Subject: Re: 2nd ordrer Butterworth vs 3rd order Butterworth
Posted by Wayne Parham on Tue, 20 Aug 2002 19:32:57 GMT
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The points I've tried to make with respect to passive second and third-order filters is they are more prone to peaking from too small a load than first order. In fact, increasing the load resistance on a first-order filter just shifts the crossover point. There will be some peaking because of the reactive nature of the load, but the R1/R2/C1 network worn't work on a first order the same it does on a second or third. It works equally well on second or third or higher. The thing on these higher order networks is you have to consider the phase shift, which is a separate matter. The higher the slope, the less the overlap band, so vertical nulls will be present over a smaller frequency range. All these kinds of things have to be considered in additon to how the R1/R2/C1 network interacts with the base band-splitter filter.