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

TEST REPORT

Test report no.: 1-7809/14-01-02

Deutsche
Akkreditierungsstelle
D-PL-12076-01-01

Testing laboratory

CETECOM ICT Services GmbH

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Internet: <http://www.cetecom.com>e-mail: 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-12076-01-01

Area of Testing:

Radio Communications & EMC (RCE)

Applicant

Swissphone Wireless AG

Fälmisstrasse 21

8833 Samstagern / SWITZERLAND

Phone: +41 4 47 86 77 42

Fax: +41 4 47 86 77 71

Contact: Thomas Minder

e-mail: Thomas.minder@swissphone.com

Phone: +41 4 47 86 75 42

Manufacturer

Swissphone Wireless AG

Fälmisstrasse 21

8833 Samstagern / SWITZERLAND

Test standard/s

47 CFR Part 90

Title 47 of the Code of Federal Regulations; Chapter I
Part 90 - Land mobile services

RSS - 119 Issue 9

Land Mobile and Fixed Radio Transmitters and Receivers, Operating in the
Frequency Range 27.41 - 960 MHz

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

Test Item

Kind of test item: One way paging Transmitter UHF 400-470 MHz**Model name:** I.SITE III UHF**FCC ID:** L3M-ISITEIIIUHF**IC:** 4404A-ISITEIIIUHF

Frequency: 450 MHz – 470 MHz

Technology tested: Proprietary system

Antenna: External, HF-Power connector Type N

Power supply: 115 V AC

Temperature range: +23°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:

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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:	2014-03-20
Date of receipt of test item:	2014-06-16
Start of test:	2014-06-16
End of test:	2014-06-23
Person(s) present during the test:	-/-

3 Test standard/s

Test standard	Date	Test standard description
47 CFR Part 90	01.10.2010	Title 47 of the Code of Federal Regulations; Chapter I Part 90 - Land mobile services
RSS - 119 Issue 9	01.06.2007	Land Mobile and Fixed Radio Transmitters and Receivers, Operating in the Frequency Range 27.41 - 960 MHz

4 Test environment

Temperature:	T_{nom}	+22 °C during room temperature tests
	T_{max}	-/- °C during high temperature tests
	T_{min}	-/- °C during low temperature tests
Relative humidity content:		54 %
Barometric pressure:		not relevant for this kind of testing
Power supply:	V_{nom}	115 V AC
	V_{max}	-/- V
	V_{min}	-/- V

5 Test item

Kind of test item	:	One way paging Transmitter UHF 400-470 MHz
Type identification	:	I.SITE III UHF
S/N serial number	:	C201408.00329
HW hardware status	:	Index B0
SW software status	:	2.0.0.1
Frequency band [MHz]	:	450 MHz – 470 MHz
Type of radio transmission	:	Single carrier
Use of frequency spectrum	:	
Type of modulation	:	DFSK
Number of channels	:	99
Antenna	:	External, HF-Power connector Type N
Power supply	:	115 V AC
Temperature range	:	+23 °C

6 Test laboratories sub-contracted

None

6.1 Additional comments

Reference documents: None

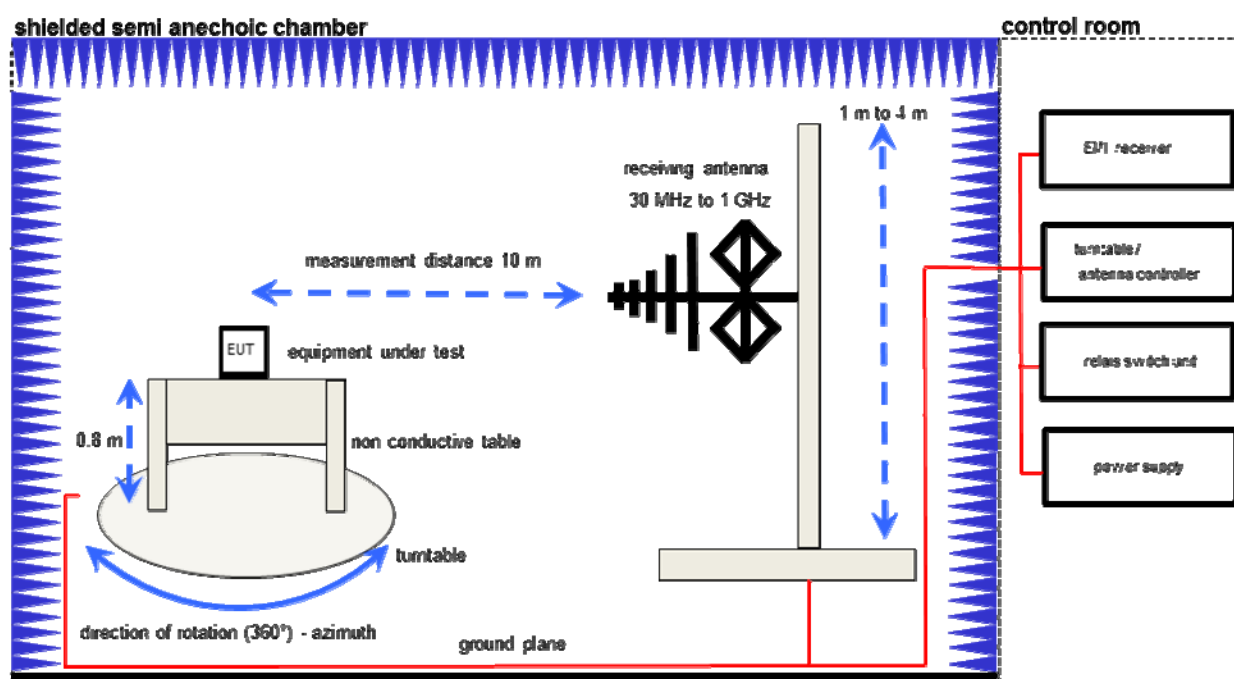
Special test descriptions: None

Configuration descriptions: None

7 Description of the test setup

7.1 Radiated measurements chamber F

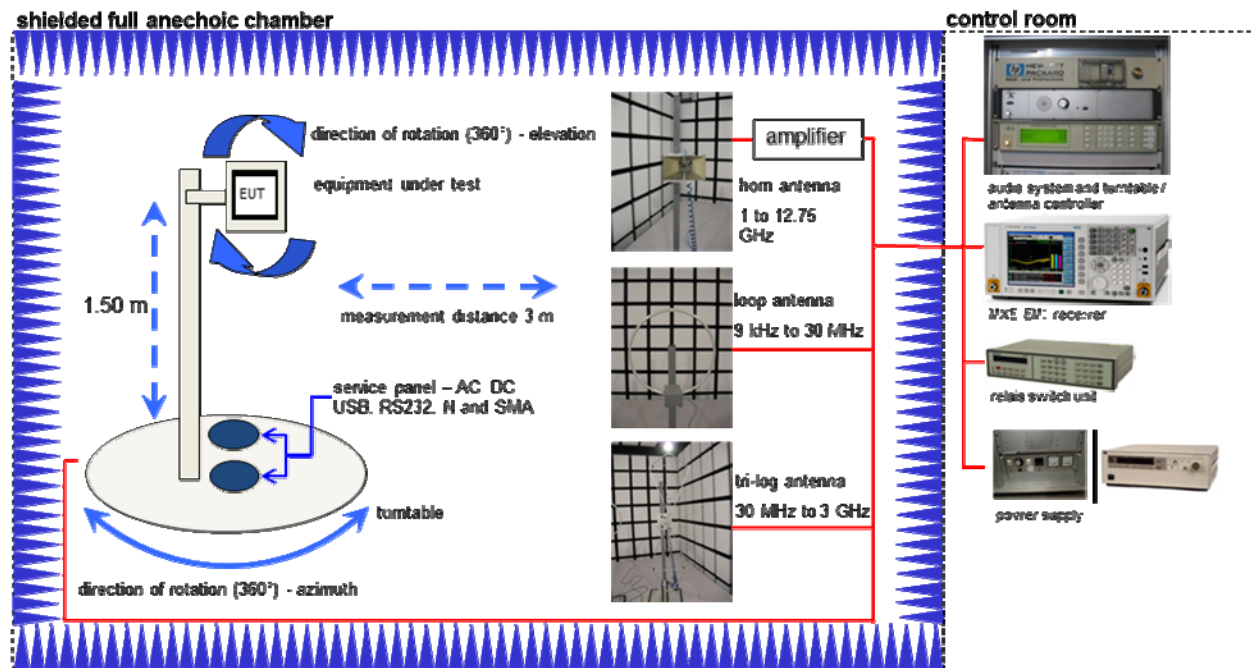
The radiated measurements are performed in vertical and horizontal plane in the frequency range from 9 kHz to 1 GHz in semi-anechoic chambers. The EUT is positioned on a non-conductive support with a height of 0.80 m above a conductive ground plane that covers the whole chamber. The receiving antennas 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 Meßtechnik	2719A14505	300000368
DC power supply, 60Vdc, 50A, 1200 W	6032A	HP Meßtechnik	2920A04466	300000580
EMI Test Receiver	ESCI 3	R&S	100083	300003312
Amplifier	JS42-00502650-28-5A	MITEQ	1084532	300003379
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

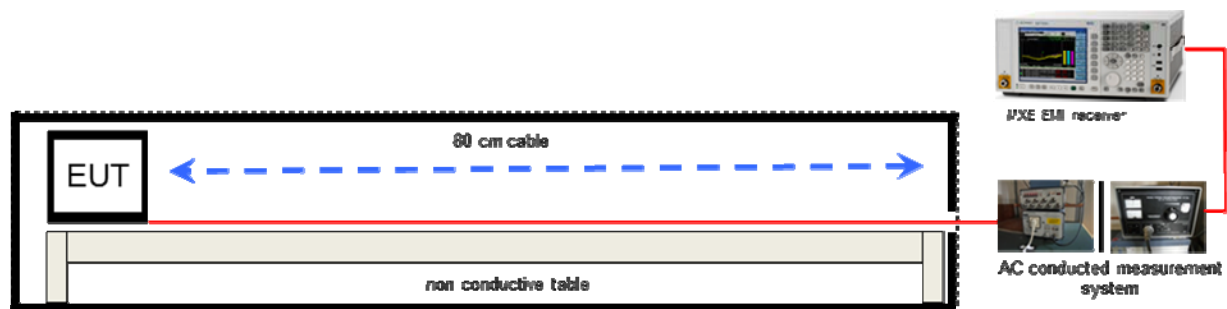
7.2 Radiated measurements chamber C



Equipment table:

Equipment	Type	Manufacturer	Serial No.	INV. No Cetecom
MXE EMI Receiver 20 Hz bis 26,5 GHz	N9038A	Agilent Technologies	MY51210197	300004405
TRILOG Broadband Test-Antenna 30 MHz - 3 GHz	VULB9163	Schwarzbeck	371	300003854
Band Reject filter	WRCG2400/2483-2375/2505-50/10SS	Wainwright	11	300003351
Highpass Filter	WHKX7.0/18G-8SS	Wainwright	18	300003789
Double-Ridged Waveguide Horn Antenna 1-18.0GHz	3115	EMCO	8812-3088	300001032
Active Loop Antenna	6502	EMCO	8905-2342	300000256
Anechoic chamber	FAC 3/5m	MWB / TDK	87400/02	300000996
Switch / Control Unit	3488A	HP Meßtechnik	*	300000199
Switch / Control Unit	3488A	HP Meßtechnik	2719A15013	300001156
Isolating Transformer	MPL IEC625 Bus Regeltrenntravo	Erfi	91350	300001155
Three-Way Power Splitter, 50 Ohm	11850C	HP Meßtechnik		300000997
Amplifier	js42-00502650-28-5a	Parzich GMBH	928979	300003143

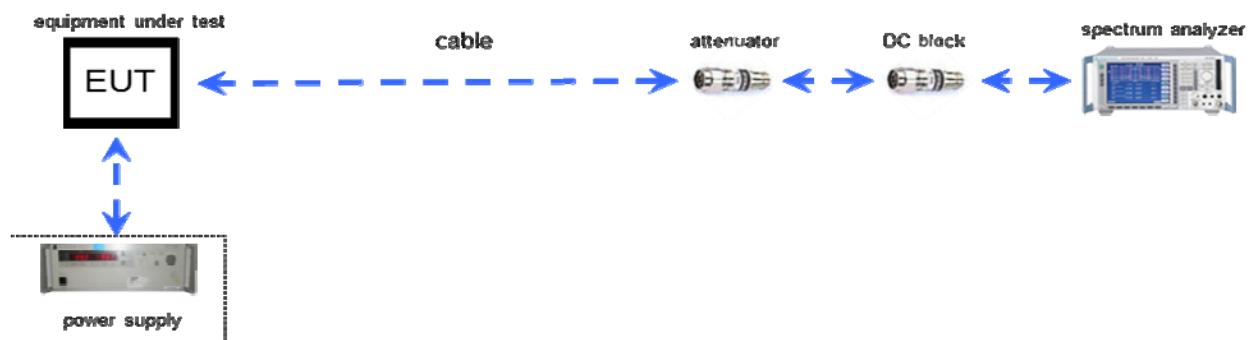
7.3 AC conducted



Equipment table:

Equipment	Type	Manufacturer	Serial No.	INV. No Cetecom
MXE EMI Receiver 20 Hz bis 26,5 GHz	N9038A	Agilent Technologies	MY51210197	300004405
Isolating Transformer	MPL IEC625 Bus Regeltrenntravo	Erft	91350	300001155
Switch / Control Unit	3488A	HP Meßtechnik	*	300000199
Switch / Control Unit	3488A	HP Meßtechnik	2719A15013	300001168
Artificial Mains 9 kHz to 30 MHz	ESH3-Z5	R&S	828576/020	300001210

7.4 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

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

TC Identifier	Description	Verdict	Date	Remark
RF-Testing	47 CFR Part 2 47 CFR Part 90 C RSS Gen Issue 2 RSS 119 Issue 11	Passed	2014-06-25	Only reduced tests according customer demand

Test Specification Clause	Test Case	Temperature Conditions	Power Source Voltages	Pass	Fail	NA	NP	Results (max.)
FCC 47 CFR § 2.1046 § 90.205 RSS 119 Issue 11 5.4	Transmitter output power	Nominal	Nominal	☒	☐	☐	☐	complies
FCC 47 CFR § 2.1047 § 90.211 (a) RSS 119 Issue 11 5.8.1	Audio frequency filter response	Nominal	Nominal	☐	☐	☒	☐	Only for analog modulated systems
FCC 47 CFR § 2.1047 (b) § 90.211 (a) RSS 119 Issue 11 5.8.1	Transmitter modulation limiting	Nominal	Nominal	☐	☐	☒	☐	Only for analog modulated systems
FCC 47 CFR § 90.20 (j)(3)	Spectrum efficiency	Nominal	Nominal	☐	☐	☐	☒	
FCC 47 CFR § 2.1049 (c) § 90.210 (d) RSS 119 Issue 11 5.8	Occupied bandwidth	Nominal	Nominal	☐	☐	☐	☒	
FCC 47 CFR § 90.214 RSS 119 Issue 11 5.9	Transient frequency behaviour	Nominal	Nominal	☐	☐	☐	☒	
FCC 47 CFR § 2.1055 (a)(1) § 90.213 RSS 119 Issue 11 5.3	Frequency stability	Nominal	Extreme	☐	☐	☐	☒	
		Extreme	Nominal	☐	☐	☐	☒	

FCC 47 CFR § 2.1051 § 90.210 RSS 119 Issue 11 5.8.9.2	Transmitter spurious emissions conducted	Nominal	Nominal	☐	☐	☐	☒	
FCC 47 CFR § 2.1051 § 90.210 RSS 119 Issue 11 5.8.9.2	Transmitter spurious emissions (radiated)	Nominal	Nominal	☒	☐	☐	☐	complies
FCC 47 CFR § 15.209 RSS Gen Issue 2 Section 6	Receiver spurious emissions (radiated)	Nominal	Nominal	☒	☐	☐	☐	complies
§15.107(a) §15.207	Conducted emissions < 30 MHz	Nominal	Nominal	☒	☐	☐	☐	complies

Note: NA = Not Applicable; NP = Not Performed

9 Measurement results

9.1 Transmitter output power

Measurement:

Measurement parameter	
Detector:	RMS
Sweep time:	Auto
Resolution bandwidth:	1 MHz
Video bandwidth:	1 MHz
Span:	3 MHz
Trace-Mode:	Max. hold

Limits:

FCC	IC
CFR § 2.1046 CFR § 90.205	RSS 119 Issue 11 5.4
Maximum transmitter power shall be within ± 1.0 dB of the manufacturer's rated power	

Result:

Frequency (channel)	Radiated output power	
Rated output power by manufacturer	30 dBm / 1 W nominal	44 dBm / 25 W nominal
453.03125 MHz	30.59 dBm / 1.146 W	44.48 dBm / 28.05 W
460.01875 MHz	30.59 dBm / 1.146 W	44.51 dBm / 28.25 W
465.56875 MHz	30.56 dBm / 1.112 W	44.51 dBm / 28.25 W

Result: **Passed**

9.2 Audio frequency filter response

Not applicable

9.3 Transmitter modulation limiting

Not applicable

9.4 Spectrum efficiency

Not performed

9.5 Occupied bandwidth

Not performed

9.6 Transient frequency behaviour

Not performed

9.7 Frequency stability

Not performed

9.8 Transmitter spurious emissions conducted

Not performed

9.9 Transmitter spurious emissions (radiated)

Measurement:

Measurement parameter	
Detector:	Peak
Sweep time:	Auto
Resolution bandwidth:	f < 1 GHz : 100 kHz f ≥ 1GHz : 1 MHz
Video bandwidth:	f < 1 GHz : 100 kHz f ≥ 1GHz : 1 MHz
Span:	See plots
Trace-Mode:	Max. hold

Limits:

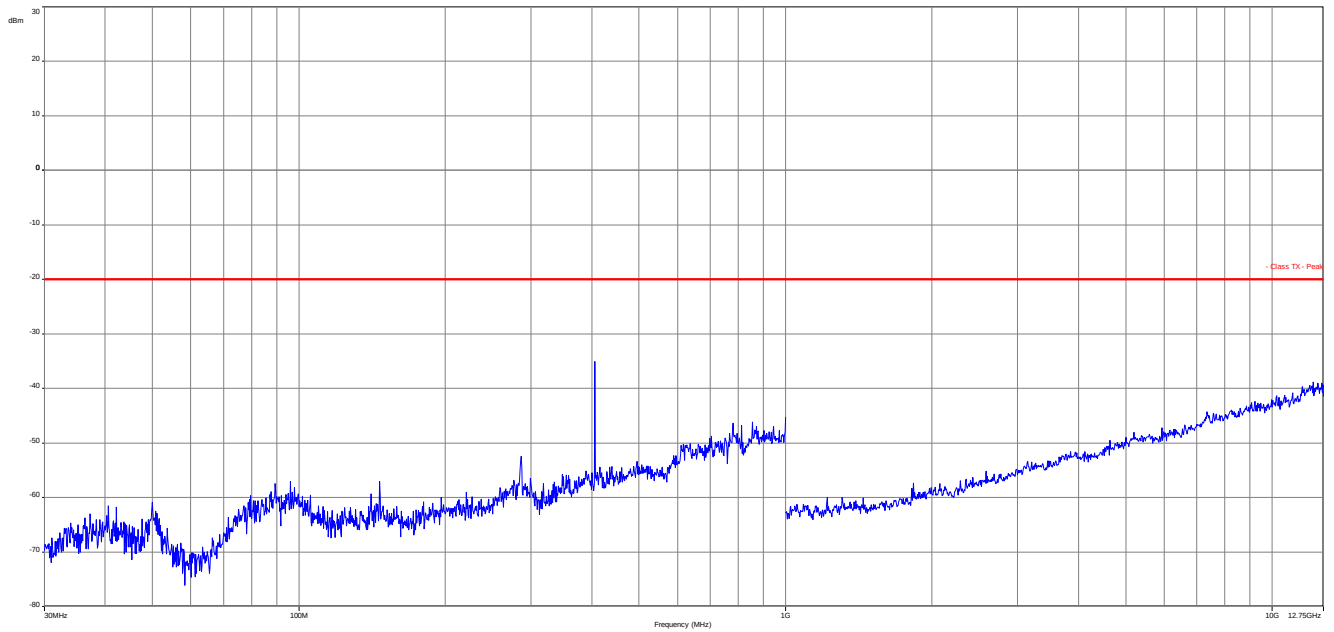
FCC	IC
FCC 47 CFR § 2.1051 § 90.210	RSS 119 Issue 11 5.8.9.2
Emission Mask D 12.5 kHz channel spacing 50 + 10Log ₁₀ (P _{Watts})	

Transmitter spurious emissions (dBm)								
Lowest channel			Middle channel			Highest channel		
Frequency	Detector	Level	Frequency	Detector	Level	Frequency	Detector	Level
All detected spurious emissions are more than 10 dB below the limit.			All detected spurious emissions are more than 10 dB below the limit.			All detected spurious emissions are more than 10 dB below the limit.		
Measurement uncertainty ± 3 dB								

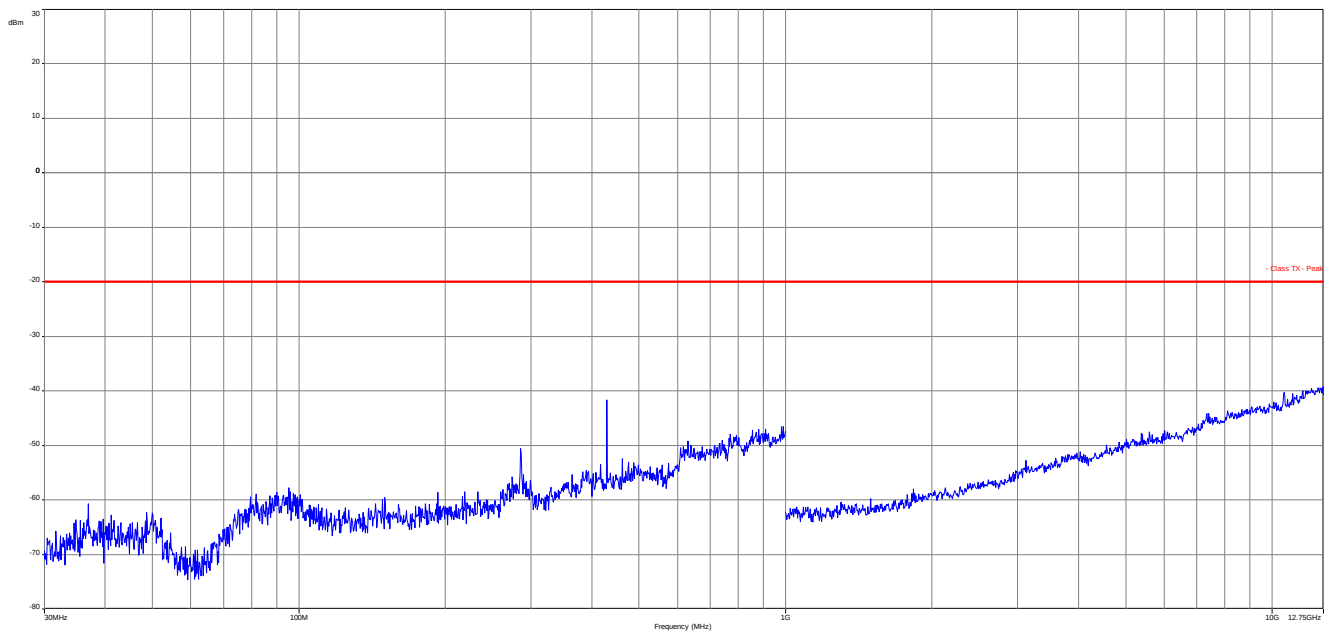
Result: **Passed**

Plots of the measurements (measured with dummy load)

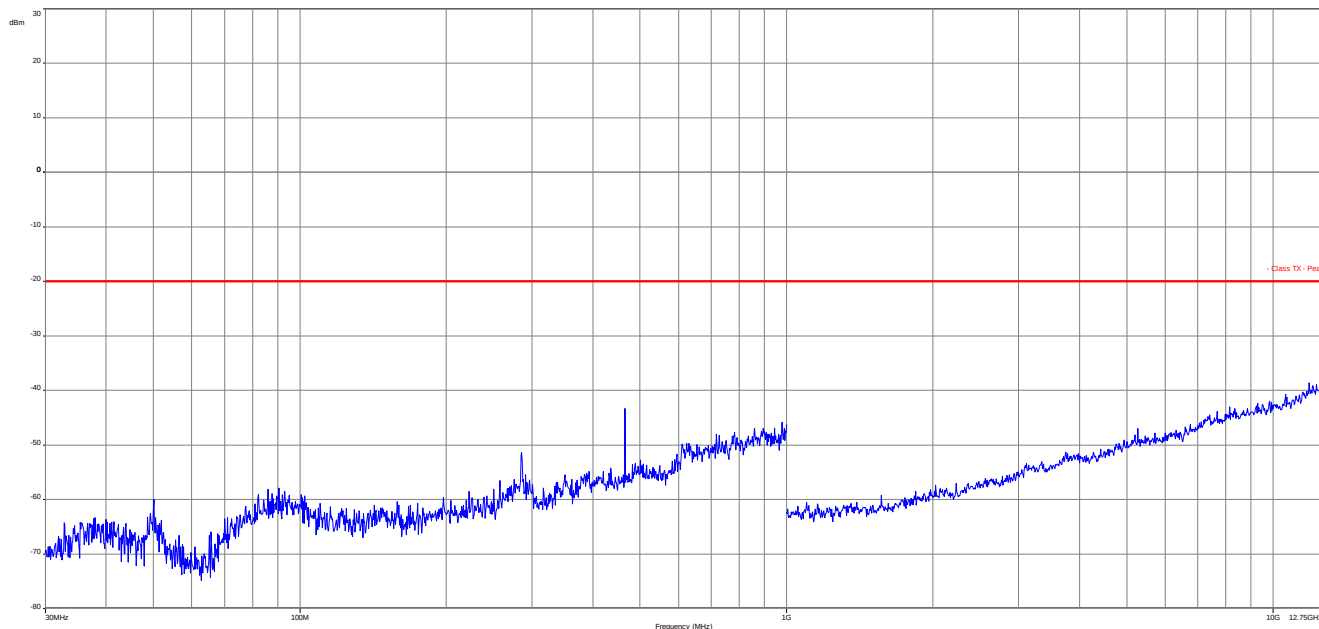
Plot 1: 30 MHz – 12.75 GHz, low channel, antenna vertical/horizontal, Low power



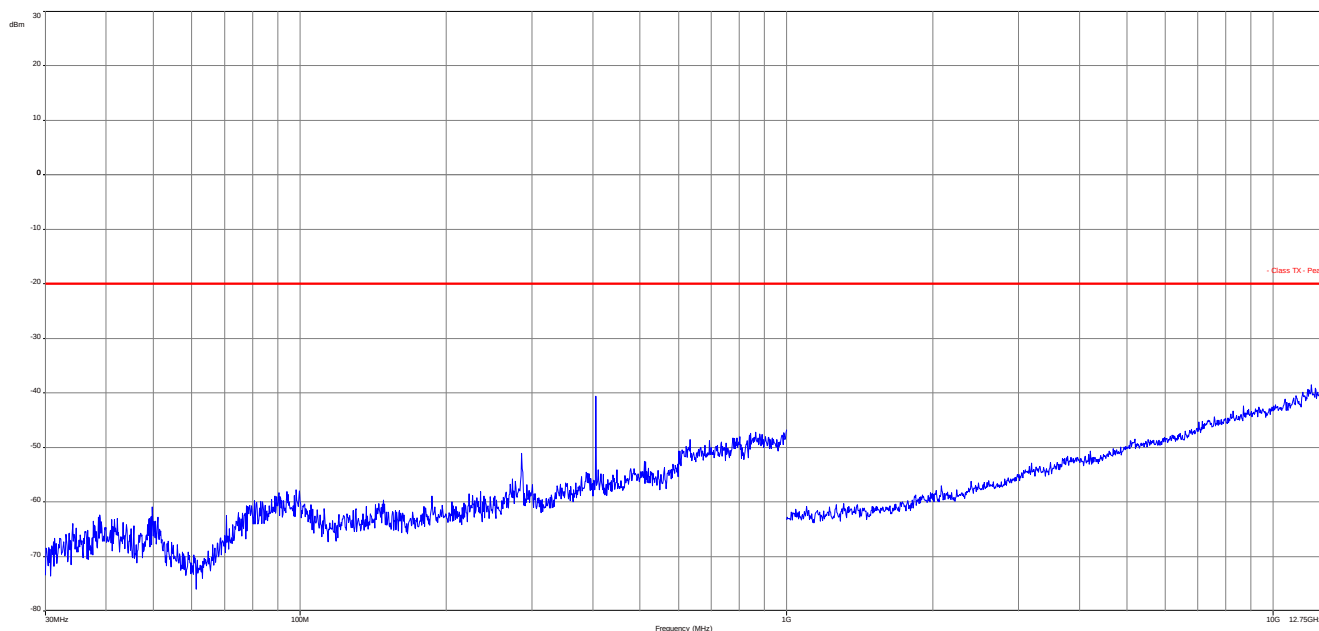
Plot 2: 30 MHz – 12.75 GHz, middle channel, antenna vertical/horizontal, Low power



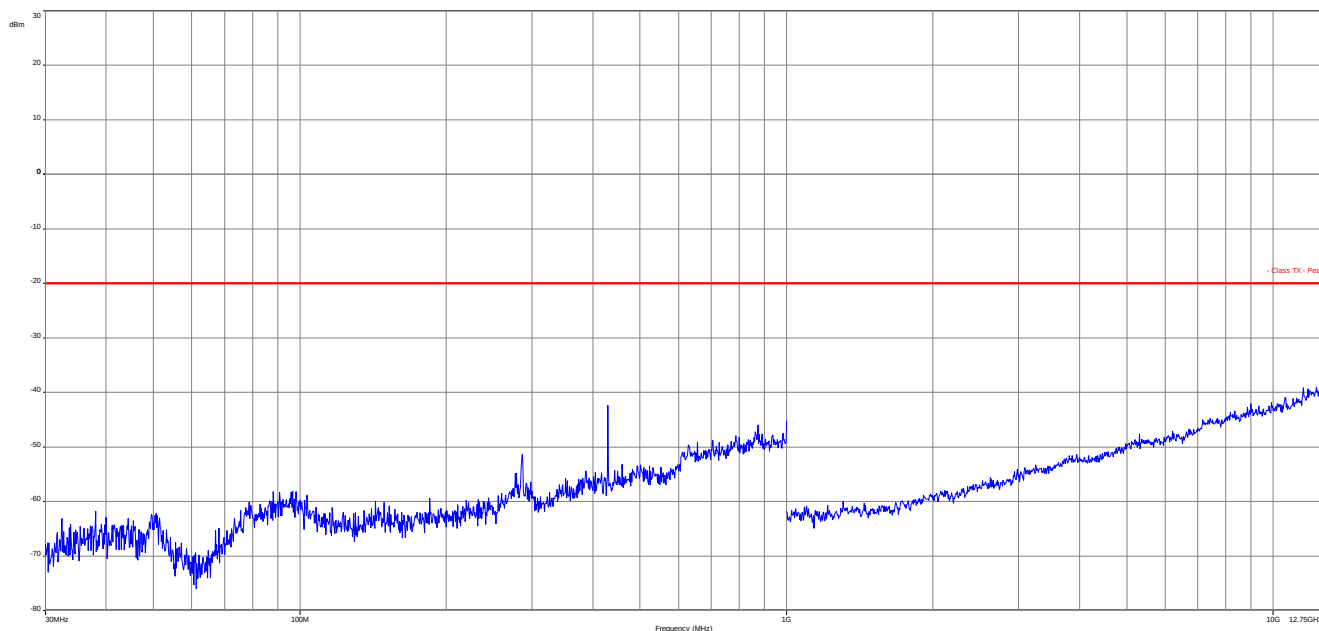
Plot 3: 30 MHz – 12.75 GHz, high channel, antenna vertical/horizontal, Low power



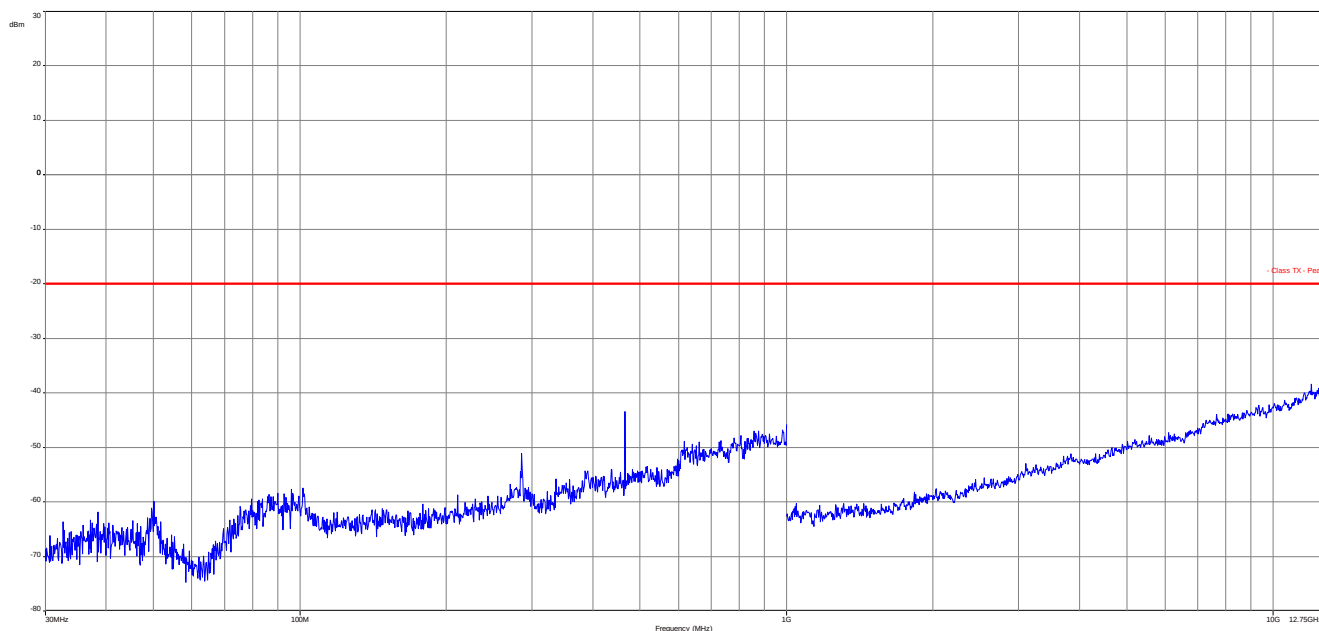
Plot 4: 30 MHz – 12.75 GHz, low channel, antenna vertical/horizontal, High power



Plot 5: 30 MHz – 12.75 GHz, middle channel, antenna vertical/horizontal, High power



Plot 6: 30 MHz – 12.75 GHz, high channel, antenna vertical/horizontal, High power



9.10 Spurious emissions radiated < 30 MHz

Description:

Measurement of the radiated spurious emissions in transmit mode below 30 MHz. The EUT is set to the middle channel. This measurement is representative for all channels and modes. If peaks are found channel low and channel high will be measured too. The measurement is performed with the data rate producing the highest output power. The limits are recalculated to a measurement distance of 3 m with 40 dB/decade according CFR Part 2.

Measurement:

Measurement parameter	
Detector:	Peak / Quasi Peak
Sweep time:	Auto
Video bandwidth:	F < 150 kHz: 200 Hz F > 150 kHz: 9 kHz
Resolution bandwidth:	F < 150 kHz: 1 kHz F > 150 kHz: 100 kHz
Span:	9 kHz to 30 MHz
Trace-Mode:	Max Hold

Limits:

FCC		IC
TX Spurious Emissions Radiated < 30 MHz		
Frequency (MHz)	Field Strength (dB μ V/m)	Measurement distance
0.009 – 0.490	2400/F(kHz)	300
0.490 – 1.705	24000/F(kHz)	30
1.705 – 30.0	30	30

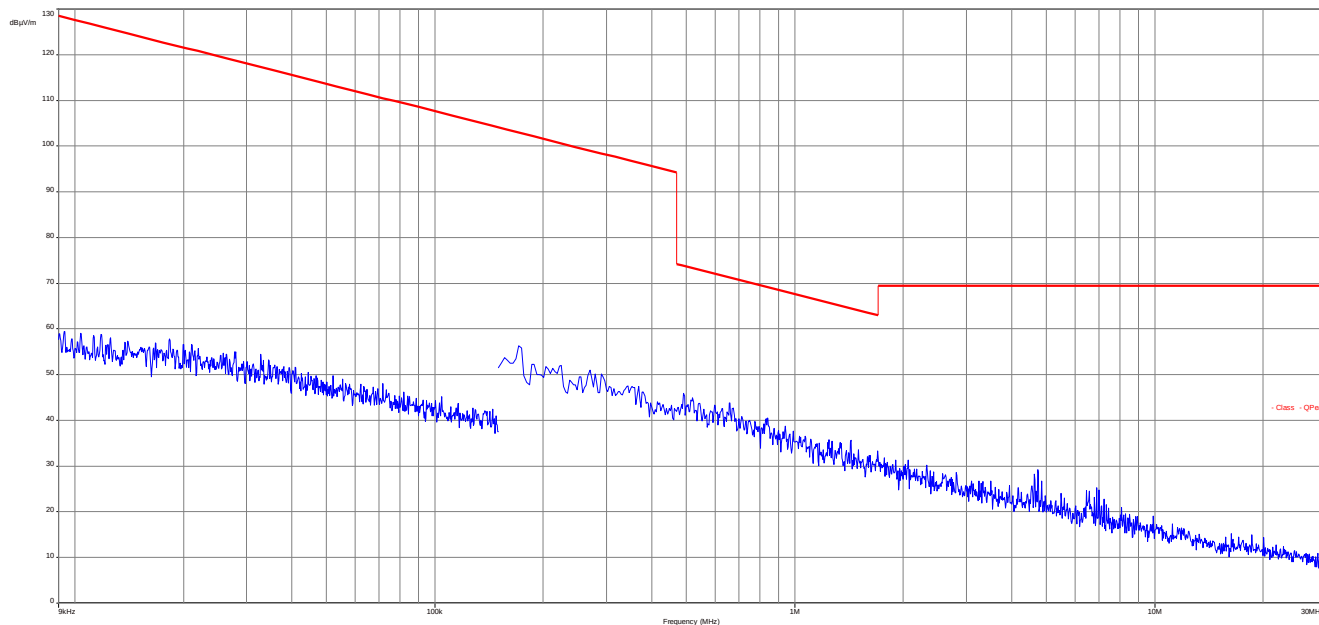
Results:

TX Spurious Emissions Radiated < 30 MHz [dB μ V/m]		
F [MHz]	Detector	Level [dB μ V/m]
No peaks detected.		
Measurement uncertainty	± 3 dB	

Result: Passed

Plots: TX mode

Plot 1: 9 kHz to 30 MHz



No EUT effected variation over all power settings and all used channels.

9.11 Receiver spurious emissions (radiated)

Measurement:

Measurement parameter	
Detector:	Peak
Sweep time:	Auto
Video bandwidth:	f < 1 GHz : 100 kHz f ≥ 1GHz : 1 MHz
Resolution bandwidth:	f < 1 GHz : 100 kHz f ≥ 1GHz : 1 MHz
Span:	See plots
Trace-Mode:	Max. hold

Limits:

FCC		IC	
FCC 47 CFR § 15.209		RSS-GEN Issue 2 Section 6	
Receiver Spurious Emission (radiated)			
Frequency (MHz)	Field strength (µV/m)	Measurement distance (m)	
30 - 88	100	3	
88 - 216	150	3	
216 - 960	200	3	
above 960	500	3	

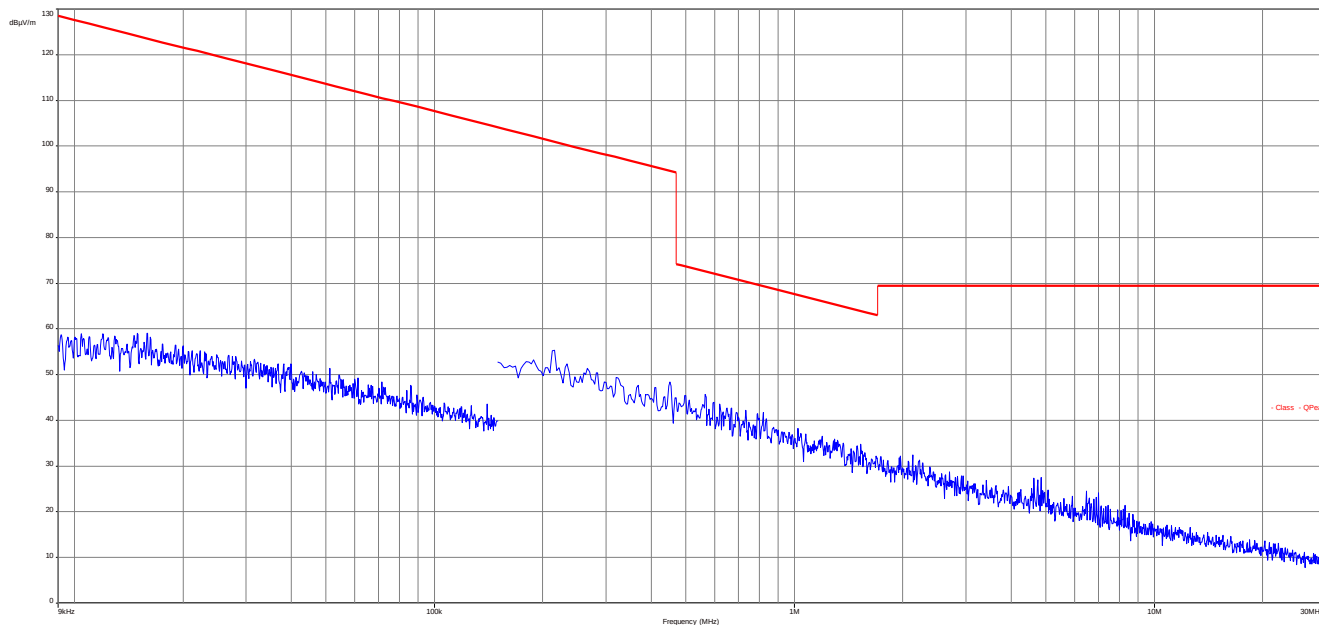
Values:

Frequency (MHz)	QuasiPeak (dBµV/m)	Limit (dBµV/m)	Margin (dB)	Meas. Time (ms)	Bandwidth (kHz)	Height (cm)	Pol	Azimuth (deg)	Corr. (dB)
45.567000	10.01	30.00	19.99	1000.0	120.000	140.0	V	266	13.8
52.668450	10.13	30.00	19.87	1000.0	120.000	139.0	V	267	13.2
75.844350	16.87	30.00	13.13	1000.0	120.000	268.0	V	333	9.2
216.728550	9.67	36.00	26.33	1000.0	120.000	269.0	V	304	12.3
499.401300	15.23	36.00	20.77	1000.0	120.000	314.0	V	91	18.7
759.470100	19.59	36.00	16.41	1000.0	120.000	100.0	H	166	22.7

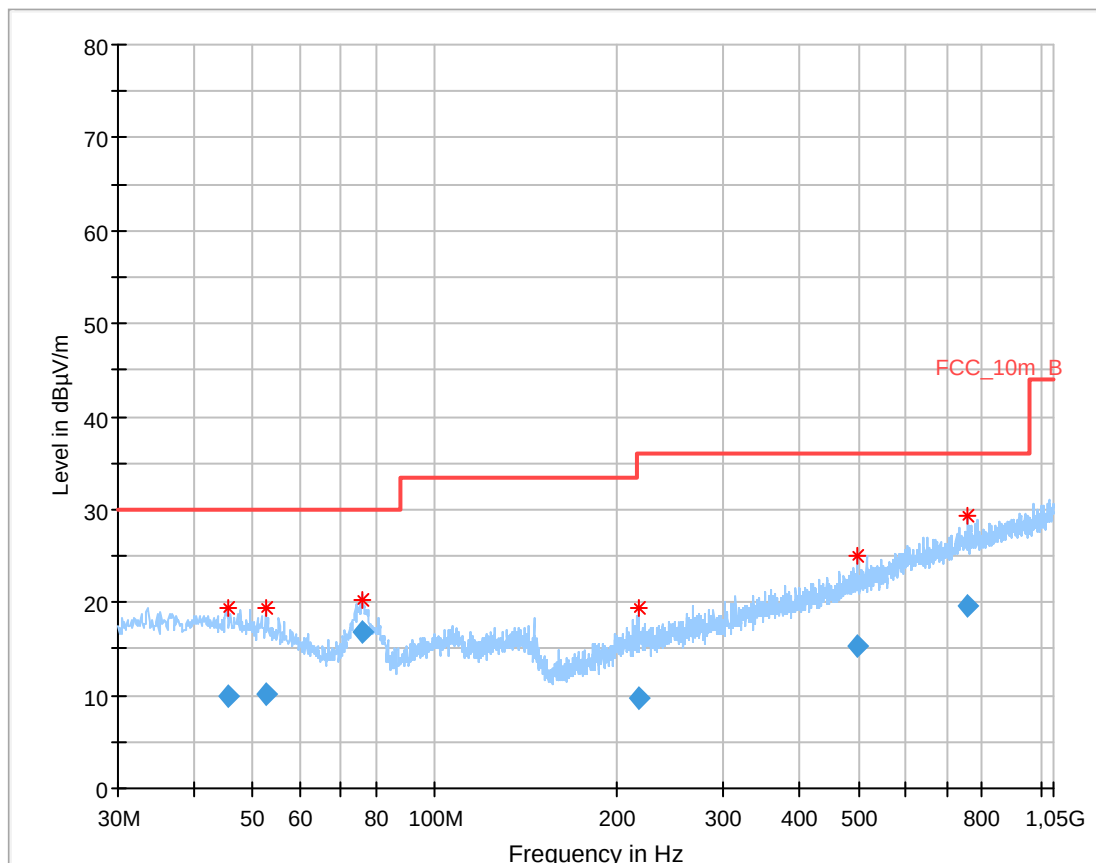
Result: **Passed**

Plots of the measurements

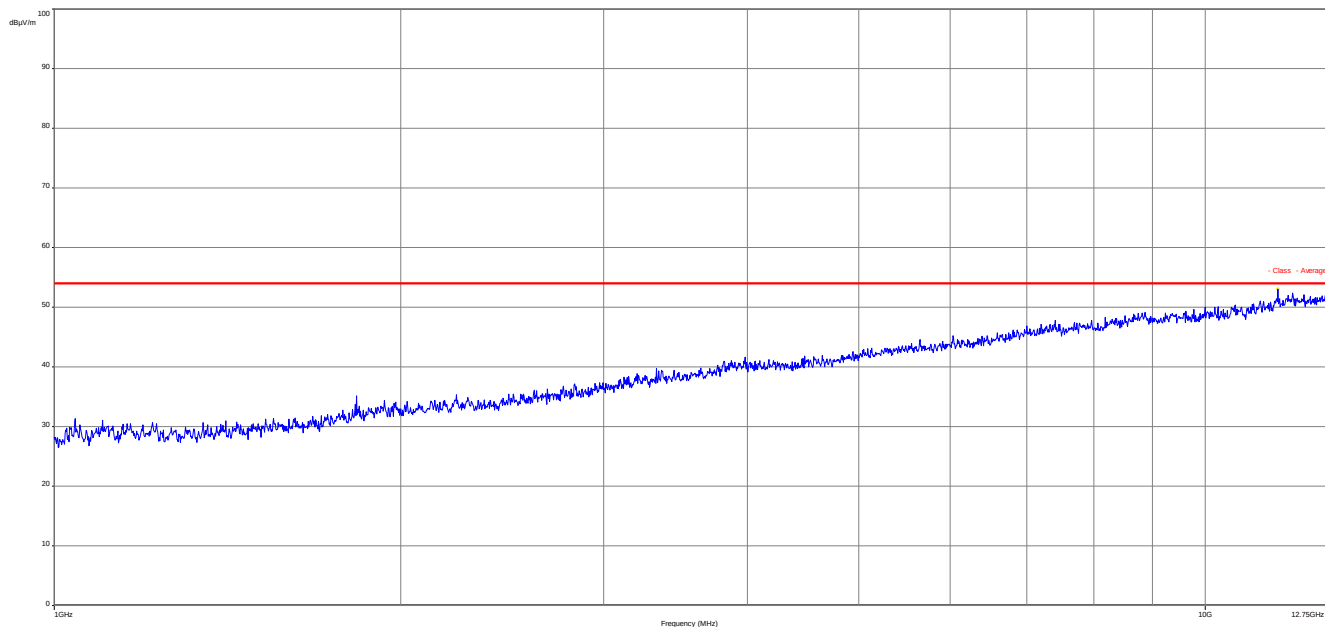
Plot 1: 150 kHz - 30 MHz



Plot 2: 30 MHz – 1 GHz



Plot 3: 1 GHz – 12.75 GHz, antenna vertical/horizontal



9.12 Spurious emissions conducted < 30 MHz

Description:

Measurement of the conducted spurious emissions in transmit mode below 30 MHz. The measurement is performed with the data rate producing the highest output power. Both power lines, phase and neutral line, are measured. Found peaks are remeasured with average and quasi peak detection to show compliance to the limits.

Measurement:

Measurement parameter	
Detector:	Peak - Quasi Peak / Average
Sweep time:	Auto
Video bandwidth:	F < 150 kHz: 200 Hz F > 150 kHz: 9 kHz
Resolution bandwidth:	F < 150 kHz: 1 kHz F > 150 kHz: 100 kHz
Span:	9 kHz to 30 MHz
Trace-Mode:	Max Hold

Limits:

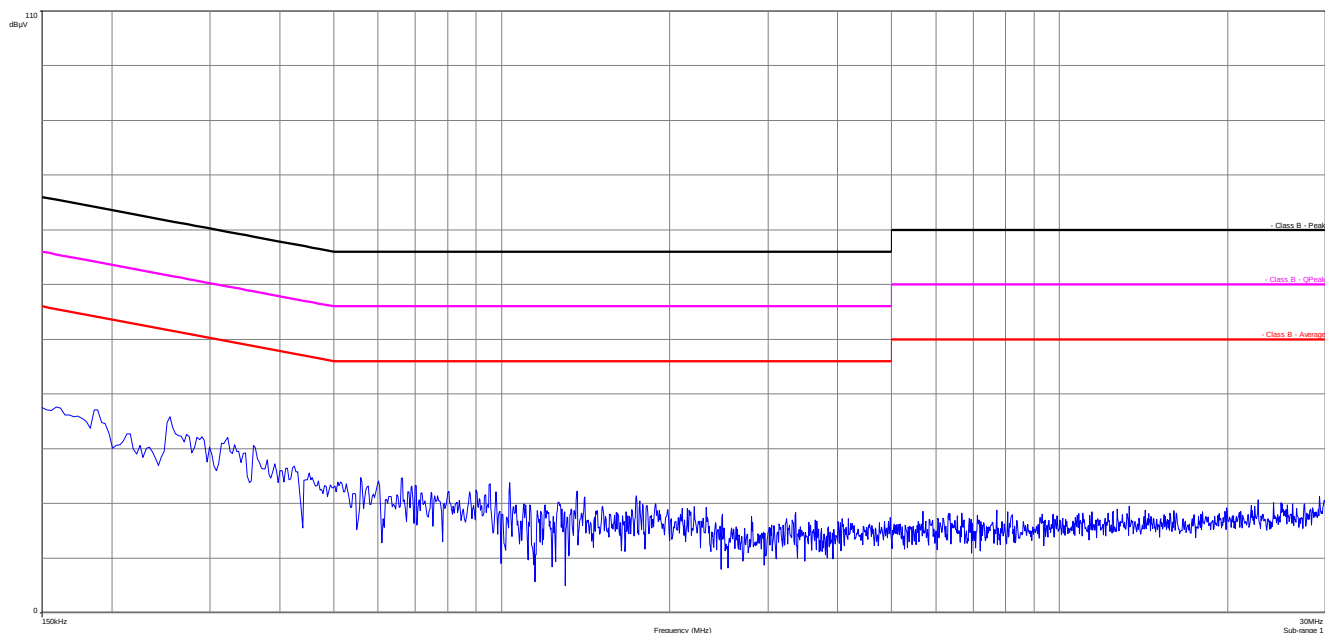
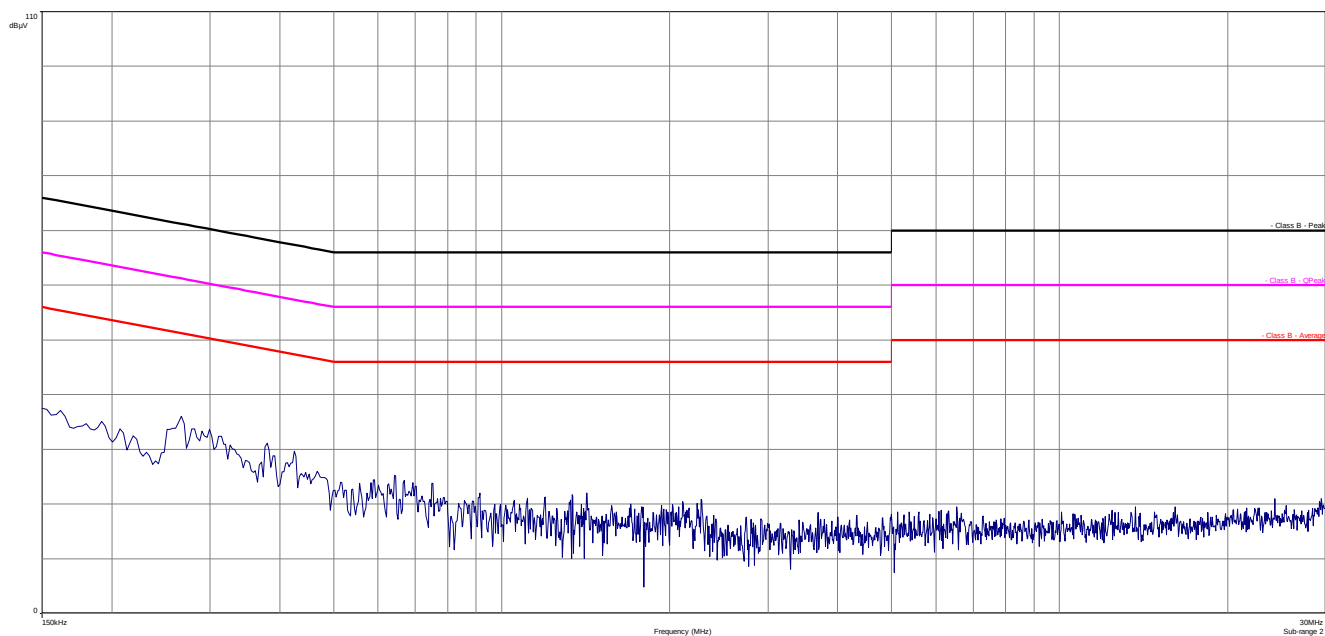
FCC		IC
TX Spurious Emissions Conducted < 30 MHz		
Frequency (MHz)	Quasi-Peak (dB μ V/m)	Average (dB μ V/m)
0.15 – 0.5	66 to 56*	56 to 46*
0.5 – 5	56	46
5 – 30.0	60	50

*Decreases with the logarithm of the frequency

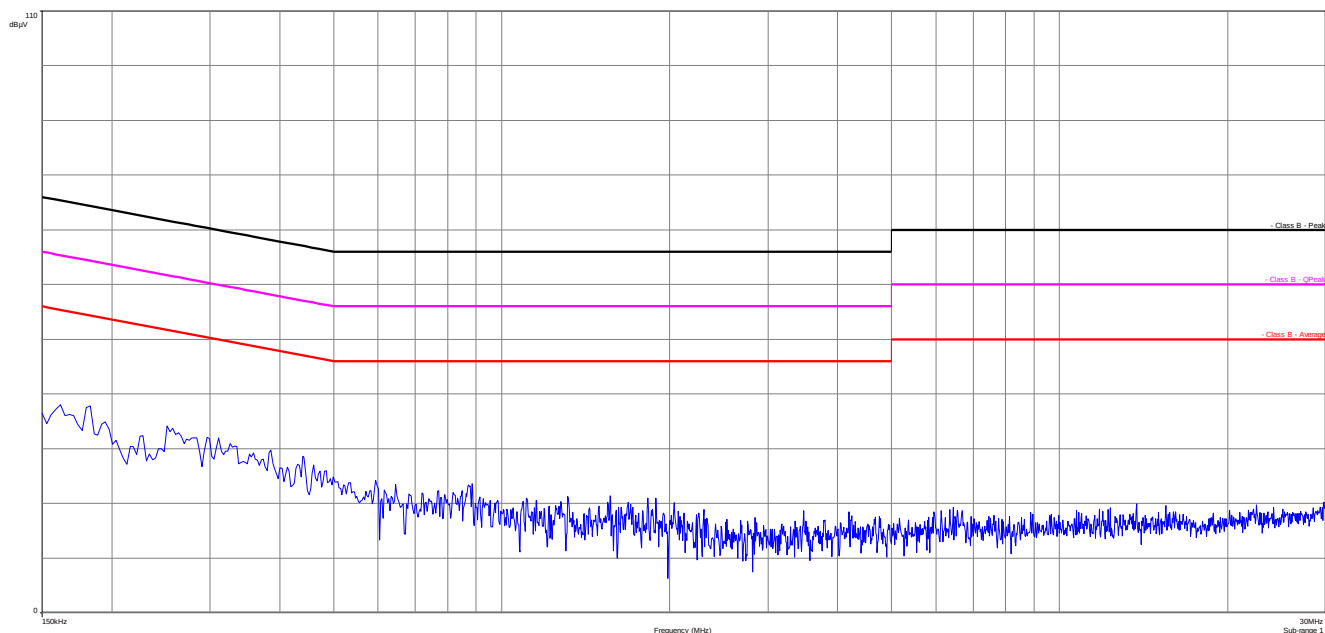
Results:

TX Spurious Emissions Conducted < 30 MHz [dB μ V/m]		
F [MHz]	Detector	Level [dB μ V/m]
No peaks detected.		
Measurement uncertainty	± 3 dB	

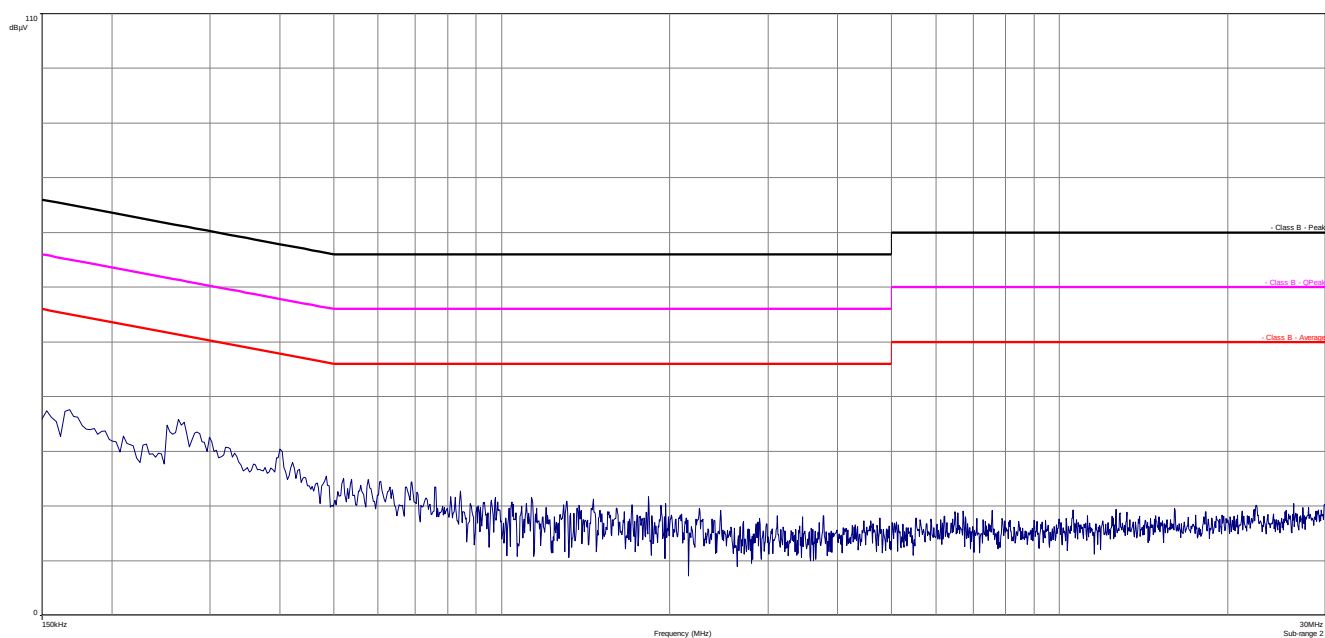
Result: **Passed**

Plots:**Plot 1:** TX mode, 150 kHz to 30 MHz, phase line, valid for all power settings**Plot 2:** TX mode, 150 kHz to 30 MHz, neutral line, valid for all power settings

Plot 3: Idle mode, 150 kHz to 30 MHz, phase line



Plot 4: Idle mode, 150 kHz to 30 MHz, neutral line



10 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 Meßtechnik	2719A14505	300000368	g		
2	50	DC power supply, 60Vdc, 50A, 1200 W	6032A	HP Meßtechnik	2920A04466	300000580	ne		
3	n. a.	software	SPS_PHE 1.4f	Spitzberger & Spieß	B5981; 5D1081; B5979	300000210	ne		
4	n. a.	EMI Test Receiver	ESCI 3	R&S	100083	300003312	k	27.01.2014	27.01.2015
5	n. a.	Amplifier	JS42-00502650-28-5A	MITEQ	1084532	300003379	ev		
6	n. a.	Antenna Tower	Model 2175	ETS-LINDGREN	64762	300003745	izw		
7	n. a.	Positioning Controller	Model 2090	ETS-LINDGREN	64672	300003746	izw		
8	n. a.	Turntable Interface-Box	Model 105637	ETS-LINDGREN	44583	300003747	izw		
9	n. a.	TRILOG Broadband Test-Antenna 30 MHz - 3 GHz	VULB9163	Schwarzbeck	295	300003787	k	22.04.2014	22.04.2016
10	n. a.	Spectrum-Analyzer	FSU26	R&S	200809	300003874	k	22.01.2014	22.01.2015
11	n. a.	DC power supply, 60Vdc, 50A, 1200 W	6032A	HP Meßtechnik	2818A03450	300001040	Ve	12.01.2012	12.01.2015
12	n. a.	Double-Ridged Waveguide Horn Antenna 1-18.0GHz	3115	EMCO	8812-3088	300001032	vIKI!	08.05.2013	08.05.2015
13	n. a.	Anechoic chamber	FAC 3/5m	MWB / TDK	87400/02	300000996	ev		
14	n. a.	Switch / Control Unit	3488A	HP Meßtechnik	*	300000199	ne		
15	9	Artificial Mains 9 kHz to 30 MHz	ESH3-Z5	R&S	828576/020	300001210	Ve	30.01.2014	30.01.2016
16	9	Isolating Transformer	MPL IEC625 Bus Regeltrennt ravo	Erfi	91350	300001155	ne		
17	90	Active Loop Antenna 10 kHz to 30 MHz	6502	Kontron Psychotech	8905-2342	300000256	k	13.06.2013	13.06.2015
18	n. a.	Amplifier	js42-00502650-28-5a	Parzich GMBH	928979	300003143	ne		
19	n. a.	Band Reject filter	WRCG185 5/1910-1835/1925-40/8SS	Wainwright	7	300003350	ev		
20	n. a.	Band Reject filter	WRCG240 0/2483-2375/2505-50/10SS	Wainwright	11	300003351	ev		
21	n. a.	Highpass Filter	WHKX7.0/1 8G-8SS	Wainwright	18	300003789	ne		
22	n. a.	TRILOG	VULB9163	Schwarzbeck	371	300003854	vIKI!	14.10.2011	14.10.2014

		Broadband Test-Antenna 30 MHz - 3 GHz		ck					
23	n. a.	MXE EMI Receiver 20 Hz bis 26,5 GHz	N9038A	Agilent Technologi es	MY51210197	300004405	k	13.03.2014	13.03.2015
24	n. a.	4U RF Switch Platform	L4491A	Agilent Technologi es	MY50000037	300004509	ne		
25	n. a.	MXA Signal Analyzer 20 Hz - 26.5 GHz	N9020A MXA Signal Analyzer	Agilent Technologi es	US46220229	300003805	viKI!	20.12.2013	20.12.2015

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
viKI!	Attention: extended calibration interval		
NK!	Attention: not calibrated	*)	next calibration ordered / currently in progress

11 Observations

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

Annex A Photographs of the test setup

Photo 1:

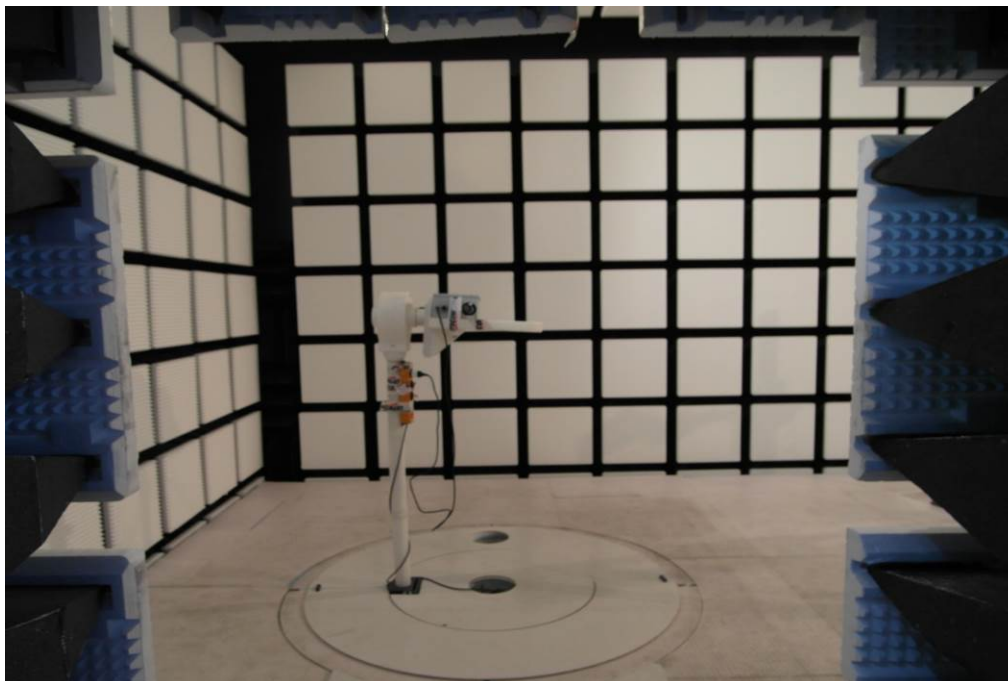


Photo 2:



Photo 3:



Photo 4:

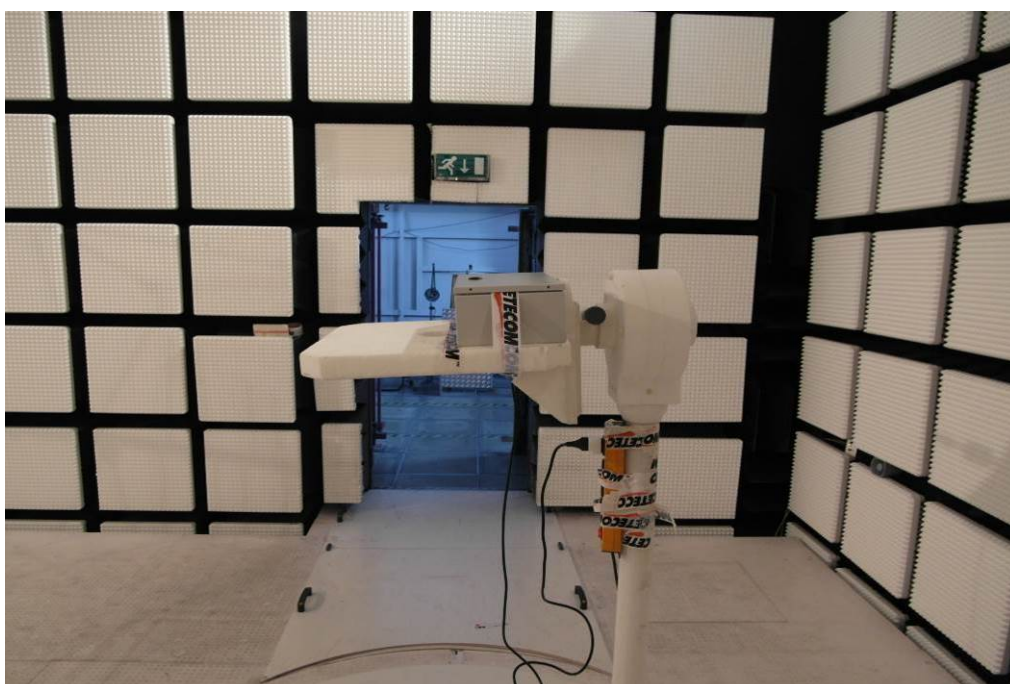


Photo 5:



Photo 6:



Photo 7:

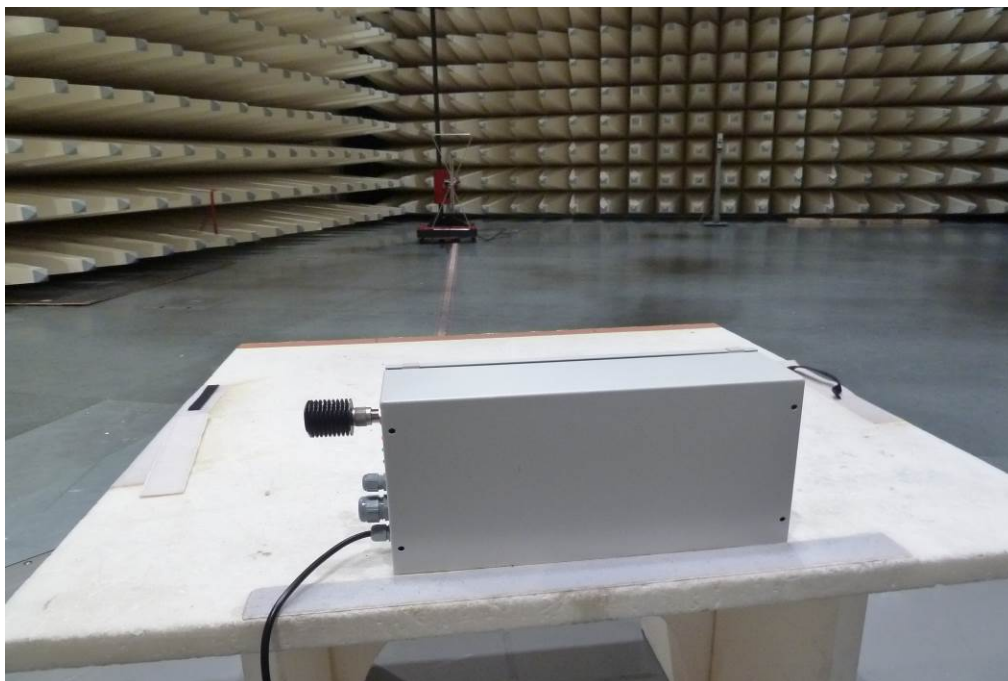


Photo 8:



Annex B External photographs of the EUT

Photo 1:

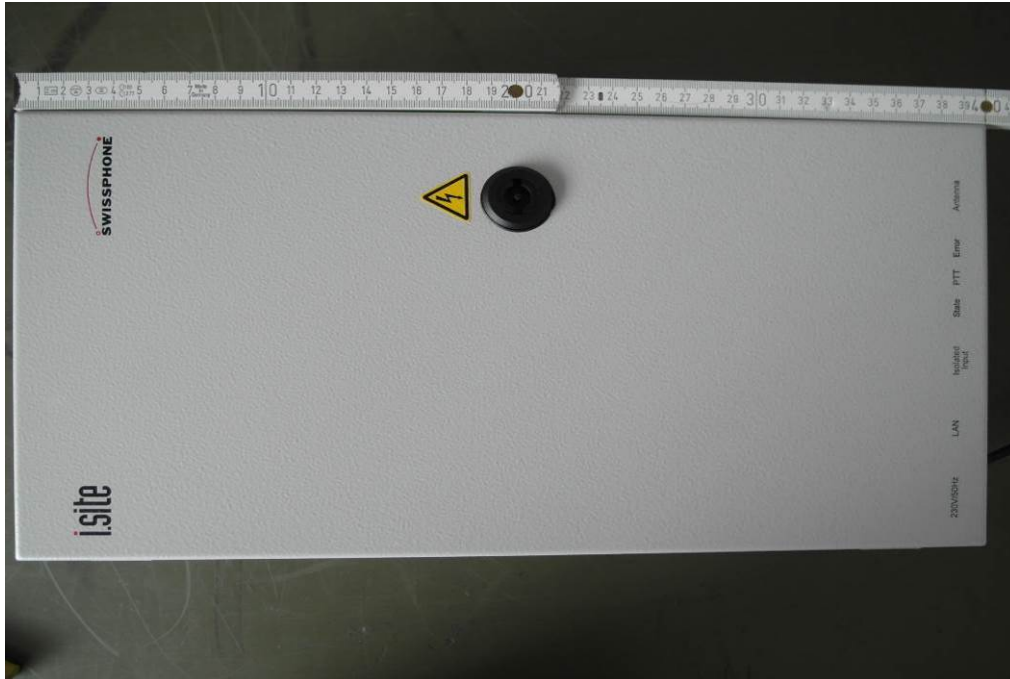


Photo 2:



Photo 3:



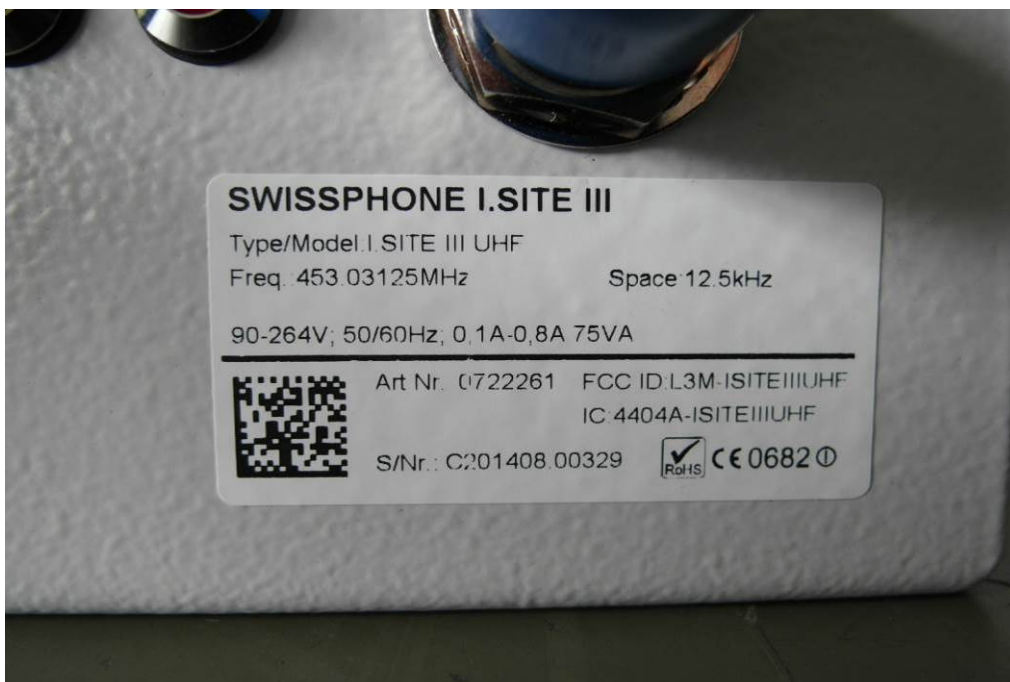
Photo 4:



Photo 5:



Photo 6:



Annex C Internal photographs of the EUT

Photo 1:

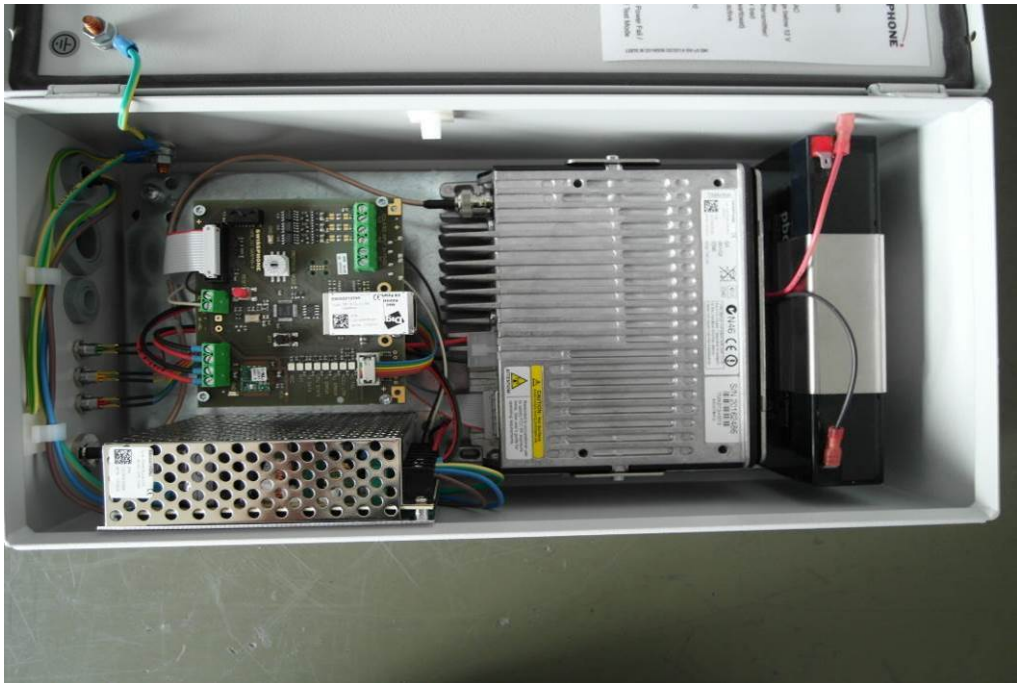


Photo 2:

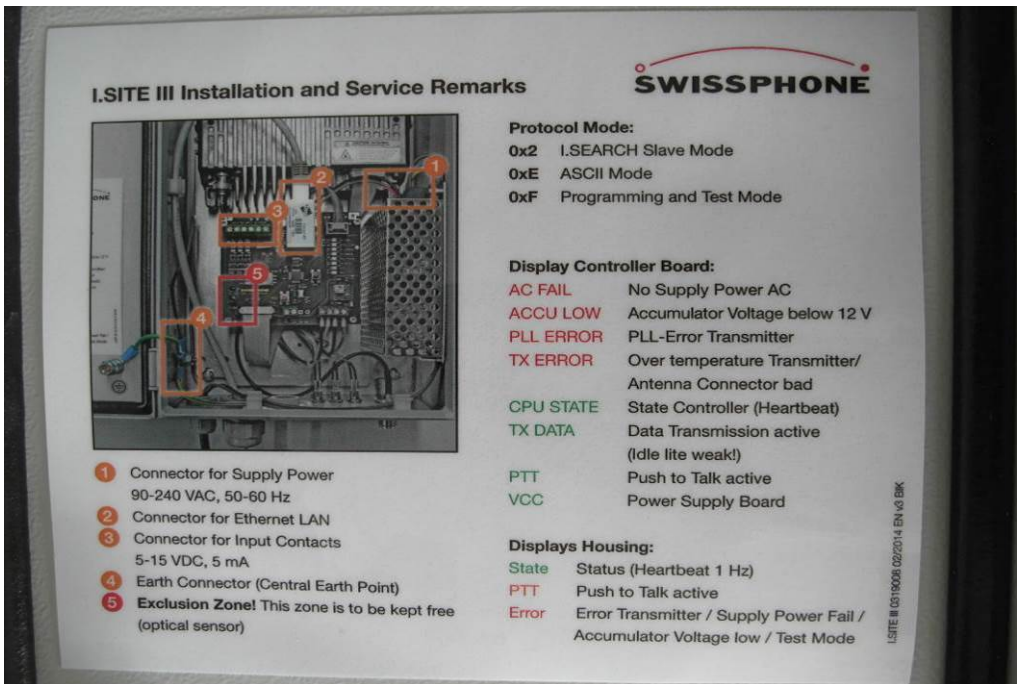


Photo 3:



Photo 4:



Photo 5:



Photo 6:

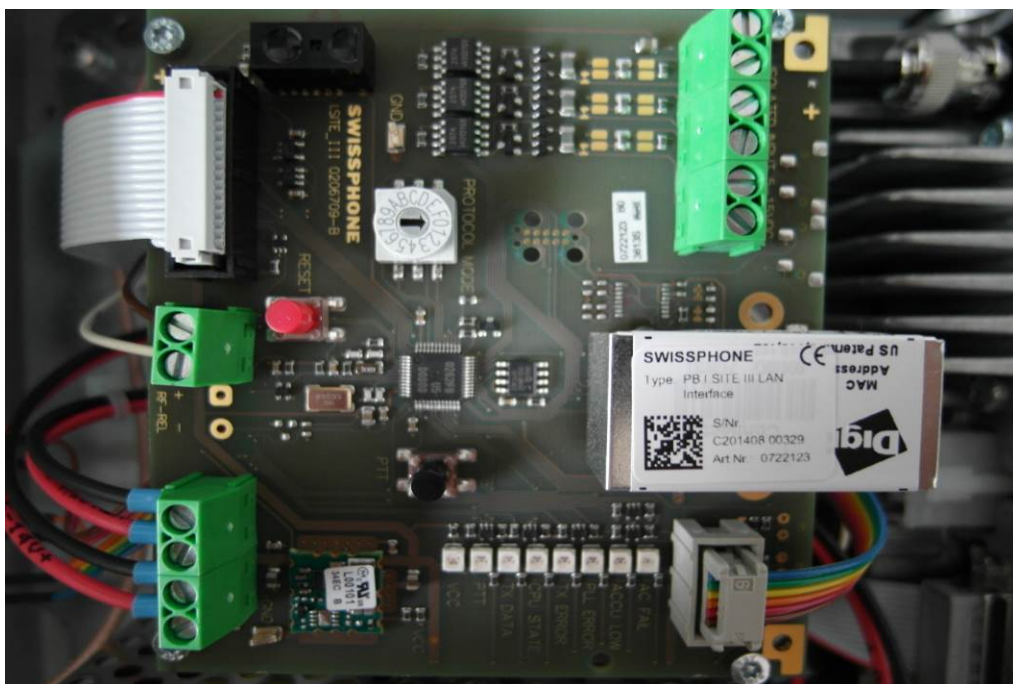


Photo 7:

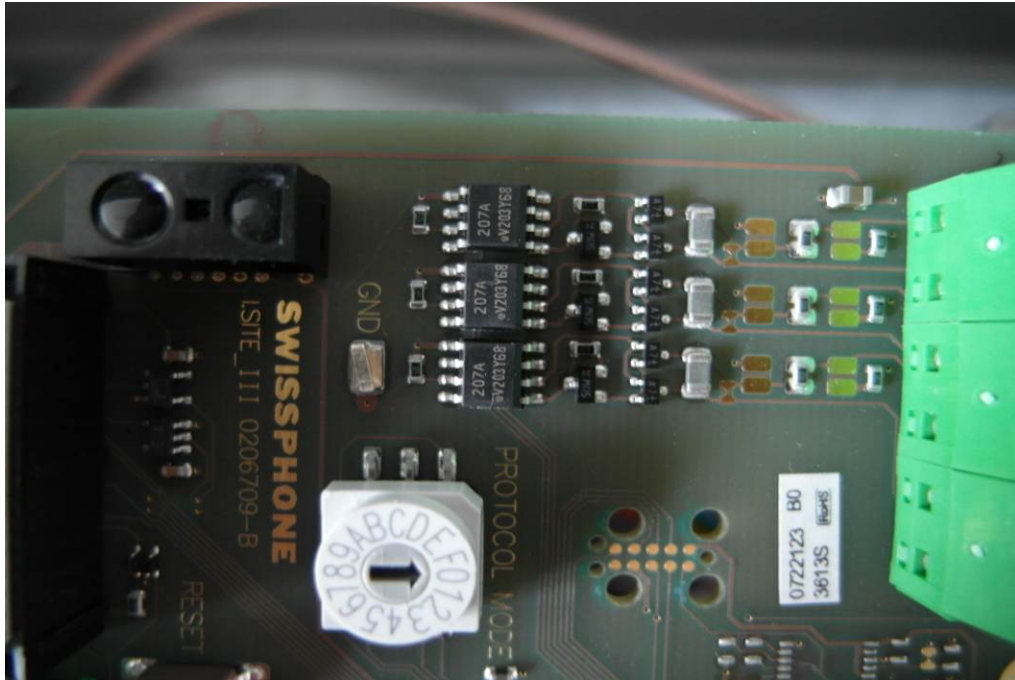


Photo 8:

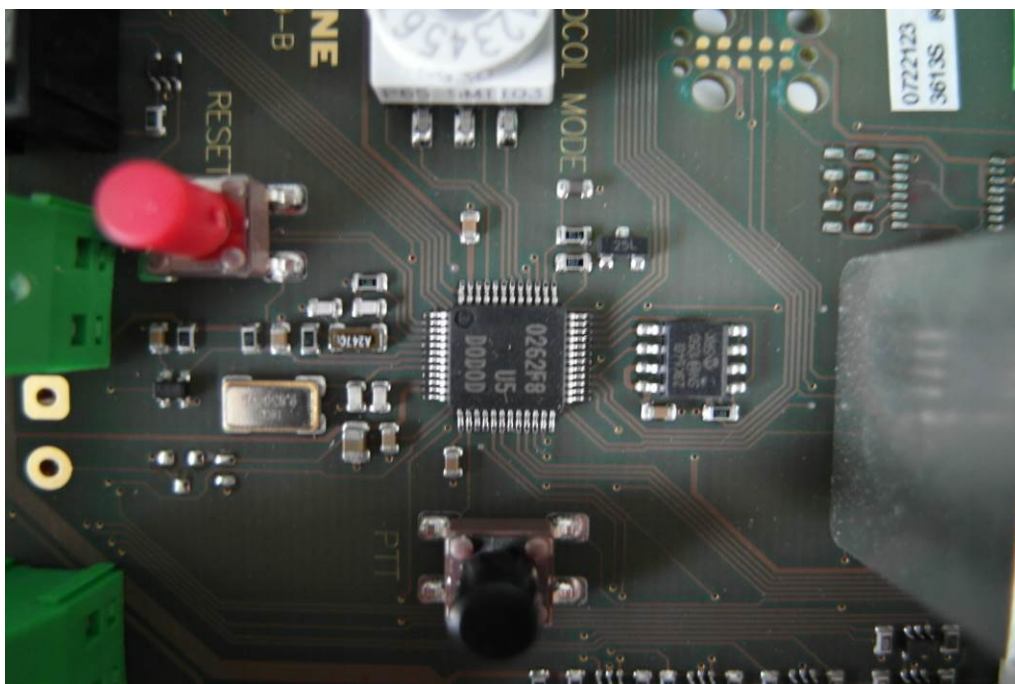


Photo 9:

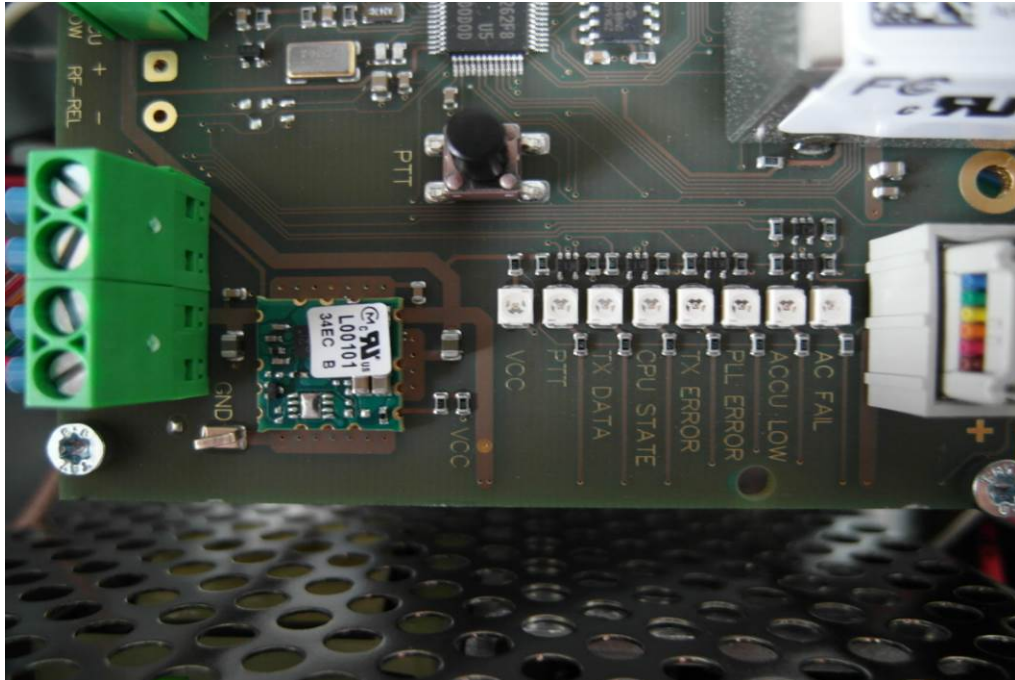


Photo 10:

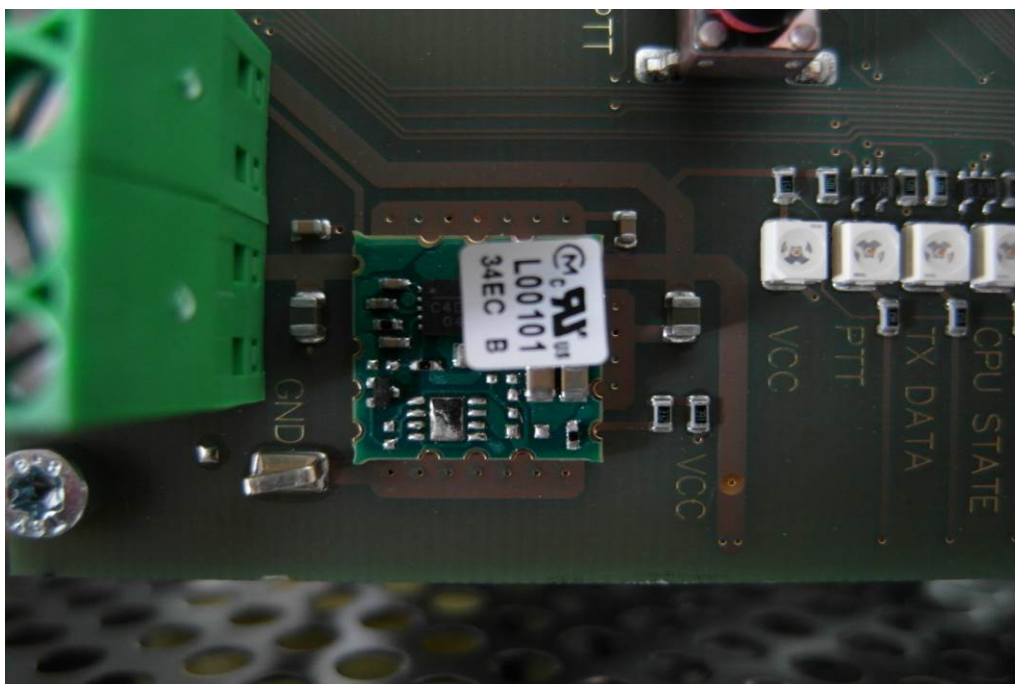


Photo 11:



Photo 12:



Photo 13:



Photo 14:



Annex D Document history

Version	Applied changes	Date of release
	Initial release	2014-06-25

Annex E 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 F Accreditation Certificate

Front side of certificate



Deutsche Akkreditierungsstelle GmbH

Befähigte gemäß § 8 Absatz 1 AkkStelleG i.V.m. § 1 Absatz 1 AkkStelleGBV
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
WiMax 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 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

Stellenbesetzung der Urkunde

Im Auftrag D-PL-12076-01-00
Hilfsprüfer

Back side of certificate

Deutsche Akkreditierungsstelle GmbH

Standort Berlin
Spittelmarkt 10
10117 Berlin

Standort Frankfurt am Main
Gartenstraße 6
60504 Frankfurt am Main

Standort Braunschweig
Bundesallee 100
38116 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 Konformitätsbewertungsstelle 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. 2675) 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
des 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.european-accreditation.org
ILAC: www.ilac.org
IAF: www.iaf.eu

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>