



Total Solution Provider in Saw Device

SF-013502-SC0

135.10 MHz IF SAW Filter

9.18 MHz Bandwidth

Revision 0: 21. January. 2013



- 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) ⁽¹⁾ | Ω | - | 50 | - |
| Load Impedance (single ended) ⁽¹⁾ | Ω | - | 50 | - |
| Package type & size | SC0 | | | |
| Length x Width | mm ² | - | 20.0 x 9.8 | - |
| Height | mm | - | - | 1.8 |

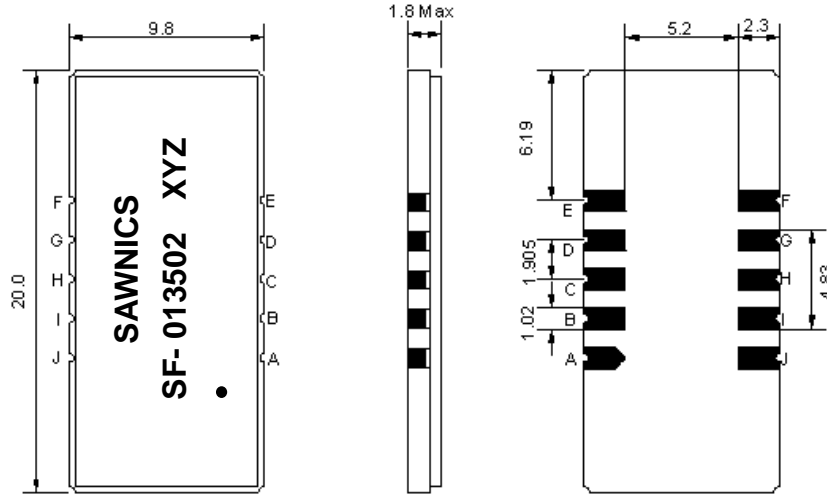
Electrical Specification

| Parameters Description | Unit | Minimum | Typical | Maximum |
|--|--------|---------|---------|---------|
| Center Frequency (Fo) | MHz | - | 135.1 | - |
| Insertion Loss at Fo | dB | - | 22.0 | 24.5 |
| Group Delay Variation at Fo ± 4.42 MHz | nsec | - | 60 | 120 |
| Absolute Delay at Fo | usec | - | 3.09 | - |
| Passband Ripple Variation at Fo ± 4.42 MHz | dB | - | 0.6 | 1.0 |
| Bandwidth at -1dB | MHz | 9.05 | 9.18 | - |
| Bandwidth at -3dB | MHz | - | 9.47 | - |
| Bandwidth at -45dB | MHz | - | 10.75 | 10.90 |
| Ultimate Rejection | dB | 45 | 50 | - |
| 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.

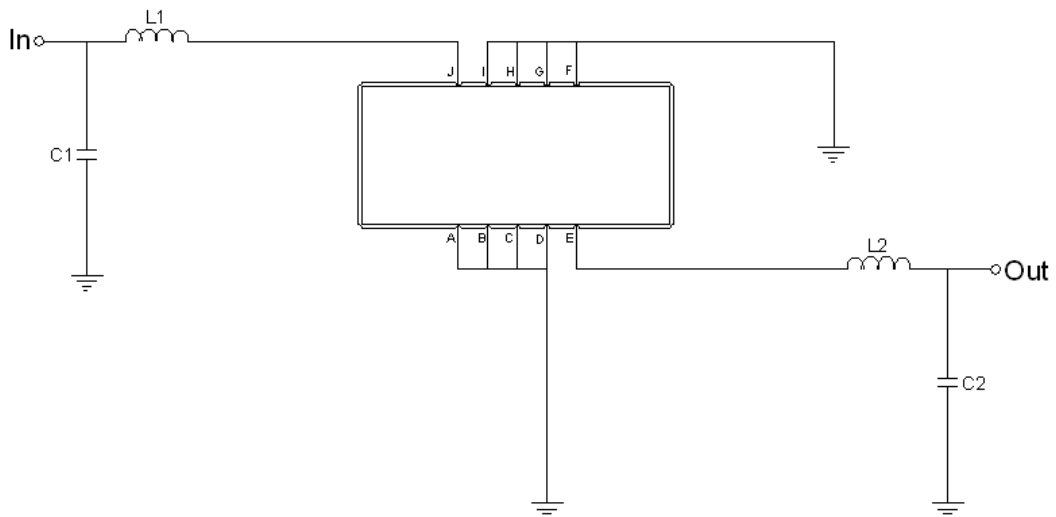
Package Dimensions



- ① SAWNICS: Brand
- ② SF-013502: 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 = 47nH, C1=62pF |
| Output | L2 = 39nH, C2=51pF |
| Source/Load Impedance | 50 Ω |

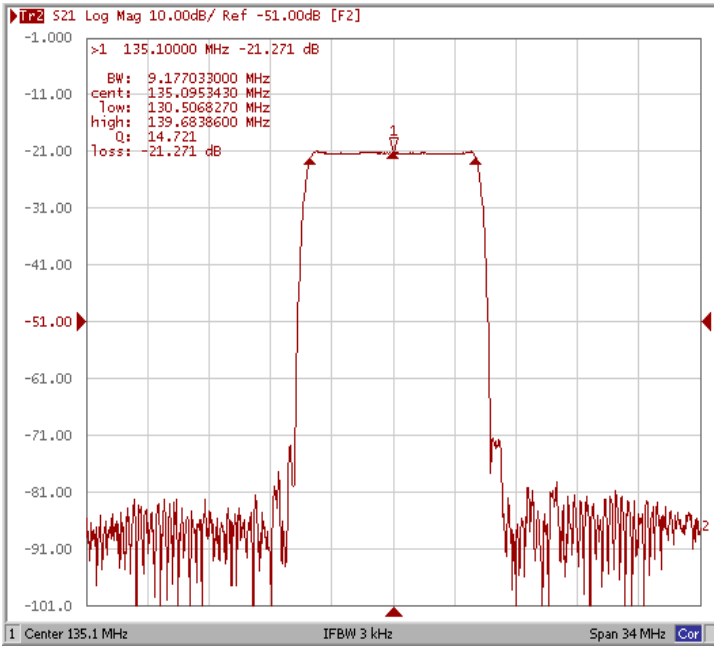


□ Frequency Characteristics

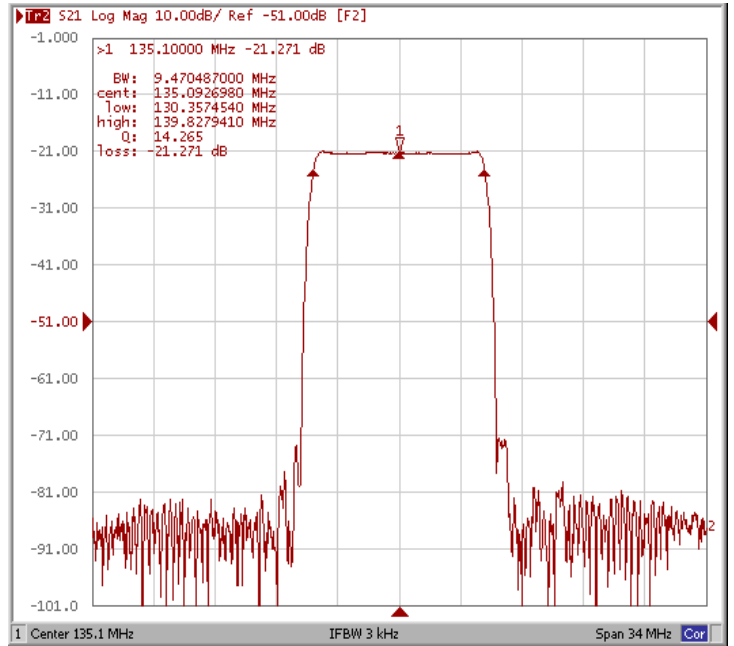
Frequency Response

Operating Temperature : +25 °C

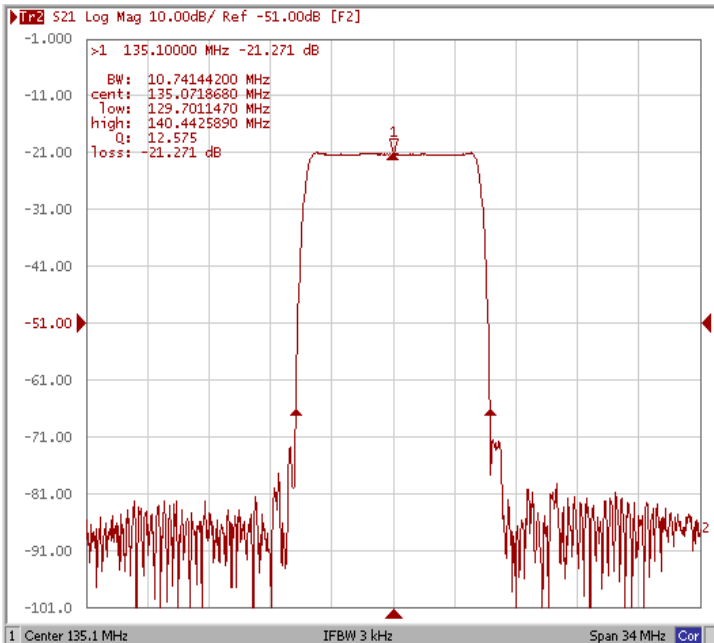
Bandwidth at -1.0 dB



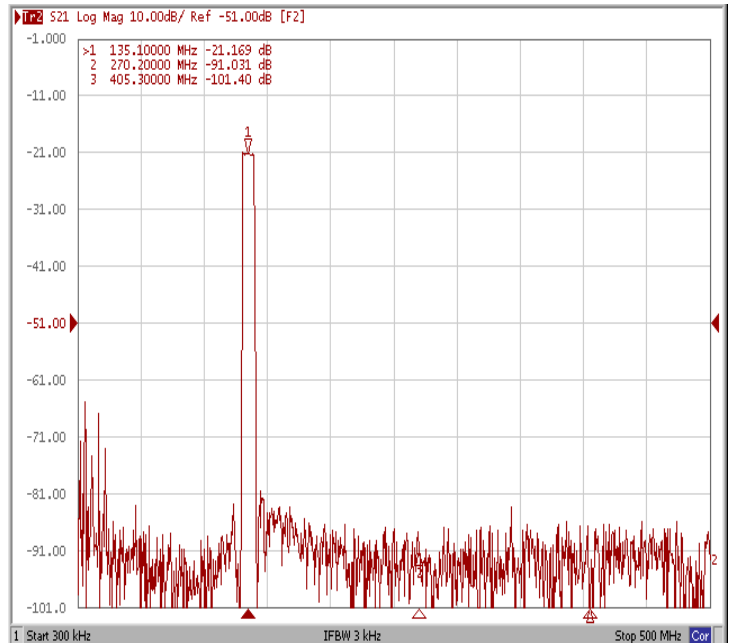
Bandwidth at -3.0 dB



Bandwidth at -45 dB



Wide-Band

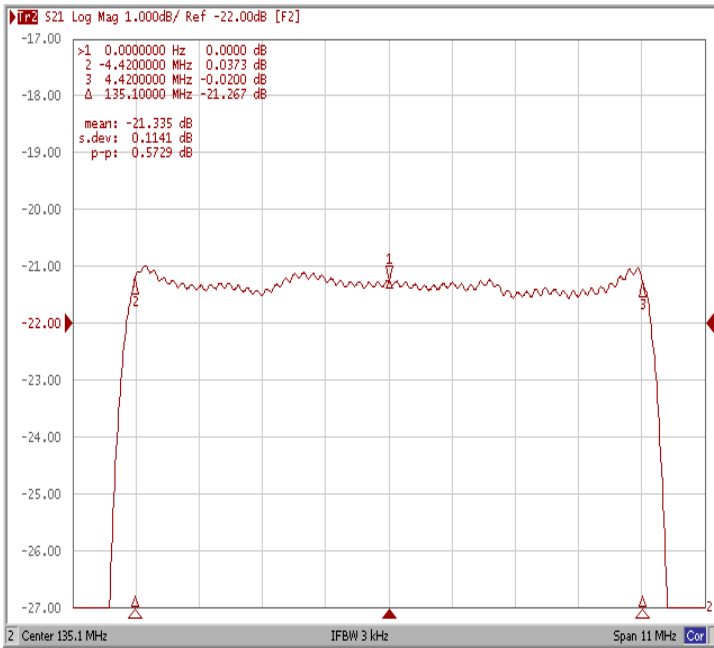




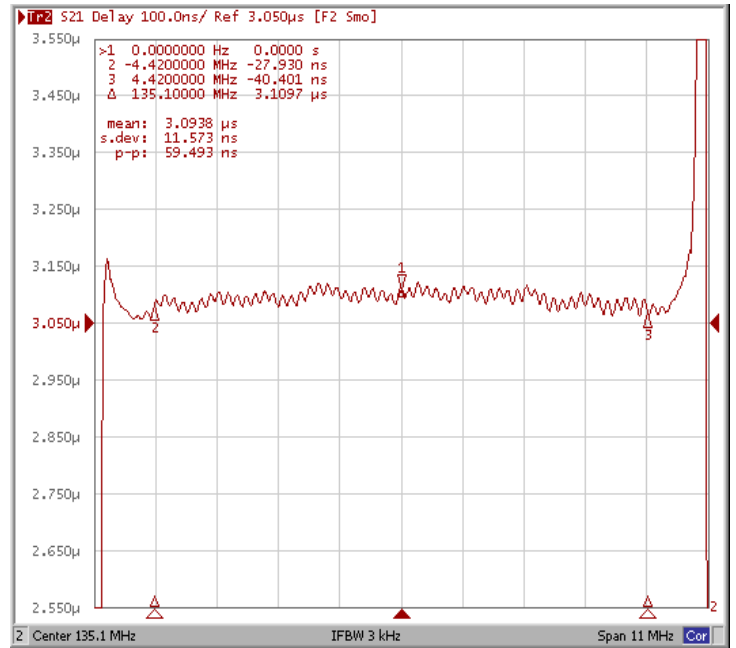
Frequency Characteristics

Frequency Response

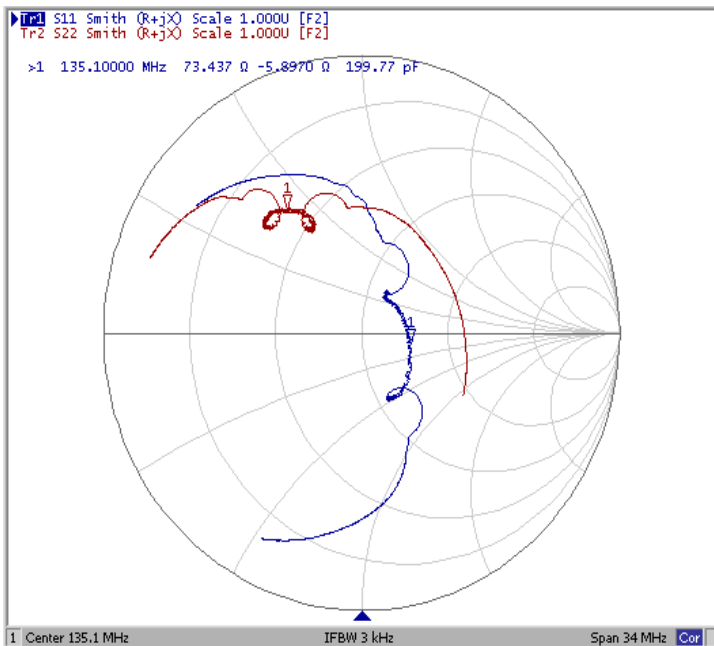
Ripple Variation $F_o \pm 4.42\text{MHz}$



Group Delay Variation $F_o \pm 4.42\text{MHz}$



Smith Chart



VSWR

