

# 101001C

FB70-2.25 2.2 MHz Bandwidth 70 MHz Bandpass Filter

## Specifications

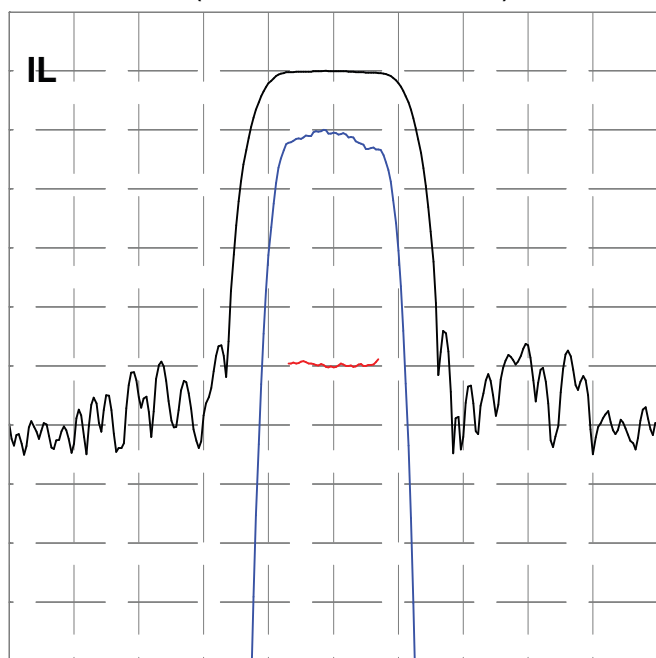
| Parameter                        | Symbol   | Min  | Typical | Max  | Unit               |
|----------------------------------|----------|------|---------|------|--------------------|
| Center Frequency                 | $F_0$    |      | 70      |      | MHz                |
| Bandwidth                        | B        |      | 2.2     |      | MHz                |
| -3dB Bandwidth                   | $B_3$    | 2.6  | 2.7     |      | MHz                |
| -40dB Bandwidth                  | $B_{40}$ |      | 4.1     | 4.2  | MHz                |
| Delay                            | $T_0$    | 2.64 | 2.659   | 2.66 | $\mu\text{sec}$    |
| Insertion Loss                   | IL       |      | 21.5    | 22   | dB                 |
| Amplitude Ripple                 |          |      | 0.4     | 1    | dB <sub>P-P</sub>  |
| Phase Ripple                     |          |      | 1.1     | 1.5  | deg <sub>P-P</sub> |
| Rejection                        |          | 42   | 45      |      | dB                 |
| Spurious for $ t - T_0  > .9T_0$ |          |      | -54     | -52  | dB                 |
| Substrate Material               |          | STQ  |         |      |                    |

### 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  $x = 3E-8 * (\text{temperature} - 22^\circ\text{C})^2$

## Typical Performance

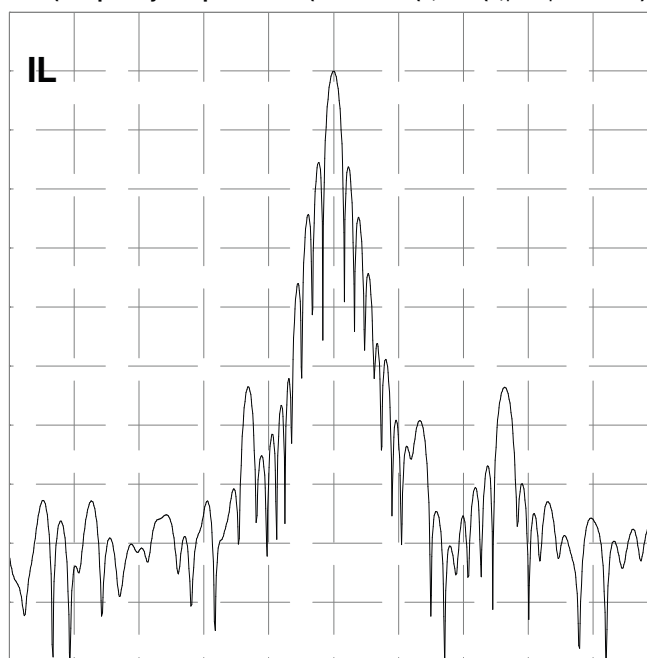
**Frequency Response**  
(Best Fit Linear Phase Removed)



10 dB/div, 1 dB/div, 10 deg/div, 1.300 MHz/div

**Impulse Response**

FFT(Frequency Response \* Cos(0.5 \* PI \* MIN(1, MAX(0, |f - F0| \* 2.0/3 - 1.0)))^2)

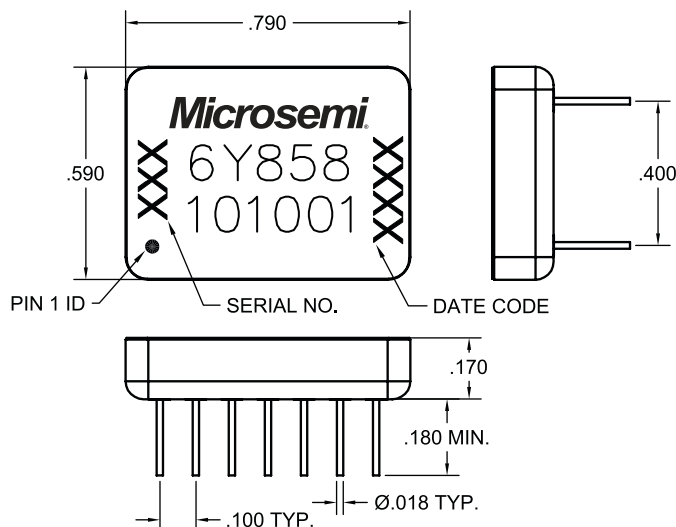


10 dB/div, 2.000 us/div

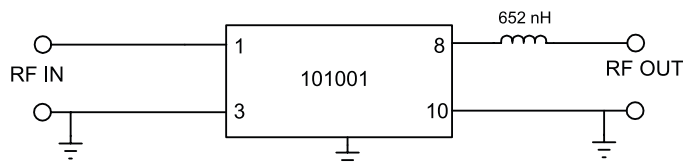
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## Package Outline



## Matching



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