



Oscilent Corporation

# PRODUCT SPECIFICATION

REV A January 2011

Oscilent Controlled Document

| Ordering Code / Part Number | Product Description                        |
|-----------------------------|--|
| 813-IF184.0M-25A            | 84.0 MHz IF SAW Filter 25.90 MHz Bandwidth |

## Specification Contents

- o Mechanical Dimensions
- o Test Circuit
- o Maximum Ratings
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- o Frequency Response
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## 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)



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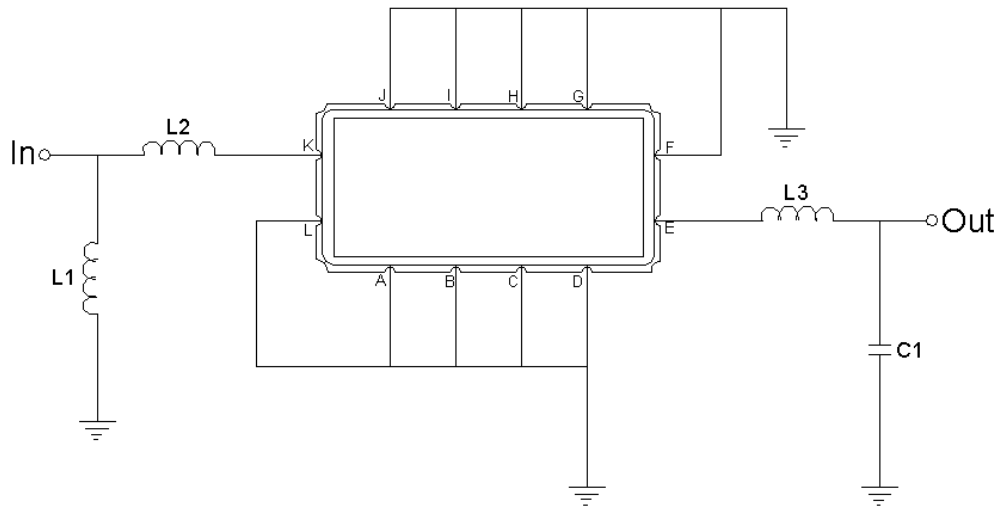


## Mechanical Dimensions (mm)



| Pin Description              |        |
|------------------------------|--------|
| A, B, C, D, F, G, H, I, J, L | Ground |
| K                            | Input  |
| E                            | Output |

## Test Circuit



| Test Fixture & Values |                        |
|-----------------------|------------------------|
| Input                 | L1 = 18 nH, L2 = 12 nH |
| Output                | L3 = 47 nH, C1 = 33 pF |
| Source/Load Impedance | 50 Ω                   |



## Maximum Ratings

| Parameters Description                         | Unit | Minimum | Typical | Maximum |
|--|------|---------|---------|---------|
| Operating Temperature Range                    | °C   | -5      | -       | 60      |
| 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      | -       |

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.

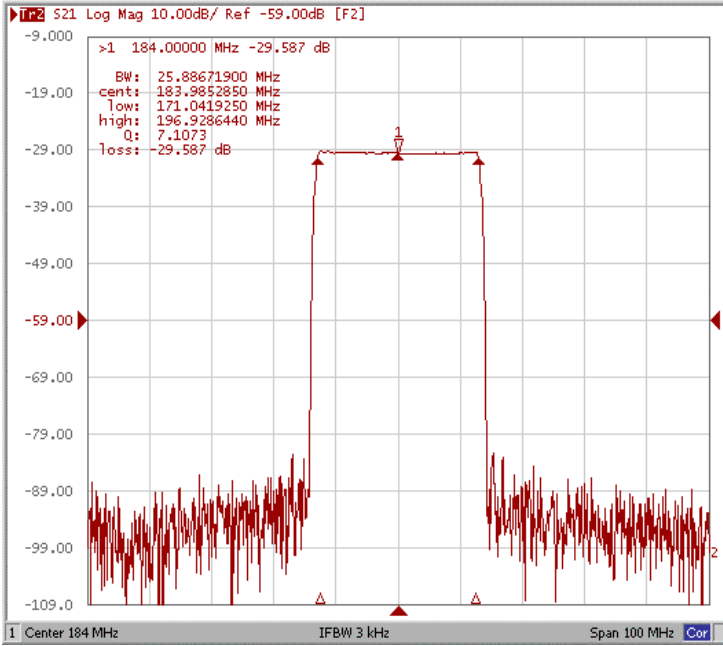
## Electrical Specification

| Parameters Description                      | Unit   | Minimum | Typical | Maximum |
|---|--------|---------|---------|---------|
| Center Frequency (Fo)                       | MHz    | -       | 184.00  | -       |
| Insertion Loss at Fo                        | dB     | -       | 29.50   | 31.50   |
| Group Delay Variation at Fo ± 12.50 MHz     | nsec   | -       | 18      | 50      |
| Absolute Delay at Fo                        | usec   | -       | 2.14    | -       |
| Passband Ripple Variation at Fo ± 12.50 MHz | dB     | -       | 0.60    | 1.00    |
| Bandwidth at -1dB                           | MHz    | 25.60   | 25.90   | -       |
| Bandwidth at -3dB                           | MHz    | -       | 26.33   | -       |
| Bandwidth at -40dB                          | MHz    | -       | 28.25   | 28.50   |
| Ultimate Rejection                          | dB     | 48      | 53      | -       |
| Temperature Coefficient                     | ppm/°C | -       | -20     | -       |

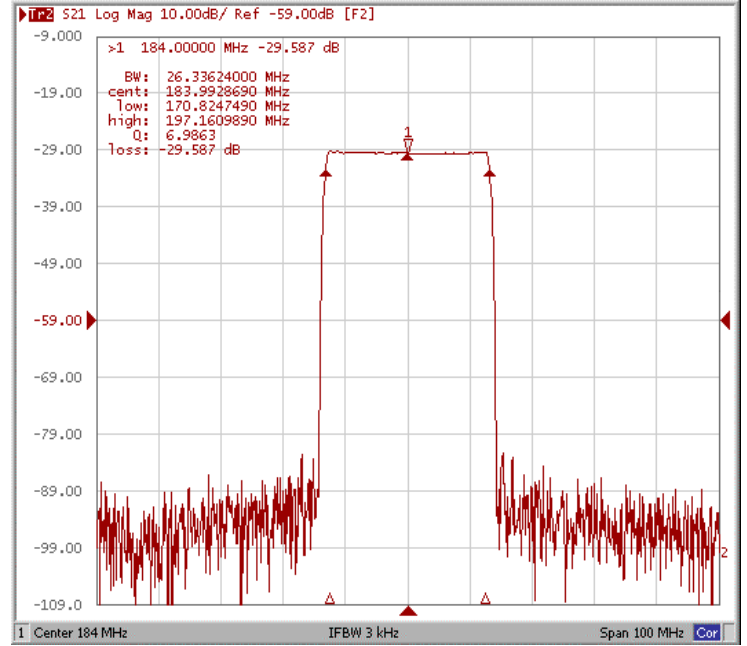


### Frequency Response (Room temperature 25°C)

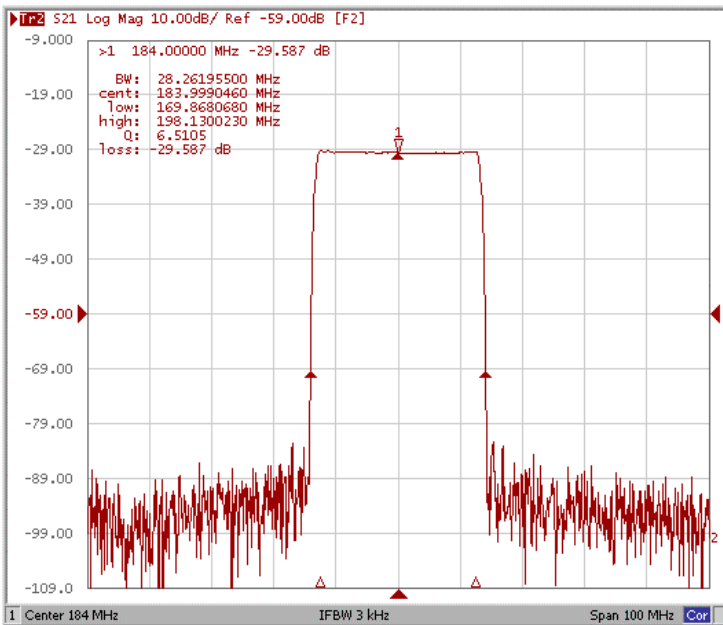
#### Bandwidth at -1.0 dB



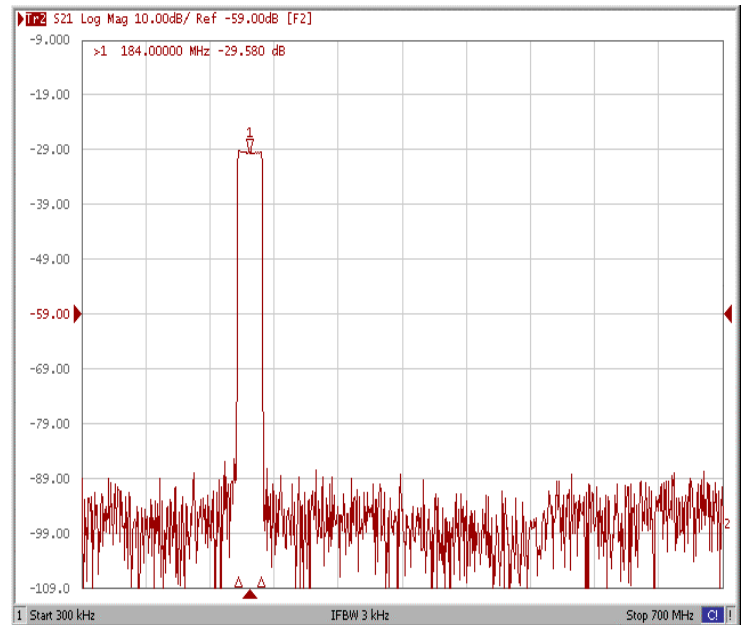
#### Bandwidth at -3.0 dB



#### Bandwidth at -40 dB

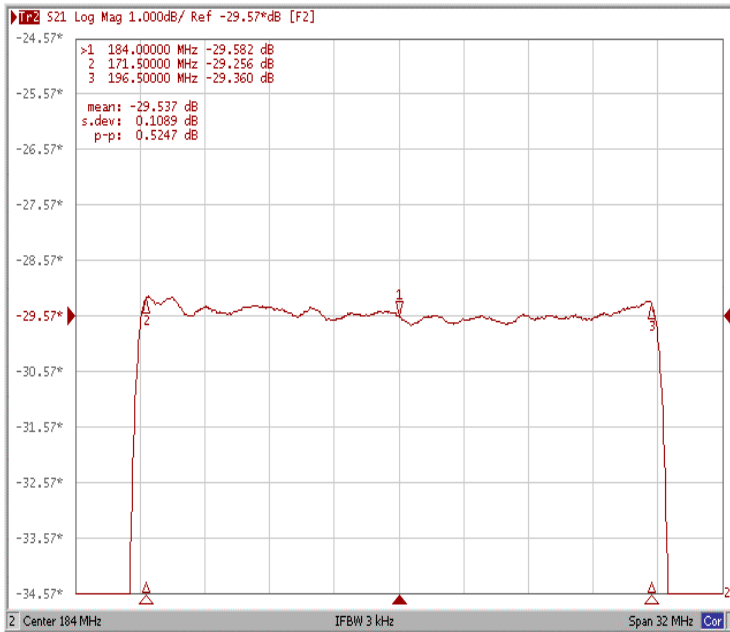


#### Wide-Band

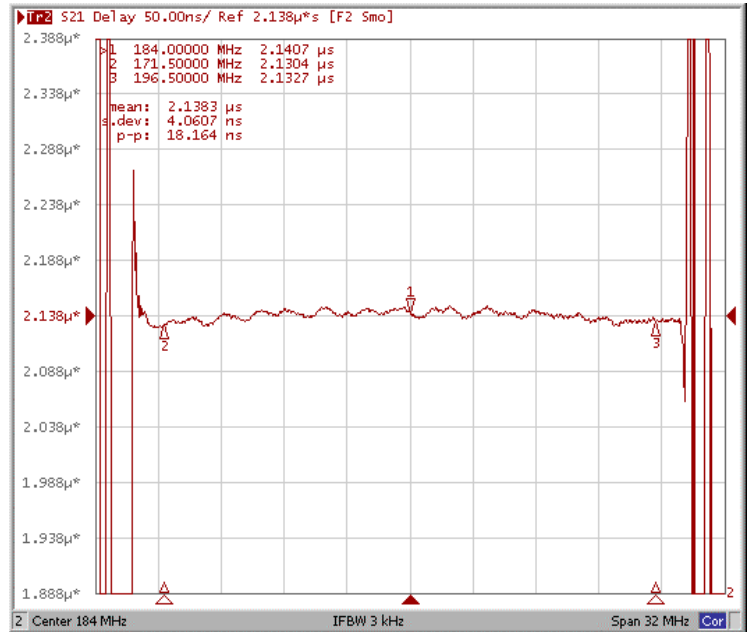




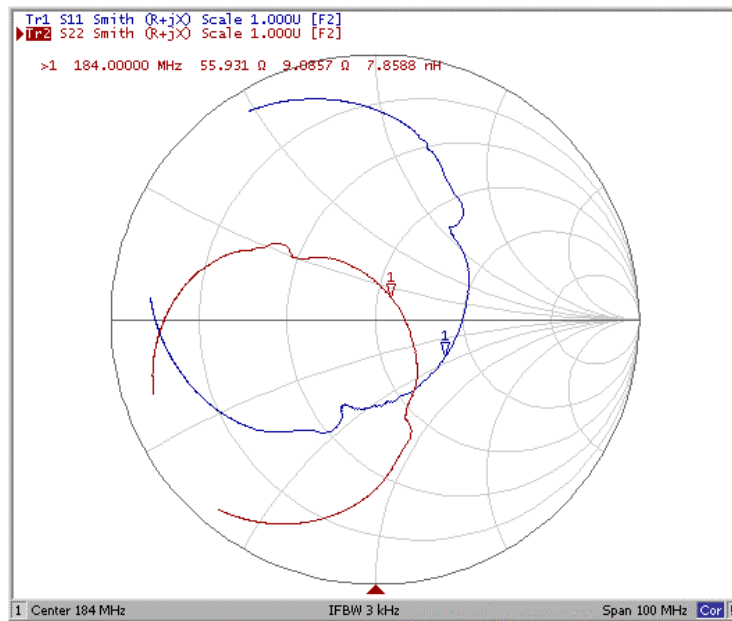
### Ripple Variation Fo±12.50 MHz



### Group Delay Variation Fo±12.50 MHz



### Smith Chart





### VSWR

