

FCC Part 15B Compliance Test Report

Test Report no.:	FCC15B_RM-819_09.docx	Date of Report:	25-Nov-2011
Number of pages:	17	Customer's Contact person:	Kari Koskela
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FCC listing no.:	94436		
IC recognition no.:	661AK-1		
Tested devices/ accessories:	Phone RM-819 / Battery BV-5JW / AC charger AC-16E / Data cable CA-185 / Headset WH-902 / Laptop IBM Thinkpad T40 / AC adapter 02K6543 / Printer HP deskjet 1600CC3540A / Parallel cable for printer		
FCC ID:	LJPA	IC:	661E-A
Supplement reports:	-		
Testing has been carried out in accordance with:	CFR 47, FCC rules Part 15 Subpart B, ANSI C63.4 (2003), ICES-003, CISPR 22, RSS-132 (Issue 2, September 2005), RSS-133 (Issue 5, February 2009), RSS-210 (Issue 8, December 2010). 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:			

Kalle Hannila, Engineer, EMC

1. Summary for FCC Part 15B Compliance Test Report

Date of receipt	29-Aug-2011
Testing completed	08-Sep-2011
The customer's contact person	Kari Koskela
Test Plan referred to	T:\Projects\RM-801\TestPlan\RS_testplan_RM-801.xls
Notes	-
Document name	T:\Projects\RM-801\EMC\FCC15B_RM-801_07.docx

1.1. EUT and Accessory Information

The EUT is a 7-band mobile phone:

GSM850/900/1800/1900/GPRS/EGPRS

WCDMA I/II(1900)/V(850)/HSDPA/HSUPA

WLAN/Bluetooth

The EUT is tested with maximum rated TX power, modulated with pseudo random bit sequence (PRBS9).

Product	Type	SN	HW	MV	SW	DUT
Phone	RM-801	00440213552705	1100	-	1600.1800.7 720.11300	42669
Battery	BV-5JW	-	-	-	-	-
AC charger	AC-16E	4090491233240501551;0675491	-	-	-	42660
Data cable	CA-185	-	-	-	-	42661
Headset	WH-902	-	-	-	-	42663
Phone	RM-801	00440213553967	1100	-	1600.2100.7 720.11330	42659
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 ICES-003 (RSS-132)	Name of the test	Result
15.107, a	5.3	AC powerline conducted emissions	NP
15.109, a	5.5 (4.6)	Radiated emissions	PASSED

GSM1900:

Section in CFR 47	Section in ICES-003 (RSS-133)	Name of the test	Result
15.107, a	5.3	AC powerline conducted emissions	NP
15.109, a	5.5 (6.6)	Radiated emissions	PASSED

WCDMA 1900 (Band II):

Section in CFR 47	Section in ICES-003 (RSS-133)	Name of the test	Result
15.107, a	5.3	AC powerline conducted emissions	NP
15.109, a	5.5 (6.6)	Radiated emissions	PASSED

Bluetooth:

Section in CFR 47	Section in ICES-003 (RSS-139)	Name of the test	Result
15.107, a	5.3	AC powerline conducted emissions	NP
15.109, a	5.5 (6.6)	Radiated emissions	PASSED

WLAN:

Section in CFR 47	Section in ICES-003 (RSS-139)	Name of the test	Result
15.107, a	5.3	AC powerline conducted emissions	NP
15.109, a	5.5 (6.6)	Radiated emissions	PASSED

PASSED

The EUT complies with the essential requirements in the standard.

FAILED

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

NP

The test was not performed by the TCC Nokia Laboratory.

The test results of LJPRM-801 are re-used for certification of the LJPA. The table above indicates the results, which will be re-used

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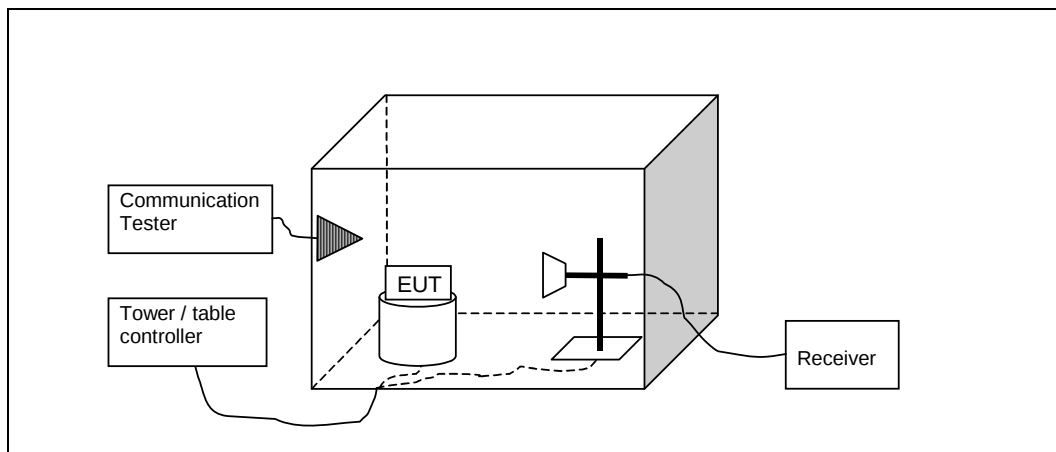
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2. Radiated emissions

(FCC §15.109, ICES-003 section 5.5, RSS-132 4.6, RSS-133 6.6)

EUT with DUT number	RM-801, DUT 42669
Accessories with DUT numbers	BV-5JW DUT -, AC-16E, DUT 42660 ; CA-185, DUT 42661 ; WH-902, DUT 42663
Operation Voltage [V] / [Hz]	115 / 60
Results	PASSED
Remarks	-
Temp [°C] / Humidity [%RH] / Air Pressure [kPa]	21 / 51 / 99.6
Date of measurements	01-Sep-2011
Measured by	Hannu Söderholm

2.1.1 Test Setup



2.2. 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:

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

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 [dBμV/m]	Average limit [dBμV/m]	Peak limit [dBμV/m]
30 - 230	40	-	-
230 – 1000	47	-	-
Above 1000	-	54	74

2.3. Bluetooth + FM radio Test results

2.3.1 GFSK modulation, PRBS packet type

TX mode, Channel 0 / 2402 MHz

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

Frequency [MHz]	E [dBμV/m]	E [μV/m]	U _{RX} [dBμV]	A _{TOT} [dB]	Polarisation	Result
4802.7	40.34	103.992	43.12	-2.78	HORIZONTAL	PASSED
7205.5	44.06	159.606	43.25	0.81	HORIZONTAL	PASSED

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

Frequency [MHz]	E [dBμV/m]	E [μV/m]	U _{RX} [dBμV]	A _{TOT} [dB]	Polarisation	Result
4802.7	27.5	23.719	30.28	-2.78	HORIZONTAL	PASSED
7205.5	30.55	33.698	29.74	0.81	HORIZONTAL	PASSED

TX mode, Channel 40 / 2442 MHz

Quasi peak (RBW: 120 kHz, VBW: 300 kHz)

Frequency [MHz]	E [dBμV/m]	E [μV/m]	U _{RX} [dBμV]	A _{TOT} [dB]	Polarisation	Result
30.84	27.54	23.826	55.26	-27.72	VERTICAL	PASSED
50.31	18.27	8.191	55.17	-36.9	VERTICAL	PASSED
460.812	32.69	43.082	60.71	-28.02	HORIZONTAL	PASSED
691.213	33.56	47.643	57.31	-23.75	HORIZONTAL	PASSED
872.475	27.71	24.294	49.04	-21.33	HORIZONTAL	PASSED
894.197	16.22	6.473	37.91	-21.69	VERTICAL	PASSED
921.603	35.25	57.856	55.66	-20.41	HORIZONTAL	PASSED
946.072	32.42	41.764	52.88	-20.46	HORIZONTAL	PASSED

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

Frequency [MHz]	E [dBμV/m]	E [μV/m]	U _{RX} [dBμV]	A _{TOT} [dB]	Polarisation	Result
1850.301	45.64	191.492	56.89	-11.25	HORIZONTAL	PASSED
2162.125	50.06	318.237	58.59	-8.53	HORIZONTAL	PASSED

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

Frequency [MHz]	E [dBμV/m]	E [μV/m]	U _{RX} [dBμV]	A _{TOT} [dB]	Polarisation	Result
1850.301	37.33	73.519	48.58	-11.25	HORIZONTAL	PASSED
2162.125	33.62	47.957	42.15	-8.53	HORIZONTAL	PASSED

TX mode, Channel 78 / 2480 MHz

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

Frequency [MHz]	E [dBμV/m]	E [μV/m]	U _{RX} [dBμV]	A _{TOT} [dB]	Polarisation	Result
4958.6	41.94	124.954	43.78	-1.84	VERTICAL	PASSED
7437.5	43.93	157.253	42.47	1.46	HORIZONTAL	PASSED

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

Frequency [MHz]	E [dBμV/m]	E [μV/m]	U _{RX} [dBμV]	A _{TOT} [dB]	Polarisation	Result
4958.6	29.2	28.83	31.04	-1.84	VERTICAL	PASSED
7437.5	30.69	34.245	29.23	1.46	HORIZONTAL	PASSED

2.4. GSM850 + FM radio 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]	Polarisation	Result
3475	38.78	86.876	44.44	-5.66	VERTICAL	PASSED
6952.9	46.82	219.23	46.73	0.09	VERTICAL	PASSED

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

Frequency [MHz]	E [dBμV/m]	E [μV/m]	U _{RX} [dBμV]	A _{TOT} [dB]	Polarisation	Result
3475	25.91	19.754	31.57	-5.66	VERTICAL	PASSED
6952.9	34.24	51.529	34.15	0.09	VERTICAL	PASSED

RX mode, channel 190 / 881.6 MHz

Quasi peak (RBW: 120 kHz, VBW: 300 kHz)

Frequency [MHz]	E [dBμV/m]	E [μV/m]	U _{RX} [dBμV]	A _{TOT} [dB]	Polarisation	Result
30.57	25.18	18.145	52.83	-27.65	VERTICAL	PASSED
46.283	19.49	9.425	53.83	-34.34	VERTICAL	PASSED
460.791	29.07	28.405	57.52	-28.45	HORIZONTAL	PASSED
691.192	32.62	42.761	56.79	-24.17	HORIZONTAL	PASSED
921.593	32.36	41.481	53.28	-20.92	HORIZONTAL	PASSED

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

Frequency [MHz]	E [dBμV/m]	E [μV/m]	U _{RX} [dBμV]	A _{TOT} [dB]	Polarisation	Result
2380.061	52.89	440.859	50.76	2.13	HORIZONTAL	PASSED

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

Frequency [MHz]	E [dBμV/m]	E [μV/m]	U _{RX} [dBμV]	A _{TOT} [dB]	Polarisation	Result
2380.061	40.09	100.983	37.96	2.13	HORIZONTAL	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]	Polarisation	Result
3574.8	39.25	91.685	44.57	-5.32	VERTICAL	PASSED
7151.9	43.23	145.111	42.6	0.63	VERTICAL	PASSED

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

Frequency [MHz]	E [dBμV/m]	E [μV/m]	U _{RX} [dBμV]	A _{TOT} [dB]	Polarisation	Result
3574.8	26.03	20.01	31.35	-5.32	VERTICAL	PASSED
7151.9	30.37	32.98	29.74	0.63	VERTICAL	PASSED

2.5. GSM1900 + FM radio 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]	Polarisation	Result
3858.4	40.83	110.027	43.25	-2.42	VERTICAL	PASSED
7718.6	45.1	179.908	43.25	1.85	HORIZONTAL	PASSED

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

Frequency [MHz]	E [dBμV/m]	E [μV/m]	U _{RX} [dBμV]	A _{TOT} [dB]	Polarisation	Result
3858.4	27.97	25.032	30.39	-2.42	VERTICAL	PASSED
7718.6	31.33	36.851	29.48	1.85	HORIZONTAL	PASSED

RX mode, channel 661 / 1960.0 MHz

Quasi peak (RBW: 120 kHz, VBW: 300 kHz)

Frequency [MHz]	E [dBμV/m]	E [μV/m]	U _{RX} [dBμV]	A _{TOT} [dB]	Polarisation	Result
30.36	9.77	3.081	37.34	-27.57	VERTICAL	PASSED
46.34	3.15	1.437	37.52	-34.37	VERTICAL	PASSED
460.791	28.89	27.832	57.34	-28.45	HORIZONTAL	PASSED
691.192	32.61	42.727	56.78	-24.17	HORIZONTAL	PASSED
911.212	15.58	6.013	37.71	-22.13	VERTICAL	PASSED
921.603	32.5	42.17	53.42	-20.92	HORIZONTAL	PASSED

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

Frequency [MHz]	E [dBμV/m]	E [μV/m]	U _{RX} [dBμV]	A _{TOT} [dB]	Polarisation	Result
2380.061	52.63	427.858	50.5	2.13	HORIZONTAL	PASSED

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

Frequency [MHz]	E [dBμV/m]	E [μV/m]	U _{RX} [dBμV]	A _{TOT} [dB]	Polarisation	Result
2380.061	40.11	101.228	37.98	2.13	HORIZONTAL	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]	Polarisation	Result
3978.7	41.63	120.587	44.57	-2.94	VERTICAL	PASSED
7961.1	46.2	204.174	43.78	2.42	HORIZONTAL	PASSED

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

Frequency [MHz]	E [dBμV/m]	E [μV/m]	U _{RX} [dBμV]	A _{TOT} [dB]	Polarisation	Result
3978.7	27.77	24.451	30.71	-2.94	VERTICAL	PASSED
7961.1	32.27	41.068	29.85	2.42	HORIZONTAL	PASSED

2.6. WCDMA 1900 (Band II) + GPS receiver Test results

RX mode, channel 9662 / 1932.4 MHz

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

Frequency [MHz]	E [dBμV/m]	E [μV/m]	U _{RX} [dBμV]	A _{TOT} [dB]	Polarisation	Result
3865.8	41.12	113.789	43.51	-2.39	HORIZONTAL	PASSED
7728.2	44.19	162.013	42.35	1.84	HORIZONTAL	PASSED

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

Frequency [MHz]	E [dBμV/m]	E [μV/m]	U _{RX} [dBμV]	A _{TOT} [dB]	Polarisation	Result
3865.8	28.07	25.308	30.46	-2.39	HORIZONTAL	PASSED
7728.2	31.43	37.295	29.59	1.84	HORIZONTAL	PASSED

RX mode, channel 9800 / 1960.0 MHz

Quasi peak (RBW: 120 kHz, VBW: 300 kHz)

Frequency [MHz]	E [dBμV/m]	E [μV/m]	U _{RX} [dBμV]	A _{TOT} [dB]	Polarisation	Result
30.21	15.71	6.1	41.23	-25.52	HORIZONTAL	PASSED
51.827	19.18	9.097	55.25	-36.07	HORIZONTAL	PASSED
460.782	30.41	33.14	58.86	-28.45	HORIZONTAL	PASSED
691.213	32.61	42.712	56.78	-24.17	HORIZONTAL	PASSED
911.02	31.64	38.177	53.77	-22.13	VERTICAL	PASSED
911.032	21.91	12.462	44.04	-22.13	VERTICAL	PASSED
921.593	31.4	37.132	52.32	-20.92	HORIZONTAL	PASSED

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

Frequency [MHz]	E [dBμV/m]	E [μV/m]	U _{RX} [dBμV]	A _{TOT} [dB]	Polarisation	Result
2380.061	52.5	421.454	50.37	2.13	HORIZONTAL	PASSED

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

Frequency [MHz]	E [dBμV/m]	E [μV/m]	U _{RX} [dBμV]	A _{TOT} [dB]	Polarisation	Result
2380.061	40.13	101.473	38	2.13	HORIZONTAL	PASSED

RX mode, channel 9938 / 1987.6 MHz

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

Frequency [MHz]	E [dBμV/m]	E [μV/m]	U _{RX} [dBμV]	A _{TOT} [dB]	Polarisation	Result
3973.2	41	112.163	43.91	-2.91	HORIZONTAL	PASSED
7951.5	44.6	169.766	42.22	2.38	VERTICAL	PASSED

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

Frequency [MHz]	E [dBμV/m]	E [μV/m]	U _{RX} [dBμV]	A _{TOT} [dB]	Polarisation	Result
3973.2	27.96	25.001	30.87	-2.91	HORIZONTAL	PASSED
7951.5	32.2	40.747	29.82	2.38	VERTICAL	PASSED

2.7. WLAN RX + GPS receiver Test results

Channel 1 / 2412 MHz

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

Frequency [MHz]	E [dBμV/m]	E [μV/m]	U _{RX} [dBμV]	A _{TOT} [dB]	Polarisation	Result
4823	40.76	109.081	43.39	-2.63	HORIZONTAL	PASSED
7235.9	44.38	165.615	43.25	1.13	HORIZONTAL	PASSED

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

Frequency [MHz]	E [dBμV/m]	E [μV/m]	U _{RX} [dBμV]	A _{TOT} [dB]	Polarisation	Result
4823	27.65	24.127	30.28	-2.63	HORIZONTAL	PASSED
7235.9	30.91	35.12	29.78	1.13	HORIZONTAL	PASSED

Channel 7 / 2442 Mhz

Quasi peak (RBW: 120 kHz, VBW: 300 kHz)

Frequency [MHz]	E [dBμV/m]	E [μV/m]	U _{RX} [dBμV]	A _{TOT} [dB]	Polarisation	Result
30.36	10.58	3.381	38.15	-27.57	VERTICAL	PASSED
51.02	12.19	4.07	49.58	-37.39	VERTICAL	PASSED
460.812	30.68	34.19	59.13	-28.45	HORIZONTAL	PASSED
691.213	32.75	43.421	56.92	-24.17	HORIZONTAL	PASSED
910.942	15.67	6.072	37.81	-22.14	VERTICAL	PASSED
921.593	31.8	38.9	52.72	-20.92	HORIZONTAL	PASSED

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

Frequency [MHz]	E [dBμV/m]	E [μV/m]	U _{RX} [dBμV]	A _{TOT} [dB]	Polarisation	Result
2380.061	53.15	454.255	51.02	2.13	HORIZONTAL	PASSED

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

Frequency [MHz]	E [dBμV/m]	E [μV/m]	U _{RX} [dBμV]	A _{TOT} [dB]	Polarisation	Result
2380.061	40.2	102.329	38.07	2.13	HORIZONTAL	PASSED

Channel 11 / 2462 MHz
Peak (RBW: 1 MHz, VBW: 1 MHz)

Frequency [MHz]	E [dB μ V/m]	E [μ V/m]	U _{RX} [dB μ V]	A _{TOT} [dB]	Polarisation	Result
4923	42.36	131.175	44.31	-1.95	HORIZONTAL	PASSED
7387.4	44.65	170.883	43.11	1.54	HORIZONTAL	PASSED

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

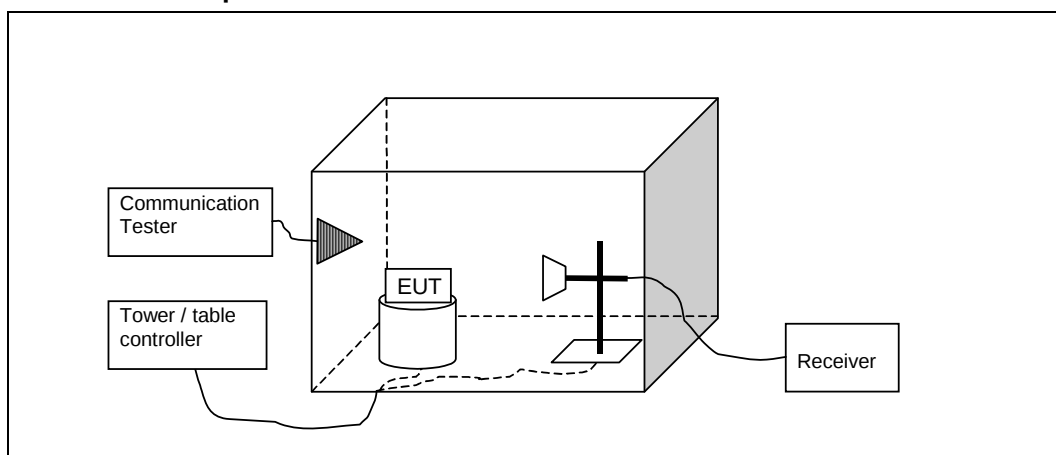
Frequency [MHz]	E [dB μ V/m]	E [μ V/m]	U _{RX} [dB μ V]	A _{TOT} [dB]	Polarisation	Result
4923	29.38	29.448	31.33	-1.95	HORIZONTAL	PASSED
7387.4	31.04	35.633	29.5	1.54	HORIZONTAL	PASSED

3. Radiated emissions

(FCC §15.109, ICES-003 section 5.5, RSS-132 4.6, RSS-133 6.6)

EUT with DUT number	RM-801, DUT 42669
Accessories with DUT numbers	BV-5JW DUT -; CA-185, DUT 42661 ; WH-902, DUT 42663 ; 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	Continuos data transfer active between phone and computer.
Temp [°C] / Humidity [%RH] / Air Pressure [kPa]	20 / 50 / 99.3
Date of measurements	08-Sep-2011
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:

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

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 [dBμV/m]	Average limit [dBμV/m]	Peak limit [dBμV/m]
30 - 230	40	-	-
230 - 1000	47	-	-
Above 1000	-	54	74

3.3. WLAN RX + Data peripherals

Channel 1 / 2412 MHz

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

Frequency [MHz]	E [dBμV/m]	E [μV/m]	U_{RX} [dBμV]	A_{TOT} [dB]	Polarisation	Result
4822.9	40.31	103.669	42.94	-2.63	VERTICAL	PASSED
7237.2	43.57	150.782	42.43	1.14	VERTICAL	PASSED

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

Frequency [MHz]	E [dBμV/m]	E [μV/m]	U_{RX} [dBμV]	A_{TOT} [dB]	Polarisation	Result
4822.9	27.64	24.102	30.27	-2.63	VERTICAL	PASSED
7237.2	30.99	35.424	29.85	1.14	VERTICAL	PASSED

Channel 7 / 2442 Mhz

Quasi peak (RBW: 120 kHz, VBW: 300 kHz)

Frequency [MHz]	E [dBμV/m]	E [μV/m]	U_{RX} [dBμV]	A_{TOT} [dB]	Polarisation	Result
87.976	29.6	30.182	65.95	-36.35	HORIZONTAL	PASSED
121.462	20.16	10.189	53.85	-33.69	HORIZONTAL	PASSED
133.076	27.35	23.318	61.3	-33.95	VERTICAL	PASSED
143.186	37.32	73.485	71.49	-34.17	VERTICAL	PASSED
200.16	37.15	72.003	72.89	-35.74	HORIZONTAL	PASSED
257.063	40.94	111.365	74.59	-33.65	HORIZONTAL	PASSED
400.471	37.09	71.507	66.62	-29.53	HORIZONTAL	PASSED
462.012	30.74	34.427	59.12	-28.38	HORIZONTAL	PASSED
501.332	33.92	49.659	62.42	-28.5	VERTICAL	PASSED
662.835	26.16	20.331	51.8	-25.64	VERTICAL	PASSED

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

Frequency [MHz]	E [dBμV/m]	E [μV/m]	U _{RX} [dBμV]	A _{TOT} [dB]	Polarisation	Result
3502.205	39.08	89.929	44.53	-5.45	HORIZONTAL	PASSED

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

Frequency [MHz]	E [dBμV/m]	E [μV/m]	U _{RX} [dBμV]	A _{TOT} [dB]	Polarisation	Result
3502.205	26.32	20.709	31.77	-5.45	HORIZONTAL	PASSED

Channel 11 / 2462 MHz

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

Frequency [MHz]	E [dBμV/m]	E [μV/m]	U _{RX} [dBμV]	A _{TOT} [dB]	Polarisation	Result
4925.1	42.11	127.482	44	-1.89	VERTICAL	PASSED
7385.5	44.73	172.346	43.2	1.53	HORIZONTAL	PASSED

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

Frequency [MHz]	E [dBμV/m]	E [μV/m]	U _{RX} [dBμV]	A _{TOT} [dB]	Polarisation	Result
4925.1	29.35	29.349	31.24	-1.89	VERTICAL	PASSED
7385.5	31.21	36.35	29.68	1.53	HORIZONTAL	PASSED

4. Test Equipment

4.1. Conducted measurements

Eq. No	Equipment	Type	Manufacturer	Used in
TM38112	Power supply	6632A	Agilent	22/24/27, 15C
TM38631	Signal Generator	83640L	Agilent	22/24/27, 15C, 15B
OM06312	Signal Generator	E4422B	Agilent	22/24
TM37678	Communication Tester	CMU200	R&S	22/24/27, 15C, 15B
TM37773	Communication Tester	CMU200	R&S	22/24/27, 15C, 15B
TM30600	Impulse limiter	ESH3-Z2	R&S	15C, 15B
TM26490	LISN 50 µH	ESH3-Z5	R&S	15C, 15B
TM26491	LISN 50 µH	ESH3-Z5	R&S	15C, 15B
TM37610	Spectrum Analyzer	FSU26	R&S	22/24/27, 15C
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
2058	Receiver	ESPC	R&S	15C, 15B
2001	Bluetooth tester	CBT	R&S	22/24/27, 15C, 15B
2002	Communication Tester	CMU200	R&S	22/24/27
2009	LISN 50 µH	ENV216	R&S	15C, 15B
2010	LISN 50 µH	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

4.2. Radiated measurements

Eq. No	Equipment	Type	Manufacturer	Used in
TM38114	Power supply	6632A	Agilent	22/24/27, 15C, 15B
TM38631	Signal Generator	83640L	Agilent	22/24/27, 15C, 15B
TM38323	Preamplifier	PA-02 18-26 GHz	EMC Automation	22/24/27, 15C, 15B
-	Antenna	BBHA 9120 D	Schwarzbeck	22/24/27, 15C
TM26497	Antenna	3115	Emco	22/24/27, 15C, 15B
TM37678	Communication Tester	CMU200	R&S	22/24/27, 15C, 15B
TM37773	Communication Tester	CMU200	R&S	22/24/27, 15C, 15B
TM38845	Receiver	ESIB 26	R&S	22/24/27, 15C, 15B
-	Antenna	HL562	R&S	22/24/27, 15C, 15B
-	Turntable	2188	EMCO	22/24/27, 15C, 15B
-	Turntable controller	2090	EMCO	22/24/27, 15C, 15B
-	RF system panel	TS-RSP	R&S	22/24/27, 15C, 15B
-	RF system panel	TS-RSP	R&S	22/24/27, 15C, 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 µH	LISN-5-20-2	FCC	22/24/27, 15C, 15B
TM30644	LISN 50 µH	LISN-5-20-2	FCC	22/24/27, 15C, 15B
-	Temperature and humidity logger	175-H2	Testo	22/24/27, 15C, 15B

Eq. No	Equipment	Type	Manufacturer	Used in
-	Air pressure and temperature logger	635-2	Testo	22/24/27, 15C, 15B
-	Air pressure sensor	0638-1835	Testo	22/24/27, 15C, 15B
TM39180	Laser distance meter	Disto Pro	Leica	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 chambre	UNKNOWN	TDK	22/24/27, 15C, 15B
TM22638	Power supply	OL63743-901	-	22/24/27, 15C, 15B
TM38066	High pass filter	4HC3000/18000-3-KK	Trilithic	22/24/27, 15C, 15B
-	High pass filter	WHKX 1.6/15G-12SS	Wainwright	22/24/27, 15C, 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
-	Band reject filter	WRCG832/838-825/848-40/5SS	Wainwright	22
TM23892	Controller	G-1000SDX	Yaesu	22/24/27
2001	Bluetooth tester	CBT	R&S	22/24/27, 15C, 15B
6023	Antenna	VUBA 9117	Schwarzbeck	22/24/27, 15C