

# Cellphone-Mate, Inc.

## TEST REPORT FOR

### Consumer Booster with WiFi Model: Fusion 7

#### Tested To The Following Standards:

FCC Part 15 Subpart C Section(s)  
15.207 and 15.247  
(DTS 2400-2483.5 MHz)

Report No.: 97491-16

Date of issue: November 4, 2015



This test report bears the accreditation symbol indicating that the testing performed herein meets the test and reporting requirements of ISO/IEC 17025 under the applicable scope of EMC testing for CKC Laboratories, Inc.

We strive to create long-term, trust based relationships by providing sound, adaptive, customer first testing services. We embrace each of our customers' unique EMC challenges, not as an interruption to set processes, but rather as the reason we are in business.

## TABLE OF CONTENTS

Administrative Information .....	3
Test Report Information .....	3
Report Authorization .....	3
Test Facility Information .....	4
Software Versions .....	4
Site Registration & Accreditation Information .....	4
Summary of Results .....	5
Modifications During Testing .....	5
Conditions During Testing .....	5
Equipment Under Test .....	6
FCC Part 15 Subpart C .....	7
15.207 AC Conducted Emissions .....	7
15.247(a)(2) 6dB Bandwidth .....	29
15.247(b)(3) Output Power .....	41
15.31(e) Voltage Variation .....	89
15.247(e) Power Spectral Density .....	94
15.247(d) Conducted Emissions & Band Edge .....	107
15.247(d) Radiated Emissions & Band Edge .....	143
Supplemental Information .....	315
Emissions Test Details .....	315

## ADMINISTRATIVE INFORMATION

### Test Report Information

**REPORT PREPARED FOR:**

Cellphone-Mate, Inc.  
48346 Milmont Drive  
Fremont, CA 94538

Representative: Dennis Findley

**REPORT PREPARED BY:**

Morgan Tramontin / Terri Rayle  
CKC Laboratories, Inc.  
5046 Sierra Pines Drive  
Mariposa, CA 95338

Project Number: 97491

**DATE OF EQUIPMENT RECEIPT:**

October 6, 2015

**DATE(S) OF TESTING:**

October 6-9, 2015

### Report Authorization

The test data contained in this report documents the observed testing parameters pertaining to and are relevant for only the sample equipment tested in the agreed upon operational mode(s) and configuration(s) as identified herein. Compliance assessment remains the client's responsibility. This report may not be used to claim product endorsement by A2LA or any government agencies. This test report has been authorized for release under quality control from CKC Laboratories, Inc.

A handwritten signature in black ink that reads "Steve Behm".

**Steve Behm**  
**Director of Quality Assurance & Engineering Services**  
**CKC Laboratories, Inc.**

## Test Facility Information



Our laboratories are configured to effectively test a wide variety of product types. CKC utilizes first class test equipment, anechoic chambers, data acquisition and information services to create accurate, repeatable and affordable test results.

TEST LOCATION(S):  
CKC Laboratories, Inc.  
1120 Fulton Place  
Fremont, CA 94539

## Software Versions

CKC Laboratories Proprietary Software	Version
EMITest Emissions	5.02.00
EMITest Immunity	5.02.00

## Site Registration & Accreditation Information

Location	CB #	TAIWAN	CANADA	FCC	JAPAN
Fremont	US0082	SL2-IN-E-1148R	3082B-1	958979	A-0149

## SUMMARY OF RESULTS

### Standard / Specification: FCC Part 15 Subpart C

Test Procedure	Description	Modifications	Results
15.207	AC Conducted Emissions	NA	Pass
15.247(a)(2)	6dB Bandwidth	NA	Pass
15.247(b)(3)	Output Power	NA	Pass
15.31(e)	Voltage Variation	NA	Pass
15.247(e)	Power Spectral Density	NA	Pass
15.247(d)	Conducted Emissions & Band Edge	NA	Pass
15.247(d)	Radiated Emissions & Band Edge	NA	Pass

NA = Not applicable.

### Modifications During Testing

This list is a summary of the modifications made to the equipment during testing.

Summary of Conditions
No modifications were made during testing.

Modifications listed above must be incorporated into all production units.

### Conditions During Testing

This list is a summary of the conditions noted to the equipment during testing.

Summary of Conditions
None

## EQUIPMENT UNDER TEST (EUT)

During testing numerous configurations may have been utilized. The configurations listed below support compliance to the standard(s) listed in the Summary of Results section.

### Configuration 1

#### *Equipment Tested:*

Device	Manufacturer	Model #	S/N
Consumer Booster with WiFi	Cellphone-Mate, Inc.	Fusion 7	01
AC/DC Power Adapter	Cellphone-Mate, Inc.	GFP451DA-1238-1	1411-0000920

#### *Support Equipment:*

Device	Manufacturer	Model #	S/N
AC/DC Adapter	Sony	PCGA-AC16V	1477749530023127
Signal Generator	Agilent	E4433B	US40052164
Laptop	Sony	PCG-6C2L	CXSM507BRD01-D480

### Configuration 2

#### *Equipment Tested:*

Device	Manufacturer	Model #	S/N
WiFi Antenna	Cellphone-Mate DBA Surecall	SC222W	NA
Consumer Booster with WiFi	Cellphone-Mate, Inc.	Fusion 7	01
AC/DC Power Adapter	Cellphone-Mate, Inc.	GFP451DA-1238-1	1411-0000920
HDTV Antenna	Cellphone-Mate DBA Surecall	SC305H	NA

#### *Support Equipment:*

Device	Manufacturer	Model #	S/N
Laptop	Sony	PCG-6C2L	CXSM507BRD01-D480
Signal Generator	Agilent	E4433B	US40052164
AC/DC Adapter	Sony	PCGA-AC16V	1477749530023127

### Configuration 3

#### *Equipment Tested:*

Device	Manufacturer	Model #	S/N
Consumer Booster with WiFi	Cellphone-Mate, Inc.	Fusion 7	01
AC/DC Power Adapter	Cellphone-Mate, Inc.	GFP451DA-1238-1	1411-0000920
WiFi Antenna	Cellphone-Mate DBA Surecall	SC248W	NA
HDTV Antenna	Cellphone-Mate DBA Surecall	SC305H	NA

#### *Support Equipment:*

Device	Manufacturer	Model #	S/N
Laptop	Sony	PCG-6C2L	CXSM507BRD01-D480
Signal Generator	Agilent	E4433B	US40052164
AC/DC Adapter	Sony	PCGA-AC16V	1477749530023127

## FCC PART 15 SUBPART C

### 15.207 AC Conducted Emissions

#### Test Setup / Conditions / Data

Test Location: CKC Laboratories, Inc. • 1120 Fulton Place • Fremont, CA 94539 • (510) 249-1170  
 Customer: **Cellphone-Mate, Inc.**  
 Specification: **15.207 AC Mains - Average**  
 Work Order #: **97491** Date: 10/6/2015  
 Test Type: **Conducted Emissions** Time: 14:55:22  
 Tested By: Hieu Song Nguyenpham Sequence#: 15  
 Software: EMITest 5.02.00 120V 60Hz

#### Equipment Tested:

Device	Manufacturer	Model #	S/N
Configuration 2			

#### Support Equipment:

Device	Manufacturer	Model #	S/N
Configuration 2			

#### Test Conditions / Notes:

Conducted Emission  
 Frequency Range: 150kHz to 30MHz

Temperature: 22.0°C  
 Humidity: 39.6 %  
 Atmospheric Pressure: 100.5kPa

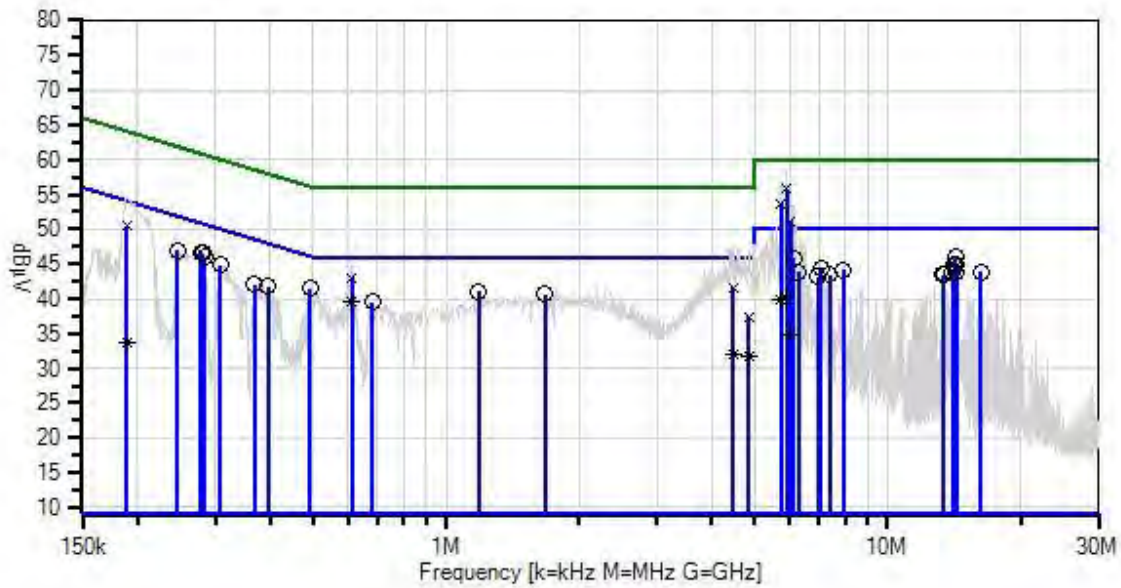
Highest Generation Frequency: 2.4GHz  
 Attenuator = 63 at MAX Level  
 Antenna Gain for **WiFi Antenna (SC222W)**=6dBi  
 Method: ANSI C 63.4 2009

The equipment under test (EUT) is placed on the Styrofoam table top. A remotely located signal generator which sits next to the EUT is connected to input port of EUT. The DL power input signal 2132.5MHz, 4.1MHz AWGN at the outdoor antenna port is set at 3dB above AGC level. HDTV input is connected to the antenna which is sat next to the EUT. The HDTV output ports are connected to F-type cables and terminated by 75Ohm terminator on another end.

The EUT is connected to the laptop through RJ45 on LAN Port which is outside of the chamber to operate the WIFI portion at the beginning and disconnect the port of RJ45 from the laptop due to the LAN port is used for service only. Another RJ45 is hanging on WAN port.

**802.11b Mode**  
 Data rate = 2Mbps  
 Attenuator for 802.11b Mode=32  
**Middle Channel**

CKC Laboratories, Inc. Date: 10/6/2015 Time: 14:55:22 Cellphone-Mate, Inc W/O#: 97491  
 Test Lead: Line 120V 60Hz Sequence#: 15



— Sweep Data  
 x QP Readings  
 Software Version: 5.02.00

— Readings  
 \* Average Readings  
 — 1 - 15.207 AC Mains - Average

o Peak Readings  
 ▼ Ambient  
 — 2 - 15.207 AC Mains - Quasi-peak



**Test Equipment:**

ID	Asset #/Serial #	Description	Model	Calibration Date	Cal Due Date
T1	ANP01211	Attenuator	23-10-34	3/31/2015	3/31/2017
T2	ANP00880	Cable	RG214U	6/13/2014	6/13/2016
T3	ANP06691	Cable	PE3062-180	8/8/2014	8/8/2016
T4	AN00494	50uH LISN-Line Loss (dB)	3816/NM	3/4/2015	3/4/2017
	AN00494	50uH LISN-Return Loss (dB)	3816/NM	3/4/2015	3/4/2017
	AN03471	RF Characteristics Analyzer	E4440A	12/19/2013	12/19/2015
T5	ANP05258	High Pass Filter	HE9615-150K-50-720B	11/14/2014	11/14/2016

**Measurement Data:**

Reading listed by margin.

Test Lead: Line

#	Freq	Rdng	T1 T5	T2	T3	T4	Dist	Corr	Spec	Margin	Polar
	MHz	dB $\mu$ V	dB	dB	dB	dB	Table	dB $\mu$ V	dB $\mu$ V	dB	Ant
1	14.211M	35.2	+9.9 +0.2	+0.3	+0.0	+0.5	+0.0	46.1	50.0	-3.9	Line
2	6.130M	34.8	+9.9 +0.2	+0.2	+0.0	+0.8	+0.0	45.9	50.0	-4.1	Line
3	5.896M	44.8	+9.9 +0.2	+0.2	+0.0	+0.8	+0.0	55.9	60.0	-4.1	Line
4	278.714k	36.0	+9.9 +0.1	+0.0	+0.0	+0.7	+0.0	46.7	50.9	-4.2	Line
5	280.896k	35.9	+9.9 +0.1	+0.0	+0.0	+0.7	+0.0	46.6	50.8	-4.2	Line
6	491.785k	30.6	+9.9 +0.2	+0.0	+0.0	+0.8	+0.0	41.5	46.1	-4.6	Line
7	284.532k	35.3	+9.9 +0.1	+0.0	+0.0	+0.7	+0.0	46.0	50.7	-4.7	Line
8	1.188M	30.2	+9.8 +0.2	+0.1	+0.0	+0.8	+0.0	41.1	46.0	-4.9	Line
9	14.274M	34.0	+9.9 +0.2	+0.3	+0.1	+0.5	+0.0	45.0	50.0	-5.0	Line
10	245.990k	36.2	+9.9 +0.1	+0.0	+0.0	+0.7	+0.0	46.9	51.9	-5.0	Line
11	14.148M	34.0	+9.9 +0.2	+0.3	+0.0	+0.5	+0.0	44.9	50.0	-5.1	Line
12	308.529k	34.1	+9.9 +0.1	+0.0	+0.0	+0.7	+0.0	44.8	50.0	-5.2	Line
13	1.672M	29.7	+9.8 +0.2	+0.1	+0.0	+0.8	+0.0	40.6	46.0	-5.4	Line
14	7.067M	33.4	+9.9 +0.1	+0.2	+0.0	+0.8	+0.0	44.4	50.0	-5.6	Line
15	7.923M	33.2	+9.9 +0.1	+0.2	+0.0	+0.8	+0.0	44.2	50.0	-5.8	Line
16	395.794k	31.1	+9.9 +0.1	+0.0	+0.0	+0.7	+0.0	41.8	47.9	-6.1	Line

17	14.031M	33.0	+9.9 +0.2	+0.3	+0.0	+0.5	+0.0	43.9	50.0	-6.1	Line
18	16.229M	33.0	+9.9 +0.2	+0.3	+0.0	+0.4	+0.0	43.8	50.0	-6.2	Line
19	6.283M	32.7	+9.9 +0.2	+0.2	+0.0	+0.8	+0.0	43.8	50.0	-6.2	Line
20	5.742M QP	42.6	+9.9 +0.2	+0.2	+0.0	+0.8	+0.0	53.7	60.0	-6.3	Line
21	14.337M	32.7	+9.9 +0.2	+0.3	+0.1	+0.5	+0.0	43.7	50.0	-6.3	Line
22	368.888k	31.4	+9.9 +0.1	+0.0	+0.0	+0.7	+0.0	42.1	48.5	-6.4	Line
23	610.668k Ave	28.7	+9.9 +0.1	+0.0	+0.0	+0.8	+0.0	39.5	46.0	-6.5	Line
24	679.404k	28.8	+9.8 +0.1	+0.0	+0.0	+0.8	+0.0	39.5	46.0	-6.5	Line
25	13.355M	32.5	+9.9 +0.2	+0.3	+0.0	+0.5	+0.0	43.4	50.0	-6.6	Line
26	7.373M	32.4	+9.9 +0.1	+0.2	+0.0	+0.8	+0.0	43.4	50.0	-6.6	Line
27	13.418M	32.5	+9.9 +0.2	+0.3	+0.0	+0.5	+0.0	43.4	50.0	-6.6	Line
28	6.959M	32.2	+9.9 +0.1	+0.2	+0.0	+0.8	+0.0	43.2	50.0	-6.8	Line
29	6.040M QP	40.1	+9.9 +0.2	+0.2	+0.0	+0.8	+0.0	51.2	60.0	-8.8	Line
30	5.896M Ave	29.1	+9.9 +0.2	+0.2	+0.0	+0.8	+0.0	40.2	50.0	-9.8	Line
^	5.896M	47.2	+9.9 +0.2	+0.2	+0.0	+0.8	+0.0	58.3	50.0	+8.3	Line
32	5.742M Ave	28.7	+9.9 +0.2	+0.2	+0.0	+0.8	+0.0	39.8	50.0	-10.2	Line
^	5.742M	46.4	+9.9 +0.2	+0.2	+0.0	+0.8	+0.0	57.5	50.0	+7.5	Line
34	610.668k QP	32.2	+9.9 +0.1	+0.0	+0.0	+0.8	+0.0	43.0	56.0	-13.0	Line
^	610.668k	34.3	+9.9 +0.1	+0.0	+0.0	+0.8	+0.0	45.1	46.0	-0.9	Line
36	189.268k QP	39.6	+9.9 +0.3	+0.0	+0.0	+0.7	+0.0	50.5	64.1	-13.6	Line
37	4.458M Ave	21.1	+9.9 +0.2	+0.1	+0.0	+0.8	+0.0	32.1	46.0	-13.9	Line
38	4.458M QP	30.6	+9.9 +0.2	+0.1	+0.0	+0.8	+0.0	41.6	56.0	-14.4	Line
^	4.458M	36.7	+9.9 +0.2	+0.1	+0.0	+0.8	+0.0	47.7	46.0	+1.7	Line

40	4.839M	20.6	+9.9 +0.1	+0.2	+0.0	+0.8	+0.0	31.6	46.0	-14.4	Line
Ave											
41	6.040M	23.8	+9.9 +0.2	+0.2	+0.0	+0.8	+0.0	34.9	50.0	-15.1	Line
Ave											
^	6.040M	42.9	+9.9 +0.2	+0.2	+0.0	+0.8	+0.0	54.0	50.0	+4.0	Line
43	4.839M	26.5	+9.9 +0.1	+0.2	+0.0	+0.8	+0.0	37.5	56.0	-18.5	Line
QP											
^	4.839M	34.7	+9.9 +0.1	+0.2	+0.0	+0.8	+0.0	45.7	46.0	-0.3	Line
45	189.268k	22.8	+9.9 +0.3	+0.0	+0.0	+0.7	+0.0	33.7	54.1	-20.4	Line
Ave											
^	189.268k	41.9	+9.9 +0.3	+0.0	+0.0	+0.7	+0.0	52.8	54.1	-1.3	Line

Test Location: CKC Laboratories, Inc. • 1120 Fulton Place • Fremont, CA 94539 • (510) 249-1170  
 Customer: **Cellphone-Mate, Inc.**  
 Specification: **15.207 AC Mains - Average**  
 Work Order #: **97491** Date: 10/6/2015  
 Test Type: **Conducted Emissions** Time: 15:21:35  
 Tested By: Hieu Song Nguyenpham Sequence#: 16  
 Software: EMITest 5.02.00 120V 60Hz

***Equipment Tested:***

Device	Manufacturer	Model #	S/N
Configuration 2			

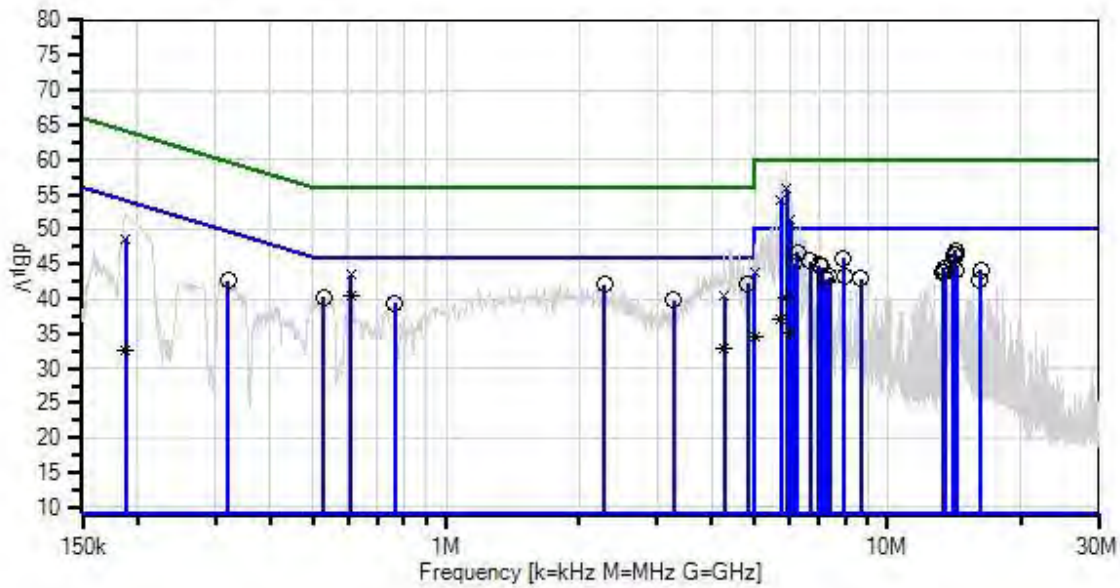
***Support Equipment:***

Device	Manufacturer	Model #	S/N
Configuration 2			

***Test Conditions / Notes:***

<p>Conducted Emission          Frequency Range: 150kHz to 30MHz</p> <p>Temperature: 22.0°C          Humidity: 39.6 %          Atmospheric Pressure: 100.5kPa</p> <p>Highest Generation Frequency: 2.4GHz          Attenuator = 63 at MAX Level          Antenna Gain for <b>WiFi Antenna (SC222W)</b>=6dBi          Method: ANSI C 63.4 2009</p> <p>The equipment under test (EUT) is placed on the Styrofoam table top. A remotely located signal generator which sits next to the EUT is connected to input port of EUT. The DL power input signal 2132.5MHz, 4.1MHz AWGN at the outdoor antenna port is set at 3dB above AGC level. HDTV input is connected to the antenna which is sat next to the EUT. The HDTV output ports are connected to F-type cables and terminated by 75Ohm terminator on another end.</p> <p>The EUT is connected to the laptop through RJ45 on LAN Port which is outside of the chamber to operate the WIFI portion at the beginning and disconnect the port of RJ45 from the laptop due to the LAN port is used for service only. Another RJ45 is hanging on WAN port.</p> <p><b>802.11b Mode</b>          Data rate = 2Mbps          Attenuator for 802.11b Mode=32</p> <p><b>Middle Channel</b></p>
---

CKC Laboratories, Inc Date: 10/6/2015 Time: 15:21:35 Cellphone-Mate, Inc W/O#: 97491  
 Test Lead: Neutral 120V 60Hz Sequence#: 16



— Sweep Data  
 x QP Readings  
 Software Version: 5.02.00

— Readings  
 \* Average Readings  
 — 1 - 15.207 AC Mains - Average

o Peak Readings  
 ▼ Ambient  
 — 2 - 15.207 AC Mains - Quasi-peak

**Test Equipment:**

ID	Asset #/Serial #	Description	Model	Calibration Date	Cal Due Date
T1	ANP01211	Attenuator	23-10-34	3/31/2015	3/31/2017
T2	ANP00880	Cable	RG214U	6/13/2014	6/13/2016
T3	ANP06691	Cable	PE3062-180	8/8/2014	8/8/2016
	AN00494	50uH LISN-Line Loss (dB)	3816/NM	3/4/2015	3/4/2017
T4	AN00494	50uH LISN-Return Loss (dB)	3816/NM	3/4/2015	3/4/2017
	AN03471	RF Characteristics Analyzer	E4440A	12/19/2013	12/19/2015
T5	ANP05258	High Pass Filter	HE9615-150K-50-720B	11/14/2014	11/14/2016

**Measurement Data:**

Reading listed by margin.

Test Lead: Neutral

#	Freq	Rdng	T1 T5	T2	T3	T4	Dist	Corr	Spec	Margin	Polar
	MHz	dB $\mu$ V	dB	dB	dB	dB	Table	dB $\mu$ V	dB $\mu$ V	dB	Ant
1	14.211M	36.2	+9.9 +0.2	+0.3	+0.0	+0.4	+0.0	47.0	50.0	-3.0	Neutr
2	6.247M	35.8	+9.9 +0.2	+0.2	+0.0	+0.6	+0.0	46.7	50.0	-3.3	Neutr
3	14.274M	35.4	+9.9 +0.2	+0.3	+0.1	+0.4	+0.0	46.3	50.0	-3.7	Neutr
4	14.148M	35.5	+9.9 +0.2	+0.3	+0.0	+0.4	+0.0	46.3	50.0	-3.7	Neutr
5	4.815M	31.4	+9.9 +0.1	+0.2	+0.0	+0.6	+0.0	42.2	46.0	-3.8	Neutr
6	2.285M	31.3	+9.8 +0.2	+0.1	+0.0	+0.7	+0.0	42.1	46.0	-3.9	Neutr
7	7.923M	35.1	+9.9 +0.1	+0.2	+0.0	+0.6	+0.0	45.9	50.0	-4.1	Neutr
8	5.895M	44.8	+9.9 +0.2	+0.2	+0.0	+0.6	+0.0	55.7	60.0	-4.3	Neutr
9	6.679M	34.6	+9.9 +0.1	+0.2	+0.0	+0.6	+0.0	45.4	50.0	-4.6	Neutr
10	6.130M	34.3	+9.9 +0.2	+0.2	+0.0	+0.6	+0.0	45.2	50.0	-4.8	Neutr
11	14.031M	34.3	+9.9 +0.2	+0.3	+0.0	+0.4	+0.0	45.1	50.0	-4.9	Neutr
12	6.977M	34.0	+9.9 +0.1	+0.2	+0.0	+0.6	+0.0	44.8	50.0	-5.2	Neutr
13	7.103M	33.8	+9.9 +0.1	+0.2	+0.0	+0.6	+0.0	44.6	50.0	-5.4	Neutr
14	13.418M	33.6	+9.9 +0.2	+0.3	+0.0	+0.4	+0.0	44.4	50.0	-5.6	Neutr
15	608.340k	29.7	+9.9 +0.1	+0.0	+0.0	+0.6	+0.0	40.3	46.0	-5.7	Neutr
16	5.746M	43.4	+9.9 +0.2	+0.2	+0.0	+0.6	+0.0	54.3	60.0	-5.7	Neutr

17	14.337M	33.3	+9.9 +0.2	+0.3	+0.1	+0.4	+0.0	44.2	50.0	-5.8	Neutr
18	528.874k	29.5	+9.9 +0.2	+0.0	+0.0	+0.6	+0.0	40.2	46.0	-5.8	Neutr
19	16.229M	33.5	+9.9 +0.2	+0.3	+0.0	+0.3	+0.0	44.2	50.0	-5.8	Neutr
20	13.481M	33.1	+9.9 +0.2	+0.3	+0.0	+0.4	+0.0	43.9	50.0	-6.1	Neutr
21	3.271M	29.1	+9.8 +0.2	+0.1	+0.0	+0.6	+0.0	39.8	46.0	-6.2	Neutr
22	13.355M	32.9	+9.9 +0.2	+0.3	+0.0	+0.4	+0.0	43.7	50.0	-6.3	Neutr
23	765.216k	28.7	+9.9 +0.2	+0.0	+0.0	+0.6	+0.0	39.4	46.0	-6.6	Neutr
24	7.373M	32.3	+9.9 +0.1	+0.2	+0.0	+0.6	+0.0	43.1	50.0	-6.9	Neutr
25	7.986M	32.3	+9.9 +0.1	+0.2	+0.0	+0.6	+0.0	43.1	50.0	-6.9	Neutr
26	7.256M	32.1	+9.9 +0.1	+0.2	+0.0	+0.6	+0.0	42.9	50.0	-7.1	Neutr
27	320.893k	32.0	+9.9 +0.1	+0.0	+0.0	+0.6	+0.0	42.6	49.7	-7.1	Neutr
28	8.716M	32.1	+9.9 +0.1	+0.2	+0.0	+0.6	+0.0	42.9	50.0	-7.1	Neutr
29	16.166M	32.1	+9.9 +0.2	+0.3	+0.0	+0.3	+0.0	42.8	50.0	-7.2	Neutr
30	6.045M QP	40.4	+9.9 +0.2	+0.2	+0.0	+0.6	+0.0	51.3	60.0	-8.7	Neutr
31	5.895M Ave	29.2	+9.9 +0.2	+0.2	+0.0	+0.6	+0.0	40.1	50.0	-9.9	Neutr
^	5.895M	47.5	+9.9 +0.2	+0.2	+0.0	+0.6	+0.0	58.4	50.0	+8.4	Neutr
33	4.994M Ave	23.6	+9.9 +0.1	+0.2	+0.0	+0.6	+0.0	34.4	46.0	-11.6	Neutr
34	4.994M QP	32.9	+9.9 +0.1	+0.2	+0.0	+0.6	+0.0	43.7	56.0	-12.3	Neutr
^	4.994M	37.9	+9.9 +0.1	+0.2	+0.0	+0.6	+0.0	48.7	46.0	+2.7	Neutr
36	608.340k QP	32.8	+9.9 +0.1	+0.0	+0.0	+0.6	+0.0	43.4	56.0	-12.6	Neutr
^	608.340k	34.3	+9.9 +0.1	+0.0	+0.0	+0.6	+0.0	44.9	46.0	-1.1	Neutr

38	5.746M	26.1	+9.9	+0.2	+0.0	+0.6	+0.0	37.0	50.0	-13.0	Neutr
Ave			+0.2								
^	5.746M	46.4	+9.9	+0.2	+0.0	+0.6	+0.0	57.3	50.0	+7.3	Neutr
			+0.2								
40	4.258M	22.1	+9.9	+0.1	+0.0	+0.6	+0.0	32.9	46.0	-13.1	Neutr
Ave			+0.2								
41	6.045M	24.3	+9.9	+0.2	+0.0	+0.6	+0.0	35.2	50.0	-14.8	Neutr
Ave			+0.2								
^	6.045M	43.2	+9.9	+0.2	+0.0	+0.6	+0.0	54.1	50.0	+4.1	Neutr
			+0.2								
43	188.542k	37.9	+9.9	+0.0	+0.0	+0.6	+0.0	48.7	64.1	-15.4	Neutr
QP			+0.3								
44	4.258M	29.6	+9.9	+0.1	+0.0	+0.6	+0.0	40.4	56.0	-15.6	Neutr
QP			+0.2								
^	4.258M	35.3	+9.9	+0.1	+0.0	+0.6	+0.0	46.1	46.0	+0.1	Neutr
			+0.2								
46	188.542k	21.8	+9.9	+0.0	+0.0	+0.6	+0.0	32.6	54.1	-21.5	Neutr
Ave			+0.3								
^	188.542k	40.3	+9.9	+0.0	+0.0	+0.6	+0.0	51.1	54.1	-3.0	Neutr
			+0.3								



Test Location: CKC Laboratories, Inc. • 1120 Fulton Place • Fremont, CA 94539 • (510) 249-1170  
 Customer: **Cellphone-Mate, Inc.**  
 Specification: **15.207 AC Mains - Average**  
 Work Order #: **97491** Date: 10/6/2015  
 Test Type: **Conducted Emissions** Time: 15:43:19  
 Tested By: Hieu Song Nguyenpham Sequence#: 17  
 Software: EMITest 5.02.00 120V 60Hz

***Equipment Tested:***

Device	Manufacturer	Model #	S/N
Configuration 3			

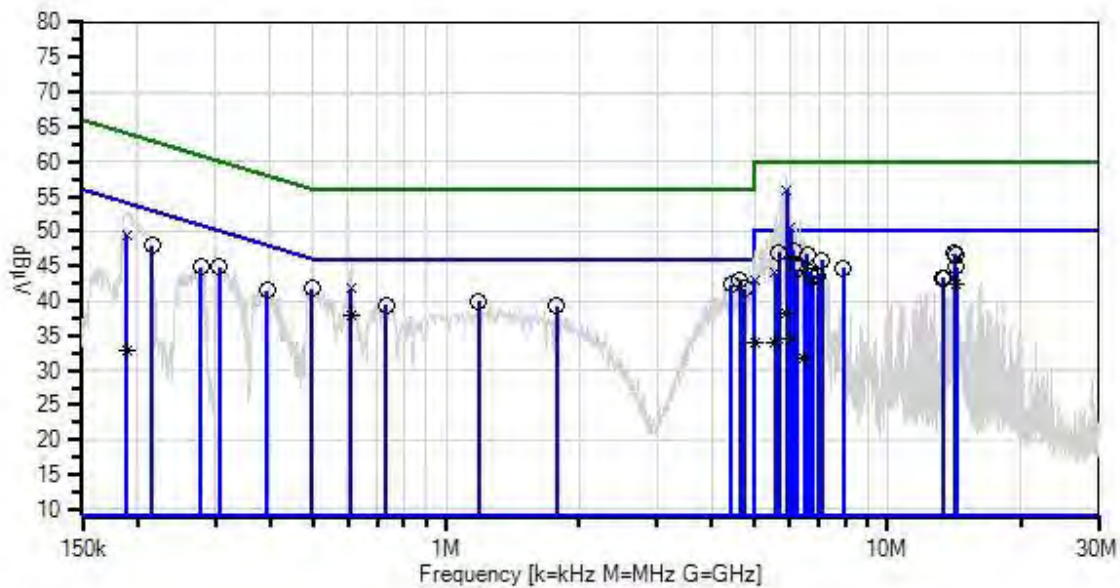
***Support Equipment:***

Device	Manufacturer	Model #	S/N
Configuration 3			

***Test Conditions / Notes:***

<p>Conducted Emission          Frequency Range: 150kHz to 30MHz</p> <p>Temperature: 22.0°C          Humidity: 39.6 %          Atmospheric Pressure: 100.5kPa</p> <p>Highest Generation Frequency: 2.4GHz          Attenuator = 63 at MAX Level          Antenna Gain for <b>WiFi Antenna (SC248W)</b>=10dBi          Method: ANSI C 63.4 2009</p> <p>The equipment under test (EUT) is placed on the Styrofoam table top. A remotely located signal generator which sits next to the EUT is connected to input port of EUT. The DL power input signal 2132.5MHz, 4.1MHz AWGN at the outdoor antenna port is set at 3dB above AGC level. HDTV input is connected to the antenna which is sat next to the EUT. The HDTV output ports are connected to F-type cables and terminated by 75Ohm terminator on another end.</p> <p>The EUT is connected to the laptop through RJ45 on LAN Port which is outside of the chamber to operate the WIFI portion at the beginning and disconnect the port of RJ45 from the Laptop due to the LAN port is used for service only. Another RJ45 is hanging on WAN port.</p> <p><b>802.11b Mode</b>          Data rate = 2Mbps          Attenuator for 802.11b Mode=32  <b>Middle Channel</b></p>
--

CKC Laboratories, Inc. Date: 10/6/2015 Time: 15:43:19 Cellphone-Mate, Inc W/O#: 97491  
 Test Lead: Line 120V 60Hz Sequence#: 17



— Sweep Data  
 x QP Readings  
 Software Version: 5.02.00

— Readings  
 \* Average Readings  
 — 1 - 15.207 AC Mains - Average

o Peak Readings  
 v Ambient  
 — 2 - 15.207 AC Mains - Quasi-peak

**Test Equipment:**

ID	Asset #/Serial #	Description	Model	Calibration Date	Cal Due Date
T1	ANP01211	Attenuator	23-10-34	3/31/2015	3/31/2017
T2	ANP00880	Cable	RG214U	6/13/2014	6/13/2016
T3	ANP06691	Cable	PE3062-180	8/8/2014	8/8/2016
T4	AN00494	50uH LISN-Line Loss (dB)	3816/NM	3/4/2015	3/4/2017
	AN00494	50uH LISN-Return Loss (dB)	3816/NM	3/4/2015	3/4/2017
	AN03471	RF Characteristics Analyzer	E4440A	12/19/2013	12/19/2015
T5	ANP05258	High Pass Filter	HE9615-150K-50-720B	11/14/2014	11/14/2016

**Measurement Data:**

Reading listed by margin.

Test Lead: Line

#	Freq	Rdng	T1 T5	T2	T3	T4	Dist	Corr	Spec	Margin	Polar
	MHz	dBμV	dB	dB	dB	dB	Table	dBμV	dBμV	dB	Ant
1	6.112M	36.1	+9.9 +0.2	+0.2	+0.0	+0.8	+0.0	47.2	50.0	-2.8	Line
2	5.679M	35.9	+9.9 +0.2	+0.2	+0.0	+0.8	+0.0	47.0	50.0	-3.0	Line
3	4.628M	32.0	+9.9 +0.1	+0.2	+0.0	+0.8	+0.0	43.0	46.0	-3.0	Line
4	14.148M	35.9	+9.9 +0.2	+0.3	+0.0	+0.5	+0.0	46.8	50.0	-3.2	Line
5	6.562M	35.7	+9.9 +0.1	+0.2	+0.0	+0.8	+0.0	46.7	50.0	-3.3	Line
6	14.274M	35.6	+9.9 +0.2	+0.3	+0.1	+0.5	+0.0	46.6	50.0	-3.4	Line
7	4.432M	31.3	+9.9 +0.2	+0.1	+0.0	+0.8	+0.0	42.3	46.0	-3.7	Line
8	5.896M	44.8	+9.9 +0.2	+0.2	+0.0	+0.8	+0.0	55.9	60.0	-4.1	Line
9	7.103M	34.8	+9.9 +0.1	+0.2	+0.0	+0.8	+0.0	45.8	50.0	-4.2	Line
10	4.739M	30.7	+9.9 +0.1	+0.2	+0.0	+0.8	+0.0	41.7	46.0	-4.3	Line
11	496.150k	30.8	+9.9 +0.2	+0.0	+0.0	+0.8	+0.0	41.7	46.1	-4.4	Line
12	6.130M	34.0	+9.9 +0.2	+0.2	+0.0	+0.8	+0.0	45.1	50.0	-4.9	Line
13	215.448k	37.3	+9.9 +0.1	+0.0	+0.0	+0.7	+0.0	48.0	53.0	-5.0	Line
14	307.076k	34.1	+9.9 +0.1	+0.0	+0.0	+0.7	+0.0	44.8	50.0	-5.2	Line
15	14.337M	33.8	+9.9 +0.2	+0.3	+0.1	+0.5	+0.0	44.8	50.0	-5.2	Line
16	7.923M	33.7	+9.9 +0.1	+0.2	+0.0	+0.8	+0.0	44.7	50.0	-5.3	Line

17	6.265M	33.5	+9.9 +0.2	+0.2	+0.0	+0.8	+0.0	44.6	50.0	-5.4	Line
18	6.661M	33.2	+9.9 +0.1	+0.2	+0.0	+0.8	+0.0	44.2	50.0	-5.8	Line
19	278.715k	34.2	+9.9 +0.1	+0.0	+0.0	+0.7	+0.0	44.9	50.9	-6.0	Line
20	1.183M	29.1	+9.8 +0.2	+0.1	+0.0	+0.8	+0.0	40.0	46.0	-6.0	Line
21	6.950M	32.6	+9.9 +0.1	+0.2	+0.0	+0.8	+0.0	43.6	50.0	-6.4	Line
22	6.743M	32.6	+9.9 +0.1	+0.2	+0.0	+0.8	+0.0	43.6	50.0	-6.4	Line
23	392.886k	30.8	+9.9 +0.1	+0.0	+0.0	+0.7	+0.0	41.5	48.0	-6.5	Line
24	730.310k	28.6	+9.9 +0.1	+0.0	+0.0	+0.8	+0.0	39.4	46.0	-6.6	Line
25	1.779M	28.4	+9.8 +0.2	+0.1	+0.0	+0.8	+0.0	39.3	46.0	-6.7	Line
26	13.355M	32.4	+9.9 +0.2	+0.3	+0.0	+0.5	+0.0	43.3	50.0	-6.7	Line
27	13.418M	32.2	+9.9 +0.2	+0.3	+0.0	+0.5	+0.0	43.1	50.0	-6.9	Line
28	14.212M Ave	31.4	+9.9 +0.2	+0.3	+0.0	+0.5	+0.0	42.3	50.0	-7.7	Line
29	607.780k Ave	27.0	+9.9 +0.1	+0.0	+0.0	+0.8	+0.0	37.8	46.0	-8.2	Line
30	6.031M QP	39.3	+9.9 +0.2	+0.2	+0.0	+0.8	+0.0	50.4	60.0	-9.6	Line
31	5.896M Ave	27.2	+9.9 +0.2	+0.2	+0.0	+0.8	+0.0	38.3	50.0	-11.7	Line
^	5.896M	47.6	+9.9 +0.2	+0.2	+0.0	+0.8	+0.0	58.7	50.0	+8.7	Line
33	4.990M Ave	23.0	+9.9 +0.1	+0.2	+0.0	+0.8	+0.0	34.0	46.0	-12.0	Line
34	4.990M QP	32.0	+9.9 +0.1	+0.2	+0.0	+0.8	+0.0	43.0	56.0	-13.0	Line
^	4.990M	37.9	+9.9 +0.1	+0.2	+0.0	+0.8	+0.0	48.9	46.0	+2.9	Line
36	14.212M QP	35.3	+9.9 +0.2	+0.3	+0.0	+0.5	+0.0	46.2	60.0	-13.8	Line
^	14.212M	36.4	+9.9 +0.2	+0.3	+0.0	+0.5	+0.0	47.3	50.0	-2.7	Line

38	607.780k	30.9	+9.9 +0.1	+0.0	+0.0	+0.8	+0.0	41.7	56.0	-14.3	Line
^	607.780k	33.1	+9.9 +0.1	+0.0	+0.0	+0.8	+0.0	43.9	46.0	-2.1	Line
40	189.269k	38.6	+9.9 +0.3	+0.0	+0.0	+0.7	+0.0	49.5	64.1	-14.6	Line
41	6.472M	34.2	+9.9 +0.2	+0.2	+0.0	+0.8	+0.0	45.3	60.0	-14.7	Line
42	6.031M	23.3	+9.9 +0.2	+0.2	+0.0	+0.8	+0.0	34.4	50.0	-15.6	Line
^	6.031M	43.7	+9.9 +0.2	+0.2	+0.0	+0.8	+0.0	54.8	50.0	+4.8	Line
44	5.571M	23.0	+9.9 +0.2	+0.2	+0.0	+0.8	+0.0	34.1	50.0	-15.9	Line
45	5.571M	32.9	+9.9 +0.2	+0.2	+0.0	+0.8	+0.0	44.0	60.0	-16.0	Line
^	5.571M	40.5	+9.9 +0.2	+0.2	+0.0	+0.8	+0.0	51.6	50.0	+1.6	Line
47	6.472M	20.5	+9.9 +0.2	+0.2	+0.0	+0.8	+0.0	31.6	50.0	-18.4	Line
^	6.472M	37.6	+9.9 +0.2	+0.2	+0.0	+0.8	+0.0	48.7	50.0	-1.3	Line
49	189.269k	21.9	+9.9 +0.3	+0.0	+0.0	+0.7	+0.0	32.8	54.1	-21.3	Line
^	189.269k	41.0	+9.9 +0.3	+0.0	+0.0	+0.7	+0.0	51.9	54.1	-2.2	Line

Test Location: CKC Laboratories, Inc. • 1120 Fulton Place • Fremont, CA 94539 • (510) 249-1170  
 Customer: **Cellphone-Mate, Inc.**  
 Specification: **15.207 AC Mains - Average**  
 Work Order #: **97491** Date: 10/6/2015  
 Test Type: **Conducted Emissions** Time: 16:02:08  
 Tested By: Hieu Song Nguyenpham Sequence#: 18  
 Software: EMITest 5.02.00 120V 60Hz

***Equipment Tested:***

Device	Manufacturer	Model #	S/N
Configuration 3			

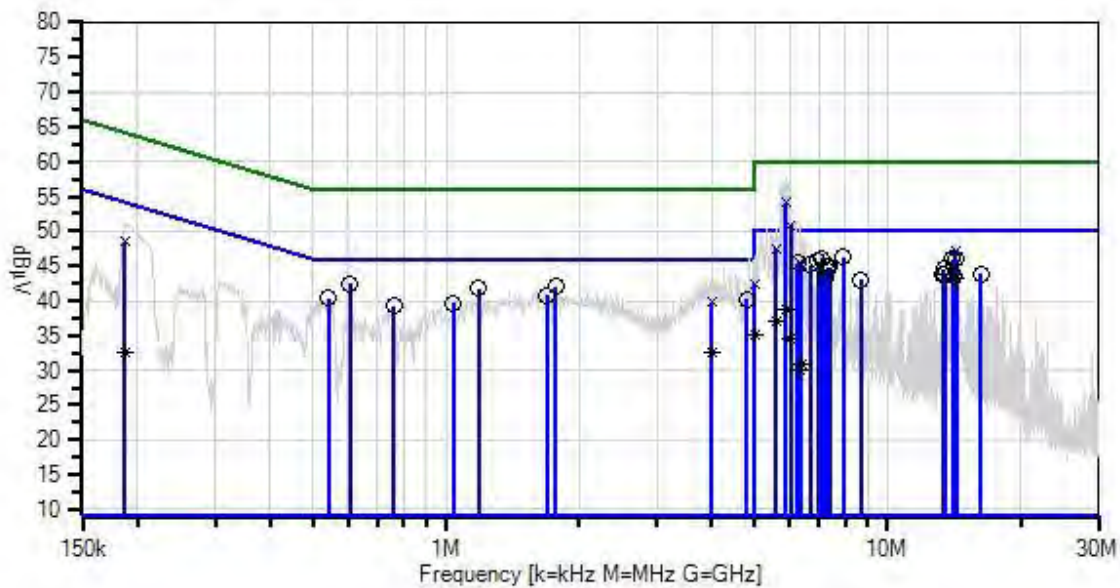
***Support Equipment:***

Device	Manufacturer	Model #	S/N
Configuration 3			

***Test Conditions / Notes:***

<p>Conducted Emission          Frequency Range: 150kHz to 30MHz</p> <p>Temperature: 22.0°C          Humidity: 39.6 %          Atmospheric Pressure: 100.5kPa</p> <p>Highest Generation Frequency: 2.4GHz          Attenuator = 63 at MAX Level          Antenna Gain for <b>WiFi Antenna (SC248W)</b>=10dBi          Method: ANSI C 63.4 2009</p> <p>The equipment under test (EUT) is placed on the Styrofoam table top. A remotely located signal generator which sits next to the EUT is connected to input port of EUT. The DL power input signal 2132.5MHz, 4.1MHz AWGN at the outdoor antenna port is set at 3dB above AGC level. HDTV input is connected to the antenna which is sat next to the EUT. The HDTV output ports are connected to F-type cables and terminated by 75Ohm terminator on another end.</p> <p>The EUT is connected to the laptop through RJ45 on LAN Port which is outside of the chamber to operate the WIFI portion at the beginning and disconnect the port of RJ45 from the Laptop due to the LAN port is used for service only. Another RJ45 is hanging on WAN port.</p> <p><b>802.11b Mode</b>          Data rate = 2Mbps          Attenuator for 802.11b Mode=32</p> <p><b>Middle Channel</b></p>
--

CKC Laboratories, Inc. Date: 10/6/2015 Time: 16:02:08 Cellphone-Mate, Inc W/O#: 97491  
 Test Lead: Neutral 120V 60Hz Sequence#: 18



— Sweep Data	— Readings	○ Peak Readings
x QP Readings	* Average Readings	▼ Ambient
Software Version: 5.02.00	— 1 - 15.207 AC Mains - Average	— 2 - 15.207 AC Mains - Quasi-peak

**Test Equipment:**

ID	Asset #/Serial #	Description	Model	Calibration Date	Cal Due Date
T1	ANP01211	Attenuator	23-10-34	3/31/2015	3/31/2017
T2	ANP00880	Cable	RG214U	6/13/2014	6/13/2016
T3	ANP06691	Cable	PE3062-180	8/8/2014	8/8/2016
	AN00494	50uH LISN-Line Loss (dB)	3816/NM	3/4/2015	3/4/2017
T4	AN00494	50uH LISN-Return Loss (dB)	3816/NM	3/4/2015	3/4/2017
	AN03471	RF Characteristics Analyzer	E4440A	12/19/2013	12/19/2015
T5	ANP05258	High Pass Filter	HE9615-150K-50-720B	11/14/2014	11/14/2016

**Measurement Data:**

Reading listed by margin.

Test Lead: Neutral

#	Freq	Rdng	T1 T5	T2	T3	T4	Dist	Corr	Spec	Margin	Polar
	MHz	dBμV	dB	dB	dB	dB	Table	dBμV	dBμV	dB	Ant
1	606.685k	31.9	+9.9 +0.1	+0.0	+0.0	+0.6	+0.0	42.5	46.0	-3.5	Neutr
2	7.923M	35.5	+9.9 +0.1	+0.2	+0.0	+0.6	+0.0	46.3	50.0	-3.7	Neutr
3	7.103M	35.3	+9.9 +0.1	+0.2	+0.0	+0.6	+0.0	46.1	50.0	-3.9	Neutr
4	14.337M	35.1	+9.9 +0.2	+0.3	+0.1	+0.4	+0.0	46.0	50.0	-4.0	Neutr
5	1.775M	31.3	+9.8 +0.2	+0.1	+0.0	+0.6	+0.0	42.0	46.0	-4.0	Neutr
6	14.031M	35.2	+9.9 +0.2	+0.3	+0.0	+0.4	+0.0	46.0	50.0	-4.0	Neutr
7	6.950M	34.9	+9.9 +0.1	+0.2	+0.0	+0.6	+0.0	45.7	50.0	-4.3	Neutr
8	1.183M	31.0	+9.8 +0.2	+0.1	+0.0	+0.6	+0.0	41.7	46.0	-4.3	Neutr
9	6.265M	34.5	+9.9 +0.2	+0.2	+0.0	+0.6	+0.0	45.4	50.0	-4.6	Neutr
10	6.670M	34.3	+9.9 +0.1	+0.2	+0.0	+0.6	+0.0	45.1	50.0	-4.9	Neutr
11	7.310M	34.1	+9.9 +0.1	+0.2	+0.0	+0.6	+0.0	44.9	50.0	-5.1	Neutr
12	1.694M	30.1	+9.8 +0.2	+0.1	+0.0	+0.6	+0.0	40.8	46.0	-5.2	Neutr
13	7.373M	34.0	+9.9 +0.1	+0.2	+0.0	+0.6	+0.0	44.8	50.0	-5.2	Neutr
14	13.418M	33.7	+9.9 +0.2	+0.3	+0.0	+0.4	+0.0	44.5	50.0	-5.5	Neutr
15	7.283M	33.5	+9.9 +0.1	+0.2	+0.0	+0.6	+0.0	44.3	50.0	-5.7	Neutr
16	541.236k	29.6	+9.9 +0.2	+0.0	+0.0	+0.6	+0.0	40.3	46.0	-5.7	Neutr



17	4.807M	29.4	+9.9 +0.1	+0.2	+0.0	+0.6	+0.0	40.2	46.0	-5.8	Neutr
18	5.888M QP	43.3	+9.9 +0.2	+0.2	+0.0	+0.6	+0.0	54.2	60.0	-5.8	Neutr
19	13.481M	33.1	+9.9 +0.2	+0.3	+0.0	+0.4	+0.0	43.9	50.0	-6.1	Neutr
20	16.229M	33.1	+9.9 +0.2	+0.3	+0.0	+0.3	+0.0	43.8	50.0	-6.2	Neutr
21	13.355M	32.9	+9.9 +0.2	+0.3	+0.0	+0.4	+0.0	43.7	50.0	-6.3	Neutr
22	1.039M	28.8	+9.9 +0.2	+0.1	+0.0	+0.6	+0.0	39.6	46.0	-6.4	Neutr
23	14.094M	32.7	+9.9 +0.2	+0.3	+0.0	+0.4	+0.0	43.5	50.0	-6.5	Neutr
24	763.034k	28.5	+9.9 +0.2	+0.0	+0.0	+0.6	+0.0	39.2	46.0	-6.8	Neutr
25	14.213M Ave	32.3	+9.9 +0.2	+0.3	+0.0	+0.4	+0.0	43.1	50.0	-6.9	Neutr
26	7.256M	32.3	+9.9 +0.1	+0.2	+0.0	+0.6	+0.0	43.1	50.0	-6.9	Neutr
27	8.716M	32.2	+9.9 +0.1	+0.2	+0.0	+0.6	+0.0	43.0	50.0	-7.0	Neutr
28	6.023M QP	40.0	+9.9 +0.2	+0.2	+0.0	+0.6	+0.0	50.9	60.0	-9.1	Neutr
29	4.998M Ave	24.2	+9.9 +0.1	+0.2	+0.0	+0.6	+0.0	35.0	46.0	-11.0	Neutr
30	5.888M Ave	27.8	+9.9 +0.2	+0.2	+0.0	+0.6	+0.0	38.7	50.0	-11.3	Neutr
^	5.888M	47.2	+9.9 +0.2	+0.2	+0.0	+0.6	+0.0	58.1	50.0	+8.1	Neutr
32	5.583M QP	36.6	+9.9 +0.2	+0.2	+0.0	+0.6	+0.0	47.5	60.0	-12.5	Neutr
33	5.583M Ave	26.3	+9.9 +0.2	+0.2	+0.0	+0.6	+0.0	37.2	50.0	-12.8	Neutr
^	5.583M	40.8	+9.9 +0.2	+0.2	+0.0	+0.6	+0.0	51.7	50.0	+1.7	Neutr

35	14.213M	36.2	+9.9 +0.2	+0.3	+0.0	+0.4	+0.0	47.0	60.0	-13.0	Neutr
^	14.213M	37.6	+9.9 +0.2	+0.3	+0.0	+0.4	+0.0	48.4	50.0	-1.6	Neutr
37	3.994M	21.7	+9.9 +0.2	+0.1	+0.0	+0.6	+0.0	32.5	46.0	-13.5	Neutr
38	4.998M	31.6	+9.9 +0.1	+0.2	+0.0	+0.6	+0.0	42.4	56.0	-13.6	Neutr
^	4.998M	37.2	+9.9 +0.1	+0.2	+0.0	+0.6	+0.0	48.0	46.0	+2.0	Neutr
40	6.310M	34.6	+9.9 +0.2	+0.2	+0.0	+0.6	+0.0	45.5	60.0	-14.5	Neutr
41	6.364M	34.4	+9.9 +0.2	+0.2	+0.0	+0.6	+0.0	45.3	60.0	-14.7	Neutr
42	6.023M	23.6	+9.9 +0.2	+0.2	+0.0	+0.6	+0.0	34.5	50.0	-15.5	Neutr
^	6.023M	43.0	+9.9 +0.2	+0.2	+0.0	+0.6	+0.0	53.9	50.0	+3.9	Neutr
44	187.088k	37.8	+9.9 +0.3	+0.0	+0.0	+0.6	+0.0	48.6	64.2	-15.6	Neutr
45	3.994M	29.0	+9.9 +0.2	+0.1	+0.0	+0.6	+0.0	39.8	56.0	-16.2	Neutr
^	3.994M	32.8	+9.9 +0.2	+0.1	+0.0	+0.6	+0.0	43.6	46.0	-2.4	Neutr
47	6.364M	20.1	+9.9 +0.2	+0.2	+0.0	+0.6	+0.0	31.0	50.0	-19.0	Neutr
^	6.364M	38.2	+9.9 +0.2	+0.2	+0.0	+0.6	+0.0	49.1	50.0	-0.9	Neutr
49	6.310M	19.2	+9.9 +0.2	+0.2	+0.0	+0.6	+0.0	30.1	50.0	-19.9	Neutr
^	6.310M	39.6	+9.9 +0.2	+0.2	+0.0	+0.6	+0.0	50.5	50.0	+0.5	Neutr
51	187.088k	21.8	+9.9 +0.3	+0.0	+0.0	+0.6	+0.0	32.6	54.2	-21.6	Neutr
^	187.088k	40.1	+9.9 +0.3	+0.0	+0.0	+0.6	+0.0	50.9	54.2	-3.3	Neutr

## Test Setup Photos



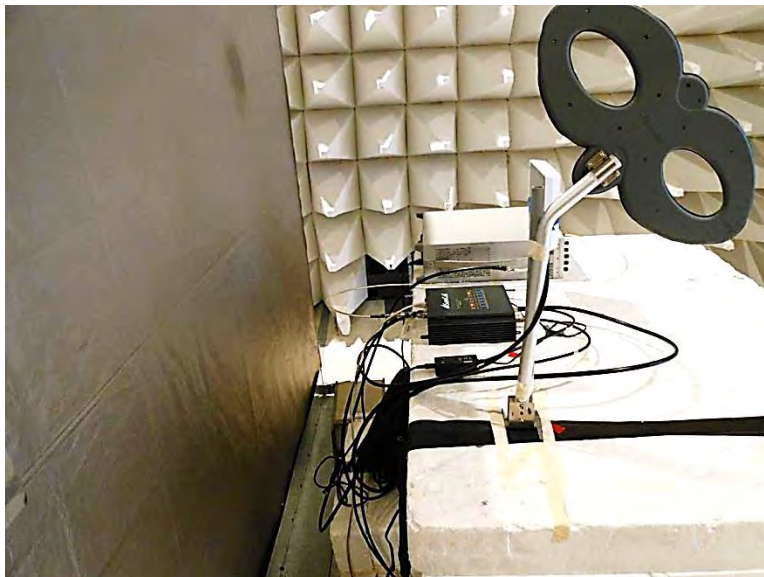
SC222W Antenna



SC222W Antenna



SC248W Antenna



SC248W Antenna

## 15.247(a)(2) 6dB Bandwidth

### Test Conditions / Setup

Test Location: CKC Laboratories, Inc. • 1120 Fulton Place • Fremont, CA 94539 • (510) 249-1170  
 Customer: **Cellphone-Mate, Inc.**  
 Specification: **OBW Set up**  
 Work Order #: **97491** Date: 10/05/2015  
 Test Type: **Conducted Power Measurement** Time:  
 Tested By: Hieu Song Nguyenpham Sequence#:  
 Software: EMITest 5.02.00

#### Test Equipment:

ID	Asset #	Description	Model	Calibration Date	Cal Due Date
T1	P06710	Cable	32026-29094K-29094K-72TC	9/18/2014	9/18/2016
T2	P06467	Attenuator	PE7014-10	5/13/2015	5/13/2017
	03471	Spectrum Analyzer	E4440A	12/19/2013	12/19/2015

#### Equipment Tested:

Device	Manufacturer	Model #	S/N
Configuration 1			

#### Support Equipment:

Device	Manufacturer	Model #	S/N
Configuration 1			

#### Test Conditions / Notes:

Application: MP\_TEST MFC version 1.3.8.0

Temperature: 22.0°C

Humidity: 39.6 %

Atmospheric Pressure: 100.5kPa

Highest Generation Frequency: 2.462 GHz

Attenuator = 63 at MAX Level

Method: KDB 558074 v03r03 section 8.1

RBW=100kHz and VBW=300kHz

The equipment under test (EUT) is placed on the table. The EUT is set up as intended to operate on WIFI continuously transmitting. A remotely located signal generator is connected to input port of EUT. The DL power input signal 2132.5MHz, 4.1MHz AWGN at the outdoor antenna port is set at 3dB above AGC level.

**Attenuator for 802.11b Mode=32**

The Data rate is at 2Mbps

Test Location: CKC Laboratories, Inc. • 1120 Fulton Place • Fremont, CA 94539 • (510) 249-1170  
 Customer: **Cellphone-Mate, Inc.**  
 Specification: **OBW Set up**  
 Work Order #: **97491** Date: 10/05/2015  
 Test Type: **Conducted Power Measurement** Time:  
 Tested By: Hieu Song Nguyenpham Sequence#:  
 Software: EMITest 5.02.00

**Test Equipment:**

ID	Asset #	Description	Model	Calibration Date	Cal Due Date
T1	P06710	Cable	32026-29094K-29094K-72TC	9/18/2014	9/18/2016
T2	P06467	Attenuator	PE7014-10	5/13/2015	5/13/2017
	03471	Spectrum Analyzer	E4440A	12/19/2013	12/19/2015

**Equipment Tested:**

Device	Manufacturer	Model #	S/N
Configuration 1			

**Support Equipment:**

Device	Manufacturer	Model #	S/N
Configuration 1			

**Test Conditions / Notes:**

Application: MP\_TEST MFC version 1.3.8.0  
  
 Temperature: 22.0°C  
 Humidity: 39.6 %  
 Atmospheric Pressure: 100.5kPa  
  
 Highest Generation Frequency: 2.462 GHz  
 Attenuator = 63 at MAX Level  
 Method: KDB 558074 v03r03 section 8.1  
  
 RBW=100kHz and VBW=300kHz  
  
 The equipment under test (EUT) is placed on the table. The EUT is set up as intended to operate on WIFI continuously transmitting. A remotely located signal generator is connected to input port of EUT. The DL power input signal 2132.5MHz, 4.1MHz AWGN at the outdoor antenna port is set at 3dB above AGC level.  
  
**Attenuator for 802.11g Mode=38**  
 The Data rate is at 54Mbps



Test Location: CKC Laboratories, Inc. • 1120 Fulton Place • Fremont, CA 94539 • (510) 249-1170  
 Customer: **Cellphone-Mate, Inc.**  
 Specification: **OBW Set up**  
 Work Order #: **97491** Date: 10/05/2015  
 Test Type: **Conducted Power Measurement** Time:  
 Tested By: Hieu Song Nguyenpham Sequence#:  
 Software: EMITest 5.02.00

**Test Equipment:**

ID	Asset #	Description	Model	Calibration Date	Cal Due Date
T1	P06710	Cable	32026-29094K-29094K-72TC	9/18/2014	9/18/2016
T2	P06467	Attenuator	PE7014-10	5/13/2015	5/13/2017
	03471	Spectrum Analyzer	E4440A	12/19/2013	12/19/2015

**Equipment Tested:**

Device	Manufacturer	Model #	S/N
Configuration 1			

**Support Equipment:**

Device	Manufacturer	Model #	S/N
Configuration 1			

**Test Conditions / Notes:**

Application: MP\_TEST MFC version 1.3.8.0  
  
 Temperature: 22.0°C  
 Humidity: 39.6 %  
 Atmospheric Pressure: 100.5kPa  
  
 Highest Generation Frequency: 2.462 GHz  
 Attenuator = 63 at MAX Level  
 Method: KDB 558074 v03r03 section 8.1  
  
 RBW=100kHz and VBW=300kHz  
  
 The equipment under test (EUT) is placed on the table. The EUT is set up as intended to operate on WIFI continuously transmitting. A remotely located signal generator is connected to input port of EUT. The DL power input signal 2132.5MHz, 4.1MHz AWGN at the outdoor antenna port is set at 3dB above AGC level.  
  
**Attenuator for 802.11n HT20 =35**  
 The Data rate is at MCS0

Test Location: CKC Laboratories, Inc. • 1120 Fulton Place • Fremont, CA 94539 • (510) 249-1170  
 Customer: **Cellphone-Mate, Inc.**  
 Specification: **OBW Set up**  
 Work Order #: **97491** Date: 10/05/2015  
 Test Type: **Conducted Power Measurement** Time:  
 Tested By: Hieu Song Nguyenpham Sequence#:  
 Software: EMITest 5.02.00

**Test Equipment:**

ID	Asset #	Description	Model	Calibration Date	Cal Due Date
T1	P06710	Cable	32026-29094K-29094K-72TC	9/18/2014	9/18/2016
T2	P06467	Attenuator	PE7014-10	5/13/2015	5/13/2017
	03471	Spectrum Analyzer	E4440A	12/19/2013	12/19/2015

**Equipment Tested:**

Device	Manufacturer	Model #	S/N
Configuration 1			

**Support Equipment:**

Device	Manufacturer	Model #	S/N
Configuration 1			

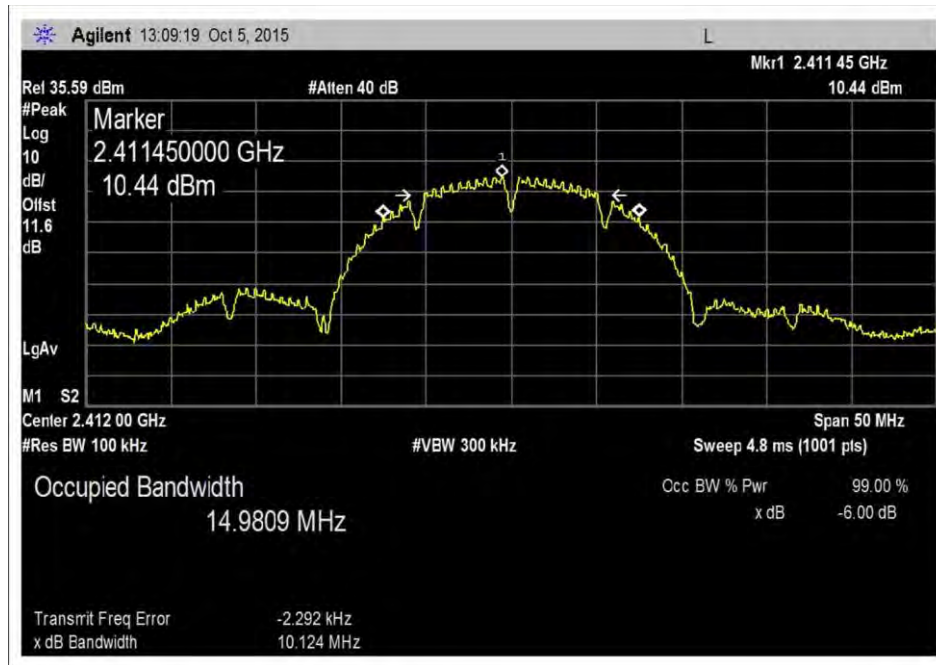
**Test Conditions / Notes:**

Application: MP\_TEST MFC version 1.3.8.0  
  
 Temperature: 22.0°C  
 Humidity: 39.6 %  
 Atmospheric Pressure: 100.5kPa  
  
 Highest Generation Frequency: 2.462 GHz  
 Attenuator = 63 at MAX Level  
 Method: KDB 558074 v03r03 section 8.1  
  
 RBW=100kHz and VBW=300kHz  
  
 The equipment under test (EUT) is placed on the table. The EUT is set up as intended to operate on WIFI continuously transmitting. A remotely located signal generator is connected to input port of EUT. The DL power input signal 2132.5MHz, 4.1MHz AWGN at the outdoor antenna port is set at 3dB above AGC level.  
  
**Attenuator for 802.11n HT40 Mode=32**  
 The Data rate is at MCS1

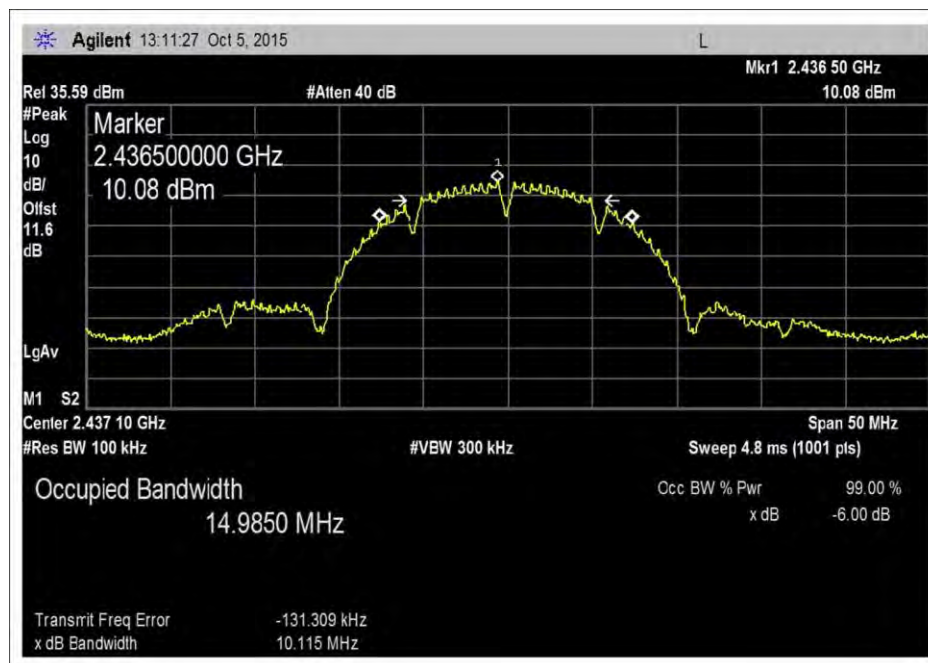


## Plots

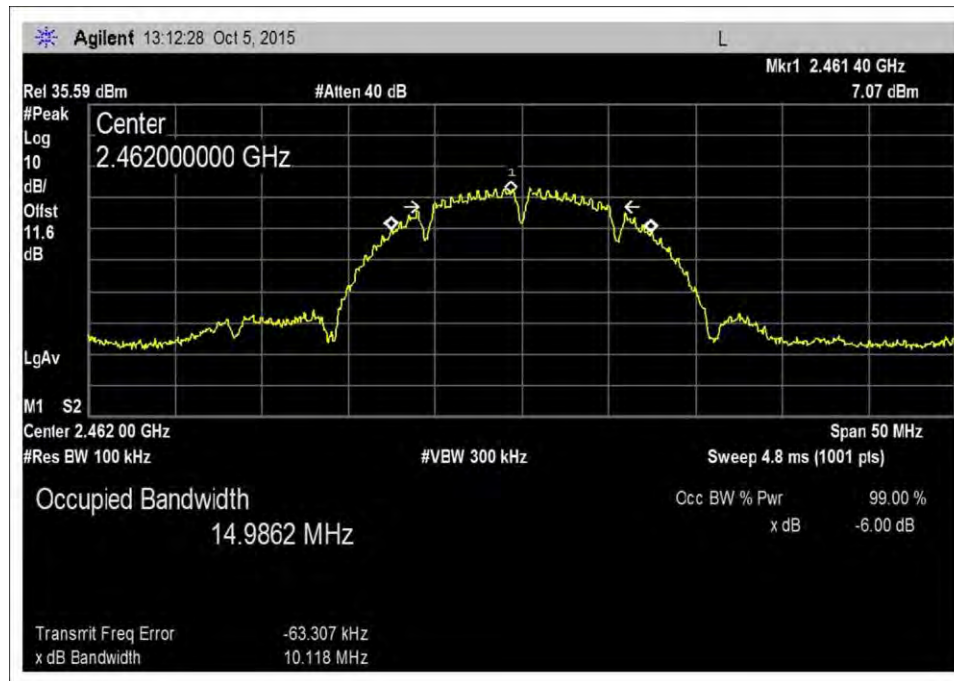
### 802.11b-Mode



Low Channel

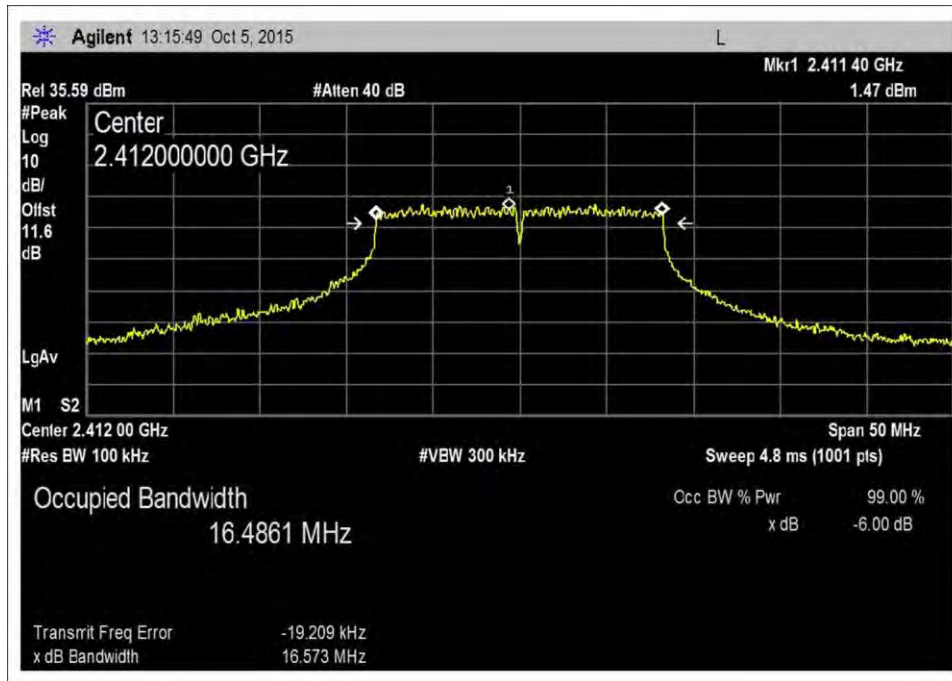


Middle Channel

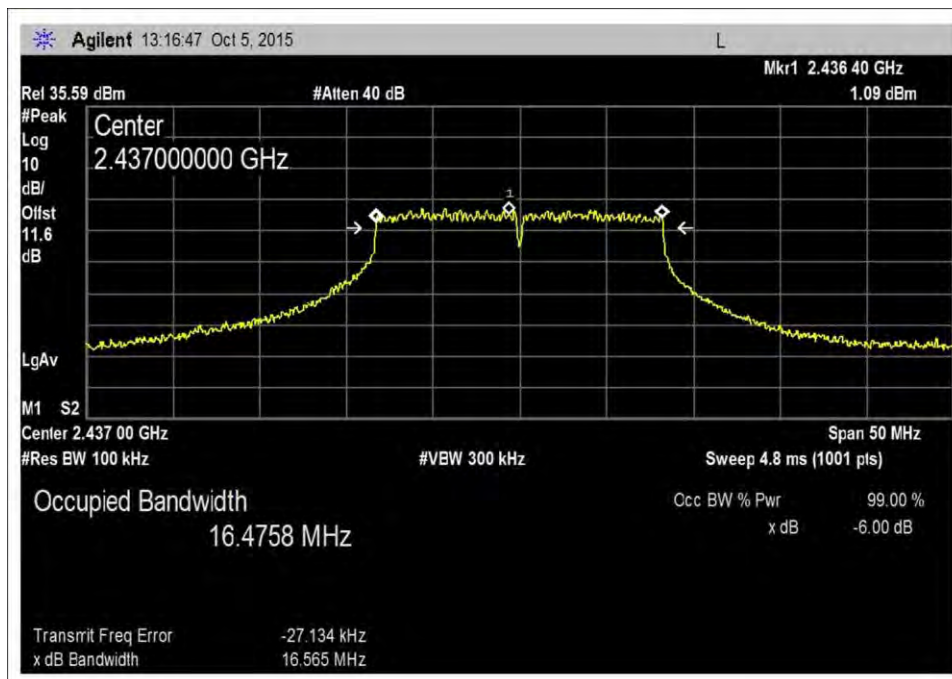


High Channel

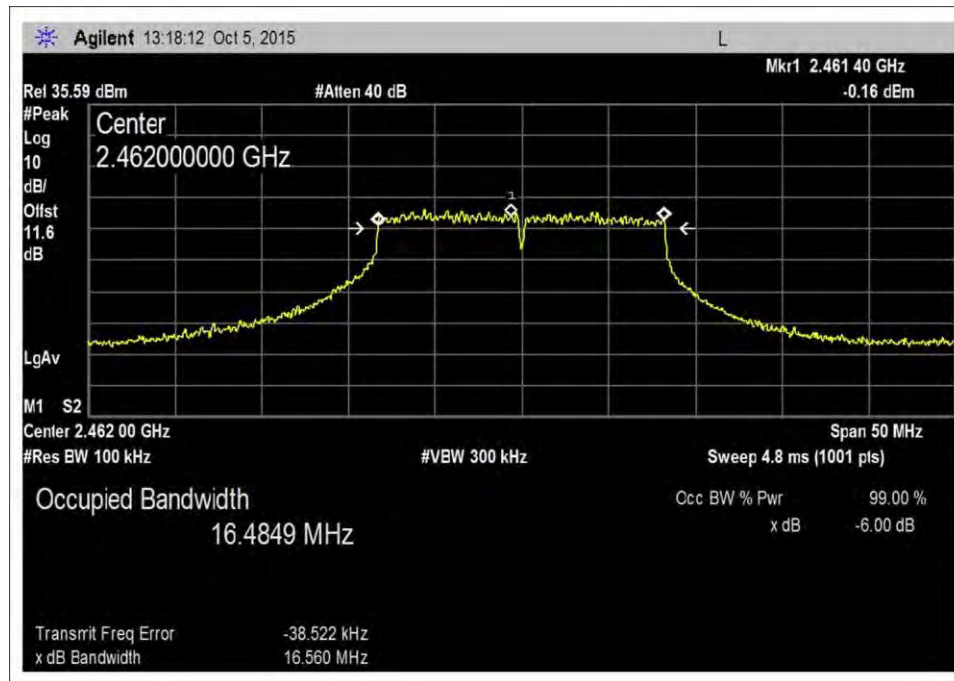
## 802.11g-Mode



Low Channel

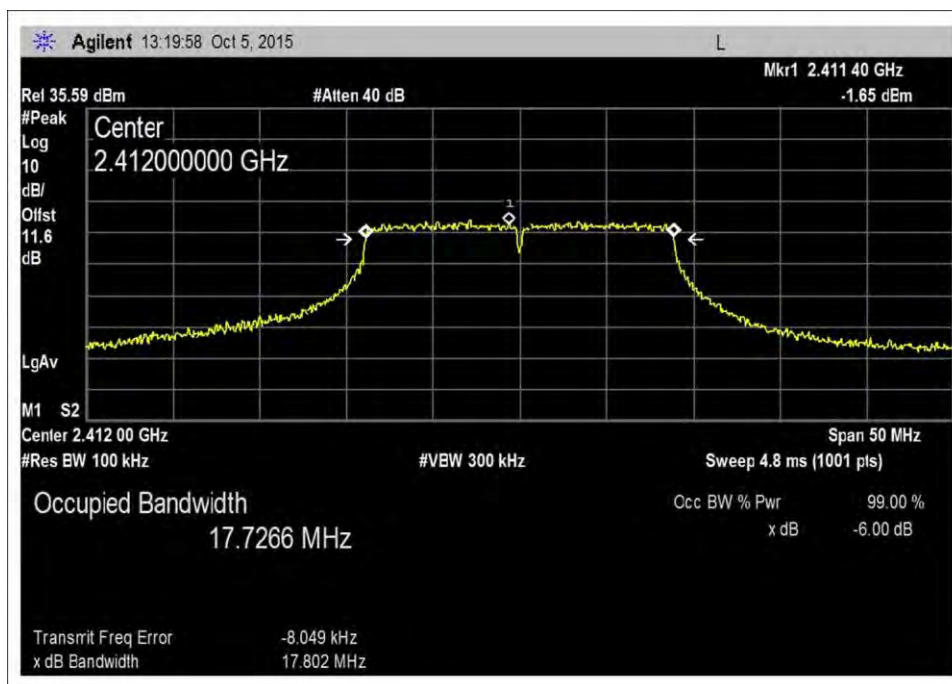


Middle Channel

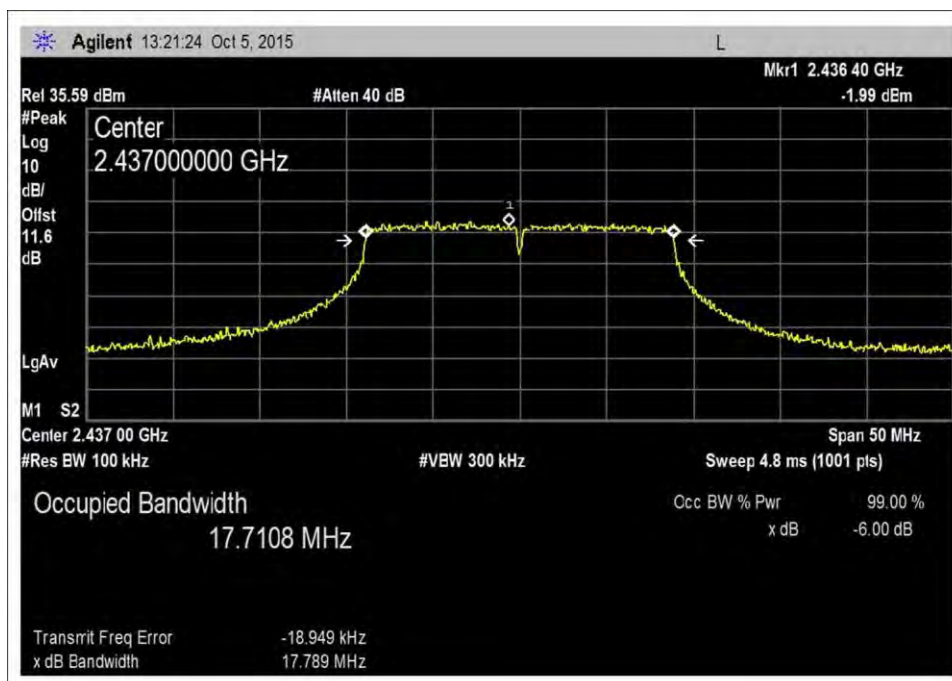


High Channel

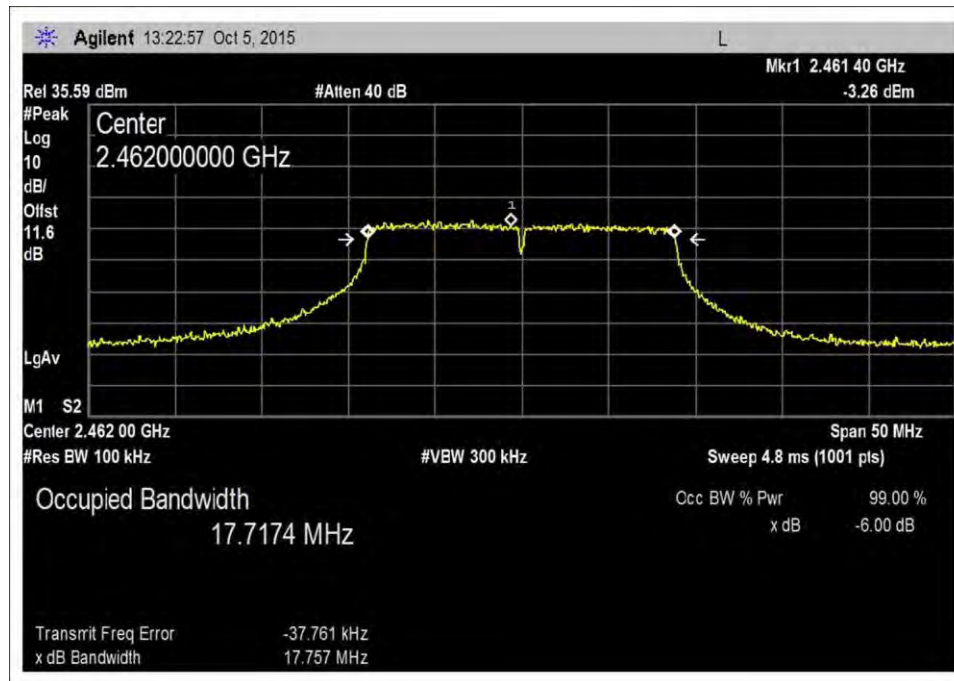
### 802.11n HT20 - Mode



Low Channel



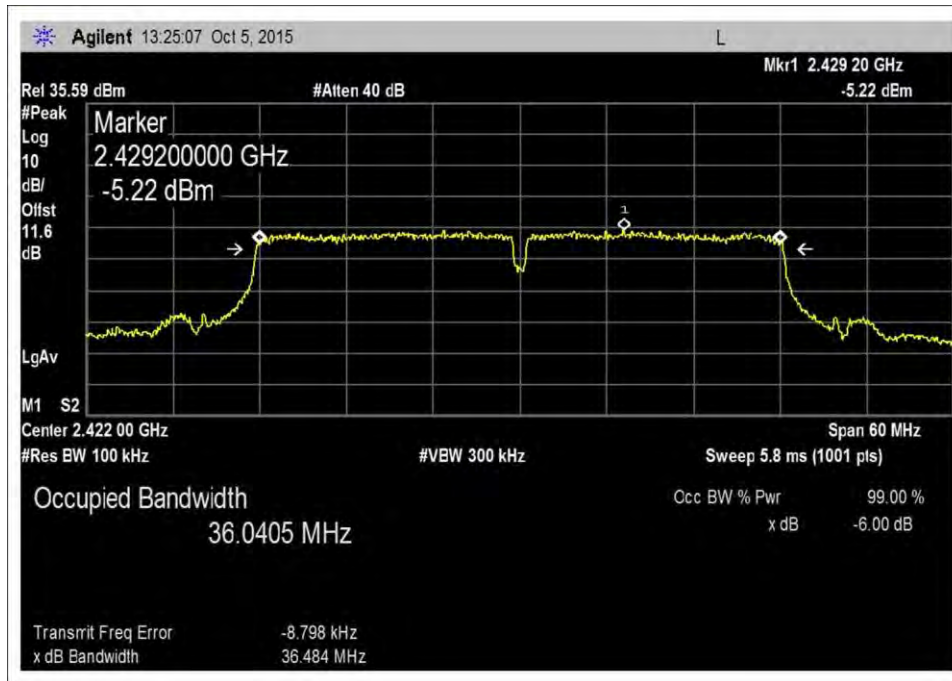
Middle Channel



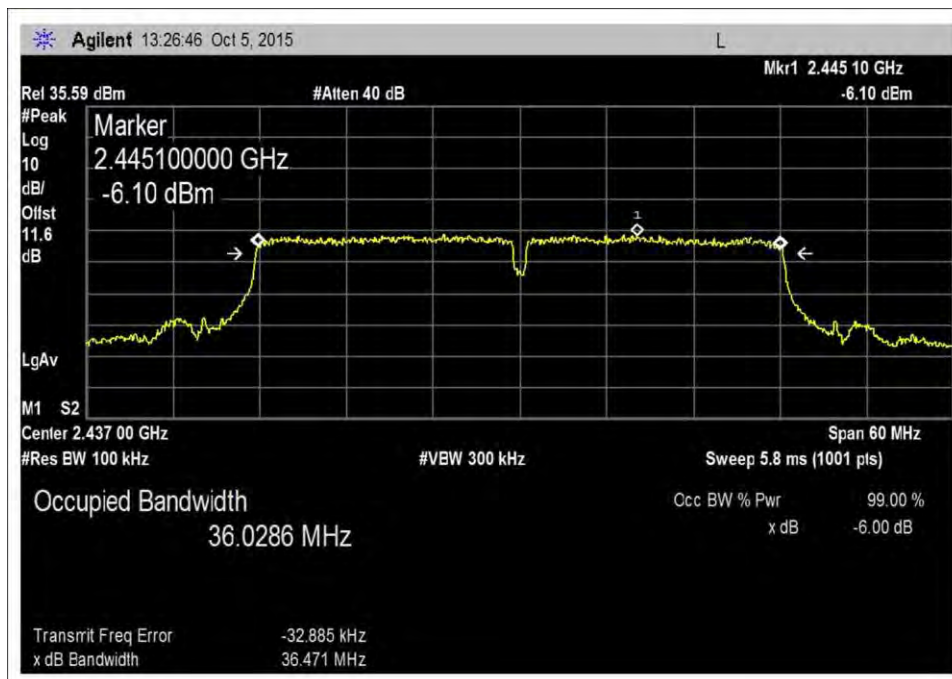
High Channel



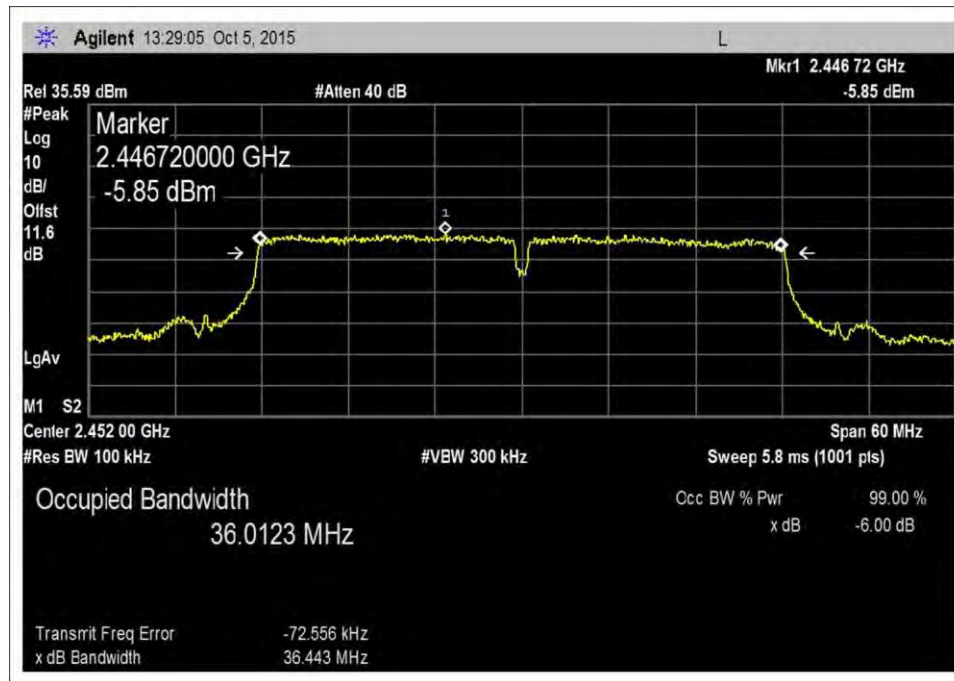
### 802.11n HT40 - Mode



Low Channel



Middle Channel



High Channel

## Test Setup Photo





## 15.247(b)(3) Output Power

### Test Conditions / Setup / Data

Test Location: CKC Laboratories, Inc. • 1120 Fulton Place • Fremont, CA 94539 • (510) 249-1170  
 Customer: **Cellphone-Mate, Inc.**  
 Specification: **15.247(b) Power Output (2400-2483.5 MHz DTS)**  
 Work Order #: **97491** Date: 10/05/2015  
 Test Type: **Conducted Power Measurement** Time:  
 Tested By: Hieu Song Nguyenpham Sequence#:  
 Software: EMITest 5.02.00

#### Test Equipment:

ID	Asset #	Description	Model	Calibration Date	Cal Due Date
T1	P06710	Cable	32026-29094K-29094K-72TC	9/18/2014	9/18/2016
T2	P06467	Attenuator	PE7014-10	5/13/2015	5/13/2017
	03471	Spectrum Analyzer	E4440A	12/19/2013	12/19/2015

#### Equipment Tested:

Device	Manufacturer	Model #	S/N
Configuration 1			

#### Support Equipment:

Device	Manufacturer	Model #	S/N
Configuration 1			

#### Test Conditions / Notes:

Application: MP\_TEST MFC version 1.3.8.0

Temperature: 22.0°C

Humidity: 39.6 %

Atmospheric Pressure: 100.5kPa

Highest Generation Frequency: 2.462 GHz

Attenuator = 63 at MAX Level

Test Method: KDB 558074 v03r03 section 9.2.2.7

The equipment under test (EUT) is placed on the table. The EUT is set up as intended to operate on WIFI.

A remotely located signal generator is connected to input port of EUT.

Output power with the booster max DL output power at the indoor antenna port with AWGN signal of 4.1MHz AWGN and sequentially with a GSM signal. The DL power input signal at the outdoor antenna port is set at 3dB above AGC level. DL input signal: 881.5MHz and 2132.5MHz, 4.1MHz AWGN / GSM

**Attenuator for 802.11b Mode=32**

Result Table (b-Mode)						
Frequency (MHz)	Measured Power in dBm (Booster off)	Measured Power in dBm (Booster on) at 881.5MHz, 4.1MHz AWGN	Measured Power in dBm (Booster on) at 2132.5MHz, 4.1MHz AWGN	Measured Power in dBm (Booster on) at 881.5MHz, GSM	Measured Power in dBm (Booster on) at 2132.5MHz, GSM	Power Limit in dBm
2412 Low Channel	21.47	21.39	21.34	21.17	21.36	30
2437 Middle Channel	21.31	21.02	21.08	20.95	21.09	30
2462 High Channel	20.5	19.94	19.84	19.73	19.86	30

Note: The data rate is at 2Mbps when the RF output power is highest.

**Test Method:** The Emissions Bandwidth measurements were made using the automatic bandwidth capability of the spectrum analyzer using the settings set out in KDB "558074 D01 DTS Meas Guidance v03r03, Section 9.2.2.7. The offset of the analyzer was set to correct for the cable and attenuator used during measurement. The units are in dBm. The limit is 1 Watt or 30dBm

Test Location: CKC Laboratories, Inc. • 1120 Fulton Place • Fremont, CA 94539 • (510) 249-1170  
 Customer: **Cellphone-Mate, Inc.**  
 Specification: **15.247(b) Power Output (2400-2483.5 MHz DTS)**  
 Work Order #: **97491** Date: 10/05/2015  
 Test Type: **Conducted Power Measurement** Time:  
 Tested By: Hieu Song Nguyenpham Sequence#:  
 Software: EMITest 5.02.00

**Test Equipment:**

ID	Asset #	Description	Model	Calibration Date	Cal Due Date
T1	P06710	Cable	32026-29094K-29094K-72TC	9/18/2014	9/18/2016
T2	P06467	Attenuator	PE7014-10	5/13/2015	5/13/2017
	03471	Spectrum Analyzer	E4440A	12/19/2013	12/19/2015

**Equipment Tested:**

Device	Manufacturer	Model #	S/N
Configuration 1			

**Support Equipment:**

Device	Manufacturer	Model #	S/N
Configuration 1			

**Test Conditions / Notes:**

Application: MP\_TEST MFC version 1.3.8.0  
  
 Temperature: 22.0°C  
 Humidity: 39.6 %  
 Atmospheric Pressure: 100.5kPa  
  
 Highest Generation Frequency: 2.462 GHz  
 Attenuator = 63 at MAX Level  
 Test Method: KDB 558074 v03r03 section 9.2.2.7  
  
 The equipment under test (EUT) is placed on the table. The EUT is set up as intended to operate on WIFI.  
 A remotely located signal generator is connected to input port of EUT.  
 Output power with the booster max DL output power at the indoor antenna port with AWGN signal of 4.1MHz  
 AWGN and sequentially with a GSM signal. The DL power input signal at the outdoor antenna port is set at 3dB  
 above AGC level. DL input signal: 881.5MHz and 2132.5MHz, 4.1MHz AWGN / GSM  
  
**Attenuator for 802.11g Mode=38**

Result Table (g-Mode)						
Frequency (MHz)	Measured Power in dBm (Booster off)	Measured Power in dBm (Booster on) at 881.5MHz, 4.1MHz AWGN	Measured Power in dBm (Booster on) at 2132.5MHz, 4.1MHz AWGN	Measured Power in dBm (Booster on) at 881.5MHz, GSM	Measured Power in dBm (Booster on) at 2132.5MHz, GSM	Power Limit in dBm
2412 Low Channel	19.22	19.14	19.28	19.01	19.09	30
2437 Middle Channel	19.1	18.96	19.26	18.84	18.87	30
2462 High Channel	17.91	17.75	17.89	17.6	17.68	30

Note: The data rate is at 54Mbps when the RF output power is highest.

**Test Method:** The Emissions Bandwidth measurements were made using the automatic bandwidth capability of the spectrum analyzer using the settings set out in KDB "558074 D01 DTS Meas Guidance v03r03, Section 9.2.2.7. The offset of the analyzer was set to correct for the cable and attenuator used during measurement. The units are in dBm. The limit is 1 Watt or 30dBm.

Test Location: CKC Laboratories, Inc. • 1120 Fulton Place • Fremont, CA 94539 • (510) 249-1170  
 Customer: **Cellphone-Mate, Inc.**  
 Specification: **15.247(b) Power Output (2400-2483.5 MHz DTS)**  
 Work Order #: **97491** Date: 10/05/2015  
 Test Type: **Conducted Power Measurement** Time:  
 Tested By: Hieu Song Nguyenpham Sequence#:  
 Software: EMITest 5.02.00

**Test Equipment:**

ID	Asset #	Description	Model	Calibration Date	Cal Due Date
T1	P06710	Cable	32026-29094K-29094K-72TC	9/18/2014	9/18/2016
T2	P06467	Attenuator	PE7014-10	5/13/2015	5/13/2017
	03471	Spectrum Analyzer	E4440A	12/19/2013	12/19/2015

**Equipment Tested:**

Device	Manufacturer	Model #	S/N
Configuration 1			

**Support Equipment:**

Device	Manufacturer	Model #	S/N
Configuration 1			

**Test Conditions / Notes:**

Application: MP\_TEST MFC version 1.3.8.0  
  
 Temperature: 22.0°C  
 Humidity: 39.6 %  
 Atmospheric Pressure: 100.5kPa  
  
 Highest Generation Frequency: 2.462 GHz  
 Attenuator = 63 at MAX Level  
 Test Method: KDB 558074 v03r03 section 9.2.2.7  
  
 The equipment under test (EUT) is placed on the table. The EUT is set up as intended to operate on WIFI.  
 A remotely located signal generator is connected to input port of EUT.  
 Output power with the booster max DL output power at the indoor antenna port with AWGN signal of 4.1MHz  
 AWGN and sequentially with a GSM signal. The DL power input signal at the outdoor antenna port is set at 3dB  
 above AGC level. DL input signal: 881.5MHz and 2132.5MHz, 4.1MHz AWGN / GSM  
  
**Attenuator for 802.11n HT20 mode = 35**

Result Table (n20-Mode)						
Frequency (MHz)	Measured Power in dBm (Booster off)	Measured Power in dBm (Booster on) at 881.5MHz, 4.1MHz AWGN	Measured Power in dBm (Booster on) at 2132.5MHz, 4.1MHz AWGN	Measured Power in dBm (Booster on) at 881.5MHz, GSM	Measured Power in dBm (Booster on) at 2132.5MHz, GSM	Power Limit in dBm
2412 Low Channel	17.51	17.4	17.5	17.27	17.26	30
2437 Middle Channel	17.34	17.19	17.25	17.05	17.22	30
2462 High Channel	16.31	16.05	16.03	15.8	15.95	30

Note: The data rate is at MCS0 when the RF output power is highest.

**Test Method:** The Emissions Bandwidth measurements were made using the automatic bandwidth capability of the spectrum analyzer using the settings set out in KDB "558074 D01 DTS Meas Guidance v03r03, Section 9.2.2.7. The offset of the analyzer was set to correct for the cable and attenuator used during measurement. The units are in dBm. The limit is 1 Watt or 30dBm.

Test Location: CKC Laboratories, Inc. • 1120 Fulton Place • Fremont, CA 94539 • (510) 249-1170  
 Customer: **Cellphone-Mate, Inc.**  
 Specification: **15.247(b) Power Output (2400-2483.5 MHz DTS)**  
 Work Order #: **97491** Date: 10/05/2015  
 Test Type: **Conducted Power Measurement** Time:  
 Tested By: Hieu Song Nguyenpham Sequence#:  
 Software: EMITest 5.02.00

**Test Equipment:**

ID	Asset #	Description	Model	Calibration Date	Cal Due Date
T1	P06710	Cable	32026-29094K-29094K-72TC	9/18/2014	9/18/2016
T2	P06467	Attenuator	PE7014-10	5/13/2015	5/13/2017
	03471	Spectrum Analyzer	E4440A	12/19/2013	12/19/2015

**Equipment Tested:**

Device	Manufacturer	Model #	S/N
Configuration 1			

**Support Equipment:**

Device	Manufacturer	Model #	S/N
Configuration 1			

**Test Conditions / Notes:**

Application: MP\_TEST MFC version 1.3.8.0  
  
 Temperature: 22.0°C  
 Humidity: 39.6 %  
 Atmospheric Pressure: 100.5kPa  
  
 Highest Generation Frequency: 2.462 GHz  
 Attenuator = 63 at MAX Level  
 Test Method: KDB 558074 v03r03 section 9.2.2.7  
  
 The equipment under test (EUT) is placed on the table. The EUT is set up as intended to operate on WIFI.  
 A remotely located signal generator is connected to input port of EUT.  
 Output power with the booster max DL output power at the indoor antenna port with AWGN signal of 4.1MHz  
 AWGN and sequentially with a GSM signal. The DL power input signal at the outdoor antenna port is set at 3dB  
 above AGC level. DL input signal: 881.5MHz and 2132.5 MHz, 4.1MHz AWGN / GSM.  
  
**Attenuator for 802.11n HT40 mode =32**

Result Table (n40-Mode)						
Frequency (MHz)	Measured Power in dBm (Booster off)	Measured Power in dBm (Booster on) at 881.5MHz, 4.1MHz AWGN	Measured Power in dBm (Booster on) at 2132.5MHz, 4.1MHz AWGN	Measured Power in dBm (Booster on) at 881.5MHz, GSM	Measured Power in dBm (Booster on) at 2132.5MHz, GSM	Power Limit in dBm
2412 Low Channel	15.83	15.81	15.77	15.5	15.61	30
2437 Middle Channel	15.64	15.5	15.5	15.31	15.4	30
2462 High Channel	15.03	14.9	14.92	14.75	14.87	30

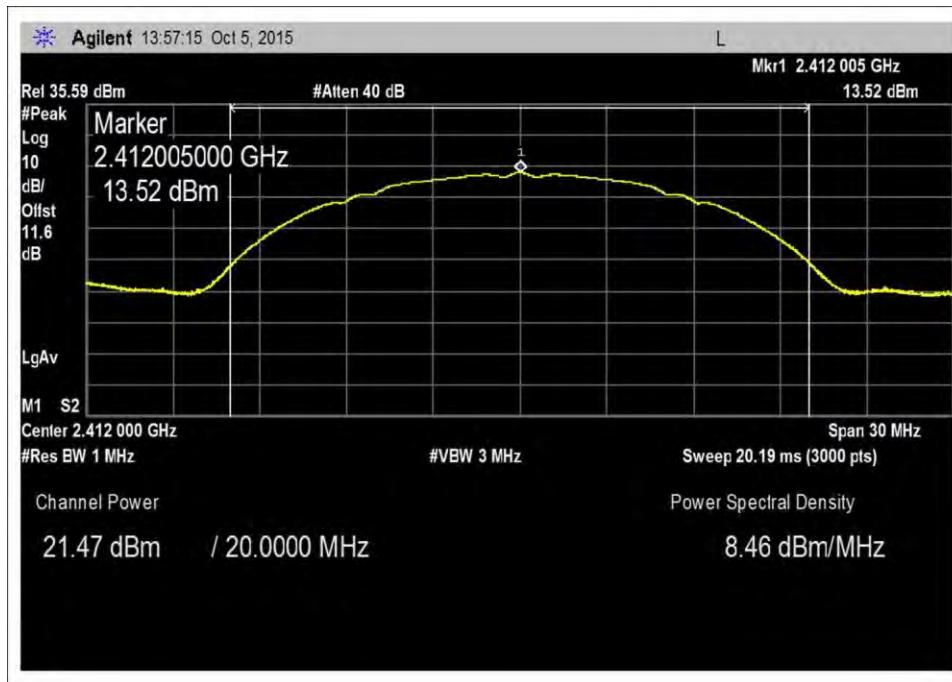
The data rate is at MCS1 when the RF output power is highest.

**Test Method:** The Emissions Bandwidth measurements were made using the automatic bandwidth capability of the spectrum analyzer using the settings set out in KDB "558074 D01 DTS Meas Guidance v03r03, Section 9.2.2.7. The offset of the analyzer was set to correct for the cable and attenuator used during measurement. The units are in dBm. The limit is 1 Watt or 30dBm.

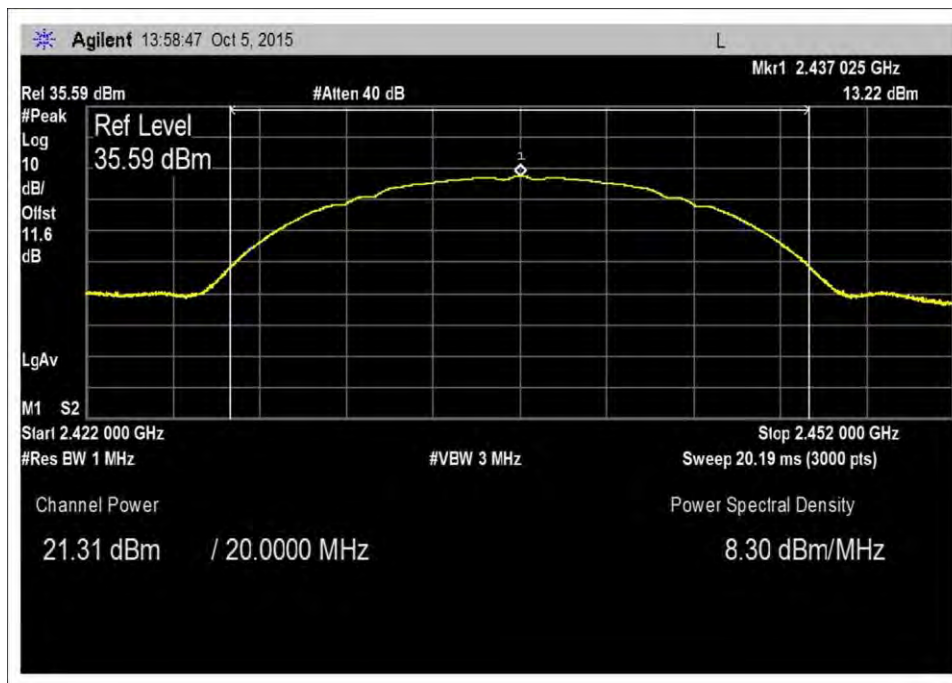


## Plots

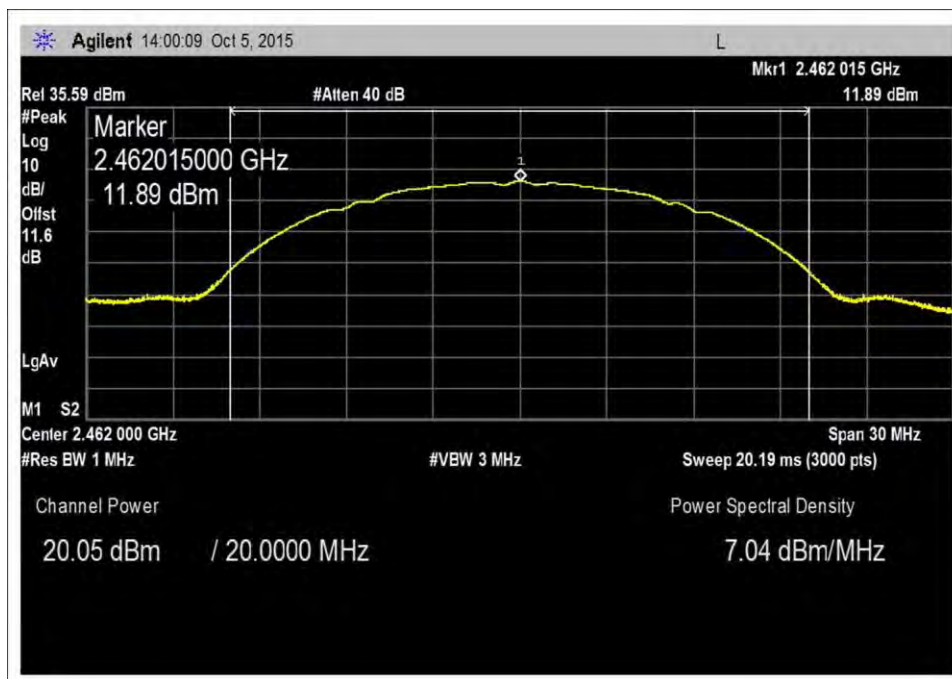
### 802.11b-Mode – Booster Off



Low Channel

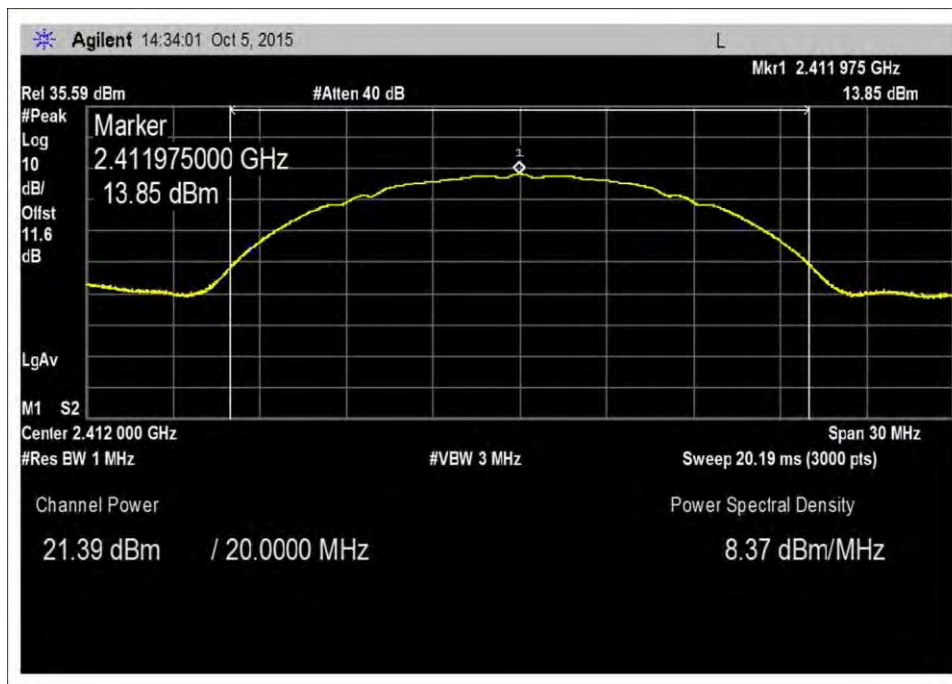


Middle Channel

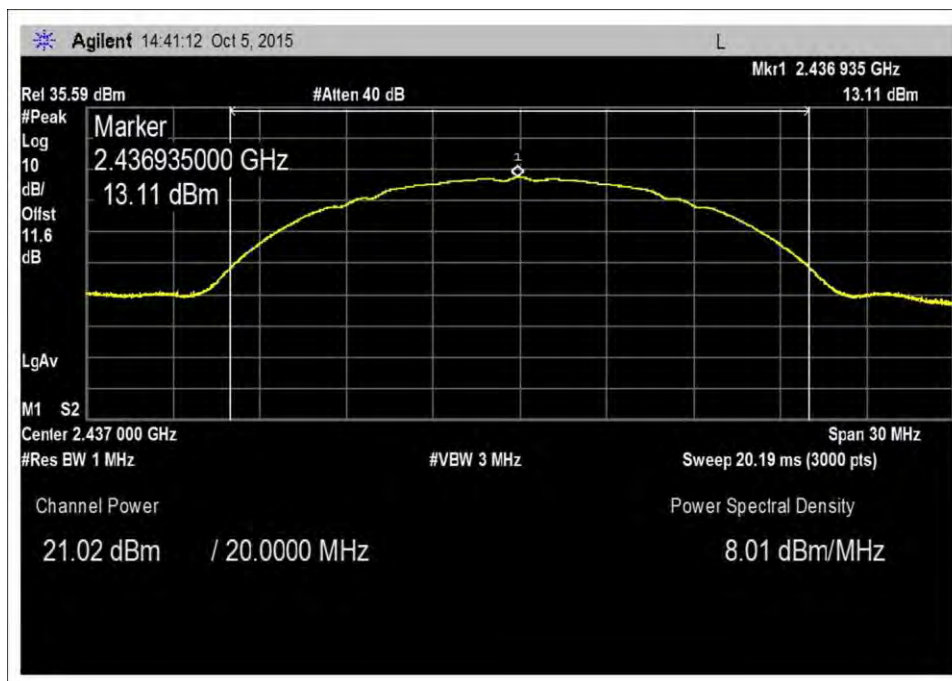


High Channel

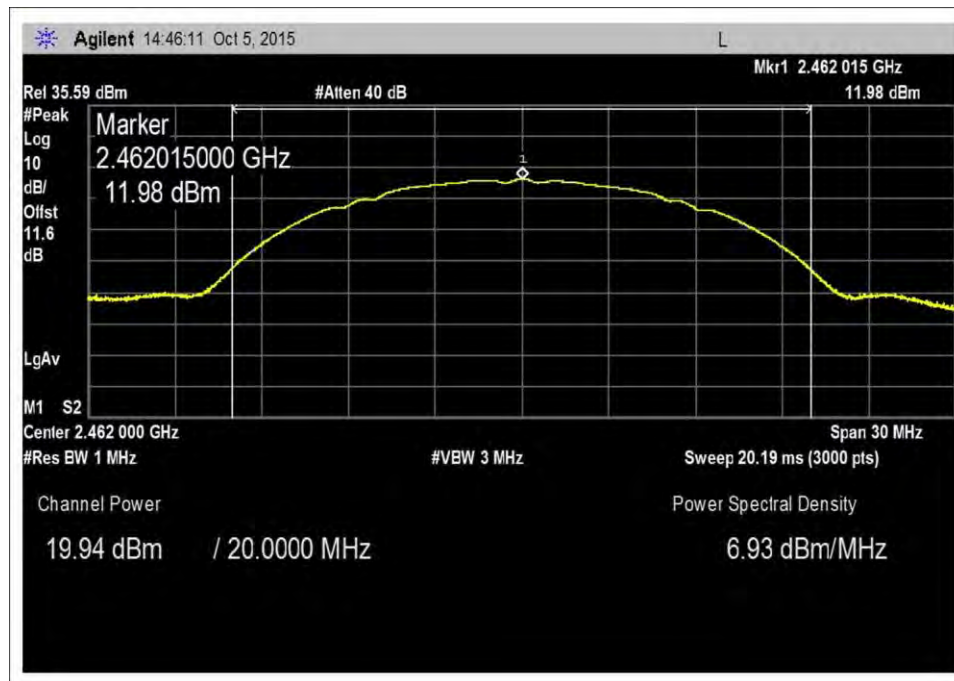
### 802.11b-Mode – 881.5 AWGN-Booster On



Low Channel

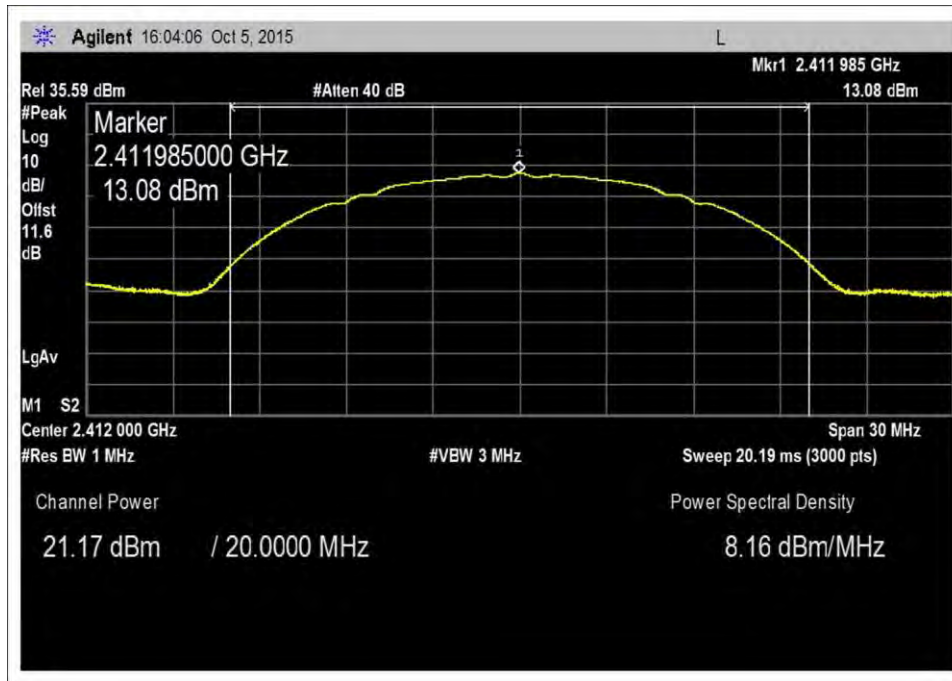


Middle Channel

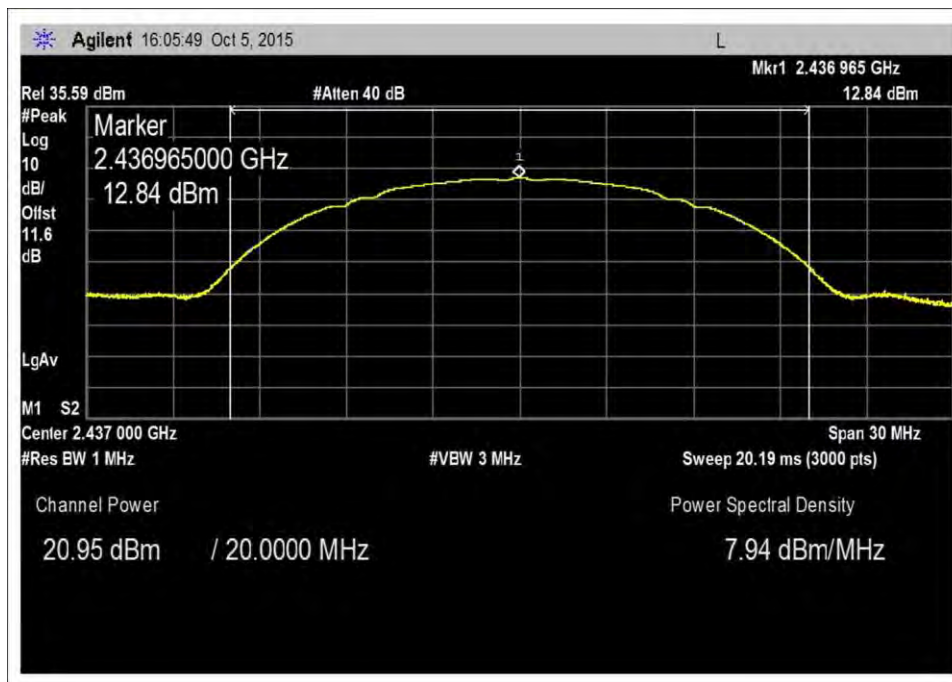


High Channel

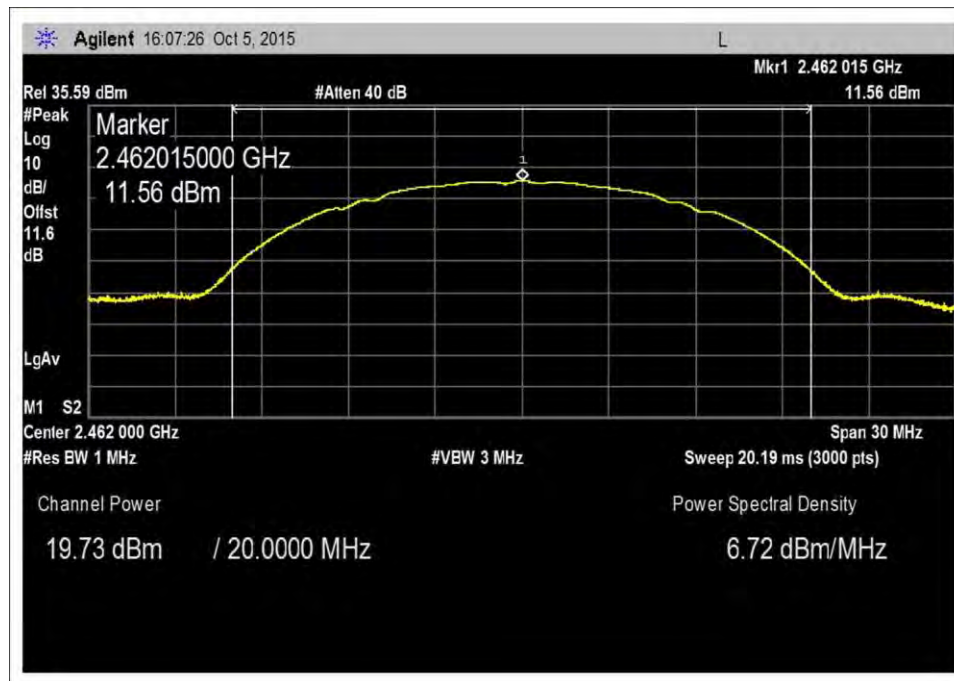
**802.11b-Mode – 881.5 GSM-Booster On**



Low Channel



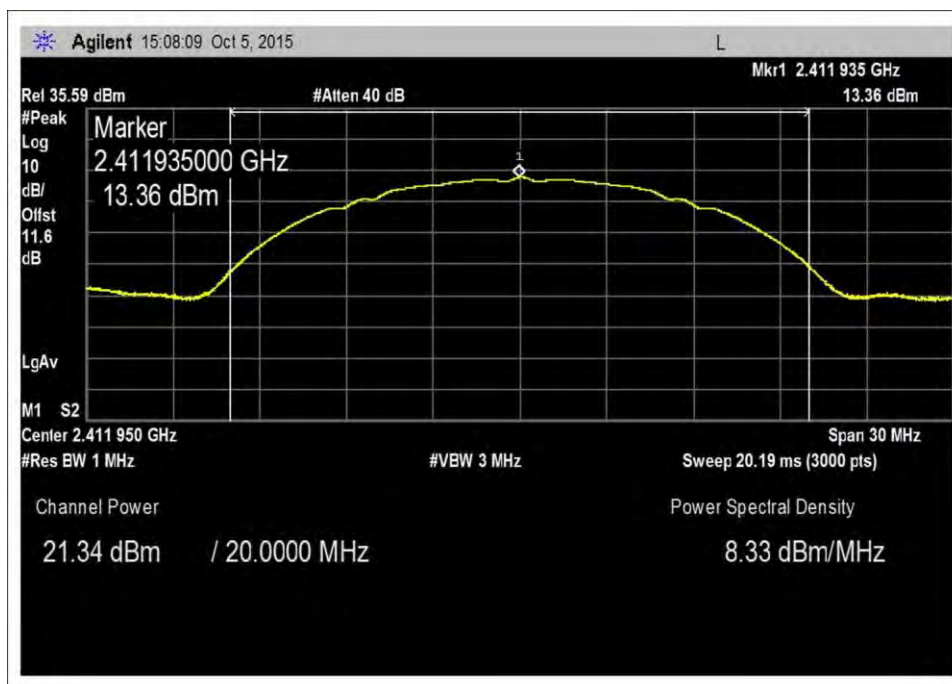
Middle Channel



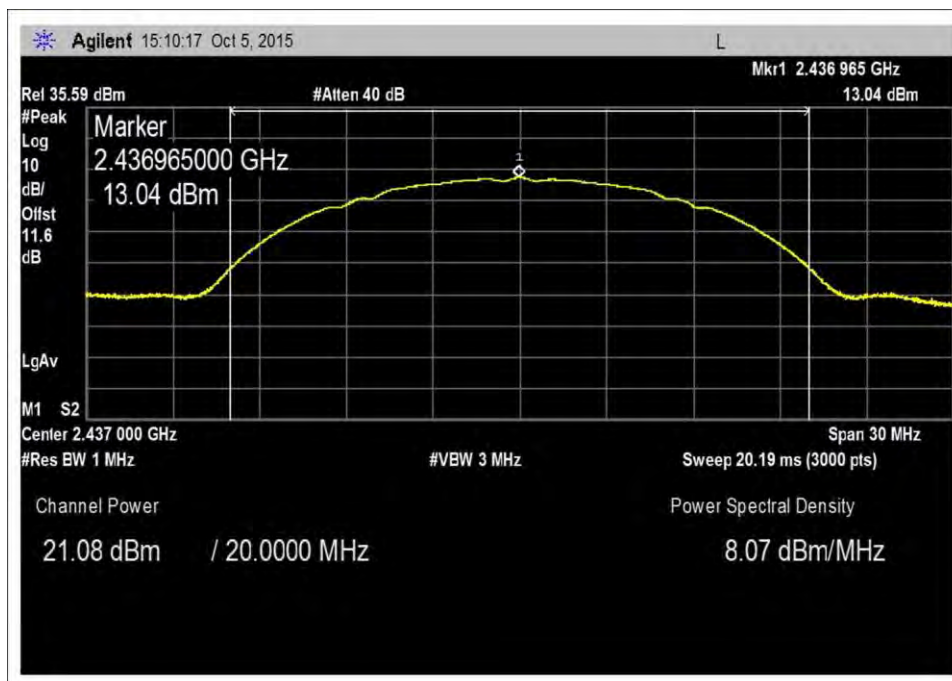
High Channel



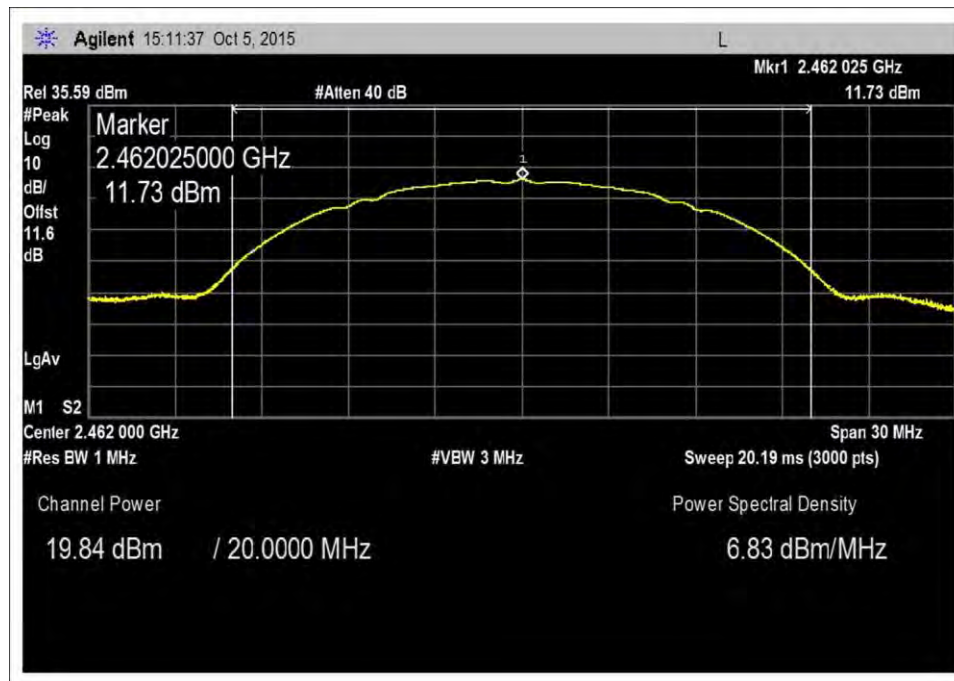
### 802.11b-Mode – 2132.5 AWGN-Booster On



Low Channel



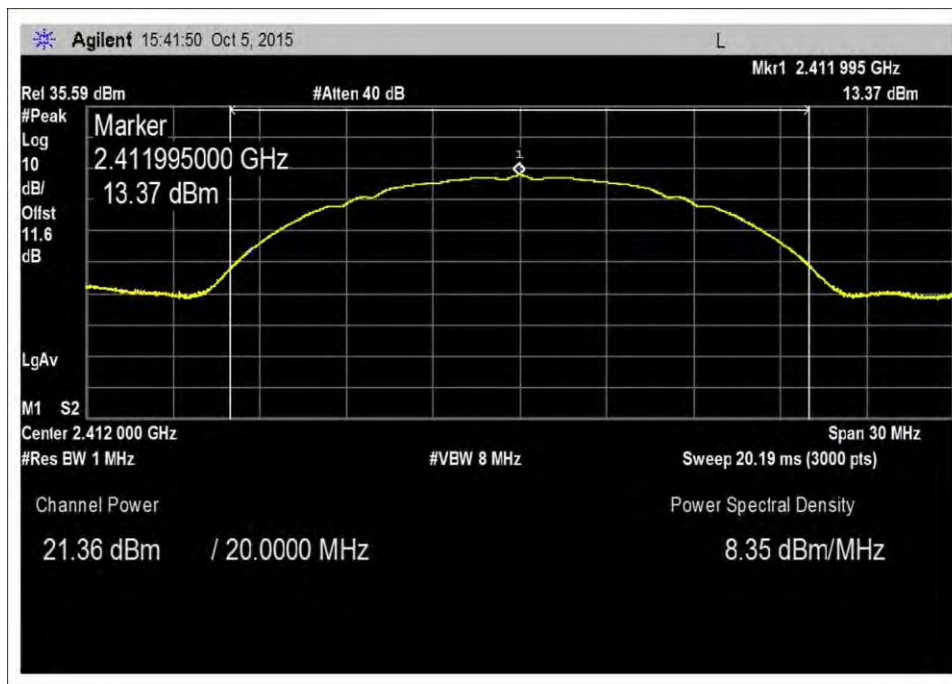
Middle Channel



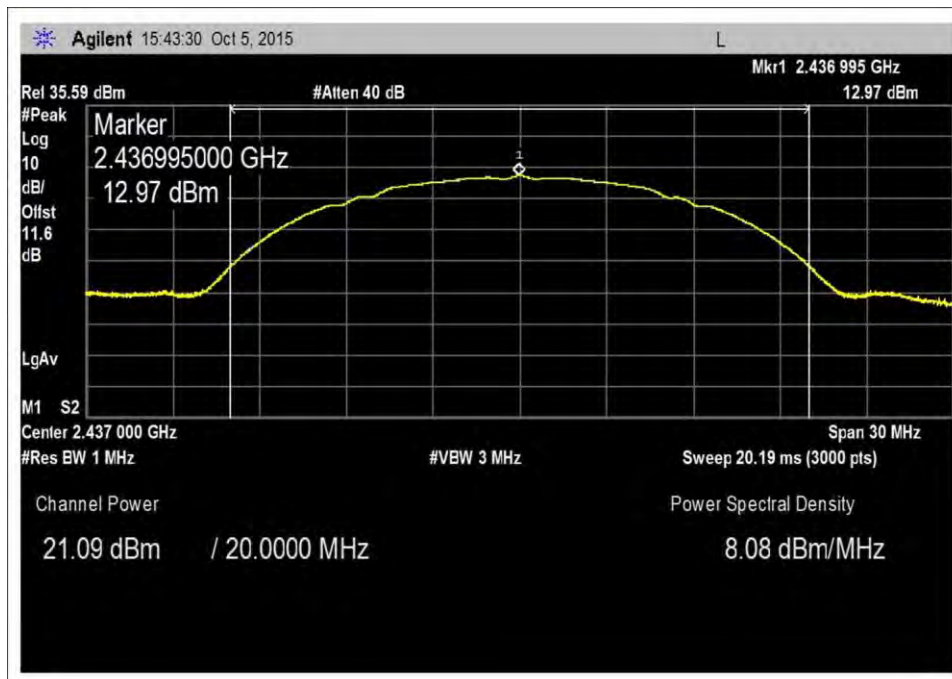
High Channel



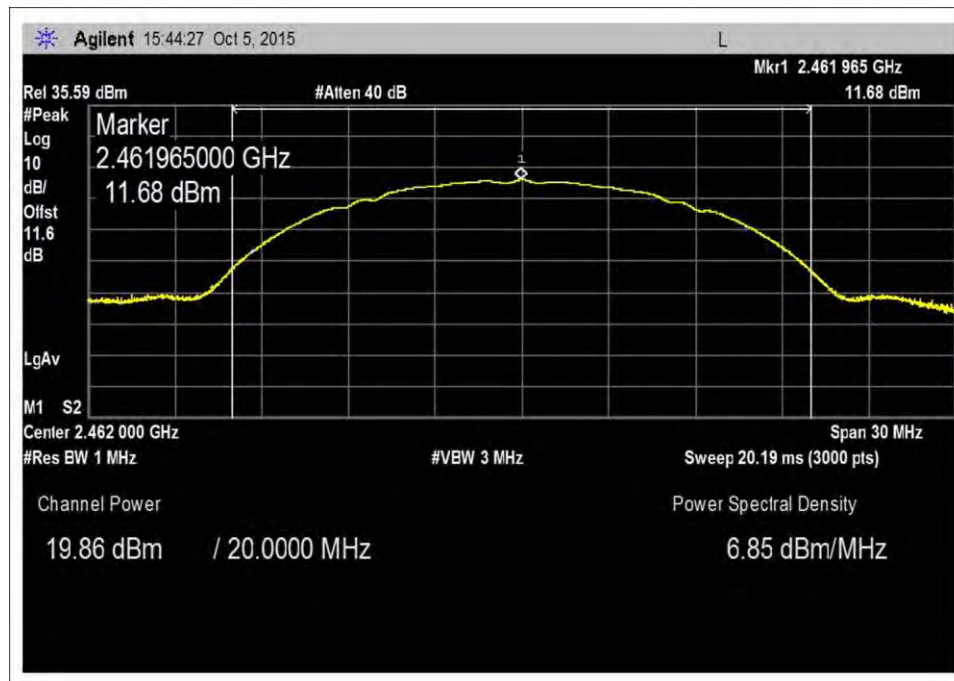
### 802.11b-Mode – 2132.5 GSM-Booster On



Low Channel

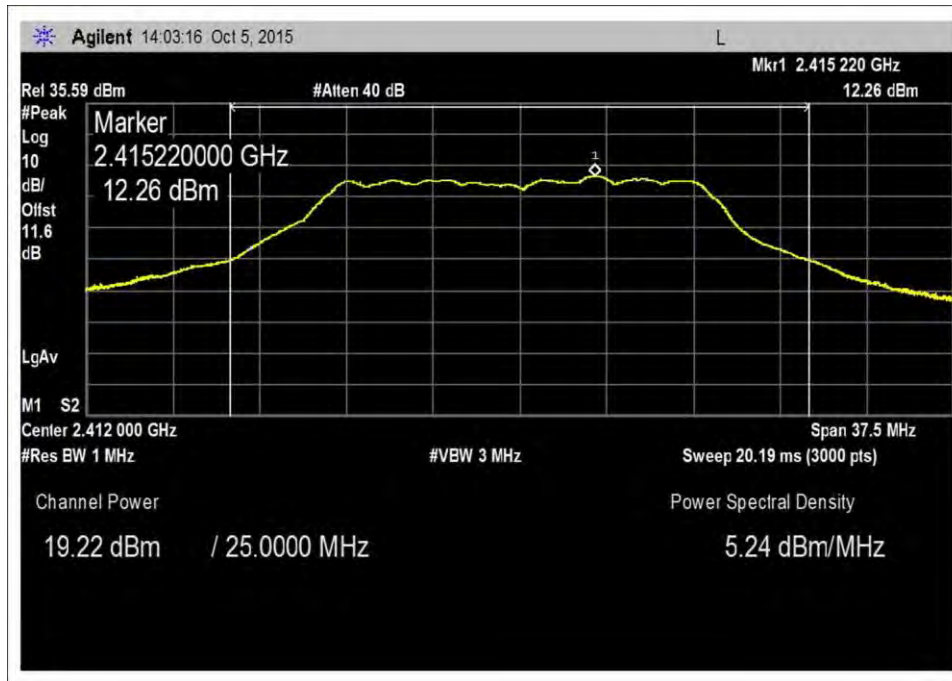


Middle Channel

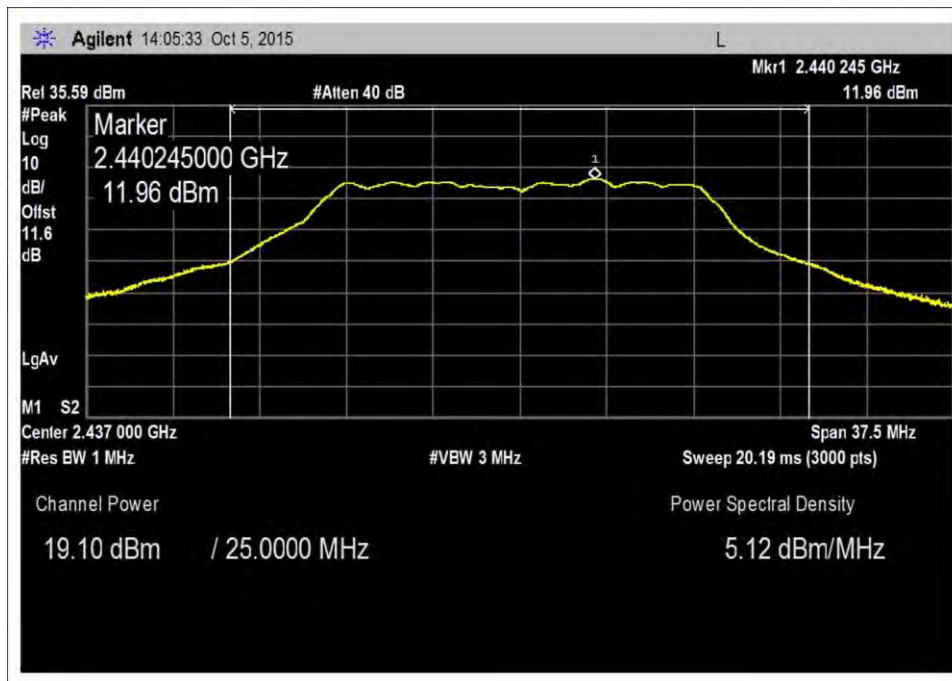


High Channel

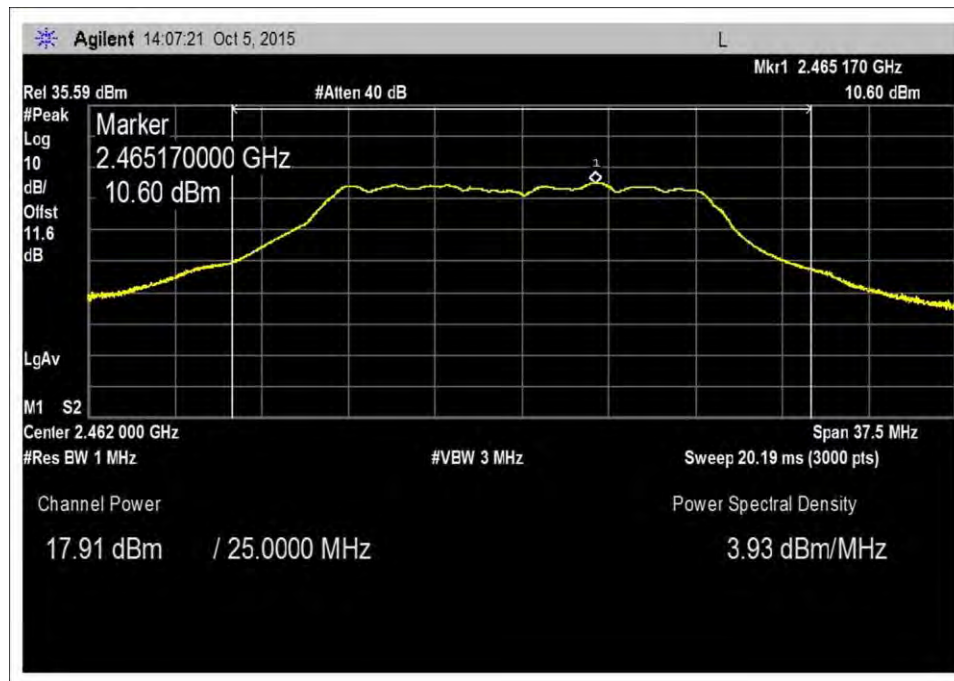
### 802.11g-Mode – Booster Off



Low Channel

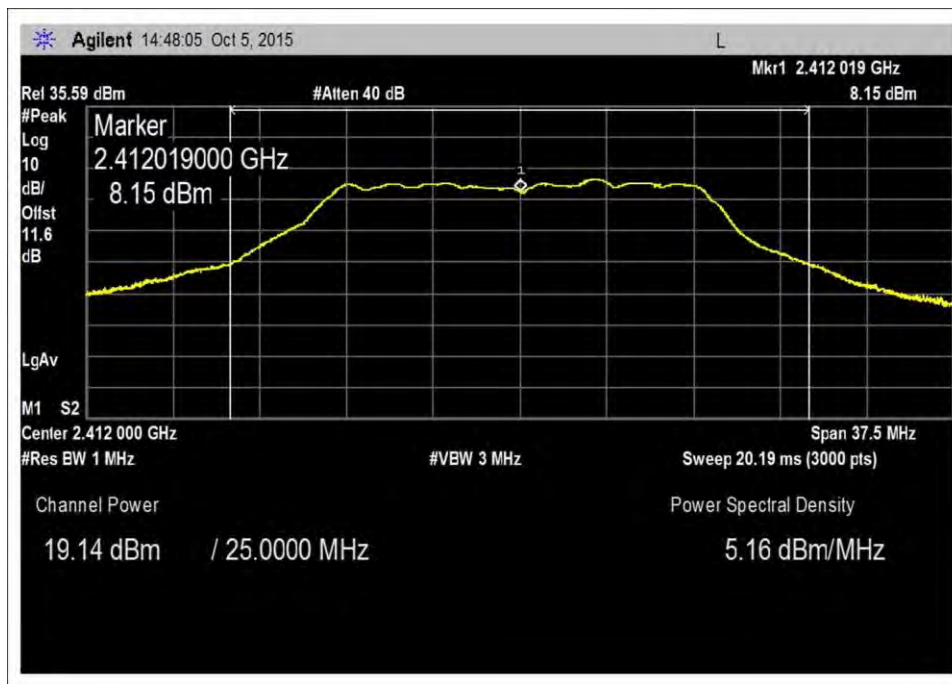


Middle Channel

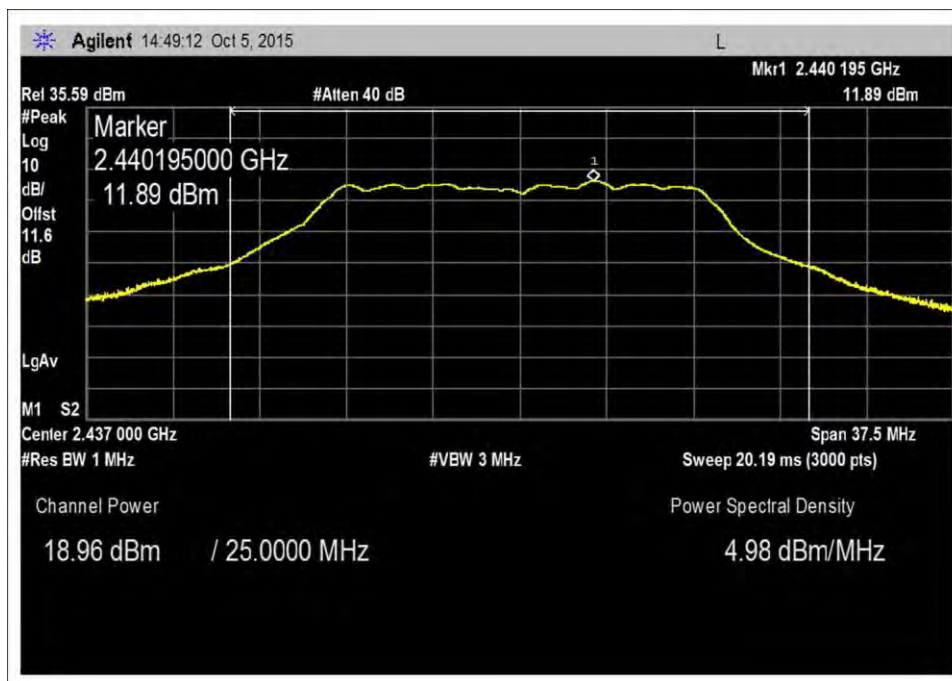


High Channel

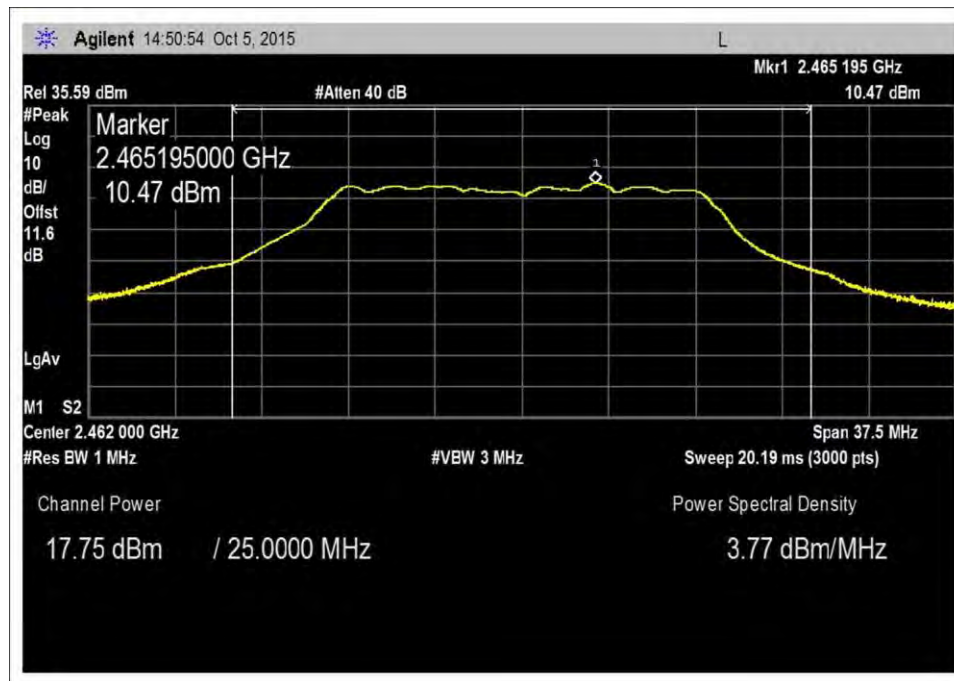
### 802.11g-Mode – 881.5 AWGN-Booster On



Low Channel



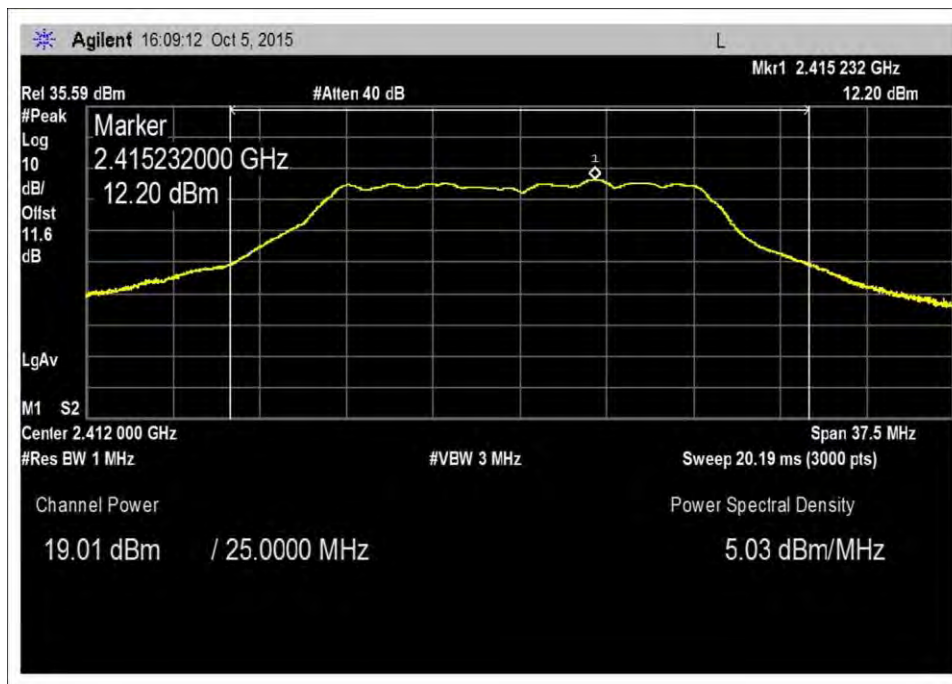
Middle Channel



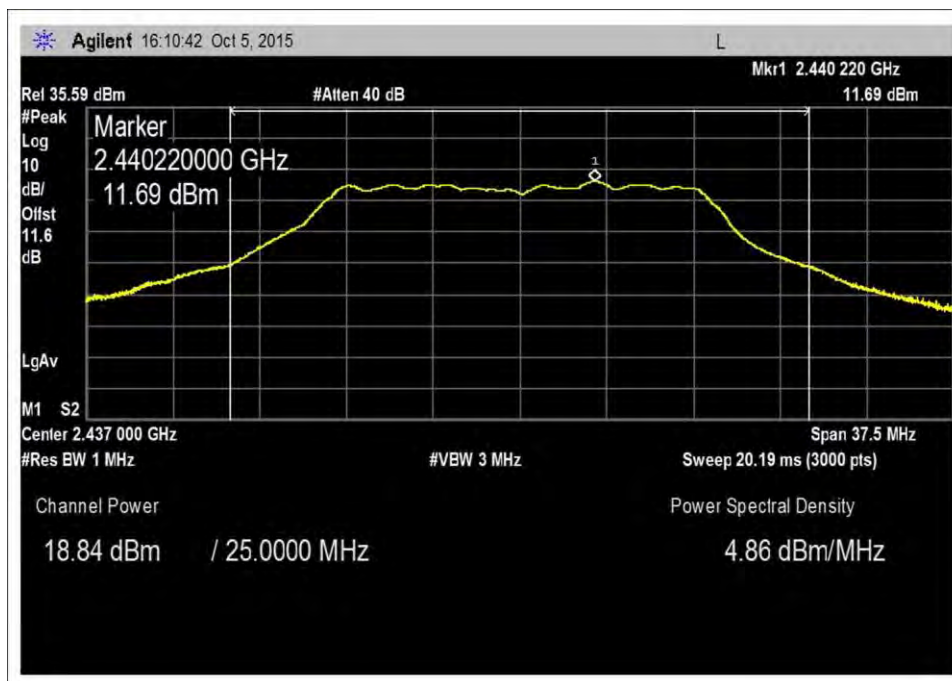
High Channel



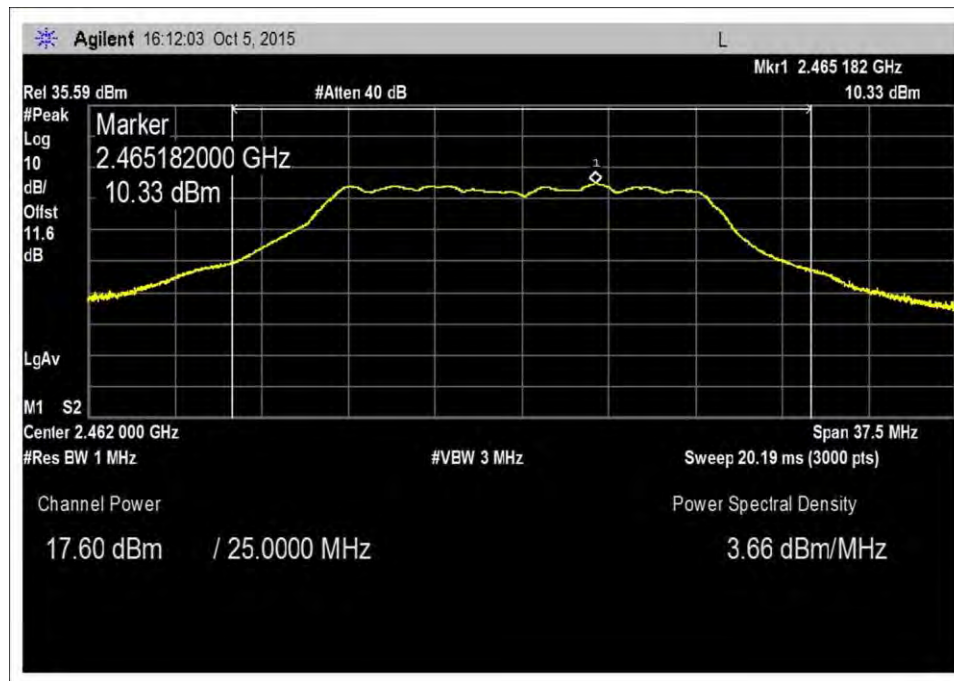
### 802.11g-Mode – 881.5 GSM-Booster On



Low Channel



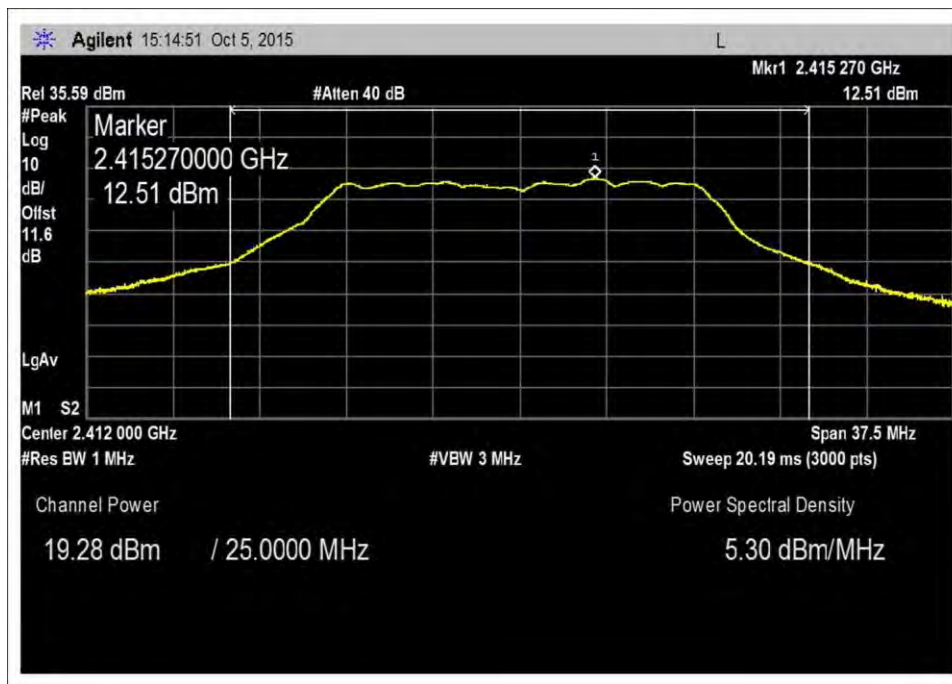
Middle Channel



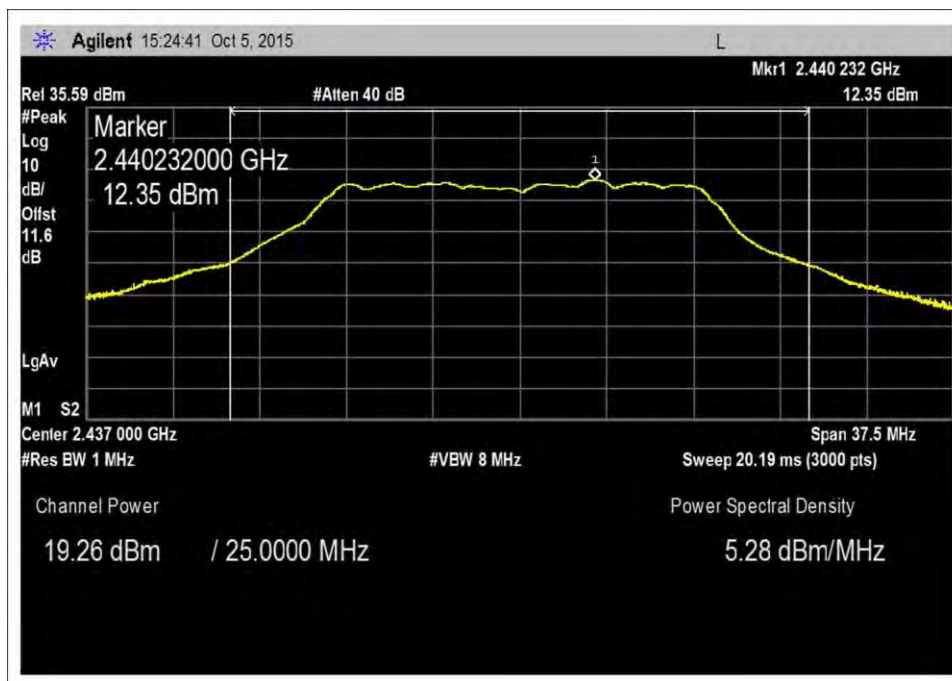
High Channel



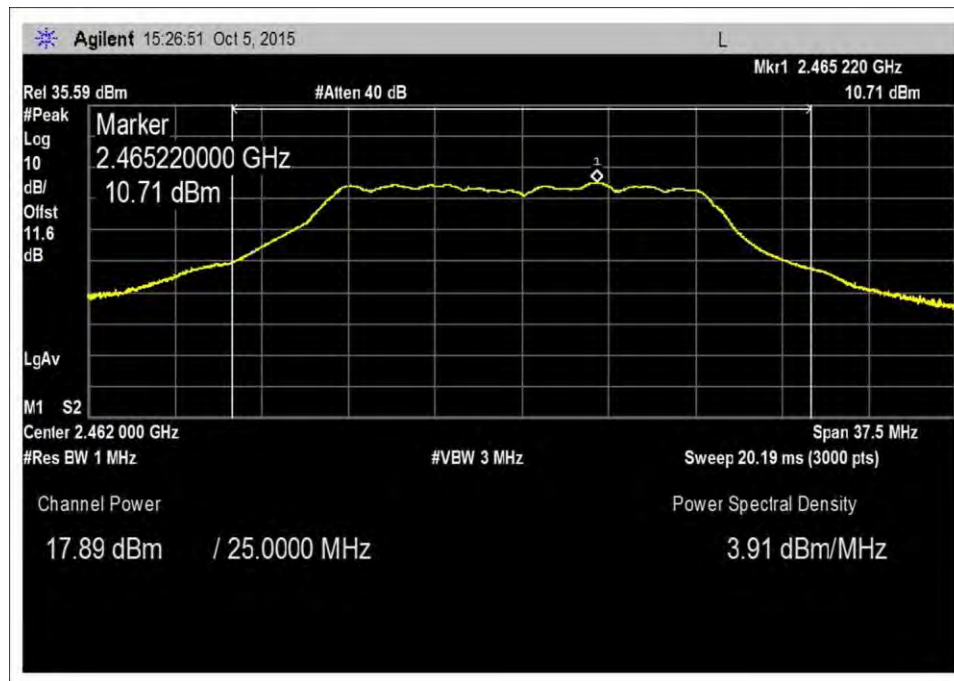
### 802.11g-Mode – 2132.5 AWGN-Booster On



Low Channel

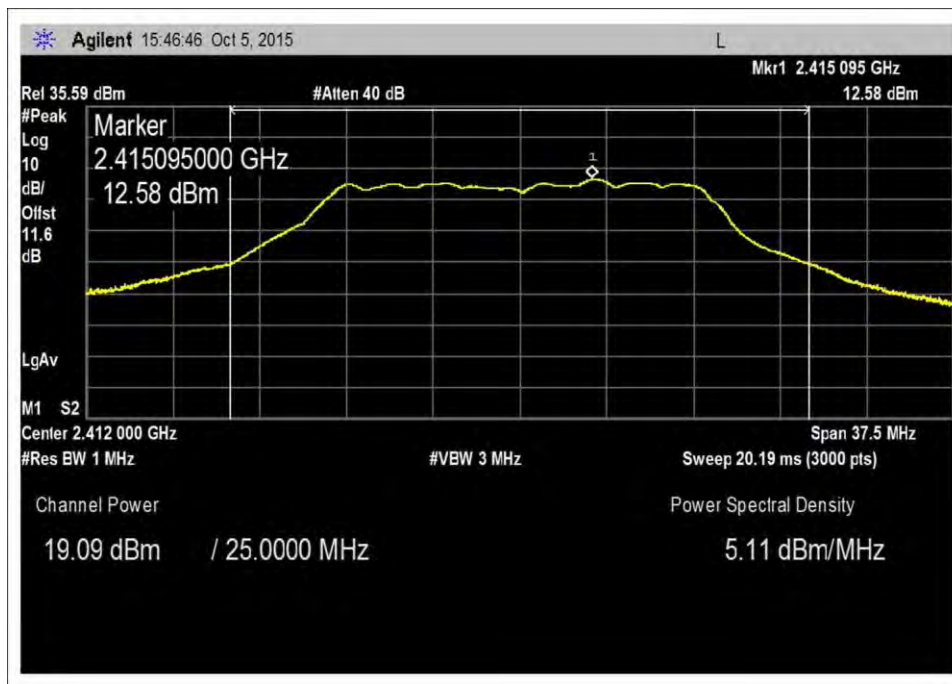


Middle Channel

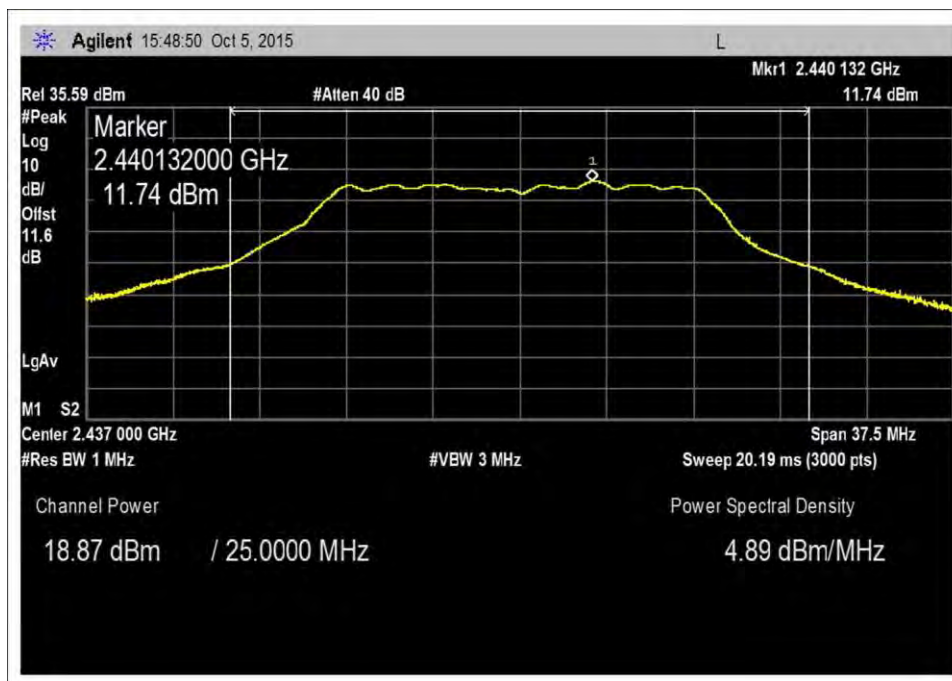


High Channel

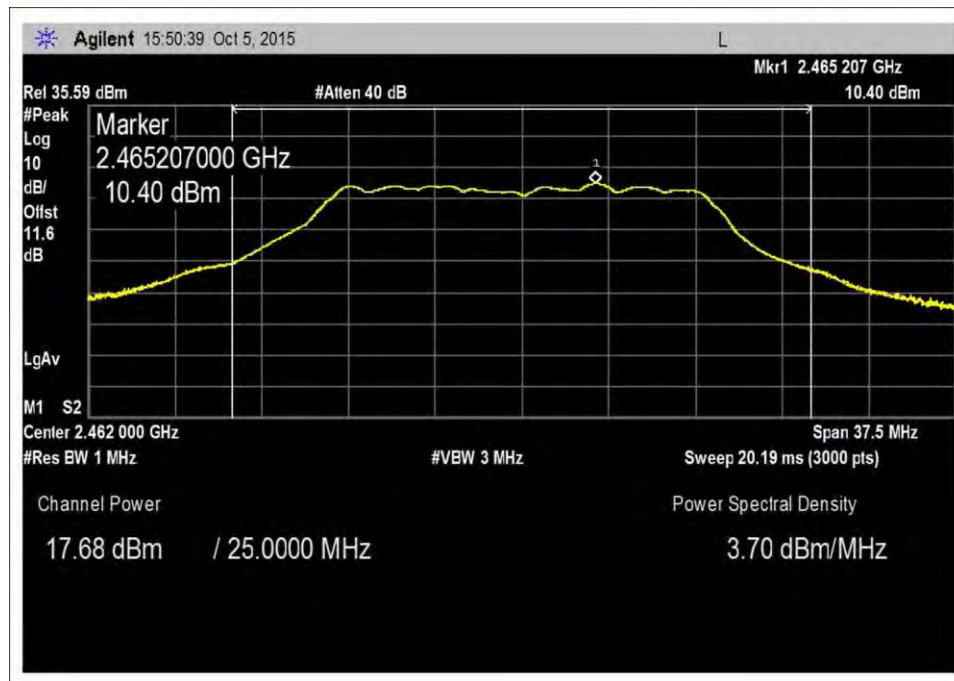
### 802.11g-Mode – 2132.5 GSM-Booster On



Low Channel

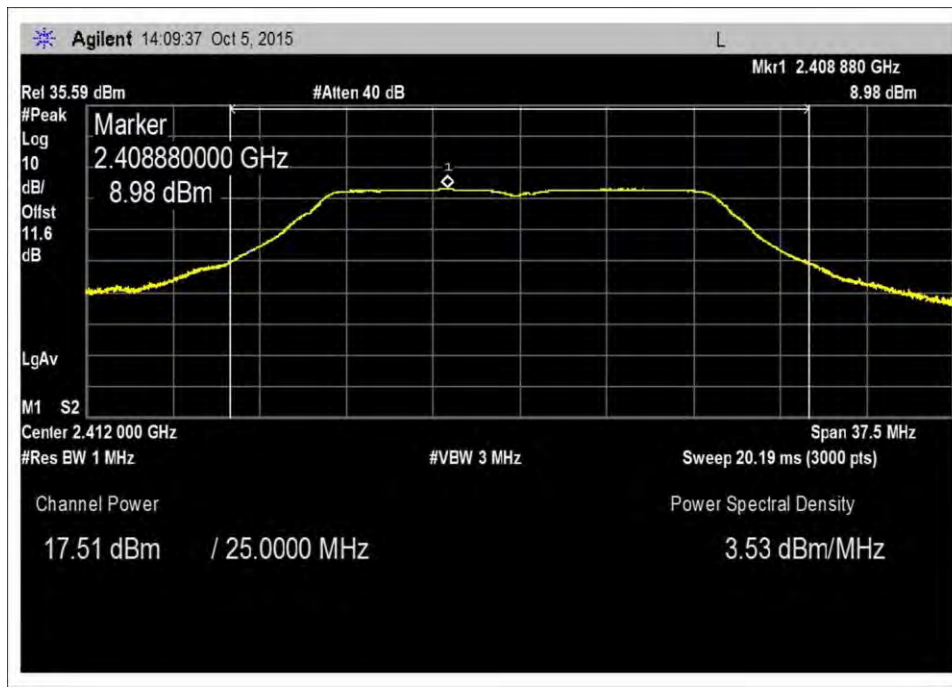


Middle Channel

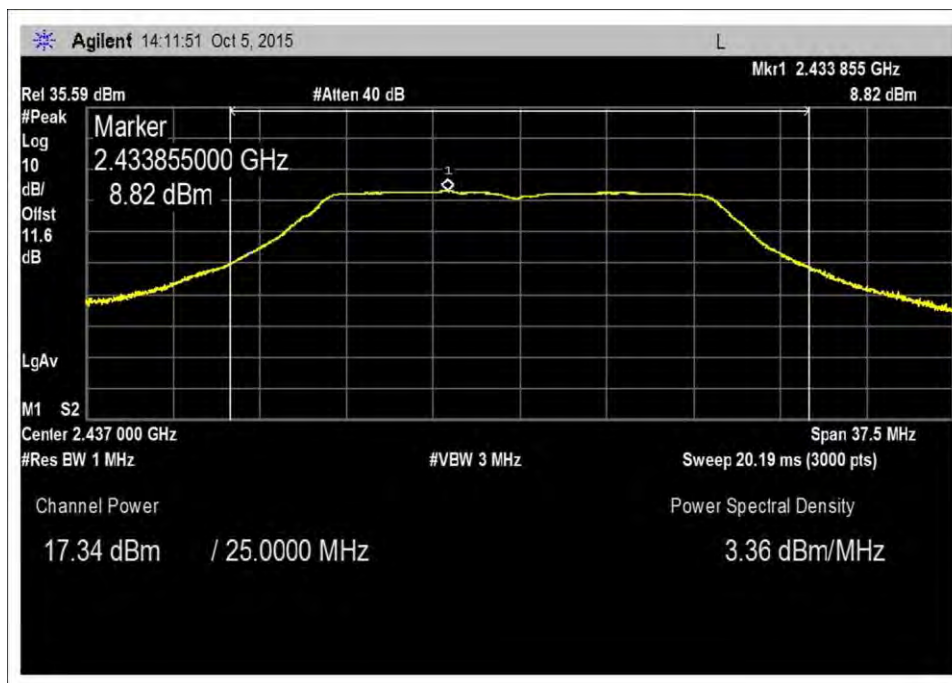


High Channel

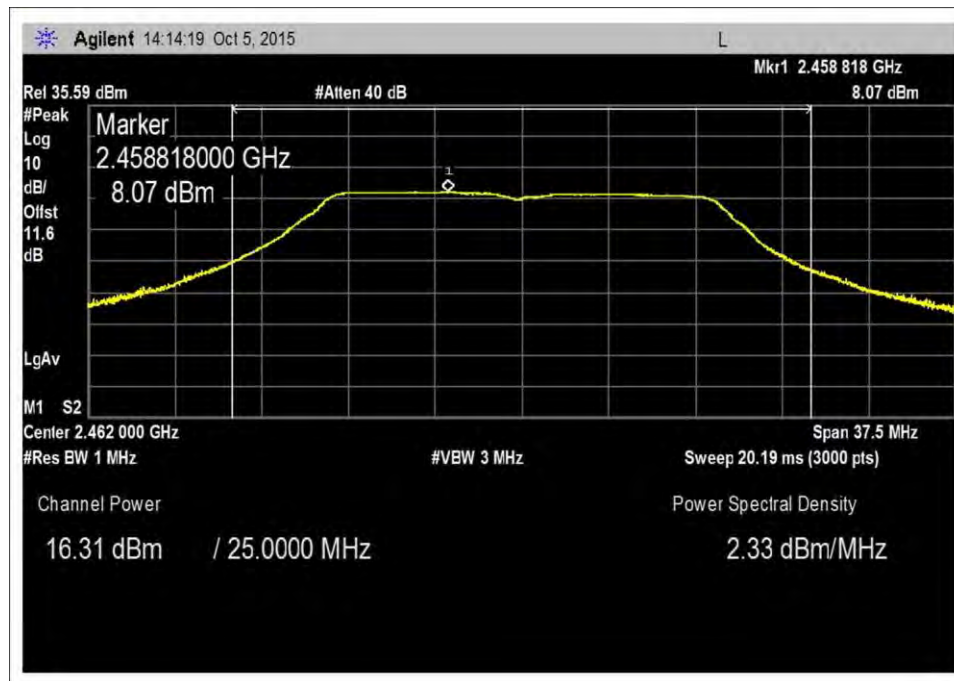
### 802.11n HT20-Mode – Booster Off



Low Channel



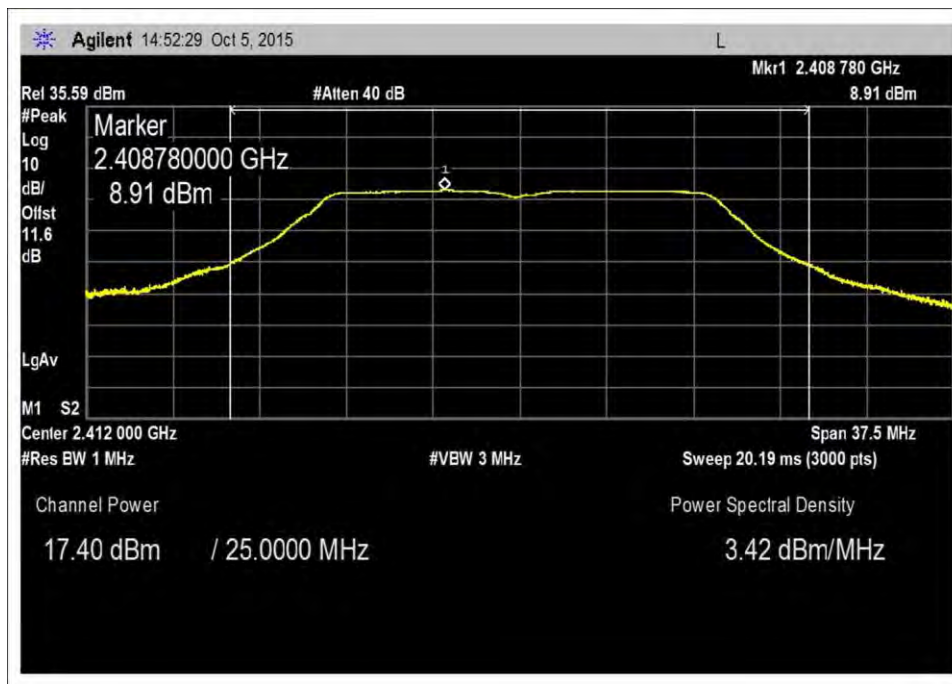
Middle Channel



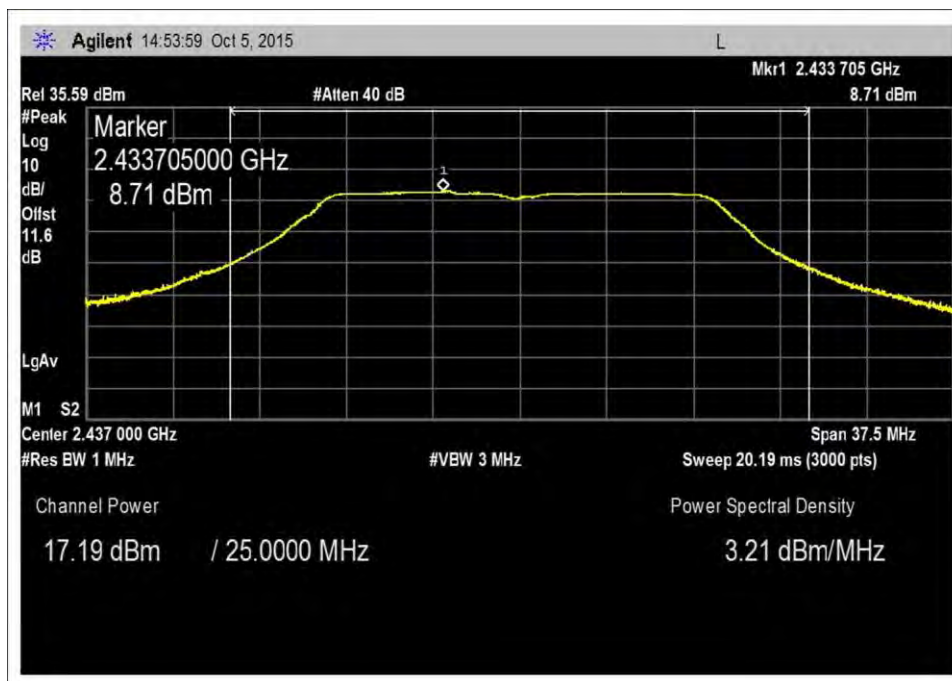
High Channel



### 802.11n HT20-Mode – 881.5 AWGN-Booster On

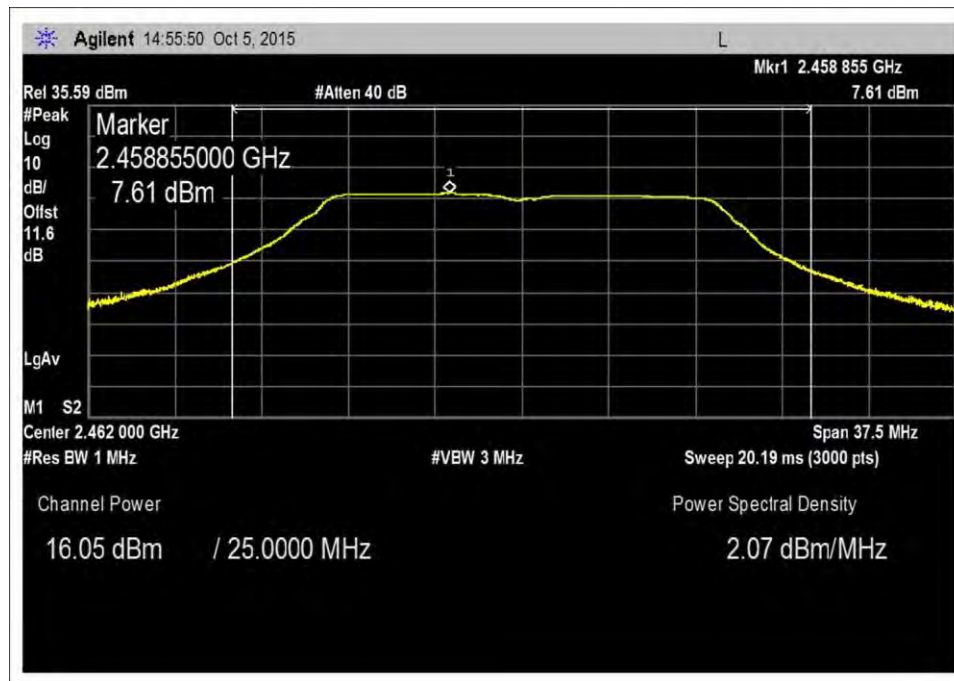


Low Channel



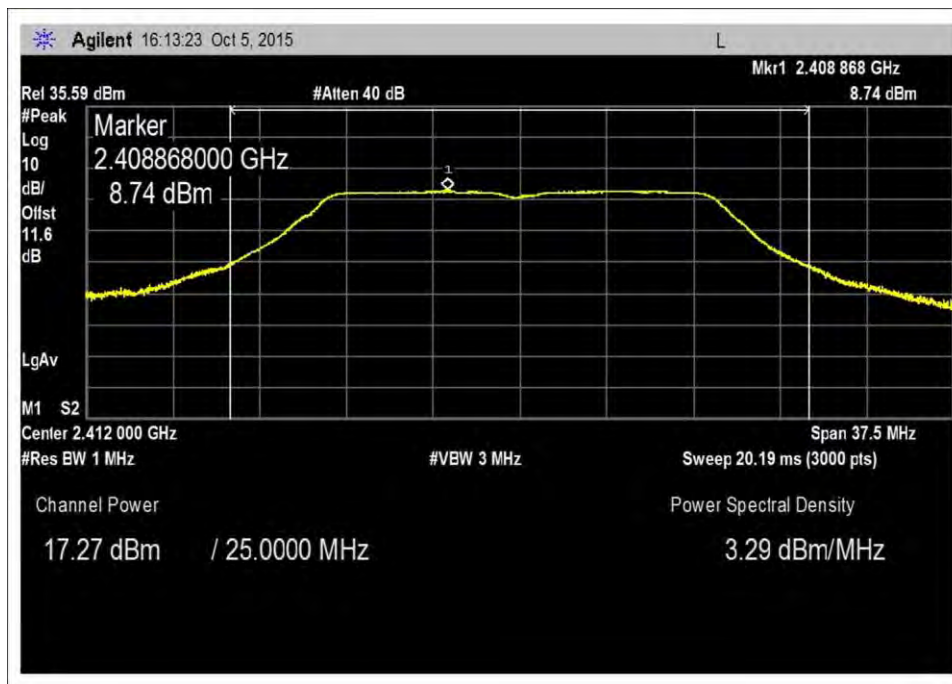
Middle Channel



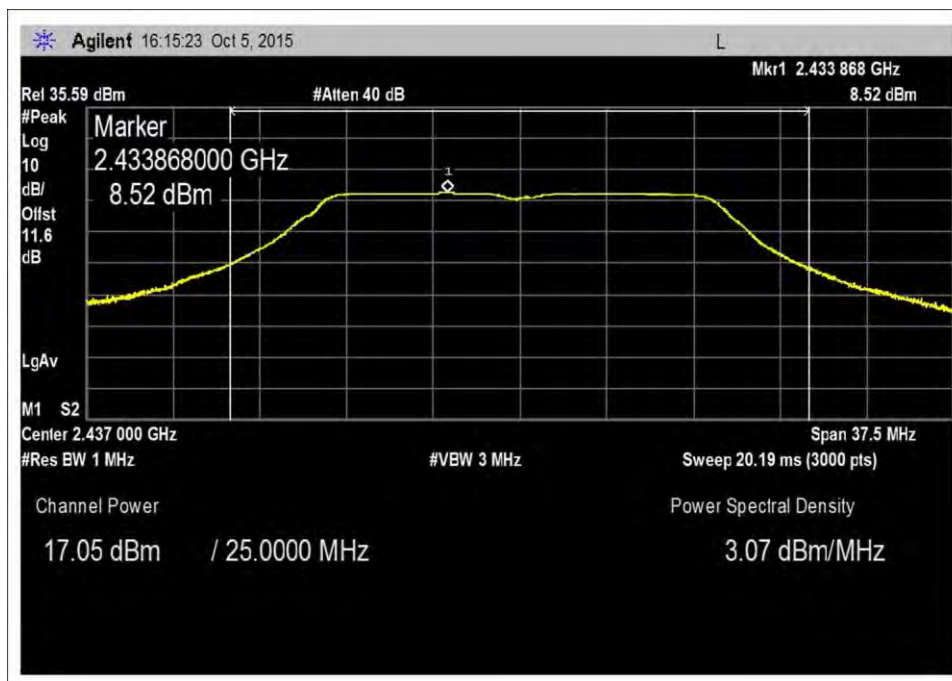


High Channel

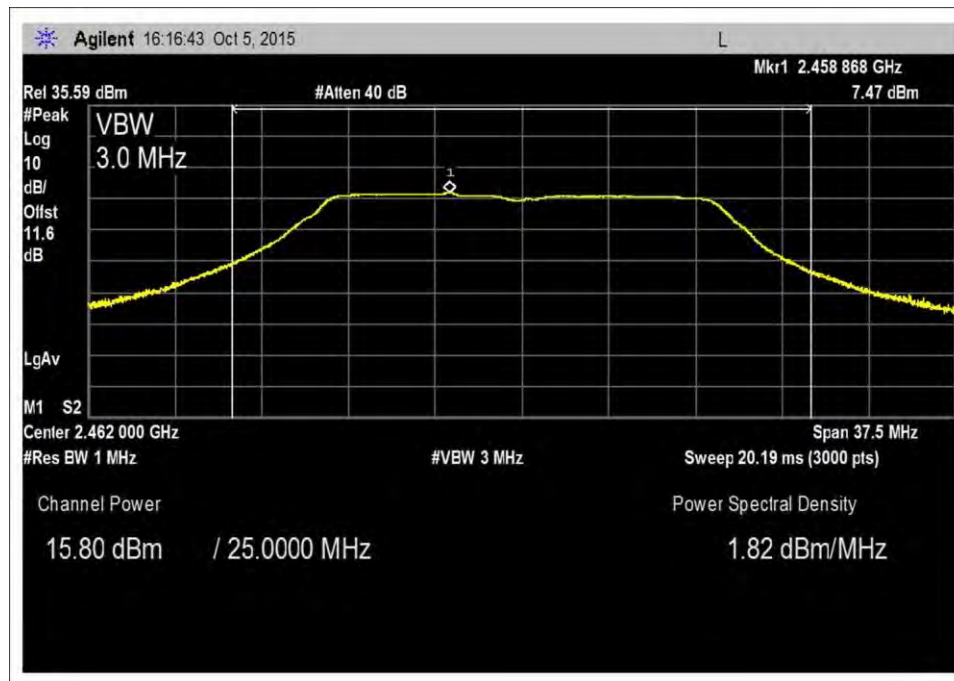
### 802.11n HT20-Mode – 881.5 GSM-Booster On



Low Channel

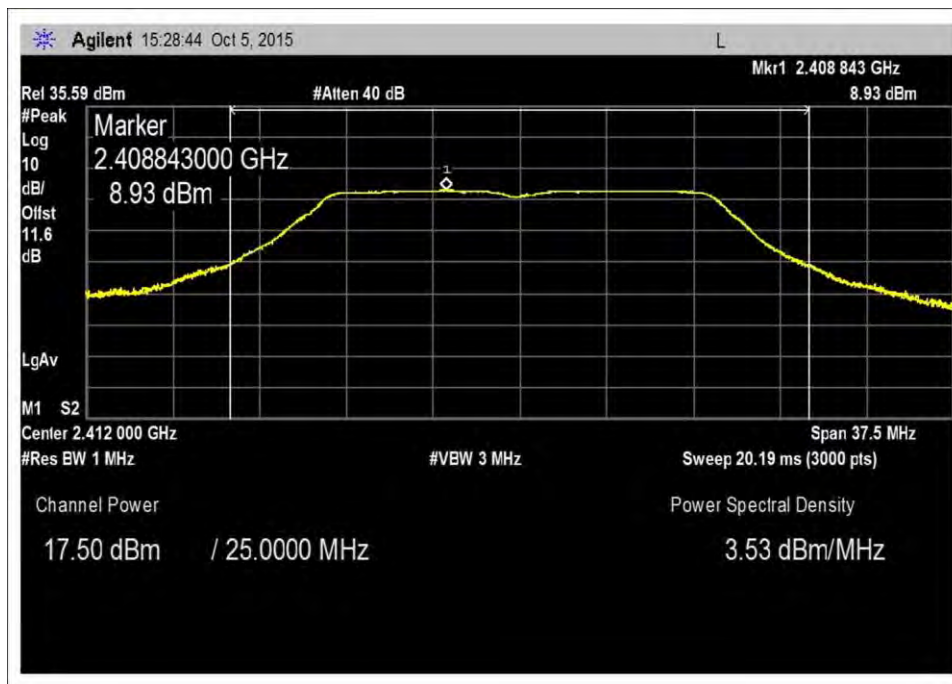


Middle Channel

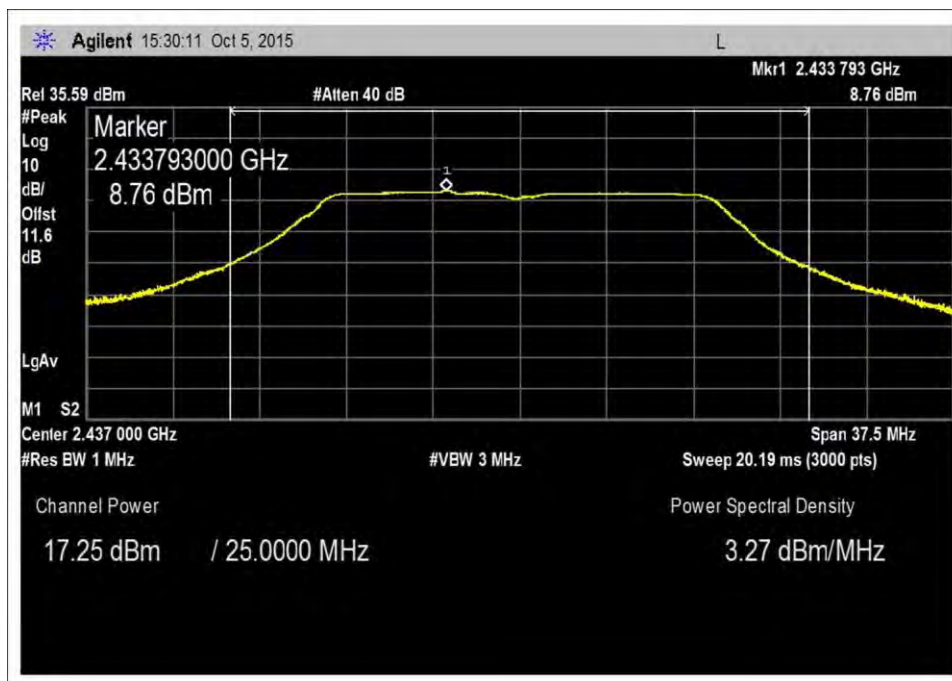


High Channel

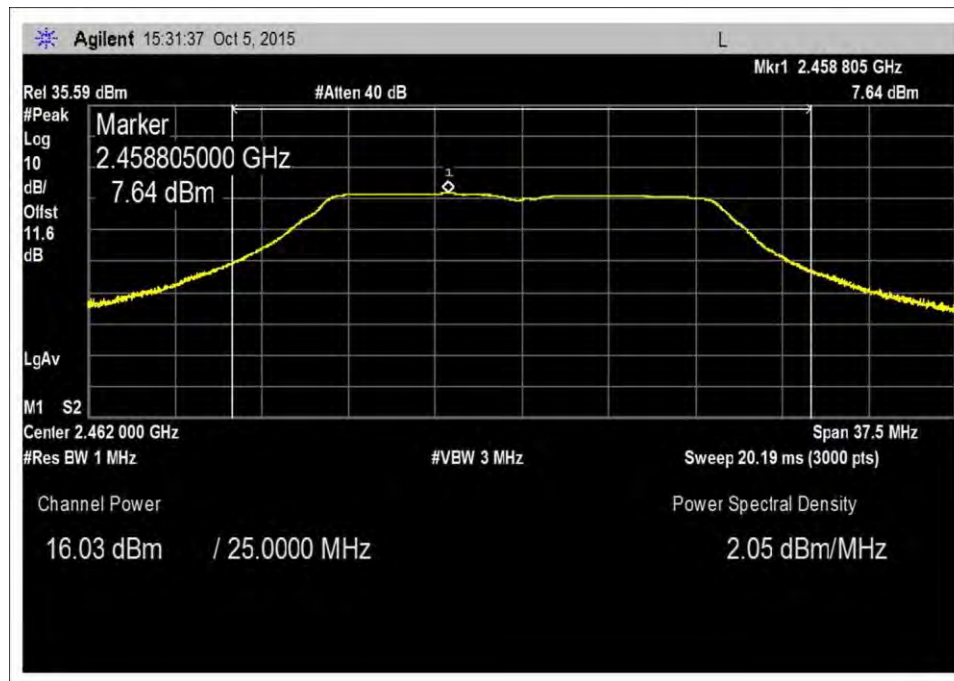
**802.11n HT20-Mode – 2132.5 AWGN-Booster On**



Low Channel

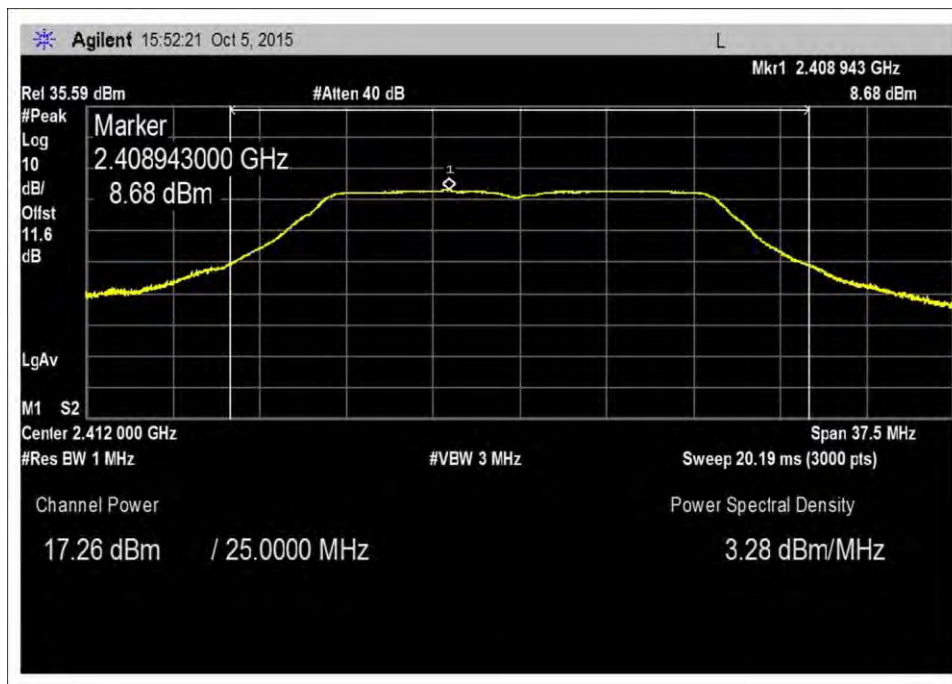


Middle Channel

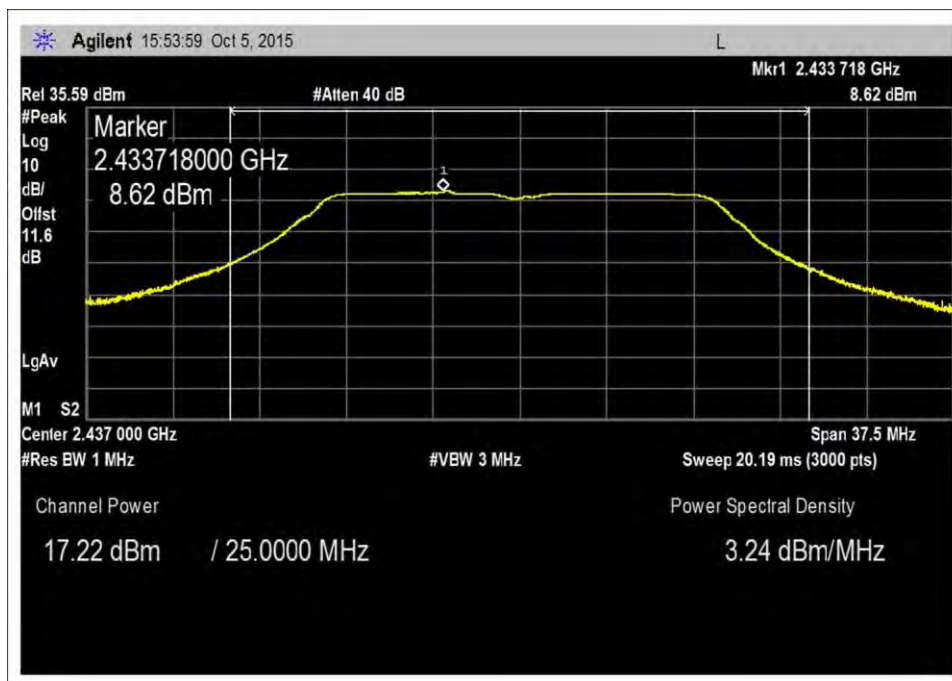


High Channel

### 802.11n HT20-Mode – 2132.5 GSM-Booster On

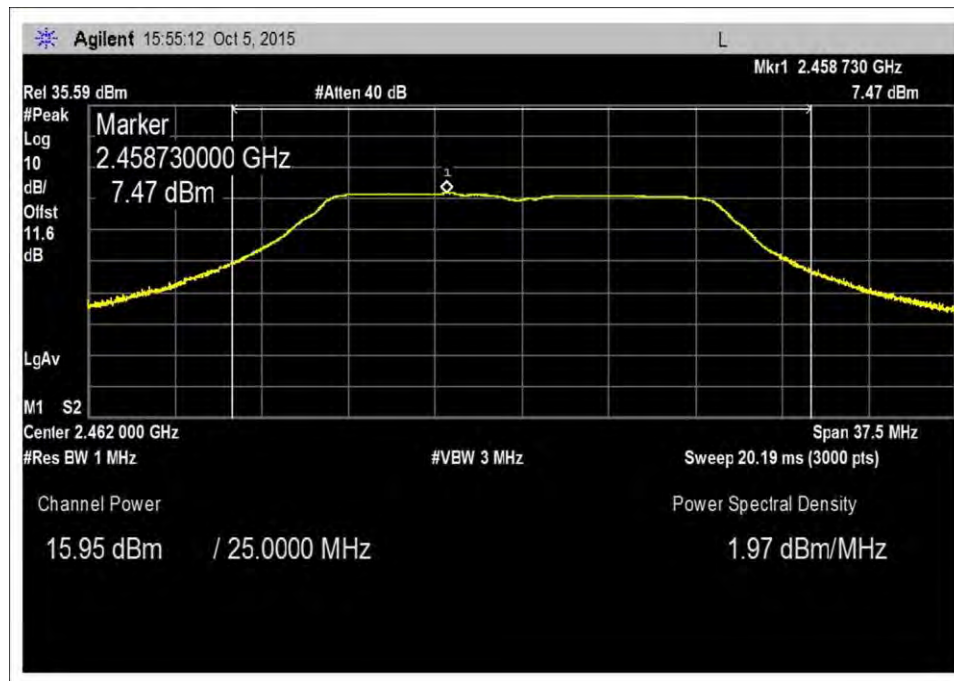


Low Channel



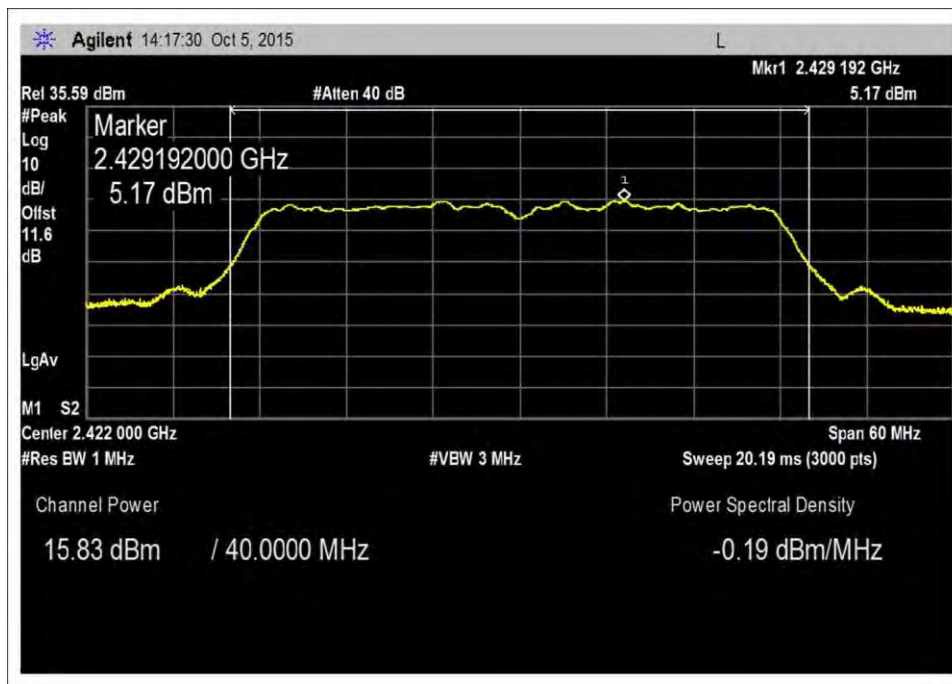
Middle Channel



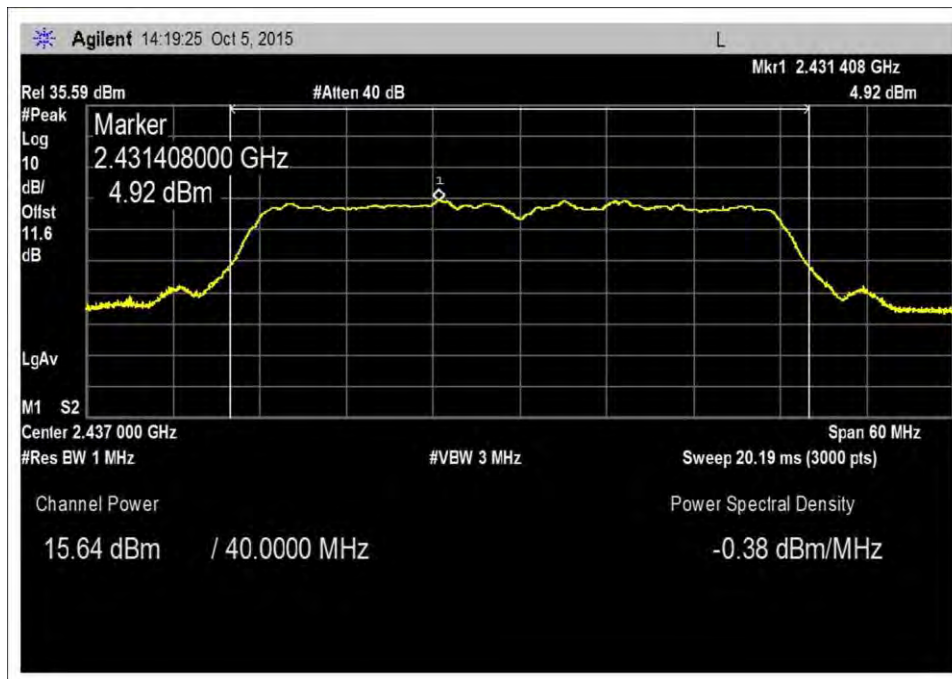


High Channel

### 802.11n HT40-Mode – Booster Off

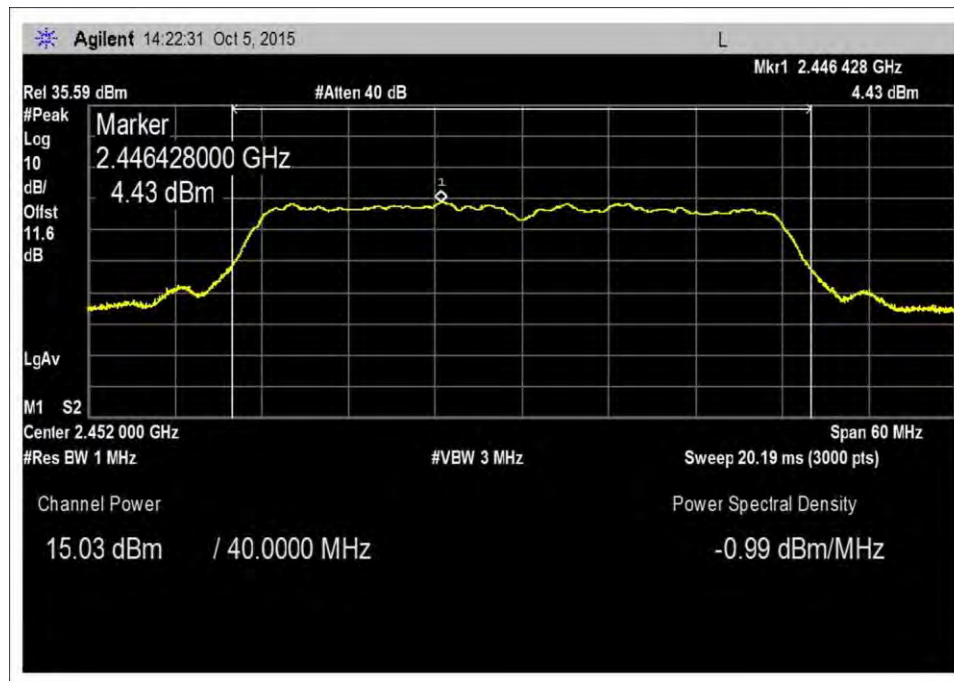


Low Channel



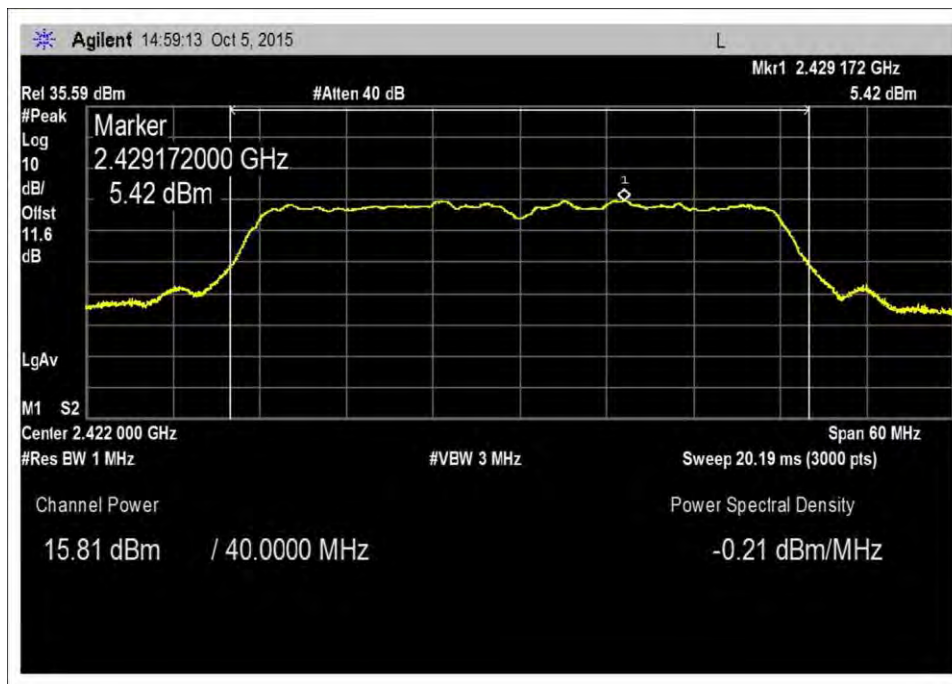
Middle Channel



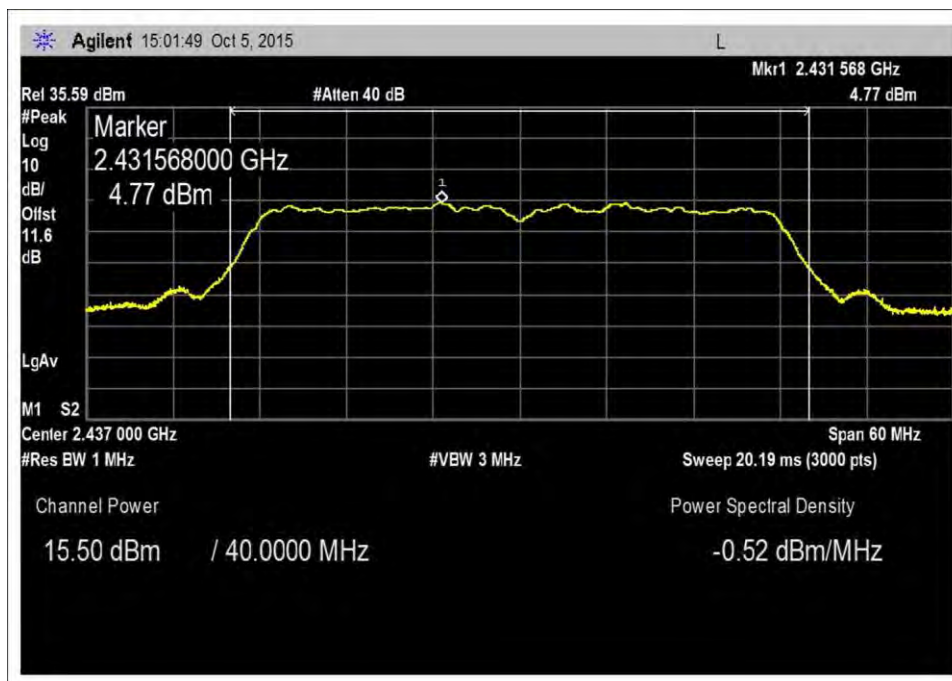


High Channel

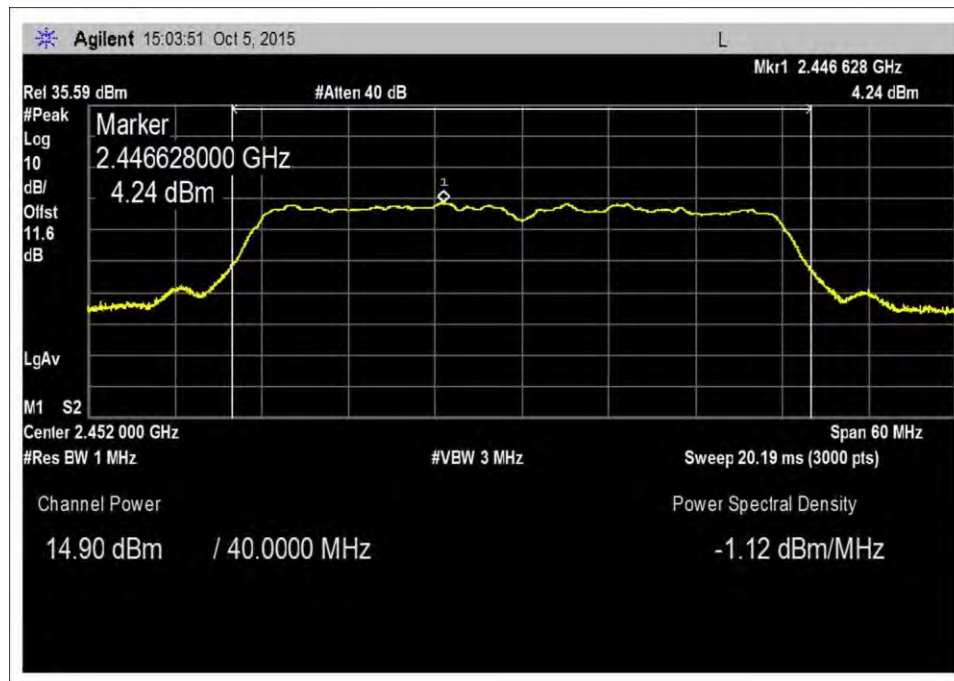
### 802.11n HT40-Mode – 881.5 AWGN-Booster On



Low Channel

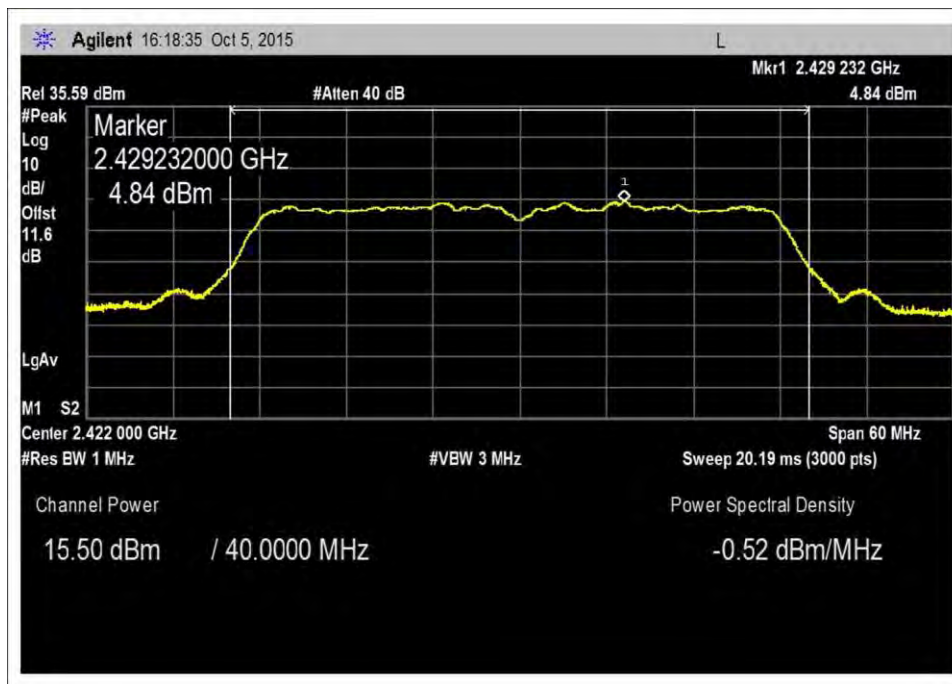


Middle Channel

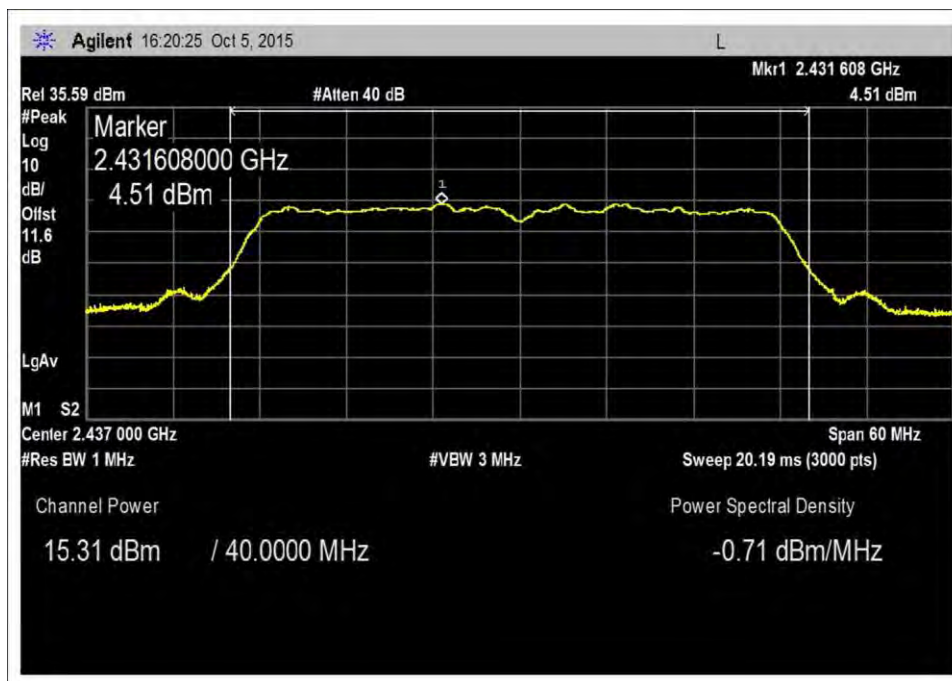


High Channel

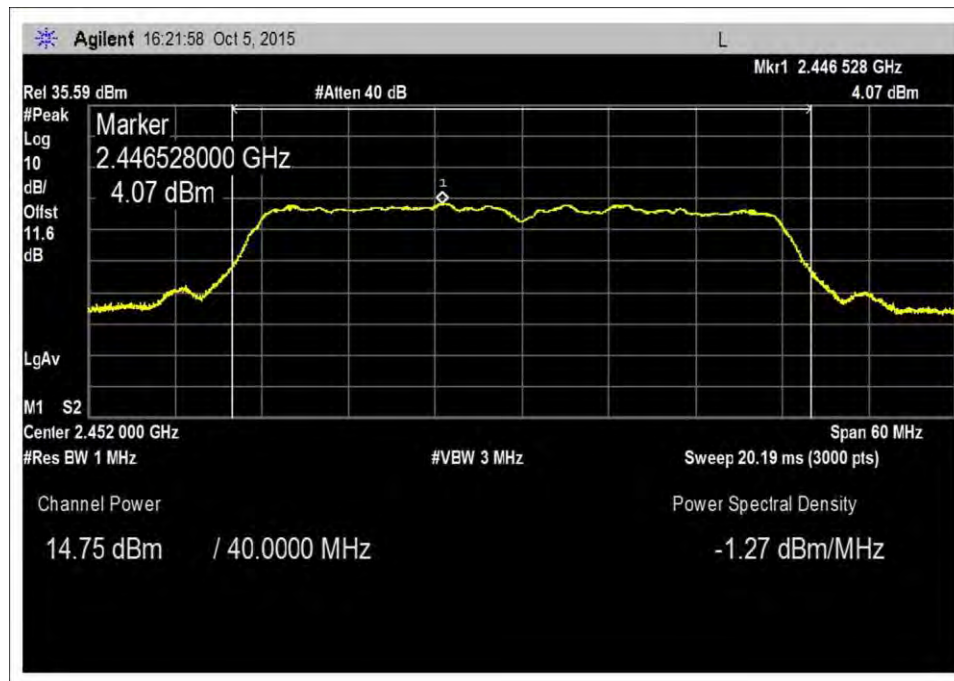
### 802.11n HT40-Mode – 881.5 GSM-Booster On



Low Channel

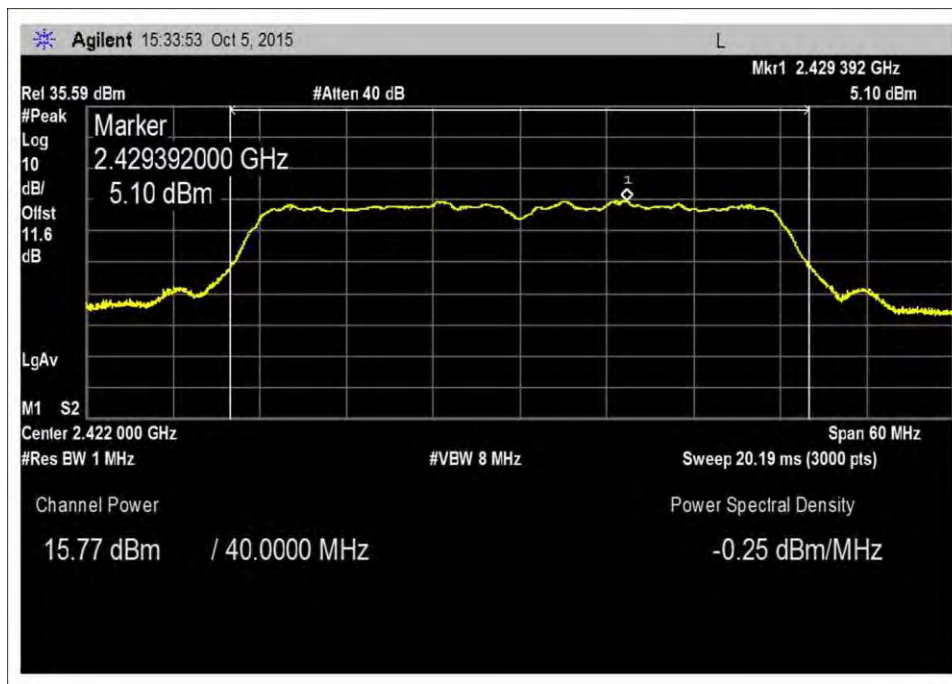


Middle Channel

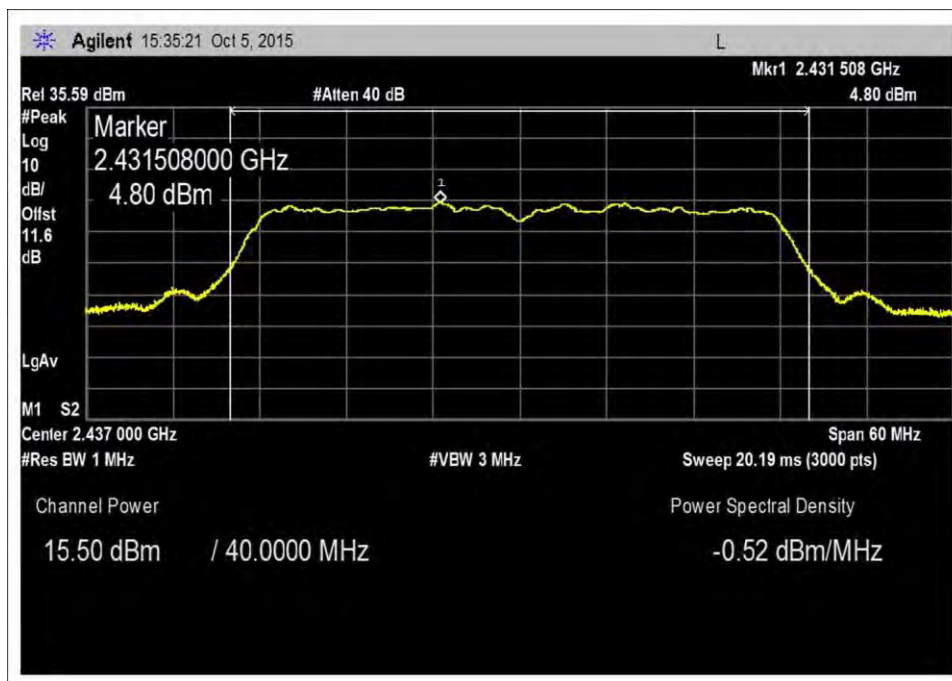


High Channel

**802.11n HT40-Mode – 2132.5 AWGN-Booster On**

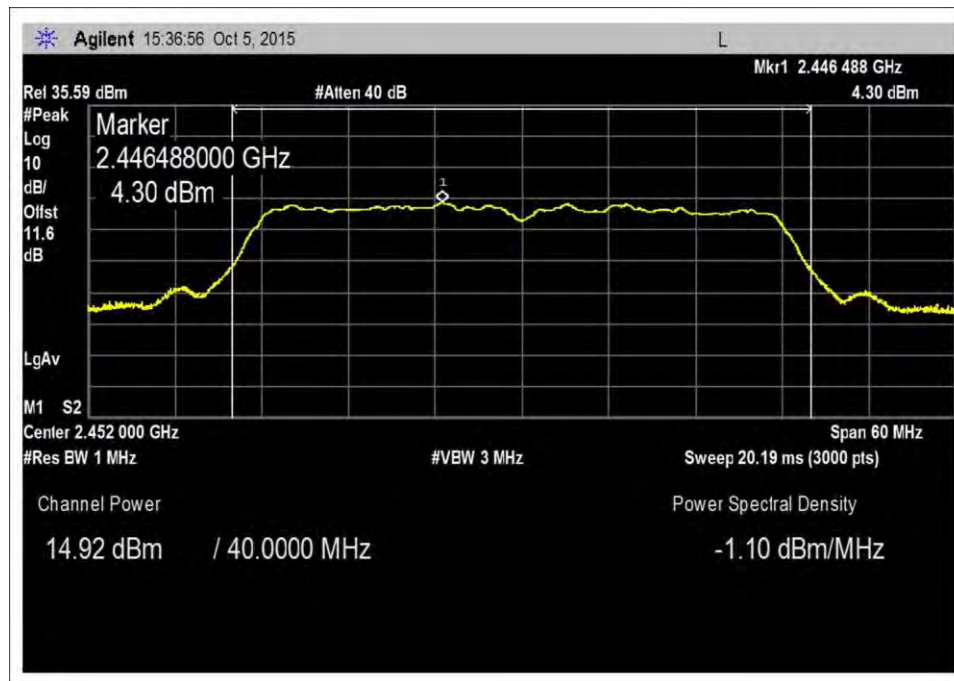


Low Channel



Middle Channel

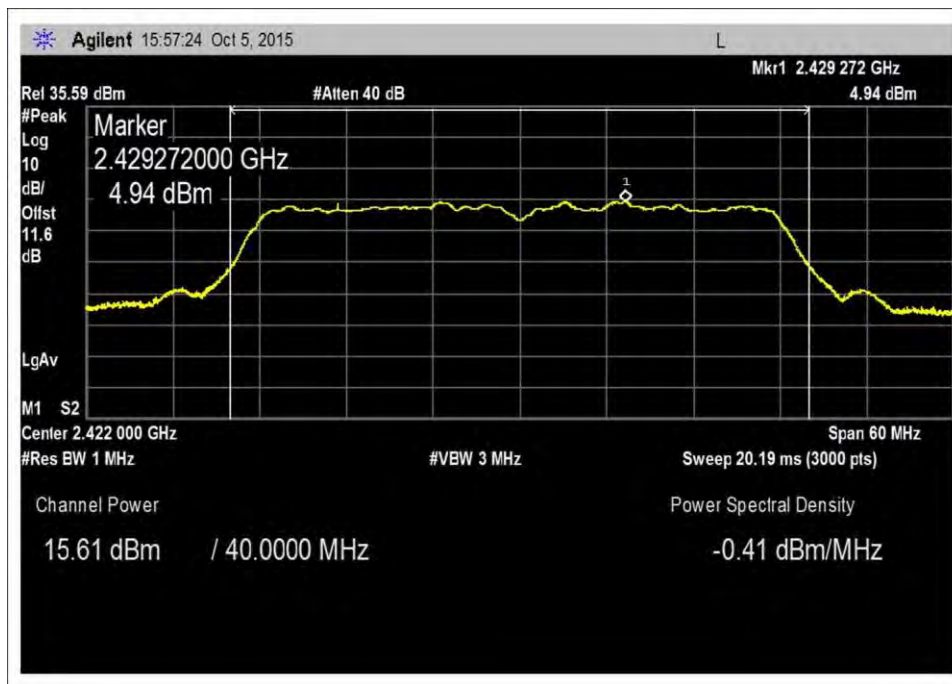




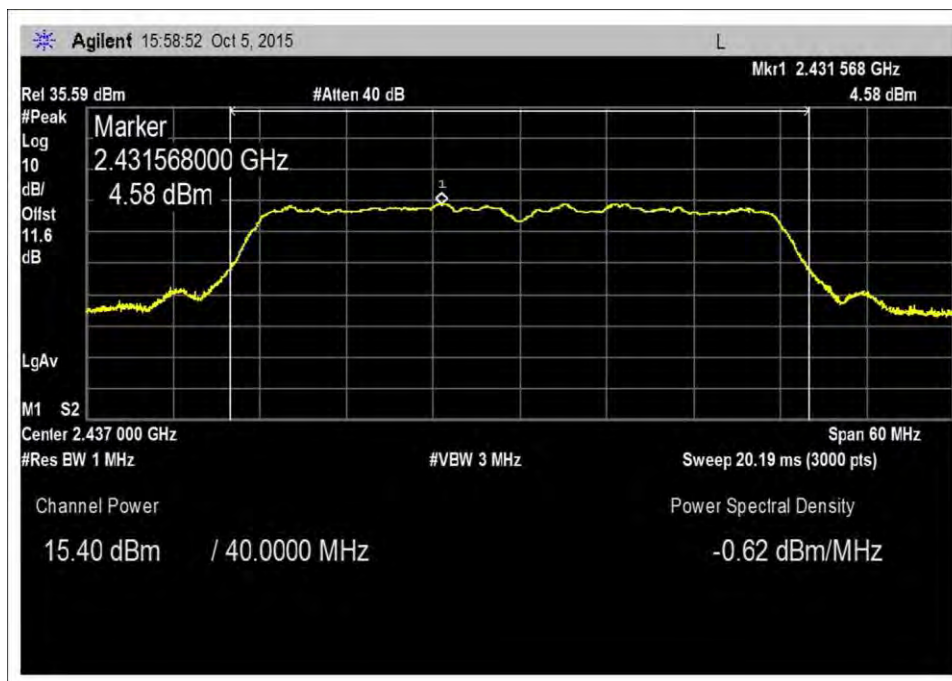
High Channel



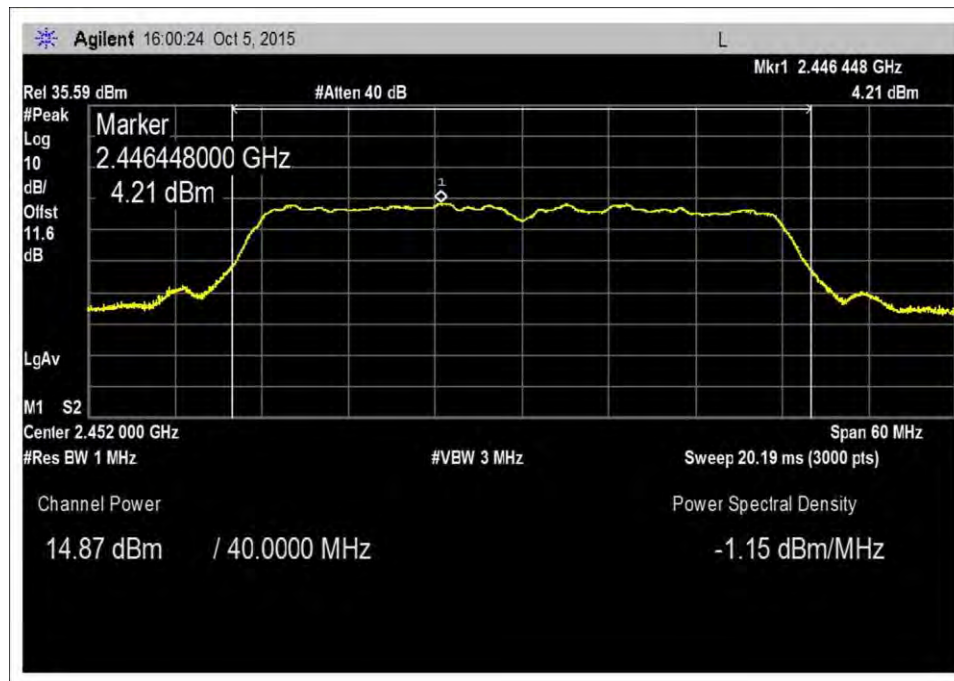
**802.11n HT40-Mode – 2132.5 GSM-Booster On**



Low Channel

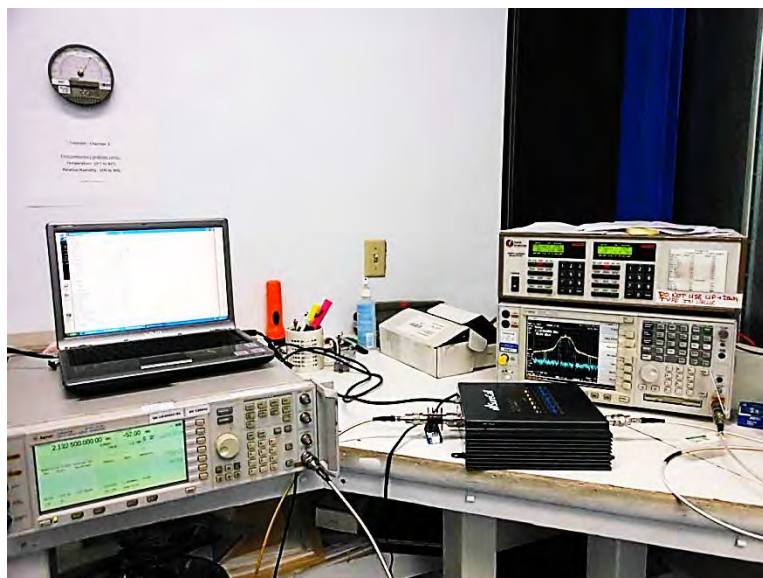


Middle Channel



High Channel

## Test Setup Photo



## 15.31(e) Voltage Variation

### Test Conditions / Setup

Test Location: CKC Laboratories, Inc. • 1120 Fulton Place • Fremont, CA 94539 • (510) 249-1170  
 Customer: **Cellphone-Mate, Inc.**  
 Specification: **15.31e**  
 Work Order #: **97491** Date: 10/05/2015  
 Test Type: **Conducted Power Measurement** Time:  
 Tested By: Hieu Song Nguyenpham Sequence#:  
 Software: EMITest 5.02.00

#### Test Equipment:

ID	Asset #	Description	Model	Calibration Date	Cal Due Date
T1	P06710	Cable	32026-29094K-29094K-72TC	9/18/2014	9/18/2016
T2	P06467	Attenuator	PE7014-10	5/13/2015	5/13/2017
	03471	Spectrum Analyzer	E4440A	12/19/2013	12/19/2015

#### Equipment Tested:

Device	Manufacturer	Model #	S/N
Configuration 1			

#### Support Equipment:

Device	Manufacturer	Model #	S/N
Configuration 1			

#### Test Conditions / Notes:

Application: MP\_TEST MFC version 1.3.8.0

Temperature: 22.0°C

Humidity: 39.6 %

Atmospheric Pressure: 100.5kPa

Highest Generation Frequency: 2.462 GHz

Attenuator = 63 at MAX Level

The equipment under test (EUT) is placed on the table. The EUT is set up as intended to operate on WIFI continuously transmitting. A remotely located signal generator is connected to input port of EUT. The DL power input signal 2132.5MHz, 4.1MHz AWGN at the outdoor antenna port is set at 3dB above AGC level.

#### Attenuator for 802.11b Mode=32

The Data rate is at 2Mbps

**15.31(e) the RF output power was not changed when adjusting the voltage 120V down to 85% and up to 115%.**

Test Location: CKC Laboratories, Inc. • 1120 Fulton Place • Fremont, CA 94539 • (510) 249-1170  
 Customer: **Cellphone-Mate, Inc.**  
 Specification: **15.31e**  
 Work Order #: **97491** Date: 10/05/2015  
 Test Type: **Conducted Power Measurement** Time:  
 Tested By: Hieu Song Nguyenpham Sequence#:  
 Software: EMITest 5.02.00

**Test Equipment:**

ID	Asset #	Description	Model	Calibration Date	Cal Due Date
T1	P06710	Cable	32026-29094K-29094K-72TC	9/18/2014	9/18/2016
T2	P06467	Attenuator	PE7014-10	5/13/2015	5/13/2017
	03471	Spectrum Analyzer	E4440A	12/19/2013	12/19/2015

**Equipment Tested:**

Device	Manufacturer	Model #	S/N
Configuration 1			

**Support Equipment:**

Device	Manufacturer	Model #	S/N
Configuration 1			

**Test Conditions / Notes:**

Application: MP\_TEST MFC version 1.3.8.0  
  
 Temperature: 22.0°C  
 Humidity: 39.6 %  
 Atmospheric Pressure: 100.5kPa  
  
 Highest Generation Frequency: 2.462 GHz  
 Attenuator = 63 at MAX Level  
  
 The equipment under test (EUT) is placed on the table. The EUT is set up as intended to operate on WIFI continuously transmitting. A remotely located signal generator is connected to input port of EUT. The DL power input signal 2132.5MHz, 4.1MHz AWGN at the outdoor antenna port is set at 3dB above AGC level.  
  
**Attenuator for 802.11g Mode=38**  
 The Data rate is at 54Mbps  
  
**15.31(e) the RF output power was not changed when adjusting the voltage 120V down to 85% and up to 115%.**

Test Location: CKC Laboratories, Inc. • 1120 Fulton Place • Fremont, CA 94539 • (510) 249-1170  
 Customer: **Cellphone-Mate, Inc.**  
 Specification: **15.31e**  
 Work Order #: **97491** Date: 10/05/2015  
 Test Type: **Conducted Power Measurement** Time:  
 Tested By: Hieu Song Nguyenpham Sequence#:  
 Software: EMITest 5.02.00

**Test Equipment:**

ID	Asset #	Description	Model	Calibration Date	Cal Due Date
T1	P06710	Cable	32026-29094K-29094K-72TC	9/18/2014	9/18/2016
T2	P06467	Attenuator	PE7014-10	5/13/2015	5/13/2017
	03471	Spectrum Analyzer	E4440A	12/19/2013	12/19/2015

**Equipment Tested:**

Device	Manufacturer	Model #	S/N
Configuration 1			

**Support Equipment:**

Device	Manufacturer	Model #	S/N
Configuration 1			

**Test Conditions / Notes:**

Application: MP\_TEST MFC version 1.3.8.0  
  
 Temperature: 22.0°C  
 Humidity: 39.6 %  
 Atmospheric Pressure: 100.5kPa  
  
 Highest Generation Frequency: 2.462 GHz  
 Attenuator = 63 at MAX Level  
  
 The equipment under test (EUT) is placed on the table. The EUT is set up as intended to operate on WIFI continuously transmitting. A remotely located signal generator is connected to input port of EUT. The DL power input signal 2132.5MHz, 4.1MHz AWGN at the outdoor antenna port is set at 3dB above AGC level.  
  
**Attenuator for 802.11n HT20 Mode=35**  
 The Data rate is at MCS0  
  
**15.31(e) the RF output power was not changed when adjusting the voltage 120V down to 85% and up to 115%.**

Test Location: CKC Laboratories, Inc. • 1120 Fulton Place • Fremont, CA 94539 • (510) 249-1170  
 Customer: **Cellphone-Mate, Inc.**  
 Specification: **15.31e**  
 Work Order #: **97491** Date: 10/05/2015  
 Test Type: **Conducted Power Measurement** Time:  
 Tested By: Hieu Song Nguyenpham Sequence#:  
 Software: EMITest 5.02.00

**Test Equipment:**

ID	Asset #	Description	Model	Calibration Date	Cal Due Date
T1	P06710	Cable	32026-29094K-29094K-72TC	9/18/2014	9/18/2016
T2	P06467	Attenuator	PE7014-10	5/13/2015	5/13/2017
	03471	Spectrum Analyzer	E4440A	12/19/2013	12/19/2015

**Equipment Tested:**

Device	Manufacturer	Model #	S/N
Configuration 1			

**Support Equipment:**

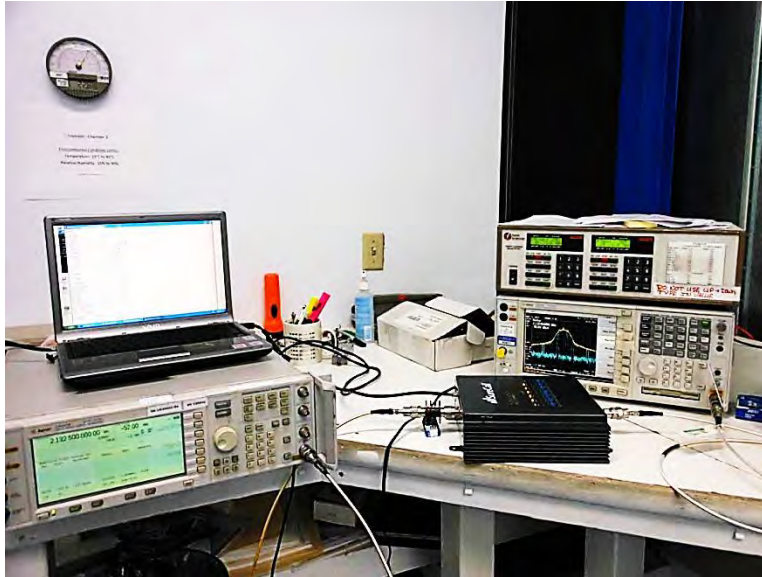
Device	Manufacturer	Model #	S/N
Configuration 1			

**Test Conditions / Notes:**

Application: MP\_TEST MFC version 1.3.8.0  
  
 Temperature: 22.0°C  
 Humidity: 39.6 %  
 Atmospheric Pressure: 100.5kPa  
  
 Highest Generation Frequency: 2.462 GHz  
 Attenuator = 63 at MAX Level  
  
 The equipment under test (EUT) is placed on the table. The EUT is set up as intended to operate on WIFI continuously transmitting. A remotely located signal generator is connected to input port of EUT. The DL power input signal 2132.5MHz, 4.1MHz AWGN at the outdoor antenna port is set at 3dB above AGC level.  
  
**Attenuator for 802.11n HT40 Mode=32**  
 The Data rate is at MCS1  
  
**15.31(e) the RF output power was not changed when adjusting the voltage 120V down to 85% and up to 115%.**



## Test Setup Photo





## 15.247(e) Power Spectral Density

### Test Conditions / Setup

Test Location: CKC Laboratories, Inc. • 1120 Fulton Place • Fremont, CA 94539 • (510) 249-1170  
 Customer: **Cellphone-Mate, Inc.**  
 Specification: **15.247(e) Peak Power Spectral Density (2400-2483.5 MHz DTS)**  
 Work Order #: **97491** Date: 10/05/2015  
 Test Type: **Conducted Power Measurement** Time:  
 Tested By: Hieu Song Nguyenpham Sequence#:  
 Software: EMITest 5.02.00

#### Test Equipment:

ID	Asset #	Description	Model	Calibration Date	Cal Due Date
T1	P06710	Cable	32026-29094K- 29094K-72TC	9/18/2014	9/18/2016
T2	P06467	Attenuator	PE7014-10	5/13/2015	5/13/2017
	03471	Spectrum Analyzer	E4440A	12/19/2013	12/19/2015

#### Equipment Tested:

Device	Manufacturer	Model #	S/N
Configuration 1			

#### Support Equipment:

Device	Manufacturer	Model #	S/N
Configuration 1			

#### Test Conditions / Notes:

Application: MP\_TEST MFC version 1.3.8.0

Temperature: 22.0° C

Humidity: 39.6 %

Atmospheric Pressure: 100.5kPa

Highest Generation Frequency: 2.462 GHz

Attenuator = 63 at MAX Level

Test Method: KDB 558074 v03r03 section 10.2

RBW=3 kHz and VBW=10 kHz

The equipment under test (EUT) is placed on the table. The EUT is set up as intended to operate on WIFI continuously transmitting. A remotely located signal generator is connected to input port of EUT. The DL power input signal 2132.5MHz, 4.1MHz AWGN at the outdoor antenna port is set at 3dB above AGC level.

**Attenuator for 802.11b Mode=32**

#### Results Table

Frequency (MHz)	Measured Power in (dBm/3kHz )	Power Limit in (dBm/kHz)	Pass/Fail
2412 Low Channel	-10.24	8	Pass
2437 Middle Channel	-10.58	8	Pass
2462 High Channel	-11.93	8	Pass

The data rate is at 2Mbps when the RF output power is highest.

The Power Spectral Density measurements were made using the methods set out in KDB “558074 D01 DTS Meas Guidance v03r03”, Section 10.2 Measurement Procedure PKPSD. The offset of the analyzer was set to correct for the cable and attenuator used during measurement.

The units are in dBm. The limit is 8dBm.

Test Location: CKC Laboratories, Inc. • 1120 Fulton Place • Fremont, CA 94539 • (510) 249-1170  
 Customer: **Cellphone-Mate, Inc.**  
 Specification: **15.247(e) Peak Power Spectral Density (2400-2483.5 MHz DTS)**  
 Work Order #: **97491** Date: 10/05/2015  
 Test Type: **Conducted Power Measurement** Time:  
 Tested By: Hieu Song Nguyenpham Sequence#:  
 Software: EMITest 5.02.00

**Test Equipment:**

ID	Asset #	Description	Model	Calibration Date	Cal Due Date
T1	P06710	Cable	32026-29094K-29094K-72TC	9/18/2014	9/18/2016
T2	P06467	Attenuator	PE7014-10	5/13/2015	5/13/2017
	03471	Spectrum Analyzer	E4440A	12/19/2013	12/19/2015

**Equipment Tested:**

Device	Manufacturer	Model #	S/N
Configuration 1			

**Support Equipment:**

Device	Manufacturer	Model #	S/N
Configuration 1			

**Test Conditions / Notes:**

Application: MP_TEST MFC version 1.3.8.0  Temperature: 22.0°C Humidity: 39.6 % Atmospheric Pressure: 100.5kPa  Highest Generation Frequency: 2.462 GHz Attenuator = 63 at MAX Level Test Method: KDB 558074 v03r03 section 10.2 RBW=3 kHz and VBW=10 kHz  The equipment under test (EUT) is placed on the table. The EUT is set up as intended to operate on WIFI continuously transmitting. A remotely located signal generator is connected to input port of EUT. The DL power input signal 2132.5MHz, 4.1MHz AWGN at the outdoor antenna port is set at 3dB above AGC level.  <b>Attenuator for 802.11g Mode=38</b>
---

**Results Table**

Frequency (MHz)	Measured Power in (dBm/3kHz )	Power Limit in (dBm/kHz)	Pass/Fail
2412 Low Channel	-11.64	8	Pass
2437 Middle Channel	-11.77	8	Pass
2462 High Channel	-13.22	8	Pass

The data rate is at 54Mbps when the RF output power is highest

The Power Spectral Density measurements were made using the methods set out in KDB "558074 D01 DTS Meas Guidance v03r03", Section 10.2 Measurement Procedure PKPSD. The offset of the analyzer was set to correct for the cable and attenuator used during measurement.

The units are in dBm. The limit is 8dBm.

Test Location: CKC Laboratories, Inc. • 1120 Fulton Place • Fremont, CA 94539 • (510) 249-1170  
 Customer: **Cellphone-Mate, Inc.**  
 Specification: **15.247(e) Peak Power Spectral Density (2400-2483.5 MHz DTS)**  
 Work Order #: **97491** Date: 10/05/2015  
 Test Type: **Conducted Power Measurement** Time:  
 Tested By: Hieu Song Nguyenpham Sequence#:  
 Software: EMITest 5.02.00

**Test Equipment:**

ID	Asset #	Description	Model	Calibration Date	Cal Due Date
T1	P06710	Cable	32026-29094K-29094K-72TC	9/18/2014	9/18/2016
T2	P06467	Attenuator	PE7014-10	5/13/2015	5/13/2017
	03471	Spectrum Analyzer	E4440A	12/19/2013	12/19/2015

**Equipment Tested:**

Device	Manufacturer	Model #	S/N
Configuration 1			

**Support Equipment:**

Device	Manufacturer	Model #	S/N
Configuration 1			

**Test Conditions / Notes:**

Application: MP\_TEST MFC version 1.3.8.0  
 Temperature: 22.0° C  
 Humidity: 39.6 %  
 Atmospheric Pressure: 100.5kPa  
 Highest Generation Frequency: 2.462 GHz  
 Attenuator = 63 at MAX Level  
 Test Method: KDB 558074 v03r03 section 10.2  
 RBW=3 kHz and VBW=10 kHz  
 The equipment under test (EUT) is placed on the table. The EUT is set up as intended to operate on WIFI continuously transmitting. A remotely located signal generator is connected to input port of EUT. The DL power input signal 2132.5MHz, 4.1MHz AWGN at the outdoor antenna port is set at 3dB above AGC level.  
**Attenuator for 802.11n HT20 Mode=35**

**Results Table**

Frequency (MHz)	Measured Power in (dBm/3kHz )	Power Limit in (dBm/kHz)	Pass/Fail
2412 Low Channel	-14.48	8	Pass
2437 Middle Channel	-14.88	8	Pass
2462 High Channel	-15.93	8	Pass

The data rate is at MCS0 when the RF output power is highest

The Power Spectral Density measurements were made using the methods set out in KDB "558074 D01 DTS Meas Guidance v03r03", Section 10.2 Measurement Procedure PKPSD. The offset of the analyzer was set to correct for the cable and attenuator used during measurement.

The units are in dBm. The limit is 8dBm.

Test Location: CKC Laboratories, Inc. • 1120 Fulton Place • Fremont, CA 94539 • (510) 249-1170  
 Customer: **Cellphone-Mate, Inc.**  
 Specification: **15.247(e) Peak Power Spectral Density (2400-2483.5 MHz DTS)**  
 Work Order #: **97491** Date: 10/05/2015  
 Test Type: **Conducted Power Measurement** Time:  
 Tested By: Hieu Song Nguyenpham Sequence#:  
 Software: EMITest 5.02.00

**Test Equipment:**

ID	Asset #	Description	Model	Calibration Date	Cal Due Date
T1	P06710	Cable	32026-29094K-29094K-72TC	9/18/2014	9/18/2016
T2	P06467	Attenuator	PE7014-10	5/13/2015	5/13/2017
	03471	Spectrum Analyzer	E4440A	12/19/2013	12/19/2015

**Equipment Tested:**

Device	Manufacturer	Model #	S/N
Configuration 1			

**Support Equipment:**

Device	Manufacturer	Model #	S/N
Configuration 1			

**Test Conditions / Notes:**

Application: MP_TEST MFC version 1.3.8.0  Temperature: 22.0°C Humidity: 39.6 % Atmospheric Pressure: 100.5kPa  Highest Generation Frequency: 2.462 GHz Attenuator = 63 at MAX Level Test Method: KDB 558074 v03r03 section 10.2 RBW=3 kHz and VBW=10 kHz  The equipment under test (EUT) is placed on the table. The EUT is set up as intended to operate on WIFI continuously transmitting. A remotely located signal generator is connected to input port of EUT. The DL power input signal 2132.5MHz, 4.1MHz AWGN at the outdoor antenna port is set at 3dB above AGC level.  <b>Attenuator for 802.11n HT40 Mode=32</b>
--

**Results Table**

Frequency (MHz)	Measured Power in (dBm/3kHz )	Power Limit in (dBm/kHz)	Pass/Fail
2422 Low Channel	-18.56	8	Pass
2437 Middle Channel	-18.17	8	Pass
2452 High Channel	-19.67	8	Pass

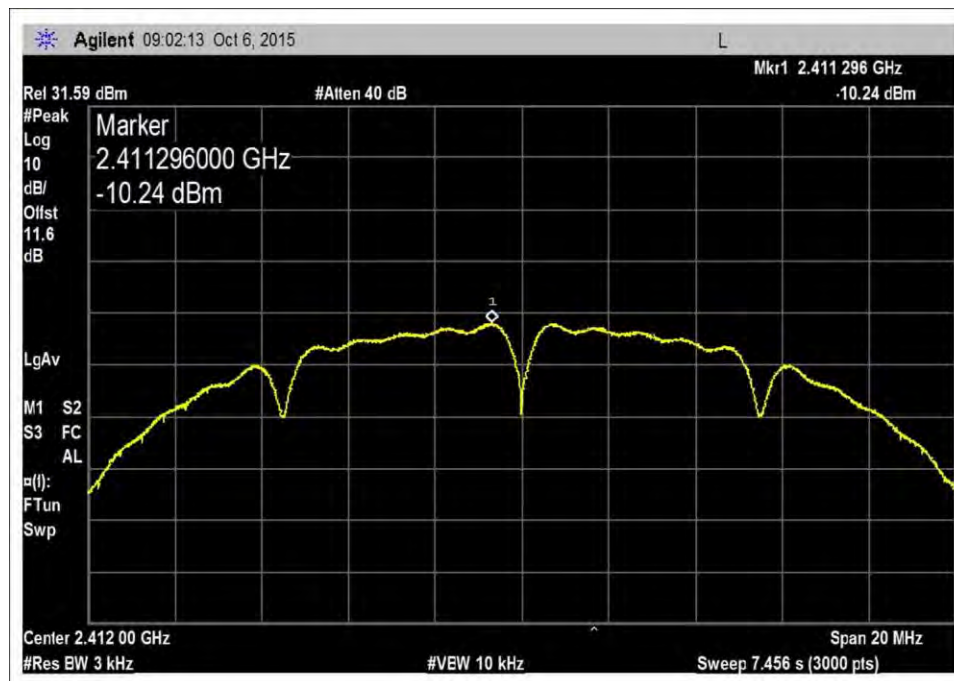
The data rate is at MCS1 when the RF output power is highest

The Power Spectral Density measurements were made using the methods set out in KDB "558074 D01 DTS Meas Guidance v03r03", Section 10.2 Measurement Procedure PKPSD. The offset of the analyzer was set to correct for the cable and attenuator used during measurement.

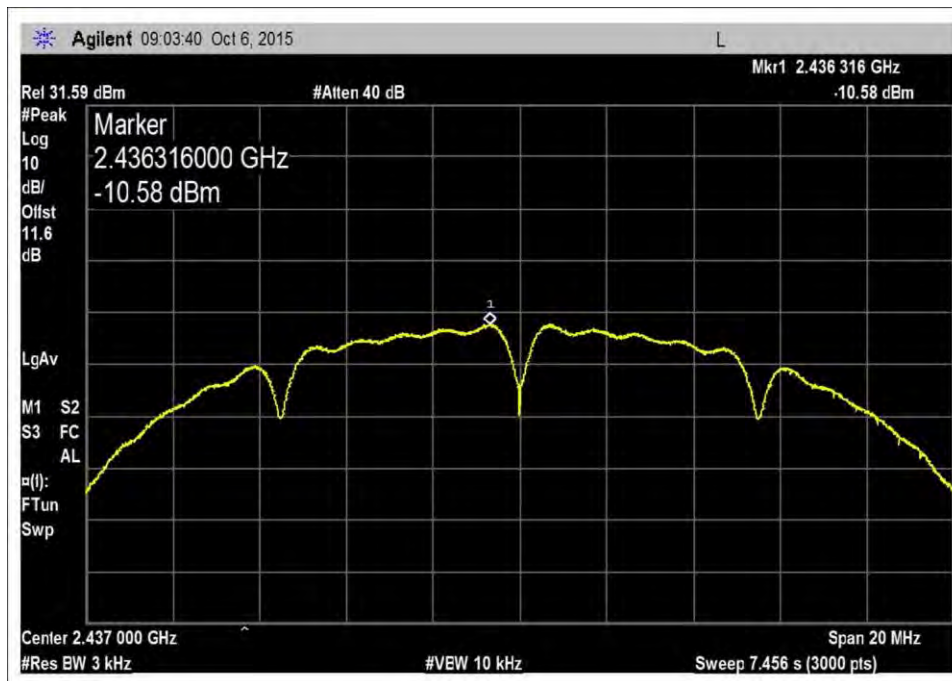
The units are in dBm. The limit is 8dBm.

## Test Data

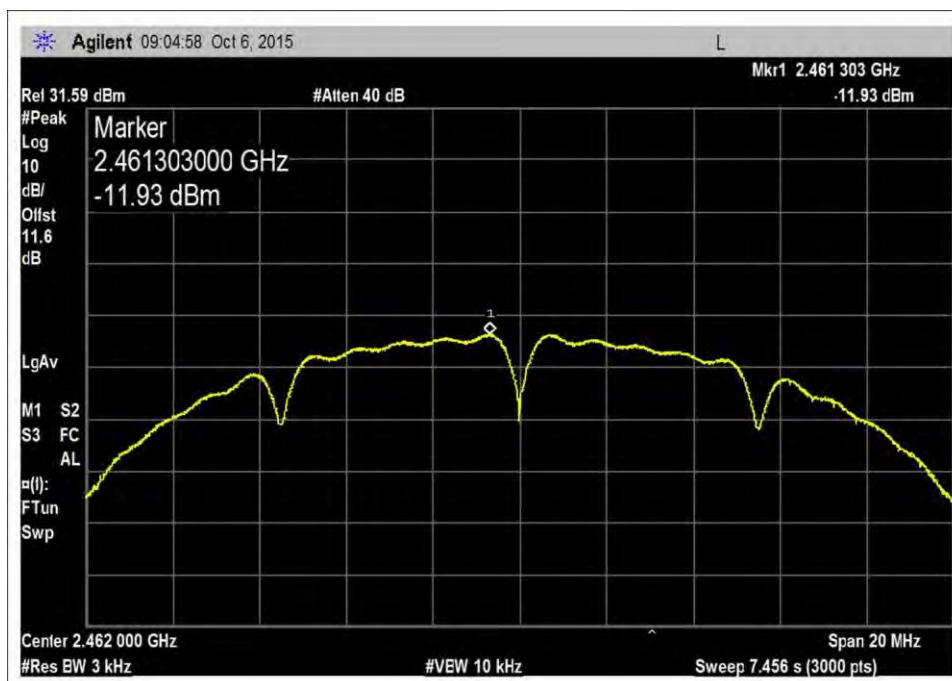
### 802.11b - Mode



Low Channel



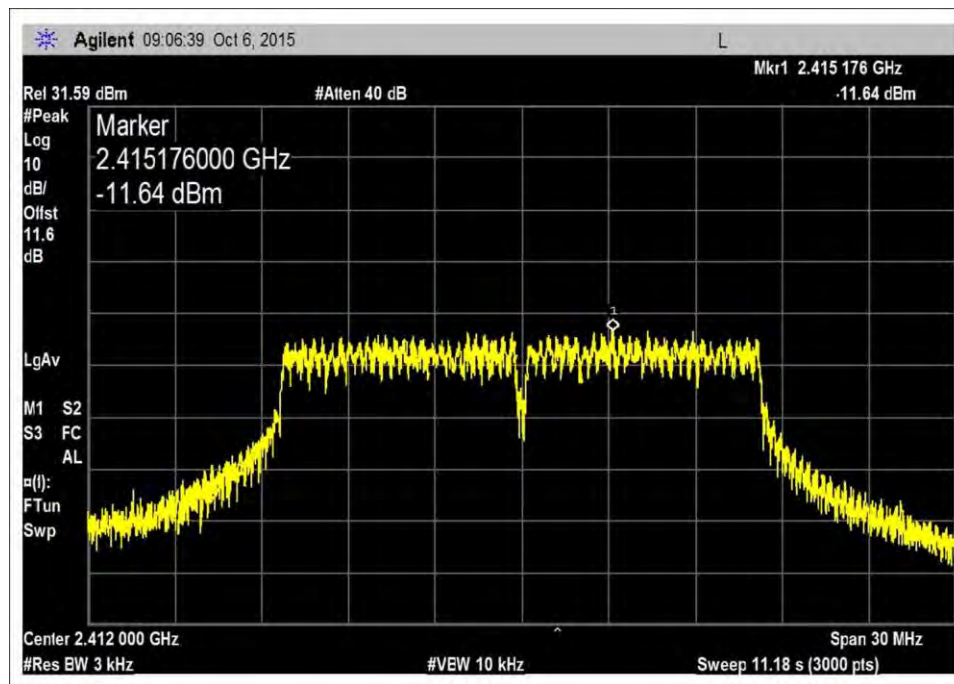
Middle Channel



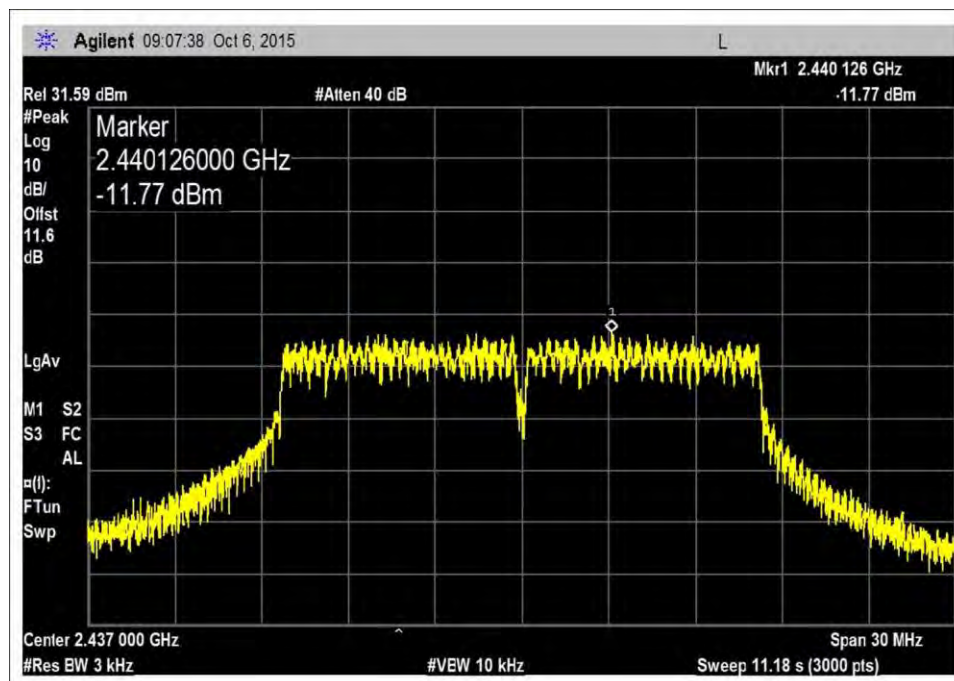
High Channel



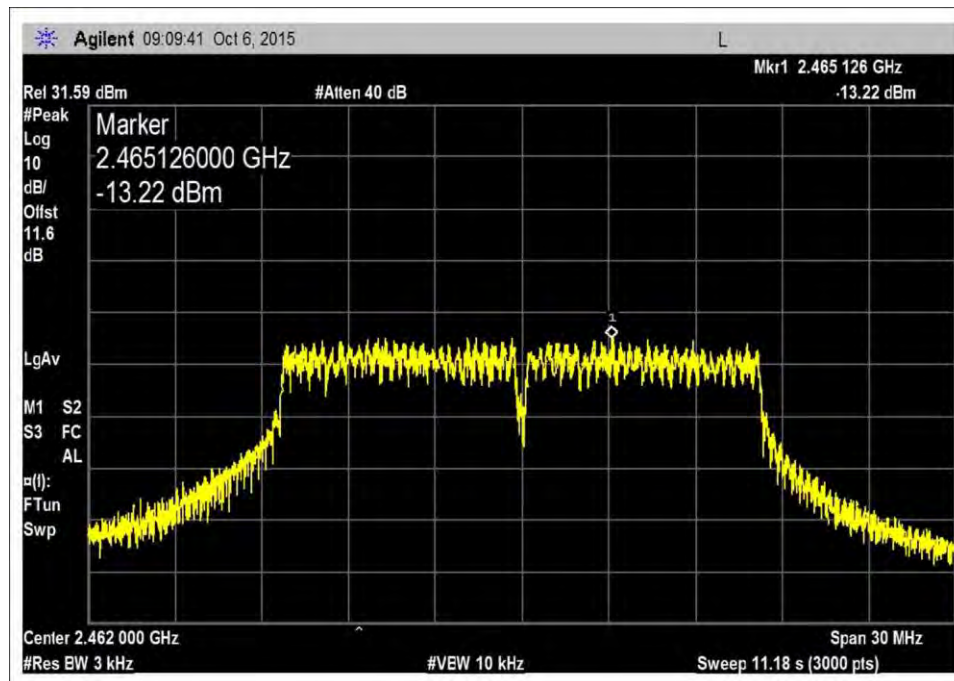
## 802.11g- Mode



Low Channel

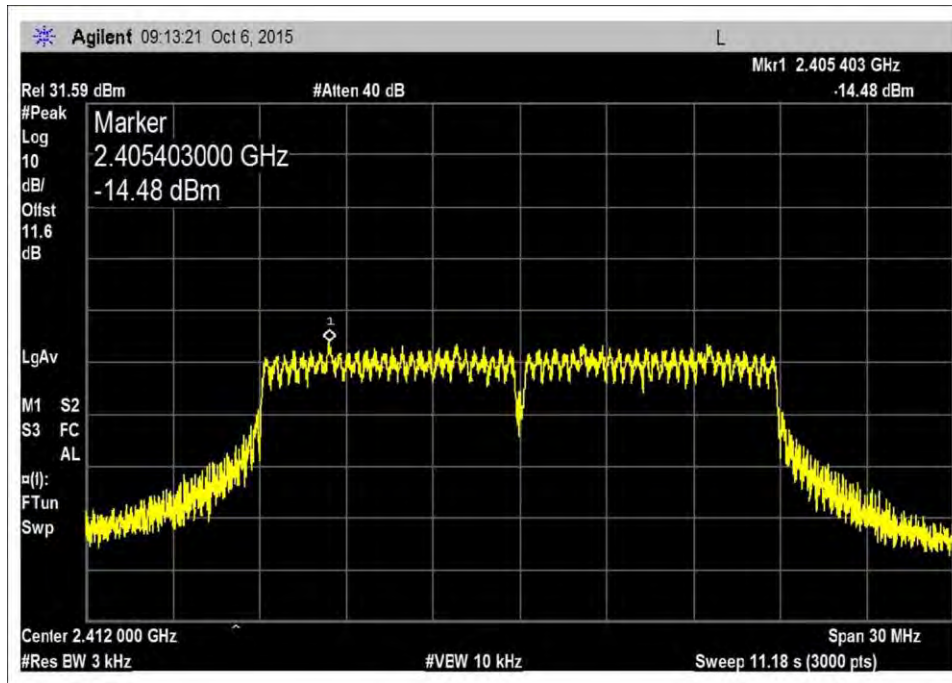


Middle Channel

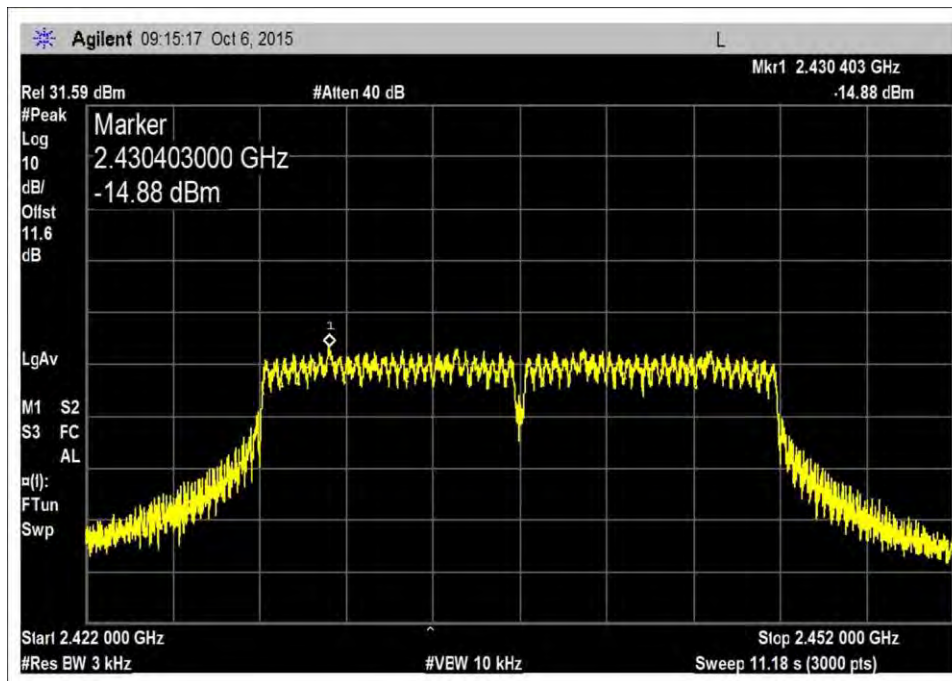


High Channel

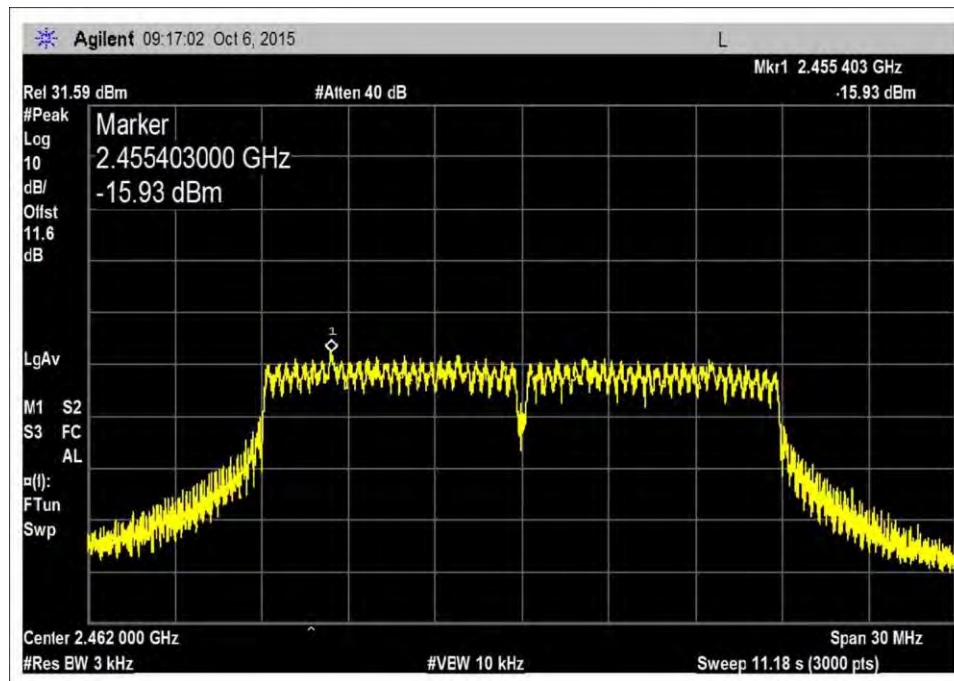
### 802.11n HT20 – Mode



Low Channel

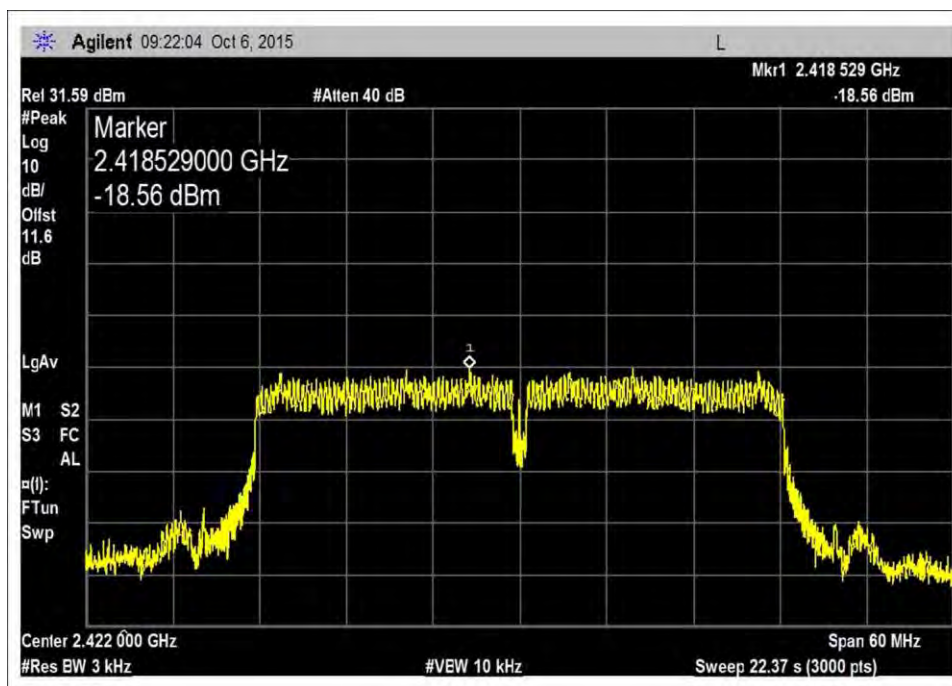


Middle Channel

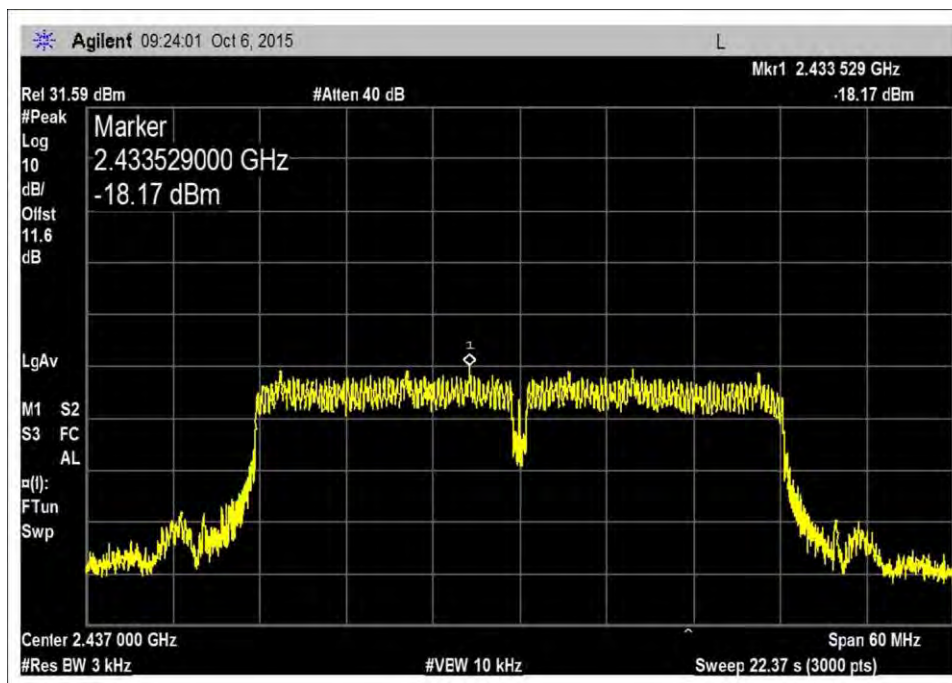


High Channel

### 802.11n HT40 - Mode

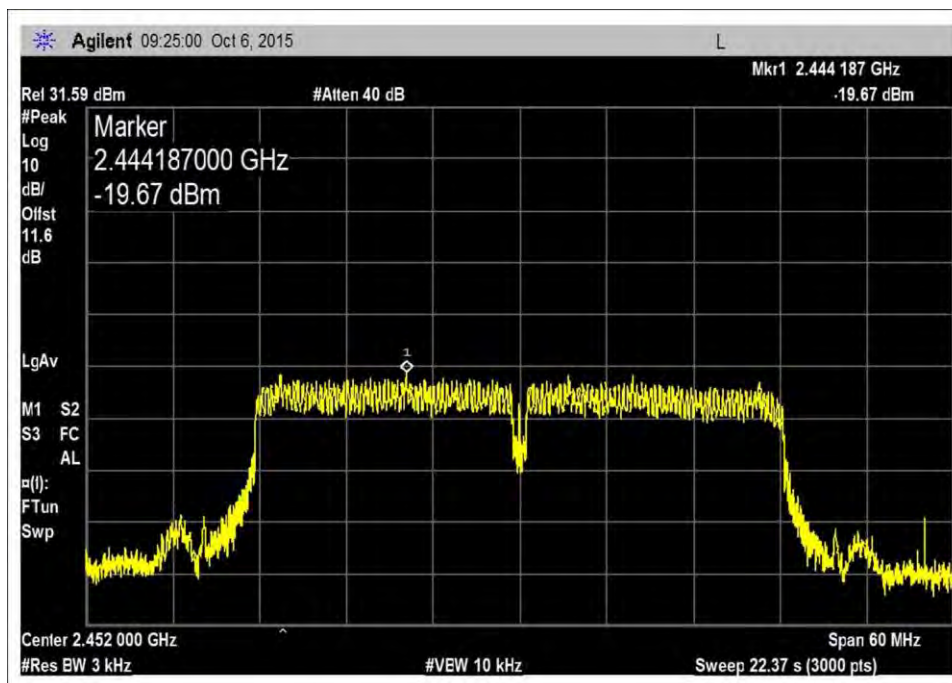


Low Channel



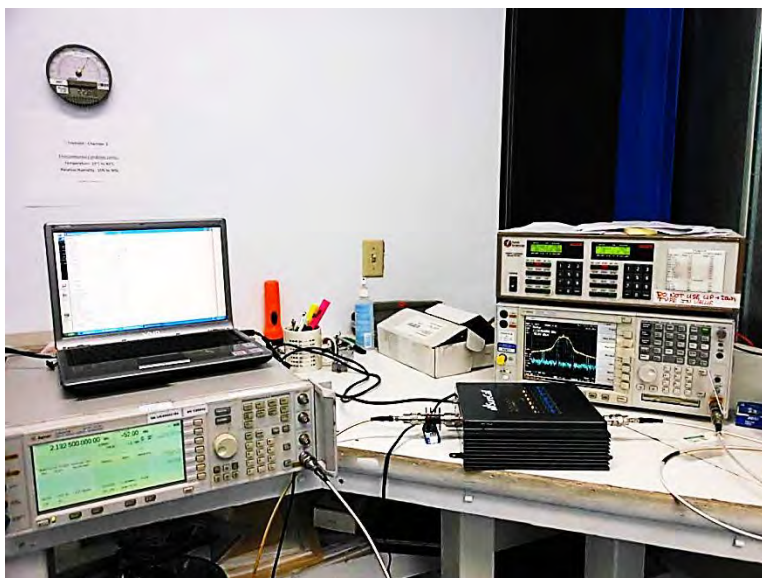
Middle Channel





High Channel

## Test Setup Photo



## 15.247(d) Conducted Emissions & Band Edge

### Test Setup / Conditions

The Reference level measurement for Emission in non restricted frequency bands were made using the methods set out in KDB "558074 D01 DTS Meas Guidance v03r03", Section 11 Emissions in non-restricted frequency band.  
NOTE: The Reference Level is the limit line for Conducted Spurious Emission for Non-Restricted Frequency Band.

#### 802.11b Mode

Reference Limit in 100kHz			
Channel	dBm in 100kHz	dBuV in 100kHz	Reference Limit dBuV
Low	9.42	116.42	96.42
Middle	8.92	115.92	95.92
High	7.45	114.45	94.45

The Data rate =2Mbps. Set attenuator at 32.

#### 802.11g Mode

Reference Limit in 100kHz			
Channel	dBm in 100kHz	dBuV in 100kHz	Reference Limit dBuV
Low	1.59	108.59	88.59
Middle	1.62	108.62	88.62
High	0.62	107.62	87.62

The Data rate =54Mbps. Set attenuator at 38.

#### 802.11n HT20 Mode

Reference Limit in 100kHz			
Channel	dBm in 100kHz	dBuV in 100kHz	Reference Limit dBuV
Low	-1.38	105.62	85.62
Middle	-1.63	105.37	85.37
High	-2.67	104.33	84.33

The Data rate =MCS0. Set attenuator at 35.

#### 802.11n HT40 Mode

Reference Limit in 100kHz			
Channel	dBm in 100kHz	dBuV in 100kHz	Reference Limit dBuV
Low	-6.3	100.7	80.7
Middle	-6.77	100.23	80.23
High	-6.76	100.24	80.24

The Data rate =MCS1. Set attenuator at 32.

Worst case for the limit for all modes: **80.24dBuV**



Test Location: CKC Laboratories, Inc. • 1120 Fulton Place • Fremont, CA 94539 • (510) 249-1170  
 Customer: **Cellphone-Mate, Inc.**  
 Specification: **15.247(d) Conducted Spurious Emissions**  
 Work Order #: **97491** Date: 10/6/2015  
 Test Type: **Conducted Spurious Emission** Time: 10:48:11 AM  
 Tested By: Hieu Song Nguyenpham Sequence#: 3  
 Software: EMITest 5.02.00

***Equipment Tested:***

Device	Manufacturer	Model #	S/N
Configuration 1			

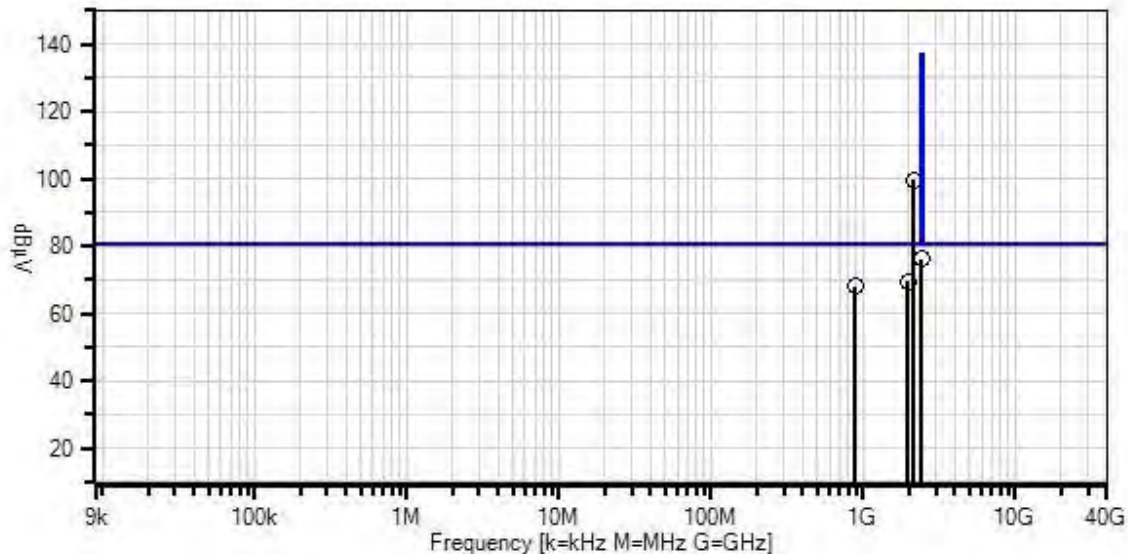
***Support Equipment:***

Device	Manufacturer	Model #	S/N
Configuration 1			

***Test Conditions / Notes:***

<p>Conducted Spurious Emission          Frequency Range: 9kHz to 25GHz</p> <p>Temperature: 22.0°C          Humidity: 39.6 %          Atmospheric Pressure: 100.5kPa</p> <p>Highest Generation Frequency: 2.462GHz          RBW=100 kHz and VBW=300kHz          Attenuator = 63 at MAX Level          Method: KDB 558074 D01 DTS Meas Guidance v03r03 section 11</p> <p>The equipment under test (EUT) is placed on the table top. The EUT set at maximum gain.          A remotely located signal generator is connected to input port of EUT.          The DL power input signal 2132.5MHz, 4.1MHz AWGN at the outdoor antenna port is set at 3dB above AGC level.</p> <p><b>802.11b Mode</b>          Data rate = 2 Mbps          Attenuator for 802.11b Mode = 32</p> <p><b>Low Channel</b></p>
--

CKC Laboratories, Inc Date: 10/6/2015 Time: 10:48:11 AM Cellphone-Mate, Inc W/O#: 97491  
Test Distance: None Sequence#: 3



— Readings  
× QP Readings  
▼ Ambient  
— 1 - 15.247(d) Conducted Spurious Emissions  
○ Peak Readings  
\* Average Readings  
Software Version: 5.02.00

**Test Equipment:**

ID	Asset #/Serial #	Description	Model	Calibration Date	Cal Due Date
T1	ANP06239	Attenuator	54A-10	7/9/2014	7/9/2016
T2	ANP06710	Cable	32026-29094K-29094K-72TC	9/18/2014	9/18/2016
	AN03471	RF Characteristics Analyzer	E4440A	12/19/2013	12/19/2015

**Measurement Data:**

Reading listed by margin.

Test Distance: None

#	Freq MHz	Rdng dBμV	T1 dB	T2 dB	Dist Table	Corr dBμV	Spec dBμV	Margin dB	Polar Ant
1	2131.975M	88.9	+9.9	+1.0	+0.0	99.8	80.4	+19.4	None
2	2396.771M	65.1	+9.9	+1.1	+0.0	76.1	80.4	-4.3	None
3	1962.928M	58.6	+9.9	+1.0	+0.0	69.5	80.4	-10.9	None
4	885.338M	57.3	+9.9	+0.7	+0.0	67.9	80.4	-12.5	None

Test Location: CKC Laboratories, Inc. • 1120 Fulton Place • Fremont, CA 94539 • (510) 249-1170  
 Customer: **Cellphone-Mate, Inc.**  
 Specification: **15.247(d) Conducted Spurious Emissions**  
 Work Order #: **97491** Date: 10/6/2015  
 Test Type: **Conducted Spurious Emission** Time: 11:11:24 AM  
 Tested By: Hieu Song Nguyenpham Sequence#: 4  
 Software: EMITest 5.02.00

***Equipment Tested:***

Device	Manufacturer	Model #	S/N
Configuration 1			

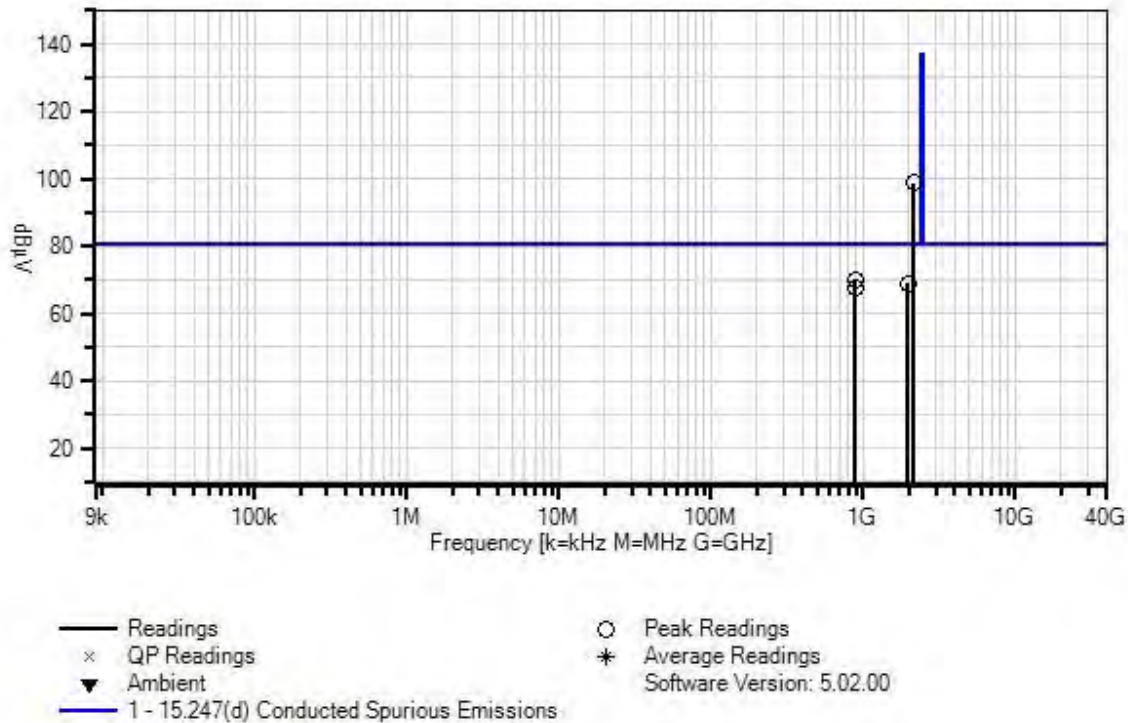
***Support Equipment:***

Device	Manufacturer	Model #	S/N
Configuration 1			

***Test Conditions / Notes:***

<p>Conducted Spurious Emission          Frequency Range: 9kHz to 25GHz</p> <p>Temperature: 22.0°C          Humidity: 39.6 %          Atmospheric Pressure: 100.5kPa</p> <p>Highest Generation Frequency: 2.462GHz          RBW=100 kHz and VBW=300kHz          Attenuator = 63 at MAX Level          Method: KDB 558074 D01 DTS Meas Guidance v03r03 section 11</p> <p>The equipment under test (EUT) is placed on the table top. The EUT set at maximum gain.          A remotely located signal generator is connected to input port of EUT.          The DL power input signal 2132.5MHz, 4.1MHz AWGN at the outdoor antenna port is set at 3dB above AGC level.</p> <p><b>802.11b Mode</b>          Data rate = 2 Mbps          Attenuator for 802.11b Mode = 32</p> <p><b>Middle Channel</b></p>
---

CKC Laboratories, Inc Date: 10/6/2015 Time: 11:11:24 AM Cellphone-Mate, Inc W/O#: 97491  
Test Distance: None Sequence#: 4



**Test Equipment:**

ID	Asset #/Serial #	Description	Model	Calibration Date	Cal Due Date
T1	ANP06239	Attenuator	54A-10	7/9/2014	7/9/2016
T2	ANP06710	Cable	32026-29094K-29094K-72TC	9/18/2014	9/18/2016
	AN03471	RF Characteristics Analyzer	E4440A	12/19/2013	12/19/2015

**Measurement Data:**

Reading listed by margin.

Test Distance: None

#	Freq MHz	Rdng dBμV	T1 dB	T2 dB	Dist Table	Corr dBμV	Spec dBμV	Margin dB	Polar Ant
1	2131.448M	87.8	+9.9	+1.0	+0.0	98.7	80.4	+18.3	None
2	884.944M	59.2	+9.9	+0.7	+0.0	69.8	80.4	-10.6	None
3	1963.872M	58.0	+9.9	+1.0	+0.0	68.9	80.4	-11.5	None
4	889.289M	57.2	+9.9	+0.7	+0.0	67.8	80.4	-12.6	None

Test Location: CKC Laboratories, Inc. • 1120 Fulton Place • Fremont, CA 94539 • (510) 249-1170  
 Customer: **Cellphone-Mate, Inc.**  
 Specification: **15.247(d) Conducted Spurious Emissions**  
 Work Order #: **97491** Date: 10/6/2015  
 Test Type: **Conducted Spurious Emission** Time: 11:18:17 AM  
 Tested By: Hieu Song Nguyenpham Sequence#: 5  
 Software: EMITest 5.02.00

***Equipment Tested:***

Device	Manufacturer	Model #	S/N
Configuration 1			

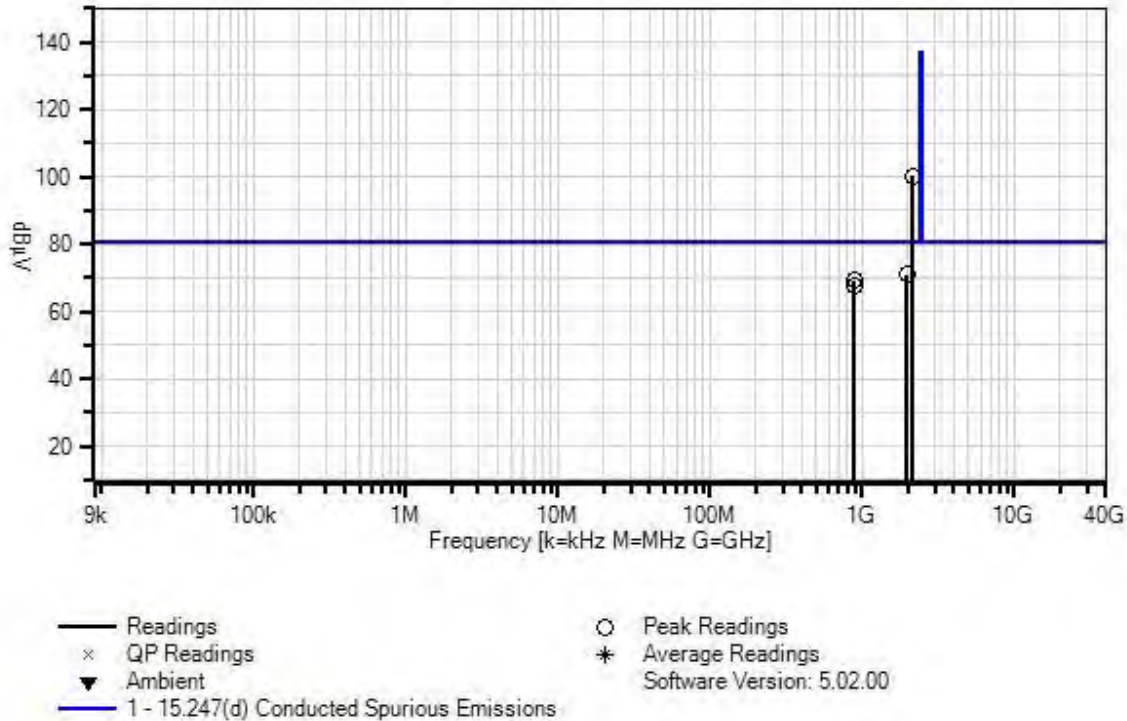
***Support Equipment:***

Device	Manufacturer	Model #	S/N
Configuration 1			

***Test Conditions / Notes:***

<p>Conducted Spurious Emission          Frequency Range: 9kHz to 25GHz</p> <p>Temperature: 22.0° C          Humidity: 39.6 %          Atmospheric Pressure: 100.5kPa</p> <p>Highest Generation Frequency: 2.462GHz          RBW=100 kHz and VBW=300kHz          Attenuator = 63 at MAX Level          Method: KDB 558074 D01 DTS Meas Guidance v03r03 section 11</p> <p>The equipment under test (EUT) is placed on the table top. The EUT set at maximum gain.          A remotely located signal generator is connected to input port of EUT.          The DL power input signal 2132.5MHz, 4.1MHz AWGN at the outdoor antenna port is set at 3dB above AGC level.</p> <p><b>802.11b Mode</b>          Data rate = 2 Mbps          Attenuator for 802.11b Mode = 32</p> <p><b>High Channel</b></p>
--

CKC Laboratories, Inc Date: 10/6/2015 Time: 11:18:17 AM Cellphone-Mate, Inc W/O#: 97491  
Test Distance: None Sequence#: 5



**Test Equipment:**

ID	Asset #/Serial #	Description	Model	Calibration Date	Cal Due Date
T1	ANP06239	Attenuator	54A-10	7/9/2014	7/9/2016
T2	ANP06710	Cable	32026-29094K-29094K-72TC	9/18/2014	9/18/2016
	AN03471	RF Characteristics Analyzer	E4440A	12/19/2013	12/19/2015

**Measurement Data:**

Reading listed by margin.

Test Distance: None

#	Freq MHz	Rdng dBμV	T1 dB	T2 dB	Dist Table	Corr dBμV	Spec dBμV	Margin dB	Polar Ant
1	2134.440M	89.4	+9.9	+1.0	+0.0	100.3	80.4	+19.9	None
2	1963.872M	60.0	+9.9	+1.0	+0.0	70.9	80.4	-9.5	None
3	884.944M	58.5	+9.9	+0.7	+0.0	69.1	80.4	-11.3	None
4	889.289M	57.0	+9.9	+0.7	+0.0	67.6	80.4	-12.8	None

Test Location: CKC Laboratories, Inc. • 1120 Fulton Place • Fremont, CA 94539 • (510) 249-1170  
 Customer: **Cellphone-Mate, Inc.**  
 Specification: **15.247(d) Conducted Spurious Emissions**  
 Work Order #: **97491** Date: 10/6/2015  
 Test Type: **Conducted Spurious Emission** Time: 11:33:17 AM  
 Tested By: Hieu Song Nguyenpham Sequence#: 6  
 Software: EMITest 5.02.00

***Equipment Tested:***

Device	Manufacturer	Model #	S/N
Configuration 1			

***Support Equipment:***

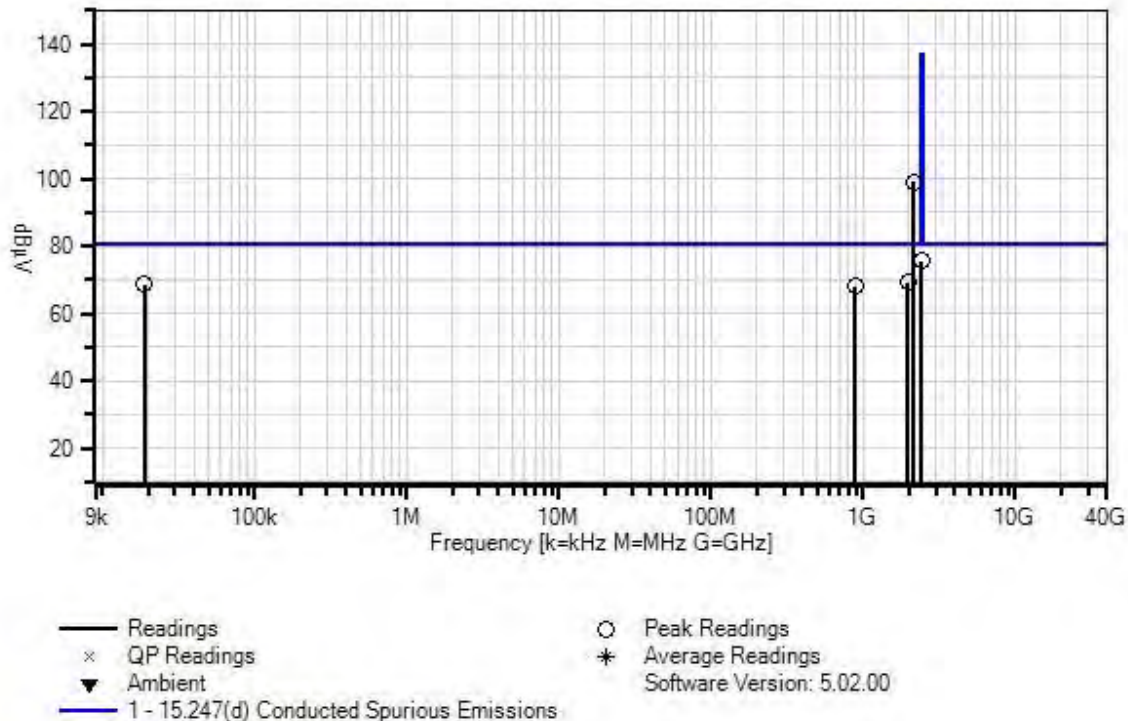
Device	Manufacturer	Model #	S/N
Configuration 1			

***Test Conditions / Notes:***

<p>Conducted Spurious Emission          Frequency Range: 9kHz to 25GHz</p> <p>Temperature: 22.0° C          Humidity: 39.6 %          Atmospheric Pressure: 100.5kPa</p> <p>Highest Generation Frequency: 2.462GHz          RBW=100 kHz and VBW=300kHz          Attenuator = 63 at MAX Level          Method: KDB 558074 D01 DTS Meas Guidance v03r03 Section 11</p> <p>The equipment under test (EUT) is placed on the table top. The EUT set at maximum gain.          A remotely located signal generator is connected to input port of EUT.          The DL power input signal 2132.5MHz, 4.1MHz AWGN at the outdoor antenna port is set at 3dB above AGC level.</p> <p><b>802.11g Mode</b>          Data rate = 54 Mbps          Attenuator for 802.11g Mode = 38</p> <p><b>Low Channel</b></p>
--



CKC Laboratories, Inc Date: 10/6/2015 Time: 11:33:17 AM Cellphone-Mate, Inc W/O#: 97491  
Test Distance: None Sequence#: 6



#### Test Equipment:

ID	Asset #/Serial #	Description	Model	Calibration Date	Cal Due Date
T1	ANP06239	Attenuator	54A-10	7/9/2014	7/9/2016
T2	ANP06710	Cable	32026-29094K-29094K-72TC	9/18/2014	9/18/2016
	AN03471	RF Characteristics Analyzer	E4440A	12/19/2013	12/19/2015

#### Measurement Data:

Reading listed by margin.

Test Distance: None

#	Freq MHz	Rdng dBμV	T1 dB	T2 dB	Dist Table	Corr dBμV	Spec dBμV	Margin dB	Polar Ant
1	2131.448M	88.1	+9.9	+1.0	+0.0	99.0	80.4	+18.6	None
2	2397.773M	64.7	+9.9	+1.1	+0.0	75.7	80.4	-4.7	None
3	1963.872M	58.2	+9.9	+1.0	+0.0	69.1	80.4	-11.3	None
4	18.983k	58.9	+9.8	+0.0	+0.0	68.7	80.4	-11.7	None
5	884.944M	57.4	+9.9	+0.7	+0.0	68.0	80.4	-12.4	None

Test Location: CKC Laboratories, Inc. • 1120 Fulton Place • Fremont, CA 94539 • (510) 249-1170  
 Customer: **Cellphone-Mate, Inc.**  
 Specification: **15.247(d) Conducted Spurious Emissions**  
 Work Order #: **97491** Date: 10/6/2015  
 Test Type: **Conducted Spurious Emission** Time: 11:39:36 AM  
 Tested By: Hieu Song Nguyenpham Sequence#: 7  
 Software: EMITest 5.02.00

***Equipment Tested:***

Device	Manufacturer	Model #	S/N
Configuration 1			

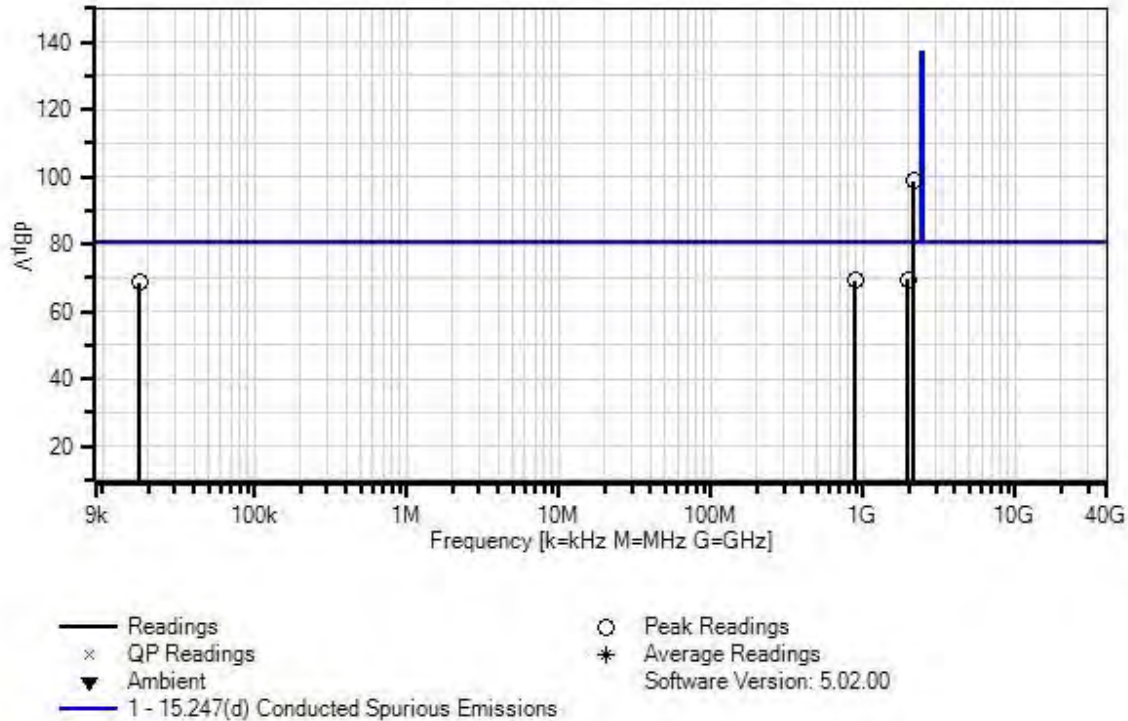
***Support Equipment:***

Device	Manufacturer	Model #	S/N
Configuration 1			

***Test Conditions / Notes:***

<p>Conducted Spurious Emission          Frequency Range: 9kHz to 25GHz</p> <p>Temperature: 22.0° C          Humidity: 39.6 %          Atmospheric Pressure: 100.5kPa</p> <p>Highest Generation Frequency: 2.462GHz          RBW=100 kHz and VBW=300kHz          Attenuator = 63 at MAX Level          Method: KDB 558074 D01 DTS Meas Guidance v03r03 Section 11</p> <p>The equipment under test (EUT) is placed on the table top. The EUT set at maximum gain.          A remotely located signal generator is connected to input port of EUT.          The DL power input signal 2132.5MHz, 4.1MHz AWGN at the outdoor antenna port is set at 3dB above AGC level.</p> <p><b>802.11g Mode</b>          Data rate = 54 Mbps          Attenuator for 802.11g Mode = 38</p> <p><b>Middle Channel</b></p>
---

CKC Laboratories, Inc Date: 10/6/2015 Time: 11:39:36 AM Cellphone-Mate, Inc W/O#: 97491  
Test Distance: None Sequence#: 7



**Test Equipment:**

ID	Asset #/Serial #	Description	Model	Calibration Date	Cal Due Date
T1	ANP06239	Attenuator	54A-10	7/9/2014	7/9/2016
T2	ANP06710	Cable	32026-29094K-29094K-72TC	9/18/2014	9/18/2016
	AN03471	RF Characteristics Analyzer	E4440A	12/19/2013	12/19/2015

**Measurement Data:**

Reading listed by margin.

Test Distance: None

#	Freq MHz	Rdng dBµV	T1 dB	T2 dB	dB	dB	Dist Table	Corr dBµV	Spec dBµV	Margin dB	Polar Ant
1	2134.440M	87.8	+9.9	+1.0			+0.0	98.7	80.4	+18.3	None
2	1963.872M	58.5	+9.9	+1.0			+0.0	69.4	80.4	-11.0	None
3	882.337M	58.6	+9.9	+0.7			+0.0	69.2	80.4	-11.2	None
4	17.707k	58.9	+9.8	+0.0			+0.0	68.7	80.4	-11.7	None

Test Location: CKC Laboratories, Inc. • 1120 Fulton Place • Fremont, CA 94539 • (510) 249-1170  
 Customer: **Cellphone-Mate, Inc.**  
 Specification: **15.247(d) Conducted Spurious Emissions**  
 Work Order #: **97491** Date: 10/6/2015  
 Test Type: **Conducted Spurious Emission** Time: 11:45:47 AM  
 Tested By: Hieu Song Nguyenpham Sequence#: 8  
 Software: EMITest 5.02.00

***Equipment Tested:***

Device	Manufacturer	Model #	S/N
Configuration 1			

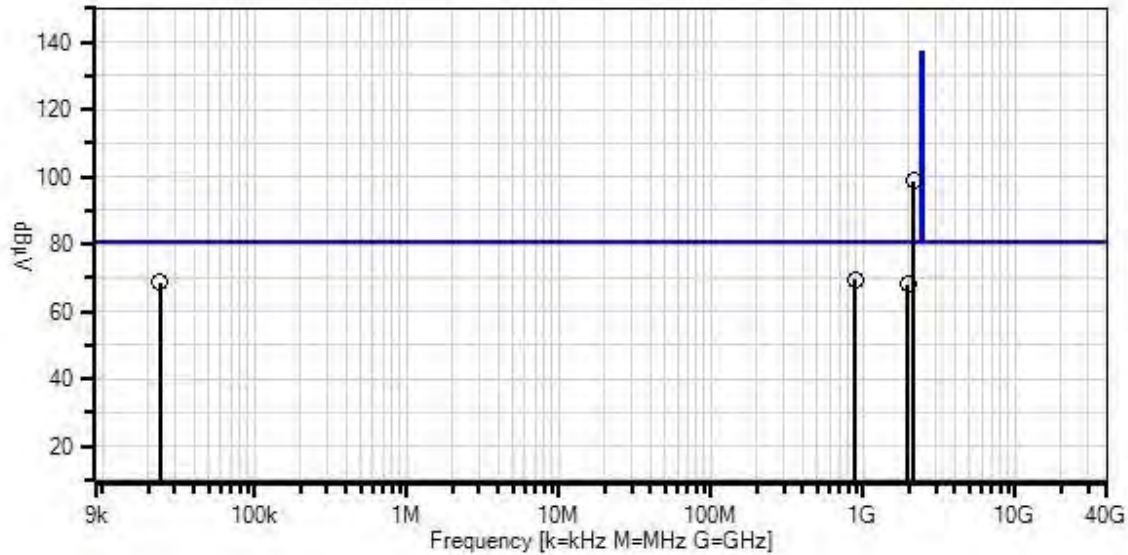
***Support Equipment:***

Device	Manufacturer	Model #	S/N
Configuration 1			

***Test Conditions / Notes:***

<p>Conducted Spurious Emission          Frequency Range: 9kHz to 25GHz</p> <p>Temperature: 22.0° C          Humidity: 39.6 %          Atmospheric Pressure: 100.5kPa</p> <p>Highest Generation Frequency: 2.462GHz          RBW=100 kHz and VBW=300kHz          Attenuator = 63 at MAX Level          Method: KDB 558074 D01 DTS Meas Guidance v03r03 Section 11</p> <p>The equipment under test (EUT) is placed on the table top. The EUT set at maximum gain.          A remotely located signal generator is connected to input port of EUT.          The DL power input signal 2132.5MHz, 4.1MHz AWGN at the outdoor antenna port is set at 3dB above AGC level.</p> <p><b>802.11g Mode</b>          Data rate = 54 Mbps          Attenuator for 802.11g Mode = 38</p> <p><b>High Channel</b></p>
---

CKC Laboratories, Inc Date: 10/6/2015 Time: 11:45:47 AM Cellphone-Mate, Inc W/O#: 97491  
Test Distance: None Sequence#: 8



— Readings  
× QP Readings  
▼ Ambient  
— 1 - 15.247(d) Conducted Spurious Emissions  
○ Peak Readings  
\* Average Readings  
Software Version: 5.02.00

**Test Equipment:**

ID	Asset #/Serial #	Description	Model	Calibration Date	Cal Due Date
T1	ANP06239	Attenuator	54A-10	7/9/2014	7/9/2016
T2	ANP06710	Cable	32026-29094K-29094K-72TC	9/18/2014	9/18/2016
	AN03471	RF Characteristics Analyzer	E4440A	12/19/2013	12/19/2015

**Measurement Data:**

Reading listed by margin.

Test Distance: None

#	Freq MHz	Rdng dBμV	T1 dB	T2 dB	Dist Table	Corr dBμV	Spec dBμV	Margin dB	Polar Ant
1	2131.448M	87.9	+9.9	+1.0	+0.0	98.8	80.4	+18.4	None
2	885.813M	59.0	+9.9	+0.7	+0.0	69.6	80.4	-10.8	None
3	24.085k	58.9	+9.8	+0.0	+0.0	68.7	80.4	-11.7	None
4	1963.872M	57.0	+9.9	+1.0	+0.0	67.9	80.4	-12.5	None

Test Location: CKC Laboratories, Inc. • 1120 Fulton Place • Fremont, CA 94539 • (510) 249-1170  
 Customer: **Cellphone-Mate, Inc.**  
 Specification: **15.247(d) Conducted Spurious Emissions**  
 Work Order #: **97491** Date: 10/6/2015  
 Test Type: **Conducted Spurious Emission** Time: 11:54:11 AM  
 Tested By: Hieu Song Nguyenpham Sequence#: 9  
 Software: EMITest 5.02.00

***Equipment Tested:***

Device	Manufacturer	Model #	S/N
Configuration 1			

***Support Equipment:***

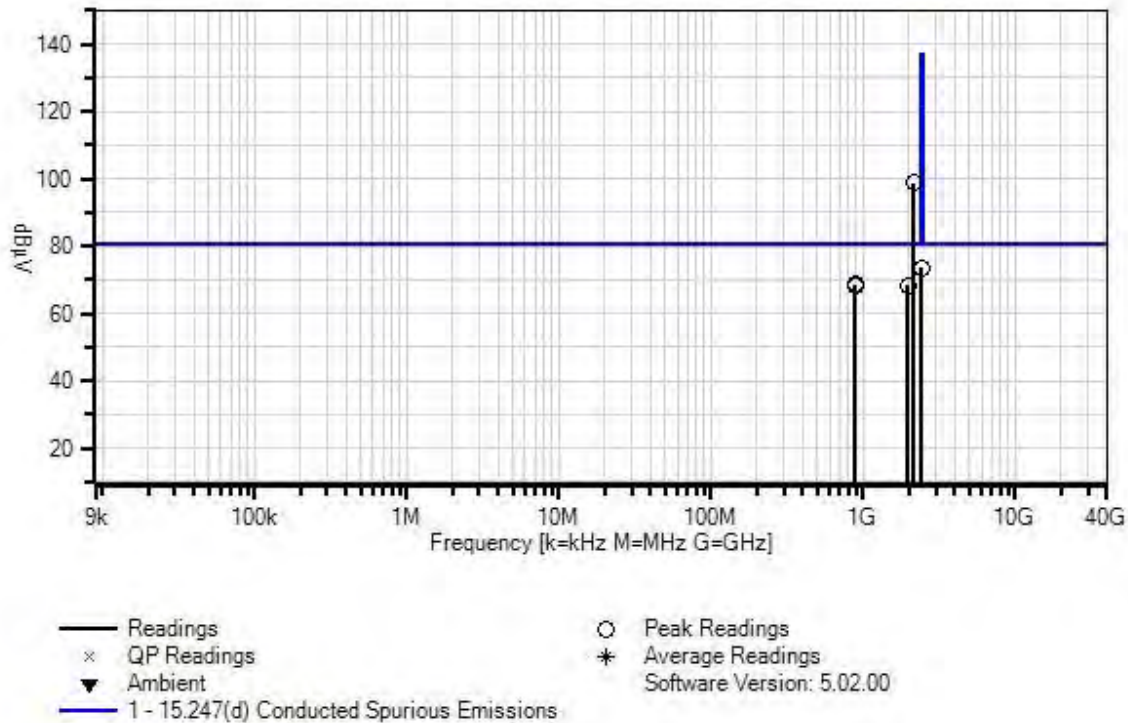
Device	Manufacturer	Model #	S/N
Configuration 1			

***Test Conditions / Notes:***

<p>Conducted Spurious Emission          Frequency Range: 9kHz to 25GHz</p> <p>Temperature: 22.0° C          Humidity: 39.6 %          Atmospheric Pressure: 100.5kPa</p> <p>Highest Generation Frequency: 2.462GHz          RBW=100 kHz and VBW=300kHz          Attenuator = 63 at MAX Level          Method: KDB 558074 D01 DTS Meas Guidance v03r03 section 11</p> <p>The equipment under test (EUT) is placed on the table top. The EUT set at maximum gain.          A remotely located signal generator is connected to input port of EUT.          The DL power input signal 2132.5MHz, 4.1MHz AWGN at the outdoor antenna port is set at 3dB above AGC level.</p> <p><b>802.11n HT20 Mode</b>          Data rate = MCS0          Attenuator for 802.11n HT20 Mode=35</p> <p><b>Low Channel</b></p>
---



CKC Laboratories, Inc Date: 10/6/2015 Time: 11:54:11 AM Cellphone-Mate, Inc W/O#: 97491  
Test Distance: None Sequence#: 9



**Test Equipment:**

ID	Asset #/Serial #	Description	Model	Calibration Date	Cal Due Date
T1	ANP06239	Attenuator	54A-10	7/9/2014	7/9/2016
T2	ANP06710	Cable	32026-29094K-29094K-72TC	9/18/2014	9/18/2016
	AN03471	RF Characteristics Analyzer	E4440A	12/19/2013	12/19/2015

**Measurement Data:**

Reading listed by margin.

Test Distance: None

#	Freq MHz	Rdng dBμV	T1 dB	T2 dB	dB	dB	Dist Table	Corr dBμV	Spec dBμV	Margin dB	Polar Ant
1	2134.440M	87.8	+9.9	+1.0			+0.0	98.7	80.4	+18.3	None
2	2397.773M	62.5	+9.9	+1.1			+0.0	73.5	80.4	-6.9	None
3	888.420M	58.0	+9.9	+0.7			+0.0	68.6	80.4	-11.8	None
4	884.944M	57.8	+9.9	+0.7			+0.0	68.4	80.4	-12.0	None
5	1963.872M	57.5	+9.9	+1.0			+0.0	68.4	80.4	-12.0	None



Test Location: CKC Laboratories, Inc. • 1120 Fulton Place • Fremont, CA 94539 • (510) 249-1170  
 Customer: **Cellphone-Mate, Inc.**  
 Specification: **15.247(d) Conducted Spurious Emissions**  
 Work Order #: **97491** Date: 10/6/2015  
 Test Type: **Conducted Spurious Emission** Time: 12:01:27 PM  
 Tested By: Hieu Song Nguyenpham Sequence#: 10  
 Software: EMITest 5.02.00

***Equipment Tested:***

Device	Manufacturer	Model #	S/N
Configuration 1			

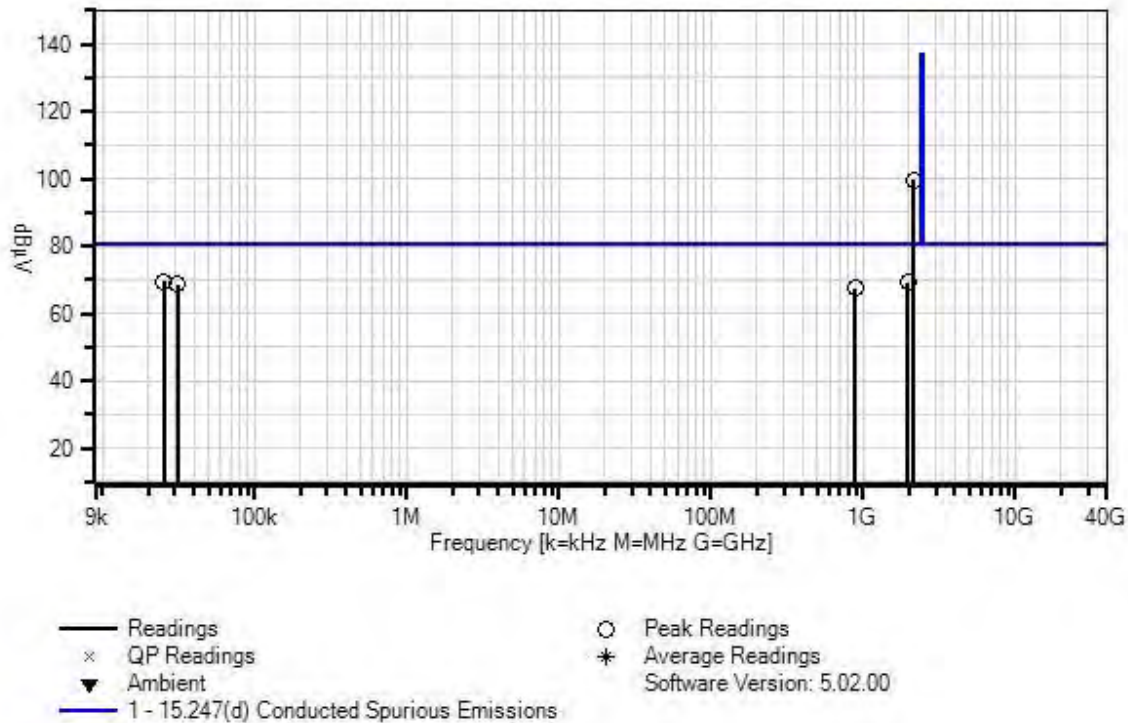
***Support Equipment:***

Device	Manufacturer	Model #	S/N
Configuration 1			

***Test Conditions / Notes:***

<p>Conducted Spurious Emission          Frequency Range: 9kHz to 25GHz</p> <p>Temperature: 22.0° C          Humidity: 39.6 %          Atmospheric Pressure: 100.5kPa</p> <p>Highest Generation Frequency: 2.462GHz          RBW=100 kHz and VBW=300kHz          Attenuator = 63 at MAX Level          Method: KDB 558074 D01 DTS Meas Guidance v03r03 section 11</p> <p>The equipment under test (EUT) is placed on the table top. The EUT set at maximum gain.          A remotely located signal generator is connected to input port of EUT.          The DL power input signal 2132.5MHz, 4.1MHz AWGN at the outdoor antenna port is set at 3dB above AGC level.</p> <p><b>802.11n HT20 Mode</b>          Data rate =MCS0          Attenuator for 802.11n HT20 Mode=35</p> <p><b>Middle Channel</b></p>
---

CKC Laboratories, Inc Date: 10/6/2015 Time: 12:01:27 PM Cellphone-Mate, Inc W/O#: 97491  
Test Distance: None Sequence#: 10



**Test Equipment:**

ID	Asset #/Serial #	Description	Model	Calibration Date	Cal Due Date
T1	ANP06239	Attenuator	54A-10	7/9/2014	7/9/2016
T2	ANP06710	Cable	32026-29094K-29094K-72TC	9/18/2014	9/18/2016
	AN03471	RF Characteristics Analyzer	E4440A	12/19/2013	12/19/2015

**Measurement Data:**

Reading listed by margin.

Test Distance: None

#	Freq MHz	Rdng dBμV	T1 dB	T2 dB	Dist Table	Corr dBμV	Spec dBμV	Margin dB	Polar Ant
1	2134.440M	88.8	+9.9	+1.0	+0.0	99.7	80.4	+19.3	None
2	25.317k	59.6	+9.8	+0.0	+0.0	69.4	80.4	-11.0	None
3	1963.872M	58.2	+9.9	+1.0	+0.0	69.1	80.4	-11.3	None
4	31.141k	58.7	+9.8	+0.0	+0.0	68.5	80.4	-11.9	None
5	884.944M	57.0	+9.9	+0.7	+0.0	67.6	80.4	-12.8	None

Test Location: CKC Laboratories, Inc. • 1120 Fulton Place • Fremont, CA 94539 • (510) 249-1170  
 Customer: **Cellphone-Mate, Inc.**  
 Specification: **15.247(d) Conducted Spurious Emissions**  
 Work Order #: **97491** Date: 10/6/2015  
 Test Type: **Conducted Spurious Emission** Time: 12:08:08 PM  
 Tested By: Hieu Song Nguyenpham Sequence#: 11  
 Software: EMITest 5.02.00

***Equipment Tested:***

Device	Manufacturer	Model #	S/N
Configuration 1			

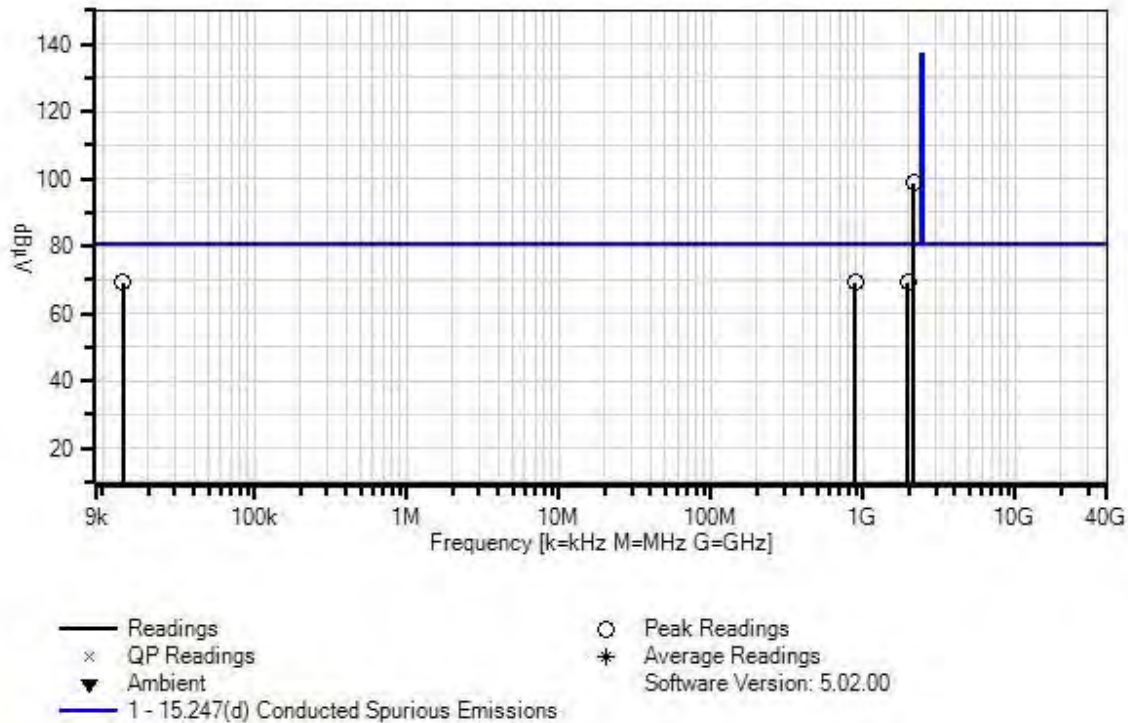
***Support Equipment:***

Device	Manufacturer	Model #	S/N
Configuration 1			

***Test Conditions / Notes:***

<p>Conducted Spurious Emission          Frequency Range: 9kHz to 25GHz</p> <p>Temperature: 22.0° C          Humidity: 39.6 %          Atmospheric Pressure: 100.5kPa</p> <p>Highest Generation Frequency: 2.462GHz          RBW=100 kHz and VBW=300kHz          Attenuator = 63 at MAX Level          Method: KDB 558074 D01 DTS Meas Guidance v03r03 section 11</p> <p>The equipment under test (EUT) is placed on the table top. The EUT set at maximum gain.          A remotely located signal generator is connected to input port of EUT.          The DL power input signal 2132.5MHz, 4.1MHz AWGN at the outdoor antenna port is set at 3dB above AGC level.</p> <p><b>802.11n HT20 Mode</b>          Data rate =MCS0          Attenuator for 802.11n HT20 Mode=35</p> <p><b>High Channel</b></p>
---

CKC Laboratories, Inc Date: 10/6/2015 Time: 12:08:08 PM Cellphone-Mate, Inc W/O#: 97491  
Test Distance: None Sequence#: 11



#### Test Equipment:

ID	Asset #/Serial #	Description	Model	Calibration Date	Cal Due Date
T1	ANP06239	Attenuator	54A-10	7/9/2014	7/9/2016
T2	ANP06710	Cable	32026-29094K-29094K-72TC	9/18/2014	9/18/2016
	AN03471	RF Characteristics Analyzer	E4440A	12/19/2013	12/19/2015

#### Measurement Data:

Reading listed by margin.

Test Distance: None

#	Freq MHz	Rdng dBµV	T1 dB	T2 dB	Dist Table	Corr dBµV	Spec dBµV	Margin dB	Polar Ant
1	2134.440M	88.0	+9.9	+1.0	+0.0	98.9	80.4	+18.5	None
2	1963.872M	58.3	+9.9	+1.0	+0.0	69.2	80.4	-11.2	None
3	13.793k	59.4	+9.8	+0.0	+0.0	69.2	80.4	-11.2	None
4	884.944M	58.5	+9.9	+0.7	+0.0	69.1	80.4	-11.3	None

Test Location: CKC Laboratories, Inc. • 1120 Fulton Place • Fremont, CA 94539 • (510) 249-1170  
 Customer: **Cellphone-Mate, Inc.**  
 Specification: **15.247(d) Conducted Spurious Emissions**  
 Work Order #: **97491** Date: 10/6/2015  
 Test Type: **Conducted Spurious Emission** Time: 1:11:19 PM  
 Tested By: Hieu Song Nguyenpham Sequence#: 12  
 Software: EMITest 5.02.00

***Equipment Tested:***

Device	Manufacturer	Model #	S/N
Configuration 1			

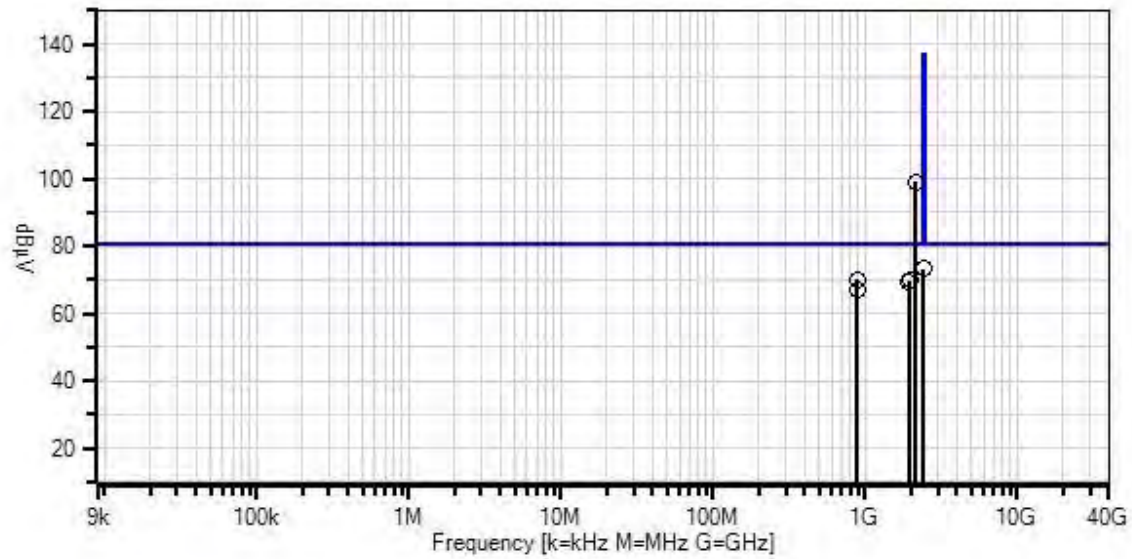
***Support Equipment:***

Device	Manufacturer	Model #	S/N
Configuration 1			

***Test Conditions / Notes:***

<p>Conducted Spurious Emission          Frequency Range: 9kHz to 25GHz</p> <p>Temperature: 22.0° C          Humidity: 39.6 %          Atmospheric Pressure: 100.5kPa</p> <p>Highest Generation Frequency: 2.462GHz          RBW=100 kHz and VBW=300kHz          Attenuator = 63 at MAX Level          Method: KDB 558074 D01 DTS Meas Guidance v03r03 Section 11</p> <p>The equipment under test (EUT) is placed on the table top. The EUT set at maximum gain.          A remotely located signal generator is connected to input port of EUT.          The DL power input signal 2132.5MHz, 4.1MHz AWGN at the outdoor antenna port is set at 3dB above AGC level.</p> <p><b>802.11n HT40 Mode</b>          Data rate =MCS1          Attenuator for 802.11n HT40 Mode=32</p> <p><b>Low Channel</b></p>
--

CKC Laboratories, Inc Date: 10/6/2015 Time: 1:11:19 PM Cellphone-Mate, Inc WO#: 97491  
 Test Distance: None Sequence#: 12



— Readings  
 × QP Readings  
 ▼ Ambient  
 — 1 - 15.247(d) Conducted Spurious Emissions  
 ○ Peak Readings  
 \* Average Readings  
 Software Version: 5.02.00

**Test Equipment:**

ID	Asset #/Serial #	Description	Model	Calibration Date	Cal Due Date
T1	ANP06239	Attenuator	54A-10	7/9/2014	7/9/2016
T2	ANP06710	Cable	32026-29094K-29094K-72TC	9/18/2014	9/18/2016
	AN03471	RF Characteristics Analyzer	E4440A	12/19/2013	12/19/2015

**Measurement Data:**

Reading listed by margin.

Test Distance: None

#	Freq MHz	Rdng dB $\mu$ V	T1 dB	T2 dB			Dist Table	Corr dB $\mu$ V	Spec dB $\mu$ V	Margin dB	Polar Ant
1	2131.448M	88.2	+9.9	+1.0			+0.0	99.1	80.4	+18.7	None
									4.1MHz AWGN Signal		
2	2397.773M	62.4	+9.9	+1.1			+0.0	73.4	80.4	-7.0	None
3	885.813M	59.5	+9.9	+0.7			+0.0	70.1	80.4	-10.3	None
4	1963.872M	59.0	+9.9	+1.0			+0.0	69.9	80.4	-10.5	None
5	1936.940M	58.3	+9.9	+1.0			+0.0	69.2	80.4	-11.2	None
6	889.289M	56.7	+9.9	+0.7			+0.0	67.3	80.4	-13.1	None



Test Location: CKC Laboratories, Inc. • 1120 Fulton Place • Fremont, CA 94539 • (510) 249-1170  
 Customer: **Cellphone-Mate, Inc.**  
 Specification: **15.247(d) Conducted Spurious Emissions**  
 Work Order #: **97491** Date: 10/6/2015  
 Test Type: **Conducted Spurious Emission** Time: 1:29:44 PM  
 Tested By: Hieu Song Nguyenpham Sequence#: 13  
 Software: EMITest 5.02.00

***Equipment Tested:***

Device	Manufacturer	Model #	S/N
Configuration 1			

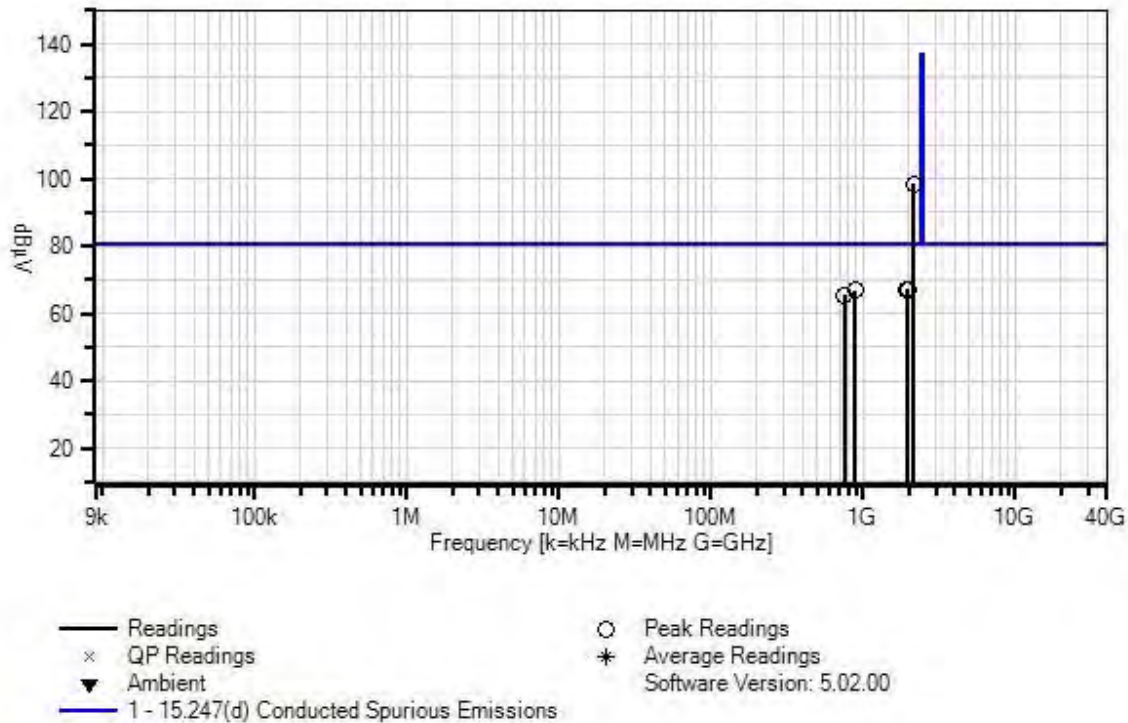
***Support Equipment:***

Device	Manufacturer	Model #	S/N
Configuration 1			

***Test Conditions / Notes:***

<p>Conducted Spurious Emission          Frequency Range: 9kHz to 25GHz</p> <p>Temperature: 22.0° C          Humidity: 39.6 %          Atmospheric Pressure: 100.5kPa</p> <p>Highest Generation Frequency: 2.462GHz          RBW=100 kHz and VBW=300kHz          Attenuator = 63 at MAX Level          Method: KDB 558074 D01 DTS Meas Guidance v03r03 Section 11</p> <p>The equipment under test (EUT) is placed on the table top. The EUT set at maximum gain.          A remotely located signal generator is connected to input port of EUT.          The DL power input signal 2132.5MHz, 4.1MHz AWGN at the outdoor antenna port is set at 3dB above AGC level.</p> <p><b>802.11n HT40 Mode</b>          Data rate = MCS1          Attenuator for 802.11n HT40 Mode=32</p> <p><b>Middle Channel</b></p>
--

CKC Laboratories, Inc Date: 10/6/2015 Time: 1:29:44 PM Cellphone-Mate, Inc WO#: 97491  
Test Distance: None Sequence#: 13



#### Test Equipment:

ID	Asset #/Serial #	Description	Model	Calibration Date	Cal Due Date
T1	ANP06239	Attenuator	54A-10	7/9/2014	7/9/2016
T2	ANP06710	Cable	32026-29094K-29094K-72TC	9/18/2014	9/18/2016
	AN03471	RF Characteristics Analyzer	E4440A	12/19/2013	12/19/2015

#### Measurement Data:

Reading listed by margin.

Test Distance: None

#	Freq MHz	Rdng dBμV	T1 dB	T2 dB	dB	dB	Dist Table	Corr dBμV	Spec dBμV	Margin dB	Polar Ant
1	2131.448M	87.5	+9.9	+1.0			+0.0	98.4	80.4	+18.0	None
2	1963.872M	56.2	+9.9	+1.0			+0.0	67.1	80.4	-13.3	None
3	1936.940M	56.0	+9.9	+1.0			+0.0	66.9	80.4	-13.5	None
4	883.206M	56.2	+9.9	+0.7			+0.0	66.8	80.4	-13.6	None
5	747.633M	54.8	+9.9	+0.7			+0.0	65.4	80.4	-15.0	None

Test Location: CKC Laboratories, Inc. • 1120 Fulton Place • Fremont, CA 94539 • (510) 249-1170  
 Customer: **Cellphone-Mate, Inc.**  
 Specification: **15.247(d) Conducted Spurious Emissions**  
 Work Order #: **97491** Date: 10/6/2015  
 Test Type: **Conducted Spurious Emission** Time: 1:35:58 PM  
 Tested By: Hieu Song Nguyenpham Sequence#: 14  
 Software: EMITest 5.02.00

***Equipment Tested:***

Device	Manufacturer	Model #	S/N
Configuration 1			

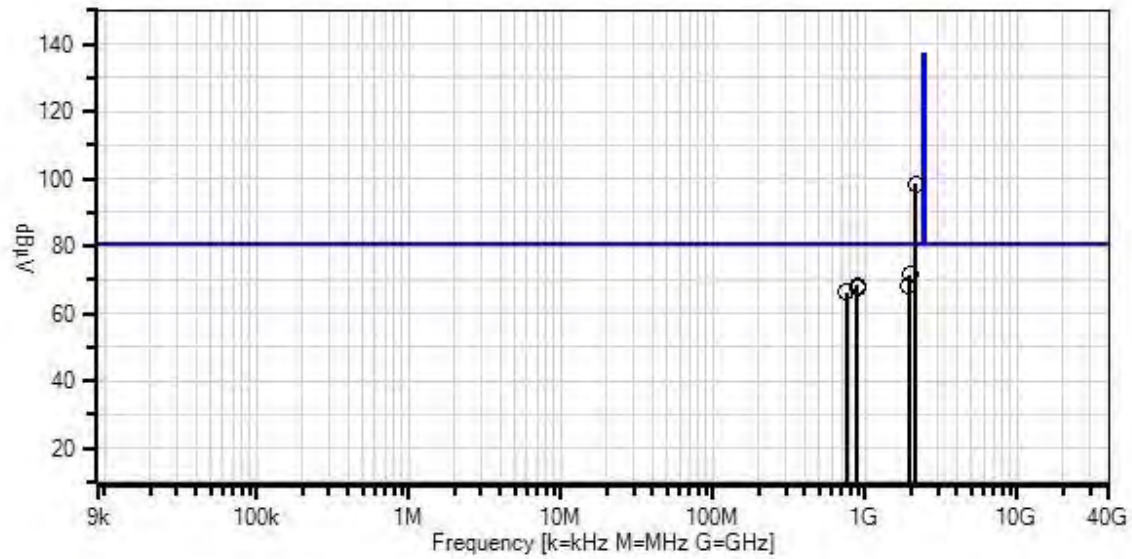
***Support Equipment:***

Device	Manufacturer	Model #	S/N
Configuration 1			

***Test Conditions / Notes:***

<p>Conducted Spurious Emission          Frequency Range: 9kHz to 25GHz</p> <p>Temperature: 22.0°C          Humidity: 39.6 %          Atmospheric Pressure: 100.5kPa</p> <p>Highest Generation Frequency: 2.462GHz          RBW=100 kHz and VBW=300kHz          Attenuator = 63 at MAX Level          Method: KDB 558074 D01 DTS Meas Guidance v03r03 Section 11</p> <p>The equipment under test (EUT) is placed on the table top. The EUT set at maximum gain.          A remotely located signal generator is connected to input port of EUT.          The DL power input signal 2132.5MHz, 4.1MHz AWGN at the outdoor antenna port is set at 3dB above AGC level.</p> <p><b>802.11n HT40 Mode</b>          Data rate =MCS1          Attenuator for 802.11n HT40 Mode=32</p> <p><b>High Channel</b></p>
--

CKC Laboratories, Inc Date: 10/6/2015 Time: 1:35:58 PM Cellphone-Mate, Inc WO#: 97491  
 Test Distance: None Sequence#: 14



— Readings  
 × QP Readings  
 ▼ Ambient  
 — 1 - 15.247(d) Conducted Spurious Emissions  
 ○ Peak Readings  
 \* Average Readings  
 Software Version: 5.02.00

**Test Equipment:**

ID	Asset #/Serial #	Description	Model	Calibration Date	Cal Due Date
T1	ANP06239	Attenuator	54A-10	7/9/2014	7/9/2016
T2	ANP06710	Cable	32026-29094K-29094K-72TC	9/18/2014	9/18/2016
	AN03471	RF Characteristics Analyzer	E4440A	12/19/2013	12/19/2015

**Measurement Data:**

Reading listed by margin.

Test Distance: None

#	Freq MHz	Rdng dBμV	T1 dB	T2 dB			Dist Table	Corr dBμV	Spec dBμV	Margin dB	Polar Ant
1	2131.448M	87.5	+9.9	+1.0			+0.0	98.4	80.4	+18.0	None
									4.1MHz AWGN Signal		
2	1963.872M	60.6	+9.9	+1.0			+0.0	71.5	80.4	-8.9	None
3	882.337M	57.8	+9.9	+0.7			+0.0	68.4	80.4	-12.0	None
4	1936.940M	57.3	+9.9	+1.0			+0.0	68.2	80.4	-12.2	None
5	888.420M	56.9	+9.9	+0.7			+0.0	67.5	80.4	-12.9	None
6	748.502M	55.8	+9.9	+0.7			+0.0	66.4	80.4	-14.0	None

## Band Edge

Test Location: CKC Laboratories, Inc. • 1120 Fulton Place • Fremont, CA 94539 • (510) 249-1170  
 Customer: **Cellphone-Mate, Inc.**  
 Specification: **Band edge Set up**  
 Work Order #: **97491** Date: 10/05/2015  
 Test Type: **Conducted Power Measurement** Time:  
 Tested By: Hieu Song Nguyenpham Sequence#:  
 Software: EMITest 5.02.00

### Test Equipment:

ID	Asset #	Description	Model	Calibration Date	Cal Due Date
T1	P06239	Attenuator	54A-10	7/9/2014	7/9/2016
T2	P06710	Cable	32026-29094K-29094K-72TC	9/18/2014	9/18/2016
	03471	Spectrum Analyzer	E4440A	12/19/2013	12/19/2015

### Equipment Tested:

Device	Manufacturer	Model #	S/N
Configuration 1			

### Support Equipment:

Device	Manufacturer	Model #	S/N
Configuration 1			

### Test Conditions / Notes:

Application: MP\_TEST MFC version 1.3.8.0

Temperature: 22.0 C

Humidity: 39.6 %

Atmospheric Pressure: 100.5kPa

Highest Generation Frequency: 2.462 GHz

RBW=100kHz and VBW=300kHz

Attenuator = 63 at MAX Level

Method: KDB 558074 v03r03 section 11

The equipment under test (EUT) is placed on the table. The EUT is set up as intended to operate on WIFI continuously transmitting. A remotely located signal generator is connected to input port of EUT.

The DL power input signal 2132.5MHz, 4.1MHz AWGN at the outdoor antenna port is set at 3dB above AGC level.

**Attenuator for 802.11b Mode=32**

The Data rate is at 2Mbps

Test Location: CKC Laboratories, Inc. • 1120 Fulton Place • Fremont, CA 94539 • (510) 249-1170  
 Customer: **Cellphone-Mate, Inc.**  
 Specification: **Band edge Set up**  
 Work Order #: **97491** Date: 10/05/2015  
 Test Type: **Conducted Power Measurement** Time:  
 Tested By: Hieu Song Nguyenpham Sequence#:  
 Software: EMITest 5.02.00

**Test Equipment:**

ID	Asset #	Description	Model	Calibration Date	Cal Due Date
T1	P06239	Attenuator	54A-10	7/9/2014	7/9/2016
T2	P06710	Cable	32026-29094K-29094K-72TC	9/18/2014	9/18/2016
	03471	Spectrum Analyzer	E4440A	12/19/2013	12/19/2015

**Equipment Tested:**

Device	Manufacturer	Model #	S/N
Configuration 1			

**Support Equipment:**

Device	Manufacturer	Model #	S/N
Configuration 1			

**Test Conditions / Notes:**

Application: MP\_TEST MFC version 1.3.8.0  
  
 Temperature: 22.0°C  
 Humidity: 39.6 %  
 Atmospheric Pressure: 100.5kPa  
  
 Highest Generation Frequency: 2.462 GHz  
 RBW=100kHz and VBW=300kHz  
 Attenuator = 63 at MAX Level  
 Method: KDB 558074 v03r03 section 11  
  
 The equipment under test (EUT) is placed on the table. The EUT is set up as intended to operate on WIFI continuously transmitting. A remotely located signal generator is connected to input port of EUT.  
 The DL power input signal 2132.5MHz, 4.1MHz AWGN at the outdoor antenna port is set at 3dB above AGC level.  
  
**Attenuator for 802.11g Mode=38**  
 The Data rate is at 54Mbps



Test Location: CKC Laboratories, Inc. • 1120 Fulton Place • Fremont, CA 94539 • (510) 249-1170  
 Customer: **Cellphone-Mate, Inc.**  
 Specification: **Band edge Set up**  
 Work Order #: **97491** Date: 10/05/2015  
 Test Type: **Conducted Power Measurement** Time:  
 Tested By: Hieu Song Nguyenpham Sequence#:  
 Software: EMITest 5.02.00

**Test Equipment:**

ID	Asset #	Description	Model	Calibration Date	Cal Due Date
T1	P06239	Attenuator	54A-10	7/9/2014	7/9/2016
T2	P06710	Cable	32026-29094K-29094K-72TC	9/18/2014	9/18/2016
	03471	Spectrum Analyzer	E4440A	12/19/2013	12/19/2015

**Equipment Tested:**

Device	Manufacturer	Model #	S/N
Configuration 1			

**Support Equipment:**

Device	Manufacturer	Model #	S/N
Configuration 1			

**Test Conditions / Notes:**

Application: MP\_TEST MFC version 1.3.8.0  
  
 Temperature: 22.0°C  
 Humidity: 39.6 %  
 Atmospheric Pressure: 100.5kPa  
  
 Highest Generation Frequency: 2.462 GHz  
 RBW=100kHz and VBW=300kHz  
 Attenuator = 63 at MAX Level  
 Method: KDB 558074 v03r03 section 11  
  
 The equipment under test (EUT) is placed on the table. The EUT is set up as intended to operate on WIFI continuously transmitting. A remotely located signal generator is connected to input port of EUT.  
 The DL power input signal 2132.5MHz, 4.1MHz AWGN at the outdoor antenna port is set at 3dB above AGC level.  
  
**Attenuator for 802.11n HT20 Mode=35**  
 The Data rate is at MCS0

Test Location: CKC Laboratories, Inc. • 1120 Fulton Place • Fremont, CA 94539 • (510) 249-1170  
 Customer: **Cellphone-Mate, Inc.**  
 Specification: **Band edge Set up**  
 Work Order #: **97491** Date: 10/05/2015  
 Test Type: **Conducted Power Measurement** Time:  
 Tested By: Hieu Song Nguyenpham Sequence#:  
 Software: EMITest 5.02.00

**Test Equipment:**

ID	Asset #	Description	Model	Calibration Date	Cal Due Date
T1	P06239	Attenuator	54A-10	7/9/2014	7/9/2016
T2	P06710	Cable	32026-29094K-29094K-72TC	9/18/2014	9/18/2016
	03471	Spectrum Analyzer	E4440A	12/19/2013	12/19/2015

**Equipment Tested:**

Device	Manufacturer	Model #	S/N
Configuration 1			

**Support Equipment:**

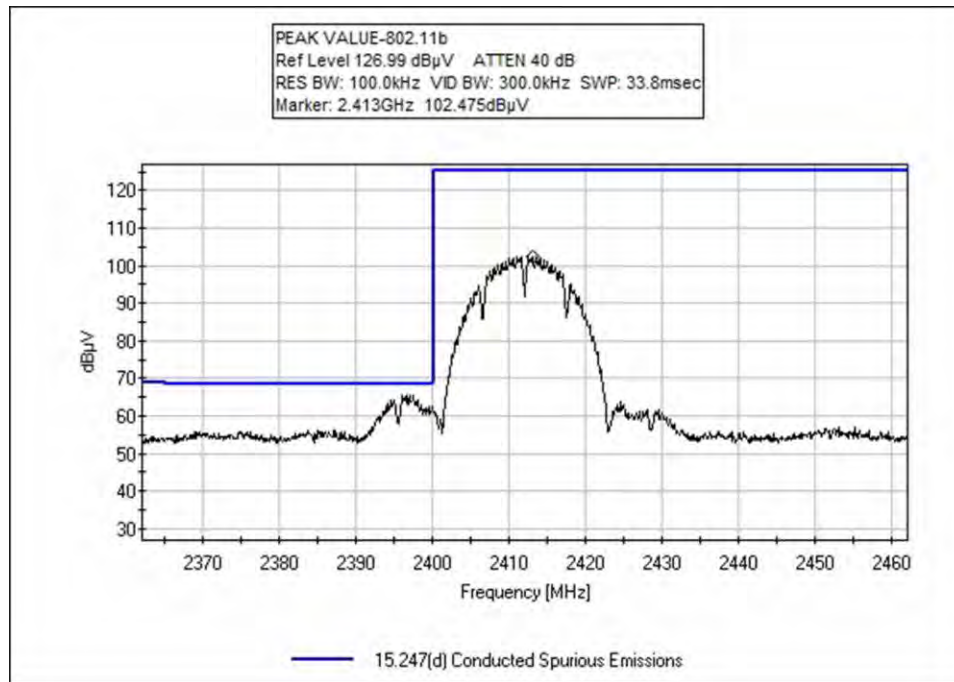
Device	Manufacturer	Model #	S/N
Configuration 1			

**Test Conditions / Notes:**

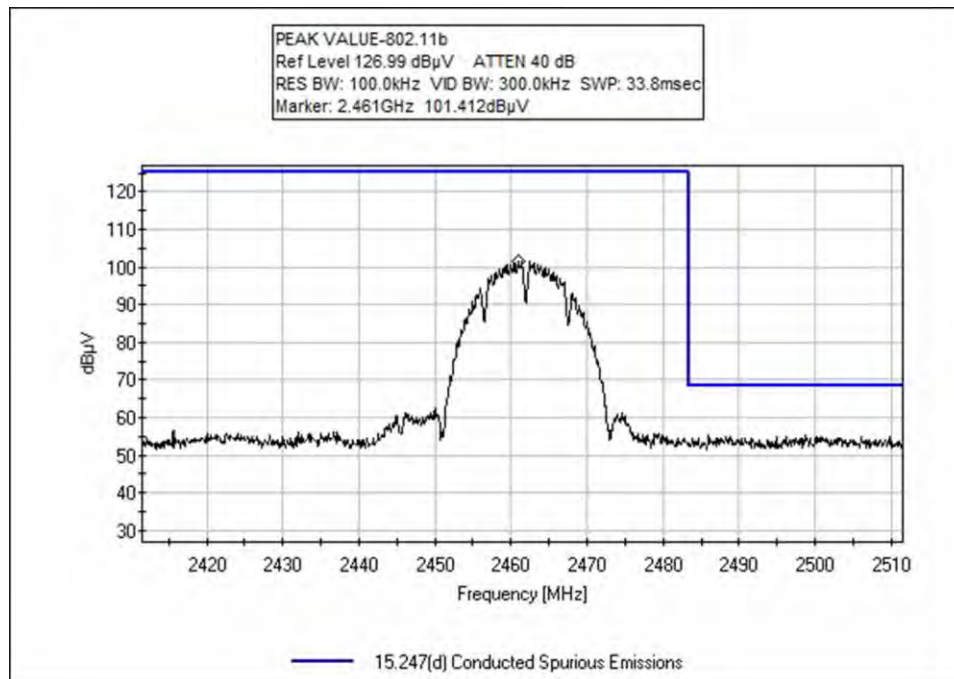
Application: MP\_TEST MFC version 1.3.8.0  
  
 Temperature: 22.0°C  
 Humidity: 39.6 %  
 Atmospheric Pressure: 100.5kPa  
  
 Highest Generation Frequency: 2.462 GHz  
 RBW=100kHz and VBW=300kHz  
 Attenuator = 63 at MAX Level  
 Method: KDB 558074 v03r03 section 11  
  
 The equipment under test (EUT) is placed on the table. The EUT is set up as intended to operate on WIFI continuously transmitting. A remotely located signal generator is connected to input port of EUT.  
 The DL power input signal 2132.5MHz, 4.1MHz AWGN at the outdoor antenna port is set at 3dB above AGC level.  
  
**Attenuator for 802.11n HT40 Mode=32**  
 The Data rate is at MCS1

## Plots

### 802.11b – Mode

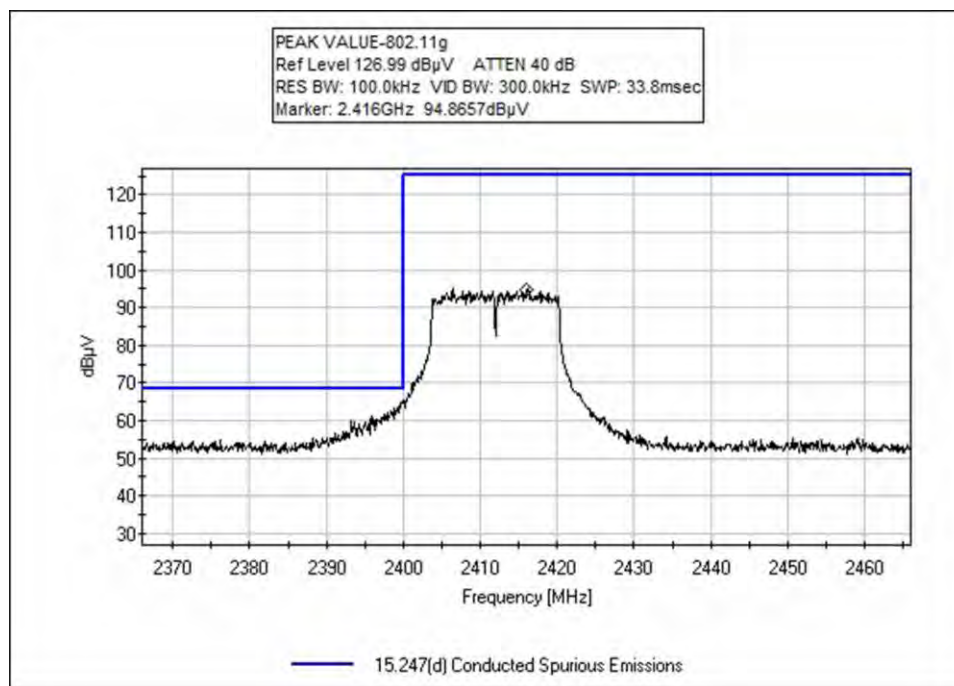


Low Channel

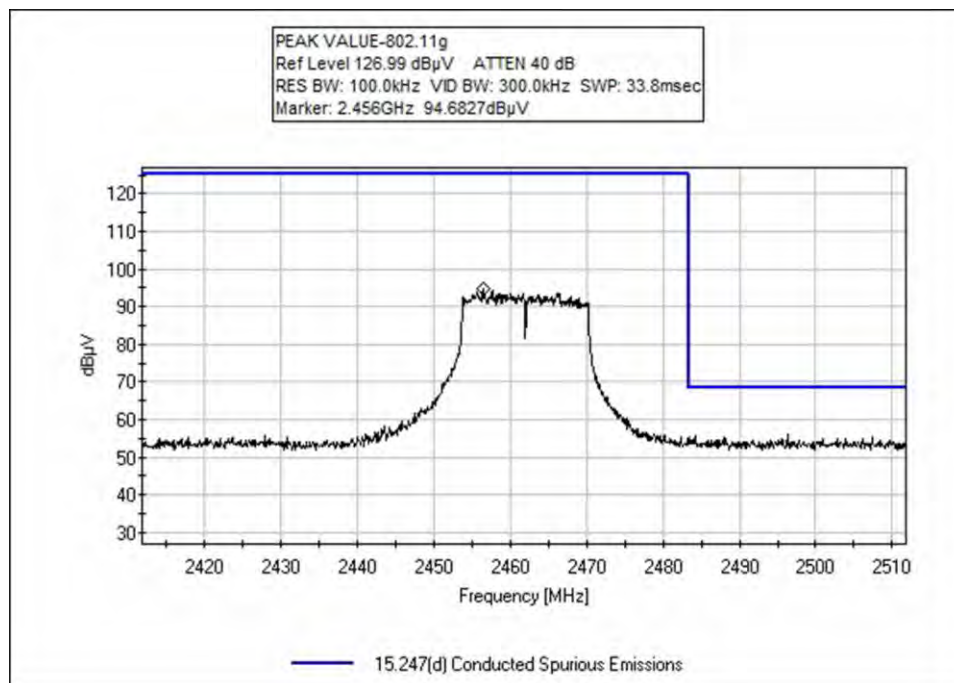


High Channel

### 802.11g- Mode

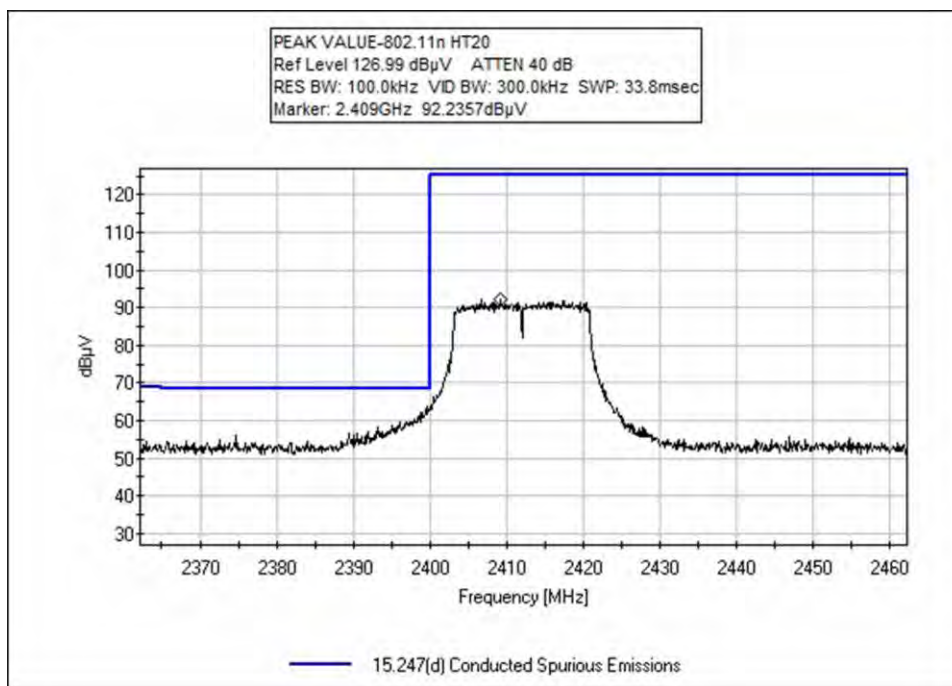


Low Channel

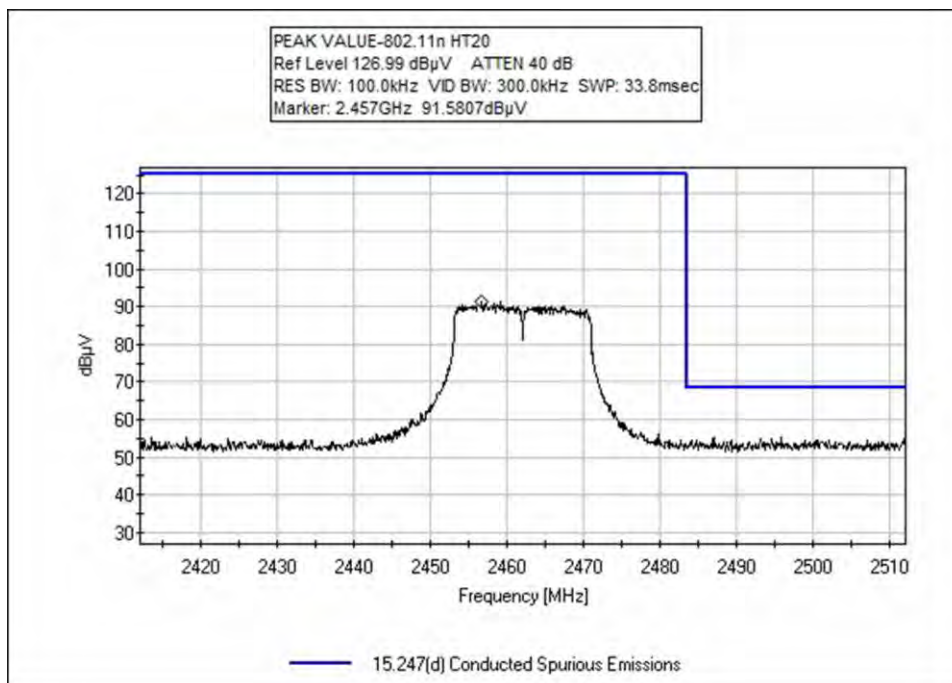


High Channel

### 802.11n HT20- Mode

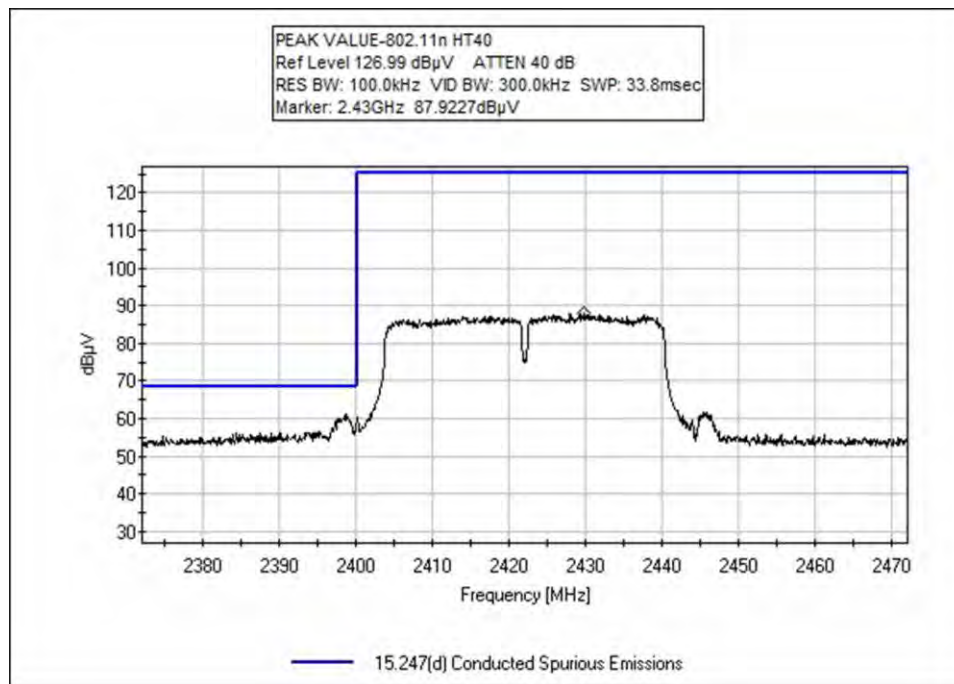


Low Channel

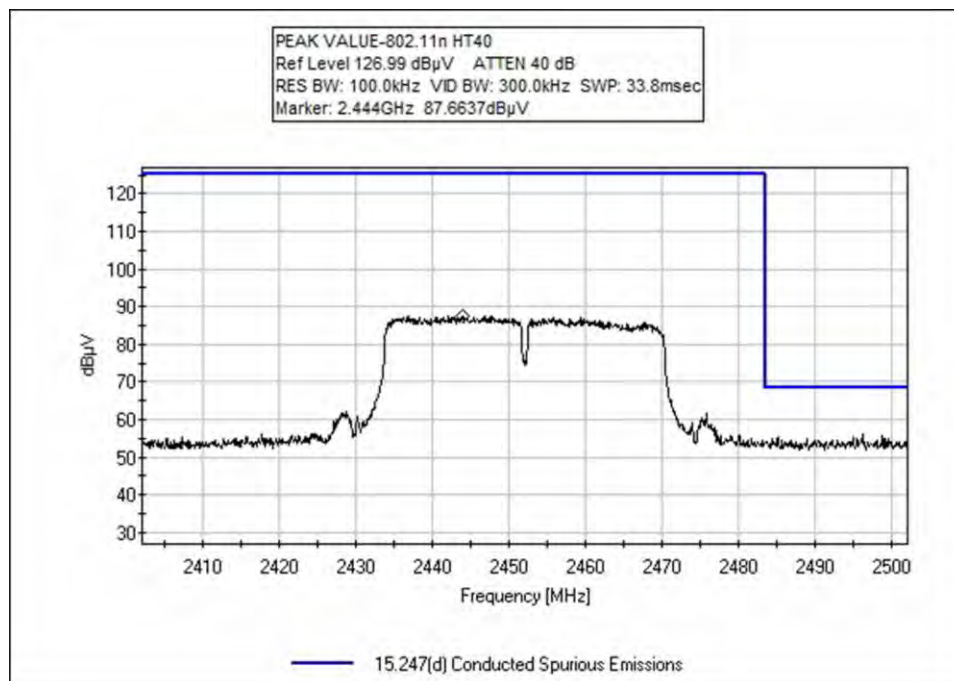


High Channel

### 802.11n HT40 - Mode



Low Channel



High Channel