



Total Solution Provider in Saw Device

SA18515AD1

185.0 MHz IF SAW Filter
16.05 MHz Bandwidth
Revision 0: 21. April. 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

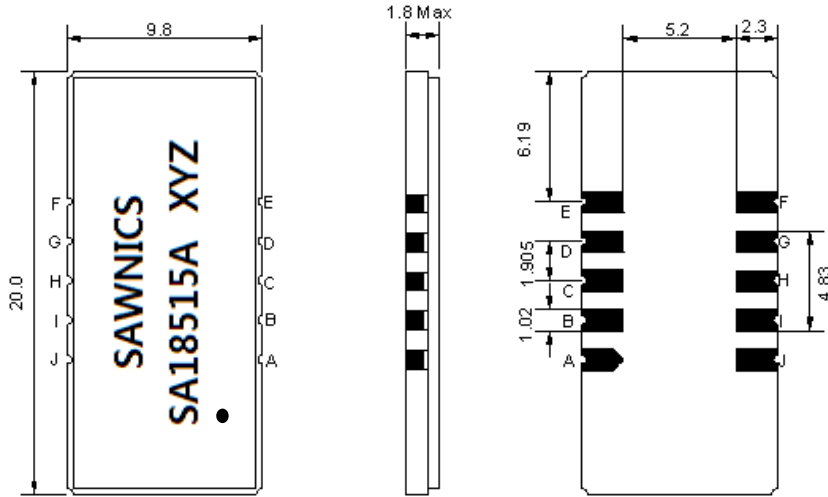
Electrical Specification

Parameters Description	Unit	Minimum	Typical	Maximum
Center Frequency (Fo)	MHz	-	185.0	-
Insertion Loss at Fo	dB	-	25.60	28.00
Group Delay Variation (Fo±7.5MHz)	nsec	-	30	70
Absolute Delay	usec	-	2.55	-
Passband Ripple (Fo±7.5MHz)	dB	-	0.50	0.95
Bandwidth at -1dB	MHz	15.80	16.05	-
Bandwidth at -3dB	MHz	-	16.40	-
Bandwidth at -40dB	MHz	-	17.95	18.10
Bandwidth at -50dB	MHz	-	18.05	-
Ultimate Rejection	dB	50	55	
Temperature coefficient	ppm/°C	-	-20	-

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.

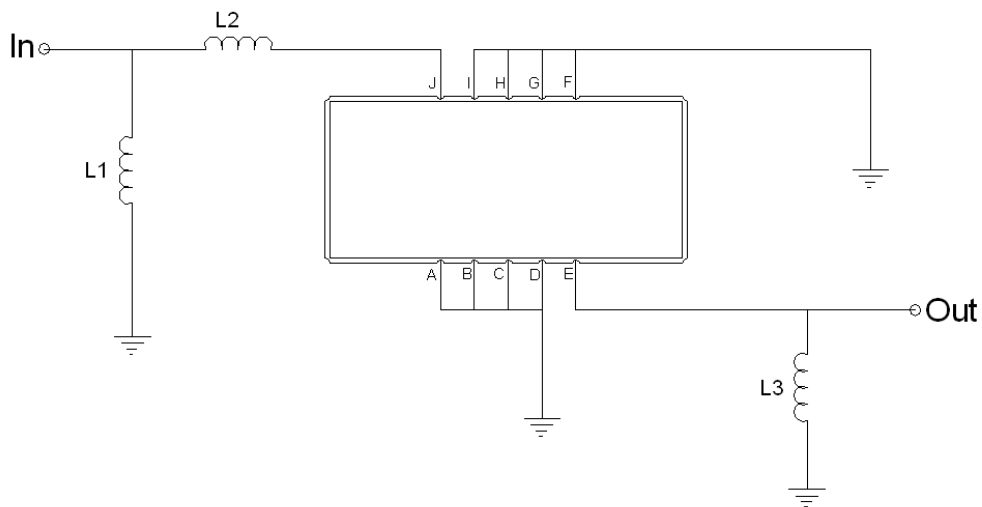
Package Dimensions



- ① SAWNICS: Brand
- ② SA18515A: 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

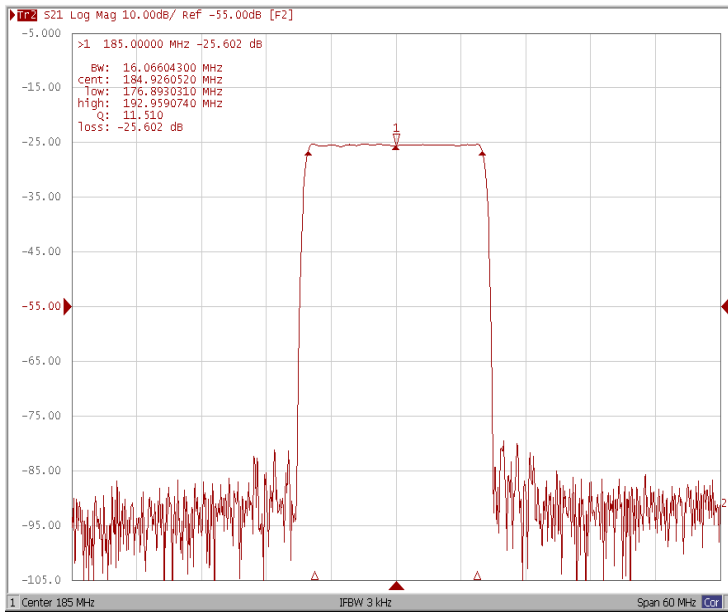


Test Fixture & Values	
Input	L1=18nH, L2=8.2pF
Output	L3=27nH,
Source/Load Impedance	50 Ω

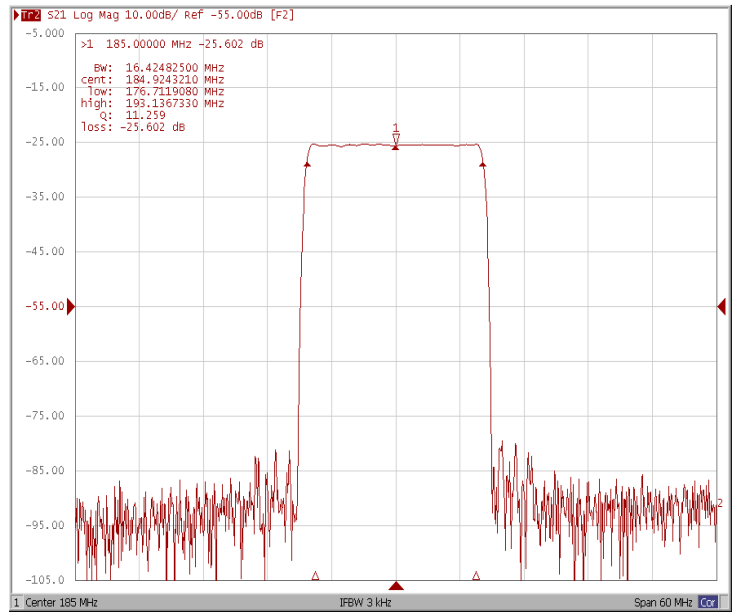
□ Frequency Characteristics

Frequency Response

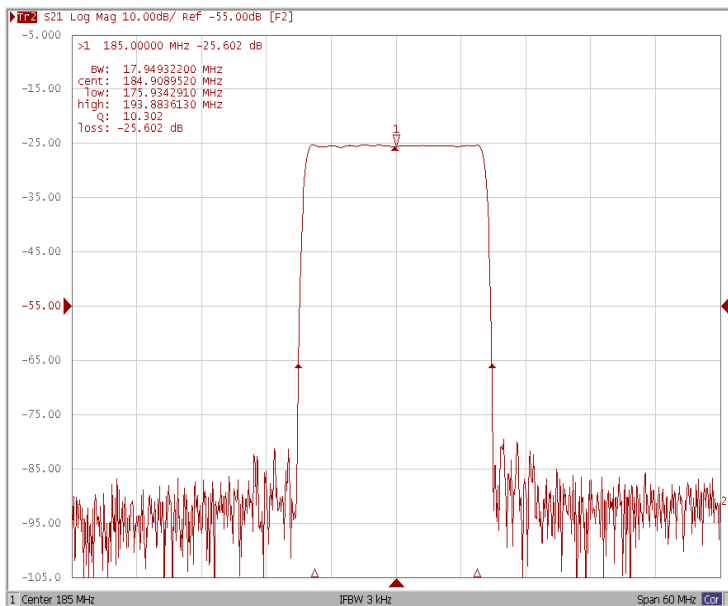
Bandwidth at -1.0 dB



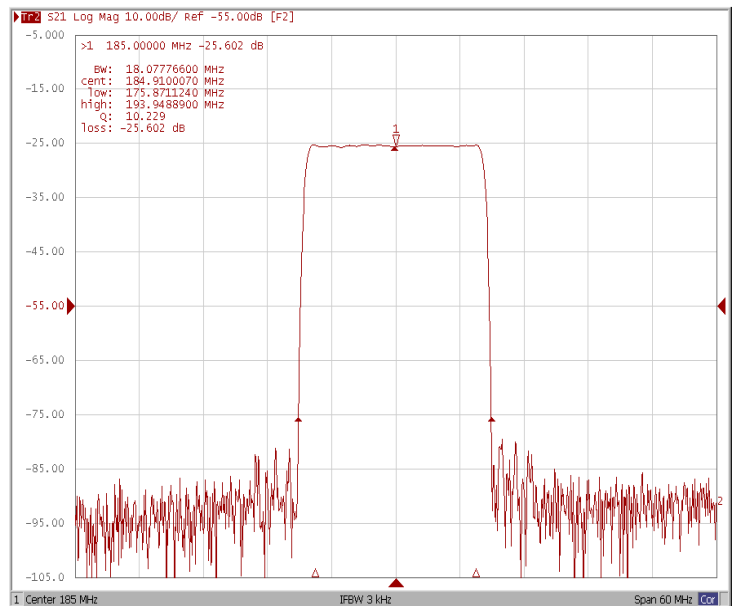
Bandwidth at -3.0 dB



Bandwidth at -40.0 dB



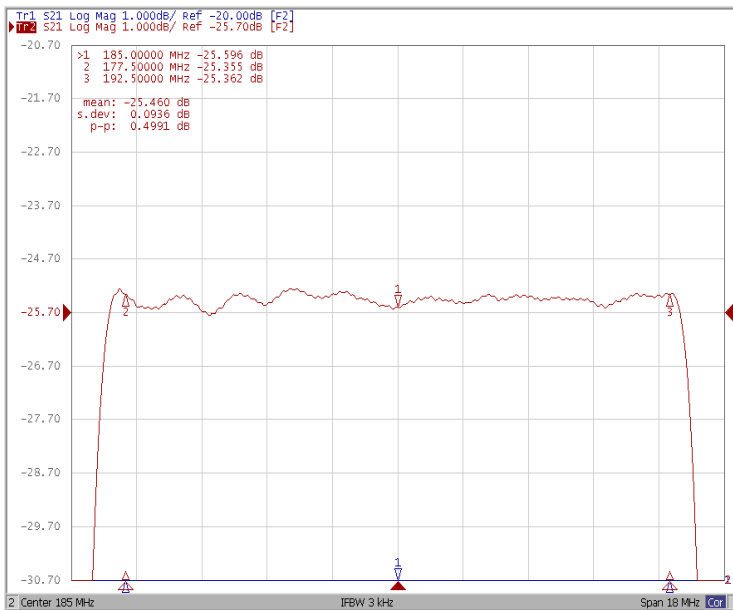
Bandwidth at -50.0 dB



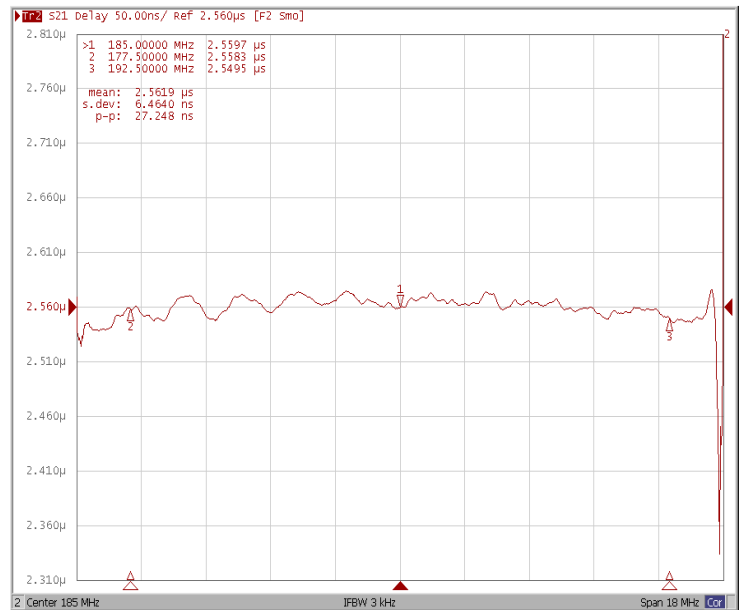
Frequency Characteristics

Frequency Response

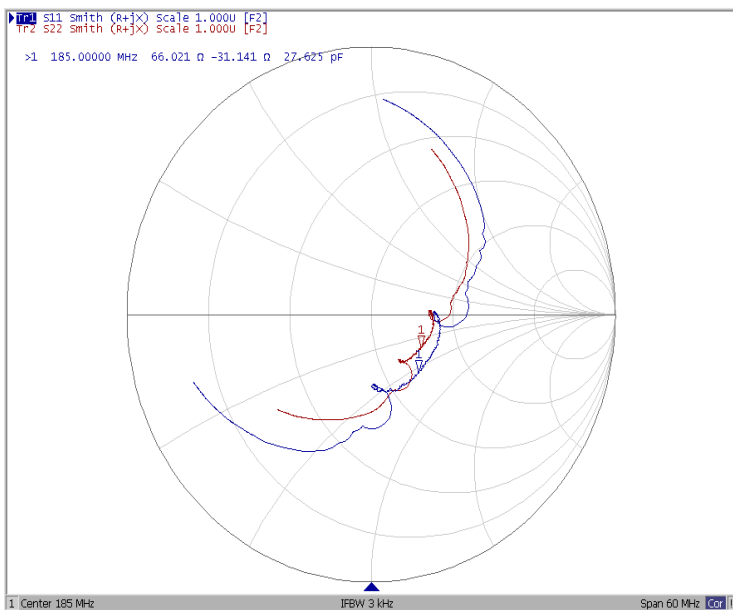
Ripple Variation $F_o \pm 7.5\text{MHz}$



Group Delay Variation $F_o \pm 7.5\text{MHz}$



Smith Chart



VSWR

