$T_и := 6 \cdot 10^{-3}\ c$

$\alpha := 4 \cdot 10^{4}\ c^{-1}$

$\sigma_x := 0.7\ B$

$R_x(\tau) := \sigma_x^{2} \cdot \frac{\sin(\alpha \cdot \tau)}{\alpha \cdot \tau}$

$\tau_{kx} := \frac{\pi}{2 \cdot \alpha} = 39.27 \times 10^{-6}$

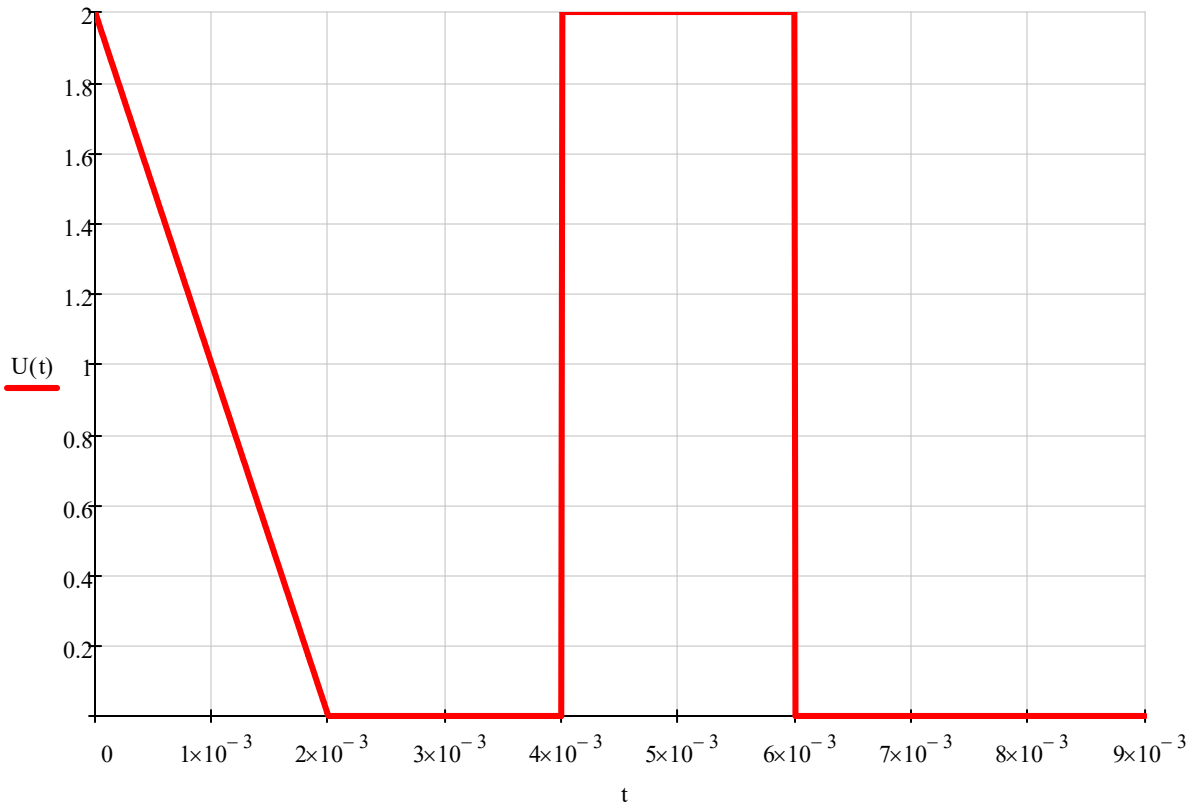
$W_{max.x} := \frac{\pi \cdot \sigma_x^{2}}{\alpha} = 38.485 \times 10^{-6}$

$\Delta\omega_{ef.x} := \alpha = 40 \times 10^{3}$

$W_x(\omega) := W_{max.x} \cdot 1(\alpha - |\omega|)$

$U_0 := 2$

$U(t) := U_0 - \frac{U_0 \cdot 3}{T_и} \cdot t \cdot 1(t) + \frac{U_0 \cdot 3}{T_и} \cdot \left(t - \frac{T_и}{3}\right) \cdot 1\left(t - \frac{T_и}{3}\right) + U_0 \cdot 1\left(t - \frac{2T_и}{3}\right) - U_0 \cdot 1\left(t - T_и\right)$



$Q_{вх} := \frac{U_0^{2}}{\sigma_x^{2}} = 8.163$

График функции корреляции на входе фильтра

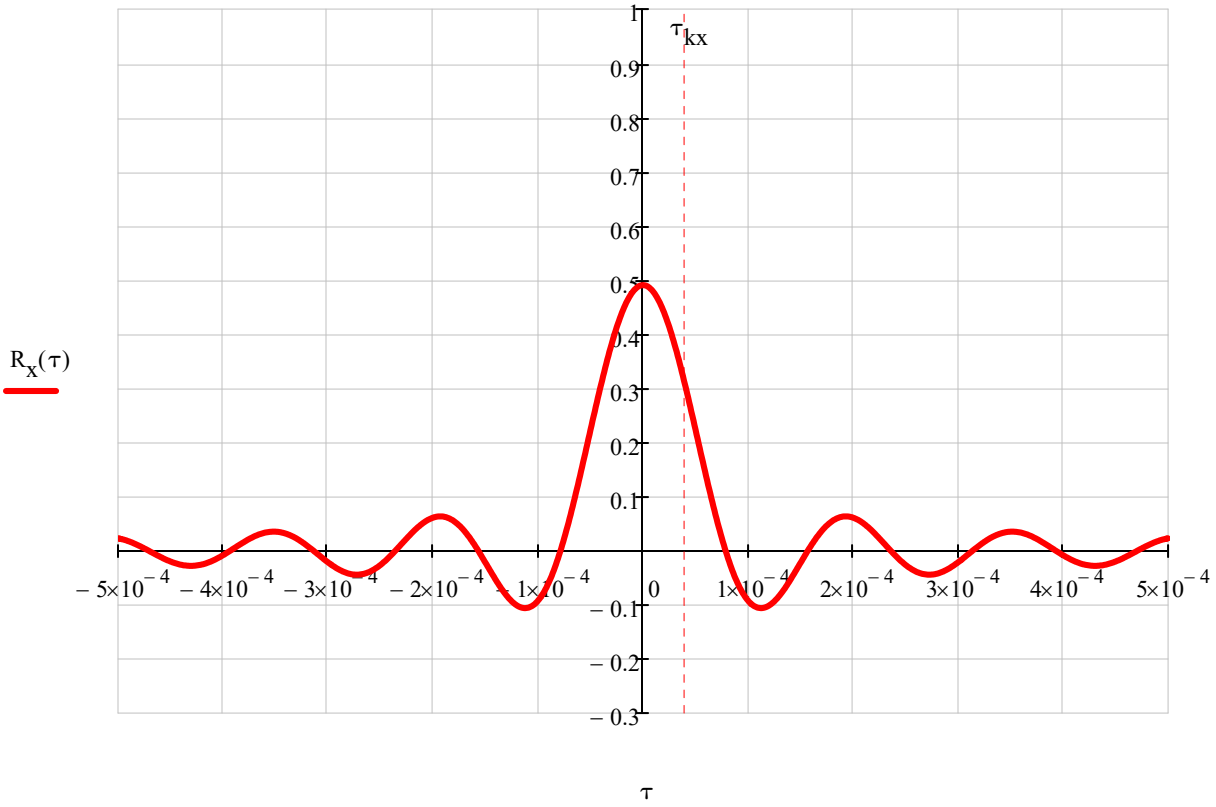
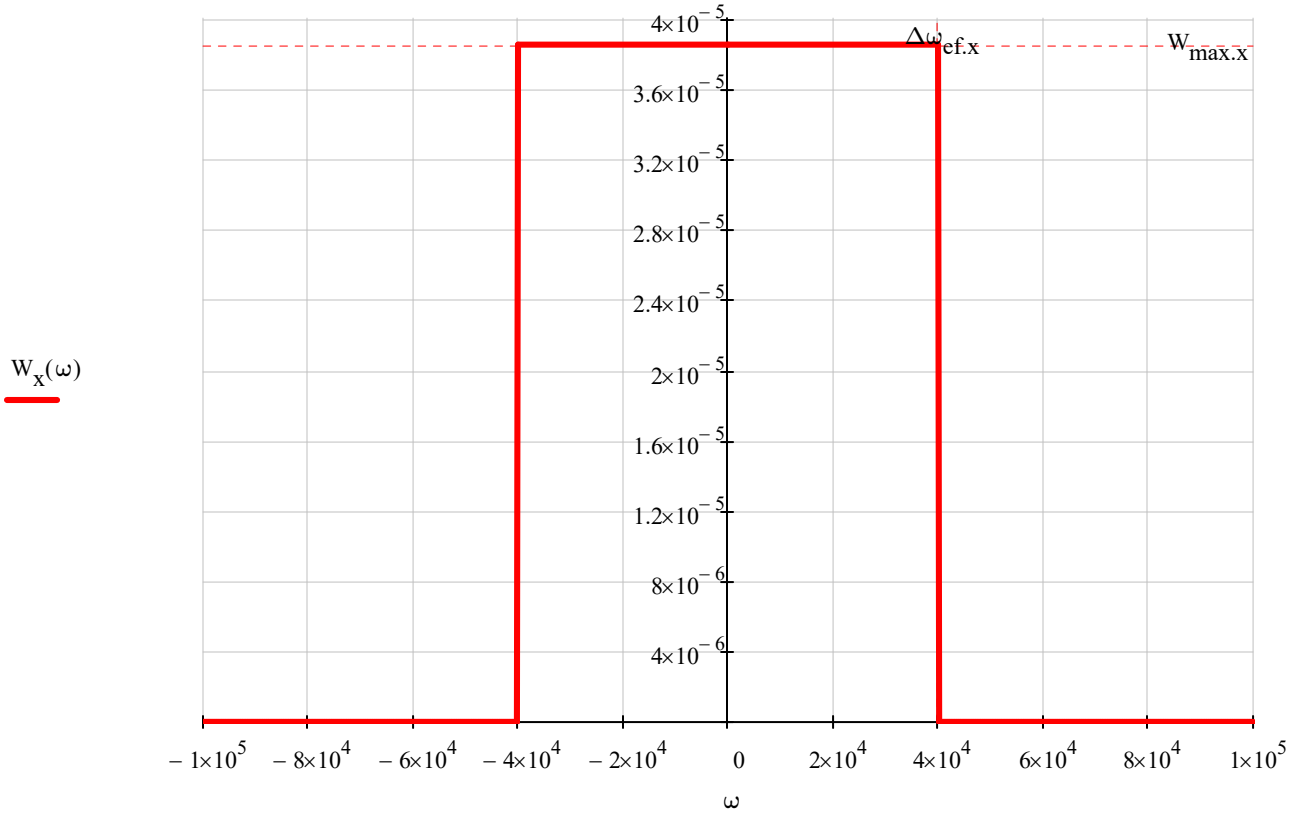


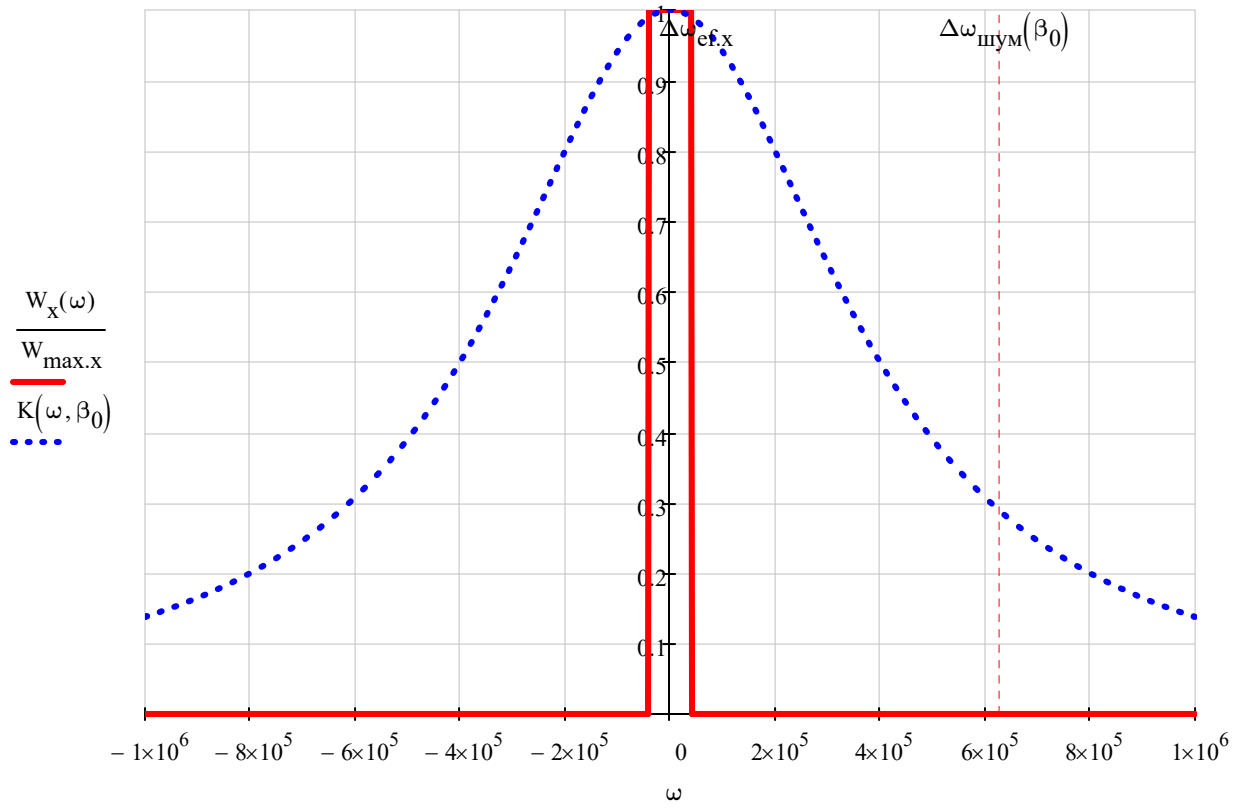
График спектра мощности шума на входе фильтра



$\beta_0 := 10\alpha = 400 \times 10^3$

$\Delta\omega_{шум}(\beta) := \frac{\pi \cdot \beta}{2}$

$K(\omega, \beta) := \frac{\beta^2}{\beta^2 + \omega^2}$



$W_y(\omega) := W_x(\omega) \cdot K(\omega, \beta_0)$