









# **TEST REPORT**

Test report no.: 1-2842/16-01-10



## **Testing laboratory**

### **CTC advanced GmbH**

e-mail:

Untertuerkheimer Strasse 6 – 10 66117 Saarbruecken / Germany Phone: + 49 681 5 98 - 0 Fax: + 49 681 5 98 - 9075 Internet: http://www.ctcadvanced.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

mail@ctcadvanced.com

### **Applicant**

### Philips Medizin Systeme Böblingen GmbH

Hewlett-Packard-Strasse 2 71034 Böblingen / GERMANY

Phone: -/-

Fax: +49 7031 463-2499 Contact: Hansjörg Geywitz

e-mail: <a href="mailto:hansjoerg.geywitz@philips.com">hansjoerg.geywitz@philips.com</a>

Phone: +49 7031 463-1879

#### Manufacturer

### Philips Medizin Systeme Böblingen GmbH

Hewlett-Packard-Strasse 2 71034 Böblingen / 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 9 Licence-Exempt Radio Apparatus: Category I Equipment

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

**Test Item** 

Kind of test item: 2.4 GHz transceiver

Model name: IntelliVue CL NBP Pod 865216

FCC ID: PQC-CLNBPBV2 IC: 3549C-CLNBPBV2

Frequency: 13.56 MHz
Technology tested: RFID

Antenna: Integrated loop antenna

Power supply: 3.7 V DC by Li-ion battery

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:	Test performed:	
Stefan Bös	Marco Bertolino	
Lab Manager	Lab Manager	

Radio Communications & EMC

Lab Manager
Radio Communications & EMC



# Table of contents

1	Table	of contents	
2	Genera	al information	
		Notes and disclaimer	
		Application details	
	2.3	Test laboratories sub-contracted	3
3	Test st	andard/s and references	
4	Test e	nvironment	
5	Test it	em	
	5.1	General description	ţ
		Additional information	
6	Descri	ption of the test setup	6
	6.1	Shielded semi anechoic chamber	
		Shielded fully anechoic chamber	
	6.3	Test setup for normalized measurement configurations & frequency error	9
7	Seque	nce of testing	10
		Sequence of testing radiated spurious 9 kHz to 30 MHz	
	7.2	Sequence of testing radiated spurious 30 MHz to 1 GHz	11
8	Measu	rement uncertainty	12
9	Summ	ary of measurement results	13
10	Add	itional comments	13
11	Mea	surement results	14
	11.1	Occupied bandwidth	14
	11.2	Field strength of the fundamental	
	11.3	Field strength of the harmonics and spurious	
	11.4	Frequency error	20
12	Obs	ervations	22
Anı	nex A	Document history	22
Anı	nex B	Further information	22
Anı	nex C	Accreditation Certificate	23



### 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.

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 CTC advanced GmbH.

The testing service provided by CTC advanced GmbH has been rendered under the current "General Terms and Conditions for CTC advanced GmbH".

CTC advanced 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 CTC advanced 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 CTC advanced GmbH test report include or imply any product or service warranties from CTC advanced GmbH, including, without limitation, any implied warranties of merchantability, fitness for purpose, or non-infringement, all of which are expressly disclaimed by CTC advanced GmbH.

All rights and remedies regarding vendor's products and services for which CTC advanced GmbH has prepared this test report shall be provided by the party offering such products or services and not by CTC advanced 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: 2016-11-17
Date of receipt of test item: 2017-01-30
Start of test: 2017-02-01
End of test: 2017-02-03

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	-/-	Title 47 of the Code of Federal Regulations; Chapter I; Part 15 - Radio frequency devices
RSS-210 Issue 9	August 2016	Licence-Exempt Radio Apparatus: 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
ANSI C63.10-2013	-/-	American national standard of procedures for compliance testing of unlicensed wireless devices



## 4 Test environment

		T <sub>nom</sub>	+22 °C during room temperature tests
Temperature	:	$T_{max}$	+50 °C during high temperature tests
		$T_{min}$	-20 °C during low temperature tests
Relative humidity content	:		35 %
Barometric pressure	:		1021 hpa
		$V_{nom}$	3.7 V DC by Li-ion battery
Power supply	:	$V_{\text{max}}$	4.3 V
		$V_{\text{min}}$	3.1 V

## 5 Test item

# 5.1 General description

Kind of test item :	2.4 GHz transceiver
Type identification :	IntelliVue CL NBP Pod 865216
HMN :	-/-
PMN :	865216
HVIN :	865216
FVIN :	-/-
S/N serial number :	Radiated unit: DE03801770
HW hardware status :	1
SW software status :	D.00.70
Frequency band :	13.553 MHz to 13.567 MHz Carrier: 13.56 MHz
Type of radio transmission: Use of frequency spectrum:	modulated carrier
Type of modulation :	OOK
Number of channels :	1
Antenna :	Integrated loop antenna
Power supply :	3.7 V DC by Li-ion battery
Temperature range :	-20°C to +55°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: 1-2842/16-01-07\_AnnexA

1-2842/16-01-07\_AnnexB 1-2842/16-01-07\_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).

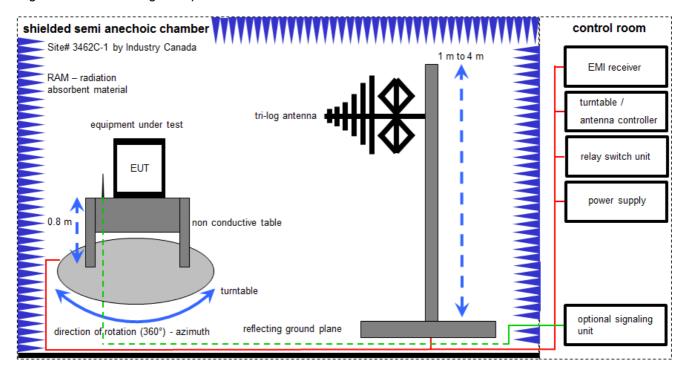
### Agenda: Kind of Calibration

k	calibration / calibrated	ΕK	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

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 conform to 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:

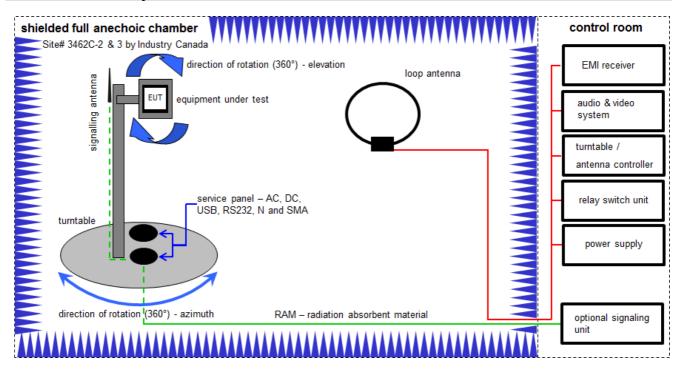
FS  $[dB\mu V/m] = 12.35 [dB\mu V/m] + 1.90 [dB] + 16.80 [dB/m] = 31.05 [dB\mu V/m] (35.69 \( \mu V/m \))$ 

### **Equipment table:**

No.	Lab / Item	Equipment	Туре	Manufacturer	Serial No.	INV. No.	Kind of Calibration	Last Calibration	Next Calibration
1	Α	Switch-Unit	3488A	HP	2719A14505	300000368	ev	-/-	-/-
2	Α	EMI Test Receiver	ESCI 3	R&S	100083	300003312	k	08.03.2016	08.03.2017
3	Α	Antenna Tower	Model 2175	ETS-Lindgren	64762	300003745	izw	-/-	-/-
4	Α	Positioning Controller	Model 2090	ETS-Lindgren	64672	300003746	izw	-/-	-/-
5	Α	Turntable Interface- Box	Model 105637	ETS-Lindgren	44583	300003747	izw	-/-	-/-
6	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



Measurement distance: loop antenna 3 meter

FS = UR + CA + AF

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

### Example calculation:

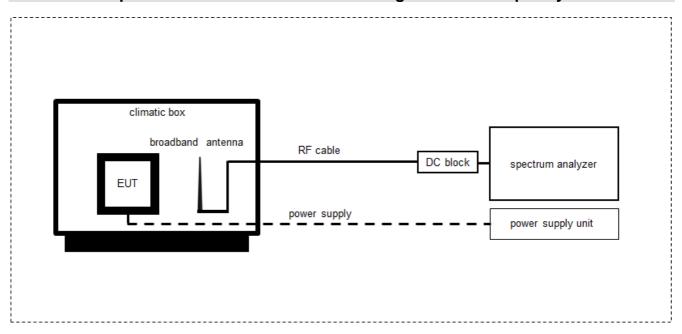
 $FS [dB\mu V/m] = 40.0 [dB\mu V/m] + (-35.8) [dB] + 32.9 [dB/m] = 37.1 [dB\mu V/m] (71.61 \ \mu V/m)$ 

### **Equipment table:**

No.	Lab / Item	Equipment	Туре	Manufacturer	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	Α	EMI Test Receiver 20Hz- 26,5GHz	ESU26	R&S	100037	300003555	k	31.01.2017	30.01.2018
5	Α	4U RF Switch Platform	L4491A	Agilent Technologies	MY50000037	300004509	ne	-/-	-/-



# 6.3 Test setup for normalized measurement configurations & frequency error



## **Equipment table:**

No.	Lab / Item	Equipment	Туре	Manufacturer	Serial No.	INV. No.	Kind of Calibration	Last Calibration	Next Calibration
1	A, B	Power Supply 0- 20V; 0-5A	6632B	HP	US37478366	400000117	ne	-/-	-/-
2	В	Temperature Test Chamber	VT 4002	Heraeus Voetsch	521/84193	300003889	ev	03.09.2015	03.09.2017
3	A, B	Signal Analyzer 40 GHz	FSV40	R&S	101353	300004819	k	19.09.2016	19.09.2017
4	A, B	RF-Cable WLAN- Tester Analyzer	ST18/SMAm/SMAm/ 36	Huber & Suhner	Batch no. 54876	400001220	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					
Conducted limits	± 2.6 dB					



# 9 Summary of measurement results

$\boxtimes$	No deviations from the technical specifications were ascertained
	There were deviations from the technical specifications ascertained
	This test report is only a partial test report. The content and verdict of the performed test cases are listed below.

TC Identifier	Description	Verdict	Date	Remark
	CFR Part 15			
RF-Testing	RSS-210 Issue 9	See table!	2017-02-23	-/-
	RSS Gen Issue 4			

Test specification clause	Test case	Temperature conditions	Power source conditions	С	NC	NA	NP	Remark
RSS Gen Issue 4	Occupied bandwidth	Nominal	Nominal	$\boxtimes$				-/-
§ 15.225 (a) RSS-210 Issue 9 B.6	Field strength of the fundamental	Nominal	Nominal	$\boxtimes$				-/-
§ 15.209 & § 15.225 (b-d) RSS-210 Issue 9 B.6	Field strength of the harmonics and spurious	Nominal	Nominal	$\boxtimes$				-/-
§ 15.109 RSS Gen Issue 4	Receiver spurious emissions and cabinet radiations	Nominal	Nominal			$\boxtimes$		No stand- alone receiver mode!
§15.107 §15.207	Conducted limits	Nominal	Nominal			$\boxtimes$		Battery powered only!
§ 15.225 (a) RSS-210 Issue 9 B.6	Frequency tolerance	Normal & extreme conditions	Normal & extreme conditions	$\boxtimes$				-/-

# Note:

C Compliant
NC Not compliant
NA Not applicable
NP Not performed

# 10 Additional comments

Reference documents: Questionnaire\_IntelliVue CL NBP Pod

Special test descriptions: None

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 parameters				
Detector:	Peak			
Resolution bandwidth:	1 % (9.41 kHz) – 5 % (47.1 kHz)			
Resolution bandwidth.	of the occupied bandwidth			
Video bandwidth:	≥ 3x RBW			
Trace mode:	Max hold			
Analyzer function:	99 % power function			
Used equipment:	See chapter 6.3 – A			
Measurement uncertainty:	See chapter 8			

## Limit:

IC
for RSP-100 test report coversheet only

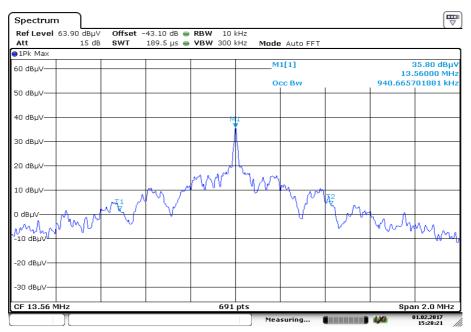
# Result:

99% emission bandwidth
941 kHz



## Plot:

Plot 1: 99 % emission bandwidth



Date:1.FEB 2017 15:28:21



# 11.2 Field strength of the fundamental

## **Measurement:**

The maximum detected field strength for the carrier signal.

Measurement parameters				
Detector:	Quasi peak / peak (worst case)			
Resolution bandwidth:	120 kHz			
Video bandwidth:	≥ 3x RBW			
Trace mode:	Max hold			
Used equipment: See chapter 6.2 – A				
Measurement uncertainty:	See chapter 8			

# Limit:

FCC & IC					
Frequency	Field strength	Measurement distance			
(MHz)	(μV/m)	(m)			
13.553 to 13.567	15,848 (84 dBµV/m)	30			

## **Recalculation:**

According to ANSI C63.10					
Frequency	Formula	Correction value from 3m to 30m			
13.56 MHz	$FS_{limit} = FS_{max} - 40 \log \left(\frac{d_{\textit{measurer}}}{d_{\textit{measurer}}}\right) - 20 \log \left(\frac{d_{\textit{limit}}}{d_{\textit{measurer}}}\right)$ is the calculation of field strength at the limit distance, expressed in dBµV/m is the measured field strength, expressed in dBµV/m is the measured field strength, expressed in dBµV/m is the $\lambda V2\pi$ distance dmeasure is the distance of the measurement point from EUT dimit is the reference limit distance	-21.4 dB			

# According to ANSI C63.10

# Result:

Field strength of the fundamental					
Frequency	13.56 MHz				
Distance @ 3 m @ 30 m					
Measured / calculated value	57.0 dBμV/m (peak) 56.0 dBμV/m (QP)	35.6 dBμV/m (peak) 34.6 dBμV/m (QP)			



# 11.3 Field strength of the harmonics and spurious

### **Measurement:**

The maximum detected field strength for the harmonics and spurious.

Measurement parameters				
Detector:	Quasi peak / average or			
Detector.	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			
Lload aquipment:	See chapter 6.1 – A			
Used equipment:	See chapter 6.2 – A			
Measurement uncertainty:	See chapter 8			

### Limit:

FCC & IC					
Frequency	Field strength	Measurement distance			
(MHz)	(dBµV/m)	(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			

**Note:** For a reduced measurement distance, please take a look at the limit line and the ANSI C63.10-2013 sub clause 6.4 radiated emissions from unlicensed wireless devices below 30 MHz.

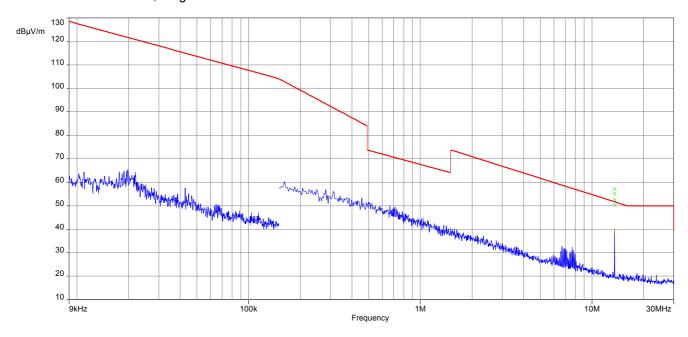
## Result:

Detected emissions						
Frequency Detector Resolution bandwidth Detected value (MHz) (kHz) (dBµV/m @ 3m)						
All detected emissions are more than 20 dB below the limit.						

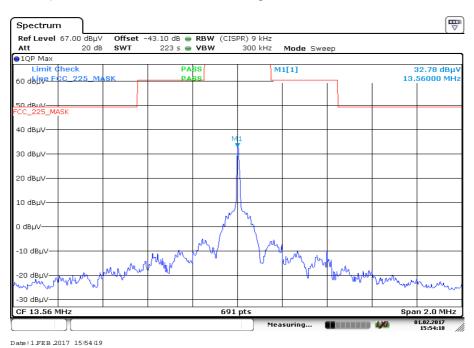


## Plots:

Plot 1: 9 kHz - 30 MHz, magnetic emissions

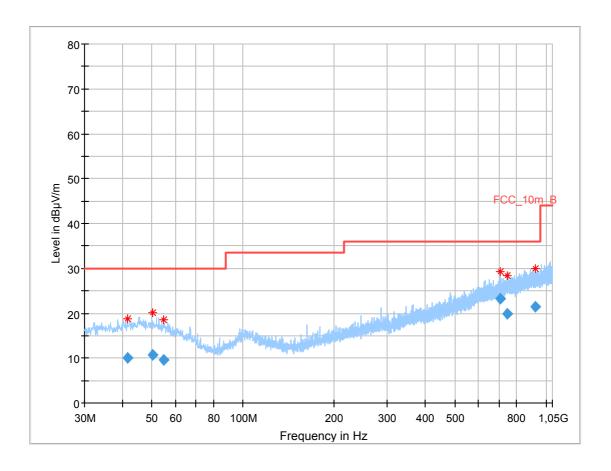


Plot 2: Spectrum mask (the limits are recalculated according to the ANSI C63.10-2013 sub clause 6.4)





Plot 3: 30 MHz – 1 GHz, vertical and horizontal polarization



# Final\_Result:

Frequency (MHz)	QuasiPeak (dBµV/m)	Limit (dBµV/m)	Margin (dB)	Meas. Time (ms)	Bandwidth (kHz)	Height (cm)	Pol	Azimuth (deg)	Corr. (dB)
41.590650	10.13	30.00	19.87	1000.0	120.000	101.0	٧	76.0	13.3
50.464800	10.63	30.00	19.37	1000.0	120.000	101.0	٧	83.0	13.7
54.586650	9.58	30.00	20.42	1000.0	120.000	179.0	Н	350.0	13.1
705.120000	23.25	36.00	12.75	1000.0	120.000	101.0	Н	105.0	21.7
747.258900	19.97	36.00	16.03	1000.0	120.000	101.0	Н	3.0	22.7
923.349000	21.43	36.00	14.57	1000.0	120.000	179.0	Н	350.0	24.3



## 11.4 Frequency error

### **Measurement:**

The maximum detected field strength for the spurious.

Measurement parameters				
Detector:	Peak detector			
Resolution bandwidth:	10 Hz			
Video bandwidth:	≥ RBW			
Trace mode:	Single sweep or max. hold			
Used equipment:	See chapter 6.3 – A			
Measurement uncertainty:	See chapter 8			

### Limit:

### FCC & IC

FCC: The frequency tolerance of the carrier signal shall be maintained within +/- 0.01% of the operating frequency over a temperature variation of -20 degrees to +50 degrees C at normal supply voltage, and for a variation in the primary supply voltage from 85% to 115% of the rated supply voltage at a temperature of 20 degrees C. (±1.356 kHz)

IC: ± 100 ppm

**Result:** Temperature variation

Frequency tolerance					
Measured frequency (MHz)	Frequency error (kHz)	Conditions	Result		
13.560162	0.16	-20 °C & 100% voltage	compliant		
13.560146	0.15	-10 °C & 100% voltage	compliant		
13.560112	0.11	0 °C & 100% voltage	compliant		
13.560058	0.06	+10 °C & 100% voltage	compliant		
13.560064	0.06	+20 °C & 100% voltage	compliant		
13.560059	0.06	+30 °C & 100% voltage	compliant		
13.560022	0.02	+40 °C & 100% voltage	compliant		
13.560000	0.00	+50 °C & 100% voltage	compliant		

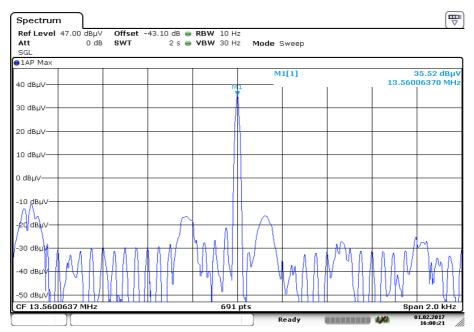
**Result:** Voltage variation

Frequency tolerance						
Measured frequency (MHz)	Frequency error (kHz)	Conditions	Result			
13.560064	0.06	+20 °C & 85% voltage	compliant			
13.560064	0.06	+20 °C & 100% voltage	compliant			
13.560064	0.06	+20 °C & 115% voltage	compliant			



## Plots:

## Plot 1:



Date:1.FEB 2017 16:00:22



### 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	2017-02-23

### 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**

first page



last page

#### Deutsche Akkreditierungsstelle GmbH

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

Die Akkreditierung erfolgte gemäß des Gesetzes über die Akkreditierungsstelle (AktöselleG) vom 31. Juli 2009 (BGBI. 1.5. 2625) sowie der Verordnung (EG) Nr. 765/2008 des Europälschen Parlamen und des Rates vom 9. Juli 2008 (Bert die Verschriften Grüe die Akkrediterung und Marküberwin 1m. Zusammenhang mit der Vermarktung von Produkten (Abl. 1.218 vom 9. Juli 2008, 5. 30). Die Dakksi ist Uterzeichherni der Muhillateralen Abkommen zur gegenseitigen Anerkennung der European co-operation for Aczreditation (EA), des International Aczreditation Forum (IAF) und der International Laboratory Aczerditation (CA), des International Aczreditation Forum (IAF) und der International Laboratory Aczerditation Cooperation (ILAC). Die Unterzeichner dieser Abkommu erkennen ihre Akkreditierungen gegenseitig an.

Der aktuelle Stand der Mitgliedschaft kann folgenden Webseiten entno EA: www.curropean-accreditation.org ILAC: www.llac.org ILAC: www.llac.org

### Note:

The current certificate including annex can be received on request.