Subject: Re: PP 845 (little theoretycal ramblings:-))
Posted by Damir on Wed, 20 Apr 2005 21:05:32 GMT
View Forum Message <> Reply to Message

With OP 800V/-120V, Ia=60mA (60mAp or 42,4mArms max. AC current "swing")and that limits PP A-class to aboutPaa = Ia^2*Raa = 0,04242^2 * 10000 = 18W.And yes, we must "limit" our "input swing" to less then 80Vp per output tube if we want to stay in A-class, lets say 54Vrms per tube, then every tube "produce" AC anode voltage:Ua=mu*Ugk/(1+rp/Ra) = 5,3*54/(1+1700/5000) = 213,5VrmsAnd we have 2*213,5=427Vrms across primary, and Paa=Uaa^2/Raa=18,2W.Actually, my little formula gives Ra= Ugk*mu/Ia - rp =120*5,3/0,06 - 1700 = 8,9 kOhms in SE , or Raa=2*Ra=17,8kOhms.Quick graphical load-line analysis gives about 9,3 kOhms per tube in SE, or about Raa=2*Ra=18,6kOhms in PP A class.Then, with Raa=18kOhms we have about Paa=32W in "pure" A-class. Of course, Raa=18k OPT is somewhat "impractical", haha... ("Lundahl" model LL1688 has Raa=20,5k.)IMO -it`s hard to get more then 18-20W in A-class with 10k a-a OPT...but class AB1 on peaks are not a great sin I suppose?