



Total Solution Provider in Saw Device

SA07016CD1

70.00 MHz IF SAW Filter
16.10 MHz Bandwidth
Revision 0: 22. July. 2009



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

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□ Electrical Characteristics

Maximum Ratings

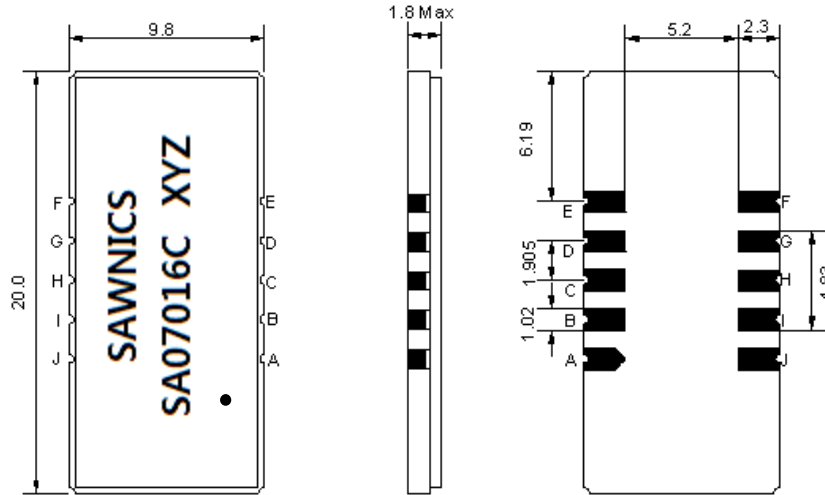
| Parameters Description | Unit | Minimum | Typical | Maximum |
|--|-----------------|---------|------------|---------|
| Operation Temperature Range | °C | -20 | - | 70 |
| Storage Temperature Range | °C | -40 | - | 85 |
| Maximum DC Voltage | V | - | - | 10 |
| Maximum Input Power | dBm | - | - | 10 |
| Source Impedance (single ended) ⁽¹⁾ | Ω | - | 50 | - |
| Load Impedance (single ended) ⁽¹⁾ | Ω | - | 50 | - |
| Package type & size | D1 | | | |
| Length x Width | mm ² | - | 20.0 x 9.8 | - |
| Height | mm | - | - | 1.8 |

Electrical Specification

| Parameters Description | Unit | Minimum | Typical | Maximum |
|---------------------------------------|--------|---------|---------|---------|
| Center Frequency (Fo) | MHz | - | 70.00 | - |
| Insertion Loss at Fo | dB | - | 23.30 | 25.0 |
| Group Delay Variation (Fo±7.50MHz) | nsec | - | 30 | 60 |
| Absolute Delay at Fo | usec | - | 2.17 | - |
| Passband Ripple Variation(Fo±7.50MHz) | dB | - | 0.65 | 1.00 |
| Bandwidth at -1dB | MHz | 15.80 | 16.10 | - |
| Bandwidth at -10dB | MHz | - | 16.95 | - |
| Bandwidth at -20dB | MHz | - | 17.35 | - |
| Bandwidth at -40dB | MHz | - | 17.77 | 17.95 |
| 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.

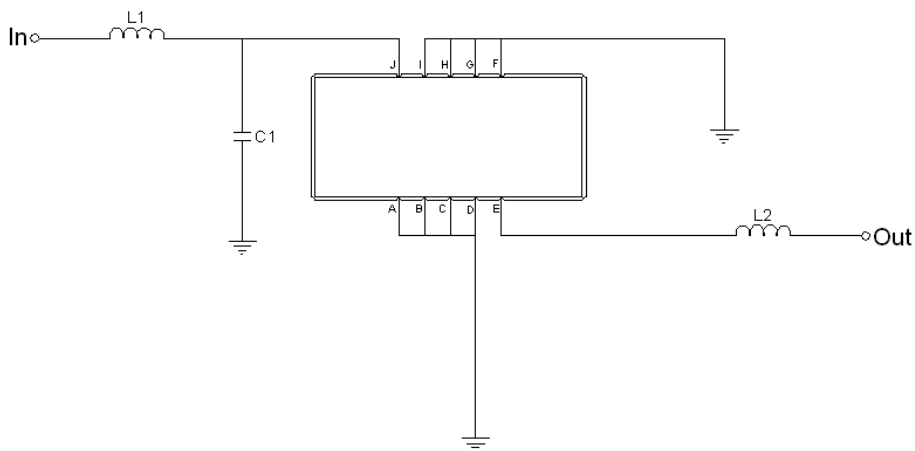
Package Dimensions



- ① SAWNICS: Brand
- ② SA07016C: 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



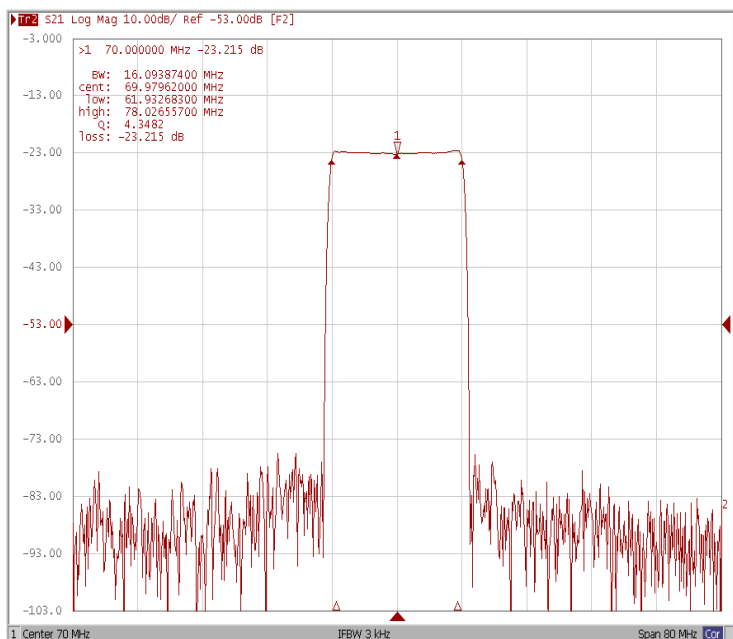
| Test Fixture & Values | |
|-----------------------|--------------------|
| Input | L1 = 82 nH, C1=9pF |
| Output | L2 = 100 nH |
| Source/Load Impedance | 50 Ω |



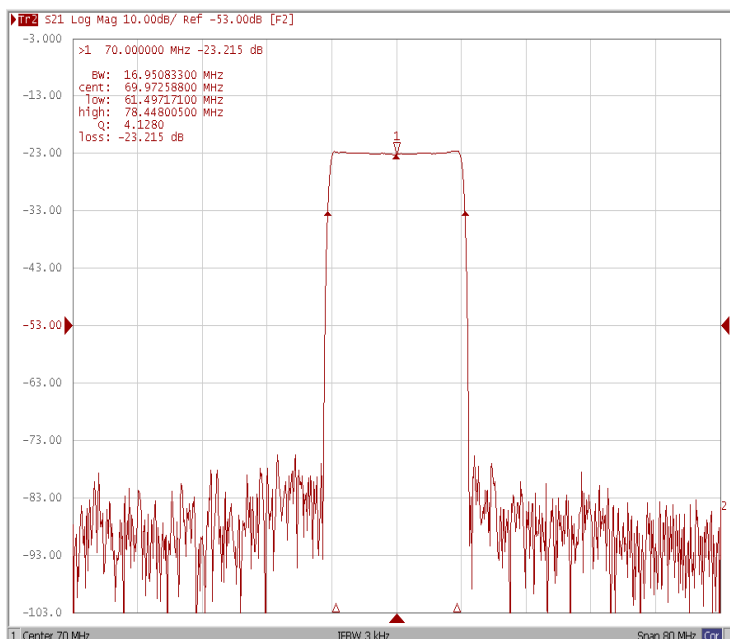
□ Frequency Characteristics

Frequency Response

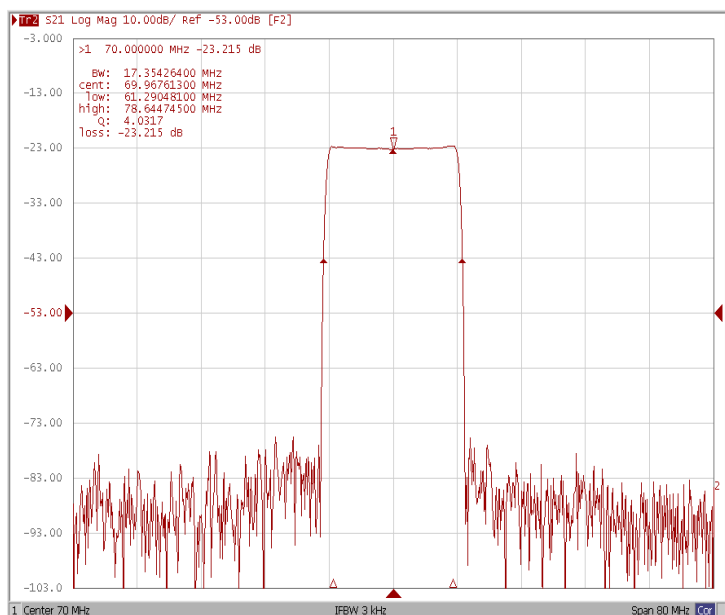
Bandwidth at -1.0 dB



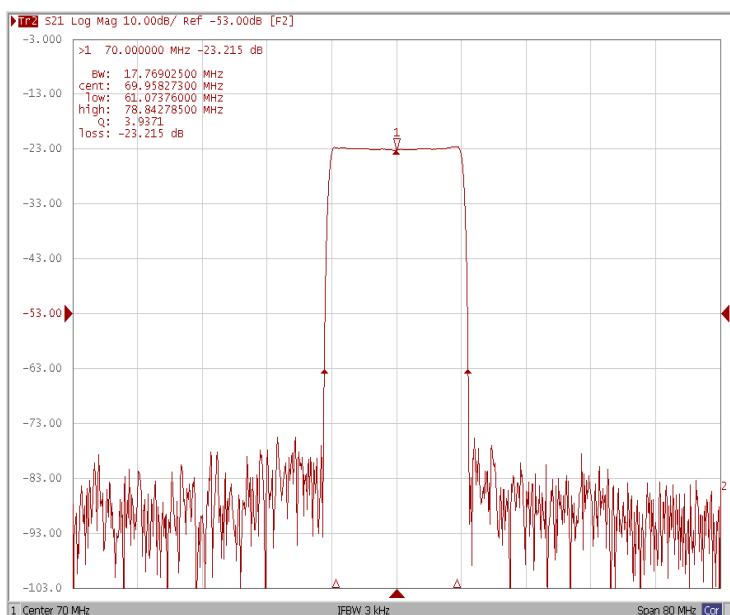
Bandwidth at -10.0 dB



Bandwidth at -20.0 dB



Bandwidth at -40.0 dB

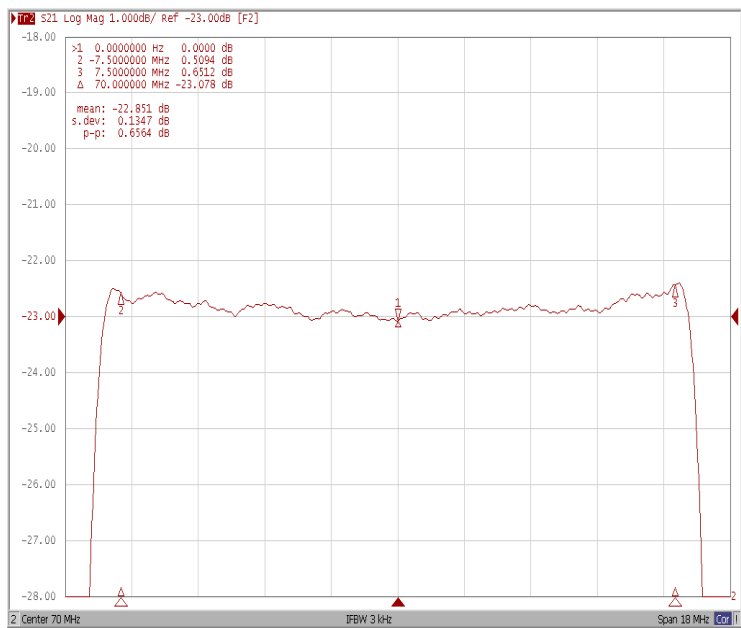




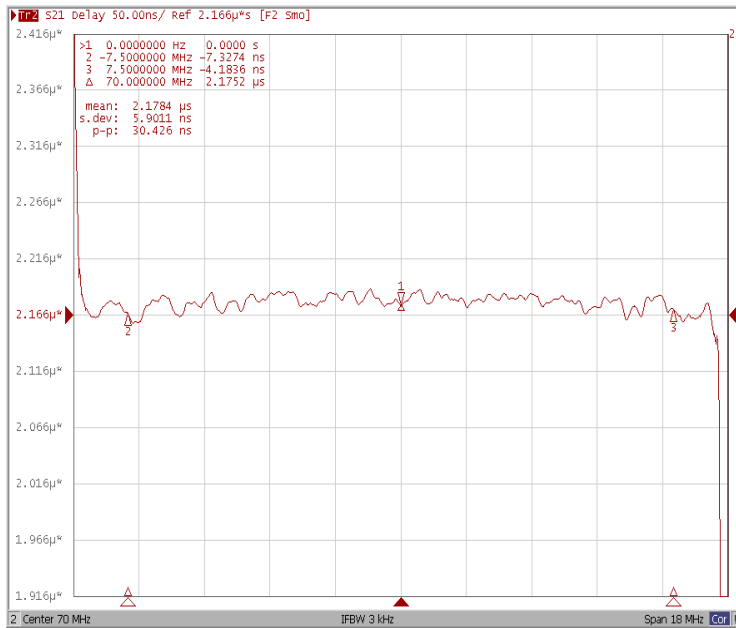
Frequency Characteristics

Frequency Response

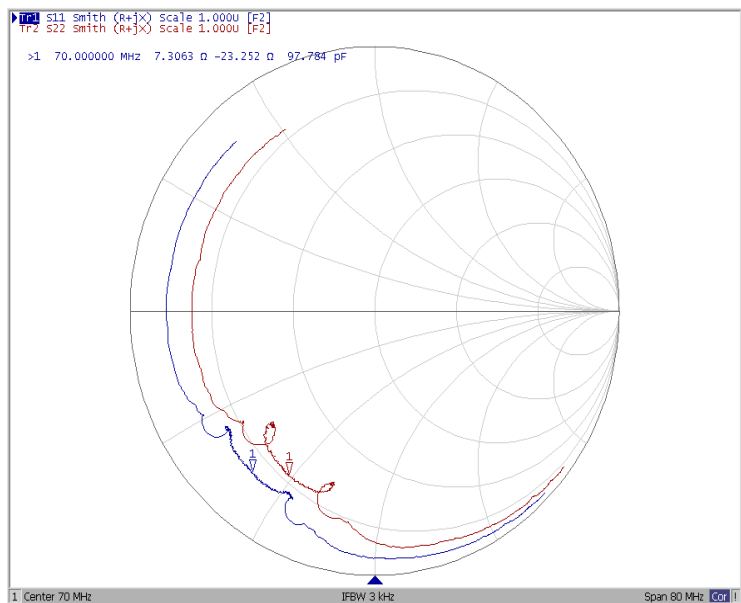
Ripple Variation Fo±7.50MHz



Group Delay Variation Fo±7.50MHz



Smith Chart



VSWR

