



Total Solution Provider in Saw Device

SF-019006-S90

190.00 MHz IF SAW Filter
12.30 MHz Bandwidth
Revision 0: July 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	-45	-	+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	S90			
Length x Width	mm ²	-	13.3 x 6.5	-
Height	mm	-	-	1.8

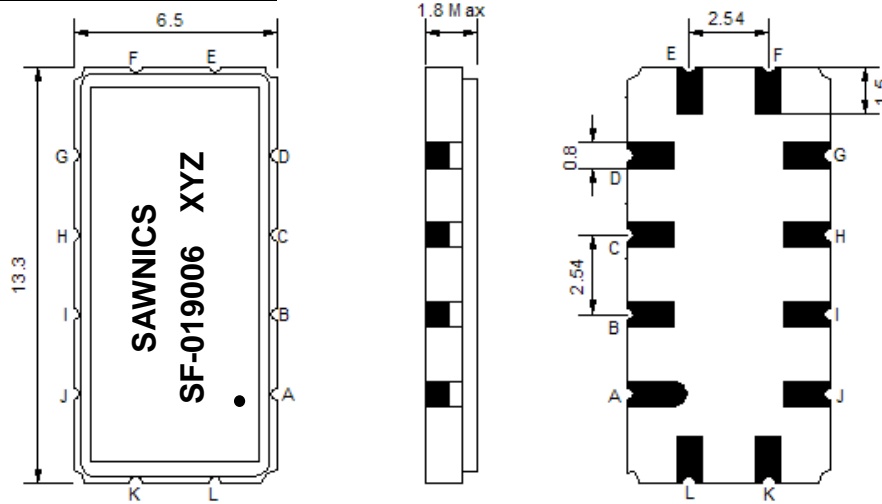
Electrical Specification

Parameters Description	Unit	Minimum	Typical	Maximum
Center Frequency (Fo)	MHz	-	190.00	-
Insertion Loss at Fo	dB	-	12.5	15.0
Group Delay Variation at Fo ± 4.5 MHz	nsec	-	16	60
Absolute Delay at Fo	usec	-	0.66	0.9
Passband Ripple Variation at Fo ± 4.5 MHz	dB _{p-p}	-	0.20	1.0
Bandwidth at -1dB	MHz	11.8	12.3	-
Bandwidth at -3dB	MHz	-	13.35	-
Bandwidth at -40dB	MHz	-	17.6	18.1
Ultimate Rejection	dB	40	47	-
Relative Attenuation				
Fo – 11.0 MHz	dB	40	55	-
Fo + 11.0 MHz	dB	40	55	-
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.

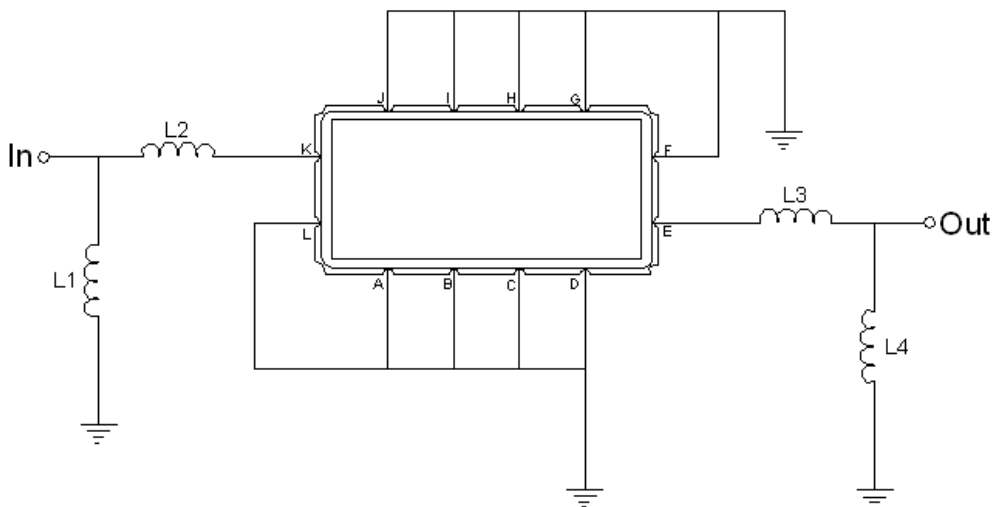
Package Dimensions



- ① SAWNICS: Brand
- ② SF-019006 : 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



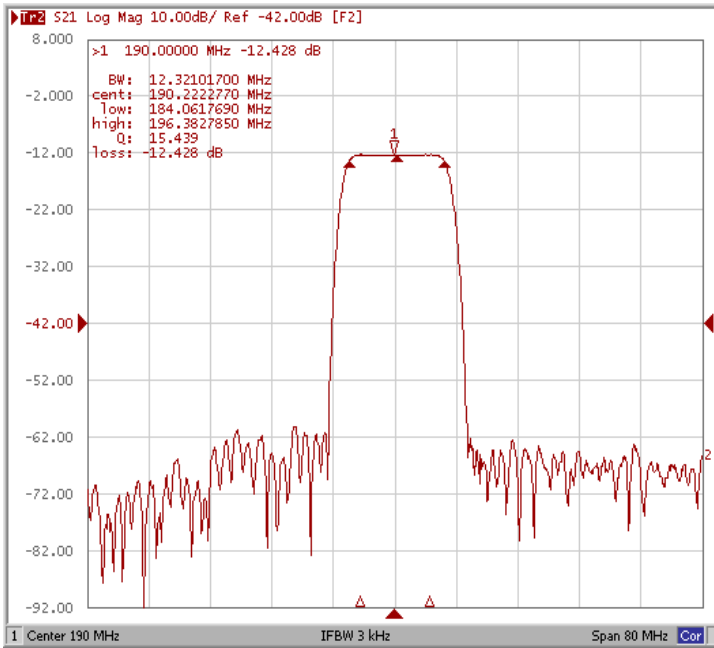
Test Fixture & Values	
Input	L1 = 22nH, L2= 5.6nH
Output	L3 = 10nH, L4= 18nH
Source/Load Impedance	50 Ω

□ Frequency Characteristics

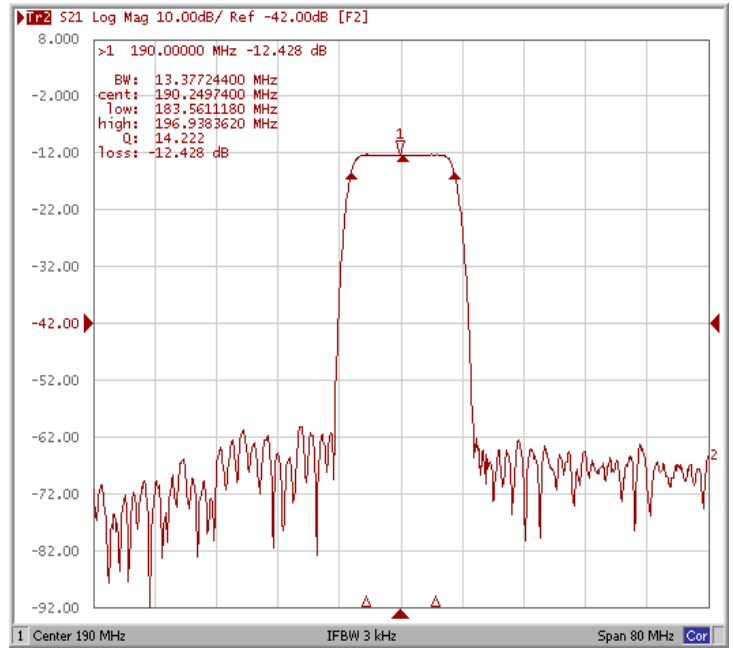
Frequency Response

Operating Temperature : +25 °C

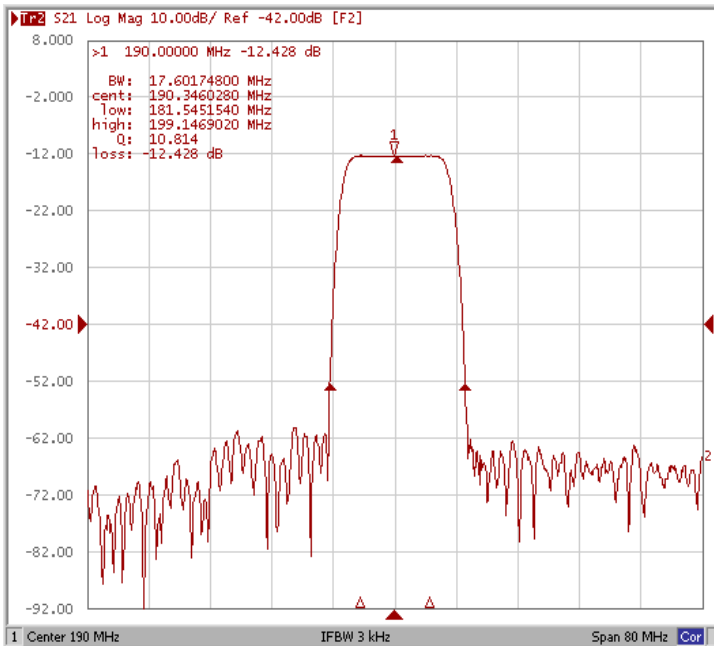
Bandwidth at -1.0 dB



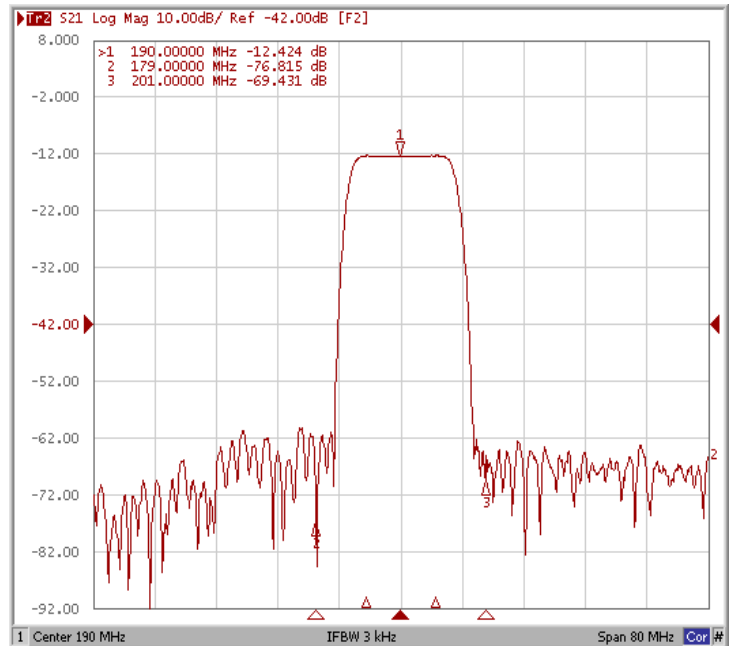
Bandwidth at -3.0 dB



Bandwidth at -40 dB



Relative Attenuation Fo ± 11.0 MHz

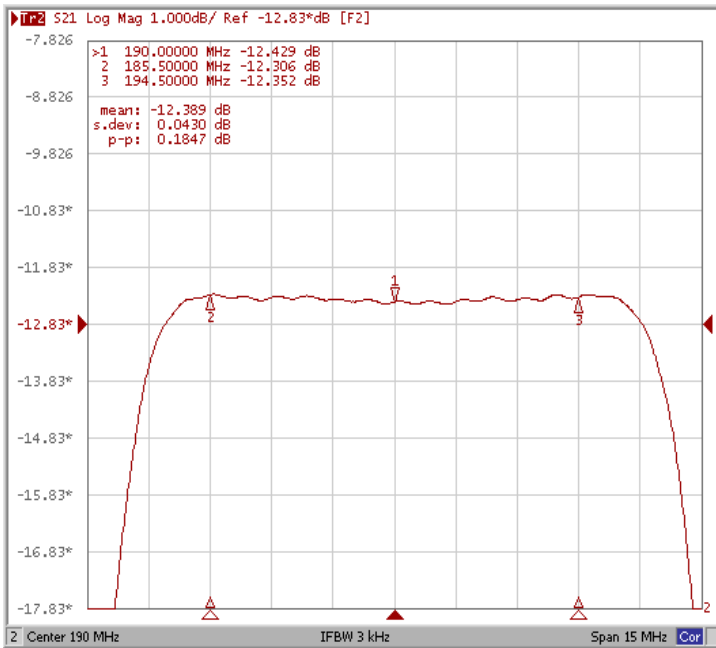




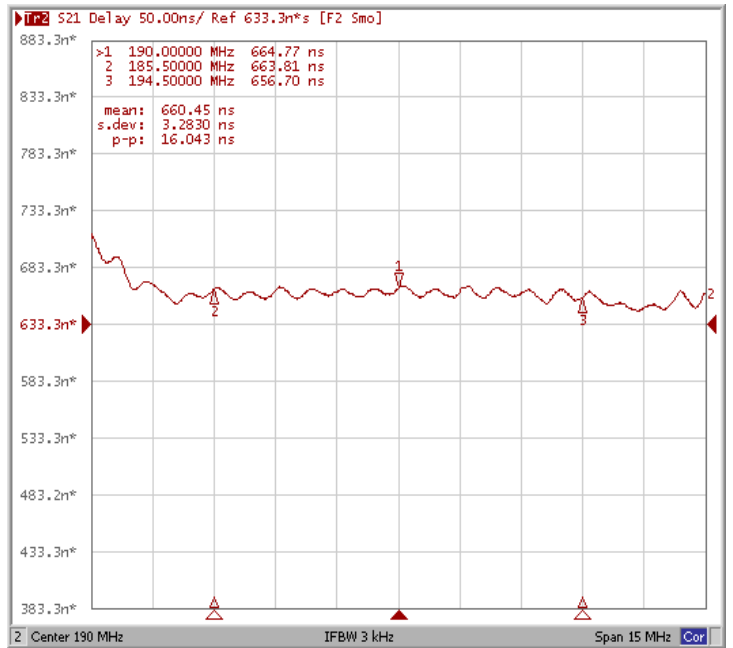
Frequency Characteristics

Frequency Response

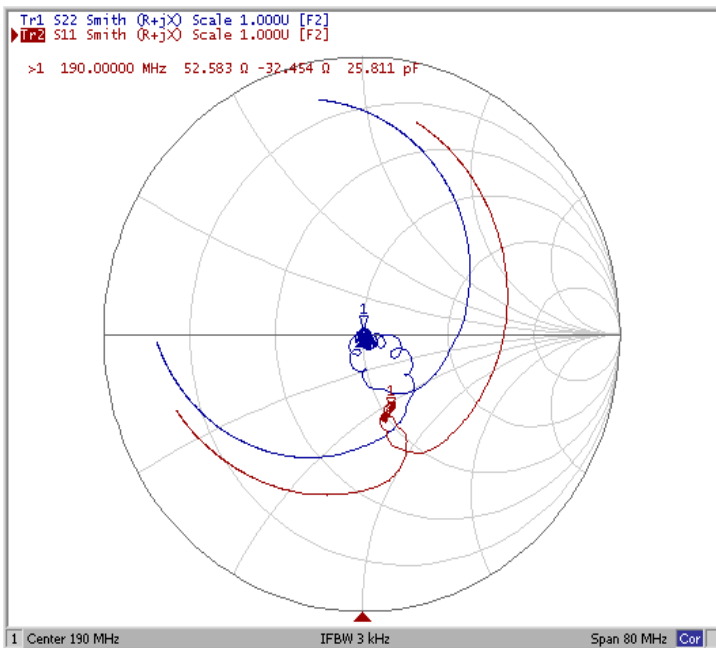
Ripple Variation Fo±4.5MHz



Group Delay Variation Fo±4.5MHz



Smith Chart



VSWR

