Provided is a wireless communication receiver including an antenna for receiving an RF signal; a first mixer, coupled to the antenna, for performing frequency conversion on the RF signal from the antenna by mixing the RF signal with a local oscillator signal to provide a first intermediate frequency (IF) signal; and a first filter, coupled to the first mixer, configured to pass a predetermined band of frequencies of the first IF signal and to generate a first channel signal. The first filter includes a negative feedback loop coupled to the first mixer for performing negative feedback loop control on the first IF signal; and a positive capacitive feedback loop coupled to the first mixer for performing positive capacitive feedback loop control on the first IF signal, the negative feedback loop and the positive capacitive feedback loop being coupled in parallel.