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**Serie 4 on Chapter 3:  
Impedance matching  
of the internal impedance of the voltage source  
to the impedance of the load**

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The frequency of the sinusoidal voltage source is equal to 100 MHz.

The internal impedance of the sinusoidal voltage source is modeled by a resistor of 100 Ohms in series with an inductor of 600 nH.

The impedance of the load is modeled by a capacitor of 2 pF in parallel with a resistor of 1'000 Ohms.

- 1) The number of components of the impedance matching network is equal to 2. Calculate the values of the passive components of the impedance matching network by using the two methods explained in chapter 3.
- 2) What type of impedance matching network do we obtain (low-pass filter, band-pass filter, high-pass filter) ? Thanks to justify your answer.