

FCC Part 15B Compliance Test Report

Test Report no.:	Cph_FCC_0701_03.doc	Date of Report:	02-01-2007
Number of pages:	16	Customer's Contact person:	Timo Seppala
Testing laboratory:	TCC Nokia Copenhagen Laboratory Frederikskaj 1790 COPENHAGEN V DENMARK Tel. +45 33 292929 Fax. +45 33 292934	Customer:	Nokia Corporation P.O. Box 86 Joensuunkatu 7 FIN-24101 SALO, FINLAND Tel. +358 (0) 7180 08000 Fax. +358 (0) 7180 44277
FCC listing no.:	99059		
IC recognition no.:	4820 and 4820-1		
Tested devices/ accessories:	Phone; RM-227 (HW: 2004), Battery; BP-4L, AC-Charger; AC-4E, Data Cable; CA-53		
FCC ID:	PYARM-227	IC:	661V-RM227
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:			

Allan F. Henriksen, Engineer

1. Summary for FCC Part 15B Compliance Test Report

Date of receipt	30-11-2006
Testing completed	02-01-2007
The customer's contact person	Timo Seppala
Test Plan referred to	\\EMC\\TESTPLAN\\
Notes	None
Document name	T:\\Projects\\RM-227\\EMC\\Results\\FCC\\Cph_FCC_0701_03.doc

1.1. EUT and Accessory Information

The EUT is a 4-band (GSM850/900/1800/1900) 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-227	004400/96/165032/0	1.0633.08.01	-	2004	29109
Battery	BP-4L	Proto 4/06wk28/Tue	-	-	-	27763
Data Cable	CA-53	108882607250	-	-	-	29067
AC Charger	AC-4E	4090496113960100313; 0675384	3.22	-	-	27778

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

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 Copenhagen Laboratory.

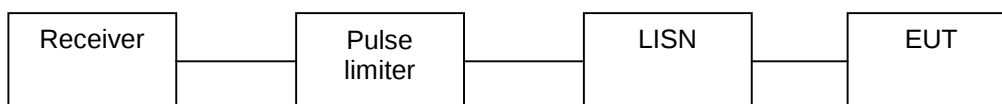
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2. AC powerline conducted emissions (FCC §15.107, ICES-003 section 5.3)

EUT with DUT number	RM-227 Dut # 29109
Accessories with DUT numbers	BP-4L Dut # 27763 + AC-4E Dut # 27778 + CA-53 Dut # 29067
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]	22.5 / 38.0 1014
Date of measurements	11-12-2006
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:

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

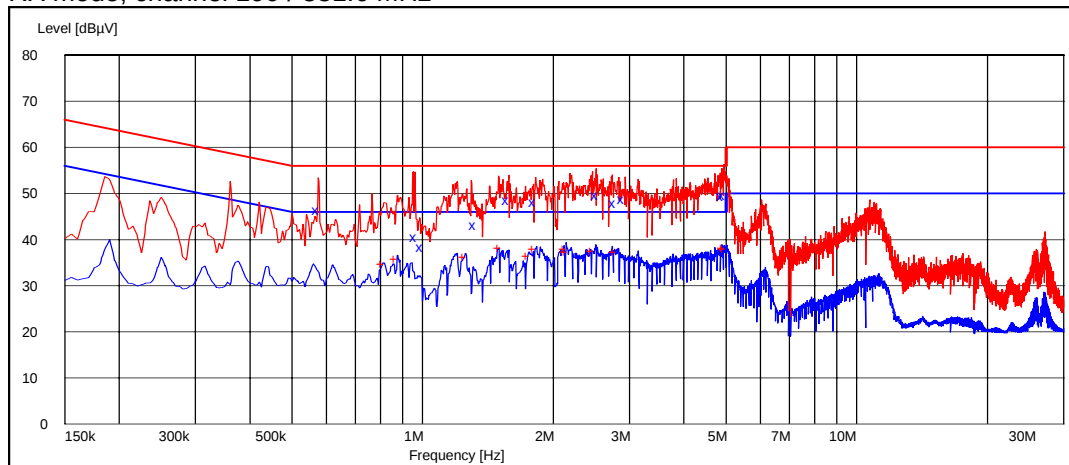
Where U_{RX} is receiver reading and A_{TOT} is total correction factor including cable and pulse limiter attenuations.

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)

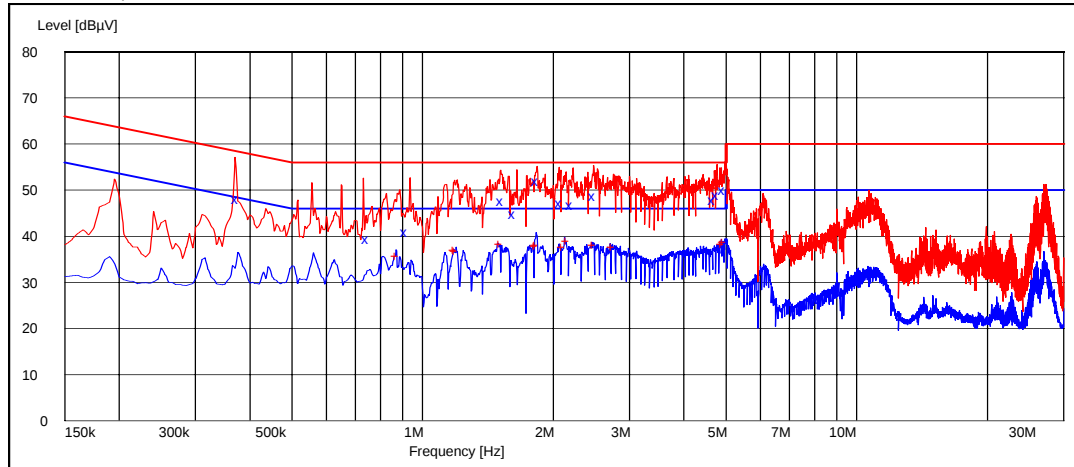
Frequency [MHz]	U [dBμV]	Line	Result
0.575000	46.50	N	Passed
0.965000	40.60	N	Passed
1.000000	38.30	N	Passed
1.325000	43.20	N	Passed
1.575000	48.50	N	Passed
1.815000	48.00	N	Passed
2.525000	49.70	N	Passed
2.775000	47.80	N	Passed
2.905000	48.80	N	Passed
4.915000	49.50	N	Passed
4.960000	49.60	N	Passed

Average (RBW: 9 kHz)

Frequency [MHz]	U [dBμV]	Line	Result
0.810000	34.60	N	Passed
0.870000	35.70	N	Passed
1.250000	36.20	N	Passed
1.505000	38.10	N	Passed
1.750000	36.50	N	Passed
1.810000	38.00	N	Passed
2.130000	37.90	N	Passed
2.145000	37.20	N	Passed
2.460000	37.40	N	Passed
2.775000	37.20	N	Passed
4.935000	38.10	N	Passed
4.955000	38.00	N	Passed

2.4. GSM 1900 Test results

RX mode, channel 661 / 1960.0 MHz



Quasi peak (RBW: 9 kHz)

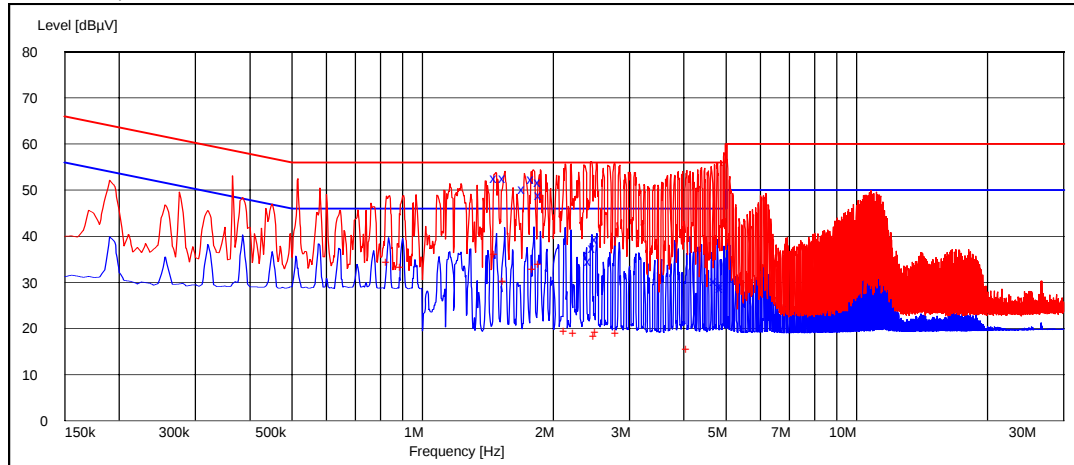
Frequency [MHz]	U [dBμV]	Line	Result
0.375000	48.00	N	Passed
0.750000	39.50	L1	Passed
0.920000	40.90	N	Passed
1.530000	47.60	N	Passed
1.630000	44.70	N	Passed
1.840000	51.90	N	Passed
2.090000	47.30	N	Passed
2.210000	46.80	N	Passed
2.490000	48.70	N	Passed
4.700000	47.80	N	Passed
4.790000	48.90	N	Passed
4.965000	50.00	N	Passed

Average (RBW: 9 kHz)

Frequency [MHz]	U [dBμV]	Line	Result
0.875000	35.80	N	Passed
1.190000	37.10	N	Passed
1.195000	36.80	N	Passed
1.515000	38.30	N	Passed
1.825000	37.90	N	Passed
1.830000	38.00	N	Passed
2.110000	37.60	N	Passed
2.160000	38.90	N	Passed
2.485000	38.00	N	Passed
2.745000	37.60	N	Passed
4.920000	38.30	N	Passed
4.965000	38.70	N	Passed

2.5. Bluetooth Test results

TX mode, channel 40 / 2442 MHz



Quasi peak (RBW: 9 kHz)

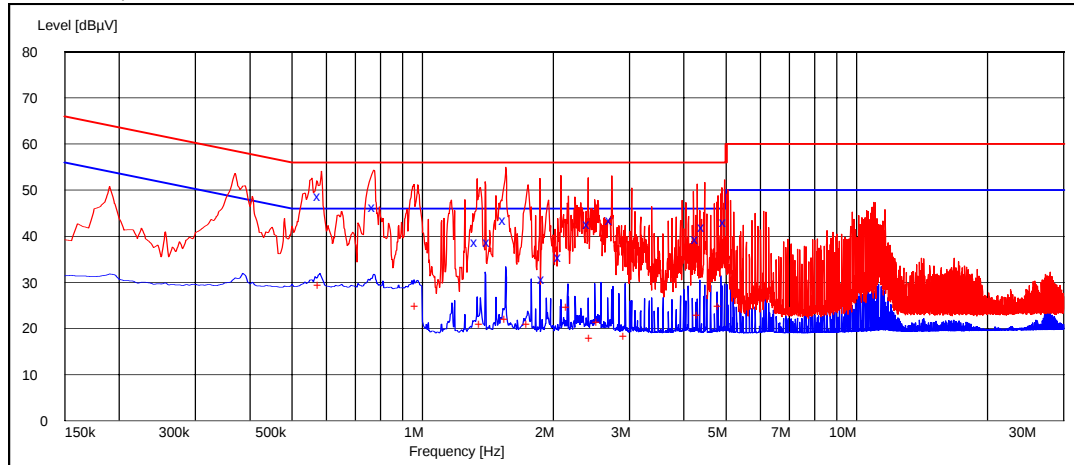
Frequency [MHz]	U [dBμV]	Line	Result
1.480000	52.70	N	Passed
1.550000	52.70	N	Passed
1.715000	50.30	N	Passed
1.800000	52.40	N	Passed
1.870000	51.80	N	Passed
1.875000	48.90	N	Passed
2.445000	34.60	N	Passed
2.495000	37.40	N	Passed
2.525000	39.30	N	Passed
4.755000	30.40	N	Passed
4.905000	29.50	N	Passed
4.910000	28.80	N	Passed

Average (RBW: 9 kHz)

Frequency [MHz]	U [dBμV]	Line	Result
0.835000	34.40	N	Passed
0.900000	33.40	N	Passed
1.480000	36.20	N	Passed
1.550000	30.30	L1	Passed
1.810000	32.80	N	Passed
1.870000	34.00	N	Passed
2.140000	19.40	N	Passed
2.250000	18.90	N	Passed
2.505000	18.30	N	Passed
2.525000	19.20	N	Passed
2.815000	19.00	N	Passed
4.095000	15.50	N	Passed

2.6. WLAN Test results

RX mode, channel 7 / 2442 MHz



Quasi peak (RBW: 9 kHz)

Frequency [MHz]	U [dBμV]	Line	Result
0.580000	48.80	N	Passed
0.775000	46.30	N	Passed
1.335000	38.70	N	Passed
1.425000	38.80	N	Passed
1.555000	43.60	N	Passed
1.905000	30.70	L1	Passed
2.085000	35.40	L1	Passed
2.425000	42.70	N	Passed
2.730000	43.60	N	Passed
4.310000	39.30	N	Passed
4.450000	41.90	N	Passed
4.990000	43.10	N	Passed

Average (RBW: 9 kHz)

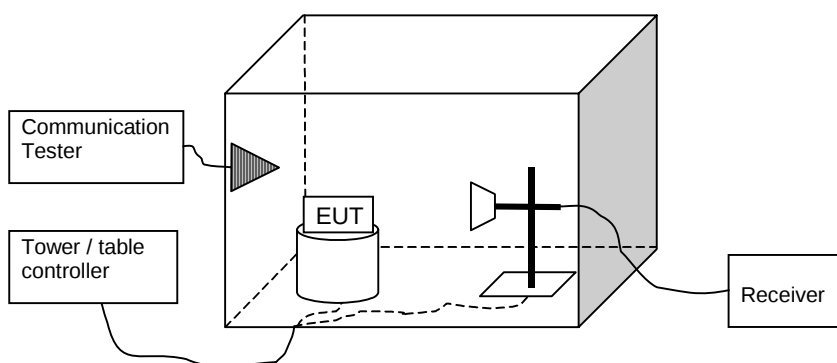
Frequency [MHz]	U [dBμV]	Line	Result
0.580000	29.40	N	Passed
0.970000	24.90	N	Passed
1.365000	20.90	N	Passed
1.560000	22.10	N	Passed
1.755000	20.90	N	Passed
2.165000	24.60	N	Passed
2.450000	17.90	L1	Passed
2.550000	21.40	L1	Passed
2.935000	18.30	L1	Passed
4.340000	22.80	N	Passed
4.850000	24.80	N	Passed

3. Radiated emissions

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

EUT with DUT number	RM-227 Dut # 29109
Accessories with DUT numbers	BP-4L #27763, AC-4E #27778, CA-53 #29067
Operation Voltage [V] / [Hz]	230 / 50
Result	Passed
Remarks	-
Temp [°C] / Humidity [%RH] / Air Pressure [kPa]	21.1 / 41.5 / 1012.4
Date of measurements	11.12.2006
Measured by	Juho Tuohino

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	39.70	96.61	44.10	-4.40	HORIZONTAL	Passed
6953.600000	44.70	171.79	41.90	2.80	VERTICAL	Passed

Average (RBW: 1 MHz)

Frequency [MHz]	E [dBμV/m]	E [μV/m]	U _{RX} [dBμV]	A _{TOT} [dB]	Polarisation	Result
3476.800000	25.20	18.20	29.60	-4.40	HORIZONTAL	Passed
6953.600000	30.80	34.67	28.00	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
39.859719	39.40	93.33	52.60	-13.20	VERTICAL	Passed
44.528858	38.10	80.35	54.40	-16.30	VERTICAL	Passed
62.464930	34.10	50.70	58.60	-24.50	VERTICAL	Passed
688.476754	35.80	61.66	44.40	-8.60	VERTICAL	Passed
881.663527	59.90	988.55	66.00	-6.10	VERTICAL	Passed

Peak (RBW: 1 MHz)

Frequency [MHz]	E [dBμV/m]	E [μV/m]	U _{RX} [dBμV]	A _{TOT} [dB]	Polarisation	Result
3526.552104	40.00	100.00	44.40	-4.40	HORIZONTAL	Passed
7838.179359	41.90	124.45	35.90	6.00	VERTICAL	Passed

Average (RBW: 1 MHz)

Frequency	E [dBμV/m]	E [μV/m]	U _{RX} [dBμV]	A _{TOT}	Polarisation	Result
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[MHz]				[dB]		
2905.309619	40.00	100.00	30.30	9.70	HORIZONTAL	Passed
3526.552104	25.20	18.20	29.60	-4.40	HORIZONTAL	Passed
7838.679359	29.30	29.17	23.30	6.00	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	39.90	98.86	43.80	-3.90	HORIZONTAL	Passed
7150.400000	44.30	164.06	40.30	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	24.80	17.38	28.70	-3.90	VERTICAL	Passed
7150.400000	29.90	31.26	25.90	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	38.20	81.28	40.90	-2.70	HORIZONTAL	Passed
7720.000000	44.00	158.49	38.80	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	25.60	19.05	28.30	-2.70	VERTICAL	Passed
7720.000000	28.20	25.70	23.00	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
31.302405	37.70	76.74	45.40	-7.70	VERTICAL	Passed
39.959719	37.40	74.13	50.70	-13.30	VERTICAL	Passed
44.428858	37.00	70.79	53.30	-16.30	VERTICAL	Passed
57.917234	25.10	17.99	49.90	-24.80	VERTICAL	Passed
63.026854	33.70	48.42	58.10	-24.40	VERTICAL	Passed
688.576754	31.20	36.31	39.80	-8.60	VERTICAL	Passed

Peak (RBW: 1 MHz)

Frequency	E [dBμV/m]	E [μV/m]	U _{RX} [dBμV]	A _{TOT}	Polarisation	Result
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[MHz]				[dB]		
1959.919840	62.50	1333.52	59.60	2.90	VERTICAL	Passed
7840.179359	47.70	242.66	41.70	6.00	VERTICAL	Passed

Average (RBW: 1 MHz)

Frequency [MHz]	E [dBμV/m]	E [μV/m]	U _{RX} [dBμV]	A _{TOT} [dB]	Polarisation	Result
1959.919840	60.80	1096.48	57.90	2.90	VERTICAL	Passed
2910.315631	39.90	98.86	30.30	9.60	HORIZONTAL	Passed
7840.179359	19.30	9.23	13.30	6.00	VERTICAL	Passed

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	38.10	80.35	40.90	-2.80	VERTICAL	Passed
7960.000000	44.20	162.18	38.90	5.30	VERTICAL	Passed

Average (RBW: 1 MHz)

Frequency [MHz]	E [dBμV/m]	E [μV/m]	U _{RX} [dBμV]	A _{TOT} [dB]	Polarisation	Result
3980.000000	25.30	18.41	28.10	-2.80	VERTICAL	Passed
7960.000000	28.30	26.00	23.00	5.30	VERTICAL	Passed

3.5. 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	36.40	66.07	38.40	-2.00	HORIZONTAL	Passed
7206.000000	39.80	97.72	35.60	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	23.60	15.14	25.60	-2.00	VERTICAL	Passed
7206.000000	26.70	21.63	22.50	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
4812.127255	44.00	158.49	46.10	-2.10	VERTICAL	Passed
4843.691383	44.60	169.82	46.80	-2.20	VERTICAL	Passed
4886.277555	38.60	85.11	40.50	-1.90	VERTICAL	Passed
4942.381764	43.50	149.62	45.20	-1.70	VERTICAL	Passed

4945.891784	37.50	74.99	39.20	-1.70	VERTICAL	Passed
7317.139279	41.20	114.82	36.90	4.30	VERTICAL	Passed
7419.839679	42.20	128.82	37.30	4.90	VERTICAL	Passed
17878.761523	57.40	741.31	32.00	25.40	HORIZONTAL	Passed

Average (RBW: 1 MHz)

Frequency [MHz]	E [dBμV/m]	E [μV/m]	U _{RX} [dBμV]	A _{TOT} [dB]	Polarisation	Result
4816.127255	24.40	16.60	26.50	-2.10	VERTICAL	Passed
4845.691383	24.20	16.22	26.40	-2.20	VERTICAL	Passed
4890.277555	24.00	15.85	25.90	-1.90	VERTICAL	Passed
4944.881764	24.60	16.98	26.30	-1.70	VERTICAL	Passed
4947.391784	24.60	16.98	26.30	-1.70	VERTICAL	Passed
7317.139279	28.20	25.70	23.90	4.30	VERTICAL	Passed
7422.339679	29.00	28.18	24.10	4.90	VERTICAL	Passed
17881.261523	44.70	171.79	19.30	25.40	HORIZONTAL	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	37.20	72.44	38.80	-1.60	HORIZONTAL	Passed
7440.000000	40.20	102.33	35.30	4.90	HORIZONTAL	Passed

Average (RBW: 1 MHz)

Frequency [MHz]	E [dBμV/m]	E [μV/m]	U _{RX} [dBμV]	A _{TOT} [dB]	Polarisation	Result
4960.000000	24.80	17.38	26.40	-1.60	VERTICAL	Passed
7440.000000	28.00	25.12	23.10	4.90	VERTICAL	Passed

3.6. 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	40.20	102.33	42.40	-2.20	HORIZONTAL	Passed
7236.000000	40.40	104.71	36.40	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	30.00	31.62	32.20	-2.20	HORIZONTAL	Passed
7236.000000	27.90	24.83	23.90	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
38.135872	19.70	9.66	37.80	-18.10	VERTICAL	Passed
250.000200	22.10	12.74	46.70	-24.60	HORIZONTAL	Passed

Peak (RBW: 1 MHz)

Frequency [MHz]	E [dBμV/m]	E [μV/m]	U _{RX} [dBμV]	A _{TOT} [dB]	Polarisation	Result
4884.267535	38.60	85.11	40.50	-1.90	HORIZONTAL	Passed
7323.647295	41.70	121.62	37.50	4.20	VERTICAL	Passed
7329.155311	40.50	105.93	36.20	4.30	HORIZONTAL	Passed
17868.239479	58.00	794.33	32.70	25.30	VERTICAL	Passed

Average (RBW: 1 MHz)

Frequency [MHz]	E [dBμV/m]	E [μV/m]	U _{RX} [dBμV]	A _{TOT} [dB]	Polarisation	Result
4883.767535	28.70	27.23	30.60	-1.90	HORIZONTAL	Passed
7323.147295	28.30	26.00	24.10	4.20	VERTICAL	Passed
7325.655311	27.70	24.27	23.50	4.20	HORIZONTAL	Passed
7442.887776	28.20	25.70	23.30	4.90	VERTICAL	Passed
17867.239479	44.90	175.79	19.60	25.30	VERTICAL	Passed

RX mode, channel 11

Peak (RBW: 1 MHz)

Frequency [MHz]	E [dBμV/m]	E [μV/m]	U _{RX} [dBμV]	A _{TOT} [dB]	Polarisation	Result
4924.000000	39.50	94.41	40.90	-1.40	VERTICAL	Passed
7386.000000	40.20	102.33	35.20	5.00	VERTICAL	Passed

Average (RBW: 1 MHz)

Frequency [MHz]	E [dBμV/m]	E [μV/m]	U _{RX} [dBμV]	A _{TOT} [dB]	Polarisation	Result
4924.000000	27.50	23.71	28.90	-1.40	VERTICAL	Passed
7386.000000	27.60	23.99	22.60	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