



The above demonstrates an interface between two stages in a radio circuit. In input of this interface is the output of a mixer, which alters the frequency of a radio signal for processing. The problem is that it also creates another frequency component that must be eliminated before proceeding to the next stage. The desired signal is at 20Mhz. The undesired signal is at 160Mhz. Design a simple filter that will reduce the 160Mhz signal's power by 15dB while not reducing the 20Mhz signal's power by more than 3dB.