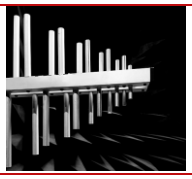
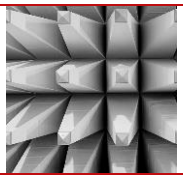

CETECOM™

CETECOM ICT Services
consulting - testing - certification

TEST REPORT

Test report no.: 1-9859/15-01-04

DAkkS 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

DataCollect Traffic Systems GmbH & Co. KG
Heinrich-Hertz-Str. 1
50170 Kerpen / GERMANY
Phone: +49 (0) 22 73 59 56 0
Fax: +49 (0) 22 73 59 56 23
Contact: Sarah Wittig
e-mail: wittig@datacollect.de
Phone: +49 (0) 22 73 59 56 0

Manufacturer

DataCollect Traffic Systems GmbH & Co. KG
Heinrich-Hertz-Str. 1
50170 Kerpen / 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 Appendix 1	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:	**SDR Side Radar Classifier**
Model name:	**SDR**
FCC ID:	**2AE0TSDRB**
IC:	**20402-SDRB**
Frequency:	24.075 GHz – 24.175 GHz
Antenna:	Integrated antenna
Power supply:	12.5 V DC from power supply
Temperature range:	-20°C to +55°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 authorized:

cn=Meheza Walla, o=CETECOM ICT Services GmbH, ou=RCE, email=Meheza.Walla@cetecom.com, c=DE
2015.08.14 12:59:22 +02'00'

Meheza Walla
Lab Manager
Radio Communications & EMC

Test performed:

p.o.

cn=Marco Bertolino, o=CETECOM ICT Services GmbH, ou=BTL-100826, email=marco.bertolino@cetecom.com, c=DE
2015.08.14 11:00:03 +02'00'

Karsten Geraldy
Lab Manager
Radio Communications & EMC

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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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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:	2015-05-05
Date of receipt of test item:	2015-07-09
Start of test:	2015-07-09
End of test:	2015-07-13
Person(s) present during the test:	-/-

3 Test standard/s

Test standard	Date	Test standard description
47 CFR Part 15	01.10.2013	Title 47 of the Code of Federal Regulations; Chapter I; Part 15 - Radio frequency devices
RSS - 210 Issue 8	2010-12	Spectrum Management and Telecommunications Radio Standards Specification - Licence-exempt Radio Apparatus (All Frequency Bands): Category I Equipment

3.1 Measurement guidance

Guidance	Version	Description
ANSI C63.4-2014	-/-	American national standard for methods of measurement of radio-noise emissions from low-voltage electrical and electronic equipment in the range of 9 kHz to 40 GHz
ANSI C63.10-2013	-/-	American national standard of procedures for compliance testing of unlicensed wireless devices

4 Test environment

Temperature:	T_{nom}	+22 °C during room temperature tests
	T_{max}	+55 °C during high temperature tests
	T_{min}	-20 °C during low temperature tests
Relative humidity content:		55 %
Barometric pressure:		not relevant for this kind of testing
Power supply:	V_{nom}	12.5 V DC

5 Test item

Kind of test item	**:**	**SDR Side Radar Classifier**
Type identification	**:**	**SDR**
PMN	**:**	**SDR**
HVIN	**:**	**SDR_BT**
FVIN	**:**	**-/-**
HMN	**:**	**-/-**
S/N serial number	**:**	**1503E4515B**
HW hardware status	**:**	**1.0**
SW software status	**:**	**8.3**
Frequency band	**:**	**24.075 GHz – 24.175 GHz**
Type of modulation	**:**	**FMCW**
Number of channels	**:**	**1**
Antenna	**:**	**Integrated antenna**
Power supply	**:**	**12.5 V DC from power supply**
Temperature range	**:**	**-20°C to +55°C**

5.1 Additional information

Test setup- and EUT-photos are included in test report: 1-9859/15-01-01_AnnexA
1-9859/15-01-01_AnnexB
1-9859/15-01-01_AnnexD

6 Test laboratories sub-contracted

None

7 Description of the test setup

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 signaling equipment as well as measuring receivers and analyzers are connected to an external high-precision 10 MHz reference (GPS-based or rubidium frequency standard).

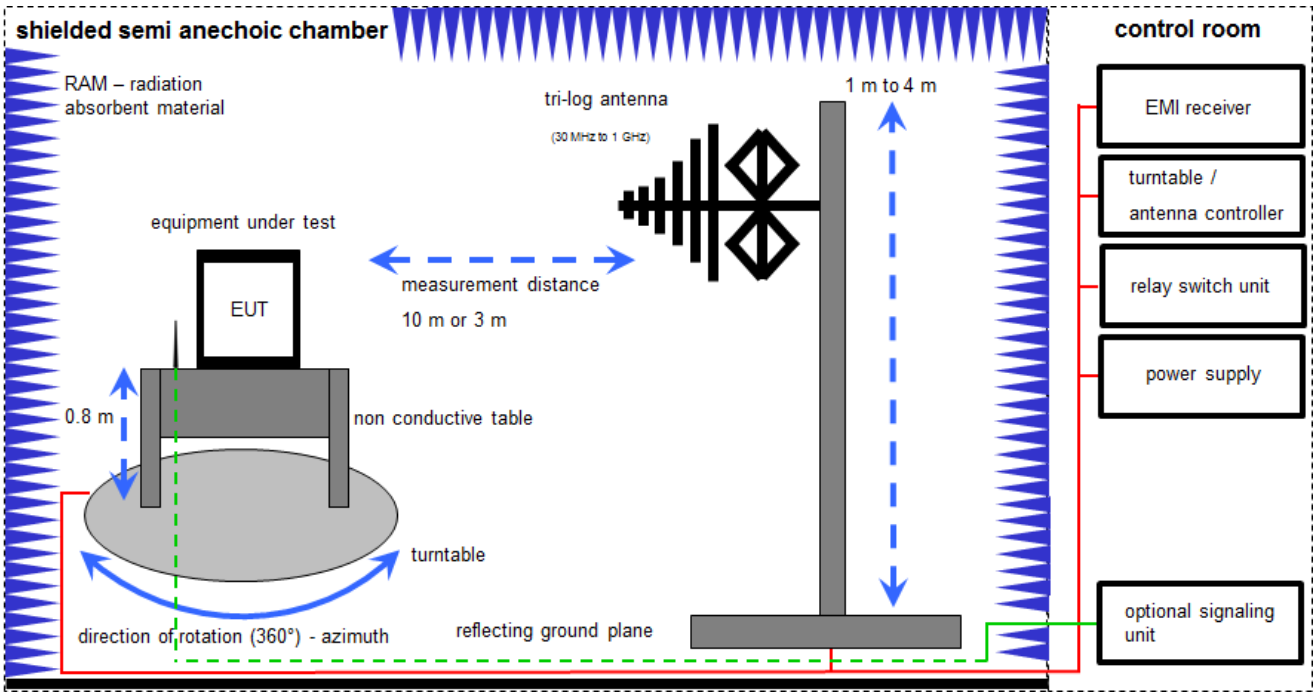
In order to simplify the identification of the equipment used at some special tests, some items of test equipment and ancillaries can be provided with an identifier or number in the equipment list below (Lab/Item).

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

7.1 Shielded semi anechoic chamber

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 analyzers where the detector modes and resolution bandwidths over various frequency ranges are set according to requirement ANSI C63.



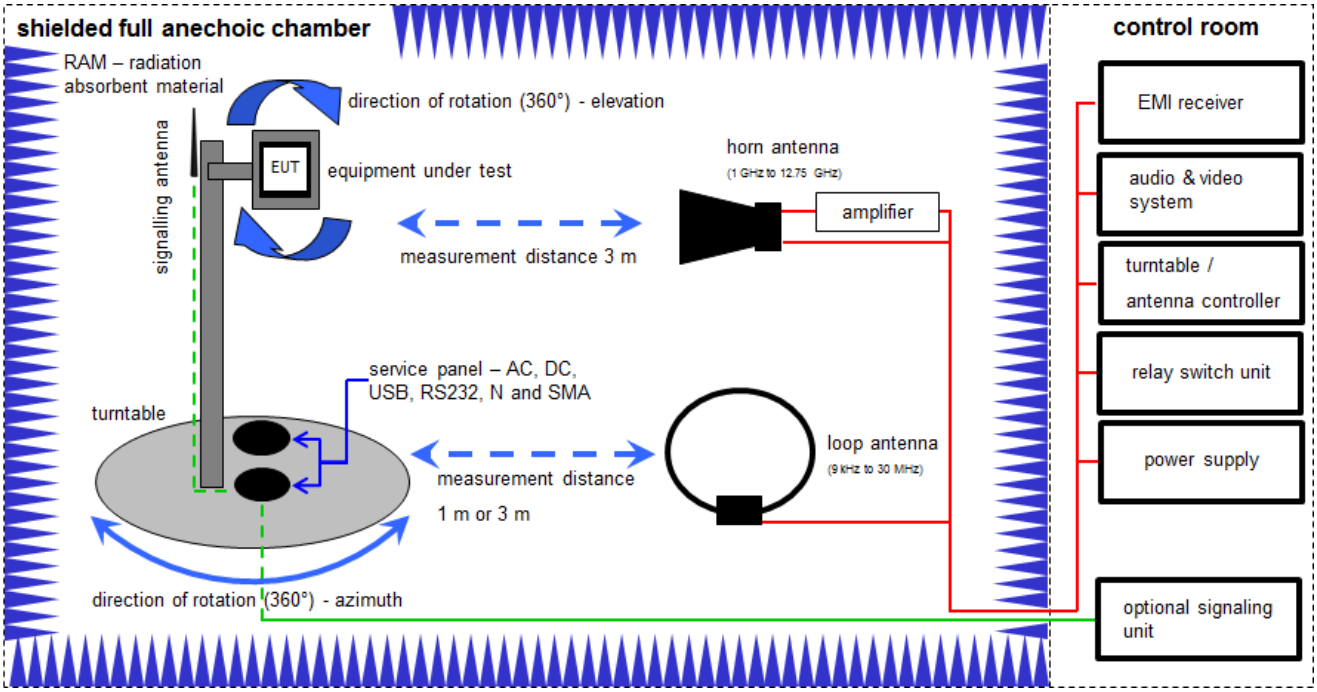
SS = U_R + CL + AF
(SS-signal strength; U_R-voltage at the receiver; CL-loss of the cable; AF-antenna factor)

Example calculation:
SS [dBµV/m] = 12.35 [dBµV/m] + 1.90 [dB] + 16.80 [dBµV/m] = 31.05 [dBµV/m] (35.69 µV/m)

Equipment table:

No.	Lab / Item	Equipment	Type	Manufact.	Serial No.	INV. No Cetecom	Kind of Calibration	Last Calibration	Next Calibration
1	A	Switch-Unit	3488A	HP	2719A14505	300000368	ev	-/-	-/-
2	A	EMI Test Receiver	ESCI 3	R&S	100083	300003312	k	26.01.2015	26.01.2016
3	A	Antenna Tower	Model 2175	ETS-Lindgren	64762	300003745	izw	30.01.2014	30.01.2016
4	A	Positioning Controller	Model 2090	ETS-Lindgren	64672	300003746	izw	29.01.2015	29.01.2017
5	A	Turntable Interface-Box	Model 105637	ETS-Lindgren	44583	300003747	izw	26.08.2014	26.08.2016
6	A	TRILOG Broadband Test-Antenna 30 MHz - 3 GHz	VULB9163	Schwarzbeck	295	300003787	k	22.04.2014	22.04.2016

7.2 Shielded fully anechoic chamber

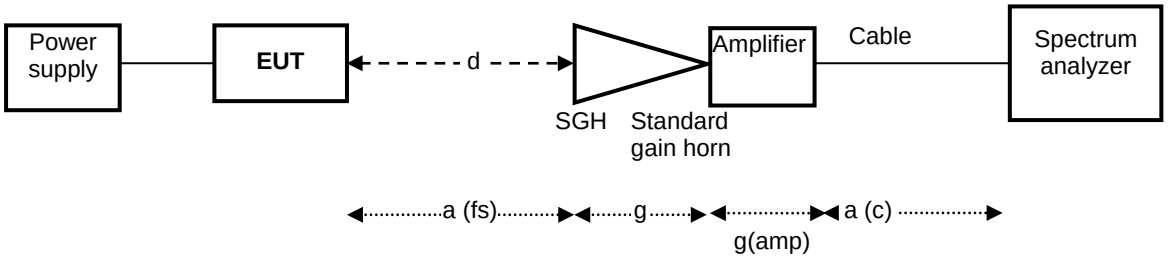


Equipment table:

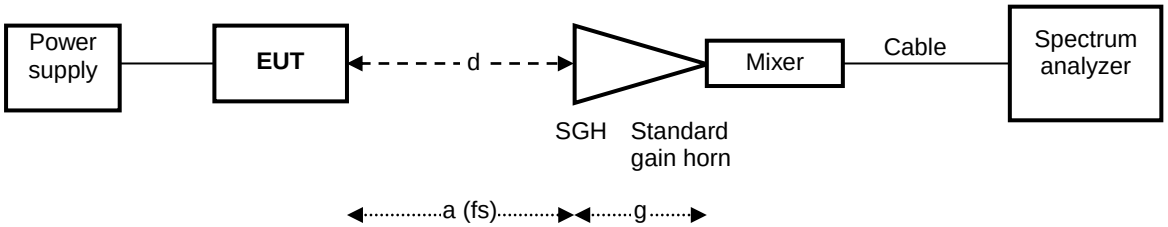
No.	Lab / Item	Equipment	Type	Manufact.	Serial No.	INV. No Cetecom	Kind of Calibration	Last Calibration	Next Calibration
1	n. a.	DC power supply, 60Vdc, 50A, 1200 W	6032A	HP	2818A03450	300001040	Ve	20.01.2015	20.01.2018
2	n. a.	Double-Ridged Waveguide Horn Antenna 1-18.0GHz	3115	EMCO	8812-3088	300001032	vlKl!	20.05.2015	20.05.2017
3	n. a.	Anechoic chamber	FAC 3/5m	MWB / TDK	87400/02	300000996	ev		
4	n. a.	Switch / Control Unit	3488A	HP	*	300000199	ne		
5	9	Isolating Transformer	MPL IEC625 Bus Regeltrenntravo	Erfi	91350	300001155	ne		
6	90	Active Loop Antenna 10 kHz to 30 MHz	6502	Kontron Psychotech	8905-2342	300000256	k	24.06.2015	24.06.2017
7	90	Amplifier	js42-00502650-28-5a	Parzich GMBH	928979	300003143	ne		
8	90	Band Reject filter	WRCG1855/1910-1835/1925-40/8SS	Wainwright	7	300003350	ev		
9	90	Band Reject filter	WRCG2400/2483-2375/2505-50/10SS	Wainwright	11	300003351	ev		
10	90	Highpass Filter	WHKX7.0/18G-8SS	Wainwright	18	300003789	ne		
11	90	MXE EMI Receiver 20 Hz to 26,5 GHz	N9038A	Agilent Technologies	MY51210197	300004405	k	06.03.2015	06.03.2016
12	90	4U RF Switch Platform	L4491A	Agilent Technologies	MY50000037	300004509	ne		

7.1 Radiated measurements > 12.75 GHz

Test set-up for the measurement of spurious radiation and Field Strength in the frequency range 12 GHz to 50 GHz:



Test set-up for the measurement of spurious radiation in the frequency range 50 GHz to 100 GHz:



Equipment table:

No.	Lab / Item	Equipment	Type	Manufact.	Serial No.	INV. No Cetecom	Kind of Calibration	Last Calibration	Next Calibration
1	CR 79	Std. Gain Horn Antenna 26.5-40.0 GHz	V637	Narda	7911	300001751	ne		
2	11b	Microwave System Amplifier, 0.5-26.5 GHz	83017A	HP	00419	300002268	ev		
3	A025	Std. Gain Horn Antenna 49.9-75.8 GHz	2524-20	Flann	*	300001983	ne		
4	A028	Std. Gain Horn Antenna 73.8-112 GHz	2724-20	Flann	*	300001991	ne		
5	A026	Std. Gain Horn Antenna 12.4 to 18.0 GHz	639	Narda	8402	300000787	k		
6	A029	Std. Gain Horn Antenna 18.0 to 26.5 GHz	638	Narda	8205	300002442	k		
7	A029	Power Supply	LA30/5GA	Zentro	2046	300000711	NK!		
8	A029	Harmonic mixer 50 - 75 GHz for spectrum analyzers	FS-Z75	R&S	100099	300003949	k	06.03.2015	06.03.2016
9	A029	Std. Gain Horn Antenna 33.0-50.1 GHz	2324-20	Flann	57	400000683	ne		
10	A029	Broadband LNA 18-50 GHz	CBL18503070PN	CERNEX	25240	300004948	ev		
11	A029	Harmonic Mixer 75 - 110 GHz	FS-Z110	R&S	101411	300004959	k	04.05.2015	04.05.2016
12	n. a.	Spectrum Analyzer 20 Hz - 50 GHz	FSU50	R&S	200012	300003443	Ve	02.10.2014	02.10.2016

8 Measurement uncertainty

Measurement uncertainty	
Test case	**Uncertainty**
Field strength	± 3 dB
Occupied bandwidth	± span/1000
TX spurious emissions radiated below 30 MHz	± 3 dB
TX spurious emissions radiated 30 MHz to 1 GHz	± 3 dB
Spurious emissions radiated 1 GHz to 12.75 GHz	± 3.7 dB
Spurious emissions radiated above 12.75 GHz	± 4.5 dB

9 Sequence of testing

9.1 Sequence of testing 9 kHz to 30 MHz

Setup

- The equipment was setup to simulate a typical usage like descripted in the user manual or described by manufacturer.
- If the EUT is a tabletop system, a rotatable table with 1.5 m height is used.
- If the EUT is a floor standing device, it is placed on the ground.
- Auxiliary equipment and cables were positioned to simulate normal operation conditions as described in ANSI C 63.4.
- The AC power port of the EUT (if available) is connected to a power outlet below the turntable.
- The measurement distance is 3 meter (see ANSI C 63.4) – see each test details
- The EUT was set into operation.

Premeasurement

- The turntable rotates from 0° to 315° with 45° steps.
- The antenna height is 1.5 meter.
- At each turntable position the analyzer sweeps with peak detection to find the maximum of all emissions

Final measurement

- Identified emissions during the premeasurement the software maximizes by rotating the turntable position (0° to 360°) and by rotating the elevation axces (0° to 360°).
- The final measurement will be done in the position (turntable and elevation) causing the highest emissions with QPK (QPK / see ANSI C 63.4) detector
- The final levels, frequency, measuring time, bandwidth, turntable position, correction factor, margin to the limit, and limit will be recorded. Also a plot with the graph of the premeasurement and the limit will be stored.

9.2 Sequence of testing 30 MHz to 1 GHz

Setup

- The equipment was setup to simulate a typical usage like descripted in the user manual or described by manufacturer.
- If the EUT is a tabletop system, a table with 0.8 m height is used, which is placed on the ground plane.
- If the EUT is a floor standing device, it is placed on the ground plane with insulation between both.
- Auxiliary equipment and cables were positioned to simulate normal operation conditions as described in ANSI C 63.4.
- The AC power port of the EUT (if available) is connected to a power outlet below the turntable.
- The measurement distance is 10 or 3 meter (see ANSI C 63.4) – see each test details
- The EUT was set into operation.

Premeasurement

- The turntable rotates from 0° to 315° with 45° steps.
- The antenna is polarized vertical and horizontal.
- The antenna height changes from 1 to 3 meter.
- At each turntable position, antenna polarization and height the analyzer sweeps three times in peak to find the maximum of all emissions

Final measurement

- The final measurement will be performed with minimum the six highest peaks.
- According to the maximum antenna and turntable positions of premeasurement the software maximize the peaks by changing turntable position (± 45°) and antenna movement between 1 and 4 meter.
- The final measurement will be done with QP (Quasi-Peak / see ANSI C 63.4) detector with an EMI receiver
- The final levels, frequency, measuring time, bandwidth, antenna height, antenna polarization, turntable angle, correction factor, margin to the limit, and limit will be recorded. Also a plot with the graph of the premeasurement with marked maximum final measurements and the limit will be stored.

9.3 Sequence of testing 1 GHz to 12.75 GHz

Setup

- The equipment was setup to simulate a typical usage like descripted in the user manual or described by manufacturer.
- If the EUT is a tabletop system, a rotatable table with 1.5 m height is used.
- If the EUT is a floor standing device, it is placed on the ground.
- Auxiliary equipment and cables were positioned to simulate normal operation conditions as described in ANSI C 63.4.
- The AC power port of the EUT (if available) is connected to a power outlet below the turntable.
- The measurement distance is 3 meter (see ANSI C 63.4) – see each test details
- The EUT was set into operation.

Premeasurement

- The turntable rotates from 0° to 315° with 45° steps.
- The antenna is polarized vertical and horizontal.
- The antenna height is 1.5 meter.
- At each turntable position and antenna polarization the analyzer sweeps with peak detection to find the maximum of all emissions

Final measurement

- The final measurement will be performed with minimum the six highest peaks according the requirements of the ANSI C63.4.
- According to the maximum found antenna polarisation and turntable position of the premeasurement the software maximizes the peaks by rotating the turntable position (0° to 360°). This measurement is repeated for different EUT-table positions (0° to 150° in 30°-steps). This procedure is repeated for both antenna polarisations.
- The final measurement will be done in the position (turntable, EUT-table and antenna polarization) causing the highest emissions with Peak and RMS (RMS / see ANSI C 63.4) detector
- The final levels, frequency, measuring time, bandwidth, turntable position, EUT-table position, antenna polarization, correction factor, margin to the limit, and limit will be recorded. Also a plot with the graph of the premeasurement with marked maximum final measurements and the limit will be stored.

9.4 Sequence of testing above 12.75 GHz

Setup

- The equipment was setup to simulate a typical usage like descripted in the user manual or described by manufacturer.
- Auxiliary equipment and cables were positioned to simulate normal operation conditions as described in ANSI C 63.4.
- The AC power port of the EUT (if available) is connected to a power outlet below the turntable.
- The measurement distance is 0.5 meter
- The EUT was set into operation.

Premeasurement

- The antenna is moved spherical over the EUT in different polarisations of the antenna.

Final measurement

- The final measurement will be performed at the position and antenna orientation for all detected emissions that were found during the premeasurements with Peak and RMS (RMS / see ANSI C 63.4) detector
- The final levels, frequency, measuring time, bandwidth, correction factor, margin to the limit, and limit will be recorded. Also a plot with the graph of the premeasurement and the limit will be stored.

10 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 15 RSS 210, Issue 8, Annex 7	Passed	2015-08-14	-/-

Test specification clause	Test case	Temperature conditions	Power source voltages	Pass	Fail	NA	NP	Results (max.)
§15.245(b) RSS 210 / A7.1	Field strength of emissions (wanted signal)	Nominal	Nominal	☒	☐	☐	☐	119.8 dBµV
§2.1049	Occupied bandwidth (99% bandwidth)	Nominal	Nominal	☒	☐	☐	☐	3.20 MHz
§15.209(a) / §15.245(b)(1)(2)(3) RSS 210 / A7.1-4	Field strength of emissions (spurious)	Nominal	Nominal	☒	☐	☐	☐	58.81 dBµV @ 48.301GHz

Note: NA = Not Applicable; NP = Not Performed

10.1.1 Additional comments

Reference documents: None

Special test descriptions: None

Configuration descriptions: None

Test mode: ☒ Normal operation, no special test mode available.

☐ Special software is used.

11 Measurement results

11.1 Field strength of emissions (wanted signal)

Description:

Measurement of the maximum radiated field strength of the wanted signal.

Measurement:

Measurement parameter	
Detector:	Pos-Peak
Sweep time:	Auto
Video bandwidth:	Auto
Resolution bandwidth:	1 MHz
Span:	120 MHz
Trace-Mode:	Max Hold

Limits:

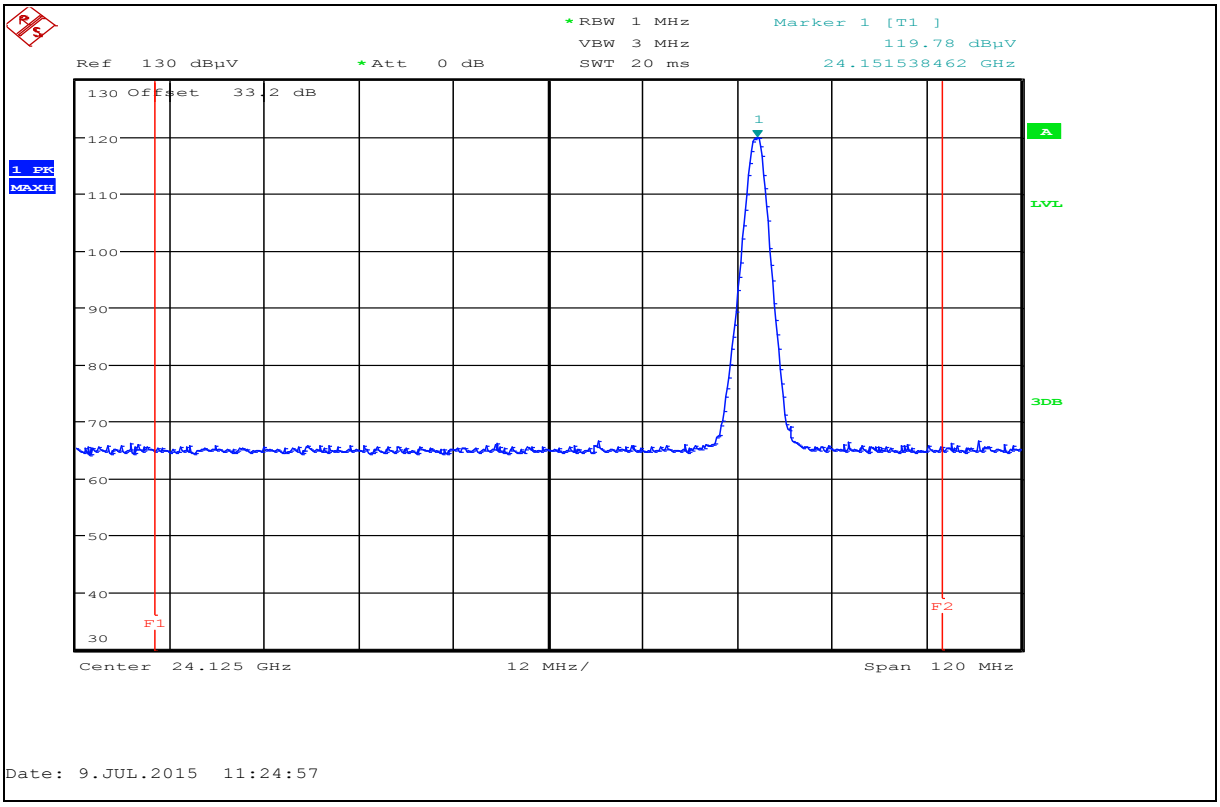
FCC		IC
CFR Part 15.245(b)		RSS - 210, Annex 7
Field strength of emissions		
The field strength of emissions from intentional radiators operated within these frequency bands shall comply with the following:		
Frequency [GHz]	Field Strength [mV/m // dBµV/m]	Measurement distance
24.075 – 24.175	128	3

Result:

Test condition	Maximum field strength [dBµV/m @ 3 m]
T_{nom} / V_{nom}	119.8
Measurement uncertainty	± 3 dB

Result: **The measurement is passed.**

Plot 1:


RBW 1 MHz
VBW 3 MHz
SWT 20 ms
Marker 1 [T1]
119.78 dBµV
24.151538462 GHz
Ref 130 dBµV
Att 0 dB
130 Offset 33.2 dB
120
110
100
90
80
70
60
50
40
30
1 PK
MAXH
A
LVL
3DB
F1
F2
Center 24.125 GHz
12 MHz/
Span 120 MHz
Date: 9.JUL.2015 11:24:57

11.2 Occupied bandwidth (99% bandwidth)

Description:

Measurement of the 99% bandwidth of the wanted signal.

Measurement:

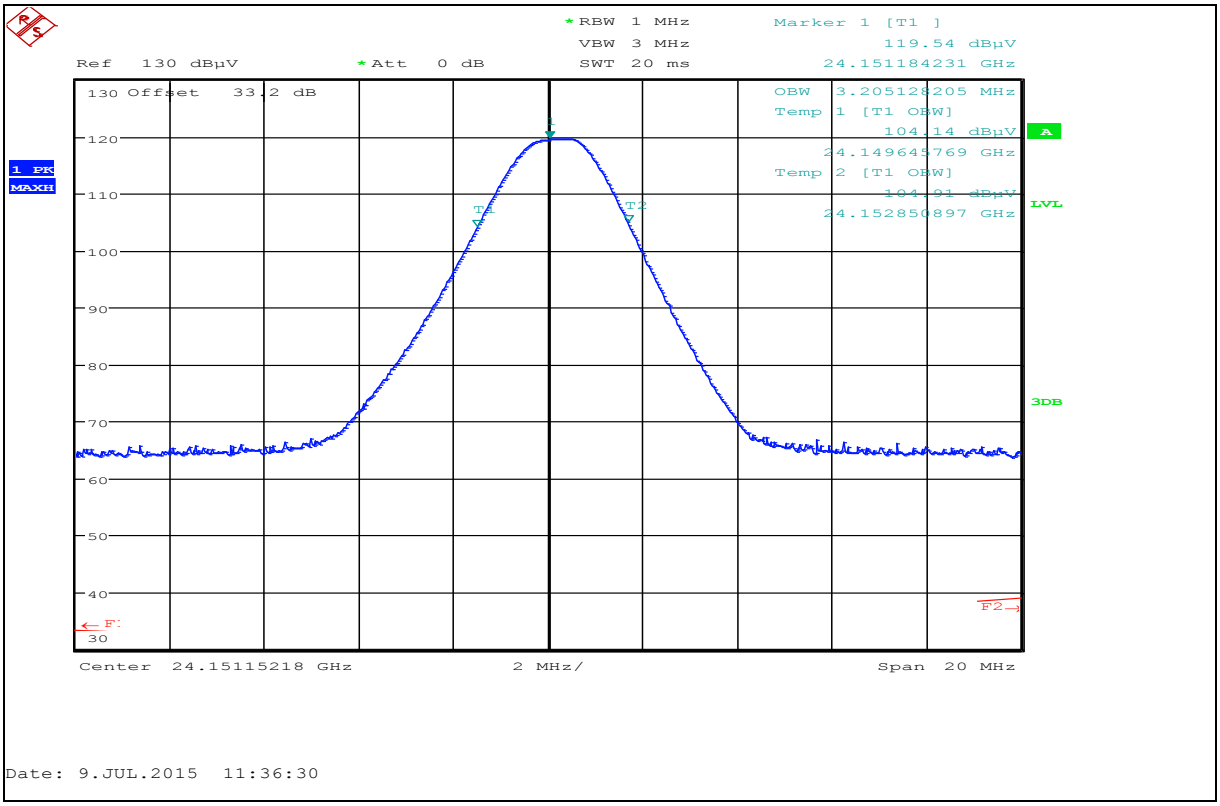
Measurement parameter	
Detector:	Peak
Sweep time:	Auto
Video bandwidth:	1 MHz
Resolution bandwidth:	Auto
Span:	20 MHz
Trace-Mode:	Max Hold

Results:

Test condition	99 % Occupied Bandwidth [MHz]
T_{nom} / V_{nom}	3.20
Measurement uncertainty	±span/1000

Result: **The measurement is passed.**

Plot 2:


RBW 1 MHz
VBW 3 MHz
SWT 20 ms
Marker 1 [T1]
119.54 dBµV
24.151184231 GHz
Ref 130 dBµV
Att 0 dB
130 Offset 33.2 dB
OBW 3.205128205 MHz
Temp 1 [T1 OBW]
104.14 dBµV
24.149645769 GHz
Temp 2 [T1 OBW]
104.91 dBµV
24.152850897 GHz
1 PK
MAXH
A
LVL
3DB
T1
T2
F2
Center 24.15115218 GHz
2 MHz/
Span 20 MHz
Date: 9.JUL.2015 11:36:30

11.3 Field strength of emissions (radiated spurious)

Description:

Measurement of the radiated spurious emissions in transmit mode.

Measurement:

Measurement parameter	
Detector:	Peak / Quasi Peak
Sweep time:	Auto
Video bandwidth:	Auto
Resolution bandwidth:	F < 1 GHz: 100 kHz F > 1 GHz: 1 MHz
Frequency range:	30 MHz to 100 GHz
Trace-Mode:	Max Hold

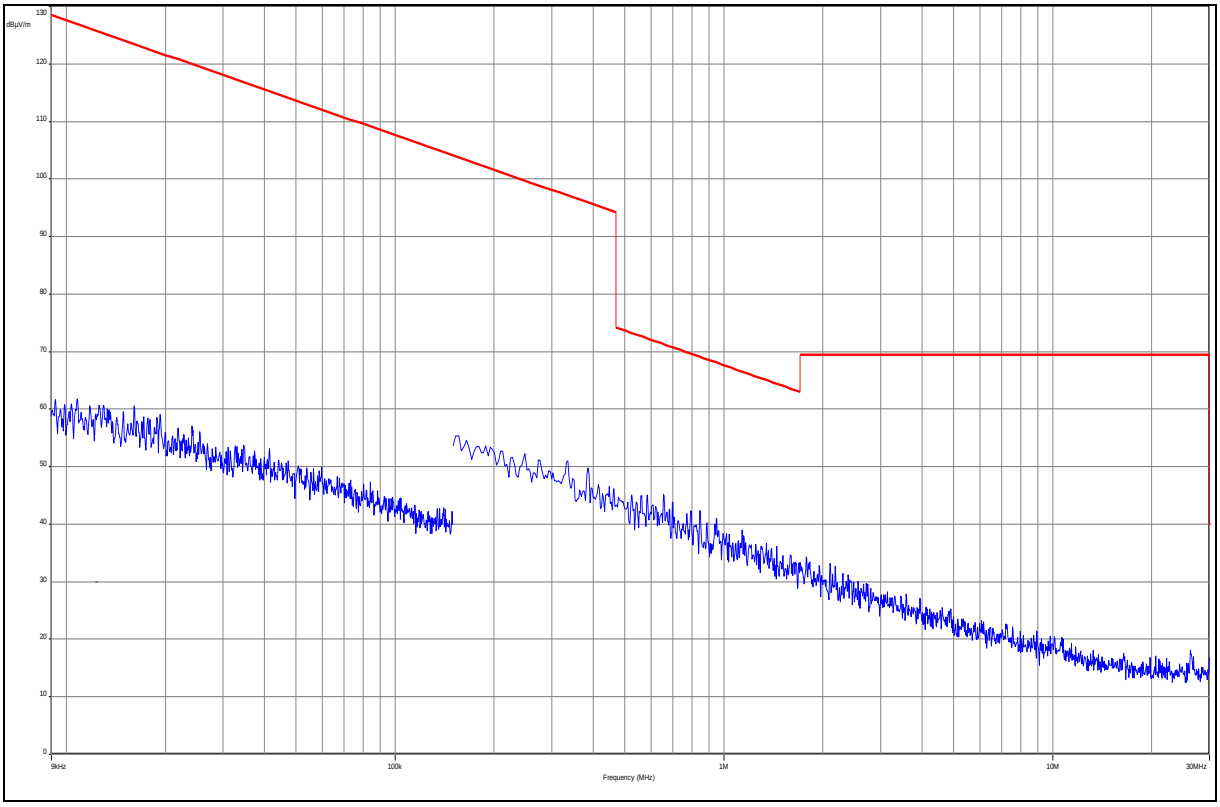
Limits:

FCC		IC
CFR Part 15.209(a)		RSS - GEN
Radiated Spurious Emissions		
Emissions radiated outside of the specified frequency bands, except for harmonics, shall be attenuated by at least 50 dB below the level of the fundamental or to the general radiated emission limits in § 15.209, whichever is the lesser attenuation.		
Frequency (MHz)	Field Strength (dBµV/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
30 88	30.0	10
88 – 216	33.5	10
216 – 960	36.0	10
Above 960	54.0	3

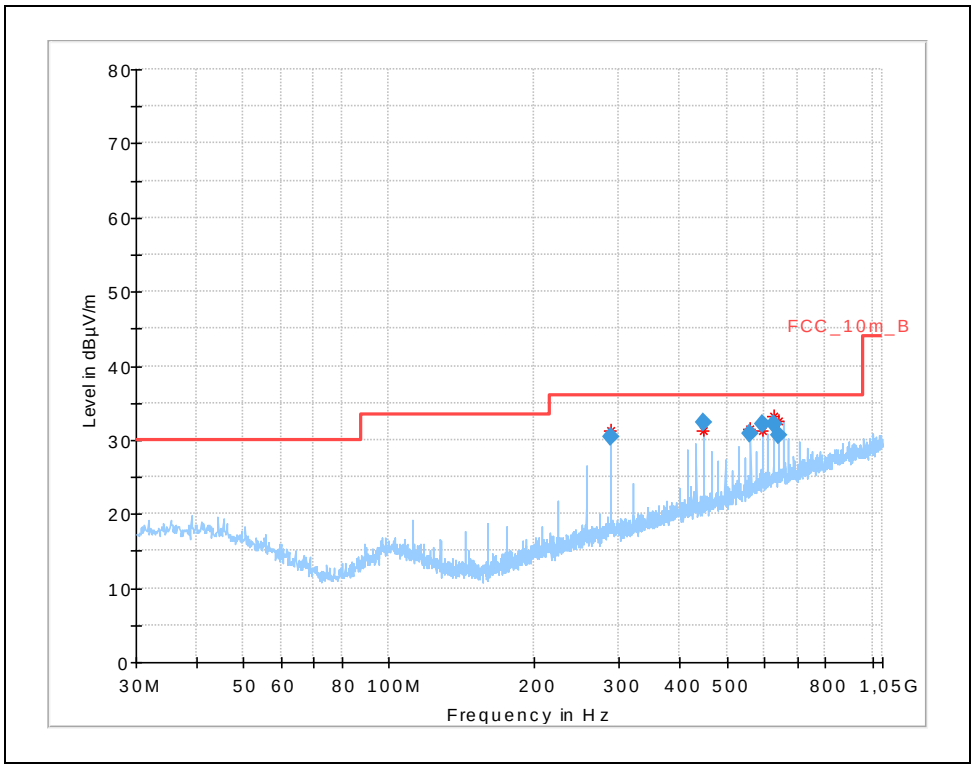
Note: Harmonics shall not exceed 25.0 millivolts/meter (88.0 dBµV/m)

Result: The measurement is passed.

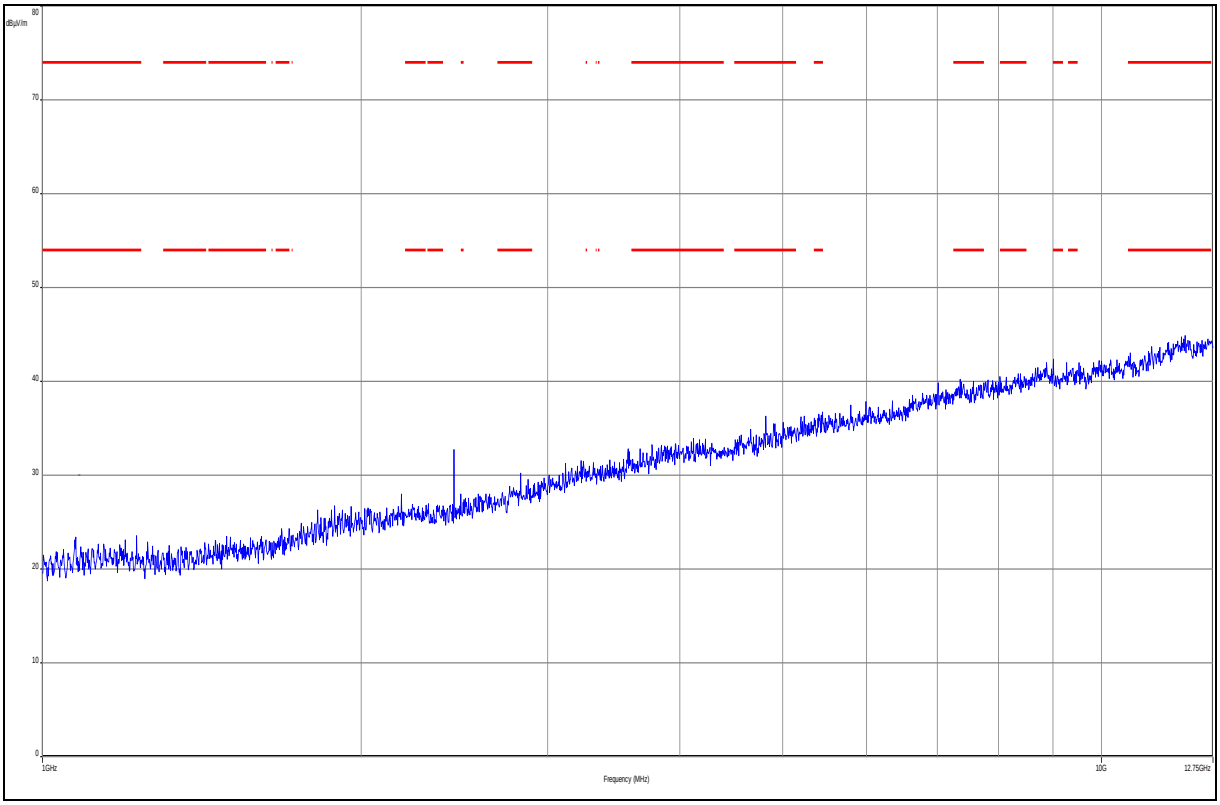
Plot 3: Traffic mode up to 30 MHz



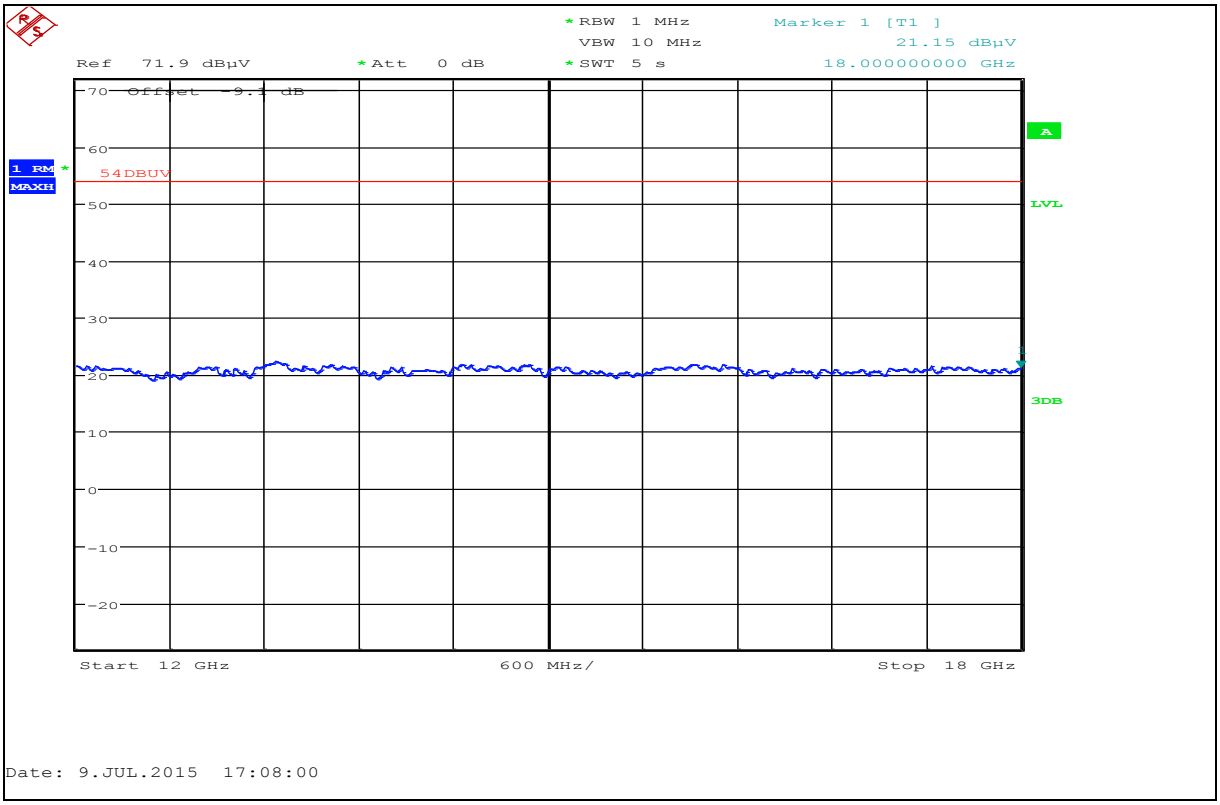
Plot 4: 30 MHz to 1 GHz, vertical / horizontal polarization



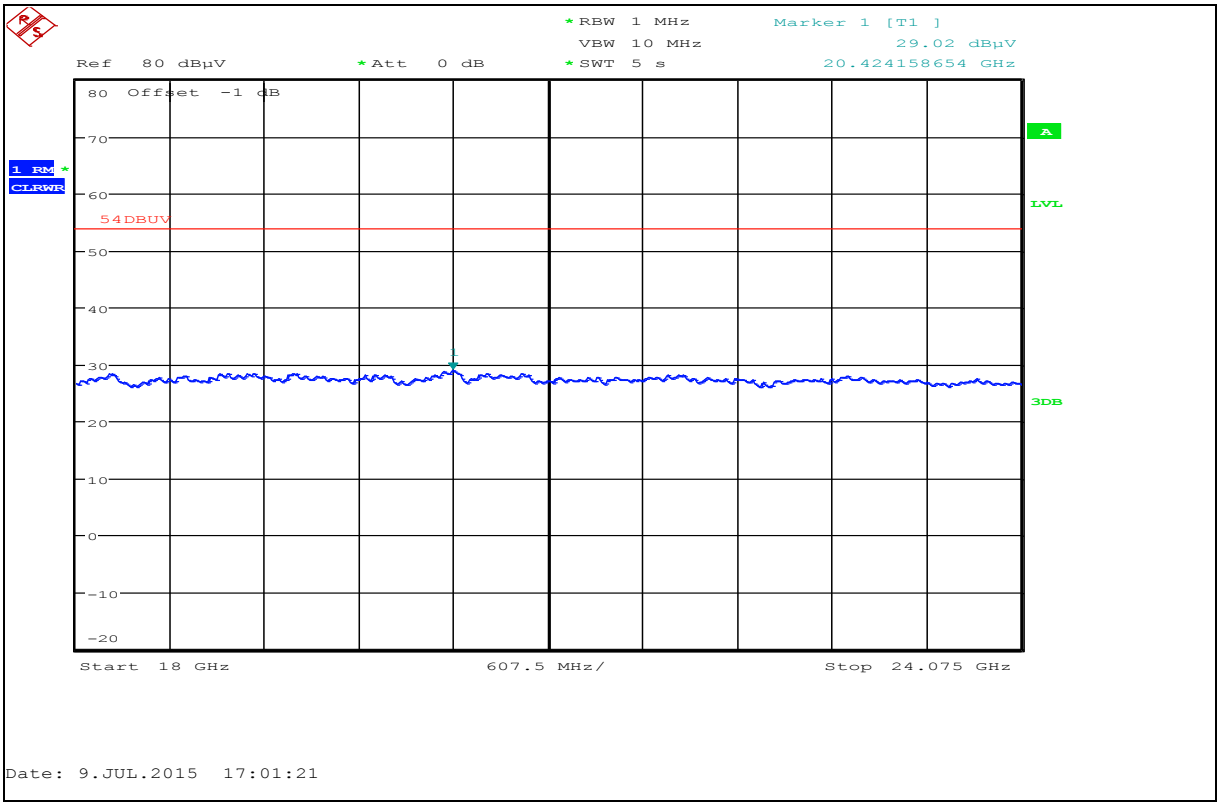
Plot 5: 1 GHz to 12 GHz, vertical / horizontal polarization



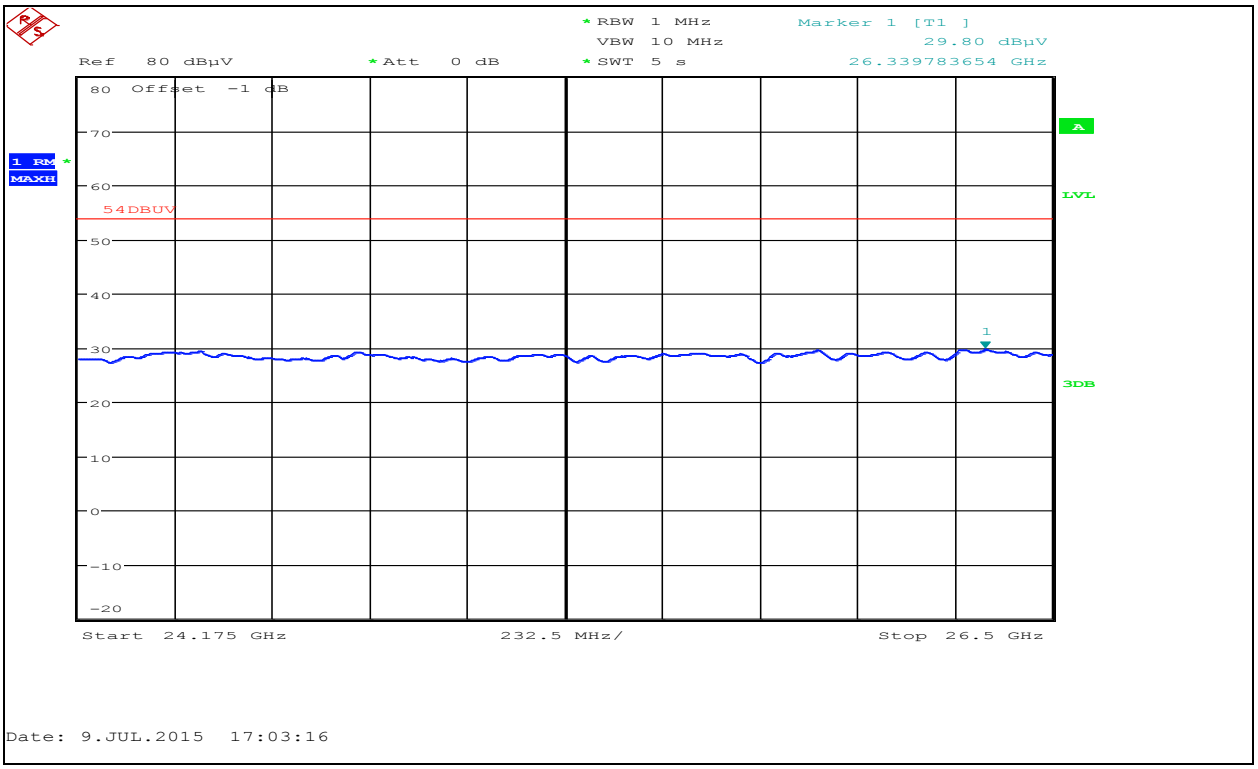
Plot 6: 12 GHz to 18 GHz, vertical / horizontal polarization



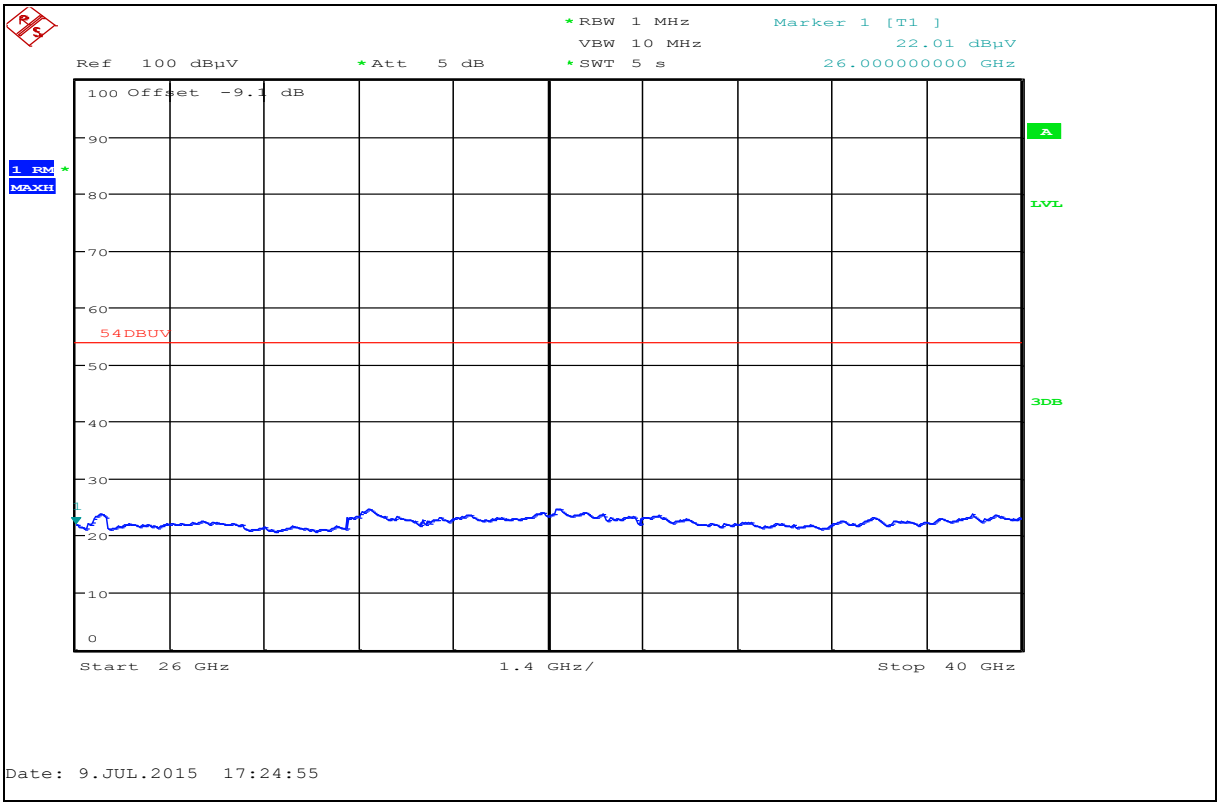
Plot 7: 18 GHz to 24.075 GHz, vertical / horizontal polarization



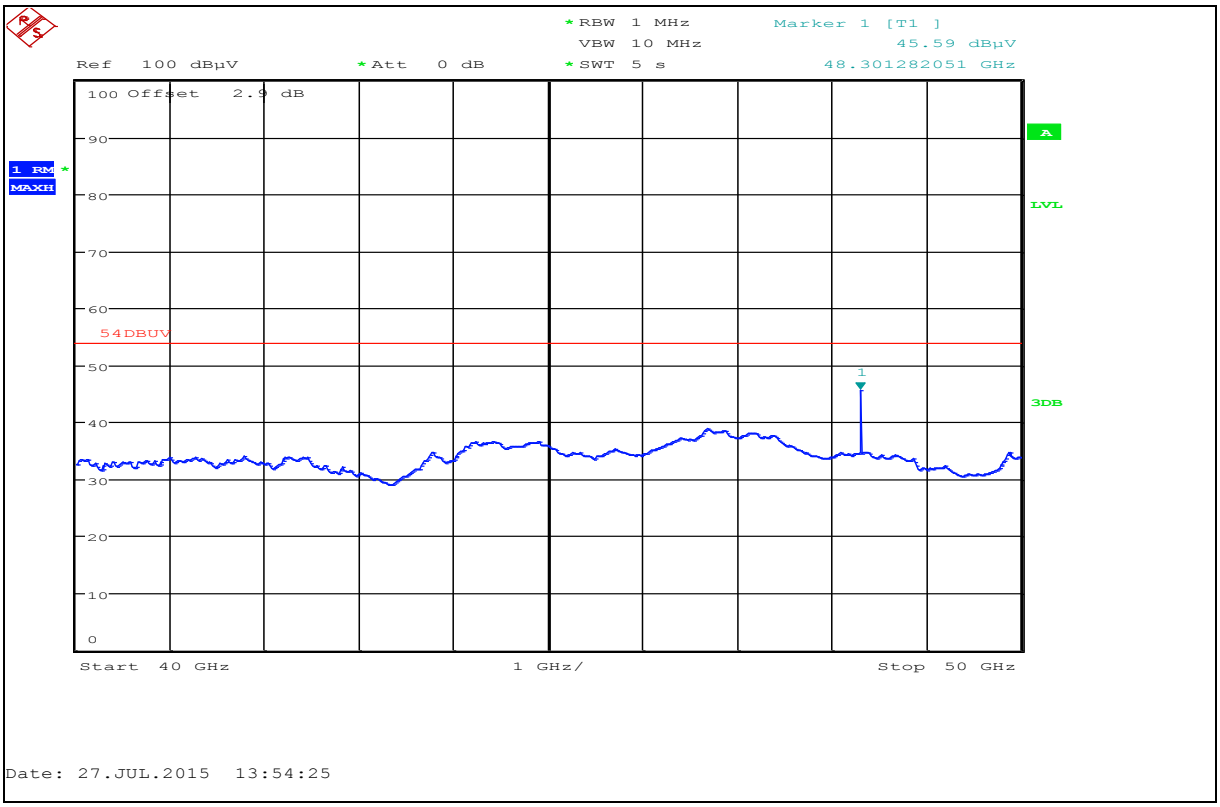
Plot 8: 24.175 GHz to 26.5 GHz, vertical / horizontal polarization



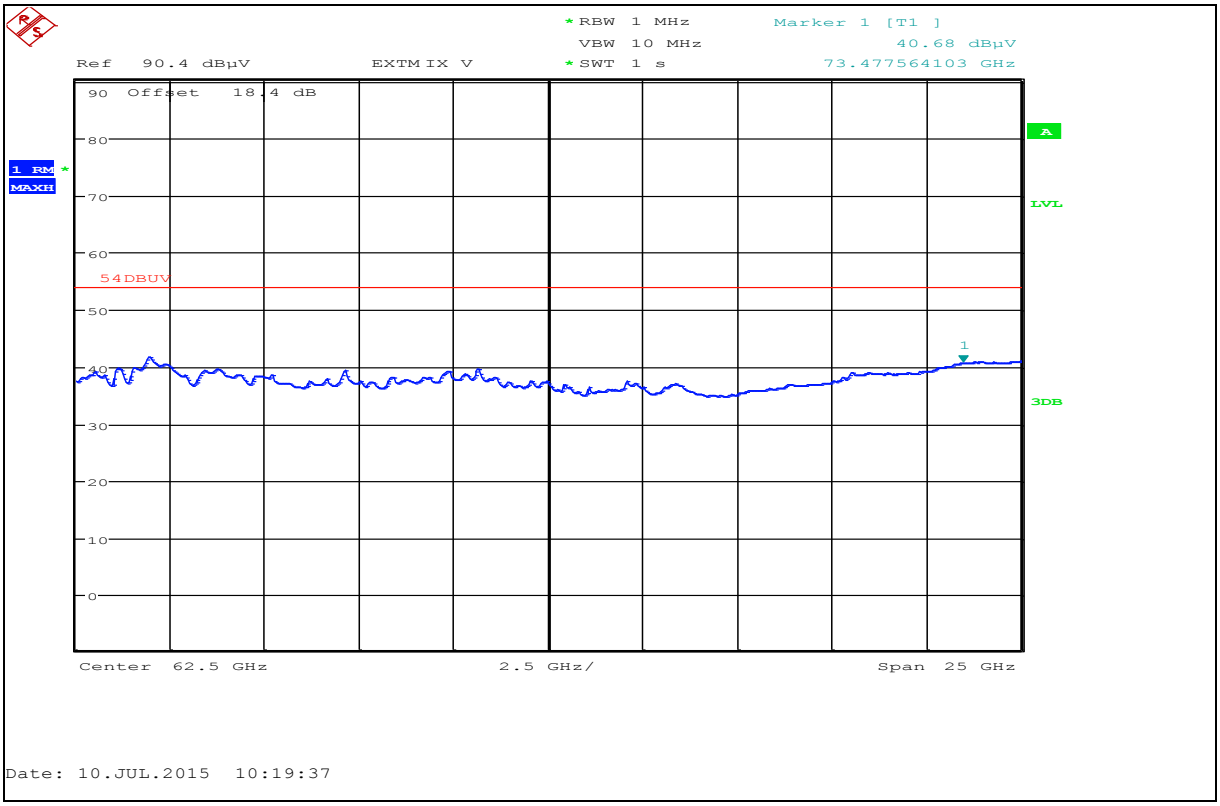
Plot 9: 26 GHz to 40 GHz, horizontal / vertical polarization



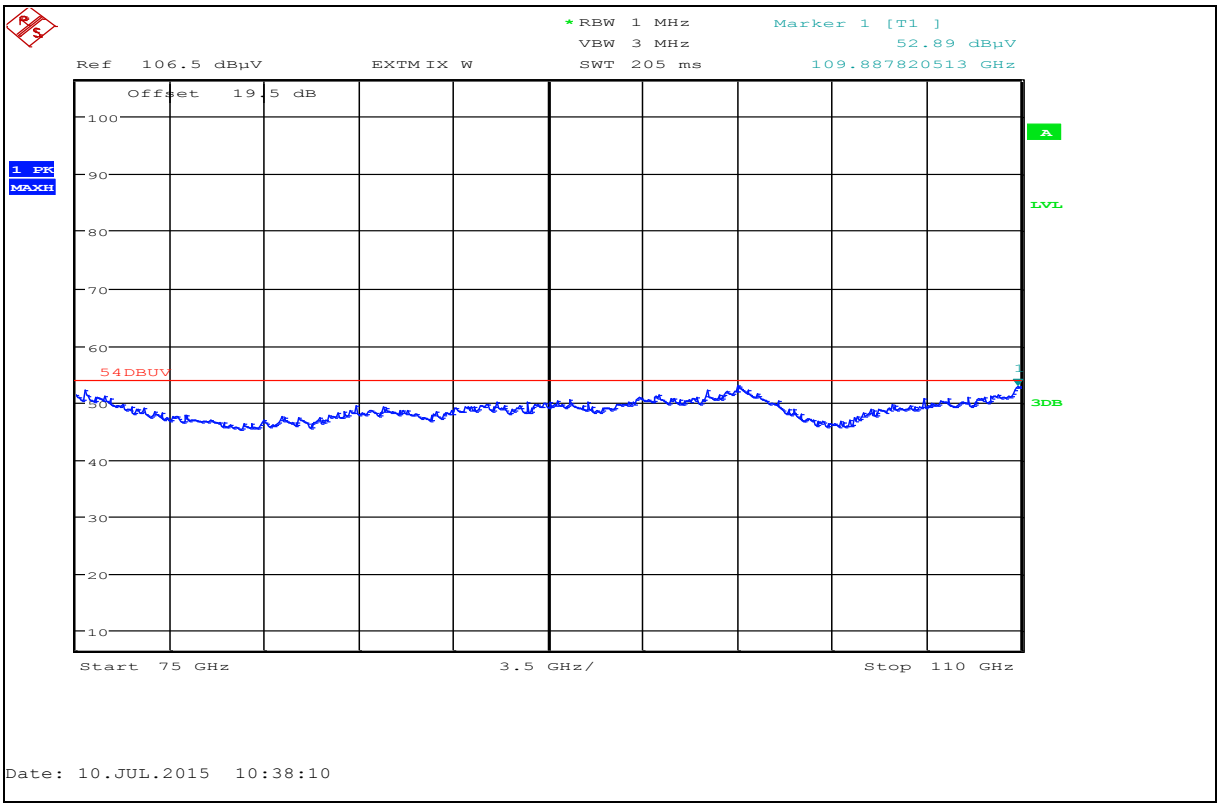
Plot 10: 40 GHz to 50 GHz, horizontal / vertical polarization



Plot 11: 50 GHz to 75 GHz



Plot 12: 75 GHz to 110 GHz



Annex A Document history

Version	Applied changes	Date of release
1.0	Initial release	2015-08-14

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
PMN Product marketing name
HMN Host marketing name
HVIN Hardware version identification number
FVIN Firmware version identification number

Annex C Accreditation Certificate

Front side of certificate

DAkkS Deutsche Akkreditierungsstelle

Deutsche Akkreditierungsstelle GmbH

Beliehene 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 / DCS, 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

Im Auftrag Dipl.-Ing. (FH) Ralf Egner
Abteilungsleiter

Siehe Rückseite und der Rückseite

Back side of certificate

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Spittelmarkt 10
10117 Berlin

Standort Frankfurt am Main
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60594 Frankfurt am Main

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Bundesallee 100
38116 Braunschweig

Die auszugsweise Veröffentlichung der Akkreditierungsurkunde bedarf der vorherigen schriftlichen Zustimmung der Deutsche 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. 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
ILAC: www.ilac.org
IAF: www.iaf.nu

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