The LP4F and LP4P 4-pole, 4-zero Low-Pass filters together provide the user with the versatility to address applications in either the time or frequency domain. The choice of LP4F or LP4P is programmable in most Precision Filters products that offer this filter characteristic.

The LP4F is specified to have excellent pass-band flatness and sharp roll-off characteristics. The pass-band characteristic is nearly identical to a 4-pole Butterworth yet the LP4F has a much sharper roll-off. The LP4F is a good choice for applications such as spectral analysis and for less stringent anti-aliasing applications where a moderately high sampling ratio is available. The LP4P has a broadly rounded amplitude response that is a consequence of the LP4P’s linear phase property.

Cascade an HP4F with an LP4F to form a band-pass filter. If the filters are set with the –0.1 dB frequencies overlapping, the resulting band-pass filter will have 0.2 dB of insertion loss and will provide more than 80 dB of attenuation below 0.107 Fc and above 9.364 Fc.