

FCC Part 15C Compliance Test Report

Test Report no.:	FCC15C_RM-431_04.doc	Date of Report:	09-Sep-2009
Number of pages:	32	Customer's Contact person:	Jyrki Juvani
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FCC listing no.:	94436		
IC recognition no.:	661AK-1		
Tested devices/ accessories:	Phone RM-431 / Battery BL-4CT, AC charger AC-10E, Audio adapter AD-54, Headset HS-45		
FCC ID:	LJPRM-431X	IC:	661E-RM431
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:			

Jari Jantunen, System Manager, EMC

1. Summary for FCC Part 15C Compliance Test Report

Date of receipt	17-Aug-2009
Testing completed	28-Aug-2009
The customer's contact person	Jyrki Juvani
Test Plan referred to	T:\Projects\RM-431\TestPlan_RS\RS_Testplan_RM-431_Semco.xls
Notes	-
Document name	FCC15C_RM-431_04.doc

1.1. EUT and Accessory Information

The EUT is a 6-band (GSM850/900/1800/1900 and WCDMA Band I/VIII) mobile phone with GPRS, EGPRS, Bluetooth and WLAN. Bluetooth and WLAN are tested with maximum rated TX power.

Product	Type	SN	HW	MV	SW	DUT
Phone	RM-431	004401105688820	0504	-	012.008	41996
Phone	RM-431	004401105688887	0504	-	012.008	41995
Battery	BL-4CT	3820668324225441820;0670565	-	-	-	41994
AC charger	AC-10E	3997918112240401230;0675408	-	-	-	41478
Audio adapter	AD-54	0750838819382101712	-	-	-	41992
Headset	HS-45	06942357231M1901180	-	-	-	41993

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

FAILED

NP

The EUT complies with the essential requirements in the standard.

The EUT does not comply with the essential requirements in the standard.

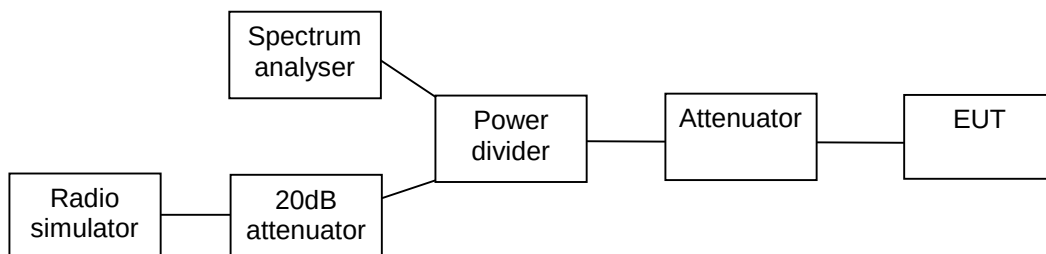
The test was not performed by the TCC Nokia Tampere Laboratory.

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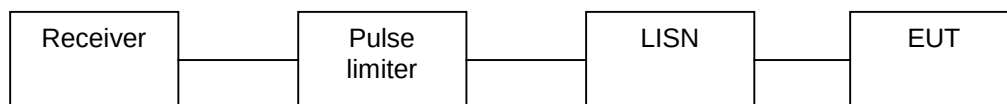
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2. Test setups

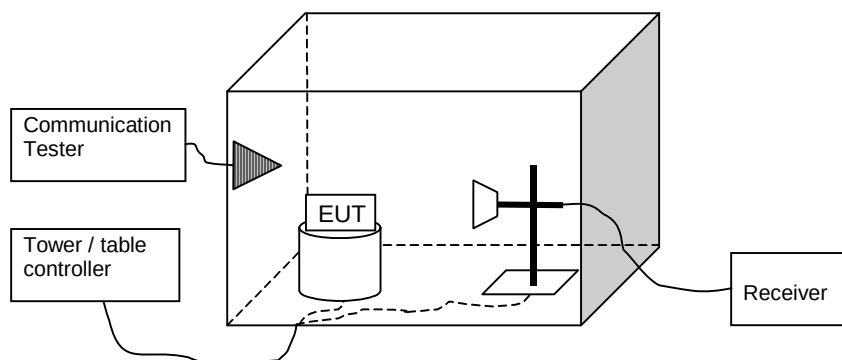
2.1. Conducted RF test setup



2.2. AC powerline conducted emissions test setup



2.3. Radiated test setup



3. Conducted peak output power (FCC §15.247(b)(1), RSS-210 A8.4 (4))

EUT with DUT number	RM-431 DUT41996
Accessories with DUT numbers	BL-4CT DUT41994
Operation Voltage [V] / [Hz]	Nominal
Result	PASSED
Remarks	-
Temp [°C] / Humidity [%RH] / Air Pressure [kPa]	22 / 43 / 101.8
Date of measurements	24-Aug-2009
Measured by	Hannu Söderholm

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

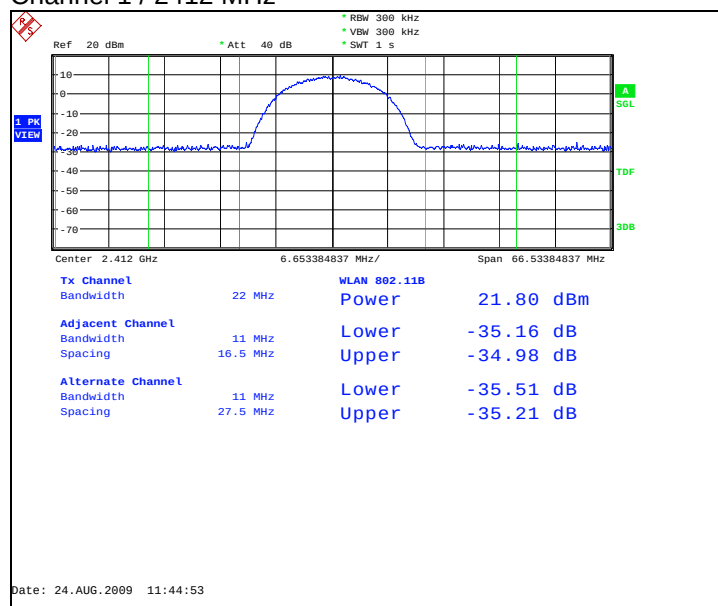
Phone	RM-431	004401105688820	0505	-	012.008	41996
Battery	BL-4CT	3820668324225441820;0670565	-	-	-	41994

3.2. WLAN Test results

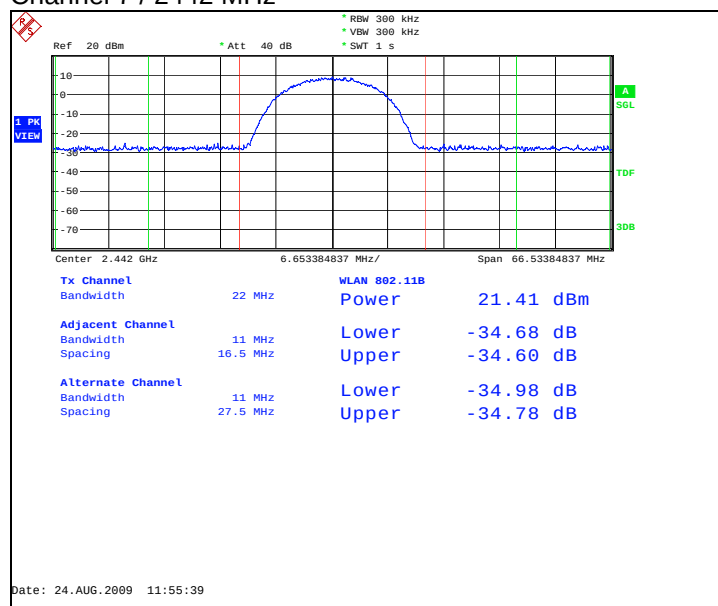
3.2.1 DSSS mode, QPSK modulation, 11 Mbps data rate

Channel / f_c [MHz]	P [dBm]	P [W]	Result
1 / 2412	21.80	0.151	PASSED
7 / 2442	21.41	0.138	PASSED
11 / 2462	21.02	0.126	PASSED

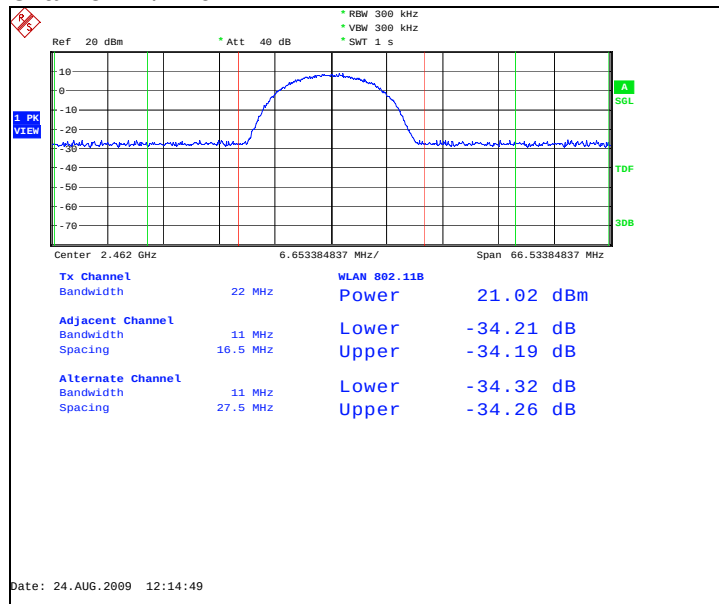
Channel 1 / 2412 MHz



Channel 7 / 2442 MHz



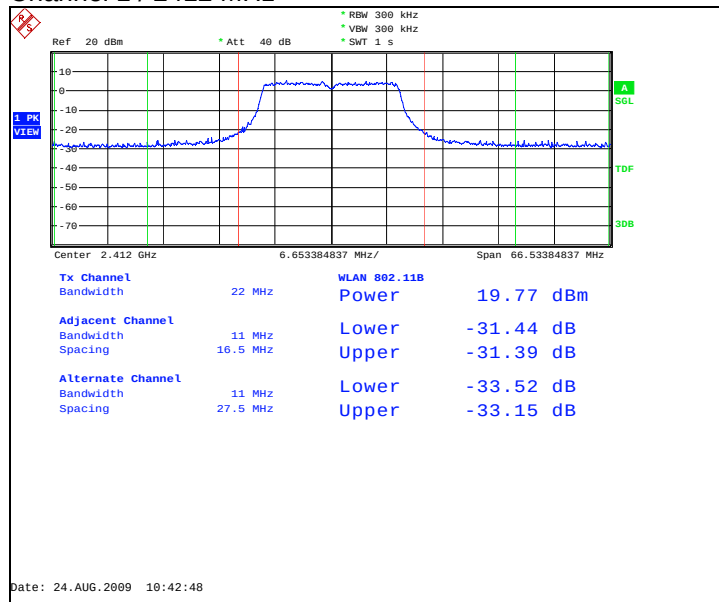
Channel 11 / 2462 MHz



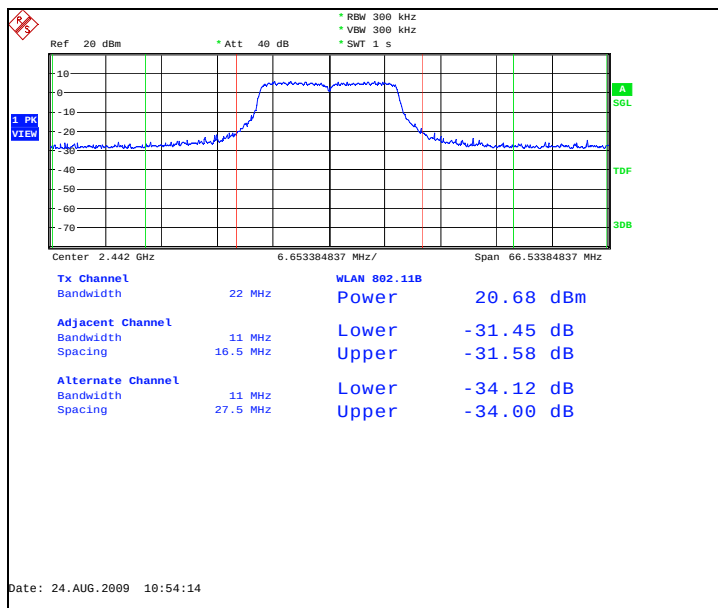
3.2.2 OFDM mode, BPSK modulation, 6 Mbps data rate

Channel / f_c [MHz]	P [dBm]	P [W]	Result
1 / 2412	19.77	0.095	PASSED
7 / 2442	20.68	0.117	PASSED
11 / 2462	19.21	0.083	PASSED

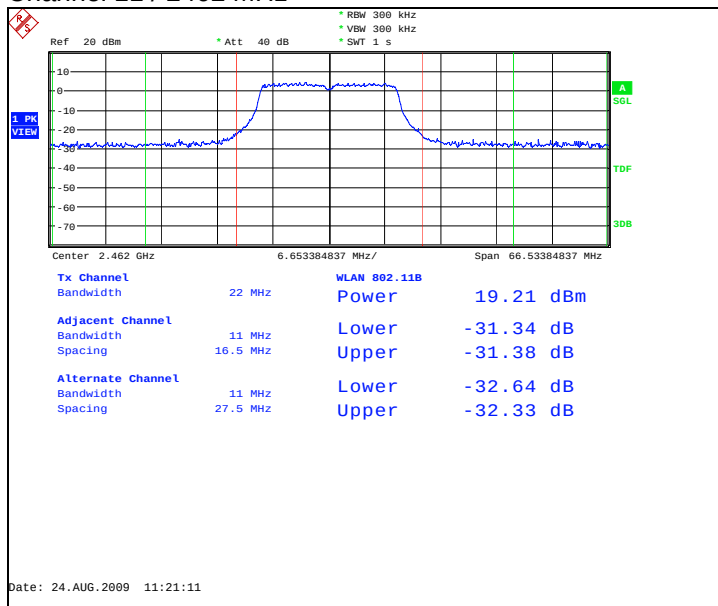
Channel 1 / 2412 MHz



Channel 7 / 2442 MHz



Channel 11 / 2462 MHz



4. Band edge compliance of RF emissions (FCC §15.247(d), RSS-210 A8.5)

EUT with DUT number	RM-431 DUT 41995
Accessories with DUT numbers	BL-4CT DUT 41994, AC-10E DUT 41478, AD-54 DUT 41992, HS-45 DUT 41993
Operation Voltage [V] / [Hz]	115 / 60
Result	PASSED
Remarks	-
Temp [°C] / Humidity [%RH] / Air Pressure [kPa]	21 / 51 / 101.1
Date of measurements	28-Aug-2009
Measured by	Jari Jantunen

4.1. Test method and limit

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

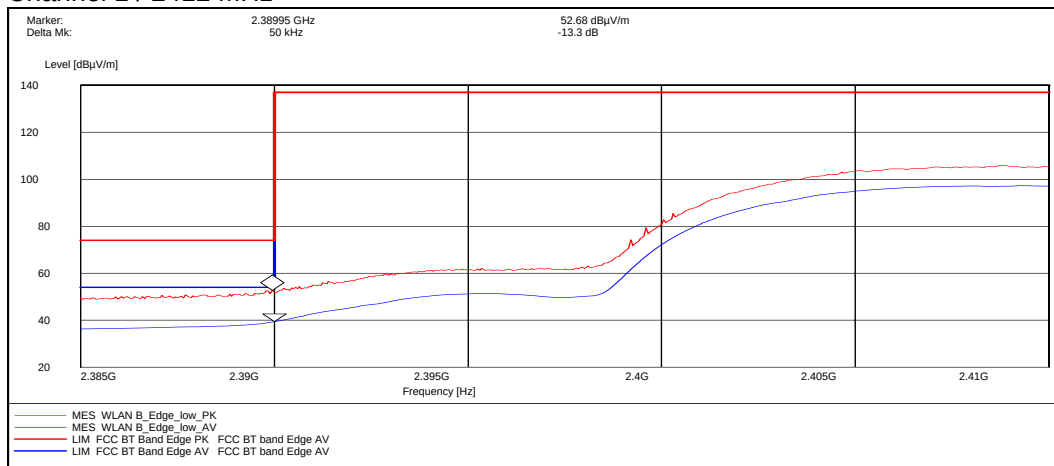
Limits for band edge compliance of RF emissions measurements (3 m measurement distance)

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

4.2. WLAN Test results

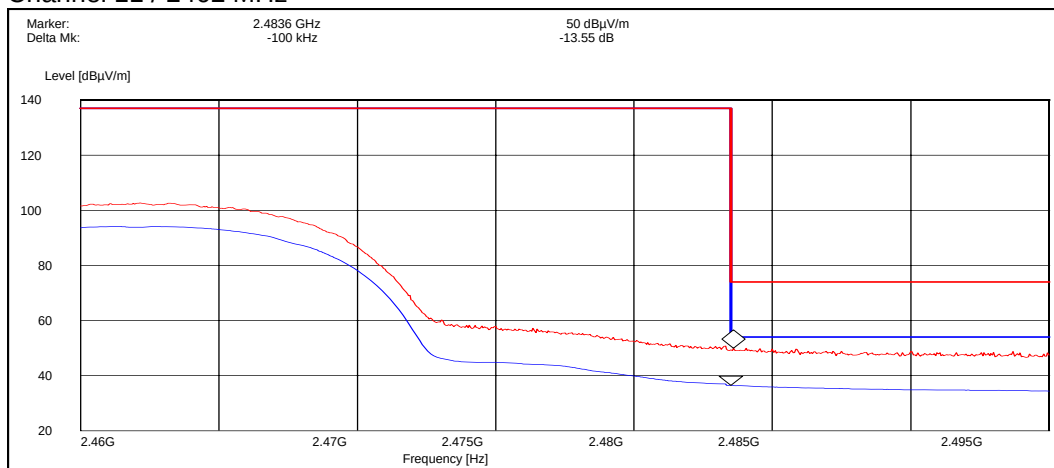
4.2.1 DSSS mode, QPSK modulation, 11 Mbps data rate

Channel 1 / 2412 MHz



Detector (RBW: 1 MHz)	E [dBμV/m]	Result
Peak	52.70	PASSED
Average	39.40	PASSED

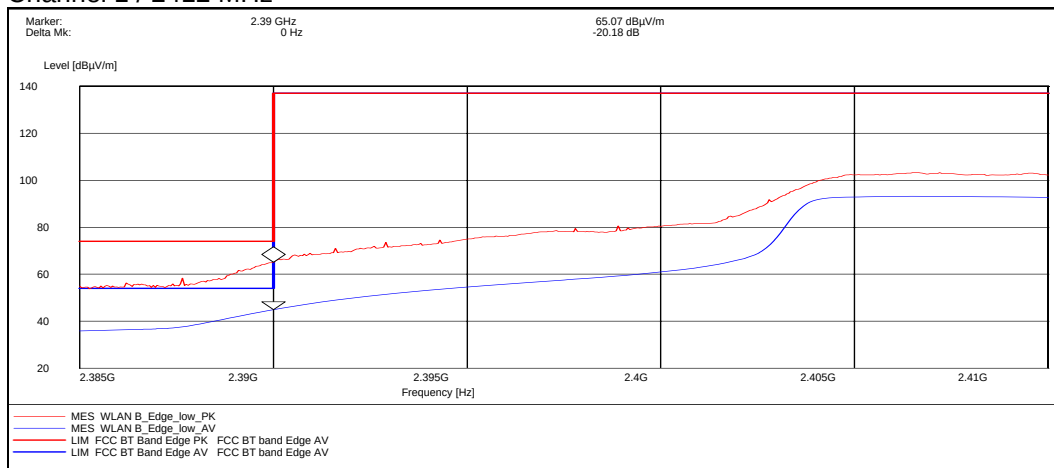
Channel 11 / 2462 MHz



Detector (RBW: 1 MHz)	E [dBμV/m]	Result
Peak	50.00	PASSED
Average	36.40	PASSED

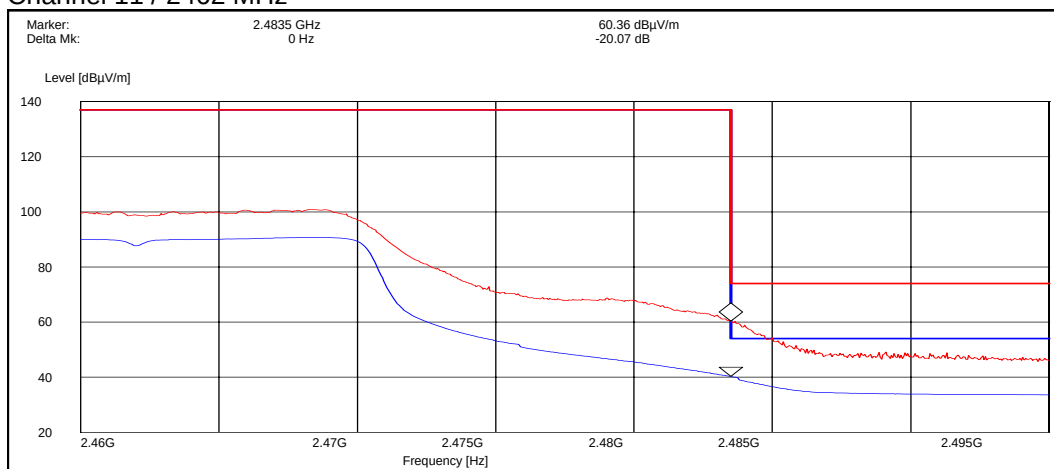
4.2.2 OFDM mode, BPSK modulation, 6 Mbps data rate

Channel 1 / 2412 MHz



Detector (RBW: 1 MHz)	E [dB μ V/m]	Result
Peak	65.10	PASSED
Average	44.90	PASSED

Channel 11 / 2462 MHz



Detector (RBW: 1 MHz)	E [dB μ V/m]	Result
Peak	60.40	PASSED
Average	40.30	PASSED

5. Spurious RF conducted emissions (FCC §15.247(d), RSS-210 A8.5)

EUT with DUT number	RM-431 DUT41996
Accessories with DUT numbers	BL-4CT DUT41994
Operation Voltage [V] / [Hz]	Nominal
Result	PASSED
Remarks	-
Temp [°C] / Humidity [%RH] / Air Pressure [kPa]	22 / 43 / 101.8
Date of measurements	24-Aug-2009
Measured by	Hannu Söderholm

5.1. Test method and limit

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

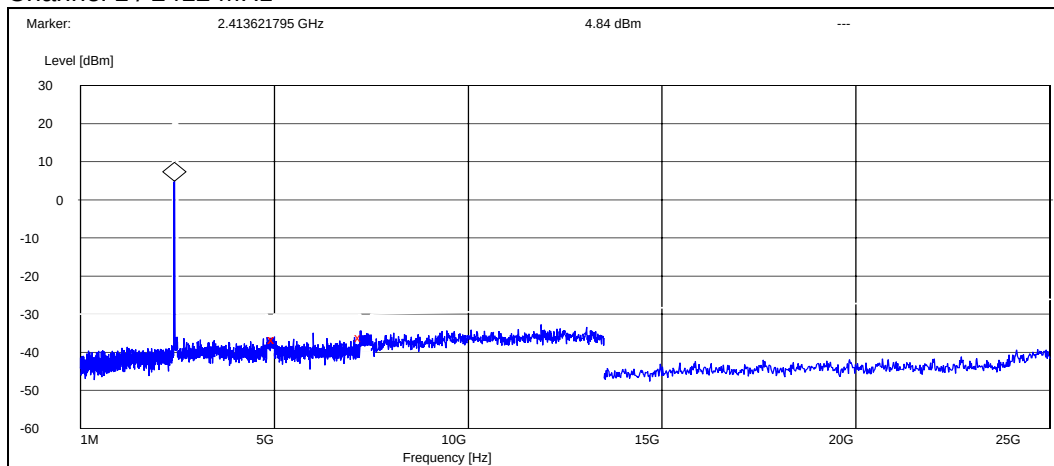
Limits for spurious RF conducted emissions measurements

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

5.2. WLAN Test results

5.2.1 DSSS mode, QPSK modulation, 11 Mbps data rate

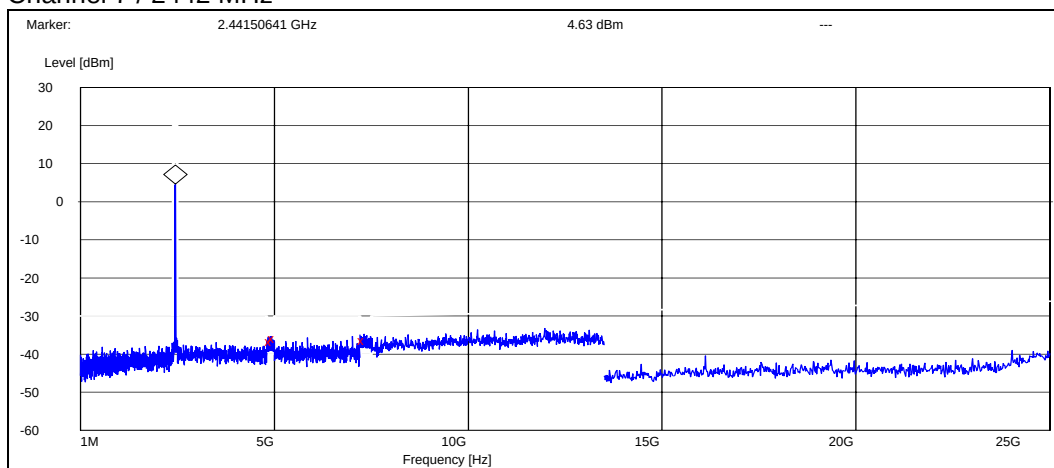
Channel 1 / 2412 MHz



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

Frequency [MHz]	P [dBc]	Result
4999.358974	-41.444897	PASSED
5000.000000	-41.544897	PASSED
7233.653846	-40.844897	PASSED

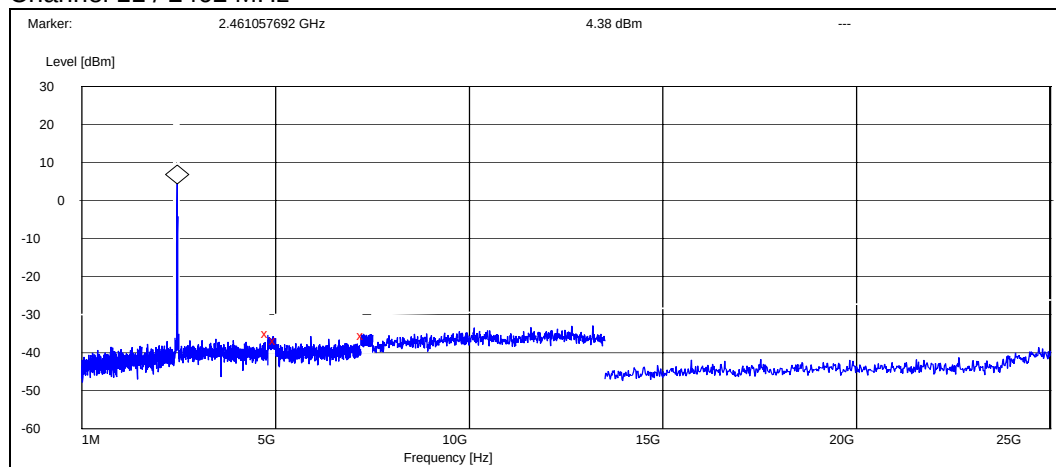
Channel 7 / 2442 MHz



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

Frequency [MHz]	P [dBc]	Result
4916.666667	-41.333373	PASSED
5000.000000	-40.533373	PASSED
7307.211538	-40.933373	PASSED

Channel 11 / 2462 MHz

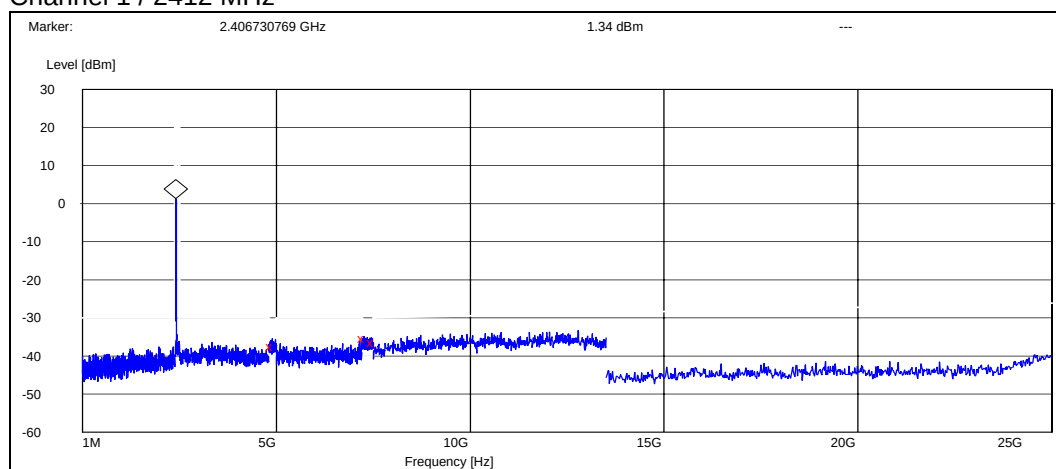


Peak (RBW: 100 kHz, VBW: 100 kHz)

Frequency [MHz]	P [dBc]	Result
4804.807692	-39.281545	PASSED
5000.000000	-41.181545	PASSED
7266.826923	-39.881545	PASSED

5.2.2 OFDM mode, BPSK modulation, 6 Mbps data rate

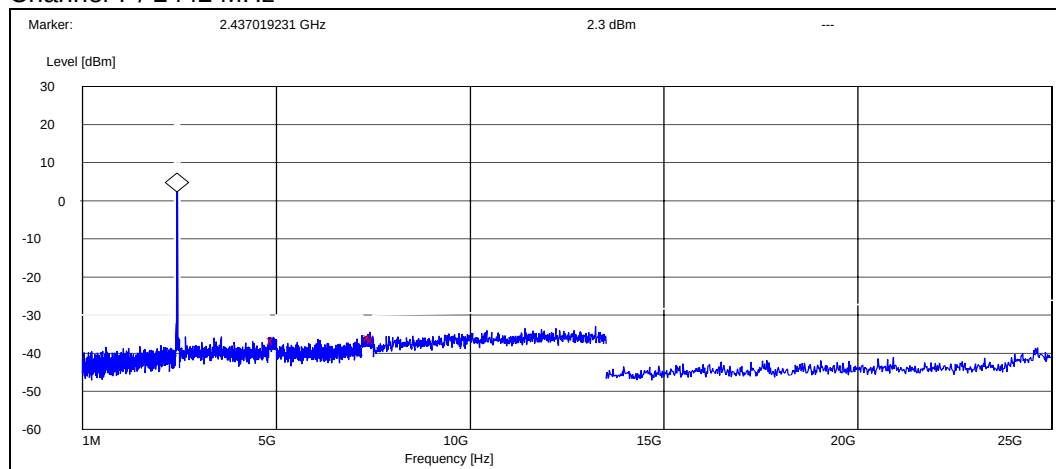
Channel 1 / 2412 MHz



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

Frequency [MHz]	P [dBc]	Result
4896.474359	-38.740670	PASSED
7257.692308	-36.640670	PASSED
7500.000000	-37.740670	PASSED

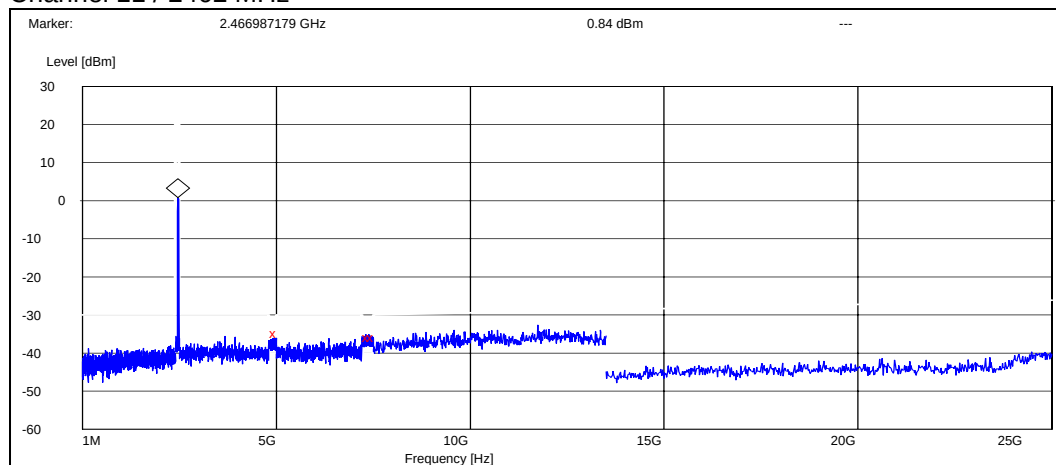
Channel 7 / 2442 MHz



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

Frequency [MHz]	P [dBc]	Result
4925.320513	-38.902367	PASSED
7415.865385	-38.202367	PASSED
7500.000000	-38.702367	PASSED

Channel 11 / 2462 MHz



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

Frequency [MHz]	P [dBc]	Result
4992.948718	-35.541461	PASSED
7383.653846	-36.641461	PASSED
7500.000000	-36.741461	PASSED

6. Spurious radiated emissions (FCC §15.247(d), §15.209, RSS-210 A8.5)

EUT with DUT number	RM-431 DUT 41995
Accessories with DUT numbers	BL-4CT DUT 41994, AC-10E DUT 41478, AD-54 DUT 41992, HS-45 DUT 41993
Operation Voltage [V] / [Hz]	115 / 60
Result	PASSED
Remarks	-
Temp [°C] / Humidity [%RH] / Air Pressure [kPa]	21 / 50 / 101.7
Date of measurements	25-Aug-2009
Measured by	Jari Jantunen

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

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

Frequency range [MHz]	Limit [$\mu\text{V/m}$]	Limit [dB $\mu\text{V/m}$]	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 DSSS mode, QPSK modulation, 11 Mbps data rate

TX mode, channel 1 / 2412 MHz

Peak (RBW: 1 MHz)

Frequency [MHz]	E [dB $\mu\text{V/m}$]	E [$\mu\text{V/m}$]	U _{RX} [dB μV]	A _{TOT} [dB]	Polarisation	Result
4824.000000	40.60	107.15	42.00	-1.4	HORIZONTAL	PASSED
7236.000000	43.20	144.54	40.10	3.1	VERTICAL	PASSED

Average (RBW: 1 MHz)

Frequency [MHz]	E [dB $\mu\text{V/m}$]	E [$\mu\text{V/m}$]	U _{RX} [dB μV]	A _{TOT} [dB]	Polarisation	Result
4824.000000	27.50	23.71	28.90	-1.4	HORIZONTAL	PASSED
7236.000000	30.60	33.88	27.50	3.1	HORIZONTAL	PASSED

TX mode, channel 7 / 2442 MHz

Quasi peak (RBW: 120 kHz)

Frequency [MHz]	E [dB $\mu\text{V/m}$]	E [$\mu\text{V/m}$]	U _{RX} [dB μV]	A _{TOT} [dB]	Polarisation	Result
38.176353	24.00	15.85	38.20	-14.2	VERTICAL	PASSED
73.327054	19.80	9.77	43.60	-23.8	HORIZONTAL	PASSED

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

Frequency [MHz]	E [dB $\mu\text{V/m}$]	E [$\mu\text{V/m}$]	U _{RX} [dB μV]	A _{TOT} [dB]	Polarisation	Result
4876.753507	42.20	128.82	43.70	-1.5	HORIZONTAL	PASSED
7290.577154	43.70	153.11	40.30	3.4	HORIZONTAL	PASSED
7310.629259	43.30	146.22	39.90	3.4	VERTICAL	PASSED
17905.811623	54.60	537.03	34.60	20.0	HORIZONTAL	PASSED

Average (RBW: 1 MHz)

Frequency [MHz]	E [dB $\mu\text{V/m}$]	E [$\mu\text{V/m}$]	U _{RX} [dB μV]	A _{TOT} [dB]	Polarisation	Result
4876.753507	29.60	30.20	31.10	-1.5	HORIZONTAL	PASSED
7292.077154	30.60	33.88	27.20	3.4	HORIZONTAL	PASSED
7314.629259	30.70	34.28	27.30	3.4	VERTICAL	PASSED
17903.311623	41.00	112.20	21.00	20.0	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	43.00	141.25	44.30	-1.3	HORIZONTAL	PASSED
7386.000000	42.80	138.04	39.30	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	28.70	27.23	30.00	-1.3	HORIZONTAL	PASSED
7386.000000	30.30	32.73	26.80	3.5	VERTICAL	PASSED

6.2.2 OFDM mode, BPSK modulation, 6 Mbps data rate

TX 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	39.90	98.86	41.30	-1.4	HORIZONTAL	PASSED
7236.000000	44.10	160.32	41.00	3.1	HORIZONTAL	PASSED

Average (RBW: 1 MHz)

Frequency [MHz]	E [dBμV/m]	E [μV/m]	U _{RX} [dBμV]	A _{TOT} [dB]	Polarisation	Result
4824.000000	27.00	22.39	28.40	-1.4	HORIZONTAL	PASSED
7236.000000	30.60	33.88	27.50	3.1	VERTICAL	PASSED

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	24.30	16.41	38.50	-14.2	VERTICAL	PASSED
73.386573	21.10	11.35	44.90	-23.8	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
4884.000000	43.00	141.25	44.50	-1.50	HORIZONTAL	PASSED
7326.000000	43.90	156.68	40.60	3.30	VERTICAL	PASSED
17879.761523	53.40	467.74	34.00	19.4	HORIZONTAL	PASSED

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

Frequency [MHz]	E [dBμV/m]	E [μV/m]	U _{RX} [dBμV]	A _{TOT} [dB]	Polarisation	Result
4884.000000	26.60	21.38	28.10	-1.50	VERTICAL	PASSED
7326.000000	30.60	33.88	27.30	3.30	VERTICAL	PASSED
17882.261523	40.60	107.15	21.10	19.5	HORIZONTAL	PASSED

TX mode, channel 7 / 2442 MHz

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
4925.853707	43.20	144.54	44.40	-1.2	HORIZONTAL	PASSED
7284.565130	43.70	153.11	40.30	3.4	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
4925.853707	29.30	29.17	30.50	-1.2	HORIZONTAL	PASSED
7281.065130	30.60	33.88	27.20	3.4	VERTICAL	PASSED

7. AC powerline conducted emissions (FCC §15.207, RSS-GEN 7.2.2)

EUT with DUT number	RM-431 DUT 41995
Accessories with DUT numbers	BL-4CT DUT 41994, AC-10E DUT 41478, AD-54 DUT 41992, HS-45 DUT 41993
Operation Voltage [V] / [Hz]	115 / 60
Result	PASSED
Remarks	-
Temp [°C] / Humidity [%RH] / Air Pressure [kPa]	19 / 50 / 101.1
Date of measurements	28-Aug-2009
Measured by	Jari Jantunen

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.

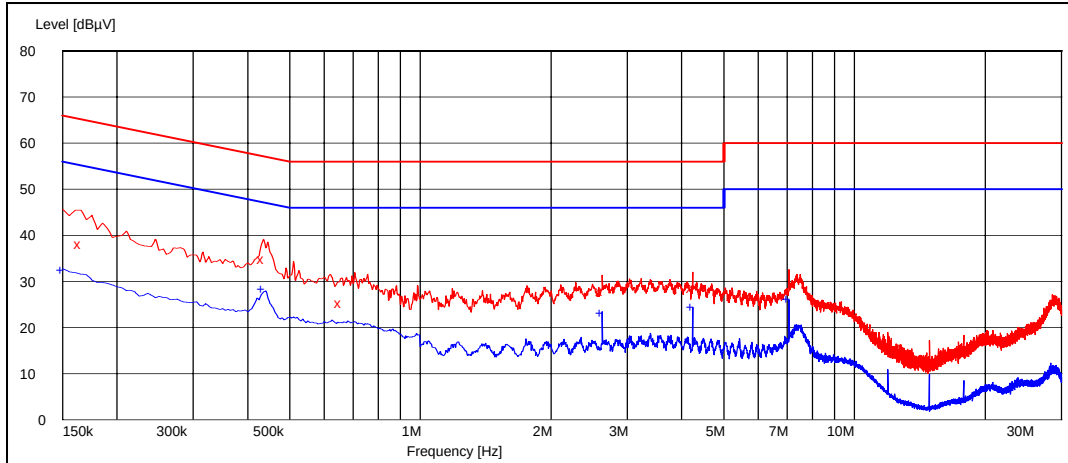
CISPR 22 Class B limits

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

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)

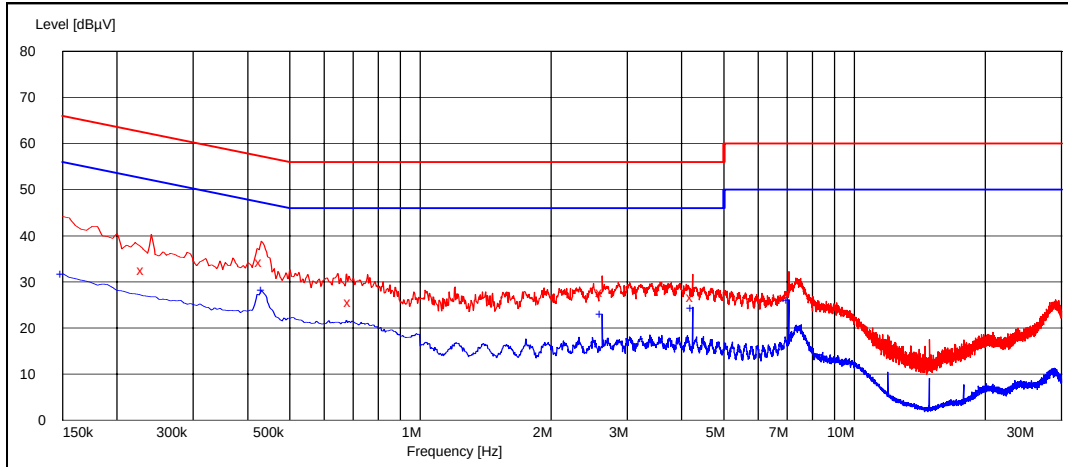
Frequency [MHz]	U [dBμV]	Line	Result
0.165000	38.10	L1	PASSED
0.435000	34.80	L1	PASSED
0.655000	25.40	L1	PASSED
2.625000	27.80	L1	PASSED
4.240000	28.50	L1	PASSED

Average (RBW: 9 kHz)

Frequency [MHz]	U [dBμV]	Line	Result
0.150000	32.40	N	PASSED
0.435000	28.30	L1	PASSED
2.625000	23.10	L1	PASSED
4.240000	24.40	L1	PASSED
7.065000	26.10	L1	PASSED

7.2.2 OFDM mode, BPSK modulation, 6 Mbps data rate

Channel 7 / 2442 MHz



Quasi peak (RBW: 9 kHz)

Frequency [MHz]	U [dBμV]	Line	Result
0.230000	32.50	L1	PASSED
0.430000	34.20	L1	PASSED
0.690000	25.60	L1	PASSED
2.625000	27.80	L1	PASSED
4.240000	26.60	N	PASSED

Average (RBW: 9 kHz)

Frequency [MHz]	U [dBμV]	Line	Result
0.150000	31.70	L1	PASSED
0.435000	28.20	L1	PASSED
2.625000	23.00	L1	PASSED
4.240000	24.30	L1	PASSED
7.065000	26.10	L1	PASSED

8. 6 dB bandwidth (FCC §15.247(a)(2), RSS-210 A8.2 (a))

EUT with DUT number	RM-431 DUT41996
Accessories with DUT numbers	BL-4CT DUT41994
Operation Voltage [V] / [Hz]	Nominal
Result	PASSED
Remarks	-
Temp [°C] / Humidity [%RH] / Air Pressure [kPa]	22 / 43 / 101.8
Date of measurements	24-Aug-2009
Measured by	Hannu Söderholm

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

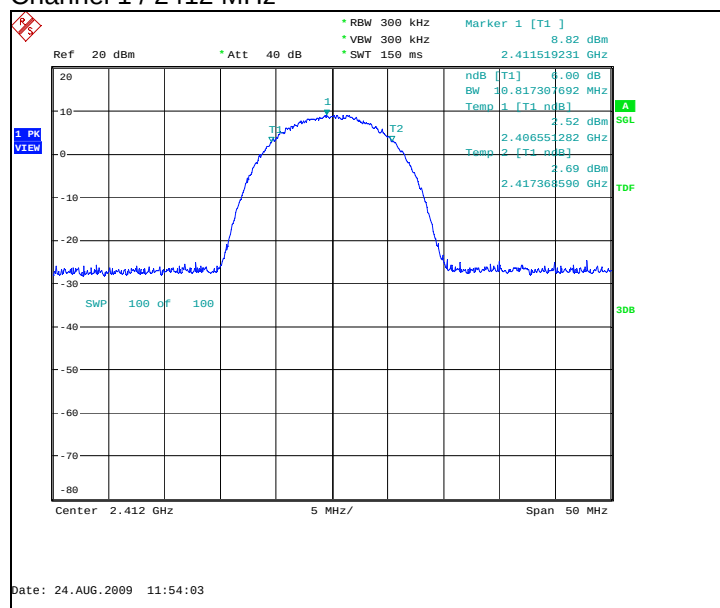
Limit [kHz]
≥ 500

8.2. WLAN test results

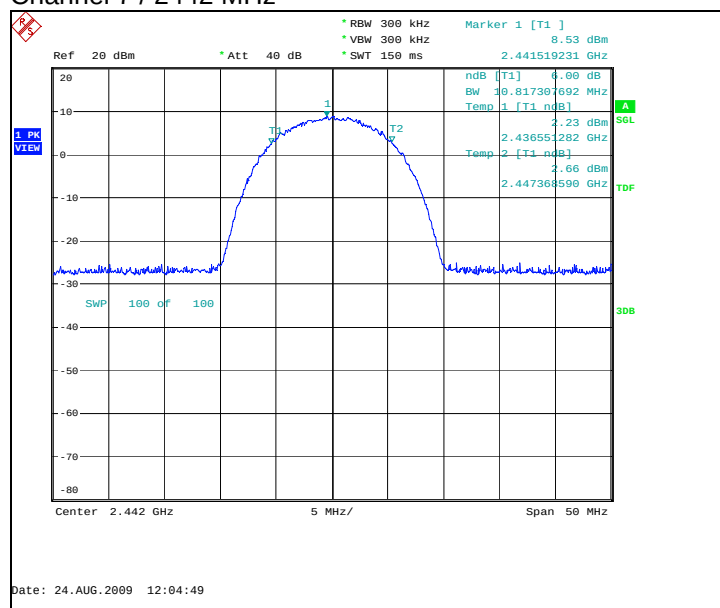
8.2.1 DSSS mode, QPSK modulation, 11 Mbps data rate

Channel / f_c [MHz]	6 dB bandwidth [kHz]	Result
1	10817.308	PASSED
7	10817.308	PASSED
11	10817.308	PASSED

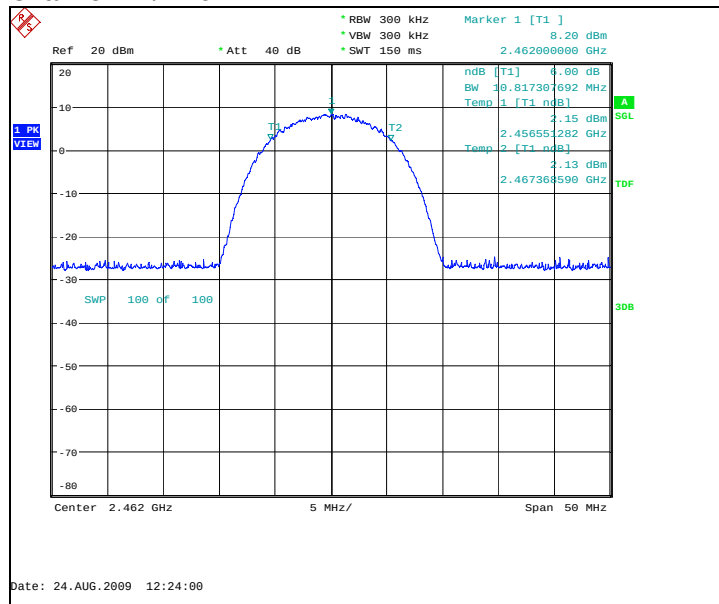
Channel 1 / 2412 MHz



Channel 7 / 2442 MHz



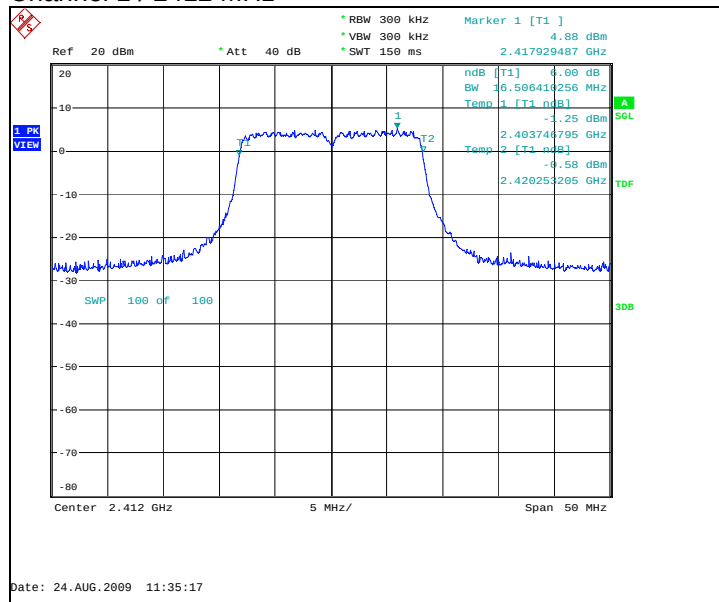
Channel 11 / 2462 MHz



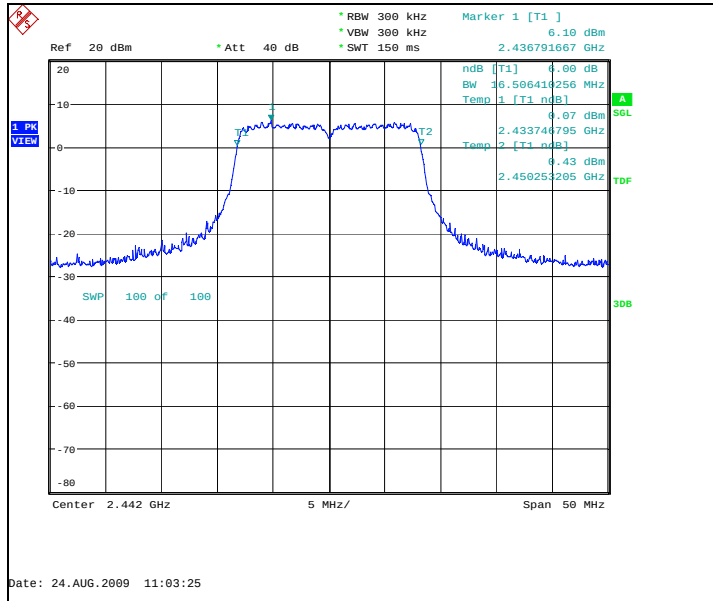
8.2.2 OFDM mode, BPSK modulation, 6 Mbps data rate

Channel / f_c [MHz]	6 dB bandwidth [kHz]	Result
1	16506.410	PASSED
7	16506.410	PASSED
11	16506.410	PASSED

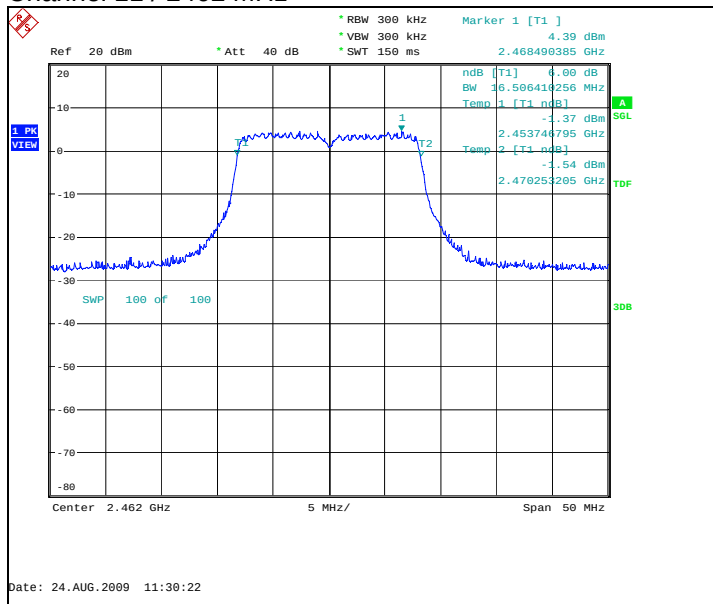
Channel 1 / 2412 MHz



Channel 7 / 2442 MHz



Channel 11 / 2462 MHz



9. Power spectral density (FCC §15.247(e), RSS-210 A8.2 (b))

EUT with DUT number	RM-431 DUT41996
Accessories with DUT numbers	BL-4CT DUT41994
Operation Voltage [V] / [Hz]	Nominal
Result	PASSED
Remarks	-
Temp [°C] / Humidity [%RH] / Air Pressure [kPa]	22 / 43 / 101.8
Date of measurements	24-Aug-2009
Measured by	Hannu Söderholm

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

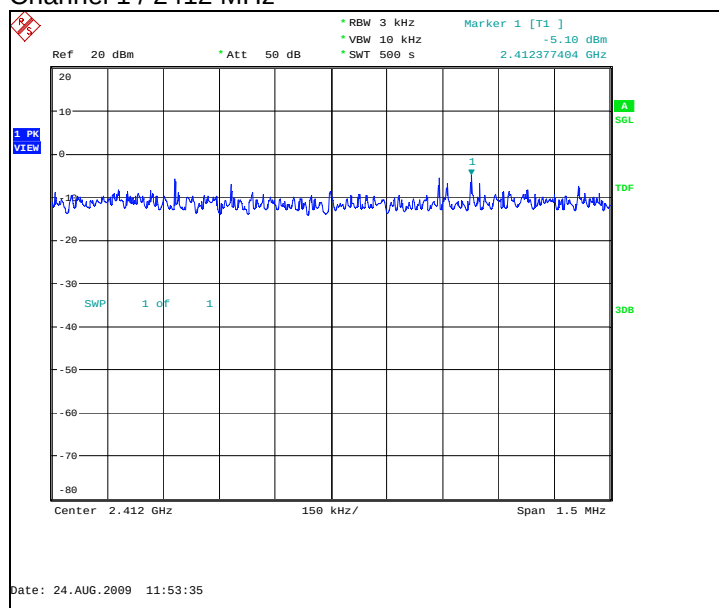
Limit [dBm] @ 3 kHz
≤ 8

9.2. WLAN test results

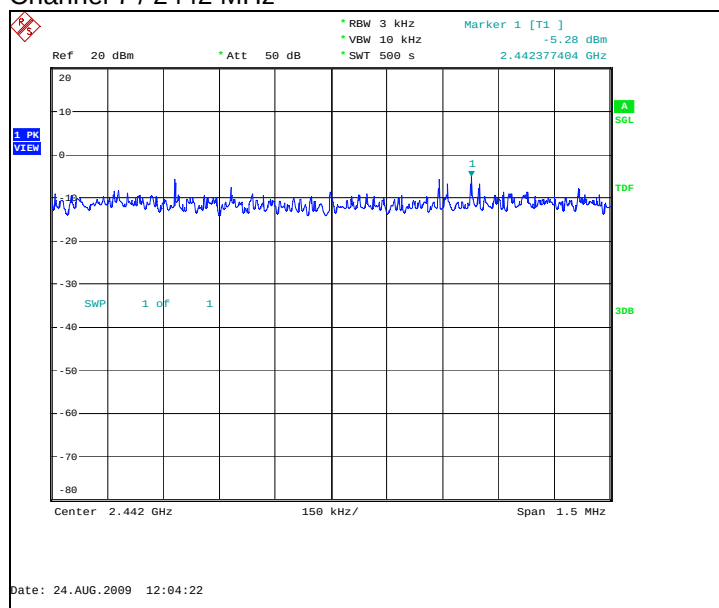
9.2.1 DSSS mode, QPSK modulation, 11 Mbps data rate

Channel / f_c [MHz]	P [dBm]	Result
1 / 2412	-5.10	PASSED
7 / 2442	-5.28	PASSED
11 / 2462	-5.80	PASSED

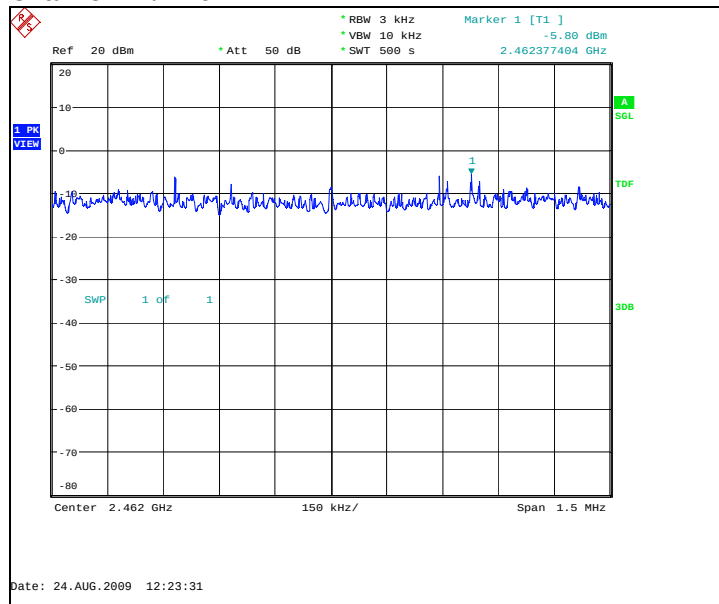
Channel 1 / 2412 MHz



Channel 7 / 2442 MHz



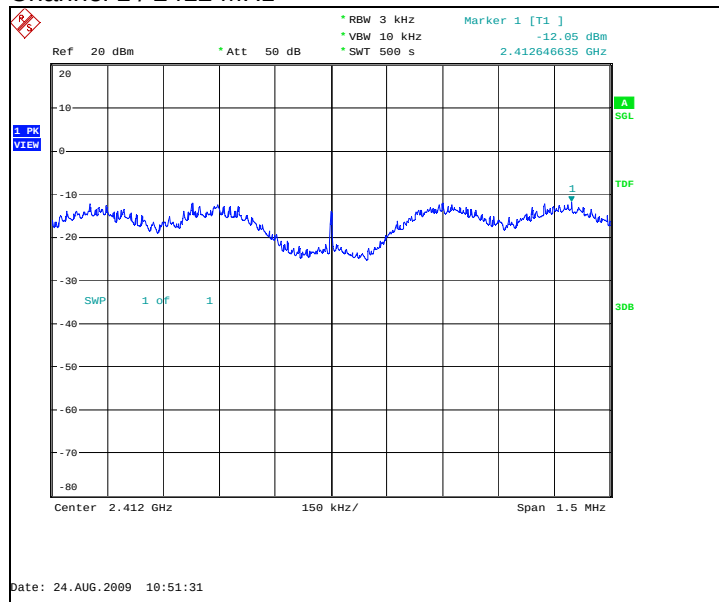
Channel 11 / 2462 MHz



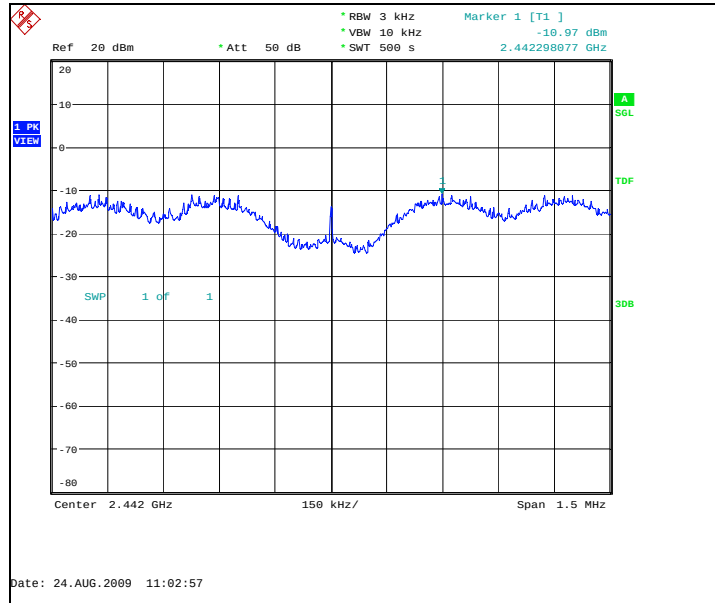
9.2.2 OFDM mode, BPSK modulation, 6 Mbps data rate

Channel / f_c [MHz]	P [dBm]	Result
1 / 2412	-12.05	PASSED
7 / 2442	-10.97	PASSED
11 / 2462	-12.65	PASSED

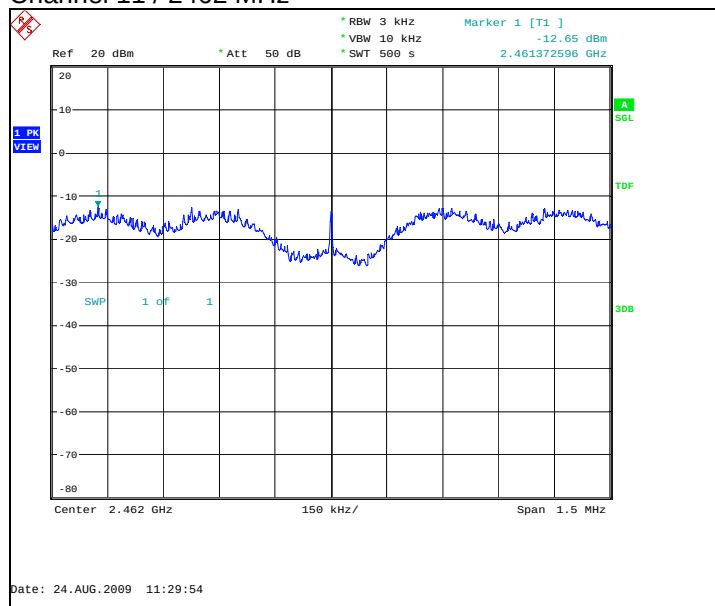
Channel 1 / 2412 MHz



Channel 7 / 2442 MHz



Channel 11 / 2462 MHz



10. Test Equipment

10.1. 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 μ H	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	Transformatic	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

10.2. 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	Transformativ	22/24/27, 15C, 15B
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

