CERTIFICATION TEST REPORT

Report Number. : 12646381-E3V3

Applicant	:	APPLE, INC. 1 APPLE PARK WAY CUPERTINO, CA 95014, U.S.A.
Model	:	A2178
FCC ID	:	BCG-A2178
IC	:	579C-A2178
EUT Description	:	iPod touch
Test Standard(s)	:	FCC 47 CFR PART 15 SUBPART C ISED RSS-247 ISSUE 2 ISED RSS-GEN ISSUE 5

Date Of Issue:
May 01, 2019

Prepared by:
UL Verification Services Inc.
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NVLAP Lab code: 200065-0

REPORT REVISION HISTORY

Rev.	Issue Date	Revisions	Revised By
V1	4/15/2019	Initial Issue	Chin Pang
V2	4/29/2019	Address TCB's Questions	Chin Pang
V2	5/1/2019	Address Section 6,	Chin Pang

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1. ATTESTATION OF TEST RESULTS

COMPANY NAME: APPLE, INC.
1 APPLE PARK WAY
CUPERTINO, CA 95014, U.S.A.

EUT DESCRIPTION: iPod touch

MODEL: A2178

SERIAL NUMBER: CCQXW00TLQJ9 (Conducted); CCQXW00LLQJ1 (Radiated)

DATE TESTED: FEBRUARY 07, 2019 – APRIL 05, 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:

Chin Pang
Senior Engineer
Consumer Technology Division
UL Verification Services Inc.

Prepared By:

Tony Li
Test Engineer
Consumer Technology Division
UL Verification Services Inc.

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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 Rd
☐ Chamber A (ISED:2324B-1)	☐ Chamber D (ISED:22541-1)	☐ Chamber I (ISED:2324A-5)
☐ Chamber B (ISED:2324B-2)	☐ Chamber E (ISED:22541-2)	☐ Chamber J (ISED:2324A-6)
☐ Chamber C (ISED:2324B-3)	☐ Chamber F (ISED:22541-3)	☐ Chamber K (ISED:2324A-1)
	☒ Chamber G (ISED:22541-4)	☐ Chamber L (ISED:2324A-3)
	☒ Chamber H (ISED:22541-5)	

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

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 an iPod touch with IEEE 802.11a/b/g/n/ac and Bluetooth Radio.

5.2. MAXIMUM OUTPUT POWER

The transmitter has a maximum conducted output power as follows:

Frequency Range (MHz)	Mode	Output Power (dBm)	Output Power (mW)
2412 - 2472	802.11b	20.28	106.66
2412 - 2472	802.11n HT20	25.01	316.96

5.3. DESCRIPTION OF AVAILABLE ANTENNAS

Frequency Band (GHz)	Antenna Gain (dBi)
2.4	0.20

5.4. SOFTWARE AND FIRMWARE

The EUT firmware installed during testing was 7.64.132.

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5.5. WORST-CASE CONFIGURATION AND MODE

EUT was investigated in three orthogonal orientations X, Y and Z and it was determined that Y (Landscapre) orientation was worst-case orientation.

Radiated band edge, harmonic, and spurious emissions from 1GHz to 18GHz were performed with the EUT was set to transmit at highest power on Low/Middle/High channels.

Radiated emissions below 30MHz, below 1GHz, 18-26GHz and power line conducted emissions were performed with the EUT transmits at the channel with the highest output power as worst-case scenario. There were no emissions found below 30MHz within 20dB of the limit.

Below 1GHz tests were performed with EUT connected to AC power adapter as the worst case; and for above 1GHz, the worst-case configuration reported was tested with EUT only. For AC line conducted emission, test was investigated with AC power adapter and with laptop. Worst case data rates as provided by the client were:

Since g mode powers are identical of HT20 power and both are OFDM modulation, therefore HT20 was used to conducted the test as the worst case.

802.11b mode: 1 Mbps
802.11n HT20mode: MCS0

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5.6. DESCRIPTION OF TEST SETUP

SUPPORT EQUIPMENT

Support Equipment List				
Description	**Manufacturer**	**Model**	**Serial Number**	**FCC ID**
Laptop	Apple	Macbook Pro	C02P41RZG086	FCC DoC
Laptop AC/DC adapter	Liteon Technology	PA-1450-BA1	B123	NA
EUT AC Adapter	Apple	A1385	D292365CDYADHLH	NA

I/O CABLES

I/O Cable List						
Cable No	**Port**	**# of identical ports**	**Connector Type**	**Cable Type**	**Cable Length (m)**	**Remarks**
1	AC	1	AC/DC	Un-shielded	2	N/A
2	USB	1	USB	Shielded	1	N/A
3	Antenna	1	SMA	Un-Shielded	0.2	To spectrum Analyzer

TEST SETUP

The EUT is connected to a test laptop during the tests. Test software exercised the radio card.

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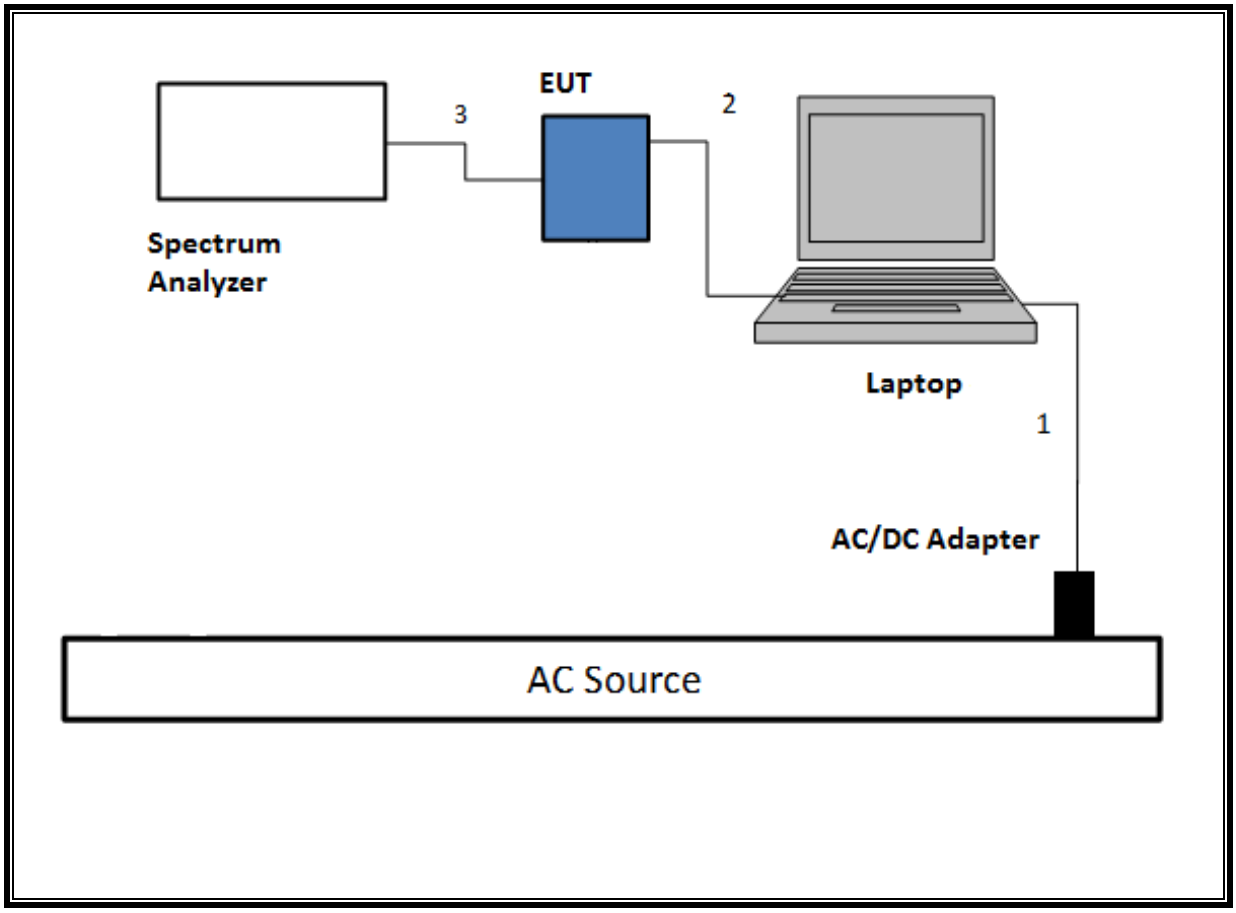
SETUP DIAGRAM FOR CONDUCTED TESTS



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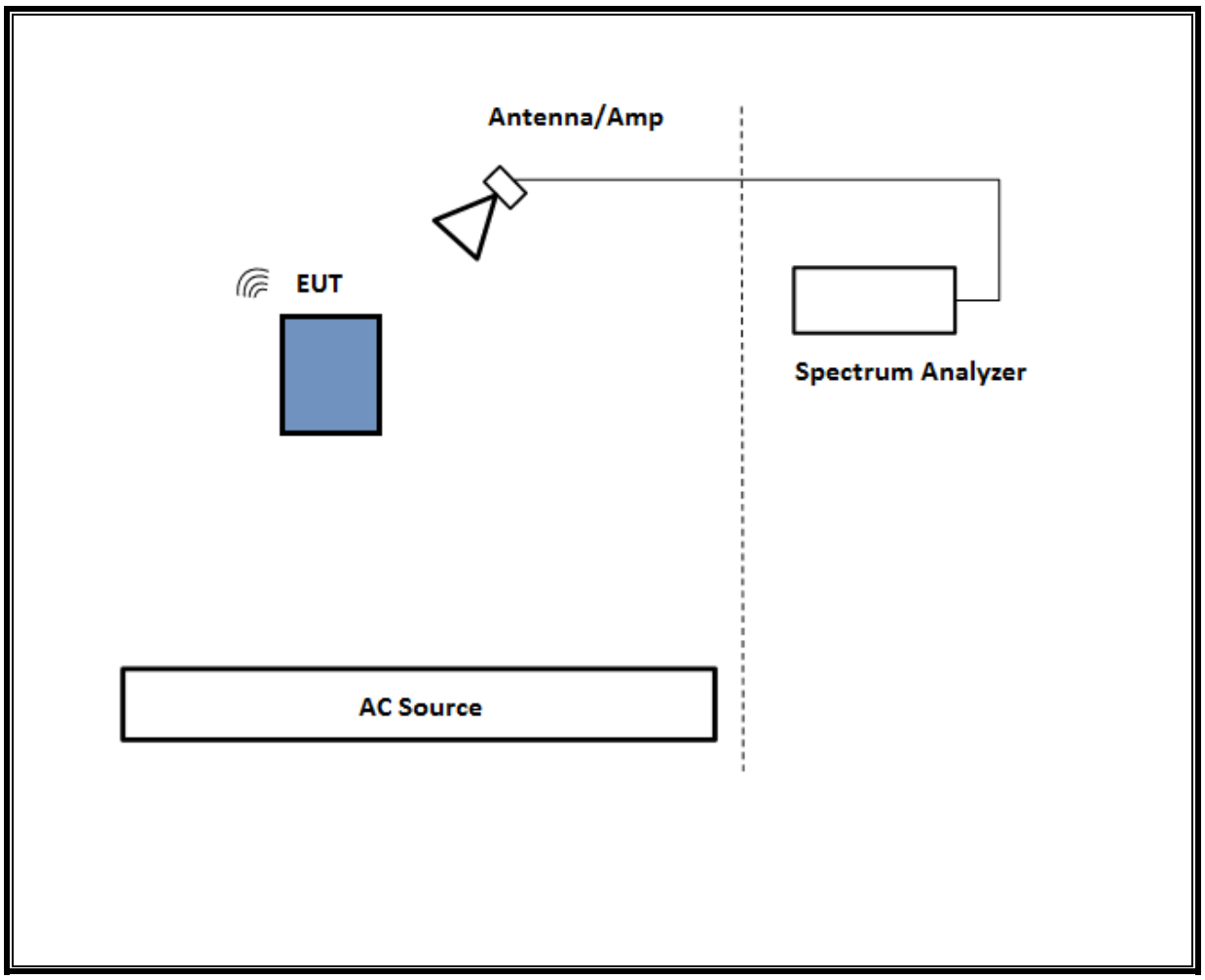
SETUP DIAGRAM FOR RADIATED TESTS ABOVE 1GHz



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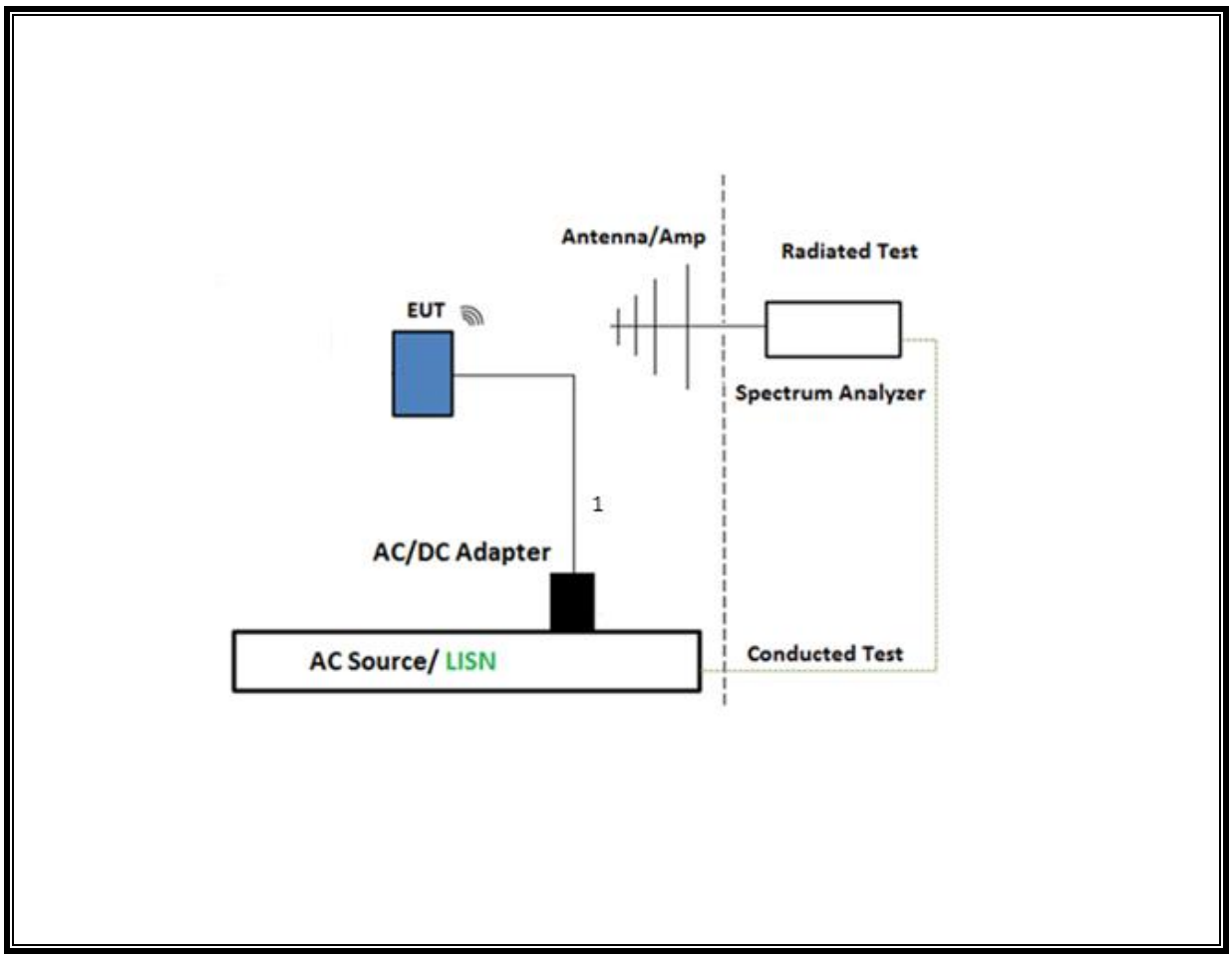
SETUP DIAGRAM FOR BELOW 1GHz AND AC LINE CONDUCTED TEST



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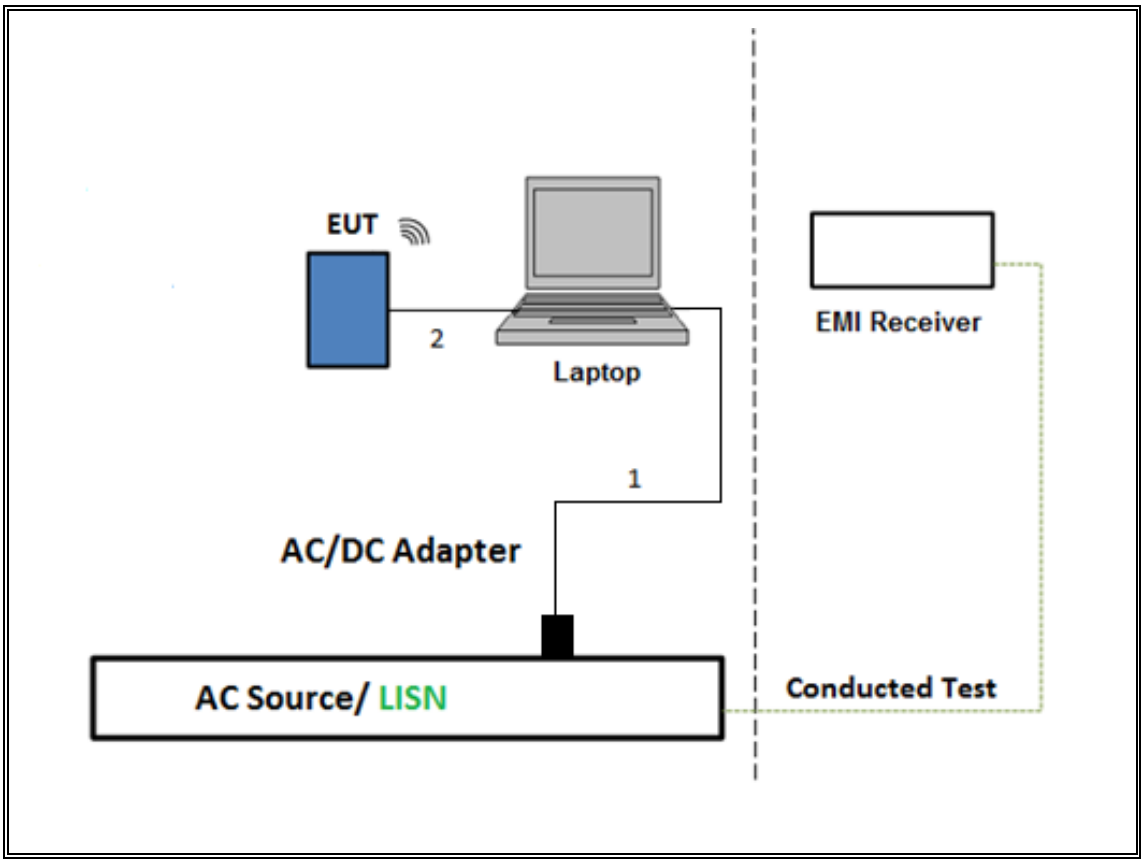
TEST SETUP- AC LINE CONDUCTED: LAPTOP CONFIGURATION



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6. MEASUREMENT METHOD

6 dB BW: ANSI C63.10 Subclause -11.8.1 RBW ≥ DTS BW

99% BW: ANSI C63.10-2013, Section 6.9.3.

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

Output Power: ANSI C63.10 Subclause -11.9.2.3.1 Method AVGPM (Measurement using an 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 -11.13.3.2 Integration method -Peak detection

Band-edge: ANSI C63.10 Subclause -11.13.3.3 Integration method -Trace averaging with continuous transmission at full power

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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7. 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**
*Spectrum Analyzer, PXA, 3Hz to 50GHz w/Ext. Mixer	Agilent (Keysight) Technologies	N9030A	T342	02/22/2019	02/22/2018
Thermometer	Control Company	14-650-118, 15557603	T1817	05/01/2019	05/01/2018
Horn Antenna 1-18GHz	ETS-Lindgren	3117	T345	04/25/2019	04/25/2018
Horn Antenna 1-18GHz	ETS-Lindgren	3117	T120	07/02/2019	07/02/2018
Amplifier, 10KHz to 1GHz, 32dB	Sonoma Instrument Co.	310N	T286	06/04/2019	06/04/2018
Antenna, Active Loop 9KHz to 30MHz	ETS-Lindgren	6502	T1616	10/18/2019	10/18/2018
Antenna, Broadband Hybrid, 30MHz to 2000MHz	Sunol Sciences Corp.	JB1	T185	04/19/2019	04/19/2018
Antenna, Horn 18 to 26.5GHz	ARA	MWH-1826/B	T447	06/16/2019	06/16/2018
Amplifier, 1 - 18GHz	Miteq	AFS42-00101800-25	T491	05/19/2019	05/19/2018
*Pre-Amp 18-26GHz	Agilent Technology	8449B	T404	03/09/2019	03/09/2018
Power Meter, P-series single channel	Agilent (Keysight) Technologies	N1911A	T227	10/29/2019	10/29/2018
Power Sensor	Power Sensor	Keysight	T1226	02/06/2020	02/06/2019
Spectrum Analyzer, PXA, 3Hz to 44GHz	Agilent (Keysight) Technologies	N9030A	T340	01/22/2020	01/22/2019
AC Line Conducted					
*EMI Test Receiver 9Khz-7GHz	Rohde & Schwarz	ESCI7	T1436	02/23/2019	
Power Cable, Line Conducted Emissions	UL	PG1	T861	08/31/2019	
LISN for Conducted Emissions CISPR-16	Fischer	50/250-25-2-01	T1310	06/19/2019	
UL AUTOMATION SOFTWARE					
Radiated Software	UL	UL EMC	Ver 9.5, April 26, 2016		
Conducted Software	UL	UL EMC	Ver 5.4, October 13, 2016		
AC Line Conducted Software	UL	UL EMC	Ver 9.5, May 26, 2015		

*Testing is completed before equipment expiration date.

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8. ANTENNA PORT TEST RESULTS

8.1. ON TIME AND DUTY CYCLE

LIMITS

None; for reporting purposes only.

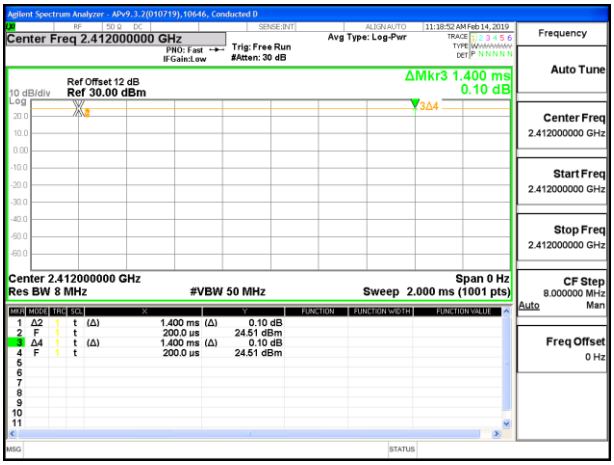
PROCEDURE

KDB 789033 Zero-Span Spectrum Analyzer Method.

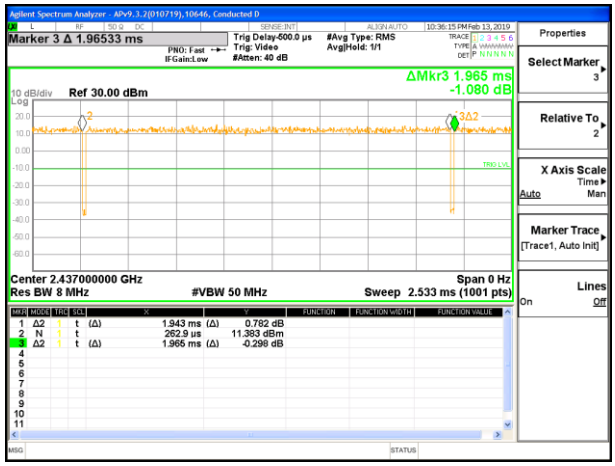
ON TIME AND DUTY CYCLE RESULTS

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	1.400	1.400	1.000	100.0%	0.00	0.010
802.11n HT20	1.943	1.965	0.989	98.9%	0.00	0.010

DUTY CYCLE PLOTS



DUTY CYCLE 802.11b 1TX MODE



DUTY CYCLE 802.11n HT20 CDD MODE

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8.2. 99% BANDWIDTH

LIMITS

None; for reporting purposes only.

RESULTS

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8.2.1. 802.11b MODE

Channel	Frequency (MHz)	99% Bandwidth (MHz)
Low 1	2412	11.5661
Mid 6	2437	11.4566
High 11	2462	11.1504
High 12	2467	11.8633
High 13	2472	10.9553

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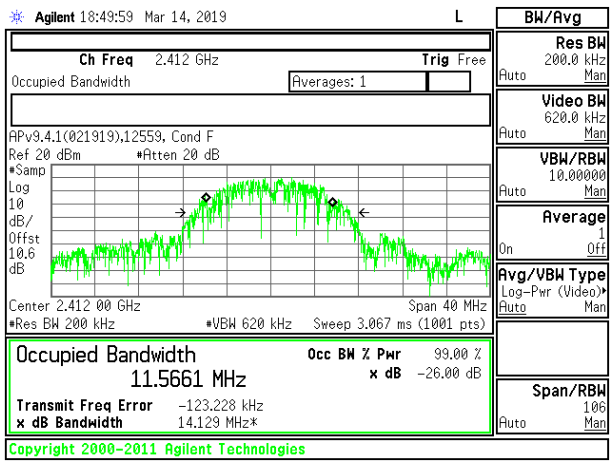
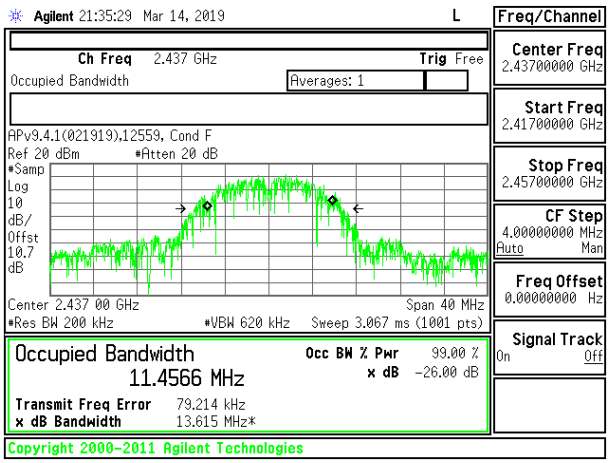
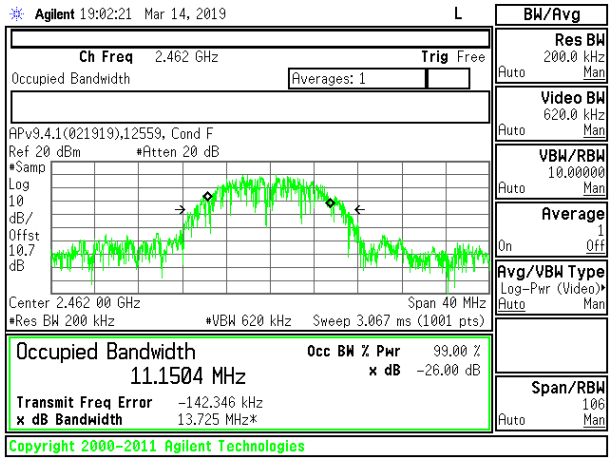


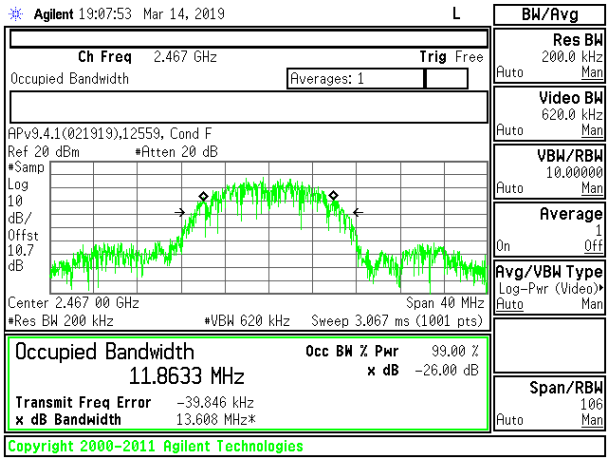
LOW CHANNEL 1



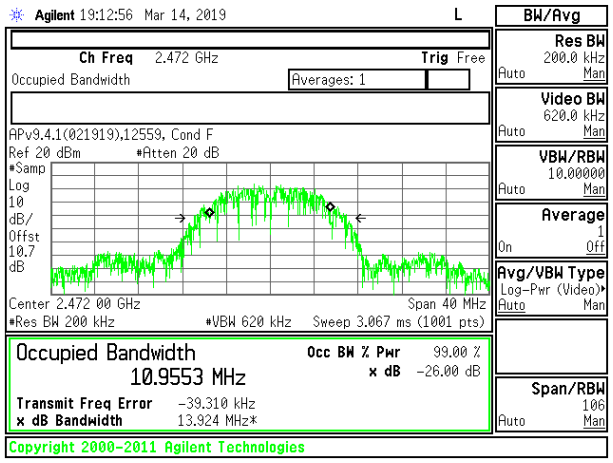
MID CHANNEL 6



HIGH CHANNEL 11



HIGH CHANNEL 12



HIGH CHANNEL 13

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8.2.2. 802.11n HT20 MODE

Channel	Frequency (MHz)	99% Bandwidth (MHz)
Low 1	2412	17.6367
Low 2	2417	17.5974
Low 3	2422	17.5820
Mid 6	2437	17.6435
High 9	2452	17.5349
High 10	2457	17.5490
High 11	2462	17.6839
High 12	2467	17.6896
High 13	2472	17.6393

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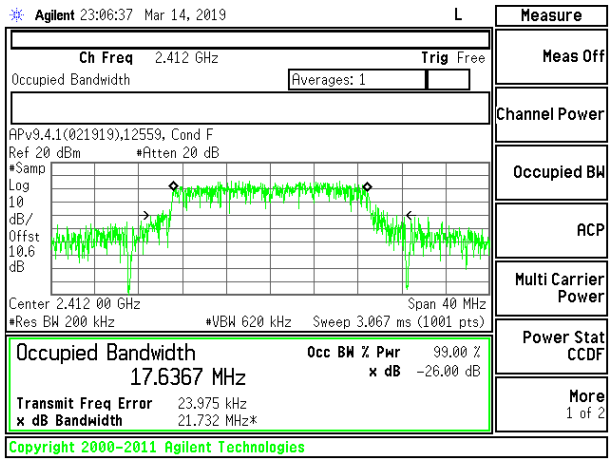
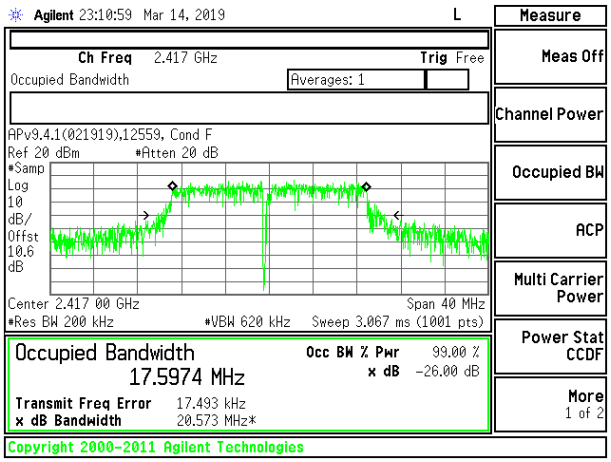
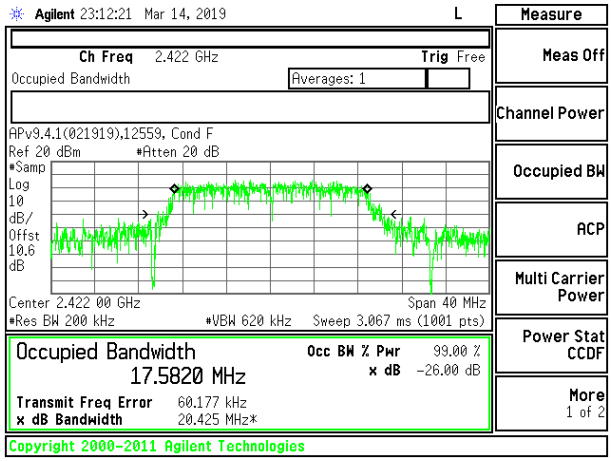


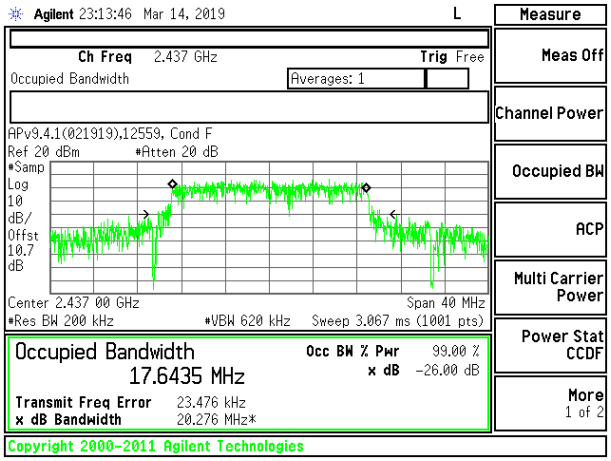
LOW CHANNEL 1



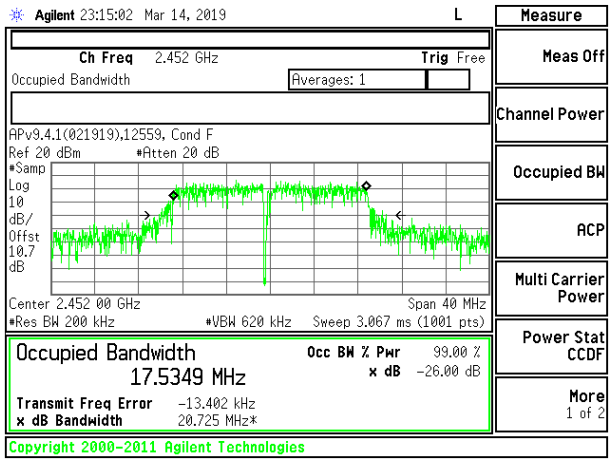
LOW CHANNEL 2



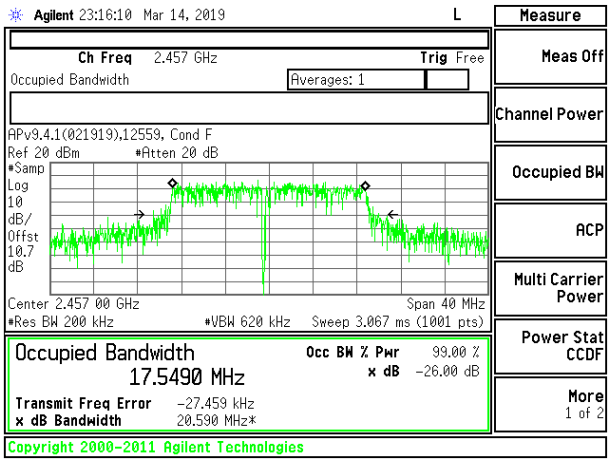
LOW CHANNEL 3



MID CHANNEL 6



HIGH CHANNEL 9



HIGH CHANNEL 10

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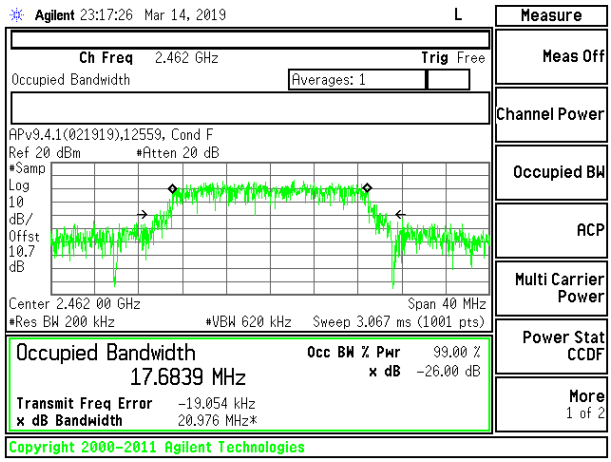
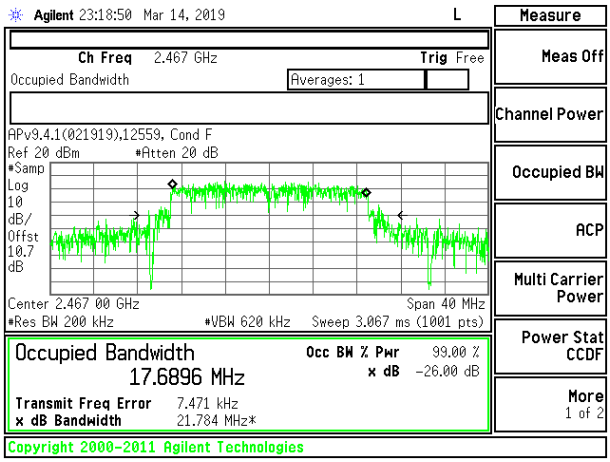
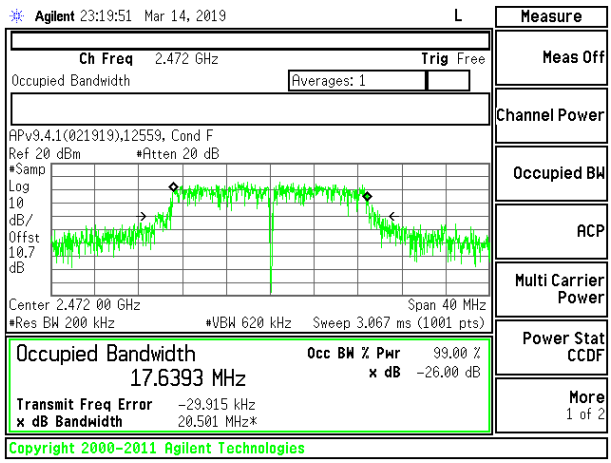


HIGH CHANNEL 11



HIGH CHANNEL 12



HIGH CHANNEL 13

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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

ID:	19467	Date:	3/14/2019

Channel	Frequency (MHz)	6 dB Bandwidth (MHz)	Minimum Limit (MHz)
Low 1	2412	8.040	0.5
Mid 6	2437	8.080	0.5
High 11	2462	8.120	0.5
High 12	2467	8.040	0.5
High 13	2472	8.120	0.5

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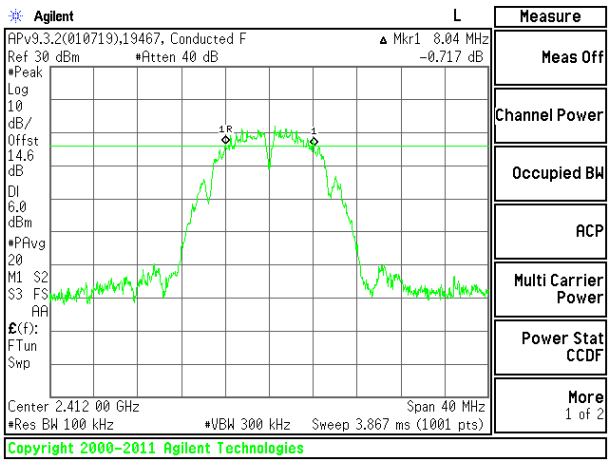
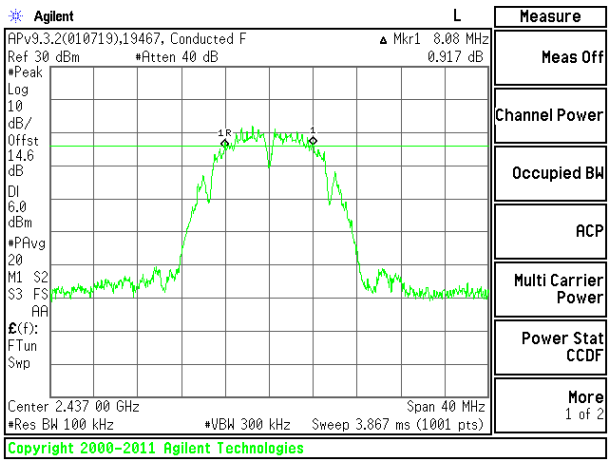
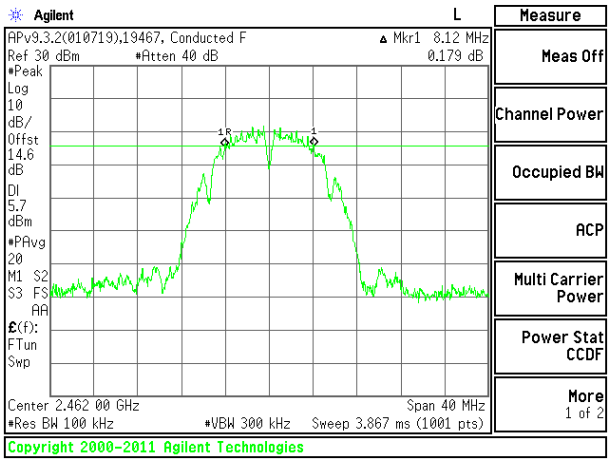


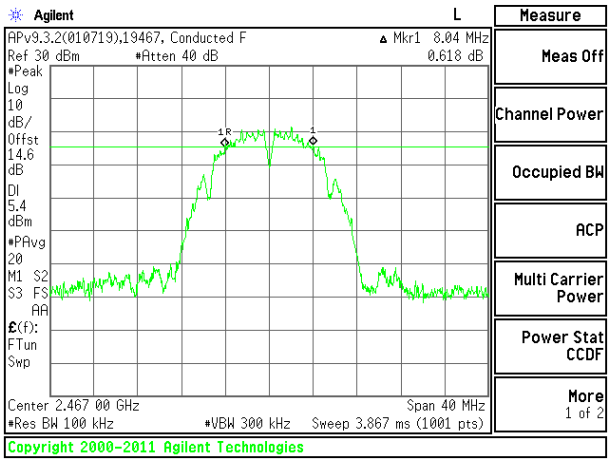
LOW CHANNEL 1



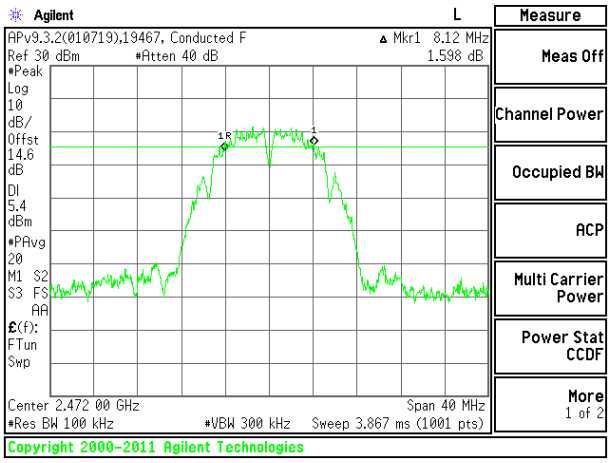
MID CHANNEL 6



HIGH CHANNEL 11



HIGH CHANNEL 12



HIGH CHANNEL 13

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8.3.2. 802.11n HT20 MODE

Channel	Frequency (MHz)	6 dB Bandwidth (MHz)	Minimum Limit (MHz)
Low 1	2412	17.560	0.5
Low 2	2417	17.760	0.5
Low 3	2422	17.600	0.5
Mid 6	2437	17.680	0.5
High 9	2452	17.600	0.5
High 10	2457	17.640	0.5
High 11	2462	17.680	0.5
High 12	2467	17.560	0.5
High 13	2472	17.680	0.5

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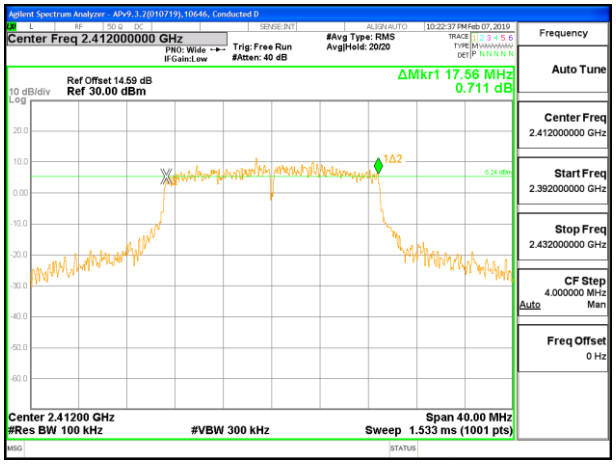
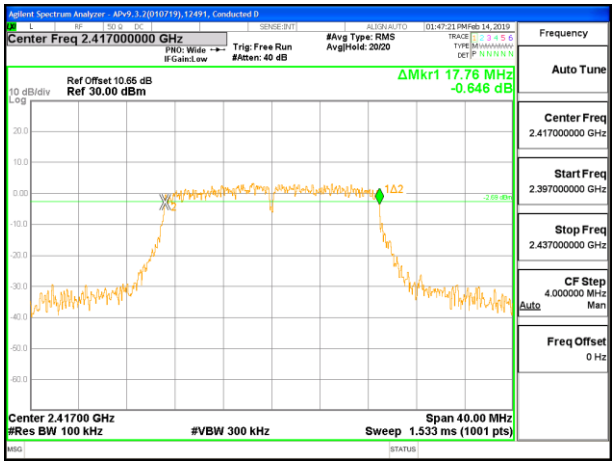
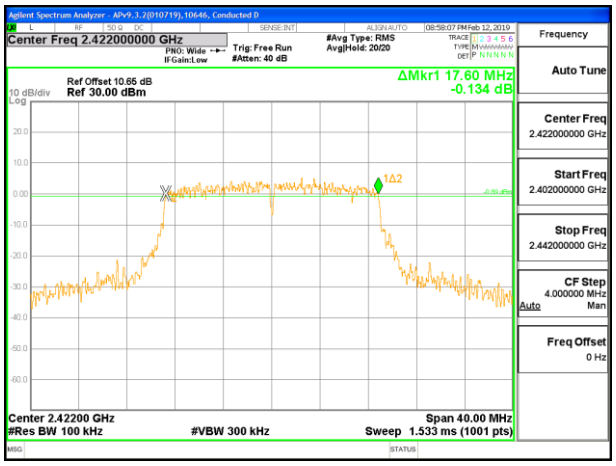


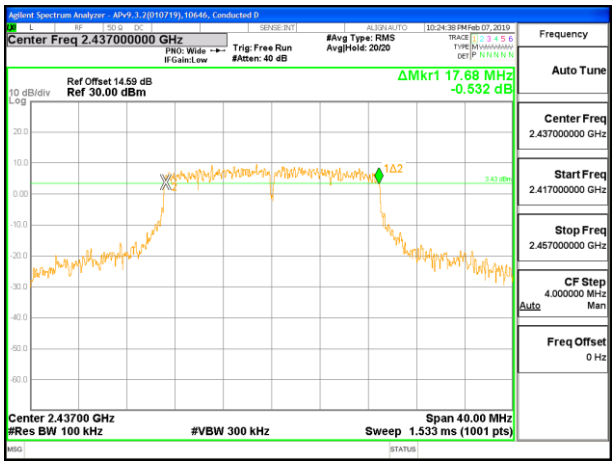
LOW CHANNEL 1



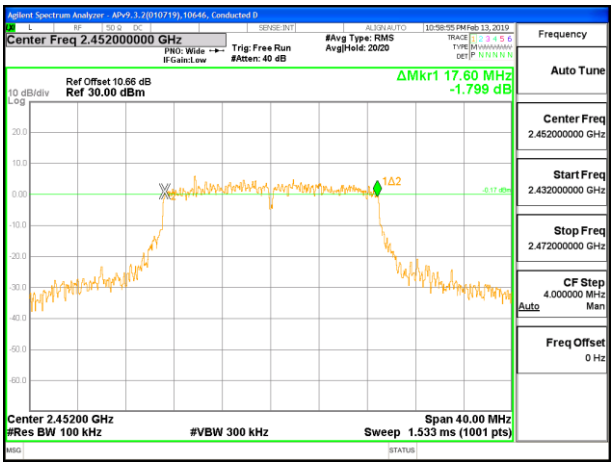
LOW CHANNEL 2



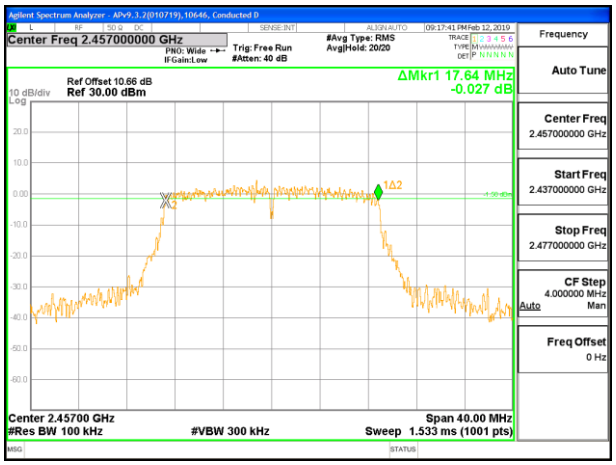
LOW CHANNEL 3



MID CHANNEL 6



HIGH CHANNEL 9



HIGH CHANNEL 10

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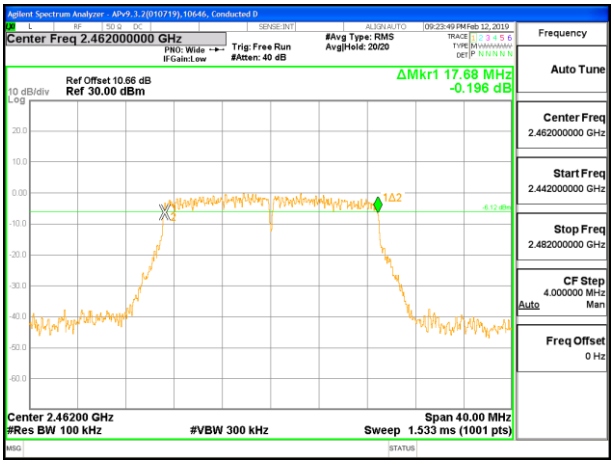

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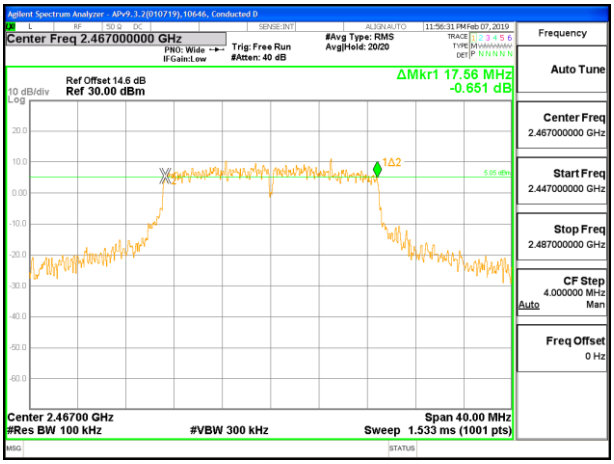
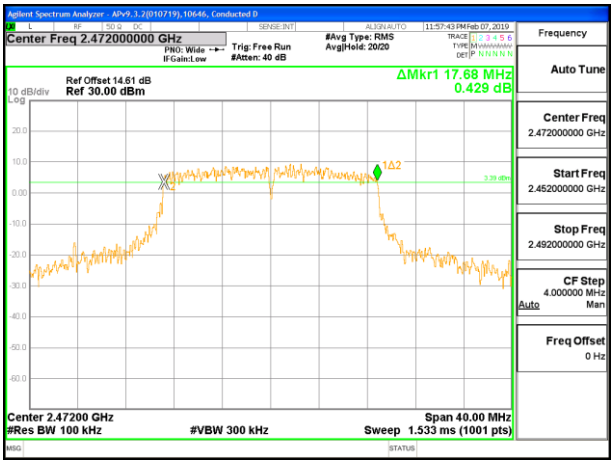


HIGH CHANNEL 12



HIGH CHANNEL 13

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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 10.65 dB (including 10 dB pad and 0.65 dB cable) was entered as an offset in the power meter to allow for a gated peak reading of power.

DIRECTIONAL ANTENNA GAIN

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

ID:	44366	Date:	4/5/2019

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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	0.20	30.00	30	36	30.00
Mid 6	2437	0.20	30.00	30	36	30.00
High 11	2462	0.20	30.00	30	36	30.00
High 12	2467	0.20	30.00	30	36	30.00
High 13	2472	0.20	30.00	30	36	30.00

Duty Cycle CF (dB)	0.00	Included in Calculations of Corr'd Power

Results

Channel	Frequency (MHz)	Meas Power (dBm)	Total Corr'd Power (dBm)	Power Limit (dBm)	Margin (dB)
Low 1	2412	20.09	20.09	30.00	-9.91
Mid 6	2437	19.97	19.97	30.00	-10.03
High 11	2462	20.28	20.28	30.00	-9.72
High 12	2467	18.94	18.94	30.00	-11.06
High 13	2472	15.41	15.41	30.00	-14.59

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8.4.2. 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	0.20	30.00	30	36	30.00
Low 2	2417	0.20	30.00	30	36	30.00
Low 3	2422	0.20	30.00	30	36	30.00
Mid 6	2437	0.20	30.00	30	36	30.00
High 9	2452	0.20	30.00	30	36	30.00
High 10	2457	0.20	30.00	30	36	30.00
High 11	2462	0.20	30.00	30	36	30.00
High 12	2467	0.20	30.00	30	36	30.00
High 13	2472	0.20	30.00	30	36	30.00

Duty Cycle CF (dB)	0.00	Included in Calculations of Corr'd Power

Results

Channel	Frequency (MHz)	Meas Power (dBm)	Total Corr'd Power (dBm)	Power Limit (dBm)	Margin (dB)
Low 1	2412	23.13	23.13	30.00	-6.87
Low 2	2417	24.66	24.66	30.00	-5.34
Low 3	2422	25.01	25.01	30.00	-4.99
Mid 6	2437	24.94	24.94	30.00	-5.06
High 9	2452	24.95	24.95	30.00	-5.05
High 10	2457	24.33	24.33	30.00	-5.67
High 11	2462	21.63	21.63	30.00	-8.37
High 12	2467	19.08	19.08	30.00	-10.92
High 13	2472	11.03	11.03	30.00	-18.97

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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 10.5 dB (including 10 dB pad and 0.5 dB cable) was entered as an offset in the power meter to allow for a gated average reading of power

RESULTS

ID:	44366	**Date:**	4/5/2019

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8.5.1. 802.11b MODE

Channel	Frequency (MHz)	Chain 0 Power (dBm)
Low 1	2412	16.84
Mid 6	2437	16.77
High 11	2462	16.87
High 12	2467	15.41
High 13	2472	11.90

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8.5.2. 802.11n HT20 MODE

Channel	Frequency (MHz)	Chain 0 Power (dBm)
Low 1	2412	14.83
Low 2	2417	16.46
Low 3	2422	16.91
Mid 6	2437	16.74
High 9	2452	16.75
High 10	2457	16.23
High 11	2462	13.43
High 12	2467	10.88
High 13	2472	2.83

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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:

Note: PSD measurements were tested and passed with Higher Power

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8.6.1. 802.11b MODE

Duty Cycle CF (dB)	0.00	Included in Calculations of Corr'd PSD

PSD Results

Channel	Frequency (MHz)	Chain 0 Meas (dBm/ 3kHz)	Total Corr'd PSD (dBm/ 3kHz)	Limit (dBm/ 3kHz)	Margin (dB)
Low 1	2412	-2.458	-2.458	8.0	-10.5
Mid 6	2437	-2.014	-2.014	8.0	-10.0
High 11	2462	-3.515	-3.515	8.0	-11.5
High 12	2467	-6.822	-6.822	8.0	-14.8
High 13	2472	-10.604	-10.604	8.0	-18.6

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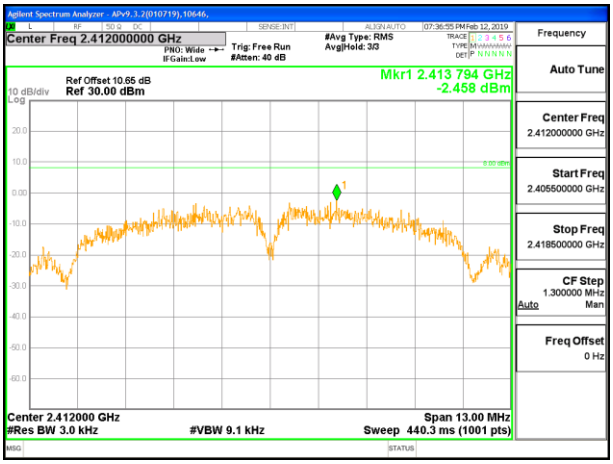
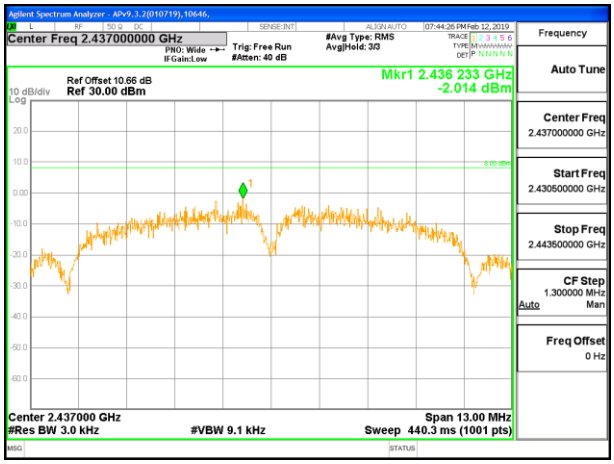
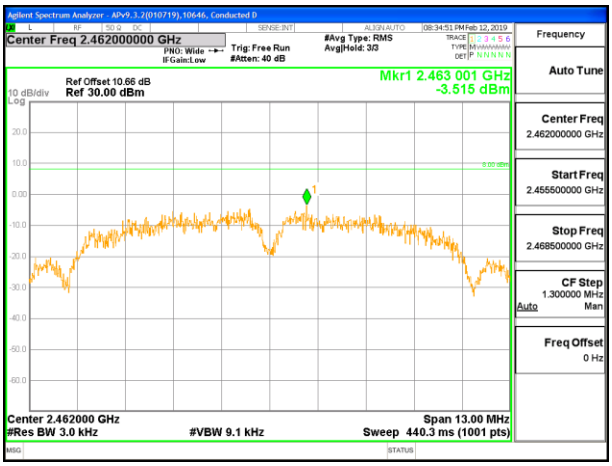


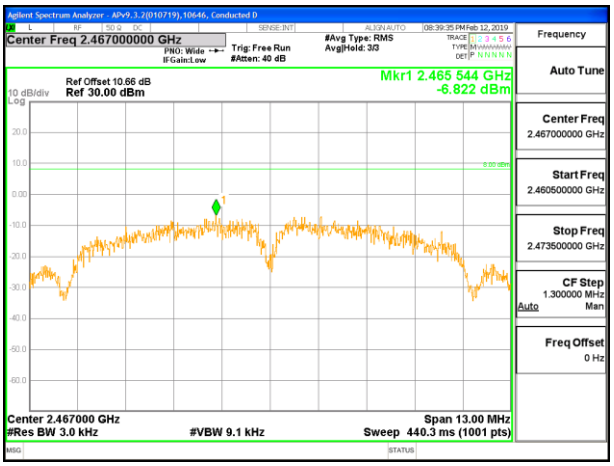
LOW CHANNEL 1



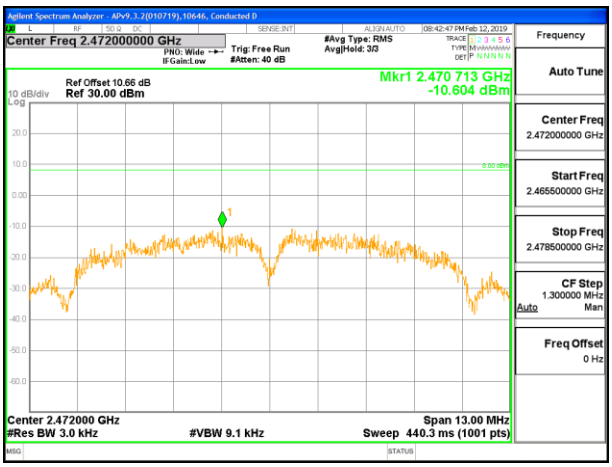
LOW CHANNEL 6



HIGH CHANNEL 11



HIGH CHANNEL 12



HIGH CHANNEL 13

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Duty Cycle CF (dB)	0.00	Included in Calculations of Corr'd PSD

PSD Results

Channel	Frequency (MHz)	Chain 0 Meas (dBm/ 3kHz)	Total Corr'd PSD (dBm/ 3kHz)	Limit (dBm/ 3kHz)	Margin (dB)
Low 1	2412	-3.500	-3.500	8.0	-11.5
Mid 6	2437	-3.555	-3.555	8.0	-11.6
High 11	2462	-5.118	-5.118	8.0	-13.1
High 12	2467	-7.983	-7.983	8.0	-16.0
High 13	2472	-11.626	-11.626	8.0	-19.6

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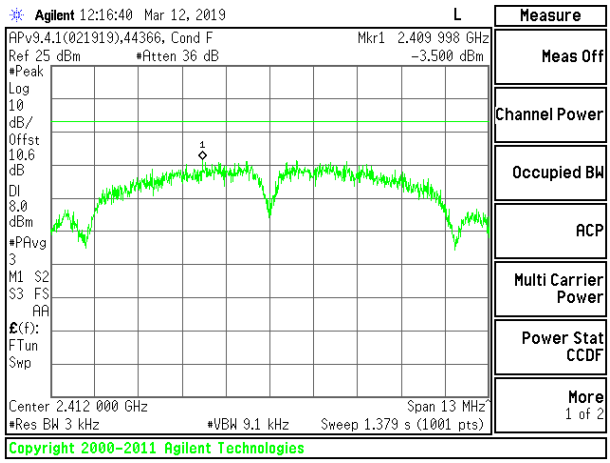
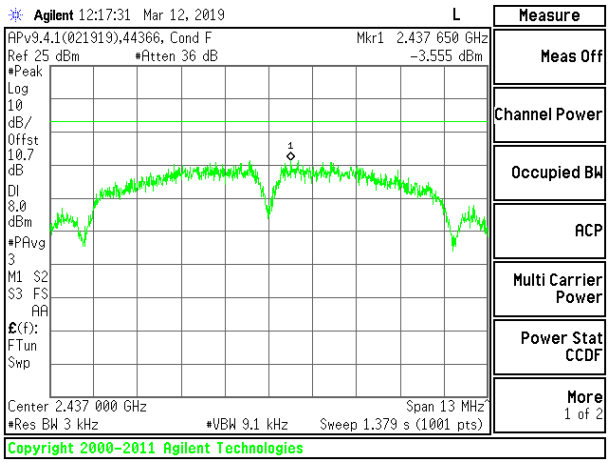
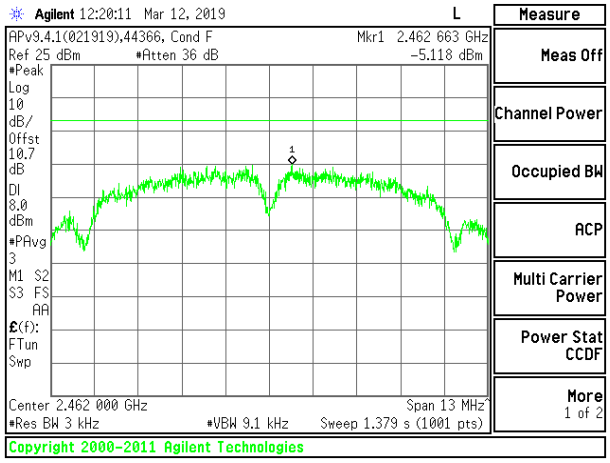


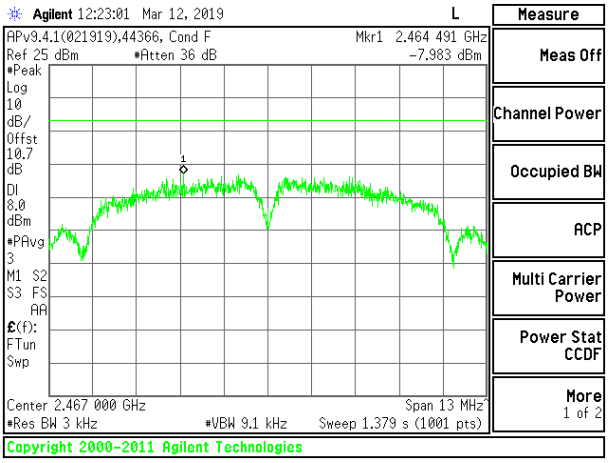
LOW CHANNEL 1



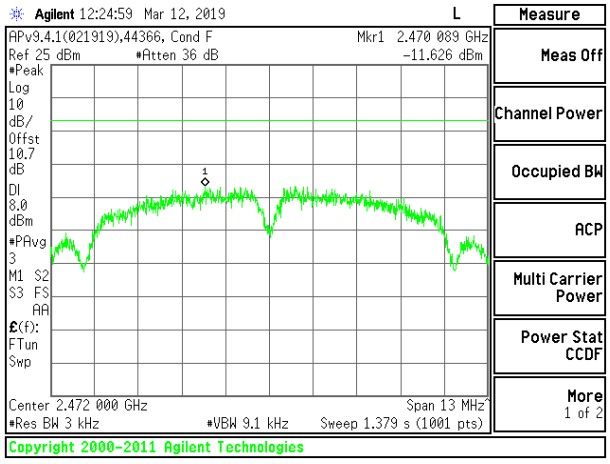
LOW CHANNEL 6



HIGH CHANNEL 11



HIGH CHANNEL 12



HIGH CHANNEL 13

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8.6.2. 802.11n HT20 MODE

Duty Cycle CF (dB)	0.00	Included in Calculations of Corr'd PSD

PSD Results

Channel	Frequency (MHz)	Chain 0 Meas (dBm/ 3kHz)	Total Corr'd PSD (dBm/ 3kHz)	Limit (dBm/ 3kHz)	Margin (dB)
Low 1	2412	-10.260	-10.26	8.0	-18.3
Low 2	2417	-9.420	-9.42	8.0	-17.4
Low 3	2422	-7.514	-7.51	8.0	-15.5
Mid 6	2437	-5.714	-5.71	8.0	-13.7
High 9	2452	-7.038	-7.04	8.0	-15.0
High 10	2457	-8.976	-8.98	8.0	-17.0
High 11	2462	-10.752	-10.75	8.0	-18.8
High 12	2467	-14.595	-14.60	8.0	-22.6
High 13	2472	-22.274	-22.27	8.0	-30.3

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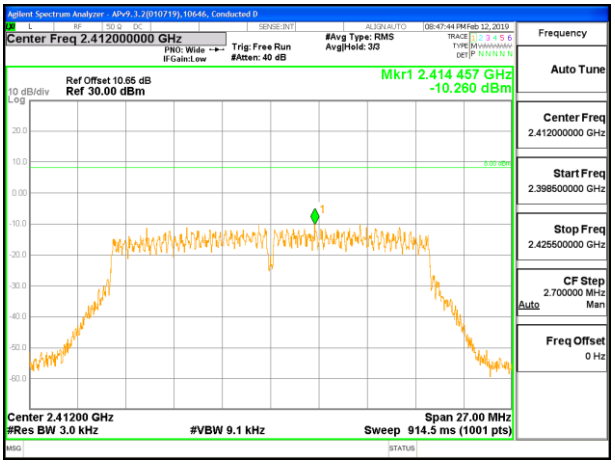
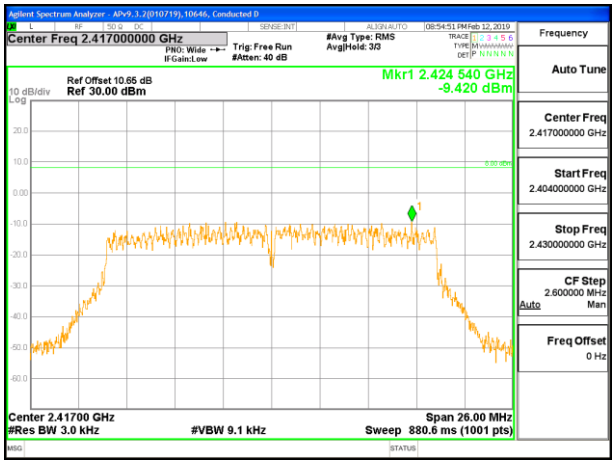
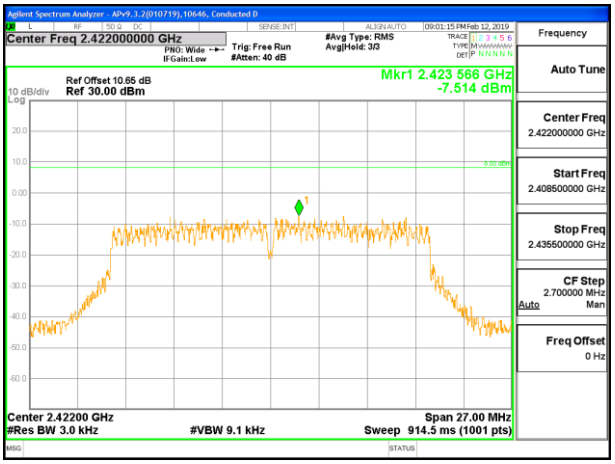


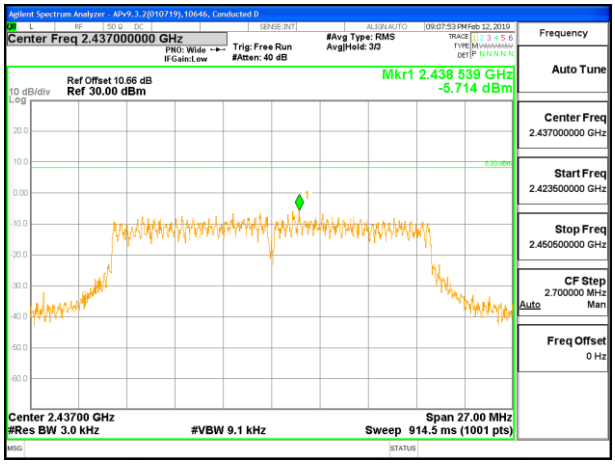
LOW CHANNEL 1



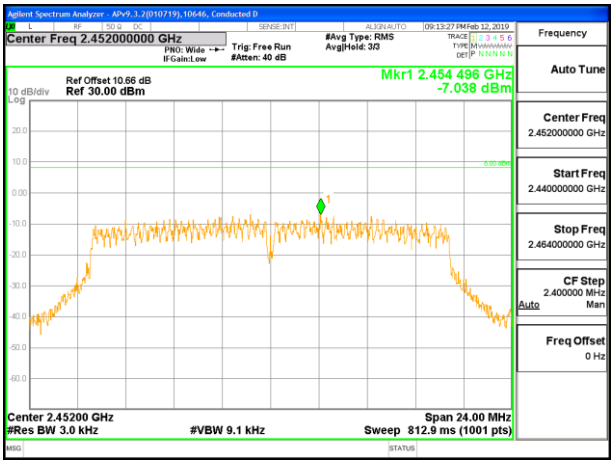
LOW CHANNEL 2



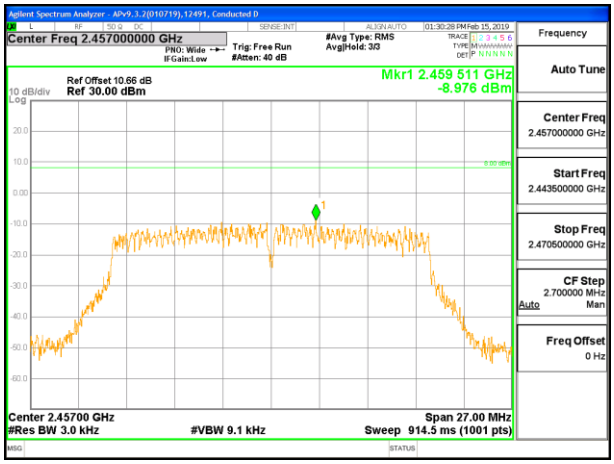
LOW CHANNEL 3



MID CHANNEL 6



HIGH CHANNEL 9



HIGH CHANNEL 10

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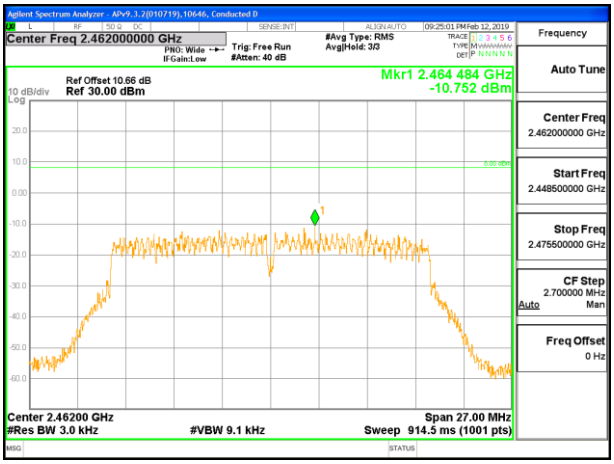
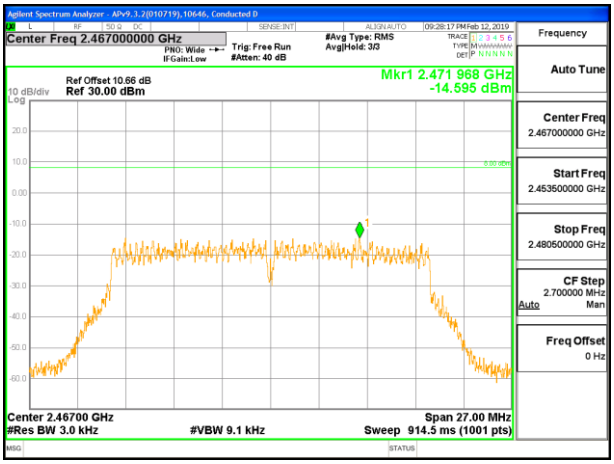
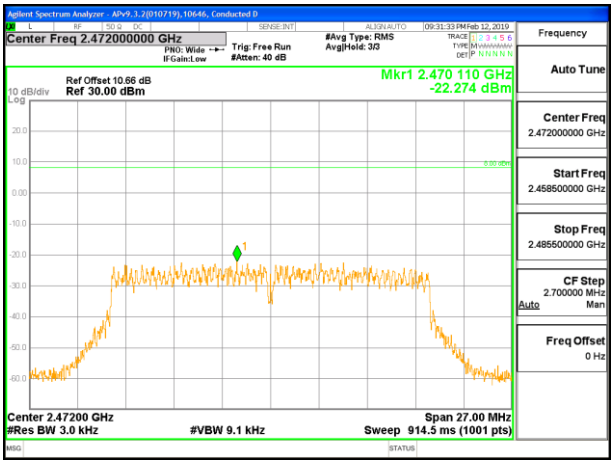


HIGH CHANNEL 11



HIGH CHANNEL 12



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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

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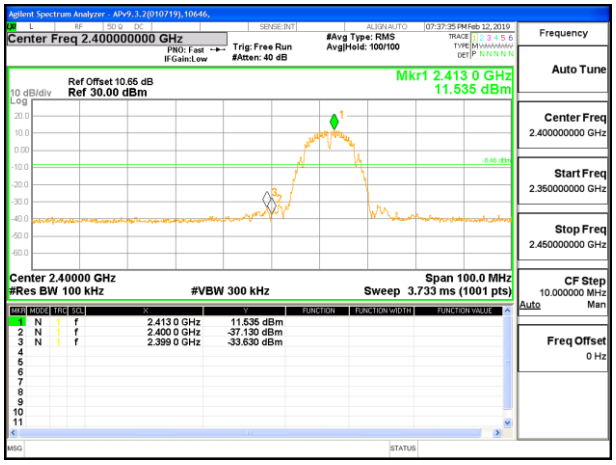
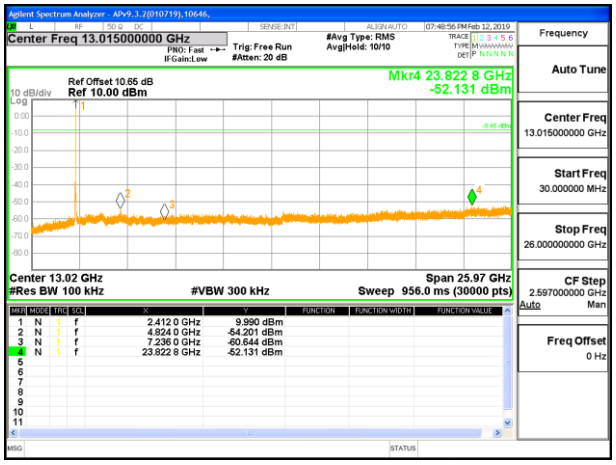
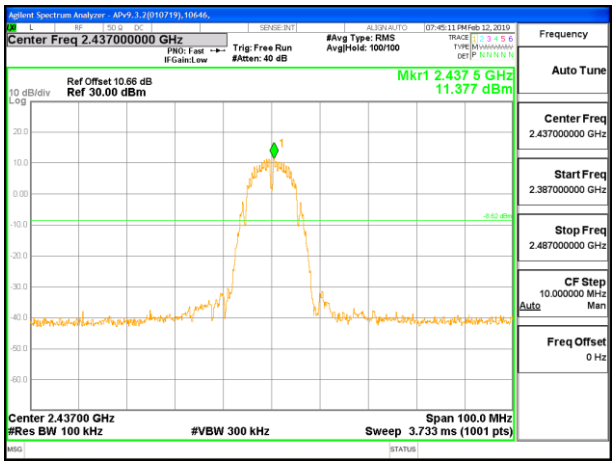
8.7.1. 802.11b MODE



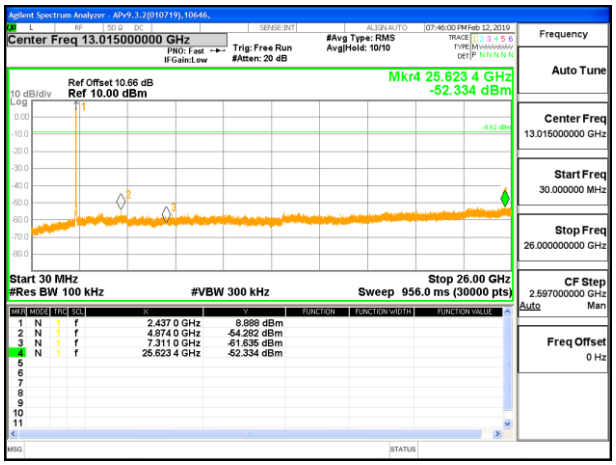
LOW CHANNEL 1 BANDEDGE



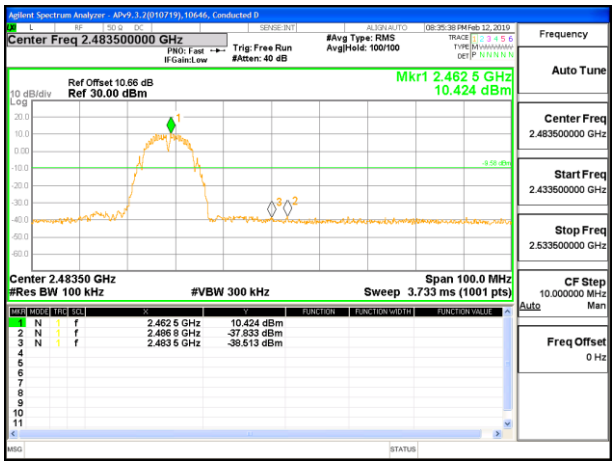
OUT-OF-BAND LOW CHANNEL 1



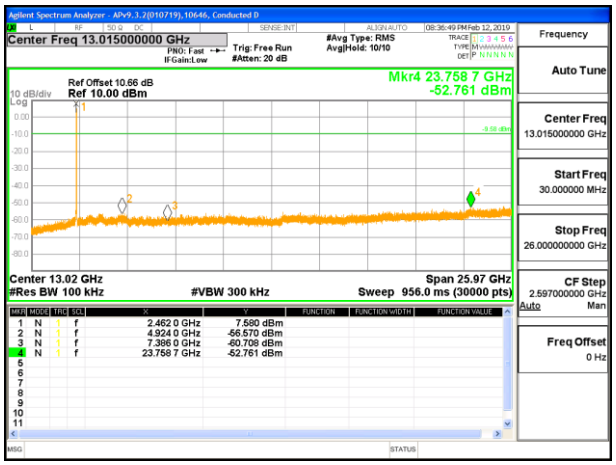
IN-BAND REFERNCE LEVEL



OUT-OF-BAND MID CHANNEL



HIGH CHANNEL 11 BANDEDGE



OUT-OF-BAND HIGH CHANNEL 11

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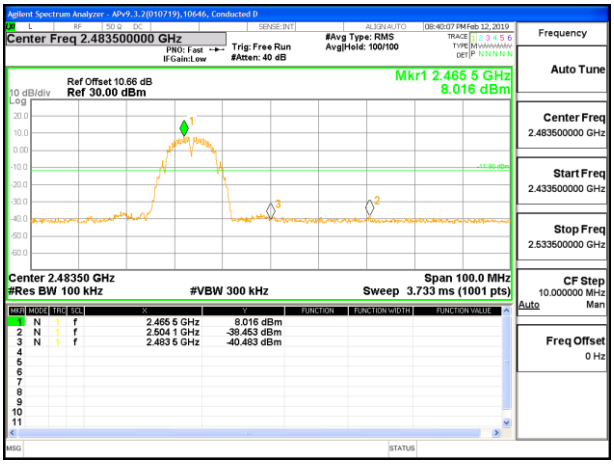
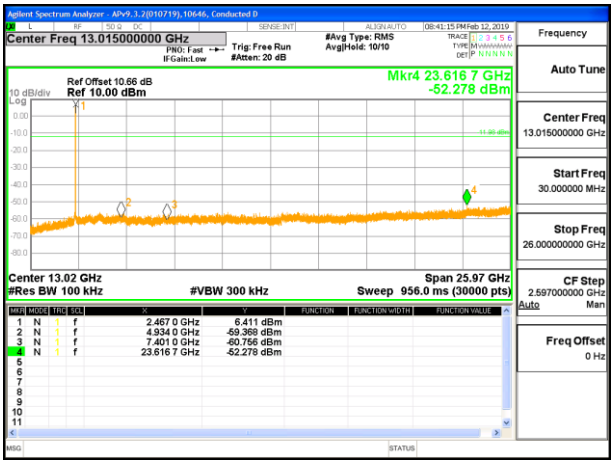
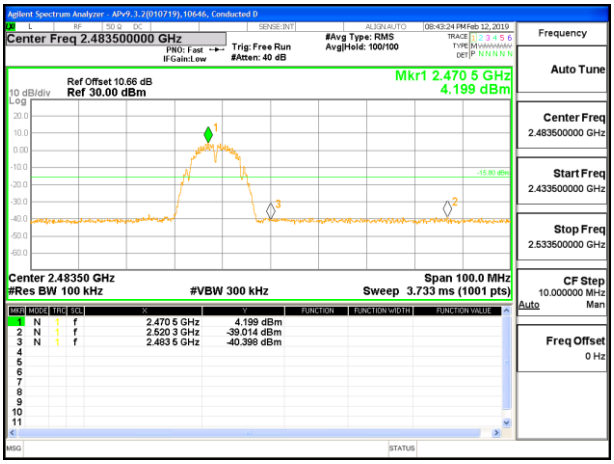


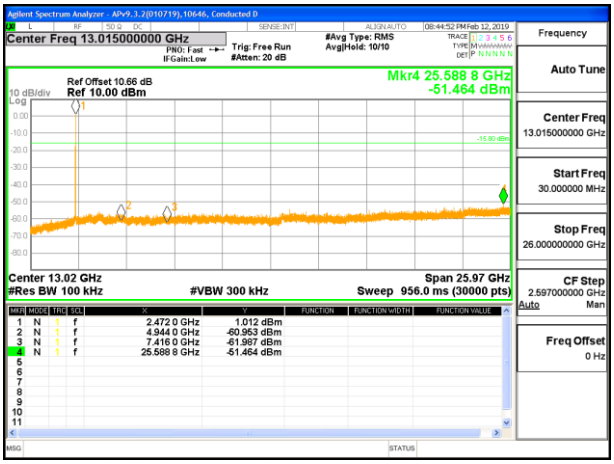
HIGH CHANNEL 12 BANDEDGE



OUT-OF-BAND HIGH CHANNEL 12



HIGH CHANNEL 13 BANDEDGE



OUT-OF-BAND HIGH CHANNEL 13

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