

$$S_3 = -\frac{S_2}{jRC\omega} \rightarrow \frac{S_3}{e} = -\frac{1}{jRC\omega} \cdot \frac{S_2}{e}$$

$$\frac{S_3}{e} = \frac{1}{1 + jRC\omega + (jRC\omega)^2} \Rightarrow \left| \frac{S_3}{e} \right| = \frac{1}{\sqrt{[1 - R^2C^2\omega^2]^2 + R^2C^2\omega^2}}$$

$$\omega \rightarrow 0 \Rightarrow \left| \frac{S_3}{e} \right|_{dB} \rightarrow 0 \text{ dB.}$$

$$\omega \rightarrow \infty \Rightarrow \left| \frac{S_3}{e} \right|_{dB} \rightarrow -\infty.$$

Passe Bas.

$$\frac{S_4}{e} = -\left(\frac{S_3}{e} + \frac{S_1}{e}\right) = -\left(\frac{1 + (jRC\omega)^2}{\text{Dénom}}\right) \Rightarrow \left| \frac{S_4}{e} \right| = \frac{\sqrt{[1 - R^2C^2\omega^2]^2}}{|\text{Dénom}|}$$

$$\left| \frac{S_4}{e} \right| = \frac{1 - R^2C^2\omega^2}{\sqrt{[1 - R^2C^2\omega^2]^2 + R^2C^2\omega^2}}$$

$$\omega \rightarrow 0 \Rightarrow \left| \frac{S_4}{e} \right|_{dB} = 0 \text{ dB.}$$

$$\omega \rightarrow \infty \Rightarrow \left| \frac{S_4}{e} \right|_{dB} = 0 \text{ dB.}$$

$$\omega = \frac{1}{RC} \Rightarrow \left| \frac{S_4}{e} \right| = \frac{1 - 1}{\sqrt{[1 - 1]^2 + 1}} = 0 \Rightarrow -\infty \text{ dB.}$$

Coupe Bande

