SL19213AS1

192.0MHz IF SAW Filter
11.95 MHz Bandwidth
Revision 0: 4 April 2008

RoHS compliance
Pb free

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

SAWNICS Inc.
460 Cheonheung-ri, Seonggeo-eup, Cheonan-si, Chungcheongnam-do, 330-836 / Korea.
Tel: +82 41 550 9372 / Fax: +82 41 550 9399 / www.sawnics.com

❒ Electrical Characteristics

Maximum Ratings

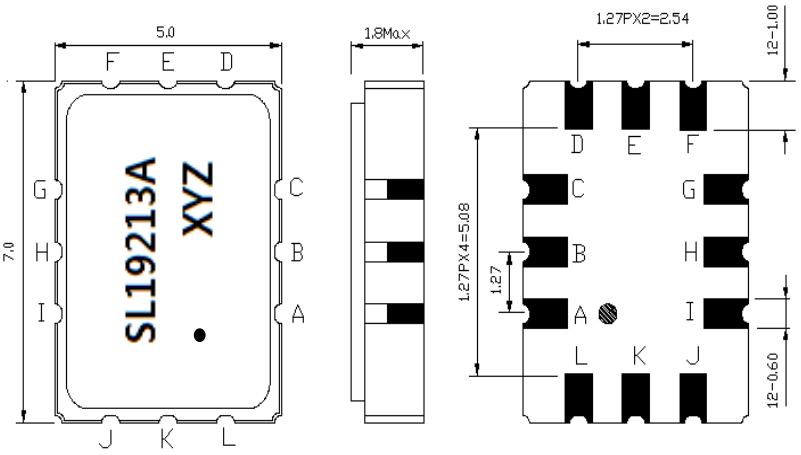
Parameters Description	Unit	Minimum	Typical	Maximum
Operation Temperature Range	°C	-40	-	85
Storage Temperature Range	°C	-40	-	85
Maximum DC Voltage	V	-	-	10
Maximum Input Power	dBm	-	-	18
Source Impedance (single ended)(1)	Ω	-	50	-
Load Impedance (single ended)(1)	Ω	-	50	-
Package type & size	S1			
Length x Width	mm^2	-	7.0 x 5.0	-
Height	mm	-	-	1.8

Electrical Specification

Parameters Description	Unit	Minimum	Typical	Maximum
Center Frequency (Fo)	MHz	191.8	192.0	192.2
Insertion Loss at Fo	dB	-	12.2	13.0
Amplitude Ripple at Fo ± 5.25MHz	dB_{p-p}	-	0.35	1.0
Group Delay Variation at Fo ± 5.25MHz	ns	-	27	80
Absolute Delay at Fo	µs	-	0.66	-
Temperature Coefficient	ppm/°C	-	-18	-
Bandwidth at –1.0 dB	MHz	11.00	11.93	-
Bandwidth at –40.0 dB	MHz	-	17.40	19.00
Return Loss	dB	12	-	-
Relative Attenuation				
Fo ± 5.25MHz	dB	-	0.35	1.0
Fo ± 7.5MHz ~ Fo ± 11.0MHz	dB	3	11	-
Fo ± 11.0MHz ~ Fo ± 58.0MHz	dB	40	46	-
Fo ± 58.0MHz ~ Fo ± 92.0MHz	dB	50	58	-

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.

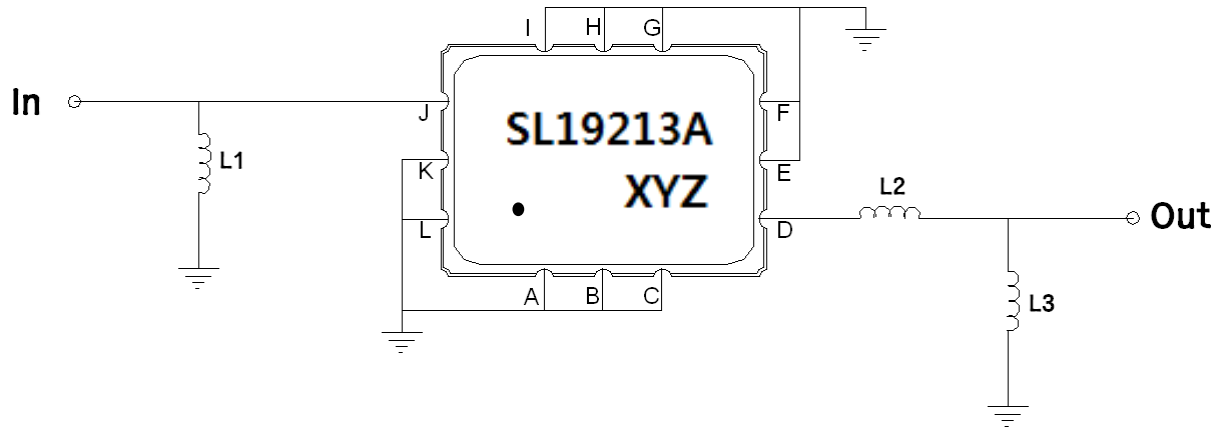
❒ Package Dimensions



① SAWNICS: Brand
② SL19213A: Model Name
③ X : Date Code (Year)
④ Y : Date Code (Month)
⑤ Z : Date Code (Date)
● : Index Dot

Pin Description	
A,B,C,E,F,G,H,I,K,L	Ground
J	Input
L	Input Ground
D	Output
F	Output Ground

❒ Testing Environment

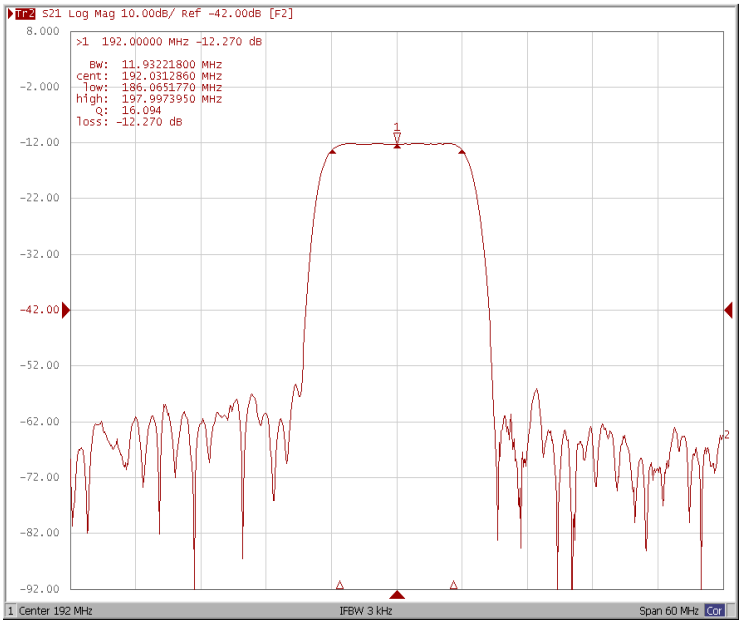


Test Fixture & Values	
Input	L1=12 nH
Output	L2=4.7 nH , L3=15 pF
Source/Load Impedance	50 Ω

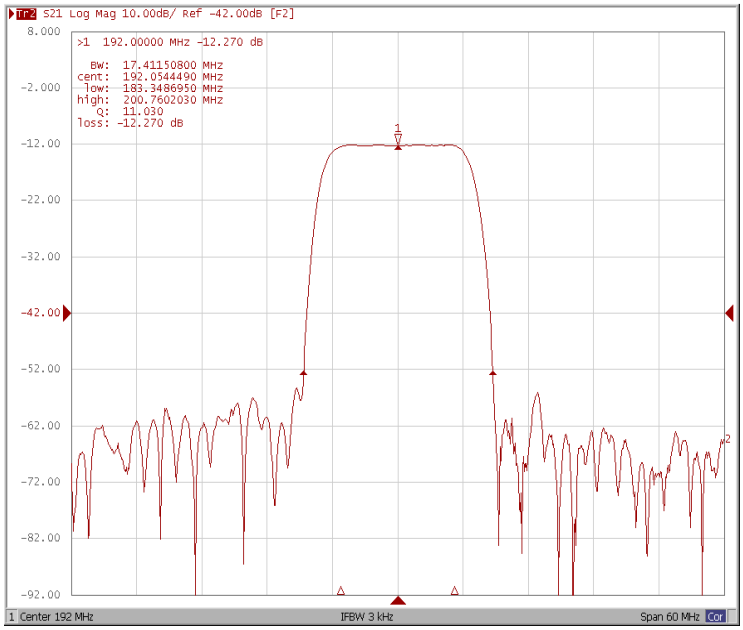
❒ Frequency Characteristics

Frequency Response

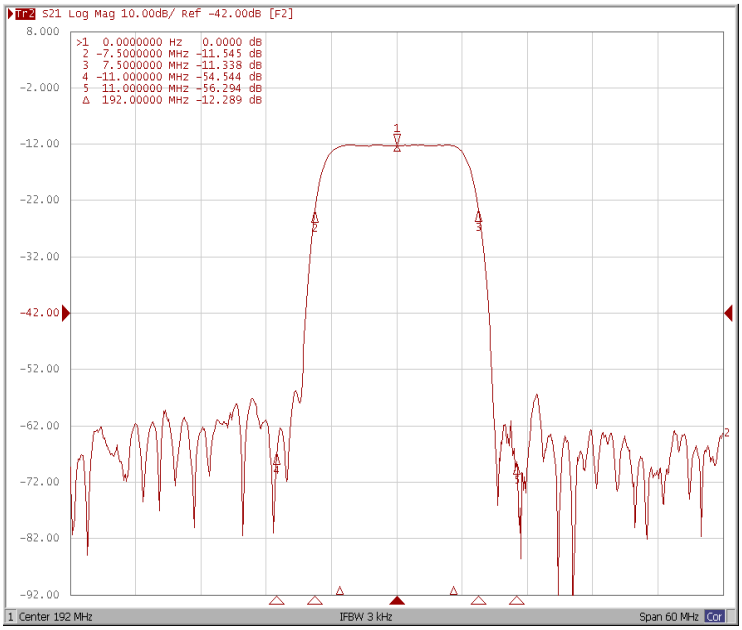
Bandwidth at –1.0 dB



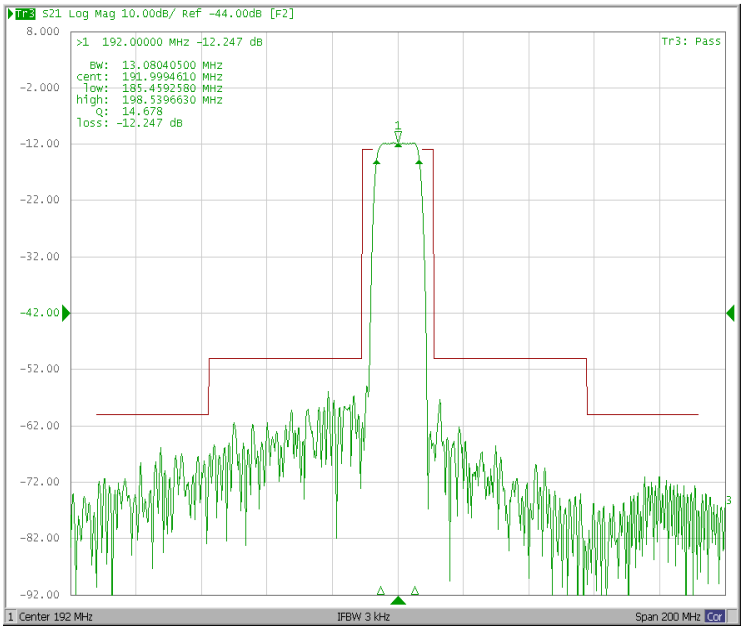
Bandwidth at –40.0 dB



Fo±7.5MHz, Fo±11.0MHz



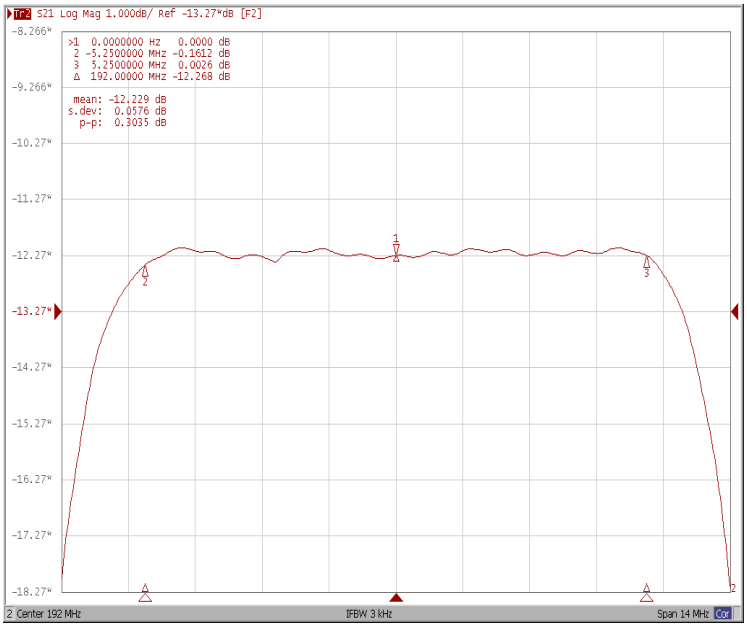
Relative Attenuation



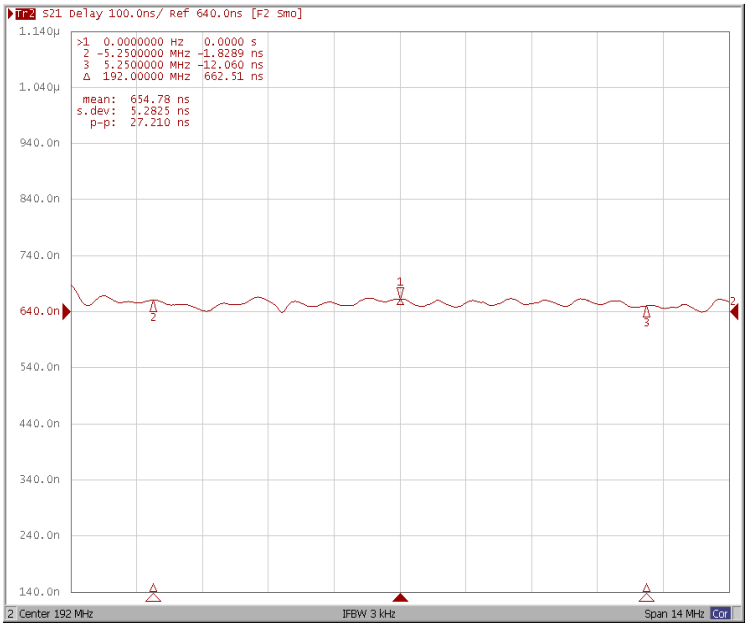
❒ Frequency Characteristics

Frequency Response

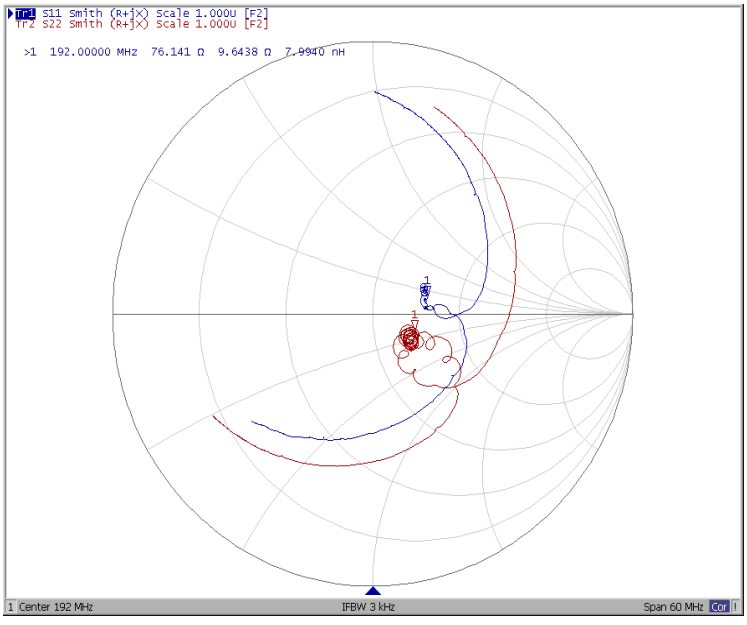
Ripple Variation at Fo ±5.25MHz



Ripple Variation at Fo ±5.25MHz



Smith Chart



Return Loss