

# 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: 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 given limits.

#### **5.1.4** Description of Measurement

The measurements are performed following the procedures set out in ANSI C63.4 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 remeasured using a tuned receiver with quasi-peak and average detection and recorded on the data sheets.

#### 5.1.5 Test result

Frequency range: 0.15 MHz - 30 MHz

Min. limit margin -22.1 dB at 15.265 MHz

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## 5.2 Field strength of the fundamental wave

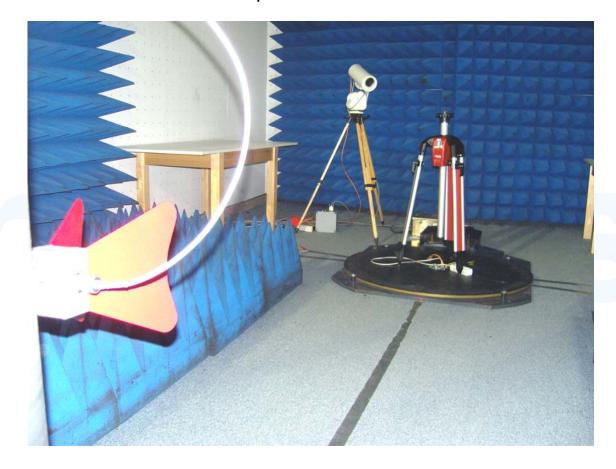
For test instruments and accessories used see section 6 Part CPR 3.

## 5.2.1 Description of the test location

Test location: Anechoic Chamber A2

Test distance: 3 metres

### 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 analyzer and appropriate linear polarized antennas.

Analyser settings:

Peak measurement: RBW: 1 MHz VBW: 3 MHz Detector: Max peak AV measurement: RBW: 1 MHz VBW: 10 Hz Detector: Max peak



# 5.3 Spurious emissions 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: OATS1

Test location: Anechoic Chamber A2

Test distance: 3 metres

## 5.3.2 Photo documentation of the test set-up

Test setup 9 kHz to 30 MHz





Test setup 30 MHz to 300 MHz

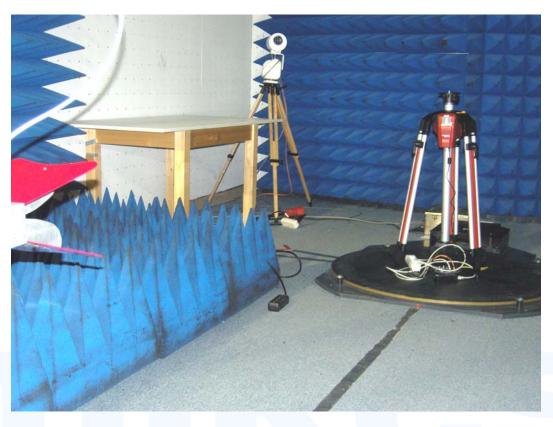


Test setup 300 MHz to 1000 MHz





Test setup 1 GHz to 18 GHz



Test setup 18 GHz to 26 GHz





## 5.4 20 dB bandwidth

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

#### 5.4.1 Description of the test location

Test location: AREA 4

## 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. The reference level is the level of the highest signal amplitude observed from the transmitter at the fundamental frequency. Alternative is the x-dB-down function of the analyser used. The EBW is than directly shown in the marker display. The measurement is performed with normal modulation and a transfer rate means the worst case.

Spectrum analyser settings:

RBW: 100 kHz, VBW: 300 kHz;



## 5.8 Receiver radiated emissions

For test instruments and accessories used see section 6 Part SER2 and SER3.

### 5.8.1 Description of the test location

Test location: OATS 1

Test location: Anechoic Chamber A2

Test distance: 3 metres

## 5.8.2 Photo documentation of the test set-up

Test setup 30 MHz to 300 MHz





Test setup 300 MHz to 1000 MHz



Test setup 1 GHz to 7.5 GHz

