



Total Solution Provider in Saw Device

SA20502AV

205MHz IF SAW Filter
2.26MHz Bandwidth
Revision 0 : 06. FEB. 2008



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

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□ Electrical Characteristics

Maximum Ratings

Parameters Description	Unit	Minimum	Typical	Maximum
Operating Temperature Range	°C	-5	-	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	V			
Length x Width	mm ²	-	13.3 x 6.5	-
Height	mm	-	-	1.8

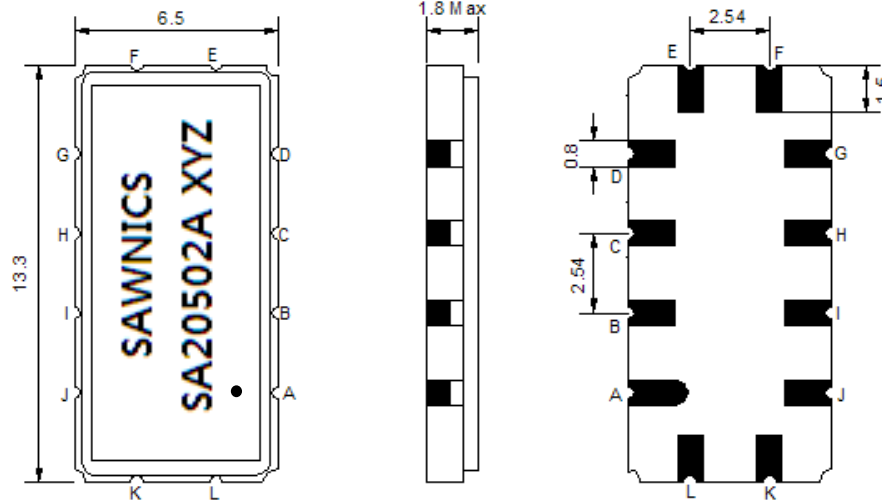
Electrical Specification

Parameters Description	Unit	Minimum	Typical	Maximum
Center Frequency (Fo)	MHz	204.85	205.0	205.15
Insertion Loss at Fo	dB	-	20.0	22.0
Amplitude Ripple within fo ±0.9 MHz	dB _{p-p}	-	0.35	0.9
Group Delay Variation within fo ±0.9 MHz	nsec	-	85	120
Absolute Delay at Fo	µsec	-	1.8	2.0
Bandwidth at -1.0 dB	MHz	1.80	2.26	-
Bandwidth at -3.0 dB	MHz	-	2.57	-
Bandwidth at -40.0 dB	MHz	-	3.78	4.00
Ultimate Rejection	dB	40	53	-
Temperature Coefficient	ppm/°C	-	-0.03	-

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.

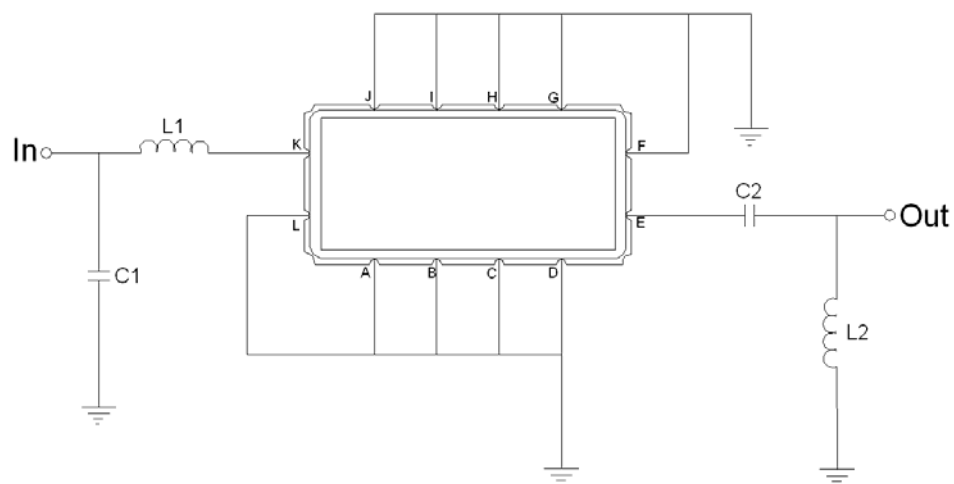
Package Dimensions



- ① SAWNICS: Brand
- ② SA20502A: 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



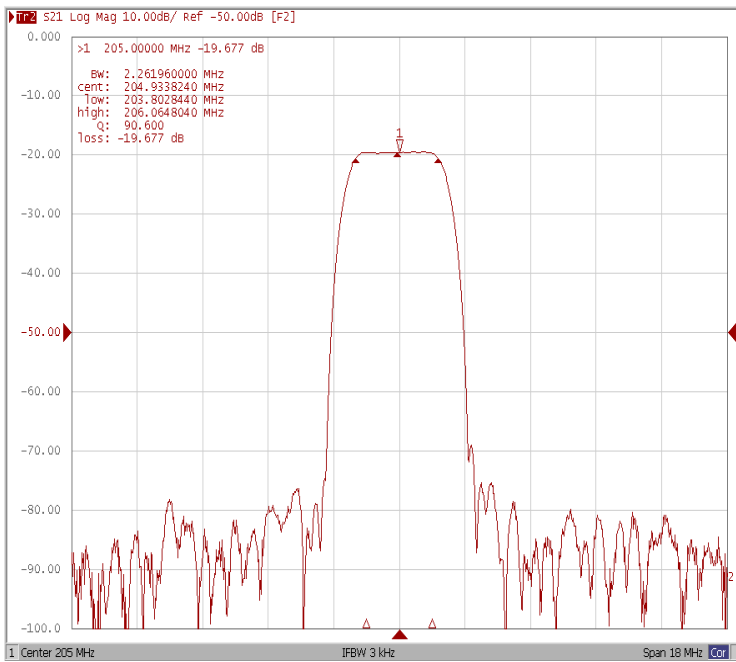
Test Fixture & Values	
Input	L1=27nH, C1=43pF
Output	L2=22nH, C2=100pF
Source/Load Impedance	50 Ω



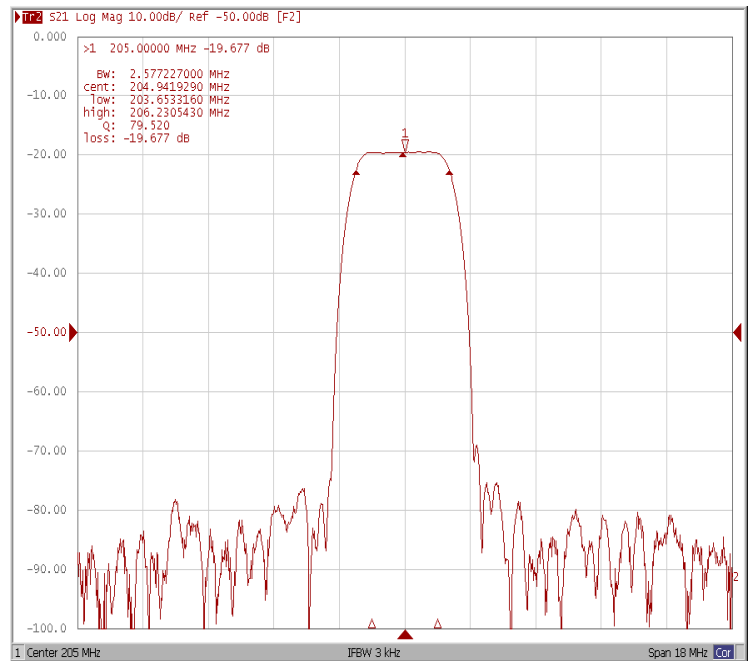
Frequency Characteristics

Frequency Response

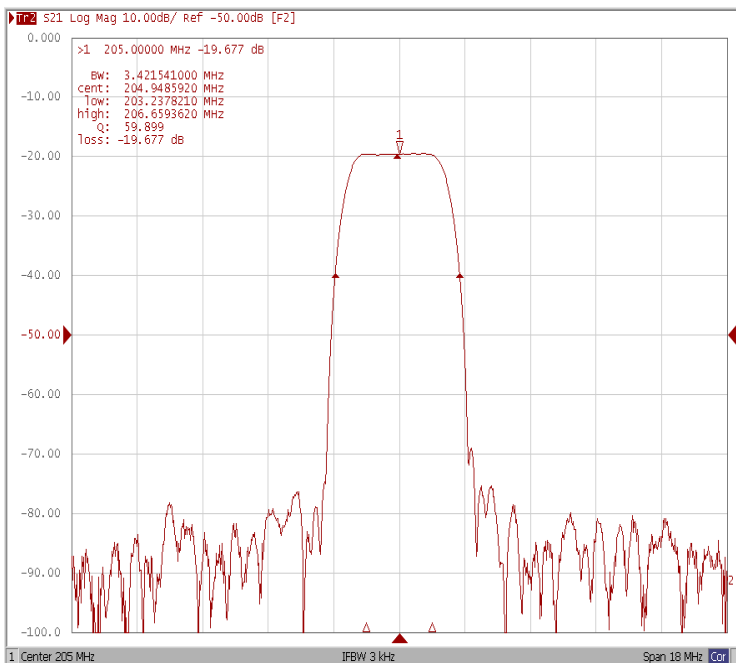
Bandwidth at -1.0 dB



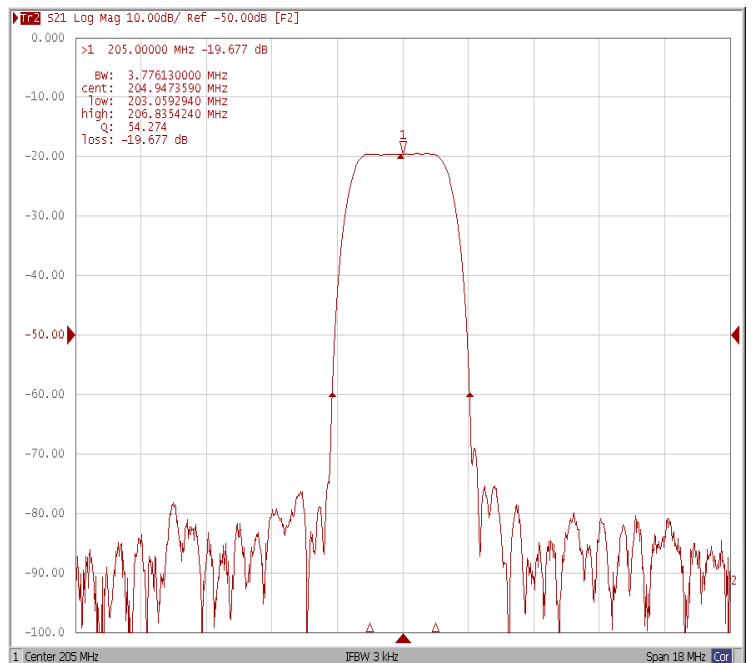
Bandwidth at -3.0 dB



Bandwidth at -20.0 dB



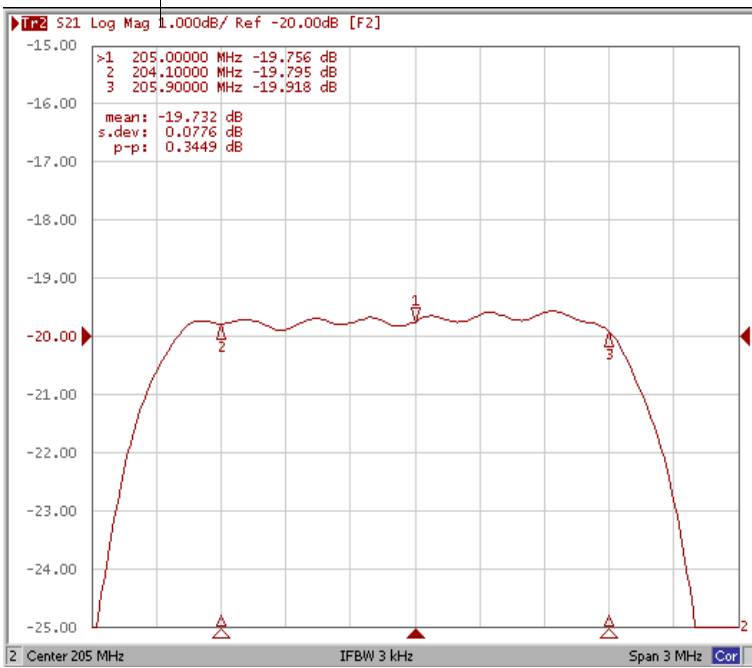
Bandwidth at -40.0 dB



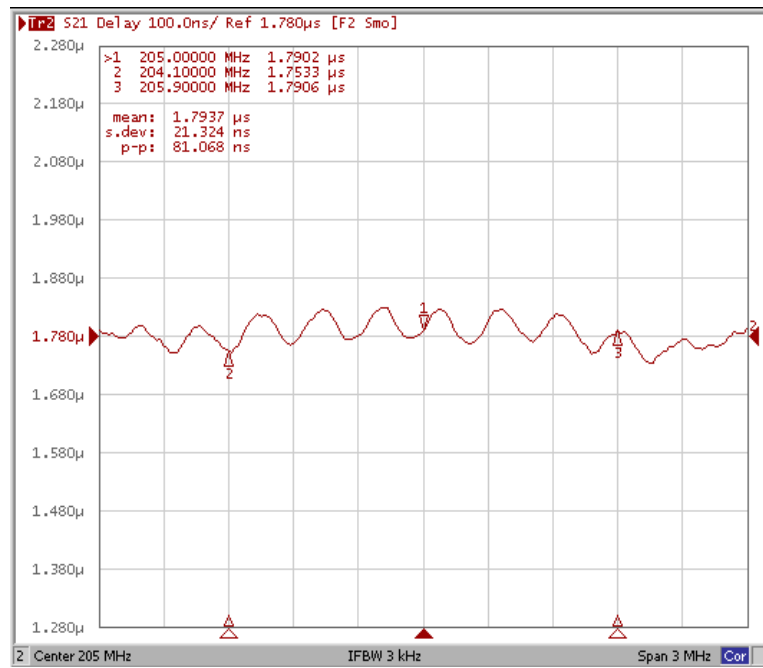
Frequency Characteristics

Frequency Response

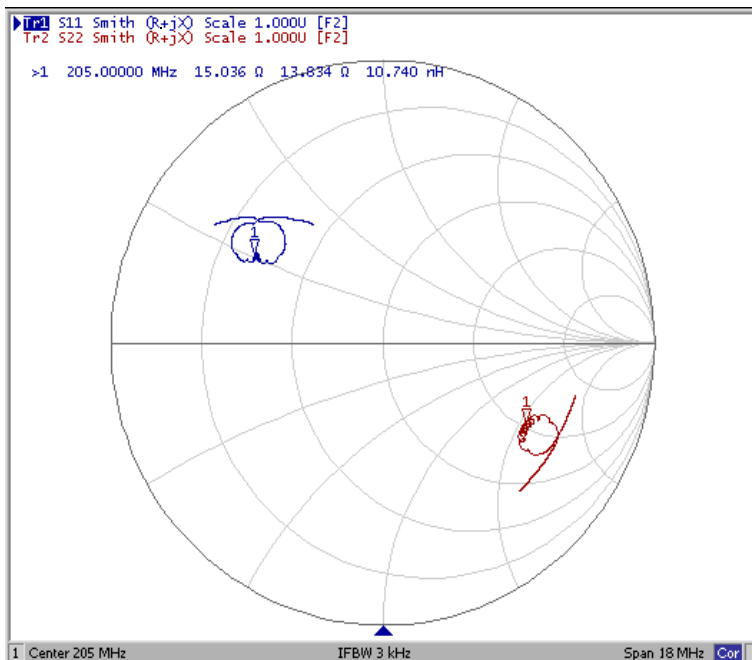
Ripple Variation $F_o \pm 0.9\text{MHz}$



Group Delay Variation $F_o \pm 0.9\text{MHz}$



Smith Chart



SWR

