



TEST REPORT

Test Report No.: 1-4536/12-01-05



Testing Laboratory

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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-12076-01-01

Applicant


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Manufacturer

Same as Applicant

Test Standard/s

| | | |
|-------------------|---------|---|
| 47CFR15 | 2009-10 | Subpart B - Unintentional Radiators |
| ICES-003, Issue 4 | 2004-02 | Interference-Causing Equipment Standard Digital Apparatus |

| | |
|---|--|
| <p style="text-align: center;">Test Item</p> <p>Kind of test item: Keyless Entry System Model name: FORD MCA BEM S/N serial number: 002312843221 FCC-ID: LXP-RX4691 IC-ID: 2298A-RX4691 HW hardware status: 06 SW software status: 07.00 Power Supply: DC 12V</p> |  |
|---|--|

This test report is electronically signed and valid without handwritten signature. The public keys can be requested at the test laboratory to verify the electronic signatures.

Test performed:

Test Report authorised:

Jens Hennemann
 Testing Manager

Bernd Rebmann
 Team Manager

| | | |
|----------|--|----|
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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: 2012-05-22
Date of receipt of test item: 2012-10-03
Start of test: 2012-10-04
End of test: 2013-01-02
Person(s) present during the test: -/-

3 Test standard/s:

| Test Standard | Version | Test Standard Description |
|-------------------|---------|--|
| 47CFR15 | 2009-10 | Subpart B - Unintentional Radiators |
| ICES-003, Issue 4 | 2004-02 | Interference-Causing Equipment Standard Digital Aparatus |

4 Test Environment

Temperature: 20°C – 25°C
Relative humidity content: 30 % - 50 %
Air pressure: 1020 hPa
Power supply: 230 V / 50 Hz

5 Test Laboratories sub-contracted

6 Information about Test Conditions

6.1 Test Item

| | | | |
|--|--|------------------|---------------|
| Kind of test item : | Keyless Entry System | | |
| Type identification : | FORD MCA BEM | | |
| Equipment classification: | Equipment for vehicular use | | |
| Environment classification: | Residential, commercial and light industry | | |
| Supply voltage : | DC 12V | | |
| Ports : (maximum cable lengths declared by manufacturer) | Description | Direction | Length |
| | DC Power | Input | > 3m |
| | signal/control ports | In / output | > 3m |
| Is mounting position / usual operating position defined? | | | no |
| Additional information: | | | |
| The build in radio part (FCC-ID: LXP-RX4691 IC-ID: 2298A-RX4691) is not part of this test report and already tested. | | | |

6.2 EUT: Type, S/N etc. and Short Descriptions Used in this Test Report

| short description*) | EUT | Type | S/N serial number | HW hardware status | SW software status |
|---------------------|-------------------------------|--------------|-------------------|--------------------|--------------------|
| EUT A | Keyless Entry System Receiver | FORD MCA BEM | 002312843221 | 06 | 07.00 |

*) EUT short description is used to simplify the identification of the EUT in this test report.

6.3 EUT Set-up(s)

| EUT set-up no. *) | Combination of EUT and AE | Remarks |
|-------------------|---------------------------|---------|
| set. 1 | EUT A | - / - |

*) EUT set-up no. is used to simplify the identification of the EUT set-up in this test report.

6.4 EUT Operating Modes

| EUT operating mode no. *) | Description of operating modes | Additional information |
|---------------------------|--------------------------------|------------------------|
| op. 1 | active | - / - |

*) EUT operating mode no. is used to simplify the test report.

7 Summary of Test Results

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

7.1 Emission

7.1.1 Enclosure

| EMI Phenomenon | Frequency range | Basic standard | Result |
|--------------------------------------|-----------------|-----------------------|--------|
| Radiated Interference Field Strength | 30 - 1000 MHz | FCC Part 15 B Class B | passed |
| Radiated Interference Field Strength | > 1 GHz | FCC Part 15 B Class B | passed |

7.1.2 AC Mains Power Input/Output Ports

| EMI Phenomenon | Frequency range | Basic standard | Result |
|--------------------------------|-----------------|---------------------|--------|
| Conducted interference voltage | 0,15– 30 MHz | FCC Part 15 Class B | NA2 |

Remarks:

| | |
|-----|---|
| NA1 | Not tested because not required by used standard |
| NA2 | Test not applicable because port does not exists |
| NA3 | Test not applicable because port only for services |
| NA4 | Test not applicable because port lengths not longer than 3m |
| NA5 | Not tested because not required by customer |
| NA6 | Not tested because used frequency < 108 MHz |

7.2 Measurement and Test Set-up

Note: The test configuration is in accordance with the requirements given in the standards in point 3

7.3 Measurement uncertainty

The uncertainty of the measurement equipment fulfils CISPR 16 and the related European and national standards.

The semi anechoic chamber fulfils the requirements of CISPR 16-1 (ANSI C63.4) for a test volume of 3m Ø.

The table below shows the measurement uncertainties for each measurement method. The expanded uncertainty (k=2 or 95%) was calculated with worst case values.

| Measurement Method | Frequency area Impulse duration time | Description | Expanded uncertainty (k=2 or 95%) |
|---|---|-------------|--------------------------------------|
| Radiated Emission FCC part 15 B, ANSI C63.4 | 30 MHz – 18 GHz | - / - | ± 4.28 dB |
| Conducted Emission FCC part 15 B, ANSI C63.4 | 9 kHz – 30 MHz | - / - | ± 3.49 dB |

8 Detailed test results - Emission

8.1 Electromagnetic Radiated Emissions (Distance 10 m)

8.1.1 Instrumentation for Test (see equipment list)

| | | | | | | | | | | | |
|-----|-----|------|-----|-----|-----|-----|------|--|--|--|--|
| F 1 | F 2 | F 4b | F 5 | F 6 | F 7 | F 8 | F 28 | | | | |
|-----|-----|------|-----|-----|-----|-----|------|--|--|--|--|

8.1.2 Test Plan

| | | | |
|-----------------------|--------------------|-----------------------|---------------|
| EUT set-up | set 1 | | |
| Operating mode | Application | Limit | Result |
| op 1 | Enclosure | FCC part 15 B Class B | passed |

Remarks: Powered by external power supply DC 12V

8.1.3 Radiated Limits

| Frequency- range | FCC part 15 B Class B | FCC part 15 B Class A |
|--------------------|--|-----------------------|
| 30 MHz – 88 MHz | 30 dB μ V/m | 39,1 dB μ V/m |
| 88 MHz – 216 MHz | 33,5 dB μ V/m | 43,5 dB μ V/m |
| 216 MHz – 960 MHz | 36 dB μ V/m | 46,4 dB μ V/m |
| 960 MHz – 1000 MHz | 44 dB μ V/m | 49,5 dB μ V/m |
| | * This values are recalculated from the class B limits at 3 m antenna distance in §15.109 (g 2) of the FCC rules | |

8.1.4 Calibration Information

| Device | Serial number | ICT Number | Calibration valid until | Calibration interval |
|-----------------|---------------|------------|-------------------------|----------------------|
| ESCI 3 Receiver | 100083/003 | 300003312 | 03/2013 | 12 month |
| Trilog Antenna | 9163-295 | 300003787 | 05/2014 | 24 month |

Remarks:
System check of all relevant devices and the chamber (weekly)

8.1.5 Test Results

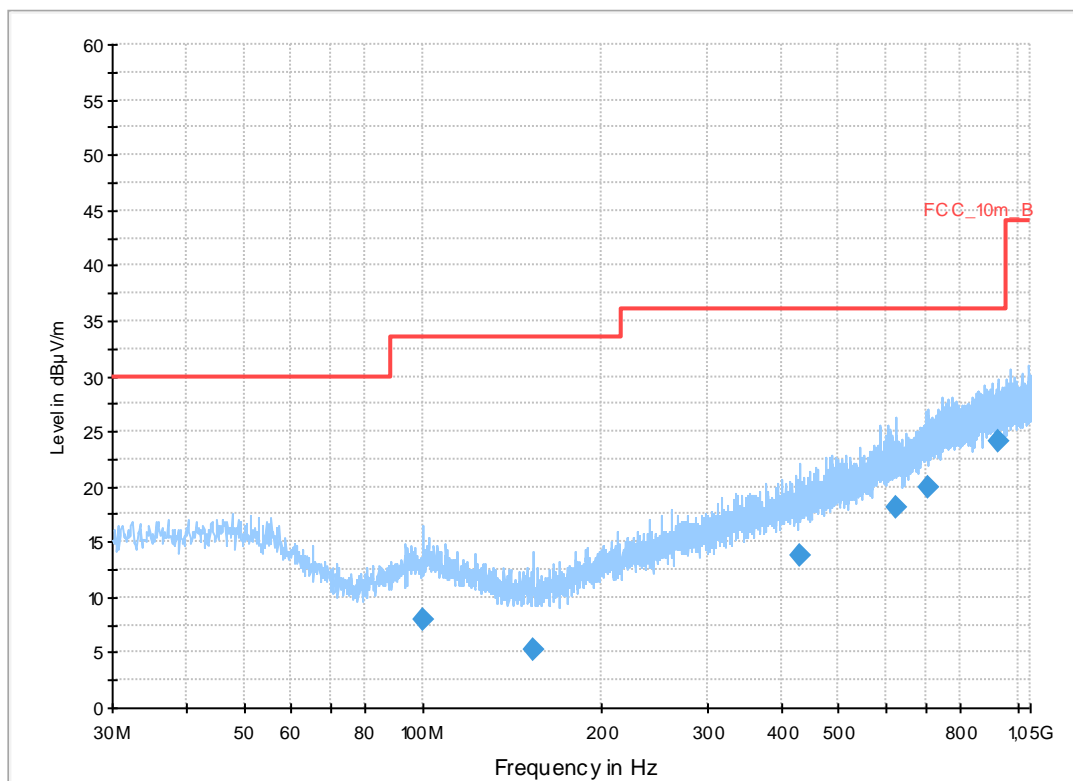
Common Information

EUT: BCM UHF
 Serial Number: 002312843221
 Test Description: FCC part 15 B class B @ 10 m
 Operating Conditions: active
 Operator Name: Medrow
 Comment: DC 12V

Scan Setup: STAN_Fin [EMI radiated]

Hardware Setup: Electric Field (NOS)
 Receiver: [ESCI 3]
 Level Unit: dB μ V/m
Subrange **Step Size** **Detectors** **IF BW** **Meas. Time** **Preamp**
 30 MHz - 2 GHz 60 kHz QPK 120 kHz 1 s 20 dB

FCC_10m(B)_3



Final Result 1

| Frequency (MHz) | QuasiPeak (dB μ V/m) | Meas. Time (ms) | Bandwidth h (kHz) | Height (cm) | Polarization | Azimuth h (deg) | Corr. (dB) | Margi n (dB) | Limit (dB μ V/m) | Comment |
|-----------------|--------------------------|-----------------|-------------------|-------------|--------------|-----------------|------------|--------------|----------------------|---------|
| 100.183050 | 7.9 | 1000.0 | 120.000 | 170.0 | V | -3.0 | 11.9 | 25.6 | 33.5 | |
| 152.931600 | 5.3 | 1000.0 | 120.000 | 170.0 | H | 0.0 | 9.0 | 28.2 | 33.5 | |
| 428.981100 | 13.8 | 1000.0 | 120.000 | 170.0 | H | 260.0 | 17.4 | 22.2 | 36.0 | |
| 622.878150 | 18.1 | 1000.0 | 120.000 | 98.0 | H | 175.0 | 20.9 | 17.9 | 36.0 | |
| 708.119850 | 19.9 | 1000.0 | 120.000 | 170.0 | V | 260.0 | 22.7 | 16.1 | 36.0 | |
| 927.436050 | 24.1 | 1000.0 | 120.000 | 120.0 | V | 260.0 | 25.3 | 11.9 | 36.0 | |

8.1.6 Hardware Set-up

| | |
|--------------------------|--|
| Subrange 1 | |
| Frequency Range: | 30 MHz - 2 GHz |
| Receiver: | Receiver [ESCI 3] @ GPIB0 (ADR 20), SN 100083/003, FW 4.42 |
| Signal Path: | without Notch FW 1.0 |
| Antenna: | VULB 9163 SN 9163-295, FW --- Correction Table (vertical): VULP6113 Correction Table (horizontal): VULP6113 Correction Table (vertical): Cable_EN_1GHz (1005) Correction Table (horizontal): Cable_EN_1GHz (1005) |
| 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 |
| Software-version: | EMC 32 Version 8.52 |

8.1.7 Signal strength calculation

Calculation formula:

$$SS = U_R + CL + AF$$

List of abbreviations:

| | | |
|-------|---|-------------------------|
| SS | ▶ | signal strength |
| U_R | ▶ | voltage at the receiver |
| CL | ▶ | loss of the cable |
| AF | ▶ | antenna factor |

List with correction factors:

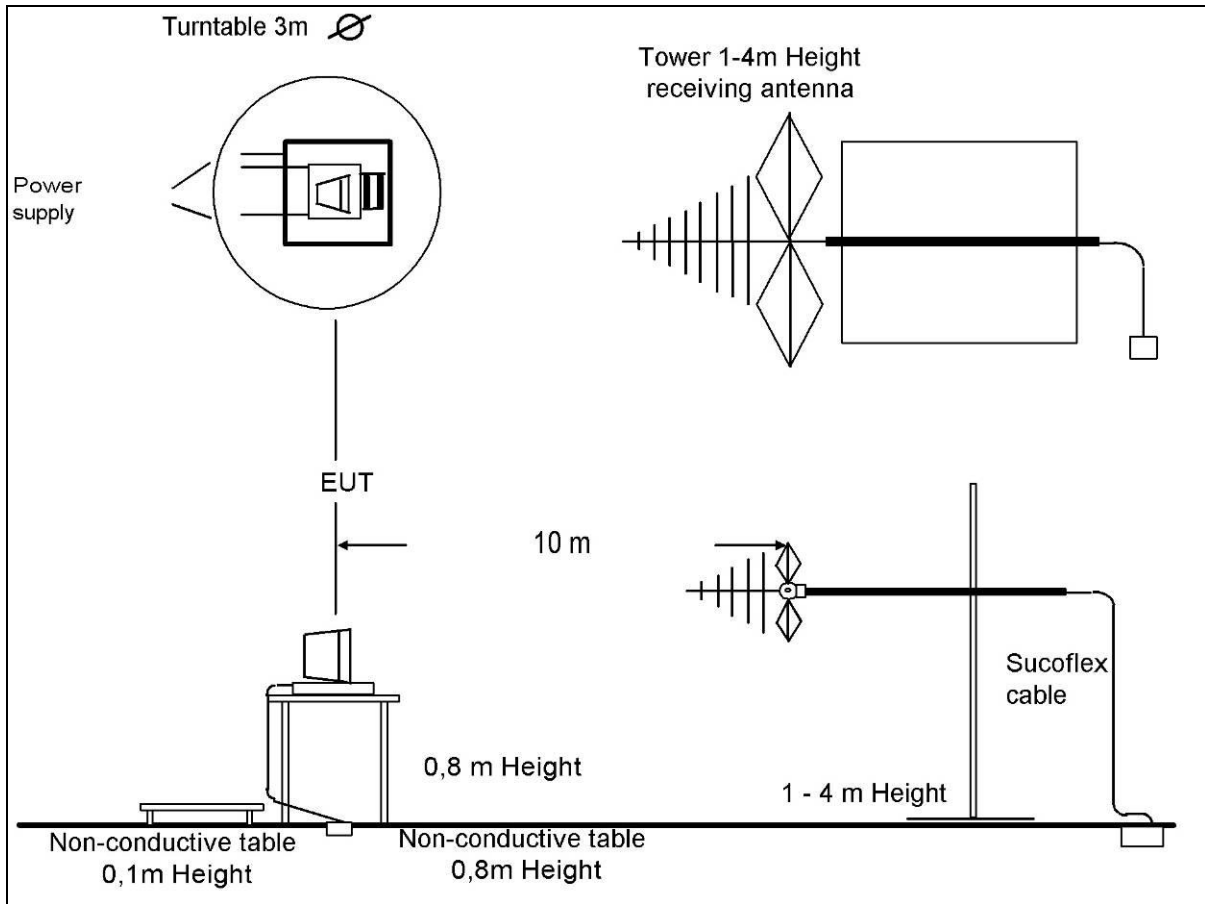
| Frequency [MHz] | CL [dB] | AF [dB μ V/m] |
|-----------------|---------|-------------------|
| 30,000 | 0,20 | 12,30 |
| 100,000 | 0,60 | 11,30 |
| 200,000 | 1,10 | 10,60 |
| 300,000 | 1,30 | 13,20 |
| 400,000 | 1,60 | 15,30 |
| 500,000 | 1,90 | 16,80 |
| 600,000 | 2,00 | 18,80 |
| 700,000 | 2,20 | 20,30 |
| 800,000 | 2,30 | 21,50 |
| 900,000 | 2,40 | 22,80 |
| 1000,000 | 2,50 | 23,30 |

Example calculation:

For example at 500,000 000 MHz the measured Voltage (U_R) is 12,35 dB μ V/m, the loss of the cable (CL) is 1,90 dB and the antenna factor (AF) is 16,80 dB μ V/m the final result will be calculated:

$$SS \text{ [dB}\mu\text{V]} = 12,35 \text{ [dB}\mu\text{V/m]} + 1,90 \text{ [dB]} + 16,80 \text{ [dB}\mu\text{V/m]} = \underline{31,05 \text{ [dB}\mu\text{V/m]}} \text{ (35,69 } \mu\text{V/m)}$$

8.1.8 Test Set-up



8.2 Electromagnetic Radiated Emissions (Distance 5 m)

8.2.1 Instrumentation for Test (see equipment list)

| | | | | | | | | | | | |
|-----|-----|------|------|------|------|--|--|--|--|--|--|
| F 1 | F 6 | F 28 | F 29 | F 30 | F 33 | | | | | | |
|-----|-----|------|------|------|------|--|--|--|--|--|--|

8.2.2 Test Plan

| | | | |
|-----------------------|--------------------|-----------------------|---------------|
| EUT set-up | set 1 | | |
| Operating mode | Application | Limit | Result |
| op 1 | Enclosure | FCC part 15 B Class B | passed |

Remarks: The measured values are recalculated from 5m to 3m distance
Powered by external power supply DC 12V

8.2.3 Radiated Limits

| Frequency- range | 47CFR15: (FCC part 15 B) Class B | 47CFR15: (FCC part 15 B) Class A * |
|----------------------|----------------------------------|--|
| 1000 MHz – 10000 MHz | 54 dB μ V/m | 59,5 dB μ V/m |
| | | * This values are recalculated from the class A limits at 10 m antenna distance in §15.109 (g 2) of the FCC rules. |

8.2.4 Calibration Information

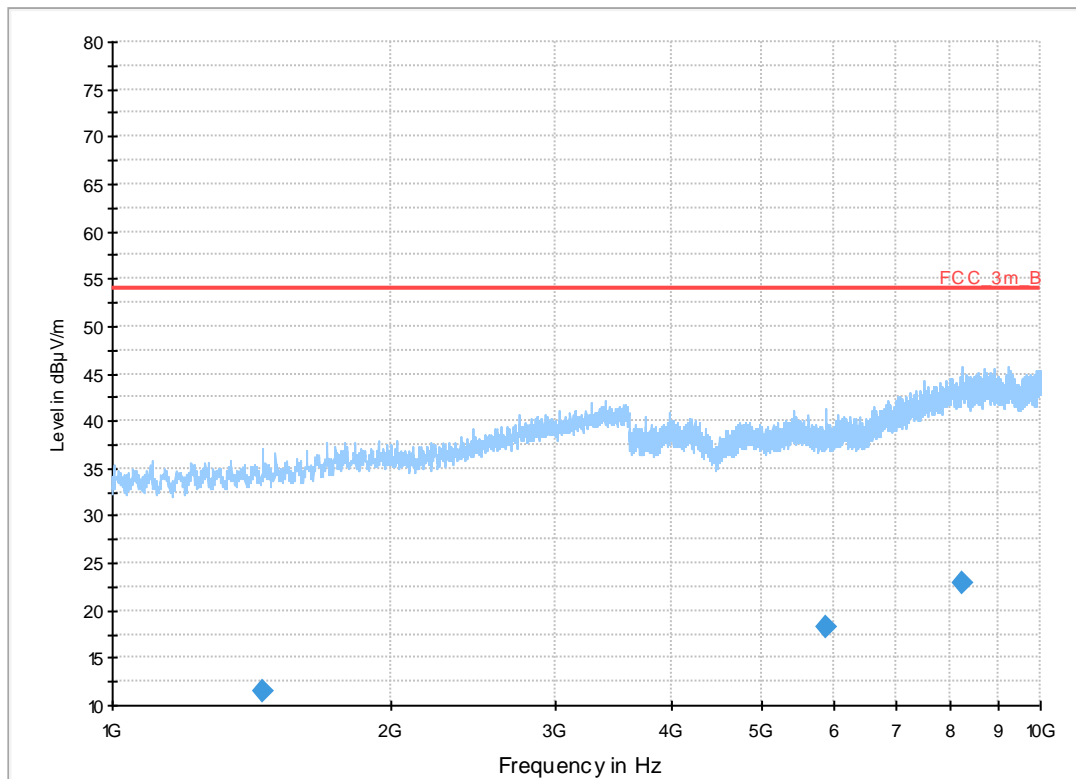
| Device | Serial number | ICT Number | Calibration valid until | Calibration interval |
|--------------|---------------|------------|-------------------------|----------------------|
| ESU 26 | 100037 | 300003555 | 01/2013 | 12 month |
| Horn Antenna | 9120B188 | 300003896 | 04/2014 | 24 month |

Remarks:
System check of all relevant devices and the chamber (weekly)

8.2.5 Test Results

EUT: BCM UHF
 Serial Number: 002312843221
 Test Description: FCC part 15 B class B @ 5 m
 Operating Conditions: active
 Operator Name: Medrow
 Comment: DC 12 V

FCC_1_10_B_5m



Final Result 1

| Frequency (MHz) | Average (dBµV/m) | Meas. Time (ms) | Bandwidth (kHz) | Height (cm) | Polarization | Azimuth (deg) | Corr. (dB) | Margin (dB) | Limit (dBµV/m) | Comment |
|-----------------|------------------|-----------------|-----------------|-------------|--------------|---------------|------------|-------------|----------------|---------|
| 1455.277994 | 11.4 | 100.0 | 100.000 | 100.0 | H | 204.0 | -5.9 | 42.6 | 54.0 | |
| 5863.923095 | 18.2 | 100.0 | 100.000 | 100.0 | V | 204.0 | 4.1 | 35.8 | 54.0 | |
| 8235.868084 | 23.0 | 100.0 | 100.000 | 100.0 | H | 262.0 | 8.8 | 31.0 | 54.0 | |

8.2.6 Hardware Set-up

| | |
|-------------------------|---|
| Subrange 1 | |
| Frequency Range: | 1 GHz - 10 GHz |
| Receiver: | ESU [ESU 26] @ GPIB0 (ADR 17), SN 100037/026, FW 4.43 |
| Signal Path: | 1_6_EN FW 1.0 Correction Table: 3_5m Correction Table: LNA_EN (matix) |
| Antenna: | BBHA 9120 B Correction Table (vertical): BBHA9120 Correction Table (horizontal): BBHA9120 Correction Table (vertical): Cable_Horn_EN (1103) Correction Table (horizontal): Cable_Horn_EN (1103) |
| Antenna Tower: | Generic Tripod [Generic Tripod] @ GPIB0 (ADR 19), SN ? |
| Turntable: | Turntable [EMCO Turntable] @ GPIB0 (ADR 9), FW REV 3.12 |

8.2.7 Signal strength calculation

Calculation formula:

$$SS = U_R + CL + AF + PA + DC$$

List of abbreviations:

| | | |
|-------|---|---|
| SS | ▶ | signal strength |
| U_R | ▶ | voltage at the receiver |
| CL | ▶ | loss of the cable and gain of the preamp |
| AF | ▶ | antenna factor |
| DC | ▶ | distance correction (results measured on 5 m calculated to 3 m) |

List with correction factors:

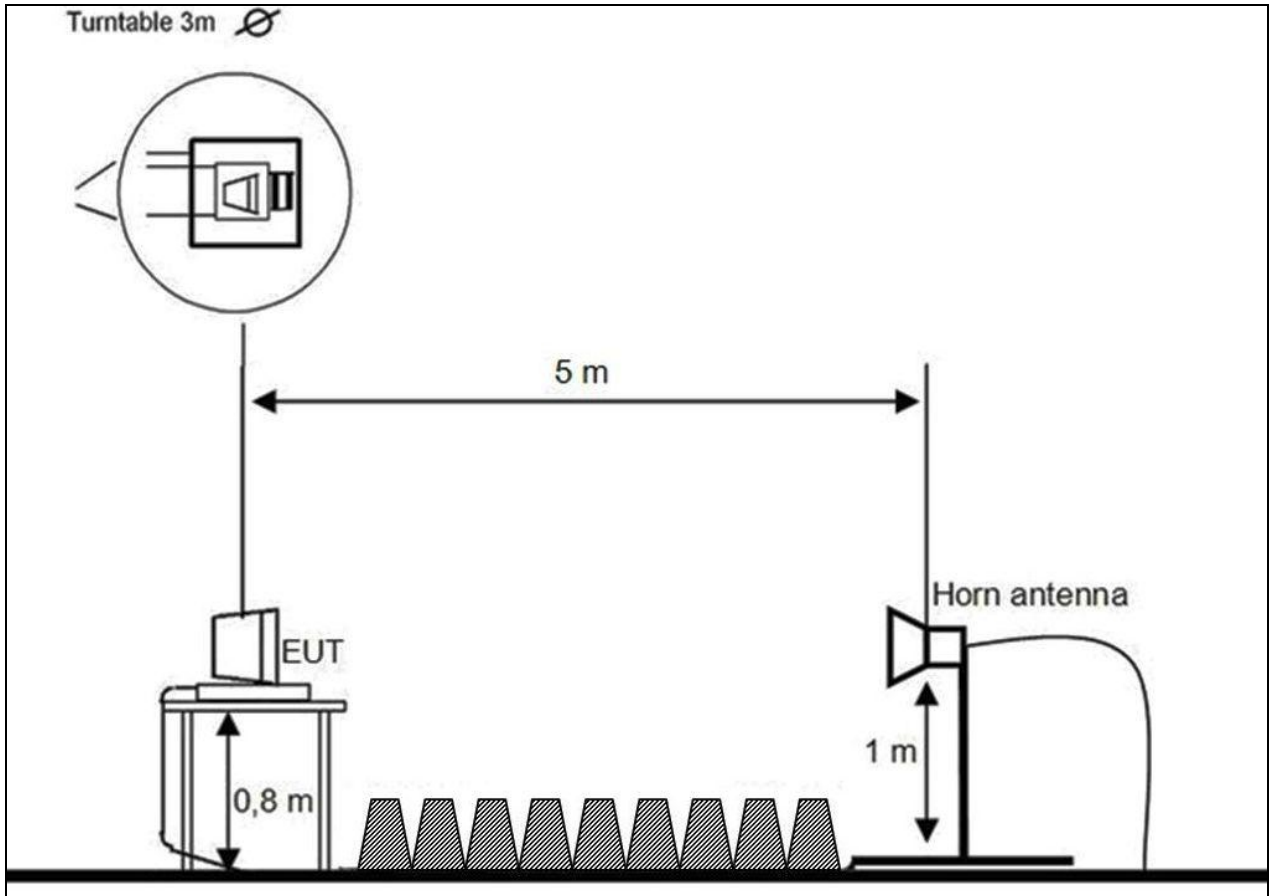
| Frequency [GHz] | CL [dB] | AF [dB μ V/m] | DC [dB] |
|-----------------|---------|-------------------|---------|
| 1,000 | -35,50 | 26,20 | 4,40 |
| 1,500 | -35,20 | 26,10 | 4,40 |
| 2,000 | -35,10 | 26,70 | 4,40 |
| 2,500 | -35,00 | 26,50 | 4,40 |
| 3,000 | -34,70 | 27,60 | 4,40 |
| 3,500 | -34,80 | 28,40 | 4,40 |
| 4,000 | -35,00 | 28,60 | 4,40 |
| 4,500 | -34,90 | 28,90 | 4,40 |
| 5,000 | -34,80 | 29,30 | 4,40 |
| 5,500 | -34,35 | 29,80 | 4,40 |
| 6,000 | -34,00 | 30,30 | 4,40 |
| 6,500 | -33,50 | 31,20 | 4,40 |
| 7,000 | -33,10 | 31,20 | 4,40 |
| 7,500 | -33,40 | 31,70 | 4,40 |
| 8,000 | -33,80 | 32,10 | 4,40 |
| 8,500 | -33,75 | 32,30 | 4,40 |
| 9,000 | -33,70 | 31,70 | 4,40 |
| 9,500 | -33,50 | 29,40 | 4,40 |
| 10,000 | -33,40 | 33,00 | 4,40 |

Example calculation:

For example at 4,000 000 000 GHz the measured Voltage (U_R) is 46,13 dB μ V/m, the loss of the cable (CL) is -35,00 dB, the antenna factor (AF) is 28,60 dB μ V/m and the distance correction (DC) is 4,40 dB the final result will be calculated:

$$SS \text{ [dB}\mu\text{V]} = 46,13 \text{ [dB}\mu\text{V/m]} + (-35,00) \text{ [dB]} + 28,60 \text{ [dB}\mu\text{V/m]} + 4,4 \text{ [dB]} = \underline{44,13 \text{ [dB}\mu\text{V/m]}} \text{ (160,88 } \mu\text{V/m)}$$

8.2.8 Test Set-up



9 Test equipment and ancillaries used for tests

To simplify the identification of the test equipment and/or ancillaries which were used, the reporting of the relevant test cases only refer to the test item number as specified in the table below.

| No. | Instrument/Ancillary | Manufacturer | Type | Serial-No. | Internal identification |
|--|---|-------------------------|-----------------------------|----------------|-------------------------|
| Radiated emission in chamber F | | | | | |
| F-1 | Control Computer | F+W | | FW0502032 | 300003303 |
| F-2 | Trilog-Antenna | Schwarzbeck | VULB 9163 | 9163-295 | --- |
| F-3a | Amplifier | Veritech Microwave Inc. | 0518C-138 | - / - | - / - |
| F-4b | Switch | HP | 3488A | - / - | 300000368 |
| F-5 | EMI Test receiver | R&S | ESCI | 100083 | 300003312 |
| F-6 | Turntable Interface-Box | EMCO / ETS-LINDGREN | Model 105637 | 44583 | 300003747 |
| F-7 | Tower/Turntable Controller | EMCO / ETS-LINDGREN | Model 2090 | 64672 | 300003746 |
| F-8 | Tower | EMCO / ETS-LINDGREN | Model 2175 | 64762 | 300003745 |
| F-9 | Ultra Notch-Filter Rejected band Ch. 62 | WRCD | | 9 | |
| Radiated immunity in chamber F | | | | | |
| F-10 | Control Computer | F+W | | FW0502032 | 300003303 |
| F-11 | Signal Generator | HP | 8665A | 2833A00112 | 300001373 |
| F-12 | RF-Amplifier | ar | 100W1000 M1 | 12951 | 300000529 |
| F-13 | Directional Coupler | ar | DC 3010 | 12708 | 300001428 |
| F-14 | Stacked Logper Antenna | Schwarzbeck | STLP9128 E | 9128 E 013 | 300003408 |
| F-15 | RF-Amplifier | ar | 60S1G3 | 313649 | 300003410 |
| F-15b | RF-Amplifier 0.8 – 4 GHz | BONN | BLMA 0840-2000/100D | 076820B | 300003783 |
| F-16 | Directional Coupler | ar | DC7144A | 312786 | 300003411 |
| F-17 | Horn Antenna | ar | AT 4002 | 19739 | 300000633 |
| F-18 | Power Meter | R&S | NRV | 860327/024 | F033 |
| F-19 | Power sensor | R&S | URV5-Z2 | 839080/005 | 300002844.02 |
| F-20 | Power sensor | R&S | URV5-Z2 | 830755/057 | F032 |
| Harmonics and flicker in front of chamber F | | | | | |
| F-21 | Flicker and Harmonics Test System | Spitzenberger & Spies | PHE4500/B I PHE4500/B II | B5983 B5984 | 300000210 |
| F-28 | Power Supply | Hewlett Packard | 6032 A | 2920 A 04466 | 300000580 |
| Radiated emission in chamber F > 1GHz | | | | | |
| F-29 | Horn antenna | Schwarzbeck | BBHA 9120 B | 9120B188 | 300003896 |
| F-30 | Amplifier | ProNova | 0518C-138 | 005 | F 024 |
| F-31 | Amplifier | Miteq | 42-00502650-28-5A | 1103782 | 300003379 |
| F-32 | Horn antenna | Emco | 3115 | 9709-5289 | 300000213 |
| F-33 | Spectrum Analyzer | R&S | ESU26 | 100037 | 300003555 |
| F-34 | Loop antenna | EMCO | 6502 | 8905-2342 | 300000256 |

| No. | Instrument/Ancillary | Manufacturer | Type | Serial-No. | Internal identification |
|--|-------------------------------------|-----------------|----------------|-------------|-------------------------|
| Conducted emission in chamber G | | | | | |
| G-1 | EMI Receiver | Hewlett Packard | 8542 E | 3617A00170 | 300000568 |
| G-2 | V-ISN | Rohde & Schwarz | ESH 3-Z5 | 892475/017 | 300002209 |
| G-2a | V-ISN | Rohde & Schwarz | ESH 2-Z5 | 892602/024 | 300000587 |
| G-3 | 2-Wire ISN | Schaffner | ISN T200 | 19075 | 300003422 |
| G-4 | 4-Wire ISN | Schaffner | ISN T400 | 22325 | 300003423 |
| G-5 | Shielded wire ISN | Schaffner | ISN ST08 | 22583 | 300003433 |
| G-6 | Unshielded 8 wire ISN | Teseq | ISN T800 | 26113 | 300003833 |
| G-7 | Unshielded 8 wire ISN | Teseq | ISN T8-Cat. 6 | 26374 | 300003851 |
| G-8 | RF Current probe | FCC | F-33-4 | 46 | 300003257 |
| G-9 | V-ISN | Schaffner | ISN PLC-150 | 21579 | 300003318 |
| G-10 | V-ISN | Schaffner | ISN PLC-25-30 | 21584 | 300003319 |
| G-10a | PLC Filter | TESEQ | Filter PLC | 23436 | 300003598 |
| G-10b | Coupling unit 75 Ohm | Fiedler | AC | ---- | 300003272.04 |
| Conducted immunity in chamber G | | | | | |
| G-11 | Signal generator | R&S | SMG | 8610647025 | 300000204.01 |
| G-12 | RF-Amplifier | BONN | BSA 0125-75 | 066502-01 | 300003545 |
| G-13 | Power Meter | R&S | URV 5 | 837723/025 | 300002844.01 |
| G-14 | Power Sensor | R&S | URV 5-Z2 | 832874/021 | 300002239 |
| G-15 | Directional coupler | emv | DC 2000 | 9401-1677 | 300000592 |
| G-16 | Attenuator 6dB | Alan | 50HP6-100 N | 121048 0348 | 300003148 |
| G-17 | EM-Injection Clamp | FCC | 203i | 232 | 300000626 |
| G-18 | CDN | FCC | FCC-801-M3-16 | 237 | 300000627 |
| G-19 | CDN | FCC | FCC-801-T2 | 78 | 300000629 |
| G-20 | CDN | FCC | FCC-801-AF 2 | 62 | 300000630 |
| G-21 | CDN | FCC | FCC-801-AF 4 | 61 | 300000631 |
| G-22 | CDN | FCC | FCC-801-M1 | 2027 | 300002761 |
| G-23 | CDN | Lüthi | CDN 801-M2/M3 | 9350105 | 300000534 |
| G-24 | Transformator for 50Hz Loop Antenna | EM-Test | MC2630 | 0200-10 | 300002659.01 |
| G-25 | 50Hz Loop Antenna | EM-Test | MS 100 | none | 300002659 |
| Surge, Burst, Dips and Interruptions in chamber G | | | | | |
| G-26 | Hybrid-Generator | EM-Test | UCS 500N5 | V112711033 | 300004257 |
| G-27 | Motor Variac | EM-Test | MV 2616 | 0600-01 | 300002658 |
| G-28 | Capacitive Coupling Clamp | MWB | KKS 100 | --- | 300000589 |
| G-29a | Coupling Decoupling Network | EMC-Partner | CDN-2000-06-32 | 158 | 300004108 |
| G-29 | Coupling Decoupling Network | EMC-Partner | CDN-UTP | 00014 | 300003226 |
| ESD in chamber G | | | | | |
| G-30 | ESD generator | Schaffner | NSG 435 | 308 | 300002249 |
| Emission on bench in chamber G | | | | | |
| G-31 | Absorbing Clamp | R&S | MDS-21 | 832 231/006 | 300000527 |
| generic in chamber G | | | | | |
| G-32 | power supply | Hewlett Packard | 6038A | 2848A06673 | 300001512 |

10 Observations

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

Annex A: Photographs of the test set-up

Photo 1: setup of radiated emission < 1 GHz

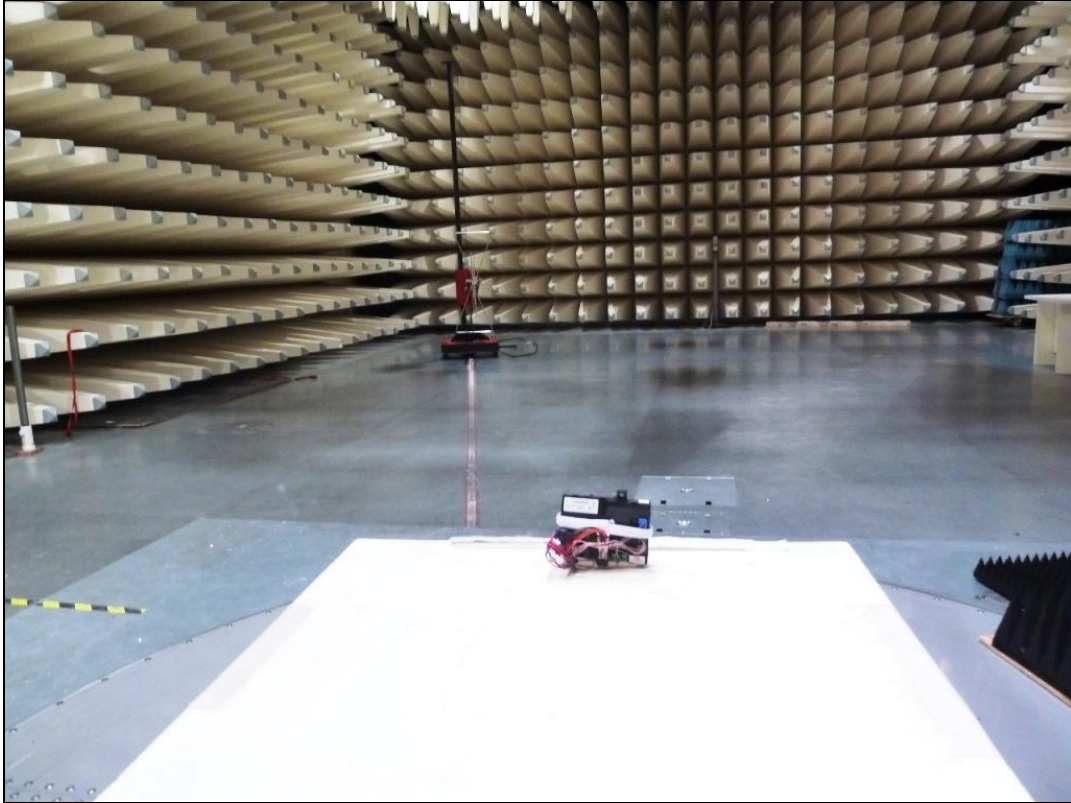


Photo 2: setup of radiated emission 1 – 10 GHz

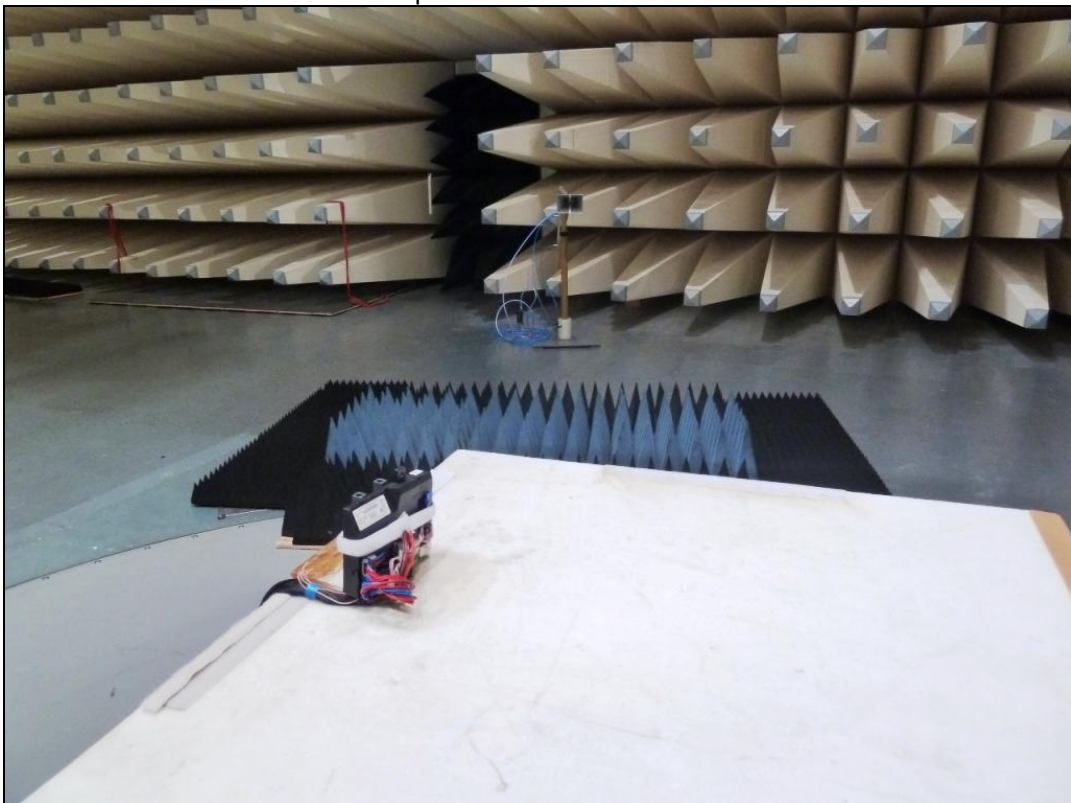
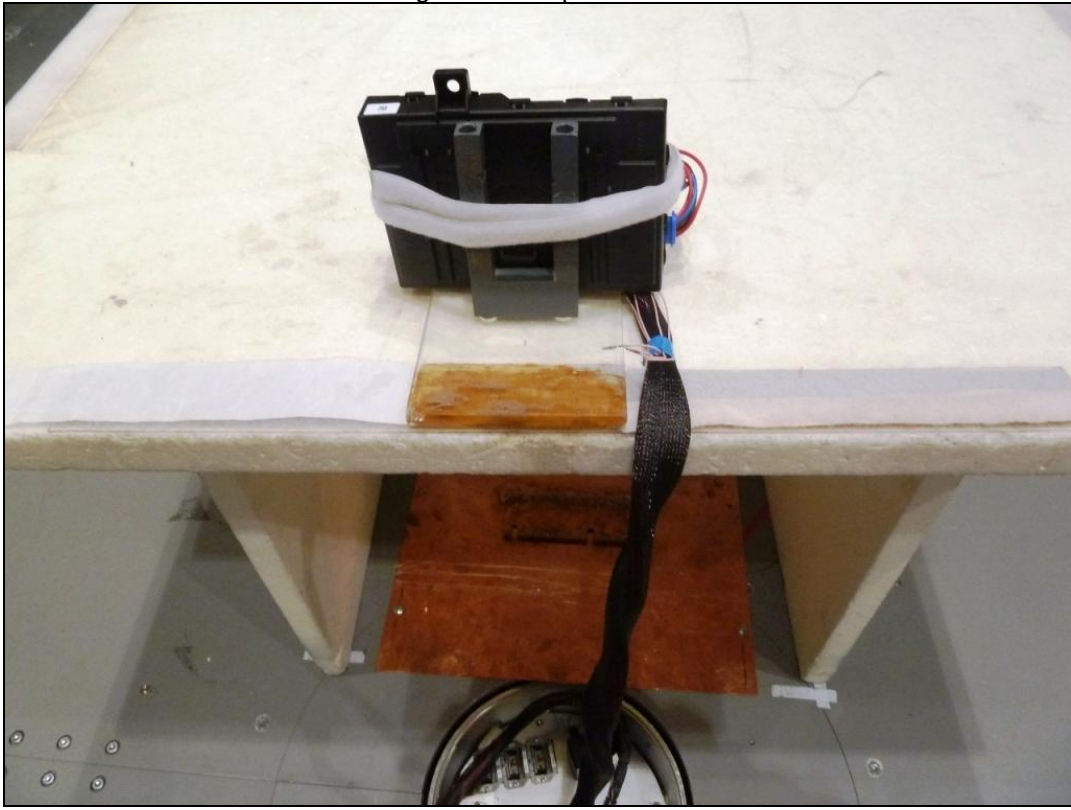


Photo 3: wiring of the setup of radiated emission



Annex B: Photographs of the EUT

Photo 4: EUT A



Photo 5: EUT A label



Photo 6: EUT A pcb top

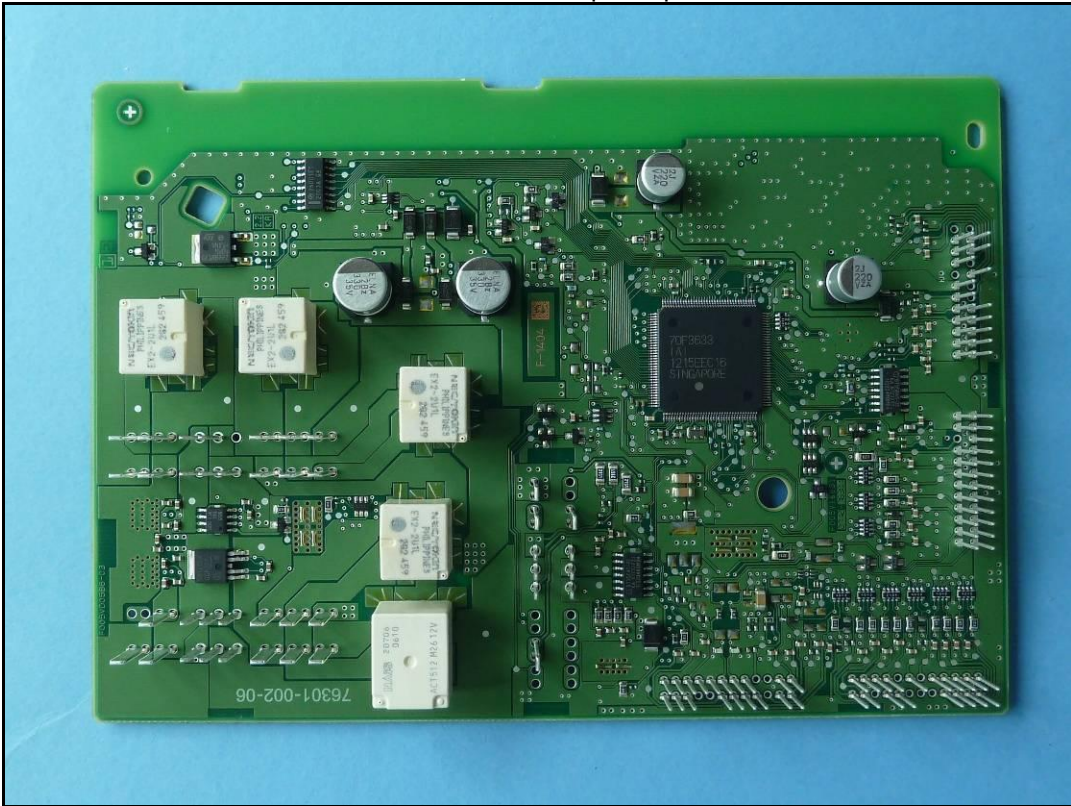


Photo 7: EUT A pcb bottom

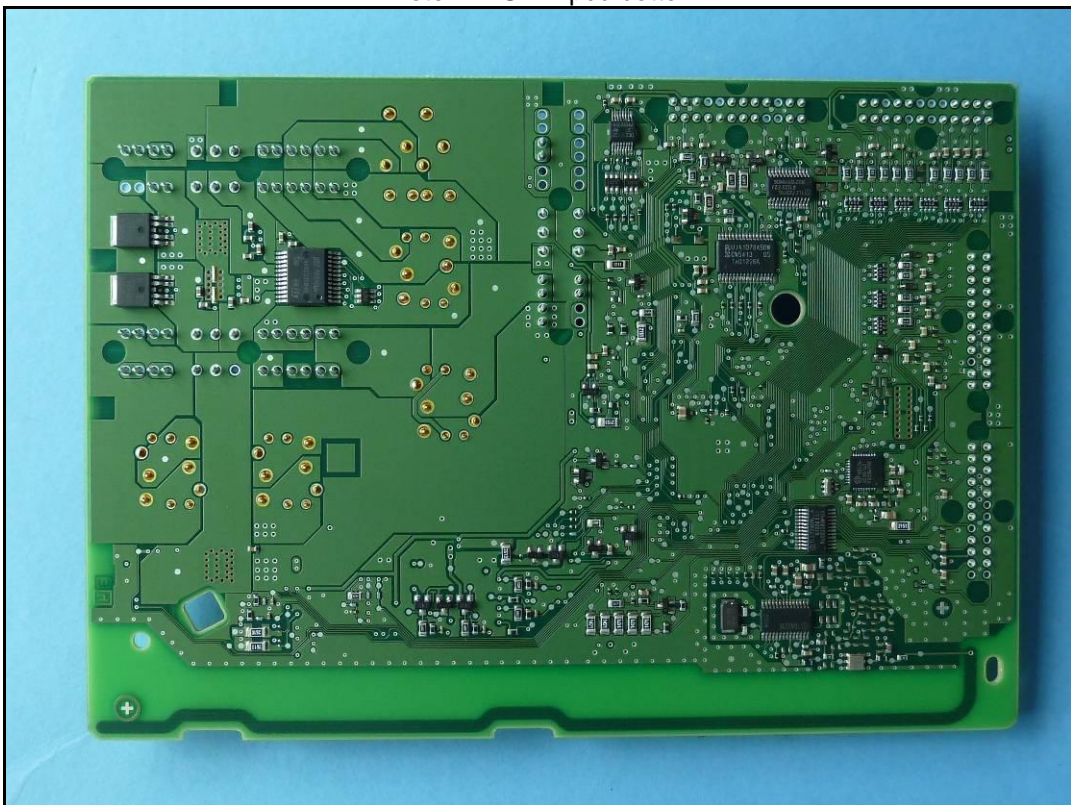


Photo 8: EUT A enclosure

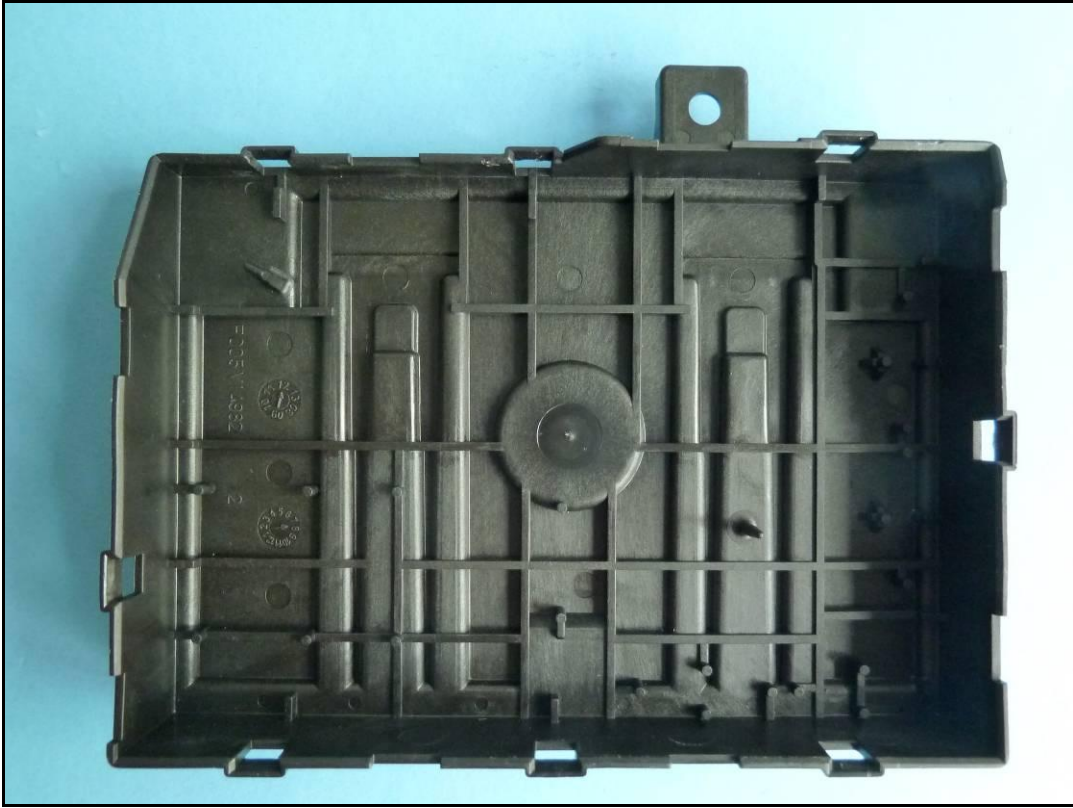
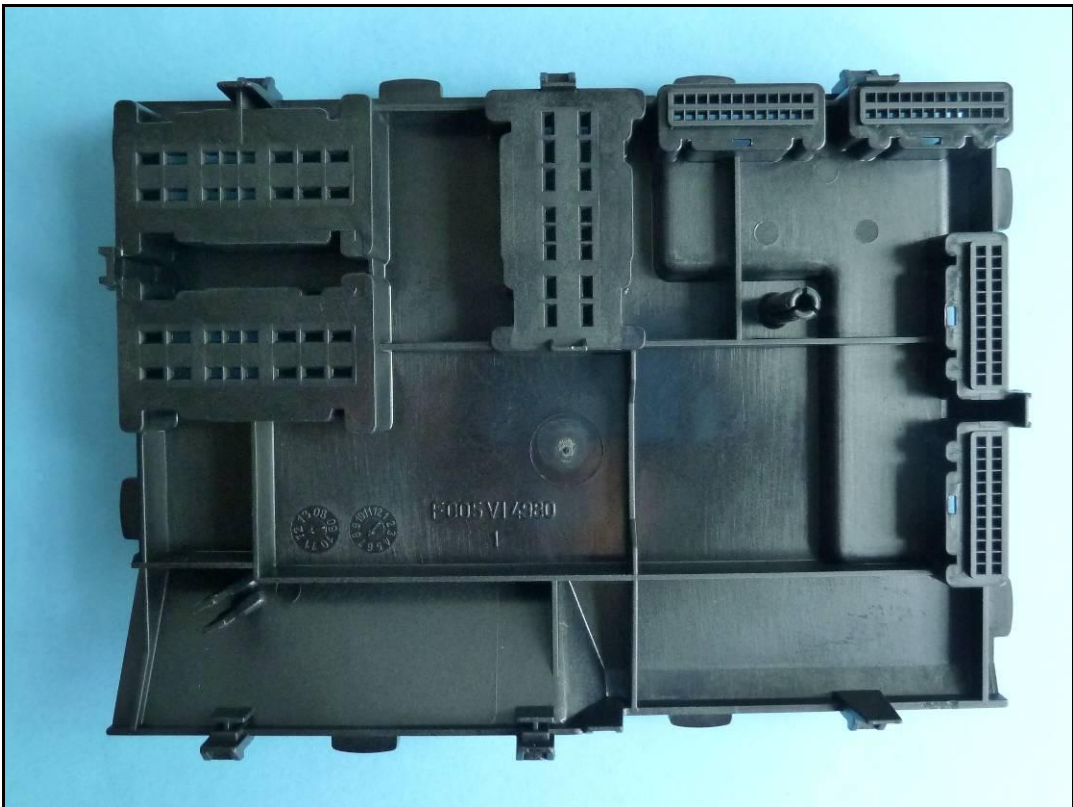


Photo 9: EUT A enclosure



Annex C: Document history

| Version | Applied changes | Date of release |
|---------|-----------------|-----------------|
| -/- | Initial release | 2013-01-02 |

Annex D: Further information**Glossary**

| | | |
|----------|---|----------------------------------|
| DUT | - | Device under Test |
| EMC | - | Electromagnetic Compatibility |
| EUT | - | Equipment under Test |
| FCC | - | Federal Communication Commission |
| FCC ID | - | Company Identifier at FCC |
| HW | - | Hardware |
| IC | - | Industry Canada |
| Inv. No. | - | Inventory number |
| N/A | - | not applicable |
| S/N | - | Serial Number |
| SW | - | Software |