FCC Part 15C Compliance Test Report

Test Report no.:	FCC15C_RM-505_15.doc	**Date of Report:**	18-sep-2009
Number of pages:	33	**Customer's Contact person:**	Futoshi Kimura
Testing laboratory:	TCC Nokia Copenhagen Laboratory Frederikskaj 1790 COPENHAGEN V DENMARK Tel. +45 33 292929 Fax. +45 33 292934	**Customer:**	Nokia Corporation Arco Tower Shimomeguro 1-8-1 Meguro-ku TOKYO 153-0064 JAPAN Tel. +81 3 5759 7001 Fax. +81 3 5740 6858
FCC listing no.: **IC recognition no.:**	99059 661AD-1		
Tested devices/ accessories:	**Phone: RM-505 (HW4002), Battery BP-4L, AC Charger AC-10, Headset AD-54**		
FCC ID:	QVVRM-505	**IC:**	661AE-RM505
Supplement reports:			
Testing has been carried out in accordance with:	**CFR 47, FCC rules Part 15 Subpart C, ANSI C63.4 (2003), Public Notice DA 00-705, DTS procedures KDB 558074, IC standards RSS-GEN (Issue 2, June 2007) 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:	 Digitally signed by Ruben Hansen DN: cn=Ruben Hansen, o=Nokia, ou=CertMT, email=ruben.hansen@nokia.com, c=DK Date: 2009.11.23 12:09:14 +01'00'		

Ruben Hansen, System Manager, EMC

1. Summary for FCC Part 15C Compliance Test Report

Date of receipt	1-sep-2009
Testing completed	18-sep-2009
The customer's contact person	Futoshi Kimura
Test Plan referred to	T:\Projects\RM-505\TestPlan_RS\RS_testplan_RM-505.xls
Notes	None
Document name	FCC15C_RM-505_15.doc

1.1. EUT and Accessory Information

The EUT is a 7-band (GSM850/900/1800/1900 and WCDMA Band I/II(1900)/VIII) mobile phone with GPRS, EGPRS, Bluetooth, WLAN and FM transmitter. Bluetooth and WLAN are tested with maximum rated TX power.

Product	Type	SN	HW	MV	SW	DUT
Phone	RM-505	004401105517888	2901	-	12.0.024	24856
Phone	RM-505	004401105517904	2901	-	12.0.024	24852
Dummy Battery	SD-59TA	DQ170675	V0.1	-	-	-
Battery	BP-4L	3932138463260836423;0670520	-	-	-	24849
Charger	AC-10	3997918422120500394;0675408	-	-	-	24954
Headset	AD-54	0750838923673106998	-	-	-	24850

1.2. Summary of Test Results

WLAN:

Section in CFR 47	Section in *RSS-GEN* or RSS-210	Name of the test	Result
15.247(b)(1)	A8.4 (4)	Conducted peak output power	Passed
15.247(d)	A8.5	Band edge compliance of RF emissions	Passed
15.247(d)	A8.5	Spurious RF conducted emissions	Passed
15.247(d), 15.209	A8.5	Spurious radiated emissions	Passed
15.207	*7.2.2*	AC powerline conducted emissions	Passed
15.247(a)(2)	A8.2 (a)	6 dB bandwidth	Passed
15.247(e)	A8.2 (b)	Power spectral density	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 Copenhagen Laboratory.

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CONTENTS

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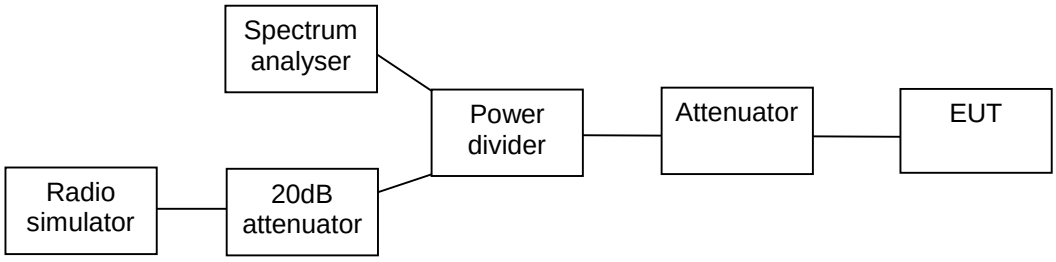
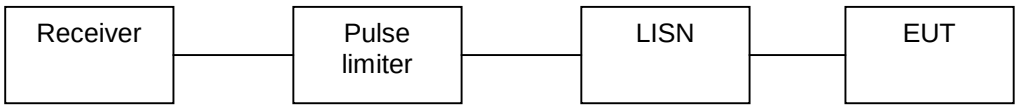
2. Test setups

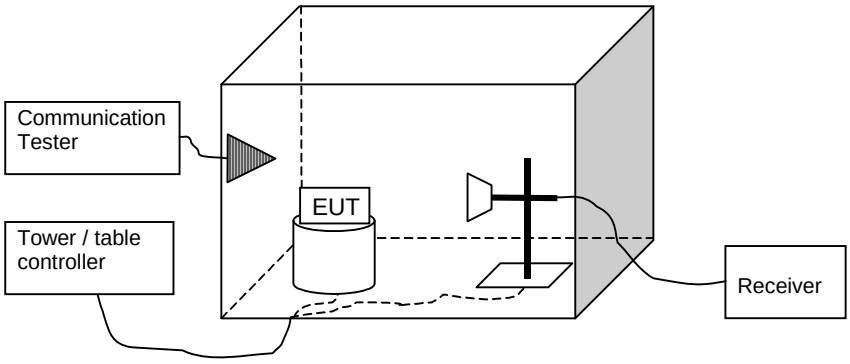
2.1. Conducted RF test setup



2.2. AC powerline conducted emissions test setup



2.3. Radiated test setup



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3. Conducted peak output power

(FCC §15.247(b)(1), RSS-210 A8.4 (4))

EUT with DUT number	Phone RM-505 DUT 24852
Accessories with DUT numbers	Dummy Battery SD-59TA DUT 24958
Operation Voltage [V] / [Hz]	-
Result	Passed
Remarks	None
Temp [°C] / Humidity [%RH] / Air Pressure [kPa]	22 / 48 / 1034
Date of measurements	8-sep-2009
Measured by	Ruben Hansen

3.1. Test method and limit

The measurement is made according to DTS procedures KDB 558074 and IC standard RSS-210.

Limits for conducted peak output power measurements

Frequency range [MHz]	Limit [W]	Limit [dBm]
2400 – 2483.5	≤ 1	≤ 30

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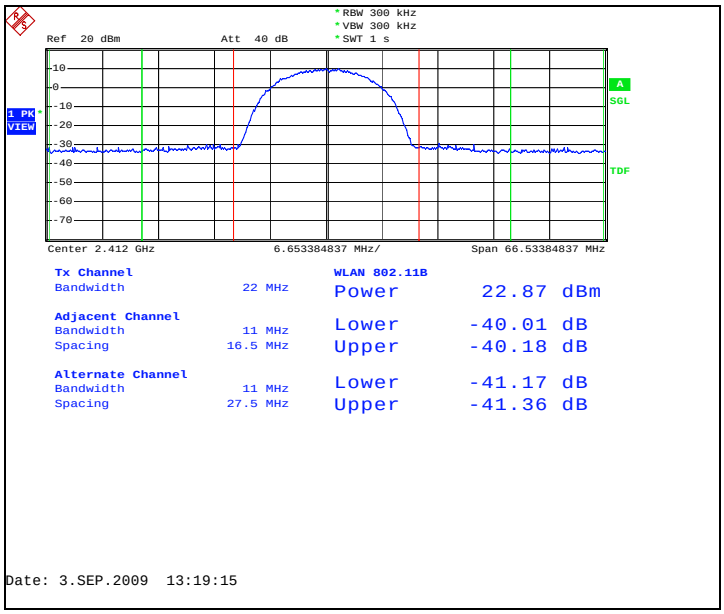
3.2. WLAN Test results

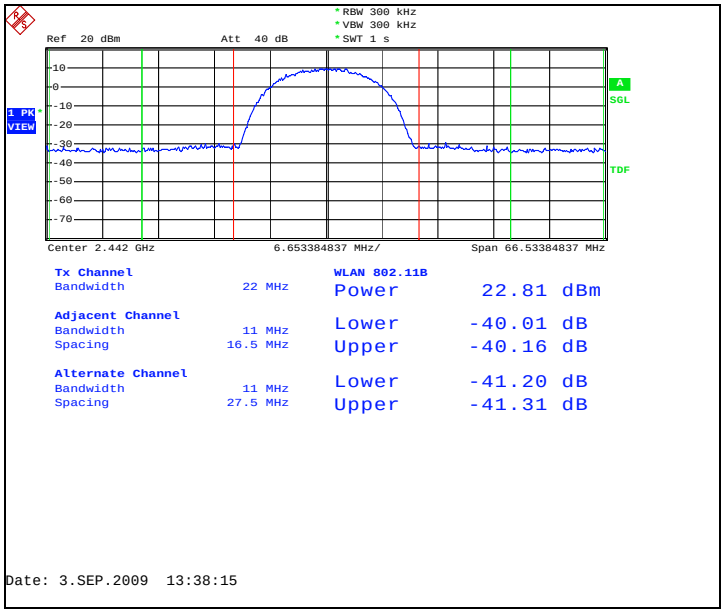
3.2.1 DSSS mode, QPSK modulation, 11 Mbps data rate

Channel / f_C [MHz]	P [dBm]	P [W]	Result
1 / 2412	22.87	0.194	Passed
7 / 2442	22.81	0.191	Passed
11 / 2462	22.97	0.198	Passed

Channel 1 / 2412 MHz



Channel 7 / 2442 MHz



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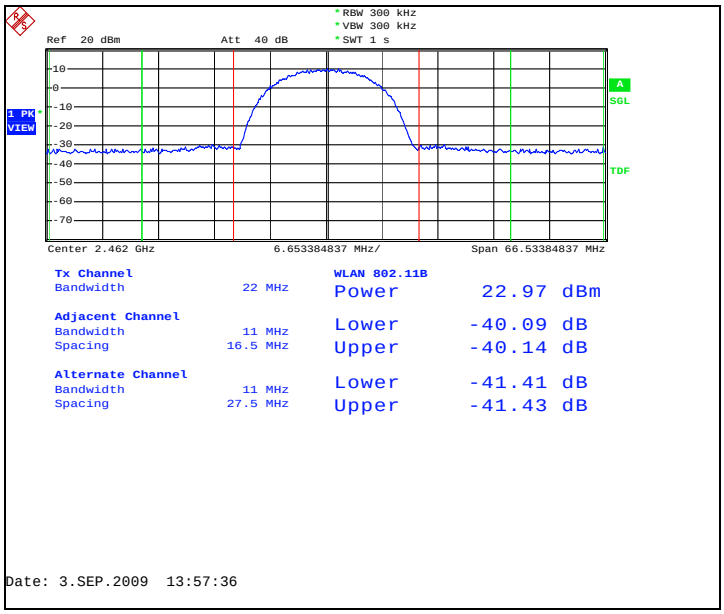
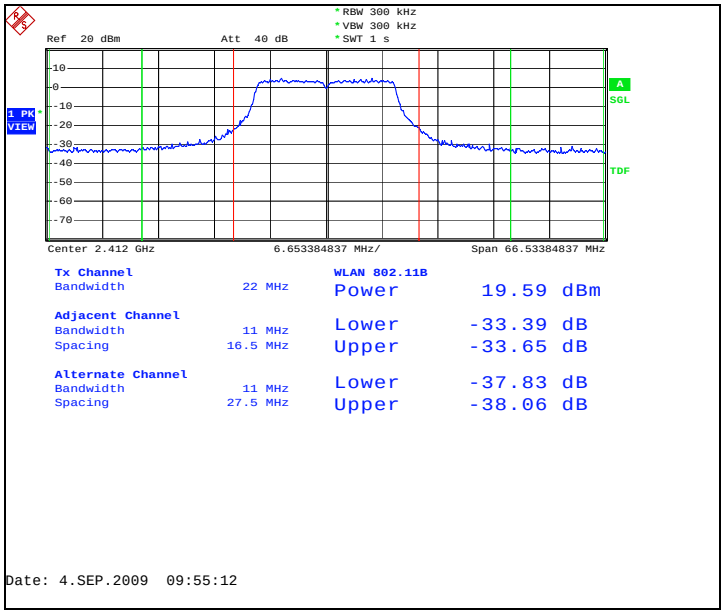
Channel 11 / 2462 MHz



3.2.2 OFDM mode, BPSK modulation, 6 Mbps data rate

Channel / f_C [MHz]	P [dBm]	P [W]	Result
1 / 2412	19.59	0.091	Passed
7 / 2442	21.75	0.150	Passed
11 / 2462	20.07	0.102	Passed

Channel 1 / 2412 MHz



Channel 7 / 2442 MHz

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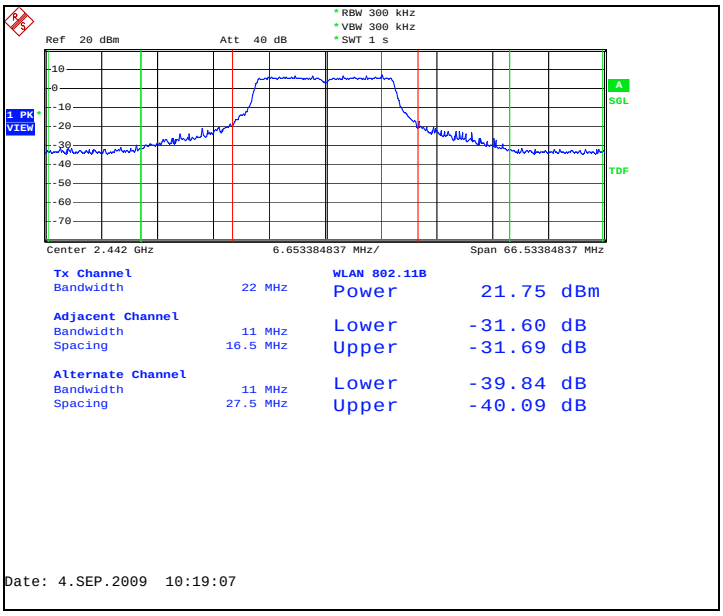
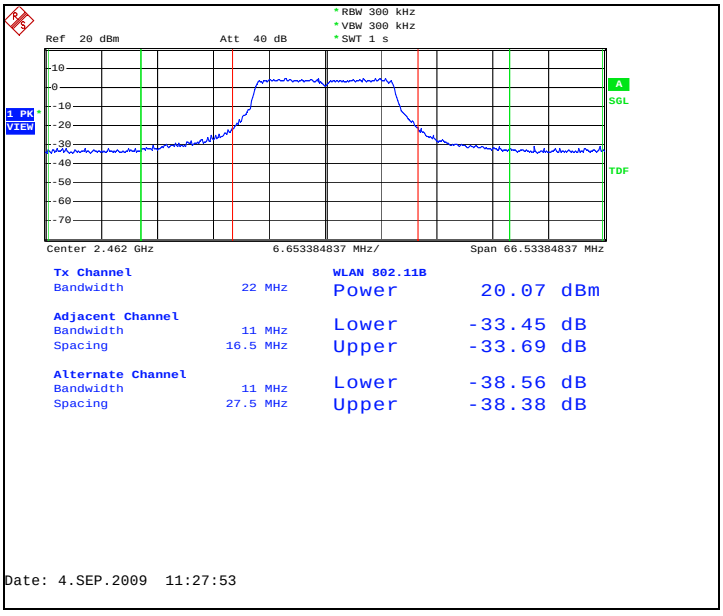


Channel 11 / 2462 MHz



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4. Band edge compliance of RF emissions

(FCC §15.247(d), RSS-210 A8.5)

EUT with DUT number	Phone RM-505 DUT 24856
Accessories with DUT numbers	Battery BP-4L DUT 24849, Charger AC-10 DUT 24954, Headset AD-54 DUT 24850
Operation Voltage [V] / [Hz]	-
Result	Passed
Remarks	None
Temp [°C] / Humidity [%RH] / Air Pressure [kPa]	22 / 48 / 1034
Date of measurements	17-sep-2009
Measured by	Ruben Hansen

4.1. Test method and limit

The measurement is made according to DTS procedures KDB 558074 and IC standard RSS-210.

Limits for band edge compliance of RF emissions measurements (3 m measurement distance)

Frequency range [MHz]	Limit Average [dBµV/m]	Limit Peak [dBµV/m]
Below 2390 and above 2483.5	≤ 54	≤ 74

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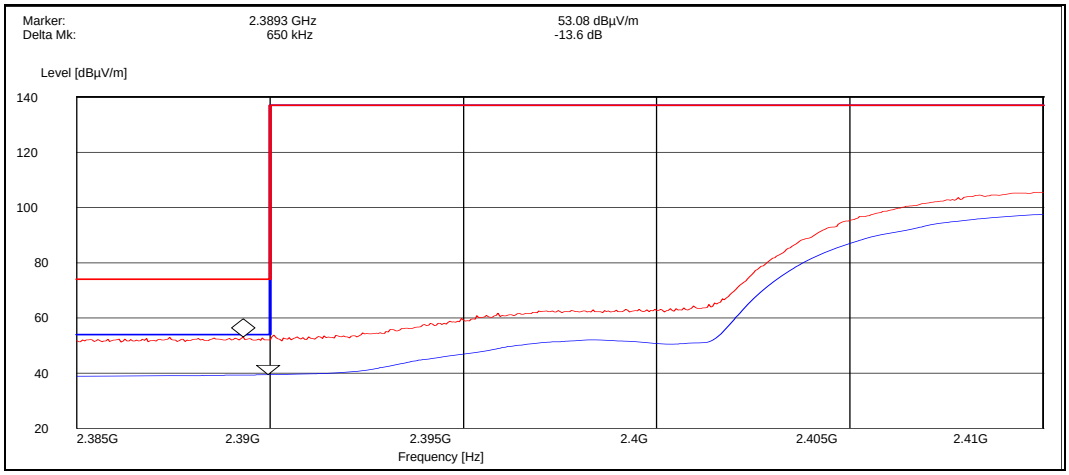
4.2. WLAN Test results

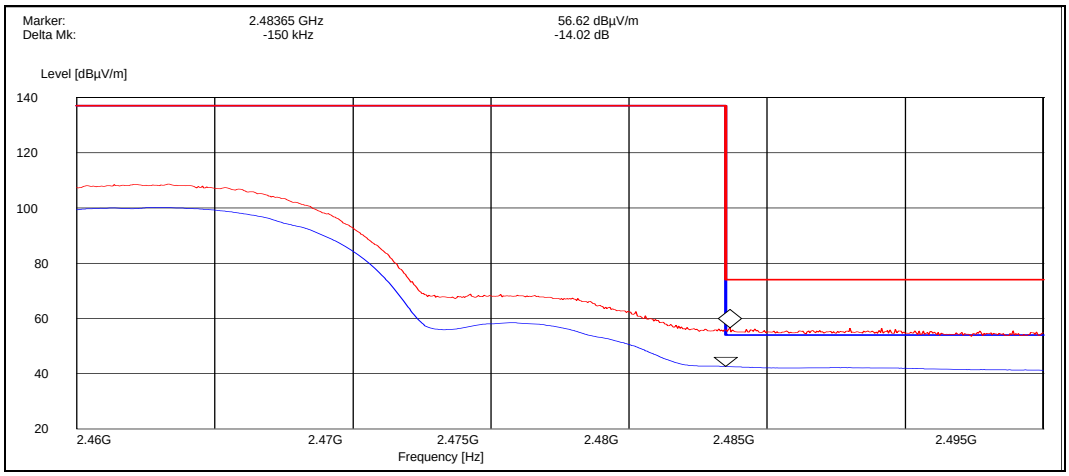
4.2.1 DSSS mode, QPSK modulation, 11 Mbps data rate

Channel 1 / 2412 MHz



Detector (RBW: 1 MHz)	*E [dBµV/m]*	*Result*
Peak	*53.10*	Passed
Average	*39.50*	Passed

Channel 11 / 2462 MHz



Detector (RBW: 1 MHz)	*E [dBµV/m]*	*Result*
Peak	*56.60*	Passed
Average	*42.60*	Passed

4.2.2 OFDM mode, BPSK modulation, 6 Mbps data rate

Channel 1 / 2412 MHz

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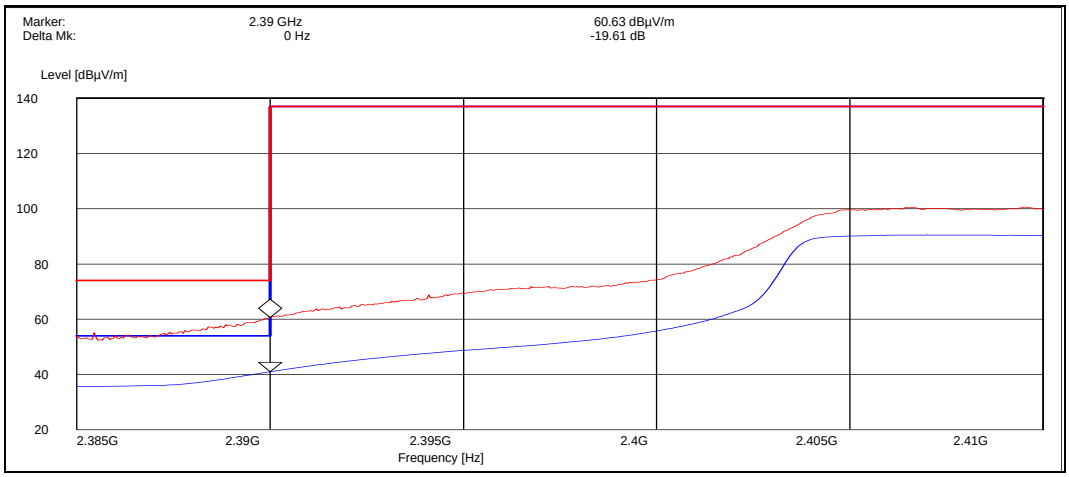

Detector (RBW: 1 MHz)	E [dBµV/m]	Result
Peak	*60.60*	Passed
Average	*41.00*	Passed

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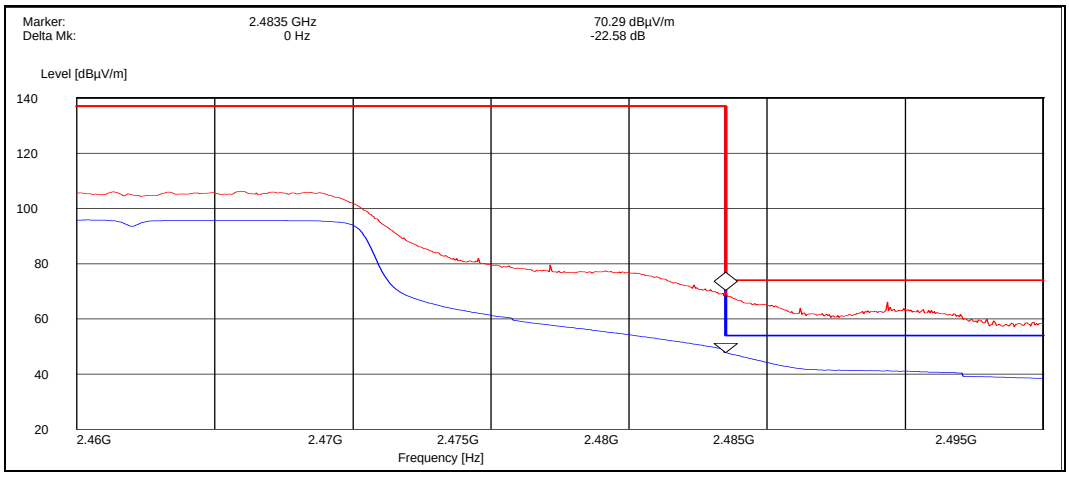
Channel 11 / 2462 MHz



Detector (RBW: 1 MHz)	***E [dBµV/m]***	***Result***
Peak	*70.30*	Passed
Average	*47.70*	Passed

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5. Spurious RF conducted emissions

(FCC §15.247(d), RSS-210 A8.5)

EUT with DUT number	Phone RM-505 DUT 24852
Accessories with DUT numbers	Dummy Battery SD-59TA DUT 24958
Operation Voltage [V] / [Hz]	-
Result	Passed
Remarks	None
Temp [°C] / Humidity [%RH] / Air Pressure [kPa]	22 / 48 / 1034
Date of measurements	8-sep-2009
Measured by	Ruben Hansen

5.1. Test method and limit

The measurement is made according to DTS procedures KDB 558074 and IC standard RSS-210.

Limits for spurious RF conducted emissions measurements

Frequency range [MHz]	Limit [dBc]
1 – 25000	≤ -20

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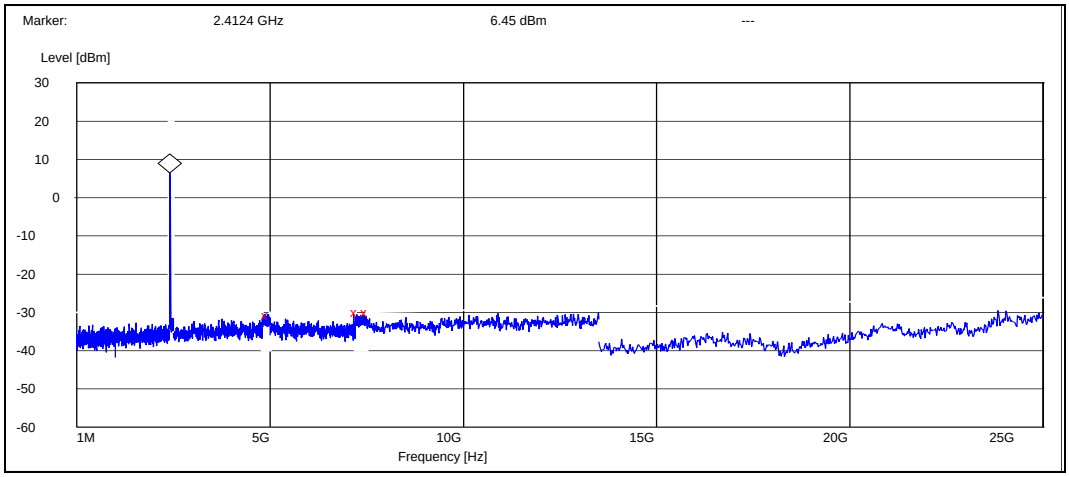
5.2. WLAN Test results

5.2.1 DSSS mode, QPSK modulation, 11 Mbps data rate

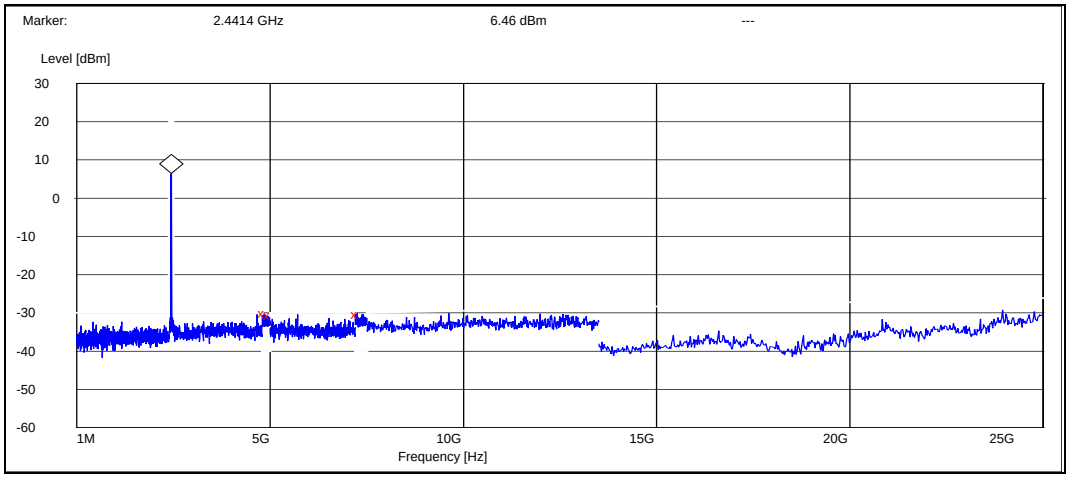
Channel 1 / 2412 MHz



Peak (RBW: 100 kHz, VBW: 100 kHz)

Frequency [MHz]	P [dBc]	Result
4952.400000	-37.146254	Passed
7251.600000	-36.546254	Passed
7500.000000	-36.546254	Passed

Channel 7 / 2442 MHz



Peak (RBW: 100 kHz, VBW: 100 kHz)

Frequency [MHz]	P [dBc]	Result
4854.400000	-36.555103	Passed
5000.000000	-37.055103	Passed
7264.200000	-36.755103	Passed

Channel 11 / 2462 MHz

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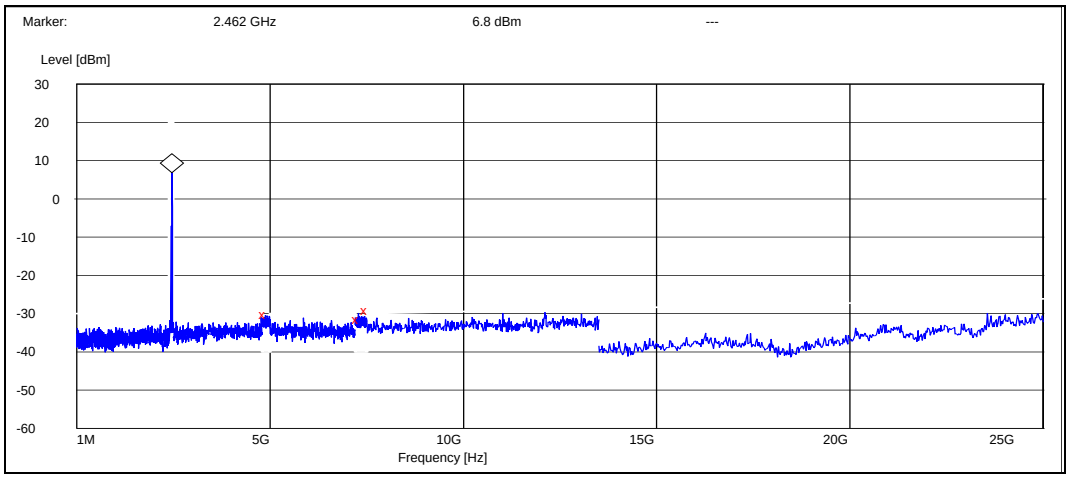
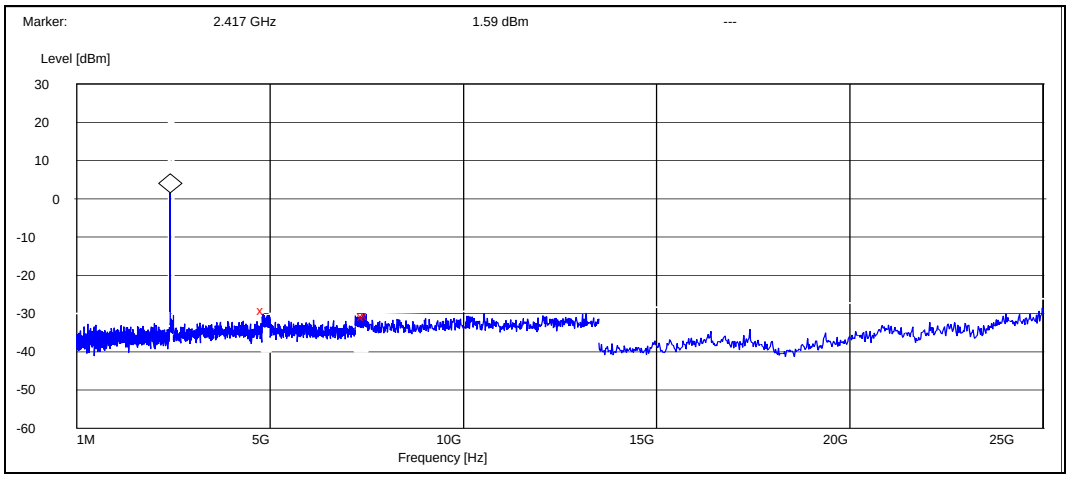


Peak (RBW: 100 kHz, VBW: 100 kHz)

Frequency [MHz]	P [dBc]	Result
4881.200000	-37.104154	Passed
7279.800000	-38.404154	Passed
7500.000000	-36.004154	Passed

5.2.2 OFDM mode, BPSK modulation, 6 Mbps data rate

Channel 1 / 2412 MHz



Peak (RBW: 100 kHz, VBW: 100 kHz)

Frequency [MHz]	P [dBc]	Result
4824.000000	-30.792317	Passed
7419.000000	-32.292317	Passed
7500.000000	-32.192317	Passed

Channel 7 / 2442 MHz

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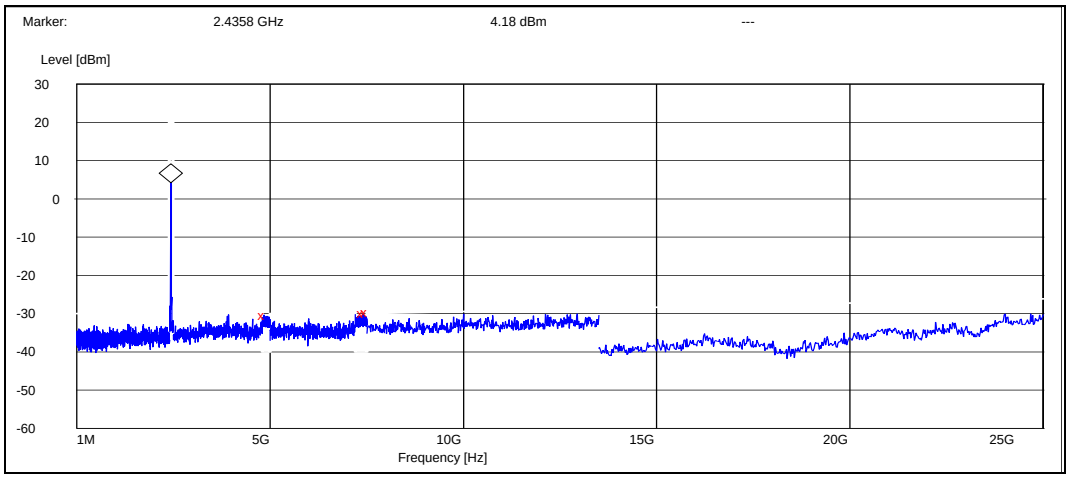
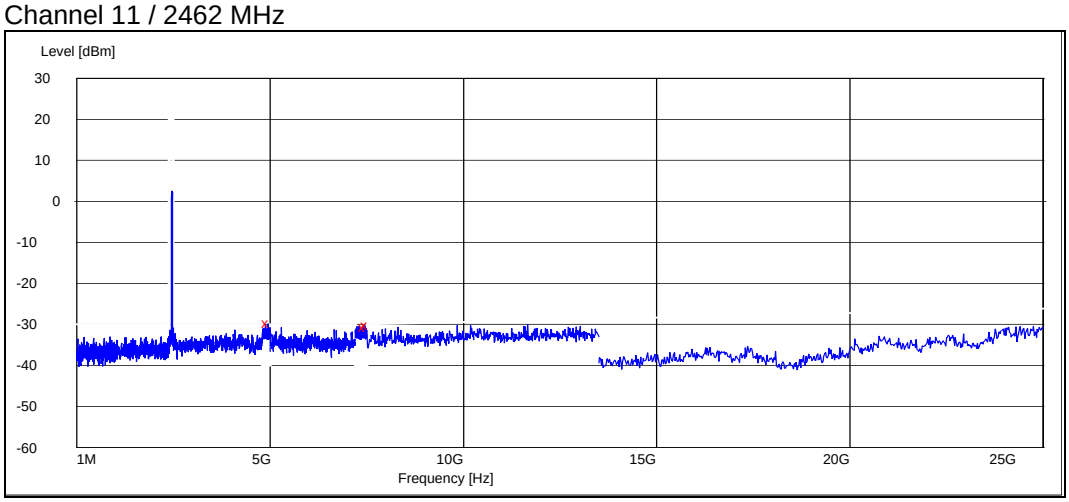


Peak (RBW: 100 kHz, VBW: 100 kHz)

Frequency [MHz]	P [dBc]	Result
4854.000000	-34.775330	Passed
7415.400000	-34.175330	Passed
7500.000000	-33.875330	Passed

Channel 11 / 2462 MHz



Peak (RBW: 100 kHz, VBW: 100 kHz)

Frequency [MHz]	P [dBc]	Result
4948.800000	7.081245	Passed
7447.800000	6.181245	Passed
7500.000000	6.581245	Passed

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6. Spurious radiated emissions

(FCC §15.247(d), §15.209, RSS-210 A8.5)

EUT with DUT number	Phone RM-505 DUT 24852
Accessories with DUT numbers	Dummy Battery SD-59TA DUT 24958
Operation Voltage [V] / [Hz]	-
Result	Passed
Remarks	None
Temp [°C] / Humidity [%RH] / Air Pressure [kPa]	22 / 48 / 1034
Date of measurements	10-sep-2009
Measured by	Ruben Hansen

6.1. Test method and limit

The measurement is made according to DTS procedures KDB 558074 and IC standard RSS-210 as follows:

The measurement is divided into the Preliminary Measurement and the Final Measurement.

The suspected frequencies are searched for in Preliminary Measurement with absorbers on the floor and measuring antenna at fixed height using 2-axis EUT position system.

The Final Measurement is performed in the Semi-Anechoic Chamber with conducting metal floor, if the Preliminary Measurement results are closer than 20 dB to the permissible value.

The EUT is placed at nonconductive plate at the turntable center.

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 ($A_{TOT} = L_{CABLES} + AF - G_{PREAMP}$).

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Limits for spurious radiated emissions measurements (3 m measurement distance)

Frequency range [MHz]	Limit [µV/m]	Limit [dBµV/m]	Detector
30 – 88	100	40	Quasi peak
88 – 216	150	43.5	Quasi peak
216 – 960	200	46	Quasi peak
960 – 1000	500	54	Quasi peak
Above 1000	500	54	Average
Above 1000	5000	74	Peak

6.2. WLAN Test results

6.2.1 OFDM mode, BPSK modulation, 6 Mbps data rate

Channel 1 / 2412 MHz

Peak (RBW: 1 MHz, VBW: 1 MHz)

Frequency [MHz]	E [dBµV/m]	E [µV/m]	U_{RX} [dBµV]	A_{TOT} [dB]	Polarization	Result
4824.000000	39.70	96.61	40.30	-0.60	VERTICAL	Passed
7236.000000	43.50	149.62	35.20	8.30	VERTICAL	Passed

Average (RBW: 1 MHz, VBW: 1 MHz)

Frequency [MHz]	E [dBµV/m]	E [µV/m]	U_{RX} [dBµV]	A_{TOT} [dB]	Polarization	Result
4824.000000	26.90	22.13	27.50	-0.60	VERTICAL	Passed
7236.000000	29.30	29.17	21.00	8.30	VERTICAL	Passed

Channel 7 / 2442 MHz

Quasi peak (RBW: 100 kHz, VBW: 100 kHz)

Frequency [MHz]	E [dBµV/m]	E [µV/m]	U_{RX} [dBµV]	A_{TOT} [dB]	Polarization	Result
38.176353	28.20	25.70	44.70	-16.50	VERTICAL	Passed
57.314830	20.90	11.09	49.20	-28.30	VERTICAL	Passed
80.260521	15.40	5.89	40.10	-24.70	HORIZONTAL	Passed
108.296794	19.30	9.23	42.90	-23.60	VERTICAL	Passed

Peak (RBW: 1 MHz, VBW: 1 MHz)

Frequency [MHz]	E [dBµV/m]	E [µV/m]	U_{RX} [dBµV]	A_{TOT} [dB]	Polarization	Result
2492.500000	59.90	988.55	55.10	4.80	HORIZONTAL	Passed
4884.269539	42.90	139.64	43.10	-0.20	VERTICAL	Passed
7327.157315	46.90	221.31	38.00	8.90	HORIZONTAL	Passed
7333.161323	47.50	237.14	38.30	9.20	HORIZONTAL	Passed
17490.475952	52.90	441.57	29.30	23.60	VERTICAL	Passed
17919.345691	58.10	803.53	29.00	29.10	VERTICAL	Passed

Average (RBW: 1 MHz, VBW: 1 MHz)

Frequency [MHz]	E [dBµV/m]	E [µV/m]	U_{RX} [dBµV]	A_{TOT} [dB]	Polarization	Result
2492.000000	41.50	118.85	36.10	5.40	HORIZONTAL	Passed
4884.769539	28.10	25.41	28.30	-0.20	VERTICAL	Passed

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7330.157315	31.80	38.90	22.80	9.00	HORIZONTAL	Passed
7333.661323	32.10	40.27	22.90	9.20	HORIZONTAL	Passed
17487.475952	39.60	95.50	16.00	23.60	VERTICAL	Passed
17922.845691	45.60	190.55	16.40	29.20	VERTICAL	Passed

Channel 11 / 2462 MHz

Peak (RBW: 1 MHz, VBW: 1 MHz)

Frequency [MHz]	E [dBµV/m]	E [µV/m]	U_{RX} [dBµV]	A_{TOT} [dB]	Polarization	Result
4924.000000	40.90	110.92	40.90	0.00	HORIZONTAL	Passed
7386.000000	47.50	237.14	37.30	10.20	VERTICAL	Passed

Average (RBW: 1 MHz, VBW: 1 MHz)

Frequency [MHz]	E [dBµV/m]	E [µV/m]	U_{RX} [dBµV]	A_{TOT} [dB]	Polarization	Result
4924.000000	27.20	22.91	27.20	0.00	HORIZONTAL	Passed
7386.000000	32.40	41.69	22.20	10.20	VERTICAL	Passed

6.2.2 DSSS mode, QPSK modulation, 11 Mbps data rate

Channel 1 / 2412 MHz

Peak (RBW: 1 MHz, VBW: 1 MHz)

Frequency [MHz]	E [dBµV/m]	E [µV/m]	U_{RX} [dBµV]	A_{TOT} [dB]	Polarization	Result
4824.000000	36.10	63.83	36.70	-0.60	VERTICAL	Passed
7236.000000	41.60	120.23	33.30	8.30	VERTICAL	Passed

Average (RBW: 1 MHz, VBW: 1 MHz)

Frequency [MHz]	E [dBµV/m]	E [µV/m]	U_{RX} [dBµV]	A_{TOT} [dB]	Polarization	Result
4824.000000	23.30	14.62	23.90	-0.60	VERTICAL	Passed
7236.000000	28.80	27.54	20.50	8.30	VERTICAL	Passed

Channel 7 / 2442 MHz

Quasi peak (RBW: 100 kHz, VBW: 100 kHz)

Frequency [MHz]	E [dBµV/m]	E [µV/m]	U_{RX} [dBµV]	A_{TOT} [dB]	Polarization	Result
38.176353	25.70	19.28	42.20	-16.50	VERTICAL	Passed

Peak (RBW: 1 MHz, VBW: 1 MHz)

Frequency [MHz]	E [dBµV/m]	E [µV/m]	U_{RX} [dBµV]	A_{TOT} [dB]	Polarization	Result
4893.279559	36.70	68.39	37.00	-0.30	VERTICAL	Passed
17999.993988	58.20	812.83	28.20	30.00	VERTICAL	Passed

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Average (RBW: 1 MHz, VBW: 1 MHz)

Frequency [MHz]	E [dBµV/m]	E [µV/m]	U_{RX} [dBµV]	A_{TOT} [dB]	Polarization	Result
4885.779559	23.70	15.31	23.90	-0.20	VERTICAL	Passed
17999.493988	45.60	190.55	15.70	29.90	VERTICAL	Passed

Channel 11 / 2462 MHz

Peak (RBW: 1 MHz, VBW: 1 MHz)

Frequency [MHz]	E [dBµV/m]	E [µV/m]	U_{RX} [dBµV]	A_{TOT} [dB]	Polarization	Result
4924.000000	45.30	184.08	45.30	0.00	HORIZONTAL	Passed
7386.000000	46.70	216.27	36.50	10.20	VERTICAL	Passed

Average (RBW: 1 MHz, VBW: 1 MHz)

Frequency [MHz]	E [dBµV/m]	E [µV/m]	U_{RX} [dBµV]	A_{TOT} [dB]	Polarization	Result
4824.000000	23.30	14.62	23.90	-0.60	VERTICAL	Passed
7236.000000	28.80	27.54	20.50	8.30	VERTICAL	Passed

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7. Powerline conducted emissions

(FCC §15.207, RSS-GEN 7.2.2)

EUT with DUT number	Phone RM-505 DUT 24856
Accessories with DUT numbers	Battery BP-4L DUT 24849, Charger AC-10 DUT 24954, Headset AD-54 DUT 24850
Operation Voltage [V] / [Hz]	115 / 60
Result	Passed
Remarks	None
Temp [°C] / Humidity [%RH] / Air Pressure [kPa]	22 / 48 / 1034
Date of measurements	10-sep-2009
Measured by	Ruben Hansen

7.1. Test method and limit

The measurement is made according to DTS procedures KDB 558074 and IC standard RSS-GEN 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

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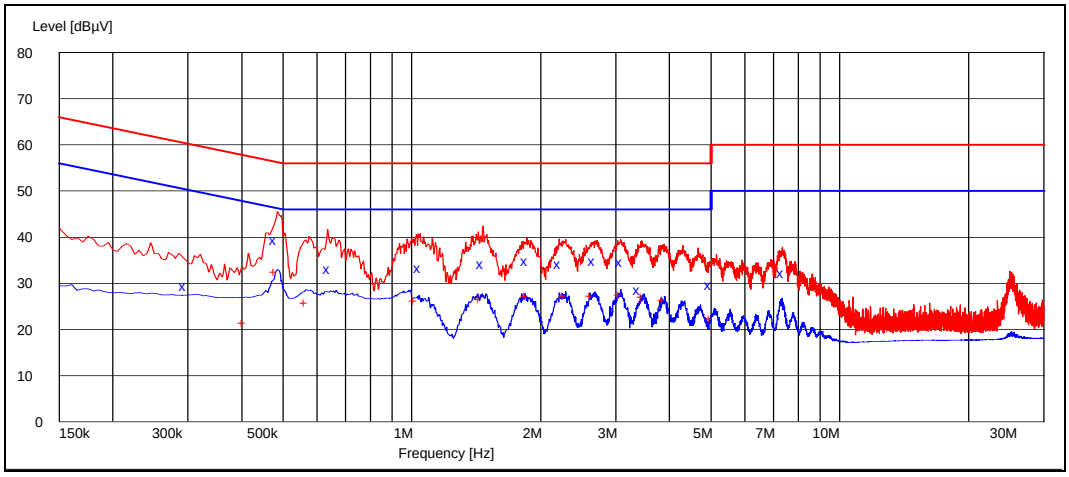
7.2. WLAN Test results

7.2.1 DSSS mode, QPSK modulation, 11 Mbps data rate

Channel 7 / 2442 MHz



Quasi peak (RBW: 9 kHz)

Frequency [MHz]	U [dBµV]	Line	Result
0.295000	29.50	N	Passed
0.480000	39.50	N	Passed
0.640000	33.00	N	Passed
1.045000	33.40	N	Passed
1.465000	34.20	N	Passed
1.860000	34.90	N	Passed
2.215000	34.20	N	Passed
2.665000	34.90	N	Passed
3.095000	34.60	N	Passed
3.400000	28.50	L1	Passed
4.985000	29.70	N	Passed
7.375000	32.20	N	Passed

Average (RBW: 9 kHz)

Frequency [MHz]	U [dBµV]	Line	Result
0.405000	21.40	N	Passed
0.480000	32.40	N	Passed
0.565000	25.80	N	Passed
1.020000	26.10	N	Passed
1.445000	26.60	N	Passed
1.855000	27.30	N	Passed
2.275000	27.20	N	Passed
2.630000	27.30	N	Passed
3.065000	27.40	N	Passed
3.465000	27.00	N	Passed
3.880000	26.30	N	Passed
5.000000	22.20	N	Passed

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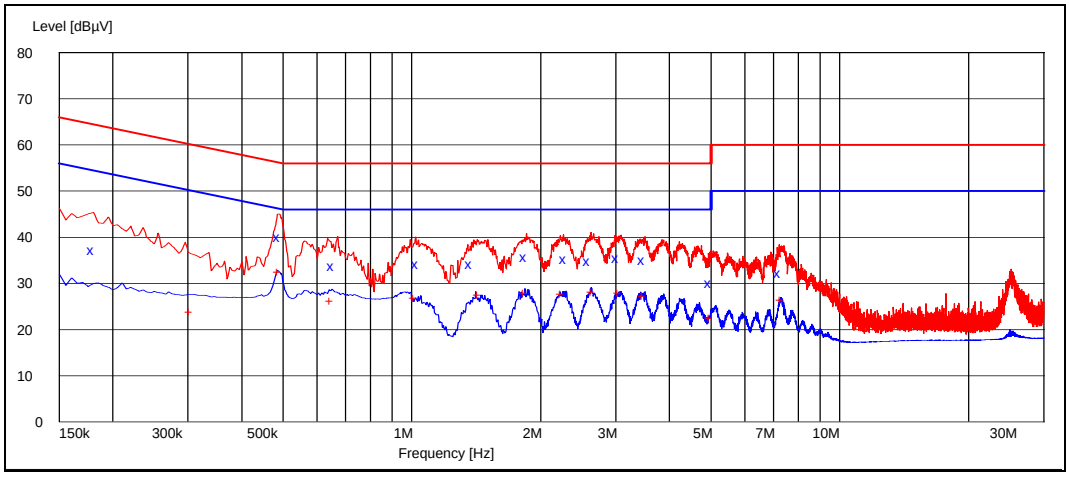
7.2.2 OFDM mode, BPSK modulation, 6 Mbps data rate

Channel 7 / 2442 MHz
Middle channel / 98.0 MHz



Quasi peak (RBW: 9 kHz)

Frequency [MHz]	U [dBµV]	Line	Result
0.180000	37.30	L1	Passed
0.490000	40.10	N	Passed
0.655000	33.80	N	Passed
1.030000	34.20	N	Passed
1.380000	34.20	N	Passed
1.850000	35.70	N	Passed
2.290000	35.20	N	Passed
2.600000	34.80	N	Passed
3.035000	35.40	N	Passed
3.485000	35.00	N	Passed
4.990000	30.00	N	Passed
7.240000	32.20	N	Passed

Average (RBW: 9 kHz)

Frequency [MHz]	U [dBµV]	Line	Result
0.305000	23.90	N	Passed
0.490000	32.40	N	Passed
0.650000	26.30	N	Passed
1.020000	26.80	N	Passed
1.440000	27.40	N	Passed
1.845000	27.80	N	Passed
2.250000	27.70	N	Passed
2.655000	28.00	N	Passed
3.060000	27.90	N	Passed
3.485000	27.30	N	Passed
5.000000	22.50	N	Passed
7.325000	26.50	N	Passed

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8. 6 dB bandwidth

(FCC §15.247(a)(2), RSS-210 A8.2 (a))

EUT with DUT number	Phone RM-505 DUT 24852
Accessories with DUT numbers	Dummy Battery SD-59TA DUT 24958
Operation Voltage [V] / [Hz]	
Result	Passed
Remarks	None
Temp [°C] / Humidity [%RH] / Air Pressure [kPa]	22 / 55 / 1026
Date of measurements	7-sep-2009
Measured by	Ruben Hansen

8.1. Test method and limit

The measurement is made according to DTS procedures KDB 558074 and IC standard RSS-210.

Limits for 6 dB bandwidth measurements

Limit [kHz]
≥ 500

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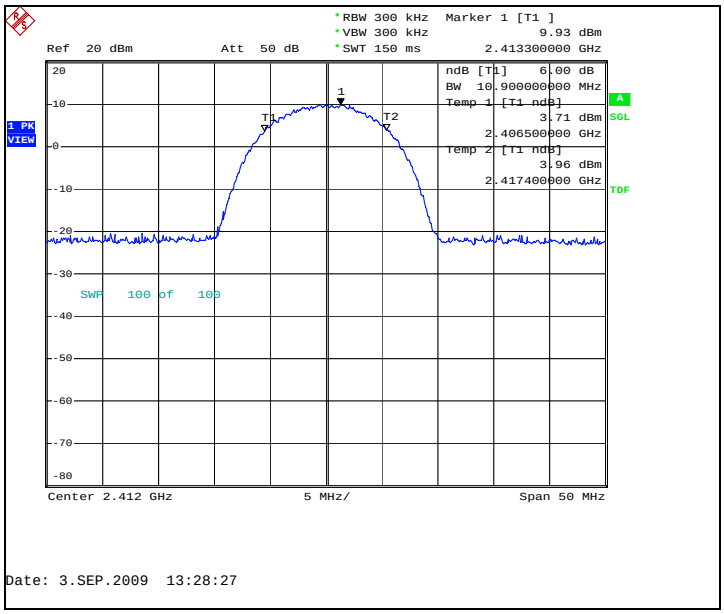
8.2. WLAN test results

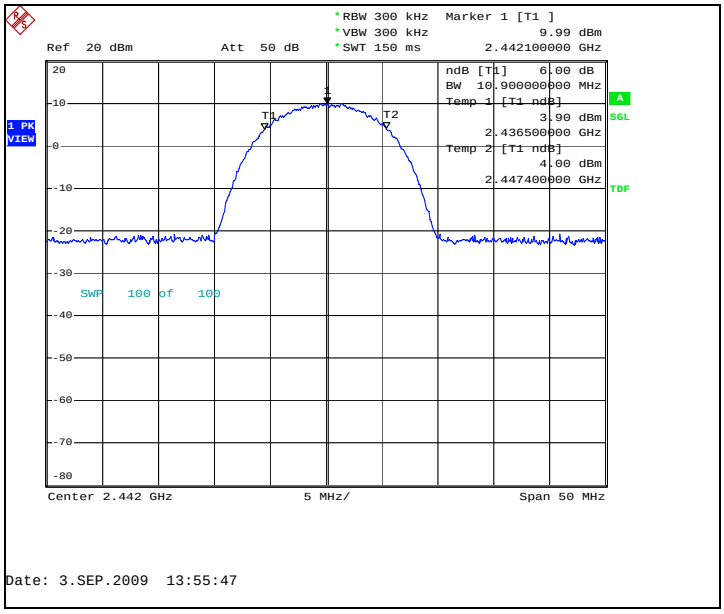
8.2.1 DSSS mode, QPSK modulation, 11 Mbps data rate

Channel / f_C [MHz]	6 dB bandwidth [kHz]	Result
1	10900.000	Passed
7	10900.000	Passed
11	10900.000	Passed

Channel 1 / 2412 MHz



Channel 7 / 2442 MHz



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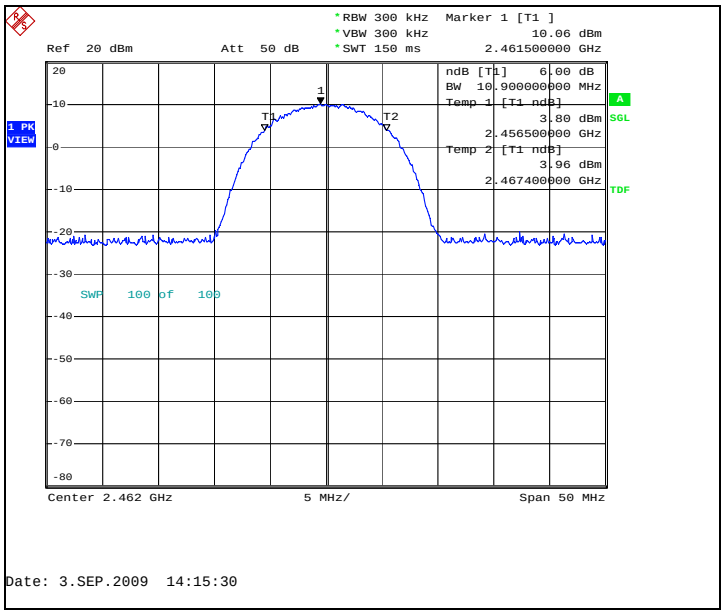
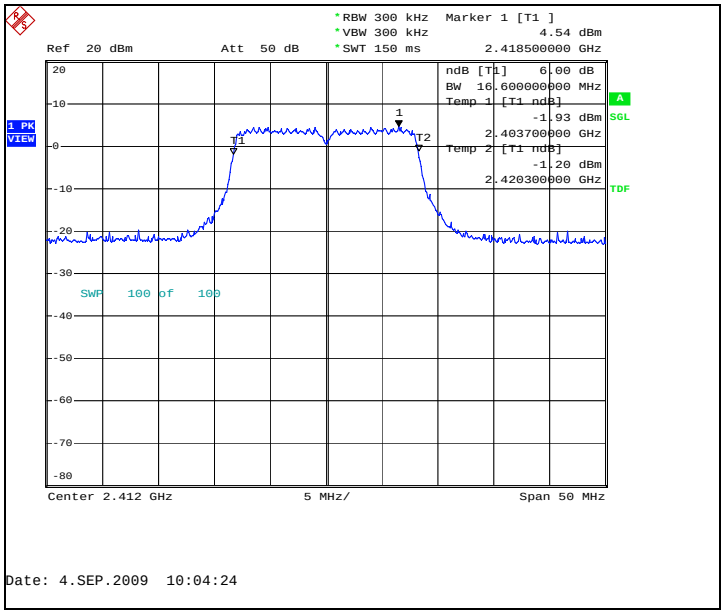
Channel 11 / 2462 MHz



8.2.2 OFDM mode, BPSK modulation, 6 Mbps data rate

Channel / f_C [MHz]	6 dB bandwidth [kHz]	Result
1	16600.000	Passed
7	16600.000	Passed
11	16600.000	Passed

Channel 1 / 2412 MHz



Channel 7 / 2442 MHz

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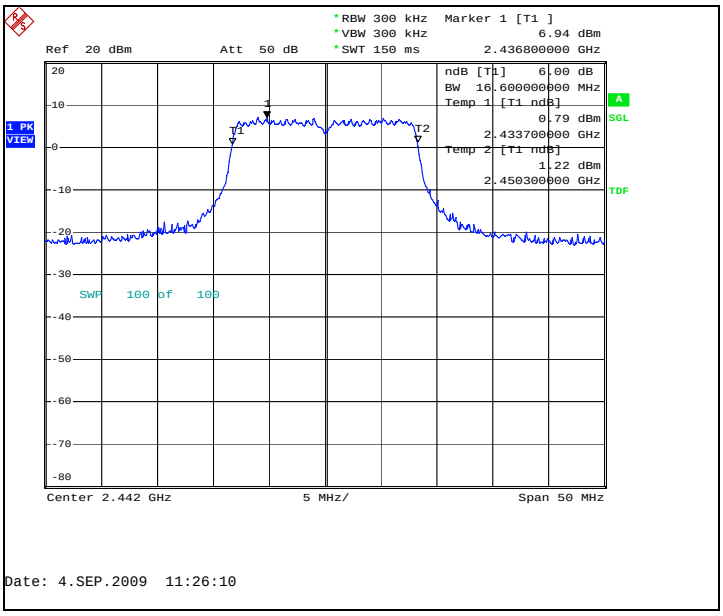
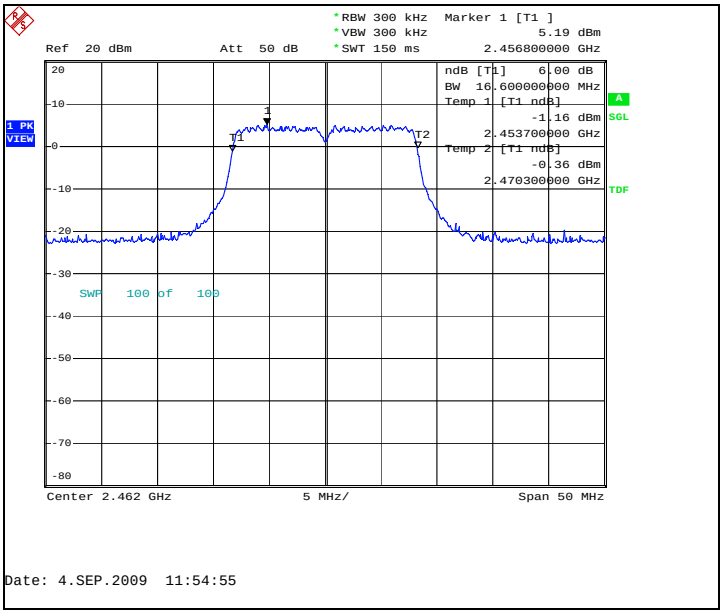


Channel 11 / 2462 MHz



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9. Power spectral density

(FCC §15.247(e), RSS-210 A8.2 (b))

EUT with DUT number	Phone RM-505 DUT 24852
Accessories with DUT numbers	Dummy Battery SD-59TA DUT 24958
Operation Voltage [V] / [Hz]	
Result	Passed
Remarks	None
Temp [°C] / Humidity [%RH] / Air Pressure [kPa]	22 / 55 / 1026
Date of measurements	7-sep-2009
Measured by	Ruben Hansen

9.1. Test method and limit

The measurement is made according to DTS procedures KDB 558074 and IC standard RSS-210.

Limits for power spectral density measurements

Limit [dBm] @ 3 kHz
≤ 8

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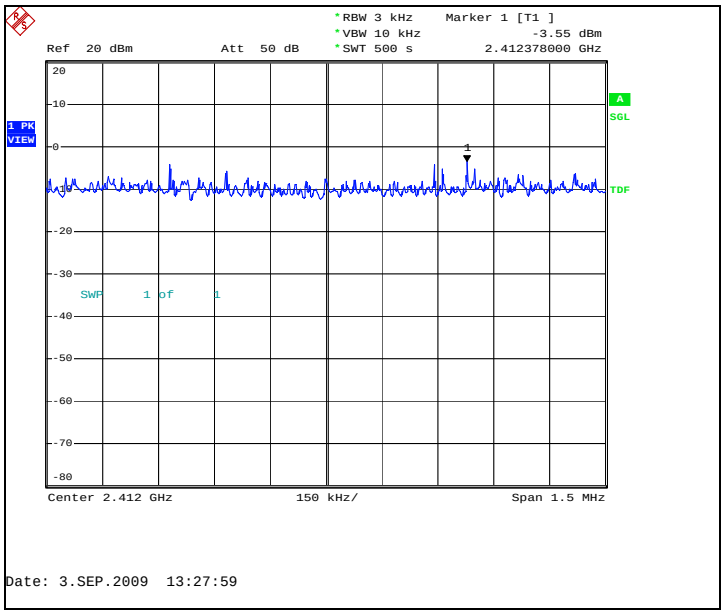
9.2. WLAN test results

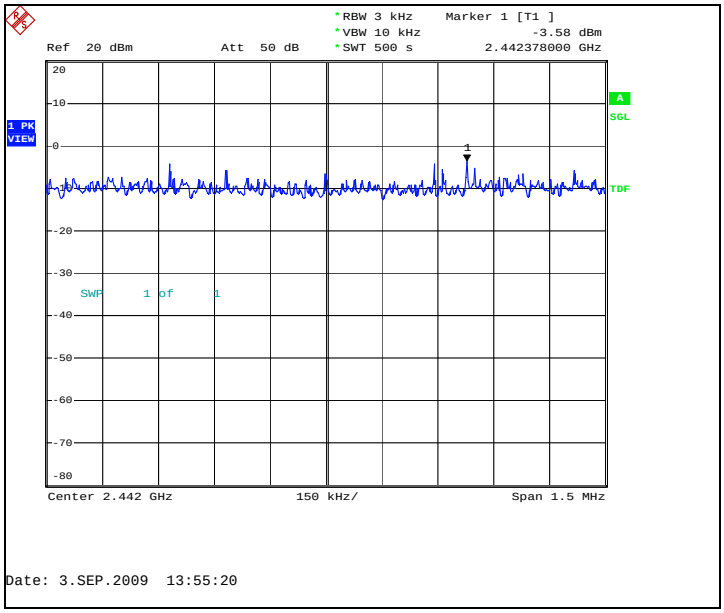
9.2.1 DSSS mode, QPSK modulation, 11 Mbps data rate

Frequency	Level	Transd	Spectr Density
2412.000000	-3.55	16.9	Passed

Channel 1 / 2412 MHz



Channel 7 / 2442 MHz



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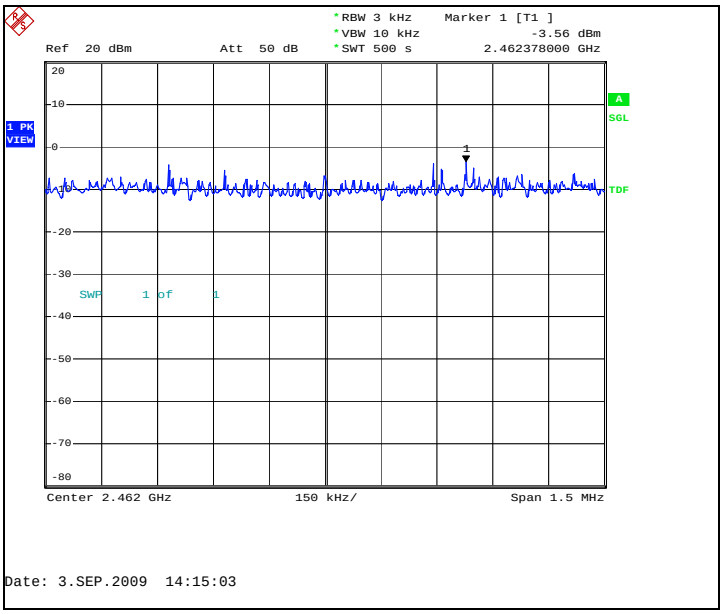
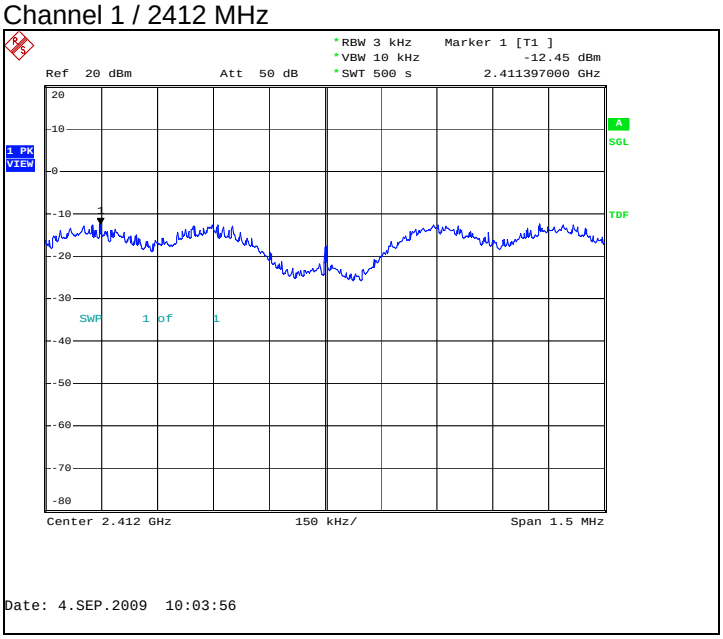
Channel 11 / 2462 MHz



9.2.2 OFDM mode, BPSK modulation, 6 Mbps data rate

Frequency	Level	Transd	Spectr Density
2412.000000	-12.45	16.9	Passed

Channel 1 / 2412 MHz



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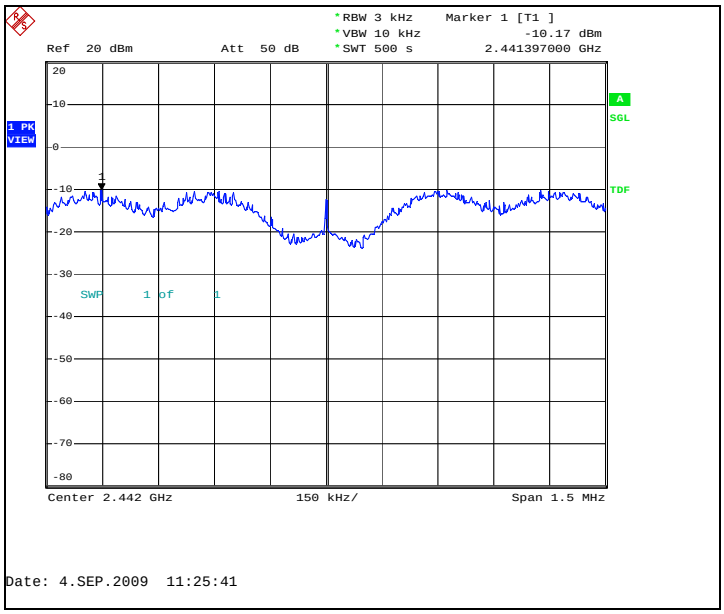
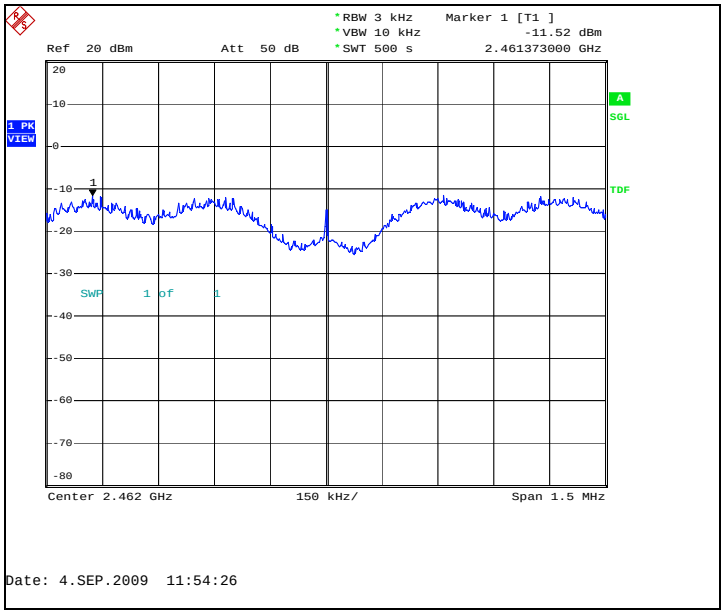
Channel 7 / 2442 MHz



Channel 11 / 2462 MHz



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10. Test Equipment

10.1. 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	22/24/27, 15C, 15B
19678	Spectrum Analyzer 26 GHz	FSP	Rohde&Schwarz	22/24/27, 15C, 15B
16601	Universal Radio Communication Tester	CMU200	Rohde&Schwarz	22/24/27, 15C, 15B
19625	Vötsch Climatic Chamber	VT4002EMC	Vötsch	22/24/27, 15C, 15B
13357	Rohde & Schwartz Signal Generator	SMP02	Rohde&Schwarz	22/24/27, 15C, 15B
20168	Bluetooth EDR Tester	CBT	Rohde&Schwarz	22/24/27, 15C, 15B

10.2. Radiated measurements

Eq. No	Equipment	Type	Manufacturer	Used in
18416	Universal Radio Communication Tester	CMU200	Rohde&Schwarz	22/24/27, 15C, 15B
	Programmable Relay Switching System	----------	Pickering	22/24/27, 15C, 15B
15742	Programmable Relay Switching System	----------	Pickering	22/24/27, 15C, 15B
14020	Power Supply Module Relay Switching System 45W	10-910-002	Pickering	22/24/27, 15C, 15B
15743	Power Supply Module Relay Switching System 50W	10-910L-001	Pickering	22/24/27, 15C, 15B
16490	RS-232/IEEE-488.2 Interface	10-921-001	Pickering	22/24/27, 15C, 15B
	RS-232/IEEE-488.2 Interface	10-921-001	Pickering	22/24/27, 15C, 15B
20078	Relay 2x6 Chnl µWave Mux	10-785B-522	Pickering	22/24/27, 15C, 15B
14021	Relay Dual 6 Chnl µWave Mux	10-785-522		22/24/27, 15C, 15B
	Relay Dual 6 Chnl µWave 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
18792	Multi Device Controller	2090	ETS-EMCO	22/24/27, 15C, 15B
14963	RF Preamplifier 100MHz-4GHz (Metal Chassis)	AFS3-00100400	Miteq/NMP Cph	22/24/27, 15C, 15B
18861	EMI Test Receiver 20Hz-26,5GHz	ESI	Rohde&Schwarz	22/24/27, 15C, 15B
20335	Ultra Broadband Antenna Ultralog 30-3000MHz	HL562	Rohde&Schwarz	22/24/27, 15C, 15B
18773	Shielded Chamber	RFD-100	ETS-Lindgren	22/24/27, 15C, 15B
18774	Shielded Chamber	RFSD-F/A-100	ETS-Lindgren	22/24/27, 15C, 15B
19151	High Pass Filter 3GHz	WHJS3000-10SS	Wainwright	22/24/27, 15C, 15B

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Eq. No	Equipment	Type	Manufacturer	Used in
	WHK3.0/18G-10ss			
13937	Ultra Stable Notch Filter 850MHz	WRCA902.4-0.2/40-6SS	Wainwright Instruments	22/24/27, 15C, 15B
13936	Ultra Stable Notch Filter 1747,5MHz	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
14188	Ultra Stable Notch Filter 902,4MHz	WRCA902.4-0.2/40-6SS	Wainwright	22/24/27, 15C, 15B
14187	Ultra Stable Notch Filter 1747,5MHz	WRCD1747.5-0.2/40-10SS	Wainwright	22/24/27, 15C, 15B
16633	Ultra Stable Notch Filter 1880,0MHz	WRCD1880.0-0.2/40-10SS	Wainwright	22/24/27, 15C, 15B
19587	BT/WLAN Band Reject Filter	WRCG2400/2483-2390/2493-35/10SS	Wainwright	22/24/27, 15C, 15B
20115	WDCMA Band 2 filter		Wainwright	24, 15C, 15B
20114	WDCMA Band 4 filter	WRCG1737/1743-1733/1747-40/6SS	Wainwright	27, 15C, 15B
20116	WDCMA Band 5&6 filter	WRCG832/83/-825/845-40/5SS	Wainwright	22, 15C, 15B
18323	Band reject filter 1947-1953MHz 40dB	WRCG1947/1953-1940/1960-40/6SS	Wainwright	22/24/27, 15C, 15B
20031	Double Ridged Broadband Horn	BBHA 9120 D	SCHWARZBECK	22/24/27, 15C, 15B
19966	Magnetic Loop Antenna 9 kHz - 30 MHz	HFH2-Z2	Rohde&Schwarz	15C, 15B
14993	EMI Test Receiver 9KHz-2750MHz	ESCS30	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
19374	Resonant Dipole Antenna 850MHz SMA m Conn.	---------	NMP Cph	22/24/27, 15C, 15B
19375	Resonant Dipole Antenna 1900MHz SMA m Conn.	----------	NMP Cph	22/24/27, 15C, 15B
20168	Bluetooth EDR Tester	CBT	Rohde&Schwarz	22/24/27, 15C, 15B

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