

FCC Part 15B Compliance Test Report

Test Report no.:	Cph_FCC_0647_03.doc	Date of Report:	29-11-2006
Number of pages:	19	Customer's Contact person:	Janne Ilkka
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FCC listing no.:	99059		
IC recognition no.:	4820 and 4820-1		
Tested devices/ accessories:	Phone; RM-159 (HW: 5500), Battery; BL-5F, AC-Charger; AC-5E, Data Cable; DKE-2		
FCC ID:	PDNRM-159	IC:	661R-RM159
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 and IC standards RSS-132, RSS-133 and 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:			

Niels Christian Andersen, Engineer

1. Summary for FCC Part 15B Compliance Test Report

Date of receipt	16-11-2006
Testing completed	29-11-2006
The customer's contact person	Janne Ilkka
Test Plan referred to	\\EMC\\TESTPLAN\\
Notes	None
Document name	T:\\Projects\\RM-159\\EMC\\Results\\FCC\\Cph_FCC_0647_03.doc

1.1. EUT and Accessory Information

The EUT is a 5-band (GSM850/900/1800/1900 and WCDMA Band I) mobile phone with GPRS, EGPRS, Bluetooth and WLAN. GSM bands are tested in idle mode. Bluetooth and WLAN are tested with maximum rated TX power.

Product	Type	SN	HW	MV	SW	DUT
Phone	RM-159	004400/82/168644/9	5500	-	1.43.050	27783
Phone	RM-159	004400/82/168643/1	5500	-	1.43.050	29107
Battery	BL-5F	3635636384310500830;0670498	PWB Ver. 6.0	-	-	27794
Battery	BL-5F	3635636384310500865;0670498	ver.6.0	-	-	29105
AC-Charger	AC-5E	3943496433040500009;0675540	1.9	1.9	-	27792
AC Charger	AC-5E	3943496433040500016;0675540	1.9	1.9	-	29104
Data Cable	DKE-2	108882631150	-	-	-	27784
Data Cable	DKE-2	108882631150	-	-	-	27784

1.2. Summary of Test Results

GSM 850:

Section in CFR 47	Section in ICES-003 (RSS-132)	Name of the test	Result
15.107, a	5.3	AC powerline conducted emissions	Passed
15.109, a	5.5 (6.6)	Radiated emissions	Passed

GSM 1900:

Section in CFR 47	Section in ICES-003 (RSS-133)	Name of the test	Result
15.107, a	5.3	AC powerline conducted emissions	Passed
15.109, a	5.5 (9)	Radiated emissions	Passed

Bluetooth:

Section in CFR 47	Section in ICES-003	Name of the test	Result
15.107, a	5.3	AC powerline conducted emissions	Passed
15.109, a	5.5	Radiated emissions	Passed

WLAN:

Section in CFR 47	Section in ICES-003	Name of the test	Result
15.107, a	5.3	AC powerline conducted emissions	Passed
15.109, a	5.5	Radiated emissions	Passed

PASSED

The EUT complies with the essential requirements in the standard.

FAILED
NP

The EUT does not comply with the essential requirements in the standard.
The test was not performed by the TCC Nokia Copenhagen Laboratory.

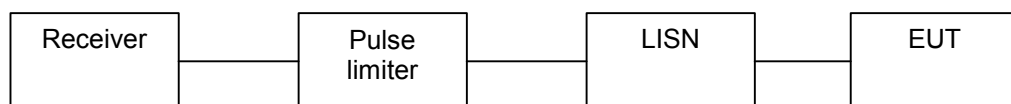
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2. AC powerline conducted emissions (FCC §15.107, ICES-003 section 5.3)

EUT with DUT number	RM-159 Dut # 27783
Accessories with DUT numbers	BL-5F Dut # 27794 + AC-5E Dut # 27792 + DKE-2 Dut # 27784
Operation Voltage [V] / [Hz]	230 / 50
Result	Passed
Remarks	Continuous data transfer was active between the phone and the computer during the test.
Temp [°C] / Humidity [%RH] / Air Pressure [mBar]	22.3 / 39.0 999.5
Date of measurements	22-11-2006
Measured by	Allan F. Henriksen

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:

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

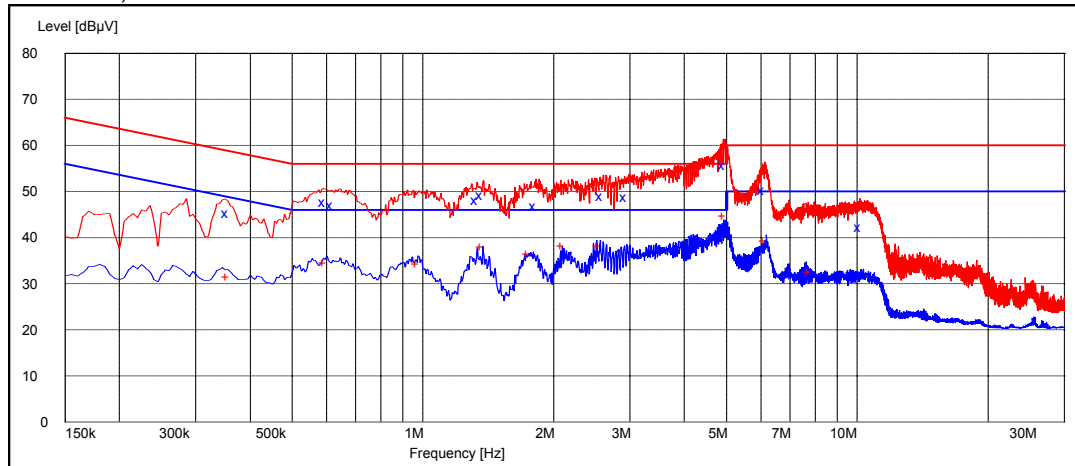
Where U_{RX} is receiver reading and A_{TOT} is total correction factor including cable and pulse limiter attenuations.

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 850 Test results

RX mode, channel 190 / 881.6 MHz



Quasi peak (RBW: 9 kHz)

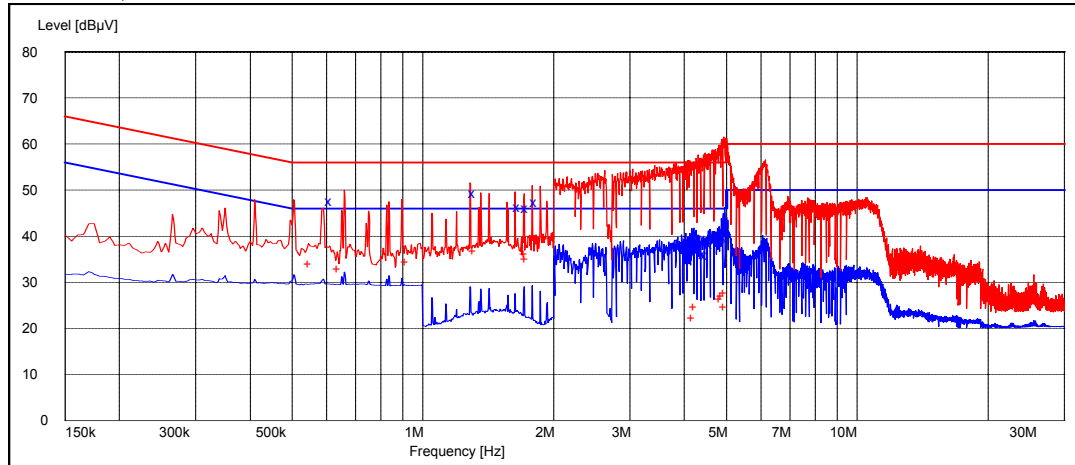
Frequency [MHz]	U [dBμV]	Line	Result
0.355000	45.20	N	Passed
0.595000	47.70	N	Passed
0.620000	47.10	N	Passed
1.330000	48.20	N	Passed
1.370000	49.20	N	Passed
1.815000	46.90	N	Passed
2.585000	48.90	N	Passed
2.935000	48.70	N	Passed
4.950000	55.70	N	Passed
6.095000	50.20	N	Passed
10.175000	42.30	N	Passed

Average (RBW: 9 kHz)

Frequency [MHz]	U [dBμV]	Line	Result
0.355000	31.40	N	Passed
0.595000	34.50	N	Passed
0.970000	34.20	N	Passed
1.370000	37.90	N	Passed
1.750000	36.50	N	Passed
2.100000	38.10	N	Passed
2.540000	38.10	N	Passed
4.945000	44.70	N	Passed
6.135000	39.30	N	Passed
7.785000	32.40	N	Passed

2.4. GSM 1900 Test results

RX mode, channel 661 / 1960.0 MHz



Quasi peak (RBW: 9 kHz)

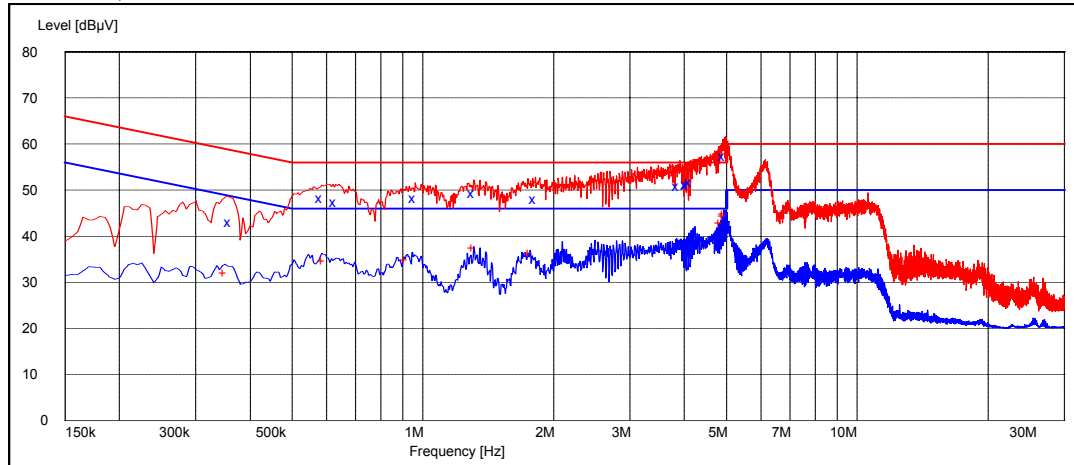
Frequency [MHz]	U [dBμV]	Line	Result
0.615000	47.60	N	Passed
1.315000	49.30	N	Passed
1.670000	46.40	N	Passed
1.740000	46.00	N	Passed
1.825000	47.50	N	Passed
4.465000	36.10	N	Passed
4.510000	35.90	N	Passed
4.615000	38.20	L1	Passed
4.915000	39.40	L1	Passed
4.945000	39.60	L1	Passed
4.985000	39.70	L1	Passed

Average (RBW: 9 kHz)

Frequency [MHz]	U [dBμV]	Line	Result
0.550000	33.90	N	Passed
0.640000	32.80	N	Passed
0.920000	34.30	N	Passed
1.315000	36.80	N	Passed
1.730000	36.00	N	Passed
1.735000	35.00	N	Passed
4.190000	22.20	L1	Passed
4.240000	24.70	N	Passed
4.870000	26.40	N	Passed
4.910000	26.90	N	Passed
4.975000	27.60	N	Passed
4.980000	24.50	L1	Passed

2.5. Bluetooth Test results

TX mode, channel 40 / 2442 MHz



Quasi peak (RBW: 9 kHz)

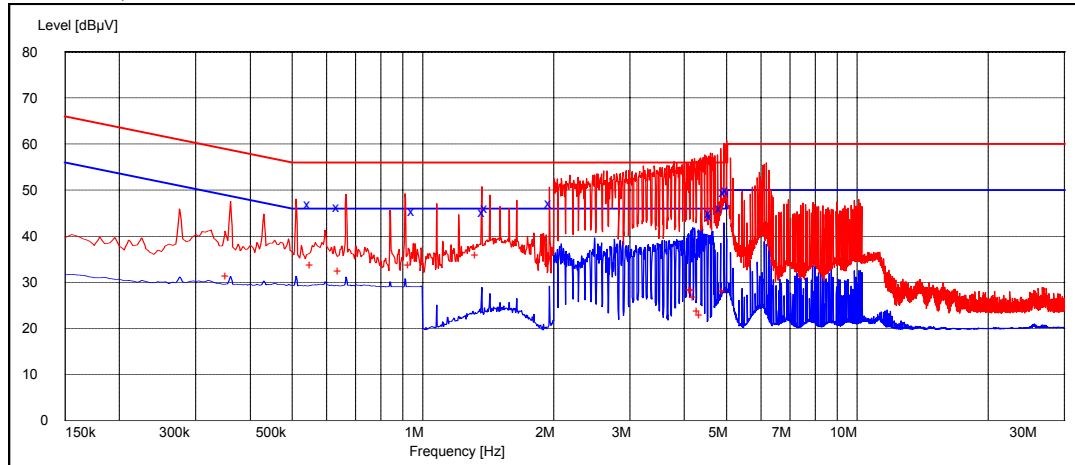
Frequency [MHz]	U [dBμV]	Line	Result
0.360000	43.00	L1	Passed
0.585000	48.20	N	Passed
0.630000	47.40	N	Passed
0.960000	48.20	N	Passed
1.310000	49.40	N	Passed
1.815000	48.00	N	Passed
3.875000	50.80	N	Passed
4.060000	51.30	N	Passed
4.070000	51.10	N	Passed
4.150000	51.70	N	Passed
4.950000	57.40	N	Passed

Average (RBW: 9 kHz)

Frequency [MHz]	U [dBμV]	Line	Result
0.350000	31.90	N	Passed
0.590000	34.70	N	Passed
0.915000	34.90	N	Passed
1.310000	37.50	N	Passed
1.765000	36.40	N	Passed
4.855000	42.70	N	Passed
4.940000	44.30	N	Passed
4.945000	44.70	N	Passed

2.6. WLAN Test results

RX mode, channel 7 / 2442 MHz



Quasi peak (RBW: 9 kHz)

Frequency [MHz]	U [dBμV]	Line	Result
0.550000	46.90	N	Passed
0.640000	46.40	N	Passed
0.955000	45.50	N	Passed
1.385000	45.10	N	Passed
1.405000	46.10	N	Passed
1.975000	47.10	N	Passed
4.440000	40.80	L1	Passed
4.605000	44.90	N	Passed
4.620000	44.30	N	Passed
4.875000	46.00	N	Passed
4.970000	49.60	N	Passed
5.030000	50.00	N	Passed

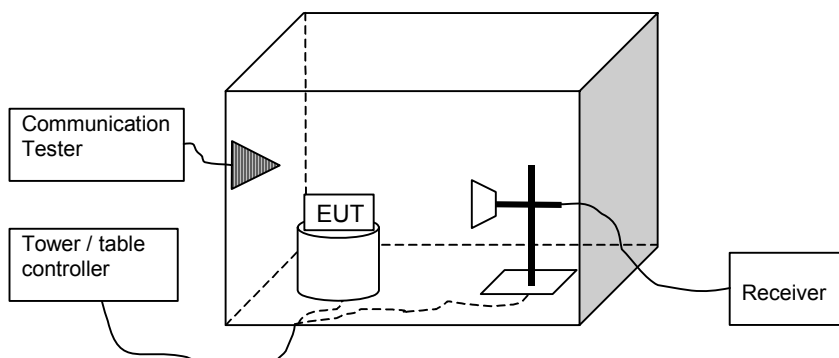
Average (RBW: 9 kHz)

Frequency [MHz]	U [dBμV]	Line	Result
0.355000	31.40	N	Passed
0.555000	33.80	N	Passed
0.645000	32.40	N	Passed
0.935000	33.80	N	Passed
1.335000	35.90	N	Passed
1.980000	34.70	N	Passed
4.160000	28.20	N	Passed
4.200000	28.30	N	Passed
4.235000	26.80	N	Passed
4.330000	23.80	N	Passed
4.375000	22.90	N	Passed
4.955000	28.10	N	Passed

3. Radiated emissions (FCC §15.109, ICES-003 section 5.5, RSS-132 6.6, RSS-133 9)

EUT with DUT number	RM-159 Dut#29107
Accessories with DUT numbers	BL-5F Dut#29105, AC-5E Dut#29104, DKE-2 Dut#27784
Operation Voltage [V] / [Hz]	230 / 50
Result	Passed
Remarks	Continuous data transfer was active between the phone and the computer during the test.
Temp [°C] / Humidity [%RH] / Air Pressure [mBar]	23 / 43 / 1020
Date of measurements	28-11-2006
Measured by	Christian Andersen

3.1. 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:

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

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

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. GSM 850 Test results

RX mode, channel 128 / 869.2 MHz

Peak (RBW: 1 MHz)

Frequency [MHz]	E [dBμV/m]	E [μV/m]	U _{RX} [dBμV]	A _{TOT} [dB]	Polarisation	Result
3476.800000	39.50	94.41	43.90	-4.40	VERTICAL	Passed
6953.600000	42.80	138.04	40.00	2.80	HORIZONTAL	Passed

Average (RBW: 1 MHz)

Frequency [MHz]	E [dBμV/m]	E [μV/m]	U _{RX} [dBμV]	A _{TOT} [dB]	Polarisation	Result
3476.800000	26.10	20.18	30.50	-4.40	HORIZONTAL	Passed
6953.600000	29.30	29.17	26.50	2.80	VERTICAL	Passed

RX mode, channel 190 / 881.6 MHz

Quasi peak (RBW: 120 kHz)

Frequency [MHz]	E [dBμV/m]	E [μV/m]	U _{RX} [dBμV]	A _{TOT} [dB]	Polarisation	Result
40.700200	26.30	20.65	46.10	-19.80	VERTICAL	Passed
63.588778	24.90	17.58	55.10	-30.20	VERTICAL	Passed
122.747094	18.70	8.61	43.80	-25.10	VERTICAL	Passed
805.309218	15.60	6.03	28.60	-13.00	HORIZONTAL	Passed
844.589379	16.70	6.84	29.40	-12.70	HORIZONTAL	Passed
881.663527	60.30	1035.14	72.40	-12.10	VERTICAL	Passed

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

Peak (RBW: 1 MHz)

Frequency [MHz]	E [dBμV/m]	E [μV/m]	U _{RX} [dBμV]	A _{TOT} [dB]	Polarisation	Result
3526.052104	38.20	81.28	42.60	-4.40	HORIZONTAL	Passed
7842.181363	43.30	146.22	37.20	6.10	VERTICAL	Passed

Average (RBW: 1 MHz)

Frequency [MHz]	E [dBμV/m]	E [μV/m]	U _{RX} [dBμV]	A _{TOT} [dB]	Polarisation	Result
1593.178357	28.60	26.92	33.30	-4.70	VERTICAL	Passed
2295.089178	37.20	72.44	38.10	-0.90	VERTICAL	Passed
2920.841683	34.80	54.95	31.00	3.80	VERTICAL	Passed
3526.552104	25.40	18.62	29.80	-4.40	HORIZONTAL	Passed
7843.681363	29.60	30.20	23.50	6.10	VERTICAL	Passed

RX mode, channel 251 / 893.8 MHz

Peak (RBW: 1 MHz)

Frequency [MHz]	E [dBμV/m]	E [μV/m]	U _{RX} [dBμV]	A _{TOT} [dB]	Polarisation	Result
3575.200000	40.10	101.16	44.00	-3.90	HORIZONTAL	Passed
7150.400000	40.10	101.16	36.10	4.00	VERTICAL	Passed

Average (RBW: 1 MHz)

Frequency [MHz]	E [dBμV/m]	E [μV/m]	U _{RX} [dBμV]	A _{TOT} [dB]	Polarisation	Result
3575.200000	26.00	19.95	29.90	-3.90	HORIZONTAL	Passed
7150.400000	27.40	23.44	23.40	4.00	VERTICAL	Passed

3.4. GSM 1900 Test results

RX mode, channel 512 / 1930.2 MHz

Peak (RBW: 1 MHz)

Frequency [MHz]	E [dBμV/m]	E [μV/m]	U _{RX} [dBμV]	A _{TOT} [dB]	Polarisation	Result
3860.000000	39.60	95.50	42.30	-2.70	HORIZONTAL	Passed
7720.000000	41.10	113.50	35.90	5.20	HORIZONTAL	Passed

Average (RBW: 1 MHz)

Frequency [MHz]	E [dBμV/m]	E [μV/m]	U _{RX} [dBμV]	A _{TOT} [dB]	Polarisation	Result
3860.000000	26.10	20.18	28.80	-2.70	VERTICAL	Passed
7720.000000	28.10	25.41	22.90	5.20	VERTICAL	Passed

RX mode, channel 661 / 1960.0 MHz

Quasi peak (RBW: 120 kHz)

Frequency [MHz]	E [dBμV/m]	E [μV/m]	U _{RX} [dBμV]	A _{TOT} [dB]	Polarisation	Result
36.233467	27.70	24.27	44.50	-16.80	VERTICAL	Passed
39.478758	24.50	16.79	43.50	-19.00	VERTICAL	Passed
46.612224	19.30	9.23	43.10	-23.80	VERTICAL	Passed
55.210020	16.90	7.00	46.80	-29.90	VERTICAL	Passed
797.795190	24.90	17.58	38.10	-13.20	HORIZONTAL	Passed

Peak (RBW: 1 MHz)

Frequency [MHz]	E [dBμV/m]	E [μV/m]	U _{RX} [dBμV]	A _{TOT} [dB]	Polarisation	Result
1959.919840	63.60	1513.56	66.70	-3.10	VERTICAL	Passed
7839.683367	42.50	133.35	36.50	6.00	VERTICAL	Passed

*1960.0 MHz frequency is coming from communication tester and thus ignored.

Average (RBW: 1 MHz)

Frequency [MHz]	E [dBμV/m]	E [μV/m]	U _{RX} [dBμV]	A _{TOT} [dB]	Polarisation	Result
1592.678357	28.80	27.54	33.50	-4.70	VERTICAL	Passed
1959.919840	62.60	1348.96	65.70	-3.10	VERTICAL	Passed
2295.089178	37.60	75.86	38.50	-0.90	VERTICAL	Passed
2921.343687	34.80	54.95	31.00	3.80	VERTICAL	Passed
7839.687375	29.70	30.55	23.70	6.00	VERTICAL	Passed
7842.183367	29.80	30.90	23.70	6.10	VERTICAL	Passed

*1960.0 MHz frequency is coming from communication tester and thus ignored.

RX mode, channel 810 / 1989.8 MHz

Peak (RBW: 1 MHz)

Frequency [MHz]	E [dBμV/m]	E [μV/m]	U _{RX} [dBμV]	A _{TOT} [dB]	Polarisation	Result
3980.000000	39.10	90.16	41.90	-2.80	VERTICAL	Passed
7960.000000	40.80	109.65	35.50	5.30	HORIZONTAL	Passed

Average (RBW: 1 MHz)

Frequency [MHz]	E [dBμV/m]	E [μV/m]	U _{RX} [dBμV]	A _{TOT} [dB]	Polarisation	Result
3980.000000	26.00	19.95	28.80	-2.80	VERTICAL	Passed
7960.000000	28.30	26.00	23.00	5.30	VERTICAL	Passed

3.5. GSM 1900 Test results with GPS active

RX mode, channel 512 / 1930.2 MHz

Peak (RBW: 1 MHz)

Frequency [MHz]	E [dBμV/m]	E [μV/m]	U _{RX} [dBμV]	A _{TOT} [dB]	Polarisation	Result
3860.000000	38.70	86.10	41.40	-2.70	HORIZONTAL	Passed
7720.000000	41.00	112.20	35.80	5.20	VERTICAL	Passed

Average (RBW: 1 MHz)

Frequency [MHz]	E [dBμV/m]	E [μV/m]	U _{RX} [dBμV]	A _{TOT} [dB]	Polarisation	Result
3860.000000	26.10	20.18	28.80	-2.70	HORIZONTAL	Passed
7720.000000	28.00	25.12	22.80	5.20	VERTICAL	Passed

RX mode, channel 661 / 1960.0 MHz

Quasi peak (RBW: 120 kHz)

Frequency [MHz]	E [dBμV/m]	E [μV/m]	U _{RX} [dBμV]	A _{TOT} [dB]	Polarisation	Result
30.600000	25.90	19.72	39.20	-13.30	VERTICAL	Passed
39.438277	25.30	18.41	44.30	-19.00	VERTICAL	Passed

Peak (RBW: 1 MHz)

Frequency [MHz]	E [dBμV/m]	E [μV/m]	U _{RX} [dBμV]	A _{TOT} [dB]	Polarisation	Result
1959.919840	65.60	1905.46	68.70	-3.10	VERTICAL	Passed
7838.177355	42.70	136.46	36.70	6.00	VERTICAL	Passed

*1960.0 MHz frequency is coming from communication tester and thus ignored.

Average (RBW: 1 MHz)

Frequency [MHz]	E [dBμV/m]	E [μV/m]	U _{RX} [dBμV]	A _{TOT} [dB]	Polarisation	Result
1592.178357	29.30	29.17	34.00	-4.70	VERTICAL	Passed
1616.732465	29.70	30.55	34.20	-4.50	VERTICAL	Passed
1959.919840	64.90	1757.92	68.00	-3.10	VERTICAL	Passed
2295.089178	37.60	75.86	38.50	-0.90	VERTICAL	Passed
2905.811623	34.10	50.70	30.40	3.70	HORIZONTAL	Passed
7838.677355	29.60	30.20	23.60	6.00	VERTICAL	Passed

*1960.0 MHz frequency is coming from communication tester and thus ignored.

RX mode, channel 810 / 1989.8 MHz

Peak (RBW: 1 MHz)

Frequency [MHz]	E [dBμV/m]	E [μV/m]	U _{RX} [dBμV]	A _{TOT} [dB]	Polarisation	Result
3980.000000	40.20	102.33	43.00	-2.80	VERTICAL	Passed
7960.000000	41.00	112.20	35.70	5.30	HORIZONTAL	Passed

Average (RBW: 1 MHz)

Frequency [MHz]	E [dBμV/m]	E [μV/m]	U _{RX} [dBμV]	A _{TOT} [dB]	Polarisation	Result
3980.000000	25.70	19.28	28.50	-2.80	VERTICAL	Passed
7960.000000	28.20	25.70	22.90	5.30	VERTICAL	Passed

3.6. Bluetooth Test results

TX mode, channel 0 / 2402 MHz

Peak (RBW: 1 MHz)

Frequency [MHz]	E [dBμV/m]	E [μV/m]	U _{RX} [dBμV]	A _{TOT} [dB]	Polarisation	Result
4804.000000	38.00	79.43	40.00	-2.00	VERTICAL	Passed
7206.000000	39.30	92.26	35.10	4.20	VERTICAL	Passed

Average (RBW: 1 MHz)

Frequency [MHz]	E [dBμV/m]	E [μV/m]	U _{RX} [dBμV]	A _{TOT} [dB]	Polarisation	Result
4804.000000	24.00	15.85	26.00	-2.00	VERTICAL	Passed
7206.000000	27.10	22.65	22.90	4.20	VERTICAL	Passed

TX mode, channel 40 / 2442 MHz

Quasi peak (RBW: 120 kHz)

Frequency [MHz]	E [dBμV/m]	E [μV/m]	U _{RX} [dBμV]	A _{TOT} [dB]	Polarisation	Result
37.595391	24.30	16.41	42.00	-17.70	VERTICAL	Passed
119.820842	22.90	13.96	47.80	-24.90	HORIZONTAL	Passed

Peak (RBW: 1 MHz)

Frequency [MHz]	E [dBμV/m]	E [μV/m]	U _{RX} [dBμV]	A _{TOT} [dB]	Polarisation	Result
7322.147295	41.90	124.45	37.70	4.20	VERTICAL	Passed
7333.159319	40.90	110.92	36.50	4.40	VERTICAL	Passed
7417.831663	42.20	128.82	37.20	5.00	VERTICAL	Passed
7421.335671	41.70	121.62	36.80	4.90	HORIZONTAL	Passed
17870.245491	57.70	767.36	32.30	25.40	VERTICAL	Passed

Average (RBW: 1 MHz)

Frequency [MHz]	E [dBμV/m]	E [μV/m]	U _{RX} [dBμV]	A _{TOT} [dB]	Polarisation	Result
7325.647295	28.30	26.00	24.10	4.20	VERTICAL	Passed
7329.159319	28.30	26.00	24.00	4.30	VERTICAL	Passed
7414.835671	29.10	28.51	24.00	5.10	HORIZONTAL	Passed
7418.331663	29.30	29.17	24.30	5.00	VERTICAL	Passed
17876.245491	45.00	177.83	19.50	25.50	VERTICAL	Passed

TX mode, channel 78 / 2480 MHz

Peak (RBW: 1 MHz)

Frequency [MHz]	E [dBμV/m]	E [μV/m]	U _{RX} [dBμV]	A _{TOT} [dB]	Polarisation	Result
4960.000000	38.20	81.28	39.80	-1.60	HORIZONTAL	Passed
7440.000000	41.50	118.85	36.60	4.90	VERTICAL	Passed

Average (RBW: 1 MHz)

Frequency [MHz]	E [dBμV/m]	E [μV/m]	U _{RX} [dBμV]	A _{TOT} [dB]	Polarisation	Result
4960.000000	25.00	17.78	26.60	-1.60	VERTICAL	Passed
7440.000000	28.30	26.00	23.40	4.90	VERTICAL	Passed

3.7. WLAN Test results

RX mode, channel 1

Peak (RBW: 1 MHz)

Frequency [MHz]	E [dBμV/m]	E [μV/m]	U _{RX} [dBμV]	A _{TOT} [dB]	Polarisation	Result
4824.000000	36.80	69.18	39.00	-2.20	HORIZONTAL	Passed
7236.000000	40.60	107.15	36.60	4.00	VERTICAL	Passed

Average (RBW: 1 MHz)

Frequency [MHz]	E [dBμV/m]	E [μV/m]	U _{RX} [dBμV]	A _{TOT} [dB]	Polarisation	Result
4824.000000	24.10	16.03	26.30	-2.20	VERTICAL	Passed
7236.000000	28.10	25.41	24.10	4.00	VERTICAL	Passed

RX mode, channel 7 / 2442 MHz

Quasi peak (RBW: 120 kHz)

Frequency [MHz]	E [dBμV/m]	E [μV/m]	U _{RX} [dBμV]	A _{TOT} [dB]	Polarisation	Result
37.695391	21.20	11.48	39.00	-17.80	VERTICAL	Passed
117.494589	22.30	13.03	47.60	-25.30	VERTICAL	Passed
125.349499	20.20	10.23	45.70	-25.50	VERTICAL	Passed

Peak (RBW: 1 MHz)

Frequency [MHz]	E [dBμV/m]	E [μV/m]	U _{RX} [dBμV]	A _{TOT} [dB]	Polarisation	Result
4917.837675	37.50	74.99	39.10	-1.60	VERTICAL	Passed
7315.635271	40.90	110.92	36.60	4.30	VERTICAL	Passed
7321.147295	41.20	114.82	37.00	4.20	VERTICAL	Passed
7415.335671	41.90	124.45	36.80	5.10	VERTICAL	Passed
17862.727455	57.40	741.31	32.20	25.20	VERTICAL	Passed

Average (RBW: 1 MHz)

Frequency [MHz]	E [dBμV/m]	E [μV/m]	U _{RX} [dBμV]	A _{TOT} [dB]	Polarisation	Result
4918.337675	24.90	17.58	26.50	-1.60	VERTICAL	Passed
7316.135271	28.30	26.00	24.00	4.30	VERTICAL	Passed
7323.647295	28.30	26.00	24.10	4.20	VERTICAL	Passed
7421.835671	29.20	28.84	24.30	4.90	VERTICAL	Passed
17867.727455	45.00	177.83	19.70	25.30	VERTICAL	Passed

RX mode, 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	37.70	76.74	39.10	-1.40	HORIZONTAL	Passed
7386.000000	41.00	112.20	36.00	5.00	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	24.50	16.79	25.90	-1.40	VERTICAL	Passed
7386.000000	27.50	23.71	22.50	5.00	VERTICAL	Passed

4. Test Equipment

4.1. Conducted measurements

Eq. No	Equipment	Type	Manufacturer	Used in
13037	Power Supply 0-15V 10A	EA3012	LP Instruments	15C, 15B
13513	Pulse Limiter 9KHz-30MHz	ESH3Z2	Rohde&Schwarz	15C, 15B
13666	EMI Test Reciever 9KHz-2,5GHz	ESPC	Rohde&Schwarz	15C, 15B
13935	Two Lines Artificial Mains Network	ESH3-Z5	Rohde&Schwarz	15C, 15B
16995	Directional Coupler 20dB 0,5-2,0 GHz SMA Conn.	1538RA-20	Weinschel	15C, 15B
18772	Shielded Chamber	RFD-100	ETS-Lindgren	15C, 15B
19171	Universal Radio Communication Tester	CMU200	Rohde&Schwarz	15C, 15B
11386	System DC Power Supply	HP6632A	Hewlett Packard	22/24, 15C, 15B
19678	Spectrum Analyzer 26 GHz	FSP	Rohde&Schwarz	22/24, 15C, 15B
16601	Universal Radio Communication Tester	CMU200	Rohde&Schwarz	22/24, 15C, 15B
19625	Vötsch Climatic Chamber	VT4002EMC	Vötsch	22/24, 15C, 15B
13357	Rohde & Schwartz Signal Generator	SMP02	Rohde&Schwarz	22/24, 15C, 15B

4.2. Radiated measurements

Eq. No	Equipment	Type	Manufacturer	Used in
18416	Universal Radio Communication Tester	CMU200	Rohde&Schwarz	22/24, 15C, 15B
	Programmable Relay Switching System	-----	Pickering	22/24, 15C, 15B
15742	Programmable Relay Switching System	-----	Pickering	22/24, 15C, 15B
14020	Power Supply Module Relay Switching System 45W	10-910-002	Pickering	22/24, 15C, 15B
15743	Power Supply Module Relay Switching System 50W	10-910L-001	Pickering	22/24, 15C, 15B
16490	RS-232/IEEE-488.2 Interface	10-921-001	Pickering	22/24, 15C, 15B
	RS-232/IEEE-488.2 Interface	10-921-001	Pickering	22/24, 15C, 15B
20078	Relay 2x6 Chnl μ Wave Mux	10-785B-522	Pickering	22/24, 15C, 15B
14021	Relay Dual 6 Chnl μ Wave Mux	10-785-522		22/24, 15C, 15B
	Relay Dual 6 Chnl μ Wave Mux	10-785-522		22/24, 15C, 15B
17644	Dual 6 Channel MUX Microwave Relay SMA 50 Ohm	10-785-522	Pickering	22/24, 15C, 15B
16948	Dual 6 Channel MUX Microwave Relay SMA 50 Ohm	10-785-522	Pickering	22/24, 15C, 15B
16949	Dual 6 Channel MUX Microwave Relay SMA 50 Ohm	10-785-522	Pickering	22/24, 15C, 15B
18792	Multi Device Controller	2090	ETS-EMCO	22/24, 15C, 15B
14963	RF Preampifier 100MHz-4GHz (Metal Chassis)	AFS3-00100400	Miteq/NMP Cph	22/24, 15C, 15B
18861	EMI Test Receiver 20Hz-26,5GHz	ESI	Rohde&Schwarz	22/24, 15C, 15B

Eq. No	Equipment	Type	Manufacturer	Used in
18860	Ultra Broadband Antenna Ultralog 30-3000MHz	HL562	Rohde&Schwarz	22/24, 15C, 15B
19830	Ultra Broadband Antenna Ultralog 30-3000MHz	HL562	Rohde&Schwarz	22/24, 15C, 15B
18773	Shielded Chamber	RFD-100	ETS-Lindgren	22/24, 15C, 15B
18774	Shielded Chamber	RFSD-F/A-100	ETS-Lindgren	22/24, 15C, 15B
19151	High Pass Filter 3GHz WHK3.0/18G-10ss	WHJS3000-10SS	Wainwright	22/24, 15C, 15B
13937	Ultra Stable Notch Filter 850MHz	WRCA902.4-0.2/40-6SS	Wainwright Instruments	22/24, 15C, 15B
13936	Ultra Stable Notch Filter 1747,5MHz	WRCD1747.5-0.2/40- 10SS	Wainwright Instruments	22/24, 15C, 15B
13917	Highpass Filter 1000-3000MHz 50OHM SMA Conn	WHKS1000-10SS	Wainwright Instruments	22/24, 15C, 15B
14188	Ultra Stable Notch Filter 902,4MHz	WRCA902.4-0.2/40-6SS	Wainwright	22/24, 15C, 15B
14187	Ultra Stable Notch Filter 1747,5MHz	WRCD1747.5-0.2/40- 10SS	Wainwright	22/24, 15C, 15B
16633	Ultra Stable Notch Filter 1880,0MHz	WRCD1880.0-0.2/40- 10SS	Wainwright	22/24, 15C, 15B
19587	BT/WLAN Band Reject Filter	WRCG2400/2483- 2390/2493-35/10SS	Wainwright	22/24, 15C, 15B
	WDCMA Band 4 filter	WRCG1737/1743- 1733/1747-40/6SS	Wainwright	22/24, 15C, 15B
	WDCMA Band 5&6 filter	WRCG832/83/-825/845- 40/5SS	Wainwright	22/24, 15C, 15B
	WDCMA Band 8 filter	WRCG894.6/900.6- 890.6/904.6-40/80SS	Wainwright	22/24, 15C, 15B
18323	Band reject filter 1947-1953MHz 40dB	WRCG1947/1953- 1940/1960-40/6SS	Wainwright	22/24, 15C, 15B
20031	Double Ridged Broadband Horn	BBHA 9120 D	SCHWARZBECK	22/24, 15C, 15B
15190	Infra Red Remote Control Unit	4630	Emco	22/24, 15C, 15B
14993	EMI Test Receiver 9KHz- 2750MHz	ESCS30	Rohde&Schwarz	22/24, 15C, 15B
15191	Turntable Contoller Unit	G-800SDX	YAESU	22/24, 15C, 15B
14900	Antenna Controller	HD100	HD GmbH	22/24, 15C, 15B
15105	Attenuator 30dB DC-1000MHz 50 Ohm Nf - Nm	NAT-30	Mini-Circuits	22/24, 15C, 15B
13302	Spectrum Analyzer 9KHz- 12.8GHz	HP8596E	Hewlett Packard	22/24, 15C, 15B
11584	Spectrum analyzer 50Hz- 6,5GHz	HP8561B	Hewlett Packard	22/24, 15C, 15B
13134	Tracking generator	HP85645A	Hewlett Packard	22/24, 15C, 15B
19374	Resonant Dipole Antenna 850MHz SMA m Conn.	-----	NMP Cph	22/24, 15C, 15B
19375	Resonant Dipole Antenna 1900MHz SMA m Conn.	-----	NMP Cph	22/24, 15C, 15B
11487	Network analyzer 300KHz- 3,0GHz	HP8753A	Hewlett Packard	22/24, 15C, 15B
14807	S - Parameter Test Set 300KHz- 6GHz	HP85047A	Hewlett Packard	22/24, 15C, 15B
17277	Multimeter Digital 6 1/2 Digit	AT34401A	Agilent Technologies	22/24, 15C, 15B