

FCC Part 15B Compliance Test Report

Test Report no.:	Cph_FCC_0734_04.doc	Date of Report:	29-08-2007
Number of pages:	14	Customer's Contact person:	Thomas Reitmayer
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FCC listing no.:	99059		
IC recognition no.:	661AD-1		
Tested devices/ accessories:	Phone; RM-322 (HW: 0211), Battery; BL-4C, AC-Charger; AC-5E, Laptop; T-43, Printer; CDP-2000A, Data Cable; DKE-2		
FCC ID:	PPIRM-322	IC:	661U-RM322
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	15-08-2007
Testing completed	29-08-2007
The customer's contact person	Thomas Reitmayer
Test Plan referred to	T:\Projects\RM-322\TestPlan_RS\RS_Testplan_RM-322.xls
Notes	None
Document name	T:\Projects\RM-322\EMC\Results\FCC\Cph_FCC_0734_04.doc

1.1. EUT and Accessory Information

The EUT is a 3-band (GSM900/1800/1900) mobile phone with GPRS, EGPRS, Bluetooth and WLAN. GSM band is tested in idle mode. Bluetooth and WLAN are tested with maximum rated TX power.

Product	Type	SN	HW	MV	SW	DUT
Phone	RM-322	004401/01/363491/6	0211	-	pr3.50.1	27198
Battery	BL-4C	0670389382066N524F1AW00979	-	-	-	27187
AC-Charger	AC-5E	3943497104090614544;0675540	-	-	-	27186
Data Cable	DKE-2	108882553108	-	-	-	27185
Laptop	T-43	L3FLF78	-	-	-	29203
Printer	CDP-2000A	0603334	-	-	-	29202
Phone	RM-322	004401/01/363534/3	0211	-	pr3.50.1	27199
Battery	BL-4C	0670389382066N524F1AW00261	-	-	-	27194
AC Charger	AC-5E	3943497104090614625;0675540	-	-	-	27192

1.2. Summary of Test Results

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.

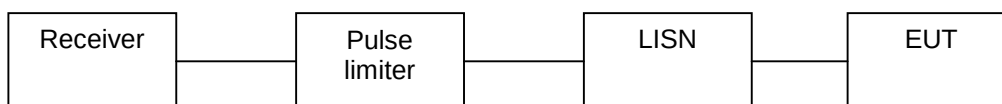
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2. AC powerline conducted emissions (FCC §15.107, ICES-003 section 5.3)

EUT with DUT number	RM-322 Dut 27198
Accessories with DUT numbers	BL-4C Dut 27187 + AC-5E Dut 27186 + DKE-2 Dut 27185 + T43 Dut 29203
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]	22.7 / 58.0 102.0
Date of measurements	23-08-2007
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:

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

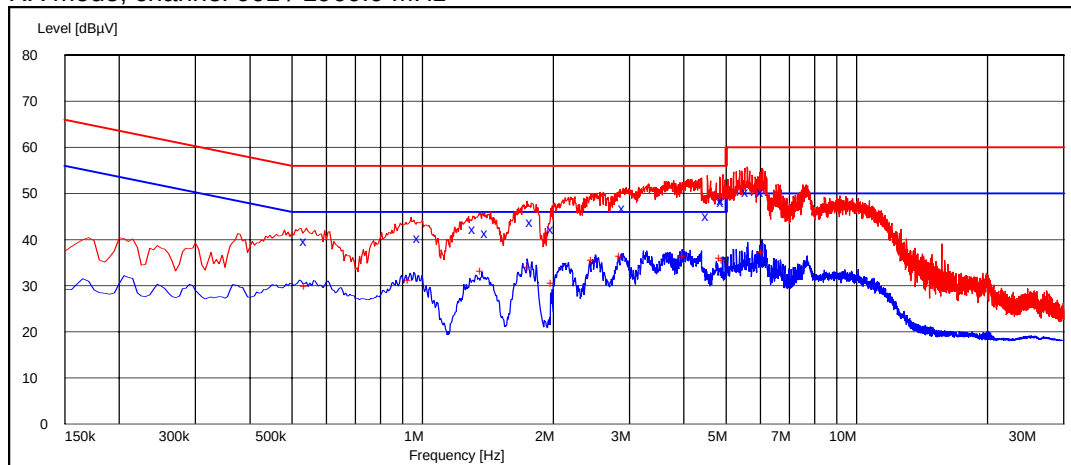
Where U_{RX} is receiver reading and A_{TOT} is total correction factor including cable and pulse limiter attenuations.

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 1900 Test results

RX mode, channel 661 / 1960.0 MHz



Quasi peak (RBW: 9 kHz)

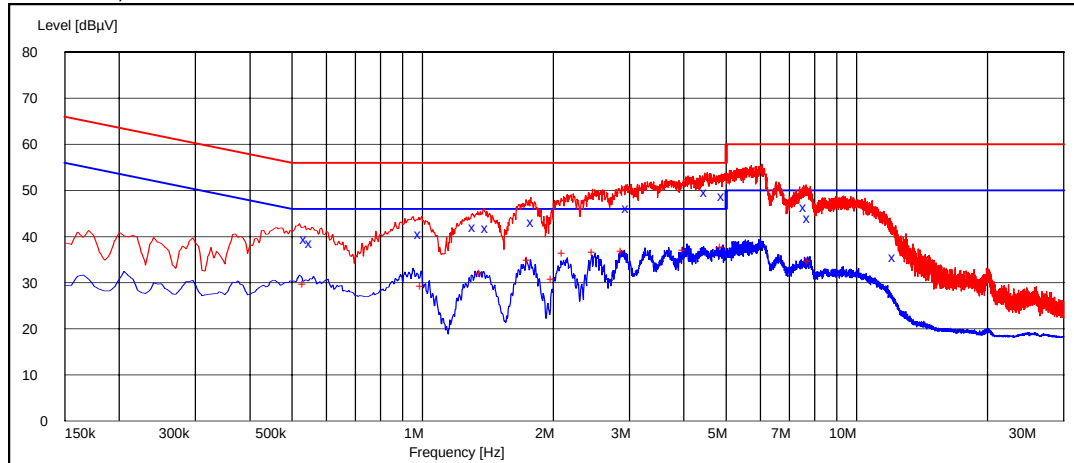
Frequency [MHz]	U [dBμV]	Line	Result
0.540000	39.60	N	Passed
0.985000	40.30	N	Passed
1.320000	42.40	N	Passed
1.410000	41.40	N	Passed
1.790000	43.70	N	Passed
2.000000	42.30	N	Passed
2.920000	46.80	N	Passed
4.550000	45.10	L1	Passed
4.930000	48.50	N	Passed
4.935000	48.10	N	Passed
5.630000	50.30	N	Passed
6.085000	50.30	N	Passed

Average (RBW: 9 kHz)

Frequency [MHz]	U [dBμV]	Line	Result
0.540000	30.00	N	Passed
0.935000	31.10	N	Passed
1.375000	33.20	N	Passed
1.770000	34.00	N	Passed
2.000000	30.60	N	Passed
2.480000	35.60	N	Passed
2.875000	36.50	N	Passed
4.015000	36.40	N	Passed
4.875000	36.10	N	Passed
4.945000	35.50	N	Passed
6.100000	37.30	N	Passed

2.4. Bluetooth Test results

TX mode, channel 40 / 2442 MHz



Quasi peak (RBW: 9 kHz)

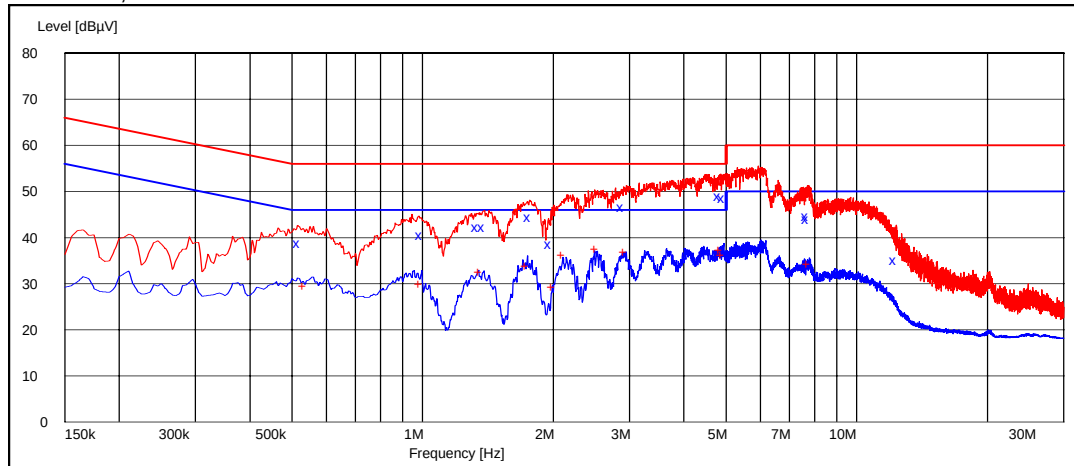
Frequency [MHz]	U [dBμV]	Line	Result
0.540000	39.40	N	Passed
0.555000	38.70	N	Passed
0.990000	40.60	N	Passed
1.320000	42.00	N	Passed
1.415000	41.90	N	Passed
1.800000	43.20	N	Passed
2.980000	46.20	N	Passed
4.520000	49.70	N	Passed
4.950000	48.80	N	Passed
7.650000	46.40	N	Passed
7.810000	43.90	N	Passed
12.270000	35.50	L1	Passed

Average (RBW: 9 kHz)

Frequency [MHz]	U [dBμV]	Line	Result
0.535000	29.70	N	Passed
1.000000	29.30	N	Passed
1.365000	32.10	N	Passed
1.760000	34.80	N	Passed
2.000000	30.70	N	Passed
2.120000	36.40	N	Passed
2.485000	36.60	N	Passed
2.900000	36.80	N	Passed
4.025000	37.10	N	Passed
4.910000	37.60	N	Passed
7.775000	34.60	N	Passed

2.5. WLAN Test results

RX mode, channel 7 / 2442 MHz



Quasi peak (RBW: 9 kHz)

Frequency [MHz]	U [dBμV]	Line	Result
0.520000	38.90	N	Passed
0.995000	40.50	N	Passed
1.340000	42.20	N	Passed
1.385000	42.30	N	Passed
1.770000	44.50	N	Passed
1.975000	38.70	N	Passed
2.900000	46.70	N	Passed
4.850000	49.10	N	Passed
4.955000	48.50	N	Passed
7.710000	44.60	N	Passed
7.745000	44.00	N	Passed
12.305000	35.10	L1	Passed

Average (RBW: 9 kHz)

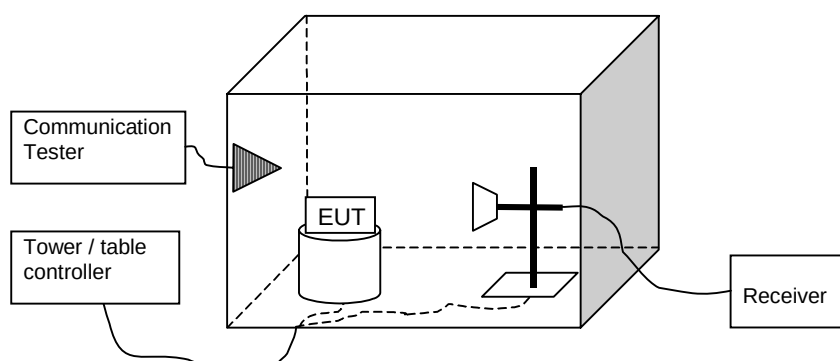
Frequency [MHz]	U [dBμV]	Line	Result
0.535000	29.60	N	Passed
0.990000	30.00	N	Passed
1.360000	32.50	N	Passed
1.740000	33.80	N	Passed
2.000000	29.30	N	Passed
2.115000	36.20	N	Passed
2.520000	37.50	N	Passed
2.930000	36.80	N	Passed
4.860000	37.20	N	Passed
4.920000	36.30	N	Passed
7.760000	34.30	N	Passed

3. Radiated emissions

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

EUT with DUT number	RM-322 Dut 27199
Accessories with DUT numbers	BL-4C Dut 27194 + AC-5E Dut 27192 + DKE-2 Dut 27185 + T-43 Dut 29203 + CDP-2000A Dut 29202
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]	22.9 / 40.0 101.0
Date of measurements	29-08-2007
Measured by	Allan F. Henriksen

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 1900 Test results

RX mode, channel 512 / 1930.2 MHz

Quasi peak (RBW: 120 kHz)

Frequency [MHz]	E [dBμV/m]	E [μV/m]	U _{RX} [dBμV]	A _{TOT} [dB]	Polarisation	Result
3860.000000	40.50	105.93	40.80	-0.3	VERTICAL	Passed
7720.000000	45.90	197.24	37.40	8.5	VERTICAL	Passed

Average (RBW: 1 MHz)

Frequency [MHz]	E [dBμV/m]	E [μV/m]	U _{RX} [dBμV]	A _{TOT} [dB]	Polarisation	Result
3860.000000	27.80	24.55	28.10	-0.3	VERTICAL	Passed
7720.000000	29.90	31.26	21.40	8.5	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
30.800000	32.00	39.81	39.30	-7.3	VERTICAL	Passed
33.507214	32.10	40.27	41.10	-9.0	VERTICAL	Passed
63.126854	29.50	29.85	53.60	-24.1	VERTICAL	Passed
257.415230	39.50	94.41	58.00	-18.5	VERTICAL	Passed
429.158918	28.20	25.70	41.60	-13.4	VERTICAL	Passed
798.497194	32.80	43.65	39.70	-6.9	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
3919.839679	40.80	109.65	41.20	-0.4	VERTICAL	Passed
7840.179359	48.10	254.10	39.20	8.9	VERTICAL	Passed

Average (RBW: 1 MHz)

Frequency [MHz]	E [dBμV/m]	E [μV/m]	U _{RX} [dBμV]	A _{TOT} [dB]	Polarisation	Result
2295.589178	40.20	102.33	34.30	5.9	VERTICAL	Passed
2987.967936	40.40	104.71	28.80	11.6	VERTICAL	Passed
3919.839679	27.70	24.27	28.10	-0.4	VERTICAL	Passed
7840.179359	32.80	43.65	23.90	8.9	VERTICAL	Passed

RX mode, channel 810 / 1989.8 MHz

Quasi peak (RBW: 120 kHz)

Frequency [MHz]	E [dBμV/m]	E [μV/m]	U _{RX} [dBμV]	A _{TOT} [dB]	Polarisation	Result
3980.000000	40.40	104.71	40.80	-0.4	VERTICAL	Passed
7960.000000	44.90	175.79	35.80	9.1	VERTICAL	Passed

Average (RBW: 1 MHz)

Frequency [MHz]	E [dBμV/m]	E [μV/m]	U _{RX} [dBμV]	A _{TOT} [dB]	Polarisation	Result
3980.000000	27.60	23.99	28.00	-0.4	VERTICAL	Passed
7960.000000	30.00	31.62	20.90	9.1	VERTICAL	Passed

3.4. Bluetooth Test results

TX mode, channel 0 / 2402 MHz

Quasi peak (RBW: 120 kHz)

Frequency [MHz]	E [dBμV/m]	E [μV/m]	U _{RX} [dBμV]	A _{TOT} [dB]	Polarisation	Result
4824.000000	38.00	79.43	37.40	0.6	VERTICAL	Passed
7236.000000	42.00	125.89	34.80	7.2	VERTICAL	Passed

Average (RBW: 1 MHz)

Frequency [MHz]	E [dBμV/m]	E [μV/m]	U _{RX} [dBμV]	A _{TOT} [dB]	Polarisation	Result
4824.000000	24.70	17.18	24.10	0.6	VERTICAL	Passed
7236.000000	28.80	27.54	21.60	7.2	VERTICAL	Passed

TX 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
38.176353	16.30	6.53	34.20	-17.9	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
4910.823647	37.30	73.28	36.30	1.0	HORIZONTAL	Passed
7343.691383	41.80	123.03	33.80	8.0	VERTICAL	Passed
7421.335671	43.10	142.89	35.10	8.0	VERTICAL	Passed

17868.239479	59.80	977.24	30.80	29.0	HORIZONTAL	Passed
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Average (RBW: 1 MHz)

Frequency [MHz]	E [dBμV/m]	E [μV/m]	U _{RX} [dBμV]	A _{TOT} [dB]	Polarisation	Result
4911.323647	24.40	16.60	23.40	1.0	HORIZONTAL	Passed
4964.935872	25.90	19.72	24.50	1.4	VERTICAL	Passed
7349.691383	29.20	28.84	21.00	8.2	VERTICAL	Passed
7421.835671	29.70	30.55	21.70	8.0	VERTICAL	Passed
17870.239479	46.60	213.80	17.60	29.0	HORIZONTAL	Passed

TX 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	38.20	81.28	37.10	1.1	VERTICAL	Passed
7386.000000	41.50	118.85	33.40	8.1	VERTICAL	Passed

Average (RBW: 1 MHz)

Frequency [MHz]	E [dBμV/m]	E [μV/m]	U _{RX} [dBμV]	A _{TOT} [dB]	Polarisation	Result
4924.000000	25.50	18.84	24.40	1.1	VERTICAL	Passed
7386.000000	28.80	27.54	20.70	8.1	VERTICAL	Passed

3.5. WLAN Test results

RX mode, channel 1

Quasi peak (RBW: 120 kHz)

Frequency [MHz]	E [dBμV/m]	E [μV/m]	U _{RX} [dBμV]	A _{TOT} [dB]	Polarisation	Result
4824.000000	37.60	75.86	37.00	0.6	VERTICAL	Passed
7236.000000	41.90	124.45	34.70	7.2	VERTICAL	Passed

Average (RBW: 1 MHz)

Frequency [MHz]	E [dBμV/m]	E [μV/m]	U _{RX} [dBμV]	A _{TOT} [dB]	Polarisation	Result
4824.000000	25.00	17.78	24.40	0.6	VERTICAL	Passed
7236.000000	29.00	28.18	21.80	7.2	VERTICAL	Passed

TX 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
255.611022	31.80	38.90	56.10	-24.3	VERTICAL	Passed
276.953707	25.20	18.20	48.60	-23.4	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
7327.661323	42.70	136.46	35.40	7.3	VERTICAL	Passed
7415.335671	42.90	139.64	34.70	8.2	VERTICAL	Passed
7419.831663	43.40	147.91	35.40	8.0	VERTICAL	Passed
17466.439880	53.60	478.63	30.00	23.6	VERTICAL	Passed
17860.715431	61.20	1148.15	32.20	29.0	VERTICAL	Passed

Average (RBW: 1 MHz)

Frequency [MHz]	E [dBμV/m]	E [μV/m]	U _{RX} [dBμV]	A _{TOT} [dB]	Polarisation	Result
7330.661323	29.40	29.51	22.00	7.4	VERTICAL	Passed
7414.331663	30.10	31.99	21.90	8.2	VERTICAL	Passed
7420.335671	30.10	31.99	22.10	8.0	VERTICAL	Passed
17473.439880	40.50	105.93	16.70	23.8	VERTICAL	Passed
17859.215431	46.90	221.31	17.90	29.0	VERTICAL	Passed

TX 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	38.70	86.10	37.60	1.1	VERTICAL	Passed
7386.000000	42.10	127.35	34.00	8.1	VERTICAL	Passed

Average (RBW: 1 MHz)

Frequency [MHz]	E [dBμV/m]	E [μV/m]	U _{RX} [dBμV]	A _{TOT} [dB]	Polarisation	Result
4924.000000	25.60	19.05	24.50	1.1	VERTICAL	Passed
7386.000000	29.00	28.18	20.90	8.1	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 Preampfier 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