

Atividade de PDS – Danilo C. Celestino – 201207140064

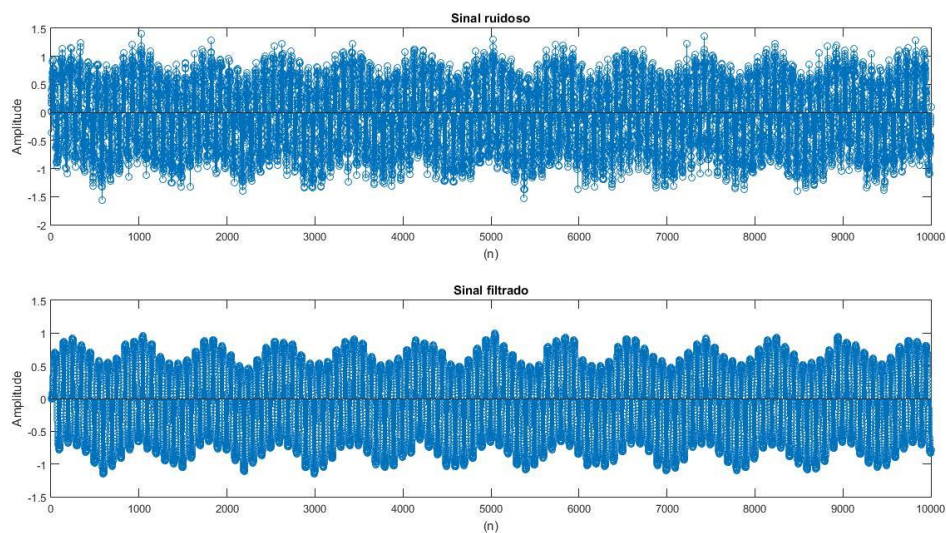
Para a realização dessa atividade utilizou-se os scripts p1.m e p2.m, e para o caso 2 foi utilizado o áudio “net2.wav”. O áudio “netruído.wav” refere-se o áudio com ruído somado a ele.

Foi utilizado Filtro Passa baixa Butterwoth para ambos os casos. ordem 3 para o caso 1 e ordem 40 para o caso 2.

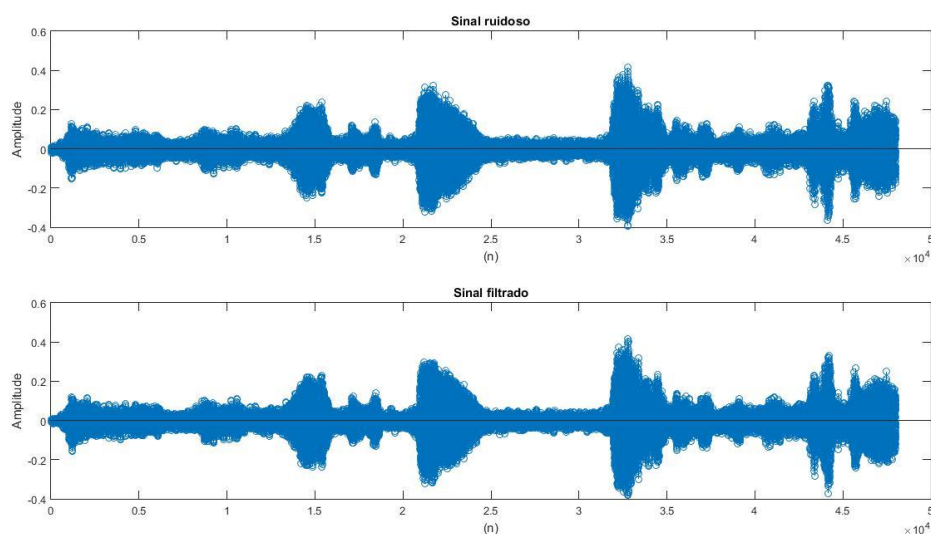
GRÁFICOS NO DOMÍNIO DO TEMPO DISCRETOS

Sinal ruidoso ($q[n]$) e sinal filtrado ($y[n]$)

Caso 1:

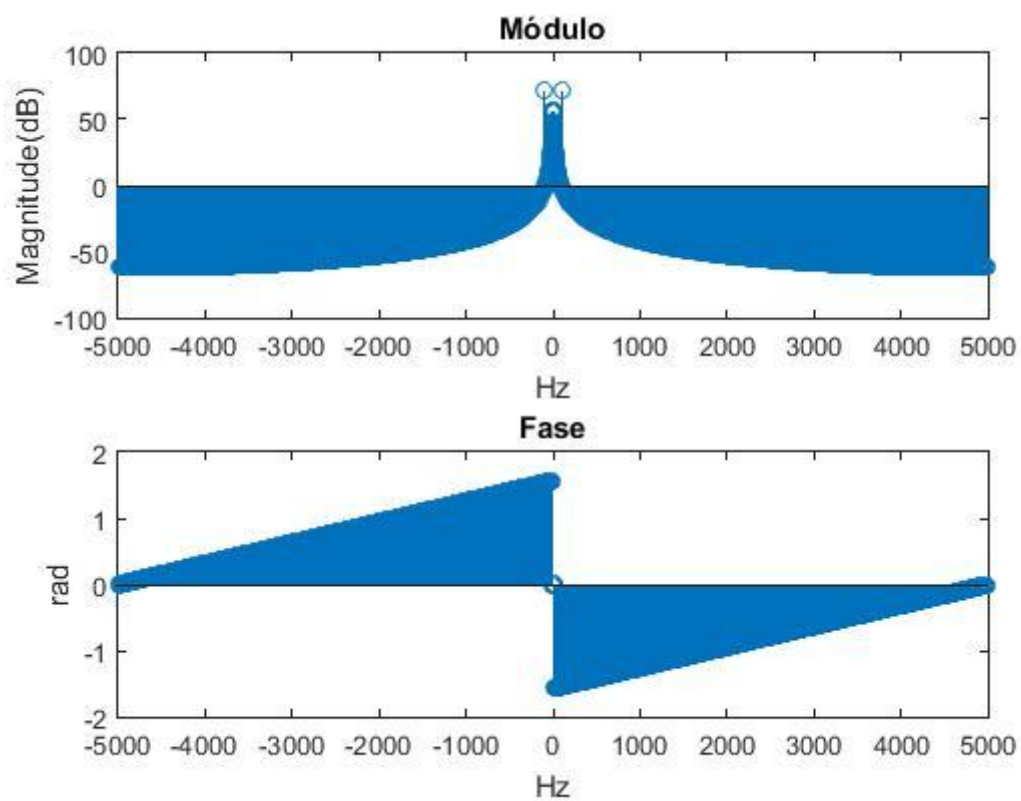


Caso 2:

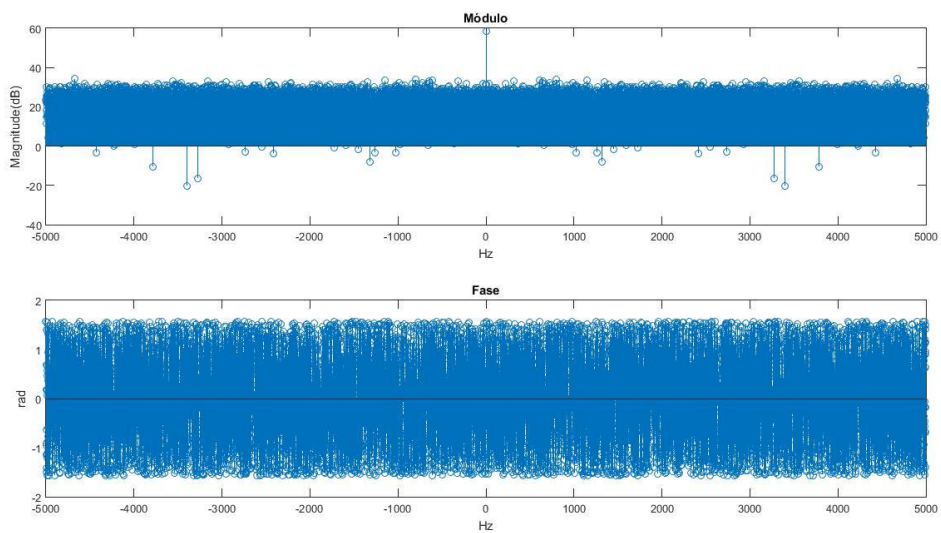


GRÁFICOS NO DOMÍNIO DA FREQUÊNCIA (DISCRETA)

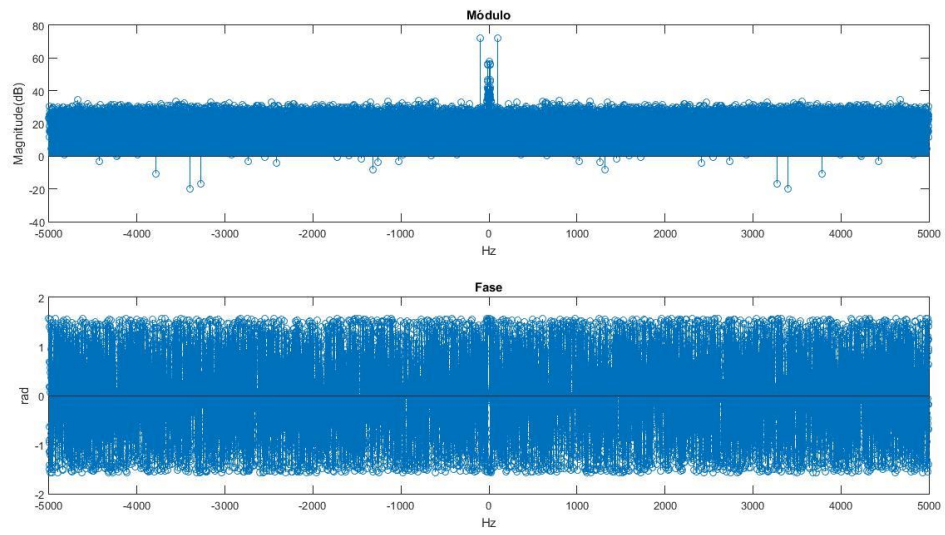
Caso1:
X (sinal original)



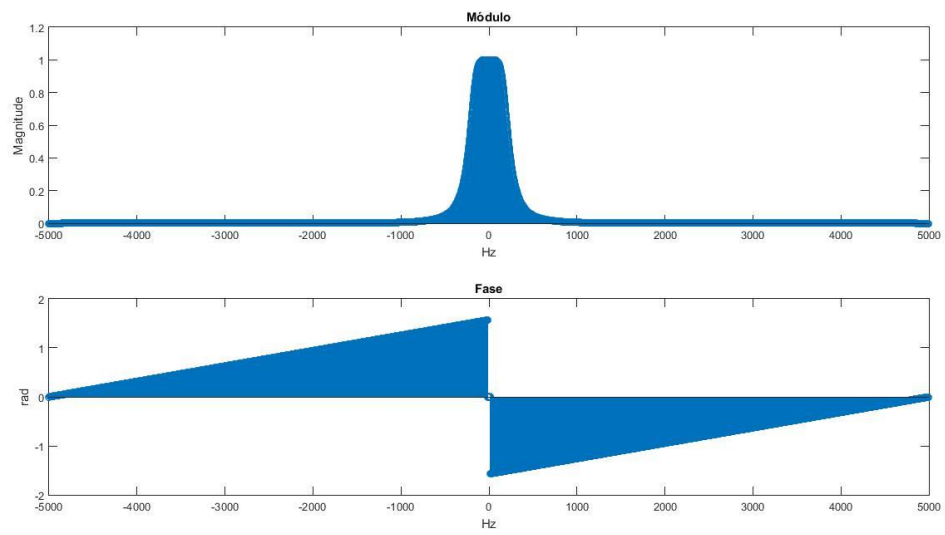
R (ruído),



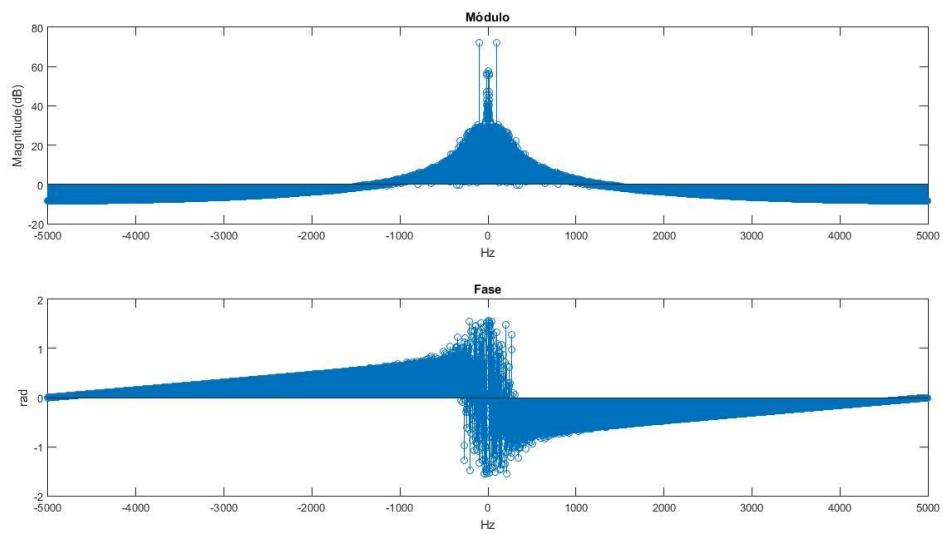
Q (sinal com ruído)



H (filtro)

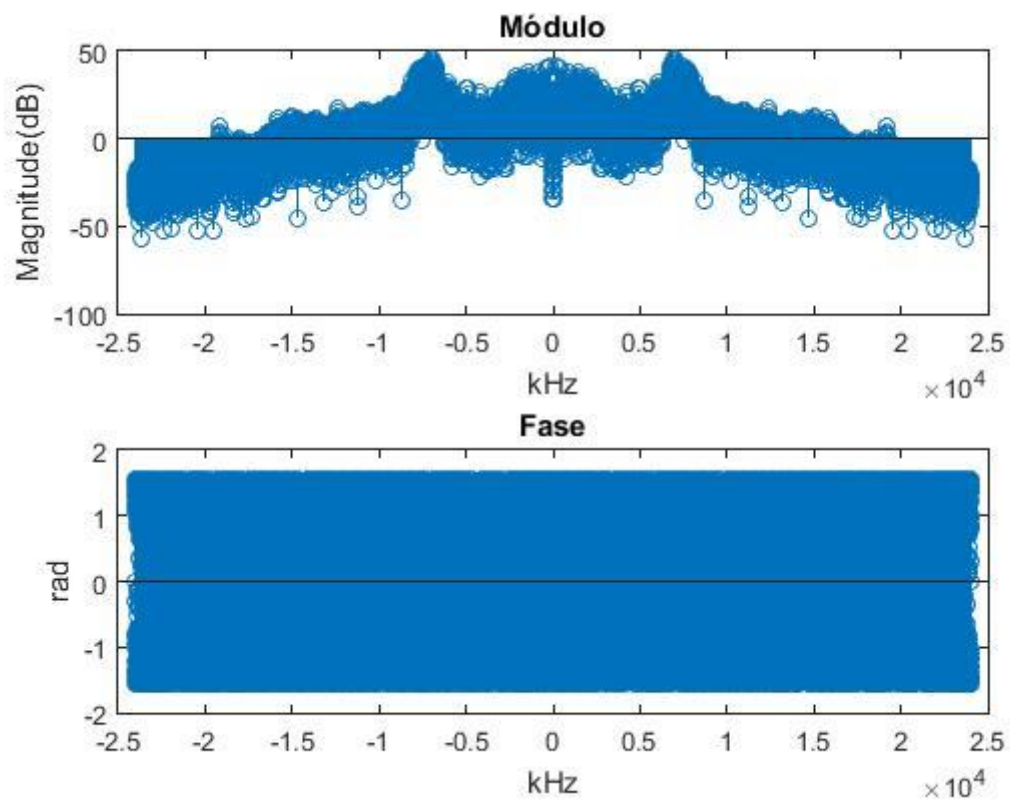


Y (sinal filtrado)

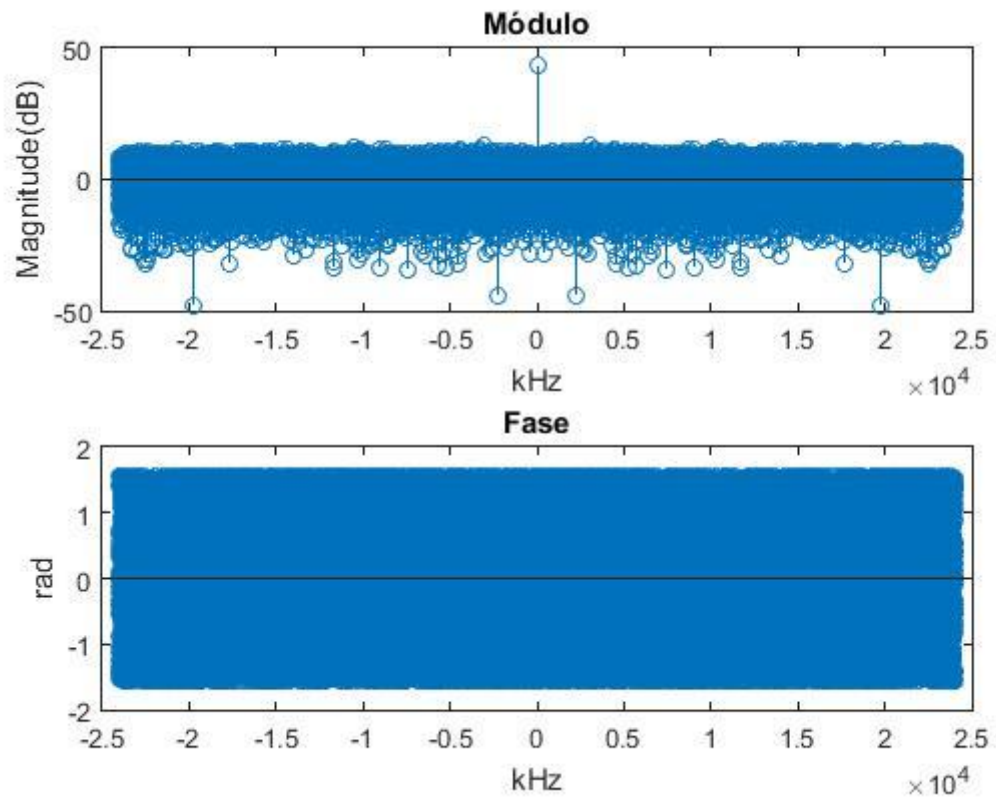


Caso 2

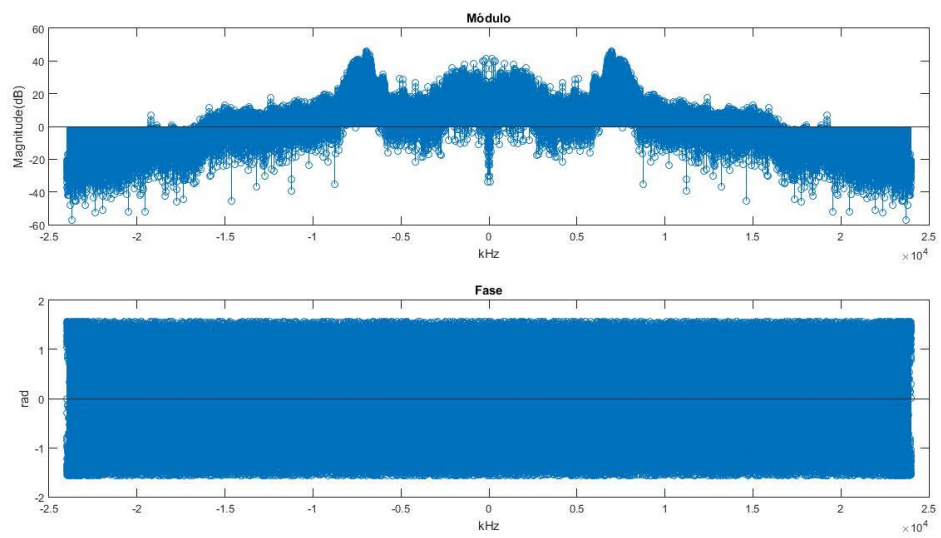
X (sinal original)



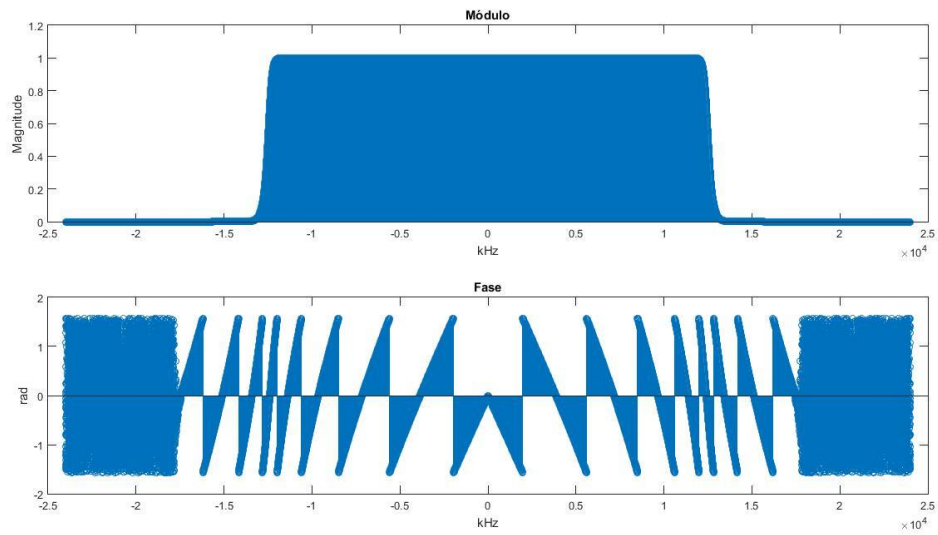
R (ruído),



Q (sinal com ruído)



Filtro (H)



Y (sinal filtrado)

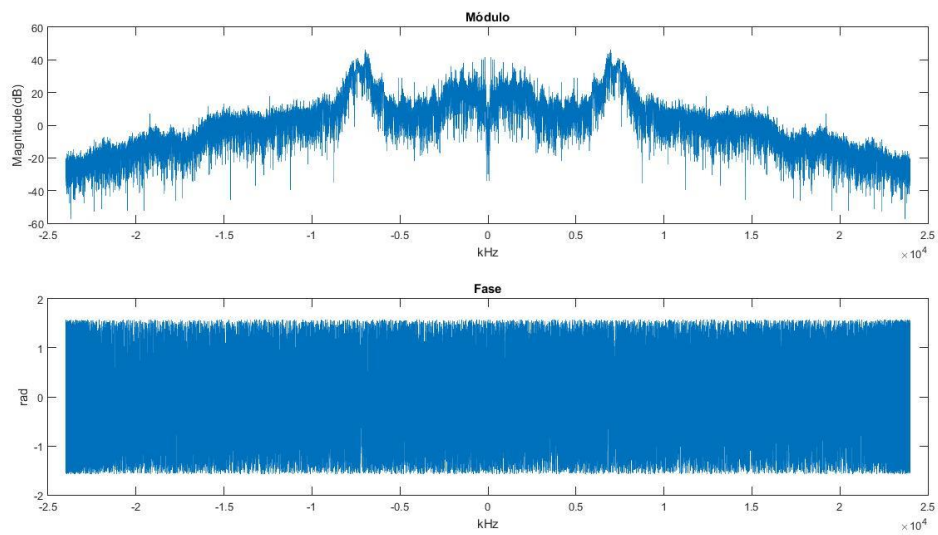
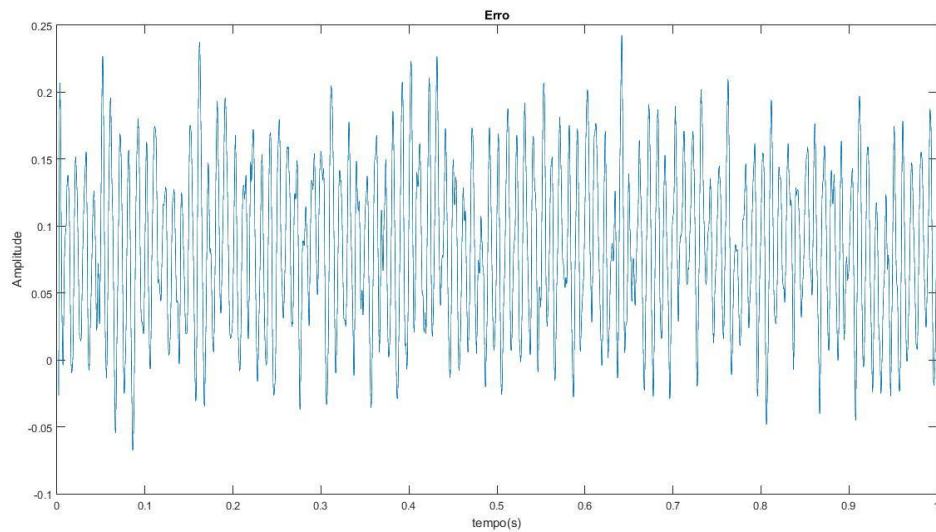
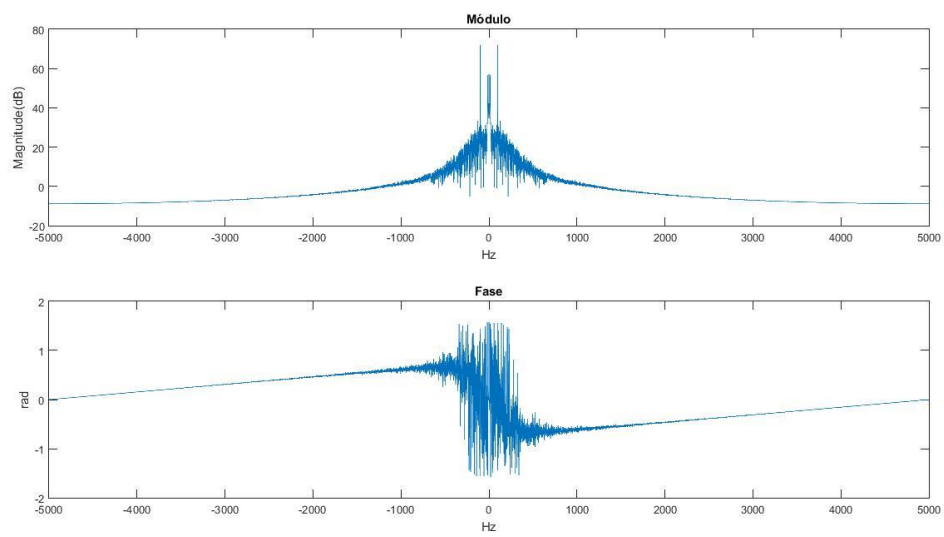


Gráfico do sinal erro para o caso 1

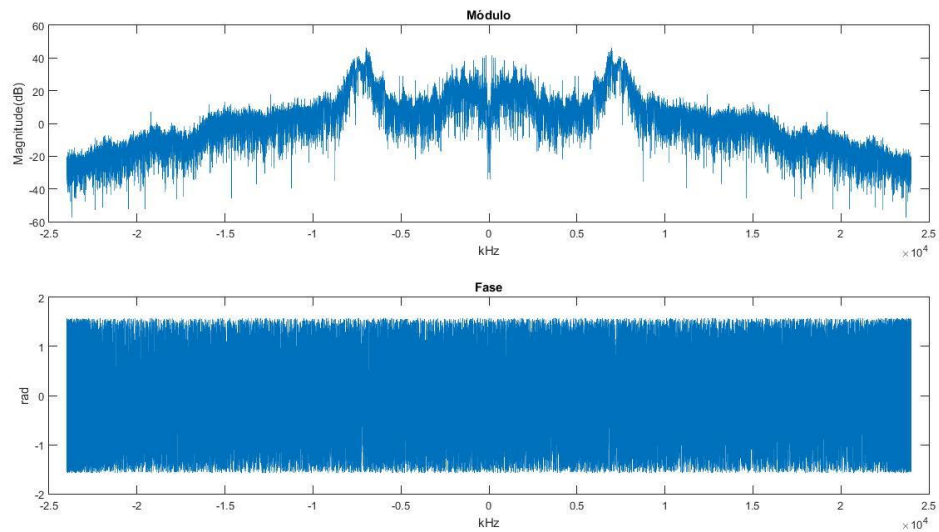


GRÁFICOS NO DOMÍNIO DA FREQUÊNCIA CONTÍNUA DE MÓDULO E FASE DE $Y(f)$

Caso 1



Caso 2



Cálculo da razão $RSR_2 = P_x / P_e$, em escala linear e da figura de mérito $FM = RSR_2 / MULT$

Caso 1

// $P_x=0.34$; $P_r=0,034$ $RSR=10$

$MULT=3$; $FM=3,3333...$

Caso 2

$P_x=0.0047$; $P_r=4,6958 \cdot 10^{-5}$ $RSR=100$

$MULT=40$; $FM=2.5$