



Accredited testing-laboratory

DAR registration number: DAT-P-176/94-D1

**Federal Motor Transport Authority (KBA)
DAR registration number: KBA-P 00070-97**

Recognized by the Federal Communications Commission

Anechoic chamber registration no.: 90462 (FCC)

Anechoic chamber registration no.: 3462C-1 (IC)

Certification ID: DE 0001

Accreditation ID: DE 0002

Accredited Bluetooth® Test Facility (BQTF)

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Test report no. : 1-1253-01-04/09_A
Type identification : VR5 N, VR7 N, VR9 N
Applicant : Bernafon AG
FCC ID : U6XFUBTE01
IC Certification No : 7031A-FUBTE01
Test standards : FCC Part 15.209
FCC Part 15.223
RSS-210 Issue 7

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1 General information

1.1 Notes

The test results of this test report relate exclusively to the test item specified in 3.1.1. The CETECOM ICT Services GmbH does not assume responsibility for any conclusions and generalisations drawn from the test results with regard to other specimens or samples of the type of the equipment represented by the test item. The test report may only be reproduced or published in full. Reproduction or publication of extracts from the report requires the prior written approval of the CETECOM ICT Services GmbH.

Test laboratory manager:

| | | |
|-------------------|------------------------|-----------------|
| <u>2009-10-26</u> | <u>Meheza K. Walla</u> | <u>M. Walla</u> |
| Date | Name | Signature |

Technical responsibility for area of testing:

| | | |
|-------------------|--------------------|--------------------|
| <u>2009-10-26</u> | <u>Stefan Boes</u> | <u>Stefan Boes</u> |
| Date | Name | Signature |

1.2 Testing laboratory

CETECOM ICT Services GmbH

Untertürkheimer Straße 6 - 10

66117 Saarbrücken

Germany

Phone: + 49 681 5 98 - 0

Fax: + 49 681 5 98 - 9075

e-mail: info@ICT.cetecom.de

Internet: http://www.cetecom-ict.de

State of accreditation: The test laboratory (area of testing) is accredited according to
DIN EN ISO/IEC 17025
DAR registration number: DAT-P-176/94-D1

Accredited by: Federal Motor Transport Authority (KBA)
DAR registration number: KBA-P 00070-97

Testing location, if different from CETECOM ICT Services GmbH:

Name :
Street :
Town :
Country :
Phone :
Fax :

1.3 Details of applicant

| | |
|-------------------|-------------------------|
| Name: | Bernafon AG |
| Street: | Morgenstraße 131 |
| Town: | 3018 Bern |
| Country: | Schweiz |
| Telephone: | +41 31 998 1515 |
| Fax: | +41 31 998 1590 |
| Contact: | Christian Müller |
| E-mail: | cm@bernafon.ch |
| Telephone: | +41 31 998 1504 |

1.4 Application details

| | |
|--|-------------------|
| Date of receipt of order: | 2009-09-03 |
| Date of receipt of test item: | 2009-09-21 |
| Date of start test: | 2009-09-21 |
| Date of end test | 2009-10-26 |
| Persons(s) who have been present during the test: | -/- |

2 Technical tests

2.1 Details of manufacturer

| | |
|----------|------------------|
| Name: | Bernafon AG |
| Street: | Morgenstraße 131 |
| Town: | 3018 Bern |
| Country: | Schweiz |

2.2 Test Item

| | |
|---|--|
| IC Registration Number: | 7031A-FUBTE01 |
| Model Name: | VR5 N, VR7 N, VR9 N |
| Details of Manufacturer | |
| Company : | Bernafon AG |
| Address : | Morgenstraße 131 |
| City : | 3018 Bern |
| Country : | Schweiz |
| Details of EUT | |
| S/N serial number : | LAB 2A 065 (Sample TX-Mode « Random Send », 50% DC) LAB 2A 038 (Sample RX-Mode) |
| HW hardware status : | Veras Micro BTE |
| SW software status : | No information available! |
| Tested to Radio Standards Specification (RSS) No. : | RSS-210 Issue 7 |
| Open Area Test Site Industry Canada Number : | IC 3462C-1 |
| Frequency Range (or fixed frequency) : | 3.84 MHz |
| Field Strength (at what distance) : | -14 dBµV/m @ 30m |
| Occupied Bandwidth (99% BW) : | 346 kHz |
| Type of Modulation : | A1D |
| Antenna information : | Integrated coil antenna |
| Emission Designator : | 346KA1D |
| Transmitter Spurious (worst case) : | 22.7 dBµV/m @ 10m |
| Receiver Spurious (worst case) : | 23 dBµV/m @ 10m |
| IC no. : | 7031A-FUBTE01 |
| FCC ID : | U6XFUBTE01 |

ATTESTATION:

DECLARATION OF COMPLIANCE:

I attest that the testing was performed or supervised by me; that the test measurements were made in accordance with the above-mentioned departmental standard(s), and that the radio equipment identified in this application has been subject to all applicable test conditions specified in the departmental standards and all of the requirements of the standards have been met.

Laboratory Manager:

2009-10-26
Date

Meheza K. Walla
Name


Signature

2.3 RF Technical Brief Cover Sheet acc. To RSS-102

All Fields must be completed with the requested information or the following codes: N/A for Not Applicable, N/P for Not Performed or N/V for Not Available. Where applicable, check appropriate box.

- 1. COMPANY NUMBER: **7031A**
- 2. MODEL NUMBER: **VR5 N, VR7 N, VR9 N**
- 3. MANUFACTURER: **Bernafon AG**
- 4. TYPE OF EVALUATION: **N/A**

Declaration of RF Exposure Compliance

ATTESTATION:

I attest that the information provided in this test report is correct; that a Technical Brief was prepared and the information it contains is correct; that the device evaluation was performed or supervised by me; that applicable measurement methods and evaluation methodologies have been followed and that the device meets the SAR and/or RF exposure limits of RSS-102.

Name: Meheza K. Walla
Title: Engineer
Company: Cetecom ICT Services GmbH

2009-10-26
Date

Meheza K. Walla
Name


Signature

2.4 Test Setup

| | | |
|----------|---|---------------------------|
| Hardware | : | Veras Micro BTE |
| Software | : | No information available! |

LAB 2A 065 (Sample TX-Mode « Random Send », 50% DC)

LAB 2A 038 (Sample RX-Mode)

2.5 Test Specifications

| | |
|------|----------------------------------|
| FCC: | CFR Part 15.209, CFR Part 15.223 |
| IC: | RSS 210, Issue 7 |

3 Statement of Compliance

3.1 Summary of Measurement Results

- No deviations from the technical specifications were ascertained
- There were deviations from the technical specifications ascertained

3.2 CFR 47 Part 15 Radio frequency devices

| Section in this Report | Test Name / Section FCC Part 15 | Test Name / Section RSS 210 Issue 7 | Applicable | Verdict |
|------------------------|---|-------------------------------------|------------|---------|
| 5.1.1 | § 15.35 (c) Timing of the transmitter (Duty cycle correction factor) | -/- | YES | PASSED |
| 5.2 | § 15.209 (a) FIELDSTRENGTH OF FUNDAMENTAL | Annex 2.6 | YES | PASSED |
| 5.4 | § 15.209 (a) FIELDSTRENGTH OF HARMONICS and SPURIOUS | Annex 2.6 | YES | PASSED |
| 5.5 | § 15.109 Receiver Spurious Emissions (Radiated) | Annex 2.6 | YES | PASSED |
| 5.6 | § 15.107 / 15.207 Conducted Limits | -/- | NO | |

4 Measurements and results

The radiated measurements are performed in vertical and horizontal plane in the frequency range from 9 kHz to 1 GHz in semi-anechoic chambers or free field. 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 conform with specifications ANSI C63.2-1996 clause 15 and ANSI C63.4-2003 clause 4.1.5. 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 set-ups 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 C63.4-2003 clause 4.2.

Antennas are conform with ANSI C63.2-1996 item 15.

150 kHz - 30 MHz: Quasi Peak measurement, 9 kHz Bandwidth, passive loop antenna.

30 MHz - 200 MHz: Quasi Peak measurement, 120 KHz Bandwidth, biconical antenna

200MHz - 1GHz: Quasi Peak measurement, 120 KHz Bandwidth, log periodic antenna

>1GHz: Average, RBW 1MHz, VBW 10 Hz, wave guide horn

All measurement settings are according to FCC 15.209 and 15.207

5 FCC Part 15

5.1 Timing of the transmitter

Reference

| | |
|------|--------------------------------|
| FCC: | CFR Part SUBCLAUSE § 15.35 (c) |
| IC: | -/- |

Test sample with test mode: 50% Duty Cycle.

In normal use, Duty Cycle is < 1.0

Limits:

§ 15.35 (c)

(c) Unless otherwise specified, e.g. Section 15.255(b), when the radiated emission limits are expressed in terms of the average value of the emission, and pulsed operation is employed, the measurement field strength shall be determined by averaging over one complete pulse train, including blanking intervals, as long as the pulse train does not exceed 0.1 seconds. As an alternative (provided the transmitter operates for longer than 0.1 seconds) or in cases where the pulse train exceeds 0.1 seconds, the measured field strength shall be determined from the average absolute voltage during a 0.1 second interval during which the field strength is at its maximum value. The exact method of calculating the average field strength shall be submitted with any application for certification or shall be retained in the measurement data file for equipment subject to notification or verification.

5.2 Occupied bandwidth

Reference

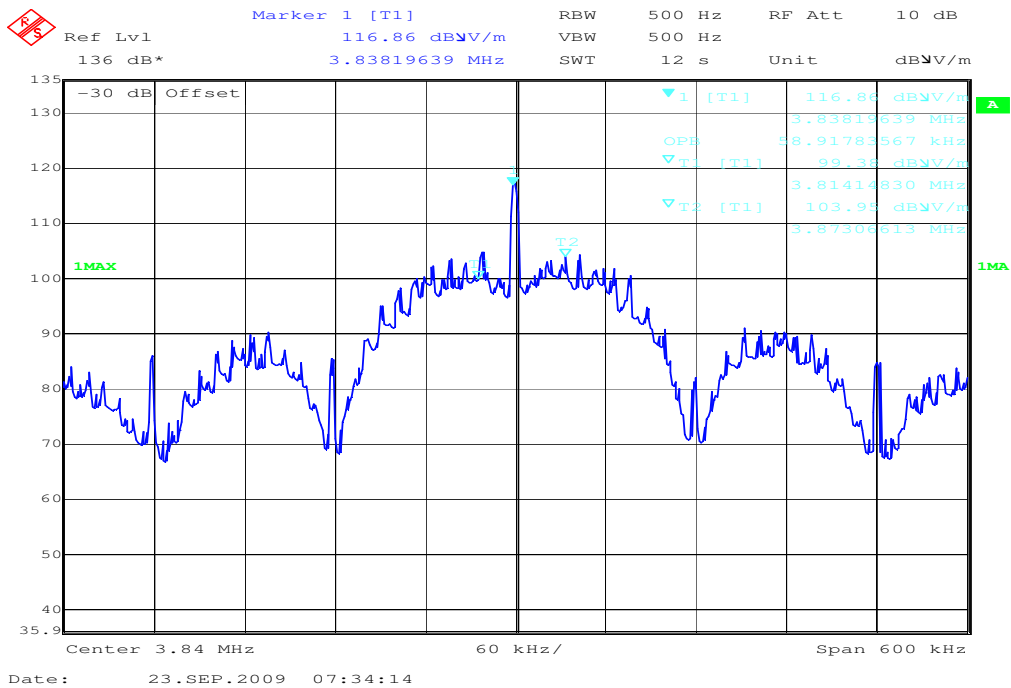
| | |
|------|-----------------------------|
| FCC: | CFR Part SUBCLAUSE § 15.223 |
| IC: | RSS 210, Issue 7, Annex 2.3 |

Results:

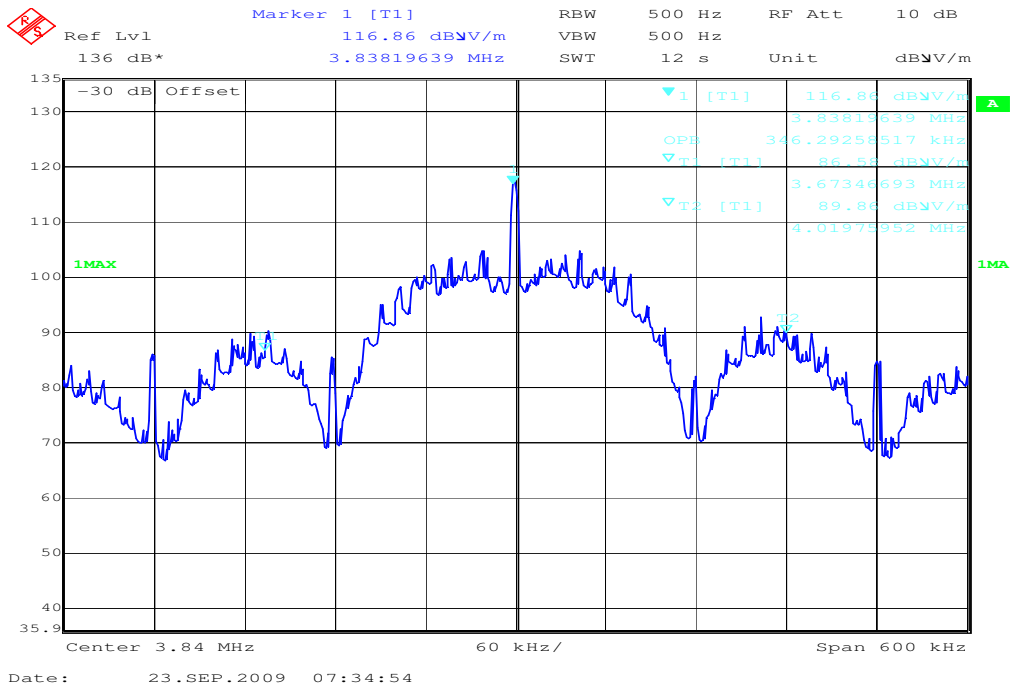
| | Occupied Bandwidth [kHz] |
|-------------|--------------------------|
| 6 dB (75%) | 59 |
| 20 dB (99%) | 346 |

Measured with the integrated OBW-function of the spectrum analyser Rohde&Schwarz FSIQ26 (measurement criteria is the integrated power in %).

Plot 1: 6 dB (75%) – Occupied Bandwidth



Plot 2: 20 dB (99%) – Occupied bandwidth



5.3 Maximum output power (quasi peak) - radiated

Reference

| | |
|------|-----------------------------|
| FCC: | CFR Part SUBCLAUSE § 15.223 |
| IC: | RSS 210, Issue 7, Annex 2.3 |

Power measured:

| TEST CONDITIONS | | Maximum field strength [dBµV/m] | |
|-------------------------|------------------|---------------------------------|-------|
| Frequency | | 3.84 MHz | |
| Distance | | 1 m | 30 m* |
| T _{nom} | V _{nom} | 46 | -14 |
| Measurement uncertainty | | ±3dB | |

*** Calculation:**

Measured maximum field strength @ 1 m: 46 dBµV/m
 Noise floor: 32.5dBµV/m

Correction factor from 1m to 10m: -40 dB (40dB/decade)
 46 dBµV/m @ 1 meters - 40 dB = 6 dBµV/m @ 10 meters

Correction factor from 1m to 30m: -60 dB (40dB/decade)
 46 dBµV/m @ 1 meters - 60 dB = -14 dBµV/m @ 30 meters

Limits

SUBCLAUSE § 15.223

| Fundamental Frequency [MHz] | Field strength of Fundamental [µV/m] | Measurement Distance [meters] |
|-----------------------------|---|-------------------------------|
| 1.705 – 10.0 | 15 or (6dB -BW[kHz]/F[MHz]) Whichver is higher | 30 |

5.4 Field strength of the harmonics and the spurious

Reference

| | |
|------|---------------------------------|
| FCC: | CFR Part SUBCLAUSE § 15.209 (a) |
| IC: | RSS - Gen 4.9 |

| EMISSION LIMITATIONS | | | | |
|-----------------------------|---|--|--|---------|
| Frequency [MHz] | amplitude of emission [dBµV/m] Average/QP | limit max. allowed emission power at 30m | actual attenuation below frequency of operation [dB] | results |
| No critical peaks detected! | | | | |
| | | | | |
| | | | | |
| | | | | |
| Measurement uncertainty | | ± 3dB | | |

RBW/VBW: 200 Hz up to 150 kHz, 9 kHz up to 30 MHz, 120 kHz up to 1 GHz

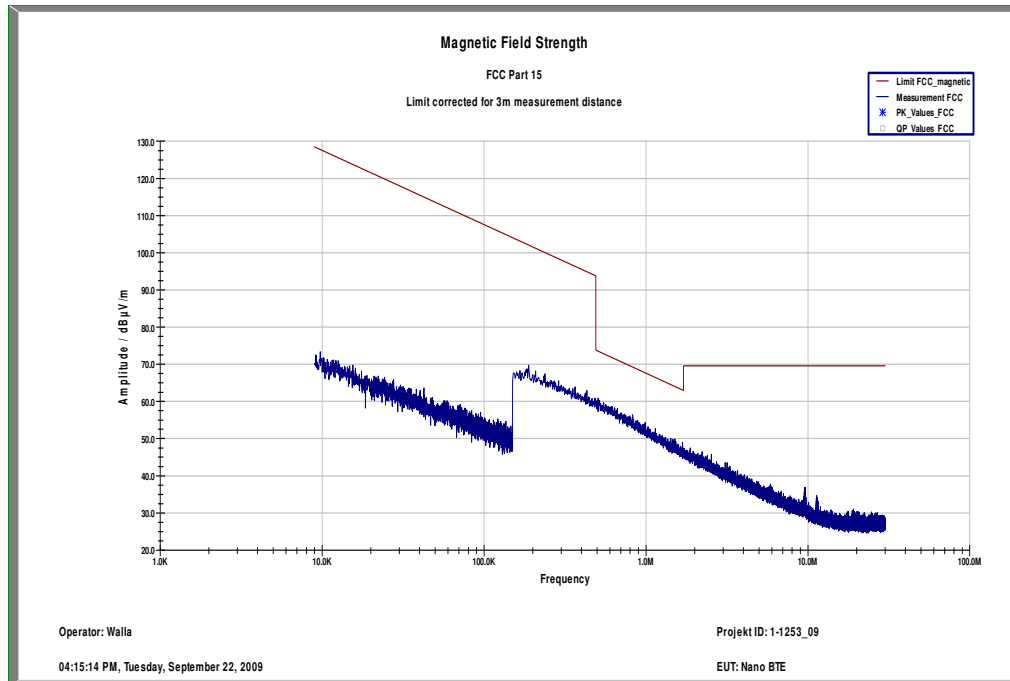
Limits

SUBCLAUSE § 15.209 (a)

| Fundamental Frequency [MHz] | Field strength of Fundamental [µV/m] | Measurement Distance [meters] |
|-----------------------------|--------------------------------------|-------------------------------|
| 0.009 – 0.490 | 2400 / F (kHz) | 300 |
| 0.490 – 1.705 | 24000 / F (kHz) | 30 |
| 1.705 – 30.0 | 30 (29.5 dBµV/m) | 30 |
| 30.0 – 88.0 | 100 (40 dBµV/m) | 3 |
| 88 – 216 | 150 (43.5 dBµV/m) | 3 |
| 216 – 960 | 200 (46 dBµV/m) | 3 |

5.4.1 Plots of the measurements

Plot 1: 9 kHz – 30 MHz



(To convert the measuring distance from 10m to 30m and 30 to 300m a correction factor from 40dB/decade was used. Here we use 80 dB to recalculate from 3m to 300m)

Measurement distance: 3 m

This measurement was done in 3 planes; the plot shows the worst case.

The values may have some errors because of the small distance between measuring antenna and sample. Therefore we re-measured all found peaks at 10m.

Plot 2: 30 MHz – 1 GHz

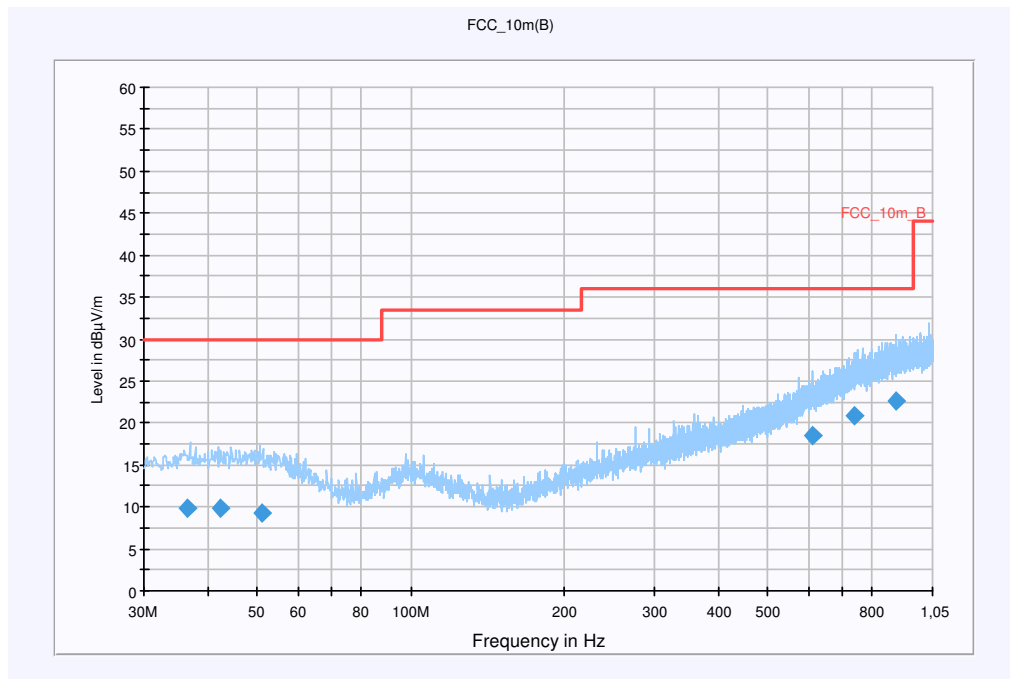
Information

| | |
|-----------------------|----------------------------|
| EUT: | NANO BTE |
| Serial Number: | LBA 2A 065 |
| Test Description: | FCC part 15 class B @ 10 m |
| Operating Conditions: | TX-Mode at 3.84 MHz |
| Operator Name: | Hennemann |
| Comment: | Battery powered 1.4 V DC |

Scan Setup: STAN_Fin [EMI radiated]

| | |
|-----------------|----------------------|
| Hardware Setup: | Electric Field (NOS) |
| Level Unit: | dB μ V/m |

| Subrange | Detectors | IF Bandwidth | Meas. Time | Receiver |
|-------------------|-----------|--------------|------------|----------|
| 30 MHz - 1,05 GHz | QuasiPeak | 120 kHz | 15 s | Receiver |



| Frequency (MHz) | QuasiPeak (dB μ V/m) | Meas. Time (ms) | Bandwidth (kHz) | Antenna height (cm) | Polarity | Turntable position (deg) | Corr. (dB) | Margin (dB) | Limit (dB μ V/m) |
|-----------------|--------------------------|-----------------|-----------------|---------------------|----------|--------------------------|------------|-------------|----------------------|
| 36.615150 | 9.9 | 15000.000 | 120.000 | 200.0 | V | 30.0 | 13.3 | 20.1 | 30.0 |
| 42.317100 | 9.8 | 15000.000 | 120.000 | 112.0 | V | 97.0 | 13.5 | 20.2 | 30.0 |
| 50.910900 | 9.2 | 15000.000 | 120.000 | 149.0 | V | 145.0 | 13.5 | 20.8 | 30.0 |
| 611.718000 | 18.5 | 15000.000 | 120.000 | 319.0 | H | 26.0 | 21.5 | 17.5 | 36.0 |
| 735.639450 | 20.8 | 15000.000 | 120.000 | 98.0 | H | 219.0 | 23.8 | 15.2 | 36.0 |
| 892.468650 | 22.7 | 15000.000 | 120.000 | 243.0 | H | 75.0 | 25.6 | 13.3 | 36.0 |

Hardware Setup: EMI radiated\Electric Field (NOS) - [EMI radiated]

| Subrange 1 | |
|------------------------|--|
| Frequency Range: | 30 MHz - 2 GHz |
| Receiver: | Receiver [ESCI 3] @ GPIB0 (ADR 20), SN 100083/003, FW 4.32 |
| Signal Path: | without Notch FW 1.0 |
| Antenna: | VULB 9163 SN 9163-295, FW --- Correction Table (vertical): VULP6113 Correction Table (horizontal): VULP6113 Correction Table: Cable_EN_1GHz (0909) |
| Antenna Tower: | Tower [EMCO 2090 Antenna Tower] @ GPIB0 (ADR 8), FW REV 3.12 |
| Turntable: | Turntable [EMCO Turntable] @ GPIB0 (ADR 9), FW REV 3.12 |
| EMC 32 Version 8.10.00 | |

5.5 Receiver spurious emission (radiated)

Reference

| | |
|------|-----------------------------|
| FCC: | CFR Part SUBCLAUSE § 15.109 |
| IC: | RSS - Gen 4.10 |

| SPURIOUS EMISSIONS LEVEL [$\mu\text{V/m}$] | | | | | | | | |
|--|----------|---------------------------|-----------------|----------|---------------------------|-----------------|----------|---------------------------|
| Idle | | | | | | | | |
| Frequency [MHz] | Detector | Level [$\mu\text{V/m}$] | Frequency [MHz] | Detector | Level [$\mu\text{V/m}$] | Frequency [MHz] | Detector | Level [$\mu\text{V/m}$] |
| No critical peaks detected! | | | | | | | | |
| | | | | | | | | |
| | | | | | | | | |
| | | | | | | | | |
| Measurement uncertainty | | | ± 3 dB | | | | | |

$f < 1$ GHz : RBW/VBW: 100 kHz

$f \geq 1$ GHz : RBW/VBW: 1 MHz

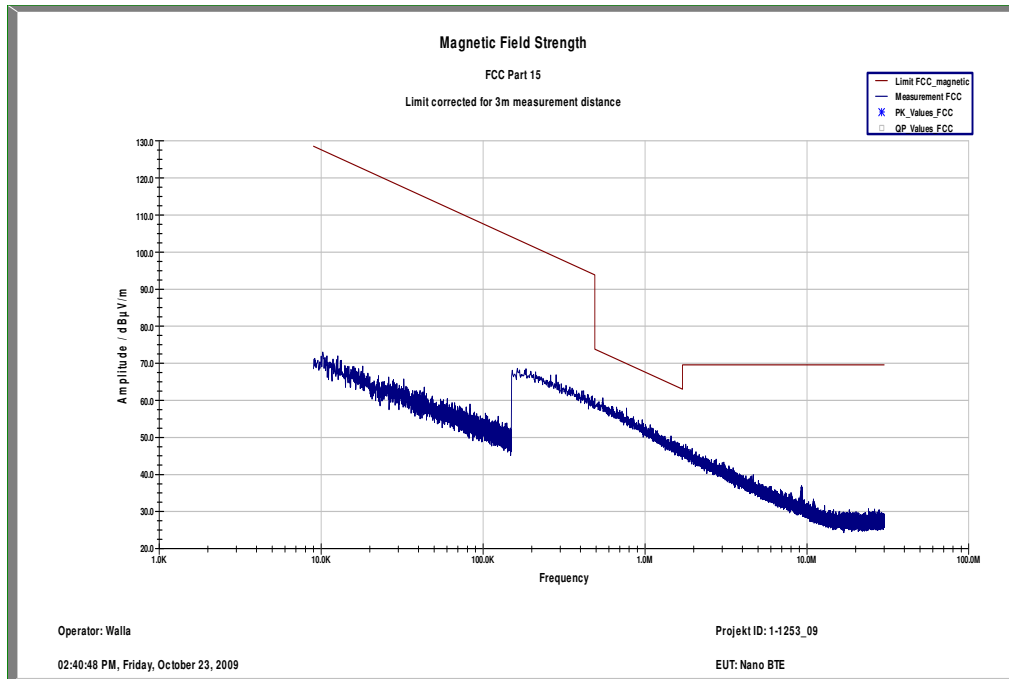
Limits

SUBCLAUSE § 15.109

| Frequency [MHz] | Field strength [$\mu\text{V/m}$] | Measurement distance [m] |
|-----------------|------------------------------------|--------------------------|
| 30 - 88 | 100 | 3 |
| 88 - 216 | 150 | 3 |
| 216 - 960 | 200 | 3 |
| above 960 | 500 | 3 |

5.5.1 Plots of the measurements

Plot 1: 9 kHz – 30 MHz



(To convert the measuring distance from 10m to 30m and 30 to 300m a correction factor from 40dB/decade was used. Here we use 80 dB to recalculate from 3m to 300m)

Measurement distance 3 m

This measurement was done in 3 planes; the plot shows the worst case.

The values may have some errors because of the small distance between measuring antenna and sample. Therefore we re-measured all found peaks at 10m.

Plot 2: 30 MHz – 1 GHz

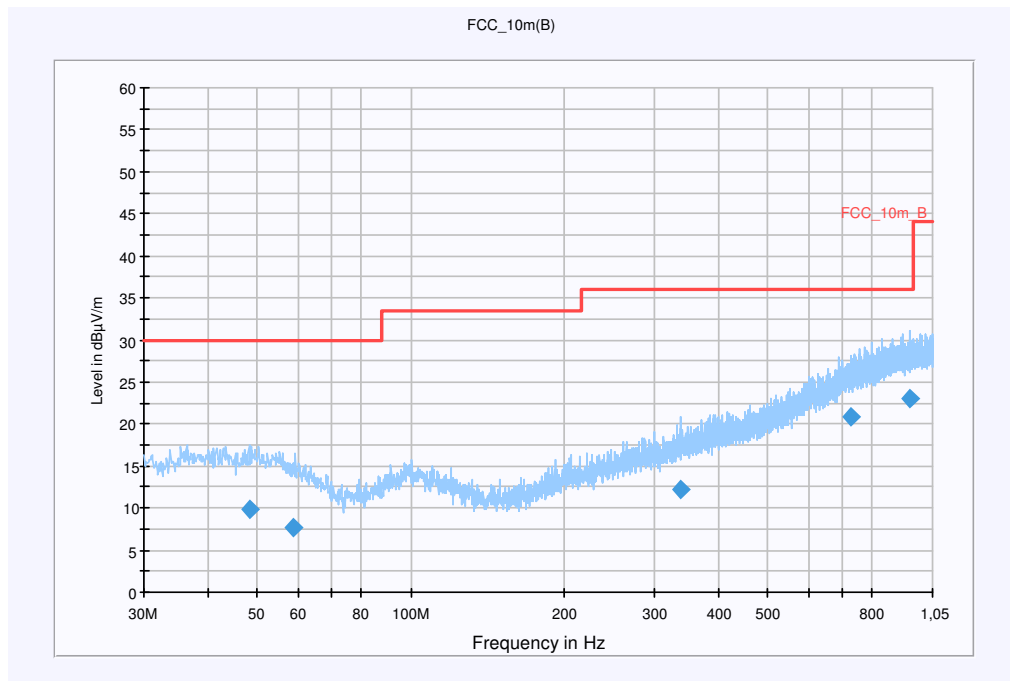
Information

| | |
|-----------------------|----------------------------|
| EUT: | NANO BTE |
| Serial Number: | LAB 2A 038 |
| Test Description: | FCC part 15 class B @ 10 m |
| Operating Conditions: | RX-Mode |
| Operator Name: | Langer |
| Comment: | Battery powered 1.4 V DC |

Scan Setup: STAN_Fin [EMI radiated]

| | |
|-----------------|----------------------|
| Hardware Setup: | Electric Field (NOS) |
| Level Unit: | dBµV/m |

| Subrange | Detectors | IF Bandwidth | Meas. Time | Receiver |
|-------------------|-----------|--------------|------------|----------|
| 30 MHz - 1,05 GHz | QuasiPeak | 120 kHz | 15 s | Receiver |



| Frequency (MHz) | QuasiPeak (dBµV/m) | Meas. Time (ms) | Bandwidth (kHz) | Antenna height (cm) | Polarity | Turntable position (deg) | Corr. (dB) | Margin (dB) | Limit (dBµV/m) |
|-----------------|--------------------|-----------------|-----------------|---------------------|----------|--------------------------|------------|-------------|----------------|
| 48.488100 | 9.8 | 15000.000 | 120.000 | 235.0 | V | -4.0 | 13.5 | 20.2 | 30.0 |
| 58.904100 | 7.8 | 15000.000 | 120.000 | 188.0 | H | 30.0 | 12.1 | 22.2 | 30.0 |
| 337.785300 | 12.1 | 15000.000 | 120.000 | 200.0 | V | 160.0 | 16.0 | 23.9 | 36.0 |
| 726.852150 | 20.8 | 15000.000 | 120.000 | 200.0 | H | 236.0 | 23.6 | 15.2 | 36.0 |
| 945.616500 | 23.0 | 15000.000 | 120.000 | 339.0 | H | 73.0 | 25.8 | 13.0 | 36.0 |

Hardware Setup: EMI radiated\Electric Field (NOS) - [EMI radiated]

| Subrange 1 | |
|------------------------|--|
| Frequency Range: | 30 MHz - 2 GHz |
| Receiver: | Receiver [ESCI 3] @ GPIB0 (ADR 20), SN 100083/003, FW 4.32 |
| Signal Path: | without Notch FW 1.0 |
| Antenna: | VULB 9163 SN 9163-295, FW --- Correction Table (vertical): VULP6113 Correction Table (horizontal): VULP6113 Correction Table: Cable_EN_1GHz (0909) |
| Antenna Tower: | Tower [EMCO 2090 Antenna Tower] @ GPIB0 (ADR 8), FW REV 3.12 |
| Turntable: | Turntable [EMCO Turntable] @ GPIB0 (ADR 9), FW REV 3.12 |
| EMC 32 Version 8.10.00 | |

5.6 Conducted Limits

Not applicable!

Reference

| | |
|------|-------------------------|
| FCC: | CFR Part 15.207, 15.107 |
| IC: | -/- |

Limits:

§ 15.107 / 15.207

| Frequency of Emission [MHz] | Conducted Limit [dBµV] | |
|-----------------------------|------------------------|------------|
| | Quasi-peak | Average |
| 0.15 – 0.5 | 66 to 56 * | 56 to 46 * |
| 0.5 – 5 | 56 | 46 |
| 5 - 30 | 60 | 50 |

* Decreases with the logarithm of the frequency

6 Test equipment and ancillaries used for tests

Test equipment and ancillaries used for tests

To simplify the identification on each page of the test equipment used, on each page of the test report, each item of test equipment and ancillaries such as cables are identified (numbered) by the Test Laboratory, below.

All reported calibration intervals are calibrations according to the EN/ISO/IEC 17025 standard. These calibrations were performed from an accredited external calibration laboratory.

Additional to these calibrations the laboratory performed comparison measurements with other calibrated systems and performed a weekly chamber inspection.

All used devices are connected with a 10 MHz external reference.

According to the manufacturers' instruction is it possible to establish a calibration interval for the FSP unit of 24 month, if the device has an external 10 MHz reference.

Anechoic chamber C:

| No | Equipment/Type | Manuf. | Serial Nr. | Inv. No. Cetecom | Last Calibration | Frequency (months) | Next Calibration |
|----|---|-------------|------------|------------------|------------------------------------|--------------------|------------------|
| 1 | Anechoic chamber | MWB | 87400/02 | 300000996 | Monthly verification | | |
| 2 | System-Rack 85900 | HP I.V. | * | 300000222 | n.a. | | |
| 3 | Measurement System 1 | | | | | | |
| 4 | PSA-Spektrumanalysator 3 Hz - 26.5 GHz (E4440A) | Agilent | MY48250080 | 300003812 | 05.08.2008 | 24 | 05.08.2010 |
| 5 | EMI Preselector 9 kHz - 1 GHz (N9039A) | Agilent | MY48260003 | 300003825 | 19.08.2008 | 24 | 19.08.2010 |
| 6 | Microwave Analog Signal Generator (N5183A) | Agilent | MY47420220 | 300003813 | 06.08.2008 | 24 | 06.08.2010 |
| 7 | PC | F+W | | | n.a. | | |
| 8 | TILE | TILE | | | n.a. | | |
| 9 | TRILOG Super Broadband Antenna (VULB9163) | Schwarzbeck | 371 | 300003854 | Monthly verification (System cal.) | | |
| 10 | Double Ridged Antenna 3115 | EMCO | 3088 | 300001032 | Monthly verification (System cal.) | | |
| 11 | Active Loop Antenna 6502 | EMCO | 2210 | 300001015 | Monthly verification (System cal.) | | |
| 12 | Switch / Control Unit 3488A | HP | 2719A15013 | 300001156 | n.a. | | |
| 13 | Power Supply 6032A | HP | 2818A03450 | 300001040 | 08.01.2009 | 36 | 08.01.2012 |
| 14 | Busisolator | Kontron | | 300001056 | n.a. | | |
| 15 | Leitungsteiler 11850C | HP | | 300000997 | Monthly verification (System cal.) | | |
| 16 | Power attenuator 8325 | Byrd | 1530 | 300001595 | Monthly verification (System cal.) | | |
| 17 | Band reject filter WRCG1855/1910 | Wainwright | 7 | 300003350 | Monthly verification (System cal.) | | |
| 18 | Band reject filter WRCG2400/2483 | Wainwright | 11 | 300003351 | Monthly verification (System cal.) | | |
| 19 | Hochpassfilter WHK1.1/15G-10SS | Wainwright | 3 | 300003255 | Monthly verification (System cal.) | | |
| 20 | Hochpassfilter WHKX2.9/18G-12SS | Wainwright | 1 | 300003492 | Monthly verification (System cal.) | | |
| 21 | Hochpassfilter WHKX7.0/18G-8SS | Wainwright | 18 | 300003789 | Monthly verification (System cal.) | | |
| 22 | Switch / Control Unit 3488A | HP | 2605e08770 | 300001443 | n.a. | | |
| 23 | Trenntrafo RT5A | Grundig | 9242 | 300001263 | n.a. | | |
| 24 | Relais Matrix PSU | R&S | 890167/024 | 300001168 | n.a. | | |
| 25 | Netznachbildung ESH3-Z5 | R&S | 828576/020 | 300001210 | n.a. | | |

SRD Laboratory Room 002:

| No | Equipment/Type | Manuf. | Serial Nr. | Inv. No. Cetecom | Last Calibration | Frequency (months) | Next Calibration |
|----|---|----------------|----------------|------------------|---------------------------------|--------------------|------------------|
| 1 | System Controller PSM 12 | R&S | 835259/007 | 300002681-00xx | n.a. | | |
| 2 | Memory Extension PSM-K10 | R&S | To 1 | 300002681 | n.a. | | |
| 3 | Operating Software PSM-B2 | R&S | To 1 | 300002681 | n.a. | | |
| 4 | 19" Monitor | | 22759020-ED | 300002681 | n.a. | | |
| 5 | Mouse | | LZE 0095/6639 | 300002681 | n.a. | | |
| 6 | Keyboard | | G00013834L461 | 300002681 | n.a. | | |
| 7 | Spectrum Analyser FSIQ 26 | R&S | 835540/018 | 300002681-0005 | 10.01.2008 | 24 | 10.01.2010 |
| 8 | Tracking Generator FSIQ-B10 | R&S | 835107/015 | 300002681 | s.No.7 | | |
| 10 | RF-Generator SMIQ03 (B1 Signal) | R&S | 835541/056 | 300002681-0002 | 26.08.2008 | 36 | 26.08.2011 |
| 11 | Modulation Coder SMIQ-B20 | R&S | To 10 | 300002681 | s.No.10 | | |
| 12 | Data Generator SMIQ-B11 | R&S | To 10 | 300002681 | s.No.10 | | |
| 13 | RF Rear Connection SMIQ-B19 | R&S | To 10 | 300002681 | s.No.10 | | |
| 14 | Broadband horn antenna (1-18 GHz) | EMCO | 9107-3696 | 300001604 | 16.04.2008 | 24 | 16.04.2010 |
| 15 | Broadband horn antenna (1-18 GHz) | EMCO | 9107-3697 | 300001605 | 21.08.2008 | 24 | 21.08.2010 |
| 16 | Std gain horn antenna (18-26.5 GHz) | Narda | Model no. 638 | 300000486 | n.a. | | |
| 17 | Std gain horn antenna (18-26.5 GHz) | Narda | Model no. 638 | 300000487 | n.a. | | |
| 18 | Sleeve dipole antenna Model 3126-880 | ETS-Lindgren | 00040887 | 3000000 | n.a. | | |
| 19 | Fast CPU SM-B50 | R&S | To 10 | 300002681 | s.No.10 | | |
| 20 | FM Modulator SM-B5 | R&S | 835676/033 | 300002681 | s.No.10 | | |
| 21 | RF-Generator SMIQ03 (B2 Signal) | R&S | 835541/055 | 300002681-0001 | 25.08.2008 | 36 | 25.08.2011 |
| 22 | Modulation Coder SMIQ-B20 | R&S | To 21 | 300002681 | s.No.21 | | |
| 23 | Data Generator SMIQ-B11 | R&S | To 21 | 300002681 | s.No.21 | | |
| 24 | RF Rear Connection SMIQ-B19 | R&S | To 21 | 300002681 | s.No.21 | | |
| 25 | Fast CPU SM-B50 | R&S | To 21 | 300002681 | s.No.21 | | |
| 26 | FM Modulator SM-B5 | R&S | 836061/022 | 300002681 | s.No.21 | | |
| 27 | RF-Generator SMP03 (B3 Signal) | R&S | 835133/011 | 300002681-0003 | 26.08.2008 | 36 | 26.08.2011 |
| 28 | Attenuator SMP-B15 | R&S | 835136/014 | 300002681 | S.No.27 | | |
| 29 | RF Rear Connection SMP-B19 | R&S | 834745/007 | 300002681 | S.No.27 | | |
| 30 | Power Meter NRVD | R&S | 835430/044 | 300002681-0004 | 26.08.2008 | 24 | 26.08.2010 |
| 31 | Power Sensor NRVD-Z1 | R&S | 833894/012 | 300002681-0013 | 26.08.2008 | 24 | 26.08.2010 |
| 32 | Power Sensor NRVD-Z1 | R&S | 833894/011 | 300002681-0010 | 26.08.2008 | 24 | 26.08.2010 |
| 33 | Rubidium Standard RUB | R&S | | 300002681-0009 | 27.08.2008 | 24 | 27.08.2010 |
| 34 | Switching and Signal Conditioning Unit SSCU | R&S | 338864/003 | 300002681-0006 | Verified with path compensation | | |
| 35 | Laser Printer HP Deskjet 2100 | HP | N/A | 300002681-0011 | n.a. | | |
| 36 | 19" Rack | R&S | 11138363000004 | 300002681 | n.a. | | |
| 37 | RF-cable set | R&S | N/A | 300002681 | n.a. | | |
| 39 | IEEE-cables | R&S | N/A | 300002681 | n.a. | | |
| 40 | Sampling System FSIQ-B70 | R&S | 835355/009 | 300002681 | s.No.7 | | |
| 41 | RSP programmable attenuator | R&S | 834500/010 | 300002681-0007 | 26.08.2008 | 24 | 26.08.2010 |
| 42 | Signalling Unit | R&S | 838312/011 | 300002681 | n.a. | | |
| 43 | NGPE programmable Power Supply for EUT | R&S | 192.033.41 | 300002681 | | | |
| 44 | Power Splitter 6005-3 | Inmet Corp. | none | 300002841 | n.a. | | |
| 45 | SMA Cables SPS-1151-985-SPS | Insulated Wire | different | different | n.a. | | |
| 46 | CBT32 with EDR Signaling Unit | R&S | | | | | |

| | | | | | | | |
|----|---------------------|-------|------------|-----------|------|--|--|
| 47 | Coupling unit | Narda | N/A | -- | n.a. | | |
| 48 | 2xSwitch Matrix PSU | R&S | 872584/021 | 300001329 | n.a. | | |
| 49 | RF-cable set | R&S | N/A | different | n.a. | | |
| 50 | IEEE-cables | R&S | N/A | -- | n.a. | | |

Note: 3000002681-00xx inventoried as a system

SRD Laboratory Room 005:

| No | Equipment/Type | Manuf. | Serial Nr. | Inv. No. Cetecom | Last Calibration | Frequency (months) | Next Calibration |
|----|----------------------------------|--------|------------|------------------|------------------|--------------------|------------------|
| 1 | Spektrum Analyzer 8566B | HP | 2747A05275 | 300000219 | 18.01.2008 | 24 | 18.01.2010 |
| 2 | Spektrum Analyzer Display 85662A | HP | 2816A16497 | 300001690 | 23.01.2008 | 24 | 23.01.2010 |
| 3 | Quasi-Peak-Adapter 85650A | HP | 2811A01135 | 300000216 | 23.01.2008 | 24 | 23.01.2010 |
| 4 | Power Supply | Heiden | 003202 | 300001187 | 12.05.2007 | 36 | 12.05.2010 |
| 5 | Power Supply | Heiden | 1701 | 300001392 | 12.05.2007 | 36 | 12.05.2010 |

SRD Laboratory Room 011:

| No | Equipment/Type | Manuf. | Serial Nr. | Inv. No. Cetecom | Last Calibration | Frequency (months) | Next Calibration |
|----|-----------------|--------|------------|------------------|------------------|--------------------|------------------|
| 1 | NRP Power Meter | R&S | 100212 | 300003780 | 27.02.2008 | 24 | 27.02.2010 |

Anechoic chamber F:

| No | Equipment/Type | Manuf. | Serial Nr. | Inv. No. Cetecom | Last Calibration | Frequency (months) | Next Calibration |
|----|---|--------------------------|------------|------------------|------------------|--------------------|------------------|
| 1 | Control Computer | F+W | FW0502032 | 300003303 | -/- | -/- | -/- |
| 2 | Trilog Antenna VULB 9163 | Schwarzbeck | 295 | 300003787 | 01.04.2008 | 24 | 01.04.2010 |
| 3 | Amplifier - 0518C-138 | Veritech Micro-wave Inc. | -/- | -/- | -/- | -/- | -/- |
| 4 | Switch - 3488A | HP | | 300000368 | -/- | -/- | -/- |
| 5 | EMI Test receiver - ESCI | R&S | 100083 | 300003312 | 01.06.2009 | 24 | 01.06.2011 |
| 6 | Turntable Controller - 1061 3M | EMCO | 1218 | 300000661 | -/- | -/- | -/- |
| 7 | Tower Controller 1051 Controller | EMCO | 1262 | 300000625 | -/- | -/- | -/- |
| 8 | Tower - 1051 | EMCO | 1262 | 300000625 | -/- | -/- | -/- |
| 10 | Ultra Notch-Filter Rejected band Ch. 62 | WRCD | 9 | -/- | -/- | -/- | -/- |

7 Annex A: Photographs of test site

Photo 1:

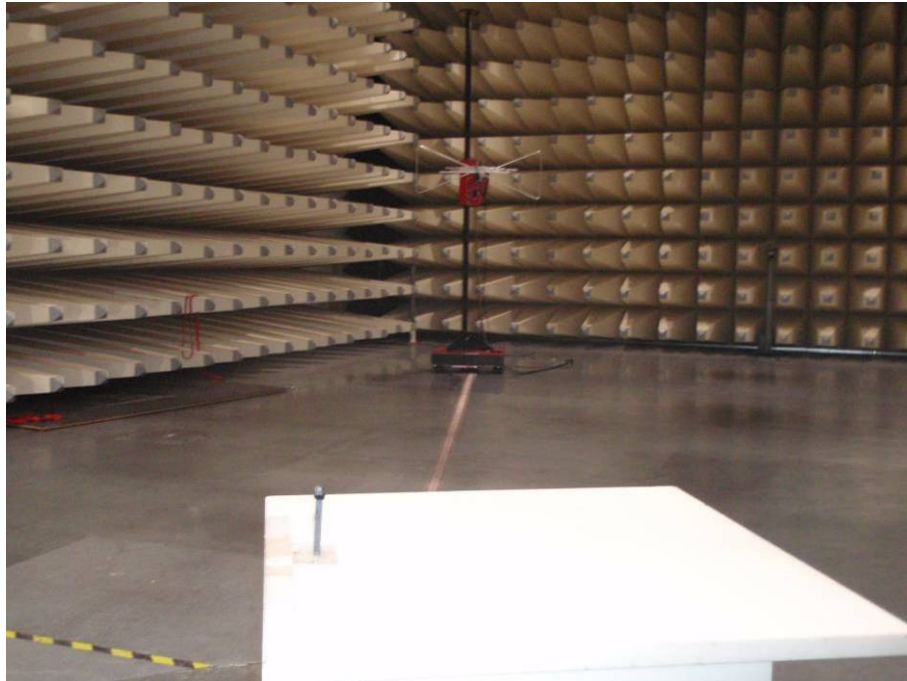


Photo 2:



8 Annex B: External photographs of the equipment

Photo 3:



Photo 4:



9 Annex C: Internal photographs of the equipment

Photo 5:



Photo 6:



Photo 7:



Photo 8:



Photo 9:



Photo 10:



Photo 11:



Photo 12:

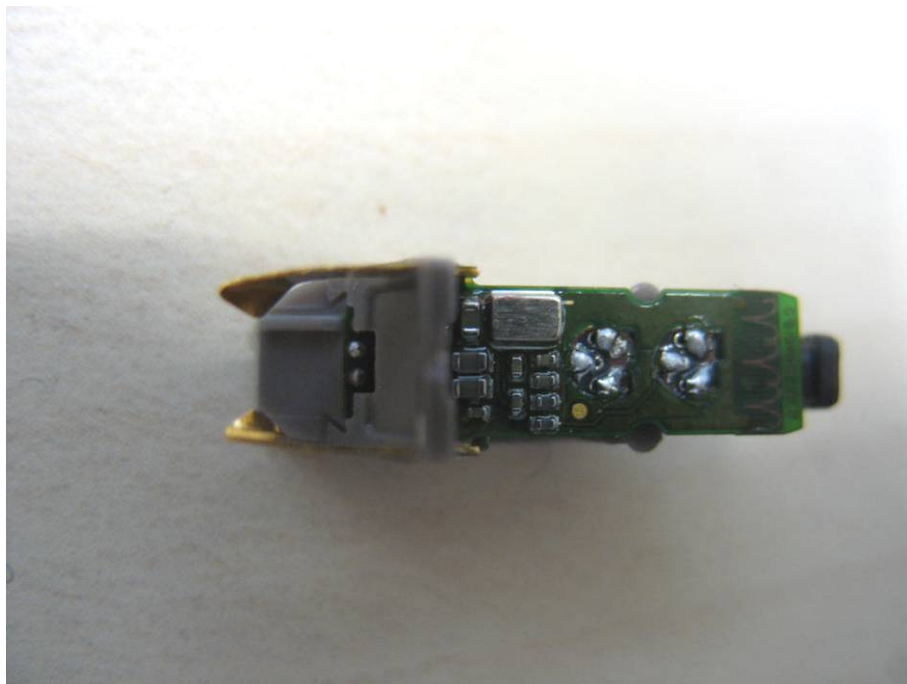


Photo 13:



Photo 14:



Photo 15:

