Subject: Re: gapped Iron
Posted by PakProtector on Tue, 25 Apr 2006 21:50:32 GMT
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Hey-Hey!!!,Russ, I have a few things for you to consider. One, what happens to the choke's impedance at self resonance? As one approaches self resonance the impedance is not equal to Omega*L anymore, and for that matter, after the self resonant point, that's also true.clip:Off the top of my head 1,000 henry at 20 hertz would be 125K but at 20kHz only 1 henry is needed to have the same reactance. That applies only to something that is only inductive. The winding capacitance appears in parallel with the inductance. This capacitance causes all sorts of things to srtay from Omega*L.Also, since inductance is varying with signal magnitude on a minimum gap core, what do you suppose is happening to the self resonant point?Dave Slagle brought up that air is a very linear core material, and that a gap in the magnetic path is going to average the two characteristics, 'Iron' and air together. I like the idea of a linear core material. I have heard it in a few experiments. I am going to get some special lams so I can experiment with PP outputs with gaps. Same coil as the minimum gap core, and perm adjusted with the gap...It's one way of isolating something approaching a single parameter. It isn't perfect, but it'll do for now, eh?cheers,Douglas