S_{11} = .2 Exp[I 50 °];

S_{14} = .4 Exp[I - 45 °];

S_{22} = .6 Exp[I 45 °];

S_{23} = .7 Exp[I - 45 °];

S_{32} = .7 Exp[I - 45 °];

S_{33} = .6 Exp[I 45 °]; S_{41} = .4 Exp[I - 45 °];

S_{44} = .5 Exp[I 45 °];

β = 45 °

45 °

Γ_{in} = S_{11} + $\dfrac{\left(S_{33} \text{ Exp}[I\ 2\ \beta]\ S_{41}\right)}{1 - S_{33}\ S_{44}\ \text{Exp}[I\ 2\ \beta]}$

0.0463152 + 0.135283 i

Gain = $\dfrac{S_{23}\ \text{Exp}[I\ \beta]\ S_{41}}{\left(1 + \Gamma_{in}\right)\ \left(1 - S_{33}\ S_{44}\ \text{Exp}[I\ 2\ \beta]\right)}$

- 0.037549 + 0.019777 i

Abs[Gain]

Arg[Gain] * 180 / π

0.0424389

152.224

-20 Log10[Abs[Gain]]

27.4447