

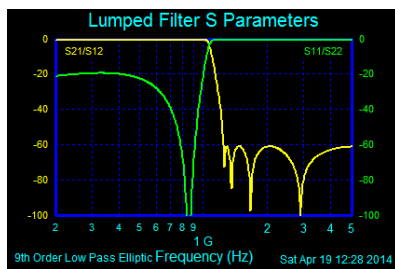


“Single Point Ripple™” Filter Synthesis Capability added to Latest Release of FilterSolutions®

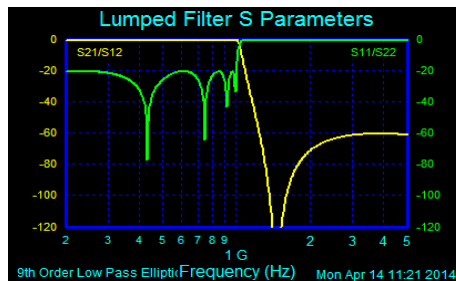
Nuhertz has just released a new version of FilterSolutions containing the new Single Point Ripple (SPR) design feature for the synthesis of Chebyshev and Elliptic filter designs. This design capability is an enhancement of the “Automated General Parameter Synthesis” (AGPS)* utility, introduced in earlier versions of the program.

The technique supports pass band, stop band, or both designed for Chebyshev and Elliptic filters. For the stop band implementation, the resultant element value spread is significantly tighter than in traditional, non- AGPS or constricted- ripple AGPS designs, and the group delay response is less traumatic about the cut-off.

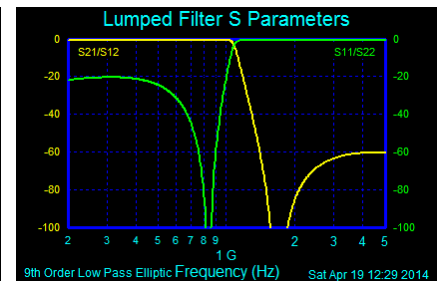
An illustration of the response, for a 9th order low pass elliptic filter is shown in shown in figure 1.



Pass Band SPR



Stop Band SPR



Pass Band and Stop Band SPR

Figure 1: Low Pass Elliptic Filter response using Single Point Ripple Technique



The schematic for the low pass filter is shown in Figure 2. Note the close element value spread:

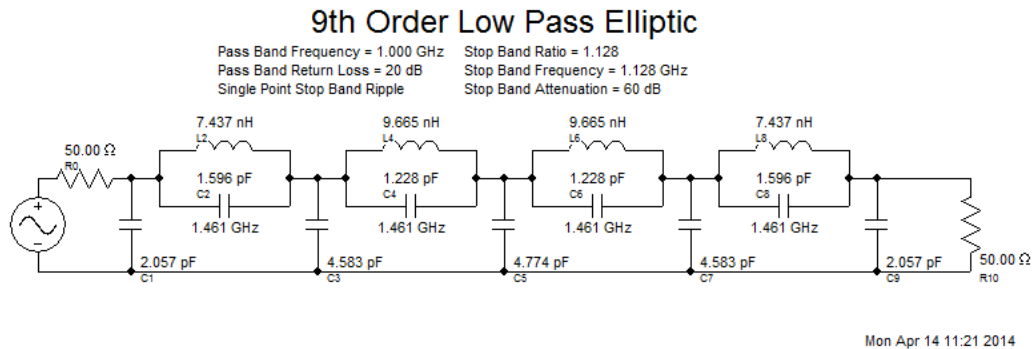


Figure 2: 9th Order Low Pass Elliptic Filter using Single Point Ripple Technique

The AGPS approach allows the design to be realized with certain improved traits by automating reflection and transmission zero placement. The resultant recalculation of the pole positions will restore the maximally flat, equi-ripple, or constricted equi-ripple characteristics of the pass band.

*AGPS refers to the technique of synthesizing the response of a filter around automatically placed stop band and/or reflection zeros, then automating the pole placement to achieve a more efficient filter attenuation response, more desirable group delay characteristic, or narrowing the element value spread

The specific AGPS Single Point Ripple technique allows the design to be realized with a minimum element value spread. The resultant recalculation of the pole positions will restore the maximally flat or equi-ripple characteristics of the pass band and/or stop band, when needed.

For further information, please visit: www.nuhertz.com, or call: (973) 228-7800.