

$$H(s) = \frac{s \frac{1}{CR}}{s^2 + s \frac{1}{CR} + \frac{1}{LC}} K.$$

$$\frac{\omega_0}{Q} = \frac{1}{CR} \quad \omega_0^2 = \frac{1}{LC} \rightarrow \omega_0 = \frac{1}{\sqrt{LC}}$$

$$Q = \frac{CR}{\sqrt{LC}} = \sqrt{\frac{C}{L}} R.$$

$$L = \frac{R_1 R_3 R_5}{R_4} \quad C' = C' R_3 R_5 = C' R^2$$

\therefore

$$\omega_0 = \frac{1}{\sqrt{R^2 C'}} \quad Q = \sqrt{\frac{C}{C' R^2}} R = \sqrt{\frac{C}{C'}}$$

~~$$C = \frac{R^2 C'}{\omega_0^2} = Q^2 C'$$~~

~~$$Q = \frac{R}{\omega_0 C'}$$~~

$$C = \frac{1}{\omega_0^2 R^2 C'} = Q^2 C'$$

$$\therefore Q^2 = \frac{1}{\omega_0^2 R^2 C'^2} \rightarrow \boxed{C' = \frac{1}{\omega_0 R Q}}$$

$$C = Q^2 \cdot \frac{1}{\omega_0 R Q} = \boxed{\frac{Q}{\omega_0 R} = C}$$