

## 5.2 Field strength of the fundamental wave

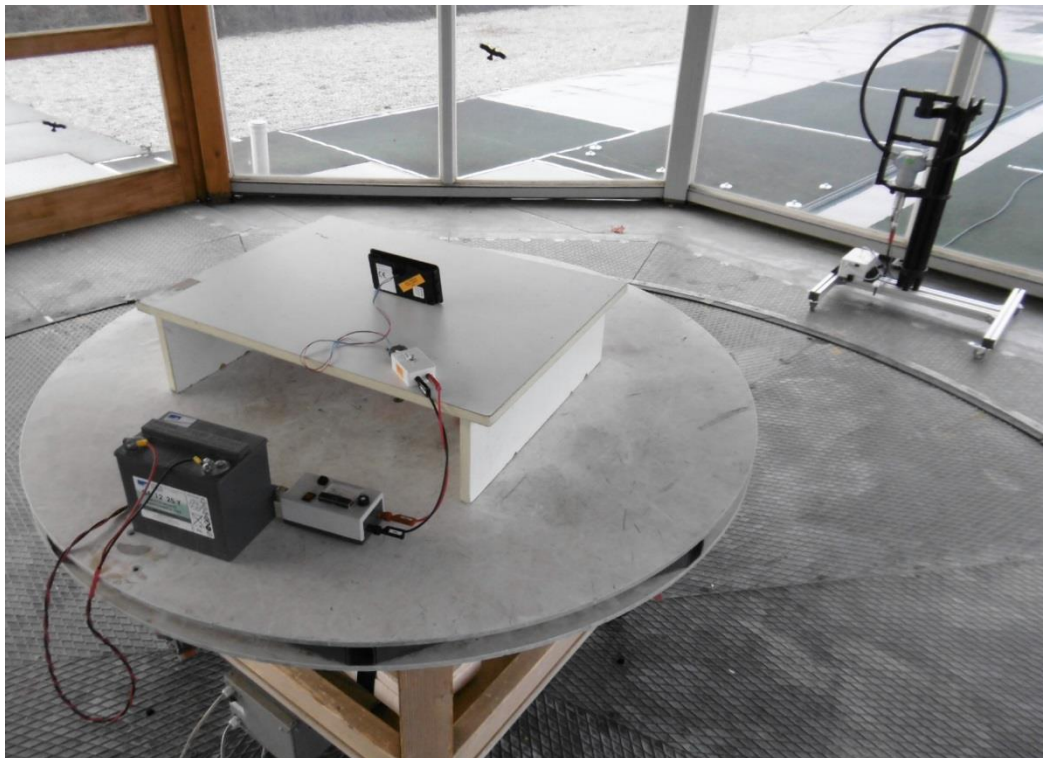
For test instruments and accessories used see section 6 Part CPR 1.

### 5.2.1 Description of the test location

Test location: OATS1

Test distance: 3 metres

### 5.2.2 Photo documentation of the test set-up



### 5.2.3 Applicable standard

According to FCC Part 15, Section 15.225(a):

The field strength of any emission within the band 13.553 – 13.567 MHz shall not exceed 15848  $\mu\text{V}/\text{m}$  at 30 m.

### 5.2.4 Description of Measurement

The transmitted field strength of the EUT has to be measured at an open area test site using a tuned receiver and a shielded loop antenna. The set up of the equipment under test will be in accordance with ANSI C63.4. The measurement has been performed at 3 m. The results have been compared to the limits defined at 30 m distances according to FCC Part 15C, Section 15.31(f)(2) using an inverse linear distance extrapolation factor of 40 dB/decade.

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### 5.3 Spurious emissions

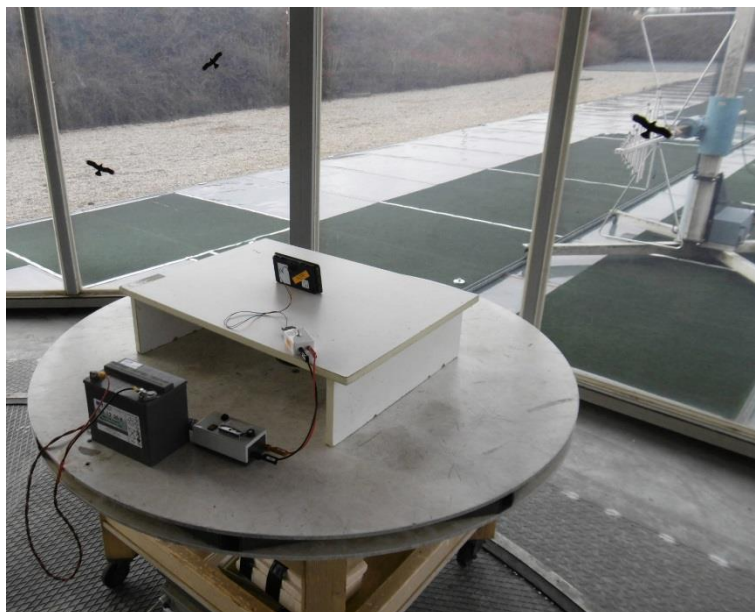
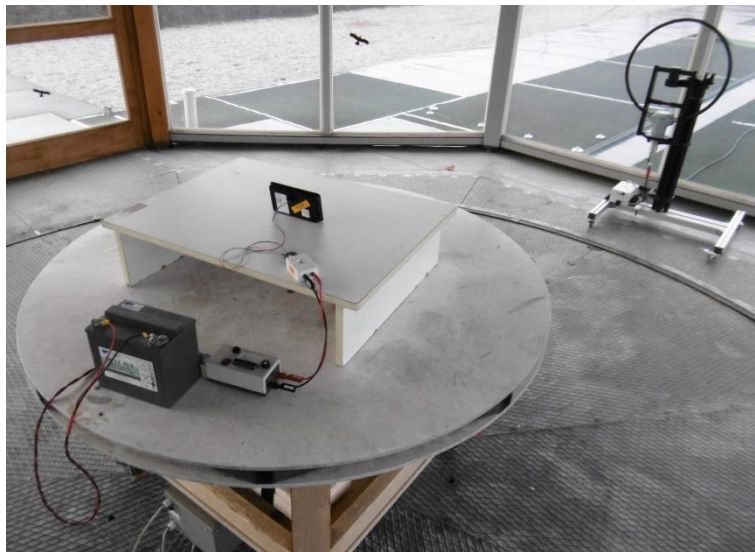
For test instruments and accessories used see section 6 Part SER 1, SER 2.

#### 5.3.1 Description of the test location

Test location: OATS1

Test distance: 3 metres

#### 5.3.2 Photo documentation of the test set-up



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## 5.4 Frequency tolerance

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

### 5.4.1 Description of the test location

Test location: AREA4 (Climatic Chamber)

### 5.4.2 Photo documentation of the test set-up



### 5.4.3 Applicable standard

According to FCC Part 15, Section 15.225(e):

The frequency tolerance of the carrier signal shall be maintained within  $\pm 0.01\%$  of the operating frequency over a temperature range of  $-20\text{ }^{\circ}\text{C}$  to  $+50\text{ }^{\circ}\text{C}$  at normal supply voltage and for a variation in the primary supply voltage from 85 % to 115 % of the rated supply voltage at a temperature of  $20\text{ }^{\circ}\text{C}$ . For battery operated equipment, the equipment shall be performed using a new battery.

### 5.4.4 Description of Measurement

The frequency tolerance has been measured radiated using a spectrum analyser. The center frequency of the spectrum analyser has been set to the fundamental frequency. This is an alternative test method because the EuT can not be operated in un-modulated mode. The limit line was set to 10 dB below the carrier. The frequencies of the upper ( $f_U$ ) and lower ( $f_L$ ) points, where the displayed power envelope of the modulation including frequency drift is equal to the appropriate level, have been recorded. The centre frequency is calculated as  $f_C = (f_U + f_L)/2$ . The measurement has been performed at normal and extreme test conditions from  $-20\text{ }^{\circ}\text{C}$  to  $+50\text{ }^{\circ}\text{C}$  in steps of 10 degrees (According to FCC Part 2.1055).

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## 5.5 20 dB Bandwidth

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

### 5.5.1 Description of the test location

Test location: AREA4 (Climatic Chamber)

### 5.5.2 Photo documentation of the test set-up



### 5.5.3 Applicable standard

According to FCC Part 15C, Section 15.215(c):

Intentional radiators operating under the alternative provisions to the general emission limits, as contained in section 15.217 to 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. The requirement to contain the designated bandwidth of the emission within the specified frequency band includes the effects from frequency sweeping, frequency hopping and other modulation techniques that may be employed.

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## 5.6 Transmitter spectrum mask

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

### 5.6.1 Description of the test location

Test location: AREA4

### 5.6.2 Photo documentation of the test set-up



### 5.6.3 Applicable standard

According to FCC Part 15C, Section 15.225 (a-d):

The field strength of any emission shall not exceed the limits given in FCC Part 15C, Section 15.225 (a-d)