

**CETECOM™****CETECOM ICT Services**  
consulting - testing - certification >>>

## TEST REPORT

Test report no.: 1-9002/14-01-17

Deutsche  
Akkreditierungsstelle  
D-PL-12076-01-00

### Testing laboratory

**CETECOM ICT Services GmbH**

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Internet: <http://www.cetecom.com>e-mail: [ict@cetecom.com](mailto:ict@cetecom.com)**Accredited Testing Laboratory:**

The testing laboratory (area of testing) is accredited according to DIN EN ISO/IEC 17025 (2005) by the Deutsche Akkreditierungsstelle GmbH (DAkkS)

The accreditation is valid for the scope of testing procedures as stated in the accreditation certificate with the registration number: D-PL-12076-01-00

### Applicant

**Phonak AG**

Laubisruetistrasse 28

8712 Staefa / SWITZERLAND

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### Manufacturer

**Phonak AG**

Laubisruetistrasse 28

8712 Staefa / SWITZERLAND

### Test standard/s

47 CFR Part 15

Title 47 of the Code of Federal Regulations; Chapter I; Part 15 - Radio frequency devices

RSS - 210 Issue 8

Spectrum Management and Telecommunications Radio Standards Specification - Licence-exempt Radio Apparatus (All Frequency Bands): Category I Equipment

For further applied test standards please refer to section 3 of this test report.

### Test Item

**Kind of test item:** Hearing Aid  
**Model name:** Phonak Bolero V90-SP  
**FCC ID:** KWC-WHSBTESP  
**IC:** 2262A-WHSBTESP  
**Frequency:** 10.6 MHz  
**Technology tested:** Modulated carrier  
**Antenna:** Integrated ferrite coil antenna (inductive)  
**Power supply:** 1.30 V DC by Zinc - Air type p13 battery  
**Temperature range:** 0°C to +35°C



This test report is electronically signed and valid without handwriting signature. For verification of the electronic signatures, the public keys can be requested at the testing laboratory.

### Test report authorised:

Stefan Bös  
Radio Communications & EMC

### Test performed:

Marco Bertolino  
Radio Communications & EMC

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## 2 General information

### 2.1 Notes and disclaimer

The test results of this test report relate exclusively to the test item specified in this test report. CETECOM ICT Services GmbH does not assume responsibility for any conclusions and generalizations drawn from the test results with regard to other specimens or samples of the type of the equipment represented by the test item.

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This test report is electronically signed and valid without handwritten signature. For verification of the electronic signatures, the public keys can be requested at the testing laboratory.

### 2.2 Application details

|                                    |            |
|------------------------------------|------------|
| Date of receipt of order:          | 2015-01-27 |
| Date of receipt of test item:      | 2015-02-02 |
| Start of test:                     | 2015-02-02 |
| End of test:                       | 2015-02-09 |
| Person(s) present during the test: | -/-        |

## 3 Test standard/s

| Test standard     | Date       | Test standard description                                                                                                                                 |
|-------------------|------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------|
| 47 CFR Part 15    | -/-        | Title 47 of the Code of Federal Regulations; Chapter I; Part 15 - Radio frequency devices                                                                 |
| RSS - 210 Issue 8 | 01.12.2010 | Spectrum Management and Telecommunications Radio Standards Specification - Licence-exempt Radio Apparatus (All Frequency Bands): Category I Equipment     |
| RSS - Gen Issue 4 | 01.11.2014 | Spectrum Management and Telecommunications Radio Standards Specifications - General Requirements and Information for the Certification of Radio Apparatus |

#### 4 Test environment

|                            |           |                                          |
|----------------------------|-----------|------------------------------------------|
| Temperature:               | $T_{nom}$ | +22 °C during room temperature tests     |
|                            | $T_{max}$ | +35 °C during high temperature tests     |
|                            | $T_{min}$ | 0 °C during low temperature tests        |
| Relative humidity content: |           | 38 %                                     |
| Barometric pressure:       |           | not relevant for this kind of testing    |
| Power supply:              | $V_{nom}$ | 1.30 V DC by Zinc - Air type p13 battery |
|                            | $V_{max}$ | 1.45 V                                   |
|                            | $V_{min}$ | 1.10 V                                   |

#### 5 Test item

|                            |   |                                                                      |
|----------------------------|---|----------------------------------------------------------------------|
| Kind of test item          | : | Hearing Aid                                                          |
| Type identification        | : | Phonak Bolero V90-SP                                                 |
| Equivalent variants        | : | Phonak Bolero V70-SP<br>Phonak Bolero V50-SP<br>Phonak Bolero V30-SP |
| S/N serial number          | : | TX unit: 1444H0F5E<br>RX unit: 1444H0F5F                             |
| HW hardware status         | : | No information available!                                            |
| SW software status         | : | RF test software                                                     |
| Frequency band             | : | 10.6 MHz                                                             |
| Type of radio transmission | : | Base band modulation                                                 |
| Use of frequency spectrum  | : |                                                                      |
| Type of modulation         | : | 8-DPSK                                                               |
| Number of channels         | : | 1                                                                    |
| Antenna                    | : | Integrated ferrite coil antenna (inductive)                          |
| Power supply               | : | 1.30 V DC by Zinc - Air type p13 battery                             |
| Temperature range          | : | 0°C to +35 °C                                                        |

##### 5.1 Additional information

The content of the following annexes is defined in the QA. It may be that not all of the listed annexes are necessary for this report, thus some values in between may be missing.

Test setup- and EUT-photos are included in test report: 1-9002/14-01-22\_AnnexA  
1-9002/14-01-22\_AnnexB  
1-9002/14-01-22\_AnnexD

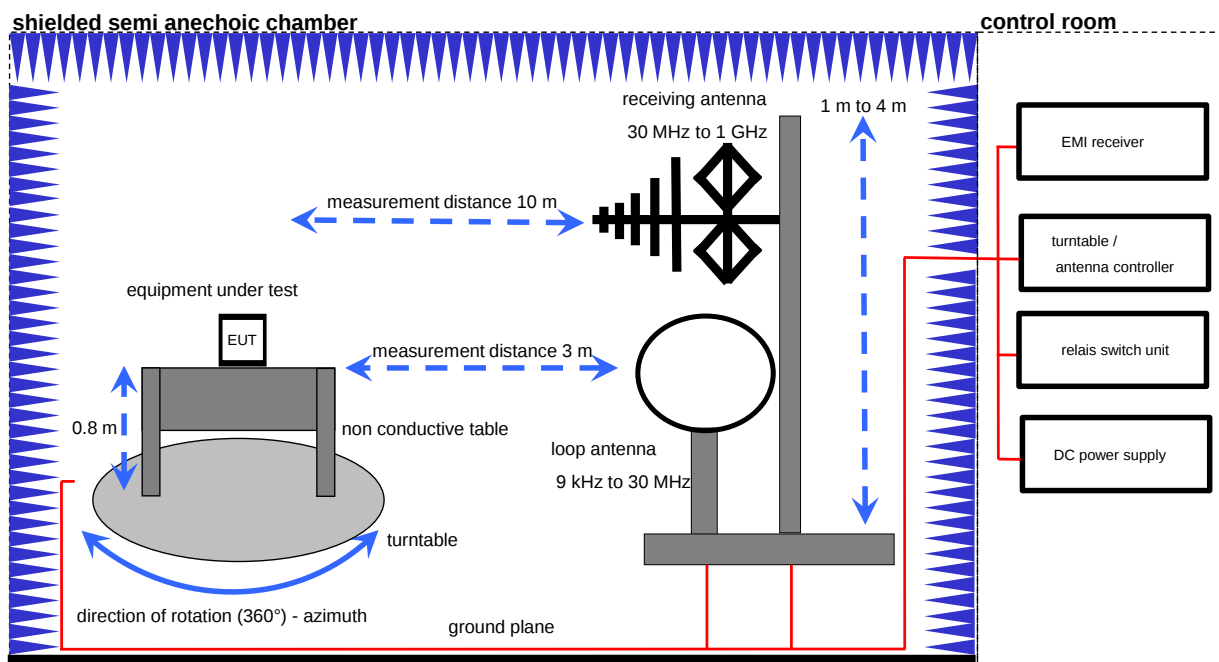
#### 6 Test laboratories sub-contracted

None

## 7 Description of the test setup

### 7.1 Radiated measurements chamber F

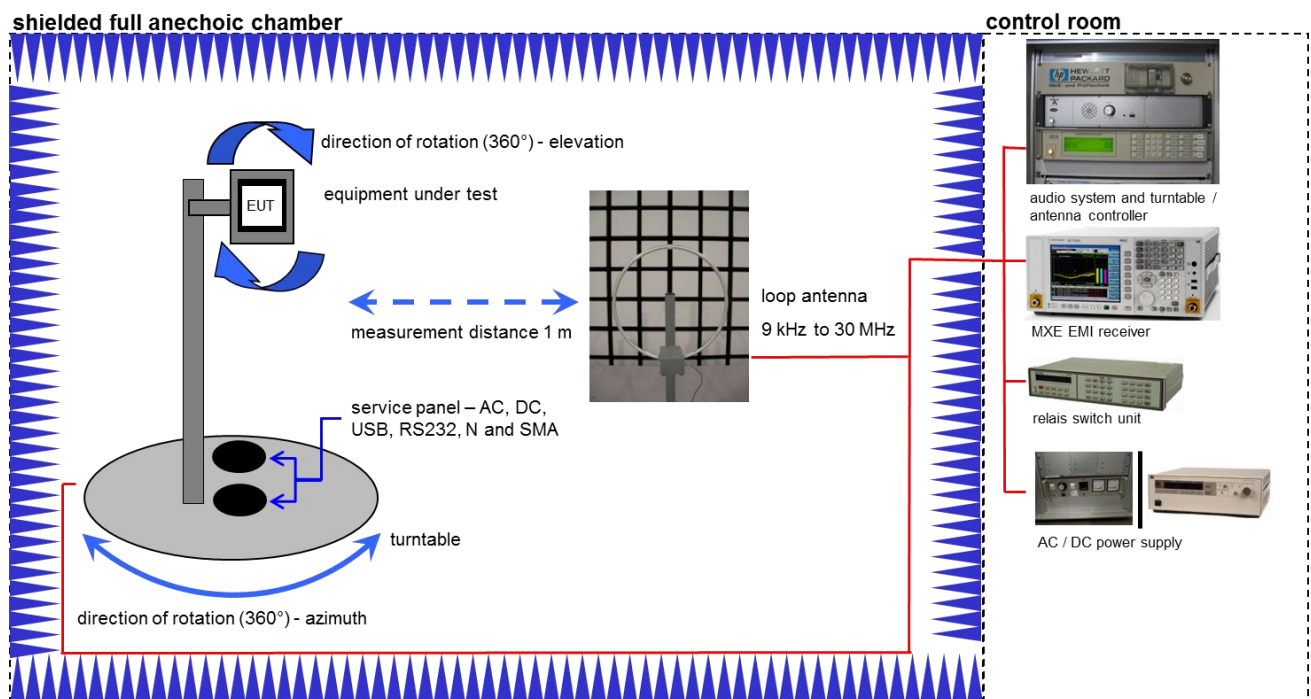
The radiated measurements are performed in vertical and horizontal plane in the frequency range from 9 kHz to 1 GHz in semi-anechoic chambers. The EUT is positioned on a non-conductive support with a height of 0.80 m above a conductive ground plane that covers the whole chamber. The receiving antennas are confirmed with specifications ANSI C63. These antennas can be moved over the height range between 1.0 m and 4.0 m in order to search for maximum field strength emitted from EUT. The measurement distances between EUT and receiving antennas are indicated in the test setups for the various frequency ranges. For each measurement, the EUT is rotated in all three axes until the maximum field strength is received. The wanted and unwanted emissions are received by spectrum analysers where the detector modes and resolution bandwidths over various frequency ranges are set according to requirement ANSI C63.



#### Equipment table:

| Equipment                                    | Type               | Manufacturer | Serial No. | INV. No Cetecom |
|----------------------------------------------|--------------------|--------------|------------|-----------------|
| Software                                     | EMC32 V.   9.12.05 | R&S          | -/-        | -/-             |
| Switch-Unit                                  | 3488A              | HP           | 2719A14505 | 300000368       |
| EMI Test Receiver                            | ESCI 3             | R&S          | 100083     | 300003312       |
| Antenna Tower                                | Model 2175         | ETS-Lindgren | 64762      | 300003745       |
| Positioning Controller                       | Model 2090         | ETS-Lindgren | 64672      | 300003746       |
| Turntable Interface-Box                      | Model 105637       | ETS-Lindgren | 44583      | 300003747       |
| TRILOG Broadband Test-Antenna 30 MHz - 3 GHz | VULB9163           | Schwarzbeck  | 295        | 300003787       |

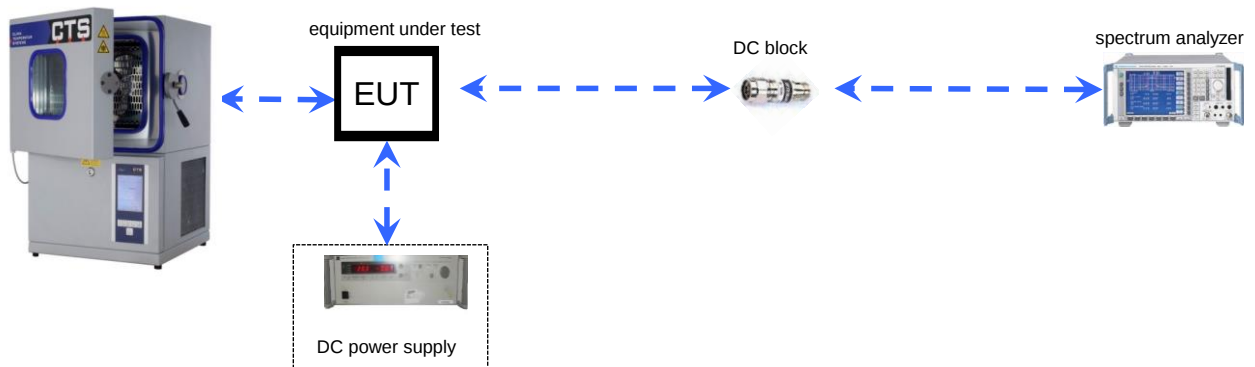
## 7.2 Radiated measurements chamber C



### Equipment table:

| Equipment                            | Type     | Manufacturer         | Serial No. | INV. No Cetecom |
|--------------------------------------|----------|----------------------|------------|-----------------|
| Anechoic chamber                     | FAC 3/5m | MWB / TDK            | 87400/02   | 300000996       |
| Switch / Control Unit                | 3488A    | HP                   | *          | 300000199       |
| Active Loop Antenna 10 kHz to 30 MHz | 6502     | Kontron Psychotech   | 8905-2342  | 300000256       |
| MXE EMI Receiver 20 Hz to 26,5 GHz   | N9038A   | Agilent Technologies | MY51210197 | 300004405       |

### 7.3 Conducted measurements



#### Equipment table:

| Equipment              | Type  | Manufacturer | Serial No. | INV. No Cetecom |
|------------------------|-------|--------------|------------|-----------------|
| Signal Analyzer 40 GHz | FSV40 | R&S          | 101042     | 300004517       |

## 8 Summary of measurement results

| TC Identifier | Description                                       | Verdict | Date       | Remark |
|---------------|---------------------------------------------------|---------|------------|--------|
| RF-Testing    | CFR Part 15<br>RSS 210 Issue 8<br>RSS Gen Issue 4 | Passed  | 2015-02-19 | -/-    |

| Test specification clause | Test case                                          | Temperature conditions | Power source conditions | Pass                                | Fail                     | NA                                  | NP                       | Remark                    |
|---------------------------|----------------------------------------------------|------------------------|-------------------------|-------------------------------------|--------------------------|-------------------------------------|--------------------------|---------------------------|
| RSS Gen Issue 4 (6.6)     | Occupied bandwidth                                 | Nominal                | Nominal                 | <input type="checkbox"/>            | <input type="checkbox"/> | <input type="checkbox"/>            | <input type="checkbox"/> | No passed / fail criteria |
| § 15.209                  | Field strength of the fundamental                  | Nominal                | Nominal                 | <input checked="" type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/>            | <input type="checkbox"/> | complies                  |
| § 15.209                  | Field strength of the harmonics and spurious       | Nominal                | Nominal                 | <input checked="" type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/>            | <input type="checkbox"/> | complies                  |
| § 15.109                  | Receiver spurious emissions and cabinet radiations | Nominal                | Nominal                 | <input checked="" type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/>            | <input type="checkbox"/> | complies                  |
| §15.107<br>§15.207        | Conducted limits                                   | Nominal                | Nominal                 | <input type="checkbox"/>            | <input type="checkbox"/> | <input checked="" type="checkbox"/> | <input type="checkbox"/> | Battery powered only      |

**Note:** NA = Not Applicable; NP = Not Performed

## 9 Additional comments

Reference documents: Cetecom instruction RF homologation  
000.000.016.870\_ProductEqualityDeclaration\_BoleroV

Special test descriptions: None

Configuration descriptions: None

## 10 Measurement results

### 10.1 Occupied bandwidth

#### Measurement:

The emission bandwidth (x dB) is defined as the frequency range between two points, one above and one below the carrier frequency, at which the spectral density of the emission is attenuated x dB below the maximum in-band spectral density of the modulated signal.

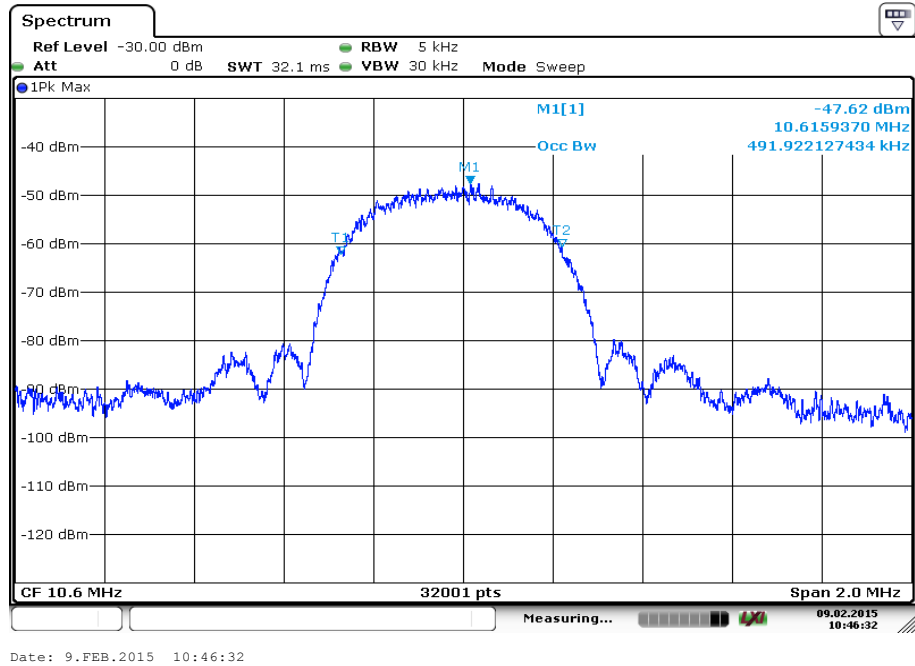
| Measurement parameters |                                     |
|------------------------|-------------------------------------|
| Detector:              | Peak                                |
| Resolution bandwidth:  | 1 % – 5 % of the occupied bandwidth |
| Video bandwidth:       | ≥ 3x RBW                            |
| Trace mode:            | Max hold                            |
| Analyser function:     | 99 % power function                 |

#### Limit:

| IC                                      |
|-----------------------------------------|
| for RSP-100 test report coversheet only |

#### Result:

| 99% emission bandwidth  |       |
|-------------------------|-------|
| 491.9 kHz               |       |
| Measurement uncertainty | ± RBW |

**Plot:****Plot 1: 99 % emission bandwidth**

## 10.2 Field strength of the fundamental

### Measurement:

The maximum detected field strength for the carrier signal.

| Measurement parameters |                                |
|------------------------|--------------------------------|
| Detector:              | Quasi peak / peak (worst case) |
| Resolution bandwidth:  | 120 kHz                        |
| Video bandwidth:       | ≥ 3x RBW                       |
| Trace mode:            | Max hold                       |

### Limit:

| FCC & IC           |                            |                             |
|--------------------|----------------------------|-----------------------------|
| Frequency<br>(MHz) | Field strength<br>(dBμV/m) | Measurement distance<br>(m) |
| 1.705 – 30.0       | 30                         | 30                          |

### Recalculation:

| According to ANSI C63.10 |                                                                                                                                                                                 |                  |
|--------------------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|------------------|
| Frequency                | Formula                                                                                                                                                                         | Correction value |
| 10.6 MHz                 | $FS_{\text{limit}} = FS_{\text{max}} - 40 \log\left(\frac{d_{\text{nearfield}}}{d_{\text{measure}}}\right) - 20 \log\left(\frac{d_{\text{limit}}}{d_{\text{nearfield}}}\right)$ | -42.62           |

### Result:

| Field strength of the fundamental |             |             |
|-----------------------------------|-------------|-------------|
| Frequency                         | 10.6 MHz    |             |
| Distance                          | @ 1 m       | @ 30 m      |
| Measured / calculated value       | 53.4 dBμV/m | 10.8 dBμV/m |
| Measurement uncertainty           | ±3 dB       |             |

### 10.3 Field strength of the harmonics and spurious

#### Measurement:

The maximum detected field strength for the harmonics and spurious.

| Measurement parameters |                                                                                    |
|------------------------|------------------------------------------------------------------------------------|
| Detector:              | Quasi peak / average or peak (worst case – pre-scan)                               |
| Resolution bandwidth:  | F < 150 kHz: 200 Hz<br>150 kHz < F < 30 MHz: 9 kHz<br>30 MHz < F < 1 GHz: 120 kHz  |
| Video bandwidth:       | F < 150 kHz: 1 kHz<br>150 kHz < F < 30 MHz: 100 kHz<br>30 MHz < F < 1 GHz: 300 kHz |
| Trace mode:            | Max hold                                                                           |

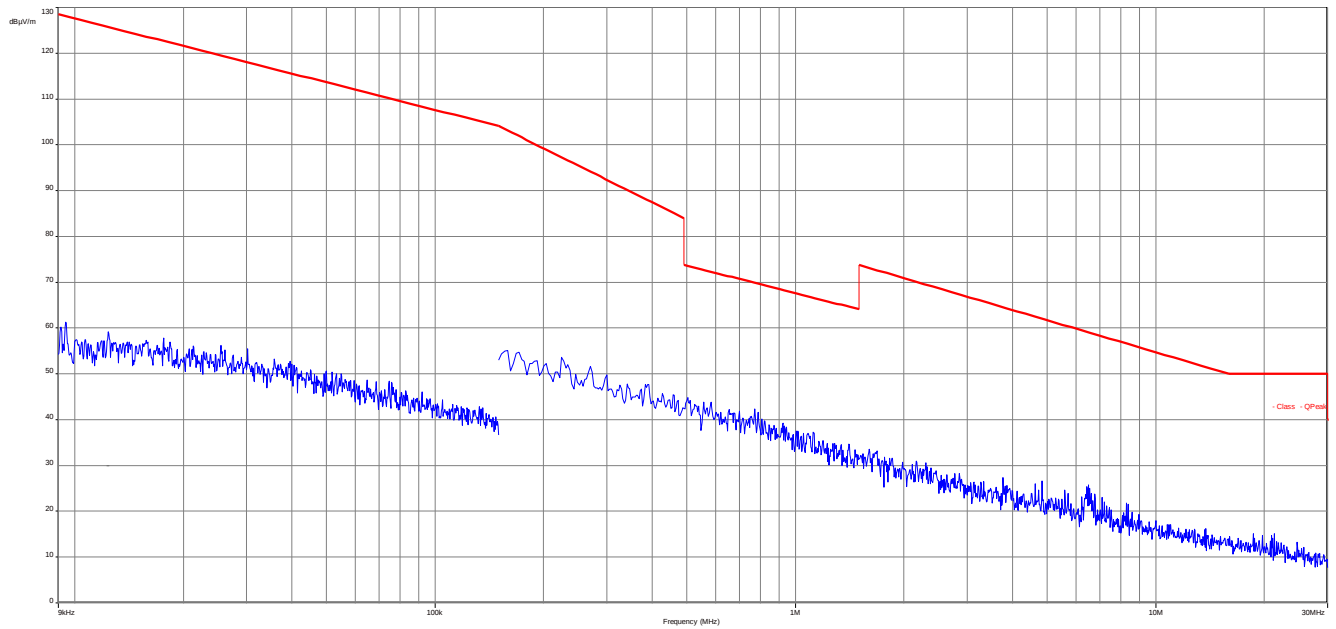
#### Limit:

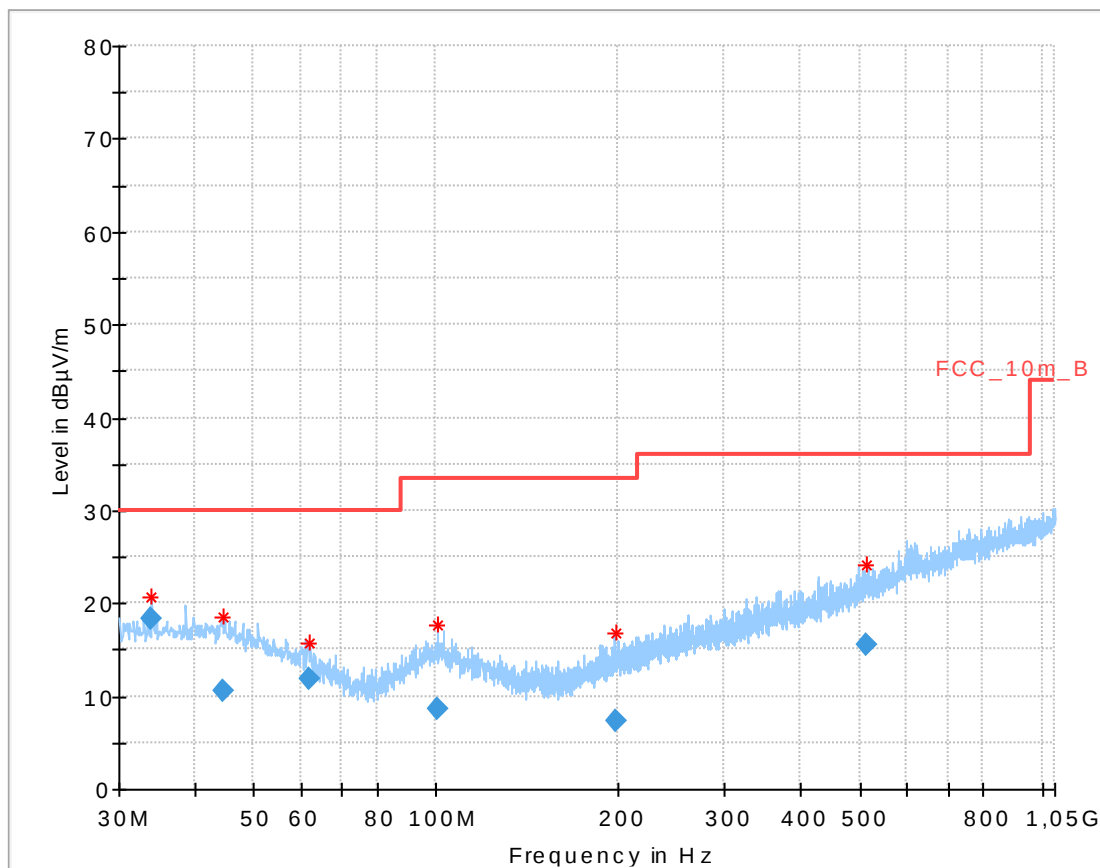
| FCC & IC        |                               |                          |
|-----------------|-------------------------------|--------------------------|
| Frequency (MHz) | Field strength (dB $\mu$ V/m) | Measurement distance (m) |
| 0.009 – 0.490   | 2400/F(kHz)                   | 300                      |
| 0.490 – 1.705   | 24000/F(kHz)                  | 30                       |
| 1.705 – 30      | 30 (29.5 dB $\mu$ V/m)        | 30                       |
| 30 – 88         | 100 (40 dB $\mu$ V/m)         | 3                        |
| 88 – 216        | 150 (43.5 dB $\mu$ V/m)       | 3                        |
| 216 – 960       | 200 (46 dB $\mu$ V/m)         | 3                        |

**Note:** For a reduced measurement distance, please take a look at the limit line and the ANSI C63.10-2013 sub clause 6.4 radiated emissions from unlicensed wireless devices below 30 MHz.

#### Result:

| Detected emissions                             |          |                            |                |
|------------------------------------------------|----------|----------------------------|----------------|
| Frequency (MHz)                                | Detector | Resolution bandwidth (kHz) | Detected value |
| Please look at the table below the 1 GHz plot. |          |                            |                |
|                                                |          |                            |                |
|                                                |          |                            |                |
| Measurement uncertainty                        |          | $\pm 3$ dB                 |                |

**Plots:****Plot 1: 9 kHz – 30 MHz, magnetic emissions**

**Plot 2:** 30 MHz – 1 GHz, vertical and horizontal polarisation**Final\_Result:**

| Frequency (MHz) | QuasiPeak (dBµV/m) | Limit (dBµV/m) | Margin (dB) | Meas. Time (ms) | Bandwidth (kHz) | Height (cm) | Pol | Azimuth (deg) | Corr. (dB) |
|-----------------|--------------------|----------------|-------------|-----------------|-----------------|-------------|-----|---------------|------------|
| 33.987150       | 18.28              | 30.00          | 11.72       | 1000.0          | 120.000         | 101.0       | V   | 245           | 13.7       |
| 44.633850       | 10.48              | 30.00          | 19.52       | 1000.0          | 120.000         | 98.0        | H   | -5            | 13.9       |
| 61.965600       | 11.95              | 30.00          | 18.05       | 1000.0          | 120.000         | 101.0       | V   | 155           | 10.1       |
| 101.034450      | 8.61               | 33.50          | 24.89       | 1000.0          | 120.000         | 101.0       | H   | 25            | 12.1       |
| 197.473950      | 7.38               | 33.50          | 26.12       | 1000.0          | 120.000         | 101.0       | V   | 25            | 11.5       |
| 514.842750      | 15.48              | 36.00          | 20.52       | 1000.0          | 120.000         | 170.0       | V   | 263           | 18.9       |

## 10.4 Receiver spurious emissions and cabinet radiations

### Measurement:

The maximum detected field strength for the spurious.

| Measurement parameters |                                                                                    |
|------------------------|------------------------------------------------------------------------------------|
| Detector:              | Quasi peak / average or peak (worst case – pre-scan)                               |
| Resolution bandwidth:  | F < 150 kHz: 200 Hz<br>150 kHz < F < 30 MHz: 9 kHz<br>30 MHz < F < 1 GHz: 120 kHz  |
| Video bandwidth:       | F < 150 kHz: 1 kHz<br>150 kHz < F < 30 MHz: 100 kHz<br>30 MHz < F < 1 GHz: 300 kHz |
| Trace mode:            | Max hold                                                                           |

### Limit:

| FCC & IC        |                               |                          |
|-----------------|-------------------------------|--------------------------|
| Frequency (MHz) | Field strength (dB $\mu$ V/m) | Measurement distance (m) |
| 30 – 88         | 100 (40 dB $\mu$ V/m)         | 3                        |
| 88 – 216        | 150 (43.5 dB $\mu$ V/m)       | 3                        |
| 216 – 960       | 200 (46 dB $\mu$ V/m)         | 3                        |

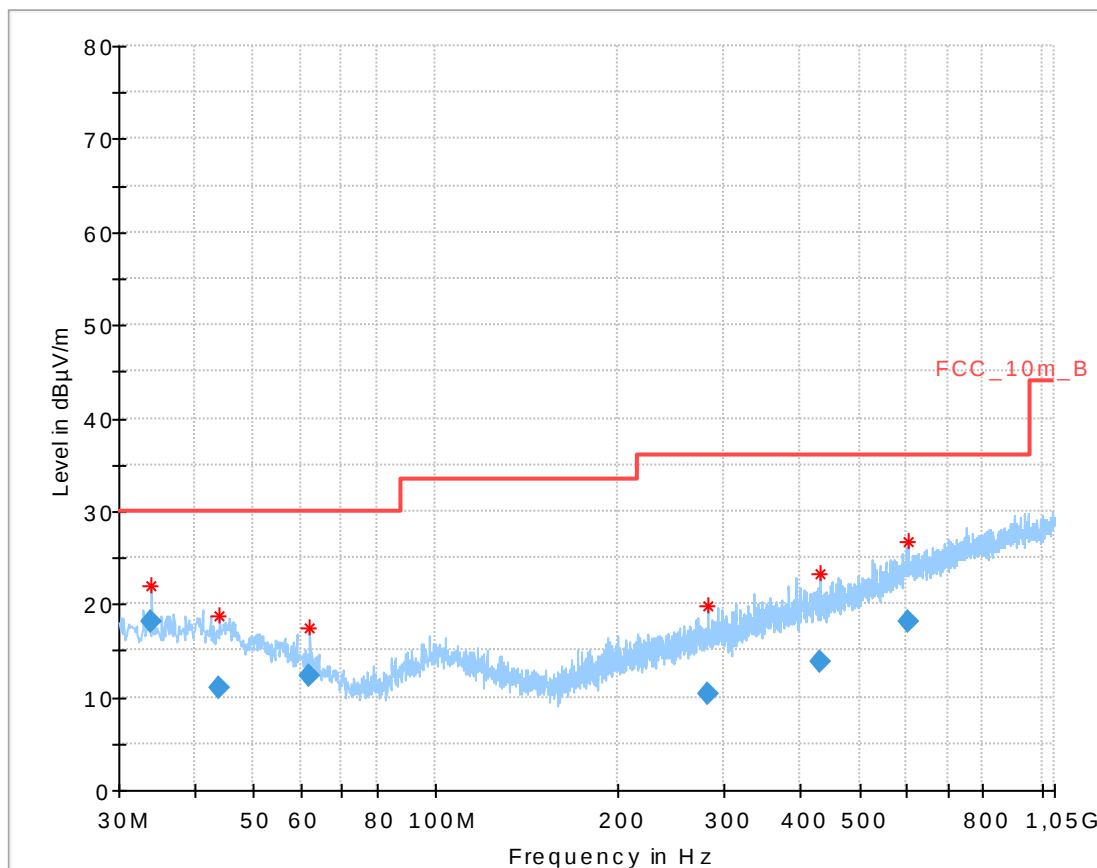
**Note:** For a reduced measurement distance, please take a look at the limit line and the ANSI C63.10-2013 sub clause 6.4 radiated emissions from unlicensed wireless devices below 30 MHz.

### Result:

| Detected emissions                             |          |                            |                |
|------------------------------------------------|----------|----------------------------|----------------|
| Frequency (MHz)                                | Detector | Resolution bandwidth (kHz) | Detected value |
| Please look at the table below the 1 GHz plot. |          |                            |                |
|                                                |          |                            |                |
|                                                |          |                            |                |
| Measurement uncertainty                        |          | $\pm 3$ dB                 |                |

### Plots:

**Plot 1:** 30 MHz – 1 GHz, vertical and horizontal polarisation



### Final\_Result:

| Frequency (MHz) | QuasiPeak (dBμV/m) | Limit (dBμV/m) | Margin (dB) | Meas. Time (ms) | Bandwidth (kHz) | Height (cm) | Pol | Azimuth (deg) | Corr. (dB) |
|-----------------|--------------------|----------------|-------------|-----------------|-----------------|-------------|-----|---------------|------------|
| 34.008750       | 18.14              | 30.00          | 11.86       | 1000.0          | 120.000         | 101.0       | V   | 106           | 13.7       |
| 43.870650       | 10.95              | 30.00          | 19.05       | 1000.0          | 120.000         | 101.0       | V   | 245           | 13.9       |
| 61.981800       | 12.25              | 30.00          | 17.75       | 1000.0          | 120.000         | 101.0       | V   | 205           | 10.1       |
| 280.561050      | 10.41              | 36.00          | 25.59       | 1000.0          | 120.000         | 170.0       | H   | 65            | 14.0       |
| 430.692900      | 13.76              | 36.00          | 22.24       | 1000.0          | 120.000         | 170.0       | H   | 197           | 17.3       |
| 603.704250      | 18.06              | 36.00          | 17.94       | 1000.0          | 120.000         | 170.0       | H   | 25            | 20.7       |

## 11 Test equipment and ancillaries used for tests

Typically, the calibrations of the test apparatus are commissioned to and performed by an accredited calibration laboratory. The calibration intervals are determined in accordance with the DIN EN ISO/IEC 17025. In addition to the external calibrations, the laboratory executes comparison measurements with other calibrated test systems or effective verifications. Weekly chamber inspections and range calibrations are performed. Where possible, rf-generating and signalling equipment as well as measuring receivers and analyzers are connected to an external high-precision 10 MHz reference (GPS-based or rubidium frequency standard).

In order to simplify the identification of the equipment used at some special tests, some items of test equipment and ancillaries can be provided with an identifier or number in the equipment list below (Lab/Item).

| No. | Lab / Item | Equipment                                    | Type         | Manufact.            | Serial No. | INV. No Cetecom | Kind of Calibration | Last Calibration | Next Calibration |
|-----|------------|----------------------------------------------|--------------|----------------------|------------|-----------------|---------------------|------------------|------------------|
| 1   | 45         | Switch-Unit                                  | 3488A        | HP                   | 2719A14505 | 300000368       | g                   |                  |                  |
| 2   | 45         | EMI Test Receiver                            | ESCI 3       | R&S                  | 100083     | 300003312       | k                   | 22.01.2015       | 22.01.2017       |
| 3   | 45         | Antenna Tower                                | Model 2175   | ETS-Lindgren         | 64762      | 300003745       | izw                 |                  |                  |
| 4   | 45         | Positioning Controller                       | Model 2090   | ETS-Lindgren         | 64672      | 300003746       | izw                 |                  |                  |
| 5   | 45         | Turntable Interface-Box                      | Model 105637 | ETS-Lindgren         | 44583      | 300003747       | izw                 |                  |                  |
| 6   | 45         | TRILOG Broadband Test-Antenna 30 MHz - 3 GHz | VULB9163     | Schwarzbeck          | 295        | 300003787       | k                   | 22.04.2014       | 22.04.2016       |
| 7   | n. a.      | Anechoic chamber                             | FAC 3/5m     | MWB / TDK            | 87400/02   | 300000996       | ev                  |                  |                  |
| 8   | n. a.      | Switch / Control Unit                        | 3488A        | HP                   | *          | 300000199       | ne                  |                  |                  |
| 9   | 90         | Active Loop Antenna 10 kHz to 30 MHz         | 6502         | Kontron Psychotech   | 8905-2342  | 300000256       | k                   | 13.06.2013       | 13.06.2015       |
| 10  | 90         | MXE EMI Receiver 20 Hz to 26,5 GHz           | N9038A       | Agilent Technologies | MY51210197 | 300004405       | k                   | 13.03.2014       | 13.03.2015       |
| 11  | n. a.      | Signal Analyzer 40 GHz                       | FSV40        | R&S                  | 101042     | 300004517       | k                   | 22.01.2015       | 22.01.2016       |

### Agenda: Kind of Calibration

|       |                                            |     |                                                      |
|-------|--------------------------------------------|-----|------------------------------------------------------|
| k     | calibration / calibrated                   | EK  | limited calibration                                  |
| ne    | not required (k, ev, izw, zw not required) | zw  | cyclical maintenance (external cyclical maintenance) |
| ev    | periodic self verification                 | izw | internal cyclical maintenance                        |
| Ve    | long-term stability recognized             | g   | blocked for accredited testing                       |
| vlkl! | Attention: extended calibration interval   |     |                                                      |
| NK!   | Attention: not calibrated                  | *)  | next calibration ordered / currently in progress     |

## 12 Observations

No observations except those reported with the single test cases have been made.

**Annex A Document history**

| Version | Applied changes | Date of release |
|---------|-----------------|-----------------|
|         | Initial release | 2015-02-19      |

**Annex B Further information****Glossary**

|          |   |                                                |
|----------|---|------------------------------------------------|
| AVG      | - | Average                                        |
| DUT      | - | Device under test                              |
| EMC      | - | Electromagnetic Compatibility                  |
| EN       | - | European Standard                              |
| EUT      | - | Equipment under test                           |
| ETSI     | - | European Telecommunications Standard Institute |
| FCC      | - | Federal Communication Commission               |
| FCC ID   | - | Company Identifier at FCC                      |
| HW       | - | Hardware                                       |
| IC       | - | Industry Canada                                |
| Inv. No. | - | Inventory number                               |
| N/A      | - | Not applicable                                 |
| PP       | - | Positive peak                                  |
| QP       | - | Quasi peak                                     |
| S/N      | - | Serial number                                  |
| SW       | - | Software                                       |

## Annex C Accreditation Certificate

Front side of certificate

Back side of certificate



Deutsche Akkreditierungsstelle GmbH

Befehlerte gemäß § 8 Absatz 1 AkkStelleG i.V.m. § 1 Absatz 1 AkkStelleG8V  
 Unterzeichnerin der Multilateralen Abkommen  
 von EA, ILAC und IAF zur gegenseitigen Anerkennung

### Akkreditierung



Die Deutsche Akkreditierungsstelle GmbH bestätigt hiermit, dass das Prüflaboratorium

**CETECOM ICT Services GmbH**  
 Untertürkheimer Straße 6-10, 66117 Saarbrücken

die Kompetenz nach DIN EN ISO/IEC 17025:2005 besitzt, Prüfungen in folgenden Bereichen durchzuführen:

Drahtgebundene Kommunikation einschließlich xDSL  
 VoIP und DECT  
 Akustik  
 Funk einschließlich WLAN  
 Short Range Devices (SRD)  
 RFID  
 WLAN und Richtfunk  
 Mobilfunk (GSM / GPRS, Over the Air (OTA) Performance)  
 Elektromagnetische Verträglichkeit (EMV) einschließlich Automotive  
 Produktsicherheit  
 SAR und Hearing Aid Compatibility (HAC)  
 Umweltsimulation  
 Smart Card Terminals  
 Bluetooth  
 Wi-Fi Services

Die Akkreditierungsurkunde gilt nur in Verbindung mit dem Bescheid vom 07.03.2014 mit der  
 Akkreditierungsnummer D-PL-12076-01 und ist gültig bis 17.01.2018. Sie besteht aus diesem Deckblatt, der  
 Rückseite des Deckblatts und der folgenden Anlage mit insgesamt 77 Seiten.

Registrierungsnummer der Urkunde: D-PL-12076-01-00

Frankfurt am Main, 07.03.2014

Datei: D-PL-12076-01-00

Dr. Ingrid Dittmann  
 stellvertretende  
 Akkreditierungsstelle

Deutsche Akkreditierungsstelle GmbH

Standort Berlin  
 Spittelmarkt 10  
 10117 Berlin

Standort Frankfurt am Main  
 Gartenstraße 6  
 60594 Frankfurt am Main

Standort Braunschweig  
 Bundesallee 100  
 38115 Braunschweig

Die auszugsweise Veröffentlichung der Akkreditierungsurkunde bedarf der vorherigen schriftlichen  
 Zustimmung der Deutschen Akkreditierungsstelle GmbH (DAKKS). Ausgenommen davon ist die separate  
 Weiterverbreitung des Deckblattes durch die umseitig genannte Koordinationsbewertungsstelle in  
 unveränderter Form.

Es darf nicht der Anschein erweckt werden, dass sich die Akkreditierung auch auf Bereiche erstreckt,  
 die über den durch die DAKKS bestätigten Akkreditierungsbereich hinausgehen.

Die Akkreditierung erfolgte gemäß des Gesetzes über die Akkreditierungsstelle (AkkStelleG) vom  
 31. Juli 2009 (BGBl. I S. 2625) sowie der Verordnung (EG) Nr. 765/2008 des Europäischen Parlaments  
 und des Rates vom 9. Juli 2008 über die Vorschriften für die Akkreditierung und Marktüberwachung  
 im Zusammenhang mit der Vermarktung von Produkten (Abt. L 218 vom 9. Juli 2008, S. 30).  
 Die DAKKS ist Unterzeichnerin der Multilateralen Abkommen zur gegenseitigen Anerkennung der  
 European co-operation for Accreditation (EA), des International Accreditation Forum (IAF) und  
 der International Laboratory Accreditation Cooperation (ILAC). Die Unterzeichner dieser Abkommen  
 erkennen ihre Akkreditierungen gegenseitig an.

Der aktuelle Stand der Mitgliedschaft kann folgenden Webseiten entnommen werden:  
 EA: [www.europecooperation-accreditation.org](http://www.europecooperation-accreditation.org)  
 IAF: [www.iaf.or.jp](http://www.iaf.or.jp)  
 ILAC: [www.ilac.or.jp](http://www.ilac.or.jp)

### Note:

The current certificate including annex is published on our website (see link below) or may be received from CETECOM ICT Services on request.

<http://www.cetecom.com/eu/de/cetecom-group/europa/deutschland-saarbruecken/akkreditierungen.html>