CERTIFICATION TEST REPORT

Report Number. : 12804406-E4V1

Applicant	:	FITBIT INC. 199 FREMONT ST, 14TH FLOOR SAN FRANCISCO, CA 94105, U.S.A.
Model	:	FB507
Brand	:	Fitbit
FCC ID	:	XRAFB507
IC	:	8542A-FB507
EUT Description	:	SMARTWATCH
Test Standard(s)	:	FCC 47 CFR PART 15 SUBPART C ISED RSS-247 ISSUE 2 ISED RSS-GEN ISSUE 5

Date Of Issue:
June 06, 2019

Prepared by:
UL Verification Services Inc.
47173 Benicia Street
Fremont, CA 94538 U.S.A.
TEL: (510) 319-4000
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NVLAP Lab code: 200065-0

REPORT REVISION HISTORY

Rev.	Issue Date	Revisions	Revised By
V1	6/6/2019	Initial Issue	-

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UL VERIFICATION SERVICES INC.
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1. ATTESTATION OF TEST RESULTS

COMPANY NAME: FITBIT INC.
199 FREMONT ST, 14TH FLOOR
SAN FRANCISCO,
CA 94105, U.S.A.

EUT DESCRIPTION: SMARTWATCH

MODEL: FB507

SERIAL NUMBER: 23 42 BA C6 B0 41; 23 60 7F C6 B0 21 (RADIATED)
23 3C 06 0C 46 B0 41(CONDUCTED)

DATE TESTED: APRIL 16, 2019 –MAY 23, 2019

APPLICABLE STANDARDS	
STANDARD	**TEST RESULTS**
CFR 47 Part 15 Subpart C	Complies
ISED RSS-247 Issue 2	Complies
ISED RSS-GEN Issue 5	Complies

UL Verification Services Inc. tested the above equipment in accordance with the requirements set forth in the above standards. The test results show that the equipment tested is capable of demonstrating compliance with the requirements as documented in this report.

The results documented in this report apply only to the tested sample, under the conditions and modes of operation as described herein. It is the manufacturer's responsibility to assure that additional production units of this model are manufactured with identical electrical and mechanical components. All samples tested were in good operating condition throughout the entire test program. Measurement Uncertainties are published for informational purposes only and were not taken into account unless noted otherwise.

This document may not be altered or revised in any way unless done so by UL Verification Services Inc. and all revisions are duly noted in the revisions section. Any alteration of this document not carried out by UL Verification Services Inc. will constitute fraud and shall nullify the document. This report must not be used by the client to claim product certification, approval, or endorsement by NVLAP, NIST, any agency of the Federal Government, or any agency of the U.S. government.

Approved & Released For
UL Verification Services Inc. By:

THU CHAN
OPERATIONS LEAD
UL Verification Services Inc.

Prepared By:

ERIC YU
TEST ENGINEER
UL Verification Services Inc.

Reviewed By:

TINA CHU
SENIOR PROJECT ENGINEER
UL Verification Services Inc.

2. TEST METHODOLOGY

The tests documented in this report were performed in accordance with FCC CFR 47 Part 2, FCC CFR 47 Part 15, ANSI C63.10-2013, KDB 558074 D01 15.247 Meas Guidance v05r02, RSS-GEN Issue 5, and RSS-247 Issue 2.

3. FACILITIES AND ACCREDITATION

The test sites and measurement facilities used to collect data are located at 47173 and 47266 Benicia Street, and 47658 Kato Road, Fremont, California, USA. Line conducted emissions are measured only at the 47173 address. The following table identifies which facilities were utilized for radiated emission measurements documented in this report. Specific facilities are also identified in the test results sections.

47173 Benicia Street	47266 Benicia Street	47658 Kato Road
☐ Chamber A	☐ Chamber D	☒ Chamber I
☐ Chamber B	☐ Chamber E	☒ Chamber J
☐ Chamber C	☐ Chamber F	☒ Chamber K
	☐ Chamber G	☐ Chamber L
	☐ Chamber H	☐ Chamber M

The above test sites and facilities are covered under FCC Test Firm Registration # 208313. Chambers above are covered under Industry Canada company address and respective code: 2324A.

UL Verification Services Inc. is accredited by NVLAP, Laboratory Code 200065-0

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4. CALIBRATION AND UNCERTAINTY

4.1. MEASURING INSTRUMENT CALIBRATION

The measuring equipment utilized to perform the tests documented in this report has been calibrated in accordance with the manufacturer's recommendations, and is traceable to recognized national standards.

4.2. SAMPLE CALCULATION

RADIATED EMISSIONS

Where relevant, the following sample calculation is provided:
Field Strength (dBuV/m) = Measured Voltage (dBuV) + Antenna Factor (dB/m) + Cable Loss (dB) – Preamp Gain (dB)
36.5 dBuV + 18.7 dB/m + 0.6 dB – 26.9 dB = 28.9 dBuV/m

MAINS CONDUCTED EMISSIONS

Where relevant, the following sample calculation is provided:
Final Voltage (dBuV) = Measured Voltage (dBuV) + Cable Loss (dB) + Limiter Factor (dB) + LISN Insertion Loss.
36.5 dBuV + 0 dB +10.1 dB+ 0 dB = 46.6 dBuV

4.3. MEASUREMENT UNCERTAINTY

Where relevant, the following measurement uncertainty levels have been estimated for tests performed on the apparatus:

PARAMETER	UNCERTAINTY
Worst Case Conducted Disturbance, 9KHz to 0.15 MHz	3.84 dB
Worst Case Conducted Disturbance, 0.15 to 30 MHz	3.65 dB
Worst Case Radiated Disturbance, 9KHz to 30 MHz	2.52 dB
Worst Case Radiated Disturbance, 30 to 1000 MHz	4.88 dB
Worst Case Radiated Disturbance, 1000 to 18000 MHz	4.24 dB
Worst Case Radiated Disturbance, 18000 to 26000 MHz	4.37 dB
Worst Case Radiated Disturbance, 26000 to 40000 MHz	5.17 dB

Uncertainty figures are valid to a confidence level of 95%.

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5. EQUIPMENT UNDER TEST

5.1. EUT DESCRIPTION

The EUT is a smartwatch.

5.2. MAXIMUM OUTPUT POWER

The transmitter has a maximum conducted output power as follows:

2.4GHz BAND

Frequency Range (MHz)	Mode	Output Power (dBm)	Output Power (mW)
1Tx			
2412 - 2472	802.11b	22.01	158.85
	802.11g	23.79	239.33
	802.11n HT20	23.30	213.80

5.3. DESCRIPTION OF AVAILABLE ANTENNAS

Frequency Band (GHz)	Antenna Peak Gain (dBi)
2.4	-4.60

5.4. SOFTWARE AND FIRMWARE

The EUT firmware installed during testing was 35.6.0.239

The test utility software used during testing was TeraTerm

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5.5. WORST-CASE CONFIGURATION AND MODE

EUT has 1 type of plastic wristband and 3 types of metallic bands: Link, Tri-Link and Mesh. The worst-case configuration was investigated with wristbands with and without a charger and it was determined that EUT with Tri-Link wristband and with a charger was the worst-case; therefore, all final radiated testing was performed with this configuration.

Radiated bandedge, harmonics, and spurious emissions from 1 GHz to 18GHz were performed with EUT set to transmit at the Low/Middle/High channels.

Radiated emission below 1GHz, above 18GHz, and power line conducted emission were performed with the EUT set to transmit at the channel with highest output power as worst-case scenario.

The fundamental of the EUT was investigated in three orthogonal orientations X/Y/Z, it was determined that Z-Portrait orientation was worst-case orientation. Therefore, all final radiated testing was performed with the EUT in Z-Portrait orientation

Worst-case data rates as provided by the client were:

802.11b mode: 1 Mbps
802.11g mode: 6 Mbps
802.11n HT20mode: MCS0

BLE/BT and Wifi bands do not transmit simultaneously.

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5.6. DESCRIPTION OF TEST SETUP

SUPPORT EQUIPMENT

Support Equipment List				
Description	Manufacturer	Model	Serial Number	FCC ID/ DoC
Laptop AC/DC Adapter	Lenovo	ADLX45DLCC2A	11S36200283ZZ10051KU2U	DoC
Laptop	Lenovo	ThinkPad X1 Carbon	R9-0G4NPM 15/06	DoC
AC/DC Adapter	HomeSpot	S005BPU0500100	N/A	DoC
EUT Charger	Fitbit	N/A	Proto 1	DoC

I/O CABLES (CONDUCTED TEST)

I/O Cable List						
Cable No	Port	# of identical	Connector Type	Cable Type	Cable Length (m)	Remarks
1	AC	1	AC	Unshielded	1	AC Mains to AC/DC Adapter
2	DC	1	DC	Unshielded	1.5	AC/DC Adapter to Laptop
3	USB	1	USB	Unshielded	1	Laptop to EUT
4	Antenna	1	SMA	Unshielded	0.08	To spectrum analyzer

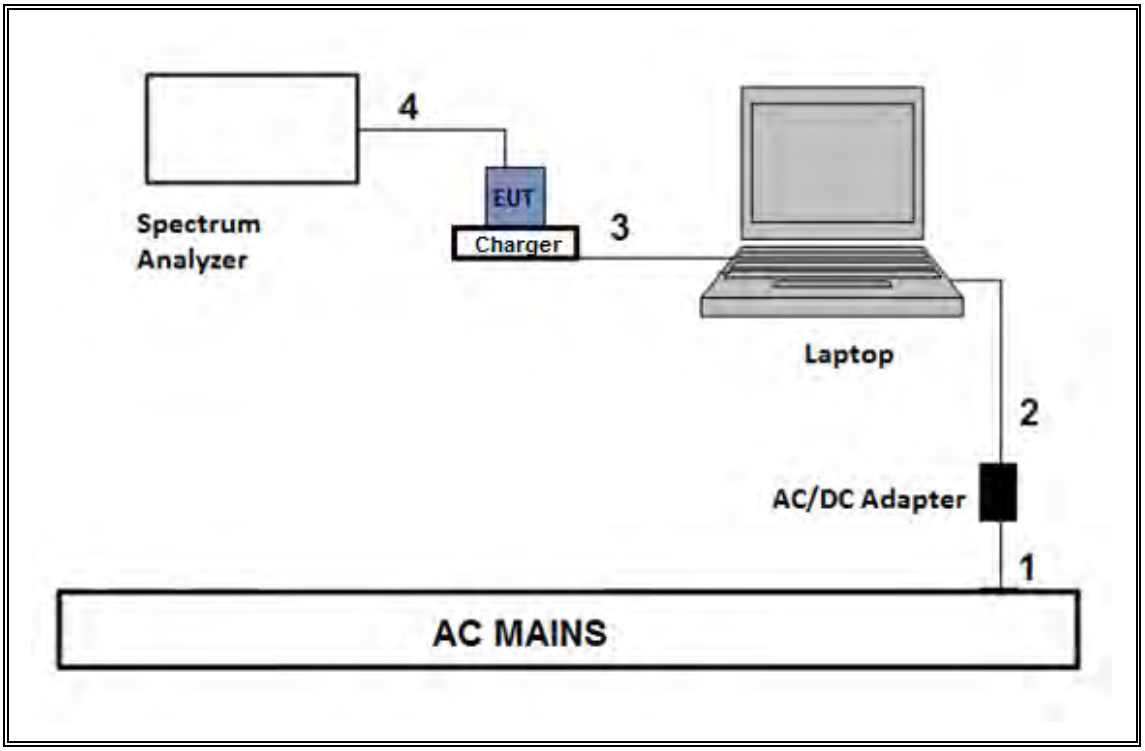
I/O CABLES (AC POWER CONDUCTED TEST AND RADIATED TEST)

I/O Cable List						
Cable No	Port	# of identical	Connector Type	Cable Type	Cable Length (m)	Remarks
1	USB	1	USB	Unshielded	1	Charger to AC/DC adapter

TEST SETUP-CONDUCTED TEST

The EUT was placed in charger and powered by host laptop. Test software exercised the EUT.

SETUP DIAGRAM



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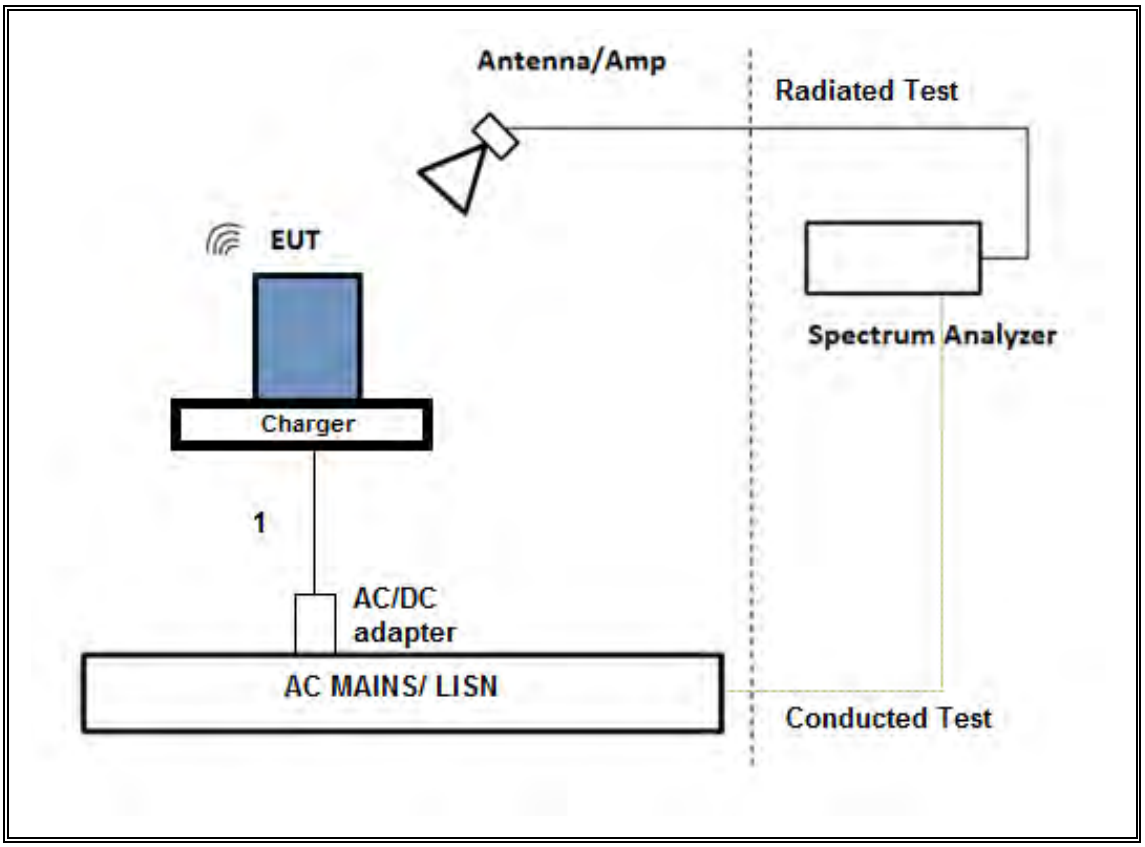
TEST SETUP- AC LINE CONDUCTED TEST AND RADIATED TEST

The EUT was placed in charger and powered by an AC/DC adapter. Test software exercised the EUT.

SETUP DIAGRAM



6. TEST AND MEASUREMENT EQUIPMENT

The following test and measurement equipment was utilized for the tests documented in this report:

TEST EQUIPMENT LIST					
Description	**Manufacturer**	**Model**	**ID Num**	**Cal Due**	**Last Cal**
Power Meter, P-series single channel	Agilent (Keysight) Technologies	N1911A	T1265	01/29/2020	01/29/2019
Power Sensor, P-series, 50MHz to 18GHz, Wideband	Agilent (Keysight) Technologies	N1921A	T1227	02/05/2020	02/05/2019
Antenna, Passive Loop 30Hz to 1MHz	ELETRO METRICS	EM-6871	PRE0179465	05/22/2019	05/22/2018
Antenna, Passive Loop 100kHz to 30MHz	ELETRO METRICS	EM-6872	PRE0179467	05/22/2019	05/22/2018
Amplifier, 100kHz to 1GHz, 32 dB	Sonoma Instrument	310	PRE0180175	07/09/2019	07/09/2018
Antenna, Horn 1-18GHz	ETS-Lindgren	3117	T344*	04/30/2019	04/30/2018
Antenna, Horn 1-18GHz	ETS-Lindgren	3117	T863	06/21/2019	06/21/2018
Amplifier, 1 to18GHz, 35dB	AMPLICAL	AMP1G18-35	T1569*	04/30/2019	04/30/2018
Antenna, Horn 1-18GHz	AR	AMPL-ATH1G18	PRE0189055	04/20/2020	04/20/2018
Amplifier, 1 to18GHz, 35dB	AMPLICAL	AMP1G18-35	T1571	07/30/2019	07/30/2018
Hybrid Antenna, 30MHz to 3GHz	SunAR rf motion	JB3	PRE0181575	08/01/2019	08/01/2018
Amplifier, 100kHz to 1GHz, 32 dB	Sonoma Instrument	310	PRE0180174	05/31/2019	05/31/2018
Antenna, Horn 18 to 26.5GHz	ARA	MWH-1826/B	PRE0182188	08/29/2019	08/29/2018
Rf Amplifier, 18-26.5GHz, 60dB gain	Amplical	AMP18G26.5-60	PRE0181238	05/01/2020	05/01/2019
EMI Test Receiver	Rohde & Schwarz	ESW44	PRE0179367	02/14/2020	02/14/2019
EMI Test Receiver	Rohde & Schwarz	ESW44	PRE0179377	02/15/2020	02/15/2019
EMI Test Receiver	Rohde & Schwarz	ESW44	PRE0179376	02/14/2020	02/14/2019
Spectrum Analyzer, PXA, 3Hz to 44GHz	Agilent (Keysight) Technologies	N9030A	T908	01/23/2020	01/23/2019
AC Line Conducted					
EMI Receiver	Rohde & Schwarz	ESR	T1436	02/14/2020	02/14/2019
LISN for Conducted Emissions CISPR-16	FCC INC.	FCC LISN 50/250	T1310	01/24/2020	01/24/2019
Test Software List					
Radiated Software	UL	UL EMC		Ver 9.5, June 22, 2018 & Jan 11, 2019	
Antenna Port Software	UL	UL RF		Ver 9.6, April 18, 2019	
AC Line Conducted Software	UL	UL EMC		Ver 9.5, May 26, 2015	

* Testing performed before calibration due date.

7. MEASUREMENT METHOD

6 dB BW: ANSI C63.10 Subclause -11.8.1

Occupied BW (99%): ANSI C63.10-2013 Section 6.9.3

Output Power: ANSI C63.10 Subclause-11.9.1.3 PKPM1 Peak power meter method

Average Power: ANSI C63.10 Subclause -11.9.2.3.2Method AVGPM-G (Measurement using a gated RF average-reading power meter)

PSD: ANSI C63.10 Subclause -11.10.2 Method PKPSD (peak PSD)

Radiated emissions non-restricted frequency bands: ANSI C63.10 Subclause -11.11

Radiated emissions restricted frequency bands: ANSI C63.10 Subclause -11.12.1

Conducted emissions in restricted frequency bands: ANSI C63.10 Subclause -11.12.2

Band-edge: ANSI C63.10 Subclause -11.13.3.4 Trace averaging across ON and OFF times of the EUT transmissions followed by duty cycle correction

AC Power Line Conducted Emissions: ANSI C63.10-2013, Section 6.2.

Radiated Spurious Emissions Below 30MHz: ANSI C63.10-2013 Section 6.4

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8. ANTENNA PORT TEST RESULTS

8.1. ON TIME AND DUTY CYCLE

LIMITS

None; for reporting purposes only.

PROCEDURE

KDB 558074 Zero-Span Spectrum Analyzer Method.

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ON TIME AND DUTY CYCLE RESULTS

Mode	ON Time B (msec)	Period (msec)	Duty Cycle x (linear)	Duty Cycle (%)	Duty Cycle Correction Factor (dB)	1/B Minimum VBW (kHz)
2.4GHz Band						
802.11b 1TX	5.000	5.000	1.000	100.00%	0.00	0.010
802.11g 1TX	2.065	2.090	0.988	98.80%	0.00	0.010
802.11n HT20 1TX	1.920	1.945	0.987	98.71%	0.00	0.010

DUTY CYCLE PLOTS

DUTY CYCLE 802.11b 1TX MODE

DUTY CYCLE 802.11g 1TX MODE

DUTY CYCLE 802.11n HT20 1TX MODE

8.2. 99% BANDWIDTH

LIMITS

None; for reporting purposes only.

RESULTS

8.2.1. 802.11b MODE

Channel	Frequency (MHz)	99% Bandwidth (MHz)
Low 1	2412	11.844
Mid 6	2437	11.949
High 11	2462	12.019
High 12	2467	11.992
High 13	2472	11.853

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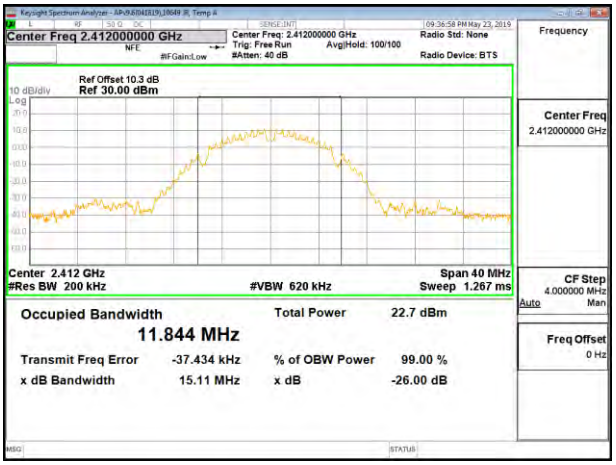

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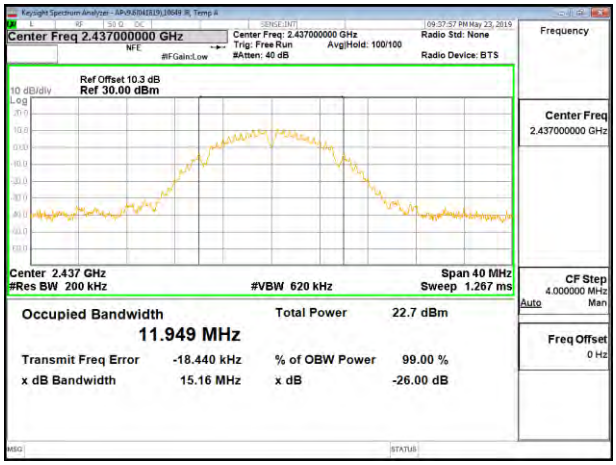

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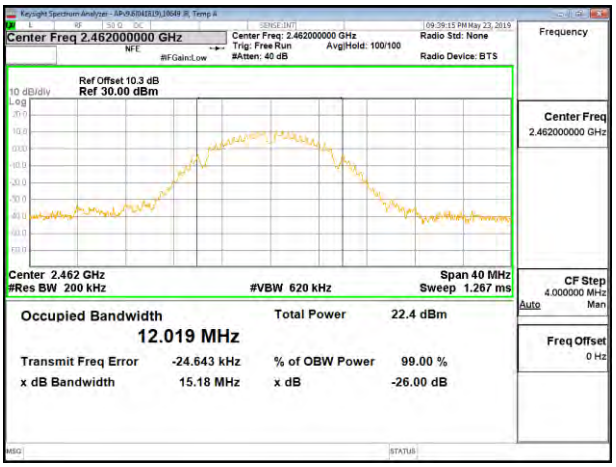

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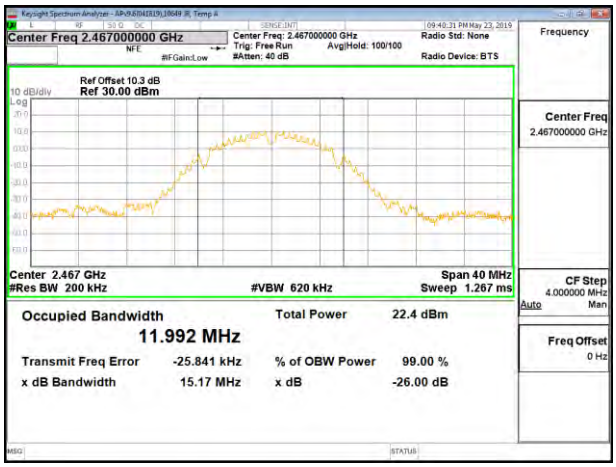

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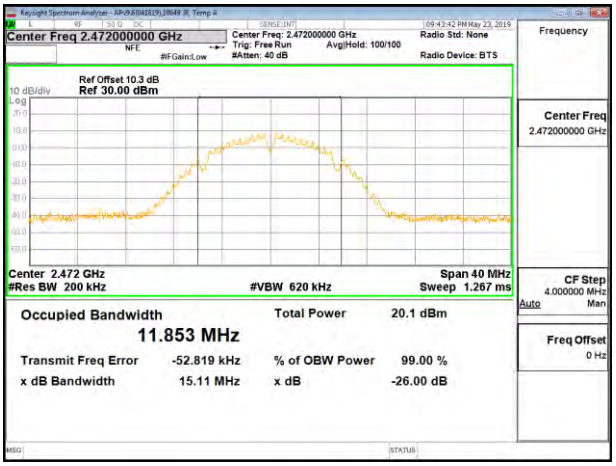

HIGH CHANNEL 13

8.2.2. 802.11g MODE

Channel	Frequency (MHz)	99% Bandwidth (MHz)
Low 1	2412	16.341
Mid 6	2437	16.409
High 11	2462	16.353
High 12	2467	16.334
High 13	2472	16.335

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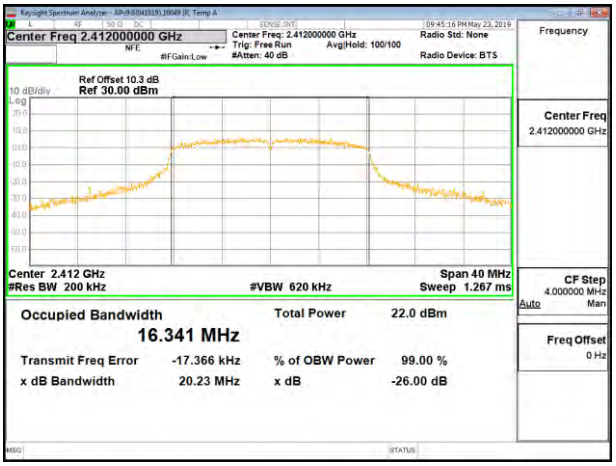

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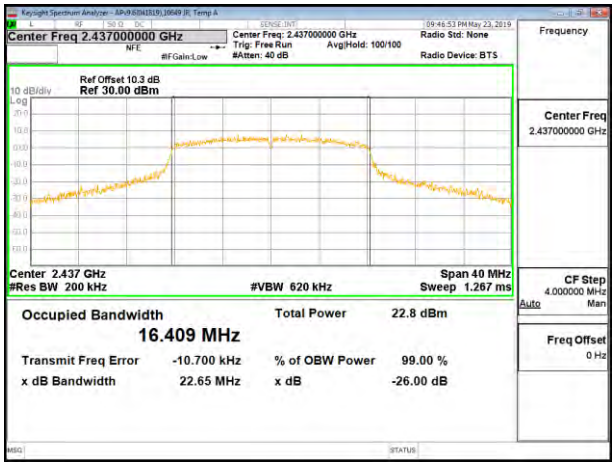

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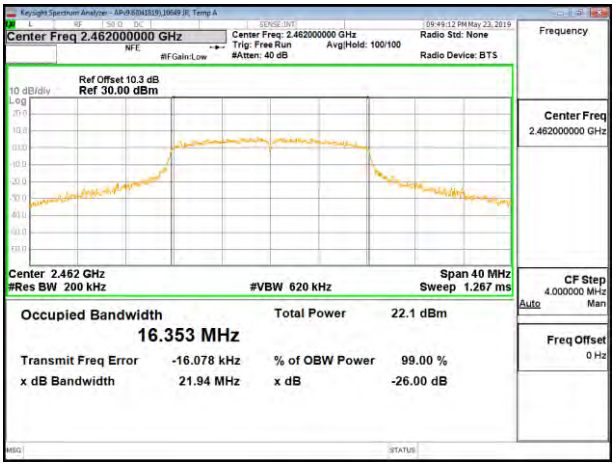

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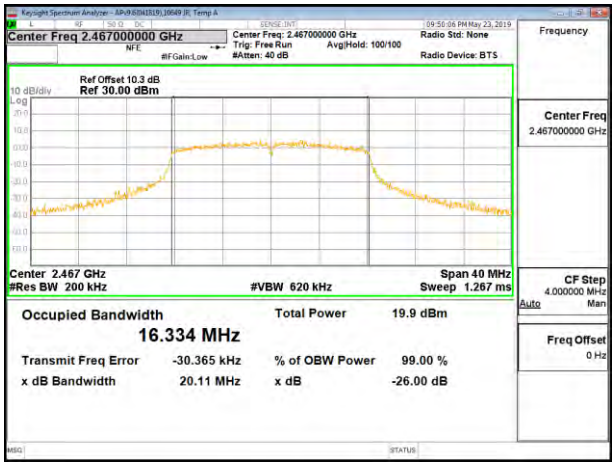

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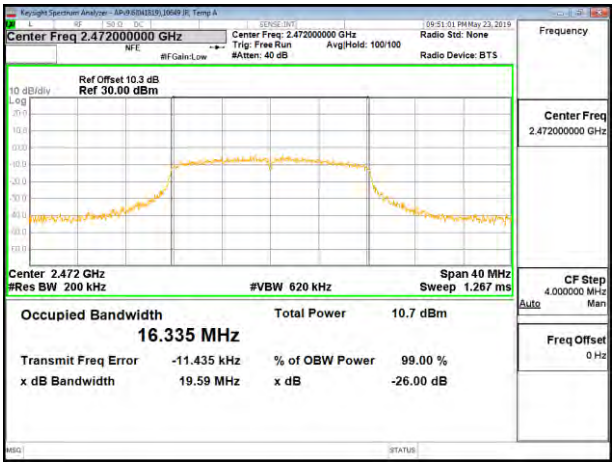
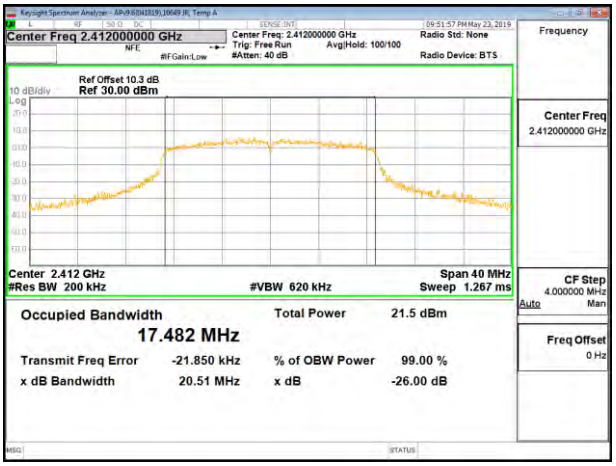


HIGH CHANNEL 13

8.2.3. 802.11n HT20 MODE

Channel	Frequency (MHz)	99% Bandwidth (MHz)
Low 1	2412	17.482
Mid 6	2437	17.517
High 11	2462	17.544
High 12	2467	17.455
High 13	2472	17.487



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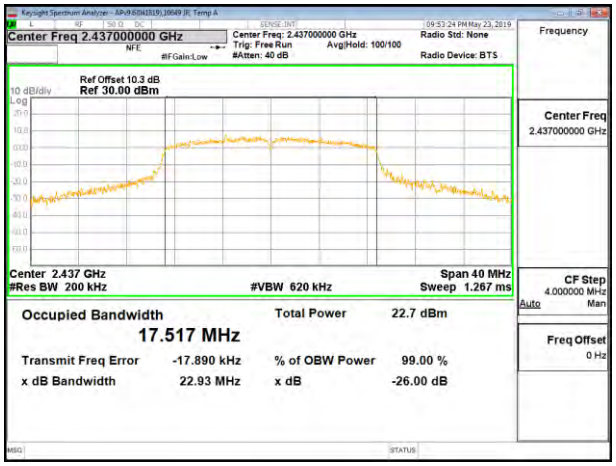

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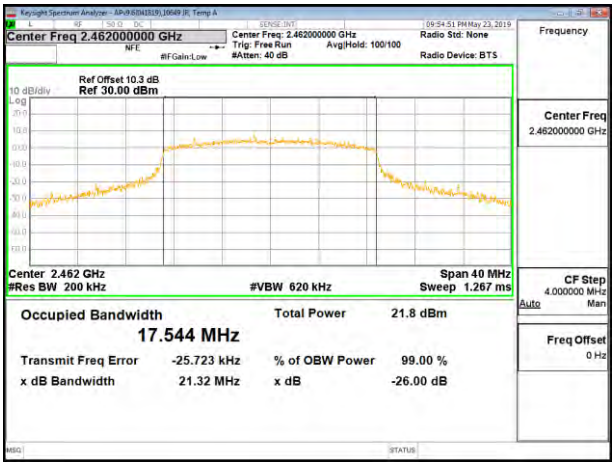

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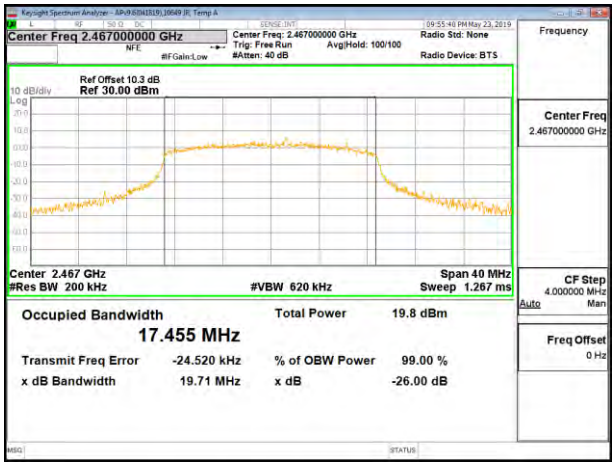

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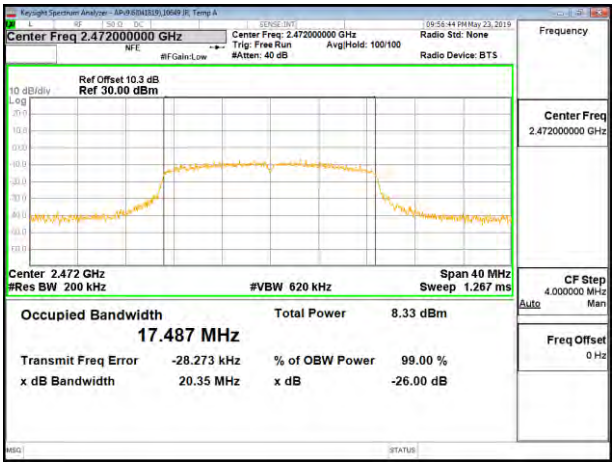

HIGH CHANNEL 13

8.3. 6 dB BANDWIDTH

LIMITS

FCC §15.247 (a) (2)

RSS-247 5.2 (a)

The minimum 6 dB bandwidth shall be at least 500 kHz.

RESULTS

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8.3.1. 802.11b MODE

Channel	Frequency (MHz)	6 dB Bandwidth (MHz)	Minimum Limit (MHz)
Low 1	2412	6.7200	0.5
Mid 6	2437	7.0800	0.5
High 11	2462	7.1600	0.5
High 12	2467	6.6400	0.5
High 13	2472	7.2000	0.5

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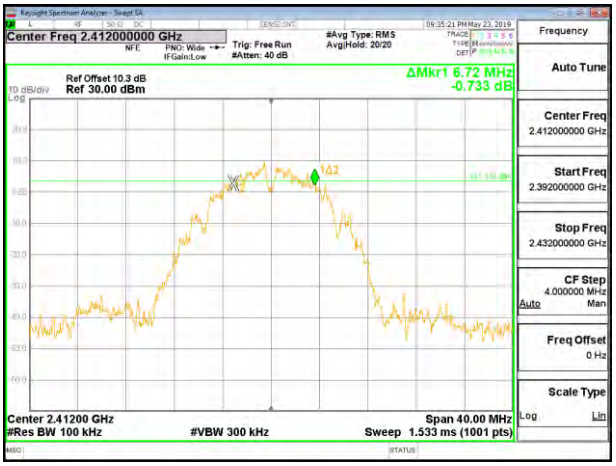

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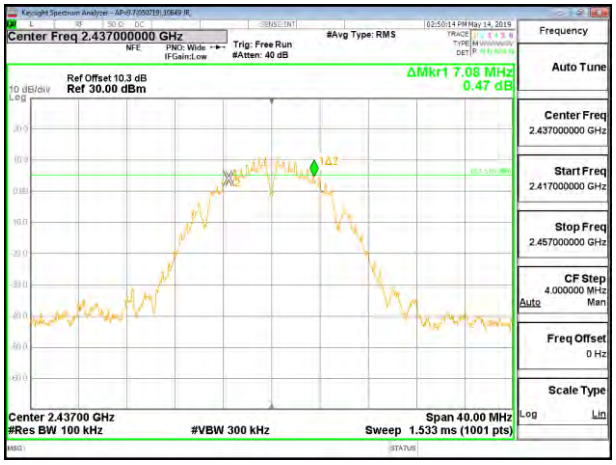

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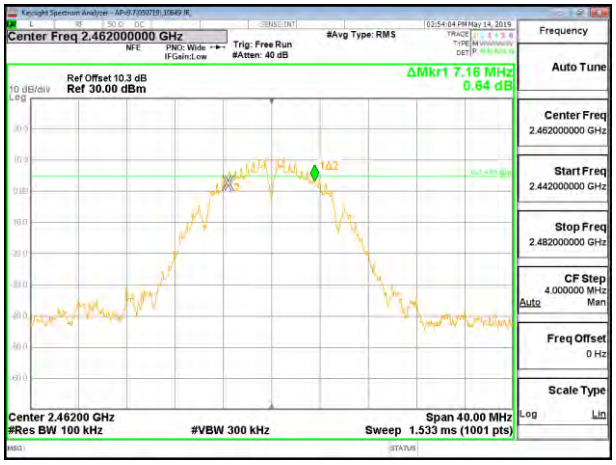

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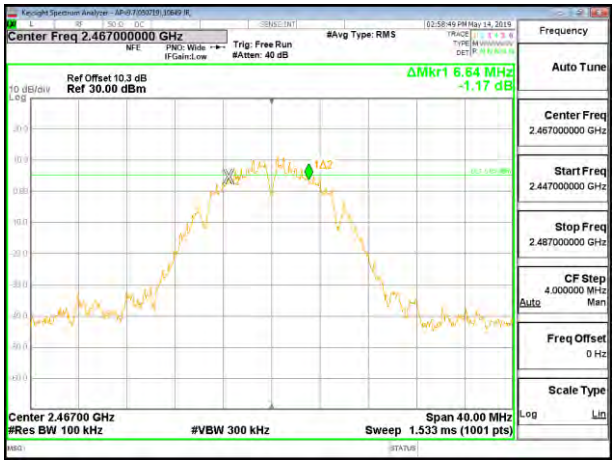

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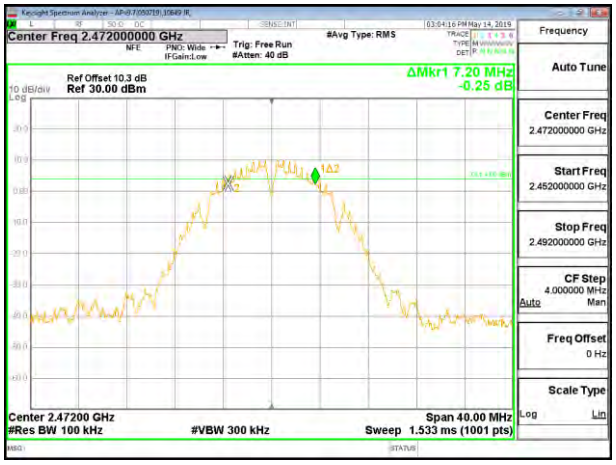
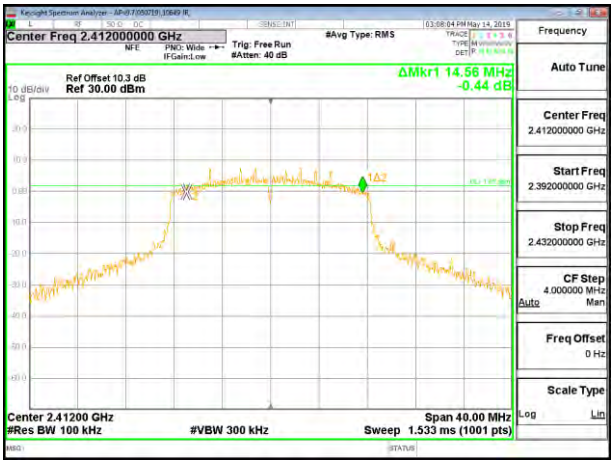


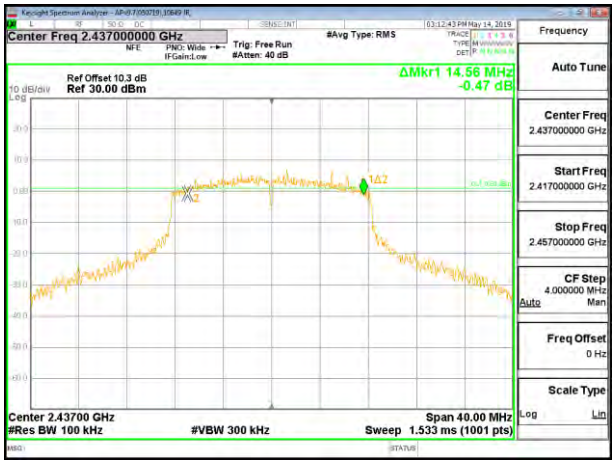
HIGH CHANNEL 13

8.3.2. 802.11g MODE

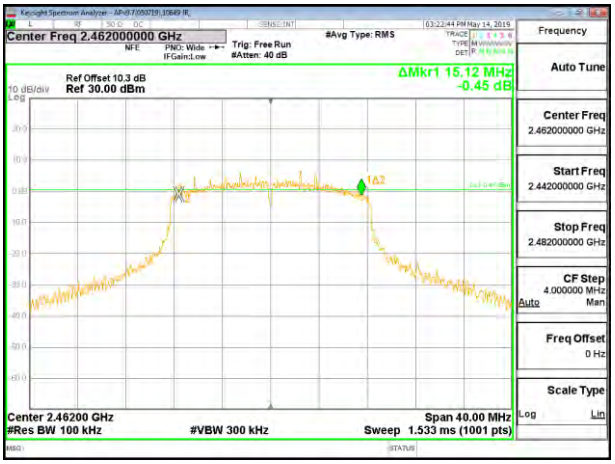
Channel	Frequency (MHz)	6 dB Bandwidth (MHz)	Minimum Limit (MHz)
Low 1	2412	14.5600	0.5
Mid 6	2437	14.5600	0.5
High 11	2462	15.1200	0.5
High 12	2467	15.1200	0.5
High 13	2472	15.2000	0.5



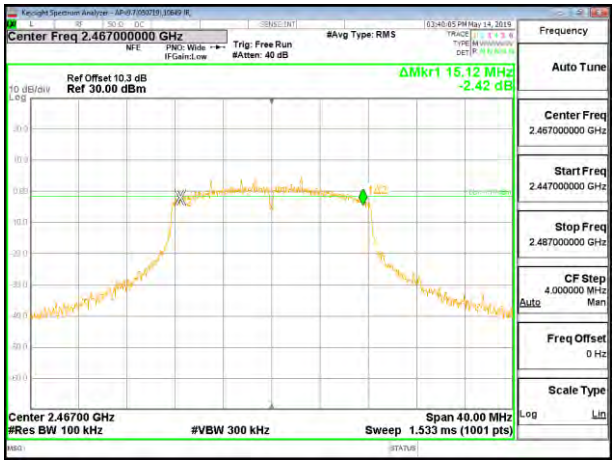
LOW CHANNEL 1



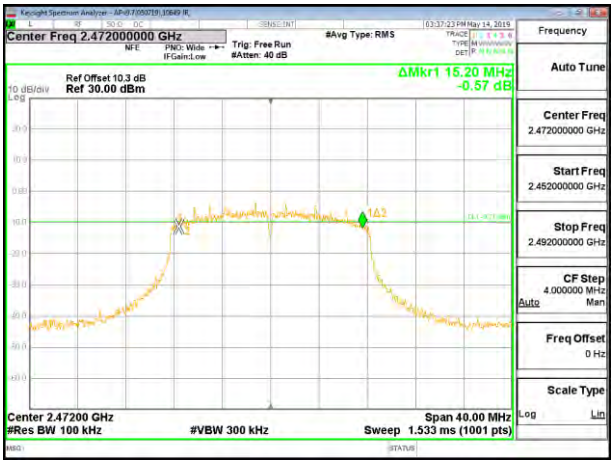
MID CHANNEL 6



HIGH CHANNEL 11



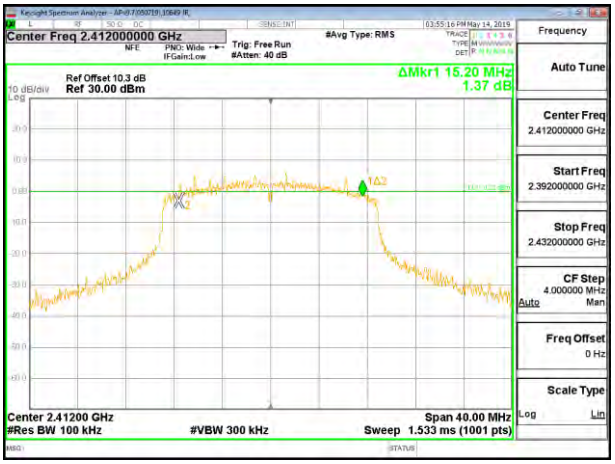
HIGH CHANNEL 12



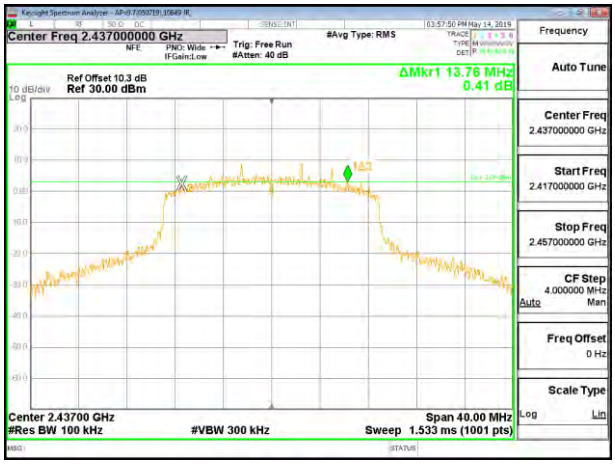
HIGH CHANNEL 13

8.3.3. 802.11n HT20 MODE

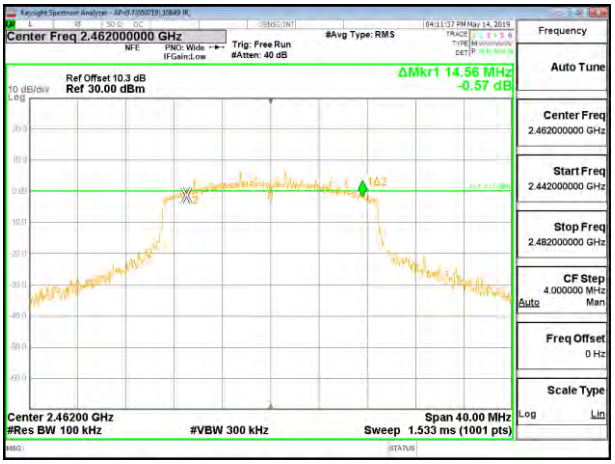
Channel	Frequency (MHz)	6 dB Bandwidth (MHz)	Minimum Limit (MHz)
Low 1	2412	15.2000	0.5
Mid 6	2437	13.7600	0.5
High 11	2462	14.5600	0.5
High 12	2467	15.1600	0.5
High 13	2472	15.0400	0.5



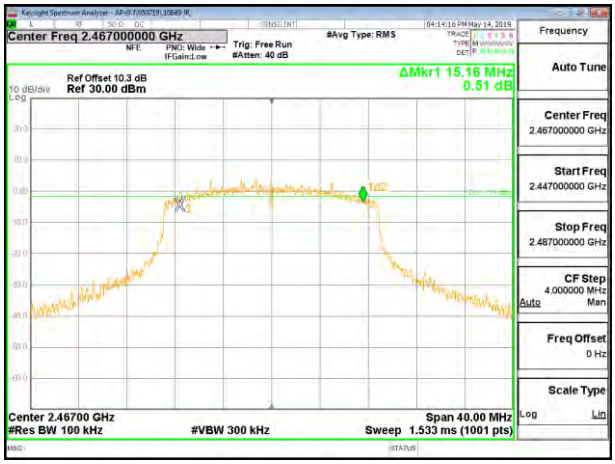
LOW CHANNEL 1



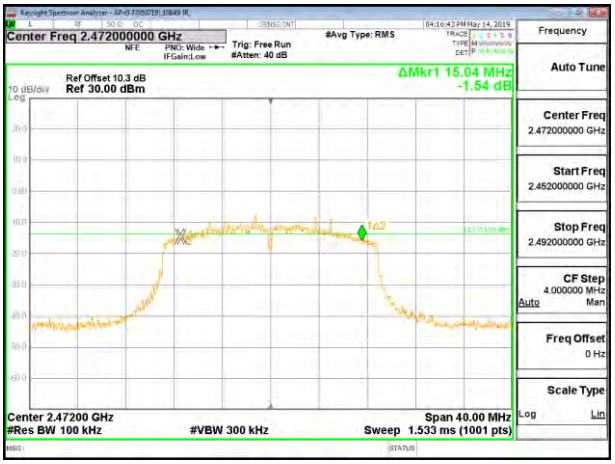
MID CHANNEL 6



HIGH CHANNEL 11



HIGH CHANNEL 12



HIGH CHANNEL 13

8.4. OUTPUT POWER

LIMITS

FCC §15.247 (b) (3)

RSS-247 5.4 (d)

For systems using digital modulation in the 902–928 MHz, 2400–2483.5 MHz, and 5725–5850 MHz bands: 1 Watt, based on the use of antennas with directional gains that do not exceed 6 dBi. If transmitting antennas of directional gain greater than 6 dBi are used, the conducted output power from the intentional radiator shall be reduced by the amount in dB that the directional gain of the antenna exceeds 6 dBi.

TEST PROCEDURE

The transmitter output is connected to a power meter.

The cable assembly insertion loss of 10.3 dB (including 10 dB pad and 0.3 dB cable) was entered as an offset in the power meter to allow for a gated peak reading of power.

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DIRECTIONAL ANTENNA GAIN

For 1 TX:
There is only one transmitter output therefore the directional gain is equal to the antenna gain.

Tested By:	10649 JR
Date:	5/20/2019

RESULTS

8.4.1. 802.11b MODE

Limits

Channel	Frequency (MHz)	Directional Gain (dBi)	FCC Power Limit (dBm)	ISED Power Limit (dBm)	ISED EIRP Limit (dBm)	Max Power (dBm)
Low 1	2412	-4.60	30.00	30	36	30.00
Mid 6	2437	-4.60	30.00	30	36	30.00
High 11	2462	-4.60	30.00	30	36	30.00
High 12	2467	-4.60	30.00	30	36	30.00
High 13	2472	-4.60	30.00	30	36	30.00

Results

Channel	Frequency (MHz)	Meas Power (dBm)	Total Corr'd Power (dBm)	Power Limit (dBm)	Margin (dB)
Low 1	2412	22.01	22.01	30.00	-7.99
Mid 6	2437	21.09	21.09	30.00	-8.91
High 11	2462	21.12	21.12	30.00	-8.88
High 12	2467	21.07	21.07	30.00	-8.93
High 13	2472	18.88	18.88	30.00	-11.12

8.4.2. 802.11g MODE

Limits

Channel	Frequency (MHz)	Directional Gain (dBi)	FCC Power Limit (dBm)	ISED Power Limit (dBm)	ISED EIRP Limit (dBm)	Max Power (dBm)
Low 1	2412	-4.60	30.00	30	36	30.00
Mid 6	2437	-4.60	30.00	30	36	30.00
High 11	2462	-4.60	30.00	30	36	30.00
High 12	2467	-4.60	30.00	30	36	30.00
High 13	2472	-4.60	30.00	30	36	30.00

Results

Channel	Frequency (MHz)	Meas Power (dBm)	Total Corr'd Power (dBm)	Power Limit (dBm)	Margin (dB)
Low 1	2412	22.66	22.66	30.00	-7.34
Mid 6	2437	23.79	23.79	30.00	-6.21
High 11	2462	23.43	23.43	30.00	-6.57
High 12	2467	22.83	22.83	30.00	-7.17
High 13	2472	13.47	13.47	30.00	-16.53

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8.4.3. 802.11n HT20 MODE

Limits

Channel	Frequency (MHz)	Directional Gain (dBi)	FCC Power Limit (dBm)	ISED Power Limit (dBm)	ISED EIRP Limit (dBm)	Max Power (dBm)
Low 1	2412	-4.60	30.00	30	36	30.00
Mid 6	2437	-4.60	30.00	30	36	30.00
High 11	2462	-4.60	30.00	30	36	30.00
High 12	2467	-4.60	30.00	30	36	30.00
High 13	2472	-4.60	30.00	30	36	30.00

Results

Channel	Frequency (MHz)	Meas Power (dBm)	Total Corr'd Power (dBm)	Power Limit (dBm)	Margin (dB)
Low 1	2412	22.72	22.72	30.00	-7.28
Mid 6	2437	23.30	23.30	30.00	-6.70
High 11	2462	23.01	23.01	30.00	-6.99
High 12	2467	21.77	21.77	30.00	-8.23
High 13	2472	10.93	10.93	30.00	-19.07

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8.5. AVERAGE POWER

LIMITS

None; for reporting purposes only

TEST PROCEDURE

The transmitter output is connected to a power meter.

The cable assembly insertion loss of 10.3 dB (including 10 dB pad and 0.3 dB cable) was entered as an offset in the power meter to allow for a gated average reading of power

RESULTS

Tested By:	10649 JR
Date:	5/20/2019

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8.5.1. 802.11b MODE

Channel	Frequency (MHz)	Chain 0 Power (dBm)
Low 1	2412	18.98
Mid 6	2437	18.33
High 11	2462	18.27
High 12	2467	18.12
High 13	2472	16.02

8.5.2. 802.11g MODE

Channel	Frequency (MHz)	Chain 0 Power (dBm)
Low 1	2412	16.95
Mid 6	2437	17.79
High 11	2462	17.40
High 12	2467	15.43
High 13	2472	6.23

8.5.3. 802.11n HT20 MODE

Channel	Frequency (MHz)	Chain 0 Power (dBm)
Low 1	2412	16.60
Mid 6	2437	17.66
High 11	2462	17.21
High 12	2467	14.26
High 13	2472	3.23

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8.6. POWER SPECTRAL DENSITY

LIMITS

FCC §15.247 (e)

RSS-247 (5.2) (b)

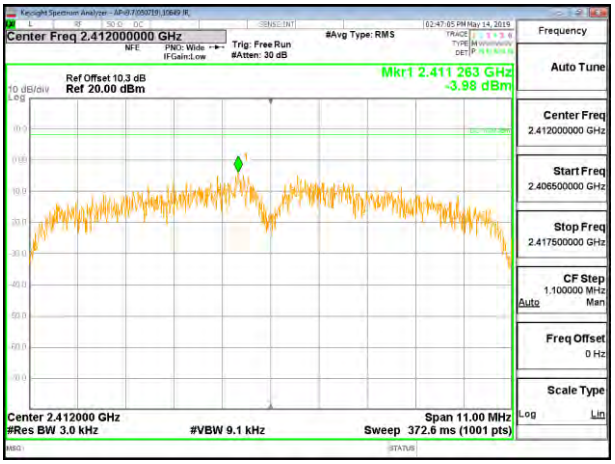
The power spectral density conducted from the transmitter to the antenna shall not be greater than 8 dBm in any 3 kHz band during any time interval of continuous transmission.

RESULTS

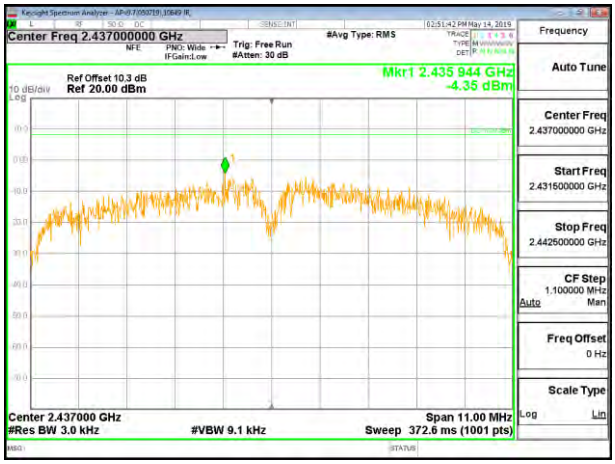
8.6.1. 802.11b MODE

PSD Results

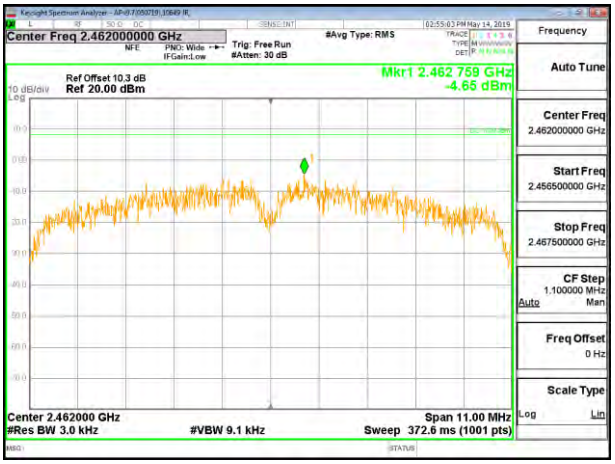
Channel	Frequency (MHz)	Chain 0 Meas (dBm/ 3kHz)	Total Corr'd PSD (dBm/ 3kHz)	Limit (dBm/ 3kHz)	Margin (dB)
Low 1	2412	-3.98	-3.98	8.0	-12.0
Mid 6	2437	-4.35	-4.35	8.0	-12.4
High 11	2462	-4.65	-4.65	8.0	-12.7
High 12	2467	-5.00	-5.00	8.0	-13.0
High 13	2472	-5.33	-5.33	8.0	-13.3



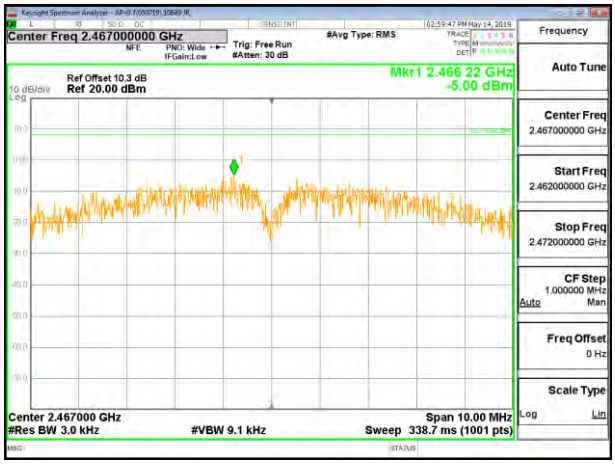
LOW CHANNEL 1



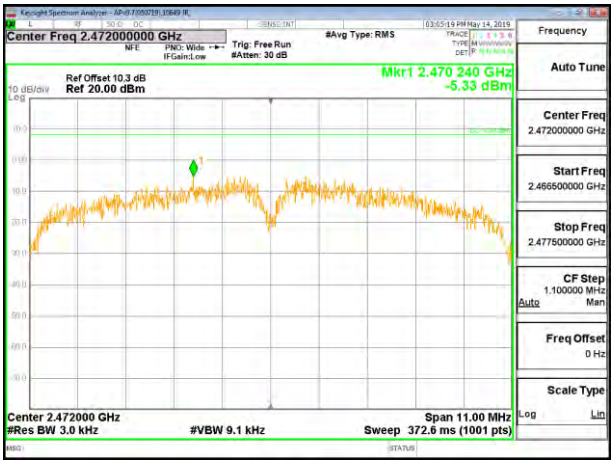
MID CHANNEL 6



HIGH CHANNEL 11



HIGH CHANNEL 12



HIGH CHANNEL 13

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8.6.2. 802.11g MODE

PSD Results

Channel	Frequency (MHz)	Chain 0 Meas (dBm/ 3kHz)	Total Corr'd PSD (dBm/ 3kHz)	Limit (dBm/ 3kHz)	Margin (dB)
Low 1	2412	-7.14	-7.14	8.0	-15.1
Mid 6	2437	-8.71	-8.71	8.0	-16.7
High 11	2462	-10.30	-10.30	8.0	-18.3
High 12	2467	-10.58	-10.58	8.0	-18.6
High 13	2472	-19.39	-19.39	8.0	-27.4

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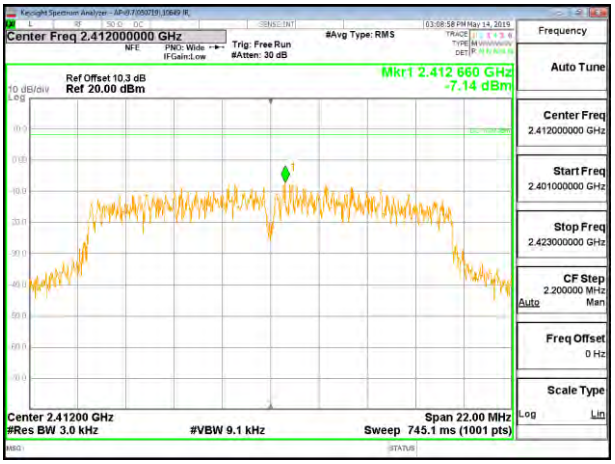
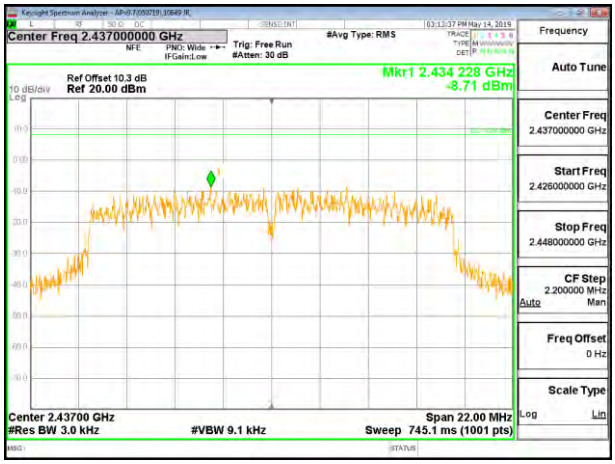
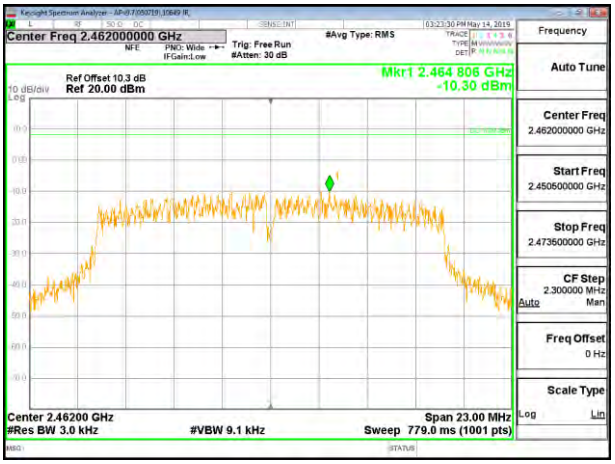


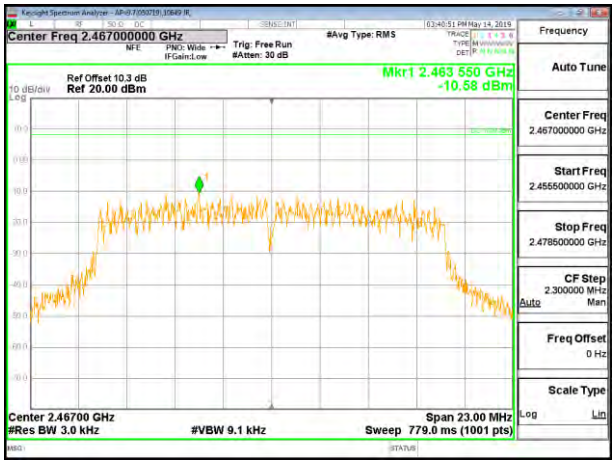
LOW CHANNEL 1



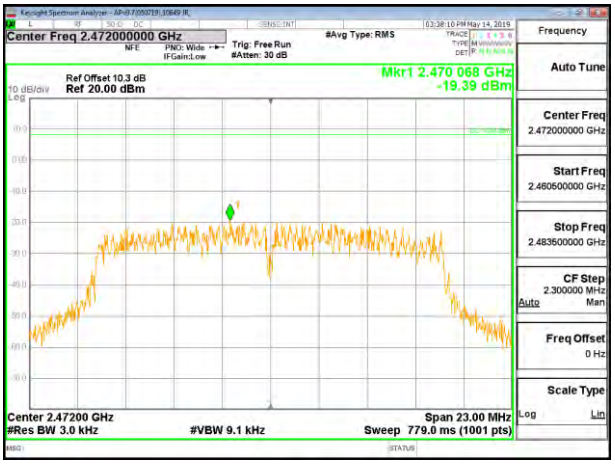
MID CHANNEL 6



HIGH CHANNEL 11



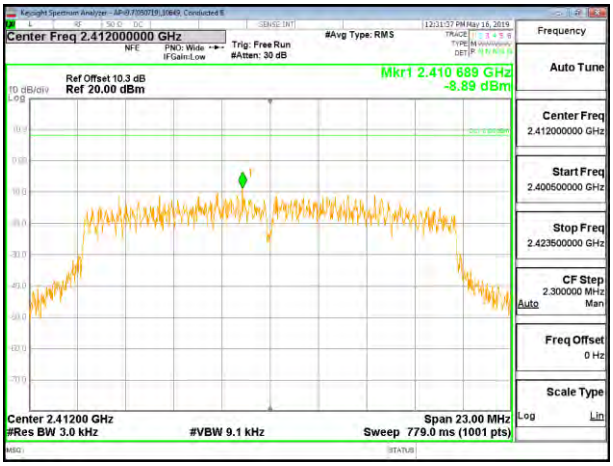
HIGH CHANNEL 12



HIGH CHANNEL 13

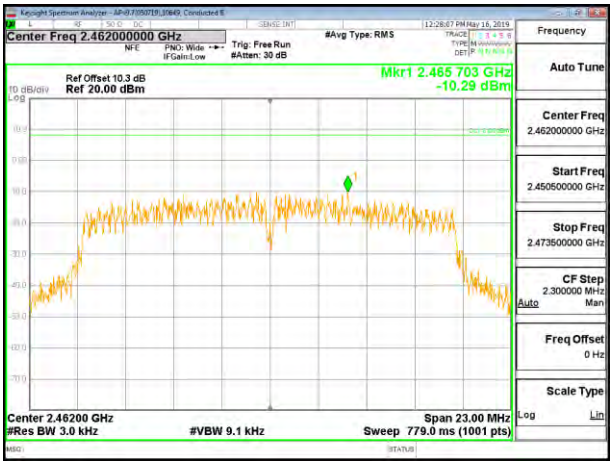
8.6.3. 802.11n HT20 MODE

Channel	Frequency (MHz)	Chain 0 Meas (dBm/ 3kHz)	Total Corr'd PSD (dBm/ 3kHz)	Limit (dBm/ 3kHz)	Margin (dB)
Low 1	2412	-8.89	-8.89	8.0	-16.9
Mid 6	2437	-9.11	-9.11	8.0	-17.1
High 11	2462	-10.29	-10.29	8.0	-18.3
High 12	2467	-11.21	-11.21	8.0	-19.2
High 13	2472	-23.80	-23.80	8.0	-31.8



LOW CHANNEL 1

MID CHANNEL 6



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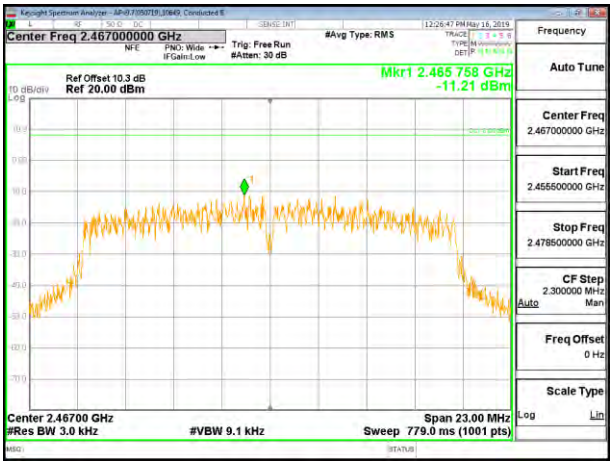

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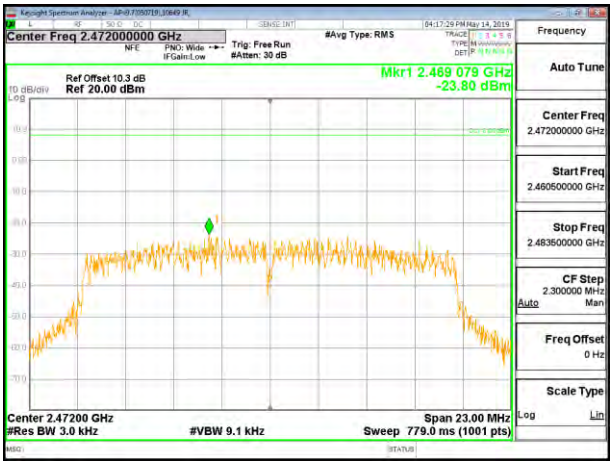


HIGH CHANNEL 13

8.7. CONDUCTED SPURIOUS EMISSIONS

LIMITS

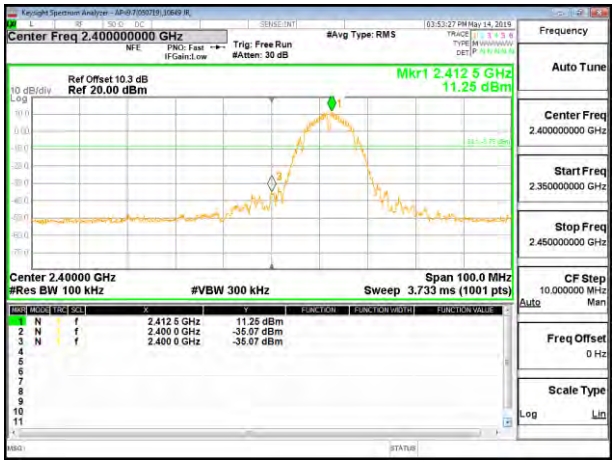
FCC §15.247 (d)

RSS-247 5.5

Output power was measured based on the use of peak measurement, therefore the required attenuation is 20 dB.

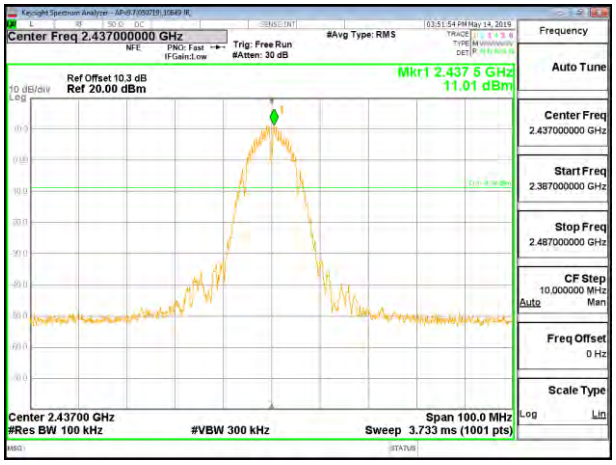
RESULTS

8.7.1. 802.11b MODE

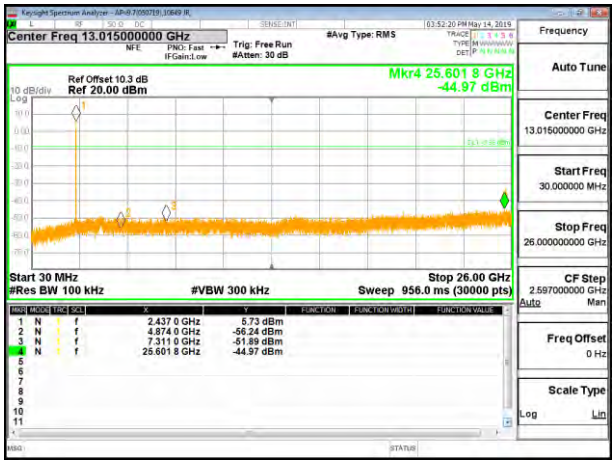


LOW CHANNEL 1 BANDEDGE

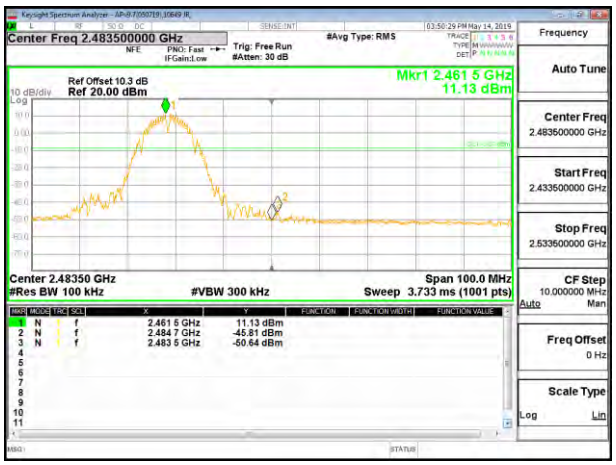
OUT-OF-BAND LOW CHANNEL 1



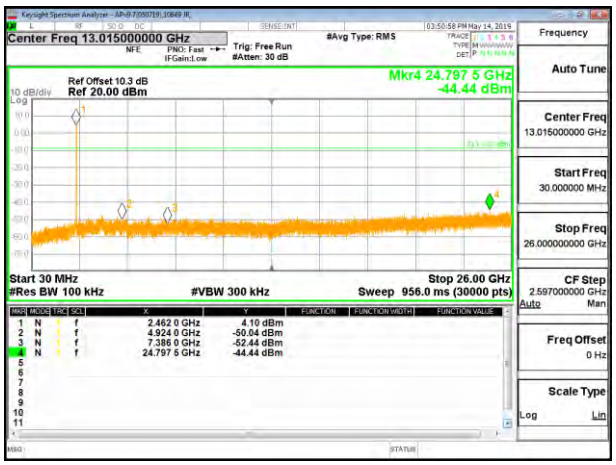
IN-BAND REFERNCE LEVEL



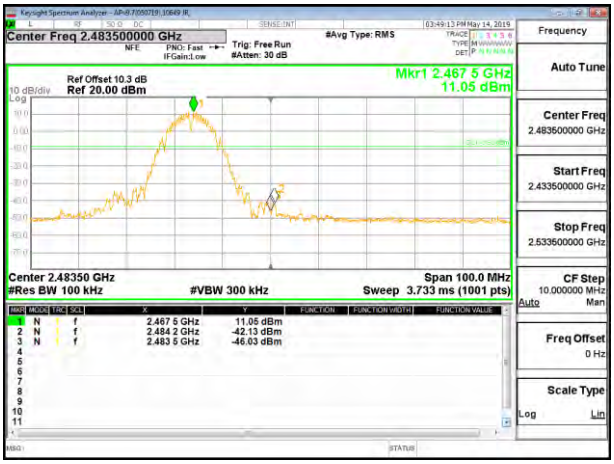
OUT-OF-BAND MID CHANNEL



HIGH CHANNEL 11 BANDEDGE

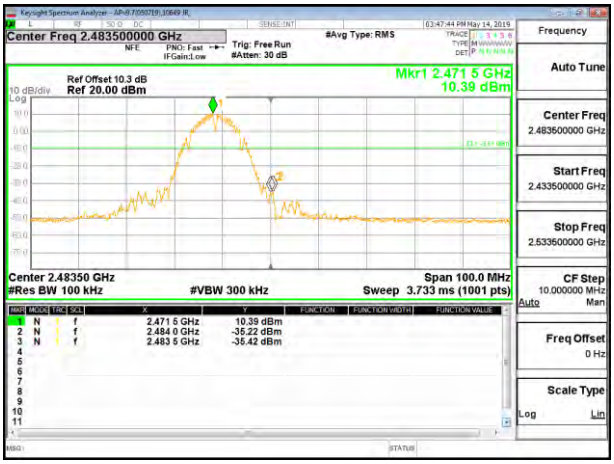


OUT-OF-BAND HIGH CHANNEL 11

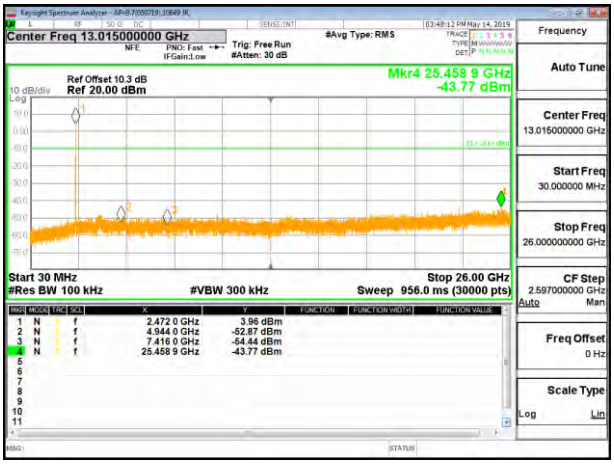


HIGH CHANNEL 12 BANDEDGE

OUT-OF-BAND HIGH CHANNEL 12

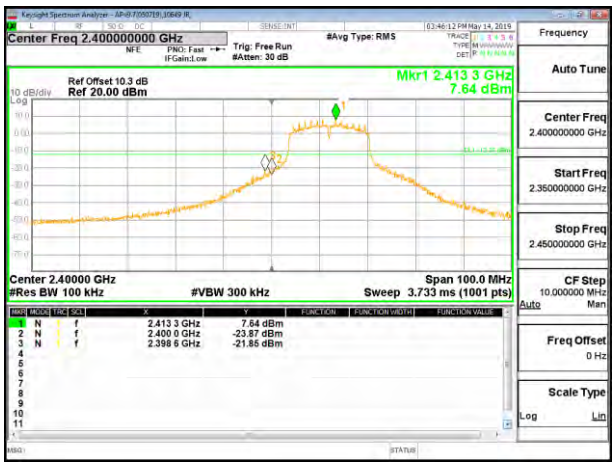


HIGH CHANNEL 13 BANDEDGE

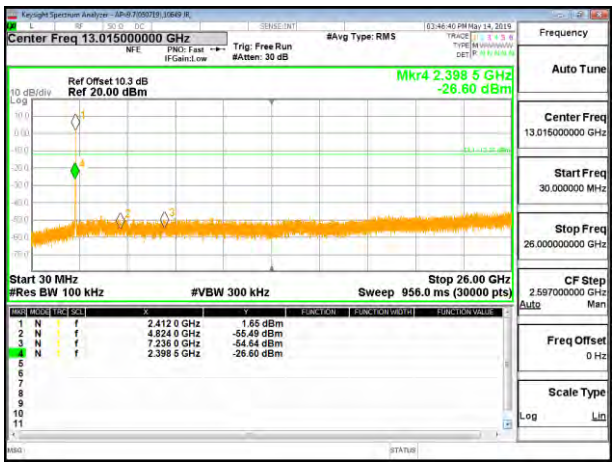


OUT-OF-BAND HIGH CHANNEL 13

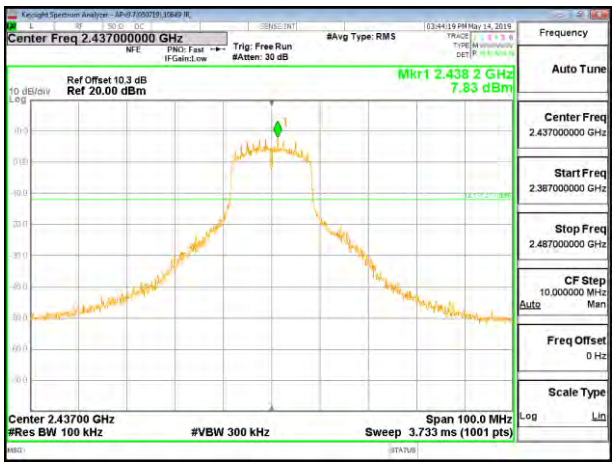
8.7.2. 802.11g MODE



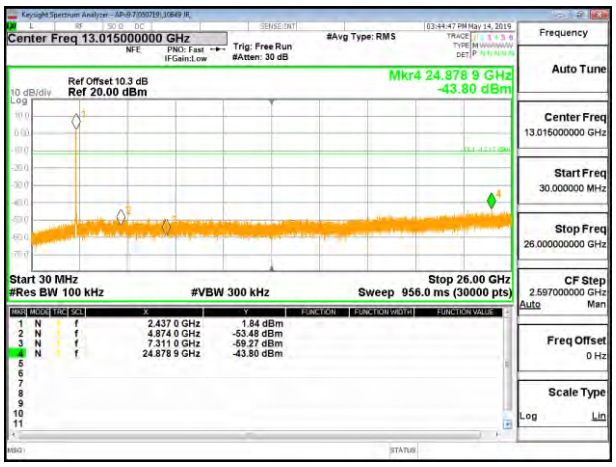
LOW CHANNEL 1 BANDEDGE



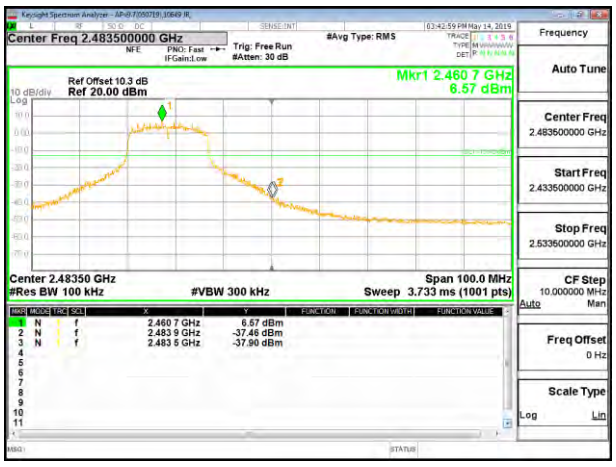
OUT-OF-BAND LOW CHANNEL 1



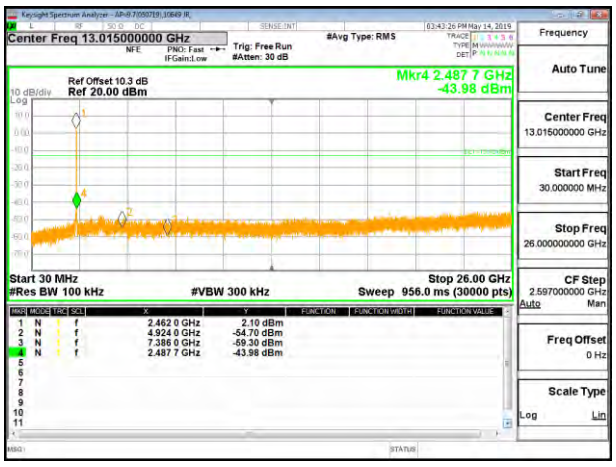
IN-BAND REFERNCE LEVEL



OUT-OF-BAND MID CHANNEL



HIGH CHANNEL 11 BANDEDGE



OUT-OF-BAND HIGH CHANNEL 11

UL VERIFICATION SERVICES INC.
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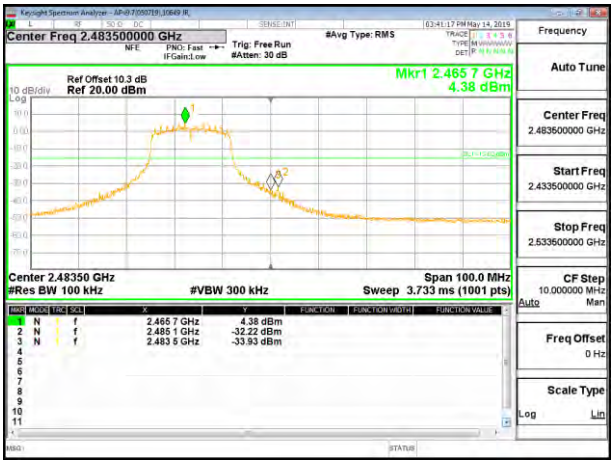
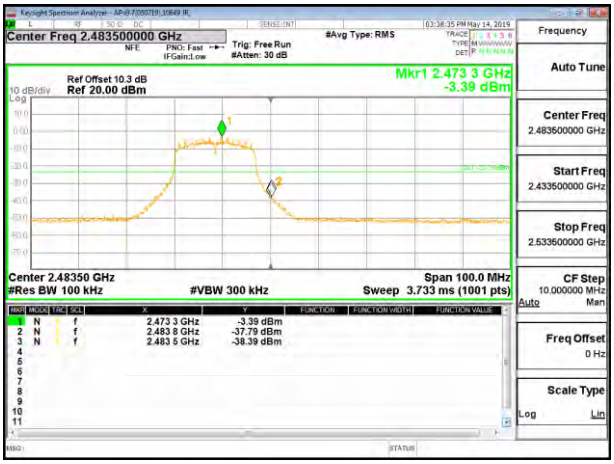


HIGH CHANNEL 12 BANDEDGE

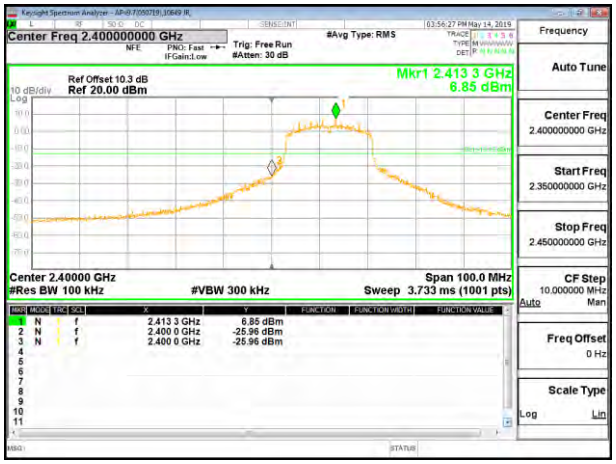
OUT-OF-BAND HIGH CHANNEL 12



HIGH CHANNEL 13 BANDEDGE

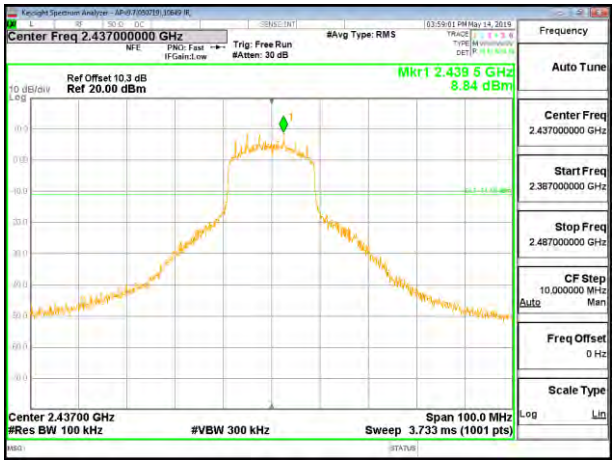
OUT-OF-BAND HIGH CHANNEL 13

8.7.3. 802.11n HT20 MODE



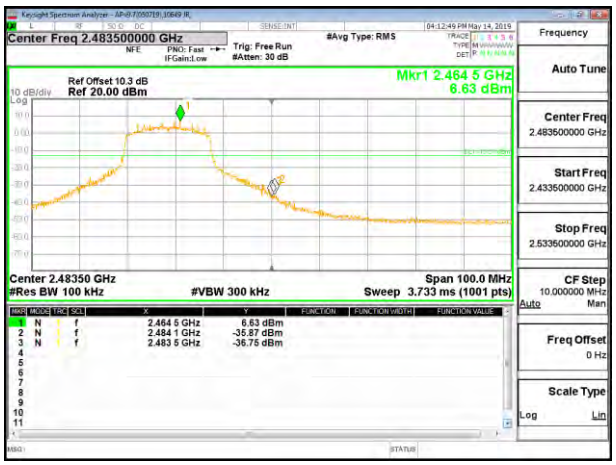
LOW CHANNEL 1 BANDEDGE

OUT-OF-BAND LOW CHANNEL 1

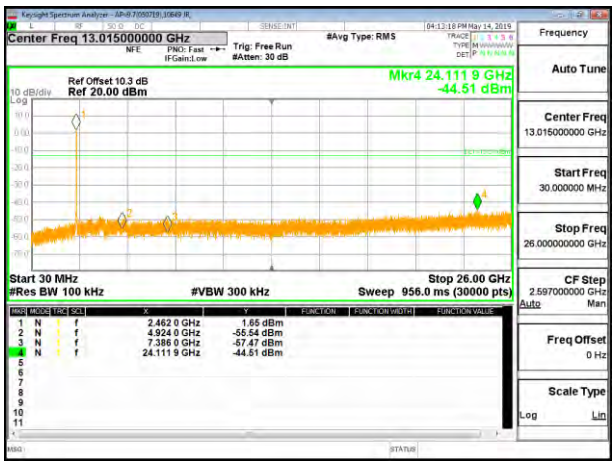


IN-BAND REFERNCE LEVEL

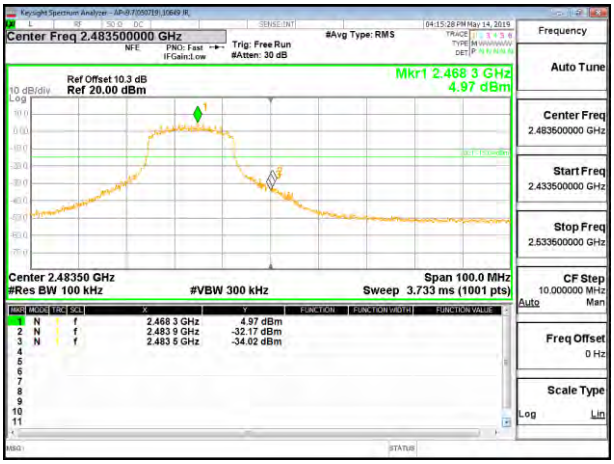
OUT-OF-BAND MID CHANNEL



HIGH CHANNEL 11 BANDEDGE

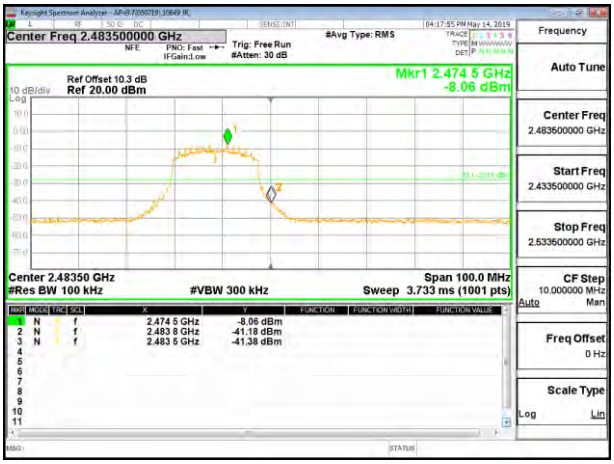


OUT-OF-BAND HIGH CHANNEL 11



HIGH CHANNEL 12 BANDEDGE

OUT-OF-BAND HIGH CHANNEL 12



HIGH CHANNEL 13 BANDEDGE

OUT-OF-BAND HIGH CHANNEL 13