



*Total Solution Provider in Saw Device*

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# SA08020BD1

80.1 MHz IF SAW Filter  
20.10 MHz Bandwidth  
Revision 0: 09. Feb. 2009



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

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## □ Electrical Characteristics

### Maximum Ratings

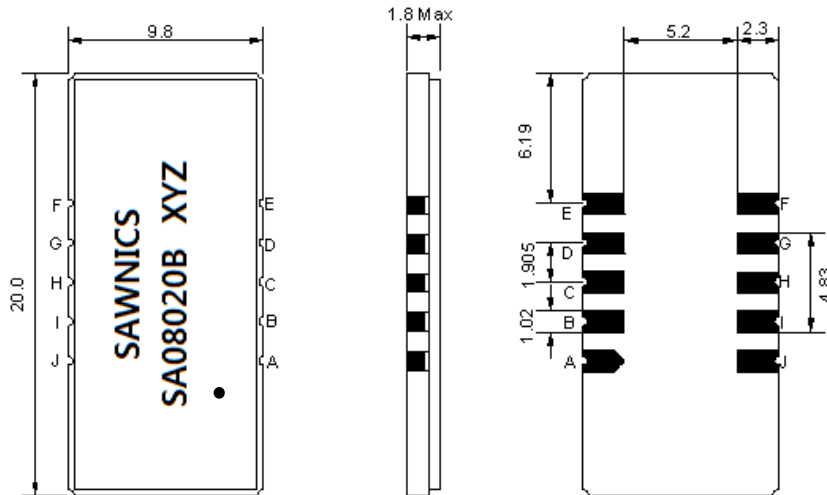
Parameters Description	Unit	Minimum	Typical	Maximum
Operation Temperature Range	°C	-30	-	80
Storage Temperature Range	°C	-30	-	80
Maximum DC Voltage	V	-	-	10
Maximum Input Power	dBm	-	-	10
Source Impedance (single ended) <sup>(1)</sup>	Ω	-	50	-
Load Impedance (single ended) <sup>(1)</sup>	Ω	-	50	-
Package 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	79.95	80.10	80.25
Insertion Loss at Fo	dB	-	21.3	23.0
Group Delay Variation (Fo±9.22MHz)	ns	-	35	60
Absolute Delay	us	-	2.38	-
Passband Ripple (Fo±9.22MHz)	dB	-	0.75	1.00
Bandwidth at -1dB	MHz	19.30	20.10	-
Bandwidth at -3dB	MHz	-	20.45	-
Bandwidth at -20dB	MHz	-	21.36	21.56
Bandwidth at -40dB	MHz	-	21.80	-
Ultimate Rejection	dB	50	52	-
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.

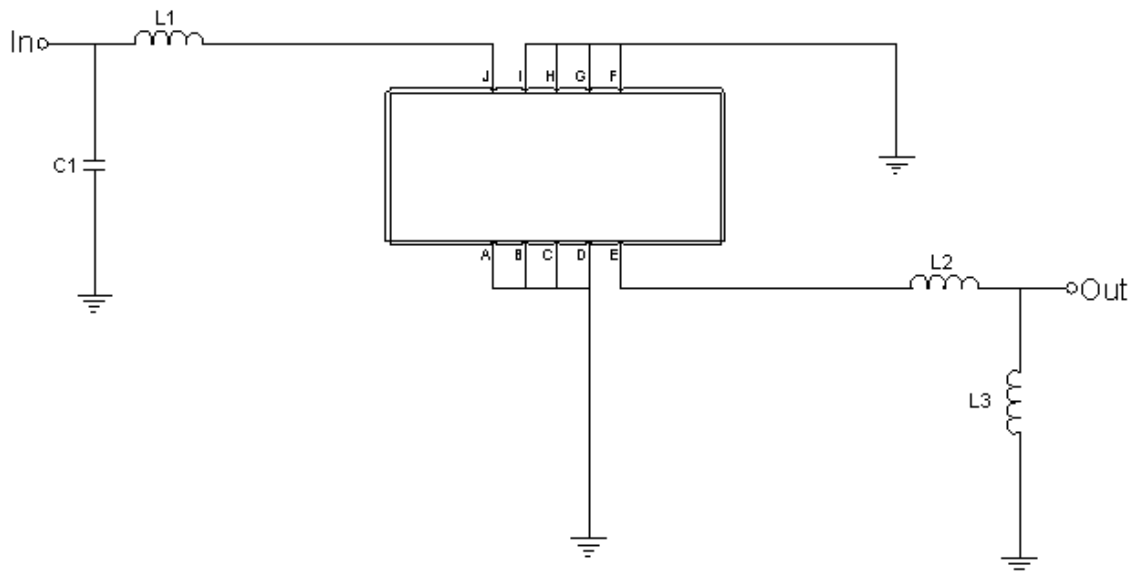
### Package Dimensions



- ① SAWNICS: Brand
- ② SA08020B: 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

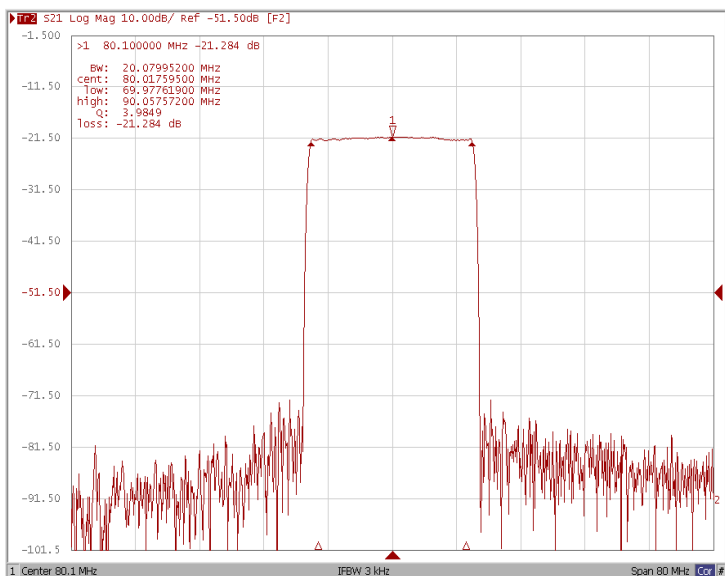


Test Fixture & Values	
Input	L1=150nH, C1=13pF
Output	L2=56nH, L3=100nH
Source/Load Impedance	50 Ω

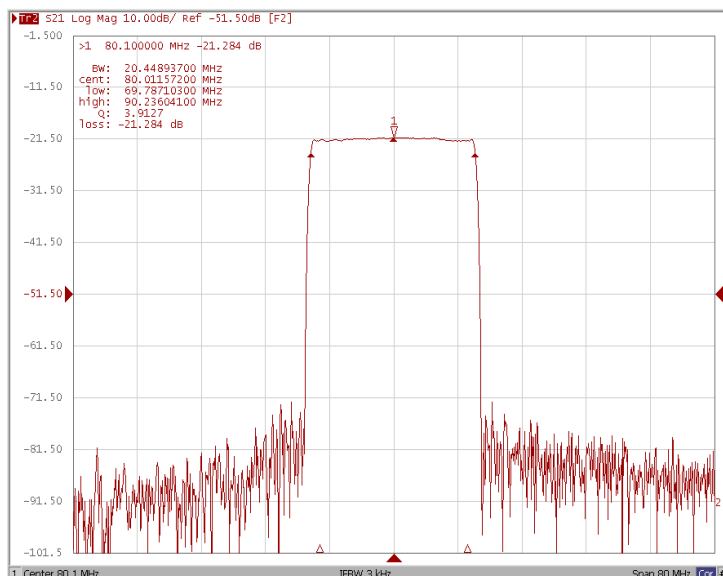
### □ Frequency Characteristics

#### Frequency Response

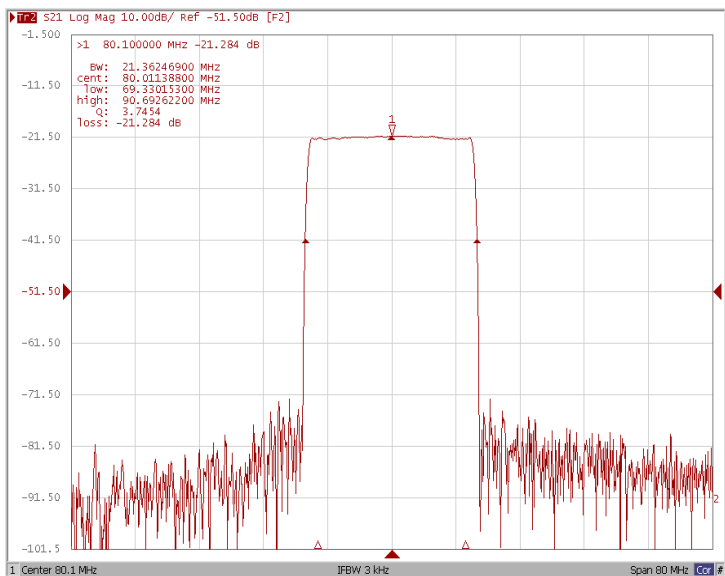
**Bandwidth at -1.0 dB**



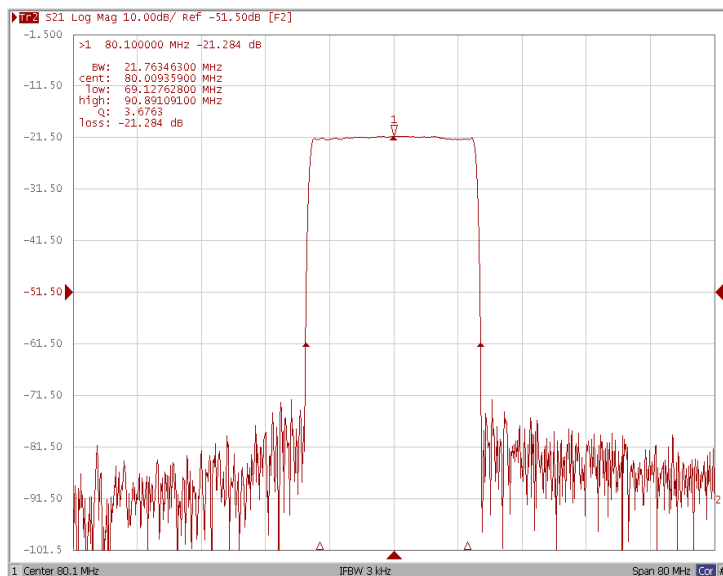
**Bandwidth at -3.0 dB**



**Bandwidth at -20.0 dB**



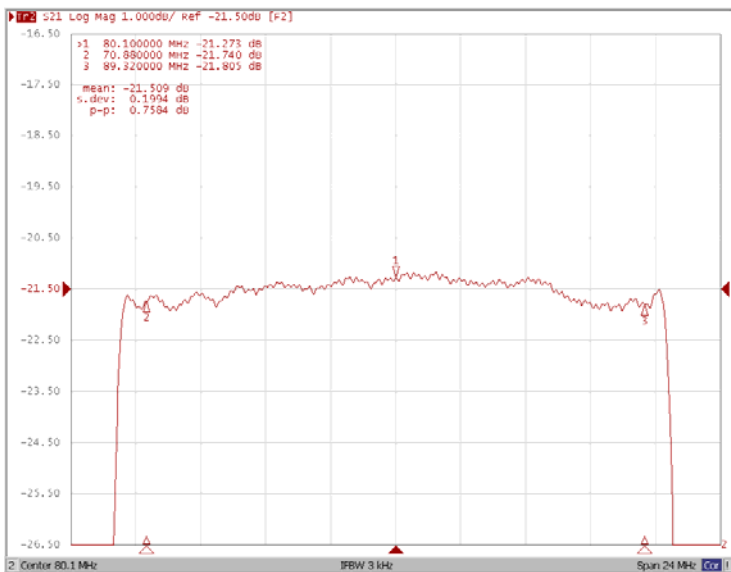
**Bandwidth at -40.0 dB**



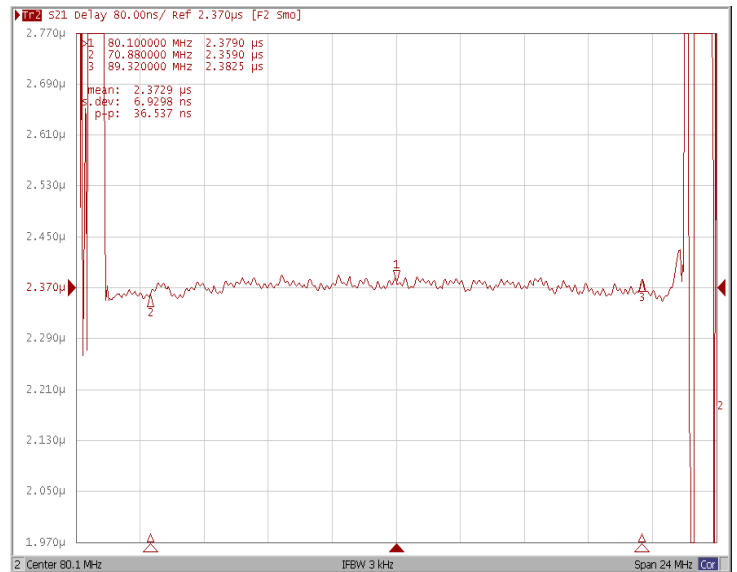
### Frequency Characteristics

#### Frequency Response

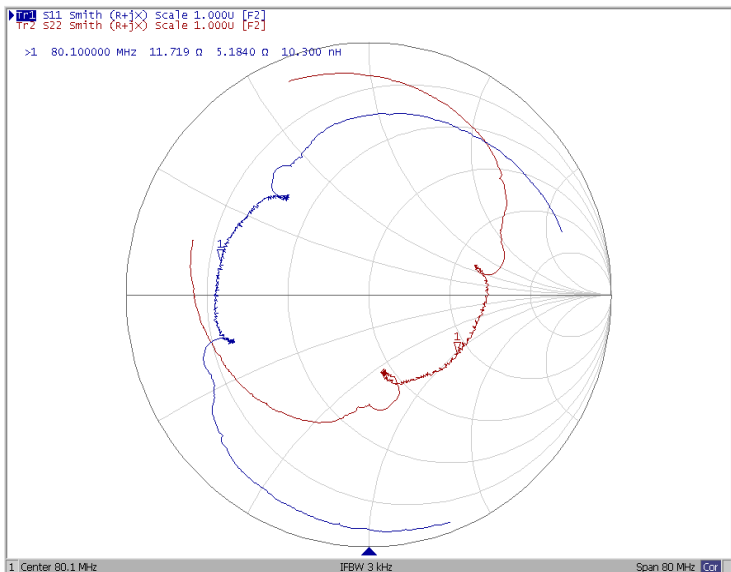
Ripple Variation Fo±9.22MHz



Group Delay Variation Fo±9.22MHz



Smith Chart



VSWR

