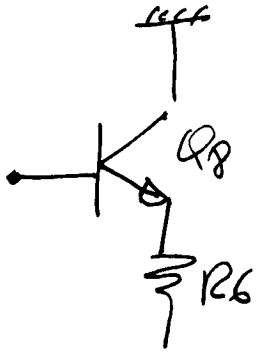
$$A_3 = \frac{R_5 \parallel R_{14}}{r_{e7} + R_4} = \frac{15{,}7k \parallel 303{,}5k}{2{,}325k} = 6{,}4$$

A_4 guadagno questo stadio

circuito equivalente



$$A_4 = \frac{R_6}{R_6 + r_{e8}} = \frac{3000}{3000+5} \simeq 1$$

$$A = A_1 \cdot A_2 \cdot A_3 \cdot A_4 = 8513$$

$$Z_{out} = R_6 \parallel \left[r_{e8} + \frac{R_5}{h_{fe}} \right] \rightarrow 15252$$