❒ Electrical Characteristics

Maximum Ratings

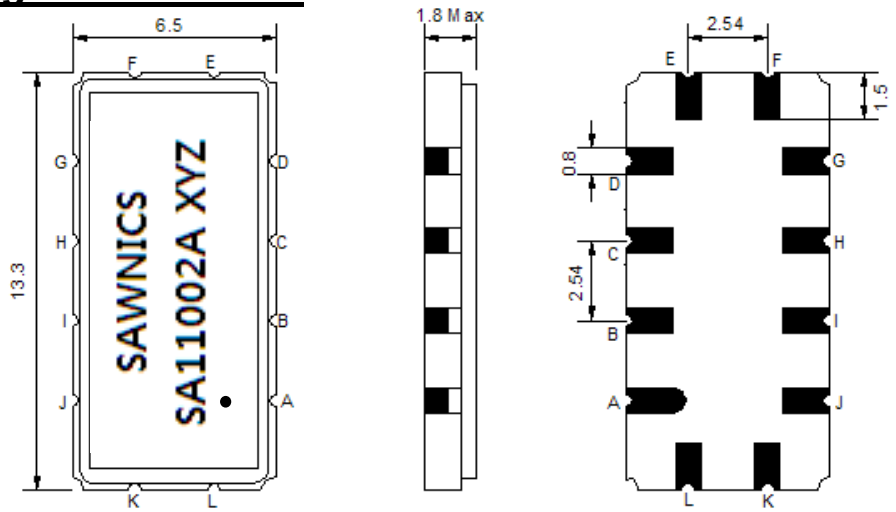
Parameters Description	Unit	Minimum	Typical	Maximum
Operating Temperature Range	°C	-5	-	70
Storage Temperature Range	°C	-40	-	85
Maximum DC Voltage	V	-	-	10
Maximum Input Power	dBm	-	-	10
Source Impedance (single ended)(1)	Ω	-	50	-
Load Impedance (single ended)(1)	Ω	-	50	-
Package type & size	V			
Length x Width	mm²	-	13.3 x 6.5	-
Height	mm	-	-	1.8

Electrical Specification

Parameters Description	Unit	Minimum	Typical	Maximum
Center Frequency (Fo)	MHz	109.9	110.0	110.1
Insertion Loss at Fo	dB	-	20	22
Amplitude Ripple within fo ±0.9 MHz	dB_{p-p}	-	0.3	0.9
Group Delay Variation within fo ±0.9 MHz	nsec	-	70	150
Absolute Delay at Fo	µsec	-	1.77	2.0
Bandwidth at –1.0 dB	MHz	1.80	2.18	-
Bandwidth at –3.0 dB	MHz	-	2.45	-
Bandwidth at –40.0 dB	MHz	-	3.60	3.80
Ultimate Rejection	dB	40	47	-
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.

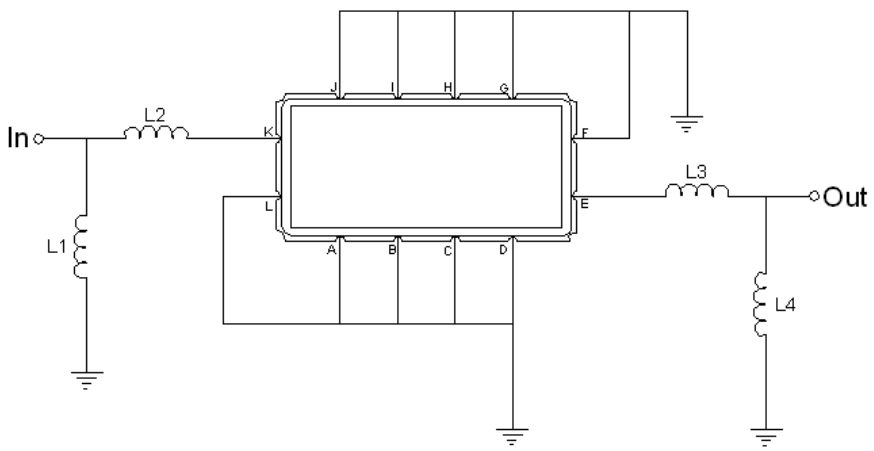
❒ Package Dimensions



① SAWNICS: Brand
② SA11002A: 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

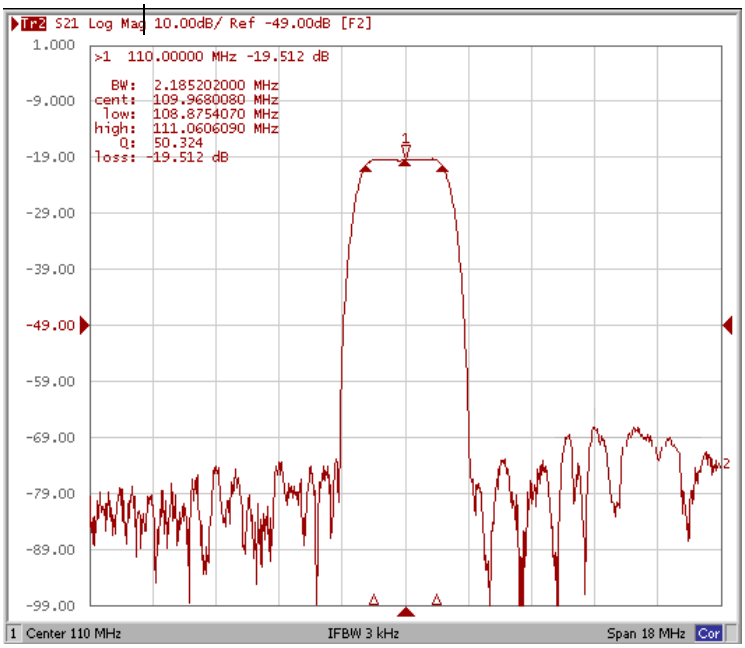


Test Fixture & Values	
Input	L1=56nH, L2=82nH
Output	L3=56nH, L4=56nH
Source/Load Impedance	50 Ω

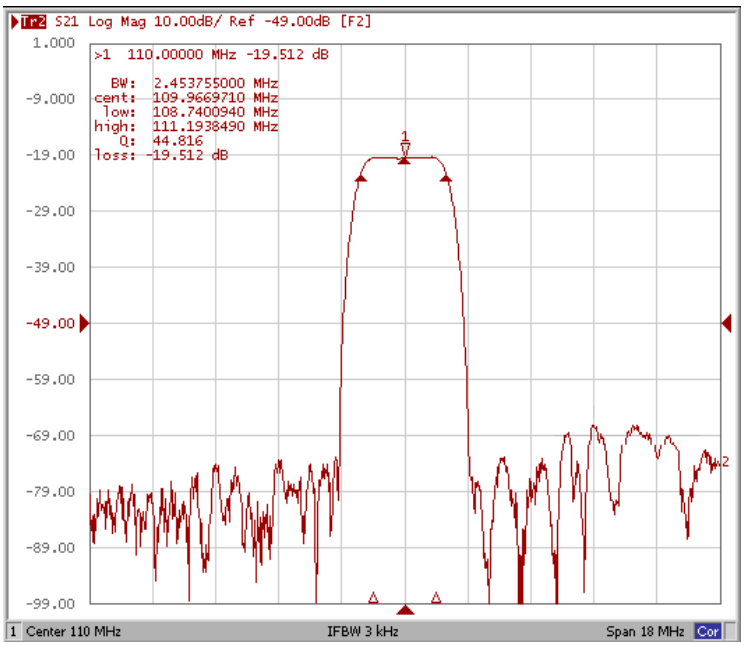
❒ Frequency Characteristics

Frequency Response

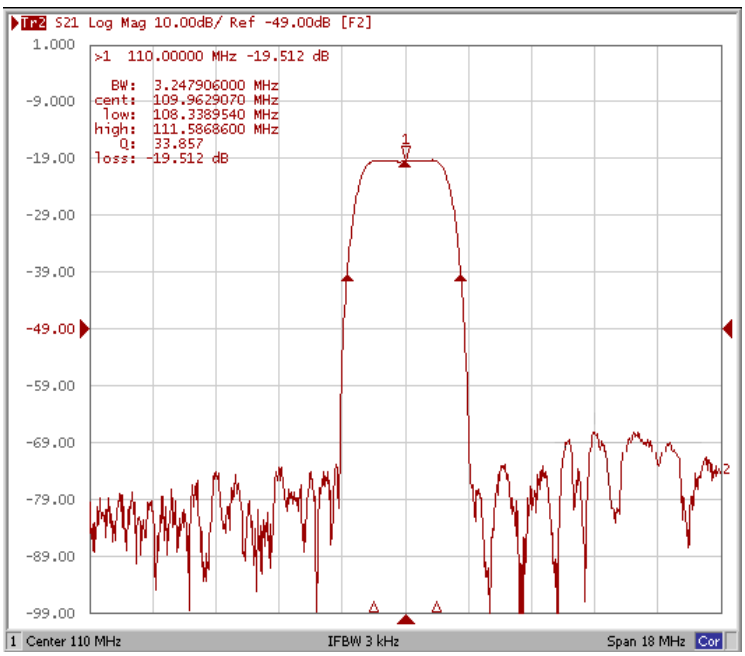
Bandwidth at –1.0 dB



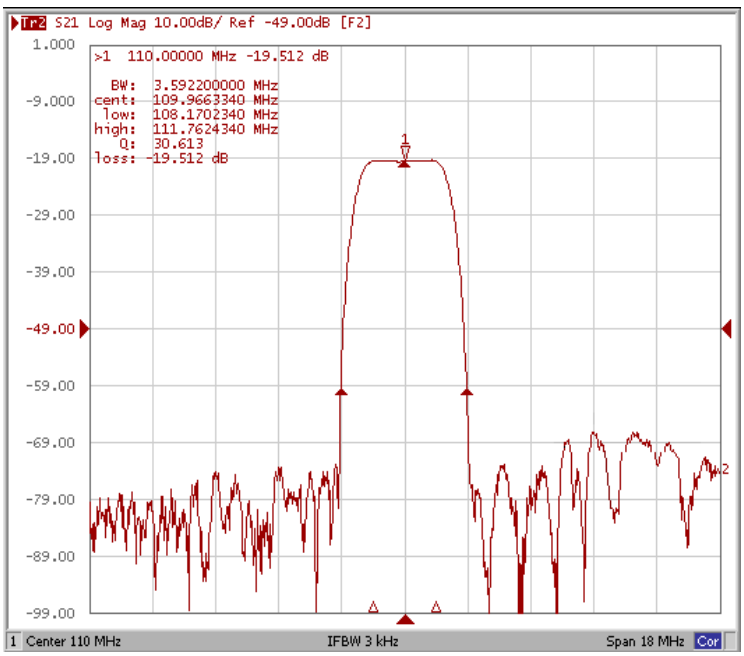
Bandwidth at –3.0 dB



Bandwidth at –20.0 dB



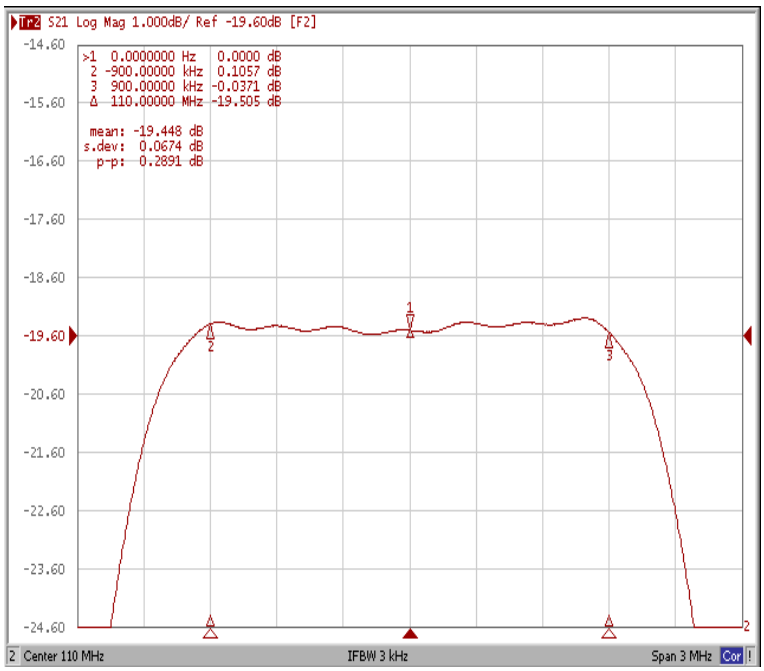
Bandwidth at –40.0 dB



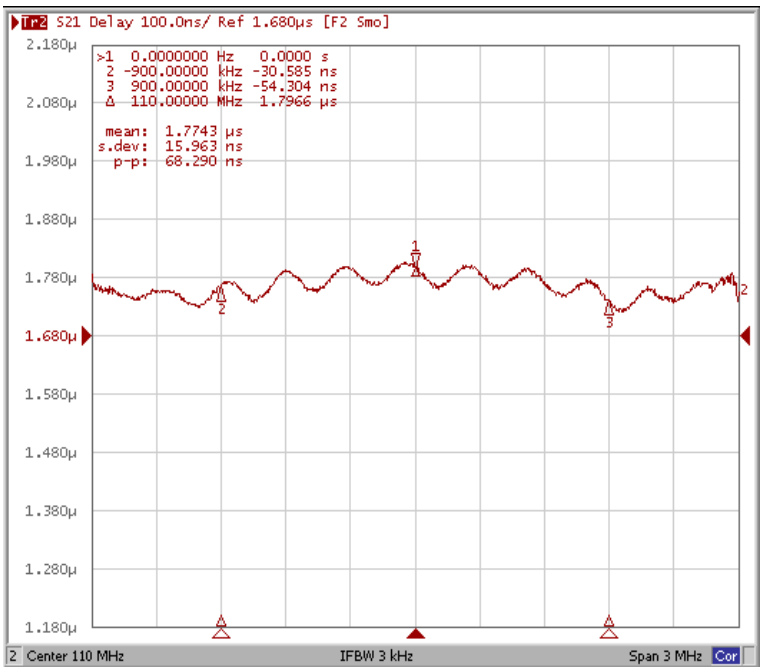
❒ Frequency Characteristics

Frequency Response

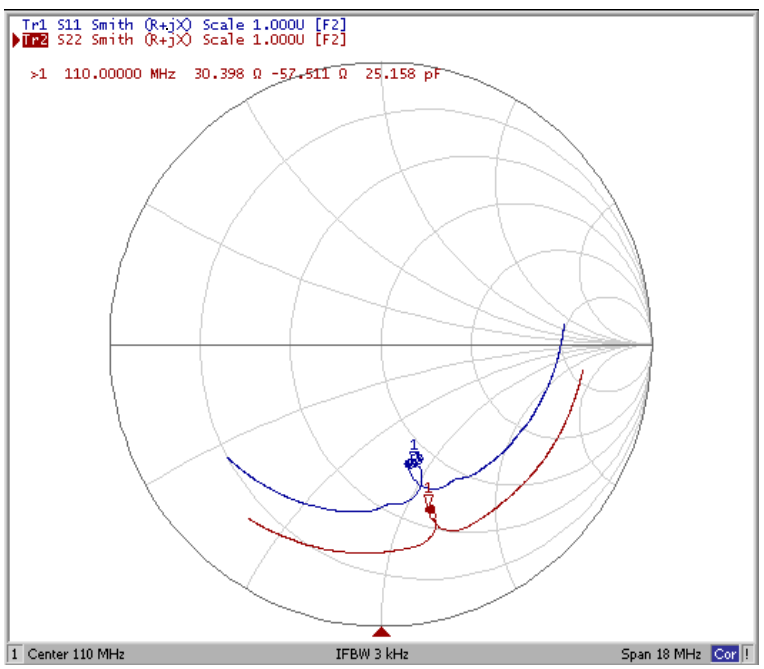
Ripple Variation Fo±0.9MHz



Group Delay Variation Fo±0.9MHz



Smith Chart



SWR