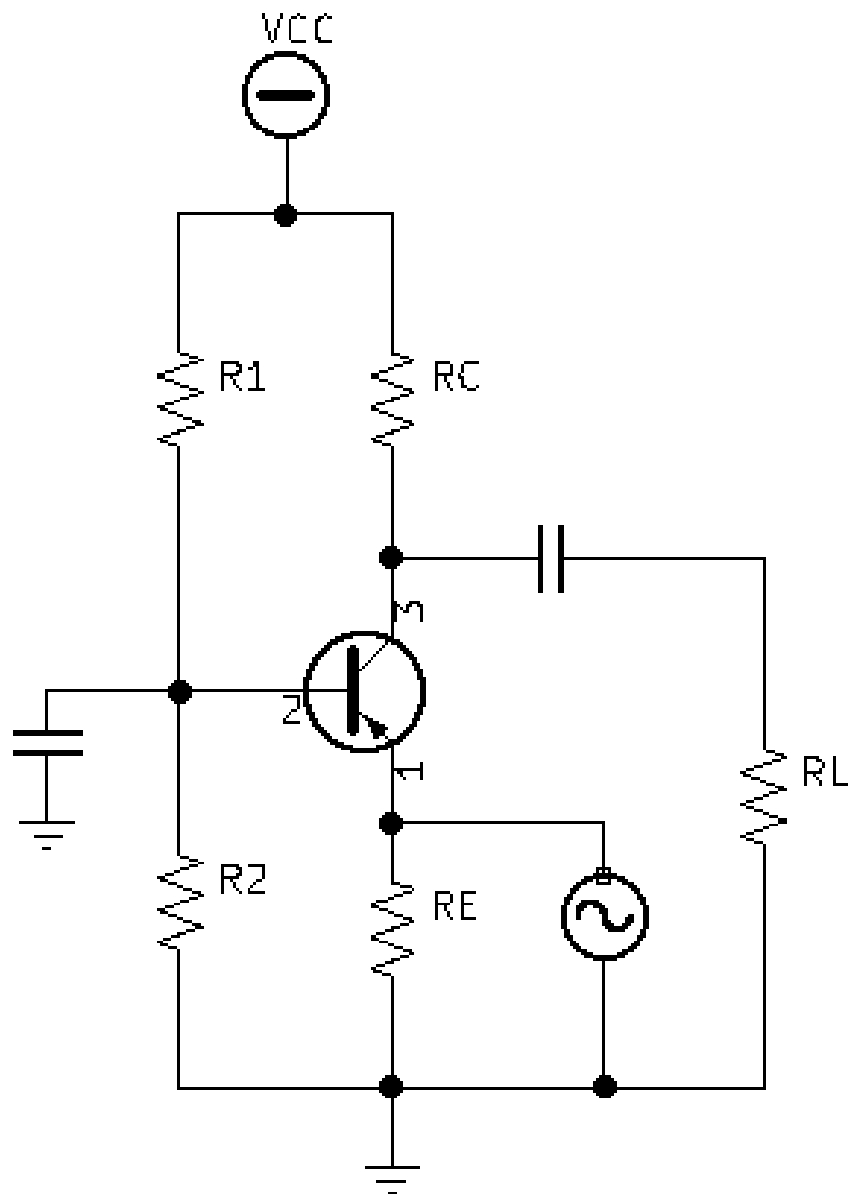
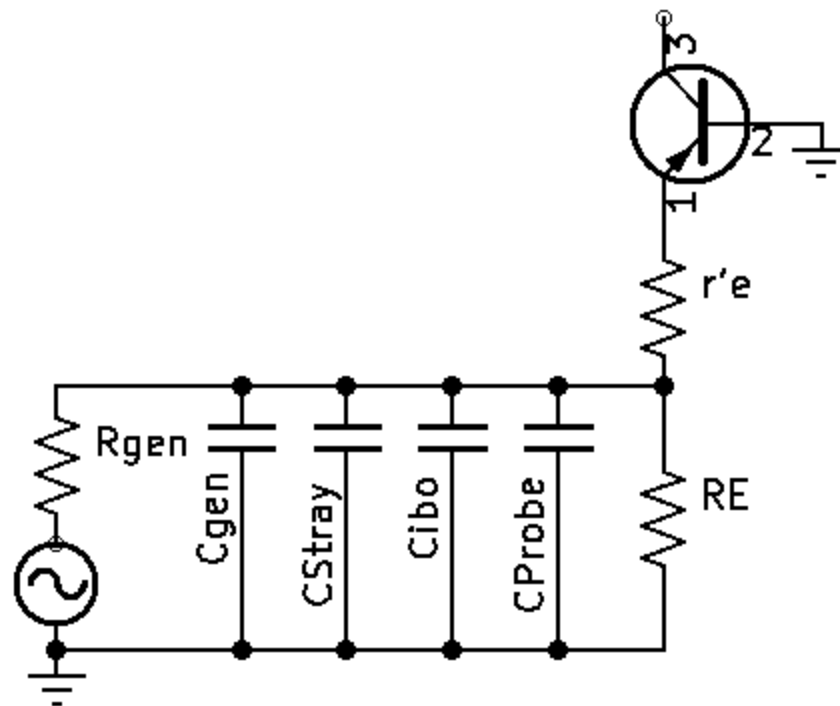


*fch Common Base:*

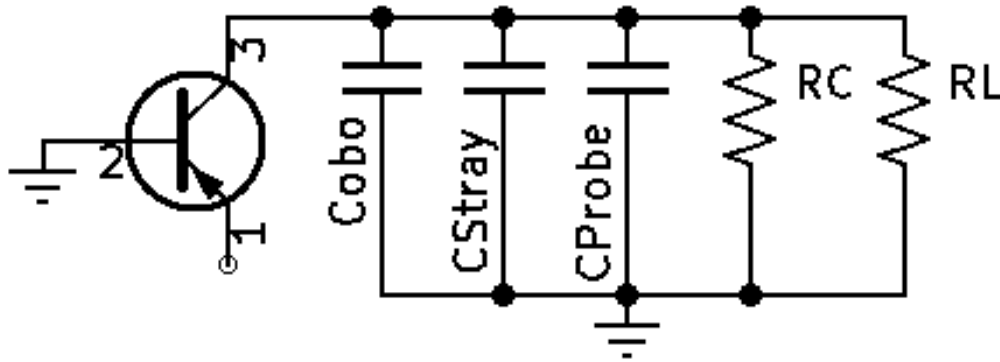


AC redraw of input at high frequency:



- Find  $C_{total_{in}}$ :
  - $C_{total_{in}} = C_{gen} + C_{stray} + C_{probe} + C_{ibo}$ 
    - $C_{gen} = \text{Measure, look up Specification in Manual}$
    - $C_{stray} \approx 10\text{pf}$
    - $C_{probe} \approx 16\text{pf}$  Measure, Specification in Manual
    - $C_{ibo} = \text{transistor data sheet value}$

AC redraw of output at high frequency:



- Find  $C_{total_{out}}$ :
  - $C_{total_{out}} = C_{obo} + C_{stray} + C_{probe}$ 
    - $C_{obo} = \text{transistor data sheet value}$
    - $C_{stray} \approx 10\text{pf}$
    - $C_{probe} \approx 16\text{pf}$  Measure, Specification in Manual

Calculate  $fch_{total}$ :

- Find  $fch_{in}$ :

$$\circ fch_{in} = \frac{1}{2\pi \times C_{total_{in}} \times R_{th_{in}}}$$

$$\blacksquare R_{th_{in}} \approx r'_e$$

$$\blacksquare R_{th_{in}} = R_{gen} // R_E // r'_e$$

- Find  $fch_{out}$ :

$$\circ fch_{out} = \frac{1}{2\pi \times C_{total_{out}} \times R_{th_{out}}}$$

$$\blacksquare R_{th_{out}} = R_C // R_L$$

$$\bullet fch_{total} = \frac{0.35}{\sqrt{\left(\frac{0.35}{fch_{in}}\right)^2 + \left(\frac{0.35}{fch_{out}}\right)^2}}$$