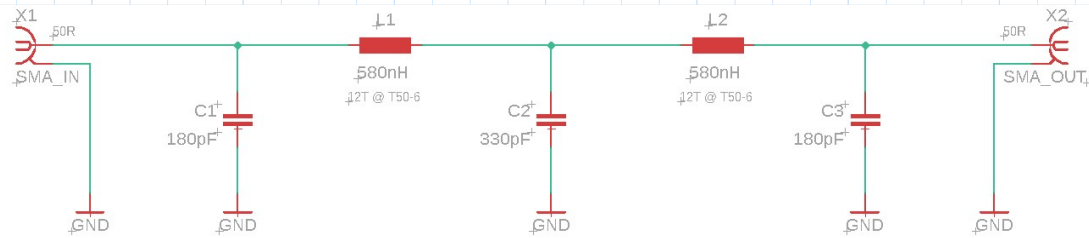


Circuit:**1.) Define cut off frequencies:**

$$f_C := 14500000 \quad \text{for 20m Band (14MHz to 14.35MHz)}$$

2.) Define impedances:

$$X_{C1} := 50 \quad \text{Ohm} \quad X_{C3} := X_{C1} = 50 \quad \text{Ohm} \quad X_{C2} := \frac{X_{C1}}{2} = 25 \quad \text{Ohm}$$

$$X_{L1} := 50 \quad \text{Ohm} \quad X_{L2} := X_{L1} = 50 \quad \text{Ohm}$$

3.) Calculate inductor value:

$$L_1 := \frac{X_{L1}}{2 \cdot \pi \cdot f_C} = 0.000000549 \text{ H} = 549 \text{ nH}$$

$$L_2 := \frac{X_{L2}}{2 \cdot \pi \cdot f_C} = 0.000000549 \text{ H} = 549 \text{ nH}$$

4.) Define inductor core and turns ($L = L_1 = L_2$):

$$L_1 := 530 \cdot 10^{-9} \quad \text{H} = 530 \text{ nH} \rightarrow 11.5 \text{ T @ T50-6 Core} \rightarrow \text{"toroids.info/T50-6.php"}$$

$$L_2 := 530 \cdot 10^{-9} \quad \text{H} = 530 \text{ nH} \rightarrow 11.5 \text{ T @ T50-6 Core} \rightarrow \text{"toroids.info/T50-6.php"}$$

--> 580nH is chosen after simulation and tests: 12T @ T50-6 Core

5.) Calculate capacitor values:

$$C_1 := \frac{1}{2 \cdot \pi \cdot f_C \cdot X_{C1}} = 0.00000000022 \text{ F} = 220 \text{ pF} \quad C_3 := C_1 = 2.195 \cdot 10^{-10} \text{ F} = 220 \text{ pF}$$

$$C_2 := \frac{1}{2 \cdot \pi \cdot f_C \cdot X_{C2}} = 0.000000000439 \text{ F} = 439 \text{ pF} \rightarrow 220 \text{ pF} // 220 \text{ pF} = 440 \text{ pF}$$

--> 330pF and 180pF is chosen after simulation and tests!

