



*Total Solution Provider in Saw Device*

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# SA13212AV

132.3MHz IF SAW Filter

12.55MHz Bandwidth

Revision 0 : 29.September.2009



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

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## □ Electrical Characteristics

### Maximum Ratings

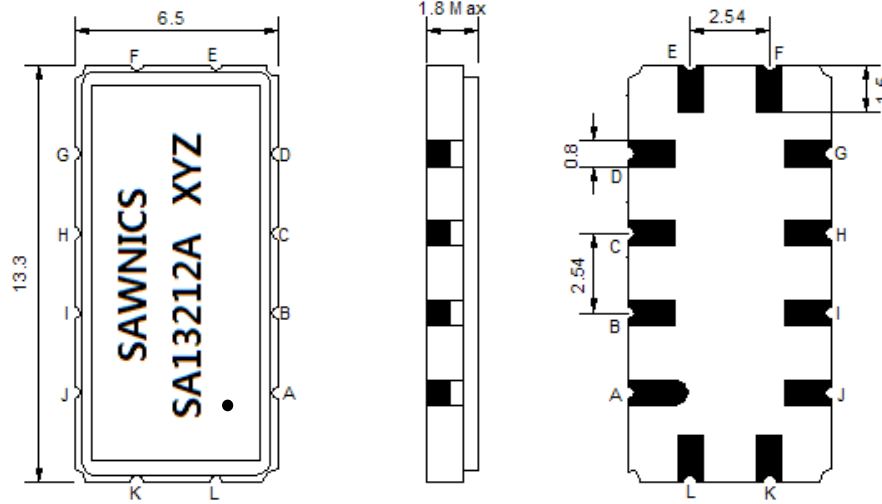
Parameters Description	Unit	Minimum	Typical	Maximum
Operating Temperature Range	°C	-5	-	+65
Storage Temperature Range	°C	-30	-	+85
Maximum DC Voltage	V	-	-	10
Maximum Input Power	dBm	-	-	10
Source Impedance (single ended) <sup>(1)</sup>	Ω	-	50	-
Load Impedance (single ended) <sup>(1)</sup>	Ω	-	50	-
Package 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	-	132.3	-
Insertion Loss at Fo	dB	-	20.5	22.0
Group Delay Variation at Fo ±6.00 MHz	ns	-	48	90
Absolute Delay at Fo	us	-	1.59	-
Amplitude Ripple at Fo ±6.00 MHz	dB	-	0.50	-
Bandwidth at -1dB	MHz	12.40	12.55	-
Bandwidth at -3dB	MHz	-	13.05	-
Bandwidth at -25dB	MHz	-	14.60	14.80
Bandwidth at -40dB	MHz	-	15.00	15.30
<b>Relative Attenuation</b>				
Lower Sidelobe	dB	50	55	-
Upper Sidelobe	dB	50	55	-
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.

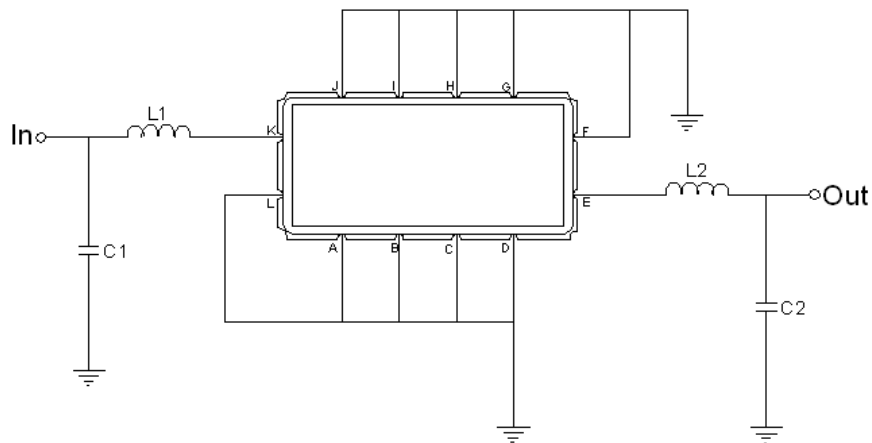
### Package Dimensions



- ① SAWNICS: Brand
- ② SA13212A: 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 = 27 nH , C1 = 5 pF
Output	L2 = 27 nH , C2 = 5 pF
Source/Load Impedance	50 Ω



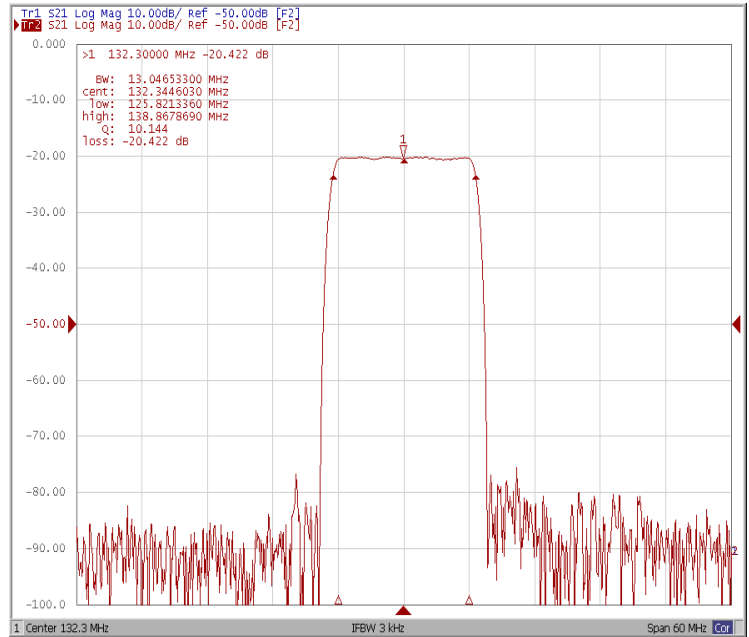
## Frequency Characteristics

### Frequency Response

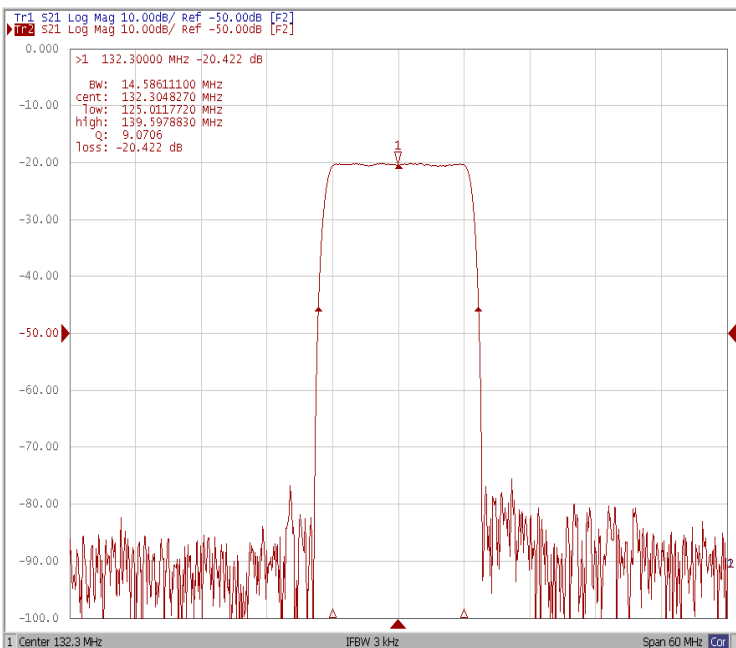
Bandwidth at -1.0 dB



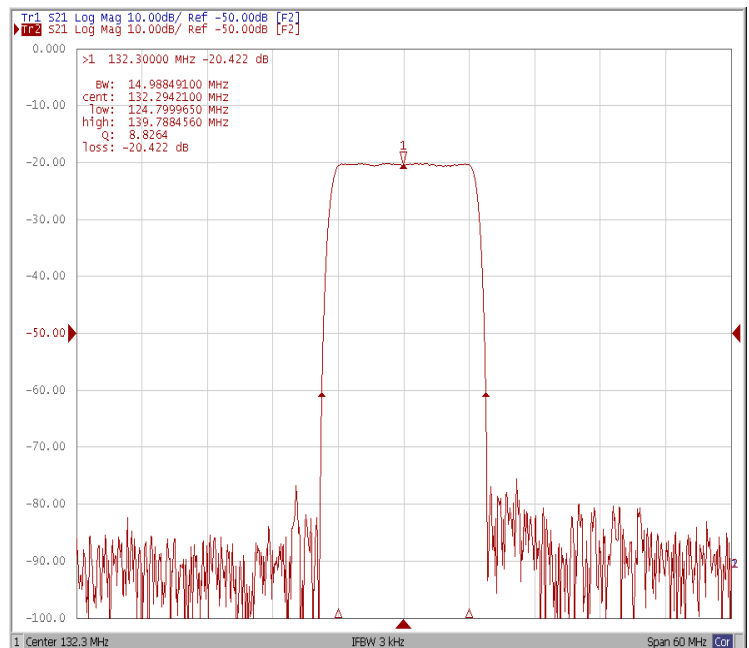
Bandwidth at -3.0 dB



Bandwidth at -25.0 dB



Bandwidth at -40.0 dB

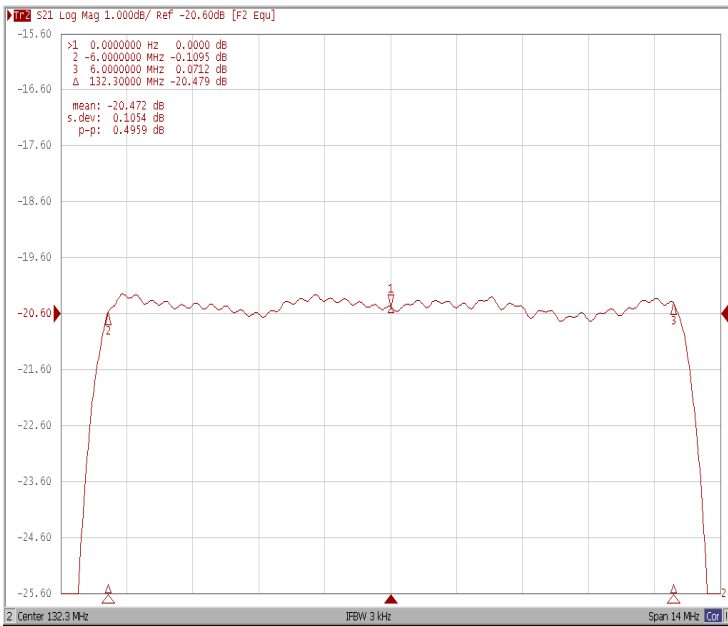




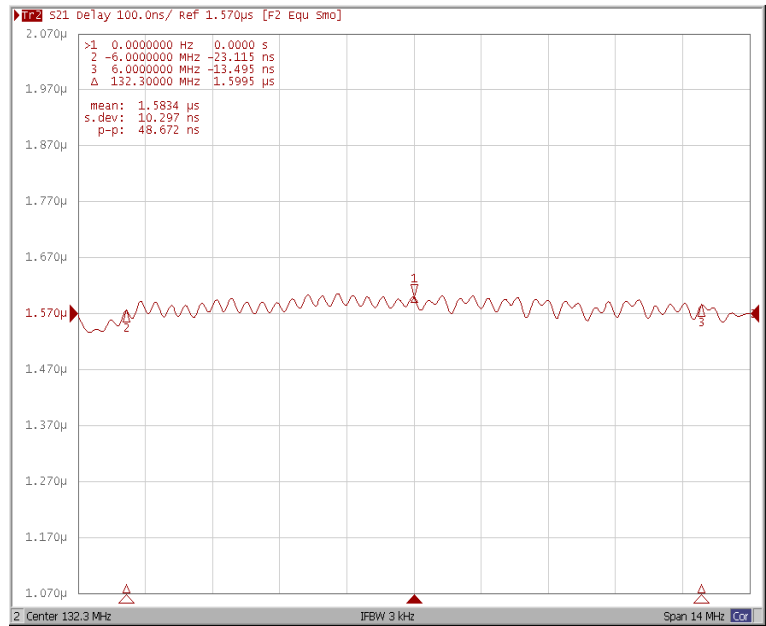
# Frequency Characteristics

## Frequency Response

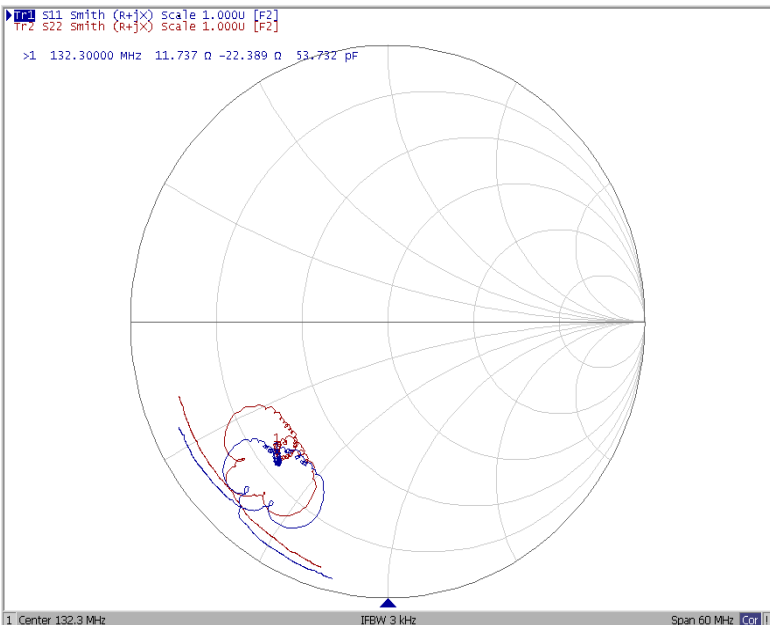
Ripple Variation at Fo ±6.00 MHz



Group Delay Variation at Fo ±6.00 MHz



Smith Chart



VSWR

