

Σφάλμα συχνότητας ΔF

$$\begin{aligned}
 v(t) &= \underbrace{s(t)}_{m(t)} \cdot A_c' \cos[2\pi(f_c + \Delta F)t] = \\
 &= A_c \cdot \cos(2\pi f_c t) m(t) \cdot A_c' \cos[2\pi(f_c + \Delta F)t] = \\
 &= \frac{1}{2} A_c \cdot A_c' m(t) \cos(2\pi \Delta F t) + \frac{1}{2} A_c A_c' \cos[2\pi(f_c + \Delta F)t] m(t) =
 \end{aligned}$$

μετά το
βαθυπερατό
φίλτρο

$$\frac{1}{2} A_c \cdot A_c' \cos(2\pi \Delta F t) m(t)$$

○

$$\begin{aligned}
 x_1(t) &= A_c m_1(t) \cos(2\pi f_c t) + A_c m_2(t) \sin(2\pi f_c t) \cdot \cos(2\pi f_c t) = \\
 &= A_c \frac{1}{2} m_1(t) + A_c \frac{1}{2} m_1(t) \cos(2\pi f_c t) + A_c \frac{1}{2} m_2(t) \sin(4\pi f_c t) = \\
 &\overset{\text{φίλτρο}}{=} A_c \frac{1}{2} m_1(t)
 \end{aligned}$$

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