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FCC RADIO TEST REPORT

Applicant's company	**Deliberant LLC**
Applicant Address	138 Mountain Brook Dr Canton, GA 30115 United States
FCC ID	**UB8-FWBD1907**
Manufacturer's company	**Deliberant LLC**
Manufacturer Address	138 Mountain Brook Dr Canton, GA 30115 United States

Product Name	Broadband Digital Transmission Module
Brand Name	Deliberant
Model No.	1907-H
Test Rule	47 CFR FCC Part 15 Subpart C § 15.247
Test Freq. Range	2400 ~ 2483.5MHz
Received Date	Aug. 11, 2014
Final Test Date	Sep. 01, 2014
Submission Type	Original Equipment

Statement

Test result included in this report is for the IEEE 802.11n and IEEE 802.11b/g of the product.

The test result in this report refers exclusively to the presented test model / sample.

Without written approval of SPORTON International Inc., the test report shall not be reproduced except in full.

The measurements and test results shown in this test report were made in accordance with the procedures and found in compliance with the limit given in **ANSI C63.10-2009**, **47 CFR FCC Part 15 Subpart C**, **KDB 558074 D01 v03r02** and **KDB 662911 D01 v02r01**.

The test equipment used to perform the test is calibrated and traceable to NML/ROC.

TAF
Testing Laboratory
1190

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History of This Test Report

REPORT NO.	VERSION	DESCRIPTION	ISSUED DATE
FR482630	Rev. 01	Initial issue of report	Sep. 15, 2014

Certificate No.: CB10309017

1. CERTIFICATE OF COMPLIANCE

Product Name	:	Broadband Digital Transmission Module
Brand Name	:	Deliberant
Model No.	:	1907-H
Applicant	:	Deliberant LLC
Test Rule Part(s)	:	47 CFR FCC Part 15 Subpart C § 15.247

Sporton International as requested by the applicant to evaluate the EMC performance of the product sample received on Aug. 11, 2014 would like to declare that the tested sample has been evaluated and found to be in compliance with the tested rule parts. The data recorded as well as the test configuration specified is true and accurate for showing the sample's EMC nature.

Sam Chen
SPORTON INTERNATIONAL INC.

2. SUMMARY OF THE TEST RESULT

Applied Standard: 47 CFR FCC Part 15 Subpart C				
Part	**Rule Section**	**Description of Test**	**Result**	**Under Limit**
4.1	15.207	AC Power Line Conducted Emissions	Complies	3.22 dB
4.2	15.247(b)(3)	Maximum Conducted Output Power	Complies	0.02 dB
4.3	15.247(e)	Power Spectral Density	Complies	5.95 dB
4.4	15.247(a)(2)	6dB Spectrum Bandwidth	Complies	-
4.5	15.247(d)	Radiated Emissions	Complies	1.27 dB
4.6	15.247(d)	Band Edge Emissions	Complies	0.12 dB
4.7	15.203	Antenna Requirements	Complies	-

Note: The module (Model number: 1907-H) is Limited Module Approval and only limited to install to the system (brand: Deliberant LLC / Model Name: DLB 2).

3. GENERAL INFORMATION

3.1. Product Details

IEEE 802.11n

Items	Description
Product Type	WLAN (2TX, 2RX)
Radio Type	Intentional Transceiver
Power Type	From PoE
Modulation	see the below table for IEEE 802.11n
Data Modulation	OFDM (BPSK / QPSK / 16QAM / 64QAM)
Data Rate (Mbps)	see the below table for IEEE 802.11n
Frequency Range	2400 ~ 2483.5MHz
Channel Number	11 for 20MHz bandwidth ; 7 for 40MHz bandwidth
Channel Band Width (99%)	Ant.1 MCS0 (HT20): 17.92 MHz ; MCS0 (HT40): 36.64 MHz Ant.2 MCS0 (HT20): 17.92 MHz ; MCS0 (HT40): 36.64 MHz Ant.3 MCS0 (HT20): 17.92 MHz ; MCS0 (HT40): 36.64 MHz
Maximum Conducted Output Power	Ant.1 MCS0 (HT20): 23.27 dBm ; MCS0 (HT40): 23.80 dBm Ant.2 MCS0 (HT20): 21.83 dBm ; MCS0 (HT40): 21.69 dBm Ant.3 MCS0 (HT20): 21.84 dBm ; MCS0 (HT40): 21.93 dBm
Carrier Frequencies	Please refer to section 3.4
Antenna	Please refer to section 3.3

IEEE 802.11b/g

Items	Description
Product Type	WLAN (2TX, 2RX)
Radio Type	Intentional Transceiver
Power Type	From PoE
Modulation	DSSS for IEEE 802.11b ; OFDM for IEEE 802.11g
Data Modulation	DSSS (BPSK / QPSK / CCK) ; OFDM (BPSK / QPSK / 16QAM / 64QAM)
Data Rate (Mbps)	DSSS (1/ 2/ 5.5/11) ; OFDM (6/9/12/18/24/36/48/54)
Frequency Range	2400 ~ 2483.5MHz
Channel Number	11
Channel Band Width (99%)	Ant.1 11b: 12.80 MHz ; 11g: 16.64 MHz Ant.2 11b: 12.80 MHz ; 11g: 16.64 MHz Ant.3 11b: 12.96 MHz ; 11g: 16.64 MHz
Maximum Conducted Output Power	Ant.1 11b: 19.59 dBm ; 11g: 22.51 dBm Ant.2 11b: 16.99 dBm ; 11g: 21.85 dBm Ant.3 11b: 17.89 dBm ; 11g: 21.98 dBm
Carrier Frequencies	Please refer to section 3.4
Antenna	Please refer to section 3.3

Items	Description	
Beamforming Function	☐ With beamforming	☒ Without beamforming

Antenna and Band width

Antenna	Two (TX)	
Band width Mode	20 MHz	40 MHz
IEEE 802.11b	V	X
IEEE 802.11g	V	X
IEEE 802.11n	V	V

IEEE 11n Spec.

Protocol	Number of Transmit Chains (NTX)	Data Rate / MCS
802.11n (HT20)	2	MCS 0-15
802.11n (HT40)	2	MCS 0-15
Note 1: IEEE Std. 802.11n modulation consists of HT20 and HT40 (HT: High Throughput). Then EUT support HT20 and HT40. Note 2: Modulation modes consist of below configuration: HT20/HT40: IEEE 802.11n		

3.2. Accessories

Power	Brand	Model	Rating
PoE	Great	GRT-240050	INPUT: 100-240V ~ 50/60Hz, 0.5A OUTPUT: 24V, 0.5A
PoE	deliberant	AY012E-ZF243	INPUT: 100-240V ~ 50/60Hz, 0.5A OUTPUT: 24V, 0.5A
Others			
Power Cable 1, Non-Shielded, 1.8m Power Cable 2, Non-Shielded, 0.7m			

3.3. Table for Filed Antenna

Set	Ant.	Brand	Model Name	Antenna Type	Connector	Gain (dBi)
1	1	FORMOSA	ANT24-1202PC	OMNI Antenna	N-TYPE FEMALE	12
2	2	Deliberant	FWA-18	Panel Antenna	SMA	14
3	3	Deliberant	FWA-28	Sector Antenna	SMA	14

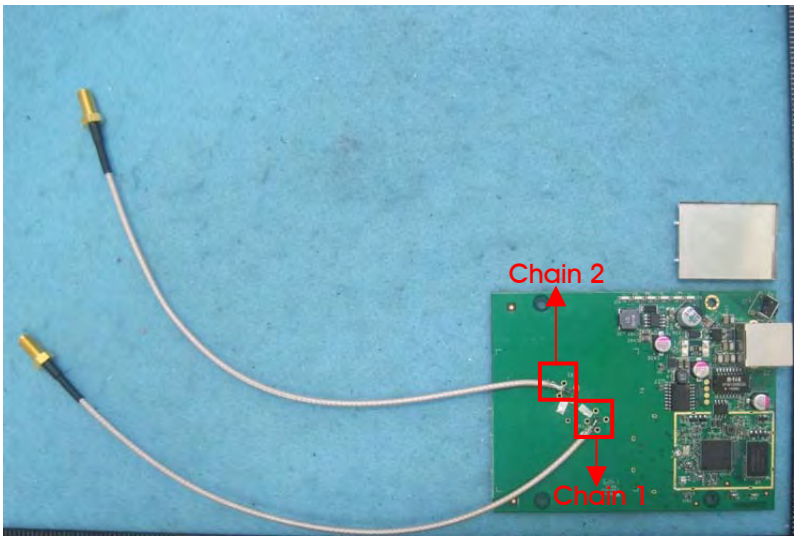
Note 1: The EUT has two antennas cable.

Note 2: The EUT has three sets of antennas and there are two antennas for set.1, the difference among set 1, set 2 and set 3 is difference antenna type, all test results were recorded in the report.

For IEEE 802.11b/g/n mode (2TX/2RX)

Ant.1 and Ant.2 can be used as transmitting/receiving antenna.

Ant.1 and Ant.2 could transmit/receive simultaneously.



3.4. Table for Carrier Frequencies

There are two bandwidth systems.

For 20MHz bandwidth systems, use Channel 1~Channel 11.

For 40MHz bandwidth systems, use Channel 3~Channel 9.

Frequency Band	Channel No.	Frequency	Channel No.	Frequency
2400~2483.5MHz	1	2412 MHz	7	2442 MHz
	2	2417 MHz	8	2447 MHz
	3	2422 MHz	9	2452 MHz
	4	2427 MHz	10	2457 MHz
	5	2432 MHz	11	2462 MHz
	6	2437 MHz	-	-

3.5. Table for Test Modes

Preliminary tests were performed in different data rate to find the worst radiated emission. The data rate shown in the table below is the worst-case rate with respect to the specific test item. Investigation has been done on all the possible configurations for searching the worst cases. The following table is a list of the test modes shown in this test report.

Test Items	Mode	Data Rate	Channel	Chain
AC Power Line Conducted Emissions	Normal Link	-	-	-
Maximum Conducted Output Power	802.11n HT20	MCS0	1/6/11	1+2
	802.11n HT40	MCS0	3/6/9	1+2
	11b/BPSK	1 Mbps	1/6/11	1+2
	11g/BPSK	6 Mbps	1/6/11	1+2
Power Spectral Density	802.11n HT20	MCS0	1/6/11	1+2
	802.11n HT40	MCS0	3/6/9	1+2
	11b/BPSK	1 Mbps	1/6/11	1+2
	11g/BPSK	6 Mbps	1/6/11	1+2
6dB Spectrum Bandwidth	802.11n HT20	MCS0	1/6/11	1+2
	802.11n HT40	MCS0	3/6/9	1+2
	11b/BPSK	1 Mbps	1/6/11	1+2
	11g/BPSK	6 Mbps	1/6/11	1+2
Radiated Emissions 9kHz~1GHz	Normal Link	-	-	-
Radiated Emissions 1GHz~10th Harmonic	802.11n HT20	MCS0	1/6/11	1+2
	802.11n HT40	MCS0	3/6/9	1+2
	11b/BPSK	1 Mbps	1/6/11	1+2
	11g/BPSK	6 Mbps	1/6/11	1+2
Band Edge Emissions	802.11n HT20	MCS0	1/6/11	1+2
	802.11n HT40	MCS0	3/6/9	1+2
	11b/BPSK	1 Mbps	1/6/11	1+2
	11g/BPSK	6 Mbps	1/6/11	1+2

The following test modes were performed for all tests:

EUT has three types of antenna. Only the highest gain antenna was selected from each different types of antenna to test and record in this report.

Thus Ant.3 was selected to perform AC Power Line Conducted Emissions and Radiated Emissions (below 1GHz) test.

For Conducted Emission test:

Mode 1. EUT with PoE 1 + Ant.3 (AP Mode)

Mode 2. EUT with PoE 1 + Ant.3 (Station mode)

Mode 1 has been evaluated to be the worst case between Mode 1~2, thus measurement for Mode 3 will follow this same test mode.

Mode 3. EUT with PoE 2 + Ant.3 (AP Mode)

Mode 1 is the worst case, so it was selected to record in this test report.

For Radiated Emission test below 1GHz:

Mode 1. EUT with PoE 1 + Ant.3 (AP Mode)

Mode 2. EUT with PoE 1 + Ant.3 (Station mode)

Mode 2 has been evaluated to be the worst case between Mode 1~2, thus measurement for Mode 3 will follow this same test mode.

Mode 3. EUT with PoE 2 + Ant.3 (Station mode)

Mode 2 is the worst case, so it was selected to record in this test report.

For Radiated Emission test above 1GHz:

Mode 1. CTX-EUT with Ant.1

Mode 2. CTX-EUT with Ant.2

Mode 3. CTX-EUT with Ant.3

3.6. Table for Testing Locations

Test Site Location				
Address:	No.8, Lane 724, Bo-ai St., Jhubei City, Hsinchu County 302, Taiwan, R.O.C.			
TEL:	886-3-656-9065			
FAX:	886-3-656-9085			
Test Site No.	**Site Category**	**Location**	**FCC Reg. No.**	**IC File No.**
03CH01-CB	SAC	Hsin Chu	262045	IC 4086D
CO01-CB	Conduction	Hsin Chu	262045	IC 4086D
TH01-CB	OVEN Room	Hsin Chu	-	-

Open Area Test Site (OATS); Semi Anechoic Chamber (SAC).

3.7. Table for Supporting Units

For Test Site No: 03CH01-CB

Support Unit	Brand	Model	FCC ID
Notebook	DELL	M1340	E2K4965AGNM
Notebook	DELL	E6430	DoC
WLAN AP	Deliberant	1907-H	N/A
PoE	Great	GRT-240050	N/A

For Test Site No: CO01-CB

Support Unit	Brand	Model	FCC ID
NB*2	DELL	E6430	DoC
PoE	Great	GRT-240050	N/A

For Test Site No: TH01-CB

Support Unit	Brand	Model	FCC ID
Notebook	DELL	E6220	DoC

3.8. Table for Parameters of Test Software Setting

During testing, Channel and Power Controlling Software provided by the customer was used to control the operating channel as well as the output power level. The RF output power selection is for the setting of RF output power expected by the customer and is going to be fixed on the firmware of the final end product.

Ant.1

Power Parameters of IEEE 802.11n

Test Software Version	ART2-GUI Ver2.3		
Frequency	2412 MHz	2437 MHz	2462 MHz
MCS0 HT20	10	11.5	11.5
Frequency	2422 MHz	2437 MHz	2452 MHz
MCS0 HT40	6	11	9

Power Parameters of IEEE 802.11b/g

Test Software Version	ART2-GUI Ver2.3		
Frequency	2412 MHz	2437 MHz	2462 MHz
IEEE 802.11b	14.5	14.5	14.5
IEEE 802.11g	10	10	11

Ant.2

Power Parameters of IEEE 802.11n

Test Software Version	ART2-GUI Ver2.3		
Frequency	2412 MHz	2437 MHz	2462 MHz
MCS0 HT20	9	9.5	9
Frequency	2422 MHz	2437 MHz	2452 MHz
MCS0 HT40	5.5	8	6

Power Parameters of IEEE 802.11b/g

Test Software Version	ART2-GUI Ver2.3		
Frequency	2412 MHz	2437 MHz	2462 MHz
IEEE 802.11b	11.5	11.5	11
IEEE 802.11g	9.5	10	9

Ant.3

Power Parameters of IEEE 802.11n

Test Software Version	ART2-GUI Ver2.3		
Frequency	2412 MHz	2437 MHz	2462 MHz
MCS0 HT20	9.5	9.5	9.5
Frequency	2422 MHz	2437 MHz	2452 MHz
MCS0 HT40	6.5	8	6

Power Parameters of IEEE 802.11b/g

Test Software Version	ART2-GUI Ver2.3		
Frequency	2412 MHz	2437 MHz	2462 MHz
IEEE 802.11b	11.5	12.5	11.5
IEEE 802.11g	9.5	10	9.5

3.9. EUT Operation during Test

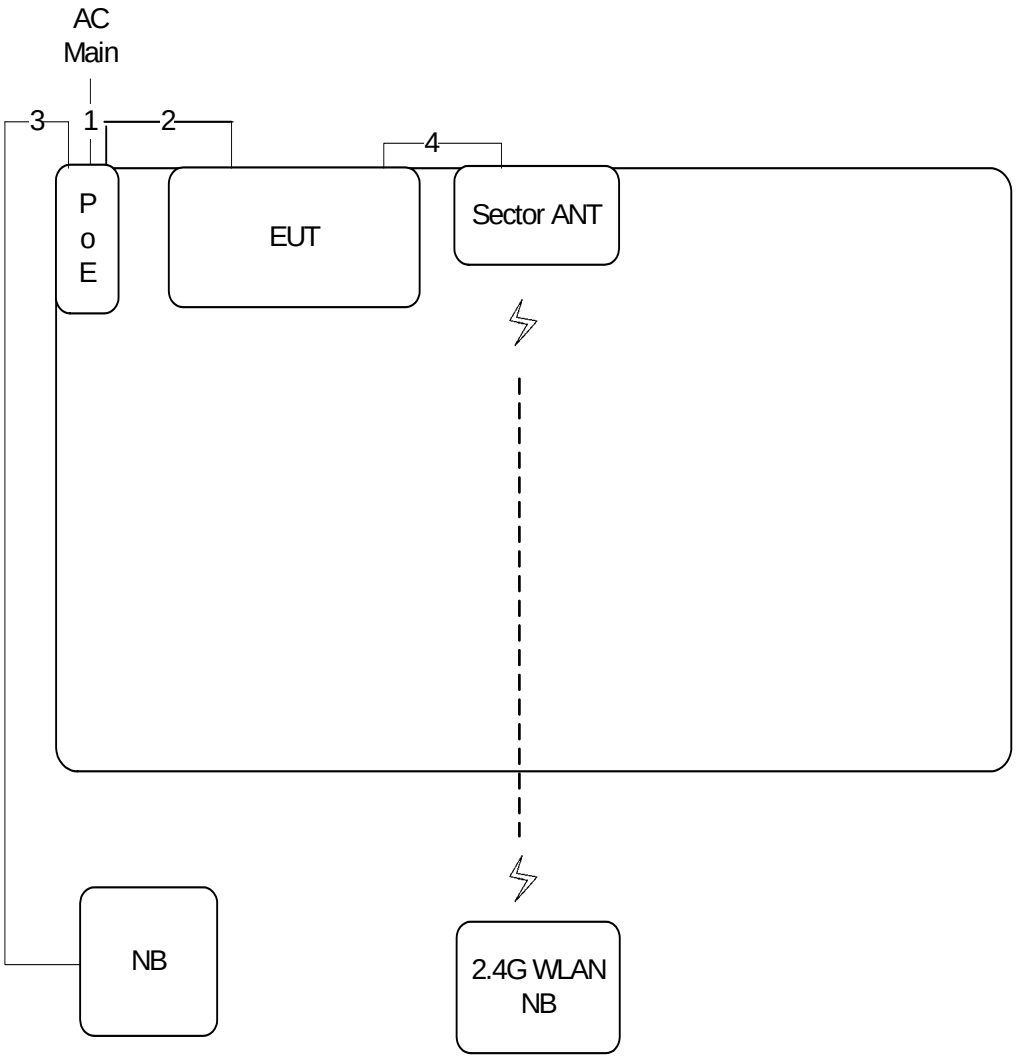
The EUT was programmed to be in continuously transmitting mode.

3.10. Duty Cycle

Mode	On Time (ms)	On+Off Time (ms)	Duty Cycle (%)	Duty Factor (dB)	1/T Minimum VBW (kHz)
802.11n MCS0 HT20	1.263	1.311	96.34%	0.16	0.79
802.11n MCS0 HT40	0.633	0.667	94.95%	0.23	1.58
802.11b	8.18	8.2	99.76%	0.01	0.01
802.11g	1.350	1.392	96.98%	0.13	0.74

3.11. Test Configurations

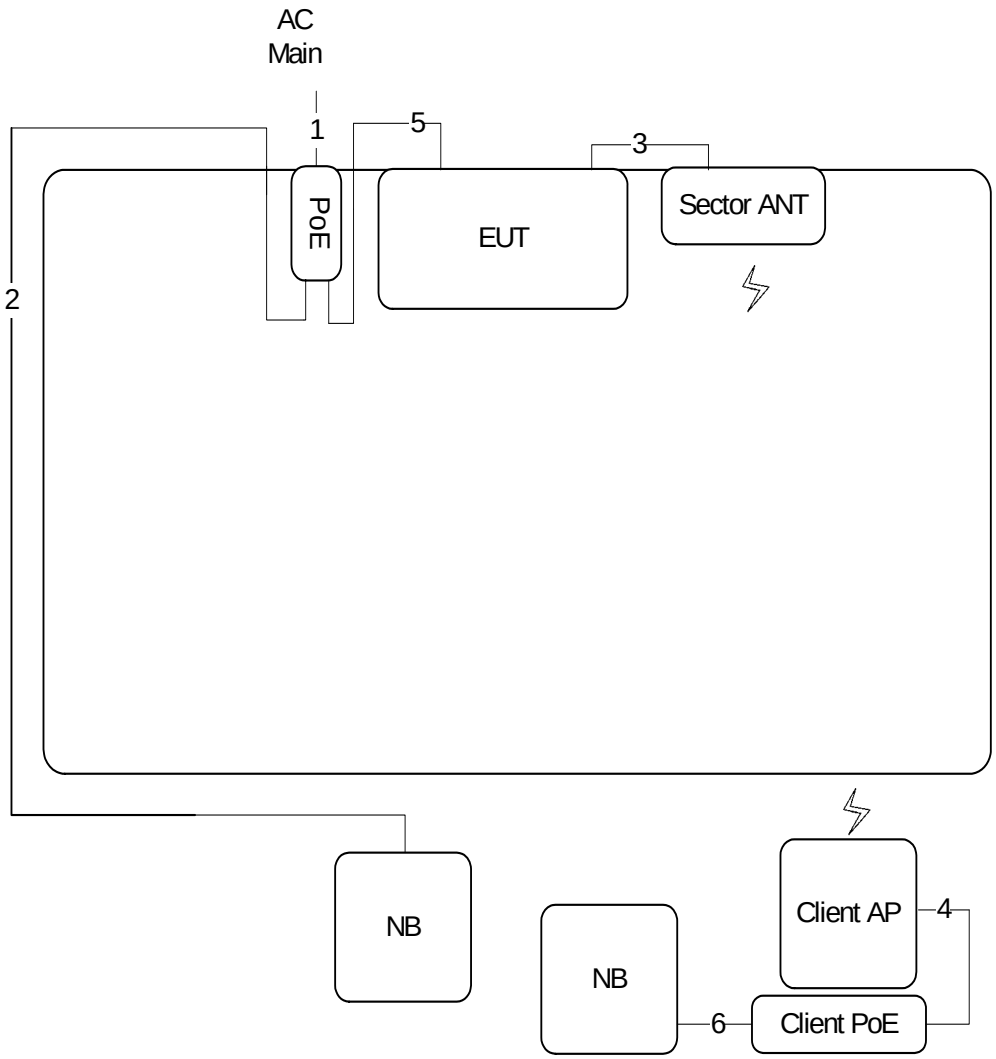
3.11.1. AC Power Line Conduction Emissions Test Configuration



Item	Connection	Shield	Length(m)
1	Power Cable	No	1.8
2	RJ-45 Cable	Yes	1.5
3	RJ-45 Cable	Yes	10
4	Ant.Cable*2	No	0.2

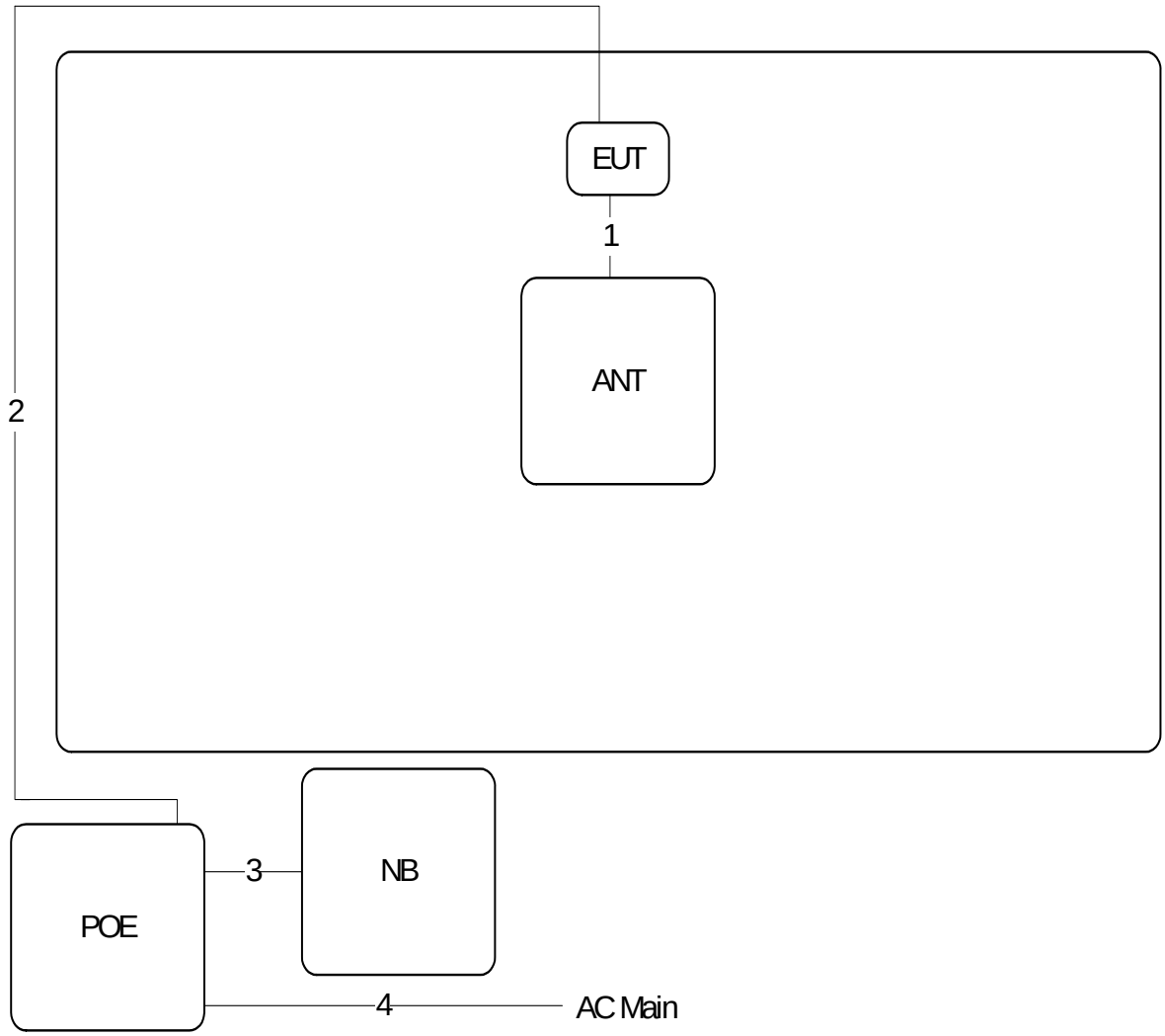
3.11.2. Radiation Emissions Test Configuration

Test Configuration: 30MHz~1GHz



Item	Connection	Shielded	Length(m)
1	Power Cable	No	1.8
2	RJ-45 Cable	No	10
3	Ant.Cable*2	Yes	0.2
4	RJ-45 Cable	Yes	1.5
5	RJ-45 Cable	No	1.5
6	RJ-45 Cable	No	1.5

Test Configuration: above 1GHz



Item	Connection	Shielded	Length(m)
1	Ant.Cable*2	No	0.2
2	RJ-45 Cable	No	10
3	RJ-45 Cable	Yes	1.5
4	Power Cable	No	1.8

4. TEST RESULT

4.1. AC Power Line Conducted Emissions Measurement

4.1.1. Limit

For this product which is designed to be connected to the AC power line, the radio frequency voltage that is conducted back onto the AC power line on any frequency or frequencies within the band 150 kHz to 30 MHz shall not exceed below limits table.

Frequency (MHz)	QP Limit (dBuV)	AV Limit (dBuV)
0.15~0.5	66~56	56~46
0.5~5	56	46
5~30	60	50

4.1.2. Measuring Instruments and Setting

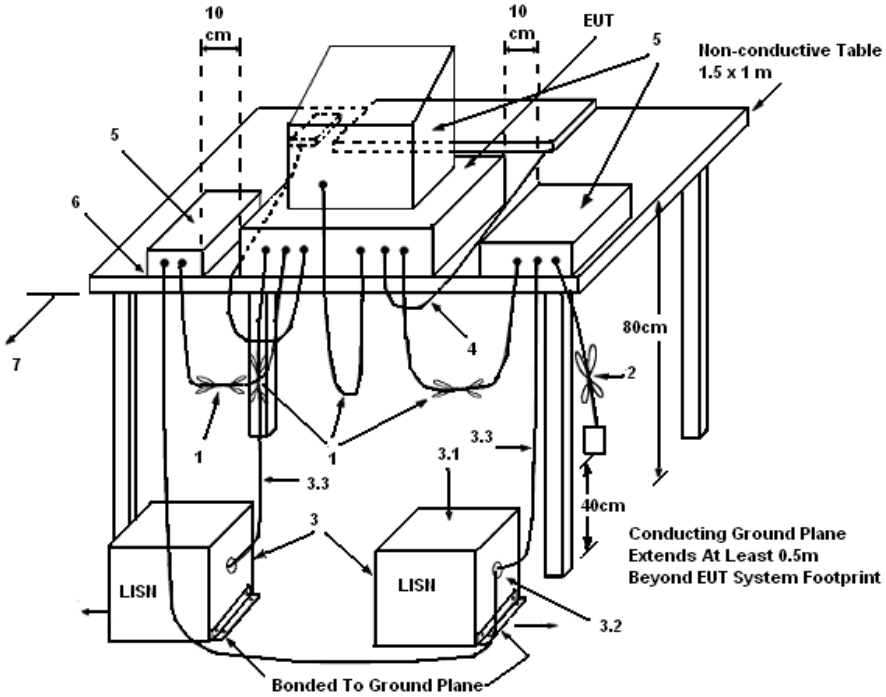
Please refer to section 5 of equipments list in this report. The following table is the setting of the receiver.

Receiver Parameters	Setting
Attenuation	10 dB
Start Frequency	0.15 MHz
Stop Frequency	30 MHz
IF Bandwidth	9 kHz

4.1.3. Test Procedures

1. Configure the EUT according to ANSI C63.10. The EUT or host of EUT has to be placed 0.4 meter far from the conducting wall of the shielding room and at least 80 centimeters from any other grounded conducting surface.
2. Connect EUT or host of EUT to the power mains through a line impedance stabilization network (LISN).
3. All the support units are connected to the other LISNs. The LISN should provide 50uH/50ohms coupling impedance.
4. The frequency range from 150 kHz to 30 MHz was searched.
5. Set the test-receiver system to Peak Detect Function and Specified Bandwidth with Maximum Hold Mode.
6. The measurement has to be done between each power line and ground at the power terminal.

4.1.4. Test Setup Layout



LEGEND:

(1) Interconnecting cables that hang closer than 40 cm to the ground plane shall be folded back and forth in the center forming a bundle 30 to 40 cm long.

(2) I/O cables that are not connected to a peripheral shall be bundled in the center. The end of the cable may be terminated, if required, using the correct terminating impedance. The overall length shall not exceed 1 m.

(3) EUT connected to one LISN. Unused LISN measuring port connectors shall be terminated in 50 Ω. LISN can be placed on top of, or immediately beneath, reference ground plane.

(3.1) All other equipment powered from additional LISN(s).

(3.2) Multiple outlet strip can be used for multiple power cords of non-EUT equipment.

(3.3) LISN at least 80 cm from nearest part of EUT chassis.

(4) Cables of hand-operated devices, such as keyboards, mice, etc., shall be placed as for normal use.

(5) Non-EUT components of EUT system being tested.

(6) Rear of EUT, including peripherals, shall all be aligned and flush with rear of tabletop.

(7) Rear of tabletop shall be 40 cm removed from a vertical conducting plane that is bonded to the ground plane.

4.1.5. Test Deviation

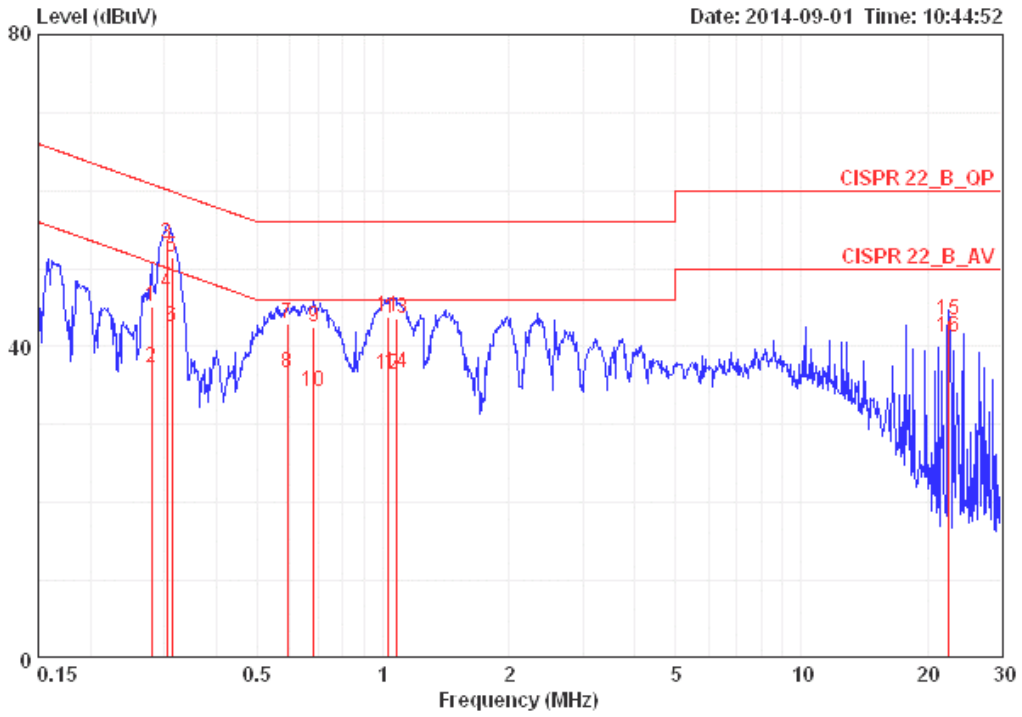
There is no deviation with the original standard.

4.1.6. EUT Operation during Test

The EUT was placed on the test table and programmed in normal function.

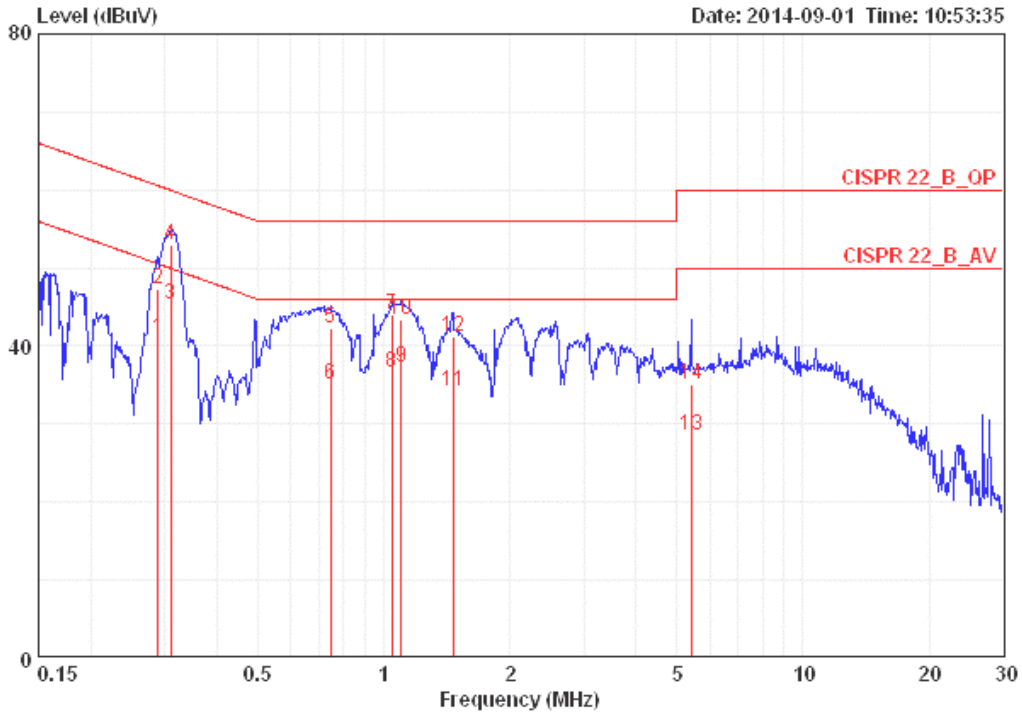
4.1.7. Results of AC Power Line Conducted Emissions Measurement

Temperature	25°C	Humidity	53%
Test Engineer	Sollo Luo	Phase	Line
Configuration	Normal Link	Test Mode	1



	Freq	Level	Over Limit	Limit Line	LISN Factor	Read Level	Cable Loss	Pol/Phase	Remark
	MHz	dBuV	dB	dBuV	dB	dBuV	dB		
1	0.28029	45.22	-15.58	60.81	0.10	44.95	0.17	LINE	QP
2	0.28029	37.32	-13.48	50.81	0.10	37.05	0.17	LINE	AVERAGE
3	0.30509	53.21	-6.89	60.10	0.10	52.94	0.17	LINE	QP
4 @	0.30509	46.88	-3.22	50.10	0.10	46.61	0.17	LINE	AVERAGE
5	0.31328	51.39	-8.49	59.88	0.10	51.12	0.17	LINE	QP
6	0.31328	42.59	-7.29	49.88	0.10	42.32	0.17	LINE	AVERAGE
7	0.59164	42.95	-13.05	56.00	0.11	42.65	0.19	LINE	QP
8	0.59164	36.70	-9.30	46.00	0.11	36.40	0.19	LINE	AVERAGE
9	0.68263	42.47	-13.53	56.00	0.12	42.16	0.19	LINE	QP
10	0.68263	34.32	-11.68	46.00	0.12	34.01	0.19	LINE	AVERAGE
11	1.027	43.87	-12.13	56.00	0.13	43.54	0.20	LINE	QP
12	1.027	36.42	-9.58	46.00	0.13	36.09	0.20	LINE	AVERAGE
13	1.077	43.65	-12.35	56.00	0.13	43.31	0.21	LINE	QP
14	1.077	36.66	-9.34	46.00	0.13	36.32	0.21	LINE	AVERAGE
15	22.395	43.41	-16.59	60.00	0.48	42.39	0.54	LINE	QP
16	22.395	41.19	-8.81	50.00	0.48	40.17	0.54	LINE	AVERAGE

Temperature	25°C	Humidity	53%
Test Engineer	Sollo Luo	Phase	Neutral
Configuration	Normal Link	Test Mode	1



	Freq	Level	Over Limit	Limit Line	LISN Factor	Read Level	Cable Loss	Pol/Phase	Remark
	MHz	dBuV	dB	dBuV	dB	dBuV	dB		
1	0.28935	41.03	-9.51	50.54	0.09	40.77	0.17	NEUTRAL	AVERAGE
2	0.28935	47.26	-13.28	60.54	0.09	47.00	0.17	NEUTRAL	QP
3 @	0.30998	45.34	-4.63	49.97	0.09	45.08	0.17	NEUTRAL	AVERAGE
4	0.30998	52.93	-7.04	59.97	0.09	52.67	0.17	NEUTRAL	QP
5	0.74697	42.38	-13.62	56.00	0.11	42.08	0.19	NEUTRAL	QP
6	0.74697	35.17	-10.83	46.00	0.11	34.87	0.19	NEUTRAL	AVERAGE
7	1.043	44.08	-11.92	56.00	0.12	43.76	0.20	NEUTRAL	QP
8	1.043	36.70	-9.30	46.00	0.12	36.38	0.20	NEUTRAL	AVERAGE
9	1.100	37.36	-8.64	46.00	0.12	37.03	0.21	NEUTRAL	AVERAGE
10	1.100	43.36	-12.64	56.00	0.12	43.03	0.21	NEUTRAL	QP
11	1.464	34.13	-11.87	46.00	0.13	33.77	0.23	NEUTRAL	AVERAGE
12	1.464	41.11	-14.89	56.00	0.13	40.75	0.23	NEUTRAL	QP
13	5.419	28.56	-21.44	50.00	0.23	28.00	0.33	NEUTRAL	AVERAGE
14	5.419	35.06	-24.94	60.00	0.23	34.50	0.33	NEUTRAL	QP

Note:

Level = Read Level + LISN Factor + Cable Loss.

4.2. Maximum Conducted Output Power Measurement

4.2.1. Limit

For systems using digital modulation in the 2400-2483.5MHz, the limit for output power is 30dBm. The limited has to be reduced by the amount in dB that the gain of the antenna exceed 6dBi. In case of point-to-point operation, the limit has to be reduced by 1dB for every 3dB that the directional gain of the antenna exceeds 6dBi.

4.2.2. Measuring Instruments and Setting

Please refer to section 5 of equipments list in this report. The following table is the setting of the power meter.

Power Meter Parameter	Setting
Bandwidth	50MHz bandwidth is greater than the EUT emission bandwidth
Detector	Peak and Average

4.2.3. Test Procedures

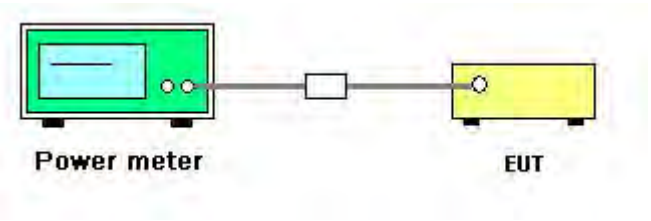
For Average Test

1. Test procedures refer KDB 558074 D01 v03r02 section 9.2.3.2 Measurement using a power meter (PM).
2. Multiple antenna systems was performed in accordance with KDB 662911 D01 v02r01 Emissions Testing of Transmitters with Multiple Outputs in the Same Band.
3. This procedure provides an alternative for determining the RMS output power using a broadband RF average power meter with a thermocouple detector.

For Peak Test:

1. Test procedures refer KDB 558074 D01 v03r02 section 9.1.3 Measurement using a power meter (PM).
2. Multiple antenna system was performed in accordance with KDB 662911 D01 v02r01 Emissions Testing of Transmitters with Multiple Outputs in the Same Band.
3. The maximum peak conducted output power may be measured using a broadband peak RF power meter.
4. The power meter shall have a video bandwidth that is greater than or equal to the DTS bandwidth and shall utilize a fast-responding diode detector.

4.2.4. Test Setup Layout



4.2.5. Test Deviation

There is no deviation with the original standard.

4.2.6. EUT Operation during Test

The EUT was programmed to be in continuously transmitting mode.

4.2.7. Test Result of Maximum Conducted Output Power

Temperature	26°C	Humidity	63%
Test Engineer	Jim Huang	Configurations	IEEE 802.11n (Ant.1)
Test Date	Aug. 29, 2014		

Configuration IEEE 802.11n MCS0 HT20

Channel	Frequency	Conducted Peak Power (dBm)			Max. Limit (dBm)	Result
		Chain 1	Chain 2	Total		
1	2412 MHz	19.78	19.65	22.73	24.00	Complies
6	2437 MHz	21.03	19.32	23.27	24.00	Complies
11	2462 MHz	21.11	18.45	22.99	24.00	Complies

Note: ANT GAIN=12dBi >6dBi,So power Limit =30-(12-6)=24dBm

Configuration IEEE 802.11n MCS0 HT20

Channel	Frequency	Conducted Average Power (dBm)			Max. Limit (dBm)	Result
		Chain 1	Chain 2	Total		
1	2412 MHz	10.23	9.87	13.06	24.00	Complies
6	2437 MHz	12.12	10.89	14.56	24.00	Complies
11	2462 MHz	12.03	9.91	14.11	24.00	Complies

Note 1: ANT GAIN=12dBi >6dBi,So power Limit =30-(12-6)=24dBm
Note 2: Average output power is only for Maximum Permissible Exposure use.

Configuration IEEE 802.11n MCS0 HT40

Channel	Frequency	Conducted Peak Power (dBm)			Max. Limit (dBm)	Result
		Chain 1	Chain 2	Total		
3	2422 MHz	18.98	17.57	21.34	24.00	Complies
6	2437 MHz	21.44	20.03	23.80	24.00	Complies
9	2452 MHz	19.08	17.33	21.30	24.00	Complies

Note: ANT GAIN=12dBi >6dBi,So power Limit =30-(12-6)=24dBm

Configuration IEEE 802.11n MCS0 HT40

Channel	Frequency	Conducted Average Power (dBm)			Max. Limit (dBm)	Result
		Chain 1	Chain 2	Total		
3	2422 MHz	6.31	5.14	8.77	24.00	Complies
6	2437 MHz	11.97	10.43	14.28	24.00	Complies
9	2452 MHz	9.63	6.72	11.42	24.00	Complies

Note 1: ANT GAIN=12dBi >6dBi,So power Limit =30-(12-6)=24dBm
Note 2: Average output power is only for Maximum Permissible Exposure use.

Temperature	26°C	Humidity	63%
Test Engineer	Jim Huang	Configurations	IEEE 802.11b/g (Ant.1)
Test Date	Aug. 29, 2014		

Configuration IEEE 802.11b

Channel	Frequency	Conducted Peak Power (dBm)			Max. Limit (dBm)	Result
		Chain 1	Chain 2	Total		
1	2412 MHz	16.57	15.76	19.19	24.00	Complies
6	2437 MHz	17.32	15.68	19.59	24.00	Complies
11	2462 MHz	17.11	14.85	19.14	24.00	Complies

Note: ANT GAIN=12dBi >6dBi,So power Limit =30-(12-6)=24dBm

Configuration IEEE 802.11b

Channel	Frequency	Conducted Average Power (dBm)			Max. Limit (dBm)	Result
		Chain 1	Chain 2	Total		
1	2412 MHz	14.53	13.96	17.26	24.00	Complies
6	2437 MHz	15.47	13.69	17.68	24.00	Complies
11	2462 MHz	15.19	13.12	17.29	24.00	Complies

Note 1: ANT GAIN=12dBi >6dBi,So power Limit =30-(12-6)=24dBm
Note 2: Average output power is only for Maximum Permissible Exposure use.

Configuration IEEE 802.11g

Channel	Frequency	Conducted Peak Power (dBm)			Max. Limit (dBm)	Result
		Chain 1	Chain 2	Total		
1	2412 MHz	19.54	19.26	22.41	24.00	Complies
6	2437 MHz	19.43	18.16	21.85	24.00	Complies
11	2462 MHz	20.43	18.31	22.51	24.00	Complies

Note: ANT GAIN=12dBi >6dBi,So power Limit =30-(12-6)=24dBm

Configuration IEEE 802.11g

Channel	Frequency	Conducted Average Power (dBm)			Max. Limit (dBm)	Result
		Chain 1	Chain 2	Total		
1	2412 MHz	9.90	9.23	12.59	24.00	Complies
6	2437 MHz	10.95	9.17	13.16	24.00	Complies
11	2462 MHz	11.92	9.62	13.93	24.00	Complies

Note 1: ANT GAIN=12dBi >6dBi,So power Limit =30-(12-6)=24dBm
Note 2: Average output power is only for Maximum Permissible Exposure use.

Temperature	26°C	Humidity	63%
Test Engineer	Jim Huang	Configurations	IEEE 802.11n (Ant.2)
Test Date	Aug. 29, 2014		

Configuration IEEE 802.11n MCS0 HT20

Channel	Frequency	Conducted Peak Power (dBm)			Max. Limit (dBm)	Result
		Chain 1	Chain 2	Total		
1	2412 MHz	18.28	17.55	20.94	22.00	Complies
6	2437 MHz	19.43	18.12	21.83	22.00	Complies
11	2462 MHz	18.78	15.78	20.54	22.00	Complies

Note: ANT GAIN=14dBi >6dBi,So power Limit =30-(14-6)=22dBm

Configuration IEEE 802.11n MCS0 HT20

Channel	Frequency	Conducted Average Power (dBm)			Max. Limit (dBm)	Result
		Chain 1	Chain 2	Total		
1	2412 MHz	9.31	8.75	12.05	22.00	Complies
6	2437 MHz	10.85	9.45	13.22	22.00	Complies
11	2462 MHz	9.51	7.49	11.63	22.00	Complies

Note 1: ANT GAIN=14dBi >6dBi,So power Limit =30-(14-6)=22dBm
Note 2: Average output power is only for Maximum Permissible Exposure use.

Configuration IEEE 802.11n MCS0 HT40

Channel	Frequency	Conducted Peak Power (dBm)			Max. Limit (dBm)	Result
		Chain 1	Chain 2	Total		
3	2422 MHz	18.66	17.02	20.93	22.00	Complies
6	2437 MHz	19.72	17.32	21.69	22.00	Complies
9	2452 MHz	18.02	15.98	20.13	22.00	Complies

Note: ANT GAIN=14dBi >6dBi,So power Limit =30-(14-6)=22dBm

Configuration IEEE 802.11n MCS0 HT40

Channel	Frequency	Conducted Average Power (dBm)			Max. Limit (dBm)	Result
		Chain 1	Chain 2	Total		
3	2422 MHz	6.34	5.38	8.90	22.00	Complies
6	2437 MHz	9.82	7.76	11.92	22.00	Complies
9	2452 MHz	6.23	4.02	8.27	22.00	Complies

Note 1: ANT GAIN=14dBi >6dBi,So power Limit =30-(14-6)=22dBm
Note 2: Average output power is only for Maximum Permissible Exposure use.

Temperature	26℃	Humidity	63%
Test Engineer	Jim Huang	Configurations	IEEE 802.11b/g (Ant.2)
Test Date	Aug. 29, 2014		

Configuration IEEE 802.11b

Channel	Frequency	Conducted Peak Power (dBm)			Max. Limit (dBm)	Result
		Chain 1	Chain 2	Total		
1	2412 MHz	13.75	13.13	16.46	22.00	Complies
6	2437 MHz	15.07	12.53	16.99	22.00	Complies
11	2462 MHz	13.56	11.31	15.59	22.00	Complies

Note: ANT GAIN=14dBi >6dBi,So power Limit =30-(14-6)=22dBm

Configuration IEEE 802.11b

Channel	Frequency	Conducted Average Power (dBm)			Max. Limit (dBm)	Result
		Chain 1	Chain 2	Total		
1	2412 MHz	11.28	10.79	14.05	22.00	Complies
6	2437 MHz	12.08	10.46	14.36	22.00	Complies
11	2462 MHz	11.72	9.34	13.70	22.00	Complies

Note 1: ANT GAIN=14dBi >6dBi,So power Limit =30-(14-6)=22dBm
Note 2: Average output power is only for Maximum Permissible Exposure use.

Configuration IEEE 802.11g

Channel	Frequency	Conducted Peak Power (dBm)			Max. Limit (dBm)	Result
		Chain 1	Chain 2	Total		
1	2412 MHz	19.28	18.16	21.77	22.00	Complies
6	2437 MHz	19.43	18.16	21.85	22.00	Complies
11	2462 MHz	19.18	16.11	20.92	22.00	Complies

Note: ANT GAIN=14dBi >6dBi,So power Limit =30-(14-6)=22dBm

Configuration IEEE 802.11g

Channel	Frequency	Conducted Average Power (dBm)			Max. Limit (dBm)	Result
		Chain 1	Chain 2	Total		
1	2412 MHz	10.42	9.48	12.99	22.00	Complies
6	2437 MHz	10.95	9.17	13.16	22.00	Complies
11	2462 MHz	10.25	7.38	12.06	22.00	Complies

Note 1: ANT GAIN=14dBi >6dBi,So power Limit =30-(14-6)=22dBm
Note 2: Average output power is only for Maximum Permissible Exposure use.

Temperature	26°C	Humidity	63%
Test Engineer	Jim Huang	Configurations	IEEE 802.11n (Ant.3)
Test Date	Aug. 29, 2014		

Configuration IEEE 802.11n MCS0 HT20

Channel	Frequency	Conducted Peak Power (dBm)			Max. Limit (dBm)	Result
		Chain 1	Chain 2	Total		
1	2412 MHz	19.11	18.52	21.84	22.00	Complies
6	2437 MHz	19.43	18.12	21.83	22.00	Complies
11	2462 MHz	19.79	17.60	21.84	22.00	Complies

Note: ANT GAIN=14dBi >6dBi,So power Limit =30-(14-6)=22dBm

Configuration IEEE 802.11n MCS0 HT20

Channel	Frequency	Conducted Average Power (dBm)			Max. Limit (dBm)	Result
		Chain 1	Chain 2	Total		
1	2412 MHz	9.67	9.02	12.37	22.00	Complies
6	2437 MHz	10.85	9.45	13.22	22.00	Complies
11	2462 MHz	10.11	8.03	12.20	22.00	Complies

Note 1: ANT GAIN=14dBi >6dBi,So power Limit =30-(14-6)=22dBm
Note 2: Average output power is only for Maximum Permissible Exposure use.

Configuration IEEE 802.11n MCS0 HT40

Channel	Frequency	Conducted Peak Power (dBm)			Max. Limit (dBm)	Result
		Chain 1	Chain 2	Total		
3	2422 MHz	19.66	18.02	21.93	22.00	Complies
6	2437 MHz	19.72	17.32	21.69	22.00	Complies
9	2452 MHz	18.02	15.98	20.13	22.00	Complies

Note: ANT GAIN=14dBi >6dBi,So power Limit =30-(14-6)=22dBm

Configuration IEEE 802.11n MCS0 HT40

Channel	Frequency	Conducted Average Power (dBm)			Max. Limit (dBm)	Result
		Chain 1	Chain 2	Total		
3	2422 MHz	7.42	5.97	9.77	22.00	Complies
6	2437 MHz	9.82	7.76	11.92	22.00	Complies
9	2452 MHz	6.23	4.02	8.27	22.00	Complies

Note 1: ANT GAIN=14dBi >6dBi,So power Limit =30-(14-6)=22dBm
Note 2: Average output power is only for Maximum Permissible Exposure use.

Temperature	26℃	Humidity	63%
Test Engineer	Jim Huang	Configurations	IEEE 802.11b/g (Ant.3)
Test Date	Aug. 29, 2014		

Configuration IEEE 802.11b

Channel	Frequency	Conducted Peak Power (dBm)			Max. Limit (dBm)	Result
		Chain 1	Chain 2	Total		
1	2412 MHz	13.75	13.13	16.46	22.00	Complies
6	2437 MHz	15.58	14.04	17.89	22.00	Complies
11	2462 MHz	14.35	11.53	16.18	22.00	Complies

Note: ANT GAIN=14dBi >6dBi,So power Limit =30-(14-6)=22dBm

Configuration IEEE 802.11b

Channel	Frequency	Conducted Average Power (dBm)			Max. Limit (dBm)	Result
		Chain 1	Chain 2	Total		
1	2412 MHz	11.28	10.79	14.05	22.00	Complies
6	2437 MHz	13.18	11.65	15.49	22.00	Complies
11	2462 MHz	11.97	9.76	14.01	22.00	Complies

Note 1: ANT GAIN=14dBi >6dBi,So power Limit =30-(14-6)=22dBm
Note 2: Average output power is only for Maximum Permissible Exposure use.

Configuration IEEE 802.11g

Channel	Frequency	Conducted Peak Power (dBm)			Max. Limit (dBm)	Result
		Chain 1	Chain 2	Total		
1	2412 MHz	19.28	18.16	21.77	22.00	Complies
6	2437 MHz	19.43	18.16	21.85	22.00	Complies
11	2462 MHz	19.91	17.78	21.98	22.00	Complies

Note: ANT GAIN=14dBi >6dBi,So power Limit =30-(14-6)=22dBm

Configuration IEEE 802.11g

Channel	Frequency	Conducted Average Power (dBm)			Max. Limit (dBm)	Result
		Chain 1	Chain 2	Total		
1	2412 MHz	10.42	9.48	12.99	22.00	Complies
6	2437 MHz	10.95	9.17	13.16	22.00	Complies
11	2462 MHz	10.41	8.07	12.41	22.00	Complies

Note 1: ANT GAIN=14dBi >6dBi,So power Limit =30-(14-6)=22dBm
Note 2: Average output power is only for Maximum Permissible Exposure use.

4.3. Power Spectral Density Measurement

4.3.1. Limit

For digitally modulated systems, the power spectral density conducted from the intentional radiator to the antenna shall not be greater than 8 dBm in any 3 kHz band during any time interval of continuous transmission.

4.3.2. Measuring Instruments and Setting

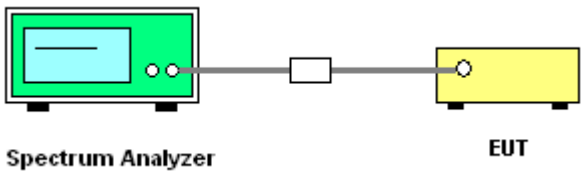
Please refer to section 5 of equipments list in this report. The following table is the setting of the spectrum analyzer.

Spectrum Parameter	Setting
Attenuation	Auto
Span Frequency	Set the span to 1.5 times the DTS channel bandwidth.
RBW	3 kHz ≤ RBW ≤ 100kHz
VBW	≥ 3 x RBW
Detector	Peak
Trace	Max Hold
Sweep Time	Auto couple

4.3.3. Test Procedures

1. Test was performed in accordance with KDB 558074 D01 v03r02 for Performing Compliance Measurements on Digital Transmission Systems (DTS) - section 10.2 Method PKPSD (peak PSD) and KDB 662911 D01 v02r01 section In-Band Power Spectral Density (PSD) Measurements option (b) Measure and sum spectral maximal across the outputs.
2. Use this procedure when the maximum conducted output power in the fundamental emission is used to demonstrate compliance. The EUT must be configured to transmit continuously at full power over the measurement duration.
3. Ensure that the number of measurement points in the sweep ≥ 2 x span/RBW (use of a greater number of measurement points than this minimum requirement is recommended).
4. Use the peak marker function to determine the maximum level in any 3 kHz band segment within the fundamental EBW.
5. The resulting PSD level must be ≤ 8 dBm.

4.3.4. Test Setup Layout



4.3.5. Test Deviation

There is no deviation with the original standard.

4.3.6. EUT Operation during Test

The EUT was programmed to be in continuously transmitting mode.

4.3.7. Test Result of Power Spectral Density

Temperature	26°C	Humidity	63%
Test Engineer	Jim Huang	Configurations	IEEE 802.11n (Ant.1)

Configuration IEEE 802.11n MCS0 HT20

Channel	Frequency	Power Density (dBm/3kHz)			Power Density Limit (dBm/3kHz)	Result
		Chain 1	Chain 2	Total		
1	2412 MHz	-15.33	-16.57	-12.90	-1.01	Complies
6	2437 MHz	-12.54	-16.57	-11.09	-1.01	Complies
11	2462 MHz	-13.80	-17.13	-12.14	-1.01	Complies

Note: $DirectionalGain = 10 \cdot \log\left[\frac{\sum_{j=1}^{N_{SS}}\left\{\sum_{k=1}^{N_{ANT}} g_{j,k}\right\}^2}{N_{ANT}}\right]$ =15.01dBi >6dBi,So Power Density Limit =8-(15.01-6)=-1.01dBm/3KHz

Configuration IEEE 802.11n MCS0 HT40

Channel	Frequency	Power Density (dBm/3kHz)			Power Density Limit (dBm/3kHz)	Result
		Chain 1	Chain 2	Total		
3	2422 MHz	-22.33	-22.51	-19.41	-1.01	Complies
6	2437 MHz	-16.70	-18.39	-14.45	-1.01	Complies
9	2452 MHz	-18.32	-20.81	-16.38	-1.01	Complies

Note: $DirectionalGain = 10 \cdot \log\left[\frac{\sum_{j=1}^{N_{SS}}\left\{\sum_{k=1}^{N_{ANT}} g_{j,k}\right\}^2}{N_{ANT}}\right]$ =15.01dBi >6dBi,So Power Density Limit =8-(15.01-6)=-1.01dBm/3KHz

Temperature	26°C	Humidity	63%
Test Engineer	Jim Huang	Configurations	IEEE 802.11b/g (Ant.1)

Configuration IEEE 802.11b

Channel	Frequency	Power Density (dBm/3kHz)			Power Density Limit (dBm/3kHz)	Result
		Chain 1	Chain 2	Total		
1	2412 MHz	-10.02	-11.15	-7.54	-1.01	Complies
6	2437 MHz	-8.91	-11.85	-7.13	-1.01	Complies
11	2462 MHz	-9.29	-11.83	-7.37	-1.01	Complies

Note: $DirectionalGain = 10 \cdot \log\left[\frac{\sum_{j=1}^{N_{SS}}\left\{\sum_{k=1}^{N_{ANT}} g_{j,k}\right\}^2}{N_{ANT}}\right]$ =15.01dBi >6dBi,So Power Density Limit =8-(15.01-6)=-1.01dBm/3KHz

Configuration IEEE 802.11g

Channel	Frequency	Power Density (dBm/3kHz)			Power Density Limit (dBm/3kHz)	Result
		Chain 1	Chain 2	Total		
1	2412 MHz	-15.12	-18.10	-13.35	-1.01	Complies
6	2437 MHz	-15.28	-17.47	-13.23	-1.01	Complies
11	2462 MHz	-13.46	-17.01	-11.87	-1.01	Complies

Note: $DirectionalGain = 10 \cdot \log\left[\frac{\sum_{j=1}^{N_{SS}}\left\{\sum_{k=1}^{N_{ANT}} g_{j,k}\right\}^2}{N_{ANT}}\right]$ =15.01dBi >6dBi,So Power Density Limit =8-(15.01-6)=-1.01dBm/3KHz

Note: All the test values were listed in the report.

For plots, only the channel with worse result was shown.

Temperature	26°C	Humidity	63%
Test Engineer	Jim Huang	Configurations	IEEE 802.11n (Ant.2)

Configuration IEEE 802.11n MCS0 HT20

Channel	Frequency	Power Density (dBm/3kHz)			Power Density Limit (dBm/3kHz)	Result
		Chain 1	Chain 2	Total		
1	2412 MHz	-17.71	-17.43	-14.56	-3.01	Complies
6	2437 MHz	-15.79	-17.11	-13.39	-3.01	Complies
11	2462 MHz	-15.73	-17.68	-13.59	-3.01	Complies

Note: $DirectionalGain = 10 \cdot \log\left[\frac{\sum_{j=1}^{N_{SS}}\left\{\sum_{k=1}^{N_{ANT}} g_{j,k}\right\}^2}{N_{ANT}}\right]$ =17.01dBi >6dBi,So Power Density Limit =8-(17.01-6)=-3.01dBm/3KHz

Configuration IEEE 802.11n MCS0 HT40

Channel	Frequency	Power Density (dBm/3kHz)			Power Density Limit (dBm/3kHz)	Result
		Chain 1	Chain 2	Total		
3	2422 MHz	-21.84	-23.98	-19.77	-3.01	Complies
6	2437 MHz	-19.11	-21.33	-17.07	-3.01	Complies
9	2452 MHz	-22.78	-23.81	-20.25	-3.01	Complies

Note: $DirectionalGain = 10 \cdot \log\left[\frac{\sum_{j=1}^{N_{SS}}\left\{\sum_{k=1}^{N_{ANT}} g_{j,k}\right\}^2}{N_{ANT}}\right]$ =17.01dBi >6dBi,So Power Density Limit =8-(17.01-6)=-3.01dBm/3KHz

Temperature	26°C	Humidity	63%
Test Engineer	Jim Huang	Configurations	IEEE 802.11b/g (Ant.2)

Configuration IEEE 802.11b

Channel	Frequency	Power Density (dBm/3kHz)			Power Density Limit (dBm/3kHz)	Result
		Chain 1	Chain 2	Total		
1	2412 MHz	-12.73	-14.00	-10.31	-3.01	Complies
6	2437 MHz	-11.43	-15.30	-9.94	-3.01	Complies
11	2462 MHz	-13.13	-16.84	-11.59	-3.01	Complies

Note: $DirectionalGain = 10 \cdot \log\left[\frac{\sum_{j=1}^{N_{SS}}\left\{\sum_{k=1}^{N_{ANT}} g_{j,k}\right\}^2}{N_{ANT}}\right]$ =17.01dBi >6dBi,So Power Density Limit =8-(17.01-6)=-3.01dBm/3KHz

Configuration IEEE 802.11g

Channel	Frequency	Power Density (dBm/3kHz)			Power Density Limit (dBm/3kHz)	Result
		Chain 1	Chain 2	Total		
1	2412 MHz	-15.65	-16.83	-13.19	-3.01	Complies
6	2437 MHz	-14.03	-16.40	-12.04	-3.01	Complies
11	2462 MHz	-15.00	-17.43	-13.04	-3.01	Complies

Note: $DirectionalGain = 10 \cdot \log\left[\frac{\sum_{j=1}^{N_{SS}}\left\{\sum_{k=1}^{N_{ANT}} g_{j,k}\right\}^2}{N_{ANT}}\right]$ =17.01dBi >6dBi,So Power Density Limit =8-(17.01-6)=-3.01dBm/3KHz

Note: All the test values were listed in the report.

For plots, only the channel with worse result was shown.

Temperature	26°C	Humidity	63%
Test Engineer	Jim Huang	Configurations	IEEE 802.11n (Ant.3)

Configuration IEEE 802.11n MCS0 HT20

Channel	Frequency	Power Density (dBm/3kHz)			Power Density Limit (dBm/3kHz)	Result
		Chain 1	Chain 2	Total		
1	2412 MHz	-15.40	-17.18	-13.19	-3.01	Complies
6	2437 MHz	-15.79	-17.11	-13.39	-3.01	Complies
11	2462 MHz	-15.40	-18.43	-13.65	-3.01	Complies

Note: $Directional Gain = 10 \cdot \log\left[\frac{\sum_{j=1}^{N_{SS}}\left\{\sum_{k=1}^{N_{ANT}} g_{j,k}\right\}^2}{N_{ANT}}\right]$ =17.01dBi >6dBi,So Power Density Limit =8-(17.01-6)=-3.01dBm/3KHz

Configuration IEEE 802.11n MCS0 HT40

Channel	Frequency	Power Density (dBm/3kHz)			Power Density Limit (dBm/3kHz)	Result
		Chain 1	Chain 2	Total		
3	2422 MHz	-20.97	-22.91	-18.82	-3.01	Complies
6	2437 MHz	-19.11	-21.33	-17.07	-3.01	Complies
9	2452 MHz	-22.78	-23.81	-20.25	-3.01	Complies

Note: $Directional Gain = 10 \cdot \log\left[\frac{\sum_{j=1}^{N_{SS}}\left\{\sum_{k=1}^{N_{ANT}} g_{j,k}\right\}^2}{N_{ANT}}\right]$ =17.01dBi >6dBi,So Power Density Limit =8-(17.01-6)=-3.01dBm/3KHz

Temperature	26°C	Humidity	63%
Test Engineer	Jim Huang	Configurations	IEEE 802.11b/g (Ant.3)

Configuration IEEE 802.11b

Channel	Frequency	Power Density (dBm/3kHz)			Power Density Limit (dBm/3kHz)	Result
		Chain 1	Chain 2	Total		
1	2412 MHz	-12.73	-14.00	-10.31	-3.01	Complies
6	2437 MHz	-11.30	-12.77	-8.96	-3.01	Complies
11	2462 MHz	-12.43	-16.79	-11.07	-3.01	Complies

Note: $DirectionalGain = 10 \cdot \log\left[\frac{\sum_{j=1}^{N_{SS}}\left\{\sum_{k=1}^{N_{ANT}} g_{j,k}\right\}^2}{N_{ANT}}\right]$ =17.01dBi >6dBi,So Power Density Limit =8-(17.01-6)=-3.01dBm/3KHz

Configuration IEEE 802.11g

Channel	Frequency	Power Density (dBm/3kHz)			Power Density Limit (dBm/3kHz)	Result
		Chain 1	Chain 2	Total		
1	2412 MHz	-15.65	-16.83	-13.19	-3.01	Complies
6	2437 MHz	-14.03	-16.40	-12.04	-3.01	Complies
11	2462 MHz	-16.02	-17.55	-13.71	-3.01	Complies

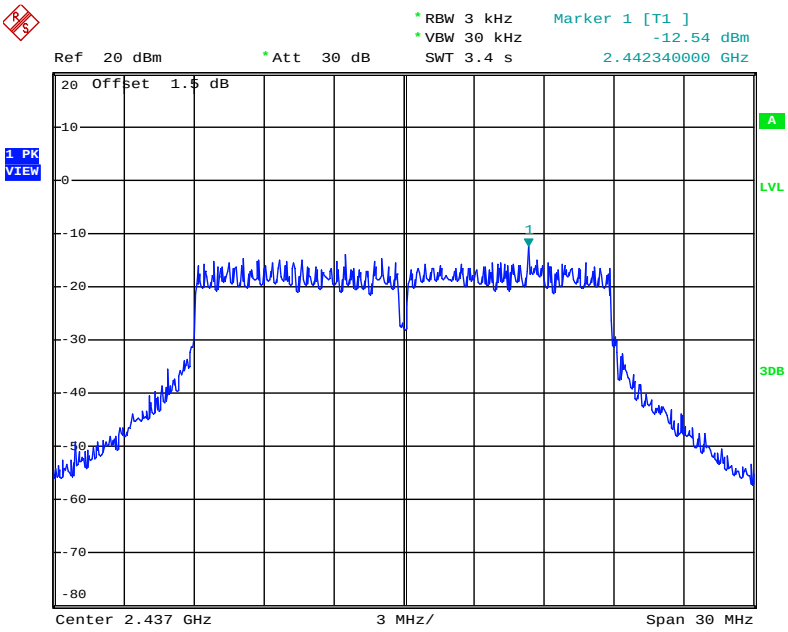
Note: $DirectionalGain = 10 \cdot \log\left[\frac{\sum_{j=1}^{N_{SS}}\left\{\sum_{k=1}^{N_{ANT}} g_{j,k}\right\}^2}{N_{ANT}}\right]$ =17.01dBi >6dBi,So Power Density Limit =8-(17.01-6)=-3.01dBm/3KHz

Note: All the test values were listed in the report.

For plots, only the channel with worse result was shown.

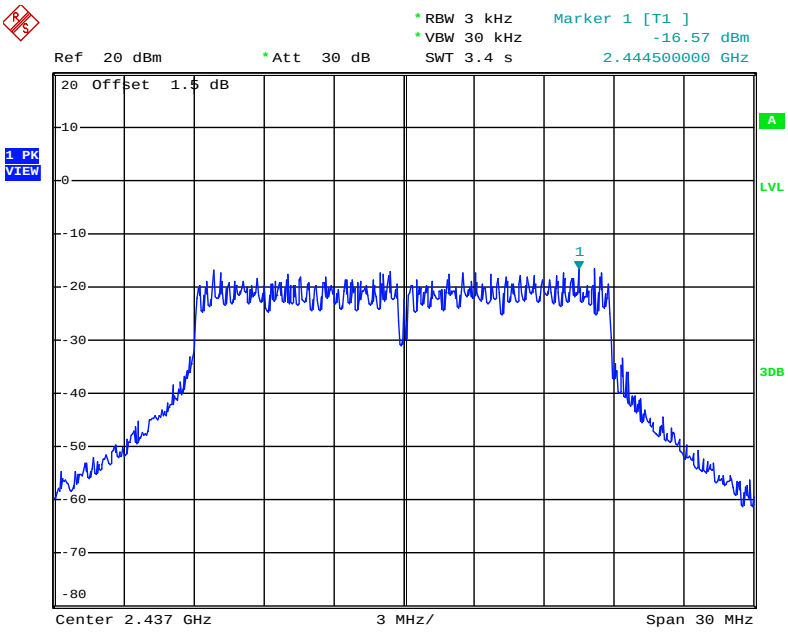
Ant.1

Power Density Plot on Configuration IEEE 802.11n MCS0 HT20 / 2437 MHz / Chain 1



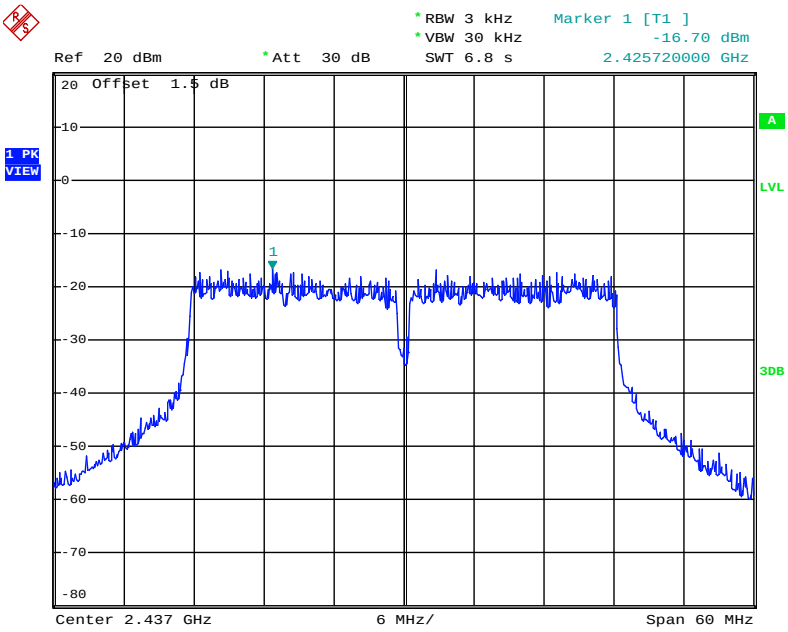
Date: 29.AUG.2014 22:30:33

Power Density Plot on Configuration IEEE 802.11n MCS0 HT20 / 2437 MHz / Chain 2



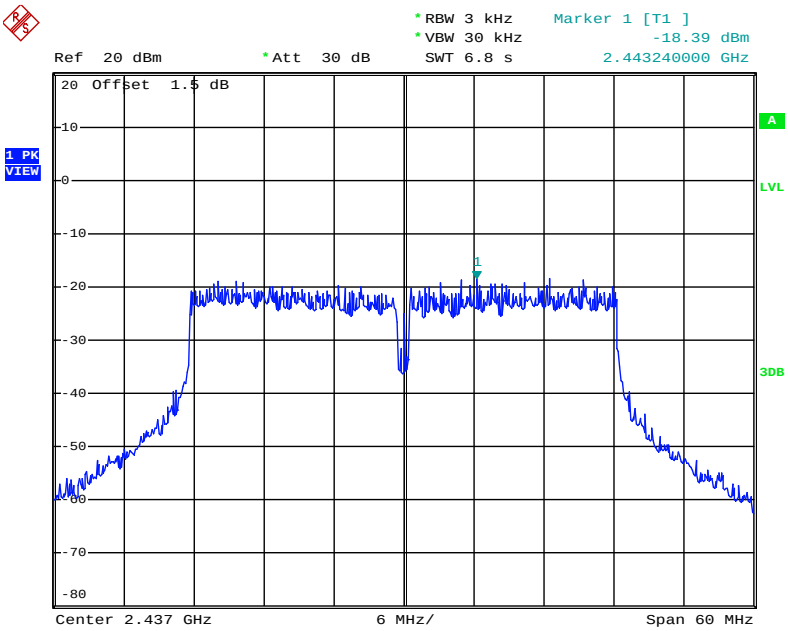
Date: 29.AUG.2014 22:30:56

Power Density Plot on Configuration IEEE 802.11n MCS0 HT40 / 2437 MHz / Chain 1



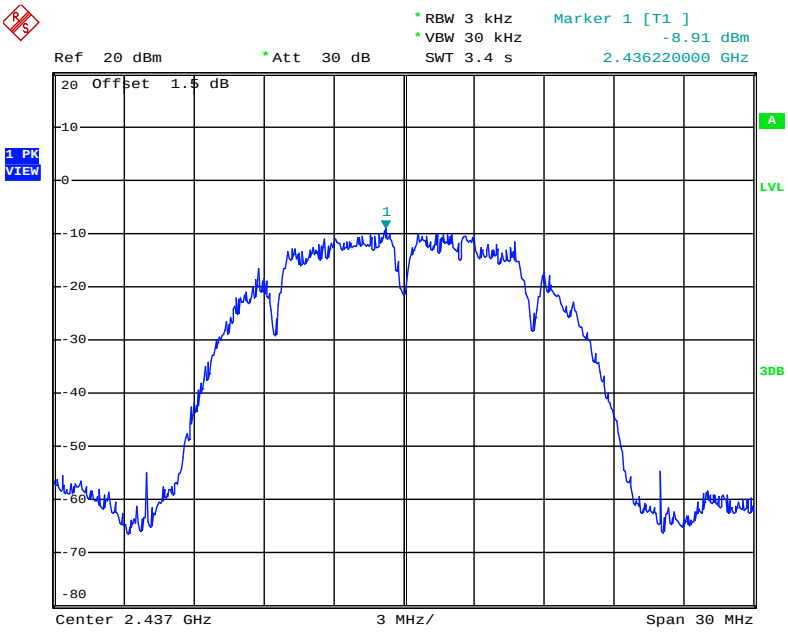
Date: 29.AUG.2014 22:38:34

Power Density Plot on Configuration IEEE 802.11n MCS0 HT40 / 2437 MHz / Chain 2



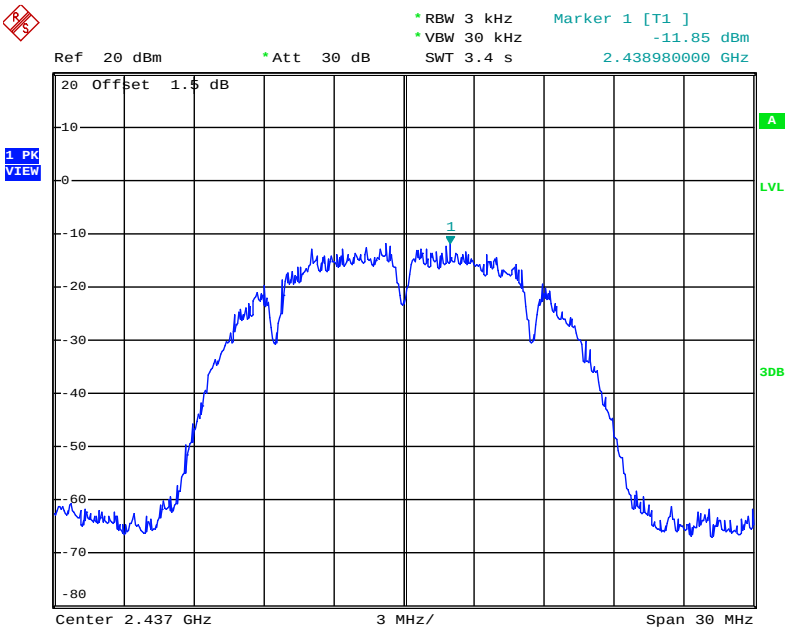
Date: 29.AUG.2014 22:39:08

Power Density Plot on Configuration IEEE 802.11b / 2437 MHz / Chain 1



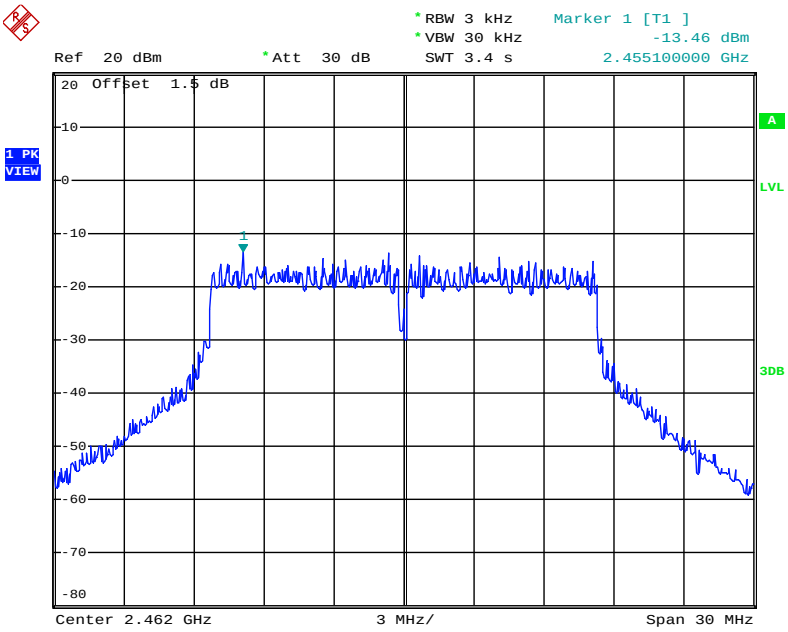
Date: 29.AUG.2014 22:14:58

Power Density Plot on Configuration IEEE 802.11g / 2437 MHz / Chain 2



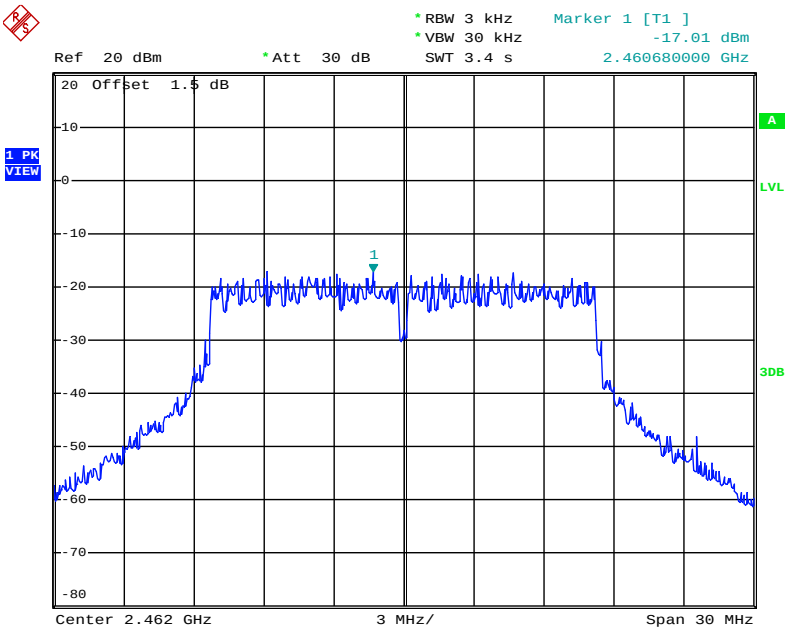
Date: 29.AUG.2014 22:14:35

Power Density Plot on Configuration IEEE 802.11g / 2462 MHz / Chain 1



Date: 29.AUG.2014 22:23:32

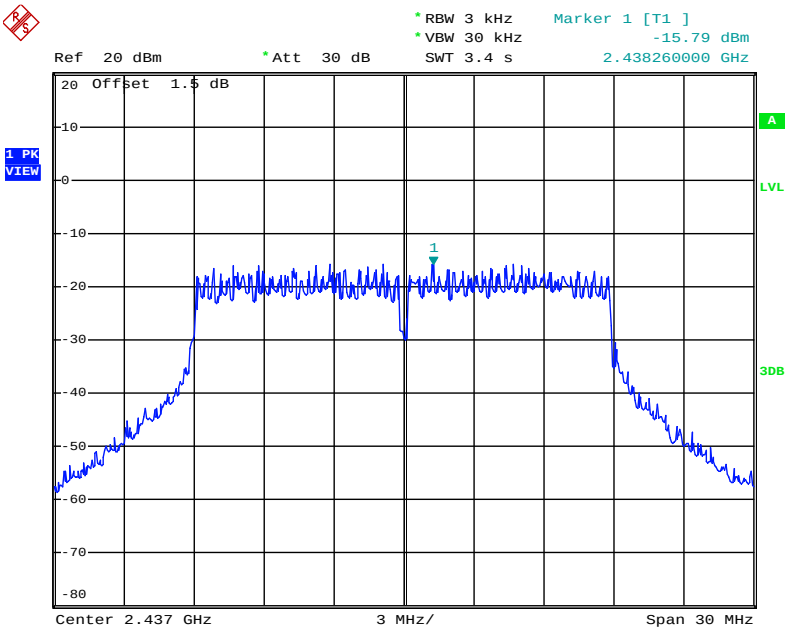
Power Density Plot on Configuration IEEE 802.11g / 2462 MHz / Chain 2



Date: 29.AUG.2014 22:23:57

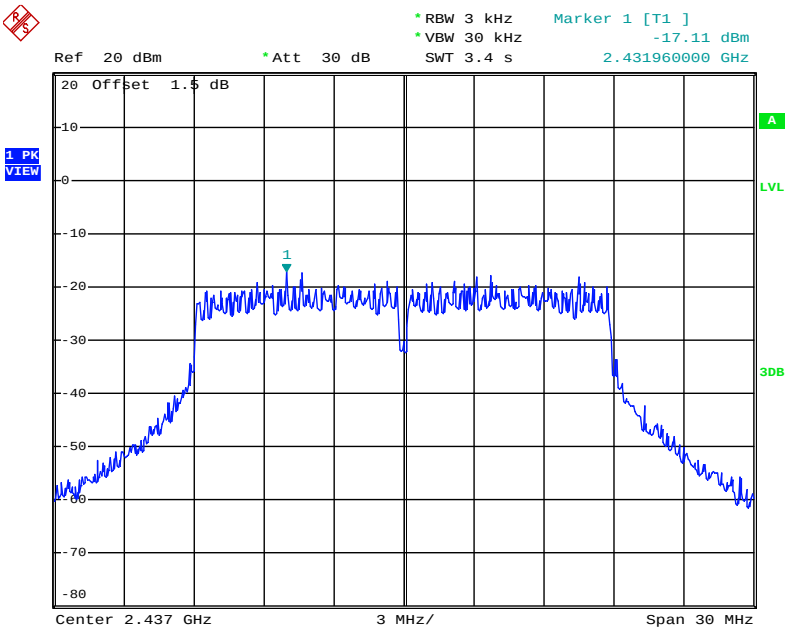
Ant.2

Power Density Plot on Configuration IEEE 802.11n MCS0 HT20 / 2437 MHz / Chain 1



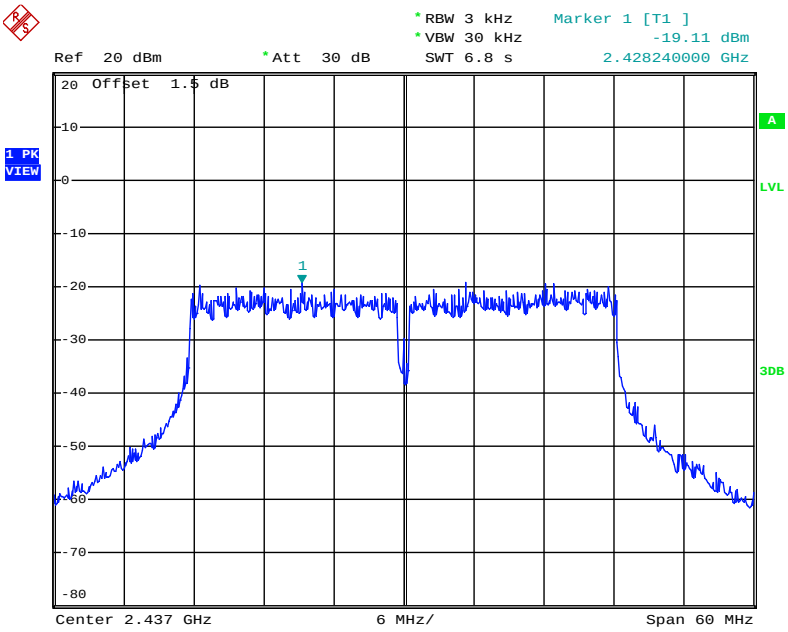
Date: 29.AUG.2014 22:33:49

Power Density Plot on Configuration IEEE 802.11n MCS0 HT20 / 2437 MHz / Chain 2



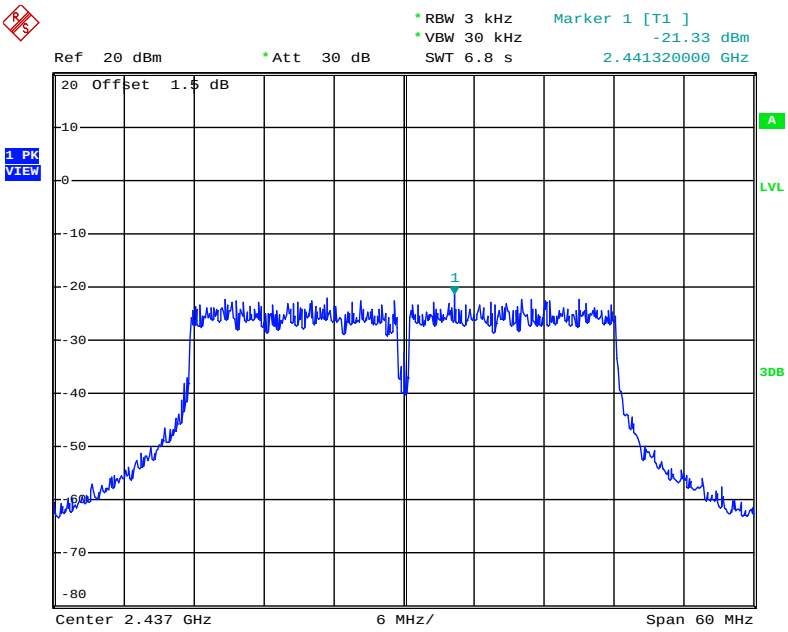
Date: 29.AUG.2014 22:33:22

Power Density Plot on Configuration IEEE 802.11n MCS0 HT40 / 2437 MHz / Chain 1



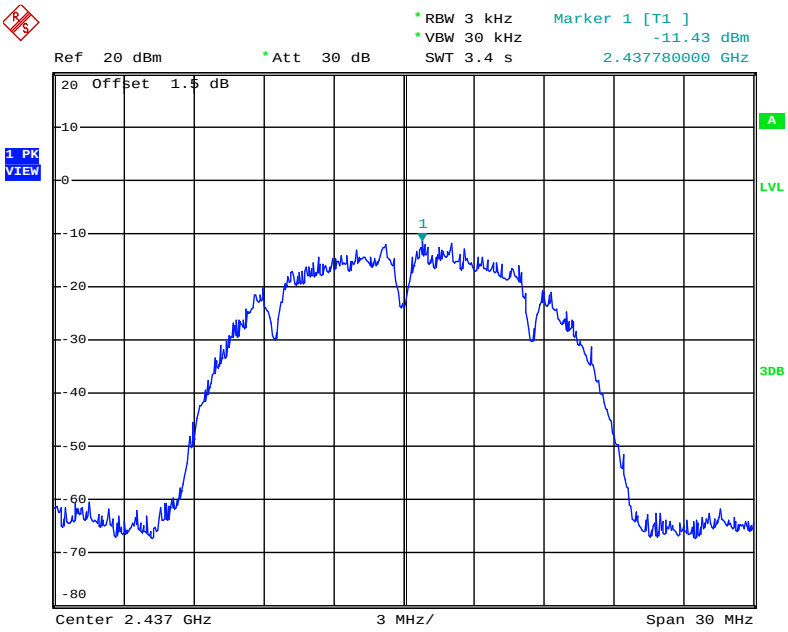
Date: 29.AUG.2014 22:42:13

Power Density Plot on Configuration IEEE 802.11n MCS0 HT40 / 2437 MHz / Chain 2



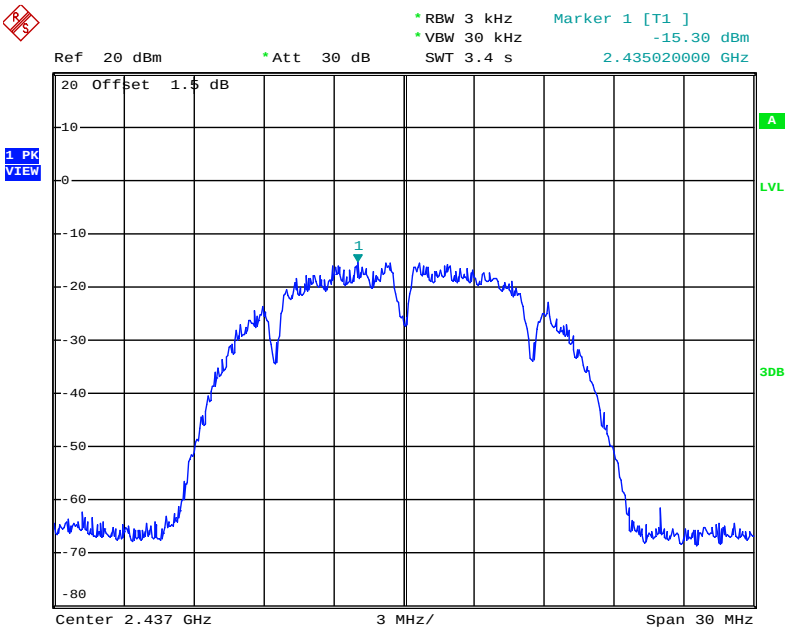
Date: 29.AUG.2014 22:41:47

Power Density Plot on Configuration IEEE 802.11b / 2437 MHz / Chain 1



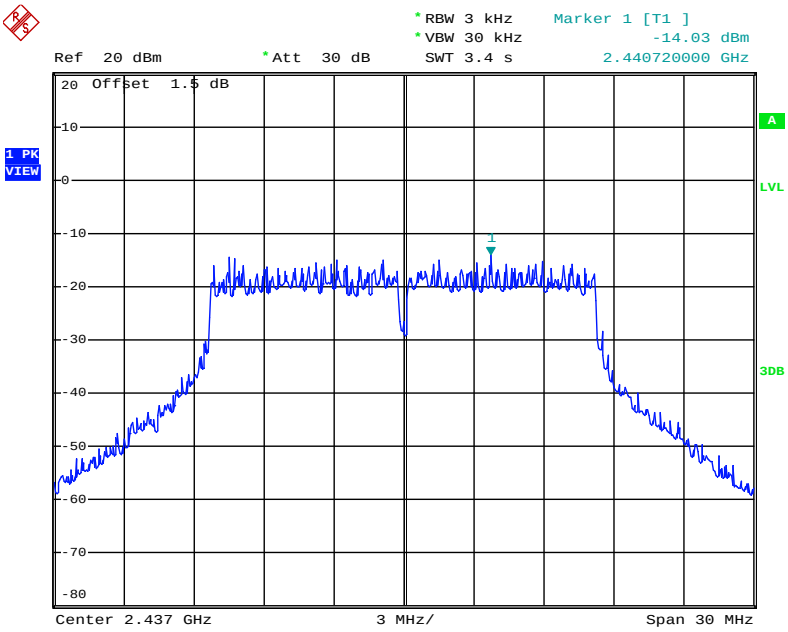
Date: 29.AUG.2014 22:17:12

Power Density Plot on Configuration IEEE 802.11g / 2437 MHz / Chain 2



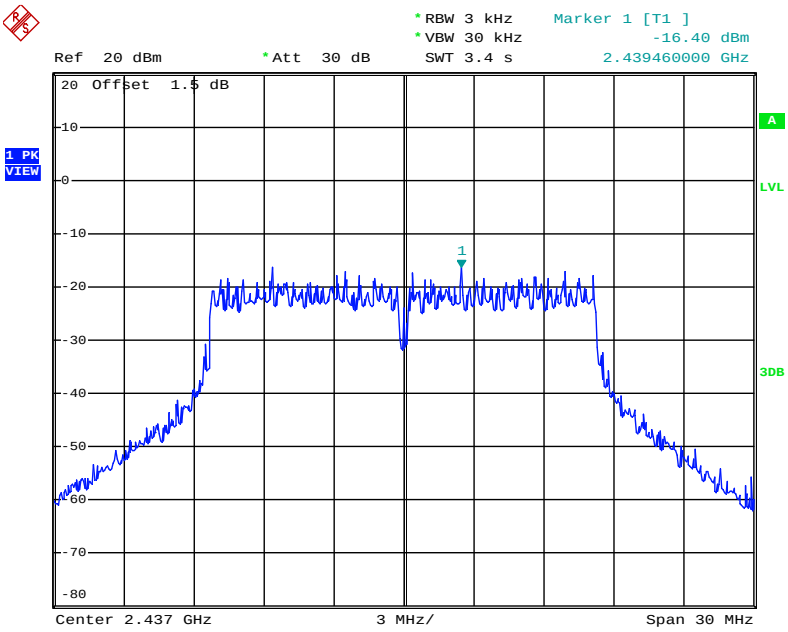
Date: 29.AUG.2014 22:17:44

Power Density Plot on Configuration IEEE 802.11g / 2437 MHz / Chain 1



Date: 29.AUG.2014 22:25:51

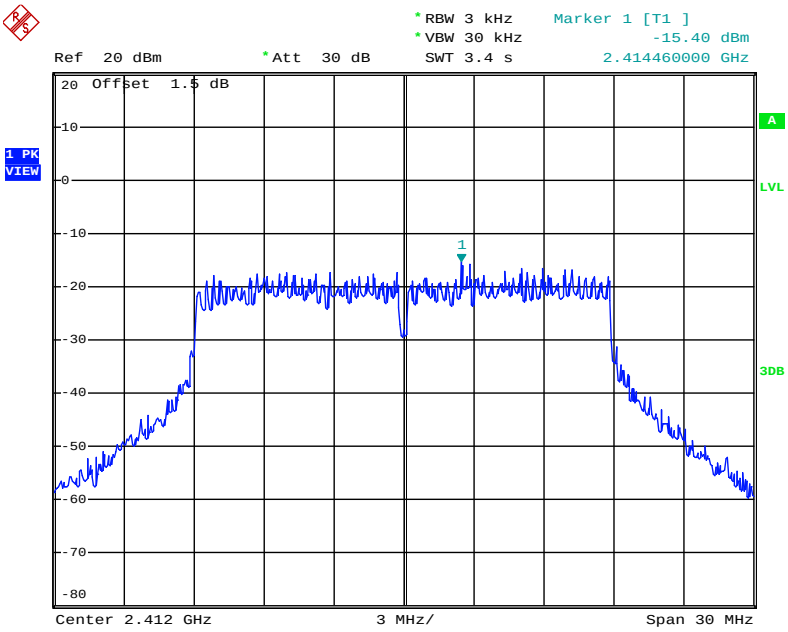
Power Density Plot on Configuration IEEE 802.11g / 2437 MHz / Chain 2



Date: 29.AUG.2014 22:26:16

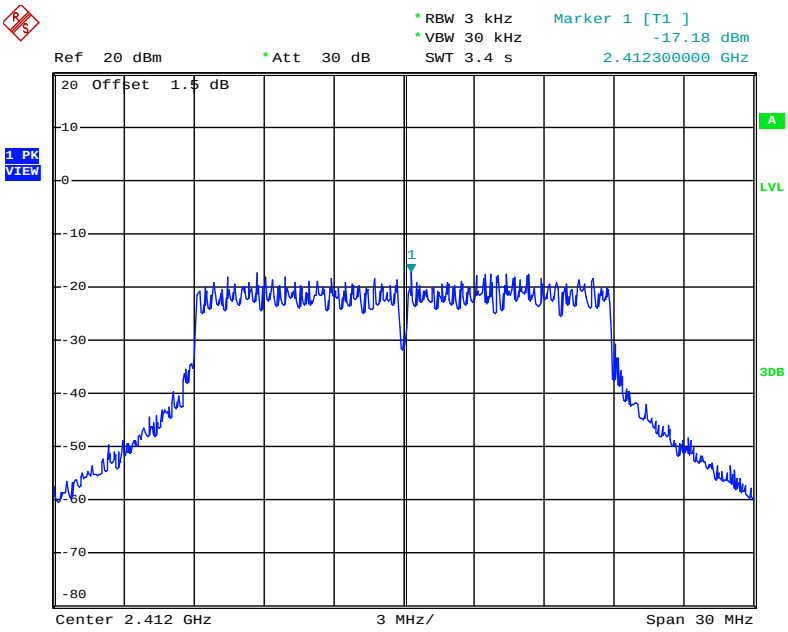
Ant.3

Power Density Plot on Configuration IEEE 802.11n MCS0 HT20 / 2412 MHz / Chain 1



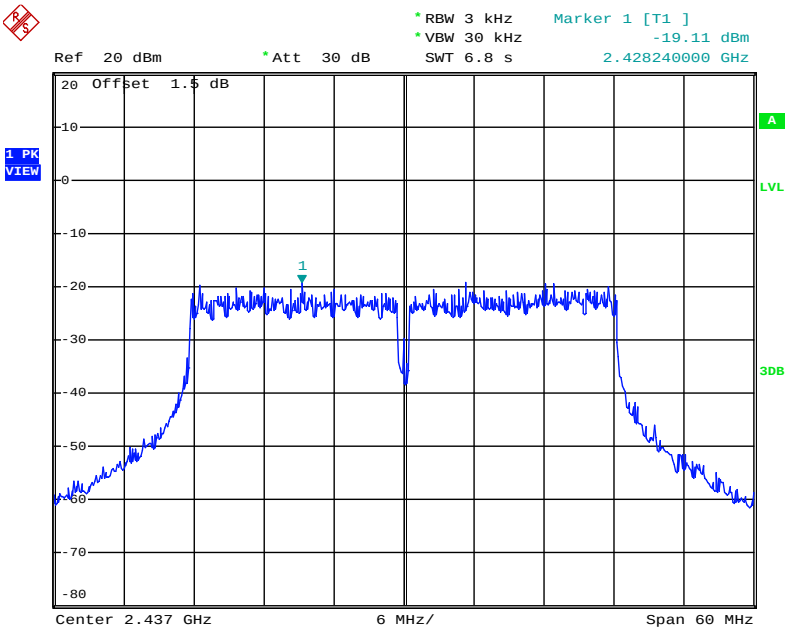
Date: 29.AUG.2014 22:36:21

Power Density Plot on Configuration IEEE 802.11n MCS0 HT20 / 2412 MHz / Chain 2



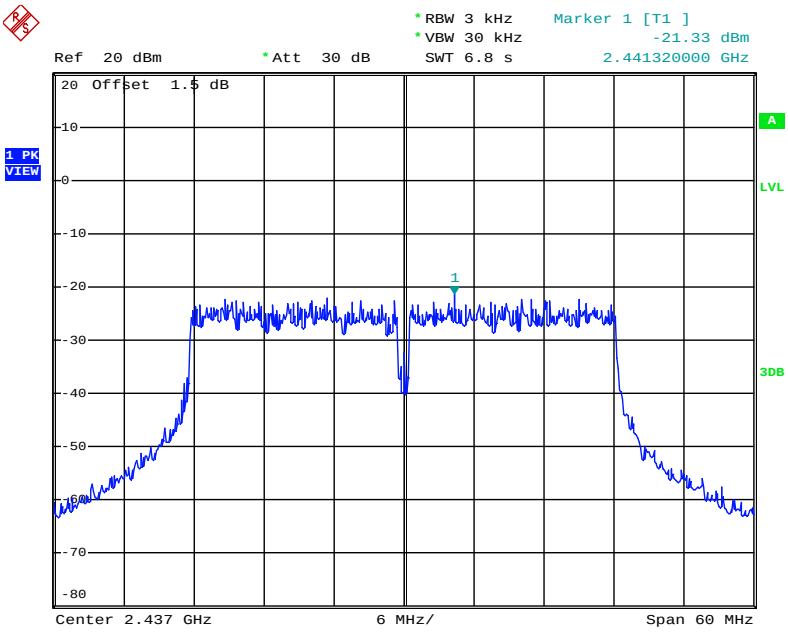
Date: 29.AUG.2014 22:35:52

Power Density Plot on Configuration IEEE 802.11n MCS0 HT40 / 2437 MHz / Chain 1



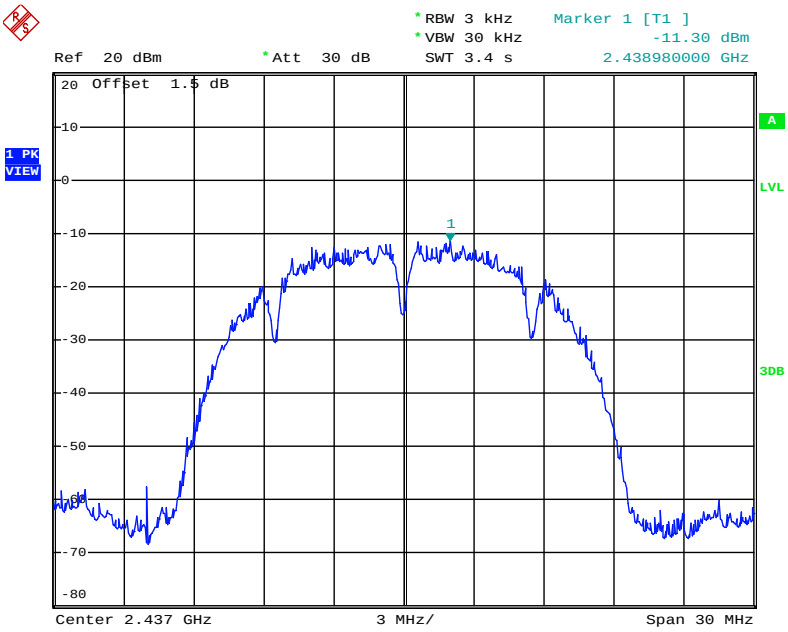
Date: 29.AUG.2014 22:42:13

Power Density Plot on Configuration IEEE 802.11n MCS0 HT40 / 2437 MHz / Chain 2



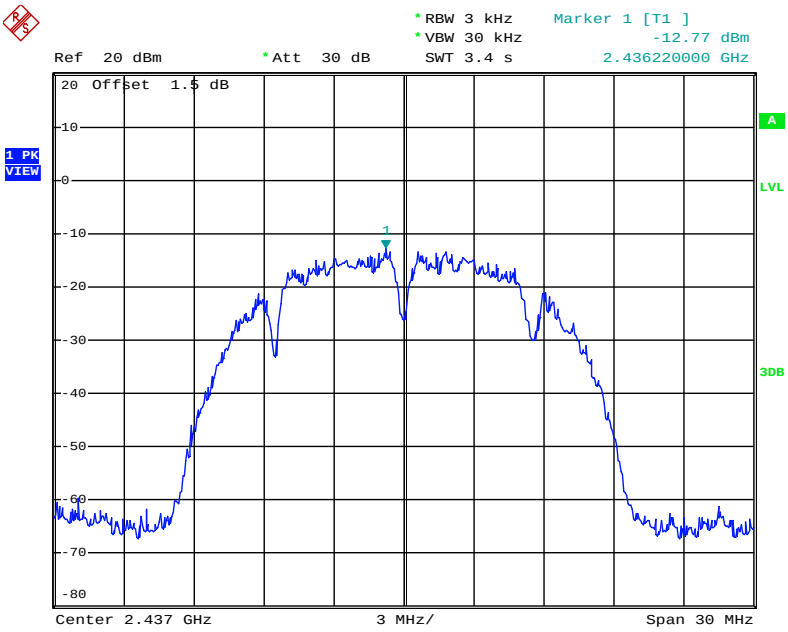
Date: 29.AUG.2014 22:41:47

Power Density Plot on Configuration IEEE 802.11b / 2437 MHz / Chain 1



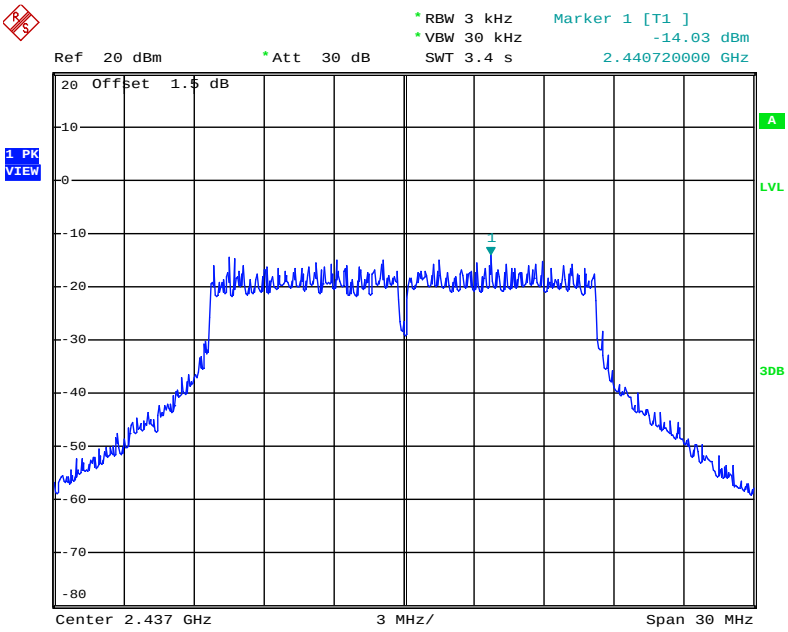
Date: 29.AUG.2014 22:19:45

Power Density Plot on Configuration IEEE 802.11g / 2437 MHz / Chain 2



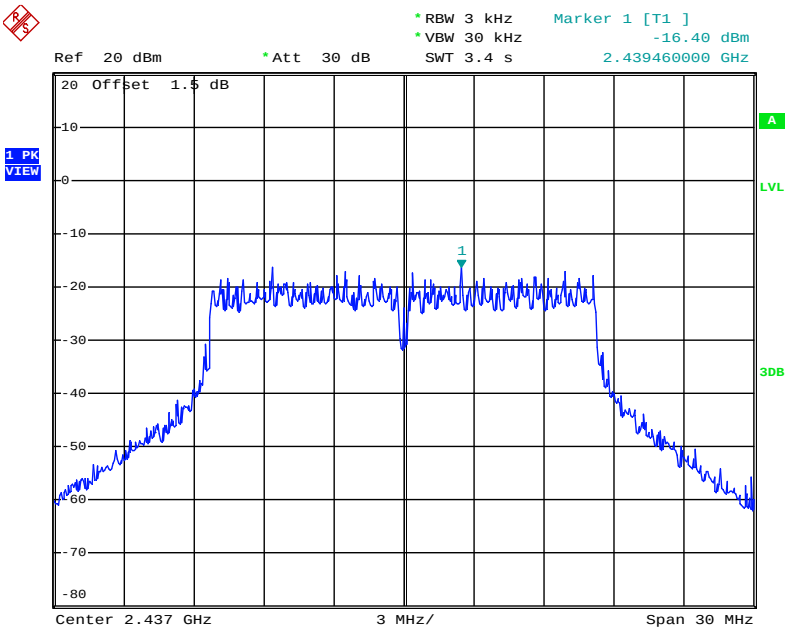
Date: 29.AUG.2014 22:20:20

Power Density Plot on Configuration IEEE 802.11g / 2437 MHz / Chain 1



Date: 29.AUG.2014 22:25:51

Power Density Plot on Configuration IEEE 802.11g / 2437 MHz / Chain 2



Date: 29.AUG.2014 22:26:16

4.4. 6dB Spectrum Bandwidth Measurement

4.4.1. Limit

For digital modulation systems, the minimum 6 dB bandwidth shall be at least 500 kHz.

4.4.2. Measuring Instruments and Setting

Please refer to section 5 of equipments list in this report. The following table is the setting of the Spectrum Analyzer.

Spectrum Parameters	Setting
Attenuation	Auto
Span Frequency	> 6dB Bandwidth
RBW	100kHz
VBW	≥ 3 x RBW
Detector	Peak
Trace	Max Hold
Sweep Time	Auto

4.4.3. Test Procedures

For Radiated 6dB Bandwidth Measurement:

1. The transmitter was radiated to the spectrum analyzer in peak hold mode.
2. Test was performed in accordance with KDB 558074 D01 v03r02 for Performing Compliance Measurements on Digital Transmission Systems (DTS) - section 8.0 DTS bandwidth=> 8.1 Option 1.
3. Multiple antenna system was performed in accordance with KDB 662911 D01 v02r01 Emissions Testing of Transmitters with Multiple Outputs in the Same Band.
4. Measured the spectrum width with power higher than 6dB below carrier.

4.4.4. Test Setup Layout

For Radiated 6dB Bandwidth Measurement:

This test setup layout is the same as that shown in section 4.5.4.

4.4.5. Test Deviation

There is no deviation with the original standard.

4.4.6. EUT Operation during Test

The EUT was programmed to be in continuously transmitting mode.

4.4.7. Test Result of 6dB Spectrum Bandwidth

Temperature	26°C	Humidity	63%
Test Engineer	Jim Huang	Configurations	IEEE 802.11n (Ant.1)

Configuration IEEE 802.11n MCS0 HT20 / Chain 1 + Chain 2

Channel	Frequency	6dB Bandwidth (MHz)	99% Occupied Bandwidth (MHz)	Min. Limit (kHz)	Test Result
1	2412 MHz	17.60	17.92	500	Complies
6	2437 MHz	17.60	17.92	500	Complies
11	2462 MHz	17.60	17.92	500	Complies

Configuration IEEE 802.11n MCS0 HT40 / Chain 1 + Chain 2

Channel	Frequency	6dB Bandwidth (MHz)	99% Occupied Bandwidth (MHz)	Min. Limit (kHz)	Test Result
3	2422 MHz	36.48	36.64	500	Complies
6	2437 MHz	36.48	36.48	500	Complies
9	2452 MHz	36.48	36.48	500	Complies

Temperature	26°C	Humidity	63%
Test Engineer	Jim Huang	Configurations	IEEE 802.11b/g (Ant.1)

Configuration IEEE 802.11b / Chain 1 + Chain 2

Channel	Frequency	6dB Bandwidth (MHz)	99% Occupied Bandwidth (MHz)	Min. Limit (kHz)	Test Result
1	2412 MHz	9.04	12.80	500	Complies
6	2437 MHz	9.52	12.72	500	Complies
11	2462 MHz	9.04	12.80	500	Complies

Configuration IEEE 802.11g / Chain 1 + Chain 2

Channel	Frequency	6dB Bandwidth (MHz)	99% Occupied Bandwidth (MHz)	Min. Limit (kHz)	Test Result
1	2412 MHz	16.48	16.64	500	Complies
6	2437 MHz	16.32	16.64	500	Complies
11	2462 MHz	16.32	16.64	500	Complies

Note: All the test values were listed in the report.

For plots, only the channel with worse result was shown.

Temperature	26°C	Humidity	63%
Test Engineer	Jim Huang	Configurations	IEEE 802.11n (Ant.2)

Configuration IEEE 802.11n MCS0 HT20 / Chain 1 + Chain 2

Channel	Frequency	6dB Bandwidth (MHz)	99% Occupied Bandwidth (MHz)	Min. Limit (kHz)	Test Result
1	2412 MHz	17.60	17.92	500	Complies
6	2437 MHz	17.60	17.92	500	Complies
11	2462 MHz	17.60	17.92	500	Complies

Configuration IEEE 802.11n MCS0 HT40 / Chain 1 + Chain 2

Channel	Frequency	6dB Bandwidth (MHz)	99% Occupied Bandwidth (MHz)	Min. Limit (kHz)	Test Result
3	2422 MHz	35.68	36.64	500	Complies
6	2437 MHz	36.48	36.48	500	Complies
9	2452 MHz	36.48	36.48	500	Complies

Temperature	26°C	Humidity	63%
Test Engineer	Jim Huang	Configurations	IEEE 802.11b/g (Ant.2)

Configuration IEEE 802.11b / Chain 1 + Chain 2

Channel	Frequency	6dB Bandwidth (MHz)	99% Occupied Bandwidth (MHz)	Min. Limit (kHz)	Test Result
1	2412 MHz	9.52	12.72	500	Complies
6	2437 MHz	8.64	12.72	500	Complies
11	2462 MHz	8.64	12.80	500	Complies

Configuration IEEE 802.11g / Chain 1 + Chain 2

Channel	Frequency	6dB Bandwidth (MHz)	99% Occupied Bandwidth (MHz)	Min. Limit (kHz)	Test Result
1	2412 MHz	16.40	16.64	500	Complies
6	2437 MHz	16.32	16.64	500	Complies
11	2462 MHz	16.56	16.64	500	Complies

Note: All the test values were listed in the report.

For plots, only the channel with worse result was shown.

Temperature	26°C	Humidity	63%
Test Engineer	Jim Huang	Configurations	IEEE 802.11n (Ant.3)

Configuration IEEE 802.11n MCS0 HT20 / Chain 1 + Chain 2

Channel	Frequency	6dB Bandwidth (MHz)	99% Occupied Bandwidth (MHz)	Min. Limit (kHz)	Test Result
1	2412 MHz	17.60	17.92	500	Complies
6	2437 MHz	17.76	17.92	500	Complies
11	2462 MHz	17.60	17.92	500	Complies

Configuration IEEE 802.11n MCS0 HT40 / Chain 1 + Chain 2

Channel	Frequency	6dB Bandwidth (MHz)	99% Occupied Bandwidth (MHz)	Min. Limit (kHz)	Test Result
3	2422 MHz	36.00	36.64	500	Complies
6	2437 MHz	36.48	36.64	500	Complies
9	2452 MHz	36.48	36.64	500	Complies

Temperature	26°C	Humidity	63%
Test Engineer	Jim Huang	Configurations	IEEE 802.11b/g (Ant.3)

Configuration IEEE 802.11b / Chain 1 + Chain 2

Channel	Frequency	6dB Bandwidth (MHz)	99% Occupied Bandwidth (MHz)	Min. Limit (kHz)	Test Result
1	2412 MHz	10.08	12.96	500	Complies
6	2437 MHz	8.64	12.72	500	Complies
11	2462 MHz	9.12	12.80	500	Complies

Configuration IEEE 802.11g / Chain 1 + Chain 2

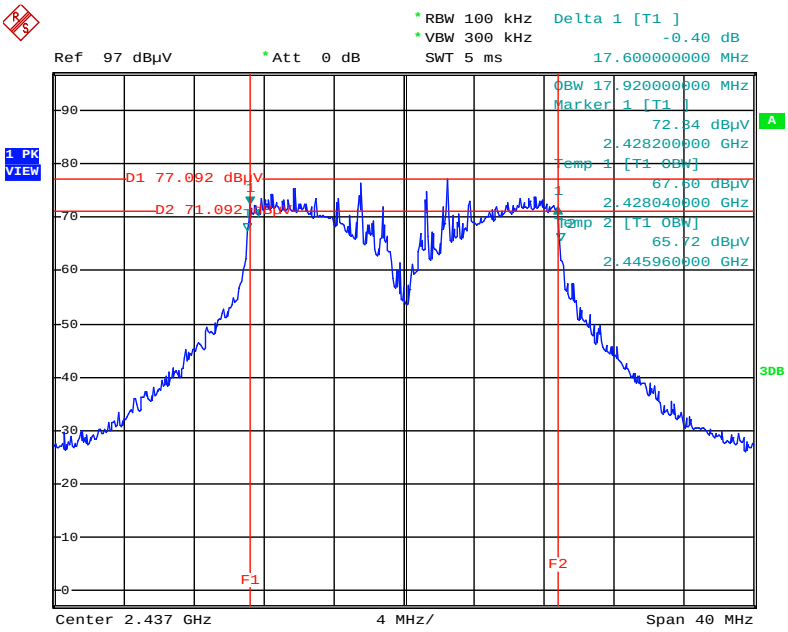
Channel	Frequency	6dB Bandwidth (MHz)	99% Occupied Bandwidth (MHz)	Min. Limit (kHz)	Test Result
1	2412 MHz	16.32	16.64	500	Complies
6	2437 MHz	16.32	16.64	500	Complies
11	2462 MHz	16.32	16.64	500	Complies

Note: All the test values were listed in the report.

For plots, only the channel with worse result was shown.

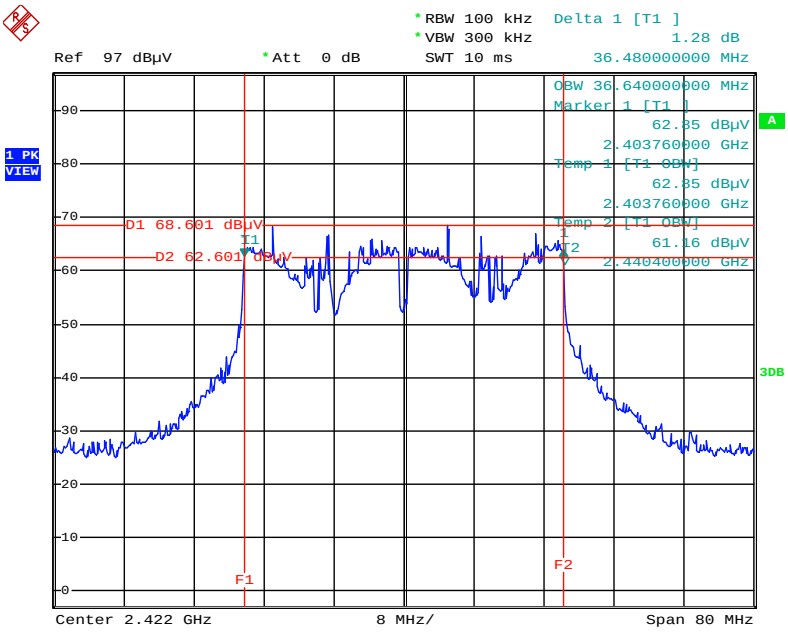
Ant.1

6 dB Bandwidth Plot on Configuration IEEE 802.11n MCS0 HT20 / 2437 MHz / Chain 1 + Chain 2



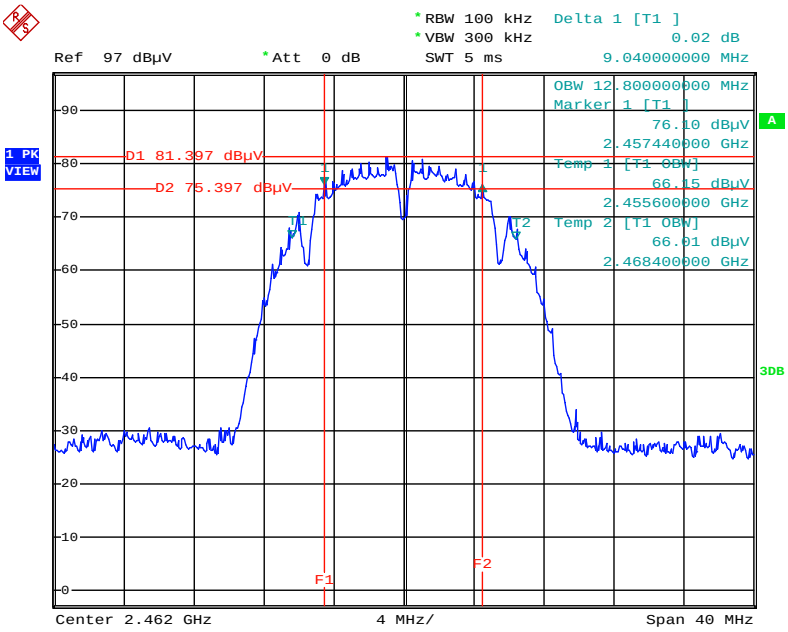
Date: 29.AUG.2014 21:51:14

6 dB Bandwidth Plot on Configuration IEEE 802.11n MCS0 HT40 / 2422 MHz / Chain 1 + Chain 2



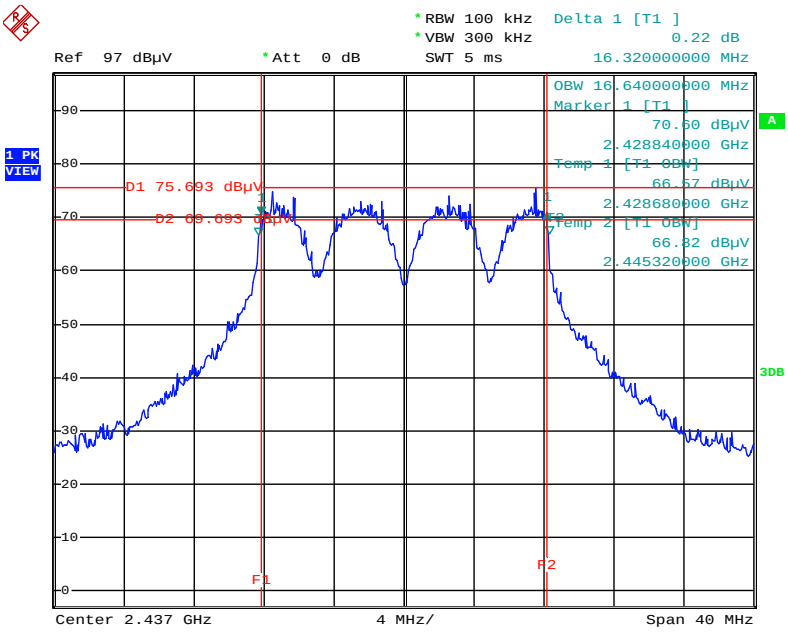
Date: 29.AUG.2014 21:57:44

6 dB Bandwidth Plot on Configuration IEEE 802.11b / 2412 MHz / Chain 1 + Chain 2



Date: 29.AUG.2014 21:35:24

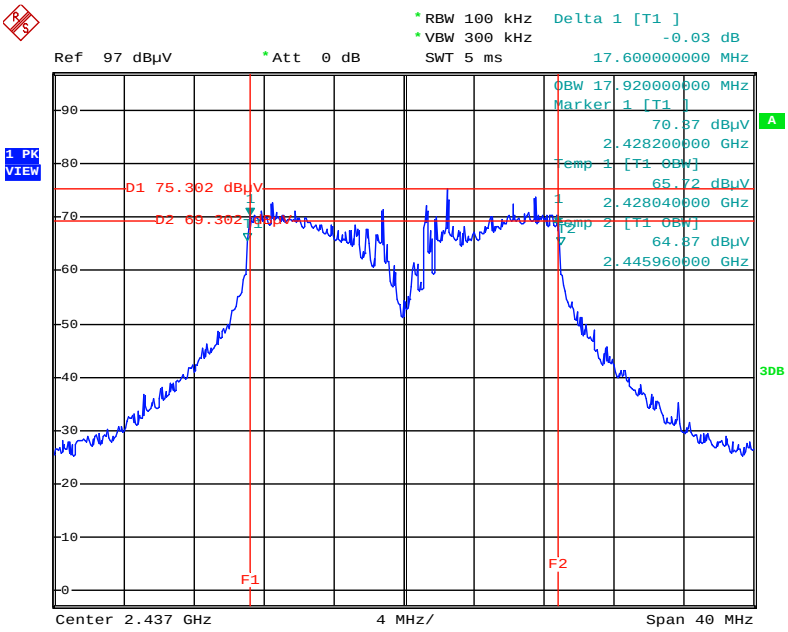
6 dB Bandwidth Plot on Configuration IEEE 802.11g / 2437 MHz / Chain 1 + Chain 2



Date: 29.AUG.2014 21:43:05

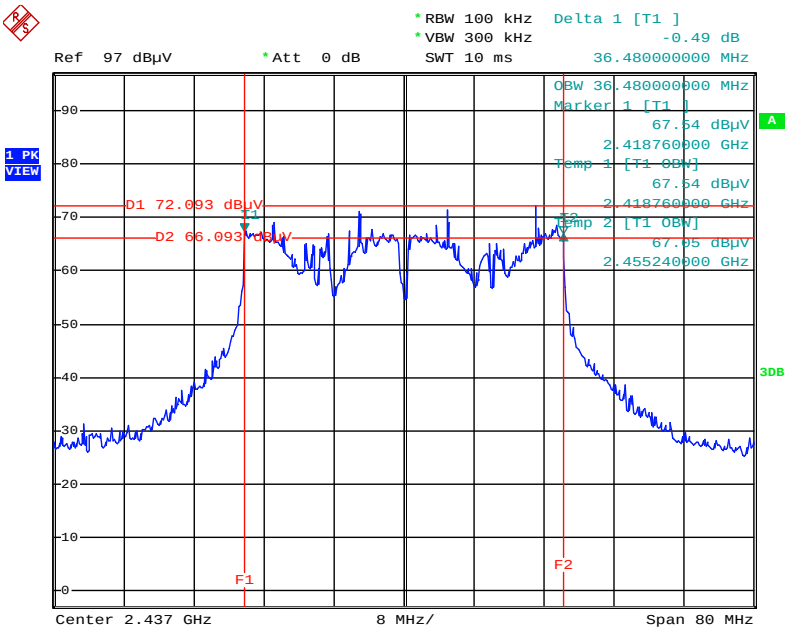
Ant.2

6 dB Bandwidth Plot on Configuration IEEE 802.11n MCS0 HT20 / 2437 MHz / Chain 1 + Chain 2



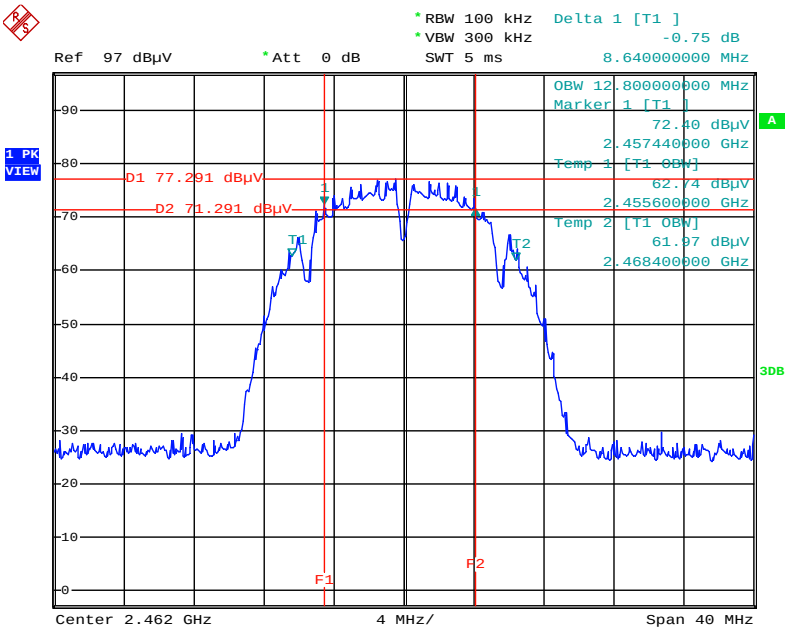
Date: 29.AUG.2014 21:53:44

6 dB Bandwidth Plot on Configuration IEEE 802.11n MCS0 HT40 / 2437 MHz / Chain 1 + Chain 2



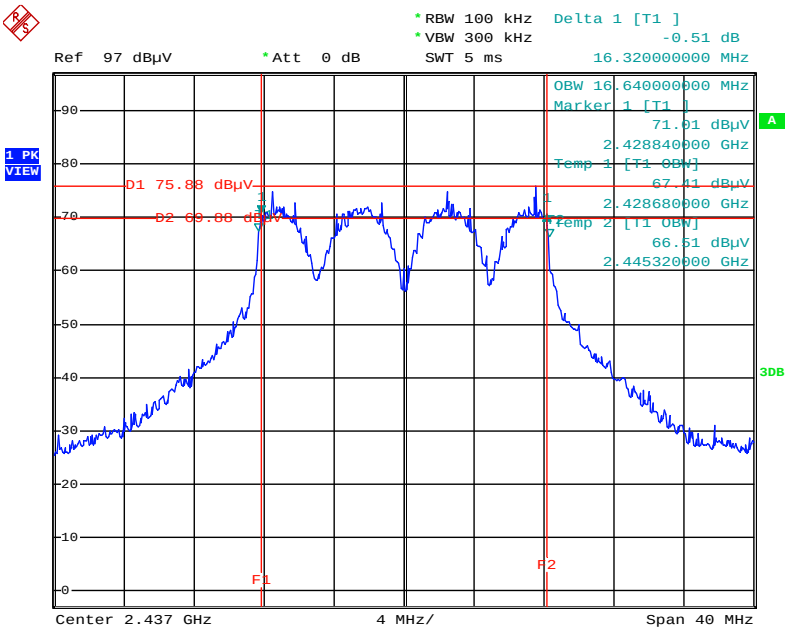
Date: 29.AUG.2014 22:00:53

6 dB Bandwidth Plot on Configuration IEEE 802.11b / 2462 MHz / Chain 1 + Chain 2



Date: 29.AUG.2014 21:36:24

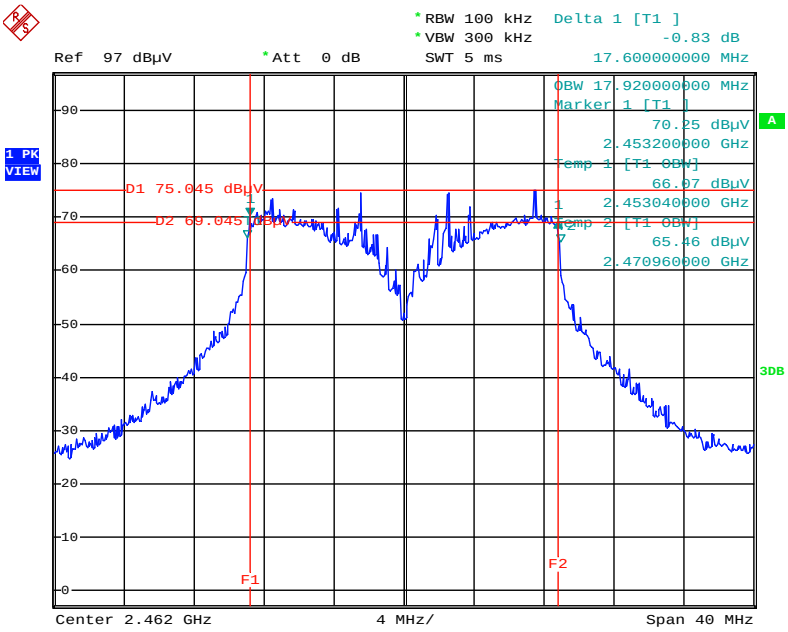
6 dB Bandwidth Plot on Configuration IEEE 802.11g / 2437 MHz / Chain 1 + Chain 2



Date: 29.AUG.2014 21:46:39

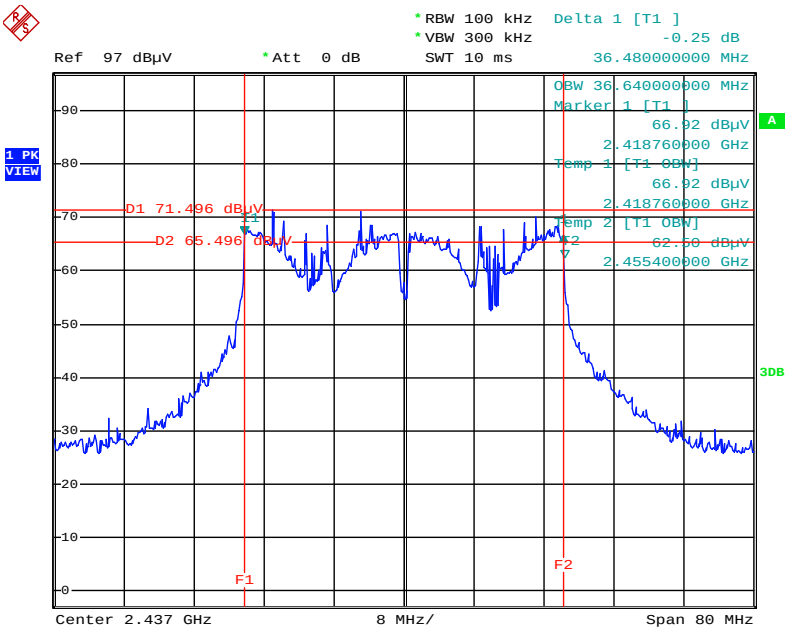
Ant.3

6 dB Bandwidth Plot on Configuration IEEE 802.11n MCS0 HT20 / 2462 MHz / Chain 1 + Chain 2



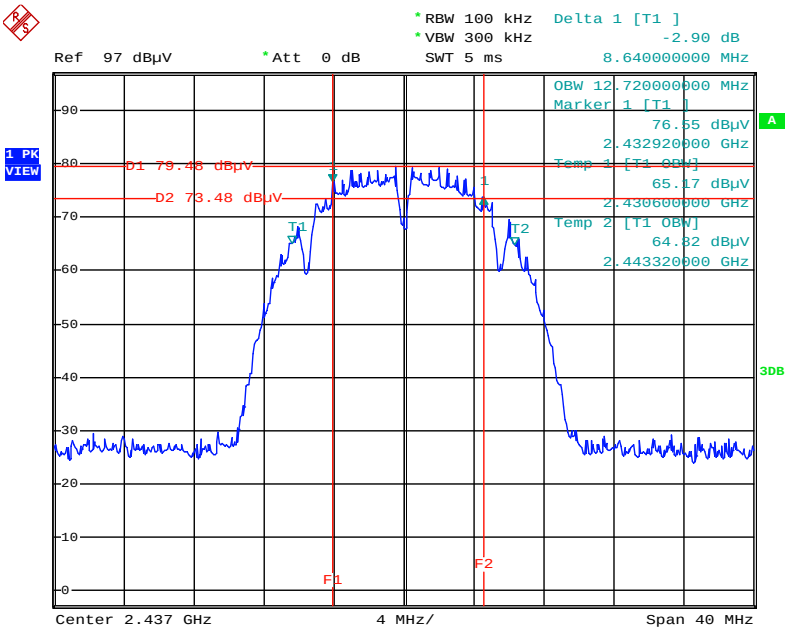
Date: 29.AUG.2014 21:54:53

6 dB Bandwidth Plot on Configuration IEEE 802.11n MCS0 HT40 / 2422 MHz / Chain 1 + Chain 2



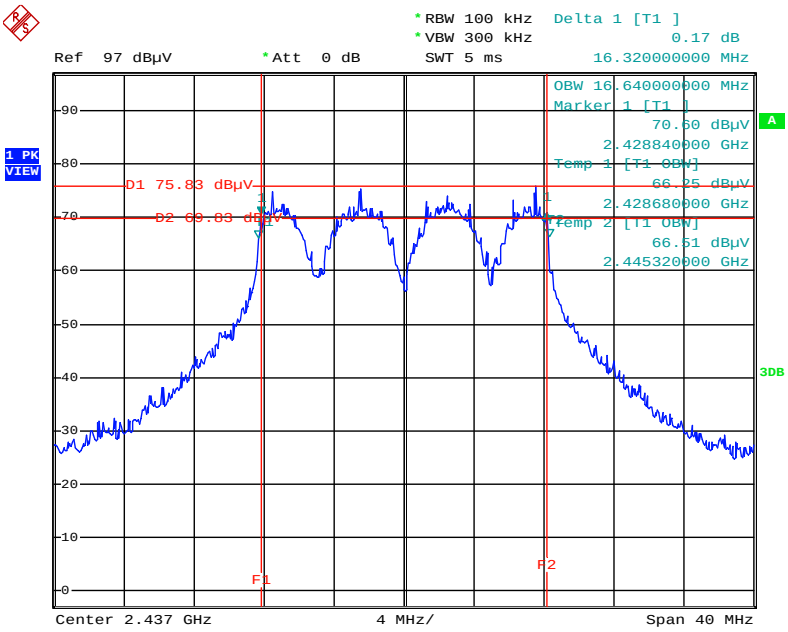
Date: 29.AUG.2014 22:03:34

6 dB Bandwidth Plot on Configuration IEEE 802.11b / 2437 MHz / Chain 1 + Chain 2



Date: 29.AUG.2014 21:40:45

6 dB Bandwidth Plot on Configuration IEEE 802.11g / 2437 MHz / Chain 1 + Chain 2



Date: 29.AUG.2014 21:49:00

4.5. Radiated Emissions Measurement

4.5.1. Limit

20dBc in any 100 kHz bandwidth outside the operating frequency band. In case the emission fall within the restricted band specified on 15.205(a), then the 15.209(a) limit in the table below has to be followed.

Frequencies (MHz)	Field Strength (micorvolts/meter)	Measurement Distance (meters)
0.009~0.490	2400/F(kHz)	300
0.490~1.705	24000/F(kHz)	30
1.705~30.0	30	30
30~88	100	3
88~216	150	3
216~960	200	3
Above 960	500	3

4.5.2. Measuring Instruments and Setting

Please refer to section 5 of equipments list in this report. The following table is the setting of spectrum analyzer and receiver.

Spectrum Parameter	Setting
Attenuation	Auto
Start Frequency	1000 MHz
Stop Frequency	10th carrier harmonic
RBW / VBW (Emission in restricted band)	1MHz / 3MHz for Peak, 1MHz / 1/T for Average
RBW / VBW (Emission in non-restricted band)	100kHz / 300kHz for peak

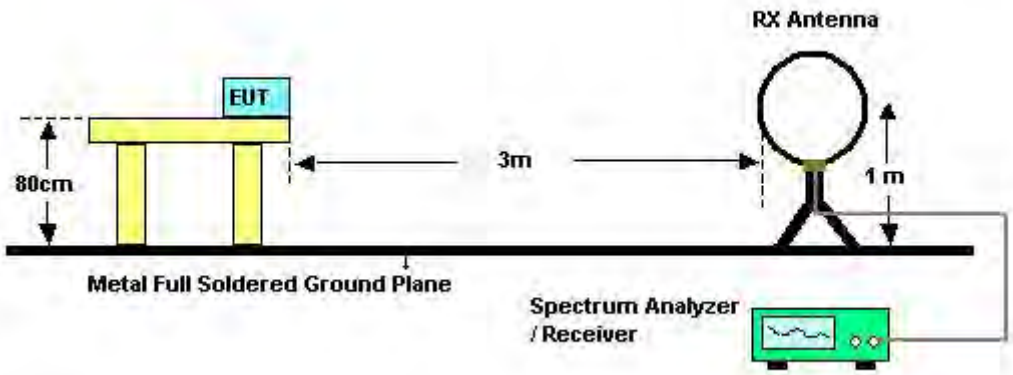
Receiver Parameter	Setting
Attenuation	Auto
Start ~ Stop Frequency	9kHz~150kHz / RBW 200Hz for QP
Start ~ Stop Frequency	150kHz~30MHz / RBW 9kHz for QP
Start ~ Stop Frequency	30MHz~1000MHz / RBW 120kHz for QP

4.5.3. Test Procedures

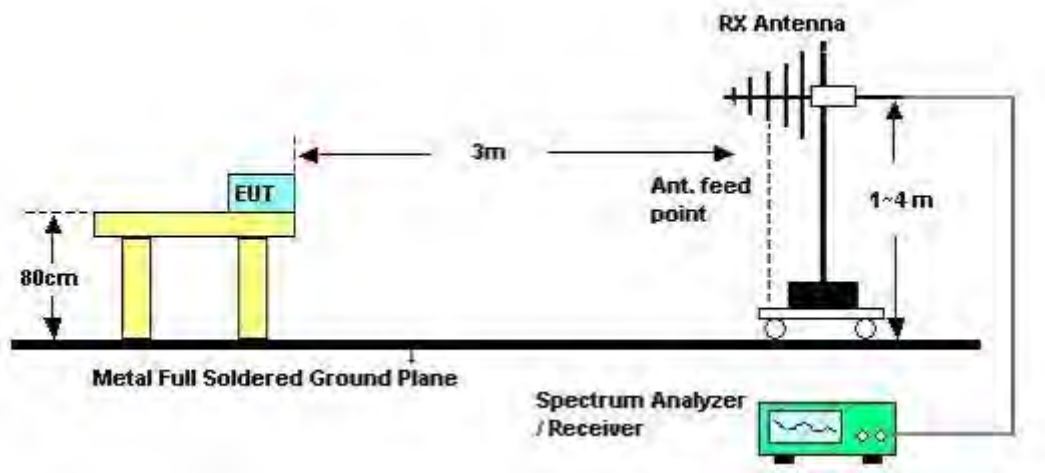
1. Configure the EUT according to ANSI C63.10. The EUT was placed on the top of the turntable 0.8 meter above ground. The phase center of the receiving antenna mounted on the top of a height-variable antenna tower was placed 3 meters far away from the turntable.
2. Power on the EUT and all the supporting units. The turntable was rotated by 360 degrees to determine the position of the highest radiation.
3. The height of the broadband receiving antenna was varied between one meter and four meters above ground to find the maximum emissions field strength of both horizontal and vertical polarization.
4. For each suspected emissions, the antenna tower was scan (from 1 m to 4 m) and then the turntable was rotated (from 0 degree to 360 degrees) to find the maximum reading.
5. Set the test-receiver system to Peak or CISPR quasi-peak Detect Function with specified bandwidth under Maximum Hold Mode.
6. For emissions above 1GHz, use 1MHz VBW and 3MHz RBW for peak reading. Then 1MHz RBW and 1/T VBW for average reading in spectrum analyzer.
7. If the emissions level of the EUT in peak mode was 3 dB lower than the average limit specified, then testing will be stopped and peak values of EUT will be reported, otherwise, the emissions which do not have 3 dB margin will be repeated one by one using the quasi-peak method for below 1GHz.
8. For testing above 1GHz, the emissions level of the EUT in peak mode was lower than average limit (that means the emissions level in peak mode also complies with the limit in average mode), then testing will be stopped and peak values of EUT will be reported, otherwise, the emissions will be measured in average mode again and reported.
9. In case the emission is lower than 30MHz, loop antenna has to be used for measurement and the recorded data should be QP measured by receiver. High – Low scan is not required in this case.

4.5.4. Test Setup Layout

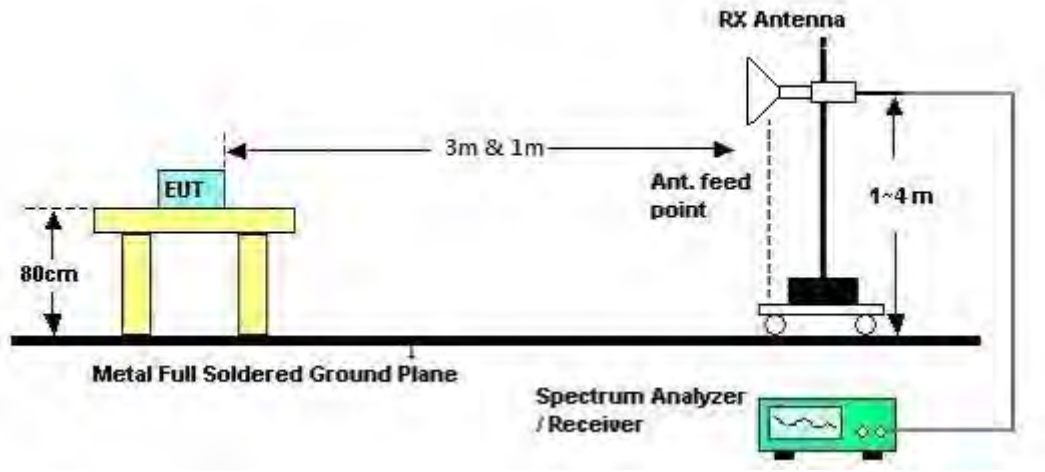
For Radiated Emissions: 9kHz ~30MHz



For Radiated Emissions: 30MHz~1GHz



For Radiated Emissions: Above 1GHz



4.5.5. Test Deviation

There is no deviation with the original standard.

4.5.6. EUT Operation during Test

The EUT was programmed to be in continuously transmitting mode.

4.5.7. Results of Radiated Emissions (9kHz~30MHz)

Temperature	26°C	Humidity	63%
Test Engineer	Mars Lin	Configurations	Normal Link
Test Date	Aug. 23, 2014		

Freq. (MHz)	Level (dBuV)	Over Limit (dB)	Limit Line (dBuV)	Remark
-	-	-	-	See Note

Note:

The amplitude of spurious emissions which are attenuated by more than 20 dB below the permissible value has no need to be reported.

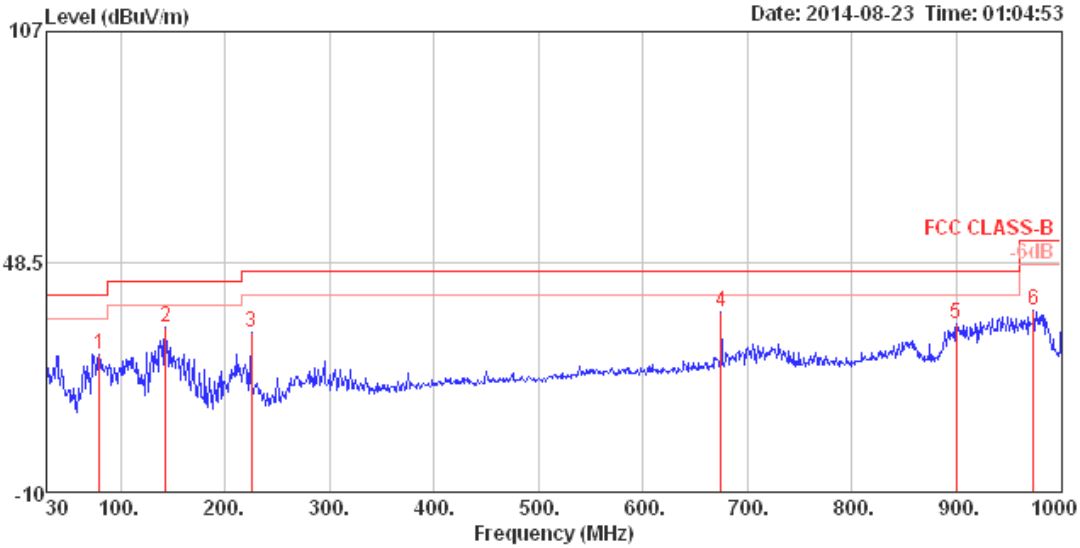
Distance extrapolation factor = 40 log (specific distance / test distance) (dB);

Limit line = specific limits (dBuV) + distance extrapolation factor.

4.5.8. Results of Radiated Emissions (30MHz~1GHz)

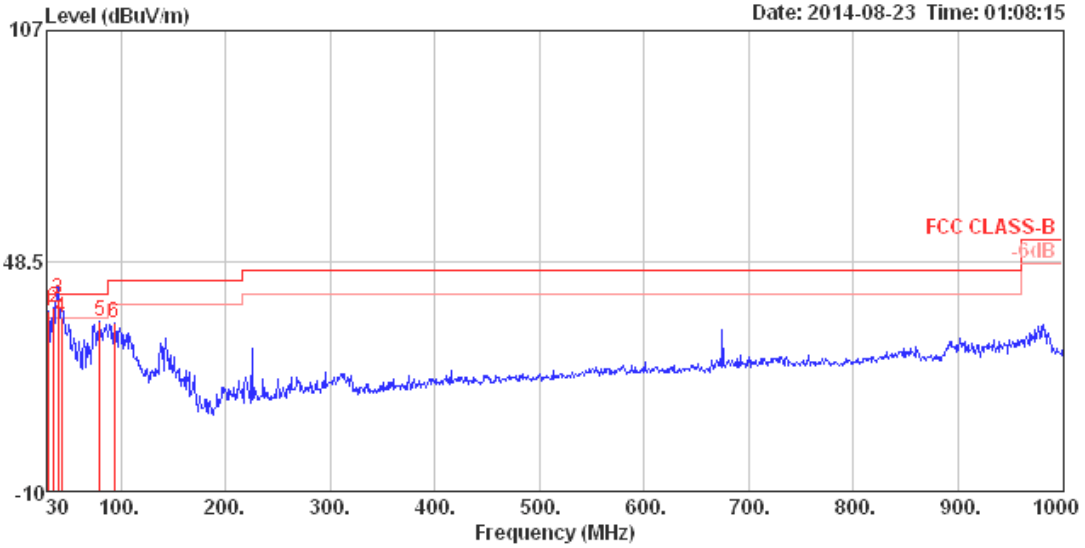
Temperature	26°C	Humidity	63%
Test Engineer	Mars Lin	Configurations	Normal Link
Test Mode	Mode 2		

Horizontal



	Freq	Level	Limit Line	Over Limit	Read Level	Cable Loss	Antenna Factor	Preamp Factor	A/Pos	T/Pos	Pol/Phase	Remark
	MHz	dBuV/m	dBuV/m	dB	dBuV	dB	dB/m	dB	cm	deg		
1	79.47	25.12	40.00	-14.88	49.06	1.04	6.73	31.71	400	360	HORIZONTAL	Peak
2	143.49	31.89	43.50	-11.61	51.41	1.42	10.59	31.53	200	187	HORIZONTAL	Peak
3	224.97	30.59	46.00	-15.41	51.28	1.82	8.92	31.43	150	180	HORIZONTAL	Peak
4	675.05	35.80	46.00	-10.20	45.05	3.33	18.78	31.36	300	229	HORIZONTAL	Peak
5	900.09	32.95	46.00	-13.05	39.55	3.97	20.64	31.21	125	278	HORIZONTAL	Peak
6	973.81	36.15	54.00	-17.85	41.95	4.13	21.16	31.09	100	284	HORIZONTAL	Peak

Vertical



	Freq	Level	Limit Line	Over Limit	Read Level	Cable Loss	Antenna Factor	Preamp Factor	A/Pos	T/Pos	Pol/Phase	Remark
	MHz	dBuV/m	dBuV/m	dB	dBuV	dB	dB/m	dB	cm	deg		
1	30.97	35.63	40.00	-4.37	49.36	0.65	17.44	31.82	100	99	VERTICAL	Peak
2	35.82	36.56	40.00	-3.44	53.12	0.70	14.62	31.88	100	209	VERTICAL	Peak
3	39.70	38.73	40.00	-1.27	57.44	0.74	12.43	31.88	100	133	VERTICAL	QP
4	43.58	34.05	40.00	-5.95	54.86	0.78	10.25	31.84	100	171	VERTICAL	Peak
5	79.47	33.00	40.00	-7.00	56.94	1.04	6.73	31.71	100	133	VERTICAL	Peak
6	94.02	32.56	43.50	-10.94	53.55	1.15	9.43	31.57	125	39	VERTICAL	Peak

Note:

The amplitude of spurious emissions which are attenuated by more than 20 dB below the permissible value has no need to be reported.

Emission level (dBuV/m) = 20 log Emission level (uV/m).

Corrected Reading: Antenna Factor + Cable Loss + Read Level - Preamp Factor = Level.

4.5.9. Results for Radiated Emissions (1GHz~10th Harmonic)

Temperature	26°C	Humidity	63%
Test Engineer	Mars Lin	Configurations	IEEE 802.11n MCS0 HT20 CH 1 / Chain 1 + Chain 2 (Ant.1)
Test Date	Aug. 20, 2014		

Horizontal

	Freq	Level	Limit Line	Over Limit	Read Level	Cable Loss	Antenna Factor	Preamp Factor	Remark	A/Pos	T/Pos	Pol/Phase
	MHz	dBuV/m	dBuV/m	dB	dBuV	dB	dB/m	dB		cm	deg	
1	4823.90	32.26	54.00	-21.74	28.20	5.87	33.39	35.20	Average	100	211	HORIZONTAL
2	4824.32	46.04	74.00	-27.96	41.98	5.87	33.39	35.20	Peak	100	211	HORIZONTAL

Vertical

	Freq	Level	Limit Line	Over Limit	Read Level	Cable Loss	Antenna Factor	Preamp Factor	Remark	A/Pos	T/Pos	Pol/Phase
	MHz	dBuV/m	dBuV/m	dB	dBuV	dB	dB/m	dB		cm	deg	
1	4823.87	45.68	74.00	-28.32	41.62	5.87	33.39	35.20	Peak	100	42	VERTICAL
2	4824.09	32.74	54.00	-21.26	28.68	5.87	33.39	35.20	Average	100	42	VERTICAL

Temperature	26°C	Humidity	63%
Test Engineer	Mars Lin	Configurations	IEEE 802.11n MCS0 HT20 CH 6 / Chain 1 + Chain 2 (Ant.1)
Test Date	Aug. 20, 2014		

Horizontal

	Freq	Level	Limit Line	Over Limit	Read Level	Cable Loss	Antenna Factor	Preamp Factor	Remark	A/Pos	T/Pos	Pol/Phase
	MHz	dBuV/m	dBuV/m	dB	dBuV	dB	dB/m	dB		cm	deg	
1	7385.69	36.79	54.00	-17.21	28.47	7.17	36.61	35.46	Average	100	36	HORIZONTAL
2	7386.17	49.45	74.00	-24.55	41.13	7.17	36.61	35.46	Peak	100	36	HORIZONTAL

Vertical

	Freq	Level	Limit Line	Over Limit	Read Level	Cable Loss	Antenna Factor	Preamp Factor	Remark	A/Pos	T/Pos	Pol/Phase
	MHz	dBuV/m	dBuV/m	dB	dBuV	dB	dB/m	dB		cm	deg	
1	7310.40	36.40	54.00	-17.60	28.19	7.13	36.51	35.43	Average	100	166	VERTICAL
2	7311.88	49.79	74.00	-24.21	41.58	7.13	36.51	35.43	Peak	100	166	VERTICAL

Temperature	26°C	Humidity	63%
Test Engineer	Mars Lin	Configurations	IEEE 802.11n MCS0 HT20 CH 11 / Chain 1 + Chain 2 (Ant.1)
Test Date	Aug. 20, 2014		

Horizontal

	Freq	Level	Limit Line	Over Limit	Read Level	Cable Loss	Antenna Factor	Preamp Factor	Remark	A/Pos	T/Pos	Pol/Phase
	MHz	dBuV/m	dBuV/m	dB	dBuV	dB	dB/m	dB		cm	deg	
1	7385.69	36.79	54.00	-17.21	28.47	7.17	36.61	35.46	Average	100	36	HORIZONTAL
2	7386.17	49.45	74.00	-24.55	41.13	7.17	36.61	35.46	Peak	100	36	HORIZONTAL

Vertical

	Freq	Level	Limit Line	Over Limit	Read Level	Cable Loss	Antenna Factor	Preamp Factor	Remark	A/Pos	T/Pos	Pol/Phase
	MHz	dBuV/m	dBuV/m	dB	dBuV	dB	dB/m	dB		cm	deg	
1	7385.17	49.88	74.00	-24.12	41.56	7.17	36.61	35.46	Peak	100	281	VERTICAL
2	7386.64	36.82	54.00	-17.18	28.50	7.17	36.61	35.46	Average	100	281	VERTICAL

Temperature	26°C	Humidity	63%
Test Engineer	Mars Lin	Configurations	IEEE 802.11n MCS0 HT40 CH 3 / Chain 1 + Chain 2 (Ant.1)
Test Date	Aug. 20, 2014		

Horizontal

	Freq	Level	Limit Line	Over Limit	Read Level	Cable Loss	Antenna Factor	Preamp Factor	Remark	A/Pos	T/Pos	Pol/Phase
	MHz	dBuV/m	dBuV/m	dB	dBuV	dB	dB/m	dB		cm	deg	
1	7266.27	49.56	74.00	-24.44	41.43	7.11	36.43	35.41	Peak	100	191	HORIZONTAL
2	7266.97	36.31	54.00	-17.69	28.18	7.11	36.43	35.41	Average	100	191	HORIZONTAL

Vertical

	Freq	Level	Limit Line	Over Limit	Read Level	Cable Loss	Antenna Factor	Preamp Factor	Remark	A/Pos	T/Pos	Pol/Phase
	MHz	dBuV/m	dBuV/m	dB	dBuV	dB	dB/m	dB		cm	deg	
1	7265.52	36.34	54.00	-17.66	28.21	7.11	36.43	35.41	Average	100	231	VERTICAL
2	7265.79	49.42	74.00	-24.58	41.29	7.11	36.43	35.41	Peak	100	231	VERTICAL

Temperature	26°C	Humidity	63%
Test Engineer	Mars Lin	Configurations	IEEE 802.11n MCS0 HT40 CH 6 / Chain 1 + Chain 2 (Ant.1)
Test Date	Aug. 20, 2014		

Horizontal

	Freq	Level	Limit Line	Over Limit	Read Level	Cable Loss	Antenna Factor	Preamp Factor	Remark	A/Pos	T/Pos	Pol/Phase
	MHz	dBuV/m	dBuV/m	dB	dBuV	dB	dB/m	dB		cm	deg	
1	7310.47	36.41	54.00	-17.59	28.20	7.13	36.51	35.43	Average	100	84	HORIZONTAL
2	7310.48	50.07	74.00	-23.93	41.86	7.13	36.51	35.43	Peak	100	84	HORIZONTAL

Vertical

	Freq	Level	Limit Line	Over Limit	Read Level	Cable Loss	Antenna Factor	Preamp Factor	Remark	A/Pos	T/Pos	Pol/Phase
	MHz	dBuV/m	dBuV/m	dB	dBuV	dB	dB/m	dB		cm	deg	
1	7310.43	36.48	54.00	-17.52	28.27	7.13	36.51	35.43	Average	100	246	VERTICAL
2	7311.78	49.26	74.00	-24.74	41.05	7.13	36.51	35.43	Peak	100	246	VERTICAL

Temperature	26℃	Humidity	63%
Test Engineer	Mars Lin	Configurations	IEEE 802.11n MCS0 HT40 CH 9 / Chain 1 + Chain 2 (Ant.1)
Test Date	Aug. 20, 2014		

Horizontal

	Freq	Level	Limit Line	Over Limit	Read Level	Cable Loss	Antenna Factor	Preamp Factor	Remark	A/Pos	T/Pos	Pol/Phase
	MHz	dBuV/m	dBuV/m	dB	dBuV	dB	dB/m	dB		cm	deg	
1	7356.19	36.79	54.00	-17.21	28.51	7.16	36.56	35.44	Average	100	274	HORIZONTAL
2	7356.25	50.97	74.00	-23.03	42.69	7.16	36.56	35.44	Peak	100	274	HORIZONTAL

Vertical

	Freq	Level	Limit Line	Over Limit	Read Level	Cable Loss	Antenna Factor	Preamp Factor	Remark	A/Pos	T/Pos	Pol/Phase
	MHz	dBuV/m	dBuV/m	dB	dBuV	dB	dB/m	dB		cm	deg	
1	7356.69	36.84	54.00	-17.16	28.56	7.16	36.56	35.44	Average	100	168	VERTICAL
2	7356.91	49.80	74.00	-24.20	41.52	7.16	36.56	35.44	Peak	100	168	VERTICAL

Note:

The amplitude of spurious emissions which are attenuated by more than 20 dB below the permissible value has no need to be reported.

Emission level (dBuV/m) = 20 log Emission level (uV/m).

Corrected Reading: Antenna Factor + Cable Loss + Read Level - Preamp Factor = Level.

Temperature	26°C	Humidity	63%
Test Engineer	Mars Lin	Configurations	IEEE 802.11b CH 1 / Chain 1 + Chain 2 (Ant.1)
Test Date	Aug. 20, 2014		

Horizontal

	Freq	Level	Limit Line	Over Limit	Read Level	Cable Loss	Antenna Factor	Preamp Factor	Remark	A/Pos	T/Pos	Pol/Phase
	MHz	dBuV/m	dBuV/m	dB	dBuV	dB	dB/m	dB		cm	deg	
1	4823.86	32.32	54.00	-21.68	28.26	5.87	33.39	35.20	Average	100	251	HORIZONTAL
2	4826.49	45.00	74.00	-29.00	40.94	5.87	33.39	35.20	Peak	100	251	HORIZONTAL

Vertical

	Freq	Level	Limit Line	Over Limit	Read Level	Cable Loss	Antenna Factor	Preamp Factor	Remark	A/Pos	T/Pos	Pol/Phase
	MHz	dBuV/m	dBuV/m	dB	dBuV	dB	dB/m	dB		cm	deg	
1	4823.99	36.19	54.00	-17.81	32.13	5.87	33.39	35.20	Average	100	172	VERTICAL
2	4824.05	46.09	74.00	-27.91	42.03	5.87	33.39	35.20	Peak	100	172	VERTICAL

Temperature	26°C	Humidity	62%
Test Engineer	Mars Lin	Configurations	IEEE 802.11b CH 6 / Chain 1 + Chain 2 (Ant.1)
Test Date	Aug. 20, 2014		

Horizontal

	Freq	Level	Limit Line	Over Limit	Read Level	Cable Loss	Antenna Factor	Preamp Factor	Remark	A/Pos	T/Pos	Pol/Phase
	MHz	dBuV/m	dBuV/m	dB	dBuV	dB	dB/m	dB		cm	deg	
1	4872.25	31.91	54.00	-22.09	27.71	5.92	33.48	35.20	Average	100	173	HORIZONTAL
2	4872.35	45.20	74.00	-28.80	41.00	5.92	33.48	35.20	Peak	100	173	HORIZONTAL
3	7309.61	49.34	74.00	-24.66	41.13	7.13	36.51	35.43	Peak	100	77	HORIZONTAL
4	7309.75	36.22	54.00	-17.78	28.01	7.13	36.51	35.43	Average	100	77	HORIZONTAL

Vertical

	Freq	Level	Limit Line	Over Limit	Read Level	Cable Loss	Antenna Factor	Preamp Factor	Remark	A/Pos	T/Pos	Pol/Phase
	MHz	dBuV/m	dBuV/m	dB	dBuV	dB	dB/m	dB		cm	deg	
1	4874.01	34.94	54.00	-19.06	30.74	5.92	33.48	35.20	Average	100	170	VERTICAL
2	4875.43	45.45	74.00	-28.55	41.25	5.92	33.48	35.20	Peak	100	170	VERTICAL
3	7308.72	49.30	74.00	-24.70	41.09	7.13	36.51	35.43	Peak	100	4	VERTICAL
4	7312.29	36.55	54.00	-17.45	28.34	7.13	36.51	35.43	Average	100	4	VERTICAL

Temperature	26°C	Humidity	63%
Test Engineer	Mars Lin	Configurations	IEEE 802.11b CH 11 / Chain 1 + Chain 2 (Ant.1)
Test Date	Aug. 20, 2014		

Horizontal

	Freq	Level	Limit Line	Over Limit	Read Level	Cable Loss	Antenna Factor	Preamp Factor	Remark	A/Pos	T/Pos	Pol/Phase
	MHz	dBuV/m	dBuV/m	dB	dBuV	dB	dB/m	dB		cm	deg	
1	4923.73	45.82	74.00	-28.18	41.47	5.97	33.58	35.20	Peak	100	204	HORIZONTAL
2	4925.95	32.47	54.00	-21.53	28.12	5.97	33.58	35.20	Average	100	204	HORIZONTAL
3	7384.85	36.59	54.00	-17.41	28.27	7.17	36.61	35.46	Average	100	104	HORIZONTAL
4	7387.94	49.58	74.00	-24.42	41.26	7.17	36.61	35.46	Peak	100	104	HORIZONTAL

Vertical

	Freq	Level	Limit Line	Over Limit	Read Level	Cable Loss	Antenna Factor	Preamp Factor	Remark	A/Pos	T/Pos	Pol/Phase
	MHz	dBuV/m	dBuV/m	dB	dBuV	dB	dB/m	dB		cm	deg	
1	4923.98	34.81	54.00	-19.19	30.46	5.97	33.58	35.20	Average	100	171	VERTICAL
2	4924.03	46.37	74.00	-27.63	42.02	5.97	33.58	35.20	Peak	100	171	VERTICAL
3	7384.53	36.52	54.00	-17.48	28.20	7.17	36.61	35.46	Average	100	250	VERTICAL
4	7384.68	49.92	74.00	-24.08	41.60	7.17	36.61	35.46	Peak	100	250	VERTICAL

Temperature	26℃	Humidity	63%
Test Engineer	Mars Lin	Configurations	IEEE 802.11g CH 1 / Chain 1 + Chain 2 (Ant.1)
Test Date	Aug. 20, 2014		

Horizontal

	Freq	Level	Limit Line	Over Limit	Read Level	Cable Loss	Antenna Factor	Preamp Factor	Remark	A/Pos	T/Pos	Pol/Phase
	MHz	dBuV/m	dBuV/m	dB	dBuV	dB	dB/m	dB		cm	deg	
1	4825.02	45.88	74.00	-28.12	41.82	5.87	33.39	35.20	Peak	100	294	HORIZONTAL
2	4826.16	32.18	54.00	-21.82	28.12	5.87	33.39	35.20	Average	100	294	HORIZONTAL

Vertical

	Freq	Level	Limit Line	Over Limit	Read Level	Cable Loss	Antenna Factor	Preamp Factor	Remark	A/Pos	T/Pos	Pol/Phase
	MHz	dBuV/m	dBuV/m	dB	dBuV	dB	dB/m	dB		cm	deg	
1	4823.98	32.32	54.00	-21.68	28.26	5.87	33.39	35.20	Average	100	357	VERTICAL
2	4825.95	45.64	74.00	-28.36	41.58	5.87	33.39	35.20	Peak	100	357	VERTICAL

Temperature	26℃	Humidity	63%
Test Engineer	Mars Lin	Configurations	IEEE 802.11g CH 6 / Chain 1 + Chain 2 (Ant.1)
Test Date	Aug. 20, 2014		

Horizontal

	Freq	Level	Limit Line	Over Limit	Read Level	Cable Loss	Antenna Factor	Preamp Factor	Remark	A/Pos	T/Pos	Pol/Phase
	MHz	dBuV/m	dBuV/m	dB	dBuV	dB	dB/m	dB		cm	deg	
1	7384.03	50.51	74.00	-23.49	42.19	7.17	36.61	35.46	Peak	100	285	HORIZONTAL
2	7384.55	36.63	54.00	-17.37	28.31	7.17	36.61	35.46	Average	100	285	HORIZONTAL

Vertical

	Freq	Level	Limit Line	Over Limit	Read Level	Cable Loss	Antenna Factor	Preamp Factor	Remark	A/Pos	T/Pos	Pol/Phase
	MHz	dBuV/m	dBuV/m	dB	dBuV	dB	dB/m	dB		cm	deg	
1	7310.40	36.40	54.00	-17.60	28.19	7.13	36.51	35.43	Average	100	166	VERTICAL
2	7311.88	49.79	74.00	-24.21	41.58	7.13	36.51	35.43	Peak	100	166	VERTICAL

Temperature	26℃	Humidity	62%
Test Engineer	Mars Lin	Configurations	IEEE 802.11g CH 11 / Chain 1 + Chain 2 (Ant.1)
Test Date	Aug. 20, 2014		

Horizontal

	Freq	Level	Limit Line	Over Limit	Read Level	Cable Loss	Antenna Factor	Preamp Factor	Remark	A/Pos	T/Pos	Pol/Phase
	MHz	dBuV/m	dBuV/m	dB	dBuV	dB	dB/m	dB		cm	deg	
1	7384.03	50.51	74.00	-23.49	42.19	7.17	36.61	35.46	Peak	100	285	HORIZONTAL
2	7384.55	36.63	54.00	-17.37	28.31	7.17	36.61	35.46	Average	100	285	HORIZONTAL

Vertical

	Freq	Level	Limit Line	Over Limit	Read Level	Cable Loss	Antenna Factor	Preamp Factor	Remark	A/Pos	T/Pos	Pol/Phase
	MHz	dBuV/m	dBuV/m	dB	dBuV	dB	dB/m	dB		cm	deg	
1	7384.17	49.66	74.00	-24.34	41.34	7.17	36.61	35.46	Peak	100	142	VERTICAL
2	7384.33	36.79	54.00	-17.21	28.47	7.17	36.61	35.46	Average	100	142	VERTICAL

Note:

The amplitude of spurious emissions that are attenuated by more than 20dB below the permissible value has no need to be reported.

Emission level (dBuV/m) = 20 log Emission level (uV/m).

Corrected Reading: Antenna Factor + Cable Loss + Read Level - Preamp Factor = Level.

Temperature	26℃	Humidity	63%
Test Engineer	Mars Lin	Configurations	IEEE 802.11n MCS0 HT20 CH 1 / Chain 1 + Chain 2 (Ant.2)
Test Date	Aug. 19, 2014		

Horizontal

	Freq	Level	Limit Line	Over Limit	Read Level	Cable Loss	Antenna Factor	Preamp Factor	Remark	A/Pos	T/Pos	Pol/Phase
	MHz	dBuV/m	dBuV/m	dB	dBuV	dB	dB/m	dB		cm	deg	
1	4823.95	32.07	54.00	-21.93	28.01	5.87	33.39	35.20	Average	100	96	HORIZONTAL
2	4824.42	45.57	74.00	-28.43	41.51	5.87	33.39	35.20	Peak	100	96	HORIZONTAL

Vertical

	Freq	Level	Limit Line	Over Limit	Read Level	Cable Loss	Antenna Factor	Preamp Factor	Remark	A/Pos	T/Pos	Pol/Phase
	MHz	dBuV/m	dBuV/m	dB	dBuV	dB	dB/m	dB		cm	deg	
1	4823.88	45.31	74.00	-28.69	41.25	5.87	33.39	35.20	Peak	100	33	VERTICAL
2	4826.12	32.30	54.00	-21.70	28.24	5.87	33.39	35.20	Average	100	33	VERTICAL

Temperature	26°C	Humidity	63%
Test Engineer	Mars Lin	Configurations	IEEE 802.11n MCS0 HT20 CH 6 / Chain 1 + Chain 2 (Ant.2)
Test Date	Aug. 19, 2014		

Horizontal

	Freq	Level	Limit Line	Over Limit	Read Level	Cable Loss	Antenna Factor	Preamp Factor	Remark	A/Pos	T/Pos	Pol/Phase
	MHz	dBuV/m	dBuV/m	dB	dBuV	dB	dB/m	dB		cm	deg	
1	4874.03	32.12	54.00	-21.88	27.92	5.92	33.48	35.20	Average	100	203	HORIZONTAL
2	4875.72	45.52	74.00	-28.48	41.32	5.92	33.48	35.20	Peak	100	203	HORIZONTAL

Vertical

	Freq	Level	Limit Line	Over Limit	Read Level	Cable Loss	Antenna Factor	Preamp Factor	Remark	A/Pos	T/Pos	Pol/Phase
	MHz	dBuV/m	dBuV/m	dB	dBuV	dB	dB/m	dB		cm	deg	
1	4871.61	45.34	74.00	-28.66	41.14	5.92	33.48	35.20	Peak	100	132	VERTICAL
2	4874.12	32.27	54.00	-21.73	28.07	5.92	33.48	35.20	Average	100	132	VERTICAL

Temperature	26°C	Humidity	63%
Test Engineer	Mars Lin	Configurations	IEEE 802.11n MCS0 HT20 CH 11 / Chain 1 + Chain 2 (Ant.2)
Test Date	Aug. 19, 2014		

Horizontal

	Freq	Level	Limit Line	Over Limit	Read Level	Cable Loss	Antenna Factor	Preamp Factor	Remark	A/Pos	T/Pos	Pol/Phase
	MHz	dBuV/m	dBuV/m	dB	dBuV	dB	dB/m	dB		cm	deg	
1	4922.31	32.21	54.00	-21.79	27.86	5.97	33.58	35.20	Average	100	253	HORIZONTAL
2	4924.84	45.92	74.00	-28.08	41.57	5.97	33.58	35.20	Peak	100	253	HORIZONTAL

Vertical

	Freq	Level	Limit Line	Over Limit	Read Level	Cable Loss	Antenna Factor	Preamp Factor	Remark	A/Pos	T/Pos	Pol/Phase
	MHz	dBuV/m	dBuV/m	dB	dBuV	dB	dB/m	dB		cm	deg	
1	4924.07	45.73	74.00	-28.27	41.38	5.97	33.58	35.20	Peak	100	288	VERTICAL
2	4924.59	32.37	54.00	-21.63	28.02	5.97	33.58	35.20	Average	100	288	VERTICAL

Temperature	26°C	Humidity	63%
Test Engineer	Mars Lin	Configurations	IEEE 802.11n MCS0 HT40 CH 3 / Chain 1 + Chain 2 (Ant.2)
Test Date	Aug. 19, 2014		

Horizontal

	Freq	Level	Limit Line	Over Limit	Read Level	Cable Loss	Antenna Factor	Preamp Factor	Remark	A/Pos	T/Pos	Pol/Phase
	MHz	dBuV/m	dBuV/m	dB	dBuV	dB	dB/m	dB		cm	deg	
1	4844.75	32.35	54.00	-21.65	28.25	5.88	33.42	35.20	Average	100	204	HORIZONTAL
2	4845.71	45.66	74.00	-28.34	41.56	5.88	33.42	35.20	Peak	100	204	HORIZONTAL

Vertical

	Freq	Level	Limit Line	Over Limit	Read Level	Cable Loss	Antenna Factor	Preamp Factor	Remark	A/Pos	T/Pos	Pol/Phase
	MHz	dBuV/m	dBuV/m	dB	dBuV	dB	dB/m	dB		cm	deg	
1	4843.08	32.33	54.00	-21.67	28.23	5.88	33.42	35.20	Average	100	130	VERTICAL
2	4844.75	45.63	74.00	-28.37	41.53	5.88	33.42	35.20	Peak	100	130	VERTICAL

Temperature	26°C	Humidity	63%
Test Engineer	Mars Lin	Configurations	IEEE 802.11n MCS0 HT40 CH 6 / Chain 1 + Chain 2 (Ant.2)
Test Date	Aug. 19, 2014		

Horizontal

	Freq	Level	Limit Line	Over Limit	Read Level	Cable Loss	Antenna Factor	Preamp Factor	Remark	A/Pos	T/Pos	Pol/Phase
	MHz	dBuV/m	dBuV/m	dB	dBuV	dB	dB/m	dB		cm	deg	
1	4874.10	31.94	54.00	-22.06	27.74	5.92	33.48	35.20	Average	100	192	HORIZONTAL
2	4874.54	44.69	74.00	-29.31	40.49	5.92	33.48	35.20	Peak	100	192	HORIZONTAL

Vertical

	Freq	Level	Limit Line	Over Limit	Read Level	Cable Loss	Antenna Factor	Preamp Factor	Remark	A/Pos	T/Pos	Pol/Phase
	MHz	dBuV/m	dBuV/m	dB	dBuV	dB	dB/m	dB		cm	deg	
1	4871.68	31.86	54.00	-22.14	27.66	5.92	33.48	35.20	Average	100	306	VERTICAL
2	4872.85	46.30	74.00	-27.70	42.10	5.92	33.48	35.20	Peak	100	306	VERTICAL

Temperature	26℃	Humidity	63%
Test Engineer	Mars Lin	Configurations	IEEE 802.11n MCS0 HT40 CH 9 / Chain 1 + Chain 2 (Ant.2)
Test Date	Aug. 19, 2014		

Horizontal

	Freq	Level	Limit Line	Over Limit	Read Level	Cable Loss	Antenna Factor	Preamp Factor	Remark	A/Pos	T/Pos	Pol/Phase
	MHz	dBuV/m	dBuV/m	dB	dBuV	dB	dB/m	dB		cm	deg	
1	4903.60	45.55	74.00	-28.45	41.29	5.95	33.51	35.20	Peak	100	196	HORIZONTAL
2	4904.92	32.44	54.00	-21.56	28.15	5.95	33.54	35.20	Average	100	196	HORIZONTAL

Vertical

	Freq	Level	Limit Line	Over Limit	Read Level	Cable Loss	Antenna Factor	Preamp Factor	Remark	A/Pos	T/Pos	Pol/Phase
	MHz	dBuV/m	dBuV/m	dB	dBuV	dB	dB/m	dB		cm	deg	
1	4901.77	45.47	74.00	-28.53	41.21	5.95	33.51	35.20	Peak	100	124	VERTICAL
2	4906.20	32.49	54.00	-21.51	28.20	5.95	33.54	35.20	Average	100	124	VERTICAL

Note:

The amplitude of spurious emissions which are attenuated by more than 20 dB below the permissible value has no need to be reported.

Emission level (dBuV/m) = 20 log Emission level (uV/m).

Corrected Reading: Antenna Factor + Cable Loss + Read Level - Preamp Factor = Level.

Temperature	26°C	Humidity	63%
Test Engineer	Mars Lin	Configurations	IEEE 802.11b CH 1 / Chain 1 + Chain 2 (Ant.2)
Test Date	Aug. 19, 2014		

Horizontal

	Freq	Level	Limit Line	Over Limit	Read Level	Cable Loss	Antenna Factor	Preamp Factor	Remark	A/Pos	T/Pos	Pol/Phase
	MHz	dBuV/m	dBuV/m	dB	dBuV	dB	dB/m	dB		cm	deg	
1	4822.41	32.29	54.00	-21.71	28.23	5.87	33.39	35.20	Average	100	32	HORIZONTAL
2	4825.41	45.50	74.00	-28.50	41.44	5.87	33.39	35.20	Peak	100	32	HORIZONTAL

Vertical

	Freq	Level	Limit Line	Over Limit	Read Level	Cable Loss	Antenna Factor	Preamp Factor	Remark	A/Pos	T/Pos	Pol/Phase
	MHz	dBuV/m	dBuV/m	dB	dBuV	dB	dB/m	dB		cm	deg	
1	4823.64	32.26	54.00	-21.74	28.20	5.87	33.39	35.20	Average	100	43	VERTICAL
2	4826.47	45.26	74.00	-28.74	41.20	5.87	33.39	35.20	Peak	100	43	VERTICAL

Temperature	26°C	Humidity	62%
Test Engineer	Mars Lin	Configurations	IEEE 802.11b CH 6 / Chain 1 + Chain 2 (Ant.2)
Test Date	Aug. 19, 2014		

Horizontal

	Freq	Level	Limit Line	Over Limit	Read Level	Cable Loss	Antenna Factor	Preamp Factor	Remark	A/Pos	T/Pos	Pol/Phase
	MHz	dBuV/m	dBuV/m	dB	dBuV	dB	dB/m	dB		cm	deg	
1	4871.88	31.71	54.00	-22.29	27.51	5.92	33.48	35.20	Average	100	189	HORIZONTAL
2	4872.77	45.41	74.00	-28.59	41.21	5.92	33.48	35.20	Peak	100	189	HORIZONTAL
3	7309.48	36.51	54.00	-17.49	28.30	7.13	36.51	35.43	Average	100	17	HORIZONTAL
4	7312.73	49.36	74.00	-24.64	41.15	7.13	36.51	35.43	Peak	100	17	HORIZONTAL

Vertical

	Freq	Level	Limit Line	Over Limit	Read Level	Cable Loss	Antenna Factor	Preamp Factor	Remark	A/Pos	T/Pos	Pol/Phase
	MHz	dBuV/m	dBuV/m	dB	dBuV	dB	dB/m	dB		cm	deg	
1	4872.10	32.16	54.00	-21.84	27.96	5.92	33.48	35.20	Average	129	298	VERTICAL
2	4875.76	45.35	74.00	-28.65	41.15	5.92	33.48	35.20	Peak	129	298	VERTICAL
3	7311.04	50.21	74.00	-23.79	42.00	7.13	36.51	35.43	Peak	100	240	VERTICAL
4	7311.76	36.47	54.00	-17.53	28.26	7.13	36.51	35.43	Average	100	240	VERTICAL

Temperature	26°C	Humidity	63%
Test Engineer	Mars Lin	Configurations	IEEE 802.11b CH 11 / Chain 1 + Chain 2 (Ant.2)
Test Date	Aug. 19, 2014		

Horizontal

	Freq	Level	Limit Line	Over Limit	Read Level	Cable Loss	Antenna Factor	Preamp Factor	Remark	A/Pos	T/Pos	Pol/Phase
	MHz	dBuV/m	dBuV/m	dB	dBuV	dB	dB/m	dB		cm	deg	
1	4923.68	32.56	54.00	-21.44	28.21	5.97	33.58	35.20	Average	111	248	HORIZONTAL
2	4924.10	45.63	74.00	-28.37	41.28	5.97	33.58	35.20	Peak	111	248	HORIZONTAL

Vertical

	Freq	Level	Limit Line	Over Limit	Read Level	Cable Loss	Antenna Factor	Preamp Factor	Remark	A/Pos	T/Pos	Pol/Phase
	MHz	dBuV/m	dBuV/m	dB	dBuV	dB	dB/m	dB		cm	deg	
1	4923.87	33.15	54.00	-20.85	28.80	5.97	33.58	35.20	Average	112	157	VERTICAL
2	4924.16	45.90	74.00	-28.10	41.55	5.97	33.58	35.20	Peak	112	157	VERTICAL

Temperature	26℃	Humidity	63%
Test Engineer	Mars Lin	Configurations	IEEE 802.11g CH 1 / Chain 1 + Chain 2 (Ant.2)
Test Date	Aug. 19, 2014		

Horizontal

	Freq	Level	Limit Line	Over Limit	Read Level	Cable Loss	Antenna Factor	Preamp Factor	Remark	A/Pos	T/Pos	Pol/Phase
	MHz	dBuV/m	dBuV/m	dB	dBuV	dB	dB/m	dB		cm	deg	
1	4822.84	45.39	74.00	-28.61	41.33	5.87	33.39	35.20	Peak	100	115	HORIZONTAL
2	4824.23	32.08	54.00	-21.92	28.02	5.87	33.39	35.20	Average	100	115	HORIZONTAL

Vertical

	Freq	Level	Limit Line	Over Limit	Read Level	Cable Loss	Antenna Factor	Preamp Factor	Remark	A/Pos	T/Pos	Pol/Phase
	MHz	dBuV/m	dBuV/m	dB	dBuV	dB	dB/m	dB		cm	deg	
1	4825.39	45.40	74.00	-28.60	41.34	5.87	33.39	35.20	Peak	100	84	VERTICAL
2	4825.86	32.30	54.00	-21.70	28.24	5.87	33.39	35.20	Average	100	84	VERTICAL

Temperature	26℃	Humidity	63%
Test Engineer	Mars Lin	Configurations	IEEE 802.11g CH 6 / Chain 1 + Chain 2 (Ant.2)
Test Date	Aug. 19, 2014		

Horizontal

	Freq	Level	Limit Line	Over Limit	Read Level	Cable Loss	Antenna Factor	Preamp Factor	Remark	A/Pos	T/Pos	Pol/Phase
	MHz	dBuV/m	dBuV/m	dB	dBuV	dB	dB/m	dB		cm	deg	
1	4872.59	31.85	54.00	-22.15	27.65	5.92	33.48	35.20	Average	100	185	HORIZONTAL
2	4874.65	46.26	74.00	-27.74	42.06	5.92	33.48	35.20	Peak	100	185	HORIZONTAL

Vertical

	Freq	Level	Limit Line	Over Limit	Read Level	Cable Loss	Antenna Factor	Preamp Factor	Remark	A/Pos	T/Pos	Pol/Phase
	MHz	dBuV/m	dBuV/m	dB	dBuV	dB	dB/m	dB		cm	deg	
1	4873.18	31.85	54.00	-22.15	27.65	5.92	33.48	35.20	Average	100	127	VERTICAL
2	4876.32	44.90	74.00	-29.10	40.70	5.92	33.48	35.20	Peak	100	127	VERTICAL

Temperature	26℃	Humidity	62%
Test Engineer	Mars Lin	Configurations	IEEE 802.11g CH 11 / Chain 1 + Chain 2 (Ant.2)
Test Date	Aug. 19, 2014		

Horizontal

	Freq	Level	Limit Line	Over Limit	Read Level	Cable Loss	Antenna Factor	Preamp Factor	Remark	A/Pos	T/Pos	Pol/Phase
	MHz	dBuV/m	dBuV/m	dB	dBuV	dB	dB/m	dB		cm	deg	
1	4924.02	45.76	74.00	-28.24	41.41	5.97	33.58	35.20	Peak	100	187	HORIZONTAL
2	4924.74	32.36	54.00	-21.64	28.01	5.97	33.58	35.20	Average	100	187	HORIZONTAL

Vertical

	Freq	Level	Limit Line	Over Limit	Read Level	Cable Loss	Antenna Factor	Preamp Factor	Remark	A/Pos	T/Pos	Pol/Phase
	MHz	dBuV/m	dBuV/m	dB	dBuV	dB	dB/m	dB		cm	deg	
1	4924.22	32.55	54.00	-21.45	28.20	5.97	33.58	35.20	Average	100	250	VERTICAL
2	4924.59	45.80	74.00	-28.20	41.45	5.97	33.58	35.20	Peak	100	250	VERTICAL

Note:

The amplitude of spurious emissions that are attenuated by more than 20dB below the permissible value has no need to be reported.

Emission level (dBuV/m) = 20 log Emission level (uV/m).

Corrected Reading: Antenna Factor + Cable Loss + Read Level - Preamp Factor = Level

Temperature	26℃	Humidity	63%
Test Engineer	Mars Lin	Configurations	IEEE 802.11n MCS0 HT20 CH 1 / Chain 1 + Chain 2 (Ant.3)
Test Date	Aug. 11, 2014		

Horizontal

	Freq	Level	Limit Line	Over Limit	Read Level	Cable Loss	Antenna Factor	Preamp Factor	A/Pos	T/Pos	Pol/Phase	Remark
	MHz	dBuV/m	dBuV/m	dB	dBuV	dB	dB/m	dB	cm	deg		
1	4823.80	32.31	54.00	-21.69	29.16	5.69	32.76	35.30	125	74	HORIZONTAL	Average
2	4824.02	44.66	74.00	-29.34	41.51	5.69	32.76	35.30	125	74	HORIZONTAL	Peak

Vertical

	Freq	Level	Limit Line	Over Limit	Read Level	Cable Loss	Antenna Factor	Preamp Factor	A/Pos	T/Pos	Pol/Phase	Remark
	MHz	dBuV/m	dBuV/m	dB	dBuV	dB	dB/m	dB	cm	deg		
1	4823.97	45.99	74.00	-28.01	42.84	5.69	32.76	35.30	109	169	VERTICAL	Peak
2	4824.21	32.37	54.00	-21.63	29.22	5.69	32.76	35.30	109	169	VERTICAL	Average

Temperature	26°C	Humidity	63%
Test Engineer	Mars Lin	Configurations	IEEE 802.11n MCS0 HT20 CH 6 / Chain 1 + Chain 2 (Ant.3)
Test Date	Aug. 11, 2014		

Horizontal

	Freq	Level	Limit Line	Over Limit	Read Level	Cable Loss	Antenna Factor	Preamp Factor	A/Pos	T/Pos	Pol/Phase	Remark
	MHz	dBuV/m	dBuV/m	dB	dBuV	dB	dB/m	dB	cm	deg		
1	4874.30	45.12	74.00	-28.88	41.88	5.75	32.80	35.31	106	287	HORIZONTAL	Peak
2	4874.38	32.68	54.00	-21.32	29.44	5.75	32.80	35.31	106	287	HORIZONTAL	Average

Vertical

	Freq	Level	Limit Line	Over Limit	Read Level	Cable Loss	Antenna Factor	Preamp Factor	A/Pos	T/Pos	Pol/Phase	Remark
	MHz	dBuV/m	dBuV/m	dB	dBuV	dB	dB/m	dB	cm	deg		
1	4873.87	45.12	74.00	-28.88	41.88	5.75	32.80	35.31	104	38	VERTICAL	Peak
2	4874.05	32.87	54.00	-21.13	29.63	5.75	32.80	35.31	104	38	VERTICAL	Average

Temperature	26°C	Humidity	63%
Test Engineer	Mars Lin	Configurations	IEEE 802.11n MCS0 HT20 CH 11 / Chain 1 + Chain 2 (Ant.3)
Test Date	Aug. 11, 2014		

Horizontal

	Freq	Level	Limit Line	Over Limit	Read Level	Cable Loss	Antenna Factor	Preamp Factor	A/Pos	T/Pos	Pol/Phase	Remark
	MHz	dBuV/m	dBuV/m	dB	dBuV	dB	dB/m	dB	cm	deg		
1	4924.45	44.89	74.00	-29.11	41.57	5.81	32.84	35.33	105	72	HORIZONTAL	Peak
2	4924.55	32.75	54.00	-21.25	29.43	5.81	32.84	35.33	105	72	HORIZONTAL	Average

Vertical

	Freq	Level	Limit Line	Over Limit	Read Level	Cable Loss	Antenna Factor	Preamp Factor	A/Pos	T/Pos	Pol/Phase	Remark
	MHz	dBuV/m	dBuV/m	dB	dBuV	dB	dB/m	dB	cm	deg		
1	4924.41	32.61	54.00	-21.39	29.29	5.81	32.84	35.33	126	108	VERTICAL	Average
2	4924.73	45.23	74.00	-28.77	41.91	5.81	32.84	35.33	126	108	VERTICAL	Peak

Temperature	26°C	Humidity	63%
Test Engineer	Mars Lin	Configurations	IEEE 802.11n MCS0 HT40 CH 3 / Chain 1 + Chain 2 (Ant.3)
Test Date	Aug. 11, 2014		

Horizontal

	Freq	Level	Limit Line	Over Limit	Read Level	Cable Loss	Antenna Factor	Preamp Factor	A/Pos	T/Pos	Pol/Phase	Remark
	MHz	dBuV/m	dBuV/m	dB	dBuV	dB	dB/m	dB	cm	deg		
1	4843.71	44.16	74.00	-29.84	40.97	5.71	32.78	35.30	125	176	HORIZONTAL	Peak
2	4844.25	31.95	54.00	-22.05	28.76	5.71	32.78	35.30	125	176	HORIZONTAL	Average

Vertical

	Freq	Level	Limit Line	Over Limit	Read Level	Cable Loss	Antenna Factor	Preamp Factor	A/Pos	T/Pos	Pol/Phase	Remark
	MHz	dBuV/m	dBuV/m	dB	dBuV	dB	dB/m	dB	cm	deg		
1	4844.06	32.01	54.00	-21.99	28.82	5.71	32.78	35.30	108	226	VERTICAL	Average
2	4844.39	44.32	74.00	-29.68	41.13	5.71	32.78	35.30	108	226	VERTICAL	Peak

Temperature	26°C	Humidity	63%
Test Engineer	Mars Lin	Configurations	IEEE 802.11n MCS0 HT40 CH 6 / Chain 1 + Chain 2 (Ant.3)
Test Date	Aug. 11, 2014		

Horizontal

	Freq	Level	Limit Line	Over Limit	Read Level	Cable Loss	Antenna Factor	Preamp Factor	A/Pos	T/Pos	Pol/Phase	Remark
	MHz	dBuV/m	dBuV/m	dB	dBuV	dB	dB/m	dB	cm	deg		
1	4873.52	45.22	74.00	-28.78	41.98	5.75	32.80	35.31	176	41	HORIZONTAL	Peak
2	4874.11	32.51	54.00	-21.49	29.27	5.75	32.80	35.31	176	41	HORIZONTAL	Average

Vertical

	Freq	Level	Limit Line	Over Limit	Read Level	Cable Loss	Antenna Factor	Preamp Factor	A/Pos	T/Pos	Pol/Phase	Remark
	MHz	dBuV/m	dBuV/m	dB	dBuV	dB	dB/m	dB	cm	deg		
1	4874.03	45.40	74.00	-28.60	42.16	5.75	32.80	35.31	120	24	VERTICAL	Peak
2	4874.32	32.61	54.00	-21.39	29.37	5.75	32.80	35.31	120	24	VERTICAL	Average

Temperature	26℃	Humidity	63%
Test Engineer	Mars Lin	Configurations	IEEE 802.11n MCS0 HT40 CH 9 / Chain 1 + Chain 2 (Ant.3)
Test Date	Aug. 11, 2014		

Horizontal

	Freq	Level	Limit Line	Over Limit	Read Level	Cable Loss	Antenna Factor	Preamp Factor	A/Pos	T/Pos	Pol/Phase	Remark
	MHz	dBuV/m	dBuV/m	dB	dBuV	dB	dB/m	dB	cm	deg		
1	4903.56	32.32	54.00	-21.68	29.05	5.78	32.82	35.33	119	63	HORIZONTAL	Average
2	4903.58	44.63	74.00	-29.37	41.36	5.78	32.82	35.33	119	63	HORIZONTAL	Peak

Vertical

	Freq	Level	Limit Line	Over Limit	Read Level	Cable Loss	Antenna Factor	Preamp Factor	A/Pos	T/Pos	Pol/Phase	Remark
	MHz	dBuV/m	dBuV/m	dB	dBuV	dB	dB/m	dB	cm	deg		
1	4903.53	44.80	74.00	-29.20	41.53	5.78	32.82	35.33	141	11	VERTICAL	Peak
2	4903.61	32.28	54.00	-21.72	29.01	5.78	32.82	35.33	141	11	VERTICAL	Average

Note:

The amplitude of spurious emissions which are attenuated by more than 20 dB below the permissible value has no need to be reported.

Emission level (dBuV/m) = 20 log Emission level (uV/m).

Corrected Reading: Antenna Factor + Cable Loss + Read Level - Preamp Factor = Level.

Temperature	26°C	Humidity	63%
Test Engineer	Mars Lin	Configurations	IEEE 802.11b CH 1 / Chain 1 + Chain 2 (Ant.3)
Test Date	Aug. 11, 2014		

Horizontal

	Freq	Level	Limit Line	Over Limit	Read Level	Cable Loss	Antenna Factor	Preamp Factor	A/Pos	T/Pos	Pol/Phase	Remark
	MHz	dBuV/m	dBuV/m	dB	dBuV	dB	dB/m	dB	cm	deg		
1	4824.21	45.60	74.00	-28.40	42.45	5.69	32.76	35.30	121	212	HORIZONTAL	Peak
2	4824.44	32.39	54.00	-21.61	29.24	5.69	32.76	35.30	121	212	HORIZONTAL	Average

Vertical

	Freq	Level	Limit Line	Over Limit	Read Level	Cable Loss	Antenna Factor	Preamp Factor	A/Pos	T/Pos	Pol/Phase	Remark
	MHz	dBuV/m	dBuV/m	dB	dBuV	dB	dB/m	dB	cm	deg		
1	4823.94	45.67	74.00	-28.33	42.52	5.69	32.76	35.30	130	130	VERTICAL	Peak
2	4824.36	32.34	54.00	-21.66	29.19	5.69	32.76	35.30	130	130	VERTICAL	Average

Temperature	26°C	Humidity	62%
Test Engineer	Mars Lin	Configurations	IEEE 802.11b CH 6 / Chain 1 + Chain 2 (Ant.3)
Test Date	Aug. 11, 2014		

Horizontal

	Freq	Level	Limit Line	Over Limit	Read Level	Cable Loss	Antenna Factor	Preamp Factor	A/Pos	T/Pos	Pol/Phase	Remark
	MHz	dBuV/m	dBuV/m	dB	dBuV	dB	dB/m	dB	cm	deg		
1	4873.74	45.19	74.00	-28.81	41.95	5.75	32.80	35.31	117	153	HORIZONTAL	Peak
2	4874.13	32.48	54.00	-21.52	29.24	5.75	32.80	35.31	117	153	HORIZONTAL	Average

Vertical

	Freq	Level	Limit Line	Over Limit	Read Level	Cable Loss	Antenna Factor	Preamp Factor	A/Pos	T/Pos	Pol/Phase	Remark
	MHz	dBuV/m	dBuV/m	dB	dBuV	dB	dB/m	dB	cm	deg		
1	4873.71	44.80	74.00	-29.20	41.56	5.75	32.80	35.31	124	113	VERTICAL	Peak
2	4874.37	32.59	54.00	-21.41	29.35	5.75	32.80	35.31	124	113	VERTICAL	Average

Temperature	26°C	Humidity	63%
Test Engineer	Mars Lin	Configurations	IEEE 802.11b CH 11 / Chain 1 + Chain 2 (Ant.3)
Test Date	Aug. 11, 2014		

Horizontal

	Freq	Level	Limit Line	Over Limit	Read Level	Cable Loss	Antenna Factor	Preamp Factor	A/Pos	T/Pos	Pol/Phase	Remark
	MHz	dBuV/m	dBuV/m	dB	dBuV	dB	dB/m	dB	cm	deg		
1	4923.56	32.46	54.00	-21.54	29.15	5.81	32.83	35.33	123	81	HORIZONTAL	Average
2	4923.93	45.29	74.00	-28.71	41.97	5.81	32.84	35.33	123	81	HORIZONTAL	Peak

Vertical

	Freq	Level	Limit Line	Over Limit	Read Level	Cable Loss	Antenna Factor	Preamp Factor	A/Pos	T/Pos	Pol/Phase	Remark
	MHz	dBuV/m	dBuV/m	dB	dBuV	dB	dB/m	dB	cm	deg		
1	4924.20	45.29	74.00	-28.71	41.97	5.81	32.84	35.33	140	259	VERTICAL	Peak
2	4924.22	32.64	54.00	-21.36	29.32	5.81	32.84	35.33	140	259	VERTICAL	Average

Temperature	26℃	Humidity	63%
Test Engineer	Mars Lin	Configurations	IEEE 802.11g CH 1 / Chain 1 + Chain 2 (Ant.3)
Test Date	Aug. 11, 2014		

Horizontal

	Freq	Level	Limit Line	Over Limit	Read Level	Cable Loss	Antenna Factor	Preamp Factor	A/Pos	T/Pos	Pol/Phase	Remark
	MHz	dBuV/m	dBuV/m	dB	dBuV	dB	dB/m	dB	cm	deg		
1	4823.78	44.77	74.00	-29.23	41.62	5.69	32.76	35.30	137	166	HORIZONTAL	Peak
2	4824.02	32.34	54.00	-21.66	29.19	5.69	32.76	35.30	137	166	HORIZONTAL	Average

Vertical

	Freq	Level	Limit Line	Over Limit	Read Level	Cable Loss	Antenna Factor	Preamp Factor	A/Pos	T/Pos	Pol/Phase	Remark
	MHz	dBuV/m	dBuV/m	dB	dBuV	dB	dB/m	dB	cm	deg		
1	4823.63	32.43	54.00	-21.57	29.28	5.69	32.76	35.30	104	166	VERTICAL	Average
2	4823.89	45.26	74.00	-28.74	42.11	5.69	32.76	35.30	104	166	VERTICAL	Peak

Temperature	26℃	Humidity	63%
Test Engineer	Mars Lin	Configurations	IEEE 802.11g CH 6 / Chain 1 + Chain 2 (Ant.3)
Test Date	Aug. 11, 2014		

Horizontal

	Freq	Level	Limit Line	Over Limit	Read Level	Cable Loss	Antenna Factor	Preamp Factor	A/Pos	T/Pos	Pol/Phase	Remark
	MHz	dBuV/m	dBuV/m	dB	dBuV	dB	dB/m	dB	cm	deg		
1	4873.77	32.46	54.00	-21.54	29.22	5.75	32.80	35.31	109	142	HORIZONTAL	Average
2	4874.13	45.22	74.00	-28.78	41.98	5.75	32.80	35.31	109	142	HORIZONTAL	Peak

Vertical

	Freq	Level	Limit Line	Over Limit	Read Level	Cable Loss	Antenna Factor	Preamp Factor	A/Pos	T/Pos	Pol/Phase	Remark
	MHz	dBuV/m	dBuV/m	dB	dBuV	dB	dB/m	dB	cm	deg		
1	4873.54	45.46	74.00	-28.54	42.22	5.75	32.80	35.31	130	63	VERTICAL	Peak
2	4873.84	32.51	54.00	-21.49	29.27	5.75	32.80	35.31	130	63	VERTICAL	Average

Temperature	26℃	Humidity	62%
Test Engineer	Mars Lin	Configurations	IEEE 802.11g CH 11 / Chain 1 + Chain 2 (Ant.3)
Test Date	Aug. 11, 2014		

Horizontal

	Freq	Level	Limit Line	Over Limit	Read Level	Cable Loss	Antenna Factor	Preamp Factor	A/Pos	T/Pos	Pol/Phase	Remark
	MHz	dBuV/m	dBuV/m	dB	dBuV	dB	dB/m	dB	cm	deg		
1	4924.18	44.89	74.00	-29.11	41.57	5.81	32.84	35.33	123	272	HORIZONTAL	Peak
2	4924.49	32.70	54.00	-21.30	29.38	5.81	32.84	35.33	123	272	HORIZONTAL	Average

Vertical

	Freq	Level	Limit Line	Over Limit	Read Level	Cable Loss	Antenna Factor	Preamp Factor	A/Pos	T/Pos	Pol/Phase	Remark
	MHz	dBuV/m	dBuV/m	dB	dBuV	dB	dB/m	dB	cm	deg		
1	4923.63	44.89	74.00	-29.11	41.57	5.81	32.84	35.33	106	170	VERTICAL	Peak
2	4924.24	32.60	54.00	-21.40	29.28	5.81	32.84	35.33	106	170	VERTICAL	Average

Note:

The amplitude of spurious emissions that are attenuated by more than 20dB below the permissible value has no need to be reported.

Emission level (dBuV/m) = 20 log Emission level (uV/m).

Corrected Reading: Antenna Factor + Cable Loss + Read Level - Preamp Factor = Level

4.6. Emissions Measurement

4.6.1. Limit

20dBc in any 100 kHz bandwidth outside the operating frequency band. In case the emission fall within the restricted band specified on 15.205(a), then the 15.209(a) limit in the table below has to be followed.

Frequencies (MHz)	Field Strength (micorvolts/meter)	Measurement Distance (meters)
0.009~0.490	2400/F(kHz)	300
0.490~1.705	24000/F(kHz)	30
1.705~30.0	30	30
30~88	100	3
88~216	150	3
216~960	200	3
Above 960	500	3

4.6.2. Measuring Instruments and Setting

Please refer to section 5 of equipments list in this report. The following table is the setting of the spectrum analyzer.

Spectrum Parameter	Setting
Attenuation	Auto
Span Frequency	100 MHz
RBW / VBW (Emission in restricted band)	1MHz / 3MHz for Peak, 1MHz / 1/T for Average
RBW / VBW (20dBc in any 100 kHz bandwidth emission)	100 kHz / 300 kHz for Peak

4.6.3. Test Procedures

For Radiated band edges Measurement:

1. The test procedure is the same as section 4.5.3, only the freqeuncy range investigated is limited to 100MHz around band edges.

For Radiated Out of Band Emission Measurement:

1. Test was performed in accordance with KDB 558074 D01 v03r02 for Performing Compliance Measurements on Digital Transmission Systems (DTS) Operating Under §15.247 section 10.1 Unwanted Emissions into Non-Restricted Frequency Bands Measurement Procedure.
2. The radiated emission test is performed on each TX port of operating mode without summing or adding 10log (N) since the limit is relative emission limit.
   Only worst data of each operating mode is presented.

4.6.4. Test Setup Layout

For Radiated band edges Measurement:

This test setup layout is the same as that shown in section 4.5.4.

For Radiated Out of Band Emission Measurement:

This test setup layout is the same as that shown in section 4.5.4.

4.6.5. Test Deviation

There is no deviation with the original standard.

4.6.6. EUT Operation during Test

The EUT was programmed to be in continuously transmitting mode.

4.6.7. Test Result of Band Edge and Fundamental Emissions

Temperature	26°C	Humidity	63%
Test Engineer	Mars Lin	Configurations	IEEE 802.11n MCS0 HT20 CH 1, 6, 11 / Chain 1 + Chain 2 (Ant.1)
Test Date	Aug. 20, 2014		

Channel 1

	Freq	Level	Limit Line	Over Limit	Read Level	Cable Loss	Antenna Factor	Preamp Factor	Remark	A/Pos	T/Pos	Pol/Phase
	MHz	dBuV/m	dBuV/m	dB	dBuV	dB	dB/m	dB		cm	deg	
1	2390.00	53.39	54.00	-0.61	21.25	4.09	28.05	0.00	Average	112	30	VERTICAL
2	2390.00	66.82	74.00	-7.18	34.68	4.09	28.05	0.00	Peak	112	30	VERTICAL
3	2406.80	114.11			81.91	4.11	28.09	0.00	Peak	112	30	VERTICAL
4	2407.60	105.07			72.87	4.11	28.09	0.00	Average	112	30	VERTICAL

Item 3, 4 are the fundamental frequency at 2412 MHz.

Channel 6

	Freq	Level	Limit Line	Over Limit	Read Level	Cable Loss	Antenna Factor	Preamp Factor	Remark	A/Pos	T/Pos	Pol/Phase
	MHz	dBuV/m	dBuV/m	dB	dBuV	dB	dB/m	dB		cm	deg	
1	2359.87	53.69	54.00	-0.31	21.65	4.07	27.97	0.00	Average	129	12	VERTICAL
2	2386.47	64.65	74.00	-9.35	32.51	4.09	28.05	0.00	Peak	129	12	VERTICAL
3	2430.20	107.06			74.81	4.12	28.13	0.00	Average	129	12	VERTICAL
4	2432.00	116.16			83.91	4.12	28.13	0.00	Peak	129	12	VERTICAL

Item 3, 4 are the fundamental frequency at 2437 MHz.

Channel 11

	Freq	Level	Limit Line	Over Limit	Read Level	Cable Loss	Antenna Factor	Preamp Factor	Remark	A/Pos	T/Pos	Pol/Phase
	MHz	dBuV/m	dBuV/m	dB	dBuV	dB	dB/m	dB		cm	deg	
1	2360.35	53.47	54.00	-0.53	21.43	4.07	27.97	0.00	Average	129	12	VERTICAL
2	2389.20	62.89	74.00	-11.11	30.75	4.09	28.05	0.00	Peak	129	12	VERTICAL
3	2455.59	105.73			73.37	4.14	28.22	0.00	Average	129	12	VERTICAL
4	2455.59	114.70			82.34	4.14	28.22	0.00	Peak	129	12	VERTICAL

Item 3, 4 are the fundamental frequency at 2462 MHz.

Temperature	26℃	Humidity	63%
Test Engineer	Mars Lin	Configurations	IEEE 802.11n MCS0 HT40 CH 3, 6, 9 / Chain 1 + Chain 2 (Ant.1)
Test Date	Aug. 20, 2014		

Channel 3

	Freq	Level	Limit Line	Over Limit	Read Level	Cable Loss	Antenna Factor	Preamp Factor	Remark	A/Pos	T/Pos	Pol/Phase
	MHz	dBuV/m	dBuV/m	dB	dBuV	dB	dB/m	dB		cm	deg	
1	2389.36	68.01	74.00	-5.99	35.87	4.09	28.05	0.00	Peak	118	13	VERTICAL
2	2390.00	53.81	54.00	-0.19	21.67	4.09	28.05	0.00	Average	118	13	VERTICAL
3	2405.33	97.80			65.60	4.11	28.09	0.00	Average	118	13	VERTICAL
4	2425.53	108.21			75.96	4.12	28.13	0.00	Peak	118	13	VERTICAL

Item 3, 4 are the fundamental frequency at 2422 MHz.

Channel 6

	Freq	Level	Limit Line	Over Limit	Read Level	Cable Loss	Antenna Factor	Preamp Factor	Remark	A/Pos	T/Pos	Pol/Phase
	MHz	dBuV/m	dBuV/m	dB	dBuV	dB	dB/m	dB		cm	deg	
1	2387.44	66.37	74.00	-7.63	34.23	4.09	28.05	0.00	Peak	130	30	VERTICAL
2	2389.36	53.57	54.00	-0.43	21.43	4.09	28.05	0.00	Average	130	30	VERTICAL
3	2444.37	102.97			70.66	4.13	28.18	0.00	Average	130	30	VERTICAL
4	2445.01	112.50			80.19	4.13	28.18	0.00	Peak	130	30	VERTICAL

Item 3, 4 are the fundamental frequency at 2437 MHz.

Channel 9

	Freq	Level	Limit Line	Over Limit	Read Level	Cable Loss	Antenna Factor	Preamp Factor	Remark	A/Pos	T/Pos	Pol/Phase
	MHz	dBuV/m	dBuV/m	dB	dBuV	dB	dB/m	dB		cm	deg	
1	2437.26	101.32			69.01	4.13	28.18	0.00	Average	131	14	VERTICAL
2	2437.58	110.94			78.63	4.13	28.18	0.00	Peak	131	14	VERTICAL
3	2483.50	53.67	54.00	-0.33	21.25	4.16	28.26	0.00	Average	131	14	VERTICAL
4	2483.50	70.61	74.00	-3.39	38.19	4.16	28.26	0.00	Peak	131	14	VERTICAL

Item 1, 2 are the fundamental frequency at 2452 MHz.

Note:

Emission level (dBuV/m) = 20 log Emission level (uV/m).

Corrected Reading: Antenna Factor + Cable Loss + Read Level - Preamp Factor = Level.

Temperature	26°C	Humidity	63%
Test Engineer	Mars Lin	Configurations	IEEE 802.11b CH 1, 6, 11 / Chain 1 + Chain 2 (Ant.1)
Test Date	Aug. 20, 2014		

Channel 1

	Freq	Level	Limit Line	Over Limit	Read Level	Cable Loss	Antenna Factor	Preamp Factor	Remark	A/Pos	T/Pos	Pol/Phase
	MHz	dBuV/m	dBuV/m	dB	dBuV	dB	dB/m	dB		cm	deg	
1	2359.87	53.80	54.00	-0.20	21.76	4.07	27.97	0.00	Average	112	36	VERTICAL
2	2389.68	72.45	74.00	-1.55	40.31	4.09	28.05	0.00	Peak	112	36	VERTICAL
3	2410.20	113.63			81.43	4.11	28.09	0.00	Average	112	36	VERTICAL
4	2411.20	117.19			84.99	4.11	28.09	0.00	Peak	112	36	VERTICAL

Item 3, 4 are the fundamental frequency at 2412 MHz.

Channel 6

	Freq	Level	Limit Line	Over Limit	Read Level	Cable Loss	Antenna Factor	Preamp Factor	Remark	A/Pos	T/Pos	Pol/Phase
	MHz	dBuV/m	dBuV/m	dB	dBuV	dB	dB/m	dB		cm	deg	
1	2359.87	53.39	54.00	-0.61	21.35	4.07	27.97	0.00	Average	113	37	VERTICAL
2	2387.12	65.30	74.00	-8.70	33.16	4.09	28.05	0.00	Peak	113	37	VERTICAL
3	2435.20	112.29			79.99	4.12	28.18	0.00	Average	113	37	VERTICAL
4	2435.60	116.11			83.81	4.12	28.18	0.00	Peak	113	37	VERTICAL

Item 3, 4 are the fundamental frequency at 2437 MHz.

Channel 11

	Freq	Level	Limit Line	Over Limit	Read Level	Cable Loss	Antenna Factor	Preamp Factor	Remark	A/Pos	T/Pos	Pol/Phase
	MHz	dBuV/m	dBuV/m	dB	dBuV	dB	dB/m	dB		cm	deg	
1	2379.74	53.58	54.00	-0.42	21.49	4.08	28.01	0.00	Average	113	36	VERTICAL
2	2382.95	65.10	74.00	-8.90	32.97	4.08	28.05	0.00	Peak	113	36	VERTICAL
3	2461.20	109.93			77.57	4.14	28.22	0.00	Average	113	36	VERTICAL
4	2461.20	113.81			81.45	4.14	28.22	0.00	Peak	113	36	VERTICAL

Item 3, 4 are the fundamental frequency at 2462 MHz.

Temperature	26℃	Humidity	63%
Test Engineer	Mars Lin	Configurations	IEEE 802.11g CH 1, 6, 11 / Chain 1 + Chain 2 (Ant.1)
Test Date	Aug. 20, 2014		

Channel 1

	Freq	Level	Limit Line	Over Limit	Read Level	Cable Loss	Antenna Factor	Preamp Factor	Remark	A/Pos	T/Pos	Pol/Phase
	MHz	dBuV/m	dBuV/m	dB	dBuV	dB	dB/m	dB		cm	deg	
1	2359.87	53.46	54.00	-0.54	21.42	4.07	27.97	0.00	Average	119	6	VERTICAL
2	2390.00	65.27	74.00	-8.73	33.13	4.09	28.05	0.00	Peak	119	6	VERTICAL
3	2417.00	106.40			74.16	4.11	28.13	0.00	Average	119	6	VERTICAL
4	2417.00	115.05			82.81	4.11	28.13	0.00	Peak	119	6	VERTICAL

Item 3, 4 are the fundamental frequency at 2412 MHz.

Channel 6

	Freq	Level	Limit Line	Over Limit	Read Level	Cable Loss	Antenna Factor	Preamp Factor	Remark	A/Pos	T/Pos	Pol/Phase
	MHz	dBuV/m	dBuV/m	dB	dBuV	dB	dB/m	dB		cm	deg	
1	2359.87	53.49	54.00	-0.51	21.45	4.07	27.97	0.00	Average	118	7	VERTICAL
2	2390.00	63.88	74.00	-10.12	31.74	4.09	28.05	0.00	Peak	118	7	VERTICAL
3	2431.60	105.85			73.60	4.12	28.13	0.00	Average	118	7	VERTICAL
4	2431.80	114.75			82.50	4.12	28.13	0.00	Peak	118	7	VERTICAL

Item 3, 4 are the fundamental frequency at 2437 MHz.

Channel 11

	Freq	Level	Limit Line	Over Limit	Read Level	Cable Loss	Antenna Factor	Preamp Factor	Remark	A/Pos	T/Pos	Pol/Phase
	MHz	dBuV/m	dBuV/m	dB	dBuV	dB	dB/m	dB		cm	deg	
1	2386.80	53.77	54.00	-0.23	21.63	4.09	28.05	0.00	Average	119	6	VERTICAL
2	2387.76	64.31	74.00	-9.69	32.17	4.09	28.05	0.00	Peak	119	6	VERTICAL
3	2456.60	114.26			81.90	4.14	28.22	0.00	Peak	119	6	VERTICAL
4	2456.80	105.20			72.84	4.14	28.22	0.00	Average	119	6	VERTICAL

Item 3, 4 are the fundamental frequency at 2462 MHz.

Note:

Emission level (dBuV/m) = 20 log Emission level (uV/m).

Corrected Reading: Antenna Factor + Cable Loss + Read Level - Preamp Factor = Level.

Temperature	26°C	Humidity	63%
Test Engineer	Mars Lin	Configurations	IEEE 802.11n MCS0 HT20 CH 1, 6, 11 / Chain 1 + Chain 2 (Ant.2)
Test Date	Aug. 19, 2014		

Channel 1

	Freq	Level	Limit Line	Over Limit	Read Level	Cable Loss	Antenna Factor	Preamp Factor	Remark	A/Pos	T/Pos	Pol/Phase
	MHz	dBuV/m	dBuV/m	dB	dBuV	dB	dB/m	dB		cm	deg	
1	2390.00	53.68	54.00	-0.32	21.54	4.09	28.05	0.00	Average	159	357	HORIZONTAL
2	2390.00	67.72	74.00	-6.28	35.58	4.09	28.05	0.00	Peak	159	357	HORIZONTAL
3	2415.85	114.56			82.36	4.11	28.09	0.00	Peak	159	357	HORIZONTAL
4	2417.45	102.57			70.33	4.11	28.13	0.00	Average	159	357	HORIZONTAL

Item 3, 4 are the fundamental frequency at 2412 MHz.

Channel 6

	Freq	Level	Limit Line	Over Limit	Read Level	Cable Loss	Antenna Factor	Preamp Factor	Remark	A/Pos	T/Pos	Pol/Phase
	MHz	dBuV/m	dBuV/m	dB	dBuV	dB	dB/m	dB		cm	deg	
1	2389.04	65.42	74.00	-8.58	33.28	4.09	28.05	0.00	Peak	161	356	HORIZONTAL
2	2390.00	53.60	54.00	-0.40	21.46	4.09	28.05	0.00	Average	161	356	HORIZONTAL
3	2435.08	116.59			84.29	4.12	28.18	0.00	Peak	161	356	HORIZONTAL
4	2439.40	103.89			71.58	4.13	28.18	0.00	Average	161	356	HORIZONTAL
5	2483.50	53.66	54.00	-0.34	21.24	4.16	28.26	0.00	Average	161	356	HORIZONTAL
6	2484.94	67.09	74.00	-6.91	34.67	4.16	28.26	0.00	Peak	161	356	HORIZONTAL

Item 3, 4 are the fundamental frequency at 2437 MHz.

Channel 11

	Freq	Level	Limit Line	Over Limit	Read Level	Cable Loss	Antenna Factor	Preamp Factor	Remark	A/Pos	T/Pos	Pol/Phase
	MHz	dBuV/m	dBuV/m	dB	dBuV	dB	dB/m	dB		cm	deg	
1	2359.71	53.51	54.00	-0.49	21.47	4.07	27.97	0.00	Average	100	1	VERTICAL
2	2360.19	61.71	74.00	-12.29	29.67	4.07	27.97	0.00	Peak	100	1	VERTICAL
3	2455.27	106.80			74.44	4.14	28.22	0.00	Peak	100	1	VERTICAL
4	2455.75	97.47			65.11	4.14	28.22	0.00	Average	100	1	VERTICAL
5	2483.50	50.11	54.00	-3.89	17.69	4.16	28.26	0.00	Average	100	1	VERTICAL
6	2485.42	61.00	74.00	-13.00	28.54	4.16	28.30	0.00	Peak	100	1	VERTICAL

Item 3, 4 are the fundamental frequency at 2462 MHz.

Temperature	26℃	Humidity	63%
Test Engineer	Mars Lin	Configurations	IEEE 802.11n MCS0 HT40 CH 3, 6, 9 / Chain 1 + Chain 2 (Ant.2)
Test Date	Aug. 19, 2014		

Channel 3

	Freq	Level	Limit Line	Over Limit	Read Level	Cable Loss	Antenna Factor	Preamp Factor	Remark	A/Pos	T/Pos	Pol/Phase
	MHz	dBuV/m	dBuV/m	dB	dBuV	dB	dB/m	dB		cm	deg	
1	2390.00	53.55	54.00	-0.45	21.41	4.09	28.05	0.00	Average	161	356	HORIZONTAL
2	2390.00	72.24	74.00	-1.76	40.10	4.09	28.05	0.00	Peak	161	356	HORIZONTAL
3	2437.71	108.70			76.39	4.13	28.18	0.00	Peak	161	356	HORIZONTAL
4	2438.67	95.65			63.34	4.13	28.18	0.00	Average	161	356	HORIZONTAL

Item 3, 4 are the fundamental frequency at 2422 MHz.

Channel 6

	Freq	Level	Limit Line	Over Limit	Read Level	Cable Loss	Antenna Factor	Preamp Factor	Remark	A/Pos	T/Pos	Pol/Phase
	MHz	dBuV/m	dBuV/m	dB	dBuV	dB	dB/m	dB		cm	deg	
1	2389.04	69.24	74.00	-4.76	37.10	4.09	28.05	0.00	Peak	160	354	HORIZONTAL
2	2390.00	53.69	54.00	-0.31	21.55	4.09	28.05	0.00	Average	160	354	HORIZONTAL
3	2420.65	99.51			67.26	4.12	28.13	0.00	Average	160	354	HORIZONTAL
4	2425.78	112.47			80.22	4.12	28.13	0.00	Peak	160	354	HORIZONTAL
5	2483.50	52.94	54.00	-1.06	20.52	4.16	28.26	0.00	Average	160	354	HORIZONTAL
6	2483.82	64.46	74.00	-9.54	32.04	4.16	28.26	0.00	Peak	160	354	HORIZONTAL

Item 3, 4 are the fundamental frequency at 2437 MHz.

Channel 9

	Freq	Level	Limit Line	Over Limit	Read Level	Cable Loss	Antenna Factor	Preamp Factor	Remark	A/Pos	T/Pos	Pol/Phase
	MHz	dBuV/m	dBuV/m	dB	dBuV	dB	dB/m	dB		cm	deg	
1	2437.26	109.91			77.60	4.13	28.18	0.00	Peak	160	352	HORIZONTAL
2	2438.22	95.96			63.65	4.13	28.18	0.00	Average	160	352	HORIZONTAL
3	2483.50	53.87	54.00	-0.13	21.45	4.16	28.26	0.00	Average	160	352	HORIZONTAL
4	2483.50	72.82	74.00	-1.18	40.40	4.16	28.26	0.00	Peak	160	352	HORIZONTAL

Item 1, 2 are the fundamental frequency at 2452 MHz.

Note:

Emission level (dBuV/m) = 20 log Emission level (uV/m).

Corrected Reading: Antenna Factor + Cable Loss + Read Level - Preamp Factor = Level.

Temperature	26°C	Humidity	63%
Test Engineer	Mars Lin	Configurations	IEEE 802.11b CH 1, 6, 11 / Chain 1 + Chain 2 (Ant.2)
Test Date	Aug. 19, 2014		

Channel 1

	Freq	Level	Limit Line	Over Limit	Read Level	Cable Loss	Antenna Factor	Preamp Factor	Remark	A/Pos	T/Pos	Pol/Phase
	MHz	dBuV/m	dBuV/m	dB	dBuV	dB	dB/m	dB		cm	deg	
1	2388.72	64.41	74.00	-9.59	32.27	4.09	28.05	0.00	Peak	161	355	HORIZONTAL
2	2390.00	52.33	54.00	-1.67	20.19	4.09	28.05	0.00	Average	161	355	HORIZONTAL
3	2410.40	110.95			78.75	4.11	28.09	0.00	Average	161	355	HORIZONTAL
4	2411.04	114.66			82.46	4.11	28.09	0.00	Peak	161	355	HORIZONTAL
5	2488.95	53.84	54.00	-0.16	21.37	4.17	28.30	0.00	Average	161	355	HORIZONTAL
6	2493.44	66.73	74.00	-7.27	34.26	4.17	28.30	0.00	Peak	161	355	HORIZONTAL

Item 3, 4 are the fundamental frequency at 2412 MHz.

Channel 6

	Freq	Level	Limit Line	Over Limit	Read Level	Cable Loss	Antenna Factor	Preamp Factor	Remark	A/Pos	T/Pos	Pol/Phase
	MHz	dBuV/m	dBuV/m	dB	dBuV	dB	dB/m	dB		cm	deg	
1	2360.19	53.60	54.00	-0.40	21.56	4.07	27.97	0.00	Average	100	3	VERTICAL
2	2366.92	61.58	74.00	-12.42	29.50	4.07	28.01	0.00	Peak	100	3	VERTICAL
3	2438.44	108.94			76.63	4.13	28.18	0.00	Peak	100	3	VERTICAL
4	2438.92	105.50			73.19	4.13	28.18	0.00	Average	100	3	VERTICAL
5	2486.87	50.37	54.00	-3.63	17.91	4.16	28.30	0.00	Average	100	3	VERTICAL
6	2486.87	61.83	74.00	-12.17	29.37	4.16	28.30	0.00	Peak	100	3	VERTICAL

Item 3, 4 are the fundamental frequency at 2437 MHz.

Channel 11

	Freq	Level	Limit Line	Over Limit	Read Level	Cable Loss	Antenna Factor	Preamp Factor	Remark	A/Pos	T/Pos	Pol/Phase
	MHz	dBuV/m	dBuV/m	dB	dBuV	dB	dB/m	dB		cm	deg	
1	2383.27	66.00	74.00	-8.00	33.87	4.08	28.05	0.00	Peak	159	353	HORIZONTAL
2	2384.55	53.80	54.00	-0.20	21.67	4.08	28.05	0.00	Average	159	353	HORIZONTAL
3	2460.40	109.97			77.61	4.14	28.22	0.00	Average	159	353	HORIZONTAL
4	2461.36	113.70			81.34	4.14	28.22	0.00	Peak	159	353	HORIZONTAL
5	2483.50	52.84	54.00	-1.16	20.42	4.16	28.26	0.00	Average	159	353	HORIZONTAL
6	2485.10	65.07	74.00	-8.93	32.61	4.16	28.30	0.00	Peak	159	353	HORIZONTAL

Item 3, 4 are the fundamental frequency at 2462 MHz.

Temperature	26℃	Humidity	63%
Test Engineer	Mars Lin	Configurations	IEEE 802.11g CH 1, 6, 11 / Chain 1 + Chain 2 (Ant.2)
Test Date	Aug. 19, 2014		

Channel 1

	Freq	Level	Limit Line	Over Limit	Read Level	Cable Loss	Antenna Factor	Preamp Factor	Remark	A/Pos	T/Pos	Pol/Phase
	MHz	dBuV/m	dBuV/m	dB	dBuV	dB	dB/m	dB		cm	deg	
1	2390.00	53.73	54.00	-0.27	21.59	4.09	28.05	0.00	Average	161	349	HORIZONTAL
2	2390.00	65.37	74.00	-8.63	33.23	4.09	28.05	0.00	Peak	161	349	HORIZONTAL
3	2416.17	114.49			82.29	4.11	28.09	0.00	Peak	161	349	HORIZONTAL
4	2417.45	105.61			73.37	4.11	28.13	0.00	Average	161	349	HORIZONTAL

Item 3, 4 are the fundamental frequency at 2412 MHz.

Channel 6

	Freq	Level	Limit Line	Over Limit	Read Level	Cable Loss	Antenna Factor	Preamp Factor	Remark	A/Pos	T/Pos	Pol/Phase
	MHz	dBuV/m	dBuV/m	dB	dBuV	dB	dB/m	dB		cm	deg	
1	2388.40	65.74	74.00	-8.26	33.60	4.09	28.05	0.00	Peak	159	354	HORIZONTAL
2	2389.68	53.72	54.00	-0.28	21.58	4.09	28.05	0.00	Average	159	354	HORIZONTAL
3	2431.55	106.20			73.95	4.12	28.13	0.00	Average	159	354	HORIZONTAL
4	2440.53	118.63			86.32	4.13	28.18	0.00	Peak	159	354	HORIZONTAL
5	2483.50	53.12	54.00	-0.88	20.70	4.16	28.26	0.00	Average	159	354	HORIZONTAL
6	2483.50	65.14	74.00	-8.86	32.72	4.16	28.26	0.00	Peak	159	354	HORIZONTAL

Item 3, 4 are the fundamental frequency at 2437 MHz.

Channel 11

	Freq	Level	Limit Line	Over Limit	Read Level	Cable Loss	Antenna Factor	Preamp Factor	Remark	A/Pos	T/Pos	Pol/Phase
	MHz	dBuV/m	dBuV/m	dB	dBuV	dB	dB/m	dB		cm	deg	
1	2388.72	52.39	54.00	-1.61	20.25	4.09	28.05	0.00	Average	161	357	HORIZONTAL
2	2388.72	63.87	74.00	-10.13	31.73	4.09	28.05	0.00	Peak	161	357	HORIZONTAL
3	2455.91	114.11			81.75	4.14	28.22	0.00	Peak	161	357	HORIZONTAL
4	2456.55	102.13			69.77	4.14	28.22	0.00	Average	161	357	HORIZONTAL
5	2483.50	53.65	54.00	-0.35	21.23	4.16	28.26	0.00	Average	161	357	HORIZONTAL
6	2483.50	65.26	74.00	-8.74	32.84	4.16	28.26	0.00	Peak	161	357	HORIZONTAL

Item 3, 4 are the fundamental frequency at 2462 MHz.

Note:

Emission level (dBuV/m) = 20 log Emission level (uV/m).

Corrected Reading: Antenna Factor + Cable Loss + Read Level - Preamp Factor = Level.

Temperature	26°C	Humidity	63%
Test Engineer	Mars Lin	Configurations	IEEE 802.11n MCS0 HT20 CH 1, 6, 11 / Chain 1 + Chain 2 (Ant.3)
Test Date	Aug. 11, 2014		

Channel 1

	Freq	Level	Limit Line	Over Limit	Read Level	Cable Loss	Antenna Factor	Preamp Factor	A/Pos	T/Pos	Pol/Phase	Remark
	MHz	dBuV/m	dBuV/m	dB	dBuV	dB	dB/m	dB	cm	deg		
1	2390.00	53.26	54.00	-0.74	21.68	3.68	27.90	0.00	191	2	HORIZONTAL	Average
2	2390.00	64.47	74.00	-9.53	32.89	3.68	27.90	0.00	191	2	HORIZONTAL	Peak
3	2417.10	102.31			70.72	3.69	27.90	0.00	191	2	HORIZONTAL	Average
4	2417.10	114.88			83.29	3.69	27.90	0.00	191	2	HORIZONTAL	Peak
5	2483.50	53.86	54.00	-0.14	22.23	3.73	27.90	0.00	191	2	HORIZONTAL	Average
6	2488.90	66.62	74.00	-7.38	34.99	3.73	27.90	0.00	191	2	HORIZONTAL	Peak

Item 3, 4 are the fundamental frequency at 2412 MHz.

Channel 6

	Freq	Level	Limit Line	Over Limit	Read Level	Cable Loss	Antenna Factor	Preamp Factor	A/Pos	T/Pos	Pol/Phase	Remark
	MHz	dBuV/m	dBuV/m	dB	dBuV	dB	dB/m	dB	cm	deg		
1	2319.80	53.50	54.00	-0.50	21.96	3.64	27.90	0.00	100	359	VERTICAL	Average
2	2390.00	64.71	74.00	-9.29	33.13	3.68	27.90	0.00	100	359	VERTICAL	Peak
3	2443.00	101.94			70.33	3.71	27.90	0.00	100	359	VERTICAL	Average
4	2443.00	114.43			82.82	3.71	27.90	0.00	100	359	VERTICAL	Peak
5	2483.50	52.41	54.00	-1.59	20.78	3.73	27.90	0.00	100	359	VERTICAL	Average
6	2483.50	64.47	74.00	-9.53	32.84	3.73	27.90	0.00	100	359	VERTICAL	Peak

Item 3, 4 are the fundamental frequency at 2437 MHz.

Channel 11

	Freq	Level	Limit Line	Over Limit	Read Level	Cable Loss	Antenna Factor	Preamp Factor	A/Pos	T/Pos	Pol/Phase	Remark
	MHz	dBuV/m	dBuV/m	dB	dBuV	dB	dB/m	dB	cm	deg		
1	2455.70	102.69			71.07	3.72	27.90	0.00	187	1	HORIZONTAL	Average
2	2456.30	115.18			83.56	3.72	27.90	0.00	187	1	HORIZONTAL	Peak
3	2483.50	53.83	54.00	-0.17	22.20	3.73	27.90	0.00	187	1	HORIZONTAL	Average
4	2483.50	66.90	74.00	-7.10	35.27	3.73	27.90	0.00	187	1	HORIZONTAL	Peak

Item 1, 2 are the fundamental frequency at 2462 MHz.

Temperature	26℃	Humidity	63%
Test Engineer	Mars Lin	Configurations	IEEE 802.11n MCS0 HT40 CH 3, 6, 9 / Chain 1 + Chain 2 (Ant.3)
Test Date	Aug. 11, 2014		

Channel 3

	Freq	Level	Limit Line	Over Limit	Read Level	Cable Loss	Antenna Factor	Preamp Factor	A/Pos	T/Pos	Pol/Phase	Remark
	MHz	dBuV/m	dBuV/m	dB	dBuV	dB	dB/m	dB	cm	deg		
1	2389.70	72.12	74.00	-1.88	40.54	3.68	27.90	0.00	193	359	HORIZONTAL	Peak
2	2390.00	53.29	54.00	-0.71	21.71	3.68	27.90	0.00	193	359	HORIZONTAL	Average
3	2437.90	108.63			77.02	3.71	27.90	0.00	193	359	HORIZONTAL	Peak
4	2439.10	95.34			63.73	3.71	27.90	0.00	193	359	HORIZONTAL	Average

Item 3, 4 are the fundamental frequency at 2422 MHz.

Channel 6

	Freq	Level	Limit Line	Over Limit	Read Level	Cable Loss	Antenna Factor	Preamp Factor	A/Pos	T/Pos	Pol/Phase	Remark
	MHz	dBuV/m	dBuV/m	dB	dBuV	dB	dB/m	dB	cm	deg		
1	2390.00	53.28	54.00	-0.72	21.70	3.68	27.90	0.00	189	358	HORIZONTAL	Average
2	2390.00	67.82	74.00	-6.18	36.24	3.68	27.90	0.00	189	358	HORIZONTAL	Peak
3	2451.70	112.83			81.22	3.71	27.90	0.00	189	358	HORIZONTAL	Peak
4	2452.90	99.12			67.51	3.71	27.90	0.00	189	358	HORIZONTAL	Average
5	2483.50	53.70	54.00	-0.30	22.07	3.73	27.90	0.00	189	358	HORIZONTAL	Average
6	2483.50	68.00	74.00	-6.00	36.37	3.73	27.90	0.00	189	358	HORIZONTAL	Peak

Item 3, 4 are the fundamental frequency at 2437 MHz.

Channel 9

	Freq	Level	Limit Line	Over Limit	Read Level	Cable Loss	Antenna Factor	Preamp Factor	A/Pos	T/Pos	Pol/Phase	Remark
	MHz	dBuV/m	dBuV/m	dB	dBuV	dB	dB/m	dB	cm	deg		
1	2445.70	108.71			77.10	3.71	27.90	0.00	190	1	HORIZONTAL	Peak
2	2465.50	95.36			63.74	3.72	27.90	0.00	190	1	HORIZONTAL	Average
3	2483.50	53.79	54.00	-0.21	22.16	3.73	27.90	0.00	190	1	HORIZONTAL	Average
4	2483.50	73.08	74.00	-0.92	41.45	3.73	27.90	0.00	190	1	HORIZONTAL	Peak

Item 1, 2 are the fundamental frequency at 2452 MHz.

Note:

Emission level (dBuV/m) = 20 log Emission level (uV/m).

Corrected Reading: Antenna Factor + Cable Loss + Read Level - Preamp Factor = Level.

Temperature	26℃	Humidity	63%
Test Engineer	Mars Lin	Configurations	IEEE 802.11b CH 1, 6, 11 / Chain 1 + Chain 2 (Ant.3)
Test Date	Aug. 11, 2014		

Channel 1

	Freq	Level	Limit Line	Over Limit	Read Level	Cable Loss	Antenna Factor	Preamp Factor	A/Pos	T/Pos	Pol/Phase	Remark
	MHz	dBuV/m	dBuV/m	dB	dBuV	dB	dB/m	dB	cm	deg		
1	2390.00	50.94	54.00	-3.06	19.36	3.68	27.90	0.00	192	1	HORIZONTAL	Average
2	2390.00	63.56	74.00	-10.44	31.98	3.68	27.90	0.00	192	1	HORIZONTAL	Peak
3	2413.20	114.07			82.48	3.69	27.90	0.00	192	1	HORIZONTAL	Peak
4	2413.80	111.42			79.83	3.69	27.90	0.00	192	1	HORIZONTAL	Average
5	2487.40	66.11	74.00	-7.89	34.48	3.73	27.90	0.00	192	1	HORIZONTAL	Peak
6	2489.20	53.83	54.00	-0.17	22.20	3.73	27.90	0.00	192	1	HORIZONTAL	Average

Item 3, 4 are the fundamental frequency at 2412 MHz.

Channel 6

	Freq	Level	Limit Line	Over Limit	Read Level	Cable Loss	Antenna Factor	Preamp Factor	A/Pos	T/Pos	Pol/Phase	Remark
	MHz	dBuV/m	dBuV/m	dB	dBuV	dB	dB/m	dB	cm	deg		
1	2390.00	52.29	54.00	-1.71	20.71	3.68	27.90	0.00	191	1	HORIZONTAL	Average
2	2390.00	64.82	74.00	-9.18	33.24	3.68	27.90	0.00	191	1	HORIZONTAL	Peak
3	2438.80	112.81			81.20	3.71	27.90	0.00	191	1	HORIZONTAL	Average
4	2440.00	115.55			83.94	3.71	27.90	0.00	191	1	HORIZONTAL	Peak
5	2483.50	53.88	54.00	-0.12	22.25	3.73	27.90	0.00	191	1	HORIZONTAL	Average
6	2483.50	65.85	74.00	-8.15	34.22	3.73	27.90	0.00	191	1	HORIZONTAL	Peak

Item 3, 4 are the fundamental frequency at 2437 MHz.

Channel 11

	Freq	Level	Limit Line	Over Limit	Read Level	Cable Loss	Antenna Factor	Preamp Factor	A/Pos	T/Pos	Pol/Phase	Remark
	MHz	dBuV/m	dBuV/m	dB	dBuV	dB	dB/m	dB	cm	deg		
1	2359.70	53.76	54.00	-0.24	22.20	3.66	27.90	0.00	100	360	VERTICAL	Average
2	2360.00	62.13	74.00	-11.87	30.57	3.66	27.90	0.00	100	360	VERTICAL	Peak
3	2460.20	106.87			75.25	3.72	27.90	0.00	100	360	VERTICAL	Average
4	2461.10	109.57			77.95	3.72	27.90	0.00	100	360	VERTICAL	Peak
5	2483.50	72.37	74.00	-1.63	40.74	3.73	27.90	0.00	100	360	VERTICAL	Peak
6	2486.50	46.32	54.00	-7.68	14.69	3.73	27.90	0.00	100	360	VERTICAL	Average

Item 3, 4 are the fundamental frequency at 2462 MHz.

Temperature	26℃	Humidity	63%
Test Engineer	Mars Lin	Configurations	IEEE 802.11g CH 1, 6, 11 / Chain 1 + Chain 2 (Ant.3)
Test Date	Aug. 11, 2014		

Channel 1

	Freq	Level	Limit Line	Over Limit	Read Level	Cable Loss	Antenna Factor	Preamp Factor	A/Pos	T/Pos	Pol/Phase	Remark
	MHz	dBuV/m	dBuV/m	dB	dBuV	dB	dB/m	dB	cm	deg		
1	2390.00	52.93	54.00	-1.07	21.35	3.68	27.90	0.00	192	360	HORIZONTAL	Average
2	2390.00	66.39	74.00	-7.61	34.81	3.68	27.90	0.00	192	360	HORIZONTAL	Peak
3	2415.90	102.72			71.13	3.69	27.90	0.00	192	360	HORIZONTAL	Average
4	2416.20	115.15			83.56	3.69	27.90	0.00	192	360	HORIZONTAL	Peak
5	2483.50	53.22	54.00	-0.78	21.59	3.73	27.90	0.00	192	360	HORIZONTAL	Average
6	2483.50	65.95	74.00	-8.05	34.32	3.73	27.90	0.00	192	360	HORIZONTAL	Peak

Item 3, 4 are the fundamental frequency at 2412 MHz.

Channel 6

	Freq	Level	Limit Line	Over Limit	Read Level	Cable Loss	Antenna Factor	Preamp Factor	A/Pos	T/Pos	Pol/Phase	Remark
	MHz	dBuV/m	dBuV/m	dB	dBuV	dB	dB/m	dB	cm	deg		
1	2390.00	52.68	54.00	-1.32	21.10	3.68	27.90	0.00	191	1	HORIZONTAL	Average
2	2390.00	63.21	74.00	-10.79	31.63	3.68	27.90	0.00	191	1	HORIZONTAL	Peak
3	2440.90	107.68			76.07	3.71	27.90	0.00	191	1	HORIZONTAL	Average
4	2441.20	117.61			86.00	3.71	27.90	0.00	191	1	HORIZONTAL	Peak
5	2483.50	53.66	54.00	-0.34	22.03	3.73	27.90	0.00	191	1	HORIZONTAL	Average
6	2488.30	67.05	74.00	-6.95	35.42	3.73	27.90	0.00	191	1	HORIZONTAL	Peak

Item 3, 4 are the fundamental frequency at 2437 MHz.

Channel 11

	Freq	Level	Limit Line	Over Limit	Read Level	Cable Loss	Antenna Factor	Preamp Factor	A/Pos	T/Pos	Pol/Phase	Remark
	MHz	dBuV/m	dBuV/m	dB	dBuV	dB	dB/m	dB	cm	deg		
1	2455.59	115.97			84.35	3.72	27.90	0.00	191	360	HORIZONTAL	Peak
2	2455.70	105.72			74.10	3.72	27.90	0.00	191	360	HORIZONTAL	Average
3	2483.50	53.14	54.00	-0.86	21.51	3.73	27.90	0.00	191	360	HORIZONTAL	Average
4	2483.50	63.82	74.00	-10.18	32.19	3.73	27.90	0.00	191	360	HORIZONTAL	Peak

Item 1, 2 are the fundamental frequency at 2462 MHz.

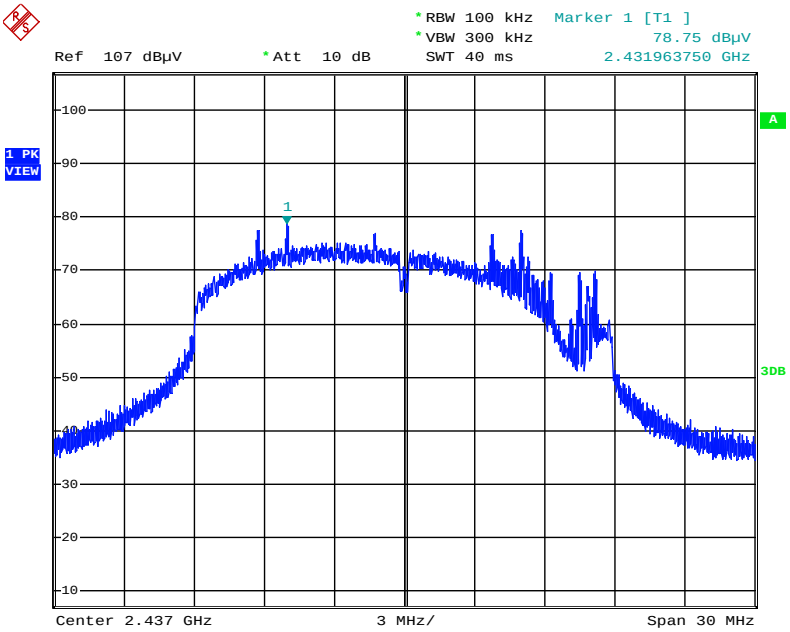
Note:

Emission level (dBuV/m) = 20 log Emission level (uV/m).

Corrected Reading: Antenna Factor + Cable Loss + Read Level - Preamp Factor = Level.

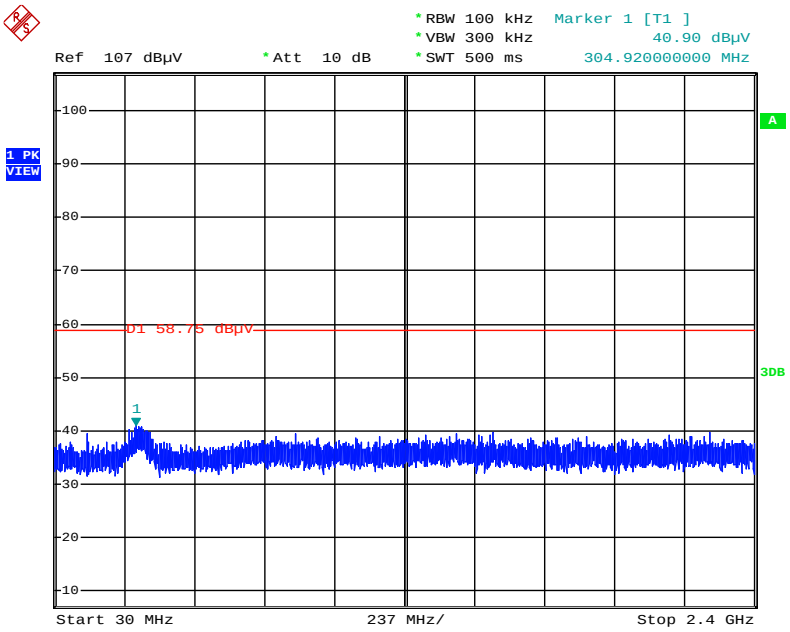
For Emission not in Restricted Band

Plot on Configuration IEEE 802.11n MCS0 HT20 / Reference Level (Ant.1)



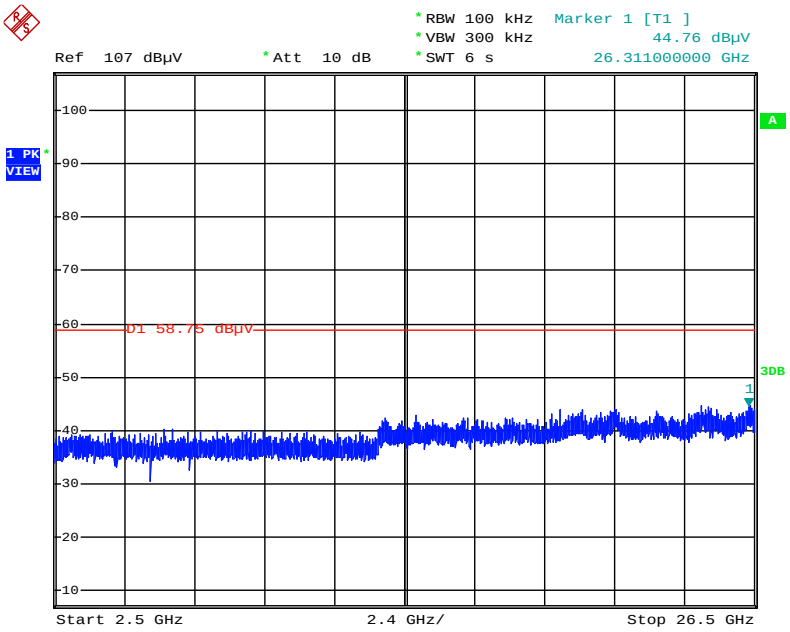
Date: 30.AUG.2014 12:58:13

Plot on Configuration IEEE 802.11n MCS0 HT20 / CH 1 / 30MHz~2400MHz (down 20dBc) (Ant.1)



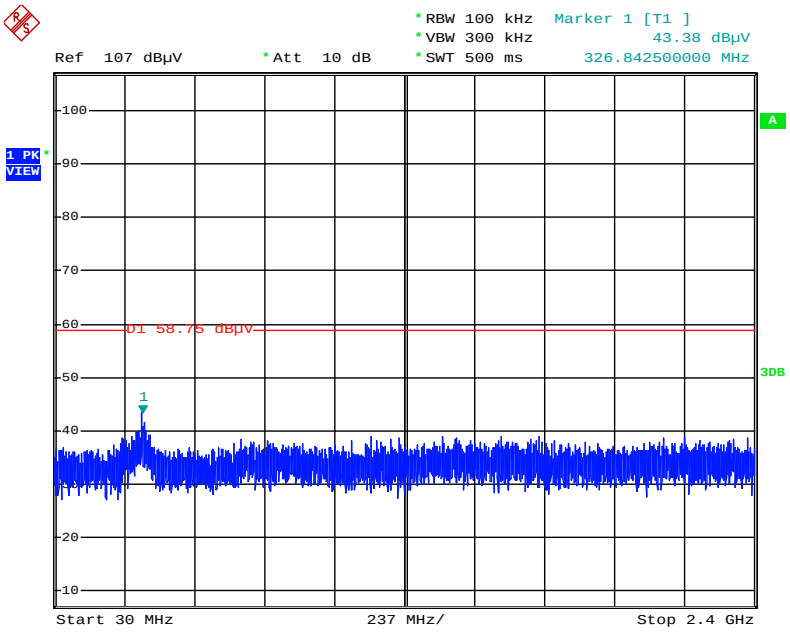
Date: 30.AUG.2014 12:59:36

Plot on Configuration IEEE 802.11n MCS0 HT20 / CH 1 / 2500MHz~26500MHz (down 20dBc) (Ant.1)



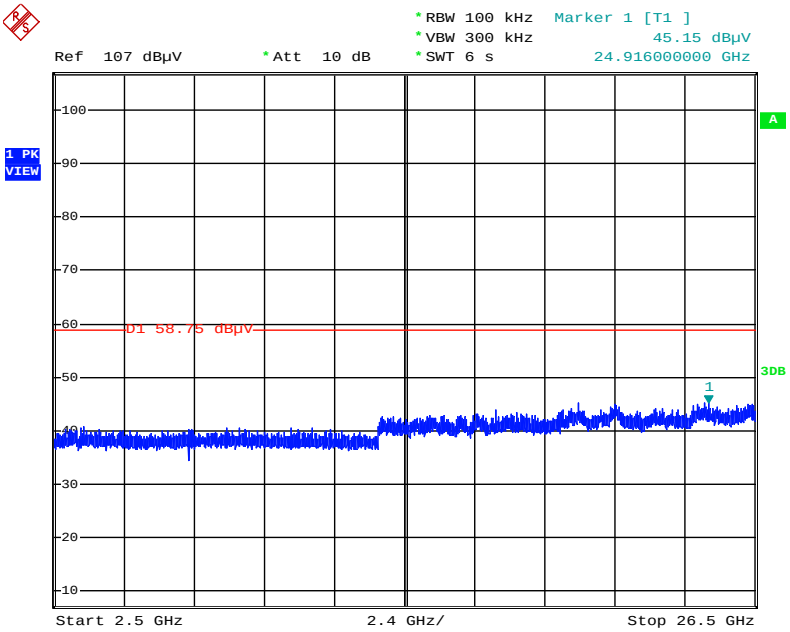
Date: 30.AUG.2014 13:00:37

Plot on Configuration IEEE 802.11n MCS0 HT20 / CH 11 / 30MHz~2400MHz (down 20dBc) (Ant.1)



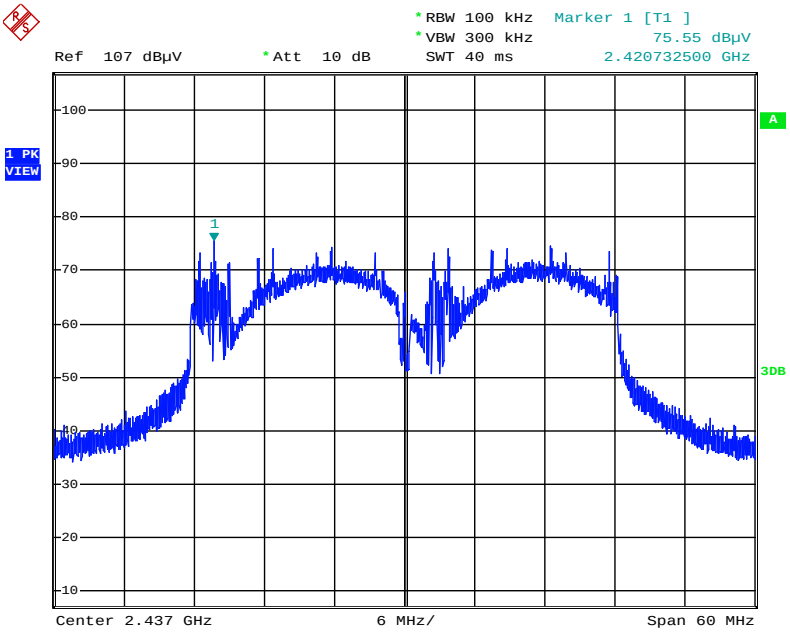
Date: 30.AUG.2014 13:11:51

Plot on Configuration IEEE 802.11n MCS0 HT20 / CH 11 / 2500MHz~26500MHz (down 20dBc) (Ant.1)



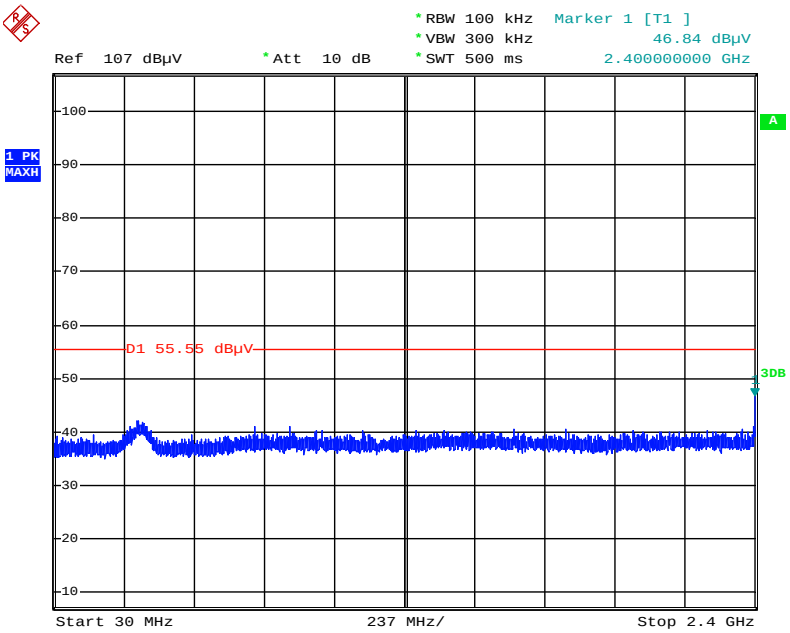
Date: 30.AUG.2014 13:03:37

Plot on Configuration IEEE 802.11n MCS0 HT40 / Reference Level (Ant.1)



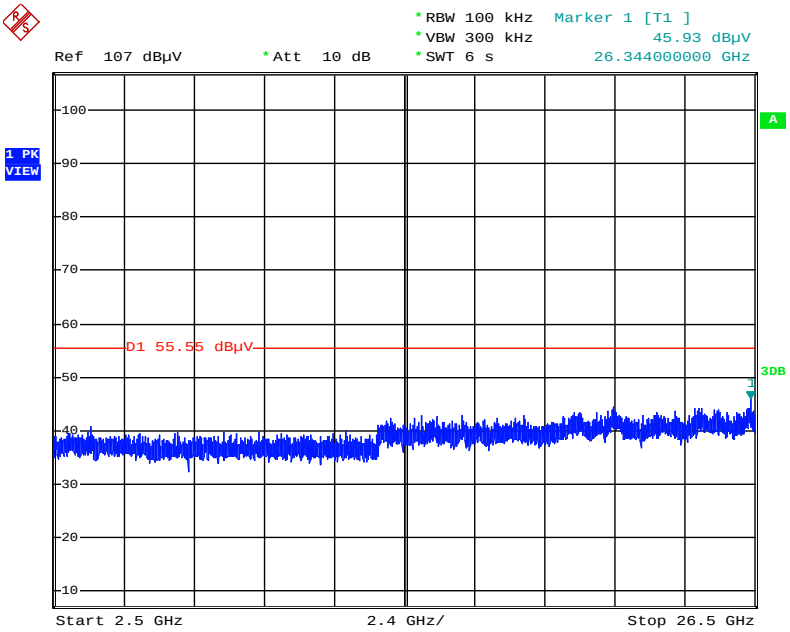
Date: 30.AUG.2014 13:31:18

Plot on Configuration IEEE 802.11n MCS0 HT40 / CH 3 / 30MHz~2400MHz (down 30dBc)



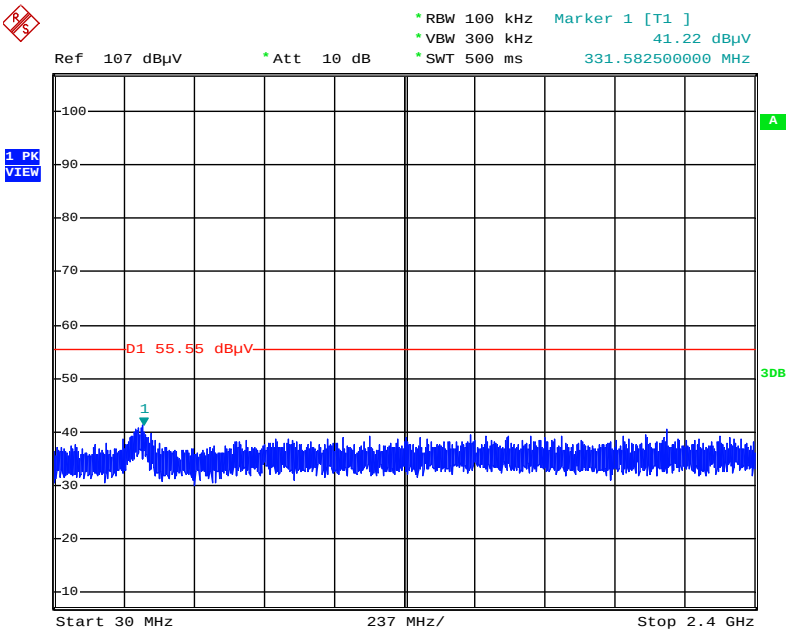
Date: 30.AUG.2014 13:51:08

Plot on Configuration IEEE 802.11n MCS0 HT40 / CH 3 / 2500MHz~26500MHz (down 20dBc) (Ant.1)



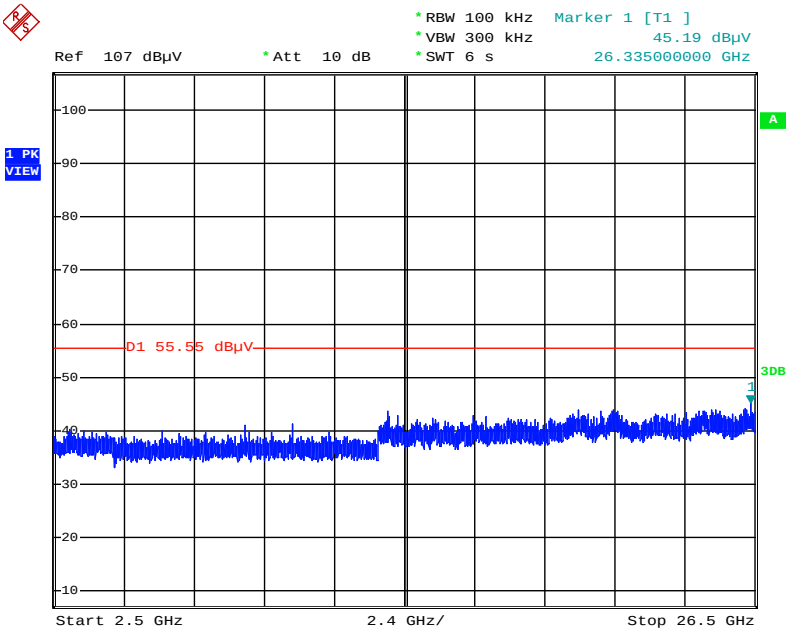
Date: 30.AUG.2014 13:53:33

Plot on Configuration IEEE 802.11n MCS0 HT40 / CH 9 / 30MHz~2400MHz (down 20dBc) (Ant.1)



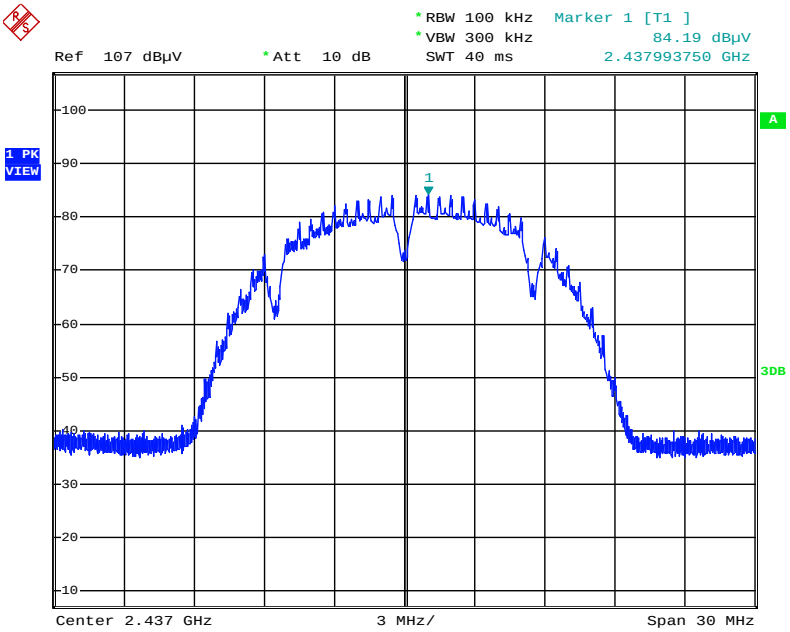
Date: 30.AUG.2014 13:56:40

Plot on Configuration IEEE 802.11n MCS0 HT40 / CH 9 / 2500MHz~26500MHz (down 20dBc) (Ant.1)



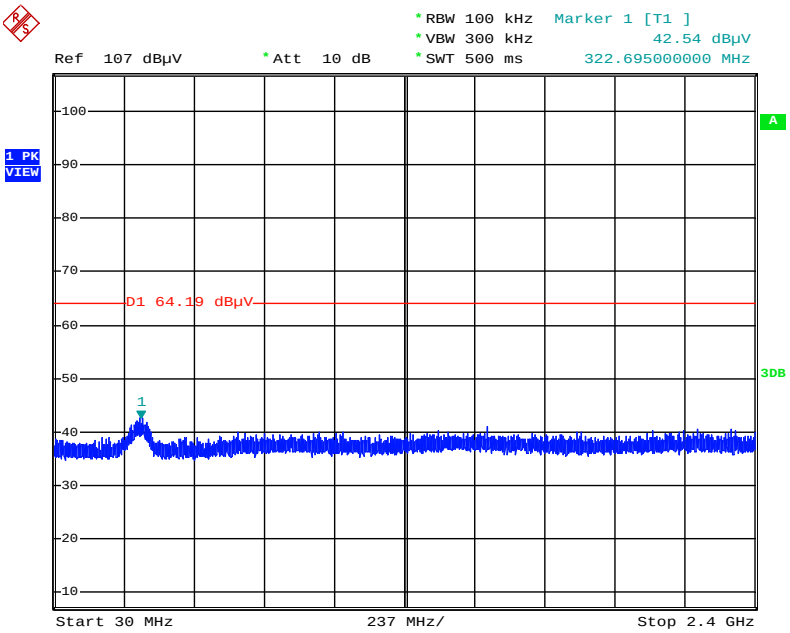
Date: 30.AUG.2014 13:55:12

Plot on Configuration IEEE 802.11b / Reference Level (Ant.1)



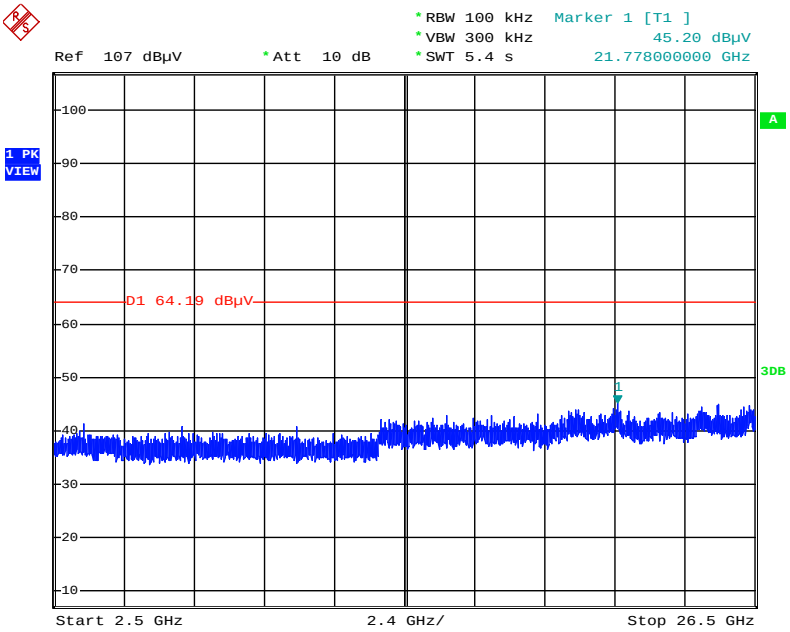
Date: 30.AUG.2014 12:27:58

Plot on Configuration IEEE 802.11b / CH 1 / 30MHz~2400MHz (down 20dBc) (Ant.1)



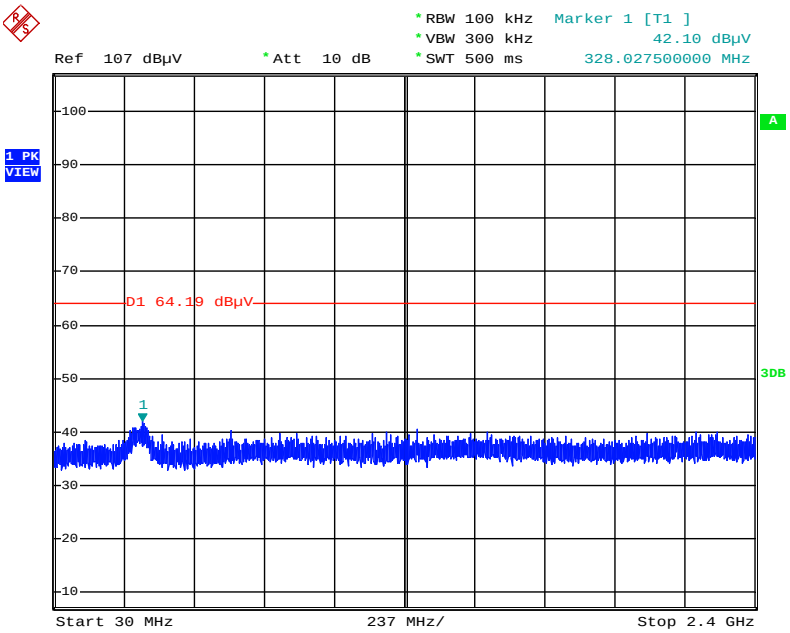
Date: 30.AUG.2014 12:44:19

Plot on Configuration IEEE 802.11b / CH 1 / 2500MHz~26500MHz (down 20dBc) (Ant.1)



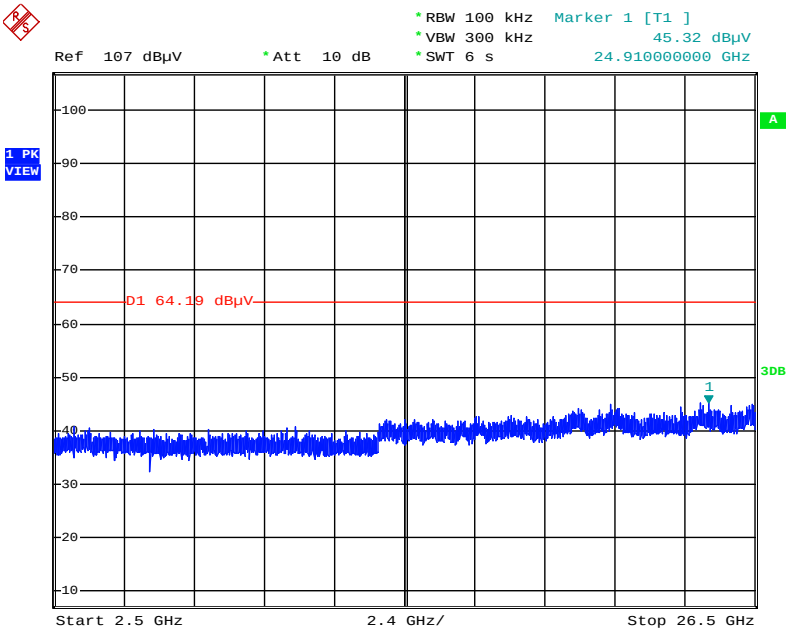
Date: 30.AUG.2014 12:42:31

Plot on Configuration IEEE 802.11b / CH 11 / 30MHz~2400MHz (down 20dBc) (Ant.1)



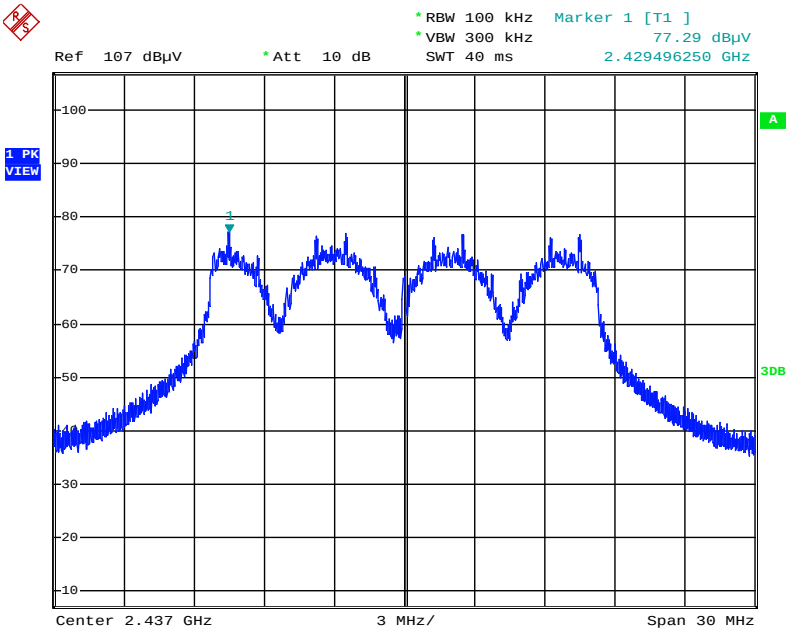
Date: 30.AUG.2014 12:45:09

Plot on Configuration IEEE 802.11b / CH 11 / 2500MHz~26500MHz (down 20dBc) (Ant.1)



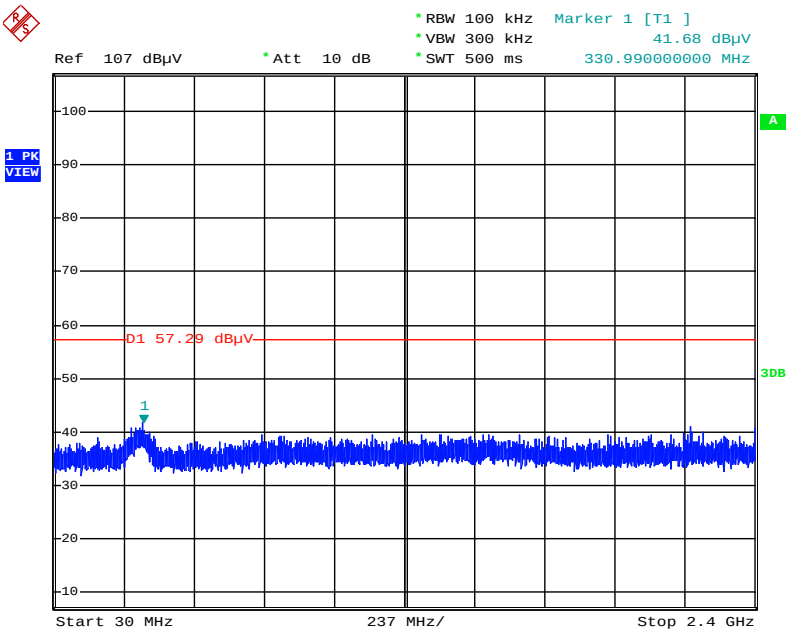
Date: 30.AUG.2014 12:46:00

Plot on Configuration IEEE 802.11g / Reference Level (Ant.1)



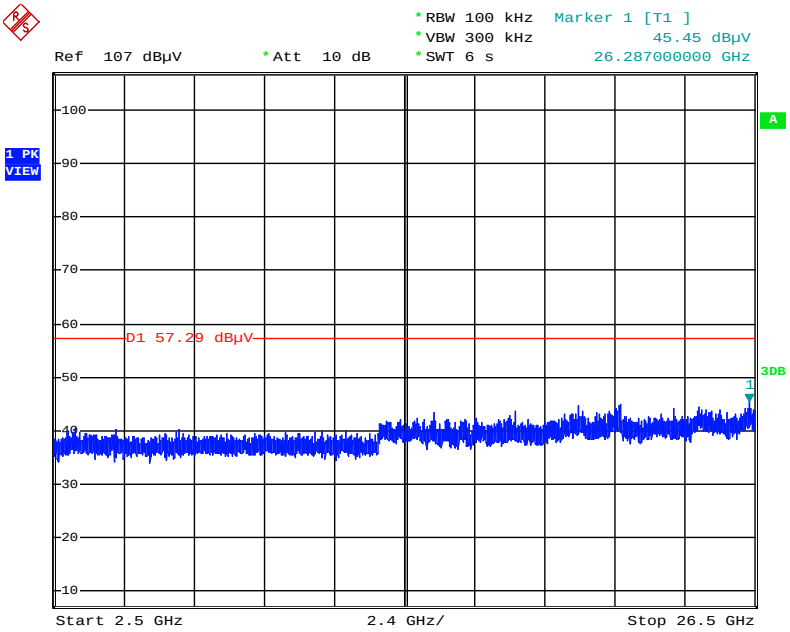
Date: 30.AUG.2014 12:49:31

Plot on Configuration IEEE 802.11g / CH 1 / 30MHz~2400MHz (down 20dBc) (Ant.1)



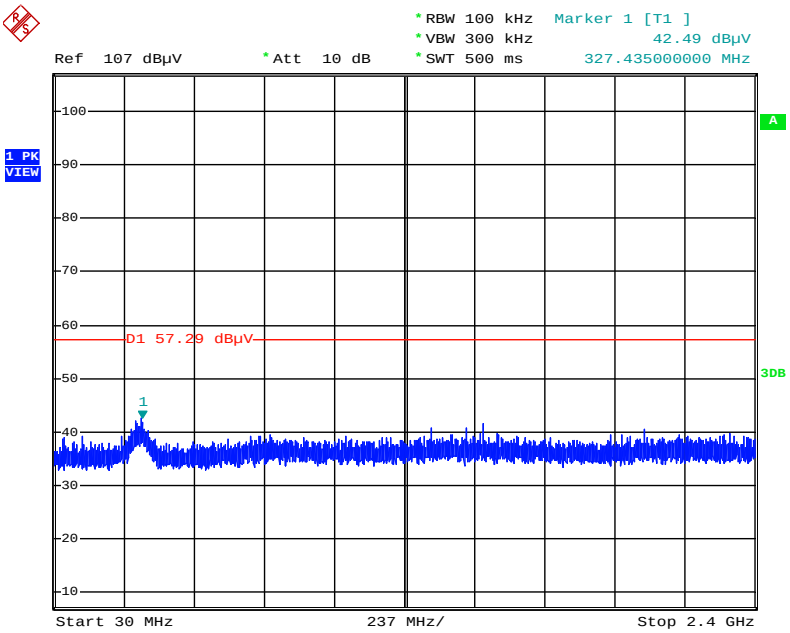
Date: 30.AUG.2014 12:51:28

Plot on Configuration IEEE 802.11g / CH 1 / 2500MHz~26500MHz (down 20dBc) (Ant.1)



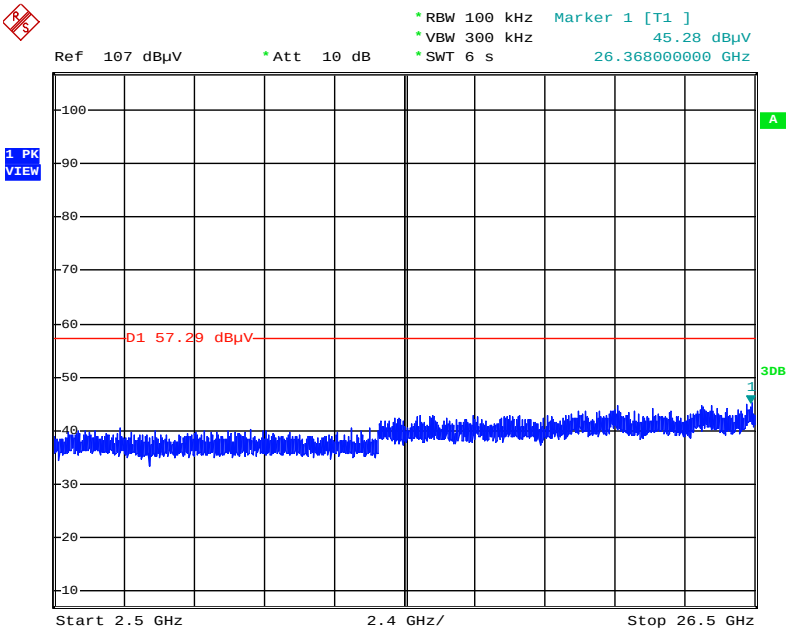
Date: 30.AUG.2014 12:52:46

Plot on Configuration IEEE 802.11g / CH 11 / 30MHz~2400MHz (down 20dBc) (Ant.1)



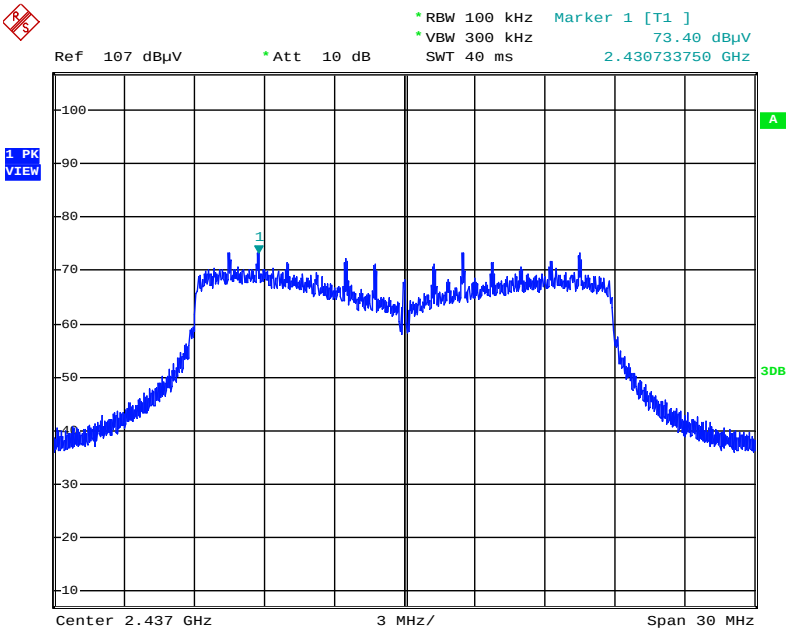
Date: 30.AUG.2014 12:55:15

Plot on Configuration IEEE 802.11g / CH 11 / 2500MHz~26500MHz (down 20dBc) (Ant.1)



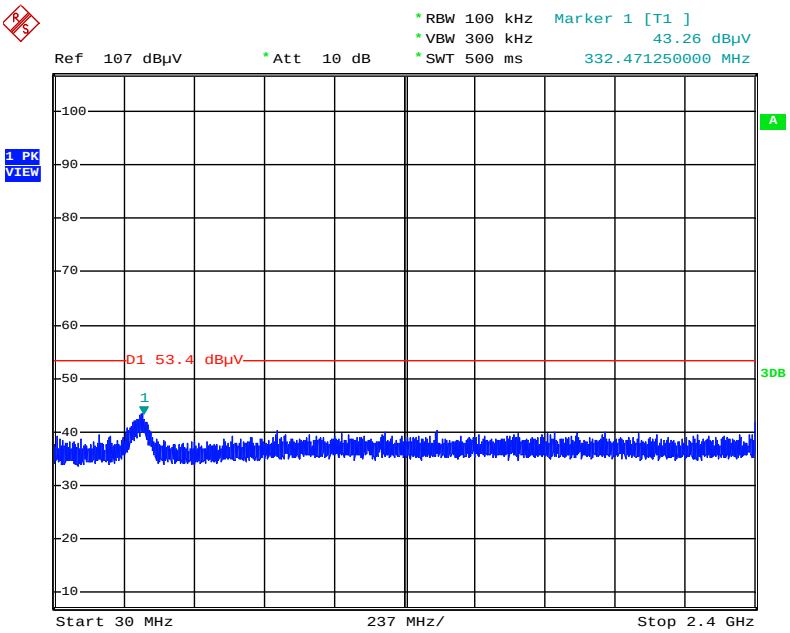
Date: 30.AUG.2014 12:53:49

Plot on Configuration IEEE 802.11n MCS0 HT20 / Reference Level (Ant.2)



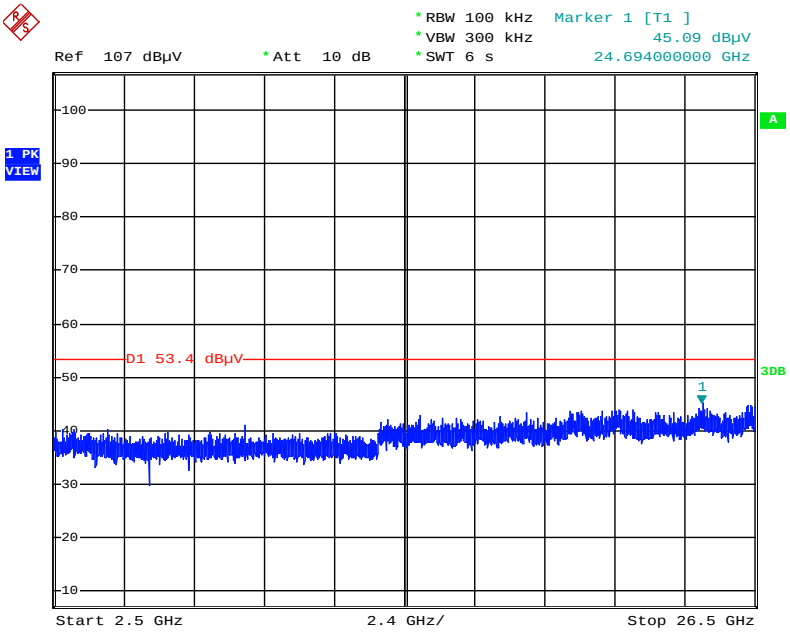
Date: 30.AUG.2014 15:21:53

Plot on Configuration IEEE 802.11n MCS0 HT20 / CH 1 / 30MHz~2400MHz (down 20dBc) (Ant.2)



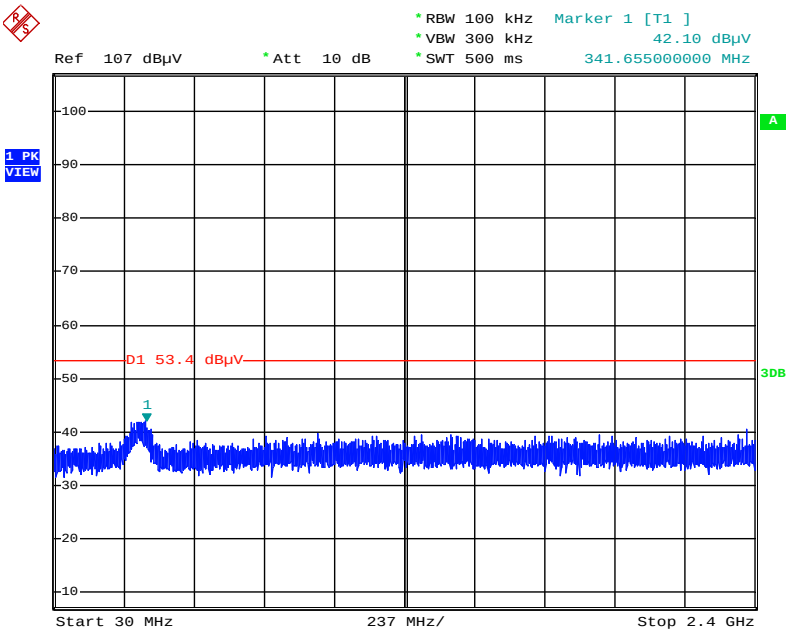
Date: 30.AUG.2014 15:24:43

Plot on Configuration IEEE 802.11n MCS0 HT20 / CH 1 / 2500MHz~26500MHz (down 20dBc) (Ant.2)



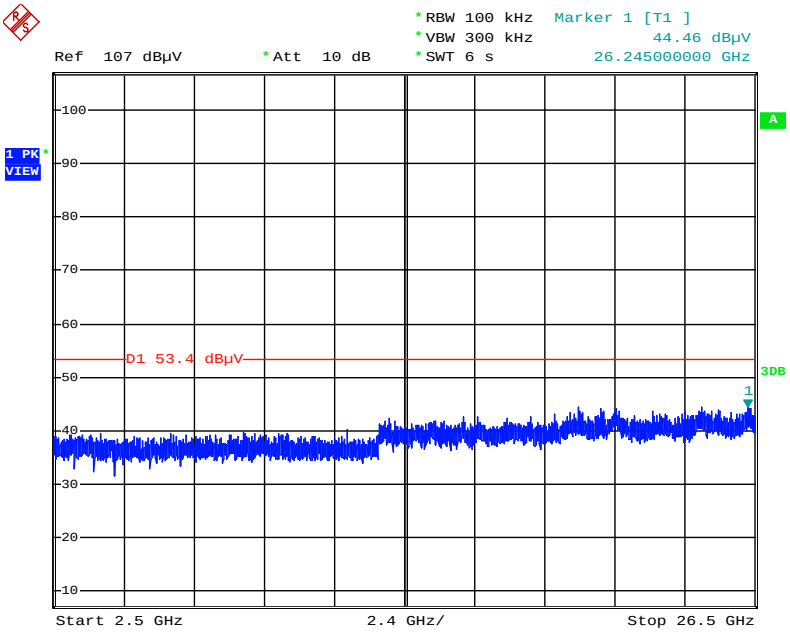
Date: 30.AUG.2014 15:25:44

Plot on Configuration IEEE 802.11n MCS0 HT20 / CH 11 / 30MHz~2400MHz (down 20dBc) (Ant.2)



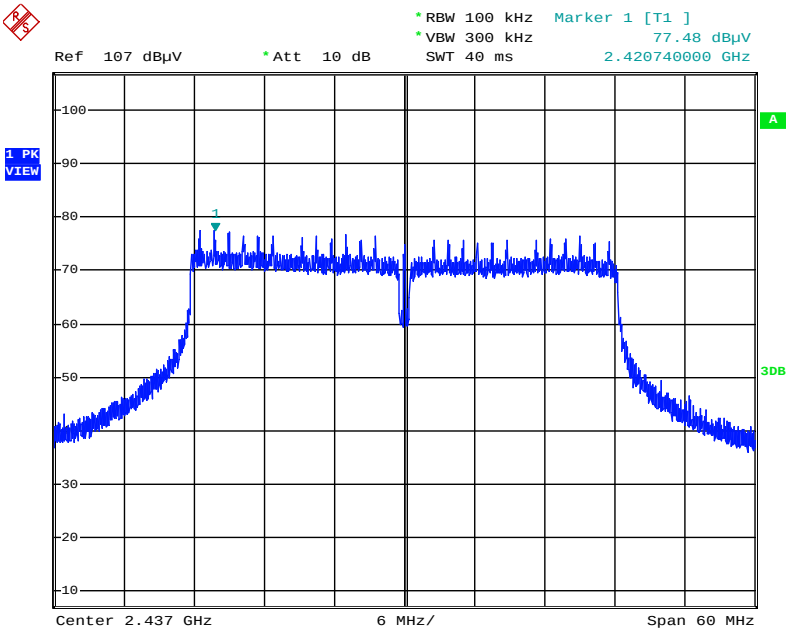
Date: 30.AUG.2014 15:27:47

Plot on Configuration IEEE 802.11n MCS0 HT20 / CH 11 / 2500MHz~26500MHz (down 20dBc) (Ant.2)



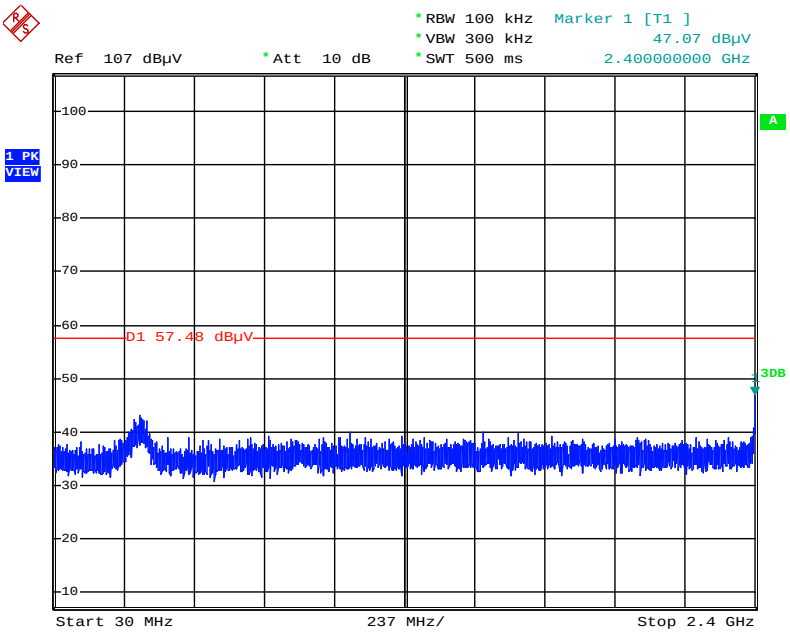
Date: 30.AUG.2014 15:26:47

Plot on Configuration IEEE 802.11n MCS0 HT40 / Reference Level (Ant.2)



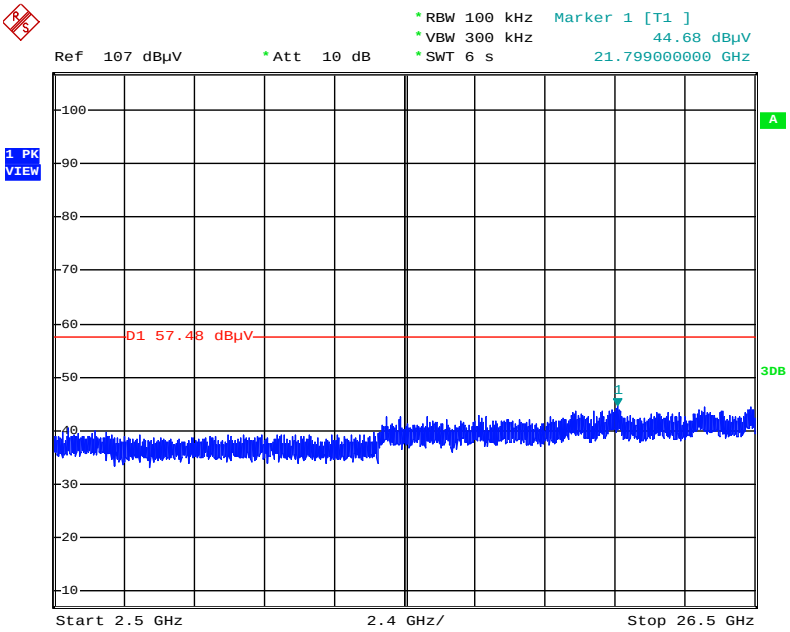
Date: 30.AUG.2014 15:34:22

Plot on Configuration IEEE 802.11n MCS0 HT40 / CH 3 / 30MHz~2400MHz (down 20dBc)



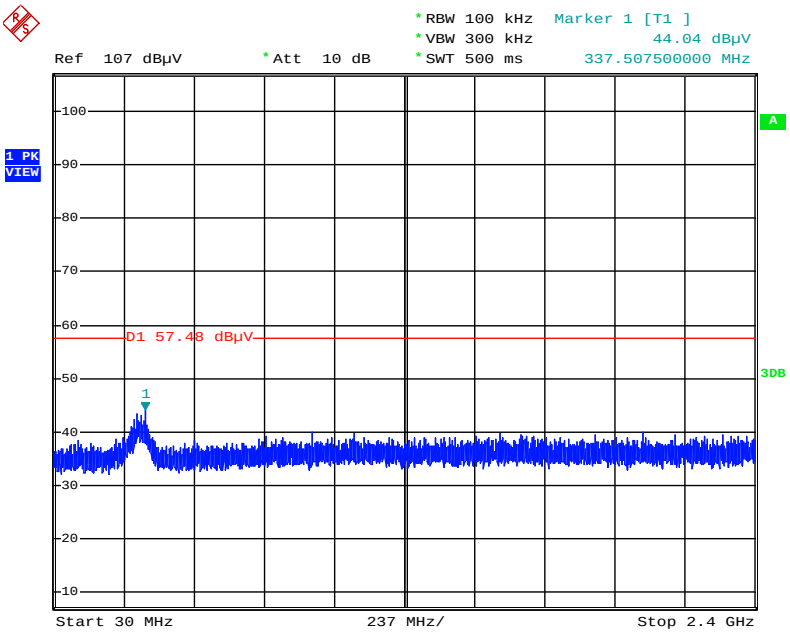
Date: 30.AUG.2014 15:37:54

Plot on Configuration IEEE 802.11n MCS0 HT40 / CH 3 / 2500MHz~26500MHz (down 20dBc) (Ant.2)



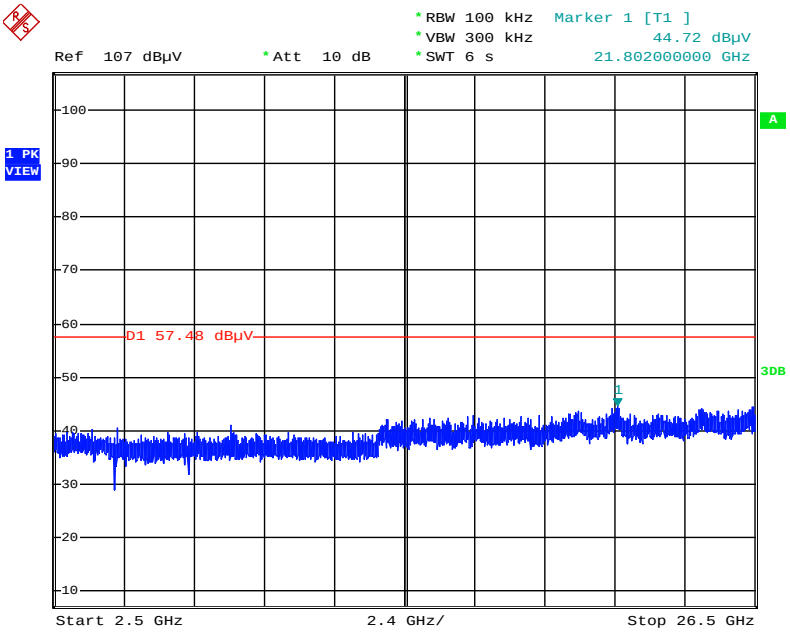
Date: 30.AUG.2014 15:39:21

Plot on Configuration IEEE 802.11n MCS0 HT40 / CH 9 / 30MHz~2400MHz (down 20dBc) (Ant.2)



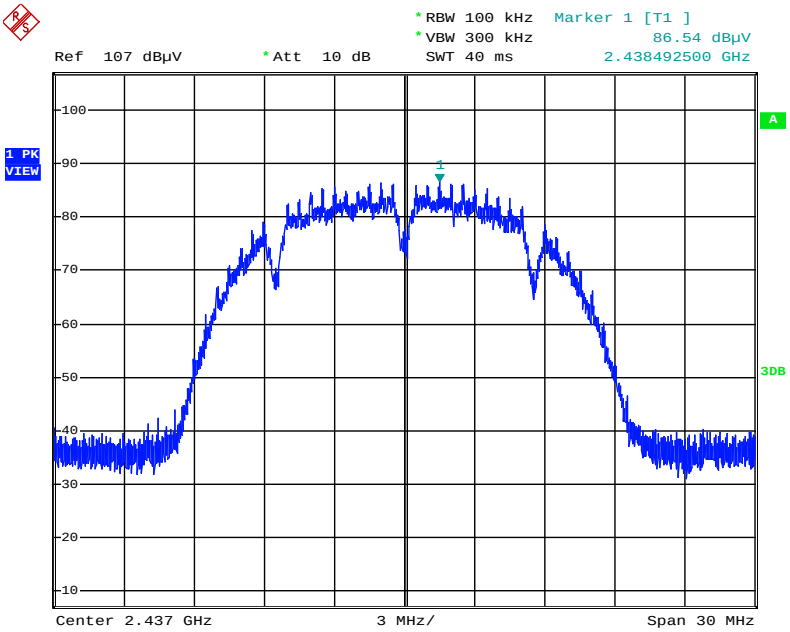
Date: 30.AUG.2014 15:41:56

Plot on Configuration IEEE 802.11n MCS0 HT40 / CH 9 / 2500MHz~26500MHz (down 20dBc) (Ant.2)



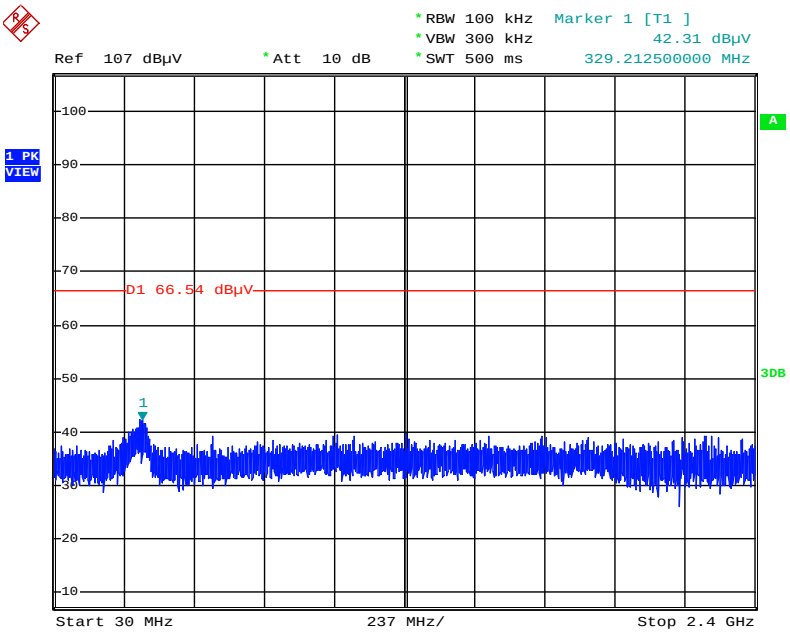
Date: 30.AUG.2014 15:40:28

Plot on Configuration IEEE 802.11b / Reference Level (Ant.2)



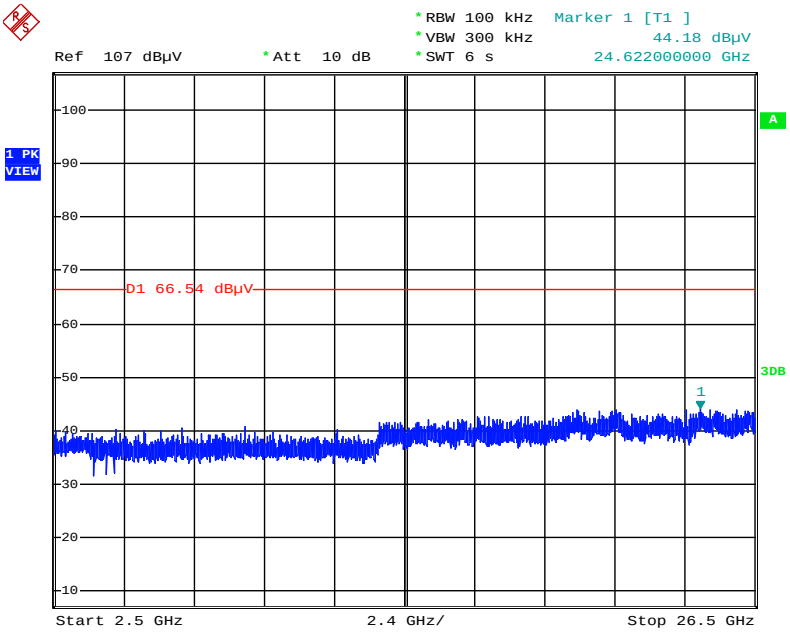
Date: 30.AUG.2014 14:59:40

Plot on Configuration IEEE 802.11b / CH 1 / 30MHz~2400MHz (down 20dBc) (Ant.2)



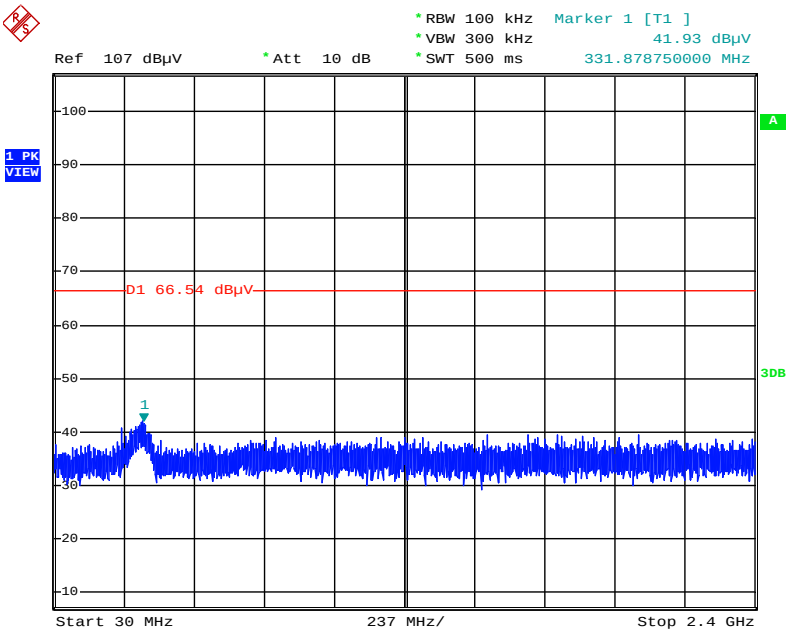
Date: 30.AUG.2014 15:01:38

Plot on Configuration IEEE 802.11b / CH 1 / 2500MHz~26500MHz (down 20dBc) (Ant.2)



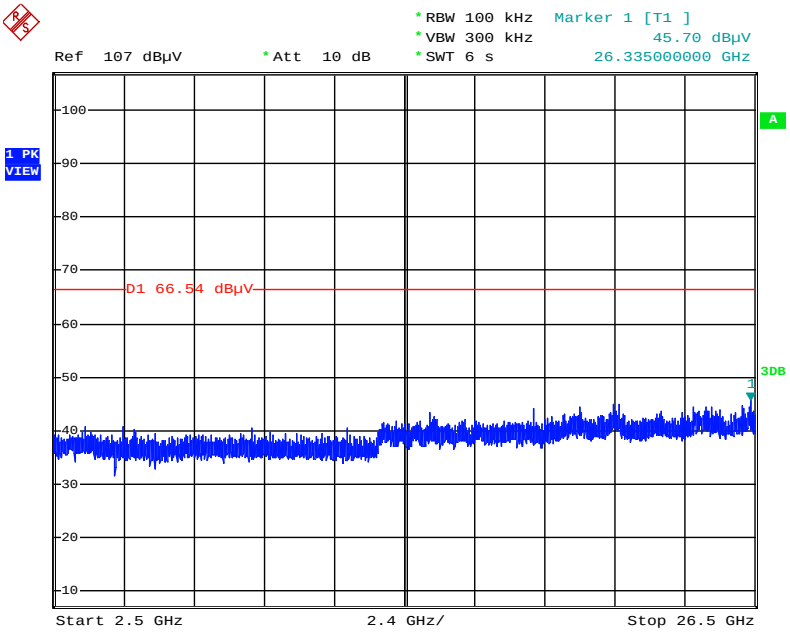
Date: 30.AUG.2014 15:05:14

Plot on Configuration IEEE 802.11b / CH 11 / 30MHz~2400MHz (down 20dBc) (Ant.2)



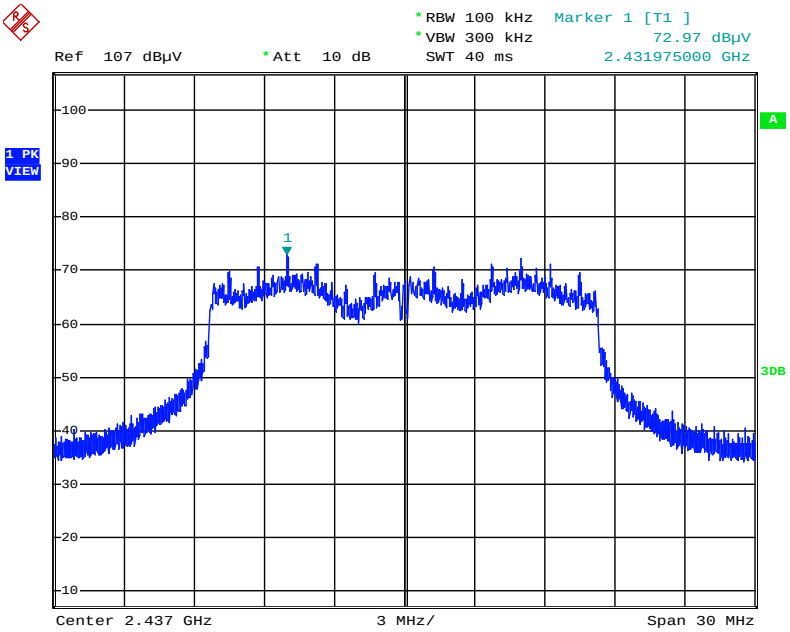
Date: 30.AUG.2014 15:07:57

Plot on Configuration IEEE 802.11b / CH 11 / 2500MHz~26500MHz (down 20dBc) (Ant.2)



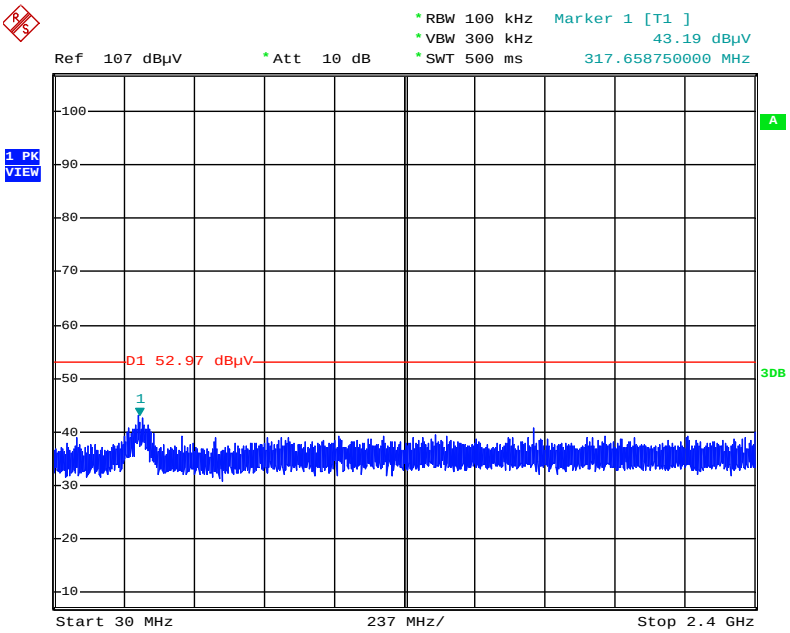
Date: 30.AUG.2014 15:06:04

Plot on Configuration IEEE 802.11g / Reference Level (Ant.2)



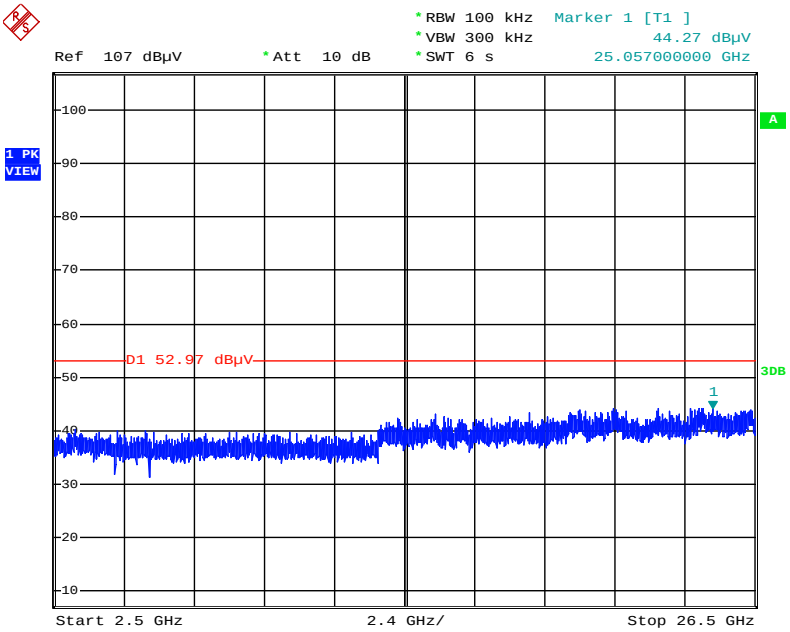
Date: 30.AUG.2014 15:10:29

Plot on Configuration IEEE 802.11g / CH 1 / 30MHz~2400MHz (down 20dBc) (Ant.2)



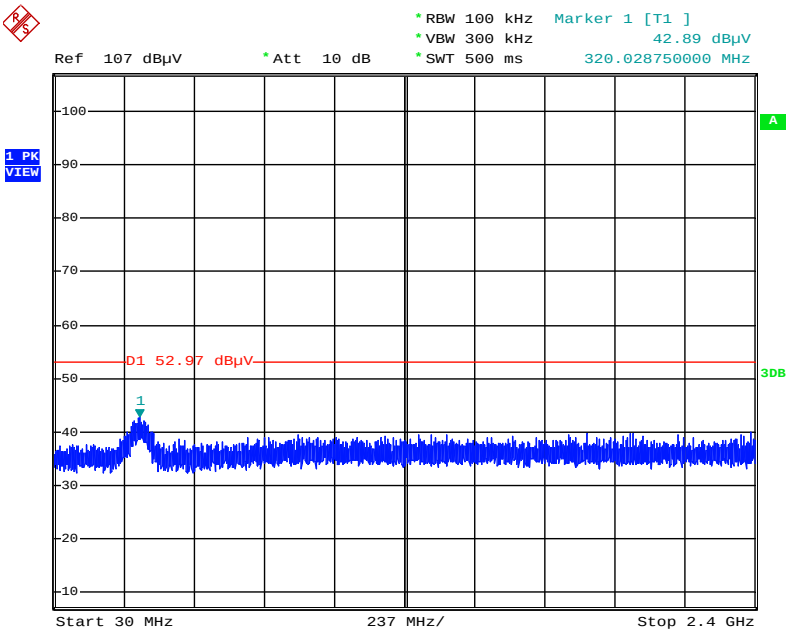
Date: 30.AUG.2014 15:13:08

Plot on Configuration IEEE 802.11g / CH 1 / 2500MHz~26500MHz (down 20dBc) (Ant.2)



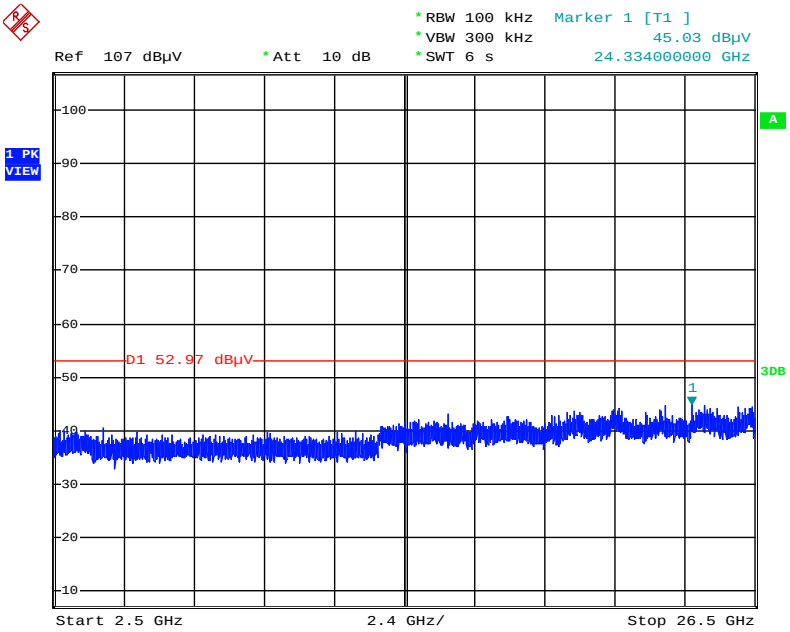
Date: 30.AUG.2014 15:14:43

Plot on Configuration IEEE 802.11g / CH 11 / 30MHz~2400MHz (down 20dBc) (Ant.2)



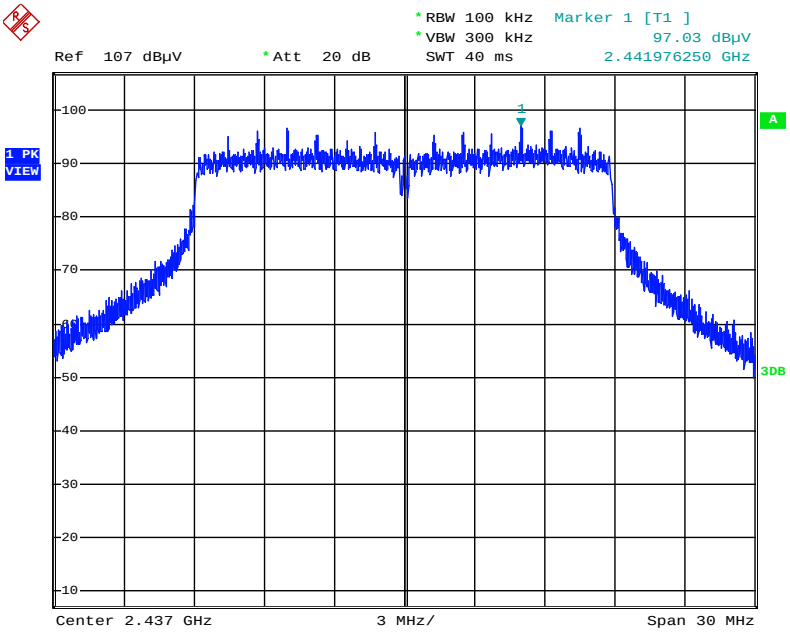
Date: 30.AUG.2014 15:16:43

Plot on Configuration IEEE 802.11g / CH 11 / 2500MHz~26500MHz (down 20dBc) (Ant.2)



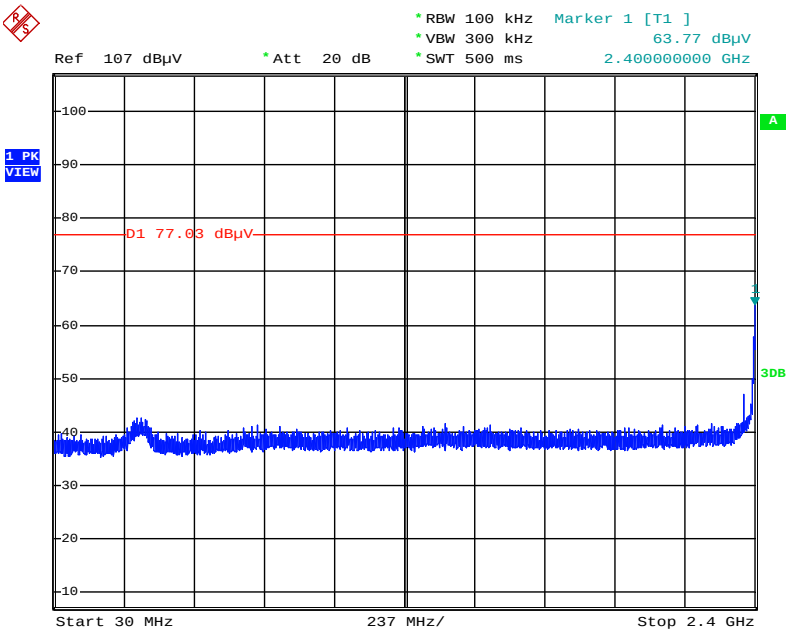
Date: 30.AUG.2014 15:16:11

Plot on Configuration IEEE 802.11n MCS0 HT20 / Reference Level (Ant.3)



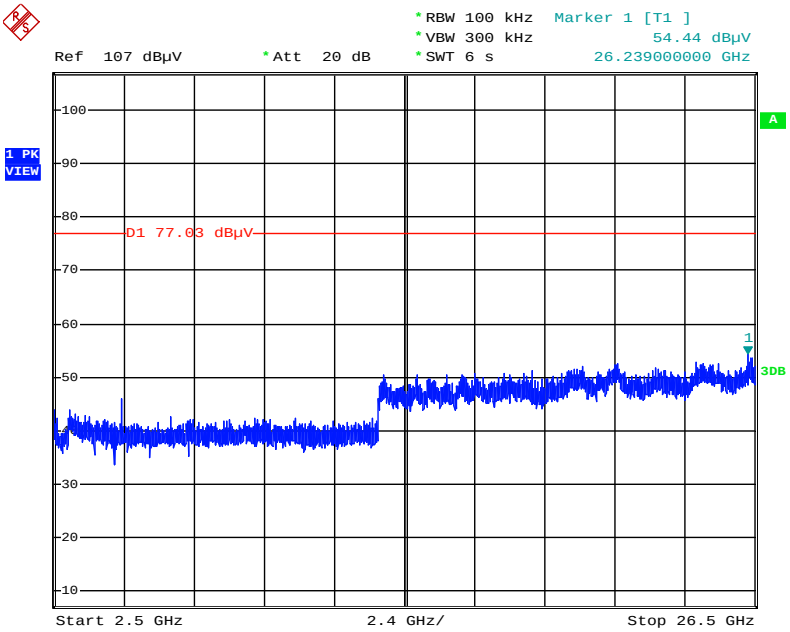
Date: 30.AUG.2014 16:56:26

Plot on Configuration IEEE 802.11n MCS0 HT20 / CH 1 / 30MHz~2400MHz (down 20dBc) (Ant.3)



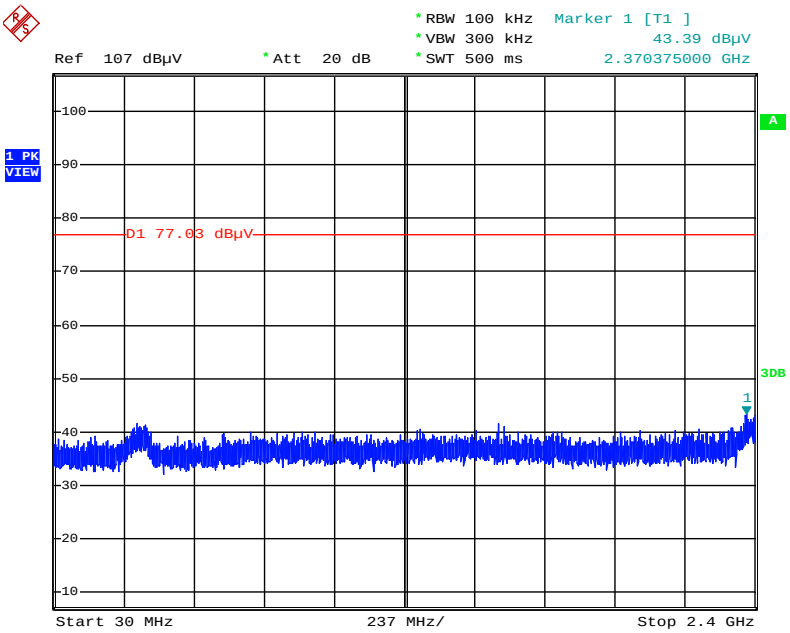
Date: 30.AUG.2014 16:59:06

Plot on Configuration IEEE 802.11n MCS0 HT20 / CH 1 / 2500MHz~26500MHz (down 20dBc) (Ant.3)



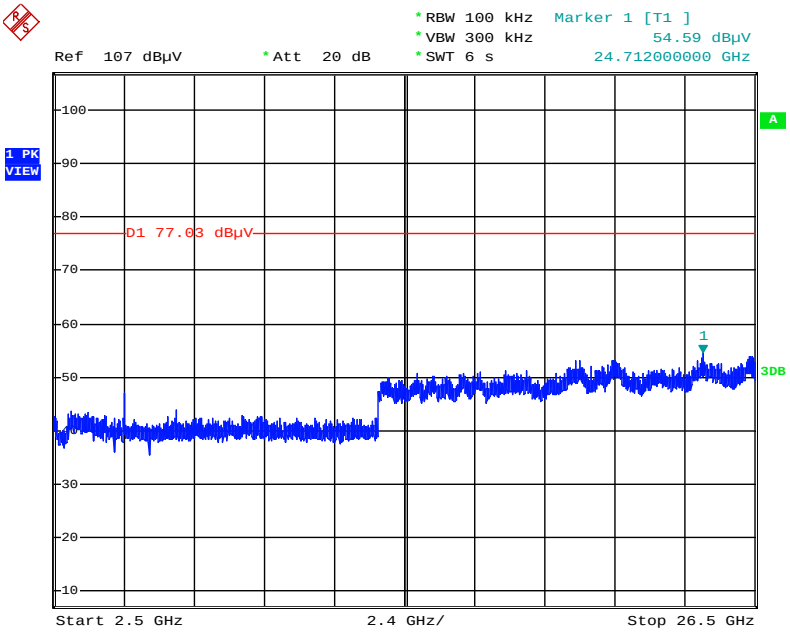
Date: 30.AUG.2014 17:00:12

Plot on Configuration IEEE 802.11n MCS0 HT20 / CH 11 / 30MHz~2400MHz (down 20dBc) (Ant.3)



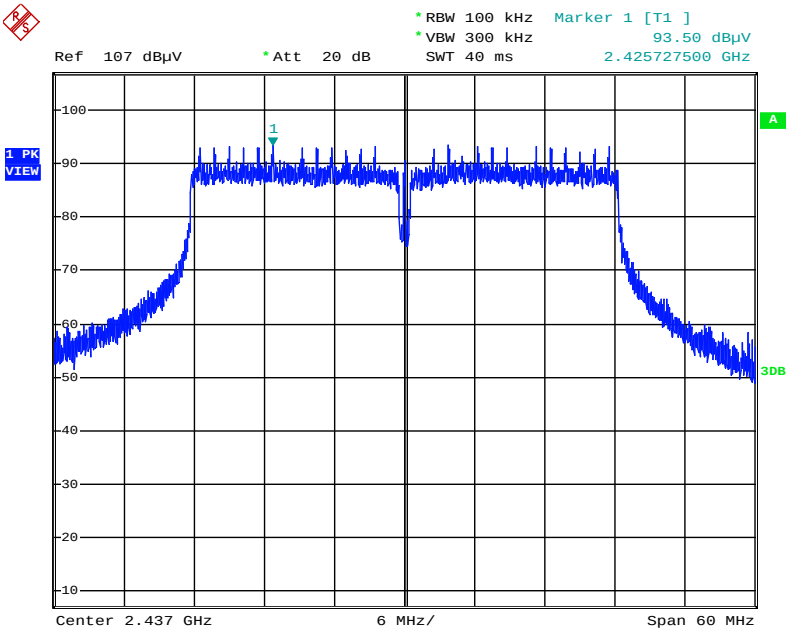
Date: 30.AUG.2014 17:03:11

Plot on Configuration IEEE 802.11n MCS0 HT20 / CH 11 / 2500MHz~26500MHz (down 20dBc) (Ant.3)



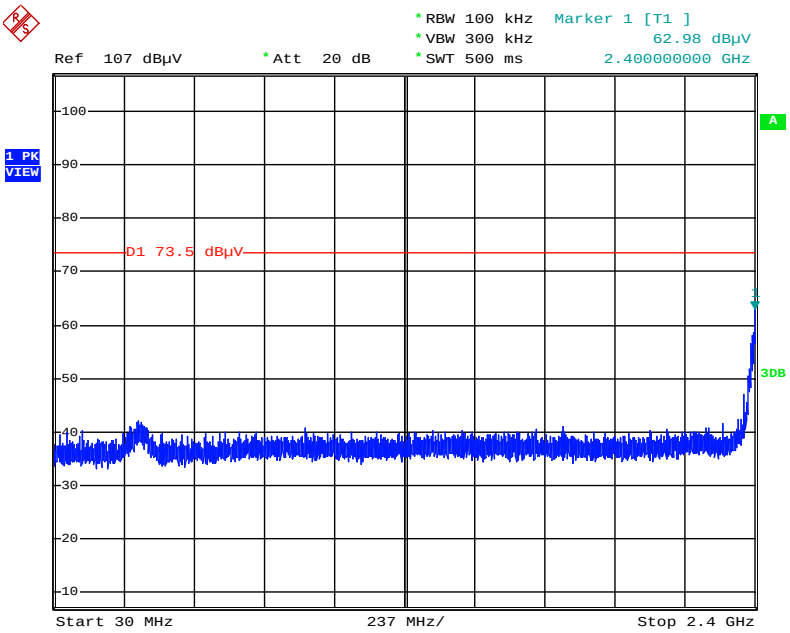
Date: 30.AUG.2014 17:02:20

Plot on Configuration IEEE 802.11n MCS0 HT40 / Reference Level (Ant.3)



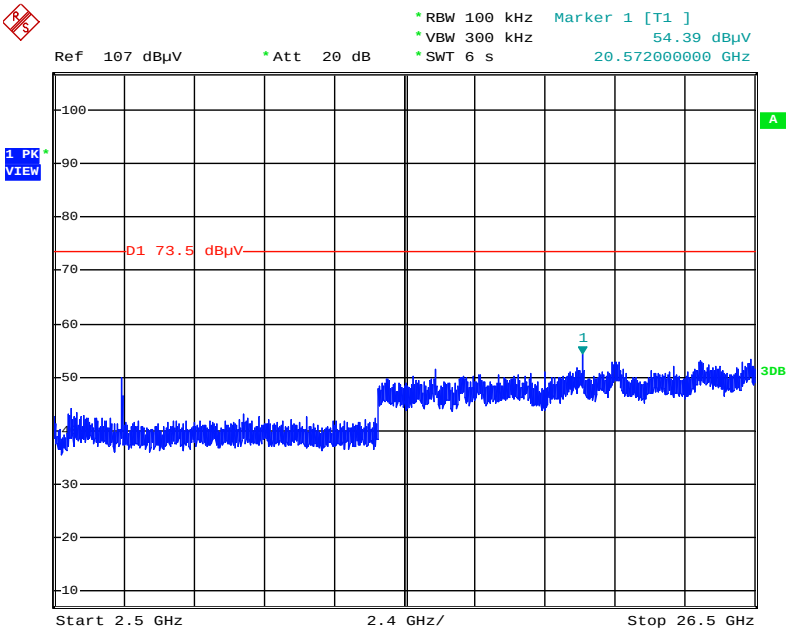
Date: 30.AUG.2014 17:06:05

Plot on Configuration IEEE 802.11n MCS0 HT40 / CH 3 / 30MHz~2400MHz (down 20dBc)



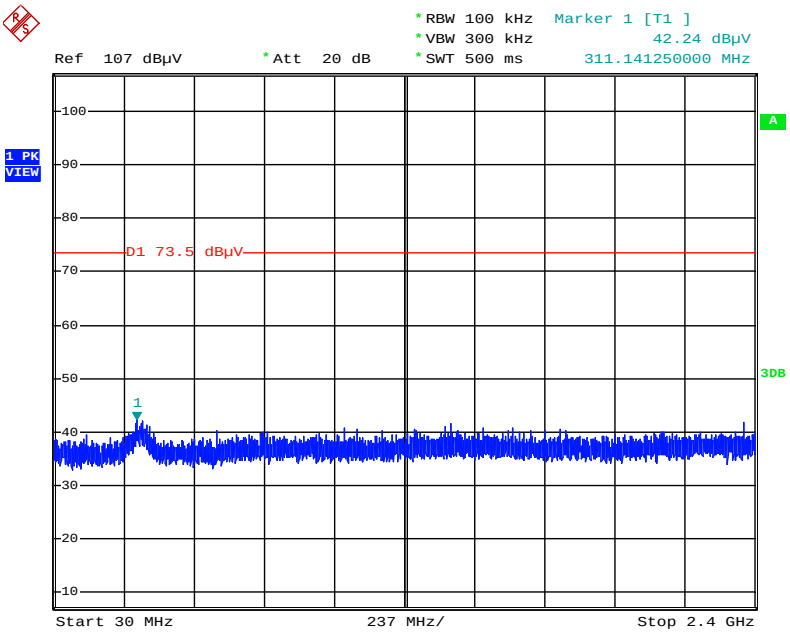
Date: 30.AUG.2014 17:08:44

Plot on Configuration IEEE 802.11n MCS0 HT40 / CH 3 / 2500MHz~26500MHz (down 20dBc) (Ant.3)



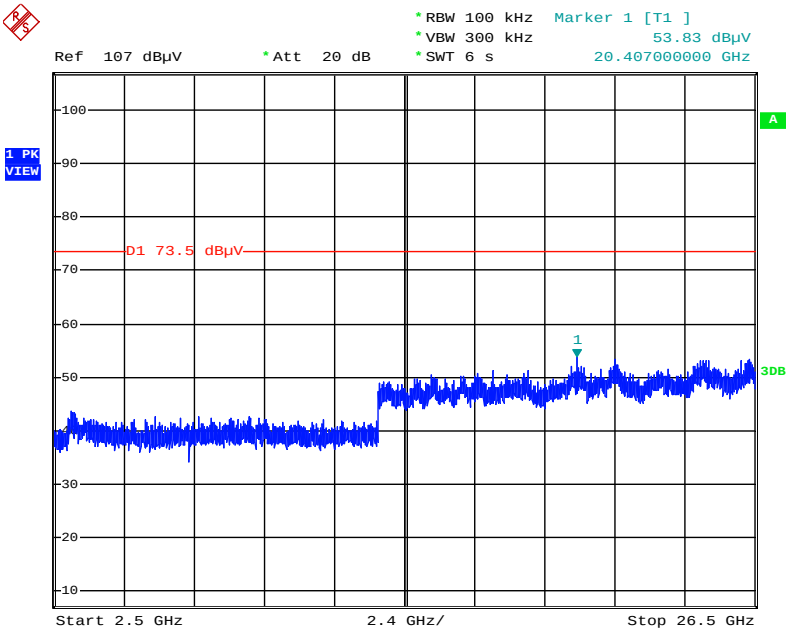
Date: 30.AUG.2014 17:09:29

Plot on Configuration IEEE 802.11n MCS0 HT40 / CH 9 / 30MHz~2400MHz (down 20dBc) (Ant.3)



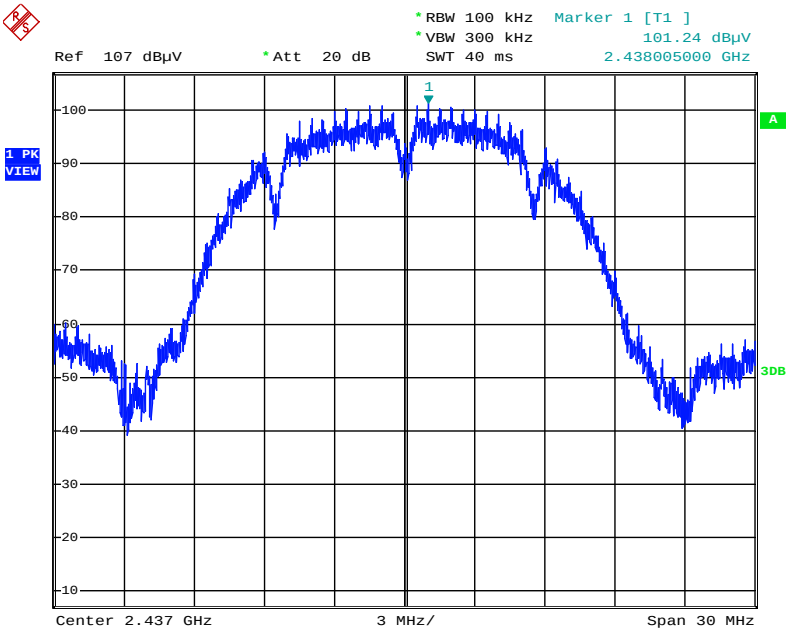
Date: 30.AUG.2014 17:11:07

Plot on Configuration IEEE 802.11n MCS0 HT40 / CH 9 / 2500MHz~26500MHz (down 20dBc) (Ant.3)



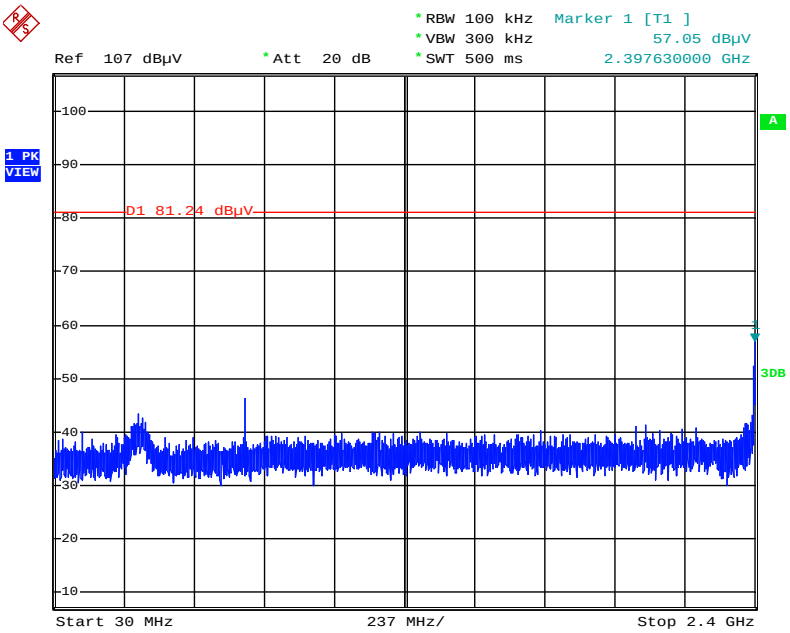
Date: 30.AUG.2014 17:10:20

Plot on Configuration IEEE 802.11b / Reference Level (Ant.3)



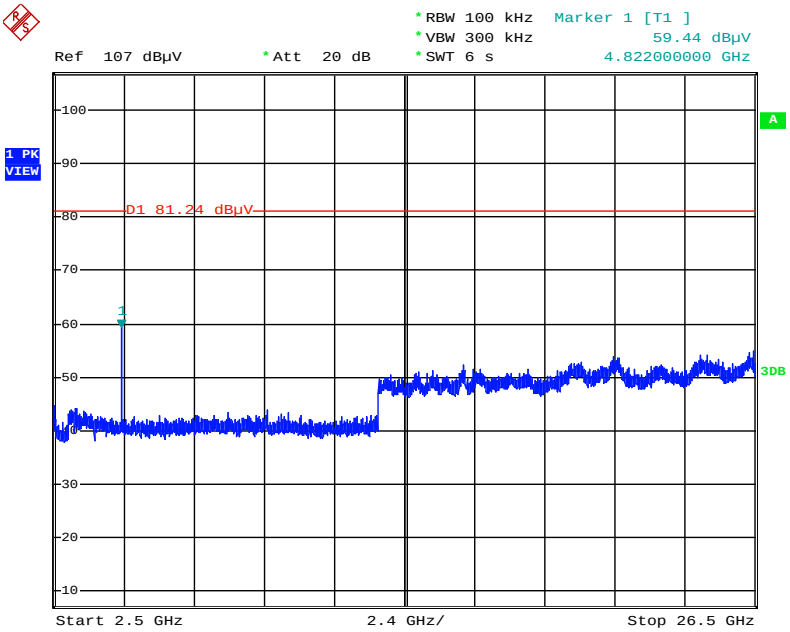
Date: 30.AUG.2014 16:31:19

Plot on Configuration IEEE 802.11b / CH 1 / 30MHz~2400MHz (down 20dBc) (Ant.3)



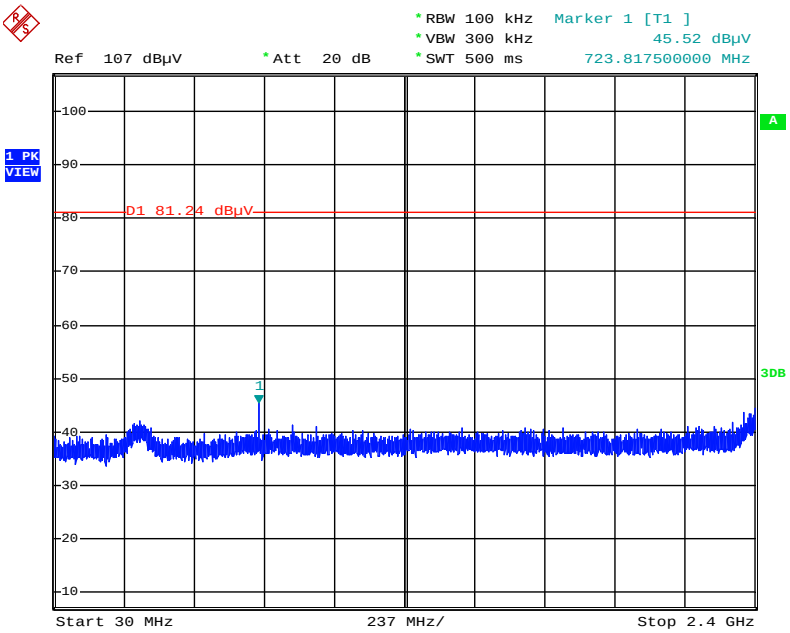
Date: 30.AUG.2014 16:34:48

Plot on Configuration IEEE 802.11b / CH 1 / 2500MHz~26500MHz (down 20dBc) (Ant.3)



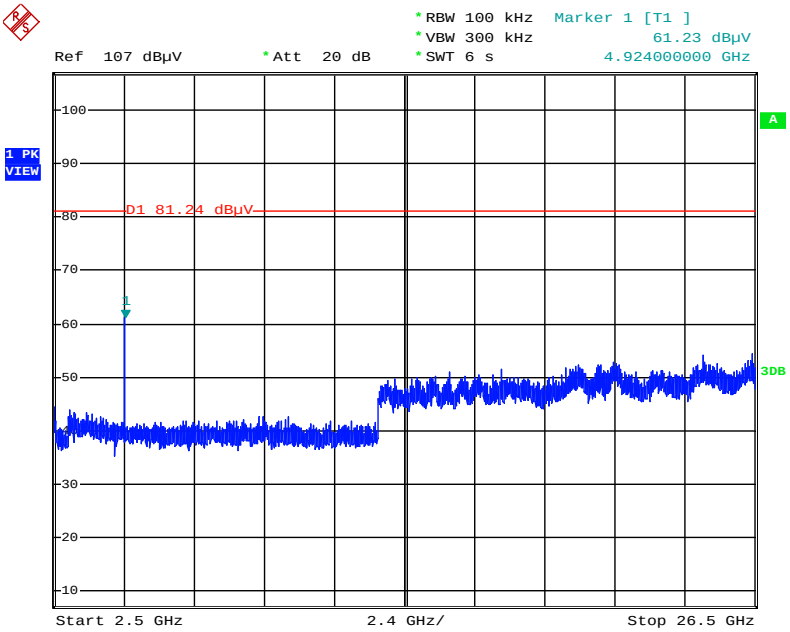
Date: 30.AUG.2014 16:42:06

Plot on Configuration IEEE 802.11b / CH 11 / 30MHz~2400MHz (down 20dBc) (Ant.3)



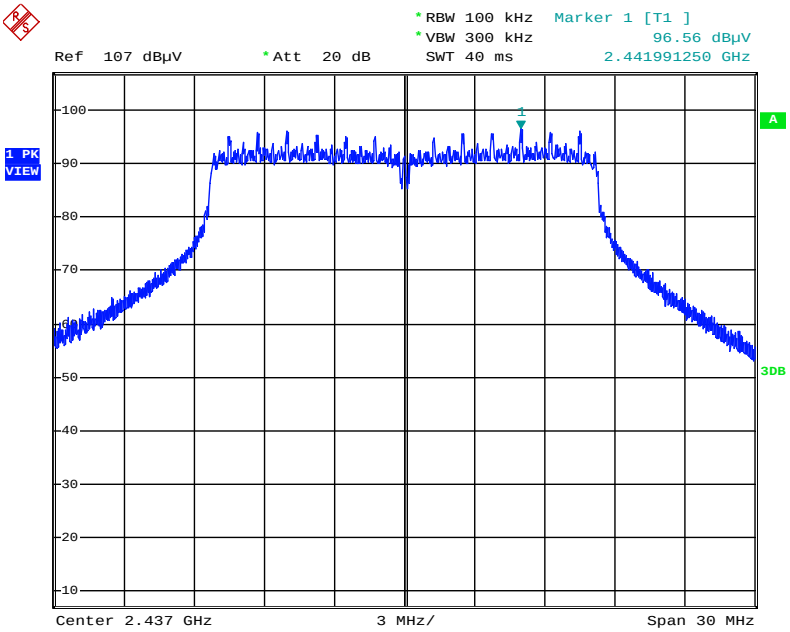
Date: 30.AUG.2014 16:44:44

Plot on Configuration IEEE 802.11b / CH 11 / 2500MHz~26500MHz (down 20dBc) (Ant.3)



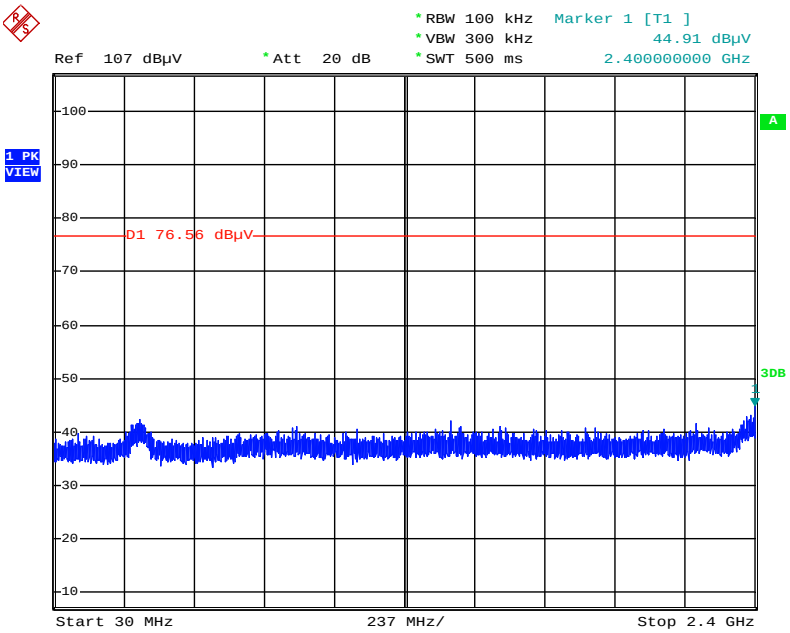
Date: 30.AUG.2014 16:43:48

Plot on Configuration IEEE 802.11g / Reference Level (Ant.3)



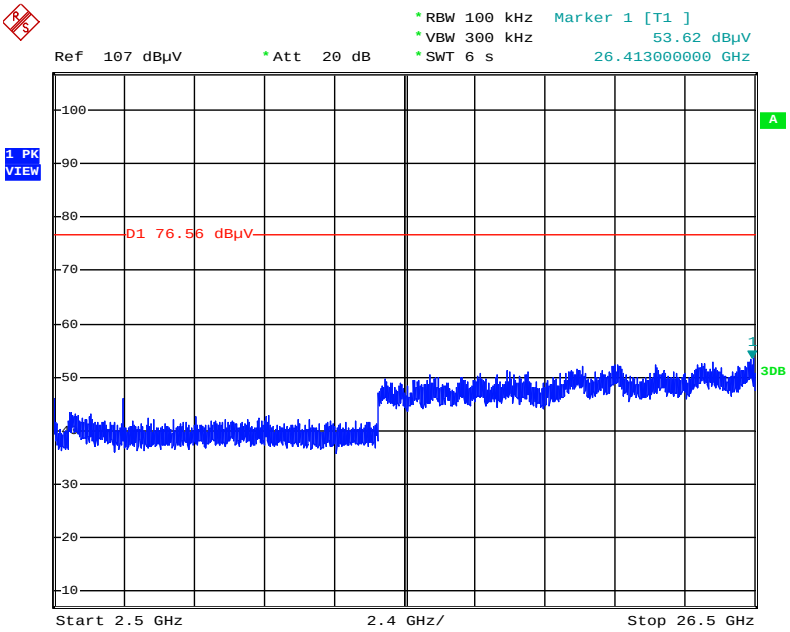
Date: 30.AUG.2014 16:49:02

Plot on Configuration IEEE 802.11g / CH 1 / 30MHz~2400MHz (down 20dBc) (Ant.3)



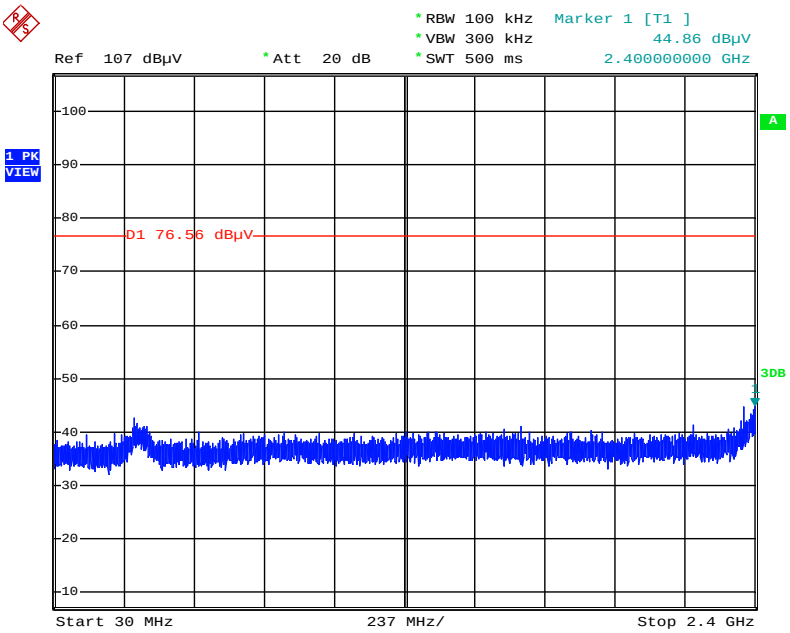
Date: 30.AUG.2014 16:50:22

Plot on Configuration IEEE 802.11g / CH 1 / 2500MHz~26500MHz (down 20dBc) (Ant.3)



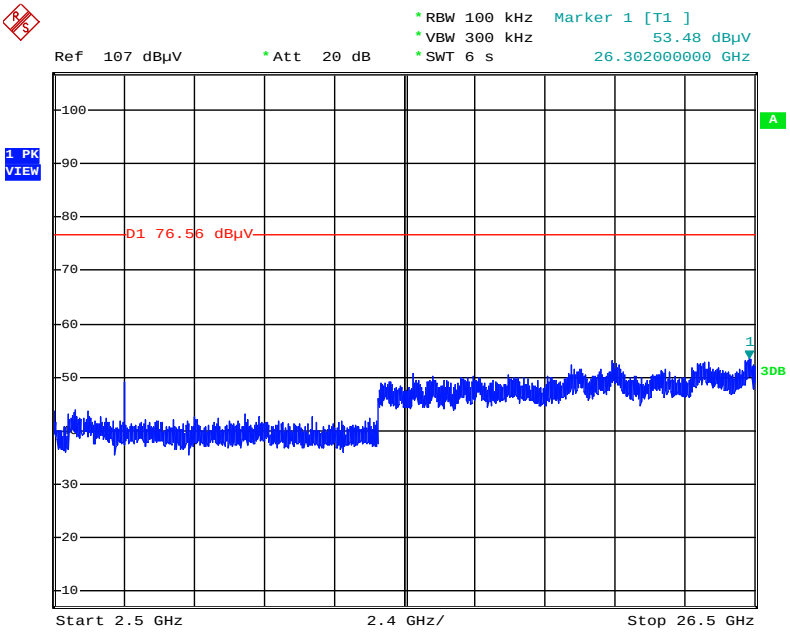
Date: 30.AUG.2014 16:51:44

Plot on Configuration IEEE 802.11g / CH 11 / 30MHz~2400MHz (down 20dBc) (Ant.3)



Date: 30.AUG.2014 16:54:39

Plot on Configuration IEEE 802.11g / CH 11 / 2500MHz~26500MHz (down 20dBc) (Ant.3)



Date: 30.AUG.2014 16:54:00

4.7. Antenna Requirements

4.7.1. Limit

Except for special regulations, the Low-power Radio-frequency Devices must not be equipped with any jacket for installing an antenna with extension cable. An intentional radiator shall be designed to ensure that no antenna other than that furnished by the responsible party shall be used with the device. The use of a permanently attached antenna or of an antenna that uses a unique coupling to the intentional radiator shall be considered sufficient to comply with the provisions of this Section. The manufacturer may design the unit so that the user can replace a broken antenna, but the use of a standard antenna jack or electrical connector is prohibited. Further, this requirement does not apply to intentional radiators that must be professionally installed.

4.7.2. Antenna Connector Construction

Please refer to section 3.3 in this test report; antenna connector complied with the requirements.

5. LIST OF MEASURING EQUIPMENTS

Instrument	Manufacturer	Model No.	Serial No.	Characteristics	Calibration Date	Remark
EMI Test Receiver	R&S	ESCS 30	100355	9kHz ~ 2.75GHz	Apr. 23, 2014	Conduction (CO01-CB)
LISN	F.C.C.	FCC-LISN-50-16-2	04083	150kHz ~ 100MHz	Nov. 23, 2013	Conduction (CO01-CB)
LISN	Schwarzbeck	NSLK 8127	8127647	9kHz ~ 30MHz	Nov. 23, 2013	Conduction (CO01-CB)
COND Cable	Woken	Cable	01	150kHz ~ 30MHz	Dec. 04, 2013	Conduction (CO01-CB)
Software	Audix	E3	5.410e	-	N.C.R.	Conduction (CO01-CB)
BILOG ANTENNA	Schaffner	CBL6112D	22021	20MHz ~ 2GHz	May 26, 2014	Radiation (03CH01-CB)
Loop Antenna	Teseq	HLA 6120	24155	9 kHz - 30 MHz	Nov. 05, 2012*	Radiation (03CH01-CB)
Horn Antenna	EMCO	3115	00075790	750MHz~18GHz	Nov. 01, 2013	Radiation (03CH01-CB)
Horn Antenna	Schwarzbeck	BBHA 9170	BBHA9170252	15GHz ~ 40GHz	Dec. 17, 2013	Radiation (03CH01-CB)
Pre-Amplifier	Agilent	8447D	2944A10991	0.1MHz ~ 1.3GHz	Nov. 12, 2013	Radiation (03CH01-CB)
Pre-Amplifier	Agilent	8449B	3008A02310	1GHz ~ 26.5GHz	Dec. 16, 2013	Radiation (03CH01-CB)
Pre-Amplifier	WM	TF-130N-R1	923365	26GHz ~ 40GHz	Oct. 23, 2013	Radiation (03CH01-CB)
Spectrum analyzer	R&S	FSP40	100019	9kHz~40GHz	Dec. 02, 2013	Radiation (03CH01-CB)
EMI Test Receiver	Agilent	N9038A	MY52260123	9kHz ~ 8GHz	Dec. 12, 2013	Radiation (03CH01-CB)
Turn Table	INN CO	CO 2000	N/A	0 ~ 360 degree	N.C.R.	Radiation (03CH01-CB)
Antenna Mast	INN CO	CO 2000	N/A	1 m - 4 m	N.C.R.	Radiation (03CH01-CB)
RF Cable-low	Woken	Low Cable-1	N/A	30 MHz - 1 GHz	Nov. 17, 2013	Radiation (03CH01-CB)
RF Cable-high	Woken	High Cable-3	N/A	1 GHz - 40 GHz	Nov. 17, 2013	Radiation (03CH01-CB)
RF Cable-high	Woken	High Cable-4	N/A	1 GHz - 40 GHz	Nov. 17, 2013	Radiation (03CH01-CB)
Signal analyzer	R&S	FSV40	100979	9kHz~40GHz	Nov. 29, 2013	Conducted (TH01-CB)
RF Power Divider	Woken	2 Way	0120A02056002D	2GHz ~ 18GHz	Nov. 17, 2013	Conducted (TH01-CB)
RF Power Divider	Woken	3 Way	MDC2366	2GHz ~ 18GHz	Nov. 17, 2013	Conducted (TH01-CB)
RF Power Divider	Woken	4 Way	0120A04056002D	2GHz ~ 18GHz	Nov. 17, 2013	Conducted (TH01-CB)

Instrument	Manufacturer	Model No.	Serial No.	Characteristics	Calibration Date	Remark
RF Cable-high	Woken	High Cable-7	-	1 GHz – 26.5 GHz	Nov. 17, 2013	Conducted (TH01-CB)
RF Cable-high	Woken	High Cable-8	-	1 GHz – 26.5 GHz	Nov. 17, 2013	Conducted (TH01-CB)
RF Cable-high	Woken	High Cable-9	-	1 GHz – 26.5 GHz	Nov. 17, 2013	Conducted (TH01-CB)
RF Cable-high	Woken	High Cable-10	-	1 GHz – 26.5 GHz	Nov. 17, 2013	Conducted (TH01-CB)
RF Cable-high	Woken	High Cable-11	-	1 GHz – 26.5 GHz	Nov. 17, 2013	Conducted (TH01-CB)
Power Sensor	Anritsu	MA2411B	0917223	300MHz~40GHz	Sep. 18, 2013	Conducted (TH01-CB)
Power Meter	Anritsu	ML2495A	1035008	300MHz~40GHz	Sep. 18, 2013	Conducted (TH01-CB)

Note: Calibration Interval of instruments listed above is one year.

"*" Calibration Interval of instruments listed above is two years.

N.C.R. means Non-Calibration required.

6. MEASUREMENT UNCERTAINTY

Test Items	Uncertainty	Remark
Conducted Emission (150kHz ~ 30MHz)	2.4 dB	Confidence levels of 95%
Radiated Emission (30MHz ~ 1,000MHz)	3.6 dB	Confidence levels of 95%
Radiated Emission (1GHz ~ 18GHz)	3.7 dB	Confidence levels of 95%
Radiated Emission (18GHz ~ 40GHz)	3.5 dB	Confidence levels of 95%
Conducted Emission	1.7 dB	Confidence levels of 95%