

$$S_{11} := 0.95539 \angle 134.65^\circ$$

$$S_{21} := 1.760155 \angle 13.81^\circ$$

$$S_{12} := 0.034576 \angle -36.49^\circ$$

$$S_{22} := 0.48362 \angle 148.16^\circ$$

$$\Delta := S_{11} \cdot S_{22} - S_{12} \cdot S_{21} = 0.43 \angle -83.814^\circ$$

$$K := \frac{1 - |S_{11}|^2 - |S_{22}|^2 + |\Delta|^2}{2 |S_{12} \cdot S_{21}|} = 0.311 \angle 0^\circ$$

$$B_1 := 1 + |S_{11}|^2 - |S_{22}|^2 - |\Delta|^2$$

$$B_2 := 1 + |S_{22}|^2 - |S_{11}|^2 - |\Delta|^2$$

$$C_1 := S_{11} - \Delta \cdot \overline{S_{22}}$$

$$C_2 := S_{22} - \Delta \cdot \overline{S_{11}}$$

$$\Gamma_S := \frac{B_1 - \sqrt{B_1^2 - 4 \cdot |C_1|^2}}{2 \cdot C_1} = 1 \angle -140.909^\circ$$

$$\Gamma_L := \frac{B_2 - \sqrt{B_2^2 - 4 \cdot |C_2|^2}}{2 \cdot C_2} = 1 \angle 139.638^\circ$$

$$z_S := \frac{1 + \Gamma_S}{1 - \Gamma_S} = 0.355 \angle -90^\circ \quad z_L := \frac{1 + \Gamma_L}{1 - \Gamma_L} = 0.368 \angle 90^\circ$$

$$y_S := \frac{1}{z_S} = 2.817 \angle 90^\circ \quad y_L := \frac{1}{z_L} = 2.721 \angle -90^\circ$$

$$G_S := \frac{1}{1 - |\Gamma_S|^2} = ? \quad G_{SdB} := 10 \cdot \log(G_S) = ?$$

$$G_0 := |S_{21}|^2 = 3.098 \angle 0^\circ \quad G_{0dB} := 10 \cdot \log(G_0) = 4.911 \angle 0^\circ$$

$$G_L := \frac{1 - |\Gamma_L|^2}{|1 - S_{22} \cdot \Gamma_L|^2} = 0 \quad G_{LdB} := 10 \cdot \log(G_L) = ?$$

$$G_{Tmax} := G_{SdB} + G_{0dB} + G_{LdB} = ?$$

$$Z_S := z_S \cdot 50 = 17.751 \angle -90^\circ$$

$$Z_L := z_L \cdot 50 = 18.377 \angle 90^\circ$$

$$Y_S := \frac{y_S}{50} = 56.336 \cdot 10^{-3} \angle 90^\circ$$

$$Y_L := \frac{y_L}{50} = 54.415 \cdot 10^{-3} \angle -90^\circ$$