



Total Solution Provider in Saw Device

SF-014701-SC0

147.50 MHz IF SAW Filter

4.93 MHz Bandwidth

Revision 0: 30. November. 2012



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

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□ Electrical Characteristics

Maximum Ratings

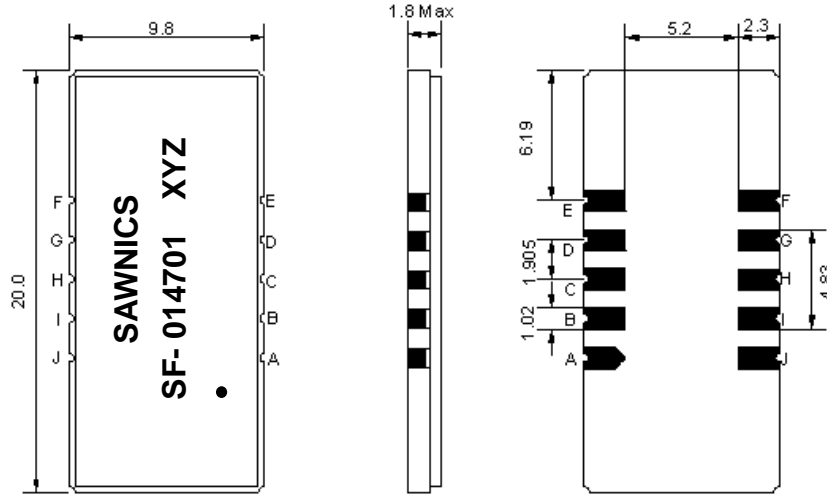
Parameters Description	Unit	Minimum	Typical	Maximum
Operation Temperature Range	°C	-	25	-
Storage Temperature Range	°C	-40	-	85
Maximum DC Voltage	V	-	-	10
Maximum Input Power	dBm	-	-	10
Source Impedance (single ended) ⁽¹⁾	Ω	-	50	-
Load Impedance (single ended) ⁽¹⁾	Ω	-	50	-
Package type & size	SC0			
Length x Width	mm ²	-	20.0 x 9.8	-
Height	mm	-	-	1.8

Electrical Specification

Parameters Description	Unit	Minimum	Typical	Maximum
Center Frequency (Fo)	MHz	-	147.5	-
Insertion Loss at Fo	dB	-	24.0	25.5
Group Delay Variation at Fo ± 2.25 MHz	nsec	-	100	200
Absolute Delay at Fo	usec	-	2.27	-
Passband Ripple Variation at Fo ± 2.25 MHz	dB	-	0.6	1.2
Bandwidth at -1dB	MHz	4.75	4.93	-
Bandwidth at -3dB	MHz	-	5.25	-
Bandwidth at -45dB	MHz	-	6.55	6.70
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.

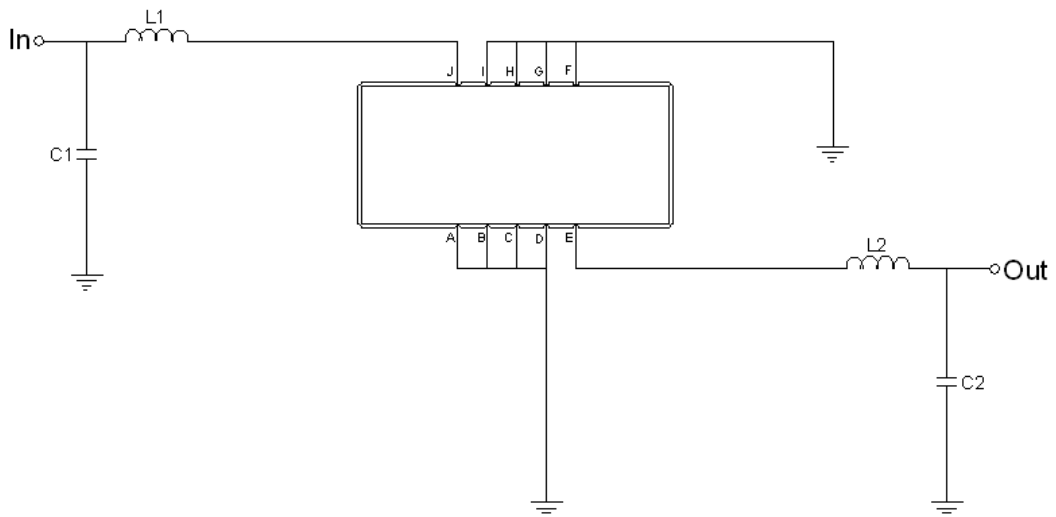
Package Dimensions



- ① SAWNICS: Brand
- ② SF-014701: 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 = 33nH, C1=62pF
Output	L2 = 22nH, C2=62pF
Source/Load Impedance	50 Ω

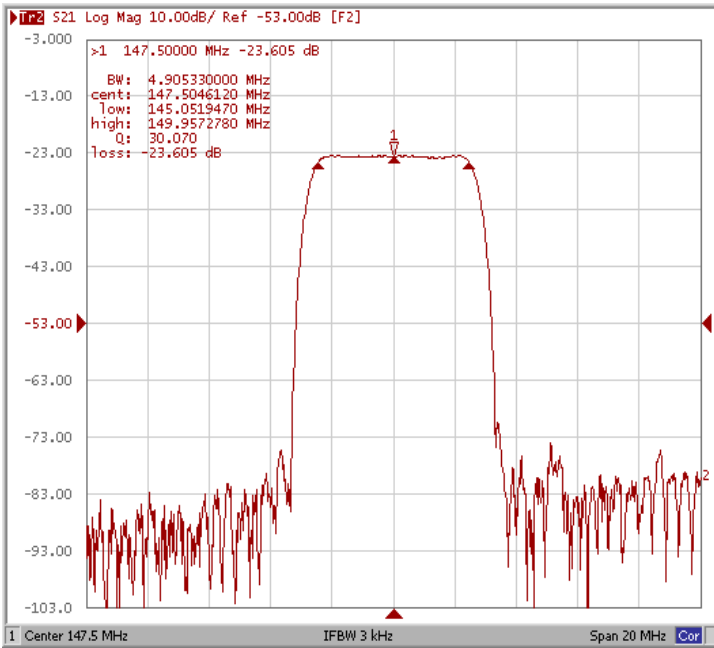


Frequency Characteristics

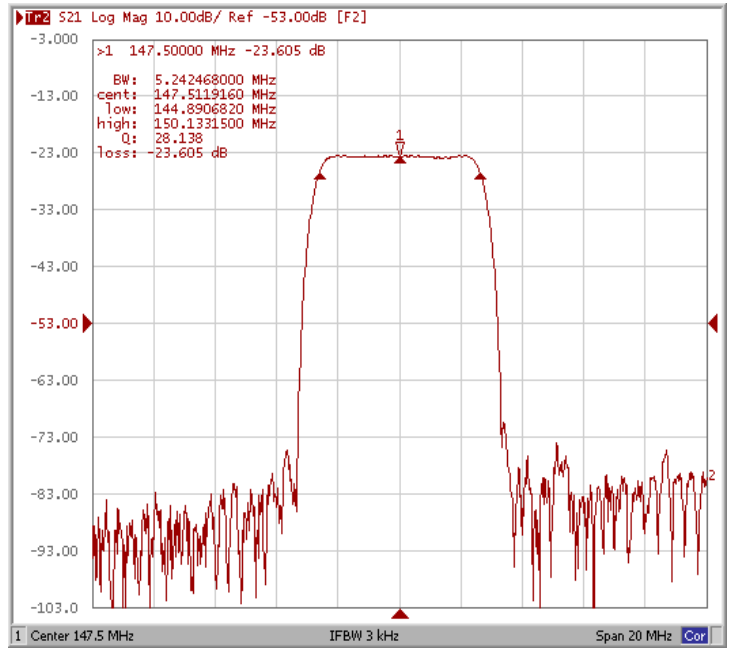
Frequency Response

Operating Temperature : +25 °C

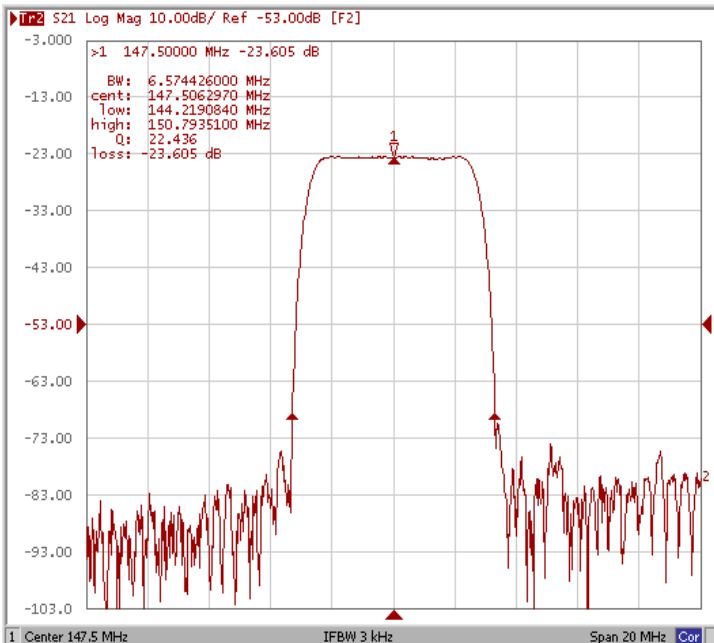
Bandwidth at -1.0 dB



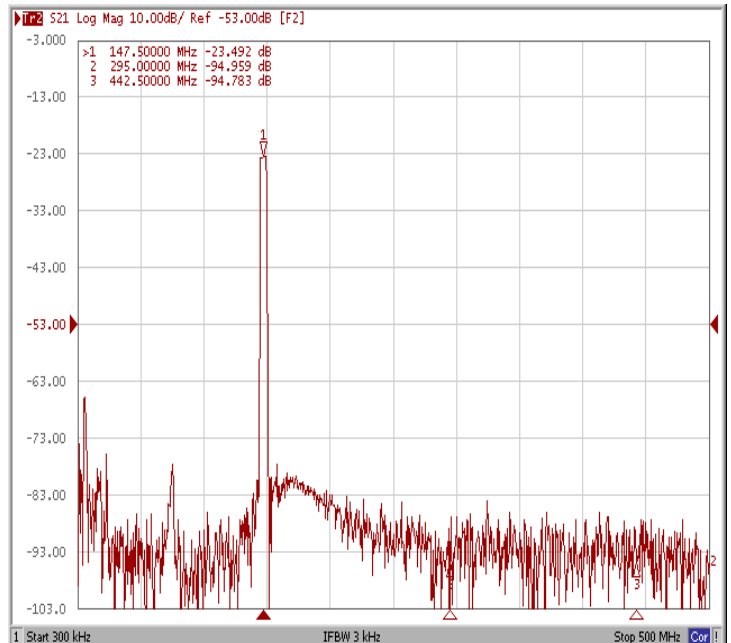
Bandwidth at -3.0 dB



Bandwidth at -45 dB



Wide-Band

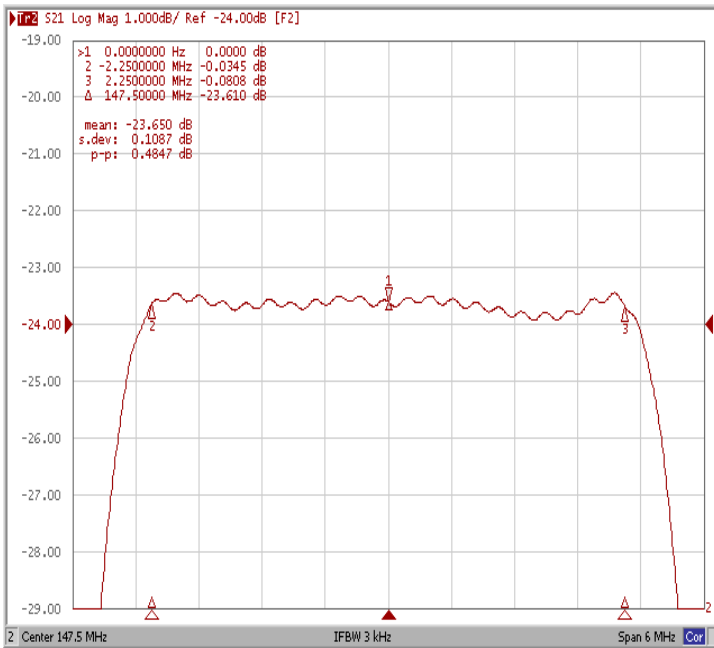




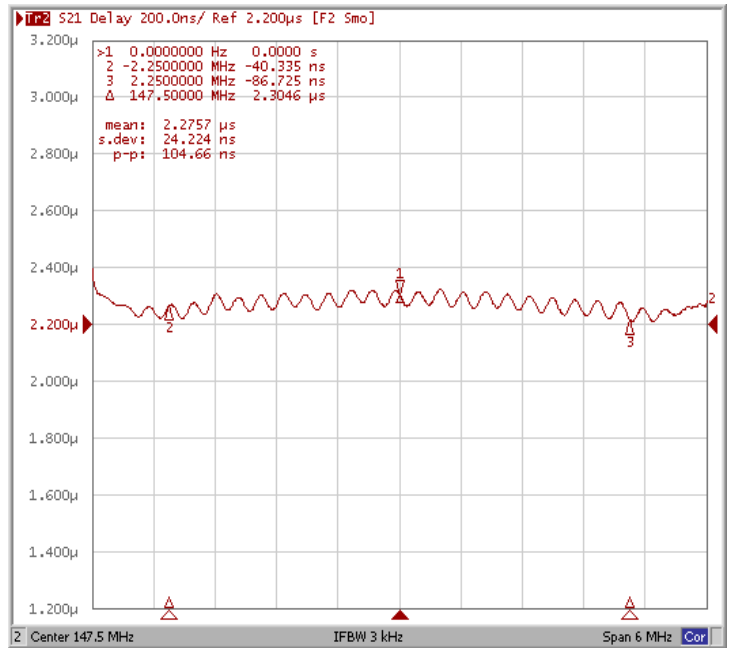
Frequency Characteristics

Frequency Response

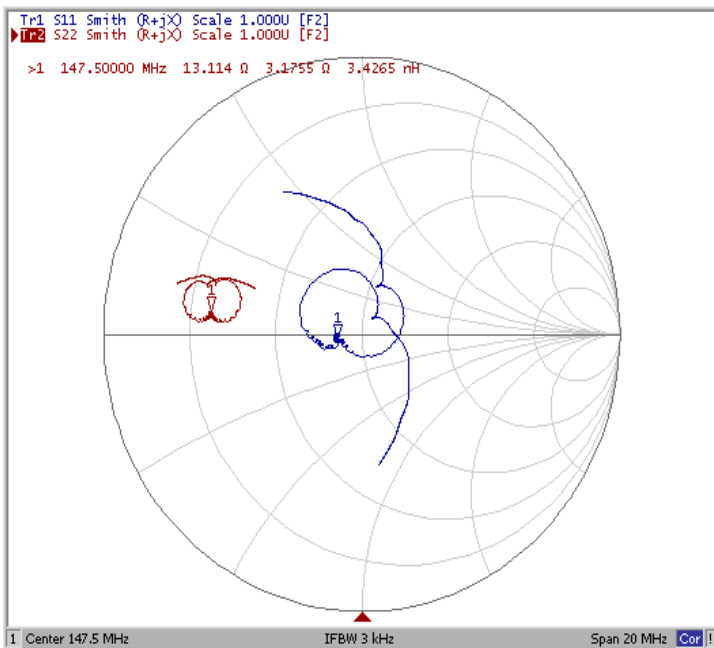
Ripple Variation $F_o \pm 2.25\text{MHz}$



Group Delay Variation $F_o \pm 2.25\text{MHz}$



Smith Chart



VSWR

