Subject: Update/correction (specs)
Posted by Damir on Tue, 11 Apr 2006 11:45:06 GMT
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On the second look, the specs on the link you provided doesn`t seem quite right - in OP 450V/-95V/100mA we`d have rp=700 Ohms, µ=4,8 and S=4,8 mA/V (?!). Barkhausen said rp=µ/S, and I found another (probably right) specs on "kraudio.cz" site:Ua=450V, Ia=100mA, Ugk=-94V, µ=3,7, S=5,7mA/VFrom that, rp = µ / S = 3,7 / 5,7 ~ 650 OhmsThan we can use the primary load Ra=(Ugk*µ/Ia) - rp = (94*3,7/0,1)-650 = 2828 Ohms, we`d use the "standard" 3k primary.Voltage "swing" on the anode load is:Ua = Ugk*µ / (1+rp/Ra) = 94*3,7/(1+650/3000) = 285,9 Vp = 202 VrmsAnd max. power in class A1 is Pa=Ua^2/Ra = 202^2/3000 = 13,6W.If we assume 10% losses, then we can expect about 12W of power, still respectable, but not 17W Verification - tube is "biased" with 100mA, it means AC 100mAp, or 100/1,4142 = 70,7mArms max. And it "allows" Pa=Ia^2*Ra=0,07^2*3000 = 15W of AC anode power, but limited voltage "swing" gave us "just" the 13,6W anode, or ~12W output power.
http://www.kraudio.cz/