

# 101152C

## FB97.8-8 8 MHz Bandwidth 97.8 MHz Bandpass Filter

### Specifications

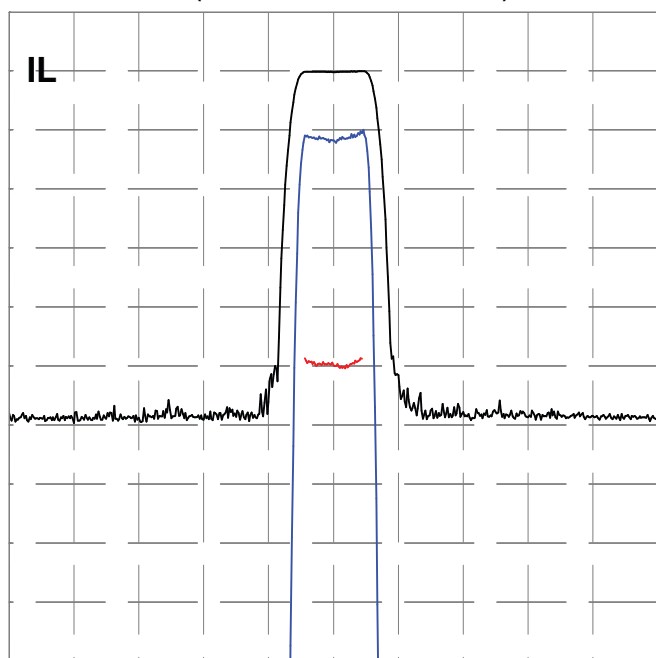
Parameter	Symbol	Min	Typical	Max	Unit
Center Frequency	$F_0$		97.8		MHz
Bandwidth	B		8		MHz
-3dB Bandwidth	$B_3$	9.5	9.5		MHz
-40dB Bandwidth	$B_{40}$		13.5	13.6	MHz
Delay	$T_0$	1.76	1.761	1.77	$\mu\text{sec}$
Insertion Loss	IL		25.4	26.5	dB
Amplitude Ripple			0.2	0.5	dB <sub>P-P</sub>
Phase Ripple			1.3	2	deg <sub>P-P</sub>
Rejection		54	56		dB
Spurious for $ t - T_0  > .9T_0$			-54	-52	dB
Substrate Material		X112Y-LT			

### 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  $x = 18E-6 * (\text{temperature} - 22^\circ\text{C})$

### Typical Performance

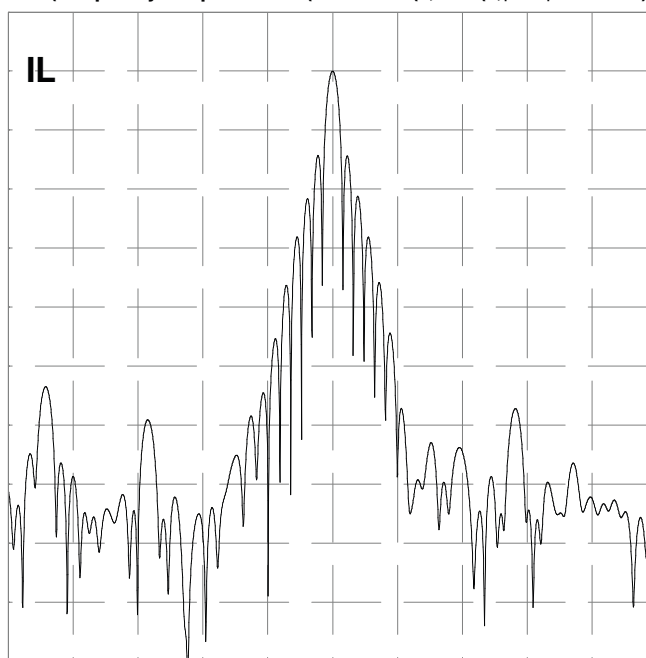
**Frequency Response**  
(Best Fit Linear Phase Removed)



10 dB/div, 1 dB/div, 10 deg/div, 8.000 MHz/div

**Impulse Response**

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

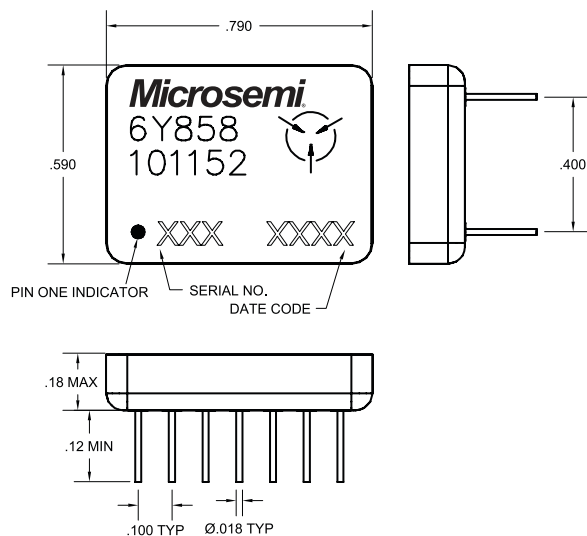


10 dB/div, 0.625 us/div

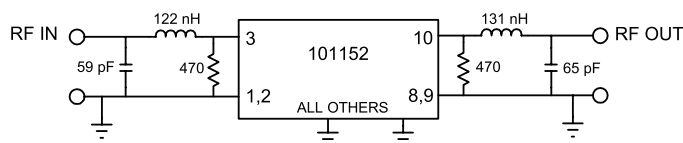
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## Package Outline



## Matching



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