

Annex 1: Measurement diagrams to
TEST REPORT
No.: 17-1-0264601T05

According to:
FCC Regulations
Part 15.517

for

Agilion GmbH

WIRELESS MESH GATEWAY PULSE | PHASE
Communication and Real time Location System

FCC ID: SCF6032502

Laboratory Accreditation and Listings			
 DAkkS Deutsche Akkreditierungsstelle D-PL-12047-01-01	 FEDERAL COMMUNICATIONS COMMISSION FCC USA • NOISE MRA US-EU 0003	 Industry Canada Reg. No.: 3462D-2 Reg. No.: 3462D-3	 Voluntary Controls for Electromagnetic Emissions Reg. No.: R-2666 C-2914, T-1967, G-301
 WiFi ALLIANCE AUTHORIZED RF LABORATORY	 ctia Authorized™ Test Lab Lab Code: 20011130-00		
accredited according to DIN EN ISO/IEC 17025			
CETECOM GmbH Laboratory Radio Communications & Electromagnetic Compatibility Im Teelbruch 116 • 45219 Essen • Germany Registered in Essen, Germany, Reg. No.: HRB Essen 8984 Tel.: + 49 (0) 20 54 / 95 19-954 • Fax: + 49 (0) 20 54 / 95 19-964 E-mail: info@cetecom.com • Internet: www.cetecom.com			

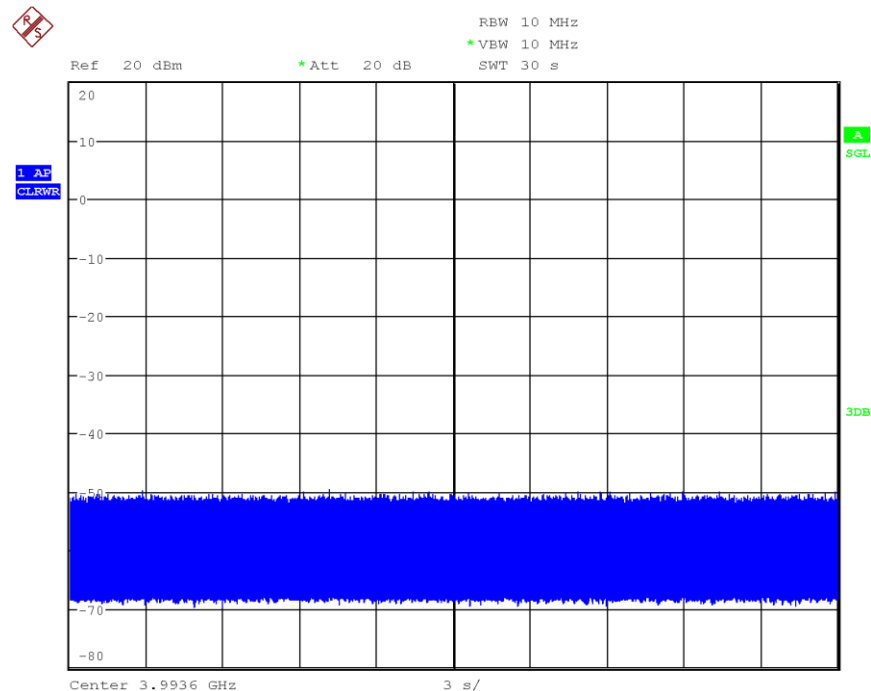
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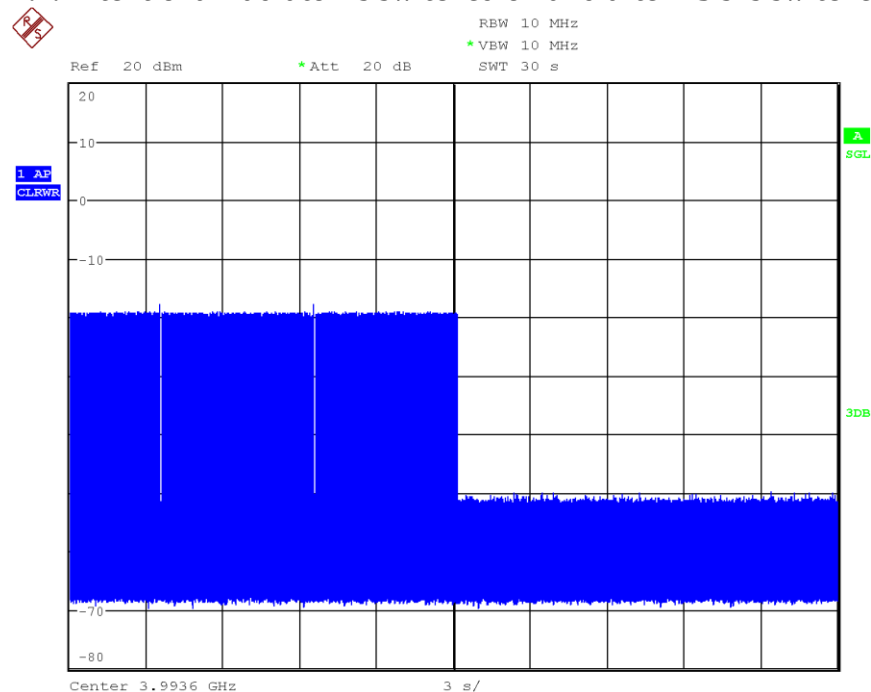
1. Transmission time measurement

1.1. Intentional radiator is switched off



Date: 13.MAR.2018 19:43:24

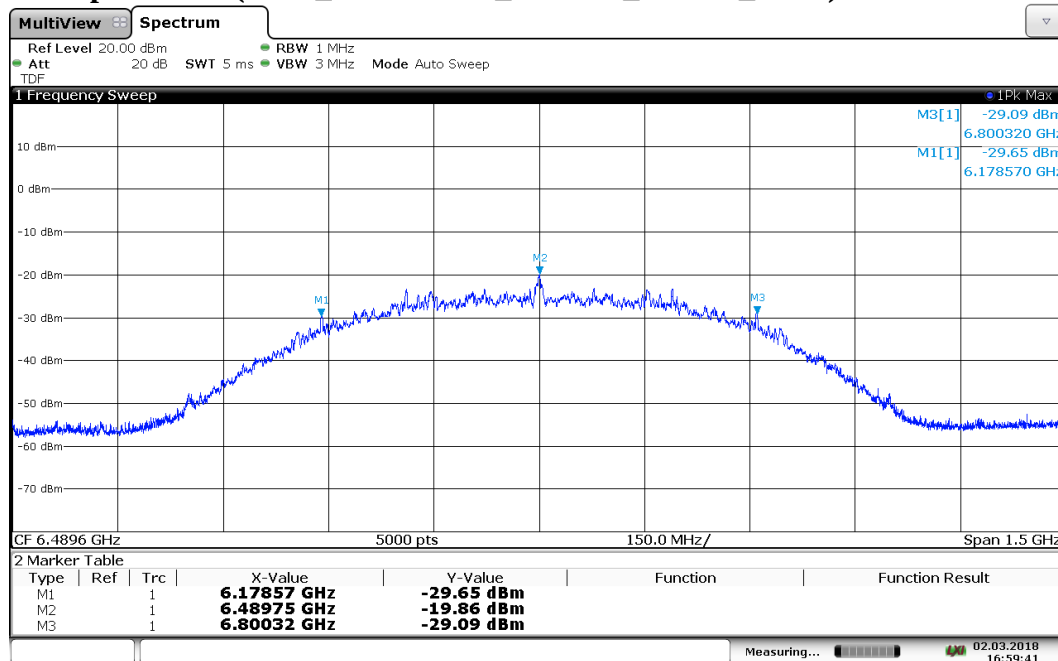
1.2. Intentional radiator is switched on and after 15 s is switched off



Date: 13.MAR.2018 19:44:56

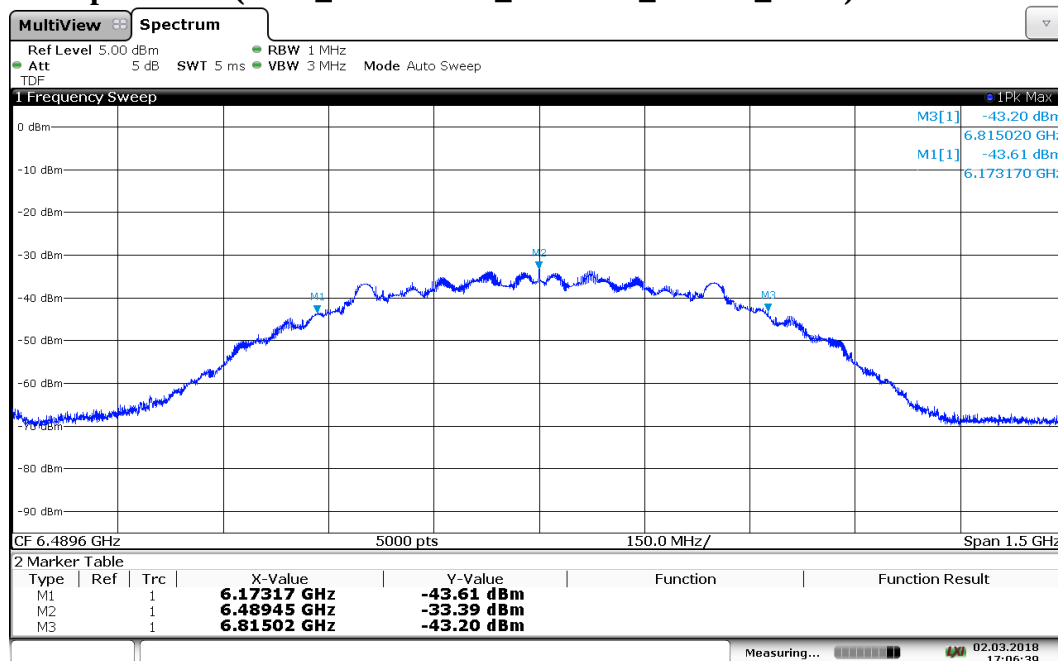
2. 10 dB bandwidth measurement

2.1. Op. Mode 1 (DW5_PRF16MHz_DR110k_PCCh2_PL36)



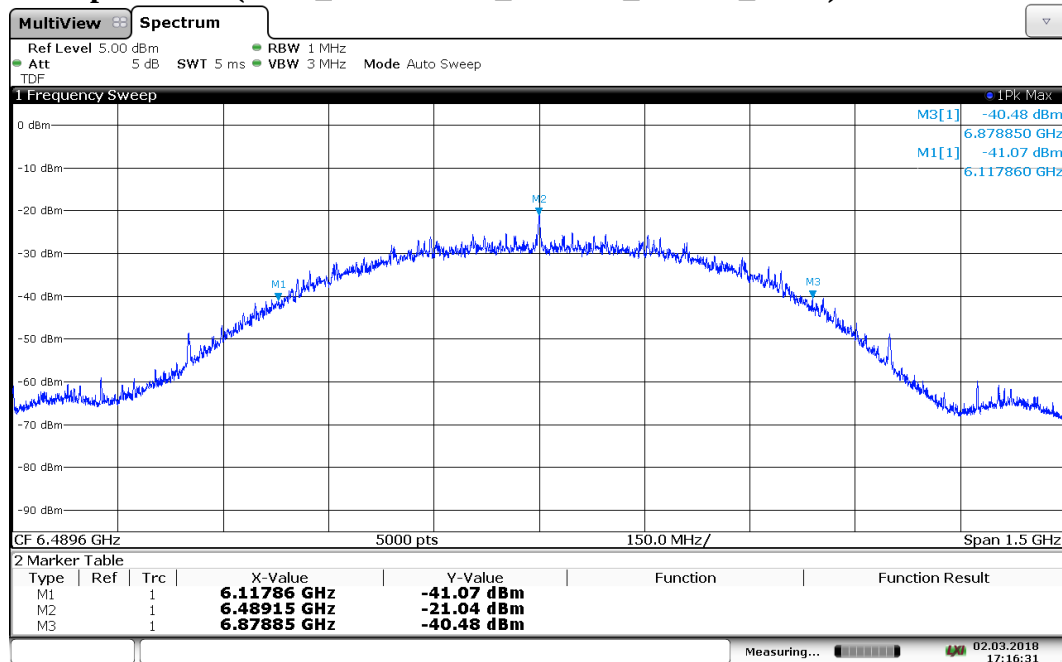
16:59:41 02.03.2018

2.2. Op. Mode 2 (DW5_PRF16MHz_DR6800k_PCCh2_PL36)



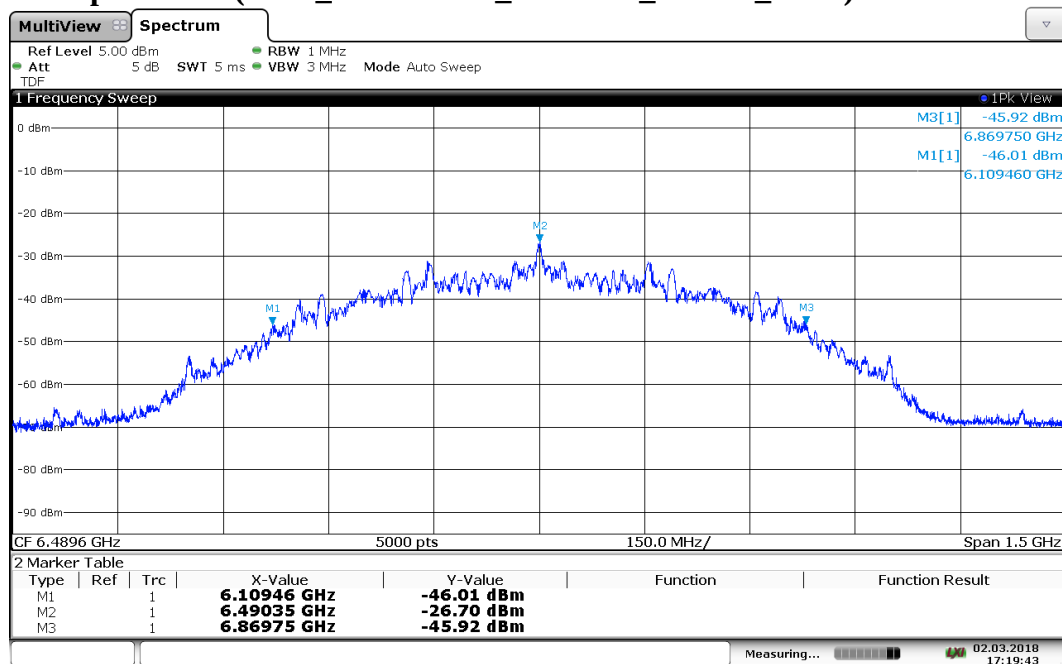
17:06:40 02.03.2018

2.3. Op. Mode 3 (DW5_PRF64MHz_DR110k_PCCh2_PL36)



17:16:32 02.03.2018

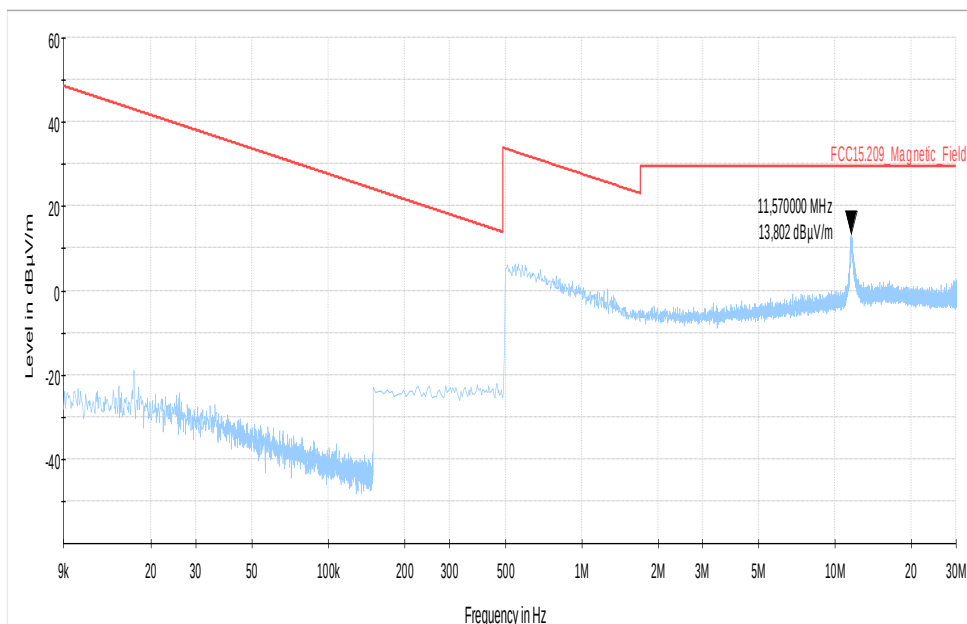
2.4. Op. Mode 4 (DW5_PRF64MHz_DR6800k_PCCh2_PL36)



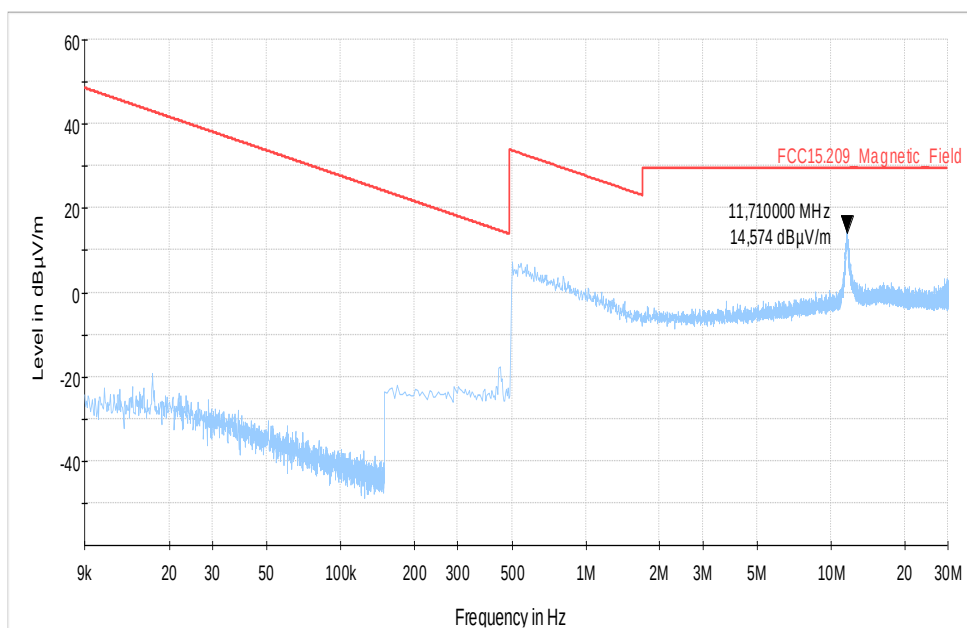
17:19:43 02.03.2018

3. General Limit - Radiated field strength emissions below 30 MHz

3.1. Op. Mode 1, 24VDC, laying

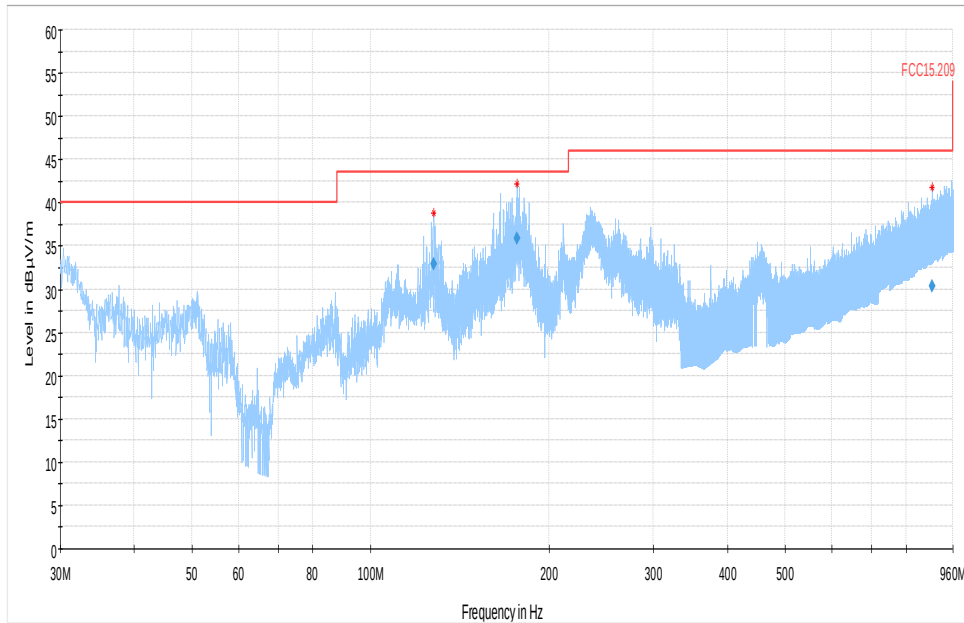


3.2. Op. Mode 1, 24VDC, standing

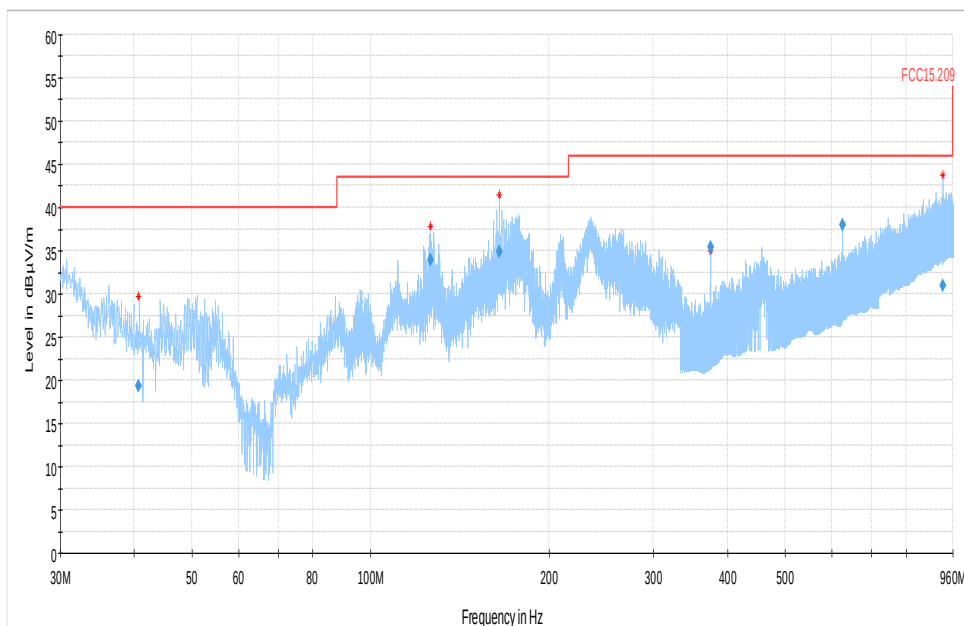


4. General Limit - Radiated field strength emissions, 30 MHz - 1 GHz

4.1. Op. Mode 1, 24VDC, laying



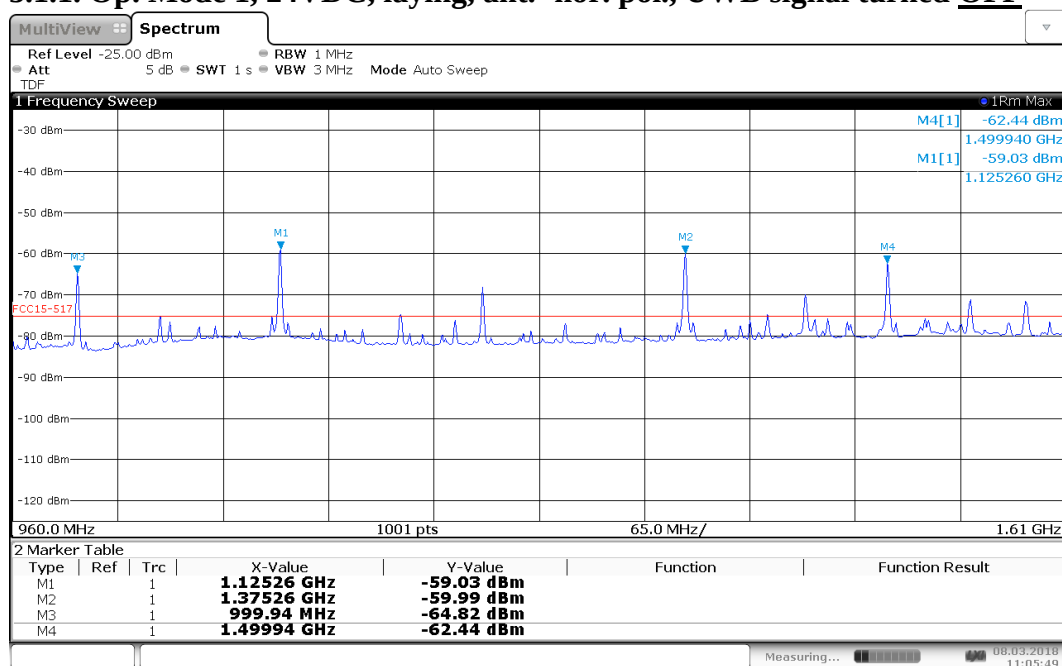
4.2. Op. Mode 1, 24VDC, standing



5. General Limit – Radiated field strength emissions, above 960 MHz

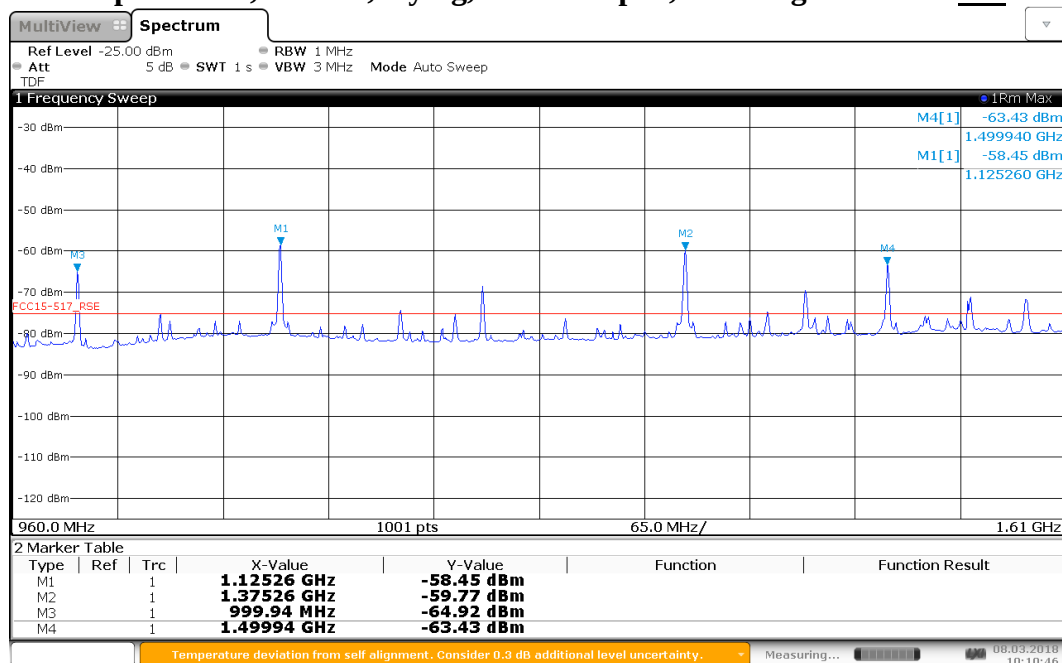
5.1. Frequency range 960 MHz – 1610 MHz

5.1.1. Op. Mode 1, 24VDC, laying, ant.- hor. pol., UWB signal turned OFF



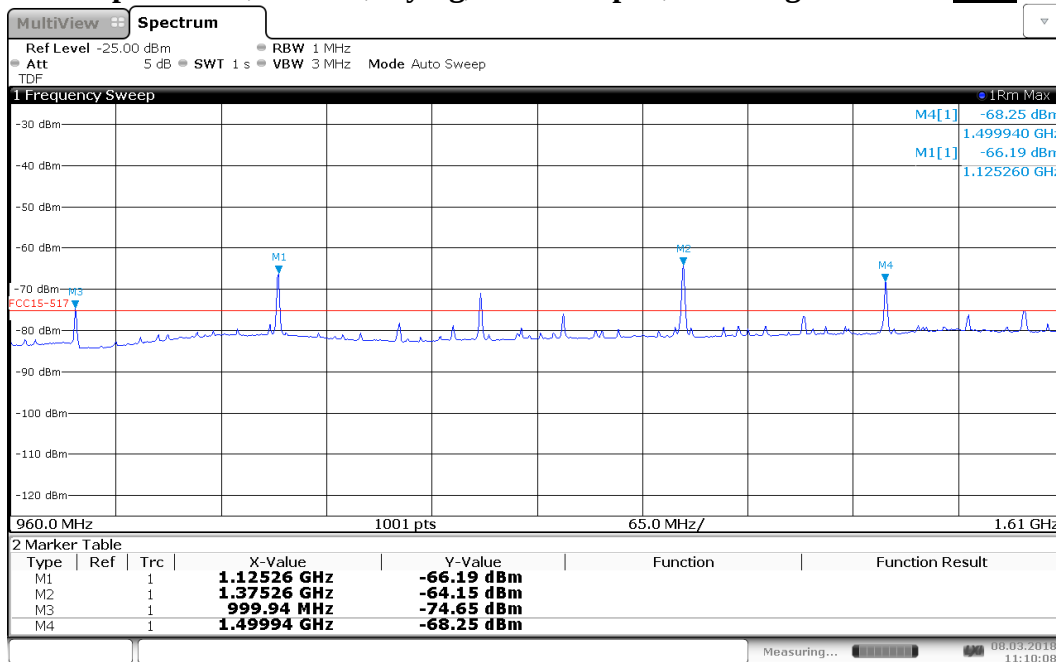
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5.1.2. Op. Mode 1, 24VDC, laying, ant.- hor. pol., UWB signal turned ON



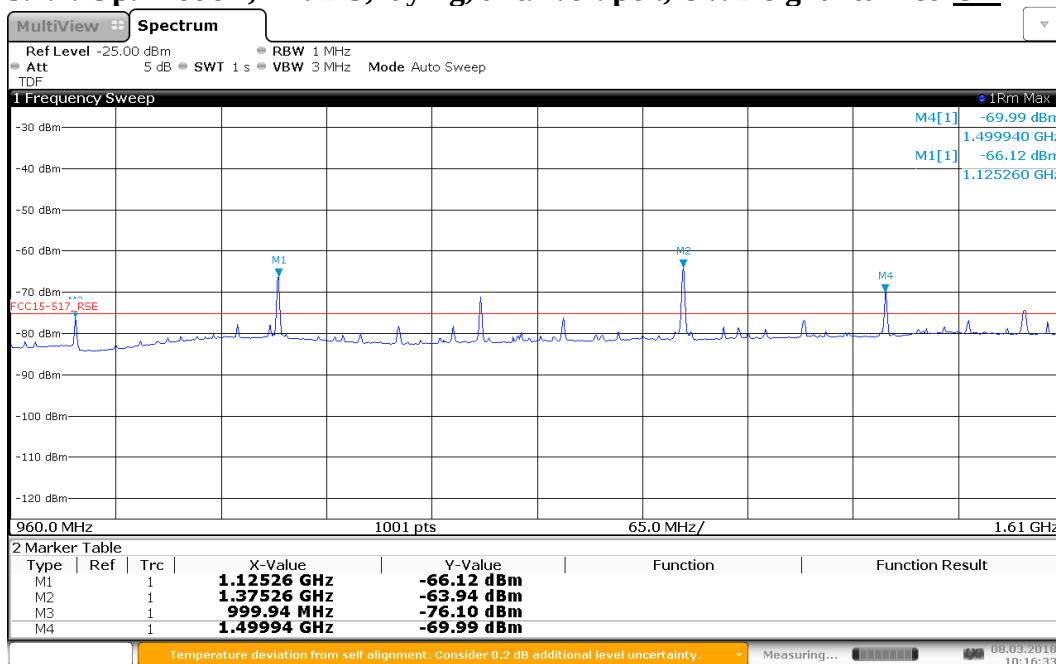
10:10:47 08.03.2018

5.1.3. Op. Mode 1, 24VDC, laying, ant.- ver. pol., UWB signal turned OFF



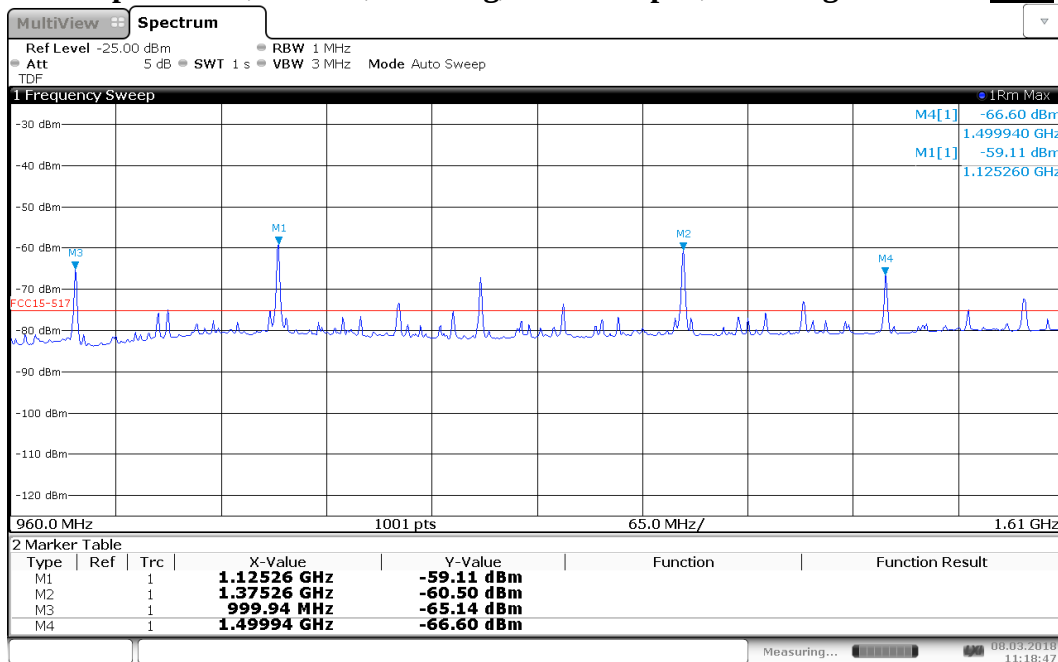
11:10:08 08.03.2018

5.1.4. Op. Mode 1, 24VDC, laying, ant.- ver. pol., UWB signal turned ON



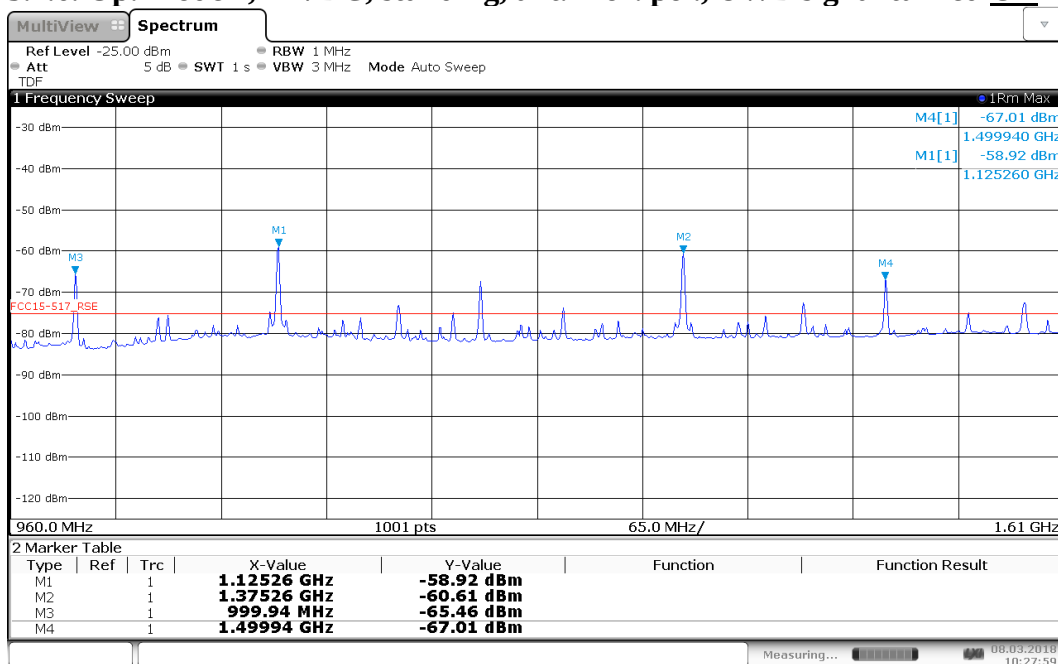
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5.1.5. Op. Mode 1, 24VDC, standing, ant.- hor. pol., UWB signal turned OFF



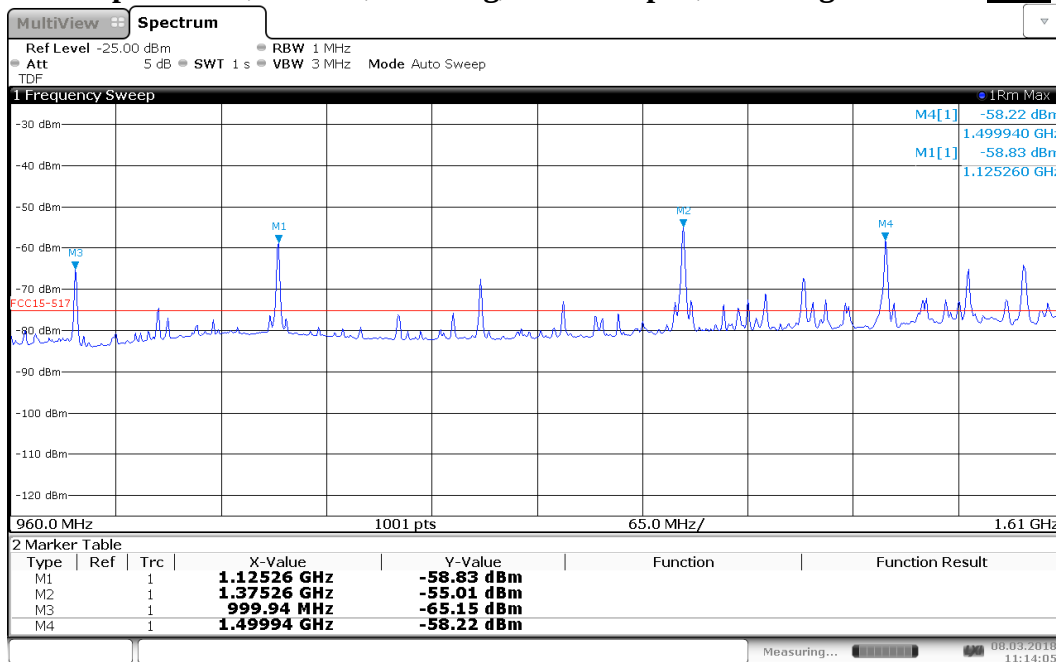
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5.1.6. Op. Mode 1, 24VDC, standing, ant.- hor. pol., UWB signal turned ON



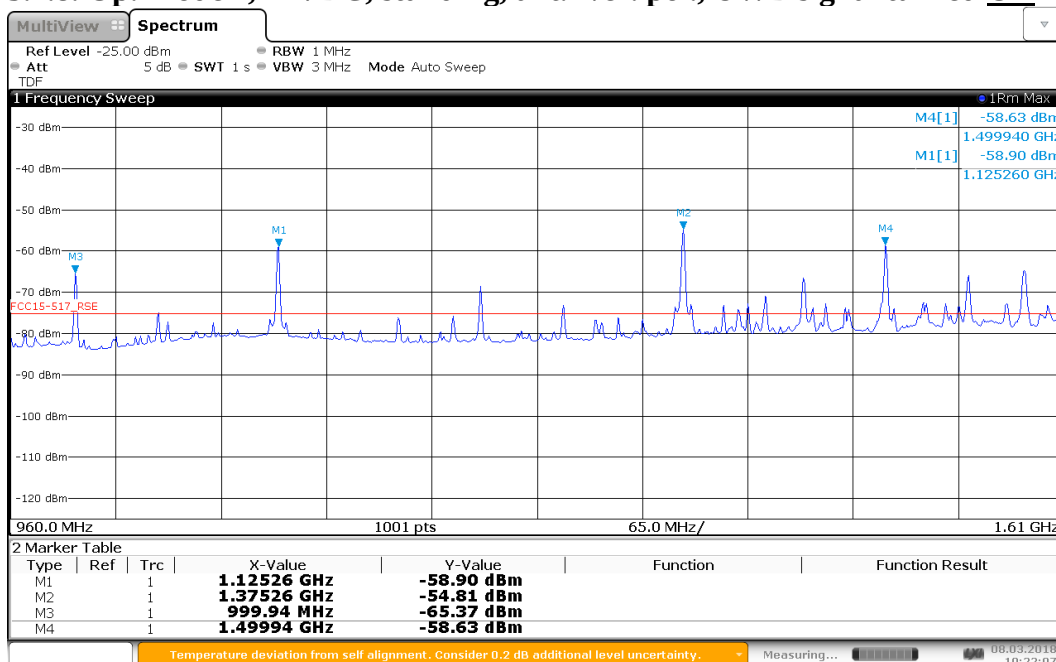
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5.1.7. Op. Mode 1, 24VDC, standing, ant.- ver. pol., UWB signal turned OFF



11:14:06 08.03.2018

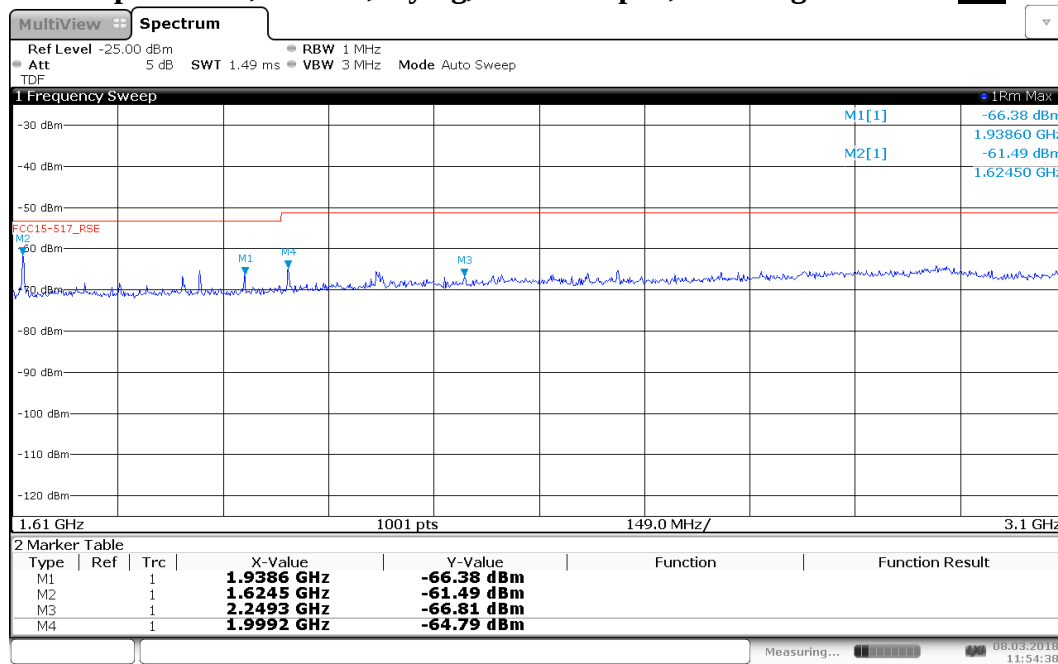
5.1.8. Op. Mode 1, 24VDC, standing, ant.- ver. pol., UWB signal turned ON



10:22:07 08.03.2018

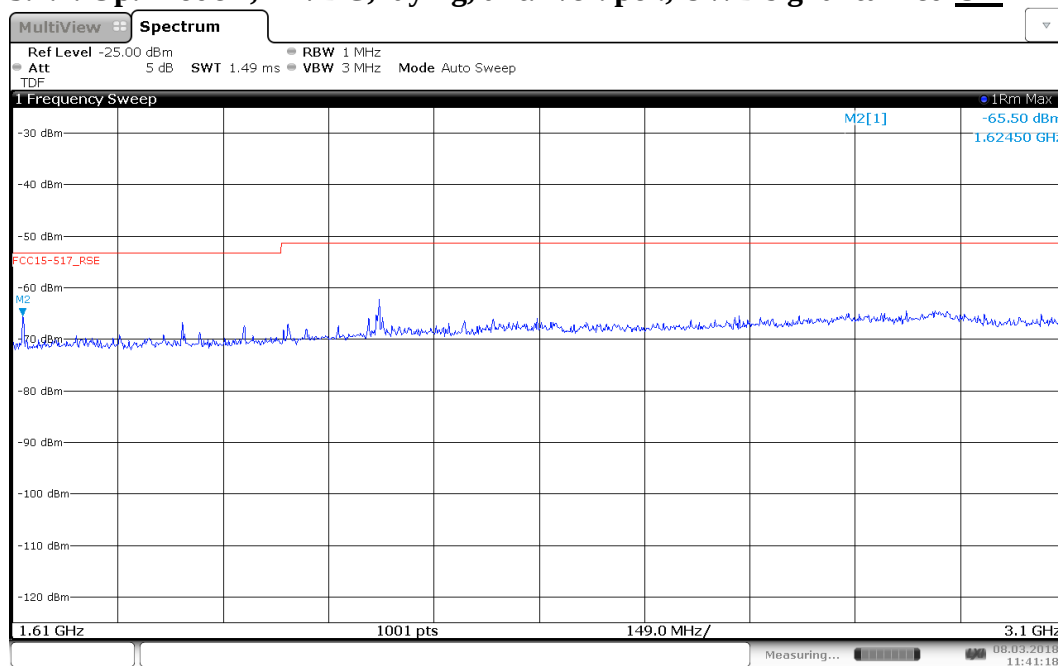
5.2. Frequency range 1610 MHz – 3100 MHz

5.2.1. Op. Mode 1, 24VDC, laying, ant.- hor. pol., UWB signal turned ON



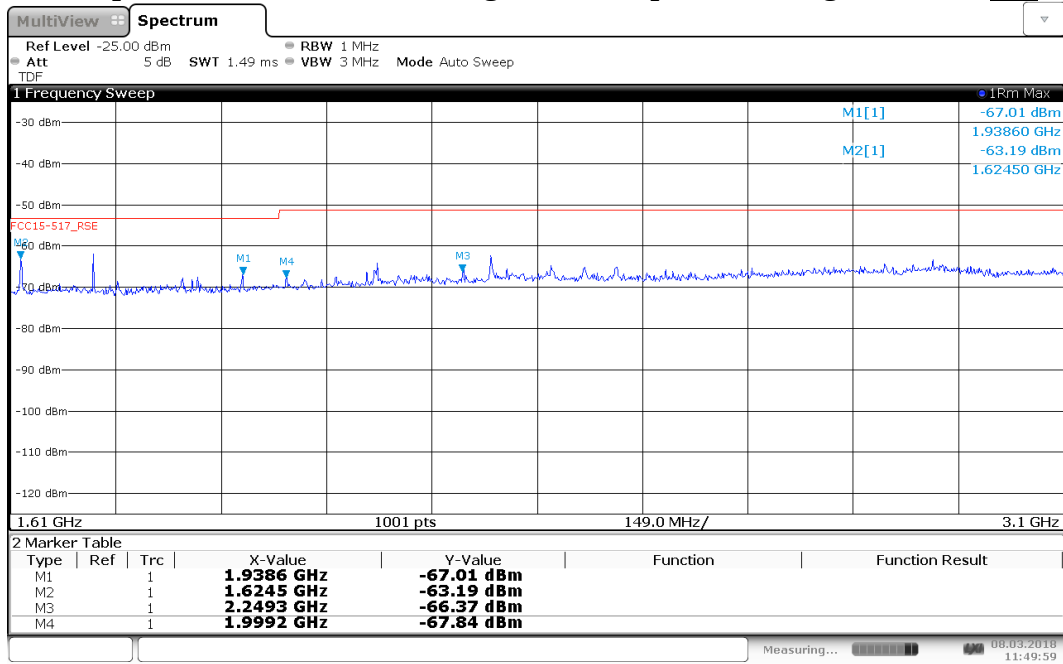
11:54:39 08.03.2018

5.2.2. Op. Mode 1, 24VDC, laying, ant.- ver. pol., UWB signal turned ON



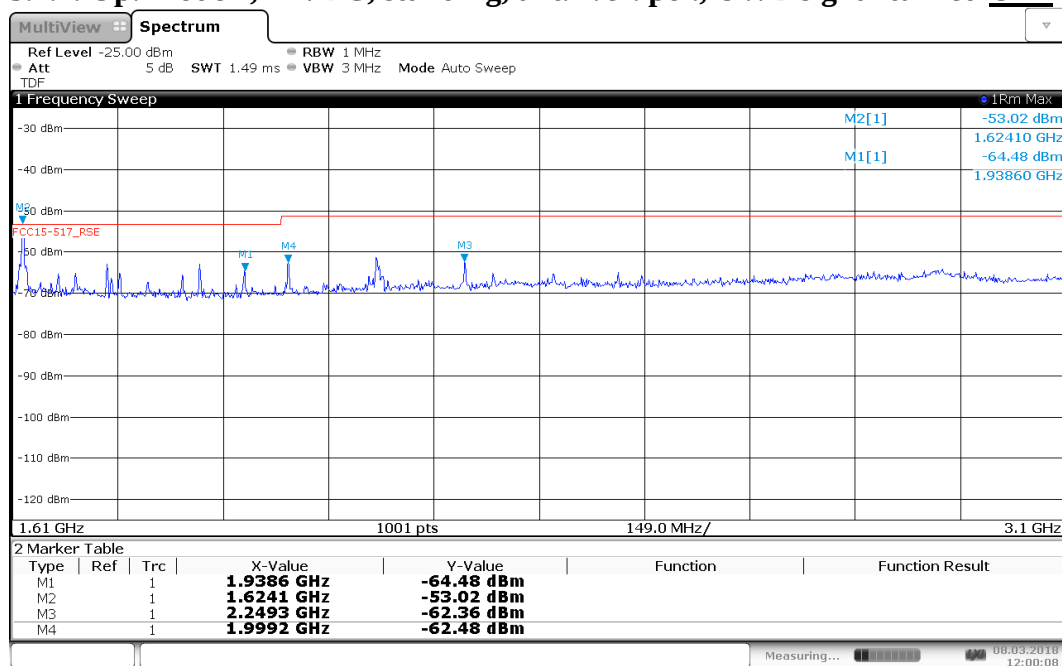
11:41:19 08.03.2018

5.2.3. Op. Mode 1, 24VDC, standing, ant.- hor. pol., UWB signal turned ON



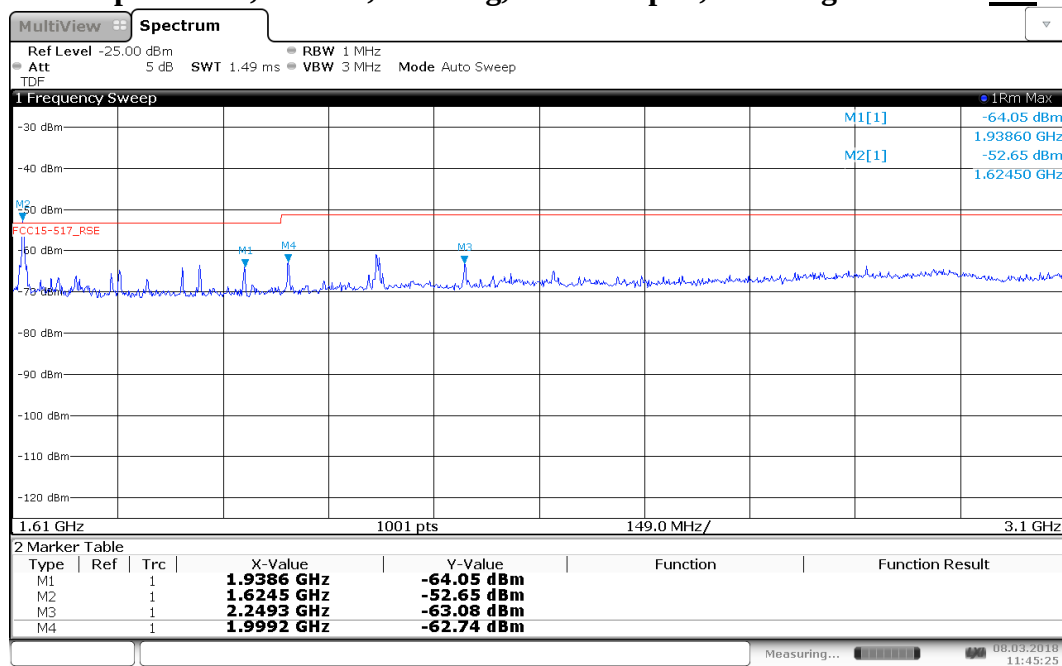
11:50:00 08.03.2018

5.2.4. Op. Mode 1, 24VDC, standing, ant.- ver. pol., UWB signal turned OFF



12:00:08 08.03.2018

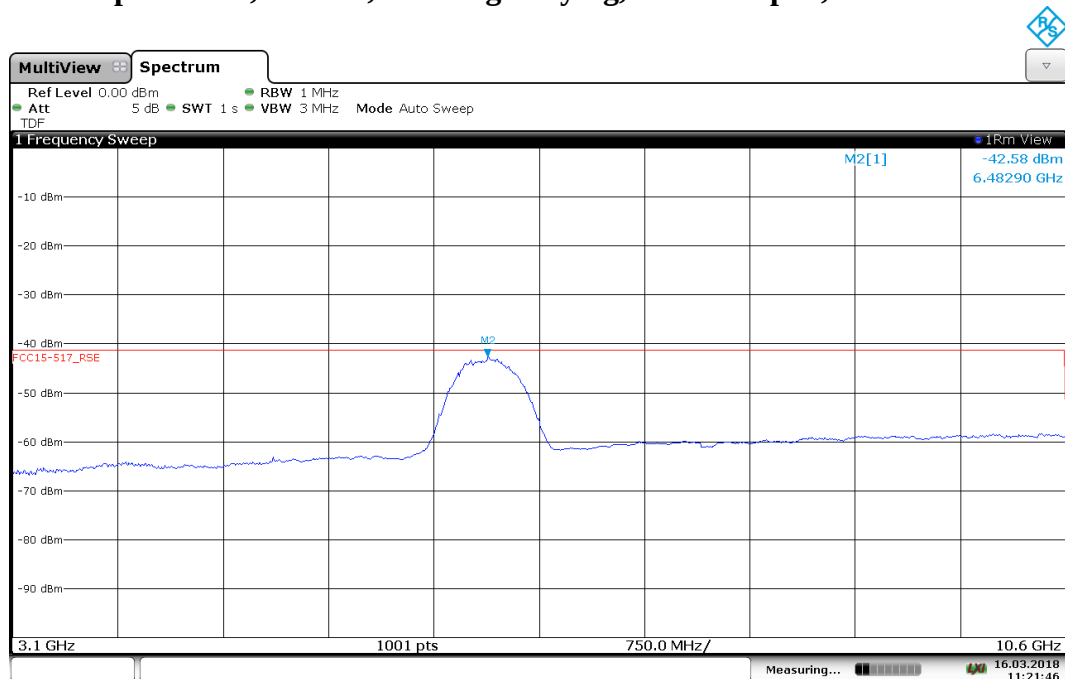
5.2.5. Op. Mode 1, 24VDC, standing, ant.- ver. pol., UWB signal turned ON



11:45:25 08.03.2018

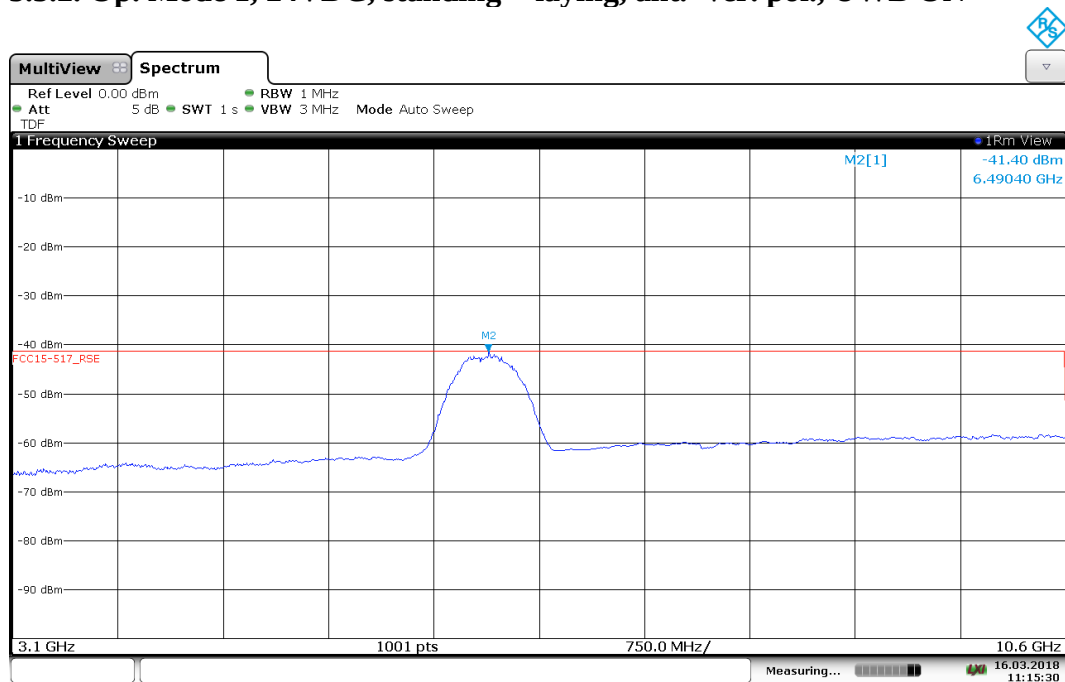
5.3. Frequency range 3100 MHz – 10600 MHz

5.3.1. Op. Mode 1, 24VDC, standing + laying, ant.- hor. pol., UWB ON



11:21:46 16.03.2018

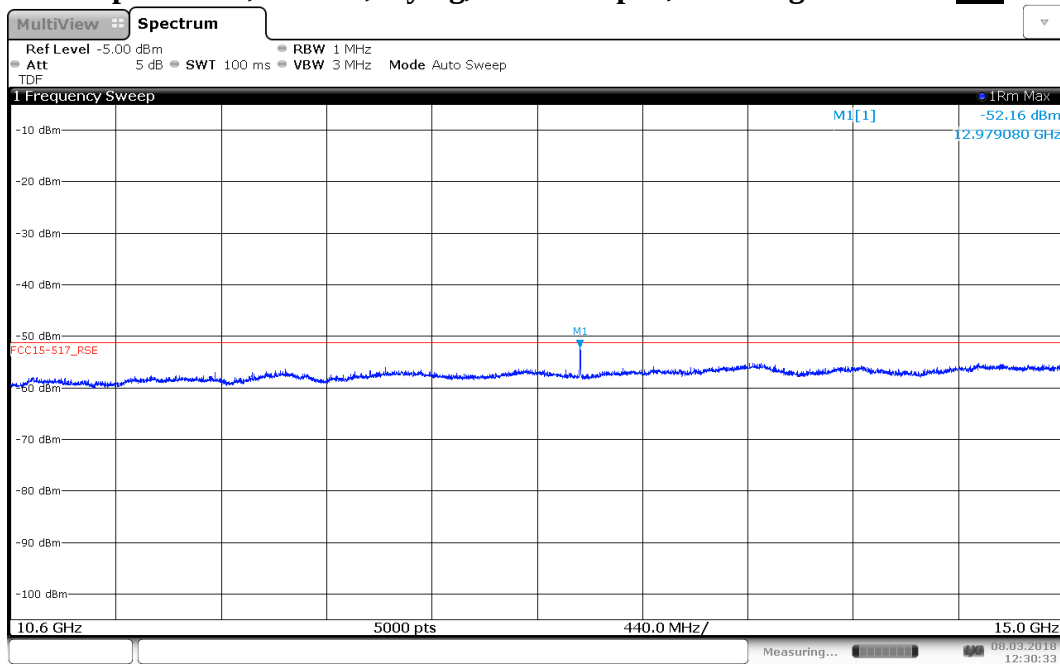
5.3.2. Op. Mode 1, 24VDC, standing + laying, ant.- ver. pol., UWB ON



11:15:30 16.03.2018

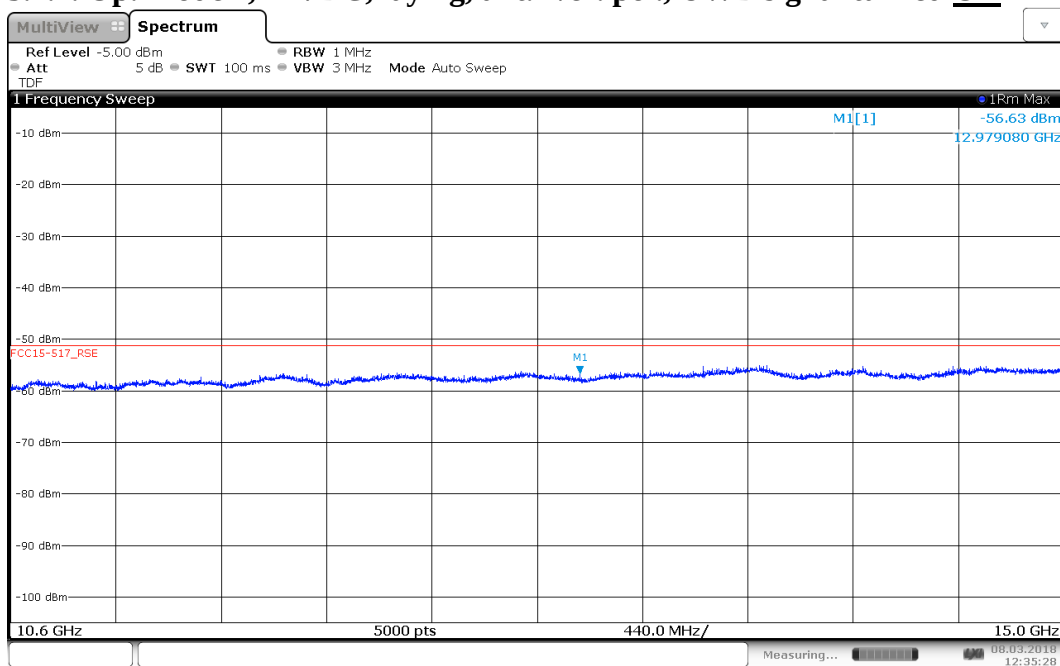
5.4. Frequency range 10600 MHz – 15000 MHz

5.4.1. Op. Mode 1, 24VDC, laying, ant.- hor. pol., UWB signal turned ON



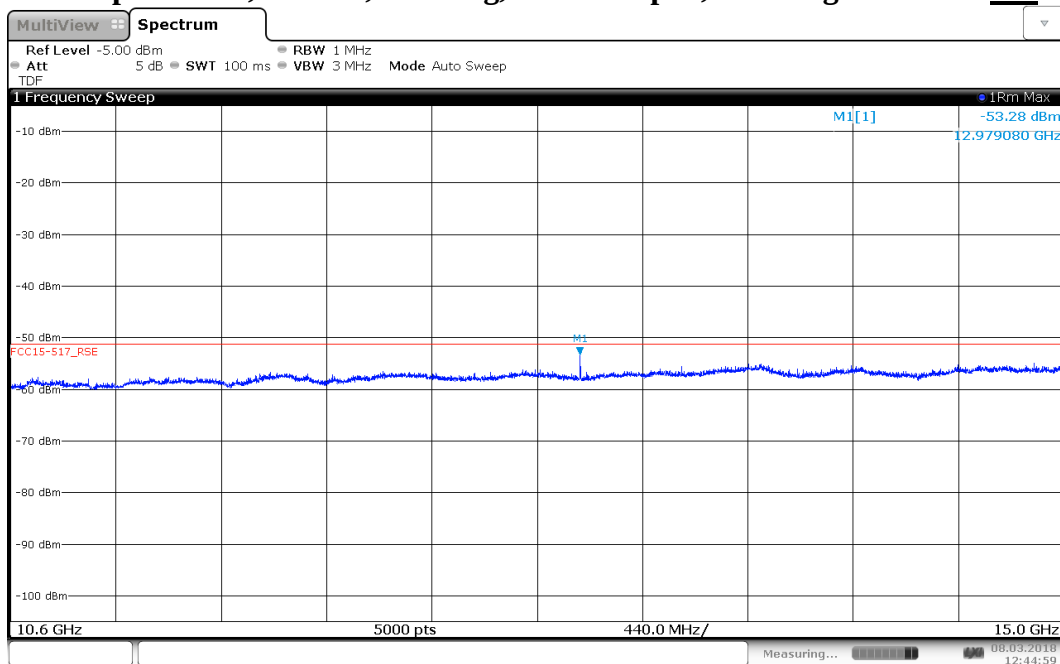
12:30:34 08.03.2018

5.4.2. Op. Mode 1, 24VDC, laying, ant.- ver. pol., UWB signal turned ON



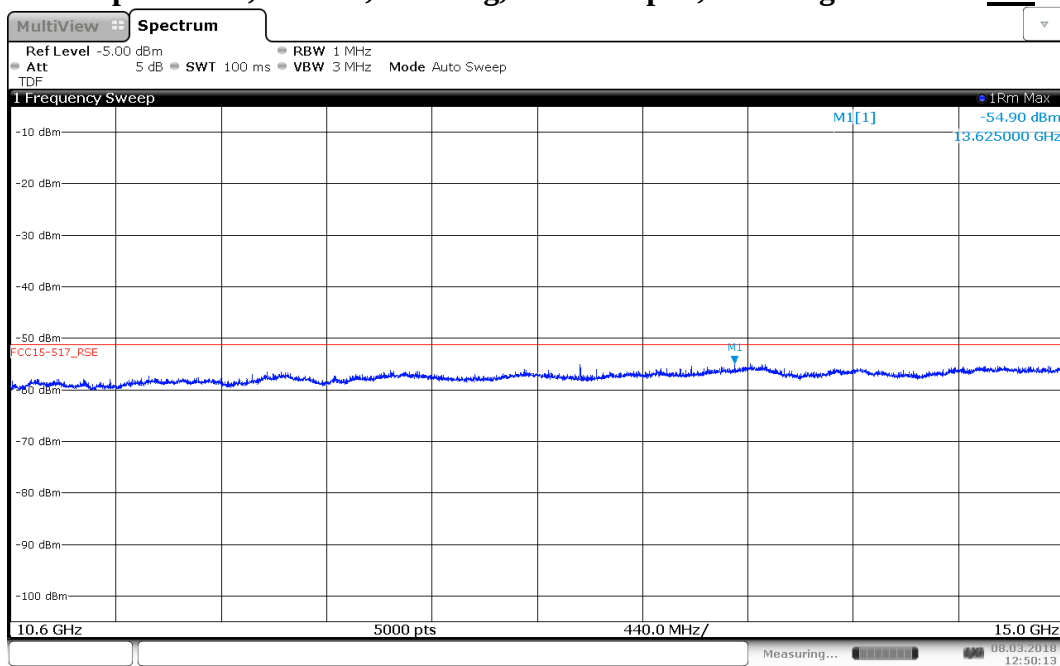
12:35:28 08.03.2018

5.4.3. Op. Mode 1, 24VDC, standing, ant.- hor. pol., UWB signal turned ON



12:45:00 08.03.2018

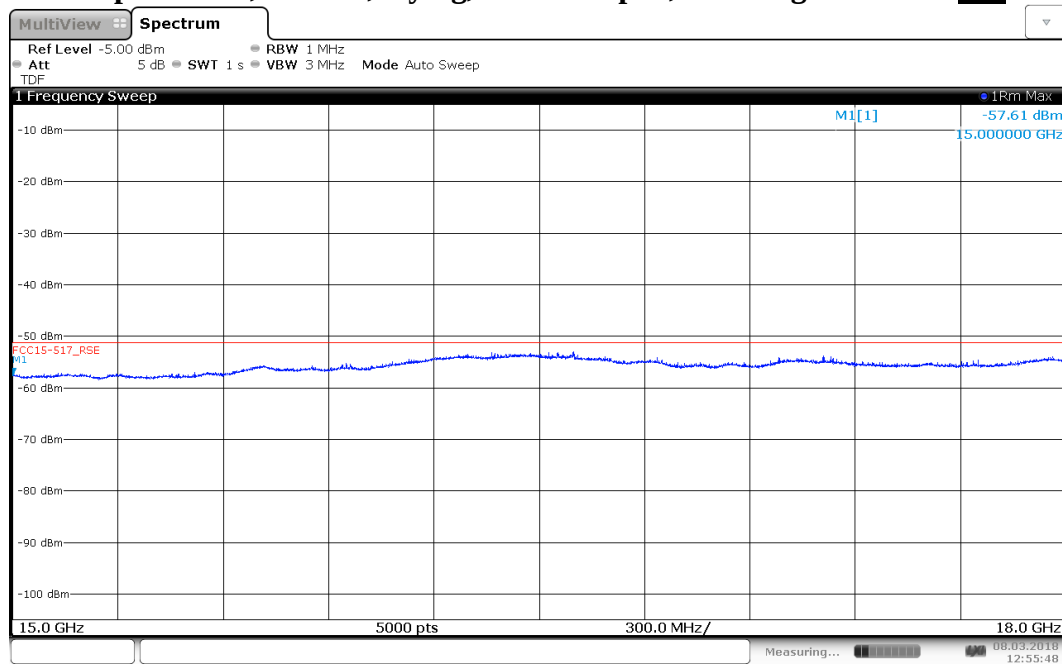
5.4.4. Op. Mode 1, 24VDC, standing, ant.- ver. pol., UWB signal turned ON



12:50:13 08.03.2018

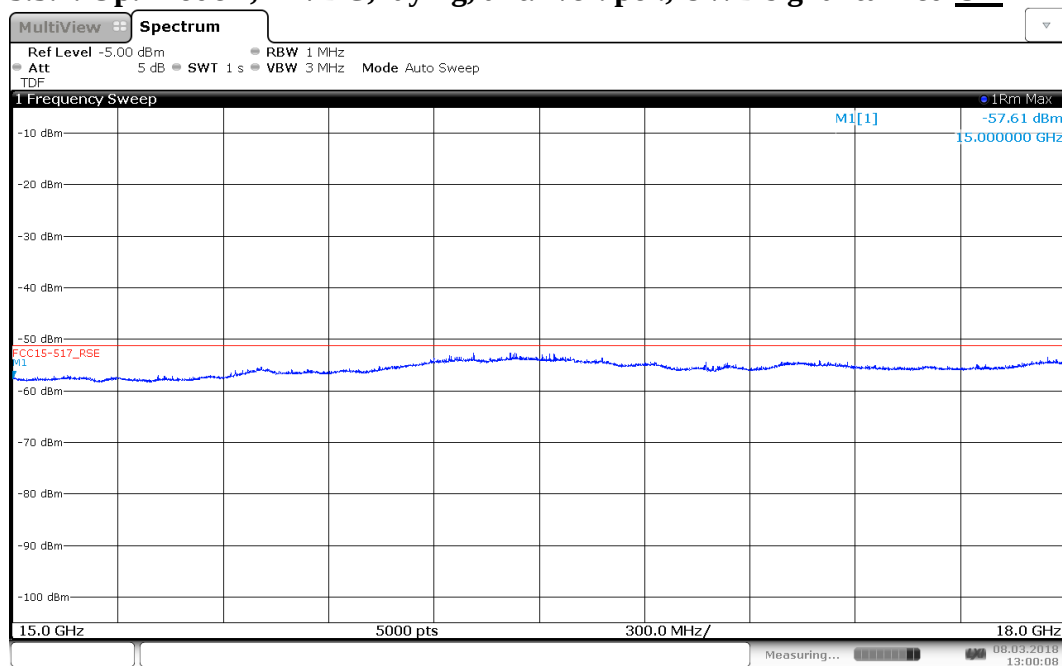
5.5. Frequency range 15000 MHz – 18000 MHz

5.5.1. Op. Mode 1, 24VDC, laying, ant.- hor. pol., UWB signal turned ON



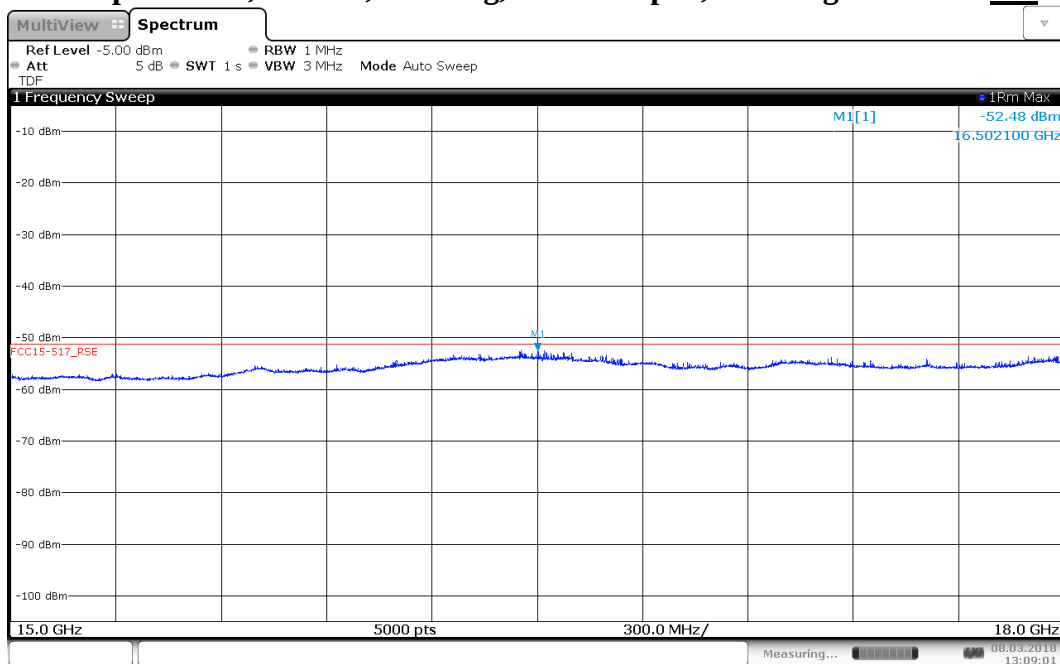
12:55:49 08.03.2018

5.5.2. Op. Mode 1, 24VDC, laying, ant.- ver. pol., UWB signal turned ON



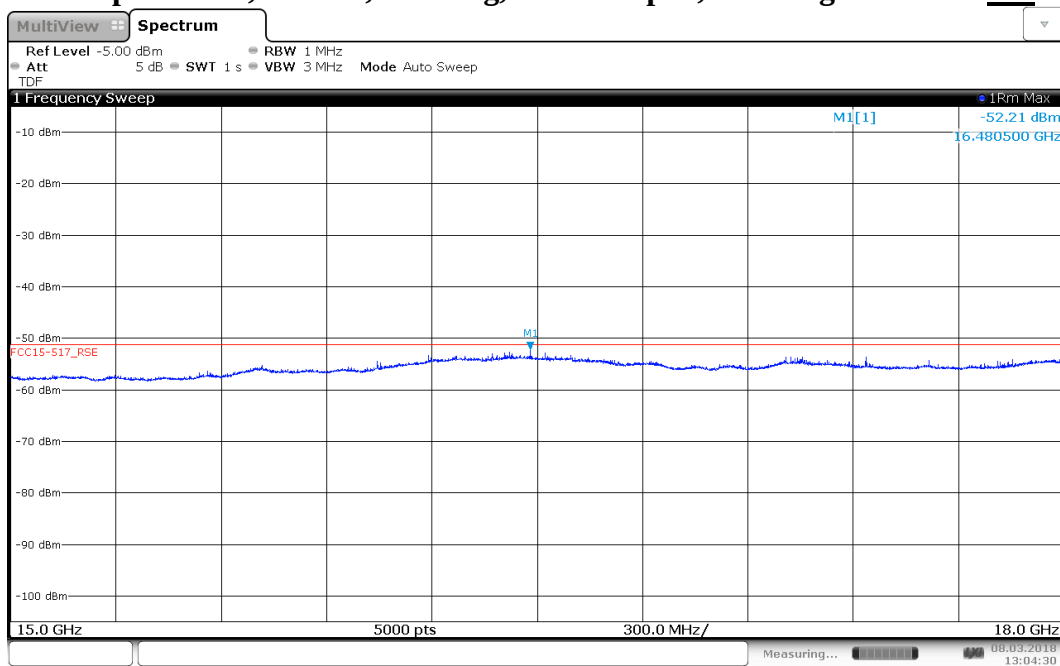
13:00:08 08.03.2018

5.5.3. Op. Mode 1, 24VDC, standing, ant.- hor. pol., UWB signal turned ON



13:09:01 08.03.2018

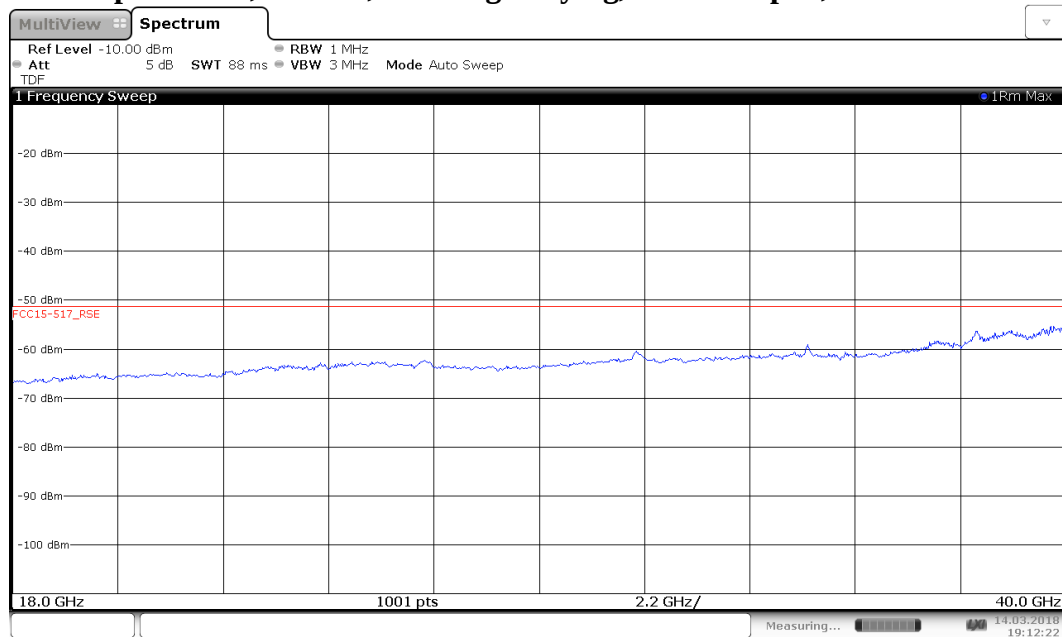
5.5.4. Op. Mode 1, 24VDC, standing, ant.- ver. pol., UWB signal turned ON



13:04:30 08.03.2018

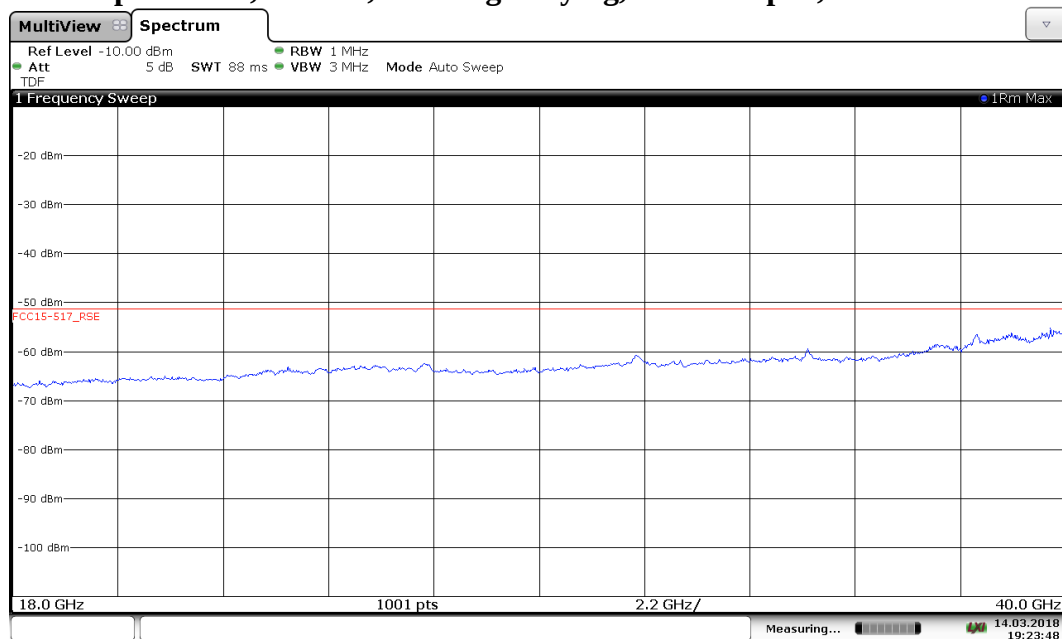
5.6. Frequency range 18000 MHz – 40000 MHz

5.6.1. Op. Mode 1, 24VDC, standing + laying, ant.- hor. pol., UWB ON



19:12:23 14.03.2018

5.6.2. Op. Mode 1, 24VDC, standing + laying, ant.- ver. pol., UWB ON

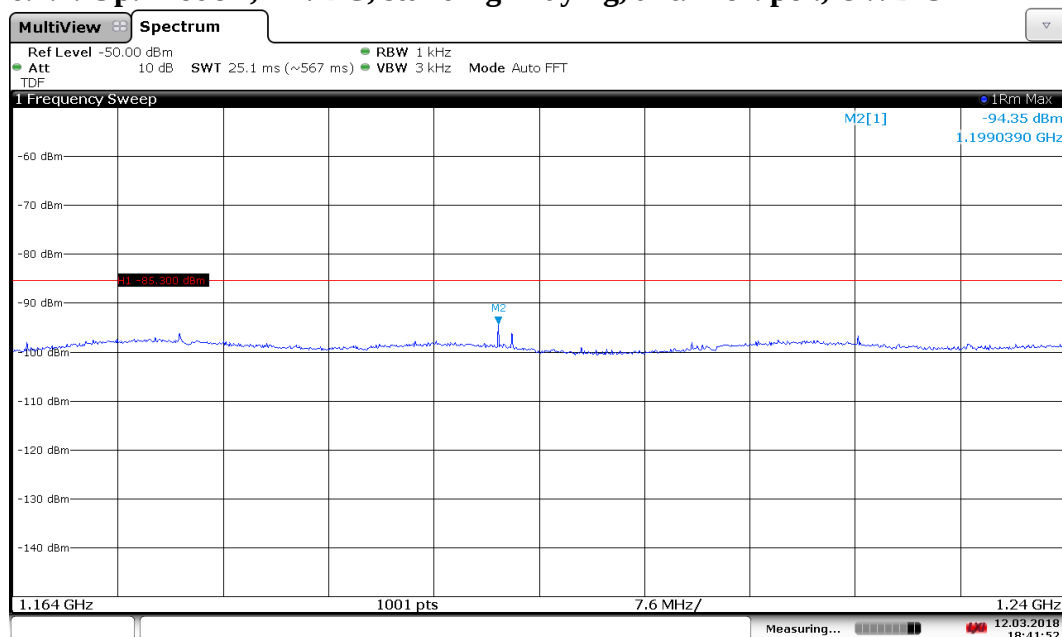


19:23:49 14.03.2018

6. Radiated emissions in the GPS bands

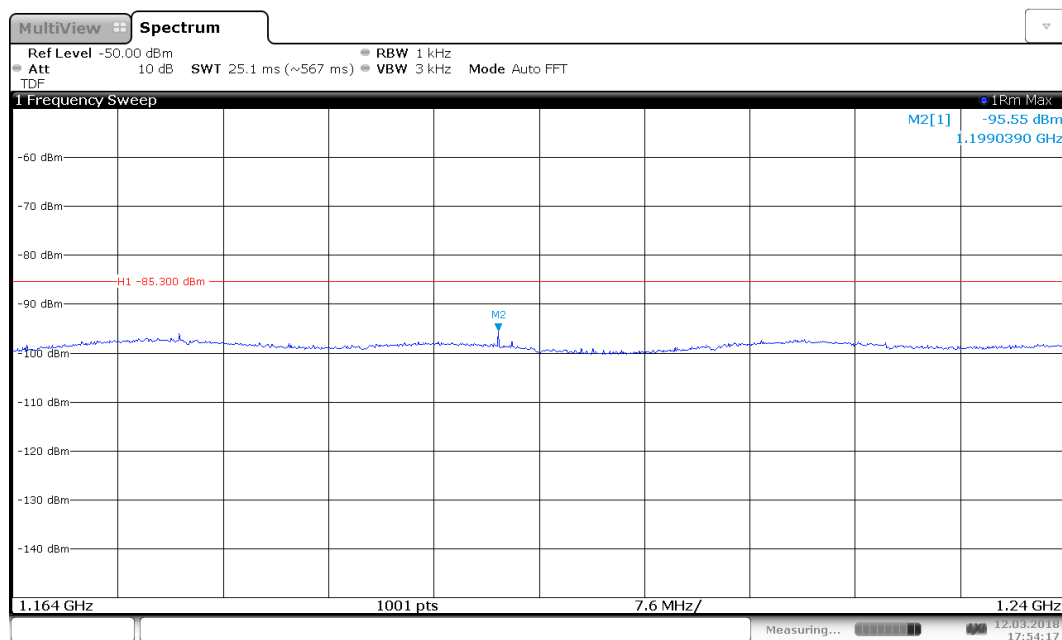
6.1. Frequency range 1164 MHz – 1240 MHz

6.1.1. Op. Mode 1, 24VDC, standing + laying, ant.- hor. pol., UWB ON



18:41:52 12.03.2018

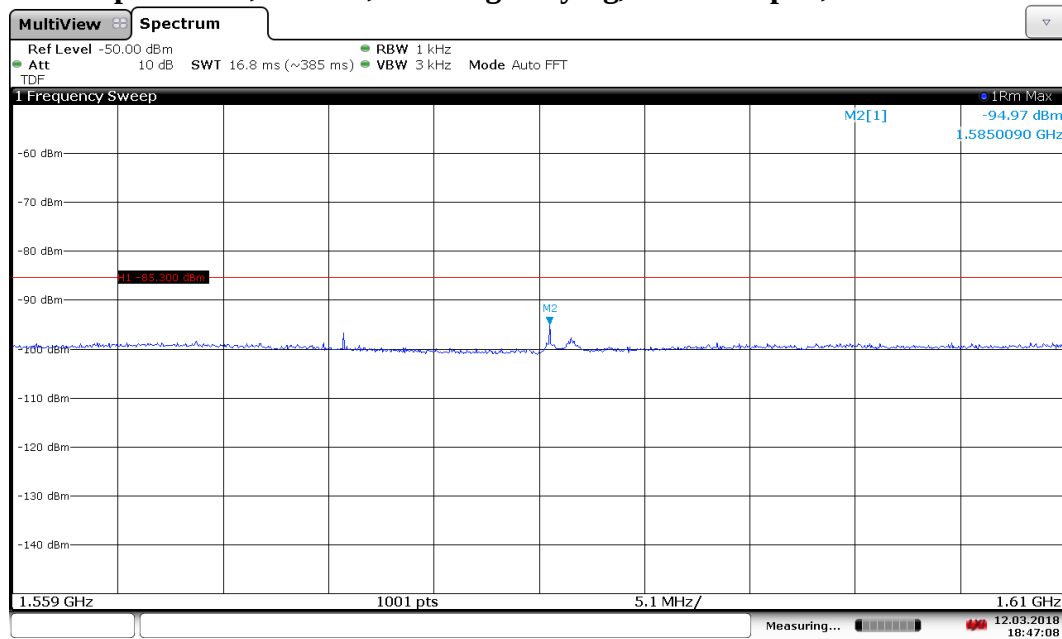
6.1.2. Op. Mode 1, 24VDC, standing + laying, ant.- ver. pol., UWB ON



17:54:18 12.03.2018

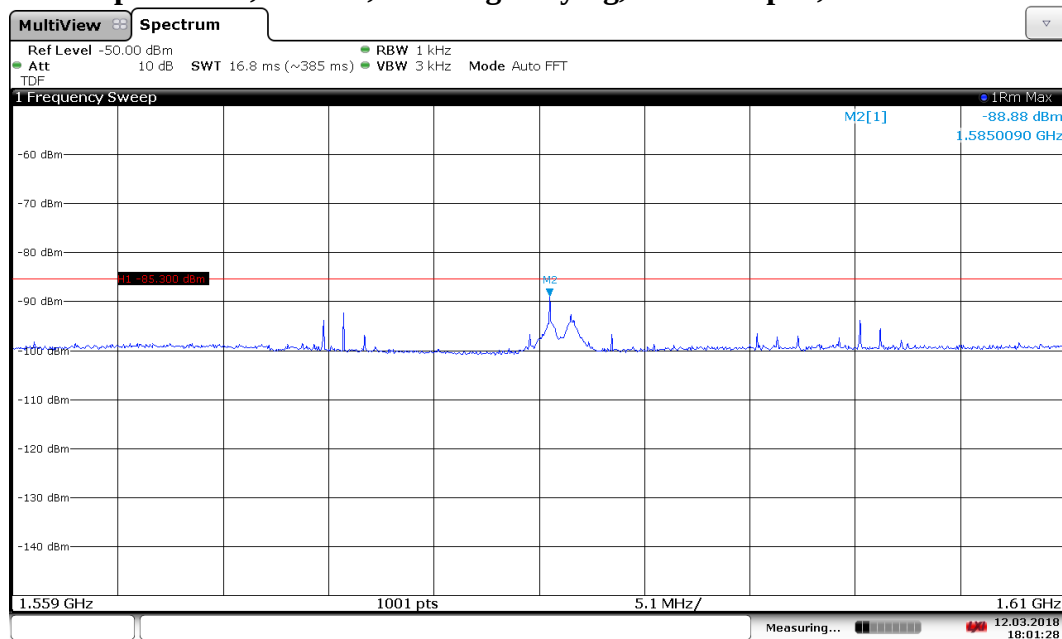
6.2. Frequency range 1559 MHz – 1610 MHz

6.2.1. Op. Mode 1, 24VDC, standing + laying, ant.- hor. pol., UWB ON



18:47:08 12.03.2018

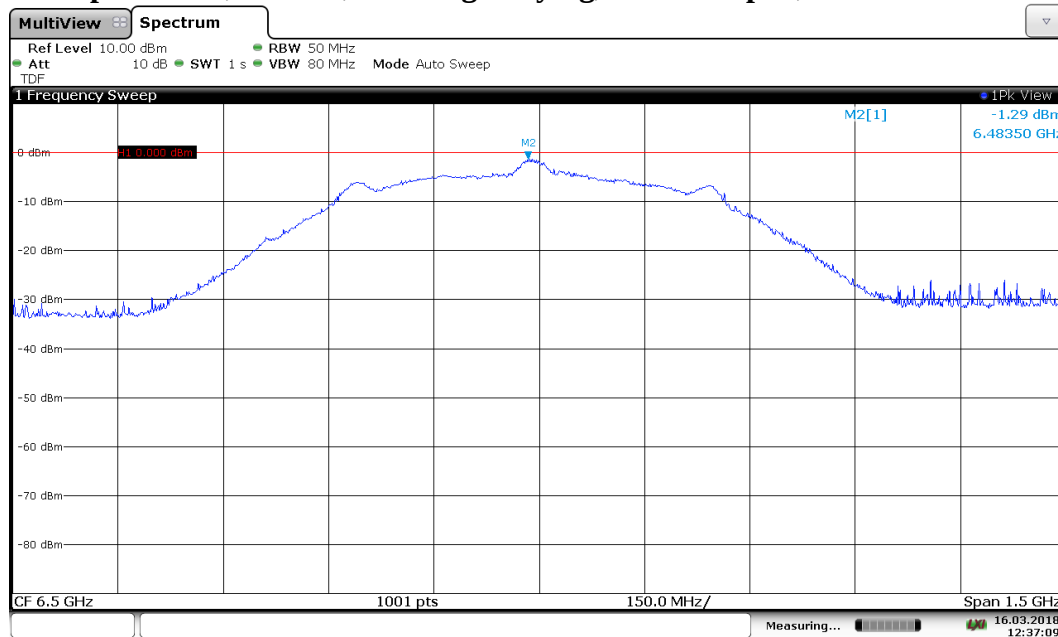
6.2.2. Op. Mode 1, 24VDC, standing + laying, ant.- ver. pol., UWB ON



18:01:28 12.03.2018

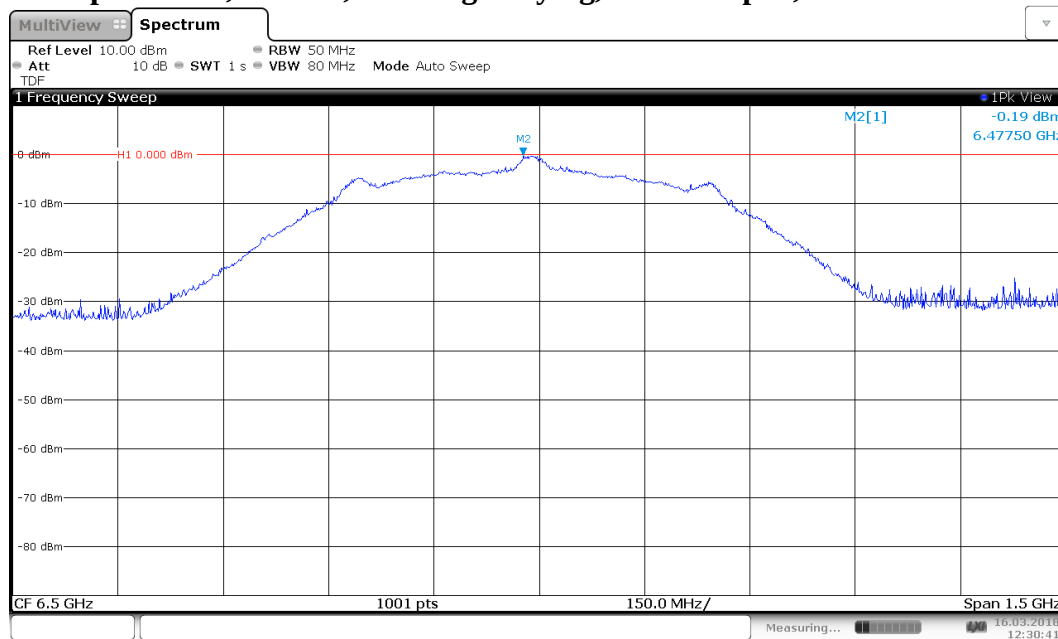
7. Fundamental emission peak power

7.1. Op. Mode 1, 24VDC, standing + laying, ant.- hor. pol., UWB ON



12:37:09 16.03.2018

7.2. Op. Mode 1, 24VDC, standing + laying, ant.- ver. pol., UWB ON



12:30:41 16.03.2018

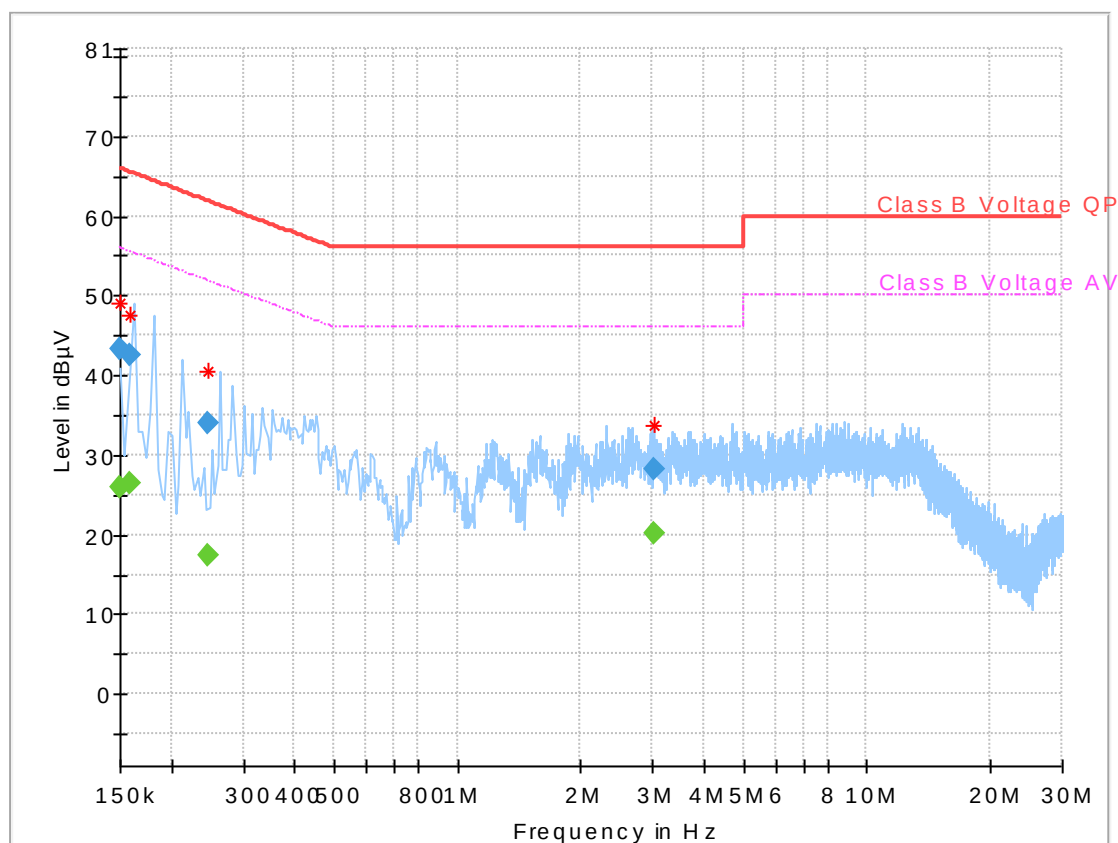
8. General Limit - Conducted emissions on AC-Power lines, §15.209

Common Information

Test Description:	Conducted Voltage Measurement Class B
Test Site & Location:	Conducted Emission, CETECOM GmbH Essen
Test Software:	R&S EMC32 v9.15
Test Specification:	FCC 15.207
Operating Mode:	1, channel 5
Measured on line:	N/L1
Diagram details:	Shows the peak values as a sum of measured ports in maxhold mode
Environmental Conditions:	Humidity: 40%rH; Temperature: 22°C
Operator:	MBe

Final_Result

Full Spectrum



Final_Result

Frequency (MHz)	QuasiPeak (dBµV)	CAverage (dBµV)	Limit (dBµV)
0.150000	---	26.00	56.00
0.150000	43.26	---	66.00
0.158750	42.46	---	65.53
0.158750	---	26.43	55.53
0.245781	33.92	---	61.90
0.245781	---	17.33	51.90
3.006875	---	20.15	46.00
3.006875	28.15	---	56.00