

P216. 4.2

$$A_{um} = 10^{\frac{3}{2}} = 10\sqrt{10} \quad f_L = 10. \quad f_H = 10^5$$

$$\therefore \dot{A}_u = \frac{-10\sqrt{10}}{(1+j\frac{10}{f})(1+j\frac{f}{10^5})}$$

P217. 4.4

(1) 高频时显著下降 \therefore 直接耦合

(2) $-60/10 = -20/10 \times 3 \therefore$ 三级

$$(3) \varphi' = 3 \times (-45^\circ - 180^\circ) = -675^\circ \quad 10^4 \text{ Hz}$$

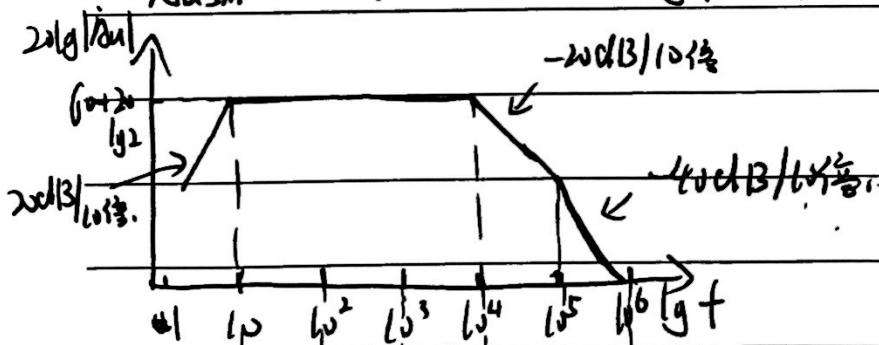
$$\varphi'' = 3 \times (-90^\circ - 180^\circ) = -810^\circ \quad 10^5 \text{ Hz}$$

$$(4) f_H = 0.52 f_{H1} = 5.2 \times 10^4 \text{ Hz}.$$

P217. 4.6

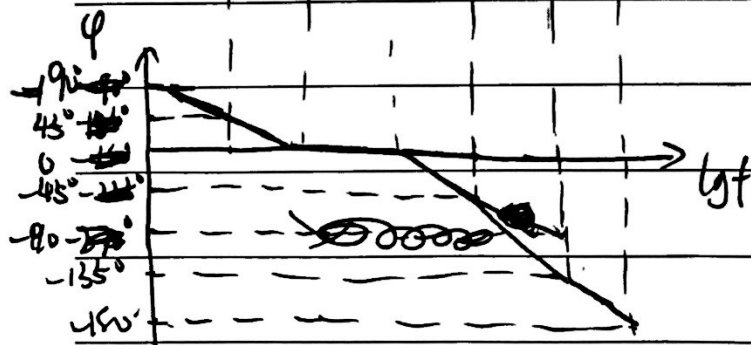
$$f_L = 10, \quad f_{H1} = 10^4, \quad f_{H2} = 10^5, \quad f_H \approx 10^4$$

$$A_{usm} = 2 \times 10^3 \quad \therefore 20 \lg |A_{usm}| = 60 + 20 \lg 2$$

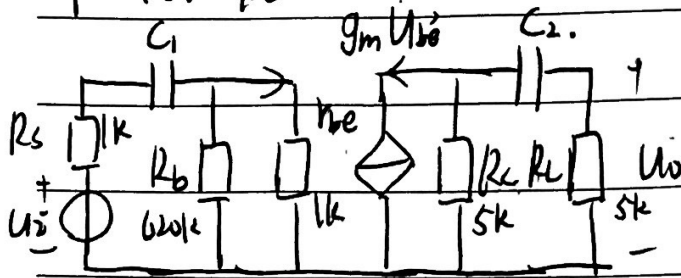


$$-180 - 45 + 180 - 90$$

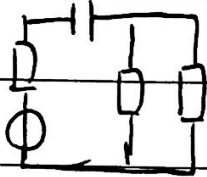
$$-45 + 90 = -135^\circ$$



P218. 4.8

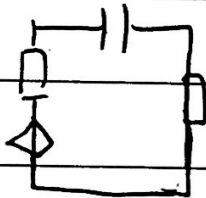


(1) \$C_1\$ 回路



$$\tau_1 = C_1 (R_S + R_B \parallel 620k\Omega) = 2k C_1$$

\$C_2\$ 回路



$$\tau_2 = C_2 (R_C + R_L) = 10k C_2$$

$$\therefore C_1 : C_2 = 5 : 1$$

(2) \$\tau_1 = \tau_2 = 25ms \Rightarrow C_1 = 12.5pF, C_2 = 2.5pF\$

(3) \$f_L \approx \frac{1}{1.56} f_{L1} = \frac{1}{1.56} \frac{1}{2\pi\tau_1} = 9.93Hz\$

P218. 4.12.

(1) \$\dot{A}_{u1} = \dot{A}_{u1} \dot{A}_{u2} = \frac{-50f^2}{(1+j\frac{f}{4})(1+j\frac{f}{50})(1+j\frac{f}{100})^2}\$

(2) \$f_L \approx 50Hz, f_H \approx 6.43 \times 10^4 Hz, \dot{A}_{usm} = 10^4\$

