



Total Solution Provider in Saw Device

SA10920AD1

109.5 MHz IF SAW Filter
20.35 MHz Bandwidth
Revision 0: 22. July. 2008



- 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

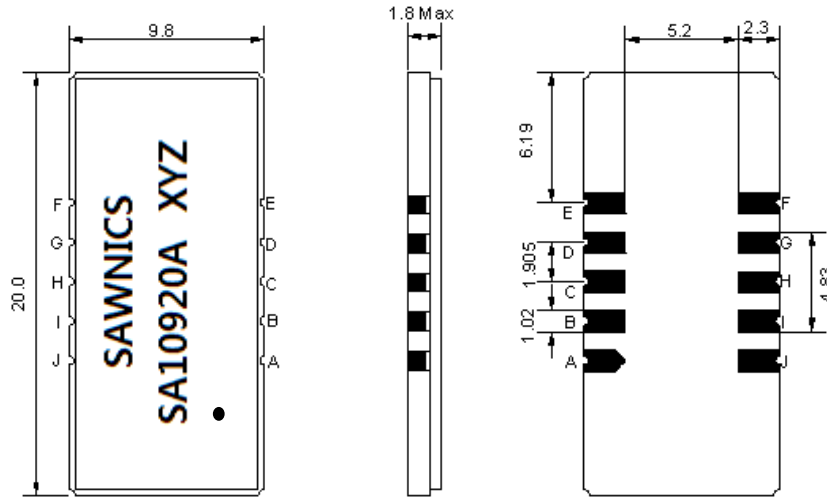
Parameters Description	Unit	Minimum	Typical	Maximum
Operation Temperature Range	°C	0		70
Storage Temperature Range	°C	-30	-	80
Maximum DC Voltage	V	-	-	10
Maximum Input Power	dBm	-	-	10
Source Impedance (single ended) ⁽¹⁾	Ω	-	50	-
Load Impedance (single ended) ⁽¹⁾	Ω	-	50	-
Package type & size	D1			
Length x Width	mm ²	-	20.0x 9.8	-
Height	mm	-	-	1.8

Electrical Specification

Parameters Description	Unit	Minimum	Typical	Maximum
Center Frequency (Fo)	MHz	-	109.5	-
Insertion Loss at Fo	dB	-	21.37	25.0
Group Delay Variation (Fo±9.22MHz)	ns	-	40	80
Absolute Delay	us	-	1.89	-
Passband Ripple (Fo±9.22MHz)	dB	-	0.45	1.0
Bandwidth at -1dB	MHz	20.00	20.35	-
Bandwidth at -10dB	MHz	-	21.40	21.80
Bandwidth at -20dB	MHz	-	21.90	22.20
Bandwidth at -30dB	MHz	-	22.20	22.50
Bandwidth at -45B	MHz	-	22.50	-
Ultimate Rejection	dB	-	50	-
Temperature Coefficient of Frequency	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.

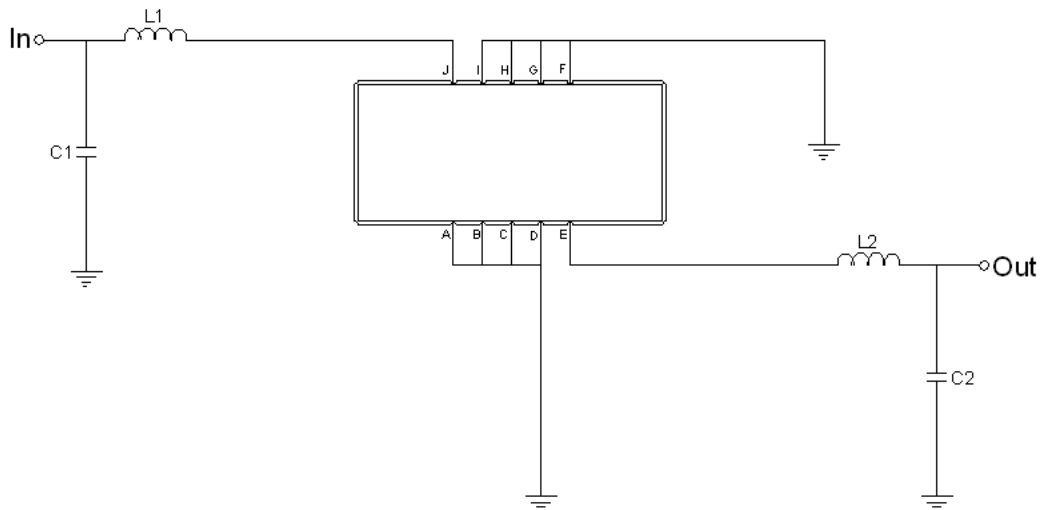
Package Dimensions



- ① SAWNICS: Brand
- ② SA10920A: 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

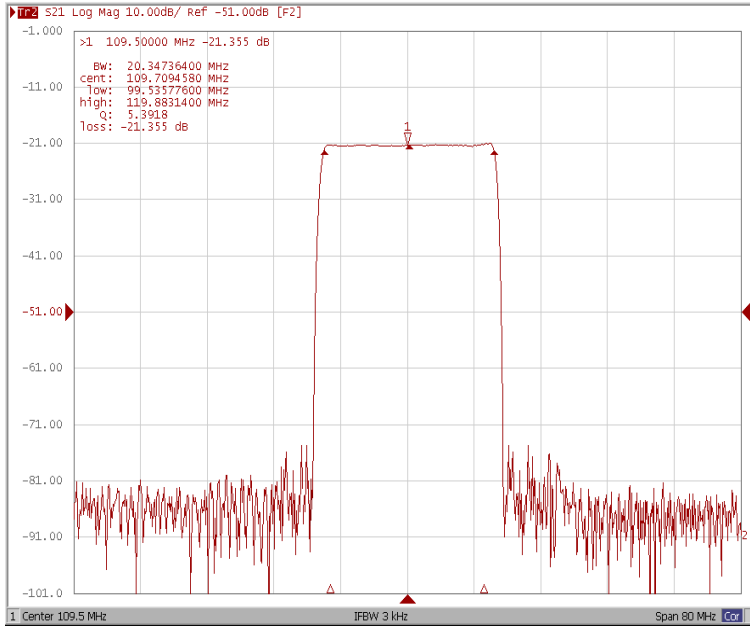


Test Fixture & Values	
Input	L1=68 nH, C1=16 pF
Output	L2=68 nH, C1=16 pF
Source/Load Impedance	50 Ω

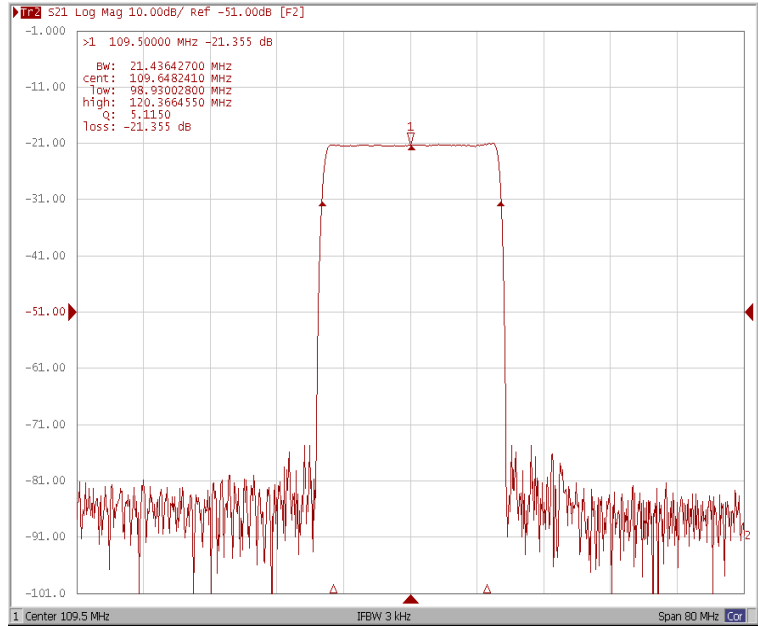
□ Frequency Characteristics

Frequency Response

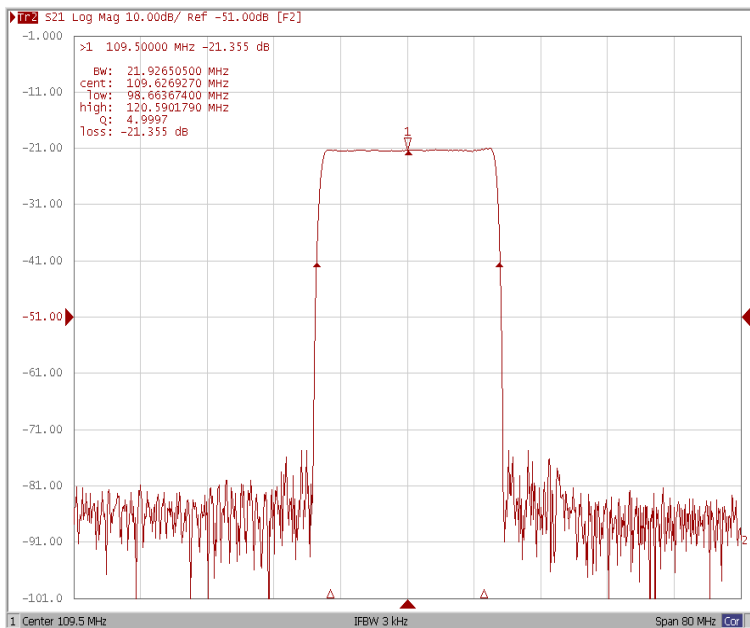
Bandwidth at -1.0 dB



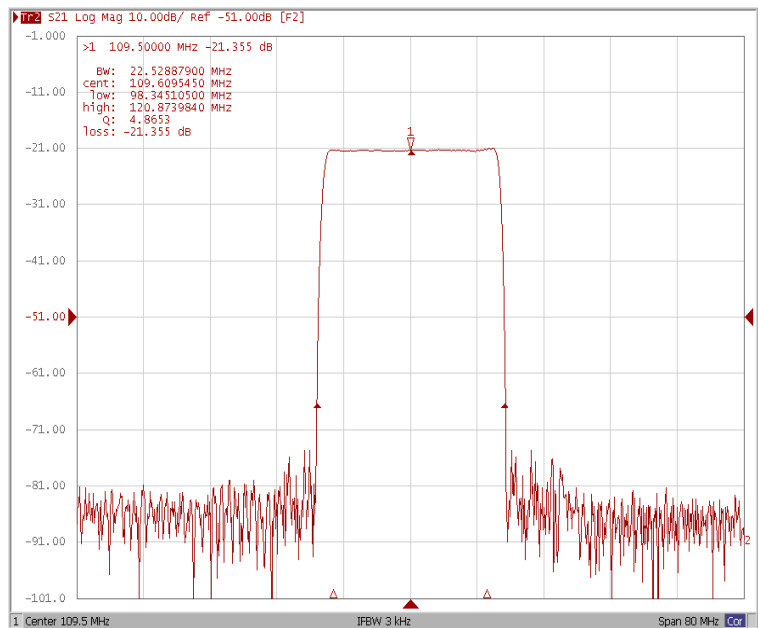
Bandwidth at -10.0 dB



Bandwidth at -20.0 dB



Bandwidth at -45.0 dB

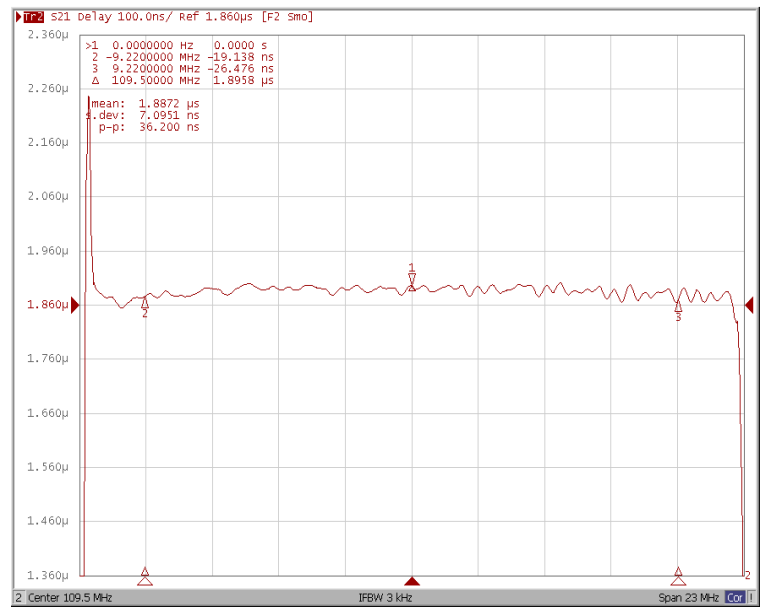
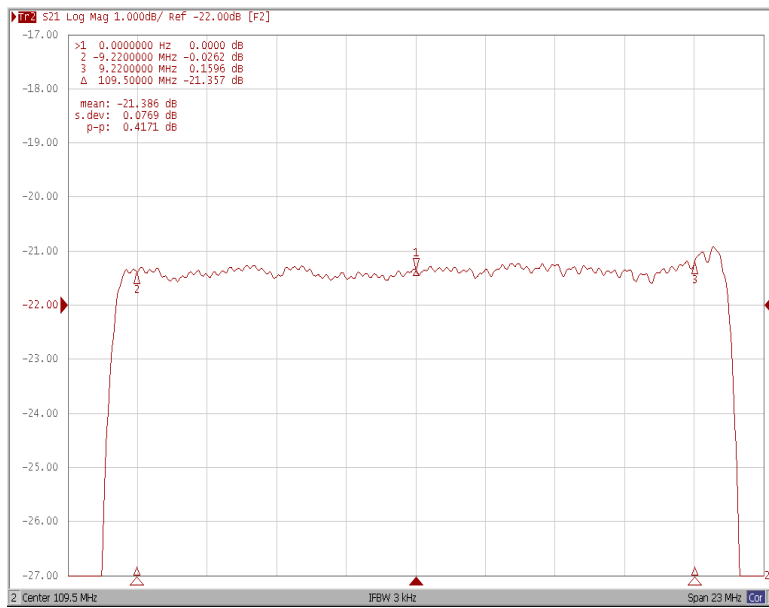


Frequency Characteristics

Frequency Response

Ripple Variation $F_o \pm 9.22\text{MHz}$

Group Delay Variation $F_o \pm 9.22\text{MHz}$



Smith Chart

VSWR

