



Total Solution Provider in Saw Device

SA09820AF

98.0MHz IF SAW Filter
20.55 MHz Bandwidth
Revision 0: 16.OCT. 2009



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

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□ Electrical Characteristics

Maximum Ratings

Parameters Description	Unit	Minimum	Typical	Maximum
Operable Temperature Range	°C	-30	-	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	F			
Length x Width	mm ²	-	34.7 x 12.6	-
Height	mm	-	-	5.05

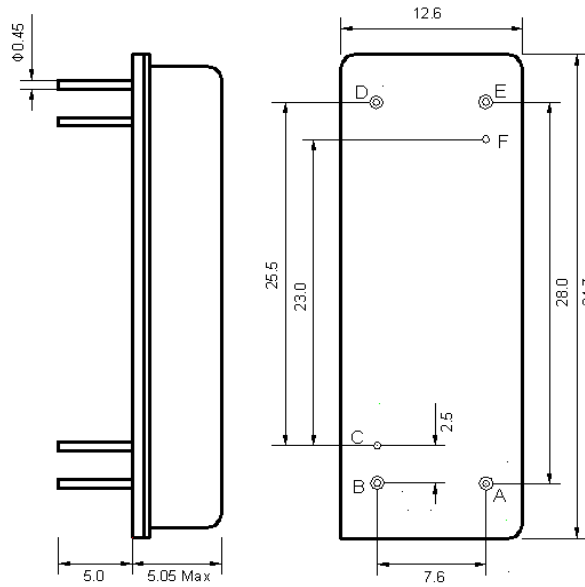
Electrical Specification

Parameters Description	Unit	Minimum	Typical	Maximum
Center Frequency (Fo)	MHz	-	98.0	-
Insertion Loss at Fo	dB	-	21.8	23.5
Group Delay Variation (Fo±10.0MHz)	ns	-	39	80
Absolute Delay Time at Fo	us	-	2.30	2.50
Amplitude Ripple (Fo±10.0MHz)	dB	-	0.57	1.00
Bandwidth at -1dB	MHz	20.35	20.55	-
Bandwidth at -3dB	MHz	-	20.90	-
Bandwidth at -45dB	MHz	-	22.43	22.70
Relative Attenuation				
Lower Sidelobe	dB	50	55	-
Upper Sidelobe	dB	50	55	-
Temperature Coefficient	ppm/°C	-	-72	-

Notes : (1) With Matching Network (Ref. Testing Environment Circuit as shown below).

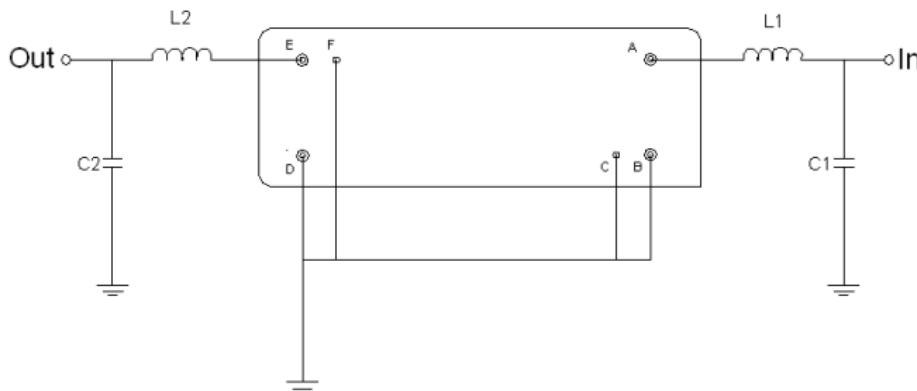
Those impedances could be modified with different impedance values and/or structures, if necessary

□ Package Dimensions



Pin Description	
B, C, D, F	Ground
A	Input
E	Output

□ Testing Environment



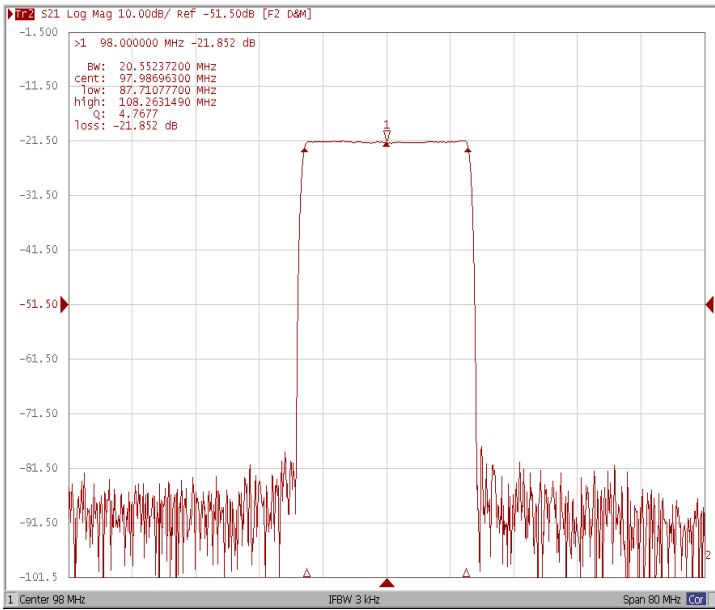
Test Fixture & Values	
Input	L1=82 nH, C1=18 pF
Output	L2=82 nH, C2= 6 pF
Source/Load Impedance	50 Ω



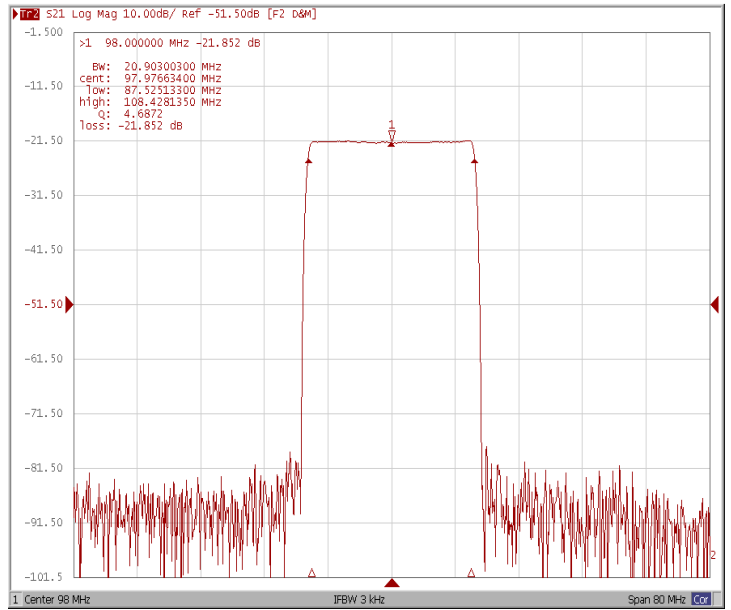
□ Frequency Characteristics

Frequency Response

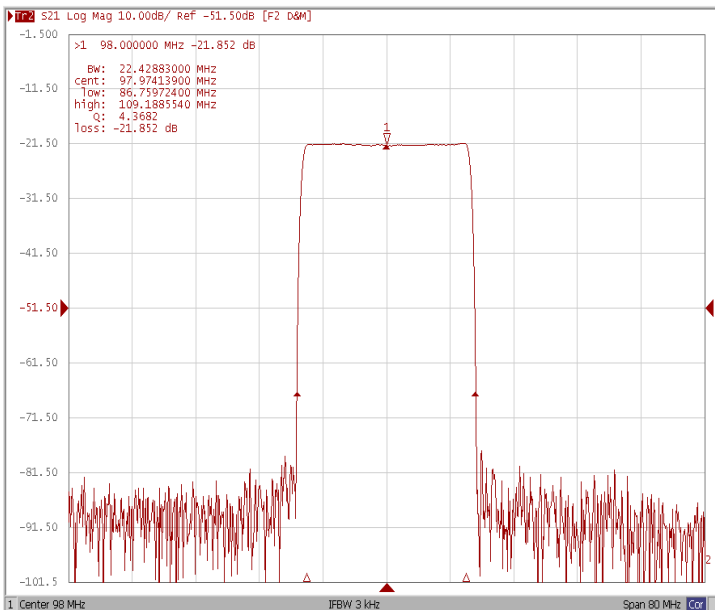
Bandwidth at -1.0 dB



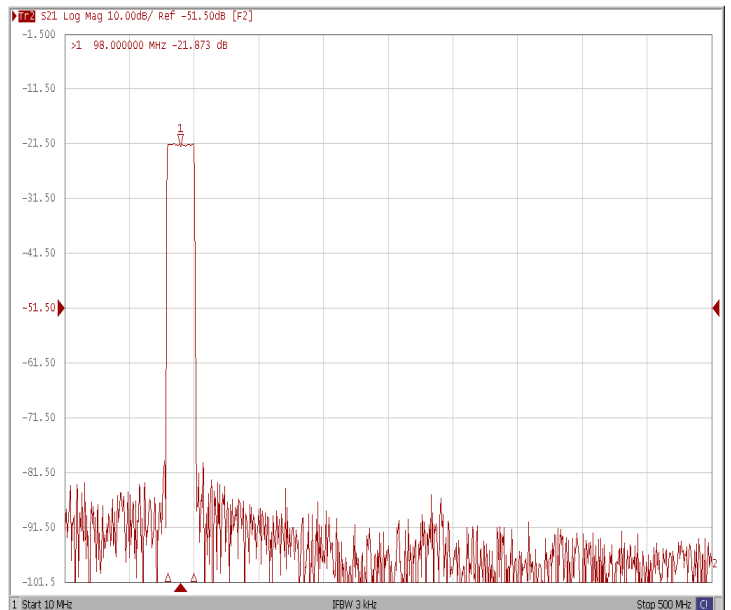
Bandwidth at -3.0 dB



Bandwidth at -45.0 dB



Wide Span

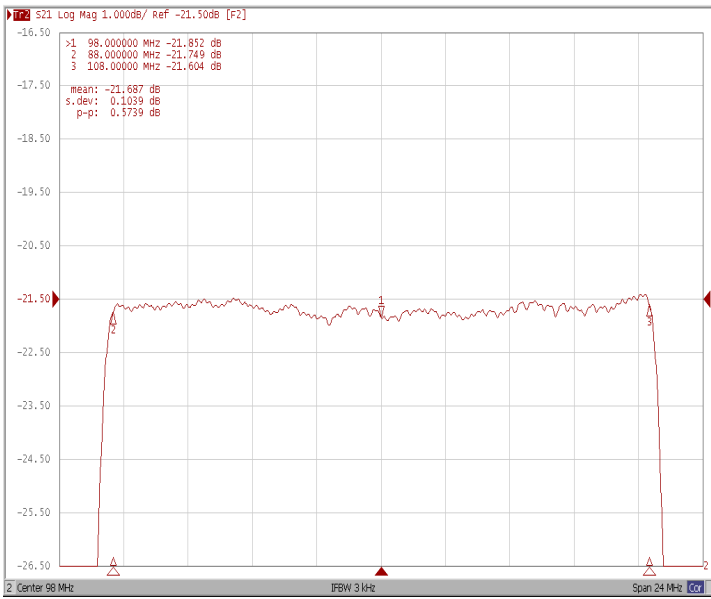




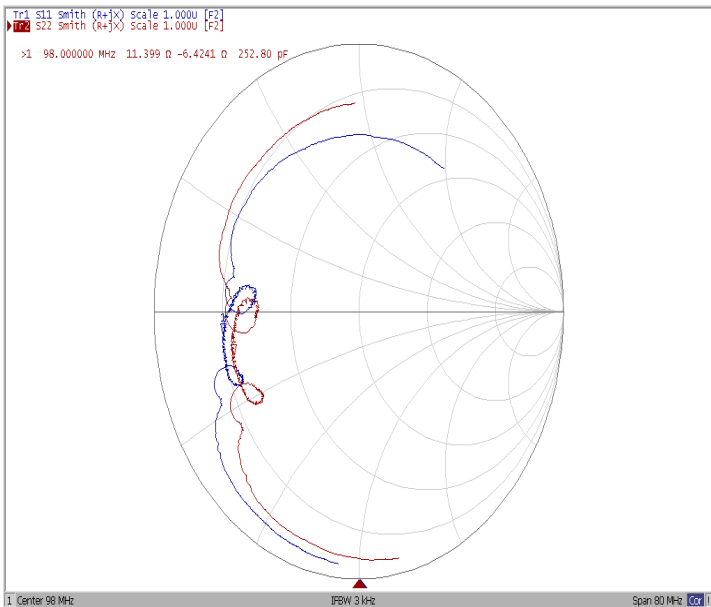
Frequency Characteristics

Frequency Response

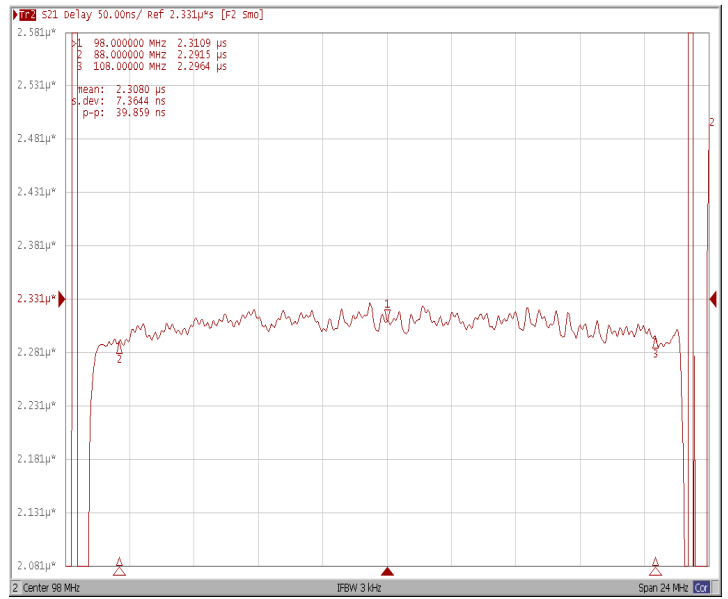
Ripple Variation $F_0 \pm 10.0\text{MHz}$



Smith Chart



Group Delay Variation $F_0 \pm 10.0\text{MHz}$



VSWR

