



# PRODUCT SPECIFICATION

REV A January 2011


Oscilent Controlled Document

| Ordering Code / Part Number | Product Description                       |
|-----------------------------|---|
| 813-SL87.5M-02A             | 87.50 MHz IF SAW Filter 2.4 MHz Bandwidth |

## Specification Contents

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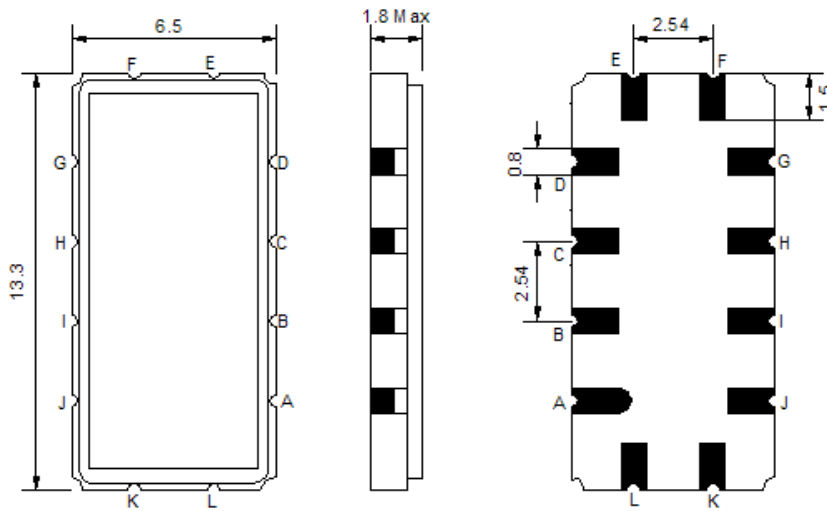
## Notes

- 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)



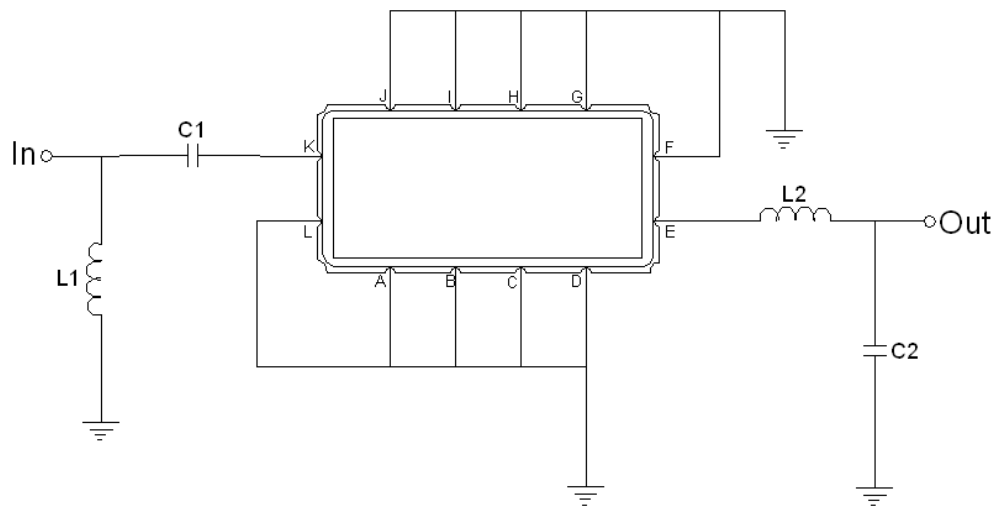


## Mechanical Dimensions (mm)



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

## Test Circuit



| Test Fixture & Values |                         |
|-----------------------|-------------------------|
| Input                 | L1 = 56 nH, C1 = 160 pF |
| Output                | L2 = 47 nH, C2 = 100 pF |
| Source/Load Impedance | 50 Ω                    |



## Maximum Ratings

| Parameters Description                         | Unit | Minimum | Typical | Maximum |
|--|------|---------|---------|---------|
| Operating 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) <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.

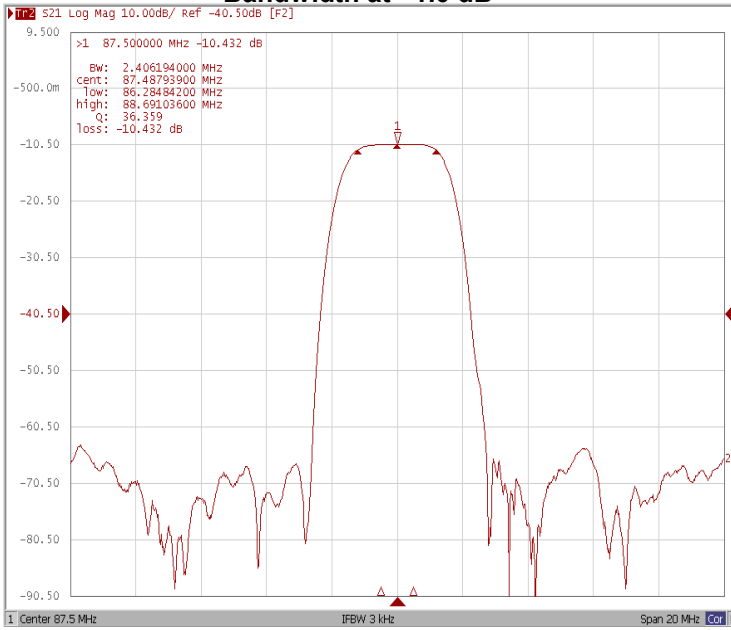
## Electrical Specification

| Parameters Description                | Unit               | Minimum | Typical | Maximum |
|---------------------------------------|--------------------|---------|---------|---------|
| Center Frequency (Fo)                 | MHz                | 87.38   | 87.50   | 87.62   |
| Insertion Loss at Fo                  | dB                 | -       | 10.5    | 13.0    |
| Group Delay Variation (Fo±500KHz)     | nsec               | -       | 15      | 50      |
| Absolute Delay at Fo                  | usec               | -       | 1.32    | -       |
| Passband Ripple Variation (Fo±500KHz) | dB                 | -       | 0.1     | 0.6     |
| Bandwidth at -1dB                     | MHz                | 2.0     | 2.4     | -       |
| Bandwidth at -3dB                     | MHz                | -       | 2.9     | -       |
| Bandwidth at -40dB                    | MHz                | -       | 4.9     | 5.5     |
| Ultimate Rejection                    | dB                 | 40      | 48      | -       |
| Phase Linearity (Fo±500KHz)           | deg <sub>p-p</sub> | -       | 1.0     | 5.0     |
| Temperature Coefficient               | ppm/°C             | -       | -18     | -       |

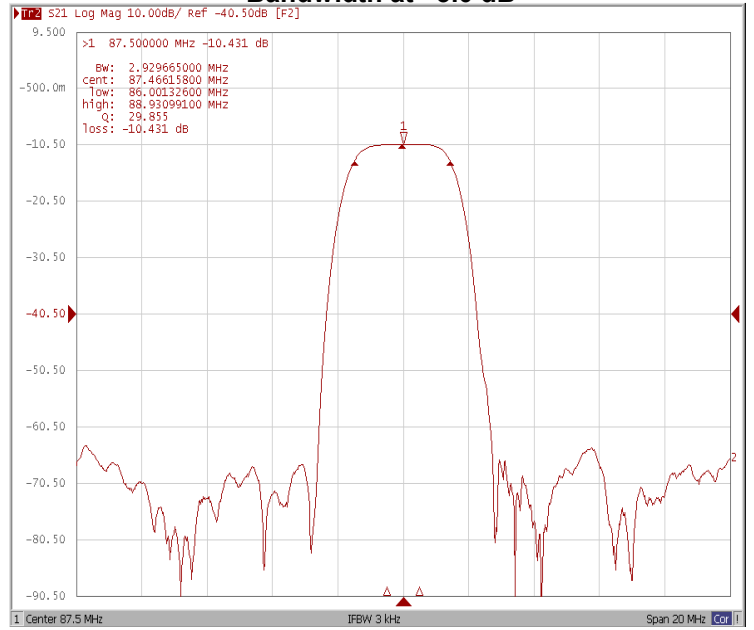


### Frequency Response

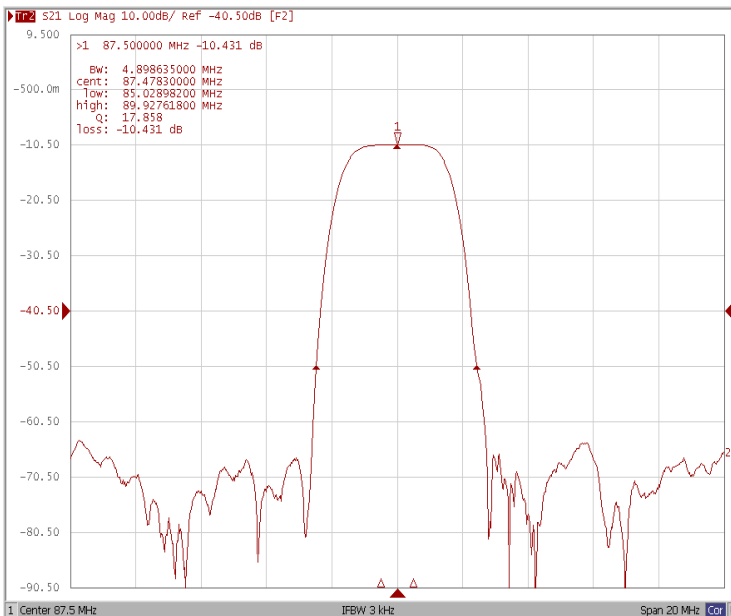
#### Bandwidth at -1.0 dB



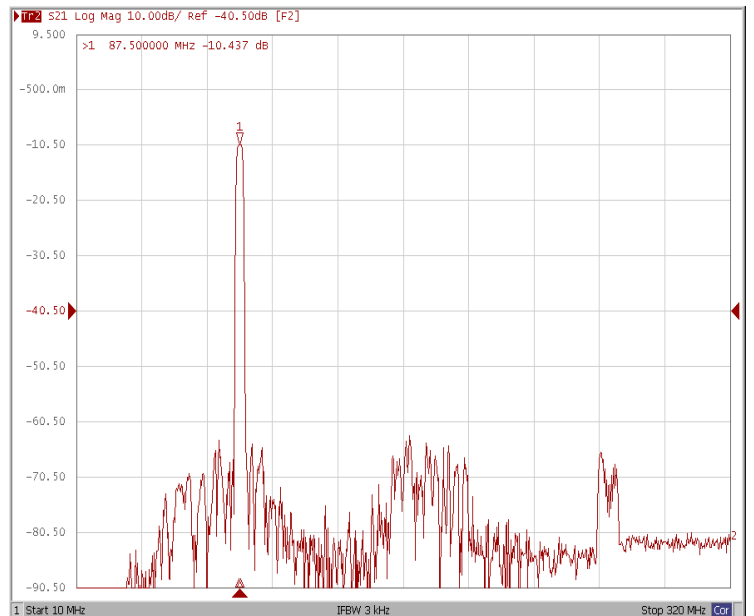
#### Bandwidth at -3.0 dB



#### Bandwidth at -40 dB

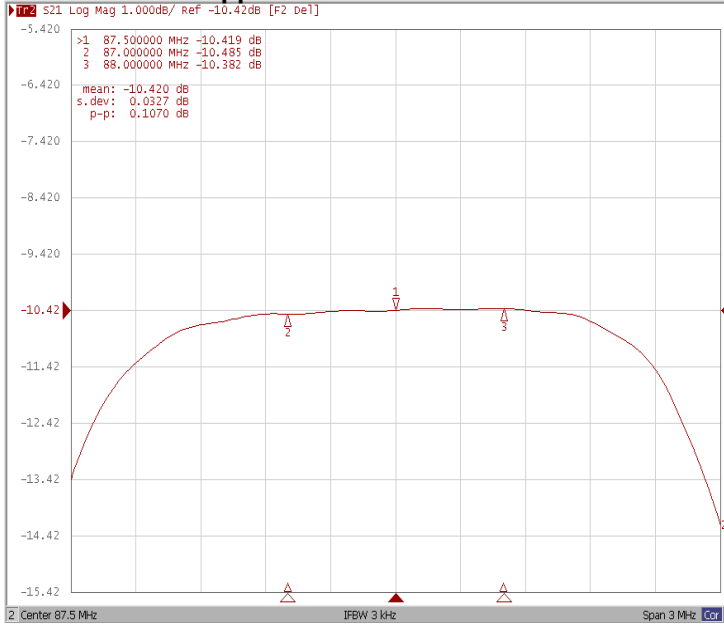


#### Wide Band

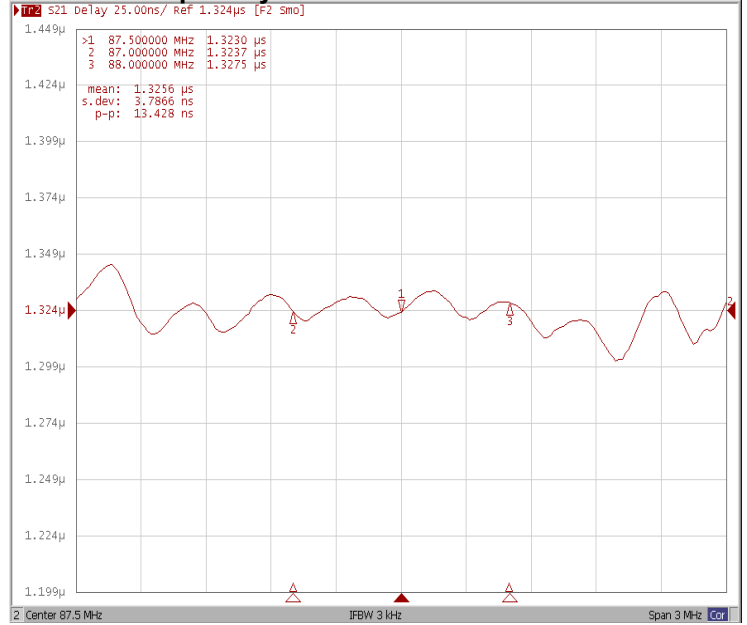




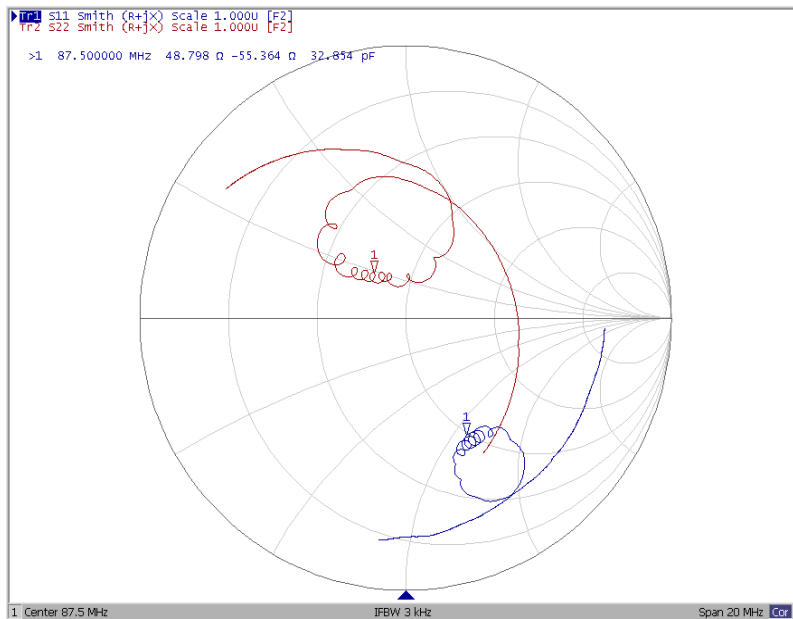
### Ripple Variation Fo±500kHz



### Group Delay Variation Fo±500kHz MHz



### Smith Chart





### VSWR

