101235C

FB102.27-12.5 102.27 MHz Bandpass Filter 12.5 MHz Bandwidth

Specifications

Parameter	Symbol	Min	Typical	Max	Unit
Center Frequency	F_0		102.27		MHz
Bandwidth	B		12.5		MHz
–3 dB Bandwidth	B_3	14.1	14.2		MHz
–40 dB Bandwidth	B_{40}		16.9	17	MHz
Delay	T_0	1.02	1.023	1.03	µsec
Insertion Loss	IL		20.1	21	dB
Amplitude Ripple			0.3	0.5	dB_{P-P}
Phase Ripple			3	5	deg_{P-P}
Rejection		40	44		dB
Spurious for $\|t - T_0\| > .9T_0$			–42	–40	dB
Substrate Material	128YX-LN				

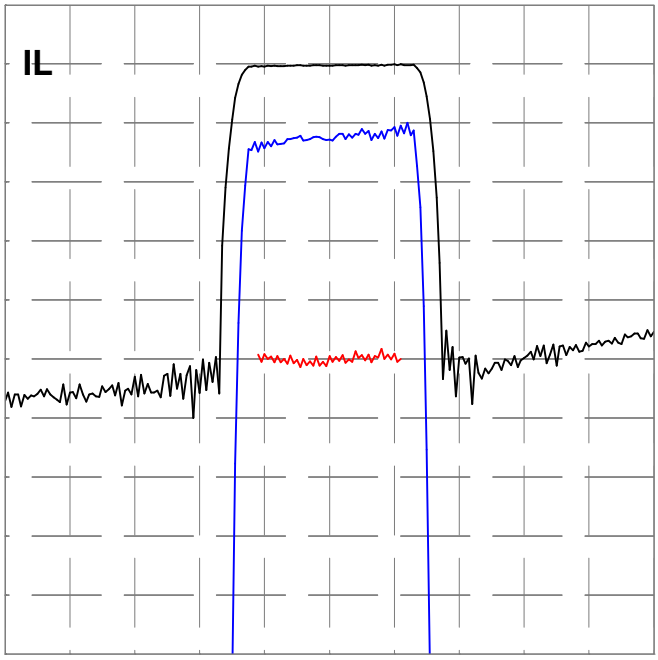
Notes

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 $x = 75E\text{-}6 * (\text{temperature} - 22\,°C)$

Typical Performance

Frequency Response

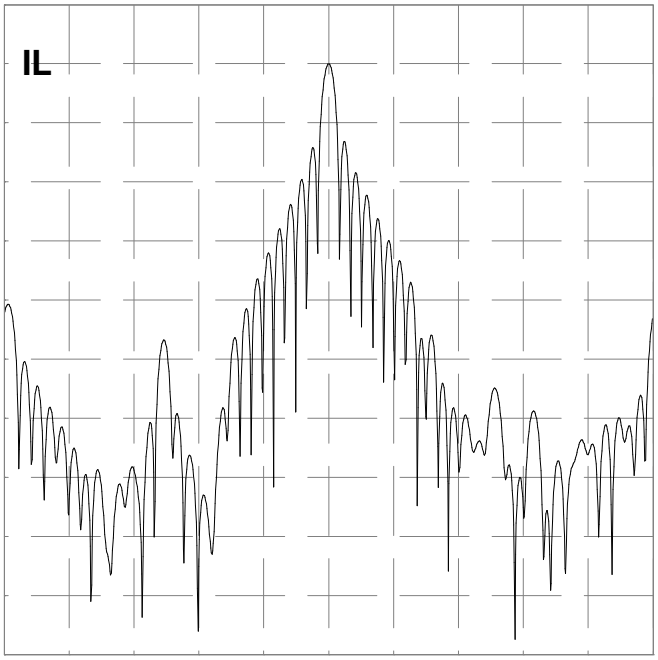
(Best Fit Linear Phase Removed)



10 dB/div, 1 dB/div, 10 deg/div, 5.000 MHz/div

Impulse Response

FFT(Frequency Response*Cos(0.5*PI*MIN(1,MAX(0,|f-F0|*2.0/12.5-1.0)))^2)



10 dB/div, 0.400 us/div

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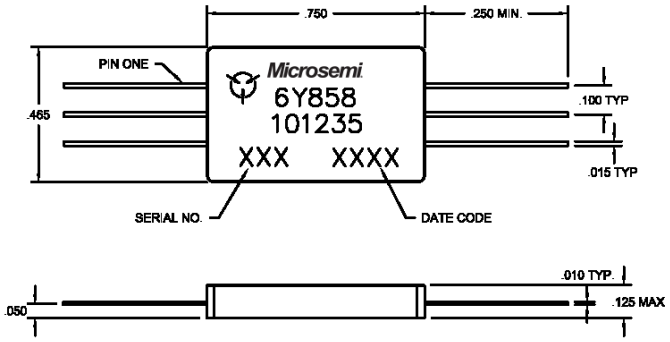
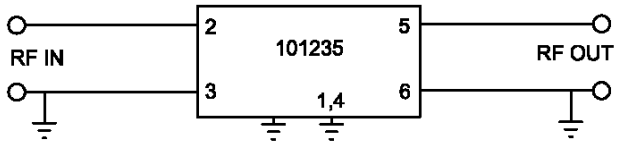
Package Outline



Matching



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