



Total Solution Provider in Saw Device

SA07020AD1

70.0 MHz IF SAW Filter

20.1MHz Bandwidth

Revision 0: 30. November. 2007



- 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	-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	D1			
Length x Width	mm ²	-	20.0 x 9.8	-
Height	mm	-	-	1.8

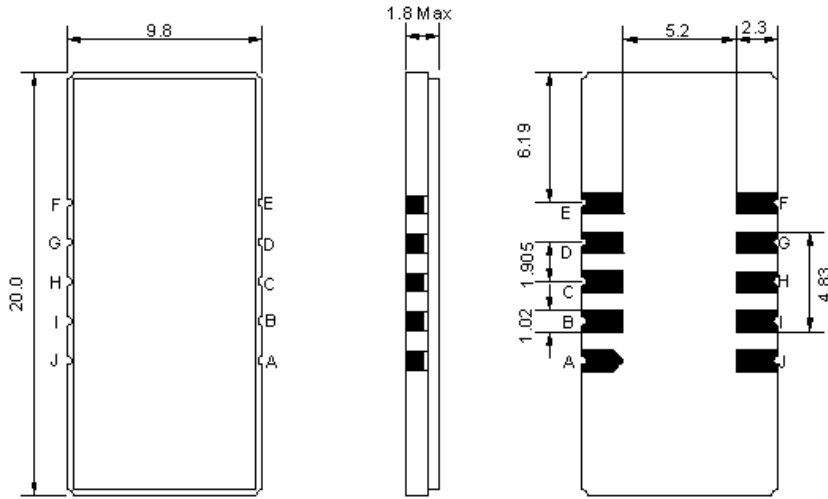
Electrical Specification

Parameters Description	Unit	Minimum	Typical	Maximum
Center Frequency (Fo)	MHz	69.90	70.00	70.10
Insertion Loss at Fo	dB	-	23.5	25.0
Amplitude Ripple Variation at Fo ±9.75 MHz	dB _{p-p}	-	0.6	1.0
Group Delay Variation at Fo ±9.75 MHz	nsec	-	40	80
Absolute Delay at Fo	µsec	-	2.26	-
Temperature Coefficient	ppm/°C	-	-72	-
Bandwidth at -1.0 dB	MHz	-	20.10	-
Bandwidth at -3.0 dB	MHz	20.30	20.46	-
Bandwidth at -40.0 dB	MHz	-	21.78	21.90
Lower Sidelobe	dB	50	54	-
Upper Sidelobe	dB	50	54	-

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

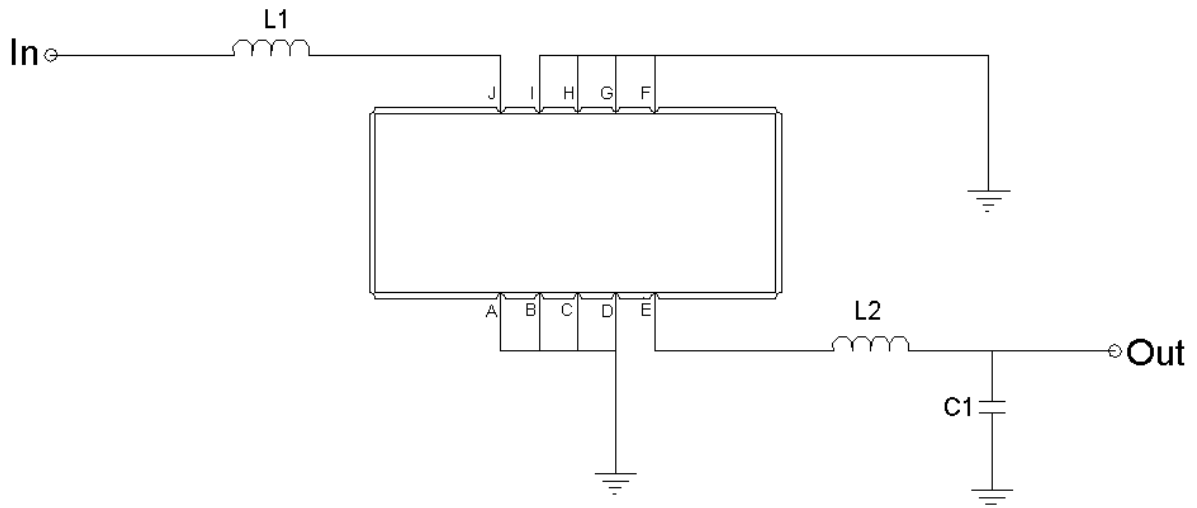
Those impedances could be modified with different impedance values and/or structures, if necessary.

Package Dimensions



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

Testing Environment



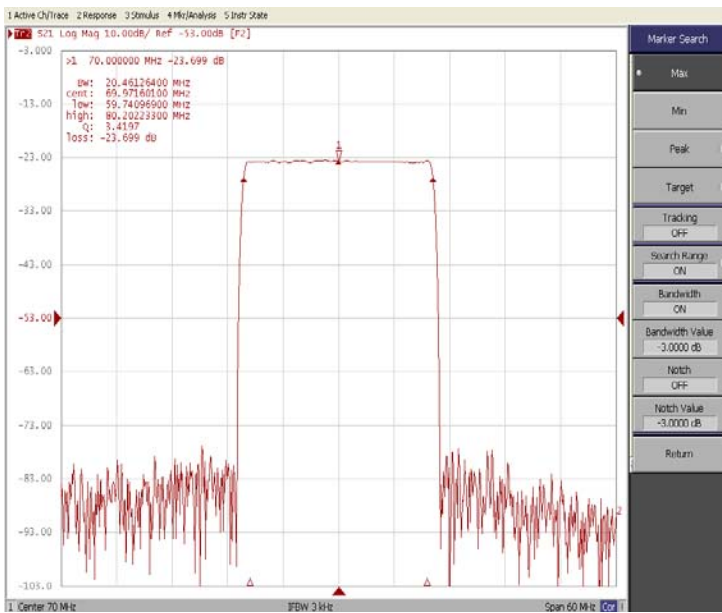
Test Fixture & Values	
Input	L1=120nH
Output	L2=220nH , C2=6pF
Source/Load Impedance	50 Ω



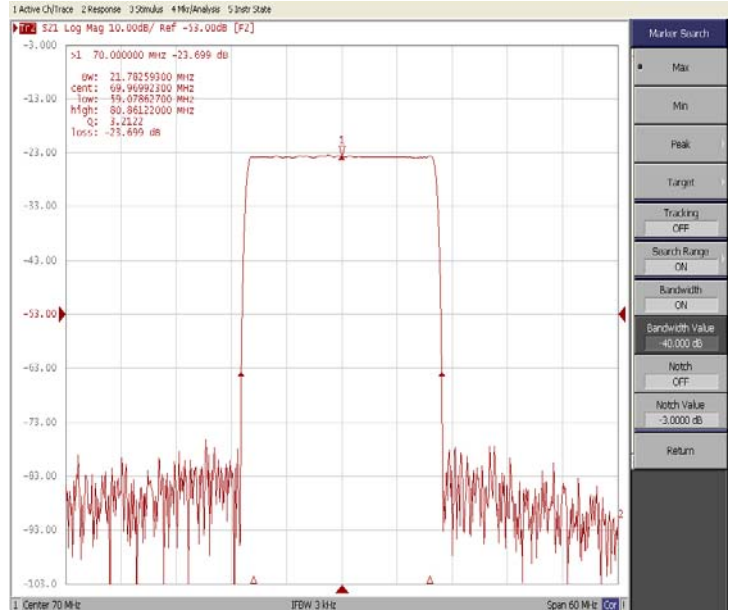
Frequency Characteristics

Frequency Response

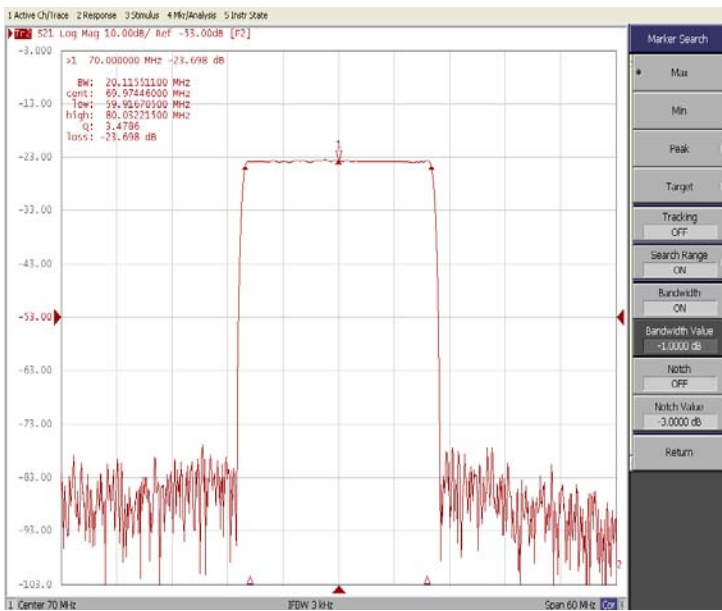
Bandwidth at -3.0 dB



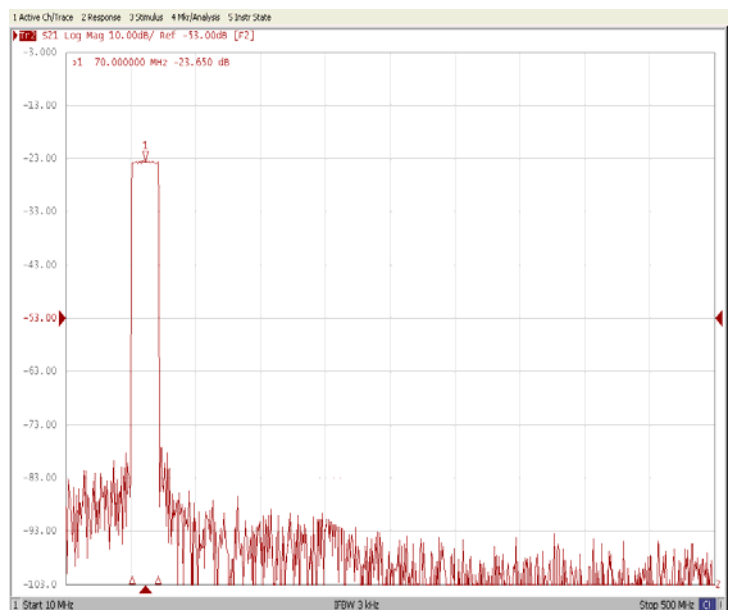
Bandwidth at -40.0 dB



Bandwidth at -1.0 dB



Wide Band

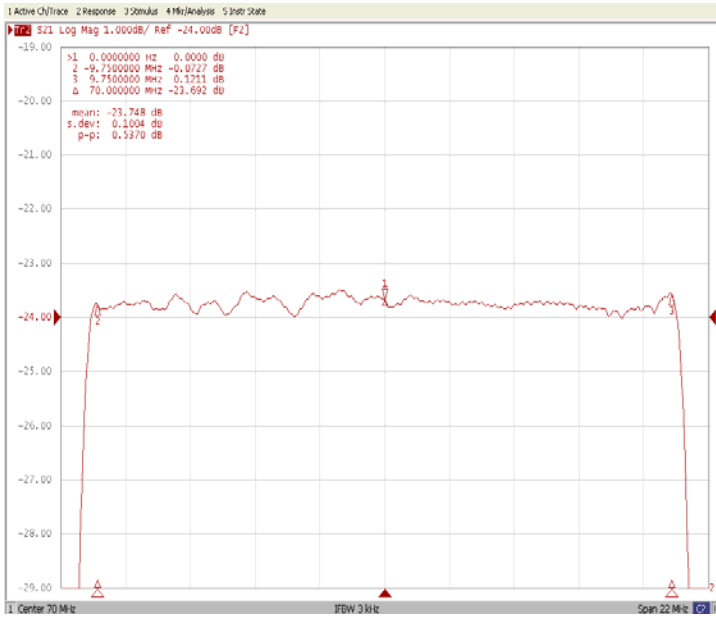




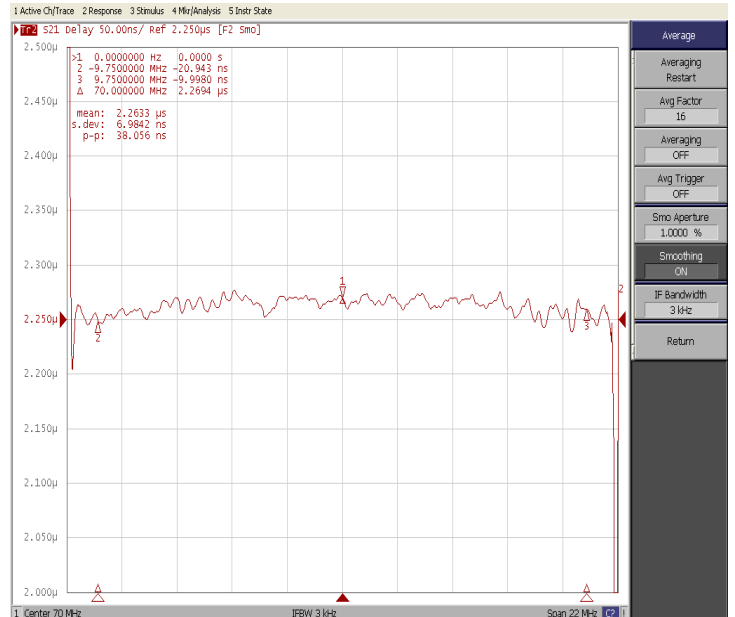
Frequency Characteristics

Frequency Response

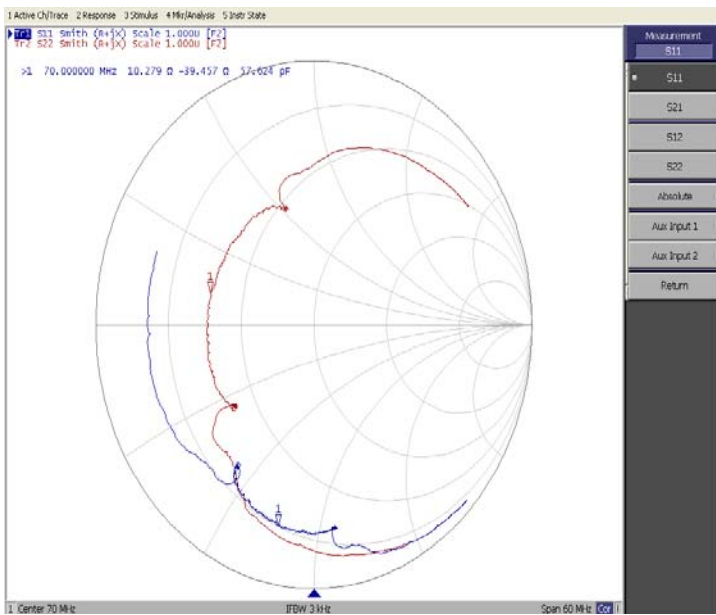
Ripple Variation



Group Delay Variation



Smith Chart



VSWR

