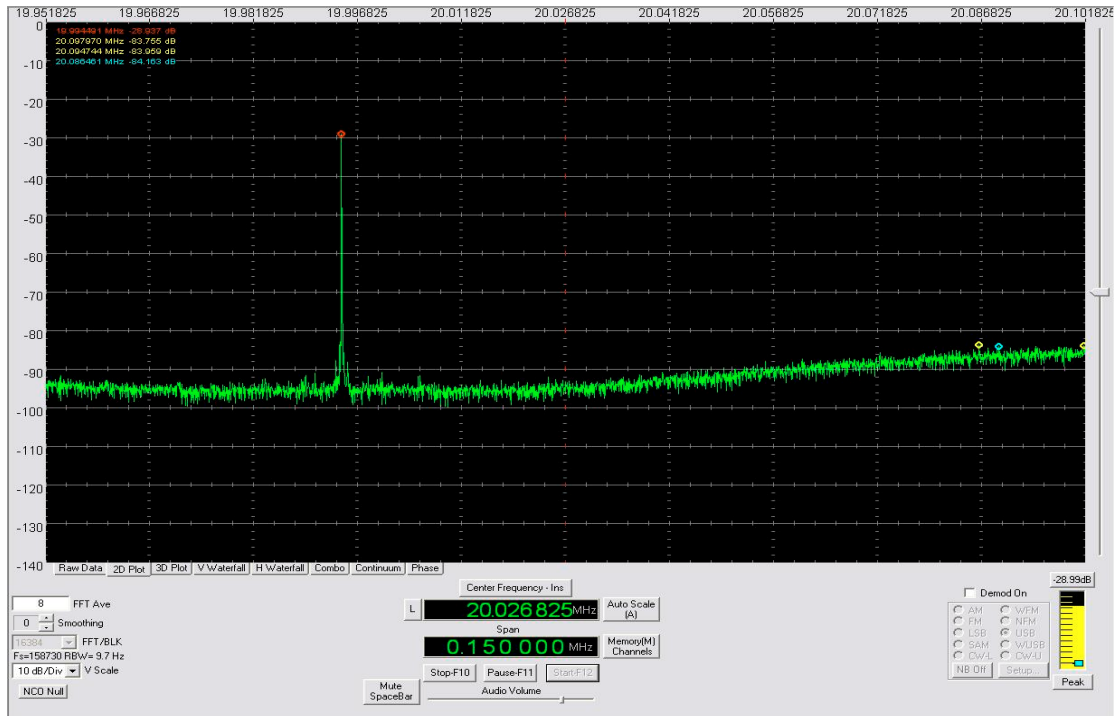


Resultant from mixing the outputs of two identical LTC6946-3 synths running at 5.76GHz and 5.74GHz. Comparison frequency is 10MHz (R=1). The 10MHz references come from an OCXO and good quality TCXO respectively. The loop filter components in each are the same.

Resolution bandwidth is 10Hz, (10dBHz) and the plot shows the summed phase noise, which will therefore show 3dB above the contribution from either, assuming each synth has the same register settings.

Phase noise in dBc/Hz is therefore 13dB below that shown on the plot, or around -78dBc at 30kHz spacing.



The second plot shows the synths running above their specified upper limit at 6.4GHz and 6.42GHz, with a comparison frequency of 5MHz. Note the increased phase noise at around -63dBc/Hz at 30kHz due to running at the lower Fcomp with a not properly optimised loop filter. When operated at 10MHz Fcomp, the plot was nearly identical to that above. The devices couldn't be made to run at 6.5GHz.

