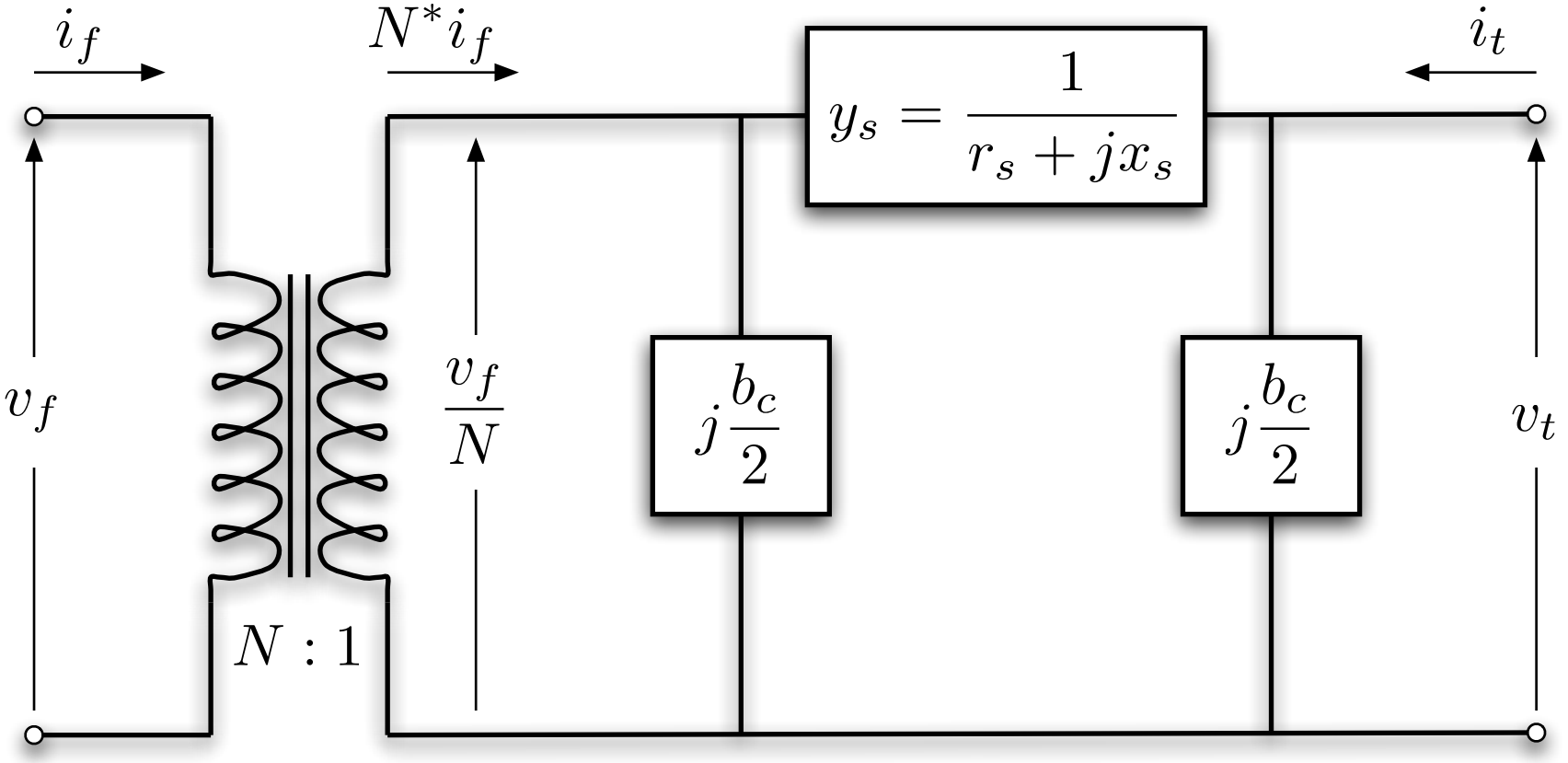

$$N = \tau e^{j\theta_{\text{shift}}}$$