

Intermodulation Distortion in a 'Switching FET' Linear Power Amplifier

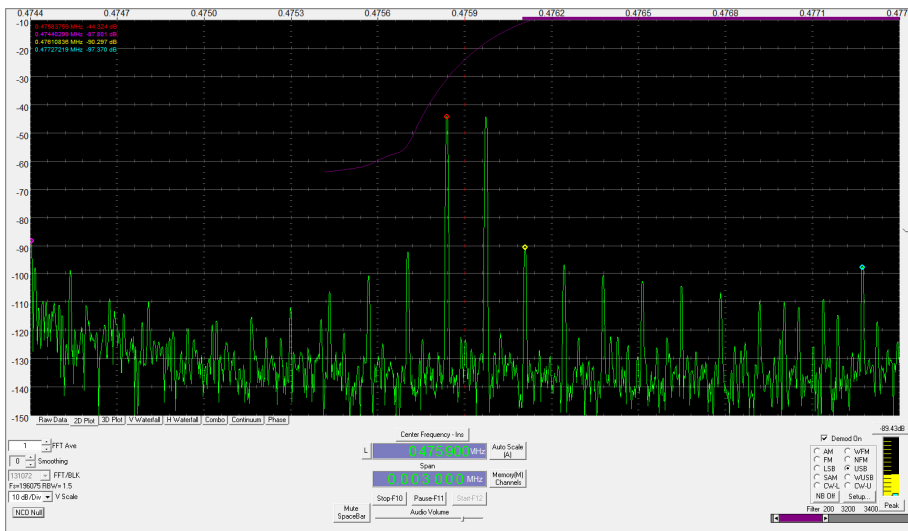
G4JNT August 2015

Equipment :

T-Cube tone generator 1435 / 1570Hz
Direct IQ Upconverter (<http://www.g4jnt.com/LFUpconv.pdf> Ver 2)
SDR-IQ 1.5Hz resolution, span 3kHz

Scope traces show the averaged RF waveform of two tone test signal

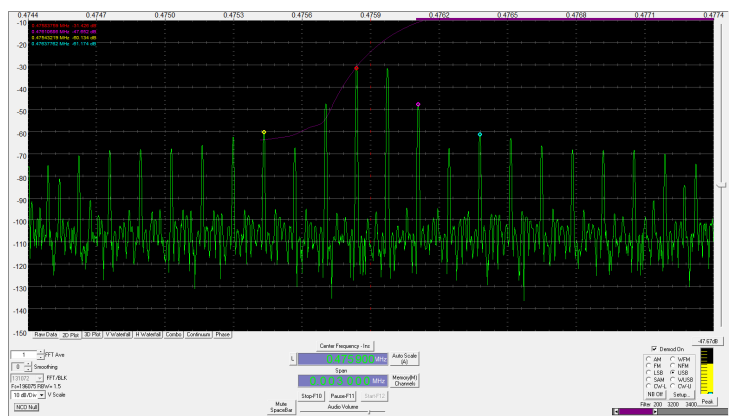
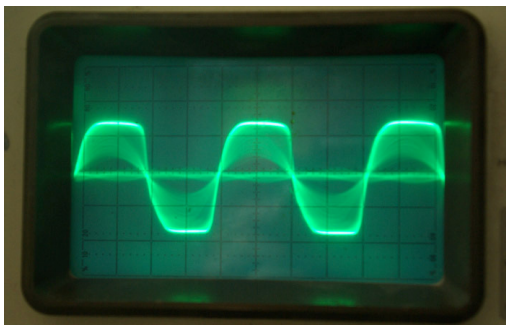
Drive signal from Upconverter



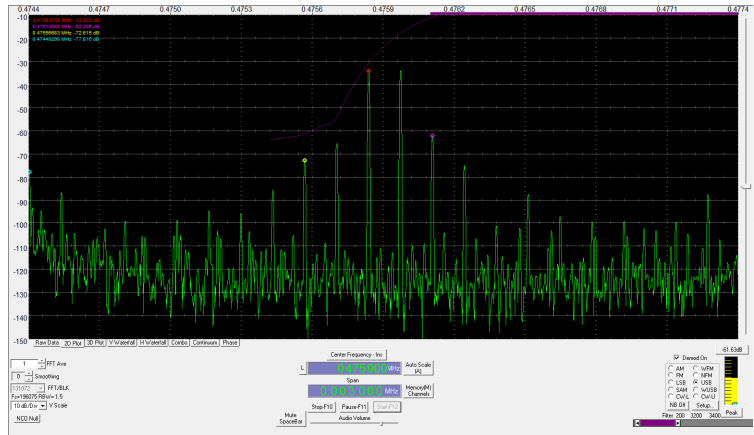
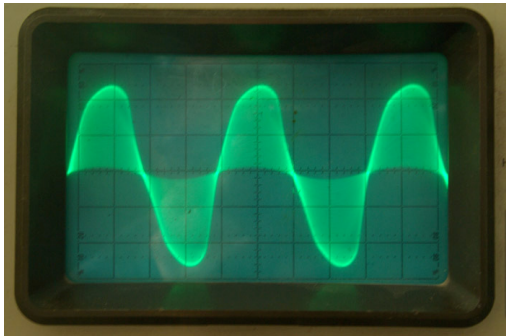
($IMD_3 = -50\text{dBc}$ on PEP)

Amplifier Output

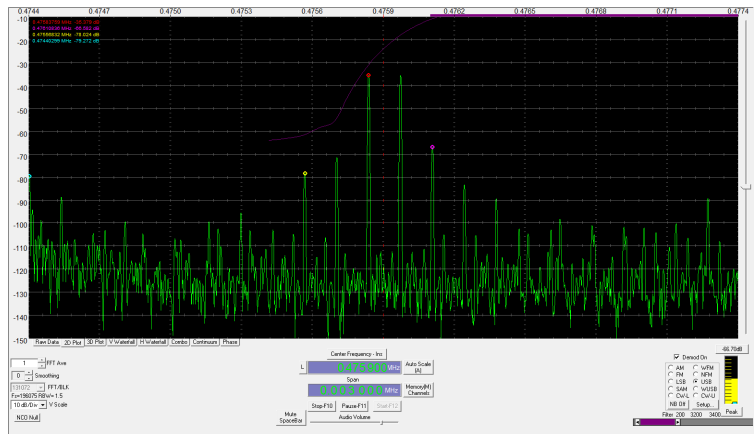
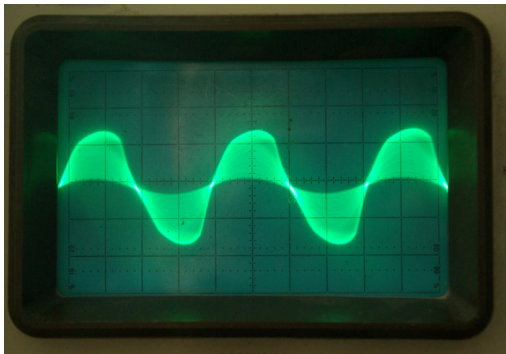
0dB drive (saturated)



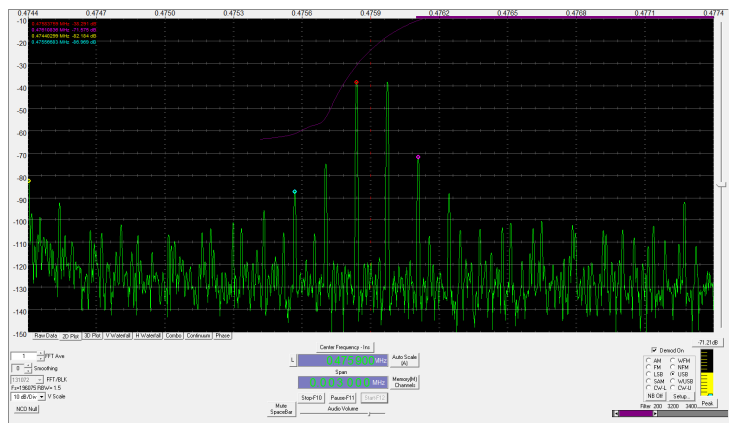
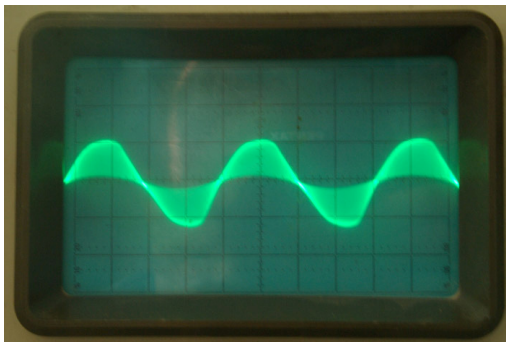
-3dB



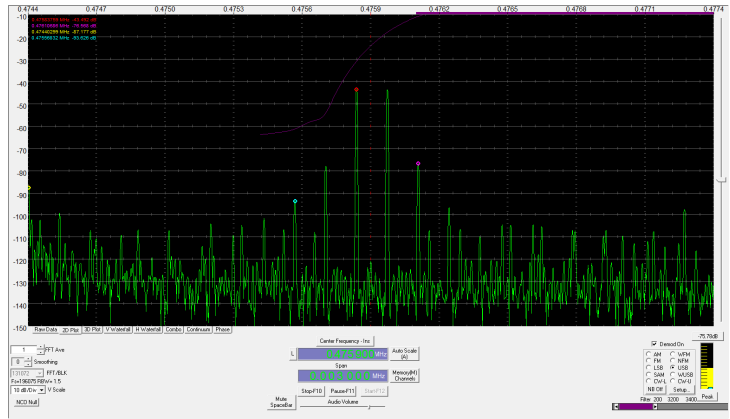
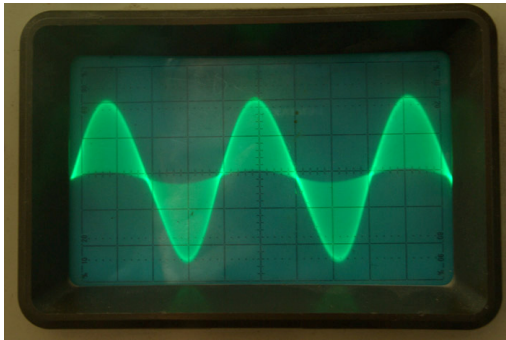
-4dB



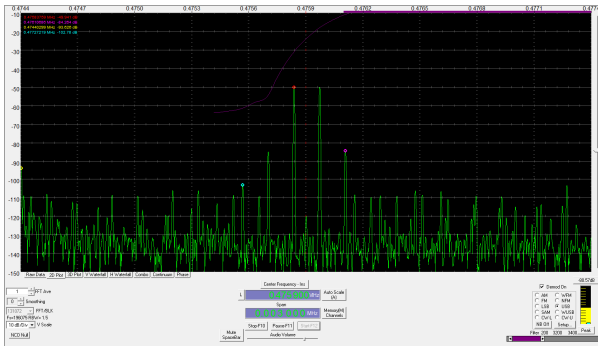
-6dB



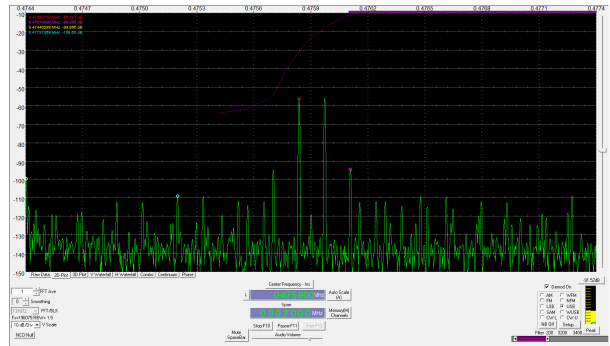
-10dB



-15dB



-20dB



-25dB

