

ELECTROMAGNETIC EMISSIONS COMPLIANCE REPORT
INTENTIONAL RADIATOR CERTIFICATION TO
FCC PART 15 SUBPART C
REQUIREMENTS

OF

wireless adapter

MODEL No.: W Adapt

FCC ID: IPUWADAPTER

Trade Mark: 

REPORT NO.: ES140827374E2

ISSUE DATE: October 17, 2014

Prepared for

DEI Sales Inc. dba Definitive Technology

One Viper Way, Vista, California, United States

Prepared by

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VERIFICATION OF COMPLIANCE

Applicant:	DEI Sales Inc. dba Definitive Technology One Viper Way, Vista, California, United States
Manufacturer:	SHENZHEN FENDA TECHNOLOGY CO., LTD. Fenda Hi-Tech Park, Zhoushi Road, Shiyan Town, Baoan District, Shenzhen City, Guangdong, China
Product Description:	wireless adapter
Model Number:	W Adapt
File Number:	ES140827374E2
Date of Test:	August 28, 2014 to October 17, 2014

We hereby certify that:

The above equipment was tested by SHENZHEN EMTEK CO., LTD. The test data, data evaluation, test procedures, and equipment configurations shown in this report were made in accordance with the procedures given in ANSI C63.4 (2009) and the energy emitted by the sample EUT tested as described in this report is in compliance with conducted and radiated emission limits of FCC Rules Part 15.407 Requirements.

The test results of this report relate only to the tested sample identified in this report.

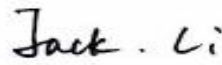
Date of Test : August 28, 2014 to October 17, 2014

Prepared by :



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1. General Information

1.1 Product Description

A major technical descriptions of EUT is described as following:

- A). Operation Frequency:
 2.4G 802.11b/g/n(HT20):2412MHz-2462MHz; 802.11n(HT40): 2422MHz-2452MHz
 5G 802.11a/n(HT20):5180-5240 MHz; 802.11n(HT40): 5190-5230 MHz;
- B). Modulation: OFDM with BPSK/QPSK/16QAM/64QAM for 802.11a/g/n,
 DSSS with DBPSK/DQPSK/CCK for 802.11b;
- C). Number of Channel: 2.4G 802.11b/g/n(HT20): 11channels; 802.11n(HT40): 7channels
 5G 802.11a/n(HT20): 7channels; 802.11n(HT40): 2 channels;
- D).Max Peak Conducted Power: 2.4G wifi 22.52dBm, 5G wifi 15.84dBm
- E). Antenna Gain: 2.0dBi for 2.4G WIFI; 2.0dBi for 5G WIFI;
- F). Antenna Type: Metal antenna
- G). Power Supply: AC 100-240V~50/60Hz

Channel	Frequency (MHz)	Channel	Frequency (MHz)
36	5180	48	5240
38	5190		
40	5200		
42	5210		
44	5220		
46	5230		

Note:

1. This device is included 802.11b, 802.11g, 802.11n 2.4GHz and 802.11a/n 5GHz transceiver function.
2. Test of channel was included the lowest middle and highest frequency in lowest data rate and to perform the test, then record on this report.

1.2 Related Submittal(s) / Grant(s)

This submittal(s) (test report) is intended for FCC ID: IPUWADAPTER filing to comply with Section 15.407 of the FCC Part 15, Subpart C Rules.
The composite system is compliance with Subpart B is authorized under a DOC procedure.

1.3 Test Methodology

All the test program has follow FCC new test procedure KDB789033 D01v01r04, Both conducted and radiated testing was performed according to the procedures in ANSI C63.10 (2009). Radiated testing was performed at an antenna to EUT distance 3 meters.

1.4 Special Accessories

Not available for this EUT intended for grant.

1.5 Equipment Modifications

Not available for this EUT intended for grant.

1.6 Test Facility

Site Description

EMC Lab.

- : Accredited by CNAS, 2013.10.29
The certificate is valid until 2016.10.28
The Laboratory has been assessed and proved to be in compliance with
CNAS/CL01: 2006(identical to ISO/IEC17025: 2005)
The Certificate Registration Number is L2291
- Accredited by TUV Rheinland Shenzhen 2010.5.25
The Laboratory has been assessed according to the requirements ISO/IEC
17025
- Accredited by FCC, October 28, 2010
The Certificate Registration Number is 406365.
- Accredited by Industry Canada, March 05, 2010
The Certificate Registration Number is 4480A-2.

Name of Firm

: SHENZHEN EMTEK CO., LTD.

Site Location

: Bldg 69, Majialong Industry Zone,
Nanshan District, Shenzhen, Guangdong, China

2. System Test Configuration

2.1 EUT Configuration

The EUT configuration for testing is installed on RF field strength measurement to meet the Commissions requirement and operating in a manner which intends to maximize its emission characteristics in a continuous normal application.

2.2 EUT Exercise

The Transmitter was operated in the normal operating mode. The TX frequency was fixed which was for the purpose of the measurements.

2.3 Test Procedure

2.3.1 Conducted Emissions

The EUT is a placed on as turn table which is 0.8 m above ground plane. According to the requirements in Section 13.1.4.1 of ANSI C63.4-2009 Conducted emissions from the EUT measured in the frequency range between 0.15 MHz and 30 MHz using CISPR Quasi-Peak and average detector mode.

2.3.2 Radiated Emissions

The EUT is a placed on as turn table which is 0.8 m above ground plane. The turn table shall rotate 360 degrees to determine the position of maximum emission level. EUT is set 3m away from the receiving antenna which varied from 1m to 4m to find out the highest emission. And also, each emission was to be maximized by changing the polarization of receiving antenna both horizontal and vertical. In order to find out the max. Emission, the relative positions of this hand-held transmitter (EUT) was rotated through three orthogonal axes according to the requirements in Section 13.1.4.1 of ANSI C63.4-2009.

2.4 Configuration of Tested System

Fig. 2-1 Configuration of Tested System

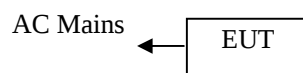


Table 2-1 Equipment Used in Tested System

Item	Equipment	Mfr/Brand	Model/Type No.	FCC ID	Series No.	Note
1.	wireless adapter	D.	W Adapt	IPUWADAPTER	N/A	EUT
2.	Mobile Phone	OPPO	R819T	N/A	N/A	Support equipment

Note:

- (1) Unless otherwise denoted as EUT in 『Remark』 column, device(s) used in tested system is a support equipment.

3. Description of Test Modes

These is Digital Transmission system (DTS) and have modulation OFDM, DSSS, DBPSK, DQPSK, CCK, 16QAM, 64QAM. According exploratory test, EUT will have maximum output power in those data rate (802.11a/n: MCS0), so those data rate were used for all test.

The equipment enables high-speed access without wires to network assets. This adapter uses the IEEE 802.11 protocol to enable wireless communications between the host and Wireless router.

For 802.11a/n(HT20):

1. For lowest channel : 5180MHz (Channel 36)
2. For middle channel : 5210MHz (Channel 42)
3. For highest channel : 5240MHz (Channel 48)

For 802.11n(HT40):

4. For lowest channel : 5190MHz (Channel 38)
5. For highest channel : 5230MHz (Channel 46)

4. Summary of Test Results

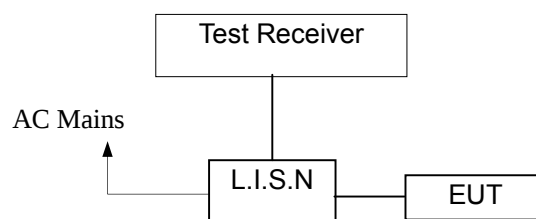
FCC Rules	Description Of Test	Result
§15.207	AC Power Conducted Emission	Pass
§15.407(b), §15.209	Radiated Emission	Pass
§15.407 (a)	26dB bandwidth and 99%dB Bandwidth	Pass
§15.407 (a)	Maximum conducted output Power	Pass
§15.407 (a)	Power density	Pass
§15.407 (b)	Band edge test	Pass
§15.407 (a)	Peak Excursion	Pass
§15.203 (a)	Antenna Requirement	Pass

5. Conducted Emissions Test

5.1 Measurement Procedure

1. The EUT was placed on a table which is 0.8m above ground plane.
2. Maximum procedure was performed on the six highest emissions to ensure EUT compliance.
3. Repeat above procedures until all frequency measured were complete.

5.2 Test SET-UP (Block Diagram of Configuration)



5.3 Measurement Equipment Used

Conducted Emission Test Site					
EQUIPMENT TYPE	MFR	MODEL NUMBER	SERIAL NUMBER	LAST CAL.	CAL DUE.
Test Receiver	Rohde & Schwarz	ESCS30	828985/018	05/17/2014	05/16/2015
L.I.S.N.	Schwarzbeck	NNLK8129	8129203	05/17/2014	05/16/2015
50Ω Coaxial Switch	Anritsu	MP59B	M20531	N/A	N/A
Pulse Limiter	Rohde & Schwarz	ESH3-Z2	100006	05/17/2014	05/16/2015

5.4 Conducted Emission Limit

Conducted Emission

Frequency(MHz)

Quasi-peak

Average

0.15-0.5

66-56

56-46

0.5-5.0

56

46

5.0-30.0

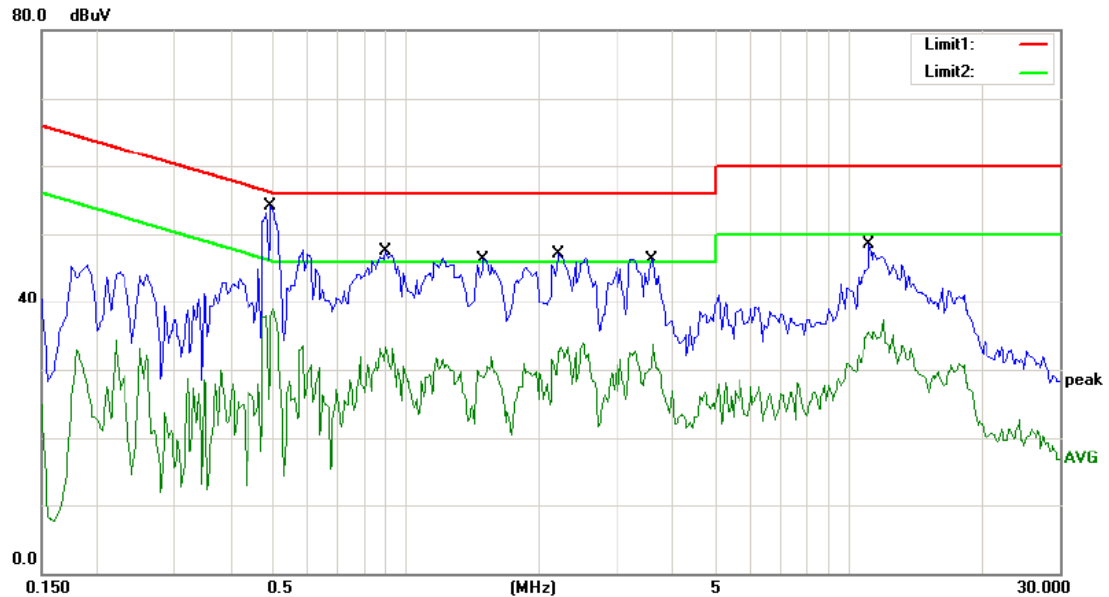
60

50

Note: 1. The lower limit shall apply at the transition frequencies

2. The limit decreases in line with the logarithm of the frequency in the range of 0.15 to 0.50MHz.

5.5 Measurement Result



Site Conduction #1

Phase: **L1**

Temperature: 26

Limit: (CE)FCC PART 15 C

Power: AC 120V/60Hz

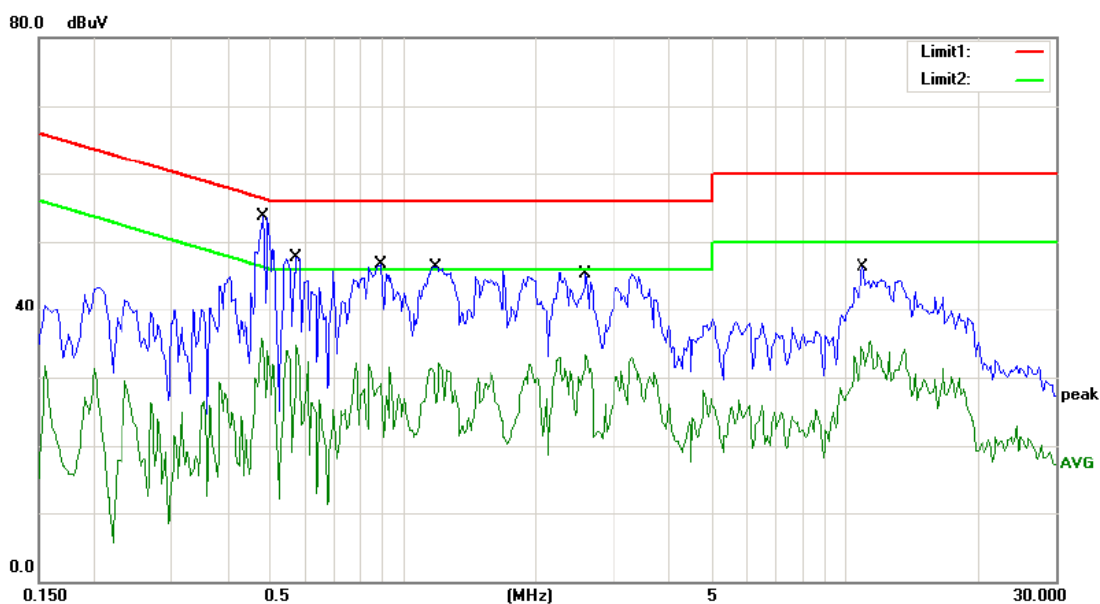
Humidity: 60 %

Mode: WIFI ON

Note:

No.	Mk.	Freq. MHz	Reading Level dBuV	Correct Factor dB	Measure- ment dBuV	Limit dBuV	Over dB	Detector	Comment
1	*	0.4950	50.60	0.00	50.60	56.08	-5.48	QP	
2		0.4950	38.89	0.00	38.89	46.08	-7.19	AVG	
3		0.9000	47.45	0.00	47.45	56.00	-8.55	QP	
4		0.9000	33.23	0.00	33.23	46.00	-12.77	AVG	
5		1.4950	46.23	0.00	46.23	56.00	-9.77	QP	
6		1.4950	30.71	0.00	30.71	46.00	-15.29	AVG	
7		2.2100	47.01	0.00	47.01	56.00	-8.99	QP	
8		2.2100	33.36	0.00	33.36	46.00	-12.64	AVG	
9		3.5900	46.31	0.00	46.31	56.00	-9.69	QP	
10		3.5900	33.66	0.00	33.66	46.00	-12.34	AVG	
11		11.1500	48.42	0.00	48.42	60.00	-11.58	QP	
12		11.1500	37.21	0.00	37.21	50.00	-12.79	AVG	

*:Maximum data x:Over limit !:over margin Comment: Factor build in receiver. Operator: ZHL



Site Conduction #1

Phase: **N**

Temperature: 26

Limit: (CE)FCC PART 15 C

Power: AC 120V/60Hz

Humidity: 60 %

Mode: WIFI ON

Note:

No.	Mk.	Freq. MHz	Reading Level dBuV	Correct Factor dB	Measure- ment dBuV	Limit dBuV	Over dB	Detector	Comment
1	*	0.4850	50.23	0.00	50.23	56.25	-6.02	QP	
2		0.4850	35.74	0.00	35.74	46.25	-10.51	AVG	
3		0.5750	47.64	0.00	47.64	56.00	-8.36	QP	
4		0.5750	34.64	0.00	34.64	46.00	-11.36	AVG	
5		0.8950	46.62	0.00	46.62	56.00	-9.38	QP	
6		0.8950	32.14	0.00	32.14	46.00	-13.86	AVG	
7		1.1900	46.37	0.00	46.37	56.00	-9.63	QP	
8		1.1900	32.09	0.00	32.09	46.00	-13.91	AVG	
9		2.5900	45.37	0.00	45.37	56.00	-10.63	QP	
10		2.5900	33.34	0.00	33.34	46.00	-12.66	AVG	
11		11.0000	46.23	0.00	46.23	60.00	-13.77	QP	
12		11.0000	35.35	0.00	35.35	50.00	-14.65	AVG	

*:Maximum data x:Over limit !:over margin Comment: Factor build in receiver. Operator: ZHL

6. Radiated Emission Test

6.1 Measurement Procedure

1. The EUT was placed on a turn table which is 0.8m above ground plane.
2. Maximum procedure was performed on the six highest emissions to ensure EUT compliance.
3. And also, each emission was to be maximized by changing the polarization of receiving antenna both horizontal and vertical.
4. Repeat above procedures until all frequency measured was complete.

When spectrum scanned from 30 MHz to 1GHz setting resolution bandwidth 120 kHz and video bandwidth 300kHz.

EMI Test Receiver	Setting
Attenuation	Auto
RB	120kHz
VB	300kHz
Detector	QP
Trace	Max hold

When spectrum scanned above 1GHz setting resolution bandwidth 1MHz, video bandwidth 3MHz.

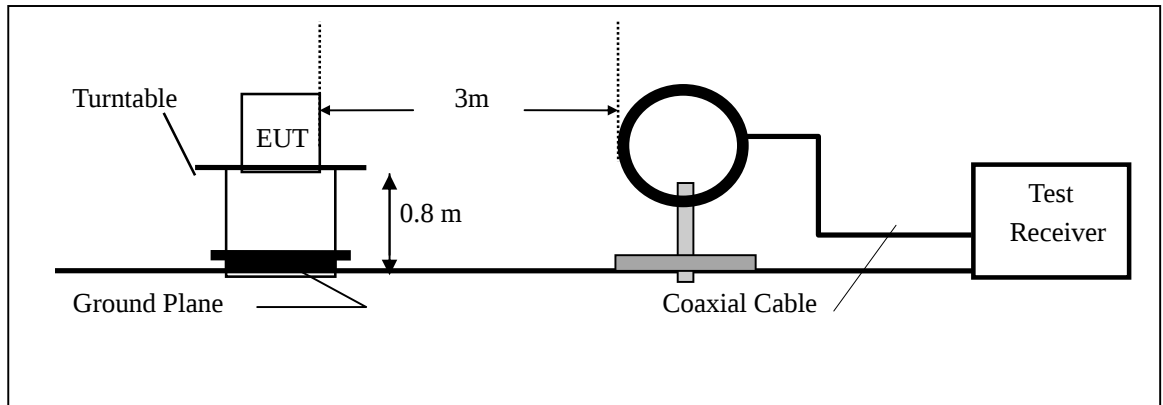
EMI Test Receiver	Setting
Attenuation	Auto
RB	1MHz
VB	3MHz
Detector	Peak
Trace	Max hold

When spectrum scanned above 1GHz setting resolution bandwidth 1MHz, video bandwidth 10Hz.

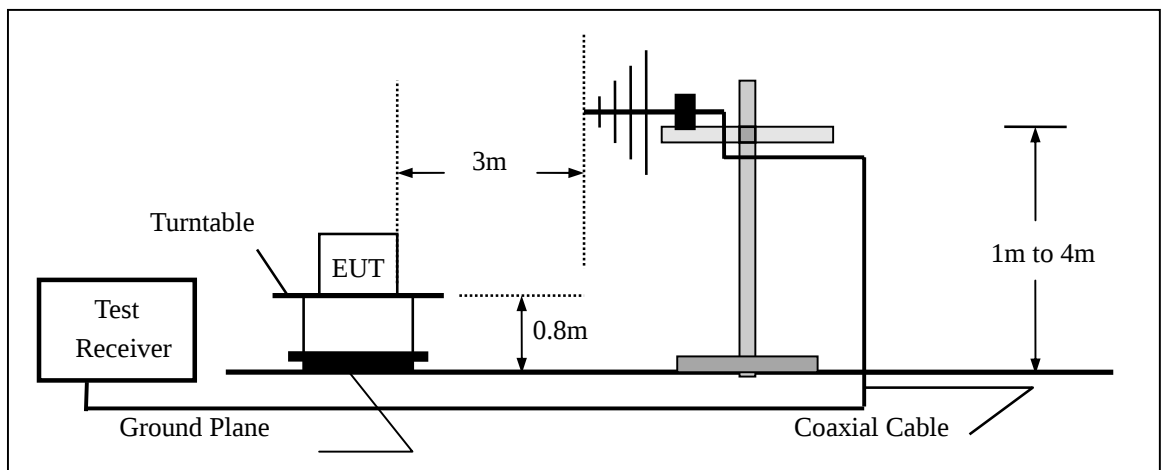
EMI Test Receiver	Setting
Attenuation	Auto
RB	1MHz
VB	10Hz
Detector	Peak
Trace	Max hold

6.2 Test SET-UP (Block Diagram of Configuration)

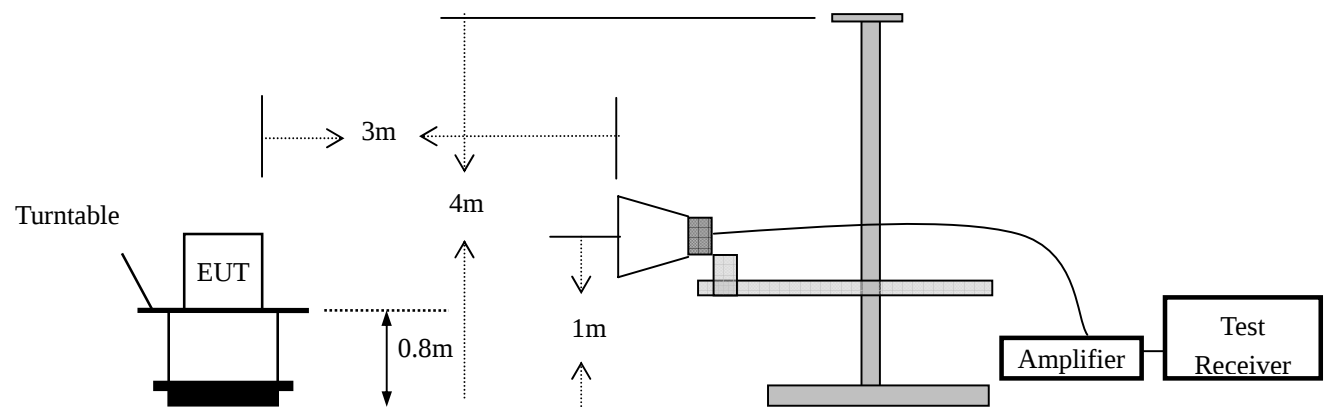
(A) Radiated Emission Test Set-Up, Frequency Below 30MHz



(B) Radiated Emission Test Set-Up, Frequency Below 1000MHz



(C) Radiated Emission Test Set-Up, Frequency above 1000MHz



6.3 Measurement Equipment Used

EQUIPMENT TYPE	MFR	MODEL NUMBER	SERIAL NUMBER	LAST CAL.	CAL DUE.
Pre-Amplifier	HP	8447D	2944A07999	05/17/2014	05/16/2015
Spectrum Analyzer	Agilent	E4448A	56481557	05/17/2014	05/16/2015
Bilog Antenna	Schwarzbeck	VULB9163	142	05/17/2014	05/16/2015
Loop Antenna	ARA	PLA-1030/B	1029	05/17/2014	05/16/2015
Horn Antenna	Schwarzbeck	BBHA 9170	BBHA9170399	05/17/2014	05/16/2015
Horn Antenna	Schwarzbeck	BBHA 9120	D143	05/17/2014	05/16/2015
Pre-Amplifier	A.H.	PAM-0126	1415261	05/17/2014	05/16/2015
Cable	Schwarzbeck	AK9513	ACRX1	05/17/2014	05/16/2015
Cable	Rosenberger	N/A	FP2RX2	05/17/2014	05/16/2015
Cable	Schwarzbeck	AK9513	CRPX1	05/17/2014	05/16/2015
Cable	Schwarzbeck	AK9513	CRRX2	05/17/2014	05/16/2015

6.4 Radiated Emission Limit

The emissions from an intentional radiator shall not exceed the field strength levels specified in the following table 15.209(a):

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

15.205 Restricted bands of operation

MHz	MHz	MHz	GHz
0.090 - 0.110	16.42 - 16.423	399.9 - 410	4.5 - 5.15
¹ 0.495 - 0.505	16.69475 - 16.69525	608 - 614	5.35 - 5.46
2.1735 - 2.1905	16.80425 - 16.80475	960 - 1240	7.25 - 7.75
4.125 - 4.128	25.5 - 25.67	1300 - 1427	8.025 - 8.5
4.17725 - 4.17775	37.5 - 38.25	1435 - 1626.5	9.0 - 9.2
4.20725 - 4.20775	73 - 74.6	1645.5 - 1646.5	9.3 - 9.5
6.215 - 6.218	74.8 - 75.2	1660 - 1710	10.6 - 12.7
6.26775 - 6.26825	108 - 121.94	1718.8 - 1722.2	13.25 - 13.4
6.31175 - 6.31225	123 - 138	2200 - 2300	14.47 - 14.5
8.291 - 8.294	149.9 - 150.05	2310 - 2390	15.35 - 16.2
8.362 - 8.366	156.52475 - 156.52525	2483.5 - 2500	17.7 - 21.4
8.37625 - 8.38675	156.7 - 156.9	2690 - 2900	22.01 - 23.12
8.41425 - 8.41475	162.0125 - 167.17	3260 - 3267	23.6 - 24.0
12.29 - 12.293	167.72 - 173.2	3332 - 3339	31.2 - 31.8
12.51975 - 12.52025	240 - 285	3345.8 - 3358	36.43 - 36.5
12.57675 - 12.57725	322 - 335.4	3600 - 4400	(²)

- Remark:
1. Emission level in dBuV/m=20 log (uV/m)
 2. Measurement was performed at an antenna to the closed point of EUT distance of meters.
 3. Only spurious frequency is permitted to locate within the Restricted Bands specified in provision of § 15.205, and the emissions located in restricted bands also comply with 15.209 limit.

6.5 Measurement Result

All the modes 802.11a/n has been tested and the worst result 802.11a recorded as below:

Operation Mode: TX Mode Test Date: September 15, 2014
 Frequency Range: 9KHz~30MHz Temperature: 24
 Test Result: PASS Humidity: 53 %
 Measured Distance: 3m Test By: SYP
 Note:

Freq. (MHz)	Ant.Pol. H/V	Emission Level (dBuV/m)	Limit 3m (dBuV/m)	Over (dB)
--	--	--	--	--

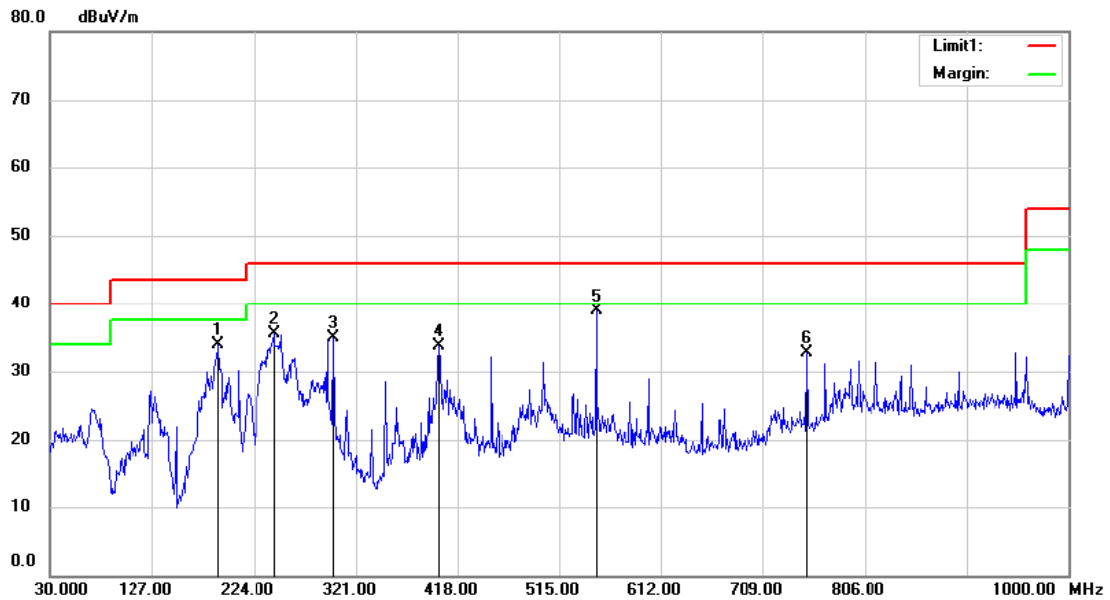
Note: the amplitude of spurious emission that is attenuated by more than 20dB below the permissible limit has no need to be reported.

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

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

Operation Mode: TX 5180
Frequency Range: 30MHz-1GHz
Test Result: PASS
Measured Distance: 3m
Note:

Test Date: September 15, 2014
Temperature: 24
Humidity: 53 %
Test By: SYP



Site site #3

Polarization: **Horizontal**

Temperature: 24 C

Limit: (RE)FCC PART 15 C

Power: AC 120V/60Hz

Humidity: 53 %

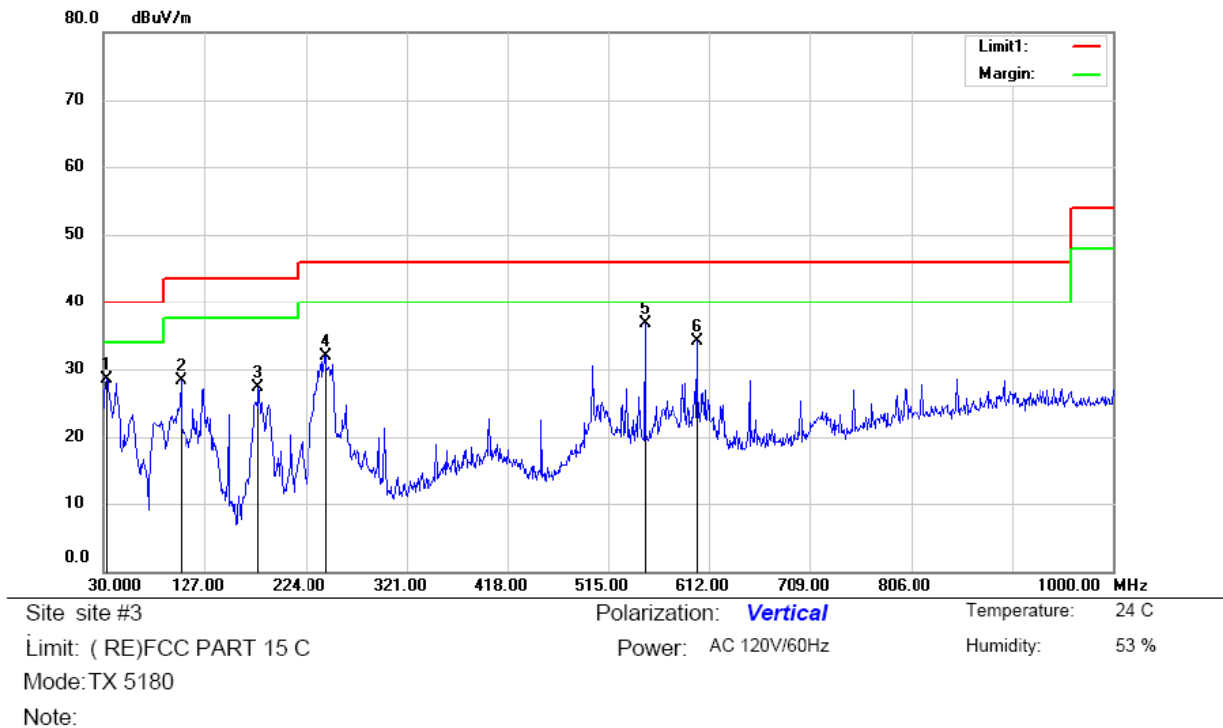
Mode:TX 5180

Note:

No.	Mk.	Freq. MHz	Reading Level dBuV	Correct Factor dB	Measure- ment dBuV/m	Limit dBuV/m	Over dB	Antenna Height cm	Table Degree degree	Comment
1		190.0500	51.11	-17.28	33.83	43.50	-9.67	QP		
2		243.4000	49.25	-13.66	35.59	46.00	-10.41	QP		
3		299.6600	48.79	-13.81	34.98	46.00	-11.02	QP		
4		400.5400	42.54	-8.89	33.65	46.00	-12.35	QP		
5	*	549.9200	46.25	-7.39	38.86	46.00	-7.14	QP		
6		750.7100	37.10	-4.40	32.70	46.00	-13.30	QP		

*:Maximum data x:Over limit !:over margin

Operator: SYP



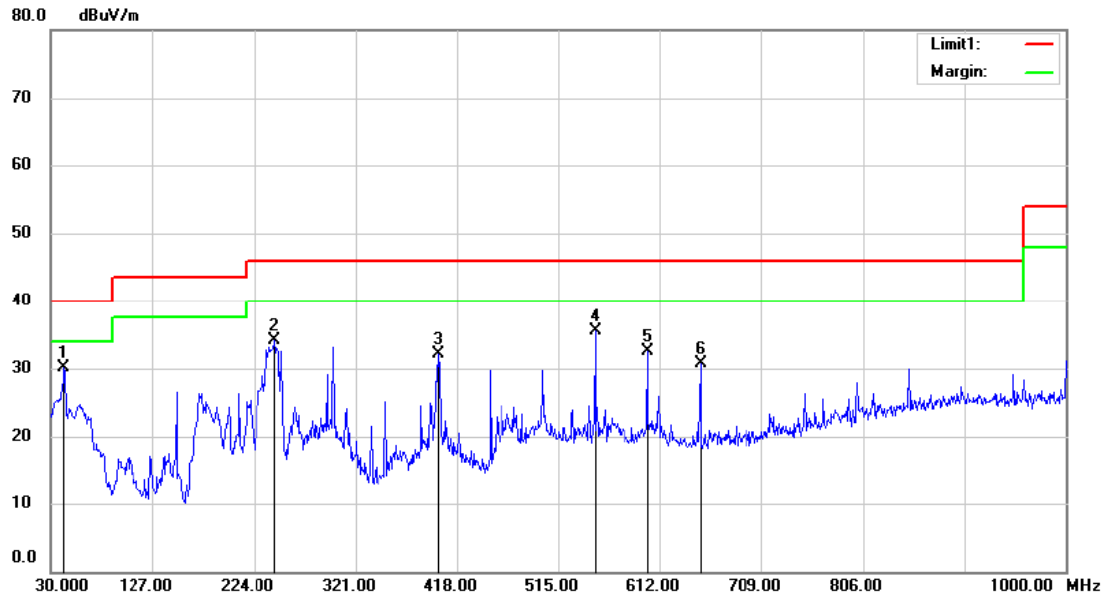
No.	Mk.	Freq. MHz	Reading Level dBuV	Correct Factor dB	Measure- ment dBuV/m	Limit dBuV/m	Over dB	Antenna Height cm	Table Degree degree	Comment
1		32.9100	43.50	-14.91	28.59	40.00	-11.41	QP		
2		103.7200	42.30	-14.07	28.23	43.50	-15.27	QP		
3		178.4100	46.35	-19.03	27.32	43.50	-16.18	QP		
4		243.4000	45.56	-13.66	31.90	46.00	-14.10	QP		
5	*	549.9200	44.15	-7.39	36.76	46.00	-9.24	QP		
6		600.3600	41.01	-6.99	34.02	46.00	-11.98	QP		

*:Maximum data x:Over limit !:over margin

Operator: SYP

Operation Mode: TX 5210
Frequency Range: 30MHz-1GHz
Test Result: PASS
Measured Distance: 3m
Note:

Test Date: September 15, 2014
Temperature: 24
Humidity: 53 %
Test By: SYP

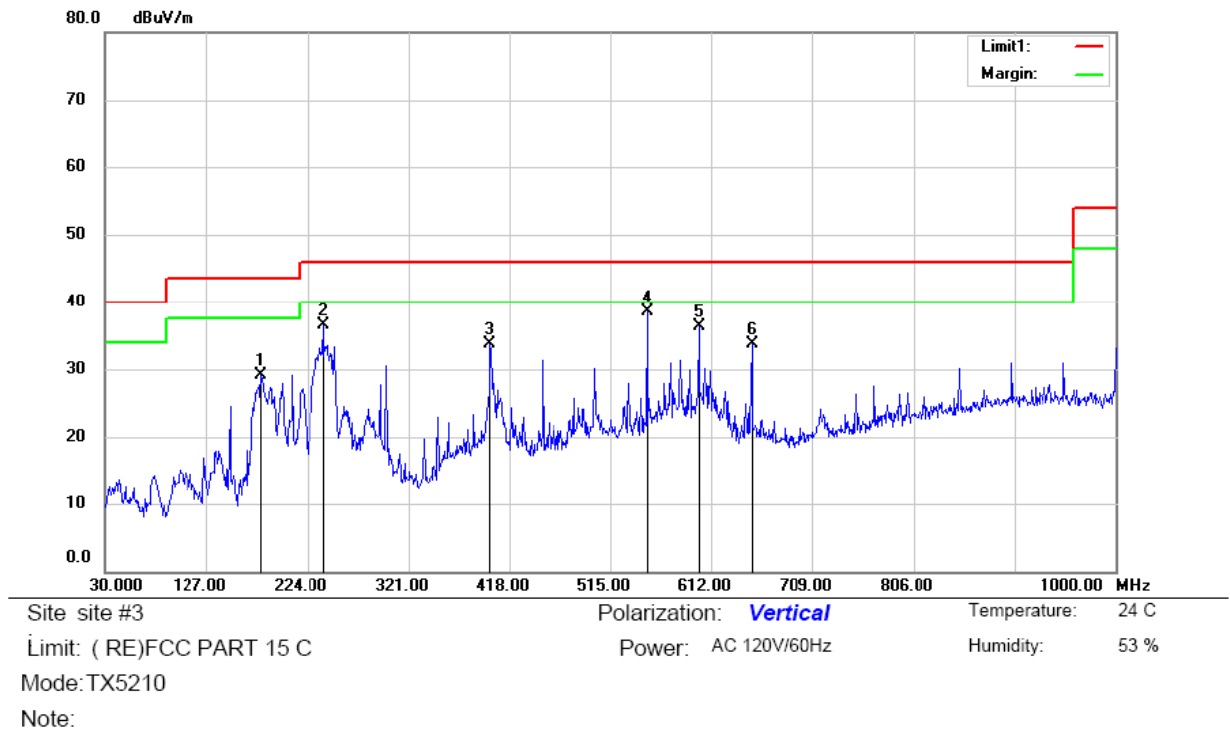


Site site #3 Polarization: **Horizontal** Temperature: 24 C
Limit: (RE)FCC PART 15 C Power: AC 120V/60Hz Humidity: 53 %
Mode:TX 5210
Note:

No.	Mk.	Freq.	Reading Level	Correct Factor	Measure-ment	Limit	Over	Antenna Height	Table Degree	
		MHz	dBuV	dB	dBuV/m	dBuV/m	dB	Detector	cm	degree
1	*	42.6100	43.67	-13.51	30.16	40.00	-9.84	QP		
2		244.3700	47.67	-13.61	34.06	46.00	-11.94	QP		
3		400.5400	41.06	-8.89	32.17	46.00	-13.83	QP		
4		549.9200	42.82	-7.39	35.43	46.00	-10.57	QP		
5		600.3600	39.56	-6.99	32.57	46.00	-13.43	QP		
6		650.8000	37.25	-6.48	30.77	46.00	-15.23	QP		

*:Maximum data x:Over limit !:over margin

Operator: SYP



No.	Mk.	Freq. MHz	Reading Level dBuV	Correct Factor dB	Measure- ment dBuV/m	Limit dBuV/m	Over dB	Antenna Height cm	Table Degree degree	Comment
1		179.3800	48.12	-18.99	29.13	43.50	-14.37	QP		
2		239.5200	50.43	-13.89	36.54	46.00	-9.46	QP		
3		399.5700	42.65	-8.89	33.76	46.00	-12.24	QP		
4	*	549.9200	45.88	-7.39	38.49	46.00	-7.51	QP		
5		600.3600	43.29	-6.99	36.30	46.00	-9.70	QP		
6		650.8000	40.17	-6.48	33.69	46.00	-12.31	QP		

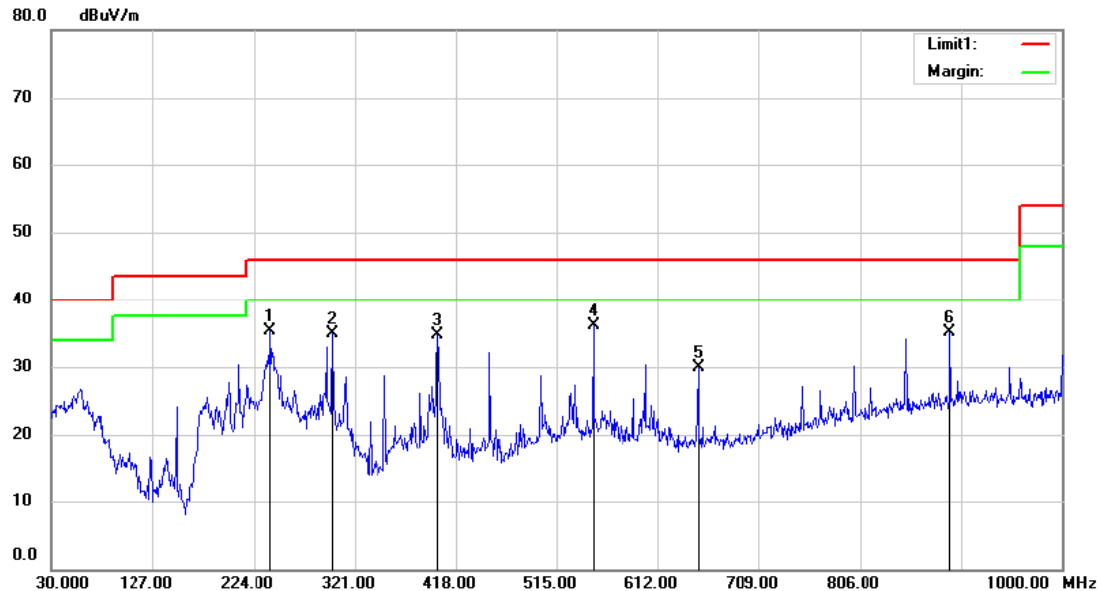
*:Maximum data x:Over limit !:over margin

Operator: SYP

Operation Mode: TX 5240
Frequency Range: 30MHz-1GHz
Test Result: PASS
Measured Distance: 3m

Test Date: September 15, 2014
Temperature: 24
Humidity: 53 %
Test By: SYP

Note:



Site site #3

Polarization: **Horizontal**

Temperature: 24 C

Limit: (RE)FCC PART 15 C

Power: AC 120V/60Hz

Humidity: 53 %

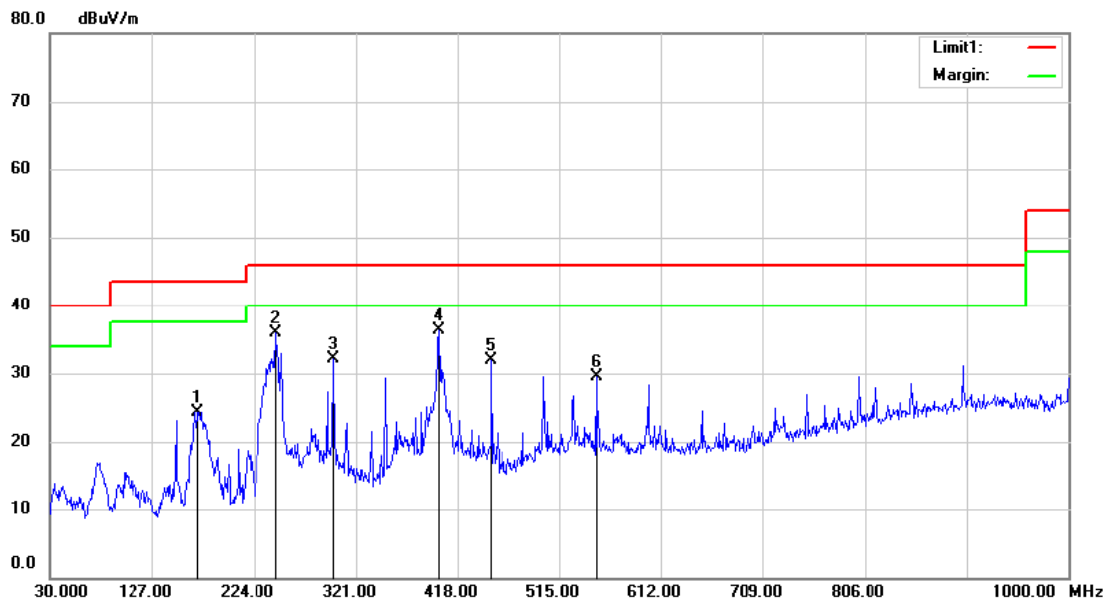
Mode:TX5240

Note:

No.	Mk.	Freq. MHz	Reading Level dBuV	Correct Factor dB	Measure- ment dBuV/m	Limit dBuV/m	Over dB	Antenna Height cm	Table Degree degree	Comment
1		240.4900	49.16	-13.81	35.35	46.00	-10.65	QP		
2		299.6600	48.64	-13.81	34.83	46.00	-11.17	QP		
3		400.5400	43.67	-8.89	34.78	46.00	-11.22	QP		
4	*	549.9200	43.54	-7.39	36.15	46.00	-9.85	QP		
5		650.8000	36.36	-6.48	29.88	46.00	-16.12	QP		
6		892.3300	35.93	-0.80	35.13	46.00	-10.87	QP		

*:Maximum data x:Over limit !:over margin

Operator: SYP



Site site #3 Polarization: **Vertical** Temperature: 24 C
Limit: (RE)FCC PART 15 C Power: AC 120V/60Hz Humidity: 53 %
Mode:TX5240
Note:

No.	Mk.	Freq. MHz	Reading Level dBuV	Correct Factor dB	Measure- ment dBuV/m	Limit dBuV/m	Over dB	Antenna Height cm	Table Degree degree	Comment
1		170.6500	43.75	-19.41	24.34	43.50	-19.16	QP		
2		245.3400	49.38	-13.56	35.82	46.00	-10.18	QP		
3		299.6600	45.86	-13.81	32.05	46.00	-13.95	QP		
4	*	400.5400	45.15	-8.89	36.26	46.00	-9.74	QP		
5		450.0100	43.28	-11.28	32.00	46.00	-14.00	QP		
6		549.9200	36.98	-7.39	29.59	46.00	-16.41	QP		

*:Maximum data x:Over limit !:over margin

Operator: SYP

Operation Mode: 802.11a TX Channel 36 Test Date : September 15, 2014
Frequency Range: 1-40GHz Temperature : 24
Test Result: PASS Humidity : 53 %
Measured Distance: 3m Test By: SYP

Freq. (MHz)	Ant.Pol. H/V	Emission Level(dBuV/m)		Limit 3m(dBuV/m)		Over(dB)	
		PK	AV	PK	AV	PK	AV
10360.00	V	63.45	48.64	74.00	54.00	-10.55	-5.36
--	--	--	--	--	--	--	--
10360.00	H	66.78	47.99	74.00	54.00	-7.22	-6.01

All emissions not reported were more than 20dB below the specified limit or in the noise floor.

Note: (1) All Readings are Peak Value and AV.
(2) Emission Level= Reading Level+Probe Factor +Cable Loss.
(3) Data of measurement within this frequency range shown "--" in the table above means the reading of emissions are attenuated more than 20dB below the permissible limits or the field strength is too small to be measured.

Operation Mode: 802.11a TX Channel 42 Test Date : September 15, 2014
Frequency Range: 1-40GHz Temperature : 24
Test Result: PASS Humidity : 53 %
Measured Distance: 3m Test By: SYP

Freq. (MHz)	Ant.Pol. H/V	Emission Level(dBuV/m)		Limit 3m(dBuV/m)		Over(dB)	
		PK	AV	PK	AV	PK	AV
10420.00	V	65.88	48.07	74.00	54.00	-8.12	-5.93
--	--	--	--	--	--	--	--
10420.00	H	65.27	46.94	74.00	54.00	-8.73	-7.06

All emissions not reported were more than 20dB below the specified limit or in the noise floor.

Note: (1) All Readings are Peak Value and AV.
(2) Emission Level= Reading Level+Probe Factor +Cable Loss.
(3) Data of measurement within this frequency range shown "--" in the table above means the reading of emissions are attenuated more than 20dB below the permissible limits or the field strength is too small to be measured.

Operation Mode: 802.11a TX Channel 48 Test Date : September 15, 2014
 Frequency Range: 1-40GHz Temperature : 24
 Test Result: PASS Humidity : 53 %
 Measured Distance: 3m Test By: SYP

Freq. (MHz)	Ant.Pol. H/V	Emission Level(dBuV/m)		Limit 3m(dBuV/m)		Over(dB)	
		PK	AV	PK	AV	PK	AV
10480.00	V	69.74	47.91	74.00	54.00	-4.26	-6.09
--	--	--	--	--	--	--	--
10480.00	H	67.81	47.11	74.00	54.00	-6.19	-6.89

All emissions not reported were more than 20dB below the specified limit or in the noise floor.

- Note:** (1) All Readings are Peak Value and AV.
 (2) Emission Level= Reading Level+Probe Factor +Cable Loss.
 (3) Data of measurement within this frequency range shown "--" in the table above means the reading of emissions are attenuated more than 20dB below the permissible limits or the field strength is too small to be measured.

7 26dB and 99% Bandwidth Test

7.1 Measurement Procedure

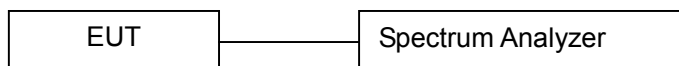
The bandwidth at 26 dB down from the highest in-band spectral density is measured with a spectrum analyzer connected to the antenna terminal while the EUT is operating at its maximum power control level, as defined in KDB 789033, at the appropriate frequencies. The spectrum analyzer's bandwidth measurement function is configured to measure the 26 dB bandwidth. The 26 dB bandwidth is used to determine the conducted power limits.

- 1) Set RBW = approximately 1% of the emission bandwidth.
- 2) Set the VBW > RBW.
- 3) Detector = Peak.
- 4) Trace mode = max hold.
- 5) Measure the maximum width of the emission that is 26 dB down from the peak of the emission. Compare this with the RBW setting of the analyzer. Readjust RBW and repeat measurement as needed until the RBW/EBW ratio is approximately 1%.

The following procedure shall be used for measuring (99 %) power bandwidth.

- 1) Set center frequency to the nominal EUT channel center frequency.
- 2) Set span = 1.5 times to 5.0 times the OBW.
- 3) Set RBW = 1 % to 5 % of the OBW
- 4) Set VBW $\geq 3 \cdot$ RBW
- 5) Video averaging is not permitted. Where practical, a sample detection and single sweep mode shall be used. Otherwise, peak detection and max hold mode (until the trace stabilizes) shall be used.

7.2 Test SET-UP (Block Diagram of Configuration)



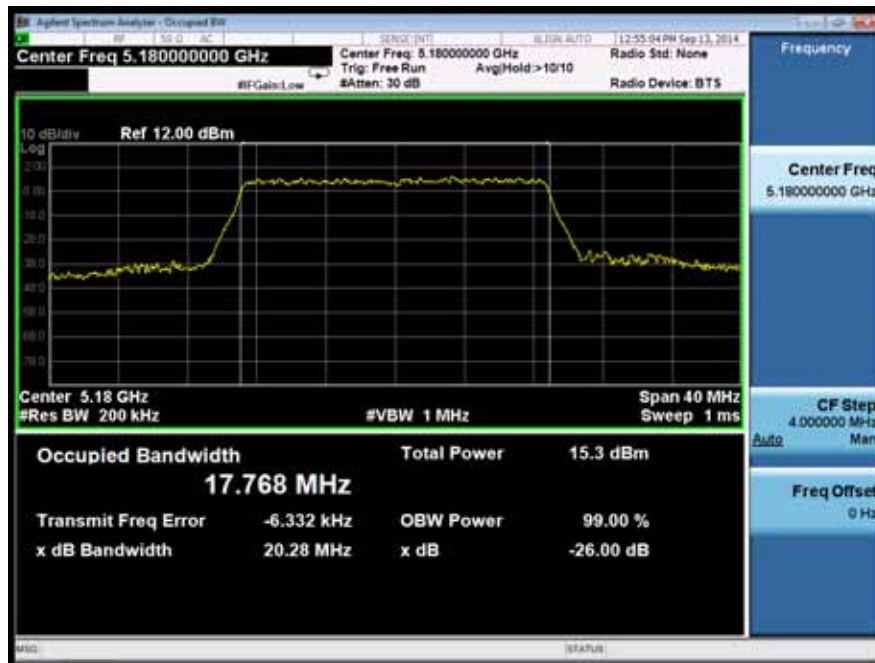
7.3 Measurement Equipment Used

EQUIPMENT TYPE	MFR	MODEL NUMBER	SERIAL NUMBER	LAST CAL.	CAL DUE.
Spectrum Analyzer	Agilent	E4407B	88156318	05/17/2014	05/16/2015

7.4 Measurement Results

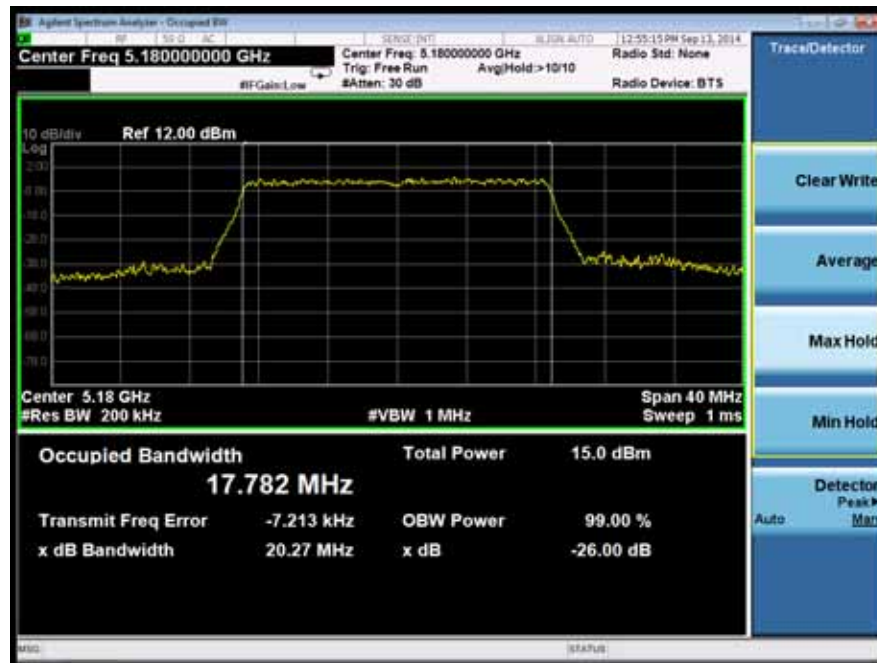
Spectrum Detector:	PK	Test Date :	September 15, 2014
Test By:	KK	Temperature :	24
Test Result:	PASS	Humidity :	53 %
Operation Mode: 802.11a		Antenna	A

Channel number	Channel frequency (MHz)	26dB Bandwidth (MHz)
36	5180	20.28
48	5240	22.00



Spectrum Detector:	PK	Test Date :	September 15, 2014
Test By:	KK	Temperature :	24
Test Result:	PASS	Humidity :	53 %
Operation Mode: 802.11a		Antenna	B

Channel number	Channel frequency (MHz)	26dB Bandwidth (MHz)
36	5180	20.27
48	5240	22.07



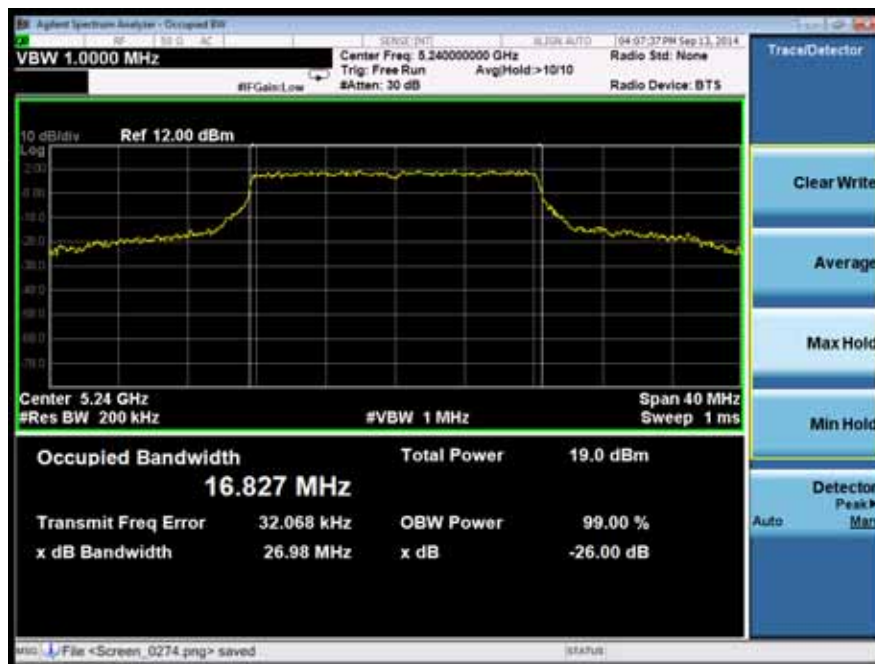
Spectrum Detector:	PK	Test Date :	September 15, 2014
Test By:	KK	Temperature :	24
Test Result:	PASS	Humidity :	53 %
Operation Mode:	802.11n(HT20)	Antenna	A

Channel number	Channel frequency (MHz)	26dB Bandwidth (MHz)
36	5180	28.05
48	5240	26.97



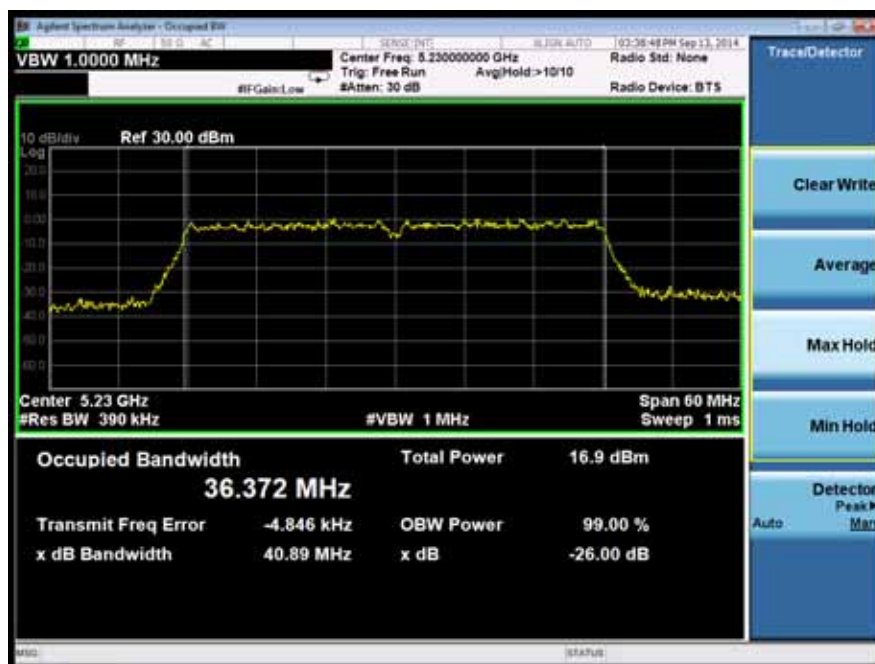
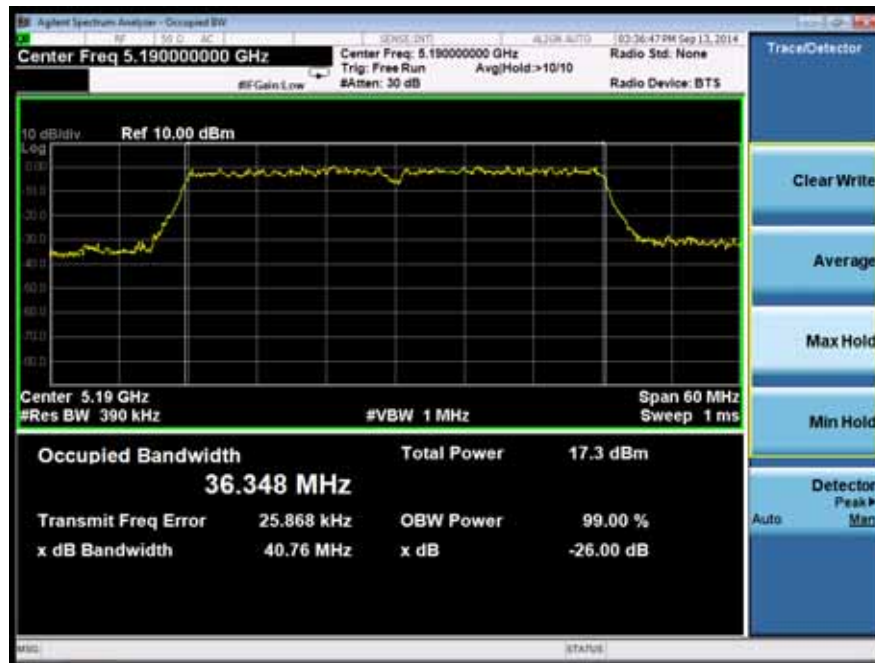
Spectrum Detector:	PK	Test Date :	September 15, 2014
Test By:	KK	Temperature :	24
Test Result:	PASS	Humidity :	53 %
Operation Mode:	802.11n(HT20)	Antenna	B

Channel number	Channel frequency (MHz)	26dB Bandwidth (MHz)
36	5180	30.77
48	5240	26.98



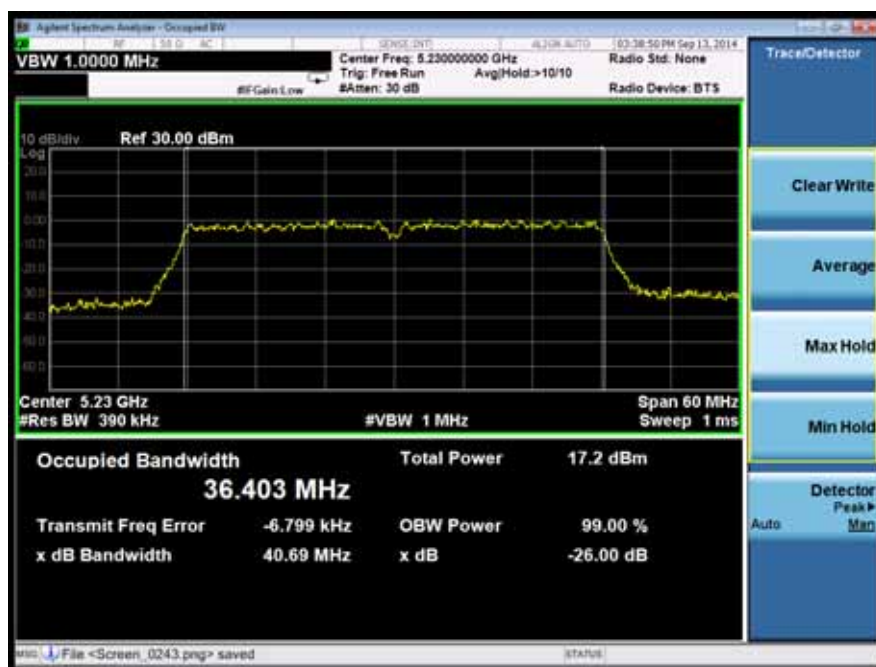
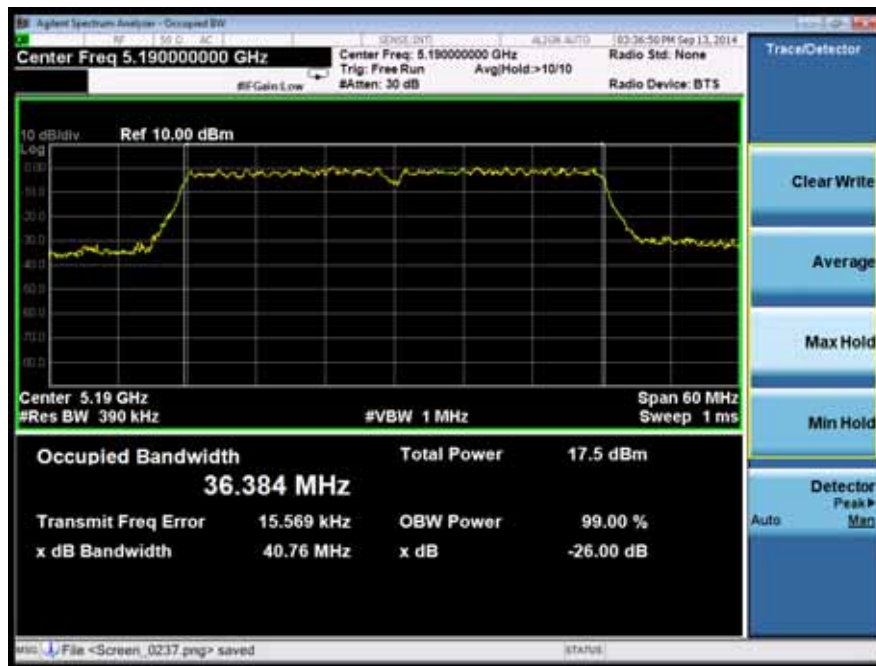
Spectrum Detector:	PK	Test Date :	September 15, 2014
Test By:	KK	Temperature :	24
Test Result:	PASS	Humidity :	53 %
Operation Mode:	802.11n(HT40)	Antenna	A

Channel number	Channel frequency (MHz)	26dB Bandwidth (MHz)
38	5190	40.76
46	5230	40.89



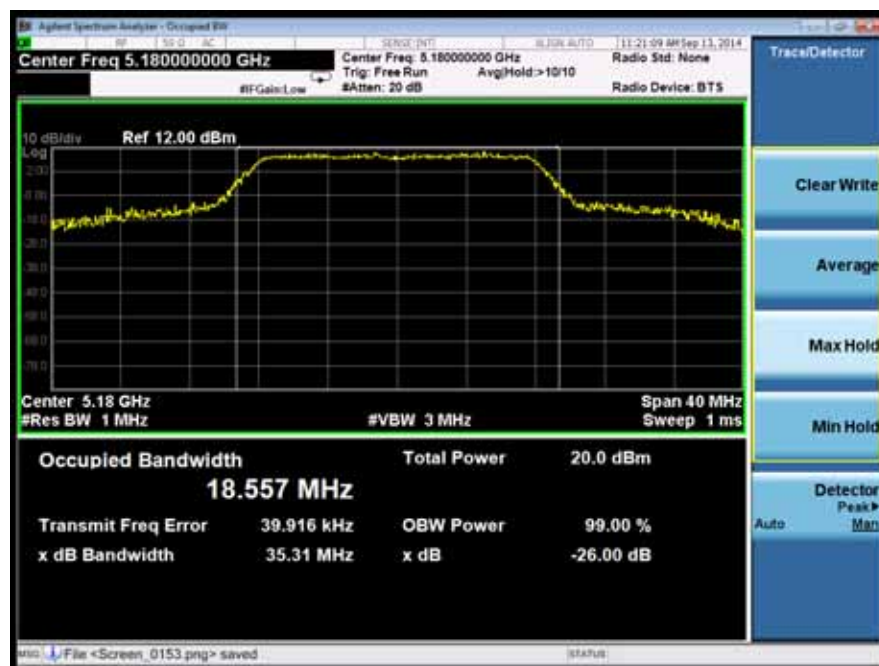
Spectrum Detector:	PK	Test Date :	September 15, 2014
Test By:	KK	Temperature :	24
Test Result:	PASS	Humidity :	53 %
Operation Mode:	802.11n(HT40)	Antenna	B

Channel number	Channel frequency (MHz)	26dB Bandwidth (MHz)
38	5190	40.76
46	5230	40.69



Spectrum Detector:	PK	Test Date :	September 15, 2014
Test By:	KK	Temperature :	24
Test Result:	PASS	Humidity :	53 %
Operation Mode: 802.11a		Antenna	A

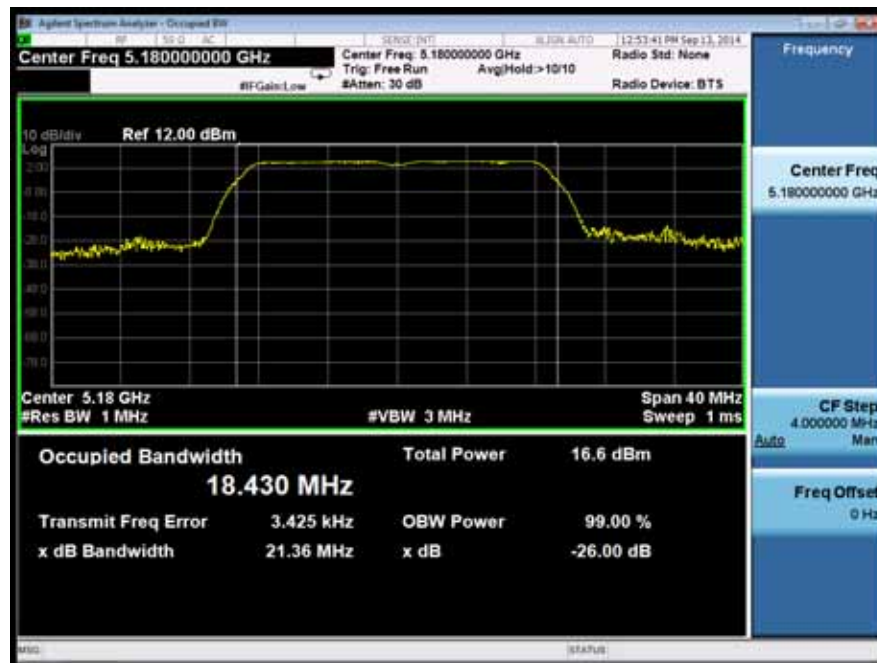
Channel number	Channel frequency (MHz)	99%dB Bandwidth (MHz)
36	5180	18.557
42	5210	18.621
48	5240	18.515

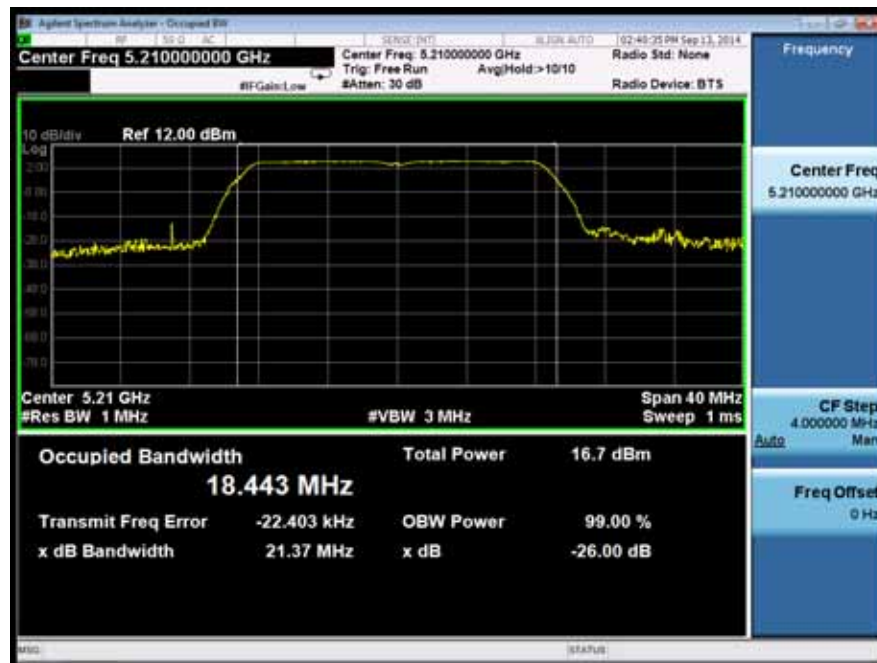




Spectrum Detector:	PK	Test Date :	September 15, 2014
Test By:	KK	Temperature :	24
Test Result:	PASS	Humidity :	53 %
Operation Mode: 802.11a		Antenna	B

Channel number	Channel frequency (MHz)	99%dB Bandwidth (MHz)
36	5180	18.430
42	5210	18.443
48	5240	18.579





Spectrum Detector:	PK	Test Date :	September 15, 2014
Test By:	KK	Temperature :	24
Test Result:	PASS	Humidity :	53 %
Operation Mode:	802.11n(HT20)	Antenna	A

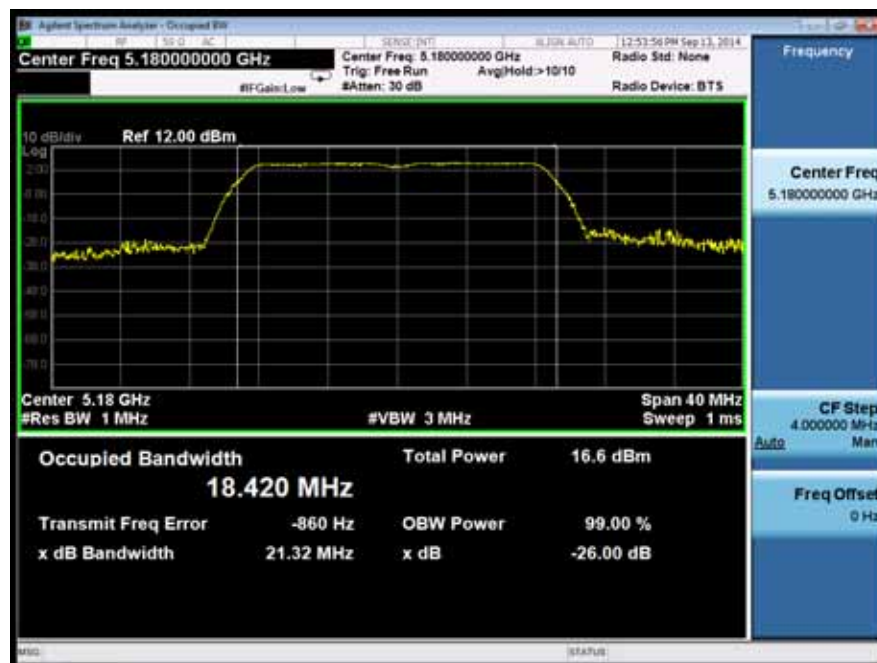
Channel number	Channel frequency (MHz)	99%dB Bandwidth (MHz)
36	5180	19.031
42	5210	19.134
48	5240	18.601

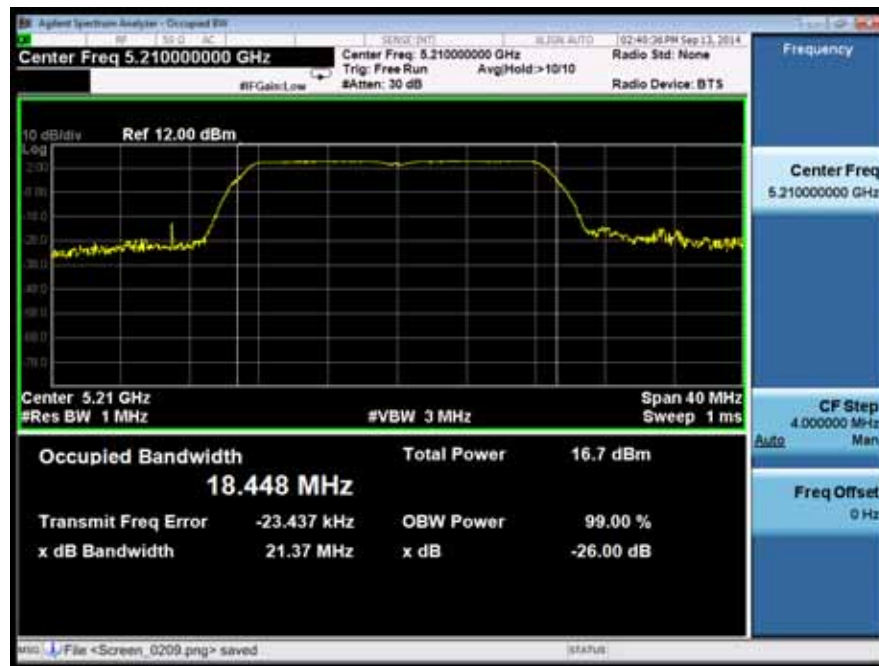




Spectrum Detector:	PK	Test Date :	September 15, 2014
Test By:	KK	Temperature :	24
Test Result:	PASS	Humidity :	53 %
Operation Mode:	802.11n(HT20)	Antenna	B

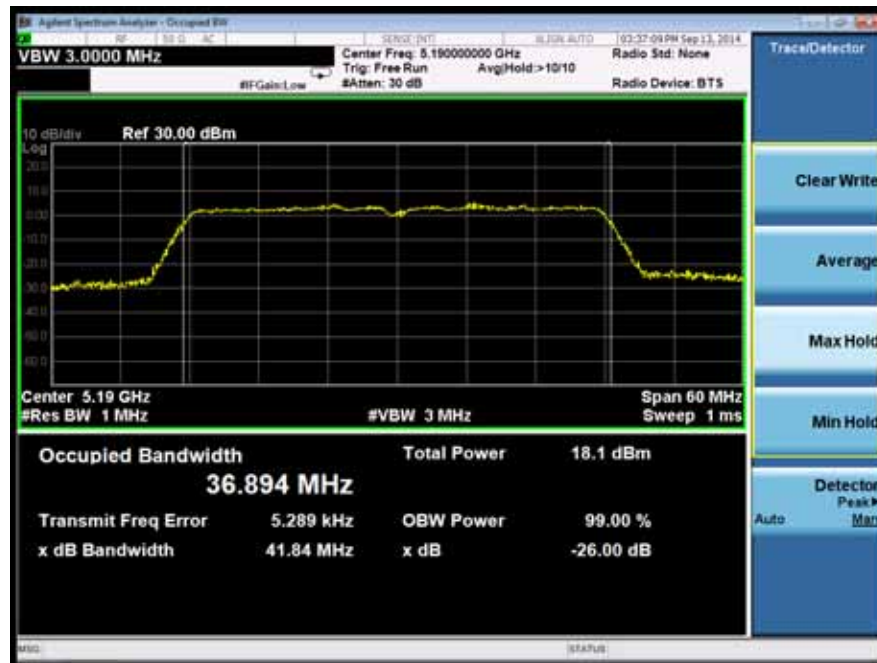
Channel number	Channel frequency (MHz)	99%dB Bandwidth (MHz)
36	5180	18.420
42	5210	18.448
48	5240	18.549





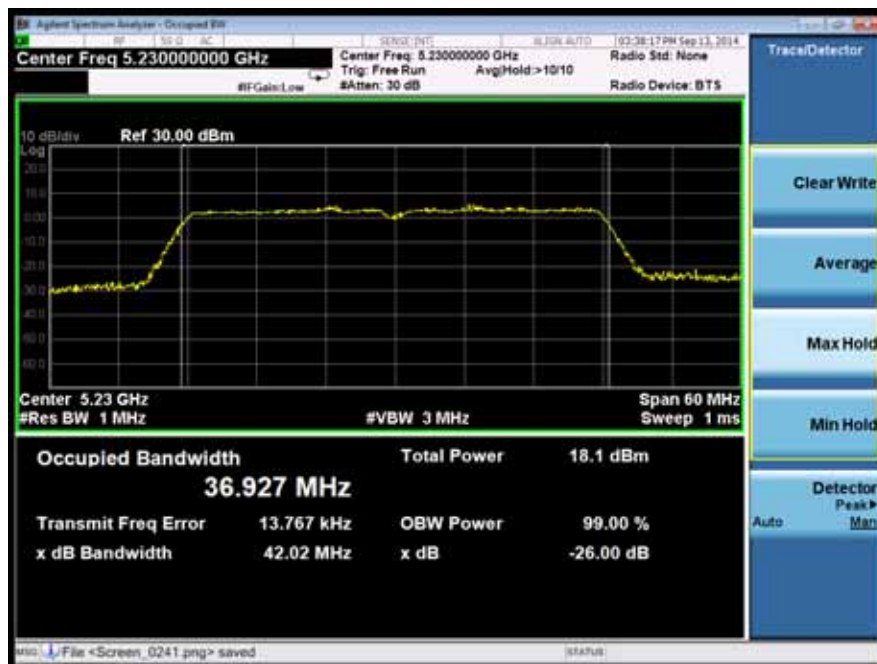
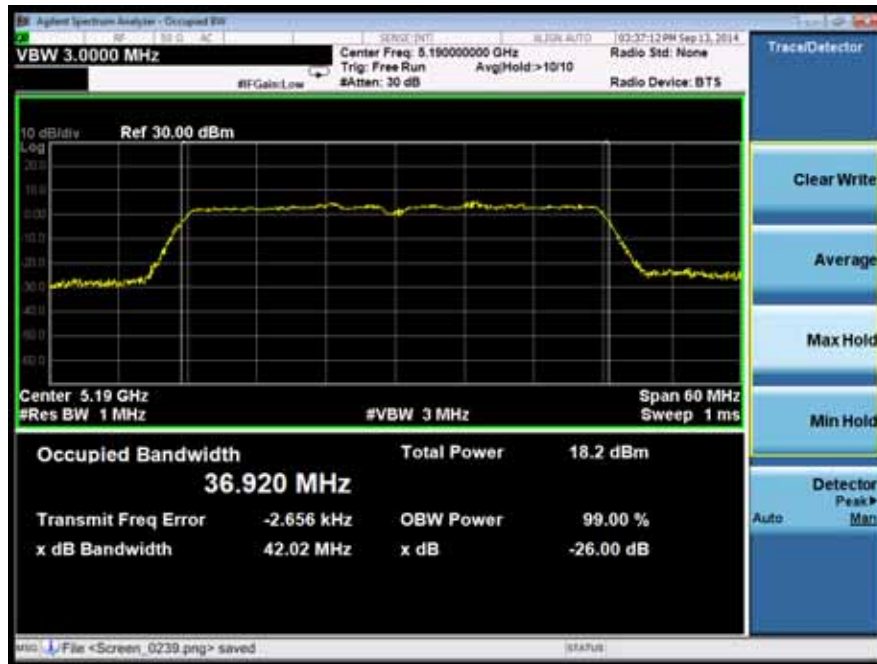
Spectrum Detector:	PK	Test Date :	September 15, 2014
Test By:	KK	Temperature :	24
Test Result:	PASS	Humidity :	53 %
Operation Mode:	802.11n(HT40)	Antenna	A

Channel number	Channel frequency (MHz)	99% Bandwidth (MHz)
38	5190	36.894
46	5230	36.762



Spectrum Detector:	PK	Test Date :	September 15, 2014
Test By:	KK	Temperature :	24
Test Result:	PASS	Humidity :	53 %
Operation Mode:	802.11n(HT40)	Antenna	B

Channel number	Channel frequency (MHz)	99% Bandwidth (MHz)
38	5190	36.920
46	5230	36.927



8 Maximum Conducted Output Power Test

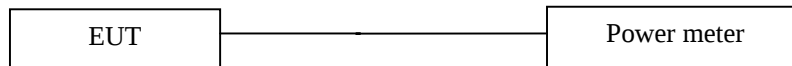
8.1 Measurement Procedure

The maximum average conducted output power can be measured using Method PM-G (Measurement using a gated RF average power meter):

Measurements may be performed using a wideband gated RF power meter provided that the gate parameters are adjusted such that the power is measured only when the EUT is transmitting at its maximum power control level. Since the measurement is made only during the ON time of the transmitter, no duty cycle correction factor is required.

- The Transmitter output (antenna port) was connected to the power meter.
- Turn on the EUT and power meter and then record the power value.
- Repeat above procedures on all channels needed to be tested.

8.2 Test SET-UP (Block Diagram of Configuration)



8.3 Measurement Equipment Used

EQUIPMENT TYPE	MODEL NUMBER	SERIAL NUMBER	LAST CAL.	CAL DUE.
Power meter	ML2495A	0824006	05/17/2014	05/16/2015
Power sensor	MA2411B	0738172	05/17/2014	05/16/2015

8.4 Conducted output limit

Band 5.15-5.25GHz:

The maximum conducted output power over the frequency band of operation shall not exceed the lesser of 50 mW or $4 \text{ dBm} + 10 \log B$, where B is the -26dB emission bandwidth in MHz.

8.5 Measurement Results

Spectrum Detector: PK Test Date : September 15, 2014
Test By: KK Temperature : 24
Test Result: PASS Humidity : 53 %
Operation Mode: 802.11a Antenna: A

Channel number	Channel Frequency(MHz)	Conducted power(dBm)	Antenna gain(dBi)	Eirp (dBm)	Eirp Limit(dBm) FCC	Pass/Fail
36	5180	13.45	2	15.45	17	PASS
42	5210	13.69	2	15.69	17	PASS
48	5240	13.84	2	15.84	17	PASS

Spectrum Detector: PK Test Date : September 15, 2014
Test By: KK Temperature : 24
Test Result: PASS Humidity : 53 %
Operation Mode: 802.11a Antenna: B

Channel number	Channel Frequency(MHz)	Conducted power(dBm)	Antenna gain(dBi)	Eirp (dBm)	Eirp Limit(dBm) FCC	Pass/Fail
36	5180	12.96	2	14.96	17	PASS
42	5210	12.88	2	14.88	17	PASS
48	5240	13.44	2	15.44	17	PASS

Spectrum Detector: PK Test Date : September 15, 2014
Test By: KK Temperature : 24
Test Result: PASS Humidity : 53 %
Operation Mode: 802.11n(HT20) Antenna: A

Channel number	Channel Frequency(MHz)	Conducted power(dBm)	Antenna gain(dBi)	Eirp (dBm)	Eirp Limit(dBm) FCC	Pass/Fail
36	5180	12.68	2	14.68	17	PASS
42	5210	11.94	2	13.94	17	PASS
48	5240	12.56	2	14.56	17	PASS

Spectrum Detector: PK Test Date : September 15, 2014
Test By: KK Temperature : 24
Test Result: PASS Humidity : 53 %
Operation Mode: 802.11n(HT20) Antenna: B

Channel number	Channel Frequency(MHz)	Conducted power(dBm)	Antenna gain(dBi)	Eirp (dBm)	Eirp Limit(dBm) FCC	Pass/Fail
36	5180	11.44	2	13.44	17	PASS
42	5210	11.80	2	13.80	17	PASS
48	5240	11.65	2	13.65	17	PASS

Spectrum Detector: PK Test Date : September 15, 2014
 Test By: KK Temperature : 24
 Test Result: PASS Humidity : 53 %
 Operation Mode: 802.11n(HT40) Antenna: A

Channel number	Channel Frequency(MHz)	Conducted power(dBm)	Antenna gain(dBi)	Eirp (dBm)	Eirp Limit(dBm) FCC	Pass/Fail
38	5190	10.66	2	12.66	17	PASS
46	5230	10.81	2	12.81	17	PASS

Spectrum Detector: PK Test Date : September 15, 2014
 Test By: KK Temperature : 24
 Test Result: PASS Humidity : 53 %
 Operation Mode: 802.11n(HT40) Antenna: B

Channel number	Channel Frequency(MHz)	Conducted power(dBm)	Antenna gain(dBi)	Eirp (dBm)	Eirp Limit(dBm) FCC	Pass/Fail
38	5190	10.47	2	12.47	17	PASS
46	5230	10.09	2	12.09	17	PASS

Remark: EIRP = conducted power + antenna gain.

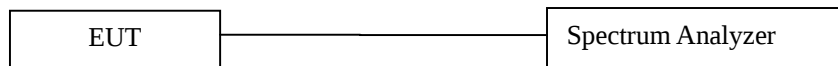
9. Peak Power Density

9.1 Test Procedures

Methods refer to FCC KDB 789033

- 1) Create an average power spectrum for the EUT operating mode being tested by following the instructions in section E)2) for measuring maximum conducted output power using a spectrum analyzer or EMI receiver: select the appropriate test method (SA-3, or alternatives to each) and apply it up to, but not including, the step labeled, "Compute power...".
- 2) Use the peak search function on the instrument to find the peak of the spectrum.
- 3) The result is the PPSD.
- 4) The above procedures make use of 1 MHz resolution bandwidth to satisfy the 1 MHz measurement bandwidth specified in the 15.407(a)(5). That rule section also permits use of resolution bandwidths less than 1 MHz "provided that the measured power is integrated to show the total power over the measurement bandwidth" (i.e., 1 MHz). If measurements are performed using a reduced resolution bandwidth and integrated over 1 MHz bandwidth

9.2 Block Diagram of Test Setup



9.3 Test Equipment

EQUIPMENT TYPE	MFR	MODEL NUMBER	SERIAL NUMBER	LAST CAL.	CAL DUE.
Spectrum Analyzer	Agilent	E4407B	88156318	05/17/2014	05/16/2015

9.4 Limit

Band 5.15-5.25GHz:

FCC: the peak power spectral density shall not exceed 4 dBm in any 1MHz band.

9.5 Test Result

Spectrum Detector:	PK	Test Date :	September 15, 2014
Test By:	KK	Temperature :	24
Test Result:	PASS	Humidity :	53 %
Operation Mode:	802.11a	Antenna:	A

Channel number	Channel Frequency(MHz)	Conducted PSD (dBm)	Antenna Gian (dBi)	PSD EIRP (dBm)	PSD EIRP Limit(dBm)	Pass/Fail
36	5180	1.788	2	3.788	10	PASS
42	5210	1.991	2	3.991	10	PASS
48	5240	1.778	2	3.778	10	PASS





Spectrum Detector:	PK	Test Date :	September 15, 2014
Test By:	KK	Temperature :	24
Test Result:	PASS	Humidity :	53 %
Operation Mode:	802.11a	Antenna:	B

Channel number	Channel Frequency(MHz)	Conducted PSD (dBm)	Antenna Gian (dBi)	PSD EIRP (dBm)	PSD EIRP Limit(dBm)	Pass/Fail
36	5180	1.655	2	3.655	10	PASS
42	5210	1.773	2	3.773	10	PASS
48	5240	1.730	2	3.730	10	PASS

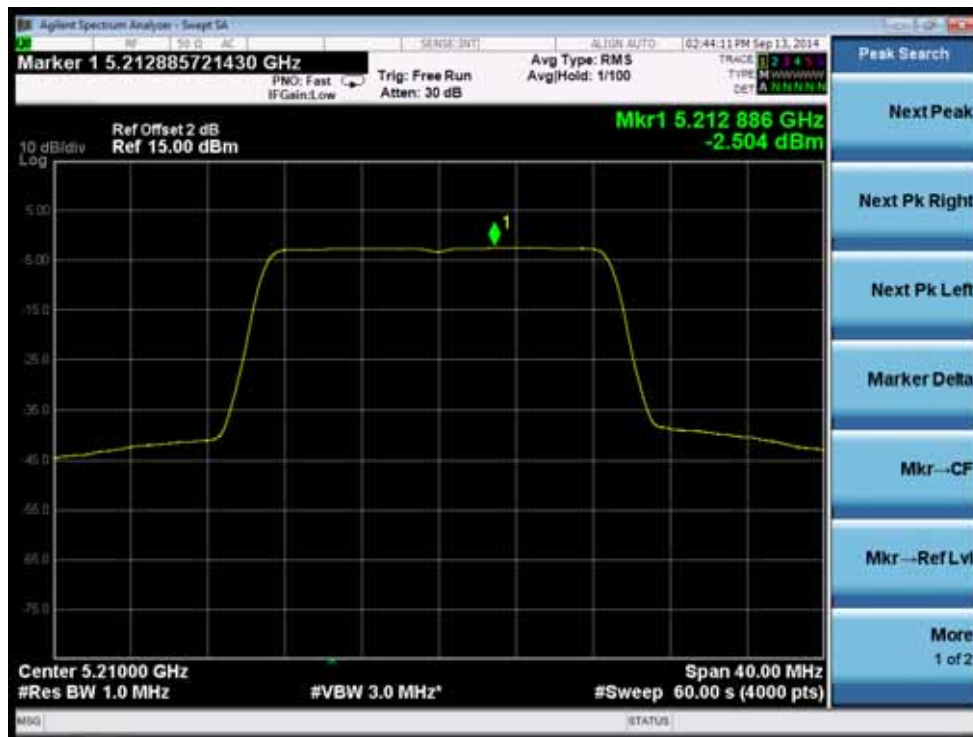




Spectrum Detector: PK Test Date : September 15, 2014
 Test By: KK Temperature : 24
 Test Result: PASS Humidity : 53 %
 Operation Mode: 802.11n(HT20) Antenna: A

Channel number	Channel Frequency(MHz)	Conducted PSD (dBm)	Antenna Gian (dBi)	PSD EIRP (dBm)	PSD EIRP Limit(dBm)	Pass/Fail
36	5180	-2.667	2	-0.667	10	PASS
42	5210	-2.504	2	-0.504	10	PASS
48	5240	-2.700	2	-0.700	10	PASS

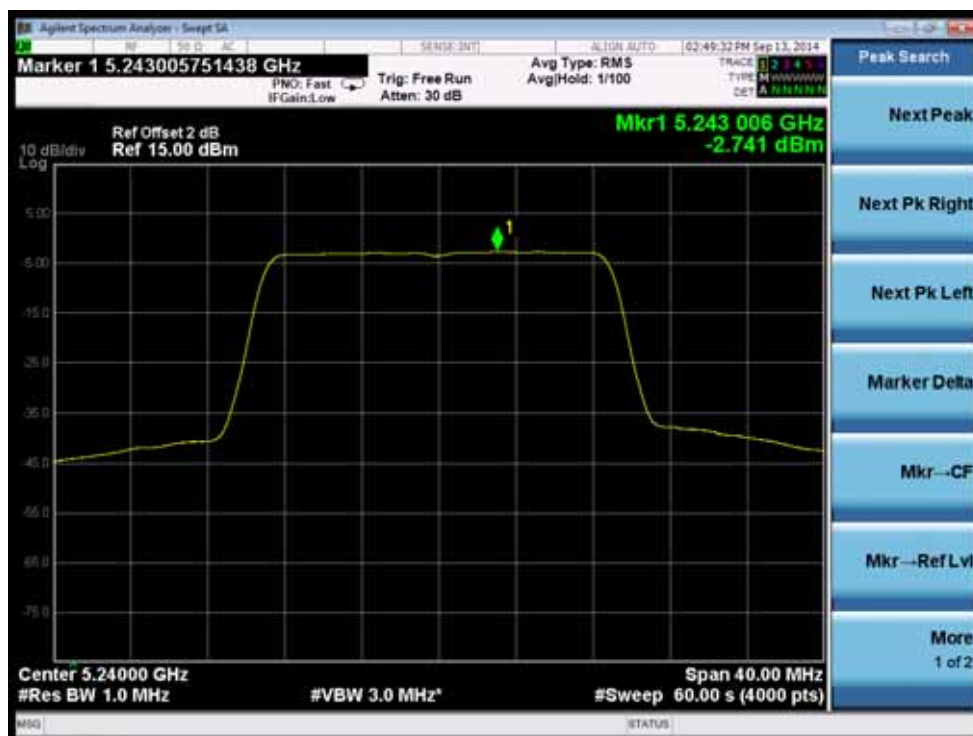
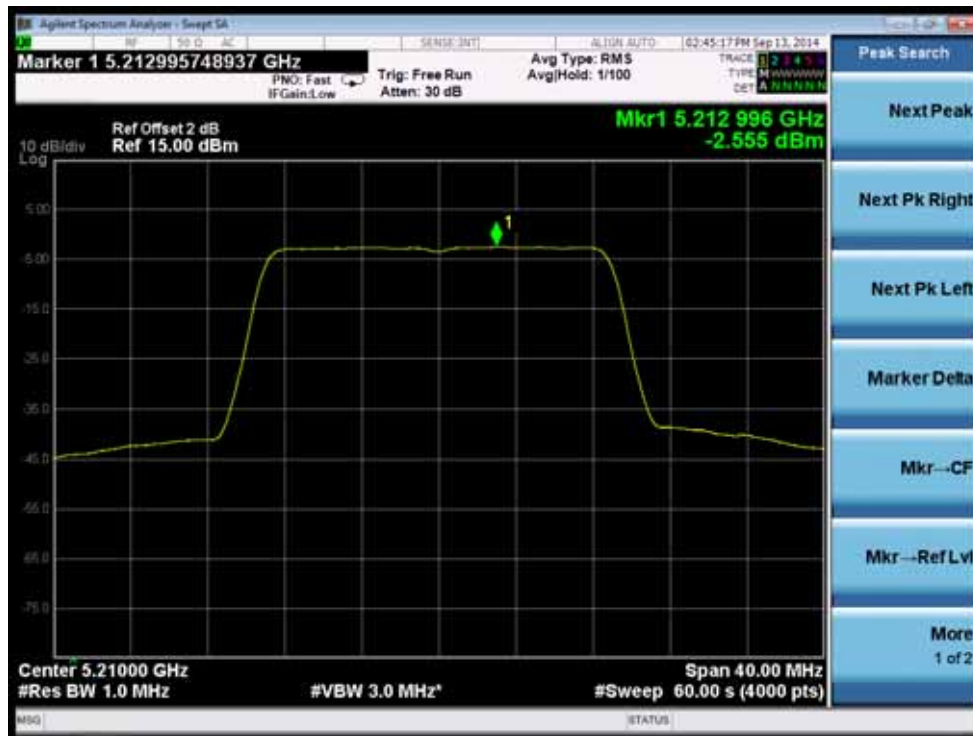




Spectrum Detector:	PK	Test Date :	September 15, 2014
Test By:	KK	Temperature :	24
Test Result:	PASS	Humidity :	53 %
Operation Mode:	802.11n(HT20)	Antenna:	B

Channel number	Channel Frequency(MHz)	Conducted PSD (dBm)	Antenna Gian (dBi)	PSD EIRP (dBm)	PSD EIRP Limit(dBm)	Pass/Fail
36	5180	-2.614	2	-0.614	10	PASS
42	5210	-2.555	2	-0.555	10	PASS
48	5240	-2.741	2	-0.741	10	PASS





Spectrum Detector: PK Test Date : September 15, 2014
 Test By: KK Temperature : 24
 Test Result: PASS Humidity : 53 %
 Operation Mode: 802.11n(HT40) Antenna: A

Channel number	Channel Frequency(MHz)	Conducted PSD (dBm)	Antenna Gian (dBi)	PSD EIRP (dBm)	PSD EIRP Limit(dBm)	Pass/Fail
38	5190	-6.192	2	-4.192	10	PASS
46	5230	-4.007	2	-2.007	10	PASS





Spectrum Detector:	PK	Test Date :	September 15, 2014
Test By:	KK	Temperature :	24
Test Result:	PASS	Humidity :	53 %
Operation Mode:	802.11n(HT40)	Antenna:	B

Channel number	Channel Frequency(MHz)	Conducted PSD (dBm)	Antenna Gian (dBi)	PSD EIRP (dBm)	PSD EIRP Limit(dBm)	Pass/Fail
38	5190	-6.075	2	-4.075	10	PASS
46	5230	-3.993	2	-1.993	10	PASS





10. Transmitter Peak Excursion

10.1 Test Procedures

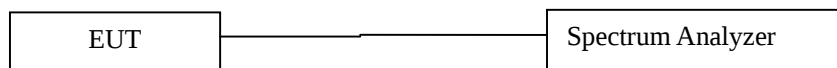
Methods refer to FCC KDB 789033

- 1) Set the spectrum analyzer or EMI receiver span to view the entire emission bandwidth.
- 2) Find the maximum of the peak-max-hold spectrum.
 - a) Set RBW = 1 MHz.
 - b) VBW $\geq$ 3 MHz.
 - c) Detector = peak.
 - d) Trace mode = max-hold.
 - e) Allow the sweeps to continue until the trace stabilizes.
 - f) Use the peak search function to find the peak of the spectrum.
- 3) Use the procedure found under 4. to measure the PPSD.
- 4) Compute the ratio of the maximum of the peak-max-hold spectrum to the PPSD.

10.2 Test Equipment

EQUIPMENT TYPE	MFR	MODEL NUMBER	SERIAL NUMBER	LAST CAL.	CAL DUE.
Signal Analyzer	Agilent	N9010A	My53470879	05/17/2014	05/16/2015
Spectrum Analyzer	Agilent	E4407B	88156318	05/17/2014	05/16/2015

10.3 Block Diagram of Test setup



10.4 Limit

The ratio of the peak excursion of the modulation envelope (measured using a peak hold function) to the maximum conducted output power (measured as specified above) shall not exceed 13 dB across any 1 MHz bandwidth or the emission bandwidth whichever is less.

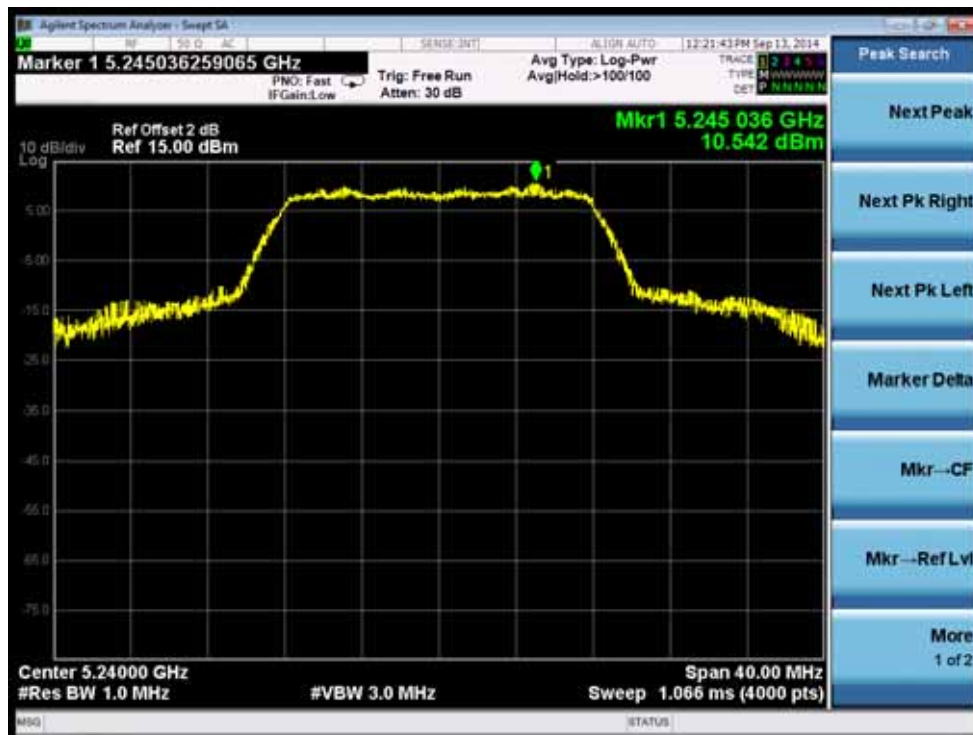
10.5 Test Result

PASS.

Spectrum Detector:	PK	Test Date :	September 15, 2014
Test By:	KK	Temperature :	24
Test Result:	PASS	Humidity :	53 %
Operation Mode:	802.11a	Antenna:	A

Channel number	Channel Frequency(MHz)	Peak Excursion (dBm)	Peak Excursion Limit(dBm)	Pass/Fail
36	5180	10.893	13	Pass
42	5210	10.707	13	Pass
48	5240	10.542	13	Pass

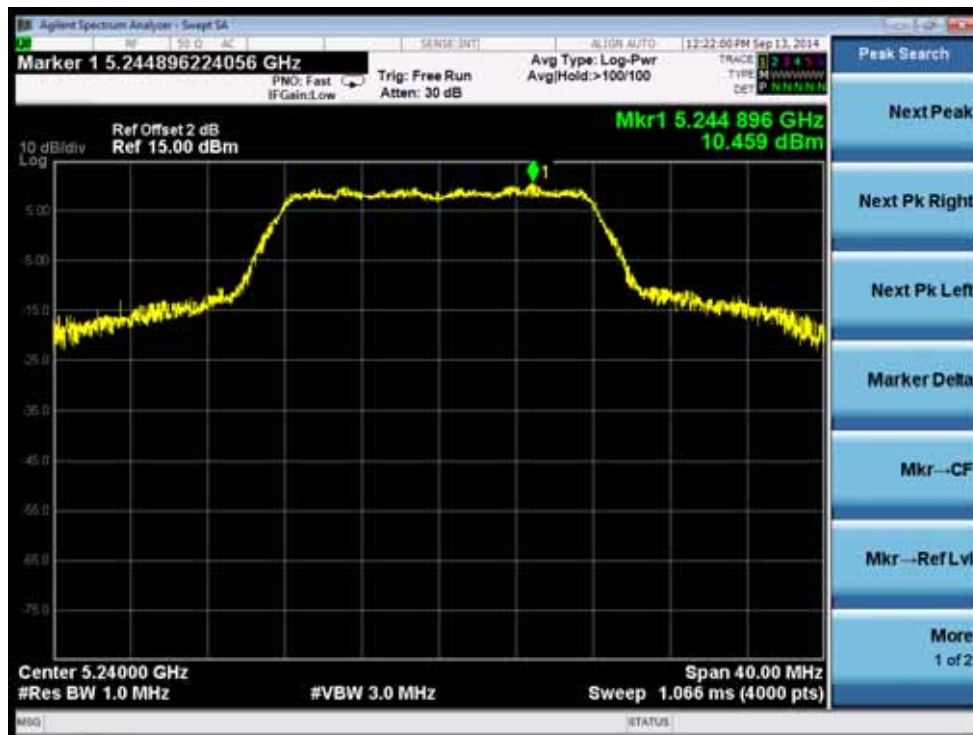




Spectrum Detector:	PK	Test Date :	September 15, 2014
Test By:	KK	Temperature :	24
Test Result:	PASS	Humidity :	53 %
Operation Mode:	802.11a	Antenna:	B

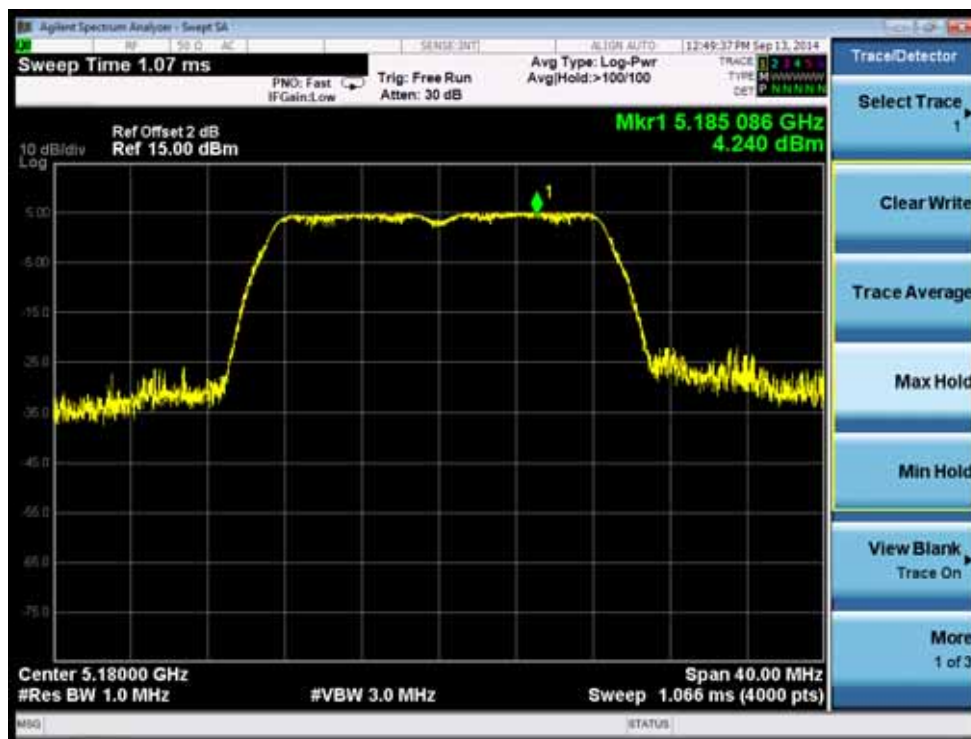
Channel number	Channel Frequency(MHz)	Peak Excursion (dBm)	Peak Excursion Limit(dBm)	Pass/Fail
36	5180	10.796	13	Pass
42	5210	10.479	13	Pass
48	5240	10.459	13	Pass

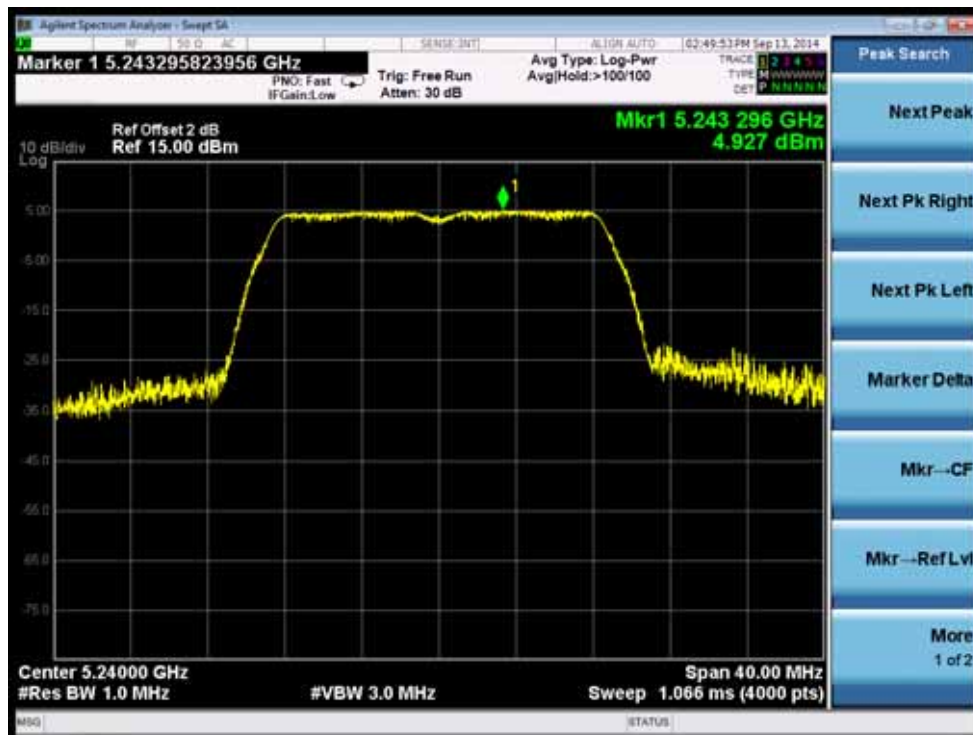




Spectrum Detector:	PK	Test Date :	September 15, 2014
Test By:	KK	Temperature :	24
Test Result:	PASS	Humidity :	53 %
Operation Mode:	802.11n(HT20)	Antenna:	A

Channel number	Channel Frequency(MHz)	Peak Excursion (dBm)	Peak Excursion Limit(dBm)	Pass/Fail
36	5180	4.240	13	Pass
42	5210	5.146	13	Pass
48	5240	4.927	13	Pass

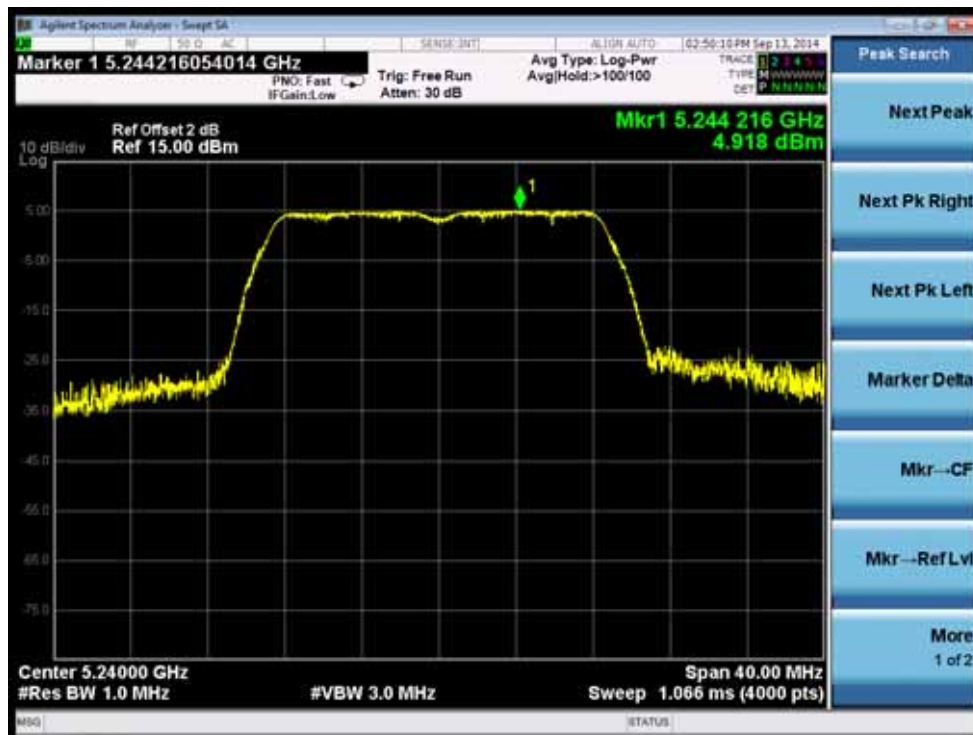
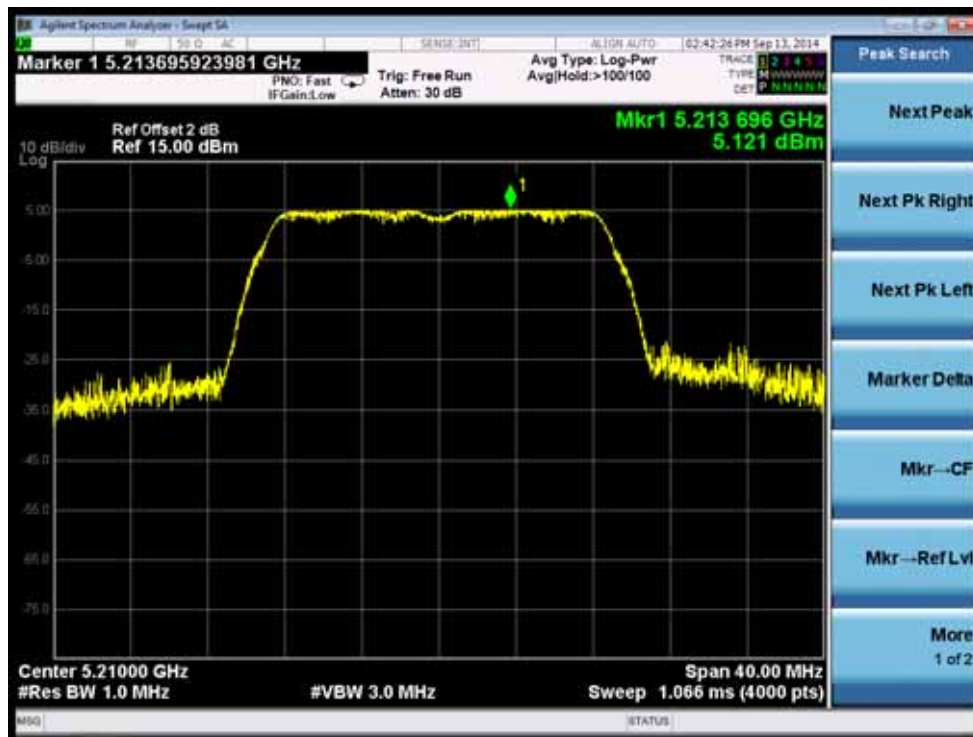




Spectrum Detector:	PK	Test Date :	September 15, 2014
Test By:	KK	Temperature :	24
Test Result:	PASS	Humidity :	53 %
Operation Mode:	802.11n(HT20)	Antenna:	B

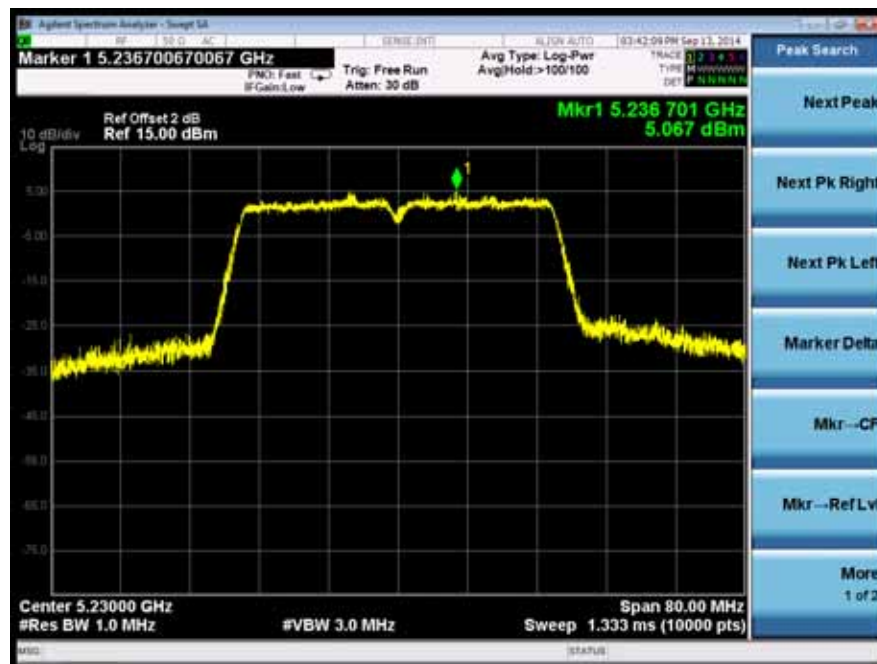
Channel number	Channel Frequency(MHz)	Peak Excursion (dBm)	Peak Excursion Limit(dBm)	Pass/Fail
36	5180	4.997	13	Pass
42	5210	5.121	13	Pass
48	5240	4.918	13	Pass





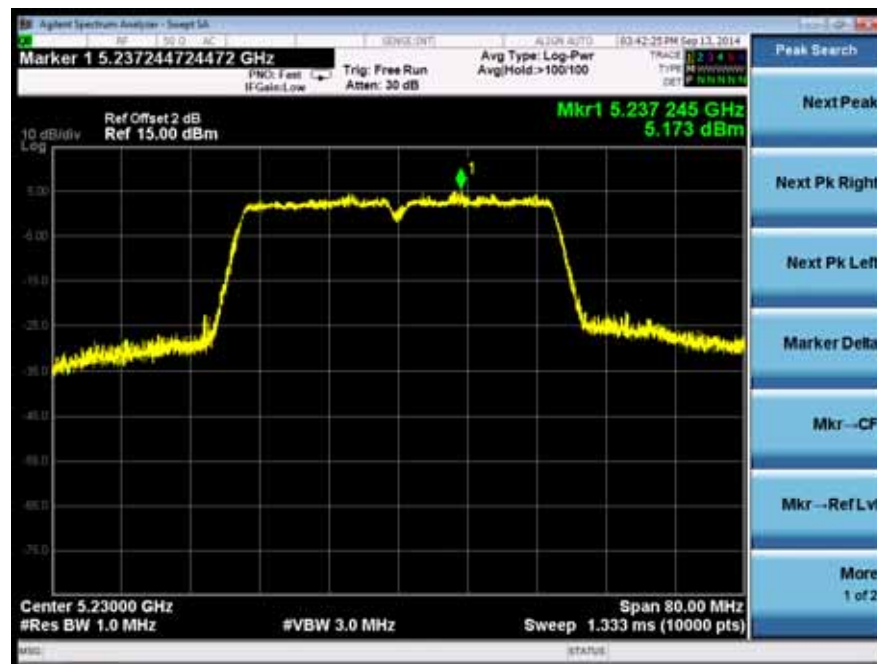
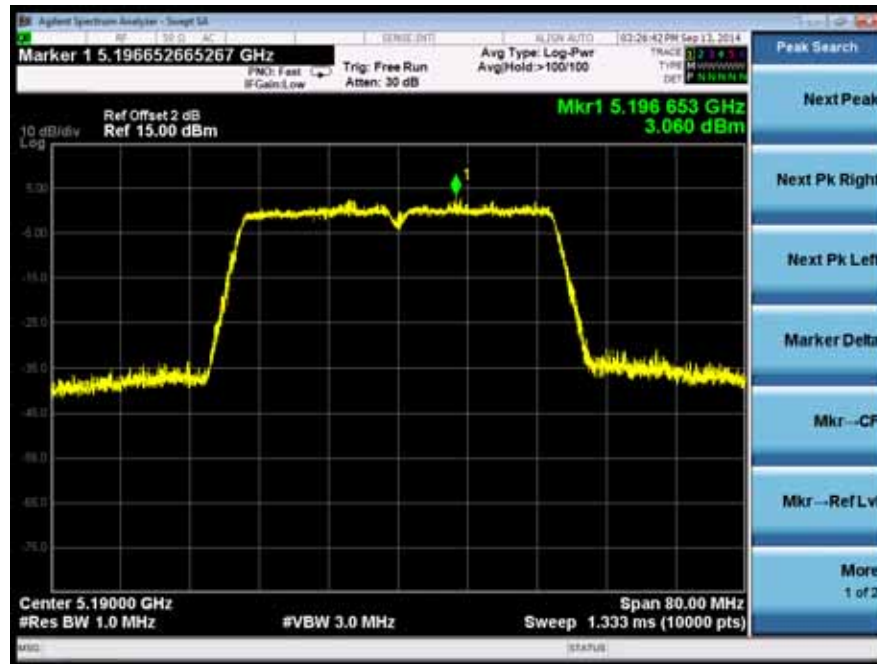
Spectrum Detector: PK Test Date : September 15, 2014
Test By: KK Temperature : 24
Test Result: PASS Humidity : 53 %
Operation Mode: 802.11n(HT40) Antenna: A

Channel number	Channel Frequency(MHz)	Peak Excursion (dBm)	Peak Excursion Limit(dBm)	Pass/Fail
38	5190	2.930	13	Pass
46	5230	5.067	13	Pass



Spectrum Detector: PK Test Date : September 15, 2014
 Test By: KK Temperature : 24
 Test Result: PASS Humidity : 53 %
 Operation Mode: 802.11n(HT40) Antenna: B

Channel number	Channel Frequency(MHz)	Peak Excursion (dBm)	Peak Excursion Limit(dBm)	Pass/Fail
38	5190	3.060	13	Pass
46	5230	5.173	13	Pass



9. Band Edge Test

9.1 Test Procedures

Test method: FCC KDB 789033 G.6

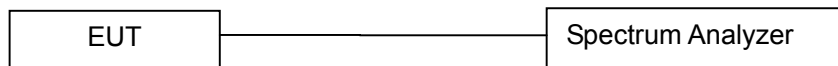
Method AD (Average Detection): Primary method

- 1) Set the spectrum analyzer or EMI receiver span to view the entire emission bandwidth.
- 2) Find the maximum of the peak-max-hold spectrum.
 - a) RBW = 1 MHz.
 - b) VBW $\geq$ 3 MHz.
 - c) Detector = RMS,
 - d) Averaging type = power
 - e) Sweep time = auto.
 - f) Allow the sweeps to continue until the trace stabilizes.
 - g) Use the peak search function to find the peak of the spectrum.
 - h) e.i.r.p Peak Level(dBm)= continued Peak Level(dBm) + Antenna Gain

9.2 Equipment

EQUIPMENT TYPE	MFR	MODEL NUMBER	SERIAL NUMBER	LAST CAL.	CAL DUE.
Signal Analyzer	Agilent	N9010A	My53470879	05/17/2014	05/16/2015

9.3 Block Diagram of Test setup



9.4 Limit

Band 5.15-5.25GHz:

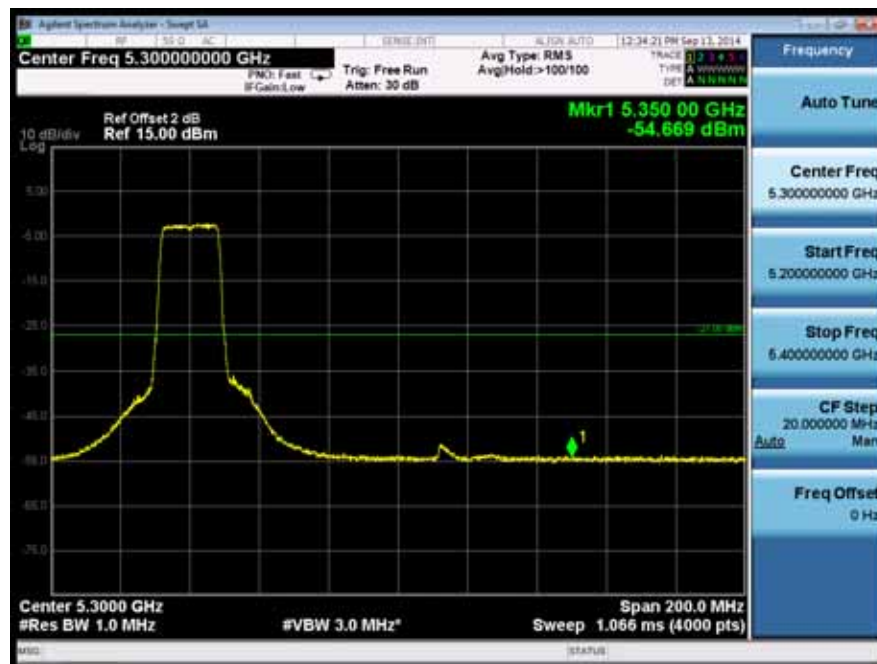
all emissions outside of the 5.15-5.35 GHz band shall not exceed an EIRP of -27 dBm/MHz.

9.5 Test Result

PASS.

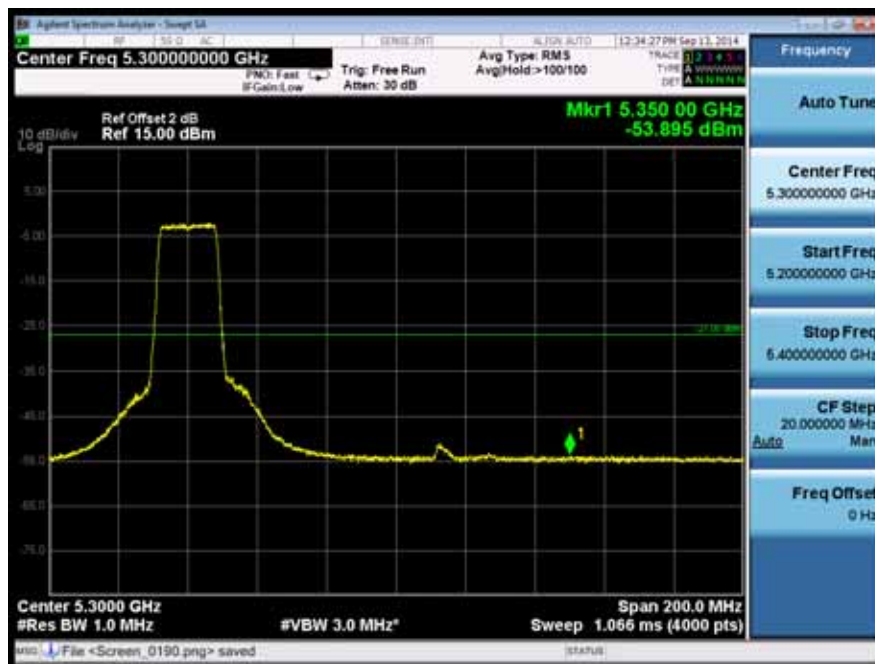
Spectrum Detector:	PK	Test Date :	September 15, 2014
Test By:	KK	Temperature :	24
Test Result:	PASS	Humidity :	53 %
Operation Mode:	802.11a	Antenna:	A

Band Edge Frequency (MHz)	continued Peak Level (dBm)	e.i.r.p Peak Level (dBm)	Limit(dBm)	Pass/Fail
5150	-42.907	-40.907	-27	PASS
5350	-54.669	-52.669	-27	PASS



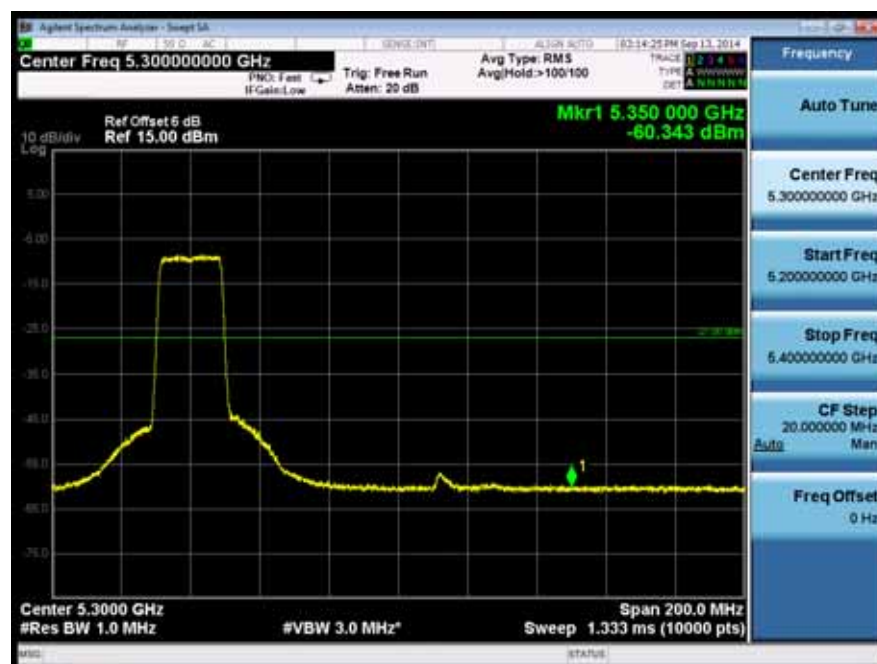
Spectrum Detector:	PK	Test Date :	September 15, 2014
Test By:	KK	Temperature :	24
Test Result:	PASS	Humidity :	53 %
Operation Mode:	802.11a	Antenna:	B

Band Edge Frequency (MHz)	continued Peak Level (dBm)	e.i.r.p Peak Level (dBm)	Limit(dBm)	Pass/Fail
5150	-43.631	-41.631	-27	PASS
5350	-53.895	-51.895	-27	PASS



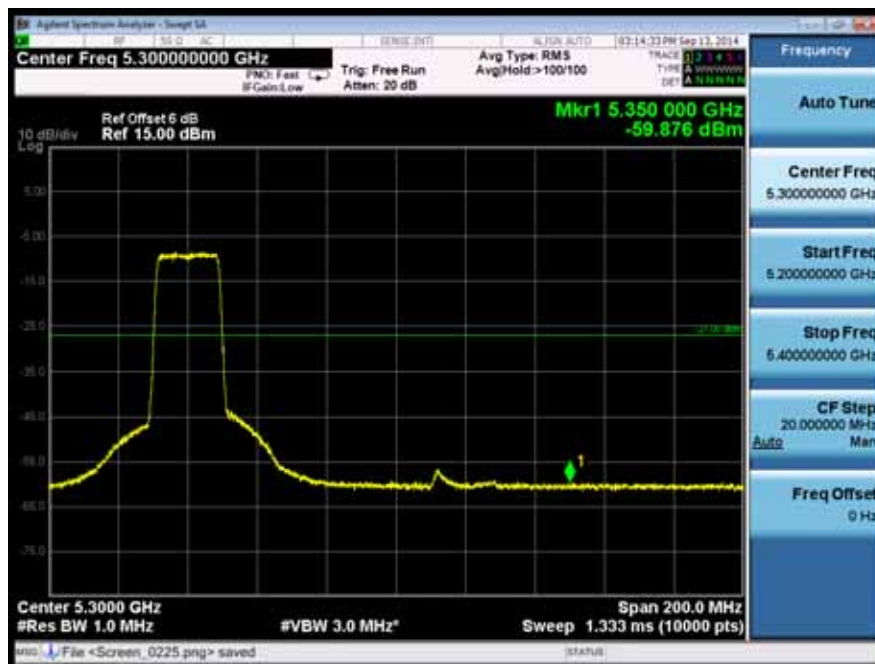
Spectrum Detector: PK Test Date : September 15, 2014
 Test By: KK Temperature : 24
 Test Result: PASS Humidity : 53 %
 Operation Mode: 802.11n(HT20) Antenna: A

Band Edge Frequency (MHz)	continued Peak Level (dBm)	e.i.r.p Peak Level (dBm)	Limit(dBm)	Pass/Fail
5150	-51.702	-49.702	-27	PASS
5350	-60.343	-58.343	-27	PASS



Spectrum Detector:	PK	Test Date :	September 15, 2014
Test By:	KK	Temperature :	24
Test Result:	PASS	Humidity :	53 %
Operation Mode:	802.11n(HT20)	Antenna:	B

Band Edge Frequency (MHz)	continued Peak Level (dBm)	e.i.r.p Peak Level (dBm)	Limit(dBm)	Pass/Fail
5150	-51.610	-49.610	-27	PASS
5350	-59.876	-57.876	-27	PASS



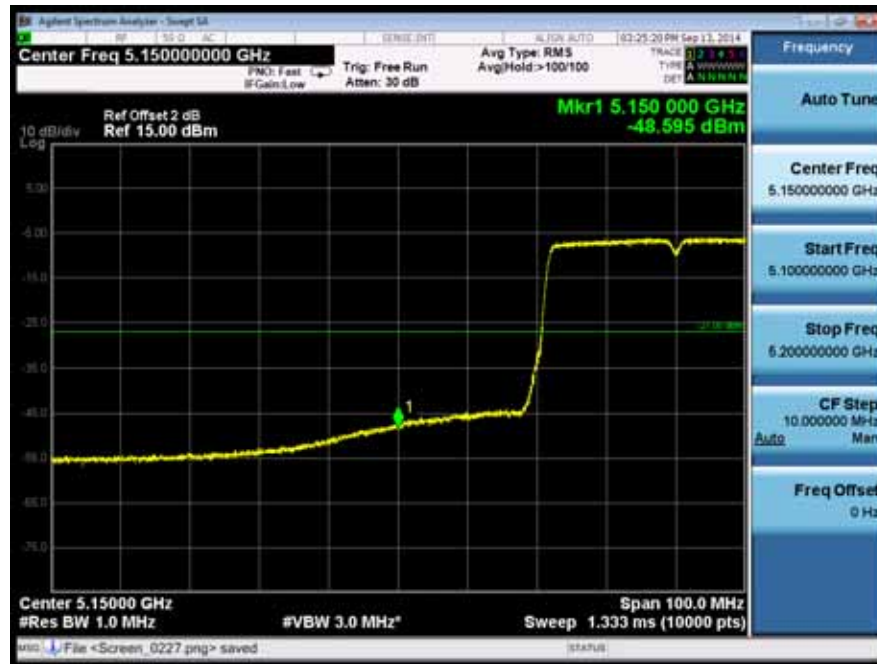
Spectrum Detector: PK Test Date : September 15, 2014
Test By: KK Temperature : 24
Test Result: PASS Humidity : 53 %
Operation Mode: 802.11n(HT40) Antenna: A

Band Edge Frequency (MHz)	continued Peak Level (dBm)	e.i.r.p Peak Level (dBm)	Limit(dBm)	Pass/Fail
5150	-48.036	-46.036	-27	PASS
5350	-55.751	-53.751	-27	PASS



Spectrum Detector: PK Test Date : September 15, 2014
 Test By: KK Temperature : 24
 Test Result: PASS Humidity : 53 %
 Operation Mode: 802.11n(HT40) Antenna: B

Band Edge Frequency (MHz)	continued Peak Level (dBm)	e.i.r.p Peak Level (dBm)	Limit(dBm)	Pass/Fail
5150	-48.595	-46.595	-27	PASS
5350	-55.868	-53.868	-27	PASS



10. Antenna Application

Antenna Requirement

For intentional device, according to FCC 47 CFR Section 15.203, 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. And according to FCC 47 CFR Section 15.247 (b), if transmitting antennas of directional gain greater than 6dBi are used, the power shall be reduced by the amount in dB that the directional gain of the antenna exceeds 6dBi.

Result

The EUT'S antenna is Metal antenna, and the antenna can't be replaced by the user, which in accordance to section 15.203, please refer to the internal photos. The antenna's gain is 2.0dBi and meets the requirement.

11. Uncertainty

Measurement Uncertainty for a level of Confidence of 95%

Parameter	Uncertainty
Radio Frequency	$\pm 1 \times 10^{-5}$
Maximum Conducted Output Power Test	$\pm 1.0\text{dB}$
Radiated Emission Test	$\pm 2.0\text{dB}$
Peak Power Density	$\pm 2.0\text{dB}$
Occupied Bandwidth Test	$\pm 1.0\text{dB}$
Band Edge Test	$\pm 3\text{dB}$
All emission, radiated	$\pm 3\text{dB}$
Antenna Port Emission	$\pm 3\text{dB}$
Temperature	± 0.5
Humidity	$\pm 3\%$