

# 101515C

FB357.5-1.7 357.5 MHz Bandpass Filter 1.7 MHz Bandwidth

## Specifications

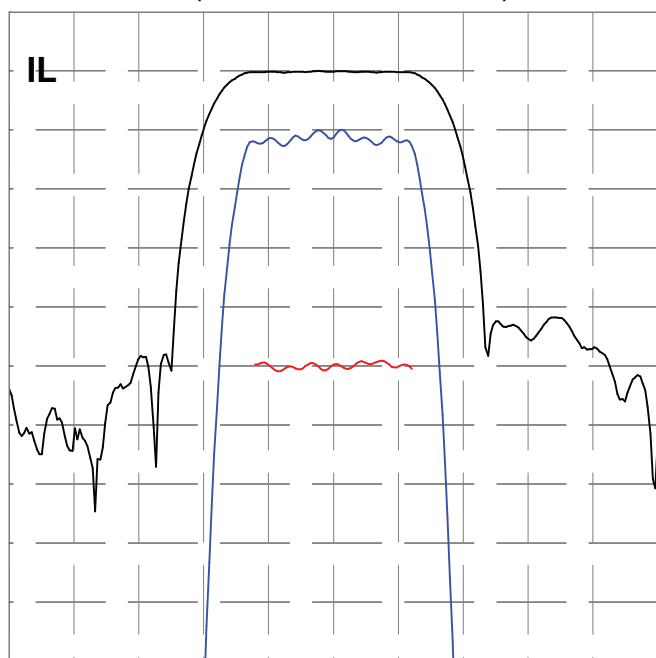
| Parameter                        | Symbol   | Min    | Typical | Max  | Unit               |
|----------------------------------|----------|--------|---------|------|--------------------|
| Center Frequency                 | $F_0$    |        | 357.5   |      | MHz                |
| Bandwidth                        | B        |        | 1.7     |      | MHz                |
| -3dB Bandwidth                   | $B_3$    | 1.9    | 2       |      | MHz                |
| -40dB Bandwidth                  | $B_{40}$ |        | 3.1     | 3.6  | MHz                |
| Delay                            | $T_0$    | 2.18   | 2.203   | 2.22 | $\mu\text{sec}$    |
| Insertion Loss                   | IL       |        | 21.9    | 24.5 | dB                 |
| Amplitude Ripple                 |          |        | 0.3     | 1    | dB <sub>P-P</sub>  |
| Phase Ripple                     |          |        | 1.8     | 3    | deg <sub>P-P</sub> |
| Rejection                        |          | 42     | 46      |      | dB                 |
| Spurious for $ t - T_0  > .9T_0$ |          |        | -45     | -42  | dB                 |
| Substrate Material               |          | 36YX-Q |         |      |                    |

### Notes

- Center Frequency ( $F_0$ ) and Bandwidth (B) are defined, not measured.
- Insertion Loss is the minimum loss for  $|f - F_0| < .5B$
- Ripple spec applies to the  $|f - F_0| < .4B$ , and is doubled for  $.4B < |f - F_0| < .5B$
- Rejection spec applies to  $(B_{40} \text{ Spec} - B / 2) < |f - F_0| < F_0 / 2$
- Specifications are at 22 °C only. Unit will operate undamaged from -54 °C to 125 °C with shifts  $dF_0 = -x * F_0$ ,  $dT_0 = x * T_0$ , where  $x = 3E-8 * (\text{temperature} - 22 \text{ °C})^2$

## Typical Performance

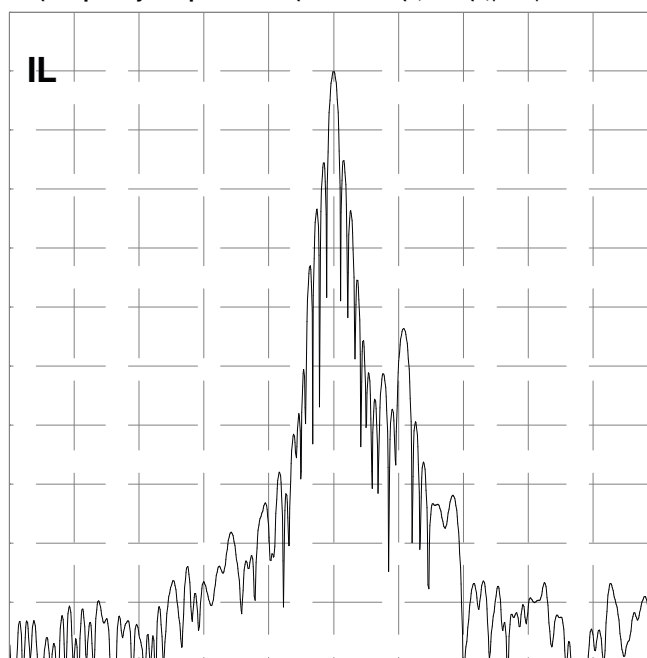
**Frequency Response**  
(Best Fit Linear Phase Removed)



10 dB/div, 1 dB/div, 10 deg/div, 0.625 MHz/div

**Impulse Response**

FFT(Frequency Response \* Cos(0.5 \* PI \* MIN(1, MAX(0, |f - F0| \* 2.0 / 2.25 - 1.0)))^2)

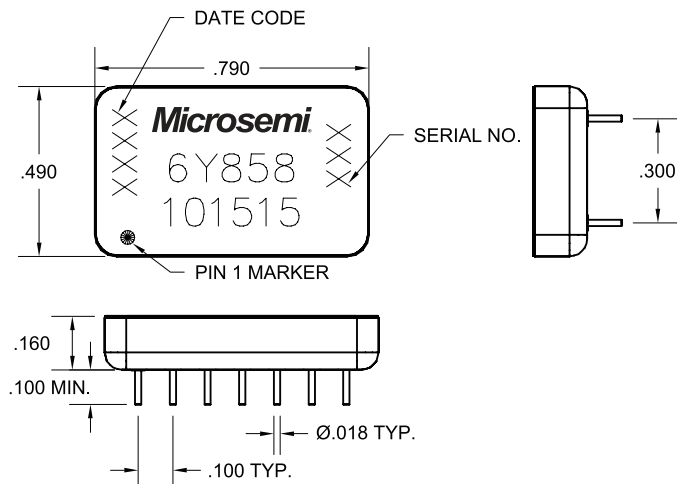


10 dB/div, 4.096 us/div

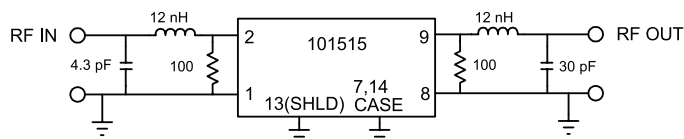
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## Package Outline



## Matching



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