



Total Solution Provider in Saw Device

SA16004AV

160.0 MHz IF SAW Filter
4.54 MHz Bandwidth
Revision 0: 4. April. 2008



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

SAWNICS Inc.

460 Cheonheung-ri, Seonggeo-eup, Cheonan-si, Chungcheongnam-do, 330-836 / Korea.
Tel: +82 41 550 9372 / Fax: +82 41 550 9399 / www.sawnics.com

□ 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) ⁽¹⁾	Ω	-	50	-
Load Impedance (single ended) ⁽¹⁾	Ω	-	50	-
Package type & size	V			
Length x Width	mm ²	-	13.3 x 6.5	-
Height	mm	-	-	1.8

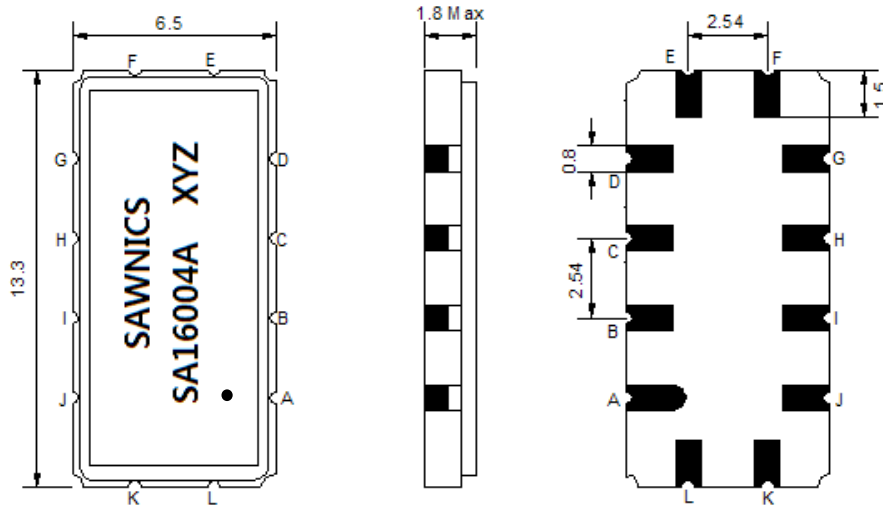
Electrical Specification

Parameters Description	Unit	Minimum	Typical	Maximum
Center Frequency (Fo)	MHz	159.85	160.0	160.15
Insertion Loss at Fo	dB	-	21.0	22.5
Group Delay Variation	ns	-	45	100
Absolute Delay	us	-	1.62	-
Passband Ripple	dB	-	0.45	1.0
Bandwidth at -1dB	MHz	4.40	4.54	-
Bandwidth at -3dB	MHz	-	5.30	-
Bandwidth at -40dB	MHz	-	7.98	8.30
Relative Attenuation:				
Lower sidelobe	dB	50	55	-
Upper sidelobe	dB	50	55	-
Temperature Coefficient	ppm/°C	-	-18	-

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.

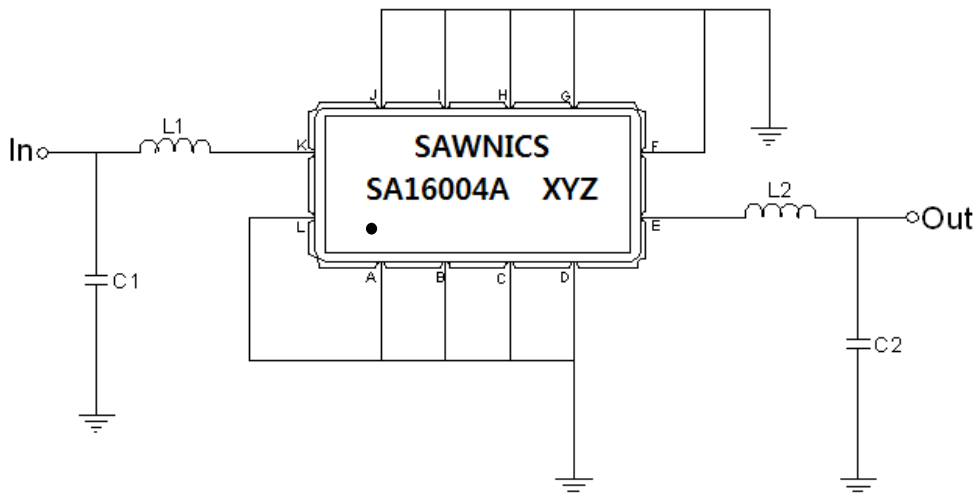
Package Dimensions



- ① SAWNICS: Brand
- ② SA16004A: 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



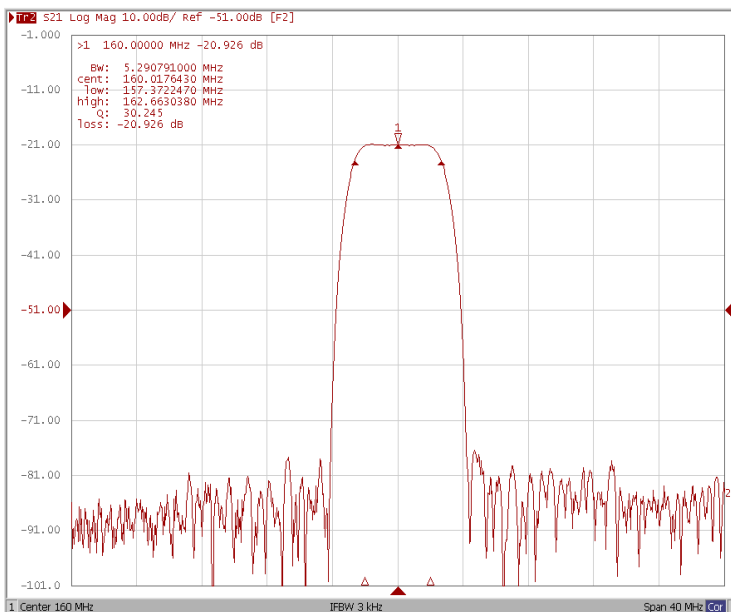
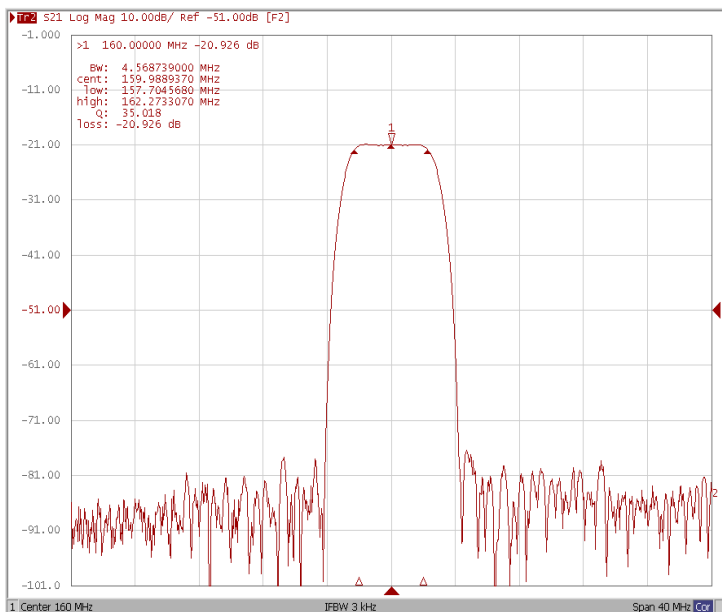
Test Fixture & Values	
Input	L1=27 nH, C1=24 pF
Output	L2=27 nH, C2=24 pF
Source/Load Impedance	50 Ω

□ Frequency Characteristics

Frequency Response

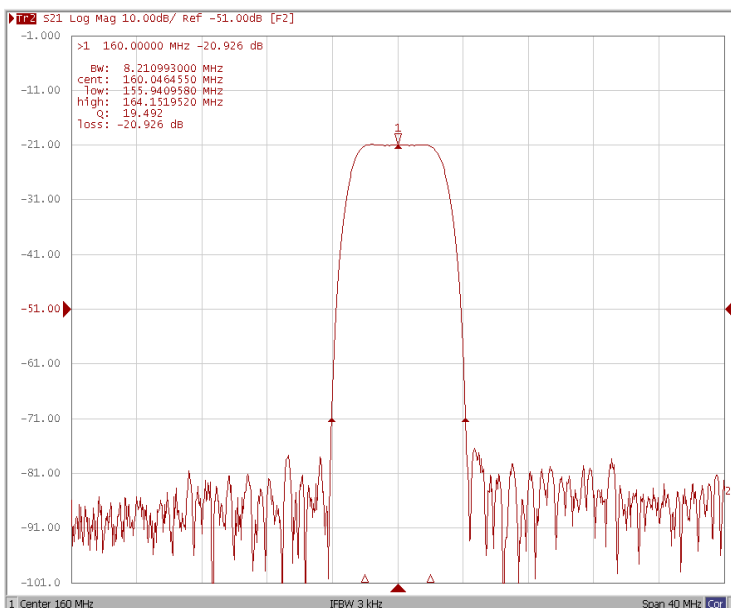
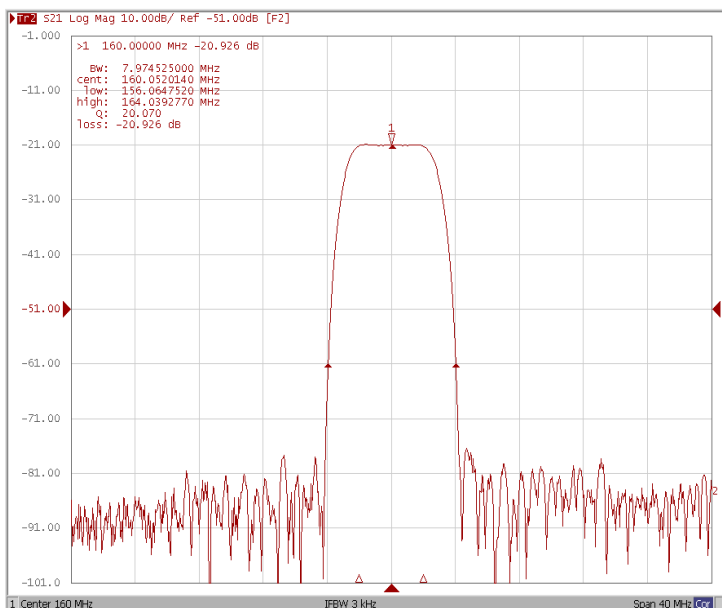
Bandwidth at -1.0 dB

Bandwidth at -3.0 dB



Bandwidth at -40.0 dB

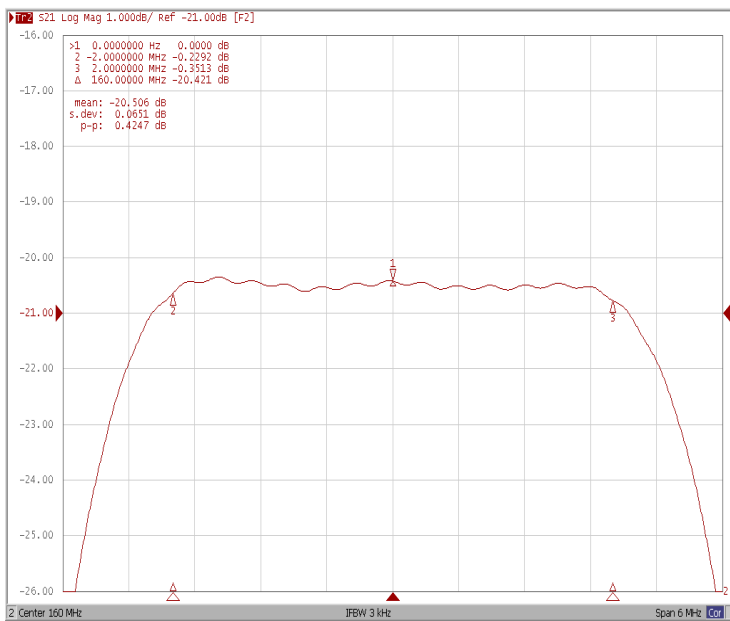
Bandwidth at -50.0 dB



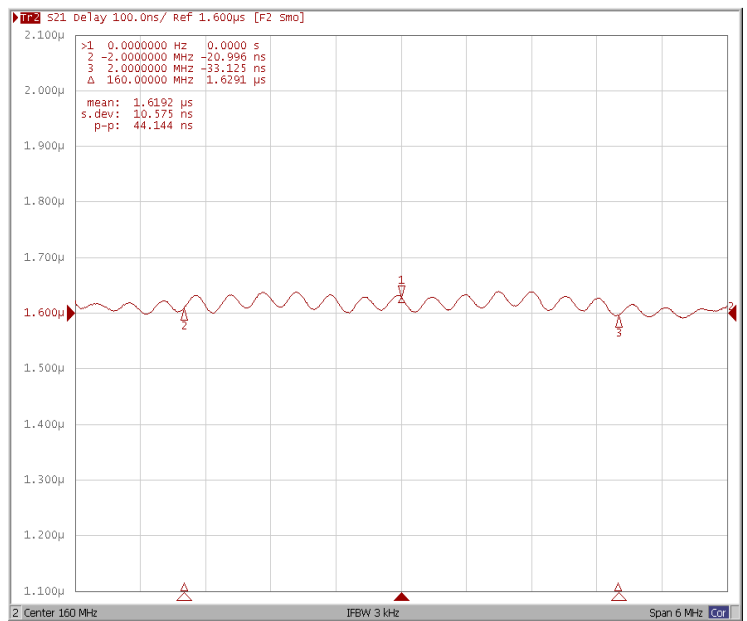
Frequency Characteristics

Frequency Response

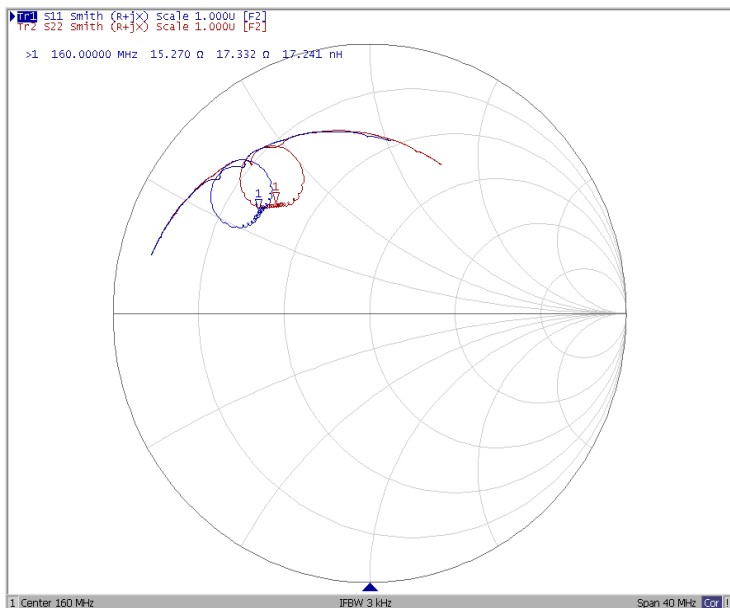
Ripple Variation



Group Delay Variation



Smith Chart



VSWR

