$$att_P$$
 attenuation of the RF power in dB att_A attenuation of the RF amplitude in dB L loss $L=10^{rac{att_P}{10}}$ or $L=10^{rac{att_A}{20}}$ $A=(L+1)/(L-1)$ $Z_{
m in}$ desired input impedance in Ω $Z_{
m out}$ desired output impedance in Ω Pi attenuator $R_2=rac{L-1}{2}\cdot\sqrt{rac{Z_{
m in}\cdot Z_{
m out}}{L}}$

 $R_1 = \frac{1}{\frac{A}{Z_{in}} - \frac{1}{R_2}}$

 $R_3 = \frac{1}{\frac{A}{Z_{\text{out}}} - \frac{1}{R_2}}$