

Measurement Trace of the Roofing Filters by the Spectrum Analyzer

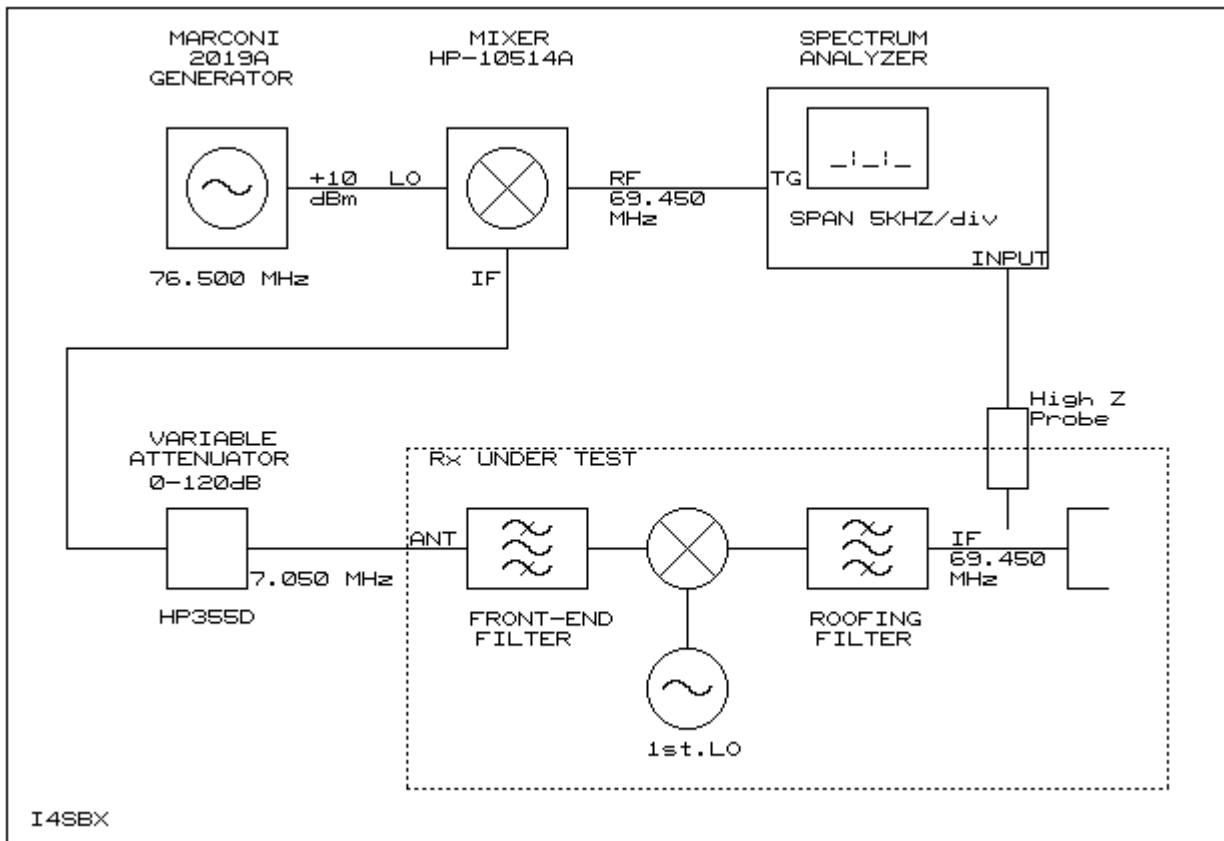
The traces of the roofing filters are taken without remove the filters from the board.

In this way we can see the trace of the filter in the true conditions of work.

Into a Receiver the frequency of the signal has converted from the antenna connectors and the output of the roofing filter, so it is not possible to use directly a Spectrum Analyzer with Tracking Generator to do this measurement.

The frequency at the input of the SA is the same that the frequency generated by the TG.

The fig. shows the set-up to use one SA to take the trace of the roofing filters.



The SA reference frequency is set to the same value of the center frequency of the filter (69.450 in this case).

The output signal from the TG has converted by the Double Balanced Mixer (HP-10514A) at one frequency received from the device under test (7.050 MHz in the example), so the frequency of the generator (Marconi 2019A) must be the exact value of the 1st. LO into the Receiver.

The variable attenuator (HP-355) is trimmed to avoid the saturation of the first stage and the mixer of the Rx under test.

The front-end filters of the Rx will cut the entire not wanted signal coming from the mixer, like the LO frequency and IF image.

The signal from the filter has taken by an Active High Z probe (Marconi 2388).

In the FT-2000 three different roofing filter are switched by four relays and a MosFet Amplifier (Q1105) follow them.

You can take the output filter signal at Test Point 1032 after that MosFet Amplifier.