

FCC Part 15C Compliance Test Report

Test Report no.:	Cph_FCC_0528_09.doc	Date of Report:	12-08-2005
Number of pages:	21	Customer's Contact person:	Jorma Hanni
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FCC listing no.:	99059		
IC recognition no.:	4820 and 4820-1		
Tested devices/ accessories:	BT/WLAN Browser SU-18 / Battery BP-5L		
FCC ID:	LJPSU-18	IC:	661E-SU18
Supplement reports:			
Testing has been carried out in accordance with:	CFR 47, FCC rules Part 15 Subpart C, ANSI C63.4 (2003) and IC standard RSS-210. 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:			

Allan F. Henriksen, Engineer

1. Summary for FCC Part 15C Compliance Test Report

Date of receipt	06 th July 2005
Testing completed	14 th July 2005
The customer's contact person	Jorma Hanni
Test Plan referred to	\\EMC\TESTPLAN\
Notes	None
Document name	\\satcc01nmp\tcc_salo\Projects\accessor\SU-18\results\emc\FCC\Cph_FCC_0528_09.doc

1.1. EUT and Accessory Information

The EUT is a Bluetooth and WLAN device. Bluetooth and WLAN are tested with maximum rated TX power.

Product	Type	SN	HW	MV	SW	DUT
Phone	SU-18	UQ0001134	1601	-	SU-18R_0.2005.27-2_TA_MRO	28606
Phone	SU-18	UQ0001600	1601	-	SU-18R_0.2005.27-2_TA_MRO	28972
Phone	SU-18	UQ0001071	1601	-	SU-18R_0.2005.27-2_TA_MRO	28975
Battery	BP-5L	0670390393213 M053110263578	-	-	-	28974
AC-Charger	AC-4E	39979151571211Q0891; 0675384	-	-	-	28973
MMC	64MB	MC12HO64DBOA-SA S VCA64MBZ 516	-	-	-	28979

1.2. Summary of Test Results

Bluetooth:

Section in CFR 47	Section in RSS-210	Name of the test	Result
15.247(b)(1)	6.2.2(o)(a3)	Peak output power	NP
15.247(c)	6.2.2 (o)(e1)	Band edge compliance of RF emissions	Passed
15.247(c)	6.2.2 (o)(e1)	Spurious RF conducted emissions	NP
15.247(c), 15.209	6.2.2 (o)(e1)	Spurious radiated emissions	Passed
15.207	6.6	AC powerline conducted emissions	NP
15.247(a)(1)	6.2.2(o)(a3)	20 dB bandwidth	NP
15.247(a)(1)	6.2.2(o)(a1)	Carrier frequency separation	NP
15.247(a)(1)(iii)	Amend I(ii)	Number of hopping frequencies	NP
15.247(a)(1)(iii)	Amend I(ii)	Time of occupancy	NP

WLAN:

Section in CFR 47	Section in RSS-210	Name of the test	Result
15.247(b)(1)	6.2.2(o)(b)	Peak output power	NP
15.247(c)	6.2.2(o)(e1)	Band edge compliance of RF emissions	Passed
15.247(c)	6.2.2(o)(e1)	Spurious RF conducted emissions	NP
15.247(c), 15.209	6.2.2(o)(e1)	Spurious radiated emissions	Passed
15.207	6.6	AC powerline conducted emissions	NP
15.247(a)(2)	Amend I(iv)	6 dB bandwidth	NP
15.247(e)	Amend I(iv)	Power spectral density	NP

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

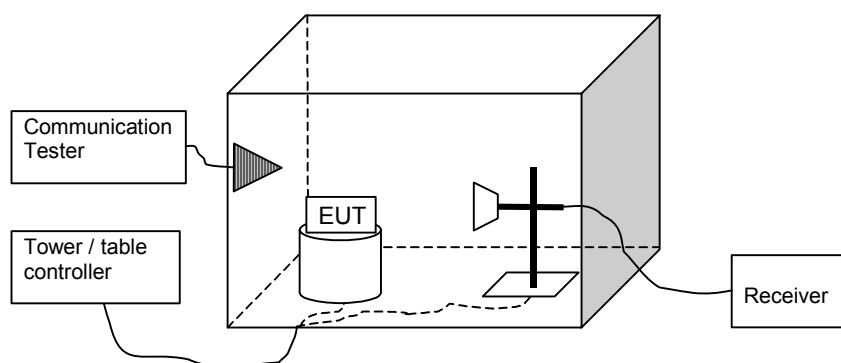
The test was not performed by the TCC Nokia Copenhagen Laboratory.

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2. Test setups

2.1. Spurious radiated emissions test setup



3. Band edge compliance of RF emissions (FCC §15.247(c), RSS-210 6.2.2(o)(e1))

EUT with DUT number	SU-18 Dut#28972
Accessories with DUT numbers	BP-5L Dut#28974 & MMC Dut# 28979, AC-4E Dut#28973
Operation Voltage [V] / [Hz]	230 / 50
Result	Passed
Remarks	None
Temp [°C] / Humidity [%RH] / Air Pressure [kPa]	22 / 50 / 1013
Date of measurements	7 th July 2005
Measured by	Christian Andersen

3.1. Test method and limit

The measurement is made according to FCC rules part 15.247 and IC standard RSS-210.

Limits for band edge compliance of RF emissions measurements (3 m measurement distance)

Frequency range [MHz]	Limit Average [dBμV/m]	Limit Peak [dBμV/m]
Below 2390 and above 2483.5	≤ 54	≤ 74

3.2. Bluetooth Test results

3.2.1 GFSK modulation, PRBS packet type

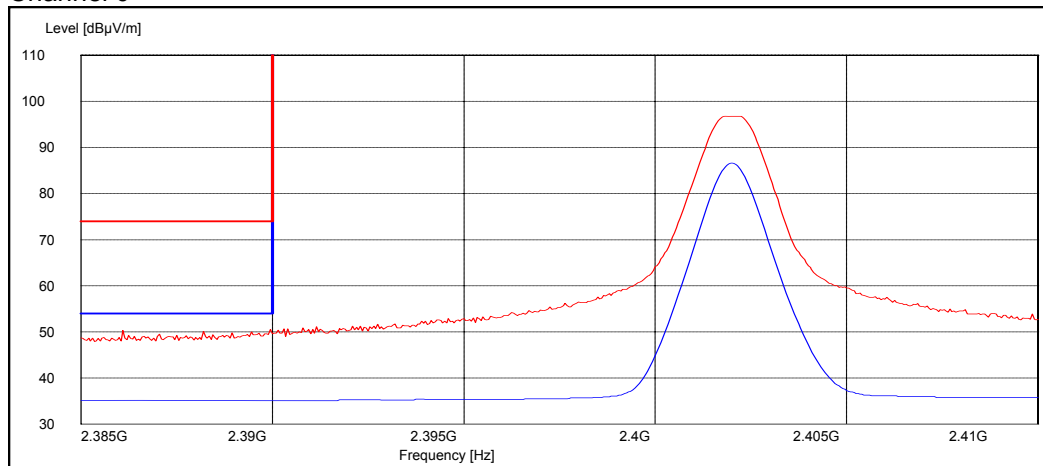
Average (RBW: 1 MHz)

Channel	E [dB μ V/m]	Result
0	35.10	Passed
78	36.81	Passed
Hopping on, low end	34.90	Passed
Hopping on, high end	36.05	Passed

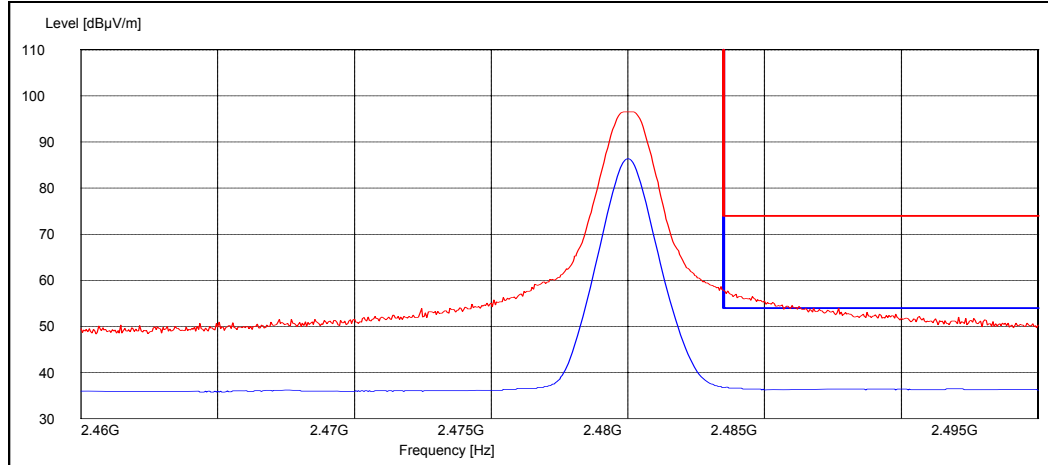
Peak (RBW: 1 MHz)

Channel	E [dB μ V/m]	Result
0	50.49	Passed
78	57.83	Passed
Hopping on, low end	49.20	Passed
Hopping on, high end	56.75	Passed

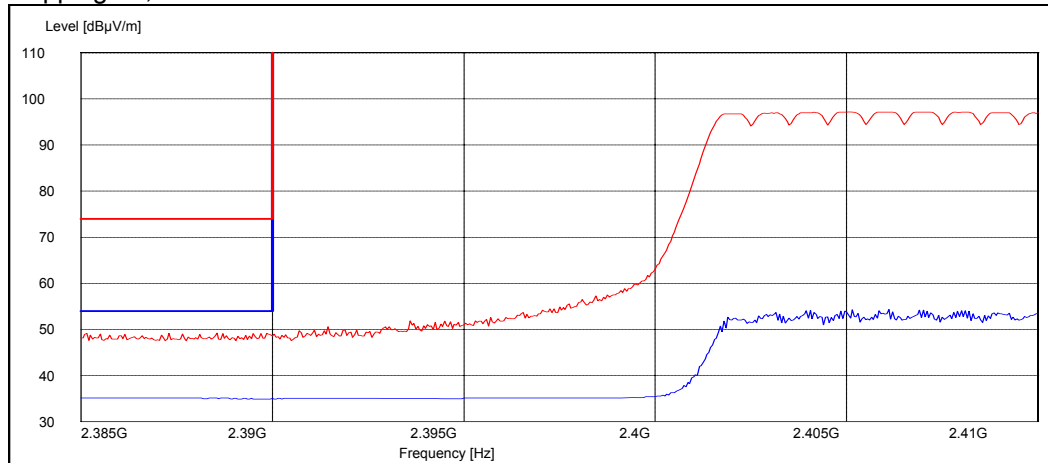
Channel 0



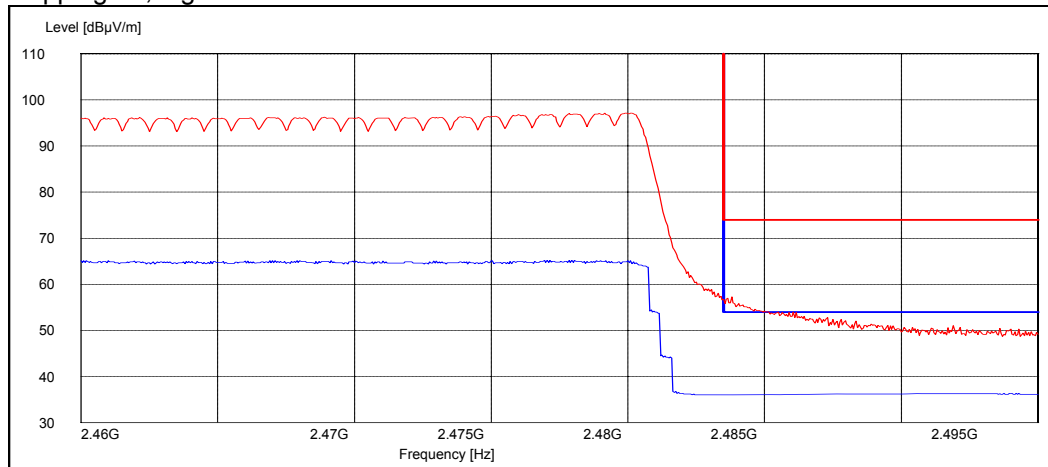
Channel 78



Hopping on, low end



Hopping on, high end



4. Spurious radiated emissions (FCC §15.247(c), §15.209, RSS-210 6.2.2(o)(e1))

EUT with DUT number	SU-18 Dut#28972
Accessories with DUT numbers	BP-5L Dut#28974 & MMC Dut# 28979, AC-4E Dut#28973
Operation Voltage [V] / [Hz]	230 / 50
Result	Passed
Remarks	None
Temp [°C] / Humidity [%RH] / Air Pressure [kPa]	22 / 50 / 1023
Date of measurements	7 July 2005
Measured by	Christian Andersen

4.1. Test method and limit

The measurement is made according to FCC rules part 15.247 and IC standard RSS-210 as follows:

The measurement is divided into the Preliminary Measurement and the Final Measurement.

The suspected frequencies are searched for in Preliminary Measurement with absorbers on the floor and measuring antenna at fixed height using 2-axis EUT position system.

The Final Measurement is performed in the Semi-Anechoic Chamber with conducting metal floor, if the Preliminary Measurement results are closer than 20 dB to the permissible value.

The EUT is placed at nonconductive plate at the turntable centre.

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 ($A_{TOT} = L_{CABLES} + AF - G_{PREAMP}$).

Limits for spurious radiated emissions measurements (3 m measurement distance)

Frequency range [MHz]	Limit [$\mu\text{V/m}$]	Limit [dB $\mu\text{V/m}$]	Detector
30 – 88	100	40	Quasi peak
88 – 216	150	43.5	Quasi peak
216 – 960	200	46	Quasi peak
960 – 1000	500	54	Quasi peak
Above 1000	500	54	Average
Above 1000	5000	74	Peak

4.2. Bluetooth Test results

4.2.1 GFSK modulation, PRBS packet type

Channel 0

Quasi peak (RBW: 120 kHz)

Frequency [MHz]	E [dB $\mu\text{V/m}$]	E [$\mu\text{V/m}$]	U _{RX} [dB μV]	A _{TOT} [dB]	Polarisation	Result
37.595391	24.10	16.03	39.70	-15.60	VERTICAL	Passed
73.867535	11.30	3.67	35.20	-23.90	HORIZONTAL	Passed

Peak (RBW: 1 MHz)

Frequency [MHz]	E [dB $\mu\text{V/m}$]	E [$\mu\text{V/m}$]	U _{RX} [dB μV]	A _{TOT} [dB]	Polarisation	Result
2441.883768	95.20	57543.99	87.20	8.00	VERTICAL	Passed
2809.125251	50.90	350.75	39.50	11.40	HORIZONTAL	Passed
2906.809619	52.10	402.72	40.00	12.10	VERTICAL	Passed
4943.893788	37.34	73.62	29.04	8.30	VERTICAL	Passed
7424.849699	39.44	93.76	26.54	12.90	VERTICAL	Passed
11825.153307	44.24	162.93	25.84	18.40	VERTICAL	Passed
12400.297595	44.54	168.66	25.14	19.40	HORIZONTAL	Passed
13267.031062	44.64	170.61	25.24	19.40	HORIZONTAL	Passed
17861.717435	54.74	545.76	26.44	28.30	VERTICAL	Passed

*2441.0 MHz frequency is coming from communication tester and thus ignored.

Peak (RBW: 1 MHz)

Frequency [MHz]	E [dB $\mu\text{V/m}$]	E [$\mu\text{V/m}$]	U _{RX} [dB μV]	A _{TOT} [dB]	Polarisation	Result
4804.000000	35.74	61.24	27.84	7.90	HORIZONTAL	Passed
7206.000000	39.64	95.94	27.14	12.50	VERTICAL	Passed

Average (RBW: 1 MHz)

Frequency [MHz]	E [dB $\mu\text{V/m}$]	E [$\mu\text{V/m}$]	U _{RX} [dB μV]	A _{TOT} [dB]	Polarisation	Result
4804.000000	23.04	14.19	15.14	7.90	HORIZONTAL	Passed
7206.000000	26.44	20.99	13.94	12.50	VERTICAL	Passed

Channel 40

Peak (RBW: 1 MHz)

Frequency [MHz]	E [dB μ V/m]	E [μ V/m]	U _{RX} [dB μ V]	A _{TOT} [dB]	Polarisation	Result
4882.000000	36.74	68.71	28.64	8.10	VERTICAL	Passed
7323.000000	39.04	89.54	26.64	12.40	HORIZONTAL	Passed

Average (RBW: 1 MHz)

Frequency [MHz]	E [dB μ V/m]	E [μ V/m]	U _{RX} [dB μ V]	A _{TOT} [dB]	Polarisation	Result
4882.000000	23.34	14.69	15.24	8.10	HORIZONTAL	Passed
7323.000000	26.24	20.51	13.84	12.40	HORIZONTAL	Passed

Channel 78

Peak (RBW: 1 MHz)

Frequency [MHz]	E [dB μ V/m]	E [μ V/m]	U _{RX} [dB μ V]	A _{TOT} [dB]	Polarisation	Result
4960.000000	37.54	75.34	29.24	8.30	HORIZONTAL	Passed
7440.000000	39.54	94.84	26.64	12.90	VERTICAL	Passed

Average (RBW: 1 MHz)

Frequency [MHz]	E [dB μ V/m]	E [μ V/m]	U _{RX} [dB μ V]	A _{TOT} [dB]	Polarisation	Result
4960.000000	24.34	16.48	16.04	8.30	HORIZONTAL	Passed
7440.000000	26.84	21.98	13.94	12.90	VERTICAL	Passed

5. Band edge compliance of RF emissions (FCC §15.247(c), RSS-210 6.2.2(o)(e1))

EUT with DUT number	SU-18 Dut#28975
Accessories with DUT numbers	BP-5L Dut#28974, AC-4E Dut#28973
Operation Voltage [V] / [Hz]	230 / 50
Result	Passed
Remarks	None
Temp [°C] / Humidity [%RH] / Air Pressure [kPa]	22 / 50 / 1023
Date of measurements	06 July 2005
Measured by	Christian Andersen

5.1. Test method and limit

The measurement is made according to FCC rules part 15.247 and IC standard RSS-210.

Limits for band edge compliance of RF emissions measurements (3 m measurement distance)

Frequency range [MHz]	Limit Average [dBμV/m]	Limit Peak [dBμV/m]
Below 2390 and above 2483.5	≤ 54	≤ 74

5.2. WLAN Test results

5.2.1 DSSS mode, BPSK modulation, 1 Mbps data rate

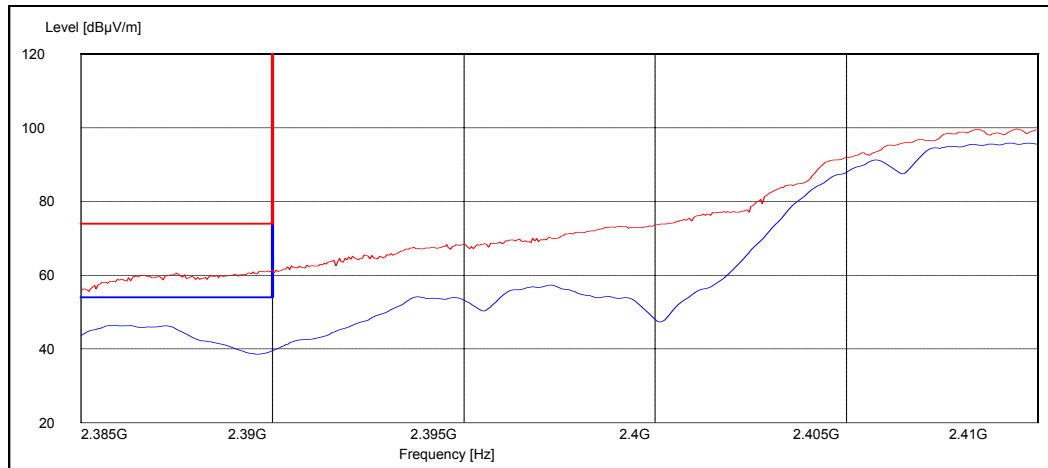
Average (RBW: 1 MHz)

Channel	E [dB μ V/m]	Result
1	46.28	Passed
11	45.78	Passed

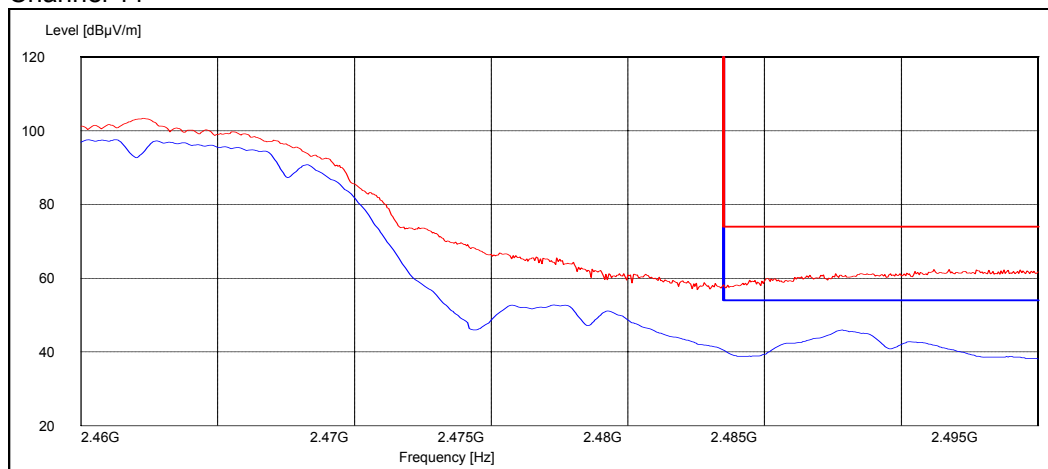
Peak (RBW: 1 MHz)

Channel	E [dB μ V/m]	Result
1	60.89	Passed
11	61.11	Passed

Channel 1



Channel 11



5.2.2 OFDM mode, BPSK modulation, 6 Mbps data rate

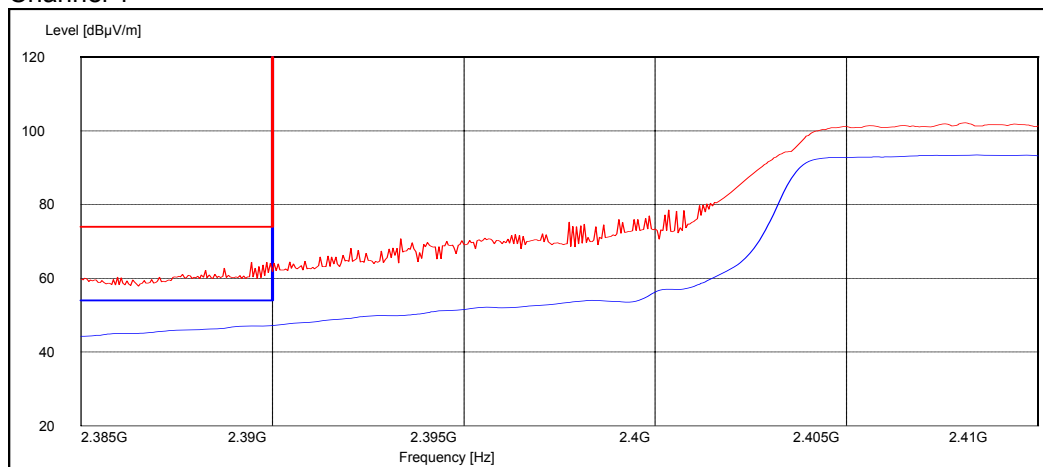
Average (RBW: 1 MHz)

Channel	E [dB μ V/m]	Result
1	47.05	Passed
11	45.85	Passed

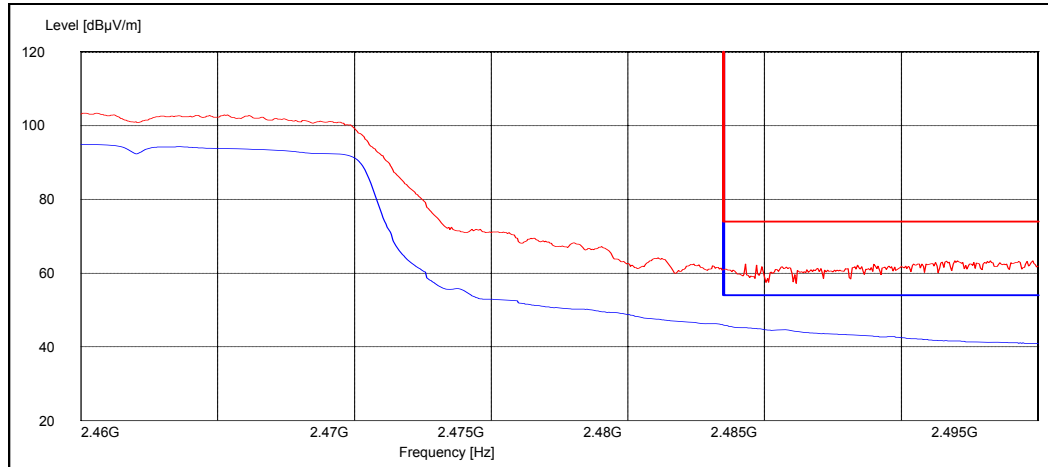
Peak (RBW: 1 MHz)

Channel	E [dB μ V/m]	Result
1	64.35	Passed
11	62.53	Passed

Channel 1



Channel 11



6. Spurious radiated emissions (FCC §15.247(c), §15.209, RSS-210 6.2.2(o)(e1))

EUT with DUT number	SU-18 DUT#28972
Accessories with DUT numbers	BP-5L Dut#28974 AC-4E Dut#28973
Operation Voltage [V] / [Hz]	230 / 50
Result	None
Remarks	Passed
Temp [°C] / Humidity [%RH] / Air Pressure [kPa]	22 / 50 / 1023
Date of measurements	11 th July 2005
Measured by	Christian Andersen

6.1. Test method and limit

The measurement is made according to FCC rules part 15.247 and IC standard RSS-210 as follows:

The measurement is divided into the Preliminary Measurement and the Final Measurement.

The suspected frequencies are searched for in Preliminary Measurement with absorbers on the floor and measuring antenna at fixed height using 2-axis EUT position system.

The Final Measurement is performed in the Semi-Anechoic Chamber with conducting metal floor, if the Preliminary Measurement results are closer than 20 dB to the permissible value.

The EUT is placed at nonconductive plate at the turntable centre.

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 ($A_{TOT} = L_{CABLES} + AF - G_{PREAMP}$).

Limits for spurious radiated emissions measurements (3 m measurement distance)

Frequency range [MHz]	Limit [$\mu\text{V/m}$]	Limit [dB $\mu\text{V/m}$]	Detector
30 – 88	100	40	Quasi peak
88 – 216	150	43.5	Quasi peak
216 – 960	200	46	Quasi peak
960 – 1000	500	54	Quasi peak
Above 1000	500	54	Average
Above 1000	5000	74	Peak

6.2. WLAN Test results

6.2.1 DSSS mode, BPSK modulation, 1 Mbps data rate

Channel 1

Peak (RBW: 1 MHz)

Frequency [MHz]	E [dB $\mu\text{V/m}$]	E [$\mu\text{V/m}$]	U _{RX} [dB μV]	A _{TOT} [dB]	Polarisation	Result
4824.000000	44.34	164.82	36.14	8.20	HORIZONTAL	Passed
7236.000000	46.04	200.45	33.44	12.60	VERTICAL	Passed

Average (RBW: 1 MHz)

Frequency [MHz]	E [dB $\mu\text{V/m}$]	E [$\mu\text{V/m}$]	U _{RX} [dB μV]	A _{TOT} [dB]	Polarisation	Result
4824.000000	37.24	72.78	29.04	8.20	HORIZONTAL	Passed
7236.000000	32.24	40.93	19.64	12.60	VERTICAL	Passed

Channel 7

Quasi peak (RBW: 120 kHz)

Frequency [MHz]	E [dB $\mu\text{V/m}$]	E [$\mu\text{V/m}$]	U _{RX} [dB μV]	A _{TOT} [dB]	Polarisation	Result
37.535872	24.90	17.58	40.40	-15.50	VERTICAL	Passed

Peak (RBW: 1 MHz)

Frequency [MHz]	E [dB $\mu\text{V/m}$]	E [$\mu\text{V/m}$]	U _{RX} [dB μV]	A _{TOT} [dB]	Polarisation	Result
2439.371743	103.60	151356.12	95.60	8.00	HORIZONTAL	Passed
2440.072144	103.60	151356.12	95.60	8.00	HORIZONTAL	Passed
2442.185371	104.40	165958.69	96.40	8.00	VERTICAL	Passed
2442.282565	104.90	175792.36	96.90	8.00	VERTICAL	Passed
2442.484970	104.60	169824.37	96.60	8.00	VERTICAL	Passed
2444.596192	101.90	124451.46	93.80	8.10	VERTICAL	Passed
2491.791583	60.50	1059.25	51.50	9.00	HORIZONTAL	Passed
2495.398798	58.10	803.53	49.10	9.00	HORIZONTAL	Passed
2907.809619	52.50	421.70	40.50	12.00	VERTICAL	Passed
4883.769539	46.84	219.79	38.64	8.20	HORIZONTAL	Passed
7325.655311	53.84	492.04	41.44	12.40	VERTICAL	Passed
7326.151303	53.44	469.89	41.04	12.40	VERTICAL	Passed
11226.446894	43.84	155.60	25.34	18.50	HORIZONTAL	Passed
12406.805611	44.64	170.61	25.34	19.30	VERTICAL	Passed
17868.235471	55.04	564.94	26.54	28.50	HORIZONTAL	Passed

*2441.0 MHz frequency is WLAN Carrier and thus ignored.

Average (RBW: 1 MHz)

Frequency [MHz]	E [dBμV/m]	E [μV/m]	U _{RX} [dBμV]	A _{TOT} [dB]	Polarisation	Result
2439.371743	99.30	92257.14	91.30	8.00	HORIZONTAL	Passed
2440.072144	99.30	92257.14	91.30	8.00	HORIZONTAL	Passed
2442.185371	94.60	53703.18	86.60	8.00	VERTICAL	Passed
2442.282565	94.90	55590.43	86.90	8.00	VERTICAL	Passed
2442.484970	97.40	74131.02	89.40	8.00	VERTICAL	Passed
2444.596192	96.80	69183.10	88.70	8.10	VERTICAL	Passed
2492.791583	39.70	96.61	30.70	9.00	HORIZONTAL	Passed
2495.398798	40.40	104.71	31.40	9.00	HORIZONTAL	Passed
2904.809619	39.20	91.20	27.00	12.20	VERTICAL	Passed
4883.769539	43.84	155.60	35.64	8.20	HORIZONTAL	Passed
7325.651303	45.34	184.93	32.94	12.40	VERTICAL	Passed
7325.655311	45.24	182.81	32.84	12.40	VERTICAL	Passed
11825.143287	31.04	35.65	12.64	18.40	HORIZONTAL	Passed
12405.805611	31.64	38.19	12.34	19.30	VERTICAL	Passed
17866.735471	41.64	120.78	13.14	28.50	HORIZONTAL	Passed

*2441.0 MHz frequency is WLAN Carrier and thus ignored.

Channel 11

Peak (RBW: 1 MHz)

Frequency [MHz]	E [dBμV/m]	E [μV/m]	U _{RX} [dBμV]	A _{TOT} [dB]	Polarisation	Result
4924.000000	47.04	224.91	38.64	8.40	HORIZONTAL	Passed
7386.000000	47.34	232.81	34.74	12.60	VERTICAL	Passed

Average (RBW: 1 MHz)

Frequency [MHz]	E [dBμV/m]	E [μV/m]	U _{RX} [dBμV]	A _{TOT} [dB]	Polarisation	Result
4924.000000	44.34	164.82	35.94	8.40	HORIZONTAL	Passed
7386.000000	35.94	62.66	23.34	12.60	VERTICAL	Passed

6.2.2 OFDM mode, BPSK modulation, 6 Mbps data rate

Channel 1

Peak (RBW: 1 MHz)

Frequency [MHz]	E [dBμV/m]	E [μV/m]	U _{RX} [dBμV]	A _{TOT} [dB]	Polarisation	Result
4824.000000	39.44	93.76	31.24	8.20	HORIZONTAL	Passed
7236.000000	46.44	209.89	33.84	12.60	VERTICAL	Passed

Average (RBW: 1 MHz)

Frequency [MHz]	E [dBμV/m]	E [μV/m]	U _{RX} [dBμV]	A _{TOT} [dB]	Polarisation	Result
4824.000000	25.84	19.59	17.64	8.20	HORIZONTAL	Passed
7236.000000	34.34	52.12	21.74	12.60	VERTICAL	Passed

Channel 7

Quasi peak (RBW: 120 kHz)

Frequency [MHz]	E [dBμV/m]	E [μV/m]	U _{RX} [dBμV]	A _{TOT} [dB]	Polarisation	Result
37.576353	24.50	16.79	40.10	-15.60	VERTICAL	Passed

Peak (RBW: 1 MHz)

Frequency [MHz]	E [dBμV/m]	E [μV/m]	U _{RX} [dBμV]	A _{TOT} [dB]	Polarisation	Result
2438.074148	106.90	221309.47	98.80	8.10	HORIZONTAL	Passed
2438.776553	106.50	211348.90	98.50	8.00	HORIZONTAL	Passed
2445.387776	105.50	188364.91	97.40	8.10	VERTICAL	Passed
2446.094188	104.90	175792.36	96.80	8.10	VERTICAL	Passed
2490.188377	61.90	1244.51	52.90	9.00	HORIZONTAL	Passed
2495.597194	60.70	1083.93	51.70	9.00	HORIZONTAL	Passed
2809.111222	52.30	412.10	40.90	11.40	VERTICAL	Passed
2906.309619	52.80	436.52	40.70	12.10	VERTICAL	Passed
4882.769539	36.24	64.86	28.14	8.10	HORIZONTAL	Passed
7325.651303	39.44	93.76	27.04	12.40	VERTICAL	Passed
7332.657315	40.44	105.20	27.94	12.50	VERTICAL	Passed
7344.697395	39.84	98.17	27.14	12.70	VERTICAL	Passed
12400.803607	44.44	166.72	25.04	19.40	VERTICAL	Passed
17866.235471	54.34	521.19	25.84	28.50	HORIZONTAL	Passed

*2441.0 MHz frequency is WLAN Carrier and thus ignored.

Average (RBW: 1 MHz)

Frequency [MHz]	E [dBμV/m]	E [μV/m]	U _{RX} [dBμV]	A _{TOT} [dB]	Polarisation	Result
2438.074148	97.70	76736.15	89.60	8.10	HORIZONTAL	Passed
2438.776553	97.60	75857.76	89.60	8.00	HORIZONTAL	Passed
2445.387776	95.90	62373.48	87.80	8.10	VERTICAL	Passed
2446.094188	95.80	61659.50	87.70	8.10	VERTICAL	Passed
2493.188377	44.00	158.49	35.00	9.00	HORIZONTAL	Passed
2495.097194	43.30	146.22	34.30	9.00	HORIZONTAL	Passed
2801.611222	38.50	84.14	26.90	11.60	VERTICAL	Passed
2904.809619	39.30	92.26	27.10	12.20	VERTICAL	Passed
4885.769539	23.44	14.86	15.24	8.20	HORIZONTAL	Passed
7325.151303	26.34	20.75	13.94	12.40	VERTICAL	Passed
7329.157315	26.44	20.99	14.04	12.40	VERTICAL	Passed
7349.197395	26.74	21.73	14.04	12.70	VERTICAL	Passed
12403.303607	31.74	38.64	12.44	19.30	VERTICAL	Passed
17871.235471	41.74	122.18	13.14	28.60	HORIZONTAL	Passed

*2441.0 MHz frequency is WLAN Carrier and thus ignored.

Channel 11

Peak (RBW: 1 MHz)

Frequency [MHz]	E [dB μ V/m]	E [μ V/m]	U _{RX} [dB μ V]	A _{TOT} [dB]	Polarisation	Result
4924.000000	41.54	119.40	33.14	8.40	HORIZONTAL	Passed
7386.000000	50.84	348.34	38.24	12.60	VERTICAL	Passed

Average (RBW: 1 MHz)

Frequency [MHz]	E [dB μ V/m]	E [μ V/m]	U _{RX} [dB μ V]	A _{TOT} [dB]	Polarisation	Result
4924.000000	30.44	33.27	22.04	8.40	HORIZONTAL	Passed
7386.000000	38.34	82.60	25.74	12.60	VERTICAL	Passed

7. Test Equipment

7.1. Conducted measurements

Eq. No	Equipment	Type	Manufacturer	Used in
13037	Power Supply 0-15V 10A	EA3012	LP Instruments	15B,15C
13513	Pulse Limiter 9KHz-30MHz	ESH3Z2	Rohde&Schwarz	15B,15C
13666	EMI Test Receiver 9KHz-2,5GHz	ESPC	Rohde&Schwarz	15B,15C
13935	Two Lines Artificial Mains Network	ESH3-Z5	Rohde&Schwarz	15B,15C
16995	Directional Coupler 20dB 0,5-2,0 GHz SMA Conn.	1538RA-20	Weinschel	15B,15C
18772	Shielded Chamber	RFD-100	ETS-Lindgren	15B,15C
19171	Universal Radio Communication Tester	CMU200	Rohde&Schwarz	15B,15C
11386	System DC Power Supply	HP6632A	Hewlett Packard	22.24
11487	Network analyzer 300KHz-3,0GHz	HP8753A	Hewlett Packard	22.24
11584	Spectrum analyzer 50Hz-6,5GHz	HP8561B	Hewlett Packard	22.24
13134	Tracking generator	HP85645A	Hewlett Packard	22.24
13302	Spectrum Analyzer 9KHz-12.8GHz	HP8596E	Hewlett Packard	22.24
13371	Temperature Chamber	S-1,2C	Thermotron	22.24
13524	Digital Radiocomm. Tester	CMD55	Rohde&Schwarz	22.24
14807	S - Parameter Test Set 300KHz-6GHz	HP85047A	Hewlett Packard	22.24
15859	Digital Radio Communication Test Set	4201S	Wavetek	22.24
17277	Multimeter Digital 6 1/2 Digit	AT34401A	Agilent Technologies	22.24
17796	Radio Communication Test Set	4400M	Wavetek	22.24
19374	Resonant Dipole Antenna 850MHz SMA m Conn.	-	NMP Cph	22.24
19375	Resonant Dipole Antenna 1900MHz SMA m Conn.	-	NMP Cph	22.24
13037	Power Supply 0-15V 10A	EA3012	LP Instruments	15B,15C

7.2. Radiated measurements

Eq. No	Equipment	Type	Manufacturer	Used in
14020	Programmable Relay Switching System	-	Pickering	15B,15C,22,24
18792	Multi Device Controller	2090	ETS-EMCO	15B,15C,22,24
13829	Turntable Controller	4630-100	Comtest	15B,15C,22,24
14963	RF Preamplifier 100MHz-4GHz (Metal Chassis)	AFS3-00100400	Miteq/NMP Cph	15B,15C,22,24
13668	BiLog Antenna 30-2000MHz	BiLog-CBL6112A	Chase	15B,15C,22,24
18861	EMI Test Receiver 20Hz-26,5GHz	ESI	Rohde&Schwarz	15B,15C,22,24

Eq. No	Equipment	Type	Manufacturer	Used in
12679	Dual Log Periodic Antenna 1-18 GHz	HL025	Rohde&Schwarz	15B,15C,22,24
18860	Ultra Broadband Antenna Ultralog 30-3000MHz	HL562	Rohde&Schwarz	15B,15C,22,24
18773	Shielded Chamber	RFD-100	ETS-Lindgren	15B,15C,22,24
18774	Shielded Chamber	RFSD-F/A-100	ETS-Lindgren	15B,15C,22,24
18324	High Pass Filter 3GHz SMA f Conn	WHJS3000-10SS	Wainwright	15B,15C,22,24
14114	Highpass Filter 1000MHz-4500MHz	WHK1000-12SS	Wainwright	15B,15C,22,24
13918	Highpass Filter 2000-4000MHz 50OHM SMA Conn	WHKS2000-10SS	Wainwright Instruments	15B,15C,22,24
13937	Ultra Stable Notch Filter 902,4MHz	WRCA902.4-0.2/40-6SS	Wainwright Instruments	15B,15C,22,24
13936	Ultra Stable Notch Filter 1747,5MHz	WRCD1747.5-0.2/40-10SS	Wainwright Instruments	15B,15C,22,24
13917	Highpass Filter 1000-3000MHz 50OHM SMA Conn	WHKS1000-10SS	Wainwright Instruments	15B,15C,22,24
14188	Ultra Stable Notch Filter 902,4MHz	WRCA902.4-0.2/40-6SS	Wainwright	15B,15C,22,24
14187	Ultra Stable Notch Filter 1747,5MHz	WRCD1747.5-0.2/40-10SS	Wainwright	15B,15C,22,24
16633	Ultra Stable Notch Filter 1880,0MHz	WRCD1880.0-0.2/40-10SS	Wainwright	15B,15C,22,24
18323	Band reject filter 1947-1953MHz 40dB	WRCG1947/1953-1940/1960-40/6SS	Wainwright	15B,15C,22,24
15190	Infra Red Remote Control Unit	4630	Emco	22,24,15B,15C
14993	EMI Test Receiver 9KHz-2750MHz	ESCS30	Rohde&Schwarz	22,24,15B,15C
15191	Turntable Contoller Unit	G-800SDX	YAESU	22,24,15B,15C
14900	Antenna Controller	HD100	HD GmbH	22,24,15B,15C