

FCC Part 15B Compliance Test Report

Test Report no.:	FCC15B_RM-974_04.docx	Date of Report:	10-Apr-2014
Number of pages:	13	Customer's Contact person:	Juha Paukku
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FCC listing no.:	94436		
IC recognition no.:	661AK-1		
Tested devices/ accessories:	Phone RM-974 / Battery BL-5H / AC charger AC-20E / Headset WH-108 Data cable CA-101, Laptop IBM Thinkpad T40, AC adapter 02K6543, Printer HP deskjet 1600CC3540A, Parallel cable for printer		
FCC ID:	PDNRM-974	IC:	661R-RM974
Supplement reports:	-		
Testing has been carried out in accordance with:	CFR 47, FCC rules Part 15 Subpart B, ANSI C63.4 (2003), CISPR 22, RSS-GEN (Issue 3, December 2010), RSS-132 (Issue 2, September 2005), RSS-133 (Issue 5, February 2009). Deviations, modifications or clarifications (if any) to above mentioned documents are written in each section under "Test method and limit".		
Documentation:	The test report must always be reproduced in full; reproduction of an excerpt only is subject to written approval of the testing laboratory. The documentation of the testing performed on the tested devices is archived for 15 years at TCC Nokia.		
Test Results:	The EUT complies with the requirements in respect of all parameters subject to the test. The test results relate only to devices specified in this document		
Date and signature for the contents:			

Hannu Soderholm, Specialist, EMC

1. Summary for FCC Part 15B Compliance Test Report

Date of receipt	21-Mar-2014
Testing completed	09-Apr-2014
The customer's contact person	Juha Paukku
Test Plan referred to	T:\Projects\RM-974\TestPlan\RS_Testplan_RM-974.xlsm
Notes	-
Document name	T:\Projects\RM-974\EMC\FCC15B_RM-974_04.docx

1.1. EUT and Accessory Information

The EUT is a mobile phone with following features:

GSM/WCDMA/WLAN/Bluetooth

The EUT is tested with maximum rated TX power.

Devices under tests

Product	Type	SN	HW	MV	SW	DUT
Phone	RM-974	004402478003183	2010	-	01061.00014.14112.00000	43151
Battery	BL-5H	4955403494010119163;0670699	V3.0	-	-	43154
AC charger	AC-20E	4868673411351126865;0675628	-	-	-	43140
Headset	WH-108	2376171	-	-	-	43142
Data cable	CA-101	-	-	-	-	41683
Laptop	IBM Thinkpad T40	99ARTGD	-	-	-	41868
AC Adapter	02K6543	-	-	-	-	40202
Printer	HP deskjet 1600CC3540A	USB8302546	-	-	-	40077
Parallel cable for printer	-	-	-	-	-	40087

1.2. Summary of Test Results

GSM850:

Section in CFR 47	Section in RSS-GEN	Name of the test	Result
15.107, a	7.2.4	AC powerline conducted emissions	NP
15.109, a	6.1	Radiated emissions	PASSED

WCDMA 850 (Band V):

Section in CFR 47	Section in RSS-GEN	Name of the test	Result
15.107, a	7.2.4	AC powerline conducted emissions	NP
15.109, a	6.1	Radiated emissions	PASSED

GSM1900:

Section in CFR 47	Section in RSS-GEN	Name of the test	Result
15.107, a	7.2.4	AC powerline conducted emissions	PASSED
15.109, a	6.1	Radiated emissions	PASSED

PASSED

FAILED

NP

The EUT complies with the essential requirements in the standard.

The EUT does not comply with the essential requirements in the standard.

The test was not performed by the TCC Nokia Laboratory.

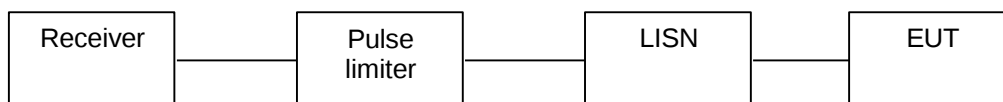
CONTENTS

1. Summary for FCC Part 15B Compliance Test Report.....	2
1.1. EUT and Accessory Information	2
1.2. Summary of Test Results	2
2. AC powerline conducted emissions (FCC §15.107, ICES-003 section 5.3).....	4
2.1. Test Setup	4
2.2. Test method and limit	4
2.3. GSM 1900 Test results, Data	5
3. Radiated emissions (FCC §15.109, RSS-Gen, section 6.1, RSS-132 4.6, RSS-133 6.6).....	6
3.2. Test method and limit	6
3.3. GSM850 test results	8
3.4. GSM1900 test results	9
3.5. GSM1900 test results with PC accessories	10
3.6. LTE7 test results.....	11
4. Test Equipment.....	12
4.1. Conducted measurements	12
4.2. Radiated measurements	13

2. AC powerline conducted emissions (FCC §15.107, ICES-003 section 5.3)

EUT with DUT number	RM-974, DUT 43151
Accessories with DUT numbers	BL-5H, DUT 43154 ; WH-108, DUT 43142, IBM Thinkpad T40 DUT 41868, 02K6543 DUT 40202, HP deskjet 1600CC3540A DUT 40077, Parallel cable for printer DUT 40087
Operation Voltage [V] / [Hz]	115 / 60
Results	PASSED
Remarks	-
Temp [°C] / Humidity [%RH] / Air Pressure [kPa]	21 / 45 / 101.5
Date of measurements	09-Apr-2014
Measured by	Hannu Söderholm

2.1. Test Setup



2.2. Test method and limit

The measurement is made according to ANSI C63.4-2003 as follows:

The EUT is placed on a wooden table 80 cm above the reference groundplane.

The EUT is connected via LISN to a test power supply.

The measurement results are obtained as described below:

$$U [dB\mu V] = U_{RX} + A_{TOT}$$

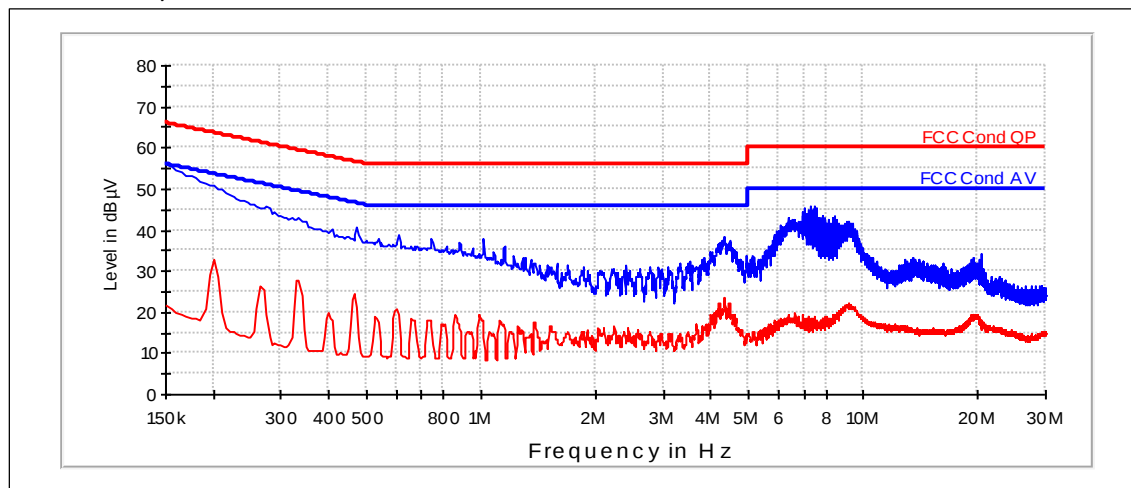
Where U_{RX} is receiver reading and A_{TOT} is total correction factor including cable and pulse limiter attenuations.

CISPR 22 Class B limits

Frequency range [MHz]	Quasi peak limit [dBμV]	Average limit [dBμV]
0.15 - 0.5	66 - 56	56 - 46
0.5 - 5	56	46
5 - 30	60	50

2.3. GSM 1900 Test results, Data

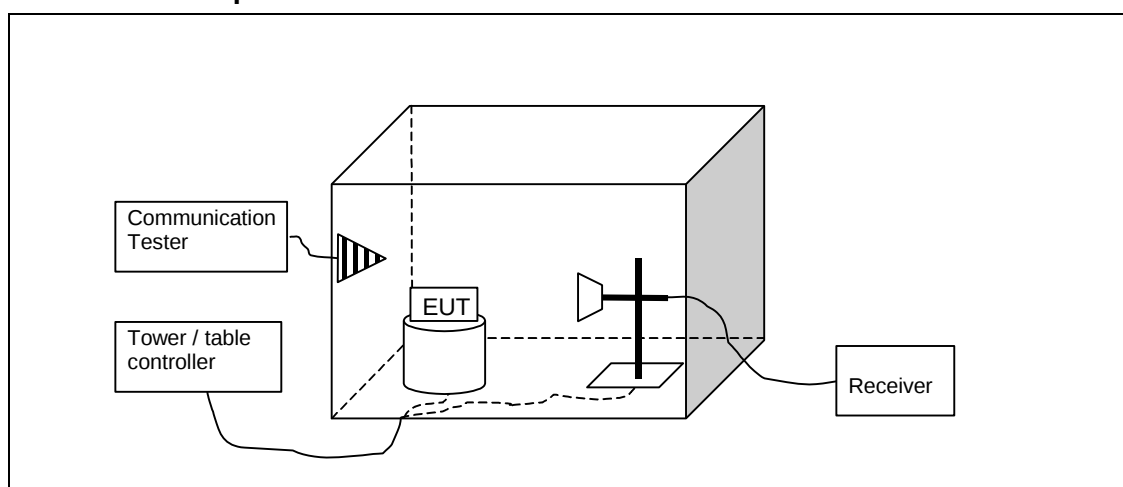
Channel 661 / 1880.0 MHz



3. Radiated emissions (FCC §15.109, RSS-Gen, section 6.1, RSS-132 4.6, RSS-133 6.6)

EUT with DUT number	RM-974, DUT 43151
Accessories with DUT numbers	BL-5H, DUT 43154 ; AC-20E, DUT 43140 ; WH-108, DUT 43142
Operation Voltage [V] / [Hz]	115 / 60
Results	PASSED
Remarks	-
Temp [°C] / Humidity [%RH] / Air Pressure [kPa]	21 / 45 / 101-5
Date of measurements	08-Apr-2014
Measured by	Hannu Söderholm

3.1.1 Test setup



3.2. Test method and limit

The measurement is made according to ANSI C63.4-2003as follows:

The measurement is performed in the Semi-Anechoic Chamber with conducting metal floor.

The measurement distance is 3 m.

The EUT is placed on a nonconductive plate at 80 cm height.

For each suspected frequency, the turntable is rotated 360 degrees and antenna is scanned from 1 to 4 m. This is repeated for both horizontal and vertical receive antenna polarizations.

The emissions less than 20 dB below the permissible value are reported.

The measurement results are obtained as described below:

$$E [dB\mu V/m] = U_{RX} + A_{TOT}$$

Where U_{RX} is receiver reading and A_{TOT} is total correction factor including cable loss, antenna factor and preamplifier gain ($A_{TOT} = L_{CABLES} + A_F - G_{PREAMP}$).

CISPR 22 and FCC Part 15 Class B limits (3 m measurement distance)

Frequency range [MHz]	Quasi peak limit [dB μ V/m]	Average limit [dB μ V/m]	Peak limit [dB μ V/m]
30 - 230	40	-	-
230 – 1000	47	-	-
1000 - 3000	-	50	70
Above 3000	-	54	74

3.3. GSM850 test results

RX mode, channel 128 / 869.2 MHz

Peak (RBW: 1 MHz, VBW: 1 MHz)

Frequency [MHz]	E [dBμV/m]	E [μV/m]	U _{RX} [dBμV]	A _{TOT} [dB]	Margin	Limit [dBμV/m]	Results
3476.4	36.66	68.038	45.04	-8.38	37.3	74	PASSED
6952.6	47.89	247.97	48.64	-0.75	26.1	74	PASSED

Average (RBW: 1 MHz, VBW: 1 MHz)

Frequency [MHz]	E [dBμV/m]	E [μV/m]	U _{RX} [dBμV]	A _{TOT} [dB]	Margin	Limit [dBμV/m]	Results
3476.4	24.17	16.162	32.55	-8.38	29.8	54	PASSED
6952.6	33.6	47.88	34.35	-0.75	20.4	54	PASSED

RX mode, channel 190 / 881.6 MHz

Quasi peak (RBW: 100 kHz, VBW: 100 kHz)

Frequency [MHz]	E [dBμV/m]	E [μV/m]	U _{RX} [dBμV]	A _{TOT} [dB]	Margin	Limit [dBμV/m]	Results
30.39	24.09	16.021	50.24	-26.15	15.9	40	PASSED

Peak (RBW: 1 MHz, VBW: 1 MHz)

Frequency [MHz]	E [dBμV/m]	E [μV/m]	U _{RX} [dBμV]	A _{TOT} [dB]	Margin	Limit [dBμV/m]	Results
3000.6	37.89	78.442	46.15	-8.26	36.1	74	PASSED
3526.7	37.29	73.215	45.53	-8.24	36.7	74	PASSED
7814.632	46.28	206.063	43.56	2.72	27.7	74	PASSED
7850.605	46.56	212.74	43.7	2.86	27.4	74	PASSED

Average (RBW: 1 MHz, VBW: 1 MHz)

Frequency [MHz]	E [dBμV/m]	E [μV/m]	U _{RX} [dBμV]	A _{TOT} [dB]	Margin	Limit [dBμV/m]	Results
3000.6	24.89	17.565	33.15	-8.26	29.1	54	PASSED
3526.7	24.29	16.379	32.53	-8.24	29.7	54	PASSED
7814.632	32.6	42.658	29.88	2.72	21.4	54	PASSED
7850.605	32.96	44.458	30.1	2.86	21	54	PASSED

RX mode, channel 251 / 893.8 MHz

Peak (RBW: 1 MHz, VBW: 1 MHz)

Frequency [MHz]	E [dBμV/m]	E [μV/m]	U _{RX} [dBμV]	A _{TOT} [dB]	Margin	Limit [dBμV/m]	Results
3574.9	37.55	75.448	46.03	-8.48	36.4	74	PASSED
7149.1	44.37	165.31	43.97	0.4	29.6	74	PASSED

Average (RBW: 1 MHz, VBW: 1 MHz)

Frequency [MHz]	E [dBμV/m]	E [μV/m]	U _{RX} [dBμV]	A _{TOT} [dB]	Margin	Limit [dBμV/m]	Results
3574.9	24.31	16.419	32.79	-8.48	29.7	54	PASSED
7149.1	31.36	36.991	30.96	0.4	22.6	54	PASSED

3.4. GSM1900 test results

RX mode, channel 512 / 1930.2 MHz

Peak (RBW: 1 MHz, VBW: 1 MHz)

Frequency [MHz]	E [dBμV/m]	E [μV/m]	U _{RX} [dBμV]	A _{TOT} [dB]	Margin	Limit [dBμV/m]	Results
3858.8	37.94	78.904	45.65	-7.71	36.1	74	PASSED
7721	45.32	184.48	43.16	2.16	28.7	74	PASSED

Average (RBW: 1 MHz, VBW: 1 MHz)

Frequency [MHz]	E [dBμV/m]	E [μV/m]	U _{RX} [dBμV]	A _{TOT} [dB]	Margin	Limit [dBμV/m]	Results
3858.8	24.73	17.237	32.44	-7.71	29.3	54	PASSED
7721	32.16	40.546	30	2.16	21.8	54	PASSED

RX mode, channel 661 / 1960.0 MHz

Quasi peak (RBW: 100 kHz, VBW: 100 kHz)

Frequency [MHz]	E [dBμV/m]	E [μV/m]	U _{RX} [dBμV]	A _{TOT} [dB]	Margin	Limit [dBμV/m]	Results
30.39	23.63	15.184	49.78	-26.15	16.4	40	PASSED

Peak (RBW: 1 MHz, VBW: 1 MHz)

Frequency [MHz]	E [dBμV/m]	E [μV/m]	U _{RX} [dBμV]	A _{TOT} [dB]	Margin	Limit [dBμV/m]	Results
3000.2	37.4	74.088	45.66	-8.26	36.6	74	PASSED
3918.5	38.35	82.68	45.66	-7.31	35.7	74	PASSED
7826.154	46.5	211.422	43.7	2.81	27.5	74	PASSED
7847.193	46.01	199.664	43.16	2.85	28	74	PASSED
7862.925	45.83	195.704	42.89	2.94	28.2	74	PASSED

Average (RBW: 1 MHz, VBW: 1 MHz)

Frequency [MHz]	E [dBμV/m]	E [μV/m]	U _{RX} [dBμV]	A _{TOT} [dB]	Margin	Limit [dBμV/m]	Results
3000.2	25.02	17.82	33.28	-8.26	29	54	PASSED
3918.5	25.1	17.987	32.41	-7.31	28.9	54	PASSED
7826.154	32.83	43.793	30.03	2.81	21.2	54	PASSED
7847.193	32.99	44.617	30.14	2.85	21	54	PASSED
7862.925	33.07	45.004	30.13	2.94	20.9	54	PASSED

RX mode, channel 810 / 1989.8 MHz

Peak (RBW: 1 MHz, VBW: 1 MHz)

Frequency [MHz]	E [dBμV/m]	E [μV/m]	U _{RX} [dBμV]	A _{TOT} [dB]	Margin	Limit [dBμV/m]	Results
3979.7	37.85	78.109	44.9	-7.05	36.1	74	PASSED
7960.5	46.22	204.574	43.03	3.19	27.8	74	PASSED

Average (RBW: 1 MHz, VBW: 1 MHz)

Frequency [MHz]	E [dBμV/m]	E [μV/m]	U _{RX} [dBμV]	A _{TOT} [dB]	Margin	Limit [dBμV/m]	Results
3979.7	25.06	17.914	32.11	-7.05	28.9	54	PASSED
7960.5	33.28	46.137	30.09	3.19	20.7	54	PASSED

3.5. GSM1900 test results with PC accessories

RX mode, channel 512 / 1930.2 MHz

Peak (RBW: 1 MHz, VBW: 1 MHz)

Frequency [MHz]	E [dBμV/m]	E [μV/m]	U _{RX} [dBμV]	A _{TOT} [dB]	Margin	Limit [dBμV/m]	Results
3860.5	37.57	75.622	45.28	-7.71	36.4	74	PASSED
7719.8	44.92	176.238	42.77	2.15	29.1	74	PASSED

Average (RBW: 1 MHz, VBW: 1 MHz)

Frequency [MHz]	E [dBμV/m]	E [μV/m]	U _{RX} [dBμV]	A _{TOT} [dB]	Margin	Limit [dBμV/m]	Results
3860.5	24.67	17.128	32.38	-7.71	29.3	54	PASSED
7719.8	32.23	40.874	30.08	2.15	21.8	54	PASSED

RX mode, channel 661 / 1960.0 MHz

Quasi peak (RBW: 100 kHz, VBW: 100 kHz)

Frequency [MHz]	E [dBμV/m]	E [μV/m]	U _{RX} [dBμV]	A _{TOT} [dB]	Margin	Limit [dBμV/m]	Results
30.18	29.37	29.417	55.43	-26.06	10.6	40	PASSED
110.742	31.29	36.665	66.41	-35.12	8.7	40	PASSED
114.559	32.49	42.102	67.28	-34.79	7.5	40	PASSED
133.105	27.37	23.37	62.07	-34.7	12.6	40	PASSED
171.834	31.76	38.744	68.1	-36.34	8.2	40	PASSED
662.895	30.75	34.459	58.28	-27.53	16.3	47	PASSED
794.752	28.12	25.46	54.05	-25.93	18.9	47	PASSED

Peak (RBW: 1 MHz, VBW: 1 MHz)

Frequency [MHz]	E [dBμV/m]	E [μV/m]	U _{RX} [dBμV]	A _{TOT} [dB]	Margin	Limit [dBμV/m]	Results
7824.246	45.44	187.004	42.64	2.8	28.6	74	PASSED
7829.659	46.65	214.907	43.84	2.81	27.4	74	PASSED
7846.49	45.87	196.585	43.02	2.85	28.1	74	PASSED
7853.611	46.17	203.517	43.29	2.88	27.8	74	PASSED

Average (RBW: 1 MHz, VBW: 1 MHz)

Frequency [MHz]	E [dBμV/m]	E [μV/m]	U _{RX} [dBμV]	A _{TOT} [dB]	Margin	Limit [dBμV/m]	Results
7824.246	32.79	43.621	29.99	2.8	21.2	54	PASSED
7829.659	32.78	43.526	29.97	2.81	21.2	54	PASSED
7846.49	32.92	44.274	30.07	2.85	21.1	54	PASSED
7853.611	32.88	44.071	30	2.88	21.1	54	PASSED

RX mode, channel 810 / 1989.8 MHz

Peak (RBW: 1 MHz, VBW: 1 MHz)

Frequency [MHz]	E [dBμV/m]	E [μV/m]	U _{RX} [dBμV]	A _{TOT} [dB]	Margin	Limit [dBμV/m]	Results
3980.5	37.58	75.666	44.64	-7.06	36.4	74	PASSED
7960.2	45.96	198.655	42.77	3.19	28	74	PASSED

Average (RBW: 1 MHz, VBW: 1 MHz)

Frequency [MHz]	E [dBμV/m]	E [μV/m]	U _{RX} [dBμV]	A _{TOT} [dB]	Margin	Limit [dBμV/m]	Results
3980.5	24.98	17.744	32.04	-7.06	29	54	PASSED
7960.2	33.19	45.677	30	3.19	20.8	54	PASSED

3.6. LTE7 test results

Channel 20775 / 2502. MHz

Peak (RBW: 1 MHz, VBW: 1 MHz)

Frequency [MHz]	E [dBμV/m]	E [μV/m]	U _{RX} [dBμV]	A _{TOT} [dB]	Limit [dBμV/m]	Margin	Results
5246.6	41.06	112.98	45.56	-4.5	74	32.94	PASSED
7866.3	46.55	212.569	43.55	3	74	27.45	PASSED

Average (RBW: 1 MHz, VBW: 1 MHz)

Frequency [MHz]	E [dBμV/m]	E [μV/m]	U _{RX} [dBμV]	A _{TOT} [dB]	Limit [dBμV/m]	Margin	Results
5246.6	28.04	25.235	32.54	-4.5	54	25.96	PASSED
7866.3	33.09	45.134	30.09	3	54	20.91	PASSED

Channel 21100 / 2535.0 MHz

Quasi peak (RBW: 100 kHz, VBW: 100 kHz)

Frequency [MHz]	E [dBμV/m]	E [μV/m]	U _{RX} [dBμV]	A _{TOT} [dB]	Limit [dBμV/m]	Margin	Results
30.27	20.66	10.789	46.76	-26.1	40	19.34	PASSED

Peak (RBW: 1 MHz, VBW: 1 MHz)

Frequency [MHz]	E [dBμV/m]	E [μV/m]	U _{RX} [dBμV]	A _{TOT} [dB]	Limit [dBμV/m]	Margin	Results
2656.113	58.14	807.235	68.74	-10.6	70	11.86	PASSED
7832.368	45.88	196.789	43.08	2.8	74	28.12	PASSED
7848.501	46.32	207.014	43.42	2.9	74	27.68	PASSED
7859.119	45.98	199.067	43.08	2.9	74	28.02	PASSED
7863.725	46.29	206.3	43.39	2.9	74	27.71	PASSED

Average (RBW: 1 MHz, VBW: 1 MHz)

Frequency [MHz]	E [dBμV/m]	E [μV/m]	U _{RX} [dBμV]	A _{TOT} [dB]	Limit [dBμV/m]	Margin	Results
2656.113	43.53	150.141	54.13	-10.6	50	6.47	PASSED
7832.368	32.93	44.31	30.13	2.8	54	21.07	PASSED
7848.501	33.05	44.926	30.15	2.9	54	20.95	PASSED
7859.119	33.12	45.29	30.22	2.9	54	20.88	PASSED
7863.725	33.13	45.342	30.23	2.9	54	20.87	PASSED

Channel 21425 / 2567.6 MHz

Peak (RBW: 1 MHz, VBW: 1 MHz)

Frequency [MHz]	E [dBμV/m]	E [μV/m]	U _{RX} [dBμV]	A _{TOT} [dB]	Limit [dBμV/m]	Margin	Results
5376.2	40.94	111.429	45.44	-4.5	74	33.06	PASSED
8064.5	46.74	217.27	43.04	3.7	74	27.26	PASSED

Average (RBW: 1 MHz, VBW: 1 MHz)

Frequency [MHz]	E [dBμV/m]	E [μV/m]	U _{RX} [dBμV]	A _{TOT} [dB]	Limit [dBμV/m]	Margin	Results
5376.2	28.17	25.615	32.67	-4.5	54	25.83	PASSED
8064.5	34.04	50.35	30.34	3.7	54	19.96	PASSED

4. Test Equipment

4.1. Conducted measurements

Eq. No	Equipment	Type	Manufacturer	Used in
TM38112	Power supply	6632A	Agilent	22/24/27, 15C, 15E
TM38114	Power supply	6632A	Agilent	22/24/27, 15C, 15E
TM37773	Communication Tester	CMU200	R&S	22/24/27, 15B
TM30600	Impulse limiter	ESH3-Z2	R&S	15C, 15B
TM26490	LISN 50 μ H	ESH3-Z5	R&S	15C, 15B
TM26491	LISN 50 μ H	ESH3-Z5	R&S	15C, 15B
TM37610	Spectrum Analyzer	FSU26	R&S	22/24/27, 15C, 15E
TM23007	Oscilloscope	TDS684B	Tektronix	15E
TM22806	Battery	BAT 20/E	Fiskars	15C, 15B
TM22805	UPS	PS 20/1.2	Fiskars	15C, 15B
-	Temperature and humidity logger	175-H2	Testo	15C, 15B
-	Temperature and humidity logger	175-H2	Testo	22/24/27, 15C
-	Air pressure and temperature logger	635-2	Testo	22/24/27, 15C, 15B
-	Air pressure sensor	0638-1835	Testo	22/24/27, 15C, 15B
-	Temperature test chamber	VT 4002	Vötsch	22/24/27
2001	Bluetooth tester	CBT	R&S	15C, 15B
2009	LISN 50 μ H	ENV216	R&S	15C, 15B
2010	LISN 50 μ H	ENV216	R&S	15C, 15B
2012	Power splitter	11667B	Agilent	22/24/27, 15C
2013	Attenuator	8493C	Agilent	22/24/27, 15C
2014	Attenuator	8493C	Agilent	22/24/27, 15C
2019	Power splitter	ZN2PD-9G-S+	Mini-Circuits	15E
2020	Power splitter	ZN2PD-9G-S+	Mini-Circuits	15E
2021	Communication Tester	CMW500	R&S	22/24/27
2022	Communication Tester	CMU200	R&S	22/24/27
2023	Spectrum Analyzer	ESMI-RF	R&S	15B/15C
2024	Analyzer display unit	ESAI-D	R&S	15B/15C
2026	Signal Generator	SMF 100A	R&S	22/24/27, 15C, 15E, 15B

4.2. Radiated measurements

Eq. No	Equipment	Type	Manufacturer	Used in
-	Antenna	BBHA 9120 D	Schwarzbeck	22/24/27, 15C
TM37678	Communication Tester	CMU200	R&S	22/24/27, 15B
TM38845	Receiver	ESIB 26	R&S	22/24/27, 15C, 15E, 15B
-	Antenna	HL562	R&S	22/24/27, 15C, 15E, 15B
-	Turntable	2188	EMCO	22/24/27, 15C, 15E, 15B
-	Turntable controller	2090	EMCO	22/24/27, 15C, 15E, 15B
-	RF system panel	OSP130	R&S	22/24/27, 15C, 15E, 15B
-	Mini mast	2075-2	ETS Lindgren	22/24/27, 15C, 15B
TM38843	Mini mast	2075	Emco	22/24/27, 15C, 15B
TM38842	Antenna mast controller	2090	Emco	22/24/27, 15C, 15B
TM30643	LISN 50 μ H	LISN-5-20-2	FCC	22/24/27, 15C, 15B
TM30644	LISN 50 μ H	LISN-5-20-2	FCC	22/24/27, 15C, 15B
-	Temperature and humidity logger	175-H2	Testo	22/24/27, 15C, 15B
-	Air pressure and temperature logger	635-2	Testo	22/24/27, 15C, 15B
-	Air pressure sensor	0638-1835	Testo	22/24/27, 15C, 15B
TM37523	Preamplifier	AMF-4D-10M-3G-25-20P	Miteq	22/24/27, 15C, 15B
TM37498	Preamplifier	AMF-5D-020180-26-10P	Miteq	22/24/27, 15C, 15B
TM30599	Semi anechoic chamber	UNKNOWN	TDK	22/24/27, 15C, 15B
TM22638	Power supply	OL63743-901	-	22/24/27, 15C, 15E, 15B
TM38066	High pass filter	WHKX3.0/18G-12SS	Wainwright	22/24/27, 15C, 15E, 15B
2028	High pass filter	WHKX 1.0/15G-12SS	Wainwright	22/24/27, 15C, 15E, 15B
TM37545	Tunable notch filter	800.0/960.0-0.2/40-8SSK	Wainwright	22
TM26512	Tunable notch filter	WRCD1850/1910-0.2/40-10SSK	Wainwright	24
-	Band reject filter	WRCG1877/1883-1870/1890-40/6EE	Wainwright	24
-	Band reject filter	WRCG1729.4/1735.4-1722.4/1742.4-40/6SS	Wainwright	27
TM23892	Controller	G-1000SDX	Yaesu	22/24/27, 15C, 15E
2001	Bluetooth tester	CBT	R&S	15C, 15B
6023	Antenna	VUBA 9117	Schwarzbeck	22/24/27
2021	Communication Tester	CMW500	R&S	22/24/27
2025	Antenna	HFH2-Z2	R&S	15C
2026	Signal Generator	SMF 100A	R&S	22/24/27, 15C, 15E, 15B
2052	Antenna	BBHA 9120 D	Schwarzbeck	22/24/27, 15C, 15B, 15E
-	Antenna	QSH18S20	Q-Par	22/24/27, 15C, 15B, 15E
-	Antenna	QSH20S20	Q-Par	22/24/27, 15C, 15B, 15E
-	Antenna	QSH20S20	Q-Par	22/24/27, 15C, 15B, 15E