

## FCC 47 CFR PART 15 SUBPART C

### RF Test Report

Applicant : Edimax Technology Co Ltd

Applicant Address : No.3, Wu-Chuan 3rd Road, Wu-Gu, New Taipei City 24891,  
Taiwan

Product Type : AC1750 Ceiling Mount AP

Trade Name : EDIMAX

Model Number : EW-7679CAP, GAP-679CAP, CAP1750

Applicable Standard : FCC 47 CFR PART 15 SUBPART C  
ANSI C63.10:2013

Receive Date : Jan. 04, 2016

Test Period : Jan. 15 ~ Feb. 17, 2016

Issue Date : Mar. 01, 2016

#### Issue by

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Taiwan Accreditation Foundation accreditation number: 1330

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**Revision History**

Rev.	Issue Date	Revisions	Revised By
00	Mar. 01, 2016	Initial Issue	

## Verification of Compliance

Issued Date: Mar. 01, 2016

Applicant : Edimax Technology Co Ltd  
Address Applicant : No.3, Wu-Chuan 3rd Road, Wu-Gu, New Taipei City 24891, Taiwan  
Product Type : AC1750 Ceiling Mount AP  
Trade Name : EDIMAX  
Model Number : EW-7679CAP, GAP-679CAP, CAP1750  
FCC ID : NDD9576791507  
EUT Rated Voltage : DC 12V, 2A  
Test Voltage : 120 Vac / 60 Hz  
Applicable Standard : FCC 47 CFR PART 15 SUBPART C  
ANSI C63.10:2013  
Test Result : Complied  
Performing Lab. : A Test Lab Techno Corp.

No. 140-1, Changan Street, Bade District,  
Taoyuan City 33465, Taiwan (R.O.C)  
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Taiwan Accreditation Foundation accreditation number: 1330  
<http://www.atl-lab.com.tw/e-index.htm>

A Test Lab Techno Corp. tested the above equipment in accordance with the requirements set forth in the above standards. All indications of Pass/Fail in this report are opinions expressed by A Test Lab Techno Corp. based on interpretations and/or observations of test results. Measurement Uncertainties were not taken into account and are published for informational purposes only. The test results show that the equipment tested is capable of demonstrating compliance with the requirements as documented in this report.

Approved By



(Manager)

(Fly Lu)

Reviewed By



(Testing Engineer)

(Eric Ou Yang)

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## 1 General Information

### 1.1 Summary of Test Result

Standard	Item	Result	Remark
15.247			
15.207	AC Power Conducted Emission	PASS	-----
Standard	Item	Result	Remark
15.247			
15.247(d)	Transmitter Radiated Emissions	PASS	-----
15.247(b)(3)	Max. Output Power	PASS	-----
15.247(a)(2)	6dB RF Bandwidth	PASS	-----
15.247(e)	Power Spectral Density	PASS	-----
15.247(d)	Out of Band Conducted Spurious Emission	PASS	-----
15.203	Antenna Requirement	PASS	-----

The test results of this report relate only to the tested sample(s) identified in this report. Manufacturer or whom it may concern should recognize the pass or fail of the test result.

### 1.2 Measurement Uncertainty

Test Item	Frequency Range	Uncertainty (dB)
Conducted Emission	9kHz ~ 150KHz	2.7
	150kHz ~ 30MHz	2.8
Radiated Emission	9kHz ~ 30MHz	1.457
	30MHz ~ 1000MHz	6.300
	1000MHz ~ 18000MHz	5.474
	18000MHz ~ 26500MHz	5.630
	26500MHz ~ 40000MHz	5.054

## 2 EUT Description

Applicant	Edimax Technology Co Ltd			
Applicant Address	No.3, Wu-Chuan 3rd Road, Wu-Gu, New Taipei City 24891, Taiwan			
Manufacturer	Edimax Technology Co Ltd			
Manufacturer Address	No.3, Wu-Chuan 3rd Road, Wu-Gu, New Taipei City 24891, Taiwan			
Product Type	AC1750 Ceiling Mount AP			
Trade Name	EDIMAX			
Model Number	EW-7679CAP, GAP-679CAP, CAP1750			
Model Number Different Description	Those model numbers differ from each other in selling region.			
FCC ID	NDD9576791507			
Operate Freq. Band	Frequency Range (MHz)	Modulation	Channel Bandwidth	Data Rate 400 / 800 GI (ns)
IEEE 802.11b	2412 ~ 2462	DSSS	20MHz	Up to 11Mbps
IEEE 802.11g	2412 ~ 2462	DSSS+OFDM	20MHz	Up to 54Mbps
IEEE 802.11n 2.4GHz 20MHz	2412 ~ 2462	OFDM	20MHz	Up to 216.6Mbps
IEEE 802.11n 2.4GHz 40MHz	2422 ~ 2452	OFDM	40MHz	Up to 450Mbps
Antenna Delivery	IEEE 802.11b / g : 1TX + 1RX IEEE 802.11n 2.4GHz 20MHz / 40MHz : 3TX + 3RX			
Antenna information	Item	Model	Type	Max. Gain (dBi)
	Ant-0	RFMTA190800NNAB001	PIFA Antenna	4.47
	Ant-1	RFMTA270819IMAB701	PIFA Antenna	3.21
	Ant-2	RFMTA260900NNAB001	PIFA Antenna	3.14
Power adapter List				
Power adapter(1)	Trade Name	APD	Model Number	WA-30J12R
	I/P: 100-240VAC, 50-60Hz, 0.9A Max. O/P: 12VDC, 2.5A Cable out: Non-Shielded, 1.4m, Detachable at Power Adapter			
Power adapter(2)	Trade Name	APD	Model Number	WA-24Q12R
	I/P: 100-240VAC, 50-60Hz, 0.7A Max. O/P: 12VDC, 2A Cable out: Non-Shielded, 1.4m, Detachable at Power Adapter			

Frequency Band	Max. RF Output Power (W)
IEEE 802.11b	0.343
IEEE 802.11g	0.291
IEEE 802.11n 2.4GHz 20MHz	0.337
IEEE 802.11n 2.4GHz 40MHz	0.193

### 3 Test Methodology

#### 3.1. Mode of Operation

Decision of Test ATL has verified the construction and function in typical operation. All the test modes were carried out with the EUT in normal operation, which was shown in this test report and defined as:

Test Mode
Mode 1: Normal operation mode
Mode 2: IEEE 802.11b link mode
Mode 3: IEEE 802.11g link mode
Mode 4: IEEE 802.11n 2.4GHz 20MHz link mode
Mode 5: IEEE 802.11n 2.4GHz 40MHz link mode

Software used to control the EUT for staying in continuous transmitting mode was programmed.

After verification, all tests were carried out with the worst case test modes as shown below except radiated spurious emission below 1GHz and power line conducted emissions below 30MHz, which worst case was in normal link mode only.

The device used two models of adapter, adapter number: WA-24Q12R is worst case to perform testing.

Test Mode	ANT-0	ANT-1	ANT-2	ANT-0+1+2
Mode 2: IEEE 802.11b link mode	V	---	---	---
Mode 3: IEEE 802.11g link mode	V	---	---	---
Mode 4: IEEE 802.11n 2.4GHz 20MHz link mode	V	V	V	V
Mode 5: IEEE 802.11n 2.4GHz 40MHz link mode	V	V	V	V

Test Mode	Antenna Delivery	Test Channel	Data Rate 800GI (ns)
Mode 2: IEEE 802.11b link mode	1TX / 1RX	1, 6, 11	1
Mode 3: IEEE 802.11g link mode	1TX / 1RX	1, 6, 11	6
Mode 4: IEEE 802.11n 2.4GHz 20MHz link mode	3TX / 3RX	1, 6, 11	19.5
Mode 5: IEEE 802.11n 2.4GHz 40MHz link mode	3TX / 3RX	3, 6, 9	40.5

#### Duty cycle

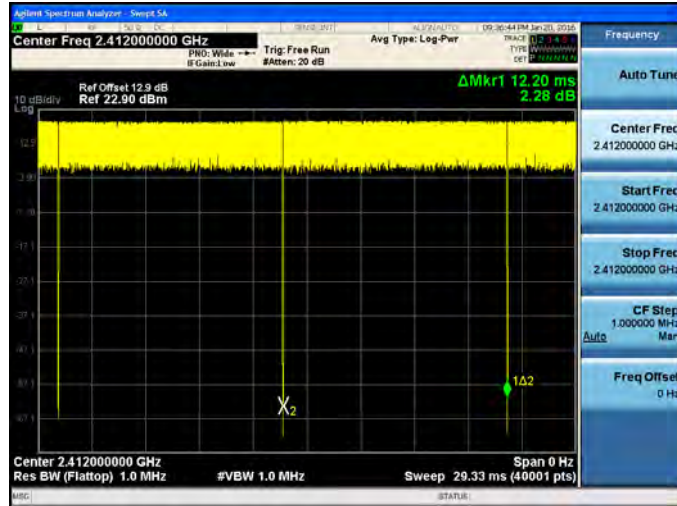
Test Mode	Frequency (MHz)	on time (ms)	on+off time (ms)	Duty cycle	Duty Factor (dB)	1/T Minimum VBW (kHz)
Mode 2: IEEE 802.11b link mode	2412.0	12.200	12.230	0.998	0.011	0.010
Mode 3: IEEE 802.11g link mode	2412.0	2.038	2.074	0.983	0.076	0.010
Mode 4: IEEE 802.11n 2.4GHz 20MHz link mode	2412.0	0.675	0.718	0.941	0.265	1.481
Mode 5: IEEE 802.11n 2.4GHz 40MHz link mode	2422.0	0.354	0.387	0.914	0.392	2.826



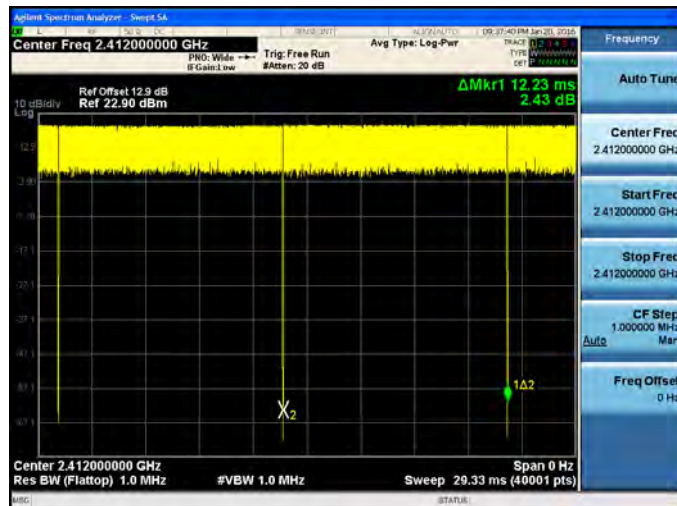
**Duty Cycle Graphs**

Mode 2: IEEE 802.11b link mode

On time

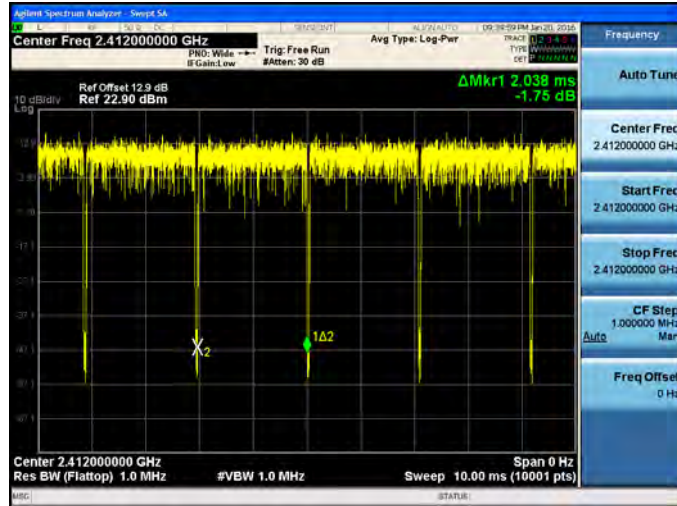


On+off time

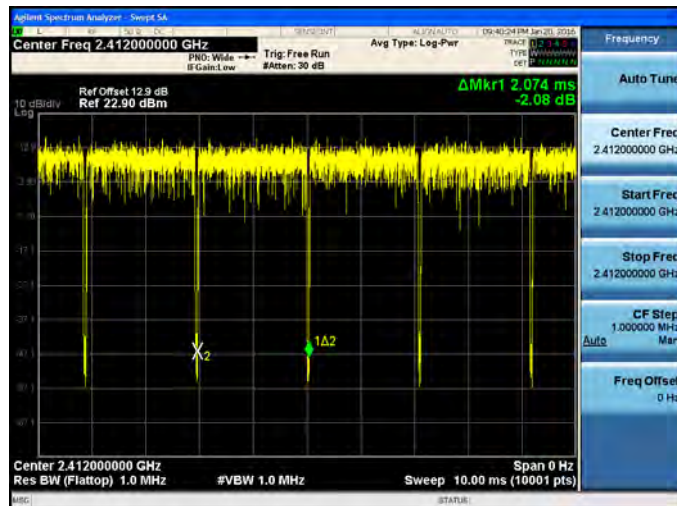


Mode 3: IEEE 802.11g Mode

On time



On+off time



Mode 4: IEEE 802.11n 2.4GHz 20MHz Mode

<p>On time</p>	
<p>On+off time</p>	

Mode 5: IEEE 802.11n 2.4GHz 40MHz Mode	
On time	<p>Agilent Spectrum Analyzer - Sweep 5A          Center Freq 2.412000000 GHz          Ref Offset 12.9 dB          Ref 22.90 dBm          ΔMkr1 353.8 μs          1.29 dB          Center 2.412000000 GHz          Res BW (Flattop) 1.0 MHz          #VBW 1.0 MHz          Sweep 2.000 ms (10001 pts)</p>
On+off time	<p>Agilent Spectrum Analyzer - Sweep 5A          Center Freq 2.412000000 GHz          Ref Offset 12.9 dB          Ref 22.90 dBm          ΔMkr1 387.2 μs          10.33 dB          Center 2.412000000 GHz          Res BW (Flattop) 1.0 MHz          #VBW 1.0 MHz          Sweep 2.000 ms (10001 pts)</p>

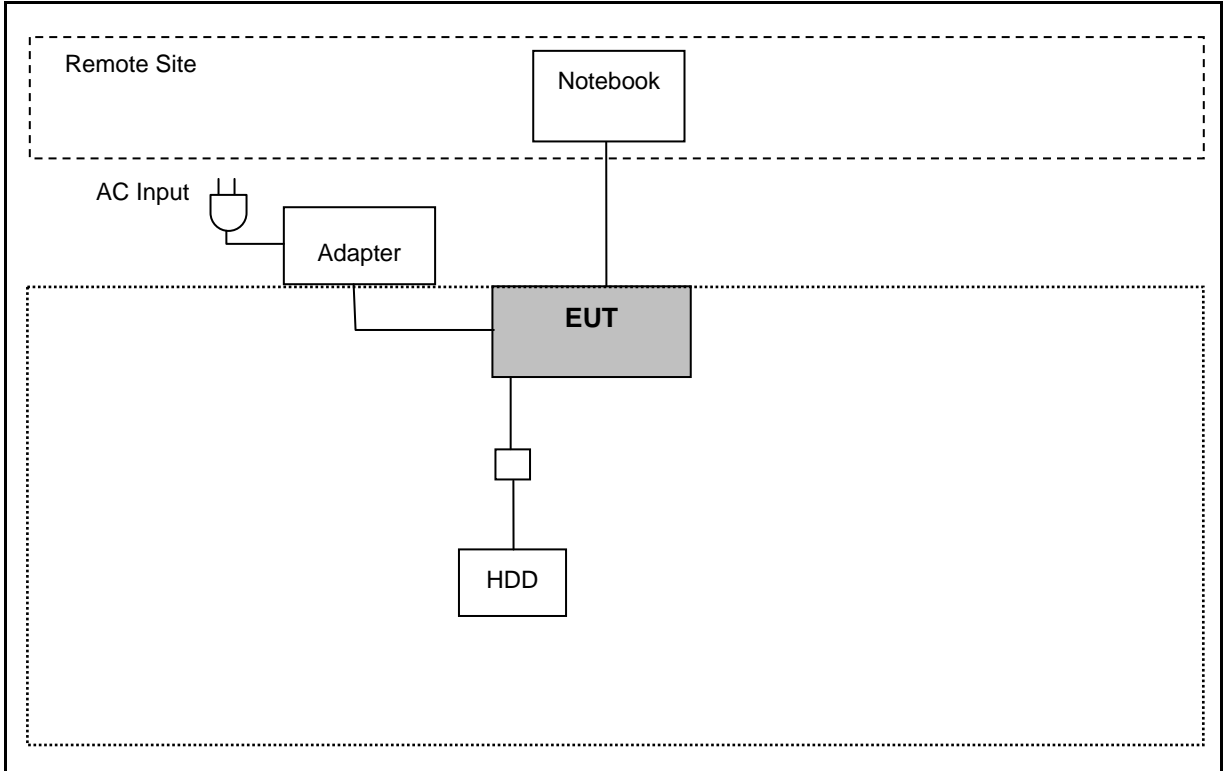
### 3.2. EUT Exercise Software

- |    |                                     |
|----|-------------------------------------|
| 1. | Setup the EUT shown on 3.3.         |
| 2. | Turn on the power of all equipment. |
| 3. | Turn on Wi-Fi function.             |
| 4. | EUT run test program.               |

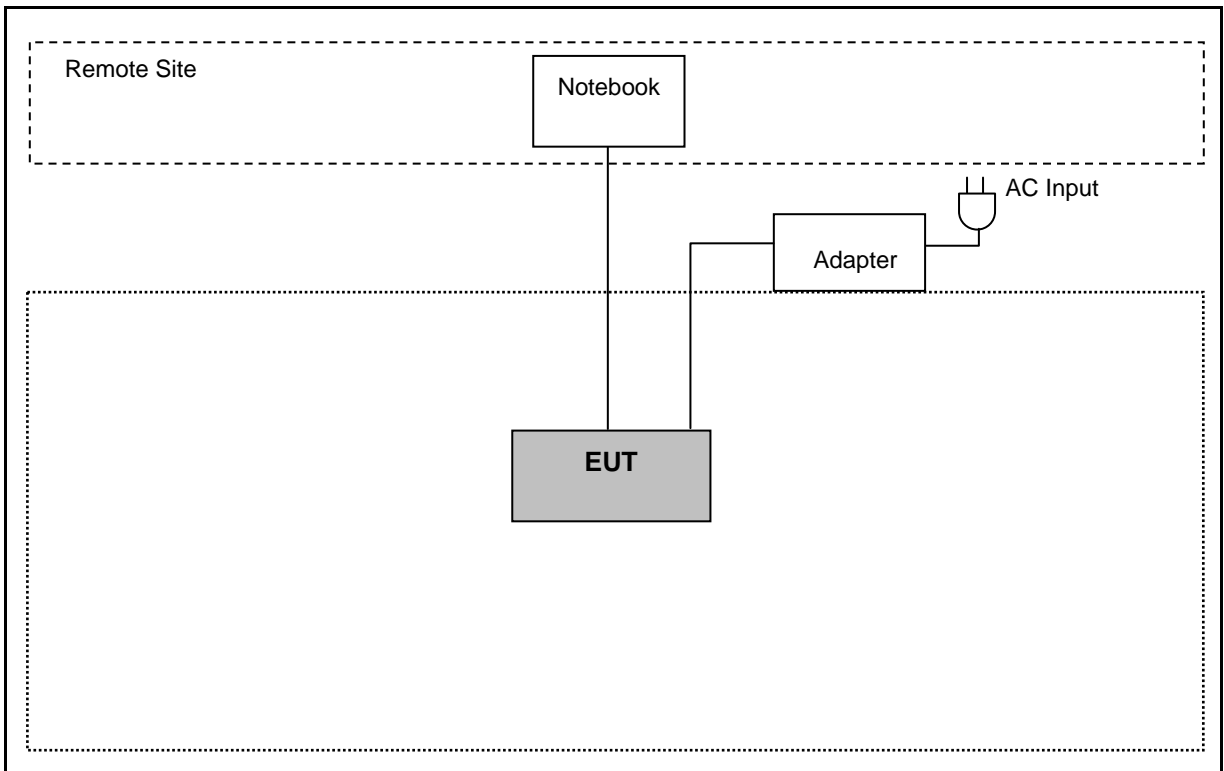
Measurement Software	
1	EZ-EMC Ver. ATL-03A1-1
2	EZ-EMC Ver ATL-ITC-3A1-1

### 3.3. Configuration of Test System Details

#### Conducted Emissions



#### Radiated Emissions



**3.4. Test Site Environment**

Items	Required (IEC 60068-1)	Actual
Temperature (°C)	15-35	26
Humidity (%RH)	25-75	60
Barometric pressure (mbar)	860-1060	950

## 4 Conducted Emission Measurement

### 4.1. Limit

Frequency (MHz)	Quasi-peak	Average
0.15 - 0.5	66 to 56	56 to 46
0.50 - 5.0	56	46
5.0 - 30.0	60	50

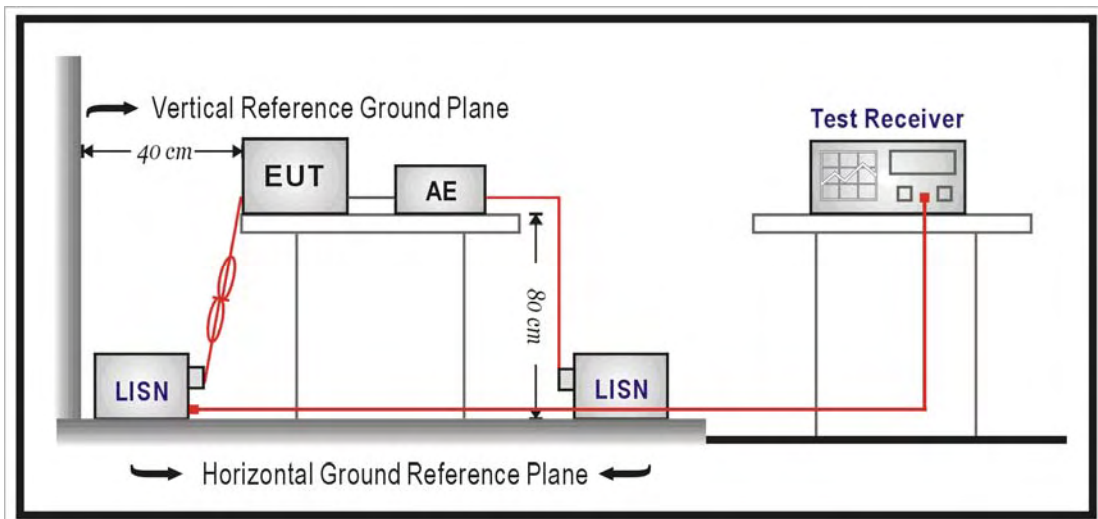
### 4.2. Test Instruments

Describe	Manufacturer	Model Number	Serial Number	Cal. Date	Remark
Test Receiver	R&S	ESCI	100367	06/25/2015	(1)
LISN	R&S	ENV216	101040	03/10/2015	(1)
LISN	R&S	ENV216	101041	03/06/2015	(1)
RF Cable	Woken	00100D1380194M	TE-02-02	06/26/2015	(1)
Test Site	ATL	TE02	TE02	N.C.R.	-----

Remark: (1) Calibration period 1 year. (2) Calibration period 2 years. (3) Calibration period 3 years.

Note: N.C.R. = No Calibration Request.

### 4.3. Test Setup





#### 4.4. Test Procedure

The power line conducted emission measurements were performed in a shielded enclosure. The EUT was assembled on a wooden table which is 80 centimeters high, was placed 40 centimeters from the back wall and at least 1 meter from the sidewall.

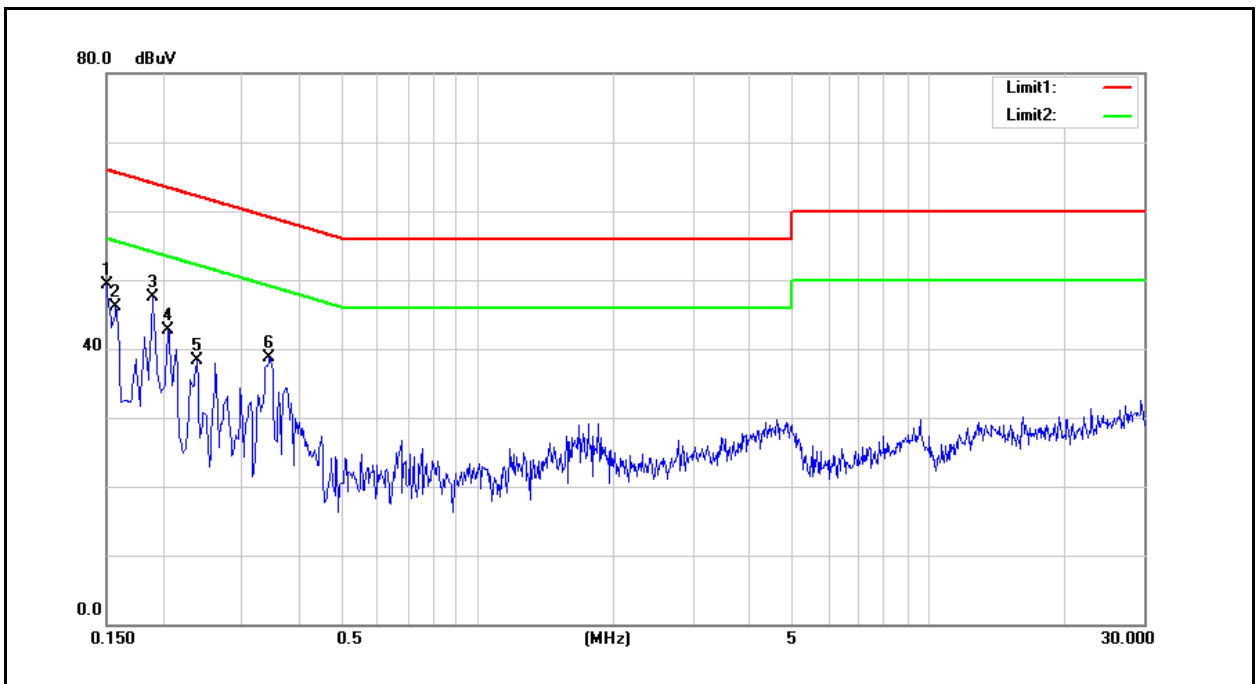
Power was fed to the EUT from the public utility power grid through a line filter and EMCO Model 3162/2 SH Line Impedance Stabilization Networks (LISN). The LISN housing, measuring instrumentation case, ground plane, etc., were electrically bonded together at the same RF potential. The Spectrum analyzer was connected to the AC line through an isolation transformer. The 50-ohm output of the LISN was connected to the spectrum analyzer directly. Conducted emission levels were in the CISPR quasi-peak detection mode. The analyzer's 6 dB bandwidth was set to 9 KHz. No post-detector video filter was used.

The spectrum was scanned from 150 KHz to 30 MHz. The physical arrangement of the test system and associated cabling was varied (within the scope of arrangements likely to be encountered in actual use) to determine the effect on the unit's emanations in amplitude and frequency. All spurious emission frequencies were observed. The highest emission amplitudes relative to the appropriate limit were measured and have been recorded in paragraph 4.1.



#### 4.5. Test Result

Standard:	FCC Part 15C	Line:	L1
Test item:	Conducted Emission	Power:	AC 120V/60Hz
Model Number:	EW-7679CAP	Temp.(°C)/Hum.(%RH):	26(°C)/60%RH
Mode:	Mode 1	Date:	01/15/2016
		Test By:	Eric Ou Yang
Description:			

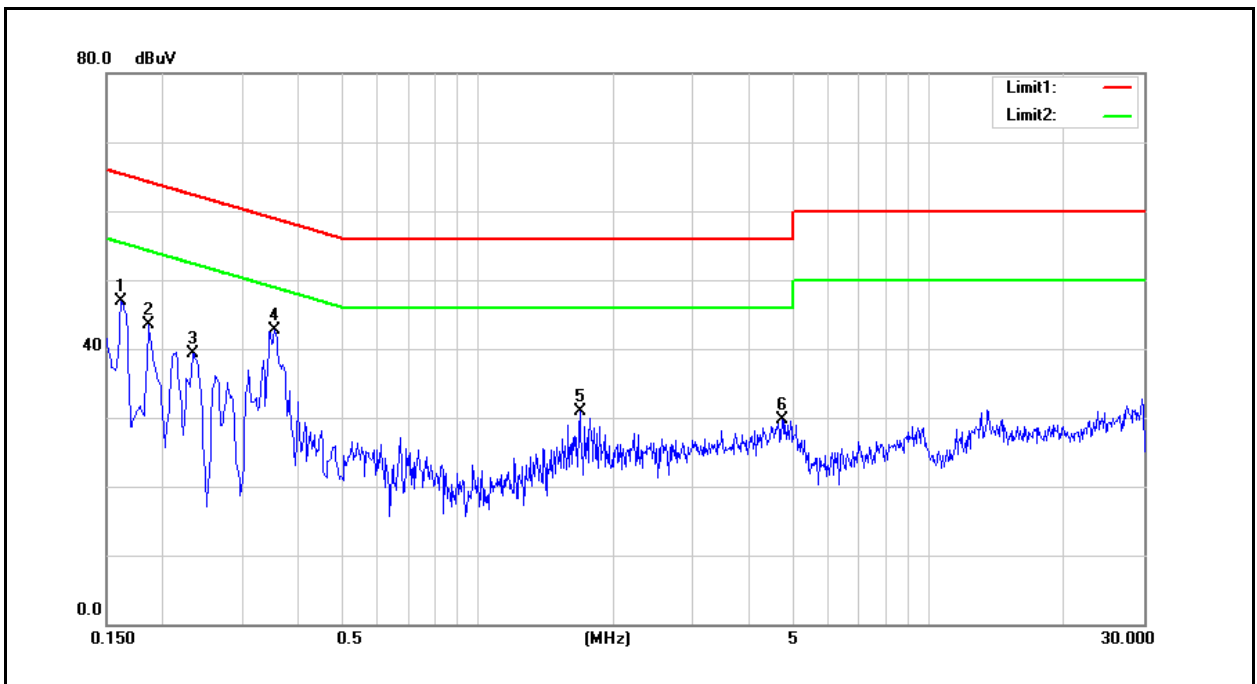


No.	Frequency (MHz)	QP reading (dBuV)	AVG reading (dBuV)	Correction factor (dB)	QP result (dBuV)	AVG result (dBuV)	QP limit (dBuV)	AVG limit (dBuV)	QP margin (dB)	AVG margin (dB)	Remark
1	0.1500	37.11	22.89	9.69	46.80	32.58	66.00	56.00	-19.20	-23.42	Pass
2	0.1580	35.32	19.89	9.69	45.01	29.58	65.57	55.57	-20.56	-25.99	Pass
3	0.1900	29.29	16.38	9.68	38.97	26.06	64.04	54.04	-25.07	-27.98	Pass
4	0.2060	27.91	16.42	9.68	37.59	26.10	63.37	53.37	-25.78	-27.27	Pass
5	0.2380	23.52	12.83	9.68	33.20	22.51	62.17	52.17	-28.97	-29.66	Pass
6	0.3460	27.83	19.79	9.69	37.52	29.48	59.06	49.06	-21.54	-19.58	Pass

Note: 1. Result (dBuV) = Correction factor (dB) + Reading(dBuV).

2. Correction factor (dB) = Cable loss (dB) + L.I.S.N. factor (dB).

Standard:	FCC Part 15C	Line:	N
Test item:	Conducted Emission	Power:	AC 120V/60Hz
Model Number:	EW-7679CAP	Temp.(°C)/Hum.(%RH):	26(°C)/60%RH
Mode:	Mode 1	Date:	01/15/2016
		Test By:	Eric Ou Yang
Description:			



No.	Frequency (MHz)	QP reading (dBuV)	AVG reading (dBuV)	Correction factor (dB)	QP result (dBuV)	AVG result (dBuV)	QP limit (dBuV)	AVG limit (dBuV)	QP margin (dB)	AVG margin (dB)	Remark
1	0.1620	32.77	17.03	9.66	42.43	26.69	65.36	55.36	-22.93	-28.67	Pass
2	0.1860	31.27	17.72	9.65	40.92	27.37	64.21	54.21	-23.29	-26.84	Pass
3	0.2340	24.68	15.36	9.65	34.33	25.01	62.31	52.31	-27.98	-27.30	Pass
4	0.3540	31.24	23.85	9.66	40.90	33.51	58.87	48.87	-17.97	-15.36	Pass
5	1.6820	13.60	8.40	9.73	23.33	18.13	56.00	46.00	-32.67	-27.87	Pass
6	4.7380	15.05	7.68	9.83	24.88	17.51	56.00	46.00	-31.12	-28.49	Pass

Note: 1. Result (dBuV) = Correction factor (dB) + Reading(dBuV).

2. Correction factor (dB) = Cable loss (dB) + L.I.S.N. factor (dB).

## 5 Radiated Emission Measurement

### 5.1. Limit

According to §15.209(a), except as provided elsewhere in this subpart, the emissions from an intentional radiator shall not exceed the field strength levels specified in the following table:

Frequency (MHz)	Field Strength ( $\mu\text{V}/\text{m}$ at 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

\*\* Except as provided in paragraph (g), fundamental emissions from intentional radiators operating under this Section shall not be located in the frequency bands 54-72 MHz, 76-88 MHz, 174-216 MHz or 470-806 MHz. However, operation within these frequency bands is permitted under other sections of this Part, e.g., Sections 15.231 and 15.241.

**5.2. Test Instruments**

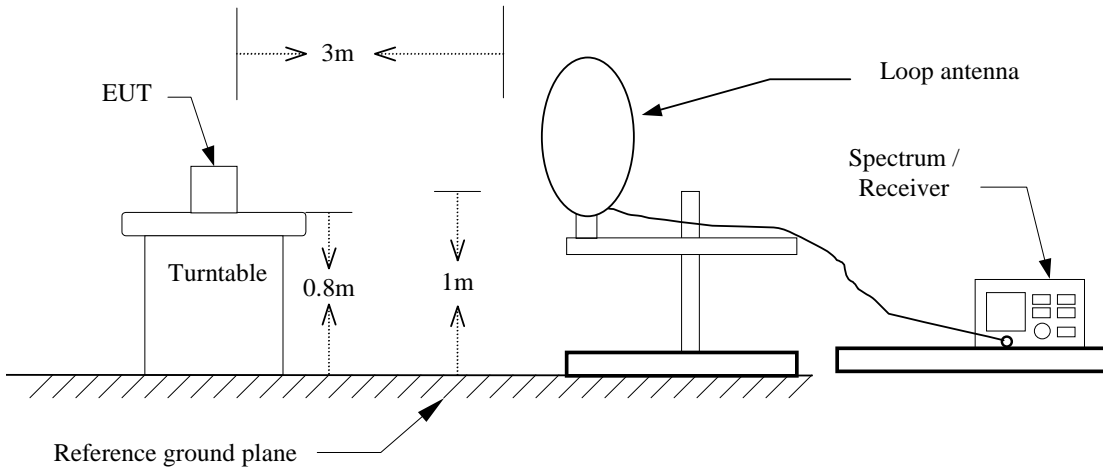
3 Meter Chamber (966-B)					
Equipment	Manufacturer	Model Number	Serial Number	Cal. Date	Remark
RF Pre-selector	Agilent	N9039A	MY46520255	05/14/2015	(1)
Spectrum Analyzer	Agilent	E4445A	MY45300744	12/15/2015	(1)
Spectrum Analyzer	Agilent	N9039A	MY53120541	12/14/2015	(1)
Pre-amplifier	EM	EM330	60545	11/16/2015	(1)
Amplifier	Agilent	8449B	3008A02456	02/24/2015	(1)
Broadband Antenna (30MHz~1GHz)	SCHWARZBECK MESS-ELEKTRONIK	VULB 9160	3268	06/04/2015	(1)
Horn Antenna (1~18GHz)	ETS	3117	152321	08/14/2015	(1)
Horn Antenna (18~40GHz)	ETS	3116	86467	09/02/2015	(1)
Loop Antenna	COM-POWER CORPORATION	AL-130	121014	02/02/2015	(1)
Microwave Cable	EMCI	EMC104-SM-S M-6000	140302	02/24/2015	(1)
Microwave Cable	EMCI	EMC104-SM-S M-1500	140303	02/24/2015	(1)
Microwave Cable	EMCI	EMC104-SM-S M-7000	140501	02/24/2015	(1)
Test Site	ATL	TE09	TE09	05/05/2015	(1)

Remark: (1) Calibration period 1 year. (2) Calibration period 2 years. (3) Calibration period 3 years.

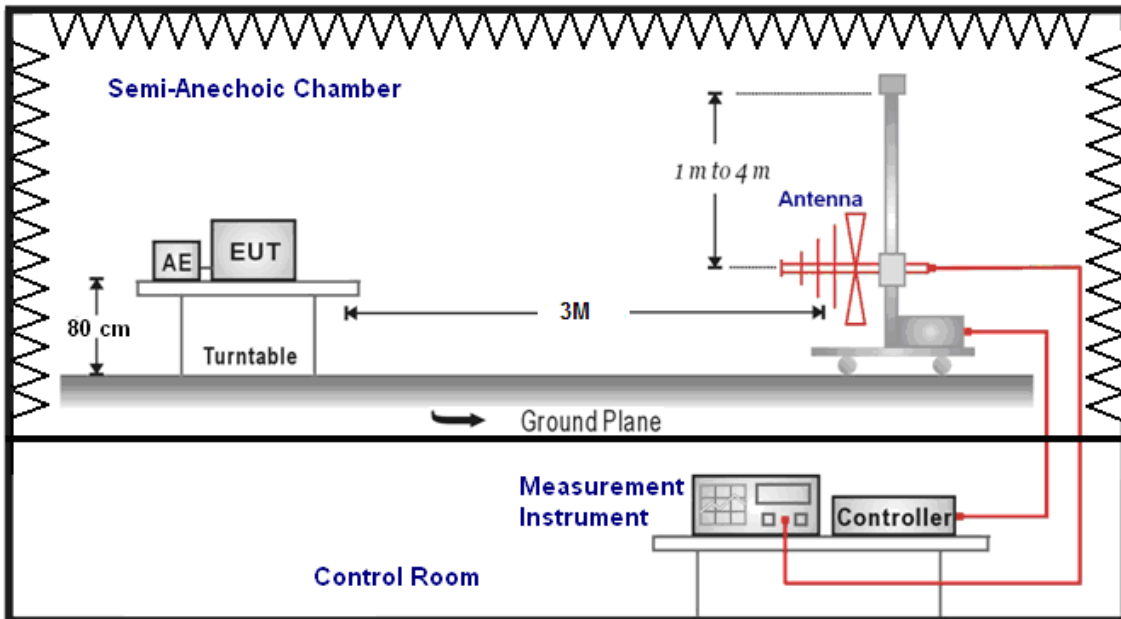
Note: N.C.R. = No Calibration Request.

### 5.3. Setup

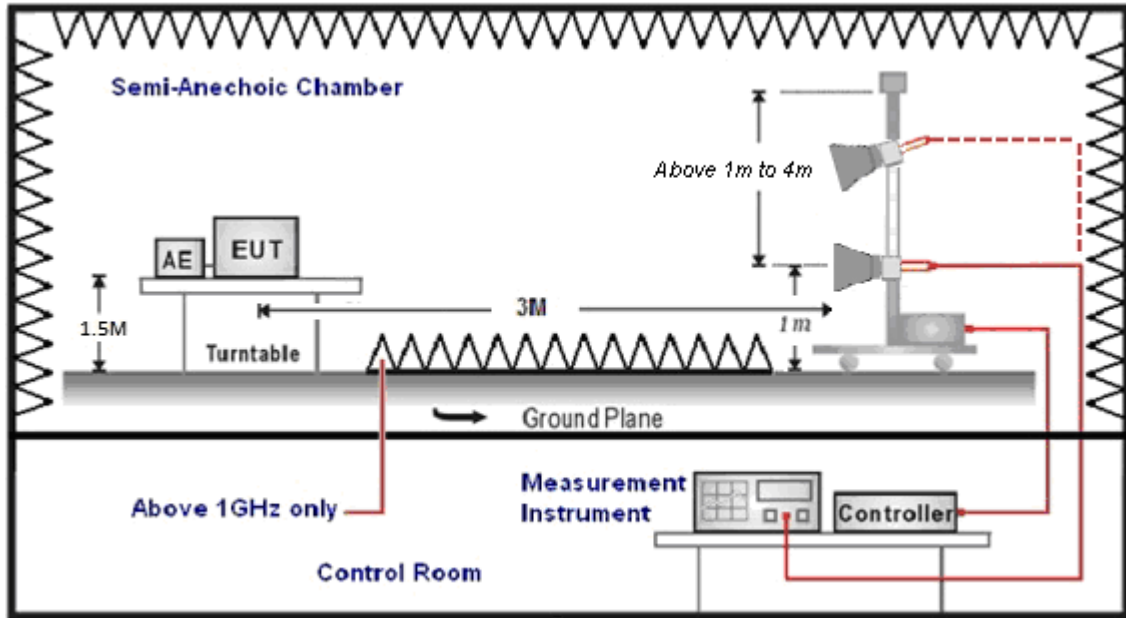
9kHz ~ 30MHz



Below 1GHz



Above 1GHz



## 5.4. Test Procedure

Final radiation measurements were made on a three-meter, Semi Anechoic Chamber. The EUT system was placed on a nonconductive turntable which is 0.8 or 1.5 meters height (below 1GHz use 0.8m turntable / above 1GHz use 1.5m turntable), top surface 1.0 x 1.5 meter. The spectrum was examined from 250 MHz to 2.5 GHz in order to cover the whole spectrum below 10th harmonic which could generate from the EUT. During the test, EUT was set to transmit continuously & Measurements spectrum range from 9 kHz to 26.5 GHz is investigated.

For measurements below 1 GHz the resolution bandwidth is set to 100 kHz for peak detection measurements or 120 kHz for quasi-peak detection measurements. Peak detection is used unless otherwise noted as quasi-peak.

For measurements above 1 GHz the resolution bandwidth is set to 1 MHz, and then the video bandwidth is set to 1 MHz for peak measurements and 10 Hz for average measurements when Duty cycle >0.98 / 1/T for average measurements when Duty cycle <0.98. A nonconductive material surrounded the EUT to supporting the EUT for standing on three orthogonal planes. At each condition, the EUT was rotated 360 degrees, and the antenna was raised and lowered from one to four meters to find the maximum emission levels. Measurements were taken using both horizontal and vertical antenna polarization.

SCHWARZBECK MESS-ELEKTRONIK Biconilog Antenna (mode VULB9163) at 3 Meter and the SCHWARZBECK Double Ridged Guide Antenna (model BBHA9120D&9170) was used in frequencies 1 –26.5 GHz at a distance of 3 meter. The antenna at an angle toward the source of the emission. All test results were extrapolated to equivalent signal at 3 meters utilizing an inverse linear distance extrapolation Factor (20dB/decade).

For testing above 1GHz, the emission level of the EUT in peak mode was 20dB lower than average limit (that means the emission level in peak mode also complies with the limit in average mode), then testing will be stopped and peak values of EUT will be reported, otherwise, the emissions will be measured in average mode again and reported.

Appropriate preamplifiers were used for improving sensitivity and precautions were taken to avoid overloading or desensitizing the spectrum analyzer. No post – detector video filters were used in the test.

The spectrum analyzer's 6 dB bandwidth was set to 1 MHz, and the analyzer was operated in the peak detection mode, for frequencies both below and up 1 GHz. The average levels were obtained by subtracting the duty cycle correction factor from the peak readings.

The following procedures were used to convert the emission levels measured in decibels referenced to 1 microvolt (dBuV) into field intensity in micro volts pre meter (uV/m).

The actual field intensity in decibels referenced to 1 microvolt in to field intensity in micro volts per meter (dBuV/m).

The actual field intensity in referenced to 1 microvolt per meter (dBuV/m) is determined by algebraically adding the measured reading in dBuV, the antenna factor (dB), and cable loss (dB) and Subtracting the gain of preamplifier (dB) is auto calculate in spectrum analyzer.

(1)  $\text{Amplitude (dBuV/m)} = \text{FI (dBuV)} + \text{AF (dBuV)} + \text{CL (dBuV)} - \text{Gain (dB)}$

FI= Reading of the field intensity.

AF= Antenna factor.

CL= Cable loss.

P.S Amplitude is auto calculate in spectrum analyzer.

(2)  $\text{Actual Amplitude (dBuV/m)} = \text{Amplitude (dBuV)} - \text{Dis(dB)}$

The FCC specified emission limits were calculated according the EUT operating frequency and by following linear interpolation equations:

(a) For fundamental frequency : Transmitter Output < +30dBm

(b) For spurious frequency : Spurious emission limits = fundamental emission limit /10

Data of measurement within this frequency range without mark 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.



## 5.5. Test Result

### Below 1GHz

Standard:	FCC Part 15C	Test Distance:	3m
Test item:	Radiated Emission	Power:	AC 120V/60Hz
Model Number:	EW-7679CAP	Temp.(°C)/Hum.(%RH):	26(°C)/60%RH
Mode:	Mode 1	Date:	01/15/2016
		Test By:	Eric Ou Yang

Frequency (MHz)	Reading (dBuV)	Correct Factor (dB/m)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Remark	Ant.Polar. H / V
130.8800	43.67	-16.33	27.34	43.50	-16.16	QP	H
299.6600	52.71	-14.12	38.59	46.00	-7.41	QP	H
375.3200	47.17	-11.98	35.19	46.00	-10.81	QP	H
493.6600	39.70	-8.94	30.76	46.00	-15.24	QP	H
624.6100	40.55	-6.17	34.38	46.00	-11.62	QP	H
874.8700	39.65	-1.85	37.80	46.00	-8.20	QP	H
93.0500	53.73	-21.54	32.19	43.50	-11.31	QP	V
299.6600	49.37	-14.12	35.25	46.00	-10.75	QP	V
375.3200	42.94	-11.98	30.96	46.00	-15.04	QP	V
499.4800	45.75	-8.82	36.93	46.00	-9.07	QP	V
624.6100	40.46	-6.17	34.29	46.00	-11.71	QP	V
874.8700	39.83	-1.85	37.98	46.00	-8.02	QP	V

Note: No emission found between lowest internal used/generated frequency to 30MHz (9kHz~30MHz).

**Above 1GHz**

Standard:	FCC Part 15C	Test Distance:	3m
Test item:	Radiated Emission	Power:	AC 120V/60Hz
Model Number:	EW-7679CAP	Temp.(°C)/Hum.(%RH):	26(°C)/60%RH
Mode:	Mode 2	Date:	01/18/2016
Frequency:	2412MHz	Test By:	Eric Ou Yang

Frequency (MHz)	Reading (dBuV)	Correct Factor (dB/m)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Remark	Ant.Polar. H / V
3037.000	36.67	1.48	38.15	74.00	-35.85	peak	H
4824.000	43.37	7.46	50.83	74.00	-23.17	peak	H
6467.000	31.78	11.44	43.22	74.00	-30.78	peak	H
3030.000	36.99	1.46	38.45	74.00	-35.55	peak	V
4824.000	47.82	7.46	55.28	74.00	-18.72	peak	V
4824.000	45.45	7.46	52.91	54.00	-1.09	AVG	V
6698.000	32.38	12.02	44.40	74.00	-29.60	peak	V

Standard:	FCC Part 15C	Test Distance:	3m
Test item:	Radiated Emission	Power:	AC 120V/60Hz
Model Number:	EW-7679CAP	Temp.(°C)/Hum.(%RH):	26(°C)/60%RH
Mode:	Mode 2	Date:	01/18/2016
Frequency:	2437MHz	Test By:	Eric Ou Yang

Frequency (MHz)	Reading (dBuV)	Correct Factor (dB/m)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Remark	Ant.Polar. H / V
3023.000	36.83	1.42	38.25	74.00	-35.75	peak	H
4874.000	44.25	7.63	51.88	74.00	-22.12	peak	H
6663.000	31.95	11.93	43.88	74.00	-30.12	peak	H
3051.000	37.11	1.55	38.66	74.00	-35.34	peak	V
4874.000	45.53	7.63	53.16	74.00	-20.84	peak	V
4874.000	45.02	7.63	52.65	54.00	-1.35	AVG	V
6677.000	33.58	11.97	45.55	74.00	-28.45	peak	V

Standard:	FCC Part 15C			Test Distance:	3m		
Test item:	Radiated Emission			Power:	AC 120V/60Hz		
Model Number:	EW-7679CAP			Temp.(°C)/Hum.(%RH):	26(°C)/60%RH		
Mode:	Mode 2			Date:	01/18/2016		
Frequency:	2462MHz			Test By:	Eric Ou Yang		
Frequency (MHz)	Reading (dBuV)	Correct Factor (dB/m)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Remark	Ant.Polar. H / V
3051.000	37.24	1.55	38.79	74.00	-35.21	peak	H
4924.000	42.02	7.81	49.83	74.00	-24.17	peak	H
6719.000	33.58	12.07	45.65	74.00	-28.35	peak	H
3086.000	36.47	1.71	38.18	74.00	-35.82	peak	V
4924.000	44.57	7.81	52.38	74.00	-21.62	peak	V
4924.000	43.15	7.81	50.96	54.00	-3.04	AVG	V
6698.000	33.39	12.02	45.41	74.00	-28.59	peak	V

Standard:	FCC Part 15C			Test Distance:	3m		
Test item:	Radiated Emission			Power:	AC 120V/60Hz		
Model Number:	EW-7679CAP			Temp.(°C)/Hum.(%RH):	26(°C)/60%RH		
Mode:	Mode 3			Date:	01/14/2016		
Frequency:	2412MHz			Test By:	Eric Ou Yang		
Frequency (MHz)	Reading (dBuV)	Correct Factor (dB/m)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Remark	Ant.Polar. H / V
3009.000	37.96	1.35	39.31	74.00	-34.69	peak	H
4640.000	35.60	6.81	42.41	74.00	-31.59	peak	H
6474.000	33.48	11.46	44.94	74.00	-29.06	peak	H
3058.000	38.38	1.58	39.96	74.00	-34.04	peak	V
4612.000	35.98	6.72	42.70	74.00	-31.30	peak	V
6810.000	33.77	12.29	46.06	74.00	-27.94	peak	V

Standard:	FCC Part 15C		Test Distance:	3m			
Test item:	Radiated Emission		Power:	AC 120V/60Hz			
Model Number:	EW-7679CAP		Temp.(°C)/Hum.(%RH):	26(°C)/60%RH			
Mode:	Mode 3		Date:	01/19/2016			
Frequency:	2437MHz		Test By:	Eric Ou Yang			
Frequency (MHz)	Reading (dBuV)	Correct Factor (dB/m)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Remark	Ant.Polar. H / V
3051.000	37.65	1.55	39.20	74.00	-34.80	peak	H
4874.000	41.14	7.63	48.77	74.00	-25.23	peak	H
6733.000	33.82	12.11	45.93	74.00	-28.07	peak	H
3023.000	36.81	1.42	38.23	74.00	-35.77	peak	V
4874.000	41.36	7.63	48.99	74.00	-25.01	peak	V
6698.000	32.79	12.02	44.81	74.00	-29.19	peak	V

Standard:	FCC Part 15C		Test Distance:	3m			
Test item:	Radiated Emission		Power:	AC 120V/60Hz			
Model Number:	EW-7679CAP		Temp.(°C)/Hum.(%RH):	26(°C)/60%RH			
Mode:	Mode 3		Date:	01/14/2016			
Frequency:	2462MHz		Test By:	Eric Ou Yang			
Frequency (MHz)	Reading (dBuV)	Correct Factor (dB/m)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Remark	Ant.Polar. H / V
2925.000	38.59	1.13	39.72	74.00	-34.28	peak	H
4640.000	34.98	6.81	41.79	74.00	-32.21	peak	H
6761.000	33.28	12.17	45.45	74.00	-28.55	peak	H
3079.000	39.74	1.68	41.42	74.00	-32.58	peak	V
4451.000	37.12	6.21	43.33	74.00	-30.67	peak	V
6733.000	35.04	12.11	47.15	74.00	-26.85	peak	V

Standard:	FCC Part 15C			Test Distance:	3m		
Test item:	Radiated Emission			Power:	AC 120V/60Hz		
Model Number:	EW-7679CAP			Temp.(°C)/Hum.(%RH):	26(°C)/60%RH		
Mode:	Mode 4			Date:	01/14/2016		
Frequency:	2412MHz			Test By:	Eric Ou Yang		
Frequency (MHz)	Reading (dBuV)	Correct Factor (dB/m)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Remark	Ant.Polar. H / V
3128.000	37.69	1.91	39.60	74.00	-34.40	peak	H
4640.000	34.76	6.81	41.57	74.00	-32.43	peak	H
6698.000	33.11	12.02	45.13	74.00	-28.87	peak	H
3226.000	37.52	2.38	39.90	74.00	-34.10	peak	V
4500.000	35.46	6.32	41.78	74.00	-32.22	peak	V
6901.000	33.17	12.49	45.66	74.00	-28.34	peak	V

Standard:	FCC Part 15C			Test Distance:	3m		
Test item:	Radiated Emission			Power:	AC 120V/60Hz		
Model Number:	EW-7679CAP			Temp.(°C)/Hum.(%RH):	26(°C)/60%RH		
Mode:	Mode 4			Date:	01/19/2016		
Frequency:	2437MHz			Test By:	Eric Ou Yang		
Frequency (MHz)	Reading (dBuV)	Correct Factor (dB/m)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Remark	Ant.Polar. H / V
3002.000	37.39	1.32	38.71	74.00	-35.29	peak	H
4874.000	41.97	7.64	49.61	74.00	-24.39	peak	H
6691.000	32.15	12.00	44.15	74.00	-29.85	peak	H
3058.000	36.29	1.58	37.87	74.00	-36.13	peak	V
4874.000	44.32	7.63	51.95	74.00	-22.05	peak	V
6677.000	31.72	11.97	43.69	74.00	-30.31	peak	V

Standard:	FCC Part 15C			Test Distance:	3m		
Test item:	Radiated Emission			Power:	AC 120V/60Hz		
Model Number:	EW-7679CAP			Temp.(°C)/Hum.(%RH):	26(°C)/60%RH		
Mode:	Mode 4			Date:	01/14/2016		
Frequency:	2462MHz			Test By:	Eric Ou Yang		
Frequency (MHz)	Reading (dBuV)	Correct Factor (dB/m)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Remark	Ant.Polar. H / V
3114.000	37.50	1.85	39.35	74.00	-34.65	peak	H
4549.000	35.44	6.49	41.93	74.00	-32.07	peak	H
6761.000	32.48	12.17	44.65	74.00	-29.35	peak	H
3044.000	38.66	1.51	40.17	74.00	-33.83	peak	V
4633.000	35.61	6.79	42.40	74.00	-31.60	peak	V
6656.000	32.76	11.92	44.68	74.00	-29.32	peak	V

Standard:	FCC Part 15C			Test Distance:	3m		
Test item:	Radiated Emission			Power:	AC 120V/60Hz		
Model Number:	EW-7679CAP			Temp.(°C)/Hum.(%RH):	26(°C)/60%RH		
Mode:	Mode 5			Date:	01/14/2015		
Frequency:	2422MHz			Test By:	Eric Ou Yang		
Frequency (MHz)	Reading (dBuV)	Correct Factor (dB/m)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Remark	Ant.Polar. H / V
3086.000	38.06	1.71	39.77	74.00	-34.23	peak	H
4570.000	35.68	6.57	42.25	74.00	-31.75	peak	H
6684.000	33.03	11.99	45.02	74.00	-28.98	peak	H
3093.000	37.88	1.74	39.62	74.00	-34.38	peak	V
4577.000	34.82	6.59	41.41	74.00	-32.59	peak	V
6586.000	33.14	11.76	44.90	74.00	-29.10	peak	V

Standard:	FCC Part 15C			Test Distance:	3m		
Test item:	Radiated Emission			Power:	AC 120V/60Hz		
Model Number:	EW-7679CAP			Temp.(°C)/Hum.(%RH):	26(°C)/60%RH		
Mode:	Mode 5			Date:	01/19/2016		
Frequency:	2437MHz			Test By:	Eric Ou Yang		
Frequency (MHz)	Reading (dBuV)	Correct Factor (dB/m)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Remark	Ant.Polar. H / V
3009.000	37.81	1.35	39.16	74.00	-34.84	peak	H
4626.000	36.22	6.77	42.99	74.00	-31.01	peak	H
6670.000	33.88	11.96	45.84	74.00	-28.16	peak	H
3037.000	36.70	1.48	38.18	74.00	-35.82	peak	V
4591.000	33.80	6.64	40.44	74.00	-33.56	peak	V
6677.000	33.75	11.97	45.72	74.00	-28.28	peak	V

Standard:	FCC Part 15C			Test Distance:	3m		
Test item:	Radiated Emission			Power:	AC 120V/60Hz		
Model Number:	EW-7679CAP			Temp.(°C)/Hum.(%RH):	26(°C)/60%RH		
Mode:	Mode 5			Date:	01/15/2015		
Frequency:	2452MHz			Test By:	Eric Ou Yang		
Frequency (MHz)	Reading (dBuV)	Correct Factor (dB/m)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Remark	Ant.Polar. H / V
3114.000	38.30	1.85	40.15	74.00	-33.85	peak	H
4444.000	36.46	6.19	42.65	74.00	-31.35	peak	H
6621.000	33.52	11.84	45.36	74.00	-28.64	peak	H
3065.000	38.04	1.62	39.66	74.00	-34.34	peak	V
4626.000	35.19	6.77	41.96	74.00	-32.04	peak	V
6761.000	33.60	12.17	45.77	74.00	-28.23	peak	V

Standard:	FCC Part 15C			Test Distance:	3m		
Test item:	Radiated Emission			Power:	AC 120V/60Hz		
Model Number:	EW-7679CAP			Temp.(°C)/Hum.(%RH):	26(°C)/60%RH		
Mode:	Simultaneous Transmitting (2.4GHz + 5GHz)			Date:	02/17/2016		
				Test By:	Eric Ou Yang		
Frequency (MHz)	Reading (dBuV)	Correct Factor (dB/m)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Remark	Ant.Polar. H / V
2799.000	34.06	0.82	34.88	74.00	-39.12	peak	H
4290.000	31.72	5.84	37.56	74.00	-36.44	peak	H
7615.000	29.01	14.26	43.27	74.00	-30.73	peak	H
2813.000	32.98	0.85	33.83	74.00	-40.17	peak	V
4591.000	31.63	6.64	38.27	74.00	-35.73	peak	V
7650.000	28.73	14.30	43.03	74.00	-30.97	peak	V



**Band Edge**

Standard:	FCC Part 15C	Test Distance:	3m
Test item:	Radiated Emission	Power:	AC 120V/60Hz
Model Number:	EW-7679CAP	Temp.(°C)/Hum.(%RH):	26(°C)/60%RH
Mode:	Mode 2	Date:	01/19/2016
Frequency:	2412 MHz	Test By:	Eric Ou Yang

Frequency (MHz)	Reading (dBuV)	Correct Factor (dB/m)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Remark	Ant.Polar. H / V
2373.250	56.26	-0.39	55.87	74.00	-18.13	peak	H
2373.250	46.45	-0.39	46.06	54.00	-7.94	AVG	H
2390.000	54.83	-0.33	54.50	74.00	-19.50	peak	H
2390.000	45.60	-0.33	45.27	54.00	-8.73	AVG	H
2332.000	62.47	-0.56	61.91	74.00	-12.09	peak	V
2332.000	45.29	-0.56	44.73	54.00	-9.27	AVG	V
2390.000	56.64	-0.33	56.31	74.00	-17.69	peak	V
2390.000	48.14	-0.33	47.81	54.00	-6.19	AVG	V

Standard:	FCC Part 15C			Test Distance:	3m		
Test item:	Radiated Emission			Power:	AC 120V/60Hz		
Model Number:	EW-7679CAP			Temp.(°C)/Hum.(%RH):	26(°C)/60%RH		
Mode:	Mode 2			Date:	01/19/2016		
Frequency:	2437 MHz			Test By:	Eric Ou Yang		
Frequency (MHz)	Reading (dBuV)	Correct Factor (dB/m)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Remark	Ant.Polar. H / V
2358.260	54.79	-0.45	54.34	74.00	-19.66	peak	H
2358.260	40.47	-0.45	40.02	54.00	-13.98	AVG	H
2390.000	50.56	-0.33	50.23	74.00	-23.77	peak	H
2483.500	53.79	0.03	53.82	74.00	-20.18	peak	H
2483.500	43.65	0.03	43.68	54.00	-10.32	AVG	H
2486.510	54.33	0.03	54.36	74.00	-19.64	peak	H
2486.510	43.35	0.03	43.38	54.00	-10.62	AVG	H
2356.930	59.29	-0.45	58.84	74.00	-15.16	peak	V
2356.930	43.45	-0.45	43.00	54.00	-11.00	AVG	V
2390.000	51.51	-0.33	51.18	74.00	-22.82	peak	V
2483.500	54.42	0.03	54.45	74.00	-19.55	peak	V
2483.500	44.79	0.03	44.82	54.00	-9.18	AVG	V
2490.500	56.16	0.06	56.22	74.00	-17.78	peak	V
2490.500	45.90	0.06	45.96	54.00	-8.04	AVG	V

Standard:	FCC Part 15C			Test Distance:	3m		
Test item:	Radiated Emission			Power:	AC 120V/60Hz		
Model Number:	EW-7679CAP			Temp.(°C)/Hum.(%RH):	26(°C)/60%RH		
Mode:	Mode 2			Date:	01/19/2016		
Frequency:	2462 MHz			Test By:	Eric Ou Yang		
Frequency (MHz)	Reading (dBuV)	Correct Factor (dB/m)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Remark	Ant.Polar. H / V
2483.500	59.13	0.03	59.16	74.00	-14.84	peak	H
2483.500	52.05	0.03	52.08	54.00	-1.92	AVG	H
2490.520	58.88	0.06	58.94	74.00	-15.06	peak	H
2490.520	51.38	0.06	51.44	54.00	-2.56	AVG	H
2483.500	58.49	0.03	58.52	74.00	-15.48	peak	V
2483.500	52.42	0.03	52.45	54.00	-1.55	AVG	V
2486.720	64.98	0.04	65.02	74.00	-8.98	peak	V
2486.720	51.78	0.04	51.82	54.00	-2.18	AVG	V

Standard:	FCC Part 15C	Test Distance:	3m
Test item:	Radiated Emission	Power:	AC 120V/60Hz
Model Number:	EW-7679CAP	Temp.(°C)/Hum.(%RH):	26(°C)/60%RH
Mode:	Mode 3	Date:	01/14/2016
Frequency:	2412 MHz	Test By:	Eric Ou Yang

Frequency (MHz)	Reading (dBuV)	Correct Factor (dB/m)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Remark	Ant.Polar. H / V
2389.310	61.13	-0.33	60.80	74.00	-13.20	peak	H
2389.310	47.10	-0.33	46.77	54.00	-7.23	AVG	H
2390.000	60.38	-0.33	60.05	74.00	-13.95	peak	H
2390.000	48.47	-0.33	48.14	54.00	-5.86	AVG	H
2388.980	65.78	-0.33	65.45	74.00	-8.55	peak	V
2388.980	51.11	-0.33	50.78	54.00	-3.22	AVG	V
2390.000	65.55	-0.33	65.22	74.00	-8.78	peak	V
2390.000	52.59	-0.33	52.26	54.00	-1.74	AVG	V

Standard:	FCC Part 15C			Test Distance:	3m		
Test item:	Radiated Emission			Power:	AC 120V/60Hz		
Model Number:	EW-7679CAP			Temp.(°C)/Hum.(%RH):	26(°C)/60%RH		
Mode:	Mode 3			Date:	01/18/2016		
Frequency:	2437 MHz			Test By:	Eric Ou Yang		
Frequency (MHz)	Reading (dBuV)	Correct Factor (dB/m)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Remark	Ant.Polar. H / V
2386.190	58.69	-0.35	58.34	74.00	-15.66	peak	H
2386.190	45.07	-0.35	44.72	54.00	-9.28	AVG	H
2390.000	57.82	-0.33	57.49	74.00	-16.51	peak	H
2390.000	46.57	-0.33	46.24	54.00	-7.76	AVG	H
2483.500	66.32	0.03	66.35	74.00	-7.65	peak	H
2483.500	51.21	0.03	51.24	54.00	-2.76	AVG	H
2485.180	68.62	0.03	68.65	74.00	-5.35	peak	H
2485.180	50.59	0.03	50.62	54.00	-3.38	AVG	H
2360.160	58.92	-0.44	58.48	74.00	-15.52	peak	V
2360.160	43.68	-0.44	43.24	54.00	-10.76	AVG	V
2390.000	60.66	-0.33	60.33	74.00	-13.67	peak	V
2390.000	47.31	-0.33	46.98	54.00	-7.02	AVG	V
2483.500	63.86	0.03	63.89	74.00	-10.11	peak	V
2483.500	52.42	0.03	52.45	54.00	-1.55	AVG	V
2485.180	68.90	0.03	68.93	74.00	-5.07	peak	V
2485.180	52.07	0.03	52.10	54.00	-1.90	AVG	V

Standard:	FCC Part 15C	Test Distance:	3m
Test item:	Radiated Emission	Power:	AC 120V/60Hz
Model Number:	EW-7679CAP	Temp.(°C)/Hum.(%RH):	26(°C)/60%RH
Mode:	Mode 3	Date:	01/14/2016
Frequency:	2462 MHz	Test By:	Eric Ou Yang

Frequency (MHz)	Reading (dBuV)	Correct Factor (dB/m)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Remark	Ant.Polar. H / V
2483.500	64.40	0.03	64.43	74.00	-9.57	peak	H
2483.500	49.79	0.03	49.82	54.00	-4.18	AVG	H
2483.880	65.10	0.03	65.13	74.00	-8.87	peak	H
2483.880	48.37	0.03	48.40	54.00	-5.60	AVG	H
2483.500	68.39	0.03	68.42	74.00	-5.58	peak	V
2483.500	52.32	0.03	52.35	54.00	-1.65	AVG	V
2485.720	69.50	0.03	69.53	74.00	-4.47	peak	V
2485.720	51.11	0.03	51.14	54.00	-2.86	AVG	V

Standard:	FCC Part 15C			Test Distance:	3m		
Test item:	Radiated Emission			Power:	AC 120V/60Hz		
Model Number:	EW-7679CAP			Temp.(°C)/Hum.(%RH):	26(°C)/60%RH		
Mode:	Mode 4			Date:	01/14/2016		
Frequency:	2412 MHz			Test By:	Eric Ou Yang		
Frequency (MHz)	Reading (dBuV)	Correct Factor (dB/m)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Remark	Ant.Polar. H / V
2385.570	65.62	-0.35	65.27	74.00	-8.73	peak	H
2385.570	49.57	-0.35	49.22	54.00	-4.78	AVG	H
2390.000	63.16	-0.33	62.83	74.00	-11.17	peak	H
2390.000	52.14	-0.33	51.81	54.00	-2.19	AVG	H
2384.800	65.15	-0.35	64.80	74.00	-9.20	peak	V
2384.800	49.94	-0.35	49.59	54.00	-4.41	AVG	V
2390.000	66.30	-0.33	65.97	74.00	-8.03	peak	V
2390.000	52.77	-0.33	52.44	54.00	-1.56	AVG	V

Standard:	FCC Part 15C			Test Distance:	3m		
Test item:	Radiated Emission			Power:	AC 120V/60Hz		
Model Number:	EW-7679CAP			Temp.(°C)/Hum.(%RH):	26(°C)/60%RH		
Mode:	Mode 4			Date:	01/18/2016		
Frequency:	2437 MHz			Test By:	Eric Ou Yang		
Frequency (MHz)	Reading (dBuV)	Correct Factor (dB/m)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Remark	Ant.Polar. H / V
2354.460	60.76	-0.47	60.29	74.00	-13.71	peak	H
2354.460	44.91	-0.47	44.44	54.00	-9.56	AVG	H
2390.000	60.39	-0.33	60.06	74.00	-13.94	peak	H
2390.000	51.62	-0.33	51.29	54.00	-2.71	AVG	H
2483.500	62.91	0.03	62.94	74.00	-11.06	peak	H
2483.500	52.21	0.03	52.24	54.00	-1.76	AVG	H
2488.600	66.81	0.05	66.86	74.00	-7.14	peak	H
2488.600	51.34	0.05	51.39	54.00	-2.61	AVG	H
2358.640	66.80	-0.45	66.35	74.00	-7.65	peak	V
2358.640	51.21	-0.45	50.76	54.00	-3.24	AVG	V
2390.000	61.90	-0.33	61.57	74.00	-12.43	peak	V
2390.000	52.71	-0.33	52.38	54.00	-1.62	AVG	V
2483.500	65.23	0.03	65.26	74.00	-8.74	peak	V
2483.500	52.42	0.03	52.45	54.00	-1.55	AVG	V
2489.170	66.35	0.05	66.40	74.00	-7.60	peak	V
2489.170	52.05	0.05	52.10	54.00	-1.90	AVG	V



Standard:	FCC Part 15C			Test Distance:	3m		
Test item:	Radiated Emission			Power:	AC 120V/60Hz		
Model Number:	EW-7679CAP			Temp.(°C)/Hum.(%RH):	26(°C)/60%RH		
Mode:	Mode 4			Date:	01/14/2016		
Frequency:	2462 MHz			Test By:	Eric Ou Yang		
Frequency (MHz)	Reading (dBuV)	Correct Factor (dB/m)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Remark	Ant.Polar. H / V
2483.500	66.18	0.03	66.21	74.00	-7.79	peak	H
2483.500	51.83	0.03	51.86	54.00	-2.14	AVG	H
2483.720	67.95	0.03	67.98	74.00	-6.02	peak	H
2483.720	51.79	0.03	51.82	54.00	-2.18	AVG	H
2483.500	67.68	0.03	67.71	74.00	-6.29	peak	V
2483.500	52.58	0.03	52.61	54.00	-1.39	AVG	V
2484.200	66.35	0.03	66.38	74.00	-7.62	peak	V
2484.200	50.22	0.03	50.25	54.00	-3.75	AVG	V

Standard:	FCC Part 15C			Test Distance:	3m		
Test item:	Radiated Emission			Power:	AC 120V/60Hz		
Model Number:	EW-7679CAP			Temp.(°C)/Hum.(%RH):	26(°C)/60%RH		
Mode:	Mode 5			Date:	01/14/2016		
Frequency:	2422 MHz			Test By:	Eric Ou Yang		
Frequency (MHz)	Reading (dBuV)	Correct Factor (dB/m)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Remark	Ant.Polar. H / V
2386.440	65.05	-0.35	64.70	74.00	-9.30	peak	H
2386.440	51.89	-0.35	51.54	54.00	-2.46	AVG	H
2390.000	64.63	-0.33	64.30	74.00	-9.70	peak	H
2390.000	52.57	-0.33	52.24	54.00	-1.76	AVG	H
2386.680	66.11	-0.34	65.77	74.00	-8.23	peak	V
2386.680	51.93	-0.34	51.59	54.00	-2.41	AVG	V
2390.000	65.46	-0.33	65.13	74.00	-8.87	peak	V
2390.000	52.78	-0.33	52.45	54.00	-1.55	AVG	V

Standard:	FCC Part 15C			Test Distance:	3m		
Test item:	Radiated Emission			Power:	AC 120V/60Hz		
Model Number:	EW-7679CAP			Temp.(°C)/Hum.(%RH):	26(°C)/60%RH		
Mode:	Mode 5			Date:	01/18/2016		
Frequency:	2437 MHz			Test By:	Eric Ou Yang		
Frequency (MHz)	Reading (dBuV)	Correct Factor (dB/m)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Remark	Ant.Polar. H / V
2359.210	56.50	-0.45	56.05	74.00	-17.95	peak	H
2359.210	46.86	-0.45	46.41	54.00	-7.59	AVG	H
2390.000	66.75	-0.33	66.42	74.00	-7.58	peak	H
2390.000	52.63	-0.33	52.30	54.00	-1.70	AVG	H
2483.500	64.88	0.03	64.91	74.00	-9.09	peak	H
2483.500	52.38	0.03	52.41	54.00	-1.59	AVG	H
2491.830	65.12	0.06	65.18	74.00	-8.82	peak	H
2491.830	51.17	0.06	51.23	54.00	-2.77	AVG	H
2360.160	62.17	-0.44	61.73	74.00	-12.27	peak	V
2360.160	50.92	-0.44	50.48	54.00	-3.52	AVG	V
2390.000	67.83	-0.33	67.50	74.00	-6.50	peak	V
2390.000	52.47	-0.33	52.14	54.00	-1.86	AVG	V
2483.500	64.84	0.03	64.87	74.00	-9.13	peak	V
2483.500	52.52	0.03	52.55	54.00	-1.45	AVG	V
2491.830	66.24	0.06	66.30	74.00	-7.70	peak	V
2491.830	51.28	0.06	51.34	54.00	-2.66	AVG	V

Standard:	FCC Part 15C			Test Distance:	3m		
Test item:	Radiated Emission			Power:	AC 120V/60Hz		
Model Number:	EW-7679CAP			Temp.(°C)/Hum.(%RH):	26(°C)/60%RH		
Mode:	Mode 5			Date:	01/14/2016		
Frequency:	2452 MHz			Test By:	Eric Ou Yang		
Frequency (MHz)	Reading (dBuV)	Correct Factor (dB/m)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Remark	Ant.Polar. H / V
2483.500	62.19	0.03	62.22	74.00	-11.78	peak	H
2483.500	49.67	0.03	49.70	54.00	-4.30	AVG	H
2484.300	64.51	0.03	64.54	74.00	-9.46	peak	H
2484.300	49.42	0.03	49.45	54.00	-4.55	AVG	H
2483.500	63.41	0.03	63.44	74.00	-10.56	peak	V
2483.500	52.31	0.03	52.34	54.00	-1.66	AVG	V
2484.900	65.79	0.03	65.82	74.00	-8.18	peak	V
2484.900	51.10	0.03	51.13	54.00	-2.87	AVG	V

## 6 Maximum Conducted Output Power Measurement

### 6.1. Limit

For systems using digital modulation in the 2400-2483.5MHz, the limit for maximum output power is 30dBm.

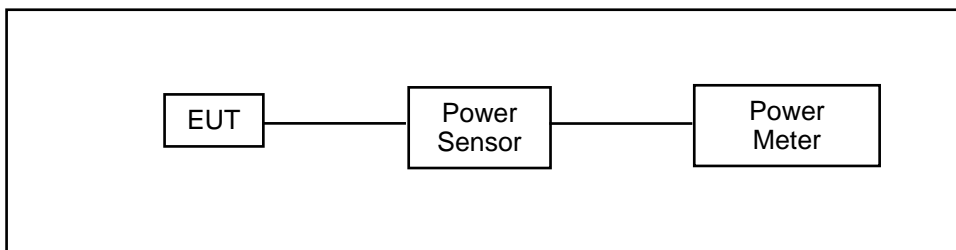
According FCC KDB 662911 D01 v02r01 – for power measurements on IEEE802.11 devices,

Array Gain = 0 dB (i.e., no array gain) for  $N_{ANT} \leq 4$ ;

Array Gain = 0 dB (i.e., no array gain) for channel widths  $\geq 40$  MHz for any  $N_{ANT}$ ;

Array Gain =  $5 \log(N_{ANT}/N_{SS})$  dB or 3 dB, whichever is less, for 20-MHz channel widths with  $N_{ANT} \geq 5$ .

### 6.2. Test Setup



### 6.3. Test Instruments

Equipment	Manufacturer	Model Number	Serial Number	Cal. Date	Remark
Power Sensor	Anritsu	MA2411B	1126022	08/24/2015	(1)
Power Meter	Anritsu	ML2495A	1135009	08/24/2015	(1)
Test Site	ATL	TE05	TE05	N.C.R.	-----

Remark: (1) Calibration period 1 year. (2) Calibration period 2 years. (3) Calibration period 3 years.

Note: N.C.R. = No Calibration Request.

### 6.4. Test Procedure

The tests below are run with the EUT's transmitter set at high power in TX mode. The EUT is needed to force selection of output power level and channel number. While testing, EUT was set to transmit continuously. Remove the Subjective device's antenna and connect the RF output port to power sensor. The maximum output power shall not exceed 1 watt.

Use a direct connection between the antenna port of transmitter and the power sensor, for prevent the power sensor input attenuation 40-50 dB. Set the RBW Bandwidth of the emission or use a channel power meter mode.

For antennas with gains of 6 dBi or less, maximum allowed transmitter output is 1 watt (+30 dBm). For antennas with gains greater than 6 dBi, transmitter output level must be decreased by an amount equal to  $(GAIN - 6)/3$  dBm.

The antenna port of the EUT was connected to the input of a power sensor. Power was read directly and cable loss correction was added to the reading to obtain power at the EUT antenna terminals.

**6.5. Test Result**

Model Number	EW-7679CAP			
Test Item	Maximum Conducted Output Power			
Test Mode	Mode 2: IEEE 802.11b link mode			
Date of Test	01/15/2016			
Frequency (MHz)	Data Rate	Output Power		Limit (dBm)
		ANT-0		
		(dBm)	(W)	
2412	1M	24.46	0.279	< 30
2437		25.35	0.343	< 30
2462		23.37	0.217	< 30
2437	2M	24.77	0.300	< 30
2437	5.5M	24.55	0.285	< 30
2437	11M	24.88	0.308	< 30

Model Number	EW-7679CAP			
Test Item	Maximum Conducted Output Power			
Test Mode	Mode 3: IEEE 802.11g link mode			
Date of Test	01/15/2016			
Frequency (MHz)	Data Rate	Output Power		Limit (dBm)
		ANT-0		
		(dBm)	(W)	
2412	6M	16.74	0.047	< 30
2437		24.64	0.291	< 30
2462		18.12	0.065	< 30
2437	9M	24.40	0.275	< 30
2437	12M	24.35	0.272	< 30
2437	18M	24.36	0.273	< 30
2437	24M	24.48	0.281	< 30
2437	36M	24.38	0.274	< 30
2437	48M	24.53	0.284	< 30
2437	54M	24.55	0.285	< 30

Model Number	EW-7679CAP							
Test Item	Maximum Conducted Output Power							
Test Mode	Mode 4: IEEE 802.11n 2.4GHz 20MHz link mode							
Date of Test	01/15/2016							
Frequency (MHz)	Data Rate	Output Power						Limit (dBm)
		ANT-0		ANT-1		ANT-2		
		(dBm)	(W)	(dBm)	(W)	(dBm)	(W)	
2412	19.5M	15.41	0.035	17.49	0.056	17.62	0.058	< 30
2437		19.16	0.082	21.07	0.128	21.01	0.126	< 30
2462		15.90	0.039	17.27	0.053	17.06	0.051	< 30
2437	39M	19.09	0.081	21.03	0.127	20.85	0.122	< 30
2437	58.5M	19.11	0.081	20.95	0.124	20.90	0.123	< 30
2437	78M	19.10	0.081	20.99	0.126	20.83	0.121	< 30
2437	117M	18.37	0.069	21.01	0.126	21.00	0.126	< 30
2437	156M	19.04	0.080	20.98	0.125	20.98	0.125	< 30
2437	175.5M	19.01	0.080	20.96	0.125	20.94	0.124	< 30
2437	195M	19.08	0.081	20.97	0.125	20.95	0.124	< 30

Frequency (MHz)	Data Rate	Output Power		Limit (dBm)
		ANT-0+1+2		
		(dBm)	(W)	
2412	19.5M	21.72	0.149	< 30
2437		25.27	0.337	< 30
2462		21.55	0.143	< 30
2437	39M	25.18	0.329	< 30
2437	58.5M	25.17	0.329	< 30
2437	78M	25.16	0.328	< 30
2437	117M	25.06	0.321	< 30
2437	156M	25.20	0.331	< 30
2437	175.5M	25.17	0.329	< 30
2437	195M	25.19	0.330	< 30

Model Number	EW-7679CAP							
Test Item	Maximum Conducted Output Power							
Test Mode	Mode 5: IEEE 802.11n 2.4GHz 40MHz link mode							
Date of Test	01/15/2016							
Frequency (MHz)	Data Rate	Output Power						Limit (dBm)
		ANT-0		ANT-1		ANT-2		
		(dBm)	(W)	(dBm)	(W)	(dBm)	(W)	
2422	40.5M	13.14	0.021	15.01	0.032	14.82	0.030	< 30
2437		16.73	0.047	18.61	0.073	18.67	0.074	< 30
2452		12.38	0.017	14.88	0.031	14.62	0.029	< 30
2437	81M	16.40	0.044	18.22	0.066	18.56	0.072	< 30
2437	121.5M	16.70	0.047	18.11	0.065	18.58	0.072	< 30
2437	162M	16.69	0.047	18.33	0.068	18.52	0.071	< 30
2437	243M	16.72	0.047	17.89	0.062	18.64	0.073	< 30
2437	324M	16.22	0.042	17.78	0.060	18.19	0.066	< 30
2437	364.5M	16.05	0.040	17.51	0.056	17.93	0.062	< 30
2437	405M	15.89	0.039	17.74	0.059	18.05	0.064	< 30

Frequency (MHz)	Data Rate	Output Power		Limit (dBm)
		ANT-0+1+2		
		(dBm)	(W)	
2422	40.5M	19.17	0.083	< 30
2437		22.86	0.193	< 30
2452		18.87	0.077	< 30
2437	81M	22.60	0.182	< 30
2437	121.5M	22.64	0.184	< 30
2437	162M	22.69	0.186	< 30
2437	243M	22.59	0.182	< 30
2437	324M	22.25	0.168	< 30
2437	364.5M	22.01	0.159	< 30
2437	405M	22.10	0.162	< 30

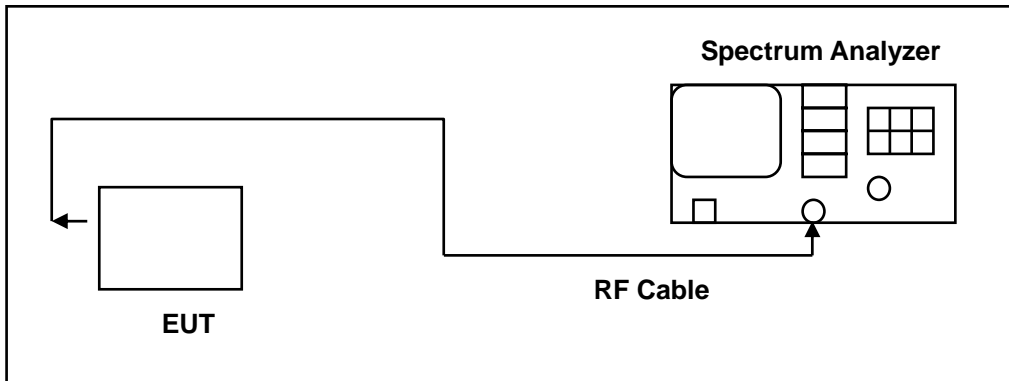


## 7 6dB RF Bandwidth Measurement

### 7.1. Limit

6dB RF Bandwidth: Systems using digital modulation techniques may operate in the 2400–2483.5 MHz bands. The minimum 6 dB band-width shall be at least 500 kHz.

### 7.2. Test Setup



### 7.3. Test Instruments

Equipment	Manufacturer	Model Number	Serial Number	Cal. Date	Remark
Spectrum Analyzer	Agilent	E4445A	MY45300744	12/15/2015	(1)
Test Site	ATL	TE05	TE05	N.C.R.	-----

dRemark: (1) Calibration period 1 year. (2) Calibration period 2 years. (3) Calibration period 3 years.

Note: N.C.R. = No Calibration Request.

### 7.4. Test Procedure

The EUT tested to DTS test procedure of KDB558074D01 for compliance to FCC 47CFR 15.247 requirements.

6dB RF Bandwidth: The antenna port of the EUT was connected to the input of a spectrum analyzer. Analyzer RBW was set to 100 kHz. For each RF output channel investigated, the spectrum analyzer center frequency was set to the channel carrier. A peak output reading was taken, a DISPLAY line was drawn 6 dB lower than peak level. The 6 dB bandwidth was determined from where the channel output spectrum intersected the display line.

The test was performed at 3 channels (Channel low, middle, high)

99 % Occupied Bandwidth: The transmitter shall be operated at its maximum carrier power measured under normal test conditions.

The video bandwidth shall be set to 3 times the resolution bandwidth. Video averaging is not permitted. Where practical, a sampling detector shall be used since a peak or, peak hold, may produce a wider bandwidth than actual.

The trace data points are recovered and are directly summed in linear terms. The recovered amplitude data points, beginning at the lowest frequency, are placed in a running sum until 0.5% of the total is reached and that frequency recorded. The process is repeated for the highest frequency data points. This frequency is recorded.

**7.5. Test Result**

Model Number	EW-7679CAP				
Test Item	6dB RF Bandwidth				
Test Mode	Mode 2: IEEE 802.11b link mode Mode 3: IEEE 802.11g link mode Mode 4: IEEE 802.11n 2.4GHz 20MHz link mode Mode 5: IEEE 802.11n 2.4GHz 40MHz link mode				
Date of Test	01/15/2016			Test Site	TE05
Test Mode	Frequency (MHz)	Measurement (MHz)			Limit (MHz)
		ANT-0	ANT-1	ANT-2	
Mode 2	2412	8.546	---	---	> 0.500
	2437	8.566	---	---	> 0.500
	2462	7.107	---	---	> 0.500
Mode 3	2412	16.370	---	---	> 0.500
	2437	16.380	---	---	> 0.500
	2462	16.400	---	---	> 0.500
Mode 4	2412	16.990	17.680	17.740	> 0.500
	2437	16.350	17.660	17.680	> 0.500
	2462	16.640	17.690	17.700	> 0.500
Mode 5	2422	35.840	36.060	36.470	> 0.500
	2437	35.500	36.350	36.440	> 0.500
	2452	35.820	36.050	36.440	> 0.500

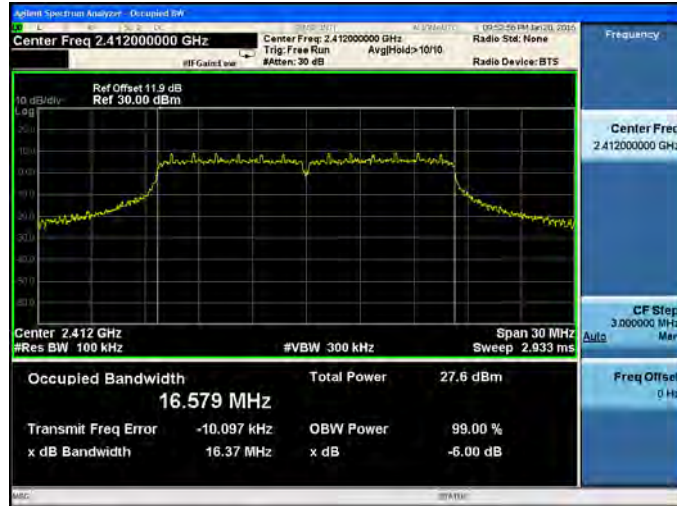
**7.6. Test Graphs**

Mode 2: IEEE 802.11b link mode\_ANT-0

<p>2412 MHz</p>	<p>Center Freq 2.412000000 GHz</p> <p>Center Freq 2.412000000 GHz</p> <p>Ref Offset 11.9 dB</p> <p>Ref 30.00 dBm</p> <p>Center 2.412 GHz</p> <p>#Res BW 100 kHz</p> <p>#VBW 300 kHz</p> <p>Span 30 MHz</p> <p>Sweep 2.933 ms</p> <p>Occupied Bandwidth 14.462 MHz</p> <p>Total Power 33.2 dBm</p> <p>Transmit Freq Error -7.816 kHz</p> <p>x dB Bandwidth 8.546 MHz</p> <p>OBW Power 99.00 %</p> <p>x dB -6.00 dB</p>
<p>2437 MHz</p>	<p>Center Freq 2.437000000 GHz</p> <p>Center Freq 2.437000000 GHz</p> <p>Ref Offset 11.9 dB</p> <p>Ref 30.00 dBm</p> <p>Center 2.437 GHz</p> <p>#Res BW 100 kHz</p> <p>#VBW 300 kHz</p> <p>Span 30 MHz</p> <p>Sweep 2.933 ms</p> <p>Occupied Bandwidth 14.725 MHz</p> <p>Total Power 33.1 dBm</p> <p>Transmit Freq Error -17.651 kHz</p> <p>x dB Bandwidth 8.566 MHz</p> <p>OBW Power 99.00 %</p> <p>x dB -6.00 dB</p>
<p>2462 MHz</p>	<p>Center Freq 2.462000000 GHz</p> <p>Center Freq 2.462000000 GHz</p> <p>Ref Offset 11.9 dB</p> <p>Ref 30.00 dBm</p> <p>Center 2.462 GHz</p> <p>#Res BW 100 kHz</p> <p>#VBW 300 kHz</p> <p>Span 30 MHz</p> <p>Sweep 2.933 ms</p> <p>Occupied Bandwidth 12.868 MHz</p> <p>Total Power 30.9 dBm</p> <p>Transmit Freq Error -43.144 kHz</p> <p>x dB Bandwidth 7.107 MHz</p> <p>OBW Power 99.00 %</p> <p>x dB -6.00 dB</p>

Mode 3: IEEE 802.11g link mode\_ANT-0

2412 MHz



2437 MHz



2462 MHz



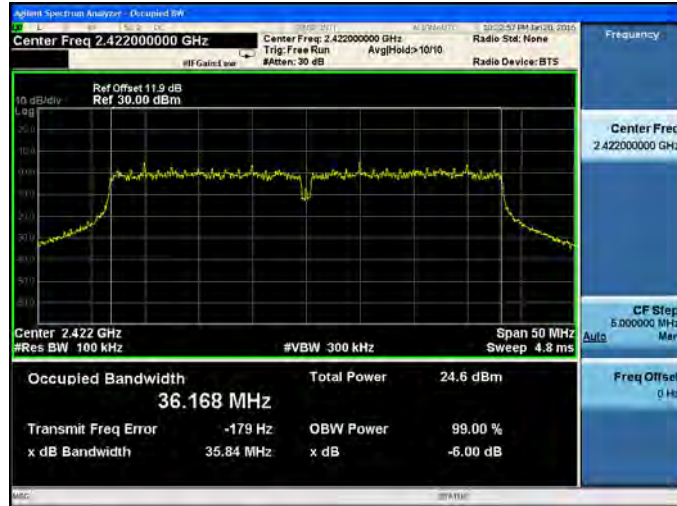
Mode 4: IEEE 802.11n 2.4GHz 20MHz link mode\_ANT-0

<p>2412 MHz</p>	<p>Center Freq 2.41200000 GHz</p> <p>Center Freq 2.412000000 GHz</p> <p>Ref Offset 11.9 dB Ref 30.00 dBm</p> <p>Center 2.412 GHz #Res BW 100 kHz</p> <p>Span 30 MHz Sweep 2.933 ms</p> <p>Occupied Bandwidth 17.671 MHz</p> <p>Total Power 27.1 dBm</p> <p>Transmit Freq Error -10.675 kHz</p> <p>OBW Power 99.00 %</p> <p>x dB Bandwidth 16.99 MHz</p> <p>x dB -6.00 dB</p>
<p>2437 MHz</p>	<p>Center Freq 2.43700000 GHz</p> <p>Center Freq 2.437000000 GHz</p> <p>Ref Offset 11.9 dB Ref 30.00 dBm</p> <p>Center 2.437 GHz #Res BW 100 kHz</p> <p>Span 30 MHz Sweep 2.933 ms</p> <p>Occupied Bandwidth 17.678 MHz</p> <p>Total Power 28.3 dBm</p> <p>Transmit Freq Error -16.750 kHz</p> <p>OBW Power 99.00 %</p> <p>x dB Bandwidth 16.35 MHz</p> <p>x dB -6.00 dB</p>
<p>2462 MHz</p>	<p>Center Freq 2.46200000 GHz</p> <p>Center Freq 2.462000000 GHz</p> <p>Ref Offset 11.9 dB Ref 30.00 dBm</p> <p>Center 2.462 GHz #Res BW 100 kHz</p> <p>Span 30 MHz Sweep 2.933 ms</p> <p>Occupied Bandwidth 17.665 MHz</p> <p>Total Power 24.7 dBm</p> <p>Transmit Freq Error -20.456 kHz</p> <p>OBW Power 99.00 %</p> <p>x dB Bandwidth 16.64 MHz</p> <p>x dB -6.00 dB</p>

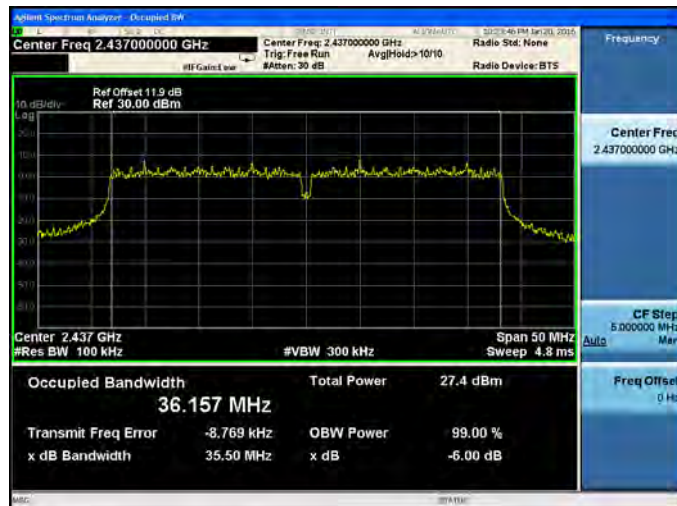


Mode 5: IEEE 802.11n 2.4GHz 40MHz link mode\_ANT-0

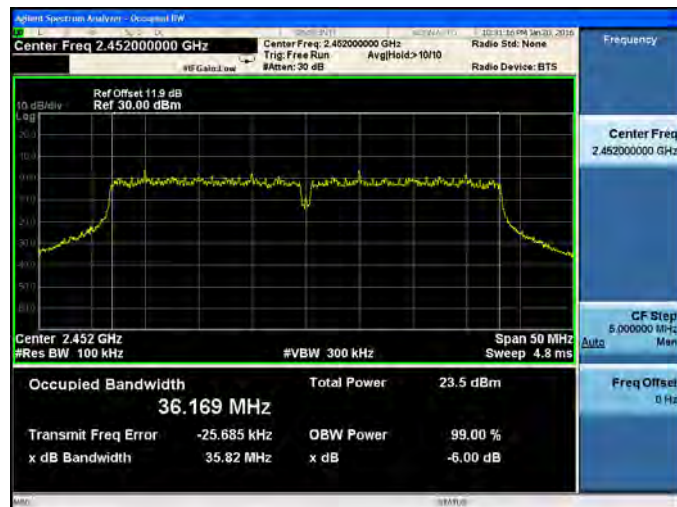
2422 MHz



2437 MHz



2452 MHz



Mode 4: IEEE 802.11n 2.4GHz 20MHz link mode\_ANT-1

<p>2412 MHz</p>	<p>Center Freq 2.412000000 GHz</p> <p>Center Freq: 2.412000000 GHz</p> <p>Trig: Free Run</p> <p>Avg/Hold: 10/10</p> <p>Radio Std: None</p> <p>Radio Device: BTS</p> <p>Ref Offset: 11.9 dB</p> <p>Ref: 30.00 dBm</p> <p>Center 2.412 GHz</p> <p>#Res BW 100 kHz</p> <p>#VBW 300 kHz</p> <p>Span 30 MHz</p> <p>Sweep 2.933 ms</p> <p>Occupied Bandwidth 17.668 MHz</p> <p>Total Power 26.2 dBm</p> <p>Transmit Freq Error -12.506 kHz</p> <p>OBW Power 99.00 %</p> <p>x dB Bandwidth 17.68 MHz</p> <p>x dB -6.00 dB</p> <p>Center Freq 2.412000000 GHz</p> <p>CF Step 3.000000 MHz</p> <p>Freq Offset 0 Hz</p>
<p>2437 MHz</p>	<p>Center Freq 2.437000000 GHz</p> <p>Center Freq: 2.437000000 GHz</p> <p>Trig: Free Run</p> <p>Avg/Hold: 10/10</p> <p>Radio Std: None</p> <p>Radio Device: BTS</p> <p>Ref Offset: 11.9 dB</p> <p>Ref: 30.00 dBm</p> <p>Center 2.437 GHz</p> <p>#Res BW 100 kHz</p> <p>#VBW 300 kHz</p> <p>Span 30 MHz</p> <p>Sweep 2.933 ms</p> <p>Occupied Bandwidth 17.696 MHz</p> <p>Total Power 28.6 dBm</p> <p>Transmit Freq Error -10.635 kHz</p> <p>OBW Power 99.00 %</p> <p>x dB Bandwidth 17.66 MHz</p> <p>x dB -6.00 dB</p> <p>Center Freq 2.437000000 GHz</p> <p>CF Step 3.000000 MHz</p> <p>Freq Offset 0 Hz</p>
<p>2462 MHz</p>	<p>Center Freq 2.462000000 GHz</p> <p>Center Freq: 2.462000000 GHz</p> <p>Trig: Free Run</p> <p>Avg/Hold: 10/10</p> <p>Radio Std: None</p> <p>Radio Device: BTS</p> <p>Ref Offset: 11.9 dB</p> <p>Ref: 30.00 dBm</p> <p>Center 2.462 GHz</p> <p>#Res BW 100 kHz</p> <p>#VBW 300 kHz</p> <p>Span 30 MHz</p> <p>Sweep 2.933 ms</p> <p>Occupied Bandwidth 17.689 MHz</p> <p>Total Power 24.8 dBm</p> <p>Transmit Freq Error -22.437 kHz</p> <p>OBW Power 99.00 %</p> <p>x dB Bandwidth 17.69 MHz</p> <p>x dB -6.00 dB</p> <p>Center Freq 2.462000000 GHz</p> <p>CF Step 3.000000 MHz</p> <p>Freq Offset 0 Hz</p>

Mode 5: IEEE 802.11n 2.4GHz 40MHz link mode\_ANT-1

<p>2422 MHz</p>	<p>Center Freq: 2.42200000 GHz          Res BW: 100 kHz          Span: 50 MHz          Sweep: 4.8 ms</p> <p>Occupied Bandwidth: 36.199 MHz          Total Power: 23.9 dBm          Transmit Freq Error: 5.048 kHz</p>
<p>2437 MHz</p>	<p>Center Freq: 2.43700000 GHz          Res BW: 100 kHz          Span: 50 MHz          Sweep: 4.8 ms</p> <p>Occupied Bandwidth: 36.183 MHz          Total Power: 27.3 dBm          Transmit Freq Error: 758 Hz</p>
<p>2452 MHz</p>	<p>Center Freq: 2.45200000 GHz          Res BW: 100 kHz          Span: 50 MHz          Sweep: 4.8 ms</p> <p>Occupied Bandwidth: 36.185 MHz          Total Power: 23.0 dBm          Transmit Freq Error: -2.430 kHz</p>



Mode 4: IEEE 802.11n 2.4GHz 20MHz link mode\_ANT-2

<p>2412 MHz</p>	<p>Center Freq: 2.412000000 GHz</p> <p>Occupied Bandwidth: 17.703 MHz</p> <p>Total Power: 27.4 dBm</p> <p>Transmit Freq Error: -22.686 kHz</p>
<p>2437 MHz</p>	<p>Center Freq: 2.437000000 GHz</p> <p>Occupied Bandwidth: 17.716 MHz</p> <p>Total Power: 30.1 dBm</p> <p>Transmit Freq Error: -19.869 kHz</p>
<p>2462 MHz</p>	<p>Center Freq: 2.462000000 GHz</p> <p>Occupied Bandwidth: 17.688 MHz</p> <p>Total Power: 26.8 dBm</p> <p>Transmit Freq Error: -24.388 kHz</p>

Mode 5: IEEE 802.11n 2.4GHz 40MHz link mode\_ANT-2

<p>2422 MHz</p>	<p>Center Freq 2.42200000 GHz</p> <p>Center Freq: 2.422000000 GHz</p> <p>Trig: Free Run</p> <p>Avg/Hold: 10/10</p> <p>Radio Std: None</p> <p>Radio Device: BTS</p> <p>Ref Offset: 11.9 dB</p> <p>Ref: 30.00 dBm</p> <p>Center 2.422 GHz</p> <p>#Res BW 100 kHz</p> <p>#VBW 300 kHz</p> <p>Span 50 MHz</p> <p>Sweep 4.8 ms</p> <p>Occupied Bandwidth <b>36.195 MHz</b></p> <p>Total Power 25.4 dBm</p> <p>Transmit Freq Error -57.943 kHz</p> <p>OBW Power 99.00 %</p> <p>x dB Bandwidth 36.47 MHz</p> <p>x dB -6.00 dB</p> <p>Center Freq 2.42200000 GHz</p> <p>CF Step 5.000000 MHz</p> <p>Freq Offset 0 Hz</p>
<p>2437 MHz</p>	<p>Center Freq 2.43700000 GHz</p> <p>Center Freq: 2.437000000 GHz</p> <p>Trig: Free Run</p> <p>Avg/Hold: 10/10</p> <p>Radio Std: None</p> <p>Radio Device: BTS</p> <p>Ref Offset: 11.9 dB</p> <p>Ref: 30.00 dBm</p> <p>Center 2.437 GHz</p> <p>#Res BW 100 kHz</p> <p>#VBW 300 kHz</p> <p>Span 50 MHz</p> <p>Sweep 4.8 ms</p> <p>Occupied Bandwidth <b>36.215 MHz</b></p> <p>Total Power 28.6 dBm</p> <p>Transmit Freq Error -61.066 kHz</p> <p>OBW Power 99.00 %</p> <p>x dB Bandwidth 36.44 MHz</p> <p>x dB -6.00 dB</p> <p>Center Freq 2.43700000 GHz</p> <p>CF Step 5.000000 MHz</p> <p>Freq Offset 0 Hz</p>
<p>2452 MHz</p>	<p>Center Freq 2.45200000 GHz</p> <p>Center Freq: 2.452000000 GHz</p> <p>Trig: Free Run</p> <p>Avg/Hold: 10/10</p> <p>Radio Std: None</p> <p>Radio Device: BTS</p> <p>Ref Offset: 11.9 dB</p> <p>Ref: 30.00 dBm</p> <p>Center 2.452 GHz</p> <p>#Res BW 100 kHz</p> <p>#VBW 300 kHz</p> <p>Span 50 MHz</p> <p>Sweep 4.8 ms</p> <p>Occupied Bandwidth <b>36.179 MHz</b></p> <p>Total Power 25.3 dBm</p> <p>Transmit Freq Error -72.775 kHz</p> <p>OBW Power 99.00 %</p> <p>x dB Bandwidth 36.44 MHz</p> <p>x dB -6.00 dB</p> <p>Center Freq 2.45200000 GHz</p> <p>CF Step 5.000000 MHz</p> <p>Freq Offset 0 Hz</p>

## 8 Maximum Power Density Measurement

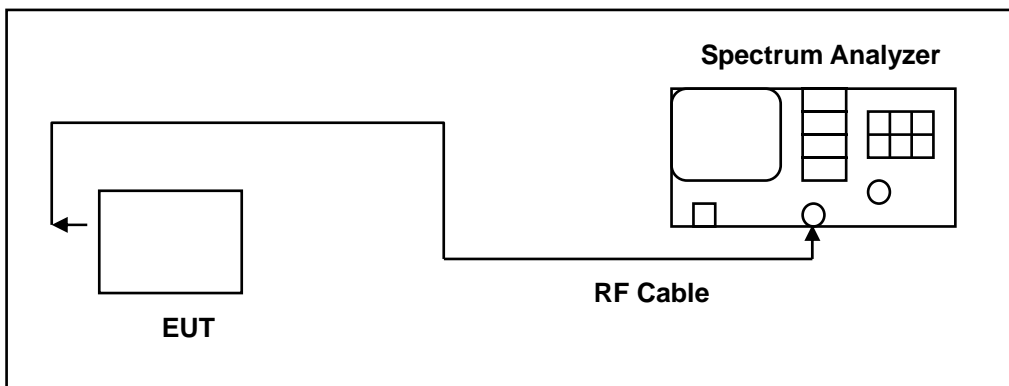
### 8.1. Limit

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

\* IEEE 802.11n mode: Directional Gain =  $10 \cdot \log \left[ \frac{(10^{G1/20} + 10^{G2/20} + 10^{G3/20})^2}{N_{ANT}} \right] = 8.42 \text{ dBi} > 6 \text{ dBi}$

\* MIMO mode power density limit shall be reduced =  $8 - 2.42 = 5.58 \text{ dBm}$

### 8.2. Test Setup



### 8.3. Test Instruments

Equipment	Manufacturer	Model Number	Serial Number	Cal. Date	Remark
Spectrum Analyzer	Agilent	E4445A	MY45300744	12/15/2015	(1)
Test Site	ATL	TE05	TE05	N.C.R.	-----

Remark: (1) Calibration period 1 year. (2) Calibration period 2 years. (3) Calibration period 3 years.

Note: N.C.R. = No Calibration Request.

### 8.4. Test Procedure

The EUT tested to DTS test procedure of KDB558074D01 for compliance to FCC 47CFR 15.247 requirements.




1. Set analyzer center frequency to DTS channel center frequency.
2. Set the span to 1.5 times the DTS bandwidth.
3. Set the RBW to:  $3 \text{ kHz} \leq \text{RBW} \leq 100 \text{ kHz}$ .
4. Set the VBW  $\geq 3 \times \text{RBW}$ .
5. Detector = peak.
6. Sweep time = auto couple.
7. Trace mode = max hold.
8. Allow trace to fully stabilize.
9. Use the peak marker function to determine the maximum amplitude level within the RBW.
10. If measured value exceeds limit, reduce RBW (no less than 3 kHz) and repeat.

**8.5. Test Result**

Model Number	EW-7679CAP					
Test Item	Maximum Power Density					
Test Mode	Mode 2: IEEE 802.11b link mode Mode 3: IEEE 802.11g link mode Mode 4: IEEE 802.11n 2.4GHz 20MHz link mode Mode 5: IEEE 802.11n 2.4GHz 40MHz link mode					
Date of Test	01/15/2016					
Test Mode	Frequency (MHz)	Measurement (dBm/3KHz)				Limit (dBm/3KHz)
		ANT-0	ANT-1	ANT-2	ANT-0+1+2	
Mode 2	2412	3.244	---	---	---	< 8
	2437	3.940	---	---	---	< 8
	2462	1.616	---	---	---	< 8
Mode 3	2412	-6.298	---	---	---	< 8
	2437	0.723	---	---	---	< 8
	2462	-6.386	---	---	---	< 8
Mode 4	2412	-7.195	-6.271	-6.482	-1.860	< 5.58
	2437	-5.073	-4.441	-3.584	0.448	< 5.58
	2462	-8.046	-7.504	-5.727	-2.204	< 5.58
Mode 5	2422	-10.776	-11.554	-10.428	-6.123	< 5.58
	2437	-9.493	-9.748	-7.988	-4.233	< 5.58
	2452	-13.650	-11.722	-11.722	-7.503	< 5.58

**8.6. Test Graphs**

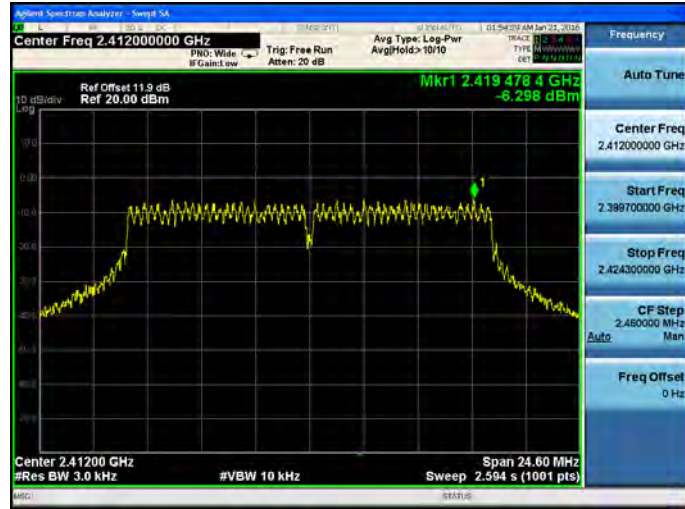
Mode 2: IEEE 802.11b link mode\_ANT-0

<p>2412 MHz</p>	
<p>2437 MHz</p>	
<p>2462 MHz</p>	



Mode 3: IEEE 802.11g link mode\_ANT-0

2412 MHz





2437 MHz



2462 MHz



Mode 4: IEEE 802.11n 2.4GHz 20MHz link mode\_ANT-0

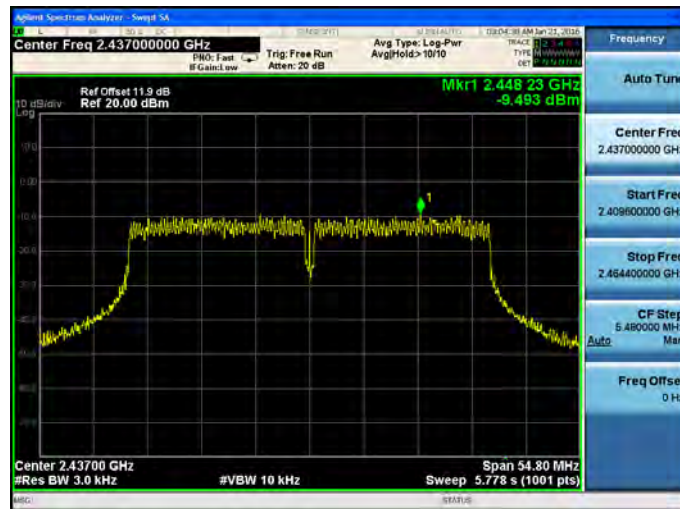
<p>2412 MHz</p>	
<p>2437 MHz</p>	
<p>2462 MHz</p>	

Mode 5: IEEE 802.11n 2.4GHz 40MHz link mode\_ANT-0

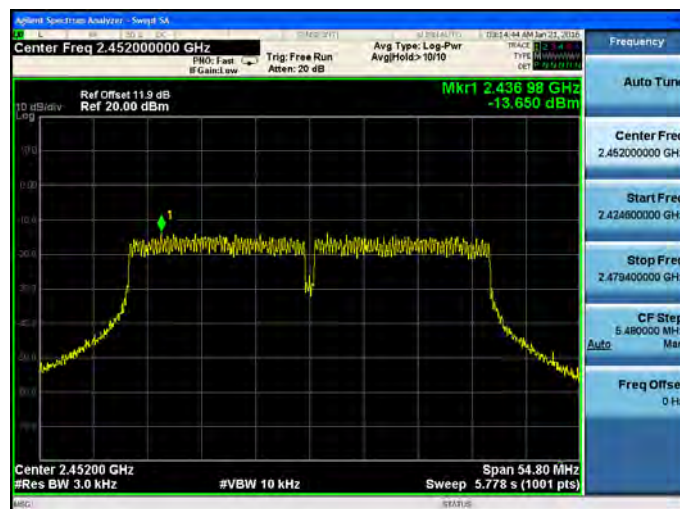
2422 MHz



2437 MHz



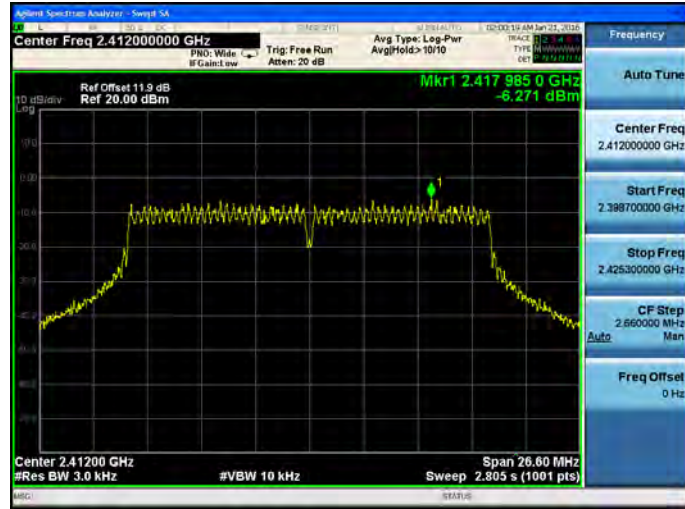
2452 MHz





Mode 4: IEEE 802.11n 2.4GHz 20MHz link mode\_ANT-1

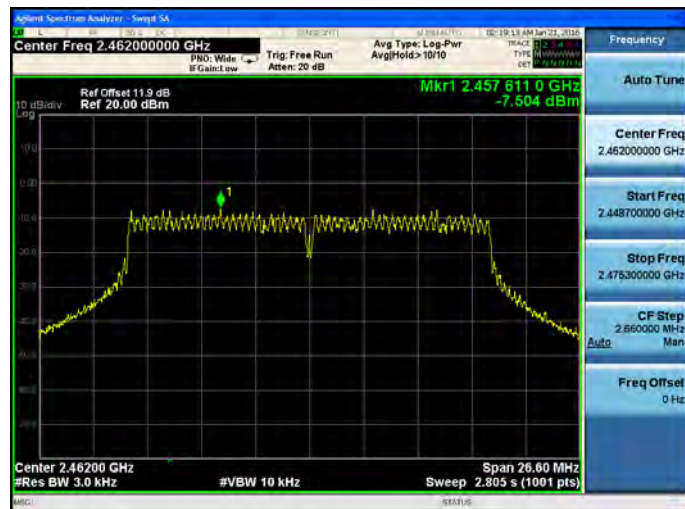
2412 MHz



2437 MHz



2462 MHz

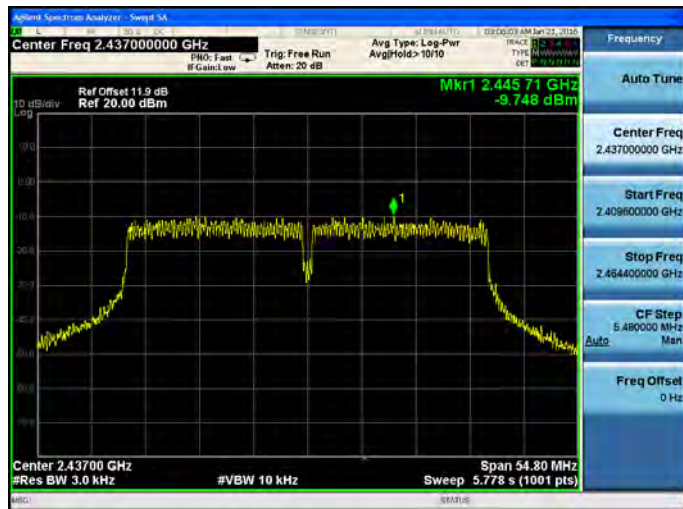


Mode 5: IEEE 802.11n 2.4GHz 40MHz link mode\_ANT-1

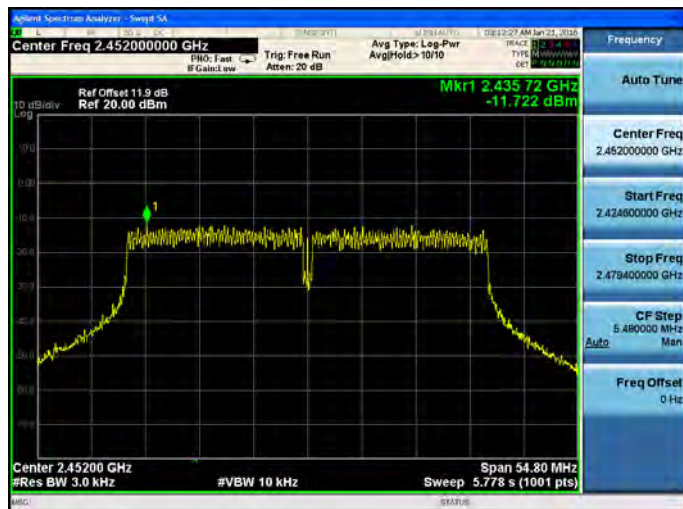
2422 MHz



2437 MHz

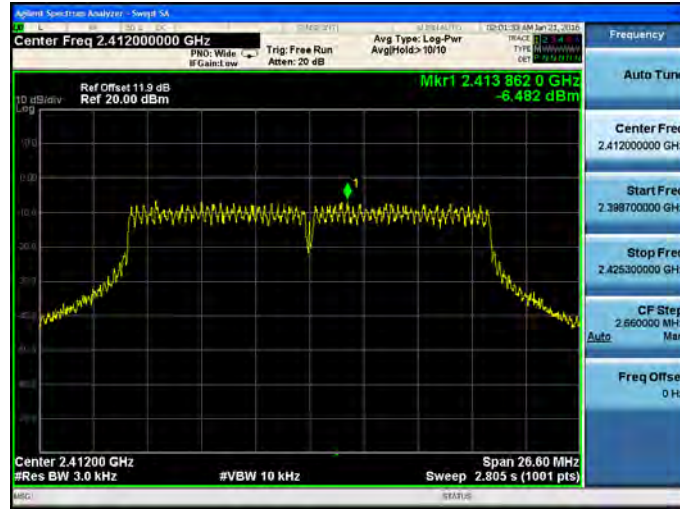


2452 MHz

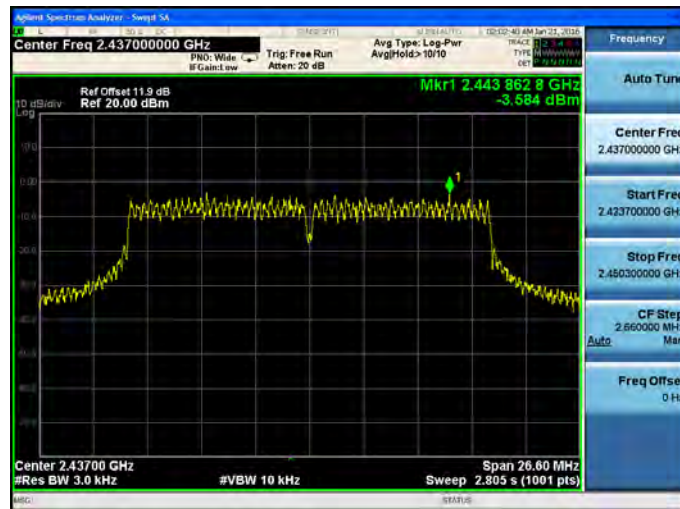


Mode 4: IEEE 802.11n 2.4GHz 20MHz link mode\_ANT-2

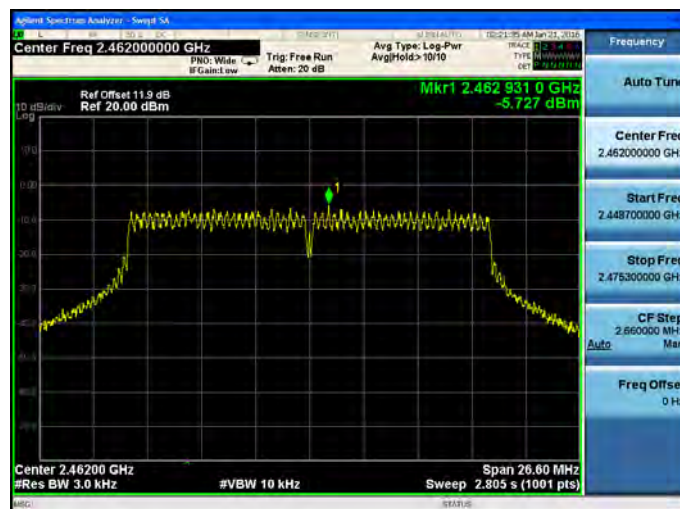
2412 MHz



2437 MHz

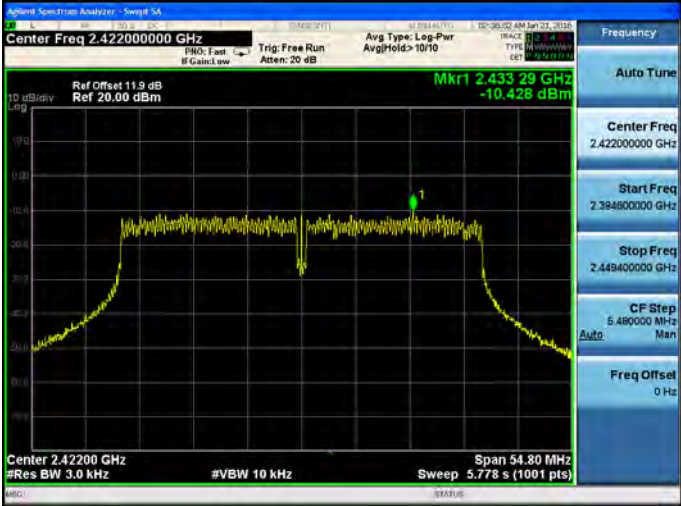
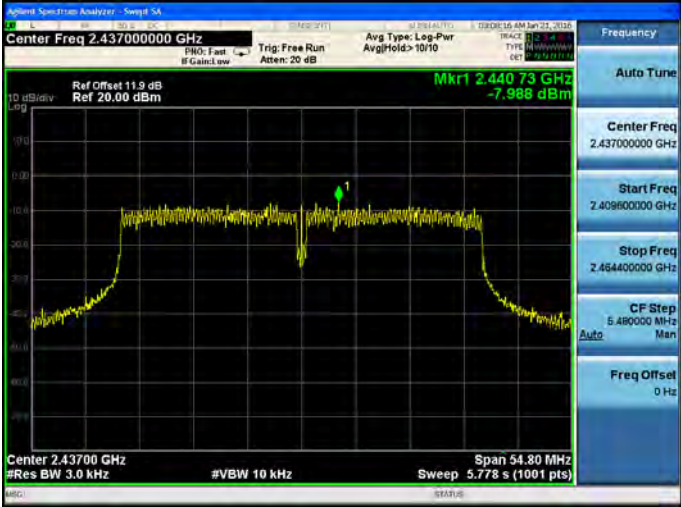
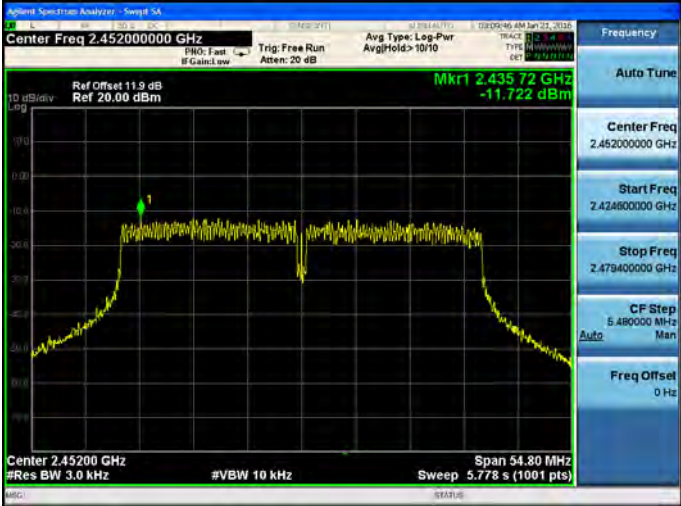


2462 MHz





Mode 5: IEEE 802.11n 2.4GHz 40MHz link mode\_ANT-2

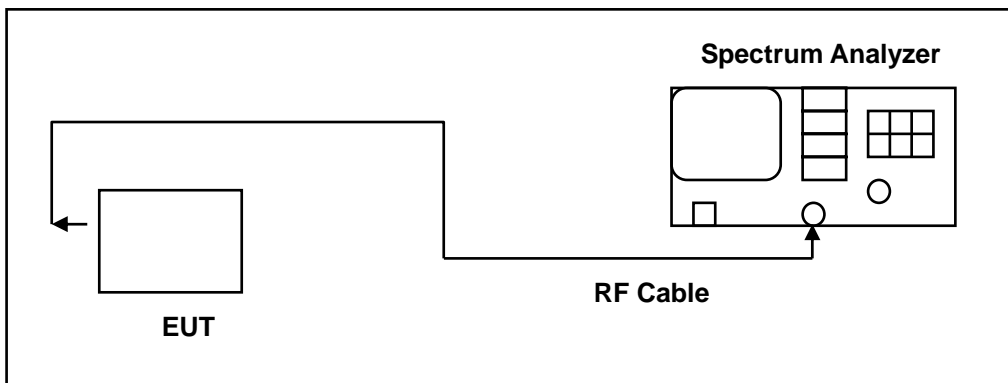
<p>2422 MHz</p>	
<p>2437 MHz</p>	
<p>2452 MHz</p>	

## 9 Out of Band Conducted Emissions Measurement

### 9.1. Limit

In any 100 kHz bandwidth outside the frequency band in which the spread spectrum or digitally modulated intentional radiator is operating, the radio frequency power that is produced by the intentional radiator shall be at least 30 dB below that in the 100 kHz bandwidth within the band that contains the highest level of the desired power

### 9.2. Test Setup



### 9.3. Test Instruments

Equipment	Manufacturer	Model Number	Serial Number	Cal. Date	Remark
Spectrum Analyzer	Agilent	E4445A	MY45300744	12/15/2015	(1)
Spectrum Analyzer	Agilent	E4408B	MY45107753	07/27/2015	(1)
Test Site	ATL	TE05	TE05	N.C.R.	-----

Remark: (1) Calibration period 1 year. (2) Calibration period 2 years. (3) Calibration period 3 years.

Note: N.C.R. = No Calibration Request.

### 9.4. Test Procedure

In any 100 kHz bandwidth outside the EUT pass band, the RF power produced by the modulation products of the spreading sequence, the information sequence, and the carrier frequency shall be at least 20 dB below that of the maximum in-band 100 kHz emission, antenna output of the EUT was coupled directly to spectrum analyzer; if an external attenuator and/or cable was used, these losses are compensated for with the analyzer OFFSET function.

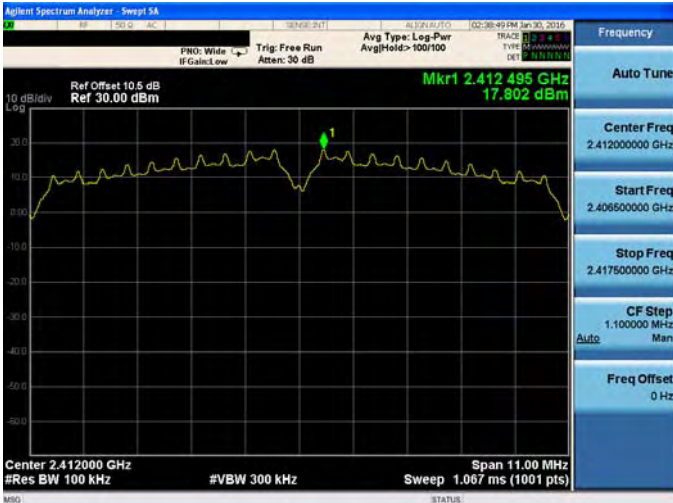


All other types of emissions from the EUT shall meet the general limits for radiated frequencies outside the pass band.

The test was performed at 3 channels.

### 9.5. Test Graphs

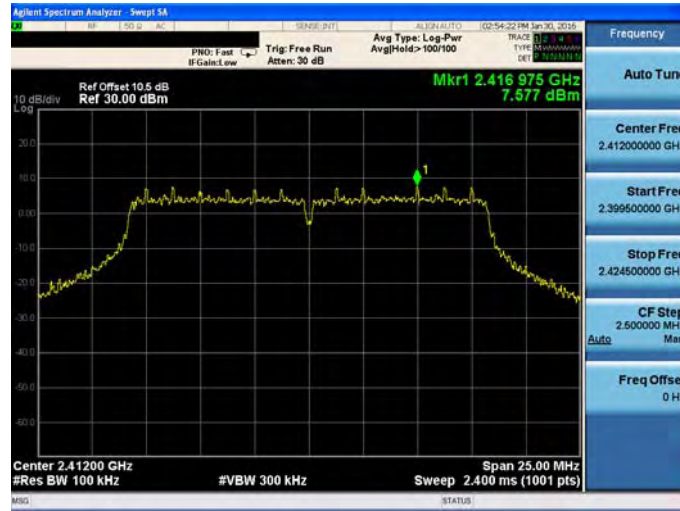
#### Reference level

Mode 2: IEEE 802.11b link mode\_ANT-0

<p>2412 MHz</p>	 <p>Agilent Spectrum Analyzer - Swept SA          Ref Offset 10.5 dB          Ref 30.00 dBm          Mkr1 2.412 495 GHz          17.802 dBm          Center 2.412000 GHz          #Res BW 100 kHz #VBW 300 kHz Sweep 1.067 ms (1001 pts)</p>
<p>2437 MHz</p>	 <p>Agilent Spectrum Analyzer - Swept SA          Ref Offset 10.5 dB          Ref 30.00 dBm          Mkr1 2.436 010 GHz          17.184 dBm          Center 2.437000 GHz          #Res BW 100 kHz #VBW 300 kHz Sweep 1.067 ms (1001 pts)</p>
<p>2462 MHz</p>	 <p>Agilent Spectrum Analyzer - Swept SA          Ref Offset 10.5 dB          Ref 30.00 dBm          Mkr1 2.462 979 GHz          15.799 dBm          Center 2.462000 GHz          #Res BW 100 kHz #VBW 300 kHz Sweep 1.067 ms (1001 pts)</p>

Mode 3: IEEE 802.11g link mode\_ANT-0

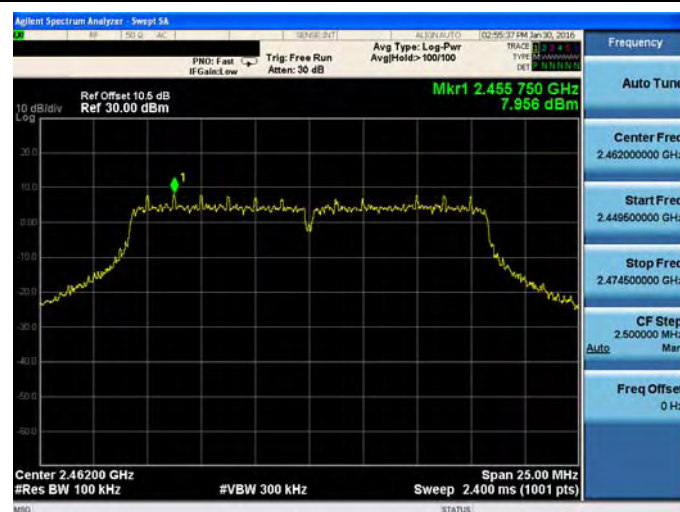
2412 MHz



2437 MHz



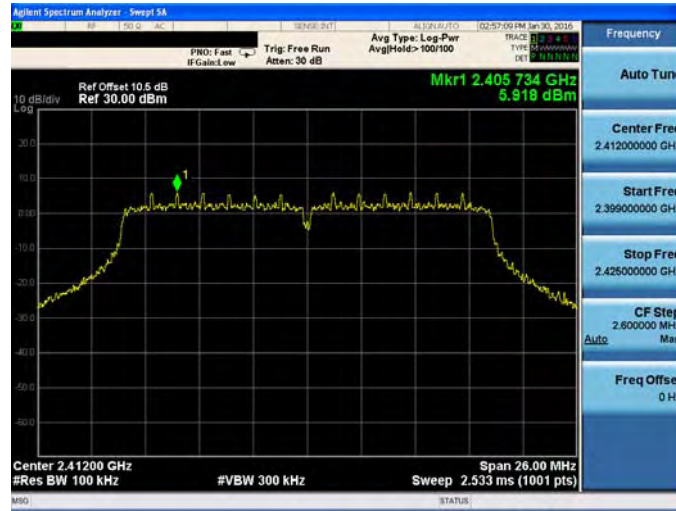
2462 MHz



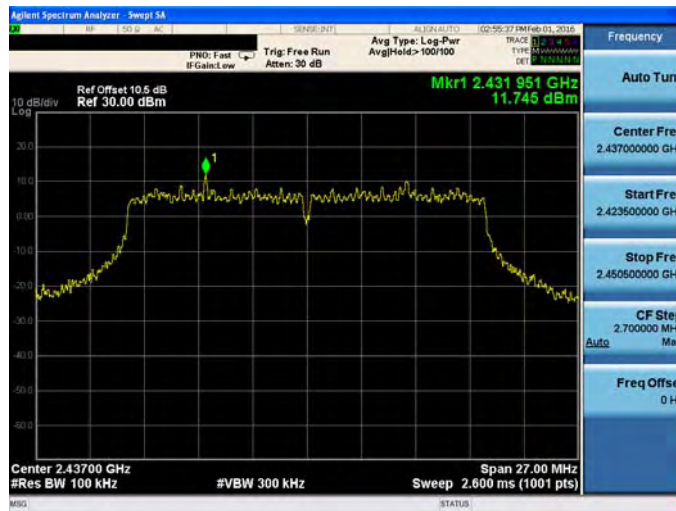


Mode 4: IEEE 802.11n 2.4GHz 20MHz link mode\_ANT-0

2412 MHz



2437 MHz



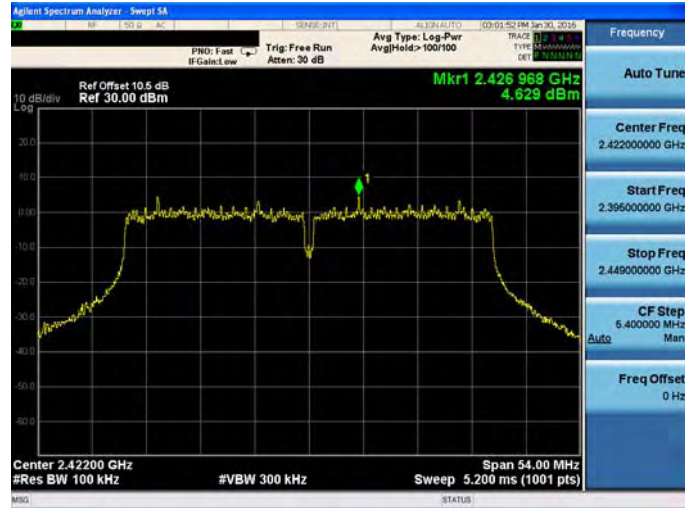
2462 MHz



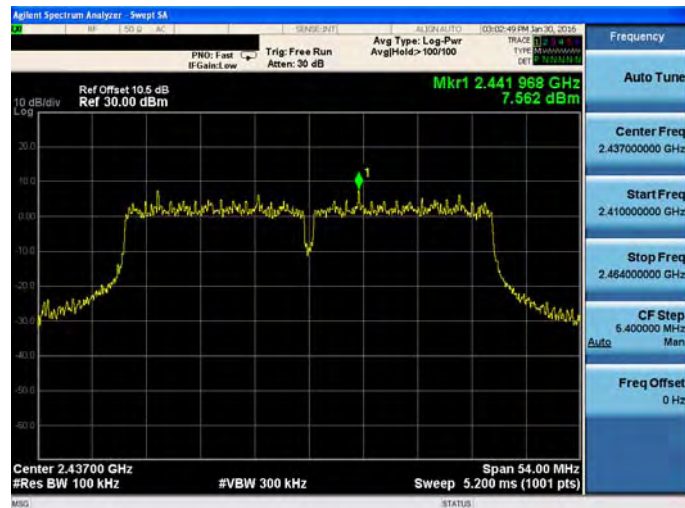


Mode 5: IEEE 802.11n 2.4GHz 40MHz link mode\_ANT-0

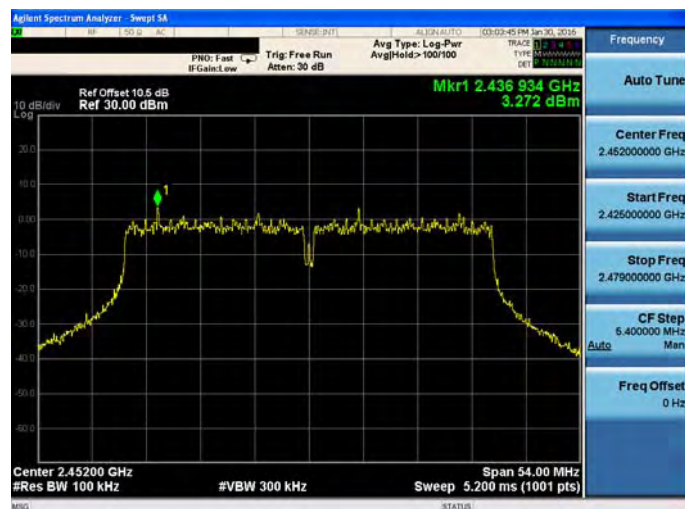
2422 MHz



2437 MHz

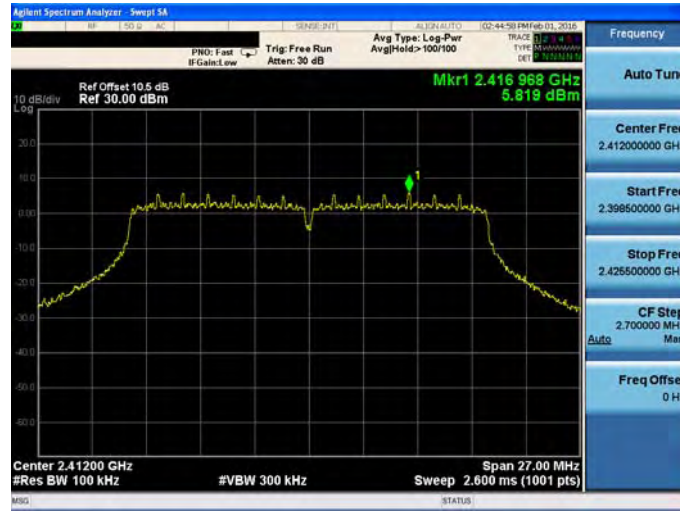


2452 MHz

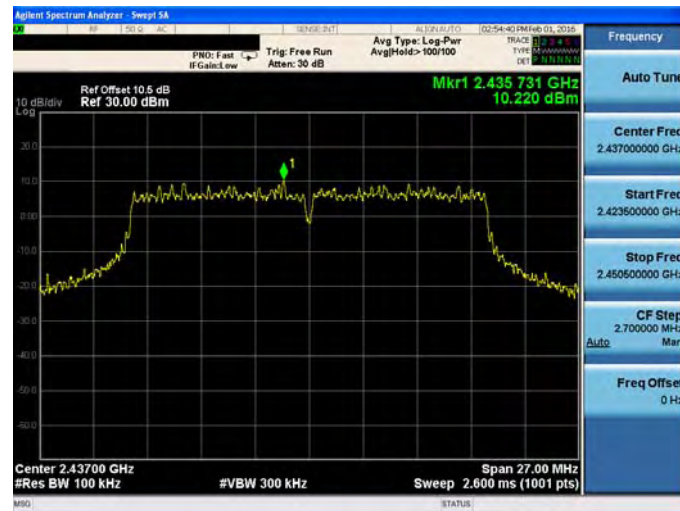


Mode 4: IEEE 802.11n 2.4GHz 20MHz link mode\_ANT-1

2412 MHz



2437 MHz

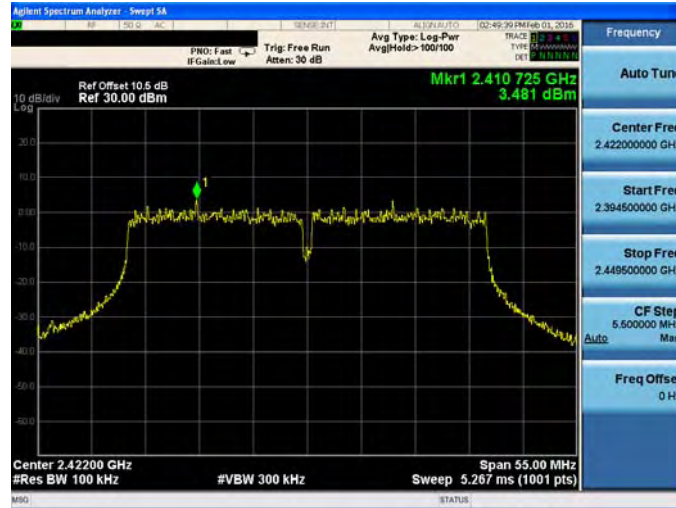


2462 MHz

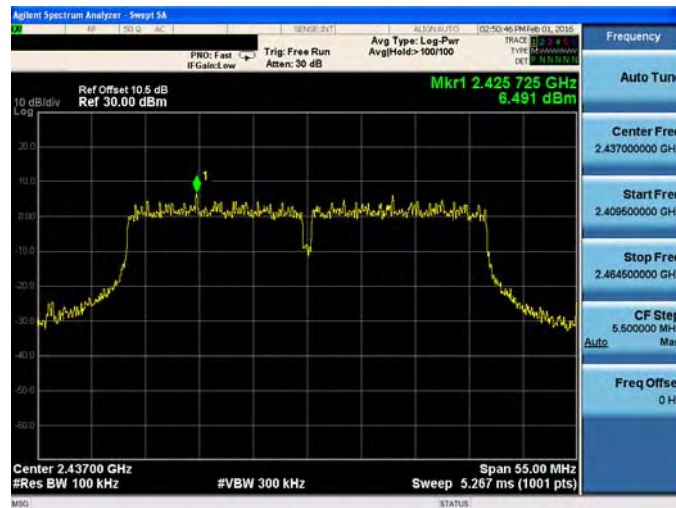


Mode 5: IEEE 802.11n 2.4GHz 40MHz link mode\_ANT-1

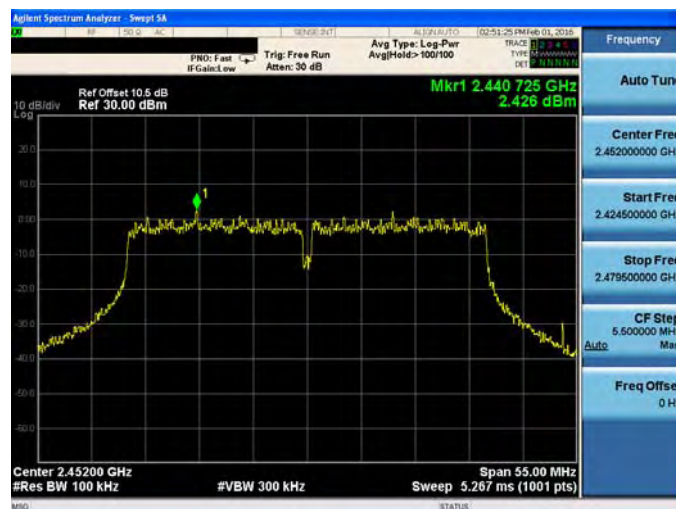
2422 MHz



2437 MHz

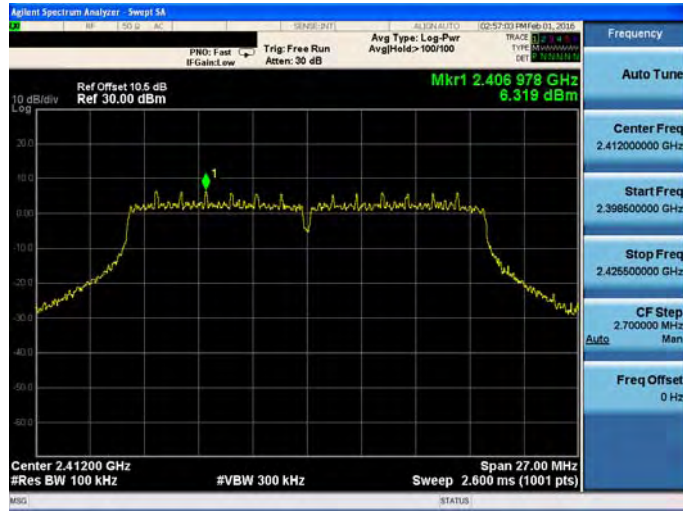


2452 MHz

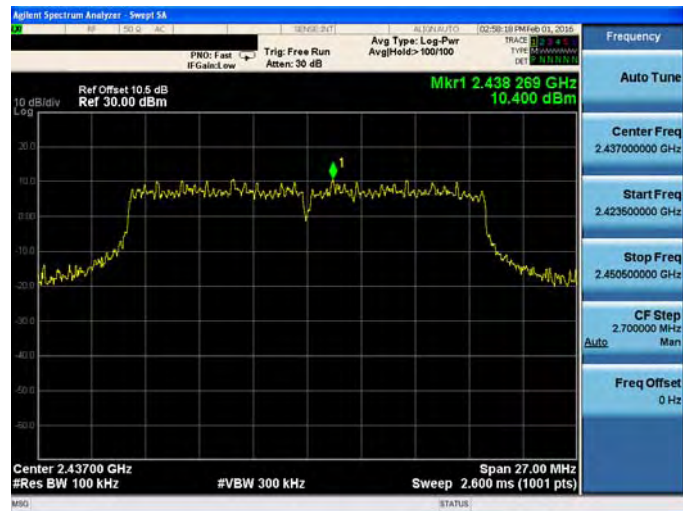


Mode 4: IEEE 802.11n 2.4GHz 20MHz link mode\_ANT-2

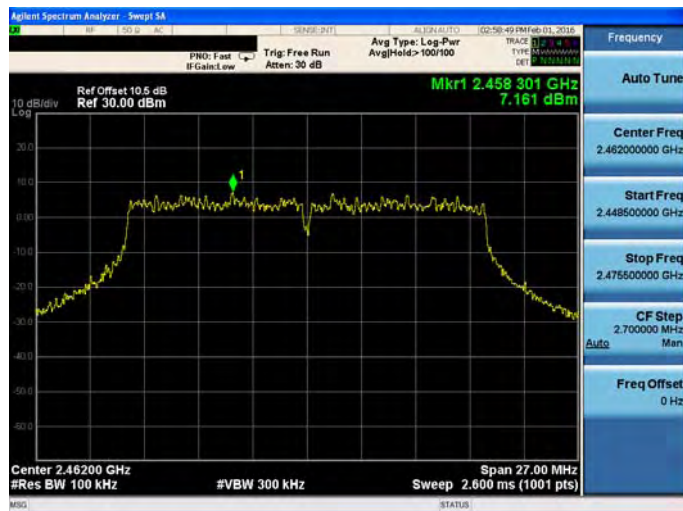
2412 MHz



2437 MHz



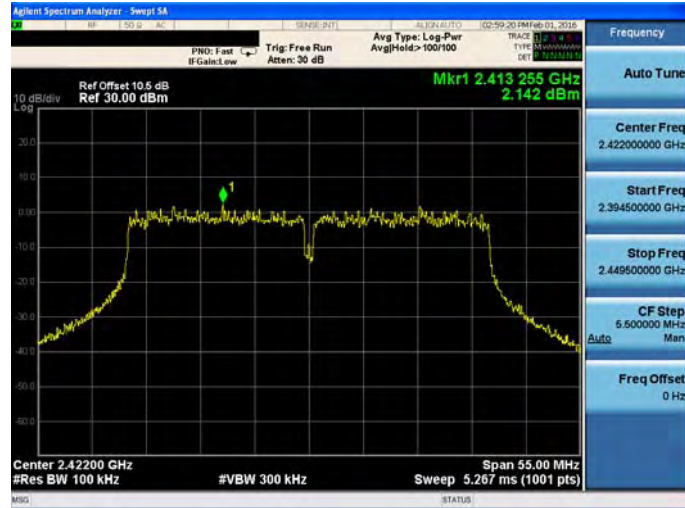
2462 MHz





Mode 5: IEEE 802.11n 2.4GHz 40MHz link mode\_ANT-2

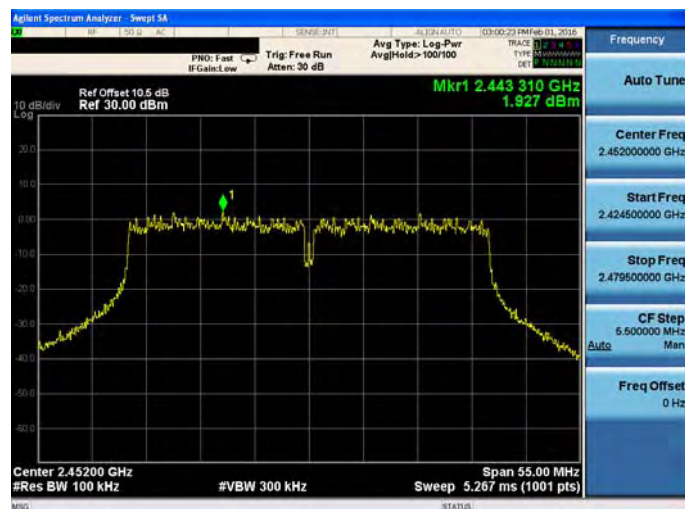
2422 MHz



2437 MHz



2452 MHz



**Out of Band Conducted Emissions**

Mode 2: IEEE 802.11b link mode\_ANT-0

<p>2412 MHz</p>	<p>Agilent Spectrum Analyzer - Swept SA</p> <p>Frequency: 2.412 GHz, Power: 16.203 dBm</p> <p>Start 30 MHz, #Res BW 100 kHz, #VBW 300 kHz, Stop 26.50 GHz, Sweep 2.530 s (1001 pts)</p> <table border="1"> <thead> <tr> <th>MKR</th> <th>MODE</th> <th>TFC</th> <th>SQL</th> <th>X</th> <th>Y</th> <th>FUNCTION</th> <th>FUNCTION WIDTH</th> <th>FUNCTION VALUE</th> </tr> </thead> <tbody> <tr> <td>1</td> <td>N</td> <td>1</td> <td>f</td> <td></td> <td>2.412 GHz</td> <td></td> <td></td> <td>16.203 dBm</td> </tr> </tbody> </table>	MKR	MODE	TFC	SQL	X	Y	FUNCTION	FUNCTION WIDTH	FUNCTION VALUE	1	N	1	f		2.412 GHz			16.203 dBm
MKR	MODE	TFC	SQL	X	Y	FUNCTION	FUNCTION WIDTH	FUNCTION VALUE											
1	N	1	f		2.412 GHz			16.203 dBm											
<p>2437 MHz</p>	<p>Agilent Spectrum Analyzer - Swept SA</p> <p>Frequency: 2.437 GHz, Power: 15.558 dBm</p> <p>Start 30 MHz, #Res BW 100 kHz, #VBW 300 kHz, Stop 26.50 GHz, Sweep 2.530 s (1001 pts)</p> <table border="1"> <thead> <tr> <th>MKR</th> <th>MODE</th> <th>TFC</th> <th>SQL</th> <th>X</th> <th>Y</th> <th>FUNCTION</th> <th>FUNCTION WIDTH</th> <th>FUNCTION VALUE</th> </tr> </thead> <tbody> <tr> <td>1</td> <td>N</td> <td>1</td> <td>f</td> <td></td> <td>2.437 GHz</td> <td></td> <td></td> <td>15.558 dBm</td> </tr> </tbody> </table>	MKR	MODE	TFC	SQL	X	Y	FUNCTION	FUNCTION WIDTH	FUNCTION VALUE	1	N	1	f		2.437 GHz			15.558 dBm
MKR	MODE	TFC	SQL	X	Y	FUNCTION	FUNCTION WIDTH	FUNCTION VALUE											
1	N	1	f		2.437 GHz			15.558 dBm											
<p>2462 MHz</p>	<p>Agilent Spectrum Analyzer - Swept SA</p> <p>Frequency: 2.462 GHz, Power: 14.056 dBm</p> <p>Start 30 MHz, #Res BW 100 kHz, #VBW 300 kHz, Stop 26.50 GHz, Sweep 2.530 s (1001 pts)</p> <table border="1"> <thead> <tr> <th>MKR</th> <th>MODE</th> <th>TFC</th> <th>SQL</th> <th>X</th> <th>Y</th> <th>FUNCTION</th> <th>FUNCTION WIDTH</th> <th>FUNCTION VALUE</th> </tr> </thead> <tbody> <tr> <td>1</td> <td>N</td> <td>1</td> <td>f</td> <td></td> <td>2.462 GHz</td> <td></td> <td></td> <td>14.056 dBm</td> </tr> </tbody> </table>	MKR	MODE	TFC	SQL	X	Y	FUNCTION	FUNCTION WIDTH	FUNCTION VALUE	1	N	1	f		2.462 GHz			14.056 dBm
MKR	MODE	TFC	SQL	X	Y	FUNCTION	FUNCTION WIDTH	FUNCTION VALUE											
1	N	1	f		2.462 GHz			14.056 dBm											

Mode 3: IEEE 802.11g link mode\_ANT-0

2412 MHz



2437 MHz



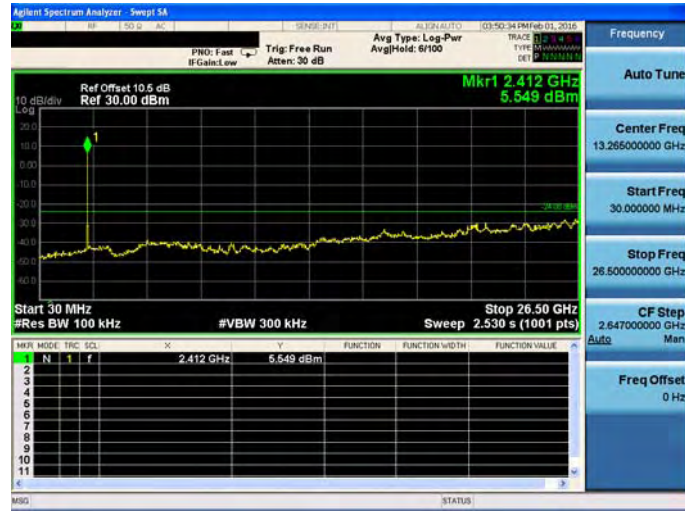
2462 MHz





Mode 4: IEEE 802.11n 2.4GHz 20MHz link mode\_ANT-0

2412 MHz



2437 MHz



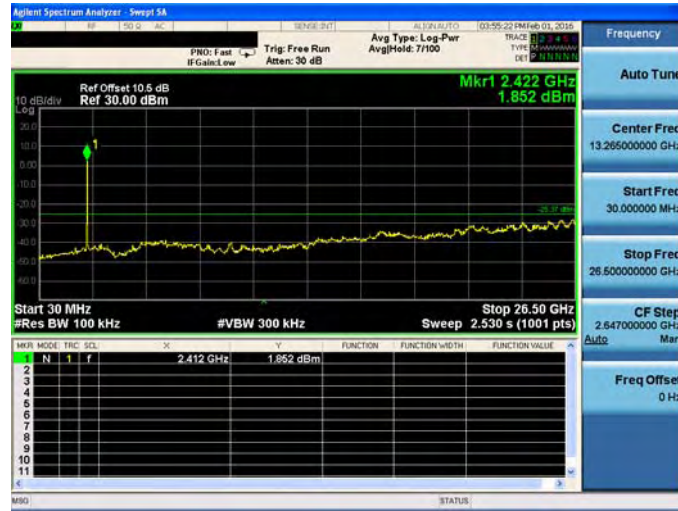
2462 MHz





Mode 5: IEEE 802.11n 2.4GHz 40MHz link mode\_ANT-0

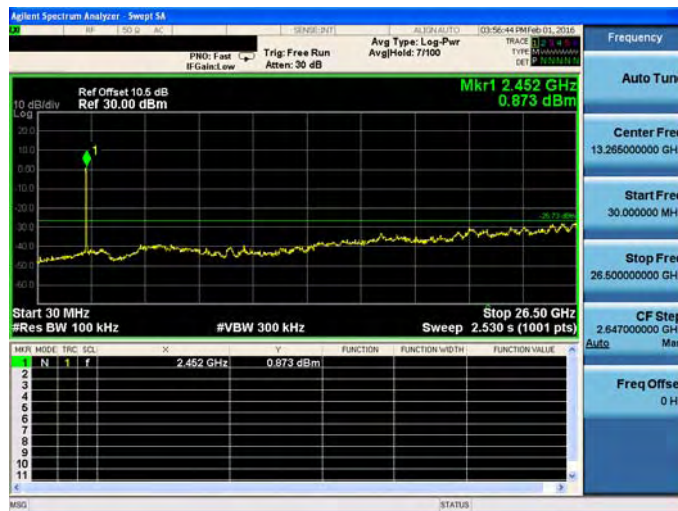
2422 MHz



2437 MHz

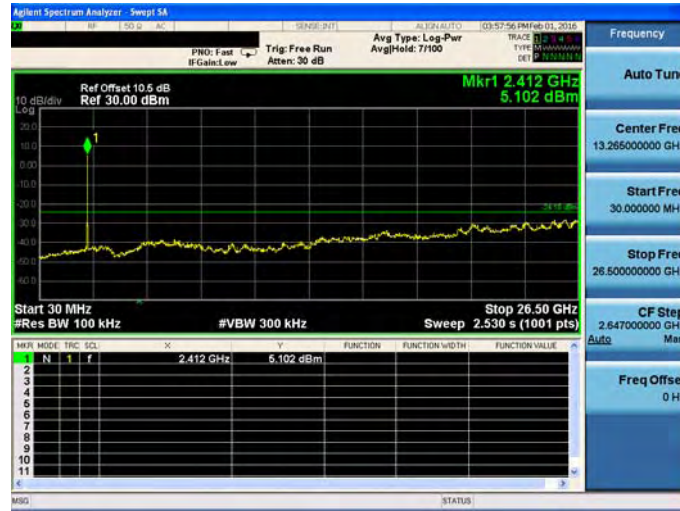


2452 MHz



Mode 4: IEEE 802.11n 2.4GHz 20MHz link mode\_ANT-1

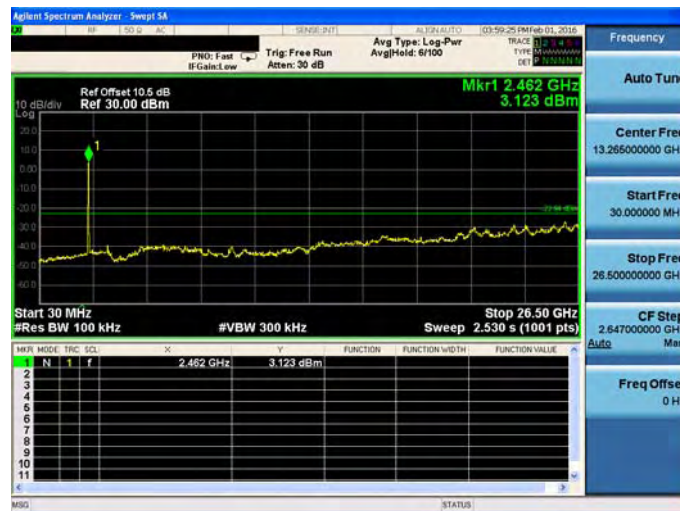
2412 MHz



2437 MHz

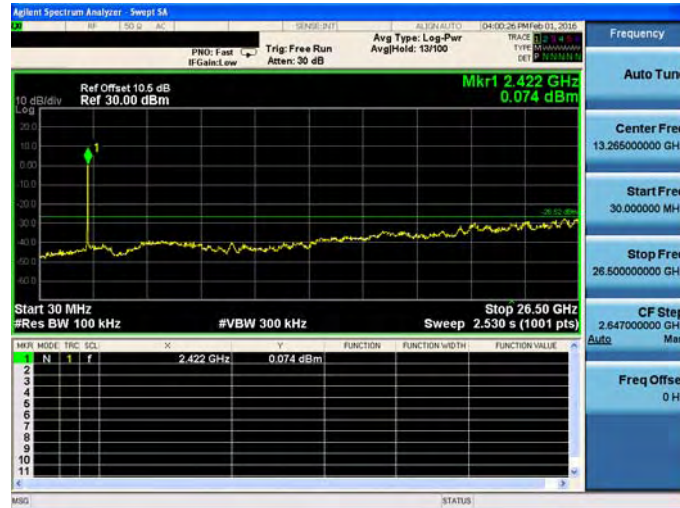


2462 MHz

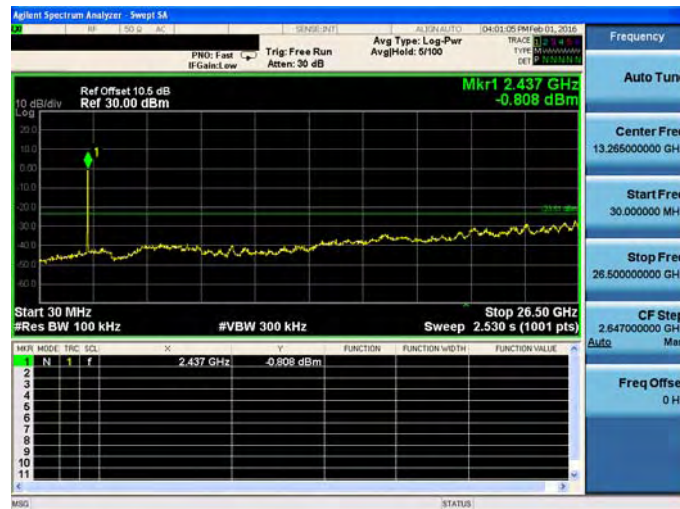


Mode 5: IEEE 802.11n 2.4GHz 40MHz link mode\_ANT-1

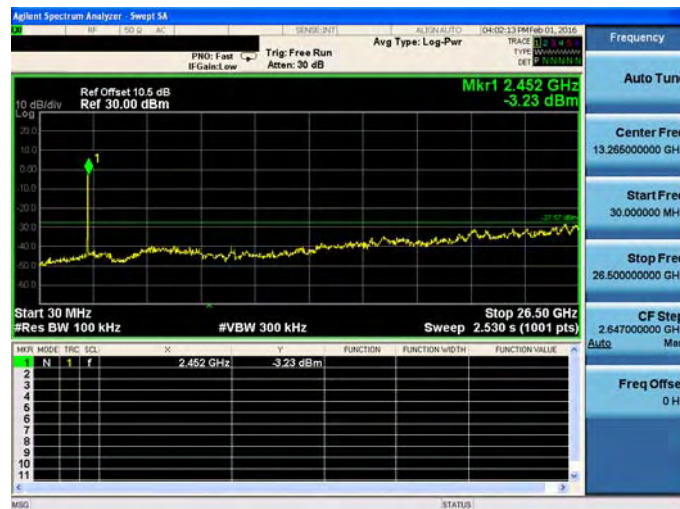
2422 MHz



2437 MHz



2452 MHz





Mode 4: IEEE 802.11n 2.4GHz 20MHz link mode\_ANT-2

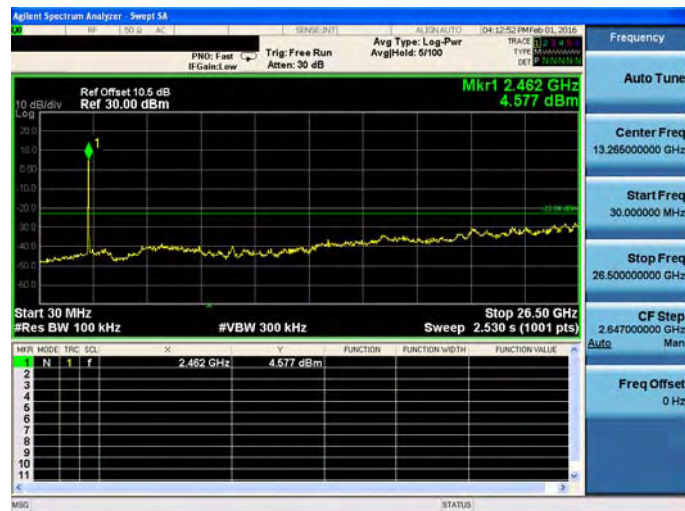
2412 MHz



2437 MHz



2462 MHz

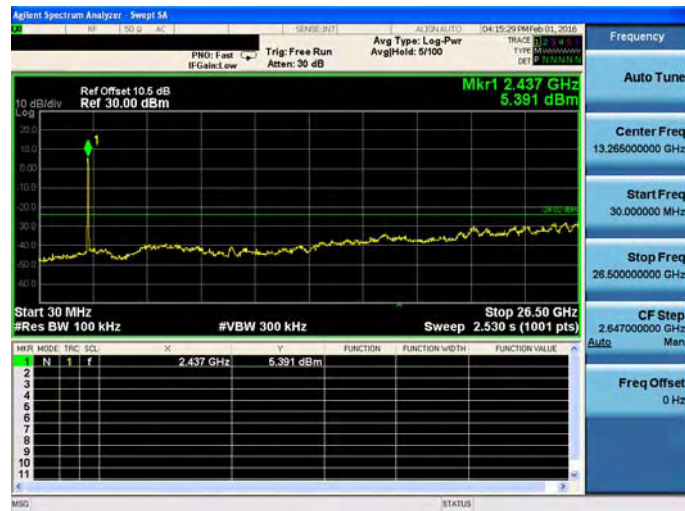


Mode 5: IEEE 802.11n 2.4GHz 40MHz link mode\_ANT-2

2422 MHz



2437 MHz



2452 MHz



**Conducted Band Edge**

Mode 2: IEEE 802.11b link mode\_ANT-0

<p>2412 MHz</p>	<p>Agilent Spectrum Analyzer - Sweep SA</p> <p>Ref Offset 10.5 dB Ref 30.00 dBm</p> <p>Mkr1 2.412 495 GHz 17.802 dBm</p> <p>Center 2.412000 GHz #Res BW 100 kHz #VBW 300 kHz Sweep 1.067 ms (1001 pts) Span 11.00 MHz</p> <p>Frequency: 2.412000000 GHz Auto Tune Center Freq: 2.412000000 GHz Start Freq: 2.406500000 GHz Stop Freq: 2.417500000 GHz CF Step: 1.100000 MHz Auto Man Freq Offset: 0 Hz</p>
<p>2437 MHz</p>	<p>Agilent Spectrum Analyzer - Sweep SA</p> <p>Ref Offset 10.5 dB Ref 30.00 dBm</p> <p>Mkr1 2.436 010 GHz 17.164 dBm</p> <p>Center 2.437000 GHz #Res BW 100 kHz #VBW 300 kHz Sweep 1.067 ms (1001 pts) Span 11.00 MHz</p> <p>Frequency: 2.437000000 GHz Auto Tune Center Freq: 2.437000000 GHz Start Freq: 2.431500000 GHz Stop Freq: 2.442500000 GHz CF Step: 1.100000 MHz Auto Man Freq Offset: 0 Hz</p>
<p>2462 MHz</p>	<p>Agilent Spectrum Analyzer - Sweep SA</p> <p>Ref Offset 10.5 dB Ref 30.00 dBm</p> <p>Mkr1 2.462 979 GHz 16.798 dBm</p> <p>Center 2.462000 GHz #Res BW 100 kHz #VBW 300 kHz Sweep 1.067 ms (1001 pts) Span 11.00 MHz</p> <p>Frequency: 2.462000000 GHz Auto Tune Center Freq: 2.462000000 GHz Start Freq: 2.456500000 GHz Stop Freq: 2.467500000 GHz CF Step: 1.100000 MHz Auto Man Freq Offset: 0 Hz</p>



Mode 3: IEEE 802.11g link mode\_ANT-0

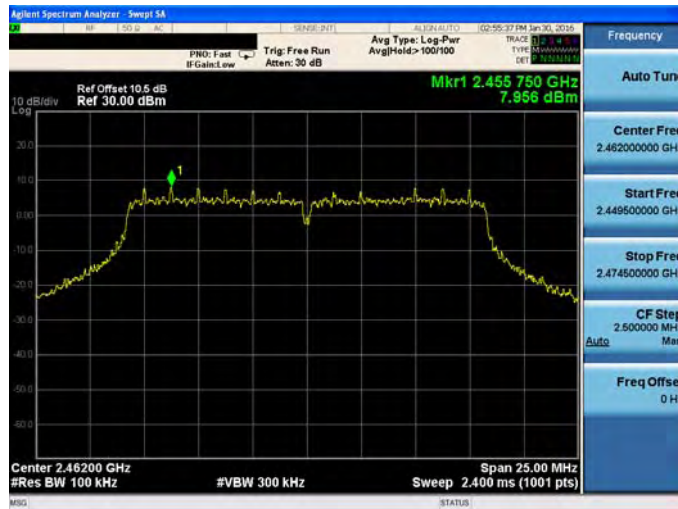
2412 MHz



2437 MHz



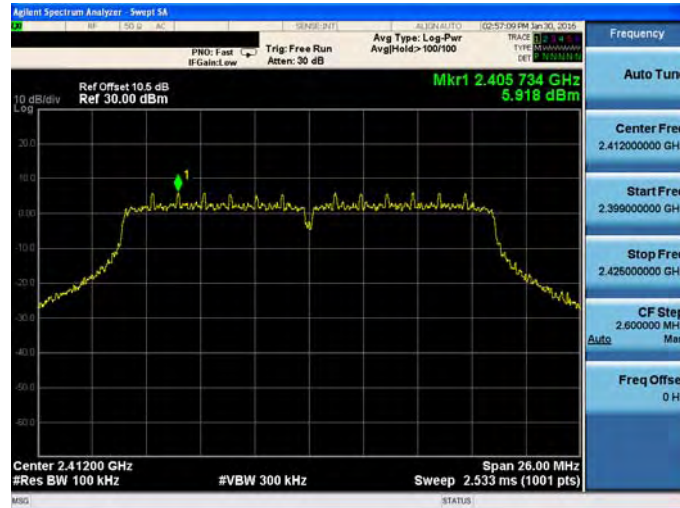
2462 MHz



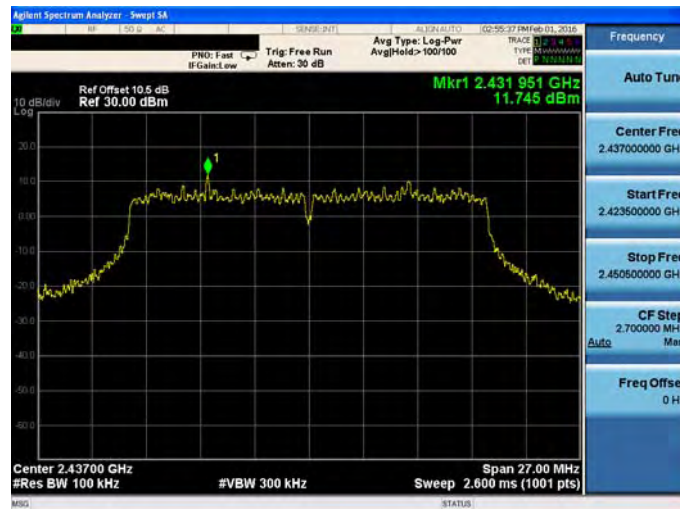


Mode 4: IEEE 802.11n 2.4GHz 20MHz link mode\_ANT-0

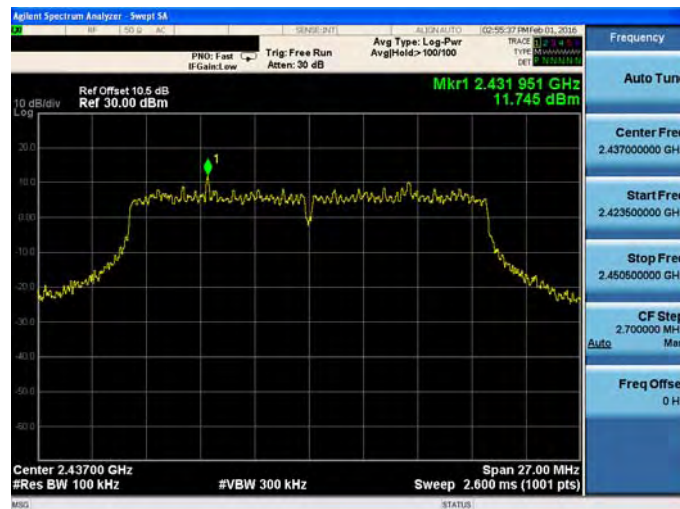
2412 MHz



2437 MHz

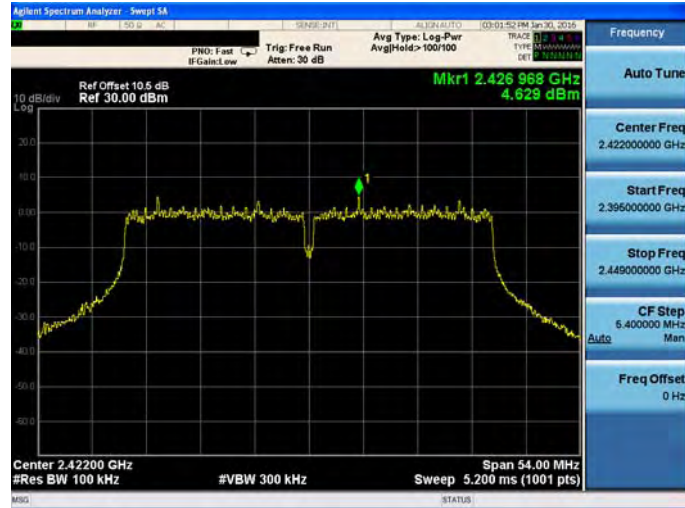


2462 MHz

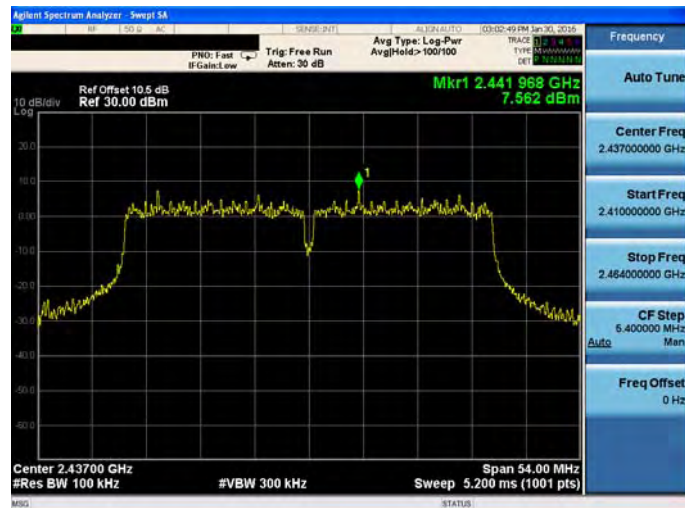


Mode 5: IEEE 802.11n 2.4GHz 40MHz link mode\_ANT-0

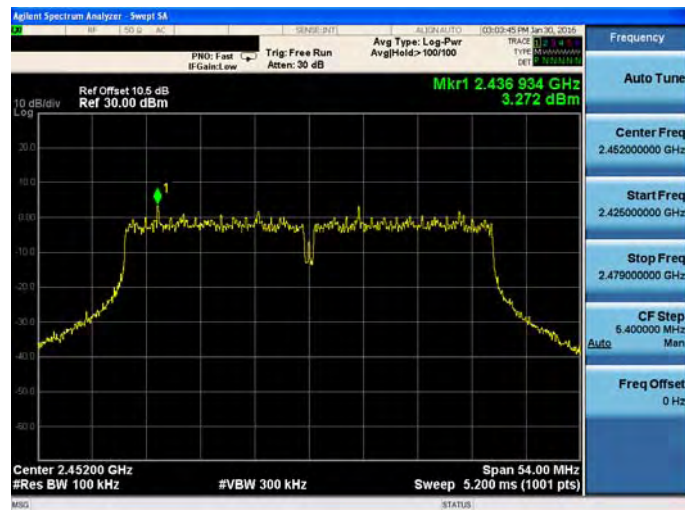
2422 MHz



2437 MHz



2452 MHz

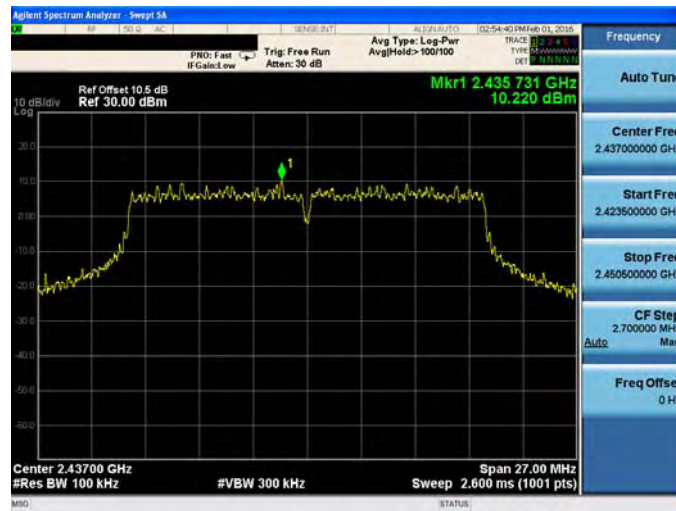


Mode 4: IEEE 802.11n 2.4GHz 20MHz link mode\_ANT-1

2412 MHz



2437 MHz

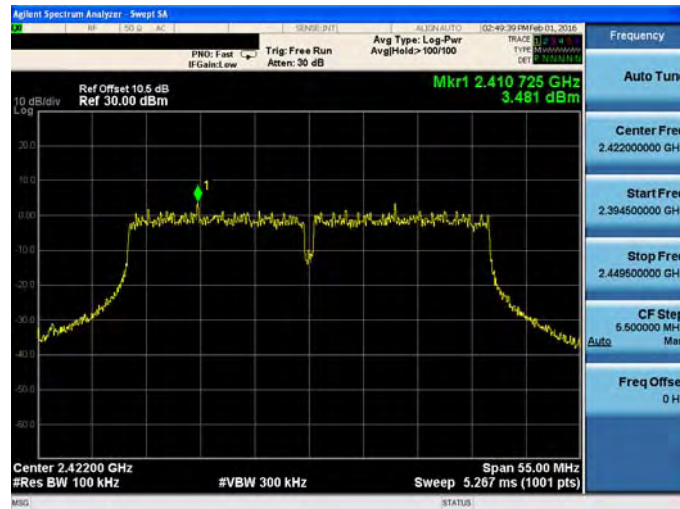


2462 MHz

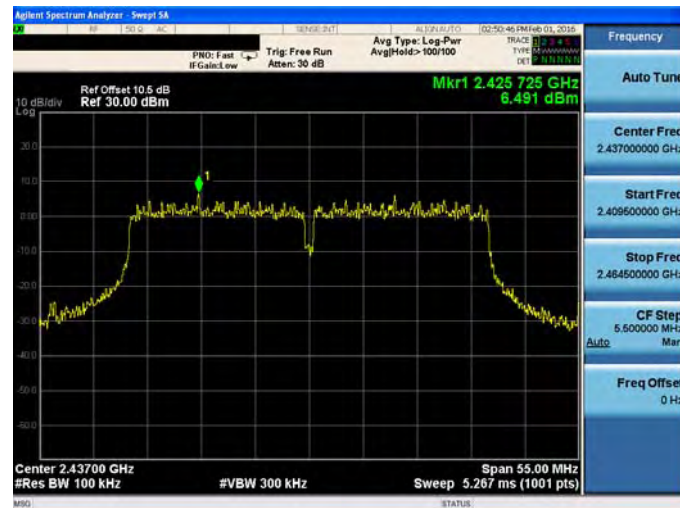


Mode 5: IEEE 802.11n 2.4GHz 40MHz link mode\_ANT-1

2422 MHz



2437 MHz



2452 MHz



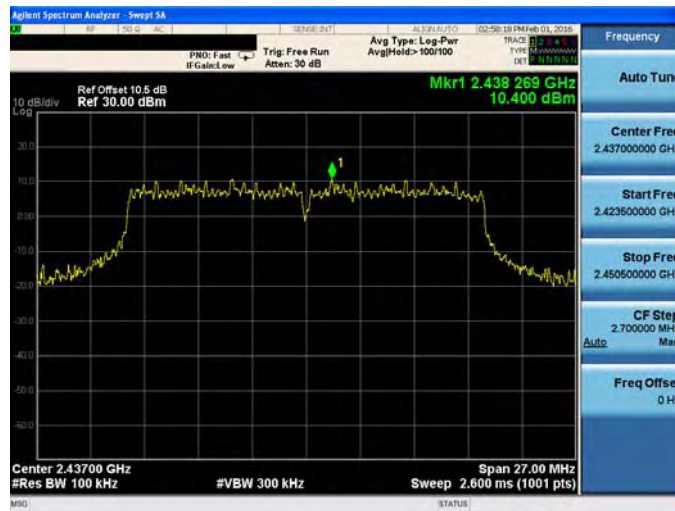


Mode 4: IEEE 802.11n 2.4GHz 20MHz link mode\_ANT-2

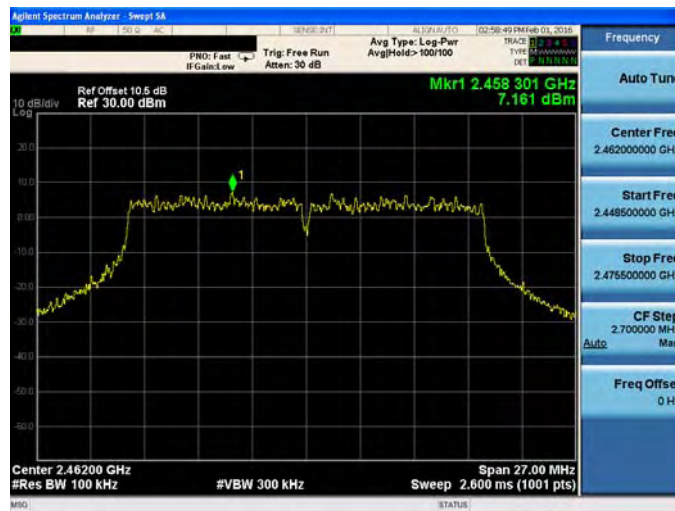
2412 MHz



2437 MHz

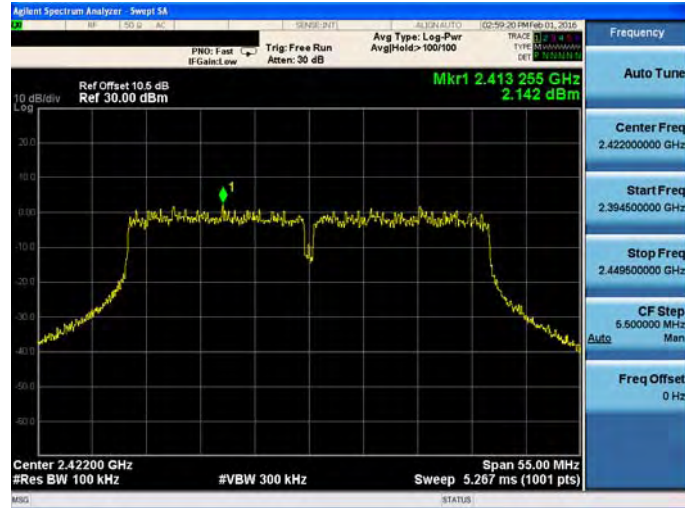


2462 MHz

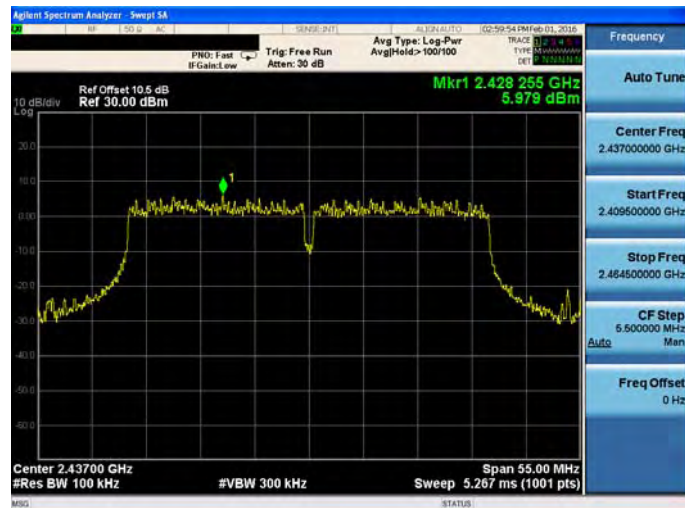


Mode 5: IEEE 802.11n 2.4GHz 40MHz link mode\_ANT-2

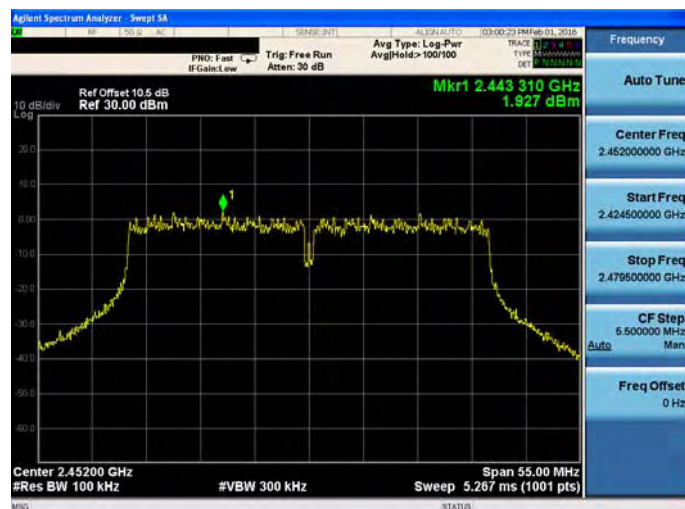
2422 MHz



2437 MHz



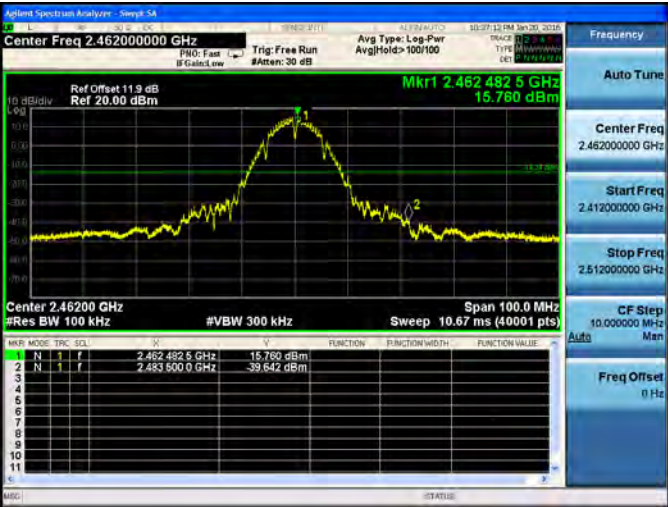


2452 MHz



**Out of Band Conducted Emissions**

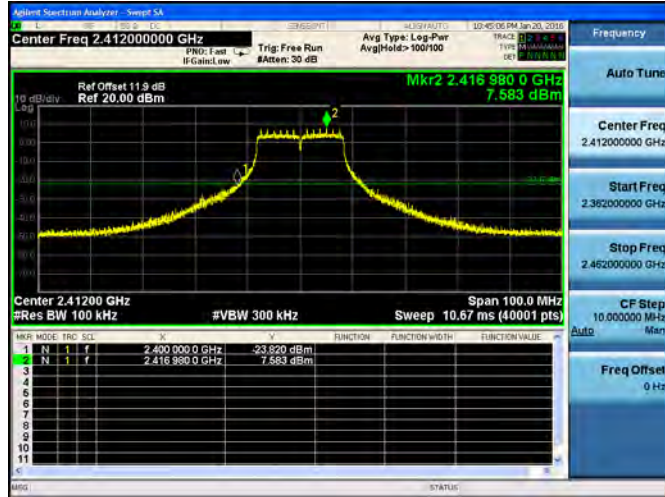
Mode 2: IEEE 802.11b link mode\_ANT-0

<p>2412 MHz</p>	 <p>Agilent Spectrum Analyzer - Sweep SA</p> <p>Center Freq 2.41200000 GHz</p> <p>Ref Offset 11.9 dB Ref 20.00 dBm</p> <p>Mkr2 2.412495 0 GHz 17.649 dBm</p> <p>Center 2.41200 GHz #VBW 300 kHz Sweep 10.67 ms (40001 pts)</p> <table border="1"> <thead> <tr> <th>MKR</th> <th>MODE</th> <th>TRC</th> <th>SOL</th> <th>F</th> <th>V</th> <th>FUNCTION</th> <th>FUNCTION WIDTH</th> <th>FUNCTION VALUE</th> </tr> </thead> <tbody> <tr> <td>1</td> <td>N</td> <td>1</td> <td>F</td> <td></td> <td>2.400000 0 GHz</td> <td></td> <td></td> <td>-19.838 dBm</td> </tr> <tr> <td>2</td> <td>N</td> <td>1</td> <td>F</td> <td></td> <td>2.412495 0 GHz</td> <td></td> <td></td> <td>17.649 dBm</td> </tr> </tbody> </table>	MKR	MODE	TRC	SOL	F	V	FUNCTION	FUNCTION WIDTH	FUNCTION VALUE	1	N	1	F		2.400000 0 GHz			-19.838 dBm	2	N	1	F		2.412495 0 GHz			17.649 dBm									
MKR	MODE	TRC	SOL	F	V	FUNCTION	FUNCTION WIDTH	FUNCTION VALUE																													
1	N	1	F		2.400000 0 GHz			-19.838 dBm																													
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<p>2437 MHz</p>	 <p>Agilent Spectrum Analyzer - Sweep SA</p> <p>Center Freq 2.43700000 GHz</p> <p>Ref Offset 11.9 dB Ref 20.00 dBm</p> <p>Mkr2 2.437487 5 GHz 17.703 dBm</p> <p>Center 2.43700 GHz #VBW 300 kHz Sweep 10.67 ms (40001 pts)</p> <table border="1"> <thead> <tr> <th>MKR</th> <th>MODE</th> <th>TRC</th> <th>SOL</th> <th>F</th> <th>V</th> <th>FUNCTION</th> <th>FUNCTION WIDTH</th> <th>FUNCTION VALUE</th> </tr> </thead> <tbody> <tr> <td>1</td> <td>N</td> <td>1</td> <td>F</td> <td></td> <td>2.400000 0 GHz</td> <td></td> <td></td> <td>-42.842 dBm</td> </tr> <tr> <td>2</td> <td>N</td> <td>1</td> <td>F</td> <td></td> <td>2.437487 5 GHz</td> <td></td> <td></td> <td>17.703 dBm</td> </tr> <tr> <td>3</td> <td>N</td> <td>1</td> <td>F</td> <td></td> <td>2.483500 0 GHz</td> <td></td> <td></td> <td>-49.620 dBm</td> </tr> </tbody> </table>	MKR	MODE	TRC	SOL	F	V	FUNCTION	FUNCTION WIDTH	FUNCTION VALUE	1	N	1	F		2.400000 0 GHz			-42.842 dBm	2	N	1	F		2.437487 5 GHz			17.703 dBm	3	N	1	F		2.483500 0 GHz			-49.620 dBm
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<p>2462 MHz</p>	 <p>Agilent Spectrum Analyzer - Sweep SA</p> <p>Center Freq 2.46200000 GHz</p> <p>Ref Offset 11.9 dB Ref 20.00 dBm</p> <p>Mkr1 2.462482 5 GHz 15.760 dBm</p> <p>Center 2.46200 GHz #VBW 300 kHz Sweep 10.67 ms (40001 pts)</p> <table border="1"> <thead> <tr> <th>MKR</th> <th>MODE</th> <th>TRC</th> <th>SOL</th> <th>F</th> <th>V</th> <th>FUNCTION</th> <th>FUNCTION WIDTH</th> <th>FUNCTION VALUE</th> </tr> </thead> <tbody> <tr> <td>1</td> <td>N</td> <td>1</td> <td>F</td> <td></td> <td>2.452482 5 GHz</td> <td></td> <td></td> <td>15.760 dBm</td> </tr> <tr> <td>2</td> <td>N</td> <td>1</td> <td>F</td> <td></td> <td>2.483500 0 GHz</td> <td></td> <td></td> <td>-39.642 dBm</td> </tr> </tbody> </table>	MKR	MODE	TRC	SOL	F	V	FUNCTION	FUNCTION WIDTH	FUNCTION VALUE	1	N	1	F		2.452482 5 GHz			15.760 dBm	2	N	1	F		2.483500 0 GHz			-39.642 dBm									
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2	N	1	F		2.483500 0 GHz			-39.642 dBm																													

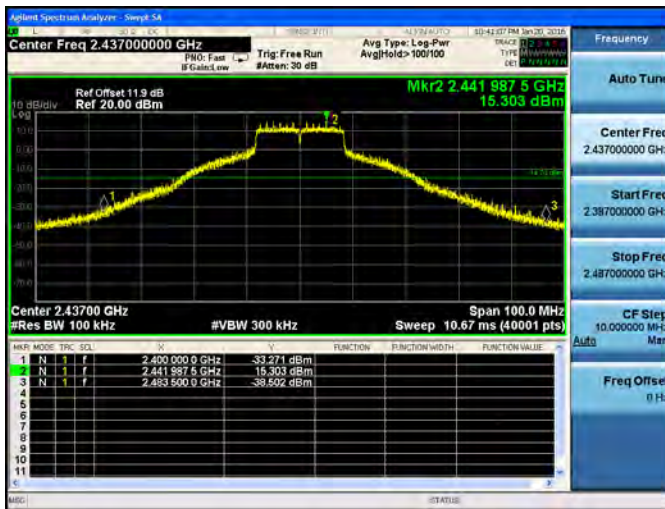


Mode 3: IEEE 802.11g link mode\_ANT-0

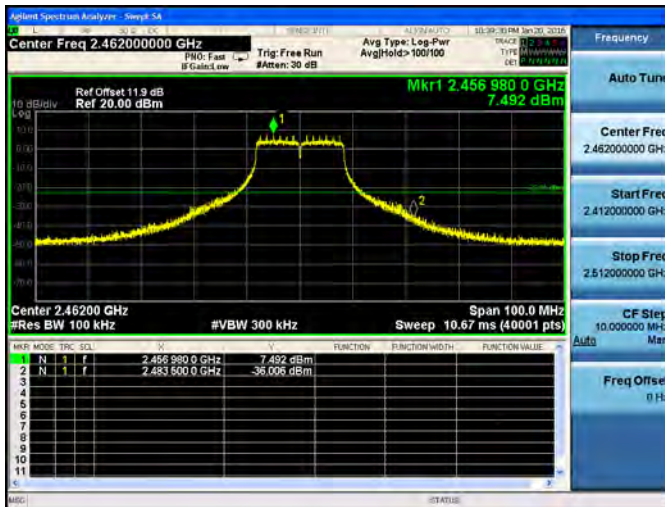
2412 MHz



2437 MHz

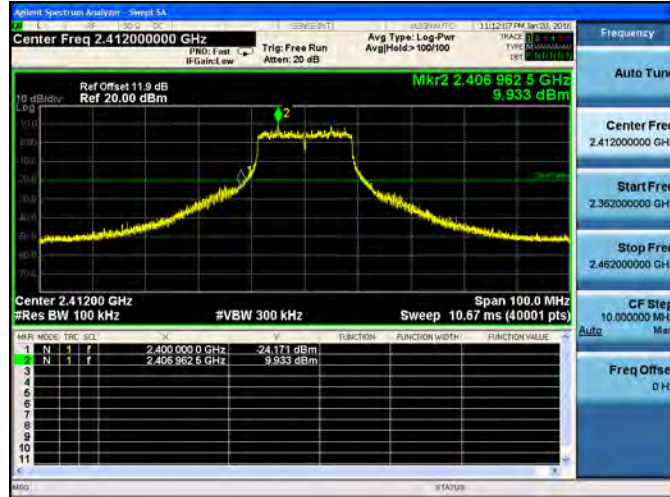


2462 MHz

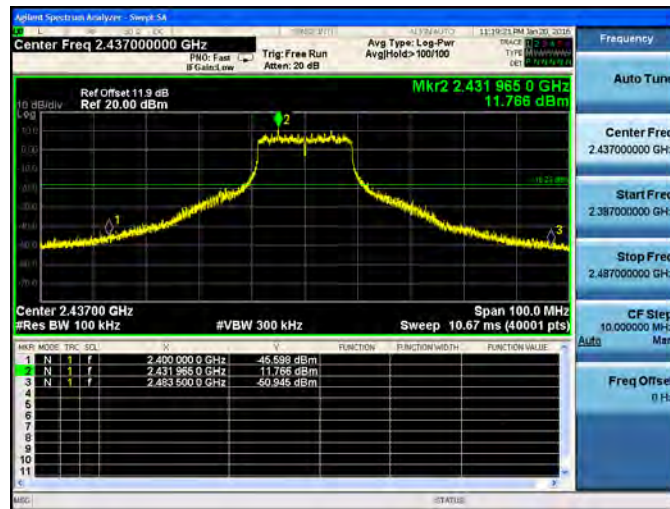


Mode 4: IEEE 802.11n 2.4GHz 20MHz link mode\_ANT-0

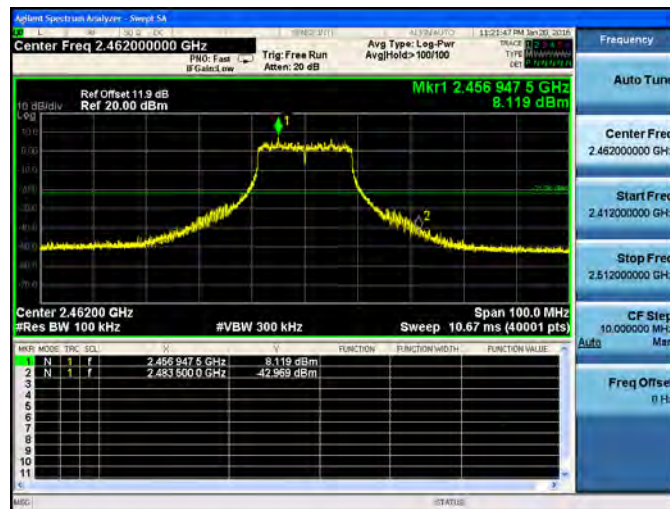
2412 MHz



2437 MHz

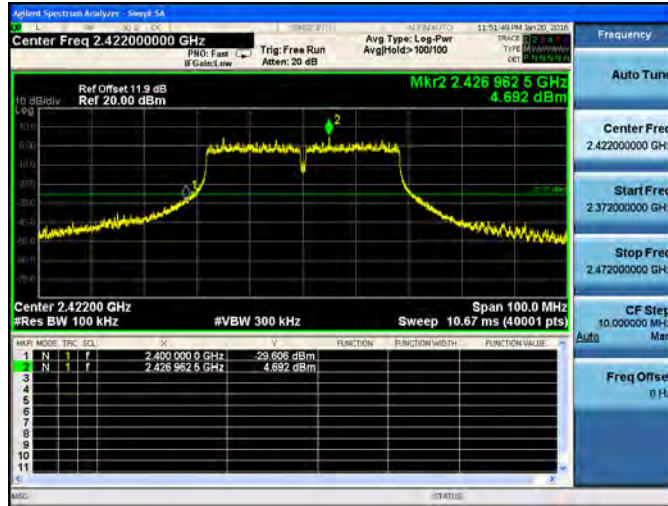


2462 MHz



Mode 5: IEEE 802.11n 2.4GHz 40MHz link mode\_ANT-0

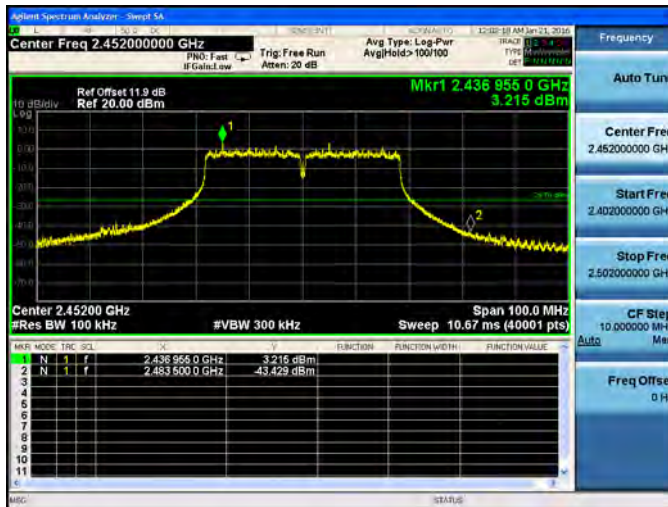
2422 MHz



2437 MHz



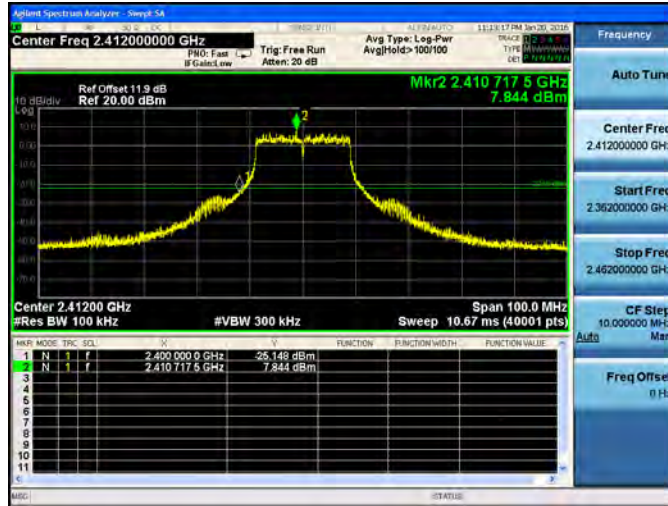
2452 MHz



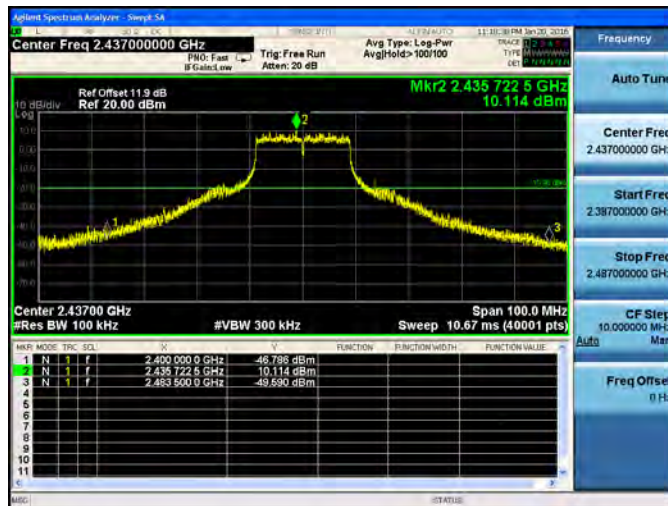


Mode 4: IEEE 802.11n 2.4GHz 20MHz link mode\_ANT-1

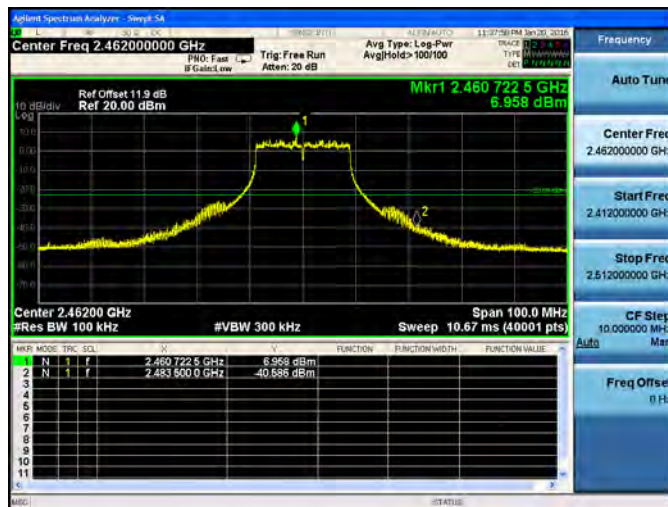
2412 MHz



2437 MHz

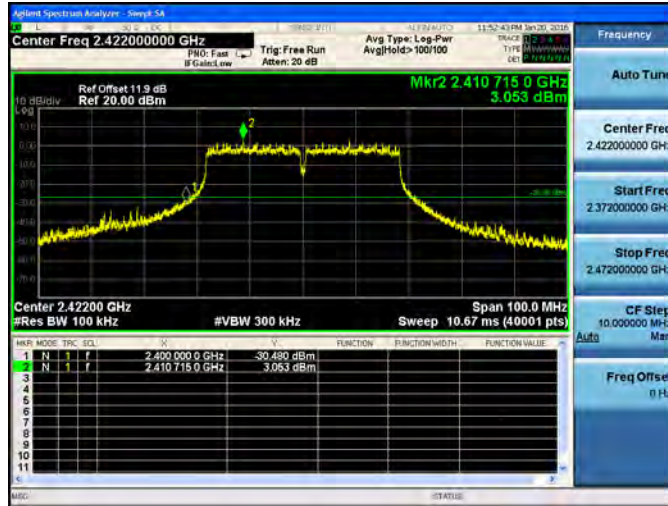


2462 MHz

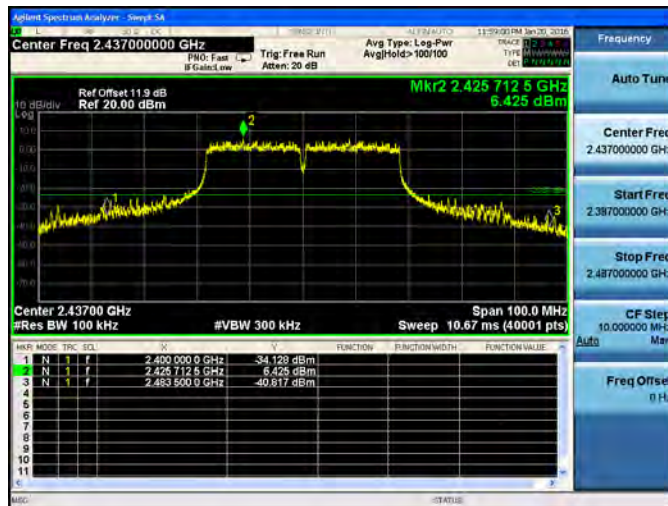


Mode 5: IEEE 802.11n 2.4GHz 40MHz link mode\_ANT-1

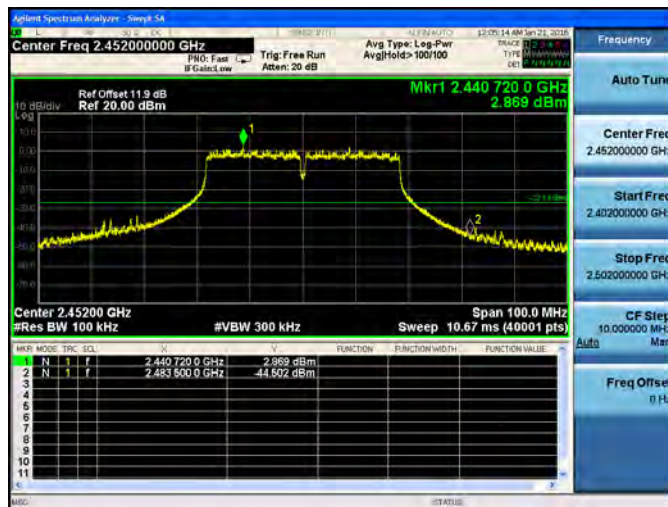
2422 MHz



2437 MHz

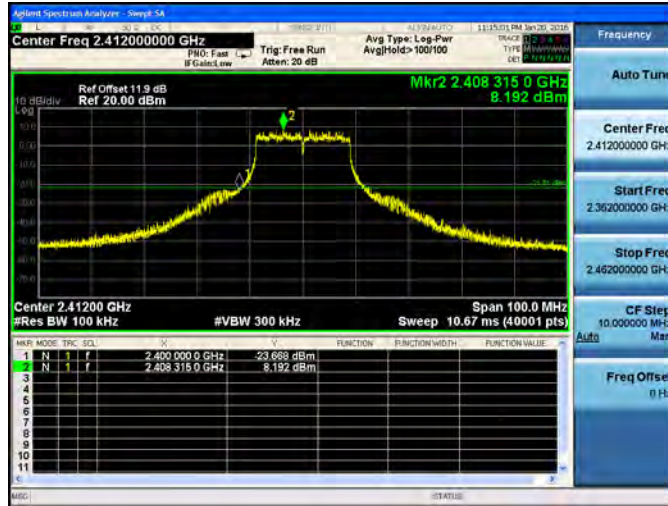


2452 MHz

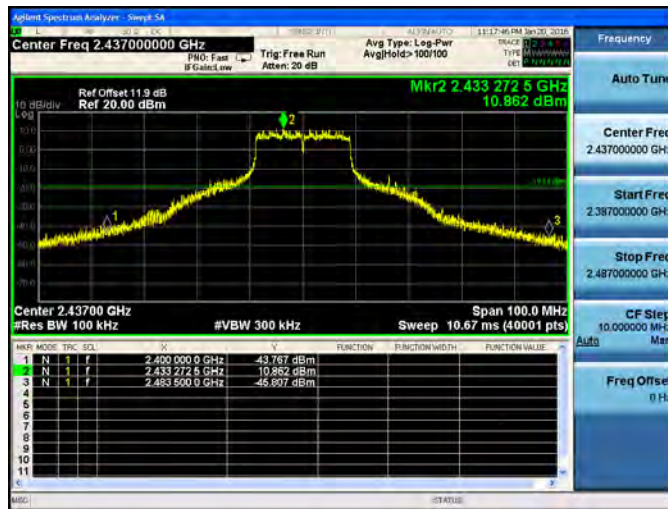


Mode 4: IEEE 802.11n 2.4GHz 20MHz link mode\_ANT-2

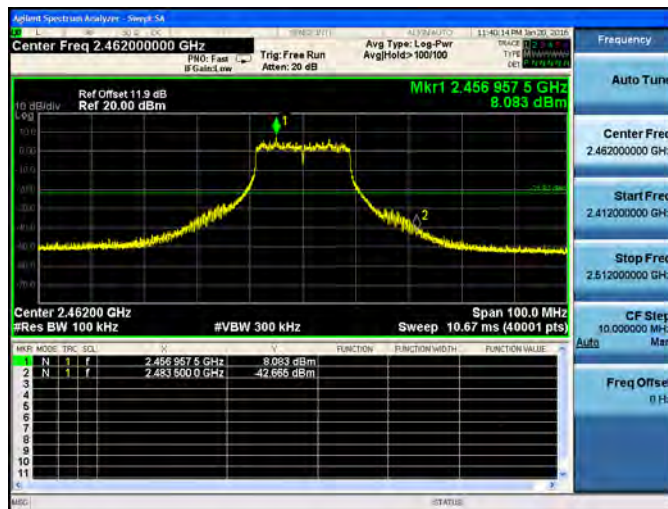
2412 MHz



2437 MHz



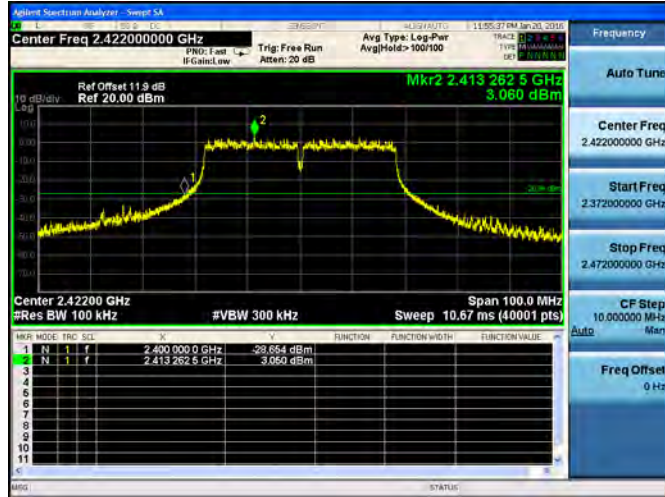
2462 MHz



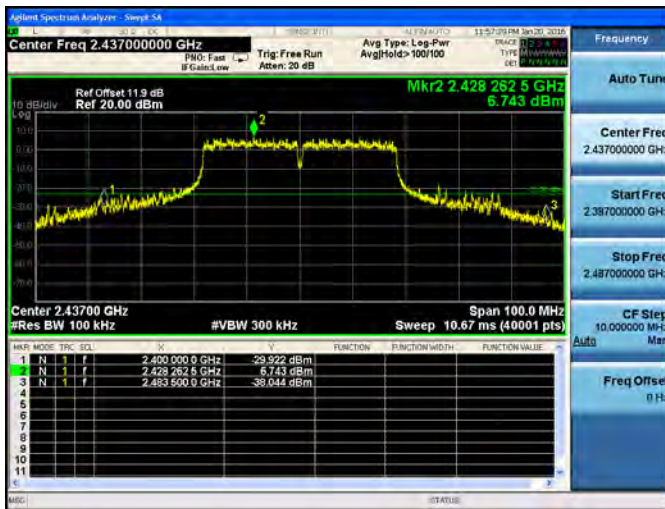


Mode 5: IEEE 802.11n 2.4GHz 40MHz link mode\_ANT-2

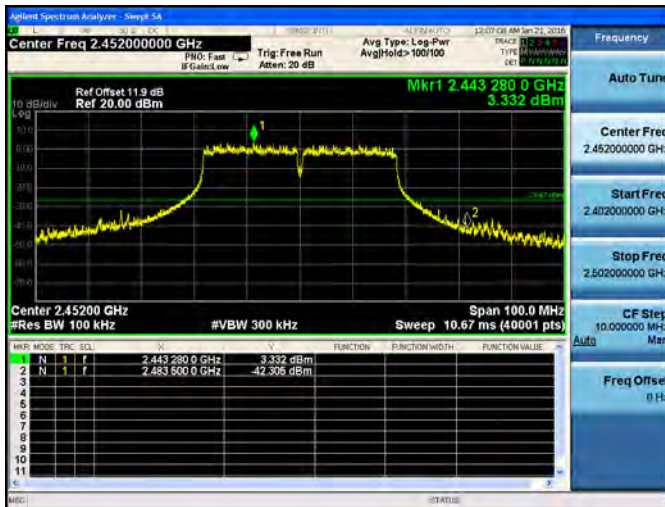
2422 MHz



2437 MHz



2452 MHz



## 10 Antenna Measurement

### 10.1.Limit

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

### 10.2.Antenna Description

See section 2 – antenna information.

### 10.3.Directiona Gain Calculated

$$\text{Directional Gain} = 10 \cdot \log \left[ \frac{(10^{G1/20} + 10^{G2/20} + 10^{G3/20})^2}{N_{\text{ANT}}} \right] = 8.42 \text{ dBi}$$