101342C

FB72.825-1.74 72.825 MHz Bandpass Filter 1.74 MHz Bandwidth

Specifications

Parameter	Symbol	Min	Typical	Max	Unit
Center Frequency	F_0		72.825		MHz
Bandwidth	B		1.74		MHz
–3 dB Bandwidth	B_3	1.9	2		MHz
–40 dB Bandwidth	B_{40}		2.9	3	MHz
Delay	T_0	2.94	2.953	2.96	µsec
Insertion Loss	IL		20.4	21	dB
Amplitude Ripple			0.5	1	dB_{P-P}
Phase Ripple			2.1	3	deg_{P-P}
Rejection		46	50		dB
Spurious for $\|t - T_0\| > .9T_0$			–46	–44	dB
Substrate Material	38YX-Q				

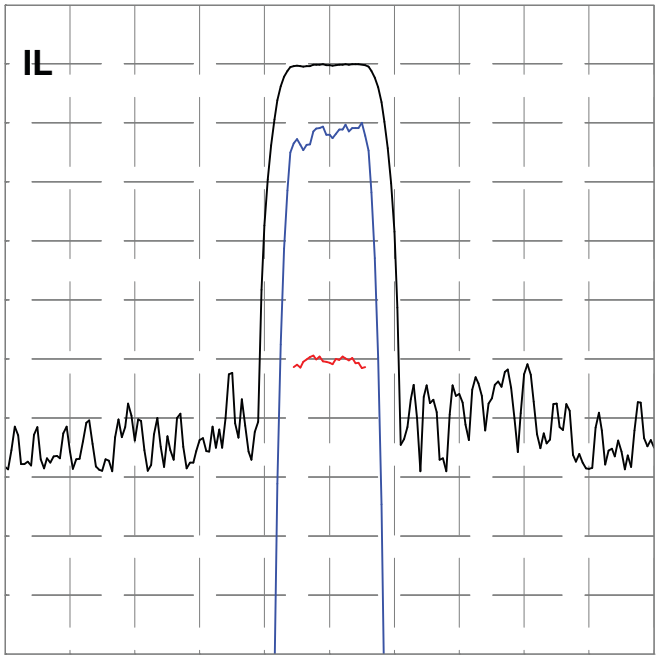
Notes

1. Center Frequency (F_0) and Bandwidth (B) are defined, not measured.
2. Insertion Loss is the minimum loss for $|f - F_0| < .5B$
3. Ripple spec applies to the $|f - F_0| < .4B$, and is doubled for $.4B < |f - F_0| < .5B$
4. Rejection spec applies to $(B_{40}\ \text{Spec} - B/2) < |f - F_0| < F_0/2$
5. 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 $x = 3E\text{-}8 * (\text{temperature} - 22\,°C)^2$

Typical Performance

Frequency Response

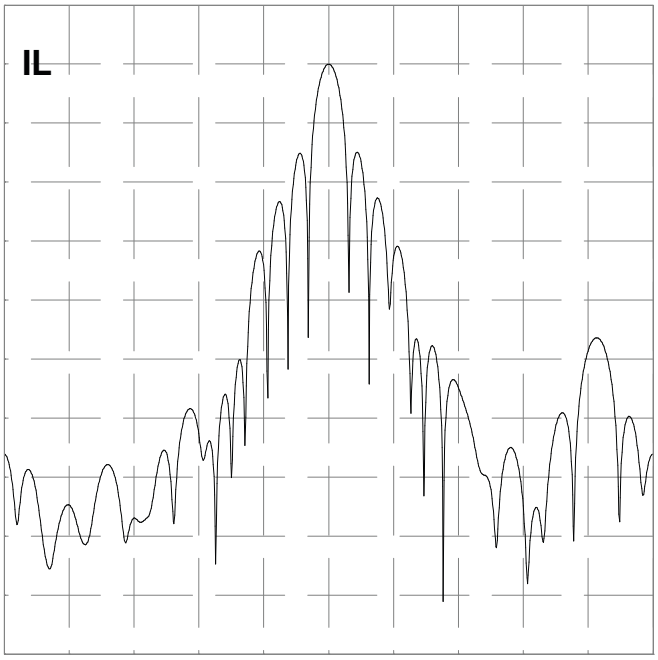
(Best Fit Linear Phase Removed)



10 dB/div, 1 dB/div, 10 deg/div, 1.400 MHz/div

Impulse Response

FFT(Frequency Response*Cos(0.5*PI*MIN(1,MAX(0,|f-F0|*2.0/2.2-1.0)))^2)



10 dB/div, 1.429 us/div

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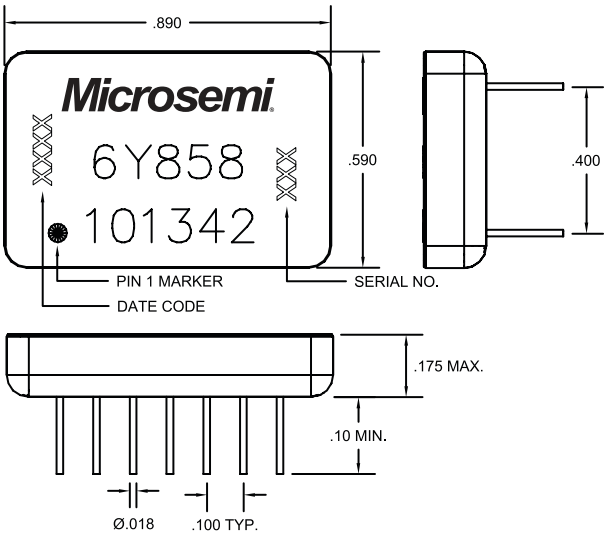
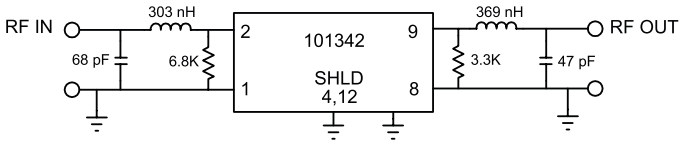
Package Outline



Matching



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