

FCC Part 15B Compliance Test Report

Test Report no.:	Tre_FCC_0802_06.doc	Date of Report:	4.2.2008
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FCC listing no.:	94436		
IC recognition no.:	3608		
Tested devices/ accessories:	GSM-phone RM-345 / AC-Charger AC-5E, Battery BL-4U, Headset HS-47, Data cable CA-101, Laptop IBM Thinkpad T22, AC adapter 02K6543, Printer HP deskjet 1600CC3540A, Digital camera FUJI DS-7, Serial cable for camera, Parallel cable for printer		
FCC ID:	PYARM-345	IC:	661V-RM345
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 (Issue 2, September 2005), RSS-133 (Issue 3, June 2005) and RSS-210 (Issue 7, June 2007). 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:			

Jari Jantunen, System Manager

1. Summary for FCC Part 15B Compliance Test Report

Date of receipt	9-Jan-2008
Testing completed	29-Jan-2008
The customer's contact person	Tia Melava
Test Plan referred to	T:\Projects\RM-345\TestPlan_RS
Notes	-
Document name	T:\Projects\RM-345\EMC\Results\FCC\Tre_FCC_0802_06.doc

1.1. EUT and Accessory Information

The EUT is a 6-band (GSM850/900/1800/1900 and WCDMA Band II(1900)/V(850)) mobile phone with GPRS, EGPRS, Bluetooth and WLAN. GSM and WCDMA bands are tested in idle mode. Bluetooth and WLAN are tested with maximum rated TX power.

Product	Type	SN	HW	MV	SW	DUT
GSM-Phone	RM-345	004401014463380	0320	-	07.45.3	41383
Battery	BL-4U	-	-	-	-	41363
Headset	HS-47	-	-	-	-	41367
AC-Charger	AC-5E	-	-	-	-	41365
Data cable	CA-101	-	-	-	-	41370
Laptop	IBM Thinkpad T22	555V2PT	-	-	-	40201
AC Adapter	02K6543	-	-	-	-	40202
Printer	HP deskjet 1600CC3540A	USB8302546	-	-	-	40077
Digital camera	FUJI DS-7	7102516	-	-	-	40076
Serial cable for camera	-	-	-	-	-	40088
Parallel cable for printer	-	-	-	-	-	40087

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	NP
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 Tampere Laboratory.

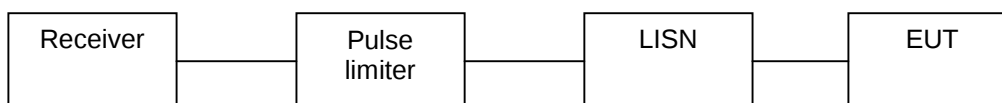
CONTENTS

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).....	5
2.1. Test setup	5
2.2. Test method and limit.....	5
2.3. GSM 850 Test results	6
2.4. GSM 1900 Test results	7
2.5. Bluetooth Test results	8
3. Radiated emissions (FCC §15.109, ICES-003 section 5.5, RSS-132 6.6, RSS-133 9)	9
3.1. Test setup	9
3.2. Test method and limit.....	9
3.3. GSM 850 Test results	10
3.4. GSM 1900 Test results	11
3.5. Bluetooth Test results	12
3.6. WLAN Test results	13
4. Test Equipment.....	15
4.1. Conducted measurements	15
4.2. Radiated measurements	15

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

EUT with DUT number	RM-345 DUT41383
Accessories with DUT numbers	BL-4U DUT41363, AC-5E DUT41365, HS-47 DUT 41367, CA-101 DUT 41370, IBM Thinkpad T22 DUT 40201, 02K6543 DUT 40202, HP deskjet 1600CC3540A DUT 40077, FUJI DS-7 DUT 40076, Serial cable for camera DUT 40088, Parallel cable for printer DUT 40087
Operation Voltage [V] / [Hz]	115 / 60
Result	PASSED
Remarks	Continuous data transfer was active between the phone and the computer during the test.
Temp [°C] / Humidity [%RH] / Air Pressure [kPa]	19-20 / 48-50 / 99.8-100.8
Date of measurements	24, 29.01.2008
Measured by	Zou Ming

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:

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

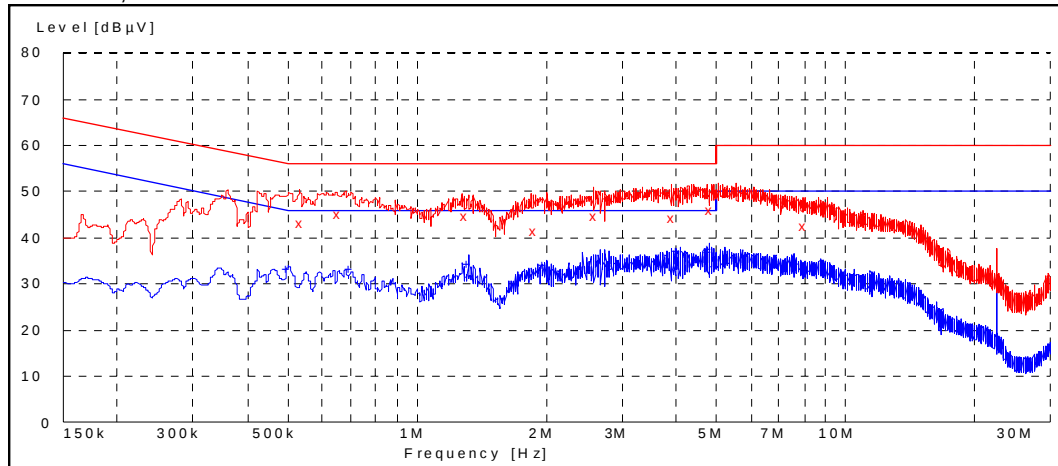
Where U_{RX} is receiver reading and A_{TOT} is total correction factor including cable and pulse limiter attenuations.

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)

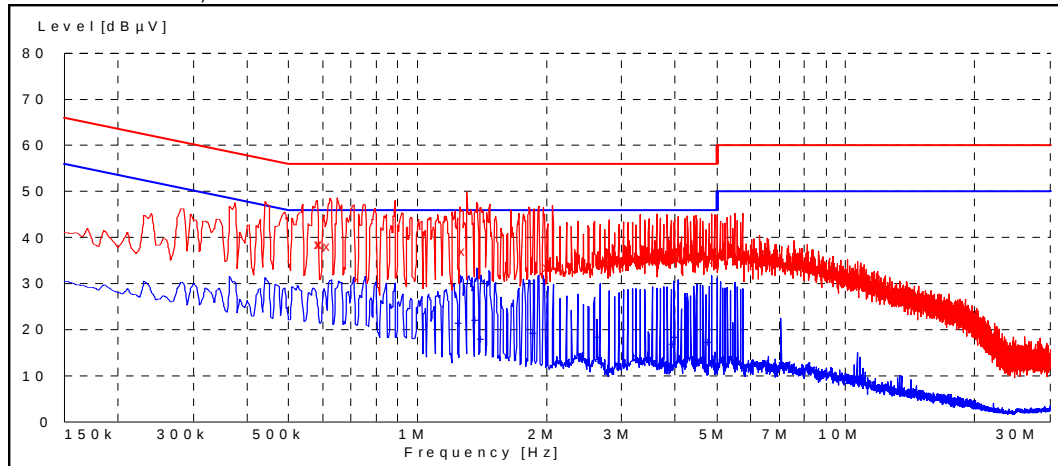
Frequency [MHz]	U [dBμV]	Line	Result
0.535000	43.00	N	PASSED
0.655000	45.00	L1	PASSED
1.310000	44.80	L1	PASSED
1.895000	41.50	N	PASSED
2.610000	44.70	L1	PASSED
3.955000	44.30	N	PASSED
4.885000	45.80	L1	PASSED
8.035000	42.50	L1	PASSED

Average (RBW: 9 kHz)

Frequency [MHz]	U [dBμV]	Line	Result
0.500000	33.10	L1	PASSED
0.700000	33.20	L1	PASSED
1.315000	34.20	L1	PASSED
1.990000	34.00	L1	PASSED
4.050000	37.10	L1	PASSED
4.790000	37.50	L1	PASSED
4.795000	36.90	L1	PASSED

2.4. GSM 1900 Test results

RX mode+ GPS, channel 661 / 1960.0 MHz



Quasi peak (RBW: 9 kHz)

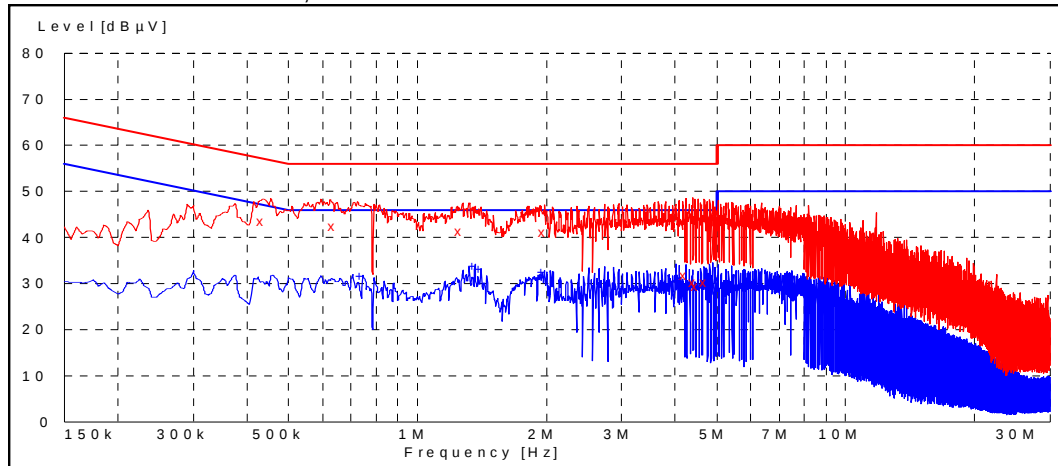
Frequency [MHz]	U [dBμV]	Line	Result
0.595000	38.50	L1	PASSED
0.600000	38.50	L1	PASSED
0.625000	38.00	L1	PASSED
1.290000	37.10	L1	PASSED
2.035000	33.50	L1	PASSED
3.330000	34.80	L1	PASSED
3.630000	35.20	L1	PASSED
4.860000	35.30	L1	PASSED

Average (RBW: 9 kHz)

Frequency [MHz]	U [dBμV]	Line	Result
1.270000	21.40	L1	PASSED
1.385000	22.10	L1	PASSED
1.430000	17.90	N	PASSED
1.890000	19.20	L1	PASSED
2.680000	18.30	L1	PASSED
4.005000	16.80	L1	PASSED
4.055000	18.30	L1	PASSED
4.855000	17.20	L1	PASSED

2.5. Bluetooth Test results

RX mode + FM Radio on, channel 40 / 2442 MHz



Quasi peak (RBW: 9 kHz)

Frequency [MHz]	U [dBμV]	Line	Result
0.435000	43.50	L1	PASSED
0.640000	42.50	L1	PASSED
1.265000	41.40	L1	PASSED
1.980000	41.20	L1	PASSED
4.240000	31.90	L1	PASSED
4.440000	30.30	L1	PASSED
4.500000	29.50	L1	PASSED
4.720000	30.30	L1	PASSED

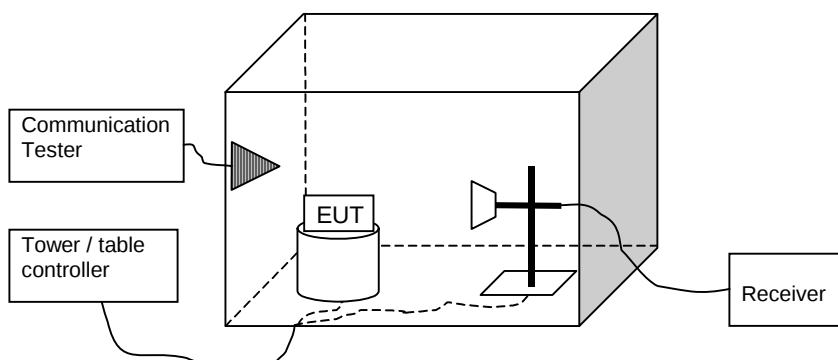
Average (RBW: 9 kHz)

Frequency [MHz]	U [dBμV]	Line	Result
0.745000	31.60	L1	PASSED
1.360000	33.70	L1	PASSED
1.405000	33.10	L1	PASSED
1.975000	32.40	L1	PASSED
4.240000	27.20	L1	PASSED

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

EUT with DUT number	RM-345 DUT41383
Accessories with DUT numbers	BL-4U DUT 41363, AC-5E DUT 41365, HS-47 DUT 41367, CA-101 DUT 41370, IBM Thinkpad T22 DUT 40201, 02K6543 DUT 40202, HP deskjet 1600CC3540A DUT 40077, FUJI DS-7 DUT 40076, Serial cable for camera DUT 40088, Parallel cable for printer DUT 40087
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 [kPa]	22-23 / 49-51 / 100.8-102.0
Date of measurements	21,29.01.2008
Measured by	Sunni Petteri, Zou Ming

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	38.80	87.10	44.10	-5.3	VERTICAL	PASSED
6953.600000	43.90	156.68	42.30	1.6	VERTICAL	PASSED

Average (RBW: 1 MHz)

Frequency [MHz]	E [dBμV/m]	E [μV/m]	U _{RX} [dBμV]	A _{TOT} [dB]	Polarisation	Result
3476.800000	25.70	19.28	31.00	-5.3	HORIZONTAL	PASSED
6953.600000	30.90	35.08	29.30	1.6	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
30.100000	28.60	26.92	54.20	-25.6	VERTICAL	PASSED
501.302004	38.80	87.10	66.80	-28.0	HORIZONTAL	PASSED

Average (RBW: 1 MHz)

Frequency [MHz]	E [dBμV/m]	E [μV/m]	U _{RX} [dBμV]	A _{TOT} [dB]	Polarisation	Result
1260.021042	37.70	76.74	56.60	-18.9	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	39.40	93.33	44.30	-4.9	VERTICAL	PASSED
7150.400000	41.40	117.49	39.00	2.4	VERTICAL	PASSED

Average (RBW: 1 MHz)

Frequency [MHz]	E [dBμV/m]	E [μV/m]	U _{RX} [dBμV]	A _{TOT} [dB]	Polarisation	Result
3575.200000	25.70	19.28	30.60	-4.9	HORIZONTAL	PASSED
7150.400000	29.10	28.51	26.70	2.4	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	40.30	103.51	43.00	-2.7	VERTICAL	PASSED
7720.000000	42.80	138.04	39.10	3.7	HORIZONTAL	PASSED

Average (RBW: 1 MHz)

Frequency [MHz]	E [dBμV/m]	E [μV/m]	U _{RX} [dBμV]	A _{TOT} [dB]	Polarisation	Result
3860.000000	27.00	22.39	29.70	-2.7	VERTICAL	PASSED
7720.000000	30.30	32.73	26.60	3.7	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
30.200000	30.60	33.88	56.30	-25.7	VERTICAL	PASSED
63.867335	21.00	11.22	60.30	-39.3	HORIZONTAL	PASSED
85.872545	20.80	10.96	57.20	-36.4	VERTICAL	PASSED
107.756313	13.70	4.84	48.60	-34.9	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
3529.556112	38.20	81.28	43.30	-5.1	VERTICAL	PASSED

Average (RBW: 1 MHz)

Frequency [MHz]	E [dBμV/m]	E [μV/m]	U _{RX} [dBμV]	A _{TOT} [dB]	Polarisation	Result
2979.459920	32.50	42.17	36.60	-4.1	VERTICAL	PASSED
3524.056112	25.20	18.20	30.30	-5.1	VERTICAL	PASSED

RX mode, channel 810 / 1989.8 MHz

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
3980.000000	40.10	101.16	42.70	-2.6	HORIZONTAL	PASSED
7960.000000	44.10	160.32	39.90	4.2	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
3980.000000	27.40	23.44	30.00	-2.6	VERTICAL	PASSED
7960.000000	31.10	35.89	26.90	4.2	VERTICAL	PASSED

3.5. Bluetooth Test results

TX mode, channel 0 / 2402 MHz

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
4804.000000	38.60	85.11	40.40	-1.8	HORIZONTAL	PASSED
7206.000000	41.80	123.03	39.20	2.6	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
4804.000000	26.10	20.18	27.90	-1.8	HORIZONTAL	PASSED
7206.000000	29.40	29.51	26.80	2.6	HORIZONTAL	PASSED

TX mode, channel 40 / 2442 MHz

Quasi peak (RBW: 120 kHz)

Frequency [MHz]	E [dB μ V/m]	E [μ V/m]	U _{RX} [dB μ V]	A _{TOT} [dB]	Polarisation	Result
31.300000	27.30	23.17	37.70	-10.4	VERTICAL	PASSED
37.895391	21.80	12.30	36.60	-14.8	VERTICAL	PASSED
74.269940	14.90	5.56	40.40	-25.5	VERTICAL	PASSED
74.588978	16.20	6.46	41.60	-25.4	VERTICAL	PASSED

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
4938.879760	39.90	98.86	41.50	-1.6	VERTICAL	PASSED
4963.935872	40.10	101.16	41.40	-1.3	HORIZONTAL	PASSED
7283.569138	43.10	142.89	40.10	3.0	HORIZONTAL	PASSED
7323.645291	43.10	142.89	40.10	3.0	HORIZONTAL	PASSED
7396.291583	43.20	144.54	39.60	3.6	VERTICAL	PASSED
17985.473948	53.40	467.74	34.00	19.4	VERTICAL	PASSED

Average (RBW: 1 MHz)

Frequency [MHz]	E [dBμV/m]	E [μV/m]	U _{RX} [dBμV]	A _{TOT} [dB]	Polarisation	Result
4939.379760	26.90	22.13	28.50	-1.6	VERTICAL	PASSED
4965.935872	27.30	23.17	28.50	-1.2	HORIZONTAL	PASSED
7280.569138	30.40	33.11	27.40	3.0	HORIZONTAL	PASSED
7326.645291	30.20	32.36	27.20	3.0	HORIZONTAL	PASSED
7391.791583	30.70	34.28	27.10	3.6	VERTICAL	PASSED
17990.973948	40.50	105.93	21.10	19.4	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	40.20	102.33	41.50	-1.3	VERTICAL	PASSED
7440.000000	43.60	151.36	40.00	3.6	VERTICAL	PASSED

Average (RBW: 1 MHz)

Frequency [MHz]	E [dBμV/m]	E [μV/m]	U _{RX} [dBμV]	A _{TOT} [dB]	Polarisation	Result
4960.000000	27.10	22.65	28.40	-1.3	HORIZONTAL	PASSED
7440.000000	30.60	33.88	27.00	3.6	HORIZONTAL	PASSED

3.6. WLAN Test results

RX mode, channel 1 / 2412 MHz

Peak (RBW: 1 MHz)

Frequency [MHz]	E [dBμV/m]	E [μV/m]	U _{RX} [dBμV]	A _{TOT} [dB]	Polarisation	Result
4824.000000	38.60	85.11	40.30	-1.7	VERTICAL	PASSED
7236.000000	42.60	134.90	40.00	2.6	VERTICAL	PASSED

Average (RBW: 1 MHz)

Frequency [MHz]	E [dBμV/m]	E [μV/m]	U _{RX} [dBμV]	A _{TOT} [dB]	Polarisation	Result
4824.000000	26.20	20.42	27.90	-1.7	HORIZONTAL	PASSED
7236.000000	29.60	30.20	27.00	2.6	HORIZONTAL	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
30.800000	27.50	23.71	37.50	-10.0	VERTICAL	PASSED
33.626253	29.50	29.85	41.40	-11.9	VERTICAL	PASSED
38.095391	24.80	17.38	39.70	-14.9	VERTICAL	PASSED
73.746092	12.40	4.17	37.90	-25.5	VERTICAL	PASSED
74.369940	12.90	4.42	38.40	-25.5	VERTICAL	PASSED
114.046894	10.70	3.43	33.40	-22.7	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
4955.917836	40.00	100.00	41.30	-1.3	HORIZONTAL	PASSED
7286.069138	43.10	142.89	40.10	3.0	HORIZONTAL	PASSED
7332.665331	43.20	144.54	40.20	3.0	VERTICAL	PASSED
7400.801603	44.10	160.32	40.40	3.7	VERTICAL	PASSED
7418.341683	43.70	153.11	40.00	3.7	HORIZONTAL	PASSED
17919.333667	53.10	451.86	33.50	19.6	VERTICAL	PASSED

Average (RBW: 1 MHz)

Frequency [MHz]	E [dBμV/m]	E [μV/m]	U _{RX} [dBμV]	A _{TOT} [dB]	Polarisation	Result
4962.917836	27.20	22.91	28.50	-1.3	HORIZONTAL	PASSED
7281.069138	30.40	33.11	27.40	3.0	HORIZONTAL	PASSED
7335.165331	30.20	32.36	27.10	3.1	VERTICAL	PASSED
7398.801603	30.60	33.88	26.90	3.7	VERTICAL	PASSED
7419.841683	30.70	34.28	27.00	3.7	HORIZONTAL	PASSED
17920.833667	40.60	107.15	21.00	19.6	VERTICAL	PASSED

RX mode, channel 11 / 2462 MHz

Peak (RBW: 1 MHz)

Frequency [MHz]	E [dBμV/m]	E [μV/m]	U _{RX} [dBμV]	A _{TOT} [dB]	Polarisation	Result
4924.000000	39.60	95.50	41.40	-1.8	HORIZONTAL	PASSED
7386.000000	43.60	151.36	40.10	3.5	VERTICAL	PASSED

Average (RBW: 1 MHz)

Frequency [MHz]	E [dBμV/m]	E [μV/m]	U _{RX} [dBμV]	A _{TOT} [dB]	Polarisation	Result
4924.000000	26.90	22.13	28.70	-1.8	HORIZONTAL	PASSED
7386.000000	30.60	33.88	27.10	3.5	HORIZONTAL	PASSED

4. Test Equipment

4.1. Conducted measurements

Eq. No	Equipment	Type	Manufacturer	Used in
TM30597	Power splitter	11667A	Agilent	22/24/27, 15C
TM37499	Power splitter	11667A	Agilent	22/24/27, 15C
TM38111	Multimeter	34401A	Agilent	22/24/27, 15C
TM38112	DC power supply	6632A	Agilent	22/24/27, 15C
TM22901	Attenuator	8496A	Agilent	22/24/27, 15C
TM30636	Artificial mains net	L2-16	PMM	15C, 15B
TM37678	Radio communication tester	CMU-200	R&S	22/24/27, 15C, 15B
TM37773	Radio communication tester	CMU-200	R&S	22/24/27, 15C, 15B
TM30600	Pulse Limiter	ESH3-Z2	R&S	15C, 15B
TM26490	LISN 50 µH	ESH3-Z5	R&S	15C, 15B
TM37610	Spectrum analyzer	FSU	R&S	22/24/27, 15C
TM22835	Multimeter	87	Fluke	15C, 15B
TM37500	Microwave switch system	7116-MSW	Keithley	22/24/27, 15C, 15B
TM22638	Power supply	OL63743-901	Transmatic	22/24/27, 15C, 15B
	Temperature chamber	VT4002	Vötsch	22/24/27, 15C
2058	EMI Test receiver	ESPC	R&S	15C, 15B
2001	Bluetooth tester	CBT	R&S	22/24/27, 15C, 15B
2002	Radio communication tester	CMU-200	R&S	22/24/27, 15C, 15B

4.2. Radiated measurements

Eq. No	Equipment	Type	Manufacturer	Used in
TM30599	3m semi-anechoic chamber		TDK	22/24/27, 15C, 15B
TM38845	EMI receiver	ESI 40	R&S	22/24/27, 15C, 15B
TM37498	Preamplifier	AMF-5D-020180-26-10P	MITEQ	22/24/27, 15C, 15B
TM37523	Preamplifier	AMF-4D-10M-3G-25-20P	MITEQ	22/24/27, 15C, 15B
TM37516	Biconilog antenna	HL562	R&S	22/24/27, 15C, 15B
TM26496	Double ridged waveguide antenna	3115	EMCO	22/24/27, 15C, 15B
TM39158	Horn antenna	3116	EMCO	22/24/27, 15C, 15B
TM26492	Reference dipole set	UHAP/VHAP	Schwarzbeck	22/24/27, 15C, 15B
TM37501	Dipole antenna	3125-870	EMCO	22/24/27
TM37502	Dipole antenna	3125-1880	EMCO	22/24/27
TM37773	Radio communication tester	CMU-200	R&S	22/24/27, 15C, 15B
TM38631	Signal generator	83640L	Agilent	22/24/27, 15C, 15B
TM38066	High pass filter	4HC3000/18000-3-KK	Trilithic	22/24/27, 15C, 15B
TM26511	Tunable notch filter	WRCA870	Wainwright	22/24/27
TM38215	Tunable notch filter	WRCD1850/1910-0.2/40	Wainwright	22/24/27
TM38214	Band reject filter	WRCT 2402/2480-2400/2483.5-30	Wainwright	15C
TM30642	Mast/Turntable controller	HD-100	Deisel	22/24/27, 15C, 15B
TM26500	Turntable	DS412	Deisel	22/24/27, 15C, 15B
TM38842	Antenna mast controller	2090	EMCO	22/24/27, 15C, 15B
TM38843	Antenna mast	2075	EMCO	22/24/27, 15C, 15B
TM38114	DC power supply	6632A	Agilent	22/24/27, 15C, 15B
TM38323	Preamplifier	PA-02 18-26 GHz	EMC Automation	22/24/27, 15C, 15B
TM37678	Radio communication tester	CMU-200	R&S	22/24/27, 15C, 15B
TM22638	Power supply	OL63743-901	Transmatic	22/24/27, 15C, 15B

Eq. No	Equipment	Type	Manufacturer	Used in
TM23892	Yaesu controller	G-1000SDX	Yaesu	22/24/27, 15C, 15B
2001	Bluetooth tester	CBT	R&S	22/24/27, 15C, 15B
2002	Radio communication tester	CMU-200	R&S	22/24/27, 15C, 15B