FCC Test Report

Equipment	:	AC1200 Wi-Fi Range Extender,AV1200 Powerline Edition
Brand Name	:	TP-Link
Model No.	:	TL-WPA8630
FCC ID	:	TE7WPA8630
Standard	:	47 CFR FCC Part 15.247
Operating Band	:	2400 MHz – 2483.5 MHz
Function	:	☒ Point-to-multipoint; ☐ Point-to-point
Applicant	:	TP-Link Technologies Co., Ltd Building 24 (floors 1,3,4,5) and 28 (floors1-4) Central Science and Technology Park,Nanshan, Shenzhen,518057,China
Manufacturer	:	TP-Link Technologies Co., Ltd Building 24 (floors 1,3,4,5) and 28 (floors1-4) Central Science and Technology Park,Nanshan, Shenzhen,518057,China

The product sample received on Jul. 18, 2016 and completely tested on Oct. 16, 2016. We, SPORTON, would like to declare that the tested sample has been evaluated in accordance with the procedures given in ANSI C63.10-2013 and shown compliance with the applicable technical standards.

The test results in this report apply exclusively to the tested model / sample. Without written approval of SPORTON INTERNATIONAL INC., the test report shall not be reproduced except in full.

Sam Chen
SPORTON INTERNATIONAL INC.

Testing Laboratory
1190

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Summary of Test Result

Conformance Test Specifications				
Report Clause	**Ref. Std. Clause**	**Description**	**Limit**	**Result**
1.1.2	15.203	Antenna Requirement	FCC 15.203	Complied
3.1	15.207	AC Power-line Conducted Emissions	FCC 15.207	Complied
3.2	15.247(a)	DTS Bandwidth	≥500kHz	Complied
3.3	15.247(b)	Maximum Conducted Output Power	Power [dBm]:30	Complied
3.4	15.247(e)	Power Spectral Density	PSD [dBm/3kHz]:8	Complied
3.5	15.247(d)	Emissions in Non-restricted Frequency Bands	Non-Restricted Bands: > 30 dBc	Complied
3.6	15.247(d)	Emissions in Restricted Frequency Bands	Restricted Bands: FCC 15.209	Complied

Revision History

Report No.	Version	Description	Issued Date
FR642705AA	Rev. 01	Initial issue of report	Nov. 02, 2016

1 General Description

1.1 Information

1.1.1 RF General Information

Frequency Range (MHz)	IEEE Std. 802.11	Ch. Frequency (MHz)	Channel Number
2400-2483.5	b, g, n (HT20)	2412-2462	1-11 [11]
2400-2483.5	n (HT40)	2422-2452	3-9 [7]

Band	Mode	BWch (MHz)	Nant
2.4G	11b	20	2
2.4G	11g	20	2
2.4G	HT20	20	2
2.4G	HT40	40	2

Note:
- 2.4G is the 2.4GHz Band (2.4-2.4835GHz).
- 11b mode uses a combination of DSSS-DBPSK, DQPSK, CCK modulation.
- 11g, HT20 and HT40 use a combination of OFDM-BPSK, QPSK, 16QAM, 64QAM modulation.
- BWch is the nominal channel bandwidth.
- Nss-Min is the minimum number of spatial streams.
- Nant is the number of outputs. e.g., 2(2,3) means have 2 outputs for port 2 and port 3. 2 means have 2 outputs for port 1 and port 2.

1.1.2 Antenna Information

Ant.	Brand	P/N	Antenna Type	Connector	Gain (dBi)	
					2.4GHz	5GHz
1	TP-LINK	3101500754	Omni Antenna	I-PEX	2.35	2.23
2	TP-LINK	3101500755	Omni Antenna	I-PEX	1.95	2.41

Note: The EUT has two antennas.

Chain 1 connect to Ant.1, Chain 2 connect to Ant.2

<For 2.4GHz Band>

For IEEE 802.11b/g/n mode<2TX/2RX>:

Chain 1 and Chain 2 will transmit/receive the same signal simultaneously.

Chain 1 and Chain 2 can be used as transmitting/receiving antennas.

<For 5GHz Band>

For IEEE 802.11a/n/ac mode <2TX/2RX>:

Chain 1 and Chain 2 will transmit/receive the same signal simultaneously.

Chain 1 and Chain 2 can be used as transmitting/receiving antennas.

1.1.3 Mode Test Duty Cycle

Mode	DC	T(s)	VBW(Hz) ≥ 1/T
11b	1	n/a (DC>=0.98)	n/a (DC>=0.98)
11g	0.99	n/a (DC>=0.98)	n/a (DC>=0.98)
HT20	0.99	n/a (DC>=0.98)	n/a (DC>=0.98)
HT40	0.985	n/a (DC>=0.98)	n/a (DC>=0.98)

1.1.4 EUT Operational Condition

EUT Power Type	Internal power supply			
Beamforming Function	☐	With beamforming	☒	Without beamforming

1.2 Testing Applied Standards

According to the specifications of the manufacturer, the EUT must comply with the requirements of the following standards:

- 47 CFR FCC Part 15
- ANSI C63.10-2013
- FCC KDB 558074 D01 v03r05
- FCC KDB 662911 D01 v02r01

1.3 Testing Location Information

Testing Location			
☐	HWA YA	ADD :	No. 52, Hwa Ya 1st Rd., Kwei-Shan Hsiang, Tao Yuan Hsien, Taiwan, R.O.C.
		TEL :	886-3-327-3456 FAX : 886-3-318-0055
☒	JHUBEI	ADD :	No.8, Lane 724, Bo-ai St., Jhubei City, HsinChu County 302, Taiwan, R.O.C.
		TEL :	886-3-656-9065 FAX : 886-3-656-9085

Test Condition	Test Site No.	Test Engineer	Test Environment	Test Date
RF Conducted	TH01-CB	Gary Chu	22°C / 55%	Aug. 30, 2016
Radiated	03CH01-CB	Zero Chen/Gino Huang/Eason Chen/Paul Chen/Jay Luo/Jeff Wu	22°C / 59%	Jul. 28, 2016~ Oct. 16, 2016
AC Conduction	CO01-CB	Deven Huang	23°C / 60%	Oct. 13, 2016

Test site Designation No. TW0006 with FCC.
Test site registered number IC 4086D with Industry Canada.

1.4 Measurement Uncertainty

ISO/IEC 17025 requires that an estimate of the measurement uncertainties associated with the emissions test results be included in the report. The measurement uncertainties given below are based on a 95% confidence level (based on a coverage factor (k=2)

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%

2 Test Configuration of EUT

2.1 Test Channel Mode

Band	Mode	BWch (MHz)	Nss-Min	Nant	Ch. (MHz)	Range	Power Setting
2.4G	11b	20	1	2	2412	L	18
2.4G	11b	20	1	2	2437	M	24
2.4G	11b	20	1	2	2462	H	20
2.4G	11g	20	1	2	2412	L	15.5
2.4G	11g	20	1	2	2437	M	24.5
2.4G	11g	20	1	2	2462	H	17.5
2.4G	HT20	20	1,(M0)	2	2412	L	15
2.4G	HT20	20	1,(M0)	2	2437	M	25
2.4G	HT20	20	1,(M0)	2	2462	H	17.5
2.4G	HT40	40	1,(M0)	2	2422	L	14.5
2.4G	HT40	40	1,(M0)	2	2437	M	19
2.4G	HT40	40	1,(M0)	2	2452	H	17

Note:
- Test range channel consist of L (Low Ch.), M (Middle Ch.), H (High Ch.), S (Single Ch.) and C (Straddle Band Ch.).

2.2 The Worst Case Measurement Configuration

The Worst Case Mode for Following Conformance Tests	
Tests Item	AC power-line conducted emissions
Condition	AC power-line conducted measurement for line and neutral
Operating Mode	CTX

The Worst Case Mode for Following Conformance Tests	
Tests Item	DTS Bandwidth Maximum Conducted Output Power Power Spectral Density
Test Condition	Conducted measurement at transmit chains

The Worst Case Mode for Following Conformance Tests	
Tests Item	Emissions in Non-restricted Frequency Bands Emissions in Restricted Frequency Bands
Test Condition	Radiated measurement If EUT consist of multiple antenna assembly (multiple antenna are used in EUT regardless of spatial multiplexing MIMO configuration), the radiated test should be performed with highest antenna gain of each antenna type.
Operating Mode < 1GHz	CTX
1	Place EUT in Y axis
2	Place EUT in Z axis
For operating mode 1 is the worst case and it was record in this test report.	
Operating Mode > 1GHz	CTX
The EUT can be placed in Y-axis and Z-axis. After evaluating, Y-axis was the worst case, so it's recorded in this report.	

The Worst Case Mode for Following Conformance Tests	
Tests Item	Simultaneous Transmission Analysis
Test Condition	Radiated measurement
Operating Mode	Normal Link
1	Place EUT in Y axis
2	Place EUT in Z axis
For operating mode 1 is the worst case and it was record in this test report.	
Refer to Sporton Test Report No.: FA642705 for Co-location RF Exposure Evaluation and Appendix G for Radiated Emission Co-location.	

2.3 EUT Operation during Test

The EUT was programmed to be in continuously transmitting mode.

2.4 Accessories

N/A

2.5 Support Equipment

For Test Site No: CO01-CB

Support Equipment				
No.	**Equipment**	**Brand Name**	**Model Name**	**FCC ID**
1	NB	DELL	E6430	DoC

For Test Site No: 03CH01-CB

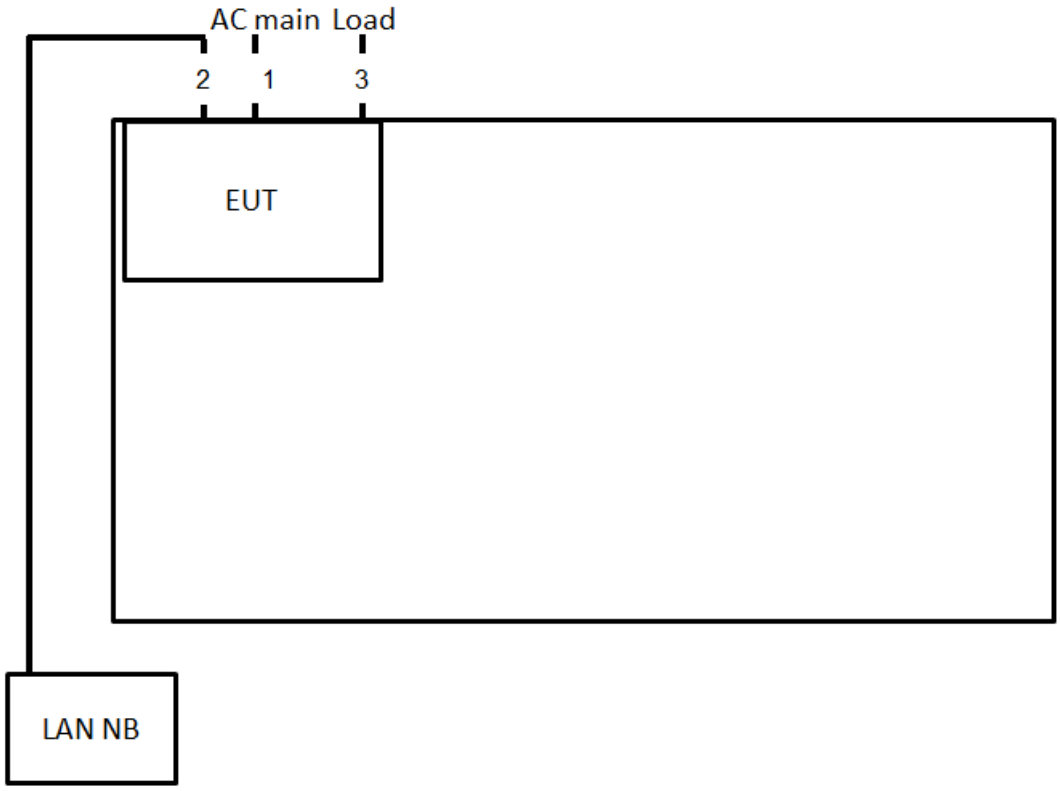
Support Equipment				
No.	**Equipment**	**Brand Name**	**Model Name**	**FCC ID**
1	NB	DELL	E4300	DoC

For Test Site No: TH01-CB

Support Equipment				
No.	**Equipment**	**Brand Name**	**Model Name**	**FCC ID**
1	NB	DELL	E4300	DoC

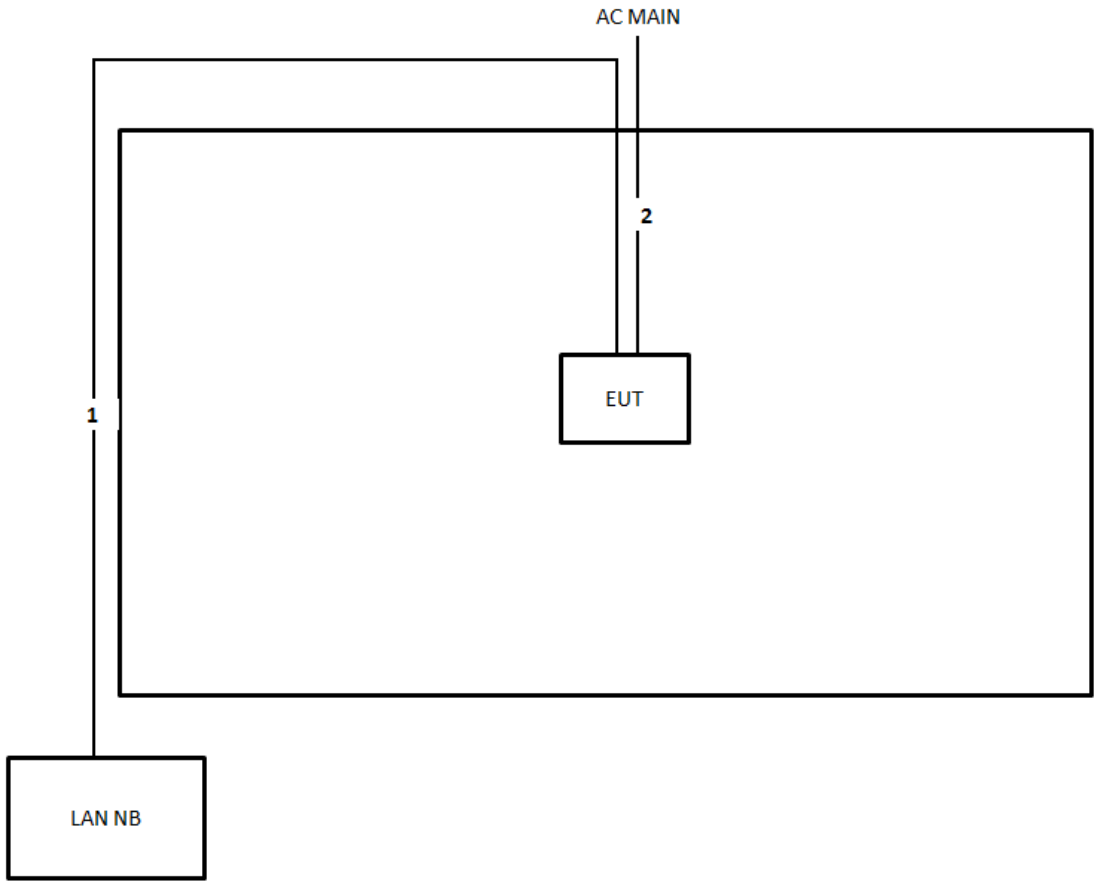
2.6 Test Setup Diagram

Test Setup Diagram – AC Line Conducted Emission Test



Item	Connection	Shielded	Length
1	Power cable	No	0.8m
2	RJ-45 cable	No	10m
3	RJ-45 cable*2	No	1.5m

Test Setup Diagram - Radiated Test



Item	Connection	Shielded	Length
1	RJ-45 cable	No	10m
2	Power cable	No	1.5m

3 Transmitter Test Result

3.1 AC Power-line Conducted Emissions

3.1.1 AC Power-line Conducted Emissions Limit

AC Power-line Conducted Emissions Limit		
Frequency Emission (MHz)	**Quasi-Peak**	**Average**
0.15-0.5	66 - 56 *	56 - 46 *
0.5-5	56	46
5-30	60	50
Note 1: * Decreases with the logarithm of the frequency.		

3.1.2 Measuring Instruments

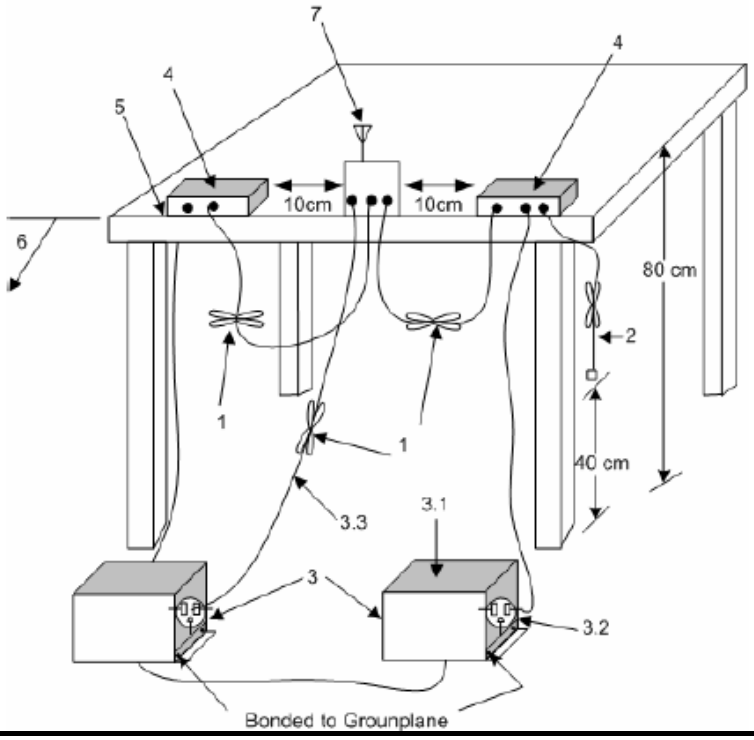
Refer a test equipment and calibration data table in this test report.

3.1.3 Test Procedures

Test Method
☒ Refer as ANSI C63.10-2013, clause 6.2 for AC power-line conducted emissions.

3.1.4 Test Setup

AC Power-line Conducted Emissions



3.1.5 Test Result of AC Power-line Conducted Emissions

Refer as Appendix A

3.2 DTS Bandwidth

3.2.1 6dB Bandwidth Limit

6dB Bandwidth Limit
Systems using digital modulation techniques:
▪ 6 dB bandwidth ≥ 500 kHz.

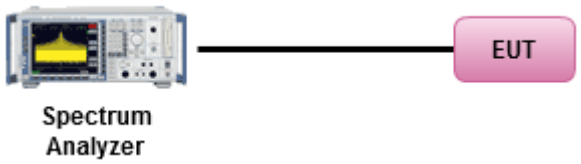
3.2.2 Measuring Instruments

Refer a test equipment and calibration data table in this test report.

3.2.3 Test Procedures

Test Method	
▪ For the emission bandwidth shall be measured using one of the options below:	
	☒ Refer as FCC KDB 558074, clause 8.1 Option 1 for 6 dB bandwidth measurement.
	☐ Refer as FCC KDB 558074, clause 8.2 Option 2 for 6 dB bandwidth measurement.
	☐ Refer as ANSI C63.10, clause 6.9.1 for occupied bandwidth testing.

3.2.4 Test Setup

Emission Bandwidth


3.2.5 Test Result of Emission Bandwidth

Refer as Appendix B

3.3 Maximum Conducted Output Power

3.3.1 Maximum Conducted Output Power Limit

Maximum Conducted Output Power Limit		
	▪ If $G_{TX} \leq 6$ dBi, then $P_{Out} \leq 30$ dBm (1 W)	
	▪ Point-to-multipoint systems (P2M): If $G_{TX} > 6$ dBi, then $P_{Out} = 30 – (G_{TX} – 6)$ dBm	
	▪ Point-to-point systems (P2P): If $G_{TX} > 6$ dBi, then $P_{Out} = 30 – (G_{TX} – 6)/3$ dBm	
	▪ Smart antenna system (SAS):	
		- Single beam: If $G_{TX} > 6$ dBi, then $P_{Out} = 30 – (G_{TX} – 6)/3$ dBm
		- Overlap beam: If $G_{TX} > 6$ dBi, then $P_{Out} = 30 – (G_{TX} – 6)/3$ dBm
		- Aggregate power on all beams: If $G_{TX} > 6$ dBi, then $P_{Out} = 30 – (G_{TX} – 6)/3 + 8$dB dBm
P_{Out} = maximum peak conducted output power or maximum conducted output power in dBm, **G_{TX}** = the maximum transmitting antenna directional gain in dBi.		

3.3.2 Measuring Instruments

Refer a test equipment and calibration data table in this test report.

3.3.3 Test Procedures

Test Method	
▪ Maximum Peak Conducted Output Power	
	☐ Refer as FCC KDB 558074, clause 9.1.1 Option 1 (RBW ≥ EBW method).
	☐ Refer as FCC KDB 558074, clause 9.1.2 Option 2 (peak power meter for VBW ≥ DTS BW)
▪ Maximum Conducted Output Power	
	[duty cycle ≥ 98% or external video / power trigger]
	☐ Refer as FCC KDB 558074, clause 9.2.2.2 Method AVGSA-1 (spectral trace averaging).
	☐ Refer as FCC KDB 558074, clause 9.2.2.3 Method AVGSA-1 Alt. (slow sweep speed)
	duty cycle < 98% and average over on/off periods with duty factor
	☐ Refer as FCC KDB 558074, clause 9.2.2.4 Method AVGSA-2 (spectral trace averaging).
	☐ Refer as FCC KDB 558074, clause 9.2.2.5 Method AVGSA-2 Alt. (slow sweep speed)
	RF power meter and average over on/off periods with duty factor or gated trigger
	☒ Refer as FCC KDB 558074, clause 9.2.3 Method AVGPM-G (using an RF average power meter).
▪ For conducted measurement.	
	▪ If the EUT supports multiple transmit chains using options given below: Refer as FCC KDB 662911, In-band power measurements. Using the measure-and-sum approach, measured all transmit ports individually. Sum the power (in linear power units e.g., mW) of all ports for each individual sample and save them.
	▪ If multiple transmit chains, EIRP calculation could be following as methods: $P_{total} = P_1 + P_2 + \ldots + P_n$ (calculated in linear unit [mW] and transfer to log unit [dBm]) $EIRP_{total} = P_{total} + DG$

3.3.4 Test Setup

Maximum Conducted Output Power (Power Meter)

3.3.5 Test Result of Maximum Conducted Output Power

Refer as Appendix C

3.4 Power Spectral Density

3.4.1 Power Spectral Density Limit

Power Spectral Density Limit
▪ Power Spectral Density (PSD) ≤ 8 dBm/3kHz

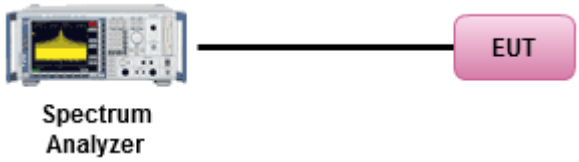
3.4.2 Measuring Instruments

Refer a test equipment and calibration data table in this test report.

3.4.3 Test Procedures

Test Method		
▪ Peak power spectral density procedures that the same method as used to determine the conducted output power. If maximum peak conducted output power was measured to demonstrate compliance to the output power limit, then the peak PSD procedure below (Method PKPSD) shall be used. If maximum conducted output power was measured to demonstrate compliance to the output power limit, then one of the average PSD procedures shall be used, as applicable based on the following criteria (the peak PSD procedure is also an acceptable option).		
	☒ Refer as FCC KDB 558074, clause 10.2 Method PKPSD (RBW=3-100kHz; Detector=peak).	
	[duty cycle ≥ 98% or external video / power trigger]	
	☐ Refer as FCC KDB 558074, clause 10.3 Method AVGPSD-1 (spectral trace averaging).	
	☐ Refer as FCC KDB 558074, clause 10.4 Method AVGPSD-2 (slow sweep speed)	
	duty cycle < 98% and average over on/off periods with duty factor	
	☐ Refer as FCC KDB 558074, clause 10.5 Method AVGPSD-1 Alt (spectral trace averaging).	
	☐ Refer as FCC KDB 558074, clause 10.6 Method AVGPSD-2 Alt. (slow sweep speed)	
▪ For conducted measurement.		
	▪ If The EUT supports multiple transmit chains using options given below:	
		☒ Option 1: Measure and sum the spectra across the outputs. Refer as FCC KDB 662911, In-band power spectral density (PSD). Sample all transmit ports simultaneously using a spectrum analyzer for each transmit port. Where the trace bin-by-bin of each transmit port summing can be performed. (i.e., in the first spectral bin of output 1 is summed with that in the first spectral bin of output 2 and that from the first spectral bin of output 3, and so on up to the NTX output to obtain the value for the first frequency bin of the summed spectrum.). Add up the amplitude (power) values for the different transmit chains and use this as the new data trace.
		☐ Option 2: Measure and sum spectral maxima across the outputs. With this technique, spectra are measured at each output of the device at the required resolution bandwidth. The maximum value (peak) of each spectrum is determined. These maximum values are then summed mathematically in linear power units across the outputs. These operations shall be performed separately over frequency spans that have different out-of-band or spurious emission limits,
		☐ Option 3: Measure and add 10 log(N) dB, where N is the number of transmit chains. Refer as FCC KDB 662911, In-band power spectral density (PSD). Performed at each transmit chains and each transmit chains shall be compared with the limit have been reduced with 10 log(N). Or each transmit chains shall be add 10 log(N) to compared with the limit.

3.4.4 Test Setup

Power Spectral Density


3.4.5 Test Result of Power Spectral Density

Refer as Appendix D

3.5 Emissions in Non-restricted Frequency Bands

3.5.1 Emissions in Non-restricted Frequency Bands Limit

Un-restricted Band Emissions Limit	
RF output power procedure	**Limit (dB)**
Peak output power procedure	20
Average output power procedure	30

Note 1: If the peak output power procedure is used to measure the fundamental emission power to demonstrate compliance to requirements, then the peak conducted output power measured within any 100 kHz outside the authorized frequency band shall be attenuated by at least 20 dB relative to the maximum measured in-band peak PSD level.
Note 2: If the average output power procedure is used to measure the fundamental emission power to demonstrate compliance to requirements, then the power in any 100 kHz outside of the authorized frequency band shall be attenuated by at least 30 dB relative to the maximum measured in-band average PSD level.

3.5.2 Measuring Instruments

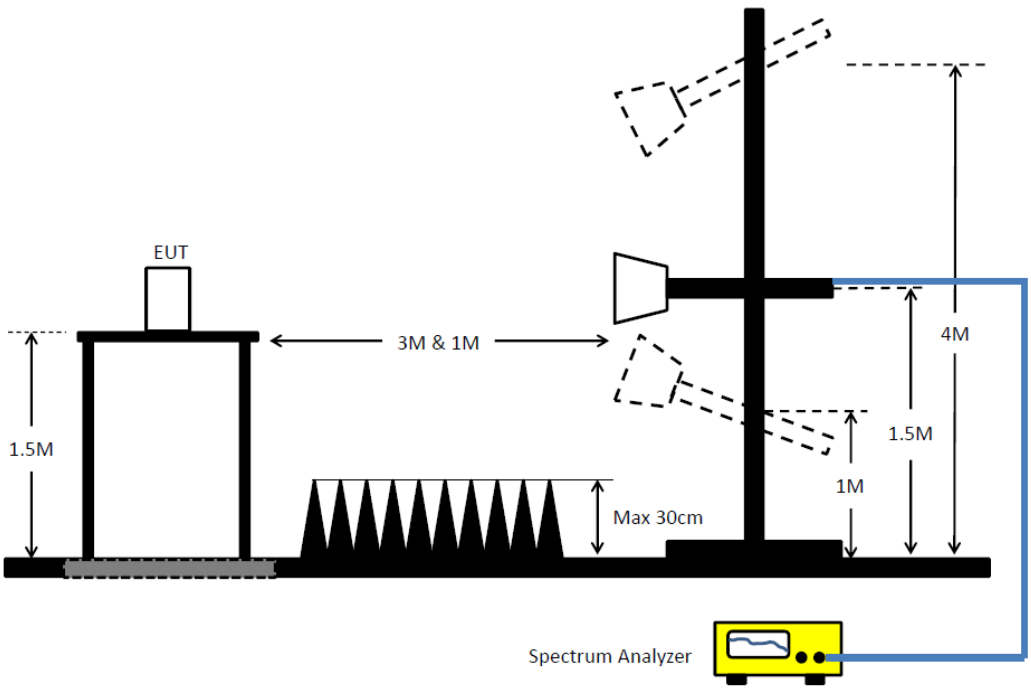
Refer a test equipment and calibration data table in this test report.

3.5.3 Test Procedures

Test Method
▪ Refer as FCC KDB 558074, clause 11 for unwanted emissions into non-restricted bands.

3.5.4 Test Setup

Emissions in Non-restricted Frequency Bands



3.5.5 Test Result of Emissions in Non-restricted Frequency Bands

Refer as Appendix E

3.6 Emissions in Restricted Frequency Bands

3.6.1 Emissions in Restricted Frequency Bands Limit

Restricted Band Emissions Limit			
Frequency Range (MHz)	**Field Strength (uV/m)**	**Field Strength (dBuV/m)**	**Measure Distance (m)**
0.009~0.490	2400/F(kHz)	48.5 - 13.8	300
0.490~1.705	24000/F(kHz)	33.8 - 23	30
1.705~30.0	30	29	30
30~88	100	40	3
88~216	150	43.5	3
216~960	200	46	3
Above 960	500	54	3

Note 1: Test distance for frequencies at or above 30 MHz, measurements may be performed at a distance other than the limit distance provided they are not performed in the near field and the emissions to be measured can be detected by the measurement equipment. When performing measurements at a distance other than that specified, the results shall be extrapolated to the specified distance using an extrapolation factor of 20 dB/decade (inverse of linear distance for field-strength measurements, inverse of linear distance-squared for power-density measurements).

Note 2: Test distance for frequencies at below 30 MHz, measurements may be performed at a distance closer than the EUT limit distance; however, an attempt should be made to avoid making measurements in the near field. When performing measurements below 30 MHz at a closer distance than the limit distance, the results shall be extrapolated to the specified distance by either making measurements at a minimum of two or more distances on at least one radial to determine the proper extrapolation factor or by using the square of an inverse linear distance extrapolation factor (40 dB/decade). The test report shall specify the extrapolation method used to determine compliance of the EUT.

3.6.2 Measuring Instruments

Refer a test equipment and calibration data table in this test report.

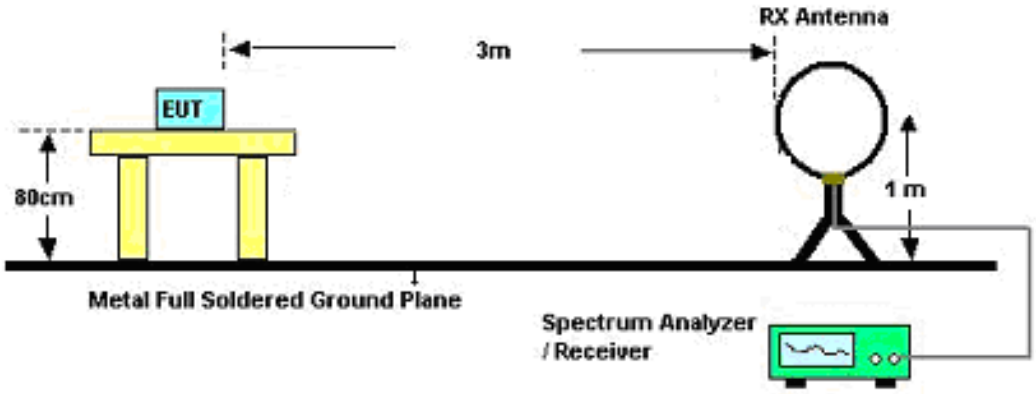
3.6.3 Test Procedures

Test Method		
▪ The average emission levels shall be measured in [duty cycle ≥ 98 or duty factor].		
▪ Refer as ANSI C63.10, clause 6.9.2.2 band-edge testing shall be performed at the lowest frequency channel and highest frequency channel within the allowed operating band.		
▪ For the transmitter unwanted emissions shall be measured using following options below:		
	▪ Refer as FCC KDB 558074, clause 12 for unwanted emissions into restricted bands.	
		☐ Refer as FCC KDB 558074, clause 12.2.5.1 Option 1 (trace averaging for duty cycle ≥98%)
		☐ Refer as FCC KDB 558074, clause 12.2.5.2 Option 2 (trace averaging + duty factor).
		☒ Refer as FCC KDB 558074, clause 12.2.5.3 Option 3 (Reduced VBW≥1/T).
		☐ Refer as ANSI C63.10, clause 4.2.3.2.3 (Reduced VBW). VBW ≥ 1/T, where T is pulse time.
		☐ Refer as ANSI C63.10, clause 4.2.3.2.4 average value of pulsed emissions.
		☒ Refer as FCC KDB 558074, clause 12.2.4 measurement procedure peak limit.
▪ For the transmitter band-edge emissions shall be measured using following options below:		
	▪ Refer as FCC KDB 558074 clause 13.1, When the performing peak or average radiated measurements, emissions within 2 MHz of the authorized band edge may be measured using the marker-delta method described below.	
	▪ Refer as FCC KDB 558074, clause 13.2 (ANSI C63.10, clause 6.9.3) for marker-delta method for band-edge measurements.	
	▪ Refer as FCC KDB 558074, clause 13.3 for narrower resolution bandwidth (100kHz) using the band power and summing the spectral levels (i.e., 1 MHz).	
▪ For conducted and cabinet radiation measurement, refer as FCC KDB 558074, clause 12.2.2.		
	▪ For conducted unwanted emissions into restricted bands (absolute emission limits). Devices with multiple transmit chains using options given below: (1) Measure and sum the spectra across the outputs or (2) Measure and add 10 log(N) dB	
	▪ For FCC KDB 662911 The methodology described here may overestimate array gain, thereby resulting in apparent failures to satisfy the out-of-band limits even if the device is actually compliant. In such cases, compliance may be demonstrated by performing radiated tests around the frequencies at which the apparent failures occurred.	

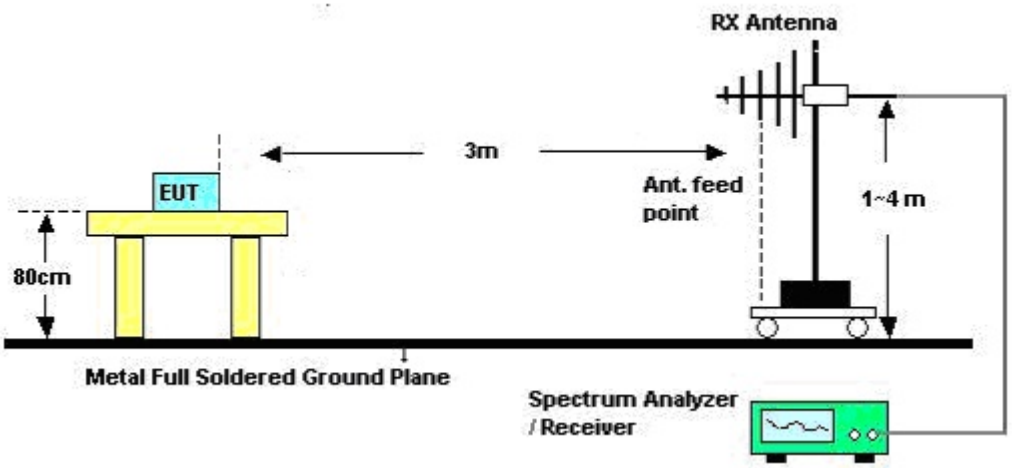
3.6.4 Test Setup

Transmitter Radiated Emissions

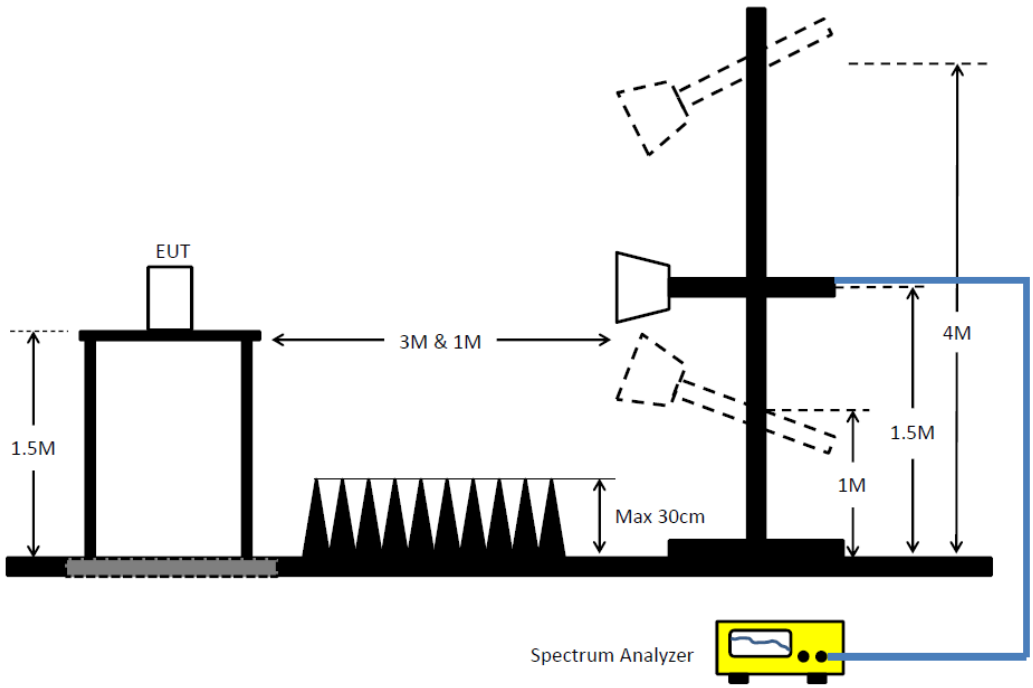
9kHz ~30MHz



30MHz~1GHz



Above 1GHz



3.6.5 Transmitter Radiated Unwanted Emissions (Below 30MHz)

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

3.6.6 Test Result of Transmitter Radiated Unwanted Emissions

Refer as Appendix F

4 Test Equipment and Calibration Data

Instrument	Manufacturer	Model No.	Serial No.	Characteristics	Calibration Date	Remark
EMI Receiver	Agilent	N9038A	My52260123	9kHz ~ 8.45GHz	Jan. 27, 2016	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 24, 2016	Conduction (CO01-CB)
Software	Audix	E3	6.120210n	-	N.C.R.	Conduction (CO01-CB)
BILOG ANTENNA	TESEQ	CBL6112D	37880	20MHz ~ 2GHz	Sep. 03, 2015	Radiation (03CH01-CB)
BILOG ANTENNA	TESEQ	CBL6112D	37880	20MHz ~ 2GHz	Aug. 30, 2016	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. 25, 2016	Radiation (03CH01-CB)
Loop Antenna	Teseq	HLA 6120	24155	9kHz - 30 MHz	Mar. 16, 2016*	Radiation (03CH01-CB)
Pre-Amplifier	Agilent	8447D	2944A10991	0.1MHz ~ 1.3GHz	Mar. 15, 2016	Radiation (03CH01-CB)
Pre-Amplifier	Agilent	8449B	3008A02310	1GHz ~ 26.5GHz	Jan. 18, 2016	Radiation (03CH01-CB)
Pre-Amplifier	WM	TF-130N-R1	923365	26GHz ~ 40GHz	Nov. 13, 2015	Radiation (03CH01-CB)
Spectrum Analyzer	R&S	FSP40	100056	9kHz ~ 40GHz	Oct. 27, 2015	Radiation (03CH01-CB)
EMI Test	R&S	ESCS	100355	9kHz ~ 2.75GHz	May 16, 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-l0-7	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)

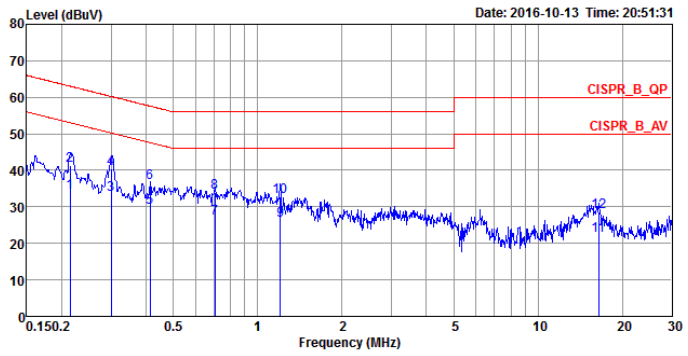
Instrument	Manufacturer	Model No.	Serial No.	Characteristics	Calibration Date	Remark
RF Cable-high	Woken	RG402	High Cable-8	1 GHz – 26.5 GHz	Nov. 02, 2015	Conducted (TH01-CB)
RF Cable-high	Woken	RG402	High Cable-9	1 GHz – 26.5 GHz	Nov. 02, 2015	Conducted (TH01-CB)
RF Cable-high	Woken	RG402	High Cable-10	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.

NCR means Non-Calibration required.

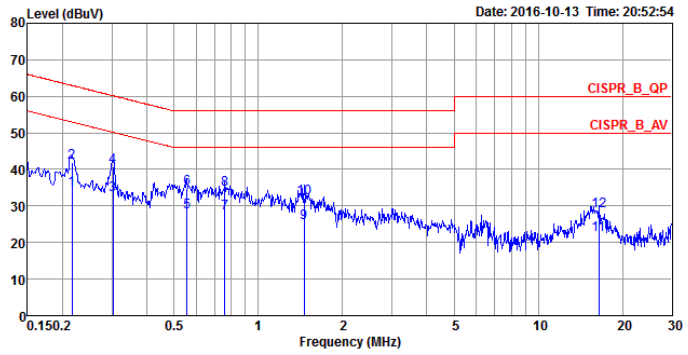
AC Power-line Conducted Emissions Result			
Operating Mode	1	**Power Phase**	Neutral
Operating Function	CTX		



	Freq	Level	Over Limit	Limit Line	Read Level	LISN Factor	Cable Loss	Pol/Phase	Remark
	MHz	dBuV	dB	dBuV	dBuV	dB	dB		
1	0.2139	33.83	-19.22	53.05	23.74	9.92	0.17	NEUTRAL	Average
2	0.2139	41.35	-21.70	63.05	31.26	9.92	0.17	NEUTRAL	QP
3	0.3003	33.25	-16.99	50.24	23.24	9.92	0.09	NEUTRAL	Average
4	0.3003	40.59	-19.65	60.24	30.58	9.92	0.09	NEUTRAL	QP
5	0.4127	29.78	-17.81	47.59	19.82	9.92	0.04	NEUTRAL	Average
6	0.4127	36.47	-21.12	57.59	26.51	9.92	0.04	NEUTRAL	QP
7	0.7047	27.00	-19.00	46.00	16.61	9.93	0.46	NEUTRAL	Average
8	0.7047	34.00	-22.00	56.00	23.61	9.93	0.46	NEUTRAL	QP
9	1.2034	26.15	-19.85	46.00	15.65	9.94	0.56	NEUTRAL	Average
10	1.2034	32.91	-23.09	56.00	22.41	9.94	0.56	NEUTRAL	QP
11	16.4856	22.01	-27.99	50.00	11.53	10.25	0.23	NEUTRAL	Average
12	16.4856	28.72	-31.28	60.00	18.24	10.25	0.23	NEUTRAL	QP

Note 1: “>20dB” means emission levels that exceed the level of 20 dB below the applicable limit.
Note 2: “N/F” means Nothing Found emissions (No emissions were detected.)

AC Power-line Conducted Emissions Result			
Operating Mode	1	**Power Phase**	Line
Operating Function	CTX		



	Freq	Level	Over Limit	Limit Line	Read Level	LISN Factor	Cable Loss	Pol/Phase	Remark
	MHz	dBuV	dB	dBuV	dBuV	dB	dB		
1	0.2162	34.45	-18.51	52.96	24.36	9.92	0.17	LINE	Average
2	0.2162	41.94	-21.02	62.96	31.85	9.92	0.17	LINE	QP
3	0.3035	33.20	-16.95	50.15	23.20	9.92	0.08	LINE	Average
4	0.3035	40.60	-19.55	60.15	30.60	9.92	0.08	LINE	QP
5	0.5552	28.40	-17.60	46.00	18.20	9.93	0.27	LINE	Average
6	0.5552	34.95	-21.05	56.00	24.75	9.93	0.27	LINE	QP
7	0.7589	27.96	-18.04	46.00	17.51	9.93	0.52	LINE	Average
8	0.7589	34.59	-21.41	56.00	24.14	9.93	0.52	LINE	QP
9	1.4562	25.33	-20.67	46.00	15.01	9.95	0.37	LINE	Average
10	1.4562	32.20	-23.80	56.00	21.88	9.95	0.37	LINE	QP
11	16.4856	22.10	-27.90	50.00	11.62	10.25	0.23	LINE	Average
12	16.4856	28.70	-31.30	60.00	18.22	10.25	0.23	LINE	QP

Note 1: “>20dB” means emission levels that exceed the level of 20 dB below the applicable limit.
Note 2: “N/F” means Nothing Found emissions (No emissions were detected.)

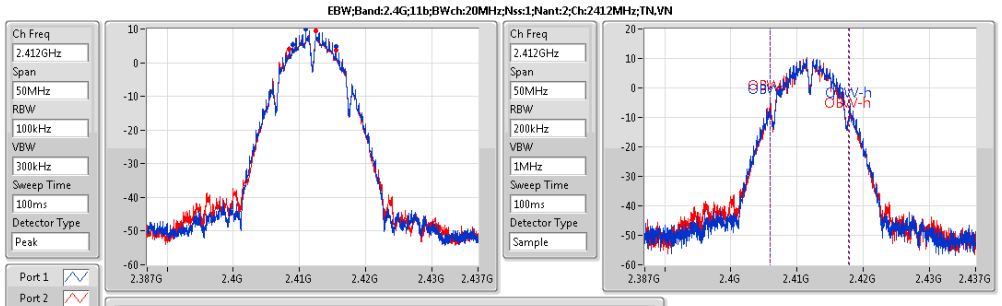
Summary

Mode	Max-N dB (Hz)	Max-OBW (Hz)	ITU-Code	Min-N dB (Hz)	Min-OBW (Hz)
2.4G;11b;Nss1;Ntx2	7.05M	13.593M	13M6G1D	6.5M	11.769M
2.4G;11g;Nss1;Ntx2	15.2M	19.64M	19M6D1D	13.7M	16.217M
2.4G;HT20;Nss1,(M0);Ntx2	15.275M	20.89M	20M9D1D	12.525M	17.341M
2.4G;HT40;Nss1,(M0);Ntx2	32.5M	35.932M	35M9D1D	22.25M	35.682M

Result

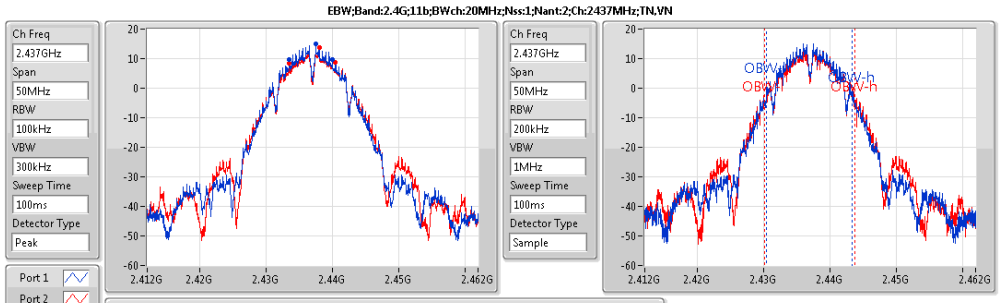
Mode	Result	Limit	P1-N dB (Hz)	P1-OBW (Hz)	P2-N dB (Hz)	P2-OBW (Hz)
2.4G;11b;Nss1;Ntx2;2412	Pass	500k	6.55M	11.869M	7.05M	11.769M
2.4G;11b;Nss1;Ntx2;2437	Pass	500k	6.5M	12.844M	7M	13.593M
2.4G;11b;Nss1;Ntx2;2462	Pass	500k	7.025M	11.844M	7.05M	12.344M
2.4G;11g;Nss1;Ntx2;2412	Pass	500k	15.025M	16.217M	13.8M	16.217M
2.4G;11g;Nss1;Ntx2;2437	Pass	500k	13.7M	17.191M	14.95M	19.64M
2.4G;11g;Nss1;Ntx2;2462	Pass	500k	14.975M	16.242M	15.2M	16.267M
2.4G;HT20;Nss1,(M0);Ntx2;2412	Pass	500k	12.525M	17.441M	15.05M	17.416M
2.4G;HT20;Nss1,(M0);Ntx2;2437	Pass	500k	15.275M	18.841M	15.225M	20.89M
2.4G;HT20;Nss1,(M0);Ntx2;2462	Pass	500k	14.325M	17.341M	14.925M	17.366M
2.4G;HT40;Nss1,(M0);Ntx2;2422	Pass	500k	28.85M	35.682M	22.25M	35.732M
2.4G;HT40;Nss1,(M0);Ntx2;2437	Pass	500k	32.5M	35.832M	32.5M	35.932M
2.4G;HT40;Nss1,(M0);Ntx2;2452	Pass	500k	31.3M	35.782M	23.15M	35.782M

EBW;Band:2.4G;11b;BWch:20MHz;Nss:1;Nant:2;Ch:2412MHz;TN,VN



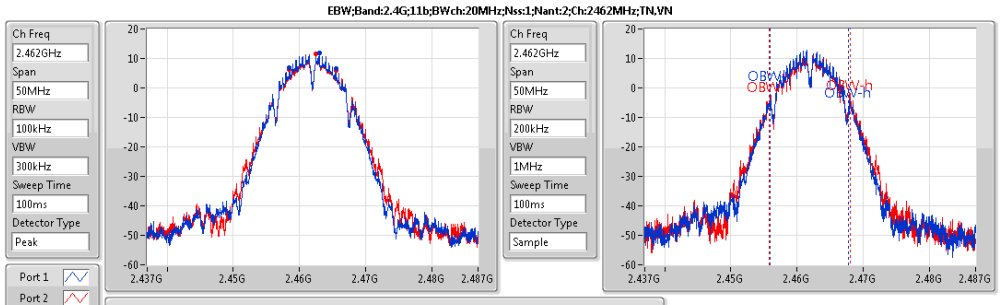
6dB(Hz)	Fl-6dB(Hz)	Fh-6dB(Hz)	OBW(Hz)	Fl-OBW(Hz)	Fh-OBW(Hz)	Limit(Hz)	Port
6.55M	2.40895G	2.4155G	11.869M	2.406003G	2.417872G	500k	1
7.05M	2.40845G	2.4155G	11.769M	2.405953G	2.417722G	500k	2

EBW;Band:2.4G;11b;BWch:20MHz;Nss:1;Nant:2;Ch:2437MHz;TN,VN



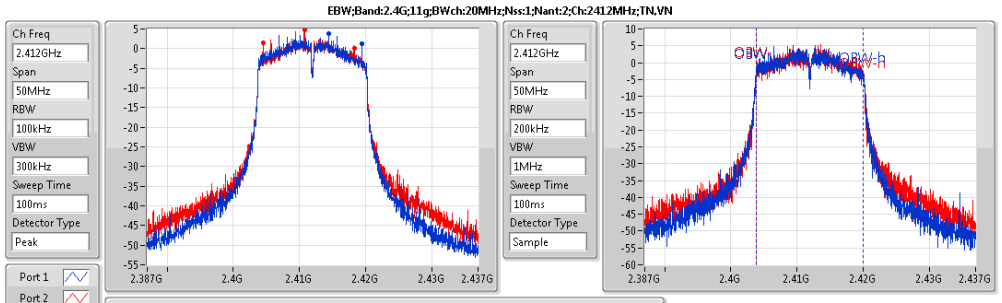
6dB(Hz)	Fl-6dB(Hz)	Fh-6dB(Hz)	OBW(Hz)	Fl-OBW(Hz)	Fh-OBW(Hz)	Limit(Hz)	Port
6.5M	2.4335G	2.44G	12.844M	2.430453G	2.443297G	500k	1
7M	2.433475G	2.440475G	13.593M	2.430153G	2.443747G	500k	2

EBW;Band:2.4G;11b;BWch:20MHz;Nss:1;Nant:2;Ch:2462MHz;TN,VN



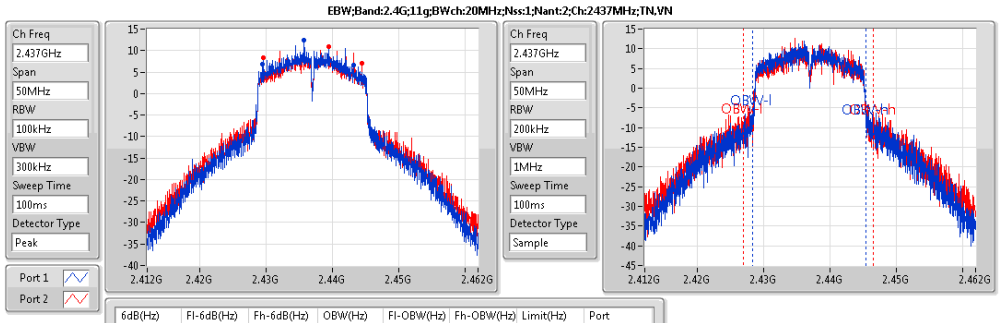
6dB(Hz)	Fl-6dB(Hz)	Fh-6dB(Hz)	OBW(Hz)	Fl-OBW(Hz)	Fh-OBW(Hz)	Limit(Hz)	Port
7.025M	2.458475G	2.4655G	11.844M	2.455978G	2.467822G	500k	1
7.05M	2.45845G	2.4655G	12.344M	2.455778G	2.468122G	500k	2

EBW;Band:2.4G;11g;BWch:20MHz;Nss:1;Nant:2;Ch:2412MHz;TN,VN



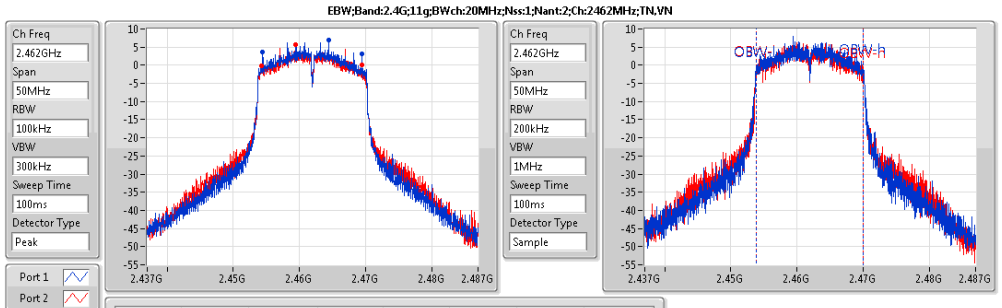
6dB(Hz)	Fl-6dB(Hz)	Fh-6dB(Hz)	OBW(Hz)	Fl-OBW(Hz)	Fh-OBW(Hz)	Limit(Hz)	Port
15.025M	2.40445G	2.419475G	16.217M	2.403829G	2.420046G	500k	1
13.8M	2.4045G	2.4183G	16.217M	2.403829G	2.420046G	500k	2

EBW;Band:2.4G;11g;BWch:20MHz;Nss:1;Nant:2;Ch:2437MHz;TN,VN



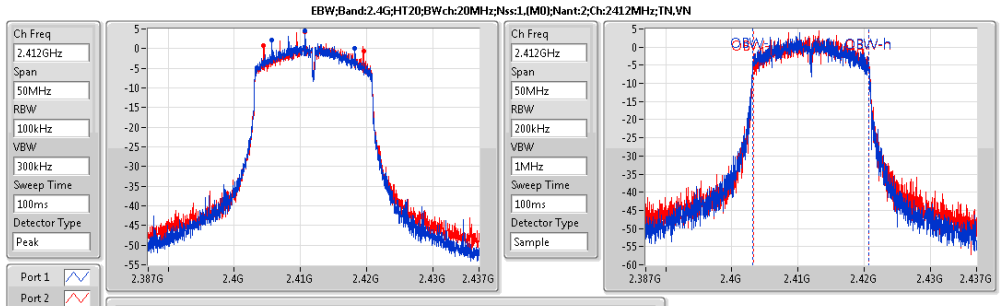
6dB(Hz)	Fl-6dB(Hz)	Fh-6dB(Hz)	OBW(Hz)	Fl-OBW(Hz)	Fh-OBW(Hz)	Limit(Hz)	Port
13.7M	2.429475G	2.443175G	17.191M	2.428229G	2.445421G	500k	1
14.95M	2.4295G	2.44445G	19.64M	2.426855G	2.446495G	500k	2

EBW;Band:2.4G;11g;BWch:20MHz;Nss:1;Nant:2;Ch:2462MHz;TN,VN



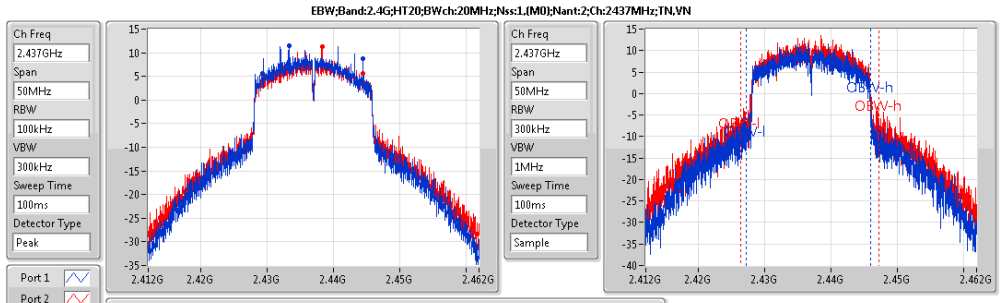
6dB(Hz)	Fl-6dB(Hz)	Fh-6dB(Hz)	OBW(Hz)	Fl-OBW(Hz)	Fh-OBW(Hz)	Limit(Hz)	Port
14.975M	2.454475G	2.46945G	16.242M	2.453829G	2.470071G	500k	1
15.2M	2.454225G	2.469425G	16.267M	2.453804G	2.470071G	500k	2

EBW;Band:2.4G;HT20;BWch:20MHz;Nss:1,(M0);Nant:2;Ch:2412MHz;TN,VN



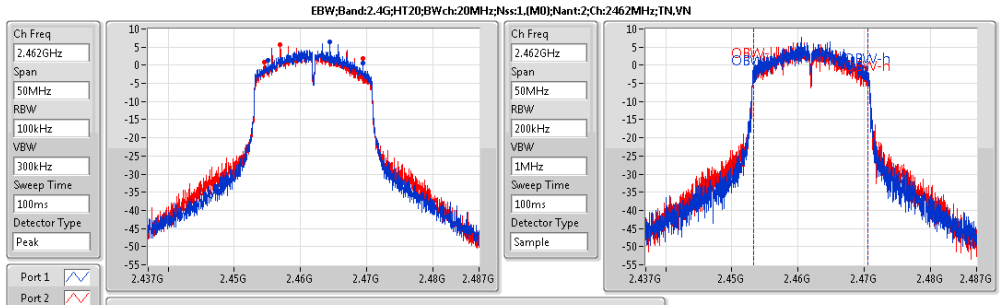
6dB(Hz)	Fl-6dB(Hz)	Fh-6dB(Hz)	OBW(Hz)	Fl-OBW(Hz)	Fh-OBW(Hz)	Limit(Hz)	Port
12.525M	2.405725G	2.41825G	17.441M	2.403204G	2.420646G	500k	1
15.05M	2.404475G	2.419525G	17.416M	2.403254G	2.420671G	500k	2

EBW;Band:2.4G;HT20;BWch:20MHz;Nss:1,(M0);Nant:2;Ch:2437MHz;TN,VN



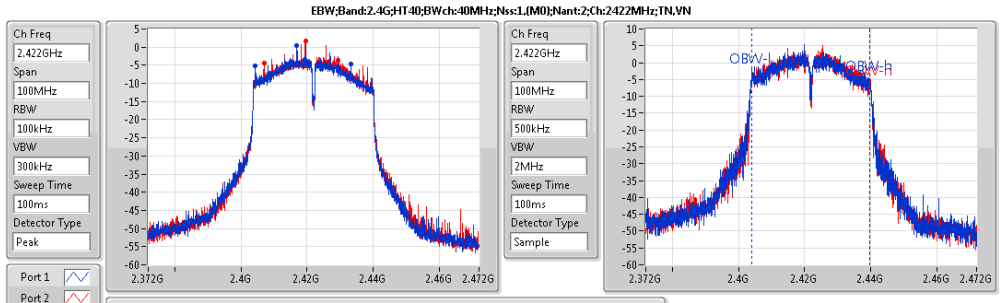
6dB(Hz)	Fl-6dB(Hz)	Fh-6dB(Hz)	OBW(Hz)	Fl-OBW(Hz)	Fh-OBW(Hz)	Limit(Hz)	Port
15.275M	2.429225G	2.4445G	18.041M	2.427205G	2.446045G	500k	1
15.225M	2.42925G	2.444475G	20.89M	2.42638G	2.44727G	500k	2

EBW;Band:2.4G;HT20;BWch:20MHz;Nss:1,(M0);Nant:2;Ch:2462MHz;TN,VN



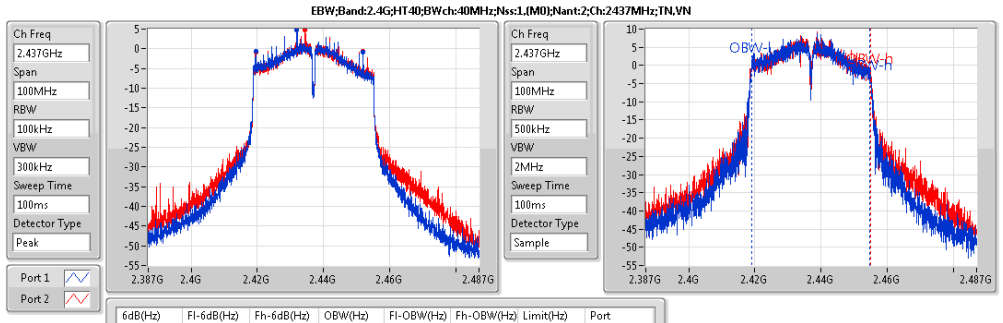
6dB(Hz)	Fl-6dB(Hz)	Fh-6dB(Hz)	OBW(Hz)	Fl-OBW(Hz)	Fh-OBW(Hz)	Limit(Hz)	Port
14.325M	2.455125G	2.46945G	17.341M	2.453254G	2.470596G	500k	1
14.925M	2.45455G	2.469475G	17.366M	2.453254G	2.470621G	500k	2

EBW;Band:2.4G;HT40;BWch:40MHz;Nss:1,(M0);Nant:2;Ch:2422MHz;TN,VN



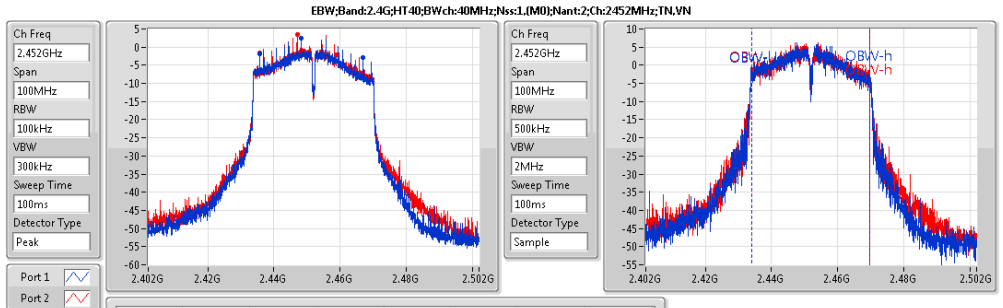
6dB(Hz)	Fl-6dB(Hz)	Fh-6dB(Hz)	OBW(Hz)	Fl-OBW(Hz)	Fh-OBW(Hz)	Limit(Hz)	Port
28.85M	2.40445G	2.4333G	35.682M	2.403959G	2.439641G	500k	1
22.25M	2.407G	2.42925G	35.732M	2.404009G	2.439741G	500k	2

EBW;Band:2.4G;HT40;BWch:40MHz;Nss:1,(M0);Nant:2;Ch:2437MHz;TN,VN



6dB(Hz)	Fl-6dB(Hz)	Fh-6dB(Hz)	OBW(Hz)	Fl-OBW(Hz)	Fh-OBW(Hz)	Limit(Hz)	Port
32.5M	2.4195G	2.452G	35.832M	2.418909G	2.454741G	500k	1
32.5M	2.4195G	2.452G	35.932M	2.418909G	2.454841G	500k	2

EBW;Band:2.4G;HT40;BWch:40MHz;Nss:1,(M0);Nant:2;Ch:2452MHz;TN,VN



6dB(Hz)	Fl-6dB(Hz)	Fh-6dB(Hz)	OBW(Hz)	Fl-OBW(Hz)	Fh-OBW(Hz)	Limit(Hz)	Port
31.3M	2.4357G	2.467G	35.782M	2.433909G	2.469691G	500k	1
23.15M	2.4357G	2.45885G	35.782M	2.433959G	2.469741G	500k	2

Summary

Mode	Sum (dBm)	Sum (W)	EIRP (dBm)	EIRP (W)
2.4G;11b;Nss1;Ntx2	25.75	0.37584	28.10	0.64565
2.4G;11g;Nss1;Ntx2	25.90	0.38905	28.25	0.66834
2.4G;HT20;Nss1,(M0);Ntx2	26.01	0.39902	28.36	0.68549
2.4G;HT40;Nss1,(M0);Ntx2	20.93	0.12388	23.28	0.21281

Result

Mode	Result	DG (dBi)	EIRP (dBm)	EIRP Lim. (dBm)	Sum (dBm)	Sum Lim. (dBm)	P1 (dBm)	P2 (dBm)
2.4G;11b;Nss1;Ntx2;2412	Pass	2.35	24.17	36.00	21.82	30.00	19.31	18.24
2.4G;11b;Nss1;Ntx2;2437	Pass	2.35	28.10	36.00	25.75	30.00	22.49	22.98
2.4G;11b;Nss1;Ntx2;2462	Pass	2.35	25.53	36.00	23.18	30.00	20.01	20.32
2.4G;11g;Nss1;Ntx2;2412	Pass	2.35	21.54	36.00	19.19	30.00	16.39	15.96
2.4G;11g;Nss1;Ntx2;2437	Pass	2.35	28.25	36.00	25.90	30.00	22.85	22.92
2.4G;11g;Nss1;Ntx2;2462	Pass	2.35	23.28	36.00	20.93	30.00	17.72	18.11
2.4G;HT20;Nss1,(M0);Ntx2;2412	Pass	2.35	20.82	36.00	18.47	30.00	15.56	15.36
2.4G;HT20;Nss1,(M0);Ntx2;2437	Pass	2.35	28.36	36.00	26.01	30.00	22.86	23.14
2.4G;HT20;Nss1,(M0);Ntx2;2462	Pass	2.35	23.11	36.00	20.76	30.00	17.69	17.8
2.4G;HT40;Nss1,(M0);Ntx2;2422	Pass	2.35	19.17	36.00	16.82	30.00	14.17	13.41
2.4G;HT40;Nss1,(M0);Ntx2;2437	Pass	2.35	23.28	36.00	20.93	30.00	18.16	17.67
2.4G;HT40;Nss1,(M0);Ntx2;2452	Pass	2.35	21.48	36.00	19.13	30.00	16.48	15.73

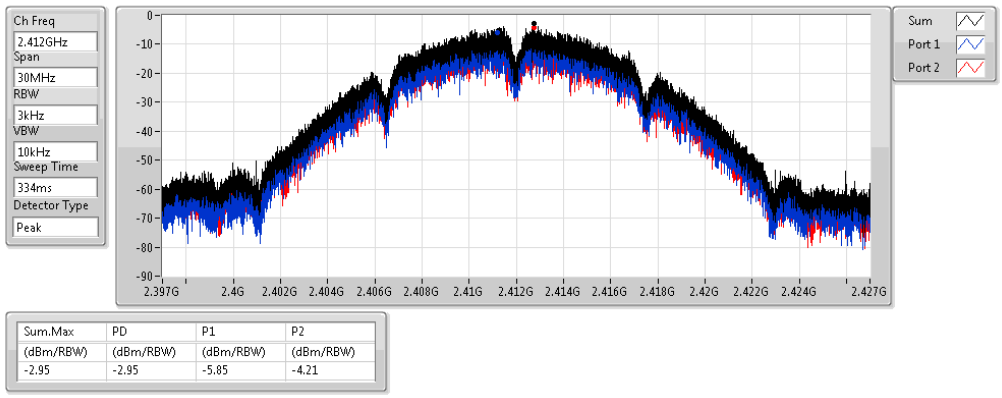
Summary

Mode	PD (dBm/RBW)	EIRP.PD (dBm/RBW)
2.4G;11b;Nss1;Ntx2	0.98	6.14
2.4G;11g;Nss1;Ntx2	-1.41	3.75
2.4G;HT20;Nss1,(M0);Ntx2	-1.90	3.26
2.4G;HT40;Nss1,(M0);Ntx2	-7.73	-2.57

Result

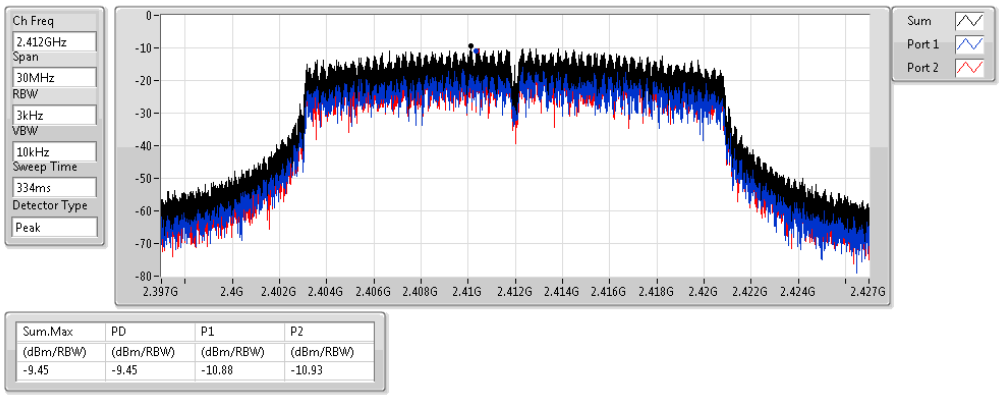
Mode	Result	Meas.RBW (Hz)	Lim.RBW (Hz)	BWCF (dB)	DG (dBi)	PD (dBm/RBW)	PD.Limit (dBm/RBW)	EIRP.PD (dBm/RBW)	EIRP.PD.Lim (dBm/RBW)	P1 (dBm/RBW)	P2 (dBm/RBW)
2.4G;11b;Nss1;Ntx2;2412	Pass	3k	3k	0.00	5.16	-2.95	8.00	2.21	Inf	-5.85	-4.21
2.4G;11b;Nss1;Ntx2;2437	Pass	3k	3k	0.00	5.16	0.98	8.00	6.14	Inf	0.42	-0.90
2.4G;11b;Nss1;Ntx2;2462	Pass	3k	3k	0.00	5.16	-1.85	8.00	3.31	Inf	-2.94	-3.59
2.4G;11g;Nss1;Ntx2;2412	Pass	3k	3k	0.00	5.16	-7.72	8.00	-2.56	Inf	-9.52	-8.43
2.4G;11g;Nss1;Ntx2;2437	Pass	3k	3k	0.00	5.16	-1.41	8.00	3.75	Inf	-1.89	-2.84
2.4G;11g;Nss1;Ntx2;2462	Pass	3k	3k	0.00	5.16	-6.36	8.00	-1.20	Inf	-6.71	-8.13
2.4G;HT20;Nss1,(M0);Ntx2;2412	Pass	3k	3k	0.00	5.16	-9.45	8.00	-4.29	Inf	-10.88	-10.93
2.4G;HT20;Nss1,(M0);Ntx2;2437	Pass	3k	3k	0.00	5.16	-1.90	8.00	3.26	Inf	-3.57	-2.71
2.4G;HT20;Nss1,(M0);Ntx2;2462	Pass	3k	3k	0.00	5.16	-5.58	8.00	-0.42	Inf	-7.85	-9.13
2.4G;HT40;Nss1,(M0);Ntx2;2422	Pass	3k	3k	0.00	5.16	-13.63	8.00	-8.47	Inf	-15.04	-14.33
2.4G;HT40;Nss1,(M0);Ntx2;2437	Pass	3k	3k	0.00	5.16	-7.73	8.00	-2.57	Inf	-10.55	-8.56
2.4G;HT40;Nss1,(M0);Ntx2;2452	Pass	3k	3k	0.00	5.16	-9.57	8.00	-4.41	Inf	-11.93	-10.18

PSD;Band:2.4G;11b;BWch:20MHz;Nss:1;Nant:2;Ch:2412MHz;TN,VN



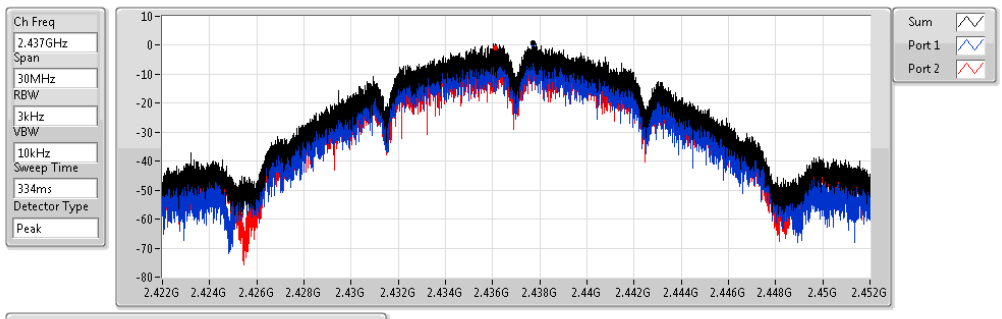
Sum.Max	PD	P1	P2
(dBm/RBW)	(dBm/RBW)	(dBm/RBW)	(dBm/RBW)
-2.95	-2.95	-5.85	-4.21

PSD;Band:2.4G;HT20;BWch:20MHz;Nss:1,(M0);Nant:2;Ch:2412MHz;TN,VN



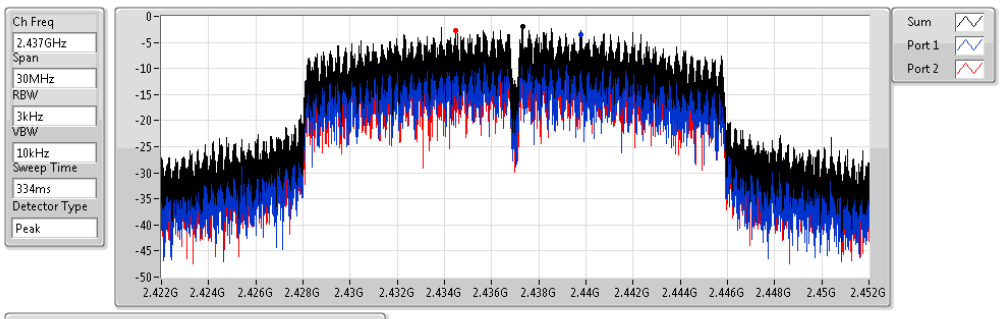
Sum.Max	PD	P1	P2
(dBm/RBW)	(dBm/RBW)	(dBm/RBW)	(dBm/RBW)
-9.45	-9.45	-10.88	-10.93

PSD;Band:2.4G;11b;BWch:20MHz;Nss:1;Nant:2;Ch:2437MHz;TN,VN



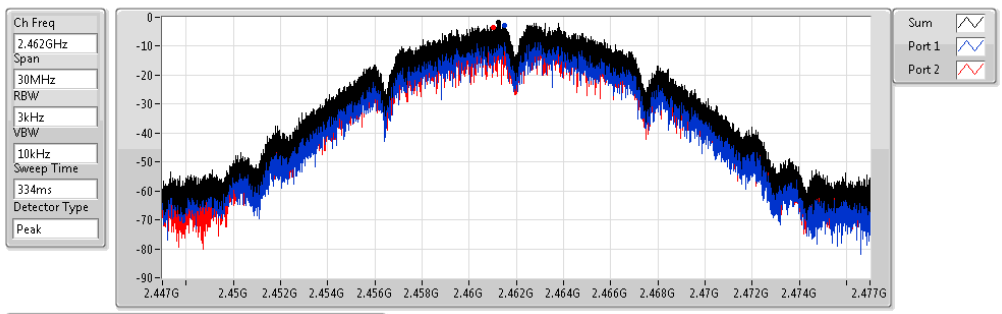
Sum.Max	PD	P1	P2
(dBm/RBW)	(dBm/RBW)	(dBm/RBW)	(dBm/RBW)
0.98	0.98	0.42	-0.90

PSD;Band:2.4G;HT20;BWch:20MHz;Nss:1,(M0);Nant:2;Ch:2437MHz;TN,VN



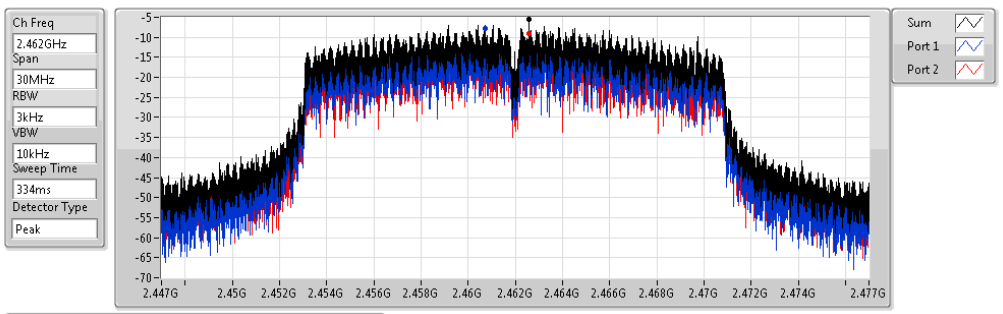
Sum.Max	PD	P1	P2
(dBm/RBW)	(dBm/RBW)	(dBm/RBW)	(dBm/RBW)
-1.90	-1.90	-3.57	-2.71

PSD;Band:2.4G;11b;BWch:20MHz;Nss:1;Nant:2;Ch:2462MHz;TN,VN



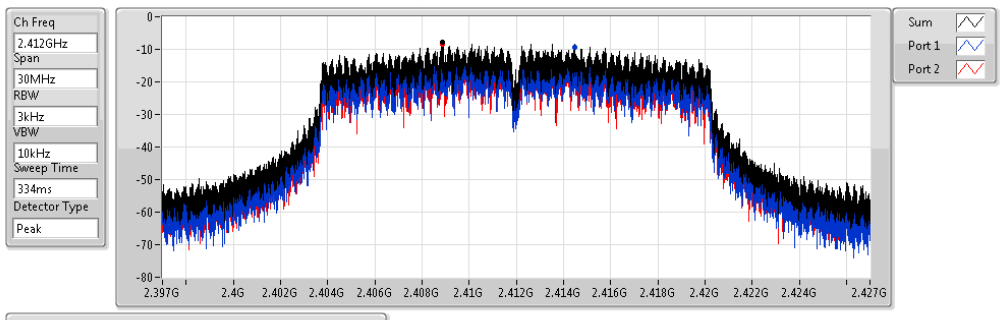
Sum.Max	PD	P1	P2
(dBm/RBW)	(dBm/RBW)	(dBm/RBW)	(dBm/RBW)
-1.85	-1.85	-2.94	-3.59

PSD;Band:2.4G;HT20;BWch:20MHz;Nss:1,(M0);Nant:2;Ch:2462MHz;TN,VN



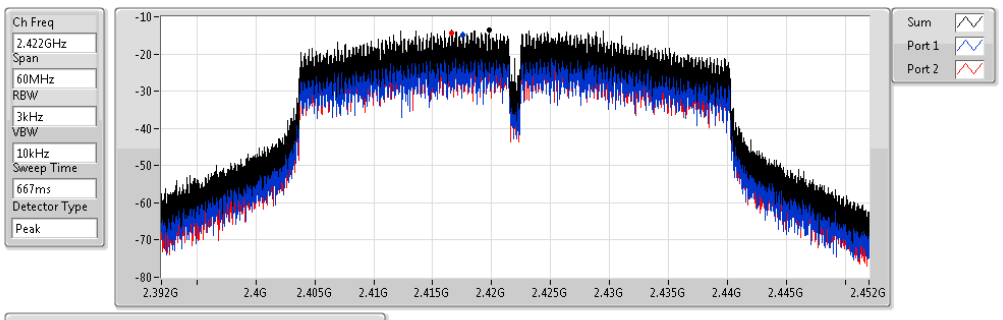
Sum.Max	PD	P1	P2
(dBm/RBW)	(dBm/RBW)	(dBm/RBW)	(dBm/RBW)
-5.58	-5.58	-7.85	-9.13

PSD;Band:2.4G;11g;BWch:20MHz;Nss:1;Nant:2;Ch:2412MHz;TN,VN



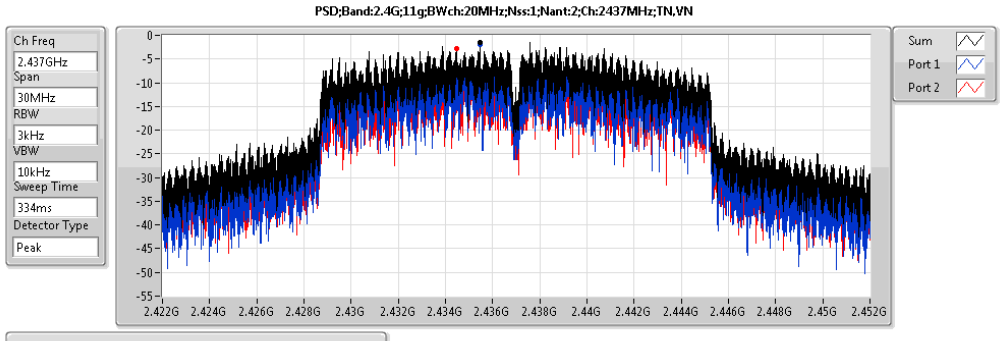
Sum.Max	PD	P1	P2
(dBm/RBW)	(dBm/RBW)	(dBm/RBW)	(dBm/RBW)
-7.72	-7.72	-9.52	-8.43

PSD;Band:2.4G;HT40;BWch:40MHz;Nss:1,(M0);Nant:2;Ch:2422MHz;TN,VN



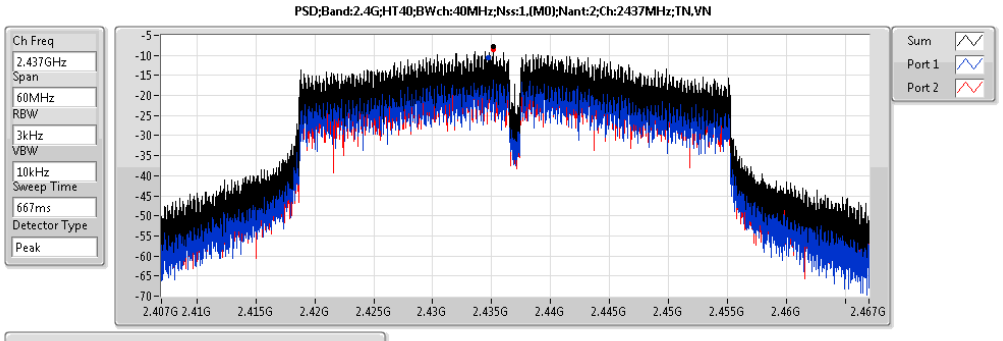
Sum.Max	PD	P1	P2
(dBm/RBW)	(dBm/RBW)	(dBm/RBW)	(dBm/RBW)
-13.63	-13.63	-15.04	-14.33

PSD;Band:2.4G;11g;BWch:20MHz;Nss:1;Nant:2;Ch:2437MHz;TN,VN



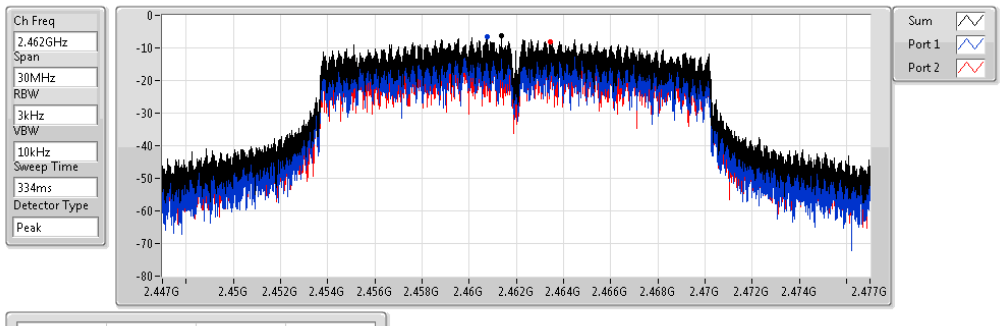
Sum.Max	PD	P1	P2
(dBm/RBW)	(dBm/RBW)	(dBm/RBW)	(dBm/RBW)
-1.41	-1.41	-1.89	-2.84

PSD;Band:2.4G;HT40;BWch:40MHz;Nss:1,(M0);Nant:2;Ch:2437MHz;TN,VN



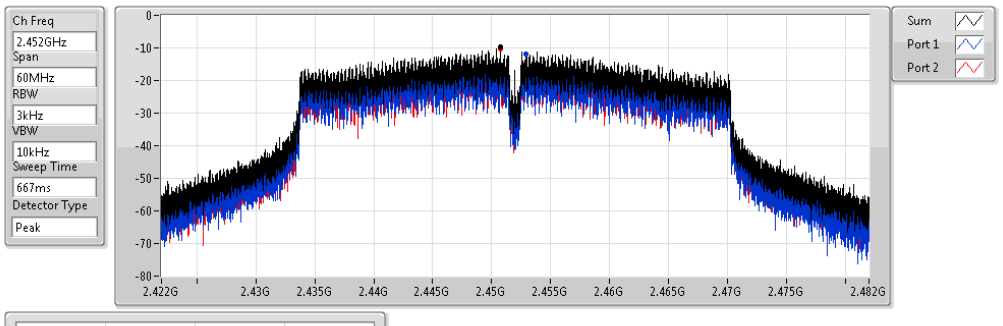
Sum.Max	PD	P1	P2
(dBm/RBW)	(dBm/RBW)	(dBm/RBW)	(dBm/RBW)
-7.73	-7.73	-10.55	-8.56

PSD;Band:2.4G;11g;BWch:20MHz;Nss:1;Nant:2;Ch:2462MHz;TN,VN



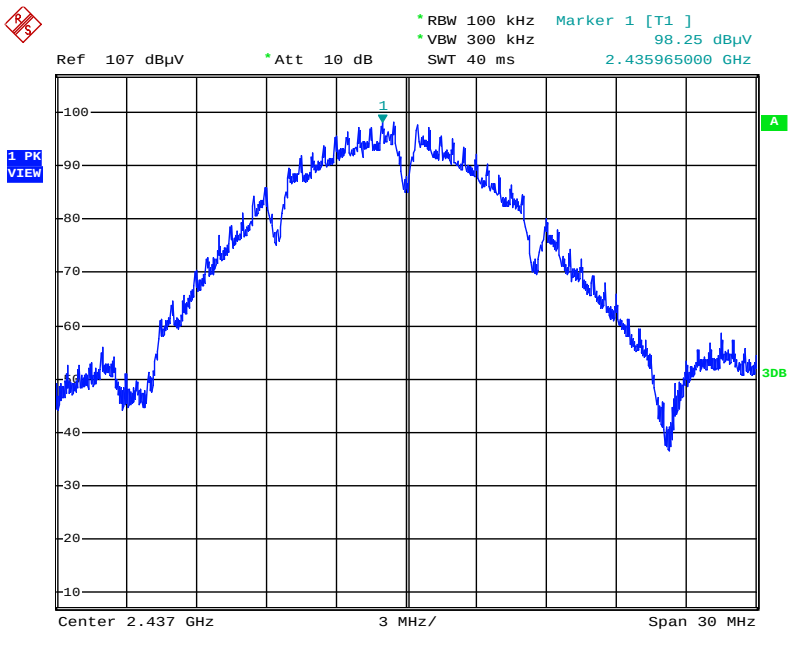
Sum.Max	PD	P1	P2
(dBm/RBW)	(dBm/RBW)	(dBm/RBW)	(dBm/RBW)
-6.36	-6.36	-6.71	-8.13

PSD;Band:2.4G;HT40;BWch:40MHz;Nss:1,(M0);Nant:2;Ch:2452MHz;TN,VN



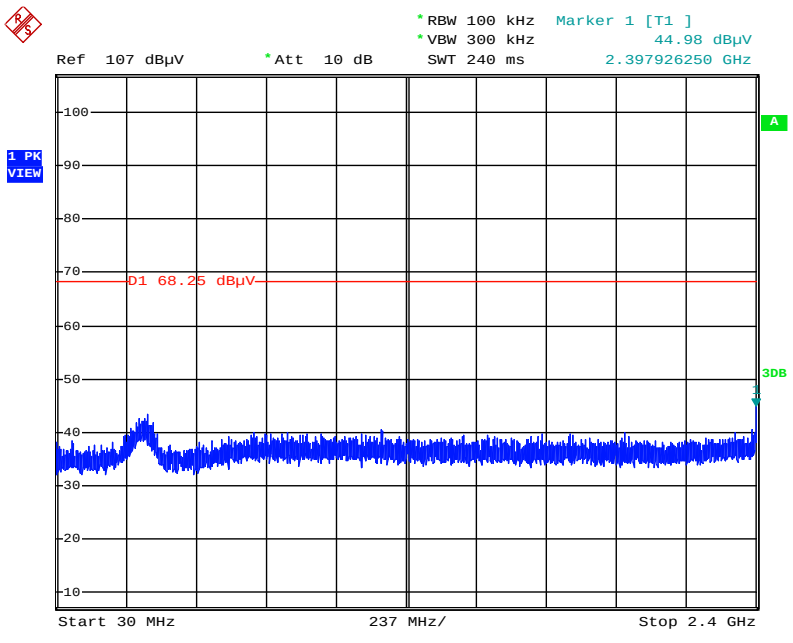
Sum.Max	PD	P1	P2
(dBm/RBW)	(dBm/RBW)	(dBm/RBW)	(dBm/RBW)
-9.57	-9.57	-11.93	-10.18

Plot on Configuration IEEE 802.11b / Reference Level



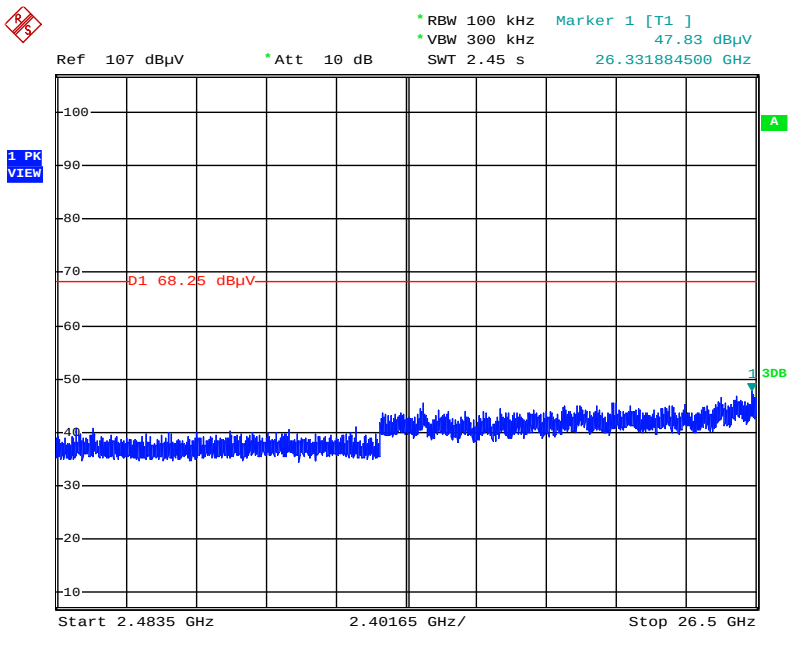
Date: 26.AUG.2016 02:41:54

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



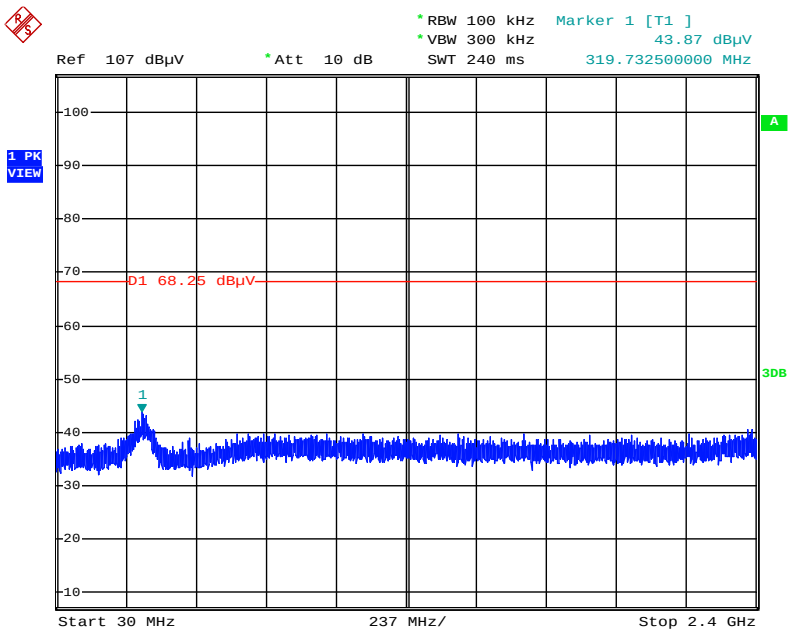
Date: 26.AUG.2016 02:42:40

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



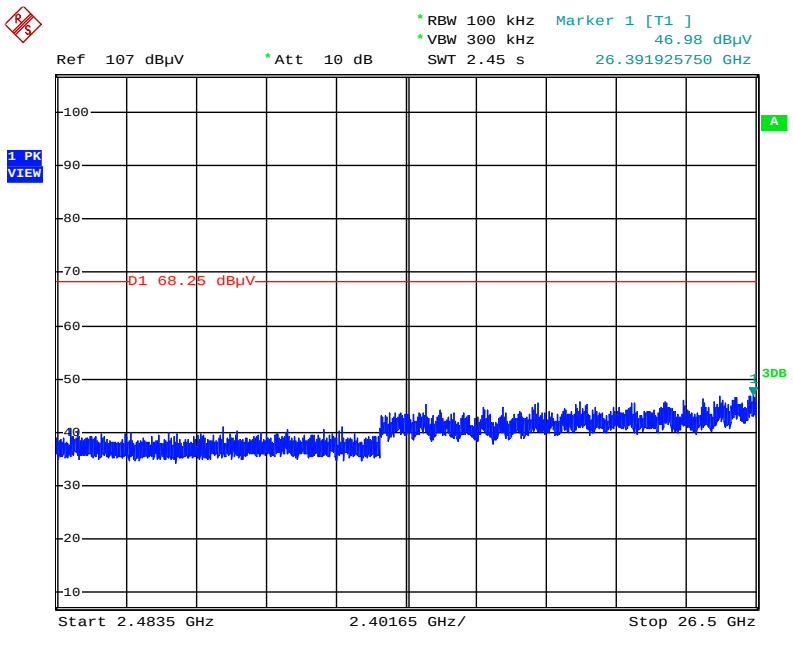
Date: 26.AUG.2016 02:43:29

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



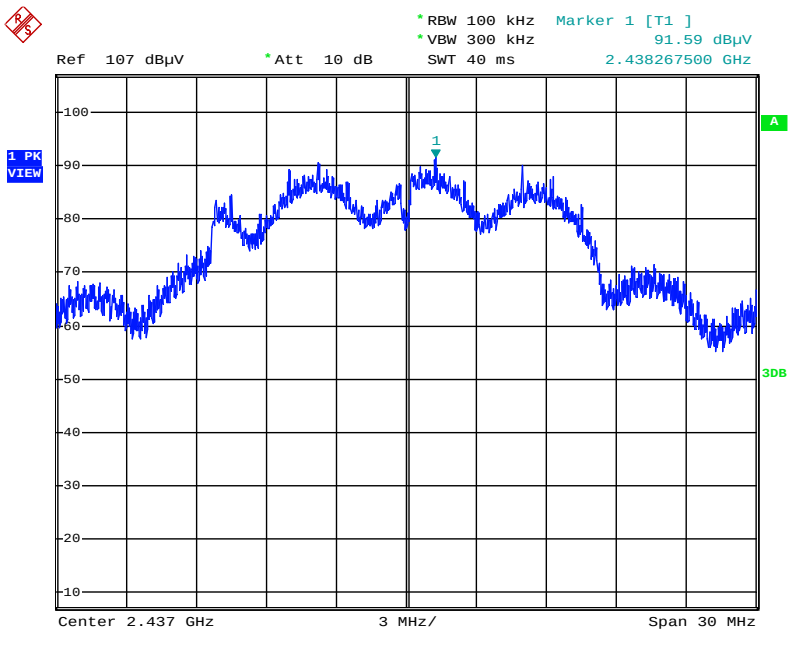
Date: 26.AUG.2016 02:44:44

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



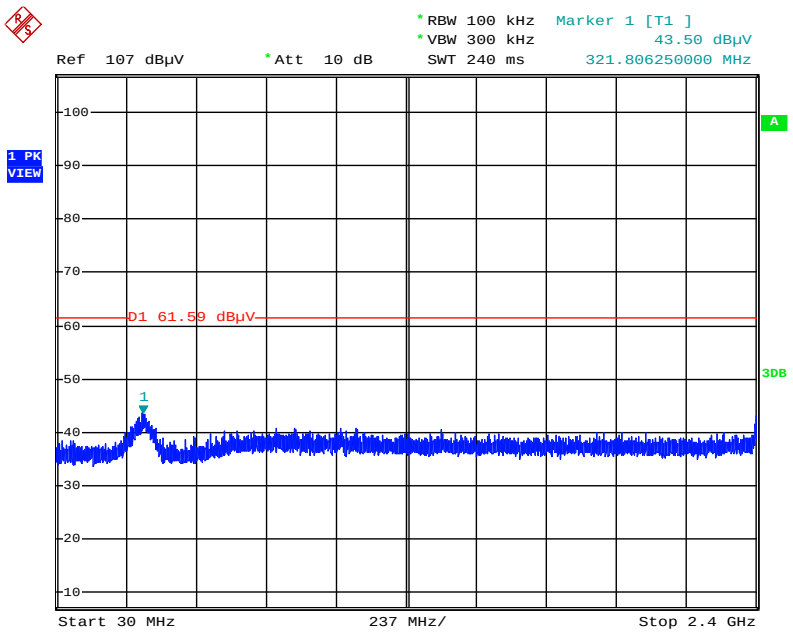
Date: 26.AUG.2016 02:44:19

Plot on Configuration IEEE 802.11g / Reference Level



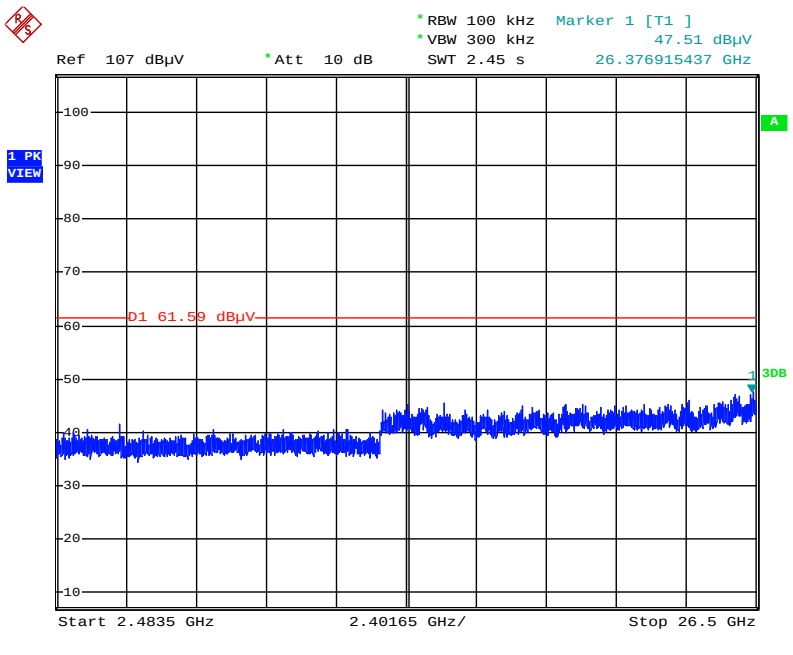
Date: 26.AUG.2016 02:23:25

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



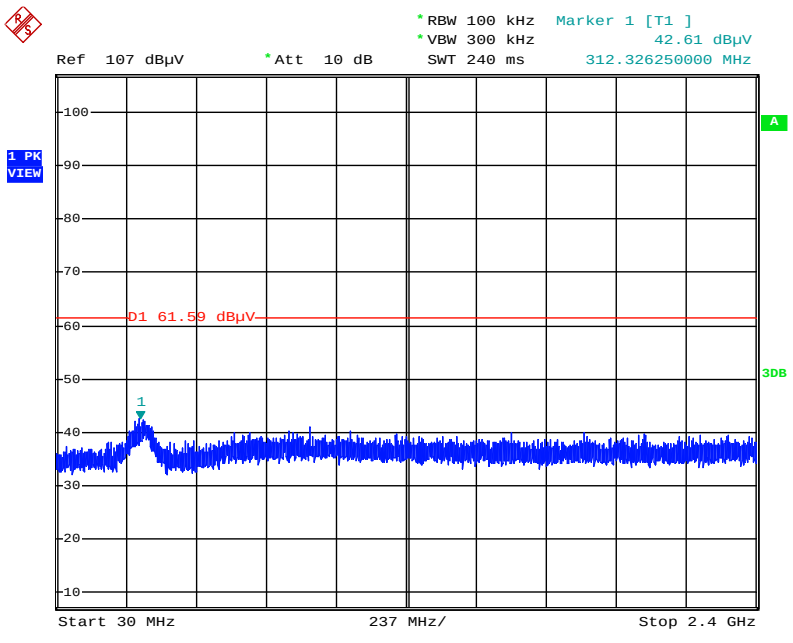
Date: 26.AUG.2016 02:25:06

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



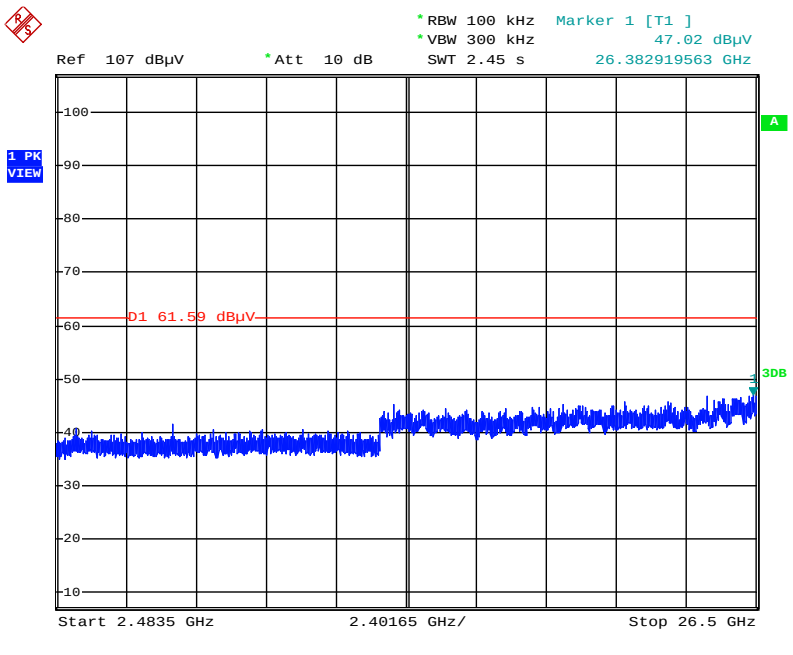
Date: 26.AUG.2016 02:25:58

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



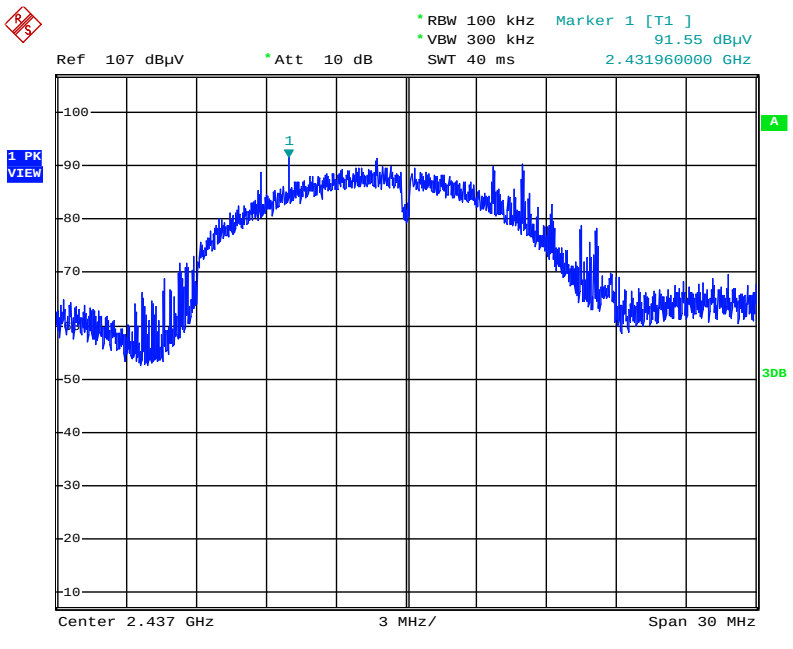
Date: 26.AUG.2016 02:27:53

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



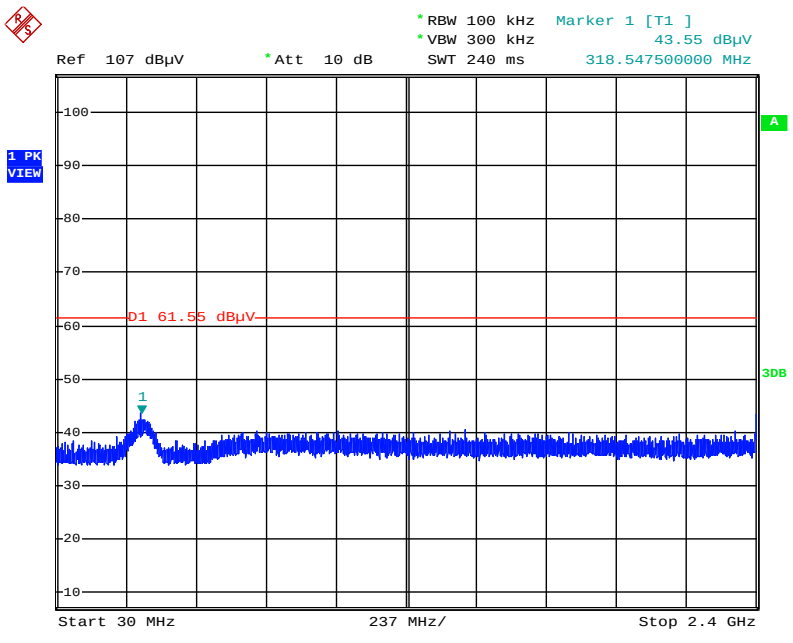
Date: 26.AUG.2016 02:27:15

Plot on Configuration IEEE 802.11n MCS0 HT20 / Reference Level



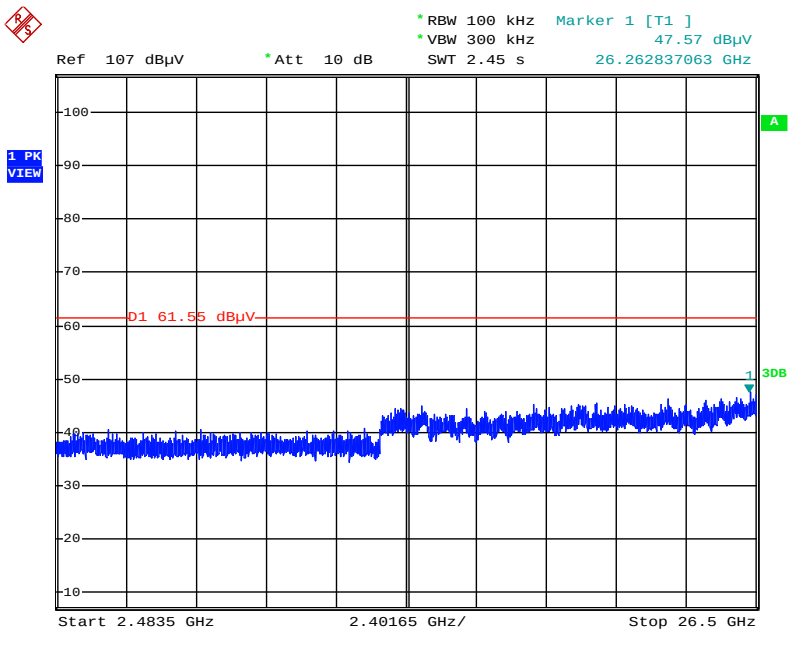
Date: 26.AUG.2016 02:29:43

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



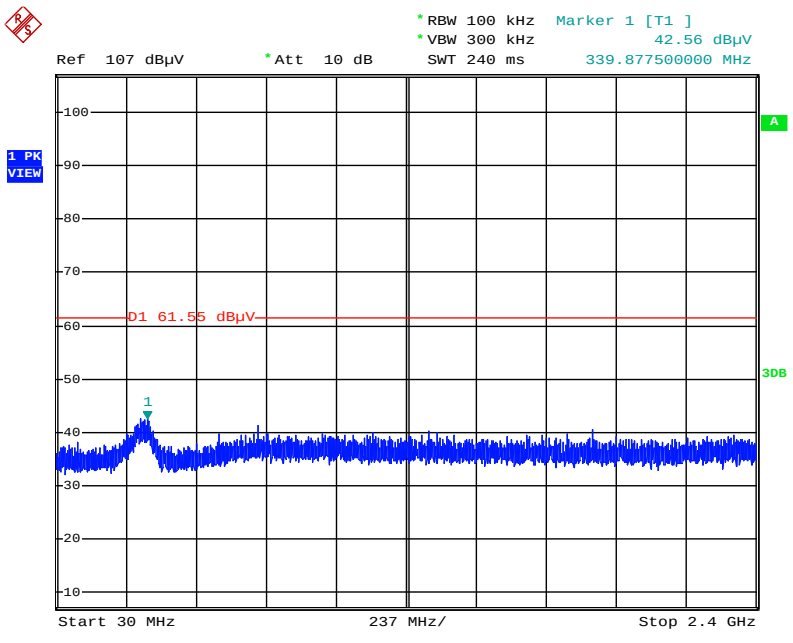
Date: 26.AUG.2016 02:30:49

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



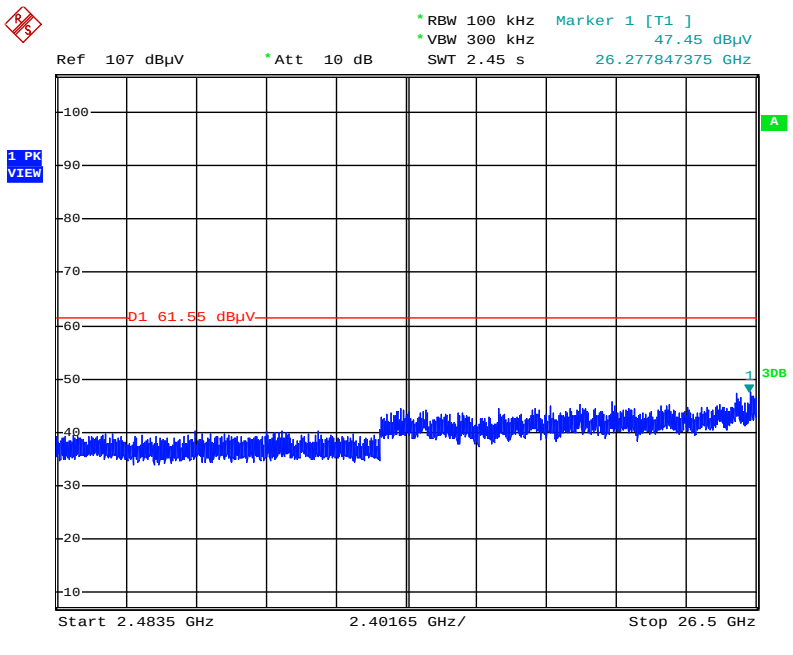
Date: 26.AUG.2016 02:31:34

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



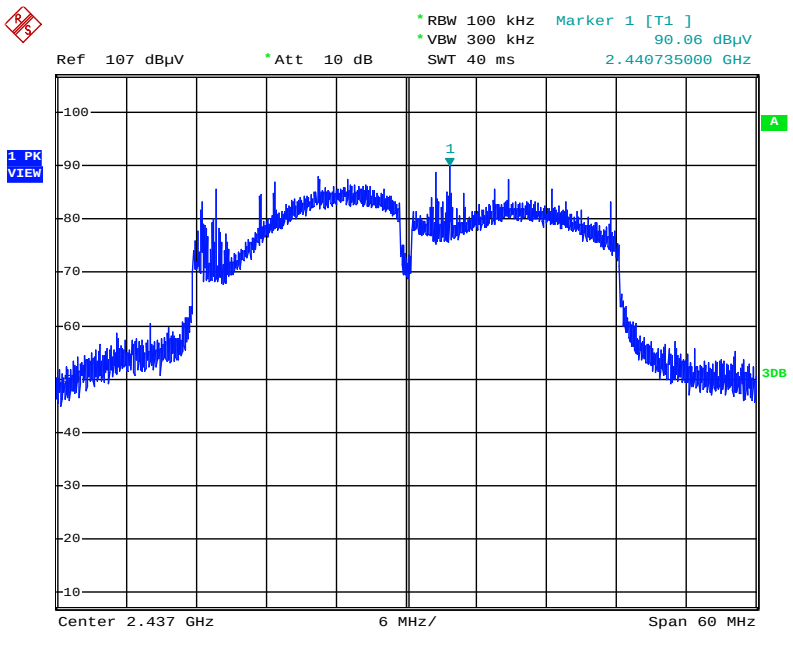
Date: 26.AUG.2016 02:34:17

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



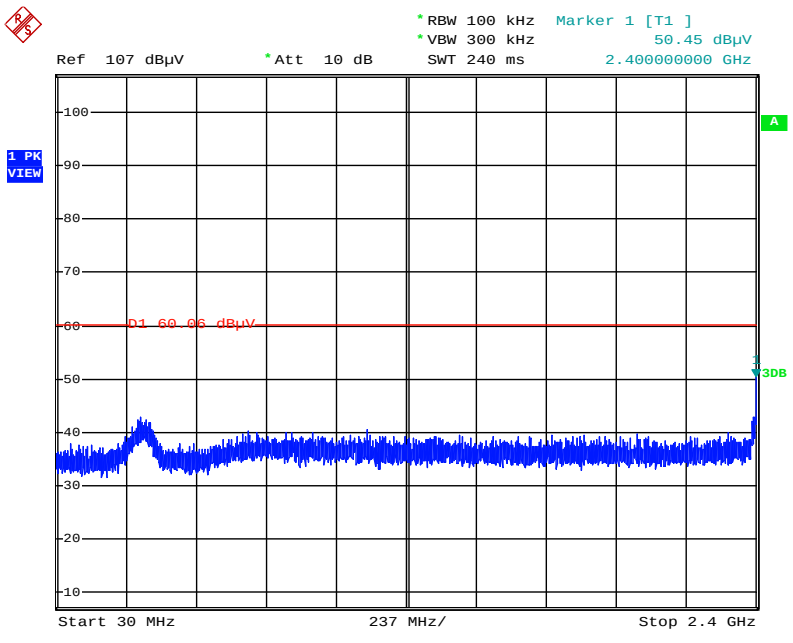
Date: 26.AUG.2016 02:33:54

Plot on Configuration IEEE 802.11n MCS0 HT40 / Reference Level



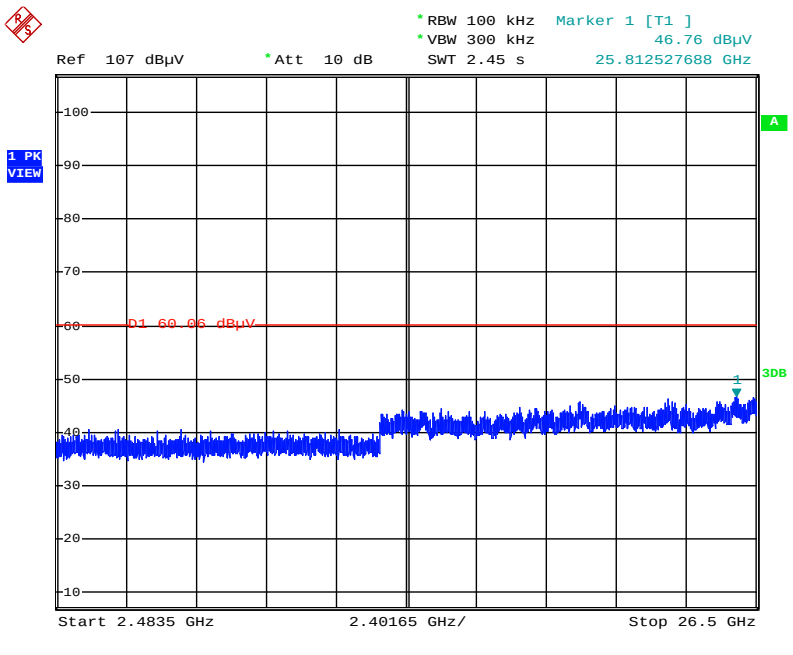
Date: 26.AUG.2016 02:37:09

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



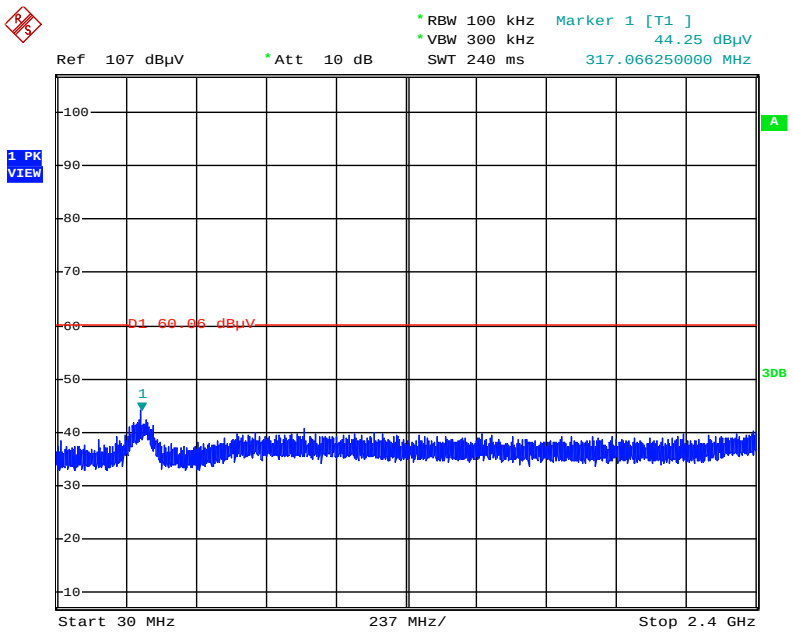
Date: 26.AUG.2016 02:37:52

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



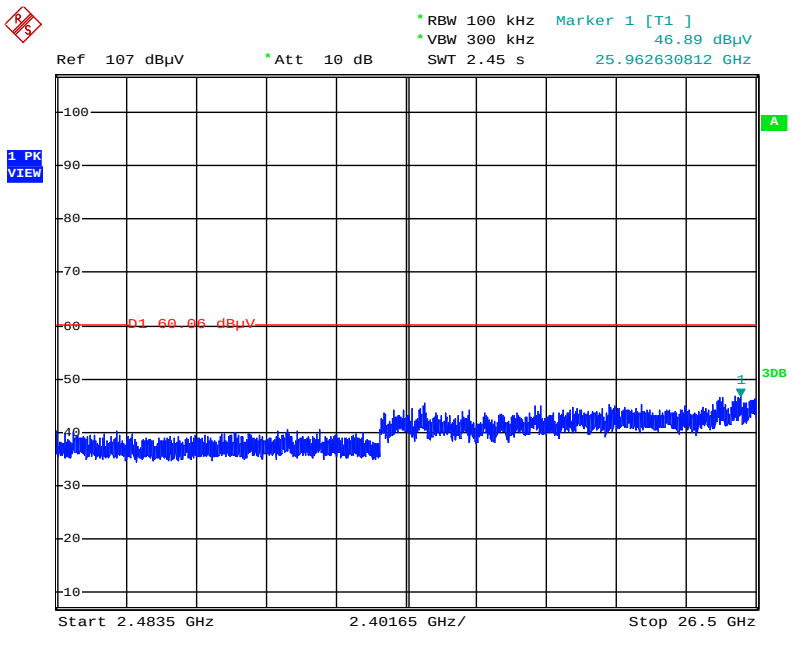
Date: 26.AUG.2016 02:38:46

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



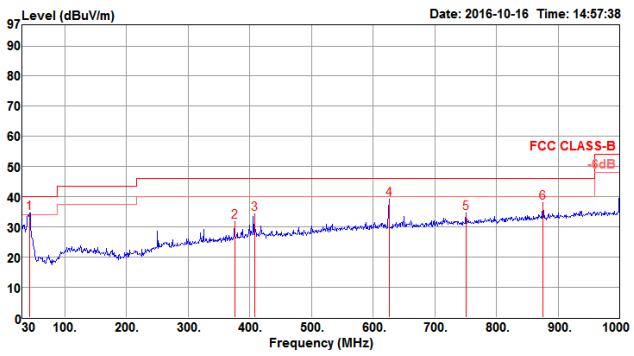
Date: 26.AUG.2016 02:40:12

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



Date: 26.AUG.2016 02:39:39

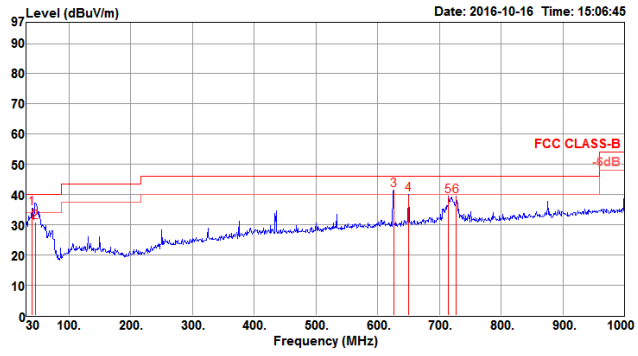
RSE below 1GHz Result			
Operating Mode	1	**Polarization**	Horizontal
Operating Function	CTX		



	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	42.61	34.77	40.00	-5.23	43.47	1.30	18.47	28.47	100	360	Peak	HORIZONTAL
2	375.32	31.89	46.00	-14.11	36.03	2.31	21.68	28.13	100	360	Peak	HORIZONTAL
3	407.33	34.43	46.00	-11.57	37.99	2.38	22.39	28.33	100	360	Peak	HORIZONTAL
4	625.58	39.31	46.00	-6.69	39.90	2.91	25.26	28.76	100	360	Peak	HORIZONTAL
5	750.71	34.68	46.00	-11.32	33.97	3.22	26.00	28.51	100	360	Peak	HORIZONTAL
6	875.84	38.02	46.00	-7.98	35.32	3.41	27.40	28.11	100	360	Peak	HORIZONTAL

Note 1: “>20dB” means emission levels that exceed the level of 20 dB below the applicable limit.
Note 2: “N/F” means Nothing Found emissions (No emissions were detected.)

RSE below 1GHz Result			
Operating Mode	1	**Power Phase**	Vertical
Operating Function	CTX		



	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	39.70	35.60	40.00	-4.40	42.73	1.29	20.05	28.47	400	360	Peak	VERTICAL
2	45.52	31.02	40.00	-8.98	41.21	1.30	16.98	28.47	104	10	QP	VERTICAL
3	625.58	41.49	46.00	-4.51	42.08	2.91	25.26	28.76	400	360	Peak	VERTICAL
4	649.83	39.97	46.00	-6.03	40.19	3.00	25.50	28.72	400	360	Peak	VERTICAL
5	714.82	39.40	46.00	-6.60	39.10	3.18	25.72	28.60	400	360	Peak	VERTICAL
6	727.43	39.60	46.00	-6.40	39.15	3.19	25.82	28.56	400	360	Peak	VERTICAL

Note 1: “>20dB” means emission levels that exceed the level of 20 dB below the applicable limit.
Note 2: “N/F” means Nothing Found emissions (No emissions were detected.)

Radiated Emissions (1GHz~10th Harmonic)

Configurations	IEEE 802.11b CH 1 / Chain 1 + Chain 2

Horizontal

	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	4823.86	51.67	74.00	-22.33	46.62	9.12	32.58	36.65	111	226	Peak	HORIZONTAL
2	4823.96	45.56	54.00	-8.44	40.51	9.12	32.58	36.65	111	226	Average	HORIZONTAL

Vertical

	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	4823.90	50.71	74.00	-23.29	45.66	9.12	32.58	36.65	125	349	Peak	VERTICAL
2	4823.91	43.93	54.00	-10.07	38.88	9.12	32.58	36.65	125	349	Average	VERTICAL

Configurations	IEEE 802.11b CH 6 / Chain 1 + Chain 2

Horizontal

	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	4873.92	55.38	74.00	-18.62	50.19	9.16	32.68	36.65	184	235	Peak	HORIZONTAL
2	4873.98	51.70	54.00	-2.30	46.51	9.16	32.68	36.65	184	235	Average	HORIZONTAL
3	7311.72	52.47	54.00	-1.53	40.63	10.70	37.24	36.10	159	260	Average	HORIZONTAL
4	7311.84	58.79	74.00	-15.21	46.95	10.70	37.24	36.10	159	260	Peak	HORIZONTAL

Vertical

	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	4873.92	55.78	74.00	-18.22	50.59	9.16	32.68	36.65	135	350	Peak	VERTICAL
2	4873.97	52.20	54.00	-1.80	47.01	9.16	32.68	36.65	135	350	Average	VERTICAL
3	7310.20	49.61	54.00	-4.39	37.77	10.70	37.24	36.10	167	226	Average	VERTICAL
4	7311.60	56.97	74.00	-17.03	45.13	10.70	37.24	36.10	167	226	Peak	VERTICAL

Configurations	IEEE 802.11b CH 11 / Chain 1 + Chain 2

Horizontal

	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	4923.96	55.15	74.00	-18.85	49.82	9.19	32.78	36.64	206	228	Peak	HORIZONTAL
2	4923.99	51.20	54.00	-2.80	45.87	9.19	32.78	36.64	206	228	Average	HORIZONTAL
3	7385.28	52.62	54.00	-1.38	40.69	10.66	37.35	36.08	155	260	Average	HORIZONTAL
4	7387.00	59.28	74.00	-14.72	47.35	10.66	37.35	36.08	155	260	Peak	HORIZONTAL

Vertical

	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	4923.96	52.60	54.00	-1.40	47.27	9.19	32.78	36.64	143	344	Average	VERTICAL
2	4924.06	56.82	74.00	-17.18	51.49	9.19	32.78	36.64	143	344	Peak	VERTICAL
3	7384.88	57.67	74.00	-16.33	45.74	10.66	37.35	36.08	148	303	Peak	VERTICAL
4	7385.24	49.82	54.00	-4.18	37.89	10.66	37.35	36.08	148	303	Average	VERTICAL

Configurations	IEEE 802.11g CH 1 / Chain 1 + Chain 2

Horizontal

	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	4819.16	35.44	54.00	-18.56	29.56	7.58	32.82	34.52	176	52	Average	HORIZONTAL
2	4825.64	46.99	74.00	-27.01	41.09	7.58	32.84	34.52	176	52	Peak	HORIZONTAL

Vertical

	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	4820.42	35.42	54.00	-18.58	29.54	7.58	32.82	34.52	158	286	Average	VERTICAL
2	4821.48	46.30	74.00	-27.70	40.42	7.58	32.82	34.52	158	286	Peak	VERTICAL

Configurations	IEEE 802.11g CH 6 / Chain 1 + Chain 2

Horizontal

	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	4871.50	53.77	74.00	-20.23	47.77	7.60	32.91	34.51	167	11	Peak	HORIZONTAL
2	4872.20	41.32	54.00	-12.68	35.32	7.60	32.91	34.51	167	11	Average	HORIZONTAL
3	7306.40	49.41	54.00	-4.59	38.40	8.60	37.17	34.76	166	23	Average	HORIZONTAL
4	7311.80	62.05	74.00	-11.95	51.04	8.60	37.17	34.76	166	23	Peak	HORIZONTAL

Vertical

	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	4873.88	54.58	74.00	-19.42	48.58	7.60	32.91	34.51	154	70	Peak	VERTICAL
2	4874.20	42.75	54.00	-11.25	36.75	7.60	32.91	34.51	154	70	Average	VERTICAL
3	7311.20	58.13	74.00	-15.87	47.12	8.60	37.17	34.76	138	37	Peak	VERTICAL
4	7311.20	46.23	54.00	-7.77	35.22	8.60	37.17	34.76	138	37	Average	VERTICAL

Configurations	IEEE 802.11g CH 11 / Chain 1 + Chain 2

Horizontal

	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	4924.20	36.72	54.00	-17.28	30.60	7.62	32.99	34.49	198	117	Average	HORIZONTAL
2	4928.80	48.79	74.00	-25.21	42.67	7.62	32.99	34.49	198	117	Peak	HORIZONTAL
3	7386.30	43.47	54.00	-10.53	32.77	8.19	37.28	34.77	158	16	Average	HORIZONTAL
4	7386.50	54.37	74.00	-19.63	43.67	8.19	37.28	34.77	158	16	Peak	HORIZONTAL

Vertical

	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	4923.90	38.35	54.00	-15.65	32.23	7.62	32.99	34.49	168	63	Average	VERTICAL
2	4924.50	49.94	74.00	-24.06	43.82	7.62	32.99	34.49	168	63	Peak	VERTICAL
3	7385.50	52.93	74.00	-21.07	42.23	8.19	37.28	34.77	150	38	Peak	VERTICAL
4	7385.80	41.81	54.00	-12.19	31.11	8.19	37.28	34.77	150	38	Average	VERTICAL

Configurations	IEEE 802.11n MCS0 HT20 CH 1 / Chain 1 + Chain 2

Horizontal

	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	4819.22	34.40	54.00	-19.60	28.52	7.58	32.82	34.52	166	185	Average	HORIZONTAL
2	4821.28	46.68	74.00	-27.32	40.80	7.58	32.82	34.52	166	185	Peak	HORIZONTAL

Vertical

	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	4819.06	34.28	54.00	-19.72	28.40	7.58	32.82	34.52	144	131	Average	VERTICAL
2	4820.94	46.30	74.00	-27.70	40.42	7.58	32.82	34.52	144	131	Peak	VERTICAL

Configurations	IEEE 802.11n MCS0 HT20 CH 6 / Chain 1 + Chain 2

Horizontal

	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	4870.20	52.88	74.00	-21.12	46.88	7.60	32.91	34.51	198	308	Peak	HORIZONTAL
2	4874.80	41.30	54.00	-12.70	35.30	7.60	32.91	34.51	198	308	Average	HORIZONTAL
3	7312.00	61.14	74.00	-12.86	50.13	8.60	37.17	34.76	157	16	Peak	HORIZONTAL
4	7312.90	49.30	54.00	-4.70	38.29	8.60	37.17	34.76	157	16	Average	HORIZONTAL

Vertical

	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	4872.40	57.00	74.00	-17.00	51.00	7.60	32.91	34.51	100	8	Peak	VERTICAL
2	4876.10	43.94	54.00	-10.06	37.94	7.60	32.91	34.51	100	8	Average	VERTICAL
3	7311.60	45.88	54.00	-8.12	34.87	8.60	37.17	34.76	147	36	Average	VERTICAL
4	7311.70	57.97	74.00	-16.03	46.96	8.60	37.17	34.76	147	36	Peak	VERTICAL

Configurations	IEEE 802.11n MCS0 HT20 CH 11 / Chain 1 + Chain 2

Horizontal

	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	4924.00	36.39	54.00	-17.61	30.27	7.62	32.99	34.49	215	23	Average	HORIZONTAL
2	4928.60	47.60	74.00	-26.40	41.48	7.62	32.99	34.49	215	23	Peak	HORIZONTAL
3	7383.50	53.13	74.00	-20.87	42.43	8.19	37.28	34.77	162	78	Peak	HORIZONTAL
4	7387.92	42.44	54.00	-11.56	31.74	8.19	37.28	34.77	162	78	Average	HORIZONTAL

Vertical

	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	4919.50	48.03	74.00	-25.97	41.94	7.61	32.97	34.49	176	205	Peak	VERTICAL
2	4926.36	36.76	54.00	-17.24	30.64	7.62	32.99	34.49	176	205	Average	VERTICAL
3	7381.54	41.28	54.00	-12.72	30.58	8.19	37.28	34.77	149	146	Average	VERTICAL
4	7382.26	53.73	74.00	-20.27	43.03	8.19	37.28	34.77	149	146	Peak	VERTICAL

Configurations	IEEE 802.11n MCS0 HT40 CH 3 / Chain 1 + Chain 2

Horizontal

	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	4844.92	34.30	54.00	-19.70	28.37	7.59	32.86	34.52	134	206	Average	HORIZONTAL
2	4847.84	47.41	74.00	-26.59	41.47	7.59	32.86	34.51	134	206	Peak	HORIZONTAL
3	7268.10	53.24	74.00	-20.76	42.07	8.80	37.12	34.75	159	126	Peak	HORIZONTAL
4	7268.24	40.15	54.00	-13.85	28.98	8.80	37.12	34.75	159	126	Average	HORIZONTAL

Vertical

	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	4845.18	34.08	54.00	-19.92	28.14	7.59	32.86	34.51	139	326	Average	VERTICAL
2	4848.20	46.81	74.00	-27.19	40.87	7.59	32.86	34.51	139	326	Peak	VERTICAL
3	7268.64	52.79	74.00	-21.21	41.62	8.80	37.12	34.75	171	162	Peak	VERTICAL
4	7269.44	40.09	54.00	-13.91	28.92	8.80	37.12	34.75	171	162	Average	VERTICAL

Configurations	IEEE 802.11n MCS0 HT40 CH 6 / Chain 1 + Chain 2

Horizontal

	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	4869.96	34.35	54.00	-19.65	28.35	7.60	32.91	34.51	166	82	Average	HORIZONTAL
2	4876.68	46.35	74.00	-27.65	40.35	7.60	32.91	34.51	166	82	Peak	HORIZONTAL
3	7307.56	39.28	54.00	-14.72	28.27	8.60	37.17	34.76	184	212	Average	HORIZONTAL
4	7310.78	51.31	74.00	-22.69	40.30	8.60	37.17	34.76	184	212	Peak	HORIZONTAL

Vertical

	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	4872.46	48.19	74.00	-25.81	42.19	7.60	32.91	34.51	172	76	Peak	VERTICAL
2	4873.94	36.29	54.00	-17.71	30.29	7.60	32.91	34.51	172	76	Average	VERTICAL
3	7306.34	40.48	54.00	-13.52	29.47	8.60	37.17	34.76	163	136	Average	VERTICAL
4	7309.52	51.28	74.00	-22.72	40.27	8.60	37.17	34.76	163	136	Peak	VERTICAL

Configurations	IEEE 802.11n MCS0 HT40 CH 9 / Chain 1 + Chain 2

Horizontal

	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	4902.96	47.21	74.00	-26.79	41.15	7.61	32.95	34.50	231	304	Peak	HORIZONTAL
2	4903.88	36.09	54.00	-17.91	30.03	7.61	32.95	34.50	231	304	Average	HORIZONTAL
3	7352.40	55.39	74.00	-18.61	44.54	8.39	37.23	34.77	171	16	Peak	HORIZONTAL
4	7356.60	41.67	54.00	-12.33	30.82	8.39	37.23	34.77	171	16	Average	HORIZONTAL

Vertical

	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	4902.98	48.03	74.00	-25.97	41.97	7.61	32.95	34.50	121	72	Peak	VERTICAL
2	4903.88	36.54	54.00	-17.46	30.48	7.61	32.95	34.50	121	72	Average	VERTICAL
3	7356.14	39.86	54.00	-14.14	29.01	8.39	37.23	34.77	176	98	Average	VERTICAL
4	7356.66	52.47	74.00	-21.53	41.62	8.39	37.23	34.77	176	98	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.

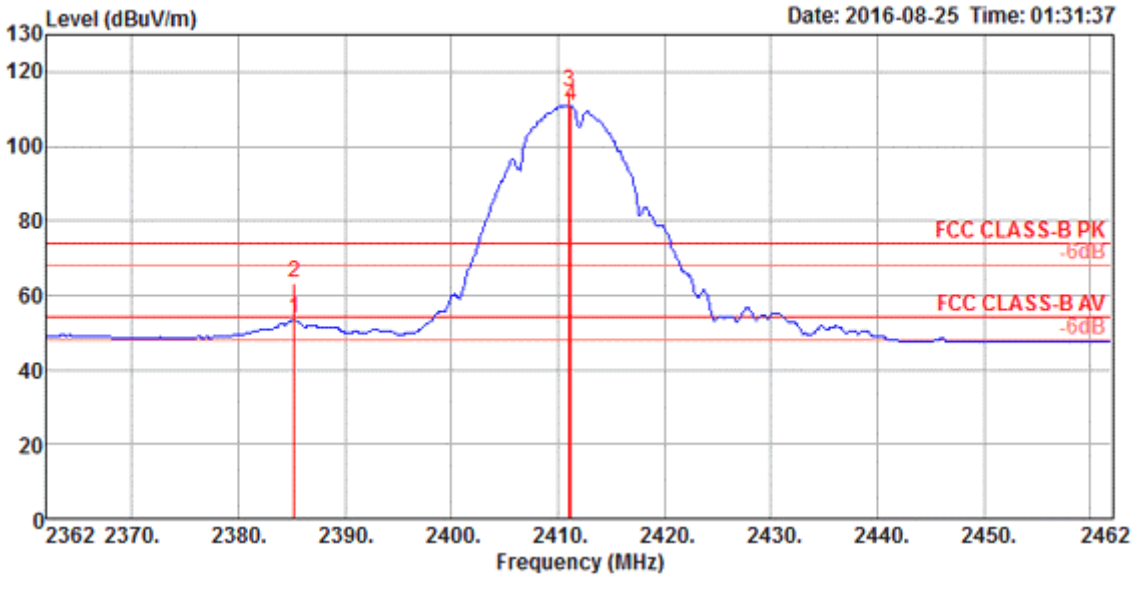
Emission level (dBuV/m) = 20 log Emission level (uV/m).

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

Band Edge Emissions

Configurations	IEEE 802.11b CH 1, 6, 11 / Chain 1 + Chain 2

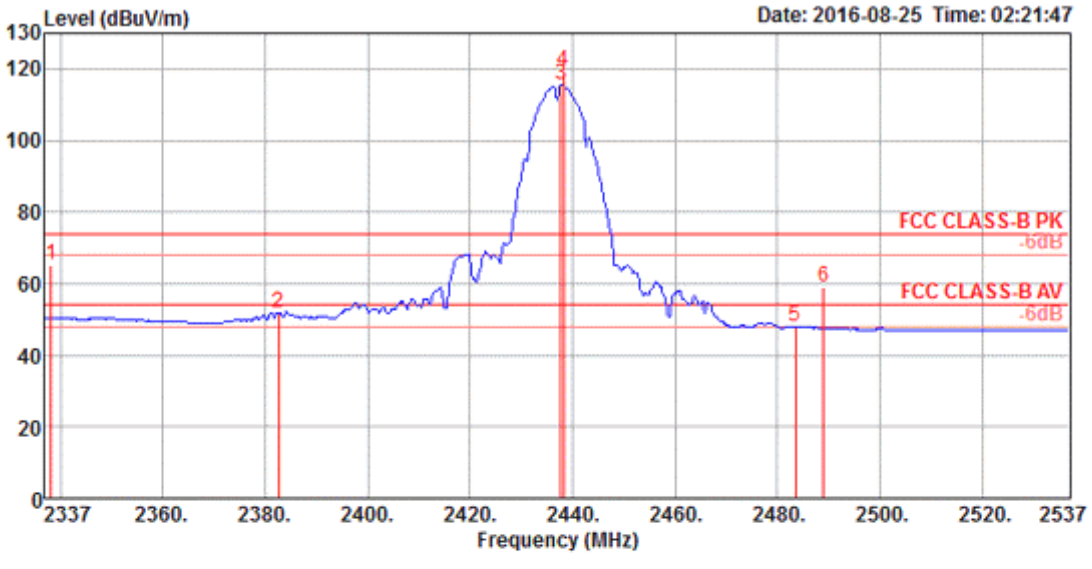
Channel 1



	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	2385.20	53.51	54.00	-0.49	19.04	6.57	27.90	0.00	208	161	Average	VERTICAL
2	2385.20	63.32	74.00	-10.68	28.85	6.57	27.90	0.00	208	161	Peak	VERTICAL
3	2411.00	114.86			80.36	6.62	27.88	0.00	208	161	Peak	VERTICAL
4	2411.20	111.01			76.50	6.63	27.88	0.00	208	161	Average	VERTICAL

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

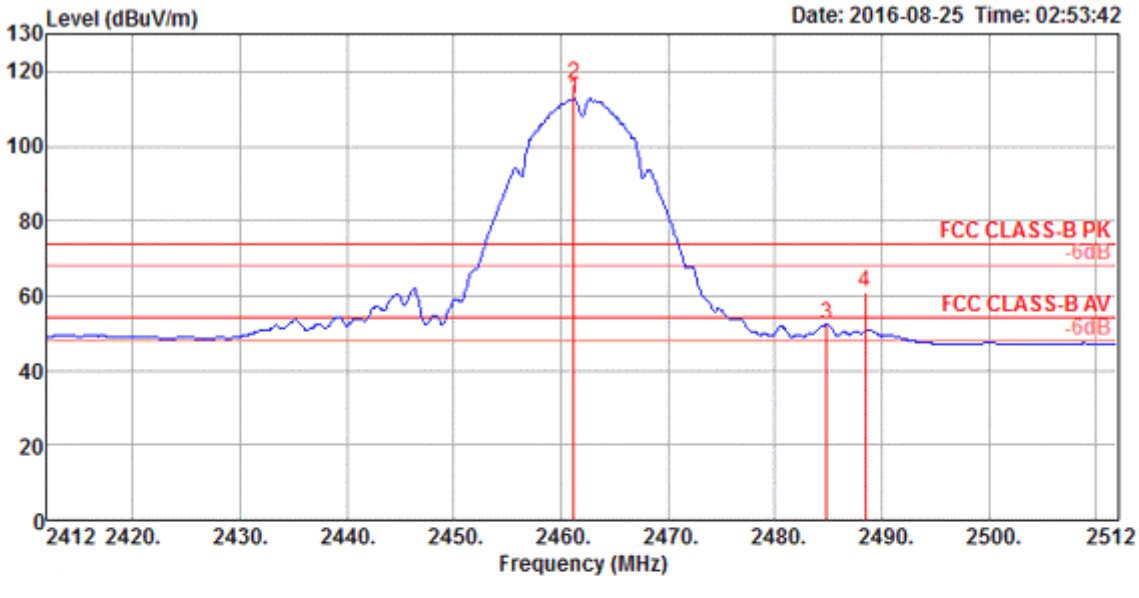
Channel 6



	Freq	Level	Limit Line	Over Limit	Read Level	Cable Loss	Antenna Factor	Preamp Factor	A/Pos	T/Pos	Remark	Pol/Phase
	MHz	dBuV/m	dBuV/m	dB	dBuV	dB	dB/m	dB	cm	deg		
1	2338.20	65.23	74.00	-8.77	30.83	6.45	27.95	0.00	192	283	Peak	VERTICAL
2	2382.60	51.91	54.00	-2.09	17.45	6.55	27.91	0.00	192	283	Average	VERTICAL
3	2437.80	115.61			81.06	6.69	27.86	0.00	192	283	Average	VERTICAL
4	2438.20	119.52			84.97	6.69	27.86	0.00	192	283	Peak	VERTICAL
5	2483.50	48.14	54.00	-5.86	13.52	6.81	27.81	0.00	192	283	Average	VERTICAL
6	2489.00	59.20	74.00	-14.80	24.58	6.81	27.81	0.00	192	283	Peak	VERTICAL

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

Channel 11

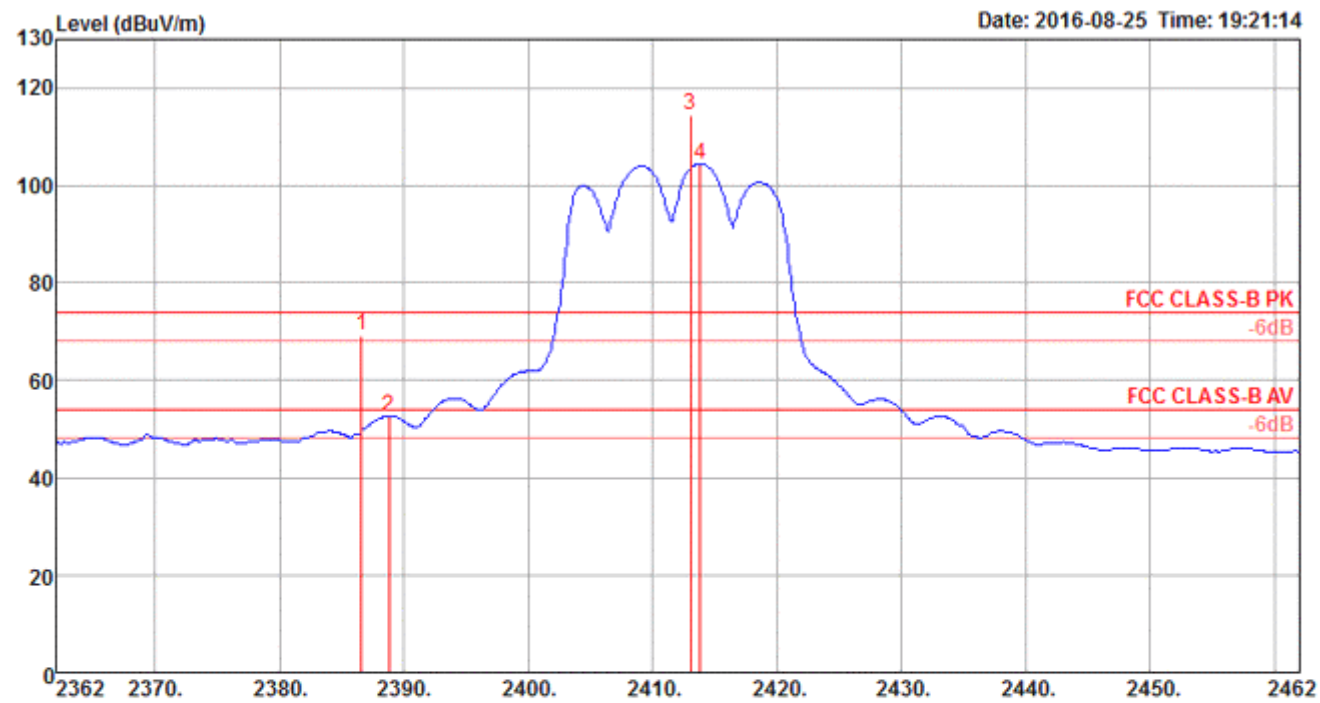


	Freq	Level	Limit Line	Over Limit	Read Level	Cable Loss	Antenna Factor	Preamp Factor	A/Pos	T/Pos	Remark	Pol/Phase
	MHz	dBuV/m	dBuV/m	dB	dBuV	dB	dB/m	dB	cm	deg		
1	2461.20	112.84			78.25	6.76	27.83	0.00	188	318	Average	VERTICAL
2	2461.20	116.56			81.97	6.76	27.83	0.00	188	318	Peak	VERTICAL
3	2484.80	52.40	54.00	-1.60	17.78	6.81	27.81	0.00	188	318	Average	VERTICAL
4	2488.40	60.92	74.00	-13.08	26.30	6.81	27.81	0.00	188	318	Peak	VERTICAL

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

Configurations	IEEE 802.11g CH 1, 6, 11 / Chain 1 + Chain 2

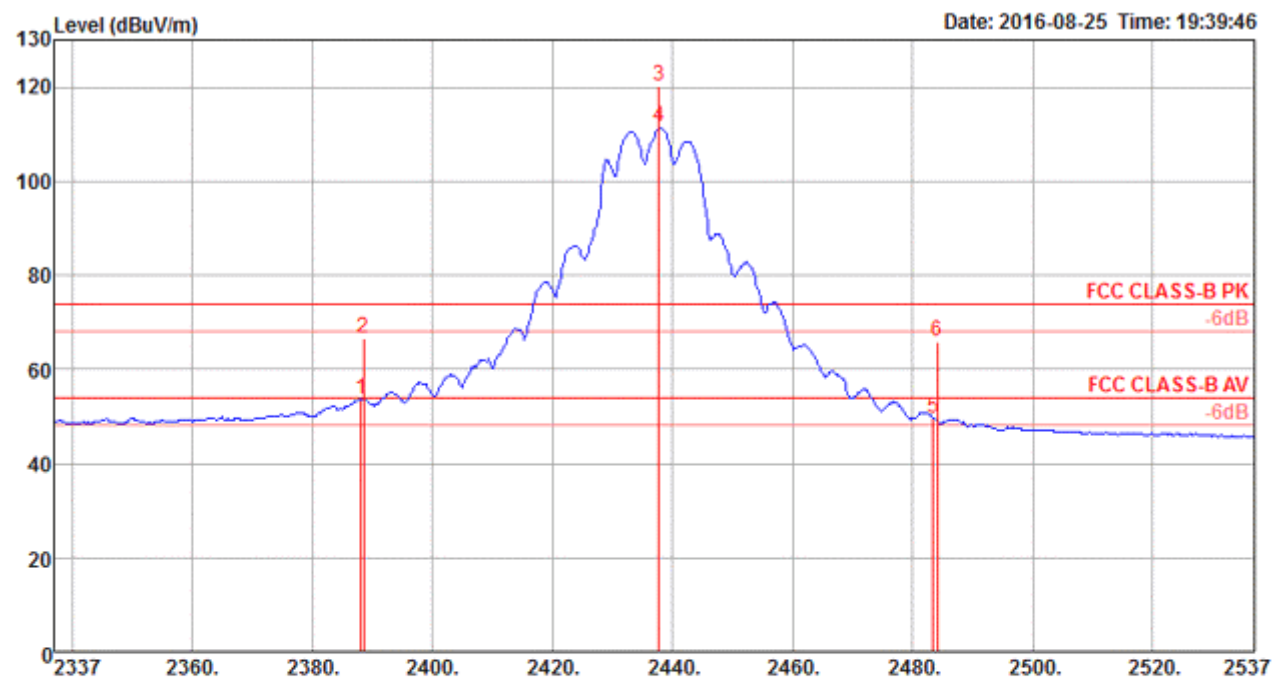
Channel 1



	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	2386.60	69.26	74.00	-4.74	37.34	3.90	28.02	0.00	206	10	Peak	VERTICAL
2	2388.80	52.67	54.00	-1.33	20.75	3.90	28.02	0.00	206	10	Average	VERTICAL
3 @	2413.00	114.43			82.50	3.94	27.99	0.00	206	10	Peak	VERTICAL
4 @	2413.80	104.42			72.49	3.94	27.99	0.00	206	10	Average	VERTICAL

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

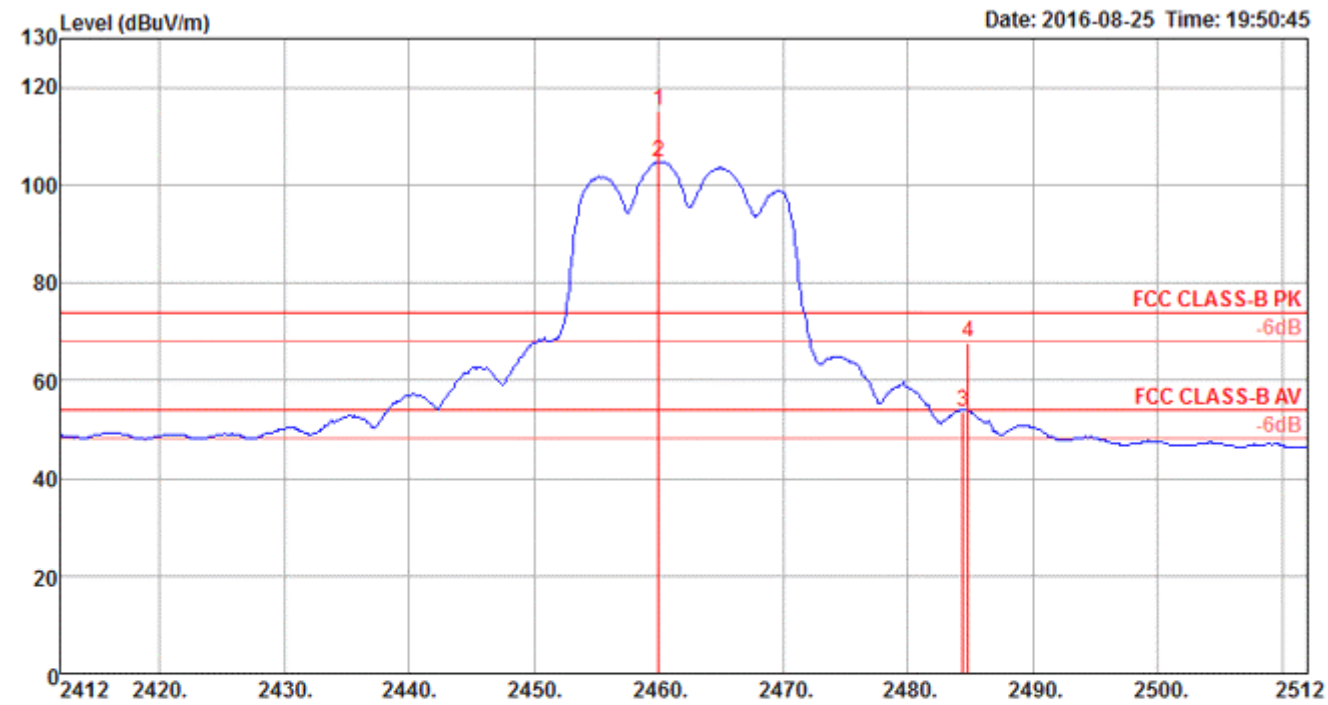
Channel 6



		Freq	Level	Limit Line	Over Limit	Read Level	Cable Loss	Antenna Factor	Preamp Factor	A/Pos	T/Pos	Remark	Pol/Phase
		MHz	dBuV/m	dBuV/m	dB	dBuV	dB	dB/m	dB	cm	deg		
1		2388.20	53.68	54.00	-0.32	21.76	3.90	28.02	0.00	174	245	Average	VERTICAL
2		2388.60	66.62	74.00	-7.38	34.70	3.90	28.02	0.00	174	245	Peak	VERTICAL
3	@	2437.80	120.32			88.38	3.97	27.97	0.00	174	245	Peak	VERTICAL
4	@	2437.80	111.38			79.44	3.97	27.97	0.00	174	245	Average	VERTICAL
5		2483.50	49.77	54.00	-4.23	17.81	4.04	27.92	0.00	174	245	Average	VERTICAL
6		2484.20	65.83	74.00	-8.17	33.87	4.04	27.92	0.00	174	245	Peak	VERTICAL

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

Channel 11

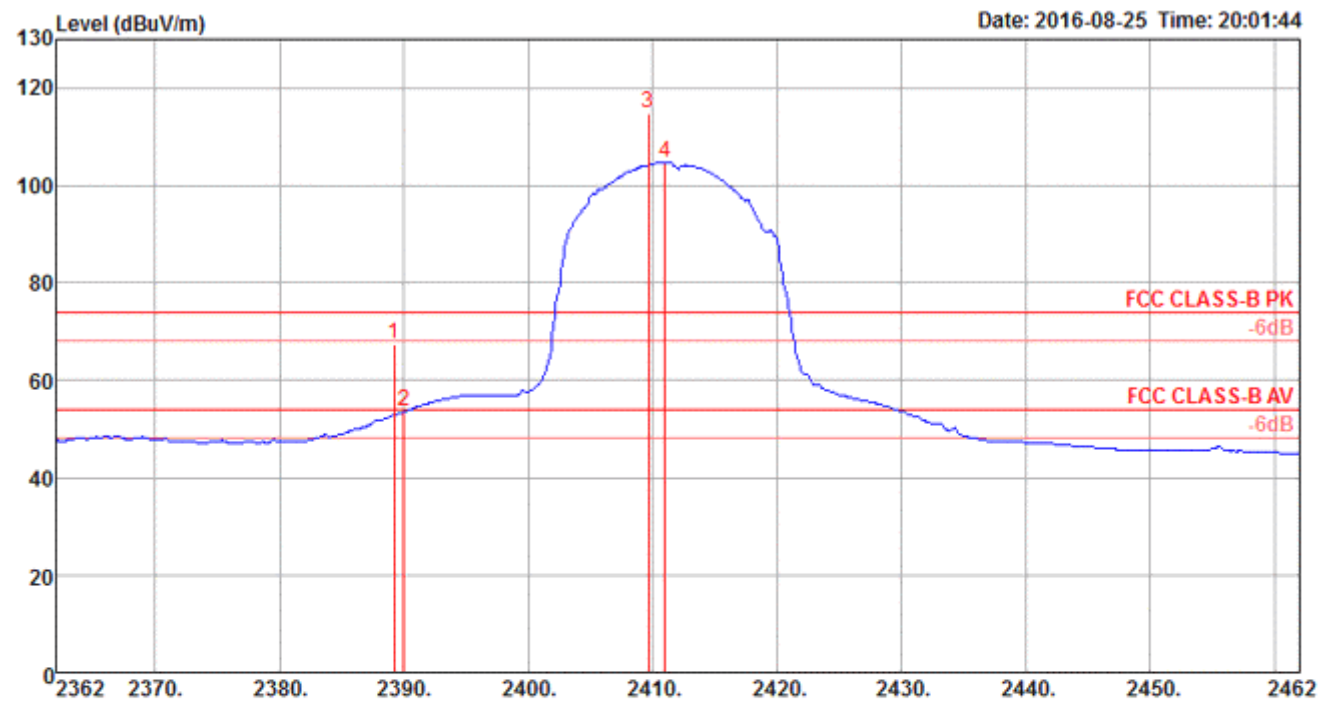


	Freq	Level	Limit Line	Over Limit	Read Level	Cable Loss	Antenna Factor	Preamp Factor	A/Pos	T/Pos	Remark	Pol/Phase
	MHz	dBuV/m	dBuV/m	dB	dBuV	dB	dB/m	dB	cm	deg		
1 @	2460.00	115.20			83.25	4.00	27.95	0.00	150	111	Peak	VERTICAL
2 @	2460.00	104.71			72.76	4.00	27.95	0.00	150	111	Average	VERTICAL
3	2484.40	53.69	54.00	-0.31	21.73	4.04	27.92	0.00	150	111	Average	VERTICAL
4	2484.80	67.81	74.00	-6.19	35.85	4.04	27.92	0.00	150	111	Peak	VERTICAL

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

Configurations	IEEE 802.11n MCS0 HT20 CH 1, 6, 11 / Chain 1 + Chain 2

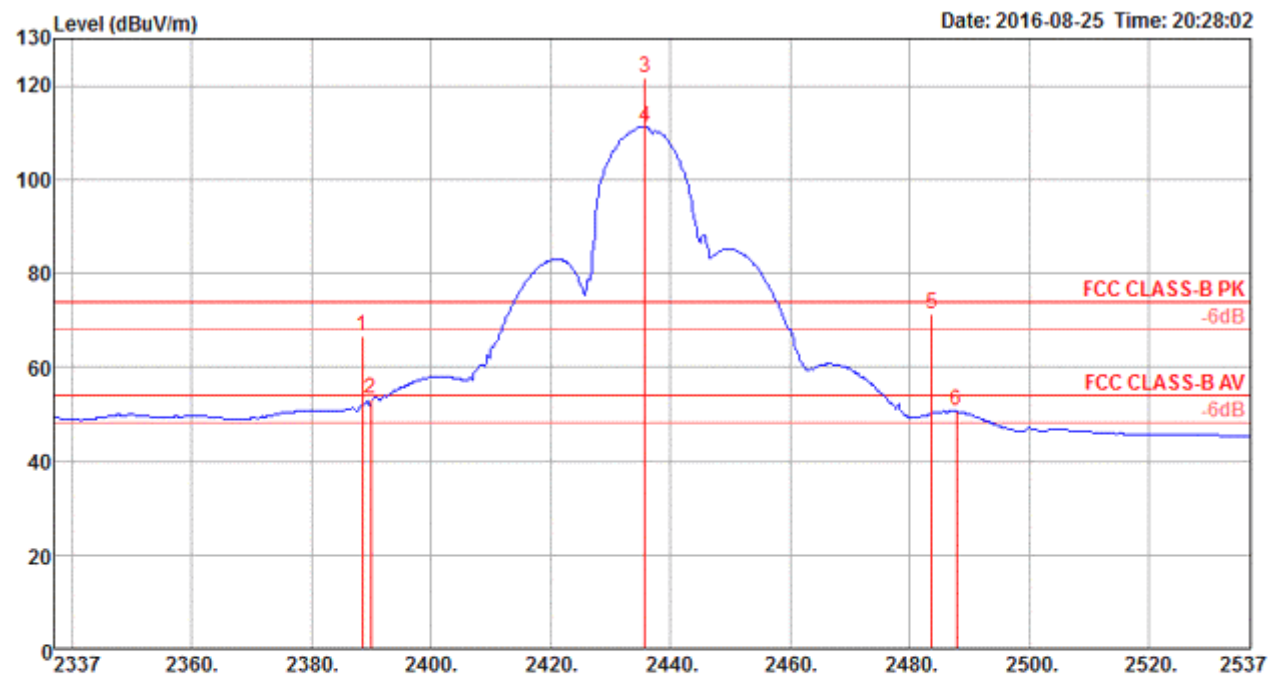
Channel 1



	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	2389.20	67.41	74.00	-6.59	35.49	3.90	28.02	0.00	182	3	Peak	VERTICAL
2	2390.00	53.52	54.00	-0.48	21.60	3.90	28.02	0.00	182	3	Average	VERTICAL
3 @	2409.60	114.86			82.93	3.93	28.00	0.00	182	3	Peak	VERTICAL
4 @	2411.00	104.71			72.78	3.93	28.00	0.00	182	3	Average	VERTICAL

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

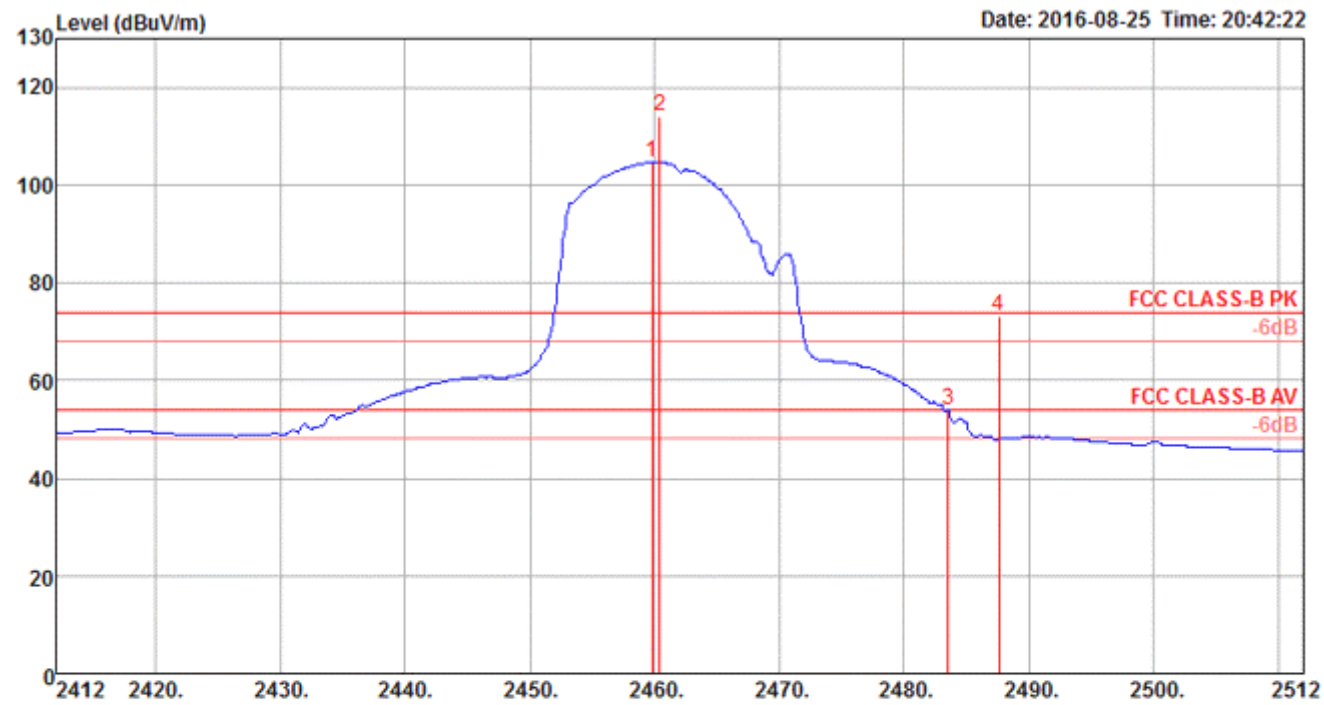
Channel 6



	Freq	Level	Limit Line	Over Limit	Read Level	Cable Loss	Antenna Factor	Preamp Factor	A/Pos	T/Pos	Remark	Pol/Phase
	MHz	dBuV/m	dBuV/m	dB	dBuV	dB	dB/m	dB	cm	deg		
1	2388.60	66.61	74.00	-7.39	34.69	3.90	28.02	0.00	175	2	Peak	VERTICAL
2	2390.00	53.25	54.00	-0.75	21.33	3.90	28.02	0.00	175	2	Average	VERTICAL
3 @	2435.80	121.68			89.74	3.97	27.97	0.00	175	2	Peak	VERTICAL
4 @	2435.80	111.26			79.32	3.97	27.97	0.00	175	2	Average	VERTICAL
5	2483.80	71.45	74.00	-2.55	39.49	4.04	27.92	0.00	175	2	Peak	VERTICAL
6	2487.80	50.57	54.00	-3.43	18.61	4.04	27.92	0.00	175	2	Average	VERTICAL

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

Channel 11

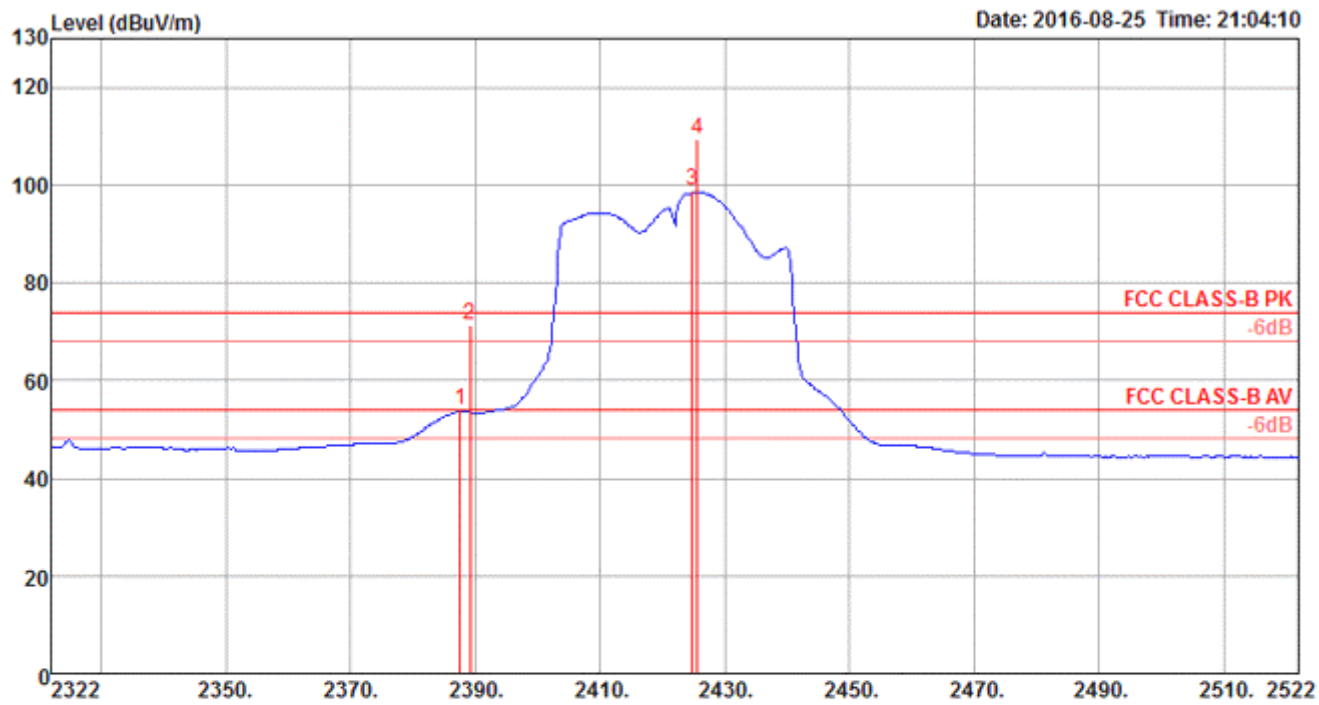


	Freq	Level	Limit Line	Over Limit	Read Level	Cable Loss	Antenna Factor	Preamp Factor	A/Pos	T/Pos	Remark	Pol/Phase
	MHz	dBuV/m	dBuV/m	dB	dBuV	dB	dB/m	dB	cm	deg		
1 @	2459.80	104.67			72.72	4.00	27.95	0.00	198	3	Average	VERTICAL
2 @	2460.40	114.09			82.14	4.00	27.95	0.00	198	3	Peak	VERTICAL
3	2483.50	53.86	54.00	-0.14	21.90	4.04	27.92	0.00	198	3	Average	VERTICAL
4	2487.60	73.20	74.00	-0.80	41.24	4.04	27.92	0.00	198	3	Peak	VERTICAL

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

Configurations	IEEE 802.11n MCS0 HT40 CH 3, 6, 9 / Chain 1 + Chain 2

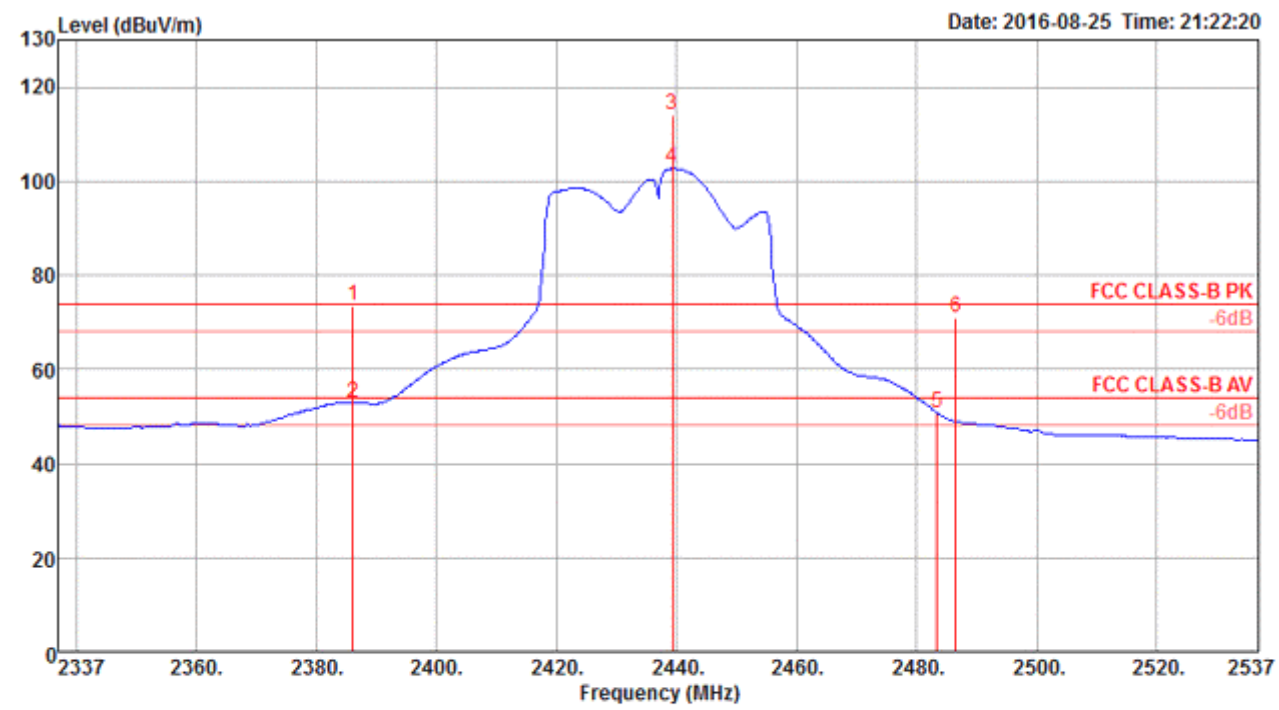
Channel 3



	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	2387.60	53.79	54.00	-0.21	21.87	3.90	28.02	0.00	184	259	Average	VERTICAL
2	2389.20	71.23	74.00	-2.77	39.31	3.90	28.02	0.00	184	259	Peak	VERTICAL
3 @	2424.80	98.74			66.80	3.95	27.99	0.00	184	259	Average	VERTICAL
4 @	2425.60	109.49			77.55	3.96	27.98	0.00	184	259	Peak	VERTICAL

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

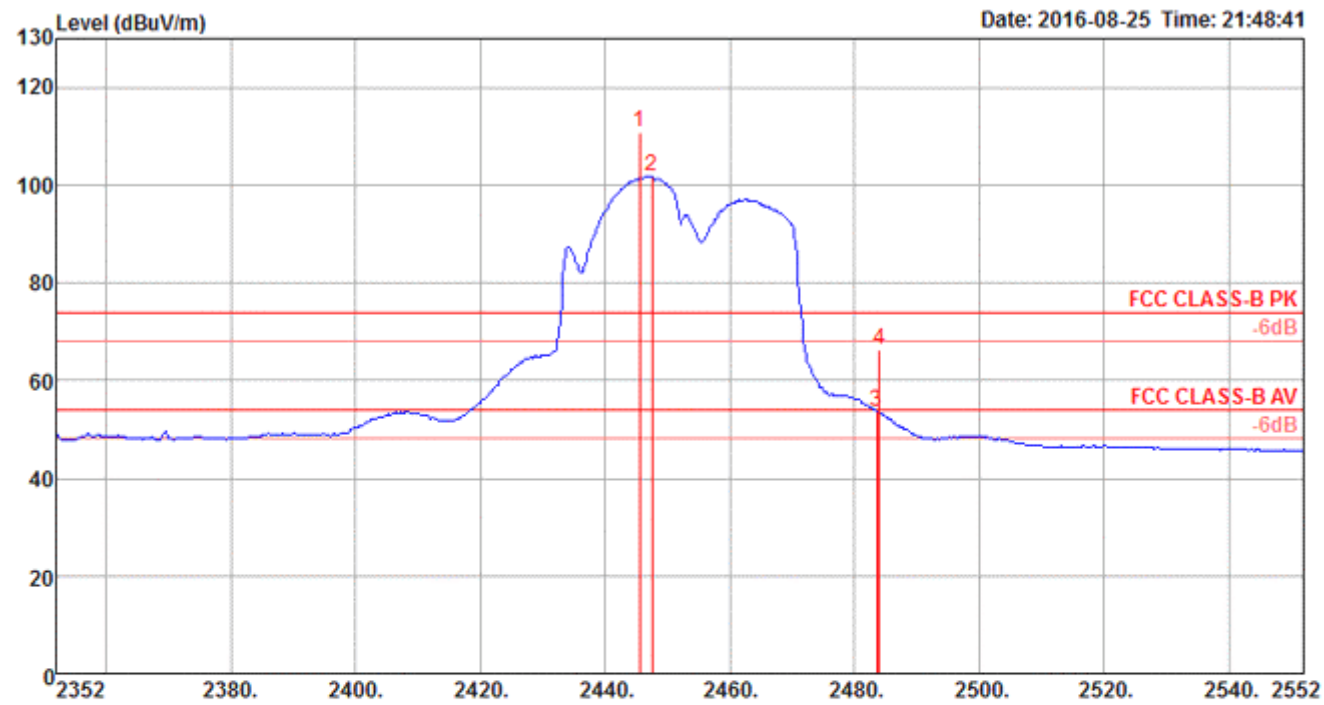
Channel 6



	Freq	Level	Limit Line	Over Limit	Read Level	Cable Loss	Antenna Factor	Preamp Factor	A/Pos	T/Pos	Remark	Pol/Phase
	MHz	dBuV/m	dBuV/m	dB	dBuV	dB	dB/m	dB	cm	deg		
1	2386.20	73.65	74.00	-0.35	41.73	3.90	28.02	0.00	201	246	Peak	VERTICAL
2	2386.20	52.90	54.00	-1.10	20.98	3.90	28.02	0.00	201	246	Average	VERTICAL
3 @	2439.40	114.02			82.08	3.98	27.96	0.00	201	246	Peak	VERTICAL
4 @	2439.40	102.70			70.76	3.98	27.96	0.00	201	246	Average	VERTICAL
5	2483.40	50.82	54.00	-3.18	18.86	4.04	27.92	0.00	201	246	Average	VERTICAL
6	2486.60	71.02	74.00	-2.98	39.06	4.04	27.92	0.00	201	246	Peak	VERTICAL

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

Channel 9



	Freq	Level	Limit Line	Over Limit	Read Level	Cable Loss	Antenna Factor	Preamp Factor	A/Pos	T/Pos	Remark	Pol/Phase
	MHz	dBuV/m	dBuV/m	dB	dBuV	dB	dB/m	dB	cm	deg		
1 @	2445.60	110.66			78.72	3.98	27.96	0.00	204	109	Peak	VERTICAL
2 @	2447.60	101.71			69.77	3.99	27.95	0.00	204	109	Average	VERTICAL
3	2483.50	53.52	54.00	-0.48	21.56	4.04	27.92	0.00	204	109	Average	VERTICAL
4	2484.00	66.38	74.00	-7.62	34.42	4.04	27.92	0.00	204	109	Peak	VERTICAL

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

Note:

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

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