



*Total Solution Provider in Saw Device*

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# SL12509BV

125.0 MHz IF SAW Filter  
9.60 MHz Bandwidth  
Revision 0: 17. July. 2008



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

### Maximum Ratings

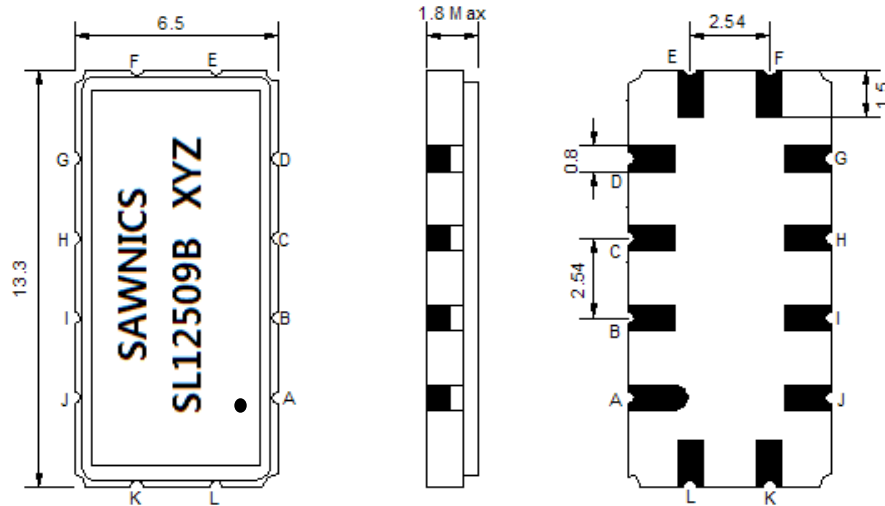
Parameters Description	Unit	Minimum	Typical	Maximum
Operation Temperature Range	°C	-20	-	70
Storage Temperature Range	°C	-40	-	85
Maximum DC Voltage	V	-	-	10
Maximum Input Power	dBm	-	-	10
Source Impedance (single ended) <sup>(1)</sup>	Ω	-	50	-
Load Impedance (single ended) <sup>(1)</sup>	Ω	-	50	-
Package type & size	V			
Length x Width	mm <sup>2</sup>	-	13.3 x 6.5	-
Height	mm	-	-	1.8

### Electrical Specification

Parameters Description	Unit	Minimum	Typical	Maximum
Center Frequency (Fo)	MHz	-	125.0	-
Insertion Loss at Fo	dB	-	20.6	22.0
Amplitude Ripple within fo ±3.8 MHz	dB <sub>p-p</sub>	-	0.45	0.9
Group Delay Variation within fo ±3.8 MHz	nsec	-	40	70
Absolute Delay at Fo	μsec	-	0.88	-
Temperature Coefficient	ppm/°C	-	-18	-
Bandwidth at -1.0 dB	MHz	9.00	9.60	-
Bandwidth at -3.0 dB	MHz	-	10.30	-
Bandwidth at -40.0 dB	MHz	-	13.08	14.00
<b>Relative Attenuation:</b>				
Lower sidelobe	dB	45	48	-
Upper sidelobe	dB	45	48	-

**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.

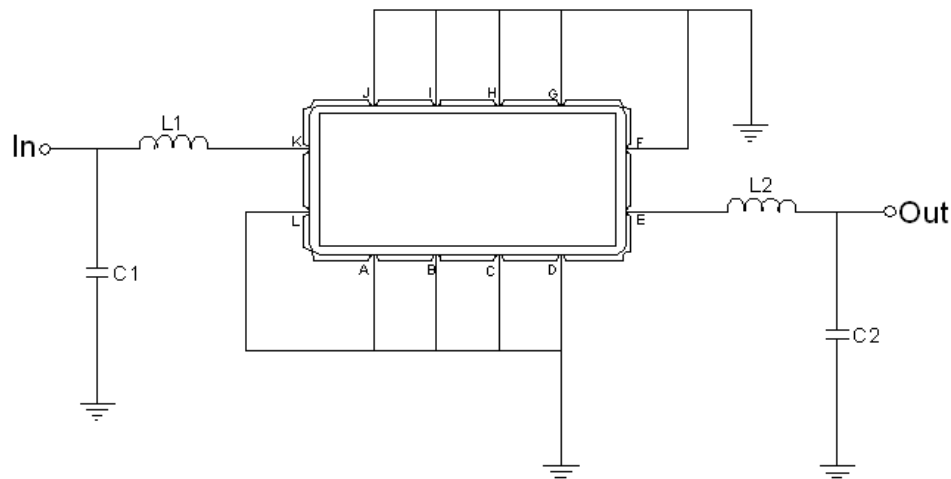
### Package Dimensions



- ① SAWNICS: Brand
- ② SL12509B: 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

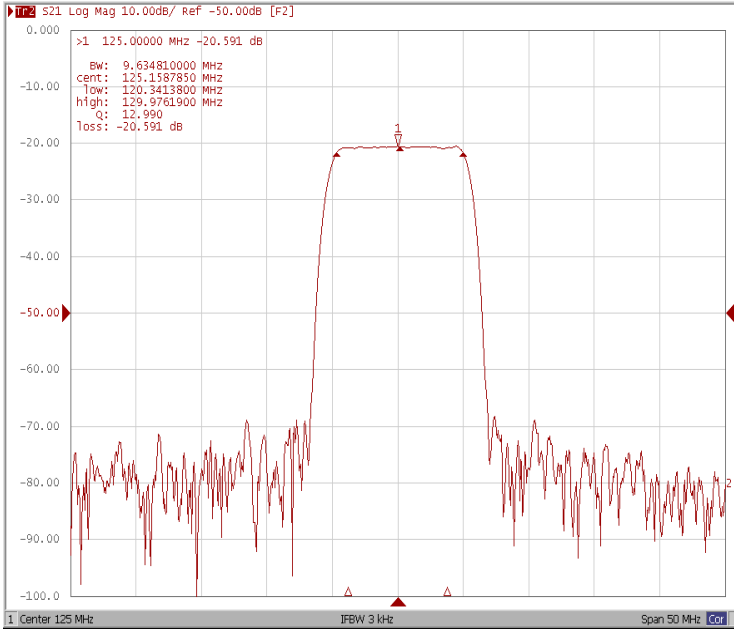


Test Fixture & Values	
Input	L1=56nH, C1=43pF
Output	L2=47nH, C2=43pF
Source/Load Impedance	50 Ω

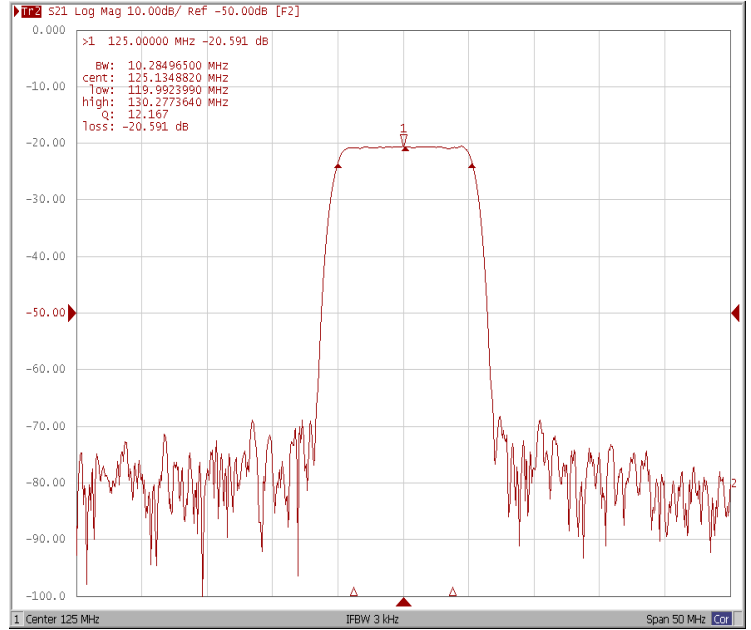
### Frequency Characteristics

#### Frequency Response

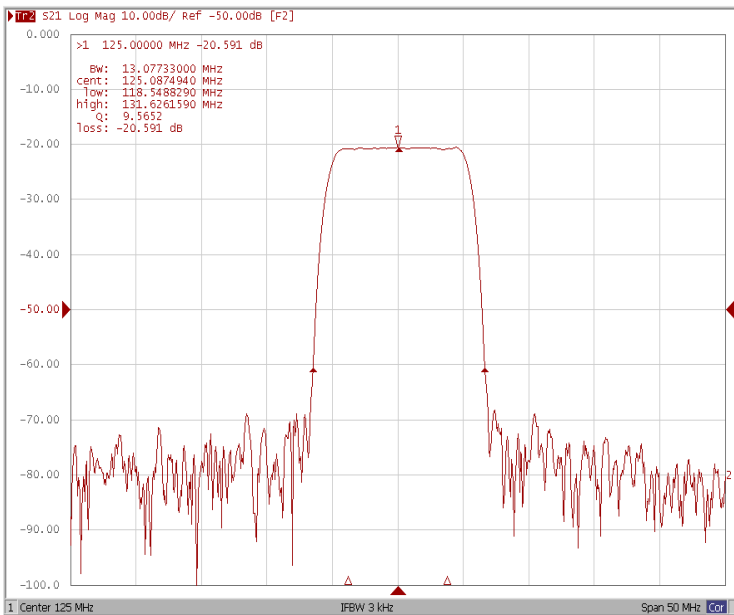
**Bandwidth at -1.0 dB**



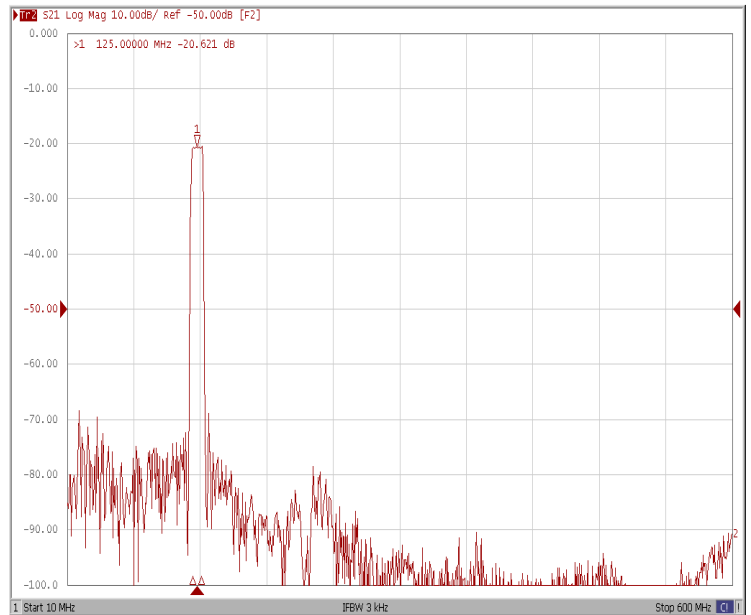
**Bandwidth at -3.0 dB**



**Bandwidth at -40.0 dB**



**Wide-Band**

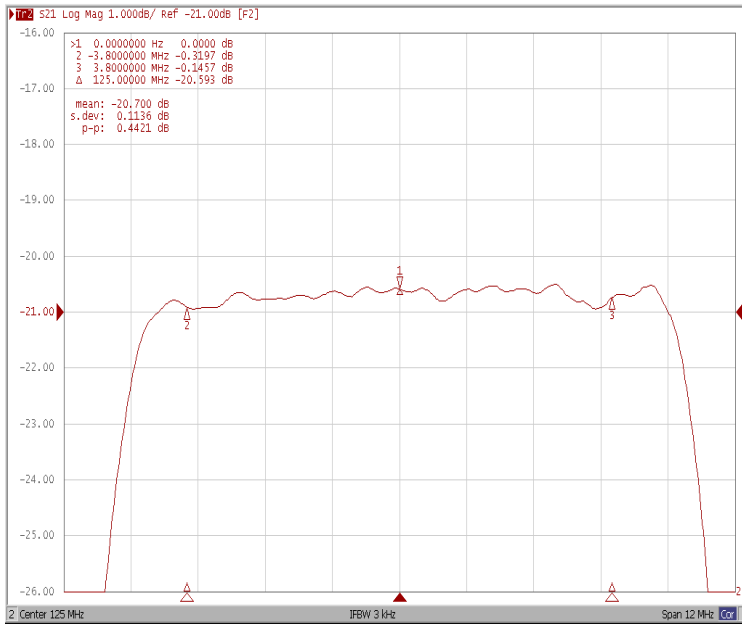




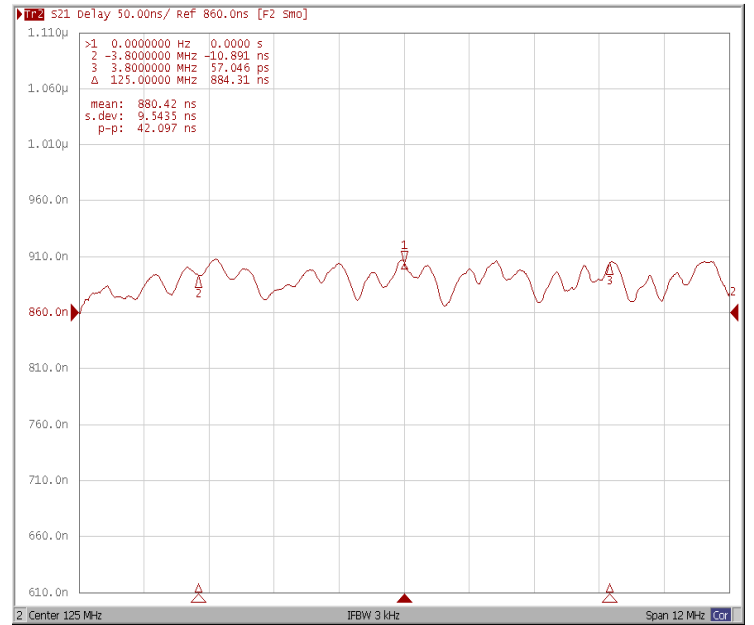
# Frequency Characteristics

## Frequency Response

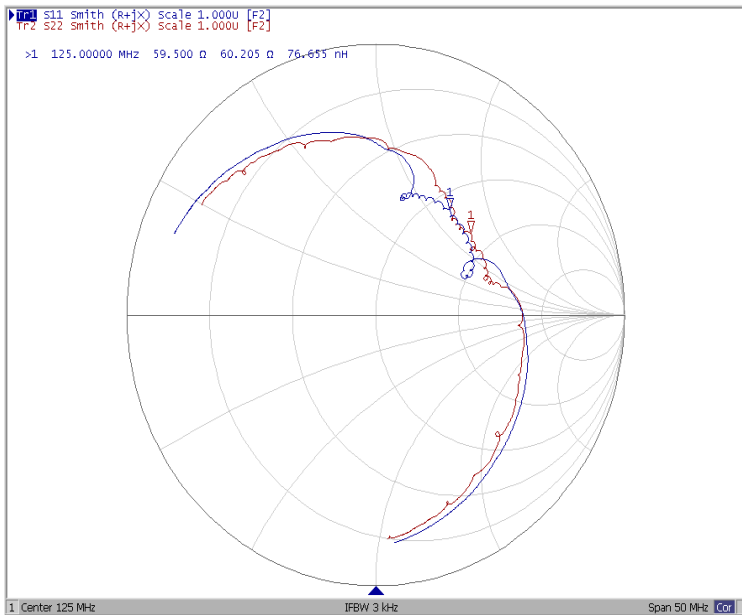
Ripple Variation  $F_o \pm 3.8\text{MHz}$



Group Delay Variation  $F_o \pm 3.8\text{MHz}$



Smith Chart



SWR

