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

TEST REPORT

Test report no.: 1-6593/13-01-07

Deutsche
Akkreditierungsstelle
D-PL-12076-01-01

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-12076-01-01

Area of Testing:

Radio Communications & EMC (RCE)

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

Hi-P Tianjin Electronics Co., Ltd.

No29, 3th Street Xinye, Factory#7, Western TEDA

300462 Tianjin / CHINA

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: Remote Controller**Model name:** easyTek**FCC ID:** SGI-WL400**IC:** 267AB-WL400

Frequency: 3.28 MHz

Technology tested: NFC

Antenna: Neck Loop antenna (75cm)

Power supply: 3.7V DC by Li-Ion battery

Temperature range: 0°C to +45°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=Tobias Wittenmeier, o=CETECOM ICT Services GmbH, ou=WIT-111222, email=tobias.wittenmeier@cetecom.com, c=DE
2014.05.20 11:35:29 +02'00'

Tobias Wittenmeier
Expert

Test performed:

cn=Stefan Boes, o=CETECOM ICT Services GmbH, ou=BOE-111011, email=Stefan.Boes@cetecom.com, c=DE
2014.05.20 13:36:20 +02'00'

Stefan Bös
Senior Testing 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:	2014-05-19
Date of receipt of test item:	2014-05-02
Start of test:	2014-05-02
End of test:	2014-05-20
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

4 Test environment

Temperature:	T_{nom}	+22 °C during room temperature tests
	T_{max}	+45 °C during high temperature tests
	T_{min}	0 °C during low temperature tests
Relative humidity content:		53 %
Barometric pressure:		not relevant for this kind of testing
Power supply:	V_{nom}	3.7 V DC by Li-Ion battery
	V_{max}	4.2 V
	V_{min}	3.0 V

5 Test item

Kind of test item	:	Remote Controller
Type identification	:	easyTek
S/N serial number	:	202WW09113831
HW hardware status	:	Proto 2.5
SW software status	:	BC7 0.12.2/ D9 240.11.1
Frequency band [MHz]	:	3.28 MHz
Type of radio transmission	:	Modulated carrier
Use of frequency spectrum	:	
Number of channels	:	1
Antenna	:	Neck Loop antenna (75cm)
Power supply	:	3.7 V DC by Li-Ion battery
Temperature range	:	0°C to +45 °C

5.1 Additional information

Test setup- and EUT-photos are included in test report: 1-6593/13-01-01_AnnexA
 1-6593/13-01-01_AnnexB
 1-6593/13-01-01_AnnexD

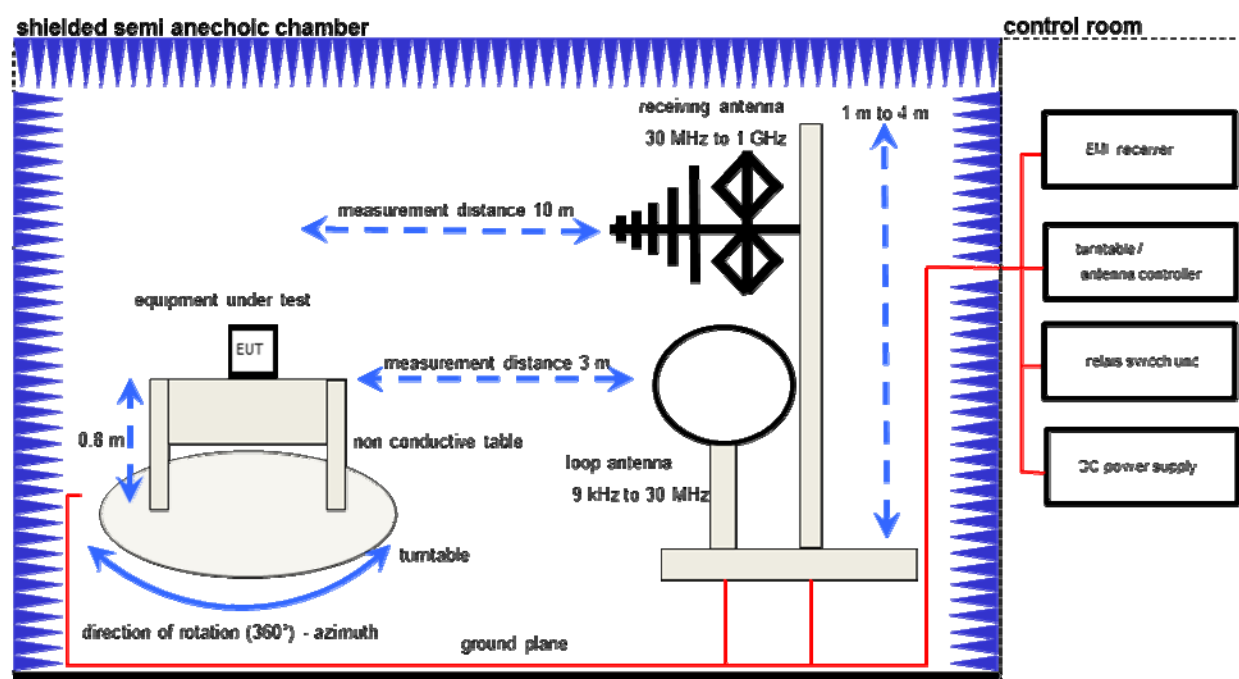
6 Test laboratories sub-contracted

None

7 Description of the test setup

7.1 Radiated measurements

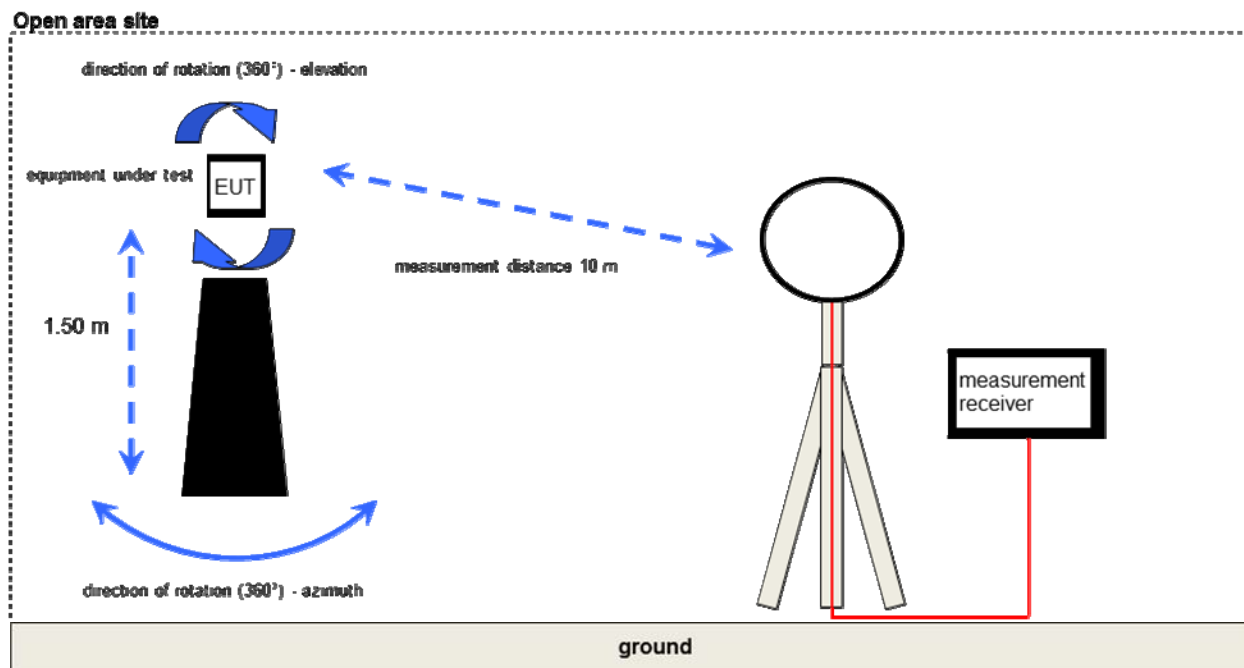
The radiated measurements are performed in vertical and horizontal plane in the frequency range from 9 kHz to 1 GHz in semi-anechoic chambers. The EUT is positioned on a non-conductive support with a height of 0.80 m above a conductive ground plane that covers the whole chamber. The receiving antennas 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
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
Test Receiver	ESH2	R&S	871921/095	300002505
Loop Antenna 9 KHz - 30 MHz	HFH2-Z2	R&S	872096/61	300001824
EMI Test Receiver 9 kHz - 3 GHz incl. Preselector	ESPI3	R&S	101713	300004059

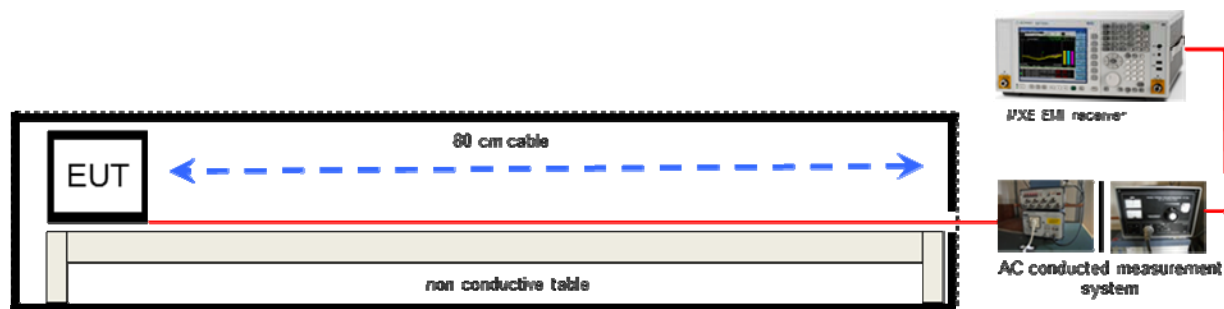
7.2 Open area site



Equipment table:

Equipment	Type	Manufacturer	Serial No.	INV. No Cetecom
Test Receiver	ESH2	R&S	871921/095	300002505
Loop Antenna 9 KHz - 30 MHz	HFH2-Z2	R&S	872096/61	300001824

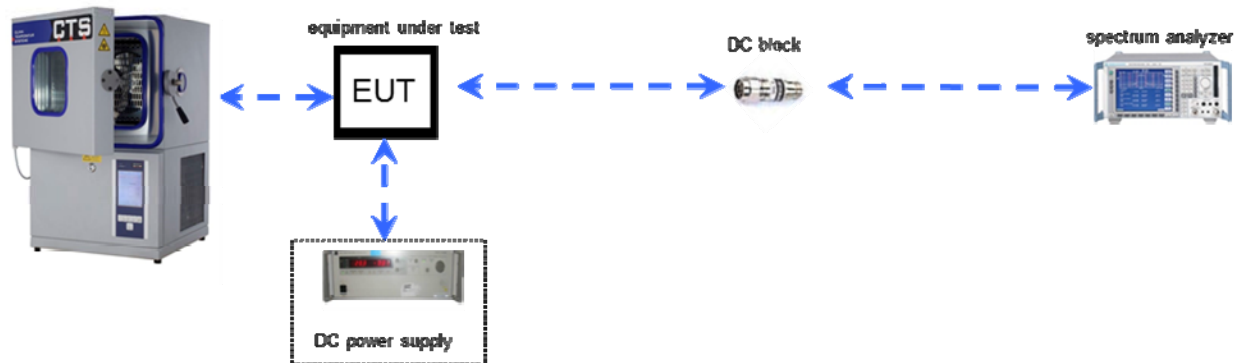
7.3 AC conducted



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
DC Power Supply 0 – 32V	1108-32	Heiden	001802	300001383
Temperature Test Chamber	T-40/50	CTS GmbH	064023	300003540
Spectrum Analyzer 20 Hz - 50 GHz	FSU50	R&S	200012	300003443

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	CFR Part 15 RSS 210, Issue 8	Passed	2014-05-20	-/-

Test Specification Clause	Test Case	Temperature Conditions	Power Source Voltages	Pass	Fail	NA	NP	Results
§ 15.35 (c) / RSS-GEN Issue 3 Section 4.5	Timing of the transmitter (Duty cycle correction factor)	Nominal	Nominal	☒	☐	☐	☐	complies
§ 15.223 / RSS-210 Issue 8	Bandwidth of the modulated carrier	Nominal	Nominal	☒	☐	☐	☐	complies
§ 15.223 / RSS-210 Issue 8	Fieldstrength of fundamental	Nominal	Nominal	☒	☐	☐	☐	complies
§ 15.209 (a) / RSS-210 Issue 8	Fieldstrength of harmonics and spurious	Nominal	Nominal	☒	☐	☐	☐	complies
§ 15.109 / RSS-210 Issue 8	Receiver spurious emissions	Nominal	Nominal	☒	☐	☐	☐	complies
§ 15.107 / § 15.207	Conducted limits	Nominal	Nominal	☒	☐	☐	☐	complies

Note: NA = Not Applicable; NP = Not Performed

8.1 Additional comments

Reference documents: None

Special test descriptions: We performed 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 120° and in phi axes @ 0° and 90° for both polarizations vertical & horizontal or magnetic emissions.

Configuration descriptions: None

9 Measurement results

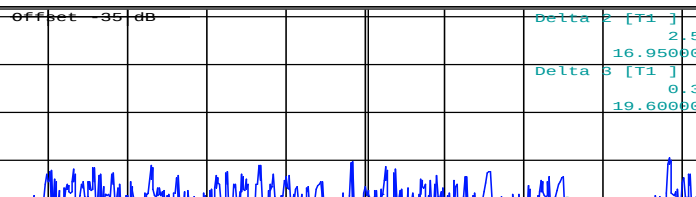
9.1 Timing of the transmitter

Measurement:

Measurement parameter	
Detector:	Peak
Sweep time:	25 ms
Resolution bandwidth:	10 kHz
Video bandwidth:	10 kHz
Span:	Zerospan
Trace-Mode:	Single sweep

Limits:

FCC	IC
Timing of the transmitter	
(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.	



RBW 10 kHz
VBW 10 kHz
SWT 25 ms

Marker 1 [T1]
25.98 dBμV
1.900000 ms

Ref 72 dBμV
Att 10 dB

Offset -35 dB

Delta 2 [T1]
2.59 dB
16.950000 ms

Delta 3 [T1]
0.35 dB
19.600000 ms

1 PK MAXH

Center 3.28 MHz
2.5 ms/

A SGL
LVL
30B

TX-Time: 16.95 ms
Idle-Time: 2.65 ms

$$\begin{aligned} \text{DC} &= ((5 \times 16.95 \text{ ms}) + (100 \text{ ms} - (5 \times 19.6 \text{ ms}))) / 100 \text{ ms} \\ \text{DC} &= 86.75 \text{ ms} / 100 \text{ ms} \\ \text{DC} &= 0.8675 \end{aligned}$$

Correction factor = -1.235 dB

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9.2 Bandwidth of the modulated carrier

Limits:

FCC	IC
Bandwidth of the modulated carrier	

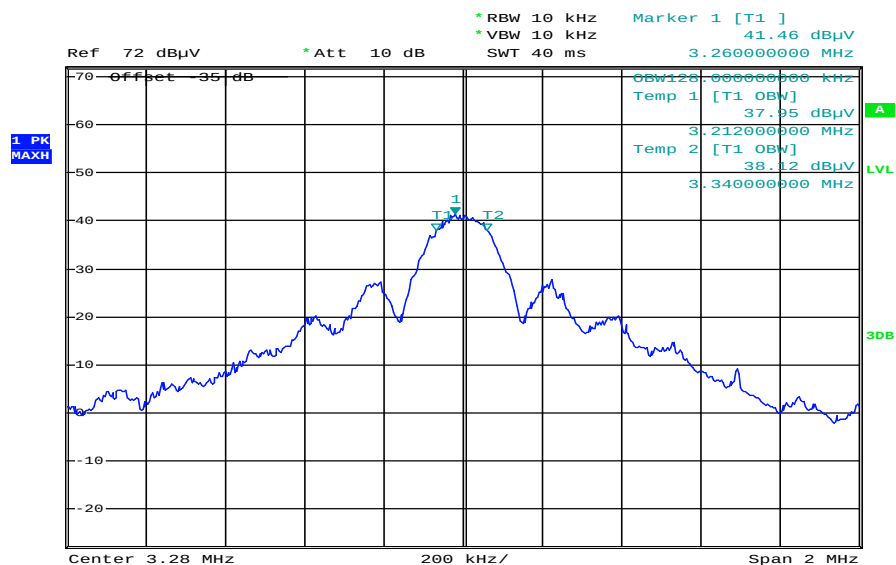
Measured with the integrated OBW-function of the spectrum analyser Rohde&Schwarz FSIQ26 (measurement criteria is the integrated power in %)

Result:

	Occupied Bandwidth (kHz)
6 dB (75%)	128
20 dB (99%)	728

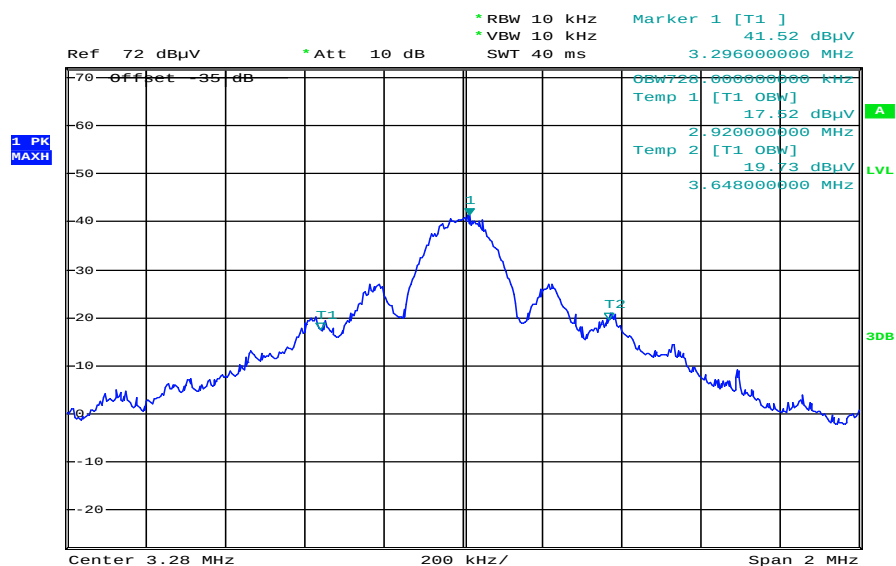
Plots of the measurement

Plot 1: 6dB (75%) – bandwidth



Date: 19.MAY.2014 09:00:23

Plot 2: 20dB (99%) - bandwidth



Date: 19.MAY.2014 09:01:14

9.3 Field strength of the fundamental

Measurement:

Measurement parameter	
Detector:	Quasi Peak (CISPR)
Resolution bandwidth:	10kHz
Trace-Mode:	Max Hold

Limits:

FCC		IC
Fundamental Frequency (MHz)	Field strength of Fundamental ($\mu\text{V/m}$)	Measurement distance (m)
1.705 – 10.0	[15] or [6dB-BW(kHz) / F(MHz)] Whichever is higher	30

Result:

TEST CONDITIONS		MAXIMUM POWER (dB $\mu\text{V/m}$)	
Frequency		3.28 MHz	3.28 MHz
Mode		at 3 m distance	at 30 m distance
T_{nom}	V_{nom}	41.2	1.2
Measurement uncertainty		$\pm 3\text{dB}$	

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

Result: **Passed.**

9.4 Fieldstrength of the harmonics and spurious

Measurement:

Measurement parameter	
Detector:	Peak / Quasi Peak / RMS
Sweep time:	Auto
Resolution bandwidth:	F < 150 kHz: 200 Hz 150 kHz > F > 30 MHz: 9 kHz F > 30 MHz: 120 kHz
Video bandwidth:	F < 150 kHz: 1 kHz 150 kHz > F > 30 MHz: 100 kHz F > 30 MHz: 300 kHz
Span:	9 kHz to 1 GHz
Trace-Mode:	Max Hold

Limits:

FCC		IC
Field strength of the harmonics and spurious.		
Frequency (MHz)	Field strength (μV/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 dBμV/m)	30
30 – 88	100 (40 dBμV/m)	3
88 – 216	150 (43.5 dBμV/m)	3
216 – 960	200 (46 dBμV/m)	3

Result:

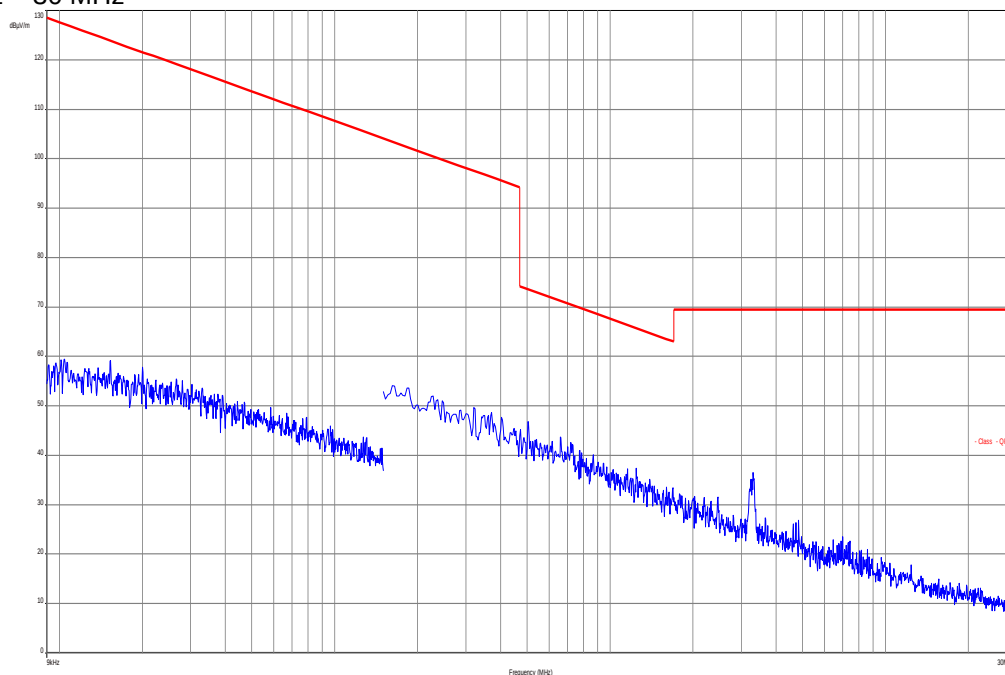
EMISSION LIMITATIONS				
f [MHz]	Detector	Limit max. allowed [dBμV/m]	Amplitude of emission [dBμV/m]	Results
For emissions below 1 GHz, please take a look at the table below the 1 GHz plot.				
All detected peak emissions are below the average limit!				

Result: **Passed**

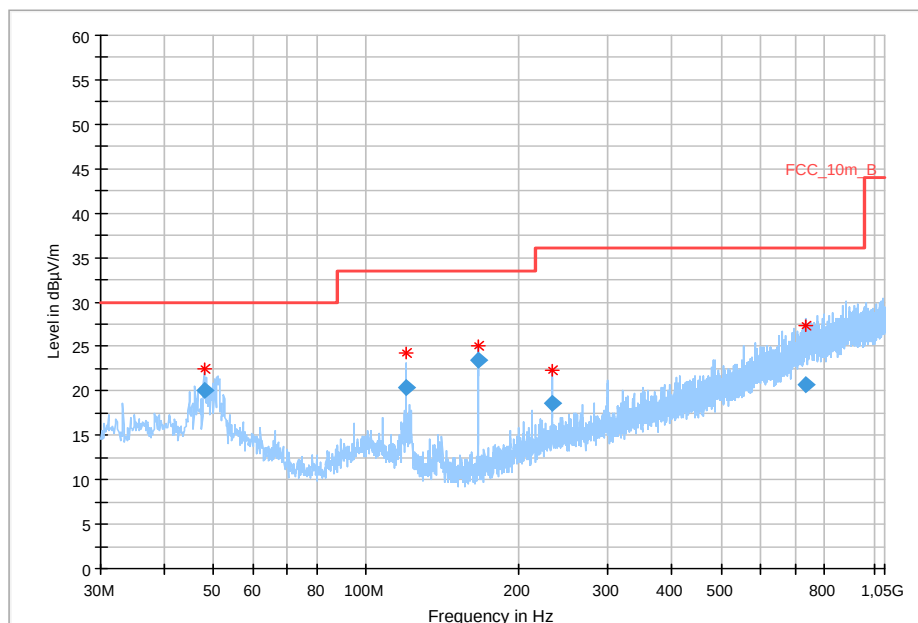
Note: The limit was recalculated with 20 dB / decade (Part 15.31) for all radiated spurious emissions 30 MHz to 1 GHz from 3 meter limit to a 10 meter distance. (40dB/decade for emissions < 30MHz)

Plots of the measurements

Plot 1: 9 kHz – 30 MHz



Plot 2: 30 MHz – 1000 MHz



Final Result

Frequency (MHz)	Quasi Peak (dBμV/m)	Limit (dBμV/m)	Margin (dB)	Meas. Time (ms)	Bandwidth (kHz)	Height (cm)	Pol	Azimuth (deg)	Corr. (dB)
48.036000	20.01	30.00	9.99	1000.0	120.000	105.0	V	94.0	13.3
120.014100	20.36	33.50	13.14	1000.0	120.000	170.0	V	190.0	10.2
166.578000	23.45	33.50	10.05	1000.0	120.000	98.0	V	100.0	9.6
233.226600	18.63	36.00	17.37	1000.0	120.000	116.0	V	280.0	12.8
735.502800	20.63	36.00	15.37	1000.0	120.000	170.0	H	271.0	23.3

9.5 Receiver spurious emissions

Measurement:

Measurement parameter	
Detector:	Peak / Quasi Peak / RMS
Sweep time:	Auto
Resolution bandwidth:	F < 150 kHz: 200 Hz 150 kHz > F > 30 MHz: 9 kHz F > 30 MHz: 120 kHz
Video bandwidth:	F < 150 kHz: 1 kHz 150 kHz > F > 30 MHz: 100 kHz F > 30 MHz: 300 kHz
Span:	9 kHz to 1 GHz
Trace-Mode:	Max Hold

Limits:

FCC		IC
Field strength of the harmonics and spurious.		
Frequency (MHz)	Field strength (μV/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 dBμV/m)	30
30 – 88	100 (40 dBμV/m)	3
88 – 216	150 (43.5 dBμV/m)	3
216 – 960	200 (46 dBμV/m)	3

Result:

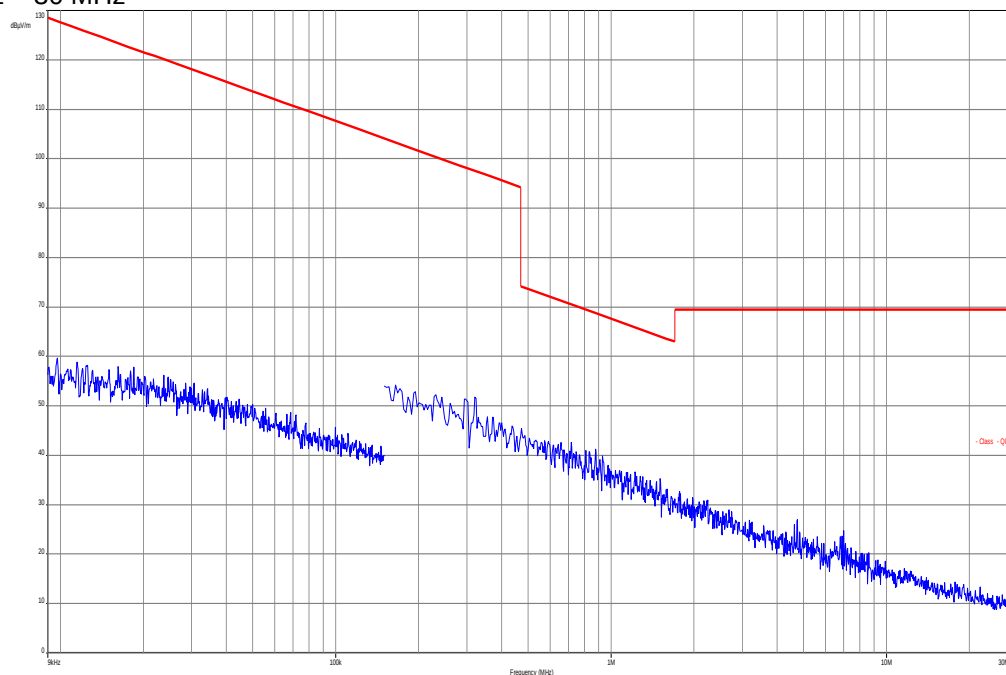
EMISSION LIMITATIONS				
f [MHz]	Detector	Limit max. allowed [dBμV/m]	Amplitude of emission [dBμV/m]	Results
For emissions below 1 GHz, please take a look at the table below the 1 GHz plot.				
All detected peak emissions are below the average limit!				

Result: **Passed**

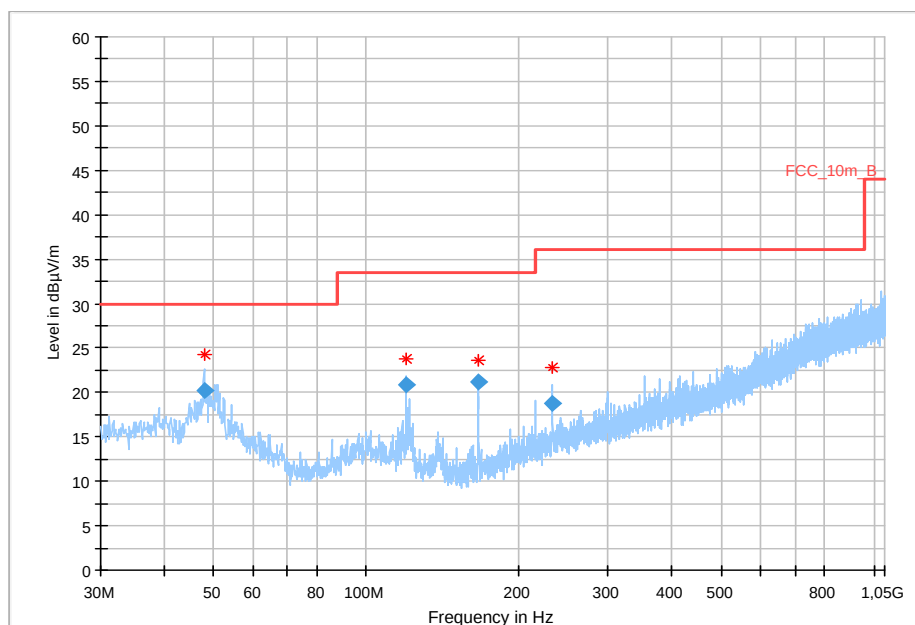
Note: The limit was recalculated with 20 dB / decade (Part 15.31) for all radiated spurious emissions 30 MHz to 1 GHz from 3 meter limit to a 10 meter distance. (40dB/decade for emissions < 30MHz)

Plots of the measurements

Plot 1: 9 kHz – 30 MHz



Plot 2: 30 MHz – 1000 MHz



Final_Result

Frequency (MHz)	Quasi Peak (dBμV/m)	Limit (dBμV/m)	Margin (dB)	Meas. Time (ms)	Bandwidth (kHz)	Height (cm)	Pol	Azimuth (deg)	Corr. (dB)
47.975100	20.21	30.00	9.79	1000.0	120.000	134.0	V	88.0	13.3
119.986050	20.88	33.50	12.62	1000.0	120.000	98.0	V	171.0	10.2
166.008000	21.12	33.50	12.38	1000.0	120.000	98.0	V	100.0	9.6
232.388250	18.74	36.00	17.26	1000.0	120.000	131.0	V	280.0	12.8

9.6 Conducted limits

Measurement:

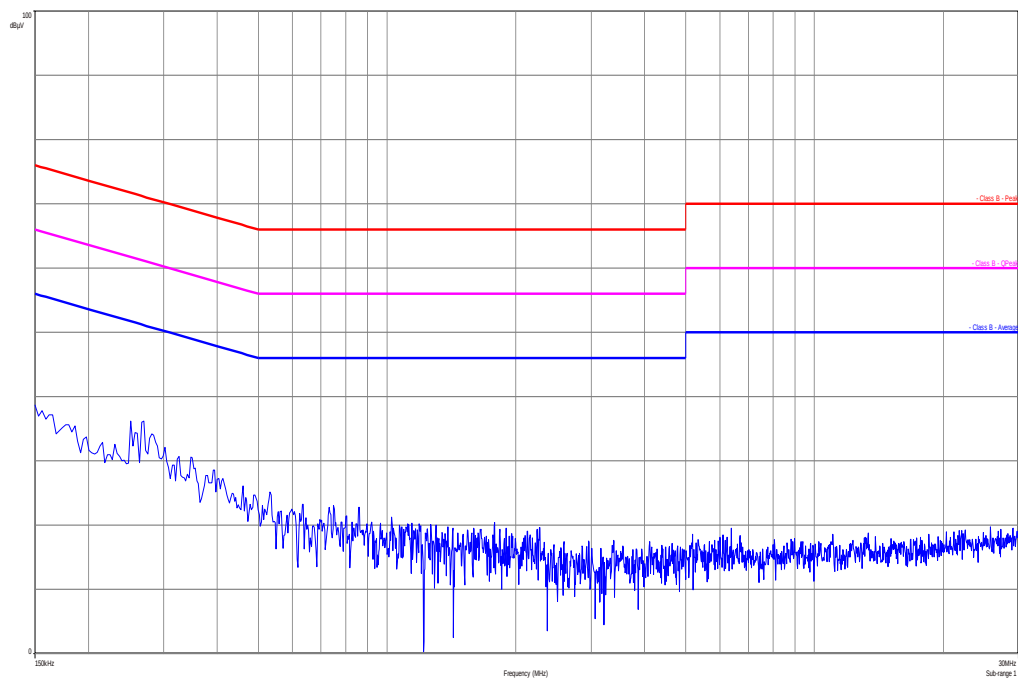
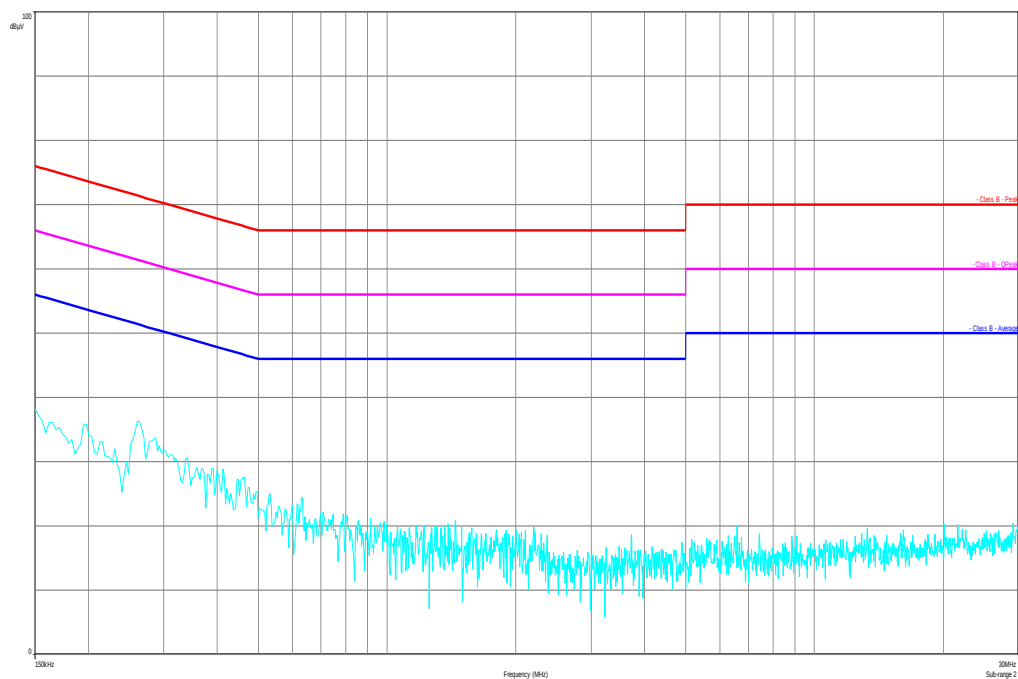
Measurement parameter	
Detector:	Peak - Quasi Peak / Average
Sweep time:	Auto
Resolution bandwidth:	F < 150 kHz: 200 Hz F > 150 kHz: 9 kHz
Video bandwidth:	F < 150 kHz: 1 kHz F > 150 kHz: 100 kHz
Span:	9 kHz to 30 MHz
Trace-Mode:	Max Hold

Limits:

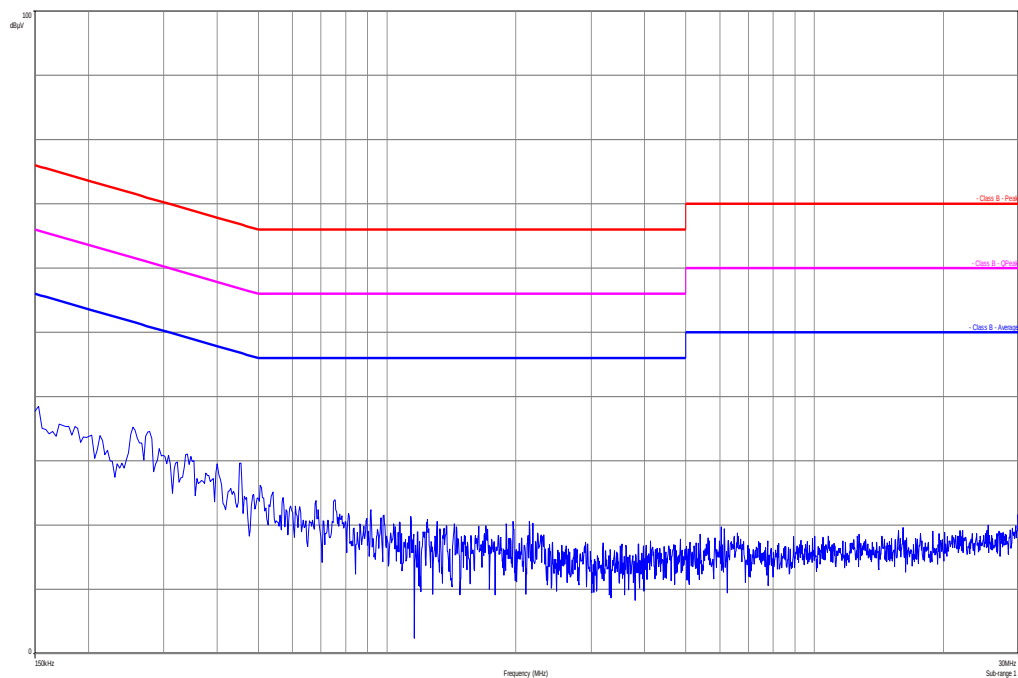
FCC		IC	
Conducted limits			
Frequency of Emission (MHz)	Conducted Limit (dBμV)		
	Quasi-peak	Average	
0.15 – 0.5	66 to 56 *	56 to 46 *	
0.5 – 5	56	46	
5 - 30	60	50	

*Decreases with the logarithm of the frequency

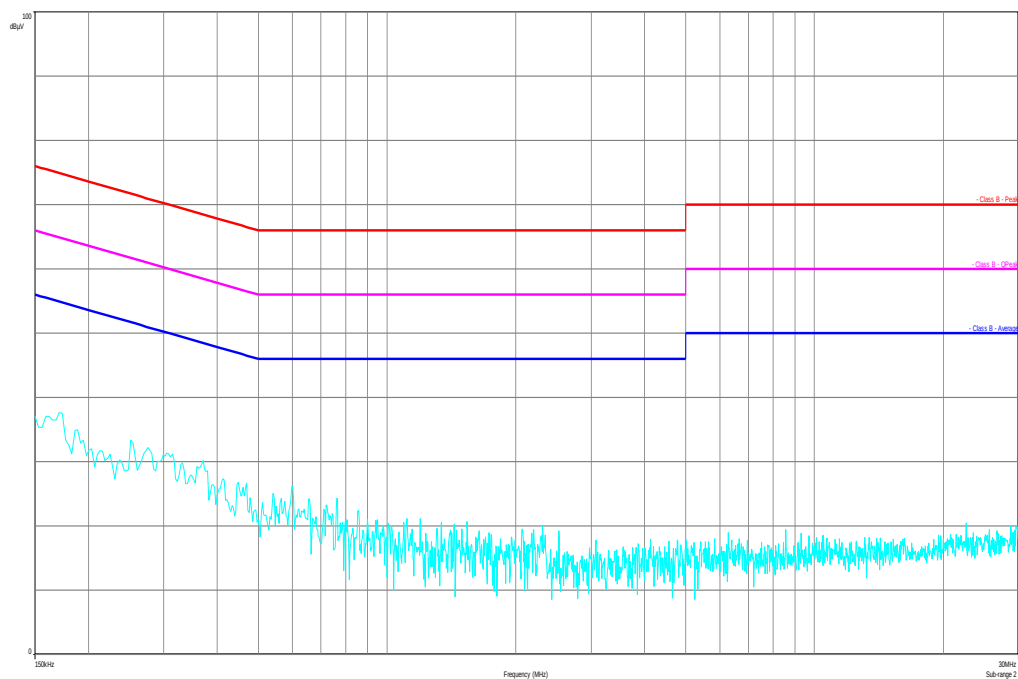
Result: -/-.

Plots:**Plot 1:** TX mode, 150 kHz to 30 MHz, phase line**Plot 2:** TX mode, 150 kHz to 30 MHz, neutral line

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



Plot 4: RX / 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	n. a.	Test Receiver	ESH2	R&S	871921/095	300002505	Ve	24.01.2014	24.01.2016
2	n. a.	Loop Antenna 9 KHz - 30 MHz	HFH2-Z2	R&S	872096/61	300001824	vIKI!	09.03.2012	09.03.2015
3	n. a.	EMI Test Receiver 9 kHz - 3 GHz incl. Preselector	ESPI3	R&S	101713	300004059	k	24.01.2014	24.01.2015
4	n. a.	DC power supply, 60Vdc, 50A, 1200 W	6032A	HP Meßtechnik	2818A03450	300001040	Ve	12.01.2012	12.01.2015
5	n. a.	Double-Ridged Waveguide Horn Antenna 1-18.0GHz	3115	EMCO	8812-3088	300001032	vIKI!	08.05.2013	08.05.2015
6	n. a.	Anechoic chamber	FAC 3/5m	MWB / TDK	87400/02	300000996	ev		
7	n. a.	Switch / Control Unit	3488A	HP Meßtechnik	*	300000199	ne		
8	9	Artificial Mains 9 kHz to 30 MHz	ESH3-Z5	R&S	828576/020	300001210	Ve	30.01.2014	30.01.2016
9	9	Isolating Transformer	MPL IEC625 Bus Regeltrennt ravo	Erfi	91350	300001155	ne		
10	90	Active Loop Antenna 10 kHz to 30 MHz	6502	Kontron Psychotech	8905-2342	300000256	k	13.06.2013	13.06.2015
11	n. a.	Amplifier	js42-00502650-28-5a	Parzich GMBH	928979	300003143	ne		
12	n. a.	Band Reject filter	WRCG185 5/1910-1835/1925-40/8SS	Wainwright	7	300003350	ev		
13	n. a.	Band Reject filter	WRCG240 0/2483-2375/2505-50/10SS	Wainwright	11	300003351	ev		
14	n. a.	Highpass Filter	WHKX7.0/1 8G-8SS	Wainwright	18	300003789	ne		
15	n. a.	TRILOG Broadband Test-Antenna 30 MHz - 3 GHz	VULB9163	Schwarzbeck	371	300003854	vIKI!	14.10.2011	14.10.2014
16	n. a.	MXE EMI Receiver 20 Hz bis 26,5 GHz	N9038A	Agilent Technologies	MY51210197	300004405	k	13.03.2014	13.03.2015
17	n. a.	4U RF Switch Platform	L4491A	Agilent Technologies	MY50000037	300004509	ne		
18	45	Switch-Unit	3488A	HP Meßtechnik	2719A14505	300000368	g		
19	50	DC power supply, 60Vdc, 50A, 1200 W	6032A	HP Meßtechnik	2920A04466	300000580	ne		
20	n. a.	EMI Test Receiver	ESCI 3	R&S	100083	300003312	k	27.01.2014	27.01.2015
21	n. a.	Funkstörmesse mpfänger 20Hz-	ESU26	R&S	100037	300003555	k	28.02.2014	28.02.2015

		26,5GHz							
22	n. a.	Antenna Tower	Model 2175	ETS-LINDGREN	64762	300003745	izw		
23	n. a.	Positioning Controller	Model 2090	ETS-LINDGREN	64672	300003746	izw		
24	n. a.	Turntable Interface-Box	Model 105637	ETS-LINDGREN	44583	300003747	izw		
25	n. a.	TRILOG Broadband Test-Antenna 30 MHz - 3 GHz	VULB9163	Schwarzbeck	295	300003787	k	22.04.2014	22.04.2016

Agenda: Kind of Calibration

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

11 Observations

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

Annex A Document history

Version	Applied changes	Date of release
	Initial release	2014-05-20

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



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 / UTRAN 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-12076-01-01
Hilfsprüfer

Back side of certificate

Deutsche Akkreditierungsstelle GmbH

Standort Berlin
Spittelmarkt 10
10117 Berlin

Standort Frankfurt am Main
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60504 Frankfurt am Main

Standort Braunschweig
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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 Akkreditierungsstellen (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>