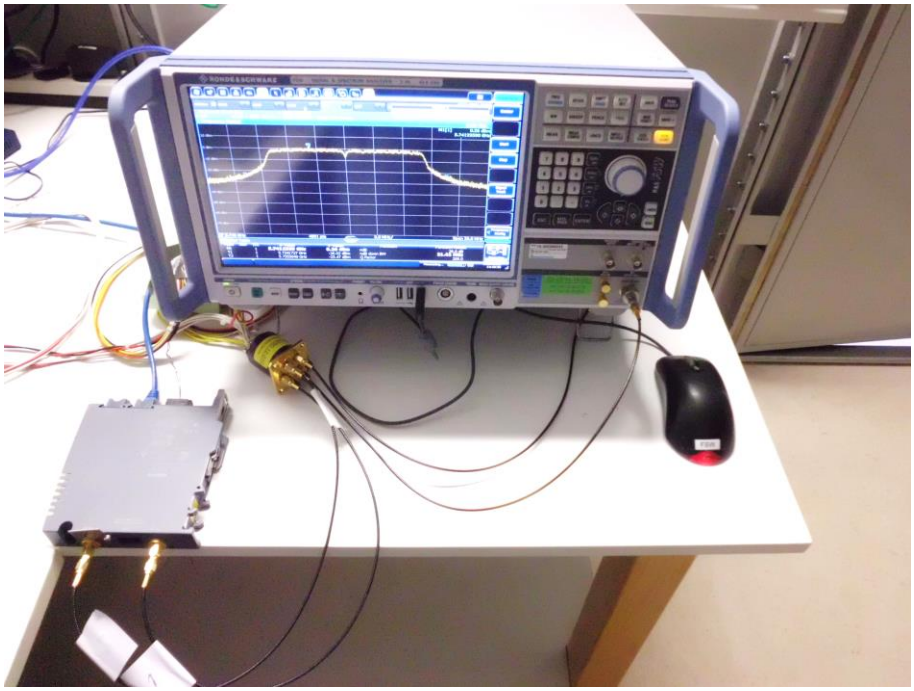
5.2 EBW and OBW

For test instruments and accessories used see section 6 Part **MB**.

5.2.1 Description of the test location

Test location: AREA 4

5.2.2 Photo documentation of the test set-up



5.2.3 Applicable standard

According to FCC Part 15E, Section 15.407(a)(5):
The maximum power spectral density is measured as a conducted emission by direct connection of a calibrated test instrument to the equipment under test. Measurements in the 5.15-5.25 GHz, 5.25-5.35 GHz, and the 5.47-5.725 GHz bands are made over a bandwidth of 1 MHz or the 26 dB emission bandwidth of the device, whichever is less.

5.2.4 Description of Measurement

The bandwidth is measured conducted using a spectrum analyser and following the procedures according the OET 789033, item C. The spectrum analyser function “n-dB-down” is used to determine the bandwidth. For the OBW the analyser function “OBW” is used to determine the bandwidth. The procedures according the OET 789033, item D are followed in this case.

Spectrum analyser settings occupied bandwidth:
For 20 MHz channels:

RBW: 300 kHz,	VBW: 1 MHz,	Detector: Peak,	Trace mode: max hold;

For 40 MHz channels:

RBW: 500 kHz,	VBW: 2 MHz,	Detector: Peak,	Trace mode: max hold;

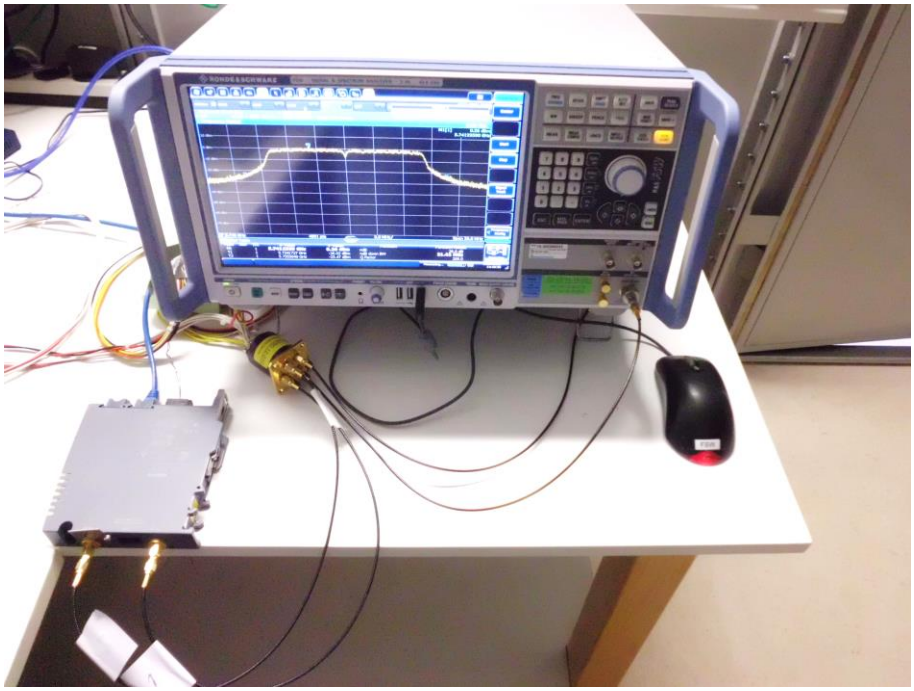
5.3 Maximum conducted output power

For test instruments and accessories used see section 6 Part **CPC 3**.

5.3.1 Description of the test location

Test location: AREA 4

5.3.2 Photo documentation of the test set-up



5.3.3 Applicable standard

According to FCC Part 15E, Section 15.407(a):
For an outdoor access point operating in the band 5.15-5.25 GHz, the maximum conducted output power over the frequency band of operation shall not exceed 1 W provided the maximum antenna gain does not exceed 6 dBi. The maximum e.i.r.p. at any elevation angle above 30 degrees as measured from the horizon must not exceed 125 mW (21 dBm).

5.3.4 Description of Measurement

The maximum conducted output power is measured using a spectrum analyser with the function “integrated band power measurement” following the procedure set out in KDB 789033 D02, item C f) Method SA-3. The EUT is set in TX continuous mode while measuring. The EUT is measured following the procedure set out in KDB 662911 for MIMO devices. The output power is measured separate at chain 1, and 2. The measurement values are converted into linear values, summed and converted back into log values. The resulting values are listed in the following tables. The insertion loss of cable and switch is taken into account with 3.9 dB at 5.2 GHz.
Spectrum analyser settings:
RBW: 1 MHz, VBW: 3 MHz, Detector: RMS (power averaging), Trace mode: max hold;
Number of points: 6401, Sweep time: see table, Band power function;

Modulation	Burst time T	Sweep points	Max sweep time analyser
	(ms)		(s)
802.11a	2.069	6401	13.2
802.11n, HT20	0.893	6401	5.7
802.11n, HT40	0.321	6401	2.1

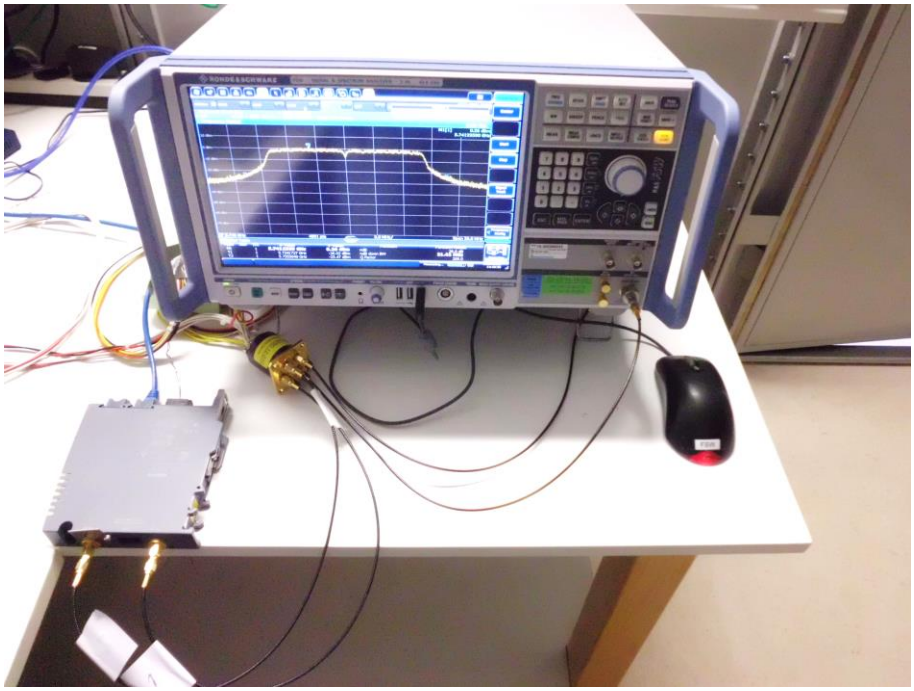
5.4 Maximum power spectral density

For test instruments and accessories used see section 6 Part **CPC 3**.

5.4.1 Description of the test location

Test location: AREA 4

5.4.2 Photo documentation of the test set-up



5.4.3 Applicable standard

According to FCC Part 15E, Section 15.407(a)(1i):
In addition, the maximum power spectral density shall not exceed 17 dBm in any 1 megahertz band. If transmitting antennas of directional gain greater than 6 dBi are used, both the maximum conducted output power and the maximum power spectral density shall be reduced by the amount in dB that the directional gain of the antenna exceeds 6 dBi.

5.4.4 Description of Measurement

The maximum power spectral density is measured using a spectrum analyser with the function “integrated band power measurement” following the procedure set out in KDB 789033 D02, item F. Therefore the PSD is measured the same way. The “integrated band power measurement” is related to PSD (dBm/Hz). The EUT is set in TX continuous mode while measuring. The EUT is measured separate at chain 1 and chain 2. The measurement values are converted into linear values. The chain 1 and chain 2 are summed and converted back into log values and corrected with the conversion factor Hz to 1 MHz, 60.0 dB. The resulting values are listed in the following tables. The insertion loss of cable and switch is taken into account with 3.9 dB at 5.2 GHz.

Spectrum analyser settings:
Channel power measurement function, TX channel bandwidth equal to EBW;
RBW: 1 MHz, VBW: 1 kHz, Sweep time: auto, Detector: PK, Trace: max hold;
Number of points: 6401, Sweep time: see table, Band power function;

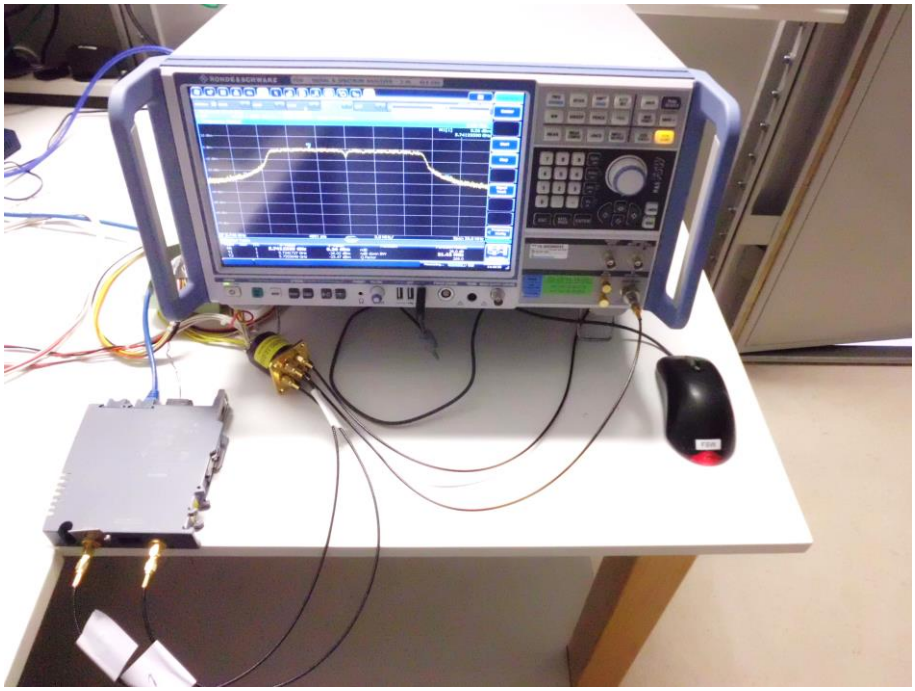
5.5 Defacto limit

For test instruments and accessories used see section 6 Part **CPC 3**.

5.5.1 Description of the test location

Test location: AREA 4

5.5.2 Photo documentation of the test set-up



5.5.3 Applicable standard

According to FCC Part 15, Section 15.407(a)(3):
If transmitting antennas of directional gain greater than 6 dBi are used, both the maximum conducted output power and the maximum power spectral density shall be reduced by the amount in dB that the directional gain of the antenna exceeds 6 dBi.