

$$2) \quad P = 1 \text{ W} \Rightarrow P = 10 \cdot \log \frac{1000 [\text{mW}]}{1 [\text{mW}]} = 30 \text{ dBm}$$

$$S = 0,5 \text{ W} = 10 \cdot \log 500 = 26,9897 \text{ dBm}$$

$$P + G - At = S$$

\hookrightarrow atenuación del coaxial fino y grueso
 \hookrightarrow Ganancia del amplificador en [dB]

$$\rightarrow 30 + G - At = 26,9897$$

$$G = 26,9897 - 30 + At$$

$$G = -3,0103 + At$$

Caso a) del coaxial fino

$$G = -3,0103 + 2S$$

$$G = 21,9897 \text{ dB}$$

$$\hookrightarrow \frac{500 \cdot 5}{100} \cdot \frac{\text{dB}}{\text{m}}$$

Caso b) del coaxial grueso

$$G = -3,0103 + 4$$

$$G = 0,9897 \text{ dB}$$

$$\wedge 4 = \frac{0,8 \text{ dB}}{100 \text{ m}} \cdot 500 \text{ m}$$