



*Total Solution Provider in Saw Device*

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# SF-013702-SC0

137.50 MHz IF SAW Filter

14.00 MHz Bandwidth

Revision 0: 21. January. 2013



- 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	SC0			
Length x Width	mm <sup>2</sup>	-	20.0 x 9.8	-
Height	mm	-	-	1.8

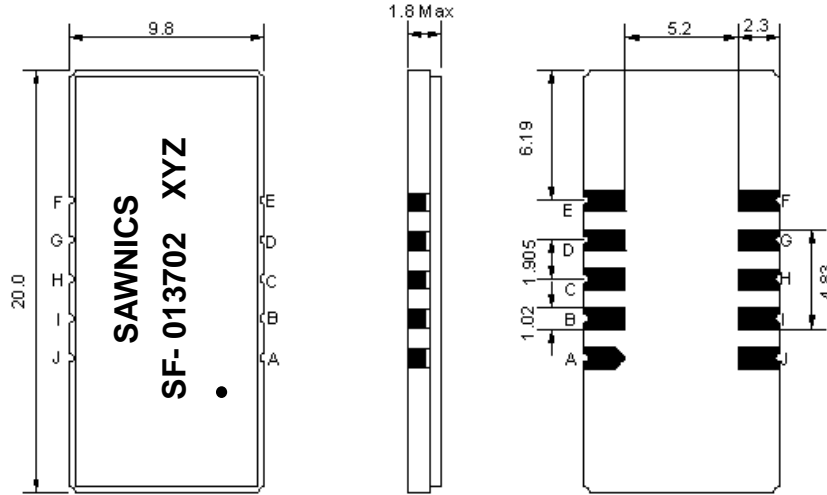
### Electrical Specification

Parameters Description	Unit	Minimum	Typical	Maximum
Center Frequency (Fo)	MHz	-	137.5	-
Insertion Loss at Fo	dB	-	25.0	26.5
Group Delay Variation at Fo ± 6.82 MHz	nsec	-	40	80
Absolute Delay at Fo	usec	-	3.12	-
Passband Ripple Variation at Fo ± 6.82 MHz	dB	-	0.5	1.0
Bandwidth at -1dB	MHz	13.90	14.00	-
Bandwidth at -3dB	MHz	-	14.25	-
Bandwidth at -45dB	MHz	-	15.48	15.60
Ultimate Rejection	dB	45	52	-
Temperature Coefficient	ppm/°C	-	-18	-

**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.

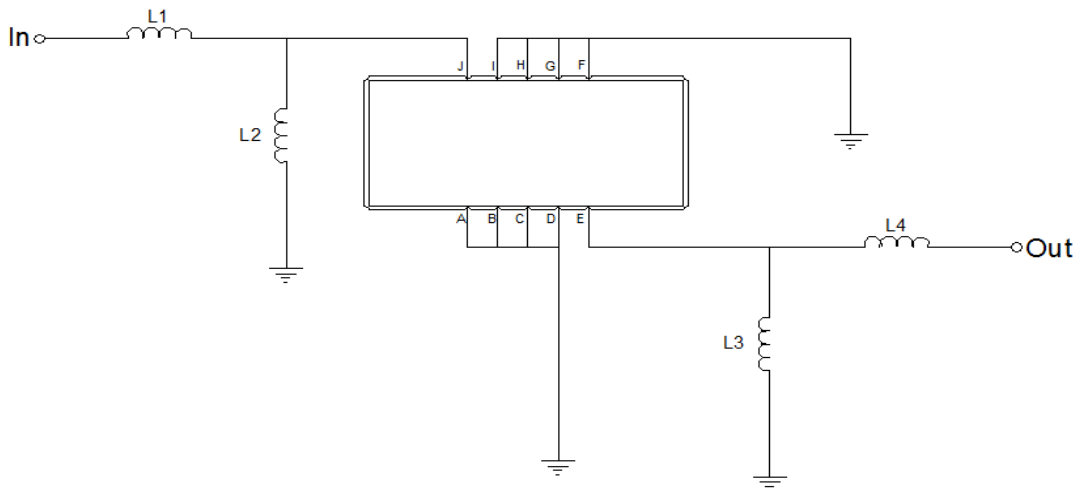
**Package Dimensions**



- ① SAWNICS: Brand
- ② SF-013702: 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	Ground
J	Input
E	Output

**Testing Environment**



Test Fixture & Values	
Input	L1 = 22nH, L2 = 27nH
Output	L3 = 27nH, L4 = 22nH
Source/Load Impedance	50 Ω

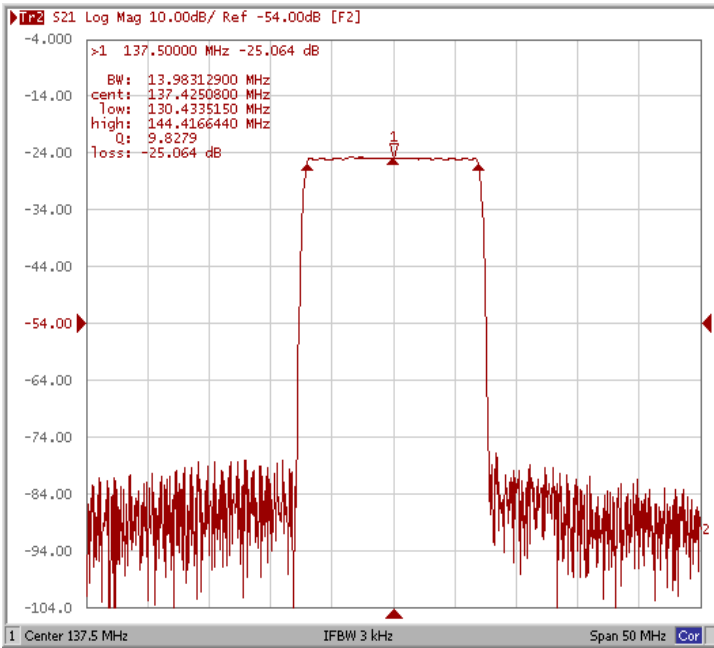


## □ Frequency Characteristics

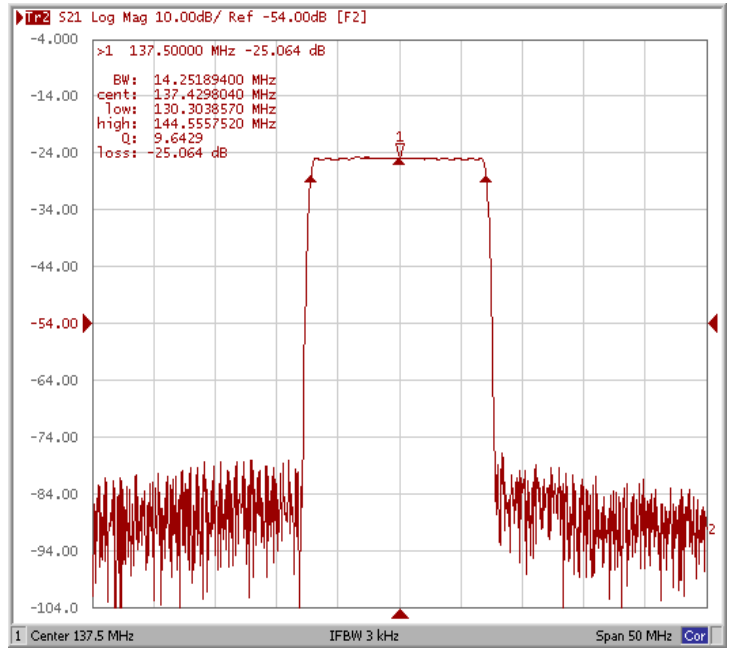
### Frequency Response

Operating Temperature : +25 °C

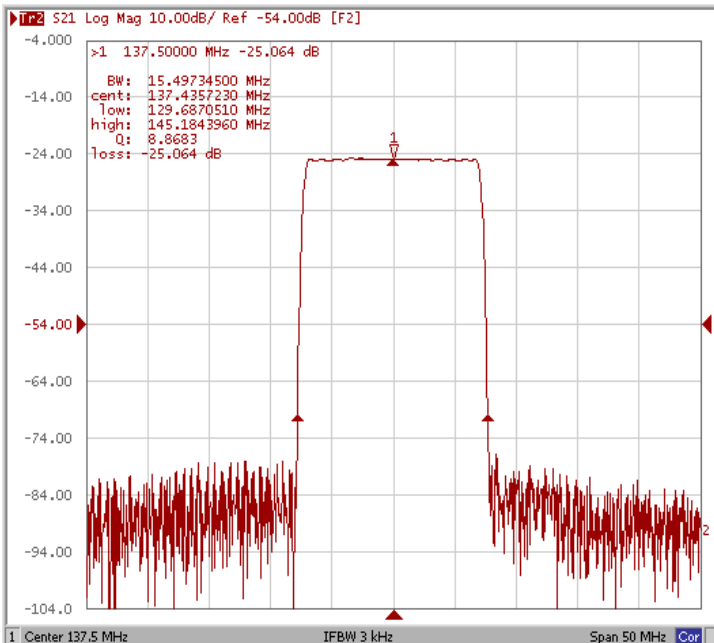
Bandwidth at -1.0 dB



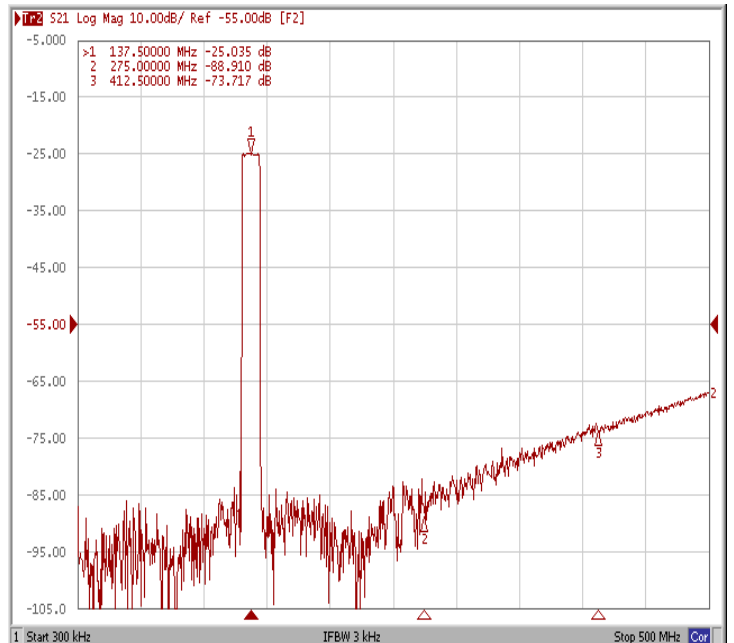
Bandwidth at -3.0 dB



Bandwidth at -45 dB



Wide-Band

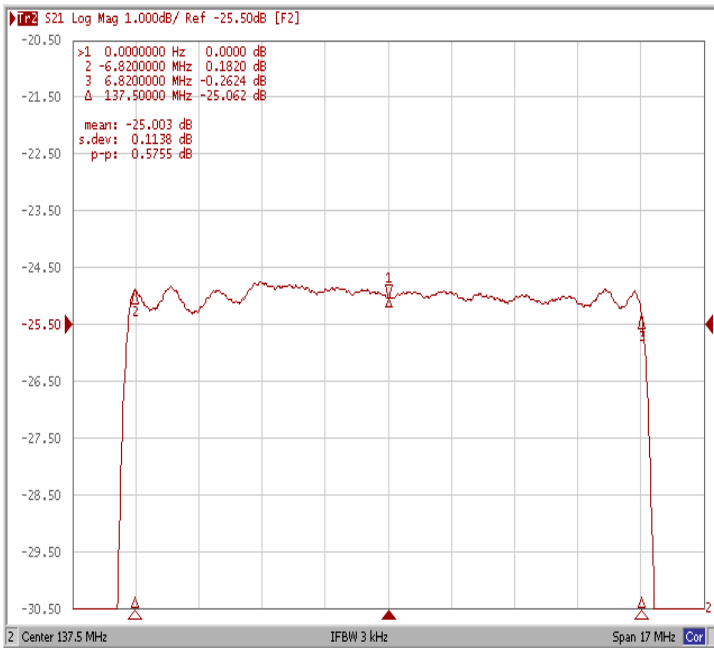




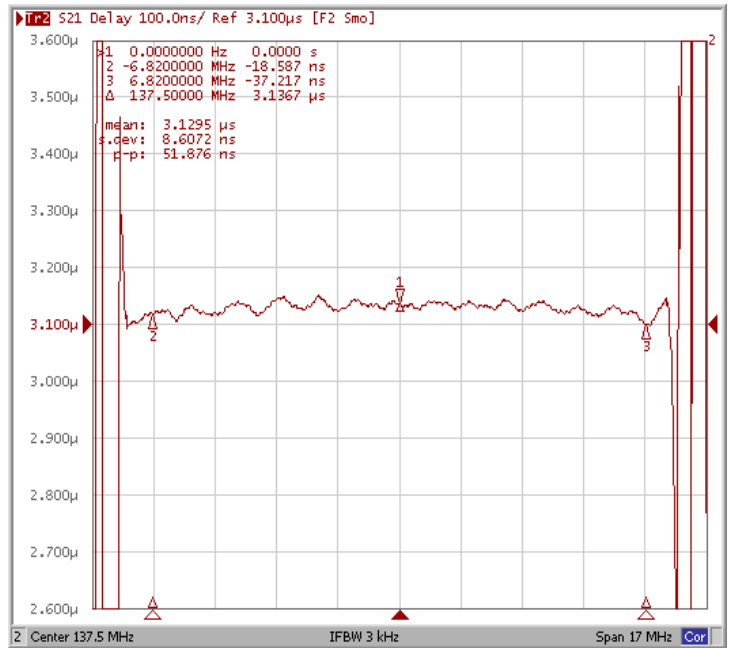
### Frequency Characteristics

#### Frequency Response

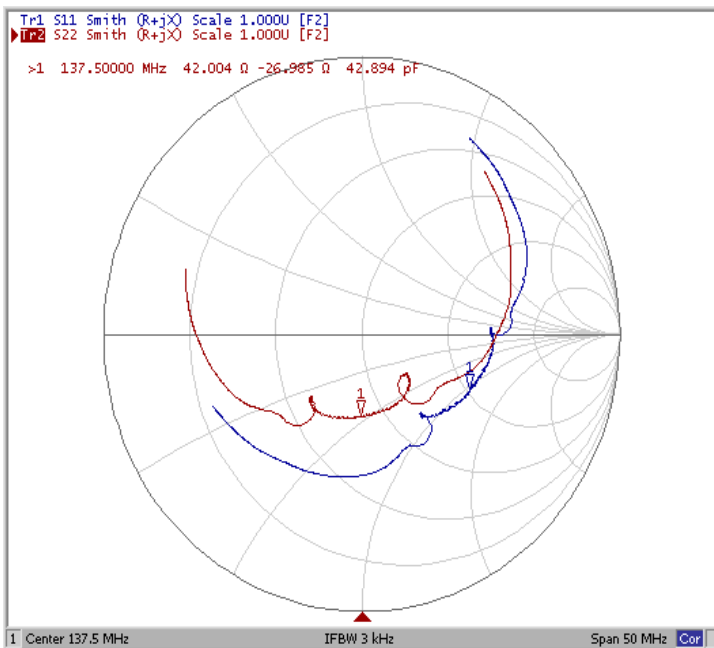
Ripple Variation Fo±6.82MHz



Group Delay Variation Fo±6.82MHz



Smith Chart



VSWR

