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

TEST REPORT

Test report no.: 1-8803/14-01-02

Deutsche
Akkreditierungsstelle
D-PL-12076-01-00

Testing laboratory

CETECOM ICT Services GmbH

Untertuerkheimer Strasse 6 – 10

66117 Saarbruecken / Germany

Phone: + 49 681 5 98 - 0

Fax: + 49 681 5 98 - 9075

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-12076-01-00

Applicant

SIEMENS Audiologische Technik GmbH

Gebbertstrasse 125

91058 Erlangen / GERMANY

Phone:

Fax: +49 9131 308-3207

Contact: Clemens Meythaler

e-mail: clemens.meythaler@siemens.com

Phone: +49 9131 308-3000

Manufacturer

SIEMENS Audiologische Technik GmbH

Gebbertstrasse 125

91058 Erlangen / GERMANY

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: BTE Hearing Aid**Model name:** e2e 3.0**FCC ID:** SGI-WL003BTE**IC:** 267AB-WL003BTE**Frequency:** 3.252 MHz – 3.302 MHz**Technology tested:** Single carrier**Antenna:** Integrated 6.45mm Rod Antenna

Integrated 6.50mm Ring Antenna

Power supply: 1.4V DC by Battery**Temperature range:** 0°C to +50°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:

cn=Stefan Boes, o=CETECOM ICT
Services GmbH, ou=BOE-111011,
email=Stefan.Boes@cetecom.com, c=DE
2015.01.19 14:35:51 +01'00'

Stefan Böes
Radio Communications & EMC

Test performed:

David Lang
cn=David Lang, o=CETECOM ICT Services
GmbH, ou=LNG-141031,
email=david.lang@cetecom.com, c=DE
2015.01.19 14:43:21 +01'00'

David Lang
Radio Communications & EMC

1 Table of contents

1	Table of contents	2
2	General information	3
2.1	Notes and disclaimer	3
2.2	Application details	3
3	Test standard/s	3
4	Test environment	4
5	Test item	4
5.1	Additional information	4
6	Test laboratories sub-contracted	4
7	Summary of measurement results	5
8	Additional comments	6
9	Measurement results	7
9.1	Field strength of the fundamental	7
9.2	Emission bandwidth (6 dB bandwidth)	9
9.3	Occupied bandwidth (99% bandwidth)	12
9.4	Field strength of the harmonics and spurious	15
10	Test equipment and ancillaries used for tests	26
11	Observations	26
Annex A	Document history	27
Annex B	Further information	27
Annex C	Accreditation Certificate	28

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.

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 CETECOM ICT Services GmbH.

The testing service provided by CETECOM ICT Services GmbH has been rendered under the current "General Terms and Conditions for CETECOM ICT Services GmbH".

CETECOM ICT Services GmbH will not be liable for any loss or damage resulting from false, inaccurate, inappropriate or incomplete product information provided by the customer.

Under no circumstances does the CETECOM ICT Services GmbH test report include any endorsement or warranty regarding the functionality, quality or performance of any other product or service provided.

Under no circumstances does the CETECOM ICT Services GmbH test report include or imply any product or service warranties from CETECOM ICT Services GmbH, including, without limitation, any implied warranties of merchantability, fitness for purpose, or non-infringement, all of which are expressly disclaimed by CETECOM ICT Services GmbH.

All rights and remedies regarding vendor's products and services for which CETECOM ICT Services GmbH has prepared this test report shall be provided by the party offering such products or services and not by CETECOM ICT Services GmbH.

In no case this test report can be considered as a Letter of Approval.

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:	2014-10-24
Date of receipt of test item:	2015-01-12
Start of test:	2015-01-14
End of test:	2015-01-15
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}	+50 °C during high temperature tests
	T_{min}	0 °C during low temperature tests
Relative humidity content:		51 %
Barometric pressure:		not relevant for this kind of testing
Power supply:	V_{nom}	1.4 V DC by Battery
	V_{max}	1.4 V
	V_{min}	1.0 V

5 Test item

Kind of test item	:	BTE Hearing Aid
Type identification	:	e2e 3.0
S/N serial number	:	Set 1 (Rod Antenna): T1 Set 2 (Ring Antenna): A1
HW hardware status	:	Set 1 (Rod Antenna): Insio 7bx IT TWIN MIC VC+ 118/55 WL Set 2 (Ring Antenna): Insio 7bx CIC 113/50 WL
SW software status	:	Set 1 (Rod Antenna): DC.FC.2.1.36.0 Set 2 (Ring Antenna): DC.FC.2.1.36.0
Frequency band [MHz]	:	3.252 MHz – 3.302 MHz
Type of radio transmission	:	Single carrier
Use of frequency spectrum	:	
Type of modulation	:	DBPSK (Status Data 80kbit/s), DQPSK (Audio Data 320 kbit/s)
Number of channels	:	1
Antenna	:	Integrated 6.45mm Rod Antenna Integrated 6.50mm Ring Antenna
Power supply	:	1.4 V DC by Battery
Temperature range	:	0°C to +50 °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: 1-8803/14-01-01_AnnexA
1-8803/14-01-01_AnnexB
1-8803/14-01-01_AnnexD

6 Test laboratories sub-contracted

None

7 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	CFR Part 15 RSS 210, Issue 8	Passed	2015-01-19	Modular approval: PC2 (see Note 1 below)

Test Specification Clause	Test Case	Temperature Conditions	Power Source Voltages	Pass	Fail	NA	NP	Remark
§ 15.223(a) RSS-210 Issue 8	Fieldstrength of Fundamental	Nominal	Nominal	☒	☐	☐	☐	complies
§ 15.223(a)	Emission bandwidth 6 dB bandwidth	Nominal	Nominal	☒	☐	☐	☐	complies
RSS-GEN Issue 3	Occupied bandwidth 99 % bandwidth	Nominal	Nominal	☒	☐	☐	☐	complies
§ 15.209/ RSS-210 Issue 8	Fieldstrength of harmonics and spurious	Nominal	Nominal	☒	☐	☐	☐	complies
§ 15.209 RSS-GEN Issue 3	Receiver spurious emissions (radiated)	Nominal	Nominal	☒	☐	☐	☐	complies
§15.107 §15.207	Conducted limits	Nominal	Nominal	☐	☐	☒	☐	Battery powered.

Note:

NA = Not Applicable;

NP = Not Performed;

¹ This report includes results of the pre-certified module e2e 3.0 (FCC ID: SGI-WL003BTE) tested with a new set of antennas as described in section 5.

To fixate the small antenna assembly for testing both antennas were incorporated in a different housing (see photo documentation as referenced in section 5.1).

8 Additional comments

Reference documents: None

Special test descriptions: We perform the radiated pre-scans in different spherical positions and consolidate the results in one result plot. The test procedure includes scans in the theta axes every 90° and in phi axes @ 0° and 90° for both polarizations vertical & horizontal or magnetic emissions.

Configuration descriptions: Operating modes tested with each set of antennas:

- HP1 (no wireless transmission, Rx-mode)
- HP2 (permanent transmission, slow modulation, DBPSK)
- HP3 (permanent transmission, high modulation, DQPSK)

Additional information: None

9 Measurement results

9.1 Field strength of the fundamental

Measurement:

Measurement parameter	
Detector:	Peak / AVG
Sweep time:	-/-
Resolution bandwidth:	1 MHz
Video bandwidth:	≥ RBW
Span:	-/-
Trace-Mode:	Max Hold

Limits:

FCC	IC
The field strength of any emission within the band 1.705-10.0 MHz shall not exceed 100 microvolts/meter at a distance of 30 meters. However, if the bandwidth of the emission is less than 10% of the center frequency, the field strength shall not exceed 15 microvolts/meter or (the bandwidth of the device in kHz) divided by (the center frequency of the device in MHz) microvolts/meter at a distance of 30 meters, whichever is the higher level	

Results: Set 1

Test conditions			Radiated field strength / (dBμV/m)	
Frequency			3.28 MHz	
Mode			at 1 m distance	at 30 m distance
DBPSK	T _{nom}	V _{nom}	40.0	-20.0*
DQPSK	T _{nom}	V _{nom}	38	-22.0*
Measurement uncertainty			±3dB	

*Recalculation to a measurement distance of 30m with a correction of 40 dB/decade.

Verdict: **Passed**

Results: Set 2

Test conditions			Radiated field strength / (dBμV/m)	
Frequency			3.28 MHz	
Mode			at 1 m distance	at 30 m distance
DBPSK	T _{nom}	V _{nom}	41.5	-18.5
DQPSK	T _{nom}	V _{nom}	39.0	-21.0
Measurement uncertainty			±3dB	

*Recalculation to a measurement distance of 30m with a correction of 40 dB/decade.

Verdict: **Passed**

9.2 Emission bandwidth (6 dB bandwidth)

Measurement:

Measurement parameter	
Detector:	Peak
Sweep time:	Auto
Resolution bandwidth:	1 kHz
Video bandwidth:	1 kHz
Span:	1 MHz
Trace-Mode:	Max Hold

Limits:

FCC
For the purposes of this section, bandwidth is determined at the points 6 dB down from the modulated carrier

Results: Set 1

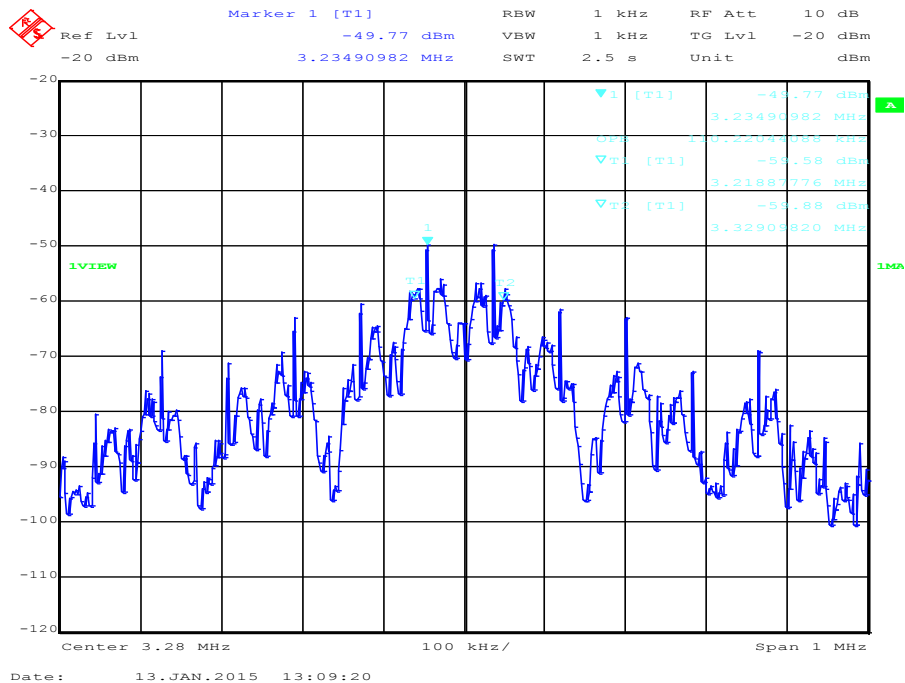
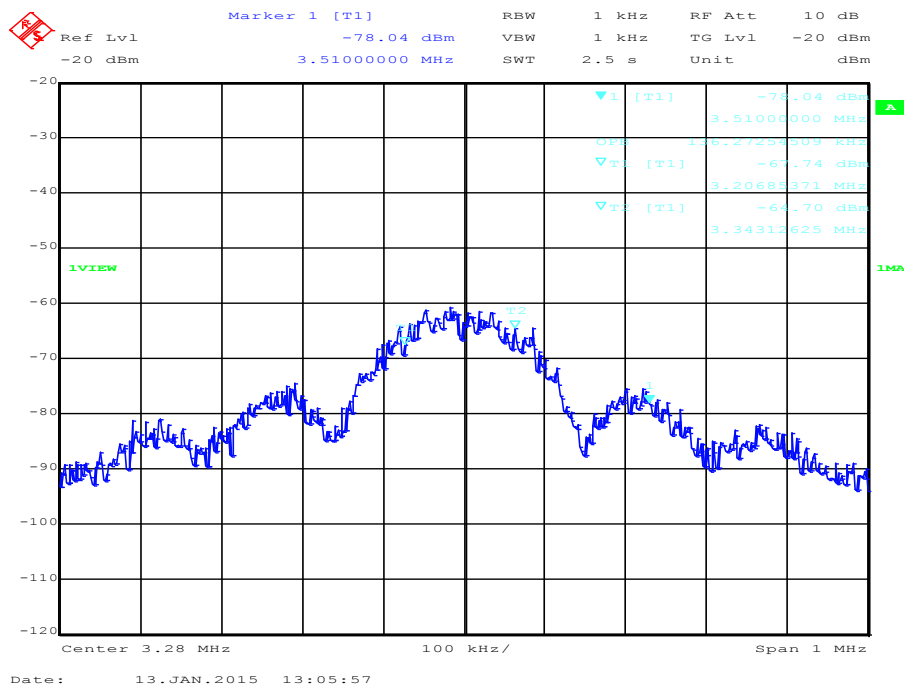
Test conditions			6 dB bandwidth
Frequency			3.28 MHz
DBPSK	T _{nom}	V _{nom}	110.2
DQPSK	T _{nom}	V _{nom}	136.3
Measurement uncertainty			±500Hz

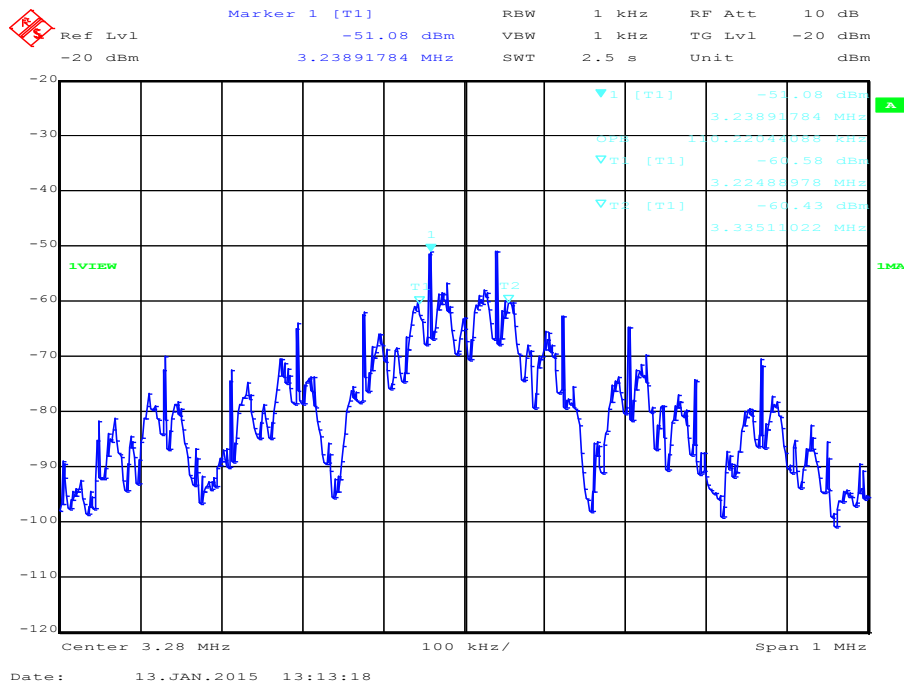
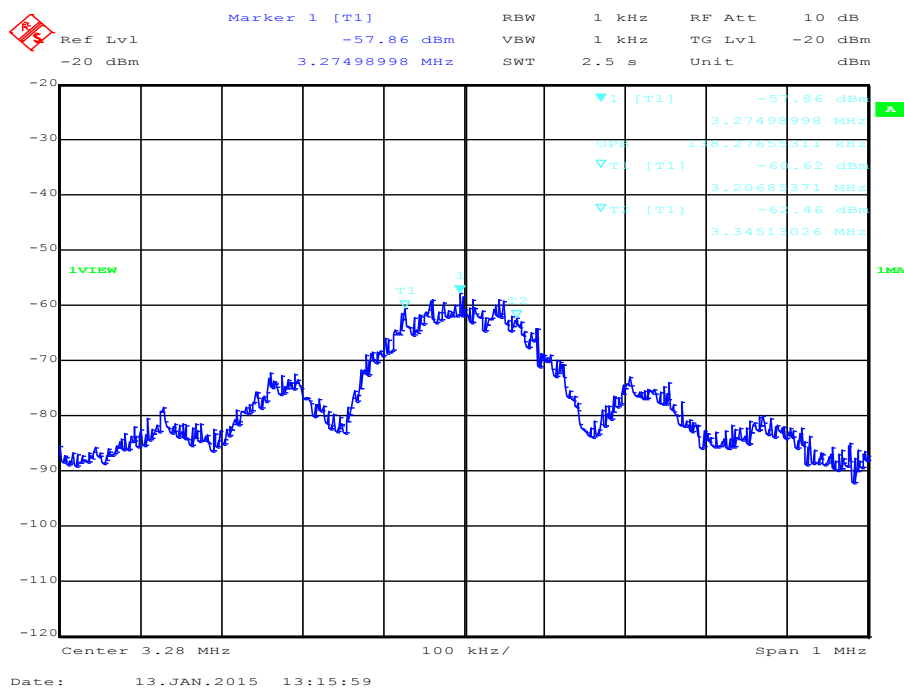
Verdict: **Passed**

Results: Set 2

Test conditions			6 dB bandwidth
Frequency			3.28 MHz
DBPSK	T _{nom}	V _{nom}	110.2
DQPSK	T _{nom}	V _{nom}	138.3
Measurement uncertainty			±500Hz

Verdict: **Passed**

Plots: Set 1**Plot 1: 6 dB bandwidth (DBPSK)****Plot 2: 6 dB bandwidth (DQPSK)**

Plots: Set 2**Plot 1: 6 dB bandwidth (DBPSK)****Plot 2: 6 dB bandwidth (DQPSK)**

9.3 Occupied bandwidth (99% bandwidth)

Measurement:

Measurement parameter	
Detector:	Peak
Sweep time:	60 s
Resolution bandwidth:	3 kHz
Video bandwidth:	> RBW
Span:	500 kHz
Trace-Mode:	Trace AVG

Limits:

IC
-/-

Results: Set 1

Test conditions			99% bandwidth
Frequency			3.28 MHz
DBPSK	T _{nom}	V _{nom}	441.0
DQPSK	T _{nom}	V _{nom}	460.0
Measurement uncertainty			±500Hz

Verdict: Passed

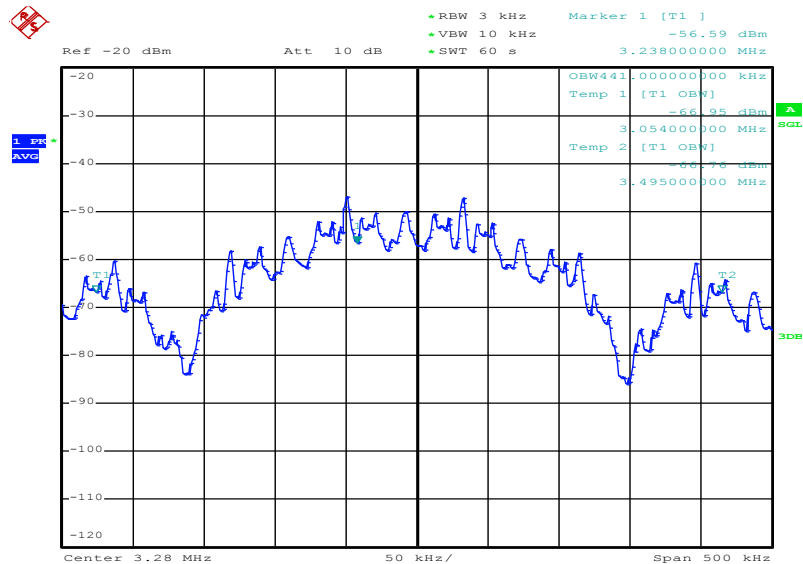
Results: Set 2

Test conditions			99% bandwidth
Frequency			3.28 MHz
DBPSK	T _{nom}	V _{nom}	448.0
DQPSK	T _{nom}	V _{nom}	460.0
Measurement uncertainty			±500Hz

Verdict: Passed

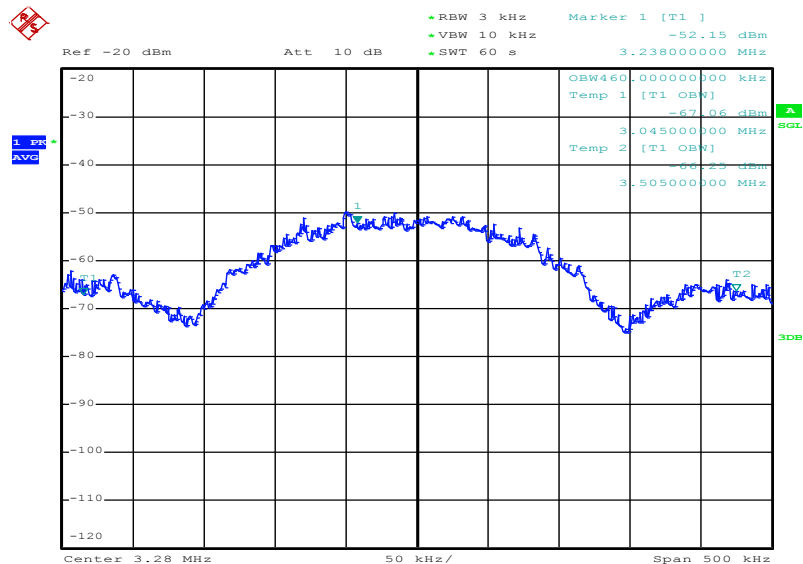
Plots: Set 1

Plot 1: 99% bandwidth (DBPSK)



Date: 16.JAN.2015 10:08:17

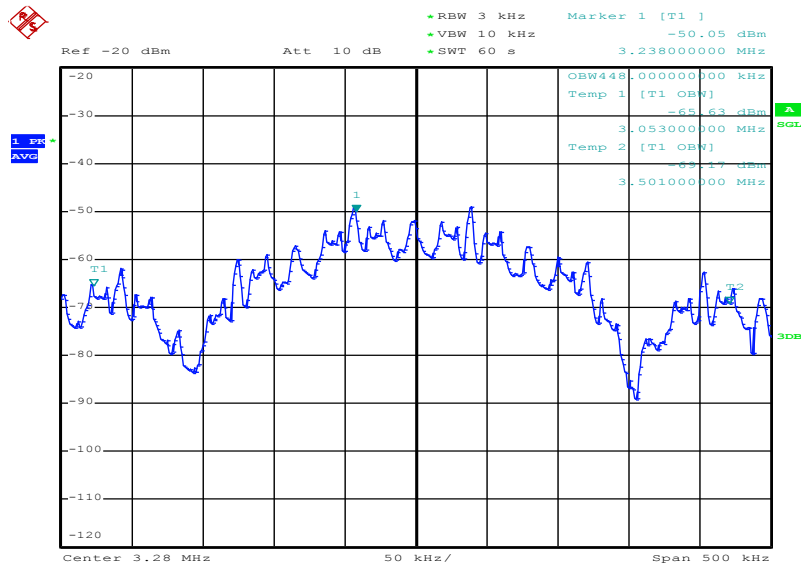
Plot 2: 99% bandwidth (DQPSK)



Date: 16.JAN.2015 10:11:03

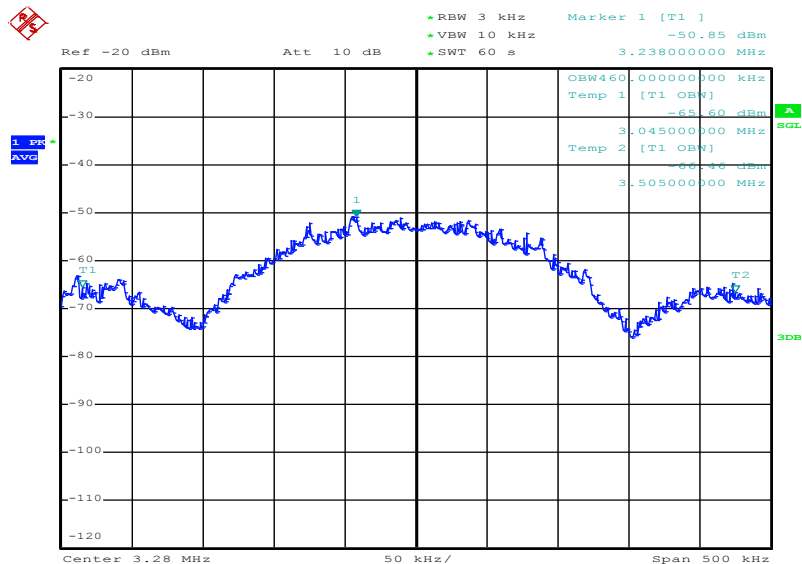
Plots: Set 2

Plot 1: 99% bandwidth (DBPSK)



Date: 16.JAN.2015 10:00:35

Plot 2: 99% bandwidth (DQPSK)



Date: 16.JAN.2015 10:02:09

9.4 Field strength of the harmonics and spurious

Measurement:

Measurement parameter	
Detector:	Average / Quasi Peak
Sweep time:	Auto
Resolution bandwidth:	F < 150 kHz: 200 Hz 150 kHz > F > 30 MHz: 9 kHz 9 kHz F > 30 MHz: 120 kHz
Video bandwidth:	F < 150 kHz: 1 kHz 150 kHz > F > 30 MHz: 100 kHz 9 kHz F > 30 MHz: 300 kHz
Span:	See plots!
Trace-Mode:	Max hold

Limits:

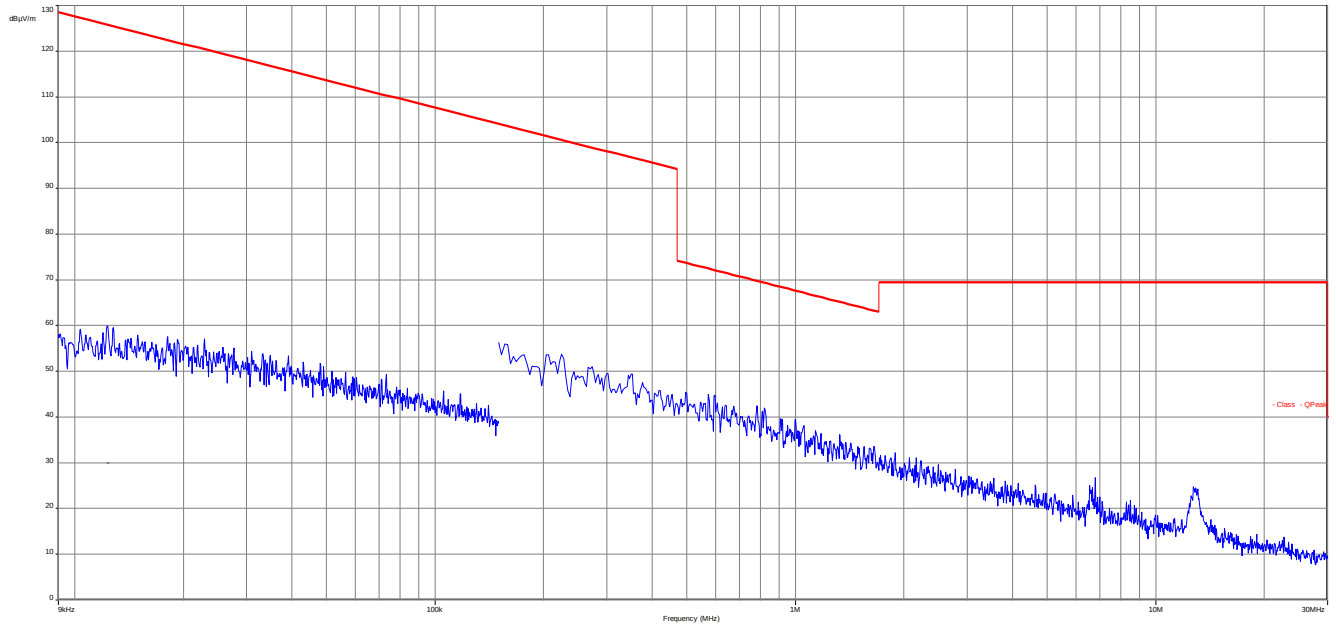
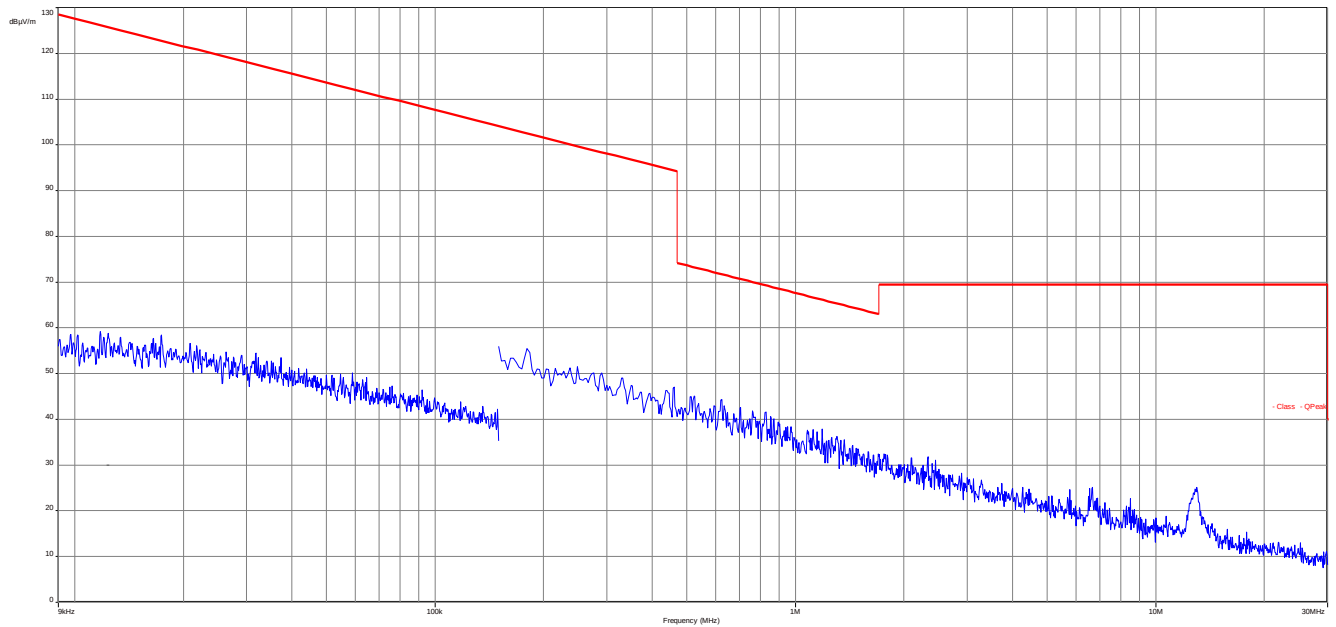
FCC		IC
Field strength of the harmonics and spurious.		
Frequency / (MHz)	Field strength / ($\mu\text{V/m}$)	Measurement distance / (m)
0.009 – 0.490	2400/F(kHz)	300
0.490 – 1.705	24000/F(kHz)	30
1.705 – 30	30 (29.5 dB $\mu\text{V/m}$)	30
30 – 88	100 (40 dB $\mu\text{V/m}$)	3
88 – 216	150 (43.5 dB $\mu\text{V/m}$)	3
216 – 960	200 (46 dB $\mu\text{V/m}$)	3

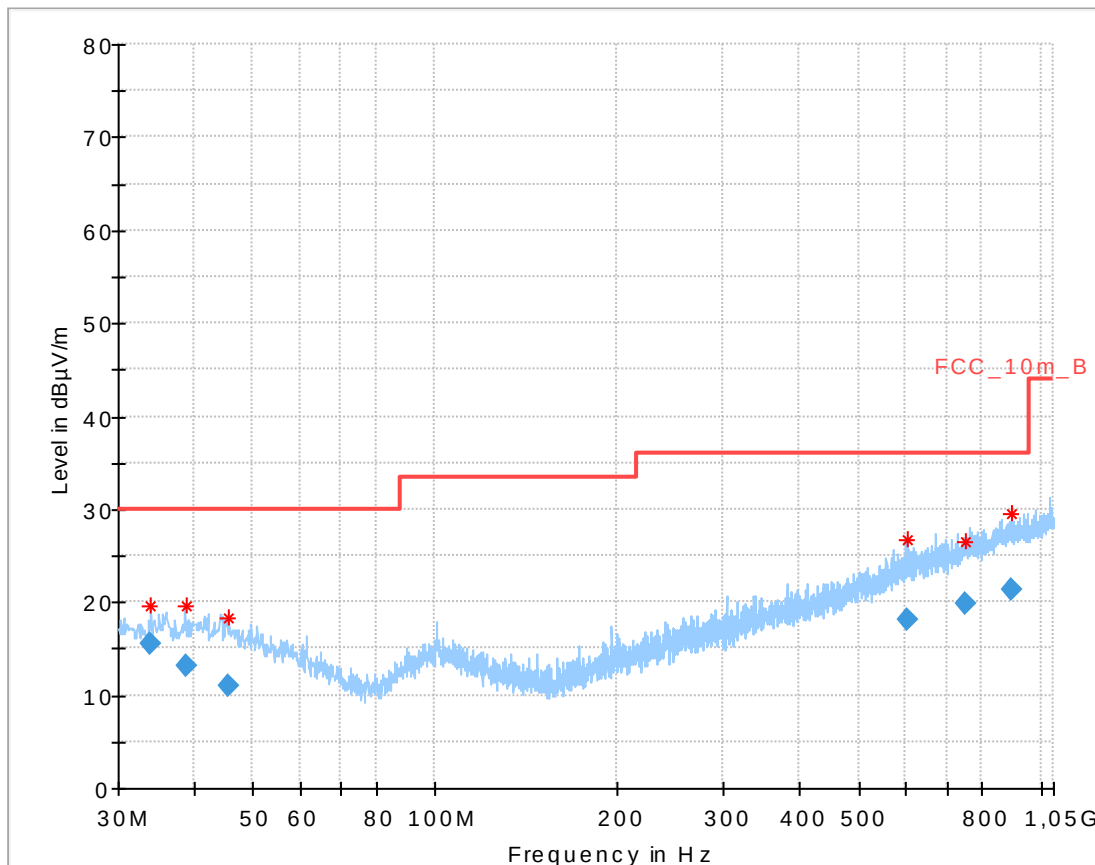
Result:

Spurious emissions				
f / (MHz)	Detector	Limit max. allowed / (dB $\mu\text{V/m}$)	Amplitude of emission / (dB $\mu\text{V/m}$)	Results
See frequency table below plots >30 MHz.				

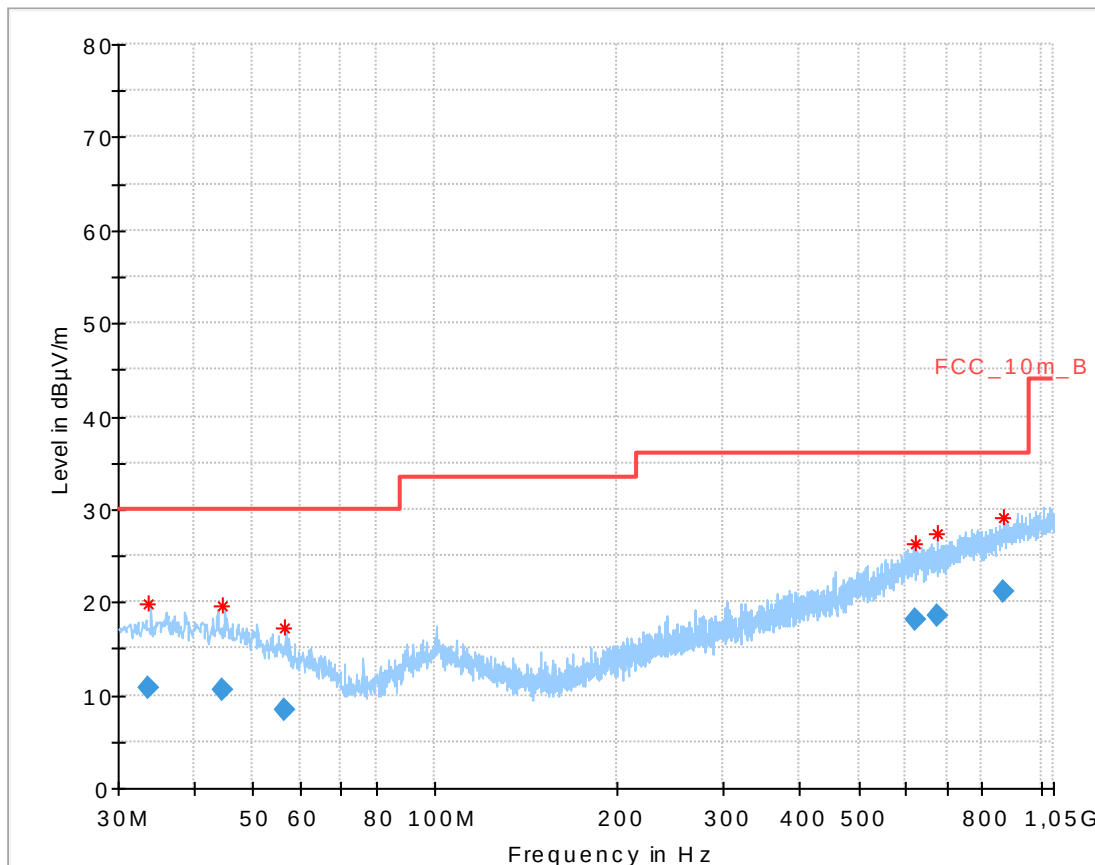
Verdict: **Passed**

Note: The limit was recalculated with 20 dB / decade (Part 15.31) for all radiated spurious emissions 30 MHz to 1 GHz from 3 meter limit to a 10 meter distance. (40dB/decade for emissions < 30MHz)

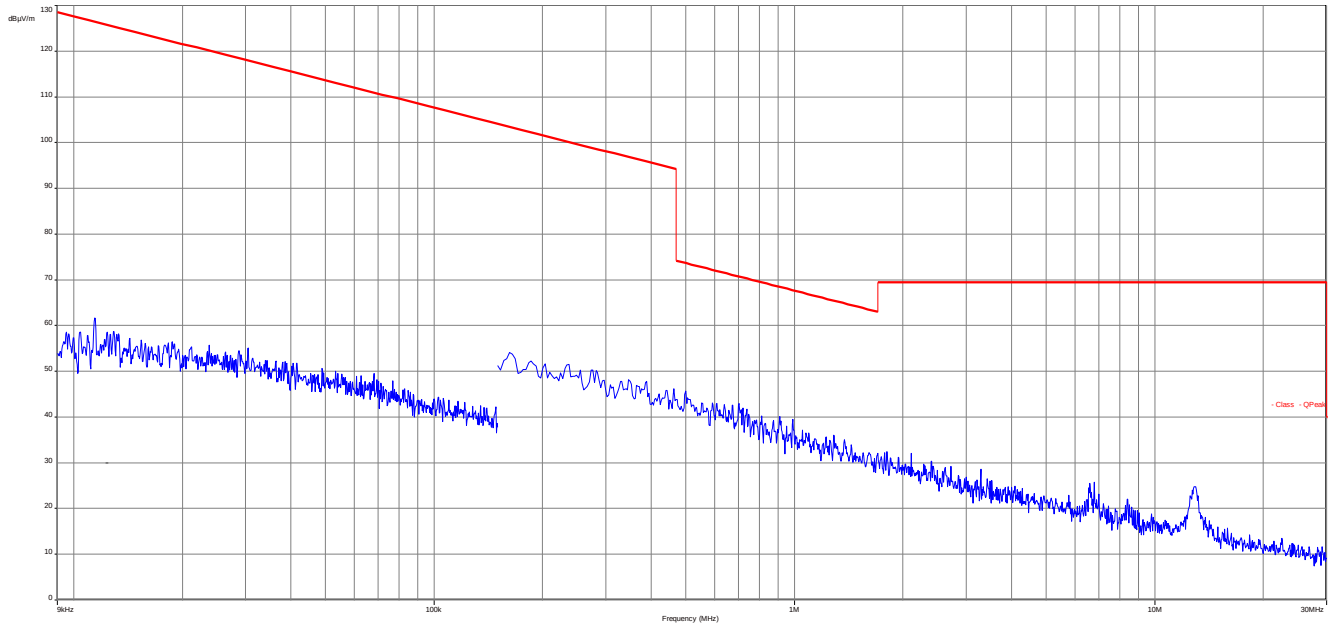
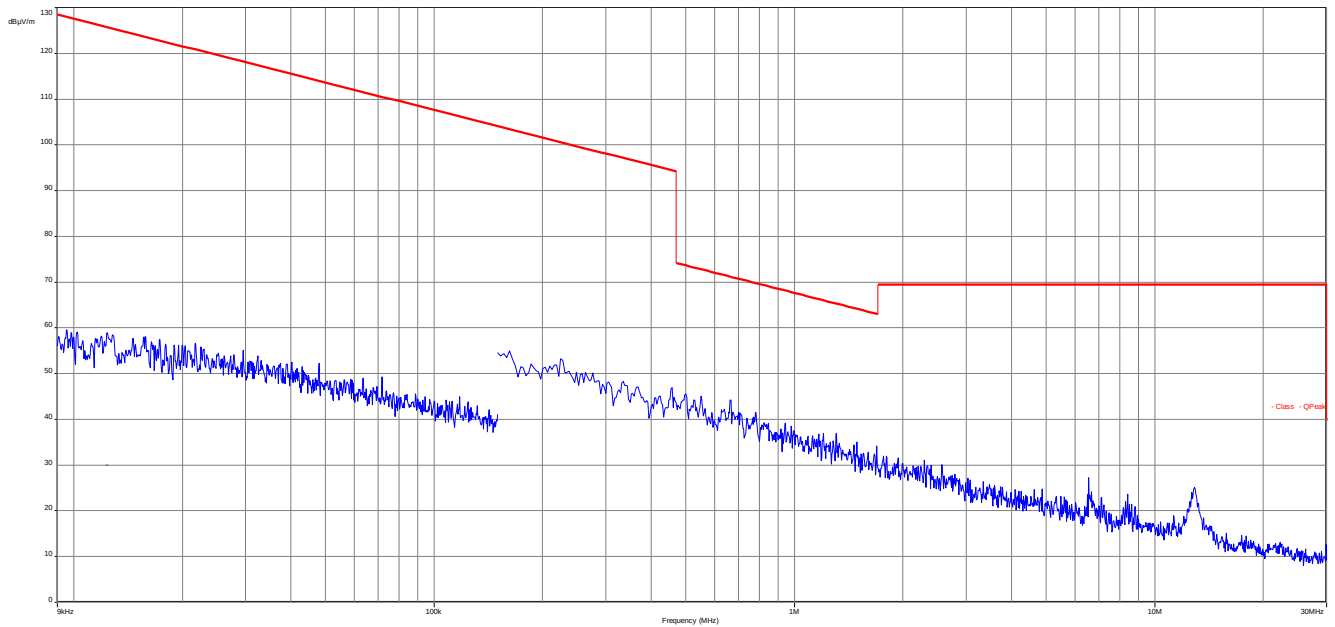
Plots: Set 1**Plot 1: 9 kHz – 30 MHz; magnetic (DBPSK)****Plot 2: 9 kHz – 30 MHz; magnetic (DQPSK)**

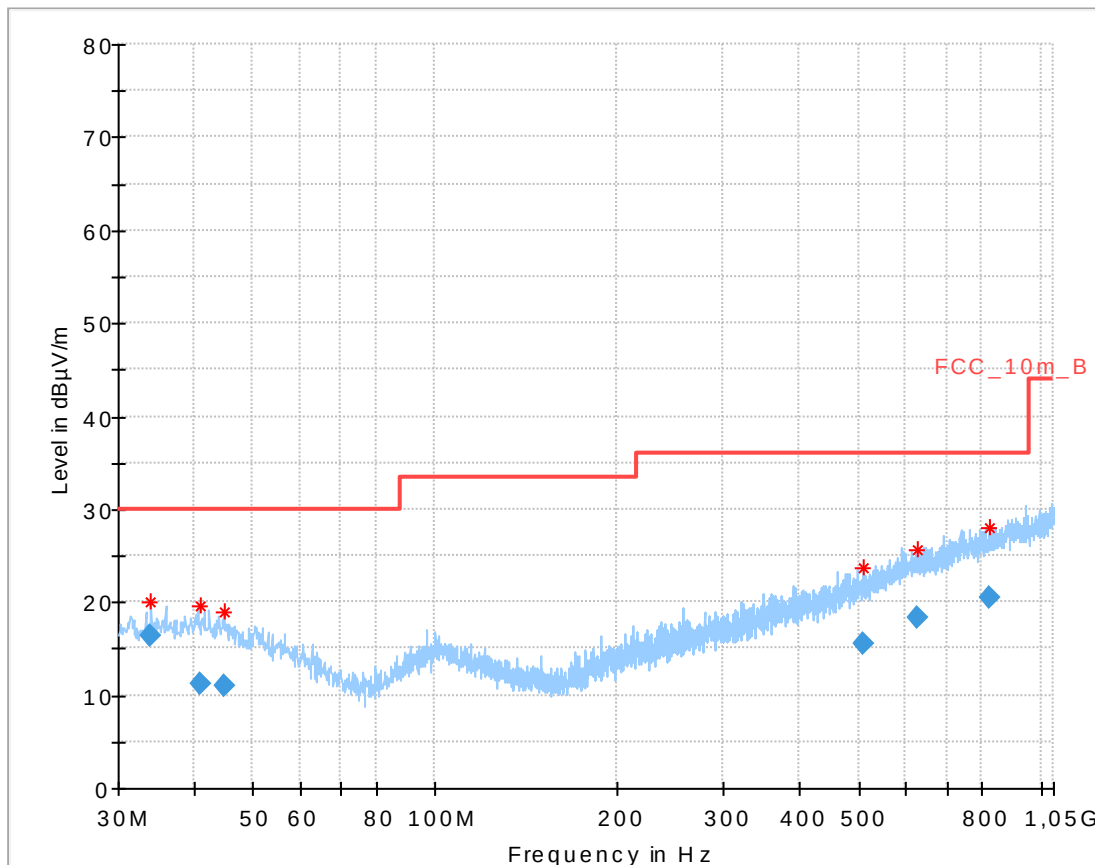
Plot 3: 30 MHz – 1000 MHz, vertical and horizontal polarization (DBPSK)

Frequency (MHz)	QuasiPeak (dBμV/m)	Limit (dBμV/m)	Margin (dB)	Meas. Time (ms)	Bandwidth (kHz)	Height (cm)	Pol	Azimuth (deg)	Corr. (dB)
34.009650	15.51	30.00	14.49	1000.0	120.000	170.0	V	90	13.7
38.746200	13.23	30.00	16.77	1000.0	120.000	101.0	V	245	14.0
45.626550	10.90	30.00	19.10	1000.0	120.000	101.0	V	180	13.7
603.341400	18.05	36.00	17.95	1000.0	120.000	101.0	H	-25	20.7
751.479150	19.90	36.00	16.10	1000.0	120.000	101.0	V	205	22.7
895.007250	21.34	36.00	14.66	1000.0	120.000	98.0	H	-25	24.0

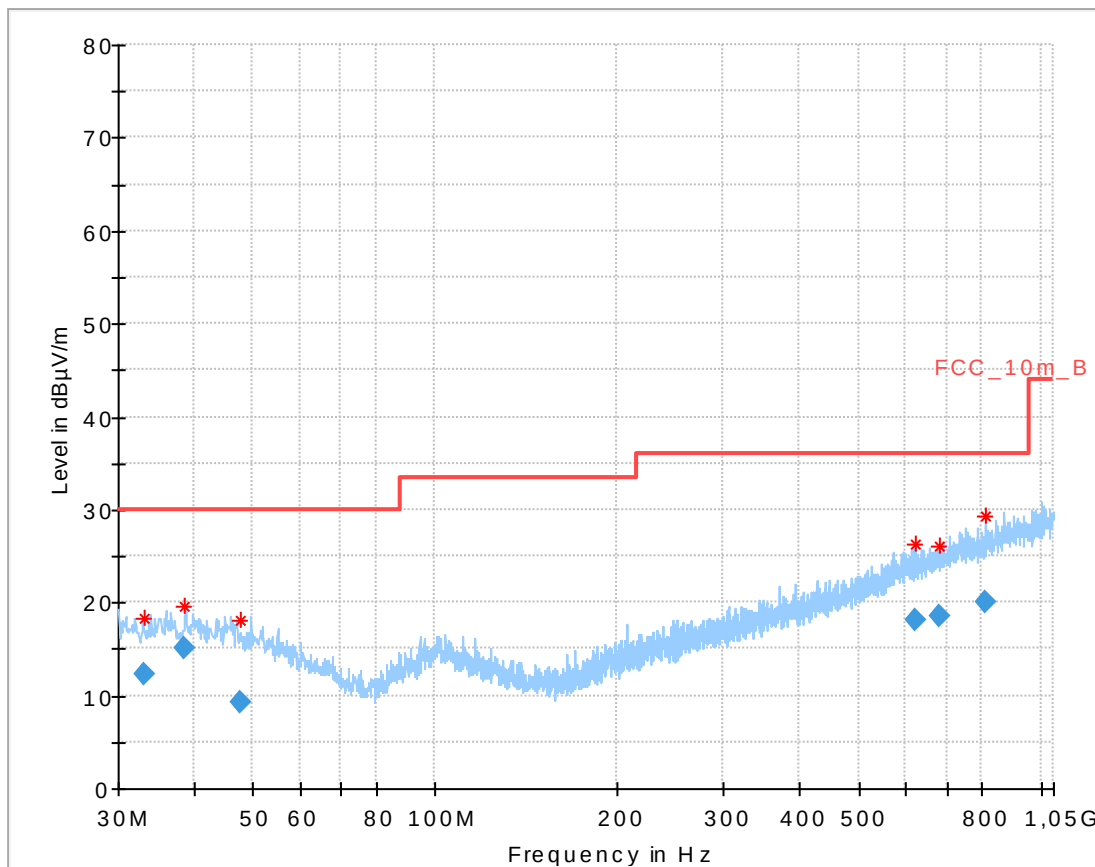
Plot 4: 30 MHz – 1000 MHz, vertical and horizontal polarization (DQPSK)

Frequency (MHz)	QuasiPeak (dBμV/m)	Limit (dBμV/m)	Margin (dB)	Meas. Time (ms)	Bandwidth (kHz)	Height (cm)	Pol	Azimuth (deg)	Corr. (dB)
33.518250	10.77	30.00	19.23	1000.0	120.000	100.0	V	295	13.7
44.466150	10.57	30.00	19.43	1000.0	120.000	101.0	V	270	13.9
56.475000	8.43	30.00	21.57	1000.0	120.000	101.0	H	0	11.5
619.397550	18.05	36.00	17.95	1000.0	120.000	106.0	H	180	20.9
674.019150	18.52	36.00	17.48	1000.0	120.000	170.0	V	115	21.3
871.135200	21.21	36.00	14.79	1000.0	120.000	170.0	H	269	23.7

Plots: Set 2**Plot 1: 9 kHz – 30 MHz; magnetic (DBPSK)****Plot 2: 9 kHz – 30 MHz; magnetic (DQPSK)**

Plot 3: 30 MHz – 1000 MHz, vertical and horizontal polarization (DBPSK)

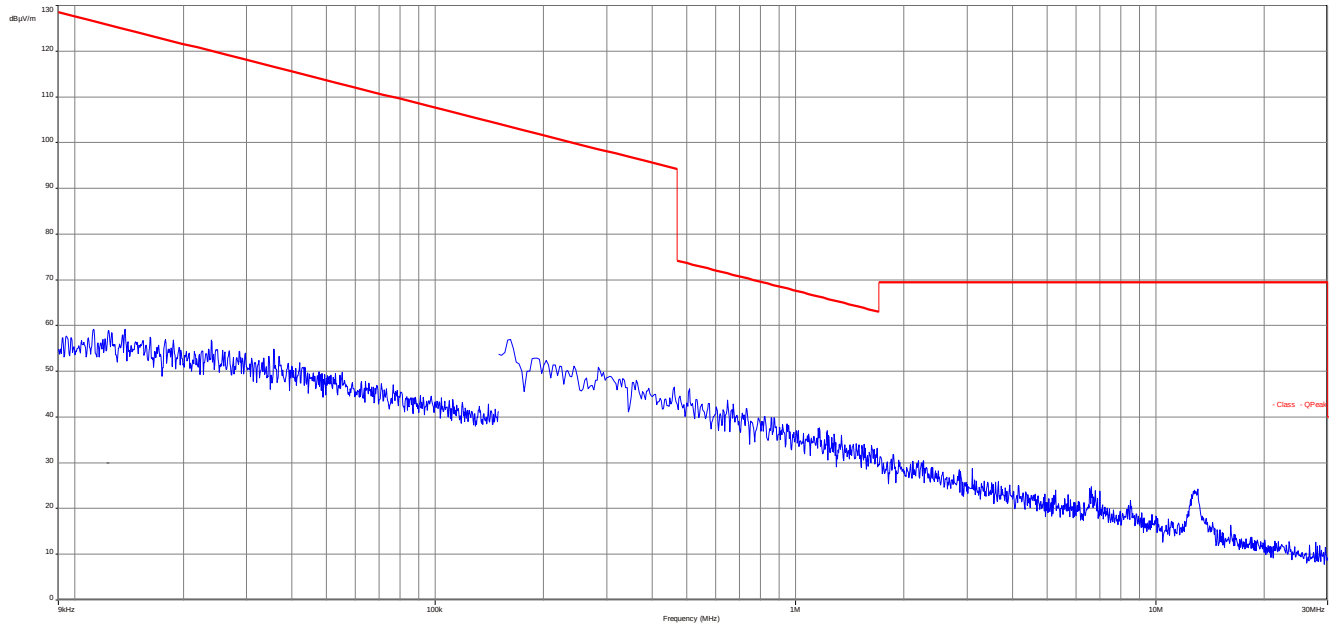
Frequency (MHz)	QuasiPeak (dBμV/m)	Limit (dBμV/m)	Margin (dB)	Meas. Time (ms)	Bandwidth (kHz)	Height (cm)	Pol	Azimuth (deg)	Corr. (dB)
33.986850	16.30	30.00	13.70	1000.0	120.000	101.0	V	295	13.7
41.027400	11.15	30.00	18.85	1000.0	120.000	101.0	H	0	14.0
45.070200	11.09	30.00	18.91	1000.0	120.000	101.0	V	180	13.8
510.510000	15.48	36.00	20.52	1000.0	120.000	98.0	V	270	18.8
625.436700	18.23	36.00	17.77	1000.0	120.000	98.0	H	156	20.9
825.725700	20.40	36.00	15.60	1000.0	120.000	98.0	H	180	23.1

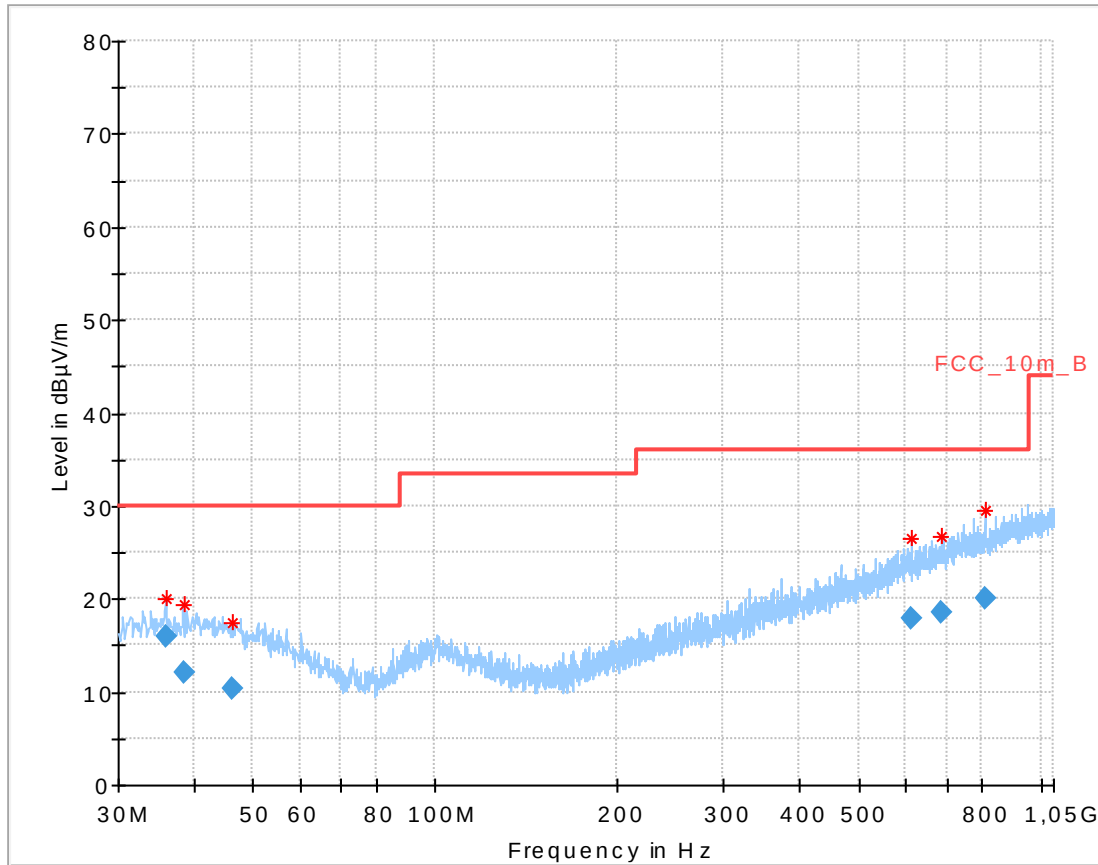
Plot 4: 30 MHz – 1000 MHz, vertical and horizontal polarization (DQPSK)

Frequency (MHz)	QuasiPeak (dBμV/m)	Limit (dBμV/m)	Margin (dB)	Meas. Time (ms)	Bandwidth (kHz)	Height (cm)	Pol	Azimuth (deg)	Corr. (dB)
33.018300	12.31	30.00	17.69	1000.0	120.000	101.0	V	90	13.6
38.697750	15.11	30.00	14.89	1000.0	120.000	101.0	V	270	14.0
47.567100	9.20	30.00	20.80	1000.0	120.000	101.0	H	0	13.2
619.948950	18.10	36.00	17.90	1000.0	120.000	170.0	H	295	20.9
678.369300	18.59	36.00	17.41	1000.0	120.000	170.0	V	246	21.3
813.180300	20.13	36.00	15.87	1000.0	120.000	101.0	H	270	22.9

Plots: Set 1

Plot 1: 9 kHz – 30 MHz; magnetic (Rx)

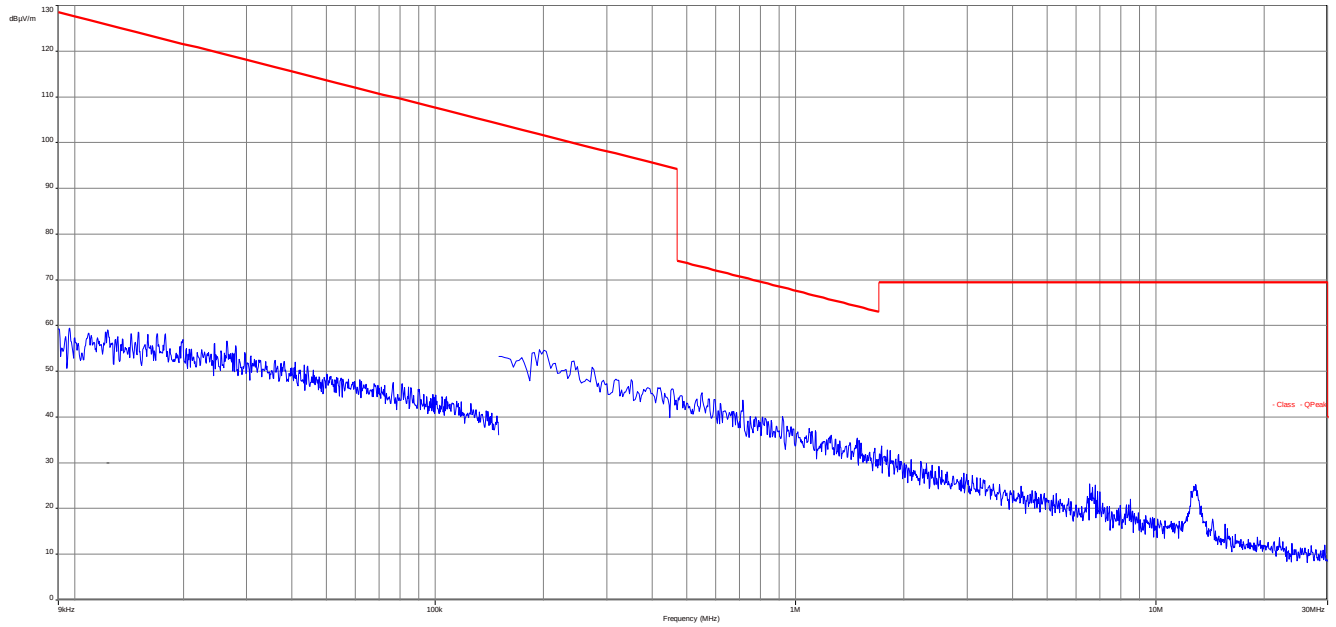


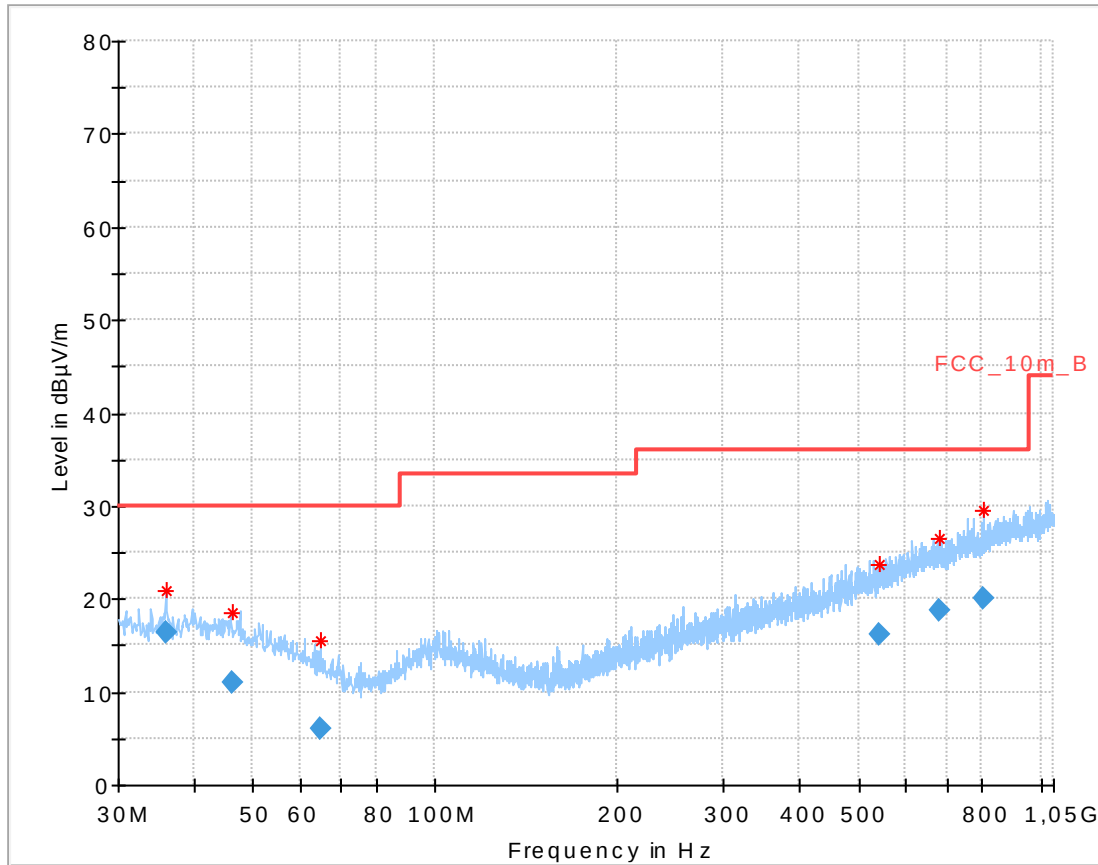
Plot 2: 30 MHz – 1000 MHz, vertical and horizontal polarization (Rx)

Frequency (MHz)	QuasiPeak (dBμV/m)	Limit (dBμV/m)	Margin (dB)	Meas. Time (ms)	Bandwidth (kHz)	Height (cm)	Pol	Azimuth (deg)	Corr. (dB)
36.010050	16.01	30.00	13.99	1000.0	120.000	101.0	V	-1	13.8
38.652750	11.99	30.00	18.01	1000.0	120.000	101.0	V	90	14.0
46.386000	10.41	30.00	19.59	1000.0	120.000	101.0	V	295	13.5
611.963400	18.00	36.00	18.00	1000.0	120.000	98.0	H	205	20.8
687.756300	18.65	36.00	17.35	1000.0	120.000	98.0	H	25	21.4
808.034850	20.04	36.00	15.96	1000.0	120.000	98.0	V	205	22.8

Plots: Set 2

Plot 1: 9 kHz – 30 MHz; magnetic (Rx)



Plot 2: 30 MHz – 1000 MHz, vertical and horizontal polarization (Rx)

Frequency (MHz)	QuasiPeak (dBμV/m)	Limit (dBμV/m)	Margin (dB)	Meas. Time (ms)	Bandwidth (kHz)	Height (cm)	Pol	Azimuth (deg)	Corr. (dB)
36.002250	16.43	30.00	13.57	1000.0	120.000	101.0	V	90	13.8
46.124550	11.10	30.00	18.90	1000.0	120.000	101.0	V	89	13.6
64.517100	6.10	30.00	23.90	1000.0	120.000	170.0	V	295	9.6
542.007150	16.26	36.00	19.74	1000.0	120.000	170.0	V	90	19.2
677.802300	18.67	36.00	17.33	1000.0	120.000	101.0	V	90	21.3
806.310750	19.99	36.00	16.01	1000.0	120.000	98.0	V	25	22.8

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	45	EMI Test Receiver	ESCI 3	R&S	100083	300003312	k	27.01.2014	27.01.2015
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 Meßtechnik	*	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 bis 26,5 GHz	N9038A	Agilent Technologies	MY51210197	300004405	k	13.03.2014	13.03.2015
11	90	4U RF Switch Platform	L4491A	Agilent Technologies	MY50000037	300004509	ne		
12	n. a.	Test Receiver	ESH2	R&S	871921/095	300002505	Ve	24.01.2014	24.01.2016
13	n. a.	Loop Antenna 9 KHz - 30 MHz	HFH2-Z2	R&S	872096/61	300001824	vKI!	09.03.2012	09.03.2015

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

11 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	2015-01-19

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
 Akkreditierungsstellenleiterin

Deutsche Akkreditierungsstelle GmbH

Standort Berlin
 Spittelmarkt 10
 10117 Berlin

Standort Frankfurt am Main
 Gartenstraße 6
 60594 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 Deckblatts durch die umseitig genannte Kurznachrichtendienststelle 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 (Abl. 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.european-accreditation.org
 IAF: www.iaf.or.jp
 ILAC: www.ilac.org

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>