



*Total Solution Provider in Saw Device*

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# SA12009BV

120.00 MHz IF SAW Filter  
9.35 MHz Bandwidth  
Revision 0: 01. April. 2011



- 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

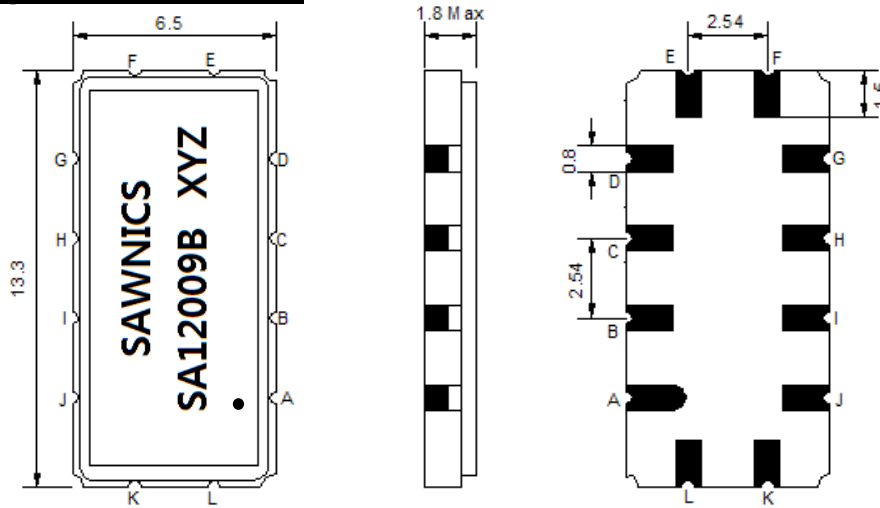
### Electrical Specification

Parameters Description	Unit	Minimum	Typical	Maximum
Center Frequency (Fo)	MHz	-	120.00	-
Insertion Loss at Fo	dB	-	22.50	24.00
Group Delay Variation at Fo ± 4.50 MHz	nsec	-	59	100
Absolute Delay at Fo	usec	-	1.71	-
Passband Ripple Variation at Fo ± 4.50 MHz	dB	-	0.65	-
Bandwidth at -1dB	MHz	-	9.35	-
Bandwidth at -3dB	MHz	-	9.65	-
Bandwidth at -40dB	MHz	-	10.87	-
Ultimate Rejection	dB	-	45	-
Attenuation at Fo ±5.20 MHz	dB	-	15	-
Temperature Coefficient	ppm/°C	-	-20	-

**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.

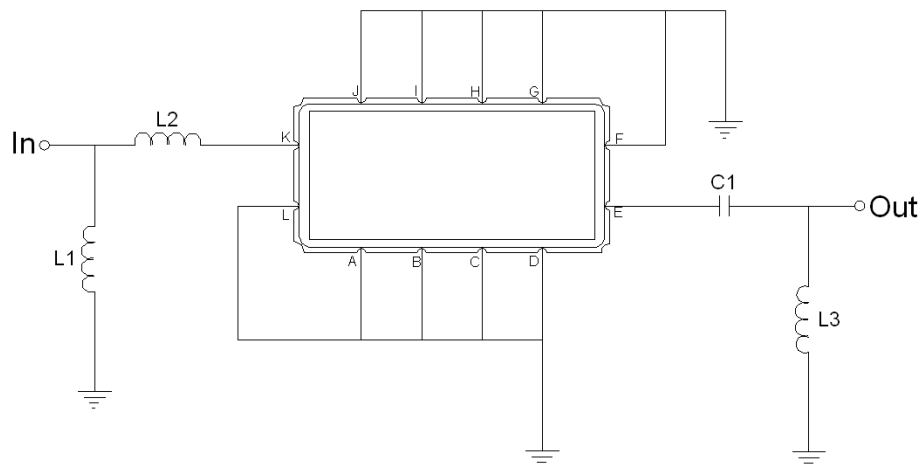
### Package Dimensions



- ① SAWNICS: Brand
- ② SA12009B: 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 = 56nH, L2=2.7nH
Output	C1 = 100pF, L3=47nH
Source/Load Impedance	50 Ω

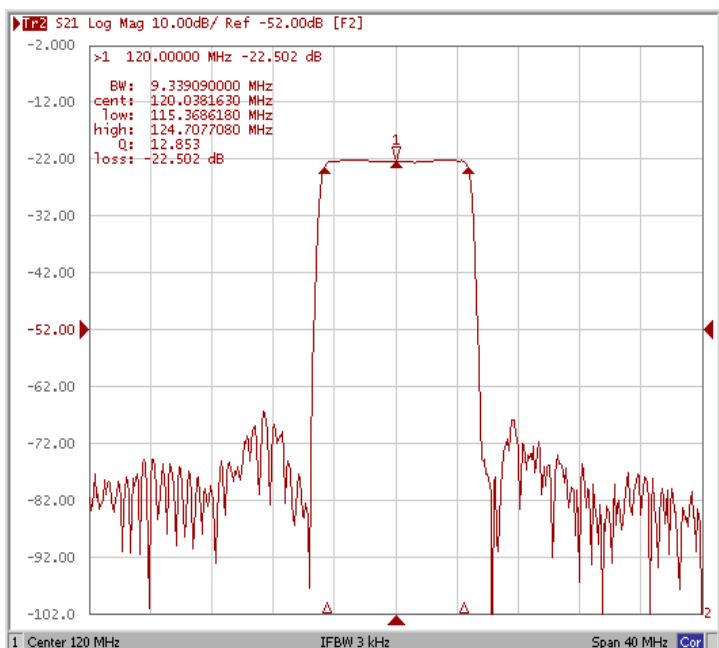


# Frequency Characteristics

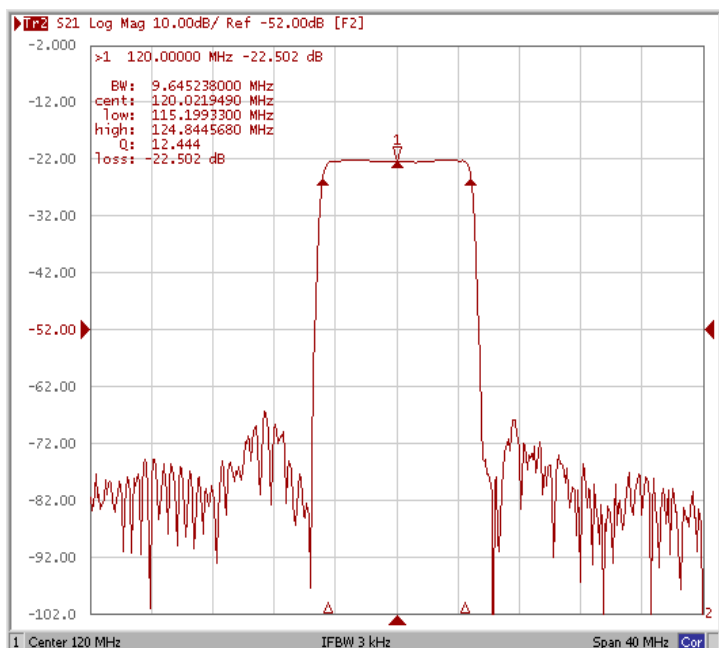
## Frequency Response

Operating Temperature : +25 °C

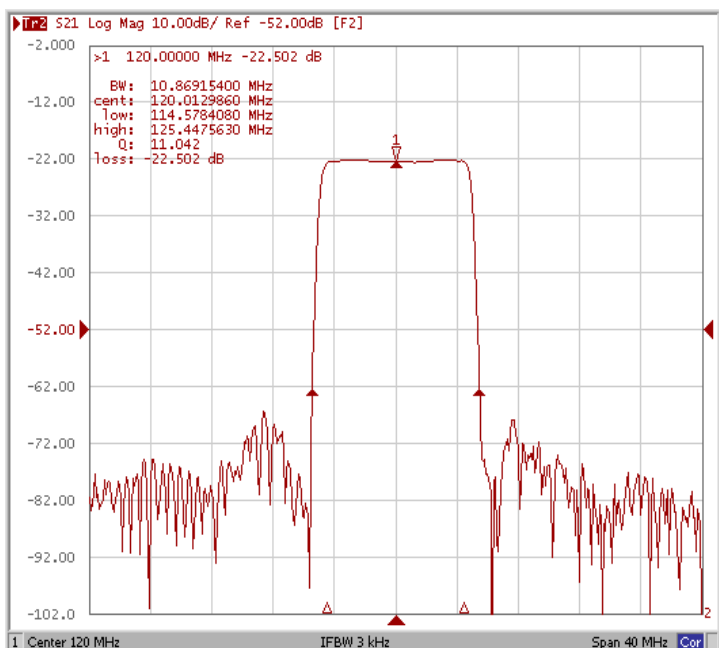
Bandwidth at -1.0 dB



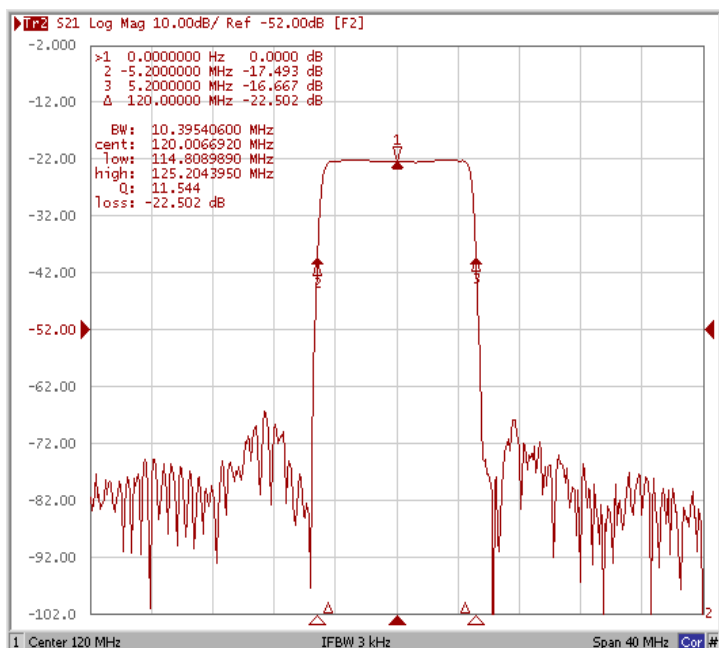
Bandwidth at -3.0 dB



Bandwidth at -40 dB



Attenuation Fo±5.20MHz

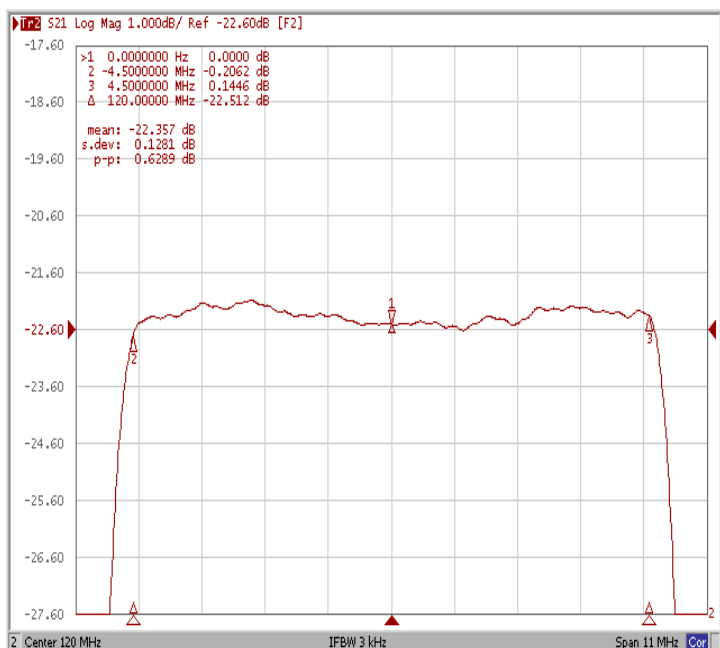




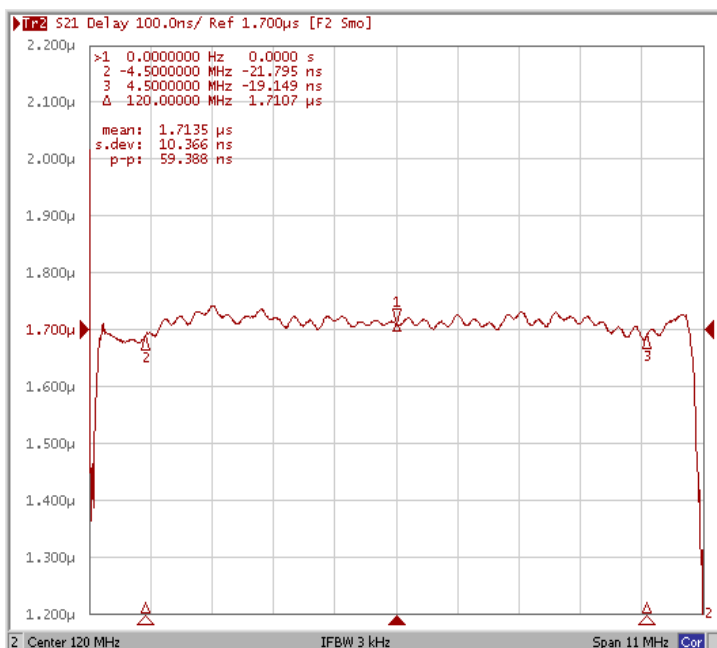
### Frequency Characteristics

#### Frequency Response

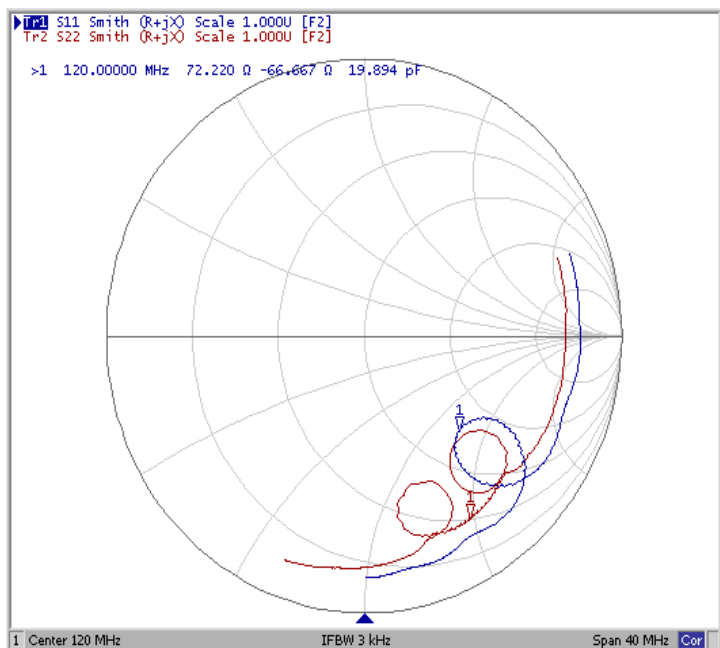
Ripple Variation Fo±4.50MHz



Group Delay Variation Fo±4.50MHz



Smith Chart



VSWR

