



Total Solution Provider in Saw Device

SA12019DV

120.0 MHz IF SAW Filter
19.48 MHz Bandwidth
Revision 0: 24. Dec. 2008



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

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□ Electrical Characteristics

Maximum Ratings

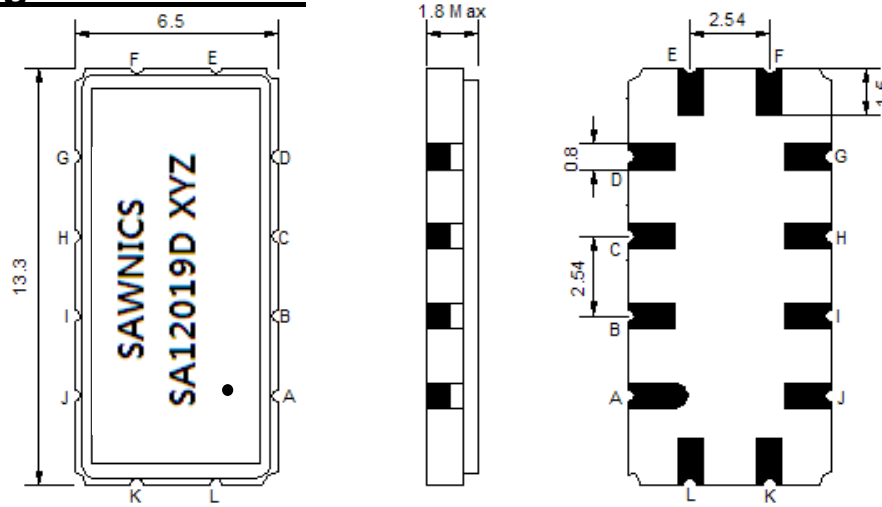
Parameters Description	Unit	Minimum	Typical	Maximum
Operation Temperature Range	°C	-	25	-
Storage Temperature Range	°C	-45	-	85
Maximum DC Voltage	V	-	-	10
Maximum Input Power	dBm	-	-	10
Source Impedance (single ended) ⁽¹⁾	Ω	-	50	-
Load Impedance (single ended) ⁽¹⁾	Ω	-	50	-
Package type & size	V			
Length x Width	mm ²	-	13.3 x 6.5	-
Height	mm	-	-	1.8

Electrical Specification

Parameters Description	Unit	Minimum	Typical	Maximum
Center Frequency (Fo)	MHz	-	120.0	-
Insertion Loss at Fo	dB	-	21.0	24.0
Bandwidth at -1.0 dB	MHz	-	19.48	-
Bandwidth at -3.0 dB	MHz	19.80	19.90	-
Bandwidth at -40.0 dB	MHz	-	21.75	22.00
Amplitude Ripple(Fo ±9.22 MHz)	dB _{p-p}	-	0.65	1.00
Group Delay Variation (Fo ±9.22 MHz)	nsec	-	37	80
Absolute Delay at Fo	µsec	-	1.52	-
Ultimate Rejection	dB	45	50	-
Relative Attenuation:				
Center of 1FA - 3.5MHz	dB	15	35	-
Center of 4FA + 3.5MHz	dB	15	32	-
Temperature Coefficient of Frequency(TCF)	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.

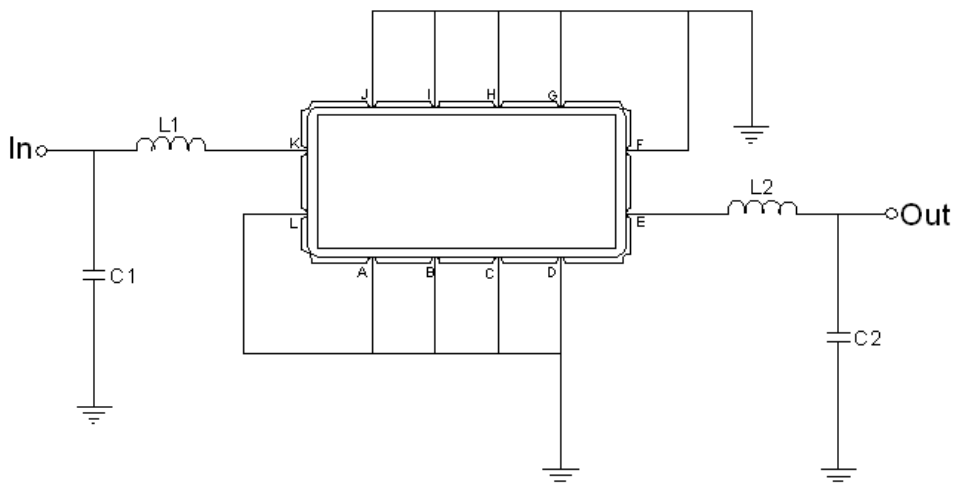
Package Dimensions



- 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, J, L	Ground
K	Input
E	Output

Testing Environment

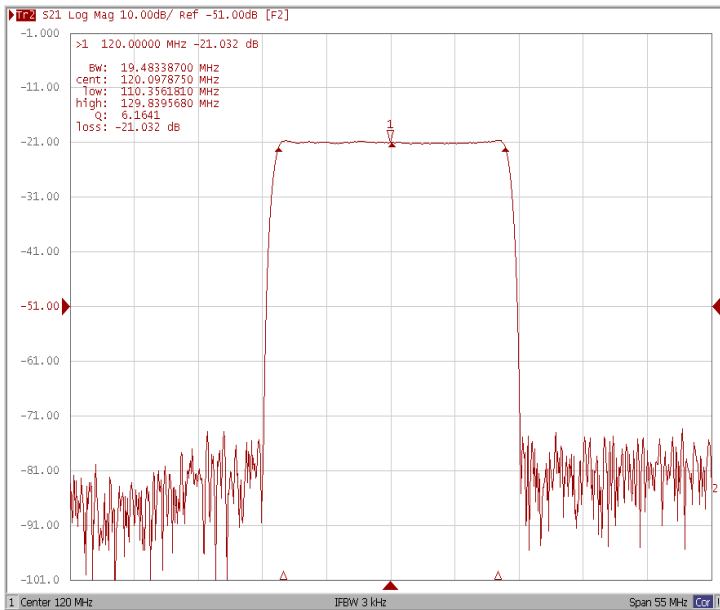


Test Fixture & Values	
Input	L1=100 nH, C1=5pF
Output	L2=56nH, C2=24pF
Source/Load Impedance	50 Ω

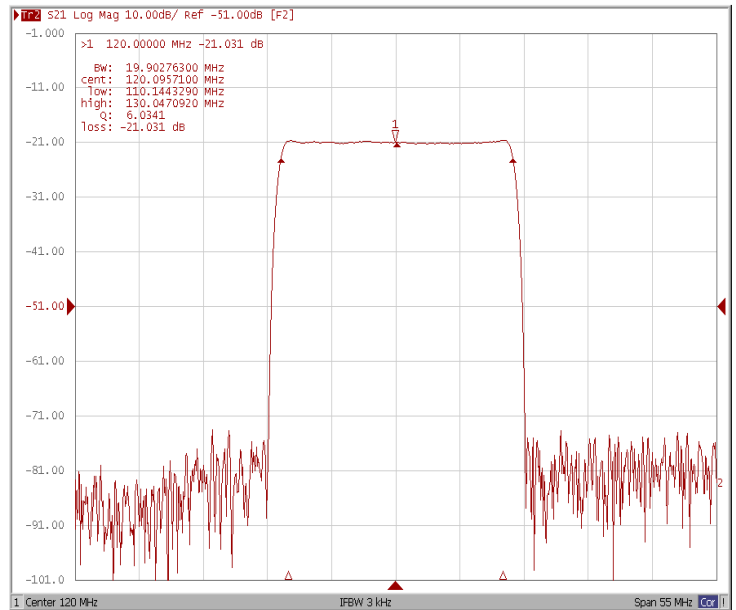
□ Frequency Characteristics

Frequency Response

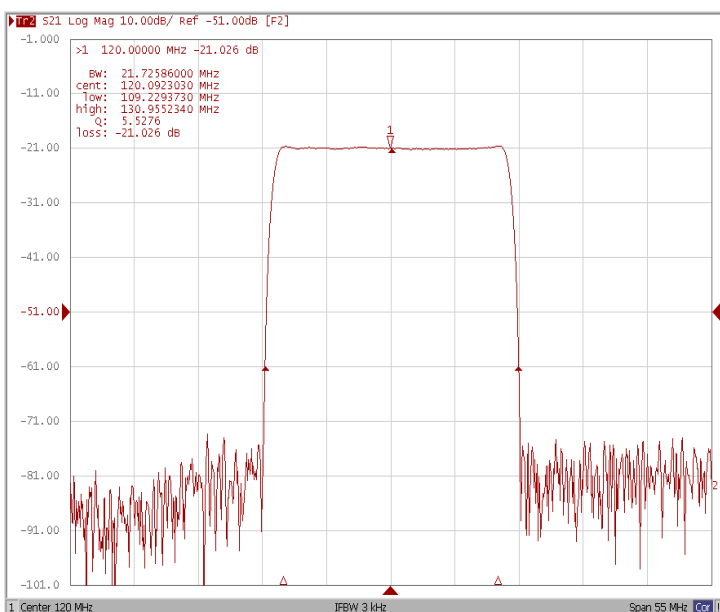
Bandwidth at -1.0 dB



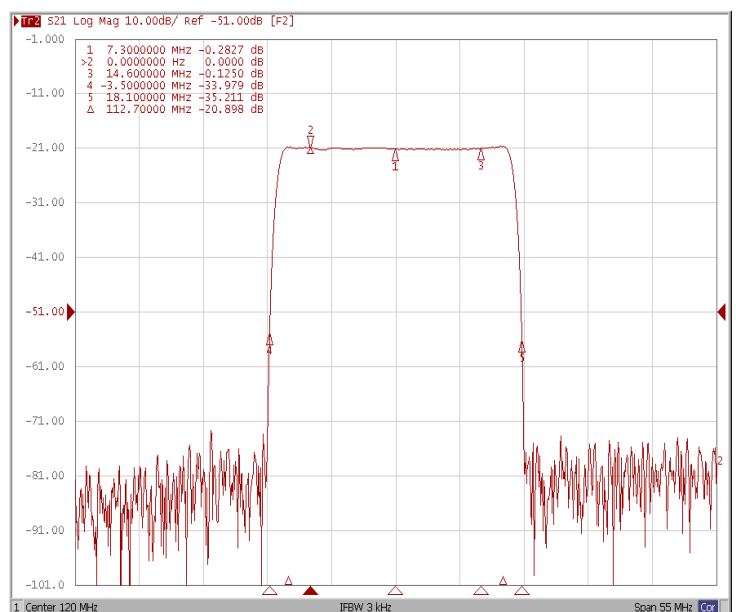
Bandwidth at -3.0 dB



Bandwidth at -40.0 dB



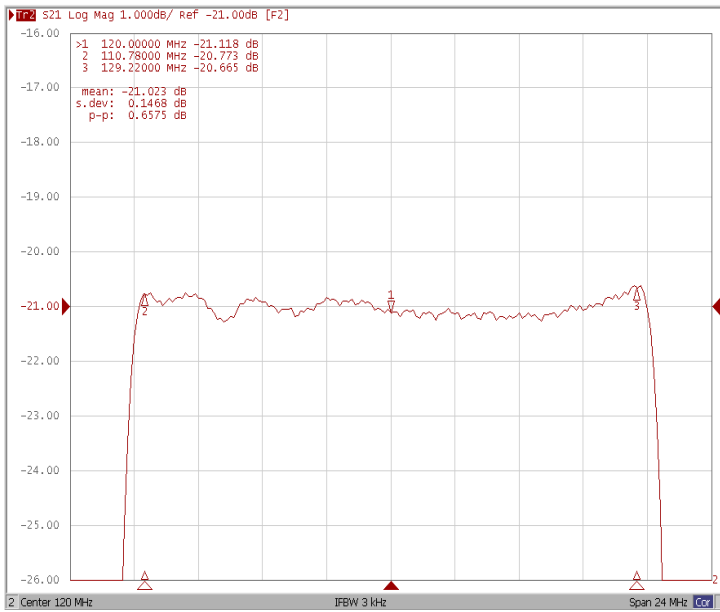
Relative Attenuation



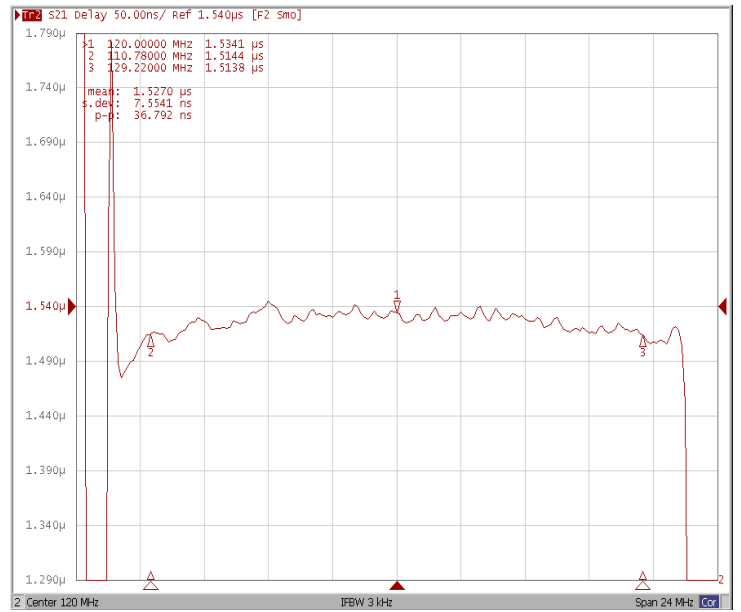
Frequency Characteristics

Frequency Response

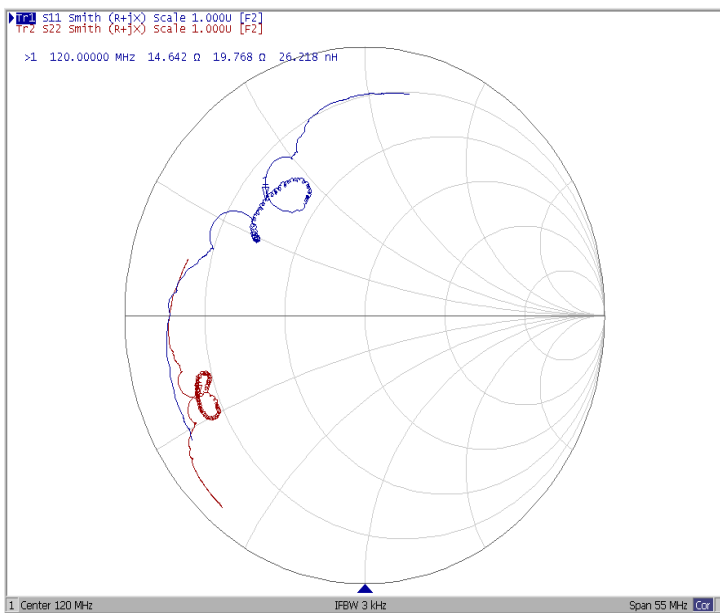
Ripple Variation $F_o \pm 9.375\text{MHz}$



Group Delay Variation $F_o \pm 9.375\text{MHz}$



Smith Chart



VSWR

