



*Total Solution Provider in Saw Device*

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# SL04510CD1

45.0 MHz IF SAW Filter

9.88 MHz Bandwidth

Revision 0: 18. June. 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	0	-	60
Storage Temperature Range	°C	-30	-	80
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

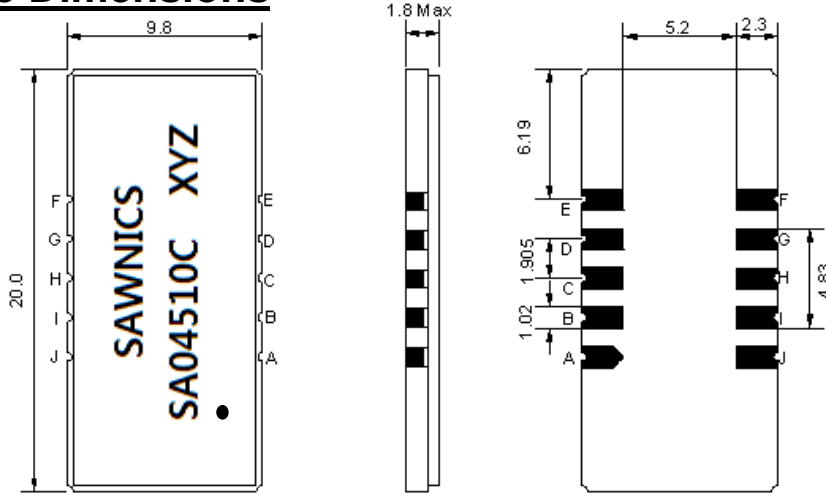
### Electrical Specification

Parameters Description	Unit	Minimum	Typical	Maximum
Center Frequency (Fo)	MHz	44.90	45.00	45.10
Insertion Loss at Fo	dB	-	12.6	15.0
Group Delay Variation (Fo±4.5MHz)	ns	-	60	100
Absolute Delay	us	-	1.51	-
Passband Ripple (Fo±4.5MHz)	dB	-	0.45	1.00
Bandwidth at -1dB	MHz	9.80	9.88	-
Bandwidth at -3dB	MHz	-	10.40	-
Bandwidth at -20dB	MHz	-	11.88	-
Bandwidth at -40dB	MHz	-	12.80	13.00
Ultimate Rejection	dB	-	45	-
Temperature coefficient	ppm/°C	-	-86	-

**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.

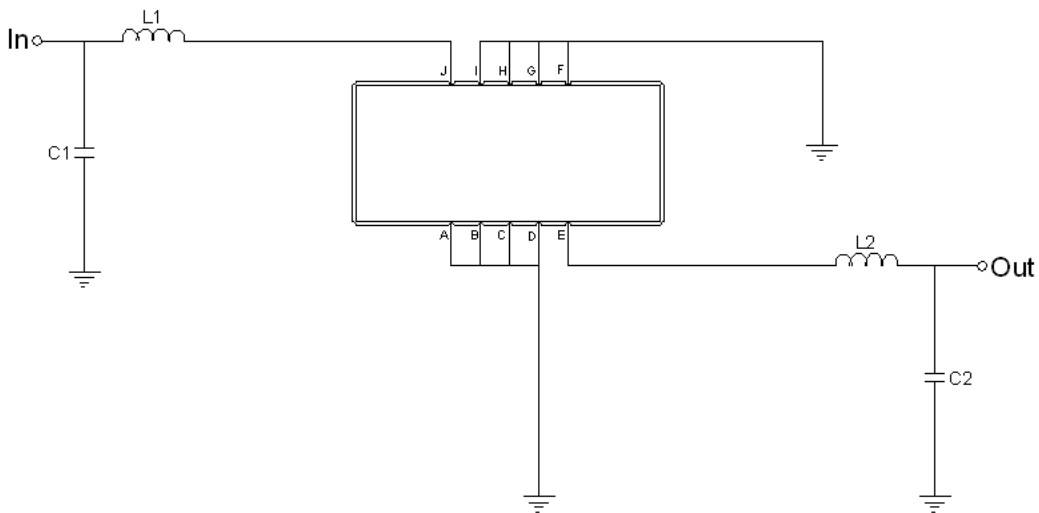
### Package Dimensions



- ① SAWNICS: Brand
- ② SL04510C: 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

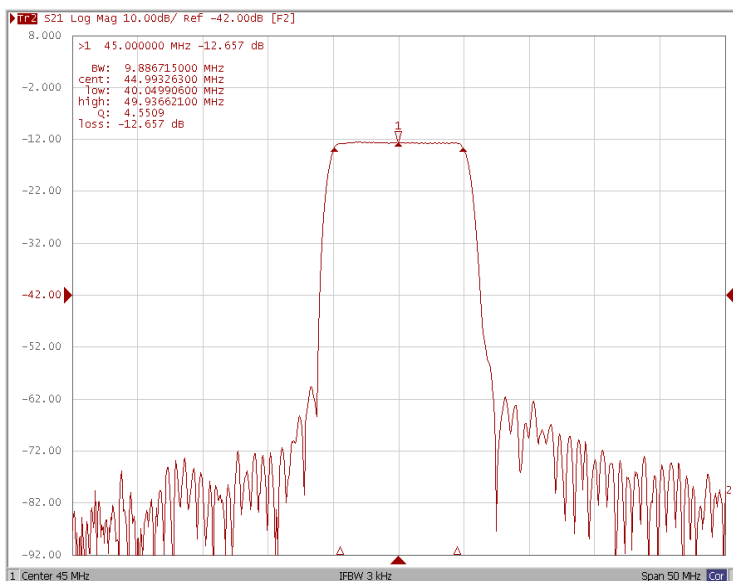


Test Fixture & Values	
Input	L1=270nH, C1=33pF
Output	L2=270nH, C2=36pF
Source/Load Impedance	50 Ω

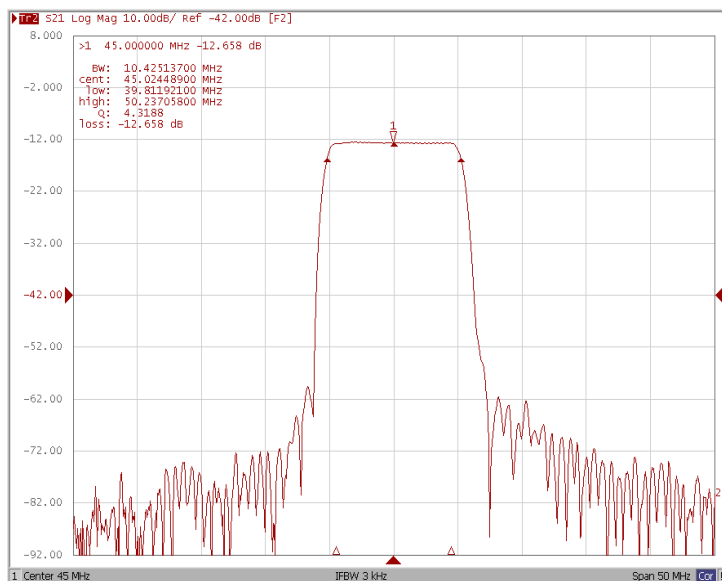
### Frequency Characteristics

#### Frequency Response

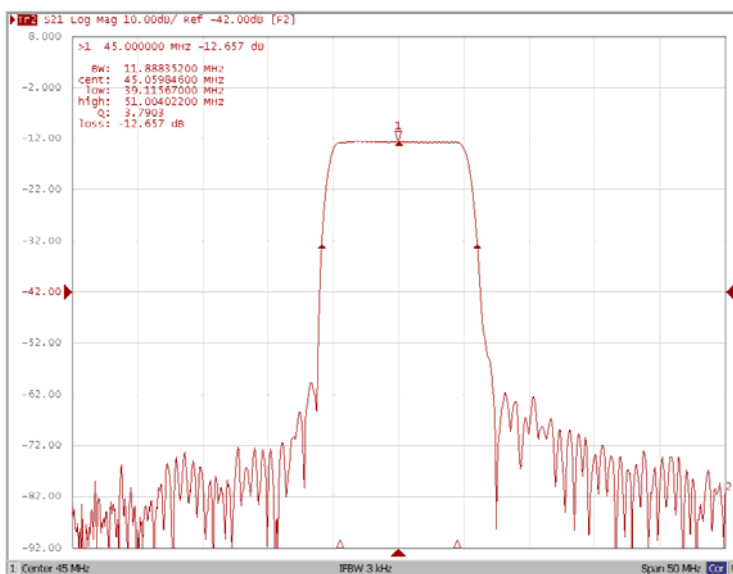
**Bandwidth at -1.0 dB**



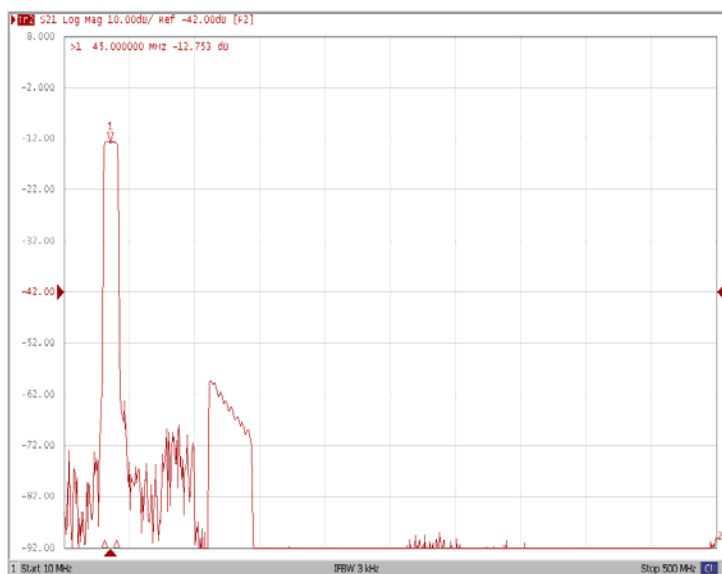
**Bandwidth at -3.0 dB**



**Bandwidth at -20.0 dB**



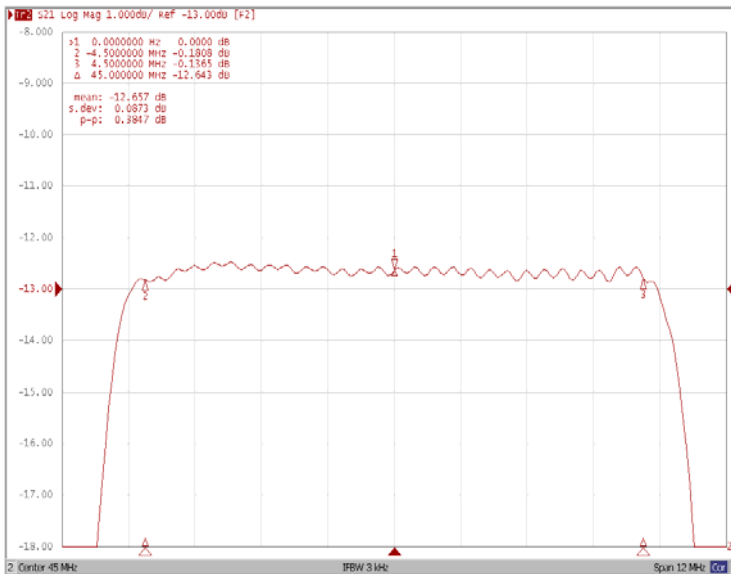
**Wide-Band**



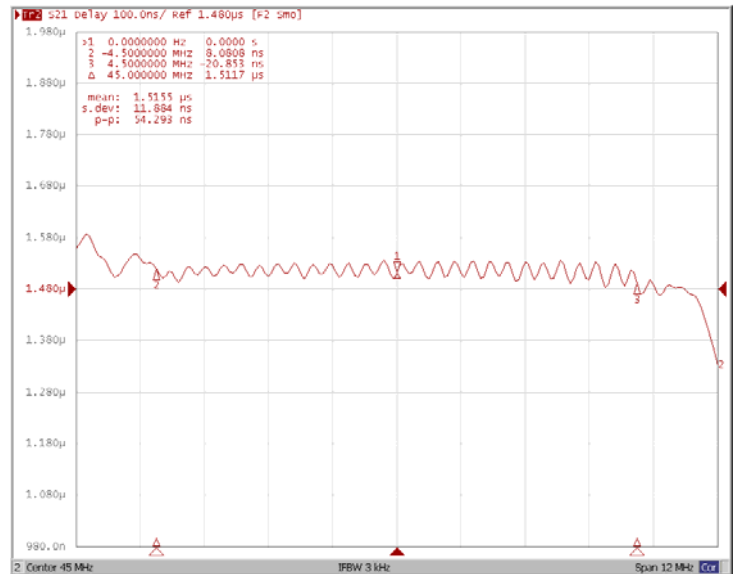
### □ Frequency Characteristics

#### Frequency Response

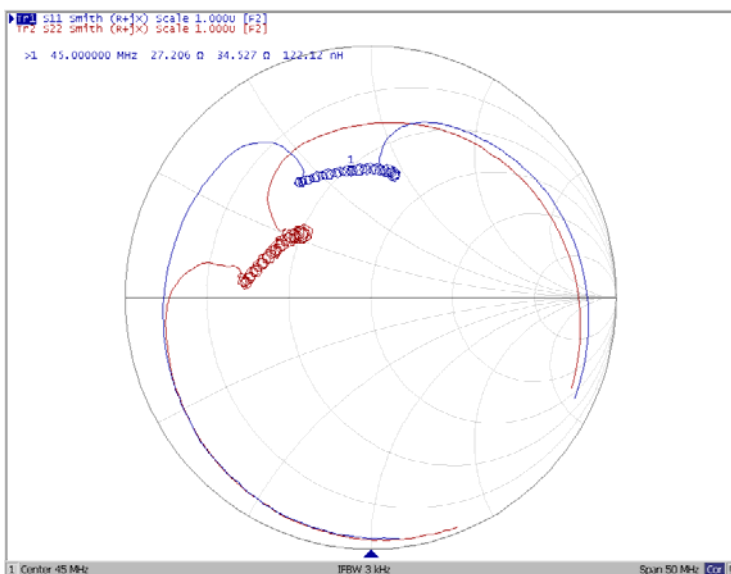
Ripple Variation  $Fo \pm 4.5\text{MHz}$



Group Delay Variation  $Fo \pm 4.5\text{MHz}$



Smith Chart



VSWR

