



*Total Solution Provider in Saw Device*

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# SA13326AV

133.5 MHz IF SAW Filter  
26.2 MHz Bandwidth  
Revision 0: 4. April. 2008

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- 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	0		70
Storage Temperature Range	°C	-30	-	80
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

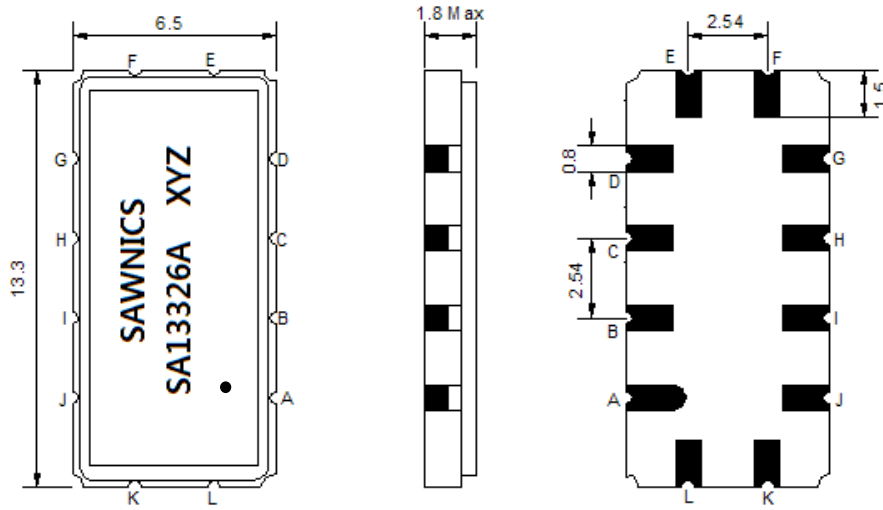
### Electrical Specification

Parameters Description	Unit	Minimum	Typical	Maximum
Center Frequency (Fo)	MHz	-	133.50	-
Insertion Loss at Fo	dB	-	22.7	25.0
Group Delay Variation (Fo±12.5MHz)	ns	-	40	80
Absolute Delay	us	-	1.42	-
Passband Ripple (Fo±12.5MHz)	dB	-	0.90	1.2
Bandwidth at -1dB	MHz	24.96	26.20	-
Bandwidth at -10dB	MHz	-	27.50	27.90
Bandwidth at -20dB	MHz	-	28.10	28.40
Bandwidth at -30dB	MHz	-	28.45	28.70
Bandwidth at -45dB	MHz	-	28.80	
Ultimate Rejection	dB	45	50	-
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.

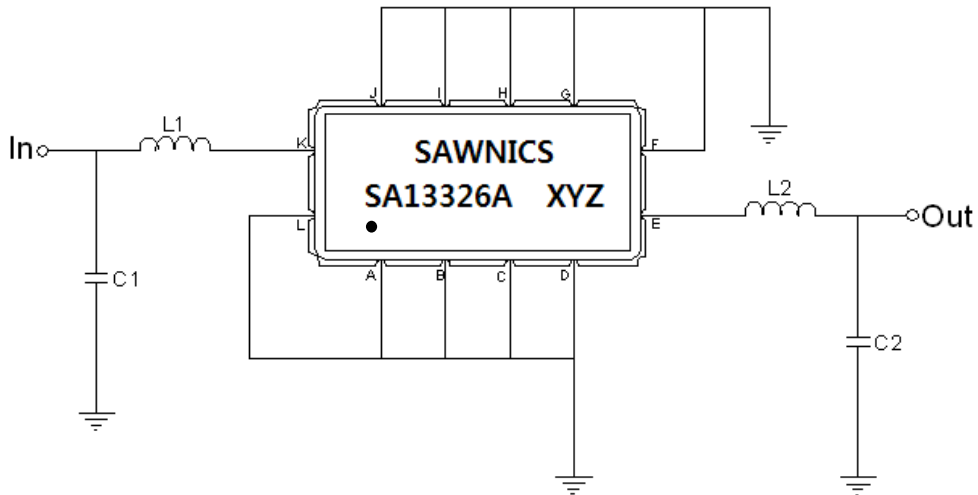
**Package Dimensions**



- ① SAWNICS: Brand
- ② SA13326A: 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**



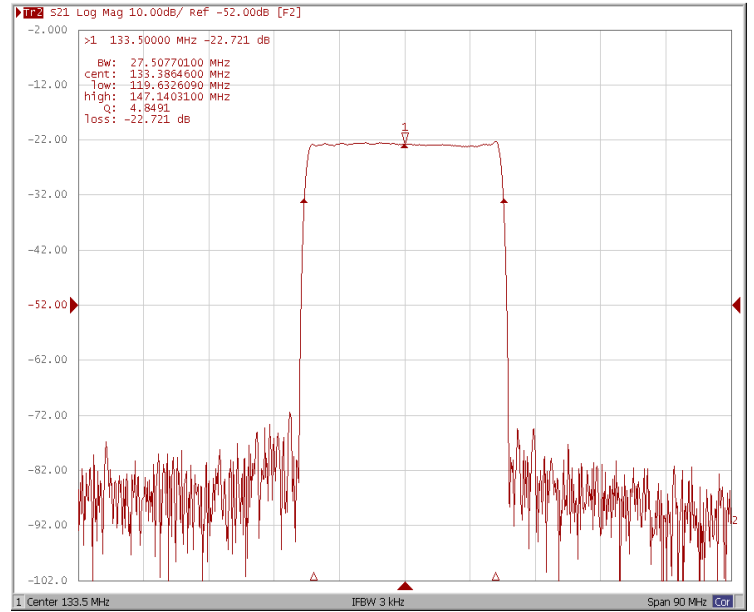
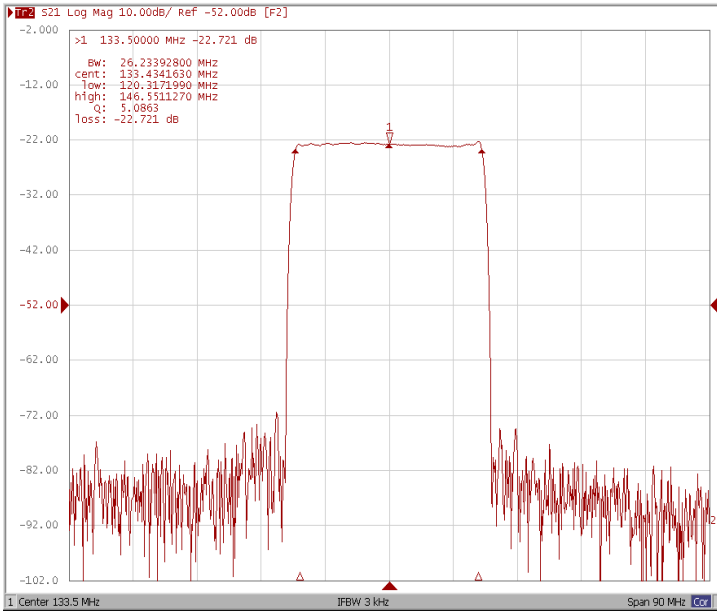
Test Fixture & Values	
Input	L1=39 nH, C1=20 pF
Output	L2=100 nH, C2=24 pF
Source/Load Impedance	50 Ω

### Frequency Characteristics

#### Frequency Response

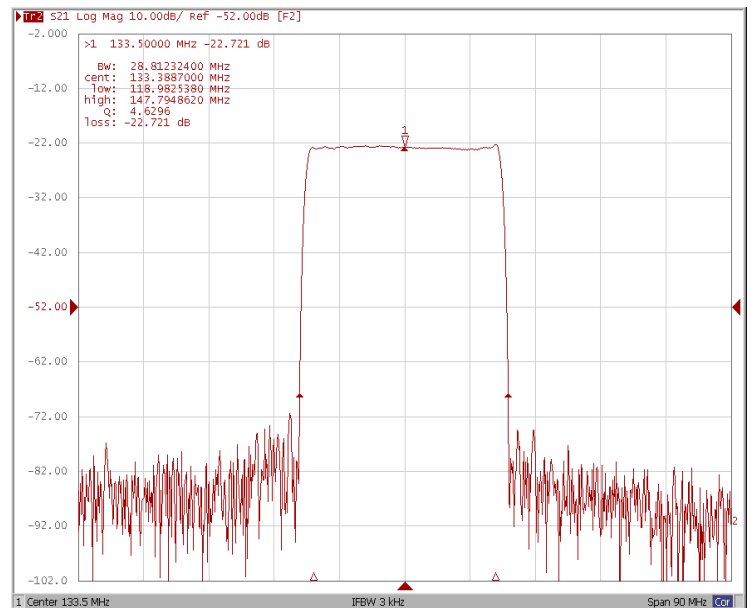
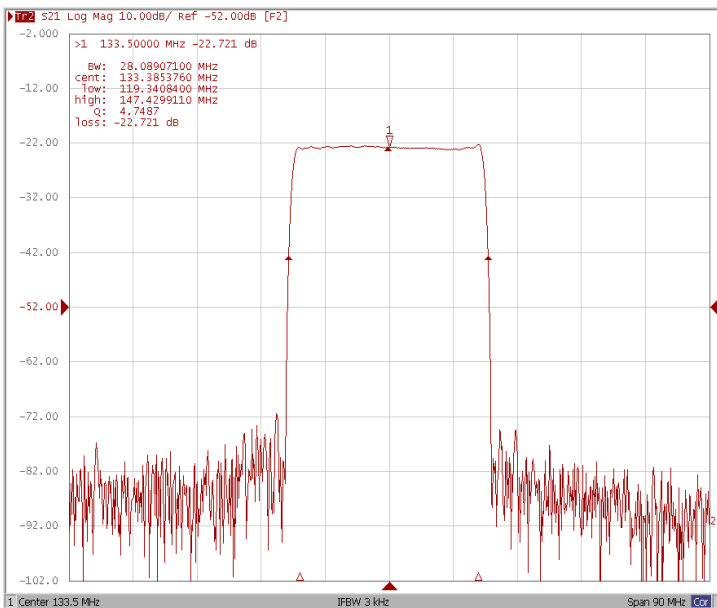
**Bandwidth at -1.0 dB**

**Bandwidth at -10.0 dB**



**Bandwidth at -20.0 dB**

**Bandwidth at -45.0 dB**

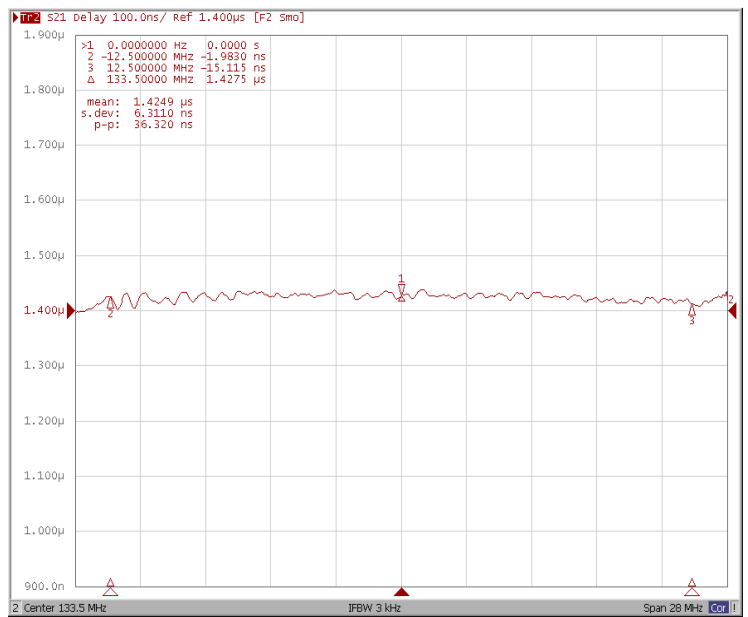
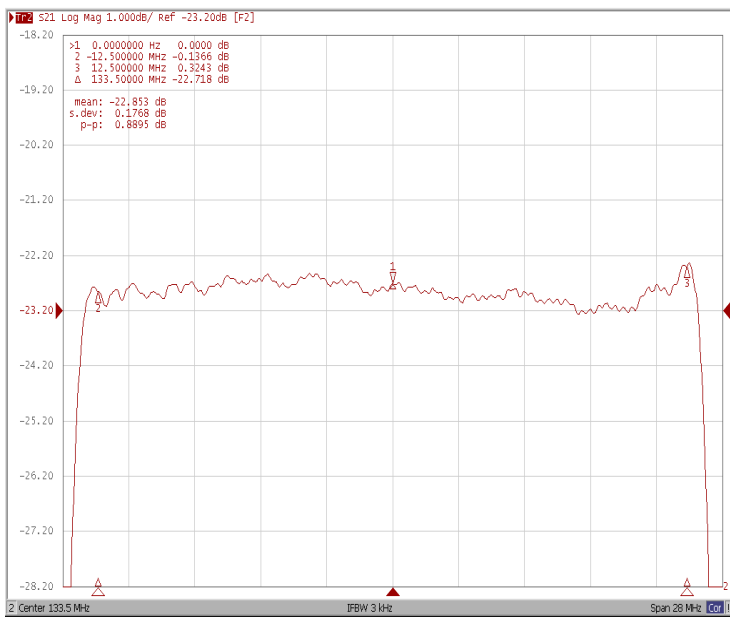


### □ Frequency Characteristics

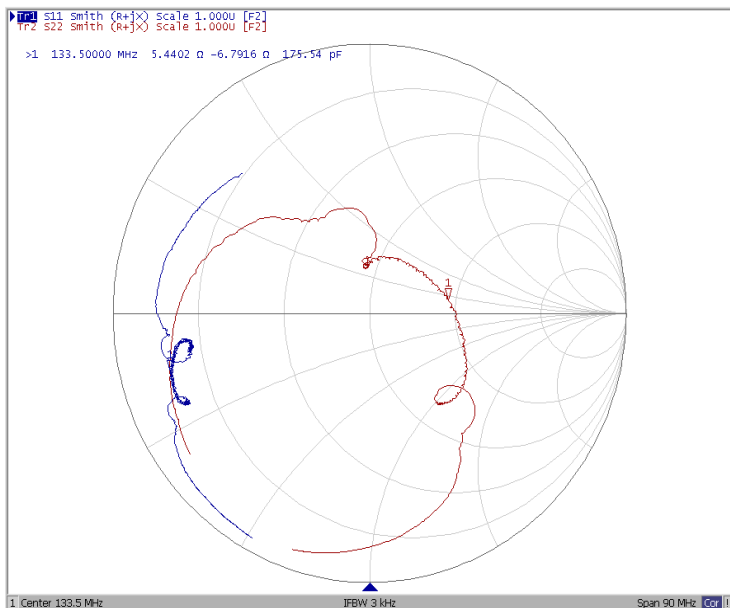
#### Frequency Response

Ripple Variation  $F_o \pm 12.5\text{MHz}$

Group Delay Variation  $F_o \pm 12.5\text{MHz}$



Smith Chart



VSWR

