



*Total Solution Provider in Saw Device*

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# SA07019DD1

70.0 MHz IF SAW Filter  
19.40 MHz Bandwidth  
Revision 0: 07. May. 2009

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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	-5	-	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	D1			
Length x Width	mm <sup>2</sup>	-	20.0 x 9.8	-
Height	mm	-	-	1.8

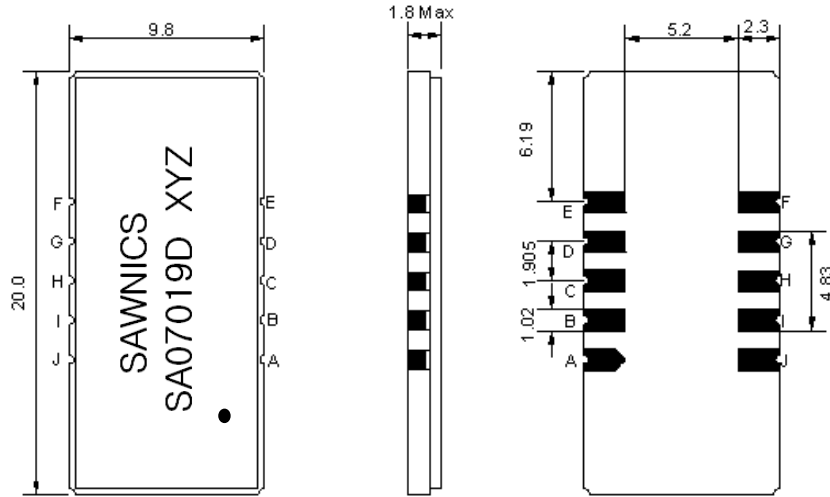
### Electrical Specification

Parameters Description	Unit	Minimum	Typical	Maximum
Center Frequency (Fo)	MHz	-	70.0	-
Insertion Loss at Fo	dB	-	23.60	25.00
Group Delay Variation (Fo±9.42MHz)	nsec	-	37	70
Absolute Delay	usec	-	2.32	2.50
Passband Ripple (Fo±9.42MHz)	dB	-	0.63	1.00
Bandwidth at -1dB	MHz	19.25	19.40	-
Bandwidth at -3dB	MHz	-	19.65	-
Bandwidth at -40dB	MHz	-	20.82	-
Bandwidth at -50dB	MHz	-	20.97	21.06
Ultimate Rejection	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.

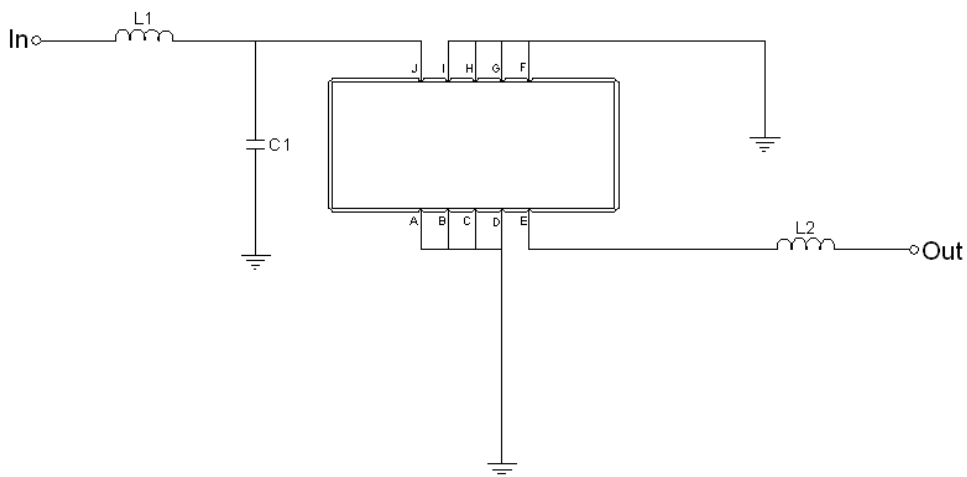
**Package Dimensions**



- ① SAWNICS: Brand
- ② SA07019D: 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**

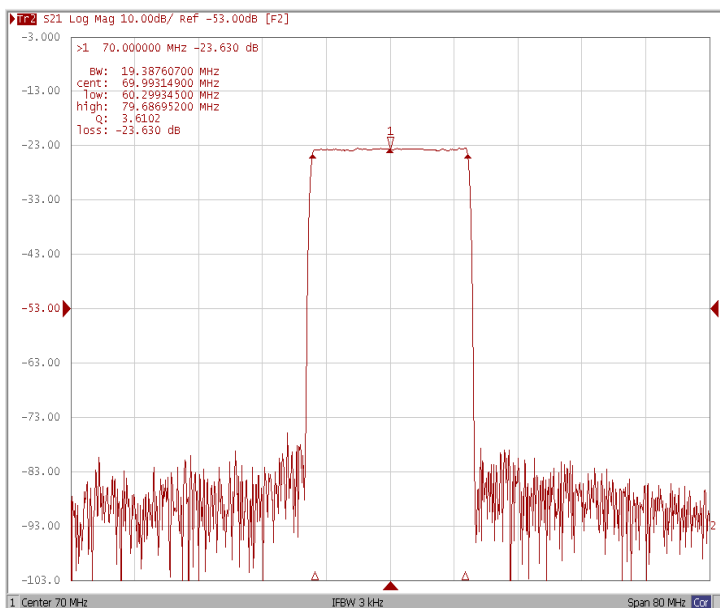


Test Fixture & Values	
Input	L1=150nH, C1=2pF
Output	L2=150nH
Source/Load Impedance	50 Ω

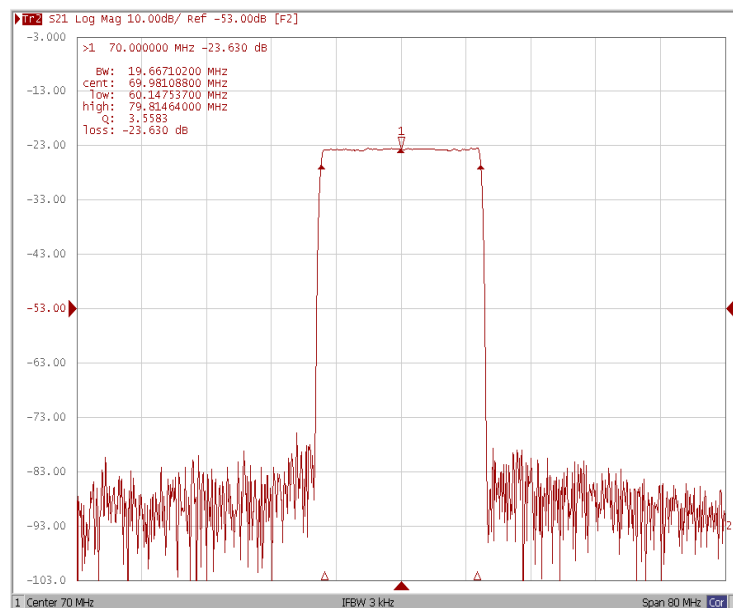
### □ Frequency Characteristics

#### Frequency Response

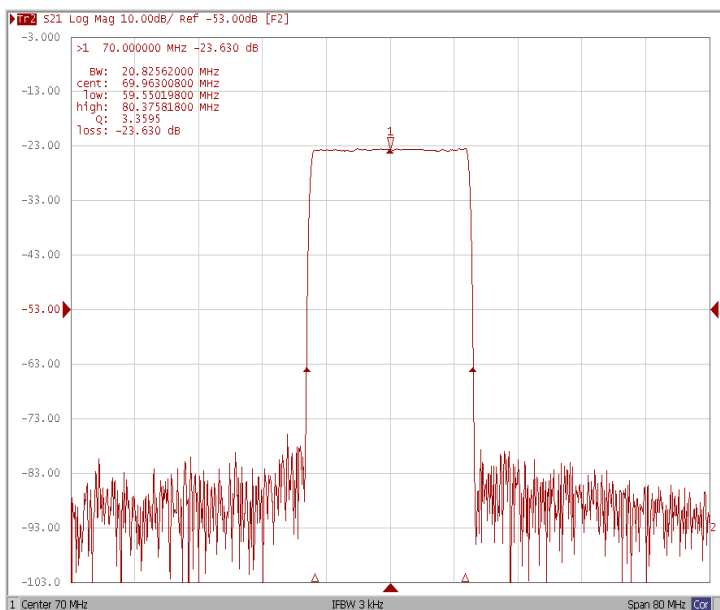
**Bandwidth at -1.0 dB**



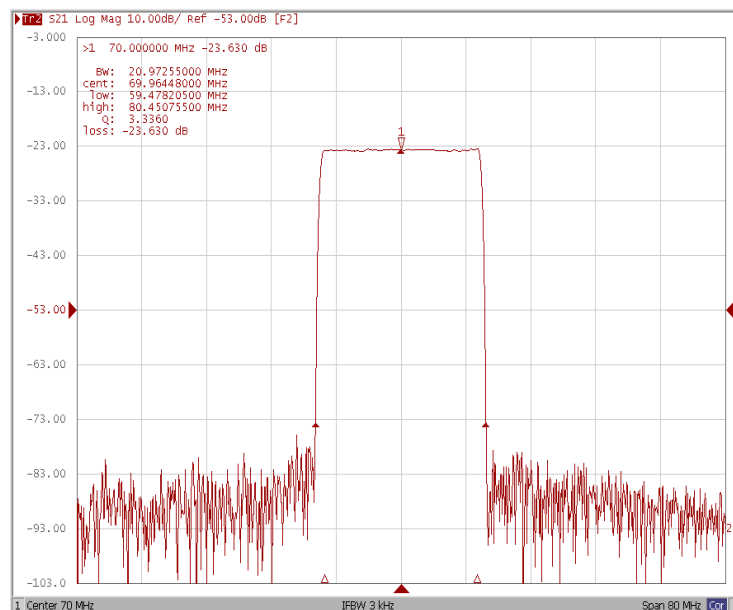
**Bandwidth at -3.0 dB**



**Bandwidth at -40.0 dB**



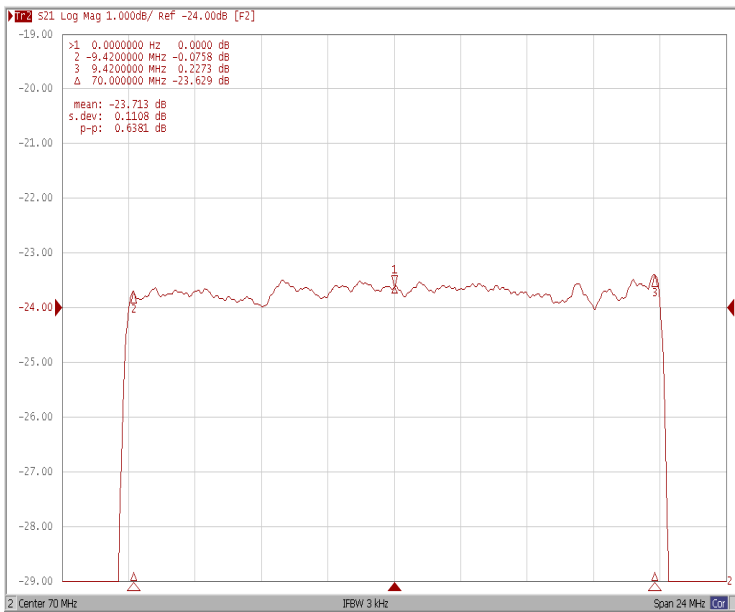
**Bandwidth at -50.0 dB**



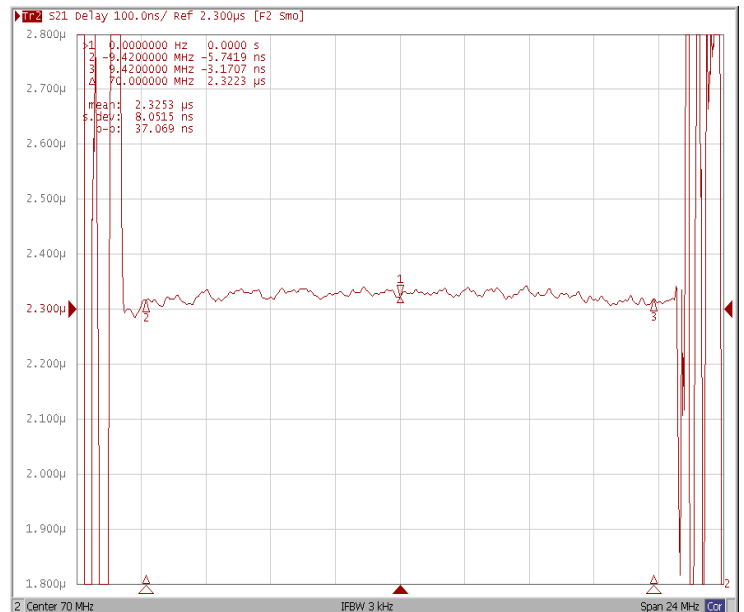
### Frequency Characteristics

#### Frequency Response

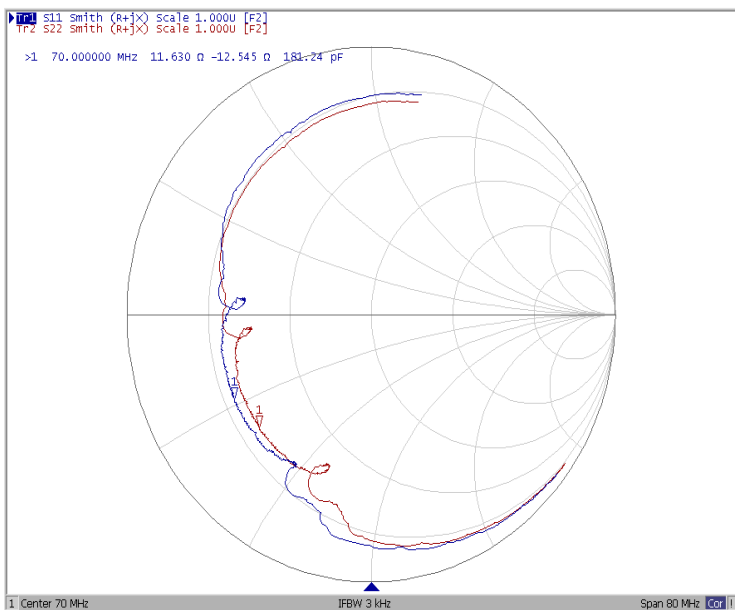
Ripple Variation  $Fo \pm 9.42\text{MHz}$



Group Delay Variation  $Fo \pm 9.42\text{MHz}$



Smith Chart



VSWR

