



Total Solution Provider in Saw Device

SA14009AF

140.00MHz IF SAW Filter
9.25 MHz Bandwidth
Revision 0: 5.June. 2009



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- 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	-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	F			
Length x Width	mm ²	-	34.7 x 12.6	-
Height	mm	-	-	5.05

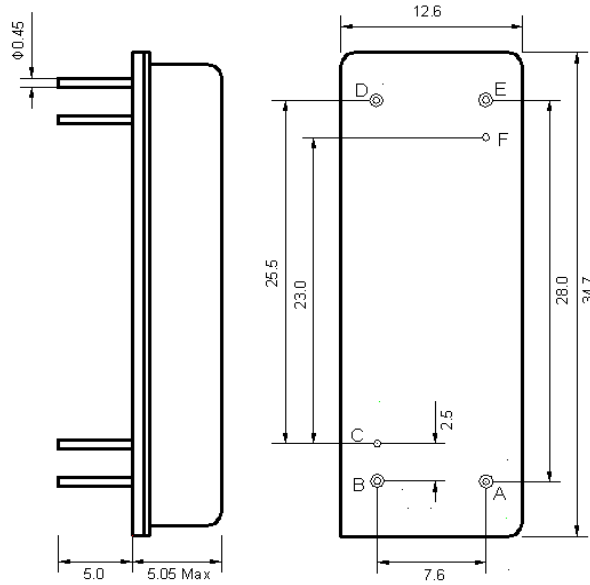
Electrical Specification

Center Frequency (Fo)	MHz	-	140.0	-
Insertion Loss at Fo	dB	-	25.6	28.0
Group Delay Variation (Fo±4.35MHz)	ns	-	49	100
Absolute Delay	us	-	4.21	-
Passband Ripple (Fo±4.35MHz)	dB	-	0.55	1.00
Bandwidth at -1dB	MHz	9.10	9.25	-
Bandwidth at -3dB	MHz	-	9.45	9.70
Bandwidth at -15dB	MHz	-	9.95	10.10
Bandwidth at -40dB	MHz	-	10.30	10.50
Bandwidth at -50dB	MHz	-	10.40	10.70
Ultimate Rejection	dB	50	55	-
Temperature Coefficient	ppm/°C	-	-20	-

Notes : (1) With Matching Network (Ref. Testing Environment Circuit as shown below).

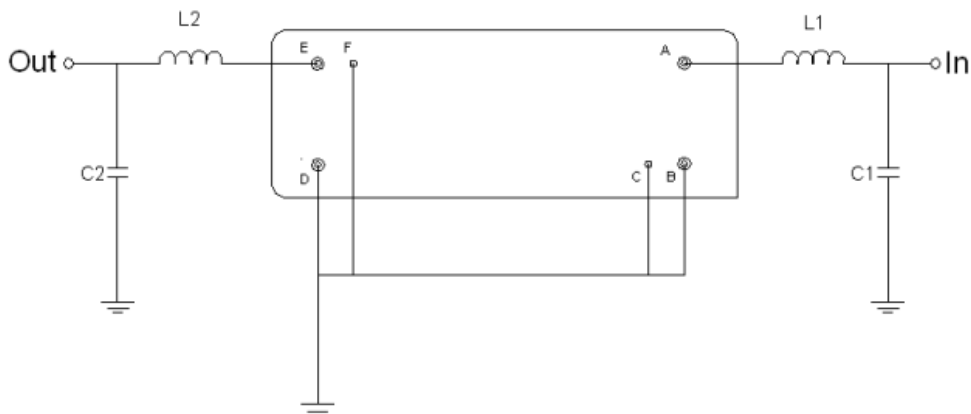
Those impedances could be modified with different impedance values and/or structures, if necessary

Package Dimensions



Pin Description	
B, C, D, F	Ground
A	Input
E	Output

Testing Environment



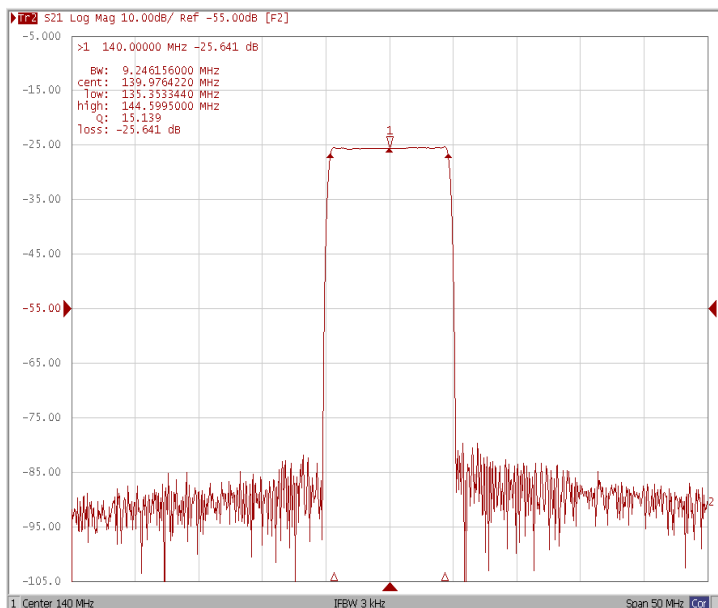
Test Fixture & Values	
Input	L1=33 nH , C1=51 pF
Output	L2=33 nH , C2=47 pF
Source/Load Impedance	50 Ω



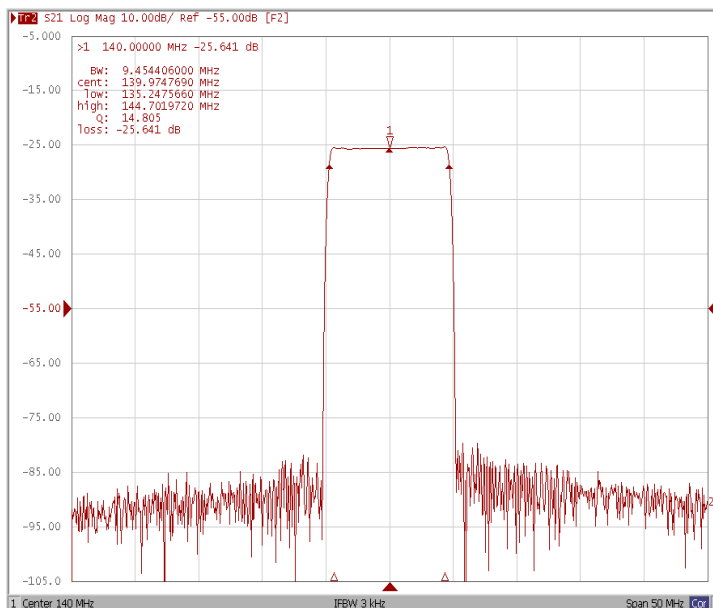
Frequency Characteristics

Frequency Response

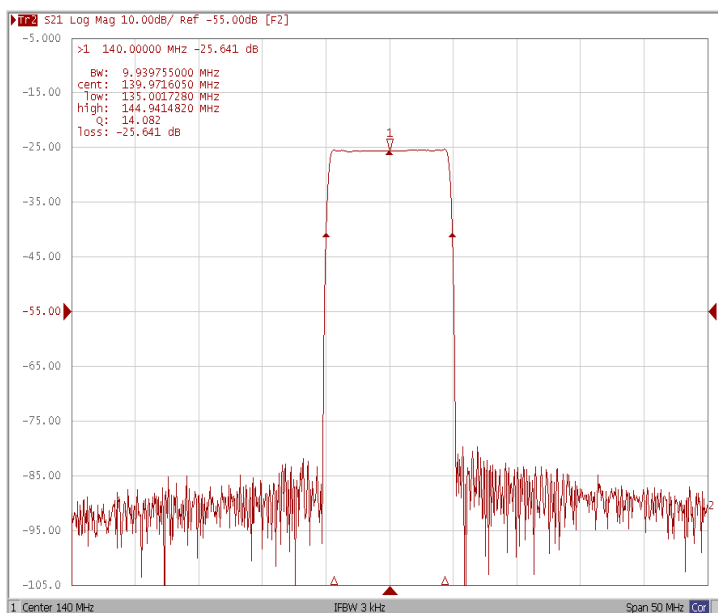
Bandwidth at -1.0 dB



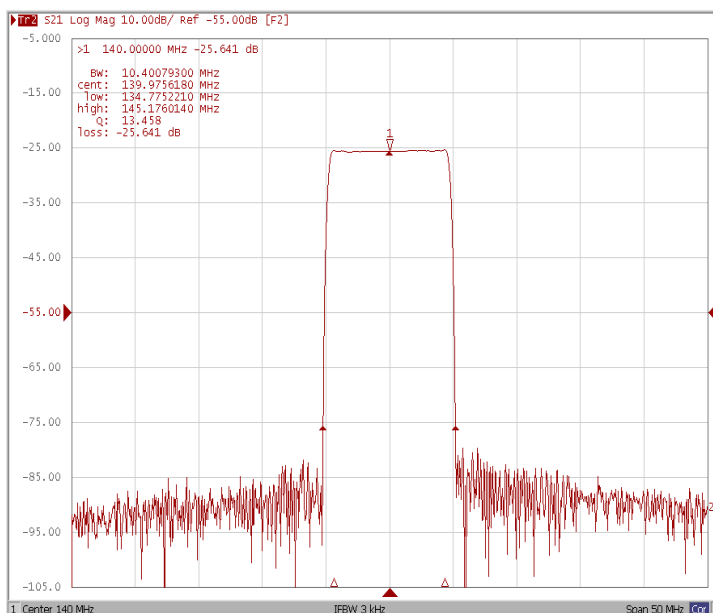
Bandwidth at -3.0 dB



Bandwidth at -15.0 dB



Bandwidth at -50.0 dB

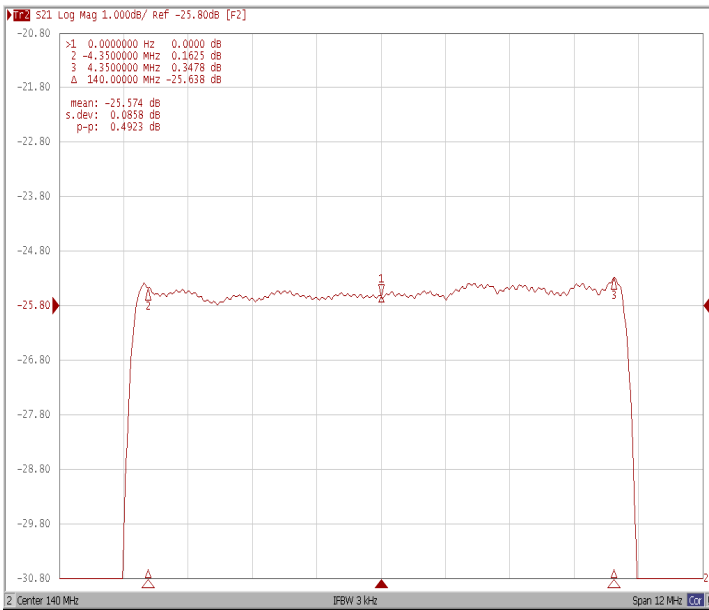




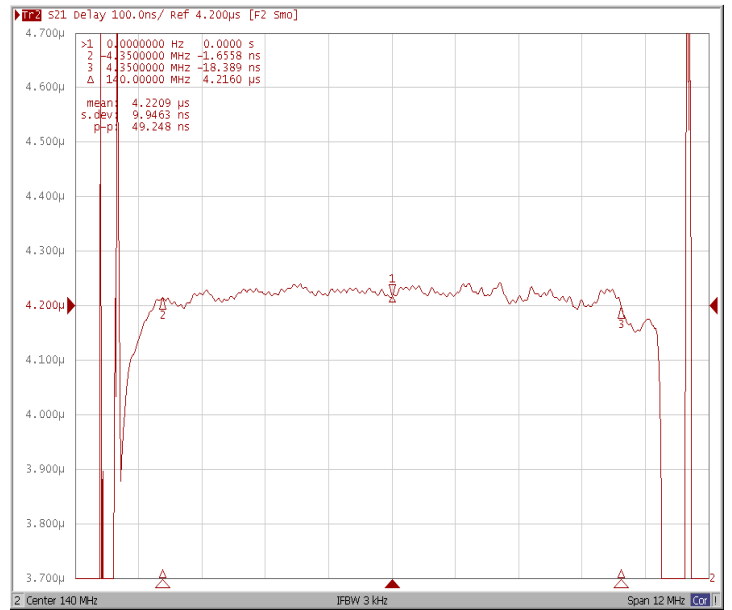
Frequency Characteristics

Frequency Response

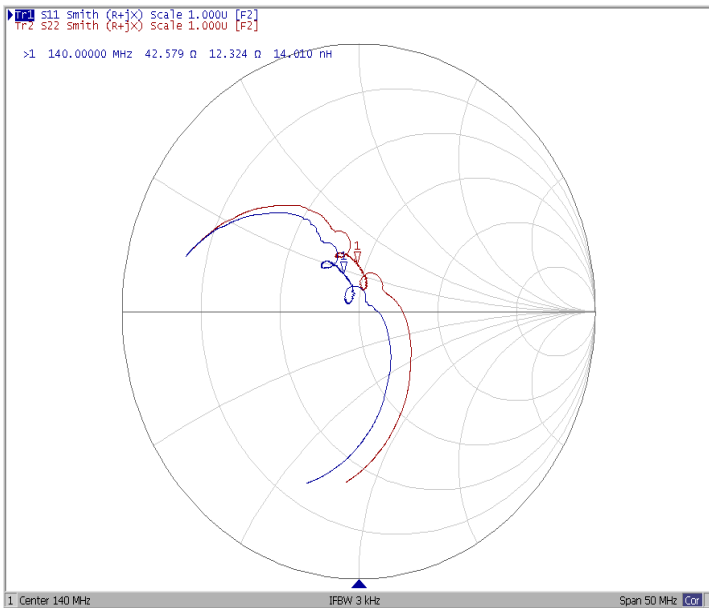
Ripple Variation $Fo \pm 4.35\text{MHz}$



Group Delay Variation $Fo \pm 4.35\text{MHz}$



Smith Chart



VSWR

