Subject: Re: Electrical filters and Acoustic Filters
Posted by Wayne Parham on Tue, 20 Sep 2005 12:12:53 GMT
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I think people will first grasp the concept of a voltage divider as an attenuator. Then they'll begin to see how reactive components can attenuate signals of different frequency and modify the response curve. But the last thing to consider is how resonators store energy and release it back into the system, so that's why an explanation of damping is so important in addition to the voltage divider concept.Q is a measure of damping. An underdamped resonant system will peak highly, increasing movement at that frequency. Sure, it is still a voltage division that's fundamentally in play, but since the cone is in mechanical resonance, increasing series resistance can make the system underdamped, which then modifies system Q.I think it is important to have this discussion, to illuminate the issues for any of those that don't fully understand them.