





TEST REPORT

Test report no.: 1-2679/16-01-06-A



Testing laboratory

CTC advanced GmbH

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Accredited Testing Laboratory:

The testing laboratory (area of testing) is accredited according to DIN EN ISO/IEC 17025 (2005) by the Deutsche Akkreditierungsstelle GmbH (DAkkS)

The accreditation is valid for the scope of testing procedures as stated in the accreditation certificate with

the registration number: D-PL-12076-01-01

Applicant

Oticon A/S

Kongebakken 9

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Fax: -/-

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Manufacturer

Oticon A/S

Kongebakken 9

2765 Smørum / DENMARK

Radio Communications & EMC

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 9 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: Hearing instrument, WL HI platform

Model name: Aurora BTE power FCC ID: U28AUBTEP IC: 1350B-AUBTEP

Frequency: 3.84 MHz

Technology tested: Magnetic coupling

Antenna: Integrated ferrite coil antenna
Power supply: 1.4 V DC by zinc air battery

Temperature range: 22°C

Radio Communications & EMC

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:	Test performed:
Christoph Schneider	Tobias Wittenmeier
Testing Manager	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. CTC advanced 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 replaces the test report with the number 1-2679/16-01-06 and dated 2017-01-25

2.2 Application details

Date of receipt of order: 2016-12-02
Date of receipt of test item: 2016-12-05
Start of test: 2016-12-05
End of test: 2016-12-06

Person(s) present during the test: -/-

2.3 Test laboratories sub-contracted

None



3 Test standard/s and references

Test standard	Date	Description
47 CFR Part 15	June 2016	Title 47 of the Code of Federal Regulations; Chapter I; Part 15 - Radio frequency devices
RSS - 210 Issue 9	August 2016	Spectrum Management and Telecommunications Radio Standards Specification - Licence-exempt Radio Apparatus (All Frequency Bands): Category I Equipment
RSS - Gen Issue 4	November 2014	Spectrum Management and Telecommunications Radio Standards Specifications - General Requirements and Information for the Certification of Radio Apparatus
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



4 Test environment

Temperature : T _{max}		T _{nom} T _{max} T _{min}	+22 °C during room temperature tests No tests under extreme conditions required. No tests under extreme conditions required.
Relative humidity content	:		55 %
Barometric pressure	:		1021 hpa
Power supply	:	$\begin{matrix} V_{nom} \\ V_{max} \\ V_{min} \end{matrix}$	1.4 V DC by zinc air battery No tests under extreme conditions required. No tests under extreme conditions required.

5 Test item

5.1 General description

Kind of product		Hearing instrument, WL HI platform				
Type identification		urora BTE power (inside an Oticon OPN BTE 13PP)				
HMN		Not applicable				
PMN	:	Aurora BTE power				
HVIN	:	Aurora BTE power				
FVIN	:	Not applicable				
S/N serial number		TX units: EUT No. 1: 45665240				
HW hardware status	:	Rev. 6 (LAB 6)				
SW software status		SIV 3.3.A				
FW firmware status	:	eSW 7.3.1				
Frequency	:	3.84 MHz				
Type of radio transmission Use of frequency spectrum	:	Modulated carrier				
Type of modulation	:	MSK				
Number of channels	:	1				
Antenna	:	Integrated ferrite coil antenna				
Power supply	:	1.4 V DC by zinc air battery				
Temperature range	:	22°C				

5.2 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: 1-2679/16-01-01_AnnexA

1-2679/16-01-01_AnnexB 1-2679/16-01-01_AnnexD



6 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).

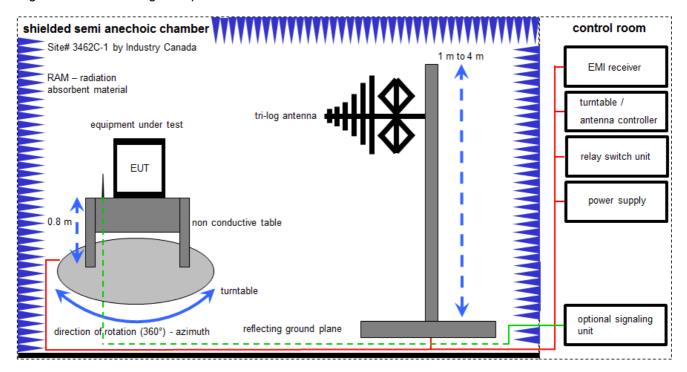
Agenda: Kind of Calibration

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



6.1 Shielded semi anechoic chamber (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 analyzers where the detector modes and resolution bandwidths over various frequency ranges are set according to requirement ANSI C63.



Measurement distance: tri-log antenna 10 meter

FS = UR + CL + AF

(FS-field strength; UR-voltage at the receiver; CL-loss of the cable; AF-antenna factor)

Example calculation:

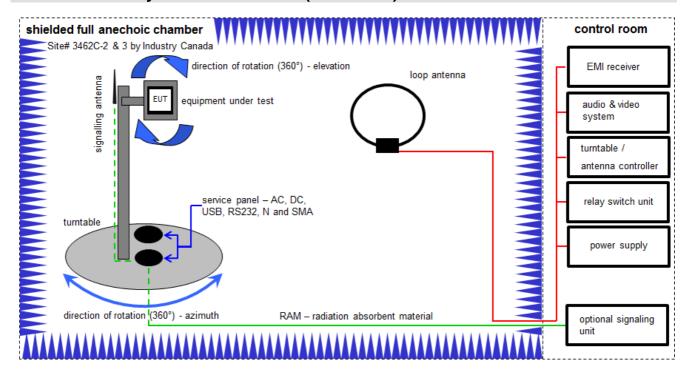
 $FS [dB\mu V/m] = 12.35 [dB\mu V/m] + 1.90 [dB] + 16.80 [dB/m] = 31.05 [dB\mu V/m] (35.69 \mu V/m)$

Equipment table:

No.	Lab / Item	Equipment	Туре	Manufact.	Serial No.	INV. No	Kind of Calibration	Last Calibration	Next Calibration
1	Α	Switch-Unit	3488A	HP	2719A14505	300000368	ev	-/-	-/-
2	Α	RF-Filter-section	85420E	HP	3427A00162	300002214	k	27.11.2006	-/-
3	Α	EMI Test Receiver	ESCI 3	R&S	100083	300003312	k	08.03.2016	08.03.2017
4	Α	Antenna Tower	Model 2175	ETS-Lindgren	64762	300003745	izw	-/-	-/-
5	Α	Positioning Controller	Model 2090	ETS-Lindgren	64672	300003746	izw	-/-	-/-
6	Α	Turntable Interface- Box	Model 105637	ETS-Lindgren	44583	300003747	izw	-/-	-/-
7	Α	TRILOG Broadband Test-Antenna 30 MHz - 3 GHz	VULB9163	Schwarzbeck	295	300003787	k	25.04.2016	25.04.2018



6.2 Shielded fully anechoic chamber (chamber C)



Measurement distance: loop antenna 3 meter / 1 meter

FS = UR + CA + AF

(FS-field strength; UR-voltage at the receiver; CA-loss of the signal path; AF-antenna factor)

Example calculation:

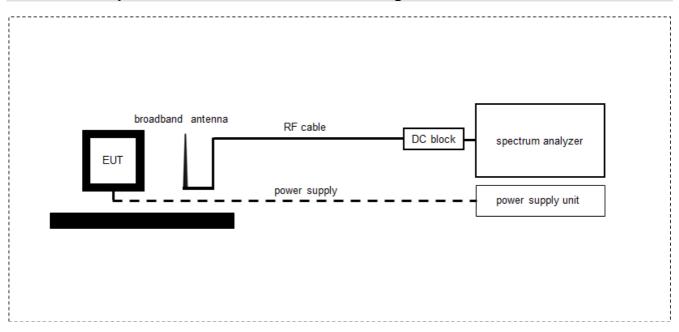
 $FS [dB\mu V/m] = 40.0 [dB\mu V/m] + (-35.8) [dB] + 32.9 [dB/m] = 37.1 [dB\mu V/m] (71.61 \mu V/m)$

Equipment table:

No.	Lab / Item	Equipment	Туре	Manufact.	Serial No.	INV. No	Kind of Calibration	Last Calibration	Next Calibration
1	Α	Anechoic chamber	FAC 3/5m	MWB / TDK	87400/02	300000996	ev	-/-	-/-
2	Α	Switch / Control Unit	3488A	HP	*	300000199	ne	-/-	-/-
3	Α	Active Loop Antenna 10 kHz to 30 MHz	6502	EMCO/2	8905-2342	300000256	k	24.06.2015	24.06.2017
4	А	4U RF Switch Platform	L4491A	Agilent Technologies	MY50000037	300004509	ne	-/-	-/-
5	Α	EMI Test Receiver 9kHz-26,5GHz	ESR26	R&S	101376	300005063	vlKI!	13.09.2016	13.03.2018



6.3 Test setup for normalized measurement configurations



FS = UR + CA + AF

(FS-field strength; UR-voltage at the receiver; CA-loss of the signal path; AF-antenna factor)

Example calculation:

 $\overline{\text{FS [dB}\mu\text{V/m]}} = 40.0 \text{ [dB}\mu\text{V/m]} + (-35.8) \text{ [dB]} + 32.9 \text{ [dB/m]} = 37.1 \text{ [dB}\mu\text{V/m]} (71.61 \ \mu\text{V/m})$

Equipment table:

No.	Lab / Item	Equipment	Туре	Manufact.	Serial No.	INV. No	Kind of Calibration	Last Calibration	Next Calibration
1	Α	RF-Cable	ST18/SMAm/SMAm/ 60	Huber & Suhner	Batch no. 606844	400001181	ev	-/-	-/-
2	Α	EMI Test Receiver 9 kHz - 3 GHz incl. Preselector	ESPI3	R&S	101713	300004059	k	26.01.2016	26.01.2017
3	Α	DC-Blocker 0.1-40 GHz	8141A	Inmet	Batch no. 699714	400001185	ev	-/-	-/-



7 Sequence of testing

7.1 Sequence of testing radiated spurious 9 kHz to 30 MHz

Setup

- The equipment is set up to simulate normal operation mode as described in the user manual or defined by the manufacturer.
- If the EUT is a tabletop system, a 2-axis positioner with 1.5 m height is used.
- If the EUT is a floor standing device, it is placed directly on the turn table.
- Auxiliary equipment and cables are 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.
- Measurement distance is 3 m (see ANSI C 63.4) see test details.
- EUT is set into operation.

Premeasurement

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

Final measurement

- Identified emissions during the premeasurement are maximized by the software by rotating the turntable from 0° to 360°. In case of the 2-axis positioner is used the elevation axis is also rotated from 0° to 360°.
- The final measurement is done in the position (turntable and elevation) causing the highest emissions with quasi-peak (as described in ANSI C 63.4).
- Final levels, frequency, measuring time, bandwidth, turntable position, correction factor, margin to the limit and limit will be recorded. A plot with the graph of the premeasurement and the limit is stored.



7.2 Sequence of testing radiated spurious 30 MHz to 1 GHz

Setup

- The equipment is set up to simulate normal operation mode as described in the user manual or defined by the 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 are 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.
- Measurement distance is 10 m or 3 m (see ANSI C 63.4) see test details.
- EUT is set into operation.

Premeasurement

- The turntable rotates from 0° to 315° using 45° steps.
- The antenna is polarized vertical and horizontal.
- The antenna height changes from 1 m to 3 m.
- 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 is performed for at least six highest peaks according to the requirements of the ANSI C63.4.
- Based on antenna and turntable positions at which the peak values are measured the software maximize the peaks by changing turntable position ± 45° and antenna height between 1 and 4 m.
- The final measurement is done with quasi-peak detector (as described in ANSI C 63.4).
- Final levels, frequency, measuring time, bandwidth, antenna height, antenna polarization, turntable angle, correction factor, margin to the limit and limit are recorded. A plot with the graph of the premeasurement with marked maximum final results and the limit is stored.



8 Measurement uncertainty

Measurement uncertainty							
Test case Uncertainty							
Occupied bandwidth	± used RBW						
Field strength of the fundamental	± 3 dB						
Field strength of the harmonics and spurious	± 3 dB						
Receiver spurious emissions and cabinet radiations	± 3 dB						



9 Summary of measurement results

TC Identifier	Description	Verdict	Date	Remark	
RF-Testing	CFR Part 15	Danad	2047.02.00	,	
	RSS 210 Issue 9	Passed	2017-02-09	-/-	
	RSS Gen Issue 4				

Test specification clause	Test case	Temperature conditions	Power source conditions	С	NC	NA	NP	Remark
RSS Gen Issue 4 (6.6)	Bandwidth of the modulated carrier	Nominal	Nominal	\boxtimes				-/-
§ 15.223	Field strength of the fundamental	Nominal	Nominal	\boxtimes				-/-
§ 15.209 RSS Gen Issue 4 (6.13)	Field strength of the harmonics and spurious	Nominal	Nominal	\boxtimes				-/-
§ 15.109	Receiver spurious emissions and cabinet radiations	Nominal	Nominal	\boxtimes				-/-
§15.107 §15.207	Conducted limits	Nominal	Nominal			\boxtimes		Battery powered

Note: NA = Not applicable; NP = Not performed; C = Compliant; NC = Not compliant

10 Additional comments

Reference documents: None

Manufacturer declaration:

The provided test sample for radiated measurements had a transmitter duty cycle of 50% for ease of test, while the transmitter duty cycle in normal use is approximately 2.5%.

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 120° and in phi axes @ 0° and 90° for both polarizations

vertical & horizontal or magnetic emissions.

Configuration descriptions: None



11 Measurement results

11.1 Occupied bandwidth

Measurement:

The emission bandwidth (x dB) is defined as the frequency range between two points, one above and one below the carrier frequency, at which the spectral density of the emission is attenuated x dB below the maximum in-band spectral density of the modulated signal.

Measurement parameter			
Detector:	Peak		
Resolution bandwidth:	1 % – 5 % of the occupied bandwidth		
Video bandwidth:	≥ 3x RBW		
Trace-Mode:	Max Hold		
Analyser function:	99 / 75 % power function		
Used test equipment:	See chapter 6.3A		
Measurement uncertainty:	See chapter 8		

Limit:

FCC	IC	
Bandwidth of the modulated carrier		



Result:

EUT No. 1 45665240

	Occupied Bandwidth (kHz)
6 dB (75%)	162
20 dB (99%)	328

EUT No. 2: 45665621

	Occupied Bandwidth (kHz)
6 dB (75%)	162
20 dB (99%)	329

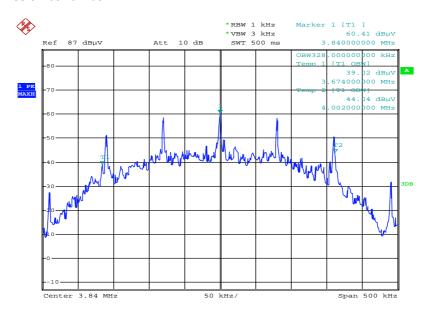
EUT No. 3: 45665278

	Occupied Bandwidth (kHz)
6 dB (75%)	162
20 dB (99%)	329



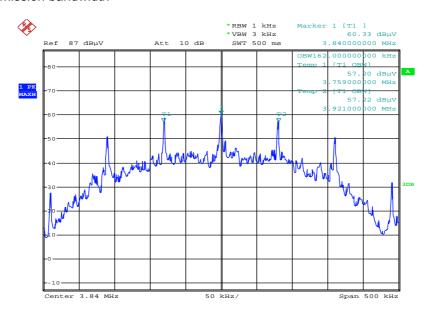
Plots: EUT No. 1 45665240

Plot 1: 99 % emission bandwidth



Date: 6.DEC.2016 09:55:35

Plot 2: 75 % emission bandwidth

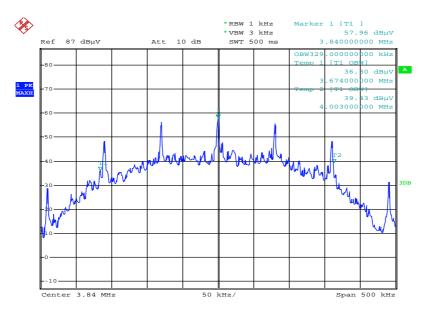


Date: 6.DEC.2016 09:55:06



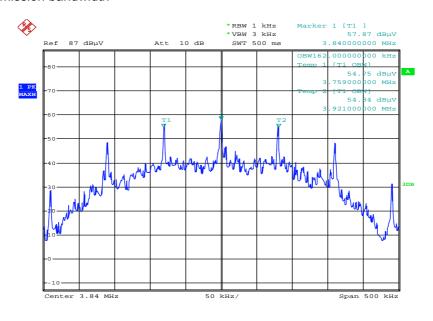
Plots: EUT No. 2: 45665621

Plot 1: 99 % emission bandwidth



Date: 6.DEC.2016 09:58:26

Plot 2: 75 % emission bandwidth

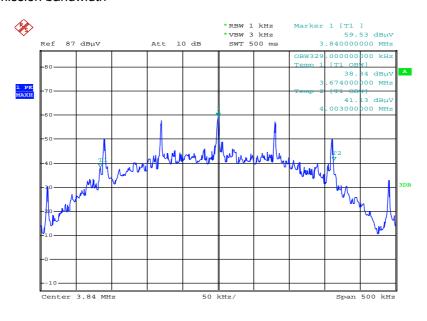


Date: 6.DEC.2016 09:58:49



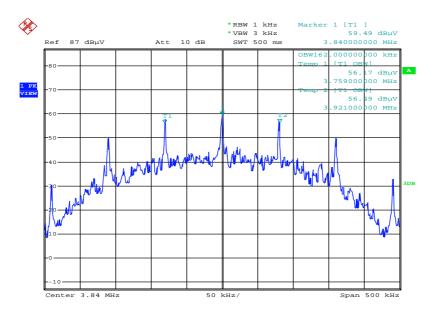
Plots: EUT No. 3: 45665278

Plot 1: 99 % emission bandwidth



Date: 6.DEC.2016 09:47:36

Plot 2: 75 % emission bandwidth



Date: 6.DEC.2016 09:48:11



11.2 Field strength of the fundamental

Measurement:

The maximum detected field strength for the carrier signal.

Measurement parameter			
Detector:	Quasi Peak (CISPR)		
Resolution bandwidth:	10kHz		
Video bandwidth:	> 3x RBW		
Trace-Mode:	Max Hold		
Used test equipment:	See chapter 6.2A		
Measurement uncertainty:	See chapter 8		

Limit:

FCC		IC	
Fundamental Frequency (MHz)	Field strength of Fundamental (µV/m)		Measurement distance (m)
1.705 – 10.0	[15] (23.5 dBµV/m) or [6dB-BW(kHz) / F(MHz) Whichever is higher		30

Recalculation:

According to ANSI C63.4			
Frequency	Formula	Correction value	
3.84 MHz	$FS_{limit} = FS_{max} - 40 \log \left(\frac{d_{nearfield}}{d_{measure}} - 20 \log \left(\frac{d_{limit}}{d_{nearfield}} \right)$	-51.43 from 1m to 30m	

Result:

Ponto 3:

TEST CC	NDITIONS	MAXIMUM POWER (dBμV/m)	
Freq	uency	3.84 MHz	3.84 MHz
EUT No. 1 45665240*		at 1 m distance	at 30 m distance
T _{nom}	V_{nom}	49.7	-1.7
EUT No. 2: 45665621		at 1 m distance	at 30 m distance
T_{nom}	V_{nom}	49.0	-2.4
EUT No. 3: 45665278		at 1 m distance	at 30 m distance
T_{nom}	V_{nom}	48.6	-2.8

^{*}Note: This sample was used for the spurious emission measurements.



11.3 Field strength of the harmonics and spurious

Measurement:

The maximum detected field strength for the harmonics and spurious.

Measurement parameter		
Detector:	Quasi peak / average or	
Botodor.	peak (worst case – pre-scan)	
	F < 150 kHz: 200 Hz	
Resolution bandwidth:	150 kHz < F < 30 MHz: 9 kHz	
	30 MHz < F < 1 GHz: 120 kHz	
	F < 150 kHz: 1 kHz	
Video bandwidth:	150 kHz < F < 30 MHz: 100 kHz	
	30 MHz < F < 1 GHz: 300 kHz	
Trace-Mode:	Max hold	
Used test equipment:	See chapter 6.1A&6.2A	
Measurement uncertainty:	See chapter 8	

Limit:

FCC		IC	
Fie	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

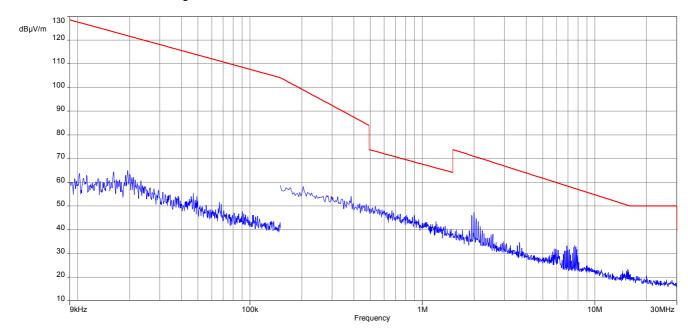
Result:

	EMISSION LIMITATIONS				
f [MHz]	Detector	Limit max. allowed [dBµV/m]	Amplitude of emission [dBµV/m]	Results	
All emissions were more than 6 dB below the limit. For emissions between 30 MHz and 1 GHz see result table below the plots.					



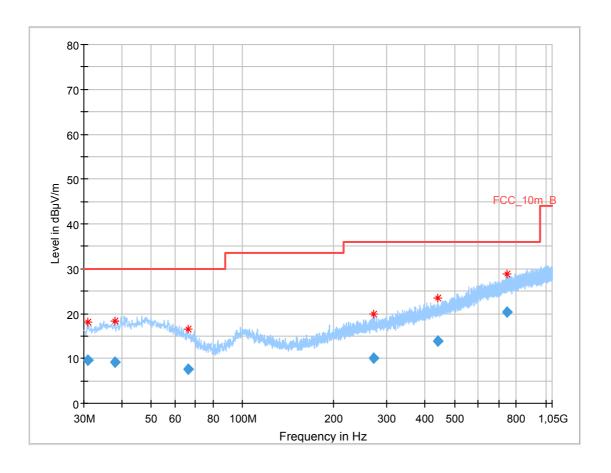
Plots: EUT No. 1 45665240

Plot 1: 9 kHz – 30 MHz, magnetic emissions





Plot 2: 30 MHz – 1 GHz, vertical and horizontal polarisation



Final_Result

Frequency (MHz)	QuasiPeak (dBµV/m)	Limit (dBµV/m)	Margin (dB)	Meas. Time (ms)	Bandwidth (kHz)	Height (cm)	Pol	Azimuth (deg)	Corr. (dB)
31.013400	9.61	30.00	20.39	1000.0	120.000	98.0	Н	77.0	12.0
38.055600	9.17	30.00	20.83	1000.0	120.000	101.0	Н	263.0	13.0
66.293550	7.64	30.00	22.36	1000.0	120.000	185.0	Н	135.0	10.5
269.835150	10.10	36.00	25.90	1000.0	120.000	101.0	٧	226.0	13.8
439.672800	13.85	36.00	22.15	1000.0	120.000	178.0	Н	169.0	17.5
746.981250	20.36	36.00	15.64	1000.0	120.000	185.0	V	146.0	22.6



11.4 Receiver spurious emissions and cabinet radiations

Measurement:

The maximum detected field strength for the spurious.

Measurement parameter						
Detector:	Average / Quasi Peak					
Sweep time:	Auto					
Resolution bandwidth:	120 kHz					
Video bandwidth:	300 kHz					
Trace-Mode:	Max hold					
Used test equipment:	See chapter 6.1A					
Measurement uncertainty:	See chapter 8					

Limit:

FCC		IC							
Fie	Field strength of the harmonics and spurious.								
Frequency (MHz)	Field streng	gth (µV/m)	Measurement distance	e (m)					
30 – 88	100 (40 c	IBμV/m)	3						
88 – 216	150 (43.5	dBμV/m)	3						
216 – 960	200 (46 c	IBμV/m)	3						

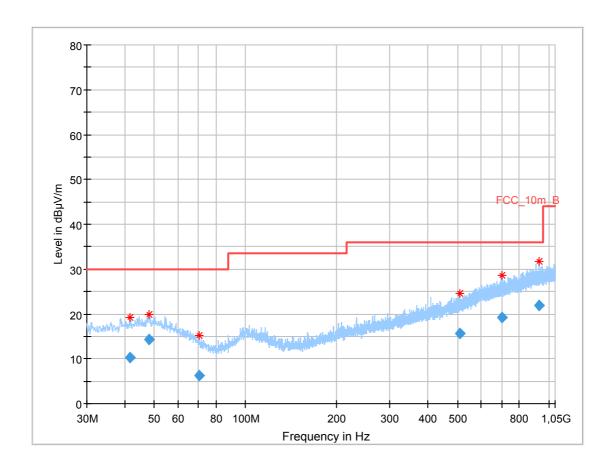
Result:

EMISSION LIMITATIONS							
f [MHz]	Detector Limit Amplitude of emission [dBμV/m] Results						
See result table below the plots.							



Plots: EUT No. 4 45064443

Plot 1: 30 MHz – 1 GHz, vertical and horizontal polarisation



Final_Result

Frequency (MHz)	QuasiPeak (dBµV/m)	Limit (dBµV/m)	Margin (dB)	Meas. Time (ms)	Bandwidth (kHz)	Height (cm)	Pol	Azimuth (deg)	Corr. (dB)
41.577450	10.32	30.00	19.68	1000.0	120.000	100.0	٧	293.0	13.3
47.999250	14.28	30.00	15.72	1000.0	120.000	101.0	٧	130.0	13.7
70.132950	6.17	30.00	23.83	1000.0	120.000	101.0	Н	223.0	9.7
508.394850	15.57	36.00	20.43	1000.0	120.000	98.0	٧	111.0	18.8
698.790600	19.27	36.00	16.73	1000.0	120.000	101.0	Н	174.0	21.5
926.251350	21.82	36.00	14.18	1000.0	120.000	185.0	٧	61.0	24.3



12 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	2017-01-25	
-A	Correction of Model name	2017-02-09	

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

OBW Occupied Bandwidth OC Operating Channel

OCW Operating Channel Bandwidth

OOB Out Of Band



Annex C Accreditation Certificate



last page

Deutsche Akkreditierungsstelle GmbH

Standort Frankfurt am Main Europa-Allee 52 60327 Frankfurt am Main

Es darf nicht der Anschein erweckt werden, dass sich die Akkreditierung au die über den durch die DAkkS bestätigten Akkreditierungsbereich hinausge

Die Akkreditierung erfolgte gemäß des Gesetzes über die Akkreditierungsstelle (AkkStelleG) vom 31. Juli 2009 (BGB, 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 Akkrediterung und Marchberwachung im Zusammenhang mit der Vermarktung von Produkten (Abl. L.218 vom 9. Juli 2008, S. 30). Die DAAKS ist Unterzeicherein der Multilateraien Abhommen zur gegeneeltigen 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 entnom EA: www.european-accreditation.org ILAC: www.libc.org ILAC: www.libc.org

Note:

The current certificate including annex can be received from CTC advanced GmbH on request.