

FCC Part 15C Compliance Test Report

Test Report no.:	FCC15CWLAN_RM-844_05.docx	Date of Report:	13-Jun-2012
Number of pages:	41	Customer's Contact person:	Zhang Wei
Testing laboratory:	TCC Nokia Beijing Laboratory Beijing Economic and Technological Development Area No.5 Donghuan Zhonglu Beijing PRC China 100176 Tel. +86 10 8711 8888 Fax. +86 10 8711 4550	Customer:	Nokia Corporation Beijing Economic and Technological Development Area No.5 Donghuan Zhonglu Beijing PRC China 100176 Tel. +86 10 8711 8888 Fax. +86 10 8711 4550
FCC listing no.:	975940		
IC recognition no.:	661AH-1		
Tested devices/ accessories:	Phone RM-844 / Battery BL-4U / AC-Charger AC-11E / Headset WH-102		
FCC ID:	QTLRM-844	IC:	661AB-RM844
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-210 (Issue 8, December 2010). 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:			

Zou Ming, Engineer, EMC

1. Summary for FCC Part 15C Compliance Test Report

Date of receipt	25-May-2012
Testing completed	04-Jun-201
The customer's contact person	Zhang Wei
Test Plan referred to	T:\Projects\RM-844\TestPlan\RS_testplan_RM-844.xls
Notes	-
Document name	FCC15CWLAN_RM-844_05.docx

1.1. EUT and Accessory Information

The EUT is a mobile phone with following features:

GSM/WLAN/Bluetooth

The EUT is tested with maximum rated TX power, modulated with pseudo random bit sequence (PRBS9).

Devices under tests

Product	Type	SN	HW	MV	SW	DUT
Phone	RM-844	004402138815992	0204	-	tn12w19	52748
Battery	BL-4U	4955402032021202846;0670560	-	-	-	52750
AC-Charger	AC-11E	4090491466160502548;0675479	-	-	-	52754
Headset	WH-102	0694323152311D23538	-	-	-	52755
Phone	RM-844	004402138815463	0204	-	tn12w19	52742
Phone	RM-844	004402138816180	0204	-	tn12w19	52736
Battery	BL-4U	4955402032021202713;0670560	-	-	-	52733
AC Charger	AC-11E	4090491466160502525;0675479	-	-	-	52735
Headset	WH-102	0694323152311D02963	-	-	-	52734

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(0.4(4))	Conducted peak output power	PASSED
15.247(d), 15.205(b)	A8(0.5)	Band edge compliance of RF emissions	PASSED
15.247(d)	A8(0.5)	Spurious RF conducted emissions	PASSED
15.247(d), 15.209	A8(0.5)	Spurious radiated emissions	PASSED
15.207	7.2.2	AC powerline conducted emissions	PASSED
15.247(a)(2)	A8(0.1(1))	6dB(bandwidth)	PASSED
15.247(e)	A8(0.1(2))	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 Laboratory.

CONTENTS

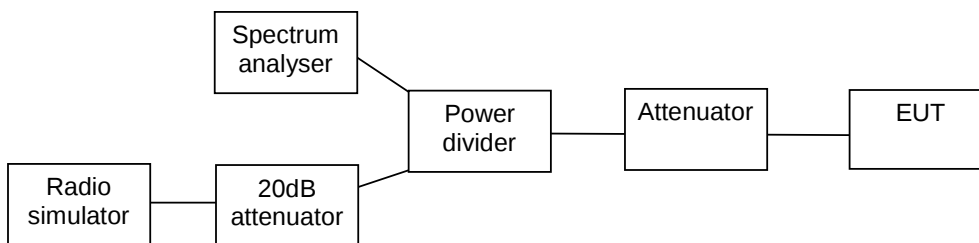
1. Summary for FCC Part 15C Compliance Test Report.....	2
1.1. EUT and Accessory Information.....	2
1.2. Summary of Test Results.....	2
2. Conducted peak output power (15.247(b)(1), RSS-210 A8.4 (4))	5
2.1. Test Setup.....	5
2.2. Test method and limit.....	5
2.3. WLAN Test results	6
3. Band edge compliance of RF emissions (FCC §15.247(d), 15.205(b), RSS-210 A8.5).....	11
3.2. Test method and limit.....	11
3.3. WLANg Test results	12
4. Spurious RF conducted emissions (FCC §15.247(d), RSS-210 A8.5).....	15
4.1. Test Setup.....	15
4.2. Test method and limit.....	15
4.3. WLAN Test results	16
5. Spurious radiated emissions (FCC §15.247(d), §15.209, RSS-210 A8.5)	21
5.2. Test method and limit.....	21
5.3. WLAN Test results	23
6. AC powerline conducted emissions (FCC §15.207, RSS-GEN 7.2.2)	27
6.1. Test Setup.....	27
6.2. Test method and limit.....	27
6.3. WLAN Test results	28
7. 6 dB bandwidth (FCC §15.247(a)(2), RSS-210 A8.2 (1)).....	29
7.1. Test Setup.....	29
7.2. Test method and limit.....	29
7.3. WLAN Test results	30
8. Power spectral density (FCC §15.247(e), RSS-210 A8.2 (2))	35
8.1. Test Setup.....	35
8.2. Test method and limit.....	35
8.3. WLAN Test results	36

9. Test Equipment.....	41
9.1. Conducted measurements	41
9.2. Radiated measurements	41

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

EUT with DUT number	RM-844, DUT 52742
Accessories with DUT numbers	BL-4U, DUT 52750 ; AC-11E, DUT 52754 ; WH-102, DUT 52755
Operation Voltage [V] / [Hz]	Nominal
Results	PASSED
Remarks	-
Temp [°C] / Humidity [%RH] / Air Pressure [kPa]	24/55/99.9
Date of measurements	04-Jun-2012
Measured by	Gao Sherina

2.1. Test Setup



2.2. 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

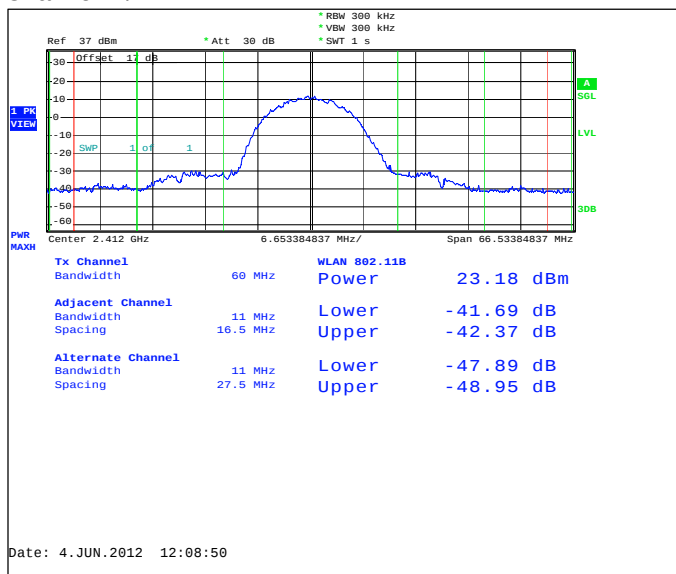
2.3. WLAN Test results

WLAN 2.4 GHz, peak output power [dBm]	
Mode & data speed	Ch 6
b-mode WLAN DSSS 1 Mbps	20.58
b-mode WLAN DSSS 2 Mbps	21.17
b-mode WLAN DSSS 5.5 Mbps	23.51
b-mode WLAN DSSS 11 Mbps	23.28
g-mode WLAN OFDM 6 Mbps	22.53
g-mode WLAN OFDM 9 Mbps	22.59
g-mode WLAN OFDM 12 Mbps	22.53
g-mode WLAN OFDM 18 Mbps	22.48
g-mode WLAN OFDM 24 Mbps	22.94
g-mode WLAN OFDM 36 Mbps	22.89
g-mode WLAN OFDM 48 Mbps	21.53
g-mode WLAN OFDM 54 Mbps	21.57

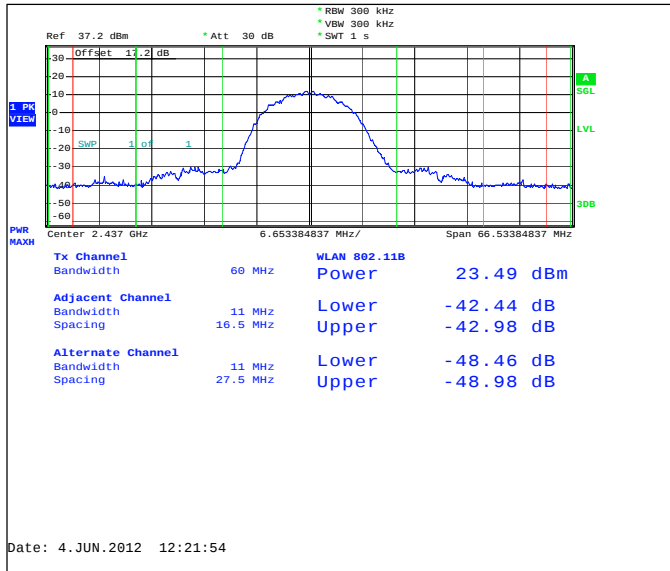
2.3.1 DSSS mode, QPSK modulation, 5.5 Mbps data rate

Channel / f _c [MHz]	P [dBm]	P [mW]	Result
1 / 2412	23.18	207.97	PASSED
6 / 2437	23.49	223.357	PASSED
11 / 2462	23.31	214.289	PASSED

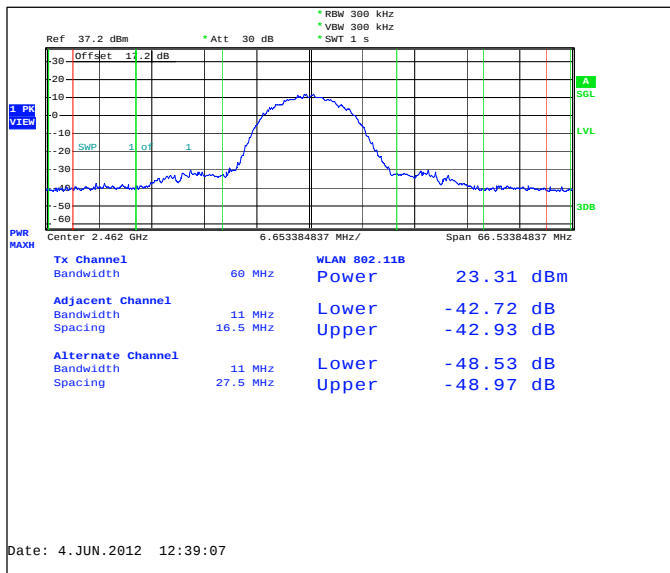
Channel 1 / 2412 MHz



Channel 6 / 2437 MHz



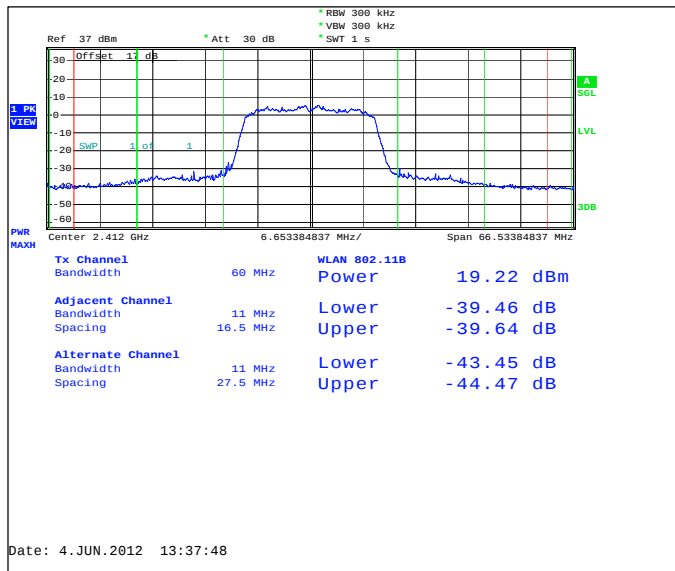
Channel 11 / 2462 MHz



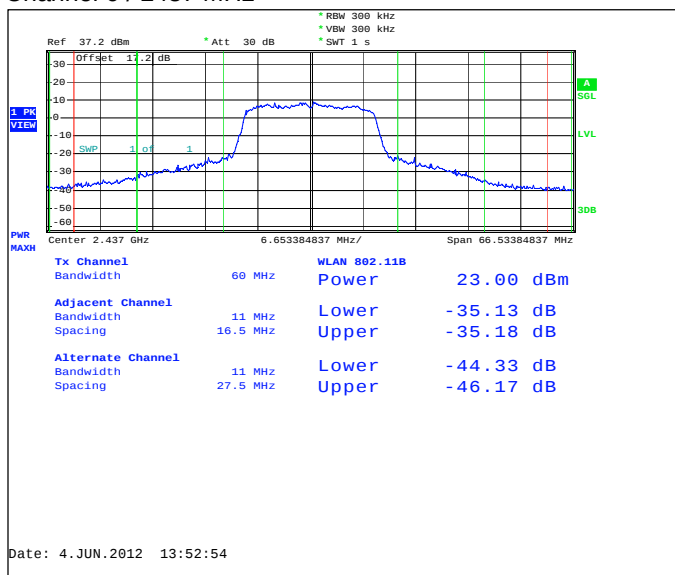
2.3.2 OFDM mode, 16QAM modulation, 24 Mbps data rate

Channel / f _c [MHz]	P [dBm]	P [mW]	Result
1 / 2412	19.22	83.56	PASSED
6 / 2437	23	199.526	PASSED
11 / 2462	20.99	125.603	PASSED

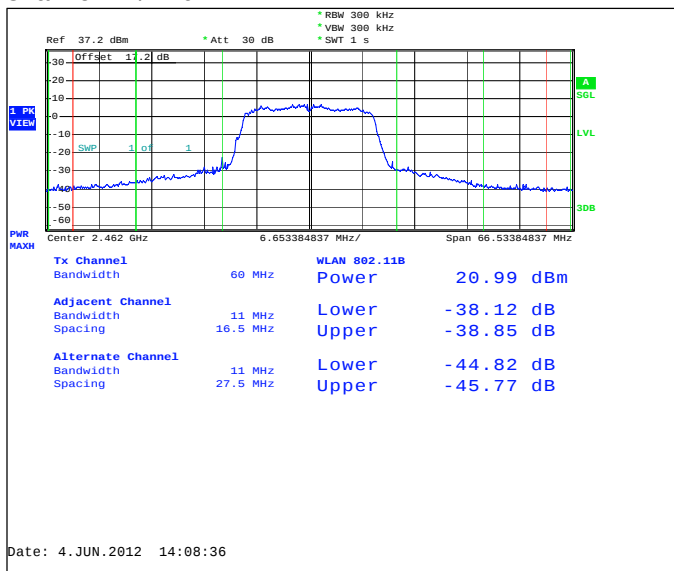
Channel 1 / 2412 MHz



Channel 6 / 2437 MHz



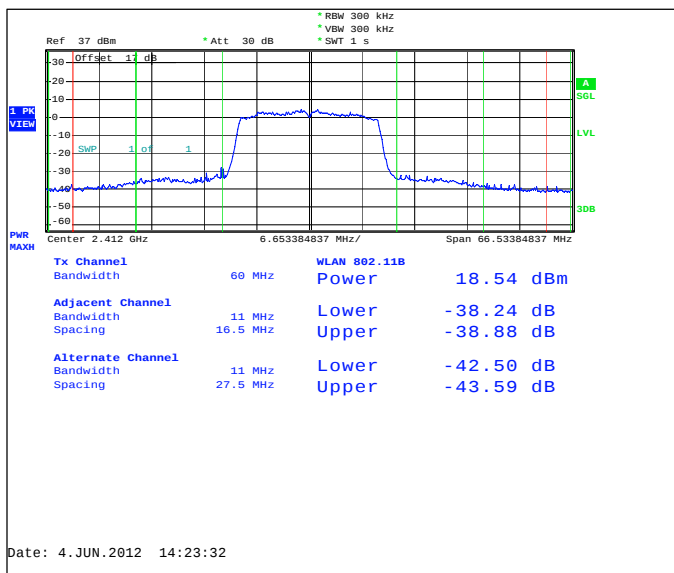
Channel 11 / 2462 MHz



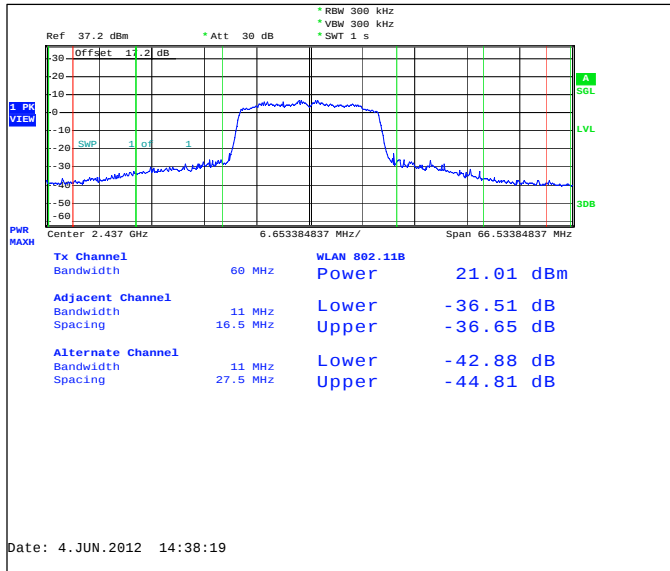
2.3.3 802.11n, HT20, MCS0

Channel / f _c [MHz]	P [dBm]	P [mW]	Result
1 / 2412	18.54	71.45	PASSED
6 / 2437	21.01	126.183	PASSED
11 / 2462	20.49	111.944	PASSED

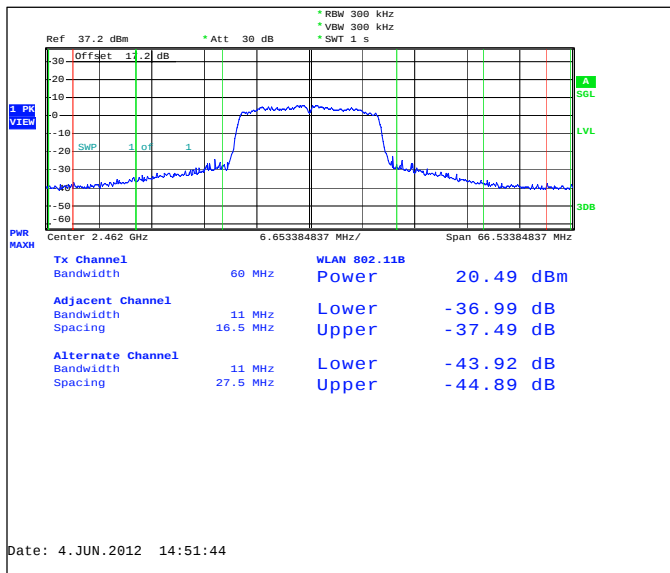
Channel 1 / 2412 MHz



Channel 6 / 2437 MHz



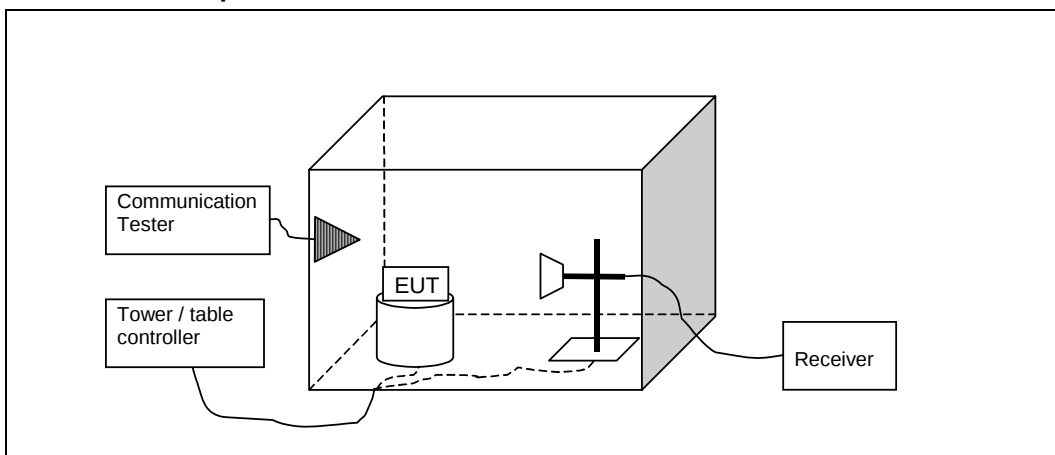
Channel 11 / 2462 MHz



3. Band edge compliance of RF emissions (FCC §15.247(d), 15.205(b), RSS-210 A8.5)

EUT with DUT number	RM-844, DUT 52736
Accessories with DUT numbers	BL-4U, DUT 52733 ; AC-11E, DUT 52735 ; WH-102, DUT 52734
Operation Voltage [V] / [Hz]	Nominal
Results	PASSED
Remarks	-
Temp [°C] / Humidity [%RH] / Air Pressure [kPa]	23/44/102.3
Date of measurements	30-May-2012
Measured by	Zou Ming

3.1.1 Test Setup



3.2. Test method and limit

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

The measurement results are obtained as described below:

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

Where U_{RX} is receiver reading and A_{TOT} is total correction factor including cable loss, antenna factor and preamplifier gain ($A_{TOT} = L_{CABLES} + A_F - G_{PREAMP}$).

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

3.3. WLANg Test results

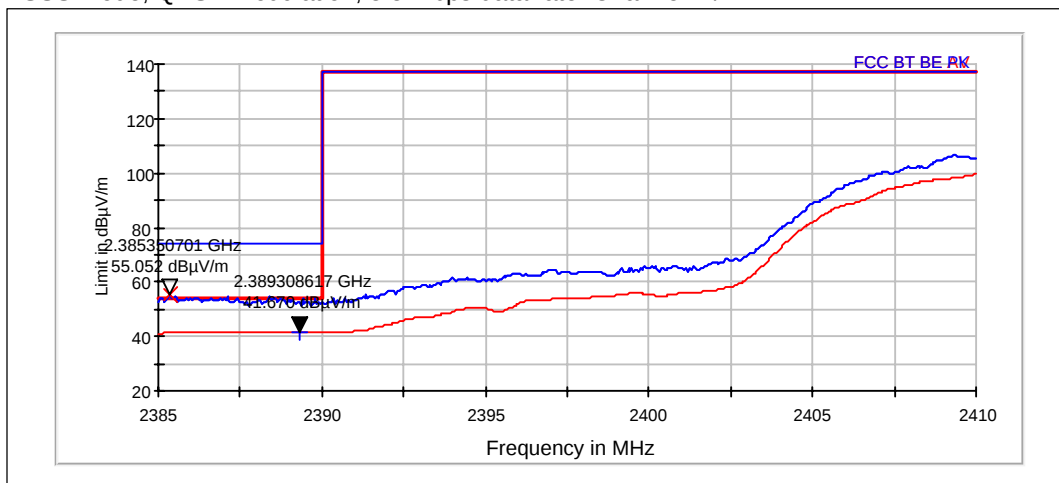
Average (RBW: 1 MHz, VBW: 10 Hz)

Channel / f_c [MHz]	E [dB μ V/m]	Result
1 / 2412 (DSSS, Mode)	41.67	PASSED
11 / 2462 (DSSS, Mode)	42.51	PASSED
1 / 2412 (OFDM, Mode)	46.55	PASSED
11 / 2462 (OFDM, Mode)	49.36	PASSED
1 / 2412 (802.11n, Mode)	50.48	PASSED
11 / 2462 (802.11n, Mode)	46.86	PASSED

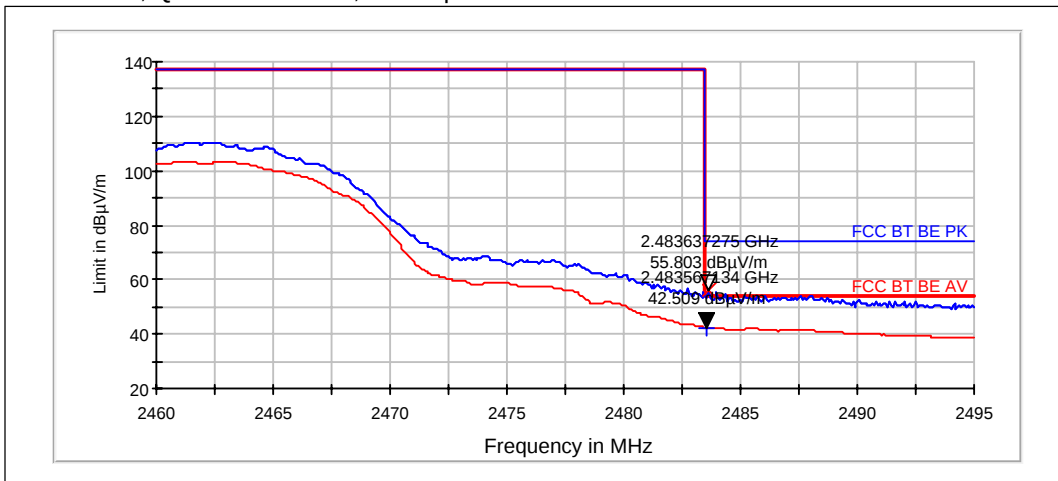
Peak (RBW: 1 MHz, VBW: 1 MHz)

Channel / f_c [MHz]	E [dB μ V/m]	Result
1 / 2412 (DSSS, Mode)	55.05	PASSED
11 / 2462 (DSSS, Mode)	55.8	PASSED
1 / 2412 (OFDM, Mode)	61.6	PASSED
11 / 2462 (OFDM, Mode)	63.39	PASSED
1 / 2412 (802.11n, Mode)	65.82	PASSED
11 / 2462 (802.11n, Mode)	64.82	PASSED

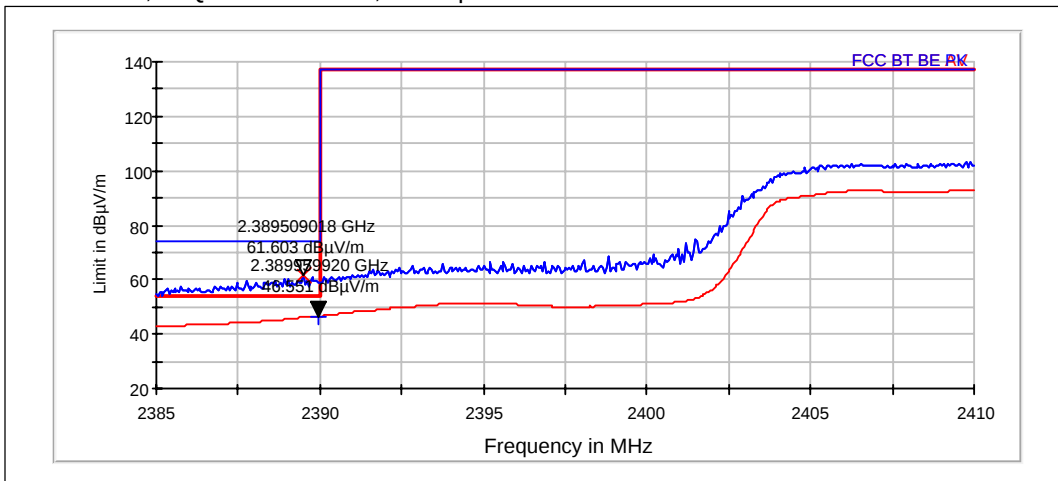
DSSS mode, QPSK modulation, 5.5 Mbps data rate. Channel 1 / 2412 MHz



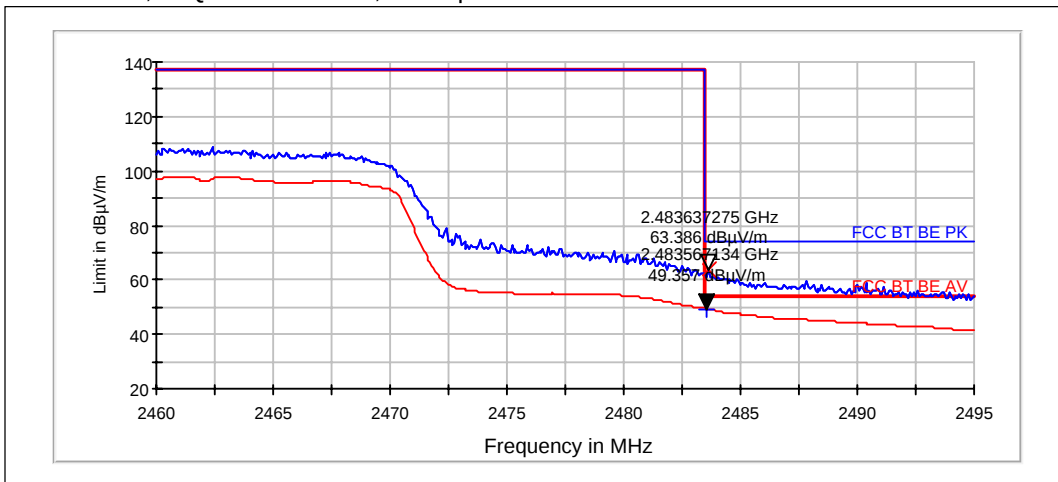
DSSS mode, QPSK modulation, 5.5 Mbps data rate. Channel 11 / 2462 MHz



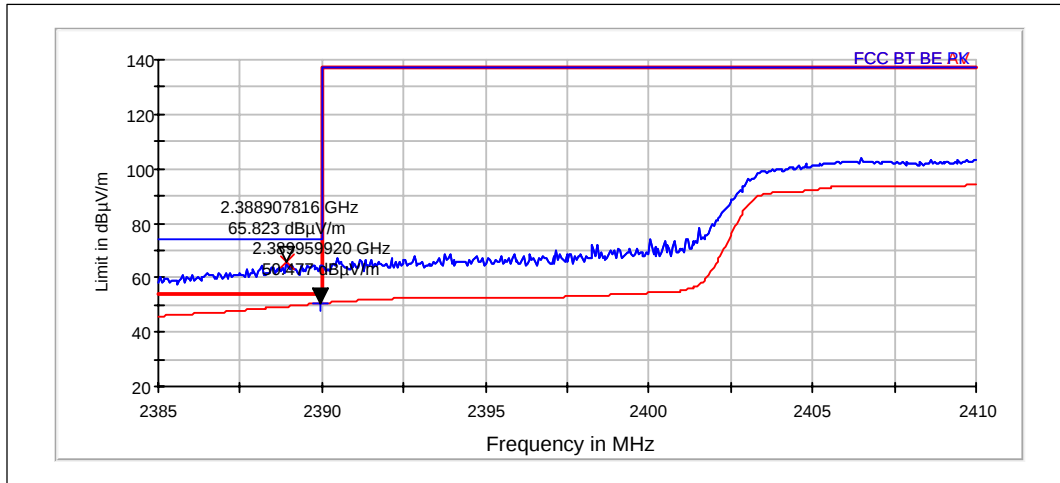
OFDM mode, 16QAM modulation, 24 Mbps data rate. Channel 1 / 2412 MHz



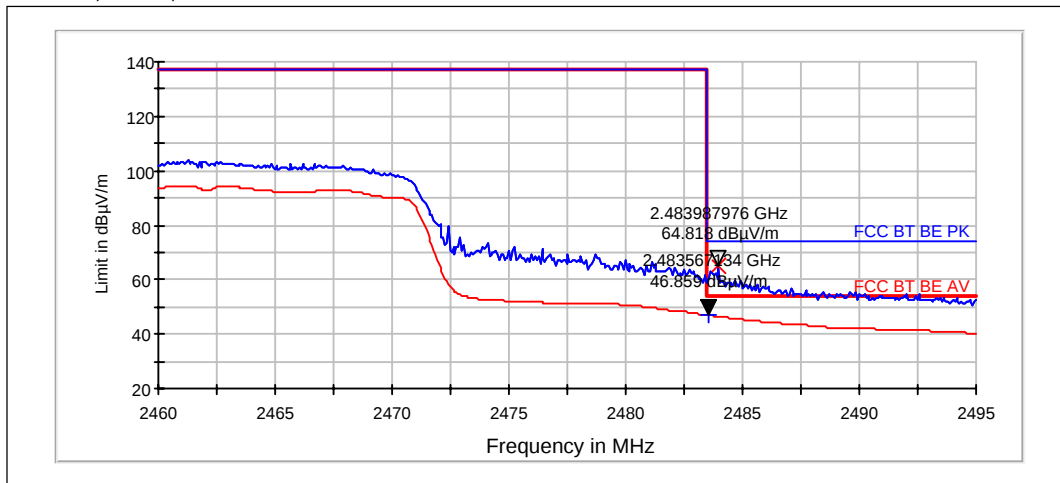
OFDM mode, 16QAM modulation, 24 Mbps data rate. Channel 11 / 2462 MHz



802.11n, HT20, MCS0. Channel 1 / 2412 MHz



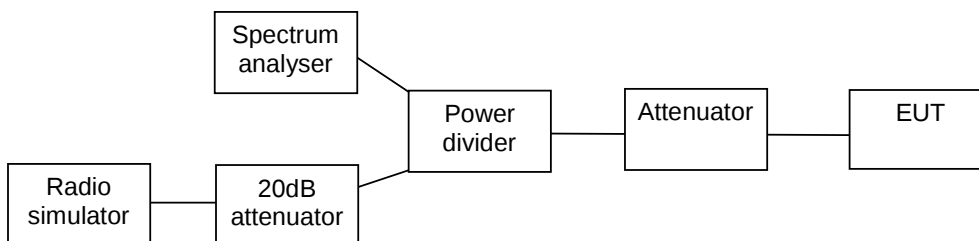
802.11n, HT20, MCS0. Channel 11 / 2462 MHz



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

EUT with DUT number	RM-844, DUT 52742
Accessories with DUT numbers	BL-4U, DUT 52750 ; AC-11E, DUT 52754 ; WH-102, DUT 52755
Operation Voltage [V] / [Hz]	Nominal
Results	PASSED
Remarks	-
Temp [°C] / Humidity [%RH] / Air Pressure [kPa]	24/55/99.9
Date of measurements	04-Jun-2012
Measured by	Gao Sherina

4.1. Test Setup



4.2. Test method and limit

The measurement is made according to Public notice DA 00-705 and IC standard RSS-210.

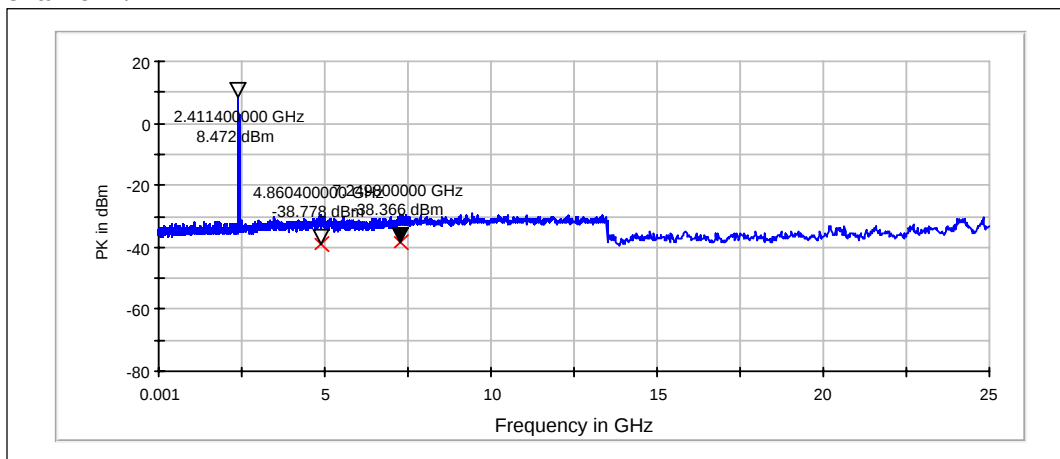
Limits for spurious RF conducted emissions measurements

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

4.3. WLAN Test results

4.3.1 DSSS mode, QPSK modulation, 5.5 Mbps data rate

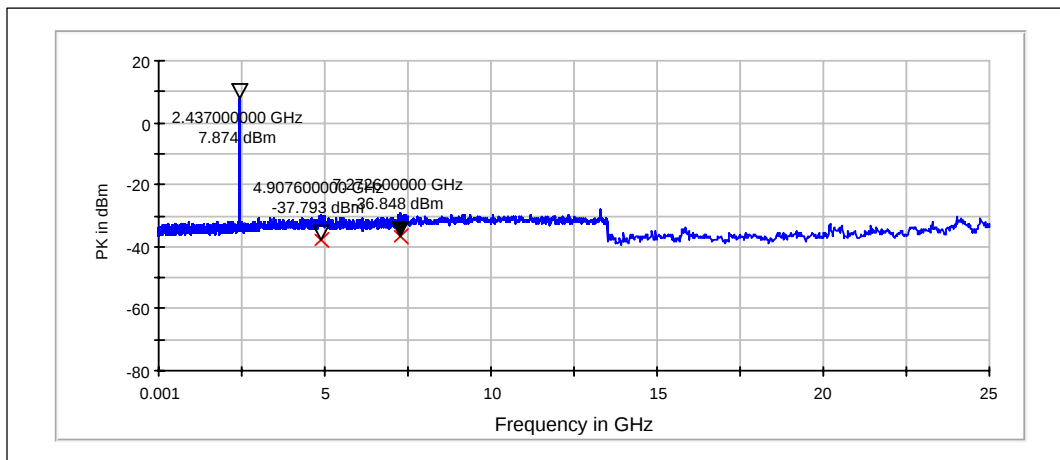
Channel 1 / 2412 MHz



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

Frequency [MHz]	P [dBc]	Result
4860.4	-38.78	PASSED
7249.8	-38.37	PASSED

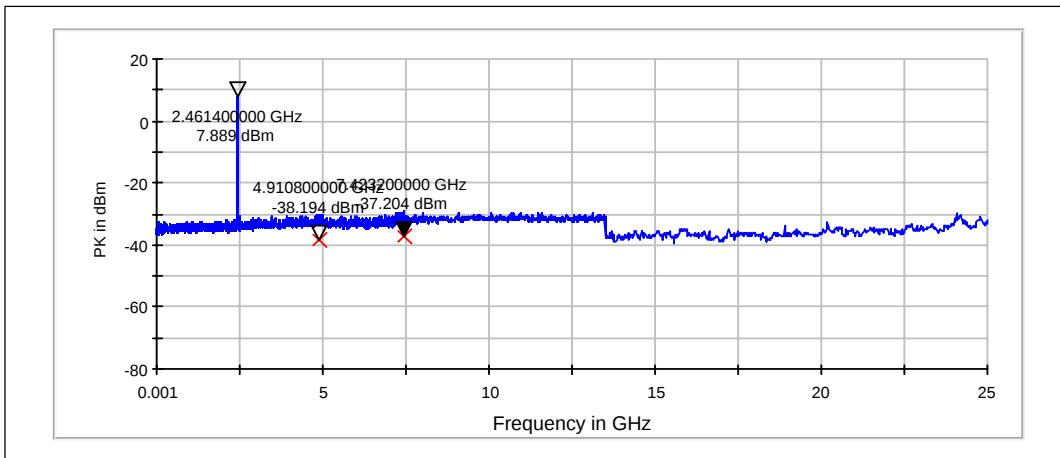
Channel 6 / 2437 MHz



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

Frequency [MHz]	P [dBc]	Result
4907.6	-37.79	PASSED
7272.6	-36.85	PASSED

Channel 11 / 2462 MHz

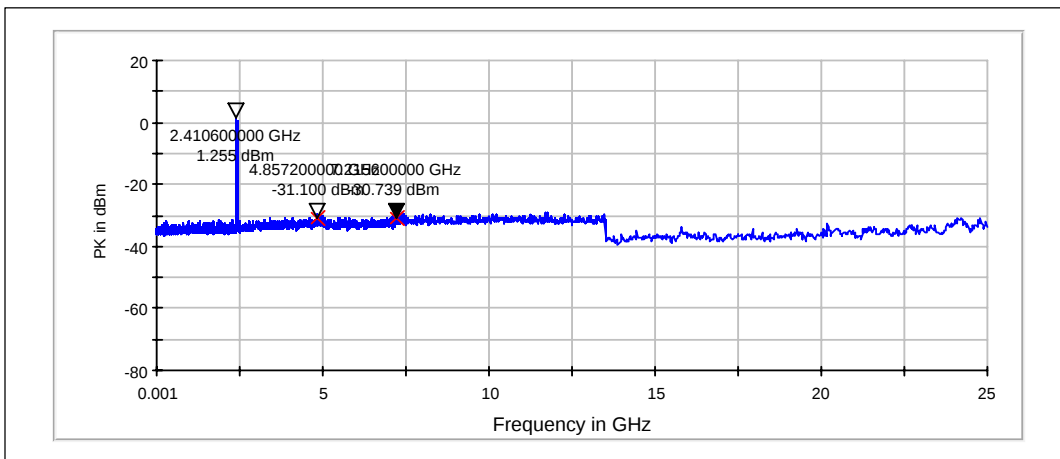


Peak (RBW: 100 kHz, VBW: 100 kHz)

Frequency [MHz]	P [dBc]	Result
4910.8	-38.19	PASSED
7423.2	-37.2	PASSED

4.3.2 OFDM mode, 16QAM modulation, 24 Mbps data rate

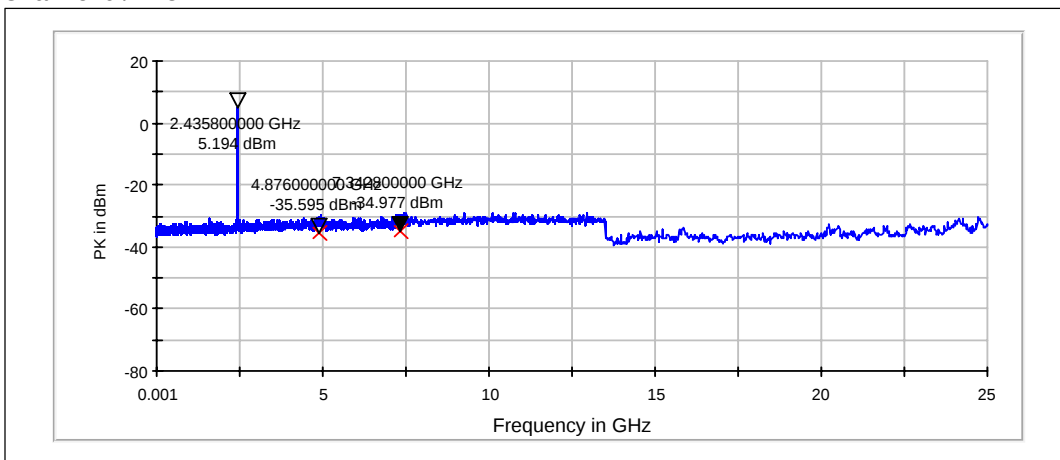
Channel 1 / 2412 MHz



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

Frequency [MHz]	P [dBc]	Result
4857.2	-31.1	PASSED
7215.6	-30.74	PASSED

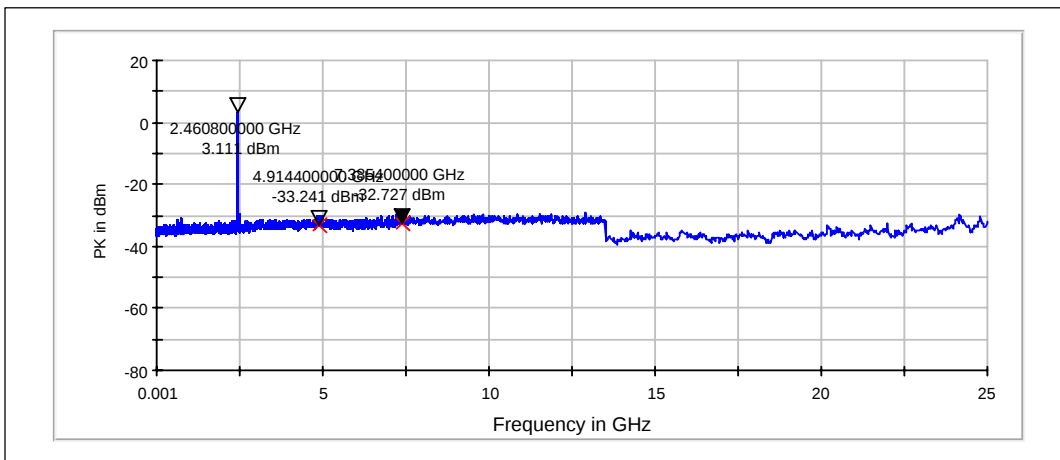
Channel 6 / 2437 MHz



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

Frequency [MHz]	P [dBc]	Result
4876	-35.6	PASSED
7342.8	-34.98	PASSED

Channel 11 / 2462 MHz

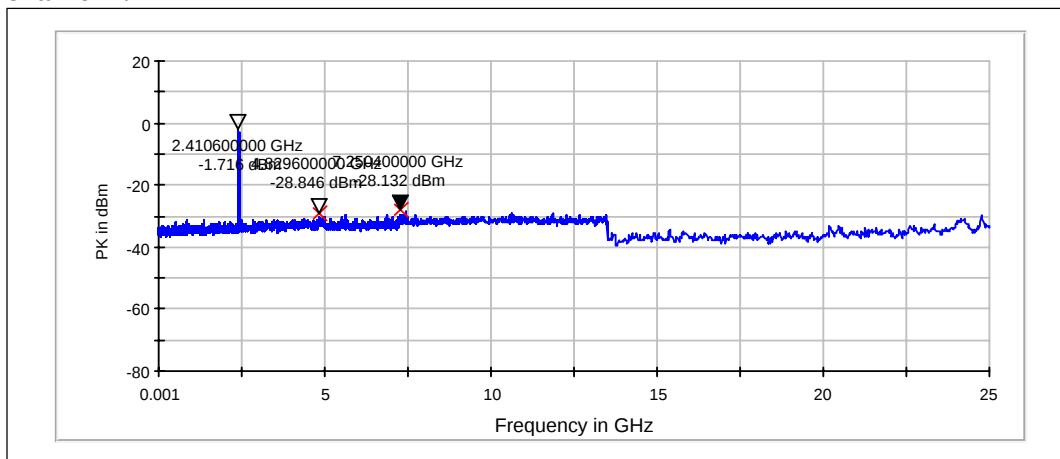


Peak (RBW: 100 kHz, VBW: 100 kHz)

Frequency [MHz]	P [dBc]	Result
4914.4	-33.24	PASSED
7385.4	-32.73	PASSED

4.3.3 802.11n, HT20, MCS0

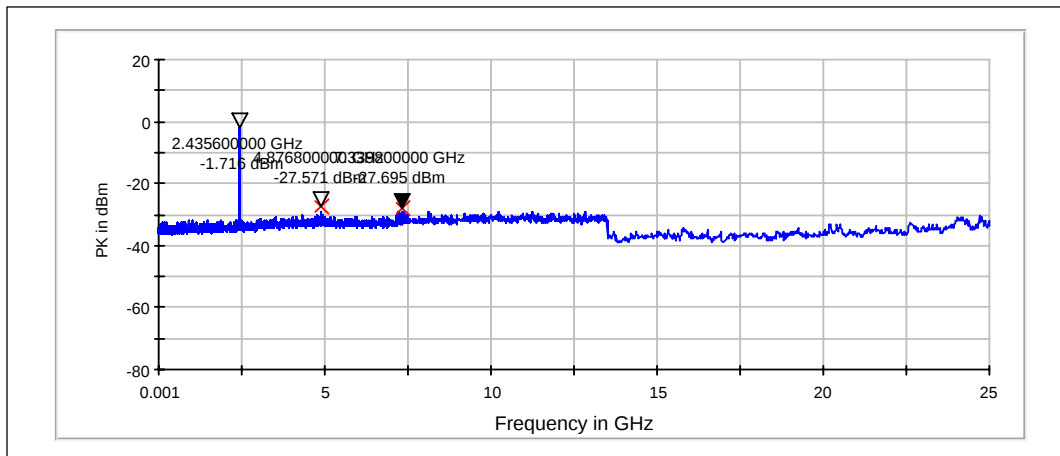
Channel 1 / 2412 MHz



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

Frequency [MHz]	P [dBc]	Result
4829.6	-28.85	PASSED
7250.4	-28.13	PASSED

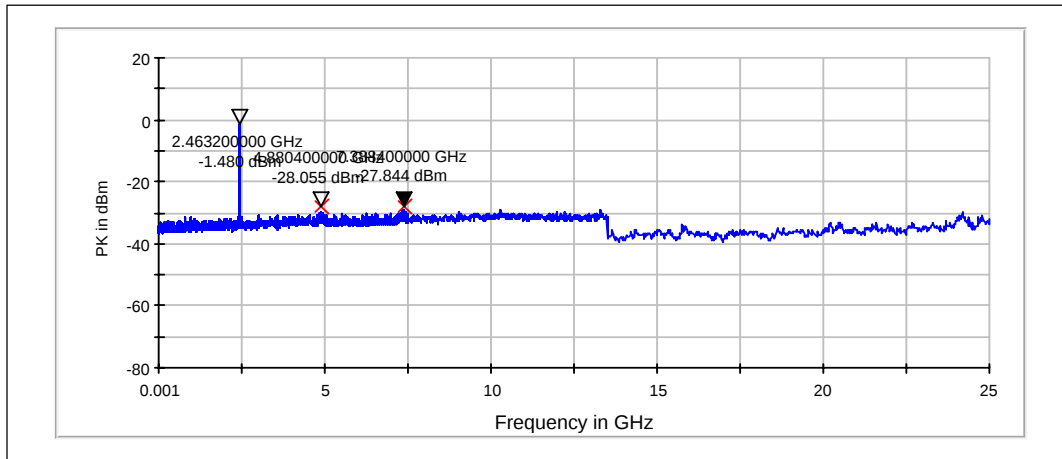
Channel 6 / 2437 MHz



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

Frequency [MHz]	P [dBc]	Result
4876.8	-27.57	PASSED
7339.8	-27.69	PASSED

Channel 11 / 2462 MHz



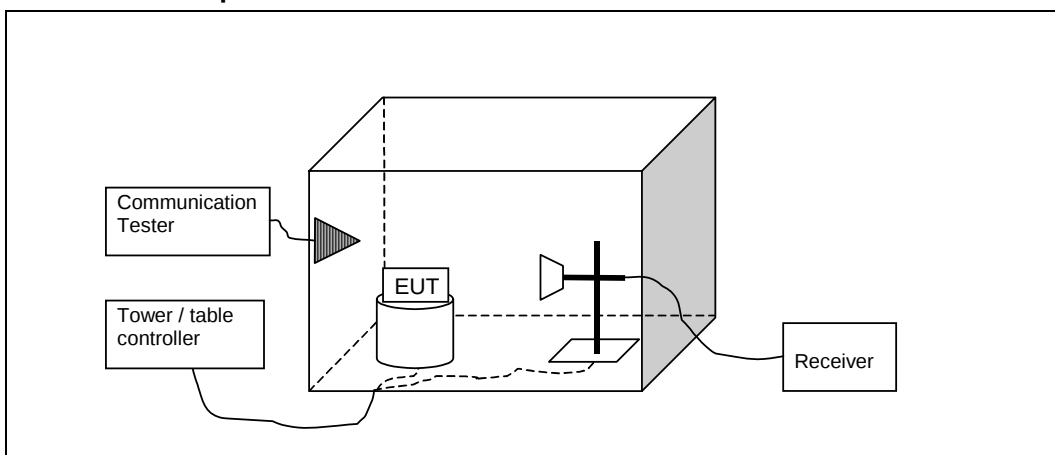
Peak (RBW: 100 kHz, VBW: 100 kHz)

Frequency [MHz]	P [dBc]	Result
4880.4	-28.05	PASSED
7388.4	-27.84	PASSED

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

EUT with DUT number	RM-844, DUT 52736
Accessories with DUT numbers	BL-4U, DUT 52733 ; AC-11E, DUT 52735 ; WH-102, DUT 52734
Operation Voltage [V] / [Hz]	Nominal
Results	PASSED
Remarks	-
Temp [°C] / Humidity [%RH] / Air Pressure [kPa]	23/44/101.3
Date of measurements	30-May-2012
Measured by	Zou Ming

5.1.1 Test Setup



5.2. 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:

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

Where U_{RX} is receiver reading and A_{TOT} is total correction factor including cable loss, antenna factor and preamplifier gain ($A_{TOT} = L_{CABLES} + A_F - G_{PREAMP}$).

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

Frequency range [MHz]	Limit [$\mu V/m$]	Limit [$dB\mu V/m$]	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

5.3. WLAN Test results

5.3.1 DSSS mode, QPSK modulation, 5.5 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]	Polarisation	Result
4824.1	44.88	175.287	44.8	0.08	VERTICAL	PASSED
7236.9	53.91	495.85	48.67	5.24	VERTICAL	PASSED

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

Frequency [MHz]	E [dBμV/m]	E [μV/m]	U _{RX} [dBμV]	A _{TOT} [dB]	Polarisation	Result
4824.1	31.45	37.381	31.37	0.08	VERTICAL	PASSED
7236.9	41.38	117.247	36.14	5.24	VERTICAL	PASSED

Channel 6 / 2437 MHz

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

Frequency [MHz]	E [dBμV/m]	E [μV/m]	U _{RX} [dBμV]	A _{TOT} [dB]	Polarisation	Result
31.784	29.85	31.074	33.35	-3.5	VERTICAL	PASSED
31.83	30	31.626	33.53	-3.53	VERTICAL	PASSED
32.035	30.28	32.64	33.95	-3.67	VERTICAL	PASSED
32.1	28.61	26.934	32.33	-3.72	VERTICAL	PASSED
902.996	31.14	36.041	33.51	-2.37	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
4878	43.71	153.25	43.39	0.32	HORIZONTAL	PASSED
7302.308	46.92	221.743	41.65	5.27	VERTICAL	PASSED
7311.824	48.02	251.71	42.7	5.32	HORIZONTAL	PASSED
7319.2	46.86	220.394	41.52	5.34	HORIZONTAL	PASSED
16424.052	58.37	829.182	41.26	17.11	VERTICAL	PASSED

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

Frequency [MHz]	E [dBμV/m]	E [μV/m]	U _{RX} [dBμV]	A _{TOT} [dB]	Polarisation	Result
4878	30.51	33.516	30.19	0.32	HORIZONTAL	PASSED
7302.308	33.89	49.488	28.62	5.27	VERTICAL	PASSED
7311.824	34.78	54.809	29.46	5.32	HORIZONTAL	PASSED
7319.2	34.08	50.594	28.74	5.34	HORIZONTAL	PASSED
16424.052	44.72	172.227	27.61	17.11	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]	Polarisation	Result
4924.2	45.45	187.327	45.07	0.38	VERTICAL	PASSED
7385.2	48.11	254.361	42.88	5.23	VERTICAL	PASSED

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

Frequency [MHz]	E [dBμV/m]	E [μV/m]	U _{RX} [dBμV]	A _{TOT} [dB]	Polarisation	Result
4924.2	32.6	42.643	32.22	0.38	VERTICAL	PASSED
7385.2	35.12	57.036	29.89	5.23	VERTICAL	PASSED

5.3.2 WLAN OFDM mode, 16QAM modulation, 24 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]	Polarisation	Result
4824.3	42.02	126.168	41.93	0.09	HORIZONTAL	PASSED
7234.8	50.43	332.086	45.22	5.21	VERTICAL	PASSED

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

Frequency [MHz]	E [dBμV/m]	E [μV/m]	U _{RX} [dBμV]	A _{TOT} [dB]	Polarisation	Result
4824.3	29.7	30.542	29.61	0.09	HORIZONTAL	PASSED
7234.8	36.99	70.705	31.78	5.21	VERTICAL	PASSED

Channel 6 / 2437 MHz

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

Frequency [MHz]	E [dBμV/m]	E [μV/m]	U _{RX} [dBμV]	A _{TOT} [dB]	Polarisation	Result
31.89	28.02	25.18	31.59	-3.57	VERTICAL	PASSED
31.95	28.53	26.709	32.14	-3.61	VERTICAL	PASSED
32.07	28.23	25.799	31.93	-3.7	VERTICAL	PASSED
32.134	28.22	25.775	31.96	-3.74	VERTICAL	PASSED
32.174	29.45	29.689	33.22	-3.77	VERTICAL	PASSED
32.19	28.79	27.495	32.57	-3.78	VERTICAL	PASSED
899.997	27.37	23.359	29.64	-2.27	HORIZONTAL	PASSED

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

Frequency [MHz]	E [dBμV/m]	E [μV/m]	U _{RX} [dBμV]	A _{TOT} [dB]	Polarisation	Result
4881	43.48	149.297	43.14	0.34	VERTICAL	PASSED
7301.404	47.33	232.648	42.06	5.27	HORIZONTAL	PASSED
7306.813	48.04	252.203	42.75	5.29	HORIZONTAL	PASSED
7318.7	46.76	217.771	41.41	5.35	HORIZONTAL	PASSED
16425.552	57.98	792.593	40.89	17.09	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
4881	30.63	34.009	30.29	0.34	VERTICAL	PASSED
7301.404	34.24	51.505	28.97	5.27	HORIZONTAL	PASSED
7306.813	34.68	54.181	29.39	5.29	HORIZONTAL	PASSED
7318.7	33.6	47.874	28.25	5.35	HORIZONTAL	PASSED
16425.552	44.68	171.396	27.59	17.09	HORIZONTAL	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]	Polarisation	Result
4922.4	43.79	154.65	43.42	0.37	HORIZONTAL	PASSED
7387.7	46.9	221.208	41.68	5.22	VERTICAL	PASSED

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

Frequency [MHz]	E [dBμV/m]	E [μV/m]	U _{RX} [dBμV]	A _{TOT} [dB]	Polarisation	Result
4922.4	31.01	35.534	30.64	0.37	HORIZONTAL	PASSED
7387.7	34.3	51.856	29.08	5.22	VERTICAL	PASSED

5.3.3 802.11n, HT20, MCS0

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]	Polarisation	Result
4824.9	43.2	144.511	43.09	0.11	HORIZONTAL	PASSED
7234.6	50.49	334.657	45.28	5.21	VERTICAL	PASSED

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

Frequency [MHz]	E [dBμV/m]	E [μV/m]	U _{RX} [dBμV]	A _{TOT} [dB]	Polarisation	Result
4824.9	29.68	30.482	29.57	0.11	HORIZONTAL	PASSED
7234.6	36.91	70.049	31.7	5.21	VERTICAL	PASSED

Channel 6 / 2437 MHz

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

Frequency [MHz]	E [dBμV/m]	E [μV/m]	U _{RX} [dBμV]	A _{TOT} [dB]	Polarisation	Result
31.86	28.42	26.348	31.97	-3.55	VERTICAL	PASSED
31.98	29.46	29.713	33.09	-3.63	VERTICAL	PASSED
32.234	28.08	25.357	31.89	-3.81	VERTICAL	PASSED
32.25	29.59	30.154	33.41	-3.82	VERTICAL	PASSED
32.254	28.88	27.781	32.71	-3.83	VERTICAL	PASSED
46.232	27.1	22.639	40.72	-13.62	HORIZONTAL	PASSED
902.696	25.35	18.512	27.72	-2.37	HORIZONTAL	PASSED

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

Frequency [MHz]	E [dBμV/m]	E [μV/m]	U _{RX} [dBμV]	A _{TOT} [dB]	Polarisation	Result
4879	43.47	149.142	43.14	0.33	VERTICAL	PASSED
7312.922	46.87	220.445	41.55	5.32	VERTICAL	PASSED
7319	47.02	224.362	41.67	5.35	VERTICAL	PASSED
16384.566	58.1	803.156	41.42	16.68	VERTICAL	PASSED

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

Frequency [MHz]	E [dBμV/m]	E [μV/m]	U _{RX} [dBμV]	A _{TOT} [dB]	Polarisation	Result
4879	30.55	33.682	30.22	0.33	VERTICAL	PASSED
7312.922	33.71	48.467	28.39	5.32	VERTICAL	PASSED
7319	34.03	50.281	28.68	5.35	VERTICAL	PASSED
16384.566	44.09	160.159	27.41	16.68	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]	Polarisation	Result
4923.9	44.14	160.972	43.76	0.38	VERTICAL	PASSED
7384.5	46.72	216.646	41.48	5.24	VERTICAL	PASSED

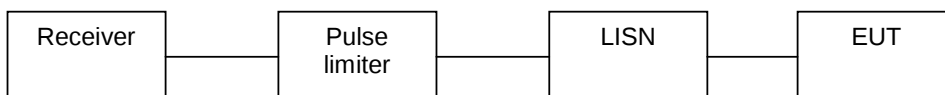
Average (RBW: 1 MHz, VBW: 1 MHz)

Frequency [MHz]	E [dBμV/m]	E [μV/m]	U _{RX} [dBμV]	A _{TOT} [dB]	Polarisation	Result
4923.9	30.95	35.261	30.57	0.38	VERTICAL	PASSED
7384.5	33.57	47.682	28.33	5.24	VERTICAL	PASSED

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

EUT with DUT number	RM-844, DUT 52748
Accessories with DUT numbers	BL-4U, DUT 52750 ; AC-11E, DUT 52754 ; WH-102, DUT 52755
Operation Voltage [V] / [Hz]	115 / 60
Results	PASSED
Remarks	-
Temp [°C] / Humidity [%RH] / Air Pressure [kPa]	23/44/101.3
Date of measurements	30-May-2012
Measured by	Gao Sherina

6.1. Test Setup



6.2. Test method and limit

The measurement is made according to Public notice DA 00-705 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.

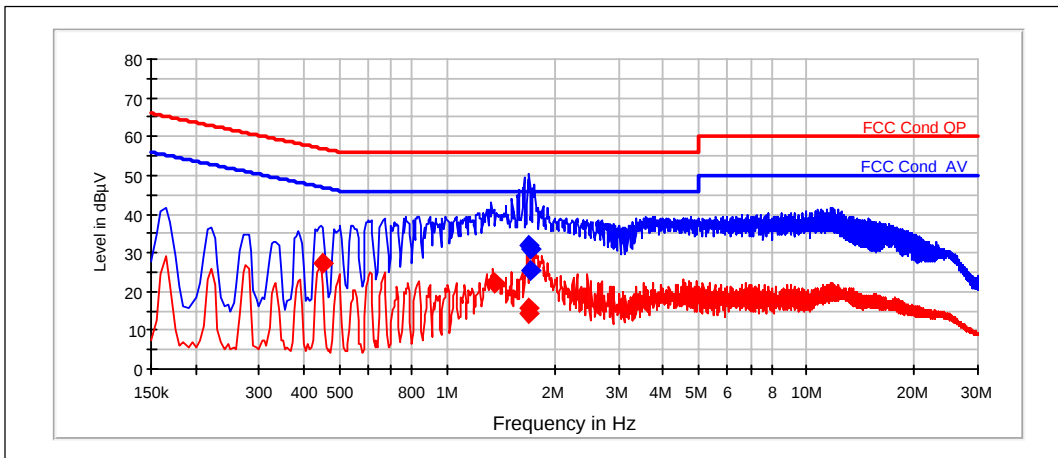
CISPR 22 Class B limits

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

6.3. WLAN Test results

6.3.1 DSSS mode, QPSK modulation, 5.5 Mbps data rate

Channel 6 / 2437 MHz



QuasiPeak (RBW: 9 kHz)

Frequency [MHz]	U [dBμV]	Line	Result
1.695	32.05	N	PASSED
1.705	30.86	N	PASSED
1.71	25.22	N	PASSED

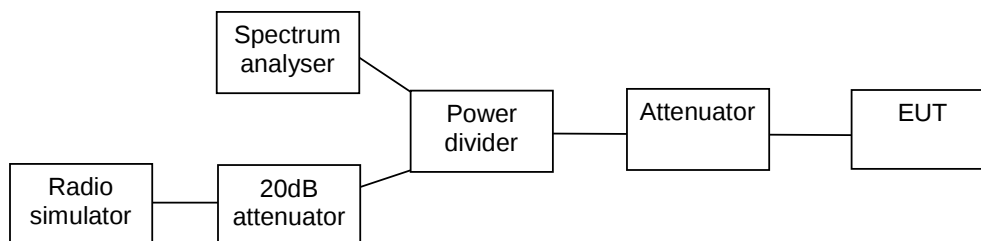
Average (RBW: 9 kHz)

Frequency [MHz]	U [dBμV]	Line	Result
0.45	27.36	N	PASSED
1.355	22.27	N	PASSED
1.69	14.36	N	PASSED
1.695	15.84	N	PASSED

7. 6 dB bandwidth (FCC §15.247(a)(2), RSS-210 A8.2 (1))

EUT with DUT number	RM-844, DUT 52742
Accessories with DUT numbers	BL-4U, DUT 52750 ; AC-11E, DUT 52754 ; WH-102, DUT 52755
Operation Voltage [V] / [Hz]	Nominal
Results	PASSED
Remarks	-
Temp [°C] / Humidity [%RH] / Air Pressure [kPa]	24/55/99.9
Date of measurements	04-Jun-2012
Measured by	Gao Sherina

7.1. Test Setup



7.2. 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

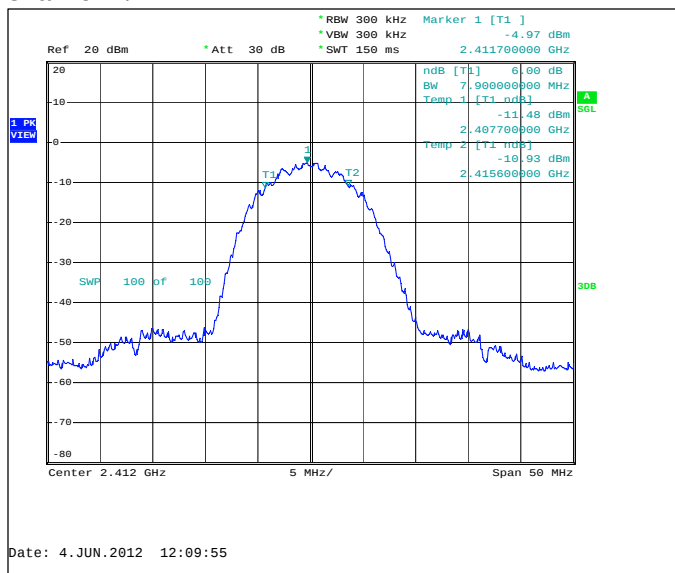
Limit [kHz]
>= 500

7.3. WLAN Test results

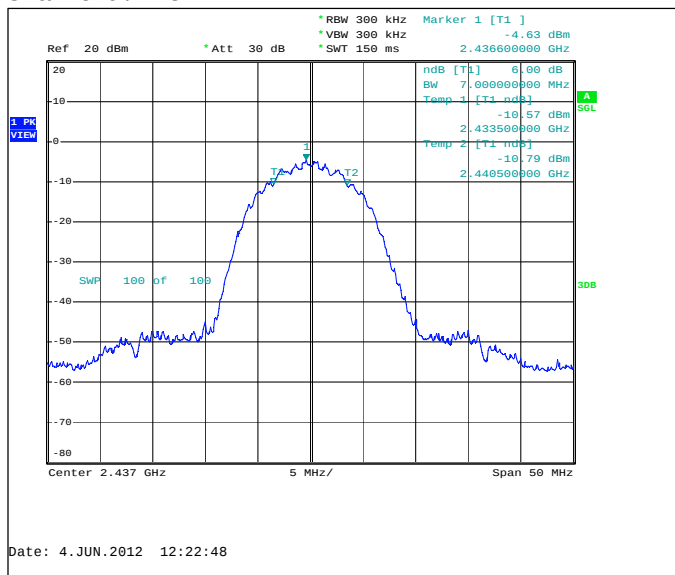
7.3.1 DSSS mode, QPSK modulation, 5.5 Mbps data rate

Channel / f _c [MHz]	6 dB bandwidth [kHz]	Result
1 / 2412	7900	PASSED
6 / 2437	7000	PASSED
11 / 2462	7000	PASSED

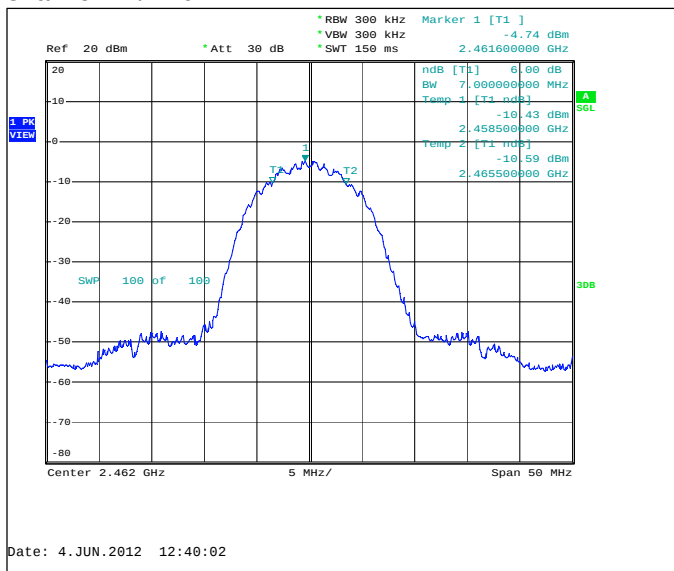
Channel 1 / 2412 MHz



Channel 6 / 2437 MHz



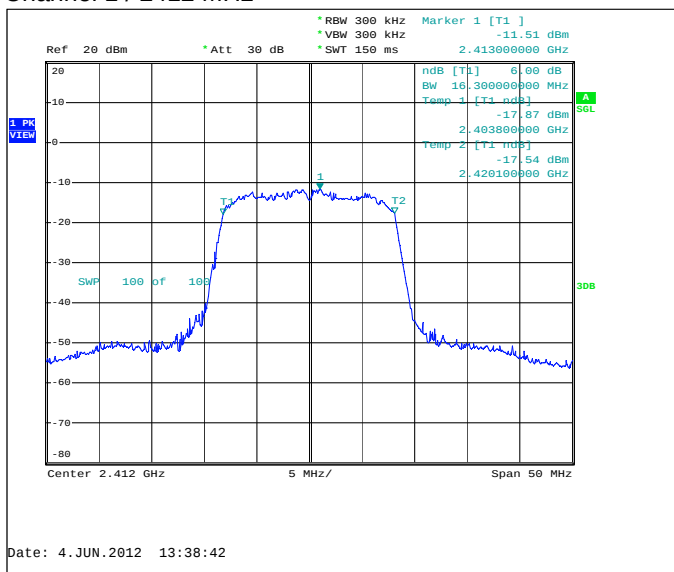
Channel 11 / 2462 MHz



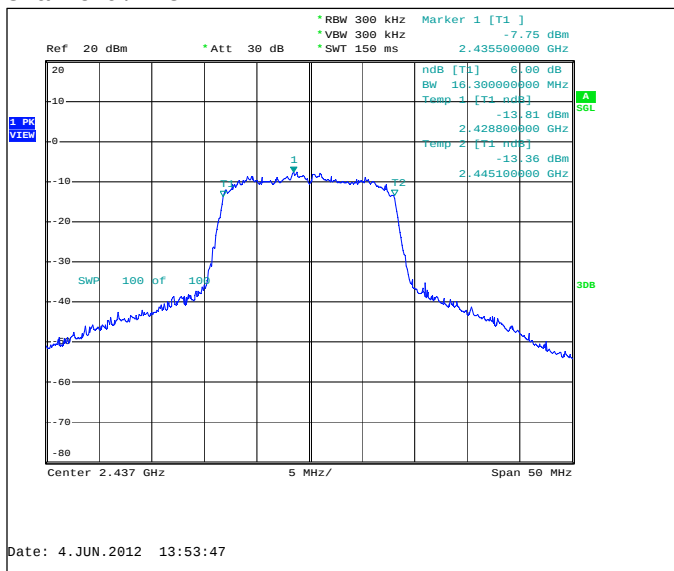
7.3.2 OFDM mode, 16QAM modulation, 24 Mbps data rate

Channel / f _c [MHz]	6 dB bandwidth [kHz]	Result
1 / 2412	16300	PASSED
6 / 2437	16300	PASSED
11 / 2462	16300	PASSED

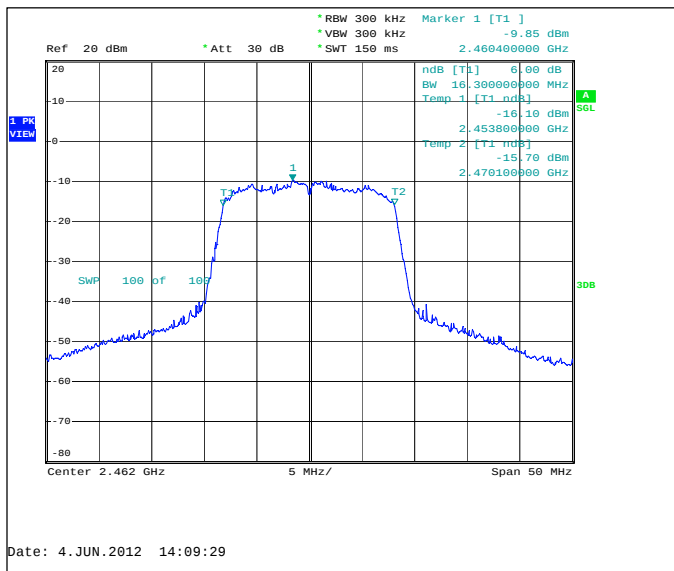
Channel 1 / 2412 MHz



Channel 6 / 2437 MHz



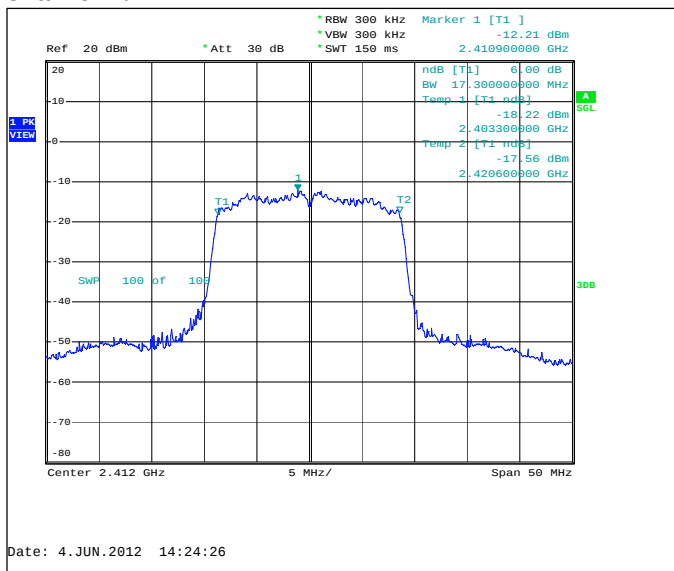
Channel 11 / 2462 MHz



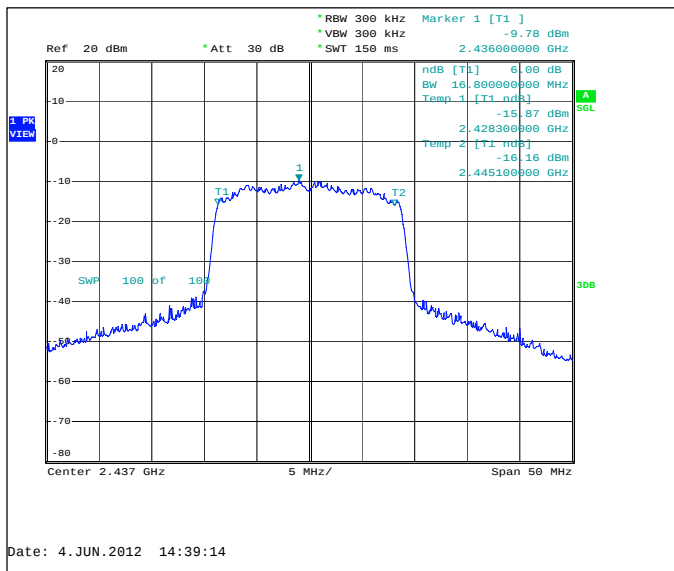
7.3.3 802.11n, HT20, MCS0

Channel / f_c [MHz]	6 dB bandwidth [kHz]	Result
1 / 2412	17300	PASSED
6 / 2437	16800	PASSED
11 / 2462	17400	PASSED

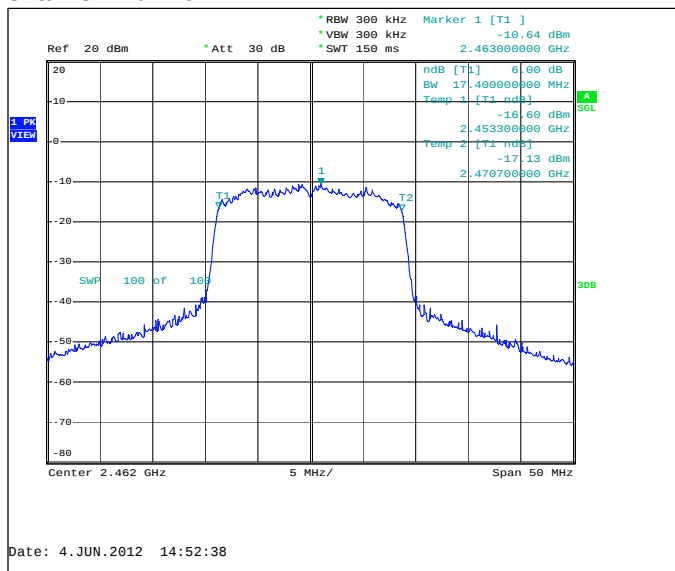
Channel 1 / 2412 MHz



Channel 6 / 2437 MHz



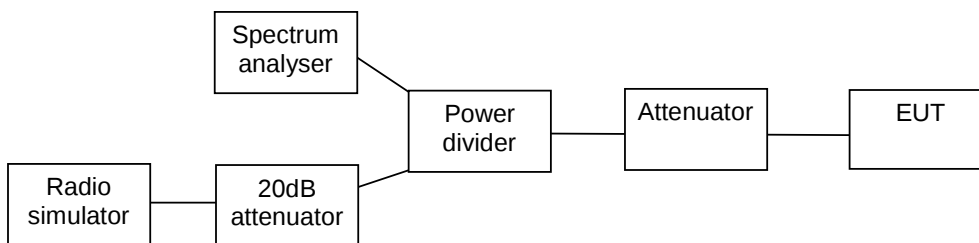
Channel 11 / 2462 MHz



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

EUT with DUT number	RM-844, DUT 52742
Accessories with DUT numbers	BL-4U, DUT 52750 ; AC-11E, DUT 52754 ; WH-102, DUT 52755
Operation Voltage [V] / [Hz]	Nominal
Results	PASSED
Remarks	-
Temp [°C] / Humidity [%RH] / Air Pressure [kPa]	24/55/99.9
Date of measurements	04-Jun-2012
Measured by	Gao Sherina

8.1. Test Setup



8.2. 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

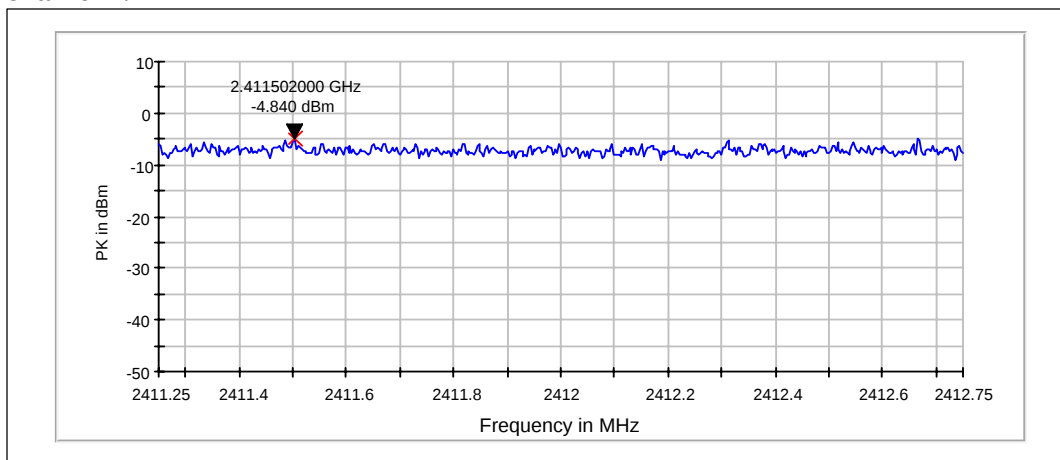
Limit [dBm] @ 3 kHz
<= 8

8.3. WLAN Test results

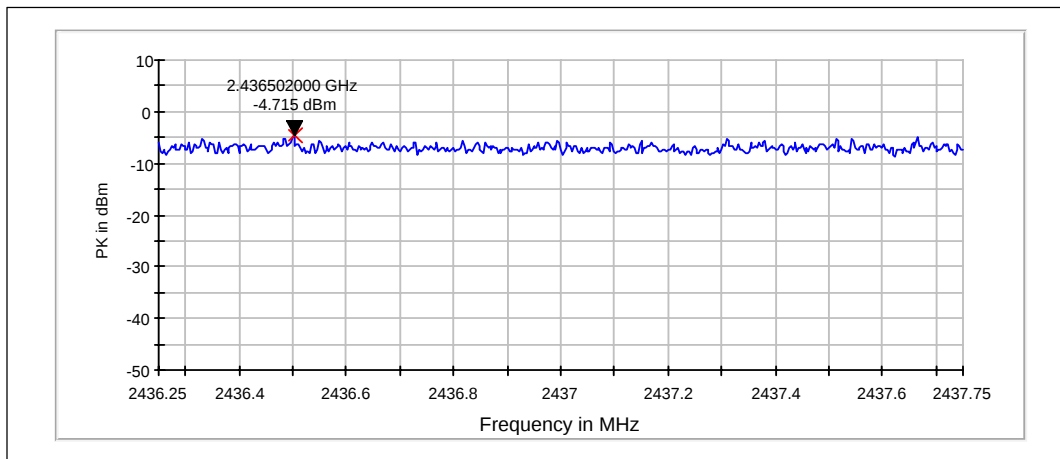
8.3.1 DSSS mode, QPSK modulation, 5.5 Mbps data rate

Channel / f_c [MHz]	P [dBm]	Result
1 / 2412	-4.84	PASSED
6 / 2437	-4.72	PASSED
11 / 2462	-4.69	PASSED

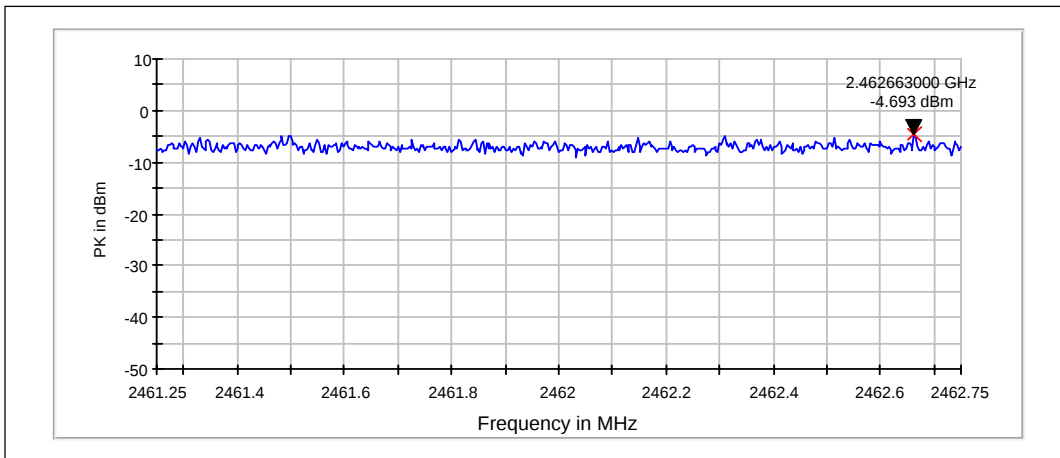
Channel 1 / 2412 MHz



Channel 6 / 2437 MHz



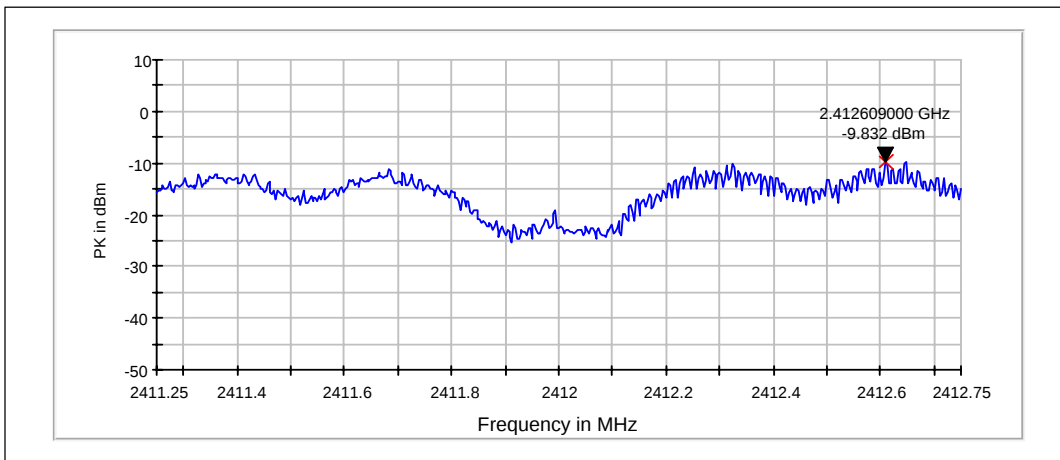
Channel 11 / 2462 MHz



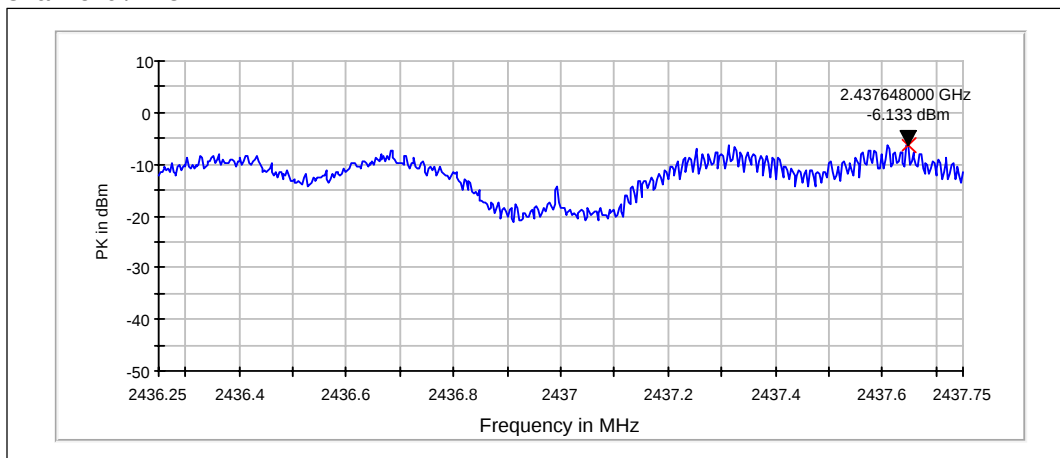
8.3.2 OFDM mode, 16QAM modulation, 24 Mbps data rate

Channel / f _c [MHz]	P [dBm]	Result
1 / 2412	-9.83	PASSED
6 / 2437	-6.13	PASSED
11 / 2462	-8.06	PASSED

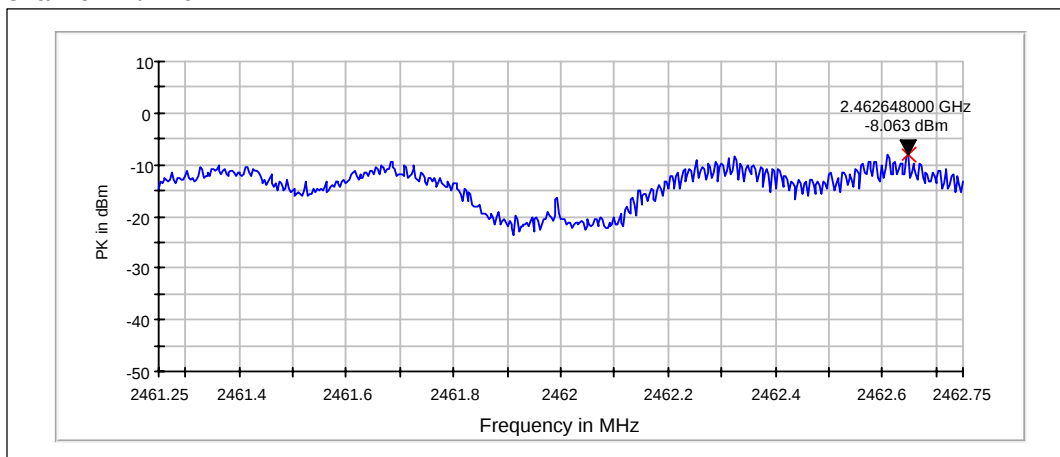
Channel 1 / 2412 MHz



Channel 6 / 2437 MHz



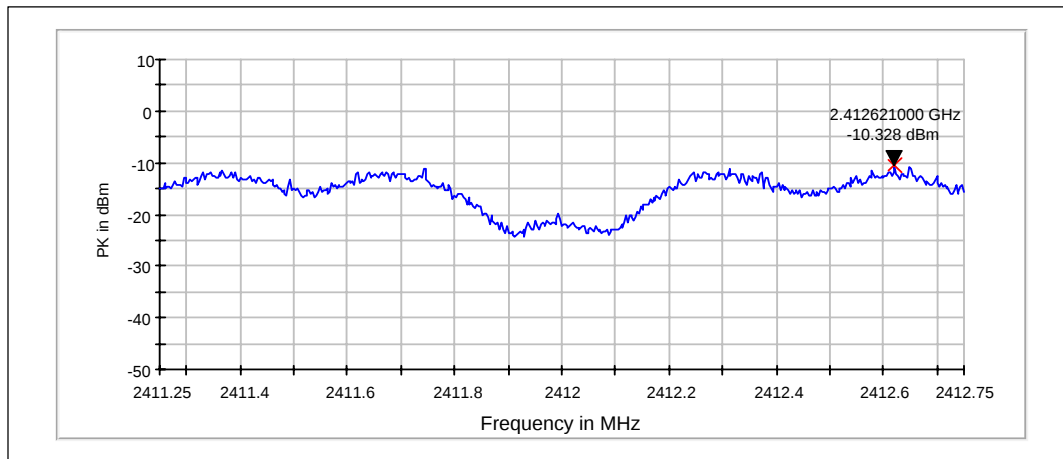
Channel 11 / 2462 MHz



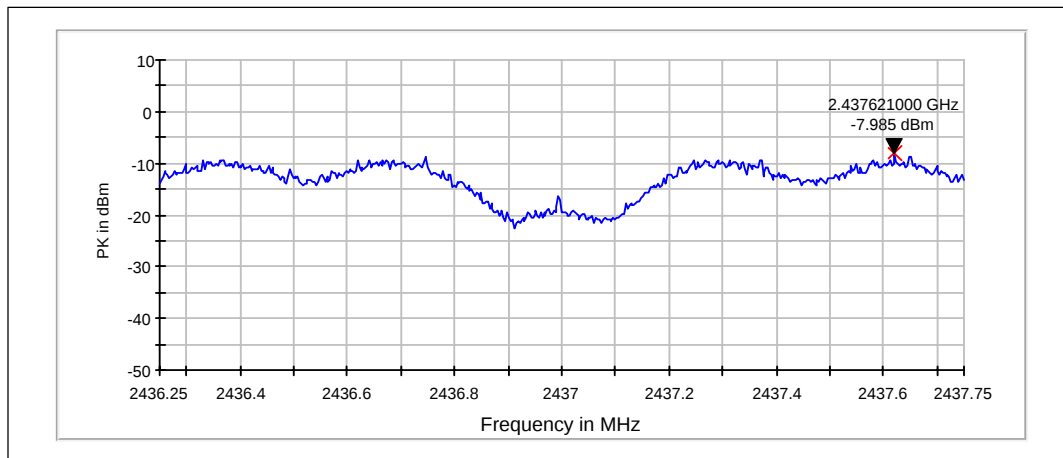
8.3.3 802.11n, HT20, MCS0

Channel / f _c [MHz]	P [dBm]	Result
1 / 2412	-10.33	PASSED
6 / 2437	-7.99	PASSED
11 / 2462	-8.65	PASSED

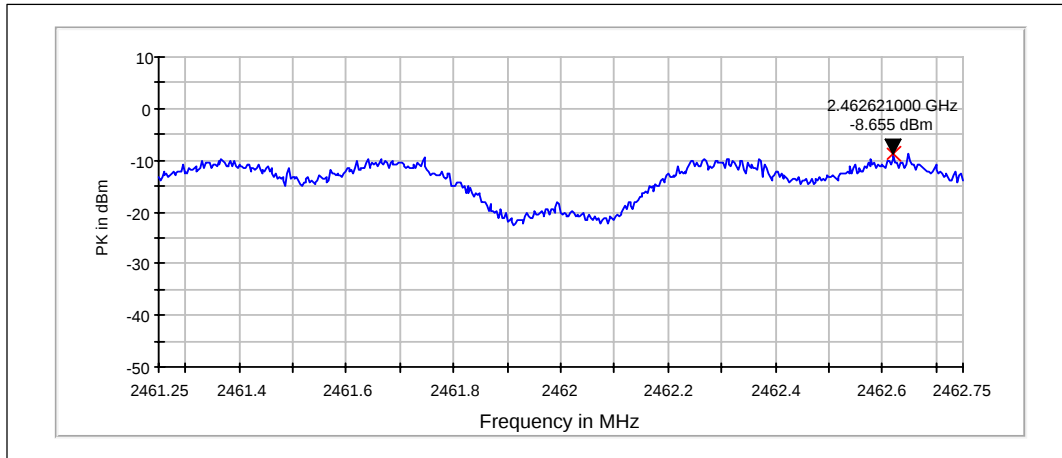
Channel 1 / 2412 MHz



Channel 6 / 2437 MHz



Channel 11 / 2462 MHz



9. Test Equipment

9.1. Conducted measurements

Eq. No	Equipment	Type	Manufacturer	Used in
-	RF Emission Software	EMC32 Test Software	R&S	22/24/27, 15C, 15B
BJPCHW0020	DC Power supply	Hp6632B	HP	22/24/27, 15C
BJPCPT0040	Receiver	ESCS30	R&S	15C,15B
BJPCPT0069	LISN 50 μ H	ESH3-Z5	R&S	15C,15B
BJPCPT0073	Signal Generator	SMR 20	R&S	22/24/27, 15C, 15B
BJPCPT0191	Pulse Limiter	ESH3-Z2	R&S	15C,15B
BJPCTC0017	Communication Tester	CMU200	R&S	22/24/27, 15C, 15B
BJPCTC0067	Bluetooth Tester	CBT	R&S	22/24/27, 15C
BJPCTC0089	Temperature Test chamber	VT4002	Votsch industrietechnik	22/24/27, 15C
BJPCTC0090	FSP spectrum analyzer	FSP30	R&S	22/24/27, 15C
BJPCTC0094	GPB-RS232 convertor	GPB-RS232	NI	22/24/27, 15C
BJPCTC0112	Power Splitter	11667B	Agilent	22/24/27, 15C
BJPCTC0114	Signal Generator	E8257C	Agilent	22/24/27, 15C
BJPCTC0115	Communication Tester	CMU200	R&S	22/24/27, 15B, 15C

9.2. Radiated measurements

Eq. No	Equipment	Type	Manufacturer	Used in
-	BT / WLAN Antenna	SPA 2400/75/9/0/V	Huber-Suhner	15C, 15B
-	BT / WLAN Antenna	SPA 2400/75/9/0/V	Huber-Suhner	15C, 15B
-	RF Emission Software	EMC32 Test Software	R&S	22/24/27, 15C, 15B
BJPCPT0072	Receiver	ESI B26	R&S	22/24/27, 15C, 15B
BJPCPT0130	Relay Switch Unit	TS-RSP	R&S	22/24/27, 15C, 15B
BJPCPT0150	High Pass Filter	WHKS1200-10SS	Wainwright	22/24/27, 15C, 15B
BJPCPT0151	Band Reject Filter	WRCD1880/2000-0.2/40-5SSK	Wainwright	24, 15B
BJPCPT0154	Band Reject Filter	WRCT2402/2480-2400/2483.5-30-20SS	Wainwright	15C, 15B
BJPCPT0162	Antenna	HF906	R&S	22/24/27, 15C, 15B
BJPCTC0007	Antenna	HL562	R&S	22/24/27, 15C, 15B
BJPCTC0029	Antenna	HF906	R&S	22/24/27, 15C, 15B
BJPCTC0034	Band Reject Filter	WRCT 800/880-0.2/40-5SSK	Wainwright	22, 15B
BJPCTC0049	Preamplifier	Blma 0118-1A-Bt	Bonn	22/24/27, 15C, 15B
BJPCTC0055	Communication Tester	CMU200	R&S	22/24/27, 15C, 15B
BJPCTC0058	Bluetooth Tester	CBT	R&S	15C, 15B
BJPCTC0064	Band Reject Filter	WRCG1877/1883-1870/1890-40/6SS	Wainwright	24, 15B
BJPCTC0065	Band Reject Filter	WRCG832/838-825/845-40/5SS	Wainwright	27, 15B
BJPCTC0071	Multi-Device Controller	2090	EMCO	22/24/27, 15C, 15B
BJPCTC0072	Anechoic Chamber	3 m Semi / Full Anechoic Chamber	ETS	22/24/27, 15C, 15B
BJPCTC0073	MAST	Model-TR/POL	ETS	22/24/27, 15C, 15B
BJPCTC0074	MAST	Model 2070-2	ETS	22/24/27, 15C, 15B
BJPCTC0075	Turntable	Model 2188	ETS-EMCO	22/24/27, 15C, 15B
BJPCTC0096	Preamplifier	AFS4-00100300-20-23P-6	Miteq	22/24/27, 15C, 15B
BJPCTC0113	Receiver	ESI B26	R&S	22/24/27, 15B, 15C
BJPCTC0115	Communication Tester	CMU200	R&S	22/24/27, 15B, 15C
BJPCTC0124	Attenuator	SA18N200W-40	Fairview Microwave	-