

Układy ze sprzężeniem zwrotnym rzeczywistym. Zakres większych częstotliwości

Tablica 4

Schemat	(a)	(b)	(c)	(d)	(e)
Funkcja wzmocnienia $\frac{K(p)}{K(0)}$	$\frac{b_0}{p^n + b_{n-1}p^{n-1} + \dots + b_0} = \prod_{m=1}^n \frac{\hat{p}_m}{p - \hat{p}_m}$	$\prod_{m=1}^n \frac{\hat{p}_m}{p - \hat{p}_m}$	jak w (a)	jak w (b)	$\frac{\hat{p}_1 \hat{p}_2 \hat{p}_3}{\prod_{m=1}^3 (p - \hat{p}_m)}$
Oznaczenia	$p = j \frac{\omega}{\omega_g}$	$\hat{p}_m = -a_m + j\beta_m = -\frac{1}{2\omega_g C} \times (G_m + 2G_{m,m+1} + G_{m+1}) + j \frac{1}{\omega_g C} \times \sqrt{(S - G_{m,m+1})G_{m,m+1} - \frac{1}{4}(G_m - G_{m+1})^2}$ $\hat{p}_{m+1} = \check{p}_m$ $K(0) \approx \left(\frac{S}{\omega_g C}\right)^n \prod_{m=1}^n \left(\frac{1}{\hat{p}_m}\right)$	—	$\hat{p}_m = -a_m + j\beta_m \approx -\frac{1}{2\omega_g C} \times (G_m + G_{m+1} + G_{m,m+1}) + j \frac{1}{\omega_g C} \times \sqrt{\frac{R_{km}}{R_{m,m+1}} S_m S_{m+1} - \frac{1}{4}(G_m - G_{m+1} - G_{m,m+1})^2}$ $\hat{p}_{m+1} = \check{p}_m$ $K(0) \approx \left(\frac{S}{\omega_g C}\right)^n \prod_{m=1}^n \left(\frac{1}{\hat{p}_m}\right)$	$\hat{p}_3 = -\frac{1}{\omega_g C R_3}$ $\hat{p}_{1,2} = -\frac{1}{2\omega_g C} (G_m + G_{m+1}) \pm j \frac{1}{\omega_g C} \times \sqrt{\frac{S_1 S_2 S_3}{1 + SR_{k1}} - \frac{1}{4}(G_m - G_{m+1})^2}$