

Chapter 11, Solution 86.

For maximum power transfer

$$\mathbf{Z_L} = \mathbf{Z_{Th}^*} \longrightarrow \mathbf{Z_i} = \mathbf{Z_{Th}} = \mathbf{Z_L^*}$$

$$\mathbf{Z_L} = \mathbf{R} + j\omega\mathbf{L} = 75 + j(2\pi)(4.12 \times 10^6)(4 \times 10^{-6})$$

$$\mathbf{Z_L} = 75 + j103.55 \, \Omega$$

$$\mathbf{Z_i} = [75 - j103.55] \, \Omega$$