



REV A January 2011


Oscilent Controlled Document

| Ordering Code / Part Number | Product Description                      |
|-----------------------------|--|
| 835-IF61.0M-10B             | 61.0MHz IF SAW Filter 10.3 MHz Bandwidth |

### Specification Contents

- o Mechanical Dimensions
- o Test Circuit
- o Maximum Ratings
- o Electrical Specification
- o Frequency Response
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- o Return Loss
- o VSWR

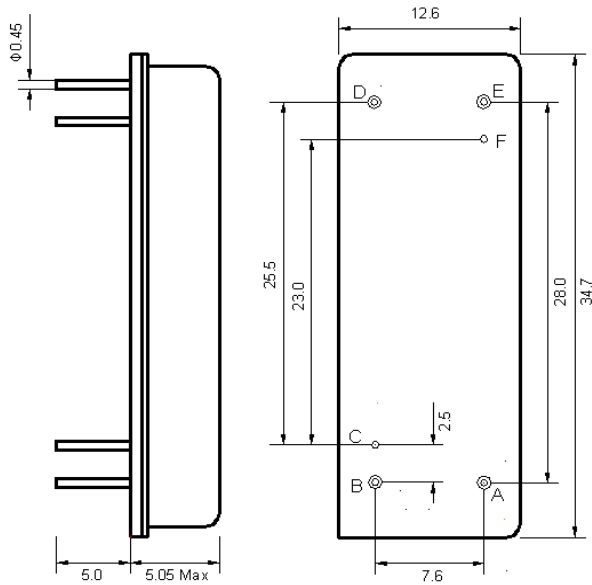
### Notes

- o Electrostatic Sensitive Device (ESD) 
- o Avoid excessive ultrasonic exposure
- o Solderability compatible with JEDEC J-STD-020C Pb-free process, 260°C peak reflow temperature
- o This product complies with EU directive 2002/95/EC (RoHS compliance)



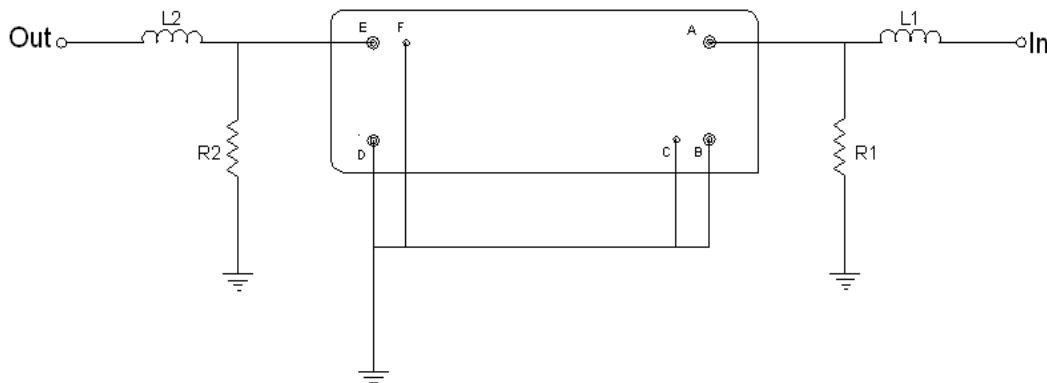


## Mechanical Dimensions (mm)



| Pin Description |        |
|-----------------|--------|
| B, C, D, F      | Ground |
| A               | In     |
| E               | Out    |

## Test Circuit



| Test Fixture & Values |                            |
|-----------------------|----------------------------|
| Input                 | L1= 82 nH, R1=300 $\Omega$ |
| Output                | L2=82 nH, R2=300 $\Omega$  |
| Source/Load Impedance | 50 $\Omega$                |



## Maximum Ratings

| Parameters Description                         | Unit | Minimum | Typical | Maximum |
|--|------|---------|---------|---------|
| Operating Temperature Range                    | °C   | 0       | 45      | 85      |
| Storage Temperature Range                      | °C   | -20     | -       | 70      |
| Maximum DC Voltage                             | V    | -       | -       | 10      |
| Maximum Input Power                            | dBm  | -       | -       | 28      |
| Source Impedance (single ended) <sup>(1)</sup> | Ω    | -       | 50      | -       |
| Load Impedance (single ended) <sup>(1)</sup>   | Ω    | -       | 50      | -       |

Notes: With Matching Network (Ref. Testing Environment Circuit as shown above).

Those impedances could be modified with different impedance values and/or structures, if necessary.

## Electrical Specification

| Parameters Description             | Unit   | Minimum | Typical | Maximum |
|------------------------------------|--------|---------|---------|---------|
| Center Frequency (Fo)              | MHz    | -       | 61.0    | -       |
| Insertion Loss at Fo               | dB     | -       | 23.2    | 26.00   |
| Group Delay Variation (Fo±4.89MHz) | ns     | -       | 53      | 90      |
| Phase Linearity (Fo±4.89MHz)       | deg    |         | 11.5    | 13      |
| Absolute Delay Time at Fo          | us     | -       | 3.7     | 4.0     |
| Temperature Coefficient            | ppm/°C | -       | -72     | -       |
| Amplitude Ripple (Fo±4.89MHz)      | dB     | -       | 0.52    | 1.00    |
| Bandwidth at -1dB                  | MHz    | 10.15   | 10.33   | -       |
| Bandwidth at -45dB                 | MHz    | -       | 11.45   | 11.60   |
| Input & Out put Return Loss        |        | 6.0     | 6.5     | -       |
| Triple transit attenuation         | dBc    | 35      | -       | -       |
| Relative Attenuation               |        |         |         |         |
| 10MHz~50MHz                        | dBc    | 40      | 68      | -       |
| @55.54 MHz                         | dBc    | 10      | 11      | -       |
| @55.64 MHz                         | dBc    | 5       | 6       | -       |
| @66.36MHz                          | dBc    | 5       | 5.5     | -       |
| @66.46 MHz                         | dBc    | 10      | 10.5    | -       |
| 70.0MHz ~180MHz                    | dBc    | 40      | 66      | -       |



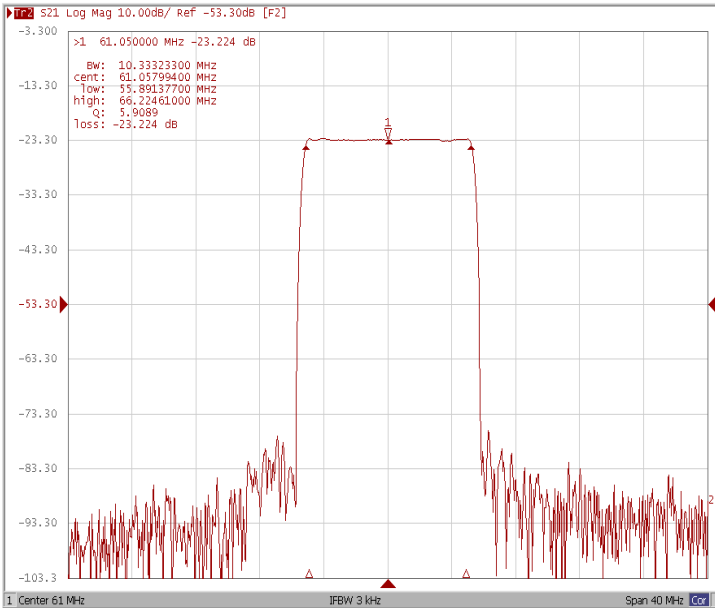
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# Oscilent Part Number 835-IF61.0M-10B

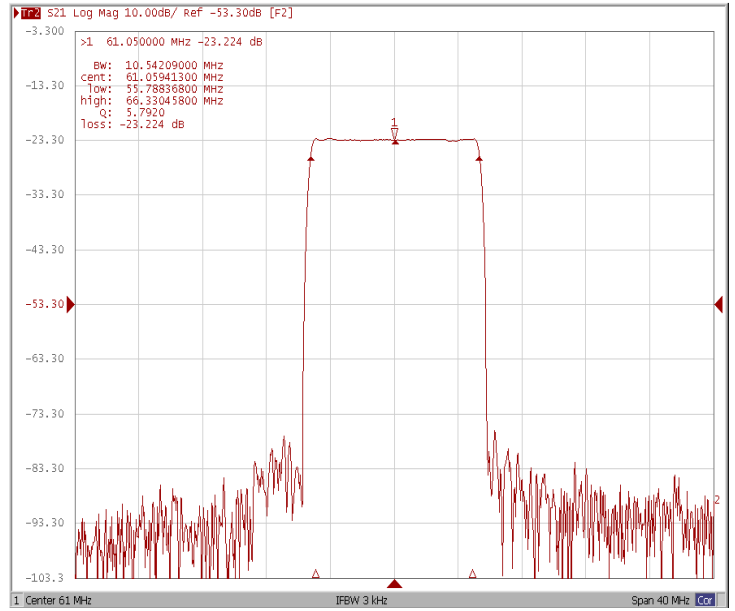
61.0MHz IF SAW Filter 10.3 MHz Bandwidth

## Frequency Response

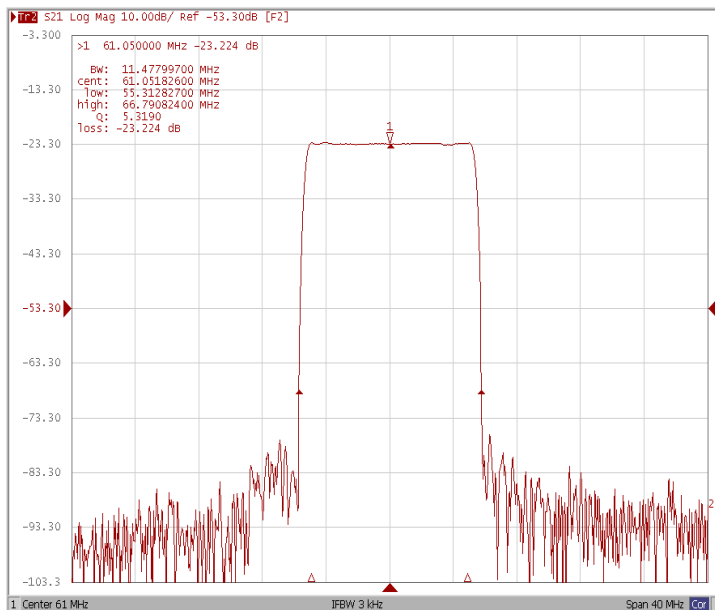
### Bandwidth at -1.0 dB



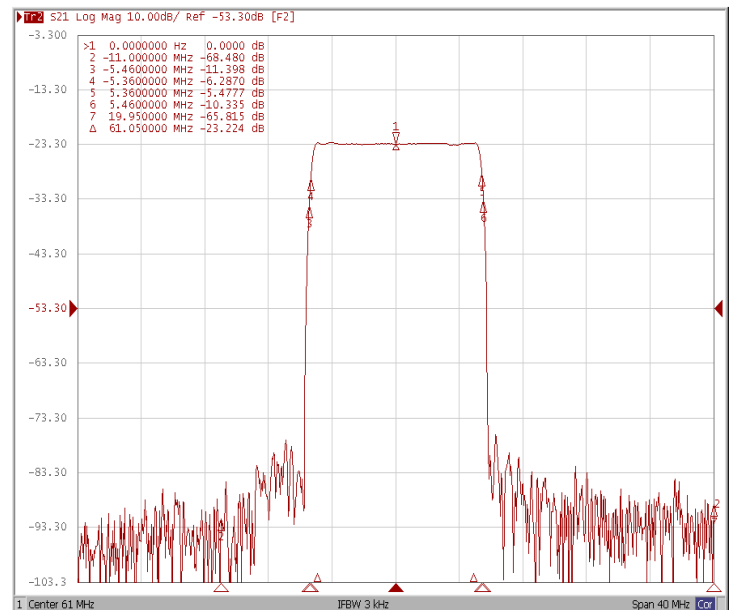
### Bandwidth at -3.0 dB



### Bandwidth at -45.0 dB

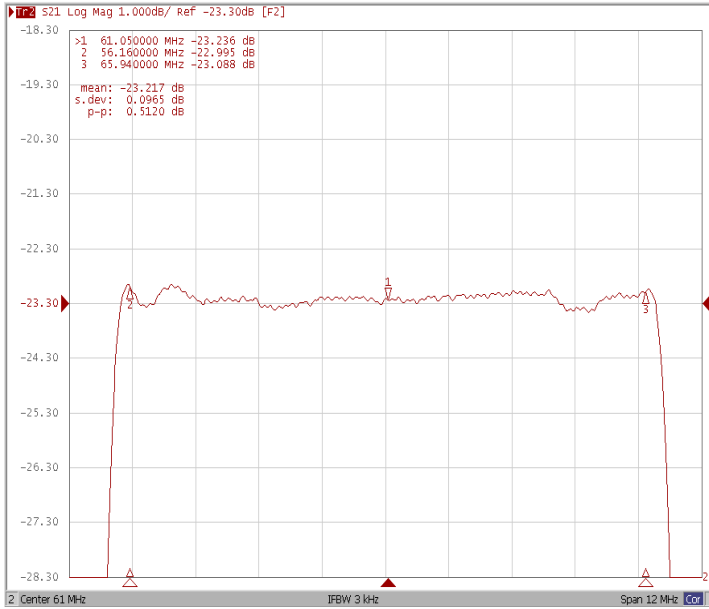


### Relative Attenuation

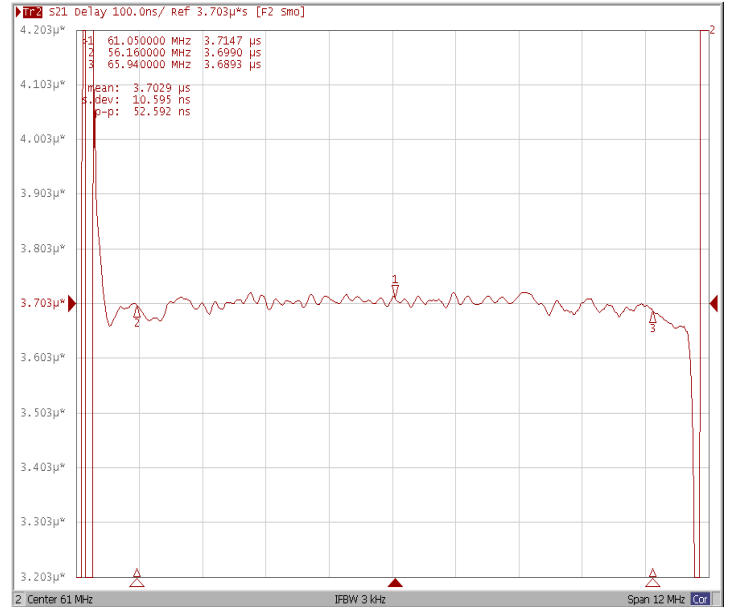




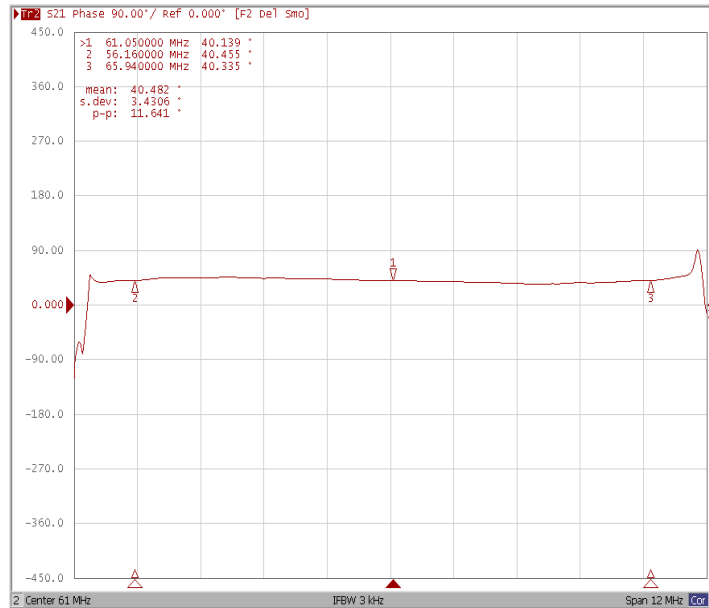
### Ripple Variation Fo±4.89MHz



### Group Delay Variation Fo±4.89MHz

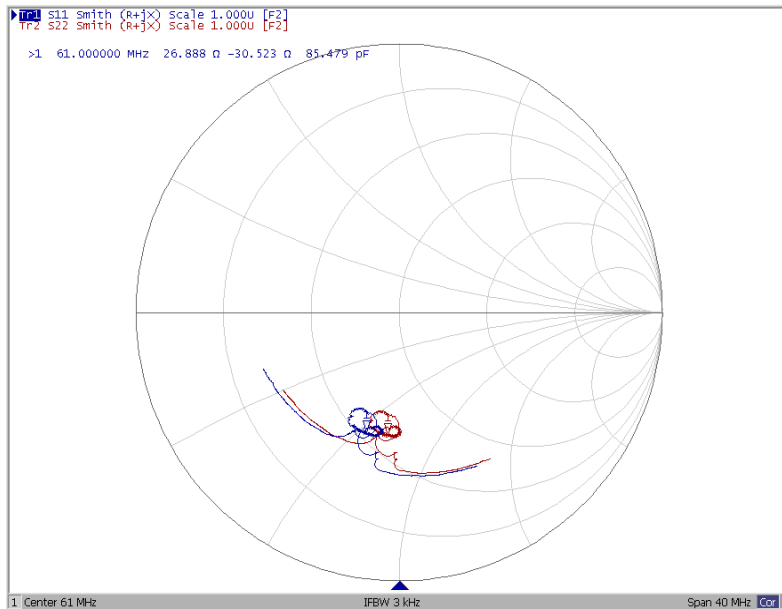


### Phase Linearity Fo±4.89MHz





### Smith Chart

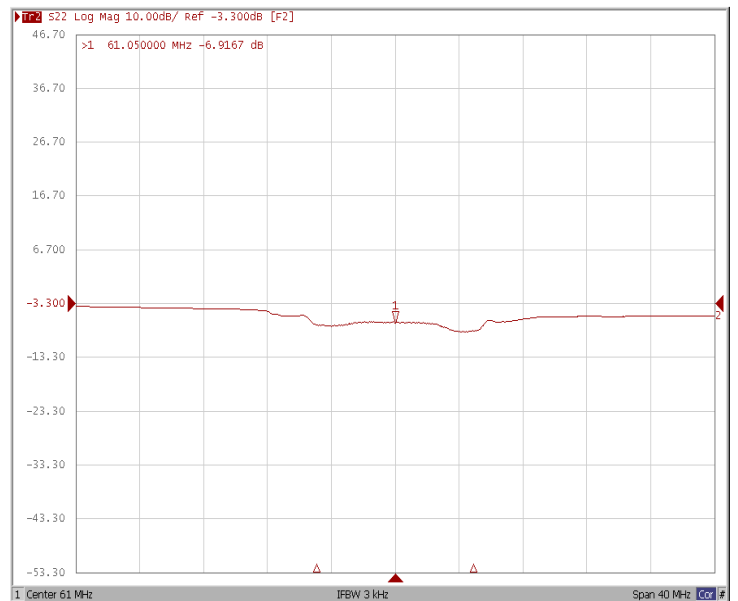


### Return Loss

S11



S22





### VSWR

**S11**



**S22**

