Subject: Damping factor - SE vs. PP
Posted by Damir on Tue, 11 Oct 2005 11:45:59 GMT
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Just to add - PP amp doesn`t have a larger damping factor (or lower output resistance) then SE amp per se, but from the fact that most PP amps have a global negative feedback loop and SE amp mostly do not.If we have a typical 300B SE amp with say Ra=3k, we can expect DF~3 without neg. feedback, or DF=Ra/(rp+Rw). We can express DF on the secondary side, like ratio DF=Rsp/Rout, where Rout is rp+Rw (anode resistance and windings resistances "reffered" to the secondary).Then, we can have 300B PP amp, class A, say with Raa=6k. Primary reflected impedance is doubled, but we now have two output tubes, and DF=Raa/(2rp+Rw). We can see that in both examples (SE & PP) we have about the same DF.In fact, if we use typical UL PP output stage coupled with somewhat lower Raa (AB1 amp), then we can expect maybe DF~1 without feedback.Simplified, and there`s a more about PP/SE things...