



*Total Solution Provider in Saw Device*

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# SL07005AV

70.00 MHz IF SAW Filter  
6.10 MHz Bandwidth  
Revision 0: 15. February. 2012



- 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              | -       | +25        | -       |
| 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    | -       | 70.00   | -       |
| Insertion Loss at Fo                       | dB     | -       | 9.00    | 10.5    |
| Group Delay Variation at Fo ± 2.50 MHz     | nsec   | -       | 81      | 150     |
| Absolute Delay at Fo                       | usec   | -       | 0.90    | -       |
| Passband Ripple Variation at Fo ± 2.50 MHz | dB     | -       | 0.60    | 1.00    |
| Bandwidth at -1dB                          | MHz    | 5.70    | 6.10    | -       |
| Bandwidth at -3dB                          | MHz    | -       | 6.90    | -       |
| Bandwidth at -40dB                         | MHz    | -       | 10.25   | 10.60   |
| Ultimate Rejection                         | dB     | 40      | 45      | -       |
| Relative Attenuation                       |        |         |         |         |
| Fo ±5.40MHz                                | dB     | 40      | 41      | -       |
| 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.

## □ Electrical Characteristics

### Maximum Ratings

| Parameters Description                         | Unit            | Minimum | Typical    | Maximum |
|--|-----------------|---------|------------|---------|
| Operation Temperature Range                    | °C              | -40     | -          | +55     |
| 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     |

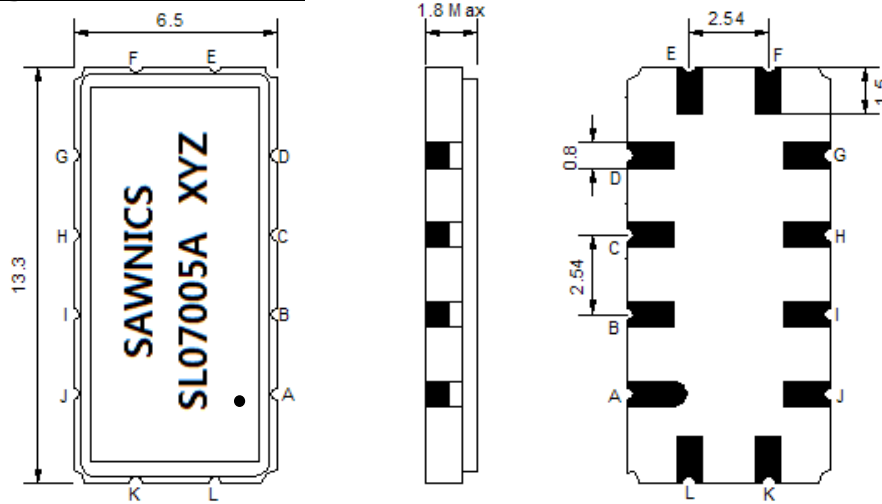
### Electrical Specification

| Parameters Description                     | Unit   | Minimum | Typical | Maximum |
|--|--------|---------|---------|---------|
| Center Frequency (Fo)                      | MHz    | -       | 70.00   | -       |
| Insertion Loss at Fo                       | dB     | -       | 9.70    | 12.00   |
| Group Delay Variation at Fo ± 2.50 MHz     | nsec   | -       | 91      | 150     |
| Absolute Delay at Fo                       | usec   | -       | 0.94    | -       |
| Passband Ripple Variation at Fo ± 2.50 MHz | dB     | -       | 0.85    | -       |
| Bandwidth at -1dB                          | MHz    | 5.70    | 6.10    | -       |
| Bandwidth at -3dB                          | MHz    | -       | 6.90    | -       |
| Bandwidth at -40dB                         | MHz    | -       | 10.25   | 10.60   |
| Ultimate Rejection                         | dB     | 40      | 45      | -       |
| <b>Relative Attenuation</b>                |        |         |         |         |
| Fo ±5.40MHz                                | dB     | -       | 28      | -       |
| 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.

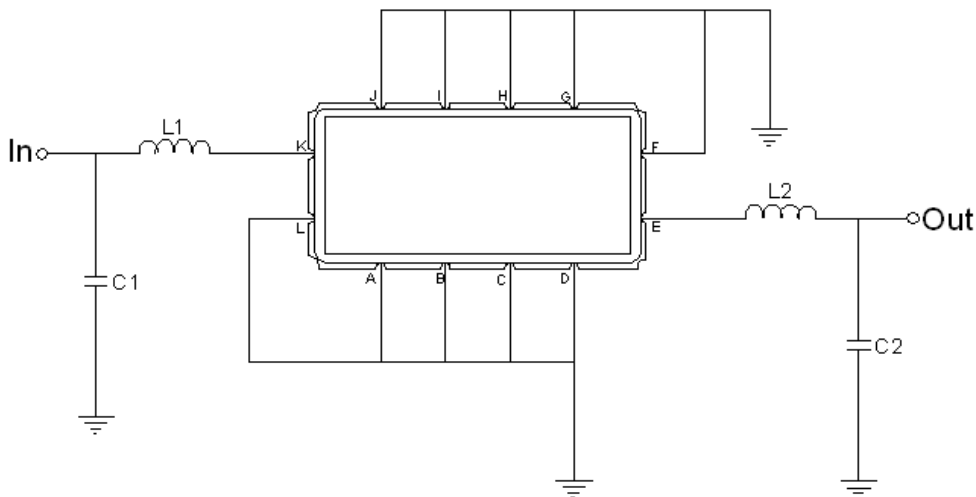
### Package Dimensions



- ① SAWNICS: Brand
- ② SL07005A: 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 = 180nH Q >40, C1=30pF |
| Output                | L2 = 100nH Q >40, C2=27pF |
| Source/Load Impedance | 50 Ω                      |

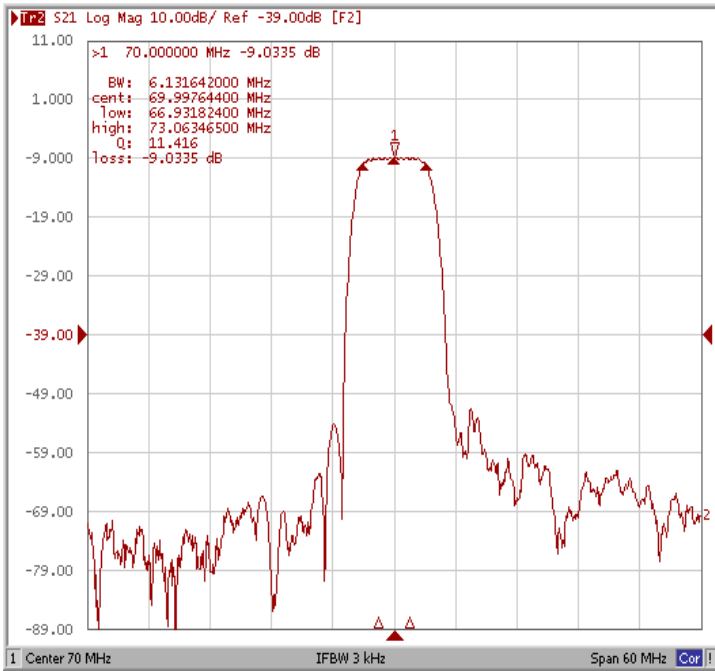


# Frequency Characteristics

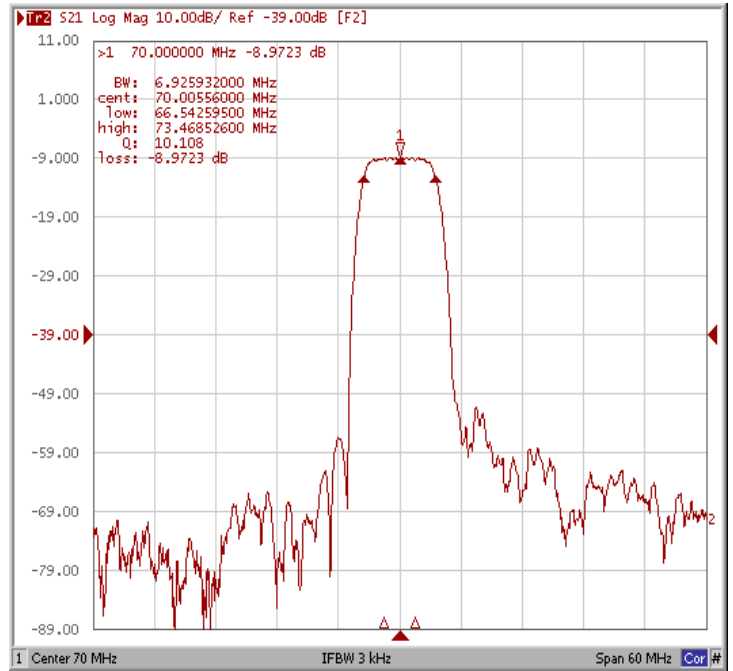
## Frequency Response

Operating Temperature : +25 °C

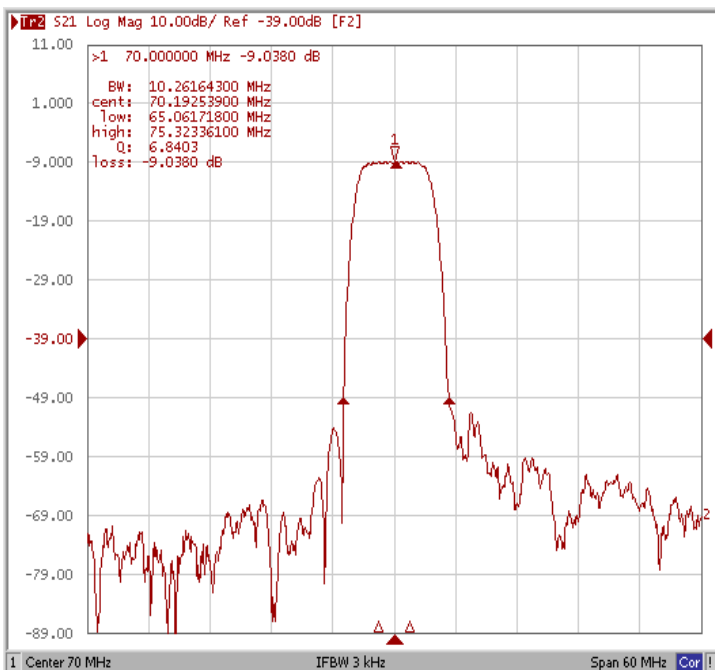
Bandwidth at -1.0 dB



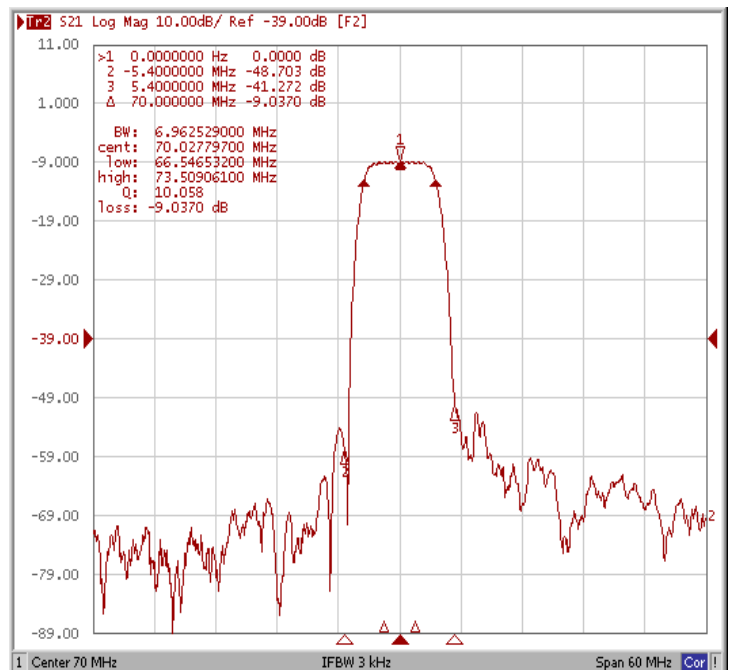
Bandwidth at -3.0 dB



Bandwidth at -40 dB



Relative Attenuation Fo±5.40MHz

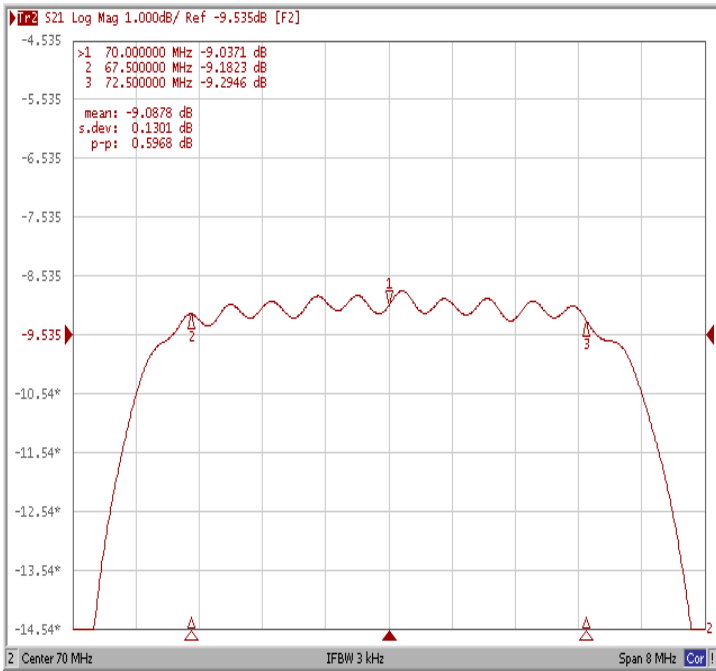




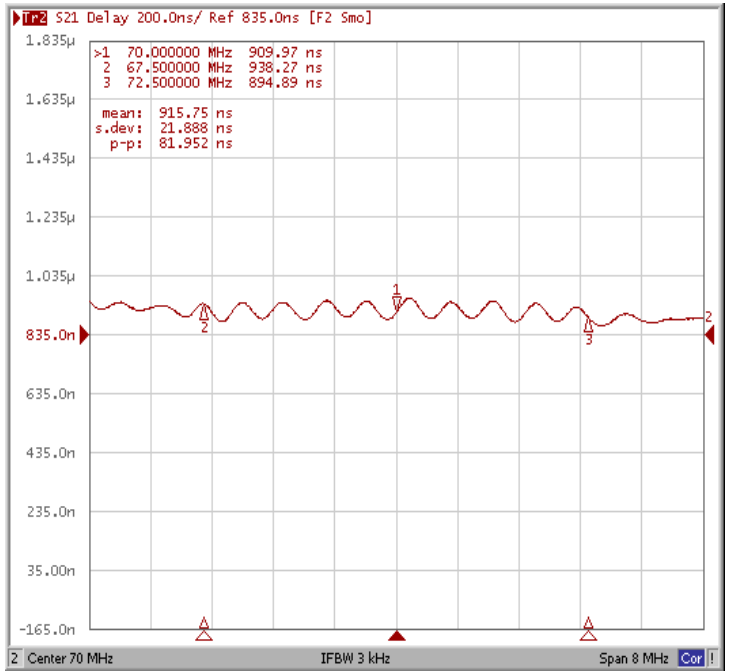
**Frequency Characteristics**

**Frequency Response**

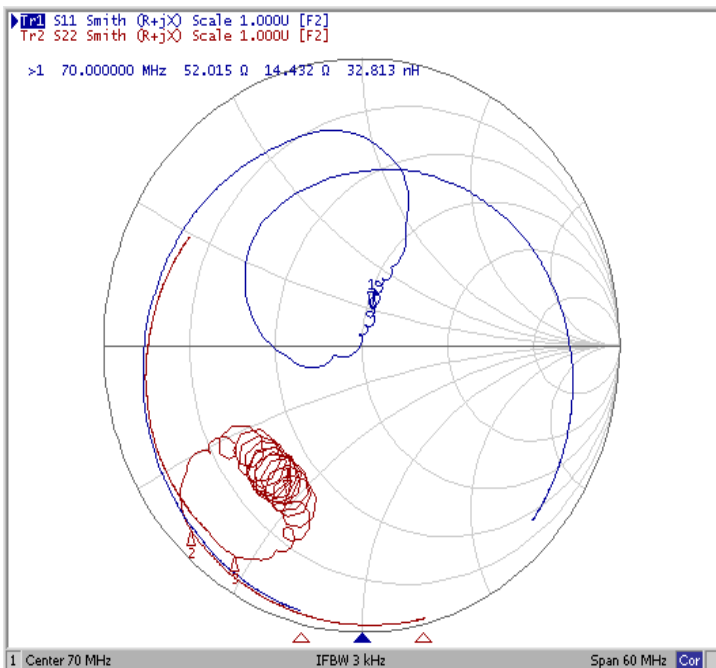
**Ripple Variation Fo±2.50MHz**



**Group Delay Variation Fo±2.50MHz**



**Smith Chart**



**VSWR**

