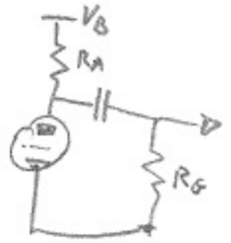
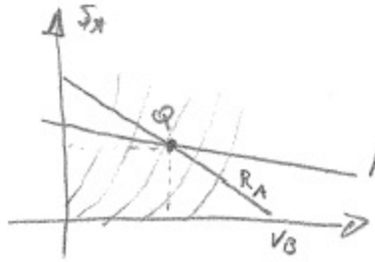
STADIO DRIVER



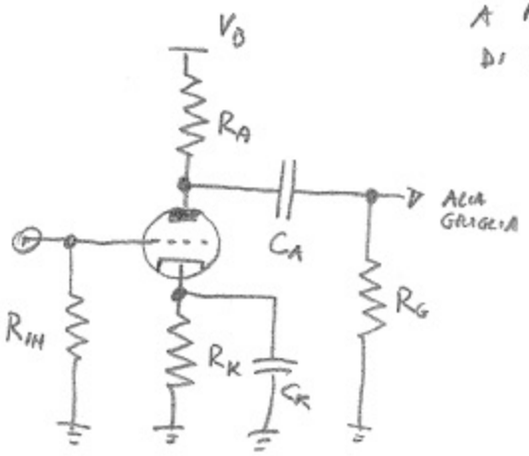


$R_A // R_G = R_{AC}$

IN AC, IL CONDENSATORE È UN CORTO, LA V_B VA A MASSA (NON VARIA V_B QC = 0) E LA RETTA DI CARICO RUOTA ATTORNO AL PUNTO DI LAVORO

$V_A = 140$, $-2V$, $0{,}6\,mA$ $\quad R_L = 5000\,\Omega$

$V_A = 215$, $-3V$, $0{,}6\,mA$ $\quad R_L = 3000\,\Omega$



$$R_K = \frac{V_G(Q)}{I_A(Q)} = \frac{2V}{0{,}6mA} = 3{,}33K = 3{,}3K$$

$$\frac{3V}{0{,}6mA} = 5K \quad \text{per } R_L = 3000\,\Omega$$

$$\begin{cases} R_A // R_G = 58\,K\Omega \quad (55{,}7\,K\Omega \text{ con } R_L = 3000\,\Omega) \\ R_A = \dfrac{V_B - (R_K I_A + V_A)}{I_A} \end{cases}$$

$V_B < 270$ (ALIMENTAZIONE)

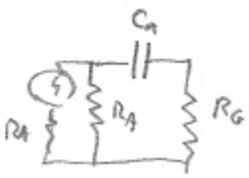
ASSUMO $V_B = 230\,V \rightarrow R_A = \dfrac{230 - (3.3 \cdot 0.6_m + 140)}{0{,}6\,mA} = 146\,K\Omega \rightarrow 150\,K\Omega$ VAL. STANDARD

RICALCOLO V_B CON $R_A = 150\,K\Omega$ $\quad V_B = 3.3K \cdot 0{,}6mA + 140 + 150K \cdot 0{,}6mA = 232\,V$

R_G : $\quad \dfrac{1}{R_{AC}} = \dfrac{1}{R_G} + \dfrac{1}{R_A} \qquad \dfrac{1}{R_G} = \dfrac{1}{R_{AC}} - \dfrac{1}{R_A} = \dfrac{1}{58K} - \dfrac{1}{150K} \Rightarrow R_G = 94{,}5\,K\Omega \rightarrow 91\,K\Omega$ STANDARD

C_A vede $R_G + R_A // R_{\Omega}$

CASO PESSIMO $R_{\Omega} \rightarrow \infty = (R_G + R_A)$



$f_{-3\,dB}$ $X_{C_A} = R_{eq}$

ASSUMO $f = 10\,Hz$ $\qquad C = \dfrac{1}{2\pi f \cdot (R_{eq})} = \dfrac{1}{6.28 \cdot 10 \cdot (91K + 150K)} = 66\,nF \rightarrow 100\,nF$ 250V

C_K, COME IN PRECEDENZA, $f_{-3\,dB} \rightarrow X_C = R_{eq}$

$R_{ep} = R_K // \dfrac{R_{AC}}{\mu} = 3{,}3K // \dfrac{58K}{68} = 220\,\Omega \qquad C_K \geq \dfrac{1}{6.28 \cdot 10\,(220)} = 72\,\mu F \Rightarrow 100\,\mu F$ 10V

CALCOLARE, PER ESERCIZIO I VALORI PER $R_L = 3000\,\Omega$ (82K, 180K, 60nF, 16µF)