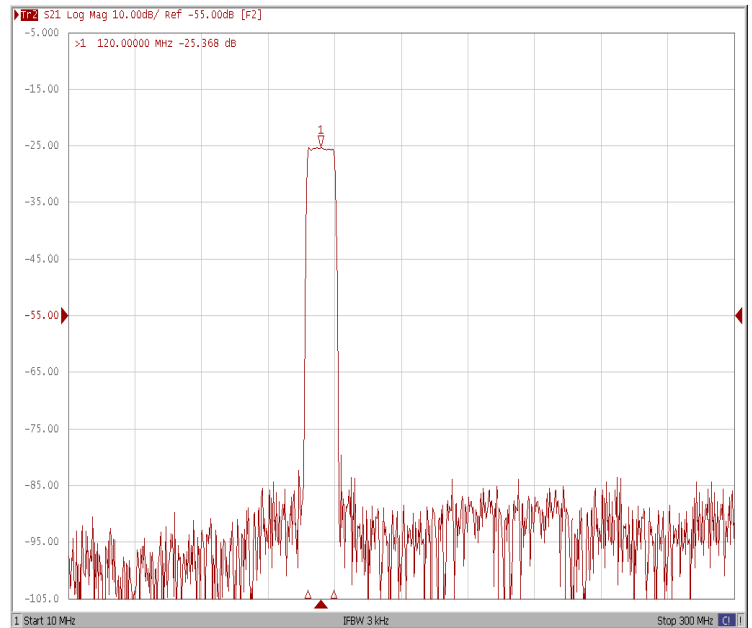
Bandwidth at -40.0 dB



Attenuation  $F_o \pm 7.5$  MHz



Wide-Band

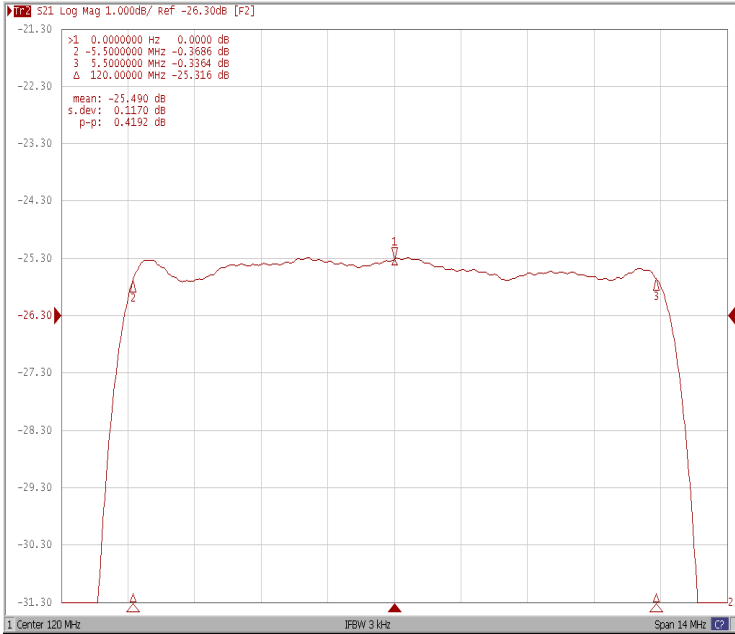




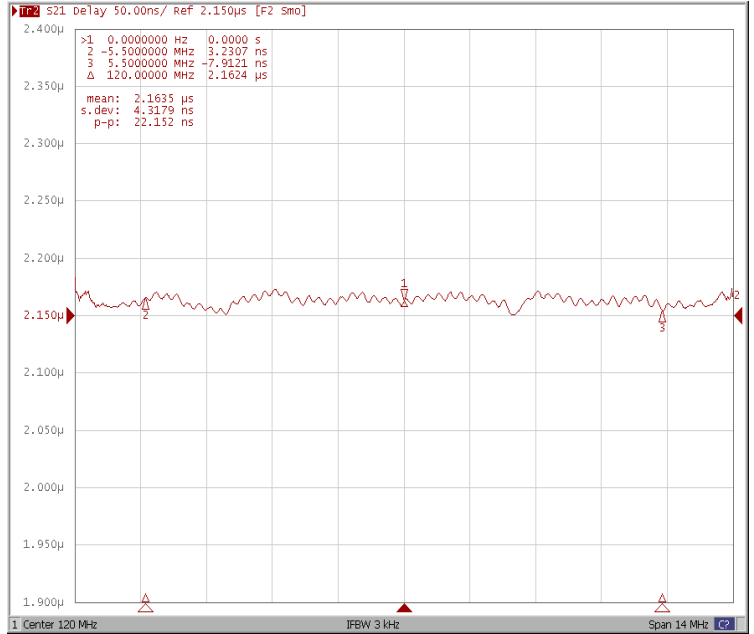
# Frequency Characteristics

## Frequency Response

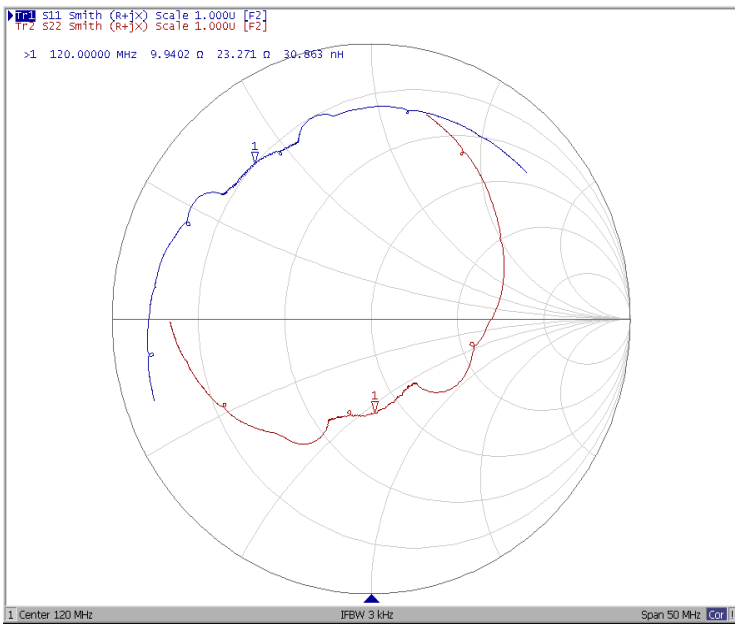
Ripple Variation Fo±5.5MHz



Group Delay Variation Fo±5.5MHz



Smith Chart



SWR

