

TEST REPORT

Report No.: SHE19020010-03DE

Date: 2020-5-15

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Applicant : Shenzhen UniStrong Science & Technology Co.,Ltd.
Address of Applicant : B,4-4Factory, Zhengcheng Road, Fuyong Baoan District, Shenzhen, China

Product Name : Rugged Smart Tablet
Model No. : UT30P
Sample No. : E19020010-05#01
FCC ID : 2AOPD-UT30P
ISED Number : 11546A-UT30P

Standards : FCC CFR47 Part 15, Subpart C
RSS-Gen (Issue 5, March 2019)
RSS-247 (Issue 2, February 2017)

Date of Receipt : 2020-2-10
Date of Test : 2020-2-10 ~ 2020-5-15
Date of Issue : 2020-5-15

Remark:

This report details the results of the testing carried out on one sample, the results contained in this report do not relate to other samples of the same product. The manufacturer should ensure that all products in series production are in conformity with the product sample detailed in this report.

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(Jennifer Zhou)

Reviewed by:

Jesse
(Jesse)

Approved by:

Guoyou Chi
(Authorized signatory: Guoyou Chi)

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Revision Record			
Version	Date	Revisions	Revised By
1.0	2019-10-31	Original	--

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1 General Information

1.1 Testing Laboratory

Company Name	ICAS Testing Technology Services (Shanghai) Co., Ltd.
Address	155 Pingbei Rd, Minhang District, Shanghai, China
Telephone	0086 21-51682999
Fax	0086 21-54711112
Homepage	www.icasiso.com

1.2 Details of Application

Company Name	Shenzhen UniStrong Science & Technology Co.,Ltd.
Address	B,4-4Factory, Zhengcheng Road, Fuyong Baoan District, Shenzhen, China
Contact Person	Lili Zheng
Telephone	+86-21-54467182
Email	ll.zheng@unistrong.com

1.3 Details of EUT

Product Name	Rugged Smart Tablet
Brand Name	Unistrong
Model No.	UT30P
FCC ID	2AOPD-UT30P
ISED Number	11546A-UT30P
Mode of Operation	WLAN 802.11b/g/n(HT20/40)
Frequency Range	2400MHz ~ 2483.5MHz
Channel Separation	5 MHz
Modulation Type	DSSS, OFDM
Antenna Type	Internal Antenna
Antenna Gain	2.84 dBi
Extreme Temperature Range	-20°C ~ +55°C
Test Voltage	DC 3.8V

1.4 Test Methodology

47 CFR Part 15, Subpart C (10-1-16 Edition)	Miscellaneous Wireless Communications Services
KDB Publication 558074 D01 v05r02	15.247 Meas Guidance.
KDB Publication 662911 D01 v02r01	Emissions Testing of Transmitters with Multiple Outputs in the Same Band (e.g., MIMO, Smart Antenna, etc)
RSS-Gen	General Requirements for Compliance of Radio Apparatus

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(Issue 5, March 2019)	
RSS-247 (Issue 2, February 2017)	Digital Transmission Systems (DTSS), Frequency Hopping Systems (FHSs) and Licence-Exempt Local Area Network (LE-LAN) Devices
ANSI C63.10-2013	American National Standard for Testing Unlicensed Wireless Devices

Note(s):

All test items were verified and recorded according to the standards and without any addition/deviation/exclusion during the test.

2 Test Condition

2.1 Test Facility

2.2 Environmental conditions

Temperature (°C)	18-25
Humidity (%RH)	40-65
Barometric Pressure (mbar)	960-1060

2.3 Equipment List

Name of Equipment	Manufacturer	Model	Serial No.	Cal. Due Date
Spectrum Analyzer	Keysight	N9020B	MY59260184	2020-07-28
Spectrum Analyzer	Rohde & Schwarz	FSV40N	101450	2020-06-24
EMI Test Receiver	Rohde & Schwarz	ESPI3	100173	2020-06-19
EMI Test Receiver	Rohde & Schwarz	ESR 7	101911	2020-06-19
V-network	SCHWARZBECK	NSLK 8127	8127-902	2021-02-20
Wideband Radio Communication Tester	Rohde & Schwarz	CMW 500	100687	2020-08-22
Broadband Antenna	SCHWARZBECK	VULB9163	9163-1037	2020-06-06
Horn Antenna-18G	SCHWARZBECK	BBHA9120D	9120D-1775	2020-06-06
Loop Antenna	SCHWARZBECK	FMZB 1513	N/A	2021-03-19
Horn Antenna-40G	YINGLIAN	LB-180400-KF	N/A	2020-07-26
EMC chamber 9*6*6 (L*W*H)	CHANGNING	966	N/A	2020-06-26
Shielded Enclosure 8*5*4 (L*W*H)	CHANGNING	854	N/A	2020-08-28
Test Software	BL	BL410_E	N/A	N/A
Power meter	Keysight	U2021XA	MY57200011	2020-07-28

2.4 Measurement Uncertainty

Parameter	Frequency	Uncertainty
Antenna Port Conducted Emission	< 1GHz	± 1.5 dB
	> 1GHz	± 1.5 dB
Radiated Emission	30 MHz – 1 GHz	± 3 dB

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	> 1GHz	± 3 dB
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3 Test Set-up and Operation Modes

3.1 Details of Test Mode

Using test software was control EUT work in continuous transmitter and receiver mode. Select test channel as below:

For 802.11b/g/n (HT20)

Channel	Frequency
The lowest channel(CH1)	2412MHz
The middle channel(CH6)	2437MHz
The Highest channel(CH11)	2462MHz

For 802.11n(HT40)

Channel	Frequency
The lowest channel(CH3)	2422MHz
The middle channel(CH6)	2437MHz
The Highest channel(CH9)	2452MHz

Through Pre-scan under all rate at lowest channel, the data rate as below table described is the worst case, so we choose these data rate for test.

Type	Data rate
802.11b	11Mbps
802.11g	54Mbps
802.11n(20M)	MCS7
802.11n(40M)	MCS7

The basic operation modes are:

- A. On
 - 1. WLAN mode
 - a. Transmitting
 - i. Low Channel
 - ii. Middle Channel
 - iii. High Channel
 - b. Receiving
- B. Standby
- C. Off

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3.2 Special Accessories and Auxiliary Equipment

Description	Manufacturer	Model No.	Serial No.
Laptop	Lenovo	TP00083A	N/A

3.3 Support Software

Description	Manufacturer	Software Name
Software	Qualcomm	QRCT

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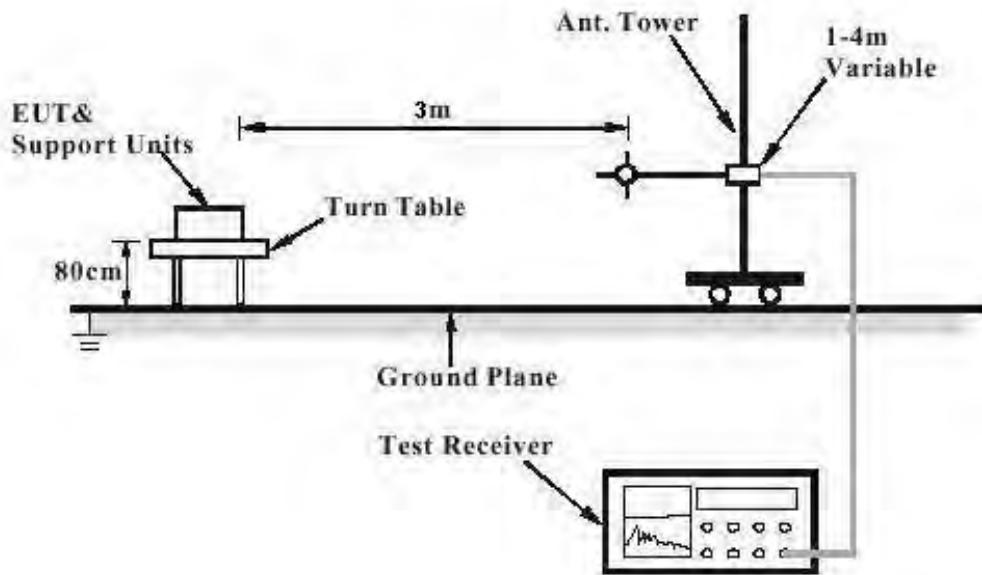
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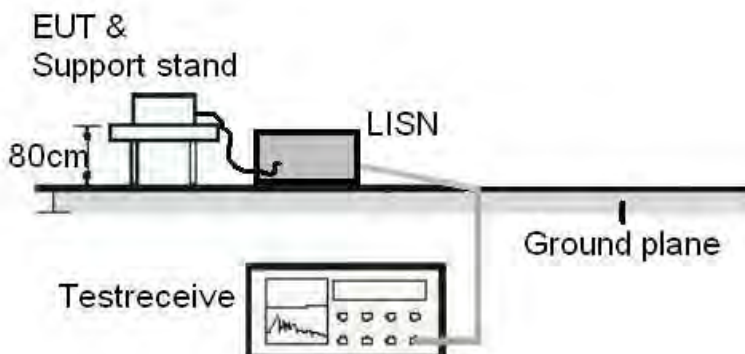
3.4 Test Setup Diagram

Diagram of Measurement Configuration for Radiation Test



Note: Measurements above 1GHz are done with a table height of 1.5m. In addition, there is RF absorbing material on the floor of the test site for above 1GHz measurement.

Diagram of Measurement Equipment Configuration for Conduction Measurement



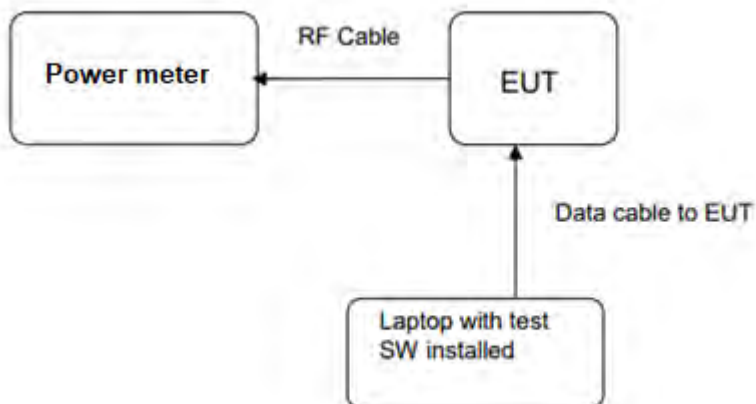
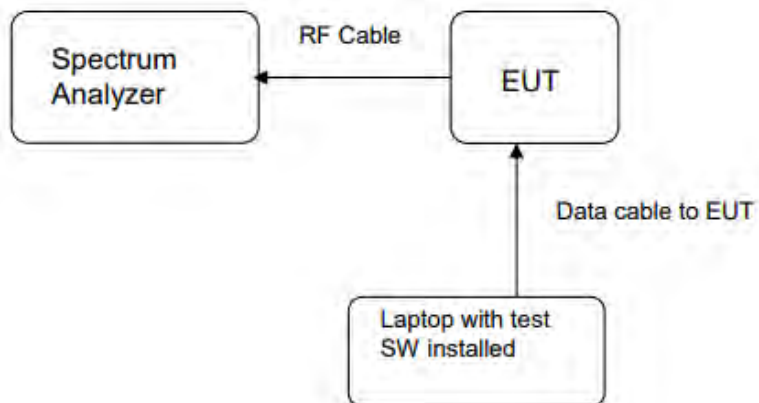
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Diagram of Measurement Equipment Configuration for Transmitter Measurement



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4 Test Results

4.1 Transmitter Requirement & Test Suites

4.1.1 Antenna Requirement

RESULT:

PASS

Test standard : FCC Part 15.247(b)(4), Part 15.203
RSS-247 5.4(6)

Requirement : The use of approved antennas only with directional
gains that do not exceed 6 dBi

According to the manufacturer declaration, the EUT has an antenna with a gain of 2.84 dBi. The antenna is an internal antenna with no possibility of replacement with a non-approved antenna by the end-user.

Therefore, the EUT is considered to comply with this provision.

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4.1.2 Peak Output Power and E.I.R.P

RESULT:

PASS

Test standard : FCC Part 15.247(b)(3)
RSS-247 5.4(4)
Requirement : ANSI C63.10-2013, KDB 558074
Kind of test site : Shielded room

Test setup

Test Channel : Low/Middle/High
Operation Mode : A.1.a
Ambient temperature : 25C
Relative humidity : 52%

Table 1: Peak Output Power

Test Mode	Test Channel (MHz)	Measured Peak Power		Limit (W)
		(dBm)	(mW)	
802.11b	2412	12.62	18.28	< 1
	2437	12.72	18.71	
	2462	12.24	16.75	
802.11g	2412	12.09	16.18	
	2437	11.84	15.28	
	2462	11.66	14.66	
802.11n(HT20)	2412	11.24	13.30	
	2437	11.25	13.34	
	2462	11.43	13.90	
802.11n(HT40)	2422	12.78	18.97	
	2437	12.86	19.32	
	2452	12.16	16.44	

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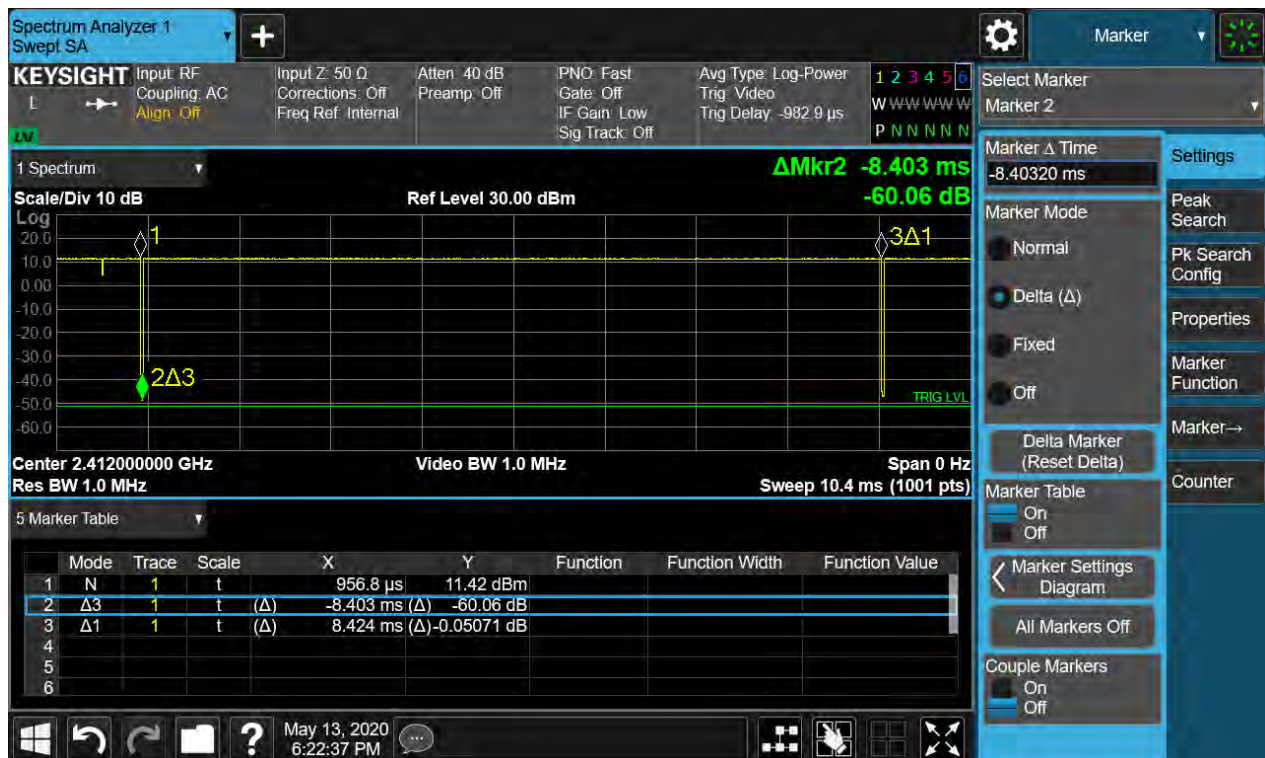
Table 2: E.I.R.P

Test Mode	Test Channel (MHz)	Measured Peak Power		Limit (W)
		(dBm)	(mW)	
802.11b	2412	15.46	35.16	< 4
	2437	15.56	35.97	
	2462	15.08	32.21	
802.11g	2412	14.93	31.12	
	2437	14.68	29.38	
	2462	14.5	28.18	
802.11n(HT20)	2412	14.08	25.59	
	2437	14.09	25.64	
	2462	14.27	26.73	
802.11n(HT40)	2422	15.62	36.48	
	2437	15.7	37.15	
	2452	15	31.62	

Note: 2.4G WIFI antenna paek gain is 2.84

Duty cycle factor = $10 \cdot \log(1/\text{duty cycle})$

802.11b > 98%



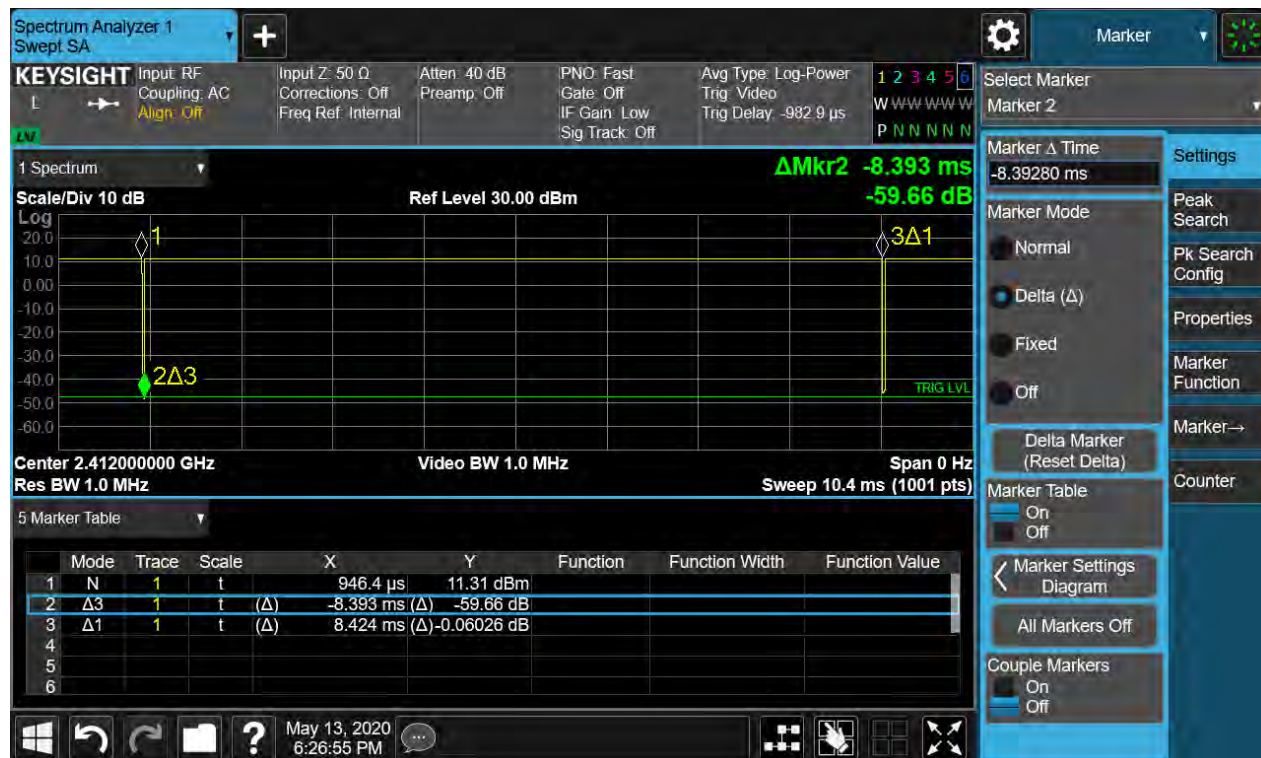
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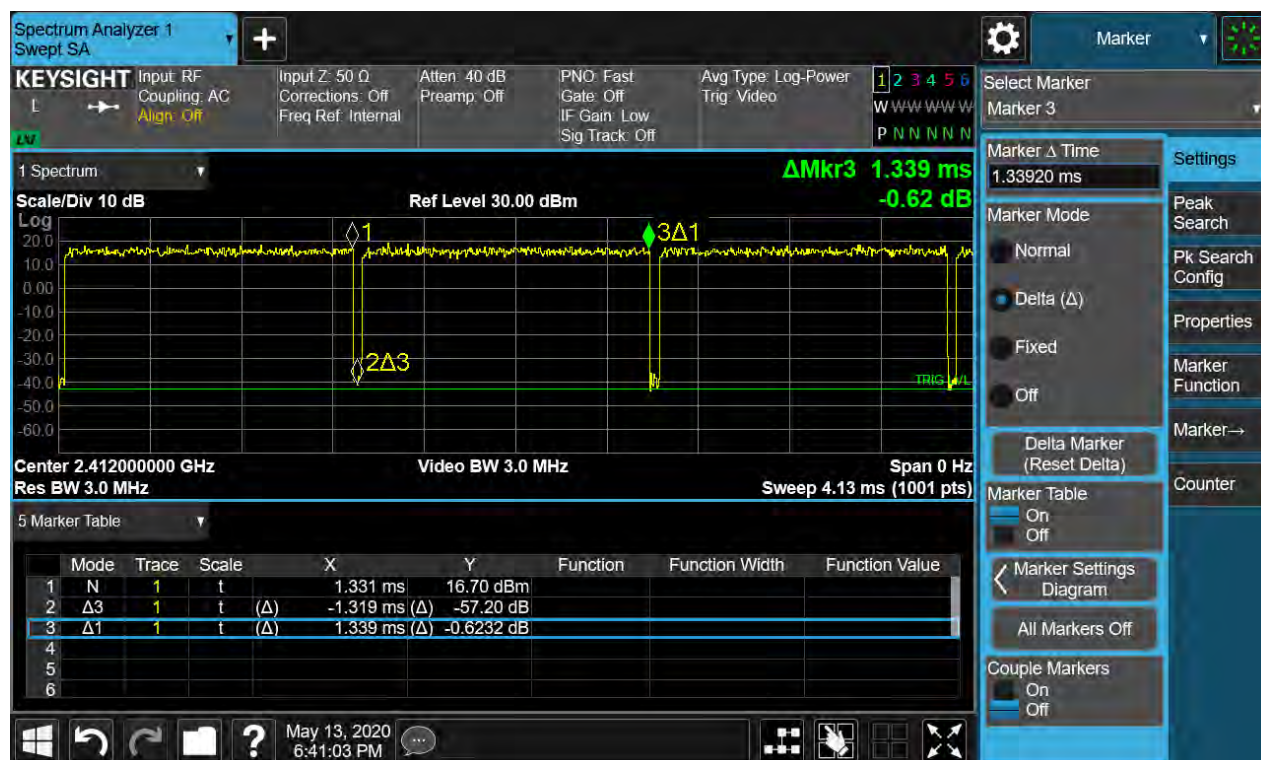
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802.11g >98%



802.11n>98%



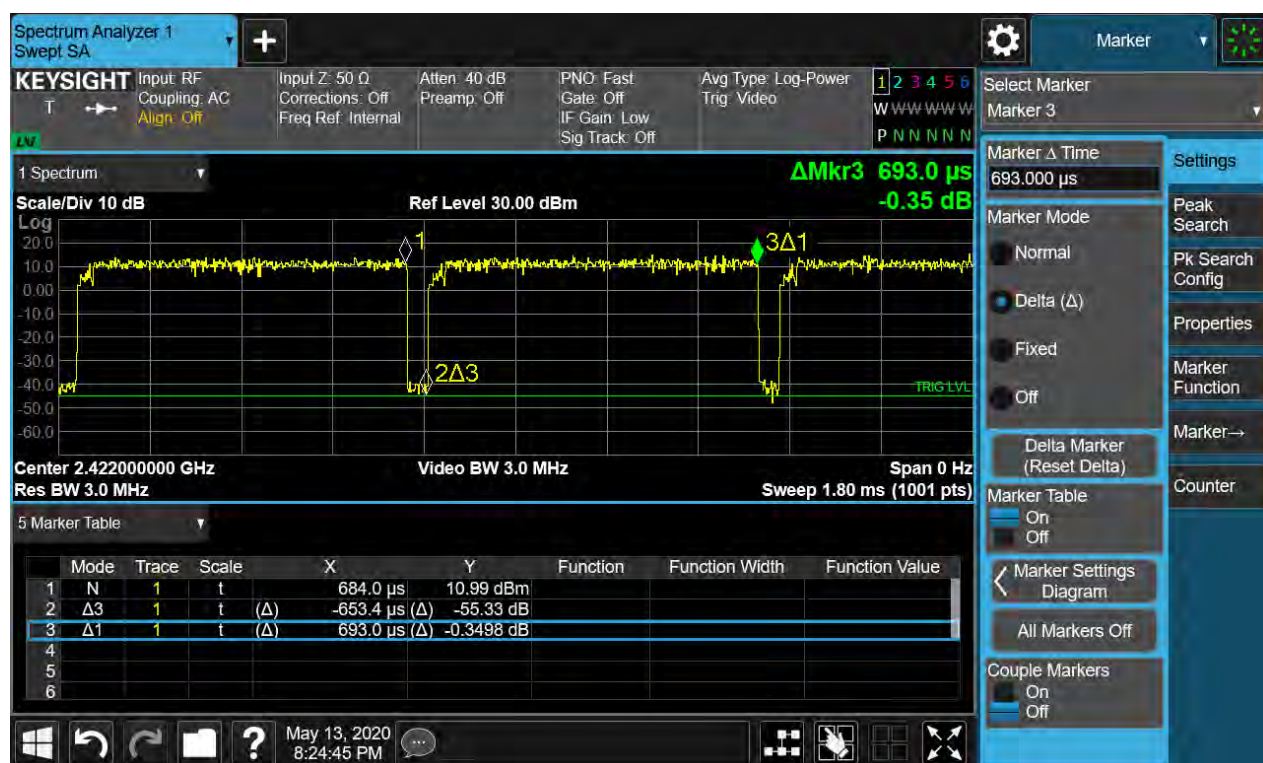
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$$802.11n40=10*\log(1/(653.4/693))=0.26$$



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4.1.3 6dB Bandwidth and 99% Bandwidth

RESULT:

PASS

Test standard : FCC Part 15.247(a)(2)
RSS-247 5.2(1)
RSS-Gen 6.6
Requirement : ANSI C63.10-2013, KDB 558074
Kind of test site : Shielded room

Test setup

Test Channel : Low/Middle/High
Operation Mode : A.1.a
Ambient temperature : 25°C
Relative humidity : 52%

Table 3: 6dB Bandwidth and 99% Bandwidth

Test Mode	Test Channel (MHz)	6dB Bandwidth (MHz)	99% Bandwidth (MHz)	6 dB Bandwidth Limit (MHz)
802.11b	2412	6.81	12.11	0.5
	2437	6.71	12.14	
	2462	7.16	12.01	
802.11g	2412	16.47	16.48	
	2437	16.52	16.48	
	2462	16.47	16.47	
802.11n(HT20)	2412	17.57	17.68	
	2437	17.72	17.68	
	2462	17.72	17.70	
802.11n(HT40)	2422	35.22	35.97	
	2437	35.22	35.99	
	2452	35.42	36.07	

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Figure 1: 6dB Bandwidth and 99% Bandwidth, 802.11b, 2412MHz

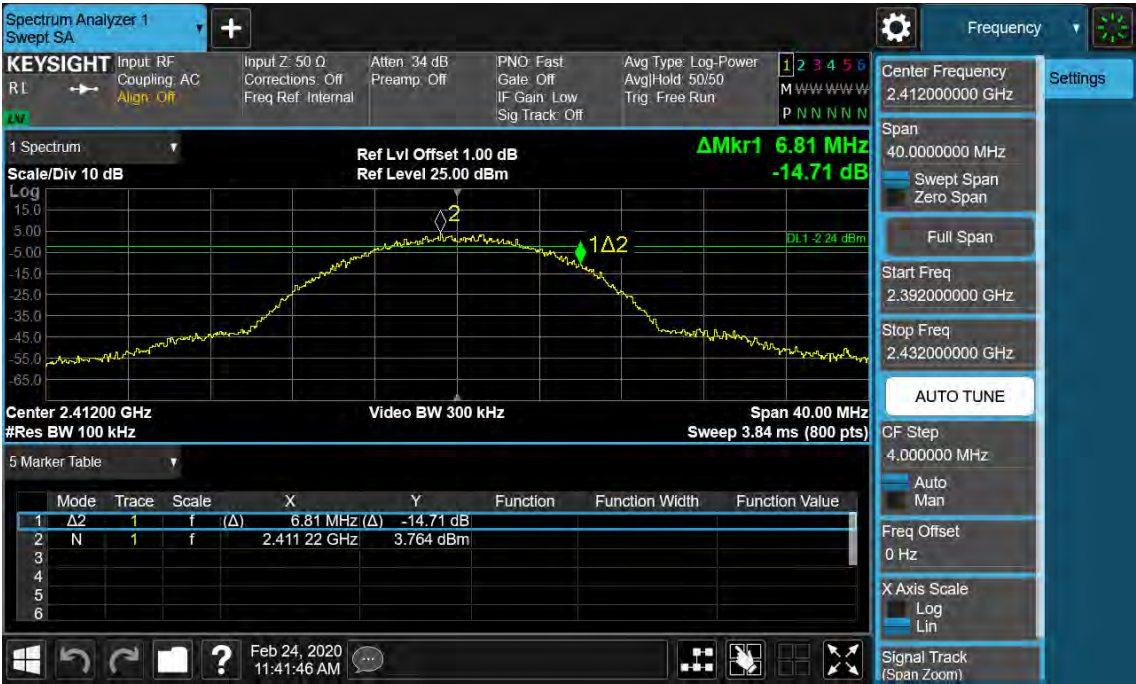


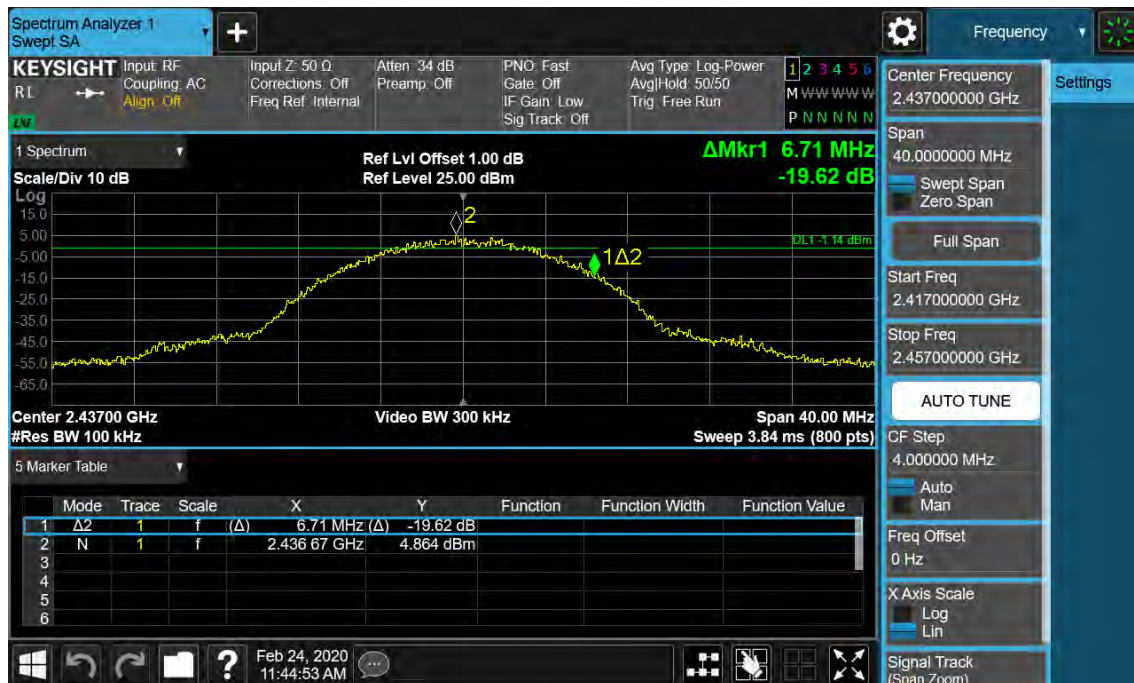
Figure 2: 6dB Bandwidth and 99% Bandwidth, 802.11b, 2437MHz

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Figure 3: 6dB Bandwidth and 99% Bandwidth, 802.11b, 2462MHz

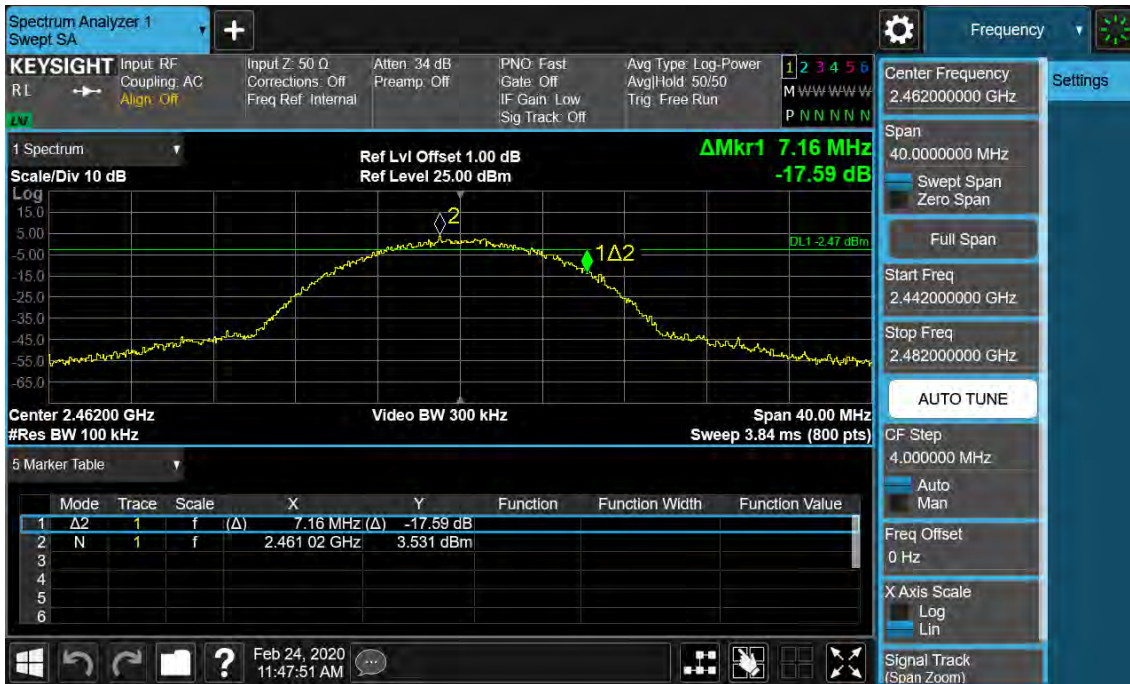


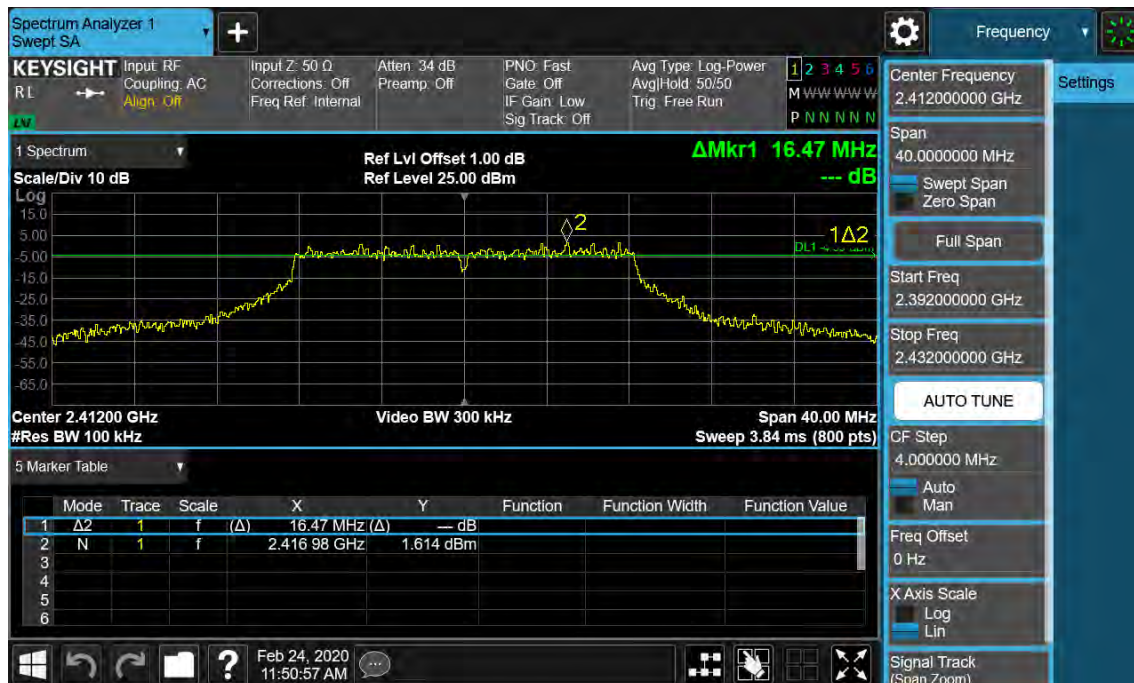
Figure 4: 6dB Bandwidth and 99% Bandwidth, 802.11g, 2412MHz

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Figure 5: 6dB Bandwidth and 99% Bandwidth, 802.11g, 2437MHz

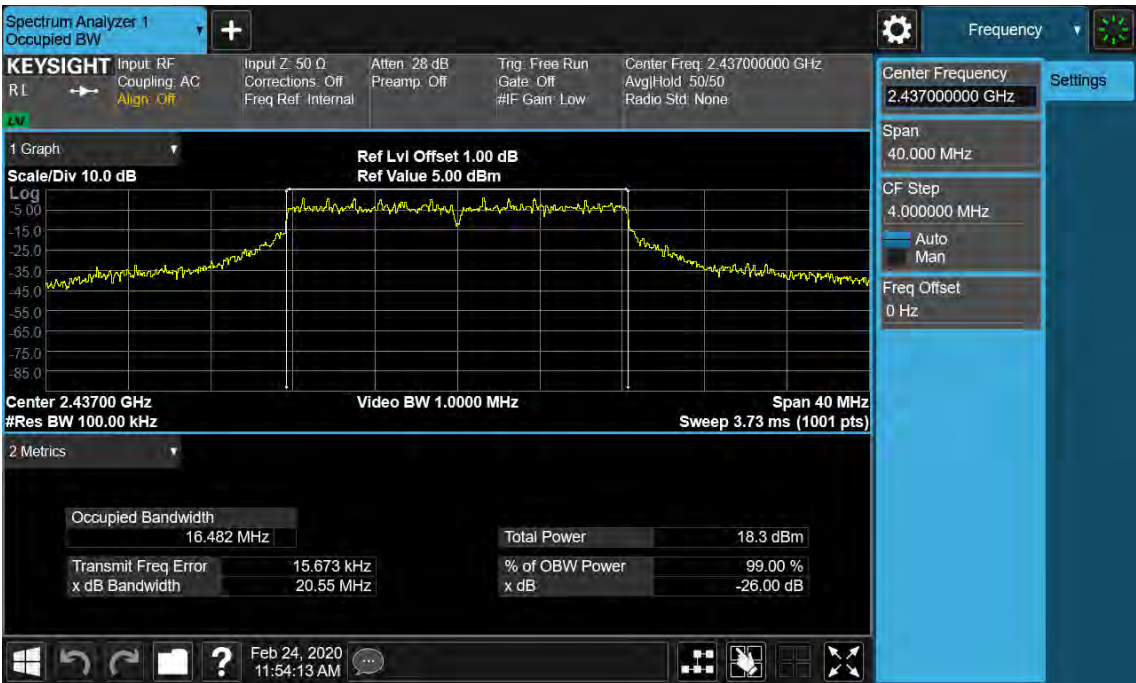


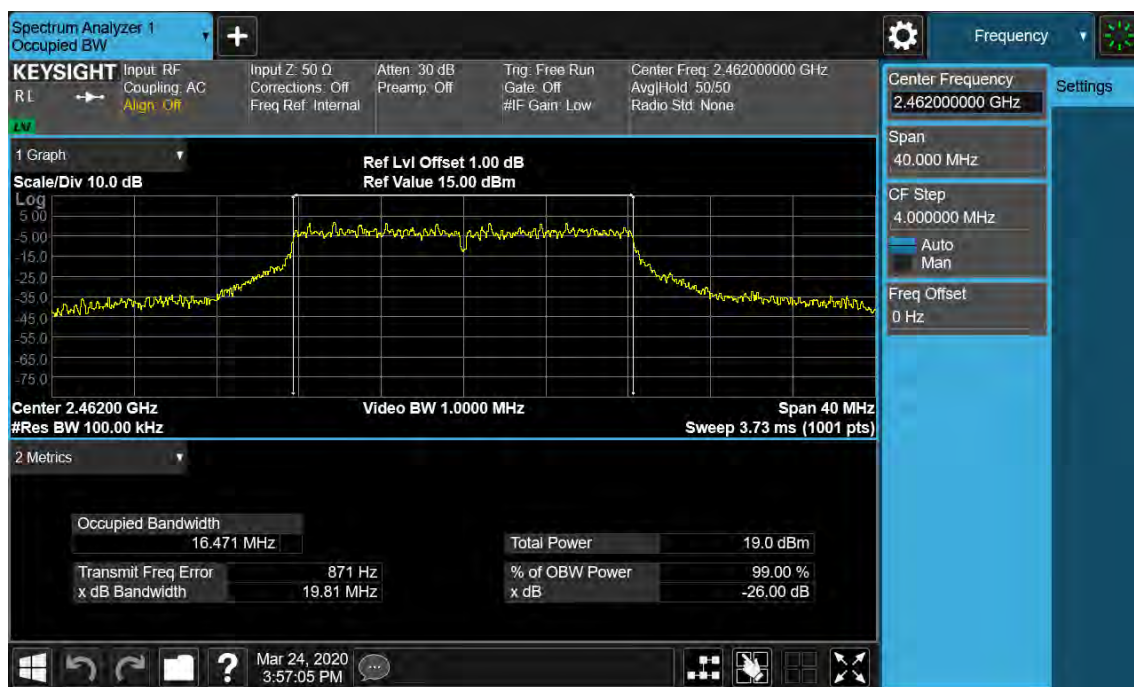
Figure 6: 6dB Bandwidth and 99% Bandwidth, 802.11g, 2462MHz

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Figure 7: 6dB Bandwidth and 99% Bandwidth, 802.11n(HT20), 2412MHz

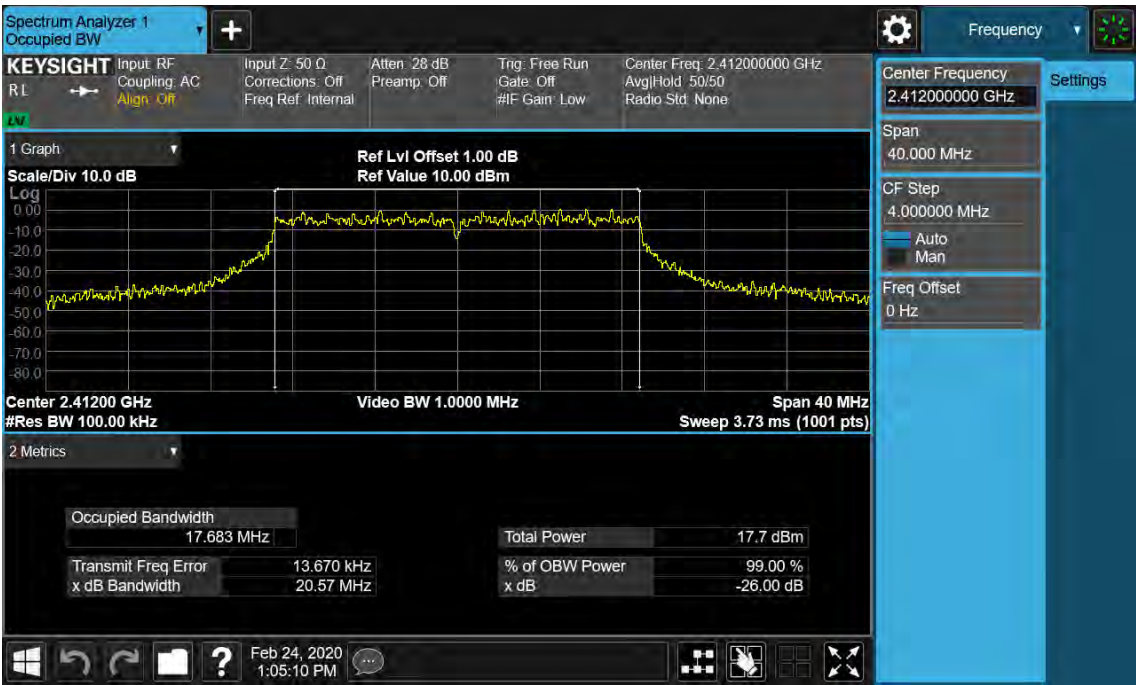


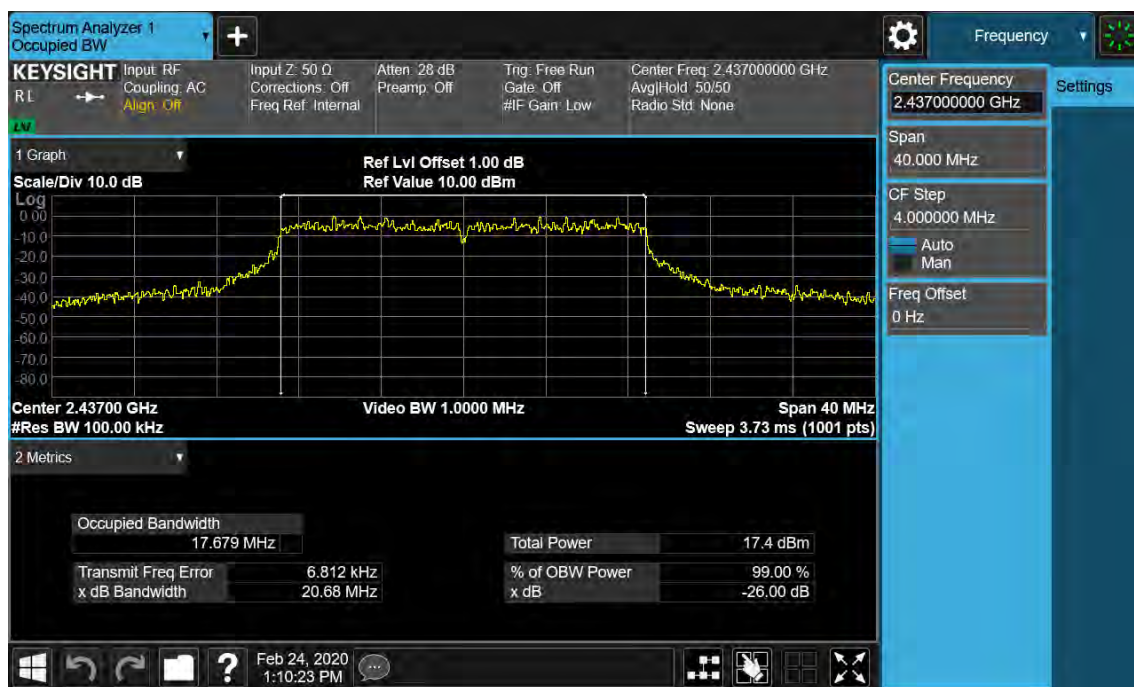
Figure 8: 6dB Bandwidth and 99% Bandwidth, 802.11n(HT20), 2437MHz

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Figure 9: 6dB Bandwidth and 99% Bandwidth, 802.11n(HT20), 2462MHz

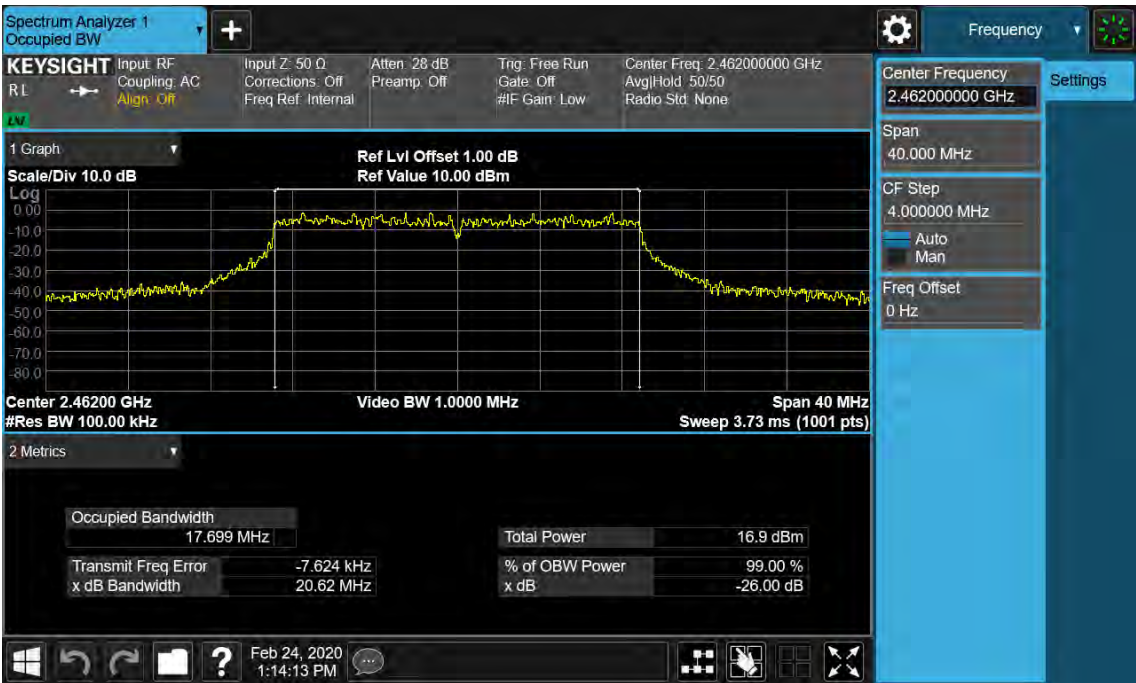


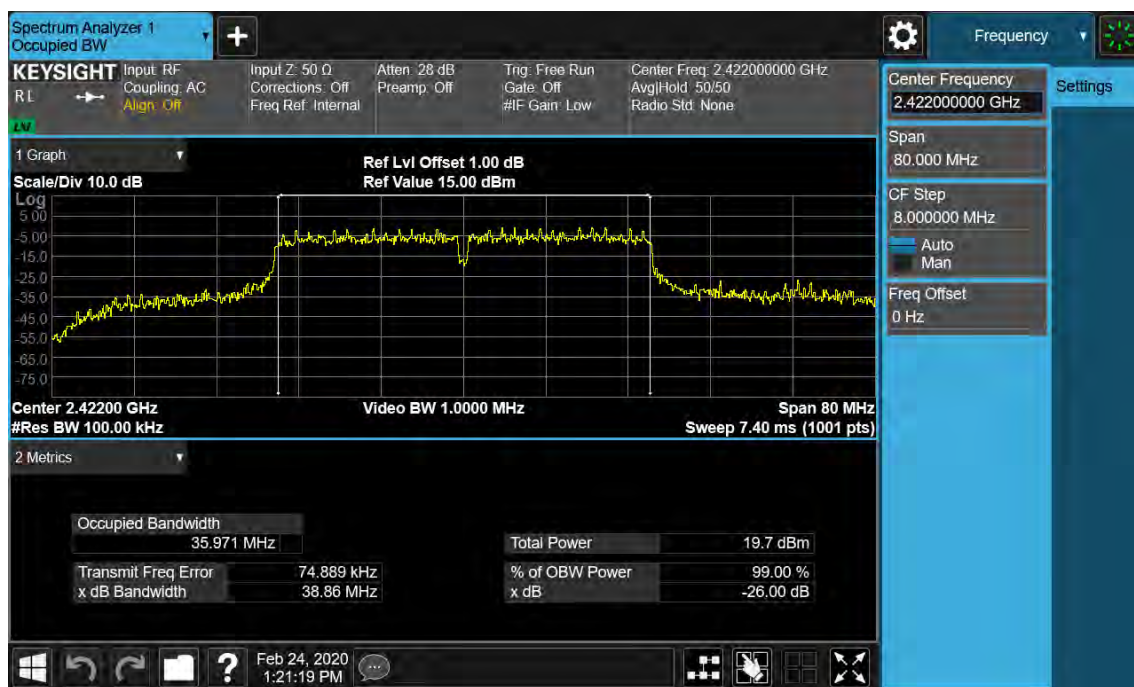
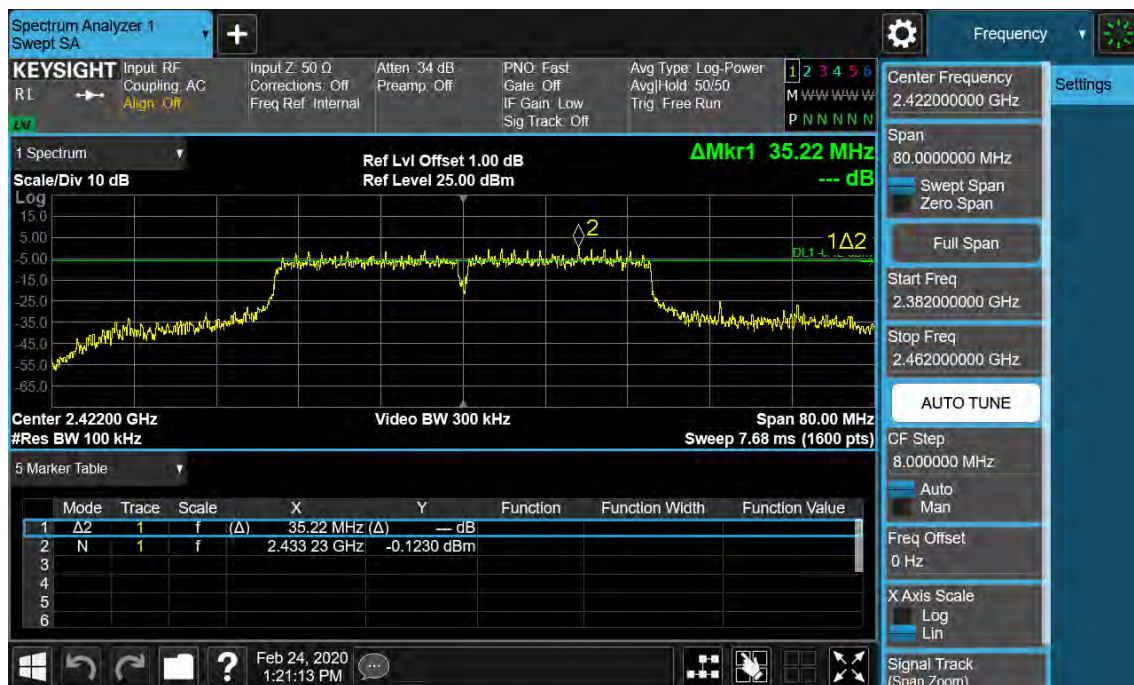
Figure 10: 6dB Bandwidth and 99% Bandwidth, 802.11n(HT40), 2422MHz

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Figure 11: 6dB Bandwidth and 99% Bandwidth, 802.11n(HT40), 2437MHz

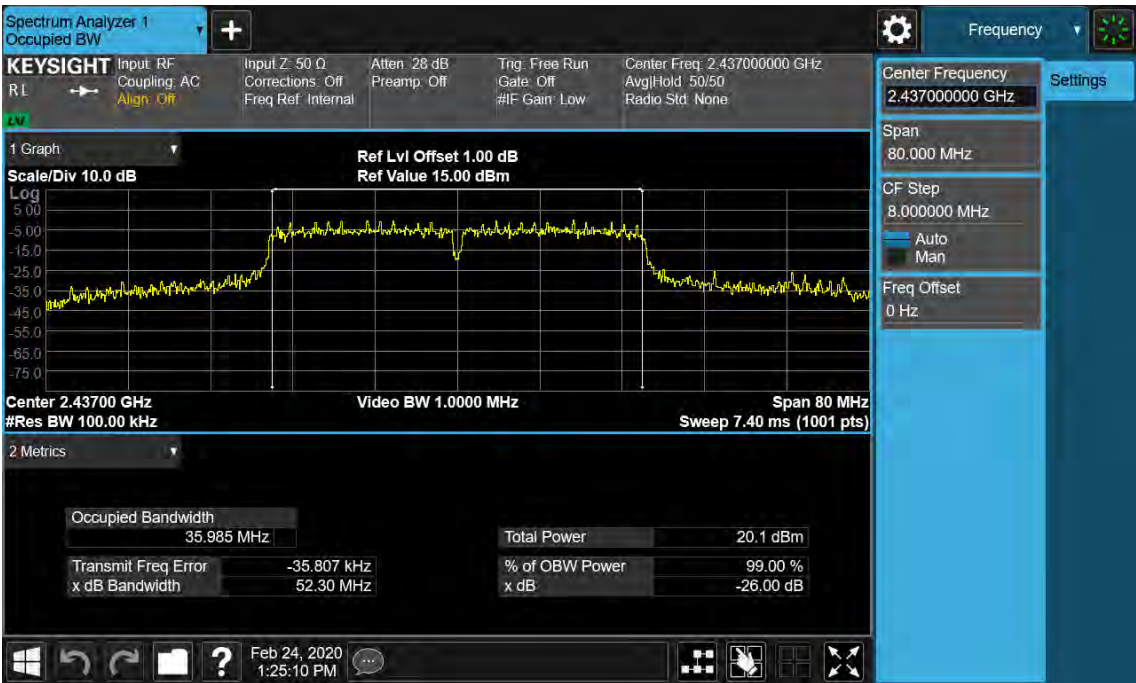
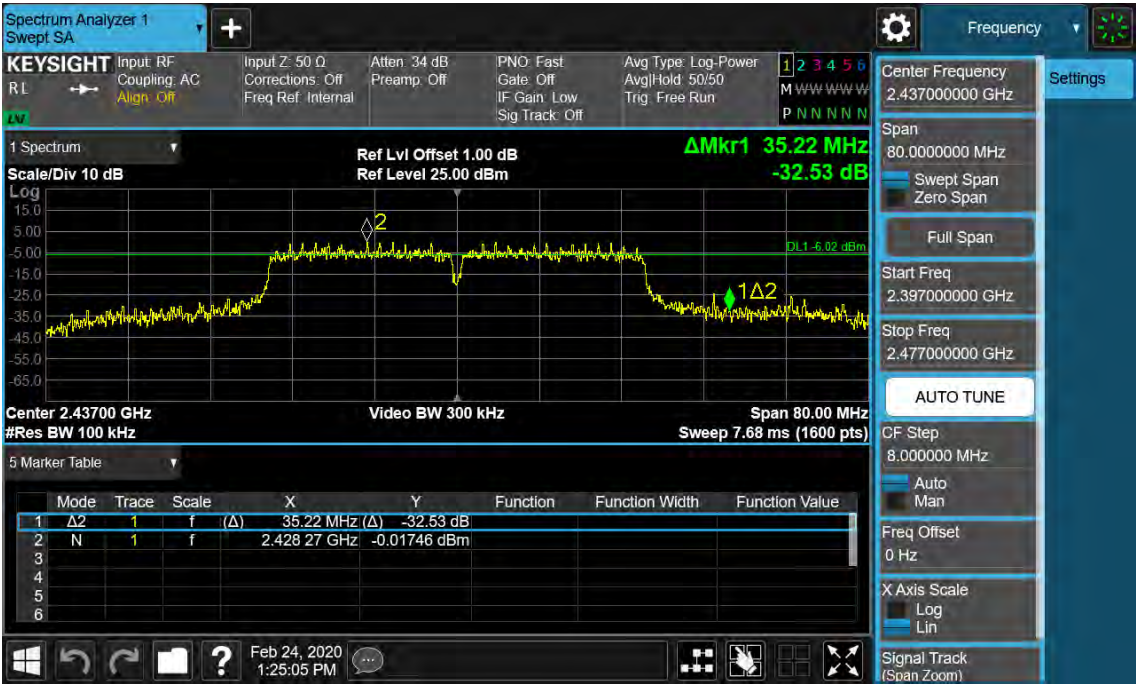


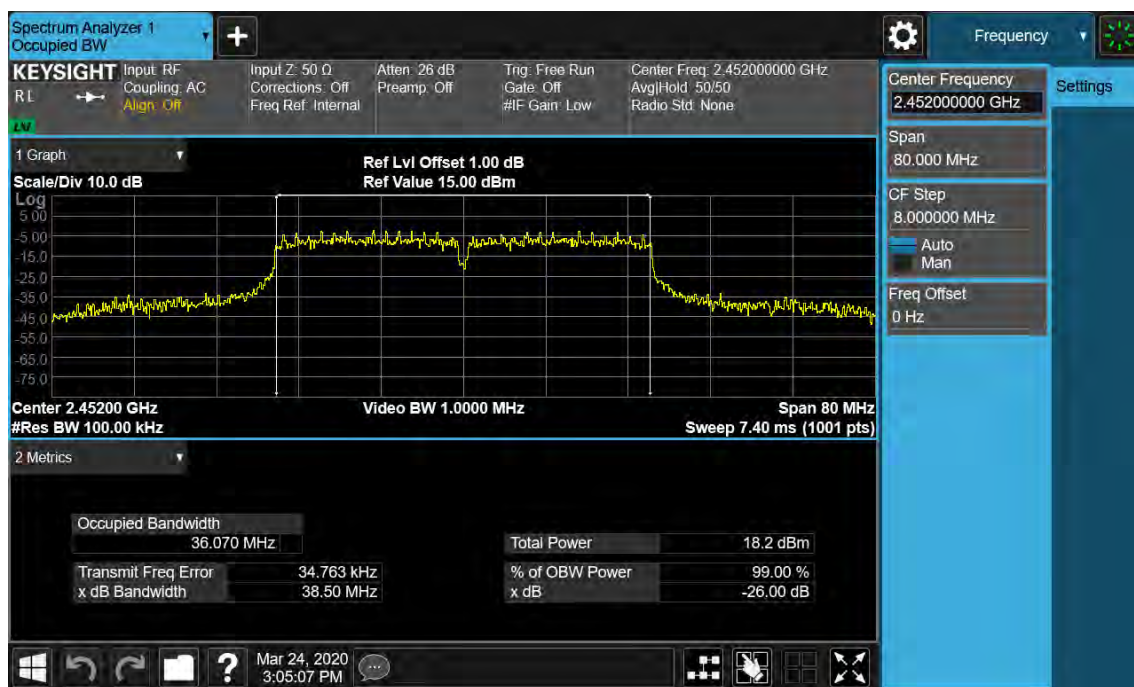
Figure 12: 6dB Bandwidth and 99% Bandwidth, 802.11n(HT40), 2452MHz

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4.1.4 Power Spectral Density

RESULT:

PASS

Test standard : FCC Part 15.247(e)
RSS-247 5.2(2)
Requirement : ANSI C63.10-2013, KDB 558074
Kind of test site : Shielded room

Test setup

Test Channel : Low/Middle/High
Operation Mode : A.1.a
Ambient temperature : 25°C
Relative humidity : 52%

Table 4: Power Spectral Density

Test Mode	Test Channel (MHz)	Measured Result (dBm/3kHz)	Limit (dBm/3kHz)
802.11b	2412	-13.26	8
	2437	-13.05	
	2462	-13.81	
802.11g	2412	-16.87	
	2437	-17.21	
	2462	-16.23	
802.11n(HT20)	2412	-16.19	
	2437	-17.46	
	2462	-17.59	
802.11n(HT40)	2422	-18.74	
	2437	-18.03	
	2452	-20.70	

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Figure 13: Power Spectral Density, 802.11b, 2412MHz

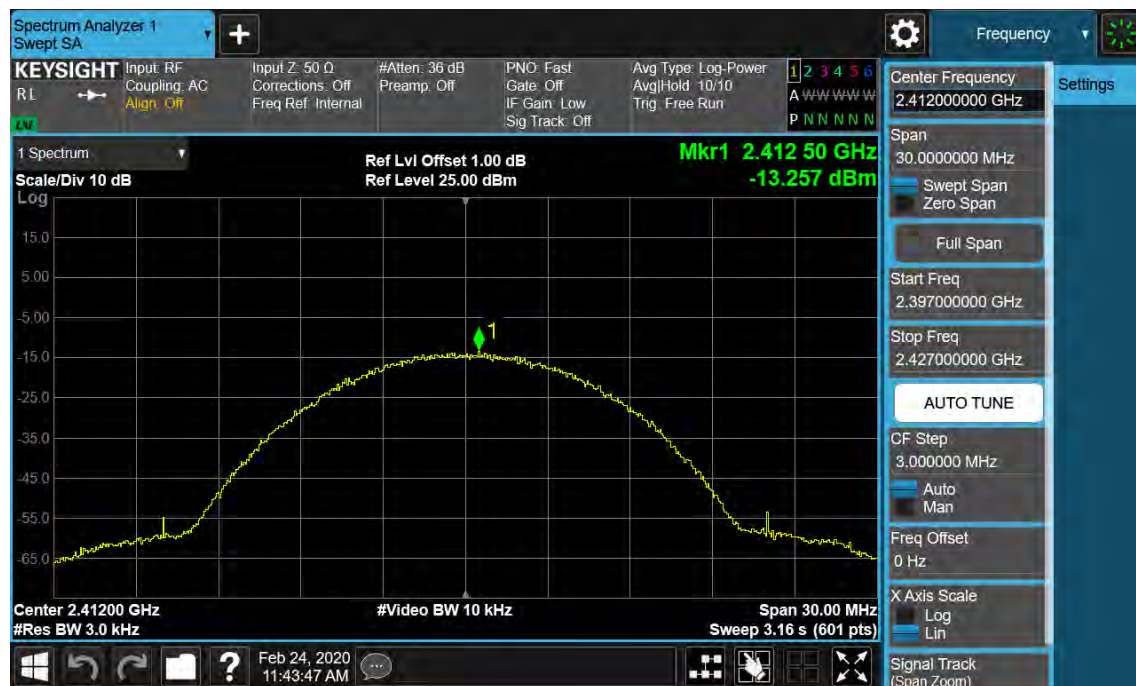
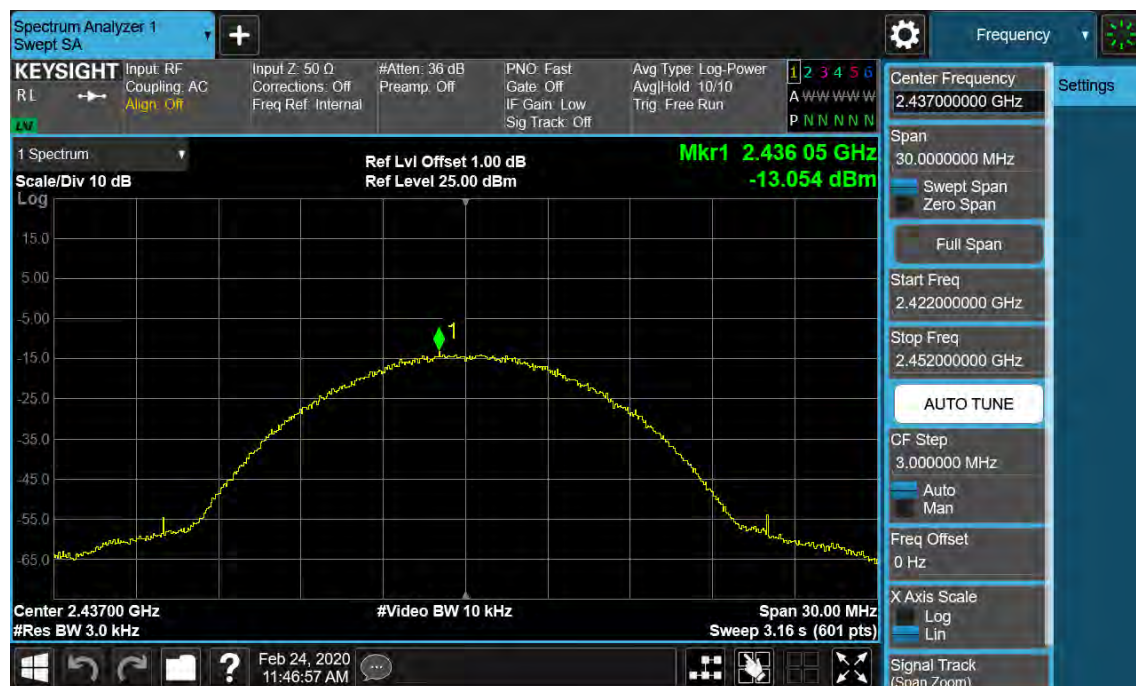


Figure 14: Power Spectral Density, 802.11b, 2437MHz



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Figure 15: Power Spectral Density, 802.11b, 2462MHz

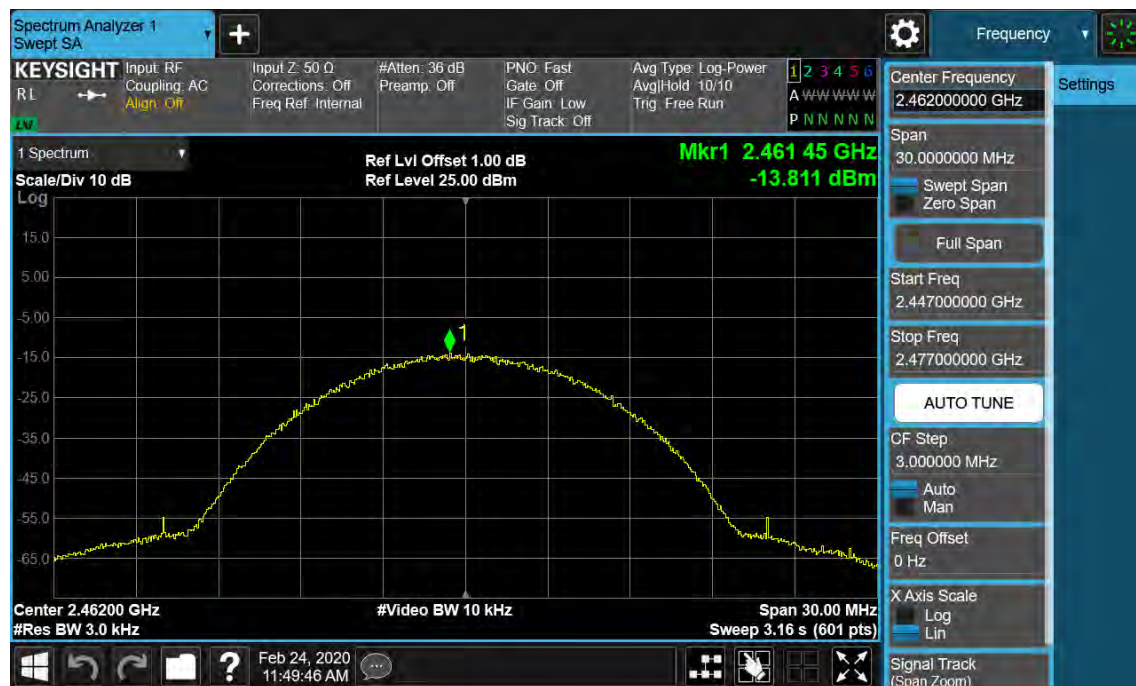
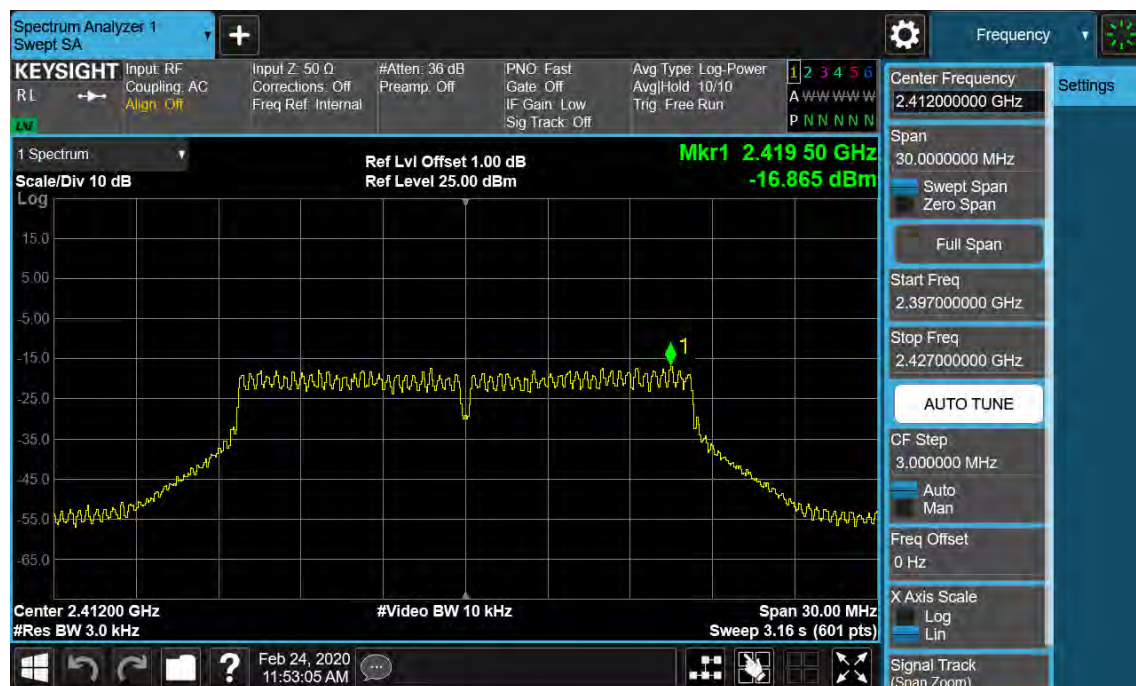


Figure 16: Power Spectral Density, 802.11g, 2412MHz



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Figure 17: Power Spectral Density, 802.11g, 2437MHz

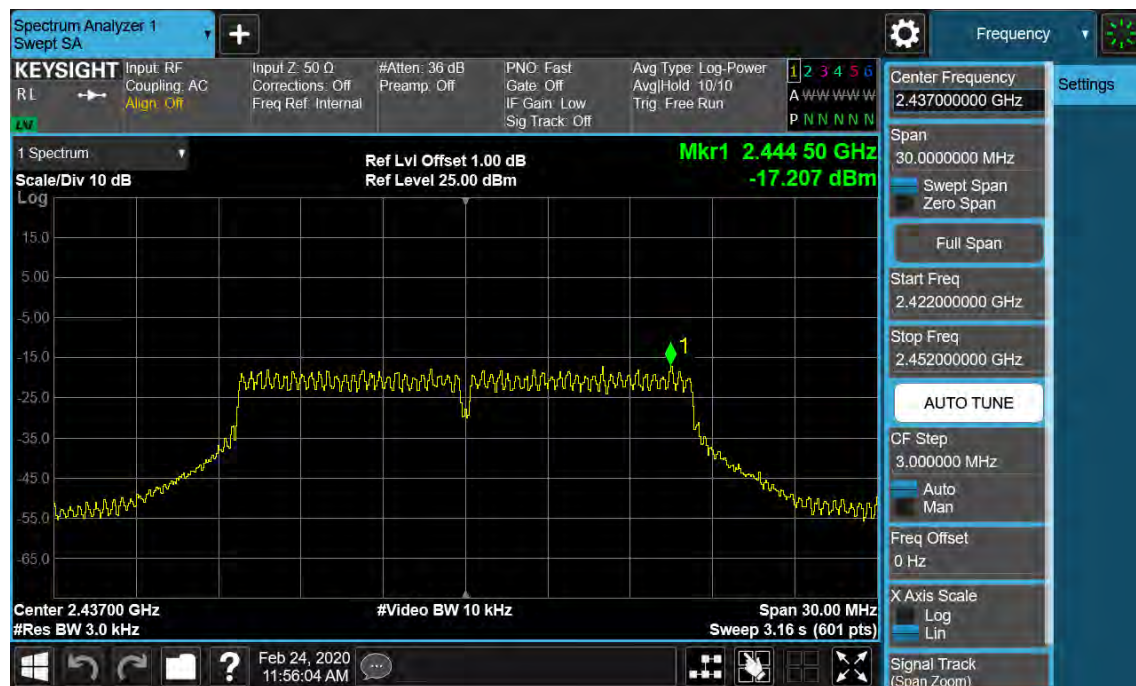
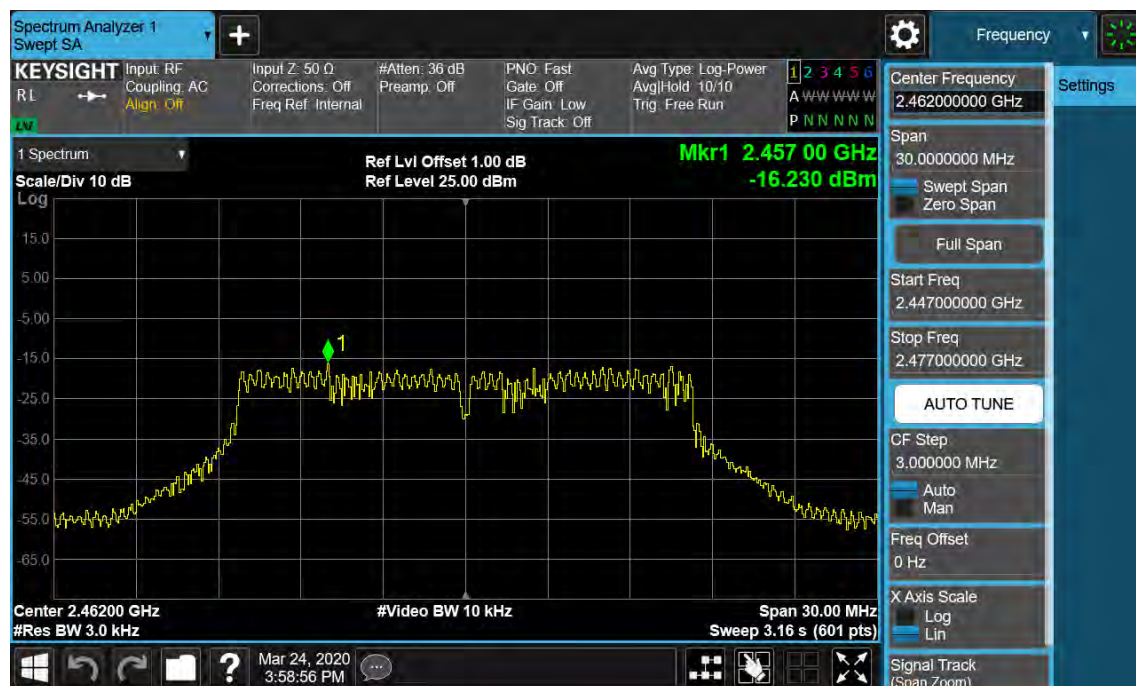


Figure 18: Power Spectral Density, 802.11g, 2462MHz



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Figure 19: Power Spectral Density, 802.11n(HT20), 2412MHz

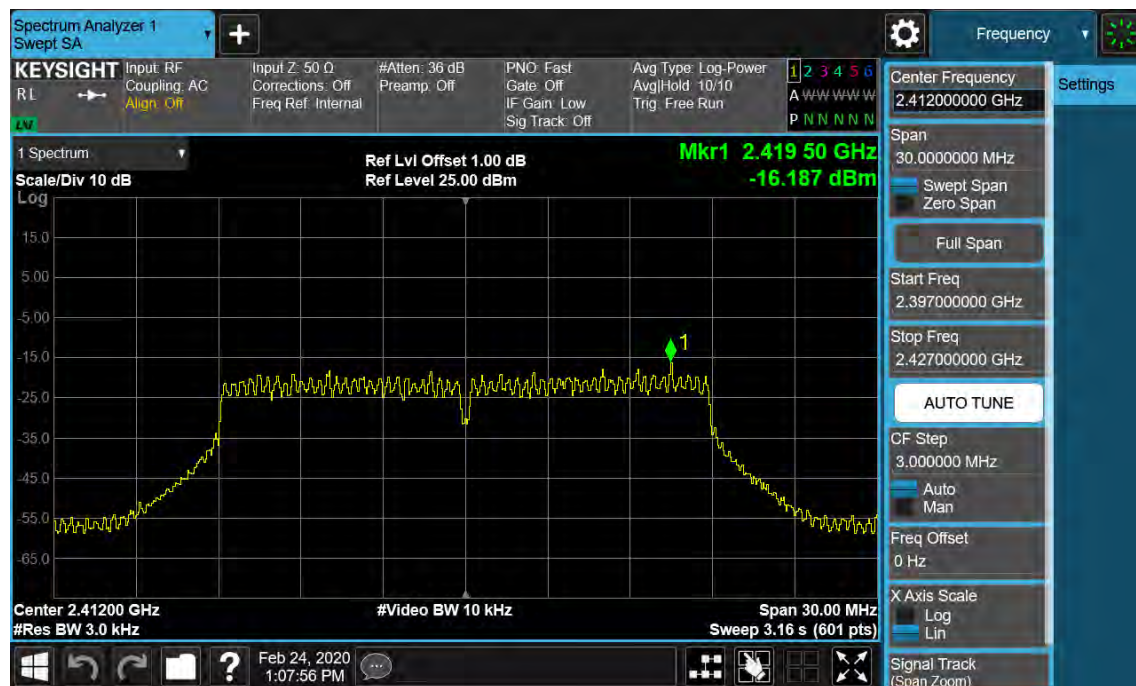
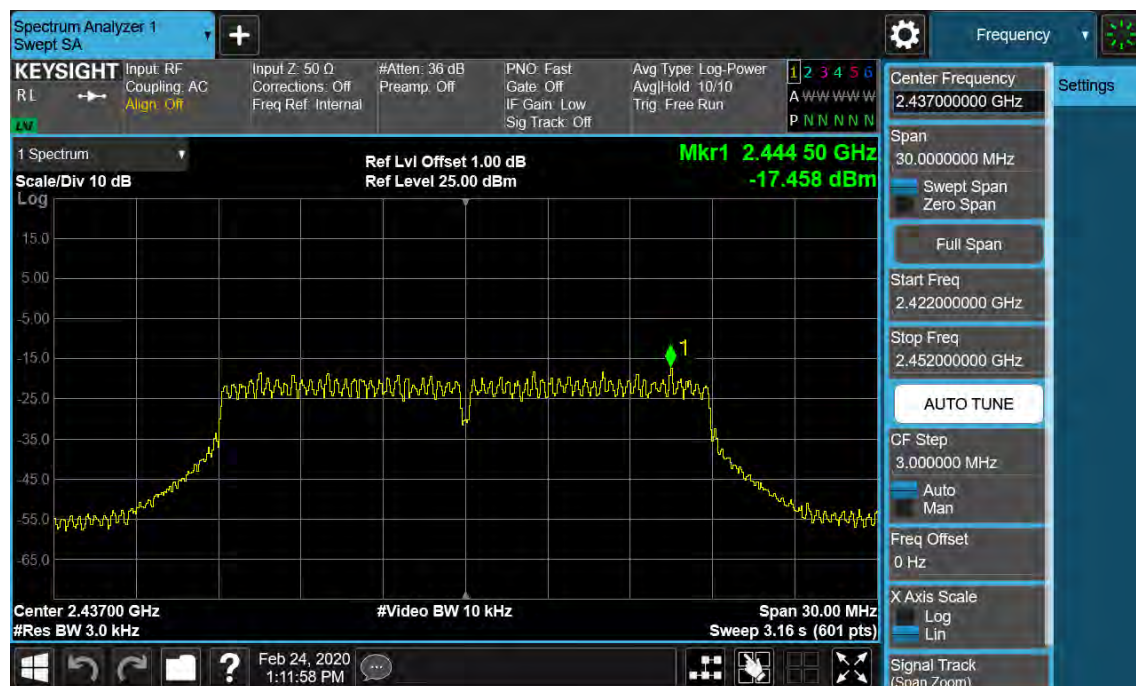


Figure 20: Power Spectral Density, 802.11n(HT20), 2437MHz



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Figure 21: Power Spectral Density, 802.11n(HT20), 2462MHz

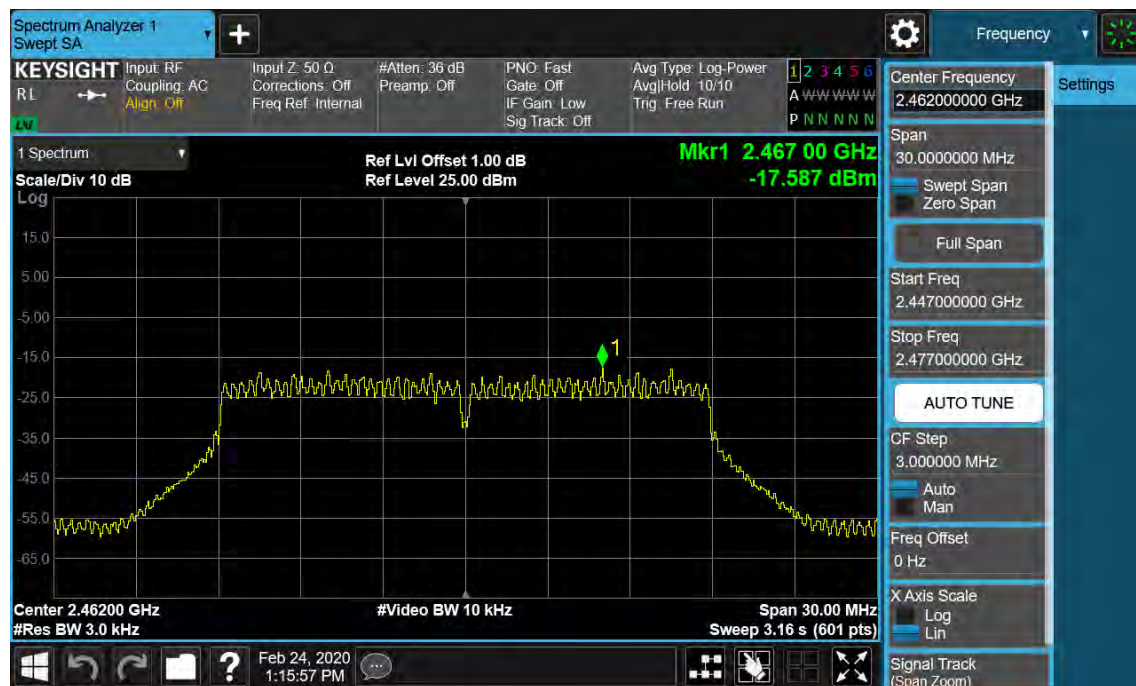
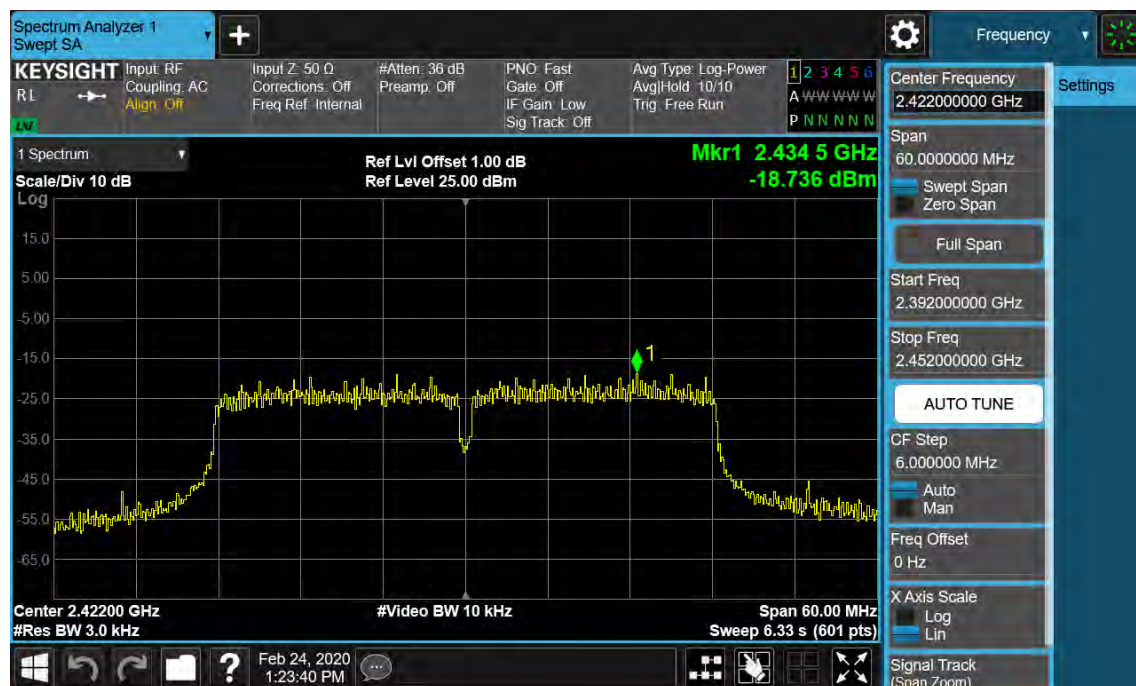


Figure 22: Power Spectral Density, 802.11n(HT40), 2422MHz



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Figure 23: Power Spectral Density, 802.11n(HT40), 2437MHz

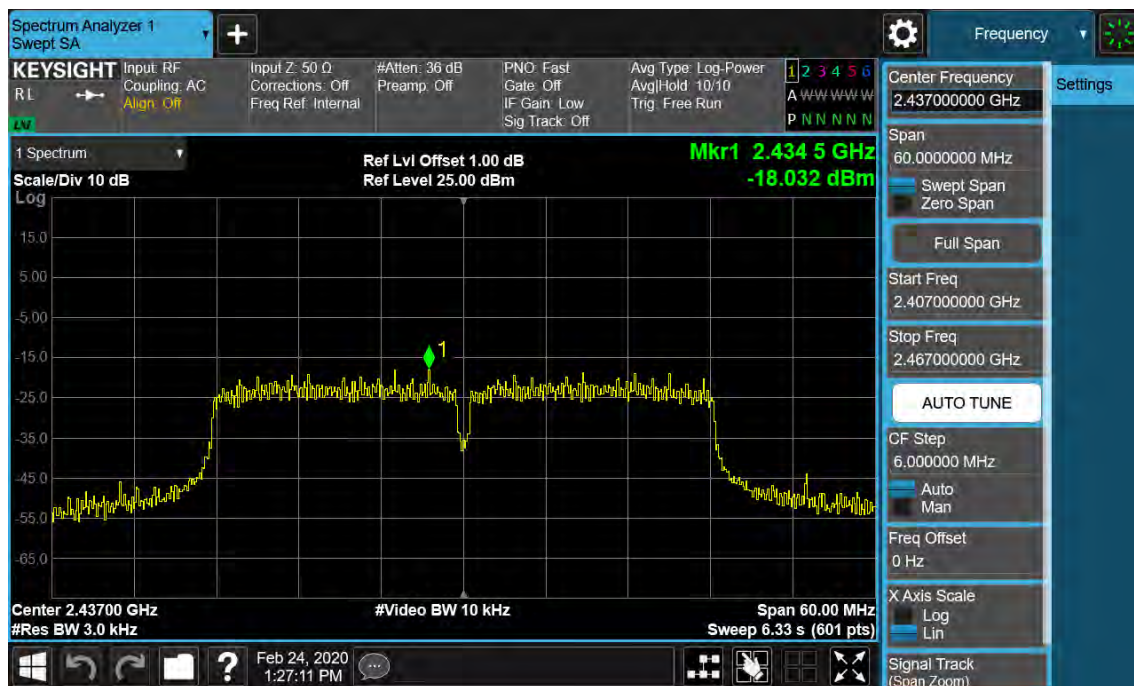
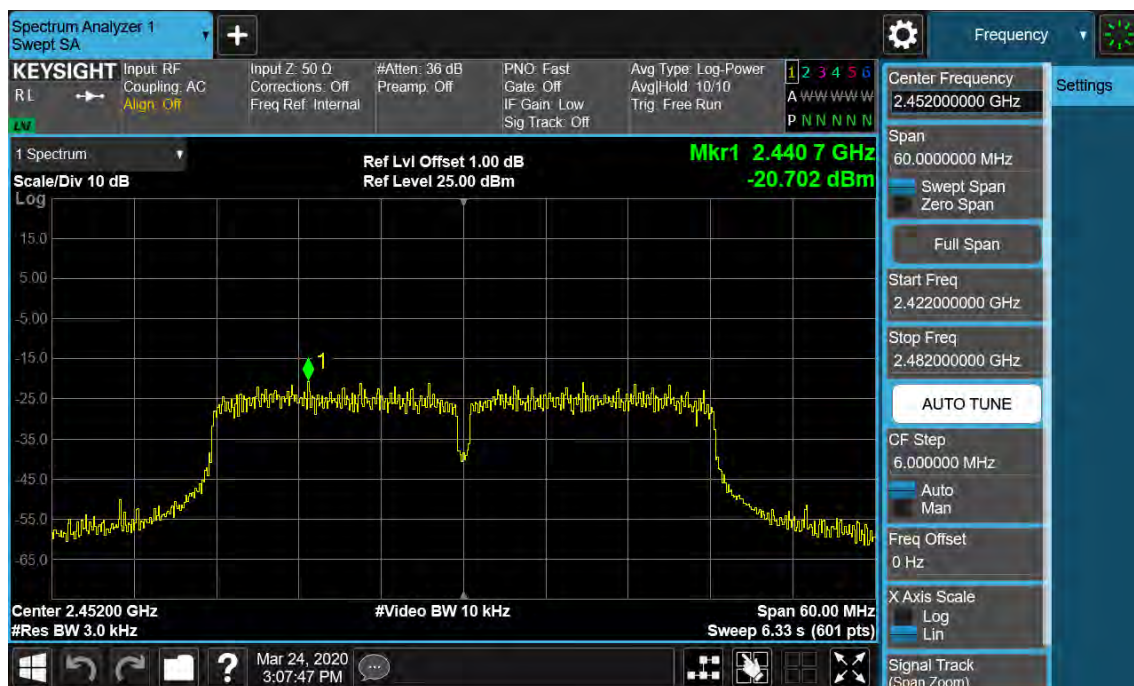


Figure 24: Power Spectral Density, 802.11n(HT40), 2452MHz



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4.1.5 Conducted Spurious Emission & Authorized-band band-edge

RESULT:

PASS

Test standard	: FCC Part 15.247(d), 15.209 RSS-247 5.5 RSS-Gen 8.9
Requirement	: ANSI C63.10-2013, KDB 558074
Kind of test site	: Shielded room

Test setup

Test Channel	: Low/Middle/High for spurious, Low/High for Band Edge
Operation Mode	: A.1.a
Ambient temperature	: 25C
Relative humidity	: 52%

For details refer to following test plot.

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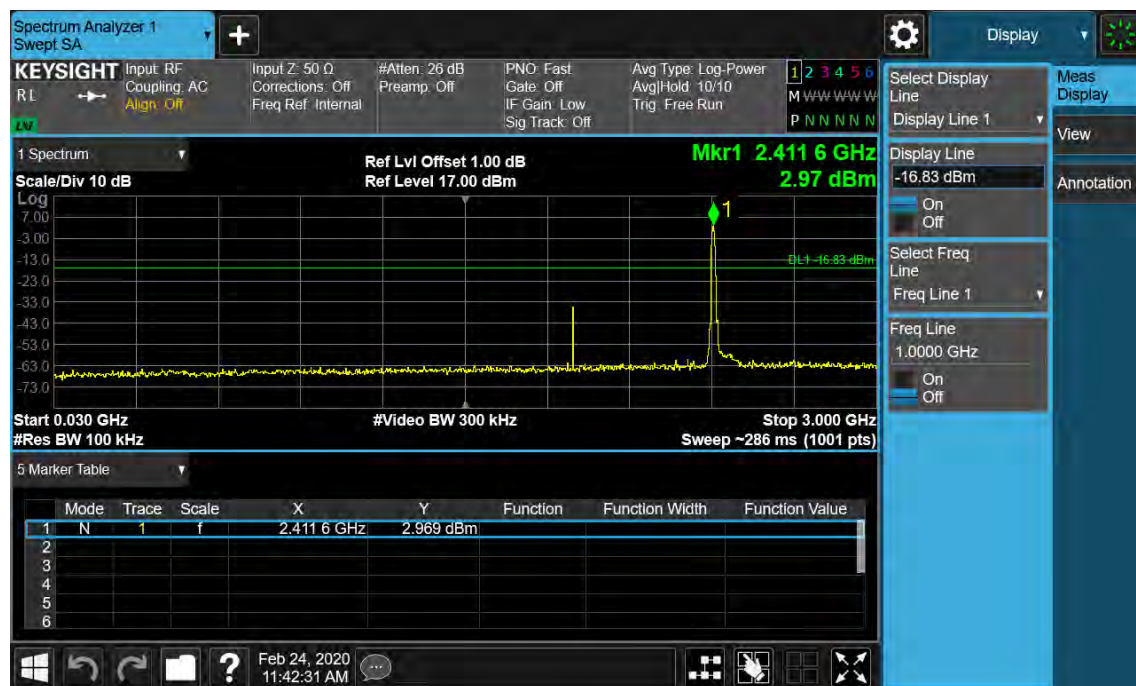
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Figure 25: Conducted Spurious Emission & Authorized-band band-edge, 802.11b, 2412MHz Carrier Level



Band Edge



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Conducted spurious emissions 30MHz-25GHz



Figure 27: Conducted Spurious Emission & Authorized-band band-edge, 802.11b, 2462MHz Carrier Level



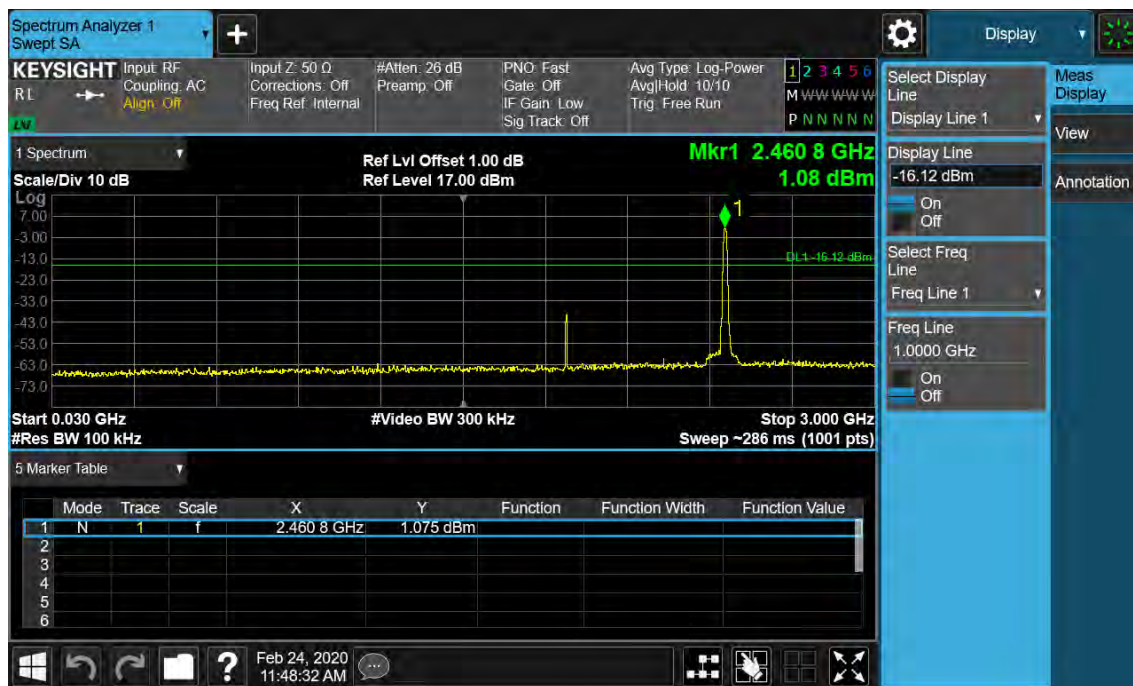
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Band Edge



Conducted spurious emissions 30MHz-25GHz



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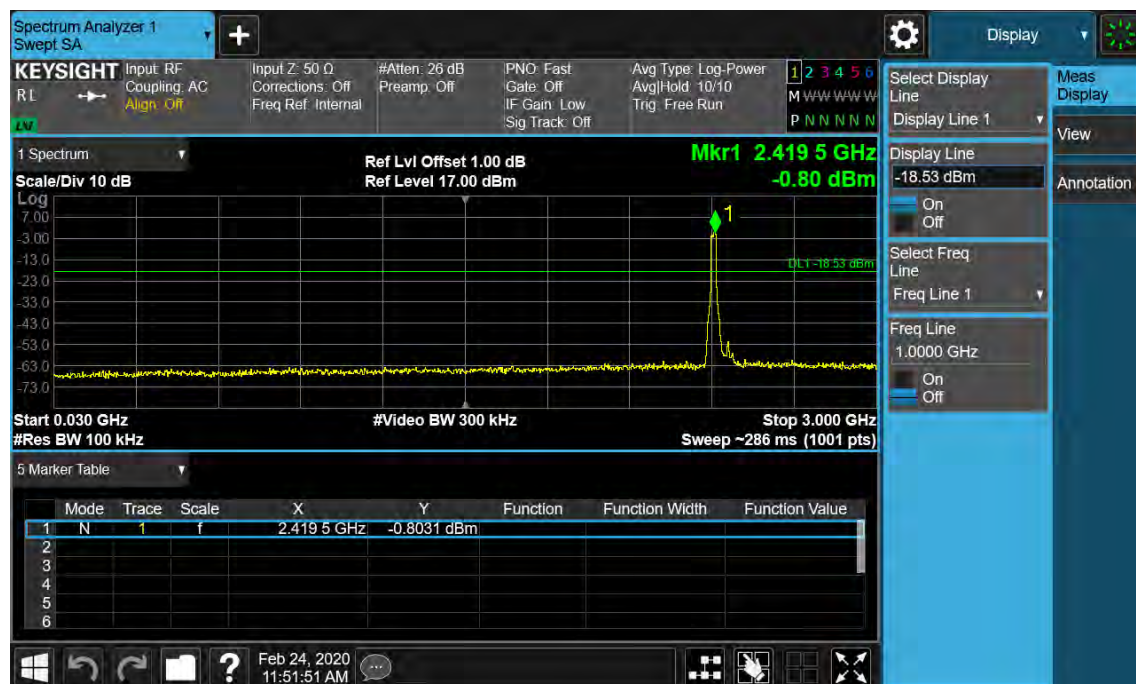
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Figure 28: Conducted Spurious Emission & Authorized-band band-edge, 802.11g, 2412MHz Carrier Level



Band Edge



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Conducted spurious emissions 30MHz-25GHz



Figure 29: Conducted Spurious Emission & Authorized-band band-edge, 802.11g, 2437MHz Carrier Level



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Conducted spurious emissions 30MHz-25GHz



Figure 30: Conducted Spurious Emission & Authorized-band band-edge, 802.11g, 2462MHz Carrier Level



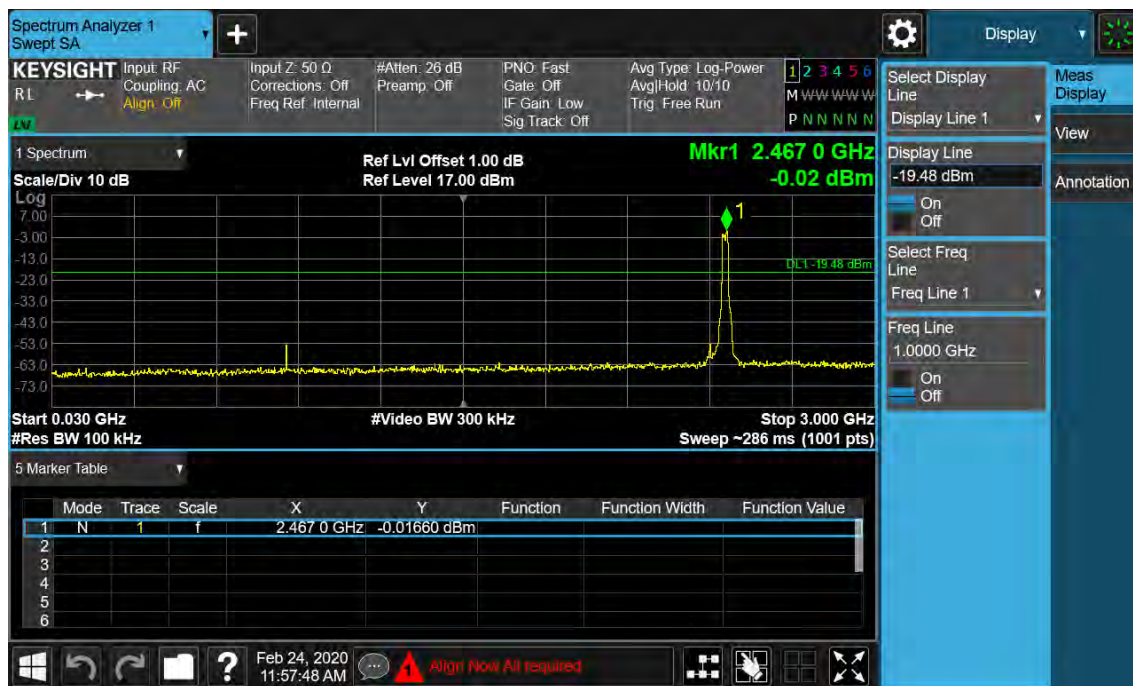
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Band Edge



Conducted spurious emissions 30MHz-25GHz



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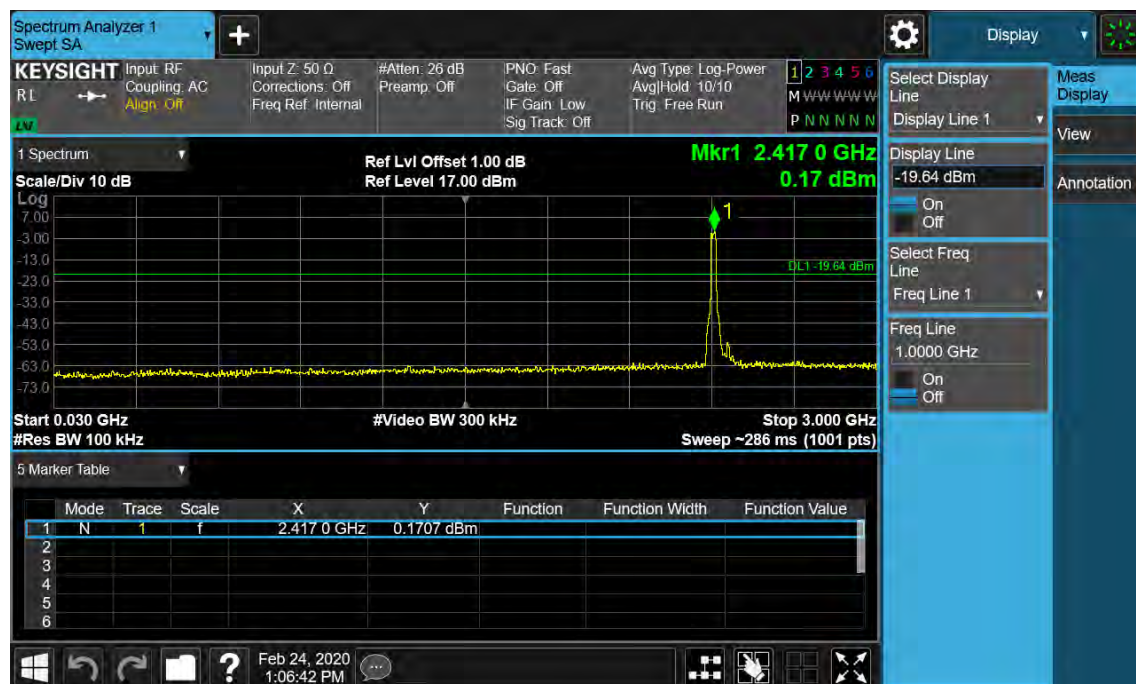
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Figure 31: Conducted Spurious Emission & Authorized-band band-edge, 802.11n(HT20), 2412MHz Carrier Level



Band Edge



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Conducted spurious emissions 30MHz-25GHz



Figure 32: Conducted Spurious Emission & Authorized-band band-edge, 802.11n(HT20), 2437MHz Carrier Level



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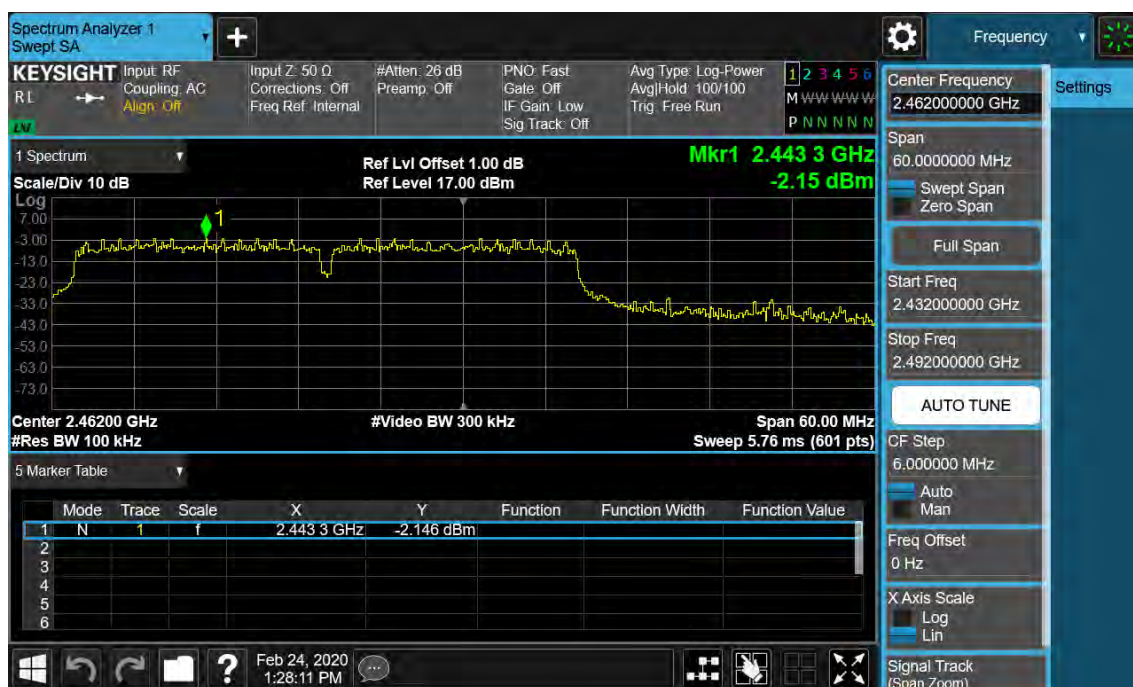
Date: 2020-5-15

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Conducted spurious emissions 30MHz-25GHz



Figure 33: Conducted Spurious Emission & Authorized-band band-edge, 802.11n(HT20), 2462MHz Carrier Level



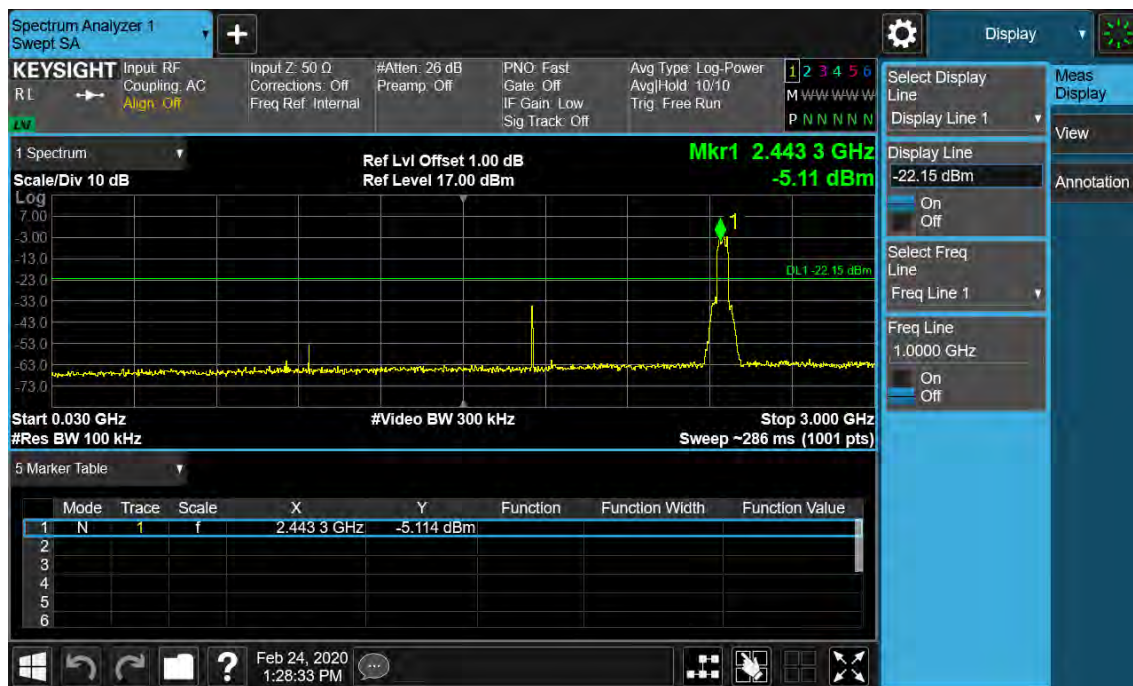
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Band Edge



Conducted spurious emissions 30MHz-25GHz



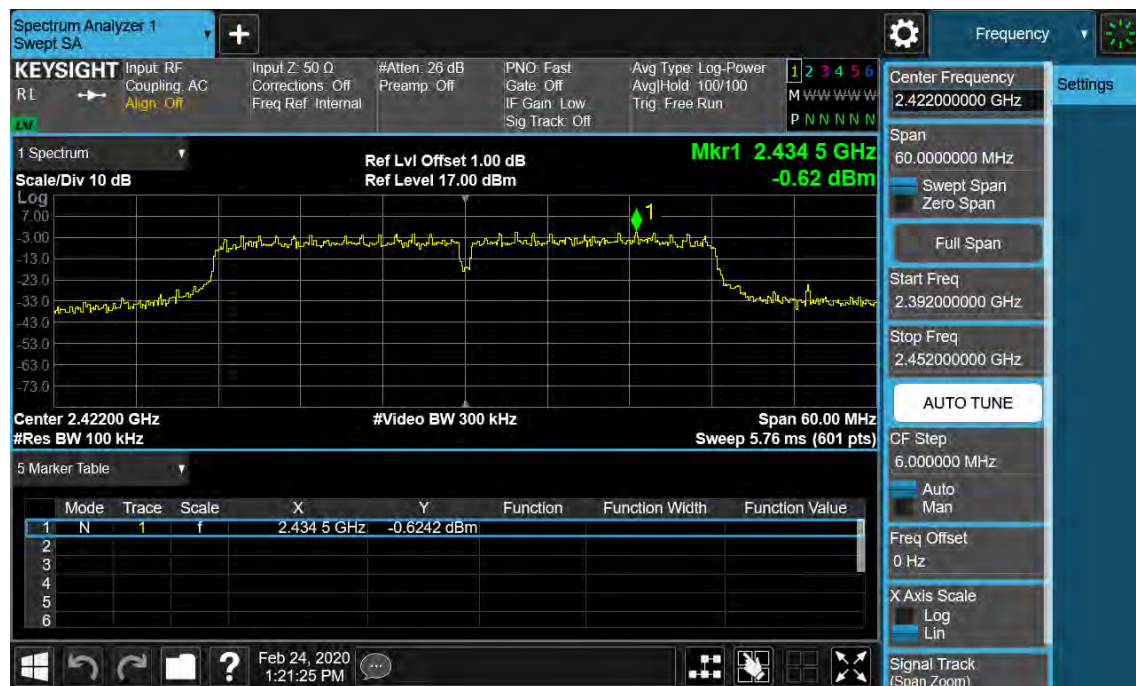
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Report No.: SHE19020010-03DE

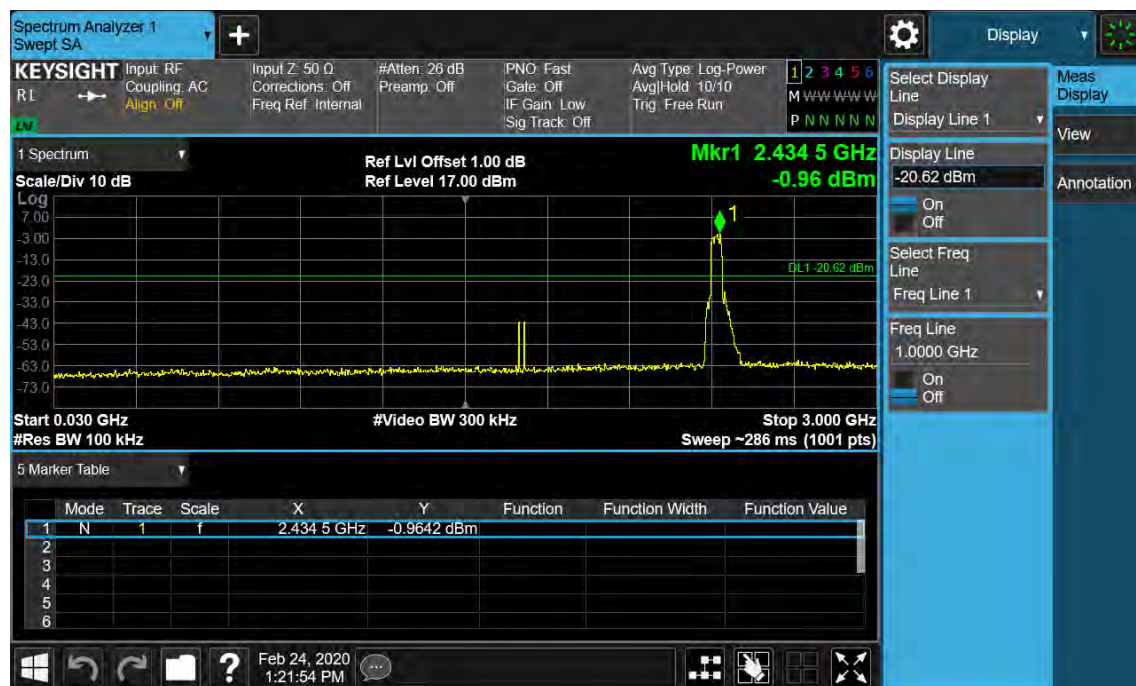
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Figure 34: Conducted Spurious Emission & Authorized-band band-edge, 802.11n(HT40), 2422MHz Carrier Level



Band Edge



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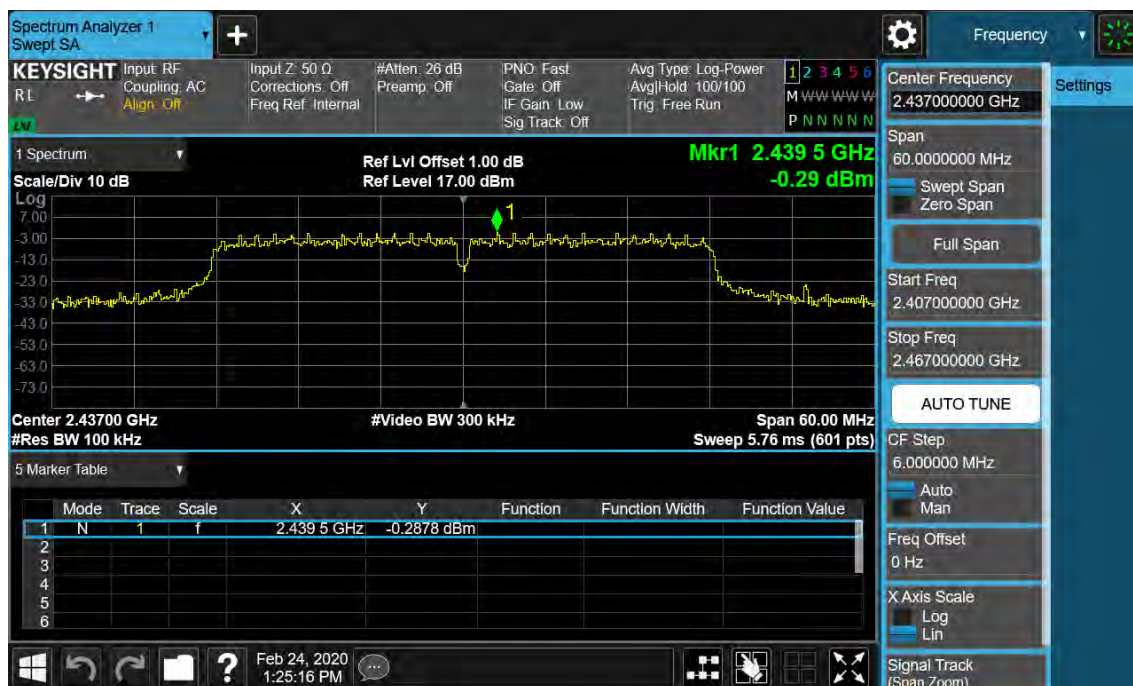
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Conducted spurious emissions 30MHz-25GHz



Figure 35: Conducted Spurious Emission & Authorized-band band-edge, 802.11n(HT40), 2437MHz Carrier Level



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Report No.: SHE19020010-03DE

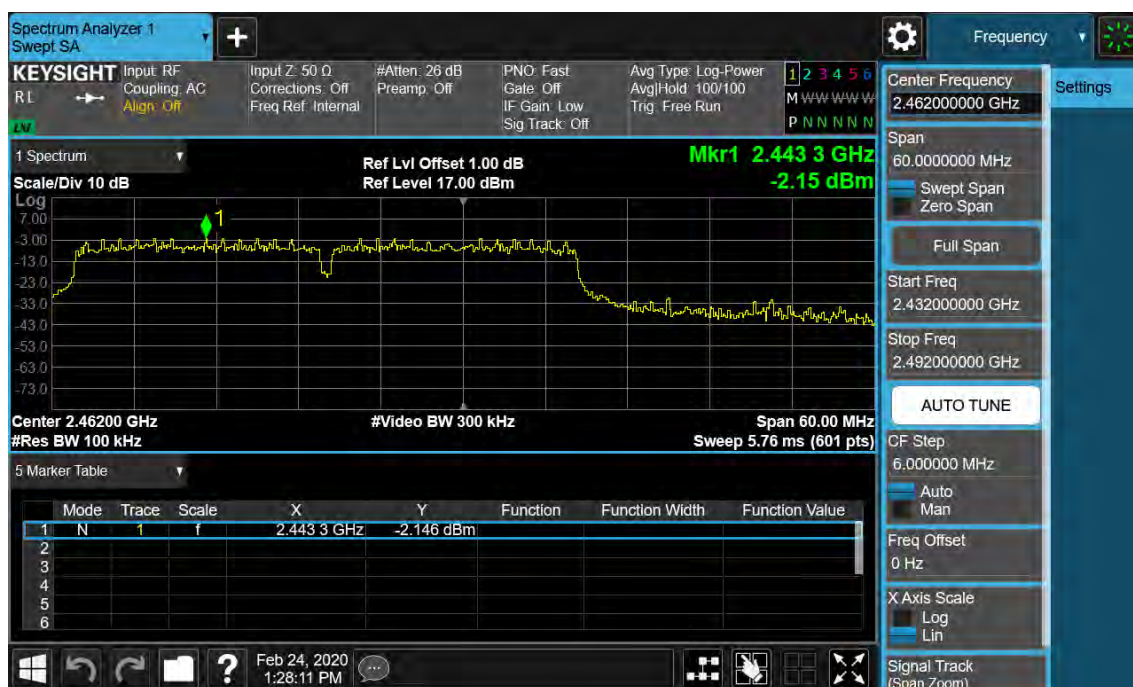
Date: 2020-5-15

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Conducted spurious emissions 30MHz-25GHz



Figure 36: Conducted Spurious Emission & Authorized-band band-edge, 802.11n(HT40), 2452MHz Carrier Level



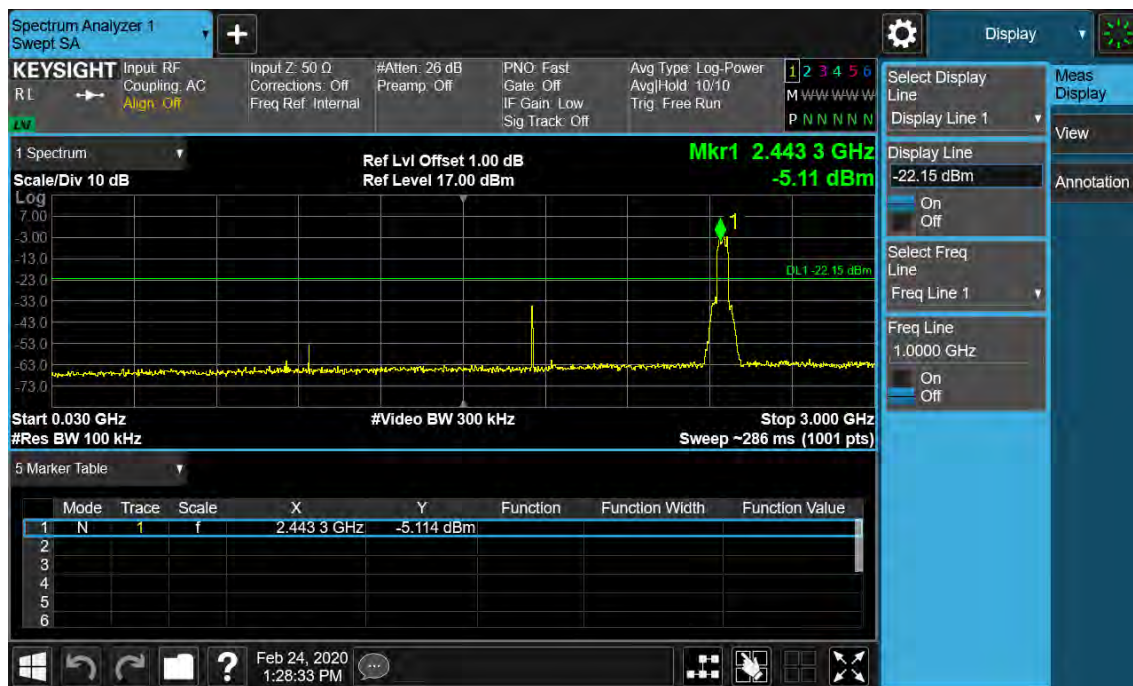
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Band Edge



Conducted spurious emissions 30MHz-25GHz



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4.1.6 Spurious Emission

RESULT:

PASS

Test standard	: FCC Part 15.247(d), 15.205, 15.209 RSS-247 5.5
Requirement	: ANSI C63.10-2013, KDB 558074
Kind of test site	: 3m Semi-Anechoic Chamber

Test setup

Test Channel	: Low/Middle/High
Operation Mode	: A
Ambient temperature	: 25C
Relative humidity	: 52%

For details refer to following test plot.

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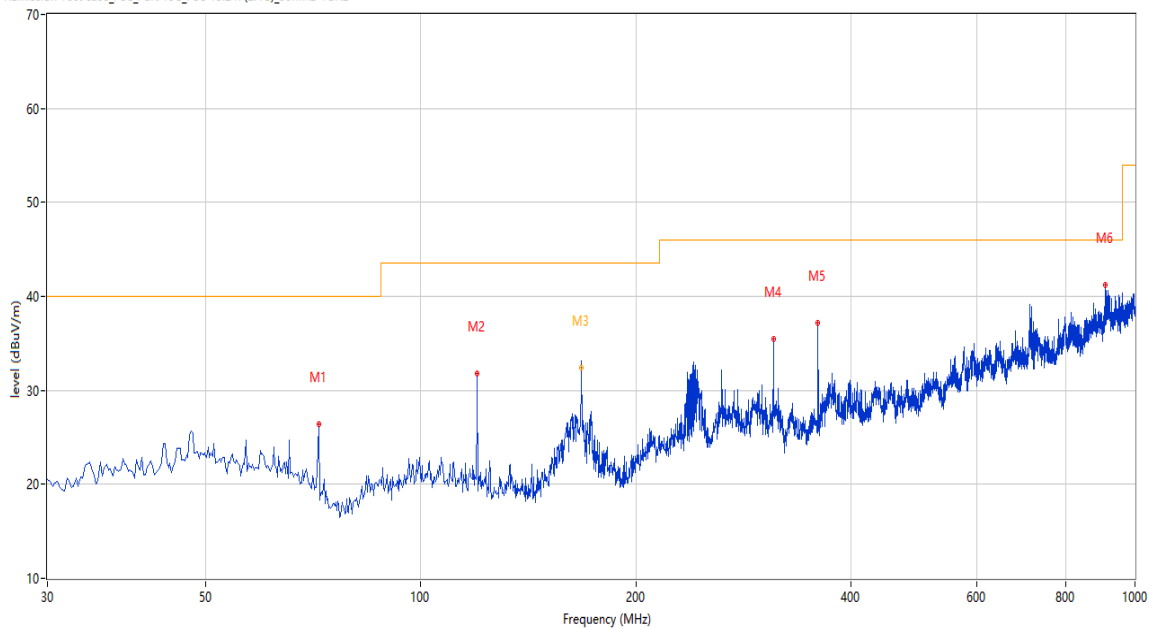
Notes:

1. For 9 kHz ~ 30 MHz, the amplitude of spurious emissions that are attenuated by more than 20dB below the permissible. The value has no need to be reported.
2. The spurious above 18GHz is noise only and 20dB below the limit. The value has no need to be reported.
3. The EUT is working in the Normal link mode below 1 GHz.

Figure 37: Spurious Emission, 30MHz – 1GHz, Normal Link Mode

30MHz-1GHz, Horizontal

REmission Test case_FCC_Part 15C_FCC 15.247(2.4G)_30MHz-1GHz



No.	Frequency (MHz)	Results (dBuV/m)	Factor (dB)	Limit (dBuV/m)	Over Limit (dB)	Detector	Table (Degree)	Height (cm)	Antenna	Verdict
1	71.942	26.39	-28.50	40.0	-13.61	Peak	17.90	200	Horizontal	Pass
2	119.945	31.79	-27.10	43.5	-11.71	Peak	360.00	200	Horizontal	Pass
3	167.999	34.95	-29.04	43.5	-8.55	Peak	360.00	108	Horizontal	Pass
3*	167.999	32.45	-29.04	43.5	-11.05	QP	360.00	108	Horizontal	Pass
4	311.957	35.47	-24.18	46.0	-10.53	Peak	360.00	200	Horizontal	Pass
5	359.960	37.17	-23.76	46.0	-8.83	Peak	181.60	100	Horizontal	Pass
6	910.055	41.24	-10.89	46.0	-4.76	Peak	360.00	200	Horizontal	Pass

TEST REPORT

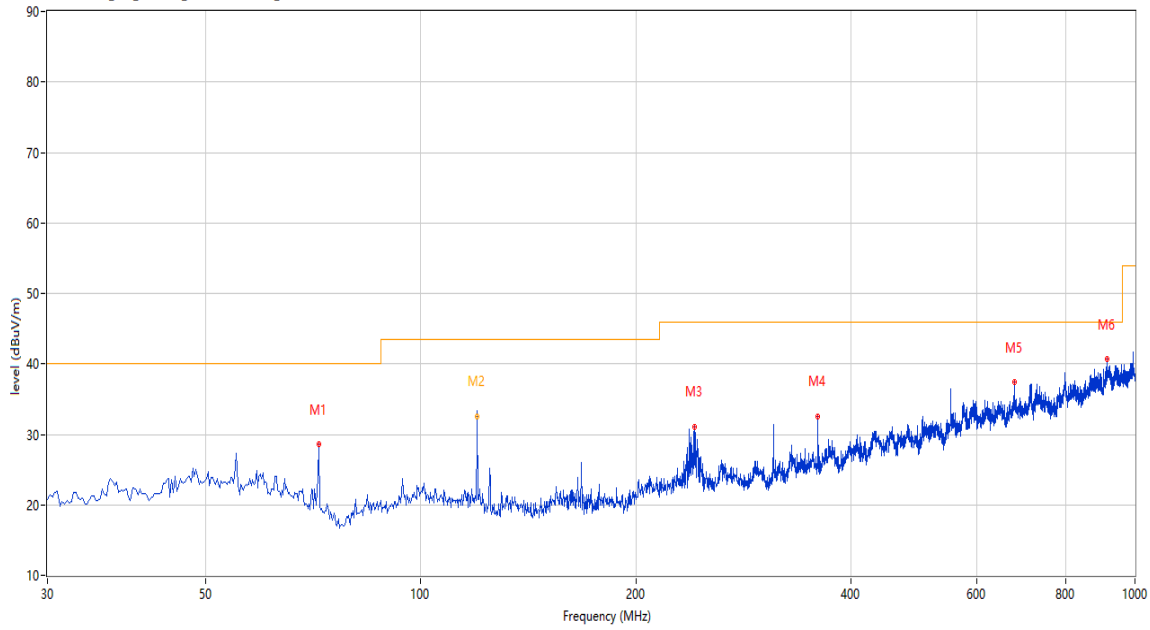
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30MHz-1GHz, Vertical

REmission Test case_FCC_Part 15C_FCC 15.247(2.4G)_30MHz-1GHz



No.	Frequency (MHz)	Results (dBuV/m)	Factor (dB)	Limit (dBuV/m)	Over Limit (dB)	Detector	Table (Degree)	Height (cm)	Antenna	Verdict
1	71.942	28.55	-28.50	40.0	-11.45	Peak	159.50	100	Vertical	Pass
2	120.003	33.03	-27.10	43.5	-10.47	Peak	339.60	100	Vertical	Pass
2*	120.003	32.46	-27.10	43.5	-11.04	QP	339.60	100	Vertical	Pass
3	241.407	31.13	-24.77	46.0	-14.87	Peak	282.90	200	Vertical	Pass
4	359.960	32.49	-23.76	46.0	-13.51	Peak	360.00	200	Vertical	Pass
5	678.040	37.50	-14.67	46.0	-8.50	Peak	360.10	200	Vertical	Pass
6	914.176	40.63	-10.26	46.0	-5.37	Peak	181.90	100	Vertical	Pass

TEST REPORT

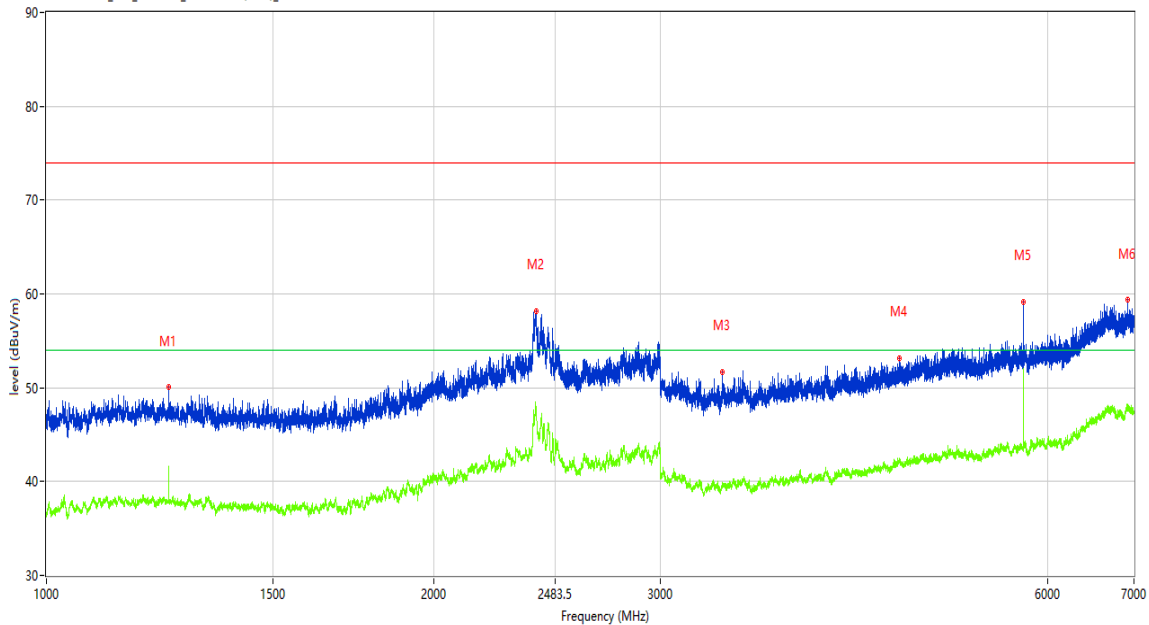
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Figure 38: Spurious Emission, 1GHz – 10th Harmonic, 802.11b, 2412MHz
1GHz-7GHz, Horizontal

REmission Test case_FCC_Part 15C_FCC 15.247(2.4G)_1GHz-7GHz



No.	Frequency (MHz)	Results (dBuV/m)	Factor (dB)	Limit (dBuV/m)	Over Limit (dB)	Detector	Table (Degree)	Height (cm)	Antenna	Verdict
1	1244.969	50.04	-4.39	74.0	-23.96	Peak	0.30	100	Horizontal	Pass
1**	1244.969	41.62	-4.39	54.0	-12.38	AV	0.30	100	Horizontal	Pass
2	2400.575	58.17	5.35	74.0	-15.83	Peak	208.60	100	Horizontal	Pass
2**	2400.575	47.93	5.35	54.0	-6.07	AV	208.60	100	Horizontal	Pass
3	3352.956	51.73	-1.58	74.0	-22.27	Peak	356.40	100	Horizontal	Pass
3**	3352.956	39.60	-1.58	54.0	-14.40	AV	356.40	100	Horizontal	Pass
4	4599.300	53.15	0.86	74.0	-20.85	Peak	148.70	100	Horizontal	Pass
4**	4599.300	42.06	0.86	54.0	-11.94	AV	148.70	100	Horizontal	Pass
5	5746.657	59.17	2.16	74.0	-14.83	Peak	3.30	100	Horizontal	Pass
5**	5746.657	46.14	2.16	54.0	-7.86	AV	3.30	100	Horizontal	Pass
6	6925.009	59.33	5.72	74.0	-14.67	Peak	349.30	100	Horizontal	Pass
6**	6925.009	47.73	5.72	54.0	-6.27	AV	349.30	100	Horizontal	Pass

TEST REPORT

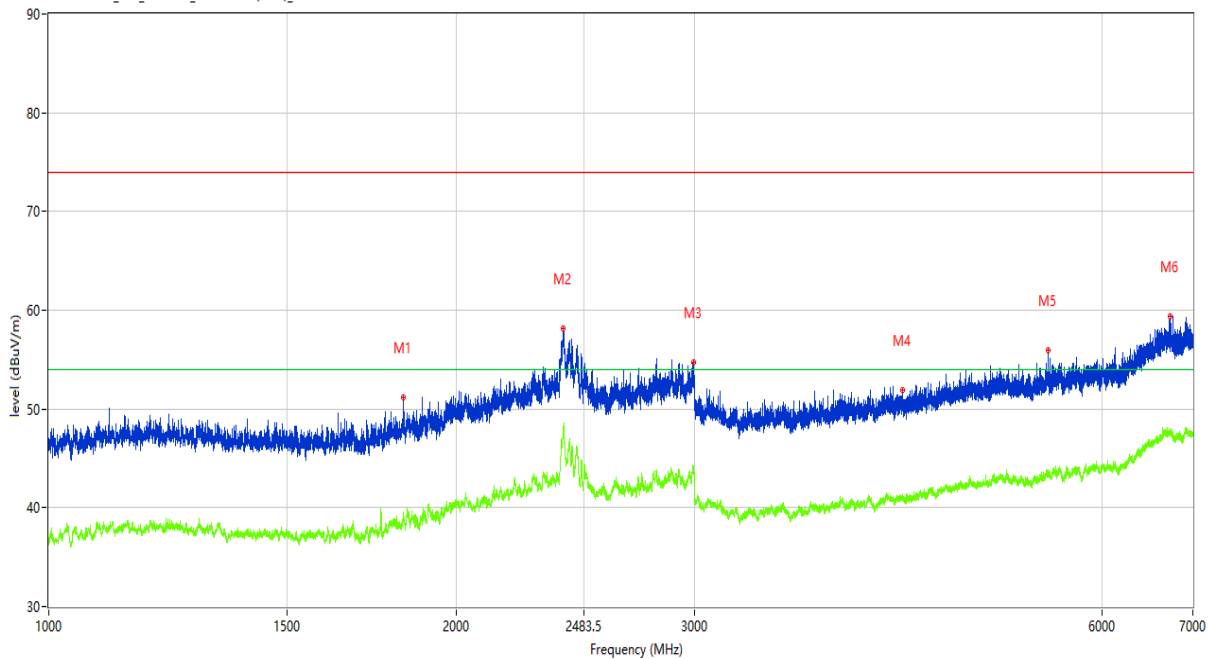
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1GHz-7GHz, Vertical

REmission Test case_FCC_Part 15C_FCC 15.247(2.4G)_1GHz-7GHz



No.	Frequency (MHz)	Results (dBuV/m)	Factor (dB)	Limit (dBuV/m)	Over Limit (dB)	Detector	Table (Degree)	Height (cm)	Antenna	Verdict
1	1828.396	51.19	-3.69	74.0	-22.81	Peak	82.70	100	Vertical	Pass
1**	1828.396	39.33	-3.69	54.0	-14.67	AV	82.70	100	Vertical	Pass
2	2398.325	58.17	5.44	74.0	-15.83	Peak	323.80	100	Vertical	Pass
2**	2398.325	47.70	5.44	54.0	-6.30	AV	323.80	100	Vertical	Pass
3	2994.001	54.70	2.85	74.0	-19.30	Peak	138.90	100	Vertical	Pass
3**	2994.001	43.68	2.85	54.0	-10.32	AV	138.90	100	Vertical	Pass
4	4274.341	51.89	-0.04	74.0	-22.11	Peak	89.20	100	Vertical	Pass
4**	4274.341	41.16	-0.04	54.0	-12.84	AV	89.20	100	Vertical	Pass
5	5474.691	55.95	1.68	74.0	-18.05	Peak	102.90	100	Vertical	Pass
5**	5474.691	43.30	1.68	54.0	-10.70	AV	102.90	100	Vertical	Pass
6	6735.533	59.37	5.76	74.0	-14.63	Peak	214.60	100	Vertical	Pass
6**	6735.533	47.47	5.76	54.0	-6.53	AV	214.60	100	Vertical	Pass

TEST REPORT

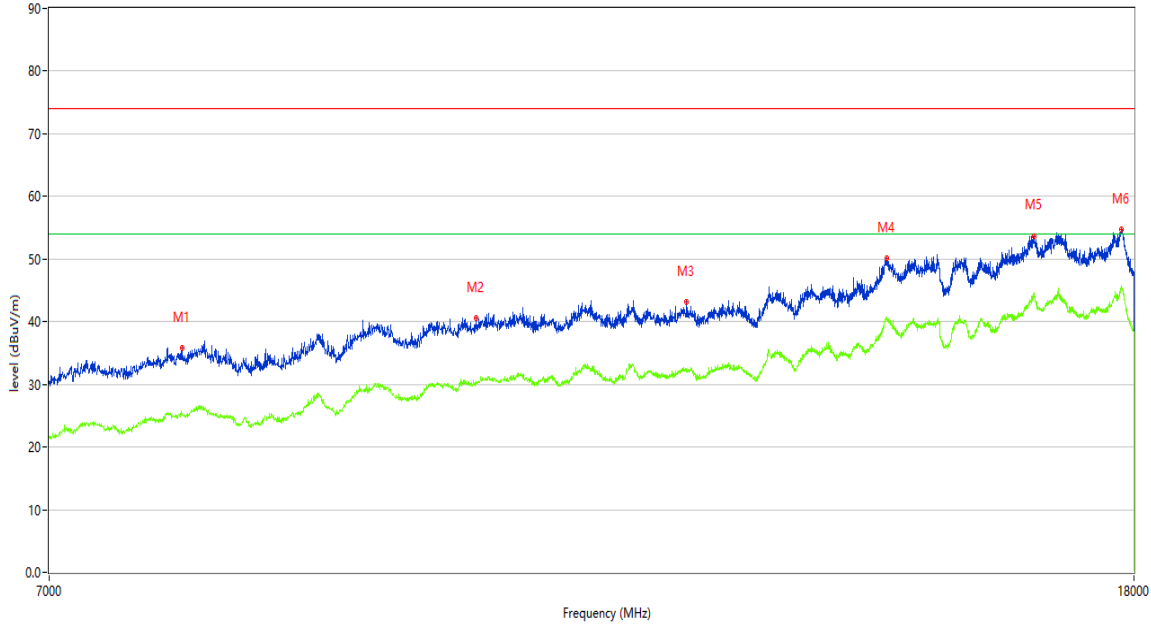
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7GHz-18GHz, Horizontal

REmission Test case_FCC_Part 15C_FCC 15.247_7GHz-18GHz



No.	Frequency (MHz)	Results (dBuV/m)	Factor (dB)	Limit (dBuV/m)	Over Limit (dB)	Detector	Table (Degree)	Height (cm)	Antenna	Verdict
1	7857.786	35.83	4.74	74.0	-38.17	Peak	116.20	100	Horizontal	Pass
1**	7857.786	25.23	4.74	54.0	-28.77	AV	116.20	100	Horizontal	Pass
2	10153.462	40.64	9.97	74.0	-33.36	Peak	275.40	100	Horizontal	Pass
2**	10153.462	30.44	9.97	54.0	-23.56	AV	275.40	100	Horizontal	Pass
3	12190.702	43.15	10.86	74.0	-30.85	Peak	98.00	100	Horizontal	Pass
3**	12190.702	32.48	10.86	54.0	-21.52	AV	98.00	100	Horizontal	Pass
4	14511.122	50.06	17.06	74.0	-23.94	Peak	189.90	100	Horizontal	Pass
4**	14511.122	40.49	17.06	54.0	-13.51	AV	189.90	100	Horizontal	Pass
5	16498.875	53.70	20.80	74.0	-20.30	Peak	143.70	100	Horizontal	Pass
5**	16498.875	44.00	20.80	54.0	-10.00	AV	143.70	100	Horizontal	Pass
6	17804.799	54.67	20.92	74.0	-19.33	Peak	189.90	100	Horizontal	Pass
6**	17804.799	45.30	20.92	54.0	-8.70	AV	189.90	100	Horizontal	Pass

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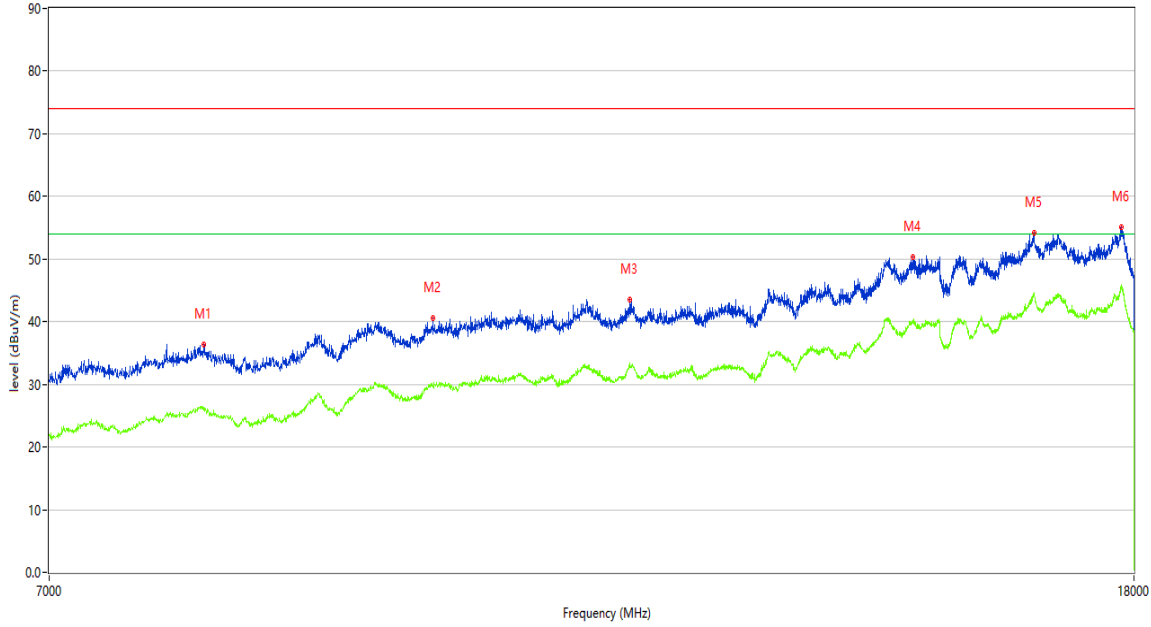
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7GHz-18GHz, Vertical

REmission Test case_FCC_Part 15C_FCC 15.247_7GHz-18GHz



No.	Frequency (MHz)	Results (dBuV/m)	Factor (dB)	Limit (dBuV/m)	Over Limit (dB)	Detector	Table (Degree)	Height (cm)	Antenna	Verdict
1	8006.248	36.39	5.67	74.0	-37.61	Peak	186.50	100	Vertical	Pass
1**	8006.248	25.91	5.67	54.0	-28.09	AV	186.50	100	Vertical	Pass
2	9776.806	40.58	9.66	74.0	-33.42	Peak	36.10	100	Vertical	Pass
2**	9776.806	29.54	9.66	54.0	-24.46	AV	36.10	100	Vertical	Pass
3	11607.848	43.49	11.46	74.0	-30.51	Peak	227.00	100	Vertical	Pass
3**	11607.848	32.80	11.46	54.0	-21.20	AV	227.00	100	Vertical	Pass
4	14846.538	50.37	18.21	74.0	-23.63	Peak	347.60	100	Vertical	Pass
4**	14846.538	40.22	18.21	54.0	-13.78	AV	347.60	100	Vertical	Pass
5	16498.875	54.09	20.80	74.0	-19.91	Peak	302.20	100	Vertical	Pass
5**	16498.875	44.21	20.80	54.0	-9.79	AV	302.20	100	Vertical	Pass
6	17804.799	55.02	20.92	74.0	-18.98	Peak	358.80	100	Vertical	Pass
6**	17804.799	45.24	20.92	54.0	-8.76	AV	358.80	100	Vertical	Pass

TEST REPORT

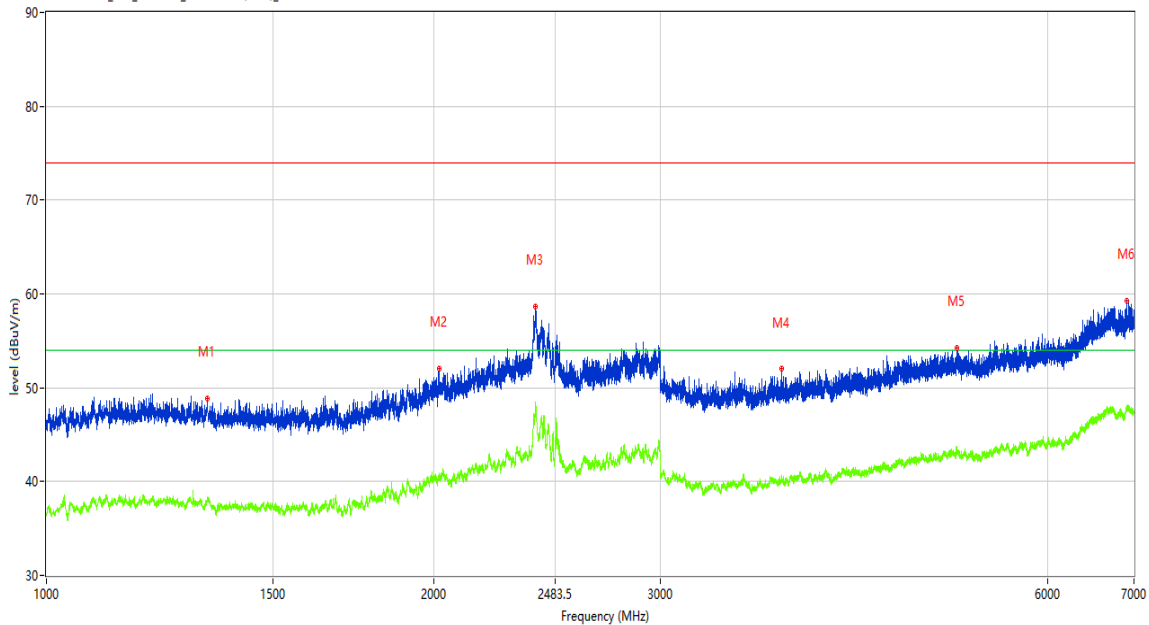
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Figure 39: Spurious Emission, 1GHz – 10th Harmonic, 802.11b, 2437MHz
1GHz-7GHz, Horizontal

REmission Test case_FCC_Part 15C_FCC 15.247(2.4G)_1GHz-7GHz



No.	Frequency (MHz)	Results (dBuV/m)	Factor (dB)	Limit (dBuV/m)	Over Limit (dB)	Detector	Table (Degree)	Height (cm)	Antenna	Verdict
1	1333.458	48.82	-4.37	74.0	-25.18	Peak	351.40	100	Horizontal	Pass
1**	1333.458	38.36	-4.37	54.0	-15.64	AV	351.40	100	Horizontal	Pass
2	2019.373	52.08	-1.92	74.0	-21.92	Peak	199.80	100	Horizontal	Pass
2**	2019.373	40.48	-1.92	54.0	-13.52	AV	199.80	100	Horizontal	Pass
3	2399.575	58.63	5.39	74.0	-15.37	Peak	218.80	100	Horizontal	Pass
3**	2399.575	47.94	5.39	54.0	-6.06	AV	218.80	100	Horizontal	Pass
4	3723.910	52.00	-0.74	74.0	-22.00	Peak	46.40	100	Horizontal	Pass
4**	3723.910	39.97	-0.74	54.0	-14.03	AV	46.40	100	Horizontal	Pass
5	5101.237	54.27	1.76	74.0	-19.73	Peak	189.00	100	Horizontal	Pass
5**	5101.237	43.70	1.76	54.0	-10.30	AV	189.00	100	Horizontal	Pass
6	6909.511	59.24	5.75	74.0	-14.76	Peak	0.20	100	Horizontal	Pass
6**	6909.511	47.58	5.75	54.0	-6.42	AV	0.20	100	Horizontal	Pass