
Subject: Re: New JJ tesla 2A3-40

Posted by [Damir](#) on Sat, 11 Mar 2006 16:23:42 GMT

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If used "300B area" OP, for example, 350V/-66V/75mA, it can produce "typical" 300B power, about 7W or so with $R_a \sim 3k$ load - it's a probably interesting for PP. With $R_{aa}=6k$ we can expect, say, 14-15W in class A. If we use more "modest" and linear OP for SE, for example 300V/75mA/-54V and use $R_a = U_g \cdot \mu / I_a - r_p = 54 \cdot 4,2 / 0,075 - 700 \sim 2,5 k\Omega$ ("standard" 2A3 value), we can expect anode voltage $U_a = \mu \cdot U_g / (1 + r_p / R_a) = 177V_p = 125V_{rms}$. On the anode load, R_a , it produces $P_a = U_a^2 / R_a = 6,25W$. If we have about 10% (OPT) losses, we can expect about 5,6W output, larger than "typical" 3,5W from standard 2A3. I tried something similar with 300B I'm experimenting. I used 760-780V ct secondary, CLCLCLC filter/AZ50 rectifier, B+ is about 440V, few V less for the driver. When I disconnected the first cap, I get L-input supply, and B+ is about 312V - exactly what we need for 2A3. We have about 12V voltage drop through the R_w of the primary (OPT), and need $U_{ak}=250V$ through the tube, $U_k=45V$. I didn't bother to try 6B4G (I have a few, but no 2A3), I just left 300B in place - it "biased" about -51V, with 250V/56mA through the tube, $R_k \sim 900 \Omega$. E180F trioded driver gets about 310V - enough for CCS driver "work" ($U_a=200V$). The sound was very good, but with less "slam" - I have 89dB/W speakers :-(. When I'll finish this 300B amp, I'll probably post about little changes needed to "convert" it in 2A3 amp, with "traditional" OP, 250V/45V/60mA.
