Calcul avant alternatif:

$$A_{dd} = g_{m1}(r_{be4} \parallel r_{o3} \parallel r_{o2}) = g_{m1} \frac{r_{o2} \cdot r_{o3} + r_{o2} \cdot r_{be4} + r_{o3} \cdot r_{be4}}{r_{o2} \cdot r_{o3} \cdot r_{be4}}$$

$$= 21 \cdot \frac{83{,}33^2 + 83{,}33 \cdot 5 + 83{,}33 \cdot 5}{83{,}33^2 \cdot 5} = 4{,}7$$

$$A_{ec} = -g_{m4}(R_{source} \parallel r_{be8} \parallel r_{be9}) = -40 \left(\frac{20 \cdot 20 + 20 \cdot 400 + 20 \cdot 400}{22 \cdot 20 \cdot 400}\right)$$

$$= -4{,}1$$

$$A_{push-pull} = 1$$

$$A_V = A_{dd} \cdot A_{ec} \cdot A_{push-pull} = -19{,}27$$

$$R_i = R_{idd} = \frac{V_i}{I_i} = 250\ M\Omega$$

$$R_o = R_{o\ push-pull} = r_{ds8} \parallel r_{ds9} = \frac{62{,}5 \cdot 1{,}42}{62{,}5 + 1{,}42} = 33{,}33\ k\Omega$$

$$A_i = A_V \cdot R_i \cdot \left(-\frac{1}{R_L}\right) = -19{,}27 \cdot 250 \cdot \left(-\frac{1}{20}\right) = 240{,}87$$