Annex 1: Measurement diagrams to
T E S T R E P O R T
No.: 18-1-0245401T05a

According to:
47 CFR Part 95
RSS-Gen Issue 5
RSS-251 Issue 2

for

Veoneer US, Inc.

77V12FLR
77 GHz FLR Radar Sensor

FCC ID: WU877V12FLR
IC: 8436B-77V12FLR

Laboratory Accreditation
ilac-MRA (((DAkkS Deutsche Akkreditierungsstelle D-PL-12047-01-01 D-PL-12047-01-03 D-PL-12047-01-04
accredited according to DIN EN ISO/IEC 17025
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1. The maximum peak power EIRP / peak EIRP spectral density. The maximum power EIRP/ average EIRP.

1.1. RMS Detector, T$_{nom}$/V$_{nom}$

MultiView	Spectrum						▽
Ref Level -4.00 dBm		● RBW 1 MHz					SGL
		● SWT 120 s ● VBW 3 MHz	Mode Auto Sweep				
TDF Inp: ExtMix W							

1 ACLR ● 1Rm Max ● 2Rm Clrw

2 Result Summary — None

Channel	Bandwidth	Offset	Power
Tx1 (Ref)	1.000 GHz		**21.32 dBm**
Tx Total			**21.32 dBm**

14:24:27 13.05.2019

* -4 dBm is a reference line from the FSW67. Limit: 50 dBm (Average), 55 dBm (Peak).

1.2. Peak Detector, T$_{nom}$/V$_{nom}$

MultiView	Spectrum						▽
Ref Level -4.00 dBm		● RBW 1 MHz					SGL
		● SWT 120 s ● VBW 3 MHz	Mode Auto Sweep				
TDF Inp: ExtMix W							

1 Occupied Bandwidth ● 1Pk Max SigID USB ● 2Pk Max SigID LSB

M1[1] 24.45 dBm
76.578500 GHz

2 Marker Table

Type	Ref	Trc	X-Value	Y-Value	Function	Function Result
M1		1	**76.5785 GHz**	**24.45 dBm**	Occ Bw	**834.971598499 MHz**
T1		1	76.07908 GHz	22.79 dBm	Occ Bw Centroid	76.496563551 GHz
T2		1	76.91405 GHz	21.61 dBm	Occ Bw Freq Offset	-3.436448503 MHz

14:17:22 13.05.2019

* -4 dBm is a reference line from the FSW67. Limit: 50 dBm (Average), 55 dBm (Peak).

1.3. RMS Detector, T$_{min}$/V$_{nom}$

16:29:24 12.05.2019

* -4 dBm is a reference line from the FSW67. Limit: 50 dBm (Average), 55 dBm (Peak).

1.4. Peak Detector, T$_{min}$/V$_{nom}$

16:33:41 12.05.2019

* -4 dBm is a reference line from the FSW67. Limit: 50 dBm (Average), 55 dBm (Peak).

1.5. RMS Detector, T$_{max}$/V$_{nom}$

15:11:48 15.05.2019

* -4 dBm is a reference line from the FSW67. Limit: 50 dBm (Average), 55 dBm (Peak).

1.6. Peak Detector, T$_{max}$/V$_{nom}$

14:52:56 15.05.2019

* -4 dBm is a reference line from the FSW67. Limit: 50 dBm (Average), 55 dBm (Peak).

1.7. RMS Detector, T$_{nom}$/V$_{min}$

14:07:41 13.05.2019

* -4 dBm is a reference line from the FSW67. Limit: 50 dBm (Average), 55 dBm (Peak).

1.8. Peak Detector, T$_{nom}$/V$_{min}$

14:12:04 13.05.2019

* -4 dBm is a reference line from the FSW67. Limit: 50 dBm (Average), 55 dBm (Peak).

1.9. RMS Detector, T$_{nom}$/V$_{max}$

14:28:45 13.05.2019

* -4 dBm is a reference line from the FSW67. Limit: 50 dBm (Average), 55 dBm (Peak).

1.10. Peak Detector, T$_{nom}$/V$_{max}$

14:33:10 13.05.2019

* -4 dBm is a reference line from the FSW67. Limit: 50 dBm (Average), 55 dBm (Peak).

2. Modulation characteristics

2.1. Peak Detector, T_{nom}/V_{nom}
See diagram 1.2

2.2. Peak Detector, T_{min}/V_{nom}
See diagram 1.4

2.3. Peak Detector, T_{max}/V_{nom}
See diagram 1.6

2.4. Peak Detector, T_{nom}/V_{min}
See diagram 1.8

2.5. Peak Detector, T_{nom}/V_{max}
See diagram 1.10

3. Occupied bandwidth

3.1. Peak Detector, T_{nom}/V_{nom}, RBW 10 MHz (only required for 99% RSS Gen Occupied BW)

3.1. Peak Detector, T_{nom}/V_{nom}, RBW 10 MHz (only required for 99% RSS Gen Occupied BW)

11:10:07 27.05.2019

* -4 dBm is a reference line from the FSW67. Limit: 50 dBm (Average), 55 dBm (Peak).

3.2. Peak Detector, T_{nom}/V_{nom}
See diagram 1.2

3.3. Peak Detector, T_{min}/V_{nom}
See diagram 1.4

3.4. Peak Detector, T_{max}/V_{nom}
See diagram 1.6

3.5. Peak Detector, T_{nom}/V_{min}
See diagram 1.8

3.6. Peak Detector, T_{nom}/V_{max}
See diagram 1.10

4. Field strength of emissions (band edge)
4.1. RMS Detector, low edge, 74.1 GHz – 75 GHz

17:25:37 19.05.2019

* -21 dBm is a reference line from the FSW67. Limit is 0 dBm.

4.2. RMS Detector, low edge, 75 GHz – 76.1 GHz

21:03:40 25.05.2019

* -4 dBm is a reference line from the FSW67. Limit is 0 dBm.

4.3. RMS Detector, high edge, SigID USB + LSB

No emissions above 77 GHz respectively 81 GHz. See diagrams in from section 5.36. 77 GHz – 78.5 GHz, ANT HOR + VER, position with the highest power (RMS), FMCW to 5.38. 79.5 GHz – 81 GHz, ANT HOR + VER, SigID USB+LSB, position with the highest power (RMS), FMCW.
* Limit is 0 dBm.

5. Field strength of emissions (radiated spurious)

5.1. 9 kHz – 30 MHz, laying, valid for f_CW_low + f_CW_center + f_CW_high

Full Spectrum

5.2. 9 kHz – 30 MHz, standing, valid for f_CW_low + f_CW_center + f_CW_high

Full Spectrum

5.3. 30 MHz – 1 GHz, laying, valid for f_CW_low + f_CW_center + f_CW_high

Full Spectrum

5.4. 30 MHz – 1 GHz, standing, valid for f_CW_low + f_CW_center + f_CW_high

Full Spectrum

5.5. 960 MHz – 1 GHz, valid for f_CW_low + f_CW_center + f_CW_high

5.6. 1 GHz – 7 GHz, valid for f_CW_low + f_CW_center + f_CW_high

5.7. 7 GHz – 18 GHz, valid for f_CW_low + f_CW_center + f_CW_high

5.8. 18 GHz – 40 GHz, ANT VER, valid for f_CW_low + f_CW_center + f_CW_high

15:03:12 19.05.2019

* -27 dBm is a reference line from the FSW67. Limit is -41.23 dBm.

5.9. 18 GHz – 40 GHz, ANT HOR, valid for f_CW_low + f_CW_center + f_CW_high

14:55:36 19.05.2019

* -27 dBm is a reference line from the FSW67. Limit is -41.23 dBm.

5.10. 40 GHz – 55 GHz, ANT HOR + VER, all positions, f_CW_low

04:13:22 24.05.2019

* -27 dBm is a reference line from the FSW67. Limit is -1.7 dBm (FCC) and -30 dBm (ISED).

5.11. 40 GHz – 55 GHz, ANT HOR + VER, all positions, f_CW_center

04:14:50 24.05.2019

* -27 dBm is a reference line from the FSW67. Limit is -1.7 dBm (FCC) and -30 dBm (ISED).

5.12. 40 GHz – 55 GHz, ANT HOR + VER, all positions, f_CW_high

04:16:20 24.05.2019

* -27 dBm is a reference line from the FSW67. Limit is -1.7 dBm (FCC) and -30 dBm (ISED).

5.13. 40 GHz – 55 GHz, ANT HOR + VER, position with the highest power (RMS), FMCW

03:22:56 24.05.2019

* -27 dBm is a reference line from the FSW67. Limit is -1.7 dBm (FCC) and -30 dBm (ISED).

5.14. 55 GHz – 75 GHz, ANT HOR + VER, SigID USB + LSB, all positions, f_CW_low

01:53:42 24.05.2019

* Signal ID function is used. The diagram shows image signals and mixer products. The real input signal is shown, only when USB and LSD traces have the same position on the frequency axis => Apart from the noise floor no real input signal was observed. See subsection 5.8.6. in the main report. -21 dBm is a reference line from the FSW67. Limit is -1.7 dBm (FCC) and -30 dBm (ISED).

5.15. 55 GHz – 75 GHz, ANT HOR + VER, SigID LSB, all positions, f_CW_low

01:56:17 24.05.2019

* Signal ID function is used. The diagram shows image signals and mixer products. The real input signal is shown, only when USB and LSD traces have the same position on the frequency axis => Apart from the noise floor no real input signal was observed. See subsection 5.8.6. in the main report. -21 dBm is a reference line from the FSW67. Limit is -1.7 dBm (FCC) and -30 dBm (ISED).

5.16. 55 GHz – 75 GHz, ANT HOR + VER, SigID USB, all positions, f_CW_low

01:55:52 24.05.2019

* Signal ID function is used. The diagram shows image signals and mixer products. The real input signal is shown, only when USB and LSD traces have the same position on the frequency axis => Apart from the noise floor no real input signal was observed. See subsection 5.8.6. in the main report. -21 dBm is a reference line from the FSW67. Limit is -1.7 dBm (FCC) and -30 dBm (ISED).

5.17. 55 GHz – 75 GHz, ANT HOR + VER, SigID USB + LSB, all positions, f_CW_center

02:02:53 24.05.2019

* Signal ID function is used. The diagram shows image signals and mixer products. The real input signal is shown, only when USB and LSD traces have the same position on the frequency axis => Apart from the noise floor no real input signal was observed. See subsection 5.8.6. in the main report. -21 dBm is a reference line from the FSW67. Limit is -1.7 dBm (FCC) and -30 dBm (ISED).

5.18. 55 GHz – 75 GHz, ANT HOR + VER, SigID LSB, all positions, f_CW_center

02:04:21 24.05.2019

* Signal ID function is used. The diagram shows image signals and mixer products. The real input signal is shown, only when USB and LSD traces have the same position on the frequency axis => Apart from the noise floor no real input signal was observed. See subsection 5.8.6. in the main report. -21 dBm is a reference line from the FSW67. Limit is -1.7 dBm (FCC) and -30 dBm (ISED).

5.19. 55 GHz – 75 GHz, ANT HOR + VER, SigID USB, all positions, f_CW_center

02:03:36 24.05.2019

* Signal ID function is used. The diagram shows image signals and mixer products. The real input signal is shown, only when USB and LSD traces have the same position on the frequency axis => Apart from the noise floor no real input signal was observed. See subsection 5.8.6. in the main report. -21 dBm is a reference line from the FSW67. Limit is -1.7 dBm (FCC) and -30 dBm (ISED).

5.20. 55 GHz – 75 GHz, ANT HOR + VER, SigID USB + LSB, all positions, f_CW_high

02:10:10 24.05.2019

* Signal ID function is used. The diagram shows image signals and mixer products. The real input signal is shown, only when USB and LSD traces have the same position on the frequency axis => Apart from the noise floor no real input signal was observed. See subsection 5.8.6. in the main report. -21 dBm is a reference line from the FSW67. Limit is -1.7 dBm (FCC) and -30 dBm (ISED).

5.21. 55 GHz – 75 GHz, ANT HOR + VER, SigID LSB, all positions, f_CW_high

02:12:06 24.05.2019

* Signal ID function is used. The diagram shows image signals and mixer products. The real input signal is shown, only when USB and LSD traces have the same position on the frequency axis => Apart from the noise floor no real input signal was observed. See subsection 5.8.6. in the main report. -21 dBm is a reference line from the FSW67. Limit is -1.7 dBm (FCC) and -30 dBm (ISED).

5.22. 55 GHz – 75 GHz, ANT HOR + VER, SigID USB, all positions, f_CW_high

02:11:39 24.05.2019

* Signal ID function is used. The diagram shows image signals and mixer products. The real input signal is shown, only when USB and LSD traces have the same position on the frequency axis => Apart from the noise floor no real input signal was observed. See subsection 5.8.6. in the main report. -21 dBm is a reference line from the FSW67. Limit is -1.7 dBm (FCC) and -30 dBm (ISED).

5.23. 55 GHz – 73.5 GHz, ANT HOR + VER, SigID USB+LSB, position with the highest power (RMS), FMCW

22:49:30 23.05.2019

* Signal ID function is used. The diagram shows image signals and mixer products. The real input signal is shown, only when USB and LSD traces have the same position on the frequency axis => Apart from the noise floor no real input signal was observed. See subsection 5.8.6. in the main report. -21 dBm is a reference line from the FSW67. Limit is -1.7 dBm (FCC) and -30 dBm (ISED).

5.24. 73.5 GHz – 74.5 GHz, ANT HOR + VER, SigID USB+LSB, position with the highest power (RMS), FMCW

23:14:29 23.05.2019

* Signal ID function is used. The diagram shows image signals and mixer products. The real input signal is shown, only when USB and LSD traces have the same position on the frequency axis => Apart from the noise floor no real input signal was observed. See subsection 5.8.6. in the main report. -21 dBm is a reference line from the FSW67. Limit is -1.7 dBm (FCC) and 0 dBm (ISED).

5.25. 74.5 GHz – 75 GHz, ANT HOR + VER, position with the highest power (RMS), FMCW

23:31:23 23.05.2019

* -21 dBm is a reference line from the FSW67. Limit is -1.7 dBm (FCC) and 0 dBm (ISED).
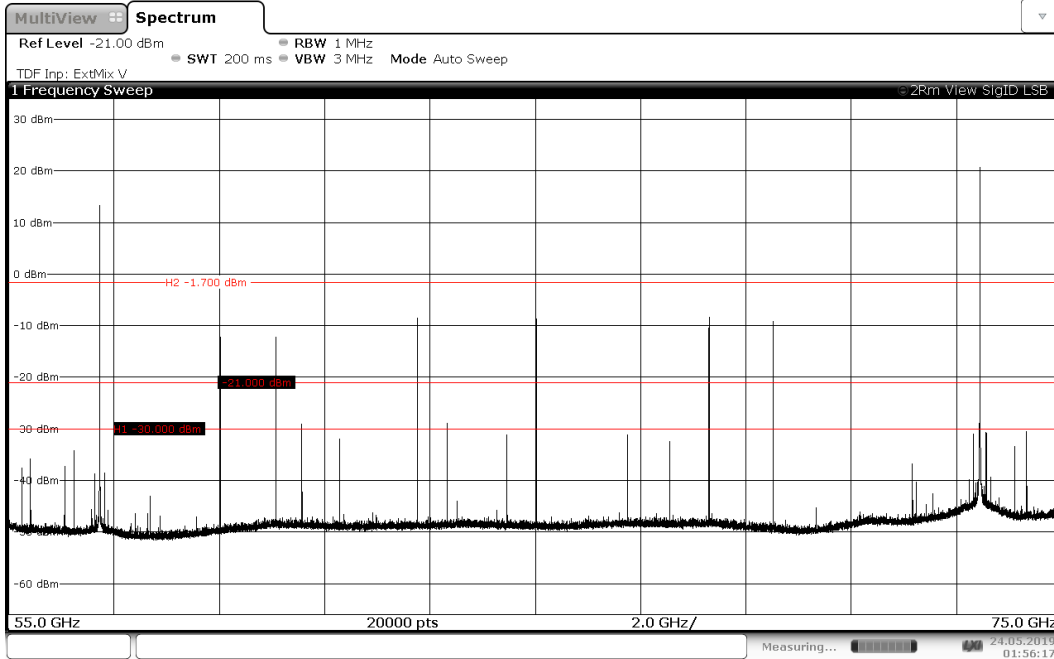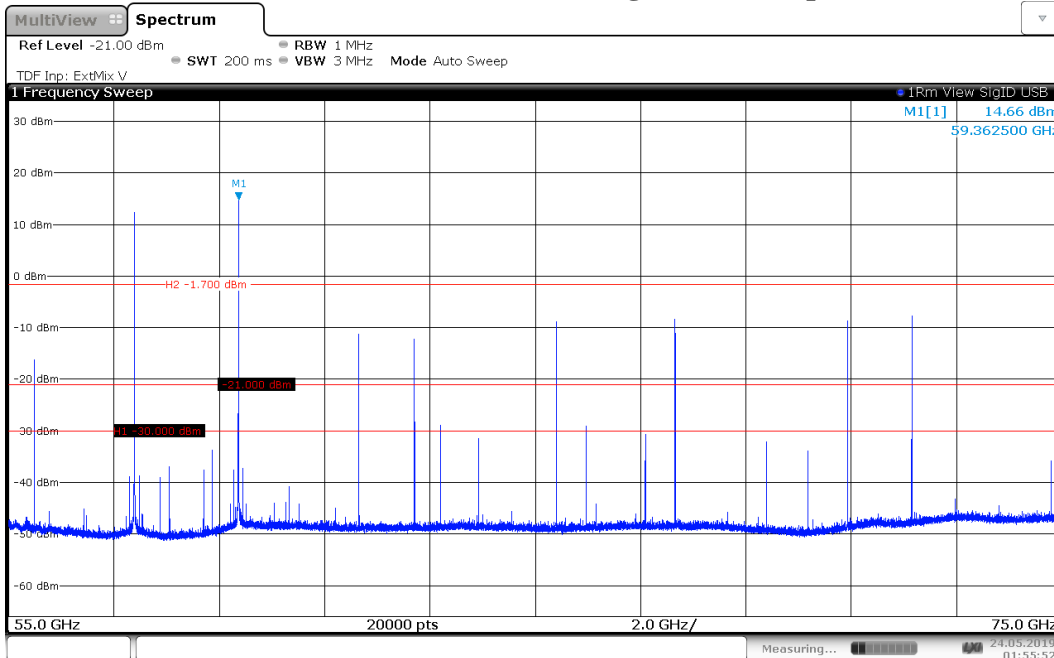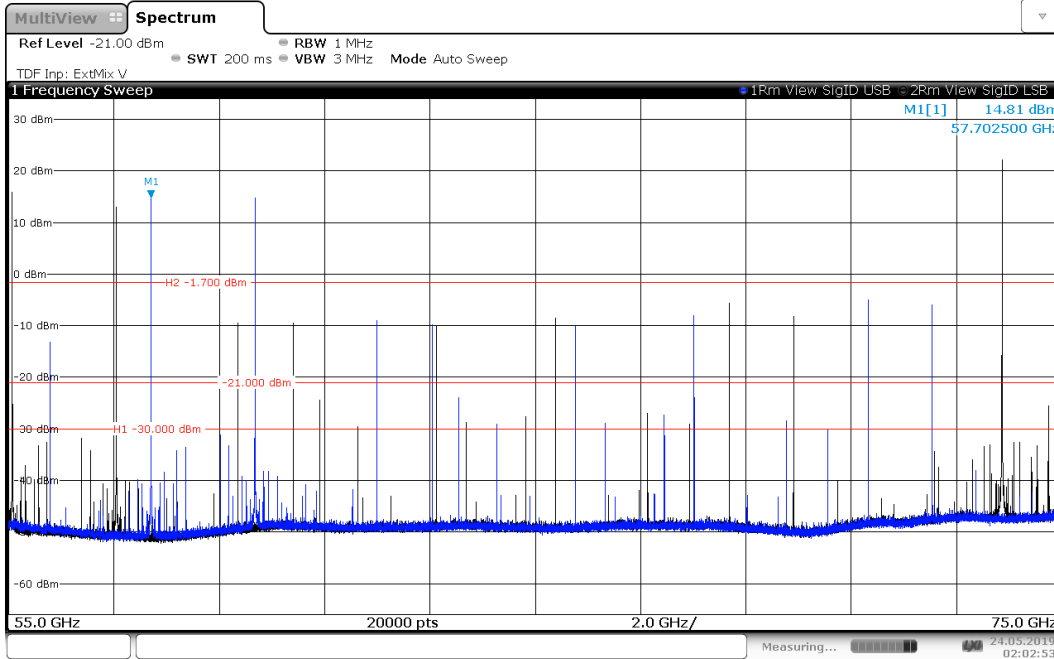
5.26. 75 GHz – 97 GHz, ANT HOR + VER, SigID USB + LSB, all positions, f_CW_low

01:55:23 22.05.2019

* Signal ID function is used. The diagram shows image signals and mixer products. The real input signal is shown, only when USB and LSD traces have the same position on the frequency axis => Apart from the noise floor no real input signal was observed. See subsection 5.8.6. in the main report. -4 dBm is a reference line from the FSW67. Limit is -1.7 dBm (FCC) and -30 dBm (ISED).
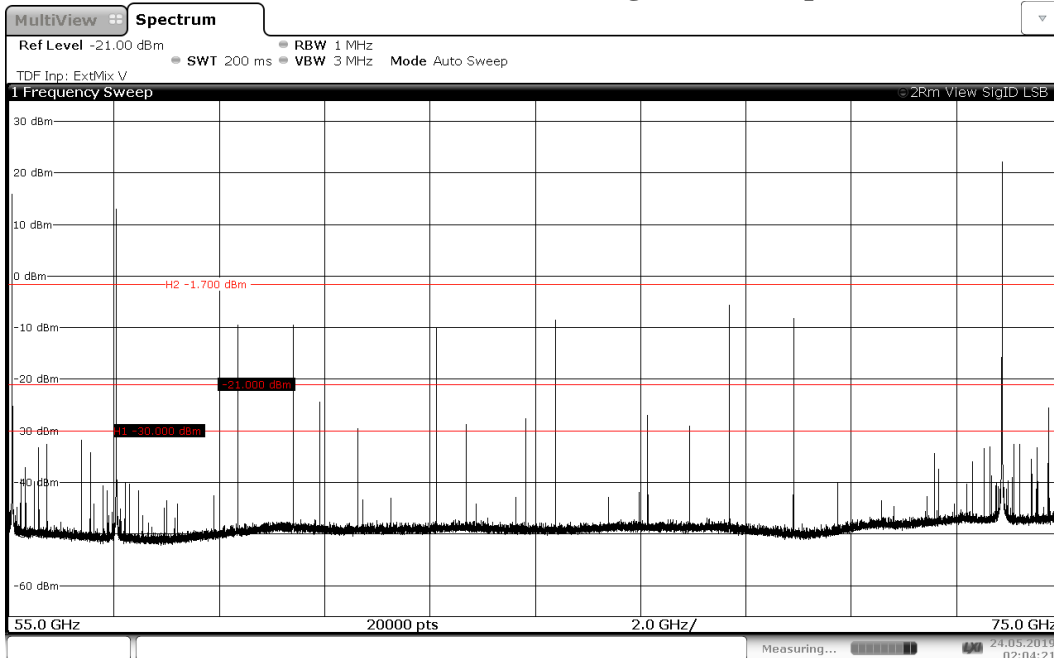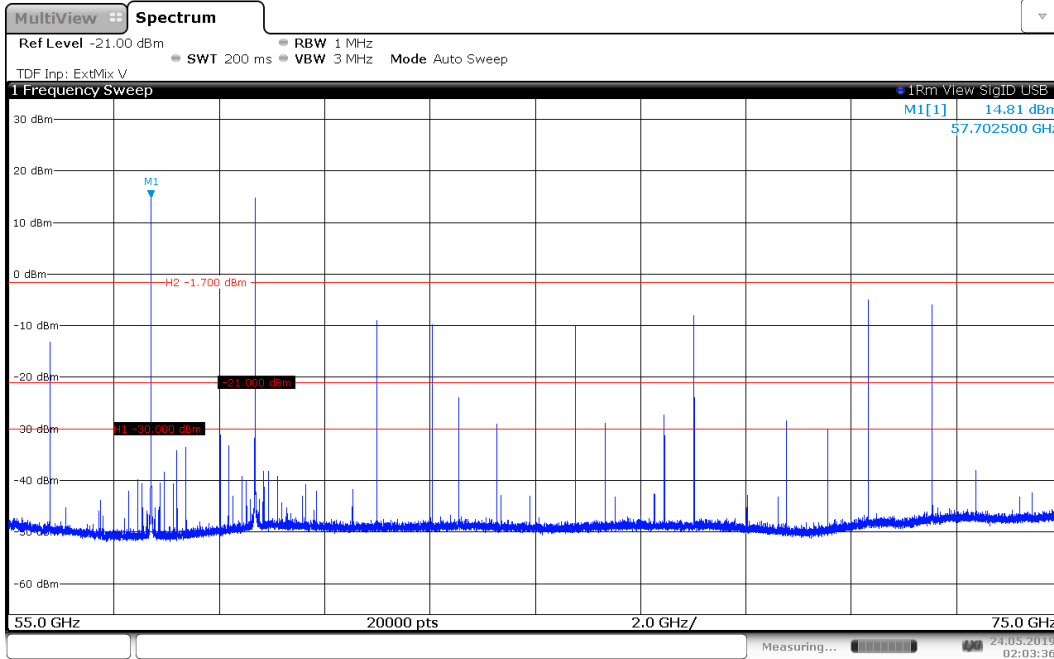
5.27. 75 GHz – 97 GHz, ANT HOR + VER, SigID LSB, all positions, f_CW_low

01:56:48 22.05.2019

* Signal ID function is used. The diagram shows image signals and mixer products. The real input signal is shown, only when USB and LSD traces have the same position on the frequency axis => Apart from the noise floor no real input signal was observed. See subsection 5.8.6. in the main report. -4 dBm is a reference line from the FSW67. Limit is -1.7 dBm (FCC) and -30 dBm (ISED).
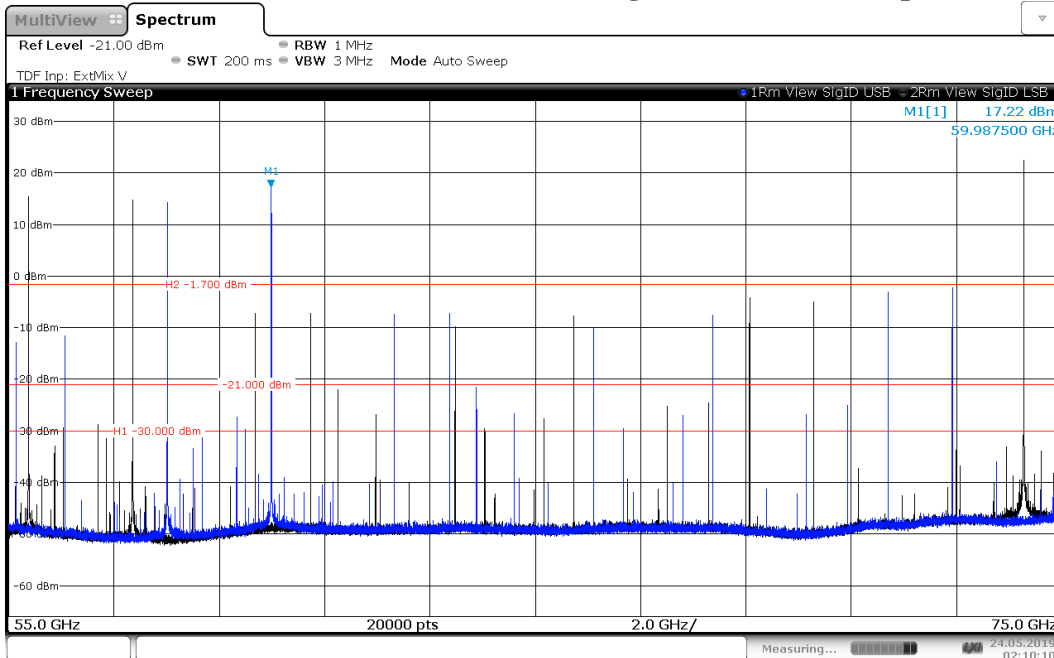
5.28. 75 GHz – 97 GHz, ANT HOR + VER, SigID USB, all positions, f_CW_low

01:56:20 22.05.2019

* Signal ID function is used. The diagram shows image signals and mixer products. The real input signal is shown, only when USB and LSD traces have the same position on the frequency axis => Apart from the noise floor no real input signal was observed. See subsection 5.8.6. in the main report. -4 dBm is a reference line from the FSW67. Limit is -1.7 dBm (FCC) and -30 dBm (ISED).
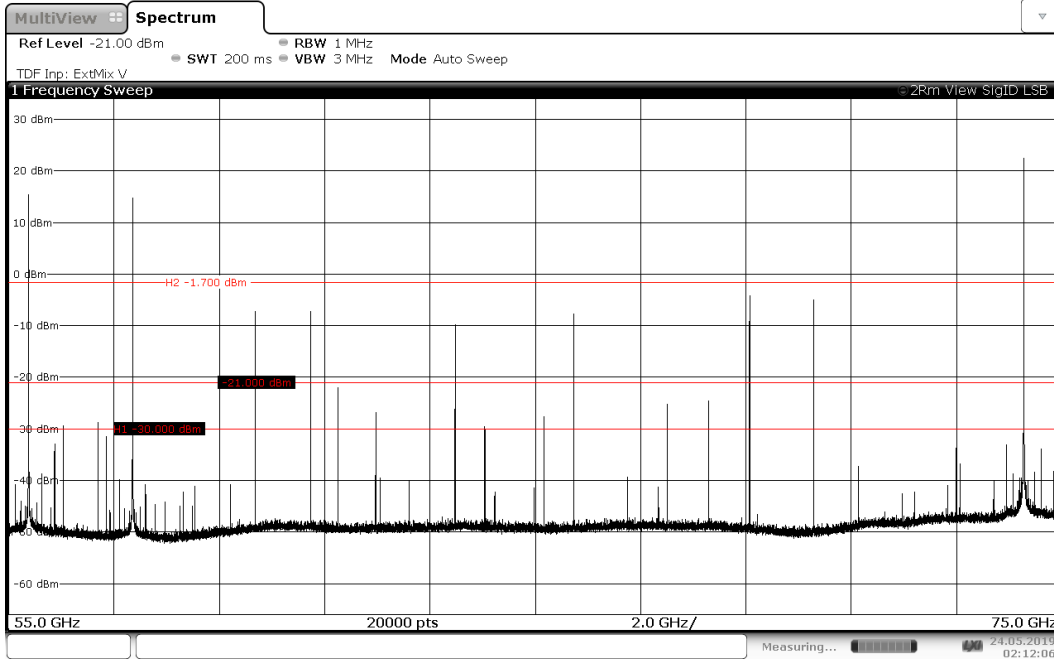
5.29. 75 GHz – 97 GHz, ANT HOR + VER, SigID USB + LSB, all positions, f_CW_center

02:05:19 22.05.2019

* Signal ID function is used. The diagram shows image signals and mixer products. The real input signal is shown, only when USB and LSD traces have the same position on the frequency axis => Apart from the noise floor no real input signal was observed. See subsection 5.8.6. in the main report. -4 dBm is a reference line from the FSW67. Limit is -1.7 dBm (FCC) and -30 dBm (ISED).
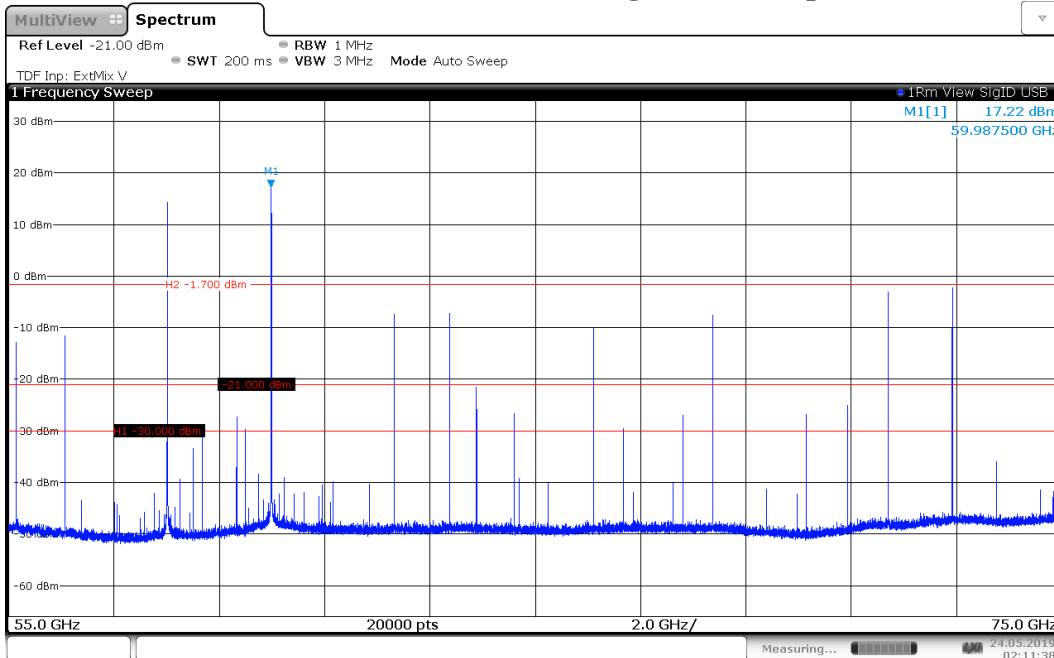
5.30. 75 GHz – 97 GHz, ANT HOR + VER, SigID LSB, all positions, f_CW_center

02:06:04 22.05.2019

* Signal ID function is used. The diagram shows image signals and mixer products. The real input signal is shown, only when USB and LSD traces have the same position on the frequency axis => Apart from the noise floor no real input signal was observed. See subsection 5.8.6. in the main report. -4 dBm is a reference line from the FSW67. Limit is -1.7 dBm (FCC) and -30 dBm (ISED).
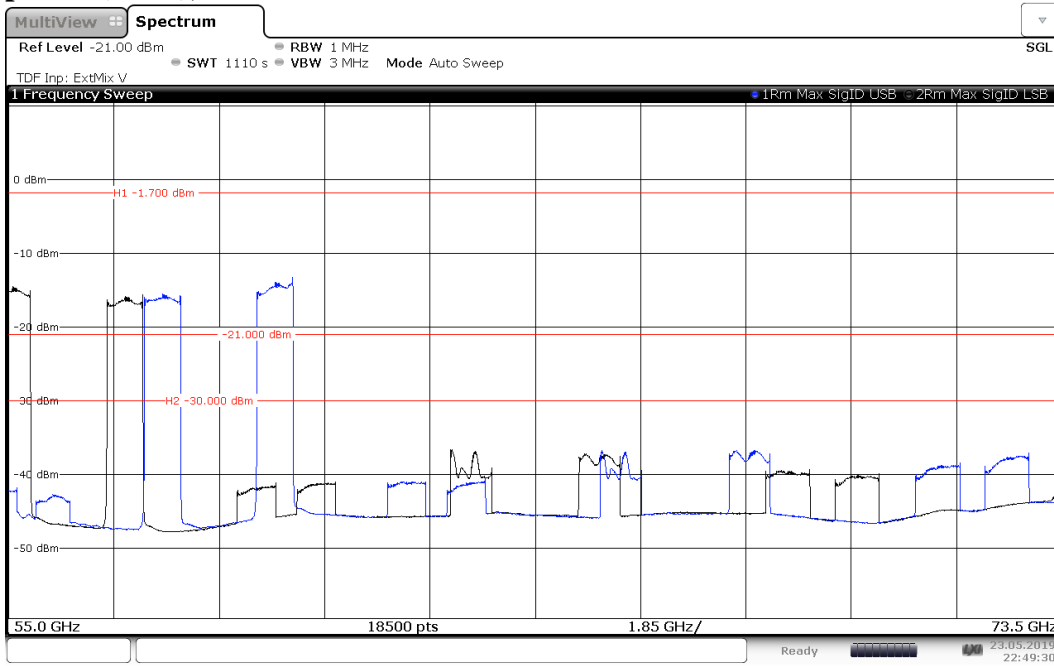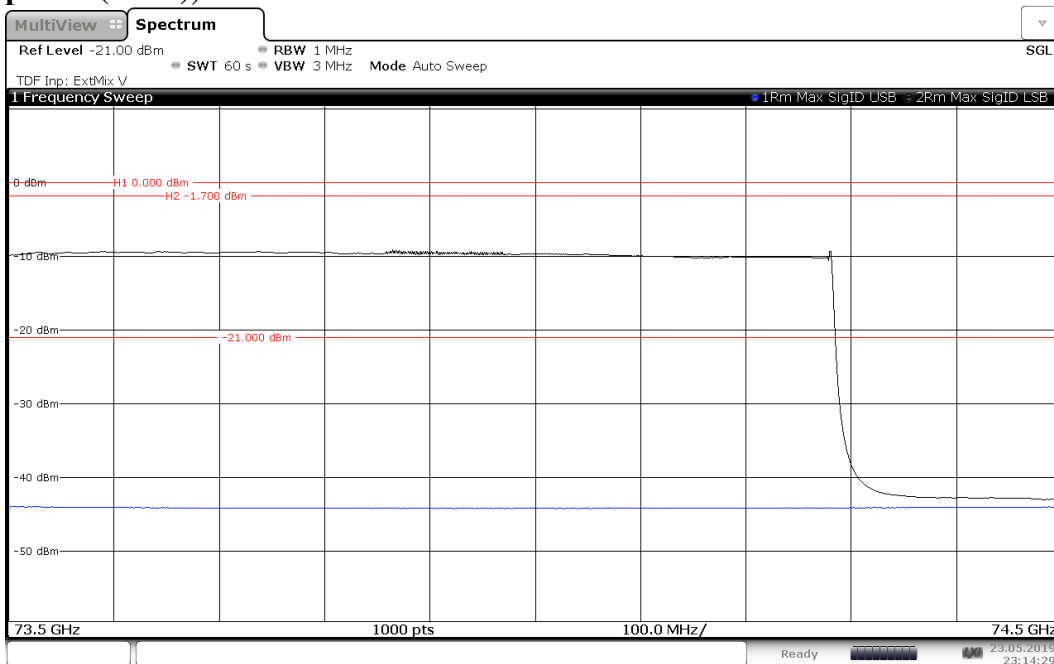
5.31. 75 GHz – 97 GHz, ANT HOR + VER, SigID USB, all positions, f_CW_center

02:05:41 22.05.2019

* Signal ID function is used. The diagram shows image signals and mixer products. The real input signal is shown, only when USB and LSD traces have the same position on the frequency axis => Apart from the noise floor no real input signal was observed. See subsection 5.8.6. in the main report. -4 dBm is a reference line from the FSW67. Limit is -1.7 dBm (FCC) and -30 dBm (ISED).
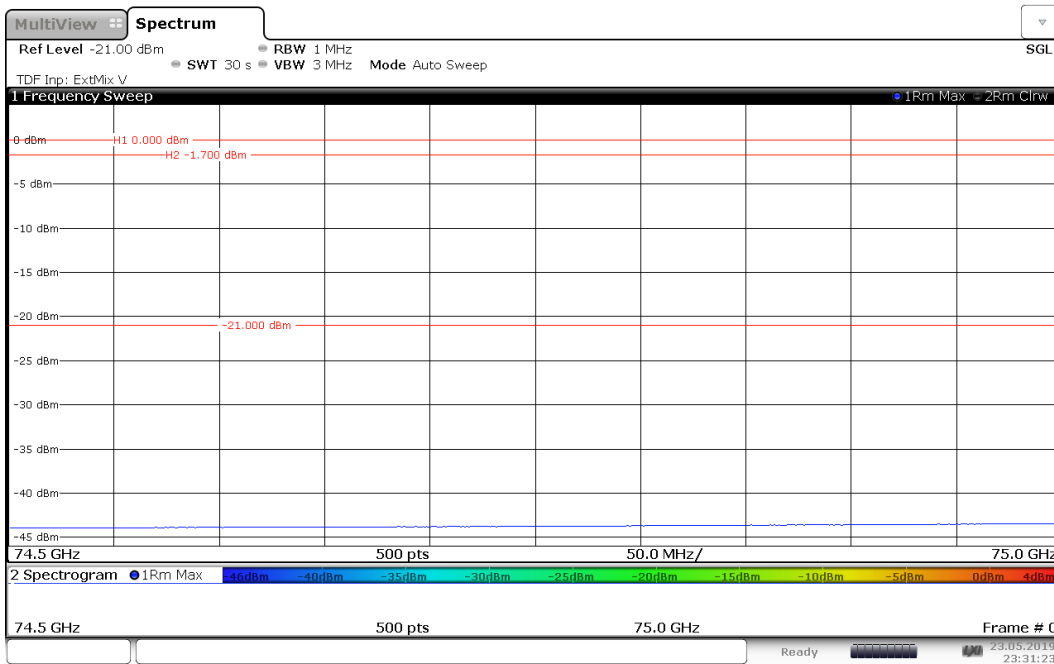
5.32. 75 GHz – 97 GHz, ANT HOR + VER, SigID USB + LSB, all positions, f_CW_high

02:21:56 22.05.2019

* Signal ID function is used. The diagram shows image signals and mixer products. The real input signal is shown, only when USB and LSD traces have the same position on the frequency axis => Apart from the noise floor no real input signal was observed. See subsection 5.8.6. in the main report. -4 dBm is a reference line from the FSW67. Limit is -1.7 dBm (FCC) and -30 dBm (ISED).
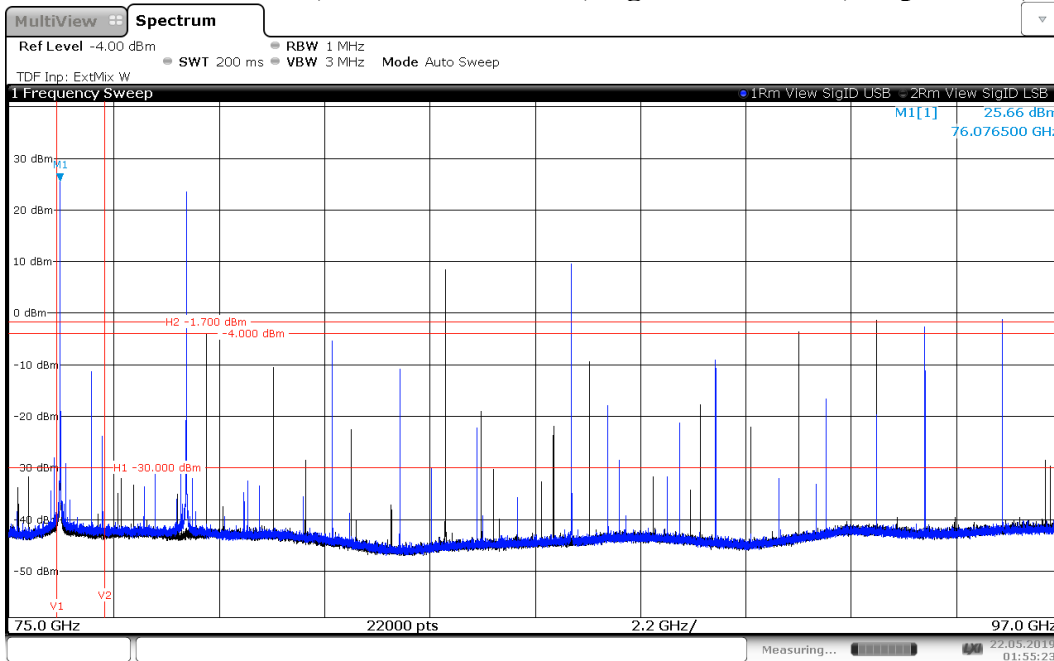
5.33. 75 GHz – 97 GHz, ANT HOR + VER, SigID LSB, all positions, f_CW_high

02:23:29 22.05.2019

* Signal ID function is used. The diagram shows image signals and mixer products. The real input signal is shown, only when USB and LSD traces have the same position on the frequency axis => Apart from the noise floor no real input signal was observed. See subsection 5.8.6. in the main report. -4 dBm is a reference line from the FSW67. Limit is -1.7 dBm (FCC) and -30 dBm (ISED).

5.34. 75 GHz – 97 GHz, ANT HOR + VER, SigID USB, all positions, f_CW_high

02:23:04 22.05.2019

* Signal ID function is used. The diagram shows image signals and mixer products. The real input signal is shown, only when USB and LSD traces have the same position on the frequency axis => Apart from the noise floor no real input signal was observed. See subsection 5.8.6. in the main report. -4 dBm is a reference line from the FSW67. Limit is -1.7 dBm (FCC) and -30 dBm (ISED).

5.35. 75 GHz – 76 GHz, ANT HOR + VER, position with the highest power (RMS), FMCW

20:53:38 21.05.2019

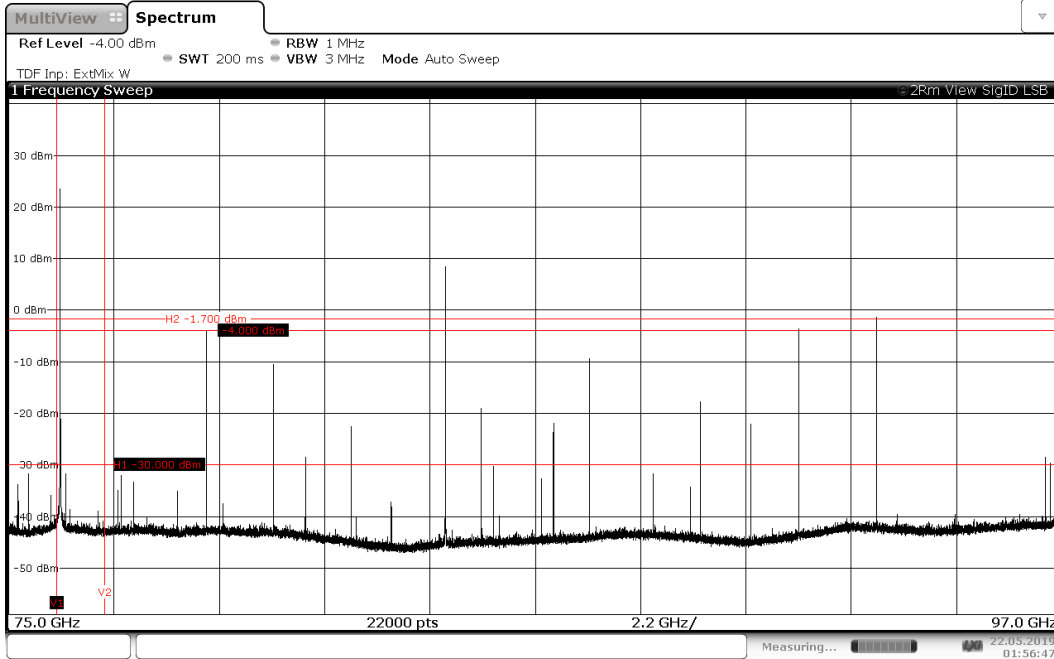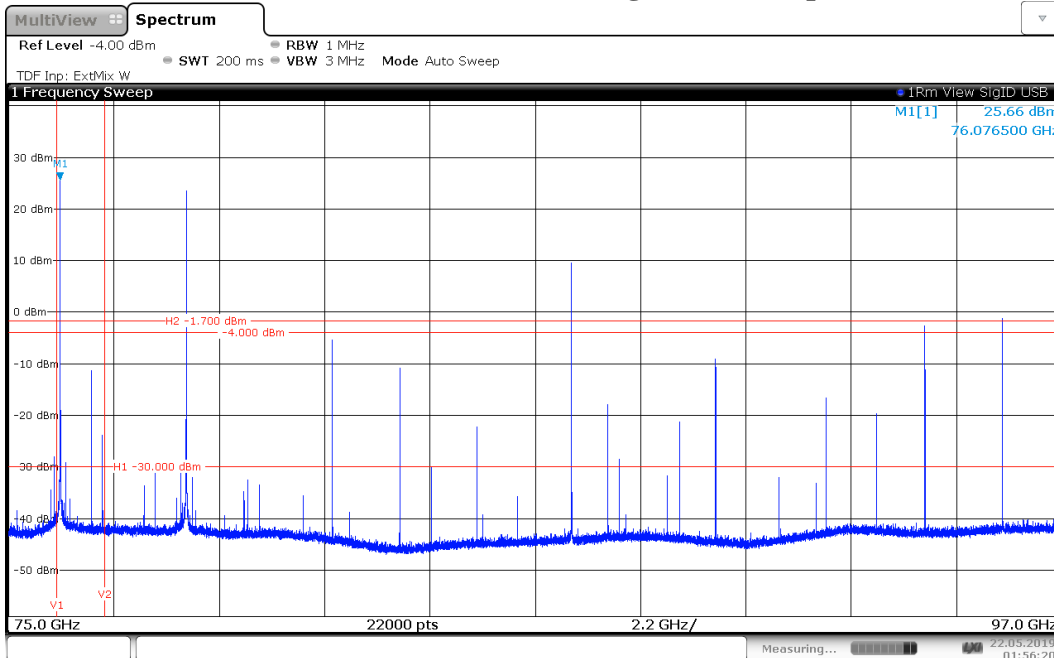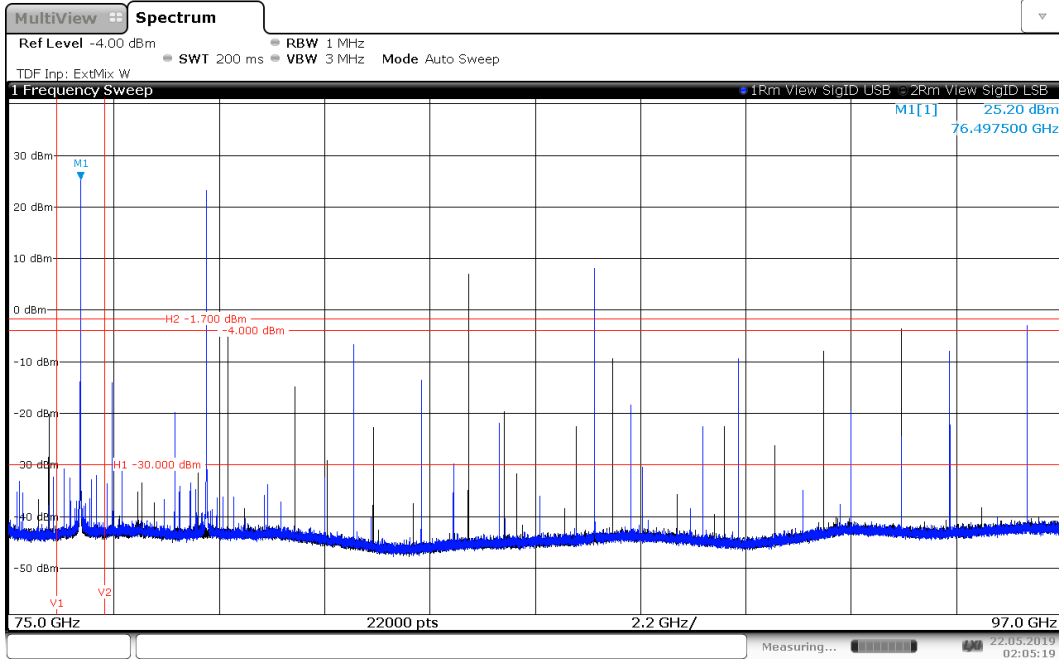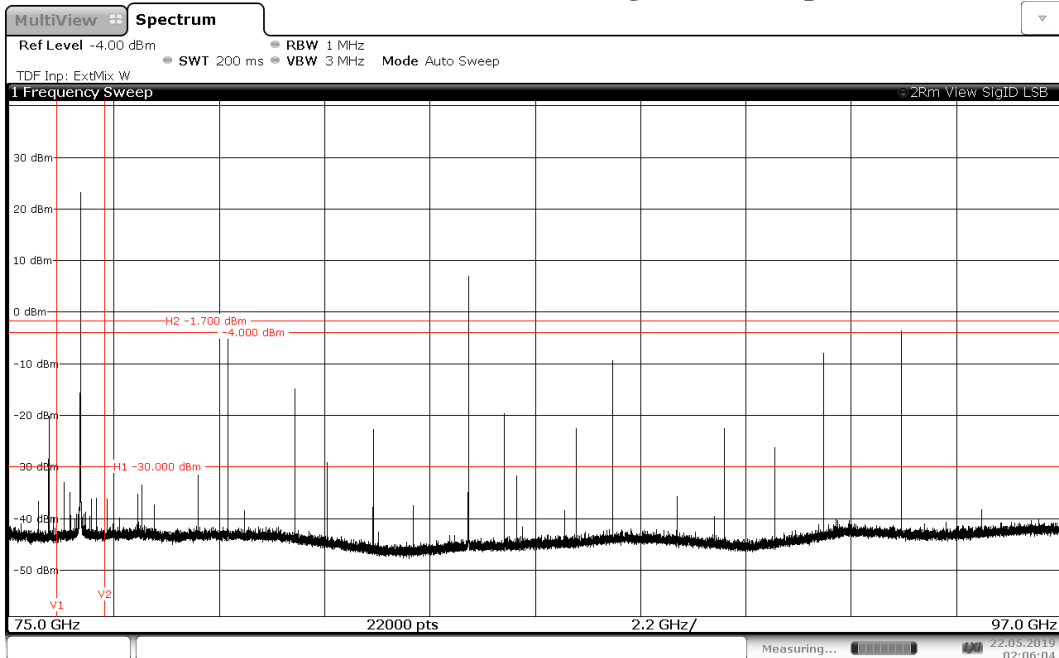*-4 dBm is a reference line from the FSW67. Limit is -1.7 dBm (FCC) and 0 dBm (ISED).

5.36. 77 GHz – 78.5 GHz, ANT HOR + VER, position with the highest power (RMS), FMCW

20:57:13 21.05.2019

* -4 dBm is a reference line from the FSW67. Limit is -1.7 dBm (FCC) and -30 dBm (ISED).

5.37. 78.5 GHz – 79.5 GHz, ANT HOR + VER, SigID USB+LSB, position with the highest power (RMS), FMCW

21:04:04 21.05.2019

* Signal ID function is used. The diagram shows image signals and mixer products. The real input signal is shown, only when USB and LSD traces have the same position on the frequency axis => Apart from the noise floor no real input signal was observed. See subsection 5.8.6. in the main report. -4 dBm is a reference line from the FSW67. Limit is -1.7 dBm (FCC) and -30 dBm (ISED).
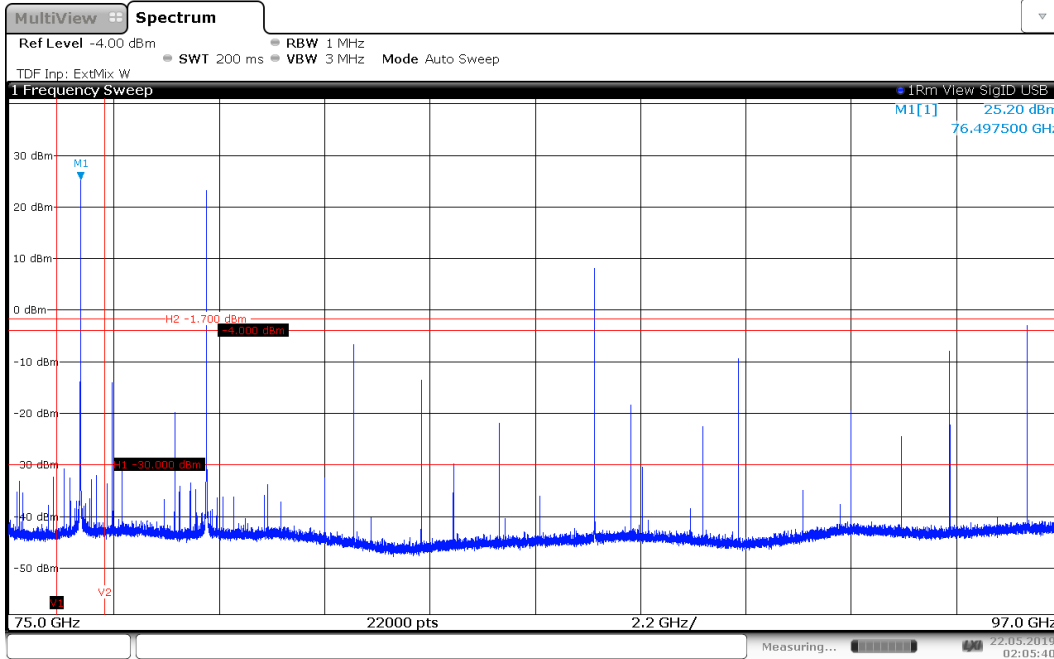
5.38. 79.5 GHz – 81 GHz, ANT HOR + VER, SigID USB+LSB, position with the highest power (RMS), FMCW

21:14:05 21.05.2019

* Signal ID function is used. The diagram shows image signals and mixer products. The real input signal is shown, only when USB and LSD traces have the same position on the frequency axis => Apart from the noise floor no real input signal was observed. See subsection 5.8.6. in the main report. -4 dBm is a reference line from the FSW67. Limit is -1.7 dBm (FCC) and -30 dBm (ISED).
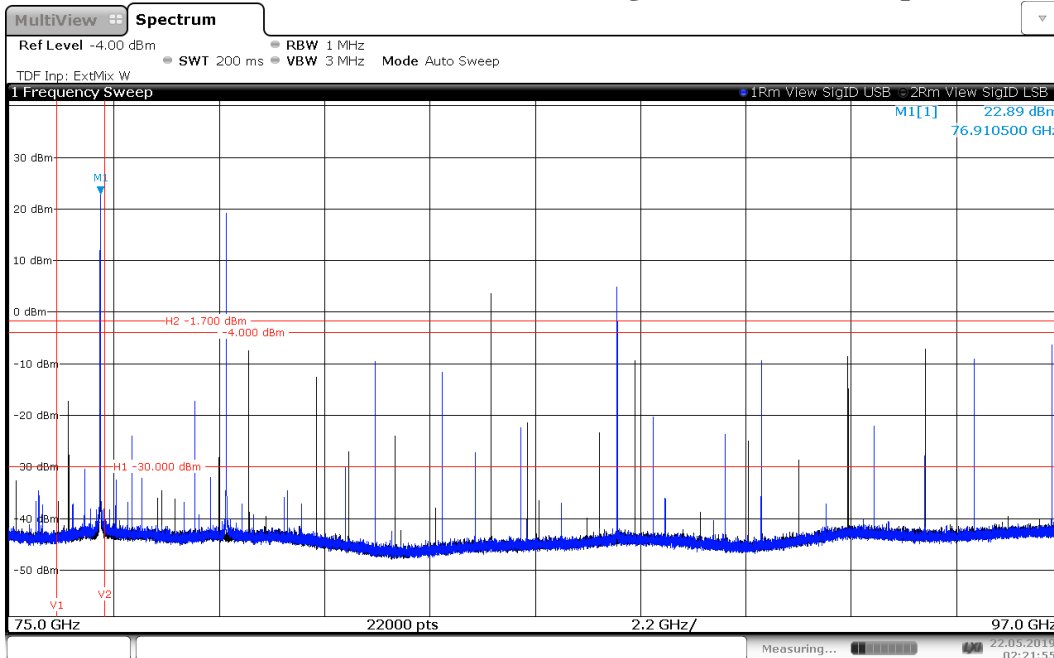
5.39. 81 GHz – 90 GHz, ANT HOR + VER, SigID USB+LSB, position with the highest power (RMS), FMCW

21:36:38 21.05.2019

* Signal ID function is used. The diagram shows image signals and mixer products. The real input signal is shown, only when USB and LSD traces have the same position on the frequency axis => Apart from the noise floor no real input signal was observed. See subsection 5.8.6. in the main report. -4 dBm is a reference line from the FSW67. Limit is -1.7 dBm (FCC) and -30 dBm (ISED).
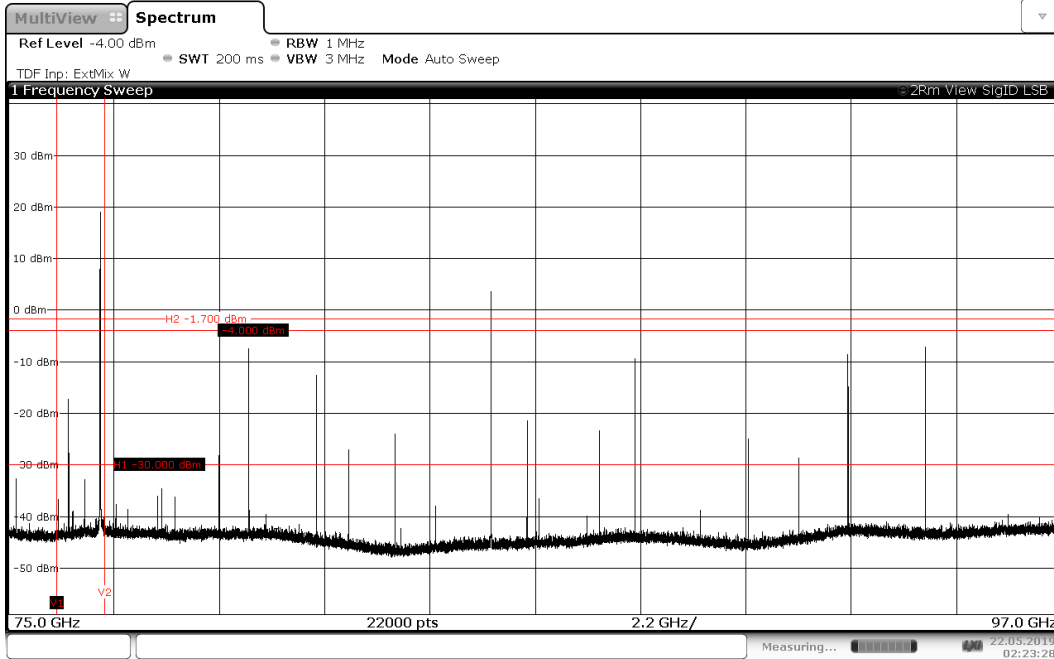
5.40. 90 GHz – 98 GHz, ANT HOR + VER, SigID USB+LSB, position with the highest power (RMS), FMCW

22:00:44 21.05.2019

* Signal ID function is used. The diagram shows image signals and mixer products. The real input signal is shown, only when USB and LSD traces have the same position on the frequency axis => Apart from the noise floor no real input signal was observed. See subsection 5.8.6. in the main report. -4 dBm is a reference line from the FSW67. Limit is -1.7 dBm (FCC) and -30 dBm (ISED).
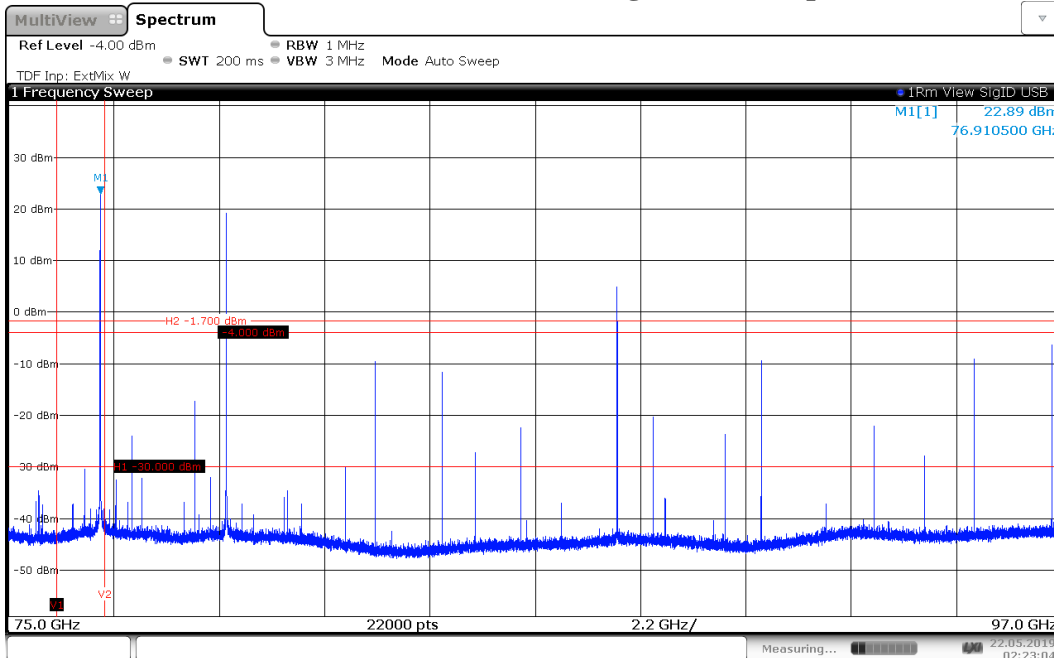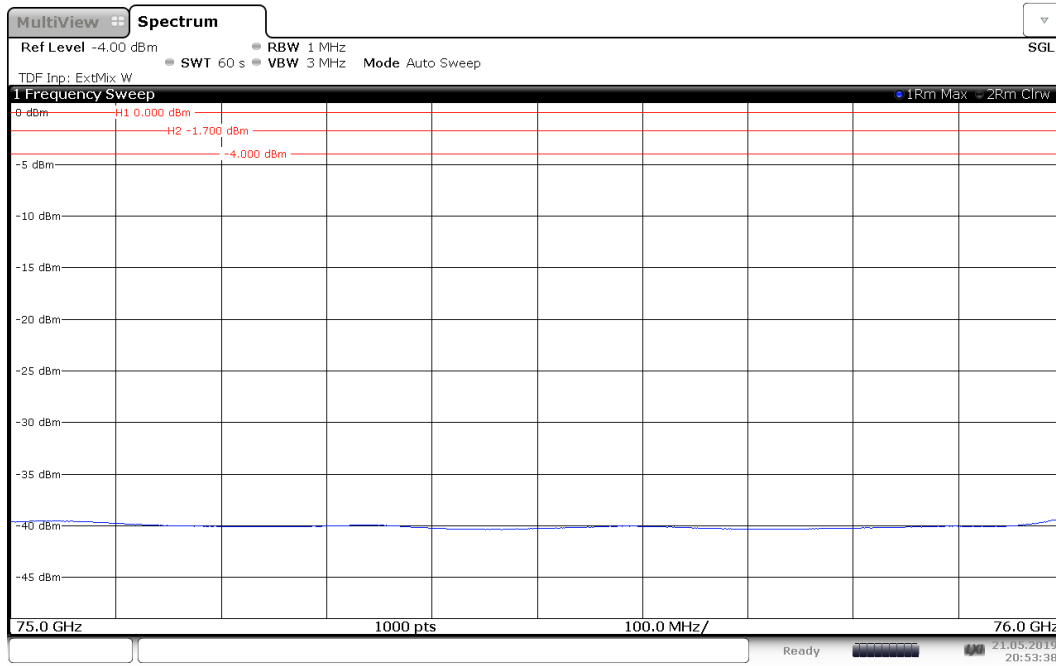
5.41. 97 GHz – 110 GHz, ANT HOR + VER, SigID USB + LSB, all positions, f_CW_low

02:02:09 22.05.2019

* Signal ID function is used. The diagram shows image signals and mixer products. The real input signal is shown, only when USB and LSD traces have the same position on the frequency axis => Apart from the noise floor no real input signal was observed. See subsection 5.8.6. in the main report. -4 dBm is a reference line from the FSW67. Limit is -1.7 dBm (FCC) and -30 dBm (ISED).
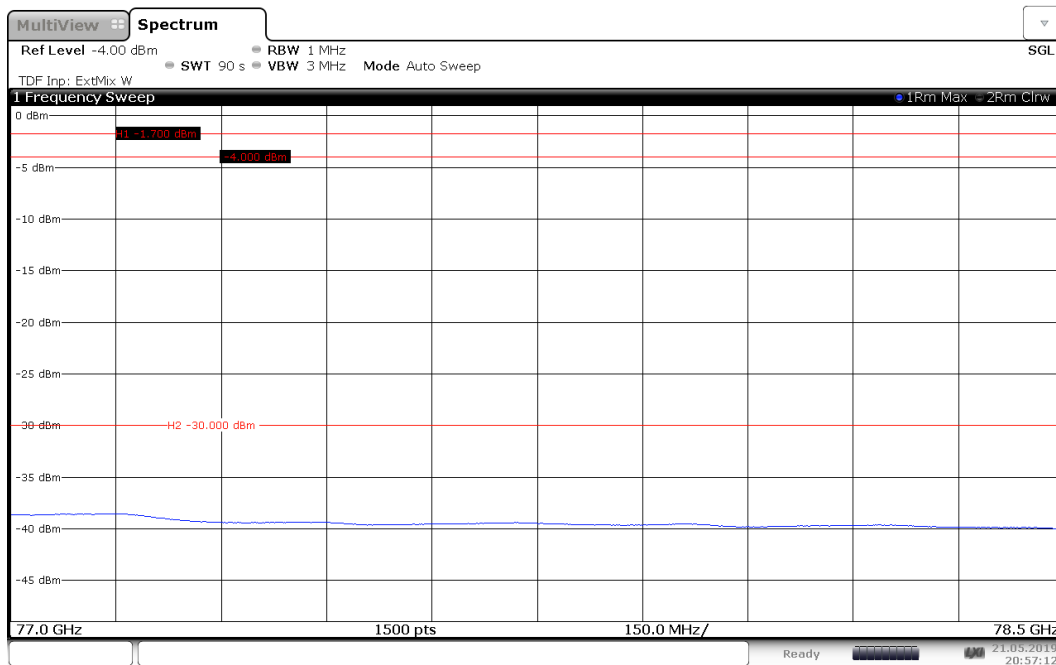
5.42. 97 GHz – 110 GHz, ANT HOR + VER, SigID LSB, all positions, f_CW_low

02:01:31 22.05.2019

* Signal ID function is used. The diagram shows image signals and mixer products. The real input signal is shown, only when USB and LSD traces have the same position on the frequency axis => Apart from the noise floor no real input signal was observed. See subsection 5.8.6. in the main report. -4 dBm is a reference line from the FSW67. Limit is -1.7 dBm (FCC) and -30 dBm (ISED).

5.43. 97 GHz – 110 GHz, ANT HOR + VER, SigID USB, all positions, f_CW_low

02:01:49 22.05.2019

* Signal ID function is used. The diagram shows image signals and mixer products. The real input signal is shown, only when USB and LSD traces have the same position on the frequency axis => Apart from the noise floor no real input signal was observed. See subsection 5.8.6. in the main report. -4 dBm is a reference line from the FSW67. Limit is -1.7 dBm (FCC) and -30 dBm (ISED).
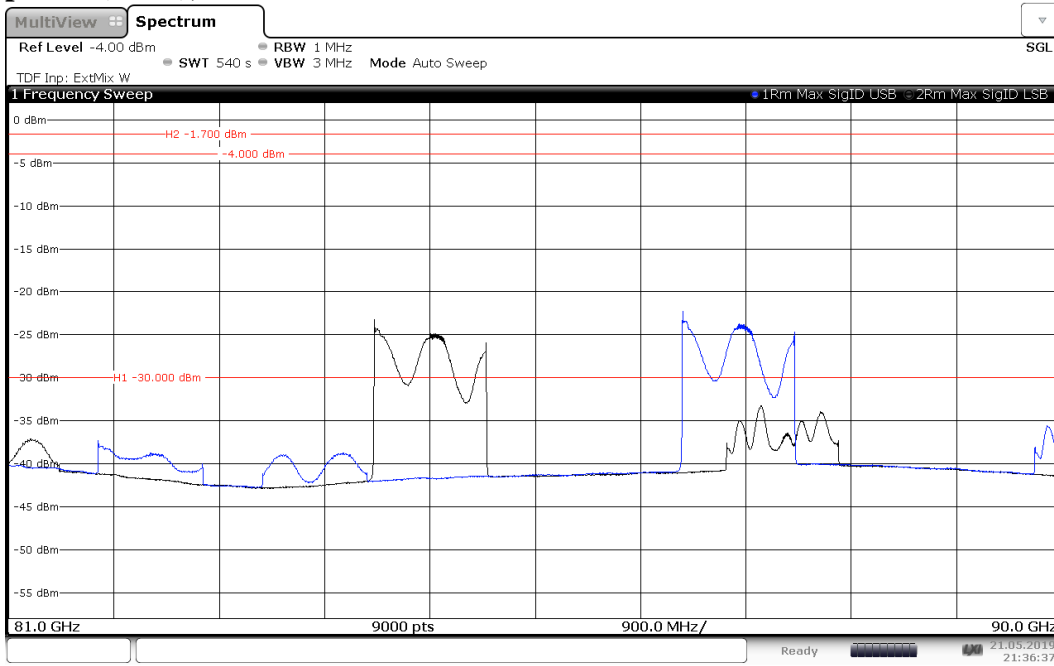
5.44. 97 GHz – 110 GHz, ANT HOR + VER, SigID USB + LSB, all positions, f_CW_center

18:28:50 16.05.2019

* Signal ID function is used. The diagram shows image signals and mixer products. The real input signal is shown, only when USB and LSD traces have the same position on the frequency axis => Apart from the noise floor no real input signal was observed. See subsection 5.8.6. in the main report. -4 dBm is a reference line from the FSW67. Limit is -1.7 dBm (FCC) and -30 dBm (ISED).
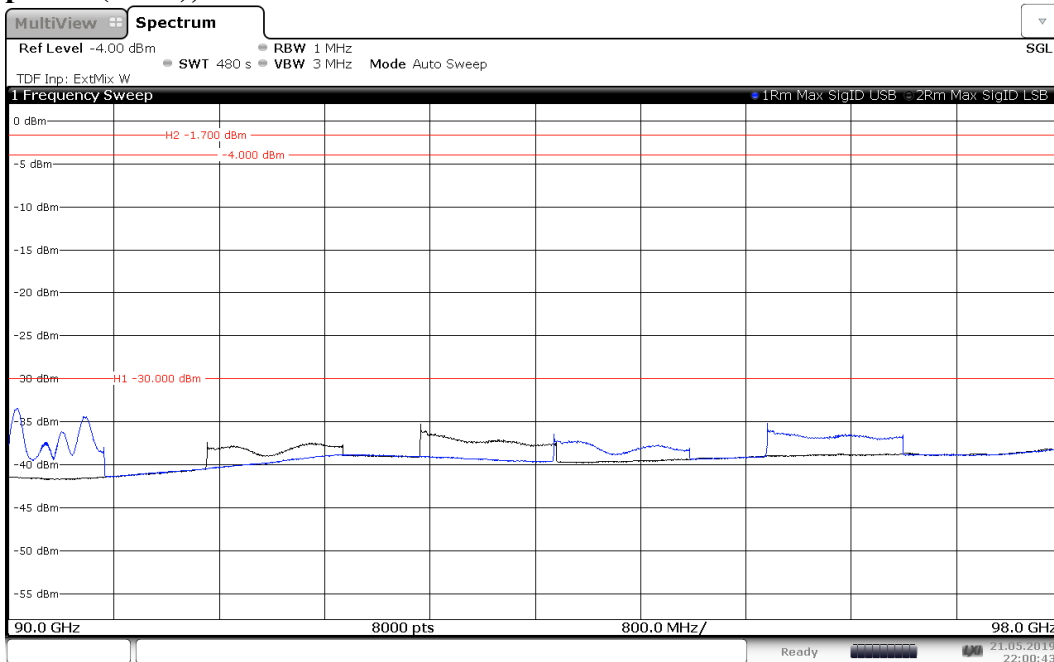
5.45. 97 GHz – 110 GHz, ANT HOR + VER, SigID LSB, all positions, f_CW_center

18:30:05 16.05.2019

* Signal ID function is used. The diagram shows image signals and mixer products. The real input signal is shown, only when USB and LSD traces have the same position on the frequency axis => Apart from the noise floor no real input signal was observed. See subsection 5.8.6. in the main report. -4 dBm is a reference line from the FSW67. Limit is -1.7 dBm (FCC) and -30 dBm (ISED).
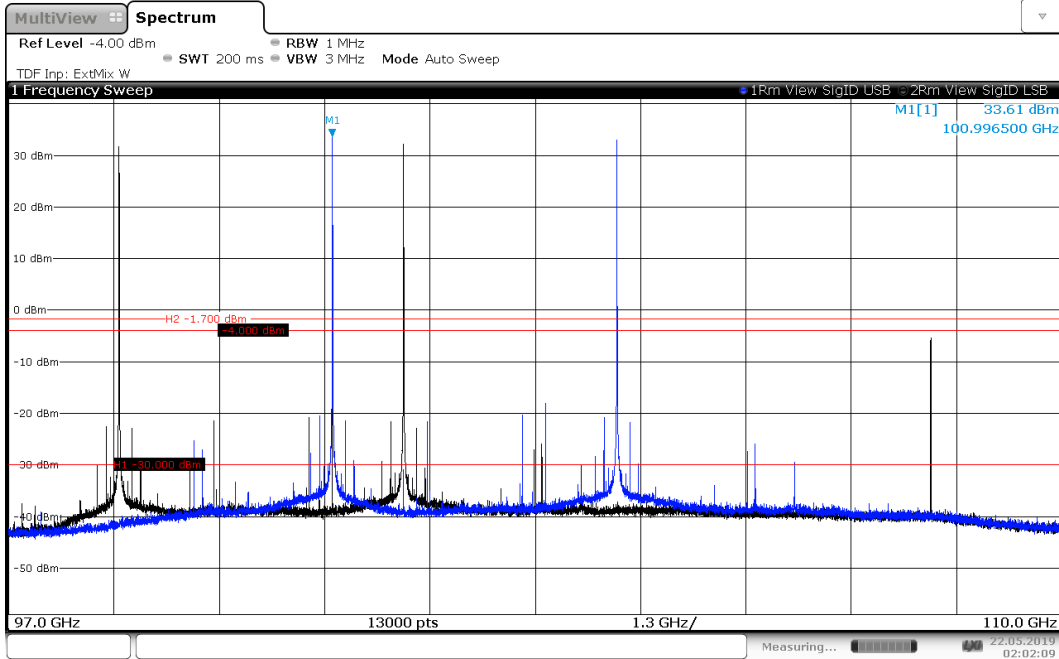
5.46. 97 GHz – 110 GHz, ANT HOR + VER, SigID USB, all positions, f_CW_center

18:29:28 16.05.2019

* Signal ID function is used. The diagram shows image signals and mixer products. The real input signal is shown, only when USB and LSD traces have the same position on the frequency axis => Apart from the noise floor no real input signal was observed. See subsection 5.8.6. in the main report. -4 dBm is a reference line from the FSW67. Limit is -1.7 dBm (FCC) and -30 dBm (ISED).
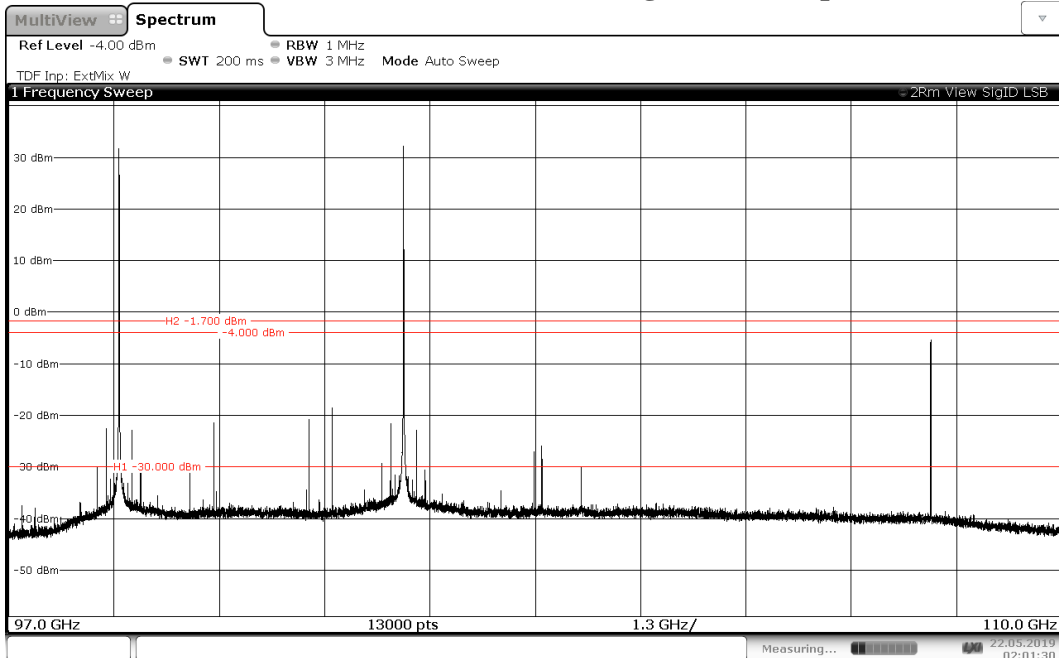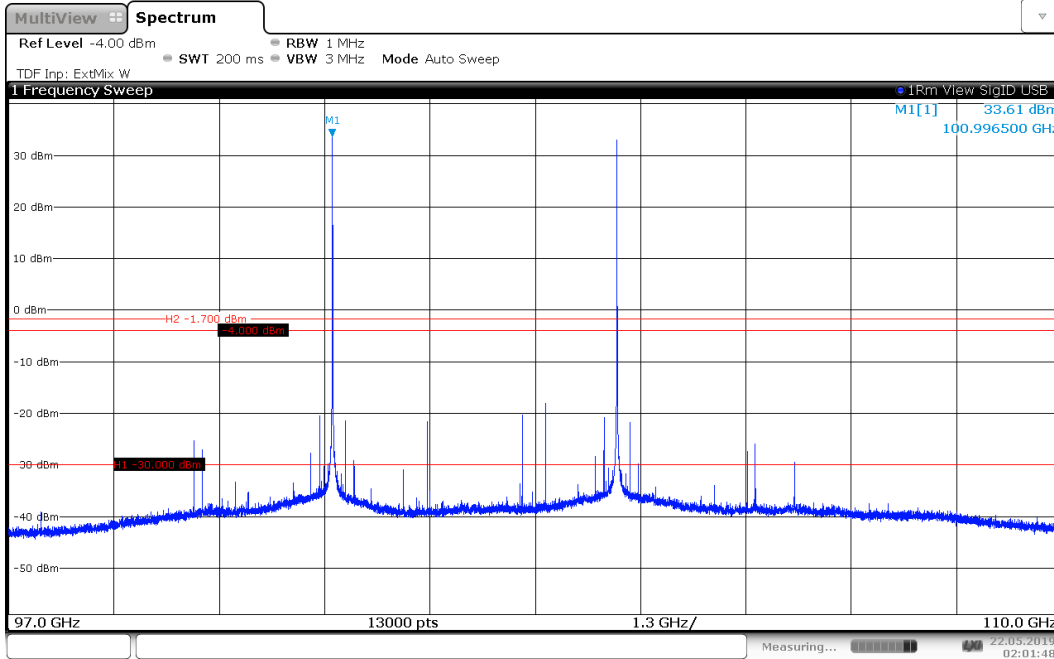
5.47. 97 GHz – 110 GHz, ANT HOR + VER, SigID USB + LSB, all positions, f_CW_high

02:09:42 22.05.2019

* Signal ID function is used. The diagram shows image signals and mixer products. The real input signal is shown, only when USB and LSD traces have the same position on the frequency axis => Apart from the noise floor no real input signal was observed. See subsection 5.8.6. in the main report. -4 dBm is a reference line from the FSW67. Limit is -1.7 dBm (FCC) and -30 dBm (ISED).
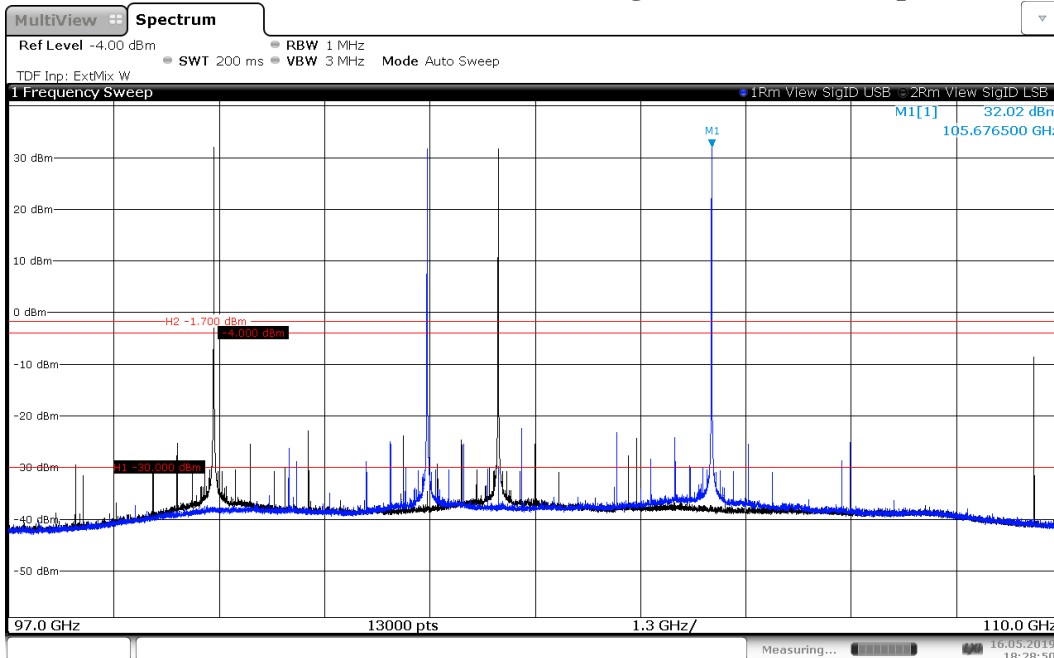
5.48. 97 GHz – 110 GHz, ANT HOR + VER, SigID LSB, all positions, f_CW_high

02:10:40 22.05.2019

* Signal ID function is used. The diagram shows image signals and mixer products. The real input signal is shown, only when USB and LSD traces have the same position on the frequency axis => Apart from the noise floor no real input signal was observed. See subsection 5.8.6. in the main report. -4 dBm is a reference line from the FSW67. Limit is -1.7 dBm (FCC) and -30 dBm (ISED).
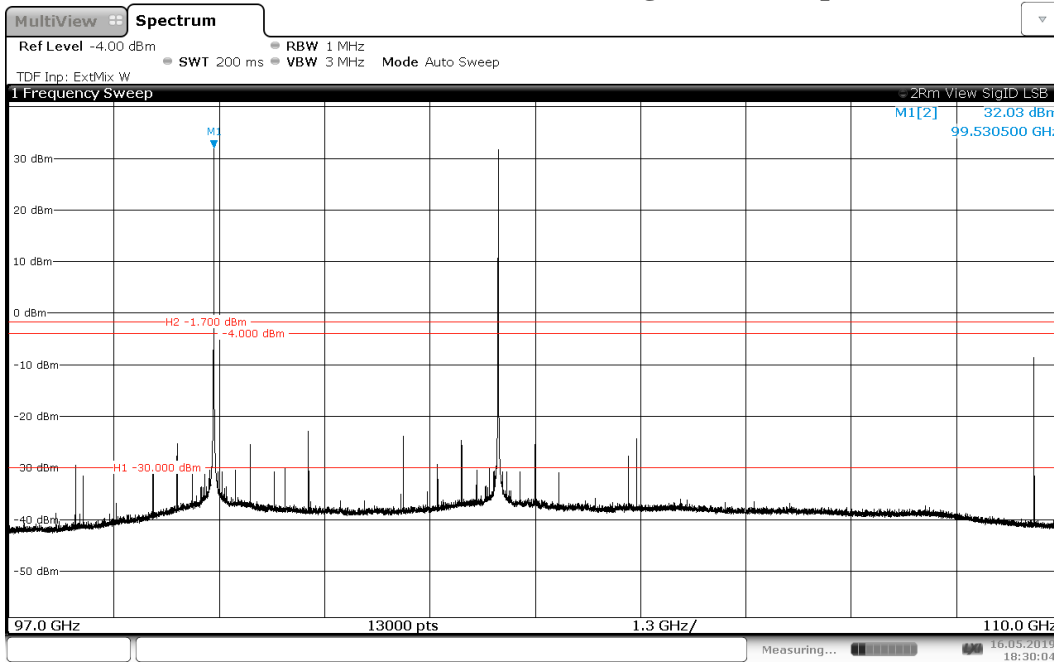
5.49. 97 GHz – 110 GHz, ANT HOR + VER, SigID USB, all positions, f_CW_high

02:10:07 22.05.2019

* Signal ID function is used. The diagram shows image signals and mixer products. The real input signal is shown, only when USB and LSD traces have the same position on the frequency axis => Apart from the noise floor no real input signal was observed. See subsection 5.8.6. in the main report. -4 dBm is a reference line from the FSW67. Limit is -1.7 dBm (FCC) and -30 dBm (ISED).
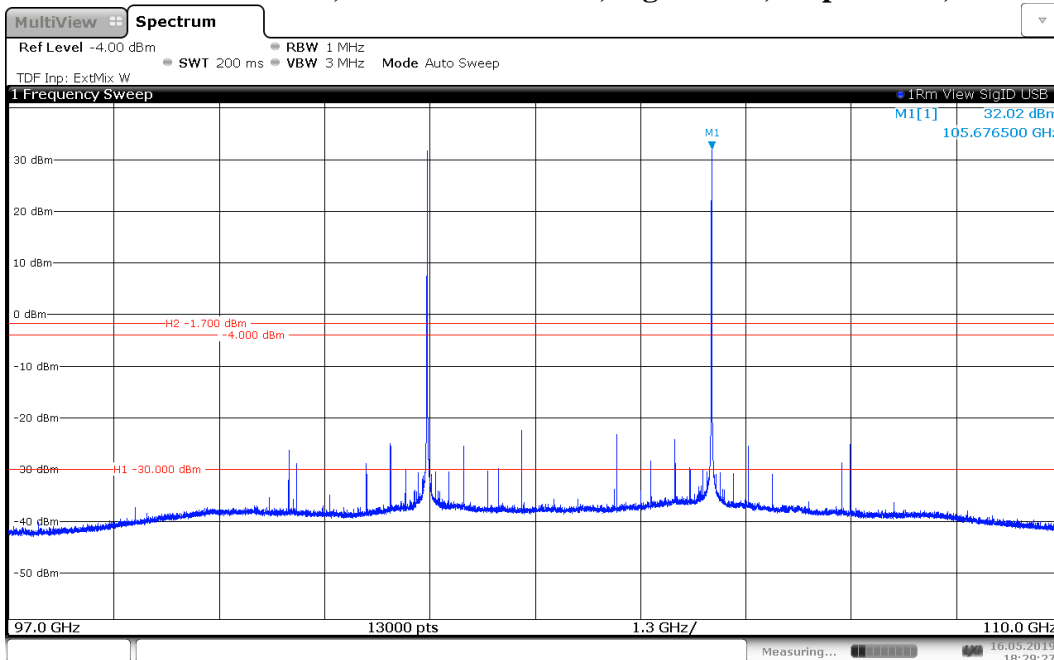
5.50. 98 GHz – 110 GHz, ANT HOR + VER, SigID USB+LSB, position with the highest power (RMS), FMCW

01:49:16 22.05.2019

* Signal ID function is used. The diagram shows image signals and mixer products. The real input signal is shown, only when USB and LSD traces have the same position on the frequency axis => Apart from the noise floor no real input signal was observed. See subsection 5.8.6. in the main report. -4 dBm is a reference line from the FSW67. Limit is -1.7 dBm (FCC) and -30 dBm (ISED).
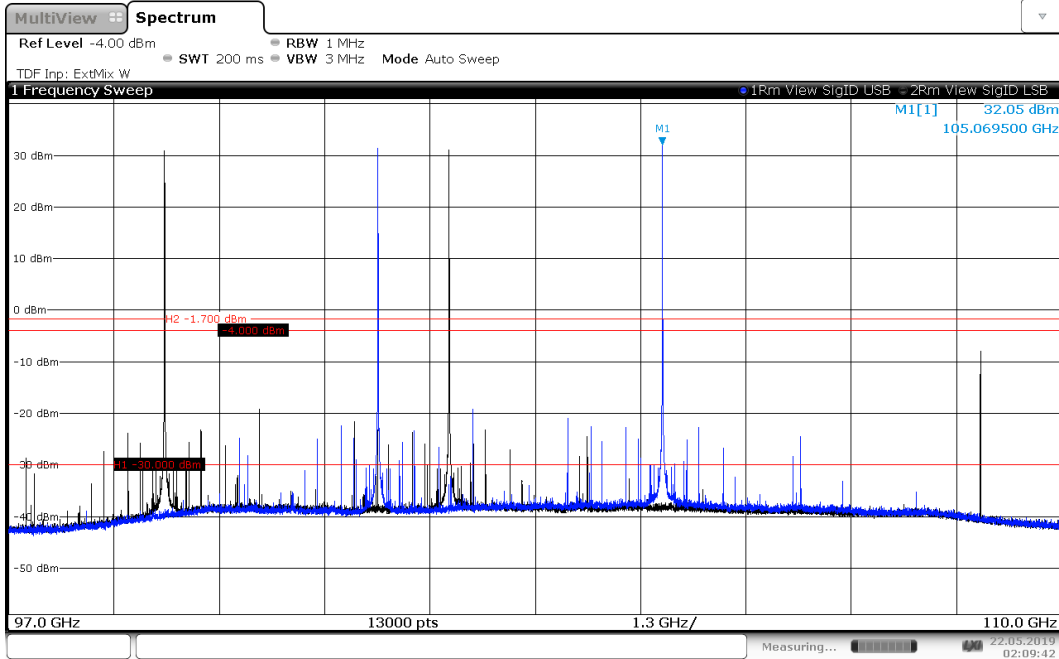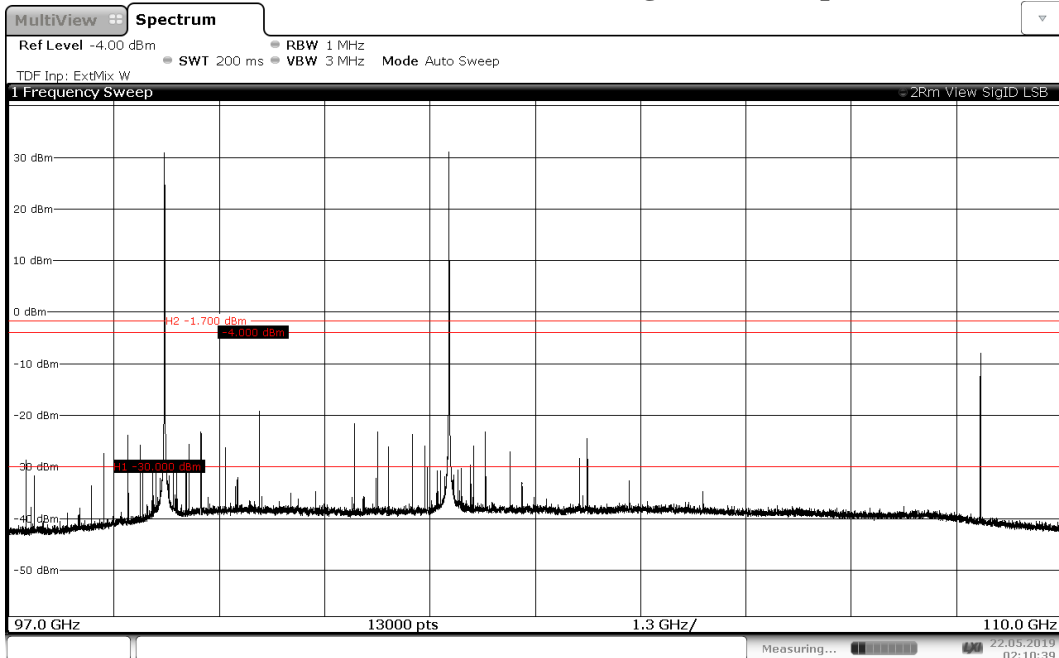
5.51. 110 GHz – 140 GHz, ANT HOR + VER, SigID USB + LSB, all positions, f_CW_low

21:51:58 22.05.2019

* Signal ID function is used. The diagram shows image signals and mixer products. The real input signal is shown, only when USB and LSD traces have the same position on the frequency axis => Apart from the noise floor no real input signal was observed. See subsection 5.8.6. in the main report. -21 dBm is a reference line from the FSW67. Limit is -1.7 dBm (FCC) and -30 dBm (ISED).
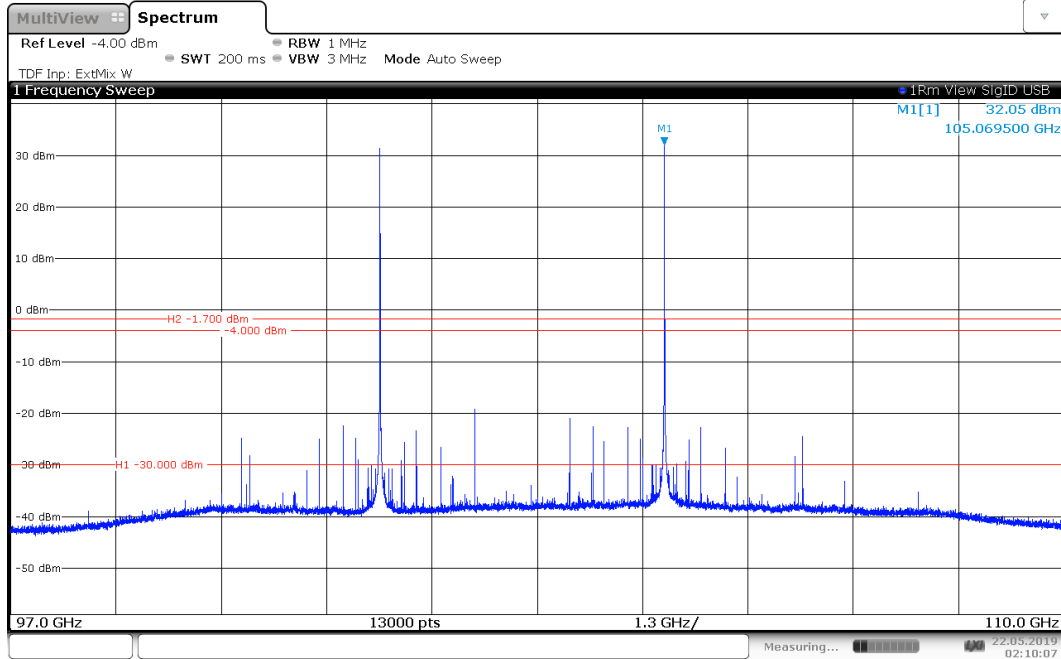
5.52. 110 GHz – 140 GHz, ANT HOR + VER, SigID LSB, all positions, f_CW_low

21:52:49 22.05.2019

* Signal ID function is used. The diagram shows image signals and mixer products. The real input signal is shown, only when USB and LSD traces have the same position on the frequency axis => Apart from the noise floor no real input signal was observed. See subsection 5.8.6. in the main report. -21 dBm is a reference line from the FSW67. Limit is -1.7 dBm (FCC) and -30 dBm (ISED).
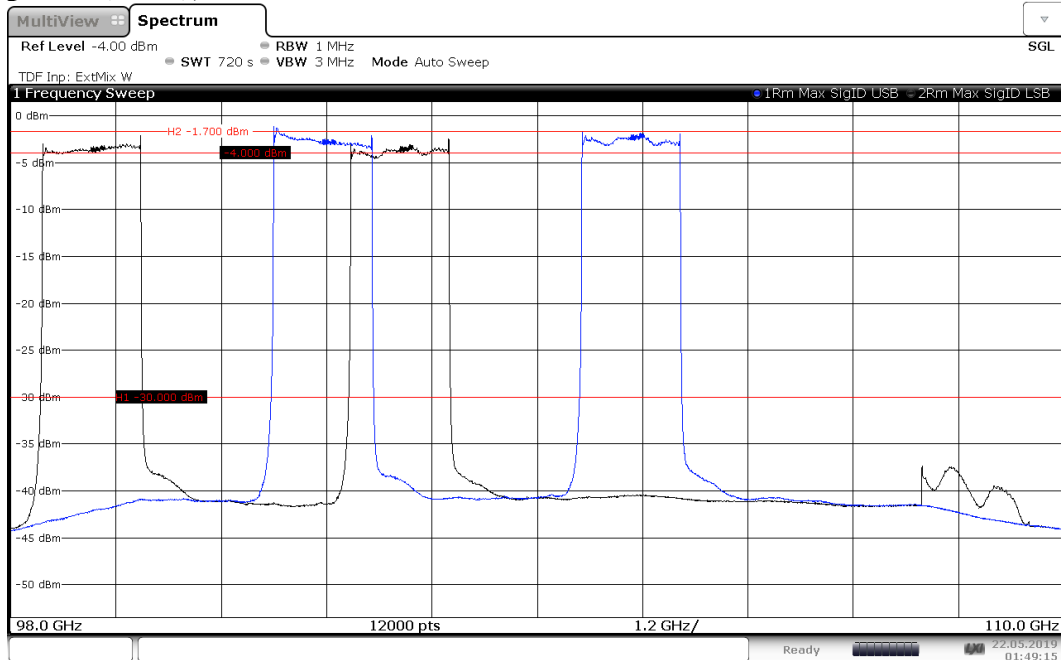
5.53. 110 GHz – 140 GHz, ANT HOR + VER, SigID USB, all positions, f_CW_low

21:52:29 22.05.2019

* Signal ID function is used. The diagram shows image signals and mixer products. The real input signal is shown, only when USB and LSD traces have the same position on the frequency axis => Apart from the noise floor no real input signal was observed. See subsection 5.8.6. in the main report. -21 dBm is a reference line from the FSW67. Limit is -1.7 dBm (FCC) and -30 dBm (ISED).
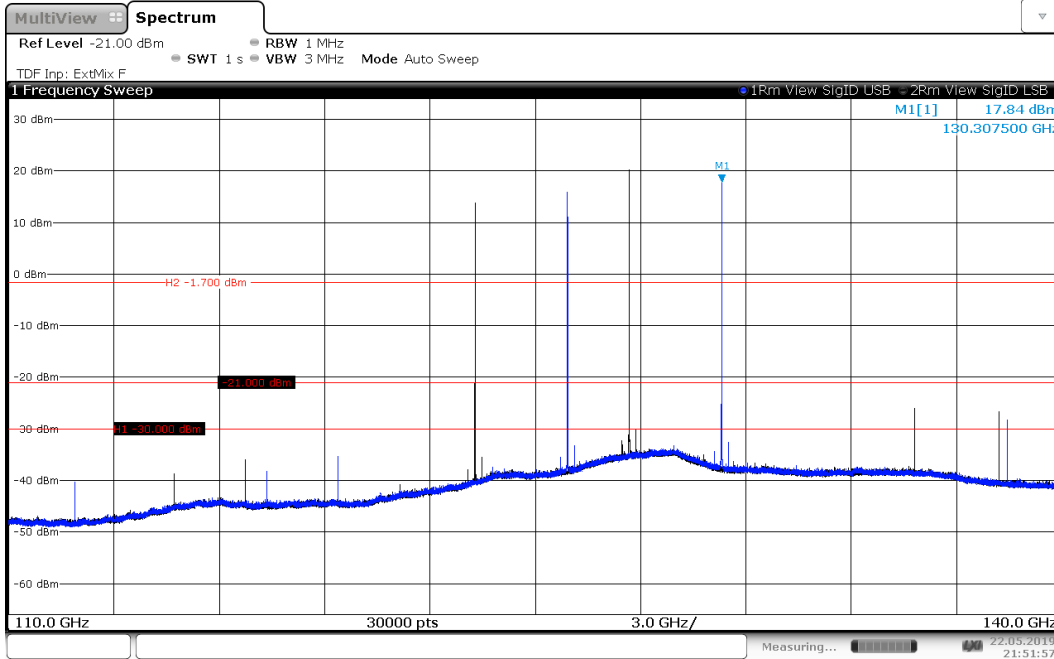
5.54. 110 GHz – 140 GHz, ANT HOR + VER, SigID USB + LSB, all positions, f_CW_center

21:57:46 22.05.2019

* Signal ID function is used. The diagram shows image signals and mixer products. The real input signal is shown, only when USB and LSD traces have the same position on the frequency axis => Apart from the noise floor no real input signal was observed. See subsection 5.8.6. in the main report. -21 dBm is a reference line from the FSW67. Limit is -1.7 dBm (FCC) and -30 dBm (ISED).
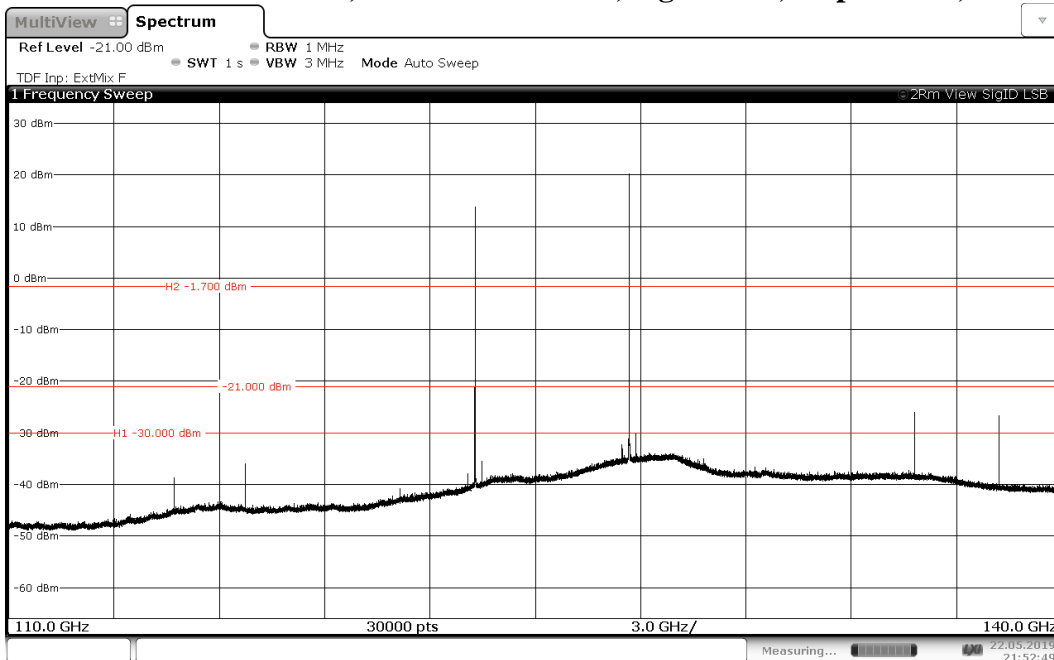
5.55. 110 GHz – 140 GHz, ANT HOR + VER, SigID LSB, all positions, f_CW_center

21:59:28 22.05.2019

* Signal ID function is used. The diagram shows image signals and mixer products. The real input signal is shown, only when USB and LSD traces have the same position on the frequency axis => Apart from the noise floor no real input signal was observed. See subsection 5.8.6. in the main report. -21 dBm is a reference line from the FSW67. Limit is -1.7 dBm (FCC) and -30 dBm (ISED).
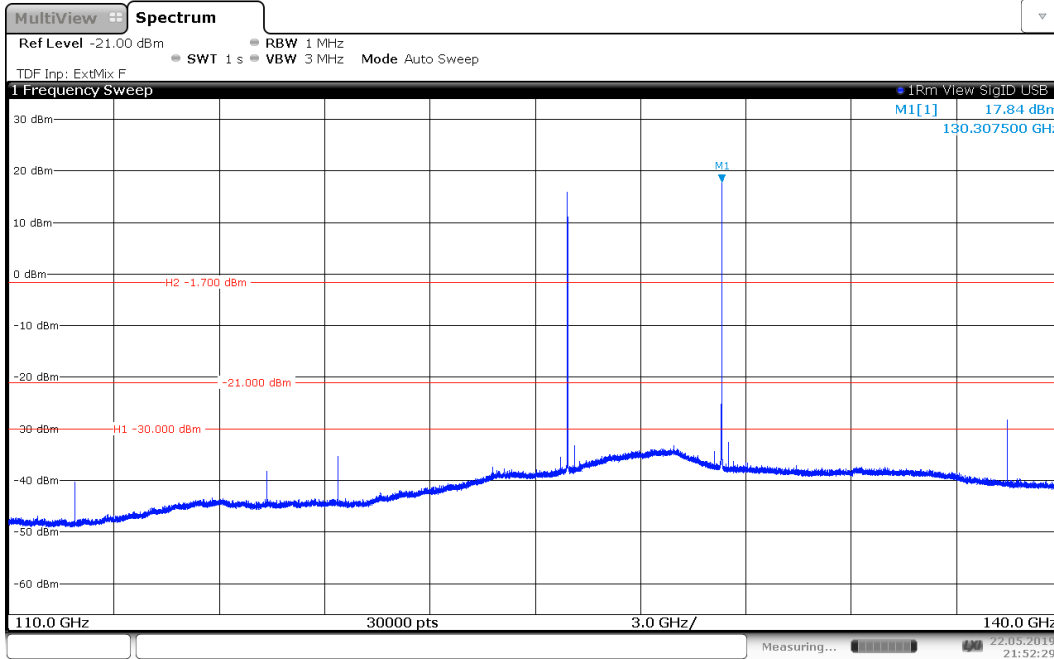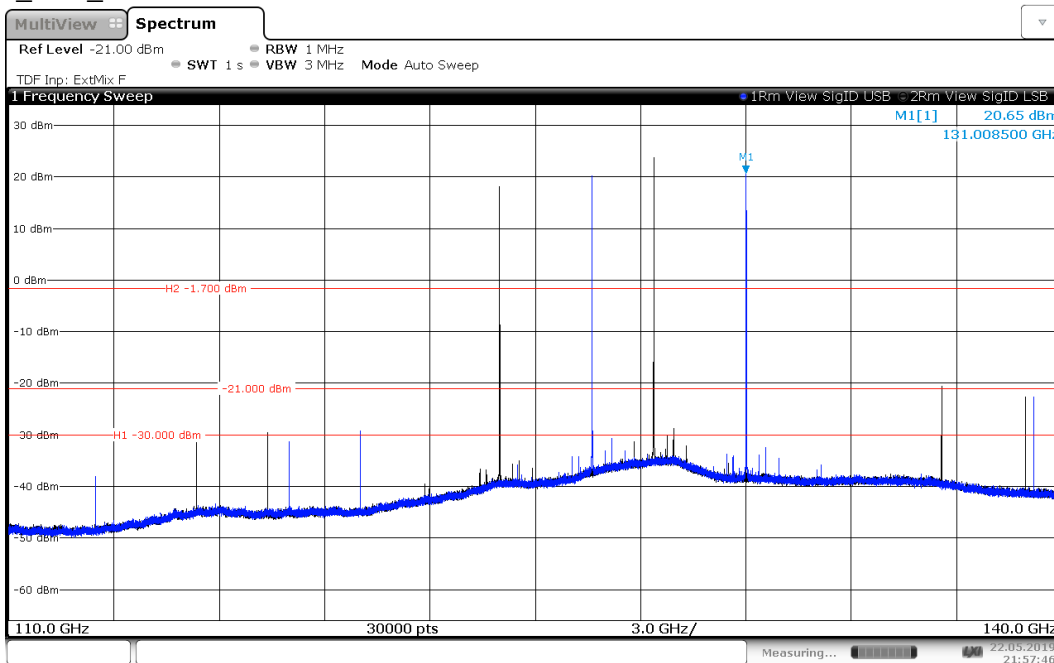
5.56. 110 GHz – 140 GHz, ANT HOR + VER, SigID USB, all positions, f_CW_center

21:58:57 22.05.2019

* Signal ID function is used. The diagram shows image signals and mixer products. The real input signal is shown, only when USB and LSD traces have the same position on the frequency axis => Apart from the noise floor no real input signal was observed. See subsection 5.8.6. in the main report. -21 dBm is a reference line from the FSW67. Limit is -1.7 dBm (FCC) and -30 dBm (ISED).
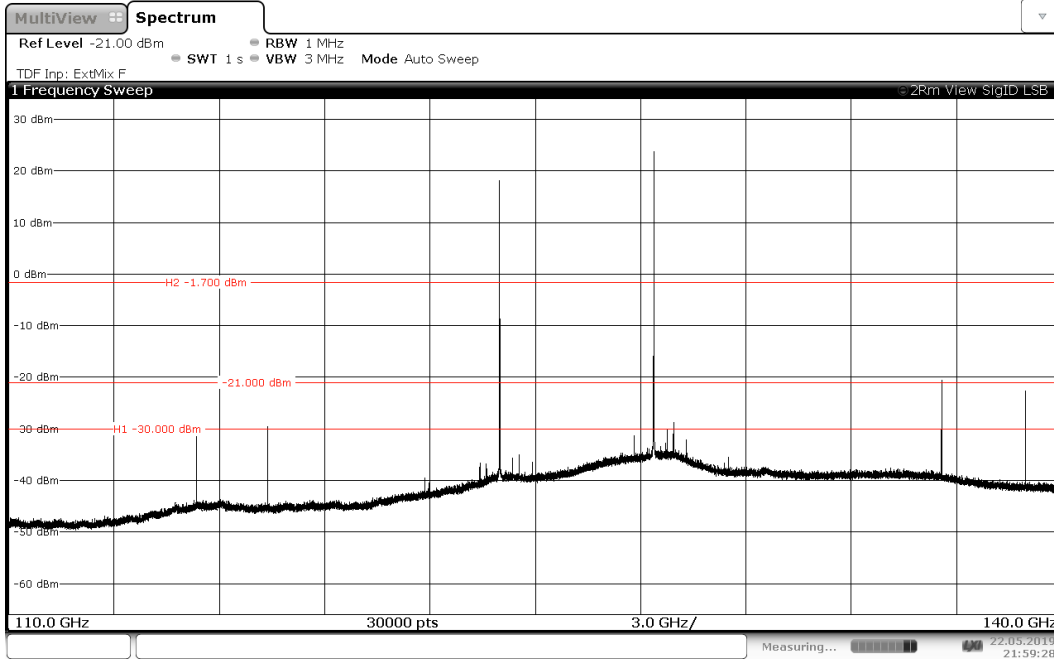
5.57. 110 GHz – 140 GHz, ANT HOR + VER, SigID USB + LSB, all positions, f_CW_high

22:02:34 22.05.2019

* Signal ID function is used. The diagram shows image signals and mixer products. The real input signal is shown, only when USB and LSD traces have the same position on the frequency axis => Apart from the noise floor no real input signal was observed. See subsection 5.8.6. in the main report. -21 dBm is a reference line from the FSW67. Limit is -1.7 dBm (FCC) and -30 dBm (ISED).
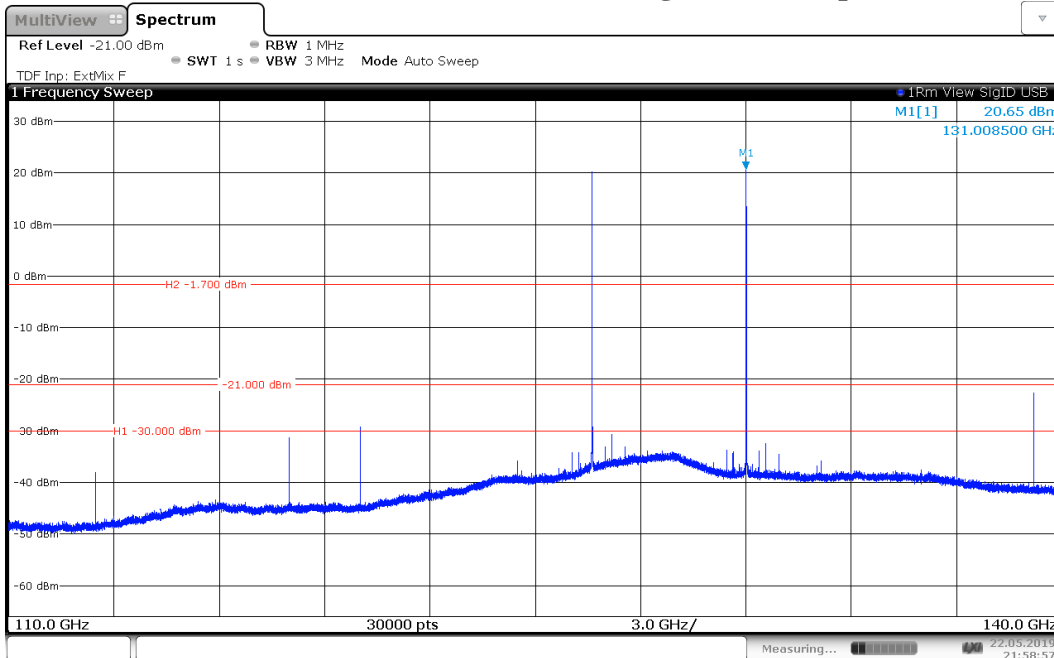
5.58. 110 GHz – 140 GHz, ANT HOR + VER, SigID LSB, all positions, f_CW_high

22:04:19 22.05.2019

* Signal ID function is used. The diagram shows image signals and mixer products. The real input signal is shown, only when USB and LSD traces have the same position on the frequency axis => Apart from the noise floor no real input signal was observed. See subsection 5.8.6. in the main report. -21 dBm is a reference line from the FSW67. Limit is -1.7 dBm (FCC) and -30 dBm (ISED).
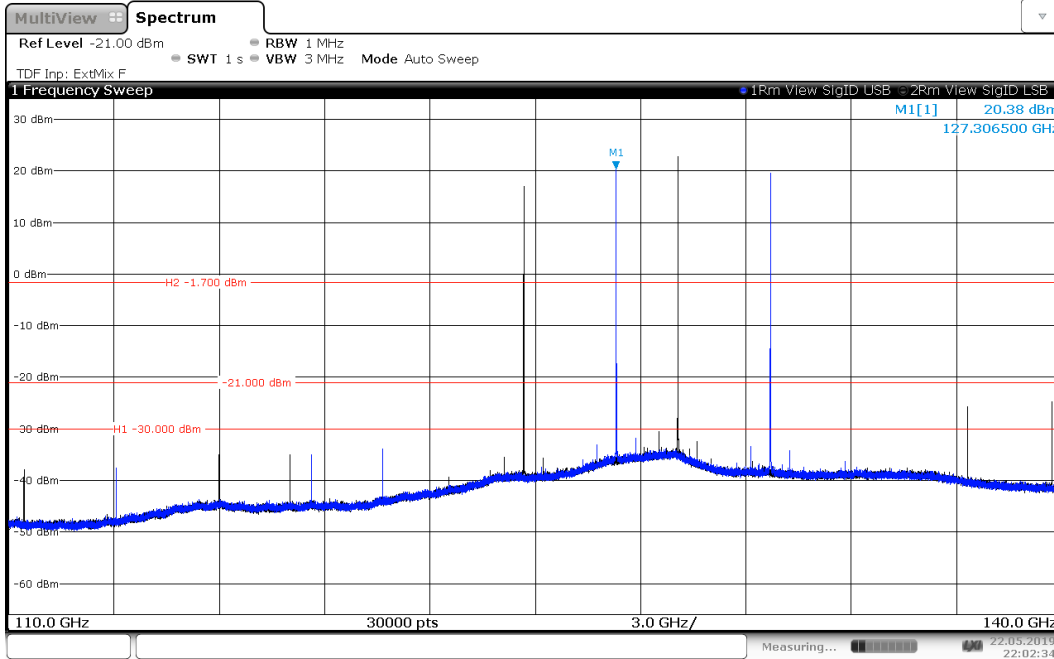
5.59. 110 GHz – 140 GHz, ANT HOR + VER, SigID USB, all positions, f_CW_high

22:03:31 22.05.2019

* Signal ID function is used. The diagram shows image signals and mixer products. The real input signal is shown, only when USB and LSD traces have the same position on the frequency axis => Apart from the noise floor no real input signal was observed. See subsection 5.8.6. in the main report. -21 dBm is a reference line from the FSW67. Limit is -1.7 dBm (FCC) and -30 dBm (ISED).
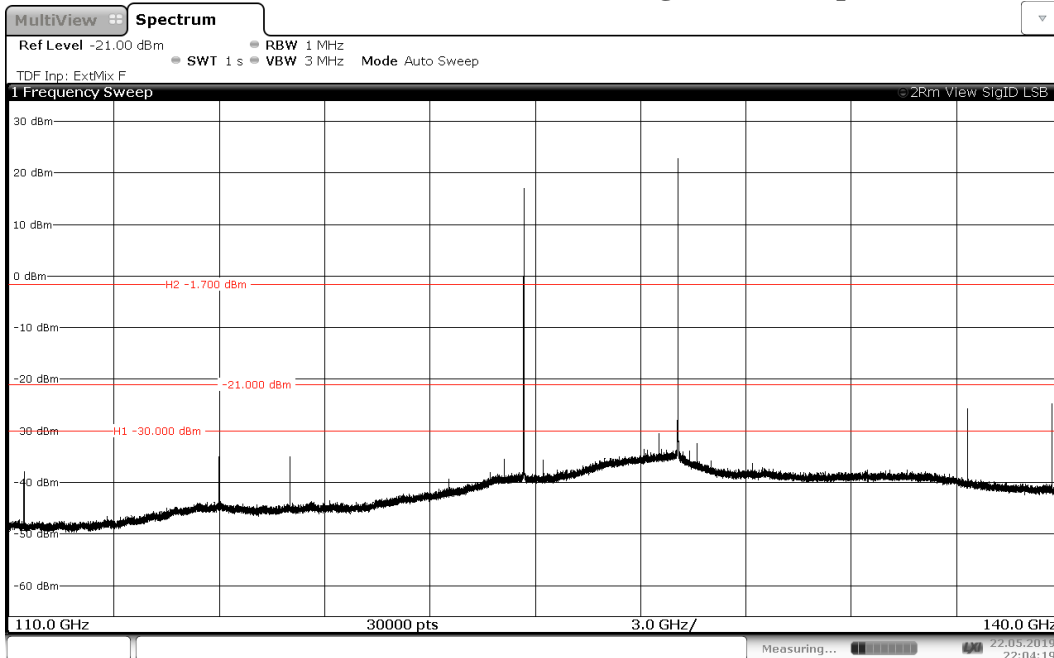
5.60. 110 GHz – 122 GHz, ANT HOR + VER, SigID USB+LSB, position with the highest power (RMS), FMCW

00:59:11 23.05.2019

* Signal ID function is used. The diagram shows image signals and mixer products. The real input signal is shown, only when USB and LSD traces have the same position on the frequency axis => Apart from the noise floor no real input signal was observed. See subsection 5.8.6. in the main report. -21 dBm is a reference line from the FSW67. Limit is -1.7 dBm (FCC) and -30 dBm (ISED).
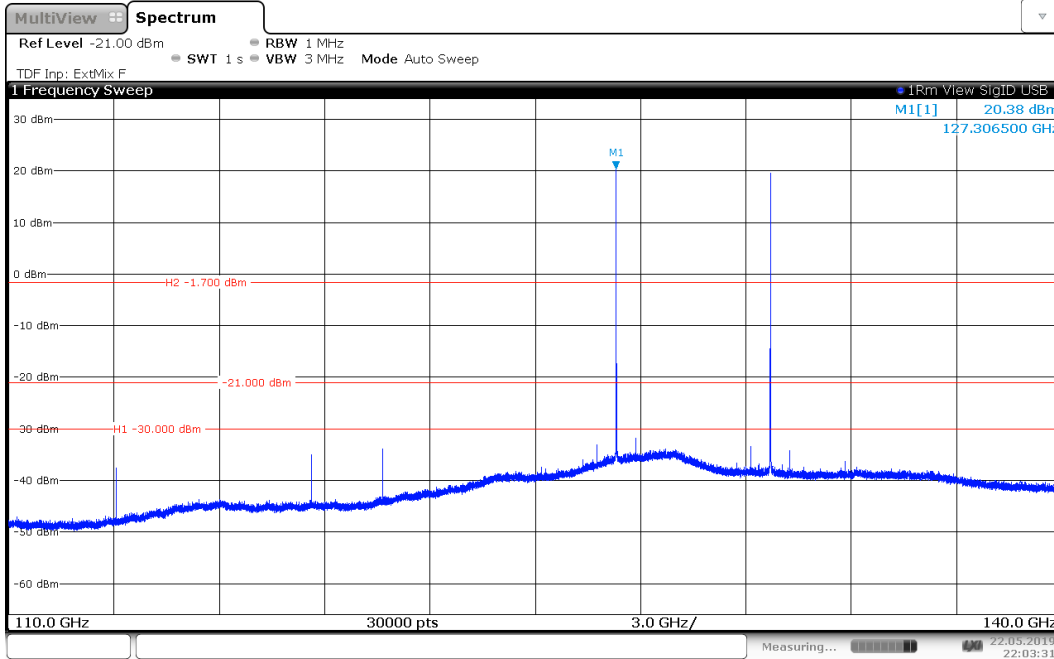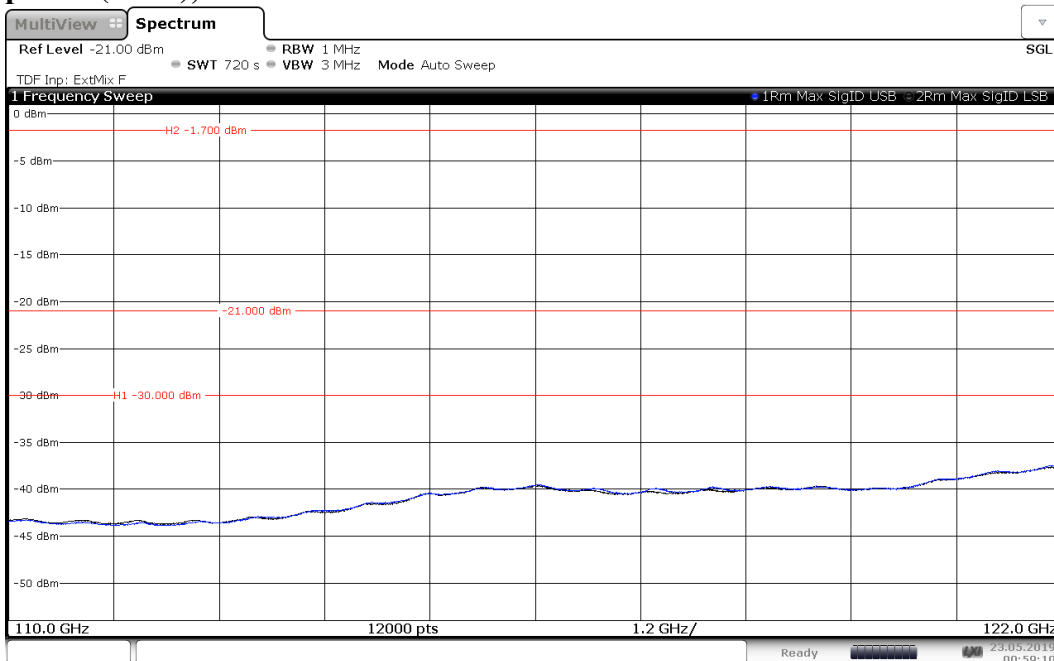
5.61. 122 GHz – 138 GHz, ANT HOR + VER, SigID USB+LSB, position with the highest power (RMS), FMCW

00:29:25 23.05.2019

* Signal ID function is used. The diagram shows image signals and mixer products. The real input signal is shown, only when USB and LSD traces have the same position on the frequency axis => Apart from the noise floor no real input signal was observed. See subsection 5.8.6. in the main report. -21 dBm is a reference line from the FSW67. Limit is -1.7 dBm (FCC) and -30 dBm (ISED). No real signal is above the limit.
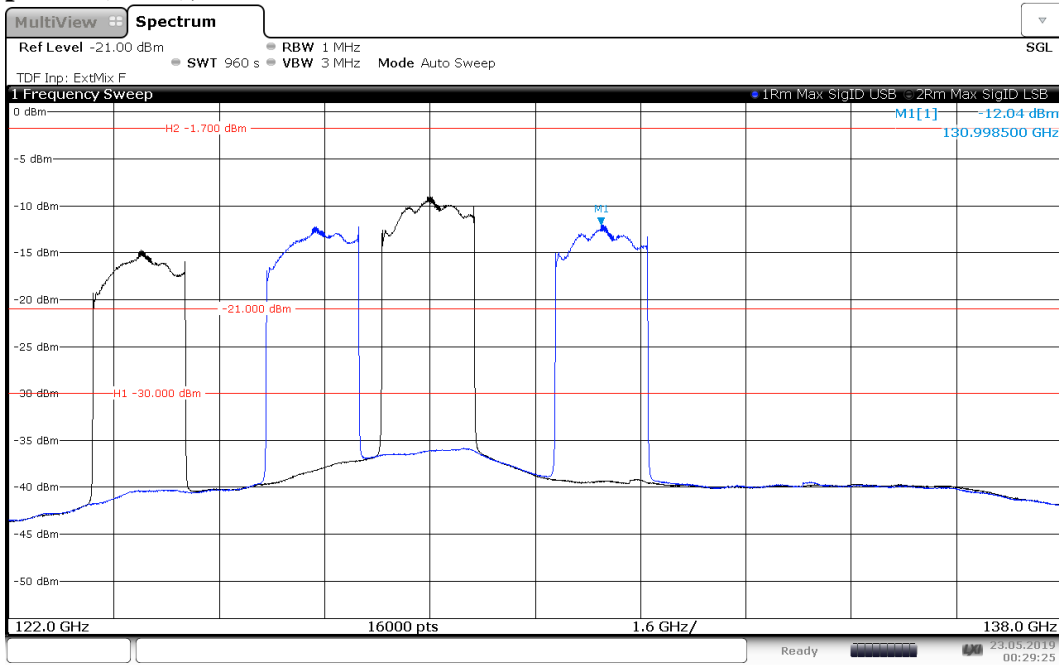
5.62. 138 GHz – 140 GHz, ANT HOR + VER, SigID USB+LSB, position with the highest power (RMS), FMCW

01:05:59 23.05.2019

* Signal ID function is used. The diagram shows image signals and mixer products. The real input signal is shown, only when USB and LSD traces have the same position on the frequency axis => Apart from the noise floor no real input signal was observed. See subsection 5.8.6. in the main report. -21 dBm is a reference line from the FSW67. Limit is -1.7 dBm (FCC) and -30 dBm (ISED).
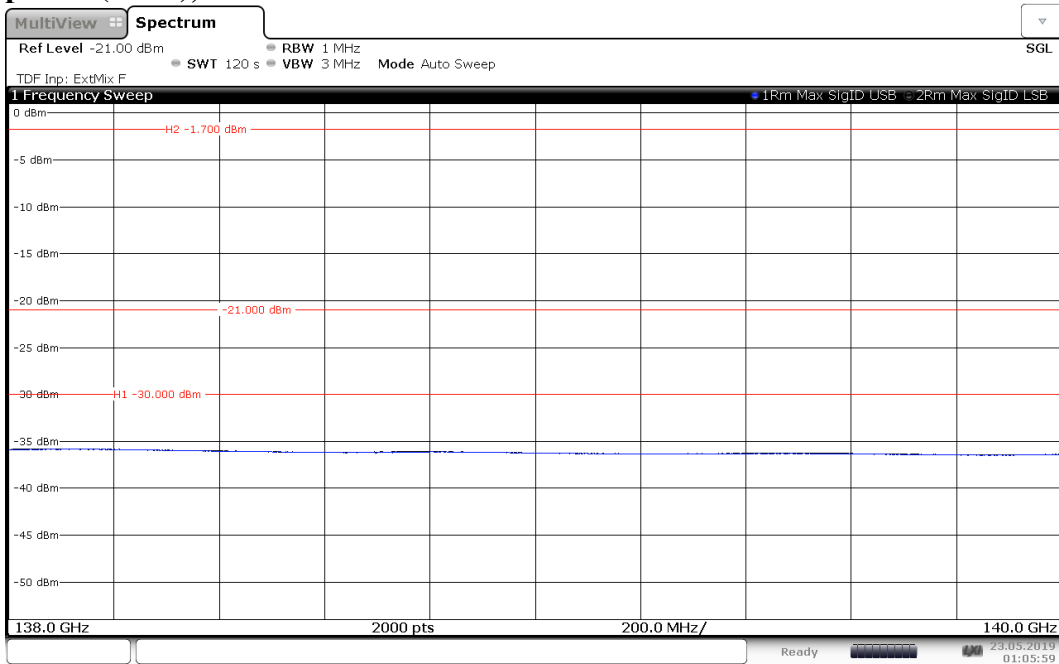
5.63. 140 GHz – 162 GHz, ANT HOR + VER, SigID USB + LSB, all positions, f_CW_low

03:30:44 23.05.2019

* Signal ID function is used. The diagram shows image signals and mixer products. The real input signal is shown, only when USB and LSD traces have the same position on the frequency axis => Apart from the noise floor no real input signal was observed. See subsection 5.8.6. in the main report. -21 dBm is a reference line from the FSW67. Limit is -1.7 dBm (FCC) and -30 dBm (ISED).
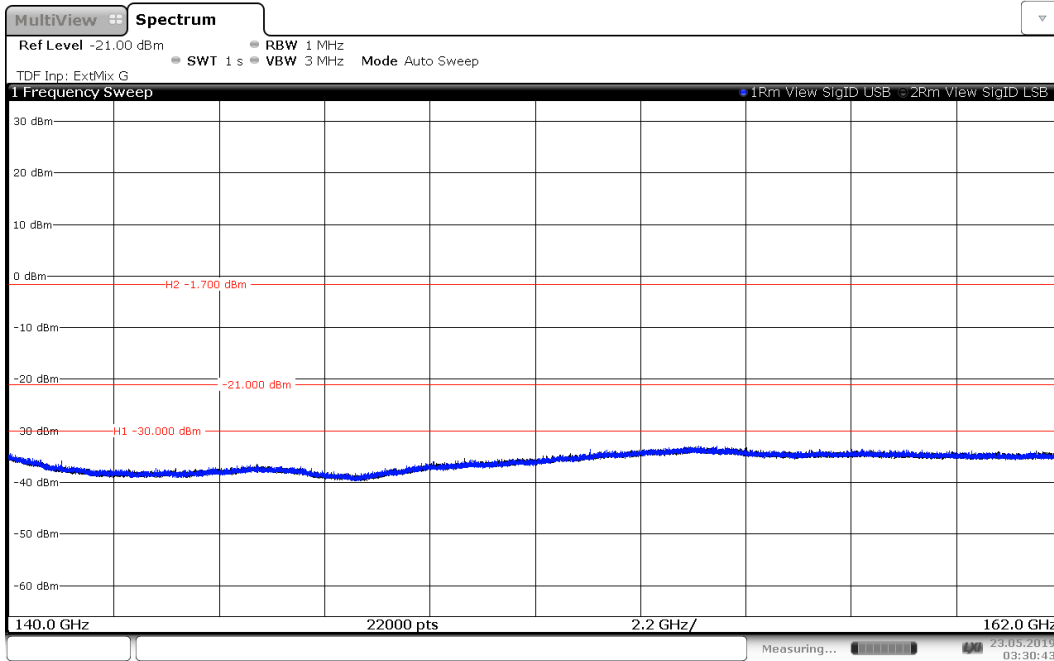
5.64. 140 GHz – 162 GHz, ANT HOR + VER, SigID USB + LSB, all positions, f_CW_center

03:34:26 23.05.2019

* Signal ID function is used. The diagram shows image signals and mixer products. The real input signal is shown, only when USB and LSD traces have the same position on the frequency axis => Apart from the noise floor no real input signal was observed. See subsection 5.8.6. in the main report. -21 dBm is a reference line from the FSW67. Limit is -1.7 dBm (FCC) and -30 dBm (ISED).
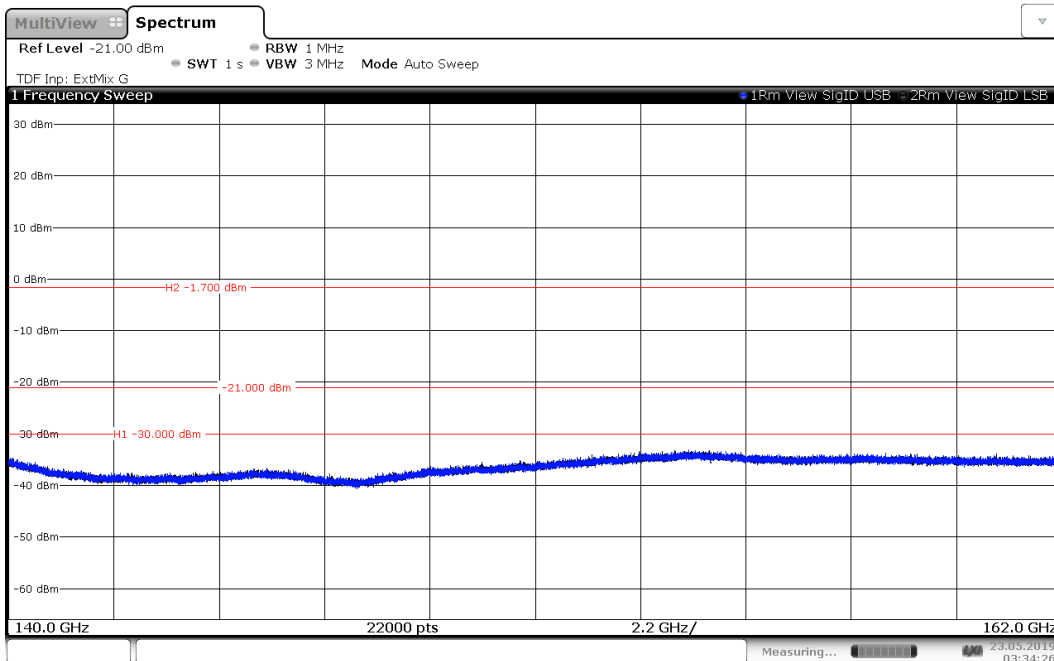
5.65. 140 GHz – 162 GHz, ANT HOR + VER, SigID USB + LSB, all positions, f_CW_high

03:38:52 23.05.2019

* Signal ID function is used. The diagram shows image signals and mixer products. The real input signal is shown, only when USB and LSD traces have the same position on the frequency axis => Apart from the noise floor no real input signal was observed. See subsection 5.8.6. in the main report. -21 dBm is a reference line from the FSW67. Limit is -1.7 dBm (FCC) and -30 dBm (ISED).
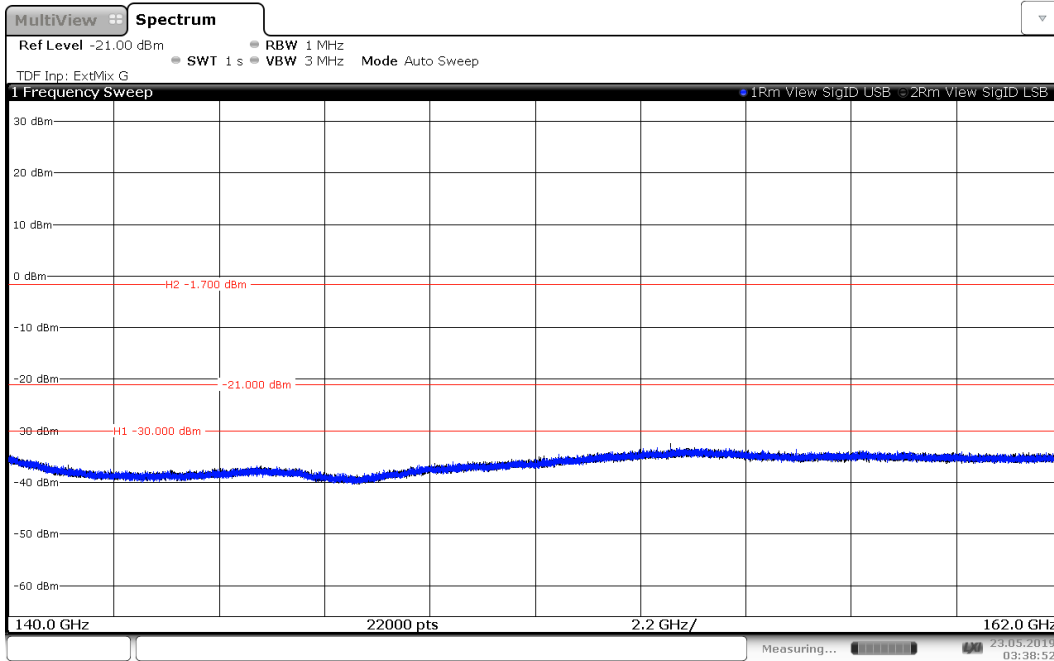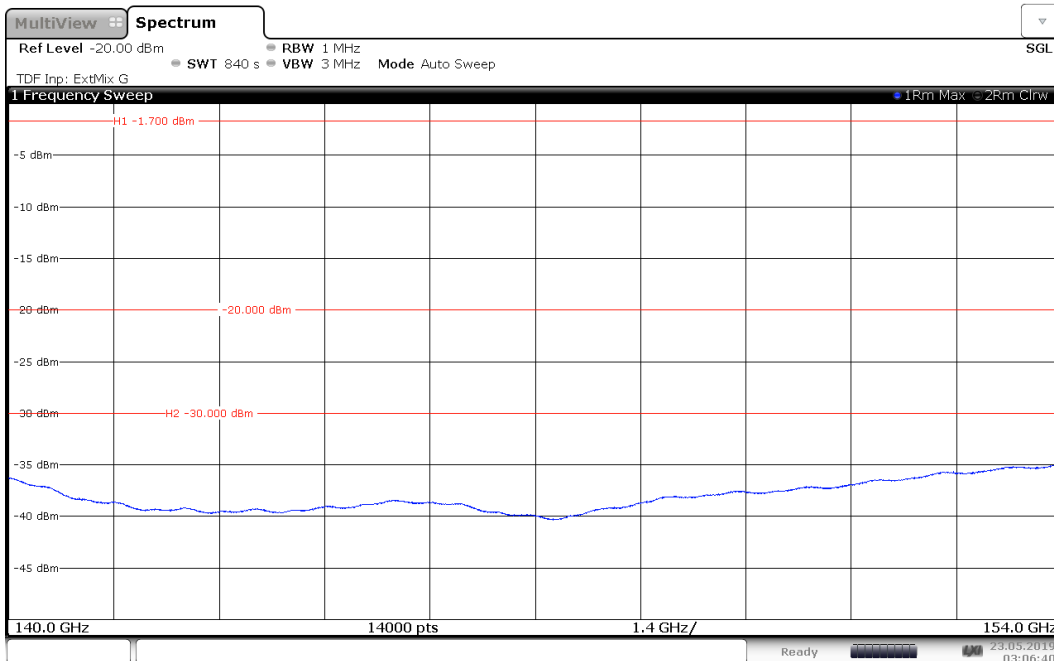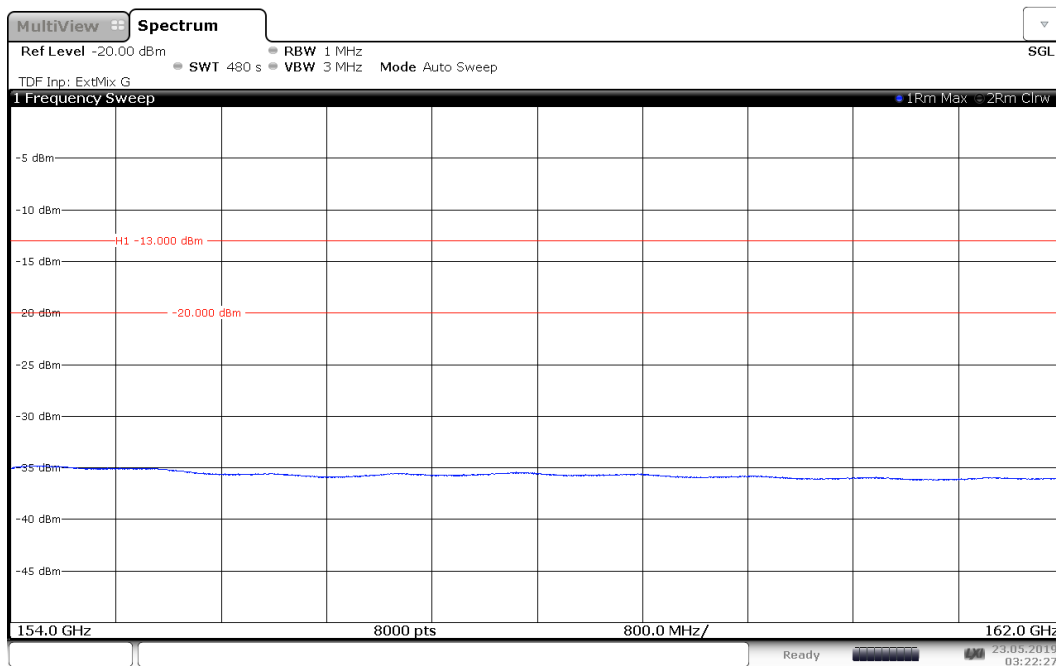
5.66. 140 GHz – 154 GHz, ANT HOR + VER, position with the highest power (RMS), FMCW

03:06:40 23.05.2019

* -20 dBm is a reference line from the FSW67. Limit is -1.7 dBm (FCC) and -30 dBm (ISED).
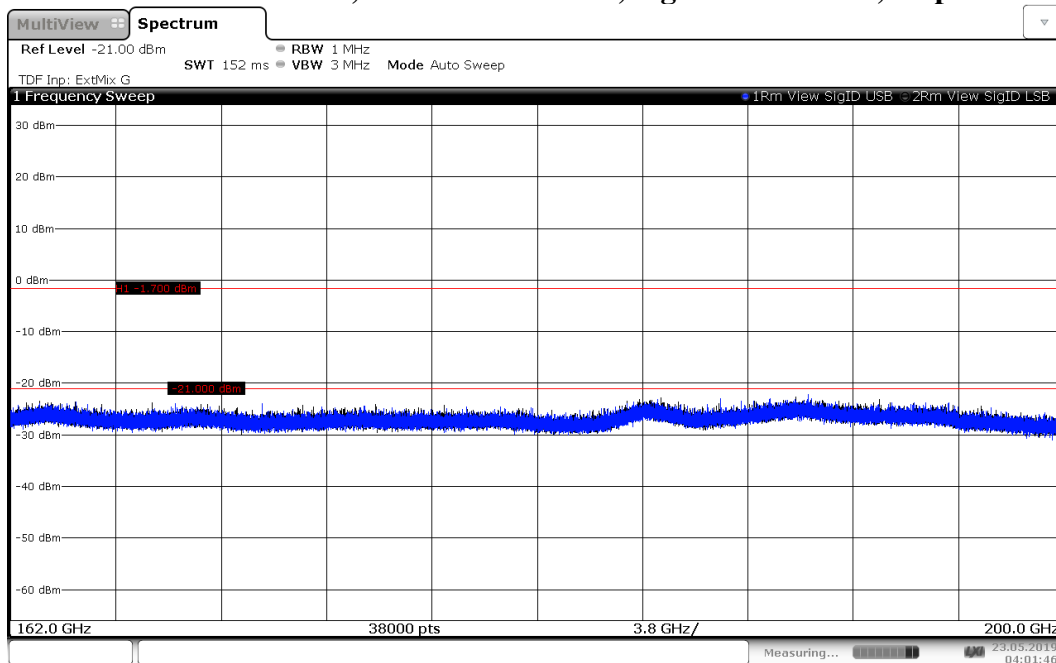
5.67. 154 GHz – 162 GHz, ANT HOR + VER, position with the highest power (RMS), FMCW

03:22:27 23.05.2019

* -20 dBm is a reference line from the FSW67. Limit is -1.7 dBm (FCC) and -30 dBm (ISED).
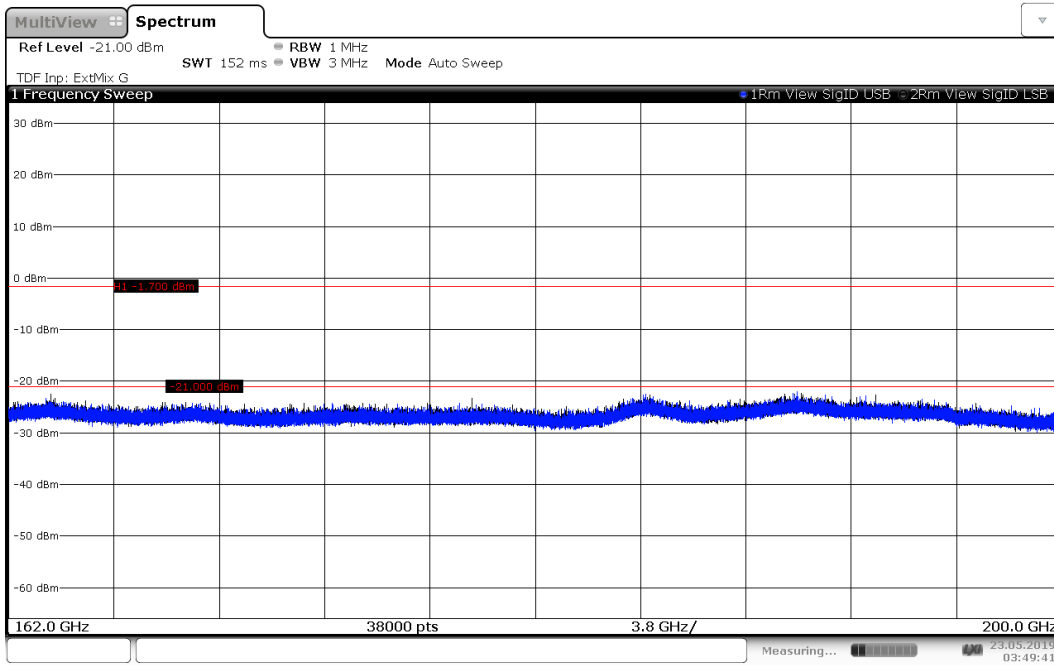
5.68. 162 GHz – 200 GHz, ANT HOR + VER, SigID USB + LSB, all positions, f_CW_low

04:01:46 23.05.2019

* Signal ID function is used. The diagram shows image signals and mixer products. The real input signal is shown, only when USB and LSD traces have the same position on the frequency axis => Apart from the noise floor no real input signal was observed. See subsection 5.8.6. in the main report. -21 dBm is a reference line from the FSW67. Limit is -1.7 dBm.
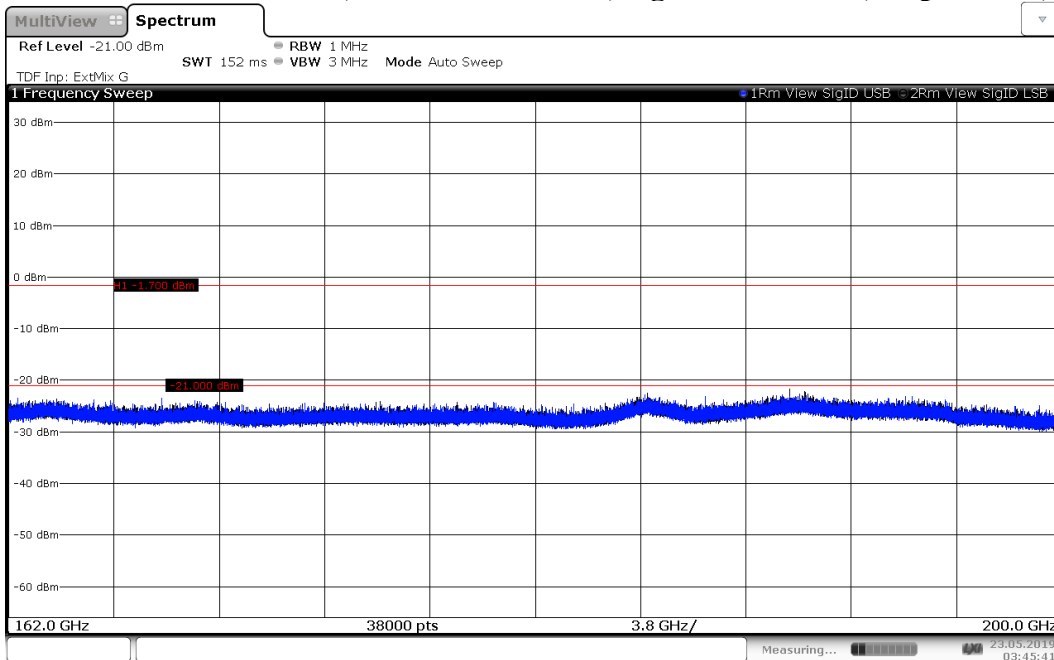
5.69. 162 GHz – 200 GHz, ANT HOR + VER, SigID USB + LSB, all positions, f_CW_center

03:49:42 23.05.2019

* Signal ID function is used. The diagram shows image signals and mixer products. The real input signal is shown, only when USB and LSD traces have the same position on the frequency axis => Apart from the noise floor no real input signal was observed. See subsection 5.8.6. in the main report. -21 dBm is a reference line from the FSW67. Limit is -1.7 dBm.
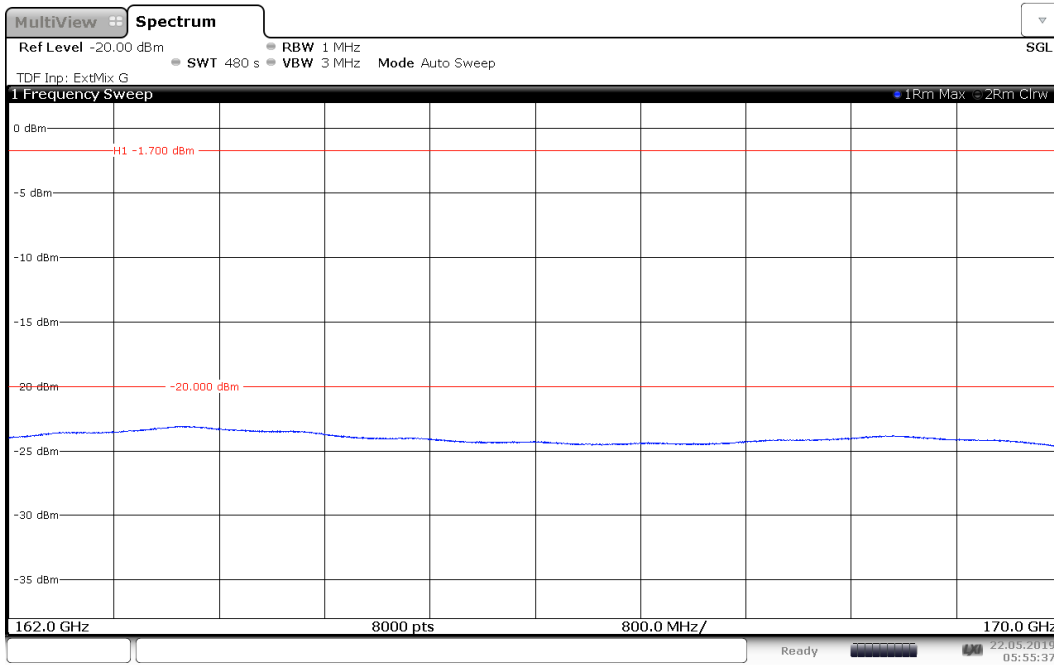
5.70. 162 GHz – 200 GHz, ANT HOR + VER, SigID USB + LSB, all positions, f_CW_high

03:45:41 23.05.2019

* Signal ID function is used. The diagram shows image signals and mixer products. The real input signal is shown, only when USB and LSD traces have the same position on the frequency axis => Apart from the noise floor no real input signal was observed. See subsection 5.8.6. in the main report. -21 dBm is a reference line from the FSW67. Limit is -1.7 dBm.
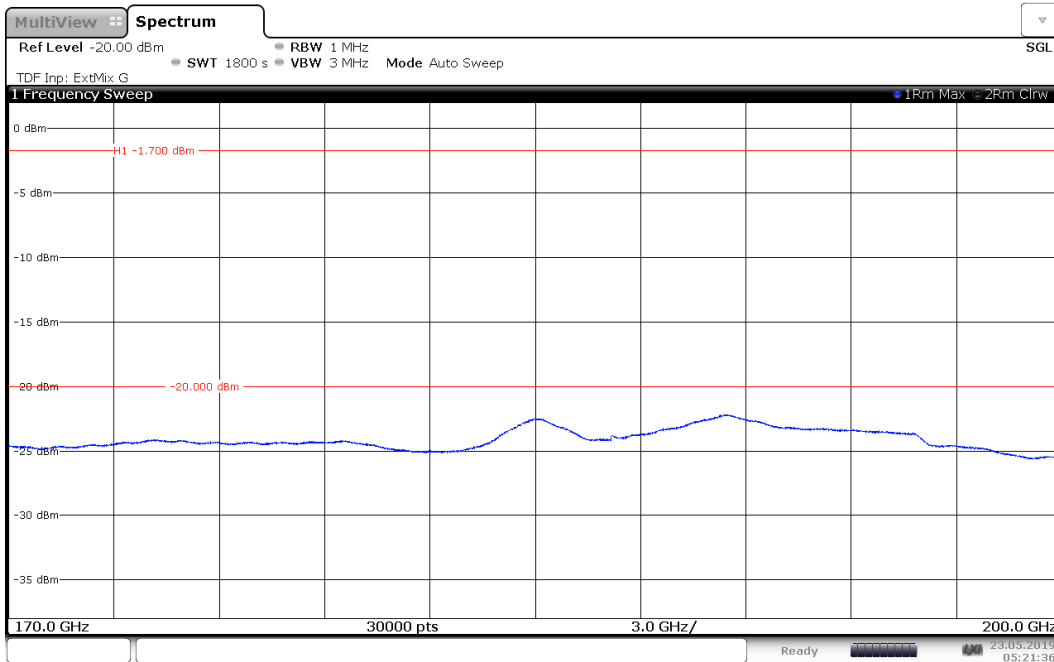
5.71. 162 GHz – 170 GHz, ANT HOR + VER, position with the highest power (RMS), FMCW

05:55:38 22.05.2019

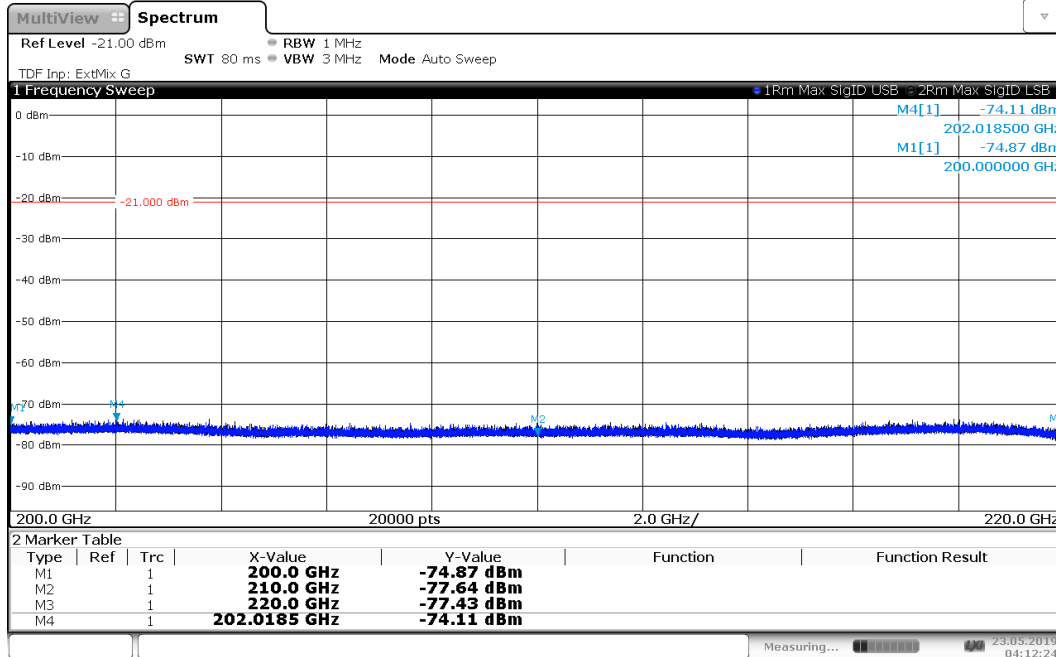* -20 dBm is a reference line from the FSW67. Limit is -1.7 dBm.

5.72. 170 GHz – 200 GHz, ANT HOR + VER, position with the highest power (RMS), FMCW

05:21:37 23.05.2019

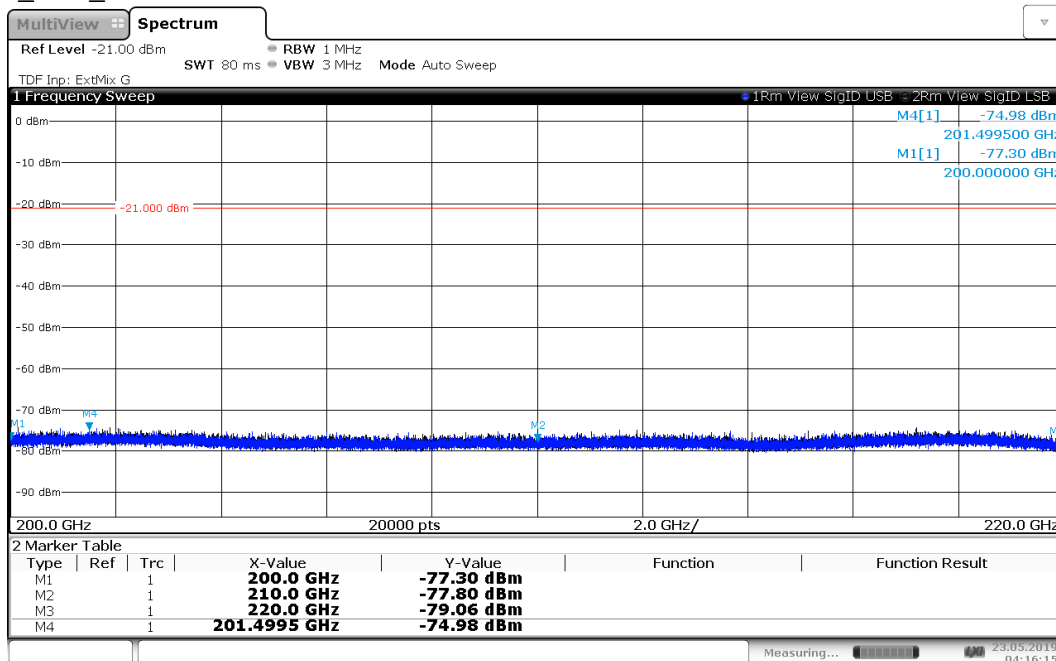* -20 dBm is a reference line from the FSW67. Limit is -1.7 dBm.

5.73. 200 GHz – 220 GHz, ANT HOR + VER, SigID USB + LSB, all positions, f_CW_low

04:12:24 23.05.2019

* Signal ID function is used. The diagram shows image signals and mixer products. The real input signal is shown, only when USB and LSD traces have the same position on the frequency axis => Apart from the noise floor no real input signal was observed. See subsection 5.8.6. in the main report. -21 dBm is a reference line from the FSW67. Limit is 0.5 dBm (see calculations in subsection 5.8.6).

5.74. 200 GHz – 220 GHz, ANT HOR + VER, SigID USB + LSB, all positions, f_CW_center

04:16:16 23.05.2019

* Signal ID function is used. The diagram shows image signals and mixer products. The real input signal is shown, only when USB and LSD traces have the same position on the frequency axis => Apart from the noise floor no real input signal was observed. See subsection 5.8.6. in the main report. -21 dBm is a reference line from the FSW67. Limit is 0.5 dBm (see calculations in subsection 5.8.6).
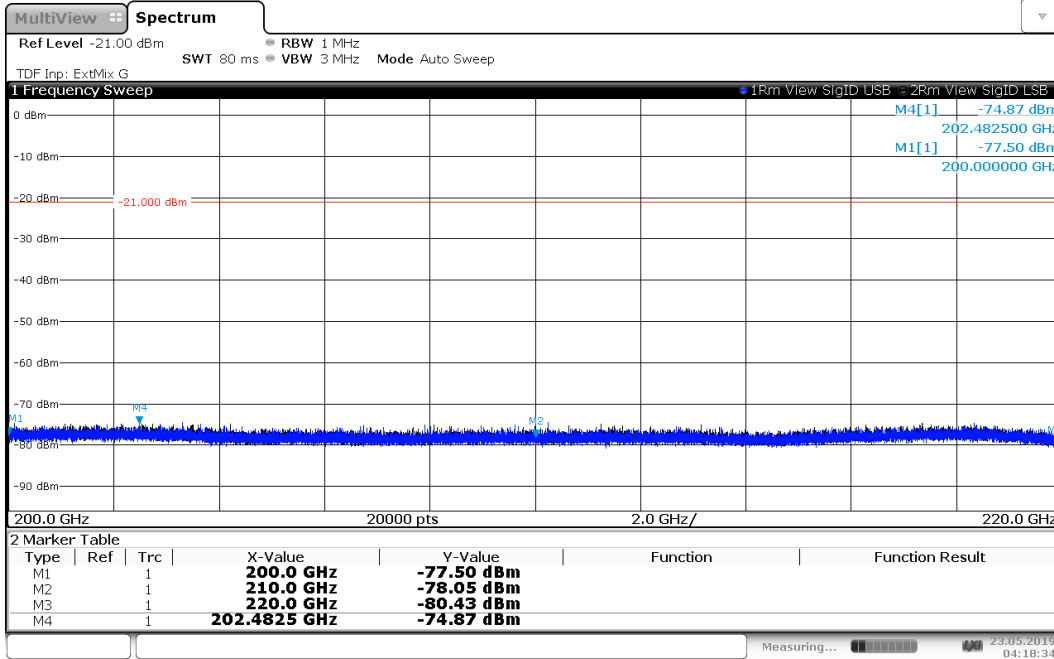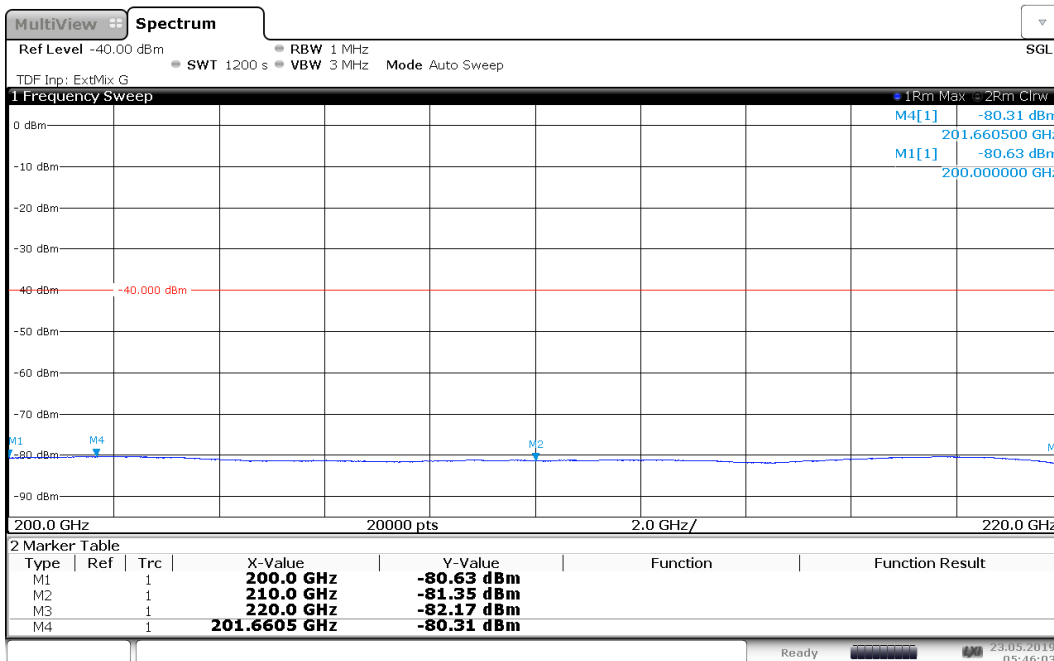
5.75. 200 GHz – 220 GHz, ANT HOR + VER, SigID USB + LSB, all positions, f_CW_high

04:18:34 23.05.2019

* Signal ID function is used. The diagram shows image signals and mixer products. The real input signal is shown, only when USB and LSD traces have the same position on the frequency axis => Apart from the noise floor no real input signal was observed. See subsection 5.8.6. in the main report. -21 dBm is a reference line from the FSW67. Limit is 0.5 dBm (see calculations in subsection 5.8.6).
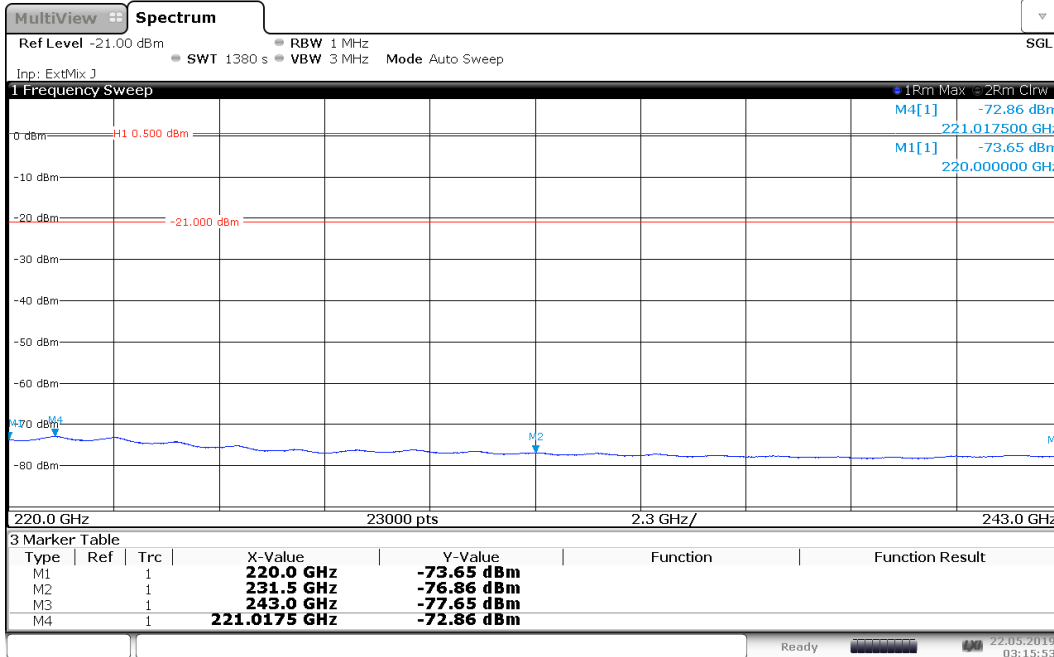
5.76. 200 GHz – 220 GHz, ANT HOR + VER, position with the highest power (RMS), FMCW

05:46:04 23.05.2019

* -40 dBm is a reference line from the FSW67. Limit is 0.5 dBm (see calculations in subsection 5.8.6).
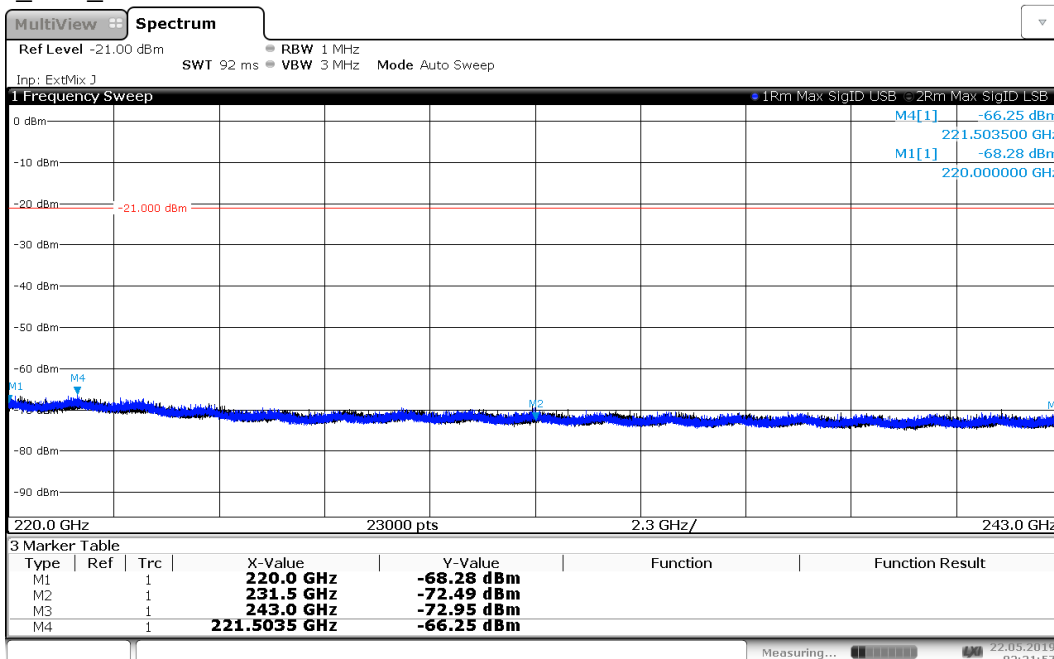
5.77. 220 GHz – 243 GHz, ANT HOR + VER, SigID USB + LSB, all positions, f_CW_low

03:15:53 22.05.2019

* Signal ID function is used. The diagram shows image signals and mixer products. The real input signal is shown, only when USB and LSD traces have the same position on the frequency axis => Apart from the noise floor no real input signal was observed. See subsection 5.8.6. in the main report. -21 dBm is a reference line from the FSW67. Limit is 0.5 dBm (see calculations in subsection 5.8.6).
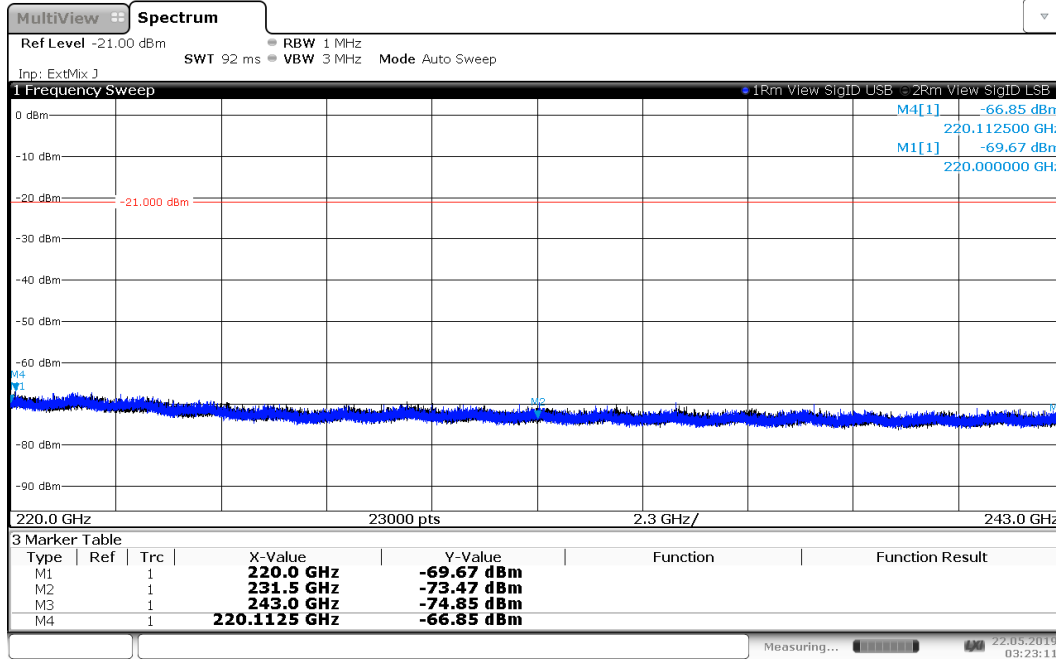
5.78. 220 GHz – 243 GHz, ANT HOR + VER, SigID USB + LSB, all positions, f_CW_center

03:21:58 22.05.2019

* Signal ID function is used. The diagram shows image signals and mixer products. The real input signal is shown, only when USB and LSD traces have the same position on the frequency axis => Apart from the noise floor no real input signal was observed. See subsection 5.8.6. in the main report. -21 dBm is a reference line from the FSW67. Limit is 0.5 dBm (see calculations in subsection 5.8.6).
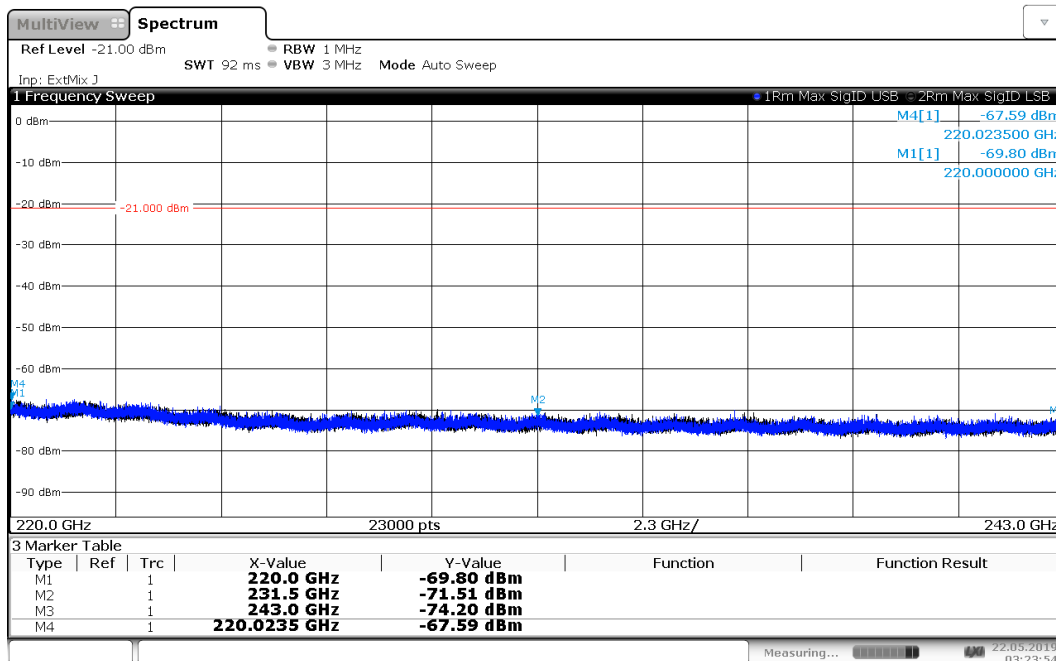
5.79. 220 GHz – 243 GHz, ANT HOR + VER, SigID USB + LSB, all positions, f_CW_high

03:23:12 22.05.2019

* Signal ID function is used. The diagram shows image signals and mixer products. The real input signal is shown, only when USB and LSD traces have the same position on the frequency axis => Apart from the noise floor no real input signal was observed. See subsection 5.8.6. in the main report. -21 dBm is a reference line from the FSW67. Limit is 0.5 dBm (see calculations in subsection 5.8.6).

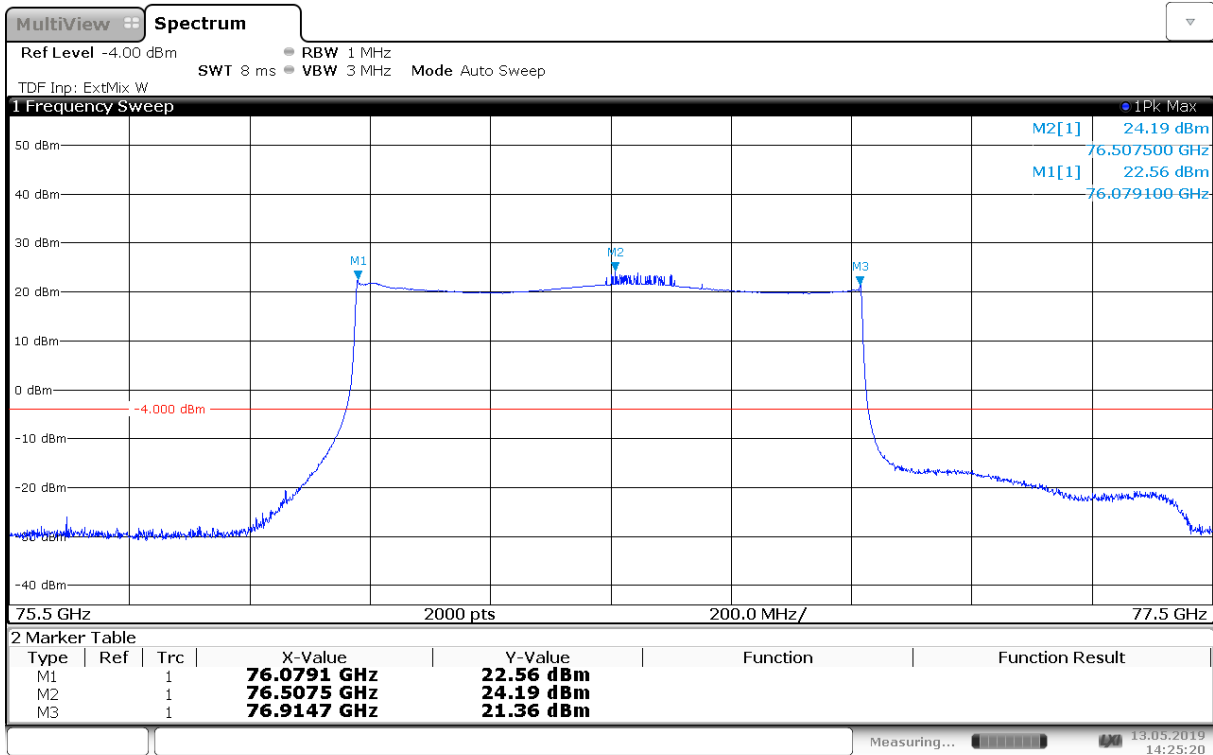## 5.80. 220 GHz – 243 GHz, ANT HOR + VER, position with the highest power (RMS), FMCW

03:23:54 22.05.2019

* -21 dBm is a reference line from the FSW67. Limit is 0.5 dBm (see calculations in subsection 5.8.6).
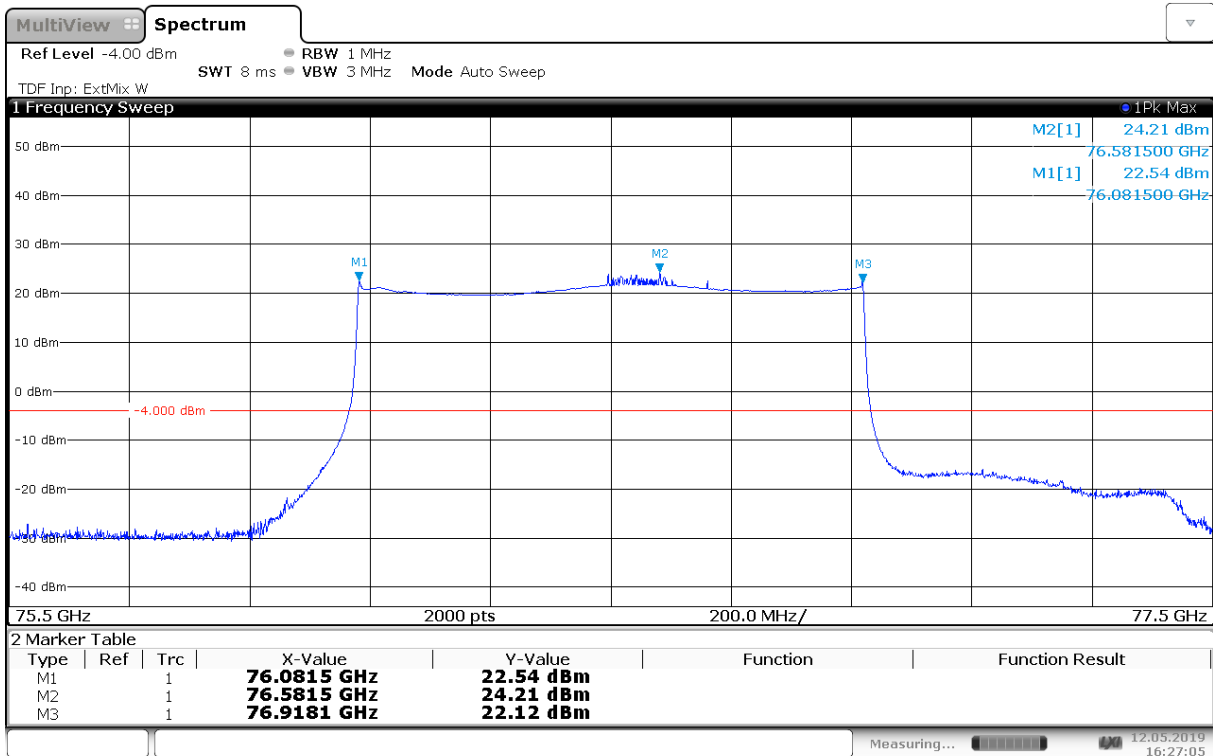
6. Frequency stability

6.1. T$_{nom}$/V$_{nom}$

14:25:21 13.05.2019
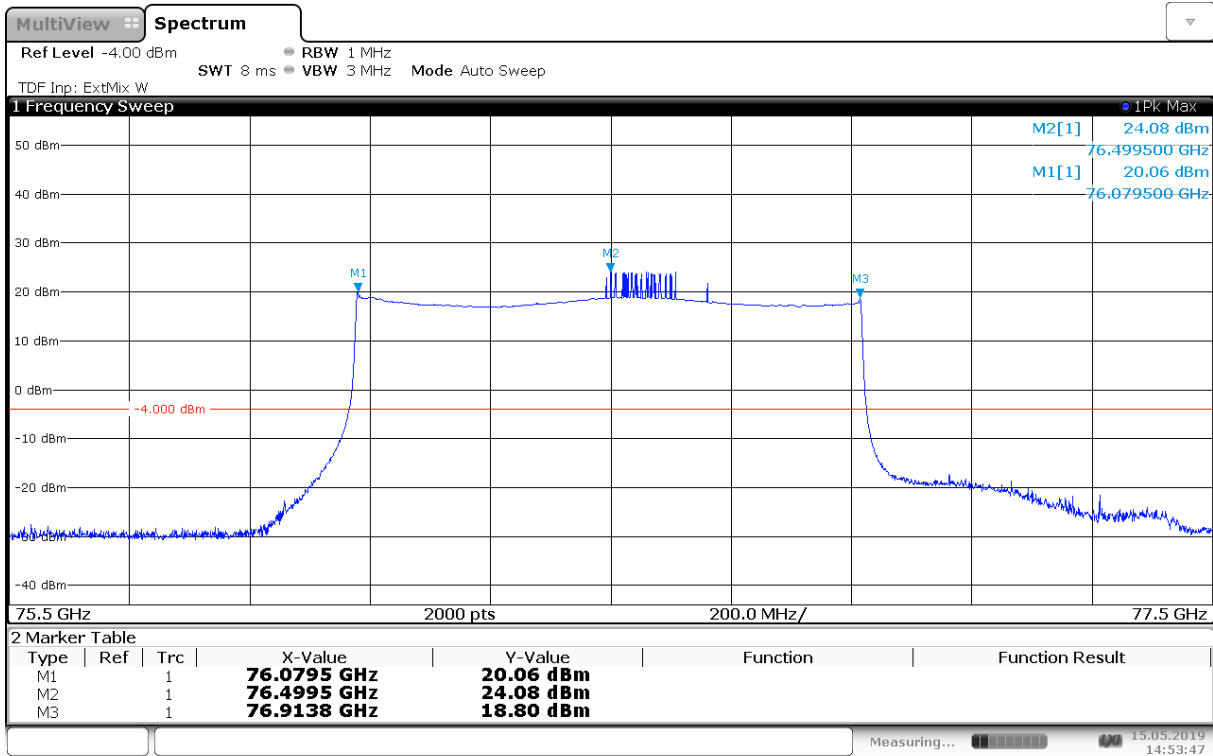
* -4 dBm is a reference line from the FSW67.

6.2. T$_{min}$/V$_{nom}$

16:27:05 12.05.2019

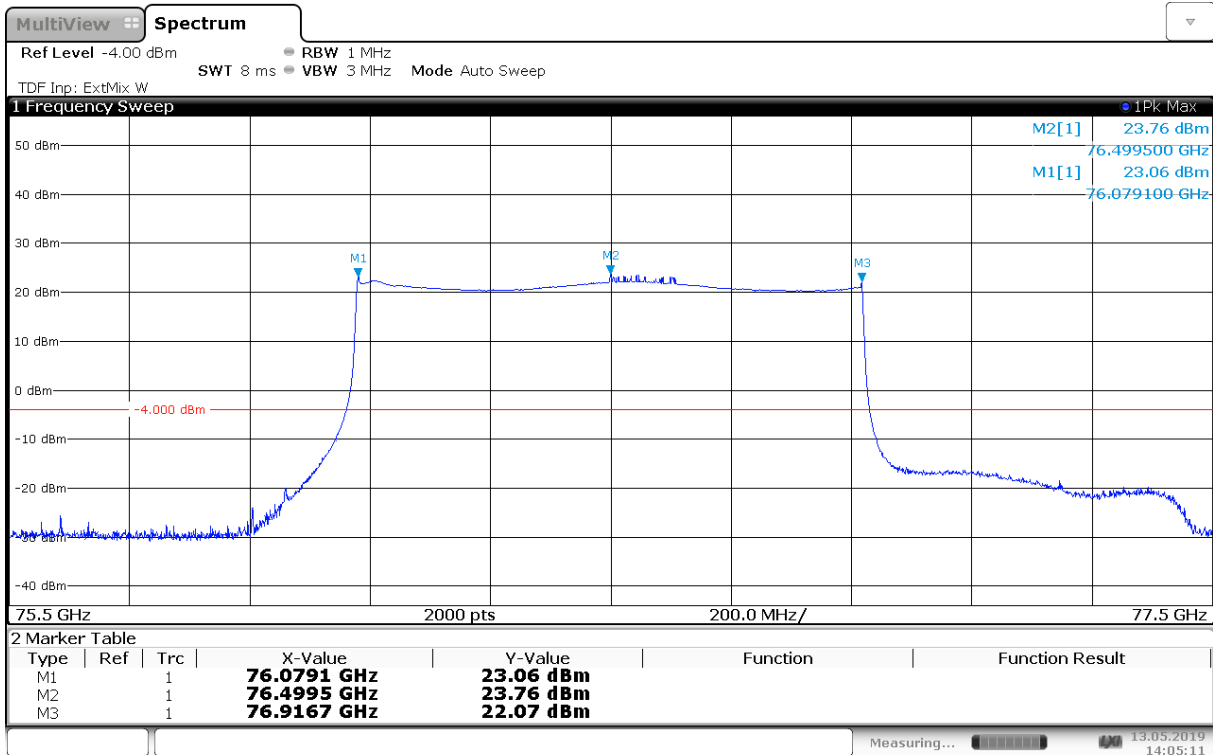* -4 dBm is a reference line from the FSW67.

6.3. T$_{max}$/V$_{nom}$

14:53:47 15.05.2019
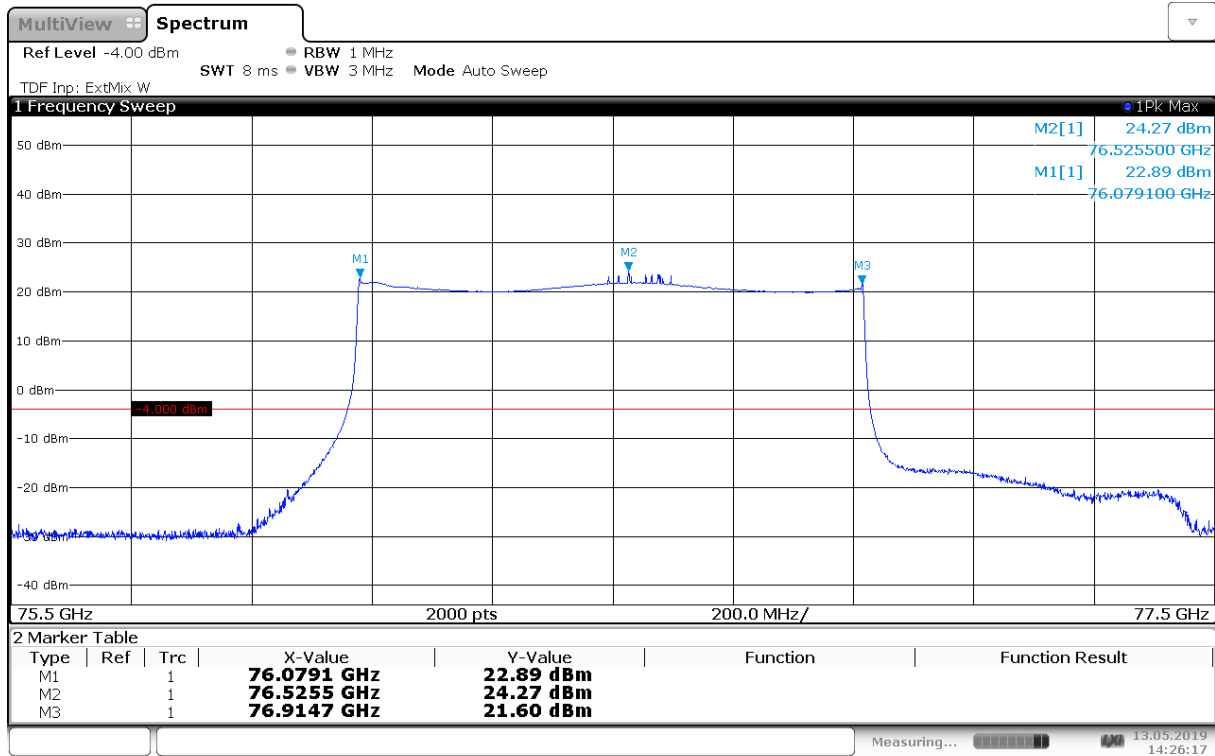
* -4 dBm is a reference line from the FSW67.

6.4. T$_{nom}$/V$_{min}$

14:05:12 13.05.2019

* -4 dBm is a reference line from the FSW67.

6.5. T$_{nom}$/V$_{max}$

14:26:17 13.05.2019

* -4 dBm is a reference line from the FSW67.