

5 Filters

1) Task

Design a band-pass filter (Fig.1) with parameters $f_{rhodium} = 5 \text{ kHz}$, $K_U = 2 \text{ V/V}$, $Q = 3$. Perform analyses with the LTspice program.

2) Task

Design a high-pass filter (Fig.2) with 1 dB Chebyshev type characteristics and $f_{gr} = 4 \text{ kHz}$, $K_U = 2 \text{ V/V}$. Conduct analyses with the LTspice program.

3) Task

Design a low-pass filter (Fig.3) with Bessel-type characteristics and $f_{gr} = 2 \text{ kHz}$, $K_U = 3 \text{ V/V}$. Conduct analyses with the LTspice program.

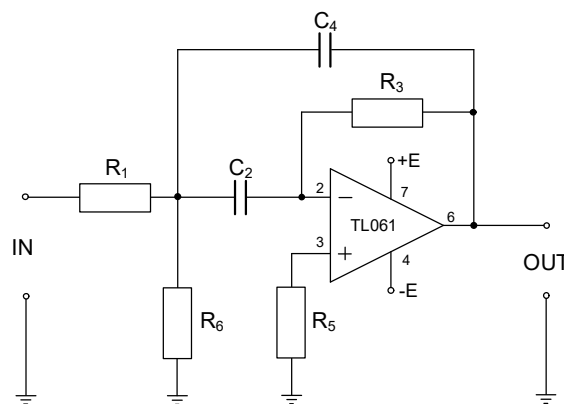


Fig.1 . Center-pass filter

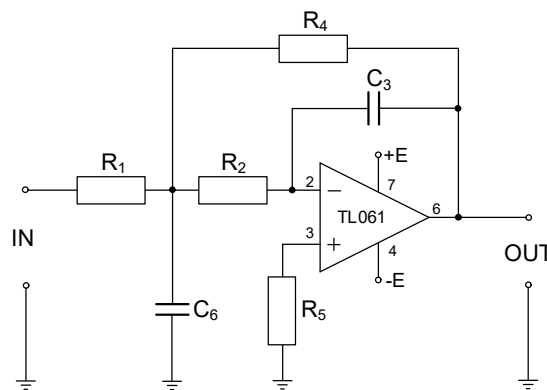


Fig.2 . Low-pass filter.

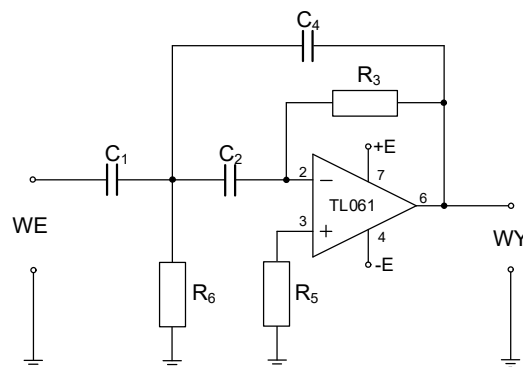


Fig.3 . High-pass filter.