



*Total Solution Provider in Saw Device*

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# SA08520DD1

85.10 MHz IF SAW Filter  
20.10MHz Bandwidth  
Revision 0: 18. July. 2009



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

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## □ Electrical Characteristics

### Maximum Ratings

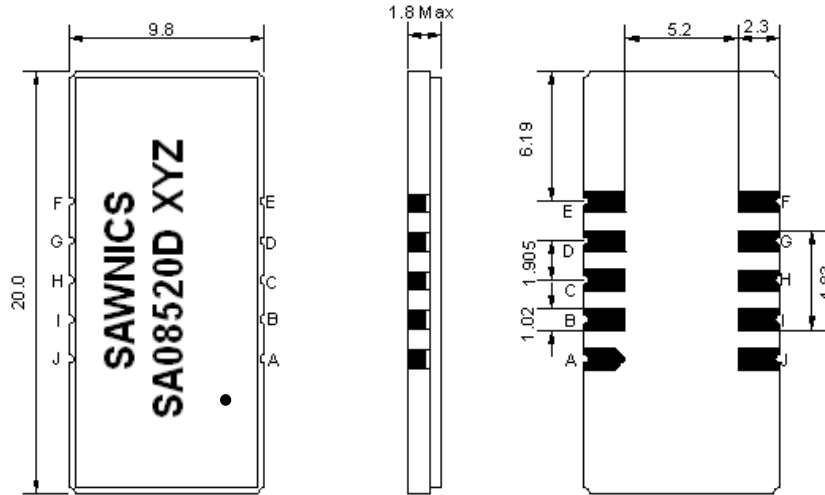
Parameters Description	Unit	Minimum	Typical	Maximum
Operation Temperature Range	°C	-30	-	80
Storage Temperature Range	°C	-40	-	85
Maximum DC Voltage	V	-	-	10
Maximum Input Power	dBm	-	-	10
Source Impedance (single ended) <sup>(1)</sup>	Ω	-	50	-
Load Impedance (single ended) <sup>(1)</sup>	Ω	-	50	-
Package type & size	D1			
Length x Width	mm <sup>2</sup>	-	20.0 x 9.8	-
Height	mm	-	-	1.8

### Electrical Specification

Parameters Description	Unit	Minimum	Typical	Maximum
Center Frequency (Fo)	MHz	-	85.10	-
Insertion Loss at Fo	dB	-	23.5	25.5
Group Delay Variation (Fo±9.42MHz)	nsec	-	40	70
Absolute Delay at Fo	usec	-	2.12	-
Passband Ripple Variation(Fo±9.42MHz)	dB	-	0.65	0.95
Bandwidth at -1dB	MHz	19.90	20.10	-
Bandwidth at -10dB	MHz	-	20.95	-
Bandwidth at -20dB	MHz	-	21.35	-
Bandwidth at -40dB	MHz	-	21.80	21.95
Ultimate Rejection	dB	50	53	-
Temperature Coefficient	ppm/°C	-	-72	-

**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.

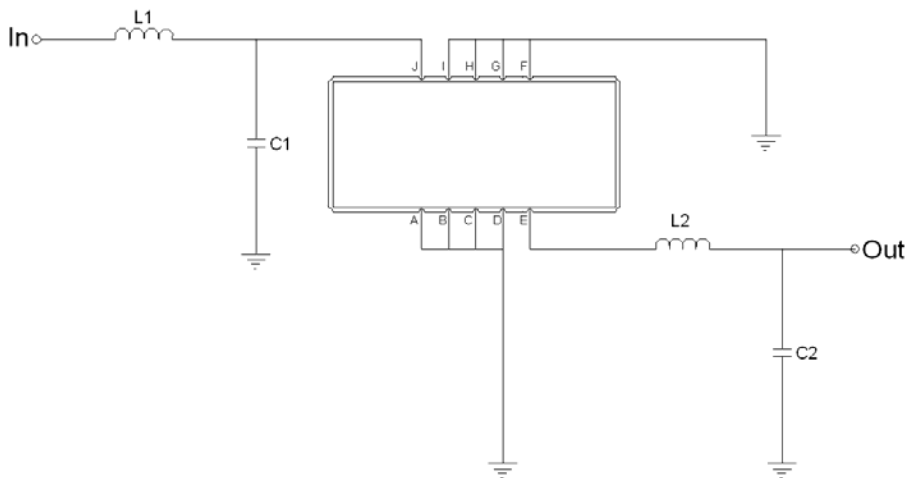
**Package Dimensions**



- ① SAWNICS: Brand
- ② SA08520D: 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**



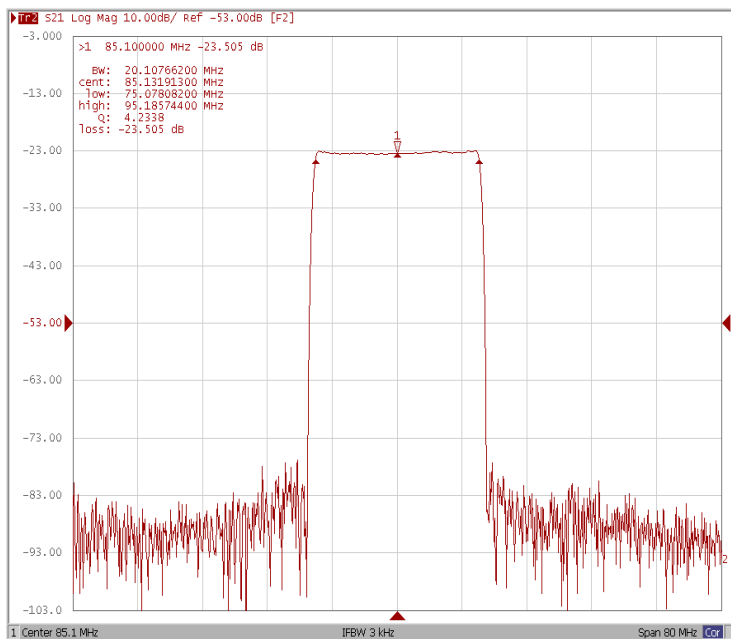
Test Fixture & Values	
Input	L1 =100 nH, C1=4pF
Output	L2 = 120 nH, C2=36pF
Source/Load Impedance	50 Ω



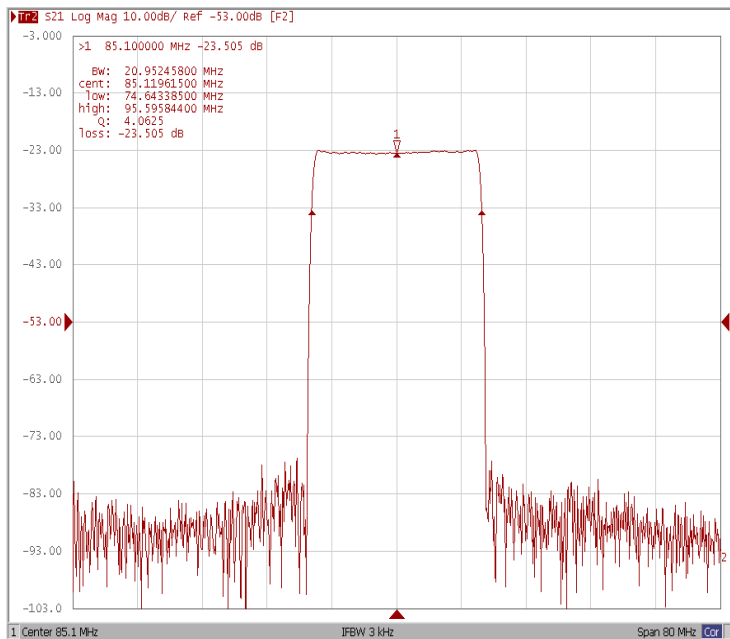
## Frequency Characteristics

### Frequency Response

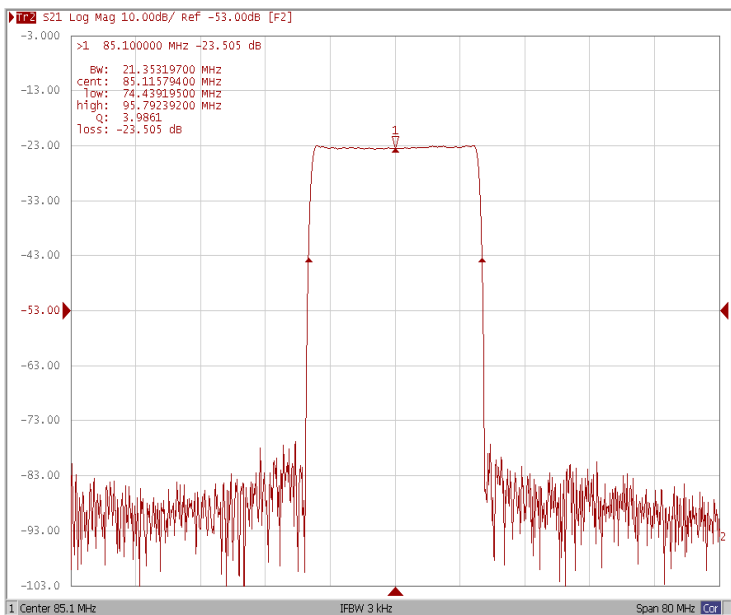
Bandwidth at -1.0 dB



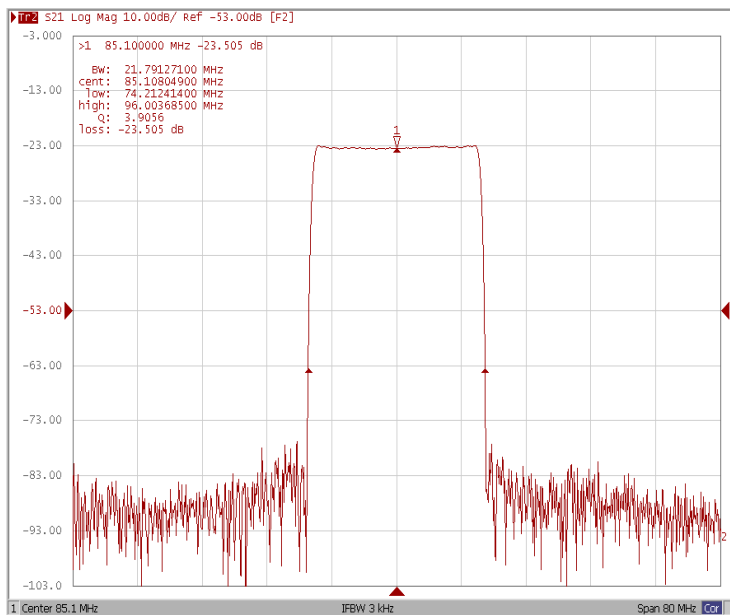
Bandwidth at -10.0 dB



Bandwidth at -20.0 dB



Bandwidth at -40.0 dB

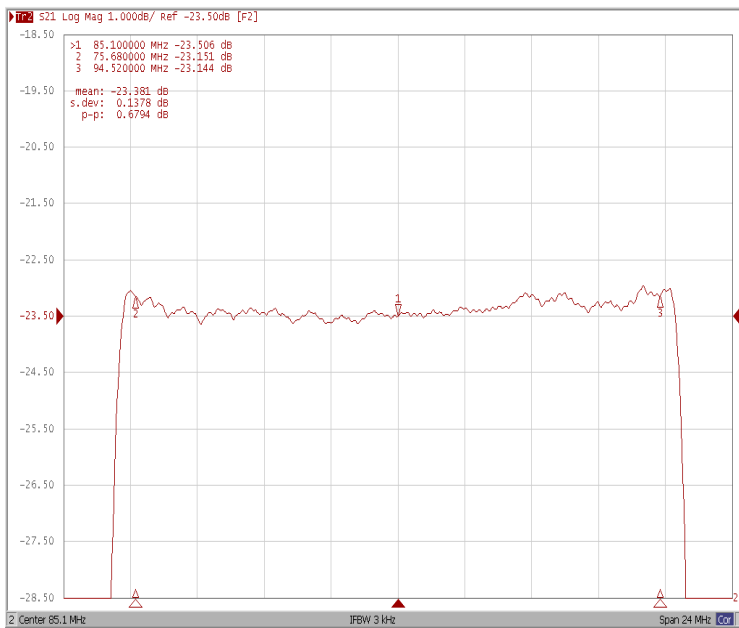




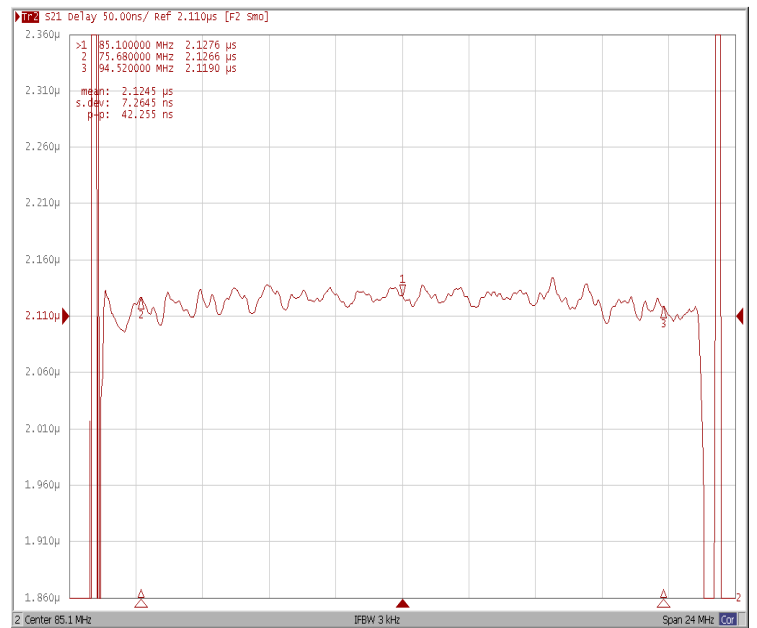
## Frequency Characteristics

### Frequency Response

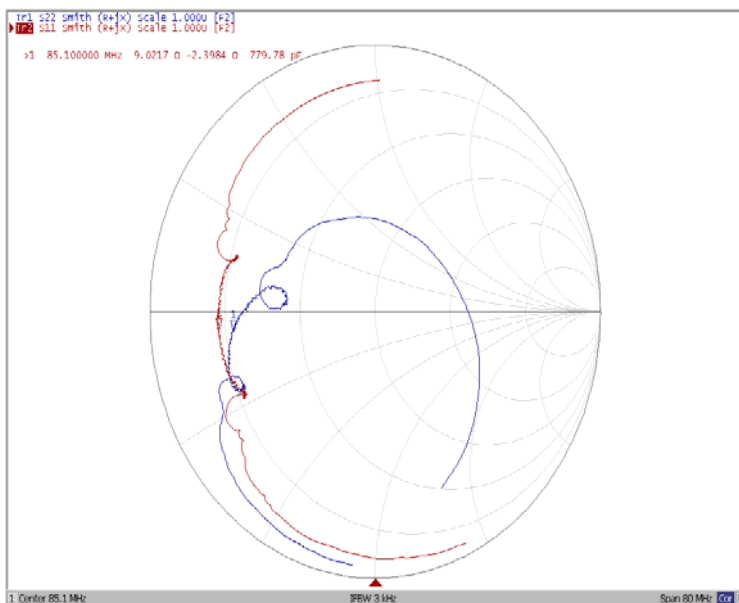
Ripple Variation  $Fo \pm 9.42\text{MHz}$



Group Delay Variation  $Fo \pm 9.42\text{MHz}$



Smith Chart



VSWR

