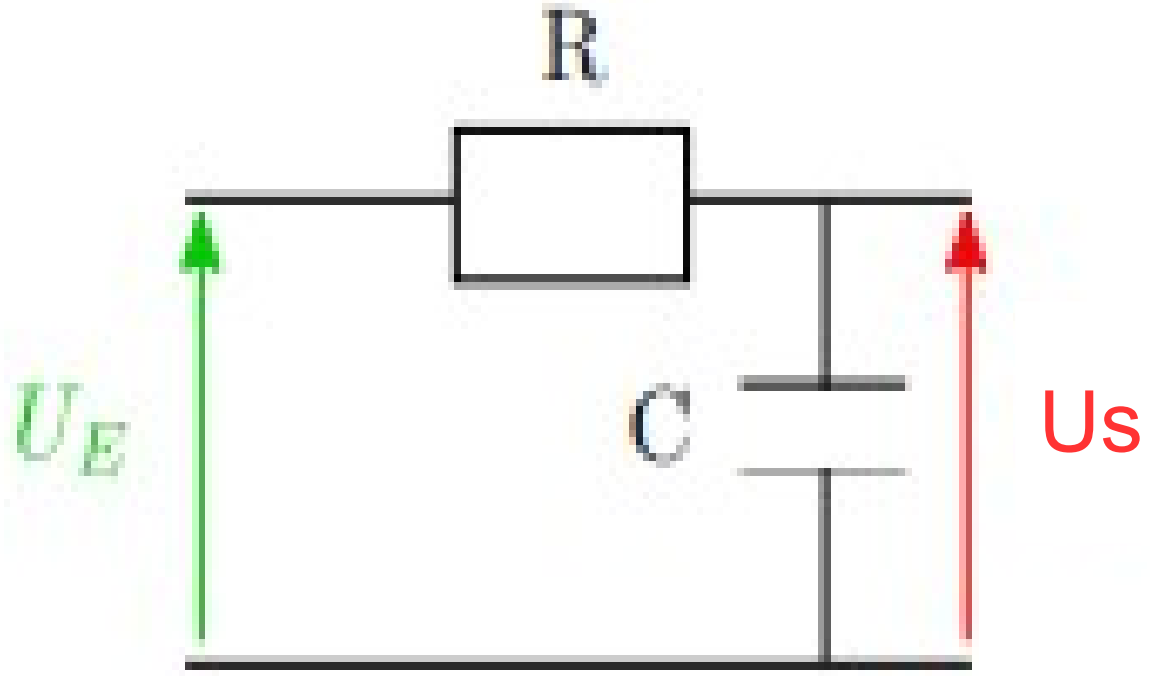
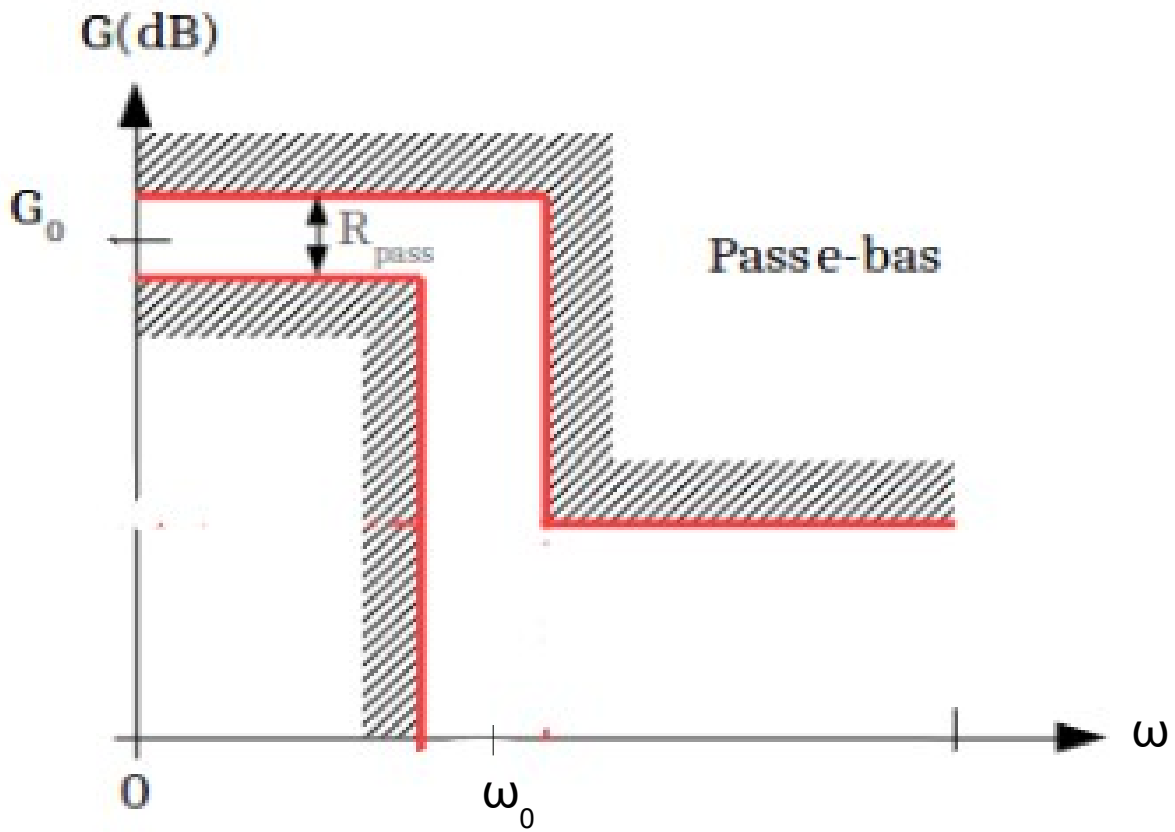
Filtrages

Circuit RC



Gabarit d'un filtre passe-bas

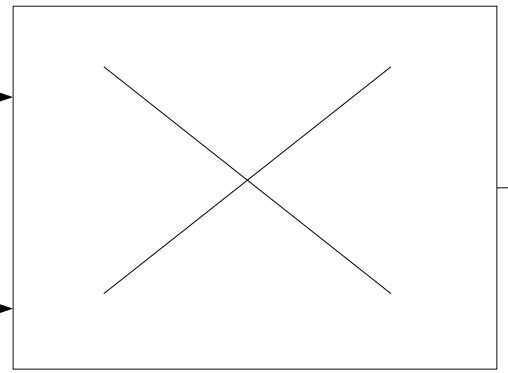


Détection synchrone

Multiplieur

$Sm = Am\cos(2\pi\, fmt + \phi)$

$Sp = Ap\cos(2\pi\, fpt)$



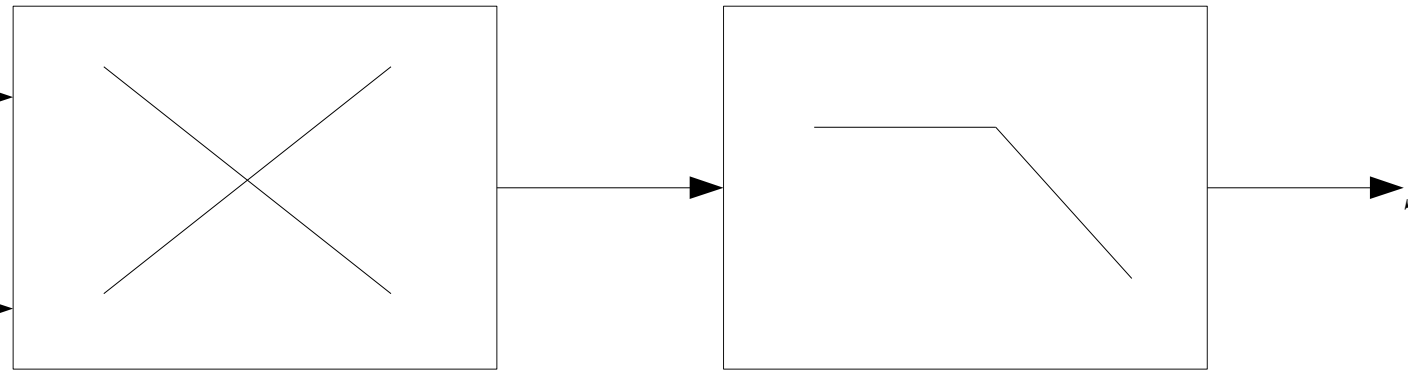
$$Stot = \frac{AmAp}{2}\left(\cos(2\pi(fm - fp)t + \phi) + \cos(2\pi(fm + fp)t + \phi)\right)$$

Détection synchrone

Multiplieur **Filtre passe bas**

$Sm = Am\cos(2\pi\, fmt + \phi)$

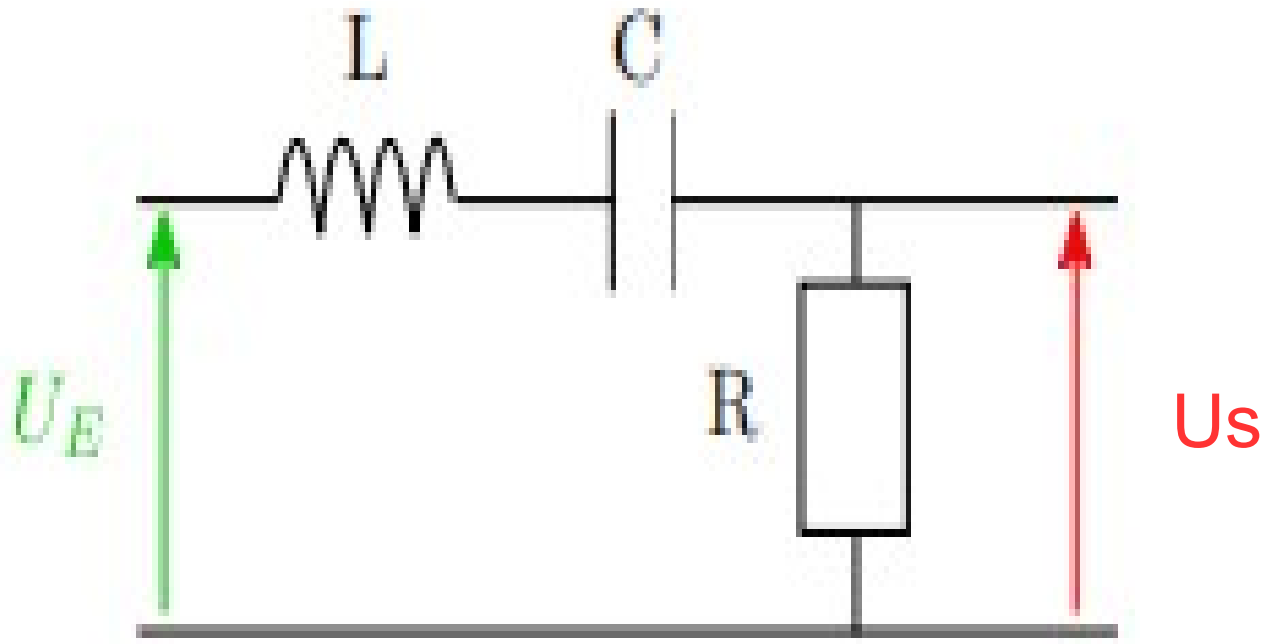
$Sp = Ap\cos(2\pi\, fpt)$



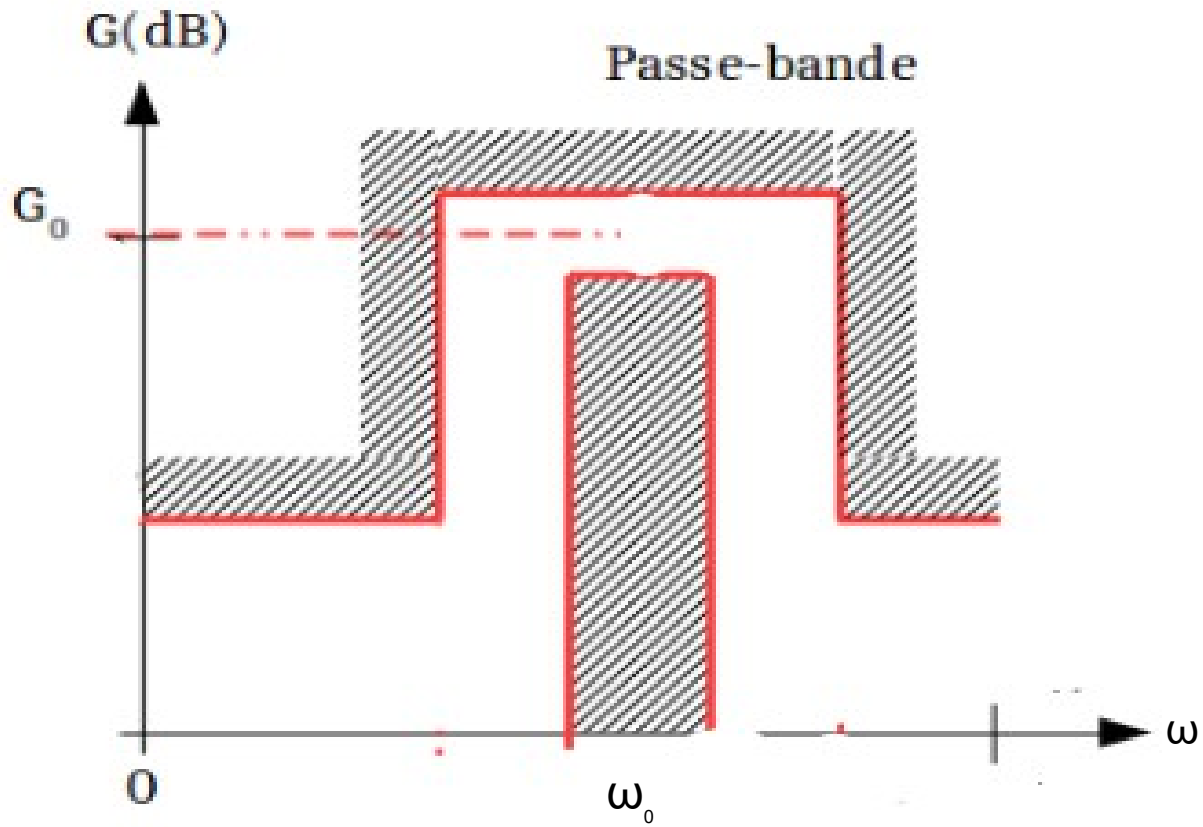
$Sfinal = \frac{AmAp}{2}\cos(2\pi(fm - fp)t + \phi)$

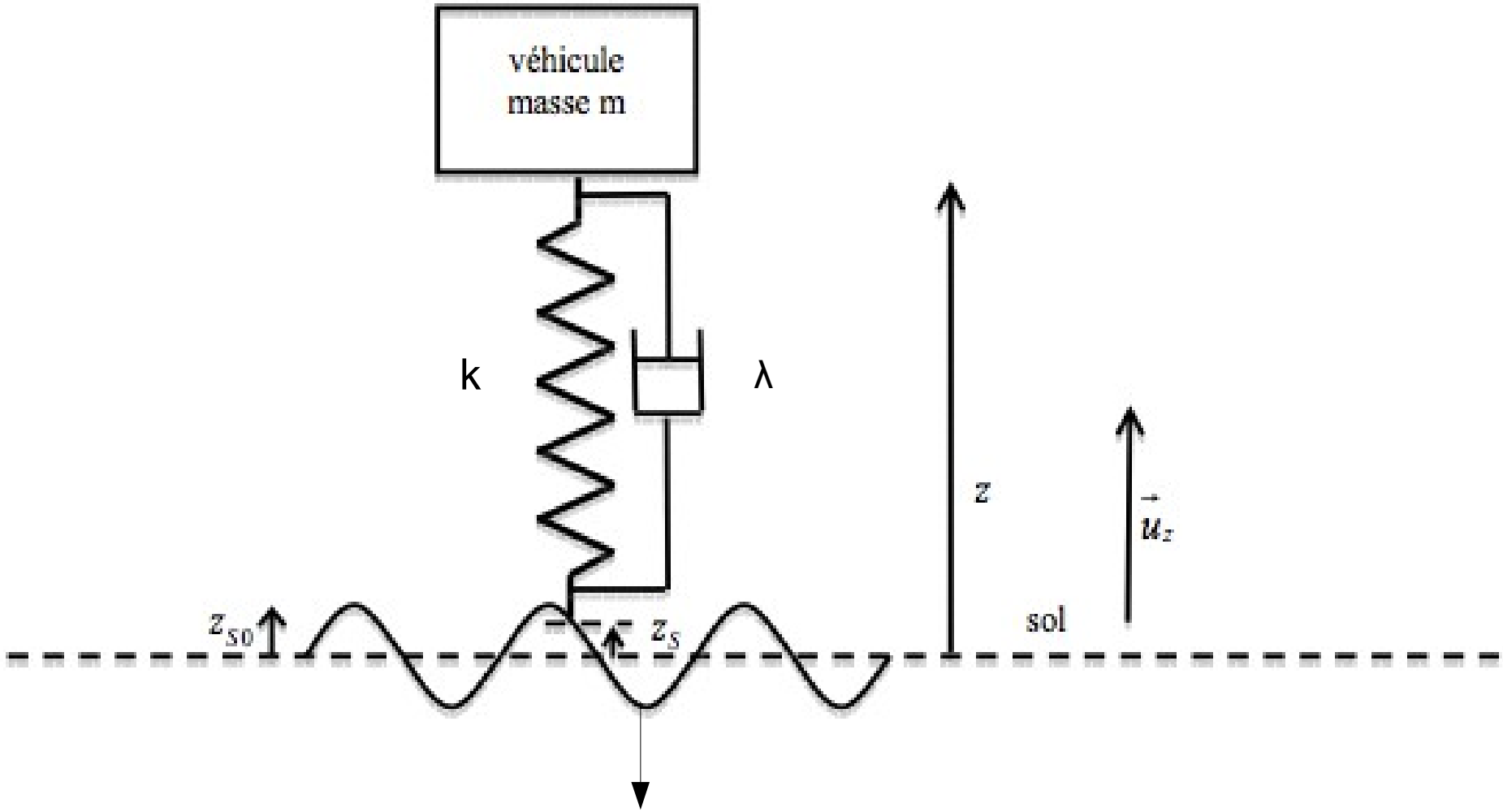
$Stot = \frac{AmAp}{2}(\cos(2\pi(fm - fp)t + \phi) + \cos(2\pi(fm + fp)t + \phi))$

Circuit RLC



Gabarit d'un filtre passe-bande




véhicule
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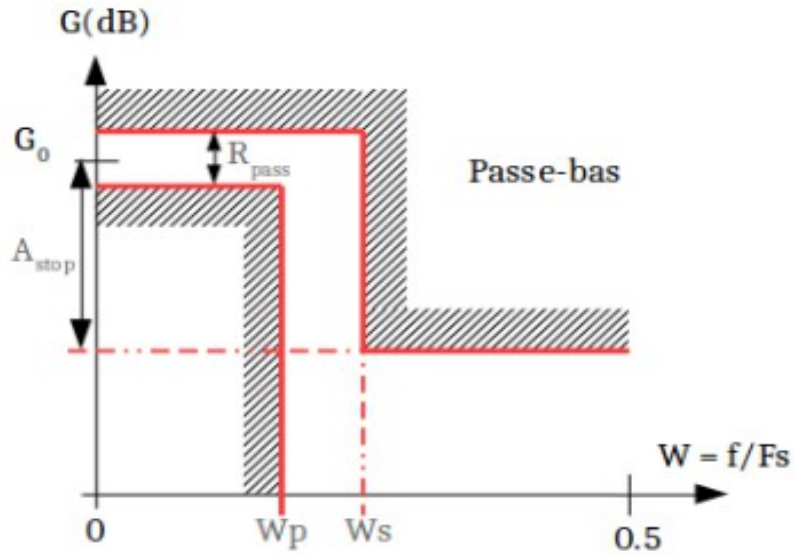
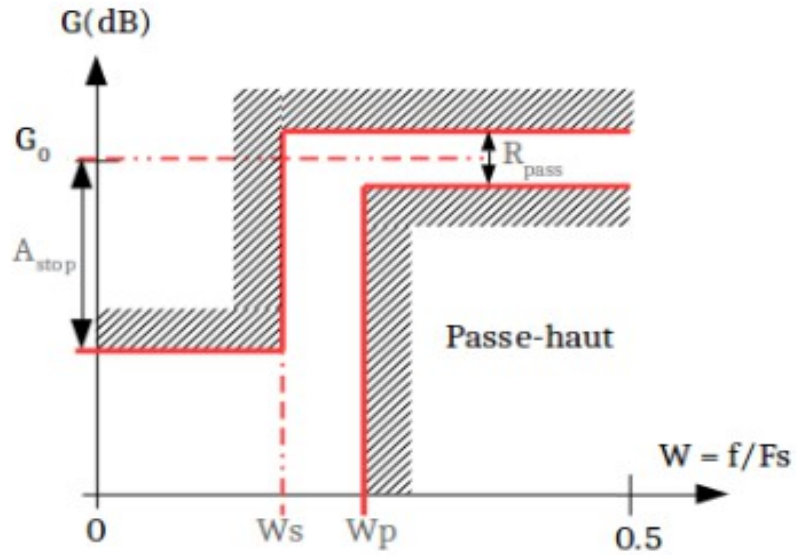
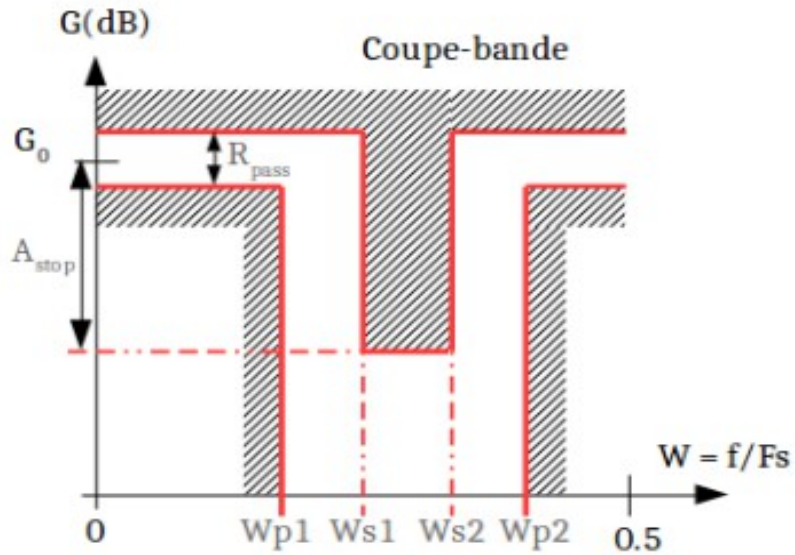
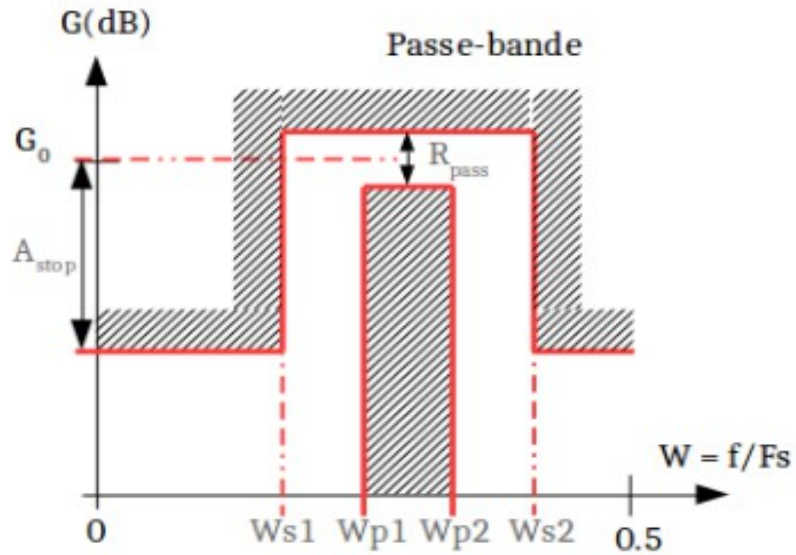
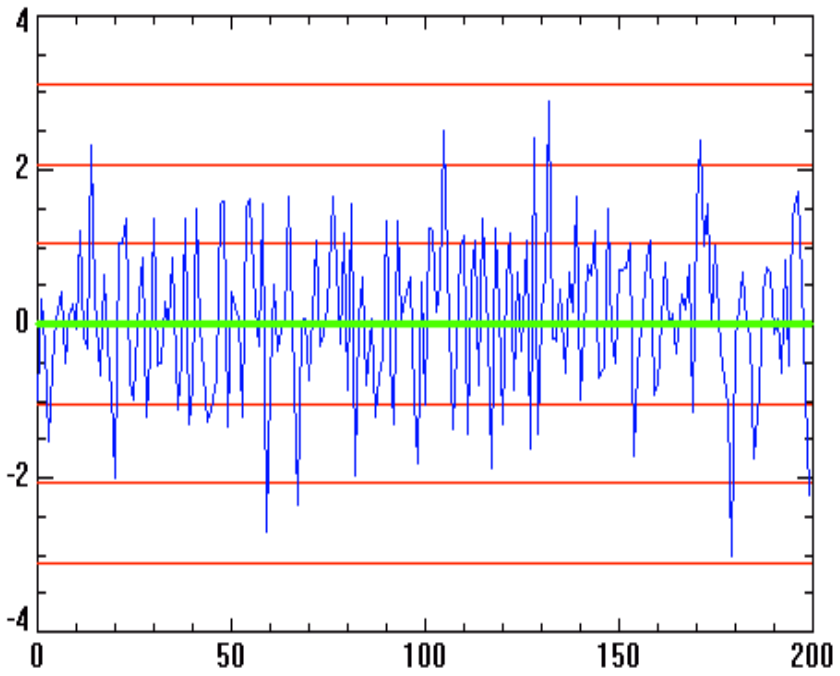
z_{S0}
z_S
sol
Irrégularités de la route

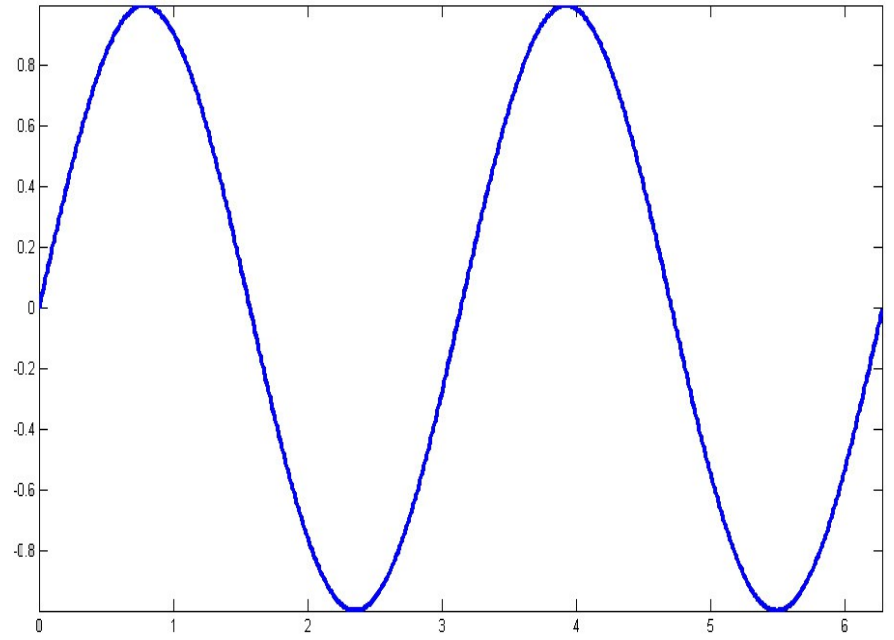

G(dB)
G0
Rpass
Astop
Passe-bas
W = f/Fs
0
Wp
Ws
0.5


G(dB)
G0
Rpass
Astop
Passe-haut
W = f/Fs
0
Ws
Wp
0.5


G(dB)
Coupe-bande
G0
Rpass
Astop
W = f/Fs
0
Wp1
Ws1
Ws2
Wp2
0.5


G(dB)
Passe-bande
G0
Rpass
Astop
W = f/Fs
0
Ws1
Wp1
Wp2
Ws2
0.5





Réception

FILTRAGE