



# SPORTON International Inc.

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## FCC RADIO TEST REPORT

Applicant's company	<b>Realtek Semiconductor Corp.</b>
Applicant Address	No. 2, Innovation Road II, Hsinchu Science Park, Hsinchu 300, Taiwan
FCC ID	<b>TX2-RTL8723DE</b>
Manufacturer's company	<b>Realtek Semiconductor Corp.</b>
Manufacturer Address	No. 2, Innovation Road II, Hsinchu Science Park, Hsinchu 300, Taiwan

Product Name	802.11 b/g/n RTL8723DE Combo module
Brand Name	REALTEK
Model No.	RTL8723DE
Test Rule	47 CFR FCC Part 15 Subpart C § 15.247
Test Freq. Range	2400 ~ 2483.5MHz
Received Date	Nov. 30, 2015
Final Test Date	May 05, 2016
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 C63.10-2013, 47 CFR FCC Part 15 Subpart C,**

**KDB558074 D01 v03r05**

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



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## History of This Test Report



SPORTON LAB.

Report No.: FR5D1601AA

Project No: CB10505147

## 1. VERIFICATION OF COMPLIANCE

Product Name : 802.11 b/g/n RTL8723DE Combo module  
Brand Name : REALTEK  
Model No. : RTL8723DE  
Applicant : Realtek Semiconductor Corp.  
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 Nov. 30, 2015 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	13.15 dB
4.2	15.247(b)(3)	Maximum Conducted Output Power	Complies	13.69 dB
4.3	15.247(e)	Power Spectral Density	Complies	19.57 dB
4.4	15.247(a)(2)	6dB Spectrum Bandwidth	Complies	-
4.5	15.247(d)	Radiated Emissions	Complies	1.18 dB
4.6	15.247(d)	Band Edge Emissions	Complies	1.29 dB
4.7	15.203	Antenna Requirements	Complies	-

### 3. GENERAL INFORMATION

#### 3.1. Product Details

Items	Description
Product Type	WLAN (1TX, 1RX)
Radio Type	Intentional Transceiver
Power Type	From host system
Modulation	IEEE 802.11b: DSSS IEEE 802.11g: OFDM IEEE 802.11n: see the below table
Data Modulation	IEEE 802.11b: DSSS (BPSK / QPSK / CCK) IEEE 802.11g/n: OFDM (BPSK / QPSK / 16QAM / 64QAM)
Data Rate (Mbps)	IEEE 802.11b: DSSS (1/ 2/ 5.5/11) IEEE 802.11g: OFDM (6/9/12/18/24/36/48/54) IEEE 802.11n: see the below table
Frequency Range	2400 ~ 2483.5MHz
Channel Number	13 for 20MHz bandwidth ; 9 for 40MHz bandwidth
Channel Band Width (99%)	IEEE 802.11b: 14.85 MHz IEEE 802.11g: 16.93 MHz IEEE 802.11n MCS0 (HT20): 17.97 MHz IEEE 802.11n MCS0 (HT40): 36.03 MHz
Maximum Conducted Output Power	IEEE 802.11b: 16.25 dBm IEEE 802.11g: 16.07 dBm IEEE 802.11n MCS0 (HT20): 16.31 dBm IEEE 802.11n MCS0 (HT40): 13.44 dBm
Carrier Frequencies	Please refer to section 3.4
Antenna	Please refer to section 3.3

Items	Description
Beamforming Function	<input type="checkbox"/> With beamforming <input checked="" type="checkbox"/> Without beamforming

**Antenna and Band width**

Antenna	One (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)	1	MCS 0-7
802.11n (HT40)	1	MCS 0-7
Note 1: IEEE Std. 802.11n modulation consists of HT20 and HT40 (HT: High Throughput). Then EUT supports HT20 and HT40. Note 2: Modulation modes consist of below configuration: HT20/HT40: IEEE 802.11n		

### 3.2. Accessories

N/A

### 3.3. Table for Filed Antenna

Ant.	Brand	P/N	Antenna Type	Connector	Gain (dBi)
1	LYNwave	ALA110-222050-300011	PIFA Antenna	I-PEX MHF4	3.5
2	PSA	RFDPA171320EMLB301	Dipole Antenna	I-PEX MHF4	3.14

Note: The EUT has two antennas.

#### For EUT 1 and EUT 3:

The EUT supports the antenna with TX/RX diversity function for WLAN and Bluetooth.

#### For WLAN 802.11b/g/n (1TX, 1RX) mode:

Both of Chain 1 and Chain 2 can be used as transmitting/receiving antennas,

but only one antenna can be used as transmitting/receiving antenna at the one time.

Chain 1 generated the worst case than Chain 2, so it is tested and recorded in the report.

#### For Bluetooth mode:

Base on WLAN's operation mode to select the other antenna to work.

(Ex. Assume Main port was selected to conduct transmitting function in WLAN,  
so AUX port was selected in Bluetooth Mode. Vice versa.)

Chain 2 generated the worst case than Chain 1, so it is tested and recorded in the report.

#### For EUT 2 and EUT 4:

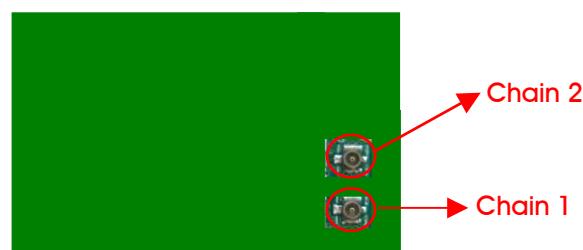
#### For WLAN 802.11b/g/n (1TX, 1RX) mode:

Chain 1 can be used as transmitting/receiving antenna.

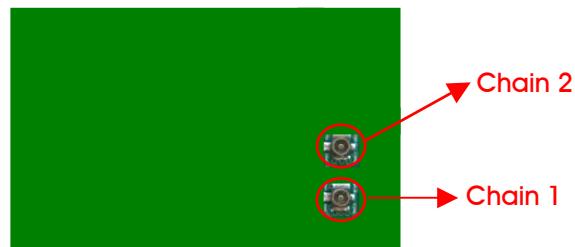
#### For Bluetooth mode:

Chain 1 can be used as transmitting/receiving antenna.

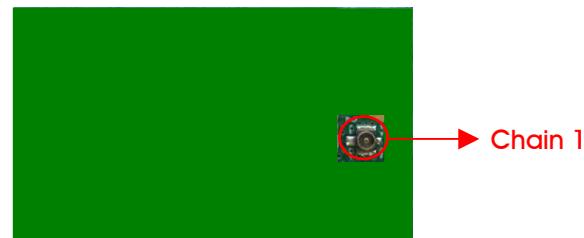
#### For EUT 1:



**For EUT 3:**



**For EUT 2:**



**For EUT 4:**



### 3.4. Table for Carrier Frequencies

There are two bandwidth systems.

For 20MHz bandwidth systems, use Channel 1~Channel 13.

For 40MHz bandwidth systems, use Channel 3~Channel 11.

Frequency Band	Channel No.	Frequency	Channel No.	Frequency
2400~2483.5MHz	1	2412 MHz	8	2447 MHz
	2	2417 MHz	9	2452 MHz
	3	2422 MHz	10	2457 MHz
	4	2427 MHz	11	2462 MHz
	5	2432 MHz	12	2467 MHz
	6	2437 MHz	13	2472 MHz
	7	2442 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	11b/CCK	1 Mbps	1/6/11/12/13	1
	11g/BPSK	6 Mbps	1/6/11/12/13	1
	11n HT20	MCS0	1/6/11/12/13	1
	11n HT40	MCS0	3/6/9/10/11	1
Power Spectral Density	11b/CCK	1 Mbps	1/6/11/12/13	1
	11g/BPSK	6 Mbps	1/6/11/12/13	1
	11n HT20	MCS0	1/6/11/12/13	1
	11n HT40	MCS0	3/6/9/10/11	1
6dB Spectrum Bandwidth	11b/CCK	1 Mbps	1/6/11/12/13	1
	11g/BPSK	6 Mbps	1/6/11/12/13	1
	11n HT20	MCS0	1/6/11/12/13	1
	11n HT40	MCS0	3/6/9/10/11	1
Radiated Emissions 9kHz~1GHz	Normal Link	-	-	-
Radiated Emissions 1GHz~10 <sup>th</sup> Harmonic	11b/CCK	1 Mbps	1/6/11/12/13	1
	11g/BPSK	6 Mbps	1/6/11/12/13	1
	11n HT20	MCS0	1/6/11/12/13	1
	11n HT40	MCS0	3/6/9/10/11	1
Band Edge Emissions	11b/CCK	1 Mbps	1/6/11/12/13	1
	11g/BPSK	6 Mbps	1/6/11/12/13	1
	11n HT20	MCS0	1/6/11/12/13	1
	11n HT40	MCS0	3/6/9/10/11	1

Note 1: For Conducted measurement Test: only the higher gain antenna "Ant. 1" was selected to perform the test and recorded in this report.

Note 2: For Radiated measurement Test: all test results were recorded in the report.

The following test modes were performed for all tests:

**For Conducted Emission test:**

Mode 1. EUT 1-E key-Diversity + Antenna 1

Mode 2. EUT 2-E key-Fixed + Antenna 1

Mode 3. EUT 3-A+E key-Diversity + Antenna 1

Mode 4. EUT 4-A+E key-Fixed + Antenna 1

Mode 1 has been evaluated to be the worst case between Mode 1~2 thus measurement for Mode 5 will follow this same test mode.

Mode 3 has been evaluated to be the worst case between Mode 3~4 thus measurement for Mode 6 will follow this same test mode.

Mode 5. EUT 1-E key-Diversity + Antenna 2

Mode 6. EUT 3-A+E key-Diversity + Antenna 2

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

**For Radiated Emission test<Below 1GHz>:**

Mode 1. Place EUT 1-E key-Diversity in Y axis + Antenna 1

Mode 2. Place EUT 1-E key-Diversity in Z axis + Antenna 1

Mode 3. Place EUT 2-E key-Fixed in Y axis + Antenna 1

Mode 4. Place EUT 2-E key-Fixed in Z axis + Antenna 1

Mode 5. Place EUT 3-A+E key-Diversity in Y axis + Antenna 1

Mode 6. Place EUT 3-A+E key-Diversity in Z axis + Antenna 1

Mode 7. Place EUT 4-A+E key-Fixed in Y axis + Antenna 1

Mode 8. Place EUT 4-A+E key-Fixed in Z axis + Antenna 1

Mode 2 has been evaluated to be the worst case between Mode 1~4 thus measurement for Mode 9 will follow this same test mode.

Mode 6 has been evaluated to be the worst case between Mode 5~8 thus measurement for Mode 10 will follow this same test mode.

Mode 9. Place EUT 1-E key-Diversity in Z axis + Antenna 2

Mode 10. Place EUT 3-A+E key-Diversity in Z axis + Antenna 2

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

**For Radiated Emission test<Above 1GHz>:**

The EUT can be placed in X axis, Y axis and Z axis. After evaluating, Z axis was the worst case, so it's recorded in this report.

Mode 1. Place EUT 1-E key-Diversity in Z axis + Antenna 1

Mode 2. Place EUT 1-E key-Diversity in Z axis + Antenna 2

Mode 3. Place EUT 2-E key-Fixed in Z axis + Antenna 1

Mode 4. Place EUT 2-E key-Fixed in Z axis + Antenna 2

**For Radiated Emission Co-location test:**

Mode 1. Place EUT 1-E key-Diversity in X axis + Antenna 1

Mode 2. Place EUT 1-E key-Diversity in Y axis + Antenna 1

Mode 3. Place EUT 1-E key-Diversity in Z axis + Antenna 1

Mode 4. Place EUT 2-E key-Fixed in X axis + Antenna 1

Mode 5. Place EUT 2-E key-Fixed in Y axis + Antenna 1

Mode 6. Place EUT 2-E key-Fixed in Z axis + Antenna 1

Mode 3 has been evaluated to be the worst case between Mode 1~3 thus measurement for Mode 7 will follow this same test mode.

Mode 6 has been evaluated to be the worst case between Mode 4~6 thus measurement for Mode 8 will follow this same test mode.

Mode 7. Place EUT 1-E key-Diversity in Z axis + Antenna 2

Mode 8. Place EUT 2-E key-Fixed in Z axis + Antenna 2

Mode 3 is the worst case, so it was selected to record in this test report.

**For Co-location MPE and Radiated Emission Co-location Test:**

The EUT could be applied with 2.4GHz WLAN function and Bluetooth function; therefore Co-location Maximum Permissible Exposure (Please refer to FA5D1601) and Radiated Emission Co-location (please refer to Appendix B) tests are added for simultaneously transmit between 2.4GHz WLAN function and Bluetooth function.

### 3.6. Table for Testing Locations

Test Site Location				
Test Site No.	Site Category	Location	FCC Designation No.	IC File No.
03CH01-CB	SAC	Hsin Chu	TW0006	IC 4086D
CO01-CB	Conduction	Hsin Chu	TW0006	IC 4086D
TH01-CB	OVEN Room	Hsin Chu	-	-

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

### 3.7. Table for Multiple Listing

The EUT has four types which are identical to each other in all aspects except for the following table:

Model Name	EUT	Interface		Function	
		E key	A+E key	Diversity	Fixed
RTL8723DE	1	V		V	
	2	V			V
	3		V	V	
	4		V		V

Interface	Description
E key	There are two interface for different platform connector, all the RF circuit and electric identity are the same.
A+E key	

Note:

**For Conducted Emission test and Radiated Emission test<Below 1GHz>:**

The table above, EUT 1 ~ EUT 4 was selected as representative model for the test and its data was recorded in this report.

**For Radiated Emission test<Above 1GHz> and Radiated Emission Co-location test:**

The above difference does not affect the test result of RF tests, so only EUT 1 and EUT 2 was tested and recorded in this report.

### 3.8. Table for Supporting Units

**For Test Site No: 03CH01-CB<Below 1GHz>**

Support Unit	Brand	Model	FCC ID
AP	Netgear	R6300V2	PY313200227
NB*2	DELL	E4300	DoC
Device	REALTEK	RTL8723DE	TX2-RTL8723DE
Test fixture	REALTEK	Ameba adapter	N/A
Earphone	SHYARO CHI	MIC-04	N/A
Mouse	Logitech	M-U0026	DoC

**For Test Site No: 03CH01-CB<Above1GHz>**

Support Unit	Brand	Model	FCC ID
NB	DELL	E4300	DoC
Test fixture	REALTEK	Ameba adapter	N/A

**For Test Site No: CO01-CB**

Support Unit	Brand	Model	FCC ID
AP	Planex	GW-AP54SGX	KA220030603014-1
NB*2	DELL	E6430	DoC
Device	REALTEK	RTL8723DE	TX2-RTL8723DE
Test fixture	REALTEK	Ameba adapter	N/A
Earphone	SHYARO CHI	MIC-04	N/A
Mouse	HP	FM100	DoC

**For Test Site No: TH01-CB**

Support Unit	Brand	Model	FCC ID
NB	DELL	E4300	DoC
Test fixture	REALTEK	Ameba adapter	N/A

### 3.9. 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.

Test Software Version	REALTEK 11n 8723DE PCIE WLAN NIC Massproduction Kit 1.10.20151229									
Mode	Test Frequency (MHz)									
	NCB: 20MHz					NCB: 40MHz				
	2412 MHz	2437 MHz	2462 MHz	2467 MHz	2472 MHz	2422 MHz	2437 MHz	2452 MHz	2457 MHz	2462 MHz
802.11b	34	33	33	33	20	-	-	-	-	-
802.11g	40	43	38	37	27	-	-	-	-	-
802.11n MCS0 HT20	38	43	37	35	25	-	-	-	-	-
802.11n MCS0 HT40	-	-	-	-	-	38	37	36	35	33

### 3.10. EUT Operation during Test

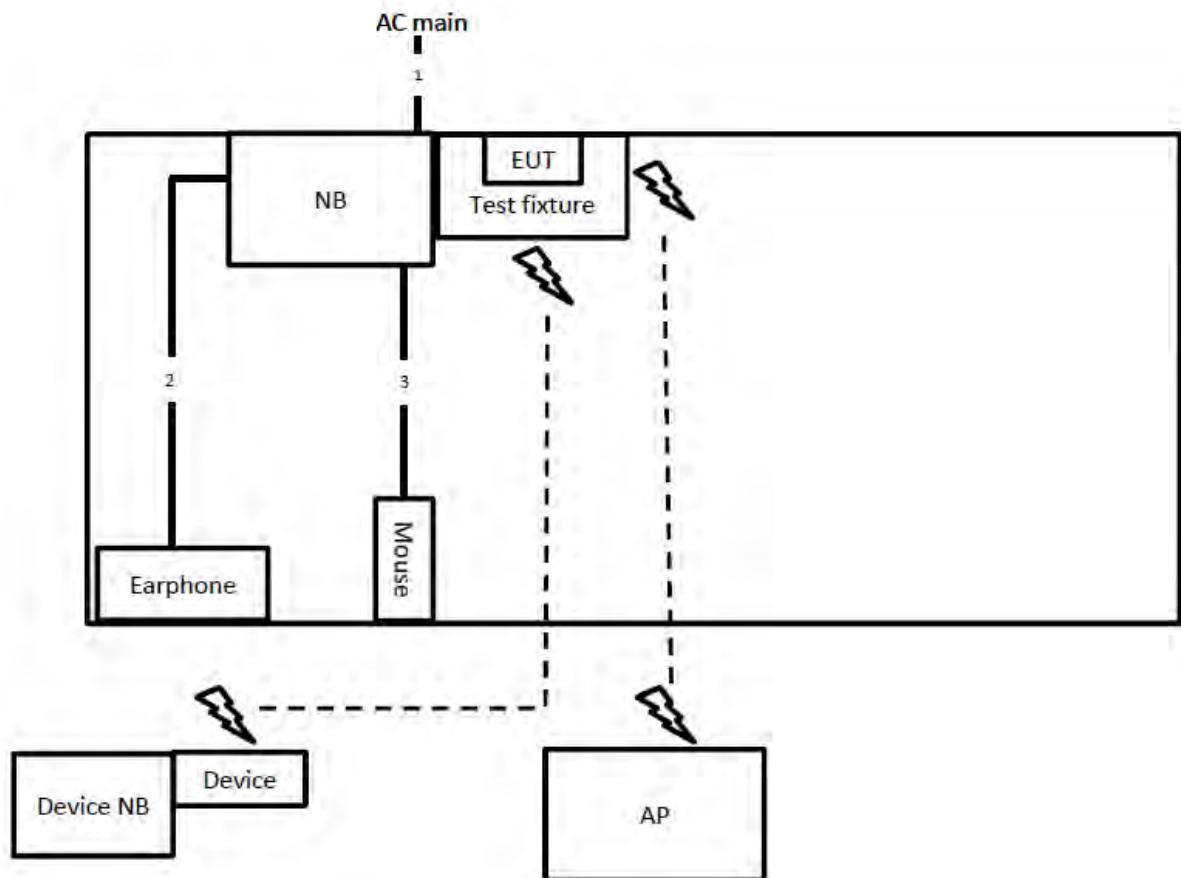
The EUT was programmed to be in continuously transmitting mode.

### 3.11. Duty Cycle

Mode	On Time (ms)	On+Off Time (ms)	Duty Cycle (%)	Duty Factor (dB)	1/T Minimum VBW (kHz)
802.11b	1.000	1.000	100.00%	0.00	0.01
802.11g	1.000	1.000	100.00%	0.00	0.01
802.11n MCS0 HT20	1.000	1.000	100.00%	0.00	0.01
802.11n MCS0 HT40	1.000	1.000	100.00%	0.00	0.01

### 3.12. Test Configurations

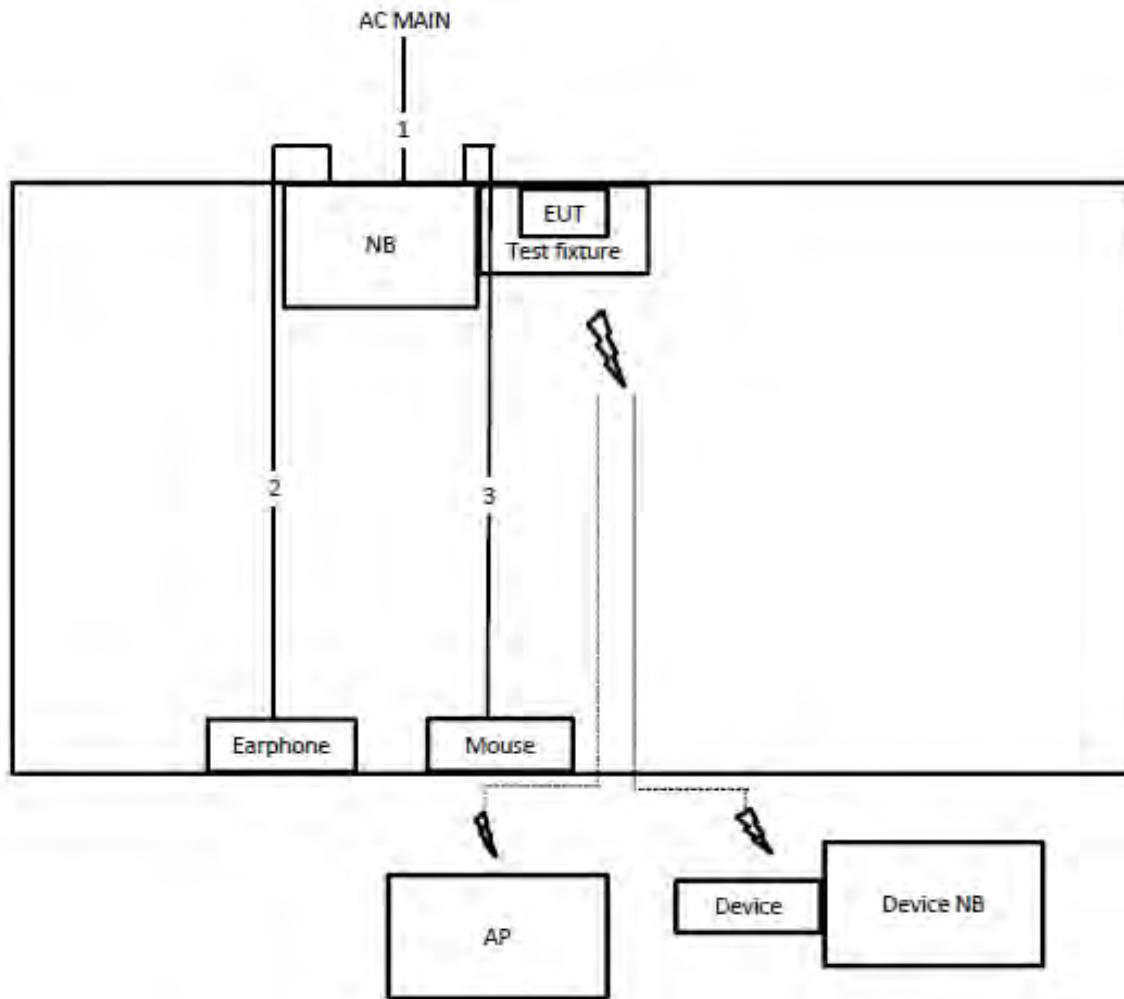
#### 3.12.1. AC Power Line Conduction Emissions Test Configuration



Item	Connection	Shielded	Length
1	Power cable	No	2.6m
2	Audio cable	No	1.1m
3	USB cable	Yes	1.8m

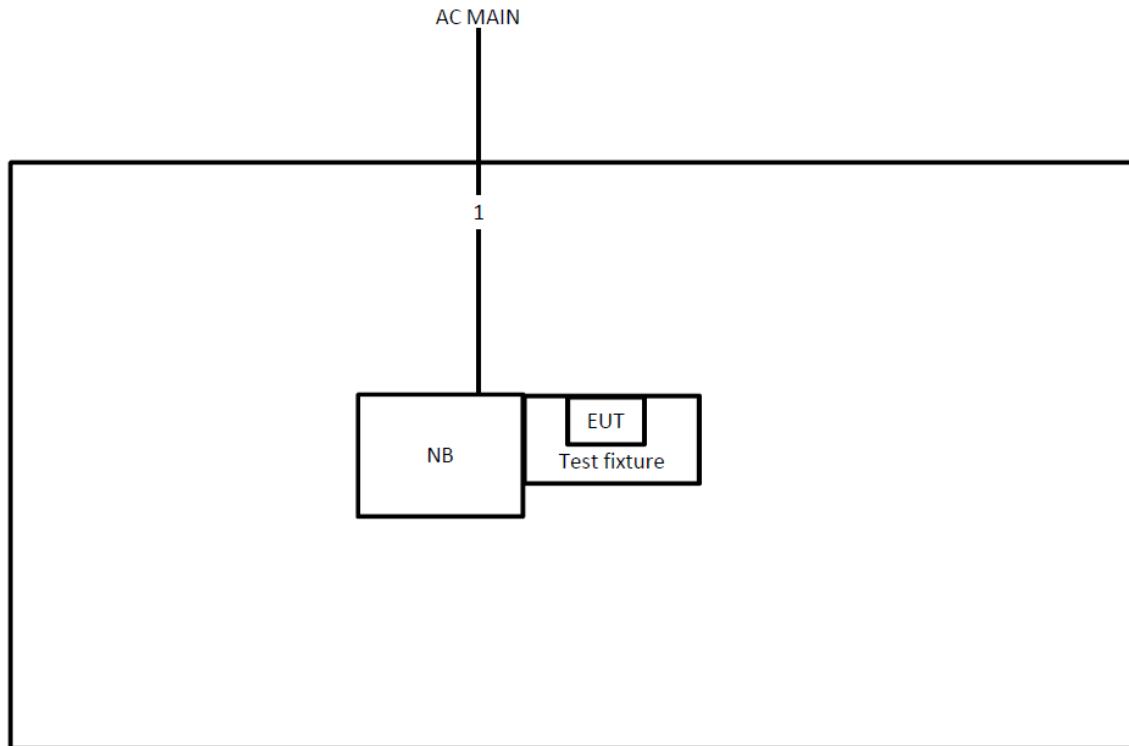
### 3.12.2. Radiation Emissions Test Configuration

Test Configuration: 30MHz~1GHz



Item	Connection	Shielded	Length
1	Power cable	No	2.6m
2	Audio cable	No	1.1m
3	USB cable	Yes	1.8m

## Test Configuration: above 1GHz



Item	Connection	Shielded	Length
1	Power cable	No	2.6m

## 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

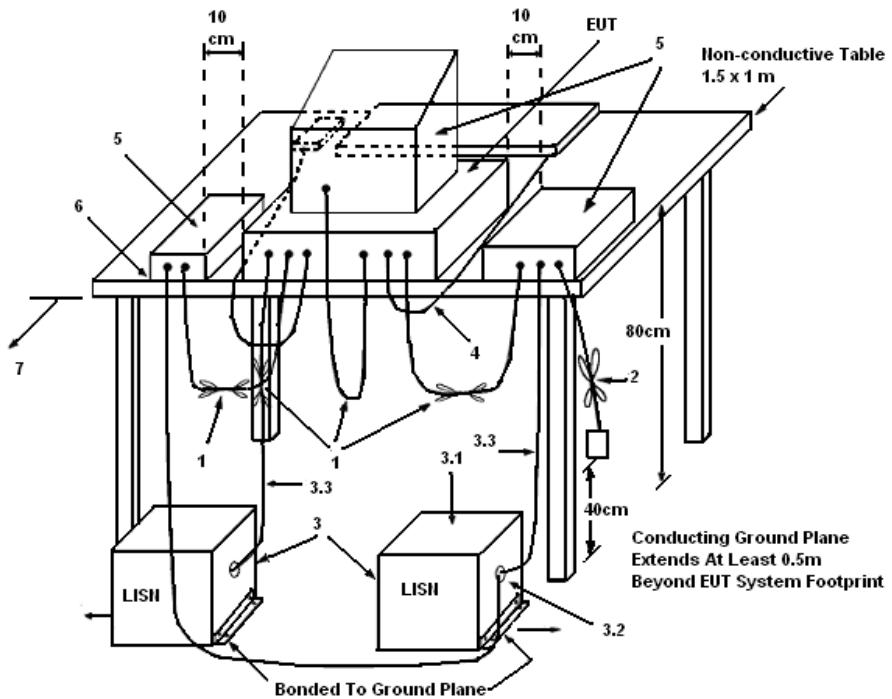
Please refer to section 5 of equipments list in this report. The following table is the setting of the receiver.

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

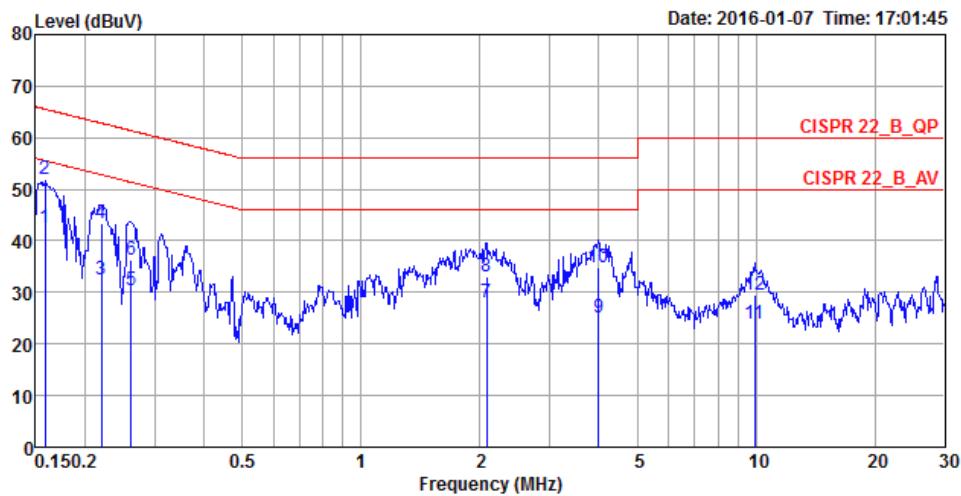
There is no deviation with the original standard.

#### 4.1.6. EUT Operation during Test

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

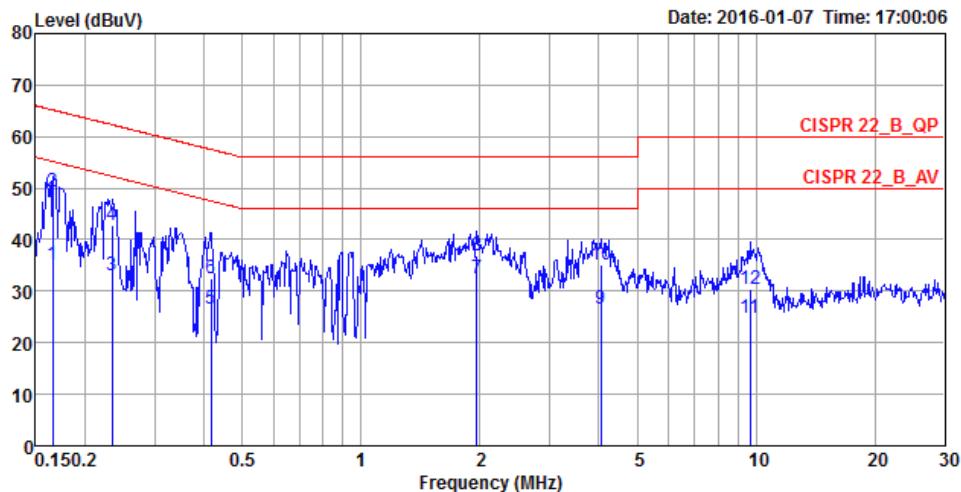
#### 4.1.7. Results of AC Power Line Conducted Emissions Measurement

<b>Temperature</b>	22°C	<b>Humidity</b>	58%
<b>Test Engineer</b>	Deven Huang	<b>Phase</b>	Line
<b>Configuration</b>	Normal Link	<b>Test Mode</b>	Mode 1



Freq	Level	Over Limit	Limit	Read Line	LISN Level	Cable Factor	Remark		
							MHz	dBuV	dB
1	0.1582	42.41	-13.15	55.56	32.46	9.93	0.02	LINE	Average
2	0.1582	51.91	-13.65	65.56	41.96	9.93	0.02	LINE	QP
3	0.2197	32.54	-20.29	52.83	22.59	9.93	0.02	LINE	Average
4	0.2197	43.37	-19.46	62.83	33.42	9.93	0.02	LINE	QP
5	0.2616	30.44	-20.94	51.38	20.48	9.93	0.03	LINE	Average
6	0.2616	36.28	-25.10	61.38	26.32	9.93	0.03	LINE	QP
7	2.0768	28.07	-17.93	46.00	18.02	9.99	0.06	LINE	Average
8	2.0768	33.01	-22.99	56.00	22.96	9.99	0.06	LINE	QP
9	3.9850	25.08	-20.92	46.00	14.99	10.02	0.07	LINE	Average
10	3.9850	34.76	-21.24	56.00	24.67	10.02	0.07	LINE	QP
11	9.9130	23.87	-26.13	50.00	13.44	10.18	0.25	LINE	Average
12	9.9130	29.38	-30.62	60.00	18.95	10.18	0.25	LINE	QP

<b>Temperature</b>	22°C	<b>Humidity</b>	58%
<b>Test Engineer</b>	Deven Huang	<b>Phase</b>	Neutral
<b>Configuration</b>	Normal Link	<b>Test Mode</b>	Mode 1



Freq	Level	Over	Limit	Read	LISN	Cable	Pol/Phase	Remark
		Line	Level	Factor	Loss	dB		
MHz	dBuV	dB	dBuV	dBuV	dB	dB		
1	0.1659	35.03	-20.13	55.16	25.23	9.78	0.02	NEUTRAL Average
2	0.1659	49.40	-15.76	65.16	39.60	9.78	0.02	NEUTRAL QP
3	0.2341	33.20	-19.10	52.30	23.38	9.79	0.03	NEUTRAL Average
4	0.2341	42.78	-19.52	62.30	32.96	9.79	0.03	NEUTRAL QP
5	0.4171	26.69	-20.82	47.51	16.86	9.79	0.04	NEUTRAL Average
6	0.4171	32.50	-25.01	57.51	22.67	9.79	0.04	NEUTRAL QP
7	1.9593	32.51	-13.49	46.00	22.61	9.84	0.06	NEUTRAL Average
8	1.9593	36.86	-19.14	56.00	26.96	9.84	0.06	NEUTRAL QP
9	4.0489	26.70	-19.30	46.00	16.76	9.87	0.07	NEUTRAL Average
10	4.0489	35.10	-20.90	56.00	25.16	9.87	0.07	NEUTRAL QP
11	9.6539	24.85	-25.15	50.00	14.61	10.00	0.24	NEUTRAL Average
12	9.6539	30.50	-29.50	60.00	20.26	10.00	0.24	NEUTRAL QP

Note:

Level = Read Level + LISN Factor + Cable Loss.

## 4.2. Maximum Conducted Output Power Measurement

### 4.2.1. Limit

The limit for output power is 30dBm.

### 4.2.2. Measuring Instruments and Setting

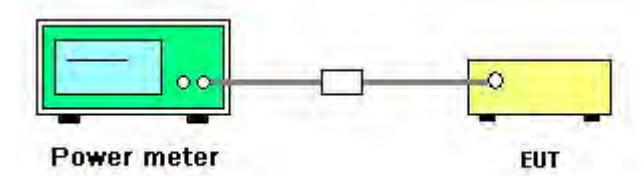
Please refer to section 5 of equipments list in this report. The following table is the setting of the power meter.

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

### 4.2.3. Test Procedures

1. Test procedures refer KDB558074 D01 v03r05 section 9.2.3.2 Measurement using a power meter (PM).
2. This procedure provides an alternative for determining the RMS output power using a broadband RF average power meter with a thermocouple 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	24°C	Humidity	60%
Test Engineer	Andy Tsai	Test Date	Feb. 16, 2016

Mode	Frequency	Conducted Power (dBm)	Max. Limit (dBm)	Result
		Chain 1		
802.11b	2412 MHz	16.11	30.00	Complies
	2437 MHz	16.11	30.00	Complies
	2462 MHz	16.15	30.00	Complies
	2467 MHz	16.25	30.00	Complies
	2472 MHz	9.76	30.00	Complies
802.11g	2412 MHz	14.01	30.00	Complies
	2437 MHz	16.07	30.00	Complies
	2462 MHz	14.10	30.00	Complies
	2467 MHz	13.51	30.00	Complies
	2472 MHz	8.41	30.00	Complies
802.11n MCS0 HT20	2412 MHz	13.16	30.00	Complies
	2437 MHz	16.31	30.00	Complies
	2462 MHz	13.06	30.00	Complies
	2467 MHz	12.74	30.00	Complies
	2472 MHz	7.61	30.00	Complies
802.11n MCS0 HT40	2422 MHz	13.44	30.00	Complies
	2437 MHz	13.08	30.00	Complies
	2452 MHz	13.06	30.00	Complies
	2457 MHz	12.56	30.00	Complies
	2462 MHz	11.72	30.00	Complies

### 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

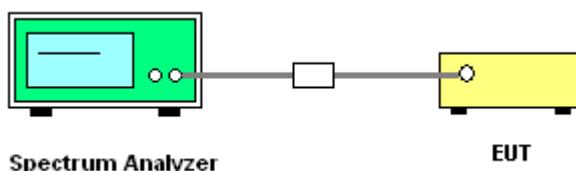
Please refer to section 5 of equipments list in this report. The following table is the setting of the spectrum analyzer.

Spectrum Parameter	Setting
Attenuation	Auto
Span Frequency	Set the span to 1.5 times the DTS channel bandwidth.
RBW	$3 \text{ kHz} \leq \text{RBW} \leq 100\text{kHz}$
VBW	$\geq 3 \times \text{RBW}$
Detector	Peak
Trace	Max Hold
Sweep Time	Auto couple

#### 4.3.3. Test Procedures

1. Test was performed in accordance with KDB558074 D01 v03r05 for Performing Compliance Measurements on Digital Transmission Systems (DTS) - section 10.2 Method PKPSD (peak PSD).
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  $\geq 2 \times \text{span/RBW}$  (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  $\leq 8 \text{ dBm}$ .

#### 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

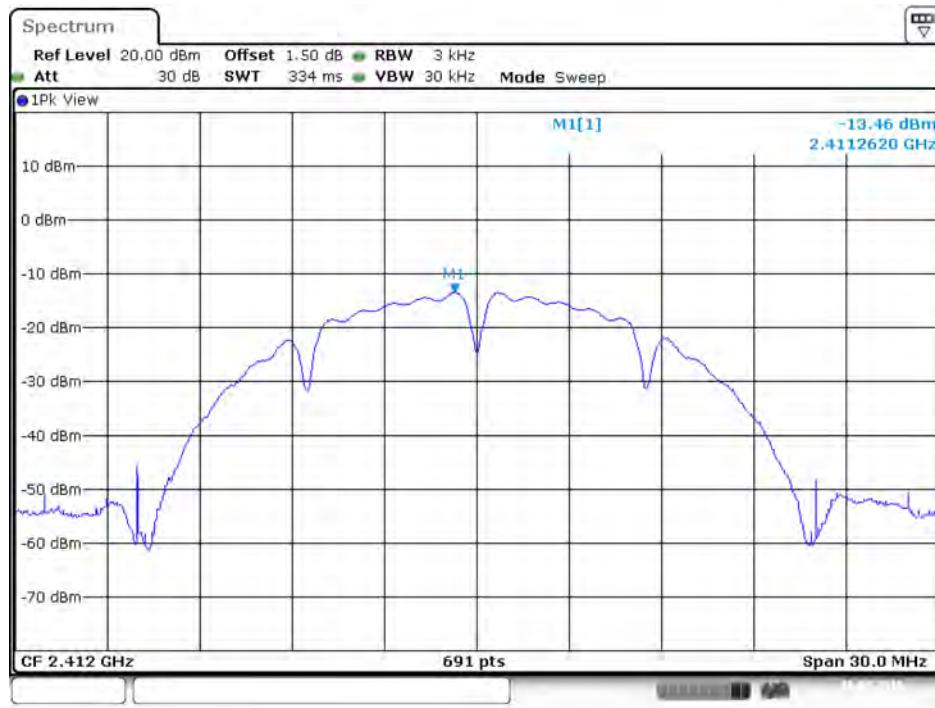
Temperature	24°C	Humidity	60%
Test Engineer	Andy Tsai		

Mode	Frequency	Power Density (dBm/3kHz)	Power Density Limit (dBm/3kHz)	Result
		Chain 1		
802.11b	2412 MHz	-13.46	8.00	Complies
	2437 MHz	-14.23	8.00	Complies
	2462 MHz	-14.37	8.00	Complies
	2467 MHz	-14.79	8.00	Complies
	2472 MHz	-21.55	8.00	Complies
802.11g	2412 MHz	-14.93	8.00	Complies
	2437 MHz	-12.85	8.00	Complies
	2462 MHz	-15.54	8.00	Complies
	2467 MHz	-13.84	8.00	Complies
	2472 MHz	-21.02	8.00	Complies
802.11n MCS0 HT20	2412 MHz	-15.69	8.00	Complies
	2437 MHz	-11.57	8.00	Complies
	2462 MHz	-15.28	8.00	Complies
	2467 MHz	-15.39	8.00	Complies
	2472 MHz	-21.82	8.00	Complies
802.11n MCS0 HT40	2422 MHz	-15.66	8.00	Complies
	2437 MHz	-15.76	8.00	Complies
	2452 MHz	-16.17	8.00	Complies
	2457 MHz	-16.07	8.00	Complies
	2462 MHz	-16.20	8.00	Complies

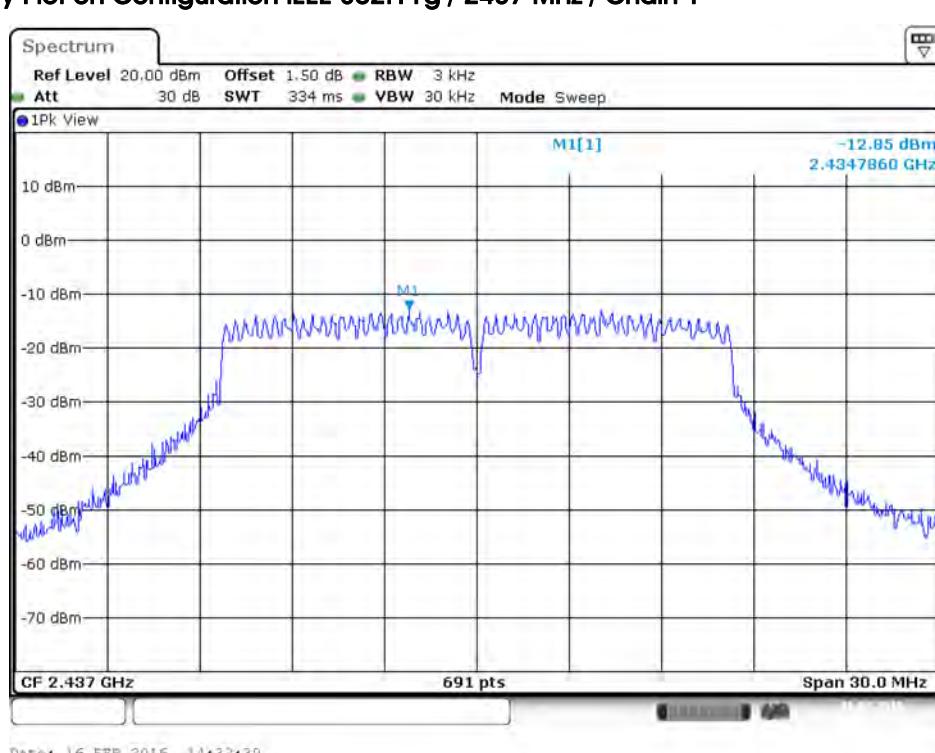
Note: All the test values were listed in the report.

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

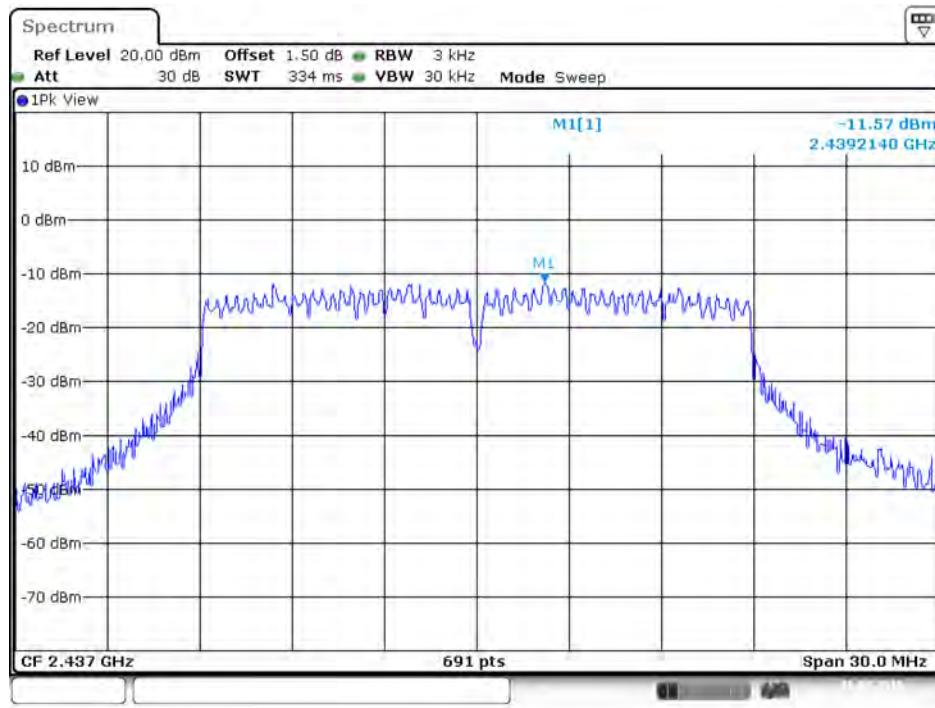
### Power Density Plot on Configuration IEEE 802.11b / 2412 MHz / Chain 1



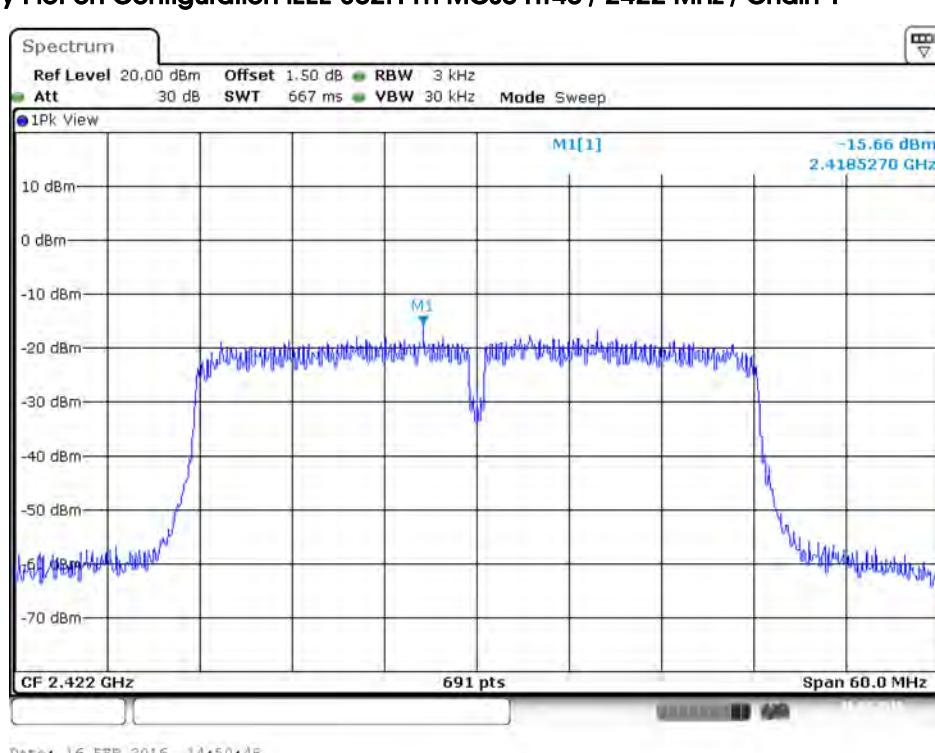
### Power Density Plot on Configuration IEEE 802.11g / 2437 MHz / Chain 1



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



### Power Density Plot on Configuration IEEE 802.11n MCS0 HT40 / 2422 MHz / Chain 1



## 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.

6dB Spectrum Bandwidth	
Spectrum Parameters	Setting
Attenuation	Auto
Span Frequency	> 6dB Bandwidth
RBW	100kHz
VBW	$\geq 3 \times RBW$
Detector	Peak
Trace	Max Hold
Sweep Time	Auto
99% Occupied Bandwidth	
Spectrum Parameters	Setting
Span	1.5 times to 5.0 times the OBW
RBW	1 % to 5 % of the OBW
VBW	$\geq 3 \times RBW$
Detector	Peak
Trace	Max Hold

### 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 KDB558074 D01 v03r05 for Performing Compliance Measurements on Digital Transmission Systems (DTS) - section 8.0 DTS bandwidth=> 8.1 Option 1.
3. 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

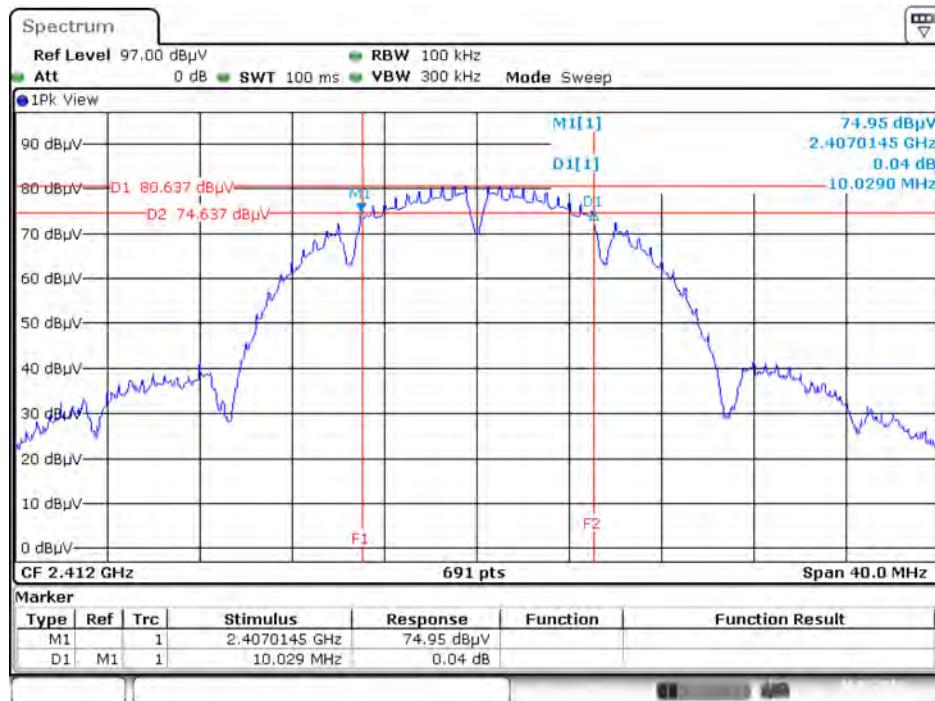
<b>Temperature</b>	24°C	<b>Humidity</b>	60%
<b>Test Engineer</b>	Andy Tsai		

Mode	Frequency	6dB Bandwidth (MHz)	99% Occupied Bandwidth (MHz)	Min. Limit (kHz)	Test Result
802.11b	2412 MHz	10.03	14.76	500	Complies
	2437 MHz	10.09	14.85	500	Complies
	2462 MHz	10.09	14.76	500	Complies
	2467 MHz	10.03	14.76	500	Complies
	2472 MHz	10.03	14.76	500	Complies
802.11g	2412 MHz	16.46	16.85	500	Complies
	2437 MHz	16.46	16.85	500	Complies
	2462 MHz	16.46	16.85	500	Complies
	2467 MHz	16.46	16.76	500	Complies
	2472 MHz	16.46	16.93	500	Complies
802.11n MCS0 HT20	2412 MHz	17.62	17.89	500	Complies
	2437 MHz	17.62	17.97	500	Complies
	2462 MHz	17.62	17.89	500	Complies
	2467 MHz	17.62	17.89	500	Complies
	2472 MHz	17.68	17.89	500	Complies
802.11n MCS0 HT40	2422 MHz	36.41	36.03	500	Complies
	2437 MHz	36.41	35.89	500	Complies
	2452 MHz	36.41	35.89	500	Complies
	2457 MHz	36.41	35.89	500	Complies
	2462 MHz	36.41	35.89	500	Complies

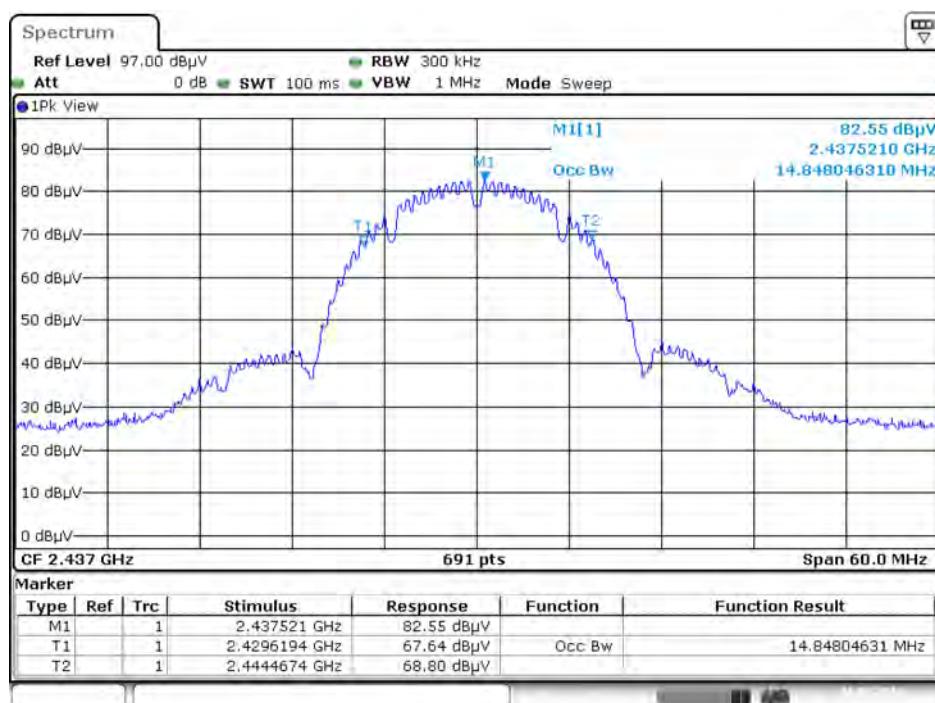
Note: All the test values were listed in the report.

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

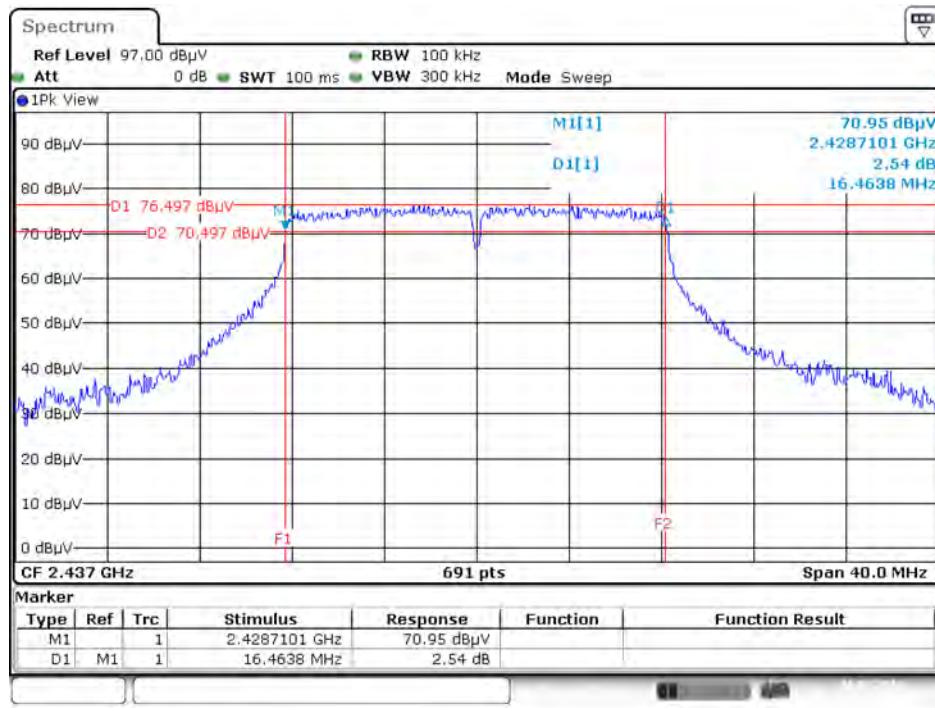
### 6 dB Bandwidth Plot on Configuration IEEE 802.11b / 2412 MHz / Chain 1



### 99% Occupied Bandwidth Plot on Configuration IEEE 802.11b / 2437 MHz / Chain 1



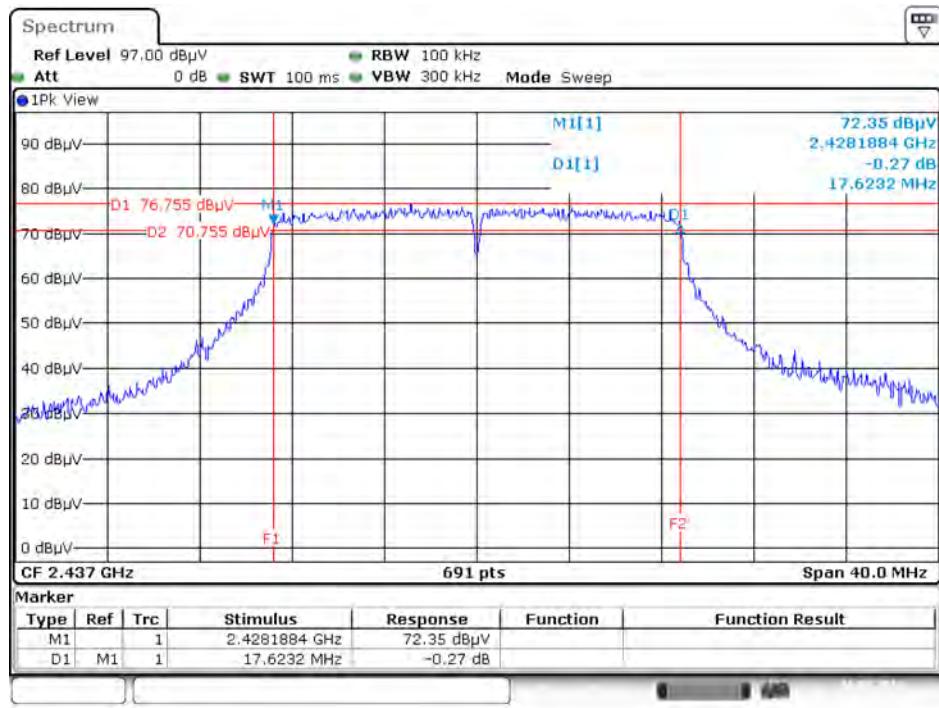
### 6 dB Bandwidth Plot on Configuration IEEE 802.11g / 2437 MHz / Chain 1



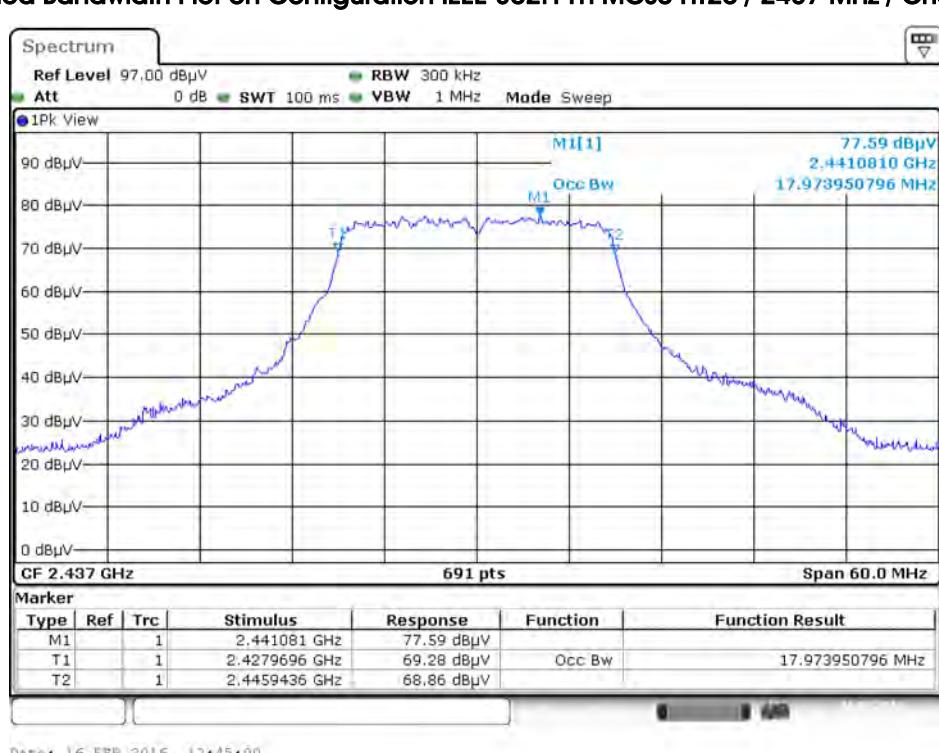
### 99% Occupied Bandwidth Plot on Configuration IEEE 802.11g / 2472 MHz / Chain 1

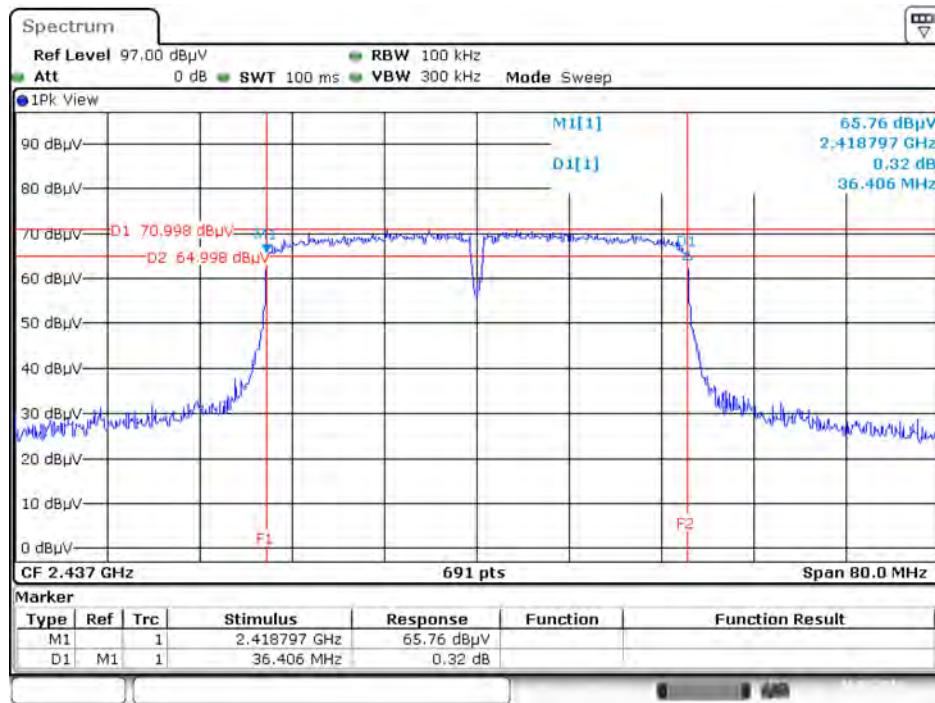
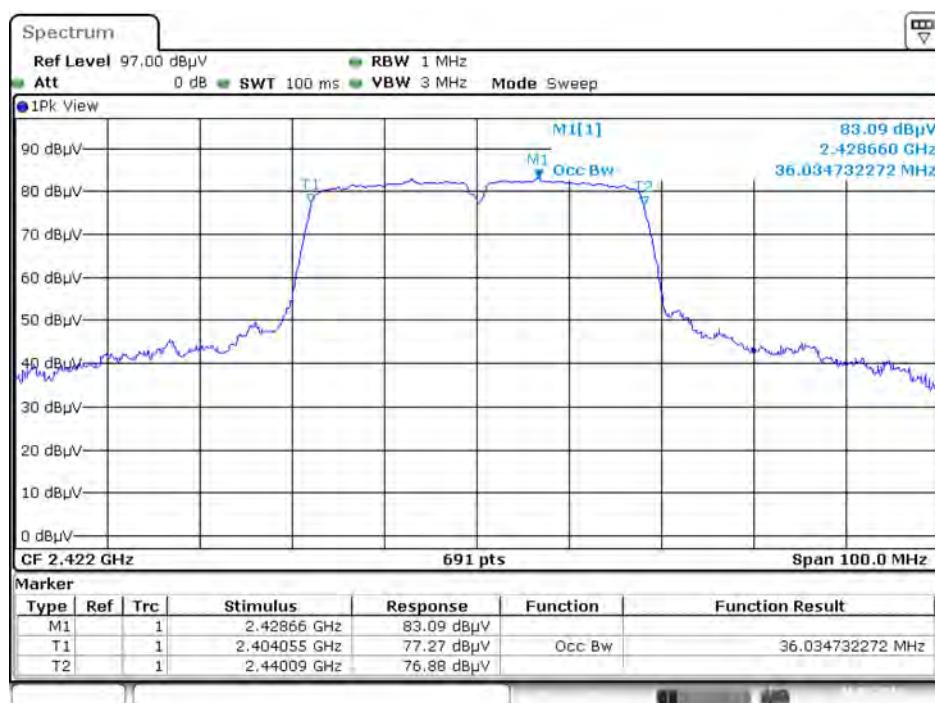


### 6 dB Bandwidth Plot on Configuration IEEE 802.11n MCS0 HT20 / 2437 MHz / Chain 1



### 99% Occupied Bandwidth Plot on Configuration IEEE 802.11n MCS0 HT20 / 2437 MHz / Chain 1



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

**99% Occupied Bandwidth Plot on Configuration IEEE 802.11n MCS0 HT40 / 2422 MHz / Chain 1**


## 4.5. Radiated Emissions Measurement

### 4.5.1. Limit

30dBc 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

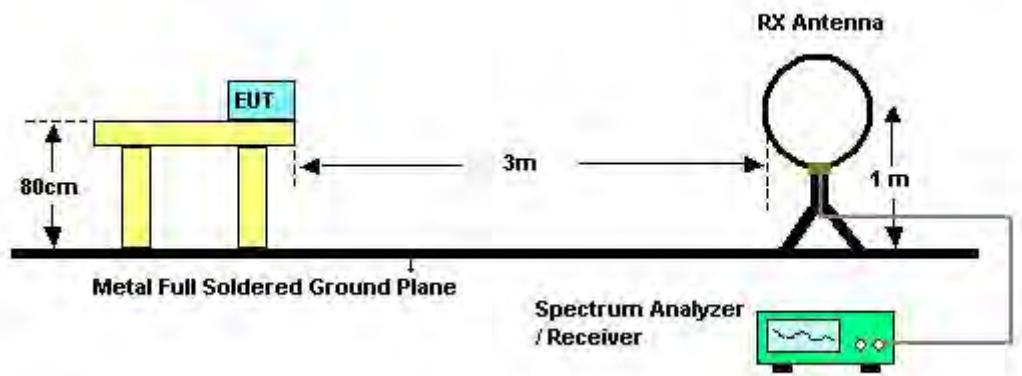
Receiver Parameter	Setting
Attenuation	Auto
Start ~ Stop Frequency	9kHz~150kHz / RBW 200Hz for QP
Start ~ Stop Frequency	150kHz~30MHz / RBW 9kHz for QP
Start ~ Stop Frequency	30MHz~1000MHz / RBW 120kHz for QP

#### 4.5.3. Test Procedures

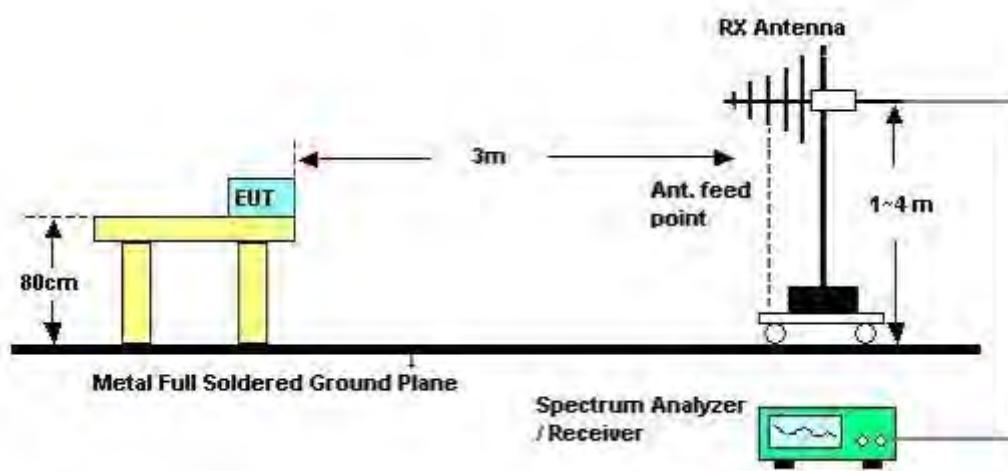
1. Configure the EUT according to ANSI C63.10. The EUT was placed on the top of the turntable 1.5 meter above ground. The phase center of the receiving antenna mounted on the top of a height-variable antenna tower was placed 1m & 3m far away from the turntable.
2. Power on the EUT and all the supporting 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

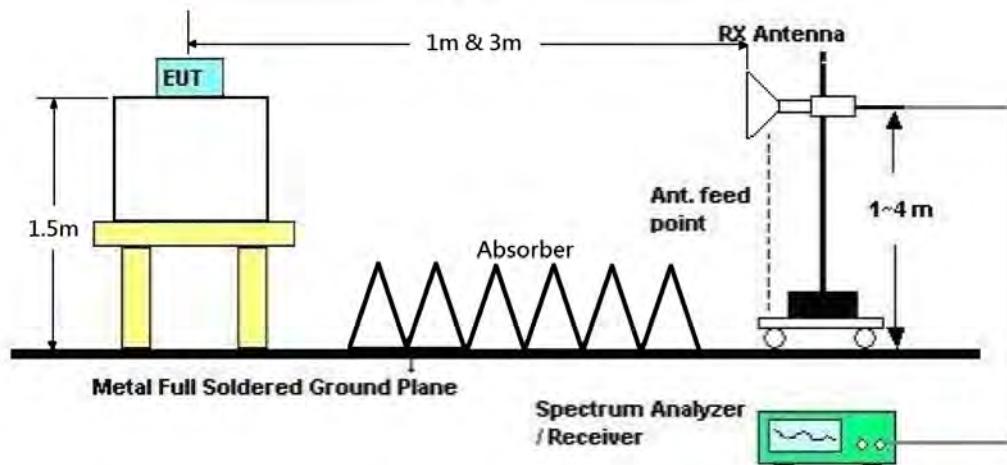
For Radiated Emissions: 9kHz ~30MHz



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	22°C	Humidity	57%
Test Engineer	Eason Chen	Configurations	Normal Link
Test Date	Jan. 13, 2016	Test Mode	Mode 2

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.

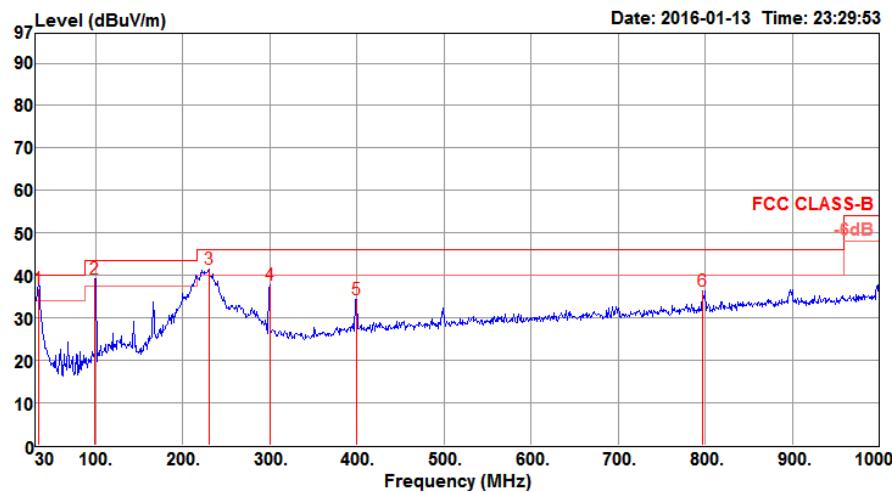
Distance extrapolation factor =  $40 \log (\text{specific distance} / \text{test distance})$  (dB);

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

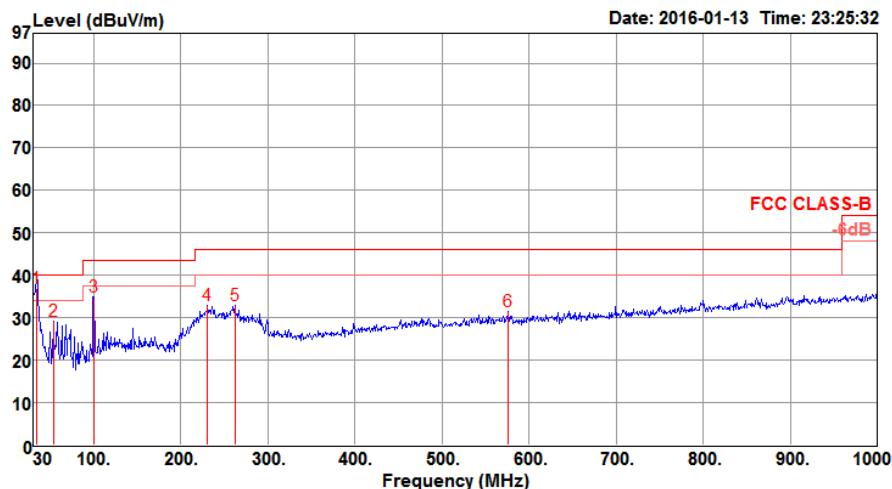
#### 4.5.8. Results of Radiated Emissions (30MHz~1GHz)

<b>Temperature</b>	22°C	<b>Humidity</b>	57%
<b>Test Engineer</b>	Eason Chen	<b>Configurations</b>	Normal Link
<b>Test Mode</b>	Mode 2		

*Horizontal*



Freq	Level	Limit Line	Over Limit	Read Level	Cable Antenna Preamp			Remark	A/Pos	T/Pos	Pol/Phase
					Cable Loss	Antenna Factor	Preamp Factor				
1	33.88	36.96	40.00	-3.04	41.02	1.24	23.19	28.49 QP	100	0	HORIZONTAL
2	98.87	39.32	43.50	-4.18	49.52	1.58	16.51	28.29 Peak	100	0	HORIZONTAL
3	229.82	41.42	46.00	-4.58	50.23	1.93	16.90	27.64 Peak	100	0	HORIZONTAL
4	299.66	37.87	46.00	-8.13	43.64	2.13	19.58	27.48 Peak	100	0	HORIZONTAL
5	399.57	34.35	46.00	-11.65	38.04	2.36	22.17	28.22 Peak	100	0	HORIZONTAL
6	797.27	36.32	46.00	-9.68	34.71	3.28	26.67	28.34 Peak	100	0	HORIZONTAL

*Vertical*


Freq	Limit			Over Limit	Read Level	CableAntenna Preamp			A/Pos	T/Pos	Pol/Phase
	Level	Line	dB			Loss	Factor	Factor			
	MHz	dBuV/m	dBuV/m	dB	dBuV	dB	dB/m	dB	cm	deg	
1	33.88	36.83	40.00	-3.17	40.89	1.24	23.19	28.49	QP	200	0 VERTICAL
2	53.28	29.27	40.00	-10.73	42.53	1.35	13.84	28.45	Peak	200	0 VERTICAL
3	99.84	34.85	43.50	-8.65	44.86	1.58	16.70	28.29	Peak	200	0 VERTICAL
4	230.79	32.90	46.00	-13.10	41.62	1.93	16.98	27.63	Peak	200	0 VERTICAL
5	261.83	32.97	46.00	-13.03	38.81	2.01	19.71	27.56	Peak	200	0 VERTICAL
6	576.11	31.48	46.00	-14.52	32.71	2.77	24.71	28.71	Peak	200	0 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.



#### 4.5.9. Results for Radiated Emissions (1GHz~10<sup>th</sup> Harmonic)

Temperature	22°C	Humidity	57%
Test Engineer	Eason Chen	Configurations	IEEE 802.11b CH 1 / Chain 1
Test Date	Jan. 04, 2016	Test Mode	Mode 1

##### Horizontal

Freq	Limit			Read Level	Cable Loss			Antenna Factor	Preamp Factor	Remark	A/Pos	T/Pos	Pol/Phase
	Level	Line	Over Limit		dBuV	dB	dB/m				cm	deg	
MHz	dBuV/m	dBuV/m											
1	4824.00	49.40	54.00	-4.60	43.90	7.10	33.41	35.01	Average		271	12	HORIZONTAL
2	4824.10	53.81	74.00	-20.19	48.31	7.10	33.41	35.01	Peak		271	12	HORIZONTAL

##### Vertical

Freq	Limit			Read Level	Cable Loss			Antenna Factor	Preamp Factor	Remark	A/Pos	T/Pos	Pol/Phase
	Level	Line	Over Limit		dBuV	dB	dB/m				cm	deg	
MHz	dBuV/m	dBuV/m											
1	4823.96	53.14	74.00	-20.86	47.64	7.10	33.41	35.01	Peak		281	303	VERTICAL
2	4824.02	47.84	54.00	-6.16	42.34	7.10	33.41	35.01	Average		281	303	VERTICAL



Temperature	22°C	Humidity	57%
Test Engineer	Eason Chen	Configurations	IEEE 802.11b CH 6 / Chain 1
Test Date	Jan. 04, 2016	Test Mode	Mode 1

**Horizontal**

Freq	Limit			Over Limit	Read Level	CableAntenna Preamp			A/Pos	T/Pos	Pol/Phase
	Level	Line	dB			Loss	Factor	Factor			
MHz	dBuV/m	dBuV/m	dB	dBuV	dB	dB/m	dB	cm	deg		
1	4874.01	52.65	74.00	-21.35	47.01	7.12	33.53	35.01	Peak	252	6 HORIZONTAL
2	4874.03	48.30	54.00	-5.70	42.66	7.12	33.53	35.01	Average	252	6 HORIZONTAL

**Vertical**

Freq	Limit			Over Limit	Read Level	CableAntenna Preamp			A/Pos	T/Pos	Pol/Phase
	Level	Line	dB			Loss	Factor	Factor			
MHz	dBuV/m	dBuV/m	dB	dBuV	dB	dB/m	dB	cm	deg		
1	4873.79	52.77	74.00	-21.23	47.13	7.12	33.53	35.01	Peak	251	312 VERTICAL
2	4874.03	47.44	54.00	-6.56	41.80	7.12	33.53	35.01	Average	251	312 VERTICAL



Temperature	22°C	Humidity	57%
Test Engineer	Eason Chen	Configurations	IEEE 802.11b CH 11 / Chain 1
Test Date	Jan. 04, 2016	Test Mode	Mode 1

**Horizontal**

Freq	Limit			Over Limit	Read Level	Cable Antenna Preamp			A/Pos	T/Pos	Pol/Phase
	Level	Line	dB			Loss	Factor	Factor			
MHz	dBuV/m	dBuV/m	dB	dBuV	dB	dB/m	dB	cm	deg		
1	4923.93	51.62	74.00	-22.38	45.84	7.14	33.65	35.01	Peak	246	6 HORIZONTAL
2	4924.01	45.78	54.00	-8.22	40.00	7.14	33.65	35.01	Average	246	6 HORIZONTAL

**Vertical**

Freq	Limit			Over Limit	Read Level	Cable Antenna Preamp			A/Pos	T/Pos	Pol/Phase
	Level	Line	dB			Loss	Factor	Factor			
MHz	dBuV/m	dBuV/m	dB	dBuV	dB	dB/m	dB	cm	deg		
1	4923.98	51.19	74.00	-22.81	45.41	7.14	33.65	35.01	Peak	263	317 VERTICAL
2	4924.03	45.62	54.00	-8.38	39.84	7.14	33.65	35.01	Average	263	317 VERTICAL



Temperature	22°C	Humidity	57%
Test Engineer	Eason Chen	Configurations	IEEE 802.11b CH 12 / Chain 1
Test Date	Jan. 04, 2016	Test Mode	Mode 1

**Horizontal**

Freq	Limit			Over Limit	Read Level	CableAntenna Preamp			A/Pos	T/Pos	Pol/Phase
	Level	Line	dB			Loss	Factor	Factor			
MHz	dBuV/m	dBuV/m	dB	dBuV	dB	dB/m	dB	cm	deg		
1	4933.90	54.51	74.00	-19.49	48.73	7.14	33.65	35.01	Peak	249	3 HORIZONTAL
2	4934.02	50.91	54.00	-3.09	45.13	7.14	33.65	35.01	Average	249	3 HORIZONTAL

**Vertical**

Freq	Limit			Over Limit	Read Level	CableAntenna Preamp			A/Pos	T/Pos	Pol/Phase
	Level	Line	dB			Loss	Factor	Factor			
MHz	dBuV/m	dBuV/m	dB	dBuV	dB	dB/m	dB	cm	deg		
1	4933.92	54.52	74.00	-19.48	48.74	7.14	33.65	35.01	Peak	273	309 VERTICAL
2	4934.03	51.07	54.00	-2.93	45.29	7.14	33.65	35.01	Average	273	309 VERTICAL



Temperature	22°C	Humidity	57%
Test Engineer	Eason Chen	Configurations	IEEE 802.11b CH 13 / Chain 1
Test Date	Jan. 04, 2016	Test Mode	Mode 1

**Horizontal**

Freq	Level	Limit		Over Line	Read Limit	Cable Antenna Preamp			A/Pos	T/Pos	Pol/Phase
		MHz	dBuV/m	dBuV/m	dB	dBuV	dB	dB/m	dB		
1	4943.87	47.88	74.00	-26.12	42.07	7.14	33.68	35.01	Peak	265	2 HORIZONTAL
2	4944.02	37.55	54.00	-16.45	31.74	7.14	33.68	35.01	Average	265	2 HORIZONTAL

**Vertical**

Freq	Level	Limit		Over Line	Read Limit	Cable Antenna Preamp			A/Pos	T/Pos	Pol/Phase
		MHz	dBuV/m	dBuV/m	dB	dBuV	dB	dB/m	dB		
1	4943.99	37.59	54.00	-16.41	31.78	7.14	33.68	35.01	Average	274	314 VERTICAL
2	4944.08	47.99	74.00	-26.01	42.18	7.14	33.68	35.01	Peak	274	314 VERTICAL



Temperature	22°C	Humidity	57%
Test Engineer	Eason Chen	Configurations	IEEE 802.11g CH 1 / Chain 1
Test Date	Jan. 28, 2016	Test Mode	Mode 1

**Horizontal**

Freq	Level	Limit		Over Limit	Read Level	Cable	Antenna	Preamplifier	T/Pos	A/Pos	Remark	Pol/Phase
		Line	dBuV/m			dB	dB	dB	dB	deg		
1	4824.00	47.59	54.00	-6.41	43.68	5.61	32.82	34.52	70	267	Average	HORIZONTAL
2	4824.06	54.02	74.00	-19.98	50.11	5.61	32.82	34.52	70	267	Peak	HORIZONTAL

**Vertical**

Freq	Level	Limit		Over Limit	Read Level	Cable	Antenna	Preamplifier	T/Pos	A/Pos	Remark	Pol/Phase
		Line	dBuV/m			dB	dB	dB	dB	deg		
1	4823.99	50.59	74.00	-23.41	46.68	5.61	32.82	34.52	344	256	Peak	VERTICAL
2	4824.00	44.22	54.00	-9.78	40.31	5.61	32.82	34.52	344	256	Average	VERTICAL



Temperature	22°C	Humidity	57%
Test Engineer	Eason Chen	Configurations	IEEE 802.11g CH 6 / Chain 1
Test Date	Jan. 04, 2016	Test Mode	Mode 1

**Horizontal**

Freq	Level	Limit		Over Limit	Read Level	CableAntenna Preamp			Remark	A/Pos	T/Pos	Pol/Phase
		Line	dBuV/m			dB	dBuV	dB				
1	4874.01	45.21	54.00	-8.79	39.57	7.12	33.53	35.01	Average	270	8	HORIZONTAL
2	4874.04	53.05	74.00	-20.95	47.41	7.12	33.53	35.01	Peak	270	8	HORIZONTAL

**Vertical**

Freq	Level	Limit		Over Limit	Read Level	CableAntenna Preamp			Remark	A/Pos	T/Pos	Pol/Phase
		Line	dBuV/m			dB	dBuV	dB				
1	4873.82	52.63	74.00	-21.37	46.99	7.12	33.53	35.01	Peak	248	315	VERTICAL
2	4873.99	43.06	54.00	-10.94	37.42	7.12	33.53	35.01	Average	248	315	VERTICAL



Temperature	22°C	Humidity	57%
Test Engineer	Eason Chen	Configurations	IEEE 802.11g CH 11 / Chain 1
Test Date	Jan. 28, 2016	Test Mode	Mode 1

**Horizontal**

Freq	Level	Limit	Over	Read	Cable	Antenna	Preamp	T/Pos	A/Pos	Remark	Pol/Phase
		Line	Limit	Level	Loss	Factor	Factor	deg	cm		
MHz	dBuV/m	dBuV/m		dB	dBuV	dB	dB/m	dB	deg	cm	
1	4923.96	52.55	74.00	-21.45	48.47	5.58	32.99	34.49	70	278 Peak	HORIZONTAL
2	4924.03	46.16	54.00	-7.84	42.08	5.58	32.99	34.49	70	278 Average	HORIZONTAL

**Vertical**

Freq	Level	Limit	Over	Read	Cable	Antenna	Preamp	T/Pos	A/Pos	Remark	Pol/Phase
		Line	Limit	Level	Loss	Factor	Factor	deg	cm		
MHz	dBuV/m	dBuV/m		dB	dBuV	dB	dB/m	dB	deg	cm	
1	4923.96	43.74	54.00	-10.26	39.66	5.58	32.99	34.49	15	246 Average	VERTICAL
2	4924.06	50.57	74.00	-23.43	46.49	5.58	32.99	34.49	15	246 Peak	VERTICAL



Temperature	22°C	Humidity	57%
Test Engineer	Eason Chen	Configurations	IEEE 802.11g CH 12 / Chain 1
Test Date	Jan. 04, 2016	Test Mode	Mode 1

**Horizontal**

Freq	Limit			Over Limit	Read Level	CableAntenna Preamp			A/Pos	T/Pos	Pol/Phase
	Level	Line	dB			Loss	Factor	Factor			
MHz	dBuV/m	dBuV/m	dB	dBuV	dB	dB/m	dB	cm	deg		
1	4933.99	50.99	74.00	-23.01	45.21	7.14	33.65	35.01	Peak	260	6 HORIZONTAL
2	4934.00	43.35	54.00	-10.65	37.57	7.14	33.65	35.01	Average	260	6 HORIZONTAL

**Vertical**

Freq	Limit			Over Limit	Read Level	CableAntenna Preamp			A/Pos	T/Pos	Pol/Phase
	Level	Line	dB			Loss	Factor	Factor			
MHz	dBuV/m	dBuV/m	dB	dBuV	dB	dB/m	dB	cm	deg		
1	4933.91	49.34	74.00	-24.66	43.56	7.14	33.65	35.01	Peak	277	24 VERTICAL
2	4933.96	40.31	54.00	-13.69	34.53	7.14	33.65	35.01	Average	277	24 VERTICAL



Temperature	22°C	Humidity	57%
Test Engineer	Eason Chen	Configurations	IEEE 802.11g CH 13 / Chain 1
Test Date	Jan. 04, 2016	Test Mode	Mode 1

**Horizontal**

Freq	Level	Limit		Over Limit	Read Level	CableAntenna Preamp			A/Pos	T/Pos	Pol/Phase
		Line	dBuV/m			Loss	Factor	Factor			
1	4944.04	38.57	54.00	-15.43	32.76	7.14	33.68	35.01	Average	280	6 HORIZONTAL
2	4944.05	48.65	74.00	-25.35	42.84	7.14	33.68	35.01	Peak	280	6 HORIZONTAL

**Vertical**

Freq	Level	Limit		Over Limit	Read Level	CableAntenna Preamp			A/Pos	T/Pos	Pol/Phase
		Line	dBuV/m			Loss	Factor	Factor			
1	4943.87	47.42	74.00	-26.58	41.61	7.14	33.68	35.01	Peak	289	23 VERTICAL
2	4943.96	36.44	54.00	-17.56	30.63	7.14	33.68	35.01	Average	289	23 VERTICAL



Temperature	22°C	Humidity	57%
Test Engineer	Eason Chen	Configurations	IEEE 802.11n MCS0 HT20 CH 1 / Chain 1
Test Date	Jan. 28, 2016	Test Mode	Mode 1

**Horizontal**

	Freq	Level	Limit	Over	Read	Cable	Antenna	Preampl	T/Pos	A/Pos	Remark	Pol/Phase
	MHz	dBuV/m	dBuV/m	dB	dBuV	dB	dB/m	dB	deg	cm		
1	4823.95	47.36	54.00	-6.64	43.45	5.61	32.82	34.52	57	267	Average	HORIZONTAL
2	4824.09	53.95	74.00	-20.05	50.04	5.61	32.82	34.52	57	267	Peak	HORIZONTAL

**Vertical**

	Freq	Level	Limit	Over	Read	Cable	Antenna	Preampl	T/Pos	A/Pos	Remark	Pol/Phase
	MHz	dBuV/m	dBuV/m	dB	dBuV	dB	dB/m	dB	deg	cm		
1	4824.06	44.04	54.00	-9.96	40.13	5.61	32.82	34.52	340	248	Average	VERTICAL
2	4824.09	50.67	74.00	-23.33	46.76	5.61	32.82	34.52	340	248	Peak	VERTICAL



Temperature	22°C	Humidity	57%
Test Engineer	Eason Chen	Configurations	IEEE 802.11n MCS0 HT20 CH 6 / Chain 1
Test Date	Jan. 04, 2016	Test Mode	Mode 1

**Horizontal**

Freq	Level	Limit	Over	Read	Cable	Antenna	Preamplifier	T/Pos	A/Pos	Remark	Pol/Phase
		Line	Limit	Level	Loss	Factor	Factor	deg	cm		
MHz	dBuV/m	dBuV/m		dB	dBuV	dB	dB/m	dB	deg	cm	
1	4873.87	53.01	74.00	-20.99	48.55	6.06	32.91	34.51	0	142	Peak HORIZONTAL
2	4874.00	45.62	54.00	-8.38	41.16	6.06	32.91	34.51	0	142	Average HORIZONTAL

**Vertical**

Freq	Level	Limit	Over	Read	Cable	Antenna	Preamplifier	T/Pos	A/Pos	Remark	Pol/Phase
		Line	Limit	Level	Loss	Factor	Factor	deg	cm		
MHz	dBuV/m	dBuV/m		dB	dBuV	dB	dB/m	dB	deg	cm	
1	4873.96	52.31	74.00	-21.69	47.85	6.06	32.91	34.51	320	164	Peak VERTICAL
2	4874.02	44.89	54.00	-9.11	40.43	6.06	32.91	34.51	320	164	Average VERTICAL



Temperature	22°C	Humidity	57%
Test Engineer	Eason Chen	Configurations	IEEE 802.11n MCS0 HT20 CH 11 / Chain 1
Test Date	Jan. 04, 2016	Test Mode	Mode 1

**Horizontal**

Freq	Level	Limit	Over	Read	Cable	Antenna	Preamplifier	T/Pos	A/Pos	Remark	Pol/Phase
		Line	Limit	Level	Loss	Factor	Factor	deg	cm		
MHz	dBuV/m	dBuV/m		dB	dBuV	dB	dB/m	dB	deg	cm	
1	4923.99	51.89	74.00	-22.11	47.45	5.94	32.99	34.49	0	145	Peak HORIZONTAL
2	4924.02	44.95	54.00	-9.05	40.51	5.94	32.99	34.49	0	145	Average HORIZONTAL

**Vertical**

Freq	Level	Limit	Over	Read	Cable	Antenna	Preamplifier	T/Pos	A/Pos	Remark	Pol/Phase
		Line	Limit	Level	Loss	Factor	Factor	deg	cm		
MHz	dBuV/m	dBuV/m		dB	dBuV	dB	dB/m	dB	deg	cm	
1	4924.00	50.85	74.00	-23.15	46.41	5.94	32.99	34.49	319	142	Peak VERTICAL
2	4924.01	44.04	54.00	-9.96	39.60	5.94	32.99	34.49	319	142	Average VERTICAL



Temperature	22°C	Humidity	57%
Test Engineer	Eason Chen	Configurations	IEEE 802.11n MCS0 HT20 CH 12 / Chain 1
Test Date	Jan. 04, 2016	Test Mode	Mode 1

**Horizontal**

Freq	Level	Limit	Over	Read	Cable	Antenna	Preamplifier	T/Pos	A/Pos	Remark	Pol/Phase
		Line	Limit	Level	Loss	Factor	Factor	deg	cm		
MHz	dBuV/m	dBuV/m		dB	dBuV	dB	dB/m	dB	deg	cm	
1	4933.86	50.60	74.00	-23.40	46.16	5.94	32.99	34.49	360	146 Peak	HORIZONTAL
2	4934.01	43.57	54.00	-10.43	39.13	5.94	32.99	34.49	360	146 Average	HORIZONTAL

**Vertical**

Freq	Level	Limit	Over	Read	Cable	Antenna	Preamplifier	T/Pos	A/Pos	Remark	Pol/Phase
		Line	Limit	Level	Loss	Factor	Factor	deg	cm		
MHz	dBuV/m	dBuV/m		dB	dBuV	dB	dB/m	dB	deg	cm	
1	4934.00	43.19	54.00	-10.81	38.75	5.94	32.99	34.49	321	151 Average	VERTICAL
2	4934.06	50.30	74.00	-23.70	45.86	5.94	32.99	34.49	321	151 Peak	VERTICAL



Temperature	22°C	Humidity	57%
Test Engineer	Eason Chen	Configurations	IEEE 802.11n MCS0 HT20 CH 13 / Chain 1
Test Date	Jan. 04, 2016	Test Mode	Mode 1

**Horizontal**

	Freq	Level	Limit	Over	Read	Cable	Antenna	Preamplifier	T/Pos	A/Pos	Remark	Pol/Phase
	MHz	dBuV/m	dBuV/m	dB	dBuV	dB	dB/m	dB	deg	cm		
1	4943.97	37.87	54.00	-16.13	33.43	5.91	33.01	34.48	360	146	Average	HORIZONTAL
2	4944.04	47.74	74.00	-26.26	43.30	5.91	33.01	34.48	360	146	Peak	HORIZONTAL

**Vertical**

	Freq	Level	Limit	Over	Read	Cable	Antenna	Preamplifier	T/Pos	A/Pos	Remark	Pol/Phase
	MHz	dBuV/m	dBuV/m	dB	dBuV	dB	dB/m	dB	deg	cm		
1	4944.02	37.13	54.00	-16.87	32.69	5.91	33.01	34.48	317	167	Average	VERTICAL
2	4944.07	48.40	74.00	-25.60	43.96	5.91	33.01	34.48	317	167	Peak	VERTICAL



Temperature	22°C	Humidity	57%
Test Engineer	Eason Chen	Configurations	IEEE 802.11n MCS0 HT40 CH 3 / Chain 1
Test Date	Jan. 28, 2016	Test Mode	Mode 1

**Horizontal**

Freq	Level	Limit	Over	Read	Cable	Antenna	Preamplifier	T/Pos	A/Pos	Remark	Pol/Phase
		Line	Limit	Level	Loss	Factor	Factor	dB	deg		
MHz	dBuV/m	dBuV/m	dB	dBuV	dB	dB/m	dB	deg	cm		
1	4843.96	47.63	54.00	-6.37	43.69	5.60	32.86	34.52	353	200 Average	HORIZONTAL
2	4843.97	54.56	74.00	-19.44	50.62	5.60	32.86	34.52	353	200 Peak	HORIZONTAL

**Vertical**

Freq	Level	Limit	Over	Read	Cable	Antenna	Preamplifier	T/Pos	A/Pos	Remark	Pol/Phase
		Line	Limit	Level	Loss	Factor	Factor	dB	deg		
MHz	dBuV/m	dBuV/m	dB	dBuV	dB	dB/m	dB	deg	cm		
1	4843.96	52.24	74.00	-21.76	48.30	5.60	32.86	34.52	249	152 Peak	VERTICAL
2	4843.99	44.14	54.00	-9.86	40.20	5.60	32.86	34.52	249	152 Average	VERTICAL

<b>Temperature</b>	22°C	<b>Humidity</b>	57%
<b>Test Engineer</b>	Eason Chen	<b>Configurations</b>	IEEE 802.11n MCS0 HT40 CH 6 / Chain 1
<b>Test Date</b>	Jan. 28, 2016	<b>Test Mode</b>	Mode 1

**Horizontal**

Freq	Level	Limit	Over	Read	Cable	Antenna	Preamplifier	T/Pos	A/Pos	Remark	Pol/Phase
		Line	Limit	Level	Loss	Factor	Factor	deg	cm		
MHz	dBuV/m	dBuV/m	dB	dBuV	dB	dB/m	dB	deg	cm		
1	4874.04	42.58	54.00	-11.42	38.59	5.59	32.91	34.51	77	129 Average	HORIZONTAL
2	4874.09	49.21	74.00	-24.79	45.22	5.59	32.91	34.51	77	129 Peak	HORIZONTAL
3	7310.05	52.93	74.00	-21.07	43.59	6.93	37.17	34.76	296	123 Peak	HORIZONTAL
4	7310.43	40.01	54.00	-13.99	30.67	6.93	37.17	34.76	296	123 Average	HORIZONTAL

**Vertical**

Freq	Level	Limit	Over	Read	Cable	Antenna	Preamplifier	T/Pos	A/Pos	Remark	Pol/Phase
		Line	Limit	Level	Loss	Factor	Factor	deg	cm		
MHz	dBuV/m	dBuV/m	dB	dBuV	dB	dB/m	dB	deg	cm		
1	4873.94	42.03	54.00	-11.97	38.04	5.59	32.91	34.51	19	127 Average	VERTICAL
2	4874.32	49.26	74.00	-24.74	45.27	5.59	32.91	34.51	19	127 Peak	VERTICAL
3	7310.09	40.03	54.00	-13.97	30.69	6.93	37.17	34.76	92	145 Average	VERTICAL
4	7310.67	52.82	74.00	-21.18	43.48	6.93	37.17	34.76	92	145 Peak	VERTICAL



Temperature	22°C	Humidity	57%
Test Engineer	Eason Chen	Configurations	IEEE 802.11n MCS0 HT40 CH 9 / Chain 1
Test Date	Jan. 04, 2016	Test Mode	Mode 1

**Horizontal**

Freq	Level	Limit	Over	Read	Cable	Antenna	Preamplifier	T/Pos	A/Pos	Remark	Pol/Phase
		Line	Limit	Level	Loss	Factor	Factor	deg	cm		
MHz	dBuV/m	dBuV/m	dB	dBuV	dB	dB/m	dB	deg	cm		
1	4903.98	43.51	54.00	-10.49	39.06	6.00	32.95	34.50	360	149 Average	HORIZONTAL
2	4904.14	50.77	74.00	-23.23	46.32	6.00	32.95	34.50	360	149 Peak	HORIZONTAL

**Vertical**

Freq	Level	Limit	Over	Read	Cable	Antenna	Preamplifier	T/Pos	A/Pos	Remark	Pol/Phase
		Line	Limit	Level	Loss	Factor	Factor	deg	cm		
MHz	dBuV/m	dBuV/m	dB	dBuV	dB	dB/m	dB	deg	cm		
1	4904.05	43.21	54.00	-10.79	38.76	6.00	32.95	34.50	319	160 Average	VERTICAL
2	4904.15	50.04	74.00	-23.96	45.59	6.00	32.95	34.50	319	160 Peak	VERTICAL



Temperature	22°C	Humidity	57%
Test Engineer	Eason Chen	Configurations	IEEE 802.11n MCS0 HT40 CH 10 / Chain 1
Test Date	Jan. 04, 2016	Test Mode	Mode 1

**Horizontal**

Freq	Level	Limit	Over	Read	Cable	Antenna	Preamplifier	T/Pos	A/Pos	Remark	Pol/Phase
		Line	Limit	Level	Loss	Factor	Factor	deg	cm		
MHz	dBuV/m	dBuV/m		dB	dBuV	dB	dB/m	dB	deg	cm	
1	4914.00	50.10	74.00	-23.90	45.65	5.97	32.97	34.49	360	148 Peak	HORIZONTAL
2	4914.01	43.28	54.00	-10.72	38.83	5.97	32.97	34.49	360	148 Average	HORIZONTAL

**Vertical**

Freq	Level	Limit	Over	Read	Cable	Antenna	Preamplifier	T/Pos	A/Pos	Remark	Pol/Phase
		Line	Limit	Level	Loss	Factor	Factor	deg	cm		
MHz	dBuV/m	dBuV/m		dB	dBuV	dB	dB/m	dB	deg	cm	
1	4913.94	50.29	74.00	-23.71	45.84	5.97	32.97	34.49	325	157 Peak	VERTICAL
2	4914.01	42.68	54.00	-11.32	38.23	5.97	32.97	34.49	325	157 Average	VERTICAL



Temperature	22°C	Humidity	57%
Test Engineer	Eason Chen	Configurations	IEEE 802.11n MCS0 HT40 CH 11 / Chain 1
Test Date	Jan. 04, 2016	Test Mode	Mode 1

**Horizontal**

Freq	Level	Limit	Over	Read	Cable	Antenna	Preampl	T/Pos	A/Pos	Remark	Pol/Phase
		Line	Limit	Level	Loss	Factor	Factor	deg	cm		
MHz	dBuV/m	dBuV/m		dB	dBuV	dB	dB/m	dB	deg	cm	
1	4923.89	50.02	74.00	-23.98	45.58	5.94	32.99	34.49	360	147 Peak	HORIZONTAL
2	4924.01	43.15	54.00	-10.85	38.71	5.94	32.99	34.49	360	147 Average	HORIZONTAL

**Vertical**

Freq	Level	Limit	Over	Read	Cable	Antenna	Preampl	T/Pos	A/Pos	Remark	Pol/Phase
		Line	Limit	Level	Loss	Factor	Factor	deg	cm		
MHz	dBuV/m	dBuV/m		dB	dBuV	dB	dB/m	dB	deg	cm	
1	4923.97	42.54	54.00	-11.46	38.10	5.94	32.99	34.49	319	152 Average	VERTICAL
2	4924.16	49.64	74.00	-24.36	45.20	5.94	32.99	34.49	319	152 Peak	VERTICAL



Temperature	22°C	Humidity	57%
Test Engineer	Eason Chen	Configurations	IEEE 802.11b CH 1 / Chain 1
Test Date	Jan. 08, 2016	Test Mode	Mode 2

**Horizontal**

Freq	Level	Limit	Over	Read	Cable	Antenna	Preamplifier	T/Pos	A/Pos	Remark	Pol/Phase
		Line	Limit	Level	Loss	Factor	Factor	deg	cm		
MHz	dBuV/m	dBuV/m		dB	dBuV	dB	dB/m	dB	deg	cm	
1	4824.03	44.53	54.00	-9.47	40.05	6.18	32.82	34.52	317	145	Average
2	4824.08	50.03	74.00	-23.97	45.55	6.18	32.82	34.52	317	145	Peak
											HORIZONTAL
											HORIZONTAL

**Vertical**

Freq	Level	Limit	Over	Read	Cable	Antenna	Preamplifier	T/Pos	A/Pos	Remark	Pol/Phase
		Line	Limit	Level	Loss	Factor	Factor	deg	cm		
MHz	dBuV/m	dBuV/m		dB	dBuV	dB	dB/m	dB	deg	cm	
1	4823.99	51.32	74.00	-22.68	46.84	6.18	32.82	34.52	46	225	Peak
2	4824.02	46.53	54.00	-7.47	42.05	6.18	32.82	34.52	46	225	Average
											VERTICAL
											VERTICAL



Temperature	22°C	Humidity	57%
Test Engineer	Eason Chen	Configurations	IEEE 802.11b CH 6 / Chain 1
Test Date	Jan. 08, 2016	Test Mode	Mode 2

**Horizontal**

Freq	Level	Limit	Over	Read	Cable	Antenna	Preamplifier	T/Pos	A/Pos	Remark	Pol/Phase
		Line	Limit	Level	Loss	Factor	Factor	deg	cm		
MHz	dBuV/m	dBuV/m		dB	dBuV	dB	dB/m	dB	deg	cm	
1	4873.95	49.65	74.00	-24.35	45.19	6.06	32.91	34.51	349	135 Peak	HORIZONTAL
2	4874.05	43.39	54.00	-10.61	38.93	6.06	32.91	34.51	349	135 Average	HORIZONTAL

**Vertical**

Freq	Level	Limit	Over	Read	Cable	Antenna	Preamplifier	T/Pos	A/Pos	Remark	Pol/Phase
		Line	Limit	Level	Loss	Factor	Factor	deg	cm		
MHz	dBuV/m	dBuV/m		dB	dBuV	dB	dB/m	dB	deg	cm	
1	4874.01	45.43	54.00	-8.57	40.97	6.06	32.91	34.51	0	213 Average	VERTICAL
2	4874.07	50.20	74.00	-23.80	45.74	6.06	32.91	34.51	0	213 Peak	VERTICAL



Temperature	22°C	Humidity	57%
Test Engineer	Eason Chen	Configurations	IEEE 802.11b CH 11 / Chain 1
Test Date	Jan. 08, 2016	Test Mode	Mode 2

**Horizontal**

Freq	Level	Limit	Over	Read	Cable	Antenna	Preamplifier	T/Pos	A/Pos	Remark	Pol/Phase
		Line	Limit	Level	Loss	Factor	Factor	deg	cm		
MHz	dBuV/m	dBuV/m		dB	dBuV	dB	dB/m	dB	deg	cm	
1	4923.95	50.02	74.00	-23.98	45.58	5.94	32.99	34.49	349	139 Peak	HORIZONTAL
2	4923.99	43.84	54.00	-10.16	39.40	5.94	32.99	34.49	349	139 Average	HORIZONTAL

**Vertical**

Freq	Level	Limit	Over	Read	Cable	Antenna	Preamplifier	T/Pos	A/Pos	Remark	Pol/Phase
		Line	Limit	Level	Loss	Factor	Factor	deg	cm		
MHz	dBuV/m	dBuV/m		dB	dBuV	dB	dB/m	dB	deg	cm	
1	4923.98	46.07	54.00	-7.93	41.63	5.94	32.99	34.49	39	259 Average	VERTICAL
2	4924.06	50.82	74.00	-23.18	46.38	5.94	32.99	34.49	39	259 Peak	VERTICAL



Temperature	22°C	Humidity	57%
Test Engineer	Eason Chen	Configurations	IEEE 802.11b CH 12 / Chain 1
Test Date	Jan. 08, 2016	Test Mode	Mode 2

**Horizontal**

Freq	Level	Limit	Over	Read	Cable	Antenna	Preamplifier	T/Pos	A/Pos	Remark	Pol/Phase
		Line	Limit	Level	Loss	Factor	Factor	deg	cm		
MHz	dBuV/m	dBuV/m	dB	dBuV	dB	dB/m	dB	deg	cm		
1	4933.97	45.94	54.00	-8.06	41.50	5.94	32.99	34.49	349	148 Average	HORIZONTAL
2	4934.14	51.00	74.00	-23.00	46.56	5.94	32.99	34.49	349	148 Peak	HORIZONTAL

**Vertical**

Freq	Level	Limit	Over	Read	Cable	Antenna	Preamplifier	T/Pos	A/Pos	Remark	Pol/Phase
		Line	Limit	Level	Loss	Factor	Factor	deg	cm		
MHz	dBuV/m	dBuV/m	dB	dBuV	dB	dB/m	dB	deg	cm		
1	4933.91	53.58	74.00	-20.42	49.14	5.94	32.99	34.49	0	242 Peak	VERTICAL
2	4934.02	49.44	54.00	-4.56	45.00	5.94	32.99	34.49	0	242 Average	VERTICAL



Temperature	22°C	Humidity	57%
Test Engineer	Eason Chen	Configurations	IEEE 802.11b CH 13 / Chain 1
Test Date	Jan. 08, 2016	Test Mode	Mode 2

**Horizontal**

Freq	Level	Limit	Over	Read	Cable	Antenna	Preamplifier	T/Pos	A/Pos	Remark	Pol/Phase
		Line	Limit	Level	Loss	Factor	Factor	deg	cm		
MHz	dBuV/m	dBuV/m	dB	dBuV	dB	dB/m	dB	deg	cm		
1	4943.92	35.31	54.00	-18.69	30.87	5.91	33.01	34.48	252	152 Average	HORIZONTAL
2	4944.72	47.99	74.00	-26.01	43.55	5.91	33.01	34.48	252	152 Peak	HORIZONTAL

**Vertical**

Freq	Level	Limit	Over	Read	Cable	Antenna	Preamplifier	T/Pos	A/Pos	Remark	Pol/Phase
		Line	Limit	Level	Loss	Factor	Factor	deg	cm		
MHz	dBuV/m	dBuV/m	dB	dBuV	dB	dB/m	dB	deg	cm		
1	4943.93	37.14	54.00	-16.86	32.70	5.91	33.01	34.48	117	188 Average	VERTICAL
2	4944.02	49.96	74.00	-24.04	45.52	5.91	33.01	34.48	117	188 Peak	VERTICAL



Temperature	22°C	Humidity	57%
Test Engineer	Eason Chen	Configurations	IEEE 802.11g CH 1 / Chain 1
Test Date	Jan. 28, 2016	Test Mode	Mode 2

**Horizontal**

Freq	Level	Limit	Over	Read	Cable	Antenna	Preamplifier	T/Pos	A/Pos	Remark	Pol/Phase
		Line	Limit	Level	Loss	Factor	Factor	deg	cm		
MHz	dBuV/m	dBuV/m	dB	dBuV	dB	dB/m	dB	deg	cm		
1	4823.96	44.45	54.00	-9.55	40.54	5.61	32.82	34.52	314	149 Average	HORIZONTAL
2	4824.03	51.43	74.00	-22.57	47.52	5.61	32.82	34.52	314	149 Peak	HORIZONTAL

**Vertical**

Freq	Level	Limit	Over	Read	Cable	Antenna	Preamplifier	T/Pos	A/Pos	Remark	Pol/Phase
		Line	Limit	Level	Loss	Factor	Factor	deg	cm		
MHz	dBuV/m	dBuV/m	dB	dBuV	dB	dB/m	dB	deg	cm		
1	4823.90	53.38	74.00	-20.62	49.47	5.61	32.82	34.52	40	246 Peak	VERTICAL
2	4824.03	48.23	54.00	-5.77	44.32	5.61	32.82	34.52	40	246 Average	VERTICAL



Temperature	22°C	Humidity	57%
Test Engineer	Eason Chen	Configurations	IEEE 802.11g CH 6 / Chain 1
Test Date	Jan. 08, 2016	Test Mode	Mode 2

**Horizontal**

Freq	Level	Limit	Over	Read	Cable	Antenna	Preamplifier	T/Pos	A/Pos	Remark	Pol/Phase
		Line	Limit	Level	Loss	Factor	Factor	deg	cm		
MHz	dBuV/m	dBuV/m		dB	dBuV	dB	dB/m	dB	deg	cm	
1	4874.02	49.79	74.00	-24.21	45.33	6.06	32.91	34.51	353	188 Peak	HORIZONTAL
2	4874.02	41.68	54.00	-12.32	37.22	6.06	32.91	34.51	353	188 Average	HORIZONTAL

**Vertical**

Freq	Level	Limit	Over	Read	Cable	Antenna	Preamplifier	T/Pos	A/Pos	Remark	Pol/Phase
		Line	Limit	Level	Loss	Factor	Factor	deg	cm		
MHz	dBuV/m	dBuV/m		dB	dBuV	dB	dB/m	dB	deg	cm	
1	4873.95	48.29	54.00	-5.71	43.83	6.06	32.91	34.51	41	251 Average	VERTICAL
2	4874.04	52.95	74.00	-21.05	48.49	6.06	32.91	34.51	41	251 Peak	VERTICAL



Temperature	22°C	Humidity	57%
Test Engineer	Eason Chen	Configurations	IEEE 802.11g CH 11 / Chain 1
Test Date	Jan. 28, 2016	Test Mode	Mode 2

**Horizontal**

Freq	Level	Limit	Over	Read	Cable	Antenna	Preamplifier	T/Pos	A/Pos	Remark	Pol/Phase
		Line	Limit	Level	Loss	Factor	Factor	deg	cm		
MHz	dBuV/m	dBuV/m		dB	dBuV	dB	dB/m	dB	deg	cm	
1	4923.85	51.10	74.00	-22.90	47.02	5.58	32.99	34.49	360	138 Peak	HORIZONTAL
2	4923.97	44.70	54.00	-9.30	40.62	5.58	32.99	34.49	360	138 Average	HORIZONTAL

**Vertical**

Freq	Level	Limit	Over	Read	Cable	Antenna	Preamplifier	T/Pos	A/Pos	Remark	Pol/Phase
		Line	Limit	Level	Loss	Factor	Factor	deg	cm		
MHz	dBuV/m	dBuV/m		dB	dBuV	dB	dB/m	dB	deg	cm	
1	4923.94	53.80	74.00	-20.20	49.72	5.58	32.99	34.49	29	250 Peak	VERTICAL
2	4924.00	48.57	54.00	-5.43	44.49	5.58	32.99	34.49	29	250 Average	VERTICAL



Temperature	22°C	Humidity	57%
Test Engineer	Eason Chen	Configurations	IEEE 802.11g CH 12 / Chain 1
Test Date	Jan. 08, 2016	Test Mode	Mode 2

**Horizontal**

Freq	Level	Limit	Over	Read	Cable	Antenna	Preamplifier	T/Pos	A/Pos	Remark	Pol/Phase
		Line	Limit	Level	Loss	Factor	Factor	deg	cm		
MHz	dBuV/m	dBuV/m	dB	dBuV	dB	dB/m	dB	deg	cm		
1	4933.95	40.96	54.00	-13.04	36.52	5.94	32.99	34.49	356	176 Average	HORIZONTAL
2	4934.00	49.15	74.00	-24.85	44.71	5.94	32.99	34.49	356	176 Peak	HORIZONTAL

**Vertical**

Freq	Level	Limit	Over	Read	Cable	Antenna	Preamplifier	T/Pos	A/Pos	Remark	Pol/Phase
		Line	Limit	Level	Loss	Factor	Factor	deg	cm		
MHz	dBuV/m	dBuV/m	dB	dBuV	dB	dB/m	dB	deg	cm		
1	4933.96	49.21	74.00	-24.79	44.77	5.94	32.99	34.49	78	260 Peak	VERTICAL
2	4934.05	41.61	54.00	-12.39	37.17	5.94	32.99	34.49	78	260 Average	VERTICAL



Temperature	22°C	Humidity	57%
Test Engineer	Eason Chen	Configurations	IEEE 802.11g CH 13 / Chain 1
Test Date	Jan. 08, 2016	Test Mode	Mode 2

**Horizontal**

Freq	Level	Limit	Over	Read	Cable	Antenna	Preamplifier	T/Pos	A/Pos	Remark	Pol/Phase
		Line	Limit	Level	Loss	Factor	Factor	deg	cm		
MHz	dBuV/m	dBuV/m	dB	dBuV	dB	dB/m	dB	deg	cm		
1	4944.06	35.70	54.00	-18.30	31.26	5.91	33.01	34.48	322	152 Average	HORIZONTAL
2	4944.18	47.38	74.00	-26.62	42.94	5.91	33.01	34.48	322	152 Peak	HORIZONTAL

**Vertical**

Freq	Level	Limit	Over	Read	Cable	Antenna	Preamplifier	T/Pos	A/Pos	Remark	Pol/Phase
		Line	Limit	Level	Loss	Factor	Factor	deg	cm		
MHz	dBuV/m	dBuV/m	dB	dBuV	dB	dB/m	dB	deg	cm		
1	4943.98	48.54	74.00	-25.46	44.10	5.91	33.01	34.48	44	224 Peak	VERTICAL
2	4944.00	39.15	54.00	-14.85	34.71	5.91	33.01	34.48	44	224 Average	VERTICAL



Temperature	22°C	Humidity	57%
Test Engineer	Eason Chen	Configurations	IEEE 802.11n MCS0 HT20 CH 1 / Chain 1
Test Date	Jan. 28, 2016	Test Mode	Mode 2

**Horizontal**

Freq	Level	Limit	Over	Read	Cable	Antenna	Preamplifier	T/Pos	A/Pos	Remark	Pol/Phase
		Line	Limit	Level	Loss	Factor	Factor	deg	cm		
MHz	dBuV/m	dBuV/m		dB	dBuV	dB	dB/m	dB	deg	cm	
1	4823.96	50.55	74.00	-23.45	46.64	5.61	32.82	34.52	360	143 Peak	HORIZONTAL
2	4824.01	44.23	54.00	-9.77	40.32	5.61	32.82	34.52	360	143 Average	HORIZONTAL

**Vertical**

Freq	Level	Limit	Over	Read	Cable	Antenna	Preamplifier	T/Pos	A/Pos	Remark	Pol/Phase
		Line	Limit	Level	Loss	Factor	Factor	deg	cm		
MHz	dBuV/m	dBuV/m		dB	dBuV	dB	dB/m	dB	deg	cm	
1	4823.85	52.43	74.00	-21.57	48.52	5.61	32.82	34.52	38	244 Peak	VERTICAL
2	4824.01	46.97	54.00	-7.03	43.06	5.61	32.82	34.52	38	244 Average	VERTICAL



Temperature	22°C	Humidity	57%
Test Engineer	Eason Chen	Configurations	IEEE 802.11n MCS0 HT20 CH 6 / Chain 1
Test Date	Jan. 08, 2016	Test Mode	Mode 2

**Horizontal**

Freq	Level	Limit	Over	Read	Cable	Antenna	Preampl	T/Pos	A/Pos	Remark	Pol/Phase
		Line	Limit	Level	Loss	Factor	Factor	deg	cm		
MHz	dBuV/m	dBuV/m	dB	dBuV	dB	dB/m	dB	deg	cm		
1	4874.02	44.10	54.00	-9.90	39.64	6.06	32.91	34.51	353	157 Average	HORIZONTAL
2	4874.08	51.03	74.00	-22.97	46.57	6.06	32.91	34.51	353	157 Peak	HORIZONTAL

**Vertical**

Freq	Level	Limit	Over	Read	Cable	Antenna	Preampl	T/Pos	A/Pos	Remark	Pol/Phase
		Line	Limit	Level	Loss	Factor	Factor	deg	cm		
MHz	dBuV/m	dBuV/m	dB	dBuV	dB	dB/m	dB	deg	cm		
1	4873.98	48.27	54.00	-5.73	43.81	6.06	32.91	34.51	42	248 Average	VERTICAL
2	4874.15	53.14	74.00	-20.86	48.68	6.06	32.91	34.51	42	248 Peak	VERTICAL



Temperature	22°C	Humidity	57%
Test Engineer	Eason Chen	Configurations	IEEE 802.11n MCS0 HT20 CH 11 / Chain 1
Test Date	Jan. 08, 2016	Test Mode	Mode 2

**Horizontal**

Freq	Level	Limit	Over	Read	Cable	Antenna	Preamplifier	T/Pos	A/Pos	Remark	Pol/Phase
		Line	Limit	Level	Loss	Factor	Factor	deg	cm		
MHz	dBuV/m	dBuV/m	dB	dBuV	dB	dB/m	dB	deg	cm		
1	4924.02	42.62	54.00	-11.38	38.18	5.94	32.99	34.49	326	143	Average
2	4924.04	49.79	74.00	-24.21	45.35	5.94	32.99	34.49	326	143	Peak
											HORIZONTAL
											HORIZONTAL

**Vertical**

Freq	Level	Limit	Over	Read	Cable	Antenna	Preamplifier	T/Pos	A/Pos	Remark	Pol/Phase
		Line	Limit	Level	Loss	Factor	Factor	deg	cm		
MHz	dBuV/m	dBuV/m	dB	dBuV	dB	dB/m	dB	deg	cm		
1	4924.00	53.16	74.00	-20.84	48.72	5.94	32.99	34.49	38	244	Peak
2	4924.01	48.89	54.00	-5.11	44.45	5.94	32.99	34.49	38	244	Average
											VERTICAL
											VERTICAL



Temperature	22°C	Humidity	57%
Test Engineer	Eason Chen	Configurations	IEEE 802.11n MCS0 HT20 CH 12 / Chain 1
Test Date	Jan. 08, 2016	Test Mode	Mode 2

**Horizontal**

Freq	Level	Limit	Over	Read	Cable	Antenna	Preamplifier	T/Pos	A/Pos	Remark	Pol/Phase
		Line	Limit	Level	Loss	Factor	Factor	deg	cm		
MHz	dBuV/m	dBuV/m		dB	dBuV	dB	dB/m	dB	deg	cm	
1	4934.00	50.23	74.00	-23.77	45.79	5.94	32.99	34.49	352	132 Peak	HORIZONTAL
2	4934.02	44.21	54.00	-9.79	39.77	5.94	32.99	34.49	352	132 Average	HORIZONTAL

**Vertical**

Freq	Level	Limit	Over	Read	Cable	Antenna	Preamplifier	T/Pos	A/Pos	Remark	Pol/Phase
		Line	Limit	Level	Loss	Factor	Factor	deg	cm		
MHz	dBuV/m	dBuV/m		dB	dBuV	dB	dB/m	dB	deg	cm	
1	4933.99	46.43	54.00	-7.57	41.99	5.94	32.99	34.49	39	232 Average	VERTICAL
2	4934.03	51.38	74.00	-22.62	46.94	5.94	32.99	34.49	39	232 Peak	VERTICAL



Temperature	22°C	Humidity	57%
Test Engineer	Eason Chen	Configurations	IEEE 802.11n MCS0 HT20 CH 13 / Chain 1
Test Date	Jan. 08, 2016	Test Mode	Mode 2

**Horizontal**

Freq	Level	Limit	Over	Read	Cable	Antenna	Preamplifier	T/Pos	A/Pos	Remark	Pol/Phase
		Line	Limit	Level	Loss	Factor	Factor	deg	cm		
MHz	dBuV/m	dBuV/m		dB	dBuV	dB	dB/m	dB	deg	cm	
1	4943.76	46.92	74.00	-27.08	42.48	5.91	33.01	34.48	351	155 Peak	HORIZONTAL
2	4944.06	37.65	54.00	-16.35	33.21	5.91	33.01	34.48	351	155 Average	HORIZONTAL

**Vertical**

Freq	Level	Limit	Over	Read	Cable	Antenna	Preamplifier	T/Pos	A/Pos	Remark	Pol/Phase
		Line	Limit	Level	Loss	Factor	Factor	deg	cm		
MHz	dBuV/m	dBuV/m		dB	dBuV	dB	dB/m	dB	deg	cm	
1	4943.98	40.27	54.00	-13.73	35.83	5.91	33.01	34.48	41	255 Average	VERTICAL
2	4944.00	48.58	74.00	-25.42	44.14	5.91	33.01	34.48	41	255 Peak	VERTICAL



Temperature	22°C	Humidity	57%
Test Engineer	Eason Chen	Configurations	IEEE 802.11n MCS0 HT40 CH 3 / Chain 1
Test Date	Jan. 28, 2016	Test Mode	Mode 2

**Horizontal**

Freq	Level	Limit	Over	Read	Cable	Antenna	Preamplifier	T/Pos	A/Pos	Remark	Pol/Phase
		Line	Limit	Level	Loss	Factor	Factor	deg	cm		
MHz	dBuV/m	dBuV/m		dB	dBuV	dB	dB/m	dB	deg	cm	
1	4844.00	45.93	54.00	-8.07	41.99	5.60	32.86	34.52	360	118 Average	HORIZONTAL
2	4844.04	50.29	74.00	-23.71	46.35	5.60	32.86	34.52	360	118 Peak	HORIZONTAL

**Vertical**

Freq	Level	Limit	Over	Read	Cable	Antenna	Preamplifier	T/Pos	A/Pos	Remark	Pol/Phase
		Line	Limit	Level	Loss	Factor	Factor	deg	cm		
MHz	dBuV/m	dBuV/m		dB	dBuV	dB	dB/m	dB	deg	cm	
1	4843.92	51.71	74.00	-22.29	47.77	5.60	32.86	34.52	39	245 Peak	VERTICAL
2	4844.01	47.47	54.00	-6.53	43.53	5.60	32.86	34.52	39	245 Average	VERTICAL



Temperature	22°C	Humidity	57%
Test Engineer	Eason Chen	Configurations	IEEE 802.11n MCS0 HT40 CH 6 / Chain 1
Test Date	Jan. 27, 2016 ~ Jan. 28, 2016	Test Mode	Mode 2

**Horizontal**

Freq	Level	Limit		Over Limit	Read Level	Cable	Antenna	Preamp	T/Pos	A/Pos	Remark	Pol/Phase
		Line	dBuV/m			dB	dBuV	dB	dB/m	dB	deg	
1	4873.92	48.50	74.00	-25.50	44.51	5.59	32.91	34.51	359	118	Peak	HORIZONTAL
2	4874.00	44.88	54.00	-9.12	40.89	5.59	32.91	34.51	359	118	Average	HORIZONTAL

**Vertical**

Freq	Level	Limit		Over Limit	Read Level	Cable	Antenna	Preamp	T/Pos	A/Pos	Remark	Pol/Phase
		Line	dBuV/m			dB	dBuV	dB	dB/m	dB	deg	
1	4873.99	50.02	74.00	-23.98	46.03	5.59	32.91	34.51	30	285	Peak	VERTICAL
2	4874.02	47.86	54.00	-6.14	43.87	5.59	32.91	34.51	30	285	Average	VERTICAL



Temperature	22°C	Humidity	57%
Test Engineer	Eason Chen	Configurations	IEEE 802.11n MCS0 HT40 CH 9 / Chain 1
Test Date	Jan. 07, 2016	Test Mode	Mode 2

**Horizontal**

Freq	Level	Limit	Over	Read	Cable	Antenna	Preampl	T/Pos	A/Pos	Remark	Pol/Phase
		Line	Limit	Level	Loss	Factor	Factor	deg	cm		
MHz	dBuV/m	dBuV/m	dB	dBuV	dB	dB/m	dB	deg	cm		
1	4903.98	43.54	54.00	-10.46	39.09	6.00	32.95	34.50	355	145 Average	HORIZONTAL
2	4904.10	49.90	74.00	-24.10	45.45	6.00	32.95	34.50	355	145 Peak	HORIZONTAL

**Vertical**

Freq	Level	Limit	Over	Read	Cable	Antenna	Preampl	T/Pos	A/Pos	Remark	Pol/Phase
		Line	Limit	Level	Loss	Factor	Factor	deg	cm		
MHz	dBuV/m	dBuV/m	dB	dBuV	dB	dB/m	dB	deg	cm		
1	4903.97	46.82	54.00	-7.18	42.37	6.00	32.95	34.50	43	244 Average	VERTICAL
2	4904.12	51.64	74.00	-22.36	47.19	6.00	32.95	34.50	43	244 Peak	VERTICAL



Temperature	22°C	Humidity	57%
Test Engineer	Eason Chen	Configurations	IEEE 802.11n MCS0 HT40 CH 10 / Chain 1
Test Date	Jan. 07, 2016	Test Mode	Mode 2

**Horizontal**

Freq	Level	Limit	Over	Read	Cable	Antenna	Preamplifier	T/Pos	A/Pos	Remark	Pol/Phase
		Line	Limit	Level	Loss	Factor	Factor	deg	cm		
MHz	dBuV/m	dBuV/m	dB	dBuV	dB	dB/m	dB	deg	cm		
1	4913.96	43.33	54.00	-10.67	38.88	5.97	32.97	34.49	350	154 Average	HORIZONTAL
2	4913.97	50.12	74.00	-23.88	45.67	5.97	32.97	34.49	350	154 Peak	HORIZONTAL

**Vertical**

Freq	Level	Limit	Over	Read	Cable	Antenna	Preamplifier	T/Pos	A/Pos	Remark	Pol/Phase
		Line	Limit	Level	Loss	Factor	Factor	deg	cm		
MHz	dBuV/m	dBuV/m	dB	dBuV	dB	dB/m	dB	deg	cm		
1	4913.98	52.11	74.00	-21.89	47.66	5.97	32.97	34.49	39	261 Peak	VERTICAL
2	4913.98	47.62	54.00	-6.38	43.17	5.97	32.97	34.49	39	261 Average	VERTICAL



Temperature	22°C	Humidity	57%
Test Engineer	Eason Chen	Configurations	IEEE 802.11n MCS0 HT40 CH 11 / Chain 1
Test Date	Jan. 07, 2016	Test Mode	Mode 2

**Horizontal**

Freq	Level	Limit	Over	Read	Cable	Antenna	Preamplifier	T/Pos	A/Pos	Remark	Pol/Phase
		Line	Limit	Level	Loss	Factor	Factor	deg	cm		
MHz	dBuV/m	dBuV/m		dB	dBuV	dB	dB/m	dB	deg	cm	
1	4924.01	49.94	74.00	-24.06	45.50	5.94	32.99	34.49	1	106	Peak HORIZONTAL
2	4924.01	43.24	54.00	-10.76	38.80	5.94	32.99	34.49	1	106	Average HORIZONTAL

**Vertical**

Freq	Level	Limit	Over	Read	Cable	Antenna	Preamplifier	T/Pos	A/Pos	Remark	Pol/Phase
		Line	Limit	Level	Loss	Factor	Factor	deg	cm		
MHz	dBuV/m	dBuV/m		dB	dBuV	dB	dB/m	dB	deg	cm	
1	4924.00	47.45	54.00	-6.55	43.01	5.94	32.99	34.49	41	244	Average VERTICAL
2	4924.01	52.22	74.00	-21.78	47.78	5.94	32.99	34.49	41	244	Peak VERTICAL



Temperature	22°C	Humidity	57%
Test Engineer	Eason Chen	Configurations	IEEE 802.11b CH 1 / Chain 1
Test Date	Feb. 05, 2016	Test Mode	Mode 3

**Horizontal**

Freq	Level	Limit		Over Limit	Read Level	Cable	Antenna	Preamp	A/Pos	T/Pos	Remark	Pol/Phase
		Line	dBuV/m			dB	dBuV	dB	dB/m	dB	cm	
1	4823.93	53.07	74.00	-20.93	49.85	7.18	32.58	36.54	152	320	Peak	HORIZONTAL
2	4823.97	48.62	54.00	-5.38	45.40	7.18	32.58	36.54	152	320	Average	HORIZONTAL

**Vertical**

Freq	Level	Limit		Over Limit	Read Level	Cable	Antenna	Preamp	A/Pos	T/Pos	Remark	Pol/Phase
		Line	dBuV/m			dB	dBuV	dB	dB/m	dB	cm	
1	4823.99	55.94	74.00	-18.06	52.72	7.18	32.58	36.54	147	345	Peak	VERTICAL
2	4824.01	52.37	54.00	-1.63	49.15	7.18	32.58	36.54	147	345	Average	VERTICAL



Temperature	22°C	Humidity	57%
Test Engineer	Eason Chen	Configurations	IEEE 802.11b CH 6 / Chain 1
Test Date	Feb. 05, 2016	Test Mode	Mode 3

**Horizontal**

	Freq	Limit		Over Limit	Read Level	Cable	Antenna	Preamplifier	A/Pos	T/Pos	Remark	Pol/Phase
		Level	Line			Loss	Factor	Factor	cm	deg		
1	4873.98	46.36	54.00	-7.64	43.09	7.12	32.68	36.53	157	148	Average	HORIZONTAL
2	4874.28	51.52	74.00	-22.48	48.25	7.12	32.68	36.53	157	148	Peak	HORIZONTAL
3	7310.24	50.22	54.00	-3.78	40.26	8.74	37.24	36.02	213	304	Average	HORIZONTAL
4	7311.68	59.22	74.00	-14.78	49.26	8.74	37.24	36.02	213	304	Peak	HORIZONTAL

**Vertical**

	Freq	Limit		Over Limit	Read Level	Cable	Antenna	Preamplifier	A/Pos	T/Pos	Remark	Pol/Phase
		Level	Line			Loss	Factor	Factor	cm	deg		
1	4874.02	48.22	54.00	-5.78	44.95	7.12	32.68	36.53	169	170	Average	VERTICAL
2	4874.17	52.83	74.00	-21.17	49.56	7.12	32.68	36.53	169	170	Peak	VERTICAL
3	7310.34	52.15	54.00	-1.85	42.19	8.74	37.24	36.02	225	204	Average	VERTICAL
4	7311.90	60.67	74.00	-13.33	50.71	8.74	37.24	36.02	225	204	Peak	VERTICAL

<b>Temperature</b>	22°C	<b>Humidity</b>	57%
<b>Test Engineer</b>	Eason Chen	<b>Configurations</b>	IEEE 802.11b CH 11 / Chain 1
<b>Test Date</b>	Jan. 05, 2016	<b>Test Mode</b>	Mode 3

**Horizontal**

Freq	Level	Limit		Read Level	Cable	Antenna	Preamp	T/Pos	A/Pos	Remark	Pol/Phase
		Line	Over Limit		Loss	Factor	Factor	deg	cm		
MHz	dBuV/m	dBuV/m	dB	dBuV	dB	dB/m	dB	deg	cm		
1	4923.87	50.75	74.00	-23.25	46.31	5.94	32.99	34.49	162	159 Peak	HORIZONTAL
2	4924.00	46.46	54.00	-7.54	42.02	5.94	32.99	34.49	162	159 Average	HORIZONTAL
3	7386.68	47.17	54.00	-6.83	36.88	7.78	37.28	34.77	145	150 Average	HORIZONTAL
4	7387.04	55.15	74.00	-18.85	44.86	7.78	37.28	34.77	145	150 Peak	HORIZONTAL

**Vertical**

Freq	Level	Limit		Read Level	Cable	Antenna	Preamp	T/Pos	A/Pos	Remark	Pol/Phase
		Line	Over Limit		Loss	Factor	Factor	deg	cm		
MHz	dBuV/m	dBuV/m	dB	dBuV	dB	dB/m	dB	deg	cm		
1	4923.96	51.86	74.00	-22.14	47.42	5.94	32.99	34.49	287	163 Peak	VERTICAL
2	4924.04	48.10	54.00	-5.90	43.66	5.94	32.99	34.49	287	163 Average	VERTICAL
3	7385.16	58.81	74.00	-15.19	48.52	7.78	37.28	34.77	76	139 Peak	VERTICAL
4	7386.72	52.44	54.00	-1.56	42.15	7.78	37.28	34.77	76	139 Average	VERTICAL



Temperature	22°C	Humidity	57%
Test Engineer	Eason Chen	Configurations	IEEE 802.11b CH 12 / Chain 1
Test Date	Jan. 27, 2016	Test Mode	Mode 3

**Horizontal**

Freq	Level	Limit		Over Line	Read Level	Cable	Antenna	Preamp	T/Pos	A/Pos	Remark	Pol/Phase
		MHz	dBuV/m	dBuV/m	dB	dBuV	dB	dB/m	dB	deg	cm	
1	4933.96	52.59	74.00	-21.41	48.51	5.58	32.99	34.49	224	146	Peak	HORIZONTAL
2	4933.99	48.45	54.00	-5.55	44.37	5.58	32.99	34.49	224	146	Average	HORIZONTAL
3	7399.87	55.51	74.00	-18.49	45.89	7.11	37.28	34.77	131	149	Peak	HORIZONTAL
4	7401.72	48.17	54.00	-5.83	38.50	7.14	37.30	34.77	131	149	Average	HORIZONTAL

**Vertical**

Freq	Level	Limit		Over Line	Read Level	Cable	Antenna	Preamp	T/Pos	A/Pos	Remark	Pol/Phase
		MHz	dBuV/m	dBuV/m	dB	dBuV	dB	dB/m	dB	deg	cm	
1	4933.91	53.33	74.00	-20.67	49.25	5.58	32.99	34.49	194	158	Peak	VERTICAL
2	4933.99	49.74	54.00	-4.26	45.66	5.58	32.99	34.49	194	158	Average	VERTICAL
3	7400.23	52.82	54.00	-1.18	43.20	7.11	37.28	34.77	333	138	Average	VERTICAL
4	7401.90	58.81	74.00	-15.19	49.14	7.14	37.30	34.77	333	138	Peak	VERTICAL



Temperature	22°C	Humidity	57%
Test Engineer	Eason Chen	Configurations	IEEE 802.11b CH 13 / Chain 1
Test Date	Jan. 05, 2016	Test Mode	Mode 3

**Horizontal**

Freq	Level	Limit	Over	Read	Cable	Antenna	Preamp	T/Pos	A/Pos	Remark	Pol/Phase
		Line	Limit	Level	Loss	Factor	Factor	deg	cm		
MHz	dBuV/m	dBuV/m		dB	dBuV	dB	dB/m	dB	deg	cm	
1	4943.98	35.62	54.00	-18.38	31.18	5.91	33.01	34.48	159	142	Average
2	4944.10	45.97	74.00	-28.03	41.53	5.91	33.01	34.48	159	142	Peak
											HORIZONTAL
											HORIZONTAL

**Vertical**

Freq	Level	Limit	Over	Read	Cable	Antenna	Preamp	T/Pos	A/Pos	Remark	Pol/Phase
		Line	Limit	Level	Loss	Factor	Factor	deg	cm		
MHz	dBuV/m	dBuV/m		dB	dBuV	dB	dB/m	dB	deg	cm	
1	4943.37	46.51	74.00	-27.49	42.07	5.91	33.01	34.48	91	150	Peak
2	4943.96	36.58	54.00	-17.42	32.14	5.91	33.01	34.48	91	150	Average
											VERTICAL
											VERTICAL



Temperature	22°C	Humidity	57%
Test Engineer	Eason Chen	Configurations	IEEE 802.11g CH 1 / Chain 1
Test Date	Jan. 05, 2016	Test Mode	Mode 3

**Horizontal**

	Freq	Level	Limit Line	Over Limit	Read Level	Cable Loss	Antenna Factor	Preamp Factor	T/Pos	A/Pos	Remark	Pol/Phase
	MHz	dBuV/m	dBuV/m		dB	dBuV	dB	dB/m	dB	deg	cm	
1	4823.96	50.80	74.00	-23.20	46.32	6.18	32.82	34.52	38	226	Peak	HORIZONTAL
2	4823.97	41.52	54.00	-12.48	37.04	6.18	32.82	34.52	38	226	Average	HORIZONTAL

**Vertical**

	Freq	Level	Limit Line	Over Limit	Read Level	Cable Loss	Antenna Factor	Preamp Factor	T/Pos	A/Pos	Remark	Pol/Phase
	MHz	dBuV/m	dBuV/m		dB	dBuV	dB	dB/m	dB	deg	cm	
1	4824.00	44.23	54.00	-9.77	39.75	6.18	32.82	34.52	269	197	Average	VERTICAL
2	4824.05	53.19	74.00	-20.81	48.71	6.18	32.82	34.52	269	197	Peak	VERTICAL



Temperature	22°C	Humidity	57%
Test Engineer	Eason Chen	Configurations	IEEE 802.11g CH 6 / Chain 1
Test Date	Jan. 05, 2016	Test Mode	Mode 3

**Horizontal**

Freq	Level	Limit	Over	Read	Cable	Antenna	Preamp	T/Pos	A/Pos	Remark	Pol/Phase
		Line	Limit	Level	Loss	Factor	Factor	deg	cm		
MHz	dBuV/m	dBuV/m		dB	dBuV	dB	dB/m	dB	deg	cm	
1	4874.05	39.83	54.00	-14.17	35.37	6.06	32.91	34.51	68	226	Average
2	4874.11	49.77	74.00	-24.23	45.31	6.06	32.91	34.51	68	226	Peak

**Vertical**

Freq	Level	Limit	Over	Read	Cable	Antenna	Preamp	T/Pos	A/Pos	Remark	Pol/Phase
		Line	Limit	Level	Loss	Factor	Factor	deg	cm		
MHz	dBuV/m	dBuV/m		dB	dBuV	dB	dB/m	dB	deg	cm	
1	4873.93	52.13	74.00	-21.87	47.67	6.06	32.91	34.51	298	216	Peak
2	4873.98	41.69	54.00	-12.31	37.23	6.06	32.91	34.51	298	216	Average



Temperature	22°C	Humidity	57%
Test Engineer	Eason Chen	Configurations	IEEE 802.11g CH 11 / Chain 1
Test Date	Jan. 05, 2016	Test Mode	Mode 3

**Horizontal**

Freq	Level	Limit		Over Line	Read Level	Cable	Antenna	Preamp	T/Pos	A/Pos	Remark	Pol/Phase
		MHz	dBuV/m	dBuV/m	dB	dBuV	dB	dB/m	dB	deg	cm	
1	4923.95	48.03	74.00	-25.97	43.59	5.94	32.99	34.49	162	158	Peak	HORIZONTAL
2	4924.00	37.28	54.00	-16.72	32.84	5.94	32.99	34.49	162	158	Average	HORIZONTAL

**Vertical**

Freq	Level	Limit		Over Line	Read Level	Cable	Antenna	Preamp	T/Pos	A/Pos	Remark	Pol/Phase
		MHz	dBuV/m	dBuV/m	dB	dBuV	dB	dB/m	dB	deg	cm	
1	4923.76	48.18	74.00	-25.82	43.74	5.94	32.99	34.49	300	165	Peak	VERTICAL
2	4924.02	38.49	54.00	-15.51	34.05	5.94	32.99	34.49	300	165	Average	VERTICAL



Temperature	22°C	Humidity	57%
Test Engineer	Eason Chen	Configurations	IEEE 802.11g CH 12 / Chain 1
Test Date	Jan. 05, 2016	Test Mode	Mode 3

**Horizontal**

Freq	Level	Limit		Over Line	Read Level	Cable	Antenna	Preamp	T/Pos	A/Pos	Remark	Pol/Phase
		MHz	dBuV/m	dBuV/m	dB	dBuV	dB	dB/m	dB	deg	cm	
1	4933.94	48.51	74.00	-25.49	44.07	5.94	32.99	34.49	156	150	Peak	HORIZONTAL
2	4933.97	38.94	54.00	-15.06	34.50	5.94	32.99	34.49	156	150	Average	HORIZONTAL

**Vertical**

Freq	Level	Limit		Over Line	Read Level	Cable	Antenna	Preamp	T/Pos	A/Pos	Remark	Pol/Phase
		MHz	dBuV/m	dBuV/m	dB	dBuV	dB	dB/m	dB	deg	cm	
1	4933.92	49.26	74.00	-24.74	44.82	5.94	32.99	34.49	121	148	Peak	VERTICAL
2	4933.94	39.92	54.00	-14.08	35.48	5.94	32.99	34.49	121	148	Average	VERTICAL



Temperature	22°C	Humidity	57%
Test Engineer	Eason Chen	Configurations	IEEE 802.11g CH 13 / Chain 1
Test Date	Jan. 05, 2016	Test Mode	Mode 3

**Horizontal**

Freq	Level	Limit		Over Line	Read Level	Cable	Antenna	Preamp	T/Pos	A/Pos	Remark	Pol/Phase
		MHz	dBuV/m	dBuV/m	dB	dBuV	dB	dB/m	dB	deg	cm	
1	4943.24	45.24	74.00	-28.76	40.80	5.91	33.01	34.48	69	141	Peak	HORIZONTAL
2	4943.89	33.61	54.00	-20.39	29.17	5.91	33.01	34.48	69	141	Average	HORIZONTAL

**Vertical**

Freq	Level	Limit		Over Line	Read Level	Cable	Antenna	Preamp	T/Pos	A/Pos	Remark	Pol/Phase
		MHz	dBuV/m	dBuV/m	dB	dBuV	dB	dB/m	dB	deg	cm	
1	4944.01	45.85	74.00	-28.15	41.41	5.91	33.01	34.48	338	150	Peak	VERTICAL
2	4944.04	34.52	54.00	-19.48	30.08	5.91	33.01	34.48	338	150	Average	VERTICAL



Temperature	22°C	Humidity	57%
Test Engineer	Eason Chen	Configurations	IEEE 802.11n MCS0 HT20 CH 1 / Chain 1
Test Date	Jan. 05, 2016	Test Mode	Mode 3

**Horizontal**

Freq	Level	Limit	Over	Read	Cable	Antenna	Preamp	T/Pos	A/Pos	Remark	Pol/Phase
		Line	Limit	Level	Loss	Factor	Factor	deg	cm		
MHz	dBuV/m	dBuV/m		dB	dBuV	dB	dB/m	dB	deg	cm	
1	4823.97	39.04	54.00	-14.96	34.56	6.18	32.82	34.52	310	150	Average
2	4824.05	49.03	74.00	-24.97	44.55	6.18	32.82	34.52	310	150	Peak

**Vertical**

Freq	Level	Limit	Over	Read	Cable	Antenna	Preamp	T/Pos	A/Pos	Remark	Pol/Phase
		Line	Limit	Level	Loss	Factor	Factor	deg	cm		
MHz	dBuV/m	dBuV/m		dB	dBuV	dB	dB/m	dB	deg	cm	
1	4823.80	51.67	74.00	-22.33	47.19	6.18	32.82	34.52	88	140	Peak
2	4823.99	42.52	54.00	-11.48	38.04	6.18	32.82	34.52	88	140	Average



Temperature	22°C	Humidity	57%
Test Engineer	Eason Chen	Configurations	IEEE 802.11n MCS0 HT20 CH 6 / Chain 1
Test Date	Jan. 05, 2016	Test Mode	Mode 3

**Horizontal**

Freq	Level	Limit	Over	Read	Cable	Antenna	Preamp	T/Pos	A/Pos	Remark	Pol/Phase
		Line	Limit	Level	Loss	Factor	Factor	deg	cm		
MHz	dBuV/m	dBuV/m		dB	dBuV	dB	dB/m	dB	deg	cm	
1	4874.01	38.12	54.00	-15.88	33.66	6.06	32.91	34.51	309	161	Average
2	4874.09	49.68	74.00	-24.32	45.22	6.06	32.91	34.51	309	161	Peak
											HORIZONTAL
											HORIZONTAL

**Vertical**

Freq	Level	Limit	Over	Read	Cable	Antenna	Preamp	T/Pos	A/Pos	Remark	Pol/Phase
		Line	Limit	Level	Loss	Factor	Factor	deg	cm		
MHz	dBuV/m	dBuV/m		dB	dBuV	dB	dB/m	dB	deg	cm	
1	4873.78	52.74	74.00	-21.26	48.28	6.06	32.91	34.51	88	150	Peak
2	4874.02	41.34	54.00	-12.66	36.88	6.06	32.91	34.51	88	150	Average
											VERTICAL
											VERTICAL



Temperature	22°C	Humidity	57%
Test Engineer	Eason Chen	Configurations	IEEE 802.11n MCS0 HT20 CH 11 / Chain 1
Test Date	Jan. 05, 2016	Test Mode	Mode 3

**Horizontal**

	Freq	Level	Limit	Over	Read	Cable	Antenna	Preamp	T/Pos	A/Pos	Remark	Pol/Phase
	MHz	dBuV/m	dBuV/m	Line	Limit	Level	Loss	Factor	Factor	deg	cm	
1	4923.68	48.18	74.00	-25.82	43.74	5.94	32.99	34.49	56	159	Peak	HORIZONTAL
2	4924.03	37.62	54.00	-16.38	33.18	5.94	32.99	34.49	56	159	Average	HORIZONTAL

**Vertical**

	Freq	Level	Limit	Over	Read	Cable	Antenna	Preamp	T/Pos	A/Pos	Remark	Pol/Phase
	MHz	dBuV/m	dBuV/m	Line	Limit	Level	Loss	Factor	Factor	deg	cm	
1	4924.01	38.66	54.00	-15.34	34.22	5.94	32.99	34.49	121	153	Average	VERTICAL
2	4924.17	48.46	74.00	-25.54	44.02	5.94	32.99	34.49	121	153	Peak	VERTICAL



Temperature	22°C	Humidity	57%
Test Engineer	Eason Chen	Configurations	IEEE 802.11n MCS0 HT20 CH 12 / Chain 1
Test Date	Jan. 05, 2016	Test Mode	Mode 3

**Horizontal**

Freq	Level	Limit		Over Line	Read Level	Cable	Antenna	Preamp	T/Pos	A/Pos	Remark	Pol/Phase
		MHz	dBuV/m	dBuV/m	dB	dBuV	dB	dB/m	dB	deg	cm	
1	4933.80	48.08	74.00	-25.92	43.64	5.94	32.99	34.49	130	164	Peak	HORIZONTAL
2	4933.94	37.45	54.00	-16.55	33.01	5.94	32.99	34.49	130	164	Average	HORIZONTAL

**Vertical**

Freq	Level	Limit		Over Line	Read Level	Cable	Antenna	Preamp	T/Pos	A/Pos	Remark	Pol/Phase
		MHz	dBuV/m	dBuV/m	dB	dBuV	dB	dB/m	dB	deg	cm	
1	4933.74	49.80	74.00	-24.20	45.36	5.94	32.99	34.49	74	170	Peak	VERTICAL
2	4933.99	39.29	54.00	-14.71	34.85	5.94	32.99	34.49	74	170	Average	VERTICAL



Temperature	22°C	Humidity	57%
Test Engineer	Eason Chen	Configurations	IEEE 802.11n MCS0 HT20 CH 13 / Chain 1
Test Date	Jan. 05, 2016	Test Mode	Mode 3

**Horizontal**

Freq	Level	Limit	Over	Read	Cable	Antenna	Preamp	T/Pos	A/Pos	Remark	Pol/Phase
		Line	Limit	Level	Loss	Factor	Factor	deg	cm		
MHz	dBuV/m	dBuV/m		dB	dBuV	dB	dB/m	dB	deg	cm	
1	4943.96	33.75	54.00	-20.25	29.31	5.91	33.01	34.48	207	155 Average	HORIZONTAL
2	4944.68	46.34	74.00	-27.66	41.90	5.91	33.01	34.48	207	155 Peak	HORIZONTAL

**Vertical**

Freq	Level	Limit	Over	Read	Cable	Antenna	Preamp	T/Pos	A/Pos	Remark	Pol/Phase
		Line	Limit	Level	Loss	Factor	Factor	deg	cm		
MHz	dBuV/m	dBuV/m		dB	dBuV	dB	dB/m	dB	deg	cm	
1	4943.85	46.93	74.00	-27.07	42.49	5.91	33.01	34.48	92	150 Peak	VERTICAL
2	4944.07	34.44	54.00	-19.56	30.00	5.91	33.01	34.48	92	150 Average	VERTICAL



Temperature	22°C	Humidity	57%
Test Engineer	Eason Chen	Configurations	IEEE 802.11n MCS0 HT40 CH 3 / Chain 1
Test Date	Jan. 27, 2016	Test Mode	Mode 3

**Horizontal**

	Freq	Level	Limit	Over	Read	Cable	Antenna	Preamp	T/Pos	A/Pos	Remark	Pol/Phase
	MHz	dBuV/m	dBuV/m	Line	Limit	Level	Loss	Factor	Factor	deg	cm	
1	4843.88	50.18	74.00	-23.82	46.24	5.60	32.86	34.52	220	138	Peak	HORIZONTAL
2	4844.00	42.14	54.00	-11.86	38.20	5.60	32.86	34.52	220	138	Average	HORIZONTAL

**Vertical**

	Freq	Level	Limit	Over	Read	Cable	Antenna	Preamp	T/Pos	A/Pos	Remark	Pol/Phase
	MHz	dBuV/m	dBuV/m	Line	Limit	Level	Loss	Factor	Factor	deg	cm	
1	4844.02	50.40	74.00	-23.60	46.46	5.60	32.86	34.52	194	151	Peak	VERTICAL
2	4844.03	42.43	54.00	-11.57	38.49	5.60	32.86	34.52	194	151	Average	VERTICAL

<b>Temperature</b>	22°C	<b>Humidity</b>	57%
<b>Test Engineer</b>	Eason Chen	<b>Configurations</b>	IEEE 802.11n MCS0 HT40 CH 6 / Chain 1
<b>Test Date</b>	Jan. 07, 2016	<b>Test Mode</b>	Mode 3

**Horizontal**

Freq	Level	Limit		Read Level	Cable	Antenna	Preamp	T/Pos	A/Pos	Remark	Pol/Phase
		Line	Over Limit		Loss	Factor	Factor	deg	cm		
MHz	dBuV/m	dBuV/m	dB	dBuV	dB	dB/m	dB	deg	cm		
1	4873.82	49.58	74.00	-24.42	45.12	6.06	32.91	34.51	44	148 Peak	HORIZONTAL
2	4873.95	40.28	54.00	-13.72	35.82	6.06	32.91	34.51	44	148 Average	HORIZONTAL
3	7310.97	38.83	54.00	-15.17	28.92	7.50	37.17	34.76	295	132 Average	HORIZONTAL
4	7312.18	51.78	74.00	-22.22	41.87	7.50	37.17	34.76	295	132 Peak	HORIZONTAL

**Vertical**

Freq	Level	Limit		Read Level	Cable	Antenna	Preamp	T/Pos	A/Pos	Remark	Pol/Phase
		Line	Over Limit		Loss	Factor	Factor	deg	cm		
MHz	dBuV/m	dBuV/m	dB	dBuV	dB	dB/m	dB	deg	cm		
1	4873.93	50.83	74.00	-23.17	46.37	6.06	32.91	34.51	318	176 Peak	VERTICAL
2	4873.98	42.52	54.00	-11.48	38.06	6.06	32.91	34.51	318	176 Average	VERTICAL
3	7308.61	56.10	74.00	-17.90	46.19	7.50	37.17	34.76	158	150 Peak	VERTICAL
4	7313.09	42.03	54.00	-11.97	32.12	7.50	37.17	34.76	158	150 Average	VERTICAL



Temperature	22°C	Humidity	57%
Test Engineer	Eason Chen	Configurations	IEEE 802.11n MCS0 HT40 CH 9 / Chain 1
Test Date	Jan. 05, 2016	Test Mode	Mode 3

**Horizontal**

Freq	Level	Limit	Over	Read	Cable	Antenna	Preamp	T/Pos	A/Pos	Remark	Pol/Phase
		Line	Limit	Level	Loss	Factor	Factor	deg	cm		
MHz	dBuV/m	dBuV/m		dB	dBuV	dB	dB/m	dB	deg	cm	
1	4903.96	39.81	54.00	-14.19	35.36	6.00	32.95	34.50	213	156	Average HORIZONTAL
2	4904.20	48.23	74.00	-25.77	43.78	6.00	32.95	34.50	213	156	Peak HORIZONTAL

**Vertical**

Freq	Level	Limit	Over	Read	Cable	Antenna	Preamp	T/Pos	A/Pos	Remark	Pol/Phase
		Line	Limit	Level	Loss	Factor	Factor	deg	cm		
MHz	dBuV/m	dBuV/m		dB	dBuV	dB	dB/m	dB	deg	cm	
1	4903.98	39.33	54.00	-14.67	34.88	6.00	32.95	34.50	177	154	Average VERTICAL
2	4904.16	48.91	74.00	-25.09	44.46	6.00	32.95	34.50	177	154	Peak VERTICAL



Temperature	22°C	Humidity	57%
Test Engineer	Eason Chen	Configurations	IEEE 802.11n MCS0 HT40 CH 10 / Chain 1
Test Date	Jan. 05, 2016	Test Mode	Mode 3

**Horizontal**

	Freq	Level	Limit Line	Over Limit	Read Level	Cable Loss	Antenna Factor	Preamplifier Factor	T/Pos	A/Pos	Remark	Pol/Phase
	MHz	dBuV/m	dBuV/m		dB	dBuV	dB	dB/m	dB	deg	cm	
1	4913.78	49.11	74.00	-24.89	44.66	5.97	32.97	34.49	212	169	Peak	HORIZONTAL
2	4914.00	40.54	54.00	-13.46	36.09	5.97	32.97	34.49	212	169	Average	HORIZONTAL

**Vertical**

	Freq	Level	Limit Line	Over Limit	Read Level	Cable Loss	Antenna Factor	Preamplifier Factor	T/Pos	A/Pos	Remark	Pol/Phase
	MHz	dBuV/m	dBuV/m		dB	dBuV	dB	dB/m	dB	deg	cm	
1	4913.96	50.06	74.00	-23.94	45.61	5.97	32.97	34.49	177	166	Peak	VERTICAL
2	4913.98	40.39	54.00	-13.61	35.94	5.97	32.97	34.49	177	166	Average	VERTICAL



Temperature	22°C	Humidity	57%
Test Engineer	Eason Chen	Configurations	IEEE 802.11n MCS0 HT40 CH 11 / Chain 1
Test Date	Jan. 05, 2016	Test Mode	Mode 3

**Horizontal**

Freq	Level	Limit	Over	Read	Cable	Antenna	Preamplifier	T/Pos	A/Pos	Remark	Pol/Phase
		Line	Limit	Level	Loss	Factor	Factor	deg	cm		
MHz	dBuV/m	dBuV/m		dB	dBuV	dB	dB/m	dB	deg	cm	
1	4924.02	38.90	54.00	-15.10	34.46	5.94	32.99	34.49	328	165	Average
2	4924.12	49.18	74.00	-24.82	44.74	5.94	32.99	34.49	328	165	Peak
											HORIZONTAL
											HORIZONTAL

**Vertical**

Freq	Level	Limit	Over	Read	Cable	Antenna	Preamplifier	T/Pos	A/Pos	Remark	Pol/Phase
		Line	Limit	Level	Loss	Factor	Factor	deg	cm		
MHz	dBuV/m	dBuV/m		dB	dBuV	dB	dB/m	dB	deg	cm	
1	4923.88	49.18	74.00	-24.82	44.74	5.94	32.99	34.49	171	164	Peak
2	4924.02	40.55	54.00	-13.45	36.11	5.94	32.99	34.49	171	164	Average
											VERTICAL
											VERTICAL



Temperature	22°C	Humidity	57%
Test Engineer	Eason Chen	Configurations	IEEE 802.11b CH 1 / Chain 1
Test Date	Feb. 05, 2016	Test Mode	Mode 4

**Horizontal**

Freq	Level	Limit		Over Line	Read Level	Cable	Antenna	Preamplifier	A/Pos	T/Pos	Remark	Pol/Phase
		dB	dBuV/m			dB	dBuV	dB	dB/m	dB	cm	
1	4824.01	49.95	54.00	-4.05	46.73	7.18	32.58	36.54	156	324	Average	HORIZONTAL
2	4824.05	54.85	74.00	-19.15	51.63	7.18	32.58	36.54	156	324	Peak	HORIZONTAL

**Vertical**

Freq	Level	Limit		Over Line	Read Level	Cable	Antenna	Preamplifier	A/Pos	T/Pos	Remark	Pol/Phase
		dB	dBuV/m			dB	dBuV	dB	dB/m	dB	cm	
1	4824.01	52.39	54.00	-1.61	49.17	7.18	32.58	36.54	150	344	Average	VERTICAL
2	4824.13	55.50	74.00	-18.50	52.28	7.18	32.58	36.54	150	344	Peak	VERTICAL



Temperature	22°C	Humidity	57%
Test Engineer	Eason Chen	Configurations	IEEE 802.11b CH 6 / Chain 1
Test Date	Jan. 09, 2016	Test Mode	Mode 4

**Horizontal**

Freq	Level	Limit		Over Limit	Read Level	Cable	Antenna	Preamp	A/Pos	T/Pos	Remark	Pol/Phase
		Line	dB			dBuV	dB	dB/m	dB	cm		
1	4873.97	45.20	54.00	-8.80	37.11	7.94	33.23	33.08	109	7	Average	HORIZONTAL
2	4874.15	51.68	74.00	-22.32	43.59	7.94	33.23	33.08	109	7	Peak	HORIZONTAL
3	7310.30	42.43	54.00	-11.57	30.16	9.65	36.09	33.47	171	208	Average	HORIZONTAL
4	7310.42	54.02	74.00	-19.98	41.75	9.65	36.09	33.47	171	208	Peak	HORIZONTAL
5	12184.81	62.51	74.00	-11.49	41.89	15.07	39.02	33.47	141	70	Peak	HORIZONTAL
6	12185.48	48.79	54.00	-5.21	28.17	15.07	39.02	33.47	141	70	Average	HORIZONTAL

**Vertical**

Freq	Level	Limit		Over Limit	Read Level	Cable	Antenna	Preamp	A/Pos	T/Pos	Remark	Pol/Phase
		Line	dB			dBuV	dB	dB/m	dB	cm		
1	4873.99	51.30	54.00	-2.70	43.21	7.94	33.23	33.08	143	355	Average	VERTICAL
2	4874.03	54.47	74.00	-19.53	46.38	7.94	33.23	33.08	143	355	Peak	VERTICAL
3	7310.26	45.75	54.00	-8.25	33.48	9.65	36.09	33.47	159	17	Average	VERTICAL
4	7311.62	55.82	74.00	-18.18	43.55	9.65	36.09	33.47	159	17	Peak	VERTICAL
5	12185.43	48.78	54.00	-5.22	28.16	15.07	39.02	33.47	155	323	Average	VERTICAL
6	12185.78	61.94	74.00	-12.06	41.32	15.07	39.02	33.47	155	323	Peak	VERTICAL



Temperature	22°C	Humidity	57%
Test Engineer	Eason Chen	Configurations	IEEE 802.11b CH 11 / Chain 1
Test Date	Jan. 09, 2016	Test Mode	Mode 4

**Horizontal**

Freq	Level	Limit		Over Limit	Read Level	Cable	Antenna	Preamp	A/Pos	T/Pos	Remark	Pol/Phase
		Line	dB			Loss	Factor	Factor	cm	deg		
1	4923.98	50.02	74.00	-23.98	41.96	7.78	33.35	33.07	111	23	Peak	HORIZONTAL
2	4924.00	42.27	54.00	-11.73	34.21	7.78	33.35	33.07	111	23	Average	HORIZONTAL
3	7386.72	43.53	54.00	-10.47	30.98	9.77	36.27	33.49	152	99	Average	HORIZONTAL
4	7386.99	53.61	74.00	-20.39	41.06	9.77	36.27	33.49	152	99	Peak	HORIZONTAL
5	12309.53	60.73	74.00	-13.27	40.20	15.09	38.88	33.44	132	300	Peak	HORIZONTAL
6	12309.95	47.80	54.00	-6.20	27.27	15.09	38.88	33.44	132	300	Average	HORIZONTAL

**Vertical**

Freq	Level	Limit		Over Limit	Read Level	Cable	Antenna	Preamp	A/Pos	T/Pos	Remark	Pol/Phase
		Line	dB			Loss	Factor	Factor	cm	deg		
1	4923.86	52.95	74.00	-21.05	44.89	7.78	33.35	33.07	208	359	Peak	VERTICAL
2	4923.94	47.42	54.00	-6.58	39.36	7.78	33.35	33.07	208	359	Average	VERTICAL
3	7385.08	55.69	74.00	-18.31	43.14	9.77	36.27	33.49	204	17	Peak	VERTICAL
4	7385.26	46.91	54.00	-7.09	34.36	9.77	36.27	33.49	204	17	Average	VERTICAL
5	12309.40	60.44	74.00	-13.56	39.91	15.09	38.88	33.44	127	249	Peak	VERTICAL
6	12309.82	47.91	54.00	-6.09	27.38	15.09	38.88	33.44	127	249	Average	VERTICAL



Temperature	22°C	Humidity	57%
Test Engineer	Eason Chen	Configurations	IEEE 802.11b CH 12 / Chain 1
Test Date	Jan. 09, 2016	Test Mode	Mode 4

**Horizontal**

Freq	Level	Limit		Over Limit	Read Level	Cable	Antenna	Preamplifier	A/Pos	T/Pos	Remark	Pol/Phase
		Line	dB			dBuV	dB	dB/m	dB	cm		
1	4934.02	42.83	54.00	-11.17	34.76	7.78	33.35	33.06	105	11	Average	HORIZONTAL
2	4934.05	51.30	74.00	-22.70	43.23	7.78	33.35	33.06	105	11	Peak	HORIZONTAL
3	7400.32	45.63	54.00	-8.37	33.08	9.77	36.27	33.49	139	82	Average	HORIZONTAL
4	7401.38	55.63	74.00	-18.37	42.94	9.86	36.32	33.49	139	82	Peak	HORIZONTAL

**Vertical**

Freq	Level	Limit		Over Limit	Read Level	Cable	Antenna	Preamplifier	A/Pos	T/Pos	Remark	Pol/Phase
		Line	dB			dBuV	dB	dB/m	dB	cm		
1	4933.98	48.08	54.00	-5.92	40.01	7.78	33.35	33.06	203	360	Average	VERTICAL
2	4933.98	53.58	74.00	-20.42	45.51	7.78	33.35	33.06	203	360	Peak	VERTICAL
3	7401.72	49.25	54.00	-4.75	36.56	9.86	36.32	33.49	198	19	Average	VERTICAL
4	7401.96	58.56	74.00	-15.44	45.87	9.86	36.32	33.49	198	19	Peak	VERTICAL



Temperature	22°C	Humidity	57%
Test Engineer	Eason Chen	Configurations	IEEE 802.11b CH 13 / Chain 1
Test Date	Jan. 09, 2016	Test Mode	Mode 4

**Horizontal**

Freq	Level	Limit		Over Limit	Read Level	Cable	Antenna	Preamplifier	A/Pos	T/Pos	Remark	Pol/Phase
		Line	dB			dBuV	dB	dB/m	dB	cm	deg	
1	4943.16	47.79	74.00	-26.21	39.73	7.74	33.38	33.06	133	222	Peak	HORIZONTAL
2	4943.91	34.35	54.00	-19.65	26.29	7.74	33.38	33.06	133	222	Average	HORIZONTAL
3	7415.05	52.96	74.00	-21.04	40.27	9.86	36.32	33.49	152	358	Peak	HORIZONTAL
4	7415.92	40.52	54.00	-13.48	27.83	9.86	36.32	33.49	152	358	Average	HORIZONTAL

**Vertical**

Freq	Level	Limit		Over Limit	Read Level	Cable	Antenna	Preamplifier	A/Pos	T/Pos	Remark	Pol/Phase
		Line	dB			dBuV	dB	dB/m	dB	cm	deg	
1	4943.96	48.14	74.00	-25.86	40.08	7.74	33.38	33.06	138	1	Peak	VERTICAL
2	4943.97	36.97	54.00	-17.03	28.91	7.74	33.38	33.06	138	1	Average	VERTICAL
3	7415.06	40.65	54.00	-13.35	27.96	9.86	36.32	33.49	124	294	Average	VERTICAL
4	7415.52	53.16	74.00	-20.84	40.47	9.86	36.32	33.49	124	294	Peak	VERTICAL



Temperature	22°C	Humidity	57%
Test Engineer	Eason Chen	Configurations	IEEE 802.11g CH 1 / Chain 1
Test Date	Jan. 09, 2016	Test Mode	Mode 4

**Horizontal**

Freq	Level	Limit		Over Limit	Read Level	Cable	Antenna	Preamp	A/Pos	T/Pos	Remark	Pol/Phase
		Line	dB			dBuV	dB	dB/m	dB	cm		
1	4823.92	38.20	54.00	-15.80	30.06	8.11	33.11	33.08	145	31	Average	HORIZONTAL
2	4824.33	50.19	74.00	-23.81	42.05	8.11	33.11	33.08	145	31	Peak	HORIZONTAL

**Vertical**

Freq	Level	Limit		Over Limit	Read Level	Cable	Antenna	Preamp	A/Pos	T/Pos	Remark	Pol/Phase
		Line	dB			dBuV	dB	dB/m	dB	cm		
1	4823.99	42.58	54.00	-11.42	34.44	8.11	33.11	33.08	154	358	Average	VERTICAL
2	4824.14	53.82	74.00	-20.18	45.68	8.11	33.11	33.08	154	358	Peak	VERTICAL



Temperature	22°C	Humidity	57%
Test Engineer	Eason Chen	Configurations	IEEE 802.11g CH 6 / Chain 1
Test Date	Jan. 09, 2016	Test Mode	Mode 4

**Horizontal**

Freq	Level	Limit		Over Limit	Read Level	Cable	Antenna	Preamp	A/Pos	T/Pos	Remark	Pol/Phase
		Line	dB			dBuV	dB	dB/m	dB	cm		
1	7310.20	40.60	54.00	-13.40	28.33	9.65	36.09	33.47	152	346	Average	HORIZONTAL
2	7310.91	53.12	74.00	-20.88	40.85	9.65	36.09	33.47	152	346	Peak	HORIZONTAL

**Vertical**

Freq	Level	Limit		Over Limit	Read Level	Cable	Antenna	Preamp	A/Pos	T/Pos	Remark	Pol/Phase
		Line	dB			dBuV	dB	dB/m	dB	cm		
1	4873.98	53.36	74.00	-20.64	45.27	7.94	33.23	33.08	138	355	Peak	VERTICAL
2	4874.02	41.41	54.00	-12.59	33.32	7.94	33.23	33.08	138	355	Average	VERTICAL



Temperature	22°C	Humidity	57%
Test Engineer	Eason Chen	Configurations	IEEE 802.11g CH 11 / Chain 1
Test Date	Jan. 09, 2016	Test Mode	Mode 4

**Horizontal**

Freq	Level	Limit		Over Limit	Read Level	Cable	Antenna	Preamp	A/Pos	T/Pos	Remark	Pol/Phase
		Line	dB			dBuV	dB	dB/m	dB	cm		
1	4923.94	37.69	54.00	-16.31	29.63	7.78	33.35	33.07	127	33	Average	HORIZONTAL
2	4924.27	50.63	74.00	-23.37	42.57	7.78	33.35	33.07	127	33	Peak	HORIZONTAL

**Vertical**

Freq	Level	Limit		Over Limit	Read Level	Cable	Antenna	Preamp	A/Pos	T/Pos	Remark	Pol/Phase
		Line	dB			dBuV	dB	dB/m	dB	cm		
1	4923.95	37.97	54.00	-16.03	29.91	7.78	33.35	33.07	134	357	Average	VERTICAL
2	4924.01	50.00	74.00	-24.00	41.94	7.78	33.35	33.07	134	357	Peak	VERTICAL



Temperature	22°C	Humidity	57%
Test Engineer	Eason Chen	Configurations	IEEE 802.11g CH 12 / Chain 1
Test Date	Jan. 09, 2016	Test Mode	Mode 4

**Horizontal**

Freq	Level	Limit		Over Limit	Read Level	Cable	Antenna	Preamp	A/Pos	T/Pos	Remark	Pol/Phase
		Line	dB			dBuV	dB	dB/m	dB	cm		
1	4934.06	35.14	54.00	-18.86	27.07	7.78	33.35	33.06	161	308	Average	HORIZONTAL
2	4934.36	47.41	74.00	-26.59	39.34	7.78	33.35	33.06	161	308	Peak	HORIZONTAL

**Vertical**

Freq	Level	Limit		Over Limit	Read Level	Cable	Antenna	Preamp	A/Pos	T/Pos	Remark	Pol/Phase
		Line	dB			dBuV	dB	dB/m	dB	cm		
1	4933.97	39.99	54.00	-14.01	31.92	7.78	33.35	33.06	154	4	Average	VERTICAL
2	4934.29	50.80	74.00	-23.20	42.73	7.78	33.35	33.06	154	4	Peak	VERTICAL



Temperature	22°C	Humidity	57%
Test Engineer	Eason Chen	Configurations	IEEE 802.11g CH 13 / Chain 1
Test Date	Jan. 09, 2016	Test Mode	Mode 4

**Horizontal**

	Freq	Limit Level	Over Line	Read Limit	Cable Loss	Antenna Factor	Preamp Factor	A/Pos	T/Pos	Remark	Pol/Phase
	MHz	dBuV/m	dBuV/m	dB	dBuV	dB	dB/m	dB	cm	deg	
1	4944.27	47.47	74.00	-26.53	39.41	7.74	33.38	33.06	142	41	Peak HORIZONTAL
2	4944.77	35.29	54.00	-18.71	27.23	7.74	33.38	33.06	142	41	Average HORIZONTAL

**Vertical**

	Freq	Limit Level	Over Line	Read Limit	Cable Loss	Antenna Factor	Preamp Factor	A/Pos	T/Pos	Remark	Pol/Phase
	MHz	dBuV/m	dBuV/m	dB	dBuV	dB	dB/m	dB	cm	deg	
1	4943.55	47.89	74.00	-26.11	39.83	7.74	33.38	33.06	139	343	Peak VERTICAL
2	4944.13	35.54	54.00	-18.46	27.48	7.74	33.38	33.06	139	343	Average VERTICAL



Temperature	22°C	Humidity	57%
Test Engineer	Eason Chen	Configurations	IEEE 802.11n MCS0 HT20 CH 1 / Chain 1
Test Date	Jan. 09, 2016	Test Mode	Mode 4

**Horizontal**

	Freq	Limit Level	Over Line	Read Limit	Cable Loss	Antenna Factor	Preamp Factor	A/Pos	T/Pos	Remark	Pol/Phase
	MHz	dBuV/m	dBuV/m	dB	dBuV	dB	dB/m	dB	cm	deg	
1	4824.06	36.35	54.00	-17.65	28.21	8.11	33.11	33.08	154	240	Average
2	4824.07	48.67	74.00	-25.33	40.53	8.11	33.11	33.08	154	240	Peak

**Vertical**

	Freq	Limit Level	Over Line	Read Limit	Cable Loss	Antenna Factor	Preamp Factor	A/Pos	T/Pos	Remark	Pol/Phase
	MHz	dBuV/m	dBuV/m	dB	dBuV	dB	dB/m	dB	cm	deg	
1	4823.71	52.46	74.00	-21.54	44.32	8.11	33.11	33.08	150	23	Peak
2	4824.04	42.97	54.00	-11.03	34.83	8.11	33.11	33.08	150	23	Average



Temperature	22°C	Humidity	57%
Test Engineer	Eason Chen	Configurations	IEEE 802.11n MCS0 HT20 CH 6 / Chain 1
Test Date	Jan. 09, 2016	Test Mode	Mode 4

**Horizontal**

Freq	Level	Limit		Over Limit	Read Level	Cable	Antenna	Preamp	A/Pos	T/Pos	Remark	Pol/Phase
		Line	dB			dBuV	dB	dB/m	dB	cm		
1	4874.07	37.24	54.00	-16.76	29.15	7.94	33.23	33.08	148	43	Average	HORIZONTAL
2	4874.94	49.40	74.00	-24.60	41.31	7.94	33.23	33.08	148	43	Peak	HORIZONTAL

**Vertical**

Freq	Level	Limit		Over Limit	Read Level	Cable	Antenna	Preamp	A/Pos	T/Pos	Remark	Pol/Phase
		Line	dB			dBuV	dB	dB/m	dB	cm		
1	4874.03	40.90	54.00	-13.10	32.81	7.94	33.23	33.08	147	327	Average	VERTICAL
2	4874.10	52.84	74.00	-21.16	44.75	7.94	33.23	33.08	147	327	Peak	VERTICAL



Temperature	22°C	Humidity	57%
Test Engineer	Eason Chen	Configurations	IEEE 802.11n MCS0 HT20 CH 11 / Chain 1
Test Date	Jan. 09, 2016	Test Mode	Mode 4

**Horizontal**

	Freq	Limit Level	Over Line	Read Limit	Cable Loss	Antenna Factor	Preamp Factor	A/Pos	T/Pos	Remark	Pol/Phase
	MHz	dBuV/m	dBuV/m	dB	dBuV	dB	dB/m	dB	cm	deg	
1	4923.82	47.29	74.00	-26.71	39.23	7.78	33.35	33.07	147	308	Peak HORIZONTAL
2	4924.02	35.10	54.00	-18.90	27.04	7.78	33.35	33.07	147	308	Average HORIZONTAL

**Vertical**

	Freq	Limit Level	Over Line	Read Limit	Cable Loss	Antenna Factor	Preamp Factor	A/Pos	T/Pos	Remark	Pol/Phase
	MHz	dBuV/m	dBuV/m	dB	dBuV	dB	dB/m	dB	cm	deg	
1	4923.98	37.67	54.00	-16.33	29.61	7.78	33.35	33.07	152	10	Average VERTICAL
2	4924.04	49.49	74.00	-24.51	41.43	7.78	33.35	33.07	152	10	Peak VERTICAL



Temperature	22°C	Humidity	57%
Test Engineer	Eason Chen	Configurations	IEEE 802.11n MCS0 HT20 CH 12 / Chain 1
Test Date	Jan. 09, 2016	Test Mode	Mode 4

**Horizontal**

Freq	Level	Limit		Over Line	Read Level	Cable	Antenna	Preamp	A/Pos	T/Pos	Remark	Pol/Phase
		MHz	dBuV/m	dBuV/m	dB	dBuV	dB	dB/m	dB	cm	deg	
1	4933.59	47.75	74.00	-26.25	39.68	7.78	33.35	33.06	147	66	Peak	HORIZONTAL
2	4933.97	35.36	54.00	-18.64	27.29	7.78	33.35	33.06	147	66	Average	HORIZONTAL

**Vertical**

Freq	Level	Limit		Over Line	Read Level	Cable	Antenna	Preamp	A/Pos	T/Pos	Remark	Pol/Phase
		MHz	dBuV/m	dBuV/m	dB	dBuV	dB	dB/m	dB	cm	deg	
1	4933.60	49.71	74.00	-24.29	41.64	7.78	33.35	33.06	140	22	Peak	VERTICAL
2	4934.03	38.98	54.00	-15.02	30.91	7.78	33.35	33.06	140	22	Average	VERTICAL



Temperature	22°C	Humidity	57%
Test Engineer	Eason Chen	Configurations	IEEE 802.11n MCS0 HT20 CH 13 / Chain 1
Test Date	Jan. 09, 2016	Test Mode	Mode 4

**Horizontal**

	Freq	Limit Level	Over Line	Read Limit	Cable Loss	Antenna Factor	Preamp Factor	A/Pos	T/Pos	Remark	Pol/Phase
	MHz	dBuV/m	dBuV/m	dB	dBuV	dB	dB/m	dB	cm	deg	
1	4943.03	47.58	74.00	-26.42	39.52	7.74	33.38	33.06	149	40	Peak HORIZONTAL
2	4944.98	34.92	54.00	-19.08	26.86	7.74	33.38	33.06	149	40	Average HORIZONTAL

**Vertical**

	Freq	Limit Level	Over Line	Read Limit	Cable Loss	Antenna Factor	Preamp Factor	A/Pos	T/Pos	Remark	Pol/Phase
	MHz	dBuV/m	dBuV/m	dB	dBuV	dB	dB/m	dB	cm	deg	
1	4944.05	35.85	54.00	-18.15	27.79	7.74	33.38	33.06	153	320	Average VERTICAL
2	4944.90	47.73	74.00	-26.27	39.67	7.74	33.38	33.06	153	320	Peak VERTICAL



Temperature	22°C	Humidity	57%
Test Engineer	Eason Chen	Configurations	IEEE 802.11n MCS0 HT40 CH 3 / Chain 1
Test Date	Jan. 09, 2016	Test Mode	Mode 4

**Horizontal**

	Freq	Limit Level	Over Line	Read Limit	Cable Loss	Antenna Factor	Preamp Factor	A/Pos	T/Pos	Remark	Pol/Phase
	MHz	dBuV/m	dBuV/m	dB	dBuV	dB	dB/m	dB	cm	deg	
1	4843.20	47.75	74.00	-26.25	39.63	8.03	33.17	33.08	147	282	Peak HORIZONTAL
2	4843.94	36.06	54.00	-17.94	27.94	8.03	33.17	33.08	147	282	Average HORIZONTAL

**Vertical**

	Freq	Limit Level	Over Line	Read Limit	Cable Loss	Antenna Factor	Preamp Factor	A/Pos	T/Pos	Remark	Pol/Phase
	MHz	dBuV/m	dBuV/m	dB	dBuV	dB	dB/m	dB	cm	deg	
1	4843.97	40.24	54.00	-13.76	32.12	8.03	33.17	33.08	152	3	Average VERTICAL
2	4844.35	49.86	74.00	-24.14	41.74	8.03	33.17	33.08	152	3	Peak VERTICAL



Temperature	22°C	Humidity	57%
Test Engineer	Eason Chen	Configurations	IEEE 802.11n MCS0 HT40 CH 6 / Chain 1
Test Date	Jan. 09, 2016	Test Mode	Mode 4

**Horizontal**

Freq	Level	Limit		Over Limit	Read Level	Cable	Antenna	Preamp	A/Pos	T/Pos	Remark	Pol/Phase
		Line	dB			dBuV	dB	dB/m	dB	cm		
1	4873.88	35.83	54.00	-18.17	27.74	7.94	33.23	33.08	147	232	Average	HORIZONTAL
2	4874.77	49.49	74.00	-24.51	41.40	7.94	33.23	33.08	147	232	Peak	HORIZONTAL

**Vertical**

Freq	Level	Limit		Over Limit	Read Level	Cable	Antenna	Preamp	A/Pos	T/Pos	Remark	Pol/Phase
		Line	dB			dBuV	dB	dB/m	dB	cm		
1	4873.98	50.10	74.00	-23.90	42.01	7.94	33.23	33.08	152	40	Peak	VERTICAL
2	4874.00	39.52	54.00	-14.48	31.43	7.94	33.23	33.08	152	40	Average	VERTICAL



Temperature	22°C	Humidity	57%
Test Engineer	Eason Chen	Configurations	IEEE 802.11n MCS0 HT40 CH 9 / Chain 1
Test Date	Jan. 09, 2016	Test Mode	Mode 4

**Horizontal**

	Freq	Level	Limit	Over	Read	Cable	Antenna	Preamp	A/Pos	T/Pos	Remark	Pol/Phase
			Line	Limit	Level	Loss	Factor	Factor	dB	cm		
	MHz	dBuV/m	dBuV/m	dB	dBuV	dB	dB/m	dB	cm	deg		
1	4903.83	48.20	74.00	-25.80	40.12	7.86	33.29	33.07	144	255	Peak	HORIZONTAL
2	4904.11	35.48	54.00	-18.52	27.40	7.86	33.29	33.07	144	255	Average	HORIZONTAL

**Vertical**

	Freq	Level	Limit	Over	Read	Cable	Antenna	Preamp	A/Pos	T/Pos	Remark	Pol/Phase
			Line	Limit	Level	Loss	Factor	Factor	dB	cm		
	MHz	dBuV/m	dBuV/m	dB	dBuV	dB	dB/m	dB	cm	deg		
1	4903.95	39.13	54.00	-14.87	31.05	7.86	33.29	33.07	144	12	Average	VERTICAL
2	4904.21	49.66	74.00	-24.34	41.58	7.86	33.29	33.07	144	12	Peak	VERTICAL



Temperature	22°C	Humidity	57%
Test Engineer	Eason Chen	Configurations	IEEE 802.11n MCS0 HT40 CH 10 / Chain 1
Test Date	Jan. 09, 2016	Test Mode	Mode 4

**Horizontal**

Freq	Level	Limit	Over	Read	Cable	Antenna	Preamp	A/Pos	T/Pos	Remark	Pol/Phase
		Line	Limit	Level	Loss	Factor	Factor	dB	cm		
MHz	dBuV/m	dBuV/m	dB	dBuV	dB	dB/m	dB	cm	deg		
1	4913.93	35.36	54.00	-18.64	27.29	7.82	33.32	33.07	153	147	Average
2	4914.58	48.03	74.00	-25.97	39.96	7.82	33.32	33.07	153	147	Peak
											HORIZONTAL

**Vertical**

Freq	Level	Limit	Over	Read	Cable	Antenna	Preamp	A/Pos	T/Pos	Remark	Pol/Phase
		Line	Limit	Level	Loss	Factor	Factor	dB	cm		
MHz	dBuV/m	dBuV/m	dB	dBuV	dB	dB/m	dB	cm	deg		
1	4913.73	49.44	74.00	-24.56	41.37	7.82	33.32	33.07	156	336	Peak
2	4913.99	39.48	54.00	-14.52	31.41	7.82	33.32	33.07	156	336	Average
											VERTICAL



Temperature	22°C	Humidity	57%
Test Engineer	Eason Chen	Configurations	IEEE 802.11n MCS0 HT40 CH 11 / Chain 1
Test Date	Jan. 27, 2016	Test Mode	Mode 4

**Horizontal**

	Freq	Limit Level	Over Line	Read Limit	Cable Loss	Antenna Factor	Preamp Factor	A/Pos	T/Pos	Remark	Pol/Phase
	MHz	dBuV/m	dBuV/m	dB	dBuV	dB	dB/m	dB	cm	deg	
1	4923.82	48.59	74.00	-25.41	40.53	7.78	33.35	33.07	148	348	Peak HORIZONTAL
2	4923.88	35.34	54.00	-18.66	27.28	7.78	33.35	33.07	148	348	Average HORIZONTAL

**Vertical**

	Freq	Limit Level	Over Line	Read Limit	Cable Loss	Antenna Factor	Preamp Factor	A/Pos	T/Pos	Remark	Pol/Phase
	MHz	dBuV/m	dBuV/m	dB	dBuV	dB	dB/m	dB	cm	deg	
1	4924.08	38.69	54.00	-15.31	30.63	7.78	33.35	33.07	151	313	Average VERTICAL
2	4924.26	49.39	74.00	-24.61	41.33	7.78	33.35	33.07	151	313	Peak 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.

## 4.6. Emissions Measurement

### 4.6.1. Limit

30dBc 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 (microvolt/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 (30dBc 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.

#### For Radiated Out of Band Emission Measurement:

1. Test was performed in accordance with KDB558074 D01 v03r05 for Performing Compliance Measurements on Digital Transmission Systems (DTS) Operating Under §15.247 section 11.0 Unwanted Emissions into Non-Restricted Frequency Bands Measurement Procedure.

#### **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	22°C	Humidity	57%
Test Engineer	Eason Chen	Configurations	IEEE 802.11b CH 1, 6, 11, 12, 13 / Chain 1
Test Date	Jan. 02, 2016	Test Mode	Mode 1

##### Channel 1

Freq	Level	Limit		Over Limit	Read Level	CableAntenna Preamp			A/Pos	T/Pos	Pol/Phase
		Line	dBuV/m			Cable Loss	Antenna Factor	Preamp Factor			
MHz	dBuV/m	dBuV/m	dB	dBuV	dB	dB/m	dB	cm	deg		
1	2388.76	48.16	54.00	-5.84	14.99	4.96	28.21	0.00	Average	198	216 HORIZONTAL
2	2389.89	60.42	74.00	-13.58	27.25	4.96	28.21	0.00	Peak	198	216 HORIZONTAL
3	2411.20	101.23			67.98	4.99	28.26	0.00	Average	198	216 HORIZONTAL
4	2412.96	105.01			71.76	4.99	28.26	0.00	Peak	198	216 HORIZONTAL

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

##### Channel 6

Freq	Level	Limit		Over Limit	Read Level	CableAntenna Preamp			A/Pos	T/Pos	Pol/Phase
		Line	dBuV/m			Cable Loss	Antenna Factor	Preamp Factor			
MHz	dBuV/m	dBuV/m	dB	dBuV	dB	dB/m	dB	cm	deg		
1	2387.64	59.43	74.00	-14.57	26.26	4.96	28.21	0.00	Peak	128	274 VERTICAL
2	2389.56	47.83	54.00	-6.17	14.66	4.96	28.21	0.00	Average	128	274 VERTICAL
3	2436.04	101.32			68.02	5.01	28.29	0.00	Peak	128	274 VERTICAL
4	2436.20	97.54			64.24	5.01	28.29	0.00	Average	128	274 VERTICAL
5	2483.80	59.80	74.00	-14.20	26.36	5.06	28.38	0.00	Peak	128	274 VERTICAL
6	2486.20	48.29	54.00	-5.71	14.85	5.06	28.38	0.00	Average	128	274 VERTICAL

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

##### Channel 11

Freq	Level	Limit		Over Limit	Read Level	CableAntenna Preamp			A/Pos	T/Pos	Pol/Phase
		Line	dBuV/m			Cable Loss	Antenna Factor	Preamp Factor			
MHz	dBuV/m	dBuV/m	dB	dBuV	dB	dB/m	dB	cm	deg		
1	2461.20	100.63			67.25	5.04	28.34	0.00	Average	192	219 HORIZONTAL
2	2461.20	104.36			70.98	5.04	28.34	0.00	Peak	192	219 HORIZONTAL
3	2483.80	48.50	54.00	-5.50	15.06	5.06	28.38	0.00	Average	192	219 HORIZONTAL
4	2499.20	60.74	74.00	-13.26	27.26	5.08	28.40	0.00	Peak	192	219 HORIZONTAL

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

### Channel 12

	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	2466.20	100.98			67.60	5.04	28.34	0.00	Average	200	20	HORIZONTAL
2	2467.96	104.56			71.16	5.05	28.35	0.00	Peak	200	20	HORIZONTAL
3	2483.99	51.69	54.00	-2.31	18.25	5.06	28.38	0.00	Average	200	20	HORIZONTAL
4	2484.15	62.08	74.00	-11.92	28.64	5.06	28.38	0.00	Peak	200	20	HORIZONTAL

Item 1, 2 are the fundamental frequency at 2467 MHz.

### Channel 13

	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	2471.20	94.58			61.18	5.05	28.35	0.00	Average	218	348	HORIZONTAL
2	2472.96	98.27			64.87	5.05	28.35	0.00	Peak	218	348	HORIZONTAL
3	2484.18	52.06	54.00	-1.94	18.62	5.06	28.38	0.00	Average	218	348	HORIZONTAL
4	2484.50	62.66	74.00	-11.34	29.22	5.06	28.38	0.00	Peak	218	348	HORIZONTAL

Item 1, 2 are the fundamental frequency at 2472 MHz.



Temperature	22°C	Humidity	57%
Test Engineer	Eason Chen	Configurations	IEEE 802.11g CH 1, 6, 11, 12, 13 / Chain 1
Test Date	Jan. 02, 2016 ~ Jan. 29, 2016	Test Mode	Mode 1

**Channel 1**

Freq	Level	Limit		Over Limit	Read Level	Cable	Antenna	Preamplifier	T/Pos	A/Pos	Remark	Pol/Phase
		Line	dBuV/m			Loss	Factor	Factor	deg	cm		
1	2390.00	64.27	74.00	-9.73	32.52	3.73	28.02	0.00	172	196	Peak	HORIZONTAL
2	2390.00	49.30	54.00	-4.70	17.55	3.73	28.02	0.00	172	196	Average	HORIZONTAL
3	2413.44	104.34			72.60	3.75	27.99	0.00	172	196	Peak	HORIZONTAL
4	2414.08	94.77			63.03	3.75	27.99	0.00	172	196	Average	HORIZONTAL

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

**Channel 6**

Freq	Level	Limit		Over Limit	Read Level	Cable	Antenna	Preamplifier	Remark	A/Pos	T/Pos	Pol/Phase
		Line	dBuV/m			Loss	Factor	Factor		deg	cm	
1	2387.80	58.78	74.00	-15.22	25.61	4.96	28.21	0.00	Peak	201	216	HORIZONTAL
2	2389.40	48.10	54.00	-5.90	14.93	4.96	28.21	0.00	Average	201	216	HORIZONTAL
3	2440.37	104.47			71.14	5.02	28.31	0.00	Peak	201	216	HORIZONTAL
4	2441.01	95.02			61.69	5.02	28.31	0.00	Average	201	216	HORIZONTAL
5	2484.92	48.60	54.00	-5.40	15.16	5.06	28.38	0.00	Average	201	216	HORIZONTAL
6	2485.56	61.36	74.00	-12.64	27.92	5.06	28.38	0.00	Peak	201	216	HORIZONTAL

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

**Channel 11**

Freq	Level	Limit		Over Limit	Read Level	Cable	Antenna	Preamplifier	Remark	A/Pos	T/Pos	Pol/Phase
		Line	dBuV/m			Loss	Factor	Factor		deg	cm	
1	2458.64	104.81			73.07	3.79	27.95	0.00	232	184	Peak	HORIZONTAL
2	2458.64	94.84			63.10	3.79	27.95	0.00	232	184	Average	HORIZONTAL
3	2483.50	52.13	54.00	-1.87	20.40	3.81	27.92	0.00	232	184	Average	HORIZONTAL
4	2483.64	72.36	74.00	-1.64	40.63	3.81	27.92	0.00	232	184	Peak	HORIZONTAL

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

### Channel 12

	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	2469.08	90.67			57.27	5.05	28.35	0.00	Average	300	243	VERTICAL
2	2469.72	100.19			66.79	5.05	28.35	0.00	Peak	300	243	VERTICAL
3	2483.50	52.14	54.00	-1.86	18.70	5.06	28.38	0.00	Average	300	243	VERTICAL
4	2484.31	72.63	74.00	-1.37	39.19	5.06	28.38	0.00	Peak	300	243	VERTICAL

Item 1, 2 are the fundamental frequency at 2467 MHz.

### Channel 13

	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	2475.37	95.45			62.03	5.06	28.36	0.00	Peak	300	242	VERTICAL
2	2476.01	85.89			52.47	5.06	28.36	0.00	Average	300	242	VERTICAL
3	2483.50	52.27	54.00	-1.73	18.83	5.06	28.38	0.00	Average	300	242	VERTICAL
4	2483.50	70.01	74.00	-3.99	36.57	5.06	28.38	0.00	Peak	300	242	VERTICAL

Item 1, 2 are the fundamental frequency at 2472 MHz.



Temperature	22°C	Humidity	57%
Test Engineer	Eason Chen	Configurations	IEEE 802.11n MCS0 HT20 CH 1, 6, 11, 12, 13 / Chain 1
Test Date	Jan. 02, 2016 ~ Jan. 28, 2016	Test Mode	Mode 1

**Channel 1**

Freq	Level	Limit		Over Limit	Read Level	Cable	Antenna	Preamp	T/Pos	A/Pos	Remark	Pol/Phase
		Line	dBuV/m			Loss	Factor	Factor	deg	cm		
MHz	dBuV/m	dBuV/m	dB	dBuV	dB	dB/m	dB	deg	cm	deg		
1	2389.40	65.46	74.00	-8.54	33.71	3.73	28.02	0.00	180	191	Peak	HORIZONTAL
2	2390.00	49.33	54.00	-4.67	17.58	3.73	28.02	0.00	180	191	Average	HORIZONTAL
3	2408.96	104.72			72.97	3.75	28.00	0.00	180	191	Peak	HORIZONTAL
4	2415.05	94.41			62.67	3.75	27.99	0.00	180	191	Average	HORIZONTAL

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

**Channel 6**

Freq	Level	Limit		Over Limit	Read Level	Cable	Antenna	Preamp	Remark	A/Pos	T/Pos	Pol/Phase
		Line	dBuV/m			Loss	Factor	Factor		deg	cm	
MHz	dBuV/m	dBuV/m	dB	dBuV	dB	dB/m	dB	deg	cm	deg		
1	2389.89	59.18	74.00	-14.82	26.01	4.96	28.21	0.00	Peak	198	215	HORIZONTAL
2	2390.00	48.17	54.00	-5.83	15.00	4.96	28.21	0.00	Average	198	215	HORIZONTAL
3	2440.21	95.41			62.08	5.02	28.31	0.00	Average	198	215	HORIZONTAL
4	2440.21	105.25			71.92	5.02	28.31	0.00	Peak	198	215	HORIZONTAL
5	2483.50	48.77	54.00	-5.23	15.33	5.06	28.38	0.00	Average	198	215	HORIZONTAL
6	2484.12	61.51	74.00	-12.49	28.07	5.06	28.38	0.00	Peak	198	215	HORIZONTAL

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

**Channel 11**

Freq	Level	Limit		Over Limit	Read Level	Cable	Antenna	Preamp	Remark	A/Pos	T/Pos	Pol/Phase
		Line	dBuV/m			Loss	Factor	Factor		deg	cm	
MHz	dBuV/m	dBuV/m	dB	dBuV	dB	dB/m	dB	deg	cm	deg		
1	2457.35	102.78			69.42	5.03	28.33	0.00	Peak	197	218	HORIZONTAL
2	2459.60	92.93			59.57	5.03	28.33	0.00	Average	197	218	HORIZONTAL
3	2483.50	51.27	54.00	-2.73	17.83	5.06	28.38	0.00	Average	197	218	HORIZONTAL
4	2483.64	71.26	74.00	-2.74	37.82	5.06	28.38	0.00	Peak	197	218	HORIZONTAL

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

### Channel 12

	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	2463.96	101.10			67.72	5.04	28.34	0.00	Peak	299	246	VERTICAL
2	2470.00	89.75			56.35	5.05	28.35	0.00	Average	299	246	VERTICAL
3	2483.50	52.49	54.00	-1.51	19.05	5.06	28.38	0.00	Average	299	246	VERTICAL
4	2485.11	72.71	74.00	-1.29	39.27	5.06	28.38	0.00	Peak	299	246	VERTICAL

Item 1, 2 are the fundamental frequency at 2467 MHz.

### Channel 13

	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	2469.12	94.43			61.03	5.05	28.35	0.00	Peak	300	240	VERTICAL
2	2475.05	84.42			51.00	5.06	28.36	0.00	Average	300	240	VERTICAL
3	2483.50	51.84	54.00	-2.16	18.40	5.06	28.38	0.00	Average	300	240	VERTICAL
4	2483.50	70.89	74.00	-3.11	37.45	5.06	28.38	0.00	Peak	300	240	VERTICAL

Item 1, 2 are the fundamental frequency at 2472 MHz.



<b>Temperature</b>	22°C	<b>Humidity</b>	57%
<b>Test Engineer</b>	Eason Chen	<b>Configurations</b>	IEEE 802.11n MCS0 HT40 CH 3, 6, 9, 10, 11 / Chain 1
<b>Test Date</b>	Jan. 02, 2016 ~ Jan. 28, 2016	<b>Test Mode</b>	Mode 1

**Channel 3**

Freq	Level	Limit	Over	Read	Cable	Antenna	Preamp	T/Pos	A/Pos	Remark	Pol/Phase
		Line	Limit	Level	Loss	Factor	Factor	deg	cm		
MHz	dBuV/m	dBuV/m	dB	dBuV	dB	dB/m	dB	deg	cm		
1	2386.74	62.40	74.00	-11.60	30.65	3.73	28.02	0.00	183	177 Peak	HORIZONTAL
2	2389.63	49.43	54.00	-4.57	17.68	3.73	28.02	0.00	183	177 Average	HORIZONTAL
3	2423.60	91.80			60.05	3.76	27.99	0.00	183	177 Average	HORIZONTAL
4	2429.05	101.13			69.39	3.76	27.98	0.00	183	177 Peak	HORIZONTAL

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

**Channel 6**

Freq	Level	Limit	Over	Read	Cable	Antenna	Preamp	T/Pos	A/Pos	Remark	Pol/Phase
		Line	Limit	Level	Loss	Factor	Factor	deg	cm		
MHz	dBuV/m	dBuV/m	dB	dBuV	dB	dB/m	dB	deg	cm		
1	2388.92	60.85	74.00	-13.15	29.10	3.73	28.02	0.00	175	194 Peak	HORIZONTAL
2	2390.00	47.22	54.00	-6.78	15.47	3.73	28.02	0.00	175	194 Average	HORIZONTAL
3	2444.05	100.05			68.31	3.78	27.96	0.00	175	194 Peak	HORIZONTAL
4	2446.30	90.50			58.77	3.78	27.95	0.00	175	194 Average	HORIZONTAL
5	2483.50	48.63	54.00	-5.37	16.90	3.81	27.92	0.00	175	194 Average	HORIZONTAL
6	2484.44	62.48	74.00	-11.52	30.75	3.81	27.92	0.00	175	194 Peak	HORIZONTAL

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

**Channel 9**

Freq	Level	Limit	Over	Read	Cable	Antenna	Preamp	A/Pos	T/Pos	Pol/Phase	
		Line	Limit	Level	Loss	Factor	Factor				
MHz	dBuV/m	dBuV/m	dB	dBuV	dB	dB/m	dB	cm	deg		
1	2445.27	99.91			66.58	5.02	28.31	0.00	Peak	201	218 HORIZONTAL
2	2450.08	89.84			56.49	5.03	28.32	0.00	Average	201	218 HORIZONTAL
3	2483.50	51.27	54.00	-2.73	17.83	5.06	28.38	0.00	Average	201	218 HORIZONTAL
4	2484.05	66.02	74.00	-7.98	32.58	5.06	28.38	0.00	Peak	201	218 HORIZONTAL

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

### Channel 10

	Freq	Level	Limit Line	Over Limit	Read Level	Cable Loss	Antenna Factor	Preamp Factor	T/Pos	A/Pos	Remark	Pol/Phase
	MHz	dBuV/m	dBuV/m	dB	dBuV	dB	dB/m	dB	deg	cm		
1	2455.00	91.78			59.93	3.90	27.95	0.00	185	198	Average	HORIZONTAL
2	2463.80	101.66			69.82	3.90	27.94	0.00	185	198	Peak	HORIZONTAL
3	2483.50	52.29	54.00	-1.71	20.45	3.92	27.92	0.00	185	198	Average	HORIZONTAL
4	2483.80	69.14	74.00	-4.86	37.30	3.92	27.92	0.00	185	198	Peak	HORIZONTAL

Item 1, 2 are the fundamental frequency at 2457 MHz.

### Channel 11

	Freq	Level	Limit Line	Over Limit	Read Level	Cable Loss	Antenna Factor	Preamp Factor	T/Pos	A/Pos	Remark	Pol/Phase
	MHz	dBuV/m	dBuV/m	dB	dBuV	dB	dB/m	dB	deg	cm		
1	2454.40	101.55			69.70	3.90	27.95	0.00	182	198	Peak	HORIZONTAL
2	2456.40	91.25			59.40	3.90	27.95	0.00	182	198	Average	HORIZONTAL
3	2483.50	52.27	54.00	-1.73	20.43	3.92	27.92	0.00	182	198	Average	HORIZONTAL
4	2488.80	69.68	74.00	-4.32	37.84	3.92	27.92	0.00	182	198	Peak	HORIZONTAL

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

<b>Temperature</b>	22°C	<b>Humidity</b>	57%
<b>Test Engineer</b>	Eason Chen	<b>Configurations</b>	IEEE 802.11b CH 1, 6, 11, 12, 13 / Chain 1
<b>Test Date</b>	Jan. 06, 2016 ~ Feb. 16, 2016	<b>Test Mode</b>	Mode 2

**Channel 1**

Freq	Level	Limit	Over	Read	Cable	Antenna	Preamp	T/Pos	A/Pos	Remark	Pol/Phase
		Line	Limit	Level	Loss	Factor	Factor	deg	cm		
MHz	dBuV/m	dBuV/m		dB	dBuV	dB	dB/m	dB	deg	cm	
1	2390.00	55.95	74.00	-18.05	24.08	3.85	28.02	0.00	212	100 Peak	VERTICAL
2	2390.00	45.03	54.00	-8.97	13.16	3.85	28.02	0.00	212	100 Average	VERTICAL
3	2411.00	104.30			72.44	3.86	28.00	0.00	212	100 Peak	VERTICAL
4	2411.20	100.39			68.53	3.87	27.99	0.00	212	100 Average	VERTICAL

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

**Channel 6**

Freq	Level	Limit	Over	Read	Cable	Antenna	Preamp	T/Pos	A/Pos	Remark	Pol/Phase
		Line	Limit	Level	Loss	Factor	Factor	deg	cm		
MHz	dBuV/m	dBuV/m		dB	dBuV	dB	dB/m	dB	deg	cm	
1	2387.20	54.87	74.00	-19.13	23.00	3.85	28.02	0.00	285	100 Peak	VERTICAL
2	2390.00	44.09	54.00	-9.91	12.22	3.85	28.02	0.00	285	100 Average	VERTICAL
3	2436.20	100.40			68.55	3.88	27.97	0.00	285	100 Average	VERTICAL
4	2438.20	104.48			72.63	3.88	27.97	0.00	285	100 Peak	VERTICAL
5	2483.50	44.23	54.00	-9.77	12.39	3.92	27.92	0.00	285	100 Average	VERTICAL
6	2484.30	55.34	74.00	-18.66	23.50	3.92	27.92	0.00	285	100 Peak	VERTICAL

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

**Channel 11**

Freq	Level	Limit	Over	Read	Cable	Antenna	Preamp	T/Pos	A/Pos	Remark	Pol/Phase
		Line	Limit	Level	Loss	Factor	Factor	deg	cm		
MHz	dBuV/m	dBuV/m		dB	dBuV	dB	dB/m	dB	deg	cm	
1	2461.20	100.89			69.05	3.90	27.94	0.00	286	100 Average	VERTICAL
2	2463.00	104.78			72.94	3.90	27.94	0.00	286	100 Peak	VERTICAL
3	2483.50	45.14	54.00	-8.86	13.30	3.92	27.92	0.00	286	100 Average	VERTICAL
4	2483.70	56.01	74.00	-17.99	24.17	3.92	27.92	0.00	286	100 Peak	VERTICAL

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

**Channel 12**

Freq	Level	Limit		Over Limit	Read Level	Cable	Antenna	Preamp	T/Pos	A/Pos	Remark	Pol/Phase
		Line	dB			dBuV	dB	dB/m	dB	deg		
MHz	dBuV/m	dBuV/m	dB	dBuV	dB	dB/m	dB	deg	cm			
1	2467.80	103.66			71.82	3.91	27.93	0.00	284	100	Average	VERTICAL
2	2468.00	107.81			75.97	3.91	27.93	0.00	284	100	Peak	VERTICAL
3	2483.80	62.31	74.00	-11.69	30.47	3.92	27.92	0.00	284	100	Peak	VERTICAL
4	2484.00	52.49	54.00	-1.51	20.65	3.92	27.92	0.00	284	100	Average	VERTICAL

Item 1, 2 are the fundamental frequency at 2467 MHz.

**Channel 13**

Freq	Level	Limit		Over Limit	Read Level	Cable	Antenna	Preamp	T/Pos	A/Pos	Remark	Pol/Phase
		Line	dB			dBuV	dB	dB/m	dB	deg		
MHz	dBuV/m	dBuV/m	dB	dBuV	dB	dB/m	dB	deg	cm			
1	2471.00	99.77			68.04	3.80	27.93	0.00	308	100	Peak	VERTICAL
2	2471.20	95.95			64.22	3.80	27.93	0.00	308	100	Average	VERTICAL
3	2484.20	52.18	54.00	-1.82	20.45	3.81	27.92	0.00	308	100	Average	VERTICAL
4	2484.60	60.49	74.00	-13.51	28.76	3.81	27.92	0.00	308	100	Peak	VERTICAL

Item 1, 2 are the fundamental frequency at 2472 MHz.



Temperature	22°C	Humidity	57%
Test Engineer	Eason Chen	Configurations	IEEE 802.11g CH 1, 6, 11, 12, 13 / Chain 1
Test Date	Jan. 06, 2016 ~ Jan. 29, 2016	Test Mode	Mode 2

**Channel 1**

Freq	Level	Limit	Over	Read	Cable	Antenna	Preamp	T/Pos	A/Pos	Remark	Pol/Phase
		Line	Limit	Level	Loss	Factor	Factor	deg	cm		
MHz	dBuV/m	dBuV/m		dB	dBuV	dB	dB/m	dB	deg	cm	
1	2389.40	63.84	74.00	-10.16	32.09	3.73	28.02	0.00	31	100 Peak	VERTICAL
2	2390.00	49.52	54.00	-4.48	17.77	3.73	28.02	0.00	31	100 Average	VERTICAL
3	2413.76	103.18			71.44	3.75	27.99	0.00	31	100 Peak	VERTICAL
4	2414.08	93.80			62.06	3.75	27.99	0.00	31	100 Average	VERTICAL

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

**Channel 6**

Freq	Level	Limit	Over	Read	Cable	Antenna	Preamp	T/Pos	A/Pos	Remark	Pol/Phase
		Line	Limit	Level	Loss	Factor	Factor	deg	cm		
MHz	dBuV/m	dBuV/m		dB	dBuV	dB	dB/m	dB	deg	cm	
1	2384.60	57.11	74.00	-16.89	25.24	3.85	28.02	0.00	285	100 Peak	VERTICAL
2	2390.00	44.81	54.00	-9.19	12.94	3.85	28.02	0.00	285	100 Average	VERTICAL
3	2438.60	105.57			73.72	3.88	27.97	0.00	285	100 Peak	VERTICAL
4	2439.00	96.07			64.22	3.88	27.97	0.00	285	100 Average	VERTICAL
5	2483.50	45.97	54.00	-8.03	14.13	3.92	27.92	0.00	285	100 Average	VERTICAL
6	2484.20	59.68	74.00	-14.32	27.84	3.92	27.92	0.00	285	100 Peak	VERTICAL

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

**Channel 11**

Freq	Level	Limit	Over	Read	Cable	Antenna	Preamp	T/Pos	A/Pos	Remark	Pol/Phase
		Line	Limit	Level	Loss	Factor	Factor	deg	cm		
MHz	dBuV/m	dBuV/m		dB	dBuV	dB	dB/m	dB	deg	cm	
1	2466.49	104.96			73.23	3.79	27.94	0.00	0	100 Peak	VERTICAL
2	2466.49	95.00			63.27	3.79	27.94	0.00	0	100 Average	VERTICAL
3	2483.50	52.18	54.00	-1.82	20.45	3.81	27.92	0.00	0	100 Average	VERTICAL
4	2483.64	71.13	74.00	-2.87	39.40	3.81	27.92	0.00	0	100 Peak	VERTICAL

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

**Channel 12**

Freq	Level	Limit		Over Limit	Read Level	Cable	Antenna	Preamp	T/Pos	A/Pos	Remark	Pol/Phase
		Line	dB			dBuV	dB	dB/m	deg	cm		
MHz	dBuV/m	dBuV/m	dB	dBuV	dB	dB/m	dB	deg	cm			
1	2470.40	103.44			71.60	3.91	27.93	0.00	212	100	Peak	VERTICAL
2	2471.00	93.86			62.02	3.91	27.93	0.00	212	100	Average	VERTICAL
3	2483.50	52.21	54.00	-1.79	20.37	3.92	27.92	0.00	212	100	Average	VERTICAL
4	2484.60	71.97	74.00	-2.03	40.13	3.92	27.92	0.00	212	100	Peak	VERTICAL

Item 1, 2 are the fundamental frequency at 2467 MHz.

**Channel 13**

Freq	Level	Limit		Over Limit	Read Level	Cable	Antenna	Preamp	T/Pos	A/Pos	Remark	Pol/Phase
		Line	dB			dBuV	dB	dB/m	deg	cm		
MHz	dBuV/m	dBuV/m	dB	dBuV	dB	dB/m	dB	deg	cm			
1	2474.00	89.56			57.72	3.91	27.93	0.00	210	100	Average	VERTICAL
2	2475.40	98.99			67.16	3.91	27.92	0.00	210	100	Peak	VERTICAL
3	2483.50	72.24	74.00	-1.76	40.40	3.92	27.92	0.00	210	100	Peak	VERTICAL
4	2483.50	52.25	54.00	-1.75	20.41	3.92	27.92	0.00	210	100	Average	VERTICAL

Item 1, 2 are the fundamental frequency at 2472 MHz.

<b>Temperature</b>	22°C	<b>Humidity</b>	57%
<b>Test Engineer</b>	Eason Chen	<b>Configurations</b>	IEEE 802.11n MCS0 HT20 CH 1, 6, 11, 12, 13 / Chain 1
<b>Test Date</b>	Jan. 06, 2016 ~ Jan. 29, 2016	<b>Test Mode</b>	Mode 2

### Channel 1

Freq	Level	Limit	Over	Read	Cable	Antenna	Preamp	T/Pos	A/Pos	Remark	Pol/Phase
		Line	Limit	Level	Loss	Factor	Factor	deg	cm		
MHz	dBuV/m	dBuV/m		dB	dBuV	dB	dB/m	dB	deg	cm	
1	2389.89	65.77	74.00	-8.23	34.02	3.73	28.02	0.00	31	100 Peak	VERTICAL
2	2390.00	49.32	54.00	-4.68	17.57	3.73	28.02	0.00	31	100 Average	VERTICAL
3	2409.12	103.54			71.79	3.75	28.00	0.00	31	100 Peak	VERTICAL
4	2415.05	93.44			61.70	3.75	27.99	0.00	31	100 Average	VERTICAL

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

### Channel 6

Freq	Level	Limit	Over	Read	Cable	Antenna	Preamp	T/Pos	A/Pos	Remark	Pol/Phase
		Line	Limit	Level	Loss	Factor	Factor	deg	cm		
MHz	dBuV/m	dBuV/m		dB	dBuV	dB	dB/m	dB	deg	cm	
1	2389.80	58.46	74.00	-15.54	26.59	3.85	28.02	0.00	284	103 Peak	VERTICAL
2	2390.00	44.81	54.00	-9.19	12.94	3.85	28.02	0.00	284	103 Average	VERTICAL
3	2433.80	105.92			74.07	3.88	27.97	0.00	284	103 Peak	VERTICAL
4	2440.20	95.78			63.93	3.89	27.96	0.00	284	103 Average	VERTICAL
5	2483.50	62.63	74.00	-11.37	30.79	3.92	27.92	0.00	284	103 Peak	VERTICAL
6	2483.50	46.03	54.00	-7.97	14.19	3.92	27.92	0.00	284	103 Average	VERTICAL

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

### Channel 11

Freq	Level	Limit	Over	Read	Cable	Antenna	Preamp	T/Pos	A/Pos	Remark	Pol/Phase
		Line	Limit	Level	Loss	Factor	Factor	deg	cm		
MHz	dBuV/m	dBuV/m		dB	dBuV	dB	dB/m	dB	deg	cm	
1	2456.39	95.53			63.79	3.79	27.95	0.00	304	100 Average	VERTICAL
2	2458.64	105.92			74.18	3.79	27.95	0.00	304	100 Peak	VERTICAL
3	2483.64	52.39	54.00	-1.61	20.66	3.81	27.92	0.00	304	100 Average	VERTICAL
4	2484.12	71.47	74.00	-2.53	39.74	3.81	27.92	0.00	304	100 Peak	VERTICAL

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

**Channel 12**

Freq	Level	Limit		Over Limit	Read Level	Cable		Antenna Loss Factor	Preamp Factor	T/Pos	A/Pos	Remark	Pol/Phase
		Line	dBuV/m			dB	dBuV	dB	dB/m	deg	cm		
1	2469.60	103.59			71.75	3.91	27.93	0.00	211	100	Peak	VERTICAL	
2	2470.00	93.67			61.83	3.91	27.93	0.00	211	100	Average	VERTICAL	
3	2483.50	52.23	54.00	-1.77	20.39	3.92	27.92	0.00	211	100	Average	VERTICAL	
4	2484.20	72.49	74.00	-1.51	40.65	3.92	27.92	0.00	211	100	Peak	VERTICAL	

Item 1, 2 are the fundamental frequency at 2467 MHz.

**Channel 13**

Freq	Level	Limit		Over Limit	Read Level	Cable		Antenna Loss Factor	Preamp Factor	T/Pos	A/Pos	Remark	Pol/Phase
		Line	dBuV/m			dB	dBuV	dB	dB/m	deg	cm		
1	2469.00	98.53			66.69	3.91	27.93	0.00	212	100	Peak	VERTICAL	
2	2475.00	88.92			57.09	3.91	27.92	0.00	212	100	Average	VERTICAL	
3	2483.50	72.31	74.00	-1.69	40.47	3.92	27.92	0.00	212	100	Peak	VERTICAL	
4	2483.50	52.43	54.00	-1.57	20.59	3.92	27.92	0.00	212	100	Average	VERTICAL	

Item 1, 2 are the fundamental frequency at 2472 MHz.

<b>Temperature</b>	22°C	<b>Humidity</b>	57%
<b>Test Engineer</b>	Eason Chen	<b>Configurations</b>	IEEE 802.11n MCS0 HT40 CH 3, 6, 9, 10, 11 / Chain 1
<b>Test Date</b>	Jan. 07, 2016 ~ Jan. 27, 2016	<b>Test Mode</b>	Mode 2

**Channel 3**

Freq	Level	Limit	Over	Read	Cable	Antenna	Preamp	T/Pos	A/Pos	Remark	Pol/Phase
		Line	Limit	Level	Loss	Factor	Factor	deg	cm		
MHz	dBuV/m	dBuV/m		dB	dBuV	dB	dB/m	dB	deg	cm	
1	2388.99	62.35	74.00	-11.65	30.60	3.73	28.02	0.00	32	100 Peak	VERTICAL
2	2390.00	48.47	54.00	-5.53	16.72	3.73	28.02	0.00	32	100 Average	VERTICAL
3	2414.63	99.96			68.22	3.75	27.99	0.00	32	100 Peak	VERTICAL
4	2423.92	89.98			58.23	3.76	27.99	0.00	32	100 Average	VERTICAL

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

**Channel 6**

Freq	Level	Limit	Over	Read	Cable	Antenna	Preamp	T/Pos	A/Pos	Remark	Pol/Phase
		Line	Limit	Level	Loss	Factor	Factor	deg	cm		
MHz	dBuV/m	dBuV/m		dB	dBuV	dB	dB/m	dB	deg	cm	
1	2360.40	59.05	74.00	-14.95	27.29	3.70	28.06	0.00	325	100 Peak	VERTICAL
2	2389.24	46.96	54.00	-7.04	15.21	3.73	28.02	0.00	325	100 Average	VERTICAL
3	2438.60	89.74			58.00	3.77	27.97	0.00	325	100 Average	VERTICAL
4	2444.05	100.34			68.60	3.78	27.96	0.00	325	100 Peak	VERTICAL
5	2483.50	48.42	54.00	-5.58	16.69	3.81	27.92	0.00	325	100 Average	VERTICAL
6	2484.12	62.19	74.00	-11.81	30.46	3.81	27.92	0.00	325	100 Peak	VERTICAL

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

**Channel 9**

Freq	Level	Limit	Over	Read	Cable	Antenna	Preamp	T/Pos	A/Pos	Remark	Pol/Phase
		Line	Limit	Level	Loss	Factor	Factor	deg	cm		
MHz	dBuV/m	dBuV/m		dB	dBuV	dB	dB/m	dB	deg	cm	
1	2457.60	89.48			57.63	3.90	27.95	0.00	20	106 Average	VERTICAL
2	2458.80	99.77			67.92	3.90	27.95	0.00	20	106 Peak	VERTICAL
3	2483.50	51.31	54.00	-2.69	19.47	3.92	27.92	0.00	20	106 Average	VERTICAL
4	2488.00	69.57	74.00	-4.43	37.73	3.92	27.92	0.00	20	106 Peak	VERTICAL

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

**Channel 10**

Freq	Level	Limit		Over Limit	Read Level	Cable	Antenna	Preamp	T/Pos	A/Pos	Remark	Pol/Phase
		Line	dBuV/m			Loss	Factor	Factor	deg	cm		
MHz	dBuV/m	dBuV/m	dB	dBuV	dB	dB/m	dB	deg	cm			
1	2462.60	89.84			58.00	3.90	27.94	0.00	346	119	Average	VERTICAL
2	2463.80	99.73			67.89	3.90	27.94	0.00	346	119	Peak	VERTICAL
3	2483.50	52.08	54.00	-1.92	20.24	3.92	27.92	0.00	346	119	Average	VERTICAL
4	2483.80	67.57	74.00	-6.43	35.73	3.92	27.92	0.00	346	119	Peak	VERTICAL

Item 1, 2 are the fundamental frequency at 2457 MHz.

**Channel 11**

Freq	Level	Limit		Over Limit	Read Level	Cable	Antenna	Preamp	T/Pos	A/Pos	Remark	Pol/Phase
		Line	dBuV/m			Loss	Factor	Factor	deg	cm		
MHz	dBuV/m	dBuV/m	dB	dBuV	dB	dB/m	dB	deg	cm			
1	2468.80	98.97			67.13	3.91	27.93	0.00	326	100	Peak	VERTICAL
2	2469.60	89.06			57.22	3.91	27.93	0.00	326	100	Average	VERTICAL
3	2483.50	69.74	74.00	-4.26	37.90	3.92	27.92	0.00	326	100	Peak	VERTICAL
4	2483.50	52.44	54.00	-1.56	20.60	3.92	27.92	0.00	326	100	Average	VERTICAL

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



Temperature	22°C	Humidity	57%
Test Engineer	Eason Chen	Configurations	IEEE 802.11b CH 1, 6, 11, 12, 13 / Chain 1
Test Date	Jan. 05, 2016	Test Mode	Mode 3

**Channel 1**

Freq MHz	Level dBuV/m	Limit		Over Line Limit	Read Level dBuV	Cable Loss		Antenna Factor		Preamp Factor	T/Pos deg	A/Pos cm	Remark	Pol/Phase
		Line dBuV/m	dB dB			dB	dB/m	dB	dB					
1 2387.20	56.19	74.00	-17.81	24.32	3.85	28.02	0.00	199	195	Peak			HORIZONTAL	
2 2390.00	44.73	54.00	-9.27	12.86	3.85	28.02	0.00	199	195	Average			HORIZONTAL	
3 2411.20	100.07			68.21	3.87	27.99	0.00	199	195	Average			HORIZONTAL	
4 2412.80	103.93			72.07	3.87	27.99	0.00	199	195	Peak			HORIZONTAL	

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

**Channel 6**

Freq MHz	Level dBuV/m	Limit		Over Line Limit	Read Level dBuV	Cable Loss		Antenna Factor		Preamp Factor	T/Pos deg	A/Pos cm	Remark	Pol/Phase
		Line dBuV/m	dB dB			dB	dB/m	dB	dB					
1 2388.40	55.41	74.00	-18.59	23.54	3.85	28.02	0.00	156	225	Peak			HORIZONTAL	
2 2390.00	43.99	54.00	-10.01	12.12	3.85	28.02	0.00	156	225	Average			HORIZONTAL	
3 2436.20	99.36			67.51	3.88	27.97	0.00	156	225	Average			HORIZONTAL	
4 2438.20	103.47			71.62	3.88	27.97	0.00	156	225	Peak			HORIZONTAL	
5 2483.50	43.91	54.00	-10.09	12.07	3.92	27.92	0.00	156	225	Average			HORIZONTAL	
6 2488.30	55.71	74.00	-18.29	23.87	3.92	27.92	0.00	156	225	Peak			HORIZONTAL	

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

**Channel 11**

Freq MHz	Level dBuV/m	Limit		Over Line Limit	Read Level dBuV	Cable Loss		Antenna Factor		Preamp Factor	T/Pos deg	A/Pos cm	Remark	Pol/Phase
		Line dBuV/m	dB dB			dB	dB/m	dB	dB					
1 2461.20	103.60				71.76	3.90	27.94	0.00	170	199	Peak			HORIZONTAL
2 2461.20	99.70				67.86	3.90	27.94	0.00	170	199	Average			HORIZONTAL
3 2483.50	55.42	74.00	-18.58	23.58	3.92	27.92	0.00	170	199	Peak			HORIZONTAL	
4 2483.50	44.23	54.00	-9.77	12.39	3.92	27.92	0.00	170	199	Average			HORIZONTAL	

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

### Channel 12

Freq	Level	Limit		Over Limit	Read Level	Cable	Antenna	Preamp	T/Pos	A/Pos	Remark	Pol/Phase
		Line	dB			dBuV	dB	dB/m	dB	deg	cm	
MHz	dBuV/m	dBuV/m	dB									
1	2466.20	104.55			72.71	3.90	27.94	0.00	169	220	Peak	HORIZONTAL
2	2466.20	100.32			68.48	3.90	27.94	0.00	169	220	Average	HORIZONTAL
3	2483.50	61.93	74.00	-12.07	30.09	3.92	27.92	0.00	169	220	Peak	HORIZONTAL
4	2484.20	52.40	54.00	-1.60	20.56	3.92	27.92	0.00	169	220	Average	HORIZONTAL

Item 1, 2 are the fundamental frequency at 2467 MHz.

### Channel 13

Freq	Level	Limit		Over Limit	Read Level	Cable	Antenna	Preamp	T/Pos	A/Pos	Remark	Pol/Phase
		Line	dB			dBuV	dB	dB/m	dB	deg	cm	
MHz	dBuV/m	dBuV/m	dB									
1	2471.20	93.77			61.93	3.91	27.93	0.00	162	212	Average	HORIZONTAL
2	2473.20	97.54			65.70	3.91	27.93	0.00	162	212	Peak	HORIZONTAL
3	2484.00	52.16	54.00	-1.84	20.32	3.92	27.92	0.00	162	212	Average	HORIZONTAL
4	2484.80	60.75	74.00	-13.25	28.91	3.92	27.92	0.00	162	212	Peak	HORIZONTAL

Item 1, 2 are the fundamental frequency at 2472 MHz.

<b>Temperature</b>	22°C	<b>Humidity</b>	57%
<b>Test Engineer</b>	Eason Chen	<b>Configurations</b>	IEEE 802.11g CH 1, 6, 11, 12, 13 / Chain 1
<b>Test Date</b>	Jan. 05, 2016	<b>Test Mode</b>	Mode 3

**Channel 1**

Freq MHz	Level dBuV/m	Limit		Read Level dBuV	Cable Loss		Antenna Factor	Preamp Factor	T/Pos deg	A/Pos cm	Remark	Pol/Phase
		Line dBuV/m	Over Limit dB		dB	dB/m						
1 2389.60	59.15	74.00	-14.85	27.28	3.85	28.02	0.00	200	205	Peak		HORIZONTAL
2 2390.00	45.84	54.00	-8.16	13.97	3.85	28.02	0.00	200	205	Average		HORIZONTAL
3 2408.00	103.67			71.81	3.86	28.00	0.00	200	205	Peak		HORIZONTAL
4 2409.60	94.26			62.40	3.86	28.00	0.00	200	205	Average		HORIZONTAL

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

**Channel 6**

Freq MHz	Level dBuV/m	Limit		Read Level dBuV	Cable Loss		Antenna Factor	Preamp Factor	T/Pos deg	A/Pos cm	Remark	Pol/Phase
		Line dBuV/m	Over Limit dB		dB	dB/m						
1 2386.80	56.95	74.00	-17.05	25.08	3.85	28.02	0.00	171	218	Peak		HORIZONTAL
2 2390.00	44.07	54.00	-9.93	12.20	3.85	28.02	0.00	171	218	Average		HORIZONTAL
3 2433.00	104.47			72.62	3.88	27.97	0.00	171	218	Peak		HORIZONTAL
4 2434.60	95.05			63.20	3.88	27.97	0.00	171	218	Average		HORIZONTAL
5 2483.50	44.02	54.00	-9.98	12.18	3.92	27.92	0.00	171	218	Average		HORIZONTAL
6 2484.30	55.94	74.00	-18.06	24.10	3.92	27.92	0.00	171	218	Peak		HORIZONTAL

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

**Channel 11**

Freq MHz	Level dBuV/m	Limit		Read Level dBuV	Cable Loss		Antenna Factor	Preamp Factor	T/Pos deg	A/Pos cm	Remark	Pol/Phase
		Line dBuV/m	Over Limit dB		dB	dB/m						
1 2459.60	92.65			60.80	3.90	27.95	0.00	166	222	Average		HORIZONTAL
2 2464.80	101.96			70.12	3.90	27.94	0.00	166	222	Peak		HORIZONTAL
3 2483.50	44.63	54.00	-9.37	12.79	3.92	27.92	0.00	166	222	Average		HORIZONTAL
4 2484.00	59.56	74.00	-14.44	27.72	3.92	27.92	0.00	166	222	Peak		HORIZONTAL

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

**Channel 12**

Freq	Level	Limit		Over Limit	Read Level	Cable	Antenna	Preamp	T/Pos	A/Pos	Remark	Pol/Phase
		Line	dBuV/m			Loss	Factor	Factor	deg	cm		
MHz	dBuV/m	dBuV/m	dB	dBuV	dB	dB/m	dB	deg	cm			
1	2460.60	104.76			72.92	3.90	27.94	0.00	170	198	Peak	HORIZONTAL
2	2464.60	94.67			62.83	3.90	27.94	0.00	170	198	Average	HORIZONTAL
3	2483.50	52.12	54.00	-1.88	20.28	3.92	27.92	0.00	170	198	Average	HORIZONTAL
4	2484.20	71.76	74.00	-2.24	39.92	3.92	27.92	0.00	170	198	Peak	HORIZONTAL

Item 1, 2 are the fundamental frequency at 2467 MHz.

**Channel 13**

Freq	Level	Limit		Over Limit	Read Level	Cable	Antenna	Preamp	T/Pos	A/Pos	Remark	Pol/Phase
		Line	dBuV/m			Loss	Factor	Factor	deg	cm		
MHz	dBuV/m	dBuV/m	dB	dBuV	dB	dB/m	dB	deg	cm			
1	2474.00	88.07			56.23	3.91	27.93	0.00	156	212	Average	HORIZONTAL
2	2474.80	97.09			65.26	3.91	27.92	0.00	156	212	Peak	HORIZONTAL
3	2483.50	70.49	74.00	-3.51	38.65	3.92	27.92	0.00	156	212	Peak	HORIZONTAL
4	2483.50	52.09	54.00	-1.91	20.25	3.92	27.92	0.00	156	212	Average	HORIZONTAL

Item 1, 2 are the fundamental frequency at 2472 MHz.

<b>Temperature</b>	22°C	<b>Humidity</b>	57%
<b>Test Engineer</b>	Eason Chen	<b>Configurations</b>	IEEE 802.11n MCS0 HT20 CH 1, 6, 11, 12, 13 / Chain 1
<b>Test Date</b>	Jan. 05, 2016	<b>Test Mode</b>	Mode 3

**Channel 1**

Freq	Level	Limit		Over Limit	Read Level	Cable	Antenna	Preamp	T/Pos	A/Pos	Remark	Pol/Phase
		Line	dBuV/m			Loss	Factor	Factor	deg	cm		
1	2389.60	58.69	74.00	-15.31	26.82	3.85	28.02	0.00	202	203	Peak	HORIZONTAL
2	2390.00	45.75	54.00	-8.25	13.88	3.85	28.02	0.00	202	203	Average	HORIZONTAL
3	2408.80	92.62			60.76	3.86	28.00	0.00	202	203	Average	HORIZONTAL
4	2409.20	102.86			71.00	3.86	28.00	0.00	202	203	Peak	HORIZONTAL

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

**Channel 6**

Freq	Level	Limit		Over Limit	Read Level	Cable	Antenna	Preamp	T/Pos	A/Pos	Remark	Pol/Phase
		Line	dBuV/m			Loss	Factor	Factor	deg	cm		
1	2388.40	56.14	74.00	-17.86	24.27	3.85	28.02	0.00	201	201	Peak	HORIZONTAL
2	2390.00	44.22	54.00	-9.78	12.35	3.85	28.02	0.00	201	201	Average	HORIZONTAL
3	2434.20	104.88			73.03	3.88	27.97	0.00	201	201	Peak	HORIZONTAL
4	2440.20	94.72			62.87	3.89	27.96	0.00	201	201	Average	HORIZONTAL
5	2483.50	44.04	54.00	-9.96	12.20	3.92	27.92	0.00	201	201	Average	HORIZONTAL
6	2485.10	55.58	74.00	-18.42	23.74	3.92	27.92	0.00	201	201	Peak	HORIZONTAL

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

**Channel 11**

Freq	Level	Limit		Over Limit	Read Level	Cable	Antenna	Preamp	T/Pos	A/Pos	Remark	Pol/Phase
		Line	dBuV/m			Loss	Factor	Factor	deg	cm		
1	2458.80	92.16			60.31	3.90	27.95	0.00	173	200	Average	HORIZONTAL
2	2459.20	102.35			70.50	3.90	27.95	0.00	173	200	Peak	HORIZONTAL
3	2483.50	55.48	74.00	-18.52	23.64	3.92	27.92	0.00	173	200	Peak	HORIZONTAL
4	2483.50	44.58	54.00	-9.42	12.74	3.92	27.92	0.00	173	200	Average	HORIZONTAL

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

### Channel 12

	Freq	Level	Limit Line	Over Limit	Read Level	Cable Loss	Antenna Factor	Preamp Factor	T/Pos	A/Pos	Remark	Pol/Phase
	MHz	dBuV/m	dBuV/m	dB	dBuV	dB	dB/m	dB	deg	cm		
1	2463.80	94.53			62.69	3.90	27.94	0.00	154	198	Average	HORIZONTAL
2	2469.40	103.28			71.44	3.91	27.93	0.00	154	198	Peak	HORIZONTAL
3	2483.50	71.07	74.00	-2.93	39.23	3.92	27.92	0.00	154	198	Peak	HORIZONTAL
4	2483.50	52.18	54.00	-1.82	20.34	3.92	27.92	0.00	154	198	Average	HORIZONTAL

Item 1, 2 are the fundamental frequency at 2467 MHz.

### Channel 13

	Freq	Level	Limit Line	Over Limit	Read Level	Cable Loss	Antenna Factor	Preamp Factor	T/Pos	A/Pos	Remark	Pol/Phase
	MHz	dBuV/m	dBuV/m	dB	dBuV	dB	dB/m	dB	deg	cm		
1	2469.20	97.12			65.28	3.91	27.93	0.00	157	223	Peak	HORIZONTAL
2	2469.60	88.00			56.16	3.91	27.93	0.00	157	223	Average	HORIZONTAL
3	2483.50	72.37	74.00	-1.63	40.53	3.92	27.92	0.00	157	223	Peak	HORIZONTAL
4	2483.50	52.12	54.00	-1.88	20.28	3.92	27.92	0.00	157	223	Average	HORIZONTAL

Item 1, 2 are the fundamental frequency at 2472 MHz.



Temperature	22°C	Humidity	57%
Test Engineer	Eason Chen	Configurations	IEEE 802.11n MCS0 HT40 CH 3, 6, 9, 10, 11 / Chain 1
Test Date	Jan. 05, 2016 ~ Jan. 27, 2016	Test Mode	Mode 3

**Channel 3**

Freq	Level	Limit	Over	Read	Cable	Antenna	Preamp	T/Pos	A/Pos	Remark	Pol/Phase
		Line	Limit	Level	Loss	Factor	Factor	deg	cm		
MHz	dBuV/m	dBuV/m	dB	dBuV	dB	dB/m	dB	deg	cm		
1	2386.42	62.53	74.00	-11.47	30.78	3.73	28.02	0.00	193	196 Peak	HORIZONTAL
2	2390.00	51.27	54.00	-2.73	19.52	3.73	28.02	0.00	193	196 Average	HORIZONTAL
3	2412.39	90.56			58.82	3.75	27.99	0.00	193	196 Average	HORIZONTAL
4	2414.31	101.04			69.30	3.75	27.99	0.00	193	196 Peak	HORIZONTAL

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

**Channel 6**

Freq	Level	Limit	Over	Read	Cable	Antenna	Preamp	T/Pos	A/Pos	Remark	Pol/Phase
		Line	Limit	Level	Loss	Factor	Factor	deg	cm		
MHz	dBuV/m	dBuV/m	dB	dBuV	dB	dB/m	dB	deg	cm		
1	2389.40	58.20	74.00	-15.80	26.33	3.85	28.02	0.00	309	185 Peak	HORIZONTAL
2	2390.00	45.32	54.00	-8.68	13.45	3.85	28.02	0.00	309	185 Average	HORIZONTAL
3	2430.20	99.84			67.98	3.88	27.98	0.00	309	185 Peak	HORIZONTAL
4	2431.40	89.34			57.48	3.88	27.98	0.00	309	185 Average	HORIZONTAL
5	2483.80	44.28	54.00	-9.72	12.44	3.92	27.92	0.00	309	185 Average	HORIZONTAL
6	2484.20	56.86	74.00	-17.14	25.02	3.92	27.92	0.00	309	185 Peak	HORIZONTAL

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

**Channel 9**

Freq	Level	Limit	Over	Read	Cable	Antenna	Preamp	T/Pos	A/Pos	Remark	Pol/Phase
		Line	Limit	Level	Loss	Factor	Factor	deg	cm		
MHz	dBuV/m	dBuV/m	dB	dBuV	dB	dB/m	dB	deg	cm		
1	2450.00	88.17			56.33	3.89	27.95	0.00	201	200 Average	HORIZONTAL
2	2458.80	98.55			66.70	3.90	27.95	0.00	201	200 Peak	HORIZONTAL
3	2483.50	45.09	54.00	-8.91	13.25	3.92	27.92	0.00	201	200 Average	HORIZONTAL
4	2489.60	57.17	74.00	-16.83	25.34	3.92	27.91	0.00	201	200 Peak	HORIZONTAL

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

### Channel 10

	Freq	Level	Limit Line	Over Limit	Read Level	Cable Loss	Antenna Factor	Preamp Factor	T/Pos	A/Pos	Remark	Pol/Phase
	MHz	dBuV/m	dBuV/m	dB	dBuV	dB	dB/m	dB	deg	cm		
1	2459.80	91.87			60.02	3.90	27.95	0.00	170	198	Average	HORIZONTAL
2	2463.80	102.15			70.31	3.90	27.94	0.00	170	198	Peak	HORIZONTAL
3	2483.50	52.37	54.00	-1.63	20.53	3.92	27.92	0.00	170	198	Average	HORIZONTAL
4	2483.80	68.22	74.00	-5.78	36.38	3.92	27.92	0.00	170	198	Peak	HORIZONTAL

Item 1, 2 are the fundamental frequency at 2457 MHz.

### Channel 11

	Freq	Level	Limit Line	Over Limit	Read Level	Cable Loss	Antenna Factor	Preamp Factor	T/Pos	A/Pos	Remark	Pol/Phase
	MHz	dBuV/m	dBuV/m	dB	dBuV	dB	dB/m	dB	deg	cm		
1	2455.20	101.73			69.88	3.90	27.95	0.00	172	196	Peak	HORIZONTAL
2	2457.60	91.12			59.27	3.90	27.95	0.00	172	196	Average	HORIZONTAL
3	2483.50	68.22	74.00	-5.78	36.38	3.92	27.92	0.00	172	196	Peak	HORIZONTAL
4	2483.50	52.43	54.00	-1.57	20.59	3.92	27.92	0.00	172	196	Average	HORIZONTAL

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



Temperature	22°C	Humidity	57%
Test Engineer	Eason Chen	Configurations	IEEE 802.11b CH 1, 6, 11, 12, 13 / Chain 1
Test Date	Jan. 09, 2016	Test Mode	Mode 4

**Channel 1**

Freq	Level	Limit		Over Limit	Read Level	Cable	Antenna	Preamp	A/Pos	T/Pos	Remark	Pol/Phase
		Line	dBuV/m			Loss	Factor	Factor	cm	deg		
MHz	dBuV/m	dBuV/m	dB	dBuV	dB	dB/m	dB	cm	deg			
1	2389.20	55.86	74.00	-18.14	22.54	5.01	28.31	0.00	100	313	Peak	VERTICAL
2	2390.00	45.42	54.00	-8.58	12.10	5.01	28.31	0.00	100	313	Average	VERTICAL
3	2411.00	101.34			67.95	5.04	28.35	0.00	100	313	Peak	VERTICAL
4	2411.20	97.67			64.26	5.05	28.36	0.00	100	313	Average	VERTICAL

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

**Channel 6**

Freq	Level	Limit		Over Limit	Read Level	Cable	Antenna	Preamp	A/Pos	T/Pos	Remark	Pol/Phase
		Line	dBuV/m			Loss	Factor	Factor	cm	deg		
MHz	dBuV/m	dBuV/m	dB	dBuV	dB	dB/m	dB	cm	deg			
1	2361.80	56.62	74.00	-17.38	23.38	4.97	28.27	0.00	108	29	Peak	VERTICAL
2	2390.00	45.08	54.00	-8.92	11.76	5.01	28.31	0.00	108	29	Average	VERTICAL
3	2436.20	96.66			63.20	5.07	28.39	0.00	108	29	Average	VERTICAL
4	2438.20	100.40			66.94	5.07	28.39	0.00	108	29	Peak	VERTICAL
5	2483.50	45.59	54.00	-8.41	11.99	5.12	28.48	0.00	108	29	Average	VERTICAL
6	2484.30	57.71	74.00	-16.29	24.11	5.12	28.48	0.00	108	29	Peak	VERTICAL

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

**Channel 11**

Freq	Level	Limit		Over Limit	Read Level	Cable	Antenna	Preamp	A/Pos	T/Pos	Remark	Pol/Phase
		Line	dBuV/m			Loss	Factor	Factor	cm	deg		
MHz	dBuV/m	dBuV/m	dB	dBuV	dB	dB/m	dB	cm	deg			
1	2461.40	98.13			64.59	5.10	28.44	0.00	106	342	Average	VERTICAL
2	2463.00	101.86			68.32	5.10	28.44	0.00	106	342	Peak	VERTICAL
3	2483.80	46.12	54.00	-7.88	12.52	5.12	28.48	0.00	106	342	Average	VERTICAL
4	2487.70	56.71	74.00	-17.29	23.11	5.12	28.48	0.00	106	342	Peak	VERTICAL

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

**Channel 12**

	Freq	Level	Limit	Over	Read	Cable	Antenna	Preamp	A/Pos	T/Pos	Remark	Pol/Phase
			Line	Limit	Level	Loss	Factor	Factor	cm	deg		
	MHz	dBuV/m	dBuV/m	dB	dBuV	dB	dB/m	dB				
1	2466.20	100.17			66.63	5.10	28.44	0.00	100	342	Average	VERTICAL
2	2468.00	104.16			70.60	5.11	28.45	0.00	100	342	Peak	VERTICAL
3	2484.20	61.15	74.00	-12.85	27.55	5.12	28.48	0.00	100	342	Peak	VERTICAL
4	2484.20	52.37	54.00	-1.63	18.77	5.12	28.48	0.00	100	342	Average	VERTICAL

Item 1, 2 are the fundamental frequency at 2467 MHz.

**Channel 13**

	Freq	Level	Limit	Over	Read	Cable	Antenna	Preamp	A/Pos	T/Pos	Remark	Pol/Phase
			Line	Limit	Level	Loss	Factor	Factor	cm	deg		
	MHz	dBuV/m	dBuV/m	dB	dBuV	dB	dB/m	dB				
1	2471.00	96.31			62.75	5.11	28.45	0.00	100	342	Peak	VERTICAL
2	2471.20	92.65			59.09	5.11	28.45	0.00	100	342	Average	VERTICAL
3	2484.20	59.77	74.00	-14.23	26.17	5.12	28.48	0.00	100	342	Peak	VERTICAL
4	2484.40	52.12	54.00	-1.88	18.52	5.12	28.48	0.00	100	342	Average	VERTICAL

Item 1, 2 are the fundamental frequency at 2472 MHz.



Temperature	22°C	Humidity	57%
Test Engineer	Eason Chen	Configurations	IEEE 802.11g CH 1, 6, 11, 12, 13 / Chain 1
Test Date	Jan. 09, 2016 ~ Jan. 27, 2016	Test Mode	Mode 4

**Channel 1**

Freq	Level	Limit		Over Limit	Read Level	Cable	Antenna	Preamp	A/Pos	T/Pos	Remark	Pol/Phase
		Line	dB			dBuV	dB	dB/m	dB	cm		
MHz	dBuV/m	dBuV/m	dB	dB	dB	dB	dB	dB	cm	deg		
1	2389.80	56.10	74.00	-17.90	22.78	5.01	28.31	0.00	100	28	Peak	VERTICAL
2	2390.00	44.32	54.00	-9.68	11.00	5.01	28.31	0.00	100	28	Average	VERTICAL
3	2413.40	100.58			67.17	5.05	28.36	0.00	100	28	Peak	VERTICAL
4	2414.20	91.46			58.05	5.05	28.36	0.00	100	28	Average	VERTICAL

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

**Channel 6**

Freq	Level	Limit		Over Limit	Read Level	Cable	Antenna	Preamp	A/Pos	T/Pos	Remark	Pol/Phase
		Line	dB			dBuV	dB	dB/m	dB	cm		
MHz	dBuV/m	dBuV/m	dB	dB	dB	dB	dB	dB	cm	deg		
1	2378.00	55.21	74.00	-18.79	21.91	5.00	28.30	0.00	101	309	Peak	VERTICAL
2	2390.00	43.16	54.00	-10.84	9.84	5.01	28.31	0.00	101	309	Average	VERTICAL
3	2439.00	93.41			59.95	5.07	28.39	0.00	101	309	Average	VERTICAL
4	2439.80	102.46			68.97	5.08	28.41	0.00	101	309	Peak	VERTICAL
5	2483.50	44.19	54.00	-9.81	10.59	5.12	28.48	0.00	101	309	Average	VERTICAL
6	2487.10	56.50	74.00	-17.50	22.90	5.12	28.48	0.00	101	309	Peak	VERTICAL

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

**Channel 11**

Freq	Level	Limit		Over Limit	Read Level	Cable	Antenna	Preamp	A/Pos	T/Pos	Remark	Pol/Phase
		Line	dB			dBuV	dB	dB/m	dB	cm		
MHz	dBuV/m	dBuV/m	dB	dB	dB	dB	dB	dB	cm	deg		
1	2464.80	101.15			67.61	5.10	28.44	0.00	102	32	Peak	VERTICAL
2	2465.20	91.82			58.28	5.10	28.44	0.00	102	32	Average	VERTICAL
3	2483.50	63.89	74.00	-10.11	30.29	5.12	28.48	0.00	102	32	Peak	VERTICAL
4	2483.50	45.13	54.00	-8.87	11.53	5.12	28.48	0.00	102	32	Average	VERTICAL

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

### Channel 12

	Freq	Level	Limit Line	Over Limit	Read Level	Cable Loss	Antenna Factor	Preamp Factor	A/Pos	T/Pos	Remark	Pol/Phase
	MHz	dBuV/m	dBuV/m	dB	dBuV	dB	dB/m	dB	cm	deg		
1	2469.20	93.33			59.77	5.11	28.45	0.00	100	342	Average	VERTICAL
2	2469.80	102.55			68.99	5.11	28.45	0.00	100	342	Peak	VERTICAL
3	2483.50	52.11	54.00	-1.89	18.51	5.12	28.48	0.00	100	342	Average	VERTICAL
4	2484.40	72.23	74.00	-1.77	38.63	5.12	28.48	0.00	100	342	Peak	VERTICAL

Item 1, 2 are the fundamental frequency at 2467 MHz.

### Channel 13

	Freq	Level	Limit Line	Over Limit	Read Level	Cable Loss	Antenna Factor	Preamp Factor	A/Pos	T/Pos	Remark	Pol/Phase
	MHz	dBuV/m	dBuV/m	dB	dBuV	dB	dB/m	dB	cm	deg		
1	2475.20	88.35			54.78	5.11	28.46	0.00	100	52	Average	VERTICAL
2	2475.40	97.84			64.27	5.11	28.46	0.00	100	52	Peak	VERTICAL
3	2483.50	71.39	74.00	-2.61	37.79	5.12	28.48	0.00	100	52	Peak	VERTICAL
4	2483.50	52.44	54.00	-1.56	18.84	5.12	28.48	0.00	100	52	Average	VERTICAL

Item 1, 2 are the fundamental frequency at 2472 MHz.



Temperature	22°C	Humidity	57%
Test Engineer	Eason Chen	Configurations	IEEE 802.11n MCS0 HT20 CH 1, 6, 11, 12, 13 / Chain 1
Test Date	Jan. 09, 2016	Test Mode	Mode 4

**Channel 1**

Freq	Level	Limit		Over Limit	Read Level	Cable	Antenna	Preamp	A/Pos	T/Pos	Remark	Pol/Phase
		Line	dB			Loss	Factor	Factor	cm	deg		
1	2389.20	44.17	54.00	-9.83	10.85	5.01	28.31	0.00	100	332	Average	VERTICAL
2	2390.00	56.86	74.00	-17.14	23.54	5.01	28.31	0.00	100	332	Peak	VERTICAL
3	2409.00	99.84			66.45	5.04	28.35	0.00	100	332	Peak	VERTICAL
4	2409.40	90.07			56.68	5.04	28.35	0.00	100	332	Average	VERTICAL

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

**Channel 6**

Freq	Level	Limit		Over Limit	Read Level	Cable	Antenna	Preamp	A/Pos	T/Pos	Remark	Pol/Phase
		Line	dB			Loss	Factor	Factor	cm	deg		
1	2387.00	55.39	74.00	-18.61	22.07	5.01	28.31	0.00	116	66	Peak	VERTICAL
2	2390.00	43.24	54.00	-10.76	9.92	5.01	28.31	0.00	116	66	Average	VERTICAL
3	2434.20	102.66			69.20	5.07	28.39	0.00	116	66	Peak	VERTICAL
4	2440.20	92.81			59.32	5.08	28.41	0.00	116	66	Average	VERTICAL
5	2483.50	55.30	74.00	-18.70	21.70	5.12	28.48	0.00	116	66	Peak	VERTICAL
6	2483.50	44.09	54.00	-9.91	10.49	5.12	28.48	0.00	116	66	Average	VERTICAL

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

**Channel 11**

Freq	Level	Limit		Over Limit	Read Level	Cable	Antenna	Preamp	A/Pos	T/Pos	Remark	Pol/Phase
		Line	dB			Loss	Factor	Factor	cm	deg		
1	2458.80	100.85			67.33	5.09	28.43	0.00	102	342	Peak	VERTICAL
2	2458.80	91.04			57.52	5.09	28.43	0.00	102	342	Average	VERTICAL
3	2483.50	44.52	54.00	-9.48	10.92	5.12	28.48	0.00	102	342	Average	VERTICAL
4	2486.60	56.03	74.00	-17.97	22.43	5.12	28.48	0.00	102	342	Peak	VERTICAL

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

### Channel 12

	Freq	Level	Limit Line	Over Limit	Read Level	Cable Loss	Antenna Factor	Preamp Factor	A/Pos	T/Pos	Remark	Pol/Phase
	MHz	dBuV/m	dBuV/m	dB	dBuV	dB	dB/m	dB	cm	deg		
1	2464.00	103.16			69.62	5.10	28.44	0.00	100	52	Peak	VERTICAL
2	2470.00	93.70			60.14	5.11	28.45	0.00	100	52	Average	VERTICAL
3	2483.50	52.18	54.00	-1.82	18.58	5.12	28.48	0.00	100	52	Average	VERTICAL
4	2485.20	70.91	74.00	-3.09	37.31	5.12	28.48	0.00	100	52	Peak	VERTICAL

Item 1, 2 are the fundamental frequency at 2467 MHz.

### Channel 13

	Freq	Level	Limit Line	Over Limit	Read Level	Cable Loss	Antenna Factor	Preamp Factor	A/Pos	T/Pos	Remark	Pol/Phase
	MHz	dBuV/m	dBuV/m	dB	dBuV	dB	dB/m	dB	cm	deg		
1	2474.20	96.47			62.91	5.11	28.45	0.00	100	56	Peak	VERTICAL
2	2475.20	87.11			53.54	5.11	28.46	0.00	100	56	Average	VERTICAL
3	2483.50	72.37	74.00	-1.63	38.77	5.12	28.48	0.00	100	56	Peak	VERTICAL
4	2483.50	51.58	54.00	-2.42	17.98	5.12	28.48	0.00	100	56	Average	VERTICAL

Item 1, 2 are the fundamental frequency at 2472 MHz.



Temperature	22°C	Humidity	57%
Test Engineer	Eason Chen	Configurations	IEEE 802.11n MCS0 HT40 CH 3, 6, 9, 10, 11 / Chain 1
Test Date	Jan. 09, 2016 ~ Jan. 27, 2016	Test Mode	Mode 4

### Channel 3

Freq	Level	Limit		Over Limit	Read Level	Cable	Antenna	Preamp	A/Pos	T/Pos	Remark	Pol/Phase
		Line	dBuV/m			Loss	Factor	Factor	cm	deg		
MHz	dBuV/m	dBuV/m	dB	dBuV	dB	dB/m	dB	cm	deg			
1	2389.60	61.90	74.00	-12.10	28.58	5.01	28.31	0.00	100	313	Peak	VERTICAL
2	2390.00	49.23	54.00	-4.77	15.91	5.01	28.31	0.00	100	313	Average	VERTICAL
3	2415.20	100.43			67.02	5.05	28.36	0.00	100	313	Peak	VERTICAL
4	2416.40	90.22			56.81	5.05	28.36	0.00	100	313	Average	VERTICAL

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

### Channel 6

Freq	Level	Limit		Over Limit	Read Level	Cable	Antenna	Preamp	A/Pos	T/Pos	Remark	Pol/Phase
		Line	dBuV/m			Loss	Factor	Factor	cm	deg		
MHz	dBuV/m	dBuV/m	dB	dBuV	dB	dB/m	dB	cm	deg			
1	2386.60	56.49	74.00	-17.51	23.17	5.01	28.31	0.00	100	67	Peak	VERTICAL
2	2390.00	43.65	54.00	-10.35	10.33	5.01	28.31	0.00	100	67	Average	VERTICAL
3	2442.60	87.02			53.53	5.08	28.41	0.00	100	67	Average	VERTICAL
4	2451.40	96.68			63.18	5.08	28.42	0.00	100	67	Peak	VERTICAL
5	2483.50	44.62	54.00	-9.38	11.02	5.12	28.48	0.00	100	67	Average	VERTICAL
6	2489.40	56.76	74.00	-17.24	23.14	5.13	28.49	0.00	100	67	Peak	VERTICAL

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

### Channel 9

Freq	Level	Limit		Over Limit	Read Level	Cable	Antenna	Preamp	A/Pos	T/Pos	Remark	Pol/Phase
		Line	dBuV/m			Loss	Factor	Factor	cm	deg		
MHz	dBuV/m	dBuV/m	dB	dBuV	dB	dB/m	dB	cm	deg			
1	2457.60	87.74			54.22	5.09	28.43	0.00	100	343	Average	VERTICAL
2	2458.80	97.77			64.25	5.09	28.43	0.00	100	343	Peak	VERTICAL
3	2483.50	46.08	54.00	-7.92	12.48	5.12	28.48	0.00	100	343	Average	VERTICAL
4	2493.60	57.74	74.00	-16.26	24.12	5.13	28.49	0.00	100	343	Peak	VERTICAL

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

**Channel 10**

Freq	Level	Limit	Over	Read	Cable	Antenna	Preamp	A/Pos	T/Pos	Remark	Pol/Phase
		Line	Limit	Level	Loss	Factor	Factor	cm	deg		
MHz	dBuV/m	dBuV/m	dB	dBuV	dB	dB/m	dB	cm	deg		
1	2453.40	90.48			56.96	5.09	28.43	0.00	101	30 Average	VERTICAL
2	2463.80	100.50			66.96	5.10	28.44	0.00	101	30 Peak	VERTICAL
3	2483.80	66.09	74.00	-7.91	32.49	5.12	28.48	0.00	101	30 Peak	VERTICAL
4	2483.80	52.13	54.00	-1.87	18.53	5.12	28.48	0.00	101	30 Average	VERTICAL

Item 1, 2 are the fundamental frequency at 2457 MHz.

**Channel 11**

Freq	Level	Limit	Over	Read	Cable	Antenna	Preamp	A/Pos	T/Pos	Remark	Pol/Phase
		Line	Limit	Level	Loss	Factor	Factor	cm	deg		
MHz	dBuV/m	dBuV/m	dB	dBuV	dB	dB/m	dB	cm	deg		
1	2467.20	89.42			55.88	5.10	28.44	0.00	100	342 Average	VERTICAL
2	2468.80	99.71			66.15	5.11	28.45	0.00	100	342 Peak	VERTICAL
3	2483.50	67.81	74.00	-6.19	34.21	5.12	28.48	0.00	100	342 Peak	VERTICAL
4	2483.50	52.24	54.00	-1.76	18.64	5.12	28.48	0.00	100	342 Average	VERTICAL

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

**Note:**

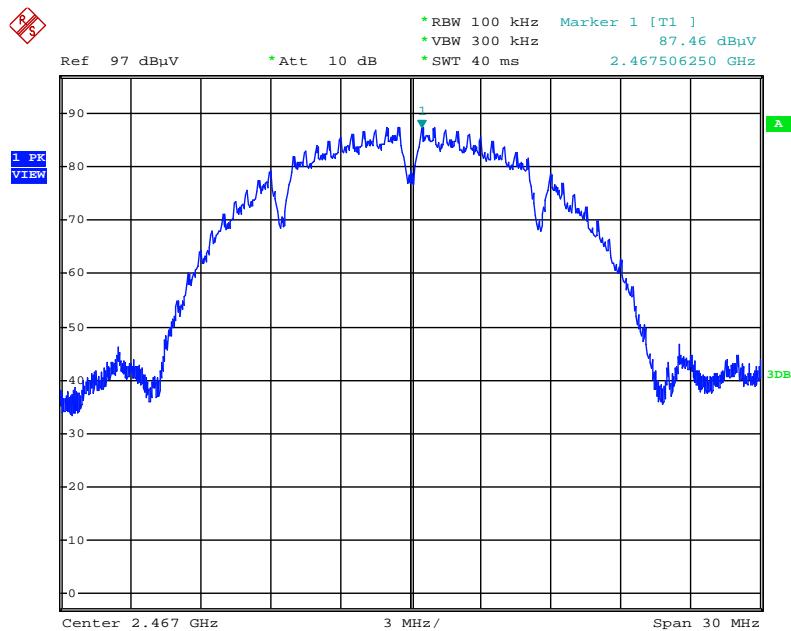
Emission level (dBuV/m) = 20 log Emission level (uV/m).

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

For Emission not in Restricted Band

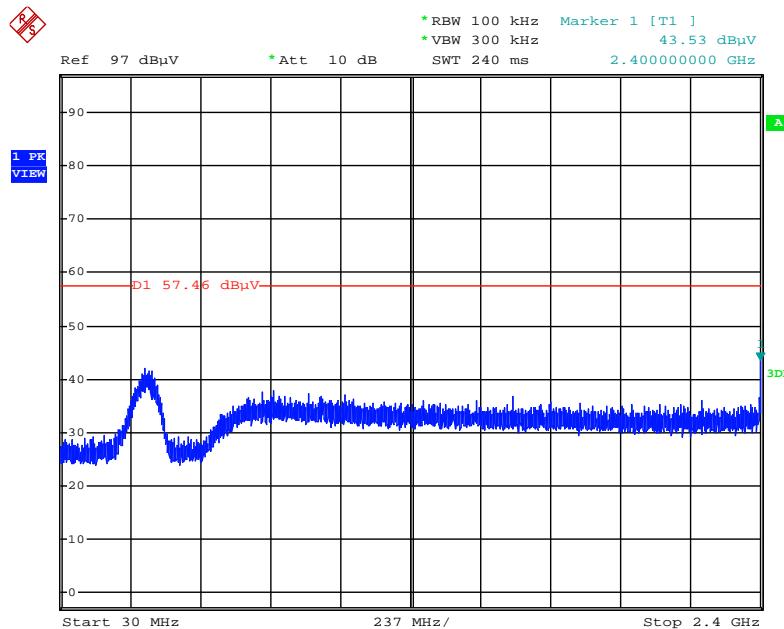
Test Moe: Mode 1

Plot on Configuration IEEE 802.11b / Reference Level



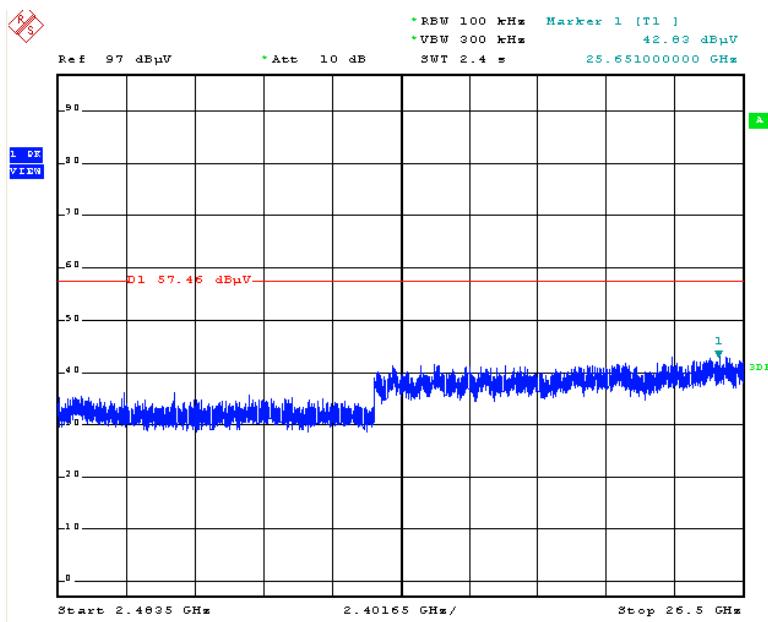
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### Plot on Configuration IEEE 802.11b / CH 1 / 30MHz~2400MHz (down 30dBc)



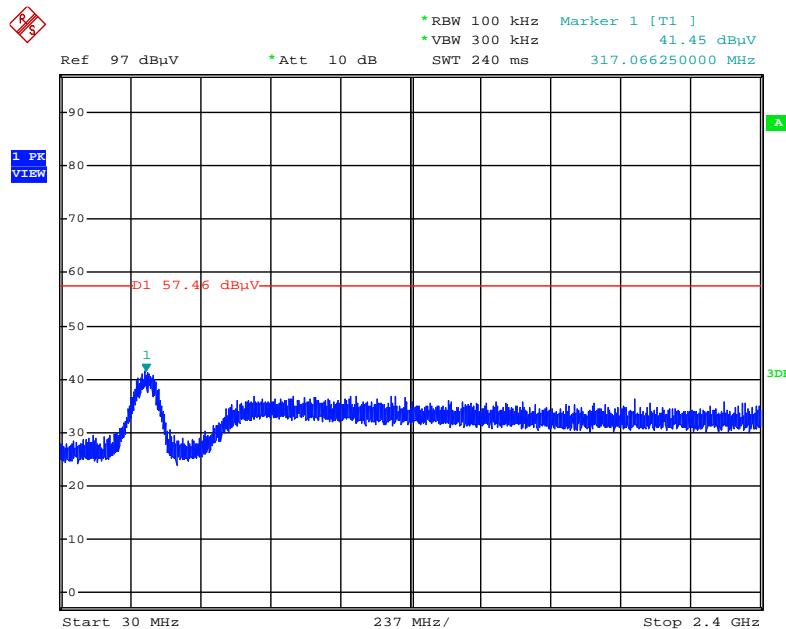
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### Plot on Configuration IEEE 802.11b / CH 1 / 2483.5MHz~26500MHz (down 30dBc)



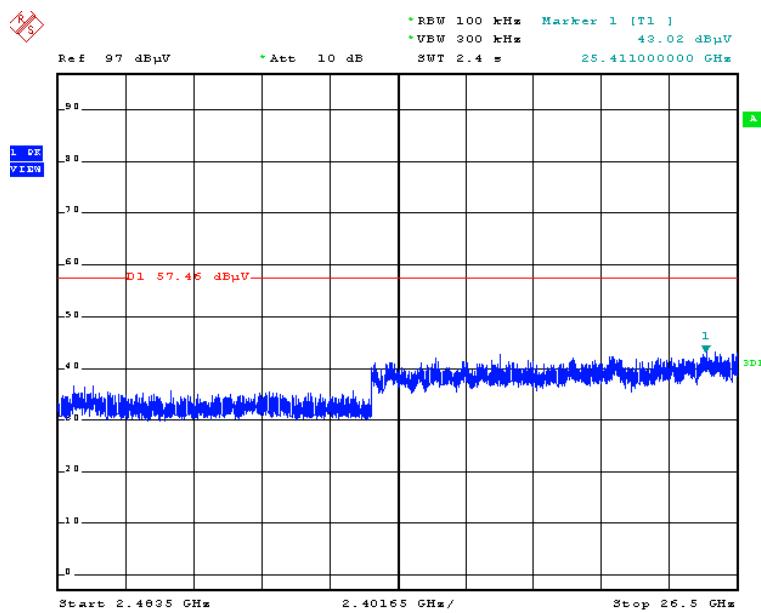
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### Plot on Configuration IEEE 802.11b / CH 11 / 30MHz~2400MHz (down 30dBc)



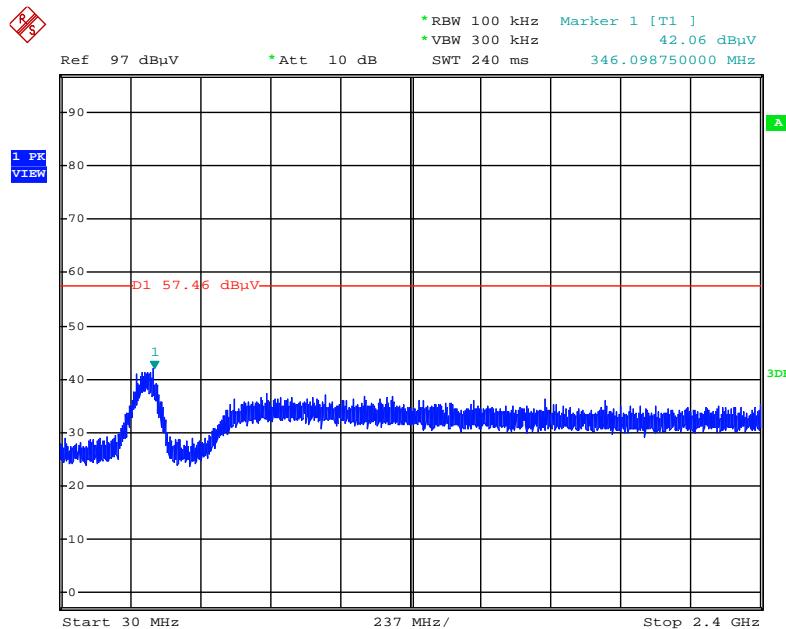
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### Plot on Configuration IEEE 802.11b / CH 11 / 2483.5MHz~26500MHz (down 30dBc)



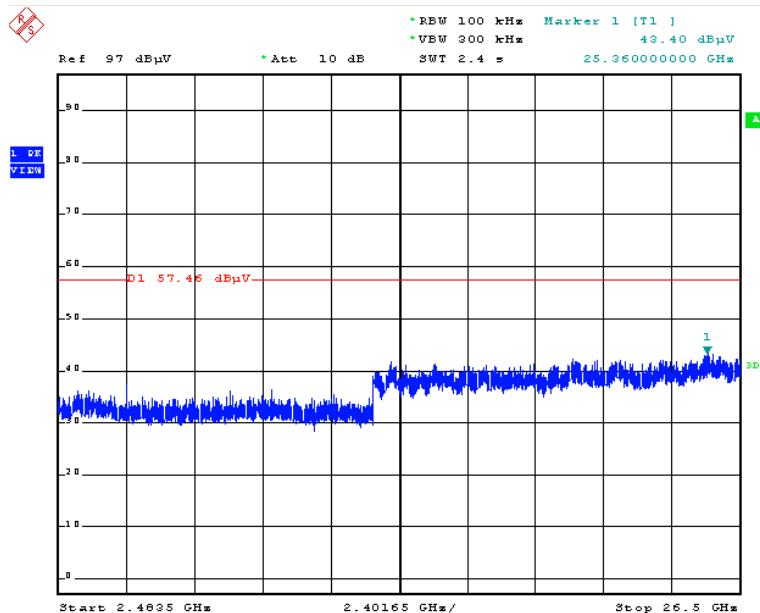
Date: 4.JAN.2016 21:06:45

### Plot on Configuration IEEE 802.11b / CH 12 / 30MHz~2400MHz (down 30dBc)



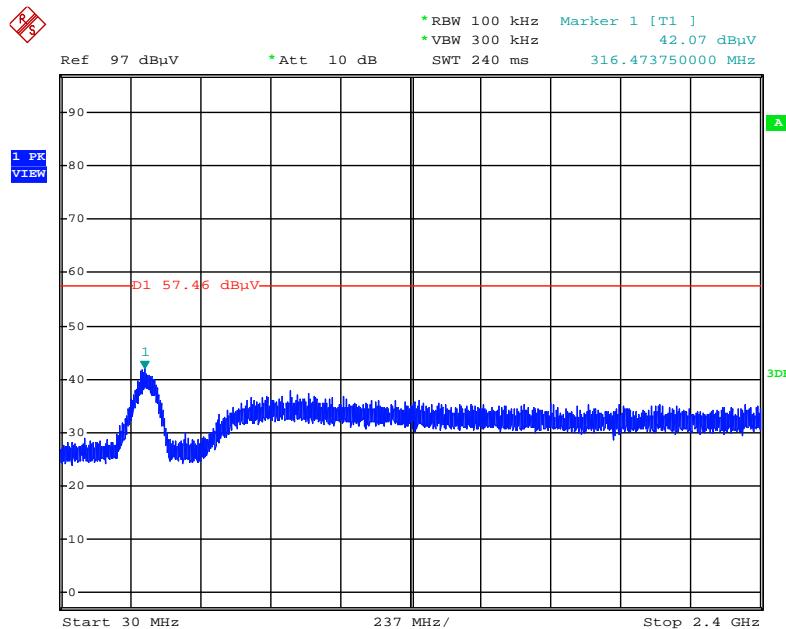
Date: 4.JAN.2016 21:08:04

### Plot on Configuration IEEE 802.11b / CH 12 / 2483.5MHz~26500MHz (down 30dBc)



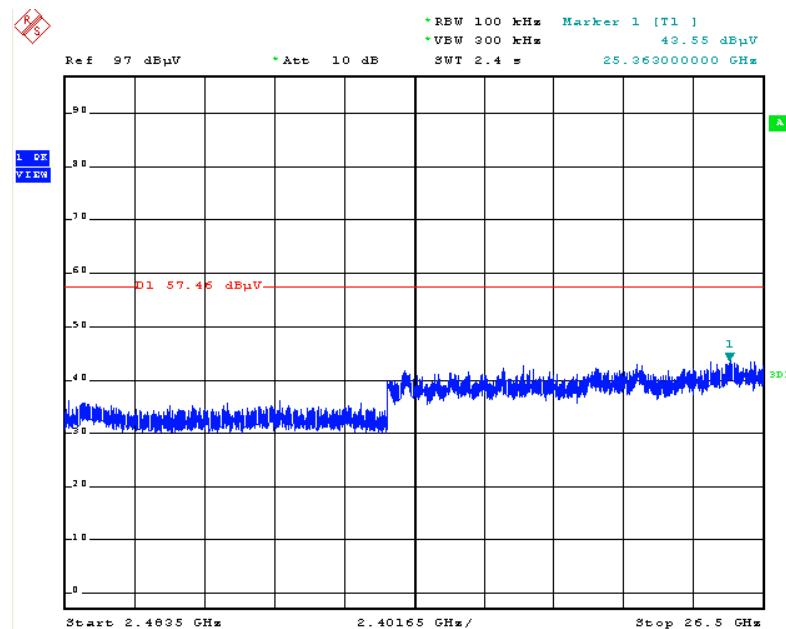
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### Plot on Configuration IEEE 802.11b / CH 13 / 30MHz~2400MHz (down 30dBc)



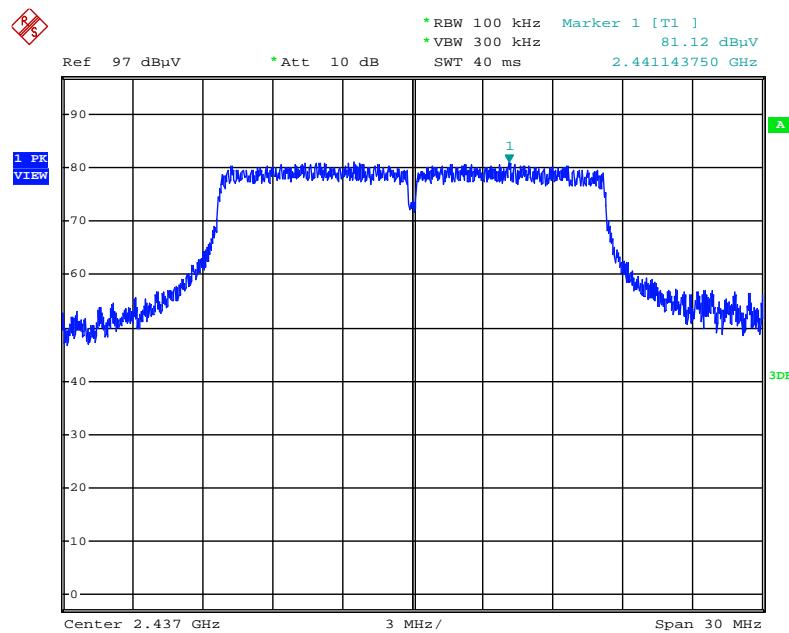
Date: 4.JAN.2016 21:21:31

### Plot on Configuration IEEE 802.11b / CH 13 / 2483.5MHz~26500MHz (down 30dBc)



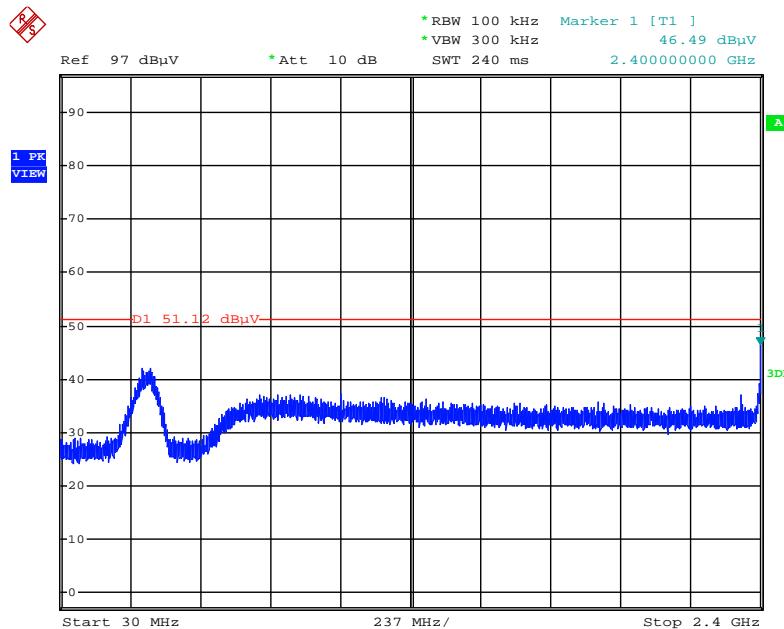
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**Plot on Configuration IEEE 802.11g / Reference Level**



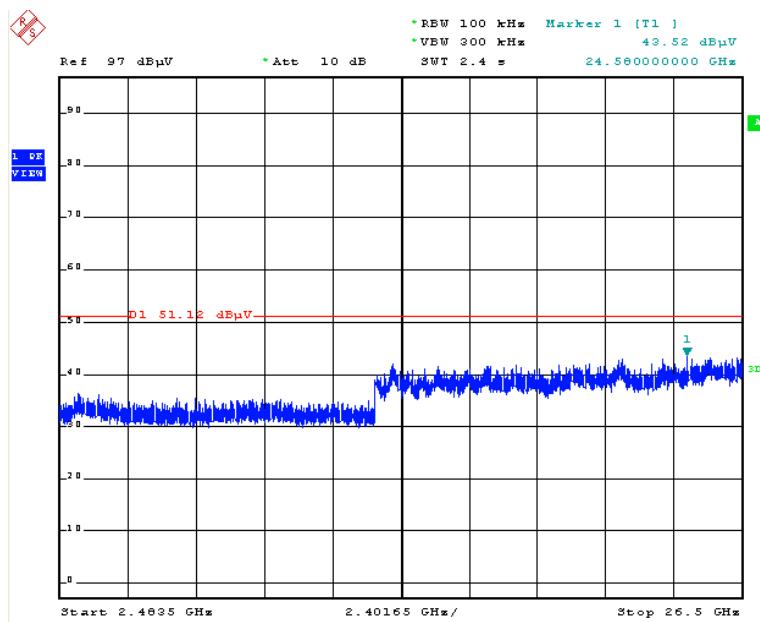
Date: 4.JAN.2016 21:23:20

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



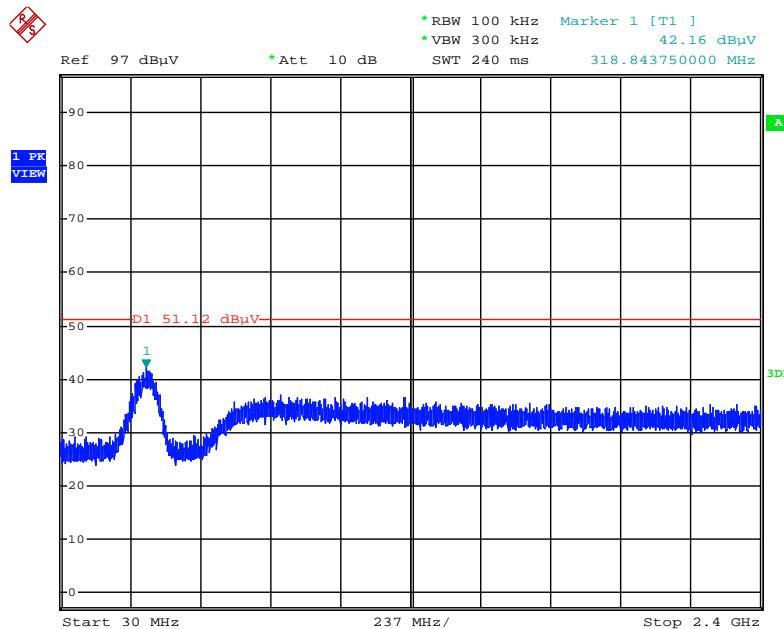
Date: 4.JAN.2016 21:26:04

### Plot on Configuration IEEE 802.11g / CH 1 / 2483.5MHz~26500MHz (down 30dBc)



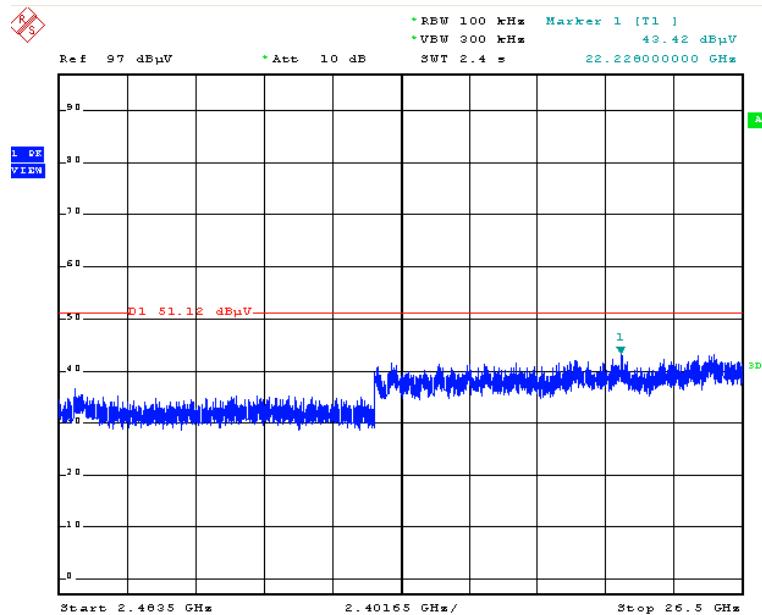
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### Plot on Configuration IEEE 802.11g / CH 11 / 30MHz~2400MHz (down 30dBc)



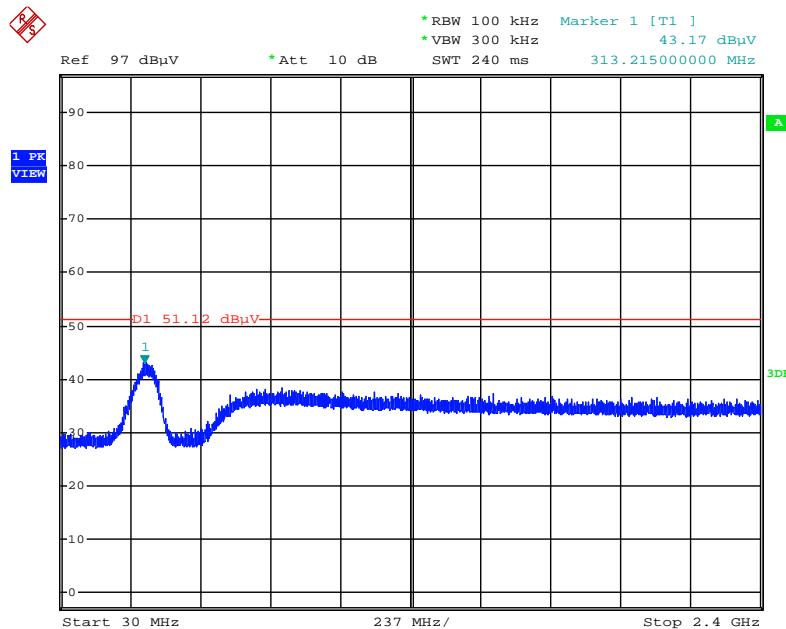
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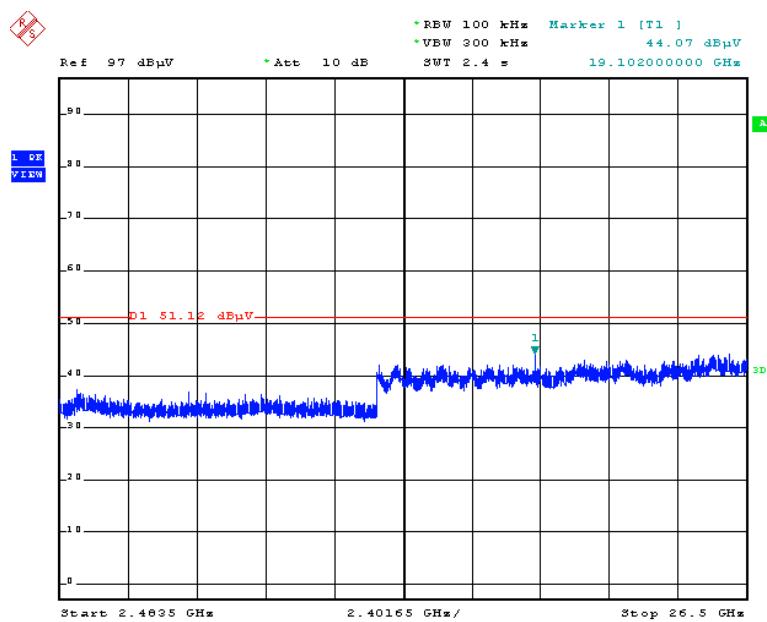
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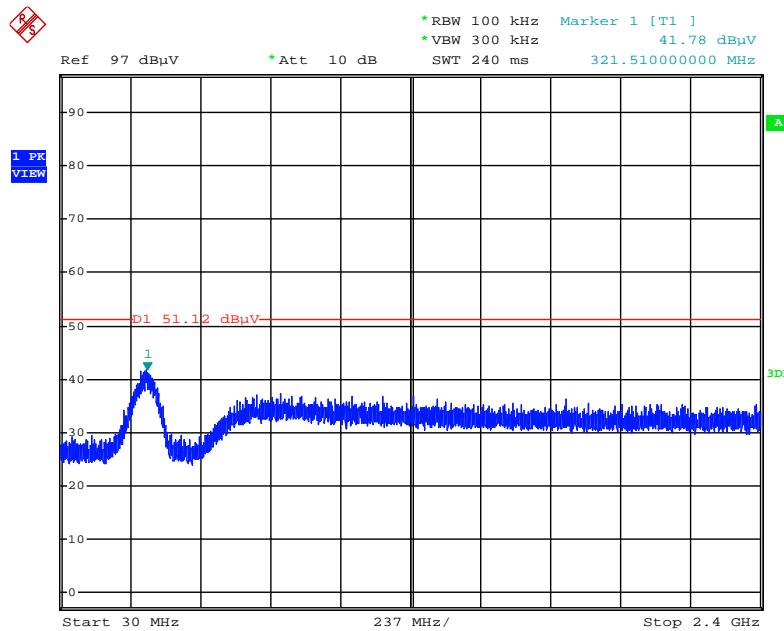
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### Plot on Configuration IEEE 802.11g / CH 12 / 2483.5MHz~26500MHz (down 30dBc)



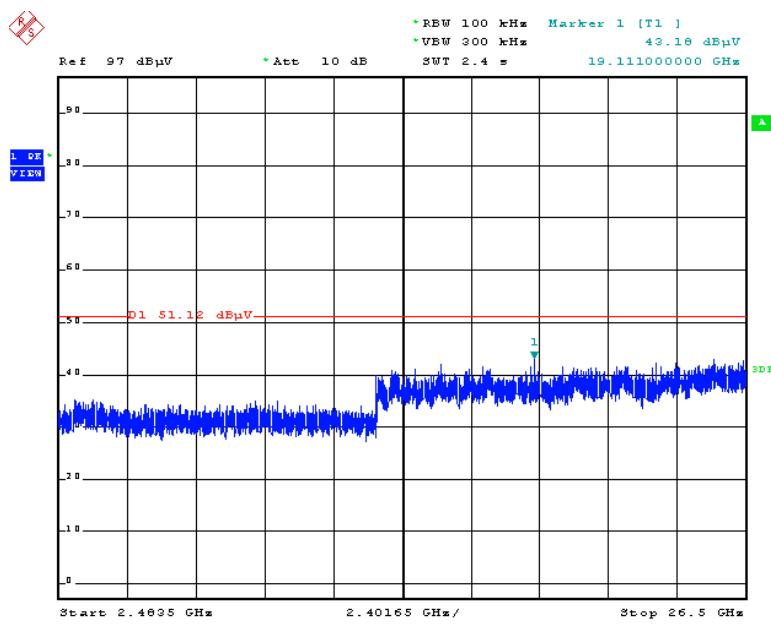
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### Plot on Configuration IEEE 802.11g / CH 13 / 30MHz~2400MHz (down 30dBc)



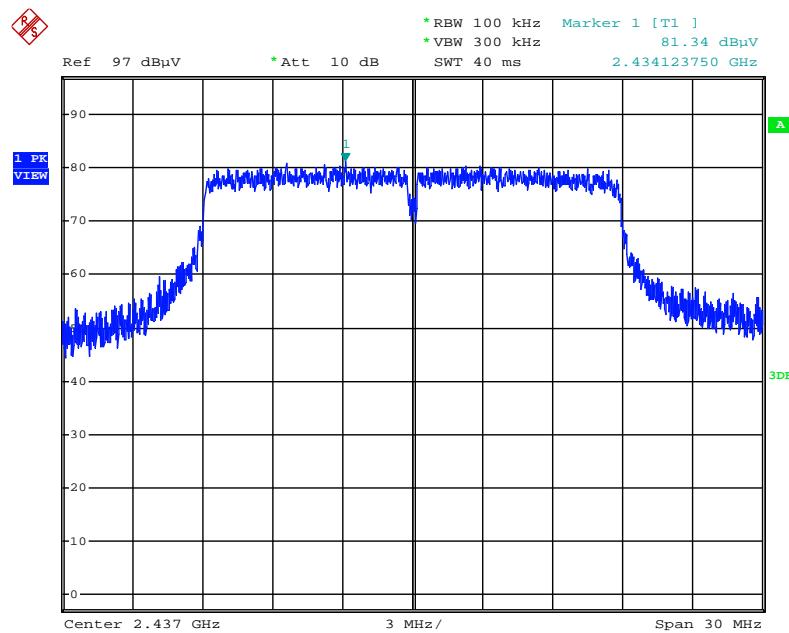
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### Plot on Configuration IEEE 802.11g / CH 13 / 2483.5MHz~26500MHz (down 30dBc)



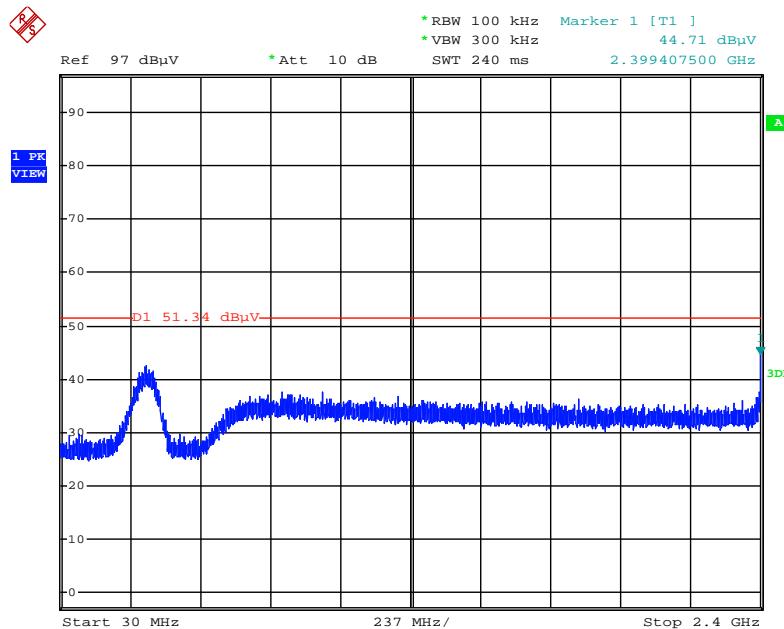
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**Plot on Configuration IEEE 802.11n MCS0 HT20 / Reference Level**



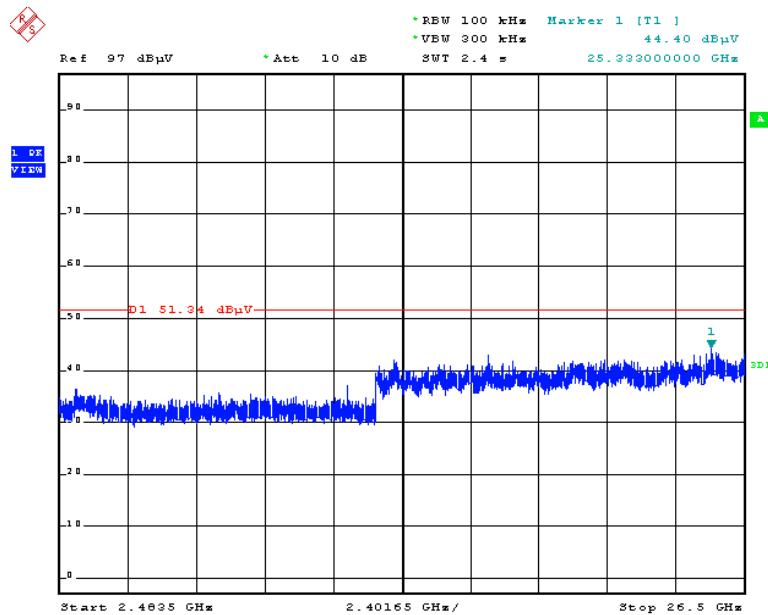
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### Plot on Configuration IEEE 802.11n MCS0 HT20 / CH 1 / 30MHz~2400MHz (down 30dBc)



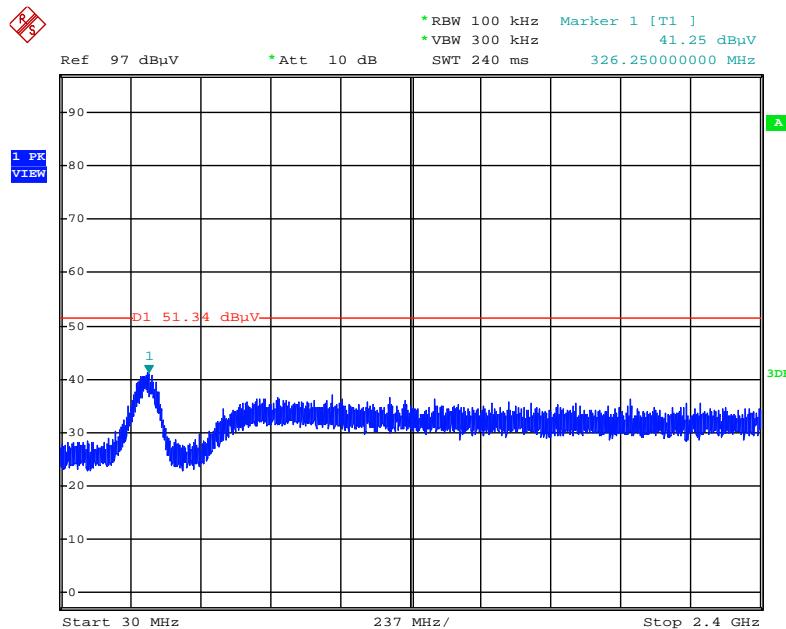
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### Plot on Configuration IEEE 802.11n MCS0 HT20 / CH 1 / 2483.5MHz~26500MHz (down 30dBc)



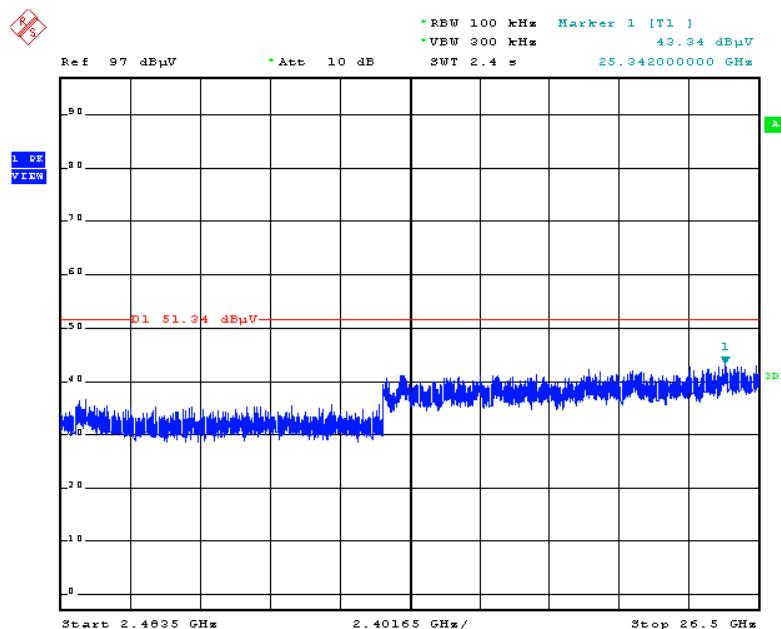
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### Plot on Configuration IEEE 802.11n MCS0 HT20 / CH 11 / 30MHz~2400MHz (down 30dBc)



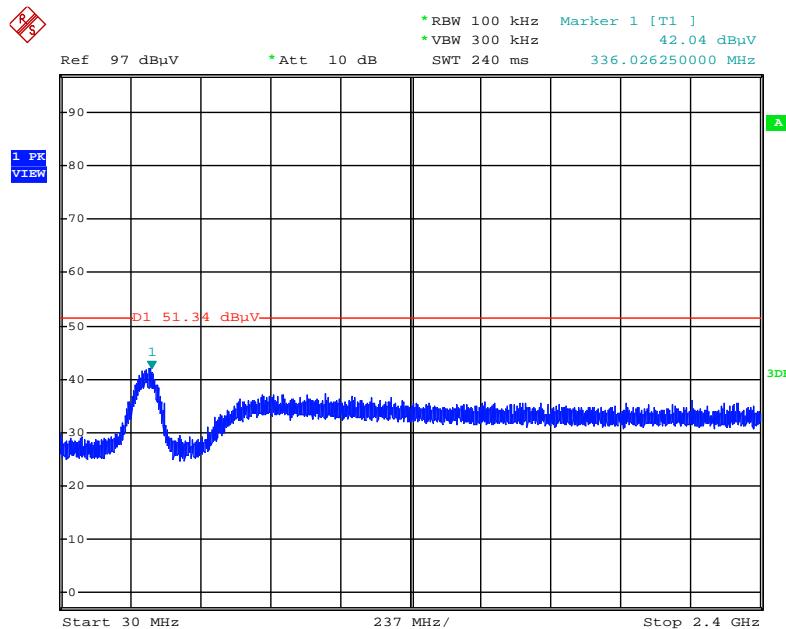
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### Plot on Configuration IEEE 802.11n MCS0 HT20 / CH 11 / 2483.5MHz~26500MHz (down 30dBc)



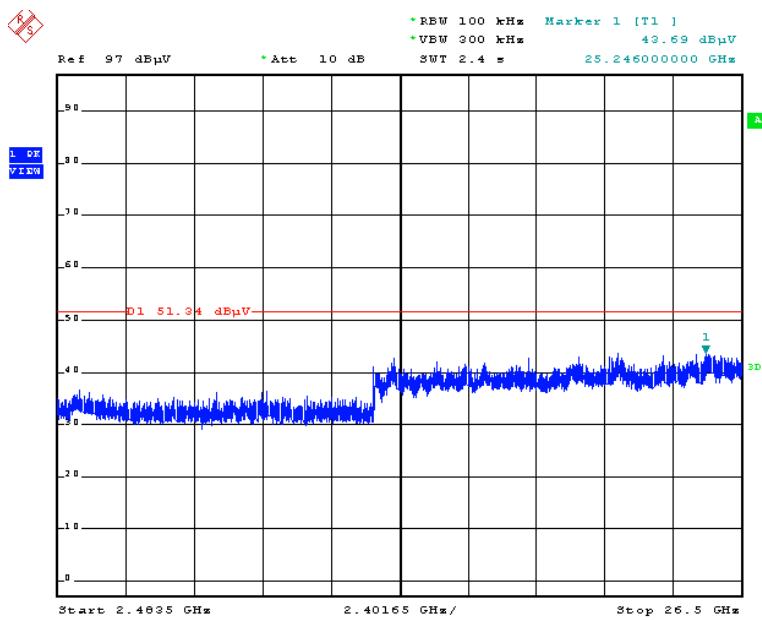
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### Plot on Configuration IEEE 802.11n MCS0 HT20 / CH 12 / 30MHz~2400MHz (down 30dBc)



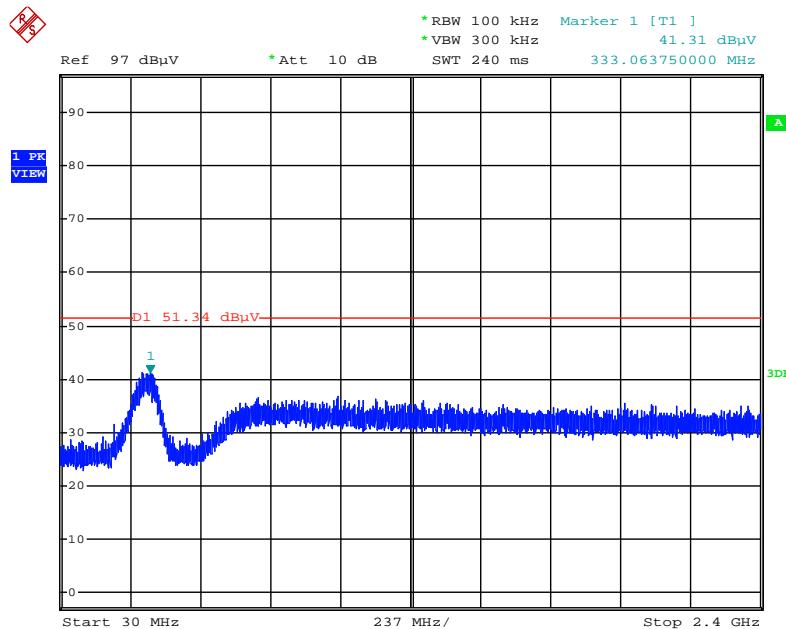
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### Plot on Configuration IEEE 802.11n MCS0 HT20 / CH 12 / 2483.5MHz~26500MHz (down 30dBc)



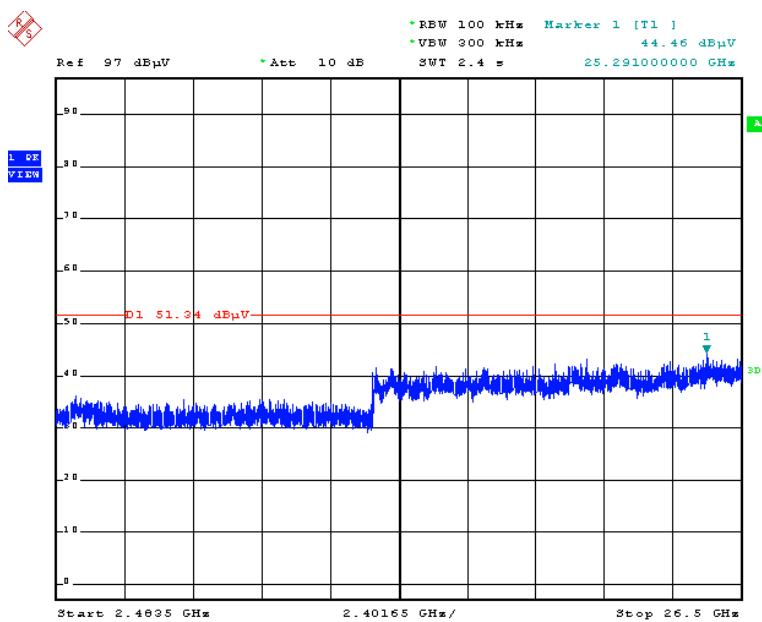
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### Plot on Configuration IEEE 802.11n MCS0 HT20 / CH 13 / 30MHz~2400MHz (down 30dBc)



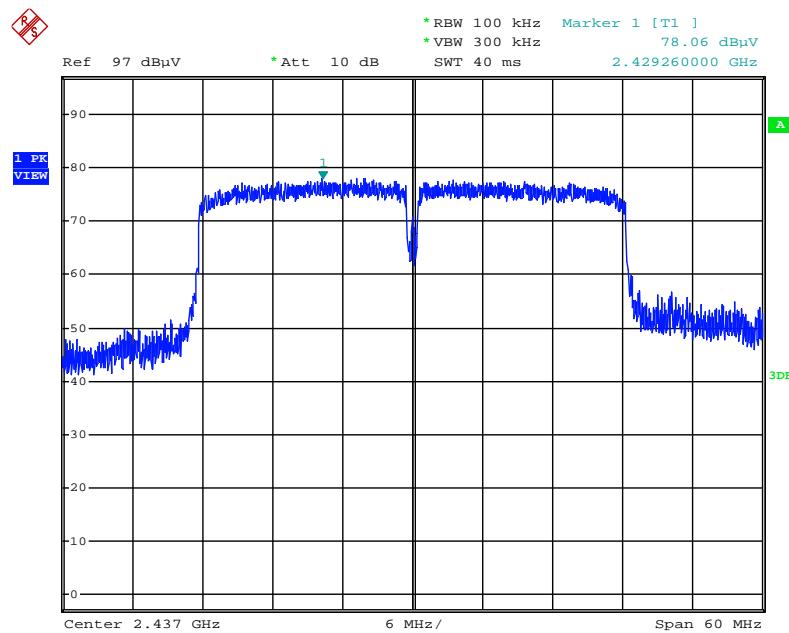
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### Plot on Configuration IEEE 802.11n MCS0 HT20 / CH 13 / 2483.5MHz~26500MHz (down 30dBc)



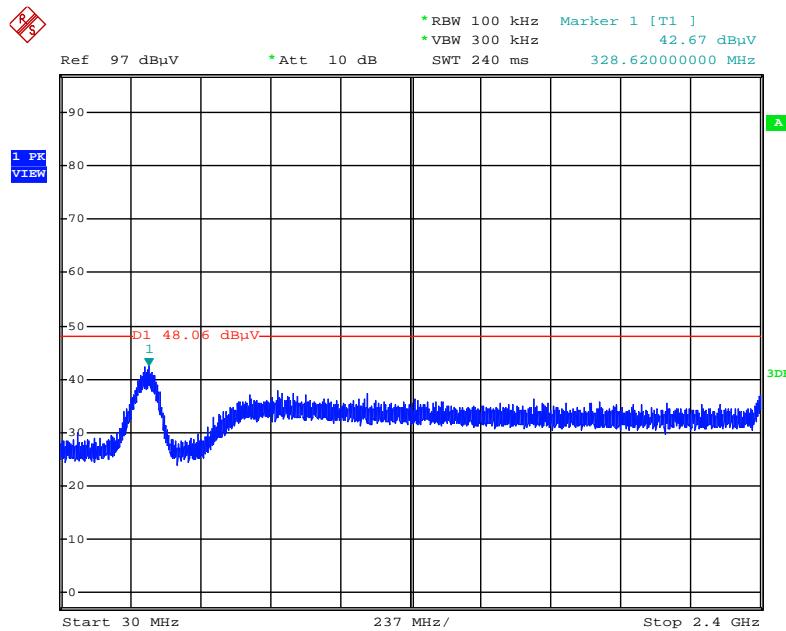
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**Plot on Configuration IEEE 802.11n MCS0 HT40 / Reference Level**



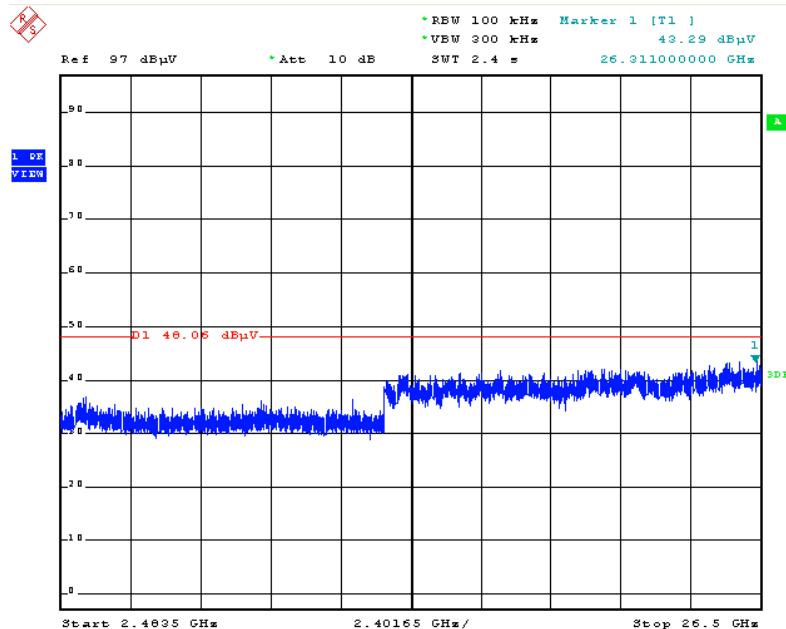
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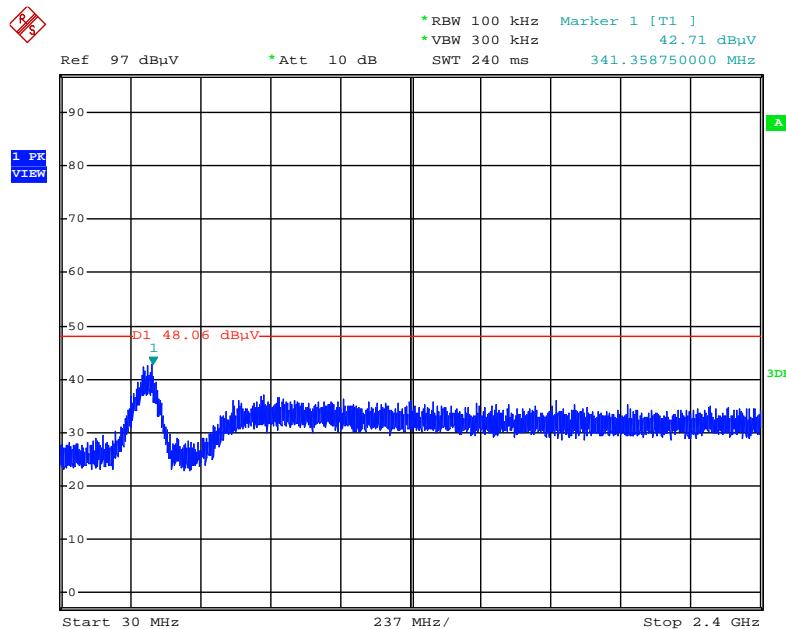
Date: 4.JAN.2016 22:00:14

### Plot on Configuration IEEE 802.11n MCS0 HT40 / CH 3 / 2483.5MHz~26500MHz (down 30dBc)



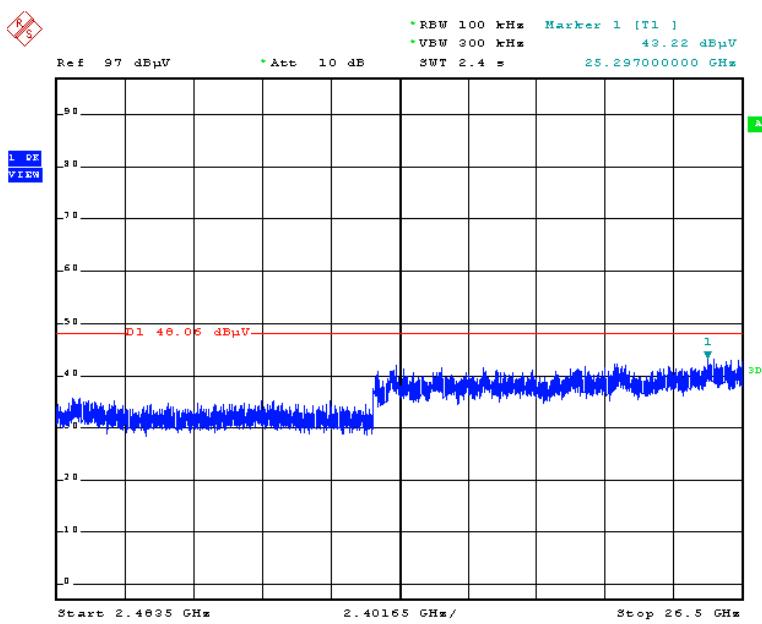
Date: 4.JAN.2016 22:00:42

### Plot on Configuration IEEE 802.11n MCS0 HT40 / CH 9 / 30MHz~2400MHz (down 30dBc)



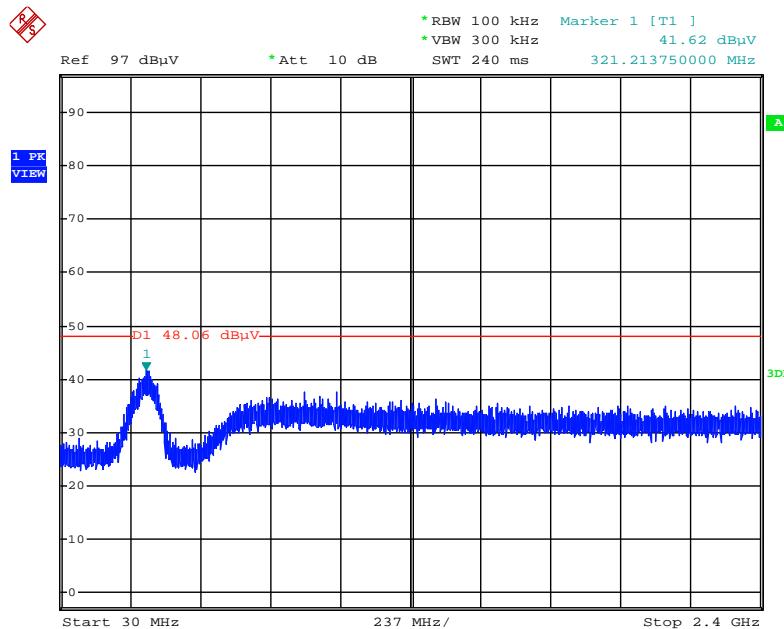
Date: 4.JAN.2016 22:01:58

### Plot on Configuration IEEE 802.11n MCS0 HT40 / CH 9 / 2483.5MHz~26500MHz (down 30dBc)



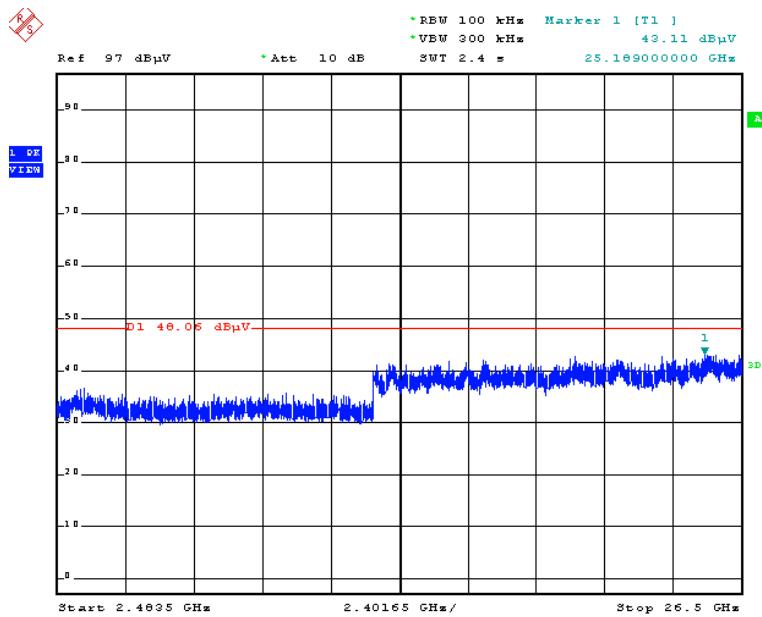
Date: 4.JAN.2016 22:02:32

### Plot on Configuration IEEE 802.11n MCS0 HT40 / CH 10 / 30MHz~2400MHz (down 30dBc)



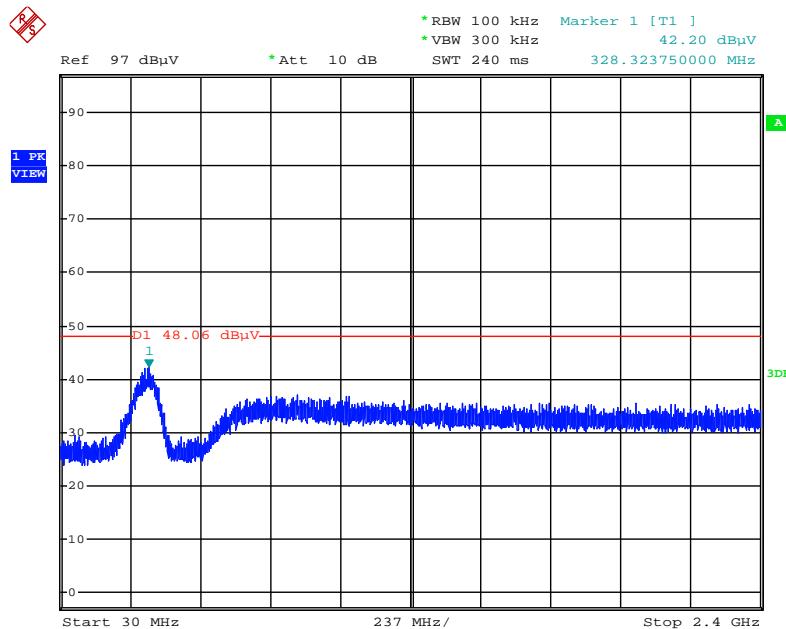
Date: 4.JAN.2016 22:03:27

### Plot on Configuration IEEE 802.11n MCS0 HT40 / CH 10 / 2483.5MHz~26500MHz (down 30dBc)



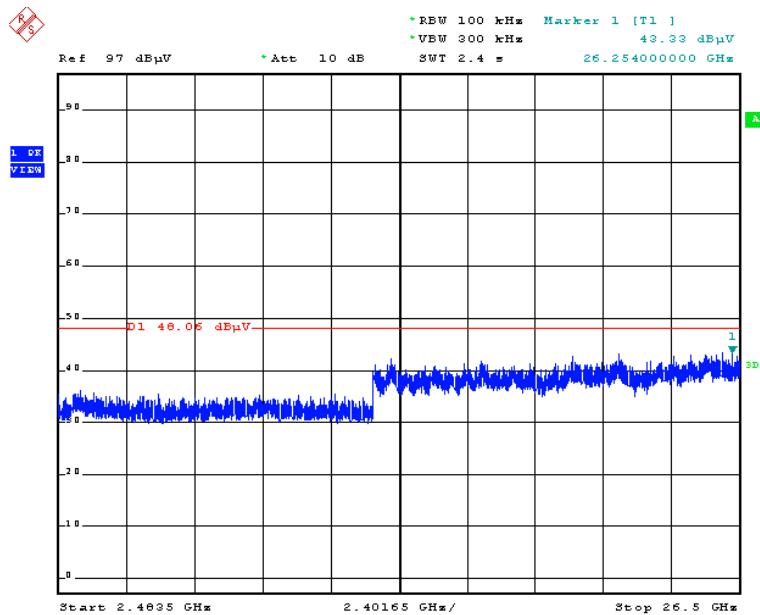
Date: 4.JAN.2016 22:04:15

### Plot on Configuration IEEE 802.11n MCS0 HT40 / CH 11 / 30MHz~2400MHz (down 30dBc)

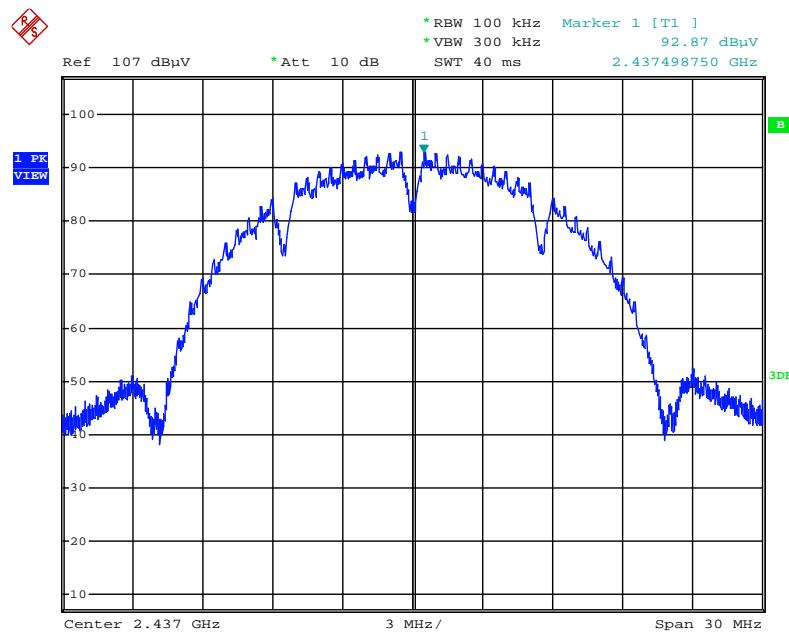


Date: 4.JAN.2016 22:05:23

### Plot on Configuration IEEE 802.11n MCS0 HT40 / CH 11 / 2483.5MHz~26500MHz (down 30dBc)

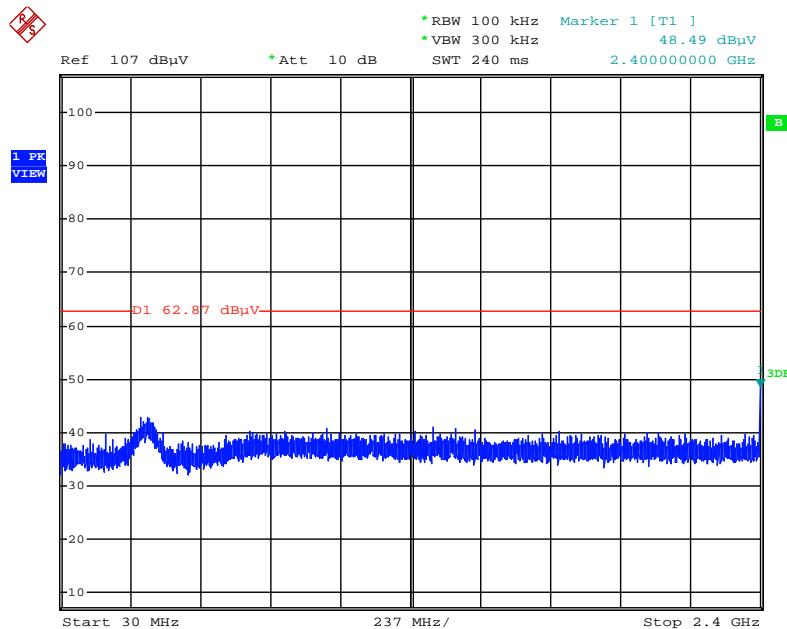


Date: 4.JAN.2016 22:05:55

**Test Moe: Mode 2****Plot on Configuration IEEE 802.11b / Reference Level**

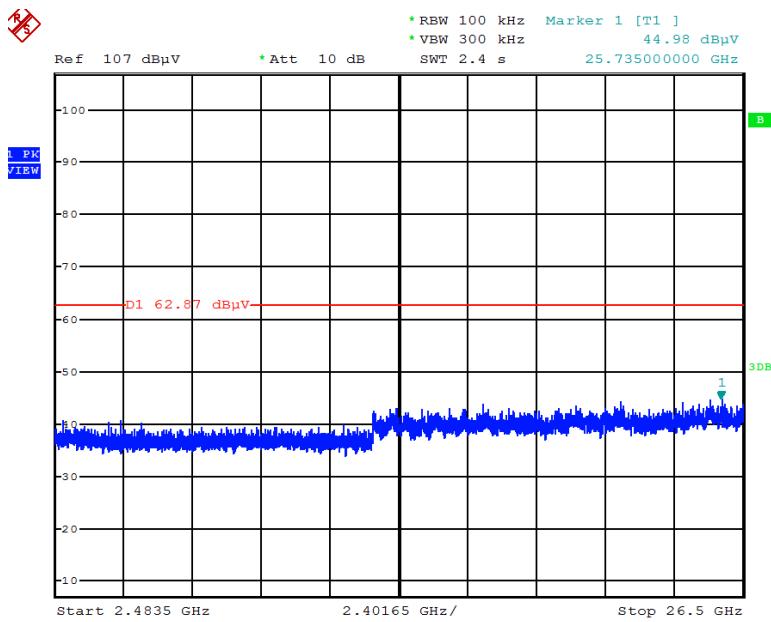
Date: 8.JAN.2016 00:14:36

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



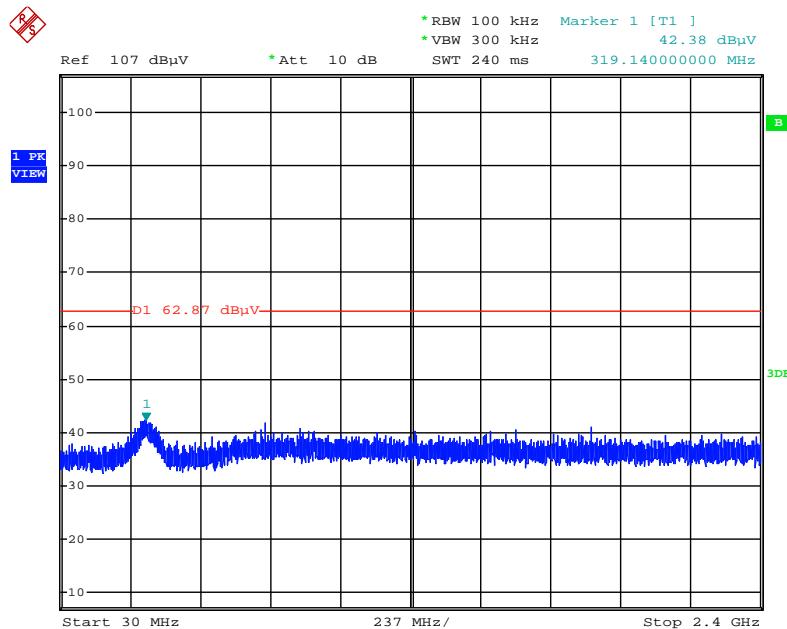
Date: 8.JAN.2016 00:15:47

### Plot on Configuration IEEE 802.11b / CH 1 / 2483.5MHz~26500MHz (down 30dBc)



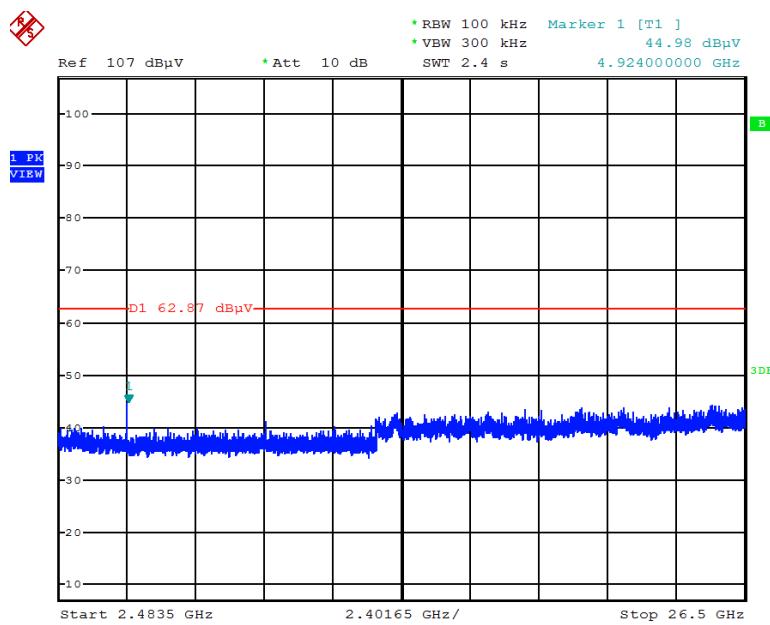
Date: 8.JAN.2016 00:16:27

### Plot on Configuration IEEE 802.11b / CH 11 / 30MHz~2400MHz (down 30dBc)



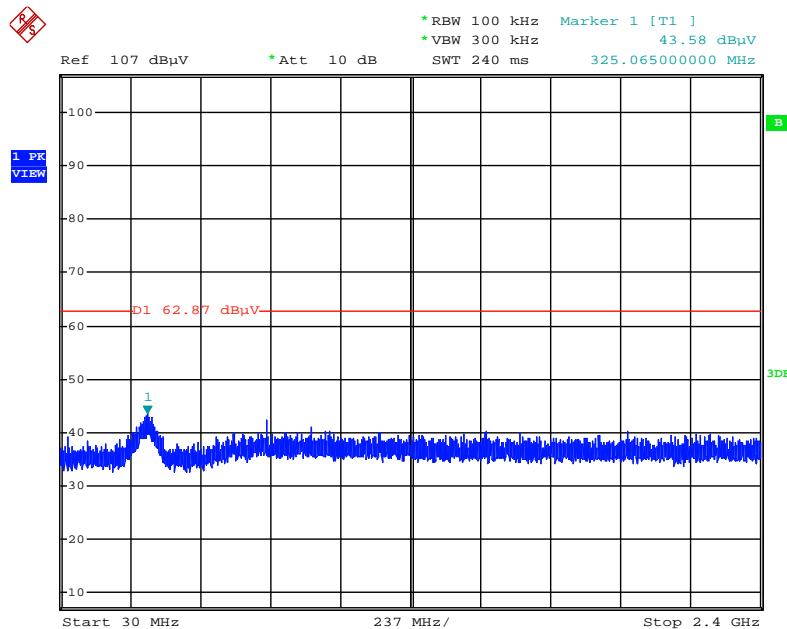
Date: 8.JAN.2016 00:18:13

### Plot on Configuration IEEE 802.11b / CH 11 / 2483.5MHz~26500MHz (down 30dBc)



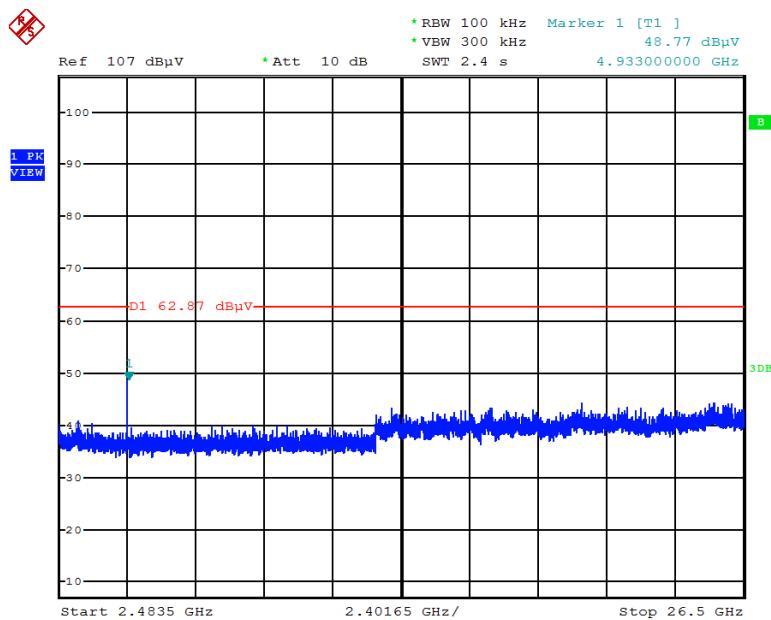
Date: 8.JAN.2016 00:17:41

### Plot on Configuration IEEE 802.11b / CH 12 / 30MHz~2400MHz (down 30dBc)



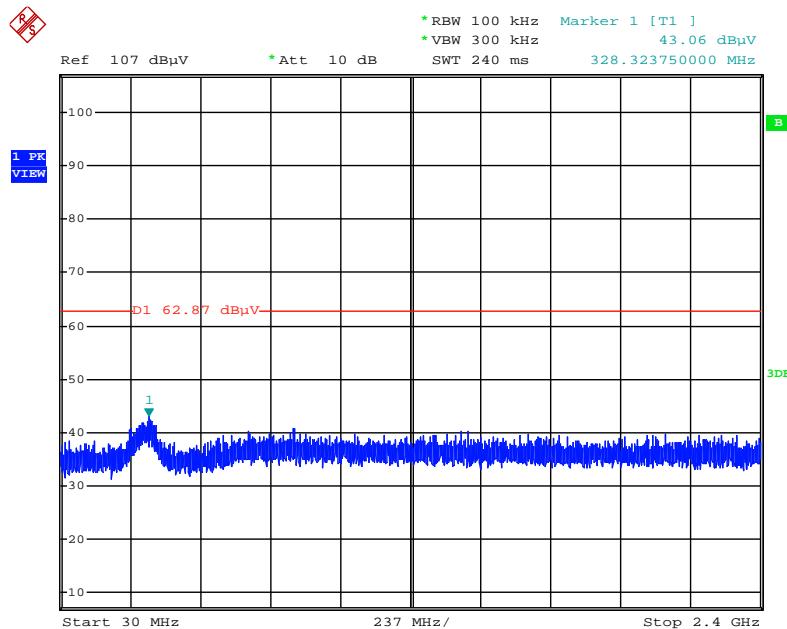
Date: 8.JAN.2016 00:19:05

### Plot on Configuration IEEE 802.11b / CH 12 / 2483.5MHz~26500MHz (down 30dBc)



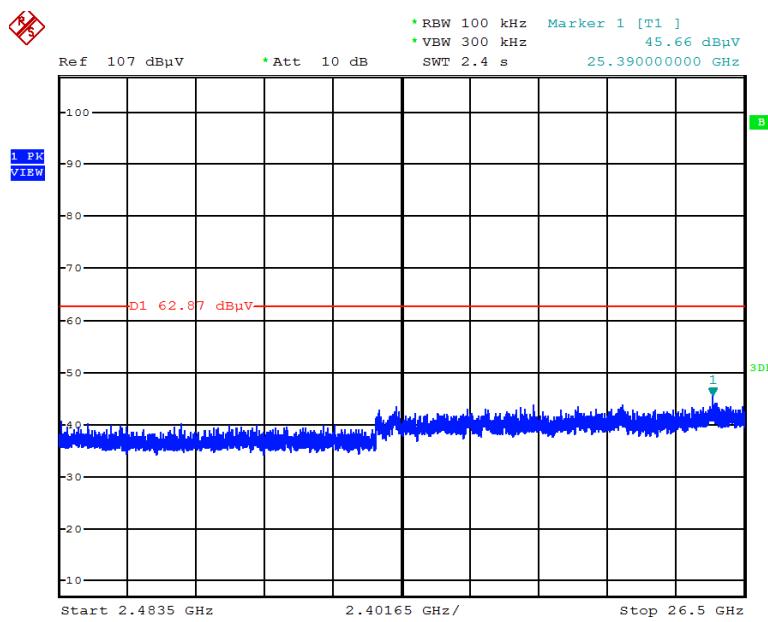
Date: 8.JAN.2016 00:19:40

### Plot on Configuration IEEE 802.11b / CH 13 / 30MHz~2400MHz (down 30dBc)



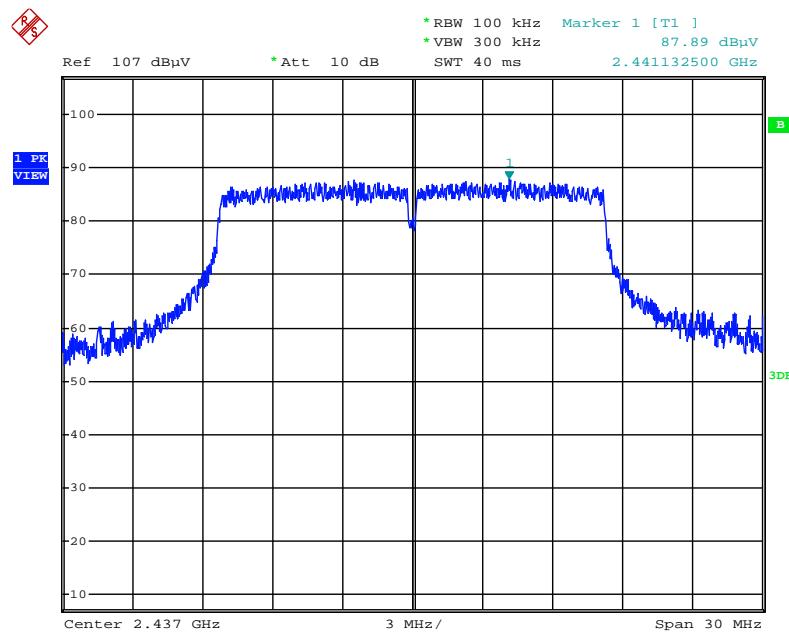
Date: 8.JAN.2016 00:21:10

### Plot on Configuration IEEE 802.11b / CH 13 / 2483.5MHz~26500MHz (down 30dBc)



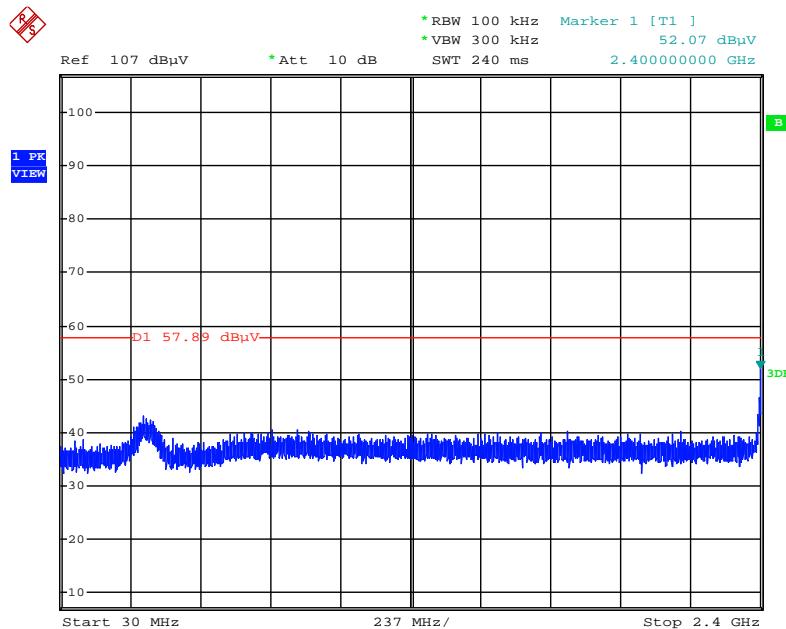
Date: 8.JAN.2016 00:20:39

## Plot on Configuration IEEE 802.11g / Reference Level



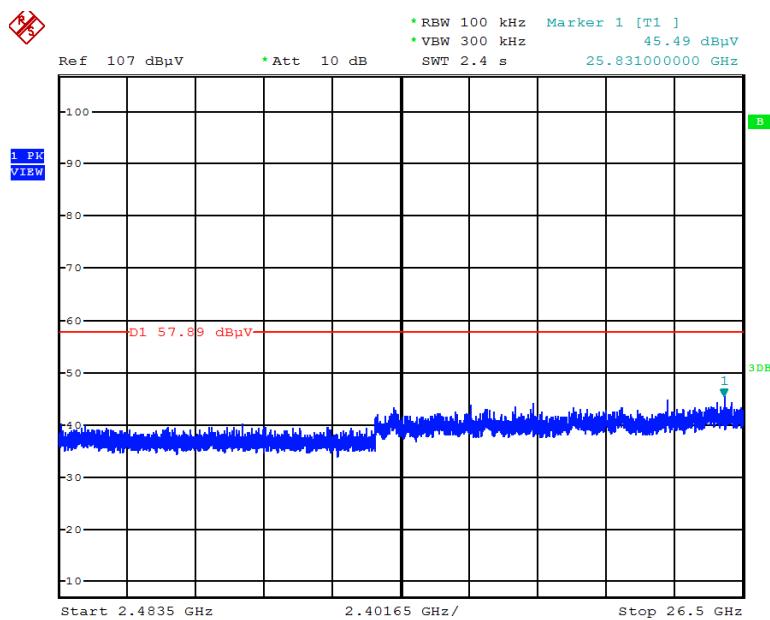
Date: 8.JAN.2016 00:25:33

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



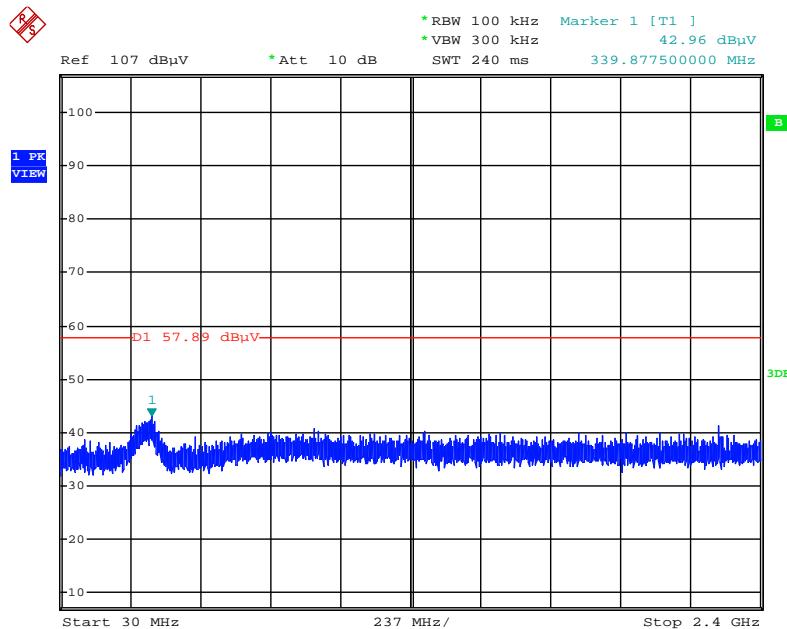
Date: 8.JAN.2016 00:26:37

### Plot on Configuration IEEE 802.11g / CH 1 / 2483.5MHz~26500MHz (down 30dBc)



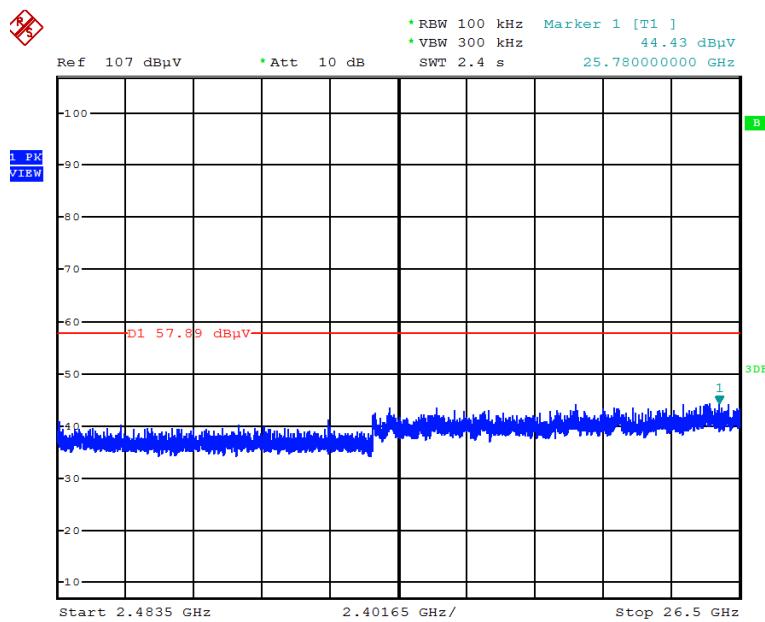
Date: 8.JAN.2016 00:27:14

### Plot on Configuration IEEE 802.11g / CH 11 / 30MHz~2400MHz (down 30dBc)



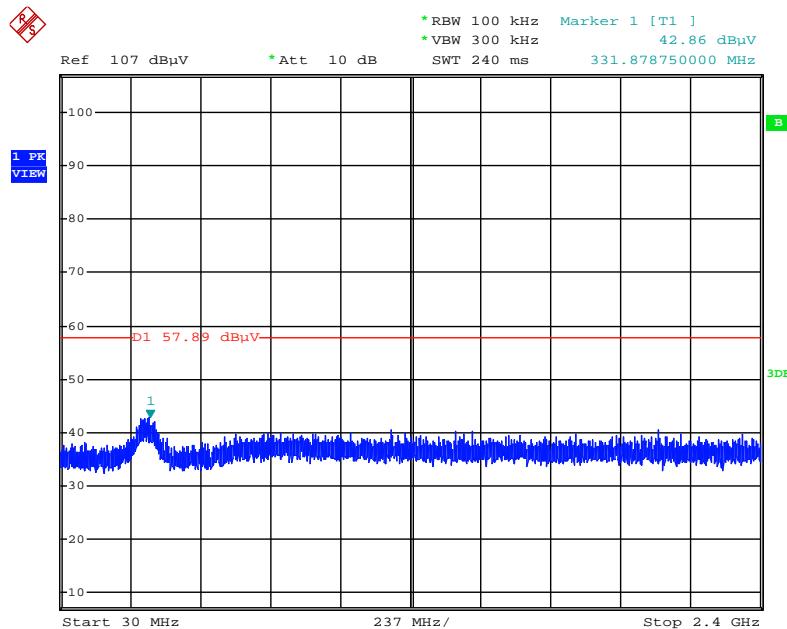
Date: 8.JAN.2016 00:28:36

### Plot on Configuration IEEE 802.11g / CH 11 / 2483.5MHz~26500MHz (down 30dBc)



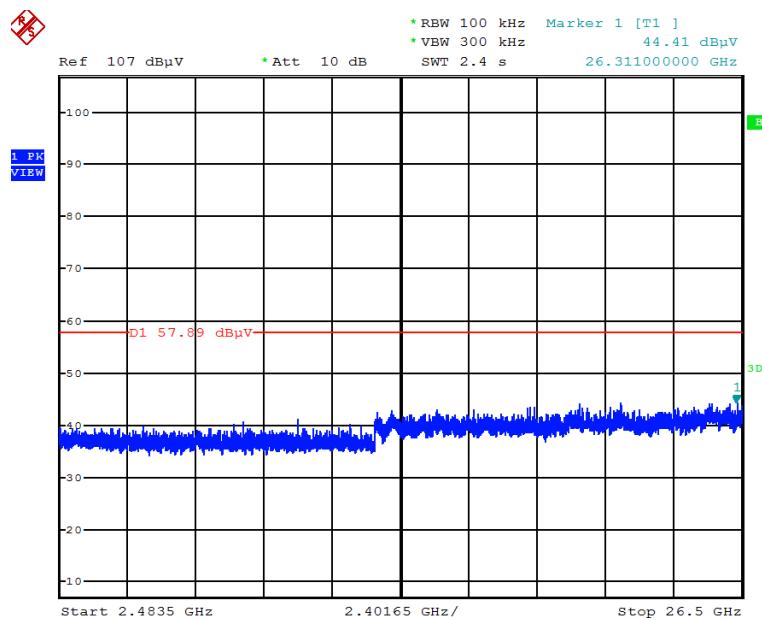
Date: 8.JAN.2016 00:28:10

### Plot on Configuration IEEE 802.11g / CH 12 / 30MHz~2400MHz (down 30dBc)



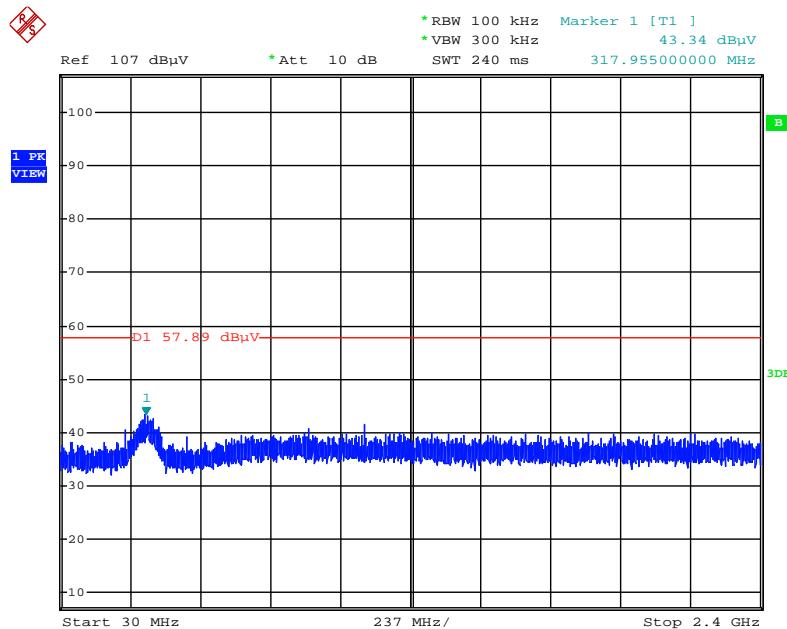
Date: 8.JAN.2016 00:29:11

### Plot on Configuration IEEE 802.11g / CH 12 / 2483.5MHz~26500MHz (down 30dBc)



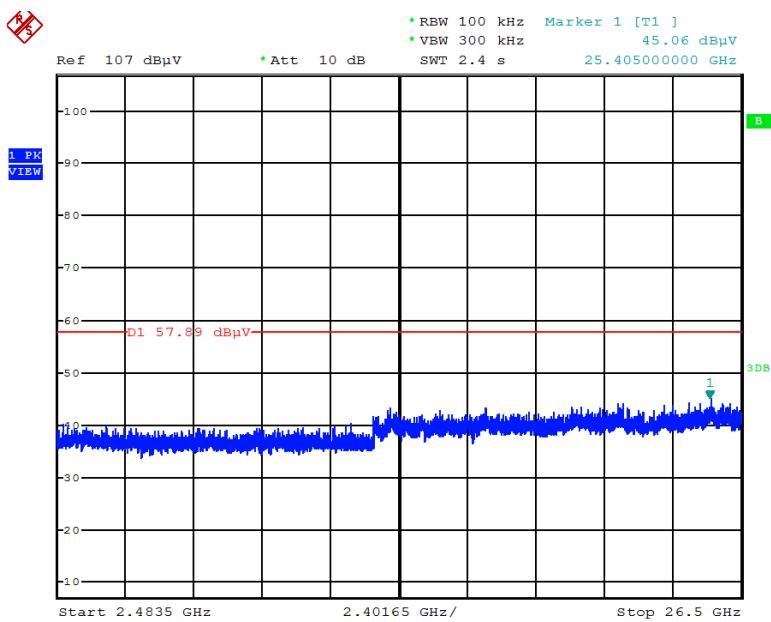
Date: 8.JAN.2016 00:29:50

### Plot on Configuration IEEE 802.11g / CH 13 / 30MHz~2400MHz (down 30dBc)



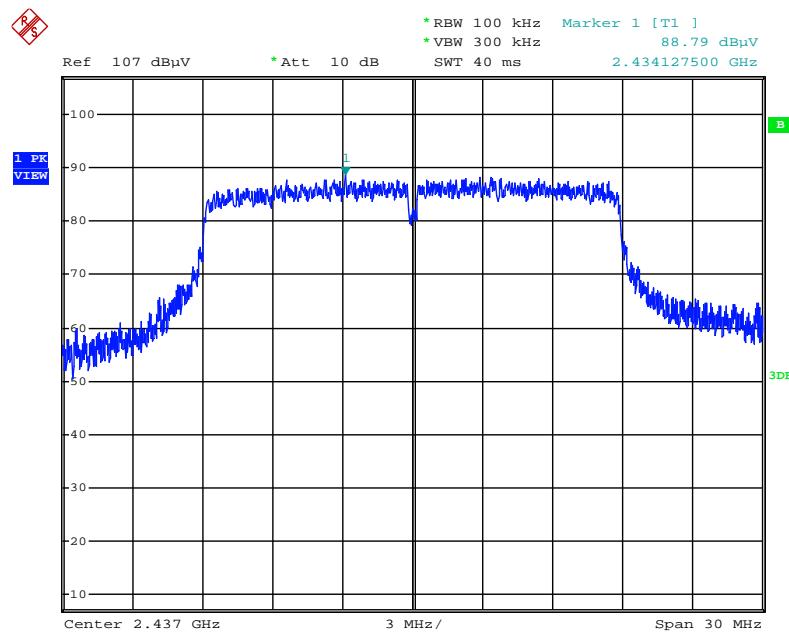
Date: 8.JAN.2016 00:30:59

### Plot on Configuration IEEE 802.11g / CH 13 / 2483.5MHz~26500MHz (down 30dBc)



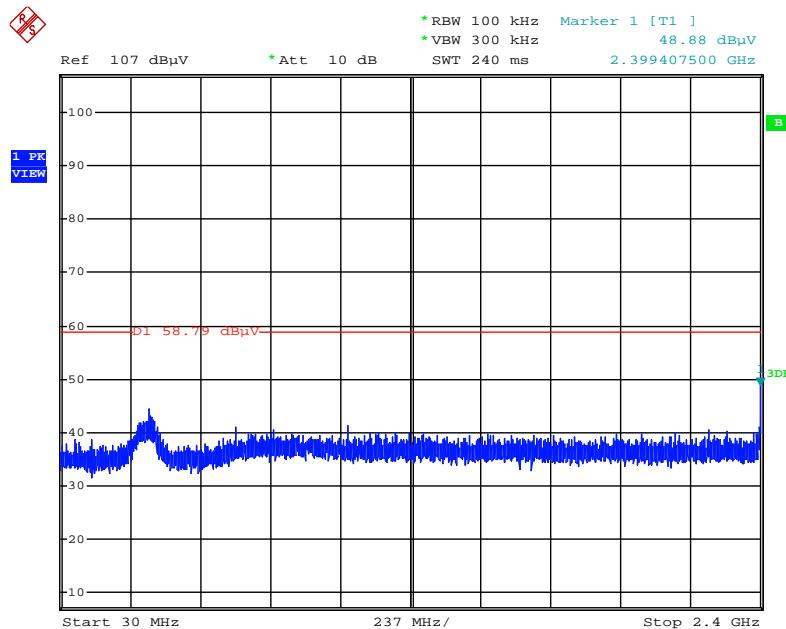
Date: 8.JAN.2016 00:30:31

**Plot on Configuration IEEE 802.11n MCS0 HT20 / Reference Level**



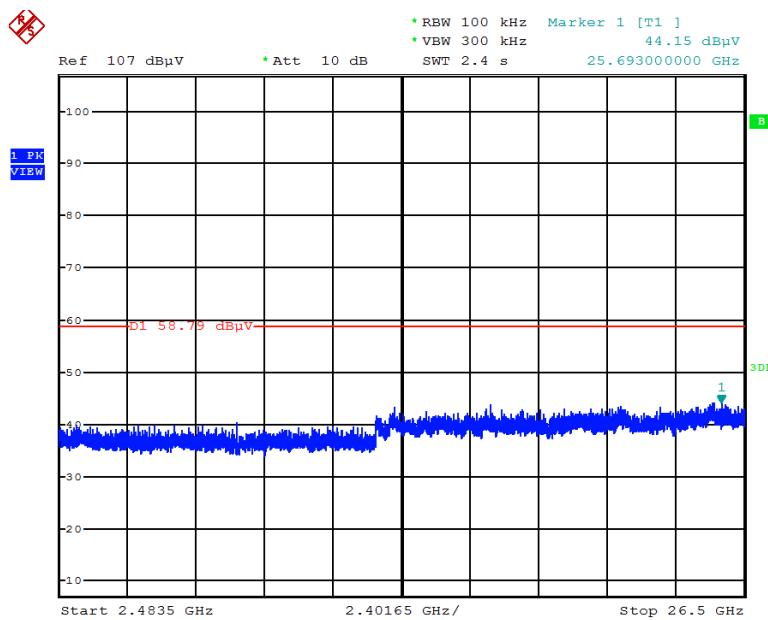
Date: 8.JAN.2016 00:37:14

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



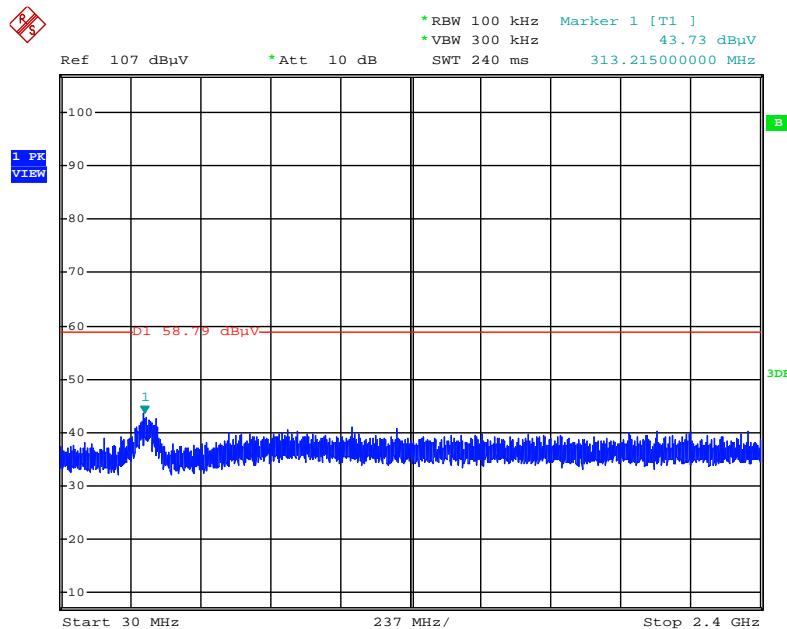
Date: 8.JAN.2016 00:38:12

### Plot on Configuration IEEE 802.11n MCS0 HT20 / CH 1 / 2483.5MHz~26500MHz (down 30dBc)



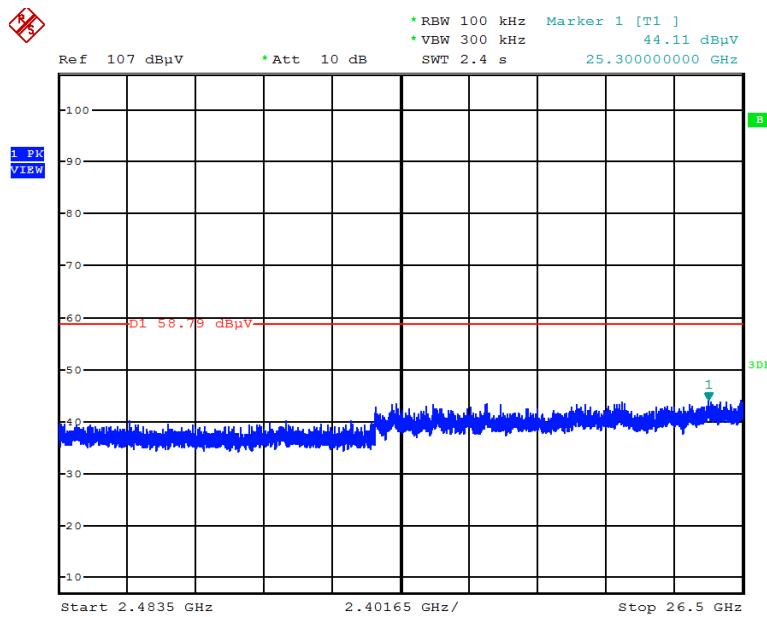
Date: 8.JAN.2016 00:38:51

### Plot on Configuration IEEE 802.11n MCS0 HT20 / CH 11 / 30MHz~2400MHz (down 30dBc)



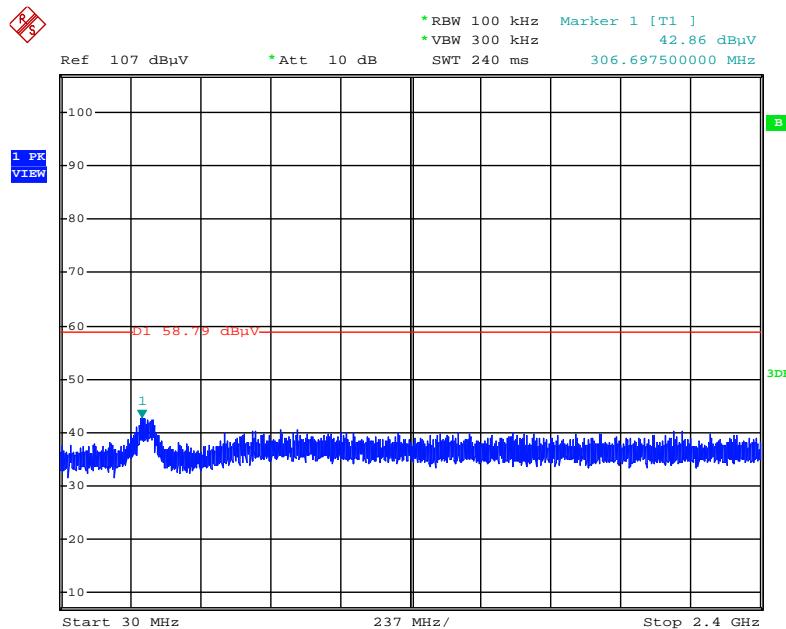
Date: 8.JAN.2016 00:40:16

### Plot on Configuration IEEE 802.11n MCS0 HT20 / CH 11 / 2483.5MHz~26500MHz (down 30dBc)



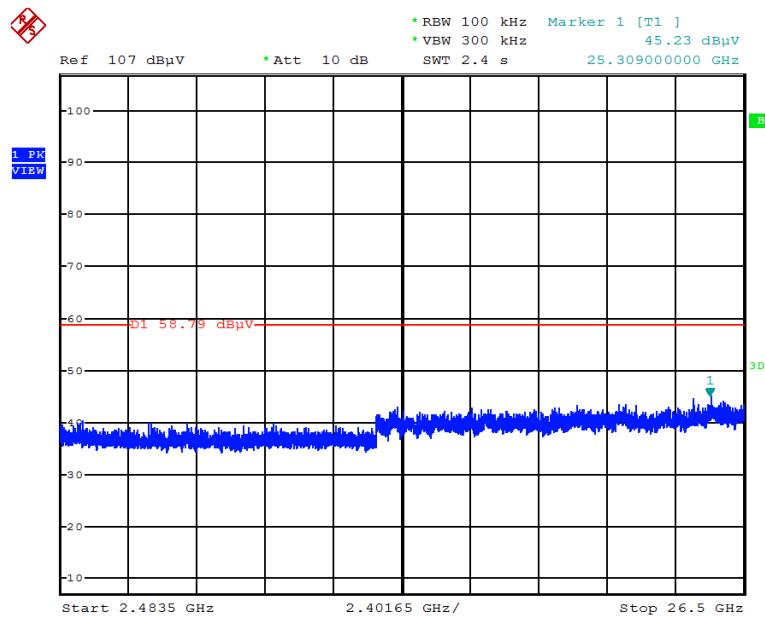
Date: 8.JAN.2016 00:39:39

### Plot on Configuration IEEE 802.11n MCS0 HT20 / CH 12 / 30MHz~2400MHz (down 30dBc)



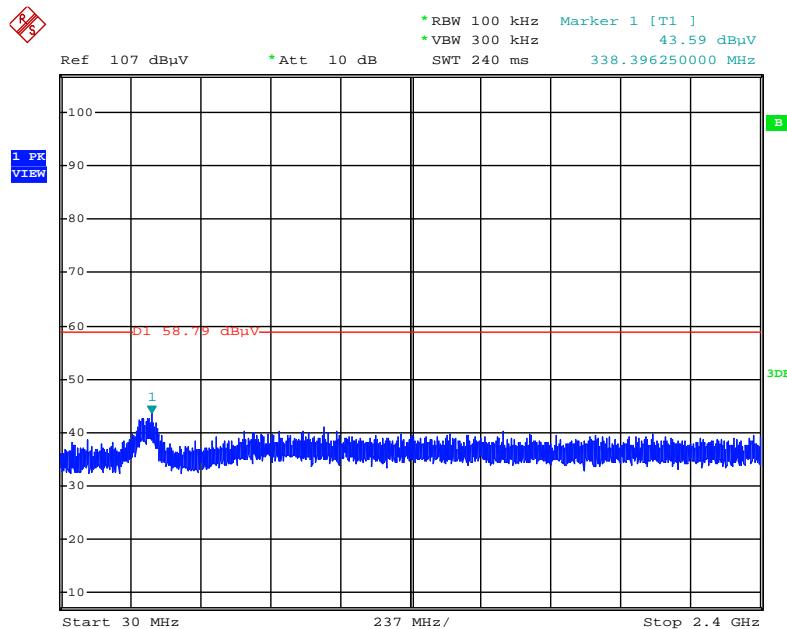
Date: 8.JAN.2016 00:40:52

### Plot on Configuration IEEE 802.11n MCS0 HT20 / CH 12 / 2483.5MHz~26500MHz (down 30dBc)



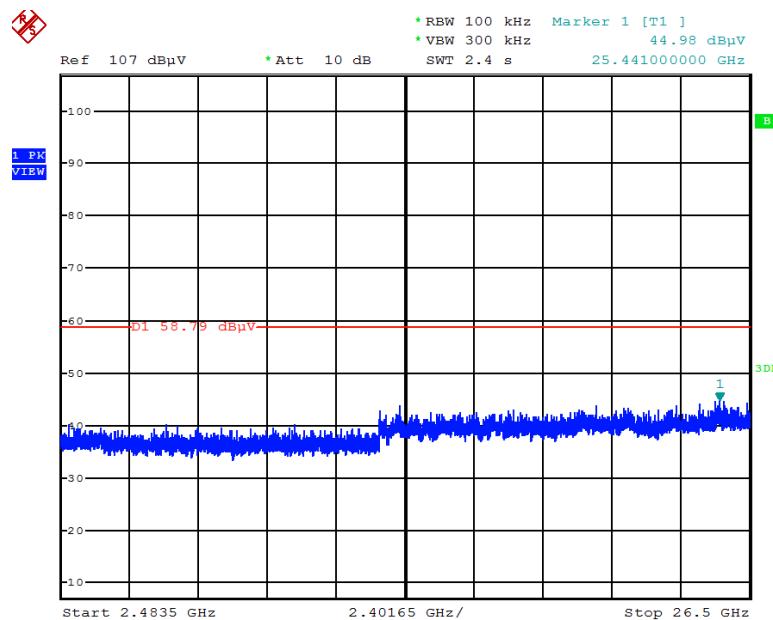
Date: 8.JAN.2016 00:41:38

### Plot on Configuration IEEE 802.11n MCS0 HT20 / CH 13 / 30MHz~2400MHz (down 30dBc)



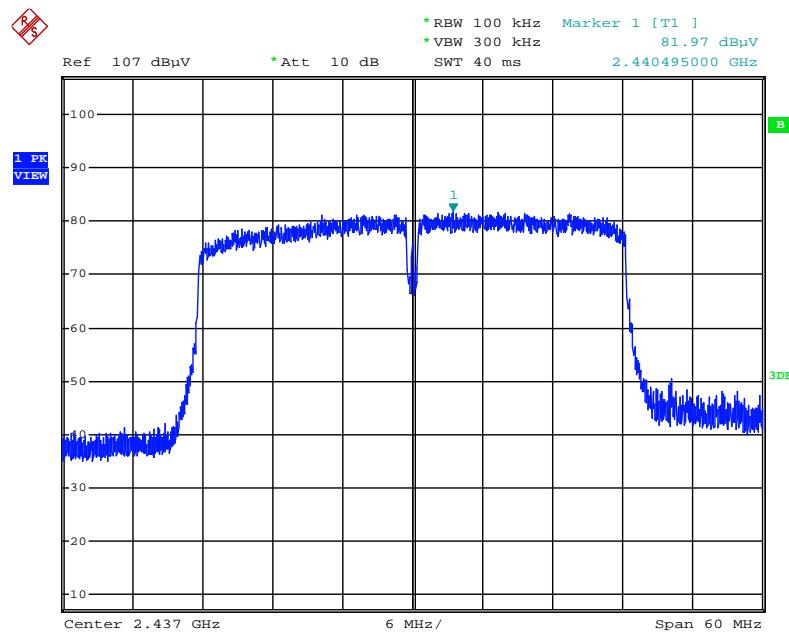
Date: 8.JAN.2016 00:42:54

### Plot on Configuration IEEE 802.11n MCS0 HT20 / CH 13 / 2483.5MHz~26500MHz (down 30dBc)



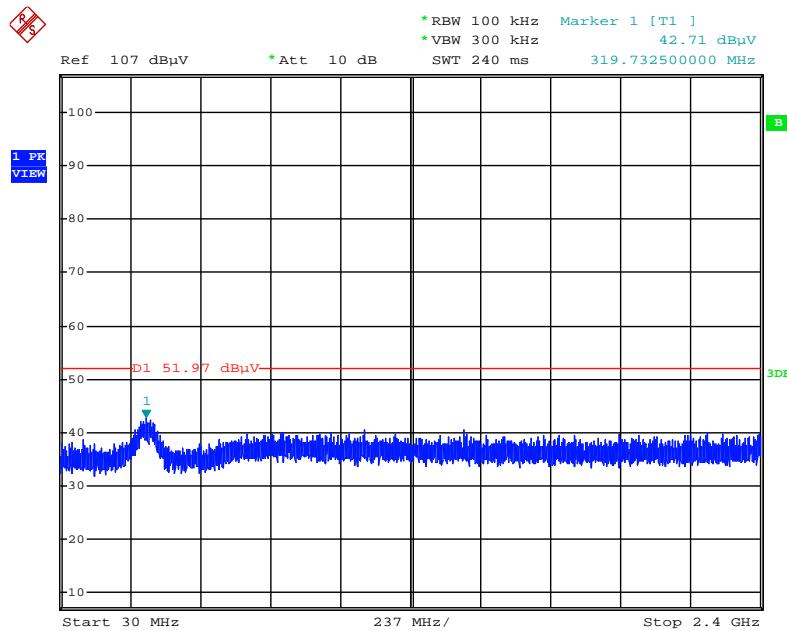
Date: 8.JAN.2016 00:42:26

**Plot on Configuration IEEE 802.11n MCS0 HT40 / Reference Level**



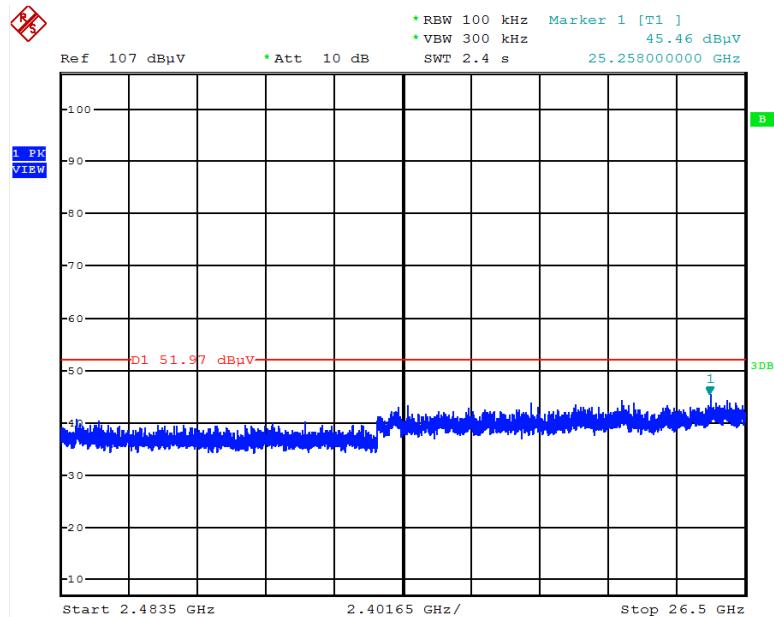
Date: 8.JAN.2016 00:46:31

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



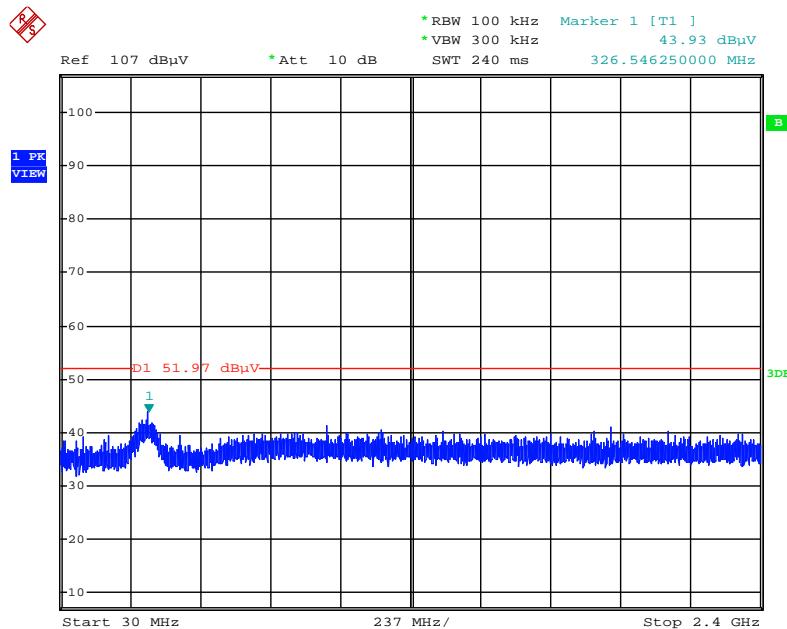
Date: 8.JAN.2016 00:47:20

### Plot on Configuration IEEE 802.11n MCS0 HT40 / CH 3 / 2483.5MHz~26500MHz (down 30dBc)



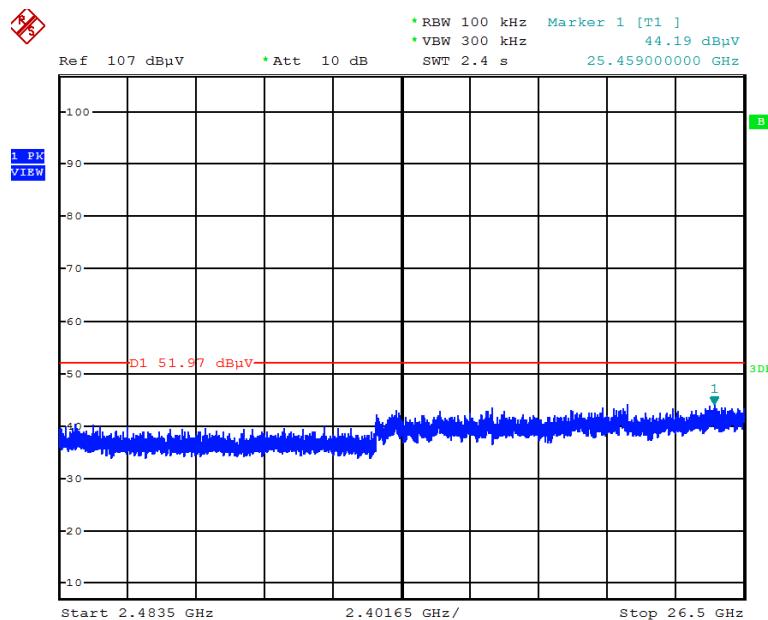
Date: 8.JAN.2016 00:48:00

### Plot on Configuration IEEE 802.11n MCS0 HT40 / CH 9 / 30MHz~2400MHz (down 30dBc)



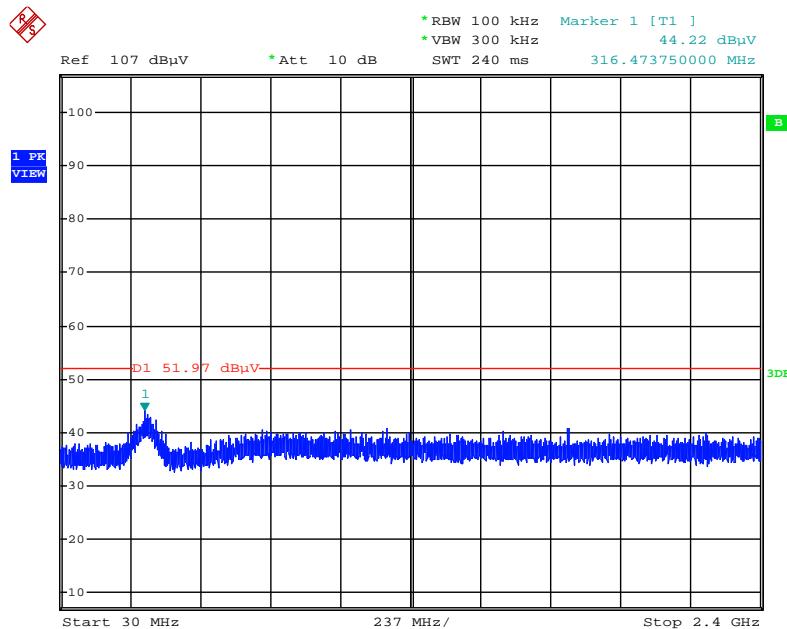
Date: 8.JAN.2016 00:49:11

### Plot on Configuration IEEE 802.11n MCS0 HT40 / CH 9 / 2483.5MHz~26500MHz (down 30dBc)



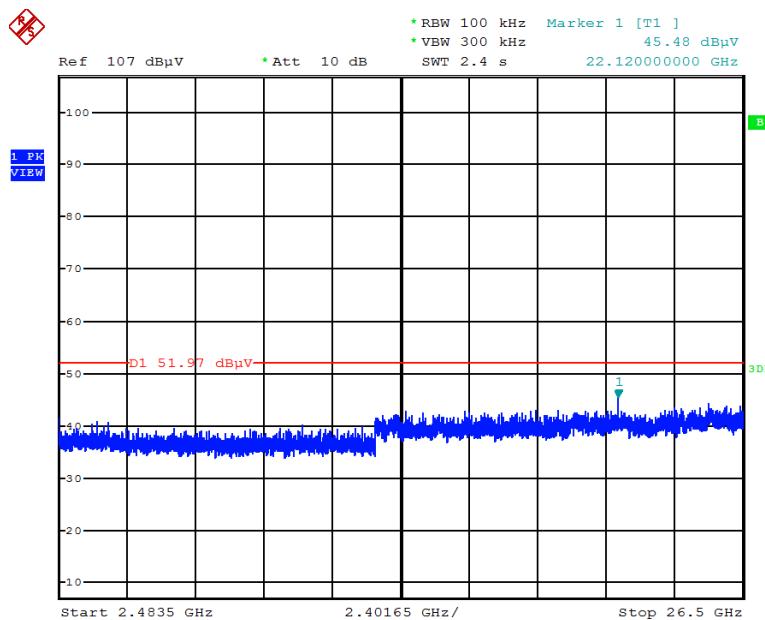
Date: 8.JAN.2016 00:48:45

### Plot on Configuration IEEE 802.11n MCS0 HT40 / CH 10 / 30MHz~2400MHz (down 30dBc)



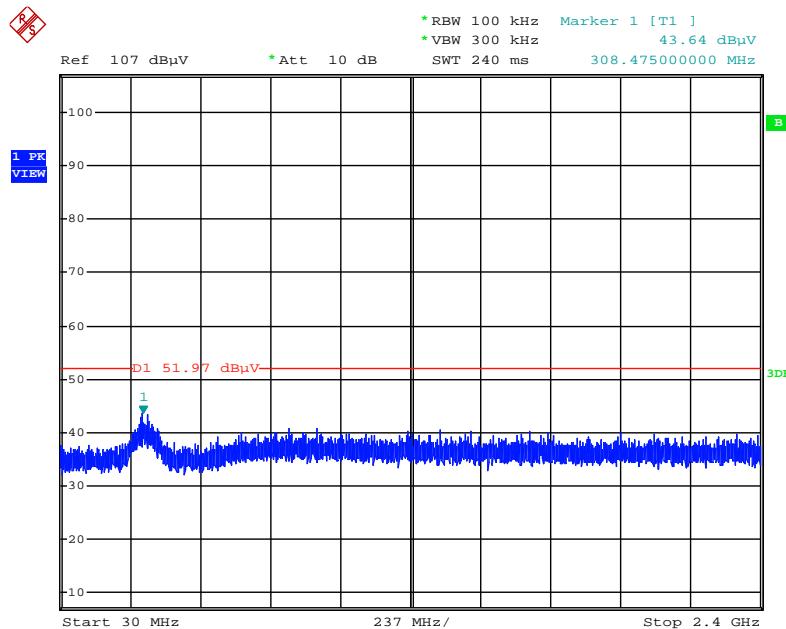
Date: 8.JAN.2016 00:49:47

### Plot on Configuration IEEE 802.11n MCS0 HT40 / CH 10 / 2483.5MHz~26500MHz (down 30dBc)



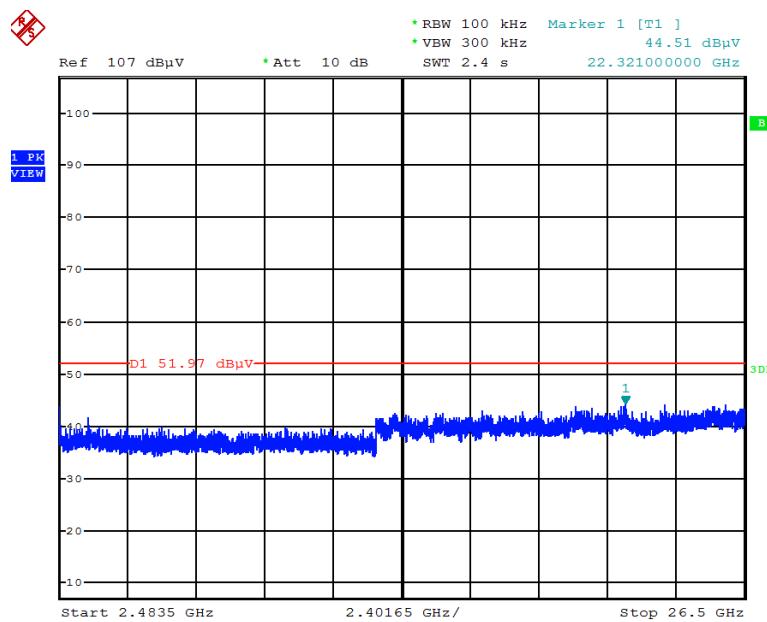
Date: 8.JAN.2016 00:50:28

### Plot on Configuration IEEE 802.11n MCS0 HT40 / CH 11 / 30MHz~2400MHz (down 30dBc)



Date: 8.JAN.2016 00:51:49

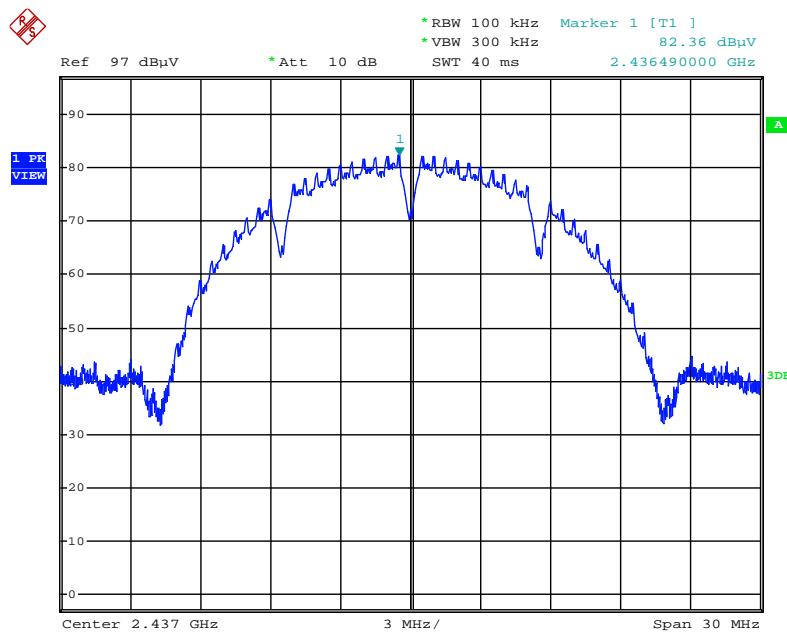
### Plot on Configuration IEEE 802.11n MCS0 HT40 / CH 11 / 2483.5MHz~26500MHz (down 30dBc)



Date: 8.JAN.2016 00:51:25

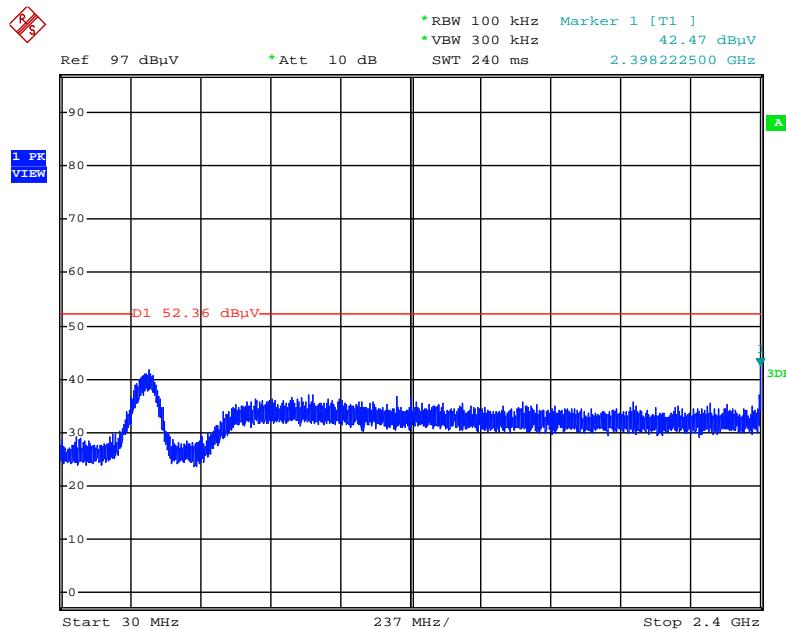
## Test Moe: Mode 3

## Plot on Configuration IEEE 802.11b / Reference Level



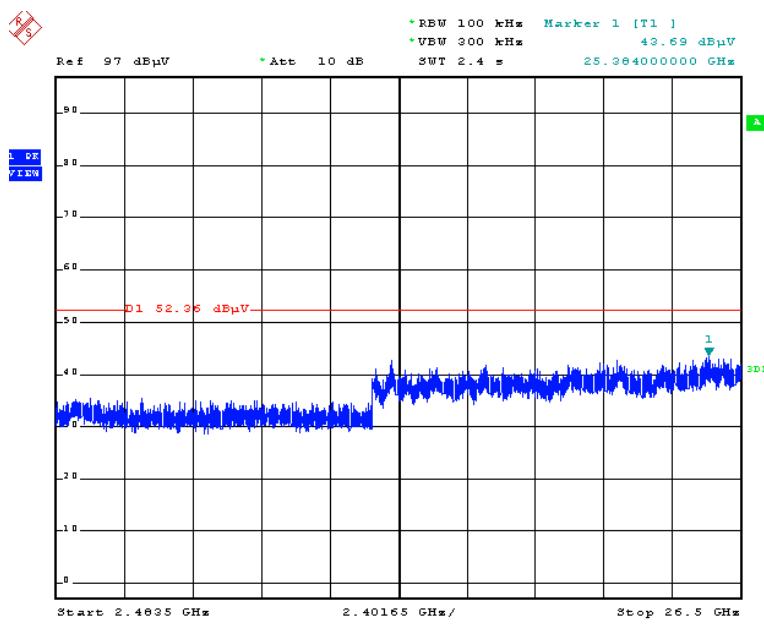
Date: 5.JAN.2016 22:00:07

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



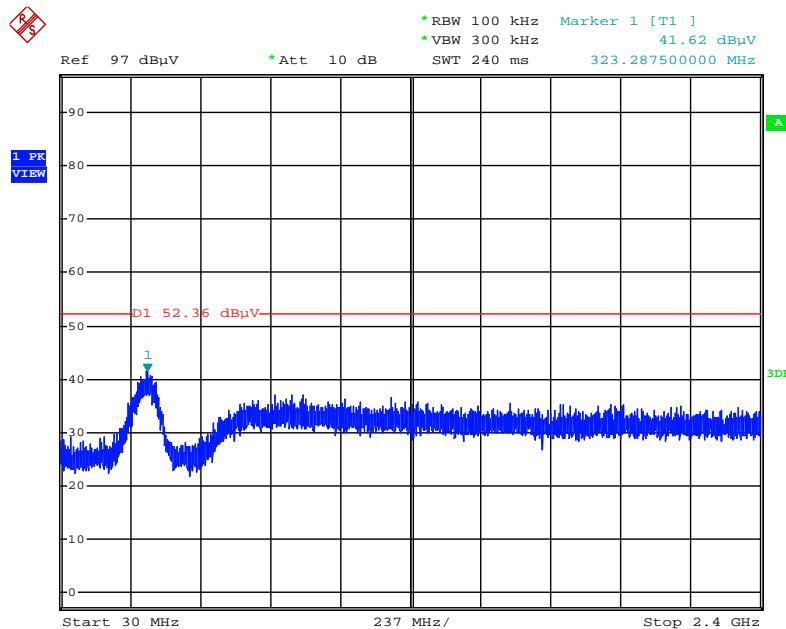
Date: 5.JAN.2016 22:01:41

### Plot on Configuration IEEE 802.11b / CH 1 / 2483.5MHz~26500MHz (down 30dBc)



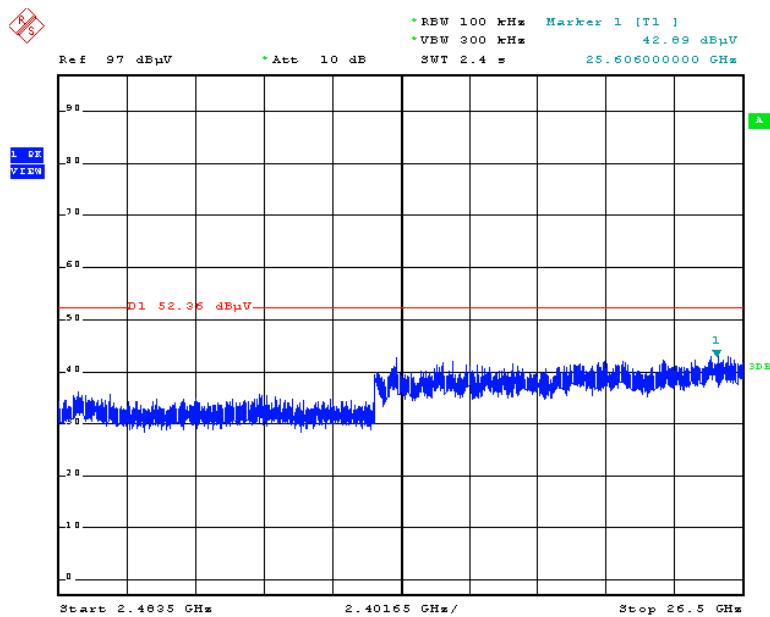
Date: 5.JAN.2016 22:02:06

### Plot on Configuration IEEE 802.11b / CH 11 / 30MHz~2400MHz (down 30dBc)



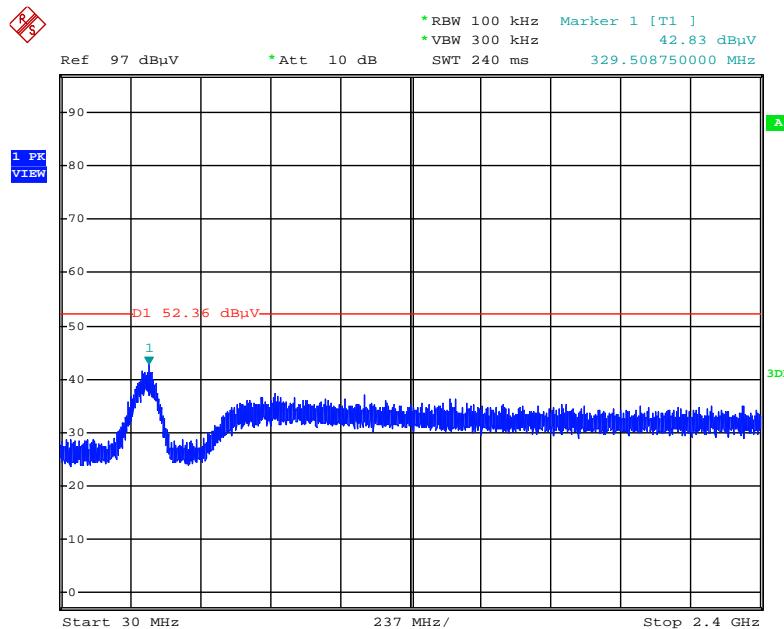
Date: 5.JAN.2016 22:03:00

### Plot on Configuration IEEE 802.11b / CH 11 / 2483.5MHz~26500MHz (down 30dBc)



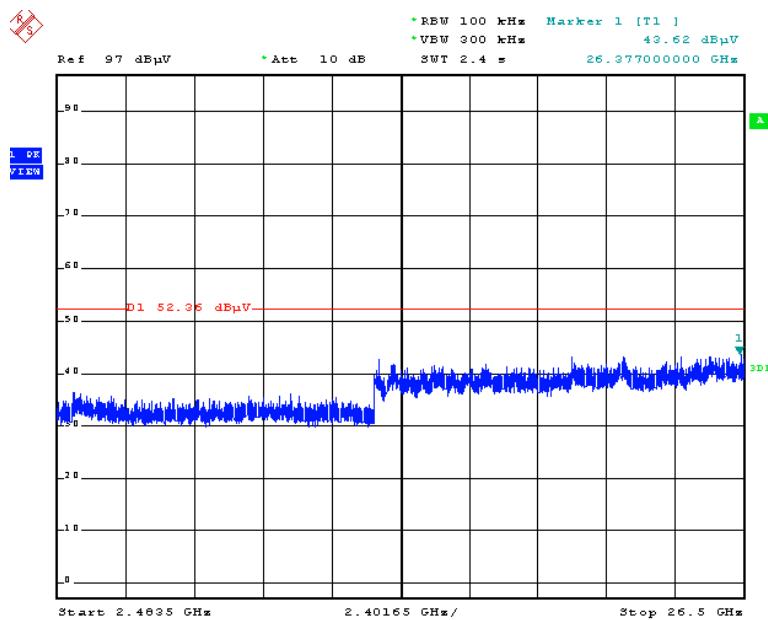
Date: 5.JAN.2016 22:03:30

### Plot on Configuration IEEE 802.11b / CH 12 / 30MHz~2400MHz (down 30dBc)



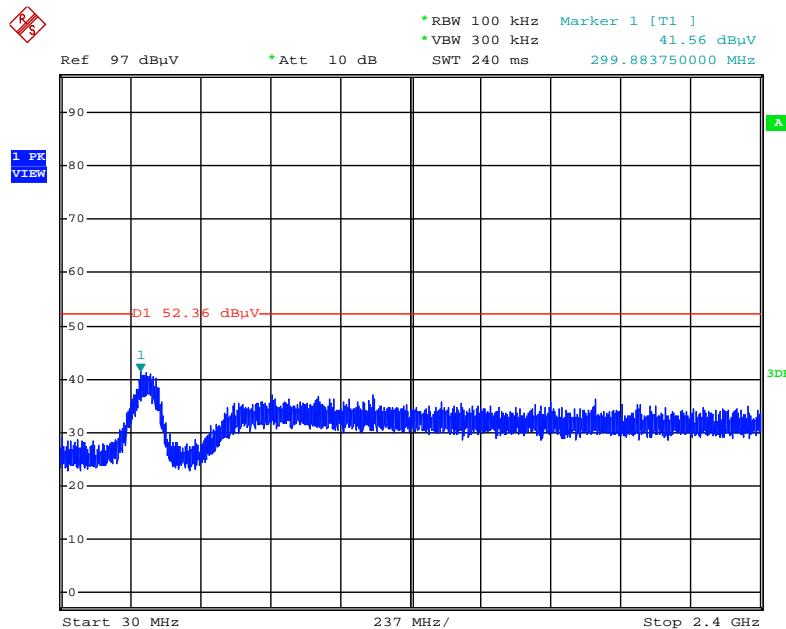
Date: 5.JAN.2016 22:04:12

### Plot on Configuration IEEE 802.11b / CH 12 / 2483.5MHz~26500MHz (down 30dBc)



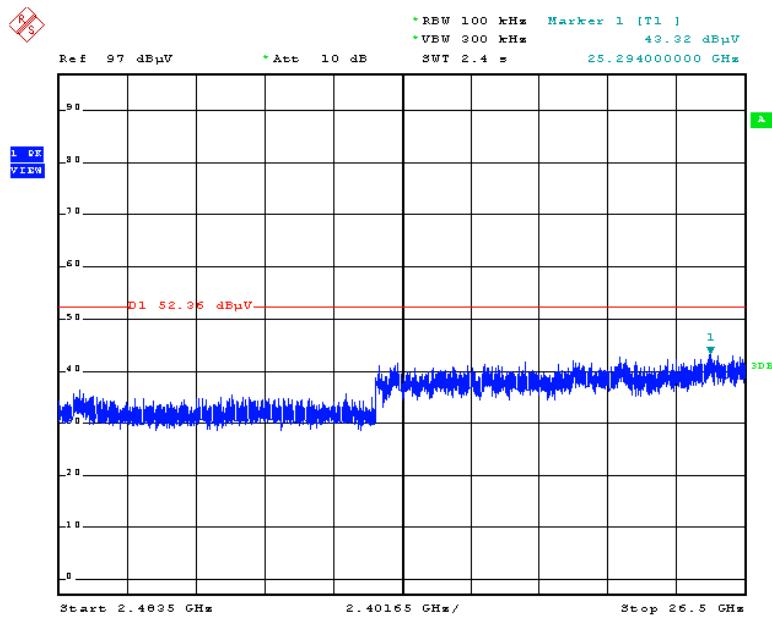
Date: 5.JAN.2016 22:04:51

### Plot on Configuration IEEE 802.11b / CH 13 / 30MHz~2400MHz (down 30dBc)



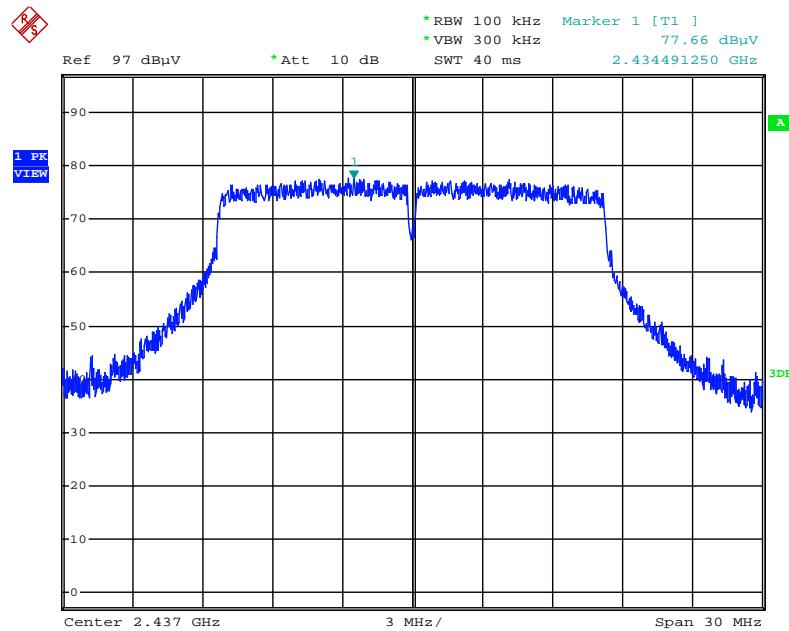
Date: 5.JAN.2016 22:05:32

### Plot on Configuration IEEE 802.11b / CH 13 / 2483.5MHz~26500MHz (down 30dBc)



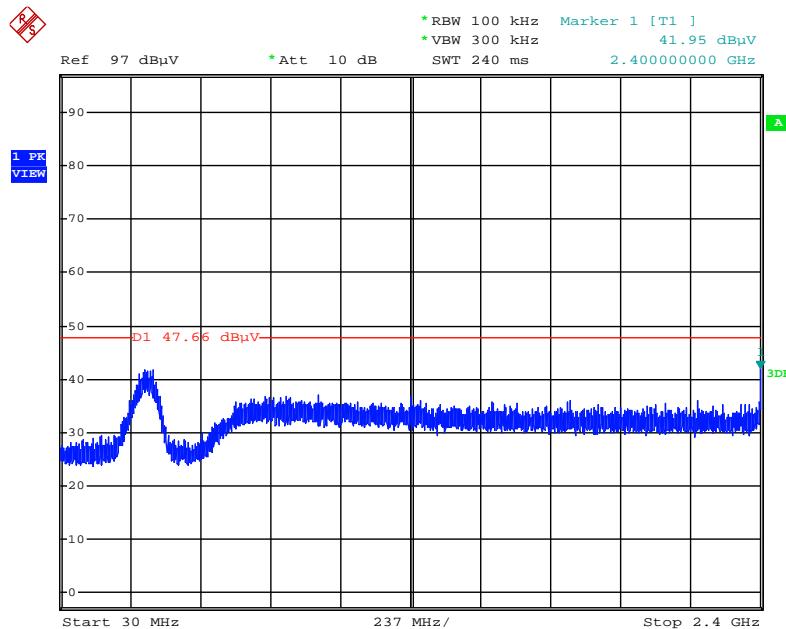
Date: 5.JAN.2016 22:06:06

**Plot on Configuration IEEE 802.11g / Reference Level**



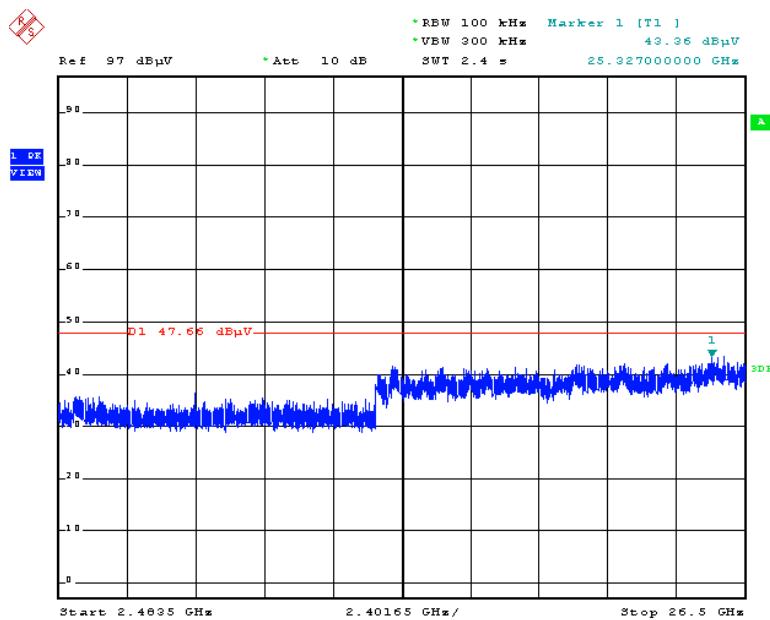
Date: 5.JAN.2016 22:07:45

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



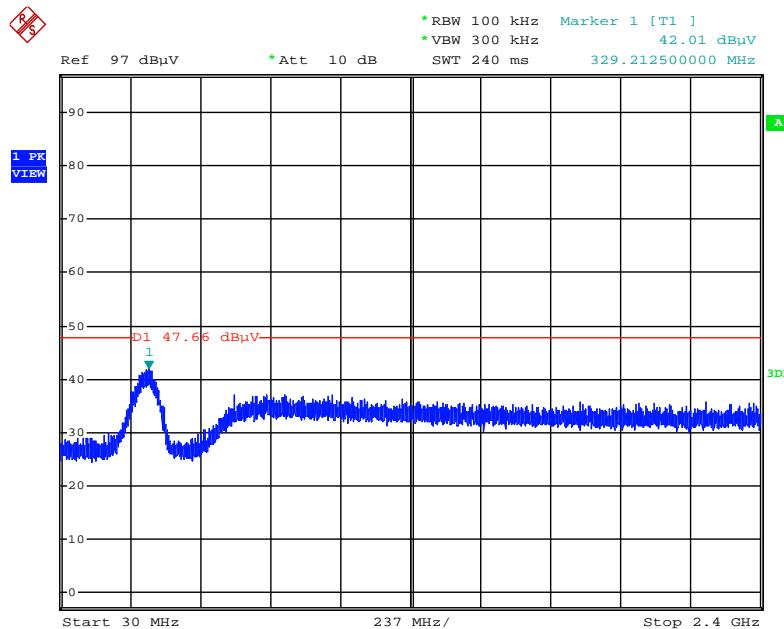
Date: 5.JAN.2016 22:08:52

### Plot on Configuration IEEE 802.11g / CH 1 / 2483.5MHz~26500MHz (down 30dBc)



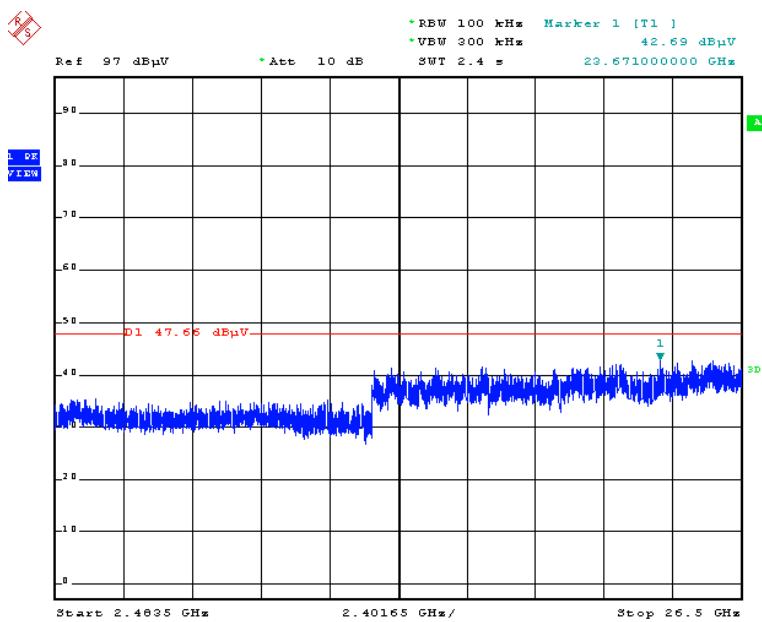
Date: 5.JAN.2016 22:09:24

### Plot on Configuration IEEE 802.11g / CH 11 / 30MHz~2400MHz (down 30dBc)



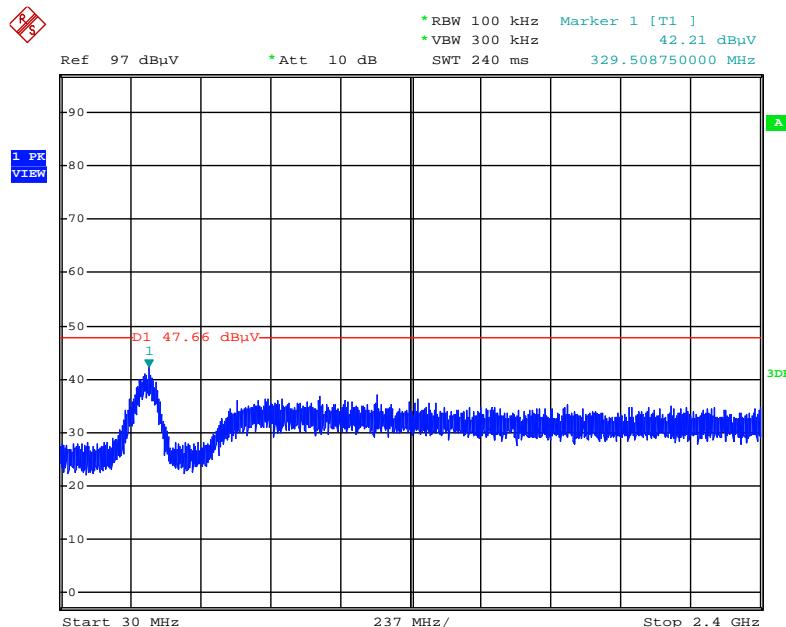
Date: 5.JAN.2016 22:26:57

### Plot on Configuration IEEE 802.11g / CH 11 / 2483.5MHz~26500MHz (down 30dBc)



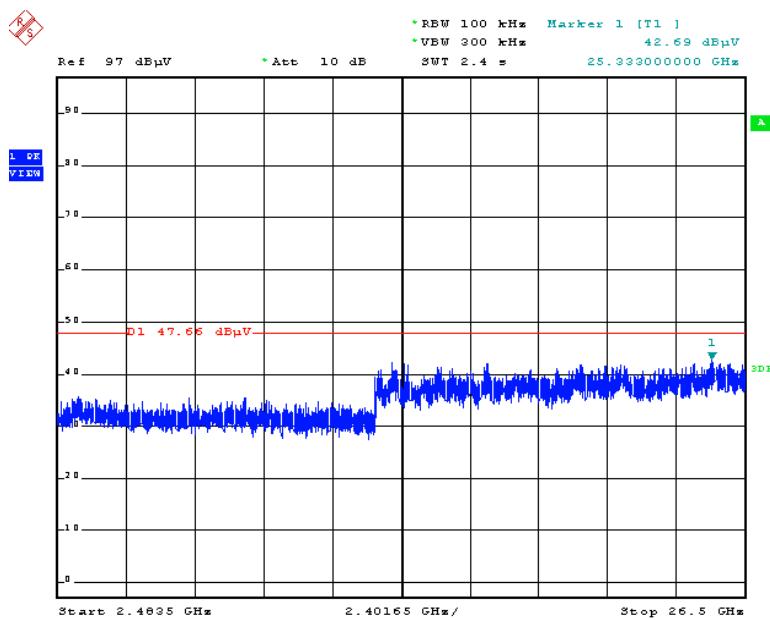
Date: 5.JAN.2016 22:27:23

### Plot on Configuration IEEE 802.11g / CH 12 / 30MHz~2400MHz (down 30dBc)



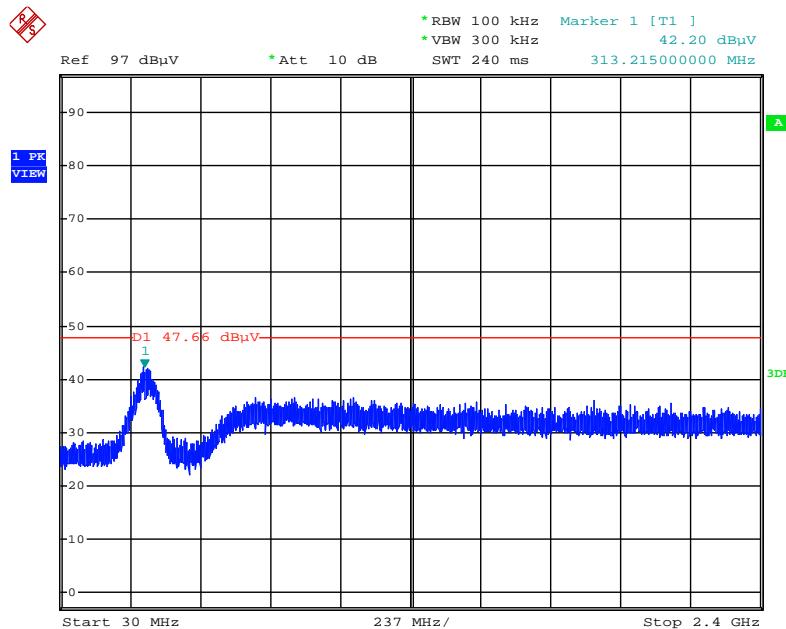
Date: 5.JAN.2016 22:30:33

### Plot on Configuration IEEE 802.11g / CH 12 / 2483.5MHz~26500MHz (down 30dBc)



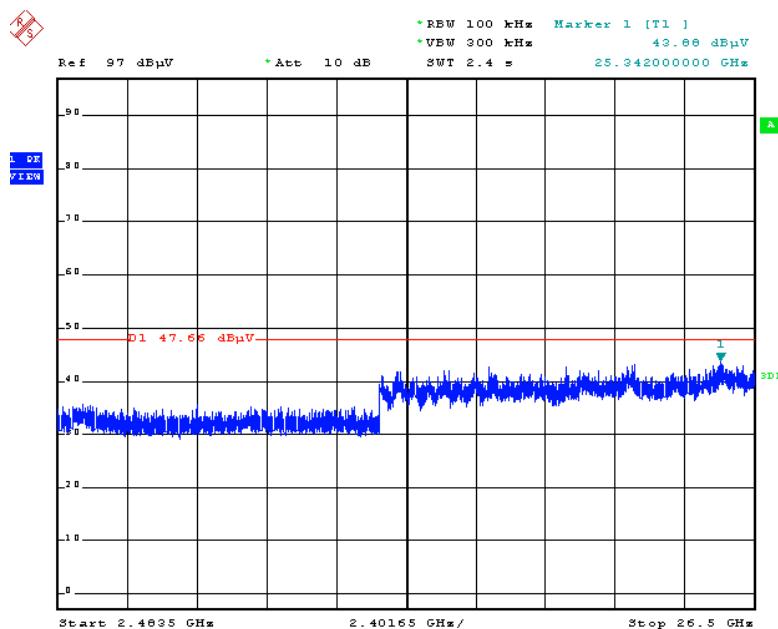
Date: 5.JAN.2016 22:31:01

### Plot on Configuration IEEE 802.11g / CH 13 / 30MHz~2400MHz (down 30dBc)



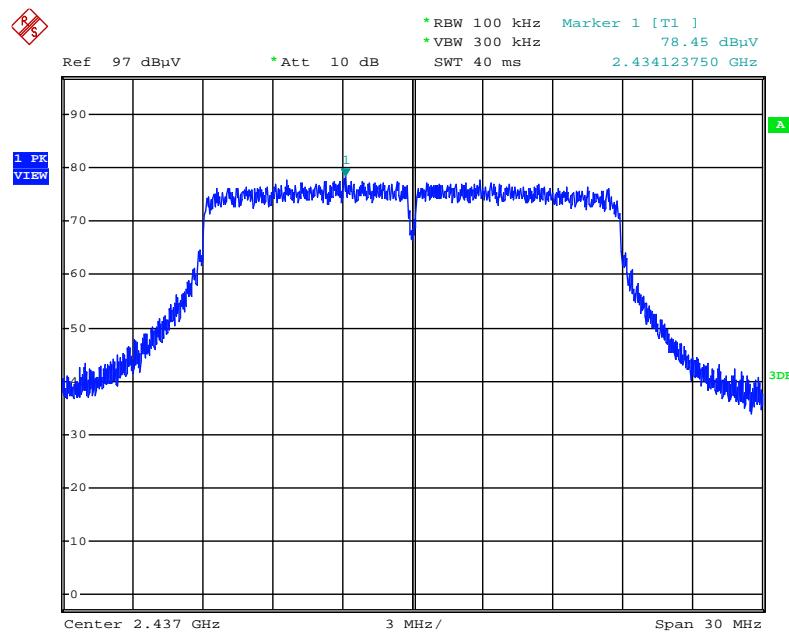
Date: 5.JAN.2016 22:31:39

### Plot on Configuration IEEE 802.11g / CH 13 / 2483.5MHz~26500MHz (down 30dBc)



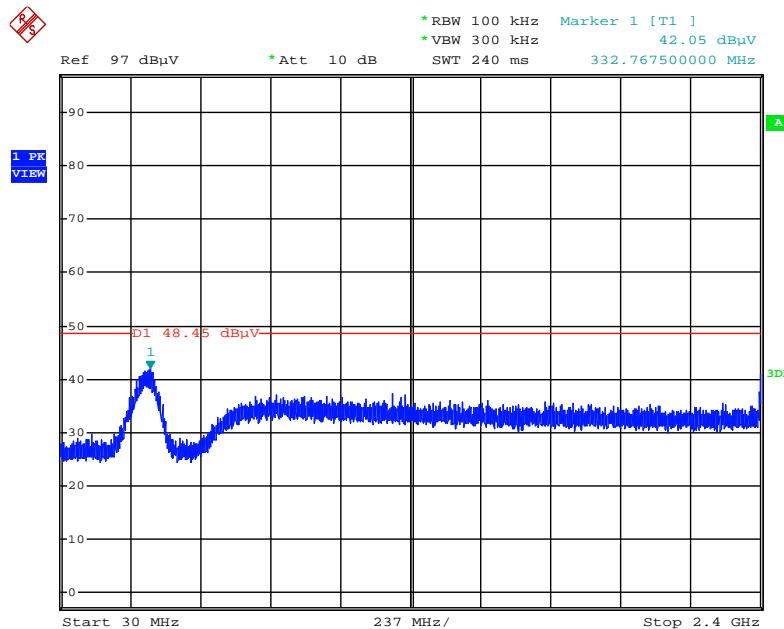
Date: 5.JAN.2016 22:32:11

**Plot on Configuration IEEE 802.11n MCS0 HT20 / Reference Level**



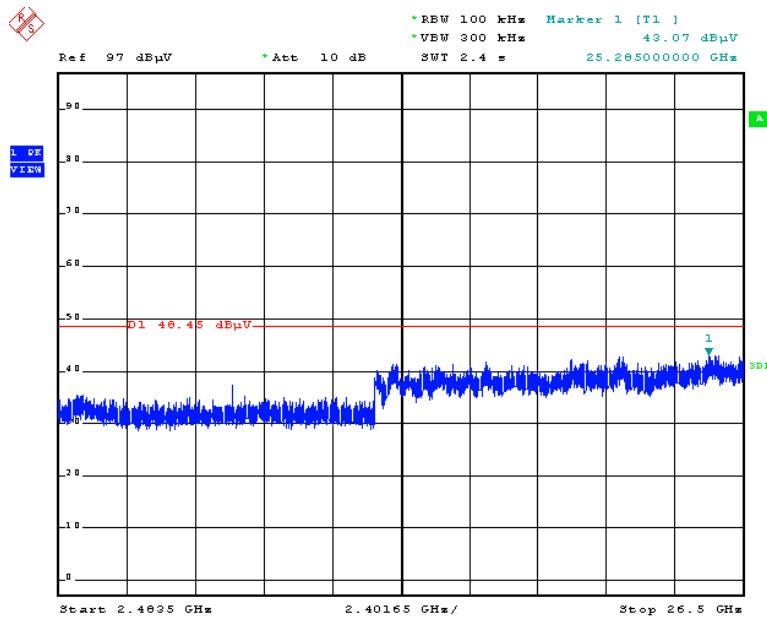
Date: 5.JAN.2016 22:33:28

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



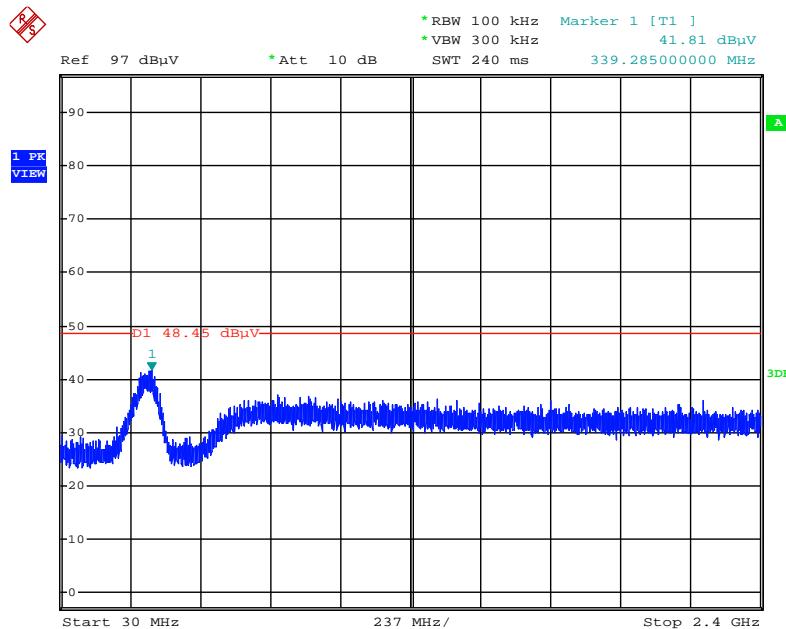
Date: 5.JAN.2016 22:34:35

### Plot on Configuration IEEE 802.11n MCS0 HT20 / CH 1 / 2483.5MHz~26500MHz (down 30dBc)



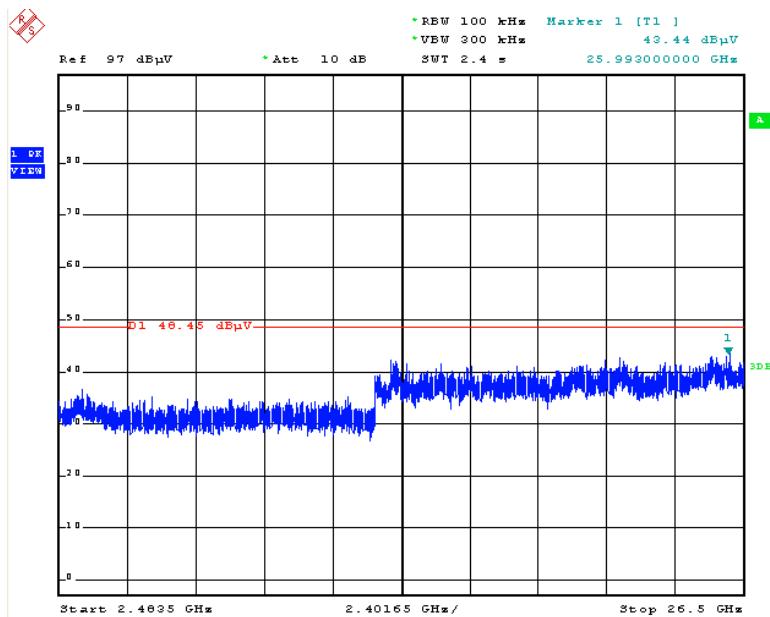
Date: 5.JAN.2016 22:34:59

### Plot on Configuration IEEE 802.11n MCS0 HT20 / CH 11 / 30MHz~2400MHz (down 30dBc)



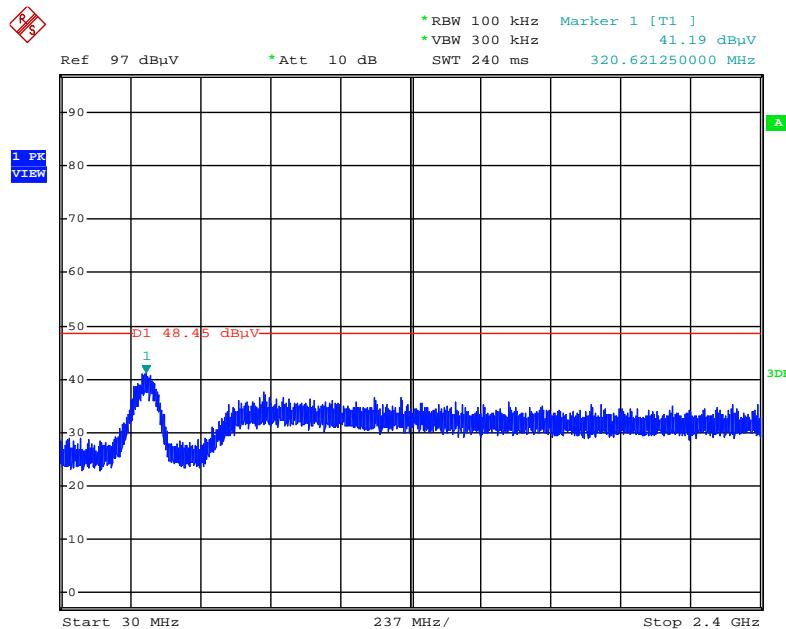
Date: 5.JAN.2016 22:35:38

### Plot on Configuration IEEE 802.11n MCS0 HT20 / CH 11 / 2483.5MHz~26500MHz (down 30dBc)



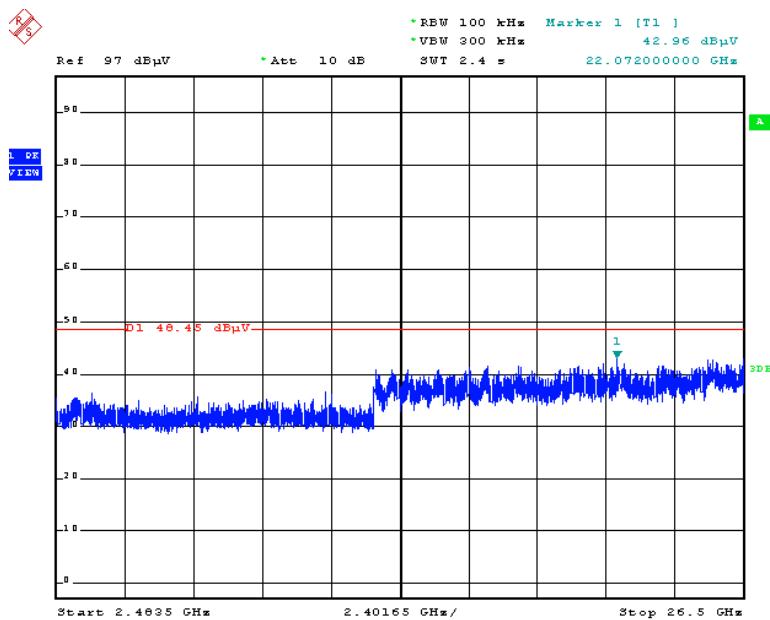
Date: 5.JAN.2016 22:36:01

### Plot on Configuration IEEE 802.11n MCS0 HT20 / CH 12 / 30MHz~2400MHz (down 30dBc)



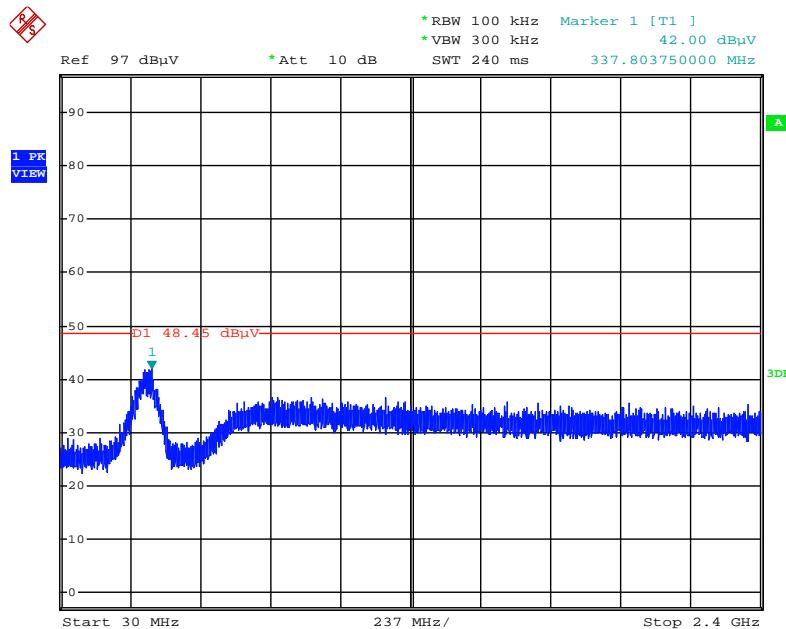
Date: 5.JAN.2016 22:36:50

### Plot on Configuration IEEE 802.11n MCS0 HT20 / CH 12 / 2483.5MHz~26500MHz (down 30dBc)



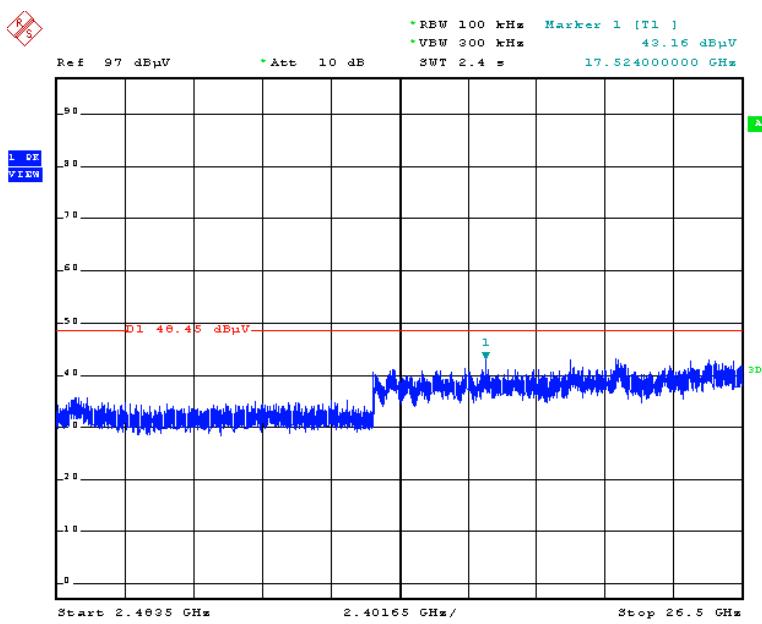
Date: 5.JAN.2016 22:37:13

### Plot on Configuration IEEE 802.11n MCS0 HT20 / CH 13 / 30MHz~2400MHz (down 30dBc)



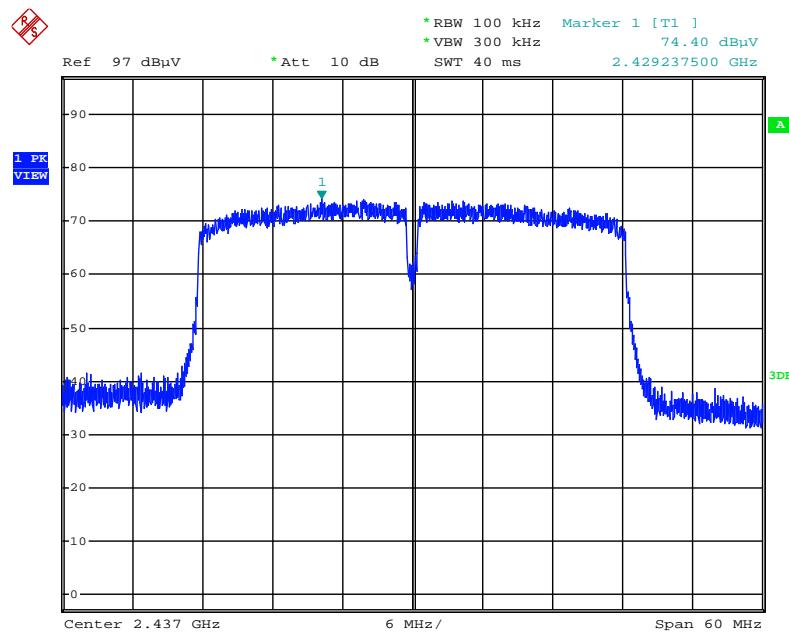
Date: 5.JAN.2016 22:37:57

### Plot on Configuration IEEE 802.11n MCS0 HT20 / CH 13 / 2483.5MHz~26500MHz (down 30dBc)



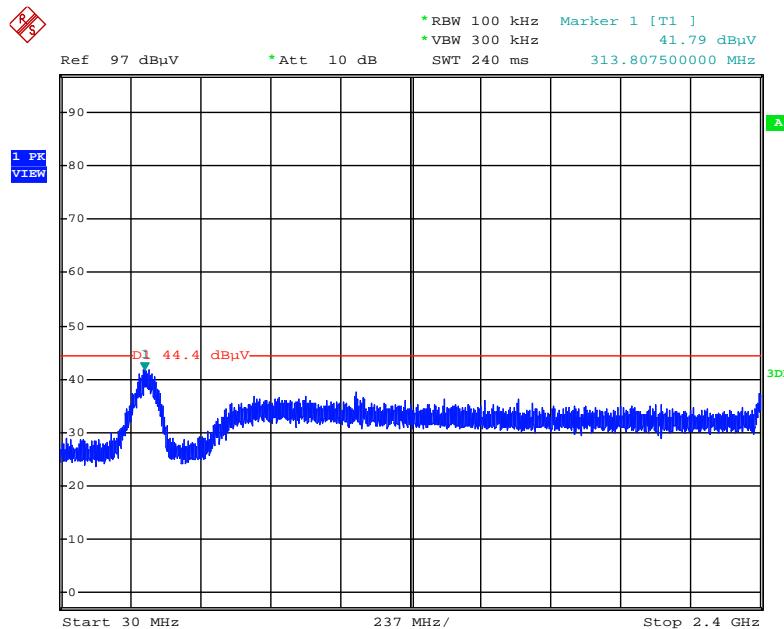
Date: 5.JAN.2016 22:38:23

**Plot on Configuration IEEE 802.11n MCS0 HT40 / Reference Level**



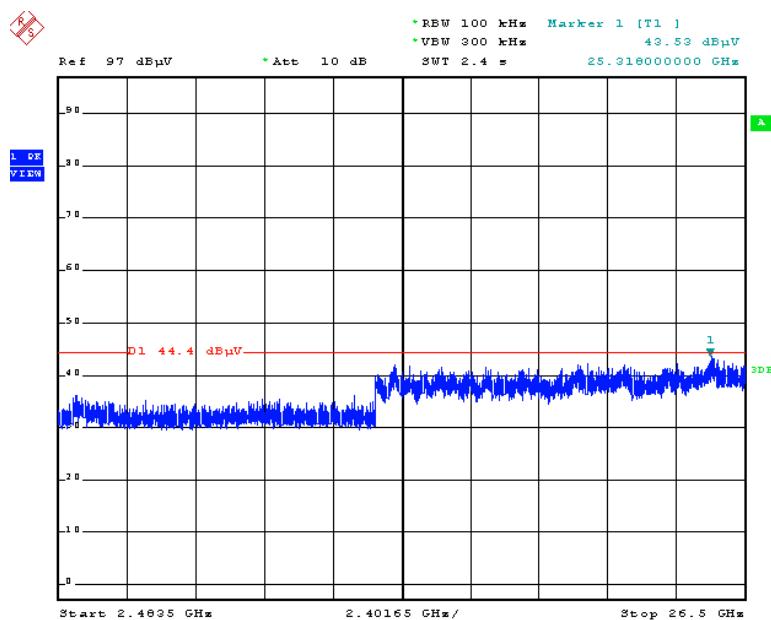
Date: 5.JAN.2016 22:40:02

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



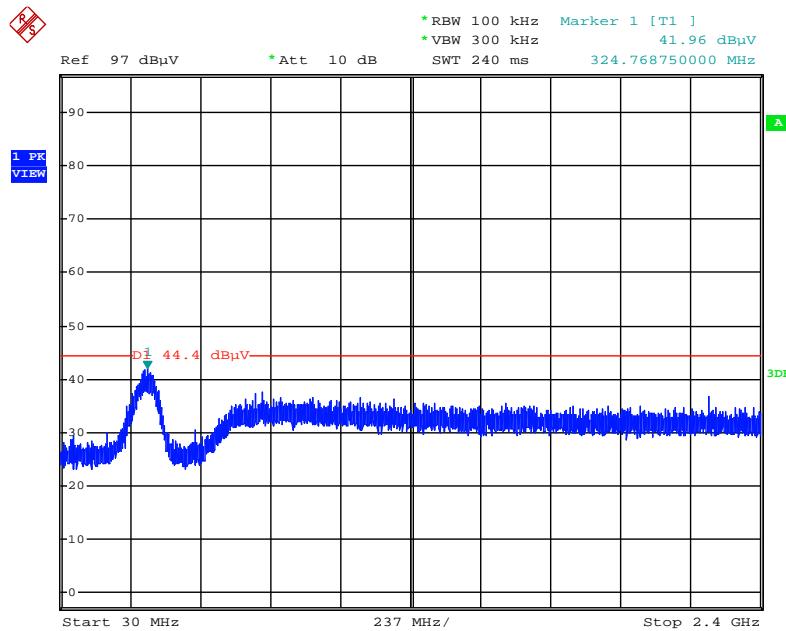
Date: 5.JAN.2016 22:41:54

### Plot on Configuration IEEE 802.11n MCS0 HT40 / CH 3 / 2483.5MHz~26500MHz (down 30dBc)



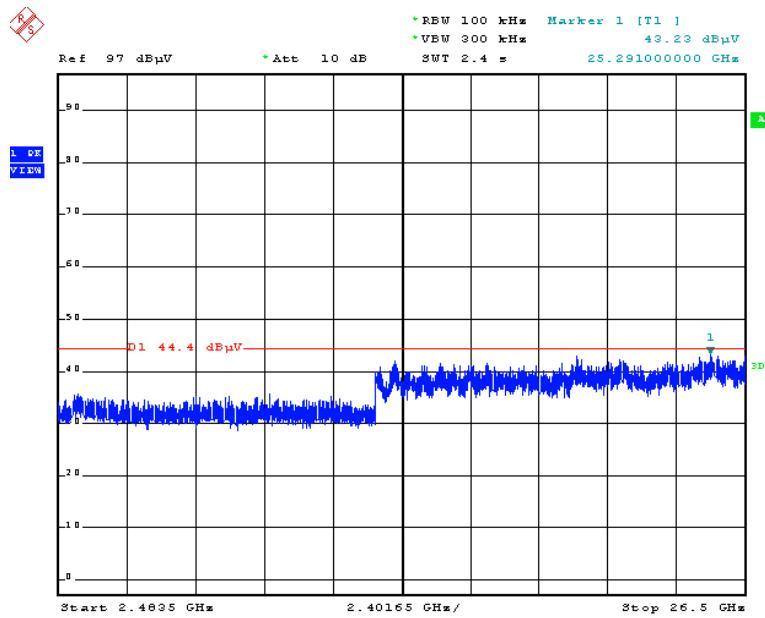
Date: 5.JAN.2016 22:42:54

### Plot on Configuration IEEE 802.11n MCS0 HT40 / CH 9 / 30MHz~2400MHz (down 30dBc)



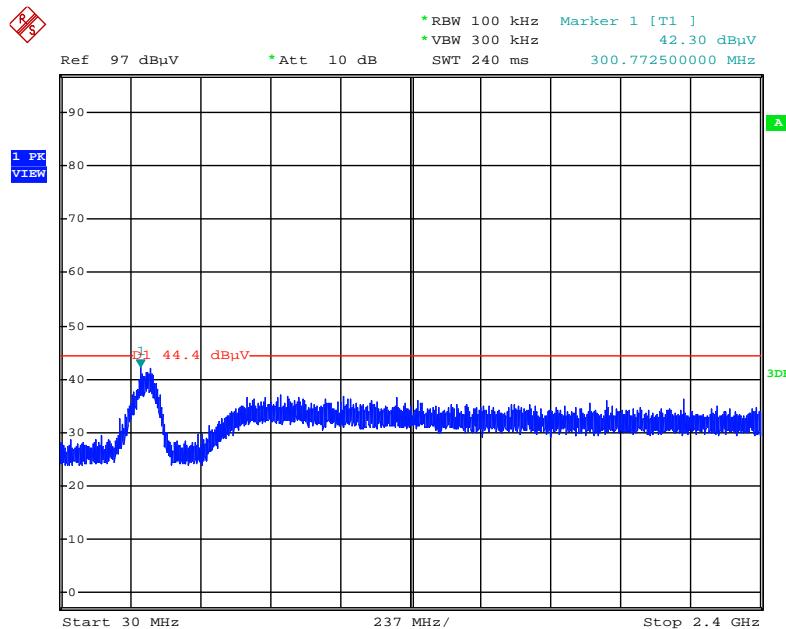
Date: 5.JAN.2016 22:44:56

### Plot on Configuration IEEE 802.11n MCS0 HT40 / CH 9 / 2483.5MHz~26500MHz (down 30dBc)



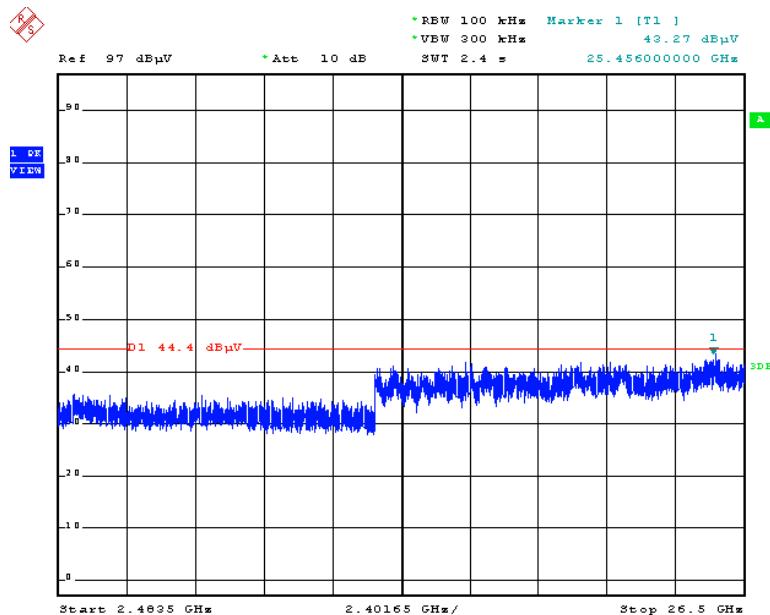
Date: 5.JAN.2016 23:14:19

### Plot on Configuration IEEE 802.11n MCS0 HT40 / CH 10 / 30MHz~2400MHz (down 30dBc)



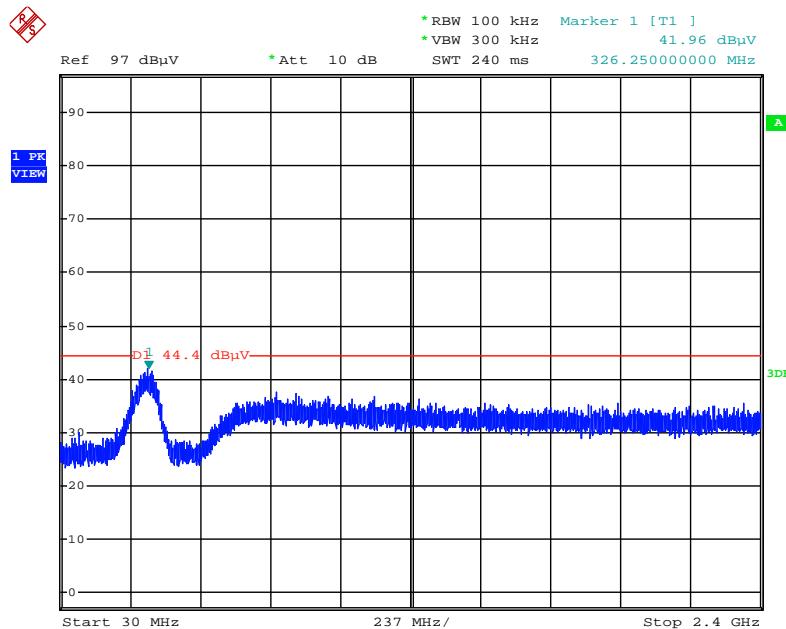
Date: 5.JAN.2016 23:15:23

### Plot on Configuration IEEE 802.11n MCS0 HT40 / CH 10 / 2483.5MHz~26500MHz (down 30dBc)



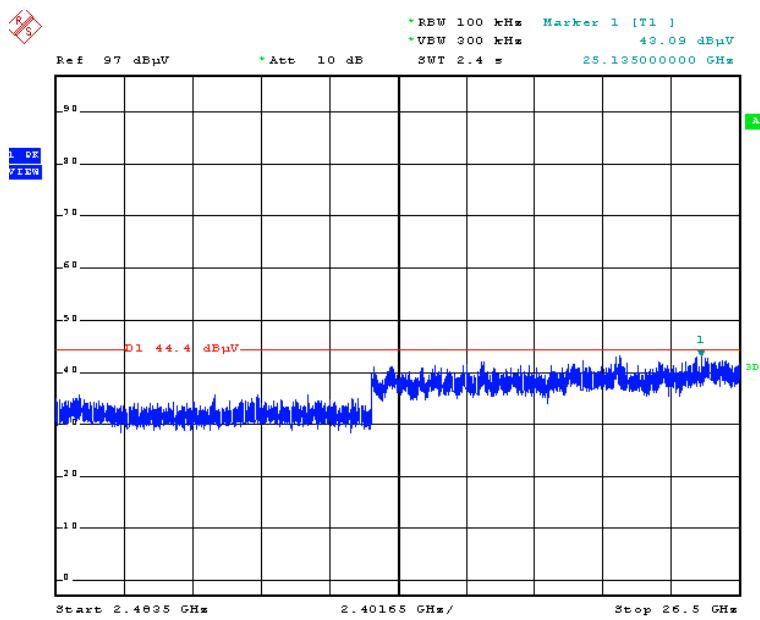
Date: 5.JAN.2016 23:15:48

### Plot on Configuration IEEE 802.11n MCS0 HT40 / CH 11 / 30MHz~2400MHz (down 30dBc)



Date: 5.JAN.2016 23:16:26

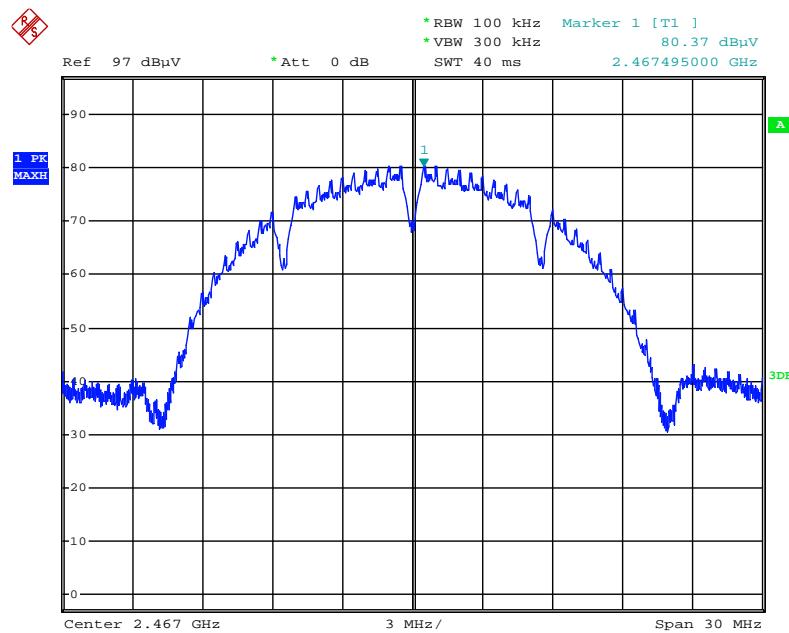
### Plot on Configuration IEEE 802.11n MCS0 HT40 / CH 11 / 2483.5MHz~26500MHz (down 30dBc)



Date: 5.JAN.2016 23:16:55

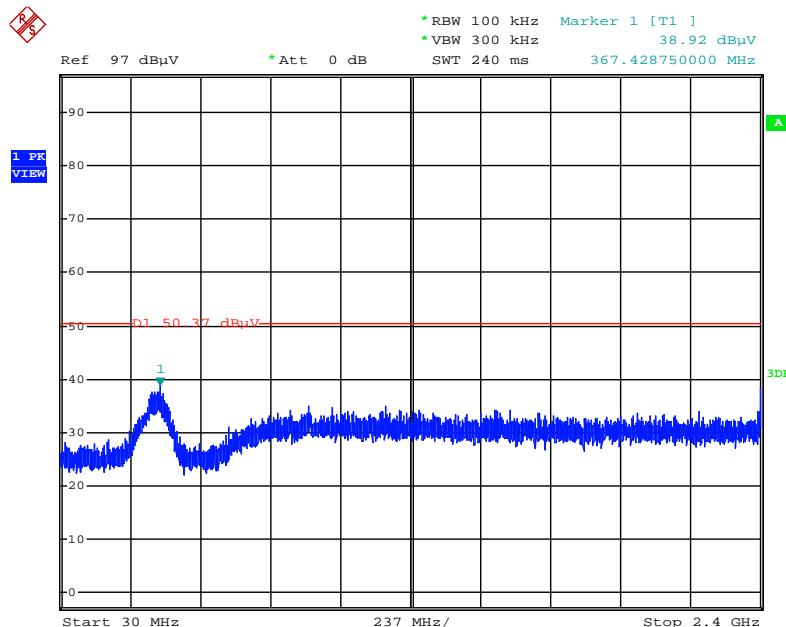
## Test Moe: Mode 4

## Plot on Configuration IEEE 802.11b / Reference Level



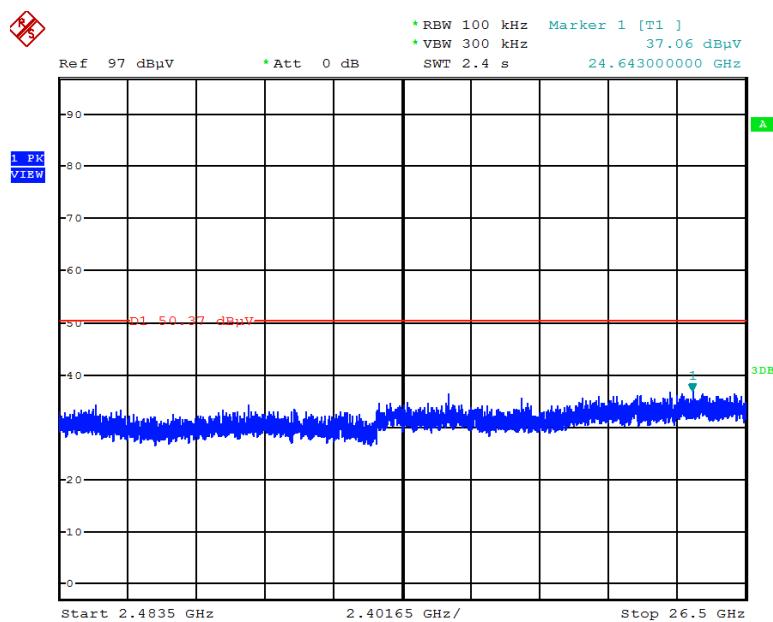
Date: 9.JAN.2016 16:54:27

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



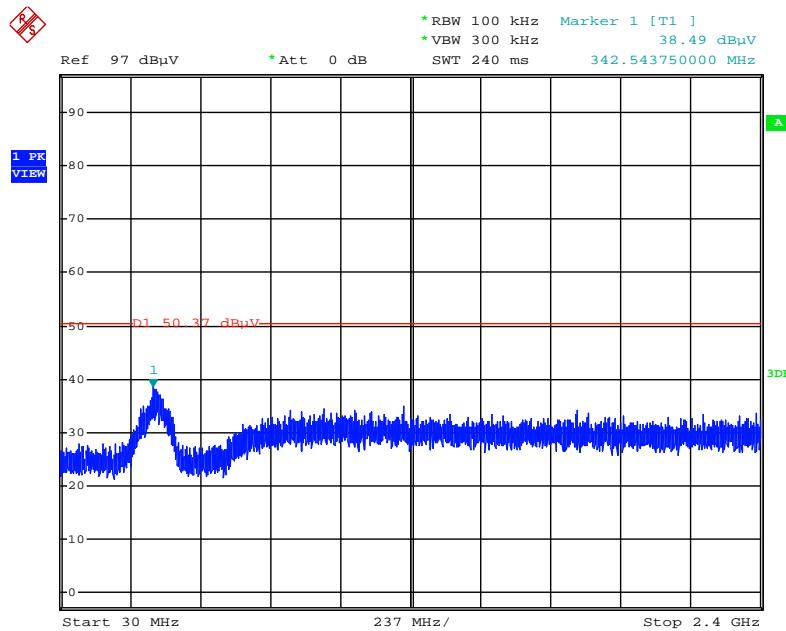
Date: 9.JAN.2016 16:55:39

### Plot on Configuration IEEE 802.11b / CH 1 / 2483.5MHz~26500MHz (down 30dBc)



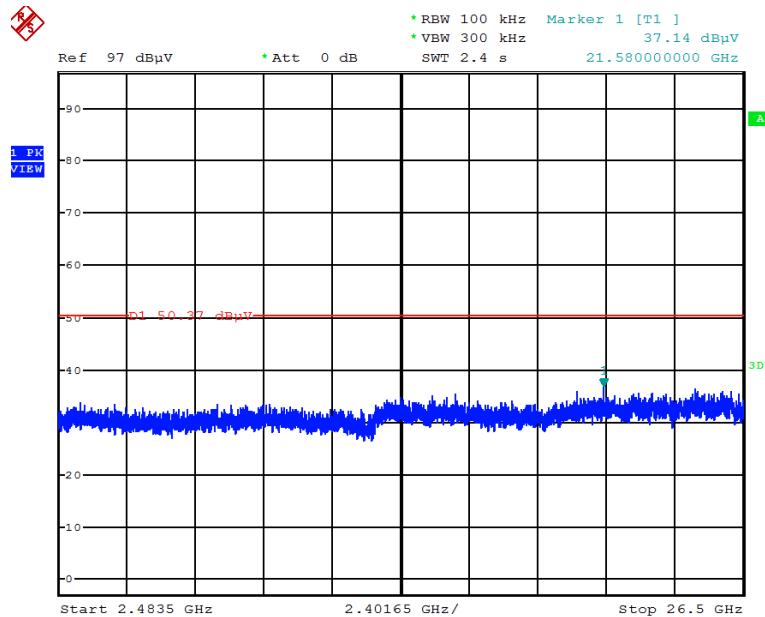
Date: 9.JAN.2016 16:56:08

### Plot on Configuration IEEE 802.11b / CH 11 / 30MHz~2400MHz (down 30dBc)

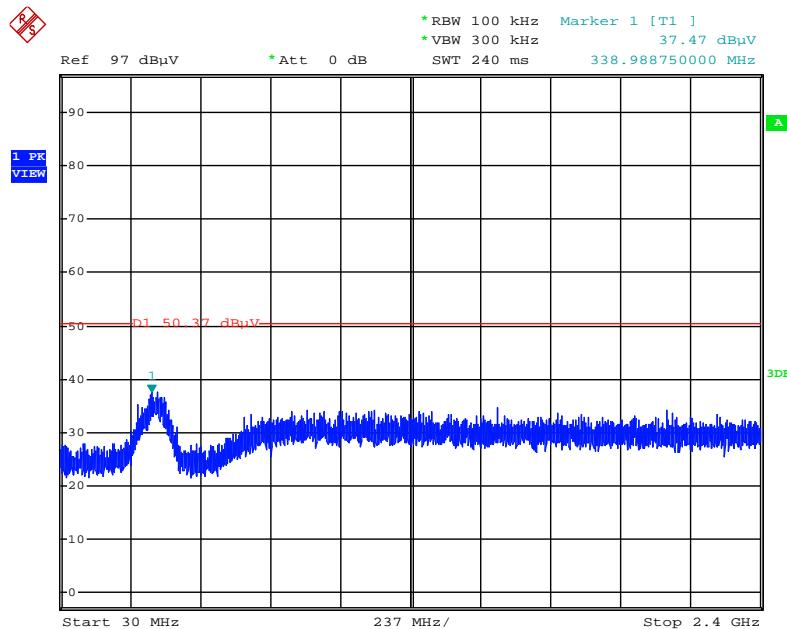


Date: 9.JAN.2016 16:57:15

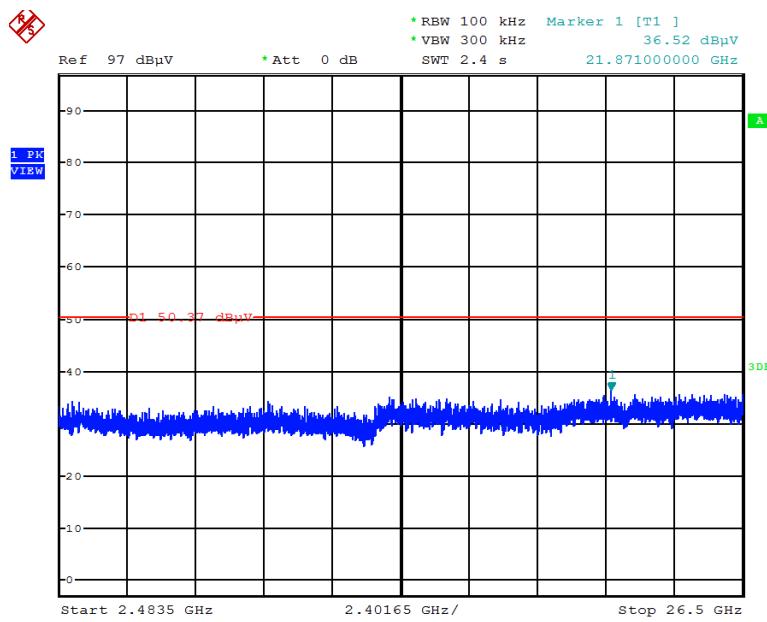
### Plot on Configuration IEEE 802.11b / CH 11 / 2483.5MHz~26500MHz (down 30dBc)



Date: 9.JAN.2016 16:56:57

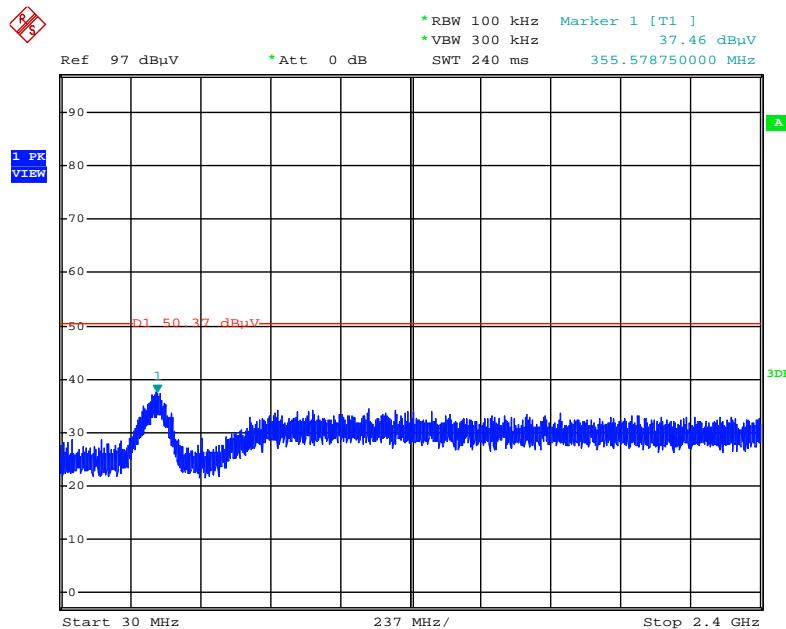
**Plot on Configuration IEEE 802.11b / CH 12 / 30MHz~2400MHz (down 30dBc)**


Date: 9.JAN.2016 16:57:46

**Plot on Configuration IEEE 802.11b / CH 12 / 2483.5MHz~26500MHz (down 30dBc)**


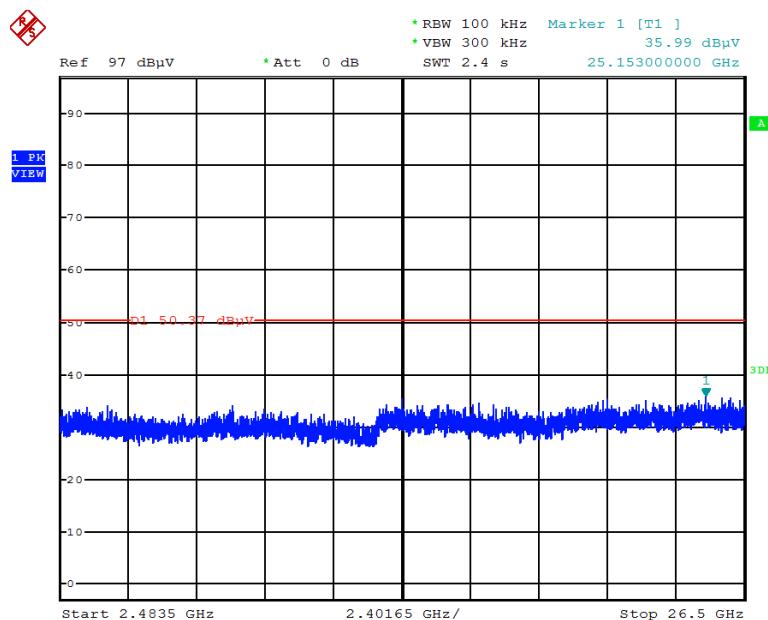
Date: 9.JAN.2016 16:58:15

### Plot on Configuration IEEE 802.11b / CH 13 / 30MHz~2400MHz (down 30dBc)



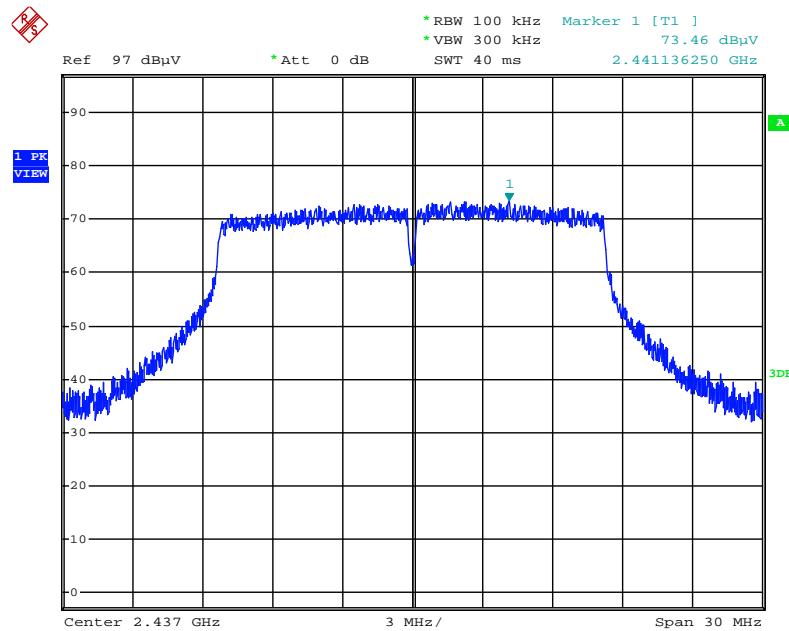
Date: 9.JAN.2016 16:59:18

### Plot on Configuration IEEE 802.11b / CH 13 / 2483.5MHz~26500MHz (down 30dBc)



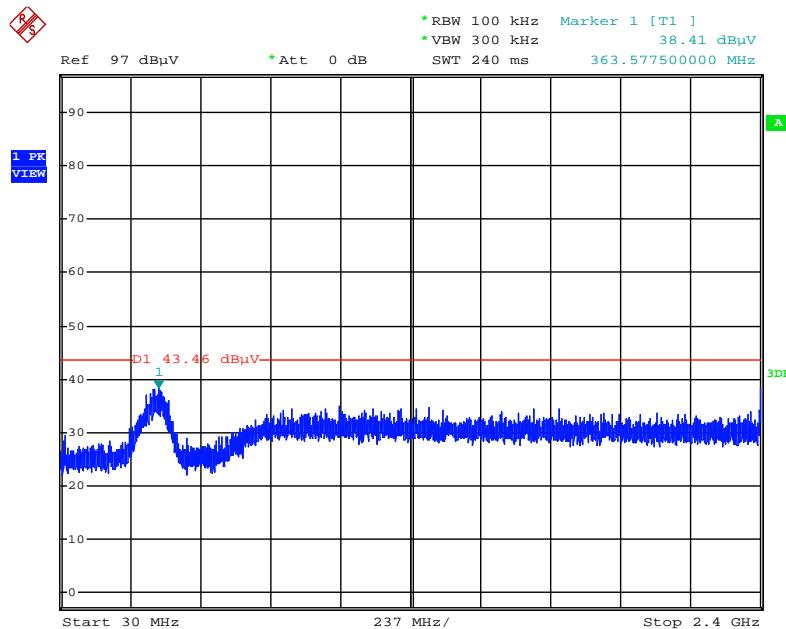
Date: 9.JAN.2016 16:58:59

**Plot on Configuration IEEE 802.11g / Reference Level**



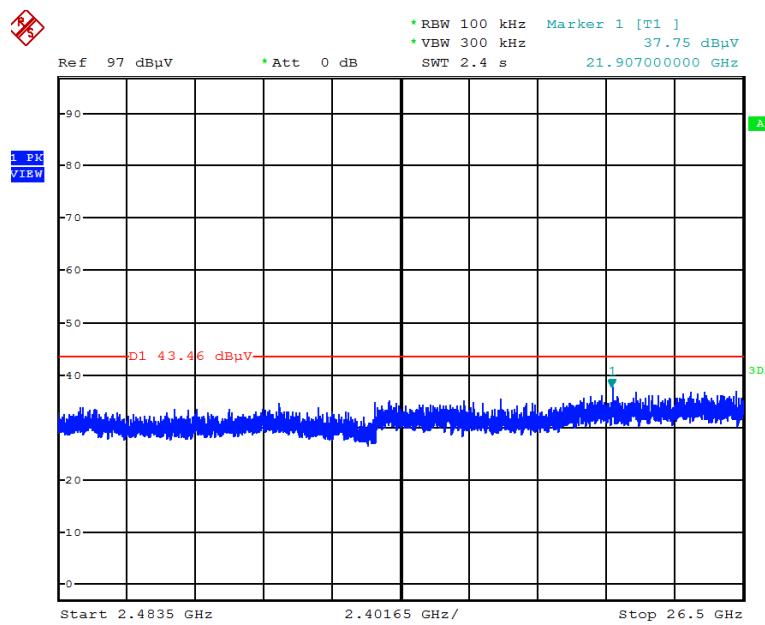
Date: 9.JAN.2016 17:00:50

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

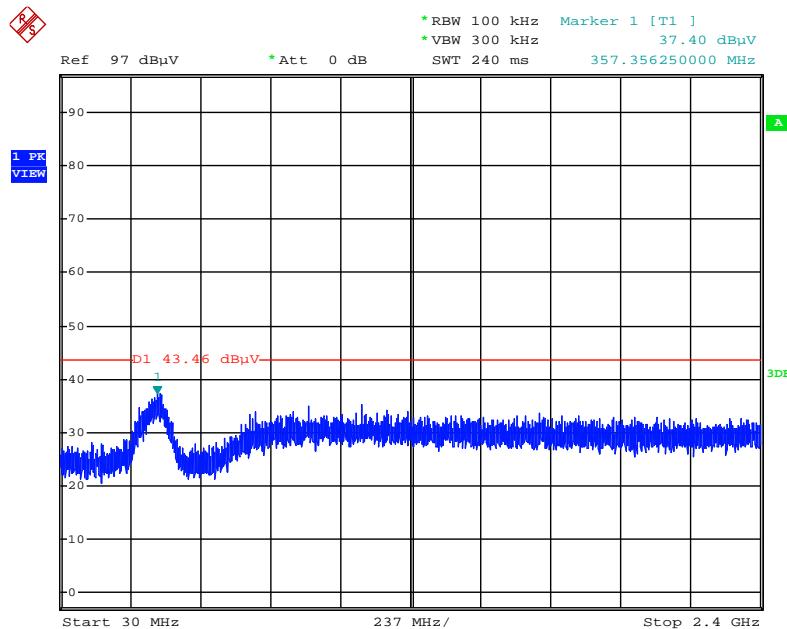


Date: 9.JAN.2016 17:02:11

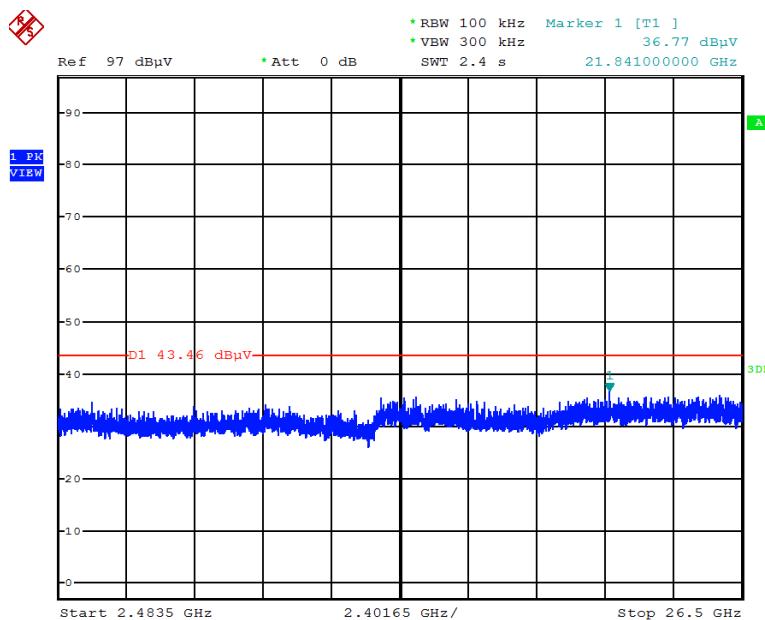
### Plot on Configuration IEEE 802.11g / CH 1 / 2483.5MHz~26500MHz (down 30dBc)



Date: 9.JAN.2016 17:02:45

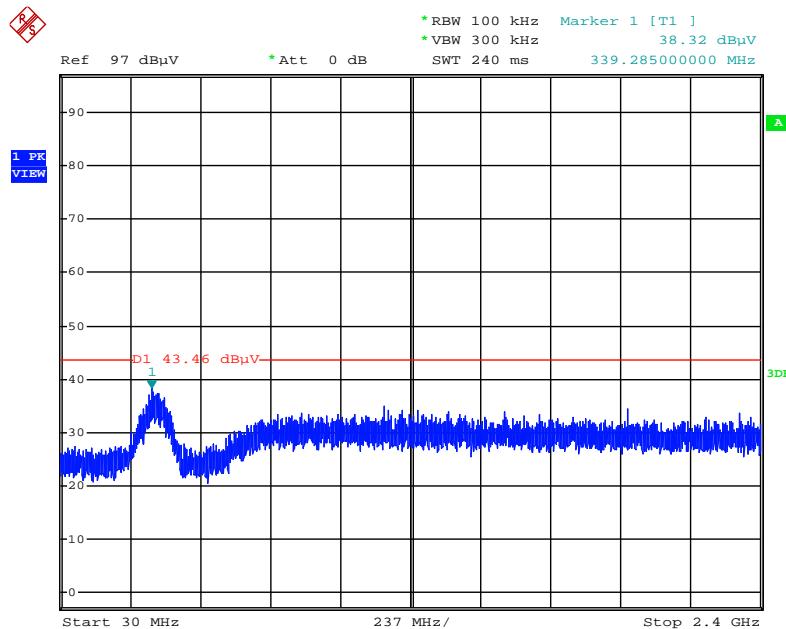
**Plot on Configuration IEEE 802.11g / CH 11 / 30MHz~2400MHz (down 30dBc)**


Date: 9.JAN.2016 17:03:38

**Plot on Configuration IEEE 802.11g / CH 11 / 2483.5MHz~26500MHz (down 30dBc)**


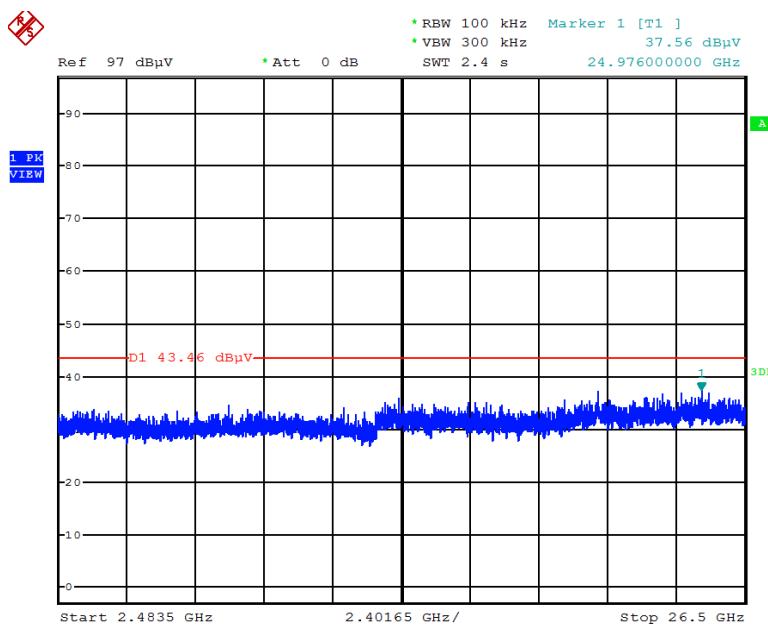
Date: 9.JAN.2016 17:03:23

### Plot on Configuration IEEE 802.11g / CH 12 / 30MHz~2400MHz (down 30dBc)

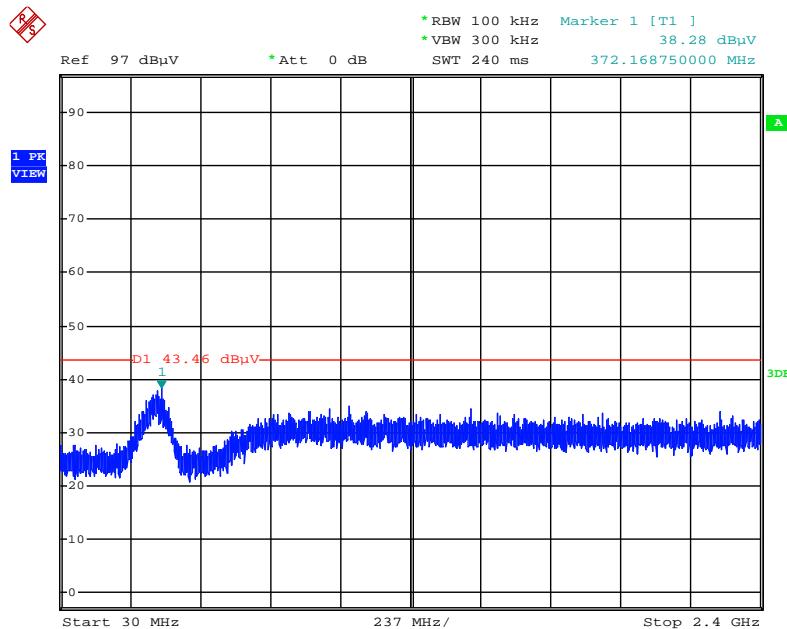


Date: 9.JAN.2016 17:23:15

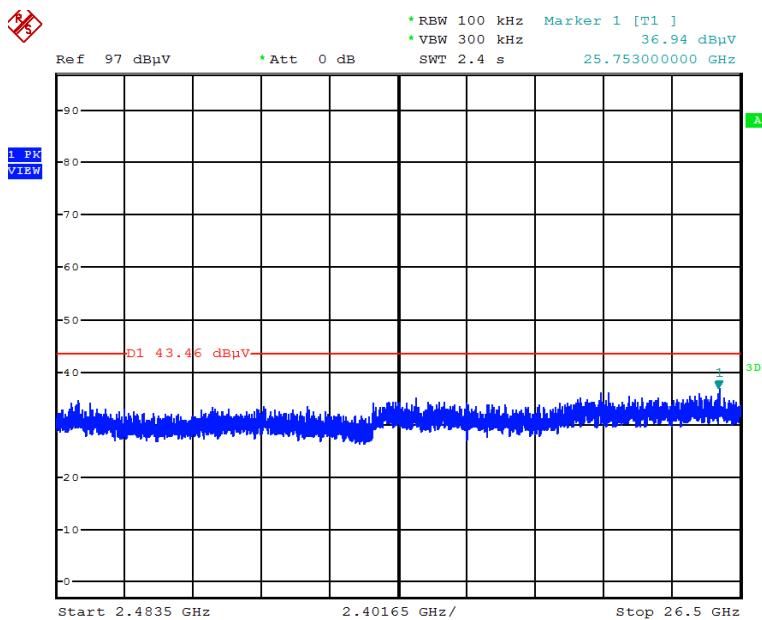
### Plot on Configuration IEEE 802.11g / CH 12 / 2483.5MHz~26500MHz (down 30dBc)



Date: 9.JAN.2016 17:05:24

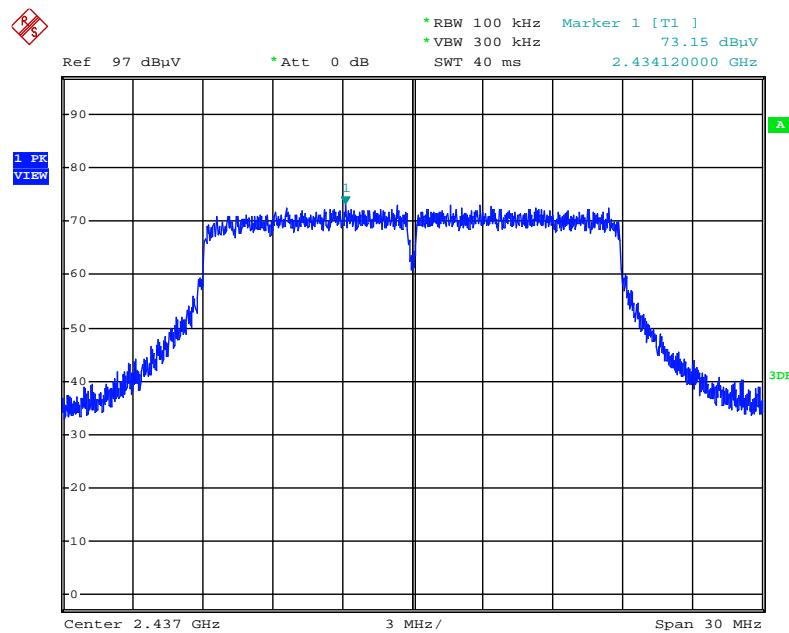
**Plot on Configuration IEEE 802.11g / CH 13 / 30MHz~2400MHz (down 30dBc)**


Date: 9.JAN.2016 17:06:15

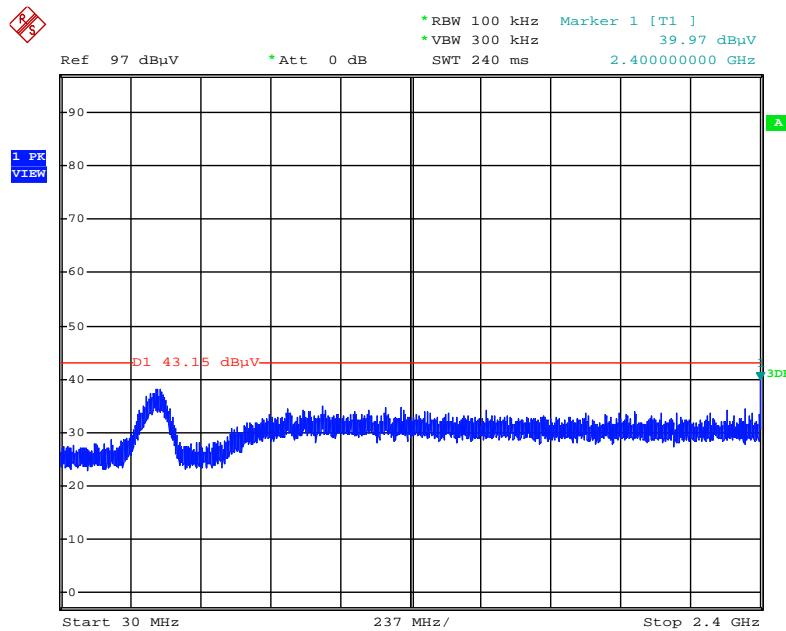
**Plot on Configuration IEEE 802.11g / CH 13 / 2483.5MHz~26500MHz (down 30dBc)**


Date: 9.JAN.2016 17:05:58

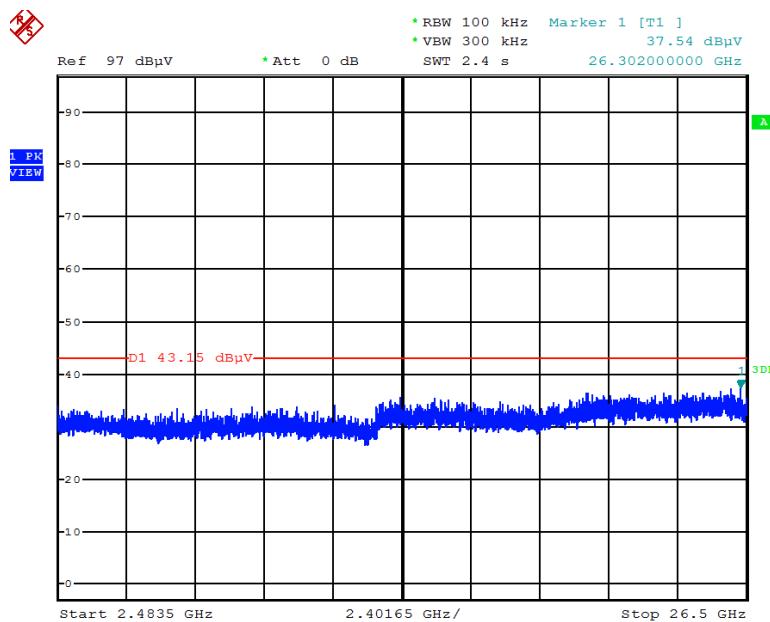
**Plot on Configuration IEEE 802.11n MCS0 HT20 / Reference Level**



Date: 9.JAN.2016 17:08:34

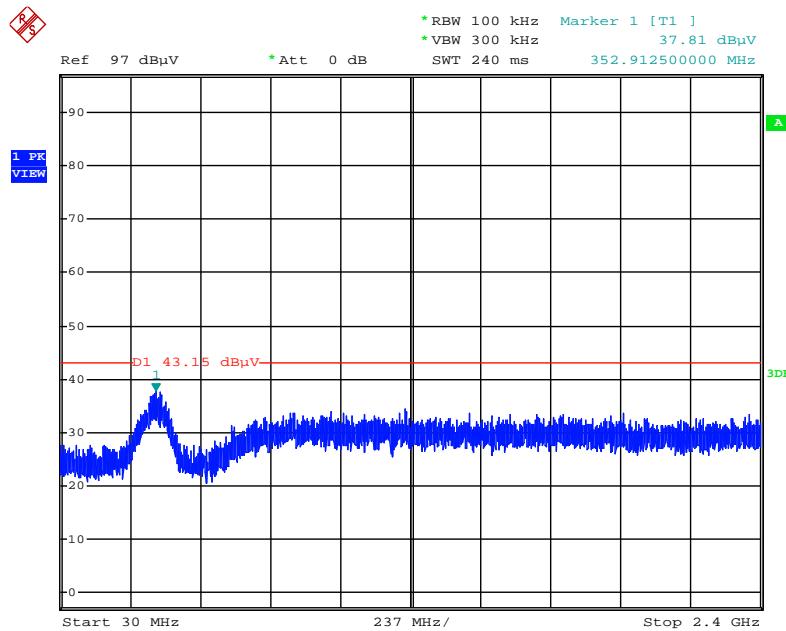
**Plot on Configuration IEEE 802.11n MCS0 HT20 / CH 1 / 30MHz~2400MHz (down 30dBc)**


Date: 9.JAN.2016 17:09:27

**Plot on Configuration IEEE 802.11n MCS0 HT20 / CH 1 / 2483.5MHz~26500MHz (down 30dBc)**


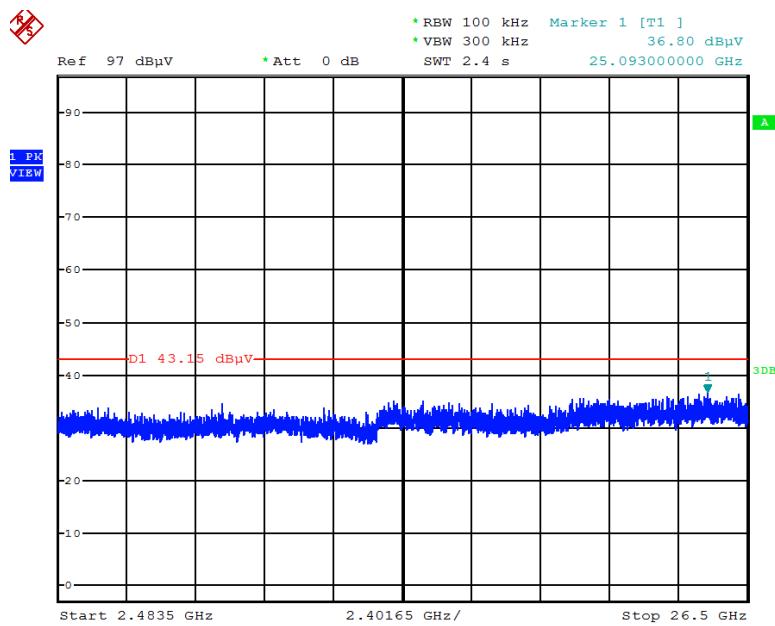
Date: 9.JAN.2016 17:09:54

### Plot on Configuration IEEE 802.11n MCS0 HT20 / CH 11 / 30MHz~2400MHz (down 30dBc)



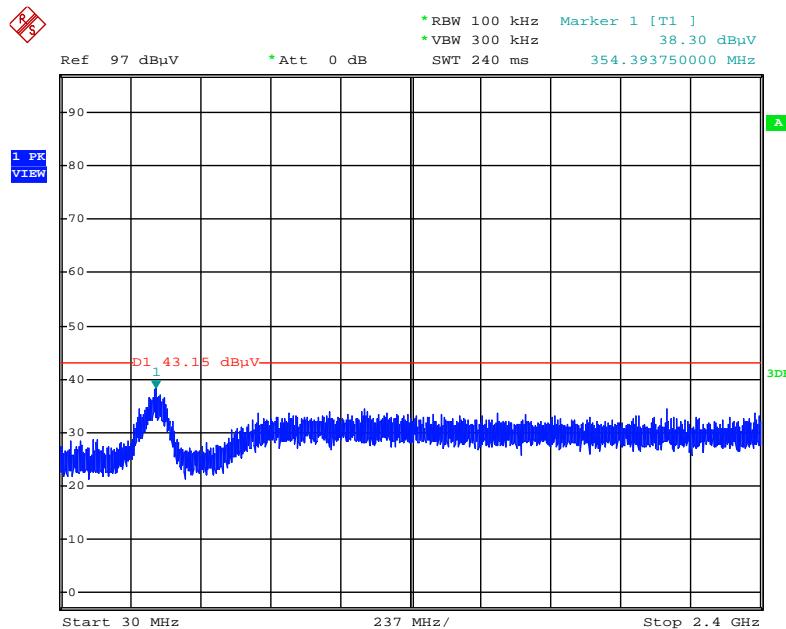
Date: 9.JAN.2016 17:10:54

### Plot on Configuration IEEE 802.11n MCS0 HT20 / CH 11 / 2483.5MHz~26500MHz (down 30dBc)



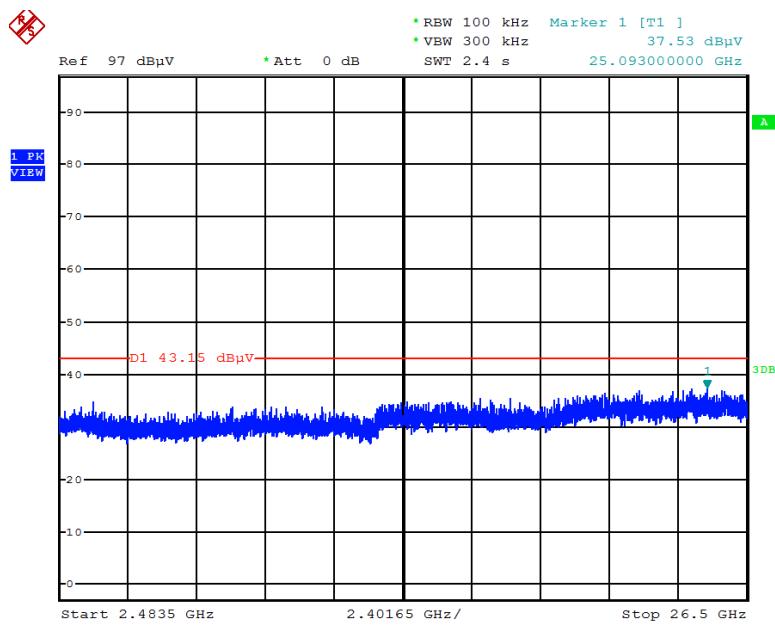
Date: 9.JAN.2016 17:10:30

### Plot on Configuration IEEE 802.11n MCS0 HT20 / CH 12 / 30MHz~2400MHz (down 30dBc)



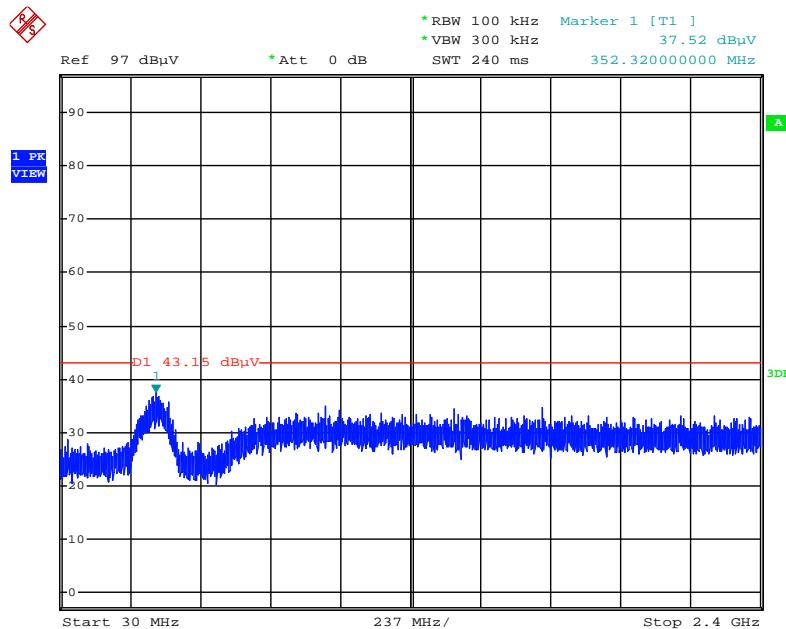
Date: 9.JAN.2016 17:14:39

### Plot on Configuration IEEE 802.11n MCS0 HT20 / CH 12 / 2483.5MHz~26500MHz (down 30dBc)



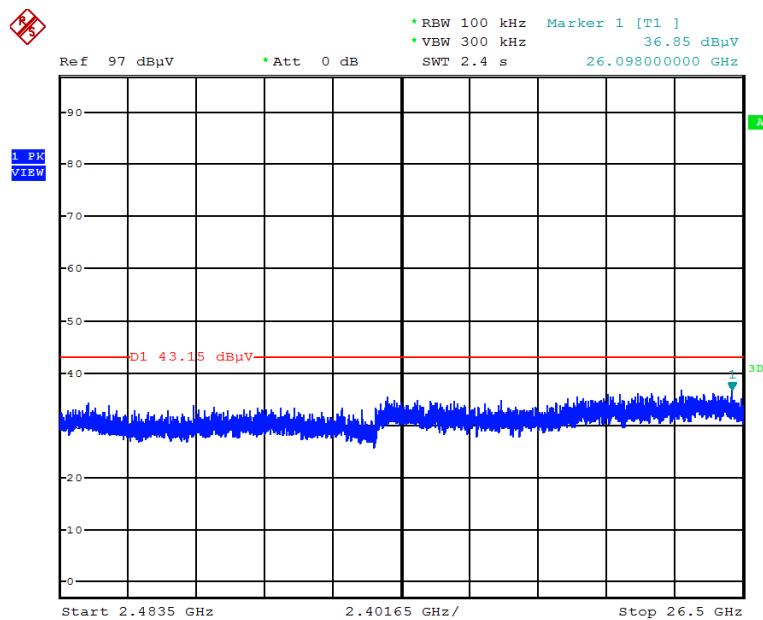
Date: 9.JAN.2016 17:15:05

### Plot on Configuration IEEE 802.11n MCS0 HT20 / CH 13 / 30MHz~2400MHz (down 30dBc)



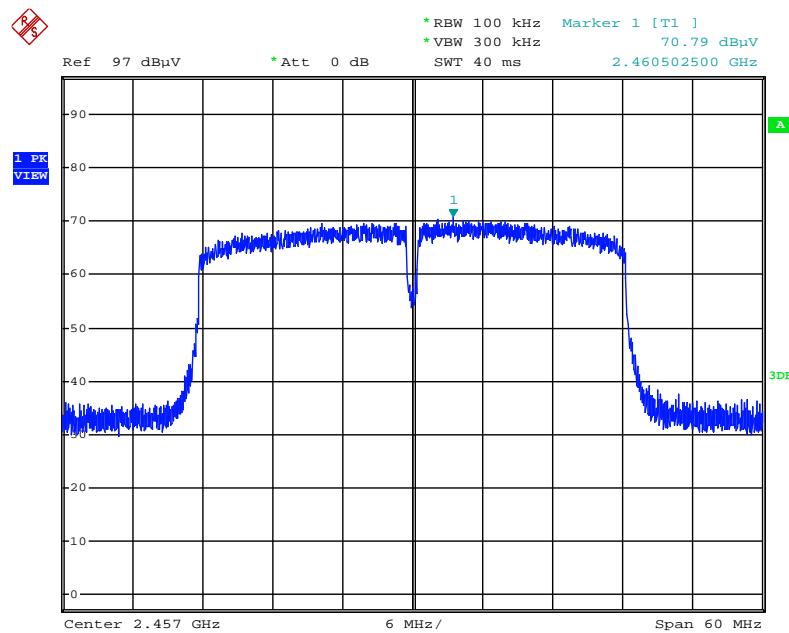
Date: 9.JAN.2016 17:16:17

### Plot on Configuration IEEE 802.11n MCS0 HT20 / CH 13 / 2483.5MHz~26500MHz (down 30dBc)



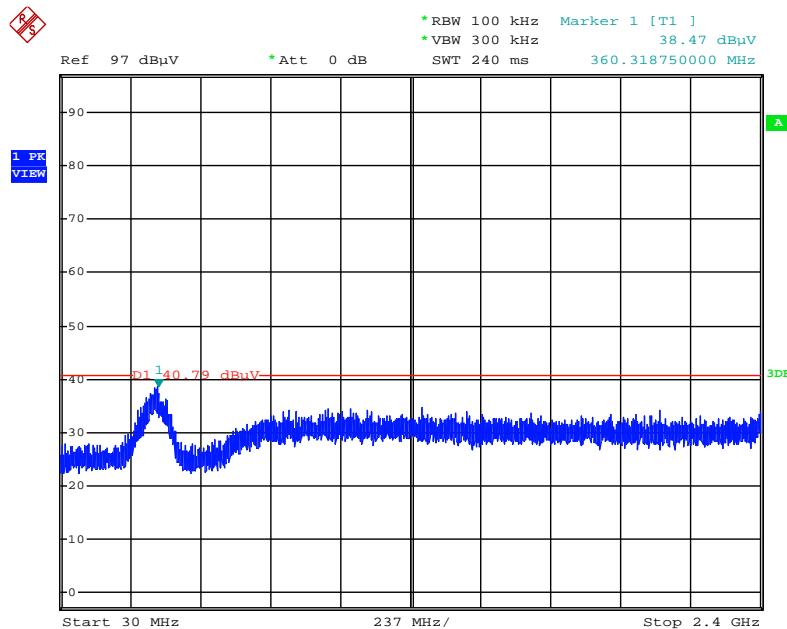
Date: 9.JAN.2016 17:15:47

**Plot on Configuration IEEE 802.11n MCS0 HT40 / Reference Level**



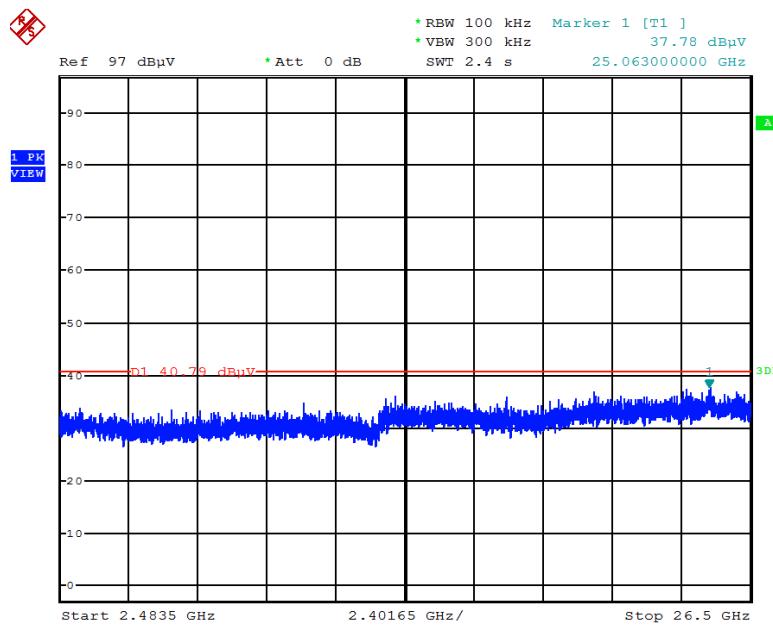
Date: 9.JAN.2016 17:17:41

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



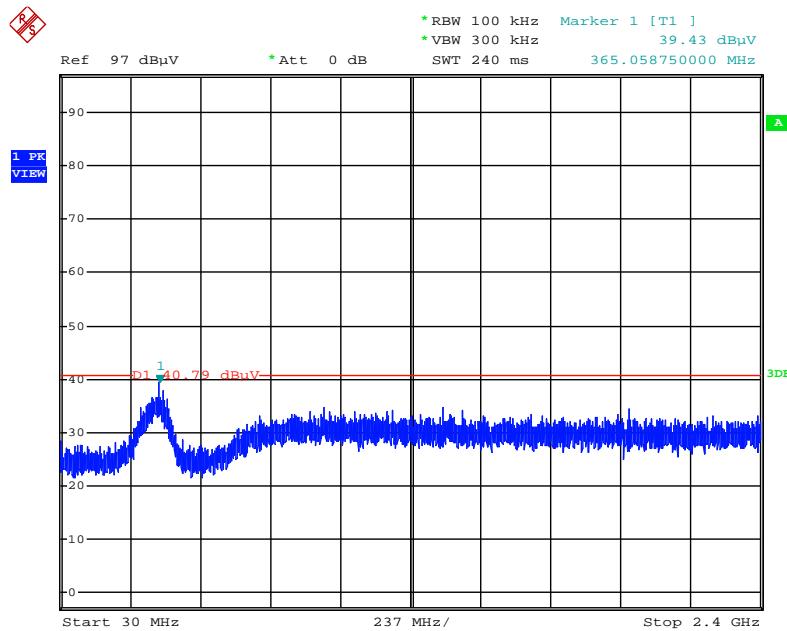
Date: 9.JAN.2016 17:18:47

### Plot on Configuration IEEE 802.11n MCS0 HT40 / CH 3 / 2483.5MHz~26500MHz (down 30dBc)



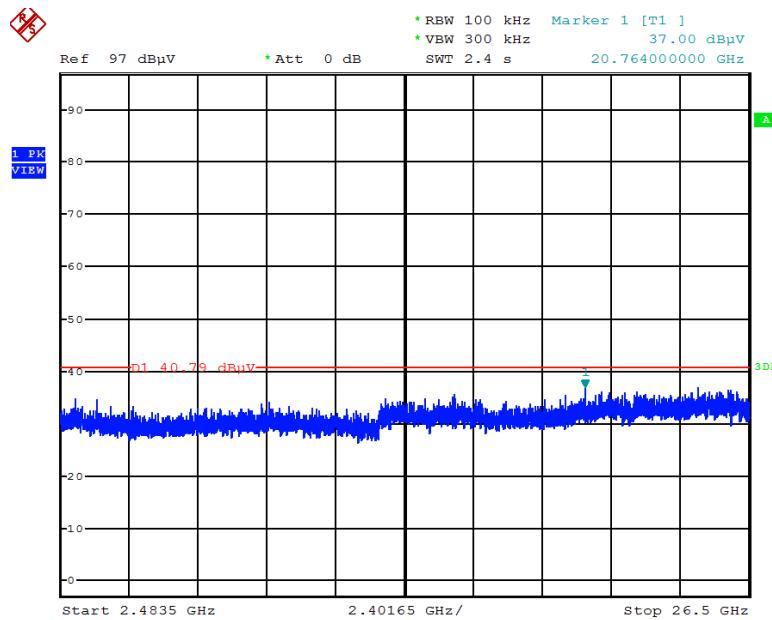
Date: 9.JAN.2016 17:19:17

### Plot on Configuration IEEE 802.11n MCS0 HT40 / CH 9 / 30MHz~2400MHz (down 30dBc)



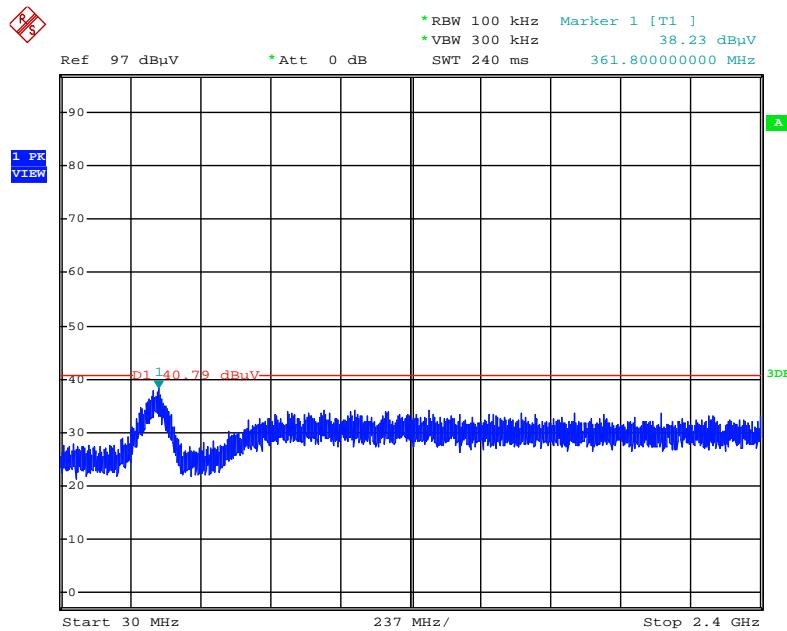
Date: 9.JAN.2016 17:20:09

### Plot on Configuration IEEE 802.11n MCS0 HT40 / CH 9 / 2483.5MHz~26500MHz (down 30dBc)



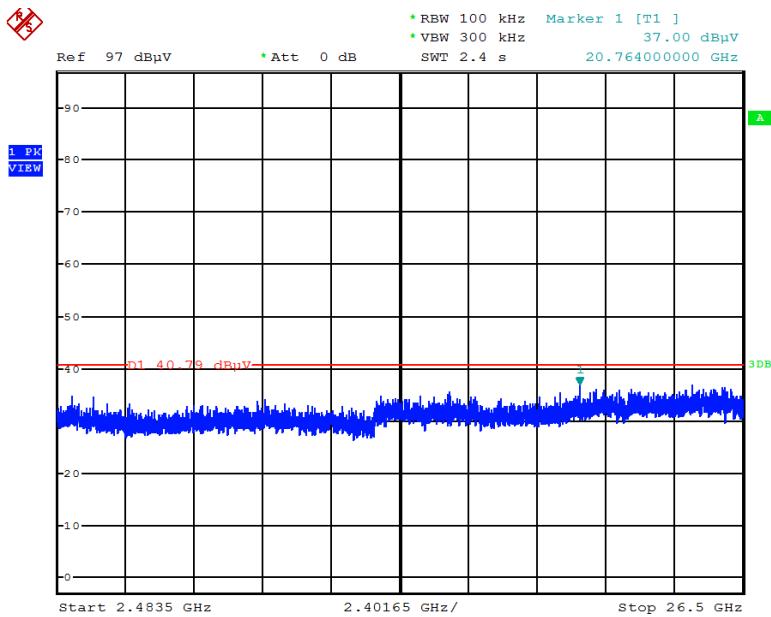
Date: 9.JAN.2016 17:19:45

### Plot on Configuration IEEE 802.11n MCS0 HT40 / CH 10 / 30MHz~2400MHz (down 30dBc)



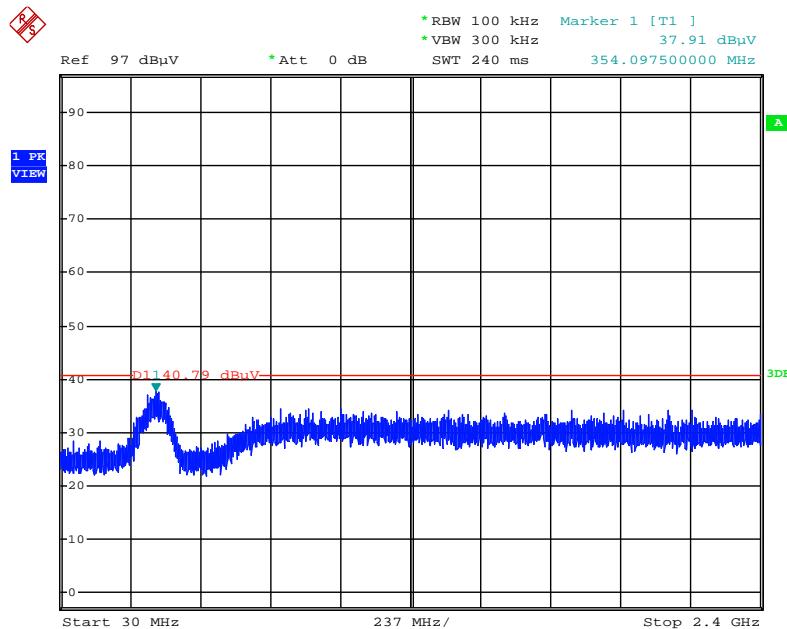
Date: 9.JAN.2016 17:20:42

### Plot on Configuration IEEE 802.11n MCS0 HT40 / CH 10 / 2483.5MHz~26500MHz (down 30dBc)



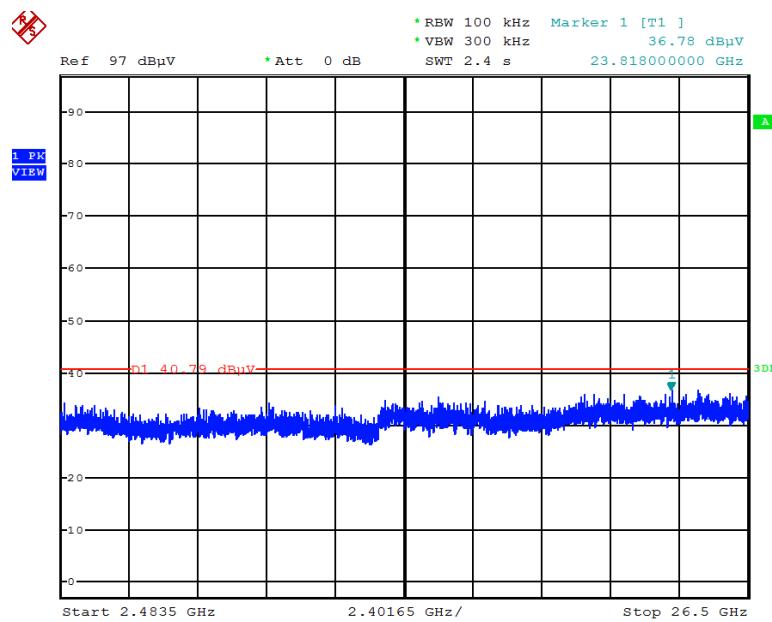
Date: 9.JAN.2016 17:19:45

### Plot on Configuration IEEE 802.11n MCS0 HT40 / CH 11 / 30MHz~2400MHz (down 30dBc)



Date: 9.JAN.2016 17:22:01

### Plot on Configuration IEEE 802.11n MCS0 HT40 / CH 11 / 2483.5MHz~26500MHz (down 30dBc)



Date: 9.JAN.2016 17:21:39

## 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. 22, 2015	Conduction (CO01-CB)
EMI Receiver	Agilent	N9038A	My52260123	9kHz ~ 8.45GHz	Jan. 27, 0216	Conduction (CO01-CB)
LISN	F.C.C.	FCC-LISN-50-16-2	04083	150kHz ~ 100MHz	Dec. 08, 2015	Conduction (CO01-CB)
LISN	Schwarzbeck	NSLK 8127	8127647	9kHz ~ 30MHz	Dec. 23, 2015	Conduction (CO01-CB)
COND Cable	Woken	Cable	01	150kHz ~ 30MHz	May 25, 2015	Conduction (CO01-CB)
Software	Audix	E3	6.120210n	-	N.C.R.	Conduction (CO01-CB)
BILOG ANTENNA	Schaffner	CBL6112D	37880	20MHz ~ 2GHz	Sep. 03, 2015	Radiation (03CH01-CB)
Loop Antenna	Teseq	HLA 6120	24155	9kHz - 30 MHz	Mar. 12, 2015*	Radiation (03CH01-CB)
Horn Antenna	EMCO	3115	00075790	750MHz ~ 18GHz	Oct. 22, 2015	Radiation (03CH01-CB)
Horn Antenna	Schwarzbeck	BBHA 9170	BBHA9170252	15GHz ~ 40GHz	Jul. 21, 2015	Radiation (03CH01-CB)
Pre-Amplifier	Agilent	8447D	2944A10991	0.1MHz ~ 1.3GHz	Feb. 24, 2015	Radiation (03CH01-CB)
Pre-Amplifier	Agilent	8447D	2944A10991	0.1MHz ~ 1.3GHz	Mar. 15, 2016	Radiation (03CH01-CB)
Pre-Amplifier	Agilent	8449B	3008A02099	1GHz ~ 26.5GHz	Dec. 07, 2015	Radiation (03CH01-CB)
Spectrum Analyzer	R&S	FSP40	100056	9kHz ~ 40GHz	Oct. 27, 2015	Radiation (03CH01-CB)
EMI Receiver	Agilent	N9038A	MY52260123	9kHz ~ 8.4GHz	Jan. 21, 2015	Radiation (03CH01-CB)
EMI Test	R&S	ESCS	100355	9kHz ~ 2.75GHz	Apr. 22, 2016	Radiation (03CH01-CB)
RF Cable-low	Woken	Low Cable-1	N/A	30 MHz ~ 1 GHz	Nov. 02, 2015	Radiation (03CH01-CB)
RF Cable-high	Woken	High Cable-16	N/A	1 GHz ~ 18 GHz	Nov. 02, 2015	Radiation (03CH01-CB)
RF Cable-high	Woken	High Cable-17	N/A	1 GHz ~ 18 GHz	Nov. 02, 2015	Radiation (03CH01-CB)
RF Cable-high	Woken	High Cable-40G-1	N/A	18GHz ~ 40 GHz	Nov. 02, 2015	Radiation (03CH01-CB)
RF Cable-high	Woken	High Cable-40G-2	N/A	18GHz ~ 40 GHz	Nov. 02, 2015	Radiation (03CH01-CB)
Test Software	Audix	E3	6.2009-I0-7	N/A	N/A	Radiation (03CH01-CB)
Spectrum analyzer	R&S	FSV40	100979	9kHz~40GHz	Dec. 09, 2015	Conducted (TH01-CB)
RF Cable-high	Woken	RG402	High Cable-6	1 GHz – 26.5 GHz	Nov. 02, 2015	Conducted (TH01-CB)
RF Cable-high	Woken	RG402	High Cable-7	1 GHz – 26.5 GHz	Nov. 02, 2015	Conducted (TH01-CB)
RF Cable-high	Woken	RG402	High Cable-8	1 GHz – 26.5 GHz	Nov. 02, 2015	Conducted (TH01-CB)



Instrument	Manufacturer	Model No.	Serial No.	Characteristics	Calibration Date	Remark
RF Cable-high	Woken	RG402	High Cable-9	1 GHz – 26.5 GHz	Nov. 02, 2015	Conducted (TH01-CB)
RF Cable-high	Woken	RG402	High Cable-10	1 GHz – 26.5 GHz	Nov. 02, 2015	Conducted (TH01-CB)
Power Sensor	Agilent	U2021XA	MY53410001	50MHz~18GHz	Nov. 02, 2015	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)	3.2 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%