

FCC Part 15B Compliance Test Report

Test Report no.:	FCC15B_RM-662_16	Date of Report:	22-July-2010
Number of pages:	17	Customer's Contact person:	Vivian Kill-Tollnek
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FCC listing no.:	99059		
IC recognition no.:	661AL-1		
Tested devices/ accessories:	Phone RM-662 / Battery BL-5CT / AC-Charger AC-8E / Headset WH-102		
FCC ID:	PPIRM-662	IC:	661U-RM662
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 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:			

Christian Andersen, System Specialist, EMC

1. Summary for FCC Part 15B Compliance Test Report

Date of receipt	03-Jun-2010
Testing completed	07-July-2010
The customer's contact person	Vivian Kill-Tollnek
Test Plan referred to	T:\Projects\RM-640\TestPlan\RS_testplan_RM-640.xls
Notes	-
Document name	T:\Projects\RM-640\EMC\FCC15B_RM-640_16

1.1. EUT and Accessory Information

The EUT is a 4-band (GSM850/900/1800/1900) mobile phone with GPRS, EGPRS, and WLAN and Bluetooth.

Product	Type	SN	HW	MV	SW	DUT
Phone	RM-640	004402/13/036951/9	0210	-	re 5.04	24275
Phone	RM-640	004402/13/036907/1	0210	-	re 5.04	24276
Battery	BL-5CT	3820669492155081010;0670555	-	-	-	24257
Battery	BL-5CT	3820669492155081011;0670555	-	-	-	24253
AC-Charger	AC-8E	4090499301040501808;0675387	-	-	-	24255
AC-Charger	AC-8E	4090499301040501988;0675387	-	-	-	24254
Headset	WH-102	06943239431A4102158	-	-	-	24240
Headset	WH-102	06943239431A4102154	-	-	-	24241

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

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 (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	PASSED
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 PPIRM-640 are re-used for certification of the PPIRM-662. The table above indicates the results, which will be re-used.

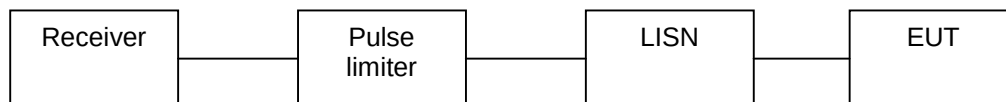
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2. AC powerline conducted emissions (FCC §15.107, ICES-003 section 5.3)

EUT with DUT number	RM-640, DUT 24276
Accessories with DUT numbers	BL-5CT, DUT 24253 ; AC-8E, DUT 24254 ; WH-102, DUT 24241
Operation Voltage [V] / [Hz]	115 / 60
Result	Passed
Remarks	None
Temp [°C] / Humidity [%RH] / Air Pressure [kPa]	24 / 42 / 100.7
Date of measurements	22-Jun-2010
Measured by	Bo Moltved Christiansen

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:

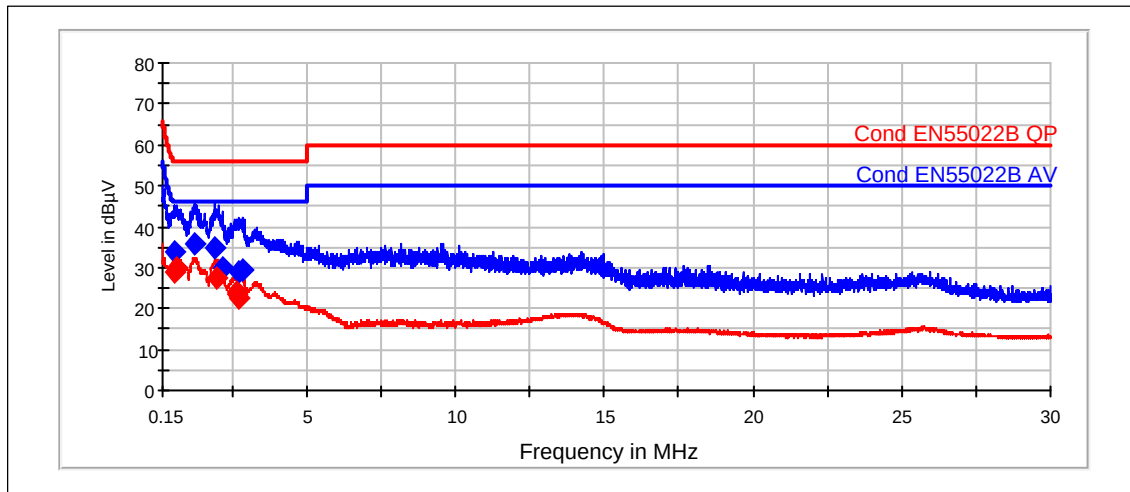
$$U [dB\mu V] = U_{RX} + A_{TOT}$$

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

BT TX



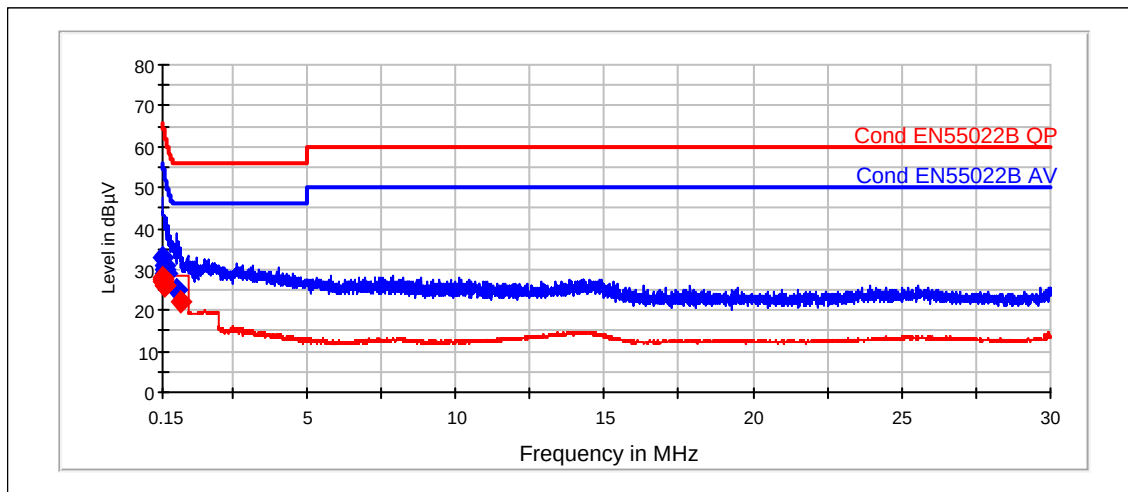
Quasi peak

Frequency [MHz]	Level [dBμV]	IF-BW[kHz]	Line	Margin	Result
0.54	34.04	10	L1	22	PASSED
1.24	35.79	10	N	20.2	PASSED
1.925	34.99	10	N	21	PASSED
2.15	30.09	10	N	25.9	PASSED
2.74	28.87	10	N	27.1	PASSED
2.855	29.57	10	N	26.4	PASSED

Average

Frequency [MHz]	Level [dBμV]	IF-BW[kHz]	Line	Margin	Result
0.54	29.12	10	N	16.9	PASSED
0.625	29.93	10	N	16.1	PASSED
1.96	27.36	10	N	18.6	PASSED
2.635	24	10	N	22	PASSED
2.665	23.34	10	N	22.7	PASSED
2.73	22.46	10	N	23.5	PASSED

WLAN 802.11b DSSS



Quasi peak

Frequency [MHz]	Level [dBμV]	IF-BW[kHz]	Line	Margin	Result
0.15	33	10	N	33	PASSED
0.2	30.74	10	N	32.91	PASSED
0.21	30.11	10	N	33.11	PASSED
0.24	29.05	10	N	33.1	PASSED
0.29	28.86	10	N	31.62	PASSED
0.61	24.84	10	N	31.2	PASSED

Average

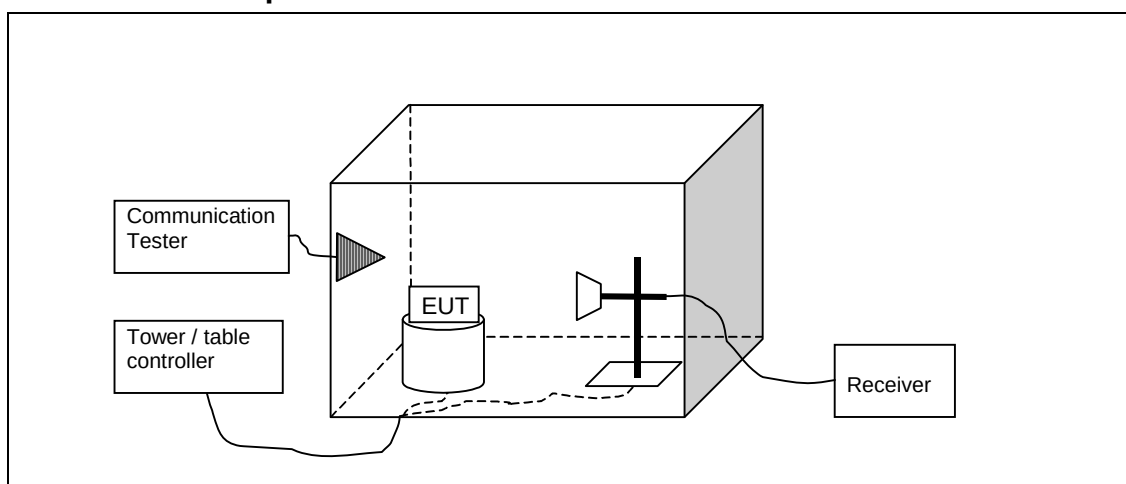
Frequency [MHz]	Level [dBμV]	IF-BW[kHz]	Line	Margin	Result
0.16	27.95	10	N	27.56	PASSED
0.17	27.37	10	N	27.56	PASSED
0.18	27.11	10	L1	27.39	PASSED
0.195	26.08	10	L1	27.72	PASSED
0.205	25.81	10	N	27.61	PASSED
0.755	21.99	10	N	24	PASSED

3. Radiated emissions

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

EUT with DUT number	RM-640, DUT 24275
Accessories with DUT numbers	BL-5CT, DUT 24257 ; AC-8E, DUT 24255 ; WH-102, DUT 24240
Operation Voltage [V] / [Hz]	115 / 60
Result	PASSED
Remarks	Phone is tested with FM receiver active.
Temp [°C] / Humidity [%RH] / Air Pressure [kPa]	23 / 44 / 101
Date of measurements	22-Jun-2010
Measured by	Ruben Hansen

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:

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

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]	Limit [$\mu V/m$]	Limit [dB $\mu V/m$]	Peak limit [dB $\mu V/m$]
30 - 230	40	-	-
230 – 1000	47	-	-
Above 1000	-	54	74

3.3. GSM850 Test results

RX mode, channel 128 / 869.2 MHz

Average(RBW: 1 MHz)

Frequency [MHz]	E [dBμV/m]	E [μV/m]	U _{RX} [dBμV]	A _{TOT} [dB]	Polarisation	Result
3477.1	22.9	13.97	25.72	-2.82	VERTICAL	PASSED
6952.2	43.66	152.405	33.77	9.89	VERTICAL	PASSED

Peak (RBW: 1 MHz)

Frequency [MHz]	E [dBμV/m]	E [μV/m]	U _{RX} [dBμV]	A _{TOT} [dB]	Polarisation	Result
3477.1	36.29	65.268	39.11	-2.82	VERTICAL	PASSED
6952.2	56.38	659.25	46.49	9.89	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
43.978	15.3	5.821	35.66	-20.36	VERTICAL	PASSED
87.96	50.09	319.448	74.29	-24.2	VERTICAL	PASSED
88.036	50.02	316.811	74.22	-24.2	VERTICAL	PASSED
89.812	42.41	131.902	66.59	-24.18	VERTICAL	PASSED
107.972	47.83	246.349	71.56	-23.73	VERTICAL	PASSED
107.996	47.86	247.172	71.59	-23.73	VERTICAL	PASSED
196.082	42.21	129.018	68.26	-26.05	VERTICAL	PASSED

*87MHz -196MHz frequency is coming from the FM Radio tester and thus ignored.

Average(RBW: 1 MHz)

Frequency [MHz]	E [dBμV/m]	E [μV/m]	U _{RX} [dBμV]	A _{TOT} [dB]	Polarisation	Result
3944.688	24.53	16.836	25.52	-0.99	VERTICAL	PASSED

Peak (RBW: 1 MHz)

Frequency [MHz]	E [dBμV/m]	E [μV/m]	U _{RX} [dBμV]	A _{TOT} [dB]	Polarisation	Result
3944.688	37.75	77.161	38.74	-0.99	VERTICAL	PASSED

RX mode, channel 251 / 893.8 MHz

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
3574.3	22.98	14.09	25.11	-2.13	VERTICAL	PASSED
7151.5	35.5	59.566	24.84	10.66	VERTICAL	PASSED

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
3574.3	35.97	62.856	38.1	-2.13	VERTICAL	PASSED
7151.5	48.49	265.858	37.83	10.66	VERTICAL	PASSED

3.4. GSM1900 Test results

RX mode, channel 512 / 1930.2 MHz

Average(RBW: 1 MHz)

Frequency [MHz]	E [dBμV/m]	E [μV/m]	U _{RX} [dBμV]	A _{TOT} [dB]	Polarisation	Result
3858.7	25.35	18.518	26.48	-1.13	VERTICAL	PASSED
7719.3	35.95	62.697	24.39	11.56	VERTICAL	PASSED

Peak (RBW: 1 MHz)

Frequency [MHz]	E [dBμV/m]	E [μV/m]	U _{RX} [dBμV]	A _{TOT} [dB]	Polarisation	Result
3858.7	38.35	82.708	39.48	-1.13	VERTICAL	PASSED
7719.3	49.39	294.646	37.83	11.56	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
87.976	50.3	327.378	74.5	-24.2	VERTICAL	PASSED
88.05	50.43	332.086	74.63	-24.2	VERTICAL	PASSED
89.812	42.63	135.316	66.81	-24.18	VERTICAL	PASSED
106.18	38.8	87.086	62.57	-23.77	VERTICAL	PASSED
107.972	48.41	263.451	72.14	-23.73	VERTICAL	PASSED
107.976	48.4	262.936	72.13	-23.73	VERTICAL	PASSED
196.082	42.33	130.737	68.38	-26.05	VERTICAL	PASSED

*87MHz -196MHz frequency is coming from the FM Radio tester and thus ignored.

Average(RBW: 1 MHz)

Frequency [MHz]	E [dBμV/m]	E [μV/m]	U _{RX} [dBμV]	A _{TOT} [dB]	Polarisation	Result
7042.783	34.73	54.532	24.22	10.51	VERTICAL	PASSED

Peak (RBW: 1 MHz)

Frequency [MHz]	E [dBμV/m]	E [μV/m]	U _{RX} [dBμV]	A _{TOT} [dB]	Polarisation	Result
7042.783	47.8	245.499	37.29	10.51	VERTICAL	PASSED

RX mode, channel 810 / 1989.8 MHz

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
3980.1	24.75	17.27	25.68	-0.93	HORIZONTAL	PASSED
7961.3	37.04	71.146	24.29	12.75	VERTICAL	PASSED

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
3980.1	37.54	75.37	38.47	-0.93	HORIZONTAL	PASSED
7961.3	50.58	338.143	37.83	12.75	VERTICAL	PASSED

3.5. Bluetooth Test results

3.5.1 GFSK modulation, PRBS packet type

RX mode, Channel MHz

Average(RBW: 1 MHz)

Frequency [MHz]	E [dBμV/m]	E [μV/m]	U _{RX} [dBμV]	A _{TOT} [dB]	Polarisation	Result
3941.287	24.64	17.057	25.65	-1.01	HORIZONTAL	PASSED

Peak (RBW: 1 MHz)

Frequency [MHz]	E [dBμV/m]	E [μV/m]	U _{RX} [dBμV]	A _{TOT} [dB]	Polarisation	Result
3941.287	37.6	75.84	38.61	-1.01	HORIZONTAL	PASSED

RX mode, Channel 40 / 2442 MHz

Average(RBW: 1 MHz)

Frequency [MHz]	E [dBμV/m]	E [μV/m]	U _{RX} [dBμV]	A _{TOT} [dB]	Polarisation	Result
1989.919	45.56	189.758	48.57	-3.01	VERTICAL	PASSED

Quasi peak (RBW: 120 kHz)

Frequency [MHz]	E [dBμV/m]	E [μV/m]	U _{RX} [dBμV]	A _{TOT} [dB]	Polarisation	Result
88.036	50.79	346.418	74.83	-24.04	VERTICAL	PASSED
88.05	50.61	339.352	74.65	-24.04	VERTICAL	PASSED
89.812	42.52	133.69	66.53	-24.01	VERTICAL	PASSED
107.976	48.27	258.97	71.78	-23.51	VERTICAL	PASSED
196.082	44.01	158.69	69.95	-25.94	VERTICAL	PASSED

*88MHz -196MHz frequency is coming from the FM Radio tester and thus ignored.

Peak (RBW: 1 MHz)

Frequency [MHz]	E [dBμV/m]	E [μV/m]	U _{RX} [dBμV]	A _{TOT} [dB]	Polarisation	Result
1989.919	49.14	286.352	52.15	-3.01	VERTICAL	PASSED

RX mode, Channel 78 / 2480 MHz

Average(RBW: 1 MHz)

Frequency [MHz]	E [dBμV/m]	E [μV/m]	U _{RX} [dBμV]	A _{TOT} [dB]	Polarisation	Result
4957.5	30.32	32.817	27.95	2.37	HORIZONTAL	PASSED
7441.1	35.58	60.097	23.98	11.6	HORIZONTAL	PASSED

Peak (RBW: 1 MHz)

Frequency [MHz]	E [dBμV/m]	E [μV/m]	U _{RX} [dBμV]	A _{TOT} [dB]	Polarisation	Result
4957.5	43.6	151.269	41.23	2.37	HORIZONTAL	PASSED
7441.1	49.16	287.045	37.56	11.6	HORIZONTAL	PASSED

3.6. WLAN DSSS 11Mbps mode

Channel 1 / 2412 MHz

Average(RBW: 1 MHz)

Frequency [MHz]	E [dBμV/m]	E [μV/m]	U _{RX} [dBμV]	A _{TOT} [dB]	Polarisation	Result
4825.4	28.4	26.315	26.84	1.56	HORIZONTAL	PASSED
7237.1	34.29	51.826	24.37	9.92	VERTICAL	PASSED

Peak (RBW: 1 MHz)

Frequency [MHz]	E [dBμV/m]	E [μV/m]	U _{RX} [dBμV]	A _{TOT} [dB]	Polarisation	Result
4825.4	41.17	114.419	39.61	1.56	HORIZONTAL	PASSED
7237.1	46.81	218.953	36.89	9.92	VERTICAL	PASSED

Channel 7 / 2442 MHz

Average(RBW: 1 MHz)

Frequency [MHz]	E [dBμV/m]	E [μV/m]	U _{RX} [dBμV]	A _{TOT} [dB]	Polarisation	Result
2353.926	38.9	88.115	38.94	-0.04	VERTICAL	PASSED
2363.389	45.54	189.278	46.01	-0.47	VERTICAL	PASSED
11463.728	42.7	136.49	24.4	18.3	HORIZONTAL	PASSED
11511.122	42.77	137.562	24.34	18.43	VERTICAL	PASSED

Quasi peak (RBW: 100 kHz)

Frequency [MHz]	E [dBμV/m]	E [μV/m]	U _{RX} [dBμV]	A _{TOT} [dB]	Polarisation	Result
48.867	33.51	47.359	51.22	-17.71	VERTICAL	PASSED
49.099	33.29	46.206	51.16	-17.87	VERTICAL	PASSED
49.147	33.41	46.827	51.31	-17.9	VERTICAL	PASSED
49.22	33.52	47.402	51.47	-17.95	VERTICAL	PASSED
49.888	32.94	44.371	51.36	-18.42	VERTICAL	PASSED

Peak (RBW: 1 MHz)

Frequency [MHz]	E [dBμV/m]	E [μV/m]	U _{RX} [dBμV]	A _{TOT} [dB]	Polarisation	Result
2353.926	51.07	357.479	51.11	-0.04	VERTICAL	PASSED
2363.389	55.41	589.658	55.88	-0.47	VERTICAL	PASSED
11463.728	55.46	592.721	37.16	18.3	HORIZONTAL	PASSED
11511.122	55.72	611.083	37.29	18.43	VERTICAL	PASSED

Channel 11 / 2462 MHz

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
4925.4	30.29	32.689	27.9	2.39	VERTICAL	PASSED
7385.1	36.22	64.684	24.3	11.92	VERTICAL	PASSED

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
4925.4	43.23	145.111	40.84	2.39	VERTICAL	PASSED
7385.1	49.75	307.15	37.83	11.92	VERTICAL	PASSED

4. Test Equipment

4.1. Conducted measurements

Eq. No	Equipment	Type	Manufacturer	Used in
20168	Bluetooth Tester	CBT	Rohde&Schwarz	22/24/27, 15C, 15B
18772	Shielded Chamber	RFD-100	ETS-Lindgren	15C, 15B
13037	Power Supply 0-15V 10A	EA3012	LP Instruments	15C, 15B
13513	Pulse Limiter	ESH3Z2	Rohde&Schwarz	15C, 15B
13666	Receiver	ESPC	Rohde&Schwarz	15C, 15B
13935	LISN	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	Communication Tester	CMU200	Rohde&Schwarz	15C, 15B
11386	DC Power Supply	HP6632A	Hewlett Packard	22/24/27, 15C, 15B
19678	Spectrum Analyzer	FSP	Rohde&Schwarz	22/24/27, 15C, 15B
16601	Communication Tester	CMU200	Rohde&Schwarz	22/24/27, 15C, 15B
19625	Climatic Chamber	VT4002EMC	Vötsch	22/24/27, 15C, 15B
13357	Signal Generator	SMP02	Rohde&Schwarz	22/24/27, 15C, 15B
19116	Power splitter	-	various	22/24/27, 15C, 15B
20544	Transformer. 230/115V	-	Nokia	22/24/27, 15C, 15B
20543	UPS. 700V/A 490W	PW 9120 700i	Powerware	22/24/27, 15C, 15B

4.2. Radiated measurements

Eq. No	Equipment	Type	Manufacturer	Used in
18792	Mast/turntable controller	2090	ETS-EMCO	22/24/27, 15C, 15B
18416	Communication Tester	CMU200	Rohde&Schwarz	22/24/27, 15C, 15B
20168	Bluetooth Tester	CBT	Rohde&Schwarz	22/24/27, 15C, 15B
13077	Power Supply	EA-3016	-	22/24/27, 15C, 15B
15742	Programmable Relay Switching System	-----	Pickering	22/24/27, 15C, 15B
20078	Relay 2x6 Chnl μ Wave Mux	10-785B-522	Pickering	22/24/27, 15C, 15B
14021	Relay Dual 6 Chnl μ Wave Mux	10-785-522	-	22/24/27, 15C, 15B
-	Relay Dual 6 Chnl μ Wave Mux	10-785-522	-	22/24/27, 15C, 15B
17644	Dual 6 Channel MUX Microwave Relay SMA 50 Ohm	10-785-522	Pickering	22/24/27, 15C, 15B
16948	Dual 6 Channel MUX Microwave Relay SMA 50 Ohm	10-785-522	Pickering	22/24/27, 15C, 15B
16949	Dual 6 Channel MUX Microwave Relay SMA 50 Ohm	10-785-522	Pickering	22/24/27, 15C, 15B
18861	Receiver	EMI Test Receiver 20Hz-26,5GHz ESI	Rohde&Schwarz	22/24/27, 15C, 15B
18860	Antenna	HL562	Rohde&Schwarz	22/24/27, 15C, 15B
18773	Anechoic chamber	RFD-100	ETS-Lindgren	22/24/27, 15C, 15B
18774	Anechoic chamber	RFSD-F/A-100	ETS-Lindgren	22/24/27, 15C, 15B
19151	High Pass Filter	WHJS3000-10SS	Wainwright	22/24/27, 15C, 15B
13937	Band reject filter	WRCA902.4-0.2/40-6SS	Wainwright Instruments	22/24/27, 15C, 15B
13936	Band reject filter	WRCD1747.5-0.2/40-10SS	Wainwright Instruments	22/24/27, 15C, 15B
14114	Highpass Filter	WHK1000-12SS	Wainwright Instruments	22/24/27, 15C, 15B

Eq. No	Equipment	Type	Manufacturer	Used in
14188	Band reject filter	WRCA902.4-0.2/40-6SS	Wainwright	22/24/27, 15C, 15B
14187	Band reject filter	WRCD1747.5-0.2/40-10SS	Wainwright	22/24/27, 15C, 15B
16633	Band reject filter	WRCD1880.0-0.2/40-10SS	Wainwright	22/24/27, 15C, 15B
19587	Band reject filter	WRCG2400/2483-2390/2493-35/10SS	Wainwright	22/24/27, 15C, 15B
20115	Band reject filter	-	Wainwright	22/24/27, 15C, 15B
20114	Band reject filter	WRCG1737/1743-1733/1747-40/6SS	Wainwright	22/24/27, 15C, 15B
20116	Band reject filter	WRCG832/83/-825/845-40/5SS	Wainwright	22/24/27, 15C, 15B
20698	Antenna	BBHA 9120 D	SCHWARZBECK	22/24/27, 15C, 15B
19966	Antenna	HFH2-Z2	Rohde&Schwarz	15C, 15B
13799	Signal Generator	SMP02	Rohde&Schwarz	22/24/27, 15C, 15B
15191	Turntable Contoller Unit	G-800SDX	YAESU	22/24/27, 15C, 15B
14900	Antenna Controller	HD100	HD GmbH	22/24/27, 15C, 15B
20544	Transformer. 230/115V	-	Nokia	22/24/27, 15C, 15B
20543	UPS. 700V/A 490W	PW 9120 700i	Powerware	22/24/27, 15C, 15B