



TEST REPORT

FCC ID: 2ALUY-SC100

Applicant : Latent Wireless
Address : 37 Norwood Circle, Iowa City, IA 52245
Equipment under Test (EUT):

Name : 300M 2.4G&5G wireless adapter
Model : SC-1

Standards : FCC PART 15, SUBPART C : 2015 (Section 15.247)
ANSI C63.4:2014 ; ANSI C63.10:2013

Report No. : T1870445 01
Date of Test : April 3, 2017 - May 11, 2017
Date of Issue : May 11, 2017

Test Result :	PASS *
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* In the configuration tested, the EUT complied with the standards specified above

Authorized Signature

(Mark Zhu)
General Manager

The manufacture should ensure that all the products in series production are in conformity with the product sample detailed in this report. If the product in this report is used in any configuration other than that detailed in the report, the manufacturer must ensure the new system complies with all relevant standards. Any mention of Shenzhen Alpha Product Testing Co., Ltd. Or test done by Shenzhen Alpha Product Testing Co., Ltd. Approvals in connection with, distribution or use of the product described in this report must be approved by Shenzhen Alpha Product Testing Co., Ltd. Approvals in writing.

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TEST REPORT VERIFICATION

Applicant : Latent Wireless
Manufacturer : Shenzhen xunman Technology co.,ltd
EUT Description : 300M 2.4G&5G wireless adapter
(A) Model No. : SC-1
(B) Trademark : N/A
(C) Ratings Supply : DC 5V from USB Port
(D) Test Voltage : DC 5V from USB Port

Measurement Standard Used:

FCC Rules and Regulations Part 15 Subpart C 2015, ANSI C63.4-2014 , ANSI C63.10:2013

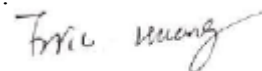
The device described above is tested by Shenzhen Alpha Product Testing Co., Ltd. to determine the maximum emission levels emanating from the device. The maximum emission levels are compared to the FCC Part 15 Subpart C limits both conducted and radiated emissions. The test results are contained in this test report and Shenzhen Alpha Product Testing Co., Ltd. is assumed of full responsibility for the accuracy and completeness of these tests.

After the test, our opinion is that EUT compliance with the requirement of the above standards.

This report applies to above tested sample only. This report shall not be reproduced in parts without written approval of Shenzhen Alpha Product Testing Co., Ltd.

Tested by (name + signature).....:

Eric Huang
Test Engineer

.....

.....

Approved by (name + signature).....:

Simple Guan
Project Manager

.....

.....

Date of issue.....

May 11, 2017

1 General Information

1.1 Description of Device (EUT)

Trade Name : N/A

EUT : 300M 2.4G&5G wireless adapter

Model No. SC-1

DIFF. : N/A

Antenna Type : PCB antenna, dipole antenna

Antenna gain : ANT0:2.0dBi; ANT1:2.0dBi.

Operation : IEEE 802.11b/g: 2412MHz-2462MHz

Frequency : IEEE 802.11n HT20: 2412MHz-2462MHz

IEEE 802.11n HT40: 2422MHz-2452MHz

IEEE 802.11b/g:11Channels

Channel number : IEEE 802.11n HT20: 11 Channels

IEEE 802.11n HT40: 7Channels

IEEE 802.11b: DSSS(CCK,DQPSK,DBPSK)

Modulation type : IEEE 802.11g: OFDM(64QAM, 16QAM, QPSK, BPSK)

IEEE 802.11n :OFDM(64QAM, 16QAM, QPSK, BPSK)

Power Supply : DC 5V from USB Port

Applicant : Latent Wireless

Address : 37 Norwood Circle, Iowa City, IA 52245

Manufacturer : Shenzhen xunman Technology co.,ltd

Address : 2/F., #3 Building, New Development Zone., Baishixia East, Fuyong St., Baoan
Dist., Shenzhen, China

1.2 Description of Test Facility

Shenzhen Alpha Product Testing Co., Ltd
Building B, East Area of Nanchang Second, Industrial Zone, Gushu 2nd Road,
Bao'an, Shenzhen, China

August 11, 2014 File on Federal Communication Commission
Registration Number: 203110

July 18, 2014 Certificated by IC
Registration Number: 12135A

2 EMC Equipment List

Equipment	Manufacture	Model No.	Serial No.	cal. Date	Cal. Interval
3m Semi-Anechoic	CHENYU	N/A	N/A	2017.07.21	2Year
Spectrum analyzer	Agilent	E4407B	MY46185649	2017.09.29	1Year
Receiver	R&S	ESPI	101873	2017.09.29	1Year
Receiver	R&S	ESCI	101165	2017.09.29	1Year
Bilog Antenna	SCHWARZBECK	VULB 9168	VULB9168-438	2017.09.30	2Year
Horn Antenna	SCHWARZBECK	BBHA 9120 D	BBHA 9120 D(1201)	2017.09.30	2Year
L.I.S.N.#1	Schwarzbeck	NSLK8126	8126466	2017.09.29	1 Year
L.I.S.N.#2	ROHDE&SCHWARZ	ENV216	101043	2017.09.29	1 Year
Cable	Resenberger	N/A	No.1	2017.09.29	1Year
Cable	SCHWARZBECK	N/A	No.2	2017.09.29	1Year
Cable	SCHWARZBECK	N/A	No.3	2017.09.29	1Year
Pre-amplifier	HP	HP8347A	2834A00455	2017.09.29	1Year
Pre-amplifier	Agilent	8449B	3008A02664	2017.09.29	1Year
vector Signal Generator	Agilent	N5182A	MY49060042	2017.09.29	1 Year
vector Signal Generator	Agilent	E4438C	US44271917	2017.09.29	1 Year
X-series USB Peak and Average Power Sensor	Agilent	U2021XA	MY54080020	2017.09.29	1 Year
X-series USB Peak and Average Power Sensor	Agilent	U2021XA	MY54110001	2017.09.29	1 Year
Signal Analyzer	Agilent	N9020A	MY48030494	2017.09.29	1 Year

3 Test Procedure

POWER LINE CONDUCTED INTERFERENCE: The test procedure used was ANSI Standard ANSI C63.4:2014 using a 50 u H LISN. Both Lines were observed. The bandwidth of the receiver was 10kHz with an appropriate sweep speed. The ambient temperature of the EUT was 25°C with a humidity of 58%.

RADIATION INTERFERENCE: The test procedure used was ANSI Standard ANSI C63.4:2014 using a ANRITSU spectrum analyzer with a pre-selector. The analyzer was calibrated in dB above a micro volt at the output of the antenna. The resolution bandwidth was 100kHz and the video bandwidth was 300 kHz up to 1 GHz and 1 MHz with a video BW of 3MHz above 1 GHz. The ambient temperature of the EUT was 25°C with a humidity of 58%.

FORMULA OF CONVERSION FACTORS: The Field Strength at 3m was established by adding the meter reading of the spectrum analyzer (which is set to read in units of dBuV) to the antenna correction factor supplied by the antenna manufacturer and cable loss. The antenna correction factors and cable loss are stated in terms of dB. The gain of the Pre-selector was accounted for in the Spectrum Analyzer Meter Reading.

Example:

Freq (MHz) METER READING + ACF + CABLE = FS

33.20 dBuV + 10.36 dB + 0.9 dB= 44.46 dBuV/m @ 3m

ANSI STANDARD ANSI C63.4:2014 10.1.7 MEASUREMENT PROCEDURES: The EUT was placed on a table 80 cm high and with dimensions of 1m by 1.5m. The EUT was placed in the center of the table (1.5m side). The table used for radiated measurements is capable of continuous rotation. When an emission was found, the table was rotated to produce the maximum signal strength. At this point, the antenna was raised and lowered from 1m to 4m. The antenna was placed in both the horizontal and vertical planes. The situation was similar for the conducted measurement except that the table did not rotate. The EUT was setup as described in ANSI Standard ANSI C63.4:2014 10.1.7 with the EUT 40 cm from the vertical ground wall.

4 Summary of Measurement

4.1 Summary of test result

Test Item	Test Requirement	Standards Paragraph	Result
Spurious Emission	FCC PART 15 : 2014	Section 15.209	Compliance
Conduction Emission	FCC PART 15 : 2015	Section 15.207	Compliance
Bandwidth Test	FCC PART 15 : 2015	Section 15.247	Compliance
Peak Power	FCC PART 15 : 2015	Section 15.247	Compliance
Power Density	FCC PART 15 : 2015	Section 15.247	Compliance
Band Edge	FCC PART 15 : 2015	Section 15.247	Compliance
Antenna Requirement	FCC PART 15 : 2015	Section 15.203	Compliance

Note: The EUT has been tested as an independent unit. And Continual Transmitting in maximum power (The adapter be used during Test)

4.2 Test connection



4.3 Assistant equipment used for test

Description	:	Notebook
Manufacturer	:	Acer
Model No.	:	ZQT

4.4 Test mode

Duty cycle :100% Keeping TX			
Mode	data rate (Mbps)(see Note)	Channel	Frequency (MHz)
IEEE 802.11b	1	Low :CH1	2412
	1	Middle: CH6	2437
	1	High: CH11	2462
IEEE 802.11g	6	Low :CH1	2412
	6	Middle: CH6	2437
	6	High: CH11	2462
IEEE 802.11 n/HT20 with 2.4G	6.5	Low :CH1	2412
	6.5	Middle: CH6	2437
	6.5	High: CH11	2462
IEEE 802.11 n/HT40 with 2.4G	13.5	Low :CH3	2422
	13.5	Middle:CH6	2437
	13.5	High:CH9	2452
Note:1. According exploratory test, EUT will have maximum output power in those data rate. so those data rate were used for all test. 2. 802.11b/g/n tested SISO mode, ANT0 is worse case and only reported for Radiated emission and Conducted emission.			

4.5 Channel list

For IEEE 802.11b/g and IEEE 802.11n/HT20 with 2.4G					
Channel	Frequency (MHz)	Channel	Frequency (MHz)	Channel	Frequency (MHz)
CH1	2412	CH5	2432	CH9	2452
CH2	2417	CH6	2437	CH10	2457
CH3	2422	CH7	2442	CH11	2462
CH4	2427	CH8	2447		

For IEEE 802.11n/HT40 with 2.4G					
Channel	Frequency (MHz)	Channel	Frequency (MHz)	Channel	Frequency (MHz)
CH1	/	CH5	2432	CH9	2452
CH2	/	CH6	2437	/	/
CH3	2422	CH7	2442	/	/
CH4	2427	CH8	2447	/	/

4.6 Test Conditions

Temperature range	21-25°C
Humidity range	40-75%
Pressure range	86-106kPa

4.7 Measurement Uncertainty (95% confidence levels, k=2)

Item	MU	Remark
Uncertainty for Power point Conducted Emissions Test	2.42dB	
Uncertainty for Radiation Emission test in 3m chamber (below 30MHz)	2.13 dB	Polarize: V
	2.57dB	Polarize: H
Uncertainty for Radiation Emission test in 3m chamber (30MHz to 1GHz)	3.54dB	Polarize: V
	4.1dB	Polarize: H
Uncertainty for Radiation Emission test in 3m chamber (1GHz to 25GHz)	2.08dB	Polarize: H
	2.56dB	Polarize: V
Uncertainty for radio frequency	1×10 ⁻⁹	
Uncertainty for conducted RF Power	0.65dB	
Uncertainty for temperature	0.2°C	
Uncertainty for humidity	1%	
Uncertainty for DC and low frequency voltages	0.06%	

5 Spurious Emission

5.1 Radiation Emission

5.1.1 Radiation Emission Limits(15.209&15.205)

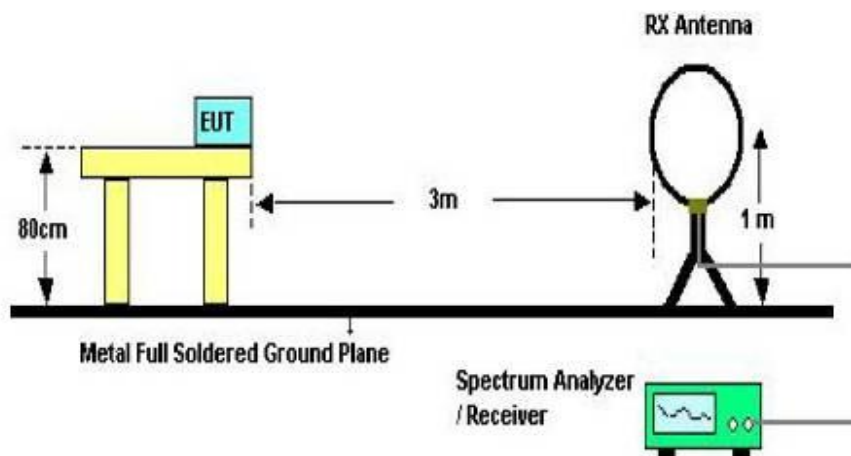
Frequencies (MHz)	Field Strength (microvolts/meter)	Measurement Distance (meters)
0.009~0.490	2400/F(KHz)	300
0.490~1.705	24000/F(KHz)	30
1.705~30.0	30	30
30~88	100	3
88~216	150	3
216~960	200	3
Above 960	500	3

Harmonic emissions limits comply with below 54 dBuV/m at 3m. Other emissions radiated outside of the specified frequency bands, except for harmonics, shall be attenuated by at least 50 dB below the level of the fundamental or comply with the radiated emissions limits specified in section 15.209(a) limit in the table below has to be followed.

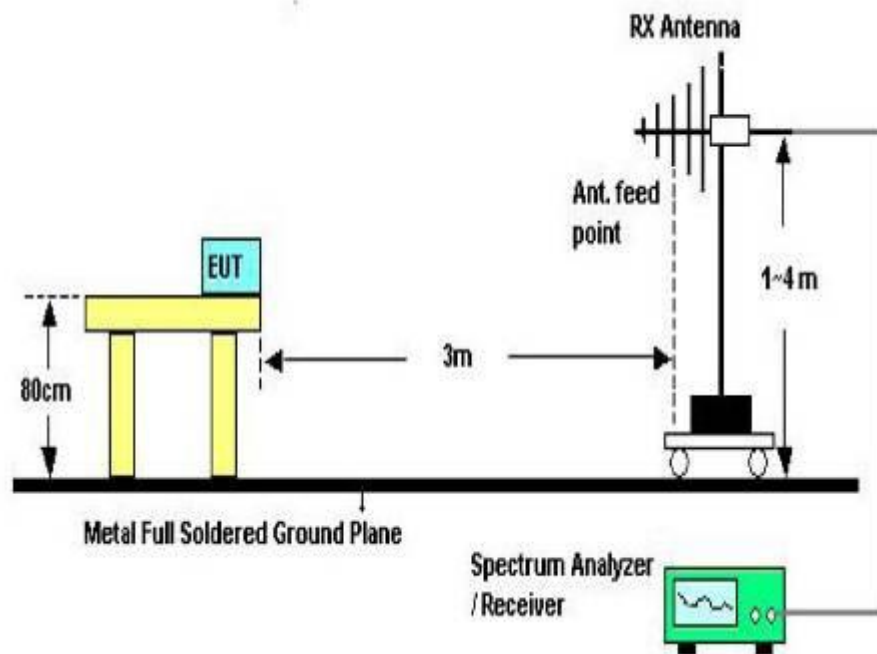
NOTE:

- The tighter limit applies at the band edges.
- Emission Level(dB uV/m)=20log Emission Level(uV/m)

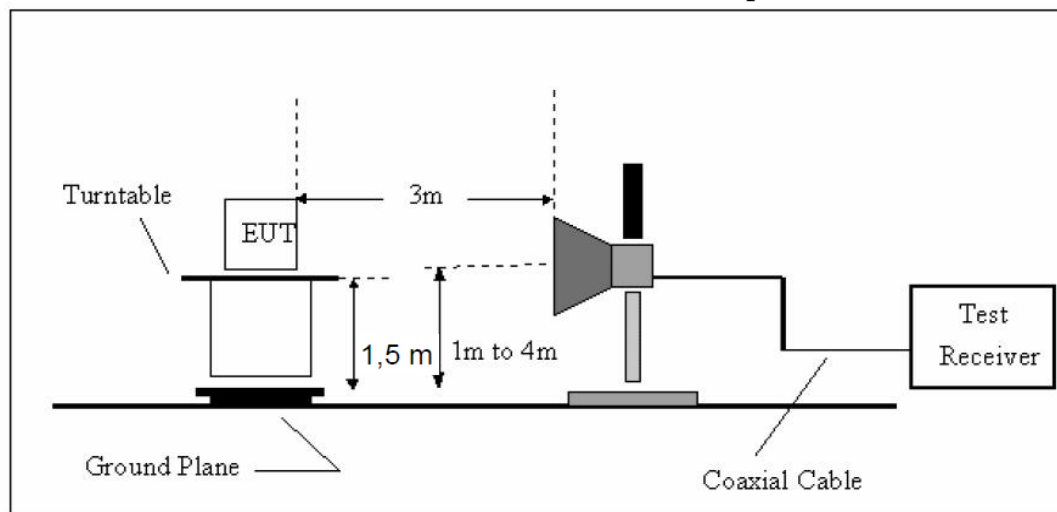
5.2 Test Setup



Below 30MHz Test Setup



Above 30MHz Test Setup



Above 1GHz Test Setup

5.3 Test Procedure

- a) The measuring distance of 3m shall be used for measurements at frequency up to 1GHz and above 1GHz, The EUT was placed on a rotating 0.8 m high above ground, The table was rotated 360 degrees to determine the position of the highest radiation
- b) The Test antenna shall vary between 1m and 4m, Both Horizontal and Vertical antenna are set of make measurement.
- c) The initial step in collecting conducted emission data is a spectrum analyzer Peak detector mode pre-scanning the measurement frequency range. Significant Peaks are then marked. and then Qusia Peak Detector mode premeasured
- d) If Peak value comply with QP limit Below 1GHz. The EUT deemed to comply with QP limit. But the Peak value and average value both need to comply with applicable limit above 1GHz.
- e) For the actual test configuration, please see the test setup photo.

5.3.1 Test Equipment Setting For emission test Result

9KHz~150KHz	RBW 200Hz	VBW 1KHz
150KHz~30MHz	RBW 9KHz	VBW 30KHz
30MHz~1GHz	RBW 120KHz	VBW 300KHz
Above 1GHz	RBW 1MHz	VBW 3MHz

5.3.2 Test Condition

Continual Transmitting in maximum power.

5.4 Test Result

We have scanned the 9KHz from 25GHz to the EUT.
Detailed information please see the following page.

From 9KHz to 30MHz: Conclusion: PASS

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

Site LAB 966-2 Chamber

Polarization: **Vertical**

Temperature: 23.8

Limit: FCC Part 15 Class B Radiation

Power: DC 5V

Humidity: 56 %

EUT: 300M 2.4G&5G wireless adpter

Distance:

M/N: SC-1

Mode:Working

Note:

Engineer Signature:

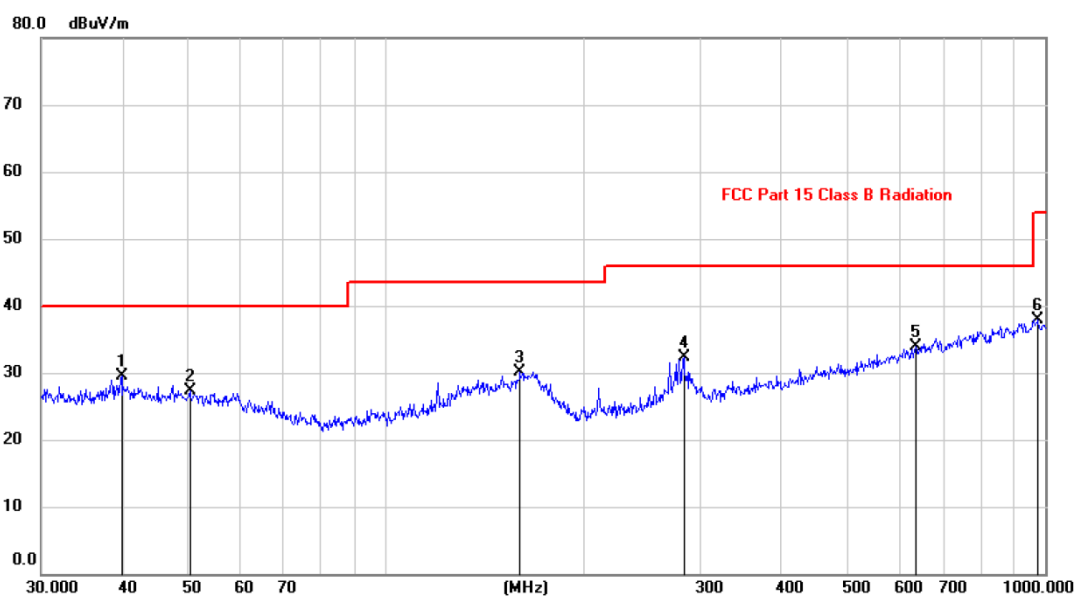
Radiated Emission Measurement

File :SC-1

Data :#1

Date: 2017/5/10

Time: 20:50:05



No.	Mk.	Freq. MHz	Reading Level dBuV	Correct Factor dB	Measure- ment dBuV/m	Limit dBuV/m	Margin dB	Antenna Height cm	Table Degree	Comment
1	*	39.7146	15.29	14.23	29.52	40.00	-10.48	peak		
2		50.4089	13.62	13.68	27.30	40.00	-12.70	peak		
3		159.7844	15.60	14.58	30.18	43.50	-13.32	peak		
4		283.9791	19.24	13.03	32.27	46.00	-13.73	peak		
5		636.1340	13.87	19.95	33.82	46.00	-12.18	peak		
6		975.7529	14.30	23.65	37.95	54.00	-16.05	peak		

Site LAB 966-2 Chamber

Polarization: **Horizontal**

Temperature: 23.8

Limit: FCC Part 15 Class B Radiation

Power: DC 5V

Humidity: 56 %

EUT: 300M 2.4G&5G wireless adpter

Distance:

M/N: SC-1

Mode:Working

Note:

Engineer Signature:

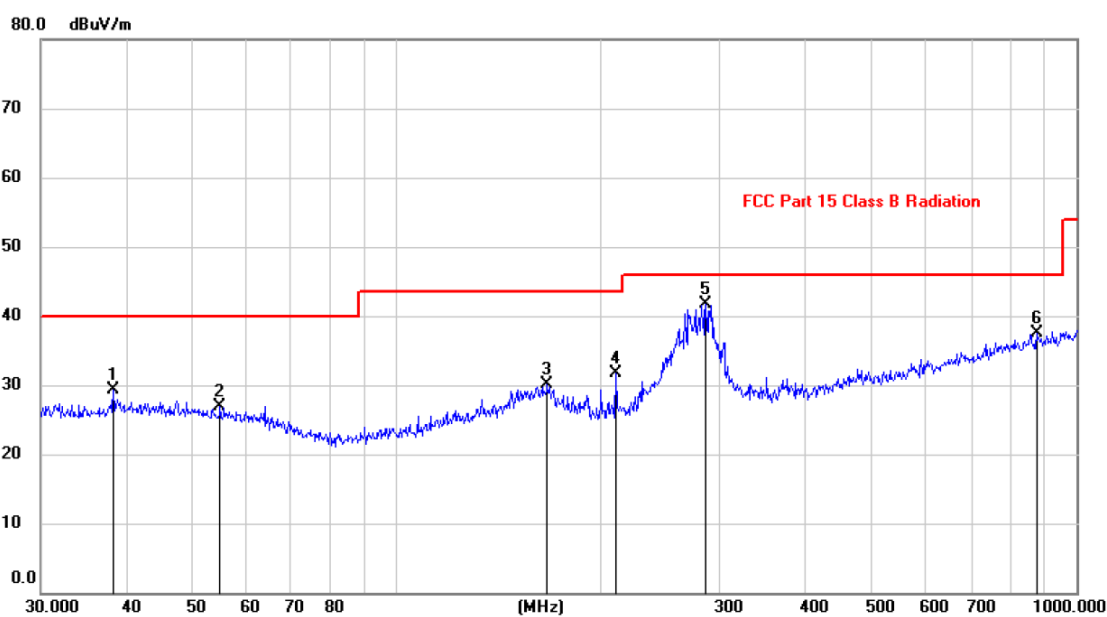
Radiated Emission Measurement

File :SC-1

Data :#2

Date: 2017/5/10

Time: 20:31:57



No.	Mk.	Freq. MHz	Reading Level dBuV	Correct Factor dB	Measure- ment dBuV/m	Limit dBuV/m	Margin dB	Antenna Height cm	Table Degree degree	Comment
1		38.3462	15.36	13.95	29.31	40.00	-10.69	peak		
2		55.0274	13.66	13.25	26.91	40.00	-13.09	peak		
3		167.2368	16.18	14.00	30.18	43.50	-13.32	peak		
4		210.0482	20.93	10.69	31.62	43.50	-11.88	peak		
5	*	284.9767	28.72	13.04	41.76	46.00	-4.24	peak		
6		875.2470	14.72	22.83	37.55	46.00	-8.45	peak		

Remark: All modes and channels have been tested and only worst data of 802.11b, 2412MHz is listed in this report.

From 1G-25GHz

EUT	300M 2.4G&5G wireless adapter	Model Name	SC-1
Temperature	26°C	Relative Humidity	56%
Pressure	960hPa	Test voltage	DC 5V From USB port
Test Mode	TX Low		

IEEE 802.11b

Freq. (MHz)	Ant. Pol H/V	Peak Reading (dBuV)	AV Reading (dBuV)	Ant. / CL CF (dB)	Actual Fs		Peak Limit (dBuV/m)	AV Limit (dBuV/m)	Margin (dB)	Remarks
					Peak (dBuV/m)	AV (dBuV/m)				
1103	V	42.58	---	-11.24	31.34	---	74	54	42.66	Peak
4824	V	34.96	---	0.64	35.6	---	74	54	38.4	Peak
N/A										

EUT	300M 2.4G&5G wireless adapter	Model Name	SC-1
Temperature	26°C	Relative Humidity	56%
Pressure	960hPa	Test voltage	DC 5V From USB port
Test Mode	TX Low		

Freq. (MHz)	Ant. Pol H/V	Peak Reading (dBuV)	AV Reading (dBuV)	Ant. / CL CF (dB)	Actual Fs		Peak Limit (dBuV/m)	AV Limit (dBuV/m)	Margin (dB)	Remarks
					Peak (dBuV/m)	AV (dBuV/m)				
1103	H	42.1	---	-11.24	30.86	---	74	54	43.14	Peak
4824	H	34.69	---	0.64	35.33	---	74	54	38.67	Peak
N/A										

Notes: AV Means AV detector test data, Peak Means Peak detector test data.

Emissions attenuated more than 20 dB below the permissible value are not reported.

EUT	300M 2.4G&5G wireless adapter	Model Name	SC-1
Temperature	26°C	Relative Humidity	56%
Pressure	960hPa	Test voltage	DC 5V From USB port
Test Mode	TX Mid		

Freq. (MHz)	Ant. Pol H/V	Peak Reading (dBuV)	AV Reading (dBuV)	Ant. / CL CF (dB)	Actual Fs		Peak Limit (dBuV/m)	AV Limit (dBuV/m)	Margin (dB)	Remark
					Peak (dBuV/m)	AV (dBuV/m)				
1103	V	42.36	---	-11.24	31.12	---	74	54	42.88	Peak
4874	V	37.45	---	0.76	38.21	---	74	54	35.79	Peak

EUT	300M 2.4G&5G wireless adapter	Model Name	SC-1
Temperature	26°C	Relative Humidity	56%
Pressure	960hPa	Test voltage	DC 5V From USB port
Test Mode	TX Mid		

Freq. (MHz)	Ant. Pol H/V	Peak Reading (dBuV)	AV Reading (dBuV)	Ant. / CL CF (dB)	Actual Fs		Peak Limit (dBuV/m)	AV Limit (dBuV/m)	Margin (dB)	Remark
					Peak (dBuV/m)	AV (dBuV/m)				
1103	H	41.6	---	-11.24	30.36	---	74	54	43.64	Peak
4874	H	37.87	---	0.76	38.63	---	74	54	35.37	Peak

Notes: AV Means AV detector test data, Peak Means Peak detector test data.

Emissions attenuated more than 20 dB below the permissible value are not reported.

EUT	300M 2.4G&5G wireless adapter	Model Name	SC-1
Temperature	26°C	Relative Humidity	56%
Pressure	960hPa	Test voltage	DC 5V From USB port
Test Mode	TX High		

Freq. (MHz)	Ant. Pol H/V	Peak Reading (dBuV)	AV Reading (dBuV)	Ant. / CL CF (dB)	Actual Fs		Peak Limit (dBuV/m)	AV Limit (dBuV/m)	Margin (dB)	Remark
					Peak (dBuV/m)	AV (dBuV/m)				
1103	V	41.5	---	-11.24	30.26	---	74	54	43.74	Peak
4924	V	32.92	---	0.87	33.79	---	74	54	40.21	Peak

EUT	300M 2.4G&5G wireless adapter	Model Name	SC-1
Temperature	26°C	Relative Humidity	56%
Pressure	960hPa	Test voltage	DC 5V From USB port
Test Mode	TX High		

Freq. (MHz)	Ant. Pol H/V	Peak Reading (dBuV)	AV Reading (dBuV)	Ant. / CL CF (dB)	Actual Fs		Peak Limit (dBuV/m)	AV Limit (dBuV/m)	Margin (dB)	Remark
					Peak (dBuV/m)	AV (dBuV/m)				
1103	H	41.91	---	-11.24	30.67	---	74	54	43.33	Peak
4924	H	31.76	---	0.87	32.63	---	74	54	41.37	Peak

Notes: AV Means AV detector test data, Peak Means Peak detector test data.

Emissions attenuated more than 20 dB below the permissible value are not reported.

IEEE 802.11 g:

EUT	300M 2.4G&5G wireless adapter	Model Name	SC-1
Temperature	26°C	Relative Humidity	56%
Pressure	960hPa	Test voltage	DC 5V From USB port
Test Mode	TX Low		

Freq. (MHz)	Ant. Pol H/V	Peak Reading (dBuV)	AV Reading (dBuV)	Ant. / CL CF (dB)	Actual Fs		Peak Limit (dBuV/m)	AV Limit (dBuV/m)	Margin (dB)	Remark
					Peak (dBuV/m)	AV (dBuV/m)				
1145	V	42.38	---	-11.24	31.14	---	74	54	42.86	Peak
2586	V	44.45	---	-7.13	37.32	---	74	54	36.68	Peak
3062	V	42.51	---	-5.74	36.77	---	74	54	37.23	Peak
4824	V	42.11	---	0.64	42.75	---	74	54	31.25	Peak
N/A										

EUT	300M 2.4G&5G wireless adapter	Model Name	SC-1
Temperature	26°C	Relative Humidity	56%
Pressure	960hPa	Test voltage	DC 5V From USB port
Test Mode	TX Low		

Freq. (MHz)	Ant. Pol H/V	Peak Reading (dBuV)	AV Reading (dBuV)	Ant. / CL CF (dB)	Actual Fs		Peak Limit (dBuV/m)	AV Limit (dBuV/m)	Margin (dB)	Remark
					Peak (dBuV/m)	AV (dBuV/m)				
1294	H	41.72	---	-10.96	30.76	---	74	54	43.24	Peak
2038	H	41.91	---	-8.58	33.33	---	74	54	40.67	Peak
3483	H	40.81	---	-4.95	35.86	---	74	54	38.14	Peak
4824	H	39.61	---	0.64	40.25	---	74	54	33.75	Peak
N/A										

Notes: AV Means AV detector test data, Peak Means Peak detector test data.

Emissions attenuated more than 20 dB below the permissible value are not reported.

EUT	300M 2.4G&5G wireless adapter	Model Name	SC-1
Temperature	26°C	Relative Humidity	56%
Pressure	960hPa	Test voltage	DC 5V From USB port
Test Mode	TX Mid		

Freq. (MHz)	Ant. Pol H/V	Peak Reading (dBuV)	AV Reading (dBuV)	Ant. / CL CF (dB)	Actual Fs		Peak Limit (dBuV/m)	AV Limit (dBuV/m)	Margin (dB)	Remark
					Peak (dBuV/m)	AV (dBuV/m)				
1374	V	41.91	---	-10.43	31.48	---	74	54	42.52	Peak
2589	V	42.5	---	-7.13	35.37	---	74	54	38.63	Peak
3365	V	41.88	---	-5.18	36.7	---	74	54	37.3	Peak
4874	V	41.1	---	0.76	41.86	---	74	54	32.14	Peak

EUT	300M 2.4G&5G wireless adapter	Model Name	SC-1
Temperature	26°C	Relative Humidity	56%
Pressure	960hPa	Test voltage	DC 5V From USB port
Test Mode	TX Mid		

Freq. (MHz)	Ant. Pol H/V	Peak Reading (dBuV)	AV Reading (dBuV)	Ant. / CL CF (dB)	Actual Fs		Peak Limit (dBuV/m)	AV Limit (dBuV/m)	Margin (dB)	Remark
					Peak (dBuV/m)	AV (dBuV/m)				
1321	H	41.91	---	-10.84	31.07	---	74	54	42.93	Peak
2314	H	42.61	---	-7.46	35.15	---	74	54	38.85	Peak
3577	H	40.9	---	-4.76	36.14	---	74	54	37.86	Peak
4874	H	38.61	---	0.76	39.37	---	74	54	34.63	Peak

Notes: AV Means AV detector test data, Peak Means Peak detector test data.

Emissions attenuated more than 20 dB below the permissible value are not reported.

EUT	300M 2.4G&5G wireless adapter	Model Name	SC-1
Temperature	26°C	Relative Humidity	56%
Pressure	960hPa	Test voltage	DC 5V From USB port
Test Mode	TX High		

Freq. (MHz)	Ant. Pol H/V	Peak Reading (dBuV)	AV Reading (dBuV)	Ant. / CL CF (dB)	Actual Fs		Peak Limit (dBuV/m)	AV Limit (dBuV/m)	Margin (dB)	Remark
					Peak (dBuV/m)	AV (dBuV/m)				
1302	V	41.91	---	-10.84	31.07	---	74	54	42.93	Peak
2982	V	42.45	---	-5.86	36.59	---	74	54	37.41	Peak
3831	V	41.51	---	-3.96	37.55	---	74	54	36.45	Peak
4924	V	39.91	---	0.87	40.78	---	74	54	33.22	Peak

EUT	300M 2.4G&5G wireless adapter	Model Name	SC-1
Temperature	26°C	Relative Humidity	56%
Pressure	960hPa	Test voltage	DC 5V From USB port
Test Mode	TX High		

Freq. (MHz)	Ant. Pol H/V	Peak Reading (dBuV)	AV Reading (dBuV)	Ant. / CL CF (dB)	Actual Fs		Peak Limit (dBuV/m)	AV Limit (dBuV/m)	Margin (dB)	Remark
					Peak (dBuV/m)	AV (dBuV/m)				
1446	H	42.09	---	-10.29	31.8	---	74	54	42.2	Peak
2198	H	40.91	---	-8.24	32.67	---	74	54	41.33	Peak
3905	H	42.01	---	-3.68	38.33	---	74	54	35.67	Peak
4924	H	39.49	---	0.87	40.36	---	74	54	33.64	Peak

Notes: AV Means AV detector test data, Peak Means Peak detector test data.

Emissions attenuated more than 20 dB below the permissible value are not reported.

IEEE 802.11n/HT20 with 2.4G

EUT	300M 2.4G&5G wireless adapter	Model Name	SC-1
Temperature	26°C	Relative Humidity	56%
Pressure	960hPa	Test voltage	DC 5V From USB port
Test Mode	TX Low		

Freq. (MHz)	Ant. Pol H/V	Peak Reading (dBuV)	AV Reading (dBuV)	Ant. / CL CF (dB)	Actual Fs		Peak Limit (dBuV/m)	AV Limit (dBuV/m)	Margin (dB)	Remark
					Peak (dBuV/m)	AV (dBuV/m)				
1492	V	42.09	---	-10.27	31.82	---	74	54	42.18	Peak
2671	V	41.68	---	-6.94	34.74	---	74	54	39.26	Peak
3948	V	41.87	---	-3.68	38.19	---	74	54	35.81	Peak
4824	V	40.62	---	0.64	41.26	---	74	54	32.74	Peak
N/A										

EUT	300M 2.4G&5G wireless adapter	Model Name	SC-1
Temperature	26°C	Relative Humidity	56%
Pressure	960hPa	Test voltage	DC 5V From USB port
Test Mode	TX Low		

Freq. (MHz)	Ant. Pol H/V	Peak Reading (dBuV)	AV Reading (dBuV)	Ant. / CL CF (dB)	Actual Fs		Peak Limit (dBuV/m)	AV Limit (dBuV/m)	Margin (dB)	Remark
					Peak (dBuV/m)	AV (dBuV/m)				
1451	H	42.12	---	-10.27	31.85	---	74	54	42.15	Peak
2839	H	42.39	---	-6.17	36.22	---	74	54	37.78	Peak
3607	H	41.96	---	-4.52	37.44	---	74	54	36.56	Peak
4824	H	40.88	---	0.64	41.52	---	74	54	32.48	Peak
N/A										

Notes: AV Means AV detector test data, Peak Means Peak detector test data.

Emissions attenuated more than 20 dB below the permissible value are not reported.

EUT	300M 2.4G&5G wireless adapter	Model Name	SC-1
Temperature	26°C	Relative Humidity	56%
Pressure	960hPa	Test voltage	DC 5V From USB port
Test Mode	TX Mid		

Freq. (MHz)	Ant. Pol H/V	Peak Reading (dBuV)	AV Reading (dBuV)	Ant. / CL CF (dB)	Actual Fs		Peak Limit (dBuV/m)	AV Limit (dBuV/m)	Margin (dB)	Remark
					Peak (dBuV/m)	AV (dBuV/m)				
1262	V	41.81	---	-10.96	30.85	---	74	54	43.15	Peak
2013	V	42.25	---	-8.58	33.67	---	74	54	40.33	Peak
3798	V	41.49	---	-4.07	37.42	---	74	54	36.58	Peak
4874	V	40.61	---	0.76	41.37	---	74	54	32.63	Peak

EUT	300M 2.4G&5G wireless adapter	Model Name	SC-1
Temperature	26°C	Relative Humidity	56%
Pressure	960hPa	Test voltage	DC 5V From USB port
Test Mode	TX Mid		

Freq. (MHz)	Ant. Pol H/V	Peak Reading (dBuV)	AV Reading (dBuV)	Ant. / CL CF (dB)	Actual Fs		Peak Limit (dBuV/m)	AV Limit (dBuV/m)	Margin (dB)	Remark
					Peak (dBuV/m)	AV (dBuV/m)				
1511	H	41.71	---	-10.14	31.57	---	74	54	42.43	Peak
2353	H	41.87	---	-7.59	34.28	---	74	54	39.72	Peak
3266	H	42.14	---	-5.39	36.75	---	74	54	37.25	Peak
4874	H	40.88	---	0.76	41.64	---	74	54	32.36	Peak

Notes: AV Means AV detector test data, Peak Means Peak detector test data.

Emissions attenuated more than 20 dB below the permissible value are not reported.

EUT	300M 2.4G&5G wireless adapter	Model Name	SC-1
Temperature	26°C	Relative Humidity	56%
Pressure	960hPa	Test voltage	DC 5V From USB port
Test Mode	TX High		

Freq. (MHz)	Ant. Pol H/V	Peak Reading (dBuV)	AV Reading (dBuV)	Ant. / CL CF (dB)	Actual Fs		Peak Limit (dBuV/m)	AV Limit (dBuV/m)	Margin (dB)	Remark
					Peak (dBuV/m)	AV (dBuV/m)				
1477	V	43.14	---	-10.27	32.87	---	74	54	41.13	Peak
2703	V	42.02	---	-6.43	35.59	---	74	54	38.41	Peak
3561	V	41.91	---	-4.76	37.15	---	74	54	36.85	Peak
4924	V	40.74	---	0.87	41.61	---	74	54	32.39	Peak

EUT	300M 2.4G&5G wireless adapter	Model Name	SC-1
Temperature	26°C	Relative Humidity	56%
Pressure	960hPa	Test voltage	DC 5V From USB port
Test Mode	TX High		

Freq. (MHz)	Ant. Pol H/V	Peak Reading (dBuV)	AV Reading (dBuV)	Ant. / CL CF (dB)	Actual Fs		Peak Limit (dBuV/m)	AV Limit (dBuV/m)	Margin (dB)	Remark
					Peak (dBuV/m)	AV (dBuV/m)				
1503	H	41.69	---	-10.14	31.55	---	74	54	42.45	Peak
3588	H	41.99	---	-4.96	37.03	---	74	54	36.97	Peak
4153	H	41.8	---	-2.48	39.32	---	74	54	34.68	Peak
4924	H	39.85	---	0.87	40.72	---	74	54	33.28	Peak

Notes: AV Means AV detector test data, Peak Means Peak detector test data.

Emissions attenuated more than 20 dB below the permissible value are not reported.

IEEE 802.11n/HT40 with 2.4G

EUT	300M 2.4G&5G wireless adapter	Model Name	SC-1
Temperature	26°C	Relative Humidity	56%
Pressure	960hPa	Test voltage	DC 5V From USB port
Test Mode	TX Low		

Freq. (MHz)	Ant. Pol H/V	Peak Reading (dBuV)	AV Reading (dBuV)	Ant. / CL CF (dB)	Actual Fs		Peak Limit (dBuV/m)	AV Limit (dBuV/m)	Margin (dB)	Remark
					Peak (dBuV/m)	AV (dBuV/m)				
1551	V	42.15	---	-10.07	32.08	---	74	54	41.92	Peak
2695	V	42.02	---	-6.94	35.08	---	74	54	38.92	Peak
3463	V	41.31	---	-4.95	36.36	---	74	54	37.64	Peak
4844	V	39.9	---	0.64	40.54	---	74	54	33.46	Peak
N/A										

EUT	300M 2.4G&5G wireless adapter	Model Name	SC-1
Temperature	26°C	Relative Humidity	56%
Pressure	960hPa	Test voltage	DC 5V From USB port
Test Mode	TX Low		

Freq. (MHz)	Ant. Pol H/V	Peak Reading (dBuV)	AV Reading (dBuV)	Ant. / CL CF (dB)	Actual Fs		Peak Limit (dBuV/m)	AV Limit (dBuV/m)	Margin (dB)	Remark
					Peak (dBuV/m)	AV (dBuV/m)				
1542	H	41.92	---	-10.14	31.78	---	74	54	42.22	Peak
2358	H	41.78	---	-7.59	34.19	---	74	54	39.81	Peak
3096	H	42.19	---	-5.74	36.45	---	74	54	37.55	Peak
4844	H	40.59	---	0.64	41.23	---	74	54	32.77	Peak
N/A										

Notes: AV Means AV detector test data, Peak Means Peak detector test data.

Emissions attenuated more than 20 dB below the permissible value are not reported.

EUT	300M 2.4G&5G wireless adapter	Model Name	SC-1
Temperature	26°C	Relative Humidity	56%
Pressure	960hPa	Test voltage	DC 5V From USB port
Test Mode	TX Mid		

Freq. (MHz)	Ant. Pol H/V	Peak Reading (dBuV)	AV Reading (dBuV)	Ant. / CL CF (dB)	Actual Fs		Peak Limit (dBuV/m)	AV Limit (dBuV/m)	Margin (dB)	Remark
					Peak (dBuV/m)	AV (dBuV/m)				
1628	V	42.48	---	-9.84	32.64	---	74	54	41.36	Peak
2593	V	41.9	---	-7.13	34.77	---	74	54	39.23	Peak
3301	V	42.04	---	-5.31	36.73	---	74	54	37.27	Peak
4874	V	40.89	---	0.76	41.65	---	74	54	32.35	Peak

EUT	300M 2.4G&5G wireless adapter	Model Name	SC-1
Temperature	26°C	Relative Humidity	56%
Pressure	960hPa	Test voltage	DC 5V From USB port
Test Mode	TX Mid		

Freq. (MHz)	Ant. Pol H/V	Peak Reading (dBuV)	AV Reading (dBuV)	Ant. / CL CF (dB)	Actual Fs		Peak Limit (dBuV/m)	AV Limit (dBuV/m)	Margin (dB)	Remark
					Peak (dBuV/m)	AV (dBuV/m)				
1564	H	42.11	---	-10.07	32.04	---	74	54	41.96	Peak
2248	H	42.45	---	-8.13	34.32	---	74	54	39.68	Peak
3159	H	41.41	---	-5.52	35.89	---	74	54	38.11	Peak
4874	H	40.66	---	0.76	41.42	---	74	54	32.58	Peak

Notes: AV Means AV detector test data, Peak Means Peak detector test data.

Emissions attenuated more than 20 dB below the permissible value are not reported.

EUT	300M 2.4G&5G wireless adapter	Model Name	SC-1
Temperature	26°C	Relative Humidity	56%
Pressure	960hPa	Test voltage	DC 5V From USB port
Test Mode	TX High		

Freq. (MHz)	Ant. Pol H/V	Peak Reading (dBuV)	AV Reading (dBuV)	Ant. / CL CF (dB)	Actual Fs		Peak Limit (dBuV/m)	AV Limit (dBuV/m)	Margin (dB)	Remark
					Peak (dBuV/m)	AV (dBuV/m)				
1645	V	42.54	---	-9.84	32.7	---	74	54	41.3	Peak
2590	V	42.07	---	-7.13	34.94	---	74	54	39.06	Peak
3851	V	41.49	---	-3.84	37.65	---	74	54	36.35	Peak
4904	V	39.84	---	0.87	40.71	---	74	54	33.29	Peak

EUT	300M 2.4G&5G wireless adapter	Model Name	SC-1
Temperature	26°C	Relative Humidity	56%
Pressure	960hPa	Test voltage	DC 5V From USB port
Test Mode	TX High		

Freq. (MHz)	Ant. Pol H/V	Peak Reading (dBuV)	AV Reading (dBuV)	Ant. / CL CF (dB)	Actual Fs		Peak Limit (dBuV/m)	AV Limit (dBuV/m)	Margin (dB)	Remark
					Peak (dBuV/m)	AV (dBuV/m)				
1792	H	42.21	---	-9.27	32.94	---	74	54	41.06	Peak
2804	H	42.39	---	-6.17	36.22	---	74	54	37.78	Peak
3743	H	42.75	---	-4.24	38.51	---	74	54	35.49	Peak
4904	H	41.18	---	0.87	42.05	---	74	54	31.95	Peak

Notes: AV Means AV detector test data, Peak Means Peak detector test data.

Emissions attenuated more than 20 dB below the permissible value are not reported.

6 POWER LINE CONDUCTED EMISSION

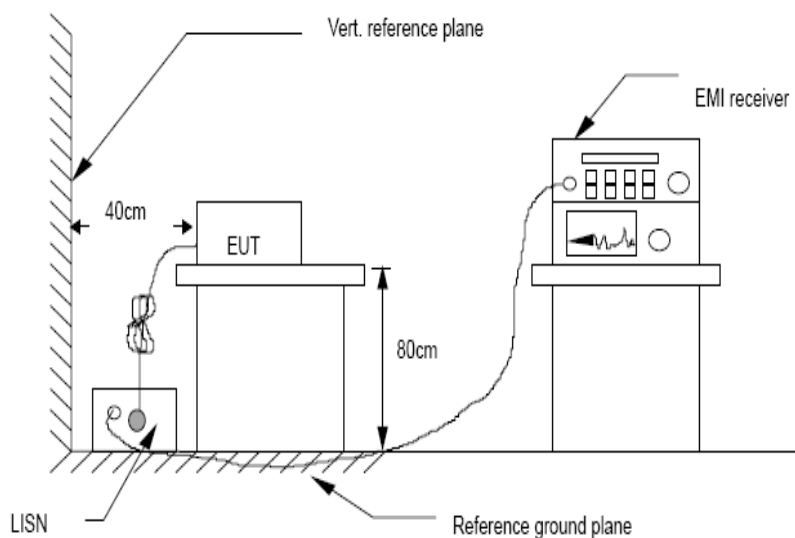
6.1 Conducted Emission Limits(15.207)

Frequency MHz	Limits dB(μ V)	
	Quasi-peak Level	Average Level
0.15 -0.50	66 -56*	56 - 46*
0.50 -5.00	56	46
5.00 -30.00	60	50

Notes:

1. *Decreasing linearly with logarithm of frequency.
2. The lower limit shall apply at the transition frequencies.
3. The limit decreases in line with the logarithm of the frequency in the rang of 0.15 to 0.50 MHz.

6.2 Test Setup



6.3 Test Procedure

The EUT is put on the plane 0.8m high above the ground by insulating support and is connected to the power mains through a line impedance stabilization network (L.I.S.N.). This provides a 50ohm coupling impedance for the EUT system. Please refer the block diagram of the test setup and photographs. Both sides of AC lines are checked to find out the maximum conducted emission. In order to find the maximum emission levels, the relative positions of equipment and all of the interface cables shall be changed according to ANSI C63.4:2014 on Conducted Emission Measurement.

The bandwidth of test receiver is set at 9 kHz.

6.4 Test Results

TX MODE

Worse case is reported only

PASS

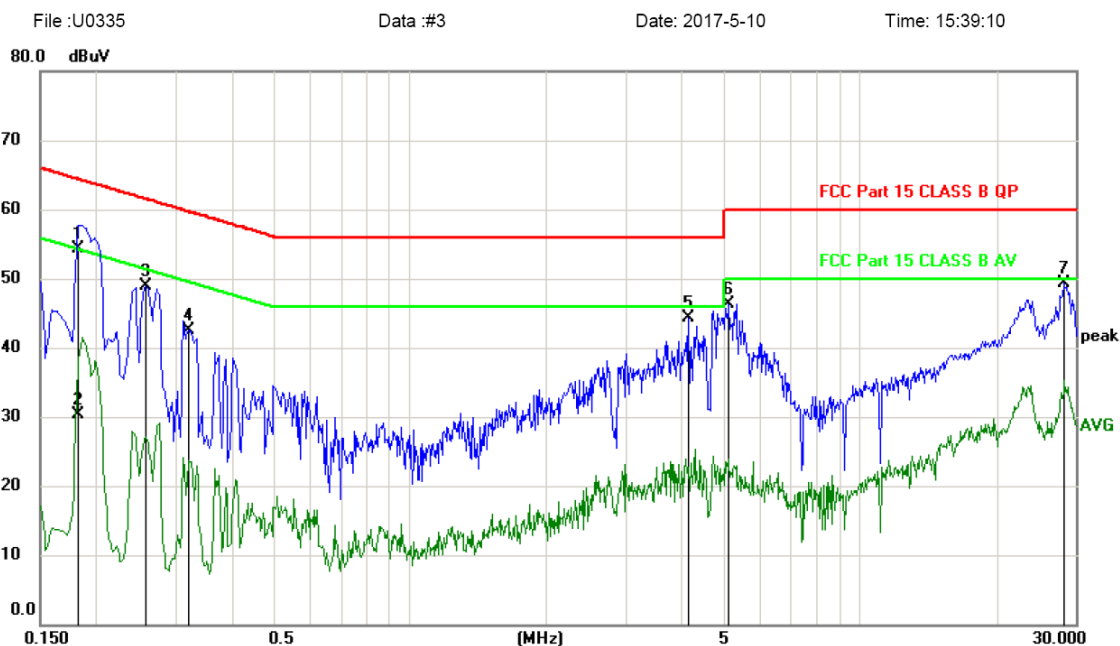
Detailed information please see the following page.

Site LAB
 Limit: FCC Part 15 CLASS B QP
 EUT:
 M/N: SC-1
 Mode: Working
 Note:

Phase: **L1**
 Power: DC 5V

Temperature: 24.2
 Humidity: 53 %

Conducted Emission Measurement



No.	Mk.	Freq. MHz	Reading Level dBuV	Correct Factor dB	Measure- ment dBuV	Limit dBuV	Margin dB	Detector	Comment
1	*	0.1815	44.66	9.74	54.40	64.42	-10.02	QP	
2		0.1815	20.63	9.74	30.37	54.42	-24.05	AVG	
3		0.2580	39.17	9.76	48.93	61.50	-12.57	peak	
4		0.3209	32.71	9.77	42.48	59.68	-17.20	peak	
5		4.1550	34.15	10.15	44.30	56.00	-11.70	peak	
6		5.0910	36.13	10.19	46.32	60.00	-13.68	peak	
7		28.2930	38.30	11.03	49.33	60.00	-10.67	peak	

Site LAB

Phase: **N**

Temperature: 24.2

Limit: FCC Part 15 CLASS B QP

Power: DC 5V

Humidity: 53 %

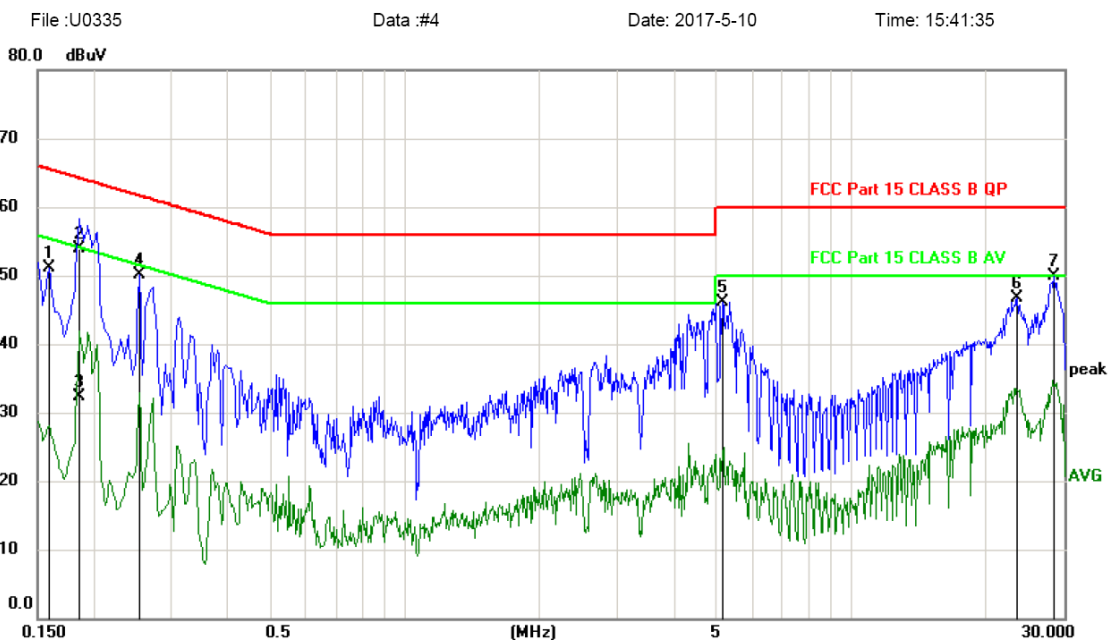
EUT:

M/N: SC-1

Mode: Working

Note:

Conducted Emission Measurement



No.	Mk.	Freq.	Reading Level	Correct Factor	Measurement	Limit	Margin		
		MHz	dBuV	dB	dBuV	dBuV	dB	Detector	Comment
1		0.1590	41.30	9.73	51.03	65.52	-14.49	peak	
2		0.1860	44.16	9.74	53.90	64.21	-10.31	QP	
3		0.1860	22.54	9.74	32.28	54.21	-21.93	AVG	
4		0.2535	40.37	9.76	50.13	61.64	-11.51	peak	
5		5.1450	35.97	10.20	46.17	60.00	-13.83	peak	
6		23.5365	35.95	10.70	46.65	60.00	-13.35	peak	
7	*	28.5270	38.91	11.06	49.97	60.00	-10.03	peak	

Remark: All modes and channels have been tested and only worst data of 802.11b, 2412MHz is listed in this report.

7 Conducted Maximum Output Power

7.1 Test limit

Please refer section 15.247.

Regulation 15.247(b) The limit of Maximum Peak Output Power Measurement is 1W(30dBm)

7.2 Test Procedure

Details see the KDB558074 Meas Guidance V03

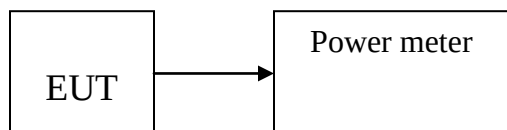
7.2.1 Place the EUT on the table and set it in transmitting mode.

7.2.2 Connected the EUT's antenna port to peak power meter by 20dB attenuator.

7.2.3 Measure out each mode and each bands peak output power of EUT.

Note: The cable loss and attenuator loss were offset into measure device as amplitude offset. Details see the KDB558074 DTS Meas Guidance V03

7.3 Test Setup



7.4 Test Results

PASS

Detailed information please see the following page.

SISO mode

EUT: 300M 2.4G&5G wireless adapter M/N: SC-1					
Test date: 2017-05-07		Test site: RF site		Tested by: Simple Guan	
Mode	Frequency (MHz)	PK Output power(dBm)			Limit (dBm)
		ANT0	ANT1	Total	
IEEE 802.11 b	CH1: 2412	8.41	8.56	N/A	30
	CH6: 2437	8.09	8.43	N/A	30
	CH11: 2462	7.86	8.51	N/A	30
IEEE 802.11 g	CH1: 2412	7.65	7.04	N/A	30
	CH6: 2437	7.24	7.11	N/A	30
	CH11: 2462	7.99	7.21	N/A	30
IEEE 802.11 n/HT20 with 2.4G	CH1: 2412	6.49	6.37	N/A	30
	CH6: 2437	6.65	6.68	N/A	30
	CH11: 2462	6.67	6.52	N/A	30
IEEE 802.11 n/HT40 with 2.4G	CH1: 2422	6.30	6.03	N/A	30
	CH4: 2437	6.22	6.05	N/A	30
	CH7: 2452	6.48	6.02	N/A	30
Conclusion: PASS					

8 PEAK POWER SPECTRAL DENSITY

8.1 Test limit

8.1.1 Please refer section 15.247.

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

8.1.3 The direct sequence operating of the hybrid system, with the frequency hopping operation turned off, shall comply with the power density requirements of paragraph (d) of this section.

8.2 Method of measurement

Details see the KDB558074 DTS Meas Guidance

8.2.1 Place the EUT on the table and set it in transmitting mode.

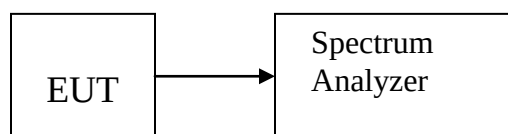
8.2.2 Remove the antenna from the EUT and then connect a low loss RF cable from the antenna port to the spectrum analyzer.

8.2.3 Set the spectrum analyzer as RBW = 3kHz, VBW = 10kHz, span=5-30%EBW, detail see the test plot.

8.2.4 Record the max reading.

8.2.5 Repeat the above procedure until the measurements for all frequencies are completed.

8.3 Test Setup



8.4 Test Results

SISO mode

EUT: 300M 2.4G&5G wireless adapter M/N: SC-1					
Test date: 2017-05-07		Test site: RF site		Tested by: Simple Guan	
Mode	Frequency (MHz)	Power Density			Limit (dBm)
		ANT0	ANT1	Total	
IEEE 802.11 b	CH1: 2412	-7.795	-7.345	N/A	8
	CH6: 2437	-7.582	-7.175	N/A	8
	CH11: 2462	-7.979	-6.982	N/A	8
IEEE 802.11 g	CH1: 2412	-11.896	-12.945	N/A	8
	CH6: 2437	-11.451	-11.498	N/A	8
	CH11: 2462	-12.405	-12.257	N/A	8
IEEE 802.11 n/HT20 with 2.4G	CH1: 2412	-13.066	-11.913	N/A	8
	CH6: 2437	-11.568	-12.157	N/A	8
	CH11: 2462	-12.015	-12.011	N/A	8
IEEE 802.11 n/HT40 with 2.4G	CH1: 2422	-18.636	-18.122	N/A	8
	CH4: 2437	-16.292	-16.265	N/A	8
	CH7: 2452	-17.774	-17.636	N/A	8
Conclusion: PASS					

ANT 0
IEEE 802.11b :
CH Low :



CH Mid:

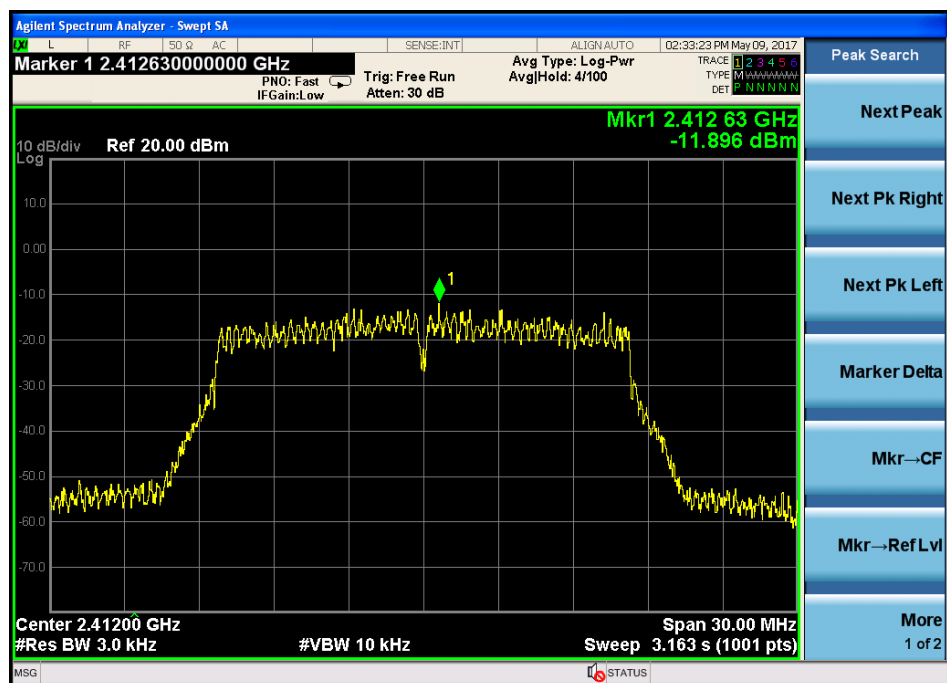


CH Hig:

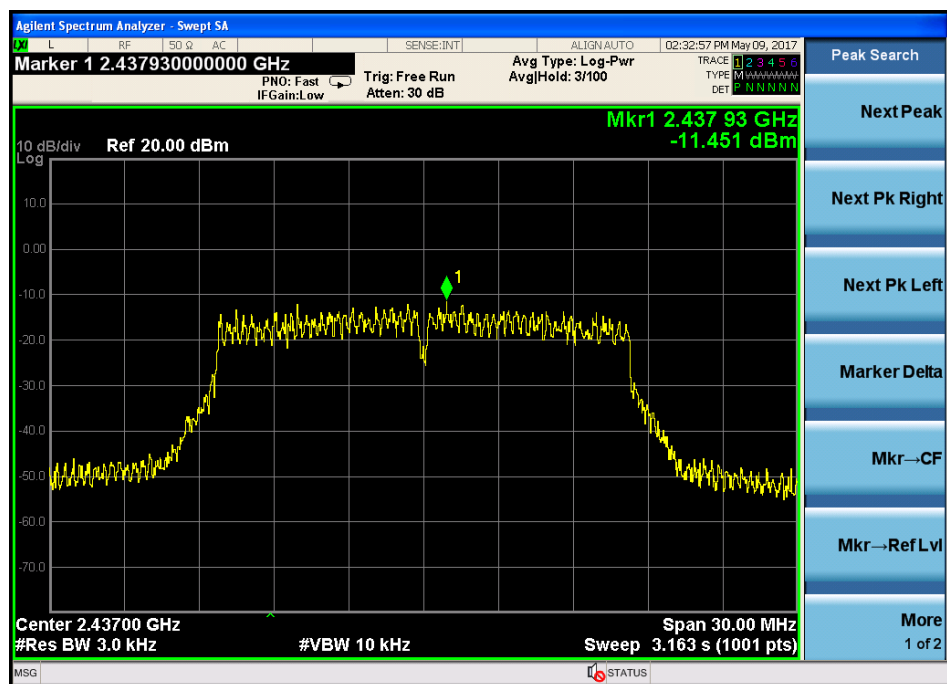


IEEE 802.11g :

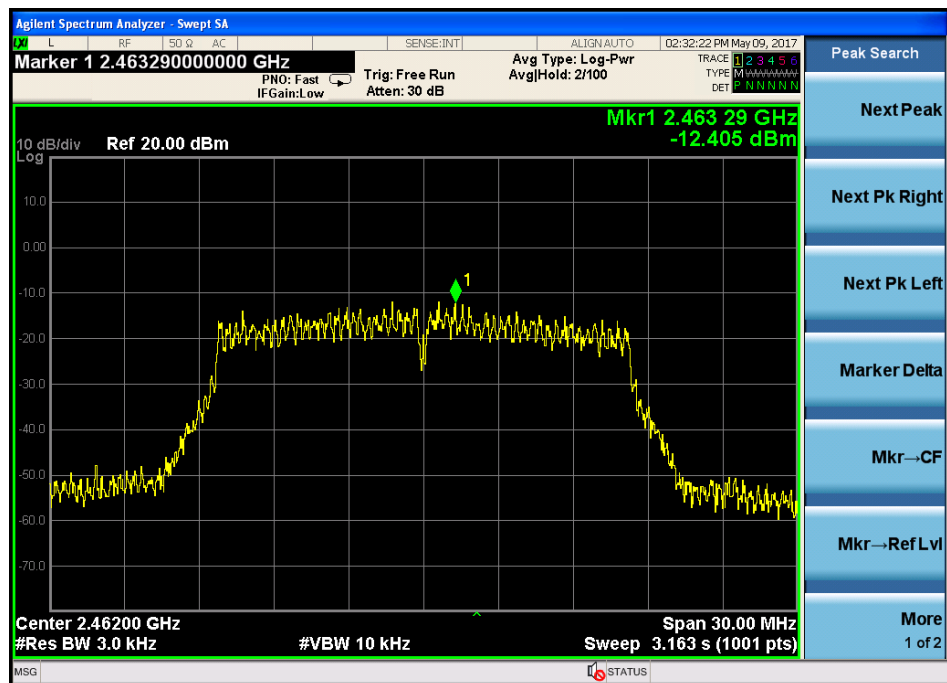
CH Low



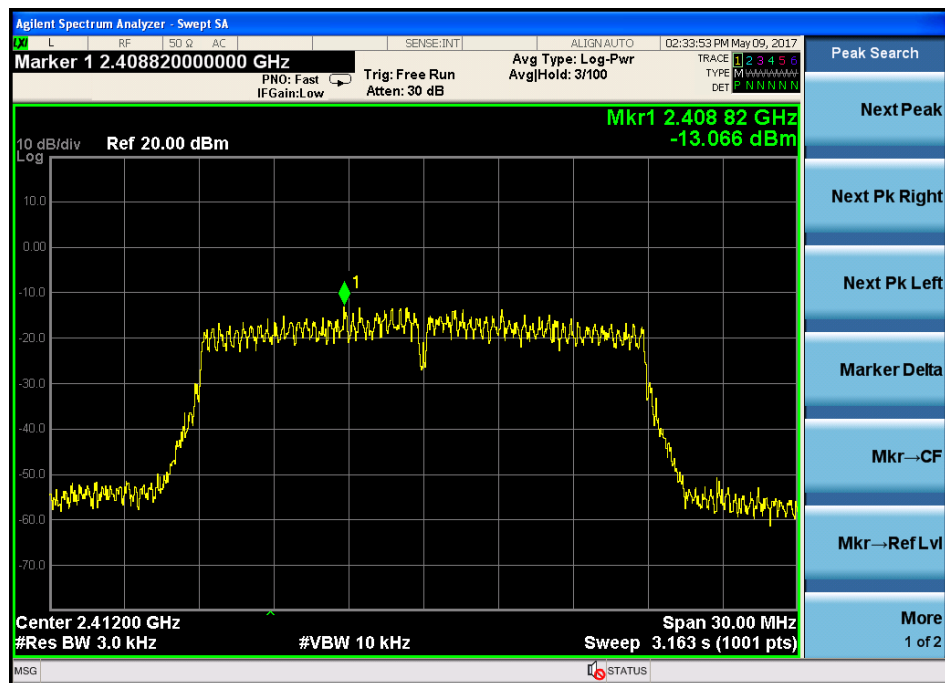
CH Mid:



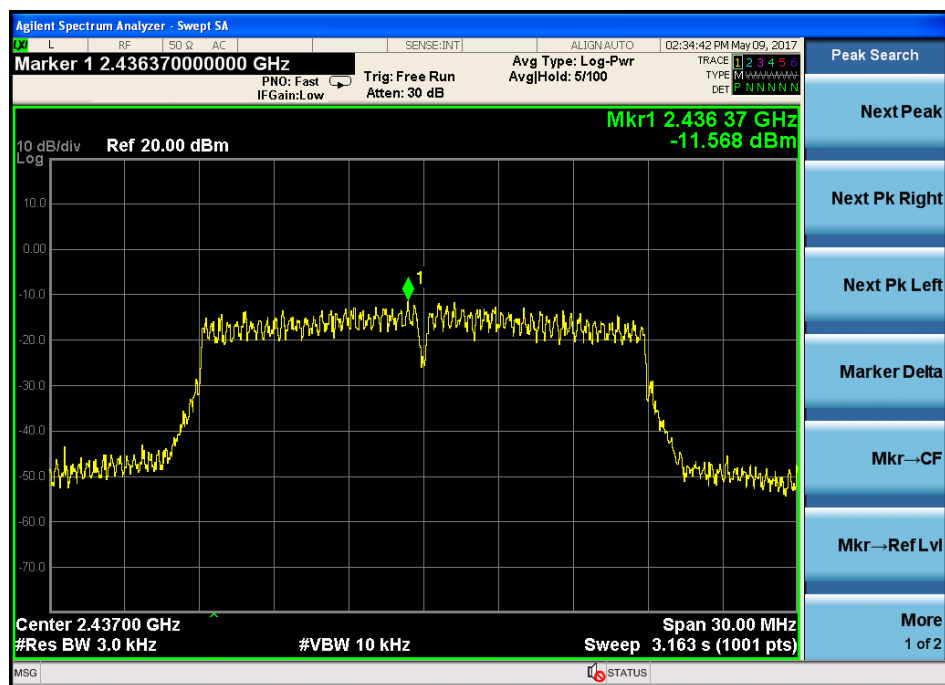
CH Hig:



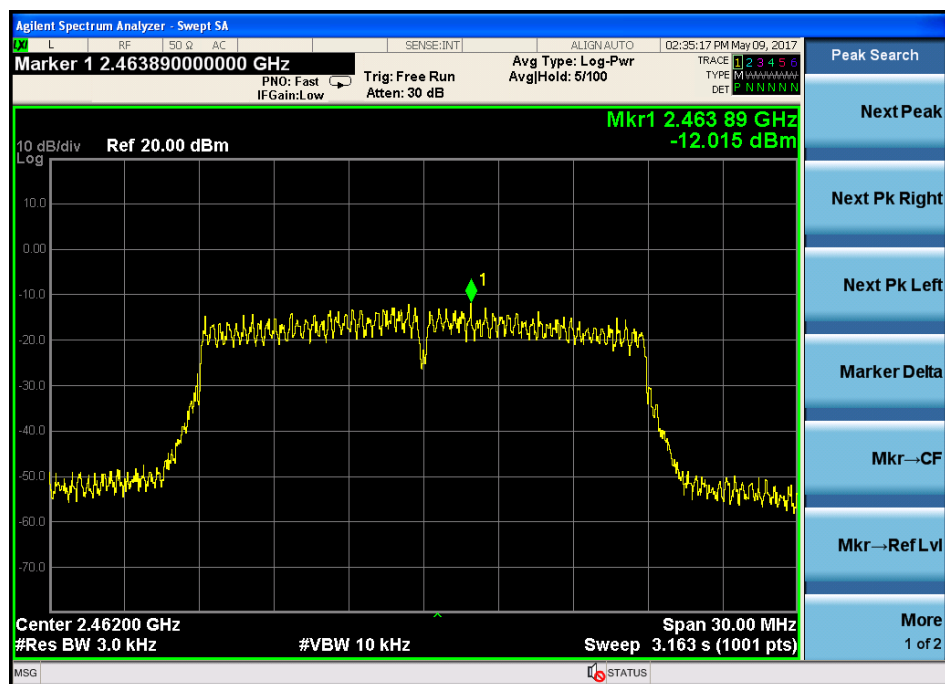
IEEE 802.11n HT20 :
CH Low :



CH Mid:

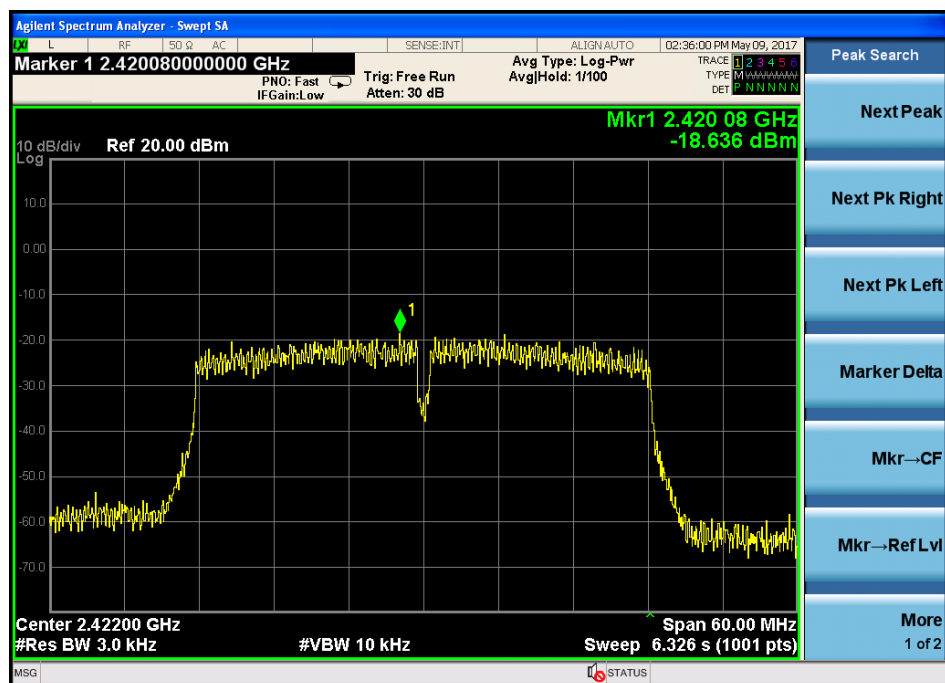


CH Hig:

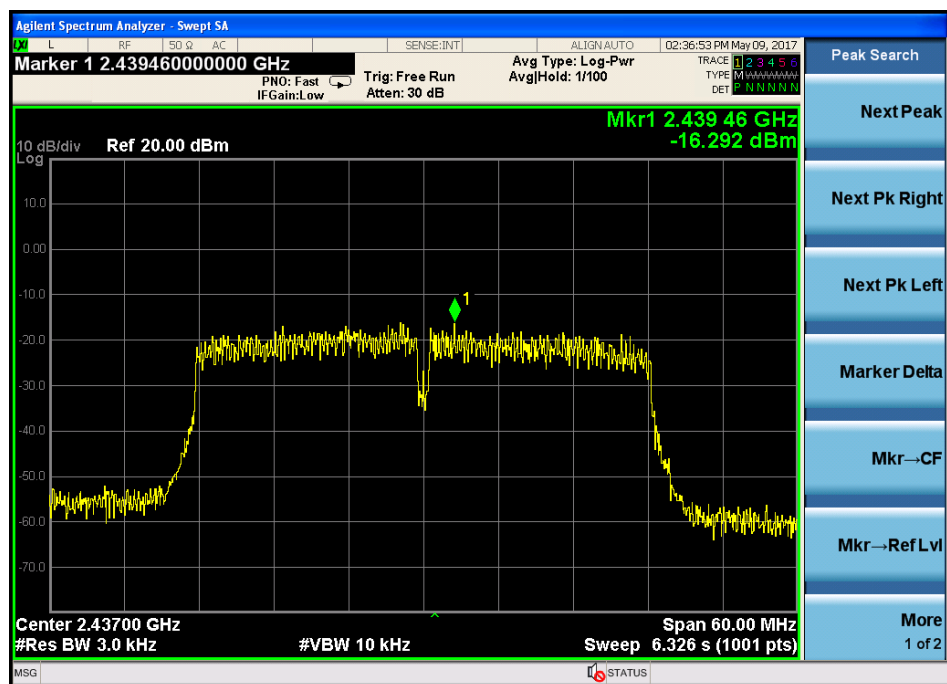


IEEE 802.11n HT40 :

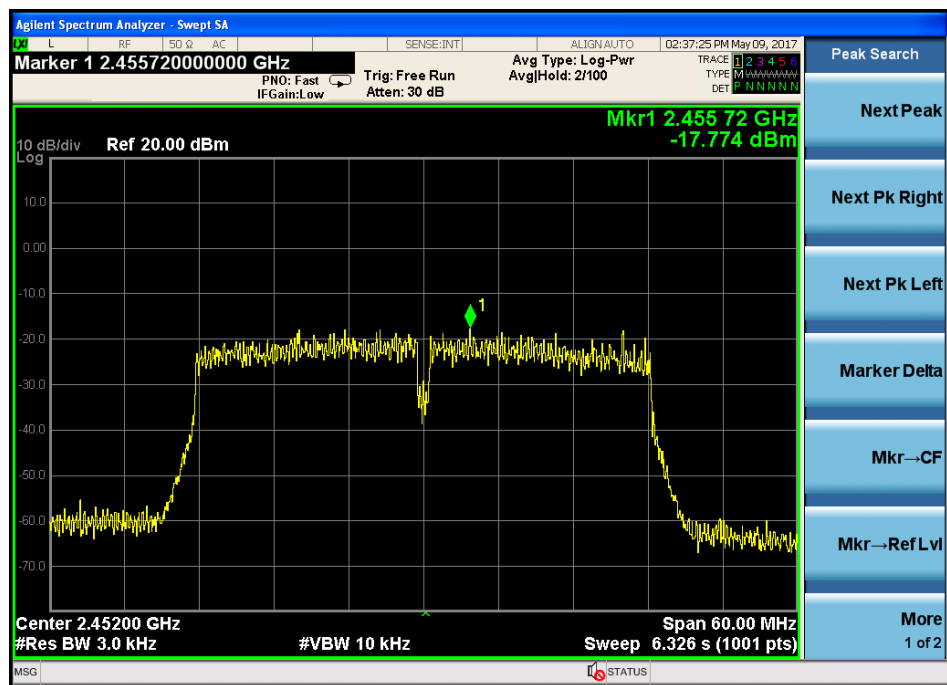
CH Low :



CH Mid:



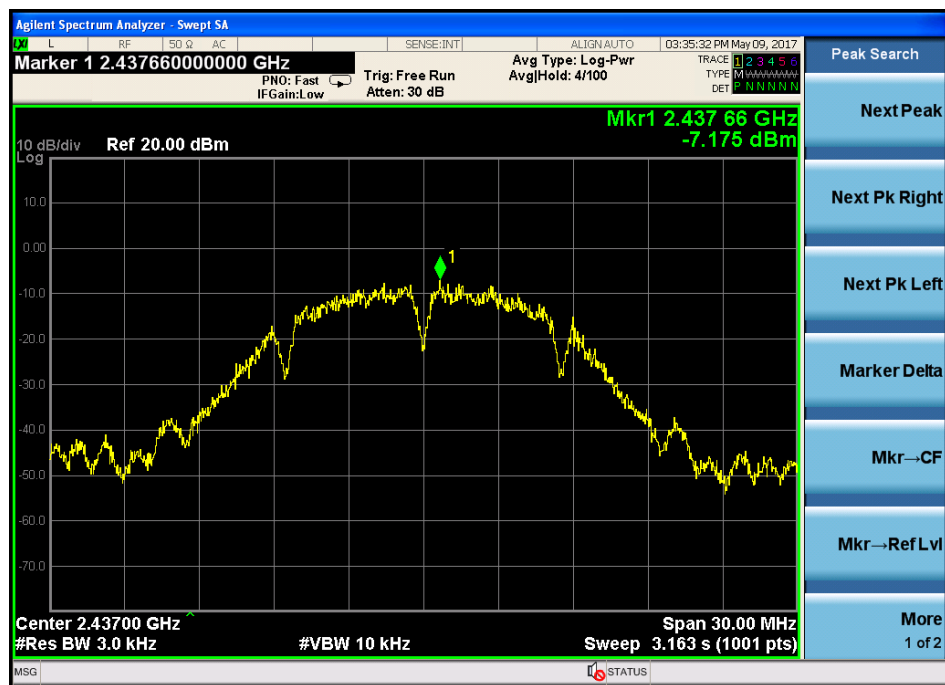
CH Hig:



ANT 1
IEEE 802.11b :
CH Low :



CH Mid:

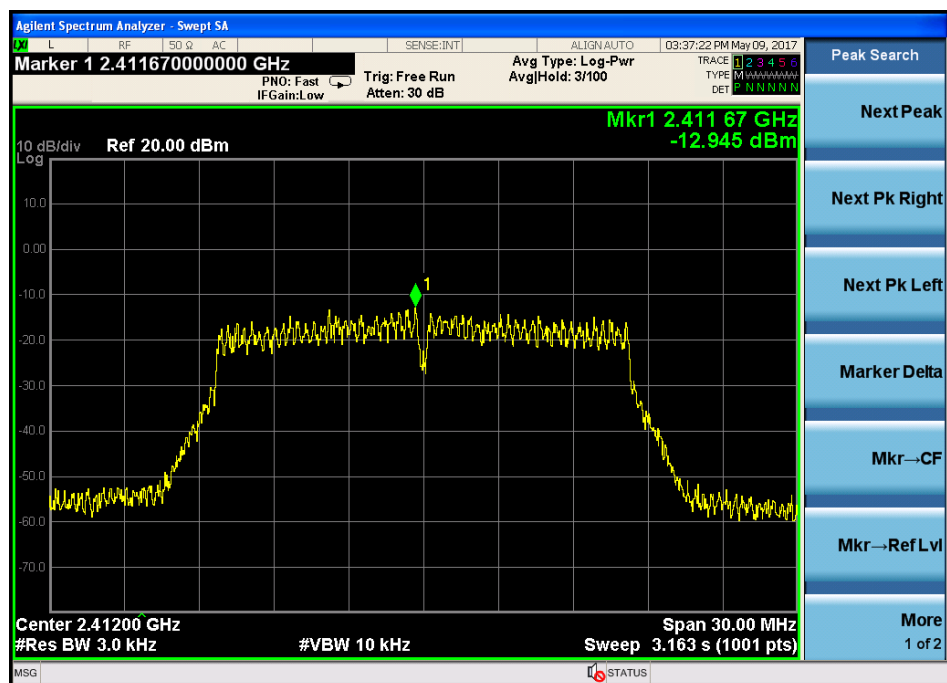


CH Hig:

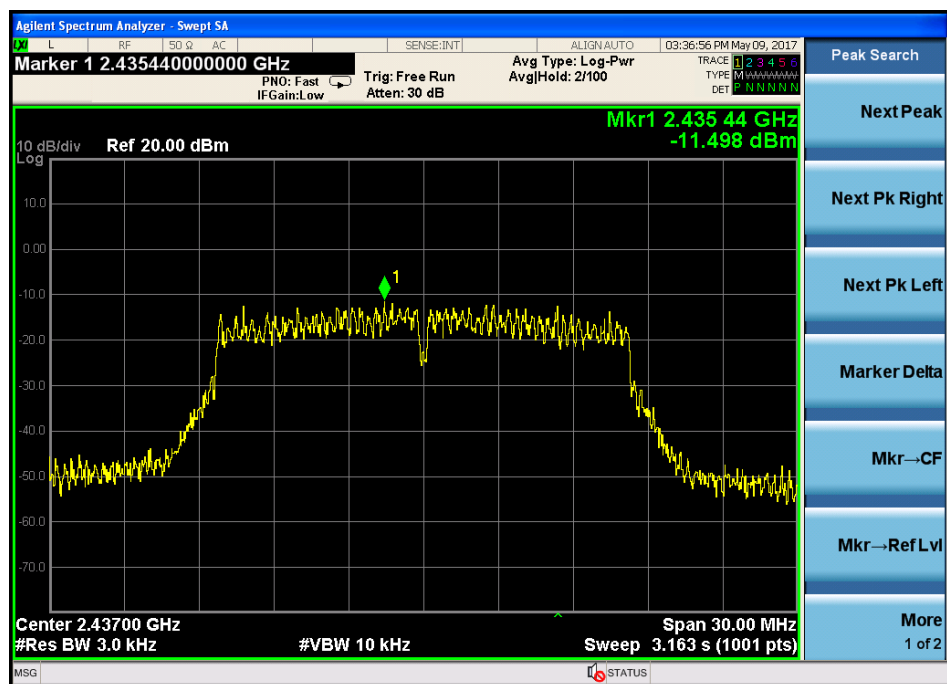


IEEE 802.11g :

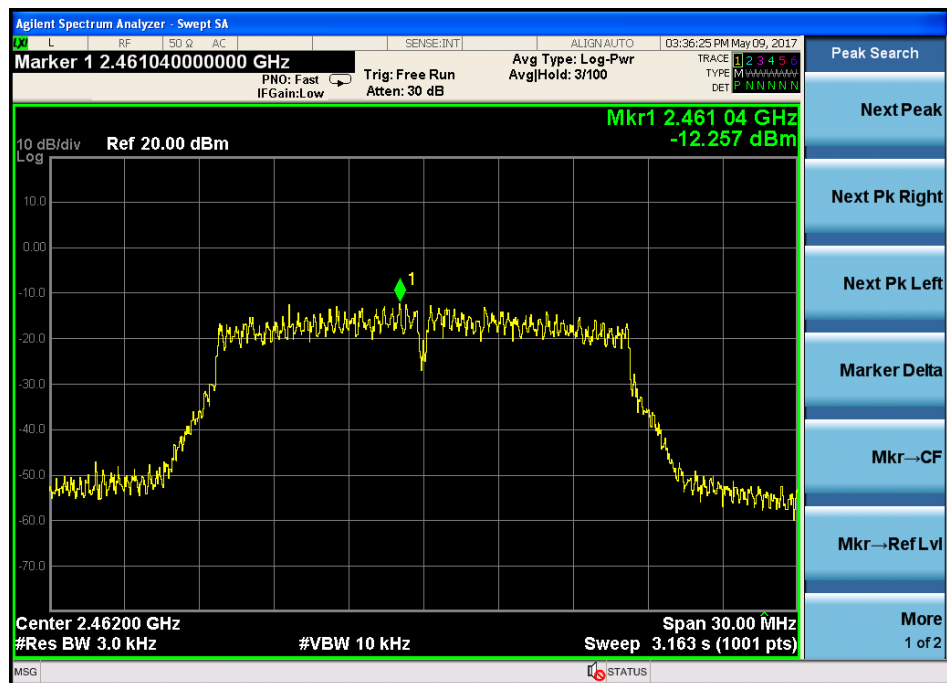
CH Low



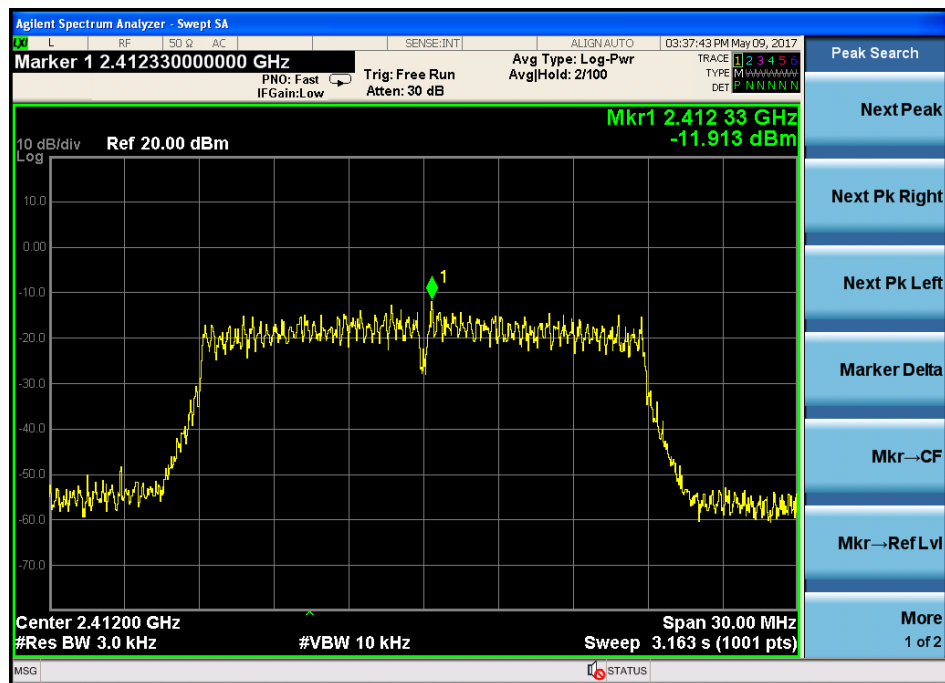
CH Mid:



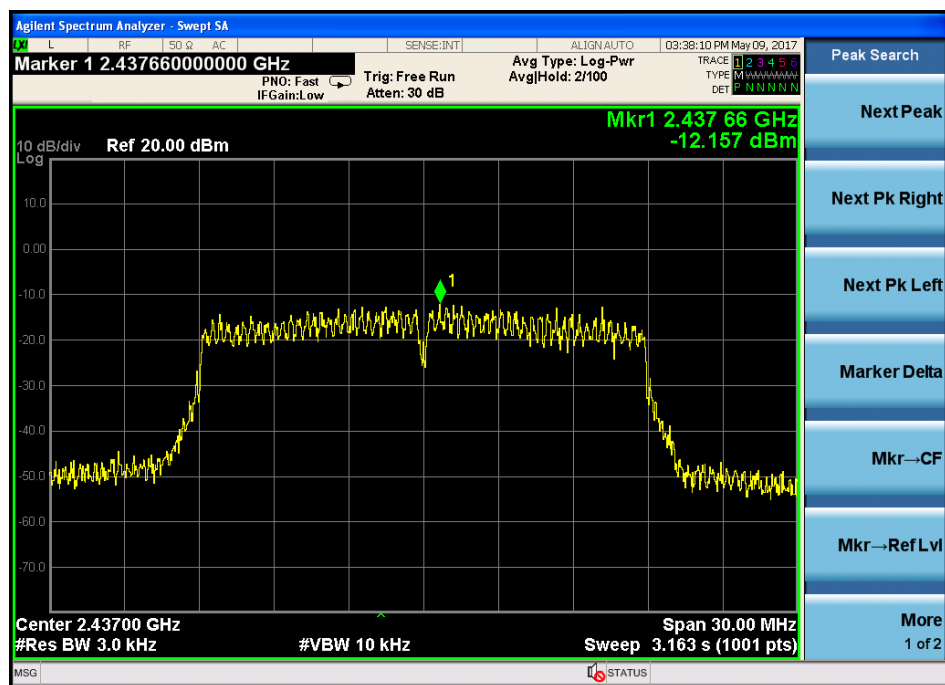
CH Hig:



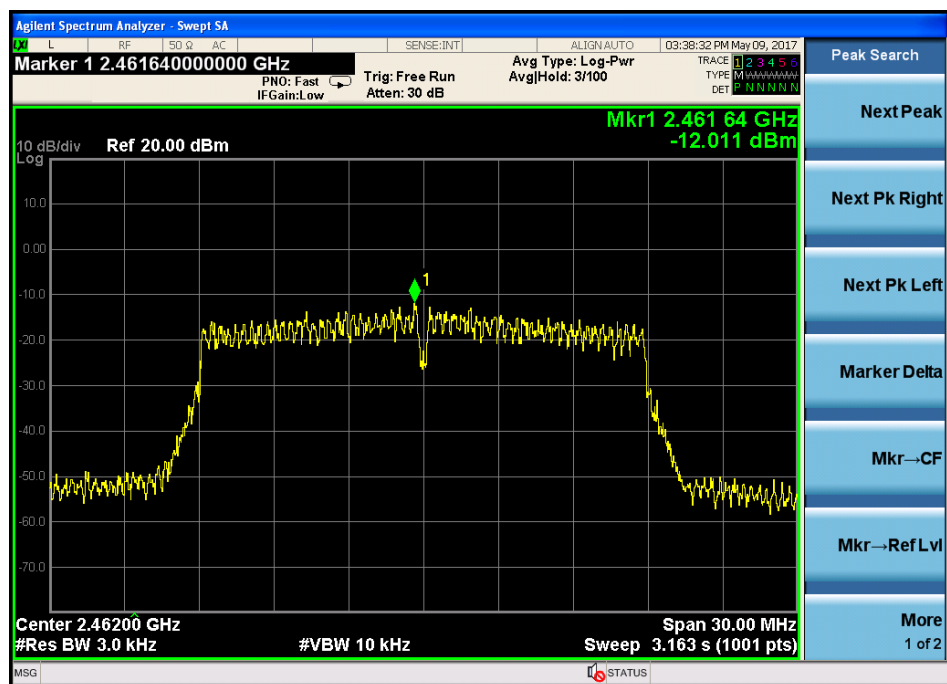
IEEE 802.11n HT20 :
CH Low :



CH Mid:

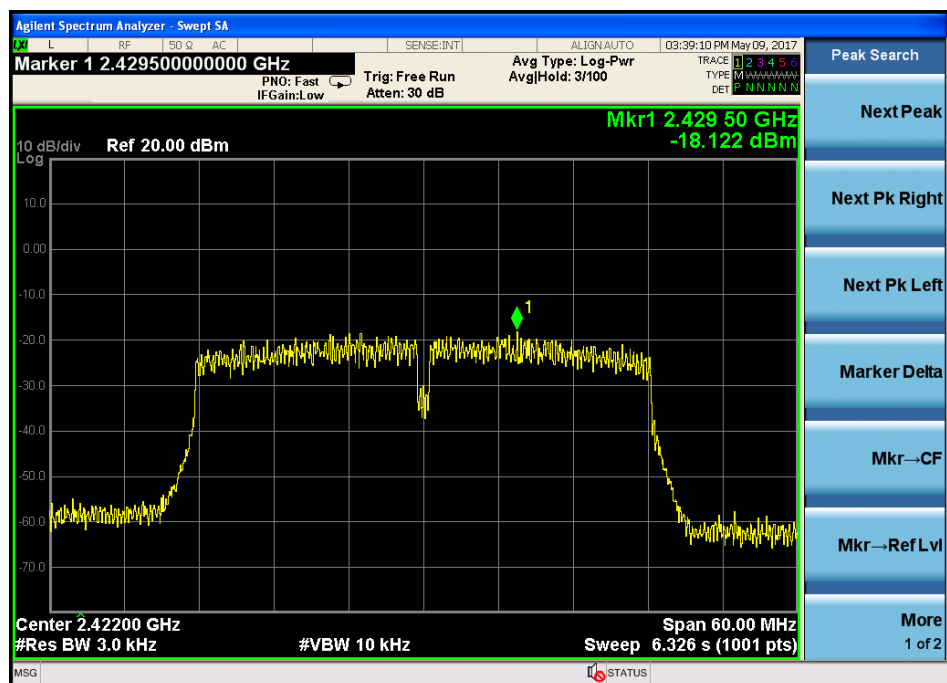


CH Hig:

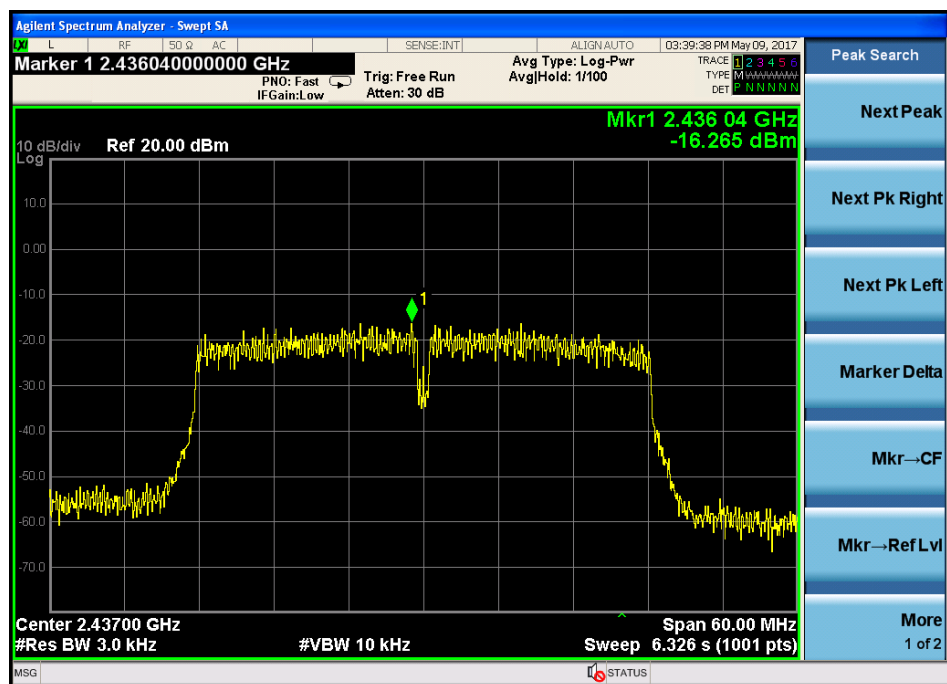


IEEE 802.11n HT40 :

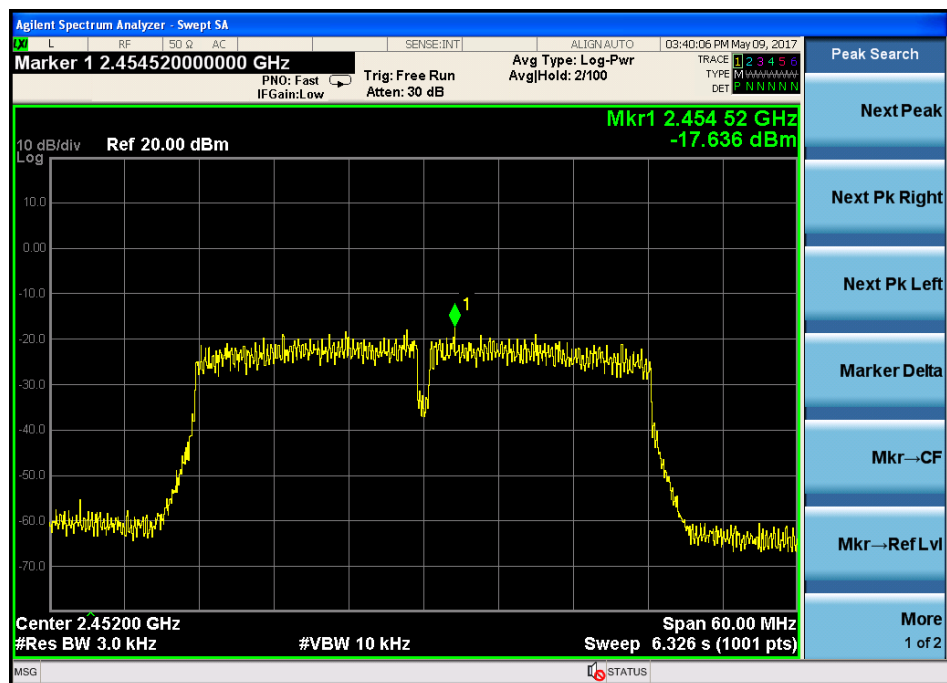
CH Low :



CH Mid:



CH Hig:



9 Bandwidth

9.1 Test limit

Please refer section 15.247

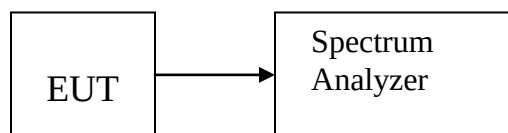
For direct sequence systems, the minimum 6dB bandwidth shall be at least 500 kHz.

9.2 Method of measurement

Details see the KDB558074 D01 Meas Guidance

- a) The bandwidth is measured at an amplitude level reduced 20dB from the reference level. The reference level is the level of the highest amplitude signal observed from the transmitter at the fundamental frequency. Once the reference level is established, the equipment is conditioned with typical modulating signal to produce the worst-case (i.e. the widest) bandwidth.
- b) The test receiver set RBW = 100kHz, VBW $\geq$ 300kHz, Peak Detector, Sweep time set auto, detail see the test plot.

9.3 Test Setup



9.4 Test Results

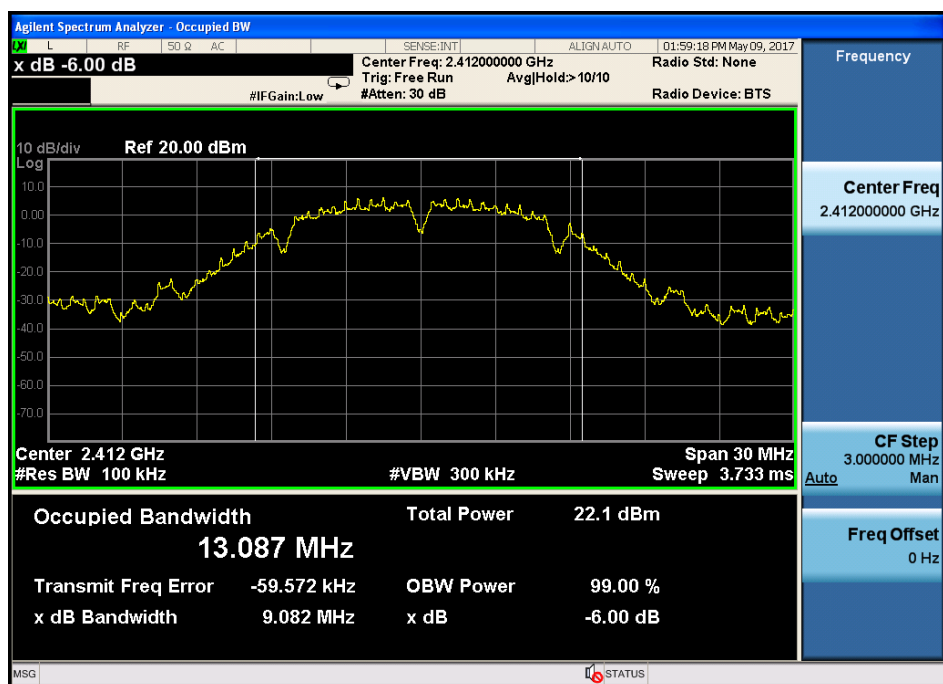
PASS.

Detailed information please see the following page.

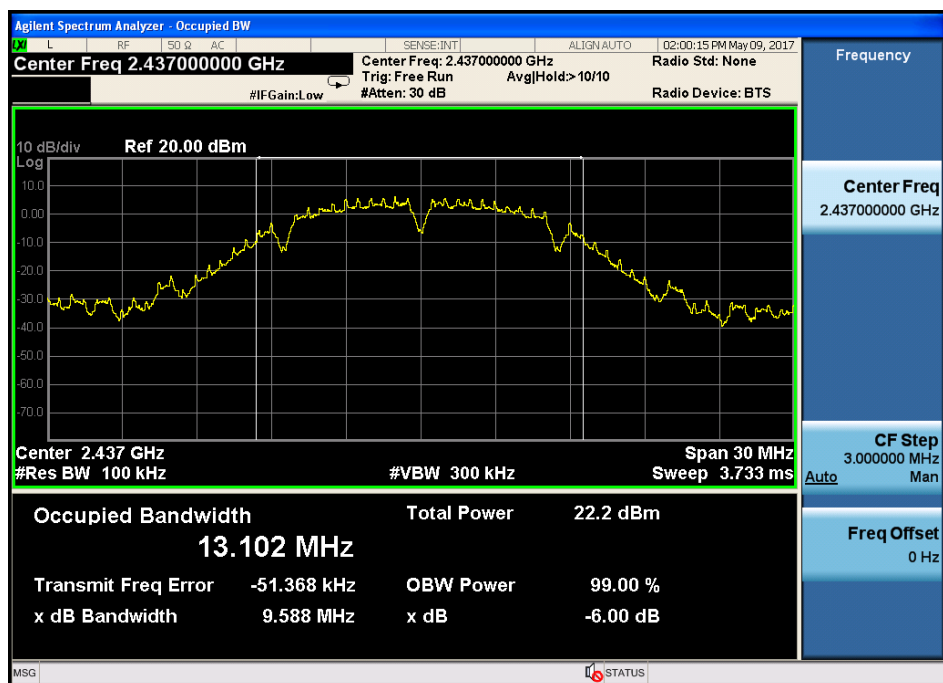
EUT: 300M 2.4G&5G wireless adapter M/N: SC-1				
Test date: 2017-05-07		Test site: RF site		Tested by: Simple Guan
Mode	Frequency (MHz)	6dB Bandwidth (MHz)		Limit (kHz)
		ANT0	ANT1	
IEEE 802.11 b	CH1: 2412	9.082	10.05	$\geq 500\text{KHz}$
	CH6: 2437	9.588	9.073	$\geq 500\text{KHz}$
	CH11: 2462	10.03	9.071	$\geq 500\text{KHz}$
IEEE 802.11 g	CH1: 2412	15.90	15.12	$\geq 500\text{KHz}$
	CH6: 2437	15.08	15.45	$\geq 500\text{KHz}$
	CH11: 2462	15.10	15.03	$\geq 500\text{KHz}$
IEEE 802.11 n/HT20 with 2.4G	CH1: 2412	15.12	16.30	$\geq 500\text{KHz}$
	CH6: 2437	15.13	15.46	$\geq 500\text{KHz}$
	CH11: 2462	15.10	17.25	$\geq 500\text{KHz}$
IEEE 802.11 n/HT40 with 2.4G	CH1: 2422	35.18	35.17	$\geq 500\text{KHz}$
	CH4: 2437	35.17	35.34	$\geq 500\text{KHz}$
	CH7: 2452	35.18	35.13	$\geq 500\text{KHz}$
Conclusion: PASS				

EUT: 300M 2.4G&5G wireless adapter M/N: SC-1				
Test date: 2017-05-07		Test site: RF site		Tested by: Simple Guan
Mode	Frequency (MHz)	99% Bandwidth (MHz)		Limit (kHz)
		ANT0	ANT1	
IEEE 802.11 b	CH1: 2412	13.087	13.135	N/A
	CH6: 2437	13.102	13.104	N/A
	CH11: 2462	13.180	13.149	N/A
IEEE 802.11 g	CH1: 2412	16.371	16.368	N/A
	CH6: 2437	16.416	16.396	N/A
	CH11: 2462	16.384	16.392	N/A
IEEE 802.11 n/HT20 with 2.4G	CH1: 2412	17.539	17.541	N/A
	CH6: 2437	17.562	17.552	N/A
	CH11: 2462	17.551	17.545	N/A
IEEE 802.11 n/HT40 with 2.4G	CH1: 2422	35.780	35.787	N/A
	CH4: 2437	35.821	35.829	N/A
	CH7: 2452	35.806	35.819	N/A
Conclusion: PASS				

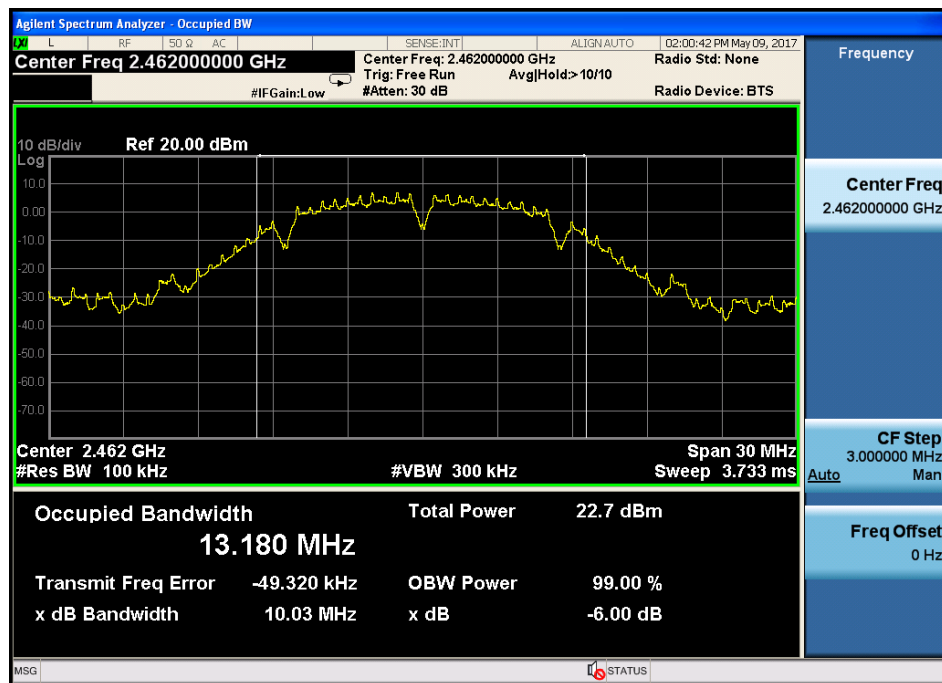
ANT 0
IEEE 802.11b:
CH Low :



CH Mid :

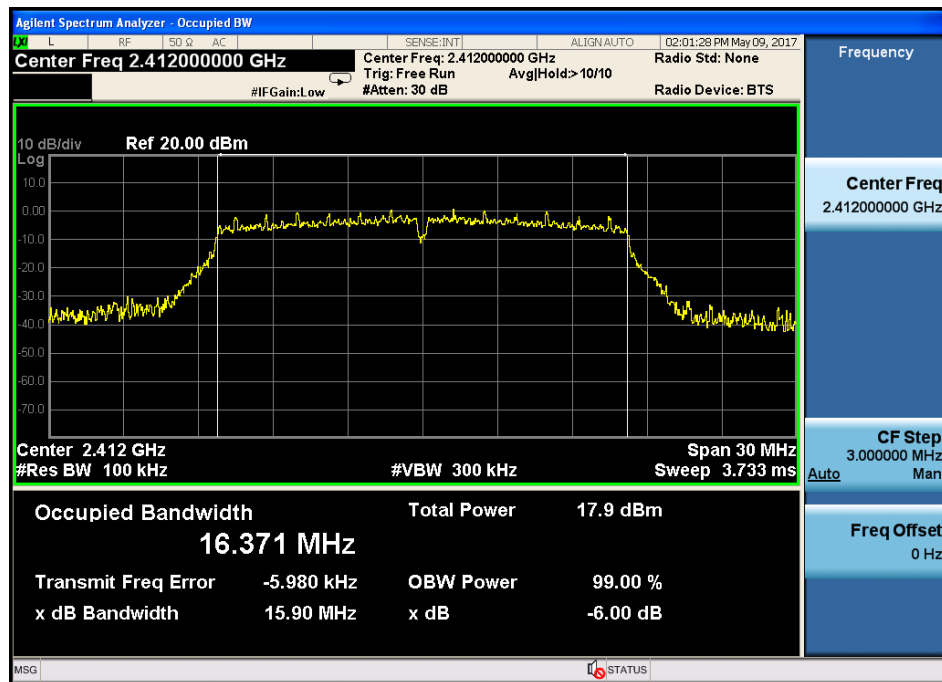


CH High :

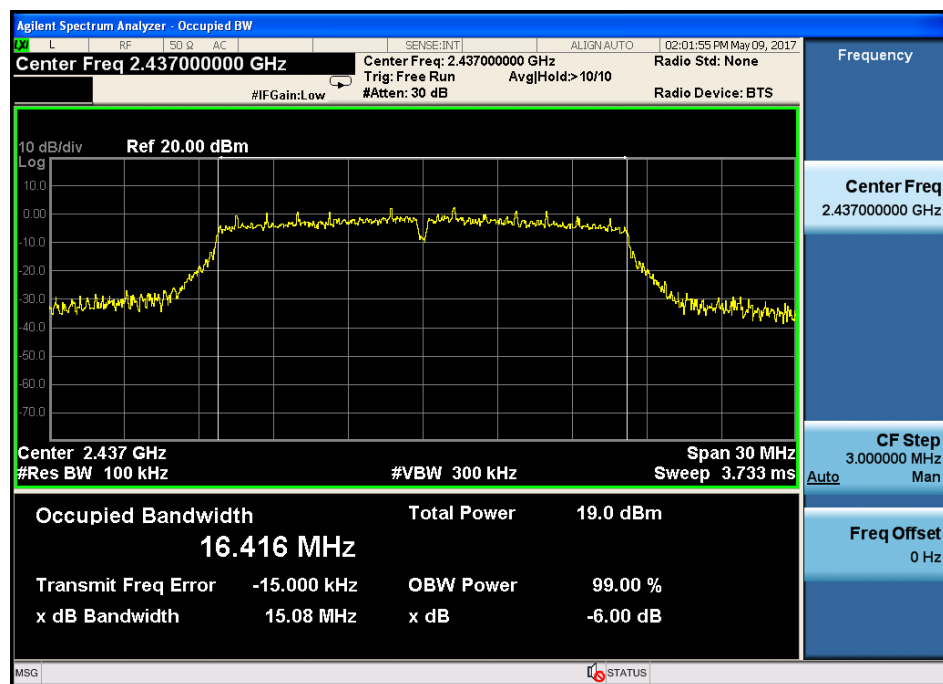


IEEE 802.11g:

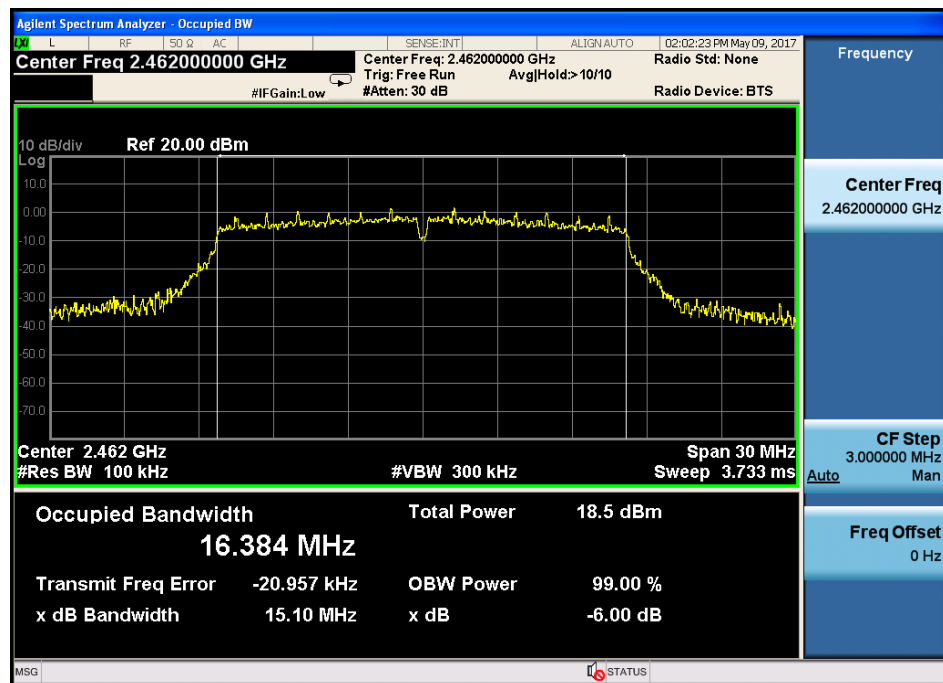
CH Low :



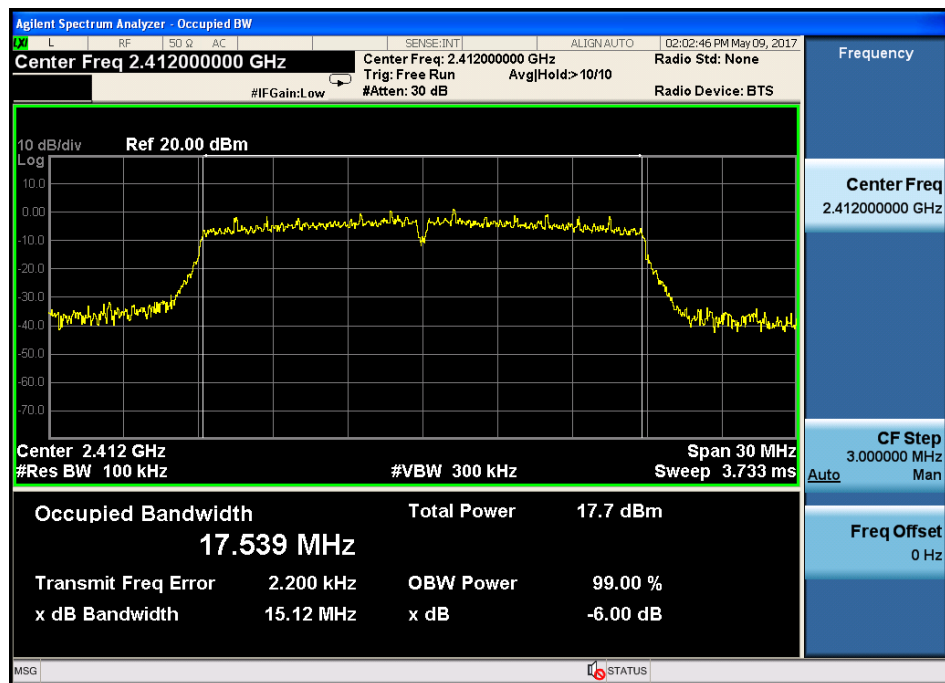
CH Mid:



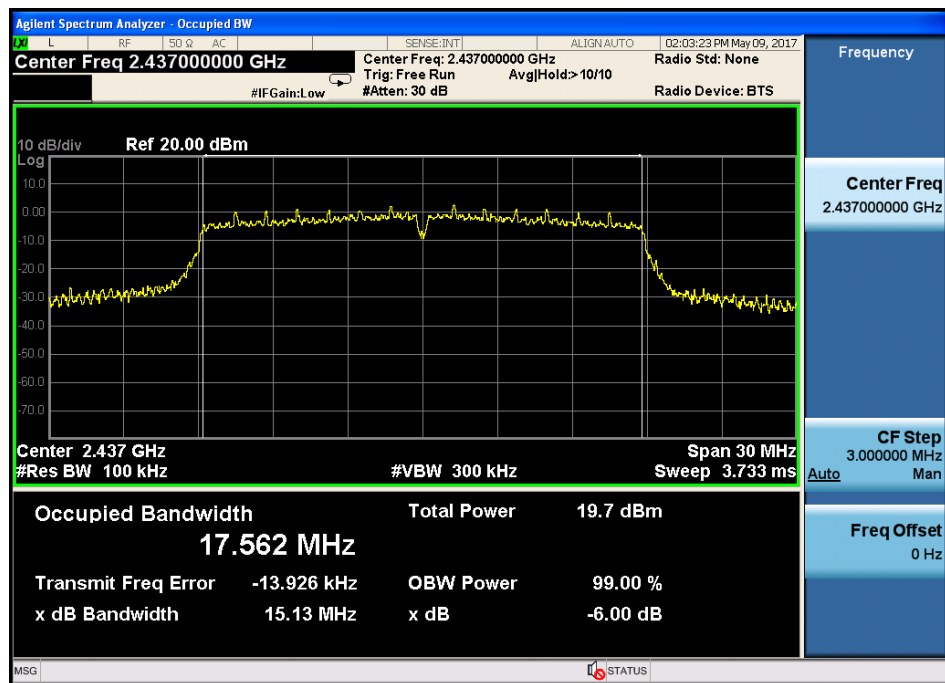
CH Hig:



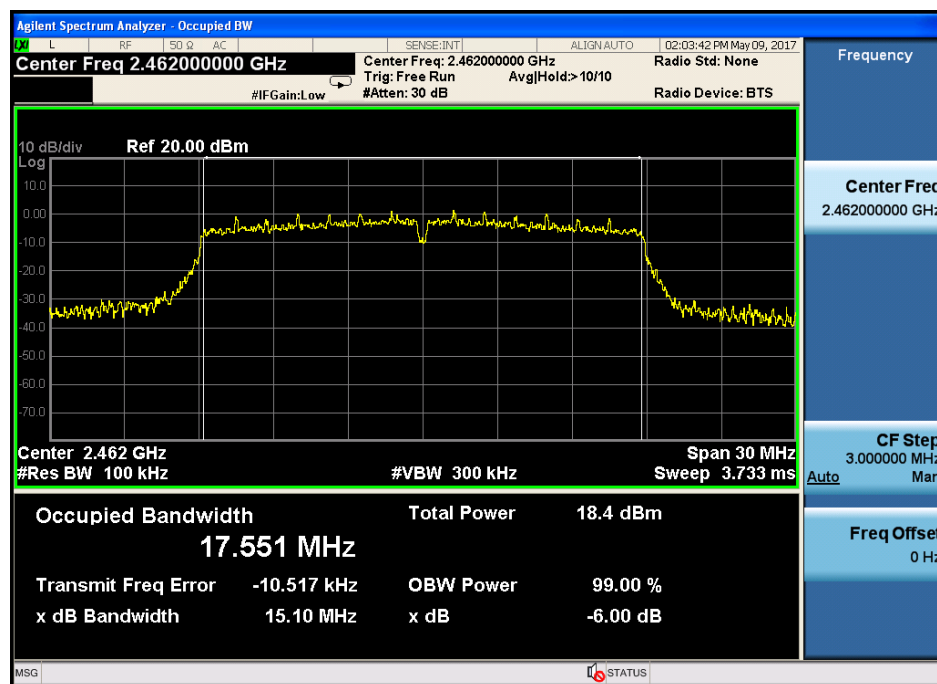
IEEE 802.11n HT20:
CH Low :



CH Mid :

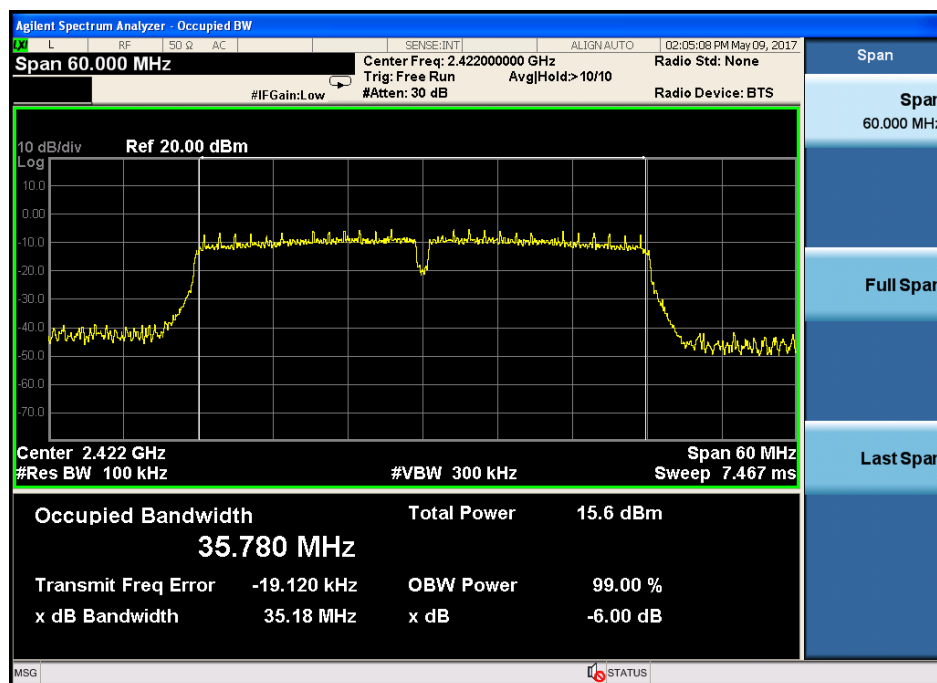


CH High :

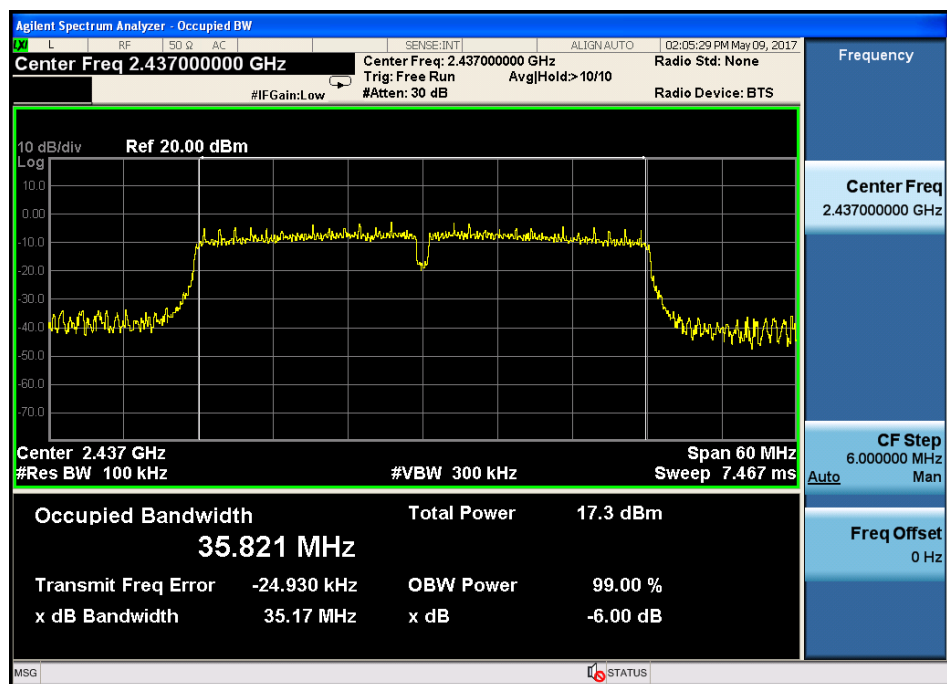


IEEE 802.11n/HT40:

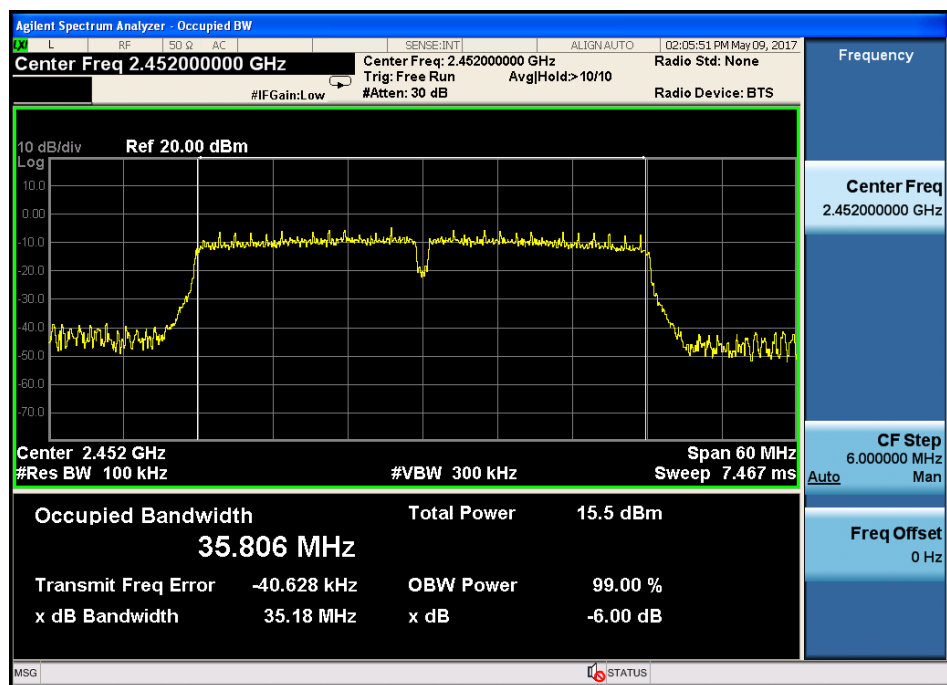
CH Low :



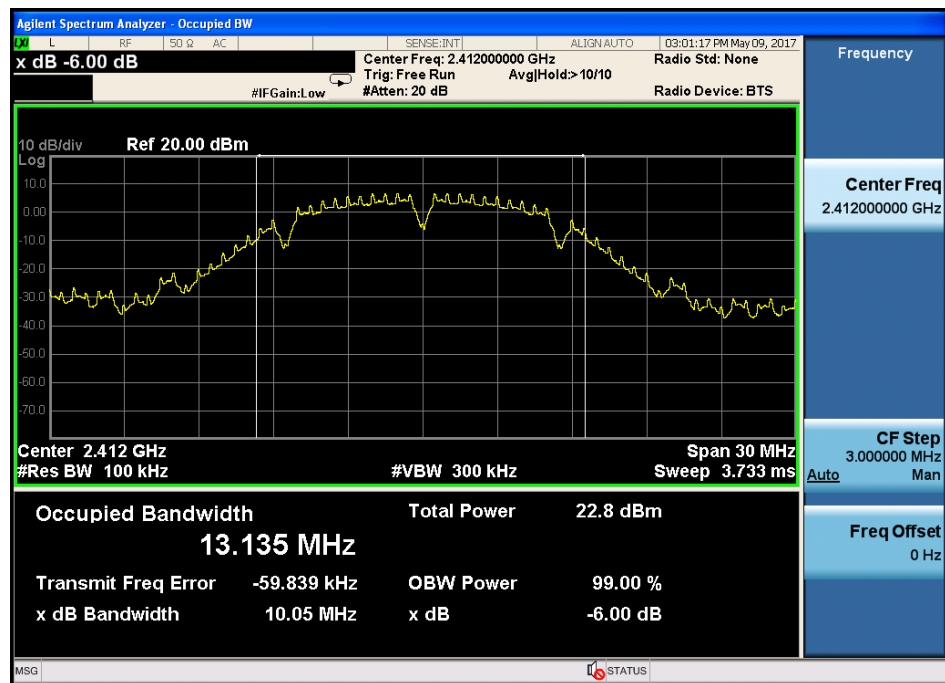
CH Mid:



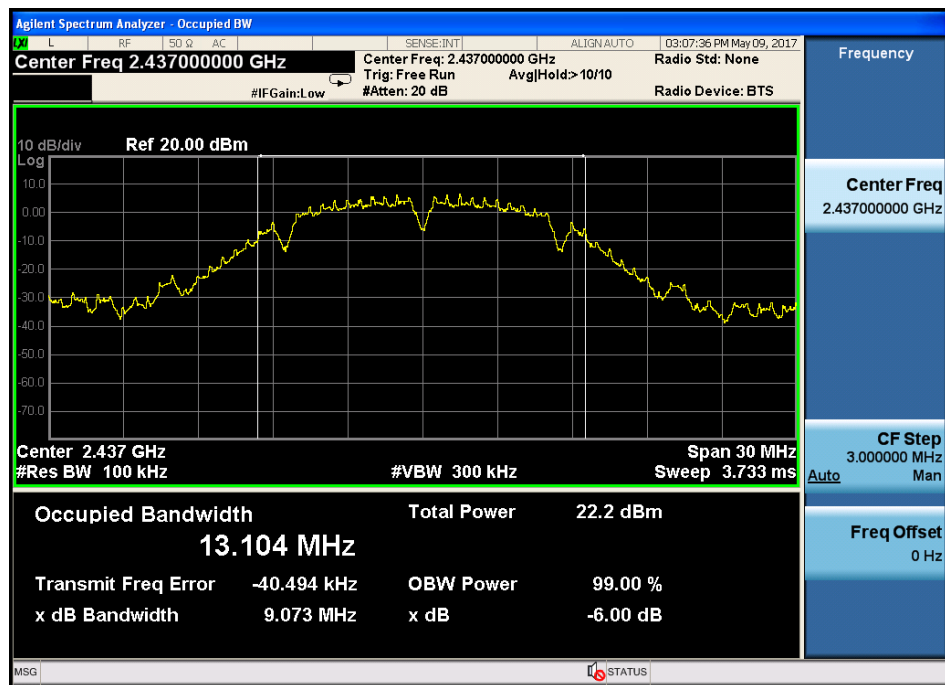
CH High :



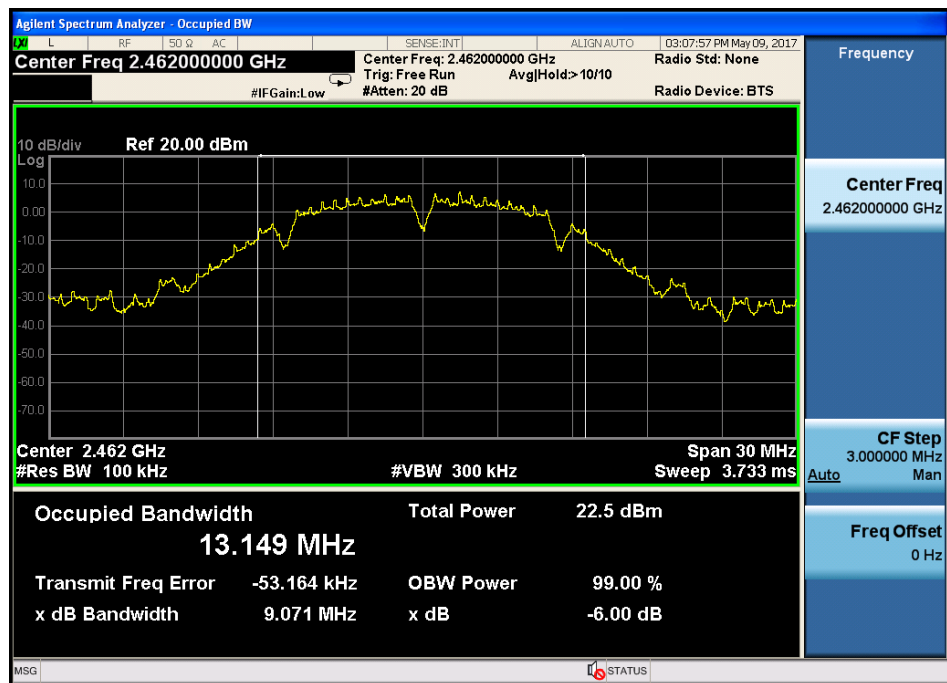
ANT 1
IEEE 802.11b:
CH Low :



CH Mid :

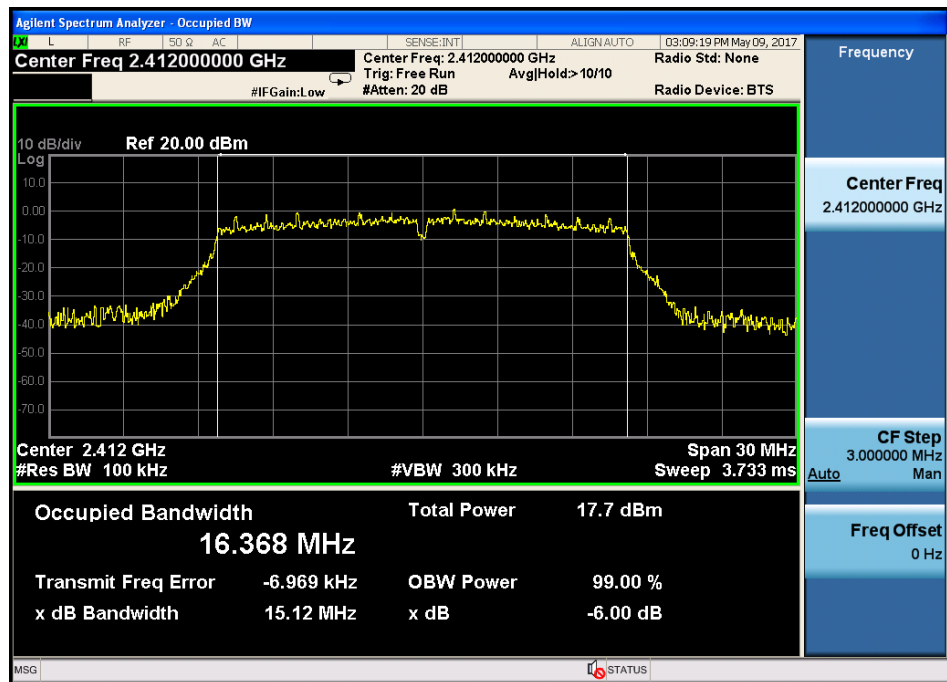


CH High :

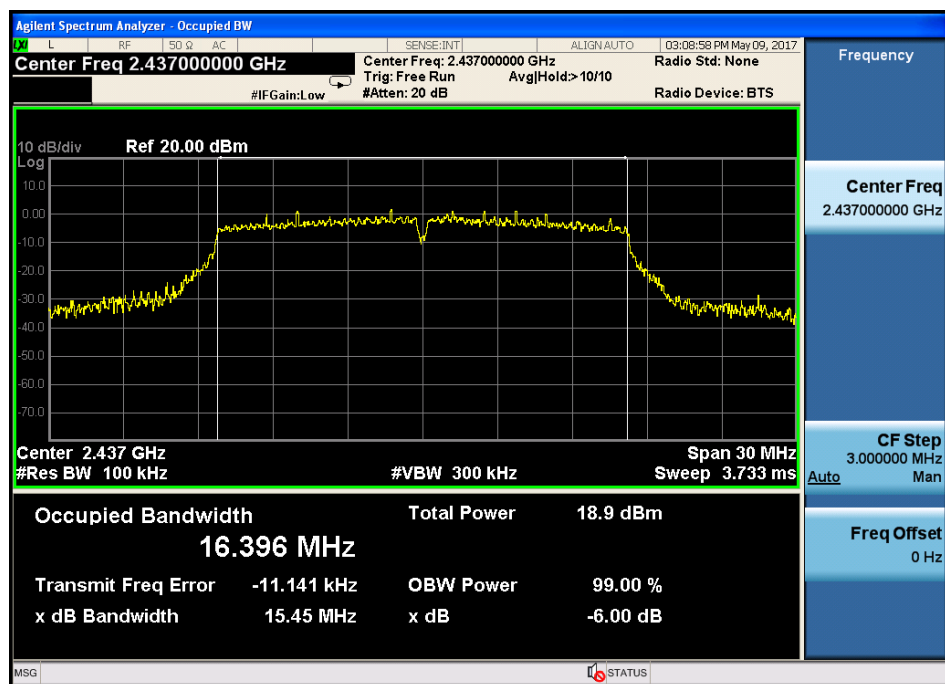


IEEE 802.11g:

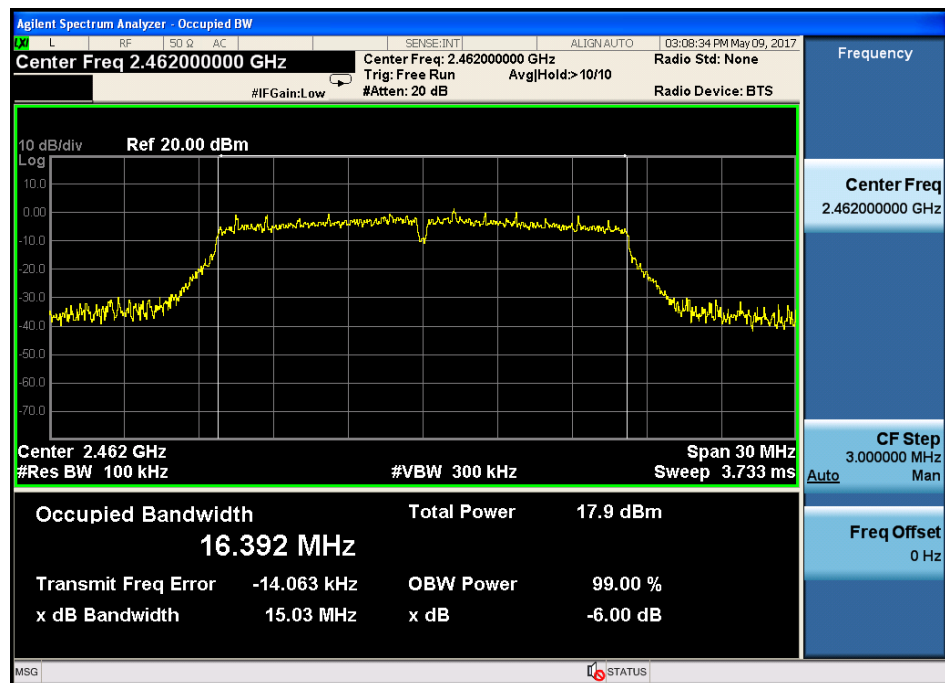
CH Low :



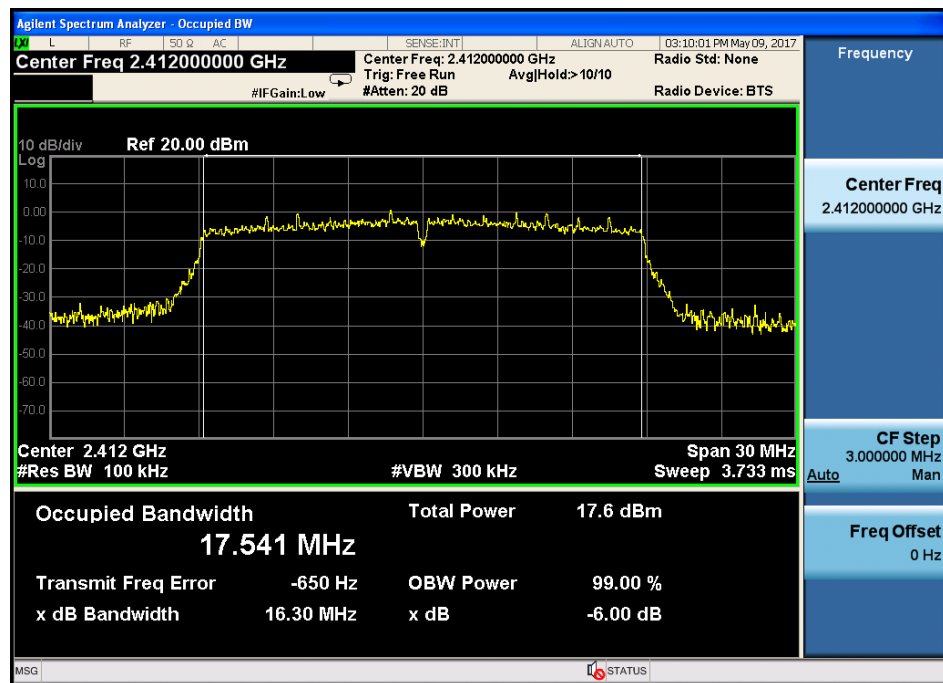
CH Mid:



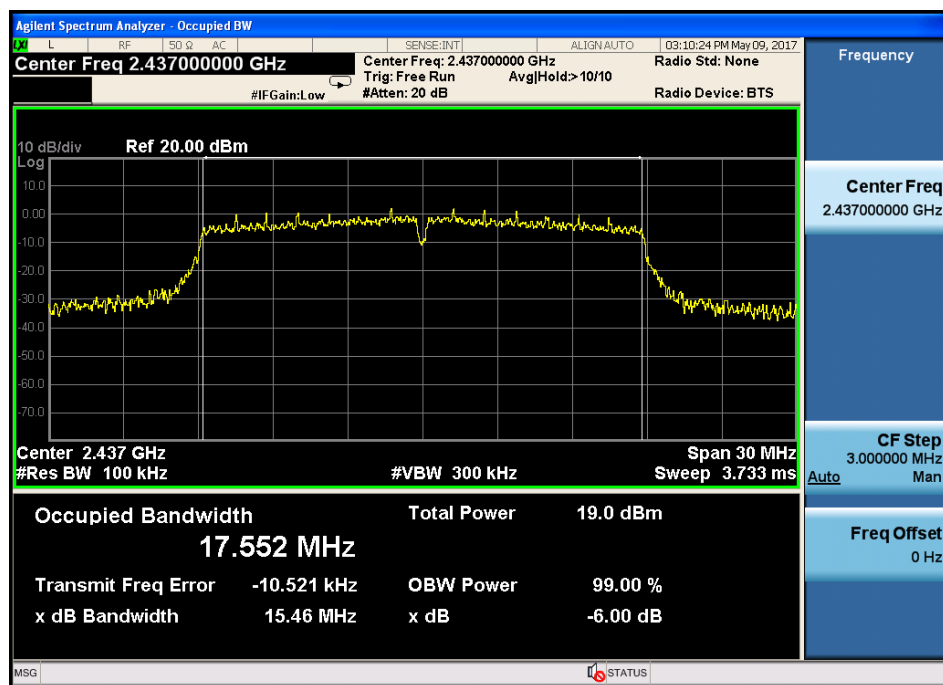
CH Hig:



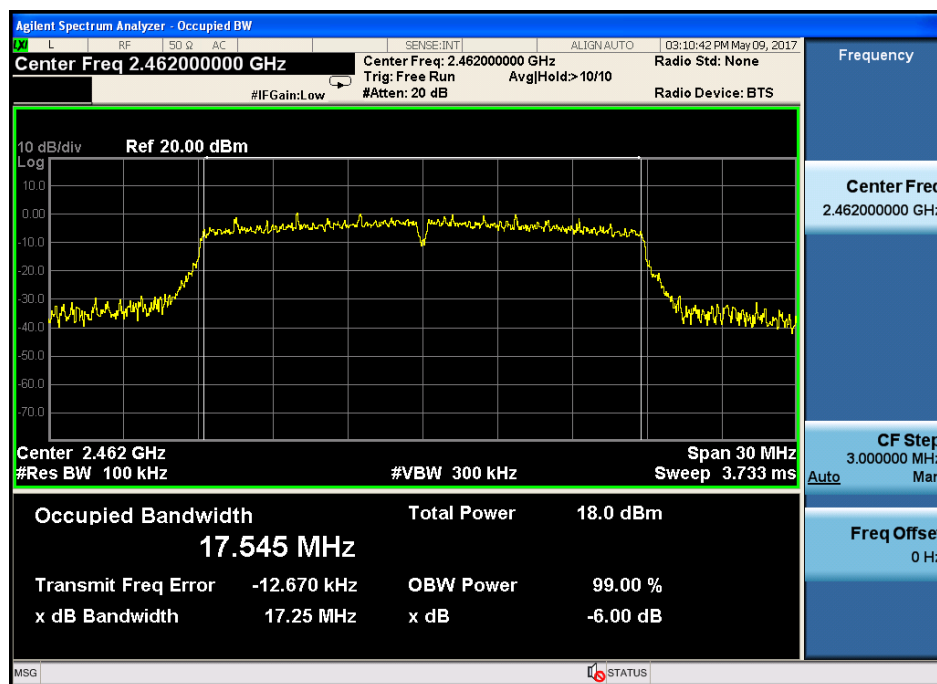
IEEE 802.11n HT20:
CH Low :



CH Mid :

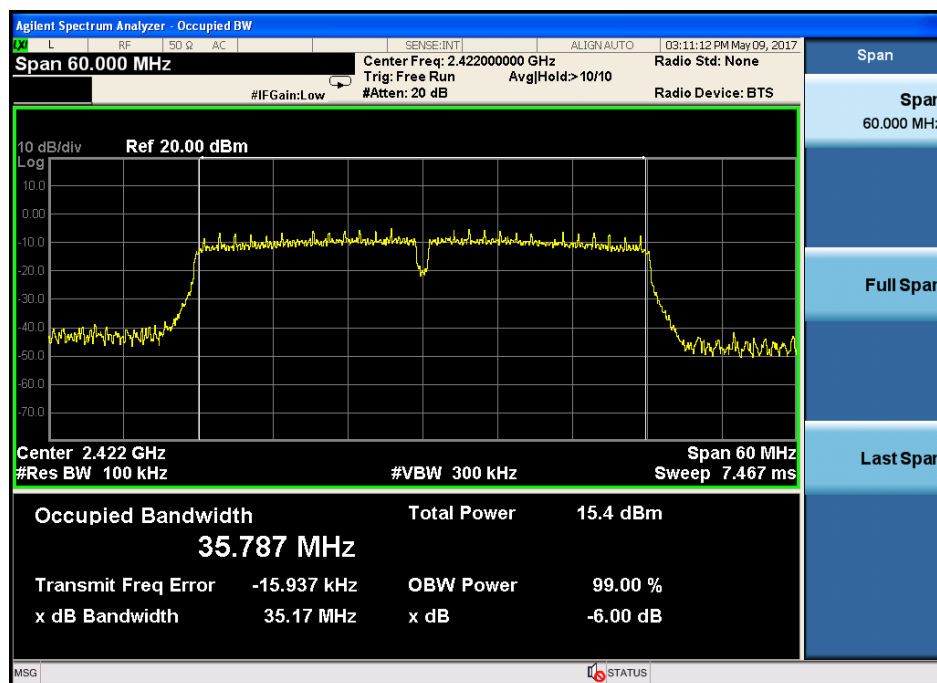


CH High :

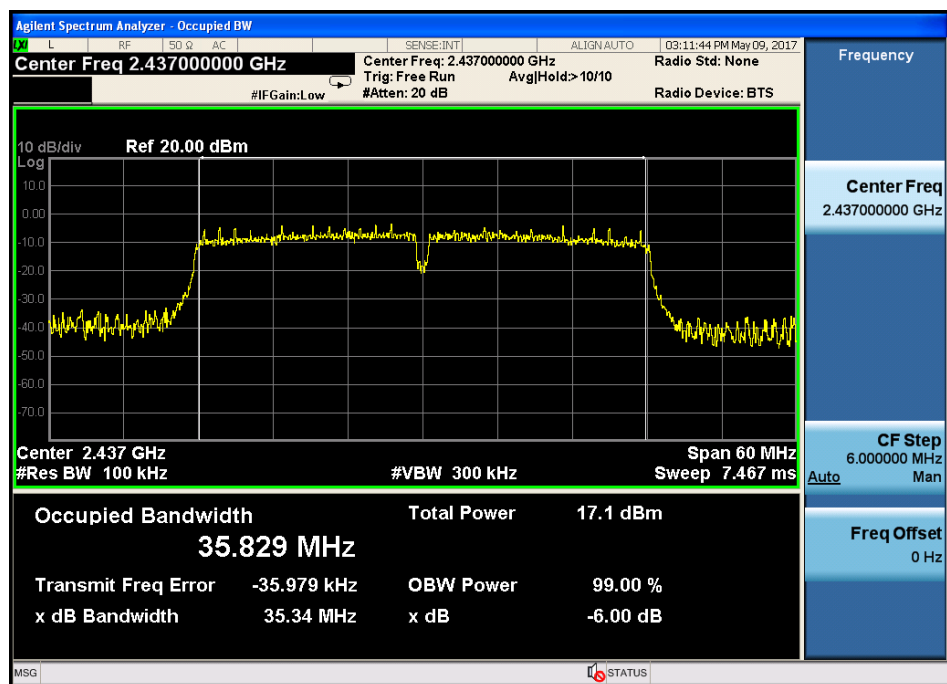


IEEE 802.11n/HT40:

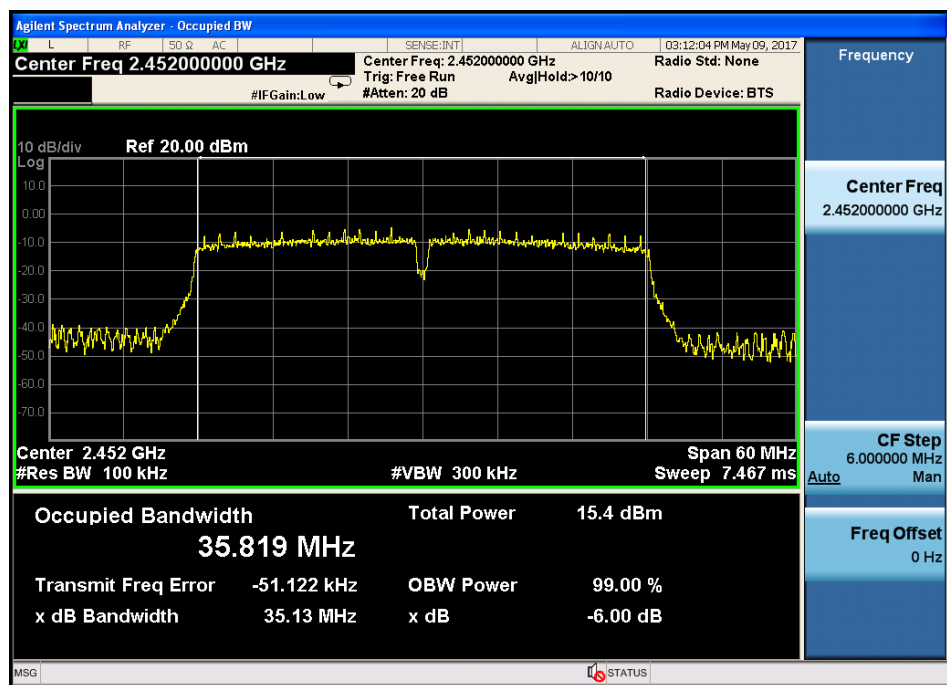
CH Low :



CH Mid:



CH High :



10 Band Edge Check

10.1 Test limit

Please refer section 15.247

All the lower and upper band-edges emissions appearing within 2310MHz to 2390MHz and 2483.5MHz to 2500MHz restricted frequency bands shall not exceed the limits shown in 15.209, all the other emissions outside operation frequency band 2400MHz to 2483.5MHz and 5725MHz to 5850MHz shall be at least 20dB below the fundamental emissions, or comply with 15.209 limits.

10.2 Test Procedure

- 12.2.1 Put the EUT on a 0.8m high table, power on the EUT. Emissions were scanned and measured rotating the EUT to 360 degrees, Find the maximum Emission
- 12.2.2 Check the spurious emissions out of band.
- 12.2.3 RBW 1MHz ,VBW 3MHz ,peak detector for peak value , RBW 1MHz ,VBW 3MHz , RMS detector for AV value.

10.3 Test Setup

Same as 5.2.2.

10.4 Test Result

PASS.

Detailed information please see the following page.

Band Edge Test result								
EUT: 300M 2.4G&5G wireless adapter					M/N: SC-1			
Power: DC 5V From USB port								
Test date: 2017-05-07			Test site: 3m Chamber		Tested by: Store			
Test mode: TX Low								
Antenna polarity: Vertical								
Freq (MHz)	Read Level (dBuV/m)	Antenna Factor (dB/m)	Cable loss(dB)	Amp Factor (dB)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Remark
2390	43.28	27.62	3.92	34.97	39.85	74	34.15	PK
2390	--	27.62	3.92	34.97	--	54	--	AV
Antenna Polarity: Horizontal								
2390	41.91	27.62	3.92	34.97	38.48	74	35.52	PK
2390	--	27.62	3.92	34.97	--	54	--	AV
Note:								
1, Spectrum Set for PK measure: RBW=1MHz, VBW=1MHz, Sweep time=Auto, Detector: PK								
2, Spectrum Set for AV measure: RBW=1MHz, VBW=3MHz, Sweep time=Auto, Detector: RMS								
3, Result = Read level + Antenna factor + cable loss-Amp factor								
4, All the other emissions not reported were too low to read and deemed to comply with FCC limit.								

Band Edge Test result														
EUT: 300M 2.4G&5G wireless adapter					M/N: SC-1									
Power: DC 5V From USB port														
Test date: 2017-05-07			Test site: 3m Chamber		Tested by: Store									
Test mode: TX High														
Antenna polarity: Vertical														
Freq (MHz)	Read Level (dBuV/m)	Antenna Factor (dB/m)	Cable loss(dB)	Amp Factor (dB)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Remark						
2483.5	42.25	27.89	4	34.97	39.17	74	34.83	PK						
2483.5		--	--	--	--	54	--	AV						
Antenna Polarity: Horizontal														
2483.5	42.47	27.89	4	34.97	39.39	74	34.61	PK						
2483.5		--	--	--	--	54	--	AV						

Note:

- 1, Spectrum Set for PK measure: RBW=1MHz, VBW=1MHz, Sweep time=Auto, Detector: PK
- 2, Spectrum Set for AV measure: RBW=1MHz, VBW=3MHz, Sweep time=Auto, Detector: RMS
- 3, Result = Read level + Antenna factor + cable loss-Amp factor
- 4, All the other emissions not reported were too low to read and deemed to comply with FCC limit.

Band Edge Test result														
EUT: 300M 2.4G&5G wireless adapter					M/N: SC-1									
Power: DC 5V From USB port														
Test date: 2017-05-07			Test site: 3m Chamber		Tested by: Store									
Test mode: TX Low														
Antenna polarity: Vertical														
Freq (MHz)	Read Level (dBuV/m)	Antenna Factor (dB/m)	Cable loss(dB)	Amp Factor (dB)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Remark						
2390	42.55	27.62	3.92	34.97	39.12	74	34.88	PK						
2390	--	27.62	3.92	34.97	--	54	--	AV						
Antenna Polarity: Horizontal														
2390	42.87	27.62	3.92	34.97	39.44	74	34.56	PK						
2390	--	27.62	3.92	34.97	--	54	--	AV						

Note:

1, Spectrum Set for PK measure: RBW=1MHz, VBW=1MHz, Sweep time=Auto
Detector: PK

2, Spectrum Set for AV measure: RBW=1MHz, VBW=3MHz, Sweep time=Auto
Detector: RMS

3, Result = Read level + Antenna factor + cable loss-Amp factor

4, All the other emissions not reported were too low to read and deemed to comply with FCC limit.

Band Edge Test result								
EUT: 300M 2.4G&5G wireless adapter					M/N: SC-1			
Power: DC 5V From USB port								
Test date: 2017-05-07			Test site: 3m Chamber		Tested by: Store			
Test mode: TX High								
Antenna polarity: Vertical								
Freq (MHz)	Read Level (dBuV/m)	Antenna Factor (dB/m)	Cable loss(dB)	Amp Factor (dB)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Remark
2483.5	41.96	27.89	4	34.97	38.88	74	35.12	PK
2483.5		--	--	--	--	54	--	AV
Antenna Polarity: Horizontal								
2483.5	42.4	27.89	4	34.97	39.32	74	34.68	PK
2483.5		--	--	--	--	54	--	AV

Note:

- 1, Spectrum Set for PK measure: RBW=1MHz, VBW=1MHz, Sweep time=Auto, Detector: PK
- 2, Spectrum Set for AV measure: RBW=1MHz, VBW=3MHz, Sweep time=Auto, Detector: RMS
- 3, Result = Read level + Antenna factor + cable loss-Amp factor
- 4, All the other emissions not reported were too low to read and deemed to comply with FCC limit.

Band Edge Test result								
EUT: 300M 2.4G&5G wireless adapter					M/N: SC-1			
Power: DC 5V From USB port								
Test date: 2017-05-07			Test site: 3m Chamber		Tested by: Store			
Test mode: TX Low								
Antenna polarity: Vertical								
Freq (MHz)	Read Level (dBuV/m)	Antenna Factor (dB/m)	Cable loss(dB)	Amp Factor (dB)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Remark
2390	42.55	27.62	3.92	34.97	39.12	74	34.88	PK
2390	--	27.62	3.92	34.97	--	54	--	AV
Antenna Polarity: Horizontal								
2390	42.51	27.62	3.92	34.97	39.08	74	34.92	PK
2390	--	27.62	3.92	34.97	--	54	--	AV

Note:
1, Spectrum Set for PK measure: RBW=1MHz, VBW=1MHz, Sweep time=Auto, Detector: PK
2, Spectrum Set for AV measure: RBW=1MHz, VBW=3MHz, Sweep time=Auto, Detector: RMS
3, Result = Read level + Antenna factor + cable loss-Amp factor
4, All the other emissions not reported were too low to read and deemed to comply with FCC limit.

Band Edge Test result								
EUT: 300M 2.4G&5G wireless adapter					M/N: SC-1			
Power: DC 5V From USB port								
Test date: 2017-05-07			Test site: 3m Chamber		Tested by: Store			
Test mode: TX High								
Antenna polarity: Vertical								
Freq (MHz)	Read Level (dBuV/m)	Antenna Factor (dB/m)	Cable loss(d B)	Amp Factor (dB)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Remark
2483.5	41.8	27.89	4	34.97	38.72	74	35.28	PK
2483.5		--	--	--	--	54	--	AV
Antenna Polarity: Horizontal								
2483.5	42.57	27.89	4	34.97	39.49	74	34.51	PK
2483.5		--	--	--	--	54	--	AV

Note:

- 1, Spectrum Set for PK measure: RBW=1MHz, VBW=1MHz, Sweep time=Auto, Detector: PK
- 2, Spectrum Set for AV measure: RBW=1MHz, VBW=3MHz, Sweep time=Auto, Detector: RMS
- 3, Result = Read level + Antenna factor + cable loss-Amp factor
- 4, All the other emissions not reported were too low to read and deemed to comply with FCC limit.

Agilent Spectrum Analyzer - Swept SA

Marker 1 2.412520000000 GHz

Ref 20.00 dBm

Start 2.31000 GHz

Stop 2.42000 GHz

#Res BW 100 kHz

#VBW 300 kHz

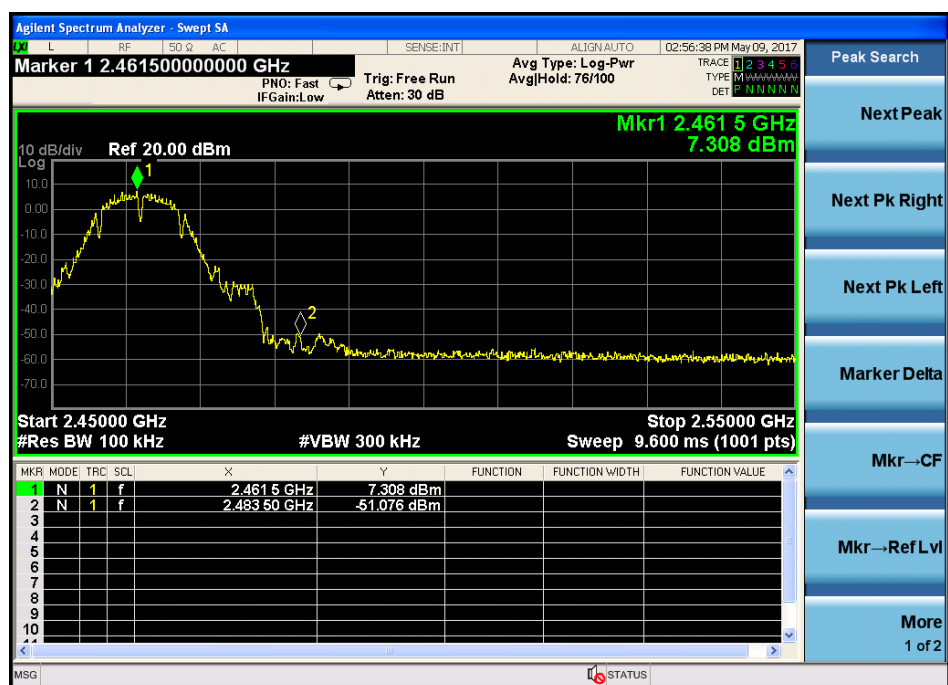
Sweep 10.53 ms (1001 pts)

10 dB/div Log

Ref 20.00 dBm

Mkr1 2.412 52 GHz 6.925 dBm

MKR	MODE	TRC	SCL	X	Y	FUNCTION	FUNCTION WIDTH	FUNCTION VALUE
1	N	1	f	2.412 52 GHz	6.925 dBm			
2	N	1	f	2.400 00 GHz	-33.265 dBm			
3	N	1	f	2.390 00 GHz	-54.472 dBm			
4	N	1	f					
5	N	1	f					
6	N	1	f					
7	N	1	f					
8	N	1	f					
9	N	1	f					
10	N	1	f					



Agilent Spectrum Analyzer - Swept SA

Marker 1 2.410760000000 GHz

PNO: Fast IF Gain Low

Trig: Free Run

Atten: 30 dB

Avg Type: Log-Pwr

Avg/Hold: >100/100

02:51:18 PM May 09, 2017

ALIGN AUTO

TRACE 1 2 3 4 5 6

TYPE M

DET P N N N N N

Peak Search

Next Peak

Next Pk Right

Next Pk Left

Marker Delta

Mkr→CF

Mkr→Ref Lvl

More 1 of 2

10 dB/div

Ref 20.00 dBm

Mkr1 2.410 76 GHz 1.595 dBm

Start 2.31000 GHz

Stop 2.42000 GHz

#Res BW 100 kHz

#VBW 300 kHz

Sweep 10.53 ms (1001 pts)

MKR	MODE	TRC	SCL	X	Y	FUNCTION	FUNCTION WIDTH	FUNCTION VALUE
1	N	1	f	2.410 76 GHz	1.595 dBm			
2	N	1	f	2.400 00 GHz	-33.335 dBm			
3	N	1	f	2.390 00 GHz	-42.498 dBm			
4								
5								
6								
7								
8								
9								
10								

MSG

STATUS



Agilent Spectrum Analyzer - Swept SA

L RF 50 Q AC SENSE:INT ALIGN:AUTO 02:52:09 PM May 09, 2017

Marker 1 2.41329000000 GHz

PNO: Fast Trg: Free Run Avg Type: Log-Pwr
IFGain:Low Atten: 30 dB AvgHld>100/100

TRACE 1 2 3 4 5 6
TYPE M
DET P N N N N N

Peak Search

Next Peak

Next Pk Right

Next Pk Left

Marker Delta

Mkr1 2.413 29 GHz
2.130 dBm

Start 2.31000 GHz Stop 2.42000 GHz
#Res BW 100 kHz #VBW 300 kHz Sweep 10.53 ms (1001 pts)

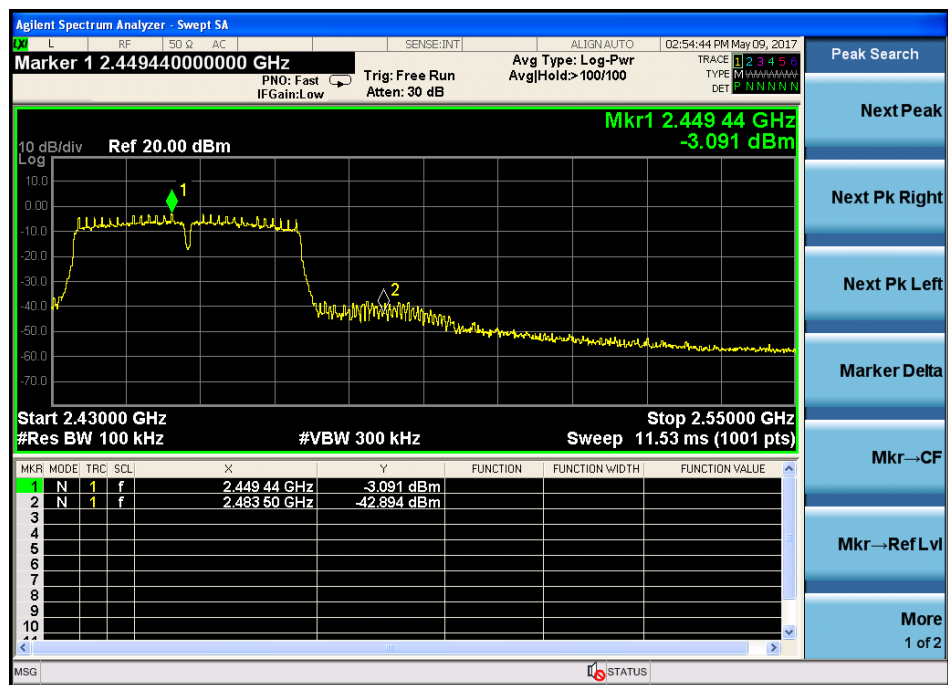
MKR	MODE	TRC	SCL	X	Y	FUNCTION	FUNCTION WIDTH	FUNCTION VALUE
1	N	1	f	2.413 29 GHz	2.130 dBm			
2	N	1	f	2.400 00 GHz	-33.014 dBm			
3	N	1	f	2.390 00 GHz	-40.612 dBm			
4								
5								
6								
7								
8								
9								
10								

Mkr→CF

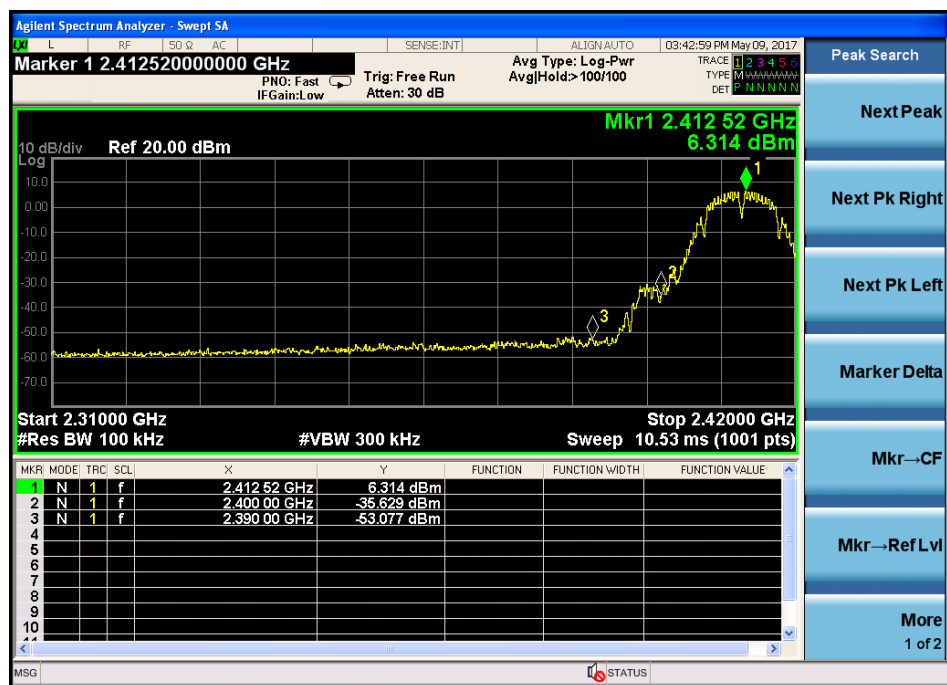
Mkr→Ref Lvl

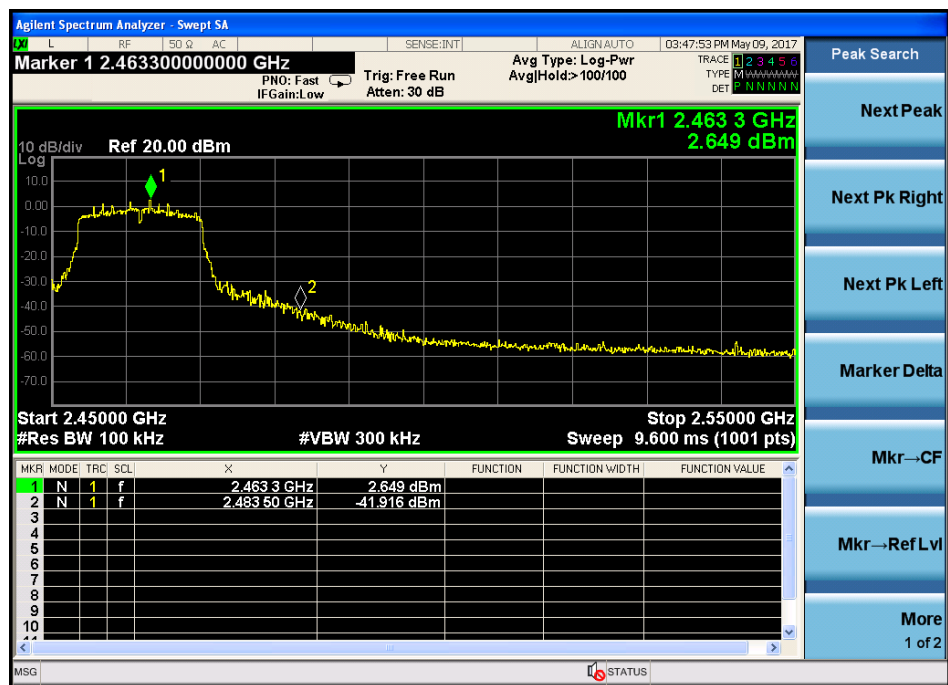
More
1 of 2



[illegible]

ANT 1
802.11b



[illegible]

Agilent Spectrum Analyzer - Swept SA

L RF 50 Q AC SENSE:INT ALIGN:AUTO 03:44:13 PM May 09, 2017

Marker 1 2.41076000000 GHz

PNO: Fast IF Gain: Low Trig: Free Run Atten: 30 dB Avg Type: Log-Pwr Avg/Hold > 100/100

TRACE 1 2 3 4 5 6 TYPE M W W W W W W W DET P N N N N N

**Mkr1 2.410 76 GHz
1.150 dBm**

10 dB/div Ref 20.00 dBm

MKR	MODE	TRC	SCL	X	Y	FUNCTION	FUNCTION WIDTH	FUNCTION VALUE
1	N	1	f	2.410 76 GHz	1.150 dBm			
2	N	1	f	2.400 00 GHz	-32.916 dBm			
3	N	1	f	2.390 00 GHz	-42.542 dBm			
4								
5								
6								
7								
8								
9								
10								

Start 2.31000 GHz Stop 2.42000 GHz
#Res BW 100 kHz #VBW 300 kHz Sweep 10.53 ms (1001 pts)

MSG STATUS



Agilent Spectrum Analyzer - Swept SA

Marker 1 2.424520000000 GHz

Ref 20.00 dBm

Start 2.31000 GHz

Stop 2.45000 GHz

#Res BW 100 kHz

#VBW 300 kHz

Sweep 13.40 ms (1001 pts)

Mkr1 2.424 52 GHz
-3.399 dBm

MKR	MODE	TRC	SCL	X	Y	FUNCTION	FUNCTION WIDTH	FUNCTION VALUE
1	N	1	f	2.424 52 GHz	-3.399 dBm			
2	N	1	f	2.400 00 GHz	-37.672 dBm			
3	N	1	f	2.390 00 GHz	-41.223 dBm			
4								
5								
6								
7								
8								
9								
10								

Peak Search

Next Peak

Next Pk Right

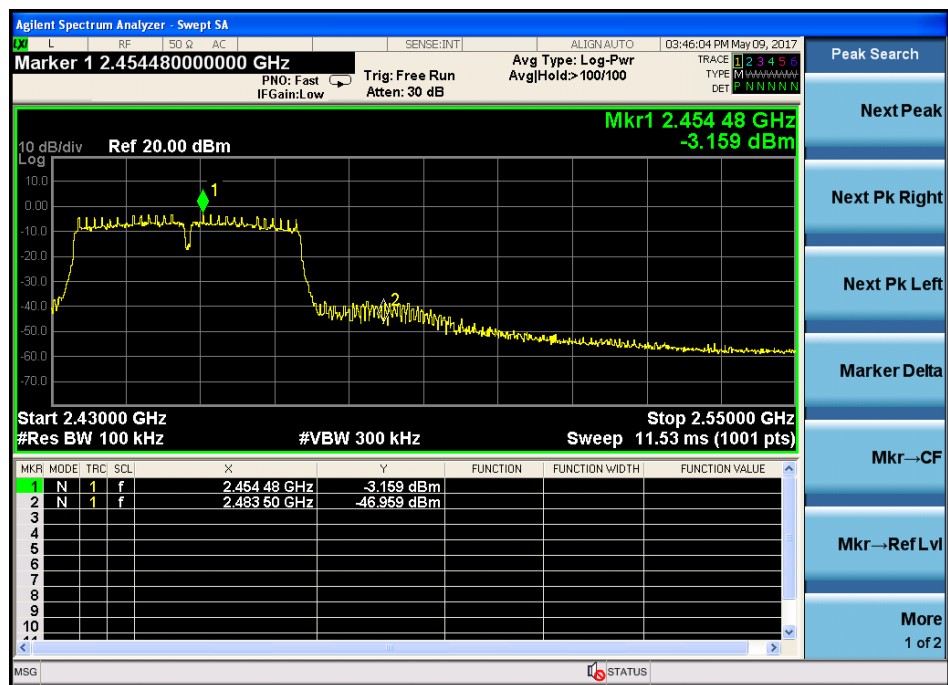
Next Pk Left

Marker Delta

Mkr→CF

Mkr→Ref Lvl

More
1 of 2



11 Antenna Requirement

11.1 Standard Requirement

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 a broken antenna can be replaced by the user, but the use of a standard antenna jack or electrical connector is prohibited.

11.2 Antenna Connected Construction

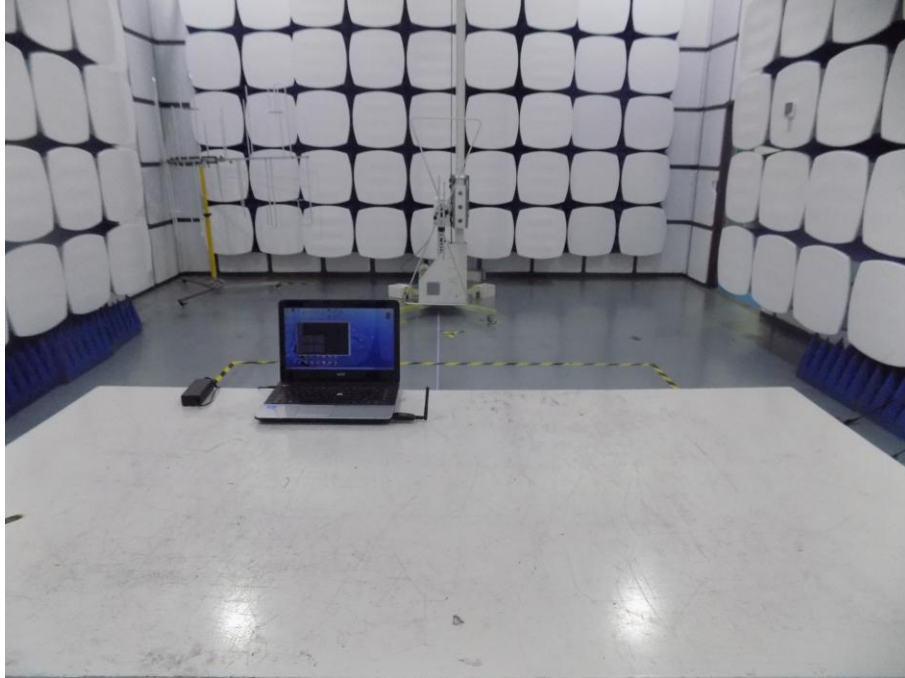
The antenna connector is unique antenna and no consideration of replacement. Please see EUT photo for details.

11.3 Result

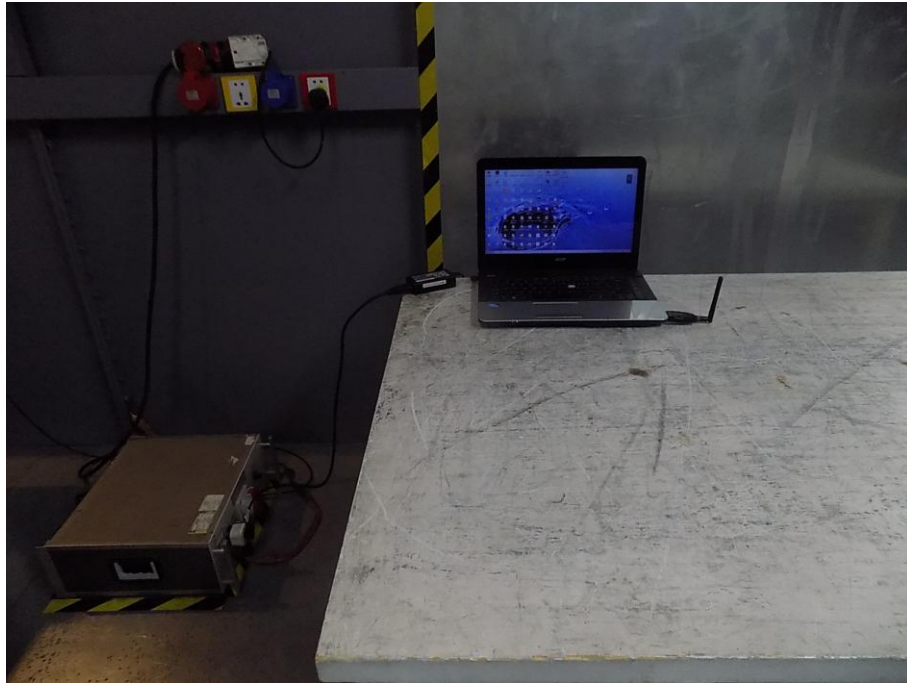
The EUT antenna is unique Antenna. It comply with the standard requirement.

12 Test setup photo

12.1 Photos of Radiated emission



12.2 Photos of Conducted Emission test

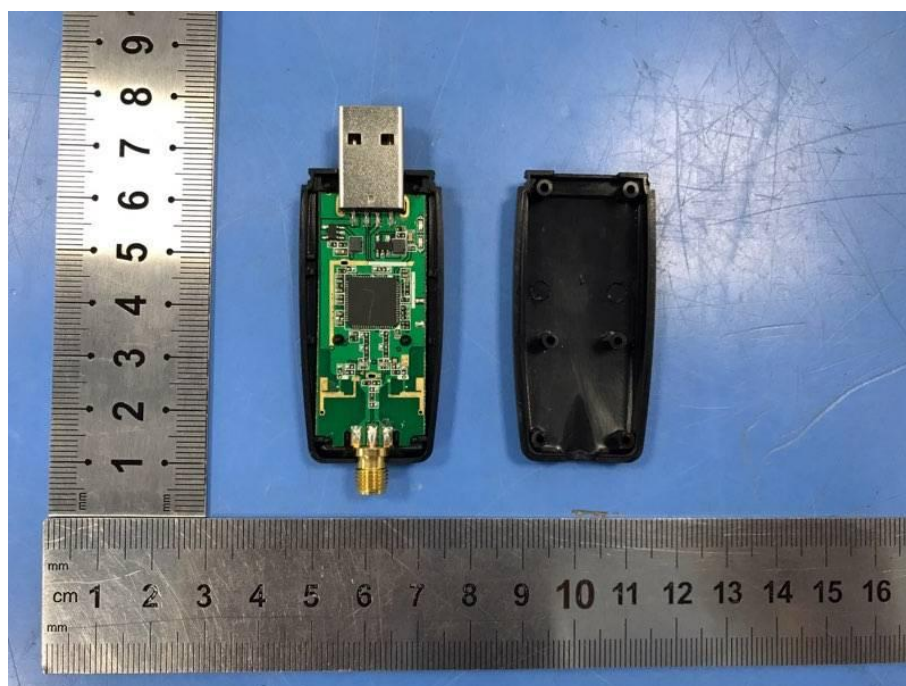


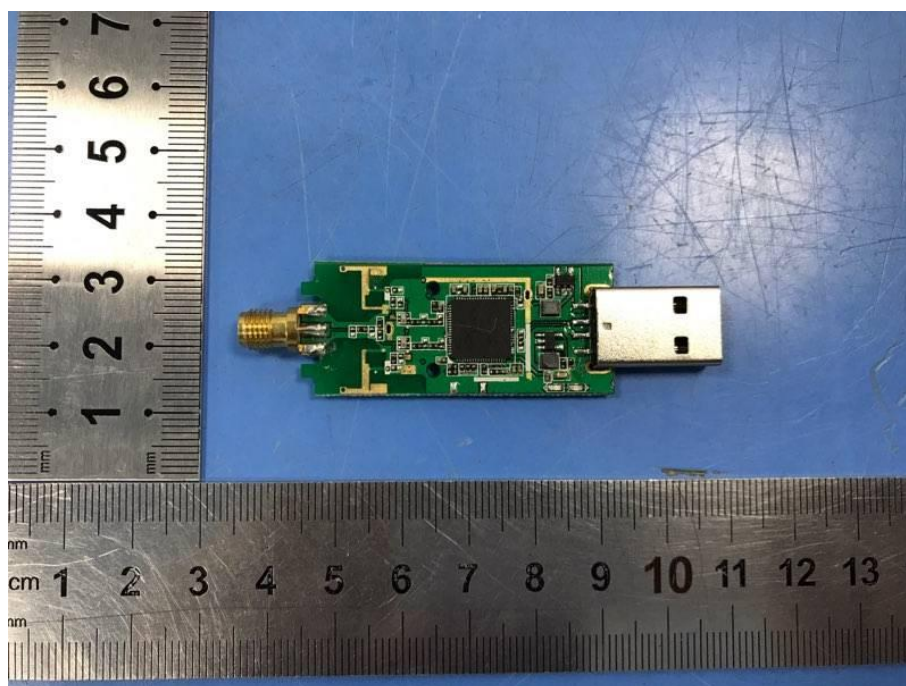
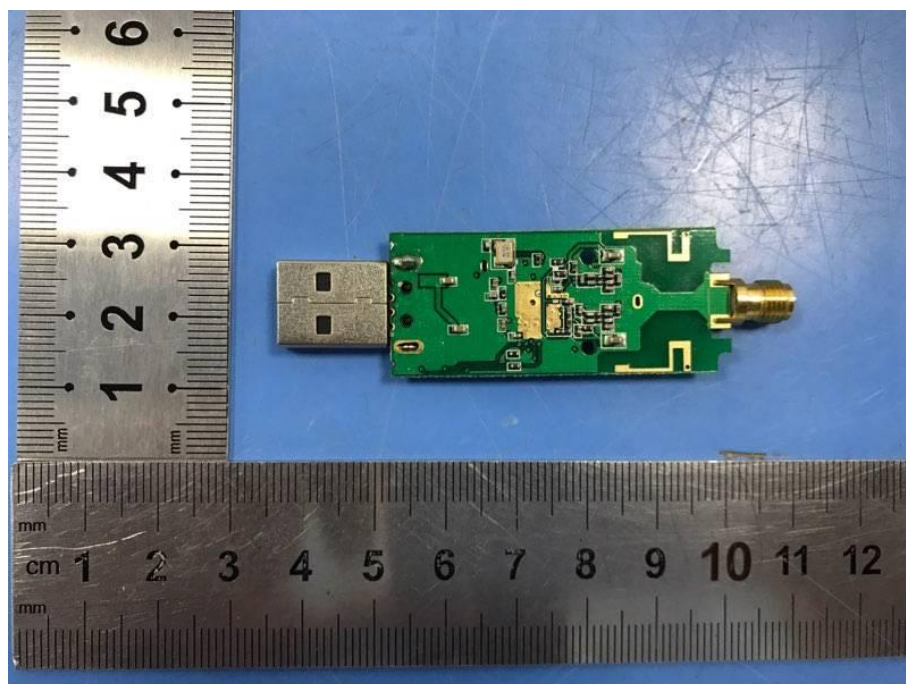
13 Photographs of EUT











-----END OF THE REPORT-----