

FCC ID: DO4EVOLVE

1 TEST CONDITIONS AND RESULTS

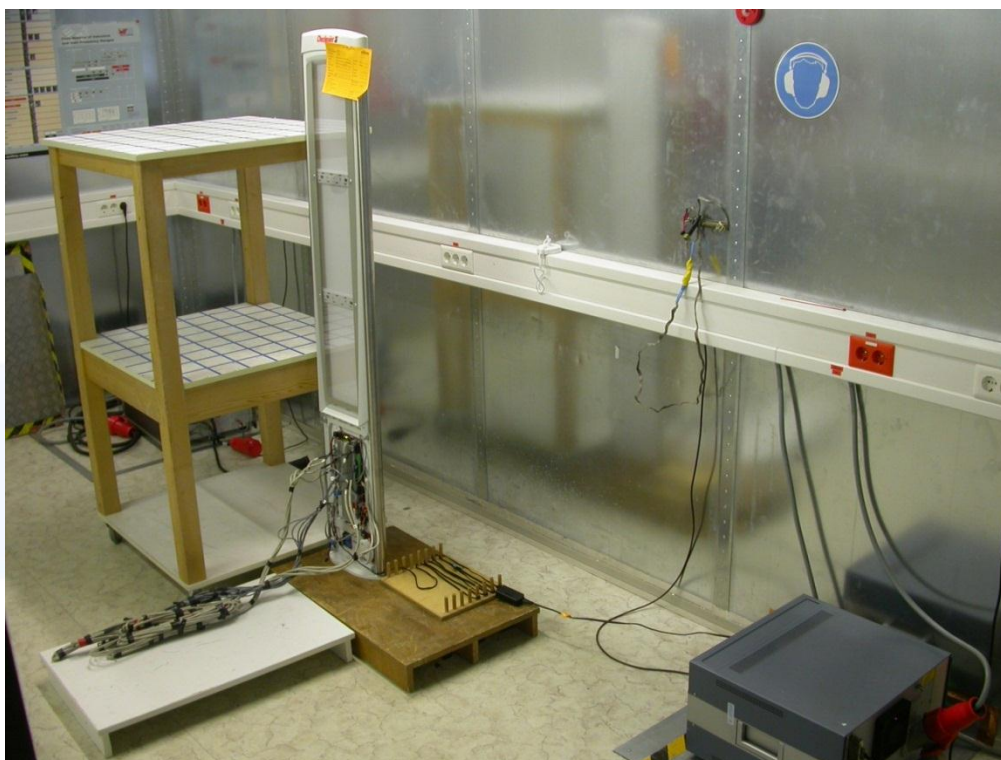
1.1 Conducted emissions

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

1.1.1 Description of the test location

Test location: Shielded Room S2

1.1.2 Photo documentation of the test set-up



1.1.3 Description of Measurement

The final level, expressed in dB μ V, is arrived at by taking the reading directly from the EMI receiver. This level is compared directly to the FCC Limit or to the CISPR limit.

To convert between dB μ V and μ V, the following conversions apply:

$$\text{dB}\mu\text{V} = 20(\log \mu\text{V})$$

$$\mu\text{V} = \text{Inverse log}(\text{dB}\mu\text{V}/20)$$

Conducted emissions on the 50 Hz and/or 60 Hz power interface of the EuT are measured in the frequency range of 150 kHz to 30 MHz. The measurements are performed using a receiver, which has CISPR characteristic bandwidth and quasi-peak detection and a Line Impedance Stabilization Network (LISN) with 50 Ω /50 μ H (CISPR 16) characteristics. Table top equipment is placed on a non-conducting table 80 centimeters above the floor and is positioned 40 centimeters from the vertical ground plane (wall) of the screen room. 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.

FCC ID: DO4EVOLVE**1.2 Field strength of the fundamental wave**

For test instruments and accessories used see section 6 Part CPR 1.

1.2.1 Description of the test location

Test location: OATS1

Test distance: 10 metres

1.2.2 Photo documentation of the test set-up**1.2.3 Description of Measurement**

The magnetic field strength from the EuT will be measured on an open area test site in the frequency range of 9 kHz to 30 MHz using a tuned receiver and a shielded loop antenna. The set up of the Equipment under test will be in accordance to ANSI C63.4-2003. The antenna was positioned 3, 10 or 30 meters horizontally from the EuT. Measurements have been made in all three orthogonal axes and the shielded loop antenna was rotated to locate the maximum of the emissions. In the case where larger measuring distances are required the results will be extrapolated based on the values measured on the closer distances according to Section 15.31 (f) (2) [2]. The final measurement will be performed with an EMI Receiver set to an average and a peak detector.

The final level, expressed in $\text{dB}\mu\text{V}/\text{m}$, is arrived at by taking the reading from the EMI receiver (Level $\text{dB}\mu\text{V}$) and adding the antenna correction factor and cable loss factor (Factor dB) to it. This result then has to be compared with the relevant FCC limit.

The resolution bandwidth during the measurement was 300 kHz.

FCC ID: DO4EVOLVE**1.3 Spurious emissions (Magnetic field) 9 kHz – 30 MHz**

For test instruments and accessories used see section 6 Part SER 1.

1.3.1 Description of the test location

Test location: OATS1

Test distance: 10 metres

1.3.2 Photo documentation of the test set-up**1.3.3 Description of Measurement**

The spurious emissions from the EuT will be measured on an open area test site in the frequency range of 9 kHz to 30 MHz using a tuned receiver and a shielded loop antenna. The antenna was positioned 3, 10 or 30 meters horizontally from the EuT. Measurements have been made in all three orthogonal axes and the shielded loop antenna was rotated to locate the maximum of the emissions. In the case where larger measuring distances are required the results will extrapolated based on the values measured on the closer distances according to Section 15.31 (f) (2) [2]. The final measurement will be performed with an EMI Receiver set to Quasi Peak detector except for the frequency bands 9 kHz to 90 kHz and 110 to 490 kHz where an average detector will be used according to Section 15.209 (d) [2].

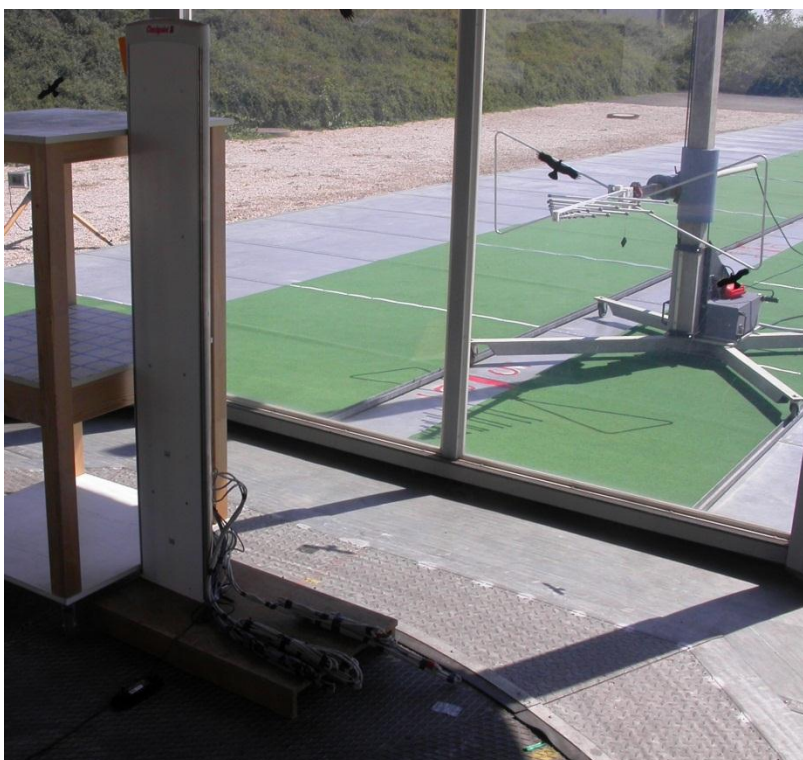
FCC ID: DO4EVOLVE**1.4 Radiated emissions (electric field) 30 MHz – 1 GHz**

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

1.4.1 Description of the test location

Test location: OATS1

Test distance: 3 metres

1.4.2 Photo documentation of the test set-up**1.4.3 Description of Measurement**

Spurious emissions from the EuT are measured in the frequency range of 30 MHz to 1000 MHz using a tuned receiver and appropriate broadband linearly polarized antennas. Measurements between 30 MHz and 1000 MHz are made with 120 kHz/6 dB bandwidth and quasi-peak detection. Table top equipment is placed on a 1.0 X 1.5 meter non-conducting table 80 centimetres above the ground plane. Floor standing equipment is placed directly on the turntable/ground plane. The set up of the Equipment under test will be in accordance to ANSI C63.4-2003. The Interface cables that are closer than 40 centimetres to the ground plane are bundled in the center in a serpentine fashion so they are at least 40 centimetres from the ground plane. Cables to simulators/testers (if used in this test) are routed through the center of the table and to a screen room located outside the test area. The antenna was positioned 3, 10 or 30 meters horizontally from the EuT. To locate maximum emissions from the test sample the antenna is varied in height from 1 to 4 meters, measurement scans are made with both horizontal and vertical antenna polarization's and the EuT are rotated 360 degrees.

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1.5 Emission Bandwidth

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

1.5.1 Description of the test location

Test location: AREA4

1.5.2 Photo documentation of the test set-up



1.5.3 Test result

Tx Frequency: 8.2 MHz Dual Band

Fundamental [MHz] See Plot 1	6dB Bandwidth F1 [MHz]	6dB Bandwidth F2 [MHz]	Measured Bandwidth [MHz]
8.2	7.715	8.705	0.99

Tx Frequency: 9.0 MHz Dual Band

Fundamental [MHz] See Plot 2	6dB Bandwidth F1 [MHz]	6dB Bandwidth F2 [MHz]	Measured Bandwidth [MHz]
8.2 & 9.2	7.828	9.418	1.59