

5 TEST CONDITIONS AND RESULTS

5.1 AC power line 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 limits under FCC 15.207(a).

5.1.4 Description of Measurement

The measurements are performed following the procedures set out in ANSI C63.10 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 re-measured using a tuned receiver with quasi-peak and average detection and recorded on the data sheets.

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5.2 Maximum peak conducted output power

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

5.2.1 Description of the test location

Test location: Anechoic chamber 1
Test distance: 3 m

5.2.2 Photo documentation of the test set-up



EUT orientation:



5.2.3 Applicable standard

According to FCC Part 15, Section 15.247 (b)(3):

For systems using digital modulation in the 2400 – 2483.5 MHz and 5725 – 5850 MHz bands, the maximum peak output power of the transmitter shall not exceed 1 Watt. The limit is based on transmitting antennas of directional gain that do not exceed 6 dBi.

5.2.4 Description of Measurement

The maximum peak conducted output power is measured using a peak power meter following the procedure set out in ANSI C63-10, item 11.9.1.1. The EUT is set in TX continuous mode while measuring.

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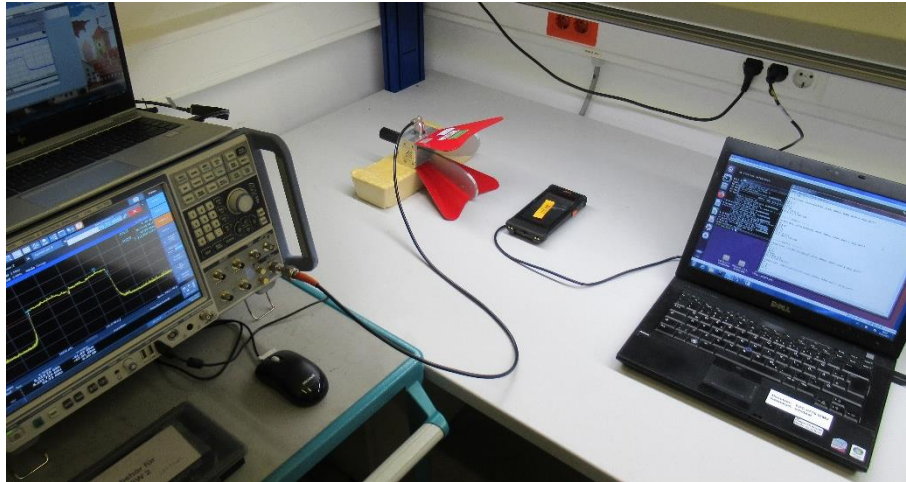
5.3 Emission bandwidth

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

5.3.1 Description of the test location

Test location: Shielded Room S6

5.3.2 Photo documentation of the test set-up



5.3.3 Applicable standard

According to FCC Part 15, Section 15.247(a)(2):

Systems using digital modulation techniques may operate in the 902 - 928 MHz, 2400 – 2483.5 MHz and 5725 – 5850 MHz bands. The minimum 6 dB bandwidth shall be at least 500 kHz.

5.3.4 Description of Measurement

The bandwidth was measured at an amplitude level reduced from the reference level of a modulated channel by a ratio of -6 dB. The reference level is the level of the highest signal amplitude observed at the transmitter at either the fundamental frequency or the first order modulation products in all typical modes of operation, including the unmodulated carrier, even if atypical. An alternative is to use the bandwidth measurement of the analyser.

Spectrum analyser settings for EBW:

RBW: 100 kHz, VBW: 300 kHz, Detector: Max peak, Sweep time: 5 s, Span: 2 EBW;

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5.4 Unwanted emissions in restricted bands, radiated

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

5.4.1 Description of the test location

Test location: OATS 1
 Test location: Anechoic chamber 1
 Test distance: 3 m

5.4.2 Photo documentation of the test set-up

30 MHz – 1 GHz:

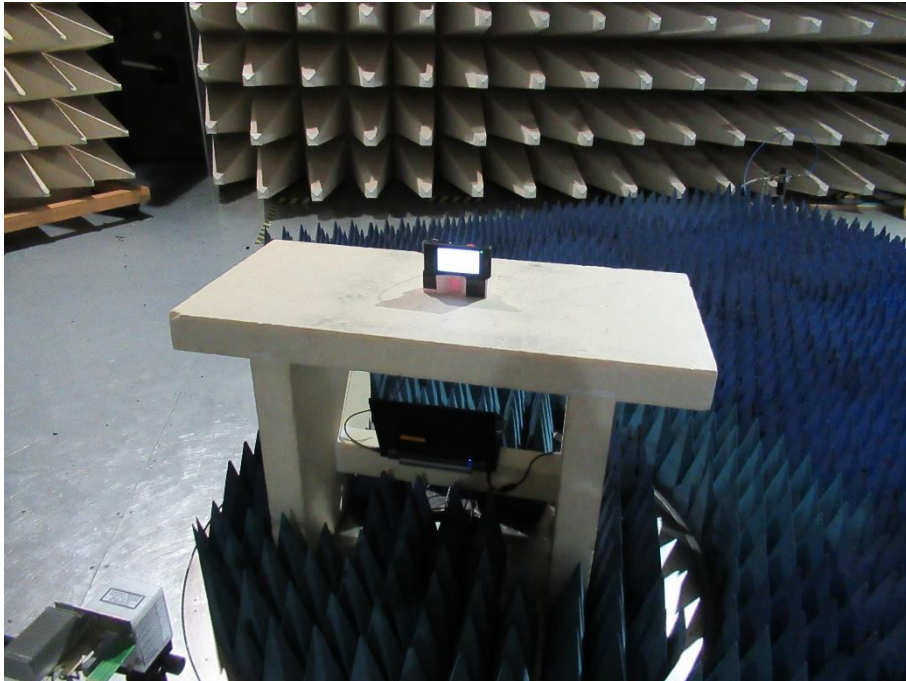


1 GHz – 18 GHz:



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18 GHz – 25 GHz:



5.4.3 Applicable standard

According to FCC Part 15, Section 15.205(a):

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).

5.4.4 Description of Measurement

The restricted bands are measured radiated. The span of the spectrum analyser is set wide enough to capture the restricted band and measure the peak level of the emission operating on the channel closest to the band edge, as well as any modulation products which fall outside of the authorized band of operation. The restricted bands are measured falling emissions into it and the nearest restricted band are checked for emissions also the restricted band for the harmonics of the carrier.

Spectrum analyser settings:

30 MHz – 1000 MHz: RBW: 120 kHz

1000 MHz – 25 GHz: RBW: 1 MHz, VBW: 3 MHz, Sweep: Auto, Detector function: Max Peak