



Total Solution Provider in Saw Device

SA12019DD1

120.0 MHz IF SAW Filter
19.35 MHz Bandwidth
Revision 0: 06. May. 2009



- 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	-10	-	70
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

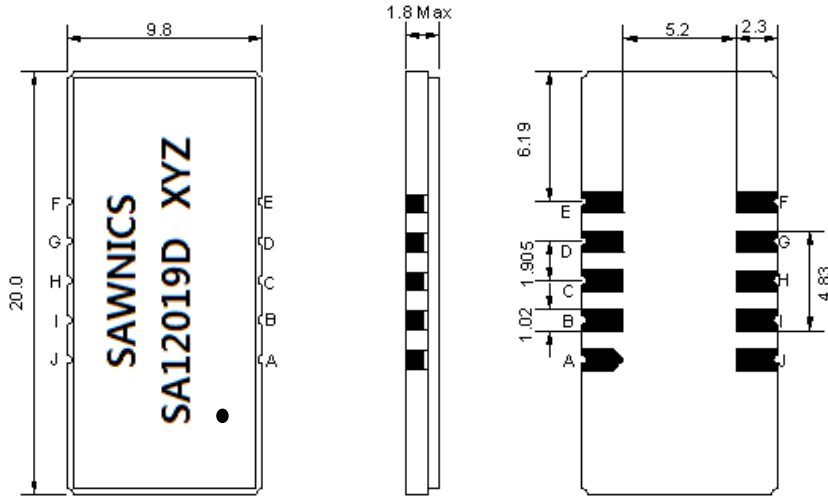
Electrical Specification

Parameters Description	Unit	Minimum	Typical	Maximum
Center Frequency (Fo)	MHz	-	120.0	-
Insertion Loss at Fo	dB	-	23.20	25.00
Group Delay Variation (Fo±9.22MHz)	nsec	-	60	90
Absolute Delay	usec	-	2.25	2.50
Passband Ripple (Fo±9.22MHz)	dB	-	0.55	1.00
Bandwidth at -1dB	MHz	19.20	19.35	-
Bandwidth at -3dB	MHz	-	19.60	-
Bandwidth at -40dB	MHz	-	20.80	20.95
Bandwidth at -50dB	MHz	-	20.95	-
Ultimate Rejection	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.

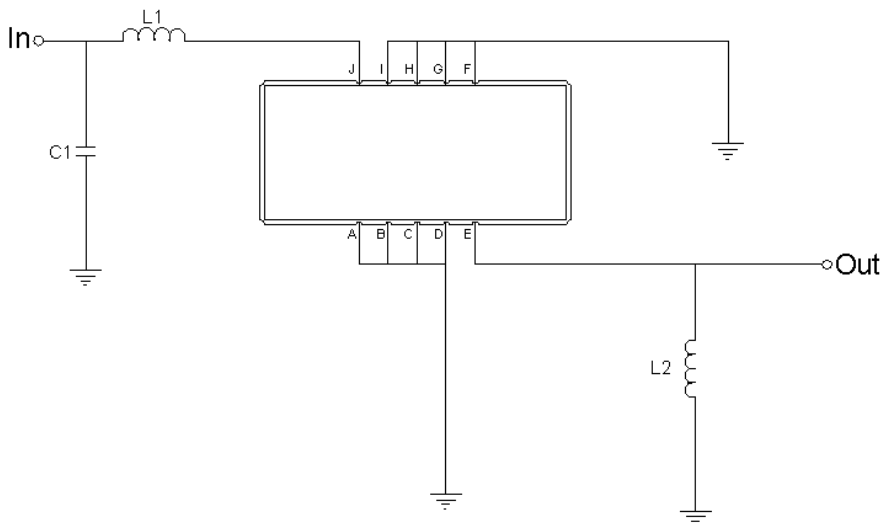
Package Dimensions



- ① SAWNICS: Brand
- ② SA12019D: 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

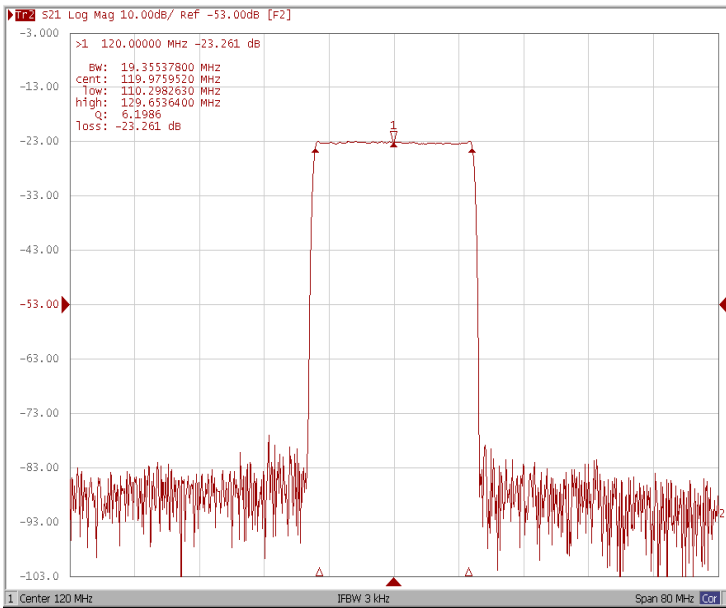


Test Fixture & Values	
Input	L1=56nH, C1=12pF
Output	L2=68nH,
Source/Load Impedance	50 Ω

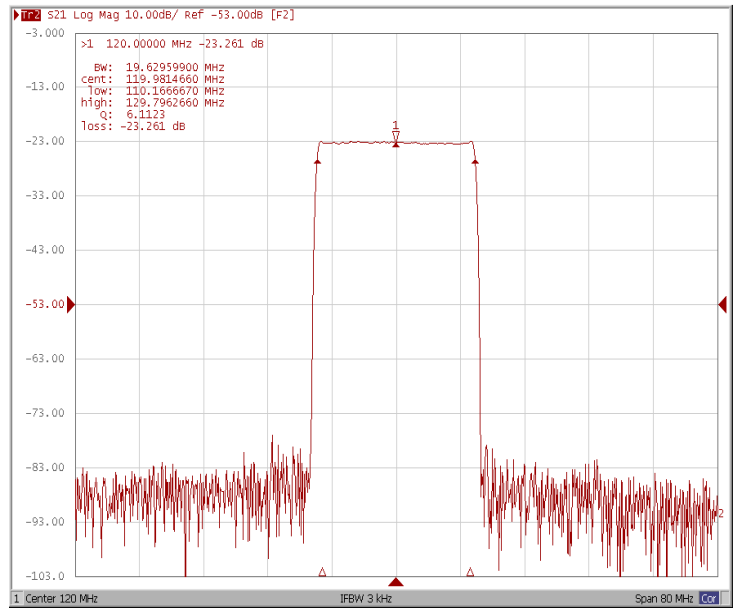
Frequency Characteristics

Frequency Response

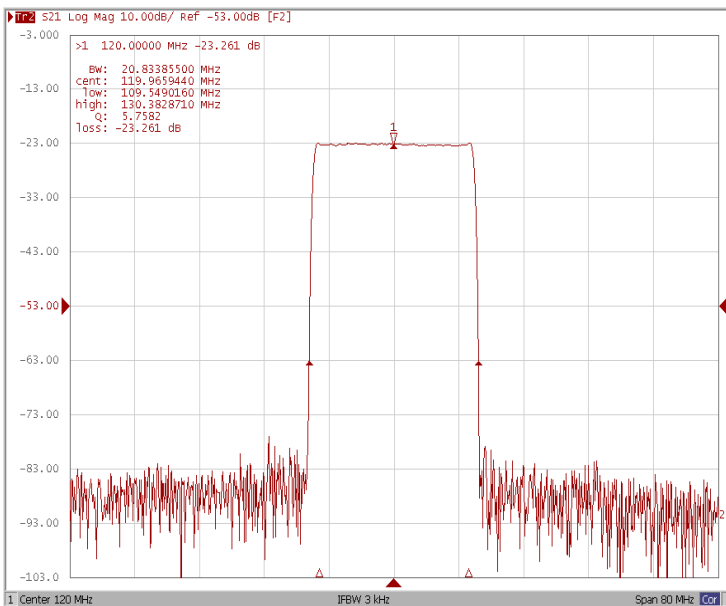
Bandwidth at -1.0 dB



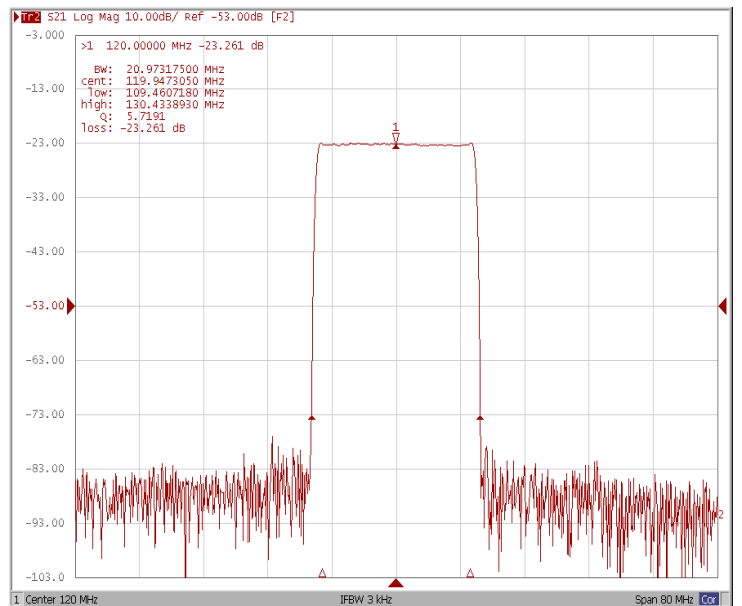
Bandwidth at -3.0 dB



Bandwidth at -40.0 dB



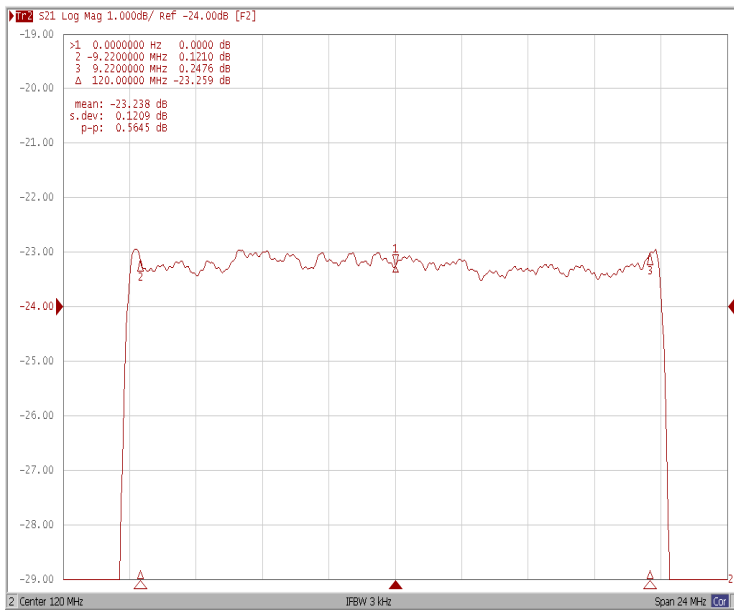
Bandwidth at -50.0 dB



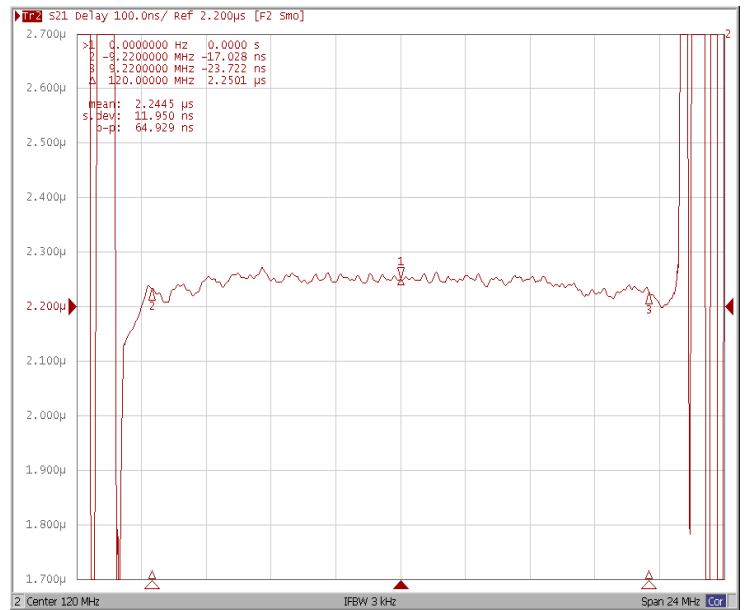
Frequency Characteristics

Frequency Response

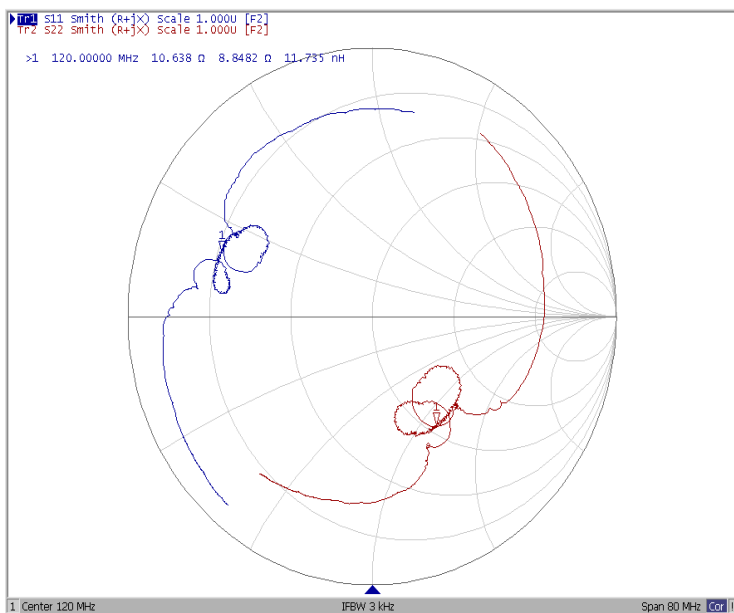
Ripple Variation $Fo \pm 9.22\text{MHz}$



Group Delay Variation $Fo \pm 9.22\text{MHz}$



Smith Chart



VSWR

