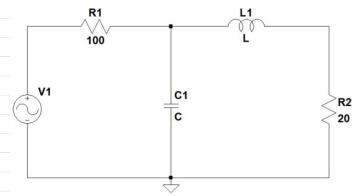
Lektion 6, Impedans tilpasning

06-03-2018



Den parallelle komponent placeres ved den højeste impedans

$$R_p = 100 \ \Omega$$

$$R_s = 20 \ \Omega$$

$$Q_s \coloneqq \sqrt{\frac{R_p}{R_s} - 1} = 2$$

$$Q_p \coloneqq Q_s$$

$$Q_p \coloneqq Q_s$$

$$X_p \coloneqq \frac{R_p}{Q_p} = 50 \ \Omega$$

$$X_s \coloneqq Q_s \cdot R_s = 40 \ \Omega$$

Bestem L og C i lavpas impedans tilpasningen

$$X_p = \underbrace{\frac{1}{250 \; MHz \cdot 2 \; \pi \cdot C}} \xrightarrow{solve, C} \underbrace{\frac{1}{25000 \cdot \pi \cdot MHz \cdot \Omega}} = 12.7 \; pF$$

$$X_s = 250 \; MHz \cdot 2 \; \pi \cdot L \xrightarrow{solve, L} \frac{2 \cdot \Omega}{25 \cdot \pi \cdot MHz} = 25.5 \; 10^{-9} \; H$$