SA10010AD1

100.0 MHz IF SAW Filter
10.65 MHz Bandwidth
Revision 0: 19. October. 2010

RoHS compliance
Pb free

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

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❒ Electrical Characteristics

Maximum Ratings

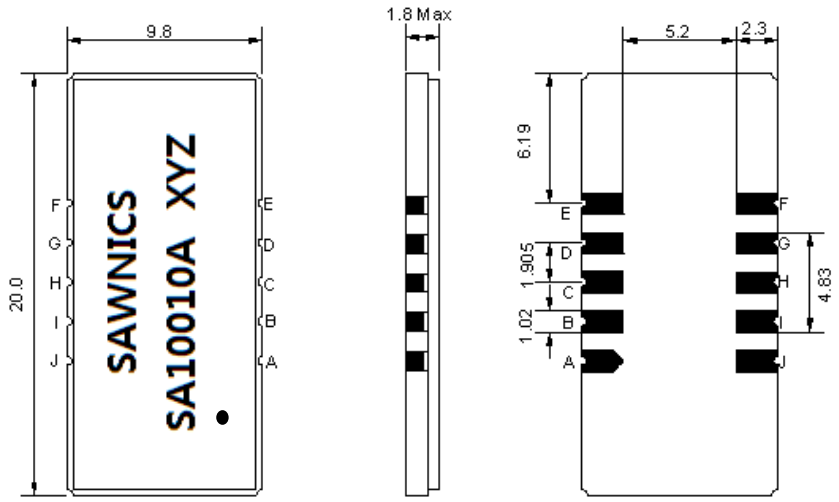
Parameters Description	Unit	Minimum	Typical	Maximum
Operation Temperature Range	°C	-20	-	80
Storage Temperature Range	°C	-40	-	85
Maximum DC Voltage	V	-	-	10
Maximum Input Power	dBm	-	-	10
Source Impedance (single ended)(1)	Ω	-	50	-
Load Impedance (single ended)(1)	Ω	-	50	-
Package type & size	D1			
Length x Width	mm²	-	20.0 x 9.8	-
Height	mm	-	-	1.8

Electrical Specification

Parameters Description	Unit	Minimum	Typical	Maximum
Center Frequency (Fo)	MHz	-	100.00	-
Insertion Loss at Fo	dB	-	21.50	23.00
Group Delay Variation (Fo±4.425MHz)	ns	-	53	90
Absolute Delay	us	-	2.07	-
Passband Ripple (Fo±4.425MHz)	dB	-	0.55	0.90
Bandwidth at -1dB	MHz	10.40	10.65	-
Bandwidth at -3dB	MHz	-	11.05	-
Bandwidth at -40dB	MHz	-	12.65	12.80
Relative Attenuation				
Lower Sidelobe	dB	50	53	-
Upper Sidelobe	dB	50	53	-
Temperature coefficient	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.

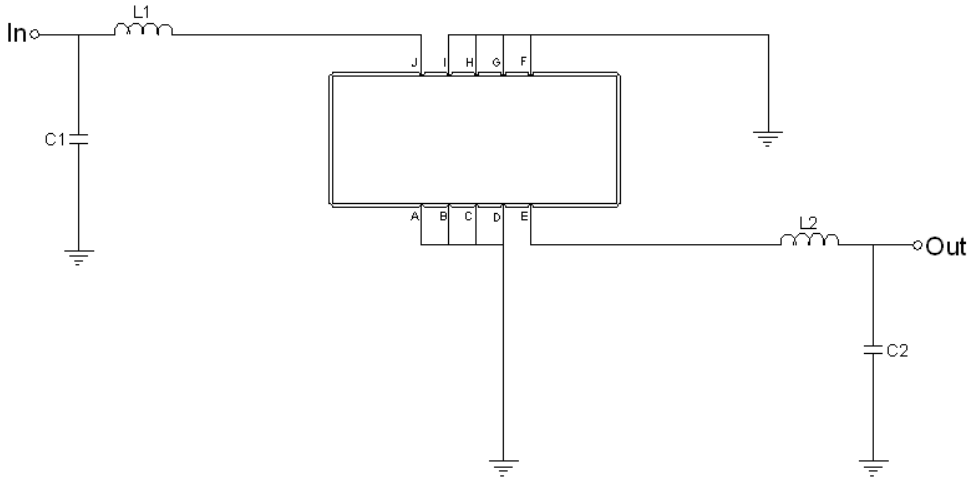
❒ Package Dimensions



① SAWNICS: Brand
② SA10010A: 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



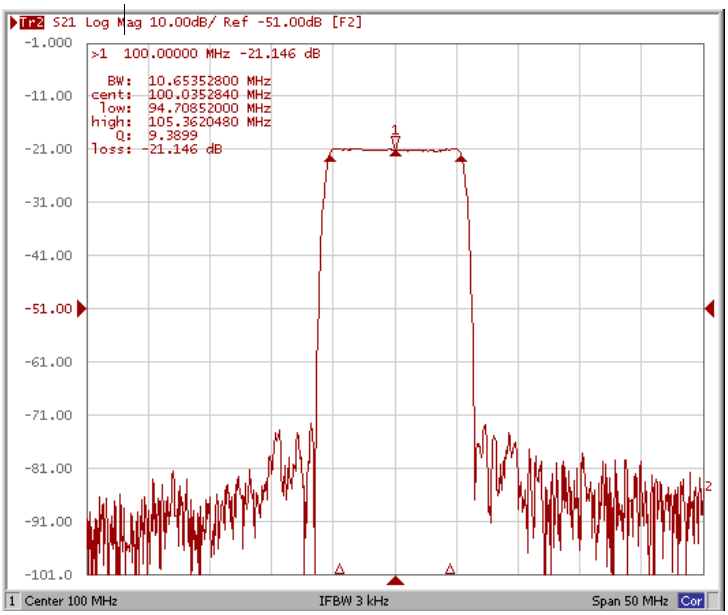
Test Fixture & Values	
Input	L1=10nH, C1=3pF
Output	L2=10nH ,C2=3pF
Source/Load Impedance	50 Ω

❒ Frequency Characteristics

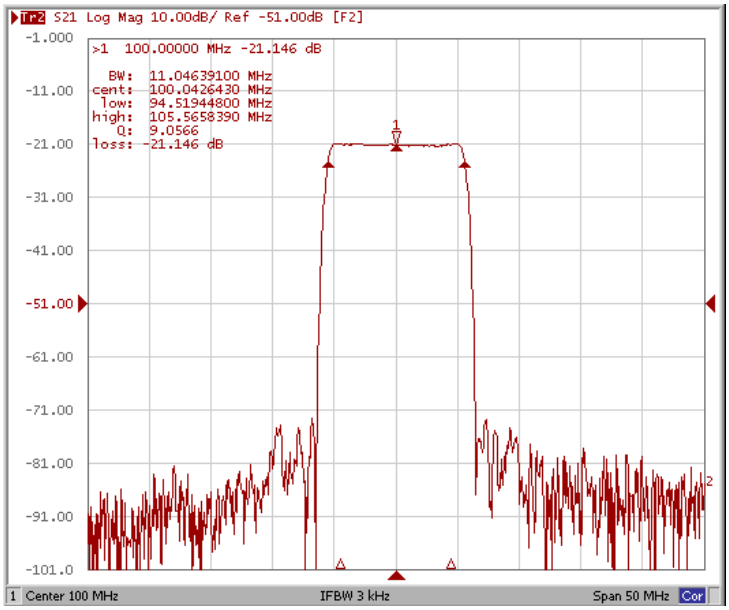
Frequency Response

Operating Temperature : +25 ℃

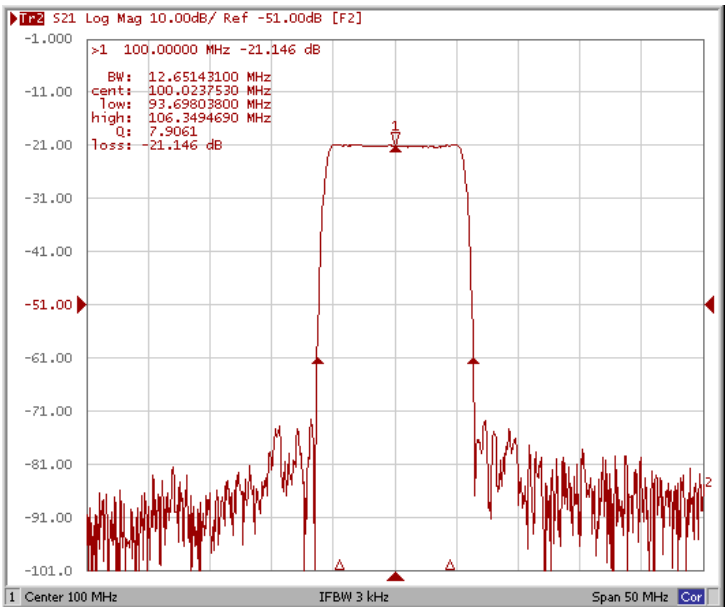
Bandwidth at –1.0 dB



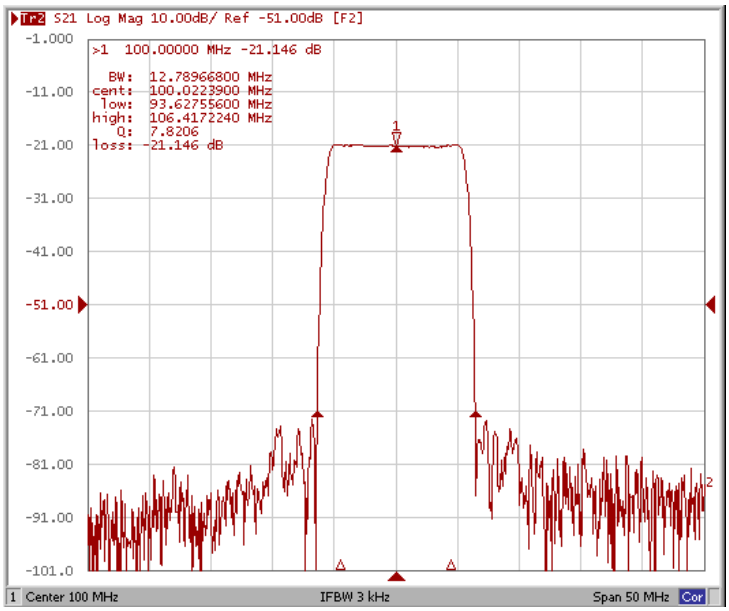
Bandwidth at –3.0 dB



Bandwidth at –40.0 dB



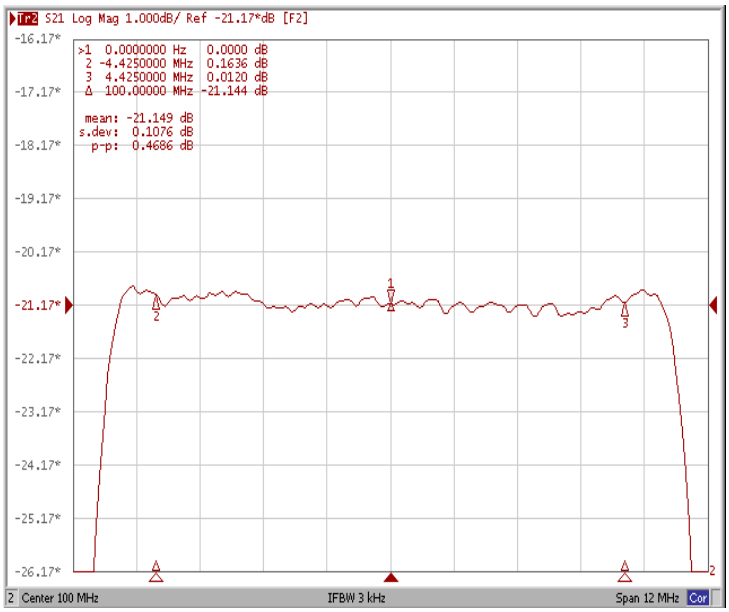
Bandwidth at –50.0 dB



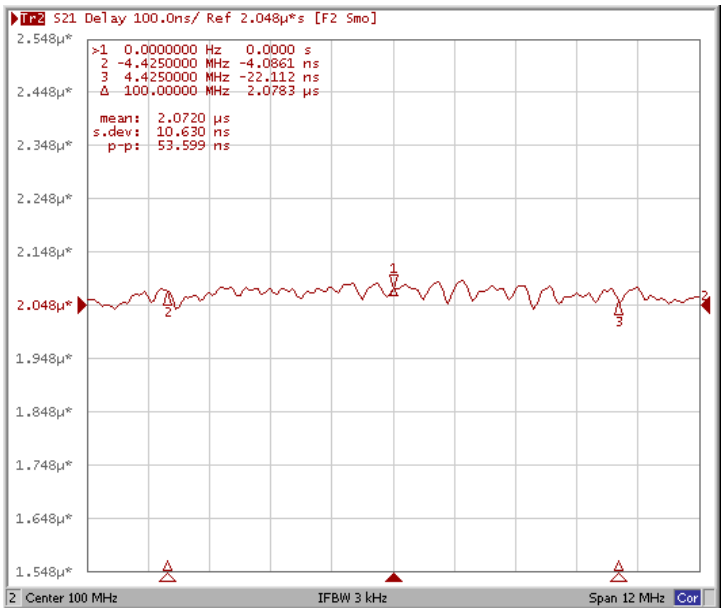
❒ Frequency Characteristics

Frequency Response

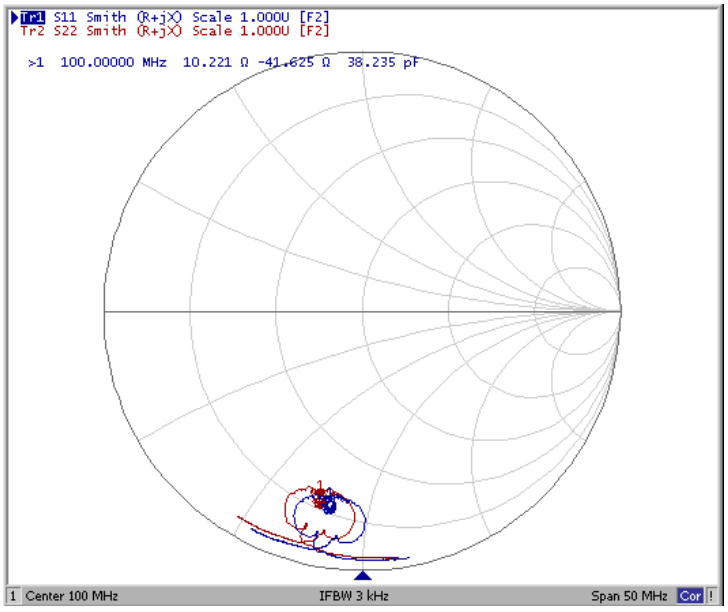
Ripple Variation Fo±4.425MHz



Group Delay Variation Fo±4.425MHz



Smith Chart



VSWR