

FCC ID: 2AARELAN905R10

IC ID: 11303A-LAN905R10

5 TEST CONDITIONS AND RESULTS

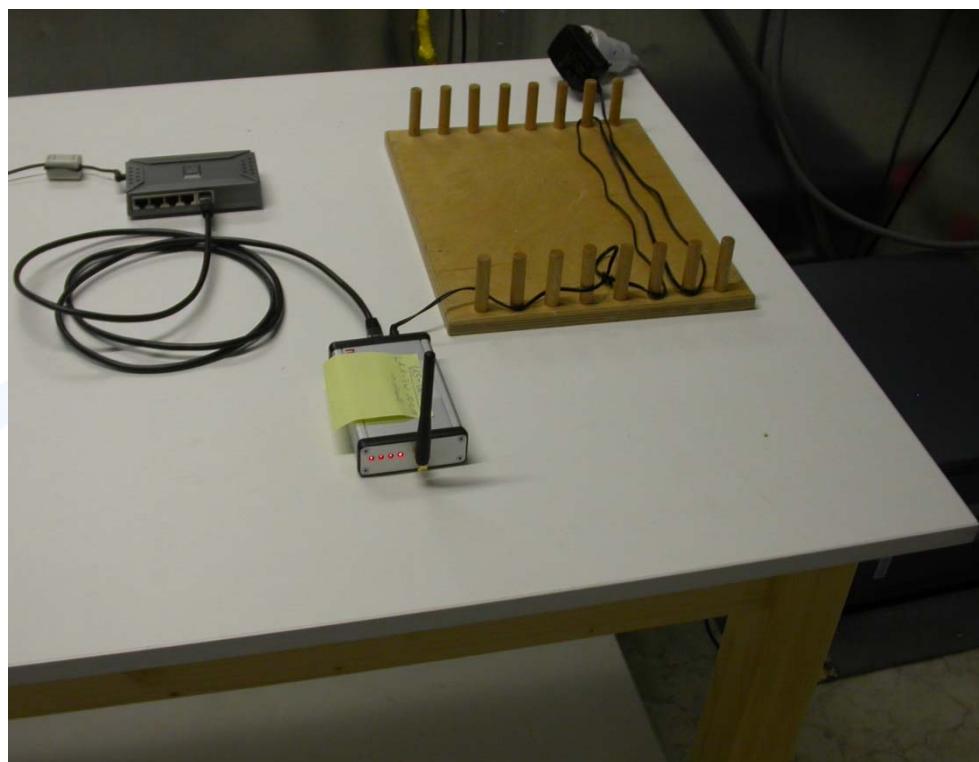
5.1 Conducted emissions

For test instruments and accessories used see section 6 Part A 4.

5.1.1 Description of the test location

Test location: Shielded Room S2

5.1.2 Photo documentation of the test set-up



5.1.3 Applicable standard

According to FCC Part 15, Section 15.207(a):

Except as shown in paragraphs (b) and (c) of this Section, for an intentional radiator that is designed to be connected to the public utility (AC) power line, the radio frequency voltage that is conducted back onto the AC power line on any frequency or frequencies within the band 150 kHz to 30 MHz shall not exceed the given limits.

5.1.4 Description of Measurement

The measurements are performed following the procedures set out in ANSI C63.4 described under item 4.4.3. If the minimum limit margin appears to be less than 20 dB with a peak mode measurement, the emissions are remeasured using a tuned receiver with quasi-peak and average detection and recorded on the data sheets.

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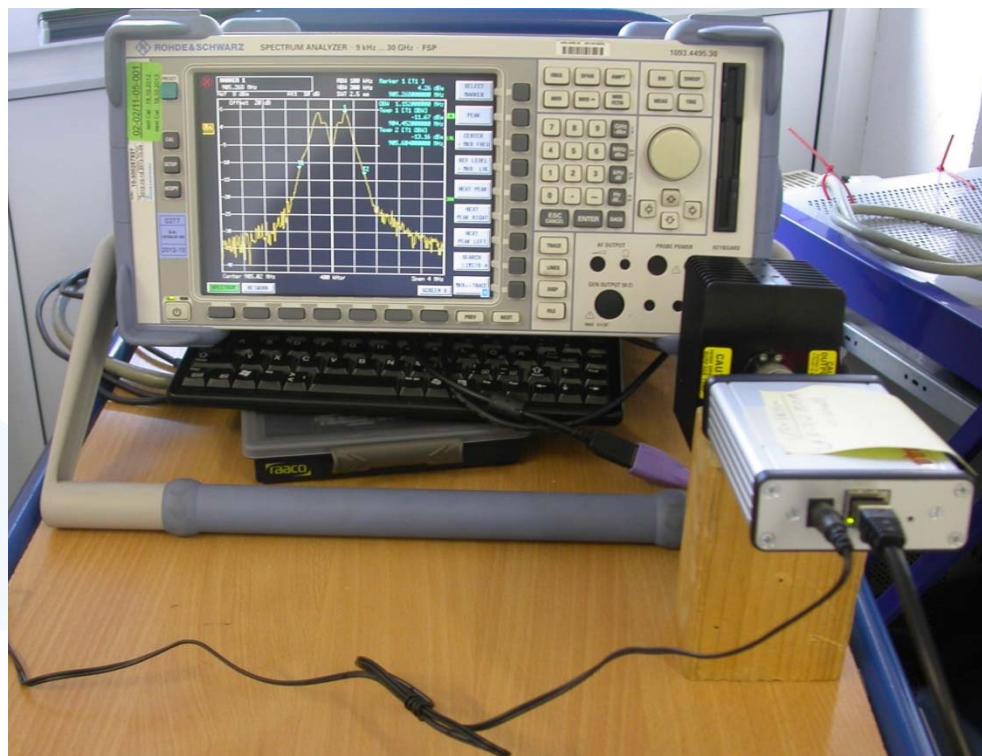
5.3 Occupied bandwidth

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

5.3.1 Description of the test location

Test location: **AREA4**

5.3.2 Photo documentation of the test set-up



5.3.1 Applicable standard

According to RSS-Gen, 4.6.1:

When an occupied bandwidth value is not specified in the applicable RSS, the transmitted signal bandwidth to be reported is to be its 99 % emission bandwidth, as calculated or measured.

5.3.2 Description of Measurement

The bandwidth was measured with the function "bandwidth measurement" of the spectrum analyser. The EUT is connected via suitable attenuator at the spectrum analyser. The measurement is repeated for every different modulation standard of the EUT and recorded.

Spectrum analyser settings:

RBW: 300 kHz,

VBW: 1 MHz,

Detector: Peak,

Sweep time: auto

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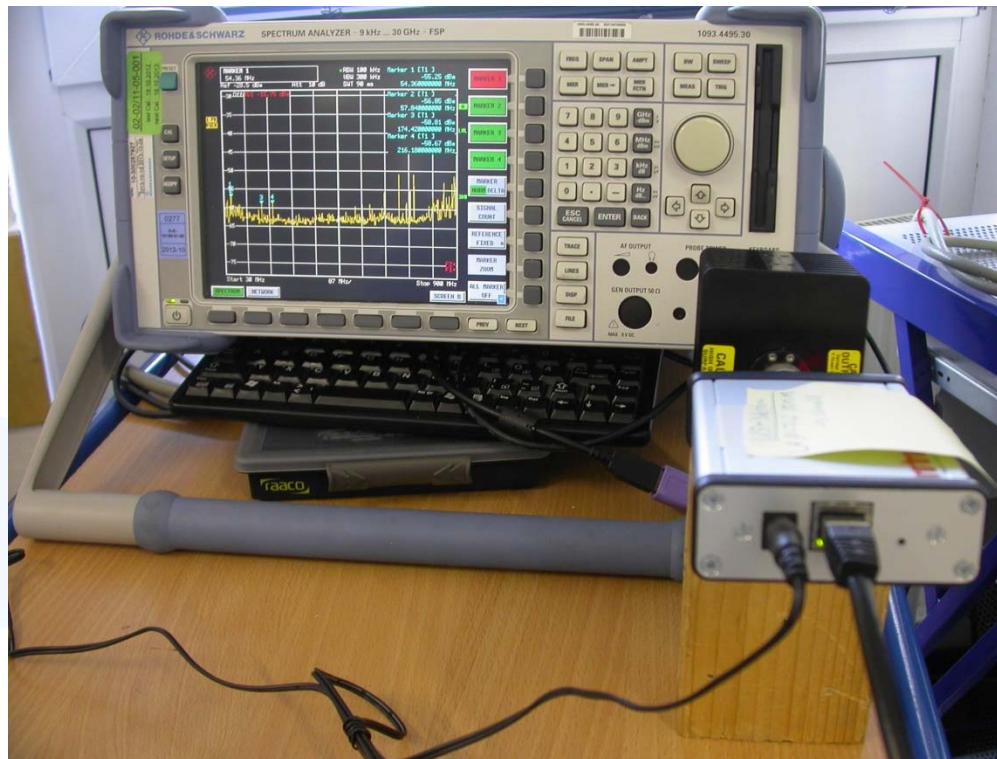
5.5 Spurious emissions conducted

For test instruments and accessories used see section 6 Part **SEC 1**, **SEC 2** and **SEC 3**.

5.5.1 Description of the test location

Test location: **AREA4**

5.5.2 Photo documentation of the test set-up



5.5.3 Applicable standard

According to FCC Part 15C, Section 15.247(d):

In any 100 kHz bandwidth outside the frequency band 902 to 928 MHz, the digitally modulated radio frequency power that is produced by the intentional radiator shall be at least 20 dB below that in the 100 kHz bandwidth within the band that contains the highest level of the desired power, based on either an RF conducted or an radiated measurement. Attenuation below the general limits specified in Section 15.209(a) is not required.

In addition, radiated emissions which fall in the restricted bands, as defined in Section 15.205(a), must also comply with the radiated emission limit specified in Section 15.209(a).

5.5.4 Description of measurement

A spectrum analyzer is connected to the output of the transmitter while EUT was operating in transmit mode at the assigned frequency.

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5.7 Spurious emissions radiated

For test instruments and accessories used see section 6 Part **SER 1, SER 2, SER 3**.

5.7.1 Description of the test location

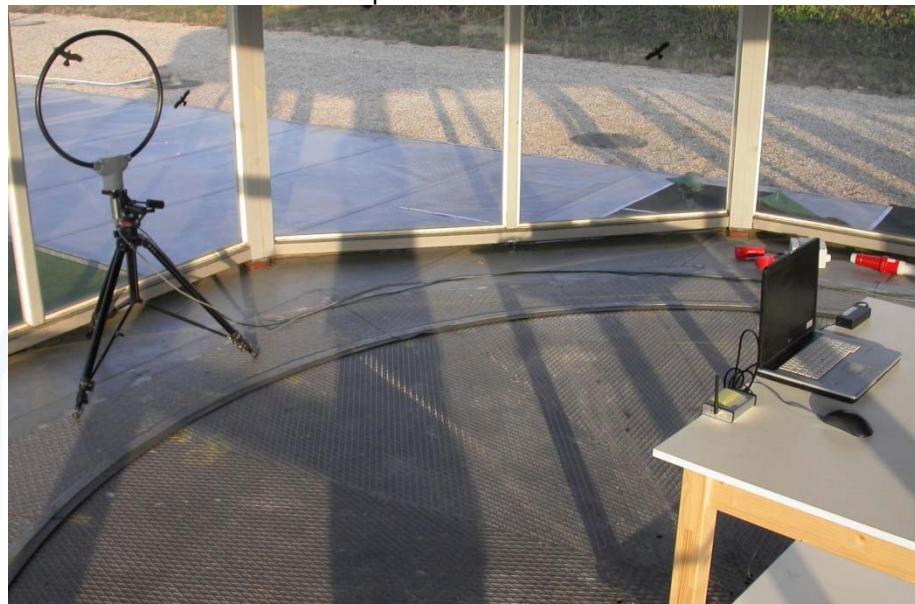
Test location: OATS 1

Test location: Anechoic chamber 2

Test distance: 3 m

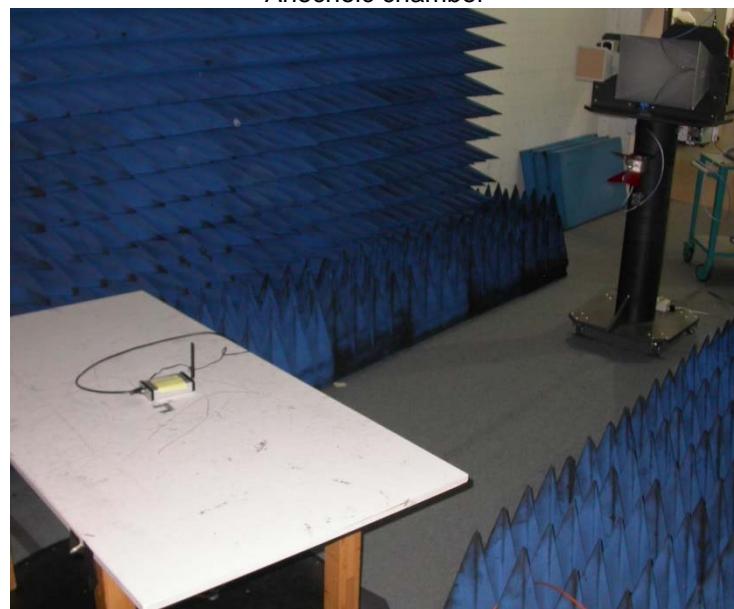
5.7.2 Photo documentation of the test set-up

Open area test site



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Anechoic chamber



5.7.3 Applicable standard

According to FCC Part 15, Section 15.247(d):

In any 100 kHz bandwidth outside the frequency bands 902 – 928 MHz, 2400 – 2483.50 MHz and 5725 – 5850 MHz, the digitally modulated radio frequency power that is produced by the intentional radiator shall be at least 20 dB below that in the 100 kHz bandwidth within the band that contains the highest level of the desired power, based on either an RF conducted or an radiated measurement. Attenuation below the general limits specified in Section 15.209(a) is not required. In addition, radiated emissions which fall in the restricted bands, as defined in Section 15.205(a), must also comply with the radiated emission limit specified in Section 15.209(a) (see Section 15.205(c)).

5.7.4 Description of Measurement

The radiated power of the spurious emission from the EUT is measured in a test setup following the procedures set out in ANSI C63.4. If the emission level of the EUT in peak mode complies with the average limit is 20 dB lower, then testing will be stopped and peak values of the EUT will be reported, otherwise the emission will be measured in average mode again and reported.

5.7.5 Test result radiated emissions

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5.13 Receiver radiated emissions

For test instruments and accessories used see section 6 Part **SER 1**, **SER2** and **SER3**.

5.13.1 Description of the test location

Test location: OATS 1

Test location: Anechoic chamber 2

Test distance: 3 m

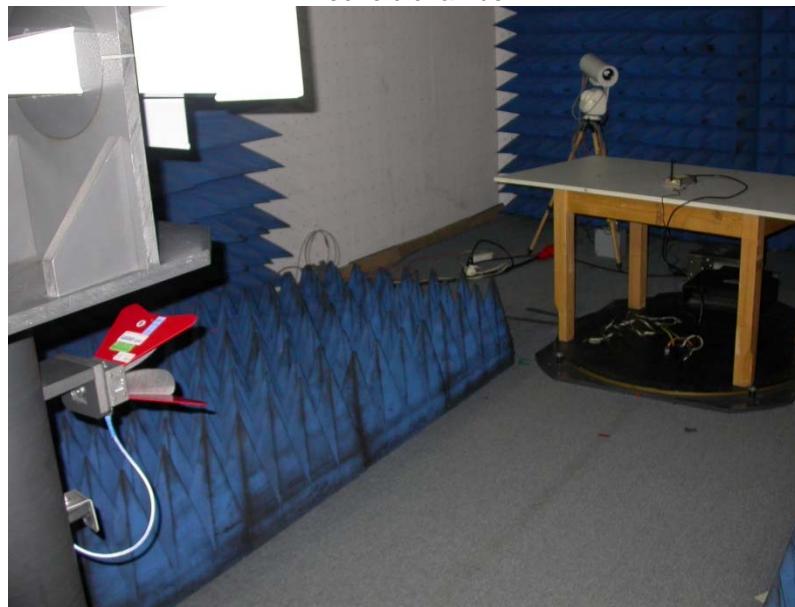
5.13.2 Photo documentation of the test set-up

Open area test site



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Anechoic chamber



5.13.3 Applicable standard

According to FCC Part 15, Section 15.109 (a):

Except for Class A digital devices, the field strength of radiated emissions from unintentional radiators at a distance of 3 m shall not exceed the given limit.

5.13.4 Description of Measurement

The radiated power of the spurious emission from the EUT is measured in a test setup following the procedures set out in ANSI C63.4. If the emission level of the EUT in peak mode complies with the average limit is 20 dB lower, then testing will be stopped and peak values of the EUT will be reported, otherwise the emission will be measured in average mode again and reported.