SA18015AD1

180.0 MHz IF SAW Filter
15.45 MHz Bandwidth
Revision 0: 19. Nov. 2009

RoHS compliance
Pb free

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

SAWNICS Inc.
460 Cheonheung-ri, Seonggeo-eup, Cheonan-si, Chungcheongnam-do, 330-836 / Korea.
Tel: +82 41 550 9372 / Fax: +82 41 550 9399 / www.sawnics.com

❒ Electrical Characteristics

Maximum Ratings

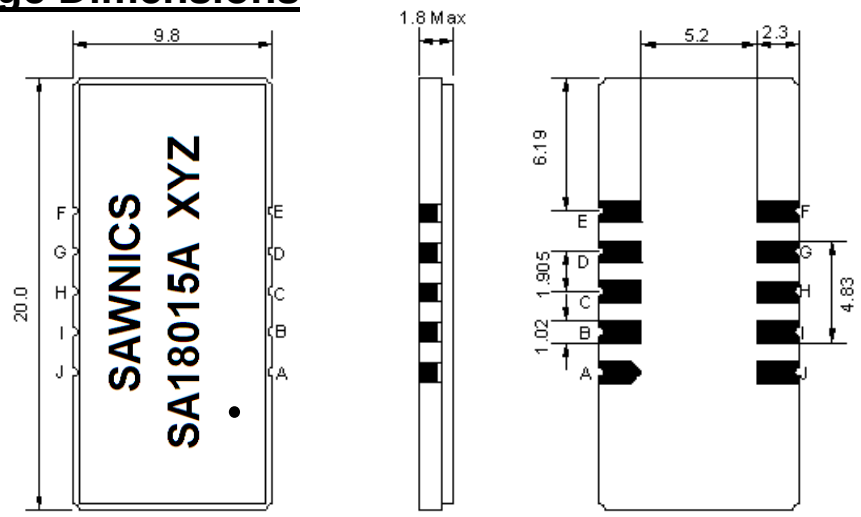
Parameters Description	Unit	Minimum	Typical	Maximum
Operating Temperature Range	°C	-5	-	70
Storage Temperature Range	°C	-40	-	85
00000000000000000Maximum DC Voltage	V	-	-	10
Maximum Input Power	dBm	-	-	10
Source Impedance (single ended)(1)	Ω	-	50	-
Load Impedance (single ended)(1)	Ω	-	50	-
Package type & size	D1			
Length x Width	mm²	-	20.0 x 9.8	-
Height	mm	-	-	1.8

Electrical Specification

Parameters Description	Unit	Minimum	Typical	Maximum
Center Frequency (Fo)	MHz	-	180.0	-
Insertion Loss at Fo	dB	-	25.3	27.0
Group Delay Variation at Fo ± 7.47 MHz	nsec	-	21	60
Absolute Delay at Fo	usec	-	2.68	
Passband Ripple Variation at Fo ± 7.47MHz	dB	-	0.57	1.0
Bandwidth at -1dB	MHz	15.25	15.45	-
Bandwidth at -3dB	MHz	-	15.83	-
Bandwidth at -40dB	MHz	-	17.40	17.60
Ultimate Rejection	dB	50	53	-
Temperature Coefficient	ppm/°C	-	-18	-

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.

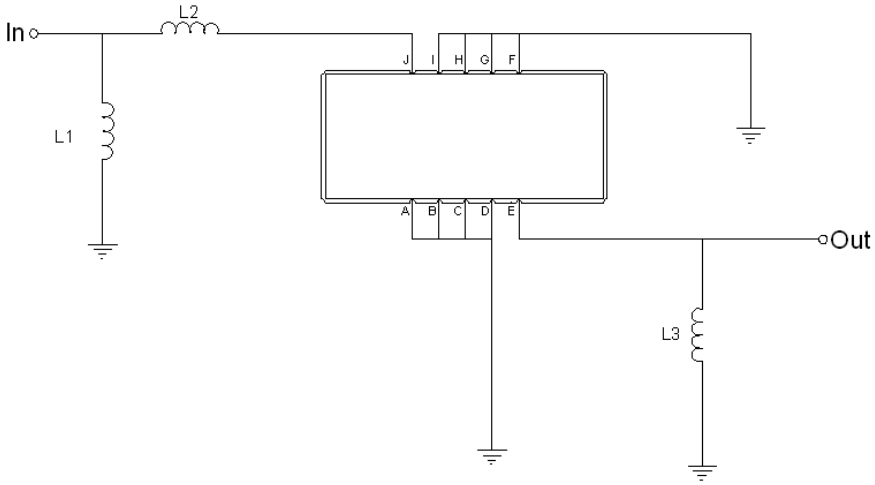
❒ Package Dimensions



① SAWNICS: Brand
② SA18015A: 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

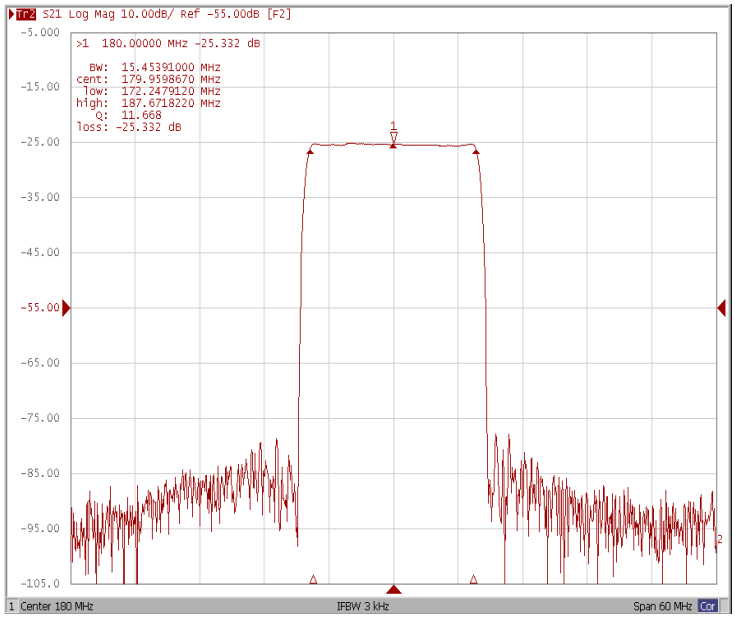


Test Fixture & Values	
Input	L1 = 15 nH, L2 = 8.2 nH
Output	L3 = 18 nH
Source/Load Impedance	50 Ω

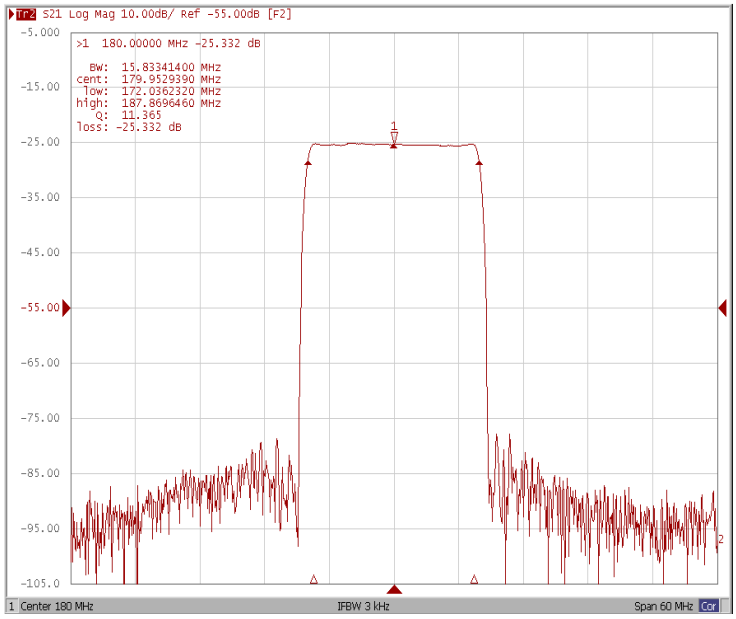
❒ Frequency Characteristics

Frequency Response

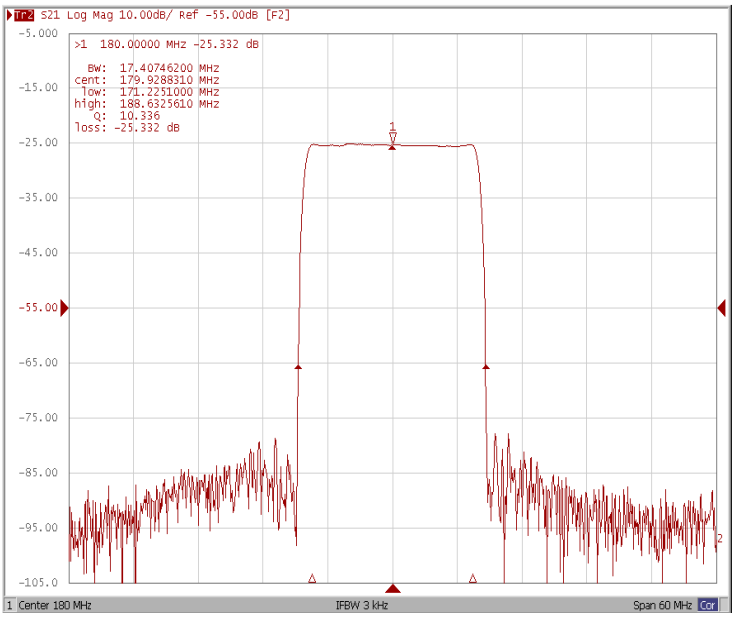
Bandwidth at –1.0 dB



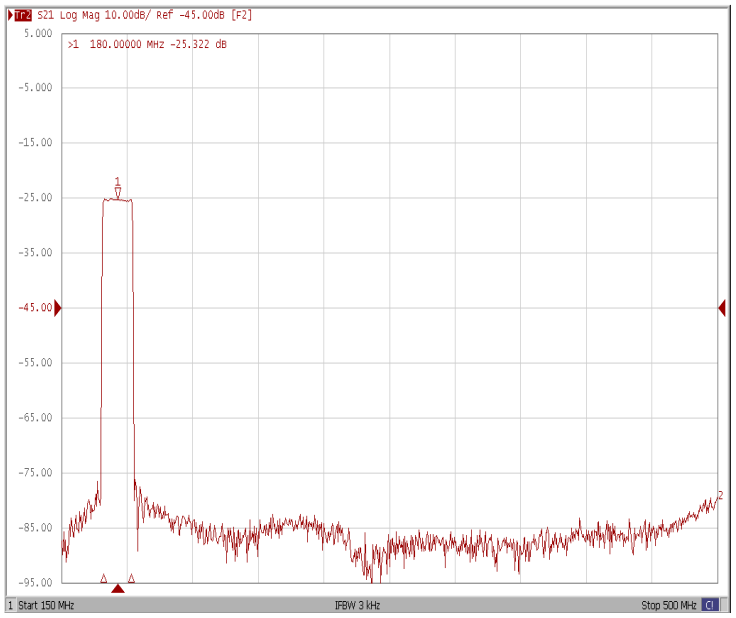
Bandwidth at –3.0 dB



Bandwidth at –40.0 dB



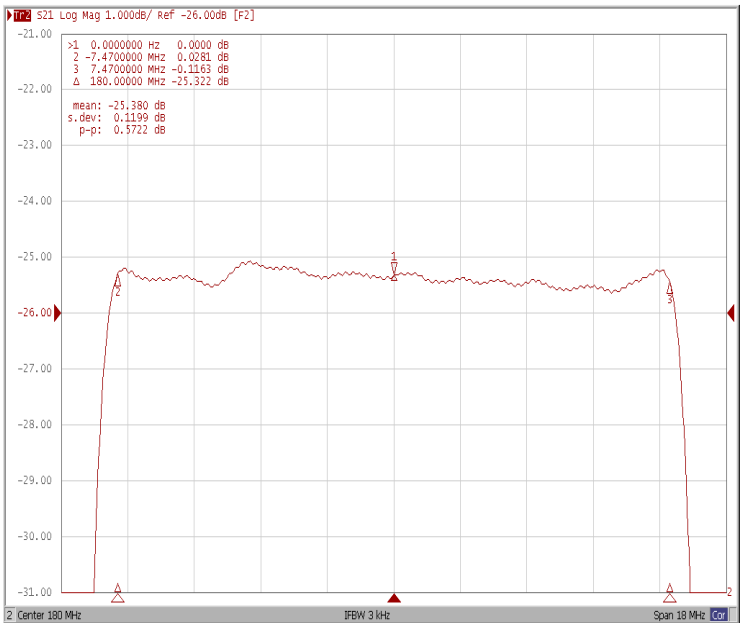
Wide-Band



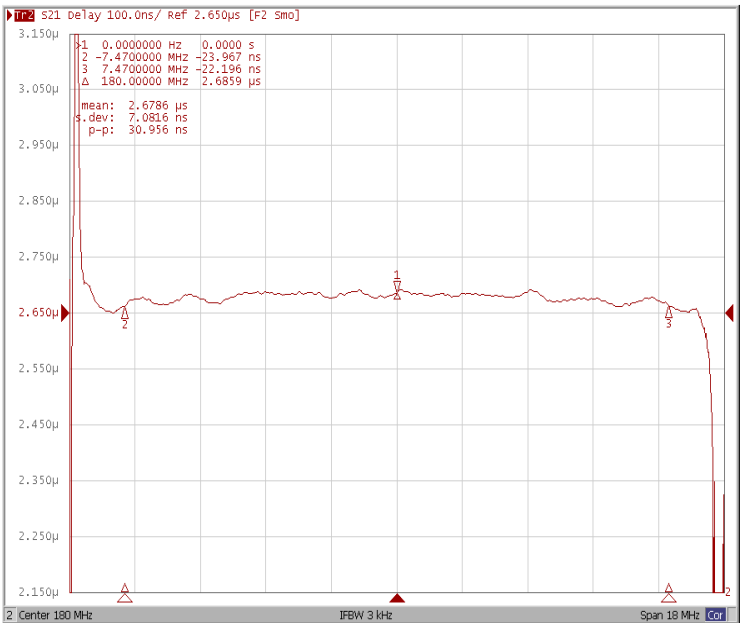
❒ Frequency Characteristics

Frequency Response

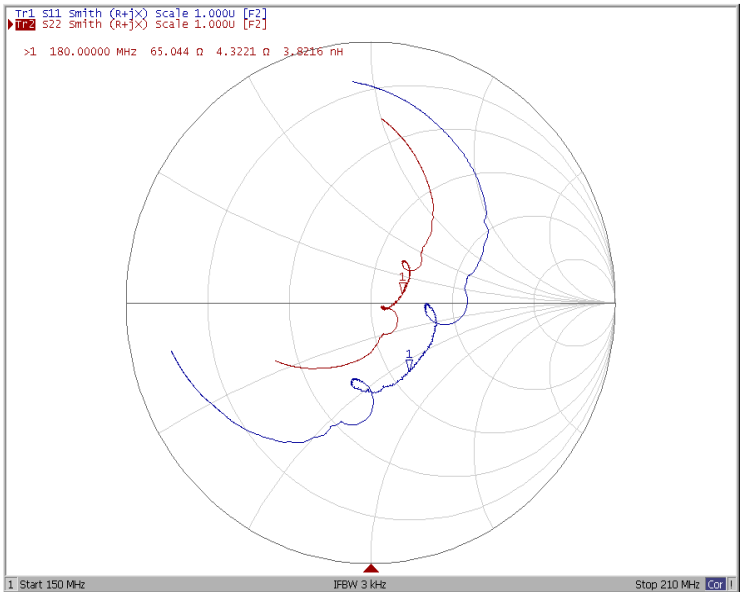
Ripple Variation Fo±7.47 MHz



Group Delay Variation Fo±7.47MHz



Smith Chart



VSWR