

TEST REPORT

Applicant: CTOUCH Europe B.V.
Address of Applicant: Achtseweg Zuid 153R, 5651 GW Eindhoven, The Netherlands
Manufacturer/Factory: CTOUCH Europe B.V.
Address of Manufacturer/Factory: Achtseweg Zuid 153R, 5651 GW Eindhoven, The Netherlands
Equipment Under Test (EUT)
Product Name: Wireless AC Module
Model No.: 01WIMRA
Trade Mark: CTOUCH
FCC ID: 2APQQ-01WIMRA
Applicable standards: FCC CFR Title 47 Part 15 Subpart C Section 15.247
ANSI C63.10:2013
Date of sample receipt: March 28,2022
Date of Test: March 28-April 25,2022
Date of report issued: April 25,2022
Test Result : PASS *

* In the configuration tested, the EUT complied with the standards specified above.

Authorized Signature:



Robinson Luo

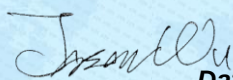
Laboratory Manager

This results shown in this test report refer only to the sample(s) tested, this test report cannot be reproduced, except in full, without prior written permission of the company. The report would be invalid without specific stamp of test institute and the signatures of compiler and approver.

2 Version

Version No.	Date	Description
00	2022-4-25	Original

Prepared By:

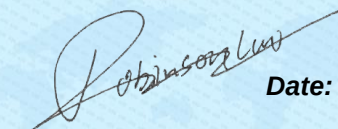


Date:

2022-4-25

Project Engineer

Check By:



Date:

2022-4-25

Reviewer

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4 Test Summary

Test Item	Section	Result
Antenna requirement	FCC part 15.203/15.247 (b)(4)	Pass
AC Power Line Conducted Emission	FCC part 15.207	Not Applicable
Conducted Max Average Output Power	FCC part 15.247 (b)(3)	Pass
Channel Bandwidth & 99% OCB	FCC part 15.247 (a)(2)	Pass
Power Spectral Density	FCC part 15.247 (e)	Pass
Band Edge	FCC part 15.247(d)	Pass
Spurious Emission	FCC part 15.205/15.209	Pass

Remark: Test according to ANSI C63.10:2013

Pass: The EUT complies with the essential requirements in the standard.

Measurement Uncertainty

No.	Item	Measurement Uncertainty
1	Radio Frequency	1×10^{-7}
2	Duty cycle	0.37%
3	Occupied Bandwidth	2.8dB
4	RF conducted power	0.75dB
5	RF power density	3dB
6	Conducted Spurious emissions	2.58dB
7	AC Power Line Conducted Emission	3.44dB (0.15MHz ~ 30MHz)
8	Radiated Spurious emission test	3.1dB (9kHz-30MHz)
		3.8039dB (30MHz-200MHz)
		3.9679dB (200MHz-1GHz)
		4.29dB (1GHz-18GHz)
		3.30dB (18GHz-40GHz)

Note (1): The measurement uncertainty is for coverage factor of k=2 and a level of confidence of 95%.

5 General Information

5.1 General Description of EUT

Product Name:	Wireless AC Module
Model No.:	01WIMRA
Serial No.:	N/A
Hardware version:	6PH0914610
Software version:	MT7663BU_mp1.4.1_202105142505501
Test sample(s) ID:	GTSL202204000115-1
Sample(s) Status	Engineer sample
Operation Frequency:	802.11b/802.11g/802.11n(HT20): 2412MHz~2462MHz 802.11n(HT40): 2422MHz~2452MHz
Channel numbers:	802.11b/802.11g /802.11n(HT20): 11 802.11n(HT40):7
Channel separation:	5MHz
Modulation technology:	802.11b: Direct Sequence Spread Spectrum (DSSS) 802.11g/802.11n(HT20)/802.11n(HT40): Orthogonal Frequency Division Multiplexing (OFDM)
Antenna Type:	External Antenna
Antenna gain:	ANTA:2.0dBi ANTB:2.0dBi MIMO technology: (PSD directional gain=5.01dBi, Power directional gain=5.01dBi)
Power Supply:	DC 5V (Powered by USB Port)

Remark: The EUT is only designed to be used in large-screen TVs and other products, not directly connected to a computer

Operation Frequency each of channel							
Channel	Frequency	Channel	Frequency	Channel	Frequency	Channel	Frequency
1	2412MHz	4	2427MHz	7	2442MHz	10	2457MHz
2	2417MHz	5	2432MHz	8	2447MHz	11	2462MHz
3	2422MHz	6	2437MHz	9	2452MHz		

Note:

In section 15.31(m), regards to the operating frequency range over 10 MHz, the Lowest frequency, the middle frequency, and the highest frequency of channel were selected to perform the test, and the selected channel see below:

Test channel	Frequency (MHz)	
	802.11b/802.11g/802.11n(HT20)	802.11n(HT40)
Lowest channel	2412MHz	2422MHz
Middle channel	2437MHz	2437MHz
Highest channel	2462MHz	2452MHz

Test Item	Software	Description
Conducted RF Testing and Radiated testing	QATool_Dbg.exe	Set the EUT to different modulation and channel

Output power setting table:

Test Mode	Set Tx Output Power	Data Rate
802.11b	17dBm	1Mbps
802.11g	17dBm	54Mbps
802.11n(HT20)	17dBm	MCS7
802.11n(HT40)	17dBm	MCS7

5.2 Test mode

Transmitting mode	Keep the EUT in continuously transmitting mode
<i>Remark: During the test, the dutycycle >98%, the test voltage was tuned from 85% to 115% of the nominal rated supply voltage, and found that the worst case was under the nominal rated supply condition. So the report just shows that condition's data. New battery is used during all test.</i>	

We have verified the construction and function in typical operation. All the test modes were carried out with the EUT in transmitting operation, which was shown in this test report and defined as follows:

Pre-scan all kind of data rate in lowest channel, and found the follow list which it was worst case.

Mode	802.11b	802.11g	802.11n(HT20)	802.11n(HT40)
Data rate	1Mbps	54Mbps	MCS7	MCS7

5.3 Description of Support Units

Notebook PC Mode Number: 500RSH

Remark: The computer used for auxiliary testing is only used for fixed-frequency control, and the product cannot work normally if directly connected to the computer. USB extension cable is used to connect EUT in the test, and the fixed-frequency computer is placed outside the shielding room.

5.4 Deviation from Standards

None.

5.5 Abnormalities from Standard Conditions

None.

5.6 Test Facility

The test facility is recognized, certified, or accredited by the following organizations:

- **FCC—Registration No.: 381383**

Designation Number: CN5029

Global United Technology Services Co., Ltd., Shenzhen EMC Laboratory has been registered and fully described in a report filed with the (FCC) Federal Communications Commission. The acceptance letter from the FCC is maintained in files.

- **IC —Registration No.: 9079A**

CAB identifier: CN0091

The 3m Semi-anechoic chamber of Global United Technology Services Co., Ltd. has been registered by Certification and Engineering Bureau of Industry Canada for radio equipment testing

- **NVLAP (LAB CODE:600179-0)**

Global United Technology Services Co., Ltd., is accredited by the National Voluntary Laboratory Accreditation Program (NVLAP).

5.7 Test Location

All tests were performed at:

Global United Technology Services Co., Ltd.

Address: No. 123-128, Tower A, Jinyuan Business Building, No.2, Laodong Industrial Zone, Xixiang Road, Baoan District, Shenzhen, Guangdong, China 518102

Tel: 0755-27798480 Fax: 0755-27798960

5.8 Additional Instructions

Test Software	Special test command provided by manufacturer
Power level setup	Default

6 Test Instruments list

Radiated Emission:						
Item	Test Equipment	Manufacturer	Model No.	Inventory No.	Cal.Date (mm-dd-yy)	Cal.Due date (mm-dd-yy)
1	3m Semi- Anechoic Chamber	ZhongYu Electron	9.2(L)*6.2(W)* 6.4(H)	GTS250	July. 02 2020	July. 01 2025
2	Control Room	ZhongYu Electron	6.2(L)*2.5(W)* 2.4(H)	GTS251	N/A	N/A
3	EMI Test Receiver	Rohde & Schwarz	ESU26	GTS203	June. 24 2021	June. 23 2022
4	BiConiLog Antenna	SCHWARZBECK MESS-ELEKTRONIK	VULB9163	GTS214	June. 24 2021	June. 23 2022
5	Double -ridged waveguide horn	SCHWARZBECK MESS-ELEKTRONIK	BBHA 9120 D	GTS208	June. 24 2021	June. 23 2022
6	Horn Antenna	ETS-LINDGREN	3160	GTS217	June. 24 2021	June. 23 2022
7	EMI Test Software	AUDIX	E3	N/A	N/A	N/A
8	Coaxial Cable	GTS	N/A	GTS213	June. 24 2021	June. 23 2022
9	Coaxial Cable	GTS	N/A	GTS211	June. 24 2021	June. 23 2022
10	Coaxial cable	GTS	N/A	GTS210	June. 24 2021	June. 23 2022
11	Coaxial Cable	GTS	N/A	GTS212	June. 24 2021	June. 23 2022
12	Amplifier(100kHz-3GHz)	HP	8347A	GTS204	June. 24 2021	June. 23 2022
13	Amplifier(2GHz-20GHz)	HP	84722A	GTS206	June. 24 2021	June. 23 2022
14	Amplifier (18-26GHz)	Rohde & Schwarz	AFS33-18002 650-30-8P-44	GTS218	June. 24 2021	June. 23 2022
15	Band filter	Amindeon	82346	GTS219	June. 24 2021	June. 23 2022
16	Power Meter	Anritsu	ML2495A	GTS540	June. 24 2021	June. 23 2022
17	Power Sensor	Anritsu	MA2411B	GTS541	June. 24 2021	June. 23 2022
18	Wideband Radio Communication Tester	Rohde & Schwarz	CMW500	GTS575	June. 24 2021	June. 23 2022
19	Splitter	Agilent	11636B	GTS237	June. 24 2021	June. 23 2022
20	Loop Antenna	ZHINAN	ZN30900A	GTS534	June. 24 2021	June. 23 2022
21	Breitband hornantenne	SCHWARZBECK	BBHA 9170	GTS579	Oct. 17 2021	Oct. 16 2022
22	Amplifier	TDK	PA-02-02	GTS574	Oct. 17 2021	Oct. 16 2022
23	Amplifier	TDK	PA-02-03	GTS576	Oct. 17 2021	Oct. 16 2022
24	PSA Series Spectrum Analyzer	Rohde & Schwarz	FSP	GTS578	June. 24 2021	June. 23 2022

Conducted Emission						
Item	Test Equipment	Manufacturer	Model No.	Inventory No.	Cal.Date (mm-dd-yy)	Cal.Due date (mm-dd-yy)
1	Shielding Room	ZhongYu Electron	7.3(L)x3.1(W)x2.9(H)	GTS252	May.15 2019	May.14 2022
2	EMI Test Receiver	R&S	ESCI 7	GTS552	June. 24 2021	June. 23 2022
3	Coaxial Switch	ANRITSU CORP	MP59B	GTS225	June. 24 2021	June. 23 2022
4	ENV216 2-L-V-NETZNACHB.DE	ROHDE&SCHWARZ	ENV216	GTS226	June. 24 2021	June. 23 2022
5	Coaxial Cable	GTS	N/A	GTS227	N/A	N/A
6	EMI Test Software	AUDIX	E3	N/A	N/A	N/A
7	Thermo meter	KTJ	TA328	GTS233	June. 24 2021	June. 23 2022
8	Absorbing clamp	Elektronik-Feinmechanik	MDS21	GTS229	June. 24 2021	June. 23 2022
9	ISN	SCHWARZBECK	NTFM 8158	GTS565	June. 24 2021	June. 23 2022
10	High voltage probe	SCHWARZBECK	TK9420	GTS537	July. 09 2021	July. 08 2022

RF Conducted Test:						
Item	Test Equipment	Manufacturer	Model No.	Serial No.	Cal.Date (mm-dd-yy)	Cal.Due date (mm-dd-yy)
1	MXA Signal Analyzer	Agilent	N9020A	GTS566	June. 24 2021	June. 23 2022
2	EMI Test Receiver	R&S	ESCI 7	GTS552	June. 24 2021	June. 23 2022
3	Spectrum Analyzer	Agilent	E4440A	GTS533	June. 24 2021	June. 23 2022
4	MXG vector Signal Generator	Agilent	N5182A	GTS567	June. 24 2021	June. 23 2022
5	ESG Analog Signal Generator	Agilent	E4428C	GTS568	June. 24 2021	June. 23 2022
6	USB RF Power Sensor	DARE	RPR3006W	GTS569	June. 24 2021	June. 23 2022
7	RF Switch Box	Shongyi	RFSW3003328	GTS571	June. 24 2021	June. 23 2022
8	Programmable Constant Temp & Humi Test Chamber	WEWON	WHTH-150L-40-880	GTS572	June. 24 2021	June. 23 2022

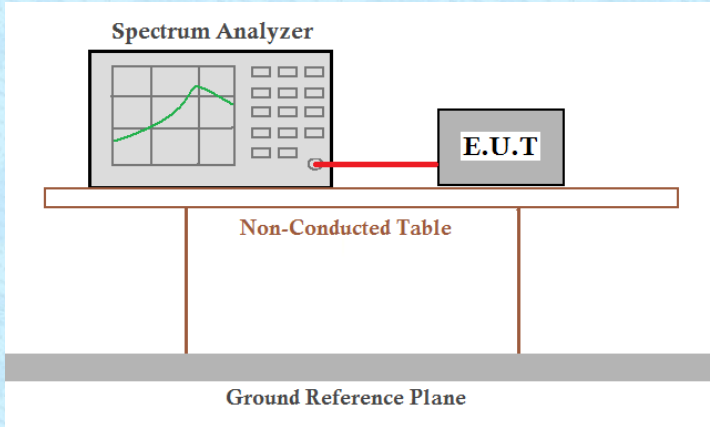
General used equipment:						
Item	Test Equipment	Manufacturer	Model No.	Inventory No.	Cal.Date (mm-dd-yy)	Cal.Due date (mm-dd-yy)
1	Humidity/ Temperature Indicator	KTJ	TA328	GTS243	June. 24 2021	June. 23 2022
2	Barometer	ChangChun	DYM3	GTS255	June. 24 2021	June. 23 2022

7 Test results and Measurement Data

7.1 Antenna requirement

Standard requirement:	FCC Part15 C Section 15.203 /247(b) (4)
15.203 requirement: An intentional radiator shall be designed to ensure that no antenna other than that furnished by the responsible party shall be used with the device. The use of a permanently attached antenna or of an antenna that uses a unique coupling to the intentional radiator, the manufacturer may design the unit so that a broken antenna can be replaced by the user, but the use of a standard antenna jack or electrical connector is prohibited. 15.247(b)(4) requirement: (4) The conducted output power limit specified in paragraph (b) of this section is based on the use of antennas with directional gains that do not exceed 6 dBi. Except as shown in paragraph (c) of this section, if transmitting antennas of directional gain greater than 6 dBi are used, the conducted output power from the intentional radiator shall be reduced below the stated values in paragraphs (b)(1), (b)(2), and (b)(3) of this section, as appropriate, by the amount in dB that the directional gain of the antenna exceeds 6 dBi.	
EUT Antenna:	
<i>The antenna is External Antenna, the best case gain of the antenna is 2.0dBi, reference to the appendix II for details</i>	

7.2 Conducted Max Average Output Power

Test Requirement:	FCC Part15 C Section 15.247 (b)(3)
Test Method:	ANSI C63.10:2013 and KDB558074 D01 15.247 Meas Guidance v05r02
Limit:	30dBm
Test setup:	
Test Instruments:	Refer to section 6.0 for details
Test mode:	Refer to section 5.2 for details
Test results:	Pass

Measurement Data

Duty Cycle:

Modulation	Frequency (MHz)	Duty cycle(%)		Duty Factor	
		Antenna-A	Antenna-B	Antenna-A	Antenna-B
802.11b	2412	99.72	99.72	0.01	0.01
	2437	99.71	99.71	0.01	0.01
	2462	99.72	99.72	0.01	0.01
802.11g	2412	97.83	97.83	0.1	0.1
	2437	97.81	97.81	0.1	0.1
	2462	97.79	97.79	0.1	0.1
802.11 n(HT20)	2412	97.65	97.65	0.1	0.1
	2437	97.66	97.66	0.1	0.1
	2462	97.7	97.7	0.1	0.1
802.11 n(HT40)	2422	95.44	95.44	0.2	0.2
	2437	95.58	95.58	0.2	0.2
	2452	95.36	95.36	0.21	0.21

Output Power:

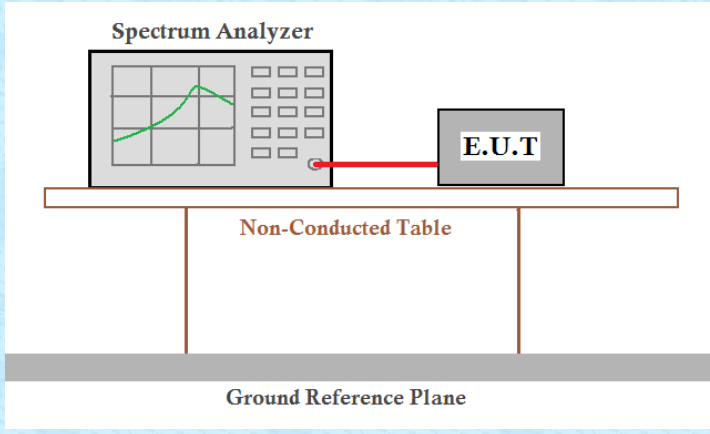
802.11b mode											
CH No.	Frequency (MHz)	Measured Power (dBm)			Duty Factor		Output Power (dBm)			Limit (dBm)	Result
		ANT A	ANT B	ANT A+B	ANT A	ANT B	ANT A	ANT B	ANT A+B		
01	2412	15.049	16.514	--	0.01	0.01	15.059	16.524	--	30	Pass
06	2437	15.229	16.361	--	0.01	0.01	15.239	16.371	--		
11	2462	15.212	16.254	--	0.01	0.01	15.222	16.264	--		
802.11g mode											
CH No.	Frequency (MHz)	Measured Power (dBm)			Duty Factor		Output Power (dBm)			Limit (dBm)	Result
		ANT A	ANT B	ANT A+B	ANT A	ANT B	ANT A	ANT B	ANT A+B		
01	2412	14.472	15.802	--	0.1	0.1	14.572	15.902	--	30	Pass
06	2437	14.195	15.599	--	0.1	0.1	14.295	15.699	--		
11	2462	14.517	15.697	--	0.1	0.1	14.617	15.797	--		
802.11 n(HT20) mode											
CH No.	Frequency (MHz)	Measured Power (dBm)			Duty Factor	Output Power (dBm)			Limit (dBm)	Result	
		ANT A	ANT B	ANT A+B		ANT A	ANT B	ANT A+B			
01	2412	13.466	14.826	17.209	0.1	13.566	14.926	17.309	30	Pass	
06	2437	13.089	14.303	16.749	0.1	13.189	14.403	16.849			
11	2462	13.449	14.496	17.014	0.1	13.549	14.596	17.114			
802.11 n(HT40) mode											
CH No.	Frequency (MHz)	Measured Power (dBm)			Duty Factor	Output Power (dBm)			Limit (dBm)	Result	
		ANT A	ANT B	ANT A+B		ANT A	ANT B	ANT A+B			
03	2422	13.234	14.649	17.009	0.2	13.434	14.849	17.209	30	Pass	
06	2437	13.099	14.558	16.9	0.2	13.299	14.758	17.1			
09	2452	13.346	14.477	16.959	0.21	13.556	14.687	17.169			

EIRP:

Test Channel	e.i.r.p (dBm)				Limit(dBm)	Result
	802.11b		802.11g			
	ANT A	ANT B	ANT A	ANT B		
Lowest	17.059	18.524	16.572	17.902	36	Pass
Middle	17.239	18.371	16.295	17.699		
Highest	17.222	18.264	16.617	17.797		

Test Channel	e.i.r.p (dBm)						Limit(dBm)	Result
	802.11n(HT20)			802.11n(HT40)				
	ANT A	ANT B	ANT(A+B)	ANT A	ANT B	ANT(A+B)		
Lowest	15.566	16.926	19.309	15.434	16.849	19.209	36	Pass
Middle	15.189	16.403	18.849	15.299	16.758	19.1		
Highest	15.549	16.596	19.114	15.556	16.687	19.169		

7.3 Channel Bandwidth & 99% Occupy Bandwidth

Test Requirement:	FCC Part15 C Section 15.247 (a)(2)
Test Method:	ANSI C63.10:2013 and KDB558074 D01 15.247 Meas Guidance v05r02
Limit:	>500KHz
Test setup:	 The diagram illustrates the test setup. A Spectrum Analyzer is connected via a red cable to an E.U.T. (Equipment Under Test). Both are placed on a Non-Conducted Table. Below the table is a Ground Reference Plane.
Test Instruments:	Refer to section 6.0 for details
Test mode:	Refer to section 5.2 for details
Test results:	Pass

Measurement Data

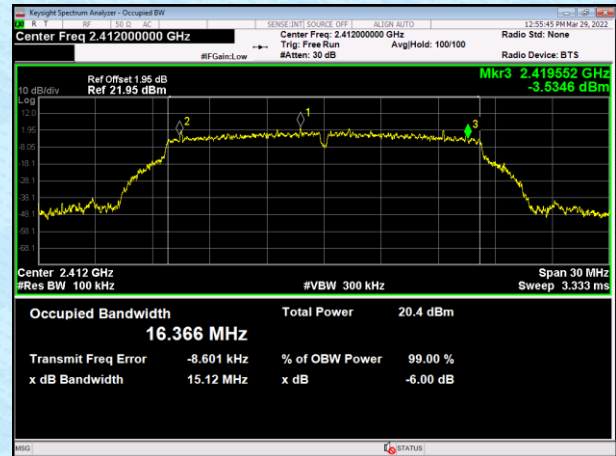
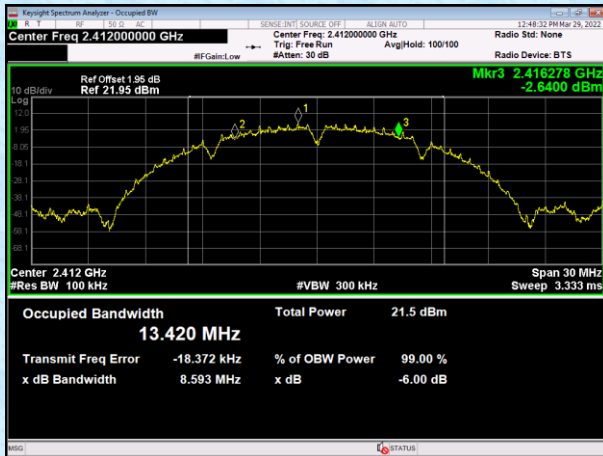
Test Channel	Channel Bandwidth (MHz)								Limit(KHz)	Result
	802.11b		802.11g		802.11n(HT20)		802.11n(HT40)			
	ANT A	ANT B	ANT A	ANT B	ANT A	ANT B	ANT A	ANT B		
Lowest	8.593	9.014	15.121	13.791	15.01	16.657	35.056	35.011	>500	Pass
Middle	8.567	7.998	15.293	13.823	13.85	16.901	35.055	35.027		
Highest	9.028	8.558	15.093	15.028	15.069	15.707	35.08	35.029		

Test Channel	99% Occupy Bandwidth (MHz)								Result
	802.11b		802.11g		802.11n(HT20)		802.11n(HT40)		
	ANT A	ANT B	ANT A	ANT B	ANT A	ANT B	ANT A	ANT B	
Lowest	13.393	13.349	16.456	16.432	17.548	17.560	36.014	35.992	Pass
Middle	13.430	13.412	16.494	16.465	17.591	17.577	36.016	35.992	
Highest	13.356	13.343	16.452	16.441	17.520	17.559	36.005	35.979	

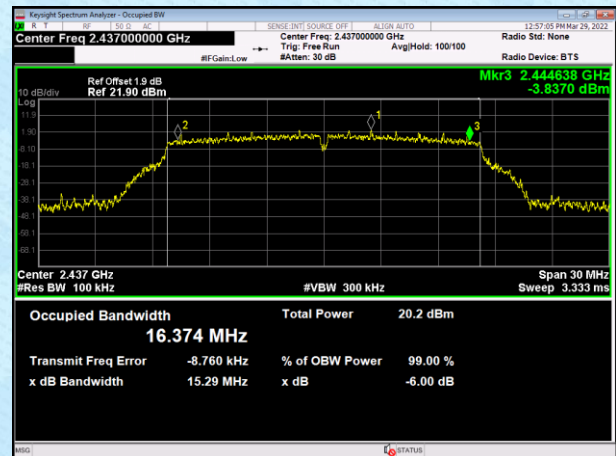
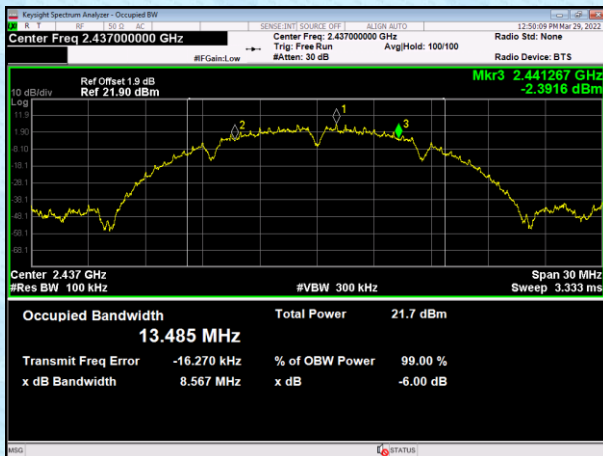
Test plot as follows:

-6dB BW(ANT A):

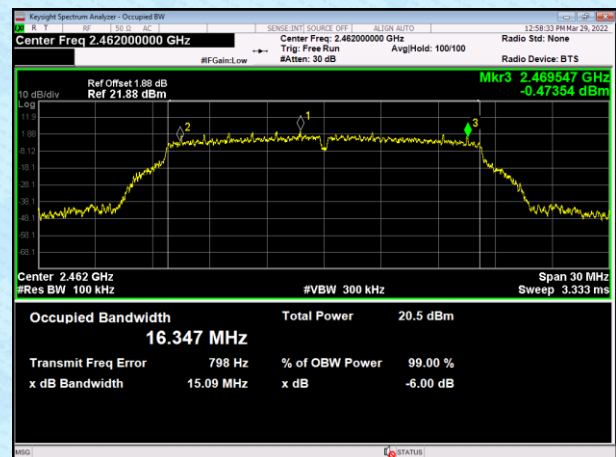
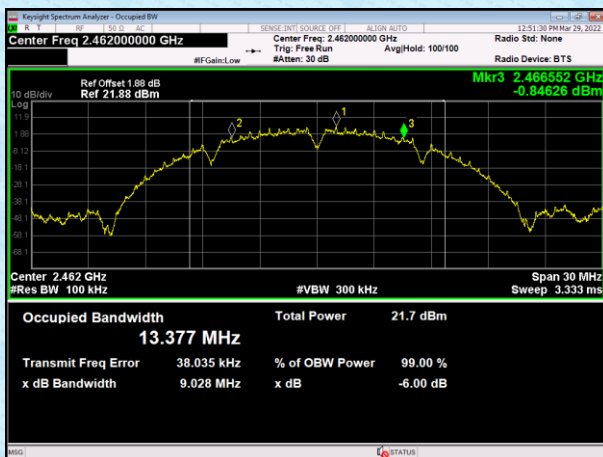
Test mode:	802.11b	Test mode:	802.11g
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Lowest channel

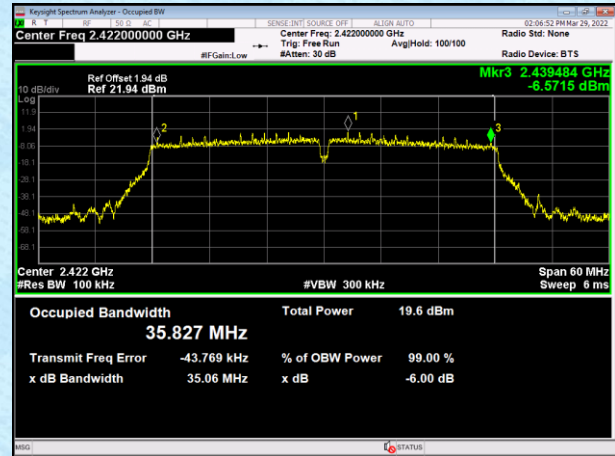
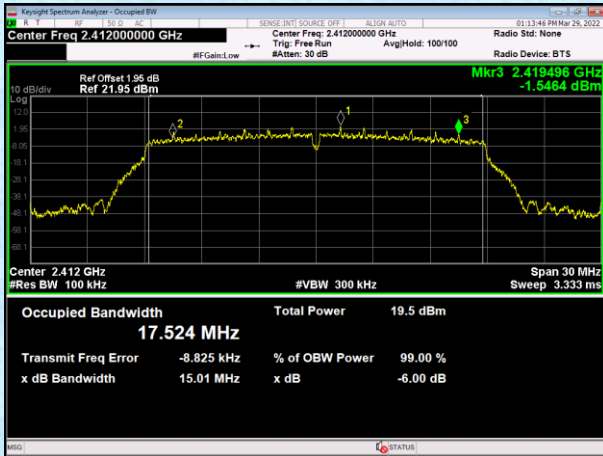


Middle channel

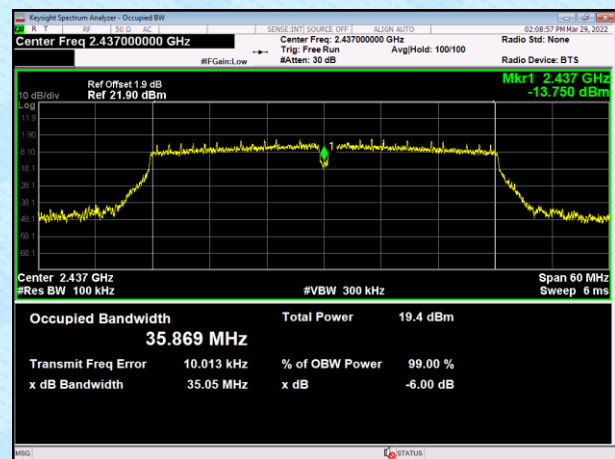
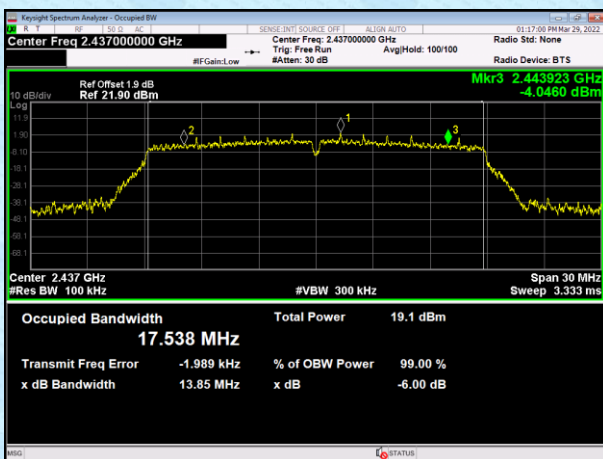


Highest channel

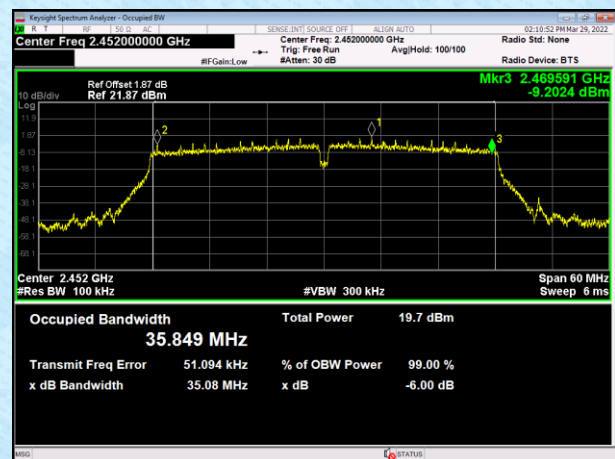
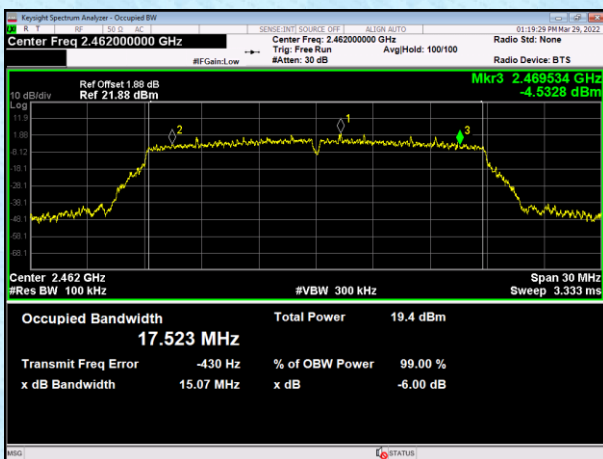
Test mode:	802.11n(HT20)	Test mode:	802.11n(HT40)
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Lowest channel



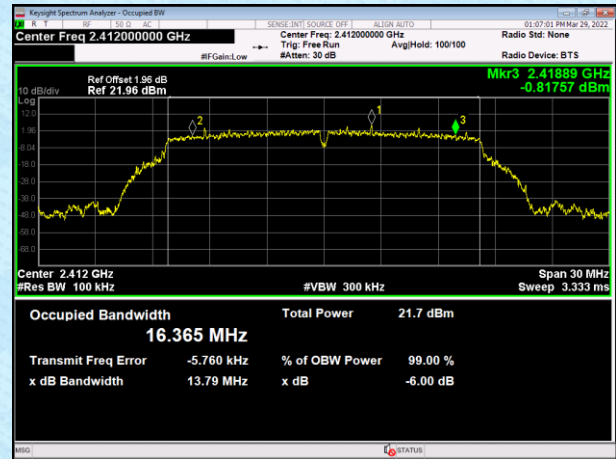
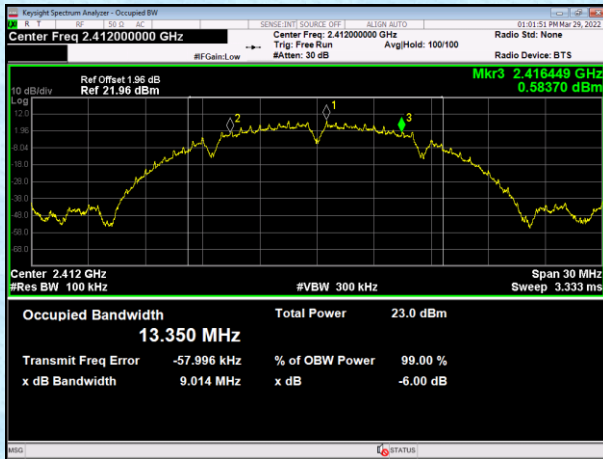
Middle channel



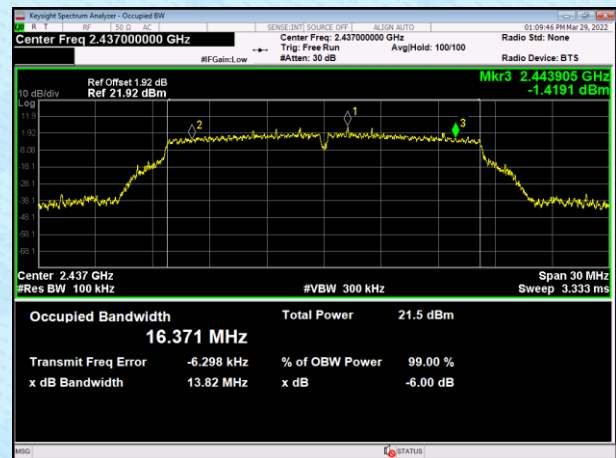
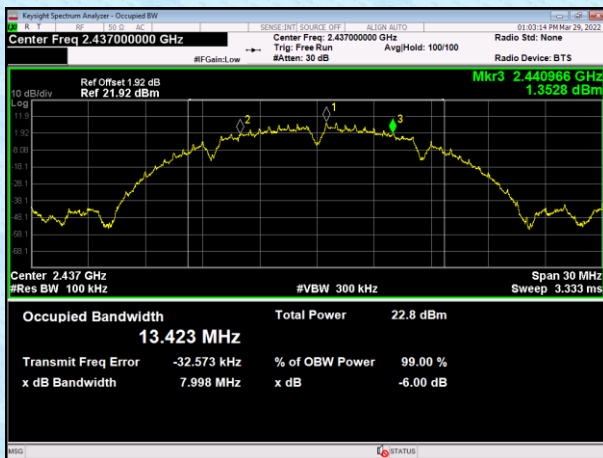
Highest channel

-6dB BW (ANT B):

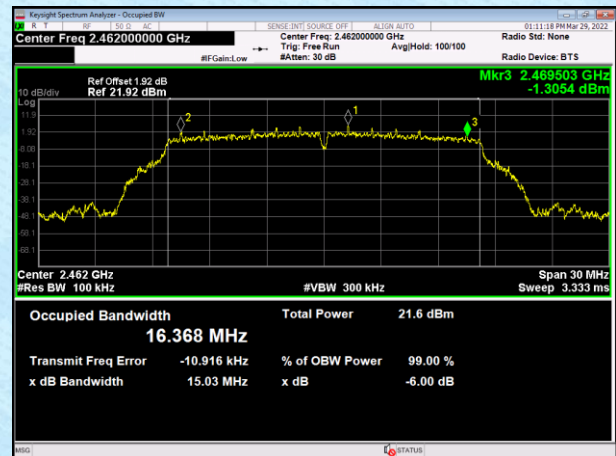
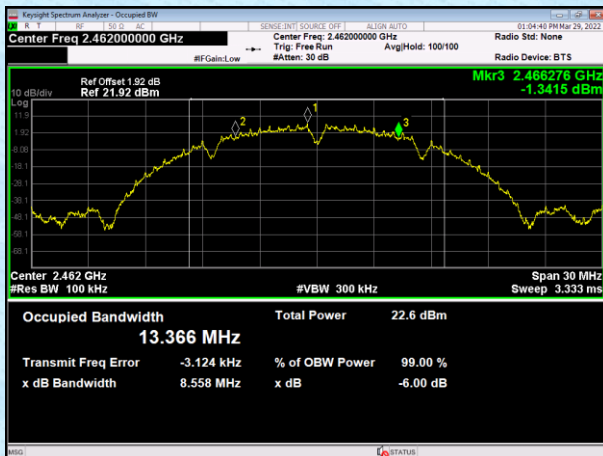
Test mode:	802.11b	Test mode:	802.11g
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Lowest channel

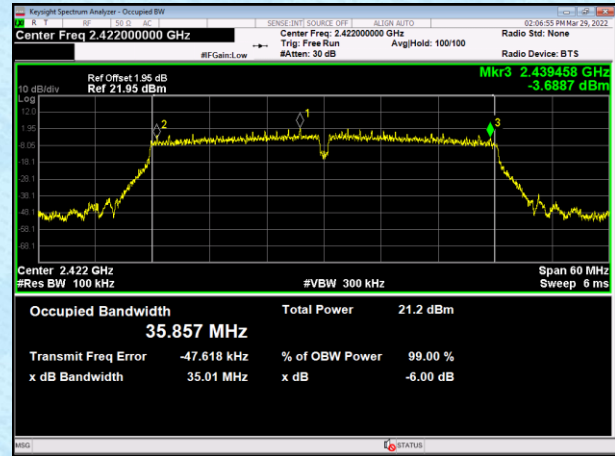
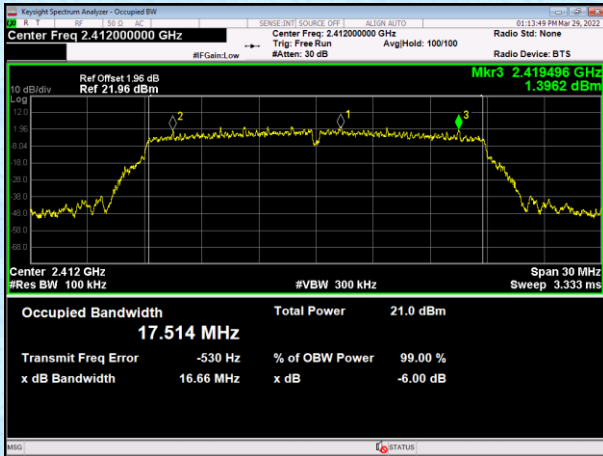


Middle channel

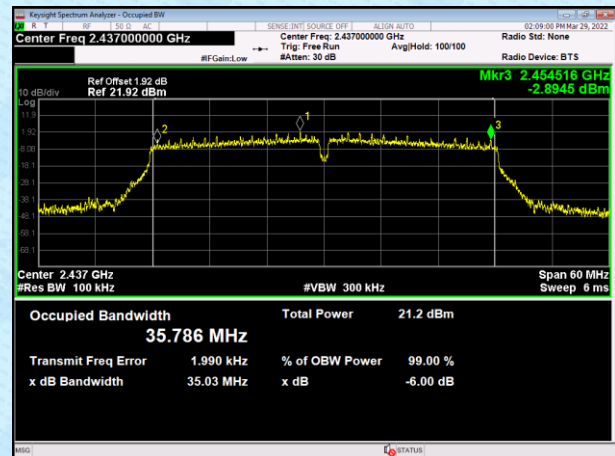
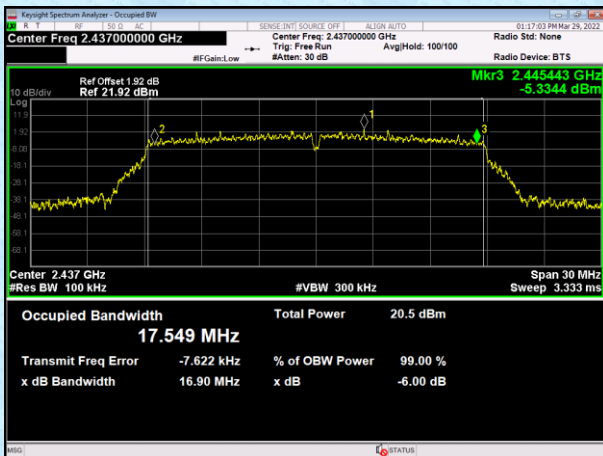


Highest channel

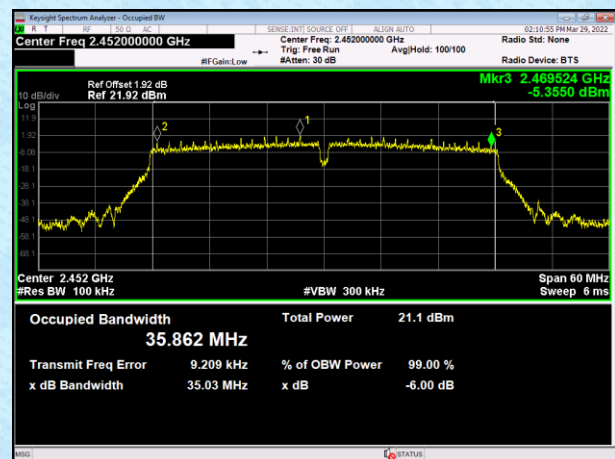
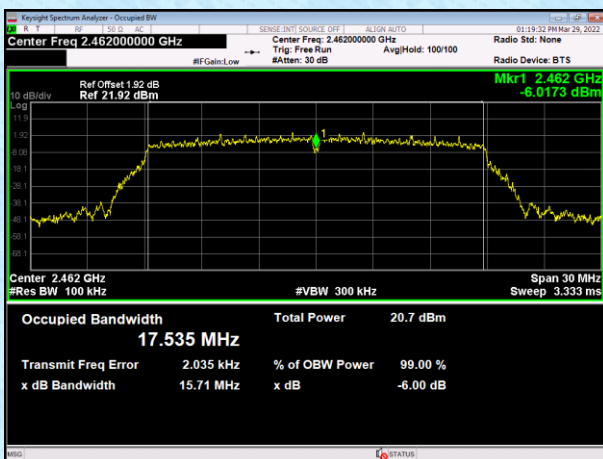
Test mode:	802.11n(HT20)	Test mode:	802.11n(HT40)
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Lowest channel



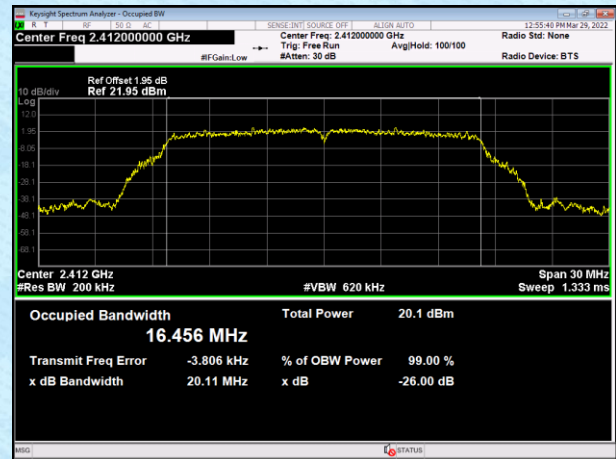
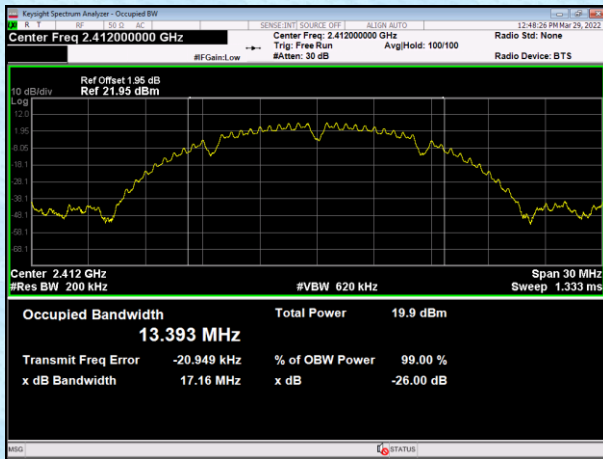
Middle channel



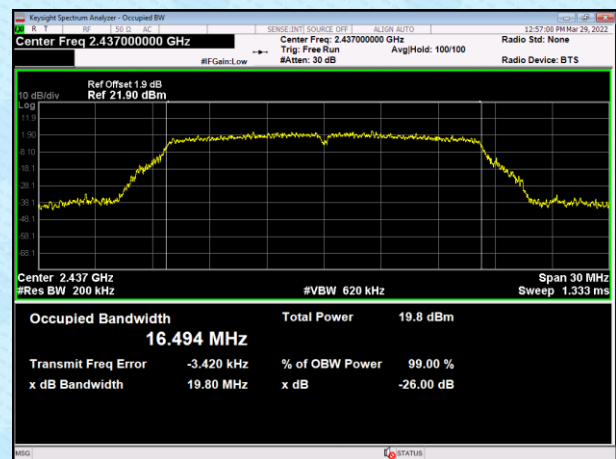
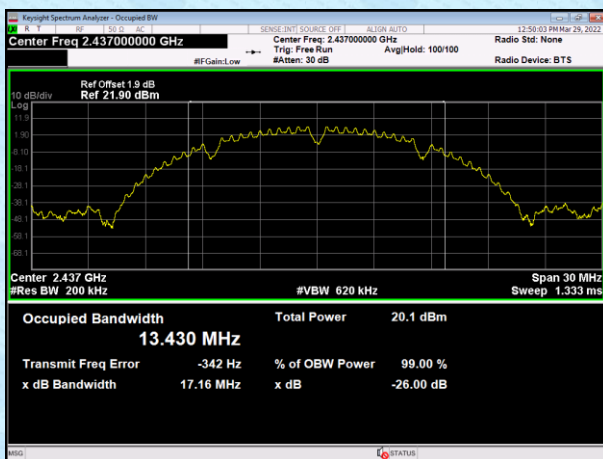
Highest channel

99% BW (ANT A):

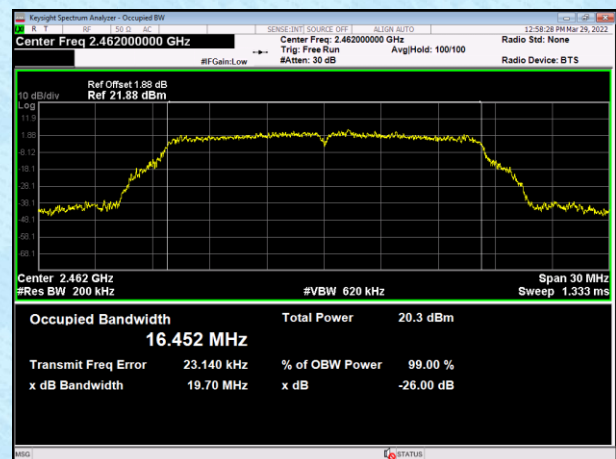
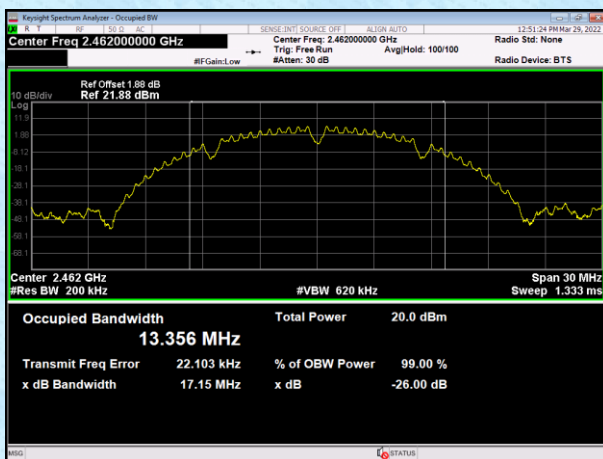
Test mode:	802.11b	Test mode:	802.11g
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Lowest channel

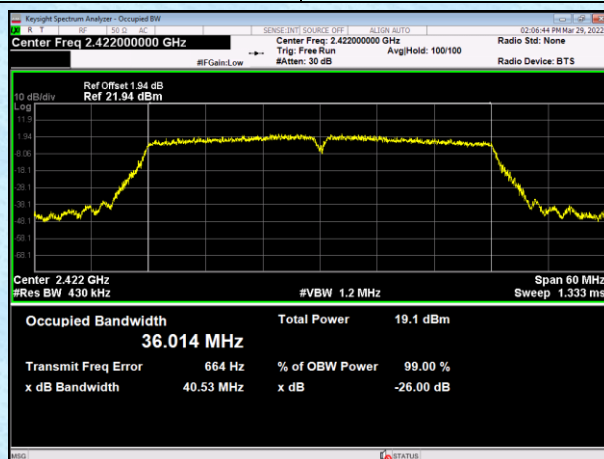
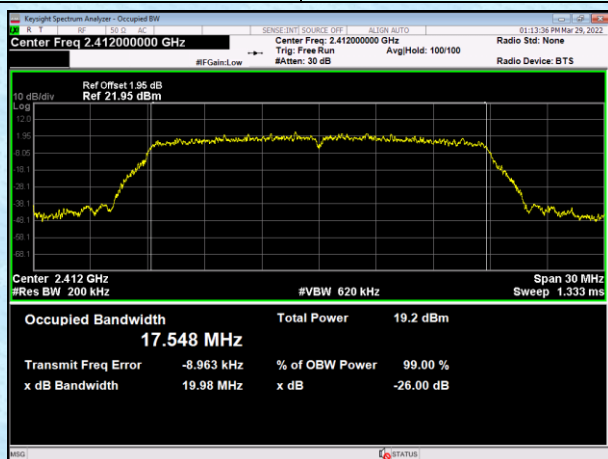


Middle channel

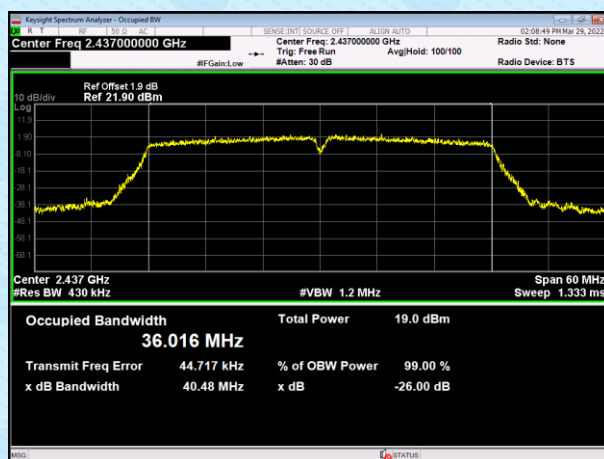
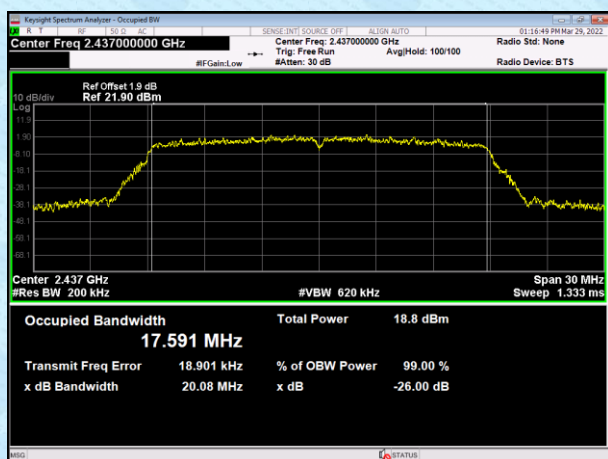


Highest channel

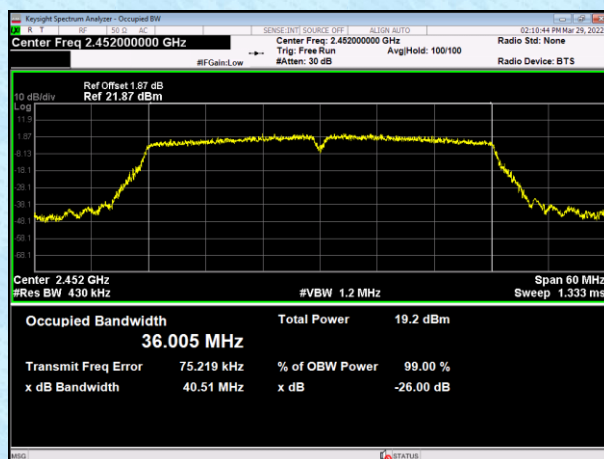
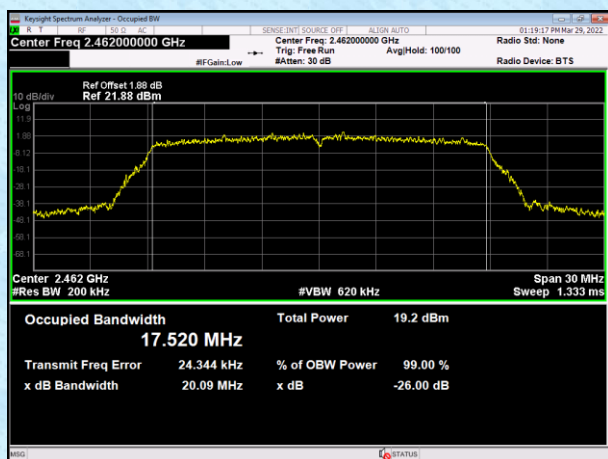
Test mode:	802.11n(HT20)	Test mode:	802.11n(HT40)
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Lowest channel



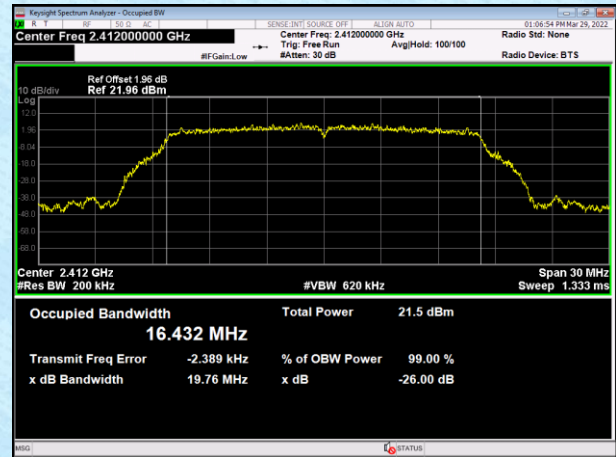
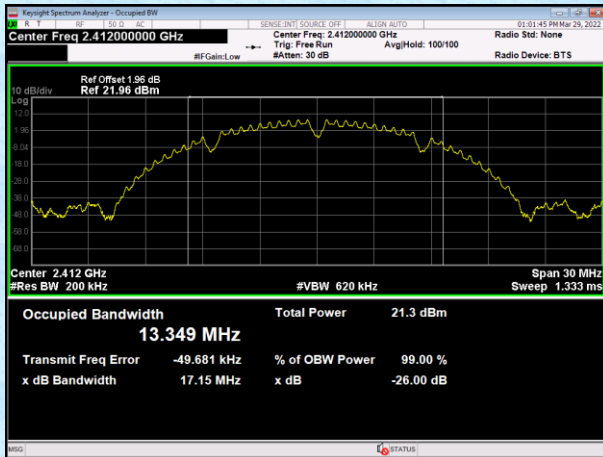
Middle channel



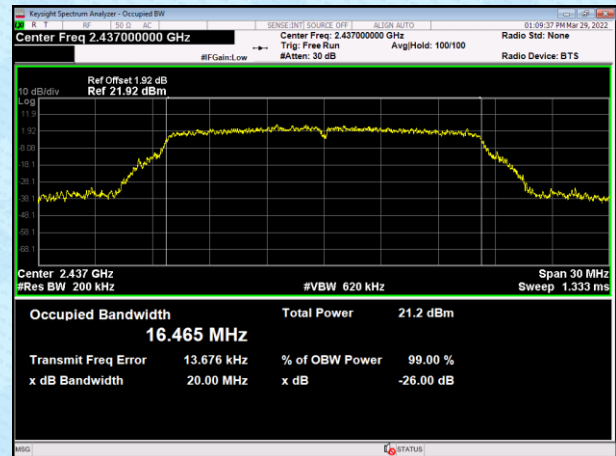
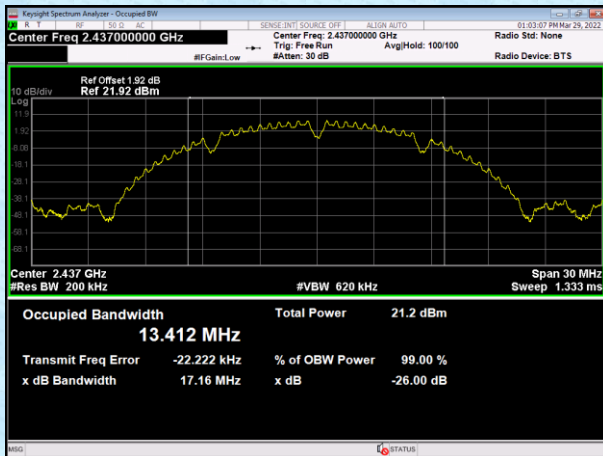
Highest channel

99% BW (ANT B):

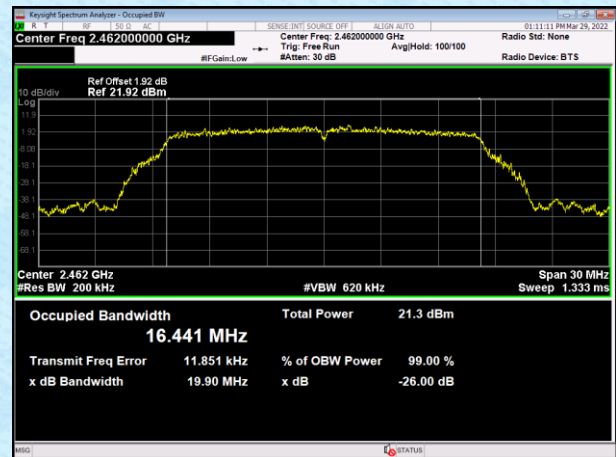
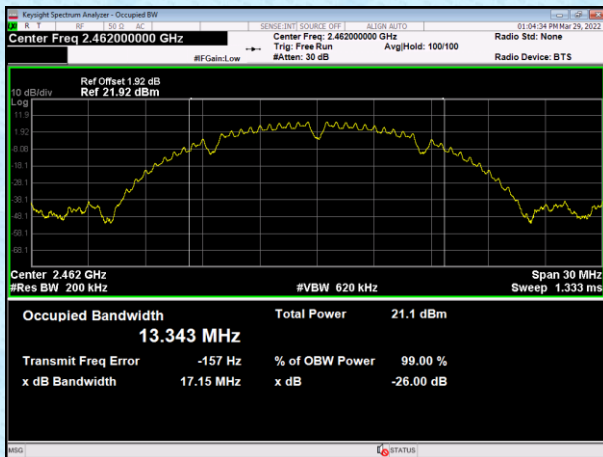
Test mode:	802.11b	Test mode:	802.11g
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Lowest channel

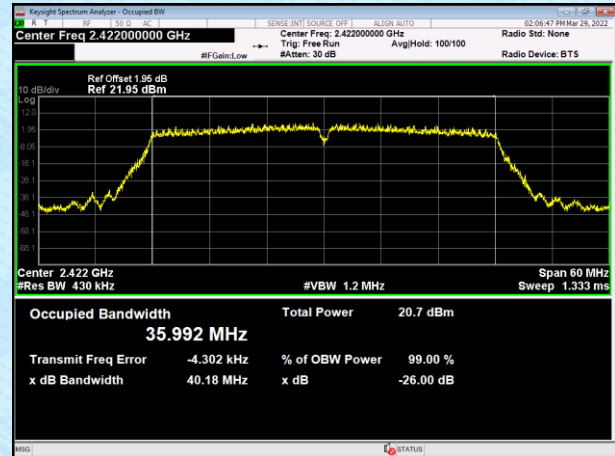
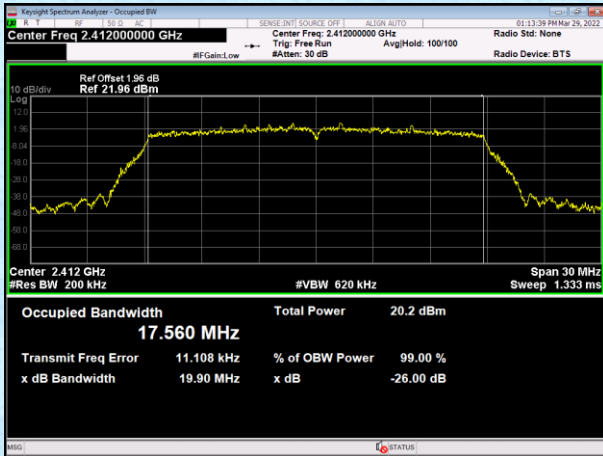


Middle channel

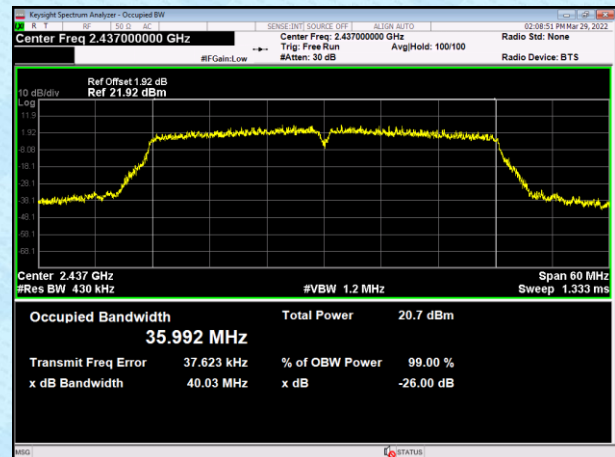
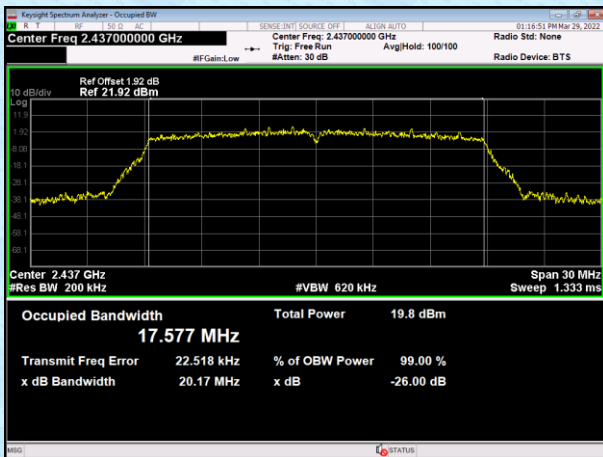


Highest channel

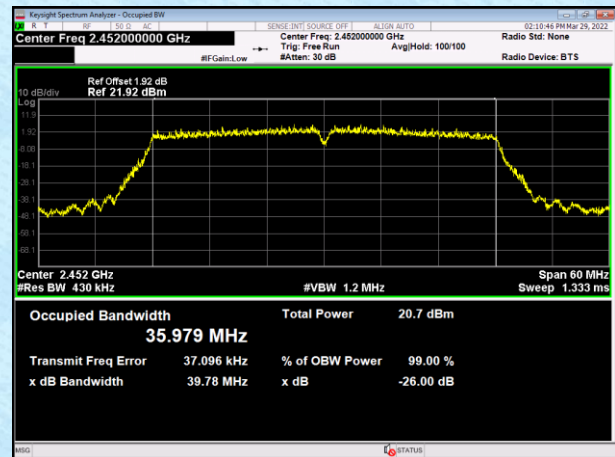
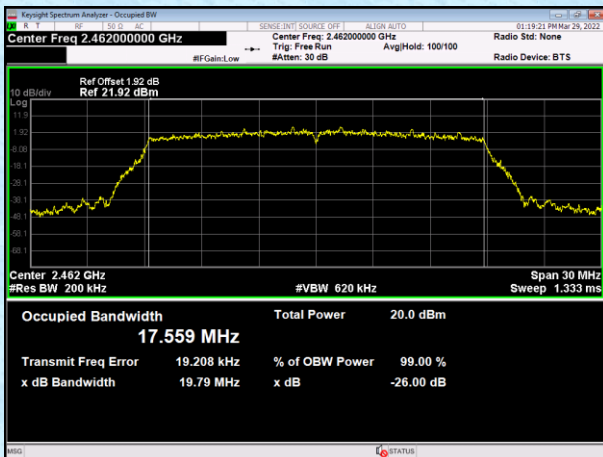
Test mode:	802.11n(HT20)	Test mode:	802.11n(HT40)
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Lowest channel

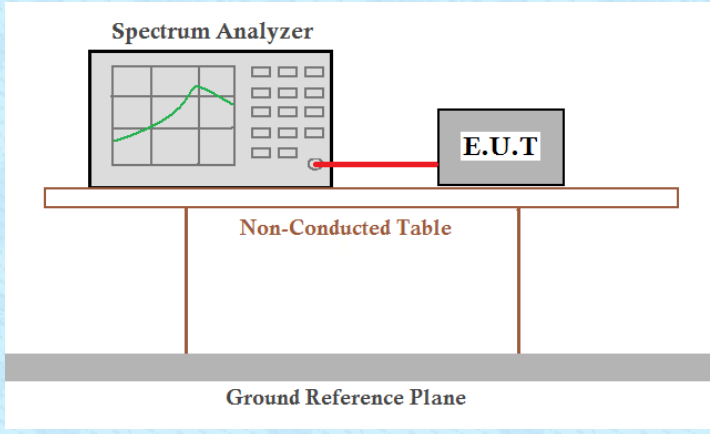


Middle channel



Highest channel

7.4 Power Spectral Density

Test Requirement:	FCC Part15 C Section 15.247 (e)
Test Method:	ANSI C63.10:2013 and KDB558074 D01 15.247 Meas Guidance v05r02
Limit:	8dBm/3kHz
Test setup:	
Test Instruments:	Refer to section 6.0 for details
Test mode:	Refer to section 5.2 for details
Test results:	Pass

Measurement Data

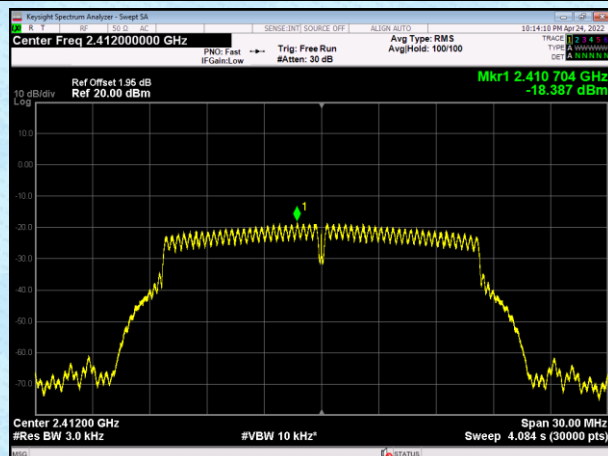
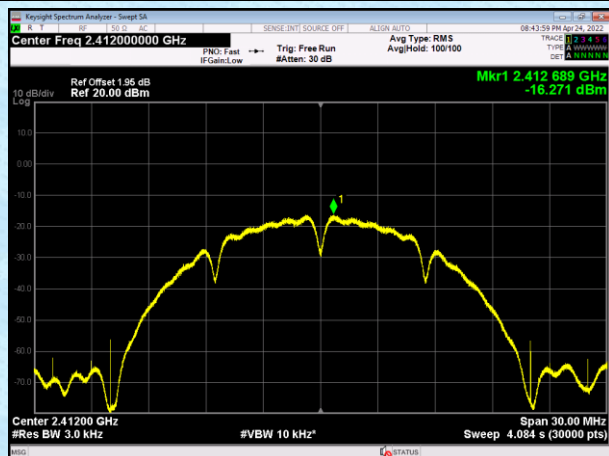
Test CH	Power Spectral Density (dBm/3kHz)						Limit (dBm/3kHz)	Result
	802.11b			802.11g				
	ANT A	ANT B	ANT A+B	ANT A	ANT B	ANT A+B		
01	-16.271	-14.824	--	-18.387	-17.051	--	8.00	Pass
06	-15.941	-15.127	--	-18.745	-17.488	--		
11	-15.801	-15.118	--	-18.46	-15.359	--		

Test CH	Power Spectral Density (dBm/3kHz)			Limit (dBm/3kHz)	Result
	802.11n(HT20)				
	ANT A	ANT B	ANT A+B		
01	-19.096	-17.971	-15.487	8	Pass
06	-18.435	-17.004	-14.651		
11	-19.678	-17.961	-15.725		

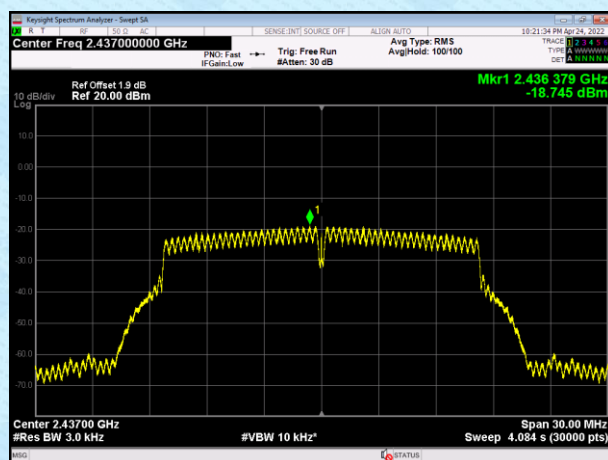
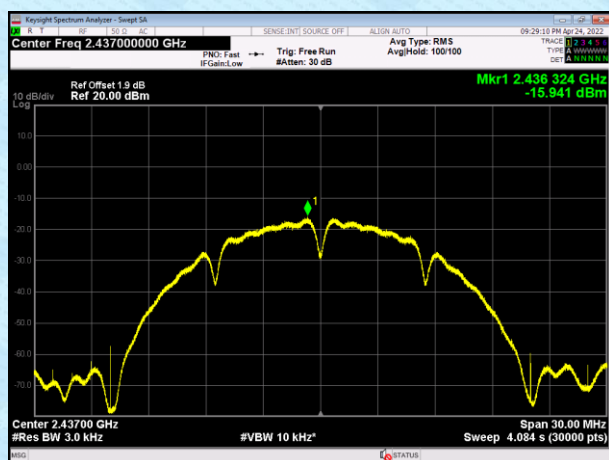
Test CH	Power Spectral Density (dBm/3kHz)			Limit (dBm/3kHz)	Result
	802.11n(HT40)				
	ANT A	ANT B	ANT A+B		
03	-19.683	-18.45	-16.013	8	Pass
06	-20.037	-18.678	-16.294		
09	-20.016	-18.242	-16.029		

Test plot as follows (ANT A):

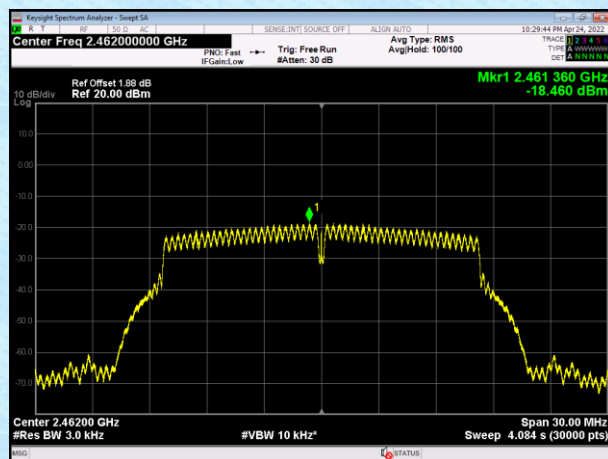
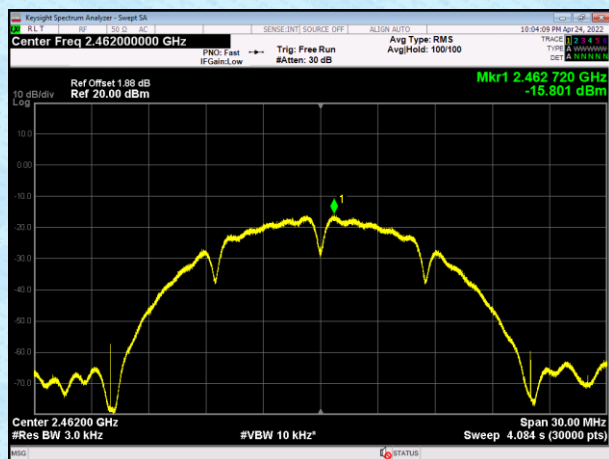
Test mode:	802.11b	Test mode:	802.11g
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Lowest channel

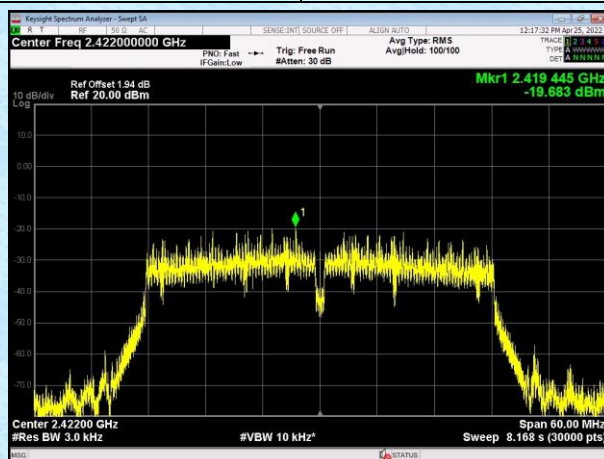
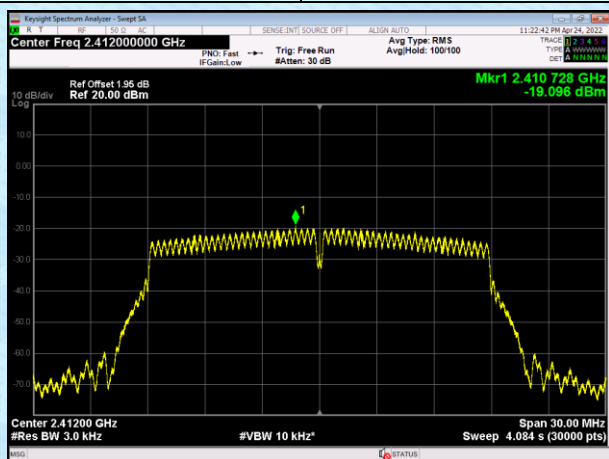


Middle channel

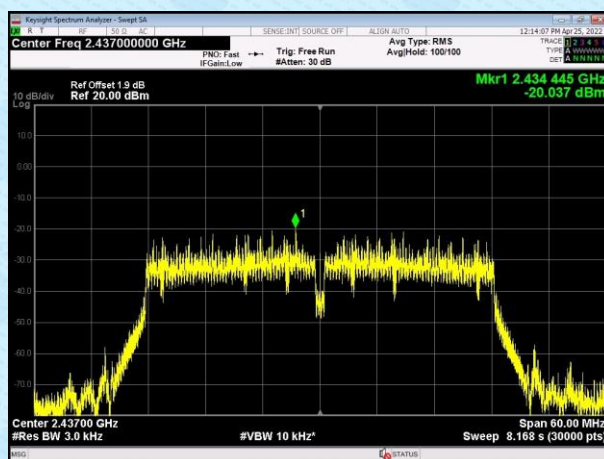
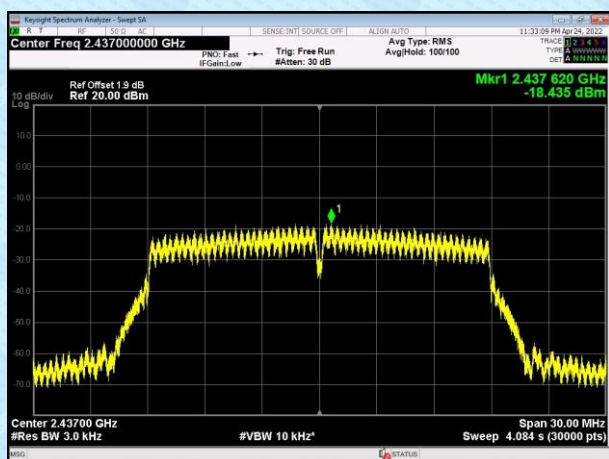


Highest channel

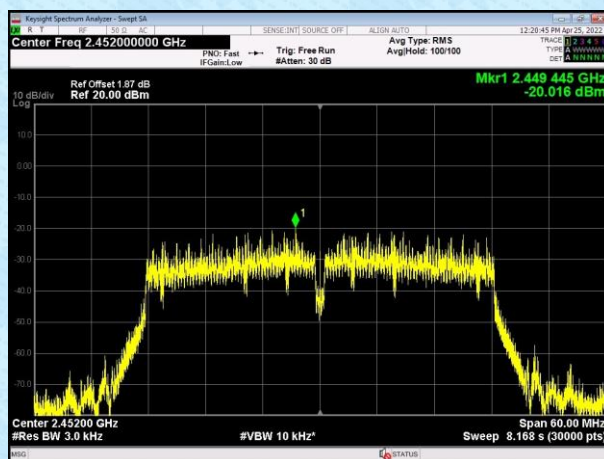
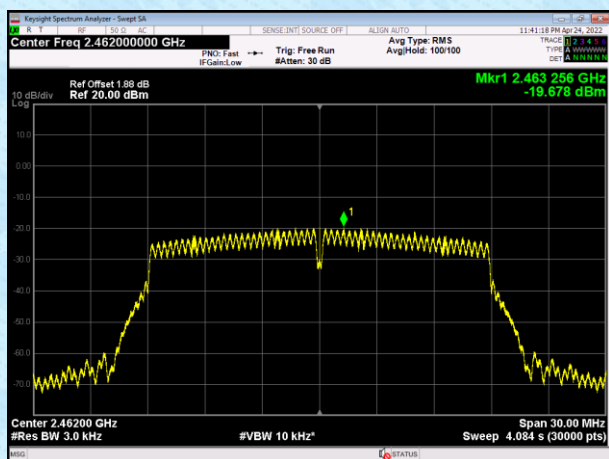
Test mode:	802.11n(HT20)	Test mode:	802.11n(HT40)
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Lowest channel



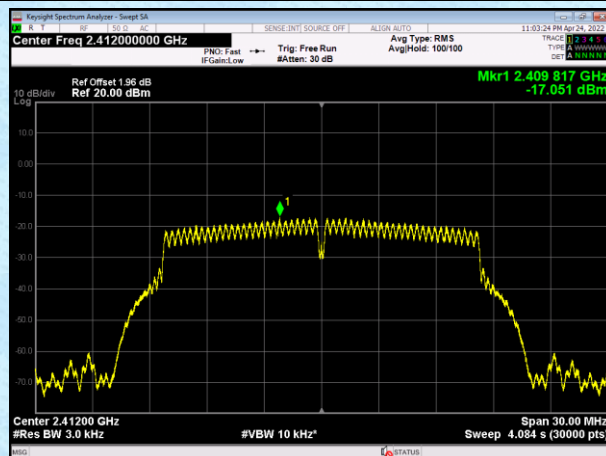
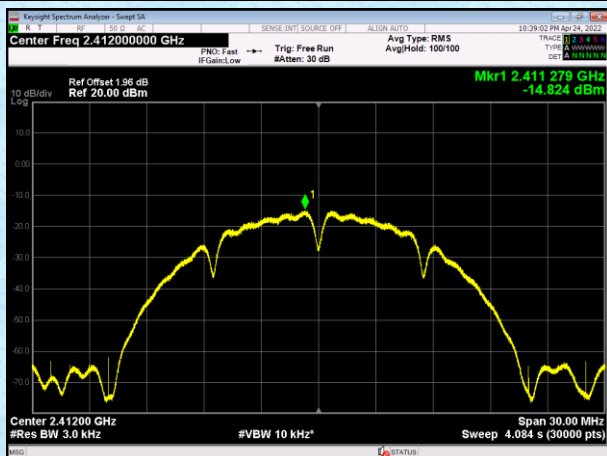
Middle channel



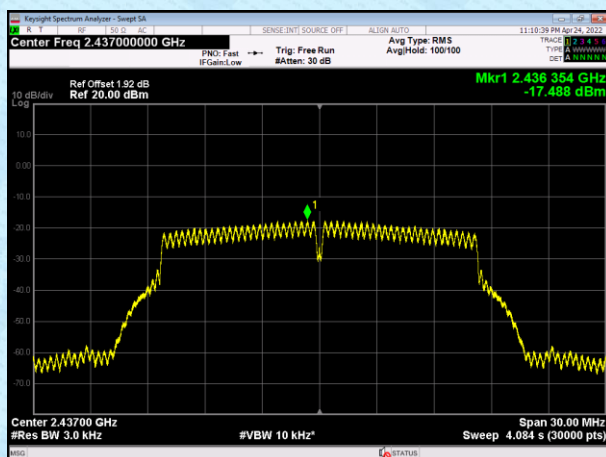
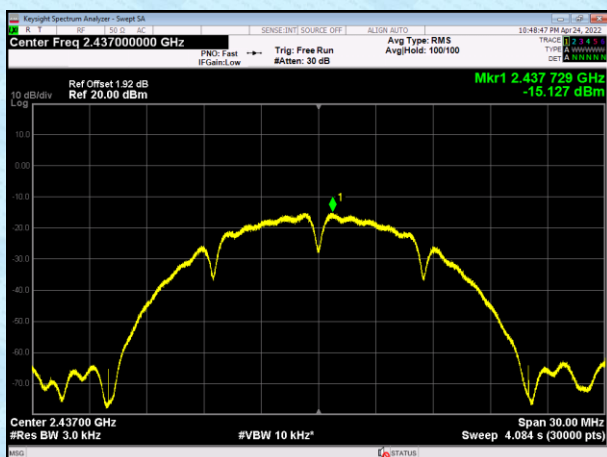
Highest channel

Test plot as follows (ANT B):

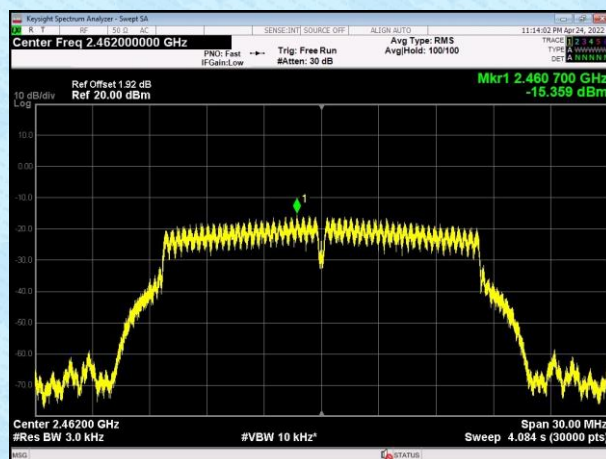
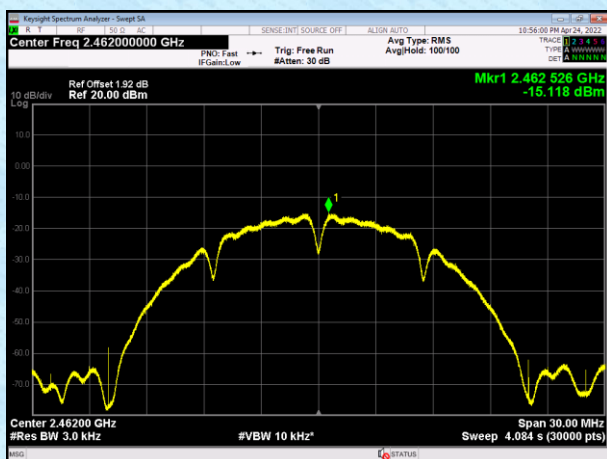
Test mode:	802.11b	Test mode:	802.11g
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Lowest channel

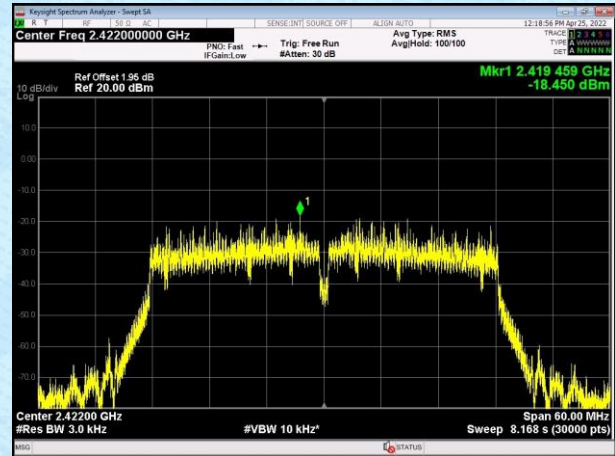
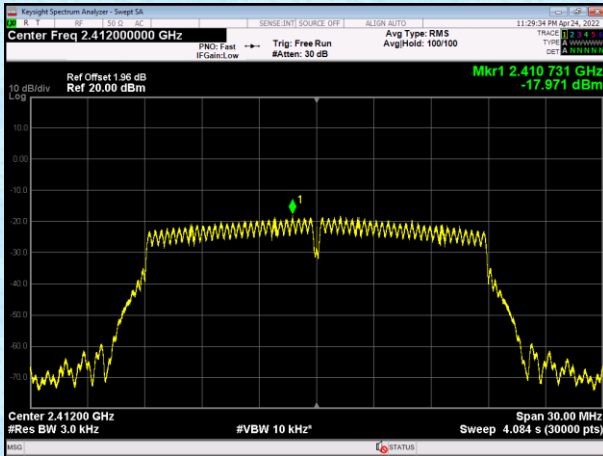


Middle channel

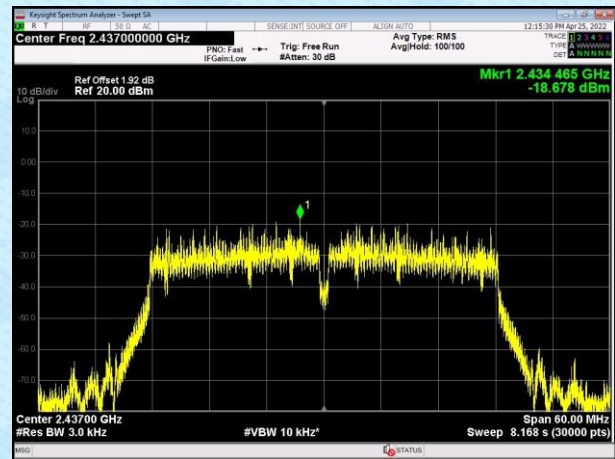
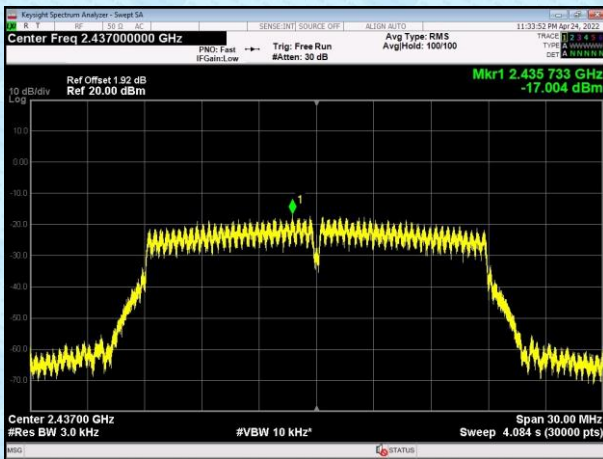


Highest channel

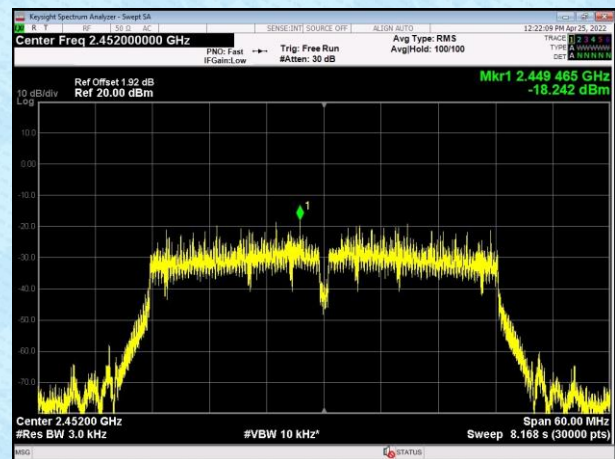
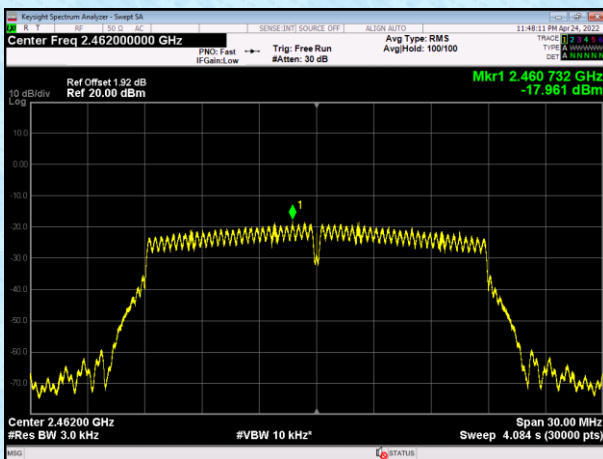
Test mode:	802.11n(HT20)	Test mode:	802.11n(HT40)
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Lowest channel



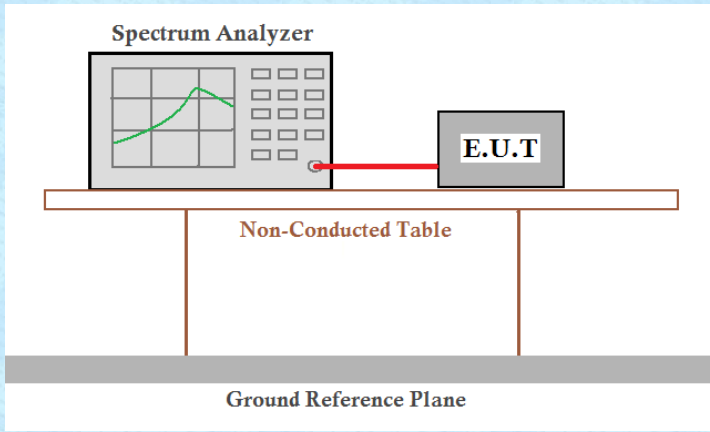
Middle channel



Highest channel

7.5 Spurious Emission in Non-restricted & restricted Bands

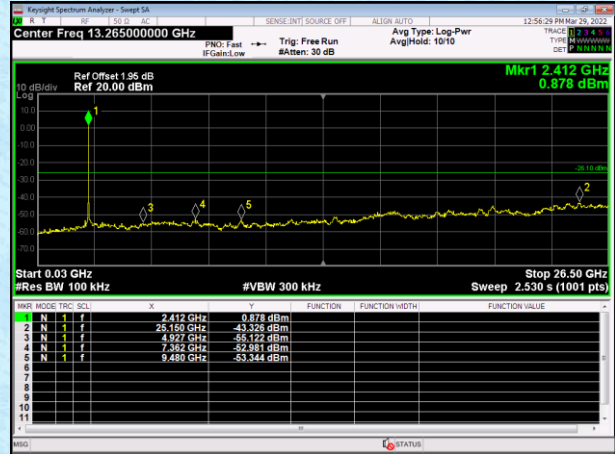
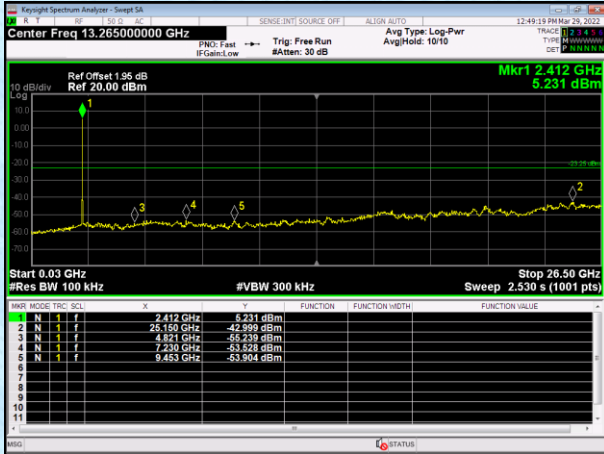
7.5.1 Conducted Emission Method

Test Requirement:	FCC Part15 C Section 15.247 (d)
Test Method:	ANSI C63.10:2013 and KDB558074 D01 15.247 Meas Guidance v05r02
Limit:	In any 100 kHz bandwidth outside the frequency band in which the spread spectrum intentional radiator is operating, the radio frequency power that is produced by the intentional radiator shall be at least 20 dB below that in the 100 kHz bandwidth within the band that contains the highest level of the desired power, based on either an RF conducted or a radiated measurement.
Test setup:	 The diagram illustrates the test setup. A Spectrum Analyzer is connected to an E.U.T. (Equipment Under Test) via a red cable. Both the Spectrum Analyzer and the E.U.T. are placed on a Non-Conducted Table. The table is supported by a Ground Reference Plane.
Test Instruments:	Refer to section 6.0 for details
Test mode:	Refer to section 5.2 for details
Test results:	Pass

Test plot as follows (ANT A):

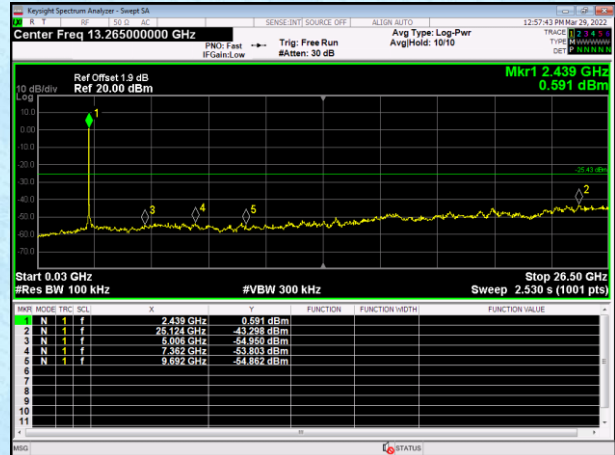
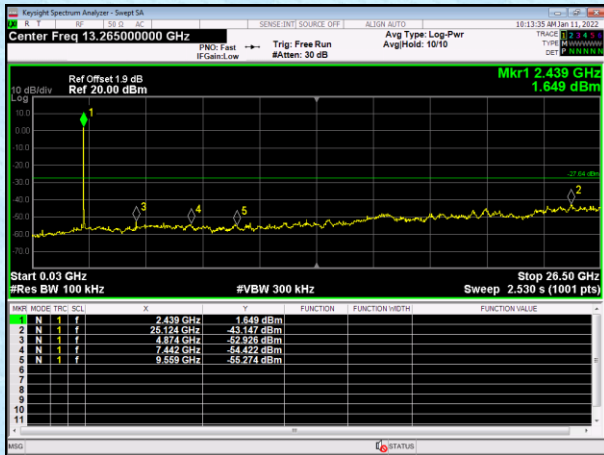
Test mode:	802.11b	Test mode:	802.11g
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Lowest channel



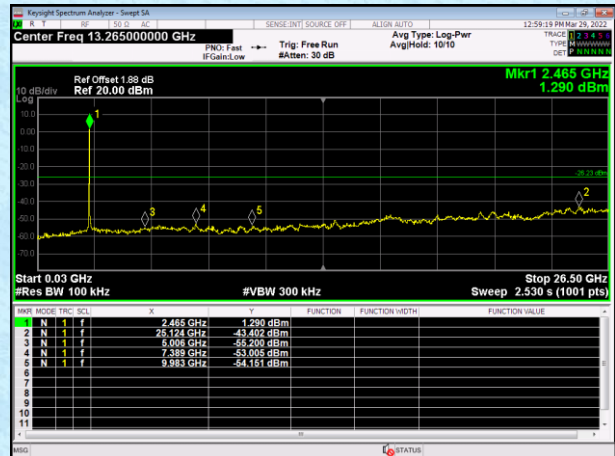
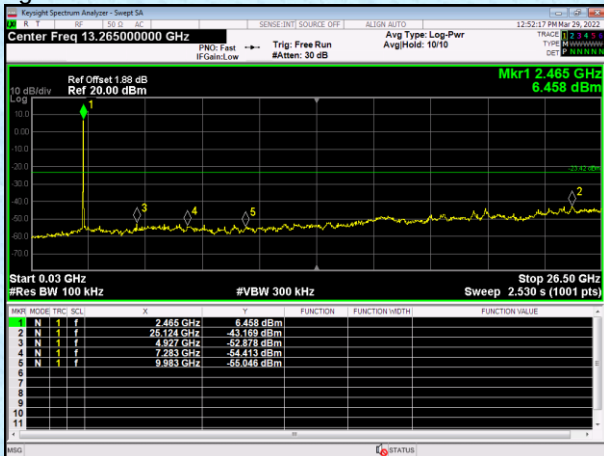
30MHz~26.5GHz

Middle channel



30MHz~26.5GHz

Highest channel



30MHz~26.5GHz