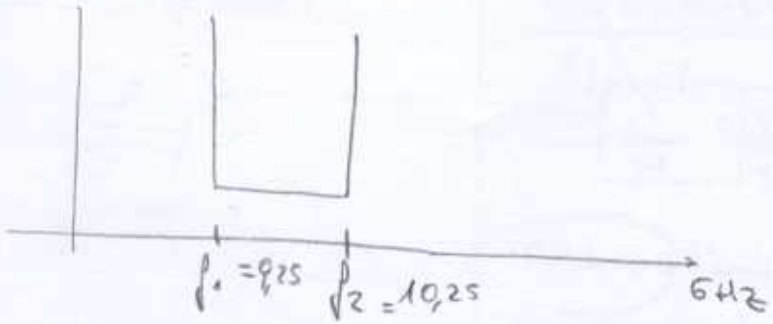
(5)



Atenuación: $|S_{21}| = \dfrac{1}{1+\left(\frac{\omega'}{\omega_1'}\right)^2}$

Atenuación a $f = 9$ GHz

$\dfrac{\omega'}{\omega_1'} = \dfrac{1}{w}\left(\dfrac{f}{f_0} - \dfrac{f_0}{f}\right) = \dfrac{1}{0,102699}\left(\dfrac{9\,GHz}{9,736GHz} - \dfrac{9,736GHz}{9GHz}\right) = \underset{-4,14}{-1,534722}$

con $w = \dfrac{f_2 - f_1}{f_0} = \dfrac{10,25 - 9,75}{9,99} = 0,102699$ ~~0,050~~

$f_0 = \sqrt{f_1 \cdot f_2} = 9,736GHz$ $9,9 = \sqrt{9,75 \cdot 10,25} = 9,996875$

$|S_{21}|^2 = \dfrac{1}{1+(-1,53)^2} = 0,298 \longrightarrow$ 0,055124

$\downarrow 10\log = -12,6\,dB$

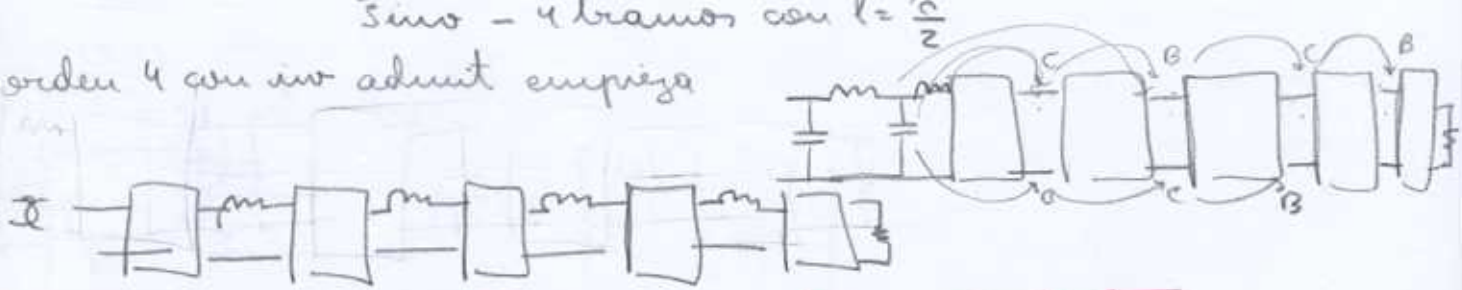
(4) Filtro de orden 4 con inversores de impedancia.

orden filtro + 1 = # inv

↓

Sino – 4 tramos con $l = \frac{\lambda}{2}$

orden 4 con inv admit empieza



Un inversor de admitancia se realiza: (admitancia → impedancia)

- $\bar{B} > 0 \rightarrow C \Rightarrow l_{i,i+1} > 0 \rightarrow$ tramo $> \frac{\lambda}{2}$
- $\bar{B} < 0 \rightarrow$ Bobina $\Rightarrow l_{i,i+1} <$ tramo $< \frac{\lambda}{2}$

Un inversor de admitancia se realiza:

- $\bar{x} > 0 \rightarrow$ Bobina $\rightarrow l_{i,i+1} > 0 \rightarrow$ tramo $> \frac{\lambda}{2}$
- $\bar{x} < 0 \rightarrow$ C $\longrightarrow l_{i,i+1} < 0 \rightarrow$ tramo $< \frac{\lambda}{2}$