

FCC Part 15C Compliance Test Report

Test Report no.:	FCC15CWLAN_RM-803_10.docx	Date of Report:	28-Sep-2011
Number of pages:	40	Customer's Contact person:	Abadilla Victoria
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 16620 West Bernardo Drive San Diego, CA 92127 USA Tel. +1 858 831 5000 Fax. +1 858 831 6500
FCC listing no.:	975940		
IC recognition no.:	661AH-1		
Tested devices/ accessories:	Phone RM-803 / Battery BP-3L / AC-charger AC-10U / Headset WH-208		
FCC ID:	QMNRM-803	IC:	661X-RM803
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 3, December 2010) and 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:			

Jia Dongsheng, System Manager

1. Summary for FCC Part 15C Compliance Test Report

Date of receipt	07-Sep-2011
Testing completed	28-Sep-2011
The customer's contact person	Abadilla Victoria
Test Plan referred to	T:\Projects\RM-803\TestPlan\RS_testplan_RM-803.xls
Notes	-
Document name	FCC15CWLAN_RM-803_10.docx

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 and WLAN. Bluetooth and WLAN are tested with maximum rated TX power.

Product	Type	SN	HW	MV	SW	DUT
Phone	RM-803	004402136356247	0110	-	1600.2201.7 720.11350	52433
Battery	BP-3L	0670389495540P134110100077	-	-	-	52435
AC-charger	AC-10U	3997910232052202765;0675409	-	-	-	52437
Headset	WH-208	392	-	-	-	52439
Phone	RM-803	004402136356486	0110	-	1600.2201.7 720.11350	52431
Battery	BP-3L	0670389495540P134110100077	-	-	-	52443
AC-charger	AC-10U	3997910227082204672;0675409	-	-	-	52442
Headset	WH-208	353	0.1	0.1	-	52444
Phone	RM-803	004402136356155	0110	-	1600.2201.7 720.11350	52426

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 Beijing Laboratory.

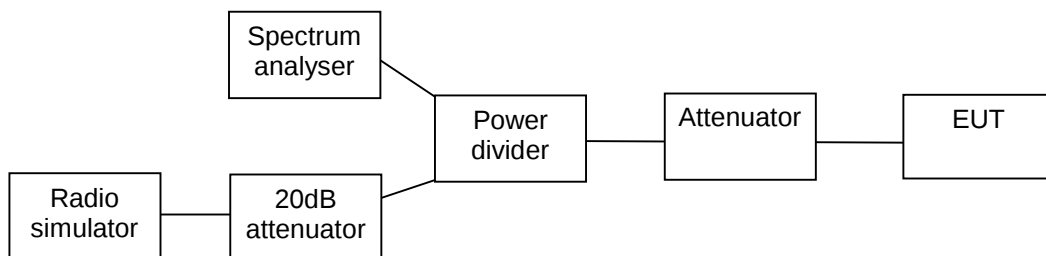
CONTENTS

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 (FCC §15.247(b)(1), RSS-210 A8.4 (4)).....	4
2.1. Test setup	4
2.2. Test method and limit	4
2.3. WLAN Test results	5
3. Band edge compliance of RF emissions (FCC §15.247(d), RSS-210 A8.5)	10
3.1. Test setup	10
3.2. Test method and limit	10
3.3. WLAN Test results	11
4. Spurious RF conducted emissions (FCC §15.247(d), RSS-210 A8.5)	14
4.1. Test setup	14
4.2. Test method and limit	14
4.3. WLAN Test results	15
5. Spurious radiated emissions (FCC §15.247(d), §15.209, RSS-210 A8.5)	20
5.1. Test setup	20
5.2. Test method and limit	20
5.3. WLAN Test results	21
6. AC powerline conducted emissions (FCC §15.207, RSS-GEN 7.2.2)	26
6.1. Test setup	26
6.2. Test method and limit	26
6.3. WLAN Test results	27
7. 6 dB bandwidth (FCC §15.247(a)(2), RSS-210 A8.2 (a)).....	28
7.1. Test setup	28
7.2. Test method and limit	28
7.3. WLAN test results	29
8. Power spectral density (FCC §15.247(e), RSS-210 A8.2 (b)).....	34
8.1. Test setup	34
8.2. Test method and limit	34
8.3. WLAN test results	35
9. Test Equipment	40
9.1. Conducted measurements	40
9.2. Radiated measurements	40

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

EUT with DUT number	RM-803, DUT52431
Accessories with DUT numbers	BP-3L, DUT52443; AC-10U, DUT52442; WH-208, DUT52444
Operation Voltage [V] / [Hz]	Nominal
Result	PASSED
Remarks	-
Temp [°C] / Humidity [%RH] / Air Pressure [kPa]	23 / 57 / 101.1
Date of measurements	16-Sep-2011
Measured by	Jia Dongsheng

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

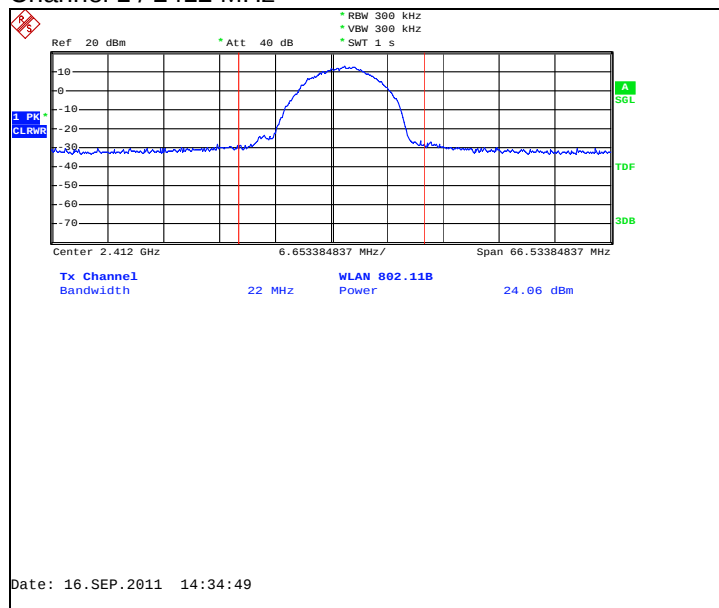
Frequency range [MHz]	Limit [W]	Limit [dBm]
2400 – 2483.5	≤ 1	≤ 30

2.3. WLAN Test results

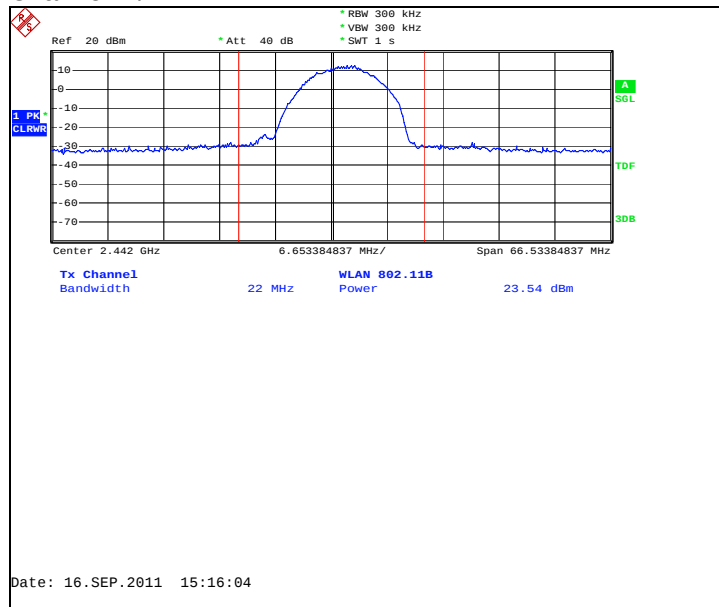
2.3.1 DSSS mode, QPSK modulation, 11 Mbps data rate

Channel / f_c [MHz]	P [dBm]	P [W]	Result
1 / 2412	24.06	0.255	PASSED
7 / 2442	23.54	0.226	PASSED
11 / 2462	23.65	0.232	PASSED

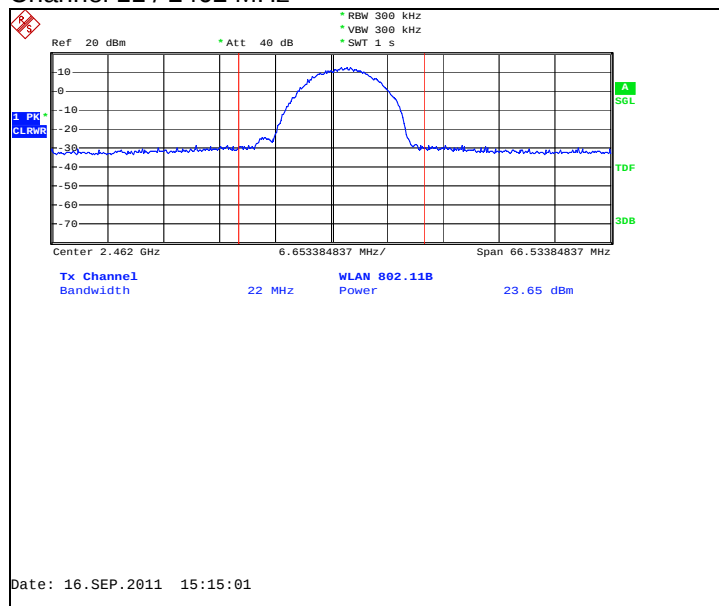
Channel 1 / 2412 MHz



Channel 7 / 2442 MHz



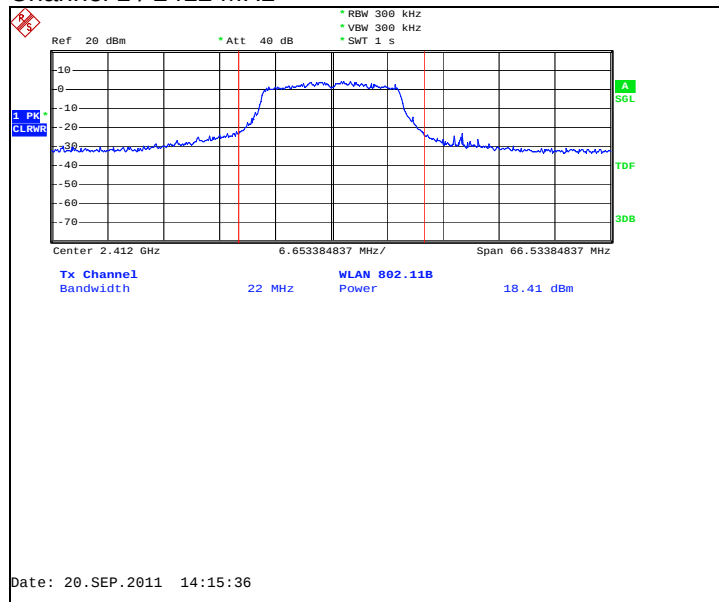
Channel 11 / 2462 MHz



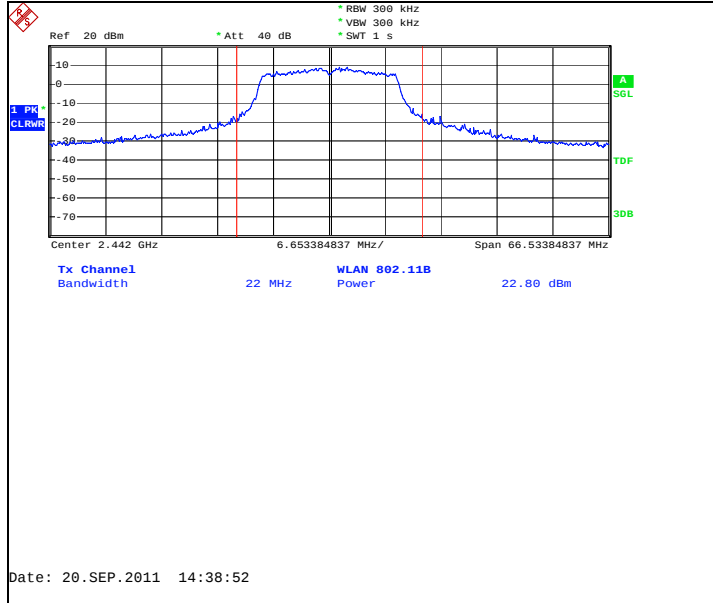
2.3.2 OFDM mode, BPSK modulation, 6 Mbps data rate

Channel / f_c [MHz]	P [dBm]	P [W]	Result
1 / 2412	18.41	0.069	PASSED
7 / 2442	22.80	0.191	PASSED
11 / 2462	18.49	0.071	PASSED

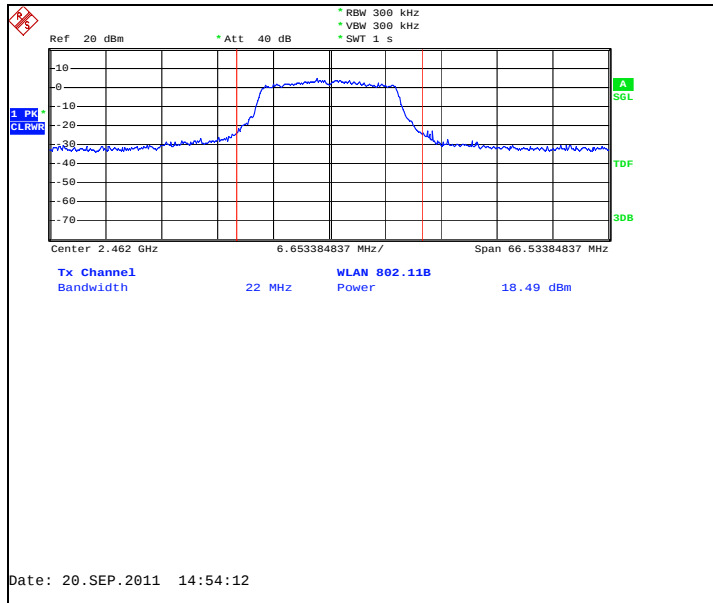
Channel 1 / 2412 MHz



Channel 7 / 2442 MHz



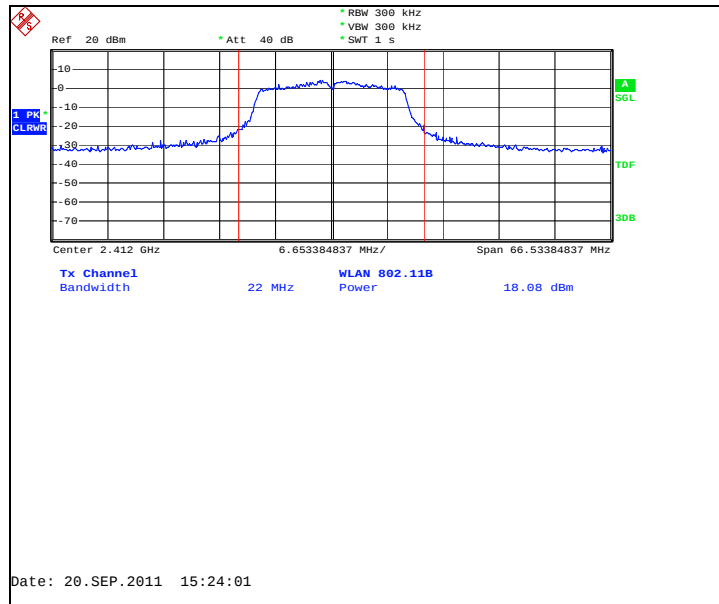
Channel 11 / 2462 MHz



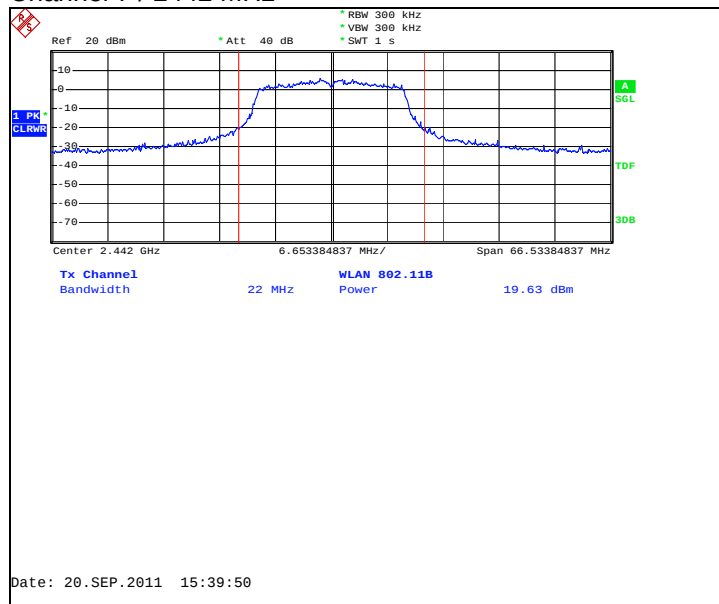
2.3.3 802.11n HT20 MCS 0

Channel / f _c [MHz]	P [dBm]	P [W]	Result
1 / 2412	18.08	0.064	PASSED
7 / 2442	19.63	0.092	PASSED
11 / 2462	18.04	0.064	PASSED

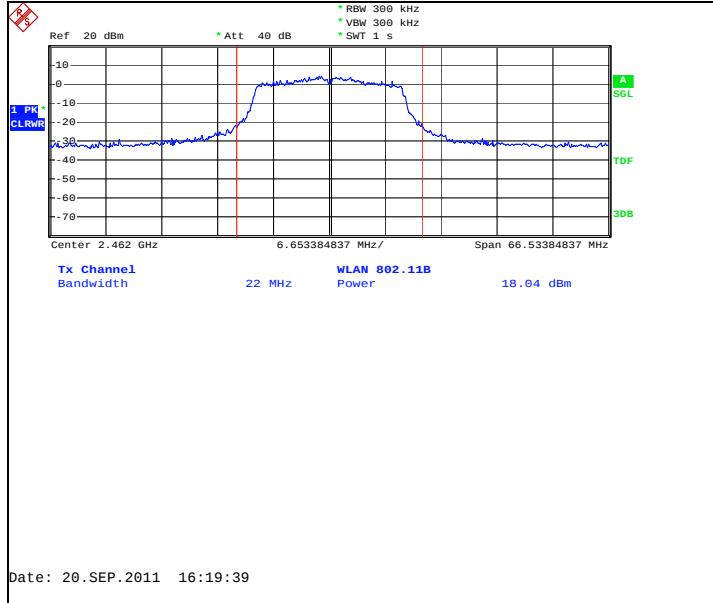
Channel 1 / 2412 MHz



Channel 7 / 2442 MHz



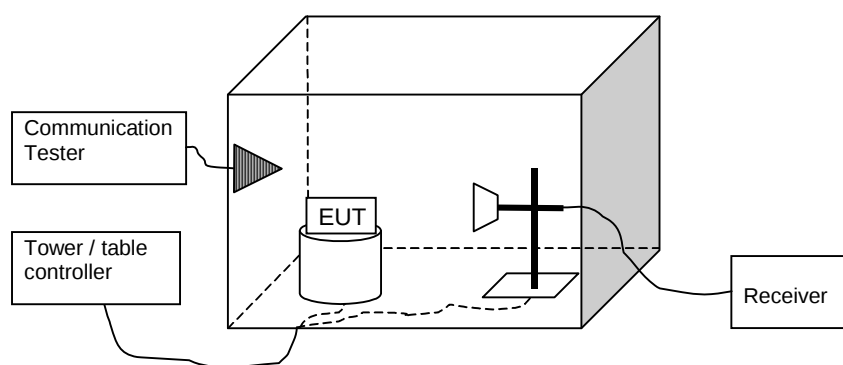
Channel 11 / 2462 MHz



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

EUT with DUT number	RM-803, DUT 52426
Accessories with DUT numbers	BP-3L, DUT 52435 ; AC-10U, DUT 52437 ; WH-208, DUT 52439
Operation Voltage [V] / [Hz]	Nominal
Result	PASSED
Remarks	-
Temp [°C] / Humidity [%RH] / Air Pressure [kPa]	21 / 40 / 101.7
Date of measurements	19-Sep-2011
Measured by	Jia Dongsheng

3.1. Test setup



3.2. 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

3.3. WLAN Test results

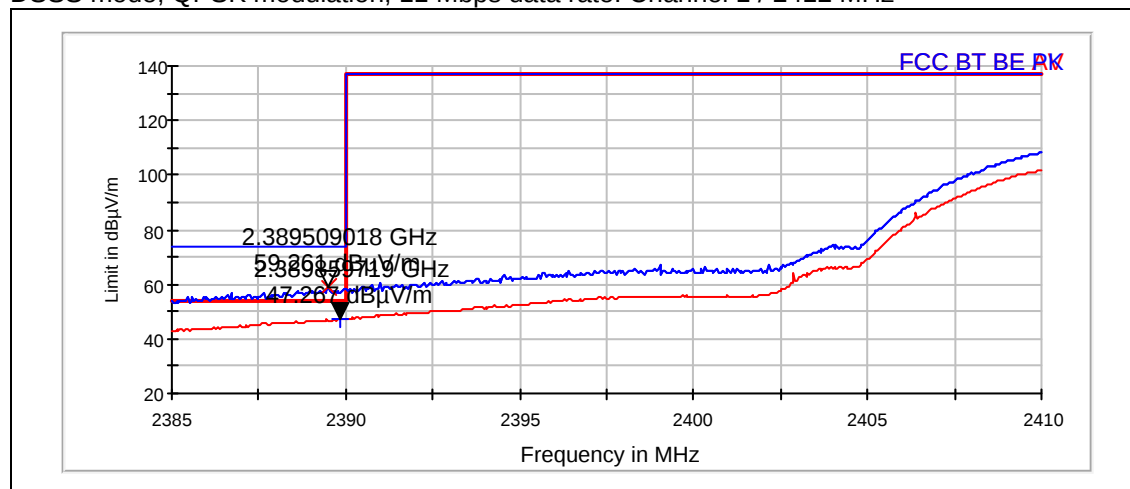
Average (RBW: 1 MHz, VBW: 1 MHz)

Channel / f_c [MHz]	E [dB μ V/m]	Result
1 / 2412 (DSSS,QPSK,11)	47.27	PASSED
11 / 2462 (DSSS,QPSK,11)	52.11	PASSED
1 / 2412 (OFDM,BPSK,6)	49.9	PASSED
11 / 2462 (OFDM,BPSK,6)	52.27	PASSED
1 / 2412 (802.11n,HT20,MCS0)	50.96	PASSED
11 / 2462 (802.11n,HT20,MCS0)	53.63	PASSED

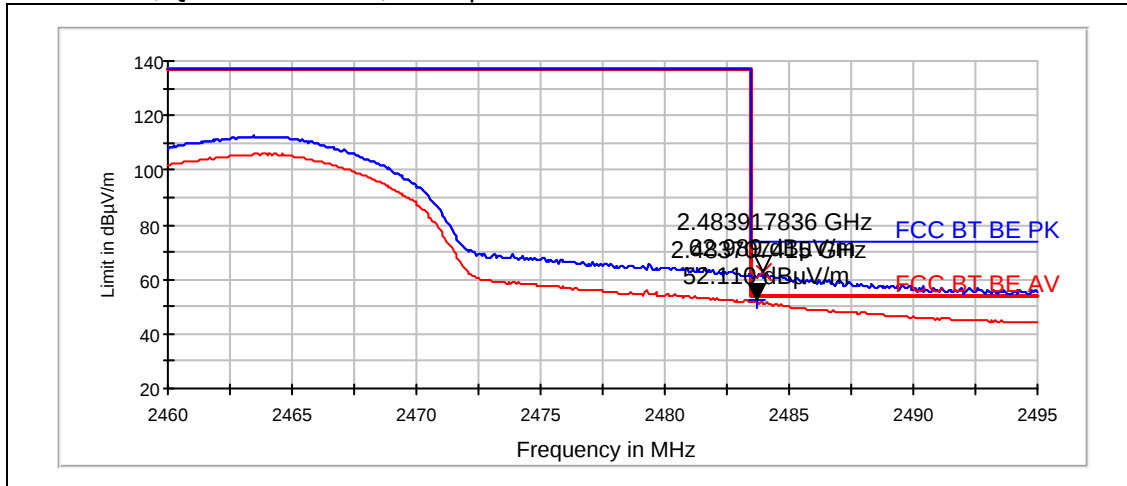
Peak (RBW: 1 MHz, VBW: 1 MHz)

Channel / f_c [MHz]	E [dB μ V/m]	Result
1 / 2412 (DSSS,QPSK,11)	59.26	PASSED
11 / 2462 (DSSS,QPSK,11)	62.99	PASSED
1 / 2412 (OFDM,BPSK,6)	66.39	PASSED
11 / 2462 (OFDM,BPSK,6)	67.3	PASSED
1 / 2412 (802.11n,HT20,MCS0)	66	PASSED
11 / 2462 (802.11n,HT20,MCS0)	68.79	PASSED

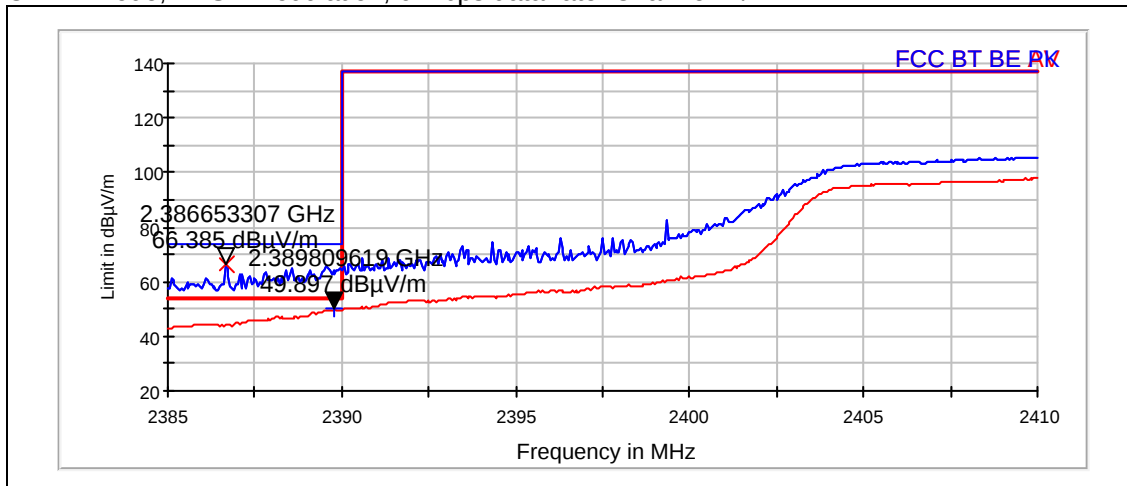
DSSS mode, QPSK modulation, 11 Mbps data rate. Channel 1 / 2412 MHz



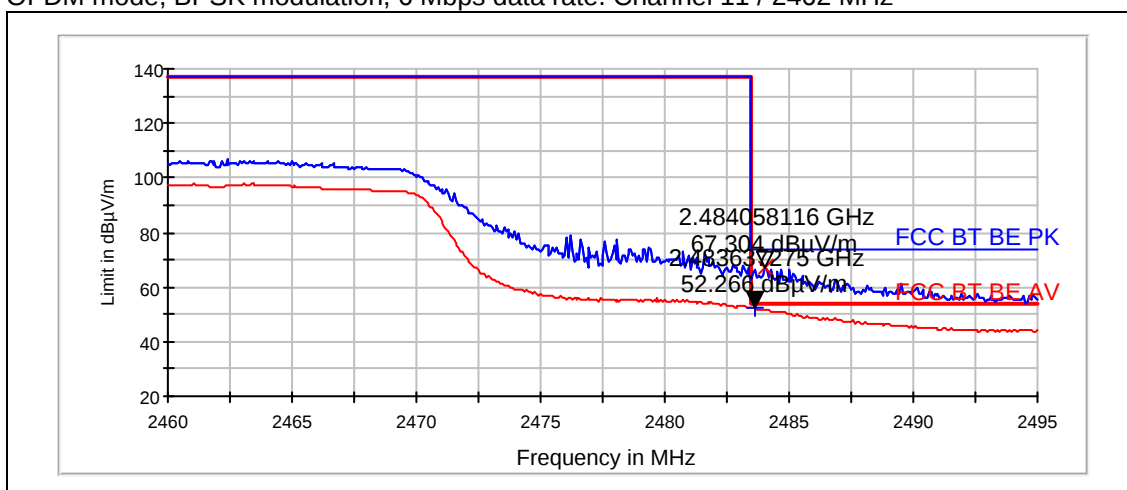
DSSS mode, QPSK modulation, 11 Mbps data rate. Channel 11 / 2462 MHz



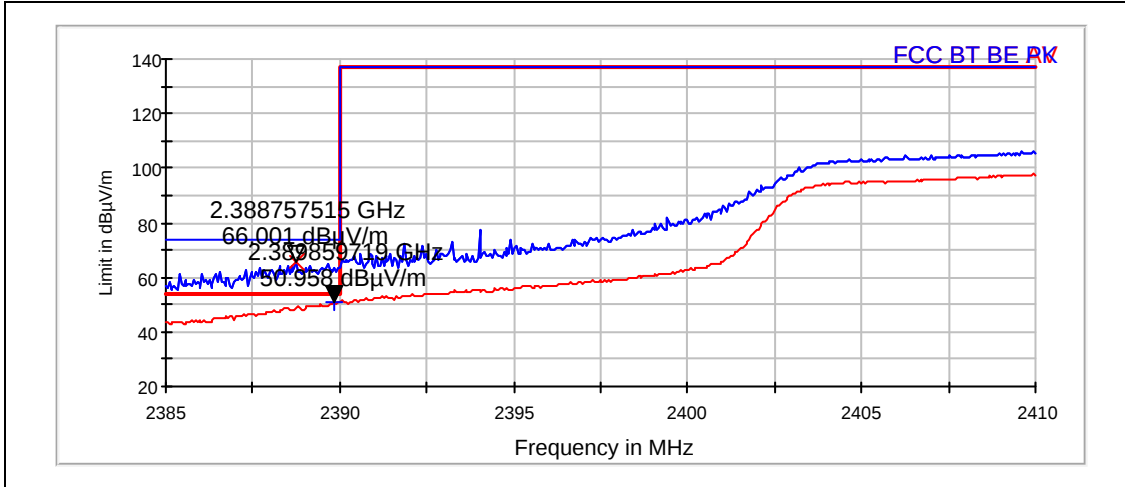
OFDM mode, BPSK modulation, 6 Mbps data rate. Channel 1 / 2412 MHz



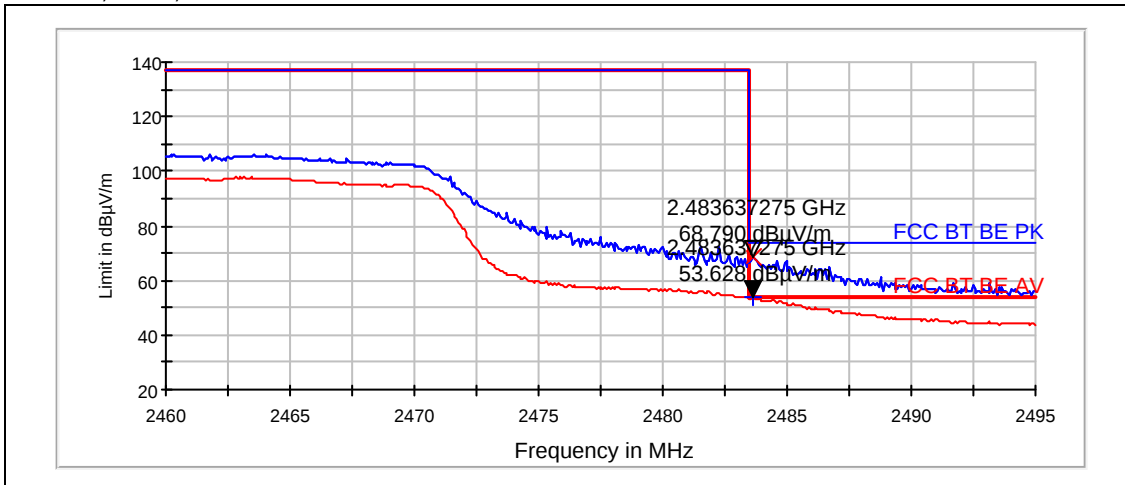
OFDM mode, BPSK modulation, 6 Mbps data rate. Channel 11 / 2462 MHz



802.11n, HT20, MCS0 Channel 1 / 2412 MHz



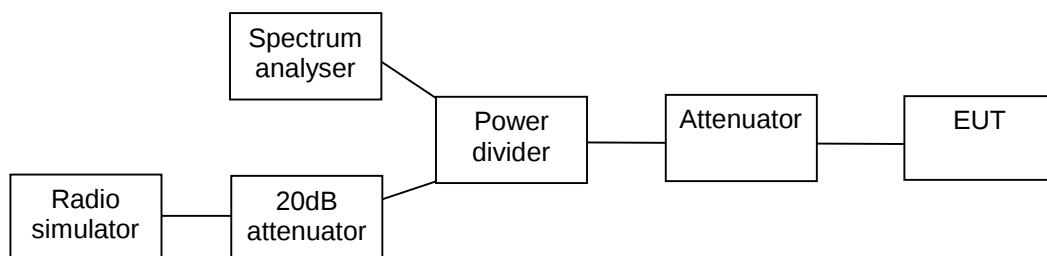
802.11n, HT20, MCS0 Channel 11 / 2462 MHz



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

EUT with DUT number	RM-803, DUT52431
Accessories with DUT numbers	BP-3L, DUT52443; AC-10U, DUT52442; WH-208, DUT52444
Operation Voltage [V] / [Hz]	Nominal
Result	PASSED
Remarks	-
Temp [°C] / Humidity [%RH] / Air Pressure [kPa]	23 / 57 / 101.1
Date of measurements	16-Sep-2011
Measured by	Jia Dongsheng

4.1. Test setup



4.2. Test method and limit

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

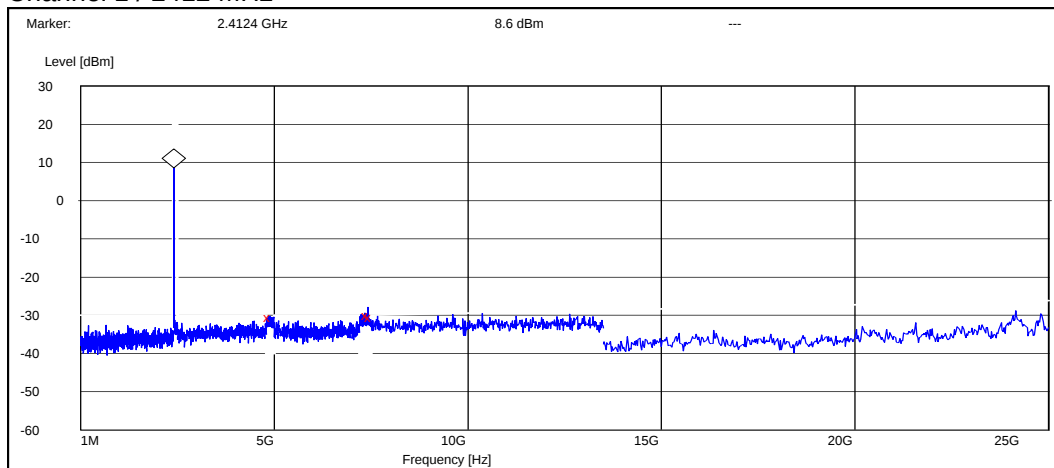
Limits for spurious RF conducted emissions measurements

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

4.3. WLAN Test results

4.3.1 DSSS mode, QPSK modulation, 11 Mbps data rate

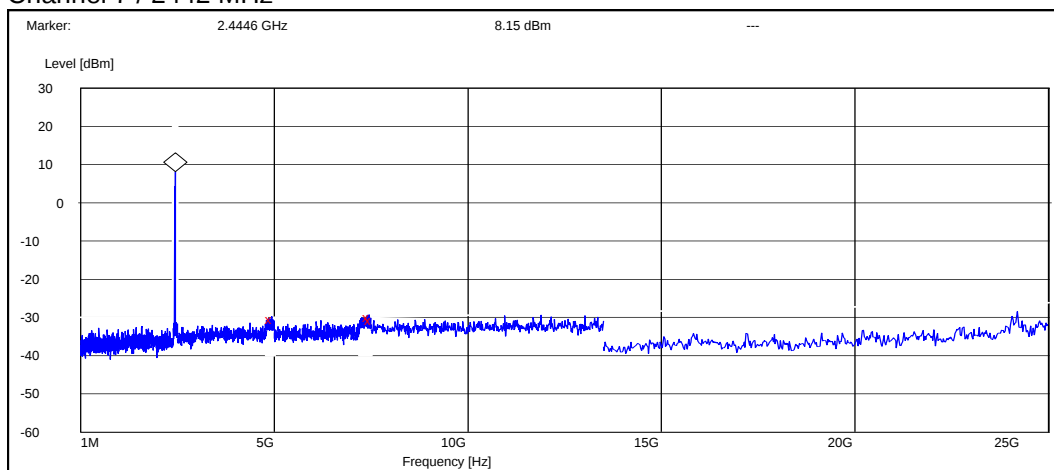
Channel 1 / 2412 MHz



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

Frequency [MHz]	P [dBc]	Result
4887.600000	-38.999857	PASSED
7420.200000	-38.699857	PASSED
7500.000000	-38.999857	PASSED

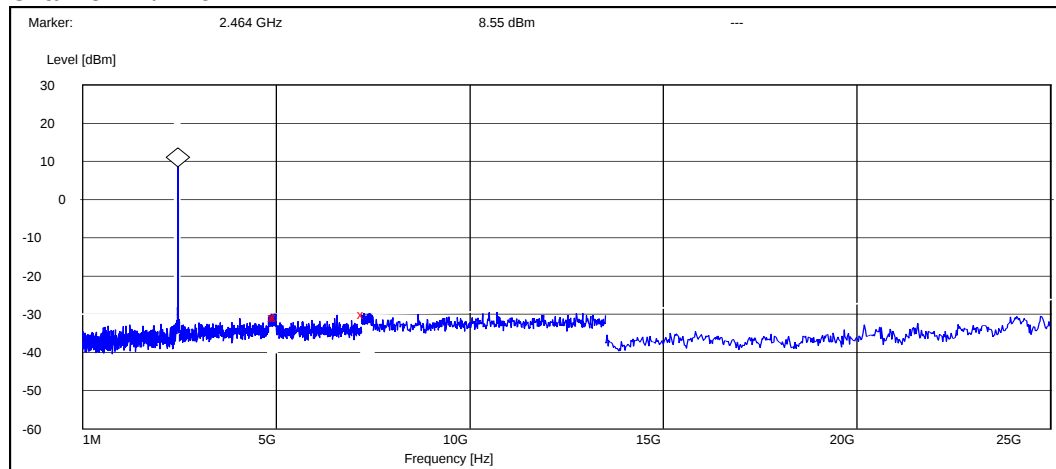
Channel 7 / 2442 MHz



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

Frequency [MHz]	P [dBc]	Result
4931.200000	-38.745926	PASSED
7455.600000	-38.045926	PASSED
7500.000000	-38.845926	PASSED

Channel 11 / 2462 MHz

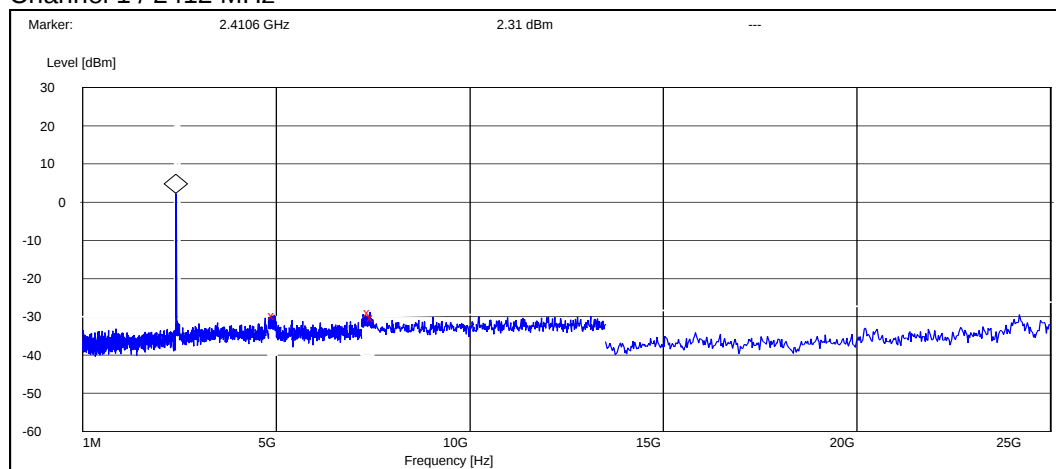


Peak (RBW: 100 kHz, VBW: 100 kHz)

Frequency [MHz]	P [dBc]	Result
4950.400000	-39.348041	PASSED
5000.000000	-39.448041	PASSED
7259.400000	-38.448041	PASSED

4.3.2 OFDM mode, BPSK modulation, 6 Mbps data rate

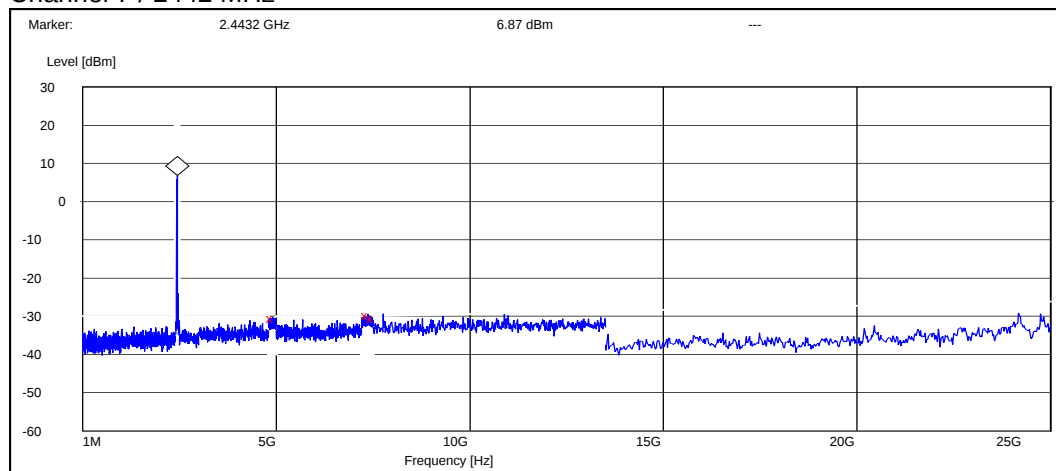
Channel 1 / 2412 MHz



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

Frequency [MHz]	P [dBc]	Result
4954.400000	-32.009767	PASSED
7421.400000	-31.009767	PASSED
7500.000000	-32.509767	PASSED

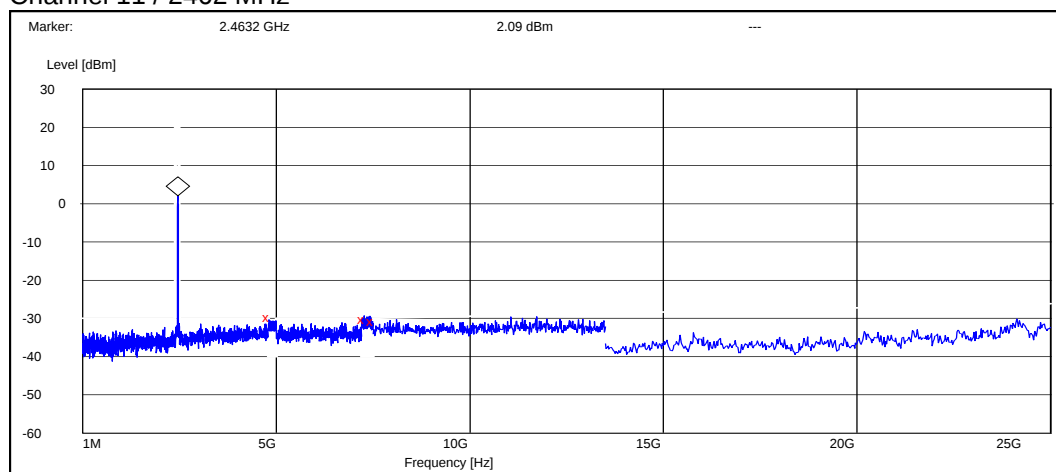
Channel 7 / 2442 MHz



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

Frequency [MHz]	P [dBc]	Result
4904.800000	-37.370261	PASSED
7362.600000	-36.570261	PASSED
7500.000000	-37.370261	PASSED

Channel 11 / 2462 MHz

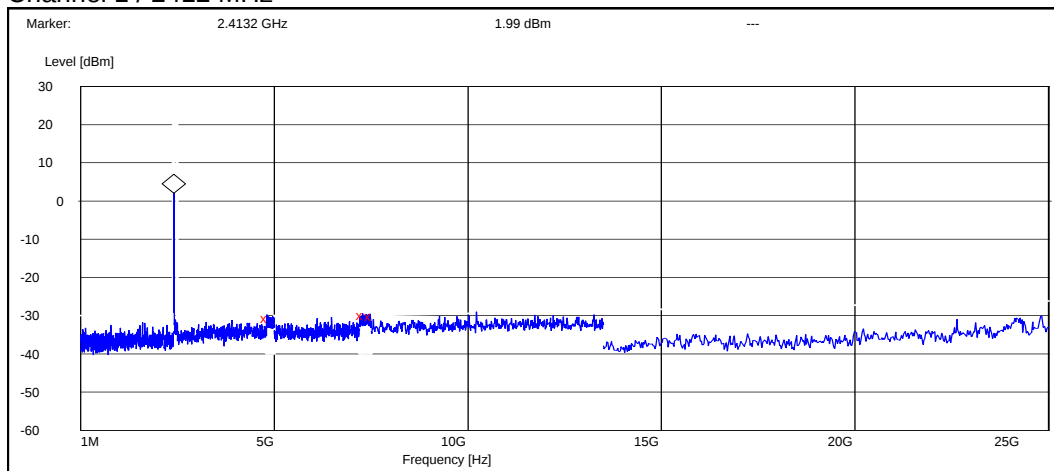


Peak (RBW: 100 kHz, VBW: 100 kHz)

Frequency [MHz]	P [dBc]	Result
4808.800000	-31.790901	PASSED
7275.600000	-32.190901	PASSED
7500.000000	-32.790901	PASSED

4.3.3 802.11n HT20 MCS 0

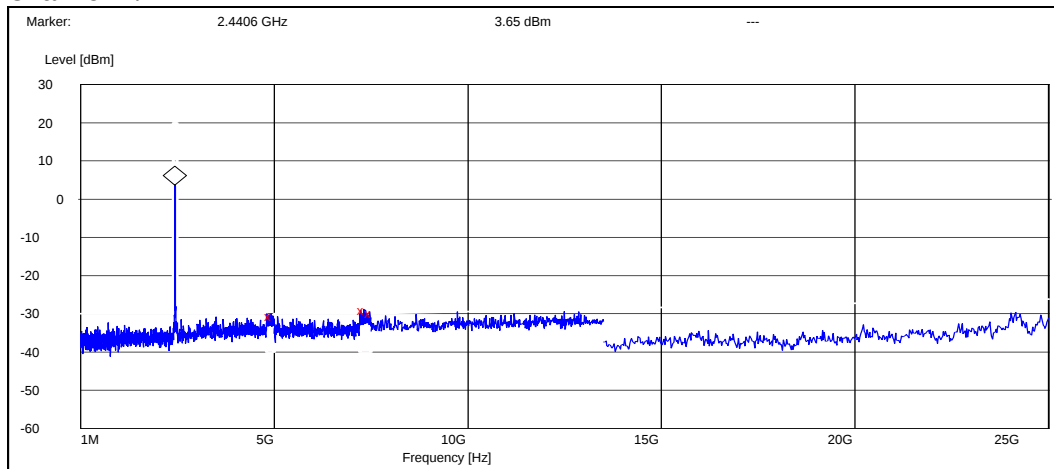
Channel 1 / 2412 MHz



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

Frequency [MHz]	P [dBc]	Result
4806.400000	-32.585847	PASSED
7292.400000	-31.885847	PASSED
7500.000000	-32.085847	PASSED

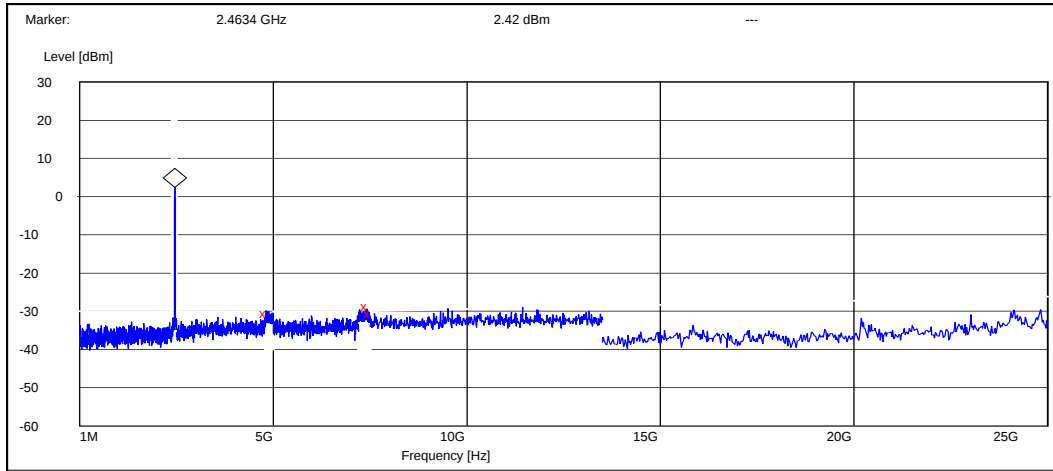
Channel 7 / 2442 MHz



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

Frequency [MHz]	P [dBc]	Result
4918.800000	-34.354678	PASSED
7320.000000	-32.654678	PASSED
7500.000000	-33.454678	PASSED

Channel 11 / 2462 MHz



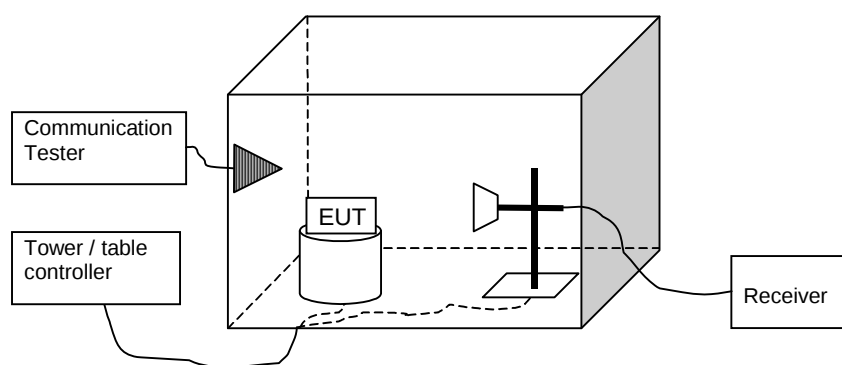
Peak (RBW: 100 kHz, VBW: 100 kHz)

Frequency [MHz]	P [dBc]	Result
4813.600000	-32.919957	PASSED
7420.200000	-31.119957	PASSED
7500.000000	-32.919957	PASSED

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

EUT with DUT number	RM-803, DUT 52433
Accessories with DUT numbers	BP-3L, DUT 52435 ; AC-10U, DUT 52437 ; WH-208, DUT 52439
Operation Voltage [V] / [Hz]	Nominal
Result	PASSED
Remarks	-
Temp [°C] / Humidity [%RH] / Air Pressure [kPa]	21 / 58 / 100.4
Date of measurements	15-Sep-2011
Measured by	Zou Ming

5.1. 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:

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

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

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

5.3. WLAN Test results

5.3.1 DSSS mode, QPSK modulation, 11 Mbps data rate

Channel 1 / 2412 MHz

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
4824.1	52.72	432.613	53.28	-0.56	HORIZONTAL	PASSED
7234.3	46.14	202.675	41.35	4.79	HORIZONTAL	PASSED

Average(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
4824.1	40.97	111.841	41.53	-0.56	HORIZONTAL	PASSED
7234.3	32.87	43.985	28.08	4.79	HORIZONTAL	PASSED

Channel 7 / 2442 MHz

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

Frequency [MHz]	E [dB $\mu\text{V/m}$]	E [$\mu\text{V/m}$]	U_{RX} [dB μV]	A_{TOT} [dB]	Polarisation	Result
81.61	33.17	45.541	50.75	-17.58	VERTICAL	PASSED
81.725	33.18	45.577	50.75	-17.57	VERTICAL	PASSED
81.774	33.14	45.389	50.7	-17.56	VERTICAL	PASSED
81.782	32.96	44.448	50.52	-17.56	VERTICAL	PASSED
81.804	33.14	45.415	50.7	-17.56	VERTICAL	PASSED
81.812	33.13	45.331	50.68	-17.55	VERTICAL	PASSED
905.006	24.93	17.638	26.78	-1.85	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
3899.802	40.72	108.643	42.73	-2.01	VERTICAL	PASSED
4884.068	49.73	306.478	50.22	-0.49	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
3899.802	27.68	24.208	29.69	-2.01	VERTICAL	PASSED
4884.068	37.82	77.786	38.31	-0.49	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
4924.1	49.54	300.054	49.88	-0.34	HORIZONTAL	PASSED
7387.5	46.15	203.049	41.47	4.68	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
4924.1	37.71	76.842	38.05	-0.34	HORIZONTAL	PASSED
7387.5	33.28	46.126	28.6	4.68	HORIZONTAL	PASSED

5.3.2 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]	Polarisation	Result
4824.1	48.04	252.203	48.6	-0.56	HORIZONTAL	PASSED
7234.2	45.88	196.766	41.09	4.79	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	33.82	49.079	34.38	-0.56	HORIZONTAL	PASSED
7234.2	32.82	43.767	28.03	4.79	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]	Polarisation	Result
40.531	29.16	28.714	38.55	-9.39	VERTICAL	PASSED
81.295	31.53	37.692	49.16	-17.63	VERTICAL	PASSED
81.573	31.69	38.406	49.28	-17.59	VERTICAL	PASSED
81.604	31.51	37.61	49.09	-17.58	VERTICAL	PASSED
81.683	31.75	38.672	49.32	-17.57	VERTICAL	PASSED
81.692	31.74	38.654	49.31	-17.57	VERTICAL	PASSED
81.78	31.65	38.221	49.21	-17.56	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
3930.061	41.34	116.694	43.47	-2.13	HORIZONTAL	PASSED
4884.268	48.63	269.991	49.11	-0.48	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
3930.061	27.62	24.041	29.75	-2.13	HORIZONTAL	PASSED
4884.268	35.01	56.318	35.49	-0.48	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
4922.5	46.05	200.724	46.38	-0.33	HORIZONTAL	PASSED
7387.8	46.54	212.324	41.86	4.68	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
4922.5	32.52	42.286	32.85	-0.33	HORIZONTAL	PASSED
7387.8	33.12	45.295	28.44	4.68	HORIZONTAL	PASSED

5.3.3 802.11n HT20 MCS 0

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	48.04	252.203	48.6	-0.56	HORIZONTAL	PASSED
7235.4	46.03	200.17	41.22	4.81	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
4824.1	33.82	49.074	34.38	-0.56	HORIZONTAL	PASSED
7235.4	32.87	44.02	28.06	4.81	HORIZONTAL	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]	Polarisation	Result
81.583	33.04	44.88	50.63	-17.59	VERTICAL	PASSED
81.604	32.75	43.401	50.33	-17.58	VERTICAL	PASSED
81.656	33.06	44.978	50.64	-17.58	VERTICAL	PASSED
81.752	32.89	44.116	50.45	-17.56	VERTICAL	PASSED
81.782	32.82	43.742	50.38	-17.56	VERTICAL	PASSED
81.815	32.83	43.787	50.38	-17.55	VERTICAL	PASSED
81.88	32.95	44.407	50.5	-17.55	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
3906.811	40.88	110.701	42.93	-2.05	VERTICAL	PASSED
3926.956	41.06	112.967	43.2	-2.14	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
3906.811	27.94	24.934	29.99	-2.05	VERTICAL	PASSED
3926.956	27.6	23.991	29.74	-2.14	HORIZONTAL	PASSED

Channel 11 / 2462 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
4922.7	45.49	188.191	45.82	-0.33	HORIZONTAL	PASSED
7387.4	45.89	197.106	41.21	4.68	HORIZONTAL	PASSED

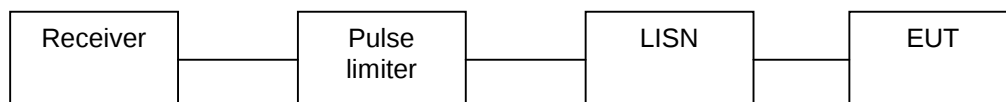
Average(RBW: 1 MHz, VBW: 1 MHz)

Frequency [MHz]	E [dB μ V/m]	E [μ V/m]	U _{RX} [dB μ V]	A _{TOT} [dB]	Polarisation	Result
4922.7	32.02	39.898	32.35	-0.33	HORIZONTAL	PASSED
7387.4	33.12	45.269	28.44	4.68	HORIZONTAL	PASSED

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

EUT with DUT number	RM-803, DUT 52433
Accessories with DUT numbers	BP-3L, DUT 52436 ; AC-10U, DUT 52438 ; WH-208, DUT 52440
Operation Voltage [V] / [Hz]	115 / 60
Result	PASSED
Remarks	-
Temp [°C] / Humidity [%RH] / Air Pressure [kPa]	22 / 52 / 100.2
Date of measurements	22-Sep-2011
Measured by	Zou Miing

6.1. Test setup



6.2. 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.

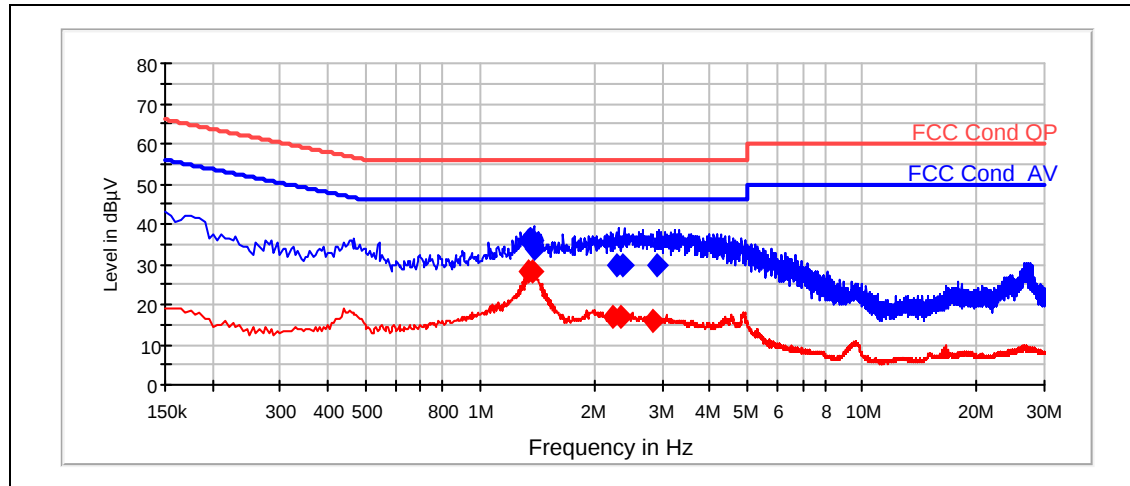
CISPR 22 Class B limits

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

6.3. WLAN Test results

6.3.1 DSSS mode, QPSK modulation, 11 Mbps data rate

Channel 40 / 2442 MHz



QuasiPeak (RBW: 9 kHz)

Frequency [MHz]	U [dBμV]	Line	Result
1.335	35.83	N	PASSED
1.365	35.8	N	PASSED
1.39	33.96	N	PASSED
2.27	29.57	N	PASSED
2.36	29.54	L1	PASSED
2.91	29.57	N	PASSED

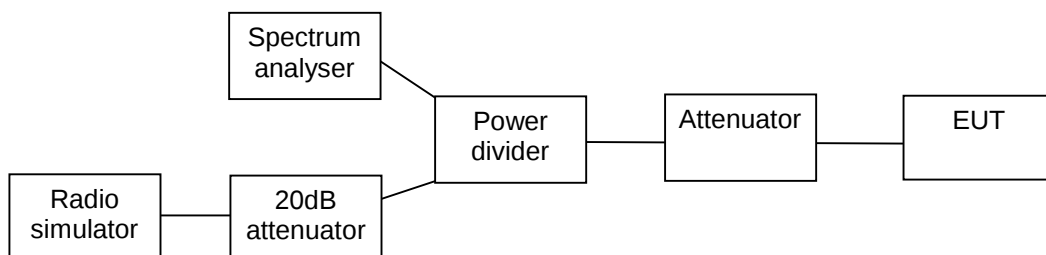
Average (RBW: 9 kHz)

Frequency [MHz]	U [dBμV]	Line	Result
1.345	28.11	N	PASSED
1.365	28.42	N	PASSED
2.215	17.03	L1	PASSED
2.325	16.73	L1	PASSED
2.83	15.93	N	PASSED

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

EUT with DUT number	RM-803, DUT52431
Accessories with DUT numbers	BP-3L, DUT52443; AC-10U, DUT52442; WH-208, DUT52444
Operation Voltage [V] / [Hz]	Nominal
Result	PASSED
Remarks	-
Temp [°C] / Humidity [%RH] / Air Pressure [kPa]	23 / 57 / 101.1
Date of measurements	16-Sep-2011
Measured by	Jia Dongsheng

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

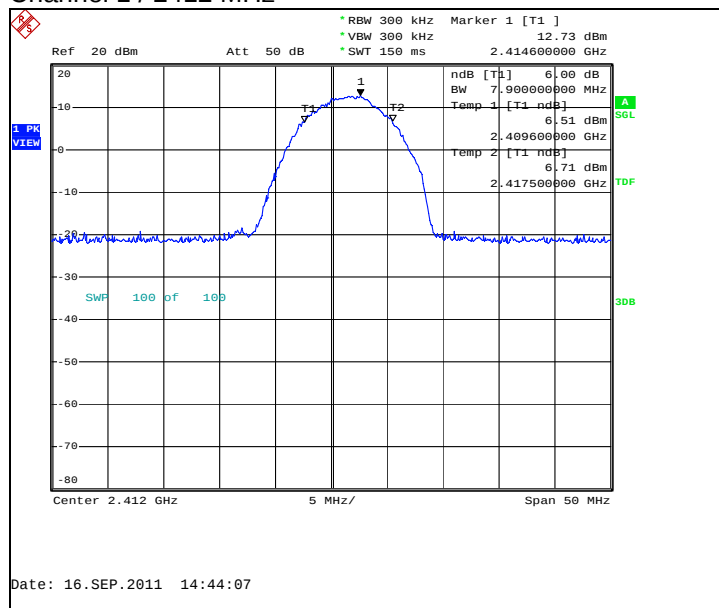
Limit [kHz]
≥ 500

7.3. WLAN test results

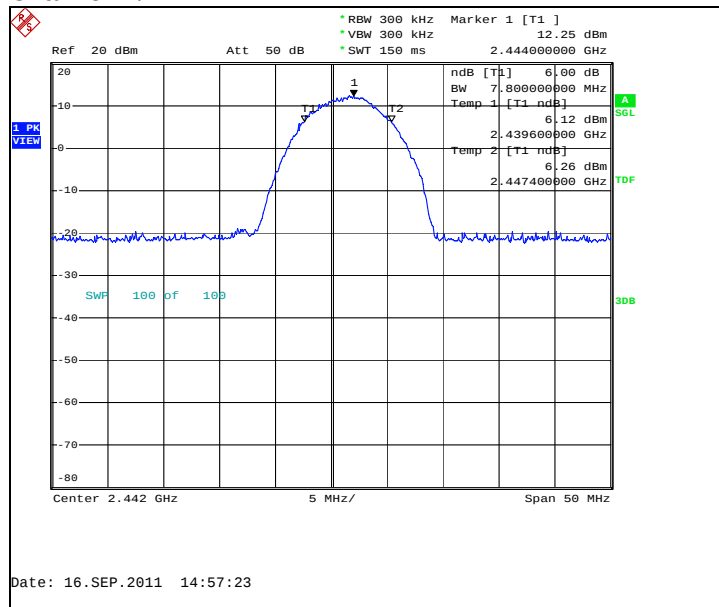
7.3.1 DSSS mode, QPSK modulation, 11 Mbps data rate

Channel / f_c [MHz]	6 dB bandwidth [kHz]	Result
1	7900.000	PASSED
7	7800.000	PASSED
11	7700.000	PASSED

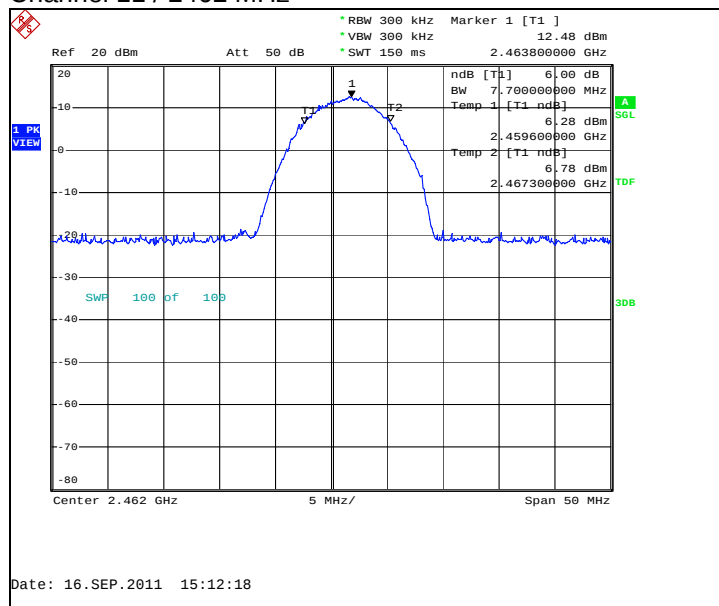
Channel 1 / 2412 MHz



Channel 7 / 2442 MHz



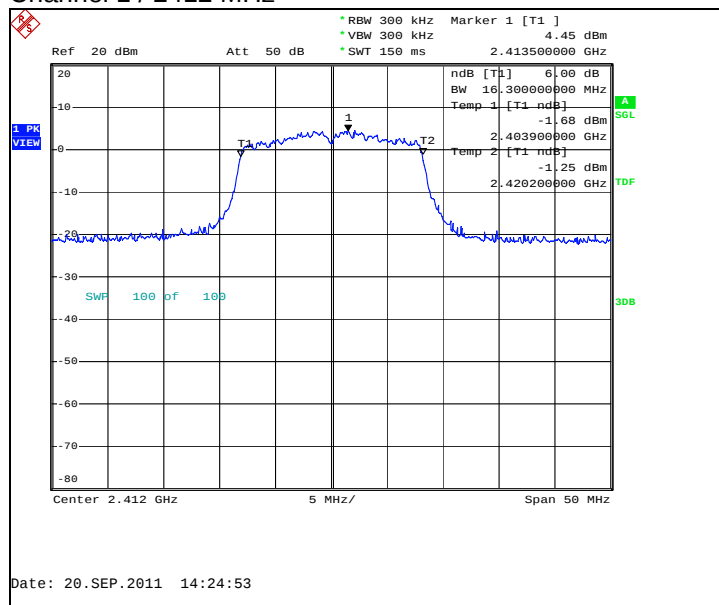
Channel 11 / 2462 MHz



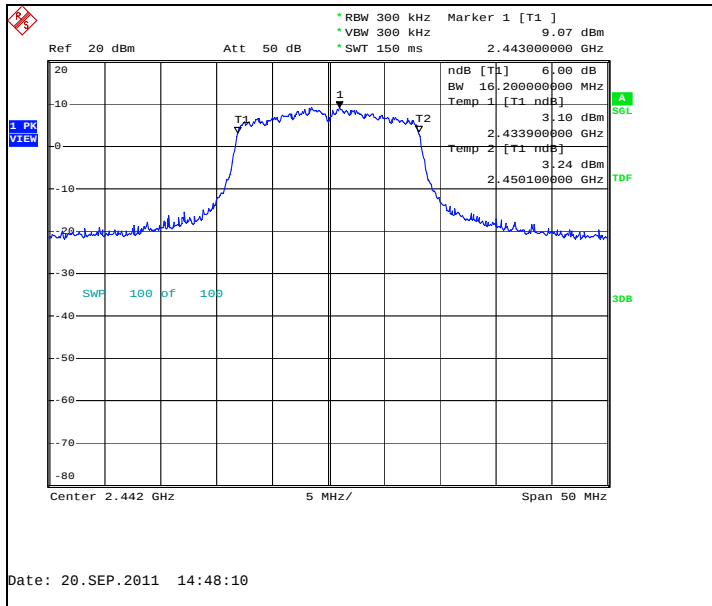
7.3.2 OFDM mode, BPSK modulation, 6 Mbps data rate

Channel / f_c [MHz]	6 dB bandwidth [kHz]	Result
1	16300.000	PASSED
7	16200.000	PASSED
11	16200.000	PASSED

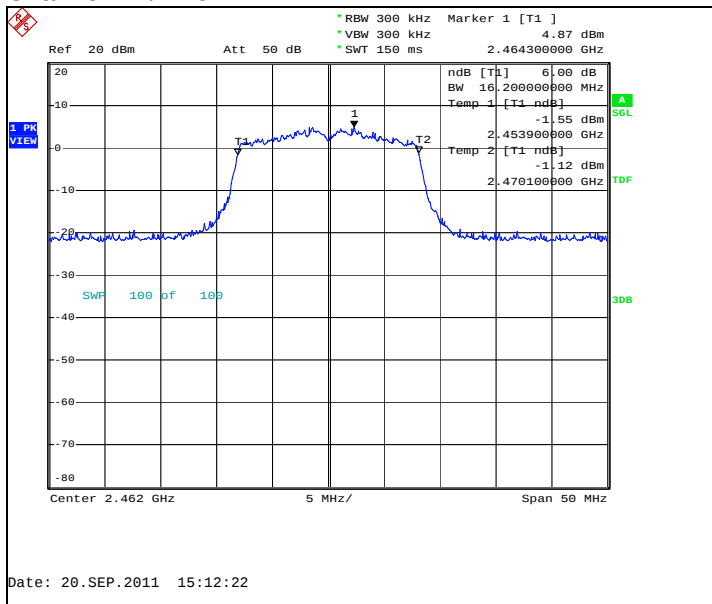
Channel 1 / 2412 MHz



Channel 7 / 2442 MHz



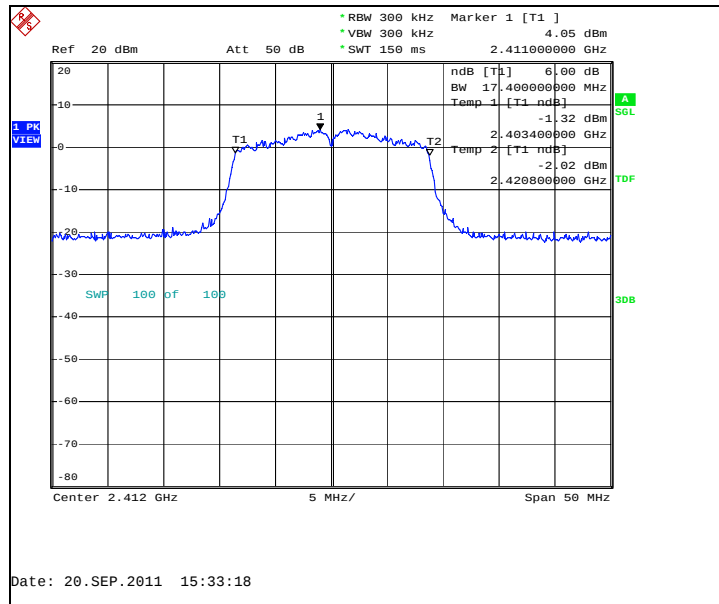
Channel 11 / 2462 MHz



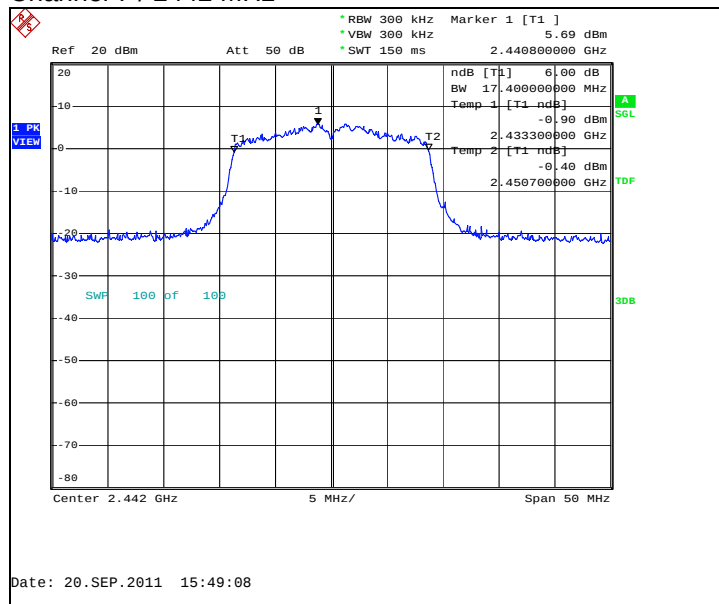
7.3.3 802.11n HT20 MCS 0

Channel / f_c [MHz]	6 dB bandwidth [kHz]	Result
1	17400.000	PASSED
7	17400.000	PASSED
11	17400.000	PASSED

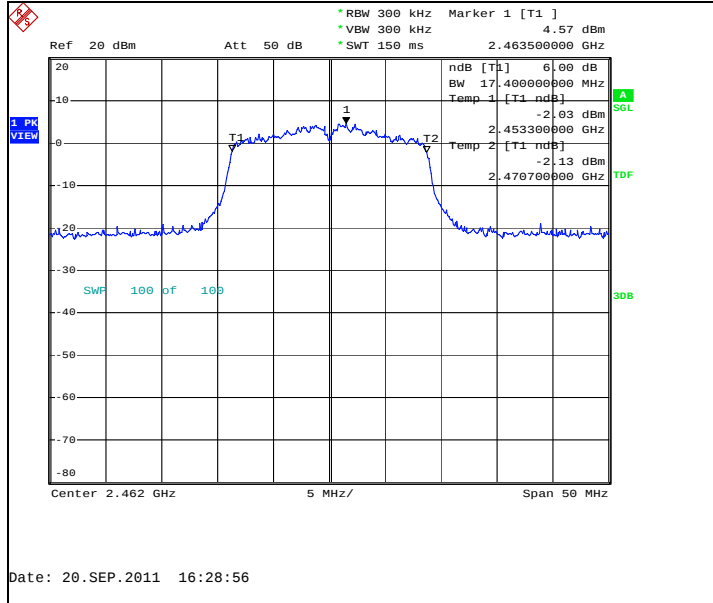
Channel 1 / 2412 MHz



Channel 7 / 2442 MHz



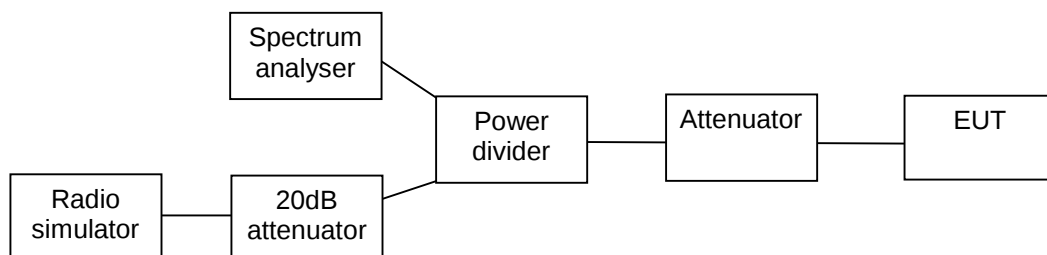
Channel 11 / 2462 MHz



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

EUT with DUT number	RM-803, DUT52431
Accessories with DUT numbers	BP-3L, DUT52443; AC-10U, DUT52442; WH-208, DUT52444
Operation Voltage [V] / [Hz]	Nominal
Result	PASSED
Remarks	-
Temp [°C] / Humidity [%RH] / Air Pressure [kPa]	22-23 / 53-57 / 101-101.7
Date of measurements	16-Sep-2011;20-Sep-2011;28-Sep-2011
Measured by	Jia Dongsheng

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

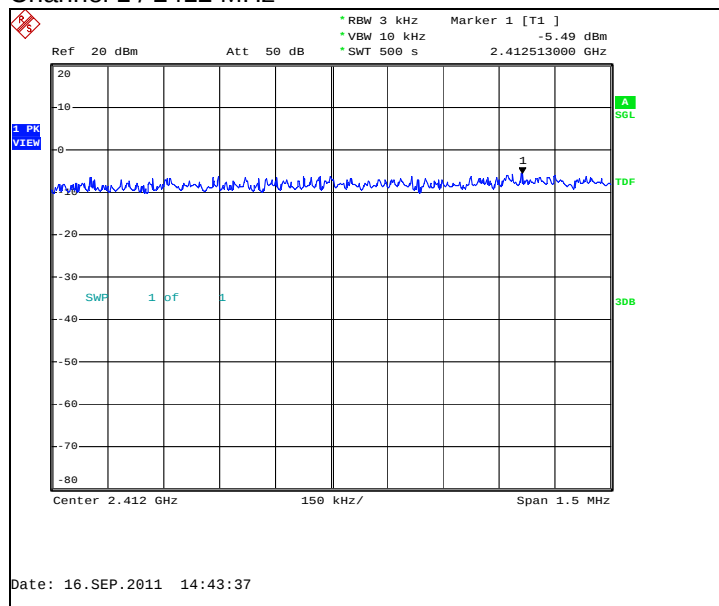
Limit [dBm] @ 3 kHz
≤ 8

8.3. WLAN test results

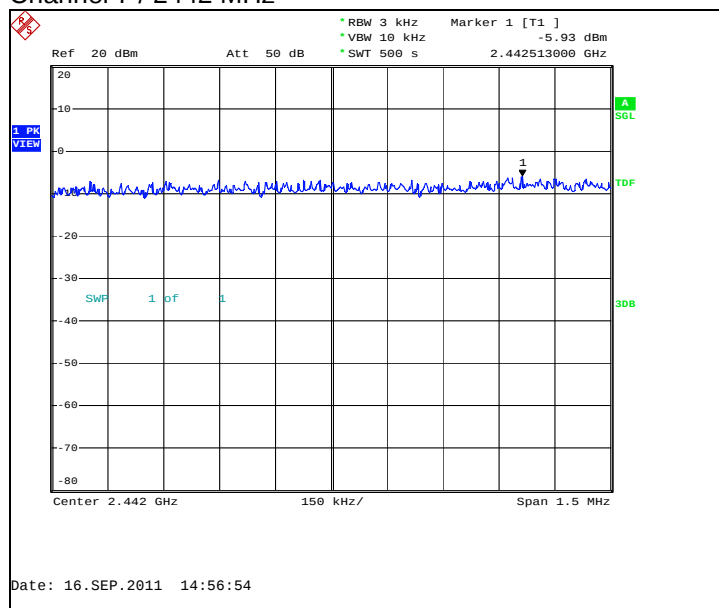
8.3.1 DSSS mode, QPSK modulation, 11 Mbps data rate

Channel / f_c [MHz]	P [dBm]	Result
1 / 2412	-5.49	PASSED
7 / 2442	-5.93	PASSED
11 / 2462	-5.54	PASSED

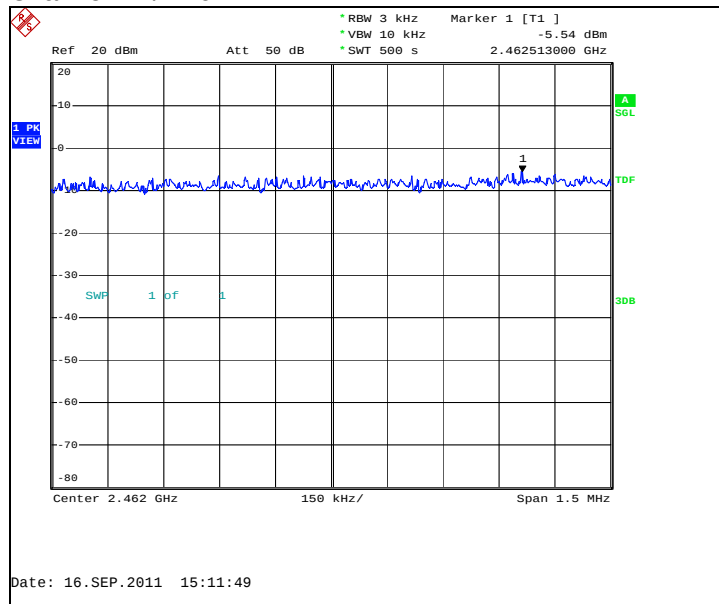
Channel 1 / 2412 MHz



Channel 7 / 2442 MHz



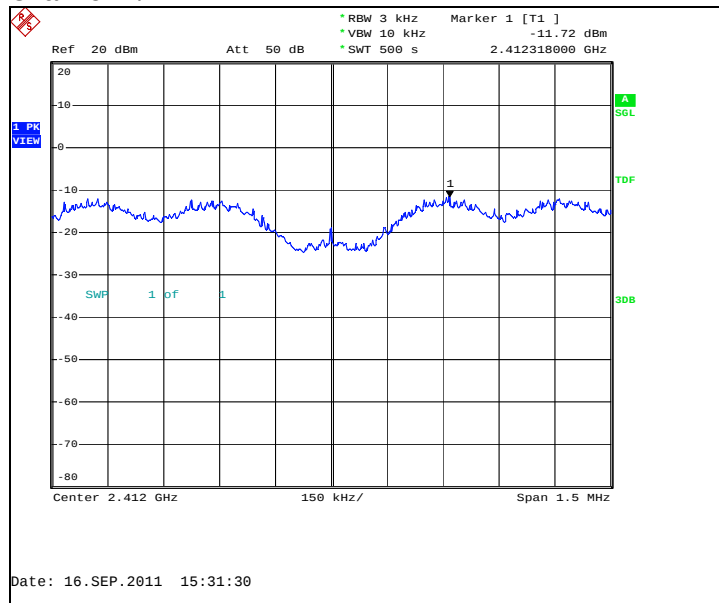
Channel 11 / 2462 MHz



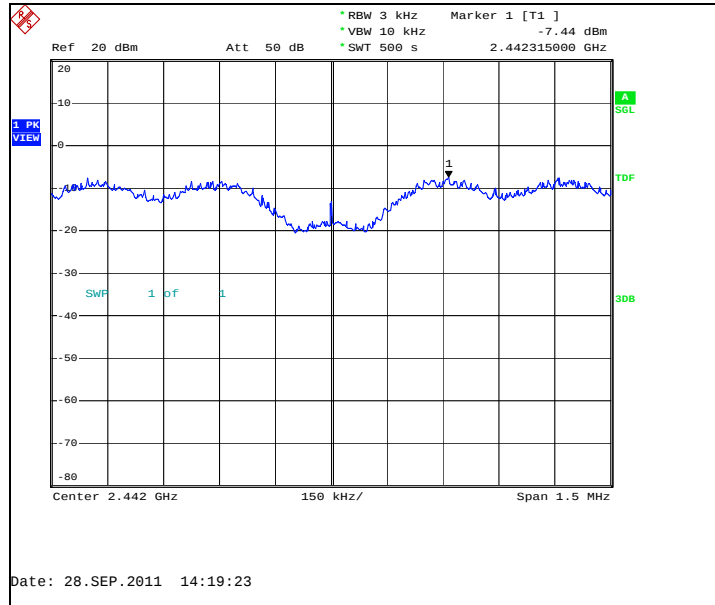
8.3.2 OFDM mode, BPSK modulation, 6 Mbps data rate

Channel / f_c [MHz]	P [dBm]	Result
1 / 2412	-11.72	PASSED
7 / 2442	-7.44	PASSED
11 / 2462	-11.76	PASSED

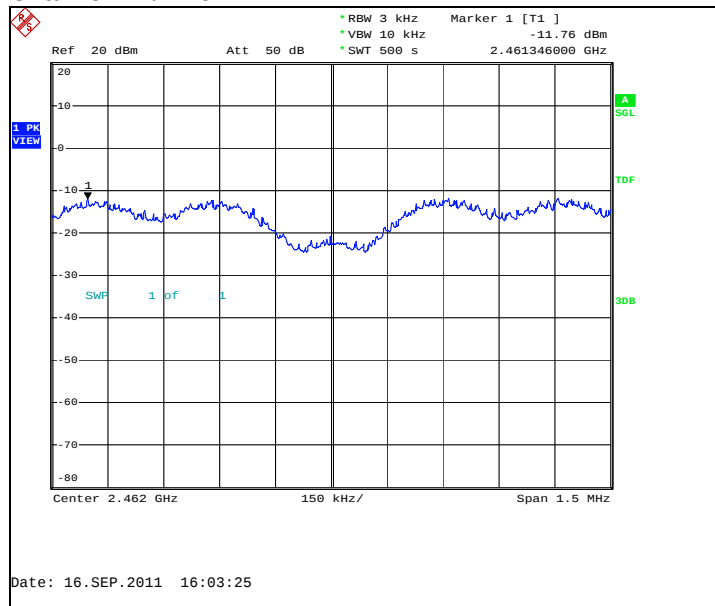
Channel 1 / 2412 MHz



Channel 7 / 2442 MHz



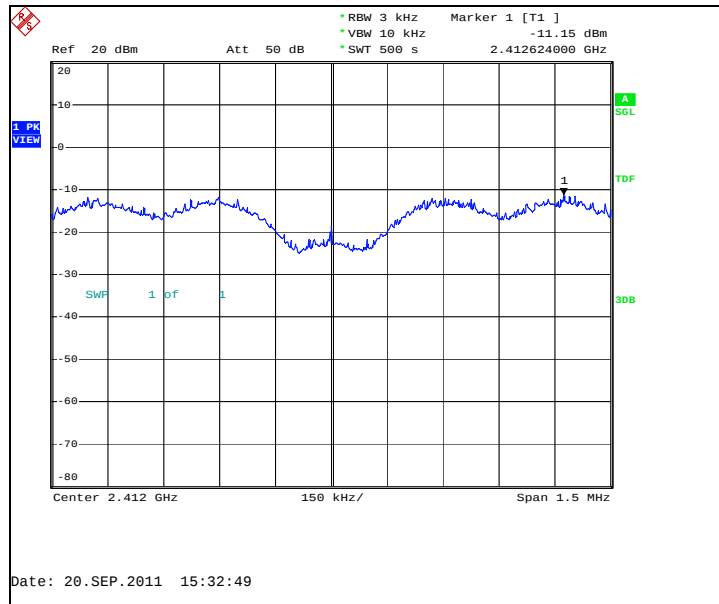
Channel 11 / 2462 MHz



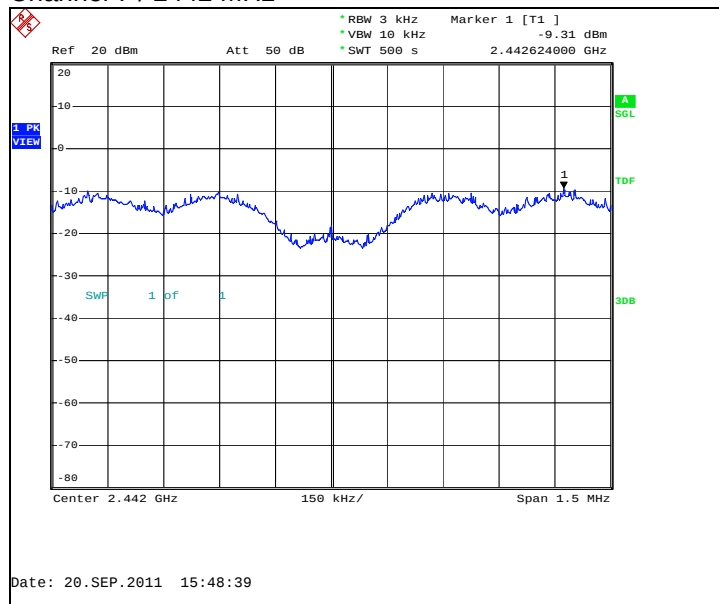
8.3.3 802.11n HT20 MCS 0

Channel / f_c [MHz]	P [dBm]	Result
1 / 2412	-11.15	PASSED
7 / 2442	-9.31	PASSED
11 / 2462	-11.00	PASSED

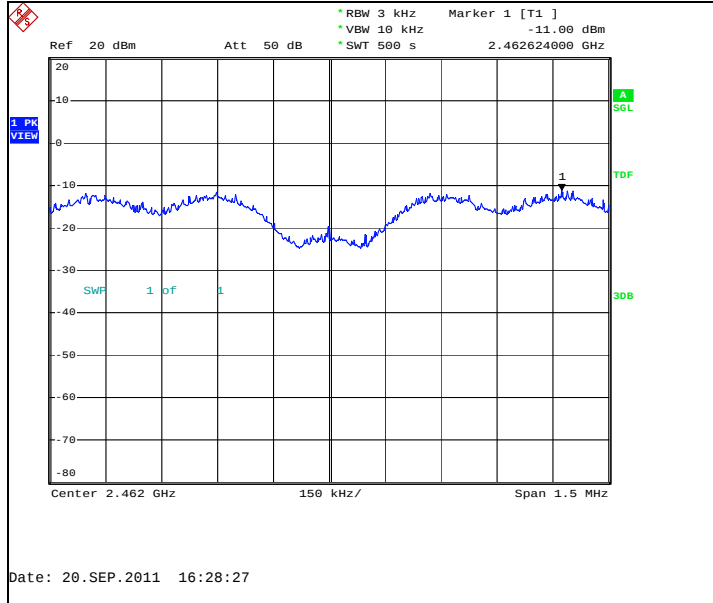
Channel 1 / 2412 MHz



Channel 7 / 2442 MHz



Channel 11 / 2462 MHz



9. Test Equipment

9.1. Conducted measurements

Eq. No	Equipment	Type	Manufacturer	Used in
-	RF Emission Software	ES-K1 v.1.71	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
BJPCPT0079	LISN 50 μ H	ESH3-Z5	R&S	15C,15B
BJPCPT0131	Communication Tester	CMU200	R&S	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

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	ES-K1 v.1.71	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