



Total Solution Provider in Saw Device

SA10010BD1

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



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- 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	mm ²	-	20.0 x 9.8	-
Height	mm	-	-	1.8

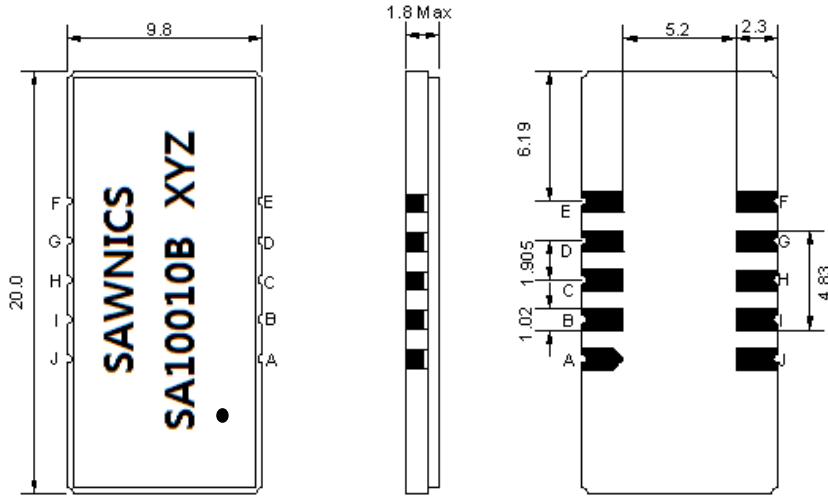
Electrical Specification

Parameters Description	Unit	Minimum	Typical	Maximum
Center Frequency (Fo)	MHz	-	100.00	-
Insertion Loss at Fo	dB	-	23.80	25.00
Group Delay Variation (Fo±4.425MHz)	ns	-	18	40
Absolute Delay	us	-	2.56	-
Passband Ripple (Fo±4.425MHz)	dB	-	0.30	0.80
Bandwidth at -1dB	MHz	10.20	10.40	-
Bandwidth at -3dB	MHz	-	10.95	-
Bandwidth at -40dB	MHz	-	12.85	13.00
Relative Attenuation				
Lower Sidelobe	dB	50	55	-
Upper Sidelobe	dB	50	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.

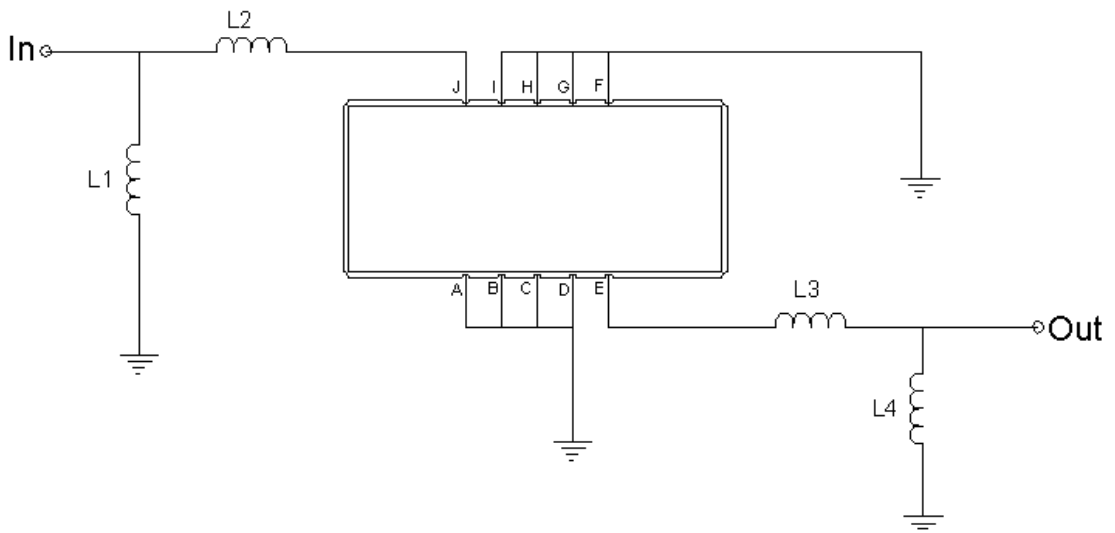
Package Dimensions



- ① SAWNICS: Brand
- ② SA10010B: 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



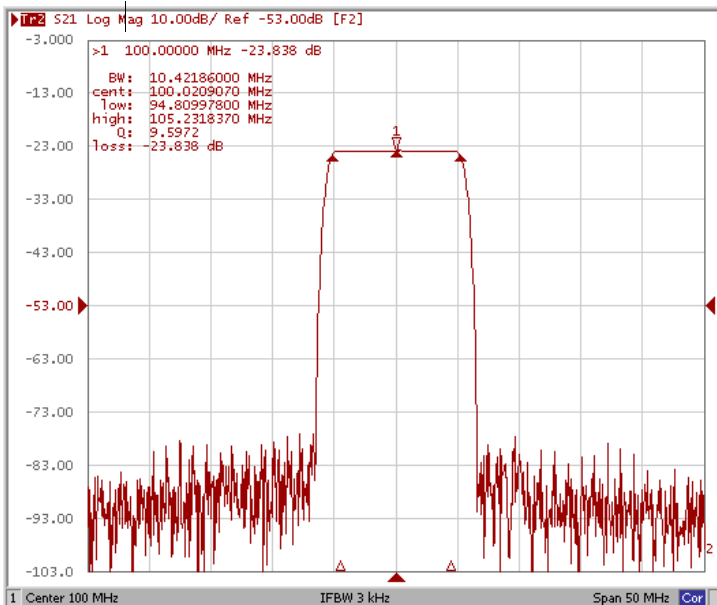
Test Fixture & Values	
Input	L1 = 56 nH, L2 = 22 nH
Output	L3 = 22 nH, L4 = 56 nH
Source/Load Impedance	50 Ω

Frequency Characteristics

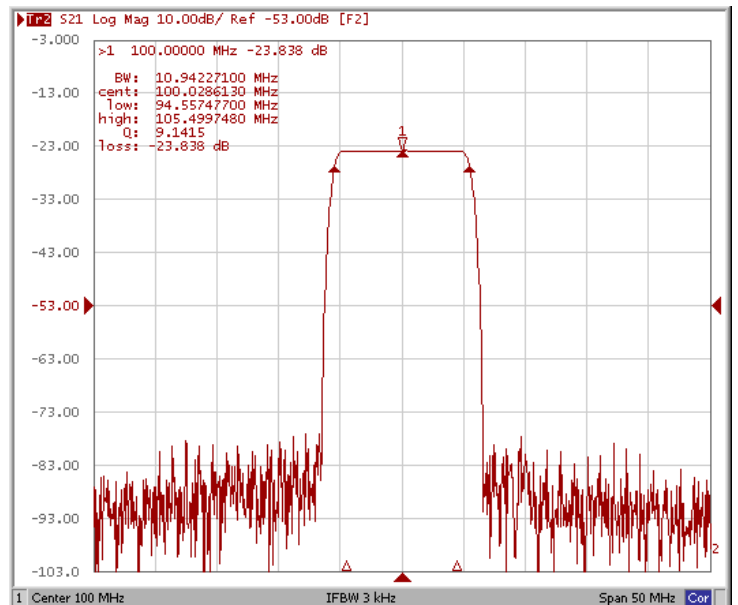
Frequency Response

Operating Temperature : +25 °C

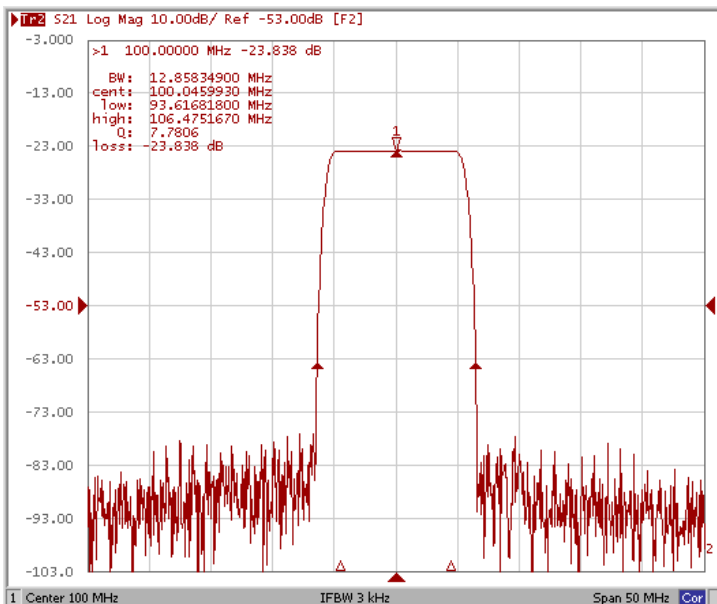
Bandwidth at -1.0 dB



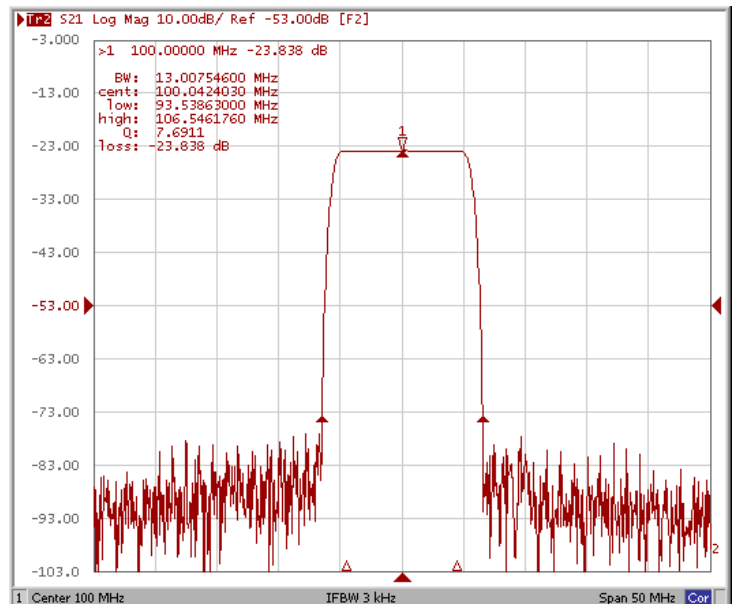
Bandwidth at -3.0 dB



Bandwidth at -40.0 dB



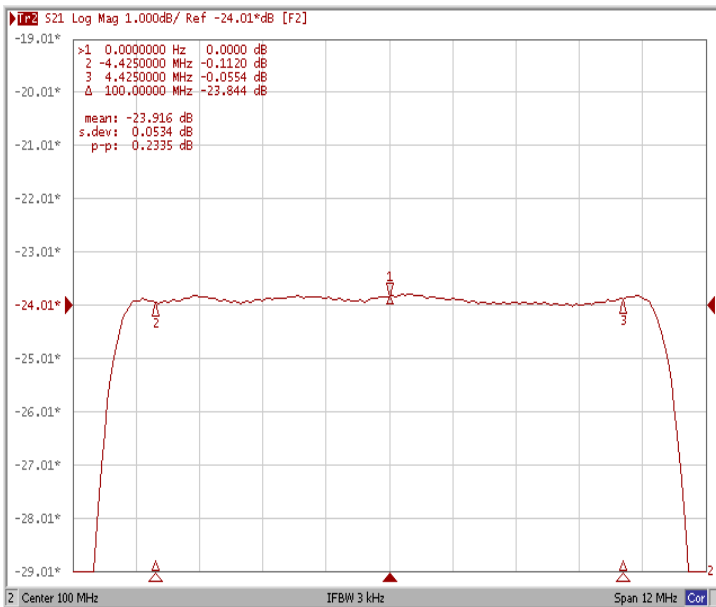
Bandwidth at -50.0 dB



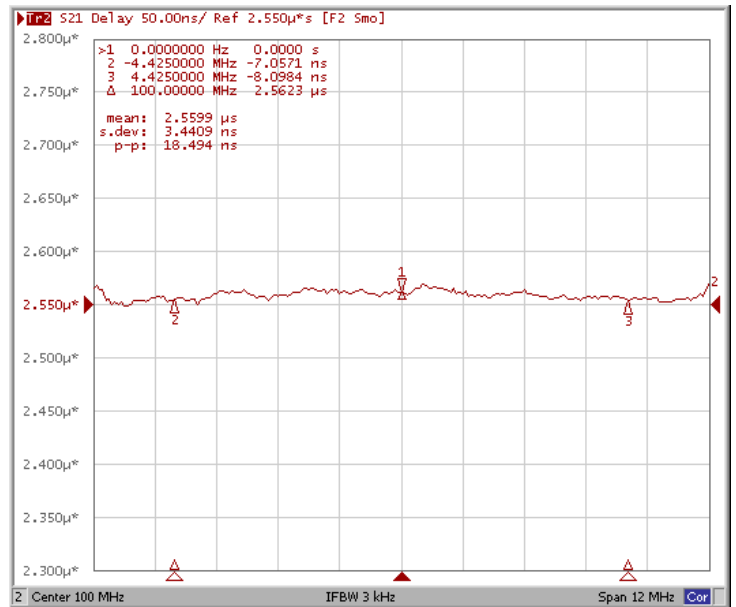
□ Frequency Characteristics

Frequency Response

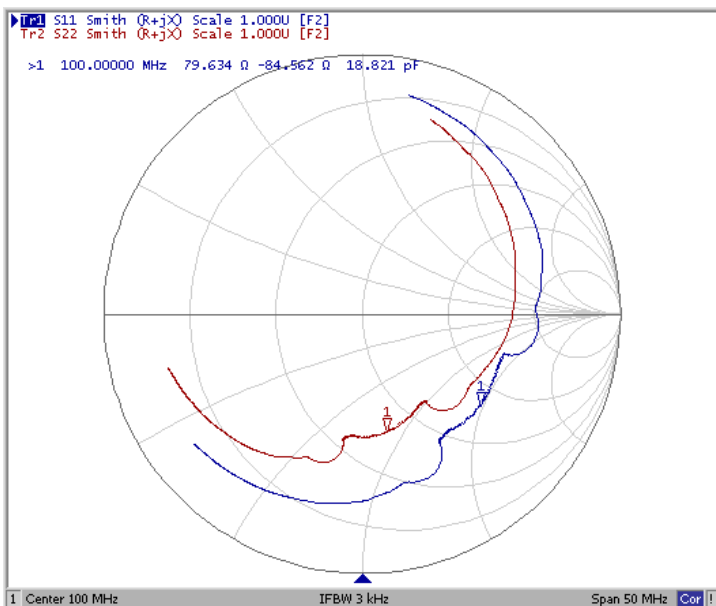
Ripple Variation $F_o \pm 4.425\text{MHz}$



Group Delay Variation $F_o \pm 4.425\text{MHz}$



Smith Chart



VSWR

