

100810C

FB70-.1 0.1 MHz Bandwidth 70 MHz Bandpass Filter

Specifications

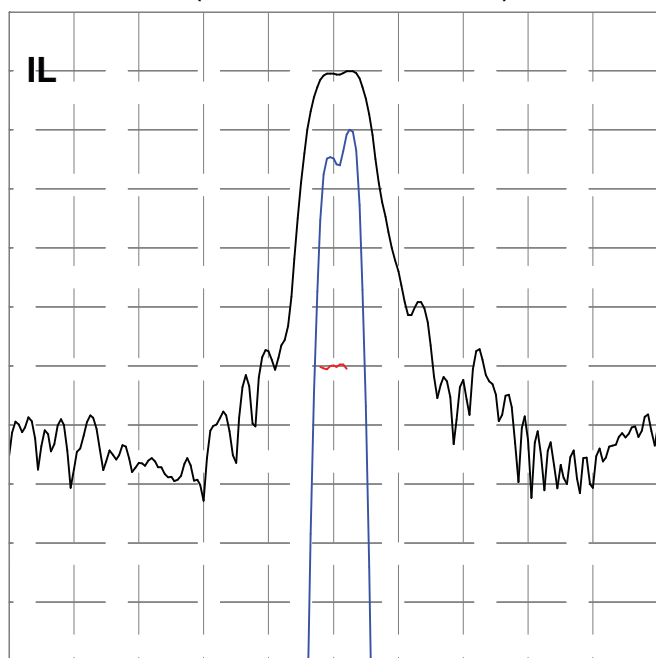
Parameter	Symbol	Min	Typical	Max	Unit
Center Frequency	F_0		70		MHz
Bandwidth	B		0.1		MHz
-3dB Bandwidth	B_3	0.1	0.11		MHz
-40dB Bandwidth	B_{40}		0.4	0.5	MHz
Delay	T_0	14.5	14.63	14.75	μ sec
Insertion Loss	IL		19.9	23.5	dB
Amplitude Ripple			1.2	3	dB _{P-P}
Phase Ripple			1	2	deg _{P-P}
Rejection		44	47		dB
Spurious for $ t - T_0 > .9T_0$			-49	-46	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 $x = 3E-8 * (\text{temperature} - 22 \text{ °C})^2$

Typical Performance

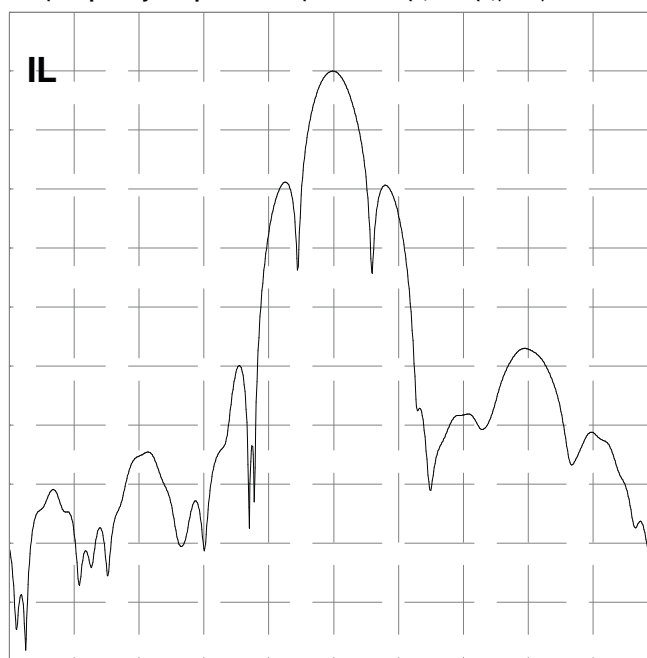
Frequency Response
(Best Fit Linear Phase Removed)



10 dB/div, 1 dB/div, 10 deg/div, 0.200 MHz/div

Impulse Response

FFT(Frequency Response * Cos(0.5 * PI * MIN(1, MAX(0, |f - F0| * 2.0 / 0.4 - 1.0)))^2)

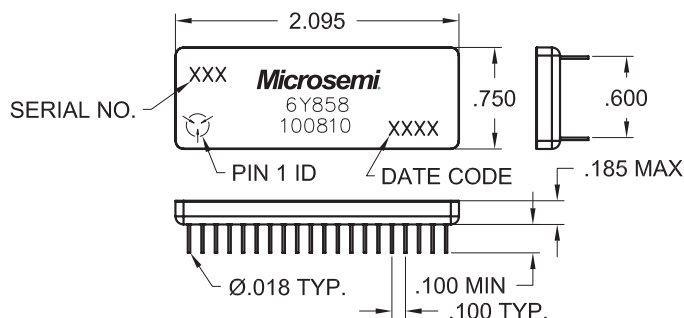


10 dB/div, 10,000 us/div

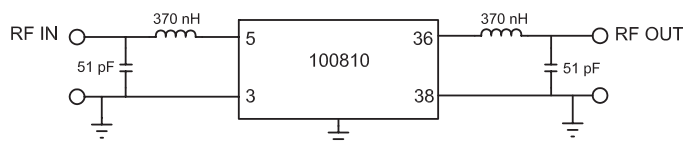
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Package Outline



Matching



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