

TEST REPORT



CTK Co., Ltd.
(Ho-dong), 113, Yejik-ro, Cheoin-gu,
Yongin-si, Gyeonggi-do, Korea
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Fax: +82-31-624-9501

Report No.:
CTK-2021-00839
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1. Client

- Name : KAONMEDIA Co., Ltd.
- Address : KAONMEDIA Building, 884-3 Seongnam-daero, Bundang-gu, Seongnam-si, Gyeonggi-do, Korea
- Date of Receipt : 2021-01-07

2. Manufacturer

- Name : KAONMEDIA Co., Ltd.
- Address : KAONMEDIA Building, 884-3, Seongnam-daero, Bundang-gu, Seongnam-si, Gyeonggi-do, Korea

3. Use of Report : For FCC Conformance

4. Test Sample / Model: IP Set-top-box(OTT STB) / KSTB2100

5. Date of Test : 2021-02-09 to 2021-03-02

6. Test Standard(method) used : FCC 47 CFR part 15 subpart C 15.247

7. Testing Environment: Temp.: (23 ± 1) °C, Humidity: (49 ± 3) % R.H.

8. Test Results : Compliance

The results shown in this test report refer only to the sample(s) tested unless otherwise stated. This Test Report cannot be reproduced, except in full.

Affirmation	Tested by	Technical Manager
	Ji-Hye, Kim: (Signature)	Won-Jae, Hwang: (Signature)

2021-03-09

Republic of KOREA **CTK Co., Ltd.**



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REPORT REVISION HISTORY

Date	Revision	Page No
2021-03-09	Issued (CTK-2021-00839)	all

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1. General Product Description

1.1 Client Information

Company	KAONMEDIA Co., Ltd.
Contact Point	KAONMEDIA Building, 884-3 Seongnam-daero, Bundang-gu, Seongnam-si, Gyeonggi-do, Korea
Contact Person	Name : Minseok Choi E-mail : minseok.choi@kaonmedia.com Tel : +82-31-724-8683 Fax : -

1.2 Product Information

FCC ID	WQTKSTB2100
Product Description	IP Set-top-box(OTT STB)
Model name	KSTB2100
Variant Model name	-
Operating Frequency	2 412 MHz – 2 462 MHz (20 MHz_BW) 2 422 MHz – 2 452 MHz (40 MHz_BW)
RF Output Power	802.11b : 25.76 dBm (376.94 mW) 802.11g : 23.46 dBm (222.03 mW) 802.11n_HT20 : 23.28 dBm (212.70 mW) 802.11n_HT40 : 21.27 dBm (134.10 mW)
Antenna Specification	Antenna type : PCB Antenna Peak Gain : 1.9 dBi (ANT1), 1.9 dBi (ANT2), 1.9 dBi (ANT3), 1.9 dBi (ANT4)
Type of Modulation	802.11b : DSSS 802.11g/n : OFDM
Data Rate	802.11b : 11 / 5.5 / 2 / 1 Mbps 802.11g : 54 / 48 / 36 / 24 / 18 / 12 / 9 / 6 Mbps 802.11n: up to 600 Mbps
Power Source	DC 12 V (Adapter)
Hardware Rev	Rev0.3
Software Rev	0.1.5

1.3 Peripheral Devices

Device	Manufacturer	Model No.	Serial No.
Note Computer	HP	15-bs563TU	CND7253R6N
AC/DC Adapter	HP	HSTNN-CA40	-
Switching Mode Power Adaptor	CHENAHOU FRECOM ELECTRONICS CO., LTD.	F18L16-120150SPAU	-

1.4 Model Differences

Not applicable



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2. Facility and Accreditations

2.1 Test Facility

The measurement facility is located at (Ho-dong), 113, Yejik-ro, Cheoin-gu, Yong-in-si, Gyeonggi-do, Korea.

2.2 Laboratory Accreditations and Listings

Country	Agency	Registration Number
USA	FCC	805871
CANADA	ISED	8737A-2
KOREA	NRRA	KR0025

2.3 Calibration Details of Equipment Used for Measurement

Test equipment and test accessories are calibrated on regular basis. The maximum time between calibrations is one year or what is recommended by the manufacturer, whichever is less. All test equipment calibrations are traceable to the Korea Research Institute of Standards and Science (KRISS), therefore, all test data recorded in this report is traceable to KRISS.



3. Test Specifications

3.1 Standards

FCC Part Section(s)	Requirement(s)	Status (Note 1)	Test Condition
15.247(a)	6 dB Bandwidth	C	Conducted
15.247(b)	Maximum Output Power	C	
15.247(d)	Conducted Spurious emission	C	
15.247(d)	Unwanted Emission(Conducted)	C	
15.247(e)	Transmitter Power Spectral Density	C	
15.209	Radiated Emissions	C	Radiated
15.207	AC Conducted Emissions	C	Line Conducted
<i>Note 1:</i> C=Complies NC=Not Complies NT=Not Tested NA=Not Applicable			
<i>Note 2:</i> The data in this test report are traceable to the national or international standards.			
<i>Note 3:</i> The sample was tested according to the following specification: FCC Part 15.247			
<i>Note 4:</i> The tests were performed according to the method of measurements prescribed in KDB No.558074, ANSI C63.10-2013			

3.2 Mode of operation during the test

The EUT is operated in a manner representative of the typical of the equipments. During at testing, system components were manipulated within the confines of typical usage to maximize each emission. All modulation modes were tests. The results are only attached worst cases.

Test Frequency

802.11b/g/n_HT20

Low	Mid	High
2 412 MHz	2 437 MHz	2 462 MHz

802.11n_HT40

Low	Mid	High
2 422 MHz	2 437 MHz	2 452 MHz

Test mode

Test mode	Modulation	Data rate	Duty Cycle	Duty Cycle Factor
802.11b	DSSS	1 Mbps	95.2 %	0.21 dB
802.11g	OFDM	6 Mbps	95.3 %	0.21 dB
802.11n_HT20	OFDM	MCS 0	95.4 %	0.21 dB
802.11n_HT40	OFDM	MCS 0	90.8 %	0.42 dB



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3.3 Device Modifications

The following modifications were necessary for compliance:

Not applicable

3.4 Maximum Measurement Uncertainty

The value of the measurement uncertainty for the measurement of each parameter.
Coverage factor $k = 2$, Confidence levels of 95 %

Description	Uncertainty
Conducted RF Output Power	± 1.5 dB
Power Spectral Density	± 1.5 dB
Occupied Bandwidth	± 0.1 MHz
Unwanted Emission(conducted)	± 3.0 dB
Radiated Emissions ($f \leq 1$ GHz)	± 4.0 dB
Radiated Emissions ($f > 1$ GHz)	± 5.0 dB

3.5 Test Software

Conducted Test	Ics Pro Ver. 6.0.3
Radiated Test	TOYO EMI software EP5RE Ver. 6.0.1.0
Line Conducted Test	ESC17, ESC13 : EMC32 Ver. 8.50.0 ESR7 : EMC32 Ver. 8.53.0



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4. Technical Characteristic Test

4.1 6dB Bandwidth

Test Procedures

KDB 558074 - Section 8.2
ANSI C63.10-2013 - Section 11.8.2

Measure the maximum width of the emission that is constrained by the frequencies associated with the two outermost amplitude points (upper and lower frequencies) that are attenuated by 6 dB relative to the maximum level measured in the fundamental emission.

Test Procedures

ANSI C63.10-2013 - Section 6.9

The occupied bandwidth is the frequency bandwidth such that, below its lower and above its upper frequency limits, the mean powers are each equal to 0.5% of the total mean power of the given emission.

Use the 99% power bandwidth function of the instrument and report the measured bandwidth.

Test Settings :

Center frequency = the highest, middle and the lowest channels

- a) RBW = 100 kHz
- b) VBW $\geq 3 \times$ RBW
- c) Detector = peak
- d) Trace mode = Max hold
- e) Sweep = auto couple
- f) Allow trace to fully stabilize
- g) Measure the maximum width of the emission that is constrained by the frequencies associated with the two outermost amplitude points (upper and lower frequencies) that are attenuated by 6 dB relative to the maximum level measured in the fundamental emission.

Minimum Standard :

6 dB Bandwidth > 500kHz



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Test Data :

ANT1

Mode	6 dB Bandwidth and 99 % Bandwidth (MHz)					
	802.11b		802.11g		802.11n_HT20	
Frequency	6 dB	99 %	6 dB	99 %	6 dB	99 %
2 412 MHz	8.54	10.34	16.10	16.40	16.69	17.59
2 437 MHz	8.62	10.93	16.47	16.56	17.68	17.77
2 462 MHz	7.66	10.30	15.75	16.37	16.15	17.57

Mode	6 dB Bandwidth and 99 % Bandwidth (MHz)	
	802.11n_HT40	
Frequency	6 dB	99 %
2 422 MHz	32.60	35.83
2 437 MHz	36.40	36.25
2 452 MHz	32.58	35.66

ANT2

Mode	6 dB Bandwidth and 99 % Bandwidth (MHz)					
	802.11b		802.11g		802.11n_HT20	
Frequency	6 dB	99 %	6 dB	99 %	6 dB	99 %
2 412 MHz	8.52	10.39	16.32	16.40	17.60	17.58
2 437 MHz	8.60	11.06	16.44	16.55	17.69	17.74
2 462 MHz	8.12	10.33	15.74	16.35	16.95	17.55

Mode	6 dB Bandwidth and 99 % Bandwidth (MHz)	
	802.11n_HT40	
Frequency	6 dB	99 %
2 422 MHz	35.71	35.88
2 437 MHz	36.46	36.28
2 452 MHz	32.58	35.68



ANT3

Mode	6 dB Bandwidth and 99 % Bandwidth (MHz)					
	802.11b		802.11g		802.11n_HT20	
Frequency	6 dB	99 %	6 dB	99 %	6 dB	99 %
2 412 MHz	8.12	10.25	16.29	16.37	17.19	17.56
2 437 MHz	9.02	10.80	16.45	16.51	17.72	17.73
2 462 MHz	8.11	10.22	15.49	16.34	15.75	17.54

Mode	6 dB Bandwidth and 99 % Bandwidth (MHz)	
	802.11n_HT40	
Frequency	6 dB	99 %
2 422 MHz	32.60	35.70
2 437 MHz	36.45	36.27
2 452 MHz	32.61	35.80

ANT4

Mode	6 dB Bandwidth and 99 % Bandwidth (MHz)					
	802.11b		802.11g		802.11n_HT20	
Frequency	6 dB	99 %	6 dB	99 %	6 dB	99 %
2 412 MHz	8.09	10.39	16.06	16.35	16.97	17.57
2 437 MHz	8.61	11.04	16.46	16.52	17.68	17.73
2 462 MHz	8.11	10.27	15.35	16.33	16.93	17.55

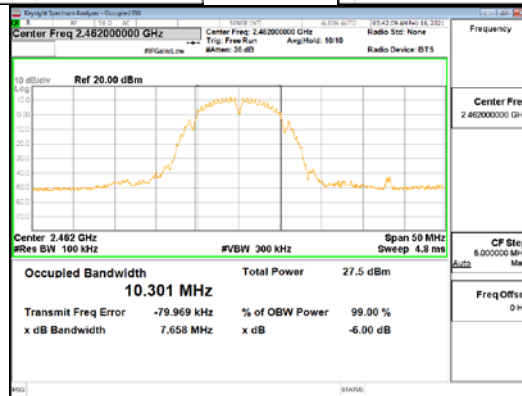
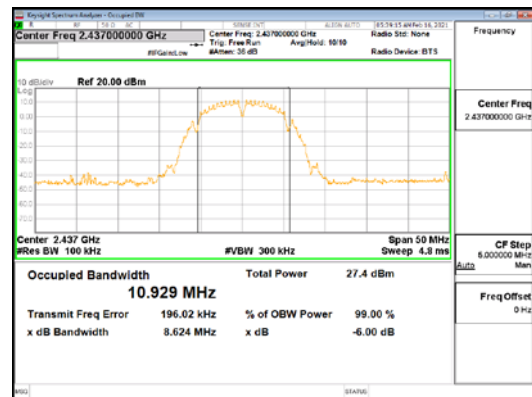
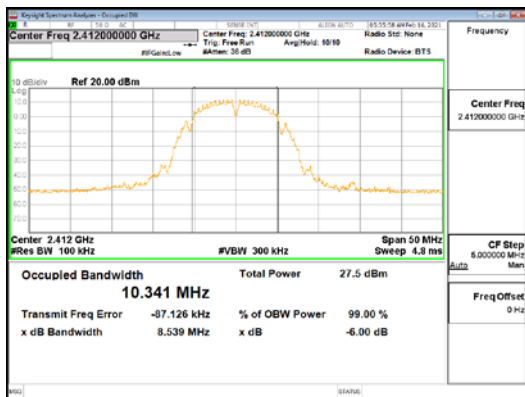
Mode	6 dB Bandwidth and 99 % Bandwidth (MHz)	
	802.11n_HT40	
Frequency	6 dB	99 %
2 422 MHz	32.78	35.78
2 437 MHz	36.40	36.26
2 452 MHz	28.89	35.69

See next pages for actual measured spectrum plots.

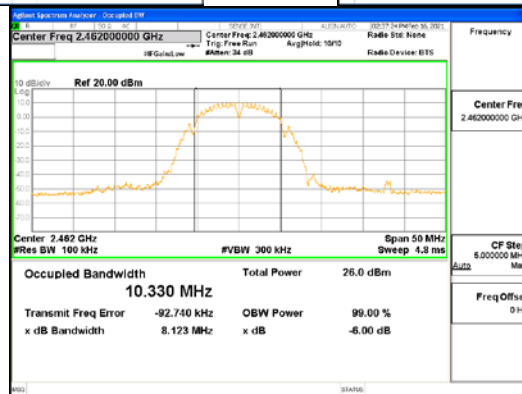
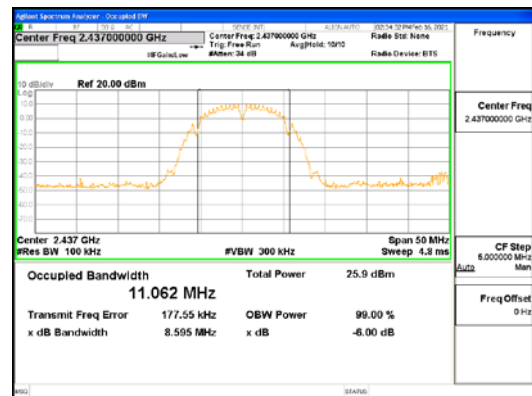
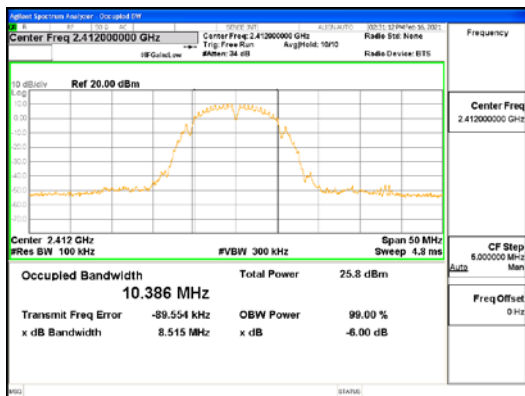


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ANT1, 802.11b

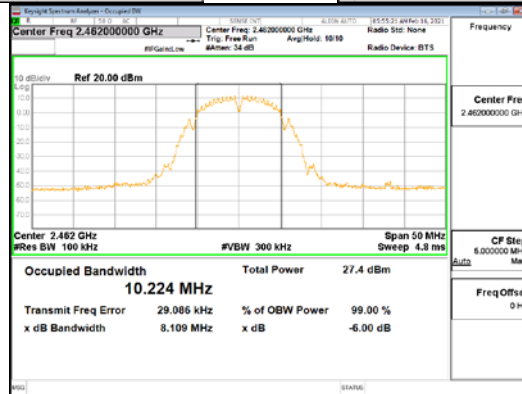
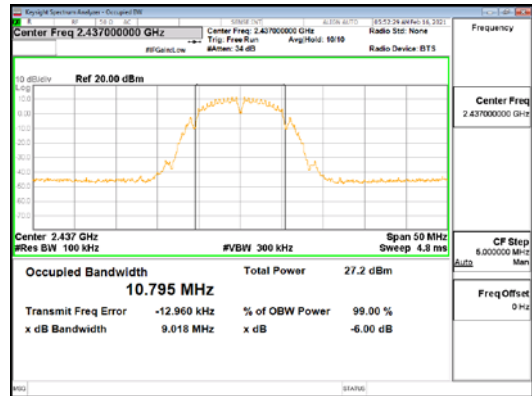
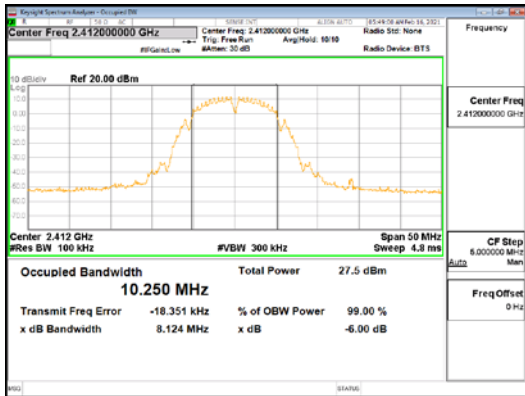


ANT2, 802.11b

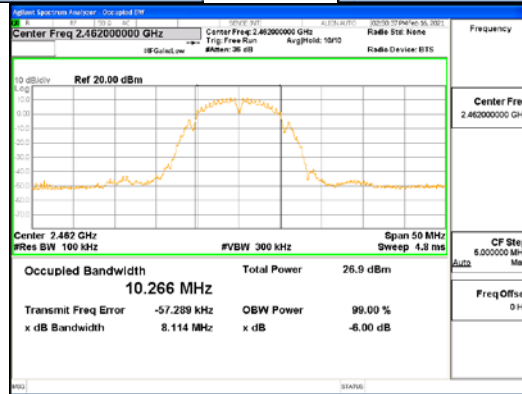
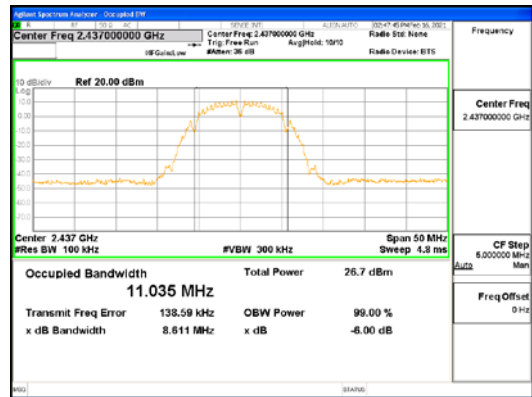
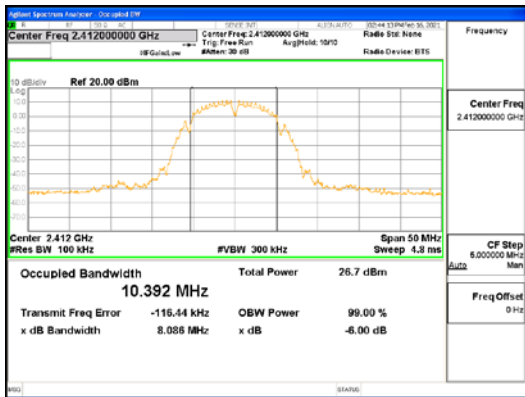


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ANT3, 802.11b

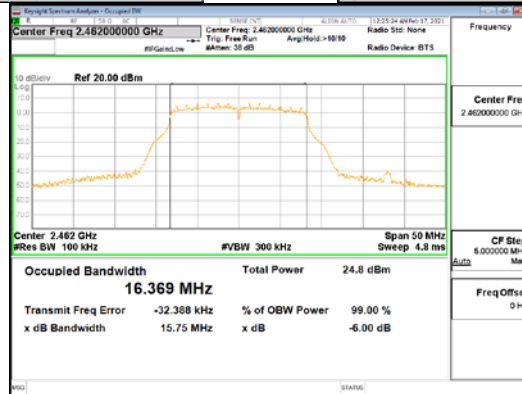
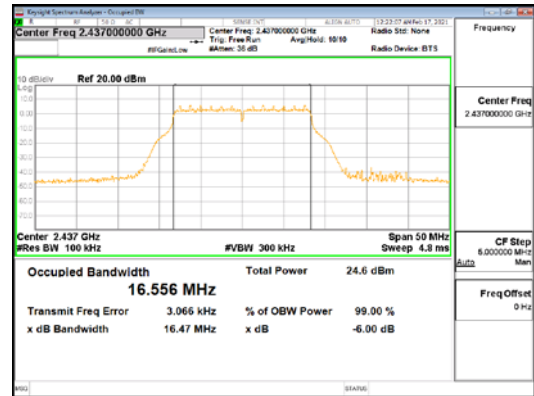
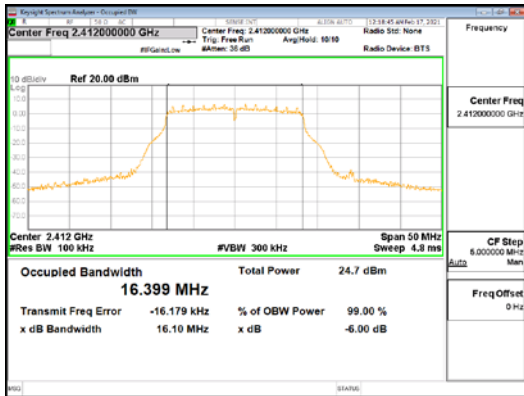


ANT4, 802.11b

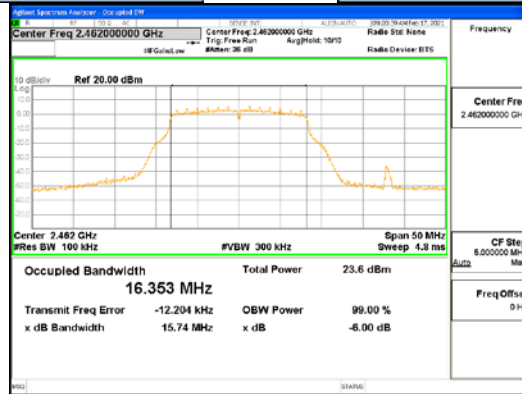
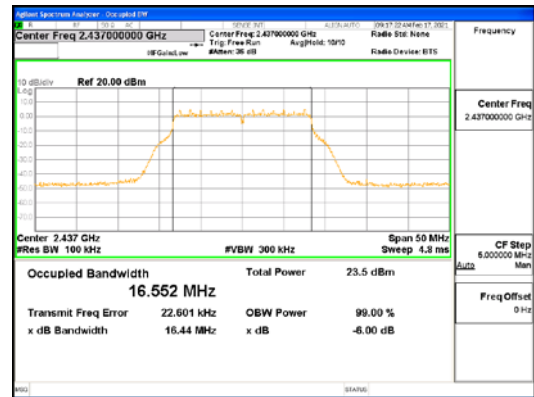
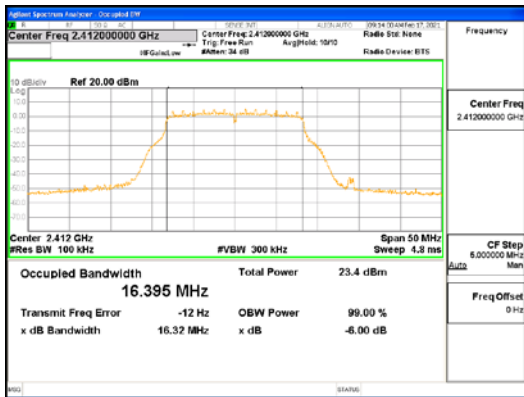


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ANT1, 802.11g

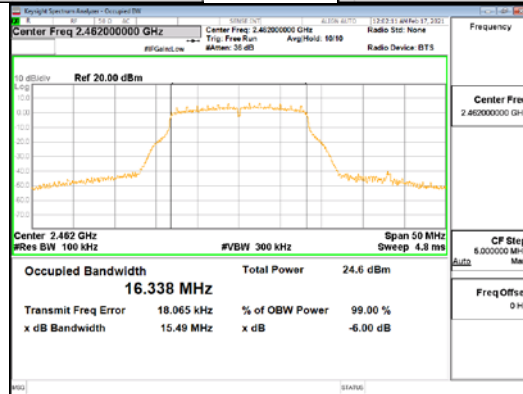
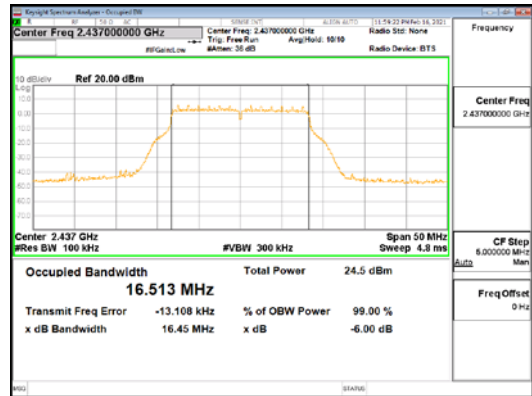
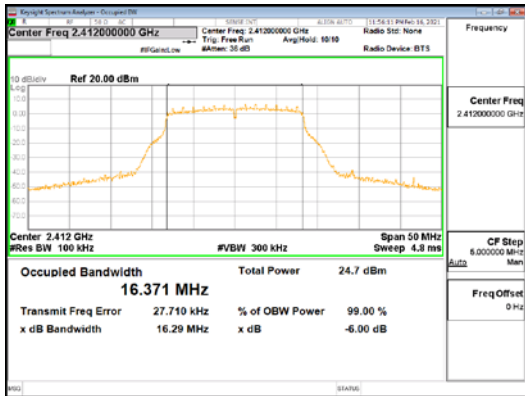


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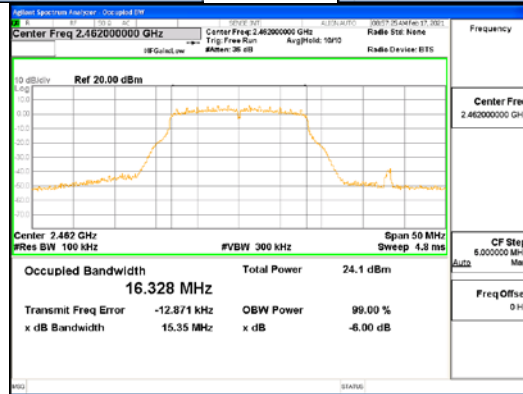
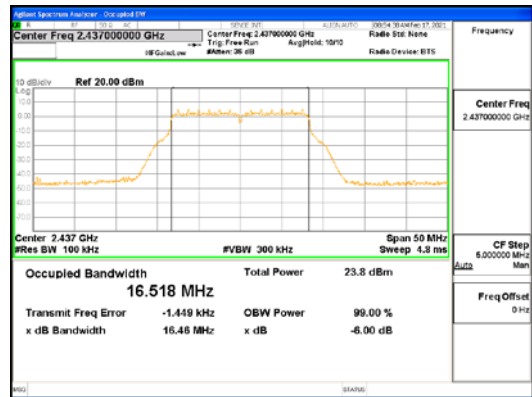
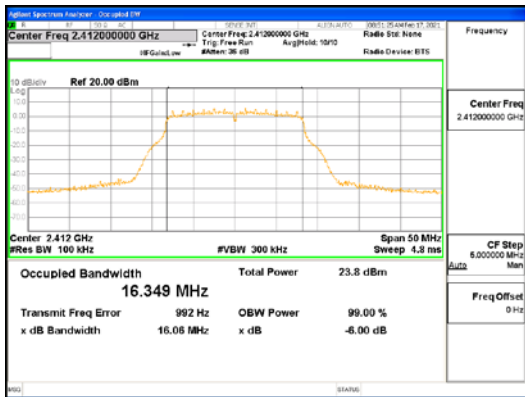


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ANT3, 802.11g

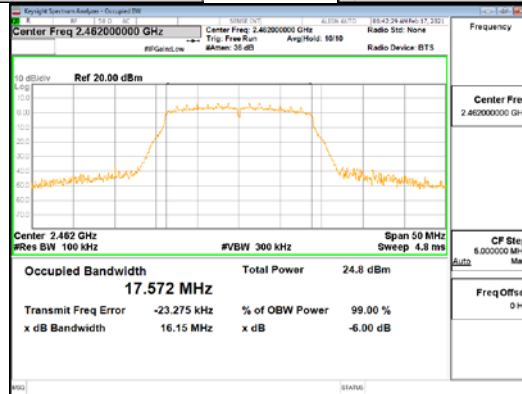
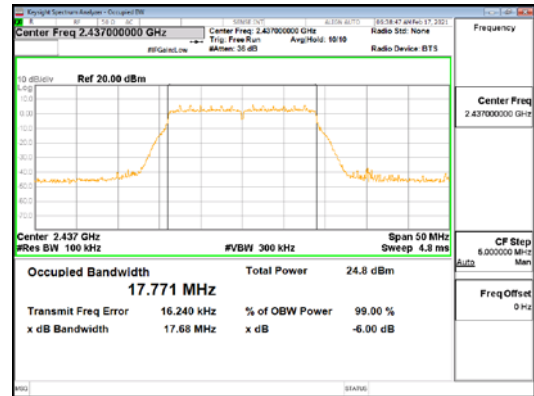
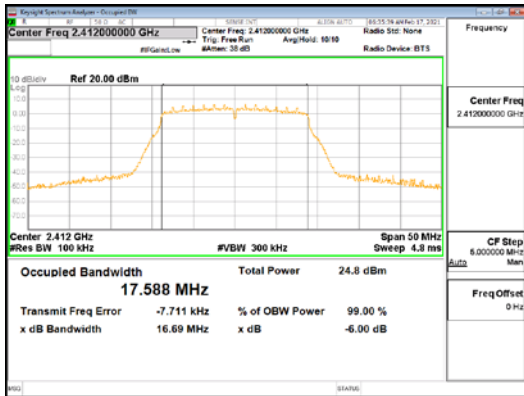


ANT4, 802.11g

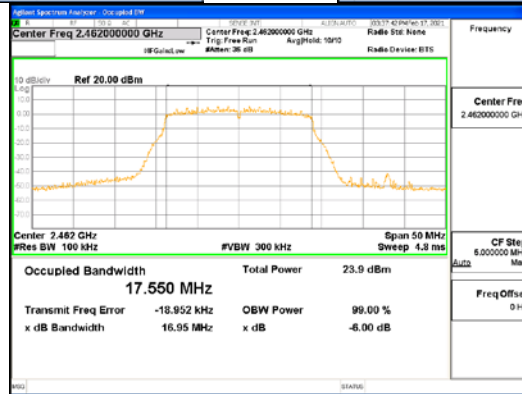
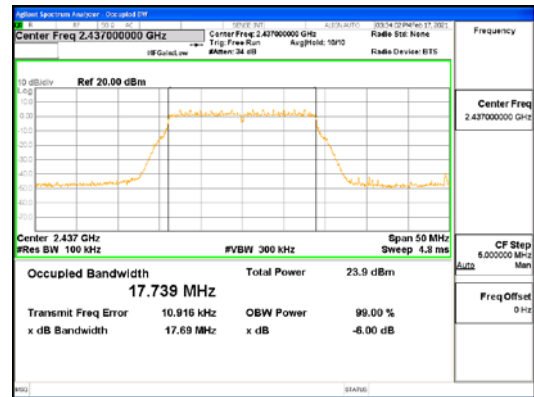
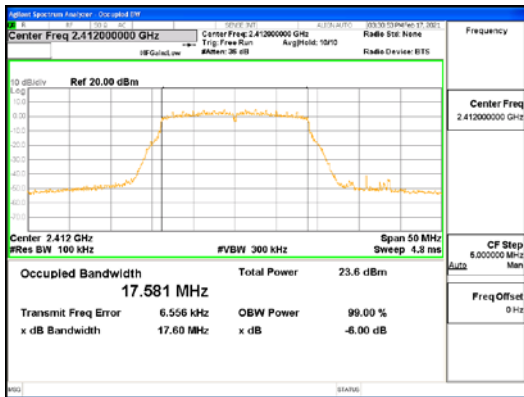


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ANT1, 802.11n_HT20

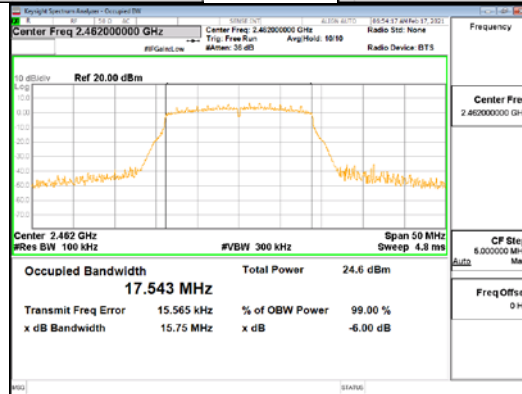
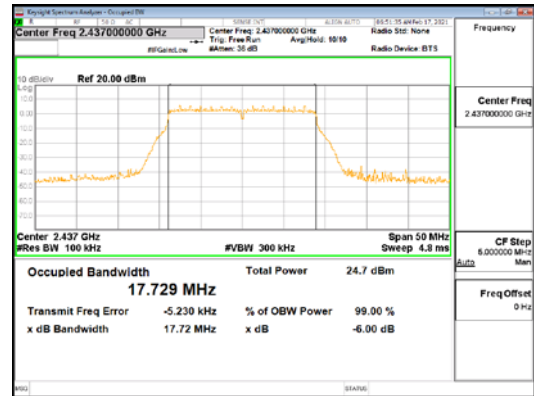
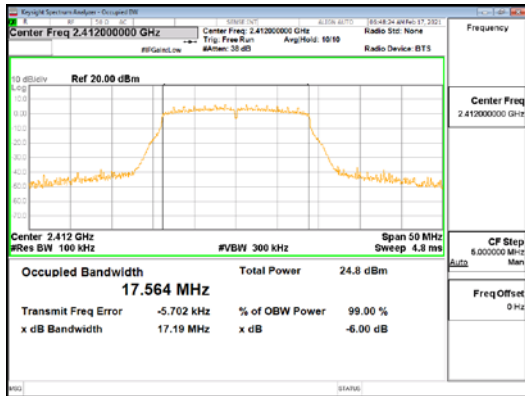


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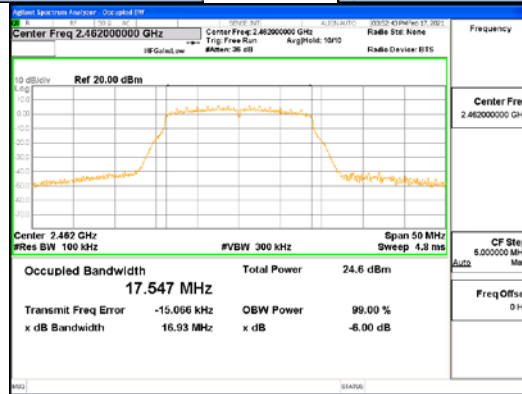
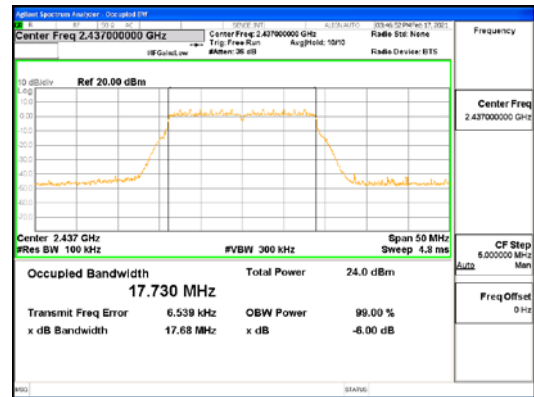
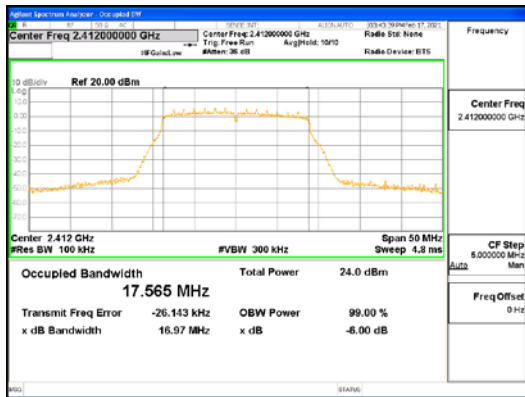


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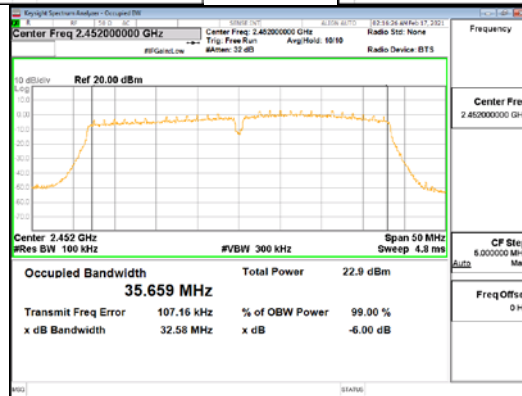
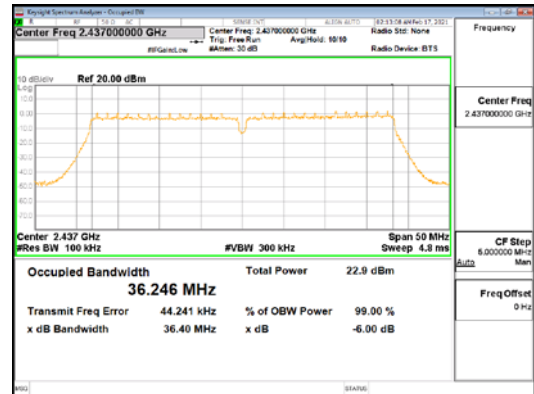
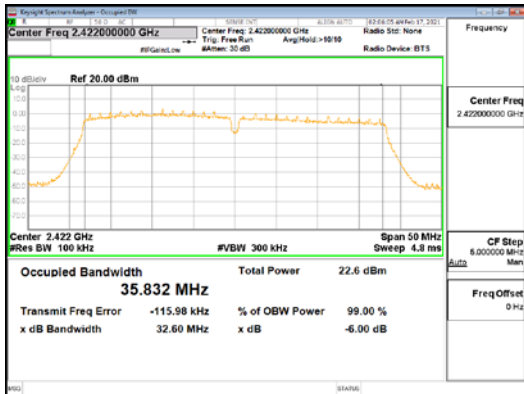
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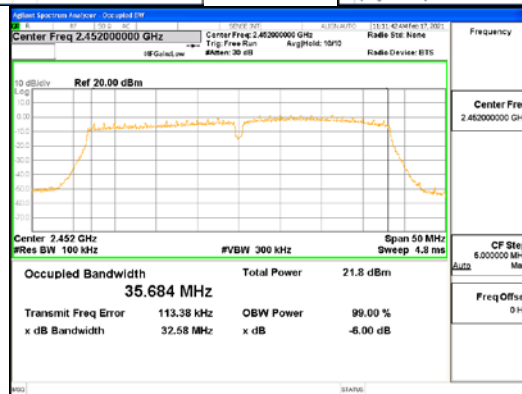
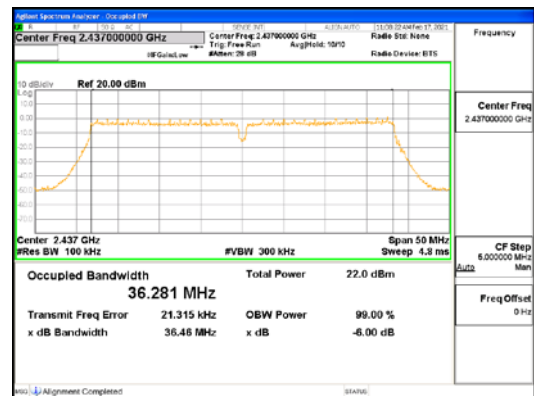
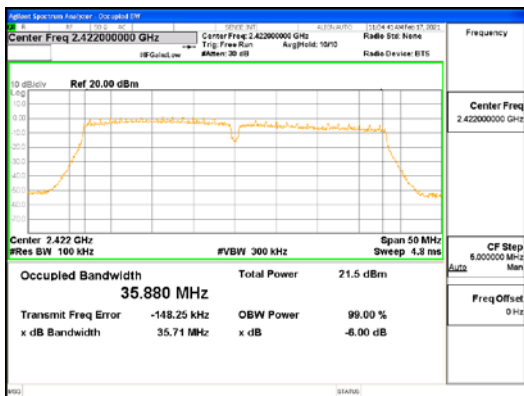
ANT3, 802.11n_HT20



ANT4, 802.11n_HT20



ANT1, 802.11n_HT40

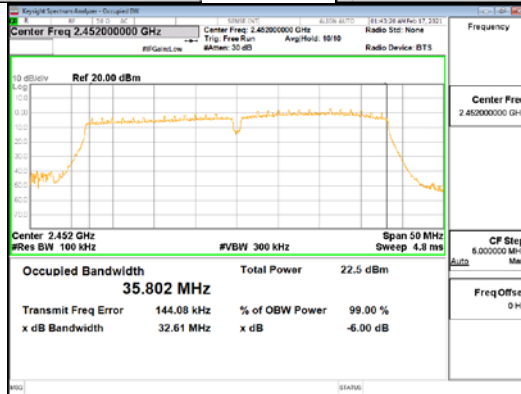
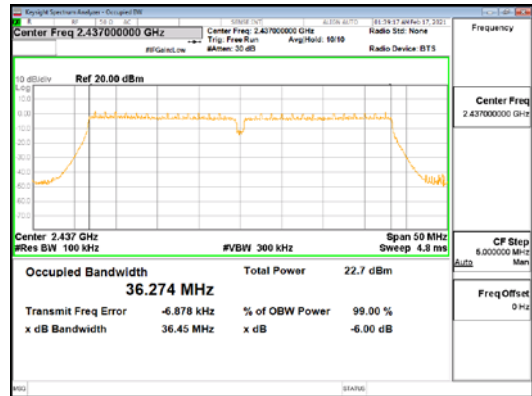
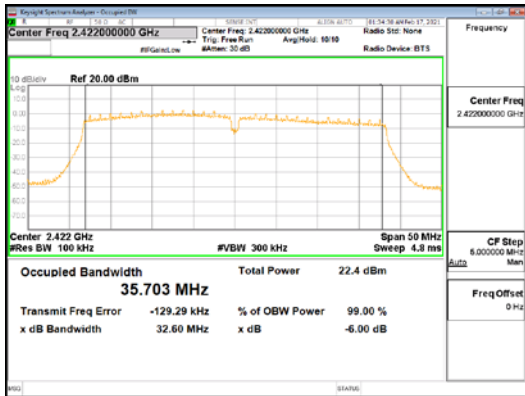


ANT2, 802.11n_HT40

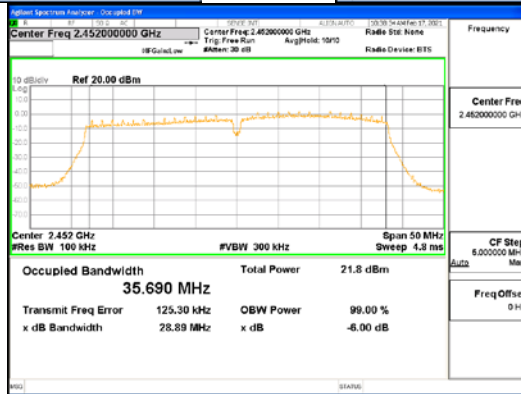
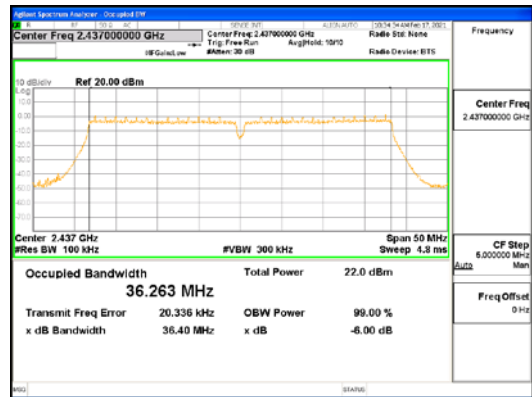
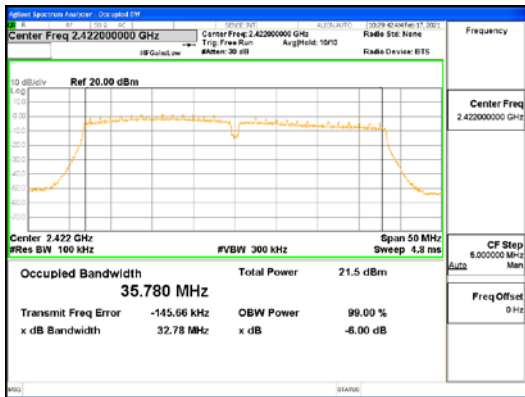


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ANT3, 802.11n_HT40



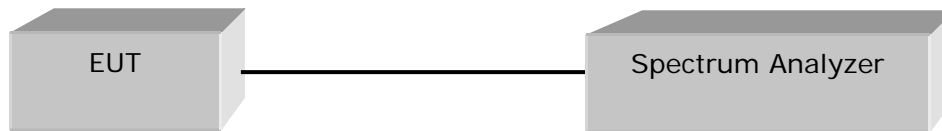
ANT4, 802.11n_HT40

4.2 OUTPUT POWER

Test Procedures

KDB 558074 - Section 8.3.2.2 (Average Power)
ANSI C63.10-2013 - Section 11.9.2.2
KDB 662911 D01, D02 (Multiple Transmitter Output)

The transmitter output is connected to a spectrum analyzer and the analyzer's internal channel power integration function is used to integrate the power over a bandwidth greater than or equal to the 99% bandwidth.



Test Settings:

Center frequency = the highest, middle and the lowest channels

- a) span $\geq 1.5 \times \text{OBW}$
- b) RBW = 1 MHz
- c) VBW $\geq 3 \times \text{RBW}$
- d) Sweep time = auto
- e) Detector = RMS
- f) average at least 100
- g) Duty cycle factor = $10\log(1/x)$

Test mode	Duty Cycle Factor (dB)
802.11b	0.21
802.11g	0.21
802.11n_HT20	0.21
802.11n_HT40	0.42

Limit

Operating Mode	Mode	ANT Configuration	ANT Gain (dBi)	Limit (dBm)
SISO	802.11b/g/n	ANT1, ANT2, ANT3, ANT4	1.90	30.00
MIMO (4Tx)	802.11b/g/n	ANT1 + ANT2 + ANT3 + ANT4	7.92	28.08



Test Data :

ANT1

Test Mode	Frequency (MHz)	Measured Output Power (dBm)	Duty cycle Factor (dB)	Result Output Power (dBm)	Limit (dBm)	Margin (dB)
802.11b	2 412	19.94	0.21	20.15	30.00	9.85
	2 437	19.92	0.21	20.13	30.00	9.87
	2 462	20.05	0.21	20.26	30.00	9.74
802.11g	2 412	17.67	0.21	17.88	30.00	12.12
	2 437	17.62	0.21	17.83	30.00	12.17
	2 462	17.65	0.21	17.86	30.00	12.14
802.11n _HT20	2 412	17.47	0.21	17.68	30.00	12.32
	2 437	17.50	0.21	17.71	30.00	12.29
	2 462	17.40	0.21	17.61	30.00	12.39
802.11n _HT40	2 422	15.14	0.42	15.56	30.00	14.44
	2 437	15.35	0.42	15.77	30.00	14.23
	2 452	15.29	0.42	15.71	30.00	14.29

ANT2

Test Mode	Frequency (MHz)	Measured Output Power (dBm)	Duty cycle Factor (dB)	Result Output Power (dBm)	Limit (dBm)	Margin (dB)
802.11b	2 412	18.47	0.21	18.68	30.00	11.32
	2 437	18.29	0.21	18.50	30.00	11.50
	2 462	18.77	0.21	18.98	30.00	11.02
802.11g	2 412	16.15	0.21	16.36	30.00	13.64
	2 437	16.41	0.21	16.62	30.00	13.38
	2 462	16.64	0.21	16.85	30.00	13.15
802.11n _HT20	2 412	16.15	0.21	16.36	30.00	13.64
	2 437	16.41	0.21	16.62	30.00	13.38
	2 462	16.35	0.21	16.56	30.00	13.44
802.11n _HT40	2 422	13.87	0.42	14.29	30.00	15.71
	2 437	14.30	0.42	14.72	30.00	15.28
	2 452	13.96	0.42	14.38	30.00	15.62



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ANT3

Test Mode	Frequency (MHz)	Measured Output Power (dBm)	Duty cycle Factor (dB)	Result Output Power (dBm)	Limit (dBm)	Margin (dB)
802.11b	2 412	19.92	0.21	20.13	30.00	9.87
	2 437	19.74	0.21	19.95	30.00	10.05
	2 462	19.83	0.21	20.04	30.00	9.96
802.11g	2 412	17.58	0.21	17.79	30.00	12.21
	2 437	17.49	0.21	17.70	30.00	12.30
	2 462	17.53	0.21	17.74	30.00	12.26
802.11n _HT20	2 412	17.43	0.21	17.64	30.00	12.36
	2 437	17.29	0.21	17.50	30.00	12.50
	2 462	17.20	0.21	17.41	30.00	12.59
802.11n _HT40	2 422	14.90	0.42	15.32	30.00	14.68
	2 437	15.10	0.42	15.52	30.00	14.48
	2 452	14.94	0.42	15.36	30.00	14.64

ANT4

Test Mode	Frequency (MHz)	Measured Output Power (dBm)	Duty cycle Factor (dB)	Result Output Power (dBm)	Limit (dBm)	Margin (dB)
802.11b	2 412	19.23	0.21	19.44	30.00	10.56
	2 437	19.59	0.21	19.80	30.00	10.20
	2 462	19.37	0.21	19.58	30.00	10.42
802.11g	2 412	16.83	0.21	17.04	30.00	12.96
	2 437	16.89	0.21	17.10	30.00	12.90
	2 462	17.04	0.21	17.25	30.00	12.75
802.11n _HT20	2 412	16.78	0.21	16.99	30.00	13.01
	2 437	16.91	0.21	17.12	30.00	12.88
	2 462	16.85	0.21	17.06	30.00	12.94
802.11n _HT40	2 422	14.06	0.42	14.48	30.00	15.52
	2 437	14.50	0.42	14.92	30.00	15.08
	2 452	14.44	0.42	14.86	30.00	15.14



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ANT1 + ANT2 + ANT3 + ANT4 (MIMO)

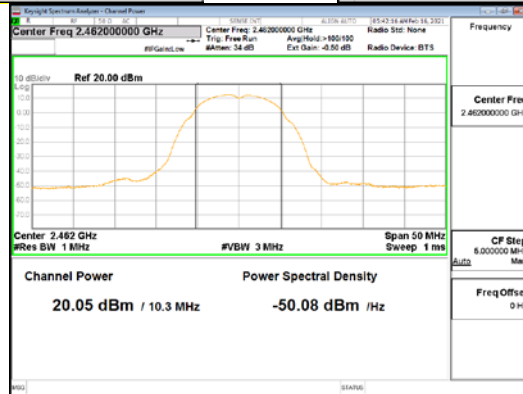
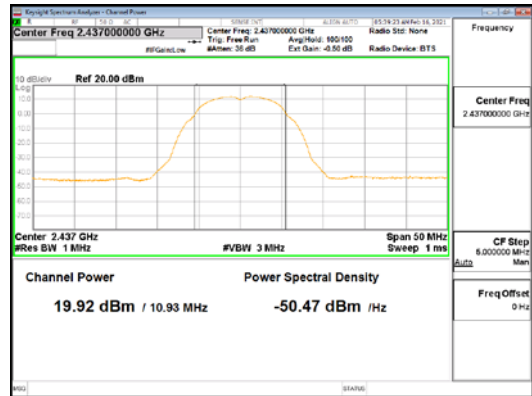
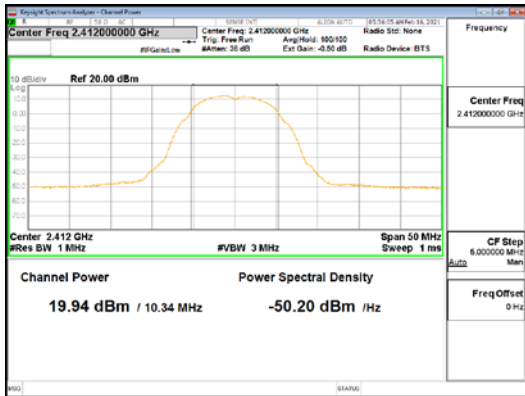
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802.11b	2 412	25.45	0.21	25.66	28.08	2.42
	2 437	25.45	0.21	25.66	28.08	2.42
	2 462	25.55	0.21	25.76	28.08	2.32
802.11g	2 412	23.12	0.21	23.33	28.08	4.75
	2 437	23.15	0.21	23.36	28.08	4.72
	2 462	23.25	0.21	23.46	28.08	4.62
802.11n _HT20	2 412	23.01	0.21	23.22	28.08	4.86
	2 437	23.07	0.21	23.28	28.08	4.80
	2 462	22.99	0.21	23.20	28.08	4.88
802.11n _HT40	2 422	20.55	0.42	20.97	28.08	7.11
	2 437	20.85	0.42	21.27	28.08	6.81
	2 452	20.71	0.42	21.13	28.08	6.95

See next pages for actual measured spectrum plots.

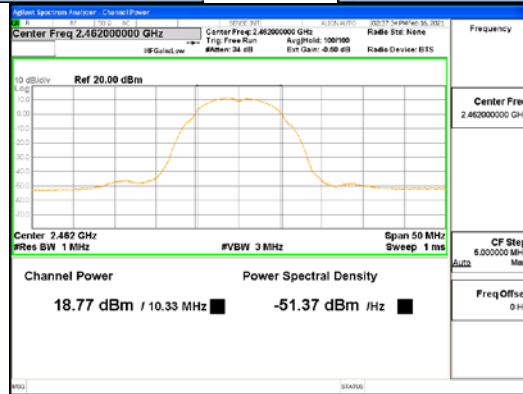
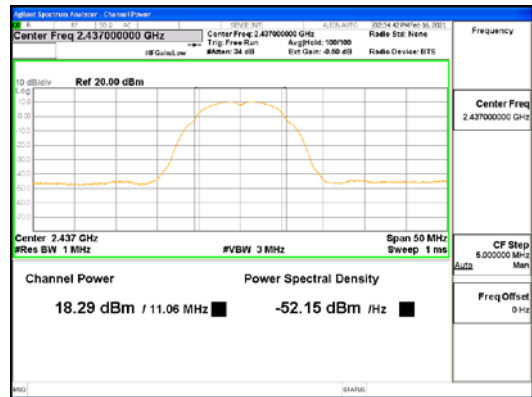
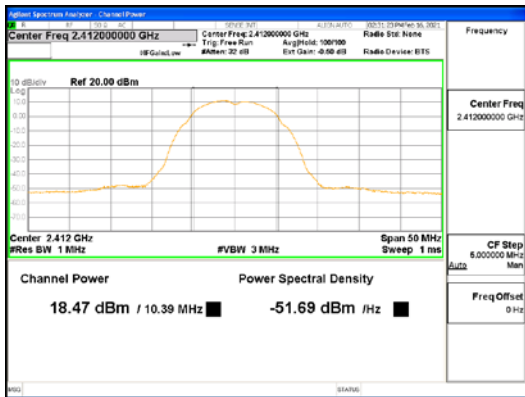


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ANT1, 802.11b

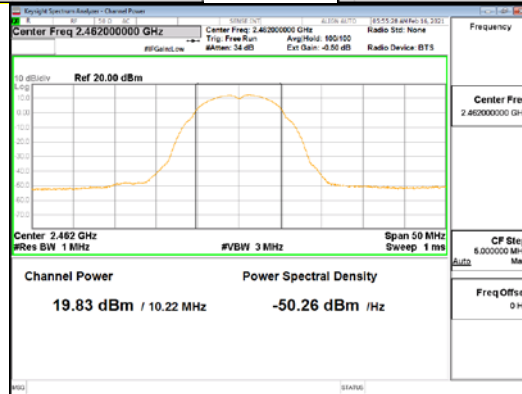
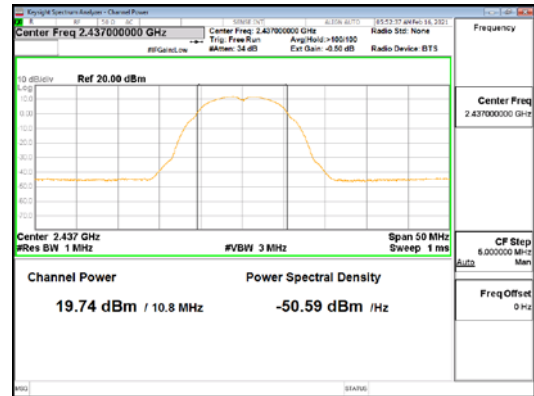
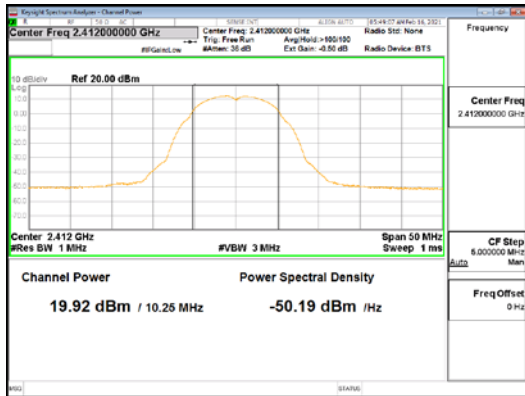


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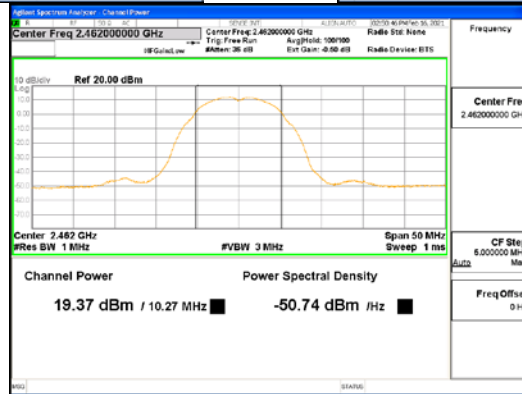
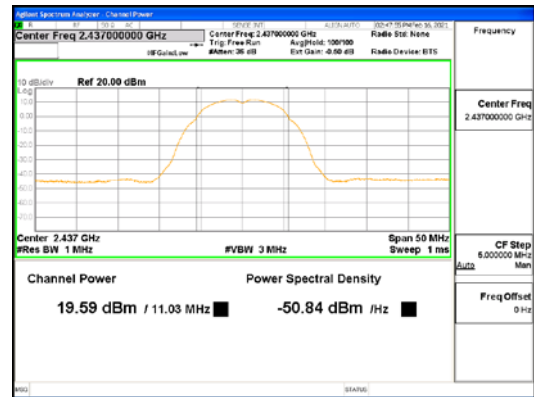
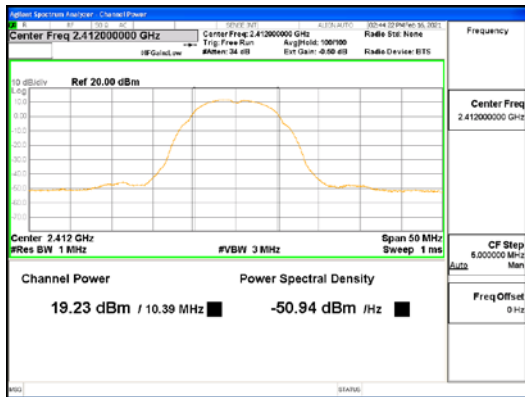


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ANT3, 802.11b

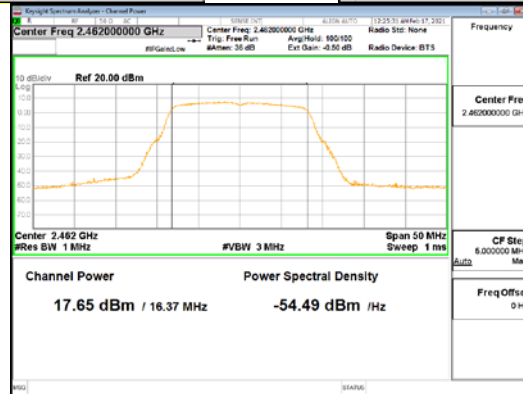
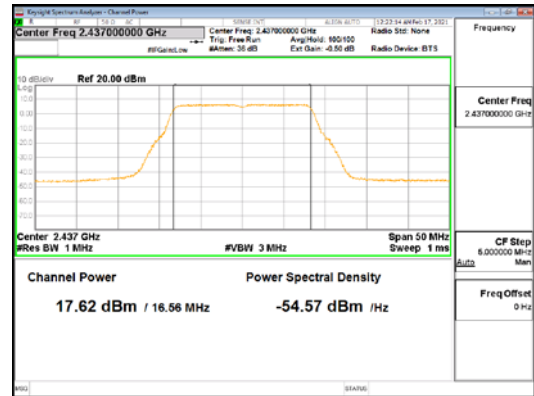
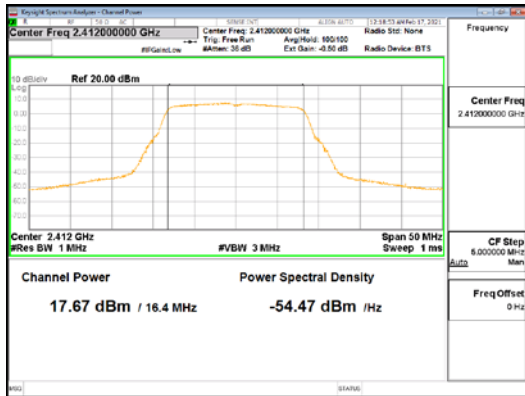


ANT4, 802.11b

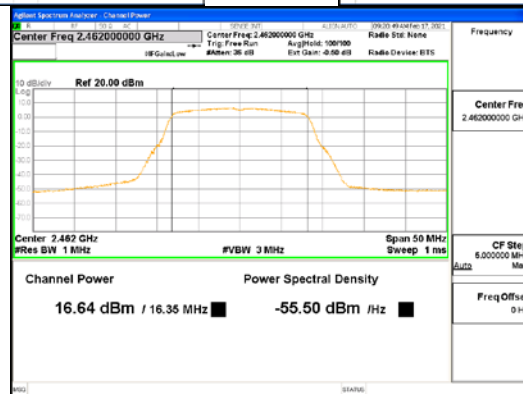
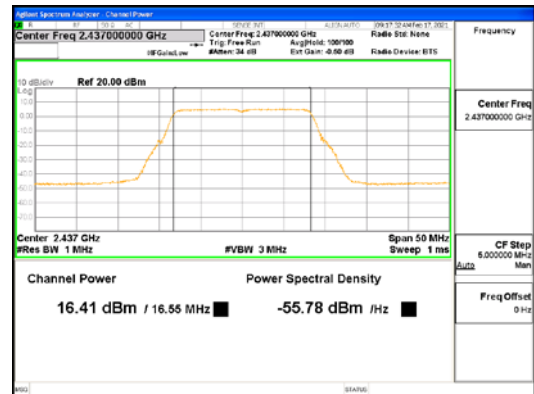
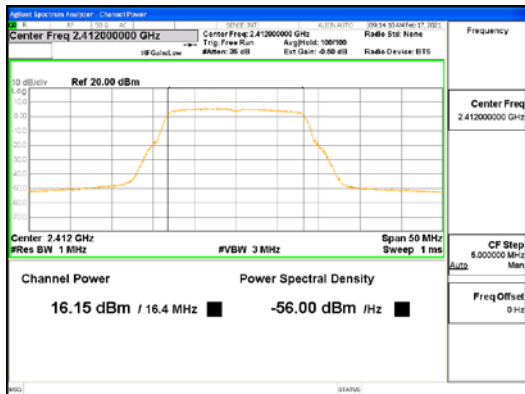


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ANT1, 802.11g

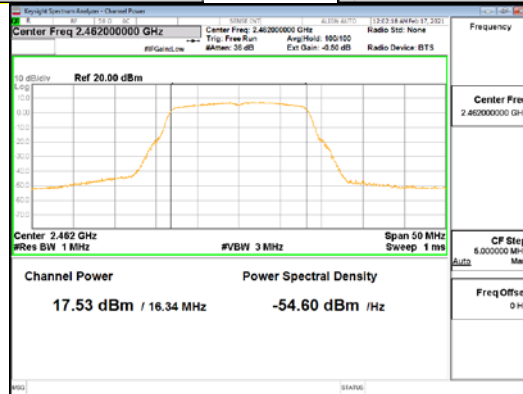
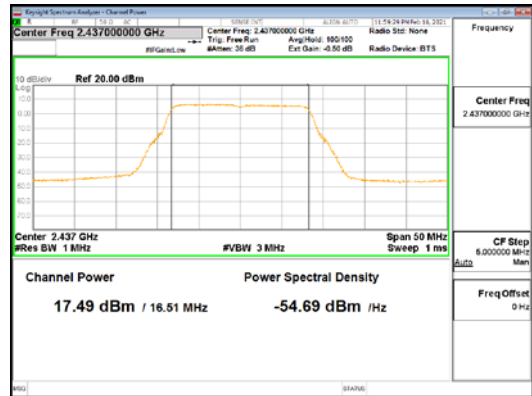
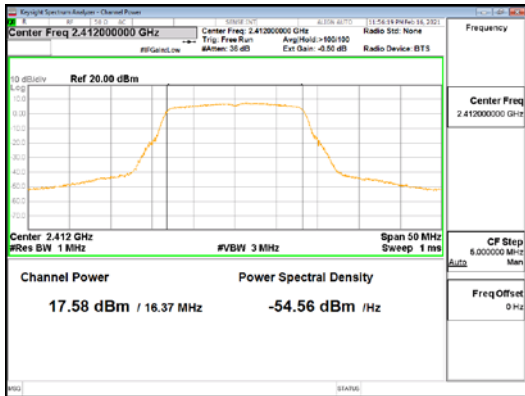


ANT2, 802.11g

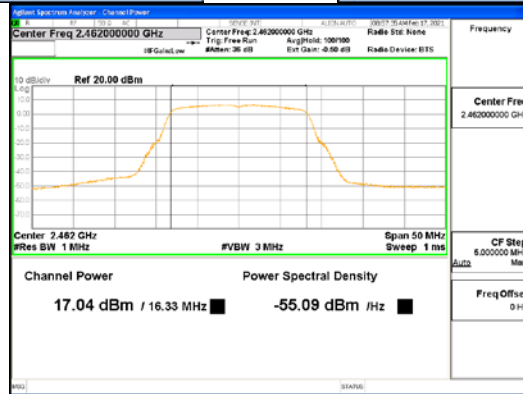
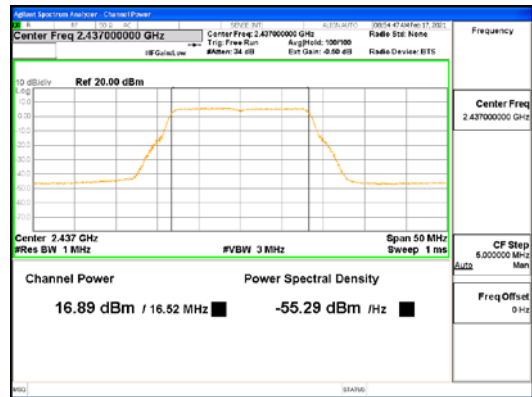
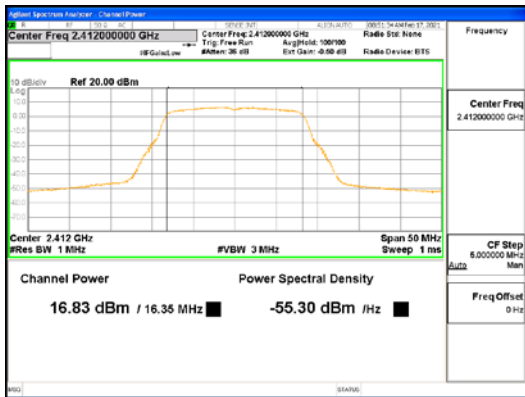


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ANT3, 802.11g

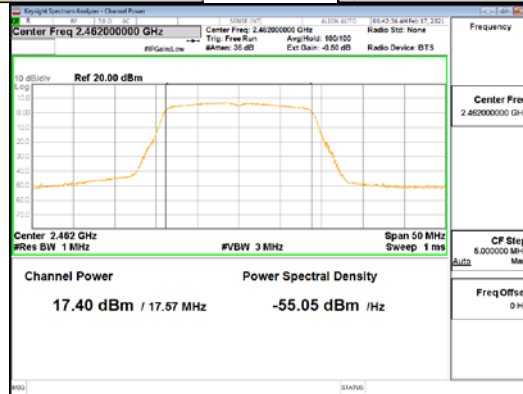
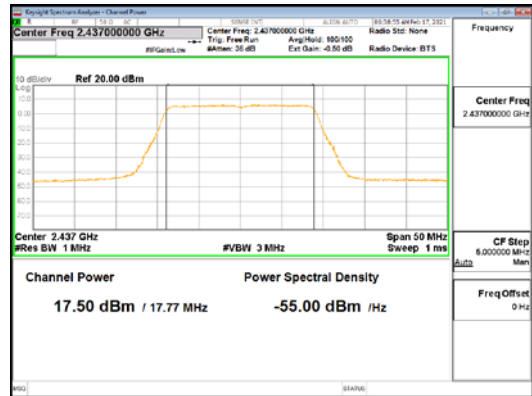
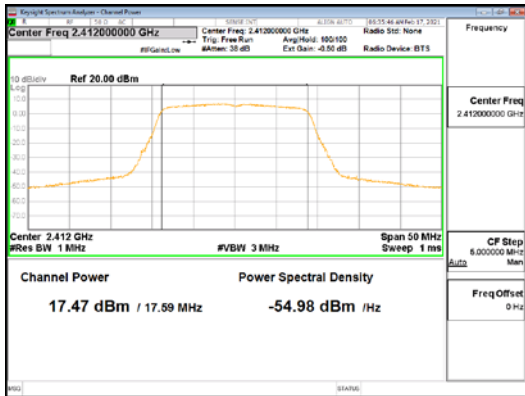


ANT4, 802.11g

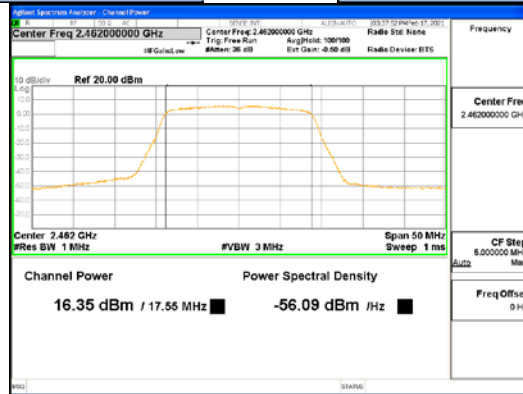
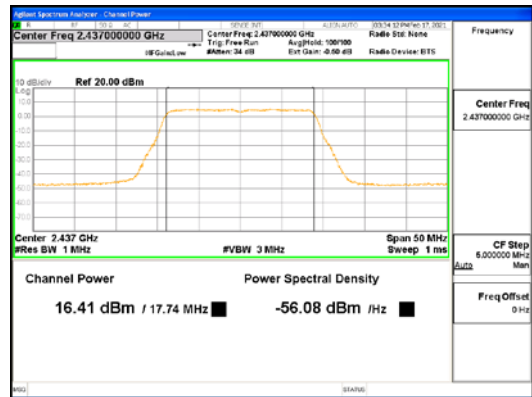
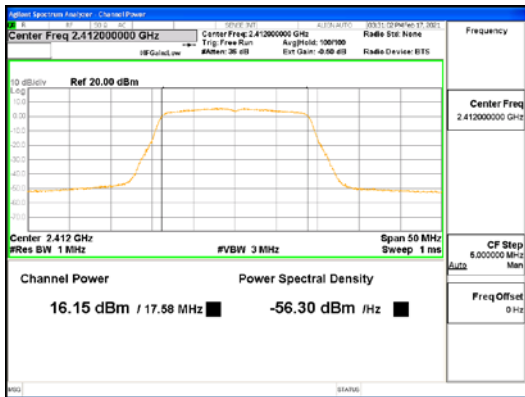


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ANT1, 802.11n_HT20

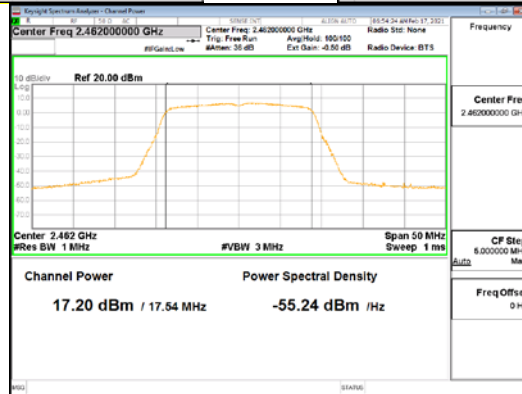
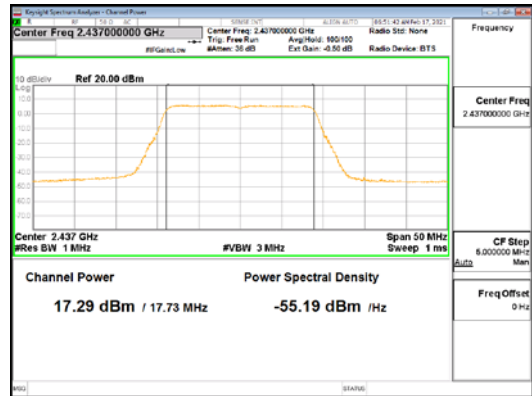
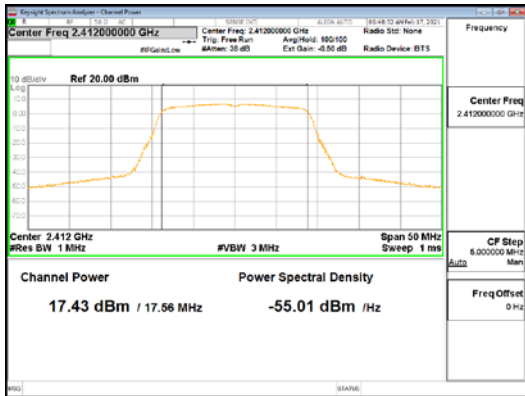


ANT2, 802.11n_HT20

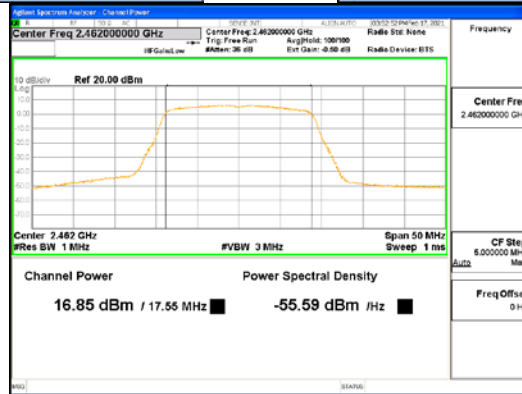
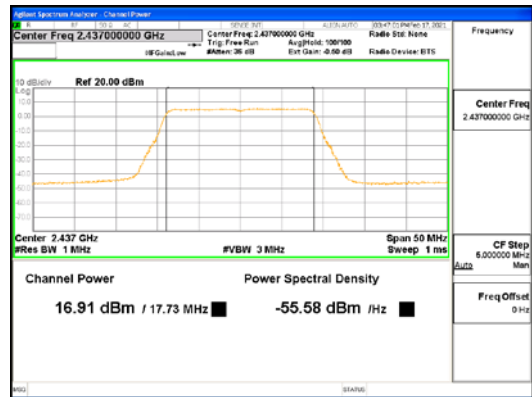
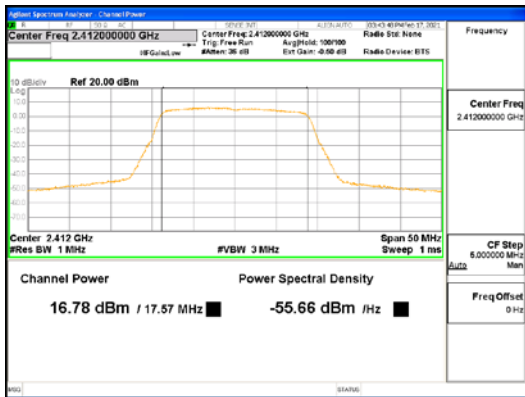


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ANT3, 802.11n_HT20

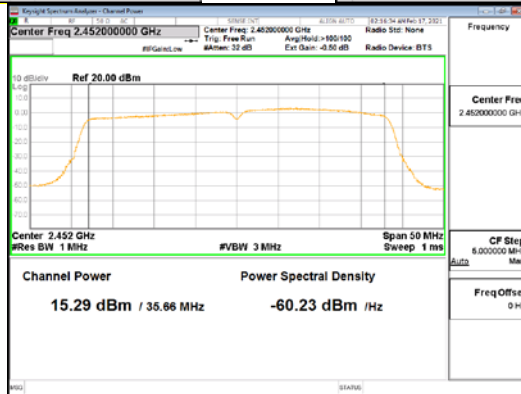
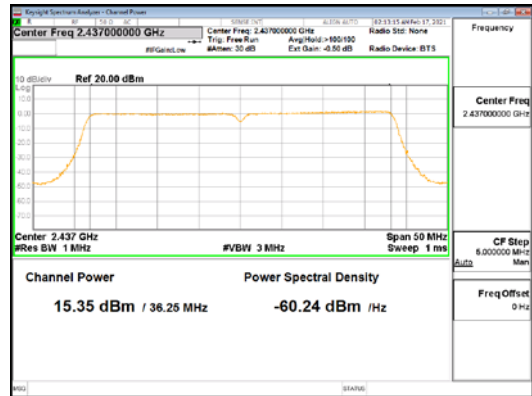
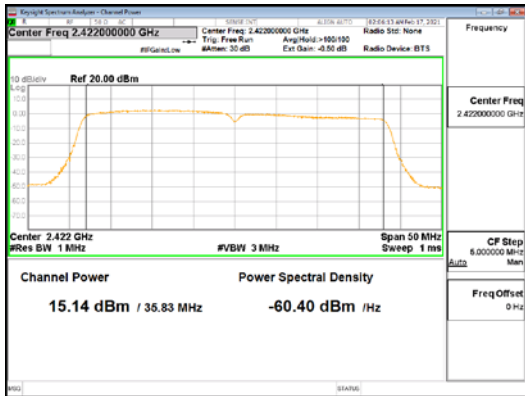


ANT4, 802.11n_HT20

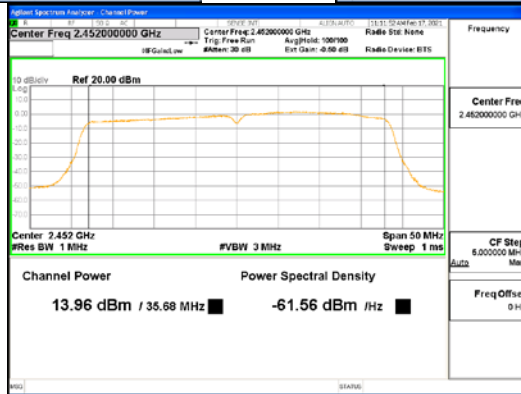
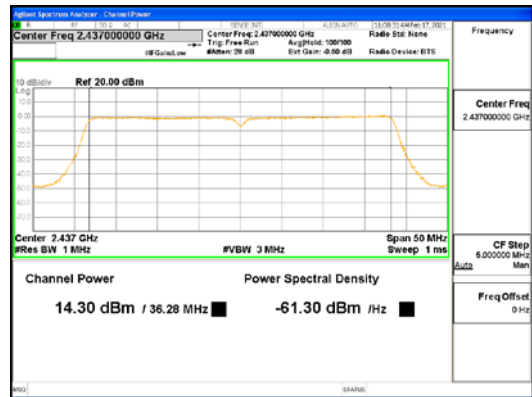
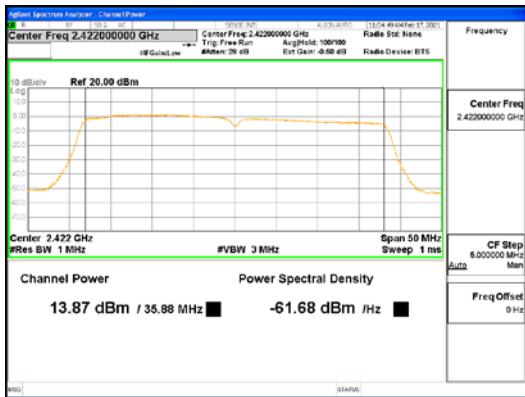


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ANT1, 802.11n_HT40

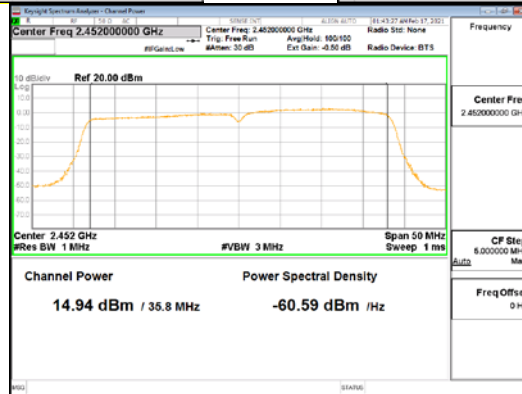
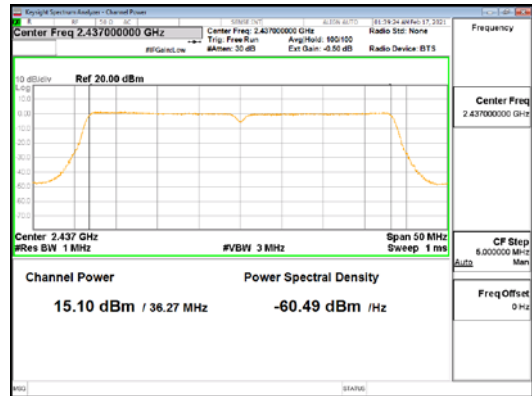
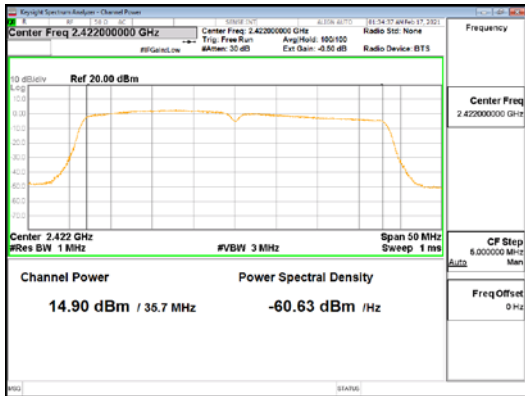


ANT2, 802.11n_HT40

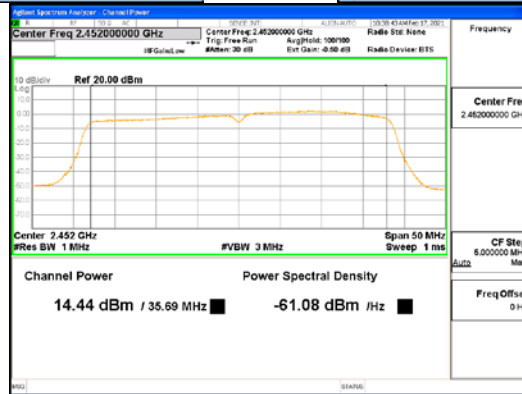
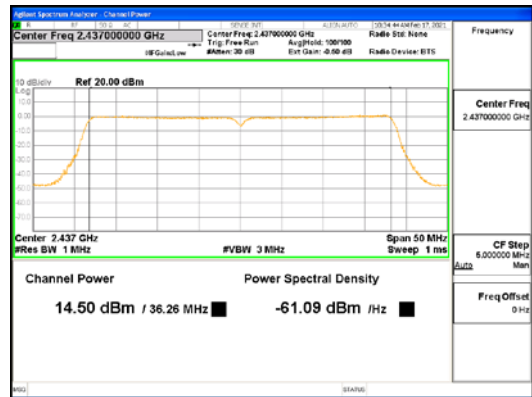
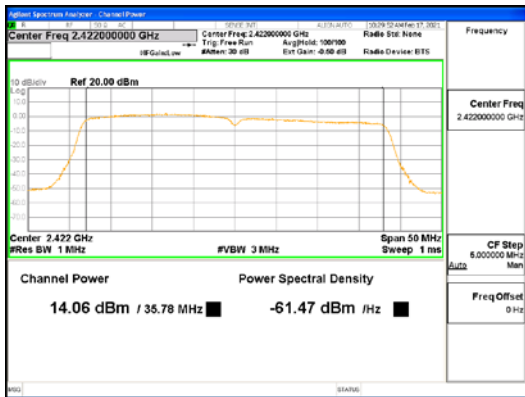


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ANT3, 802.11n_HT40



ANT4, 802.11n_HT40



4.3 Transmitter Power Spectral Density

Test Procedures

KDB 558074 - Section 8.4
ANSI C63.10-2013 - Section 11.10.2
KDB 662911 D01, D02 (Multiple Transmitter Output)

This procedure shall be used if maximum peak conducted output power was used to demonstrate compliance.

Test Settings:

Center frequency = the highest, middle and the lowest channels

- a) $RBW : 3 \text{ kHz} \leq RBW \leq 100 \text{ kHz}$
- b) $VBW \geq 3 \times RBW$
- c) $span \geq 1.5 \times \text{DTS bandwidth}$
- d) Sweep time = auto couple
- e) Detector = peak
- f) Trace mode = max hold
- g) Allow trace to fully stabilize
- h) Use the peak marker function to determine the maximum amplitude level within the RBW.

Limit

Operating Mode	Mode	ANT Configuration	ANT Gain (dBi)	Limit (dBm)
SISO	802.11b/g/n	ANT1, ANT2, ANT3, ANT4	1.90	8.00
MIMO (4Tx)	802.11b/g/n	ANT1 + ANT2 + ANT3 + ANT4	7.92	6.08

Test Data

ANT1

Test Mode	Frequency (MHz)	Measured Power Density (dBm)	Limit (dBm)	Margin(dB)
802.11b	2 412	-1.78	8.00	9.78
	2 437	-2.36	8.00	10.36
	2 462	-1.73	8.00	9.73
802.11g	2 412	-6.54	8.00	14.54
	2 437	-6.77	8.00	14.77
	2 462	-6.26	8.00	14.26
802.11n_HT20	2 412	-6.67	8.00	14.67
	2 437	-7.19	8.00	15.19
	2 462	-6.51	8.00	14.51
802.11n_HT40	2 422	-10.64	8.00	18.64
	2 437	-11.72	8.00	19.72
	2 452	-10.04	8.00	18.04

ANT2

Test Mode	Frequency (MHz)	Measured Power Density (dBm)	Limit (dBm)	Margin(dB)
802.11b	2 412	-3.26	8.00	11.26
	2 437	-3.14	8.00	11.14
	2 462	-3.31	8.00	11.31
802.11g	2 412	-8.14	8.00	16.14
	2 437	-7.97	8.00	15.97
	2 462	-7.21	8.00	15.21
802.11n_HT20	2 412	-7.40	8.00	15.40
	2 437	-8.28	8.00	16.28
	2 462	-7.29	8.00	15.29
802.11n_HT40	2 422	-12.68	8.00	20.68
	2 437	-13.17	8.00	21.17
	2 452	-11.86	8.00	19.86



ANT3

Test Mode	Frequency (MHz)	Measured Power Density (dBm)	Limit (dBm)	Margin(dB)
802.11b	2 412	-2.03	8.00	10.03
	2 437	-1.55	8.00	9.55
	2 462	-2.13	8.00	10.13
802.11g	2 412	-6.79	8.00	14.79
	2 437	-6.13	8.00	14.13
	2 462	-6.56	8.00	14.56
802.11n_HT20	2 412	-6.81	8.00	14.81
	2 437	-7.40	8.00	15.40
	2 462	-7.20	8.00	15.20
802.11n_HT40	2 422	-10.91	8.00	18.91
	2 437	-11.86	8.00	19.86
	2 452	-10.80	8.00	18.80

ANT4

Test Mode	Frequency (MHz)	Measured Power Density (dBm)	Limit (dBm)	Margin(dB)
802.11b	2 412	-2.58	8.00	10.58
	2 437	-2.84	8.00	10.84
	2 462	-1.62	8.00	9.62
802.11g	2 412	-7.32	8.00	15.32
	2 437	-7.18	8.00	15.18
	2 462	-7.13	8.00	15.13
802.11n_HT20	2 412	-7.66	8.00	15.66
	2 437	-6.55	8.00	14.55
	2 462	-7.50	8.00	15.50
802.11n_HT40	2 422	-11.89	8.00	19.89
	2 437	-12.72	8.00	20.72
	2 452	-10.24	8.00	18.24



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ANT1 + ANT2 + ANT3 + ANT4 (MIMO)

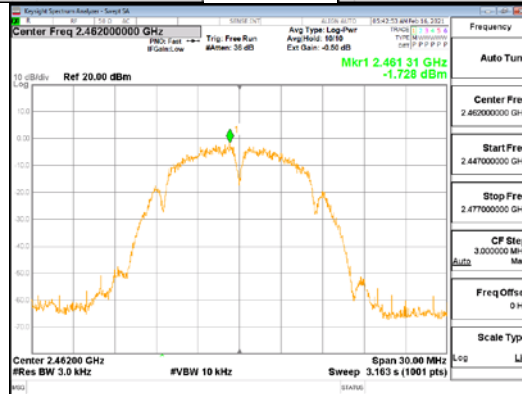
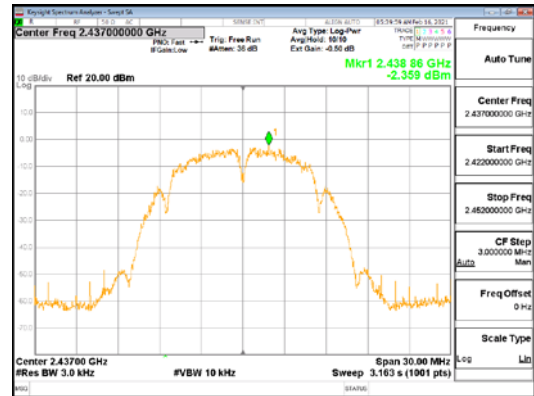
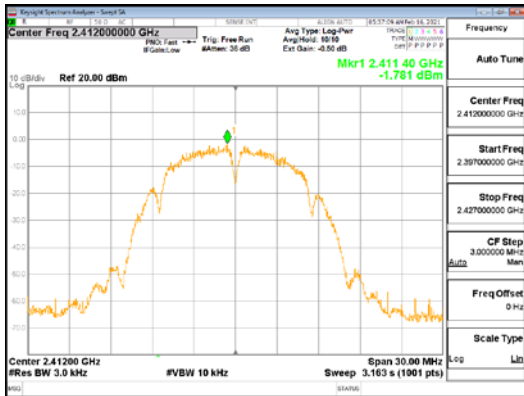
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802.11b	2 412	3.64	6.08	2.44
	2 437	3.59	6.08	2.49
	2 462	3.87	6.08	2.21
802.11g	2 412	-1.13	6.08	7.21
	2 437	-0.94	6.08	7.02
	2 462	-0.75	6.08	6.83
802.11n_HT20	2 412	-1.10	6.08	7.18
	2 437	-1.29	6.08	7.37
	2 462	-1.09	6.08	7.17
802.11n_HT40	2 422	-5.44	6.08	11.52
	2 437	-6.31	6.08	12.39
	2 452	-4.66	6.08	10.74

See next pages for actual measured spectrum plots.

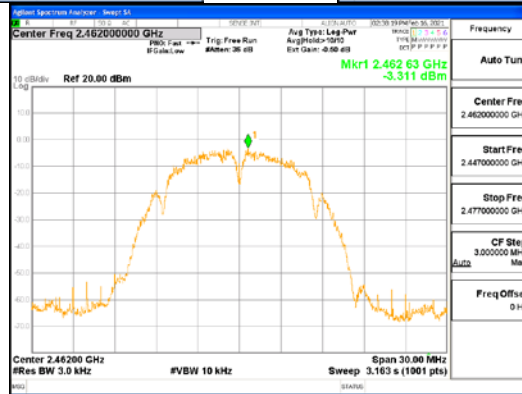
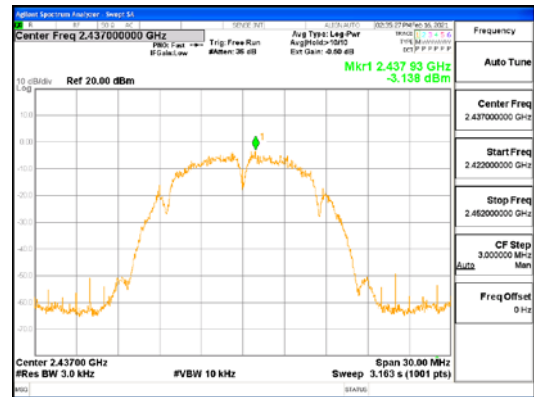
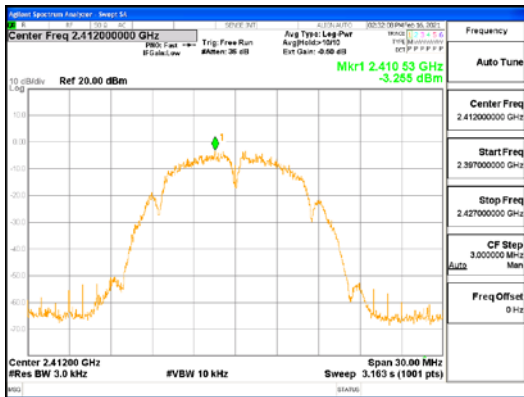


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ANT1, 802.11b

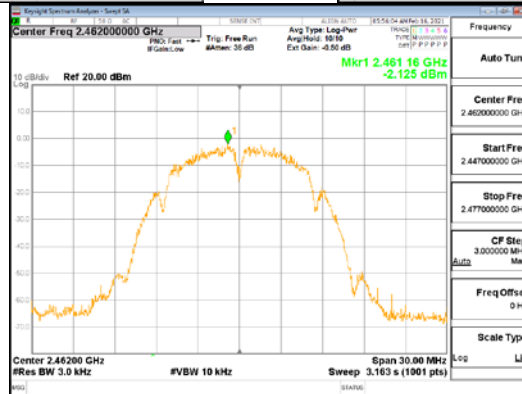
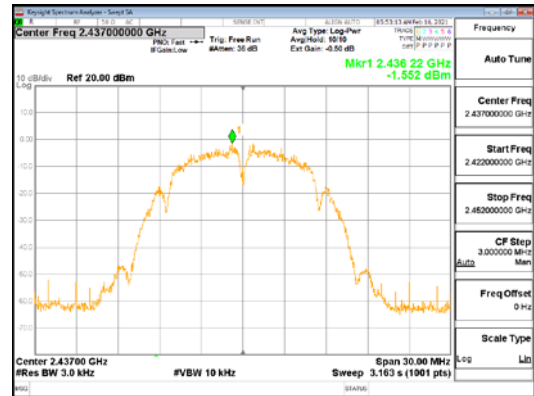
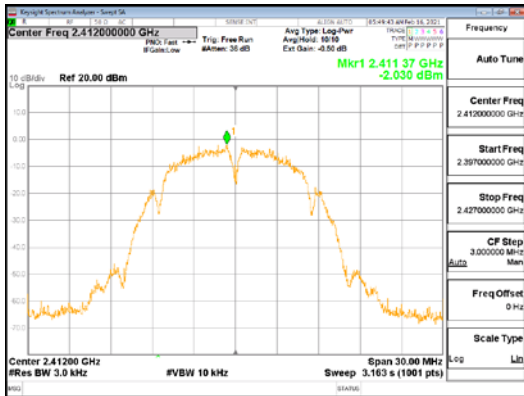


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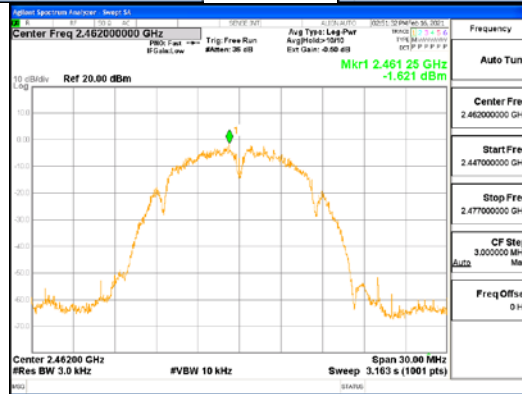
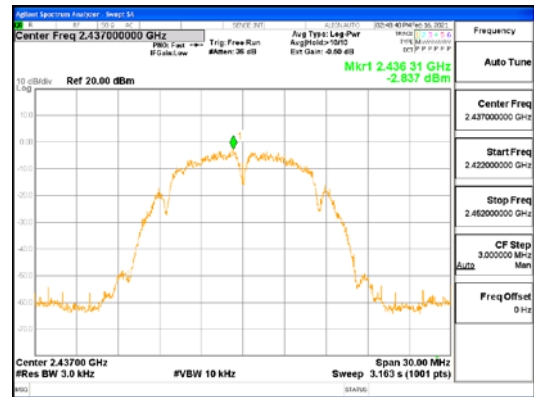
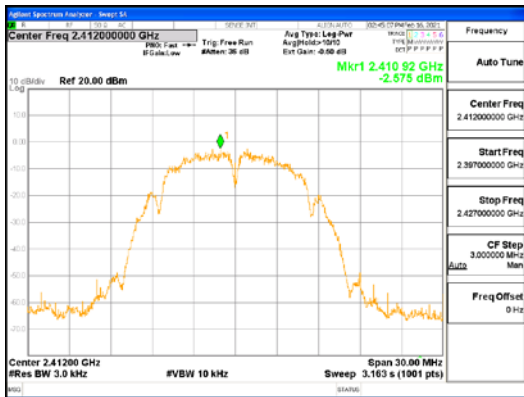


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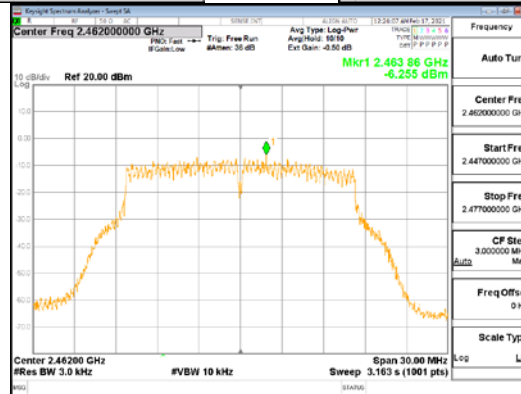
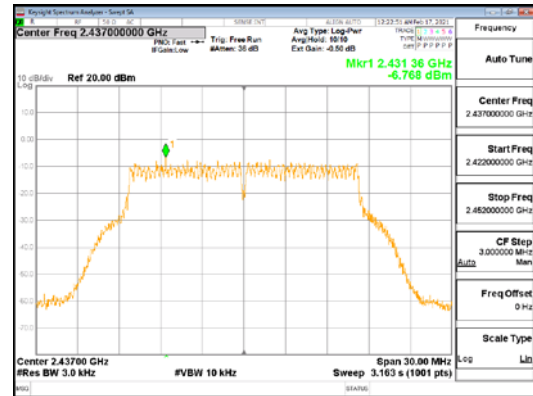
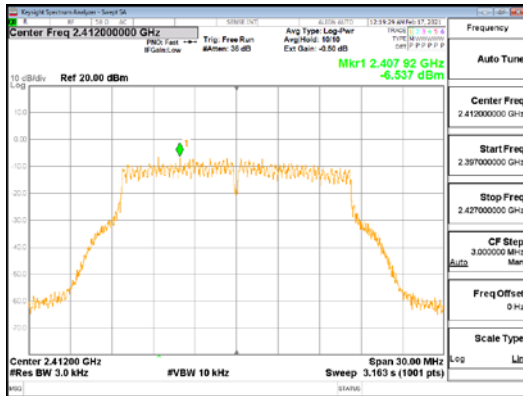
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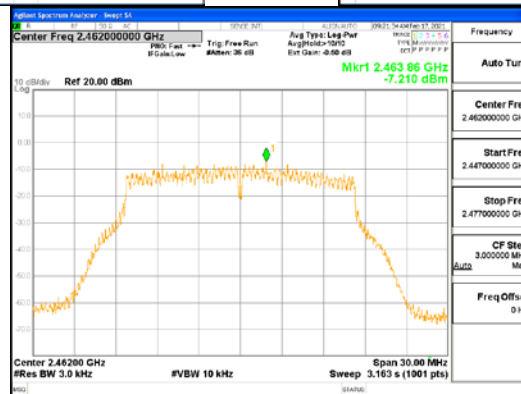
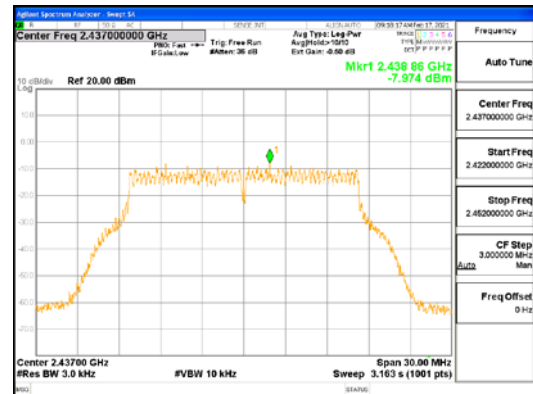
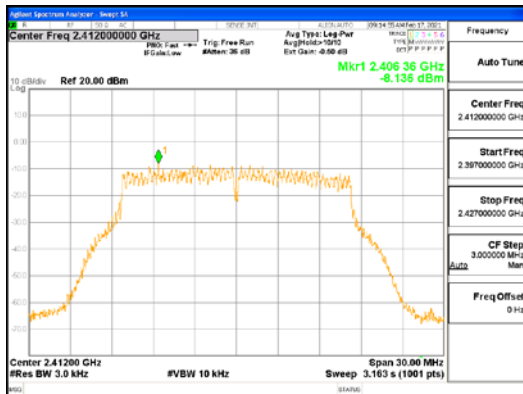
ANT3, 802.11b



ANT4, 802.11b



ANT1, 802.11g



ANT2, 802.11g