5.2   Field strength of fundamental

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

5.2.1   Description of the test location

Test location: OATS 1
Test distance: 3 m

5.2.2   Photo documentation of the test set-up

5.3   Out-of-band emission, radiated

For test instruments and accessories used see section 6 Part **SER1, SER 2, SER 3**.

5.3.1   Description of the test location

Test location: OATS 1 / Anechoic chamber 1

Test distance: 3 m

5.3.2   Photo documentation of the test set-up

Test setup 9 kHz – 30 MHz:

Test setup 30 MHz – 1000 MHz:

Test setup 1 GHz – 10 GHz:

5.3.3　Applicable standard

According to FCC Part 15C, Section 15.249 (d):
Emission radiated outside of the specified frequency bands, except harmonics, shall be attenuated by at least 50 dB below the level of the fundamental or to the general radiated limit in FCC Part 15C, Section 15.209, whichever is the lesser attenuation.

5.3.4　Description of Measurement

The radiated emissions from the EUT are measured in the frequency range of 9 kHz to 1000 MHz using a tuned receiver and appropriate broadband linearly polarized antennas. The setup of the EUT and the measurement procedure is in accordance to ANSI C63.10, Item 6.3. In the frequency range above 1 GHz a spectrum analyser is used with appropriate linear polarized antennas. If the emission level in peak mode complies with the average limit testing is stopped and peak values will be reported, otherwise, the emission is measured in average mode again and reported. The EUT is measured in TX continuous mode unmodulated under normal conditions.

Instrument settings:
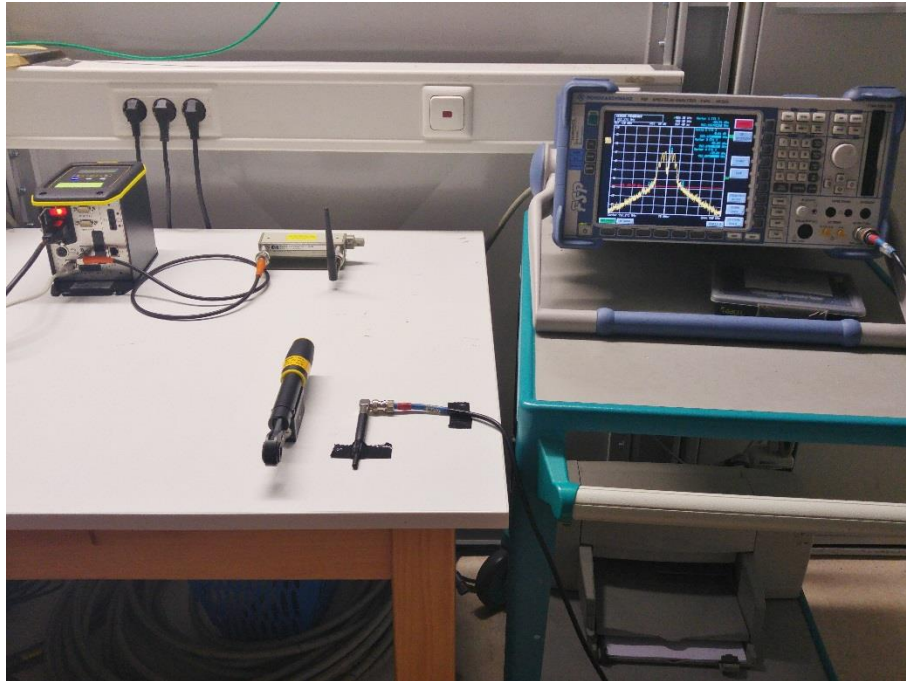|		
9 kHz – 150 kHz	RBW:	200 Hz
150 kHz - 30 MHz	RBW:	9 kHz
30 MHz – 1000 MHz:	RBW:	120 kHz
1000 MHz – 10 GHz	RBW:	1 MHz

5.4   EBW and OBW

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

5.4.1   Description of the test location

Test location: Shielded Room S4

5.4.2   Photo documentation of the test set-up

5.4.3   Applicable standard

According to FCC Part 15, Section 15.215(c):
Intentional radiators operating under the alternative provisions to the general emission limits, as contained in Section 15.217 through Section 15.257, must be designed to ensure that the 20 dB bandwidth of the emission is contained within the frequency band designated in the rule section under which the equipment is operated.

5.4.4   Description of Measurement

The bandwidth is measured at an amplitude level reduced from the reference level by a specified ratio of -20 dB (99%). The x-dB-down (OBW) function of the analyser is used. The measurement is performed with normal modulation in TX continuous mode.

Spectrum analyser settings:
RBW: 10 kHz,   VBW: 30 kHz,   Span: 750 kHz,   Trace mode: max. hold,   Detector: max. peak;
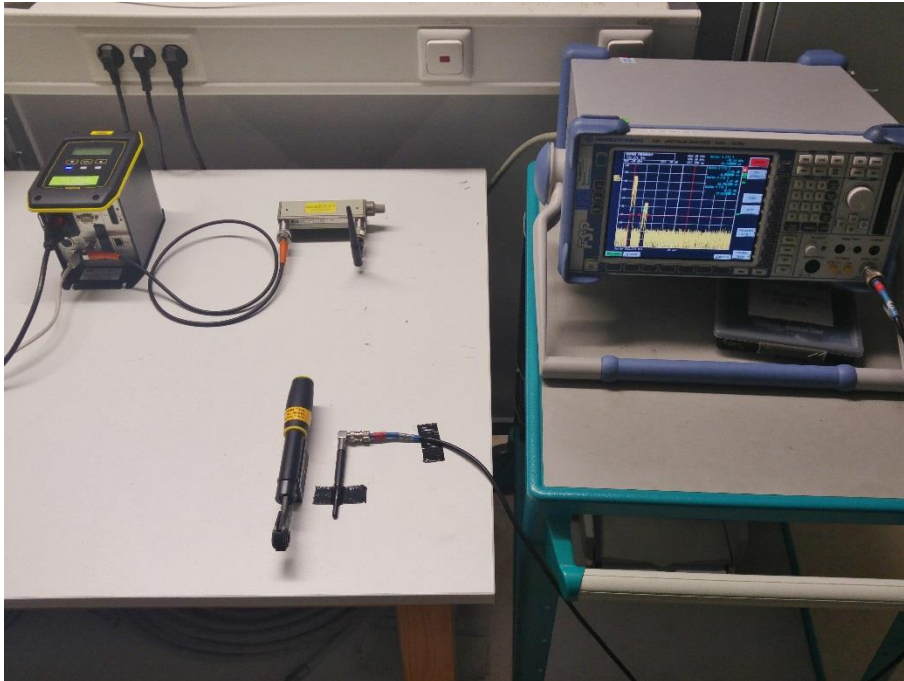
5.5   Correction for pulse operation (duty cycle)

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

5.5.1   Description of the test location

Test location: Shielded Room S4

5.5.2   Photo documentation of the test set-up

5.5.3   Applicable standard

According to FCC Part 15A, Section 15.35(c):
When the radiated emission limits are expressed in terms of average value and pulsed operation is employed, the measurement field strength shall be determined by averaging over one complete puls train, including blanking intervals, as long as the pulse train does not exceed 0.1s. In cases where the puls train exceeds 0.1s, the measured field strength shall be determined from the average absolute voltage during a 0.1s interval during which the field strength is at its maximum. The exact method of calculating the average field strength shall be submitted.

5.5.4   Description of Measurement

The Duty cycle factor (dB) is calculated applying the following formula:

$$K_E = 20 \log \left((t_{iB})/100 \right)$$

K_E: pulse operation correction factor   (dB)
t_{iB} pulse duration for one pulse   (ms)

Spectrum analyser settings:
RBW: 10 kHz,   VBW: 30 kHz,   Span: zero span,   Trace mode: clear write (single),   Detector: max. peak;