

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: NONE

Remarks: Not applicable, the EUT is battery powered.

5.2 Radiated emission of the fundamental wave

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

5.2.1 Description of the test location

Test location: Anechoic chamber 2

Test distance: 3 m

5.2.2 Photo documentation of the test set-up





5.2.1 Applicable standard

According to FCC Part 15C, Section 15.249(a):

The field strength of emissions from intentional radiators operated within these frequency bands shall comply with the effective limits.

5.2.2 Description of Measurement

The radiated emission of the fundamental wave from the EUT is measured using a spectrum analyser and appropriate linear polarized antennas. The set up of the EUT and the measurement procedure is in accordance to ANSI C63.4. The EUT is measured in TX continuous mode unmodulated under normal conditions.

Analyser settings:

Peak measurement: RBW: 1 MHz

VBW: 3 MHz

Detector: Max peak

AV measurement: RBW: 1 MHz

VBW: 10 Hz

Detector: Max peak

5.2.3 Test result

Frequency (MHz)	Level PK dB(μ V/m)	Limit PK dB(μ V/m)	Margin PK (dB)	Level AV dB(μ V/m)	Limit AV dB(μ V/m)	Margin AV (dB)
2402	76.9	114.0	-37.1	-	94.0	-
2440	77.5	114.0	-36.5	-	94.0	-
2480	74.2	114.0	-39.8	-	94.0	-

Note: Due the extremely low level of the EUT no average level is measured.

5.3 Spurious emissions radiated

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

5.3.1 Description of the test location

Test location: OATS 1
Test location: Anechoic chamber 2

Test distance: 3 m

5.3.2 Photo documentation of the test set-up

Test setup 30 MHz – 1000 MHz:



Test setup 1 GHz – 18 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 C63.4, Item 8.3. 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 – 25 GHz	RBW:	1 MHz

5.3.1 Test result $f < 30$ MHz

Note: In the frequency range 9 kHz to 30 MHz no emission could be detected.

5.3.2 Test result $f < 1$ GHz

Note: In the frequency range 30 MHz to 1000 MHz no emission could be detected.

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: AREA4

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: 30 kHz, VBW: 100 kHz, Span: 6 MHz, Trace mode: max. hold, Detector: max. peak;