



# PRODUCT SPECIFICATION

REV A January 2011

Oscilent Controlled Document

| Ordering Code / Part Number | Product Description                     |
|-----------------------------|---|
| 813-IF145.0M-16B            | 145MHz IF SAW Filter 15.88MHz Bandwidth |

## Specification Contents

- o Mechanical Dimensions
- o Test Circuit
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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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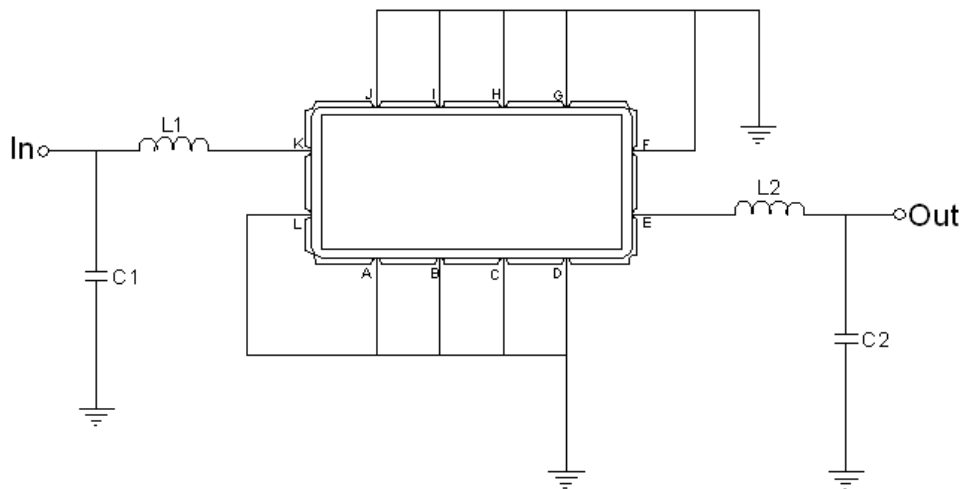


## Mechanical Dimensions (mm)



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

## Test Circuit



| Test Fixture & Values |                       |
|-----------------------|-----------------------|
| Input                 | L1 = 33 nH, C1 = 8 pF |
| Output                | L2 = 33 nH, C2 = 8 pF |
| Source/Load Impedance | 50 $\Omega$           |



## Maximum Ratings

| Parameters Description                         | Unit | Minimum | Typical | Maximum |
|--|------|---------|---------|---------|
| Operating Temperature Range                    | °C   | -10     | -       | 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.

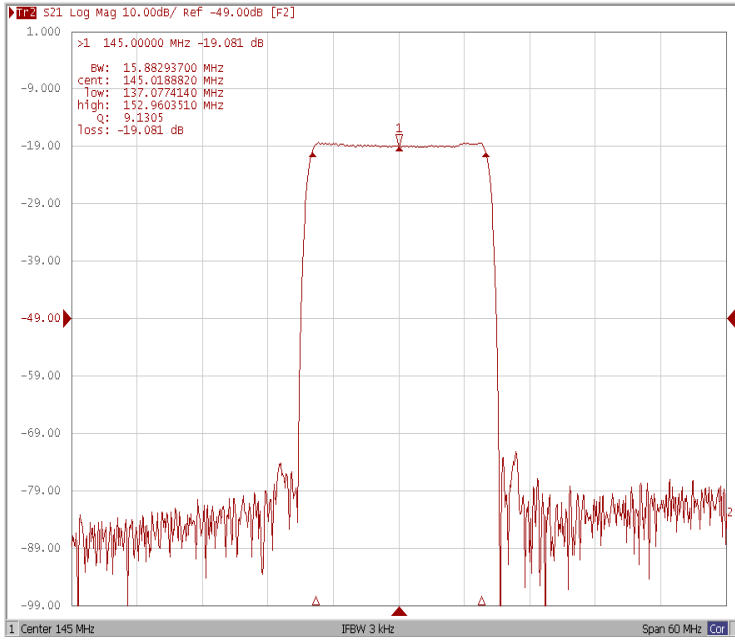
## Electrical Specification

| Parameters Description             | Unit   | Minimum | Typical | Maximum |
|------------------------------------|--------|---------|---------|---------|
| Center Frequency (Fo)              | MHz    | -       | 145.0   | -       |
| Insertion Loss at Fo               | dB     | -       | 19.0    | 20.5    |
| Group Delay Variation (Fo±7.56MHz) | ns     | -       | 52      | 80      |
| Absolute Delay Time at Fo          | us     | -       | 1.53    | -       |
| Temperature Coefficient            | ppm/°C | -       | -72     | -       |
| Amplitude Ripple (Fo±7.56MHz)      | dB     | -       | 0.89    | 1.00    |
| Bandwidth at -1dB                  | MHz    | 15.70   | 15.88   | -       |
| Bandwidth at -3dB                  | MHz    | -       | 16.30   | -       |
| Bandwidth at -40dB                 | MHz    | -       | 18.21   | 18.35   |
| Bandwidth at -50dB                 | MHz    | -       | 18.37   | -       |
| Ultimate Rejection                 | dB     | 50      | 53      | -       |

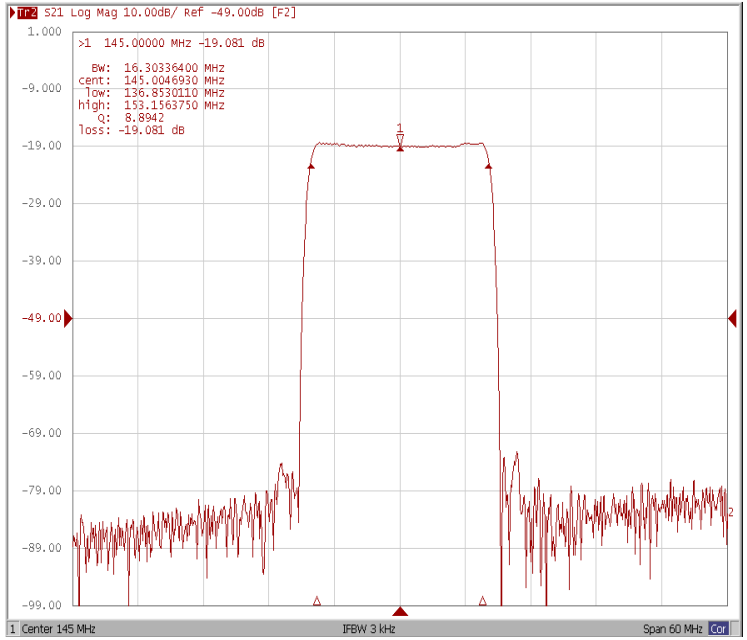


## Frequency Response

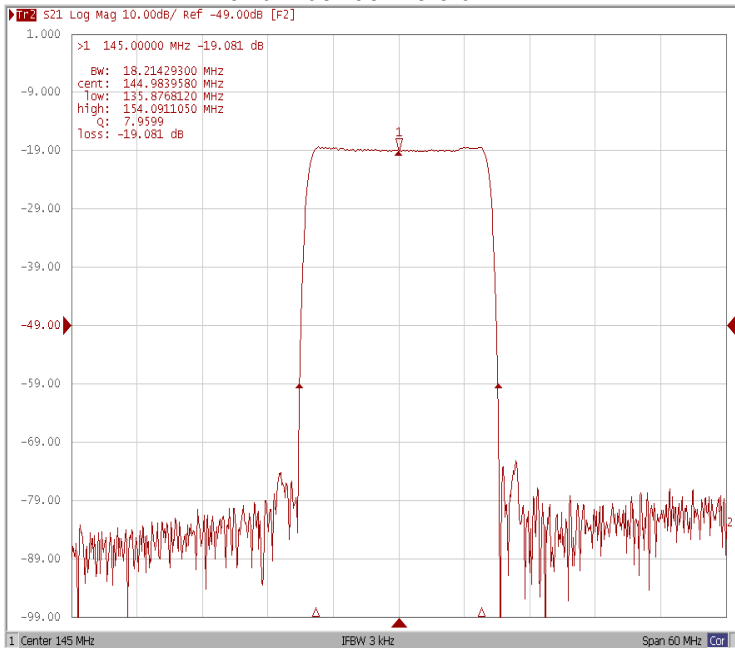
### Bandwidth at -1.0 dB



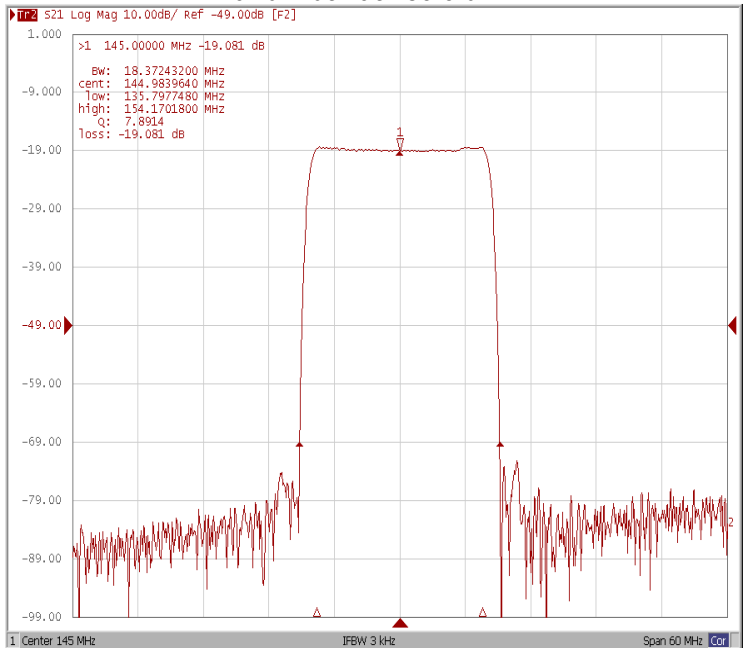
### Bandwidth at -3.0 dB



### Bandwidth at -40.0 dB

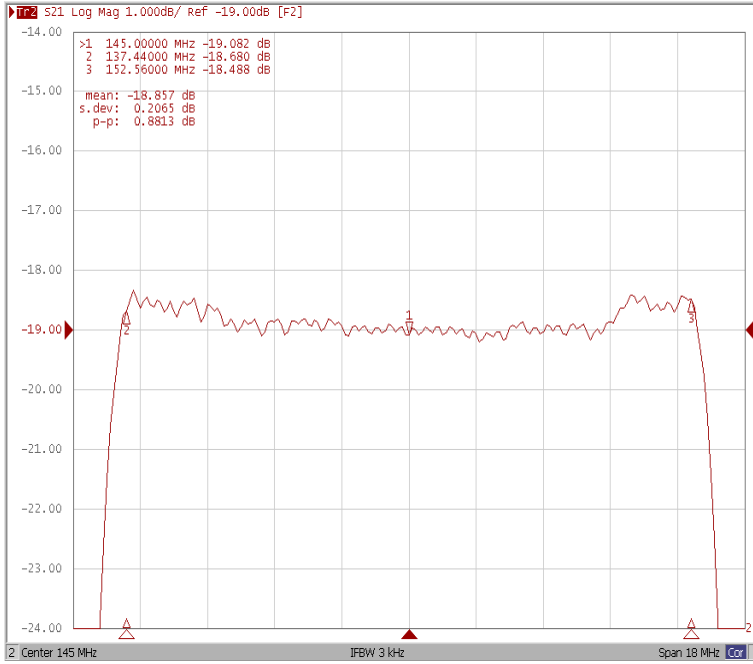


### Bandwidth at -50.0 dB

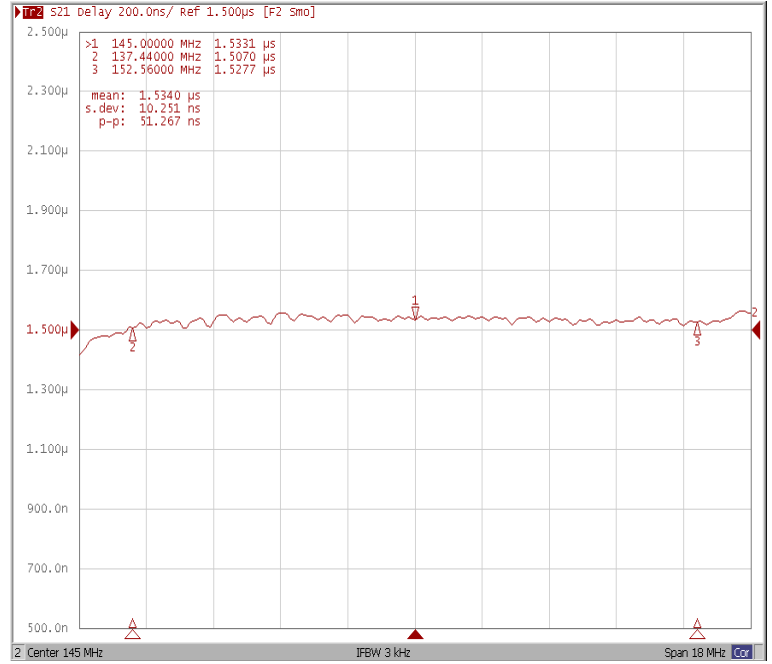




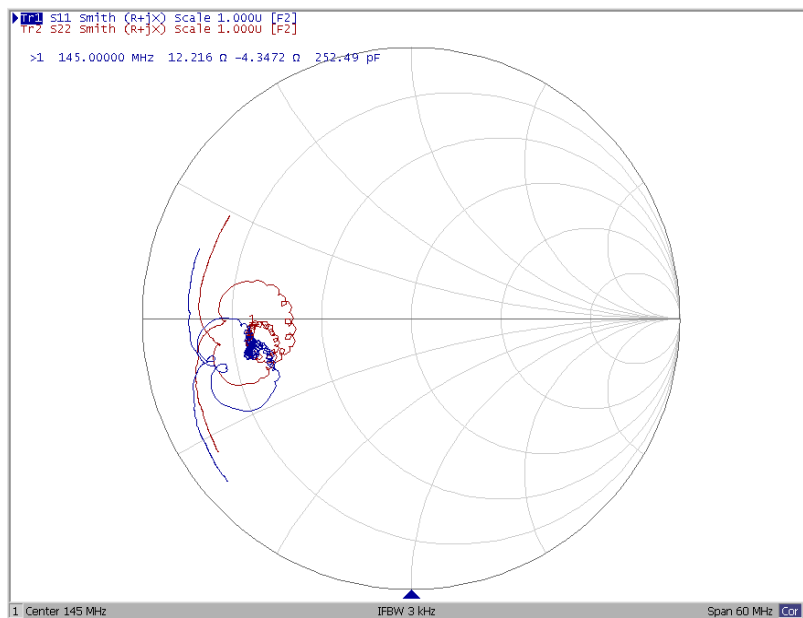
### Ripple Variation Fo±7.56MHz



### Group Delay Variation Fo±7.56MHz



### Smith Chart





### VSWR

