



*Total Solution Provider in Saw Device*

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# SA70SD

70.0 MHz IF SAW Filter

4.34 MHz Bandwidth

Revision 2: 16. Dec. 2008



- 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) <sup>(1)</sup>	Ω	-	50	-
Load Impedance (single ended) <sup>(1)</sup>	Ω	-	50	-
Package type & size	D			
Length x Width	mm <sup>2</sup>	-	20.2 x 12.6	-
Height	mm	-	-	5.3

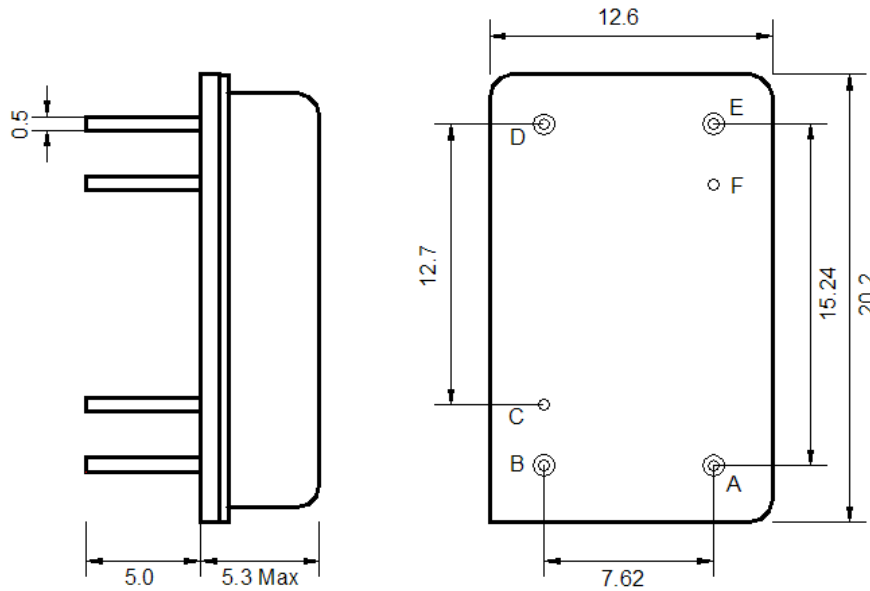
### Electrical Specification

Parameters Description	Unit	Minimum	Typical	Maximum
Center Frequency (Fo)	MHz	69.90	70.00	70.10
Insertion Loss at Fo	dB	-	20.2	24.0
Group Delay Variation at Fo±2.0MHz	nsec	-	93	150
Absolute Delay at Fo	usec	-	2.44	-
Passband Ripple Variation at Fo±2.0MHz	dB	-	0.5	0.8
Bandwidth at -1dB	MHz	4.00	4.34	-
Bandwidth at -3dB	MHz	4.40	4.54	-
Bandwidth at -40dB	MHz	-	5.42	5.60
Ultimate Rejection	dB	40	45	-
Temperature Coefficient	ppm/°C	-	-23	-

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

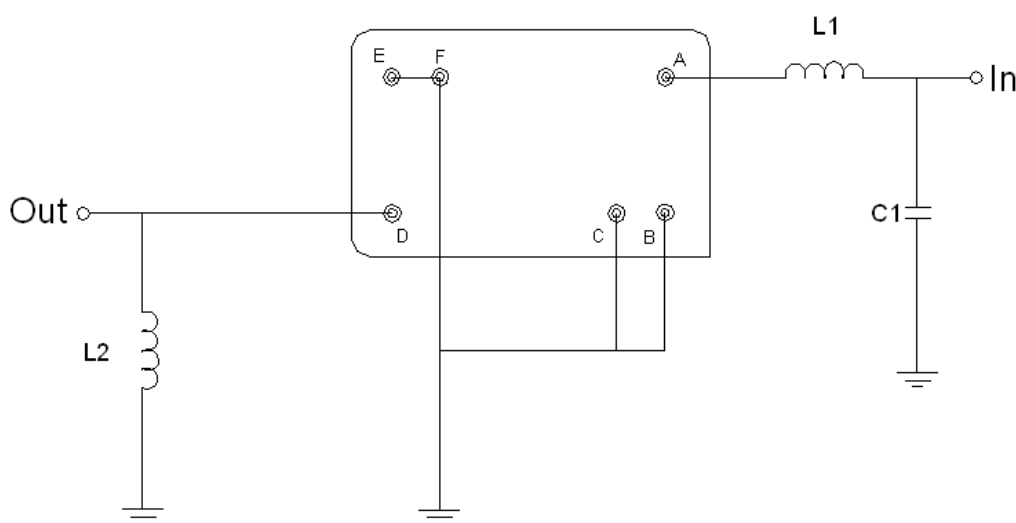
Those impedances could be modified with different impedance values and/or structures, if necessary.

**Package Dimensions**



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

**Testing Environment**

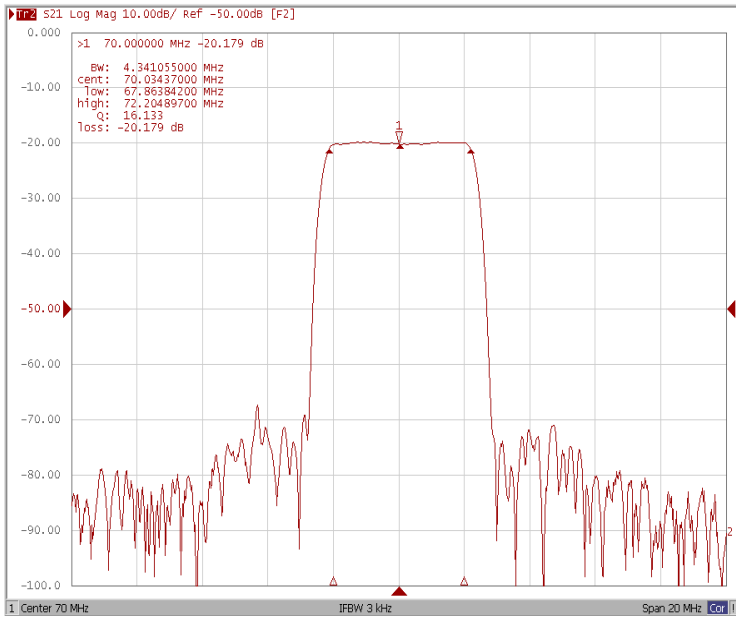


Test Fixture & Values	
Input	L1 = 82 nH , C1 = 92 pF
Output	L2 = 82 nH
Source/Load Impedance	50 Ω

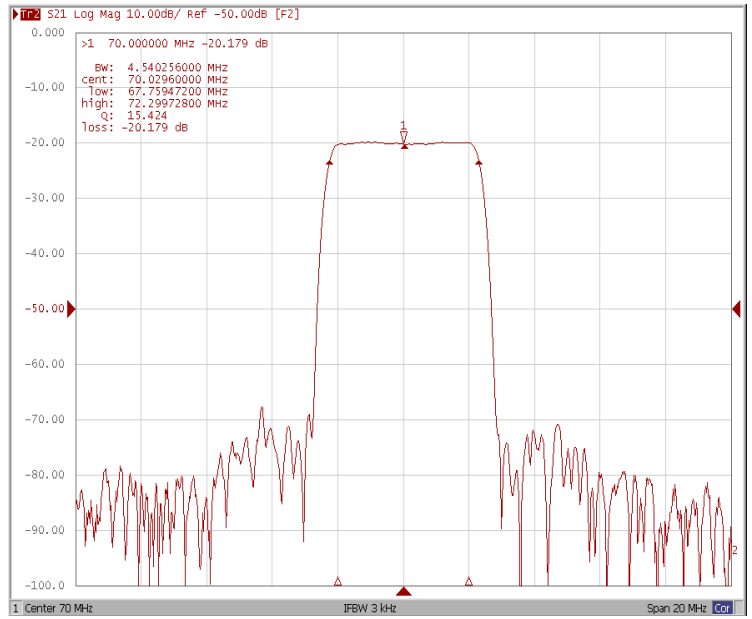
### Frequency Characteristics

#### Frequency Response

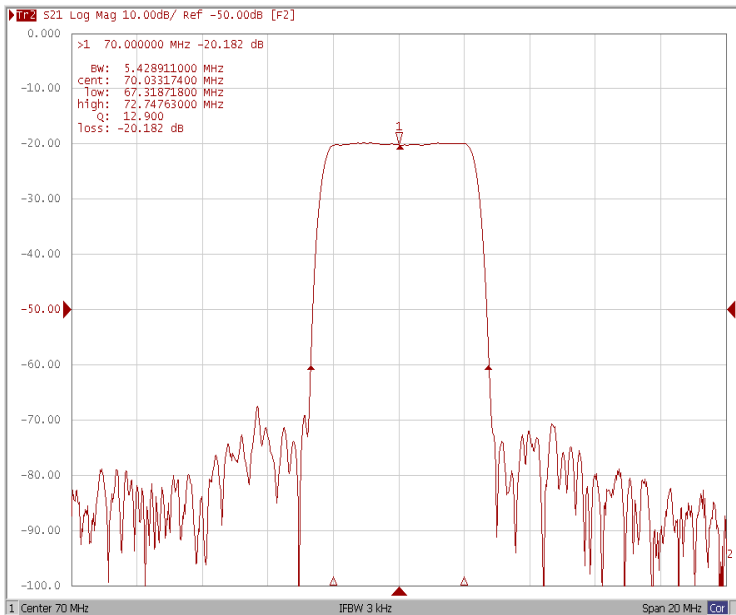
**Bandwidth at -1.0 dB**



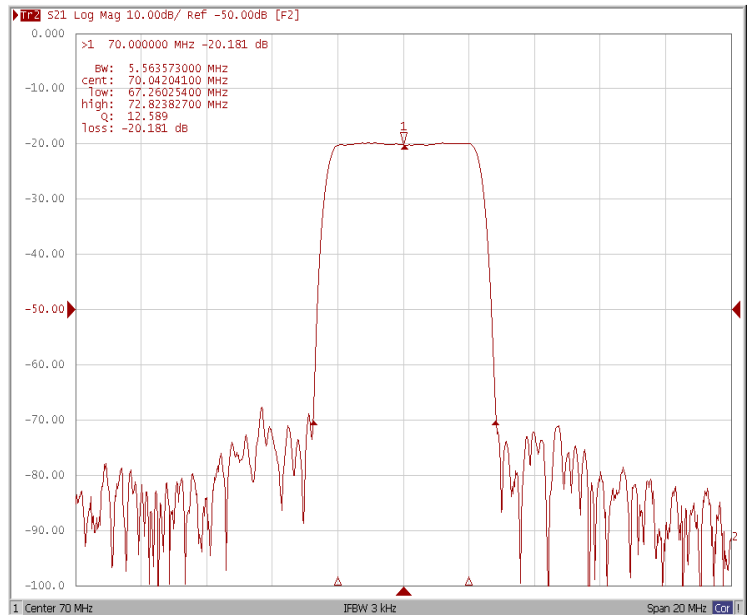
**Bandwidth at -3.0 dB**



**Bandwidth at -40.0 dB**



**Bandwidth at -50.0 dB**

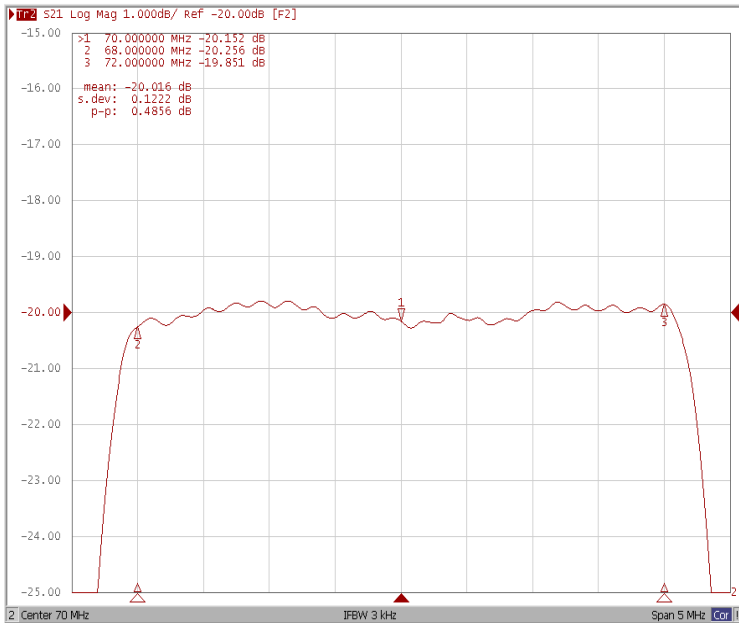




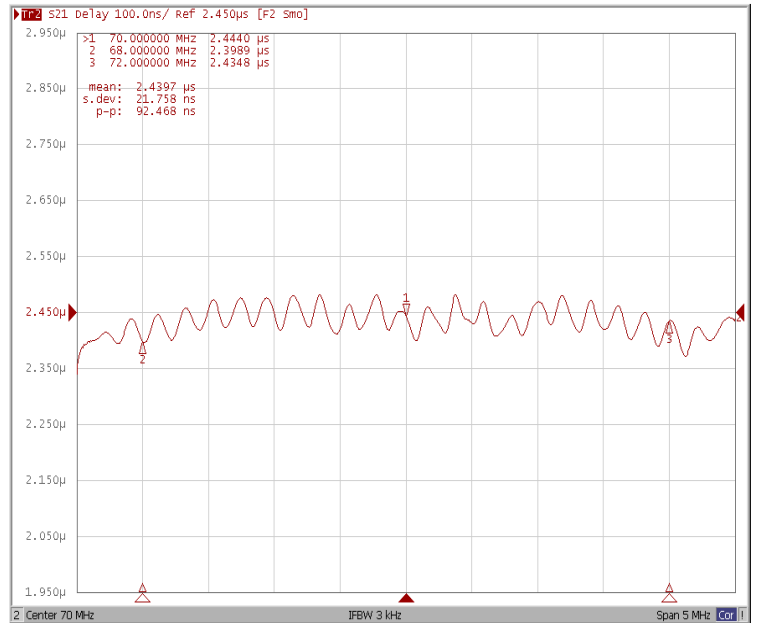
# Frequency Characteristics

## Frequency Response

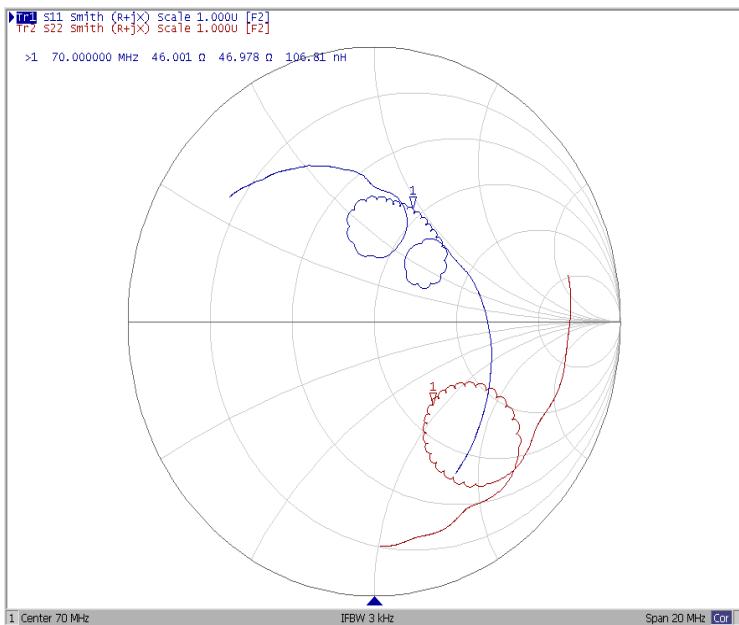
Ripple Variation Fo±2.0MHz



Group Delay Variation Fo±2.0MHz



Smith Chart



VSWR

