

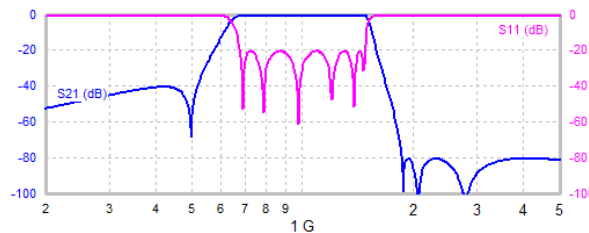


Characteristics of FilterSolutions® Believed to be Unique

February 04, 2016

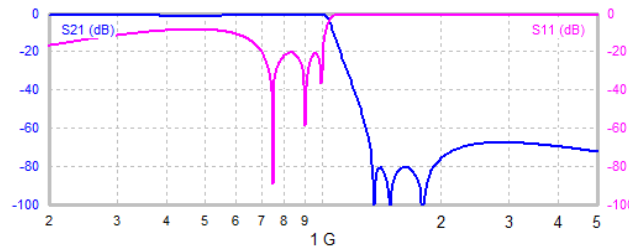
1) Instant and accurate stop band Frequency Asymmetric Synthesis.

- Advantageous to minimize the physical size of band pass filters with frequency asymmetric attenuation requirements.
- Placed in the center of the FilterQuick user panel, where it may be easily found by new users.
- Synthesis procedure is derived from internal Nuhertz research. and does not rely on restrictive tables.
- Included in FilterQuick user interface



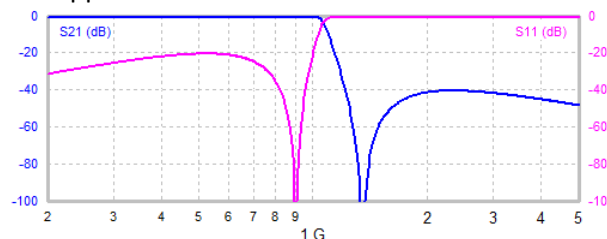
2) Instant and accurate Constricted Stop Band and Pass Band Ripple

- Pass band and/or stop band ripple constricted to a desired percentage of pass band and/or stop band.
- Advantageous to minimize element count of lumped designs.
- Synthesis procedure is derived from internal Nuhertz research, and does not rely on restrictive tables.



3) Instant and accurate Single Point Stop Band and Pass Band Ripple

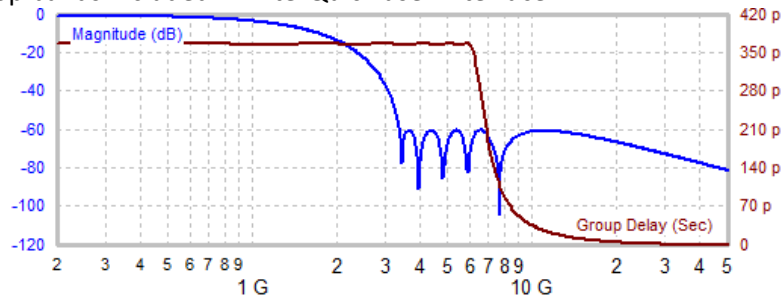
- Advantageous to minimize element value spread of lumped designs, and improving geometry of planar designs, especially Wide Band Dual Microstrip Resonators.
- Synthesis procedure is derived from internal Nuhertz research, and does not rely on restrictive tables.
- Stop band single point ripple Included in FilterQuick user interface





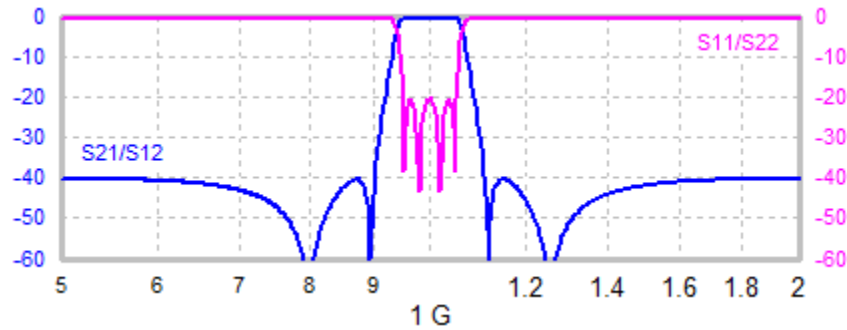
4) Instant and accurate Bessel, Linear Phase, and Gaussian Stop Band

- a. Advantageous for increasing cutoff attenuation of Bessel, Linear Phase, and Gaussian Filters.
- b. Synthesis procedure is derived from internal Nuhertz research, and does not rely on restrictive tables.
- c. Bessel stop bands included in FilterQuick user interface

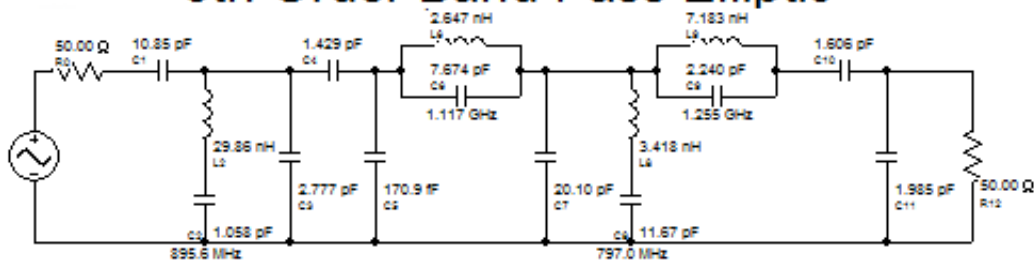


5) Instant and accurate Minimum Inductor Elliptic and Chebyshev II band pass (one less inductor required than the number of prototype poles)

- a. Odd Order Zigzags for narrow and medium band
- b. Odd Order High/Low Pass 2 for medium band and wide band
- c. Published solutions are inaccurate. Precisely accurate Nuhertz synthesis procedure is derived from internal Nuhertz research, and does not rely on restrictive tables.
- d. Included in FilterQuick user interface

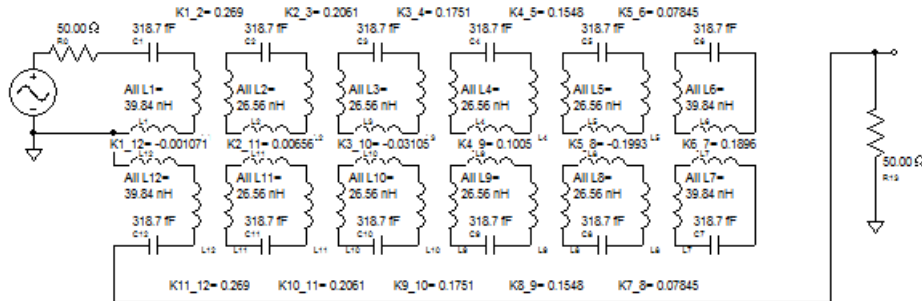


5th Order Band Pass Elliptic



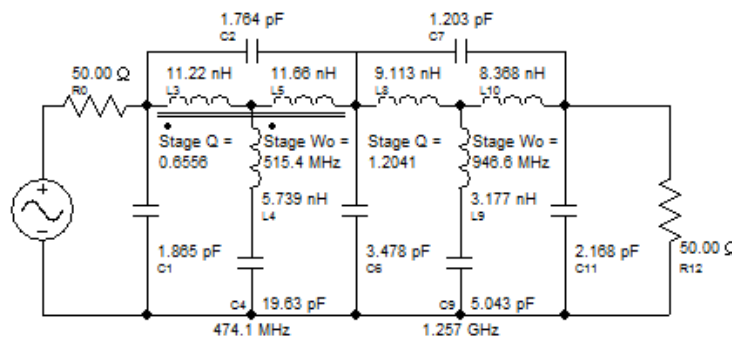
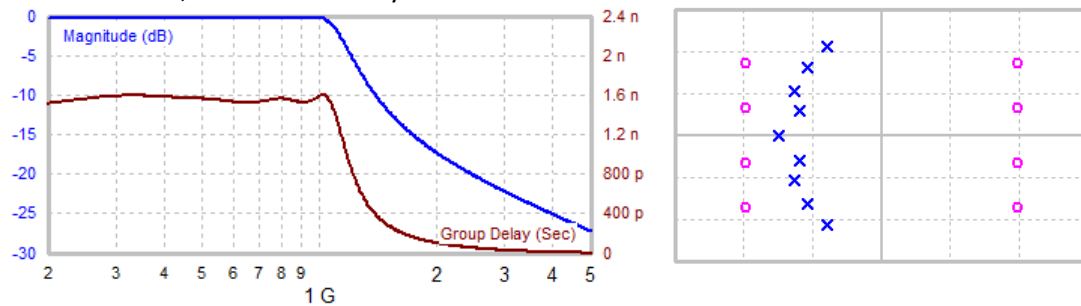
6) Instant and accurate Cross coupled Elliptic band pass filters with absolute minimum number of couplings

- a. Published solutions contain excessive numbers of cross-couplings.
- b. Minimum coupling synthesis procedure is derived from internal Nuhertz research, and does not rely on restrictive tables.
- c. Included in FilterQuick user interface



7) Quadruplet zeros delay equalization with instant and accurate lumped element computations

- a. Traditional all pass stages require too many element to implement
- b. Quadruplet zeros lumped synthesis procedure is derived from internal Nuhertz research, and does not rely on restrictive tables.





8) Instant and accurate multiband filters with independent design requirements for each pass band

- a. Fully flexible synthesis that does not rely on restrictive tables.
- b. Support for low pass, high pass, band pass, and band stop.

