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Subject: Re: and now to include "air resistance"

Posted by [Damir](#) on Sun, 30 Jan 2005 07:46:36 GMT

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Wonderful world of tubes .Formula has it`s limitations, it is based on the analysis of the typical DHT output stage, where close to the max. power is the goal, and is assumed that current swing through the load is maximum, or from zero to the value  $2 \cdot I_a$  dc. Formula gives such  $R_a$  with  $U_a/I_a$  proportion as described, and is not effective in the area close to the  $U_g=0$  line - resultant load line is too steep...For example, for AD1 tube (close to 2A3), OP 250V/-45V/60mA and  $r_p \sim 670$  Ohms,  $\mu \sim 4$  ,  $R_a$  is:  $R_a = (U_g \cdot \mu) / I_a - r_p = (45 \cdot 4) / 0,06 - 670 = 2330$  Ohms Just like recommended  $R_a = 2k3$  in manuals. But, if you want the "extreme" OP, say 100V/-5V/90mA, then  $I_a$  can`t "swing" from 0- $2I_a$  dc value and formula can`t give the "right" result, you must "compensate" it with real current swing...

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