

2.3 Telegraphengleichung



$x=0$ absorbierendes Medium

$$\tilde{n}^* = n - i k$$

$$\tilde{\epsilon}^* = \epsilon' - i \epsilon''$$

$$\epsilon_0 \mu_0 = \frac{1}{c^2}$$

$$\frac{k^2}{c^2} = \left(\frac{\alpha c}{2\omega}\right)^2 \frac{1}{c^2} = \frac{\alpha^2}{4\omega^2}$$

$$\sigma = 2 n k \frac{\epsilon_0 \omega}{\mu_r} = 2 n \frac{\alpha c}{2\omega} \frac{\epsilon_0 \omega}{\mu_r} = n \frac{\alpha c \mu_0 \epsilon_0}{\mu_r} = n \frac{\alpha}{c \mu}$$