

MEASUREMENT REPORT

FCC PART 15.407/ WLAN 802.11a/n/ac

FCC ID: HD5-EDA711

Applicant: Honeywell International Inc
Honeywell Safety and Productivity Solutions

Application Type: Certification

Product: Tablet

Model No.: EDA71-1

Brand Name: Honeywell

FCC Classification: Unlicensed National Information Infrastructure (NII)

FCC Rule Part(s): Part15 Subpart E (Section 15.407)

Test Procedure(s): ANSI C63.10-2013, KDB 789033 D02v02r01

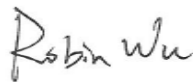
Test Date: March 01 ~ July 27, 2020

Reviewed By:



(Jame Yuan)

Approved By:



(Robin Wu)



The test results relate only to the samples tested.

This equipment has been shown to be capable of compliance with the applicable technical standards as indicated in the measurement report and was tested in accordance with the measurement procedures specified in KDB 789033 D02v02r01. Test results reported herein relate only to the item(s) tested.

The test report shall not be reproduced except in full without the written approval of MRT Technology (Suzhou) Co., Ltd.

Revision History

Report No.	Version	Description	Issue Date	Note
2001RSU044-U4	Rev. 01	Initial Report	08-15-2020	Valid

CONTENTS

Description	Page
General Information	6
1. INTRODUCTION	7
1.1. Scope	7
1.2. MRT Test Location	7
2. PRODUCT INFORMATION	8
2.1. Equipment Description.....	8
2.2. Product Specification Subjective to this Report.....	9
2.3. Working Frequencies for this Report.....	9
2.4. Test Mode	10
2.5. Duty Cycle	11
2.6. Description of Test Configuration and Software	12
2.7. EMI Suppression Device(s)/Modifications	12
2.8. Labeling Requirements.....	13
2.9. Test Environment Condition	13
3. DESCRIPTION OF TEST	14
3.1. Evaluation Procedure	14
3.2. AC Line Conducted Emissions	14
3.3. Radiated Emissions	15
4. ANTENNA REQUIREMENTS.....	16
5. TEST EQUIPMENT CALIBRATION DATE.....	17
6. MEASUREMENT UNCERTAINTY.....	19
7. TEST RESULT	20
7.1. Summary	20
7.2. Emission Bandwidth Measurement.....	21
7.2.1. Test Limit	21
7.2.2. Test Procedure Used	21
7.2.3. Test Setting.....	21
7.2.4. Test Setup	21
7.2.5. Test Result.....	22
7.3. 6dB Bandwidth Measurement.....	39
7.3.1. Test Limit	39
7.3.2. Test Procedure Used	39
7.3.3. Test Setting.....	39

7.3.4. Test Setup	39
7.3.5. Test Result.....	40
7.4. Output Power Measurement	45
7.4.1. Test Limit	45
7.4.2. Test Procedure Used	45
7.4.3. Test Setting.....	45
7.4.4. Test Setup	46
7.4.5. Test Result.....	47
7.5. Transmit Power Control	51
7.5.1. Test Limit	51
7.5.2. Test Procedure Used	51
7.5.3. Test Setting.....	51
7.5.4. Test Setup	51
7.5.5. Test Result.....	51
7.6. Power Spectral Density Measurement	52
7.6.1. Test Limit	52
7.6.2. Test Procedure Used	52
7.6.3. Test Setting.....	52
7.6.4. Test Setup	53
7.6.5. Test Result.....	54
7.7. Frequency Stability Measurement.....	71
7.7.1. Test Limit	71
7.7.2. Test Procedure Used	71
7.7.3. Test Setup	72
7.7.4. Test Result.....	73
7.8. Radiated Spurious Emission Measurement	74
7.8.1. Test Limit	74
7.8.2. Test Procedure Used	74
7.8.3. Test Setting.....	74
7.8.4. Test Setup	76
7.8.5. Test Result.....	77
7.9. Radiated Restricted Band Edge Measurement	144
7.9.1. Test Limit	144
7.9.2. Test Procedure Used	145
7.9.3. Test Setting.....	146
7.9.4. Test Setup	147
7.9.5. Test Result.....	148
7.10. AC Conducted Emissions Measurement.....	252
7.10.1. Test Limit	252

7.10.2. Test Setup	252
7.10.3. Test Result.....	253
8. CONCLUSION.....	255
Appendix A - Test Setup Photograph	256
Appendix B-EUT Photograph.....	257

General Information

Applicant:	Honeywell International Inc Honeywell Safety and Productivity Solutions
Applicant Address:	9680 Old Bailes Road, Fort Mill, SC 29707 United States
Manufacturer:	Honeywell International Inc Honeywell Safety and Productivity Solutions
Manufacturer Address:	9680 Old Bailes Road, Fort Mill, SC 29707 United States
Test Site:	MRT Technology (Suzhou) Co., Ltd
Test Site Address:	D8 Building, No.2 Tian'edang Rd., Wuzhong Economic Development Zone, Suzhou, China

Test Facility / Accreditations

Measurements were performed at MRT Laboratory located in Tian'edang Rd., Suzhou, China.

- MRT facility is an FCC registered (MRT Designation No. CN1166) test facility with the site description report on file and has met all the requirements specified in ANSI C63.4-2014.
- MRT facility is an IC registered (MRT Reg. No.11384A-1) test laboratory with the site description on file at Industry Canada.
- MRT facility is a VCCI registered (R-20025, G-20034, C-20020, T-20020) test laboratory with the site description on file at VCCI Council.
- MRT Lab is accredited to ISO 17025 by the American Association for Laboratory Accreditation (A2LA) under the American Association for Laboratory Accreditation Program (A2LACert. No.3628.01) in EMC, Telecommunications, Radio and SAR testing.



1. INTRODUCTION

1.1. Scope

Measurement and determination of electromagnetic emissions (EMC) of radio frequency devices including intentional and/or unintentional radiators for compliance with the technical rules and regulations of the Federal Communications Commission and the Innovation, Science and Economic Development Canada and Certification and Engineering Bureau.

1.2. MRT Test Location

The map below shows the location of the MRT LABORATORY, its proximity to the Taihu Lake. These measurement tests were conducted at the MRT Technology (Suzhou) Co., Ltd. Facility located at D8 Building, No.2 Tian'edang Rd., Wuzhong Economic Development Zone, Suzhou, China. The measurement facility compliant with the test site requirements specified in ANSI C63.4-2014.



2. PRODUCT INFORMATION

2.1. Equipment Description

Product Name	Tablet
Model No.	EDA71-1
Serial No.	20087B1290
Hardware Version	IDH63_MB_V2.0.0
Software Version	213.01.00.0009E
IMEI	990013560217445
Wi-Fi Specification	802.11a/b/g/n/ac
Bluetooth Version	v4.2 dual mode
NFC Working Frequency	13.56MHz
Satellite	GPS / GLONASS / BDS
GSM Operating Band	GSM850 / PCS1900
WCDMA Operating Band	Band II / IV / V
CDMA2000 Operating Band	BC0 / BC1
LTE Operating Band	FDD Band: 2 / 4 / 7 / 12 / 13 / 17 TDD Band: 38 / 41
Accessories	
USB Adapter	Model No.: ADS-12B-06 05010E Input Power: 100 - 240V ~ 50/60Hz, Max. 0.3A Output Power: 5VDC 2.0A
Li-ion Battery 1#	Model No.: BAT-EDA50US Capacitance: 4000mAh/15.2Wh Rated Voltage: 3.8V
Li-ion Battery 2#	Model No.: EDA70-EXT Capacitance: 8850mAh/33.45Wh Rated Voltage: 3.78V
USB CUP	Model No.: EDA70-UC Input: 5VDC 2.0A

2.2. Product Specification Subjective to this Report

Frequency Range	For 802.11a/n-HT20/ac-VHT20: 5180~5240MHz, 5260~5320MHz, 5500~5720MHz, 5745~5825MHz For 802.11n-HT40/ac-VHT40: 5190~5230MHz, 5270~5310MHz, 5510~5710MHz, 5755~5795MHz For 802.11ac-VHT80: 5210MHz, 5290MHz, 5530MHz, 5610MHz, 5690MHz, 5775MHz
Type of Modulation	802.11a/n/ac: OFDM
Data Rate	802.11a: 6/9/12/18/24/36/48/54Mbps 802.11n: up to 150Mbps 802.11ac: up to 433.3Mbps
Antenna Type	FPC Antenna
Antenna Gain	4.59dBi

Note 1: For other features of this EUT, test report will be issued separately.

Note 2: Antenna type and antenna gain are provided by the manufacturer.

2.3. Working Frequencies for this Report

802.11a/n-HT20/ac-VHT20

Channel	Frequency	Channel	Frequency	Channel	Frequency
36	5180 MHz	40	5200 MHz	44	5220 MHz
48	5240 MHz	52	5260 MHz	56	5280 MHz
60	5300 MHz	64	5320 MHz	100	5500 MHz
104	5520 MHz	108	5540 MHz	112	5560 MHz
116	5580 MHz	120	5600 MHz	124	5620 MHz
128	5640 MHz	132	5660 MHz	136	5680 MHz
140	5700 MHz	144	5720 MHz	149	5745 MHz
153	5765 MHz	157	5785 MHz	161	5805 MHz
165	5825 MHz	--	--	--	--

802.11n-HT40/ac-VHT40

Channel	Frequency	Channel	Frequency	Channel	Frequency
38	5190 MHz	46	5230 MHz	54	5270 MHz
62	5310 MHz	102	5510 MHz	110	5550 MHz
118	5590 MHz	126	5630 MHz	134	5670 MHz
142	5710 MHz	151	5755 MHz	159	5795 MHz

802.11ac-VHT80

Channel	Frequency	Channel	Frequency	Channel	Frequency
42	5210 MHz	58	5290 MHz	106	5530 MHz
122	5610 MHz	138	5690 MHz	155	5775 MHz

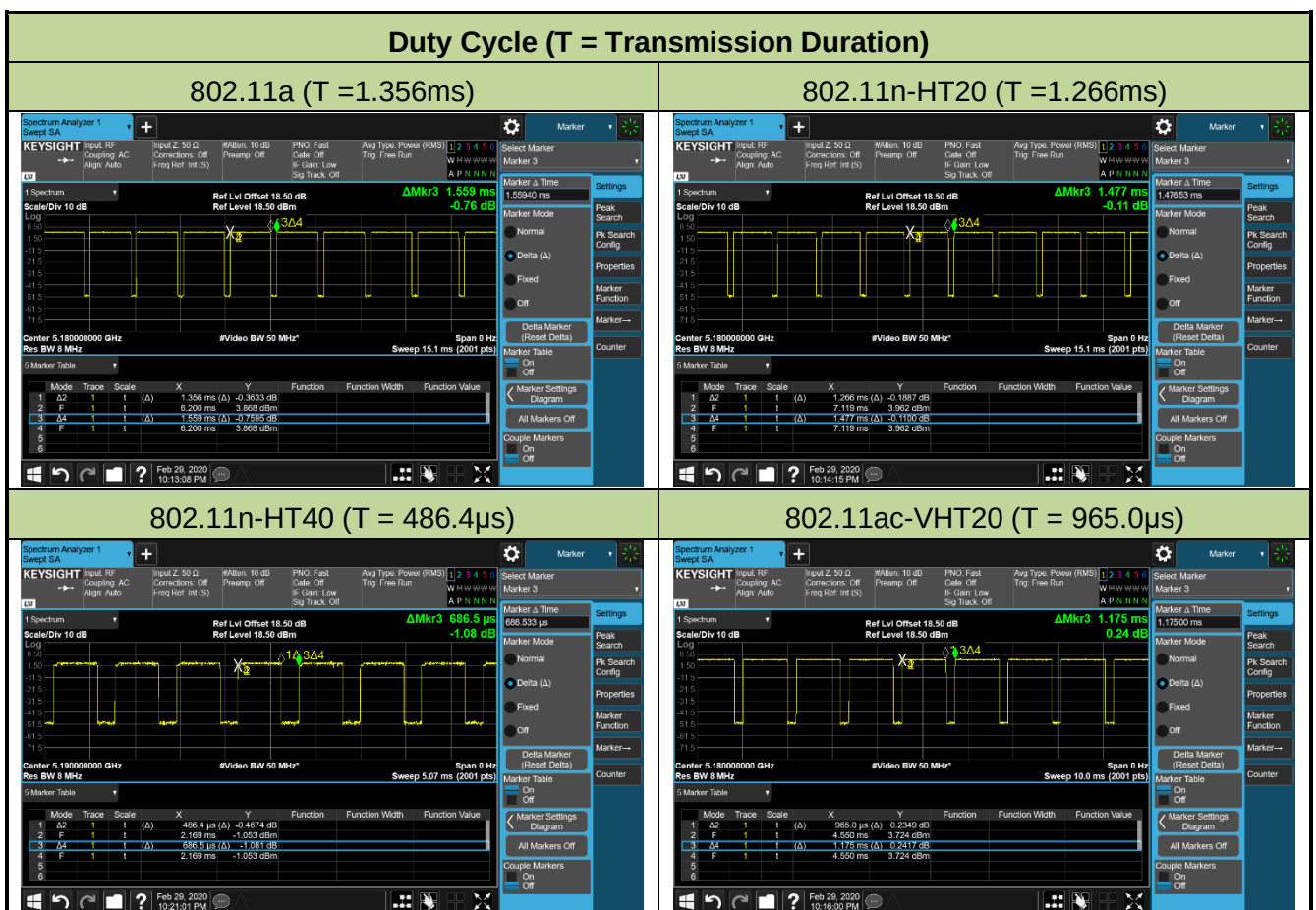
2.4. Test Mode

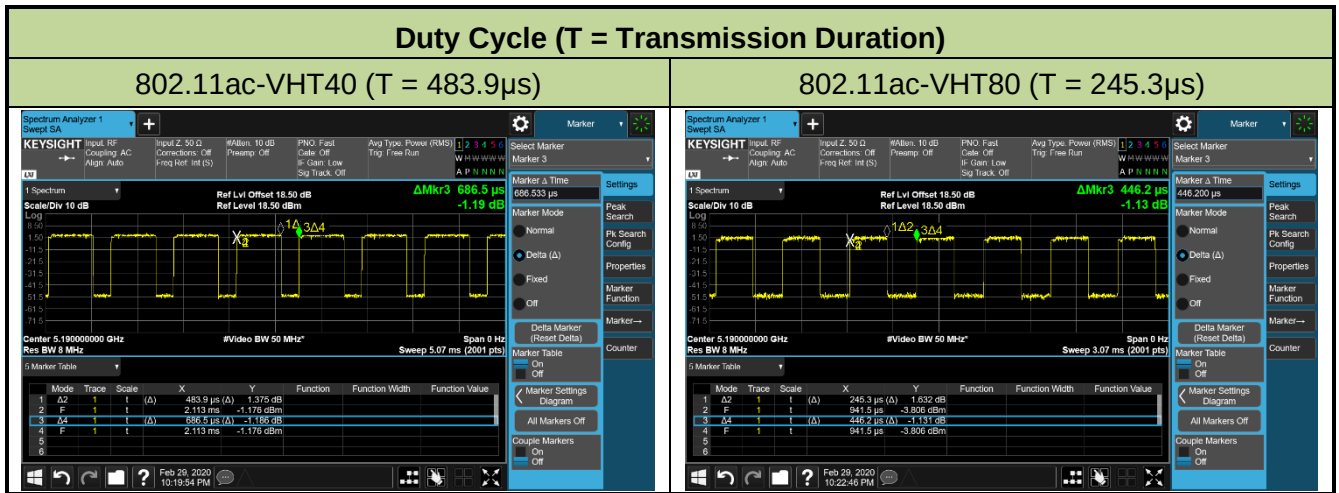
Test Mode	Mode 1: Transmit by 802.11a (6Mbps)
	Mode 2: Transmit by 802.11n-HT20 (MCS0)
	Mode 3: Transmit by 802.11n-HT40 (MCS0)
	Mode 4: Transmit by 802.11ac-VHT20 (MCS0)
	Mode 5: Transmit by 802.11ac-VHT40 (MCS0)
	Mode 6: Transmit by 802.11ac-VHT80 (MCS0)

2.5. Duty Cycle

5GHz (NI) operation is possible in 20MHz, 40MHz and 80MHz channel bandwidths. The maximum achievable duty cycles for all modes were determined based on measurements performed on a spectrum analyzer in zero-span mode with RBW = 8MHz, VBW = 50MHz. The RBW and VBW were both greater than 50/T, where T is the minimum transmission duration, and the number of sweep points across T was greater than 100. The duty cycles are as follows:

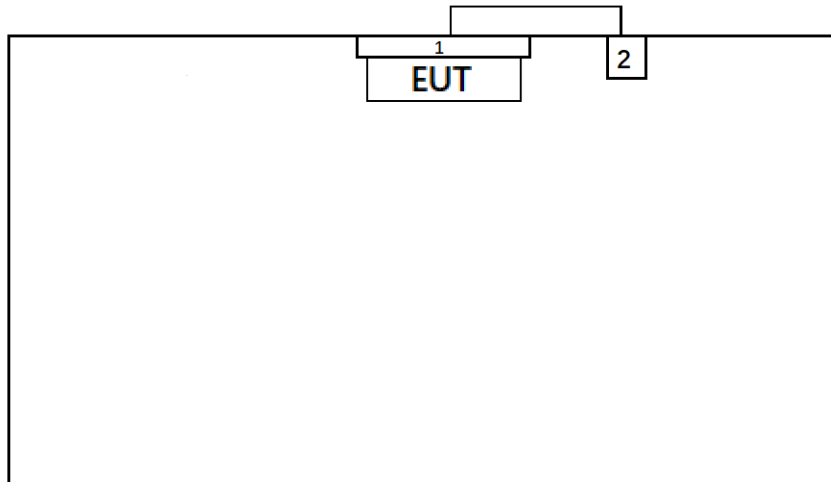
Test Mode	Duty Cycle
802.11a	86.98%
802.11n-HT20	85.71%
802.11n-HT40	70.85%
802.11ac-VHT20	82.13%
802.11ac-VHT40	78.49%
802.11ac-VHT80	54.98%





2.6. Description of Test Configuration and Software

The device was tested per the guidance ANSI C63.10: 2013 was used to reference the appropriate EUT setup for radiated emissions testing and AC line conducted testing.



Product	Manufacturer	Model No.
1 USB CUP	Honeywell	EDA70-UC
2 Adapter	Shenzhen Honor Electronic Co., Ltd	ADS-12B-06 05010E

Note 1: The test utility software used during testing was “QRCT”, and the version was 3.0.268.0.

Note 2: Detail power setting refer to operation description.

2.7. EMI Suppression Device(s)/Modifications

No EMI suppression device(s) were added and/or no modifications were made during testing.

2.8. Labeling Requirements

Per 2.1074 & 15.19; Docket 95-19

The label shall be permanently affixed at a conspicuous location on the device; instruction manual or pamphlet supplied to the user and be readily visible to the purchaser at the time of purchase.

However, when the devices so small wherein placement of the label with specified statement is not practical, only the FCC ID must be displayed on the device per Section 15.19(a)(5). Please see attachment for FCC ID label and label location.

2.9. Test Environment Condition

Ambient Temperature	15°C~35°C
Relative Humidity	20%RH ~75%RH

3. DESCRIPTION OF TEST

3.1. Evaluation Procedure

The measurement procedures described in the American National Standard of Procedures for Compliance Testing of Unlicensed Wireless Devices (ANSI C63.10-2013), and the guidance provided in KDB 789033 D02v02r01 were used in the measurement.

3.2. AC Line Conducted Emissions

The line-conducted facility is located inside an 8'x4'x4' shielded enclosure. A 1m x 2m wooden table 80cm high is placed 40cm away from the vertical wall and 80cm away from the sidewall of the shielded room. Two 10kHz-30MHz, 50Ω/50uH Line-Impedance Stabilization Networks (LISNs) are bonded to the shielded room floor. Power to the LISNs is filtered by external high-current high-insertion loss power line filters. These filters attenuate ambient signal noise from entering the measurement lines. These filters are also bonded to the shielded enclosure.

The EUT is powered from one LISN and the support equipment is powered from the second LISN. All interconnecting cables more than 1 meter were shortened to a 1 meter length by non-inductive bundling (serpentine fashion) and draped over the back edge of the test table. All cables were at least 40cm above the horizontal reference ground-plane. Power cables for support equipment were routed down to the second LISN while ensuring that that cables were not draped over the second LISN.

Sufficient time for the EUT, support equipment, and test equipment was allowed in order for them to warm up to their normal operating condition. The RF output of the LISN was connected to the receiver and exploratory measurements were made to determine the frequencies producing the maximum emission from the EUT. The receiver was scanned from 150kHz to 30MHz. The detector function was set to peak mode for exploratory measurements while the bandwidth of the analyzer was set to 9kHz. The EUT, support equipment, and interconnecting cables were arranged and manipulated to maximize each emission. Each emission was also maximized by varying: power lines, the mode of operation or data exchange speed, or support equipment whichever determined the worst-case emission. Once the worst case emissions have been identified, the one EUT cable configuration/arrangement and mode of operation that produced these emissions are used for final measurements on the same test site. The analyzer is set to CISPR quasi-peak and average detectors with a 9kHz resolution bandwidth for final measurements.

An extension cord was used to connect to a single LISN which powered by EUT. The extension cord was calibrated with LISN, the impedance and insertion loss are compliance with the requirements as stated in ANSI C63.10-2013.

3.3. Radiated Emissions

The radiated test facilities consisted of an indoor 3 meter semi-anechoic chamber used for final measurements and exploratory measurements, when necessary. The measurement area is contained within the semi-anechoic chamber which is shielded from any ambient interference. For measurements above 1GHz absorbers are arranged on the floor between the turn table and the antenna mast in such a way so as to maximize the reduction of reflections. For measurements below 1GHz, the absorbers are removed. A MF Model 210SS turntable is used for radiated measurement. It is a continuously rotatable, remote controlled, metallic turntable and 2 meters (6.56 ft.) in diameter. The turn table is flush with the raised floor of the chamber in order to maintain its function as a ground plane. An 80cm high PVC support structure is placed on top of the turntable.

For all measurements, the spectrum was scanned through all EUT azimuths and from 1 to 4 meter receive antenna height using a broadband antenna from 30MHz up to the upper frequency shown in 15.33(b)(1) depending on the highest frequency generated or used in the device or on which the device operates or tunes. For frequencies above 1GHz, linearly polarized double ridge horn antennas were used. For frequencies below 30MHz, a calibrated loop antenna was used. When exploratory measurements were necessary, they were performed at 1 meter test distance inside the semi-anechoic chamber using broadband antennas, broadband amplifiers, and spectrum analyzers to determine the frequencies and modes producing the maximum emissions. Sufficient time for the EUT, support equipment, and test equipment was allowed in order for them to warm up to their normal operating condition. The test set-up for frequencies below 1GHz was placed on top of the 0.8 meter high, 1 x 1.5 meter table; and test set-up for frequencies 1-40GHz was placed on top of the 1.5 meter high, 1 x 1.5 meter table. The EUT, support equipment, and interconnecting cables were arranged and manipulated to maximize each emission. Appropriate precaution was taken to ensure that all emissions from the EUT were maximized and investigated. The system configuration, clock speed, mode of operation or video resolution, if applicable, turntable azimuth, and receive antenna height was noted for each frequency found.

Final measurements were made in the semi-anechoic chamber using calibrated, linearly polarized broadband and horn antennas. The test setup was configured to the setup that produced the worst case emissions. The spectrum analyzer was set to investigate all frequencies required for testing to compare the highest radiated disturbances with respect to the specified limits. The turntable containing the EUT was rotated through 360 degrees and the height of the receive antenna was varied 1 to 4 meters and stopped at the azimuth and height producing the maximum emission. Each emission was maximized by changing the orientation of the EUT through three orthogonal planes and changing the polarity of the receive antenna, whichever produced the worst-case emissions. According to 3dB Beam-Width of horn antenna, the horn antenna should be always directed to the EUT when rising height.

4. ANTENNA REQUIREMENTS

Excerpt from §15.203 of the FCC Rules/Regulations:

“An intentional radiator antenna shall be designed to ensure that no antenna other than that furnished by the responsible party can 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 shall be considered sufficient to comply with the provisions of this section.”

- The antenna of the device is **permanently attached**.
- There are no provisions for connection to an external antenna.

Conclusion:

The unit complies with the requirement of §15.203.

5. TEST EQUIPMENT CALIBRATION DATE

Conducted Emissions - SR2

Instrument	Manufacturer	Type No.	Asset No.	Cali. Interval	Cali. Due Date
EMI Test Receiver	R&S	ESR3	MRTSUE06185	1 year	2021/01/18
Two-Line V-Network	R&S	ENV 216	MRTSUE06002	1 year	2021/06/11
Two-Line V-Network	R&S	ENV 216	MRTSUE06003	1 year	2021/06/11
Thermohygrometer	Testo	608-H1	MRTSUE06404	1 year	2020/08/08
Shielding Room	MIX-BEP	Chamber-SR2	MRTSUE06215	N/A	N/A

Radiated Emissions - AC1

Instrument	Manufacturer	Type No.	Asset No.	Cali. Interval	Cali. Due Date
EMI Test Receiver	R&S	ESR7	MRTSUE06001	1 year	2020/08/01
PXA Signal Analyzer	Keysight	9030B	MRTSUE06395	1 year	2020/09/03
Loop Antenna	Schwarzbeck	FMZB 1519	MRTSUE06025	1 year	2020/11/13
Bilog Period Antenna	Schwarzbeck	VULB 9168	MRTSUE06172	1 year	2021/04/03
BroadBand Horn Antenna	Schwarzbeck	BBHA 9120D	MRTSUE06023	1 year	2020/10/13
Broad Band Horn Antenna	Schwarzbeck	BBHA 9170	MRTSUE06024	1 year	2020/12/29
Microwave System Amplifier	Agilent	83017A	MRTSUE06076	1 year	2020/11/15
Preamplifier	Schwarzbeck	BBV 9721	MRTSUE06121	1 year	2021/06/11
Thermohygrometer	Testo	608-H1	MRTSUE06403	1 year	2020/08/08
Anechoic Chamber	TDK	Chamber-AC1	MRTSUE06212	1 year	2021/04/30

Radiated Emission - AC2

Instrument	Manufacturer	Type No.	Asset No.	Cali. Interval	Cali. Due Date
Spectrum Analyzer	Keysight	N9038A	MRTSUE06125	1 year	2020/08/01
Loop Antenna	Schwarzbeck	FMZB 1519	MRTSUE06025	1 year	2020/11/13
Bilog Period Antenna	Schwarzbeck	VULB 9162	MRTSUE06022	1 year	2020/10/13
Horn Antenna	Schwarzbeck	BBHA9120D	MRTSUE06171	1 year	2020/10/27
Broad Band Horn Antenna	Schwarzbeck	BBHA 9170	MRTSUE06024	1 year	2020/12/29
Broadband CoaxialPreamplifier	Schwarzbeck	BBV 9718	MRTSUE06176	1 year	2020/11/15
Preamplifier	Schwarzbeck	BBV 9721	MRTSUE06121	1 year	2021/06/11
Temperature/Humidity Meter	Minggao	ETH529	MRTSUE06170	1 year	2020/12/15
Anechoic Chamber	RIKEN	Chamber-AC2	MRTSUE06213	1 year	2021/04/30

Conducted Test Equipment - TR3

Instrument	Manufacturer	Type No.	Asset No.	Cali. Interval	Cali. Due Date
EXA Signal Analyzer	Agilent	N9020A	MRTSUE06106	1 year	2021/04/14
EXA Signal Analyzer	Keysight	N9010B	MRTSUE06457	1 year	2021/07/02
Signal Analyzer	R&S	FSV40	MRTSUE06218	1 year	2021/04/14
Power Meter	Agilent	U2021XA	MRTSUE06030	1 year	2020/11/17
USB wideband power sensor	Keysight	U2021XA	MRTSUE06446	1 year	2021/06/11
USB wideband power sensor	Keysight	U2021XA	MRTSUE06447	1 year	2021/06/11
Bluetooth Test Set	Anritsu	MT8852B-042	MRTSUE06389	1 year	2021/06/11
Audio Analyzer	Agilent	U8903B	MRTSUE06143	1 year	2021/06/11
Modulation Analyzer	HP	8901A	MRTSUE06098	1 year	2020/10/10
Wideband Radio Communication Tester	R&S	CMW 500	MRTSUE06243	1 year	2020/11/07
DC Power Supply	GWINSTEK	DPS-3303C	MRTSUE06064	N/A	N/A
Attenuator	MVE	6dB	MRTSUE06534	1 year	2020/12/12
Attenuator	MVE	10dB	MRTSUE06543	1 year	2020/12/12
Temperature & Humidity Chamber	BAOYT	BYH-150CL	MRTSUE06051	1 year	2020/11/07
Thermohygrometer	testo	608-H1	MRTSUE06401	1 year	2020/08/08

Software	Version	Function
EMI Software	V3	EMI Test Software

6. MEASUREMENT UNCERTAINTY

Where relevant, the following test uncertainty levels have been estimated for tests performed on the EUT as specified in CISPR 16-4-2. This uncertainty represents an expanded uncertainty expressed at approximately the 95% confidence level using a coverage factor of $k = 2$.

AC Conducted Emission Measurement
Measurement Uncertainty for a Level of Confidence of 95% ($U=2U_c(y)$): 9kHz~150kHz: 3.74dB 150kHz~30MHz: 3.44dB
Radiated Disturbance
Measurement Uncertainty for a Level of Confidence of 95% ($U=2U_c(y)$): Horizontal: 30MHz~300MHz: 5.04dB 300MHz~1GHz: 4.95dB 1GHz~40GHz: 6.40dB Vertical: 30MHz~300MHz: 5.24dB 300MHz~1GHz: 6.03dB 1GHz~40GHz: 6.40dB
Spurious Emissions, Conducted
Measuring Uncertainty for a Level of Confidence of 95% ($U=2U_c(y)$): 0.78dB
Output Power
Measuring Uncertainty for a Level of Confidence of 95% ($U=2U_c(y)$): 1.13dB
Power Spectrum Density
Measuring Uncertainty for a Level of Confidence of 95% ($U=2U_c(y)$): 1.15dB
Occupied Bandwidth
Measuring Uncertainty for a Level of Confidence of 95% ($U=2U_c(y)$): 0.28%

7. TEST RESULT

7.1. Summary

FCC Section(s)	Test Description	Test Limit	Test Condition	Test Result	Reference
15.407(a)	26dB Bandwidth	N/A	Conducted	Pass	Section 7.2
15.407(e)	6dB Bandwidth	$\geq 500\text{kHz}$		Pass	Section 7.3
15.407(a)(1)(iv), (2), (3)	Maximum Conducted Output Power	U-NII-1: $\leq 250\text{mW}$ U-NII-2: $\leq 250\text{mW}$ or $11\text{dBm} + 10\log_{10}B$ U-NII-3: $\leq 1\text{W}$		Pass	Section 7.4
15.407(h)(1)	Transmit Power Control	$\leq 24\text{dBm}$		N/A	Section 7.5
15.407(a)(1)(iv), (2), (3), (5)	Power Spectral Density	U-NII-1&U-NII-2: $\leq 11\text{dBm/MHz}$ U-NII-3: $\leq 30\text{dBm}/500\text{kHz}$		Pass	Section 7.6
15.407(g)	Frequency Stability	N/A		Pass	Section 7.7
15.407(b)(1), (2), (3), (4)(i)	Undesirable Emissions	$\leq -27\text{dBm/MHz}$ EIRP Detail see section 7.9	Radiated	Pass	Section 7.8 Section 7.9
15.205, 15.209 15.407(b)(5), (6), (7)	General Field Strength Limits (Restricted Bands and Radiated Emission Limits)	Emissions in restricted bands must meet the radiated limits detailed in 15.209		Pass	
15.207	AC Conducted Emissions 150kHz-30MHz	< FCC 15.207 limits	Line Conducted	Pass	Section 7.10

Notes:

- The analyzer plots shown in this section were all taken with a correction table loaded into the analyzer. The correction table was used to account for the losses of the cables and attenuators used as part of the system to connect the EUT to the analyzer at all frequencies of interest.
- All modes of operation and data rates were investigated. For radiated emission test, every axis (X, Y, Z) was also verified. The test results shown in the following sections represent the worst case emissions.
- "N/A" means that the test item is not applicable, and the details refer to relevant section.

7.2. Emission Bandwidth Measurement

7.2.1. Test Limit

N/A

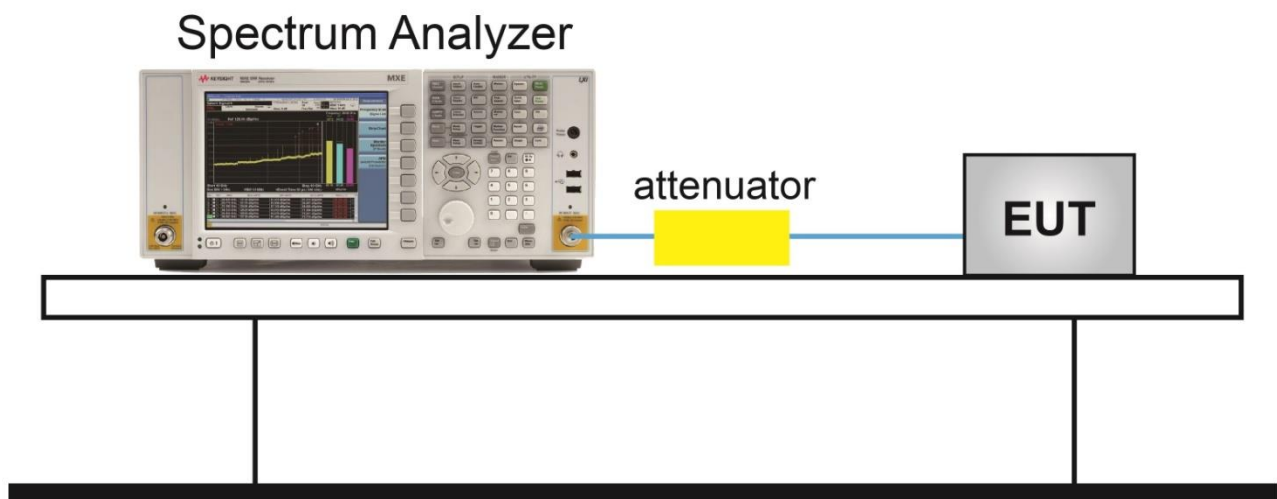
7.2.2. Test Procedure Used

KDB 789033 D02v02r01 -Section C.1

7.2.3. Test Setting

1. Set RBW = approximately 1% of the emission bandwidth.
2. Set the VBW > RBW.
3. Detector = Peak.
4. Trace mode = max hold.
5. Measure the maximum width of the emission that is 26 dB down from the maximum of the emission. Compare this with the RBW setting of the analyzer. Readjust RBW and repeat measurement as needed until the RBW/EBW ratio is approximately 1%.

7.2.4. Test Setup



7.2.5.Test Result

Product	Tablet	Test Engineer	Gordon Qi
Test Site	TR3	Test Date	2020/03/01

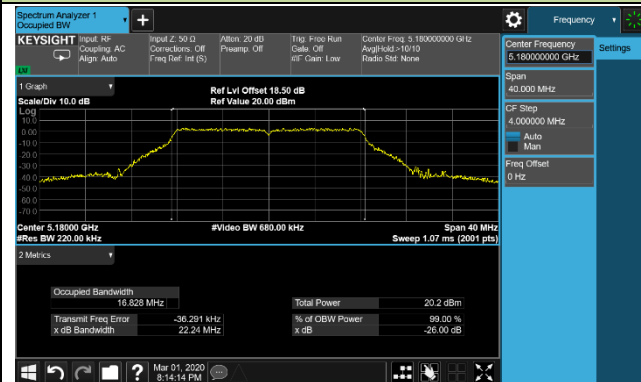
Test Mode	Data Rate/ MCS	Channel No.	Frequency (MHz)	26dB Bandwidth (MHz)
802.11a	6Mbps	36	5180	22.24
802.11a	6Mbps	44	5220	21.78
802.11a	6Mbps	48	5240	22.11
802.11a	6Mbps	52	5260	21.95
802.11a	6Mbps	60	5300	21.79
802.11a	6Mbps	64	5320	21.56
802.11a	6Mbps	100	5500	21.96
802.11a	6Mbps	120	5600	21.86
802.11a	6Mbps	140	5700	21.63
802.11a	6Mbps	144	5720	21.94
802.11a	6Mbps	149	5745	22.27
802.11a	6Mbps	157	5785	22.19
802.11a	6Mbps	165	5825	21.99
802.11n-HT20	MCS0	36	5180	22.46
802.11n-HT20	MCS0	44	5220	22.30
802.11n-HT20	MCS0	48	5240	22.39
802.11n-HT20	MCS0	52	5260	22.12
802.11n-HT20	MCS0	60	5300	21.88
802.11n-HT20	MCS0	64	5320	22.07
802.11n-HT20	MCS0	100	5500	22.38
802.11n-HT20	MCS0	120	5600	22.61
802.11n-HT20	MCS0	140	5700	22.01
802.11n-HT20	MCS0	144	5720	22.46
802.11n-HT20	MCS0	149	5745	22.23
802.11n-HT20	MCS0	157	5785	21.91
802.11n-HT20	MCS0	165	5825	22.51

Test Mode	Data Rate/ MCS	Channel No.	Frequency (MHz)	26dB Bandwidth (MHz)
802.11n-HT40	MCS0	38	5190	43.15
802.11n-HT40	MCS0	46	5230	42.44
802.11n-HT40	MCS0	54	5270	43.20
802.11n-HT40	MCS0	62	5310	42.67
802.11n-HT40	MCS0	102	5510	42.62
802.11n-HT40	MCS0	118	5590	44.39
802.11n-HT40	MCS0	134	5670	42.52
802.11n-HT40	MCS0	142	5710	43.10
802.11n-HT40	MCS0	151	5755	44.16
802.11n-HT40	MCS0	159	5795	43.74
802.11ac-VHT20	MCS0	36	5180	22.10
802.11ac-VHT20	MCS0	44	5220	22.13
802.11ac-VHT20	MCS0	48	5240	21.98
802.11ac-VHT20	MCS0	52	5260	21.93
802.11ac-VHT20	MCS0	60	5300	21.99
802.11ac-VHT20	MCS0	64	5320	21.78
802.11ac-VHT20	MCS0	100	5500	21.95
802.11ac-VHT20	MCS0	120	5600	22.08
802.11ac-VHT20	MCS0	140	5700	21.84
802.11ac-VHT20	MCS0	144	5720	21.76
802.11ac-VHT20	MCS0	149	5745	21.87
802.11ac-VHT20	MCS0	157	5785	21.90
802.11ac-VHT20	MCS0	165	5825	21.94

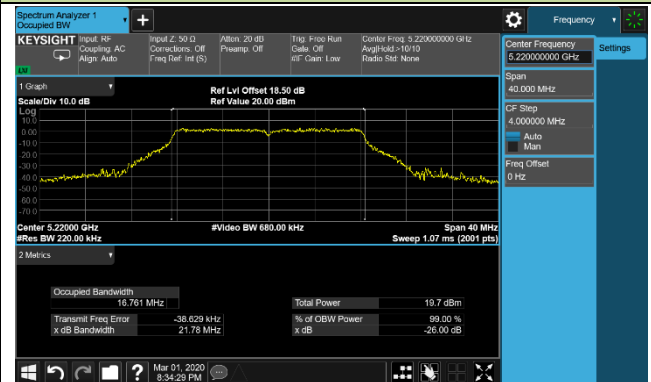
Test Mode	Data Rate/ MCS	Channel No.	Frequency (MHz)	26dB Bandwidth (MHz)
802.11ac-VHT40	MCS0	38	5190	43.66
802.11ac-VHT40	MCS0	46	5230	43.27
802.11ac-VHT40	MCS0	54	5270	42.56
802.11ac-VHT40	MCS0	62	5310	42.45
802.11ac-VHT40	MCS0	102	5510	42.35
802.11ac-VHT40	MCS0	118	5590	42.19
802.11ac-VHT40	MCS0	134	5670	42.58
802.11ac-VHT40	MCS0	142	5710	42.79
802.11ac-VHT40	MCS0	151	5755	42.62
802.11ac-VHT40	MCS0	159	5795	43.05
802.11ac-VHT80	MCS0	42	5210	84.66
802.11ac-VHT80	MCS0	58	5290	84.78
802.11ac-VHT80	MCS0	106	5530	84.62
802.11ac-VHT80	MCS0	112	5610	83.88
802.11ac-VHT80	MCS0	138	5690	84.45
802.11ac-VHT80	MCS0	155	5775	84.14

802.11a 26dB Bandwidth

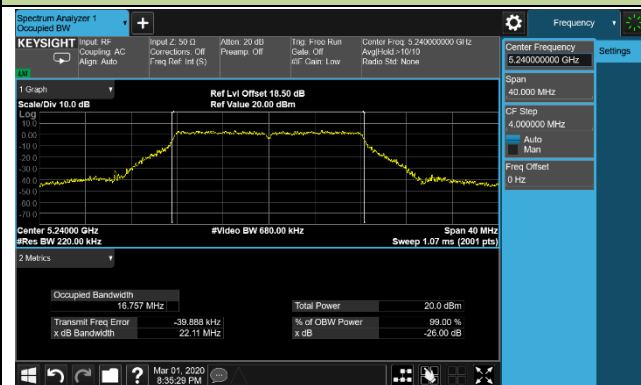
Channel 36 (5180MHz)



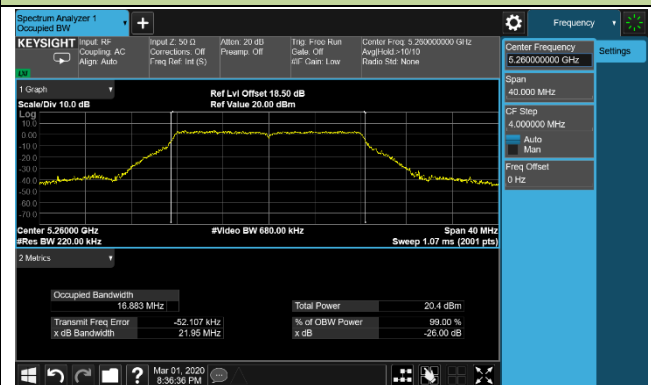
Channel 44 (5220MHz)



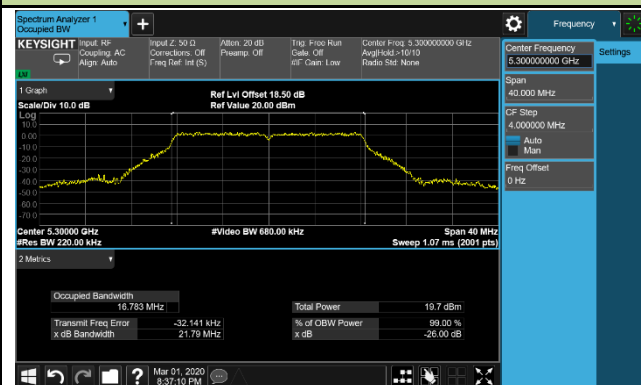
Channel 48 (5240MHz)



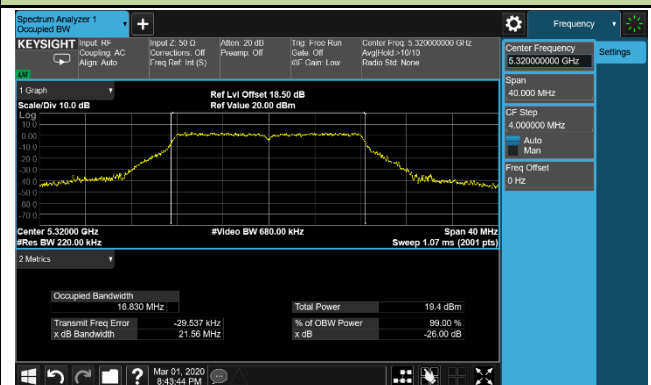
Channel 52 (5260MHz)



Channel 60 (5300MHz)

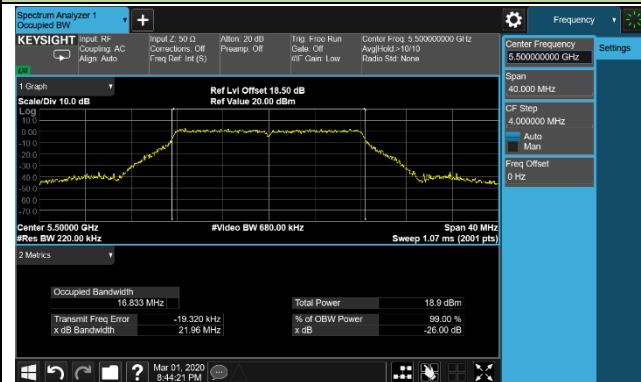


Channel 64 (5320MHz)

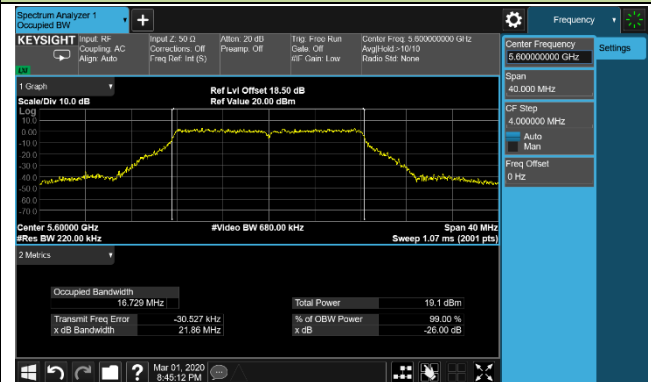


802.11a 26dB Bandwidth

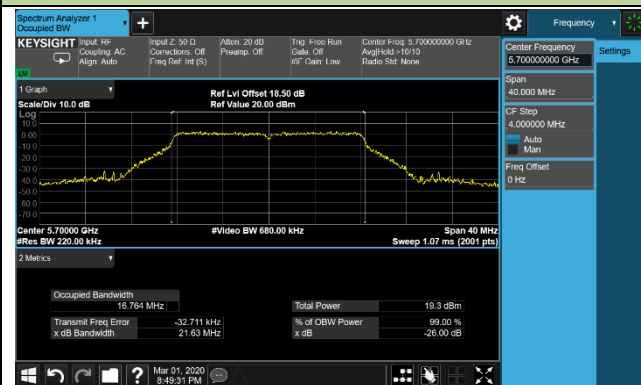
Channel 100 (5500MHz)



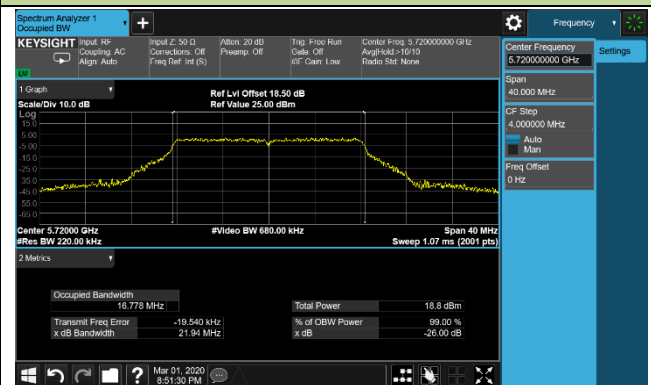
Channel 120 (5600MHz)



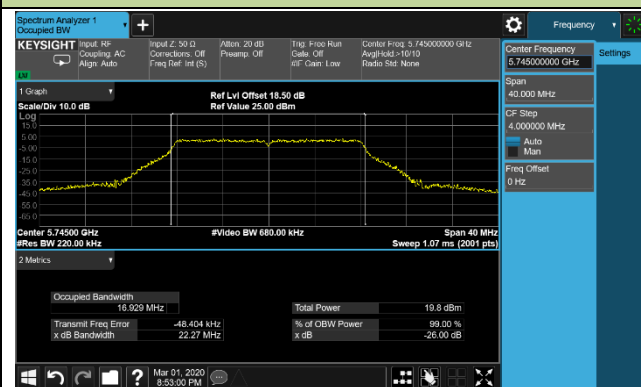
Channel 140 (5700MHz)



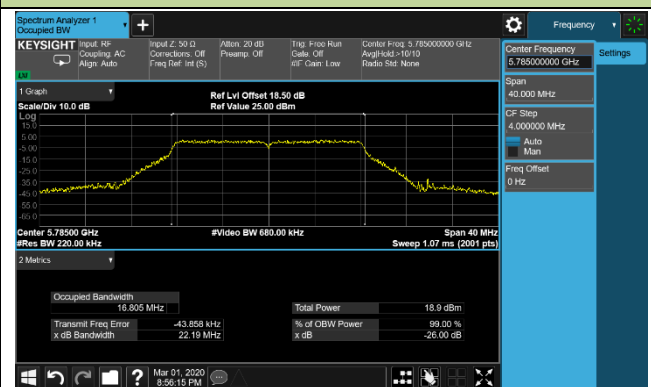
Channel 144 (5720MHz)



Channel 149 (5745MHz)

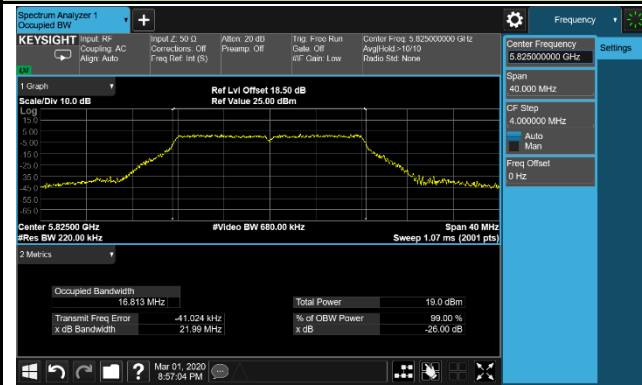


Channel 157 (5785MHz)



802.11a 26dB Bandwidth

Channel 165 (5825MHz)

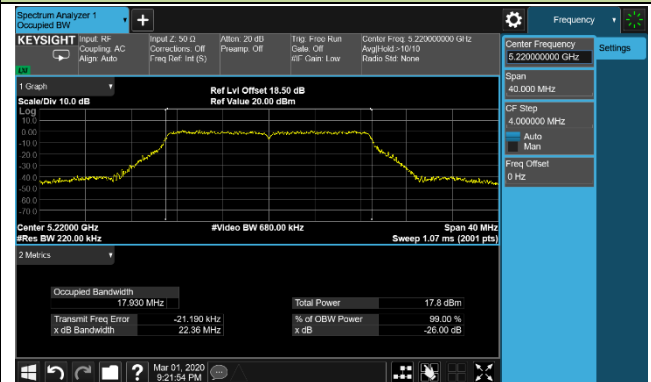


802.11n-HT20 26dB Bandwidth

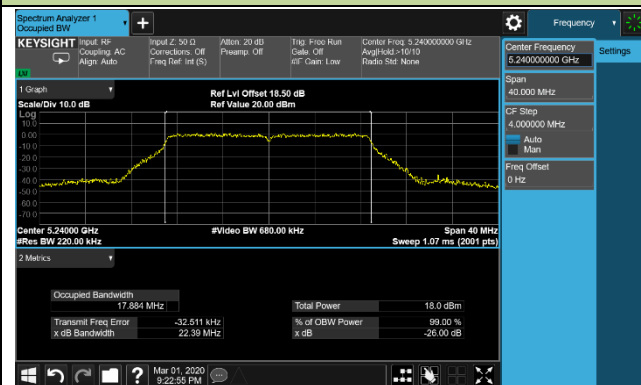
Channel 36 (5180MHz)



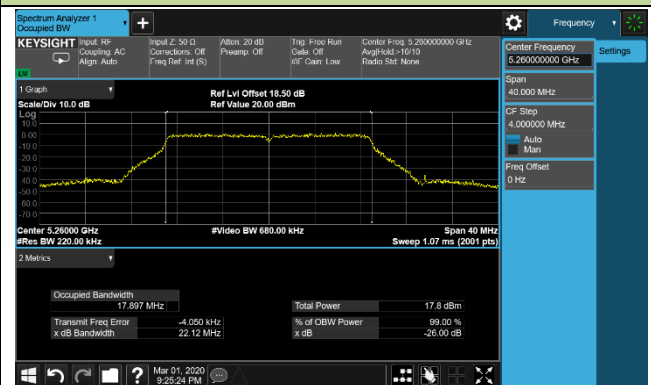
Channel 44 (5220MHz)



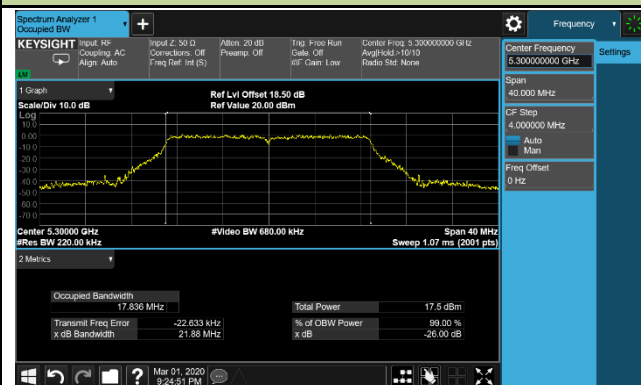
Channel 48 (5240MHz)



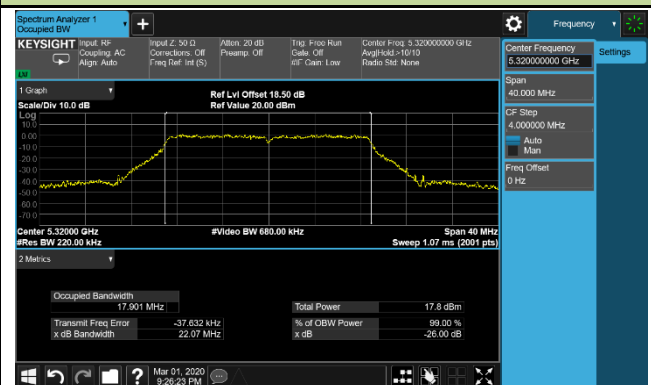
Channel 52 (5260MHz)



Channel 60 (5300MHz)

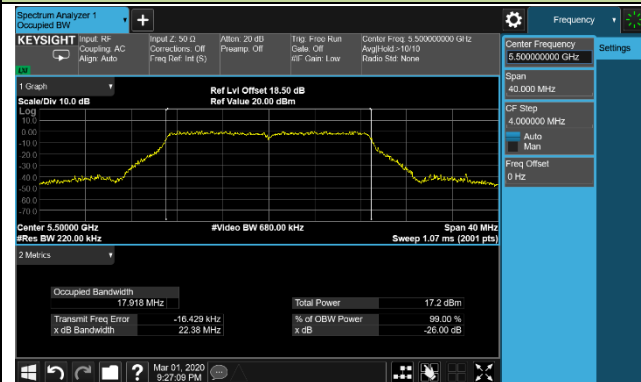


Channel 64 (5320MHz)

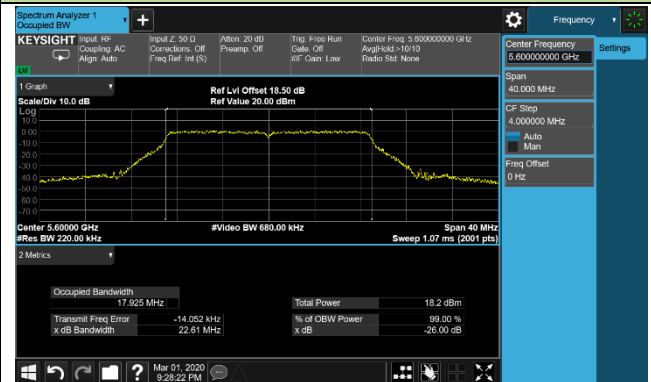


802.11n-HT20 26dB Bandwidth

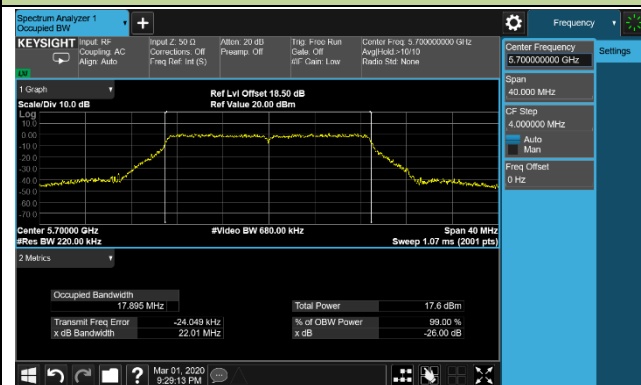
Channel 100 (5500MHz)



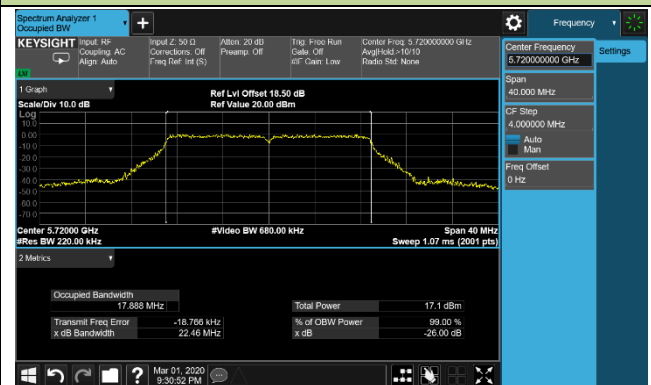
Channel 120 (5600MHz)



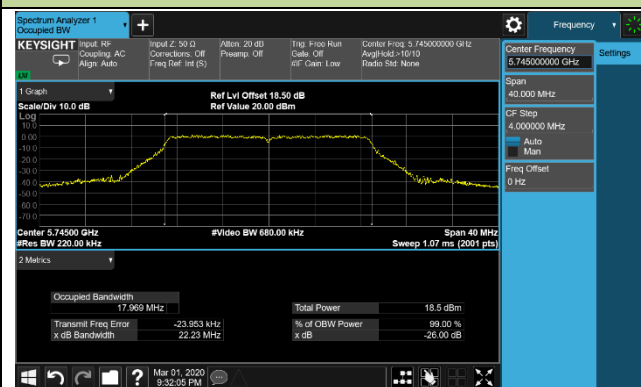
Channel 140 (5700MHz)



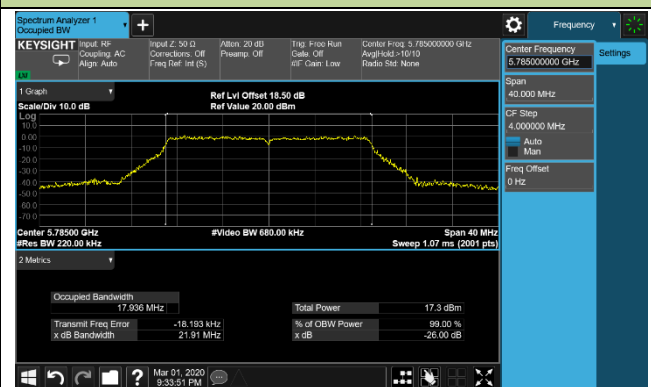
Channel 144 (5720MHz)



Channel 149 (5745MHz)

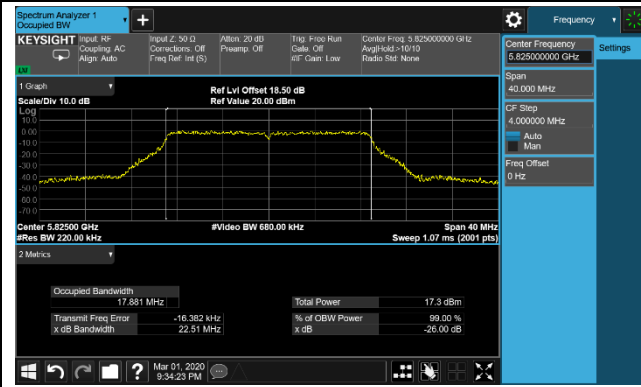


Channel 157 (5785MHz)



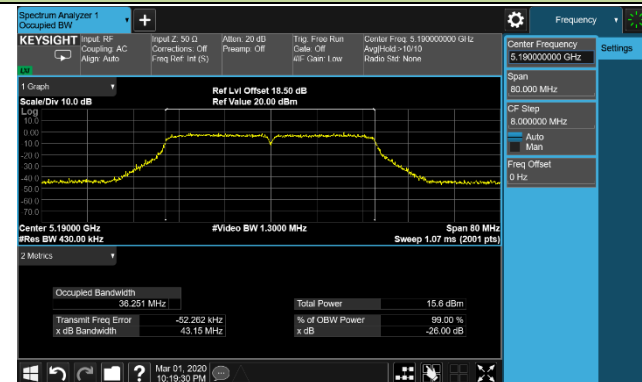
802.11n-HT20 26dB Bandwidth

Channel 165 (5825MHz)

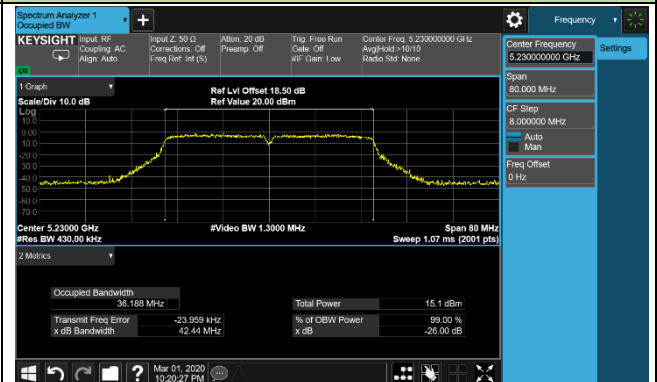


802.11n-HT40 26dB Bandwidth

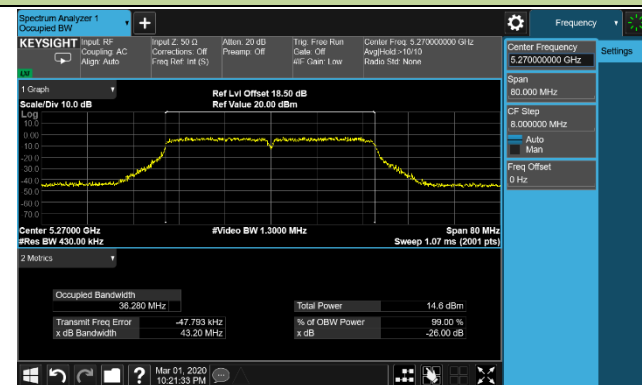
Channel 38 (5190MHz)



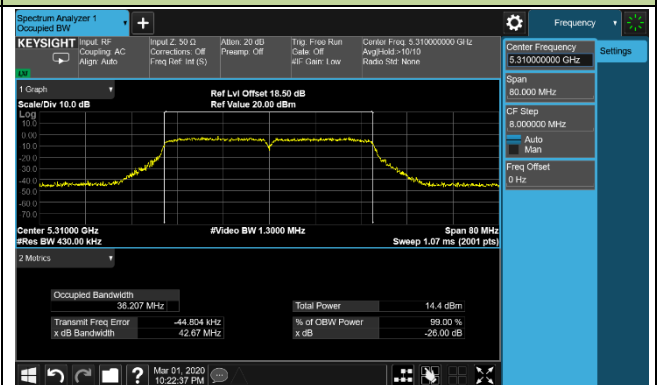
Channel 46 (5230MHz)



Channel 54 (5270MHz)



Channel 62 (5310MHz)



Channel 102 (5510MHz)

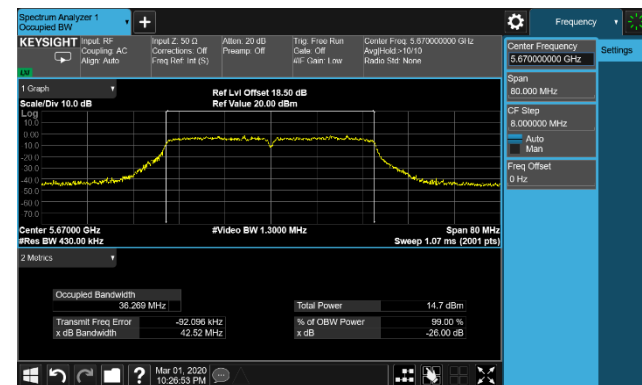


Channel 118 (5590MHz)

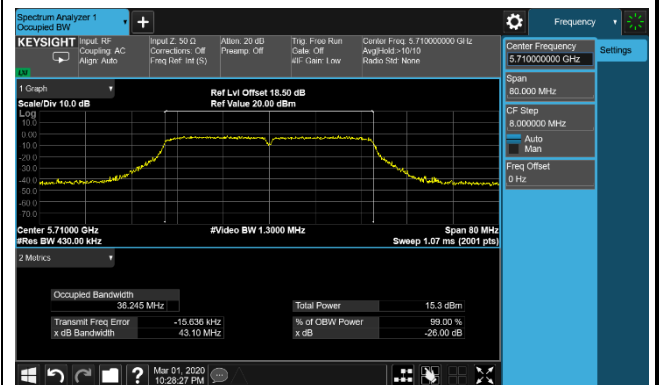


802.11n-HT40 26dB Bandwidth

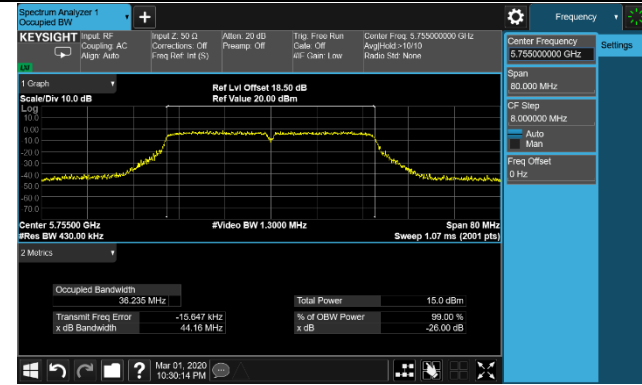
Channel 134 (5670MHz)



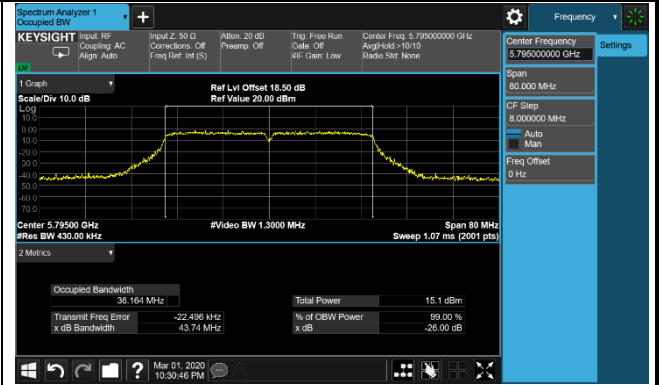
Channel 142 (5710MHz)



Channel 151 (5755MHz)

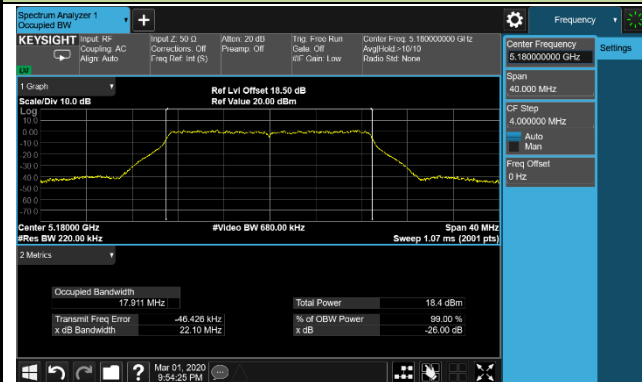


Channel 159 (5795MHz)

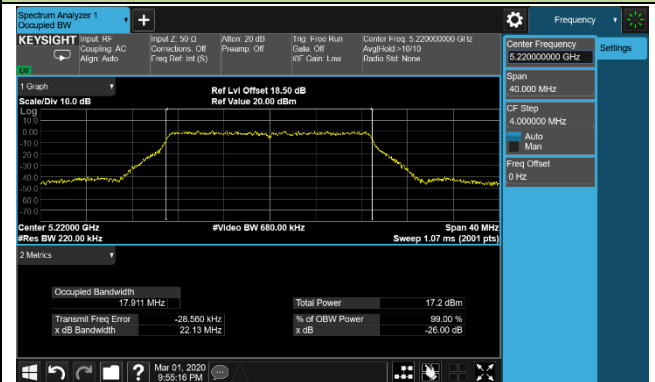


802.11ac-VHT20 26dB Bandwidth

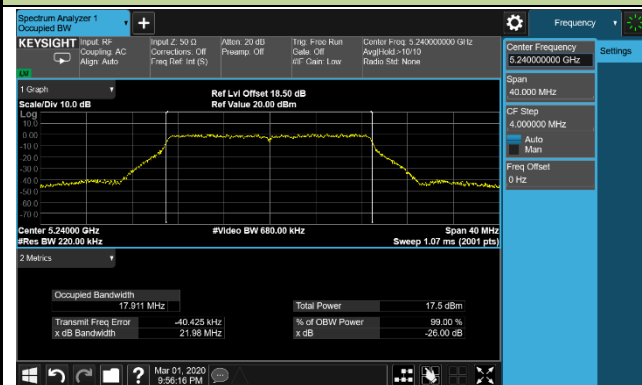
Channel 36 (5180MHz)



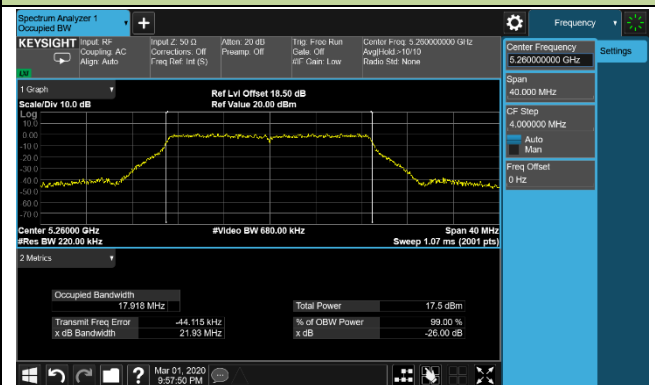
Channel 44 (5220MHz)



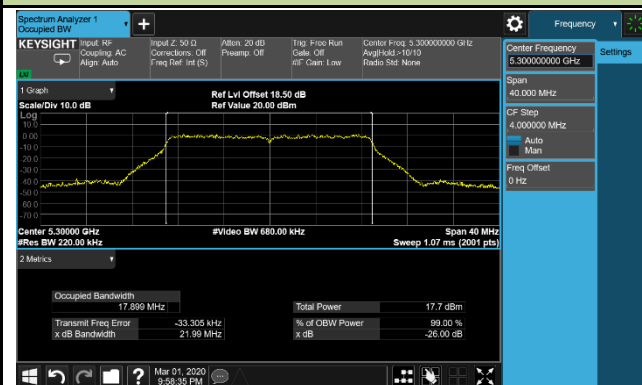
Channel 48 (5240MHz)



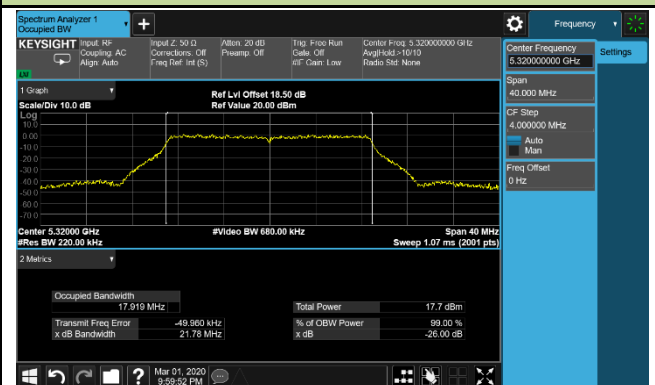
Channel 52 (5260MHz)



Channel 60 (5300MHz)

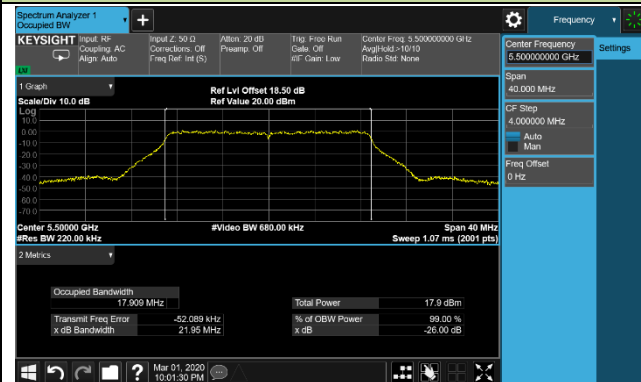


Channel 64 (5320MHz)

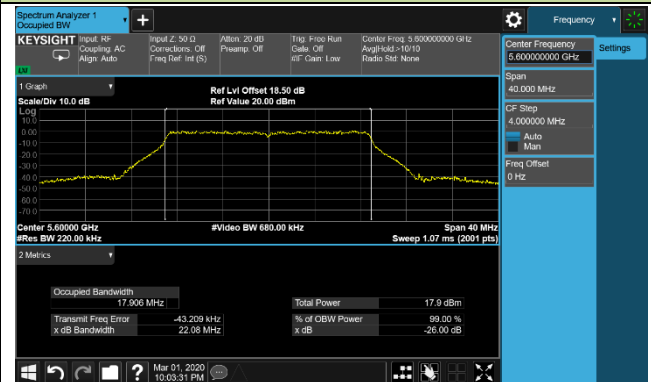


802.11ac-VHT20 26dB Bandwidth

Channel 100 (5500MHz)



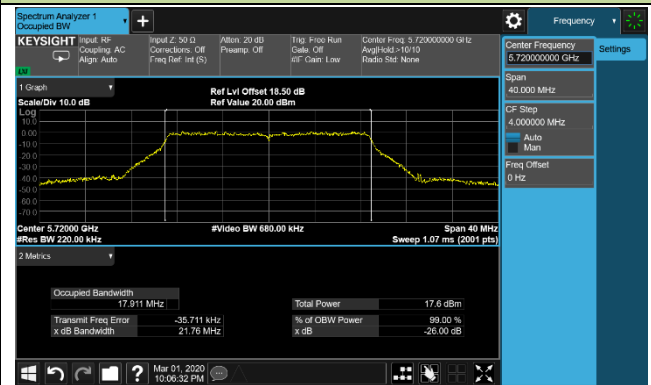
Channel 120 (5600MHz)



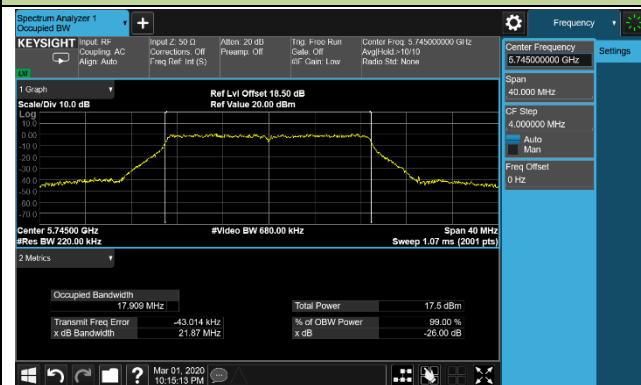
Channel 140 (5700MHz)



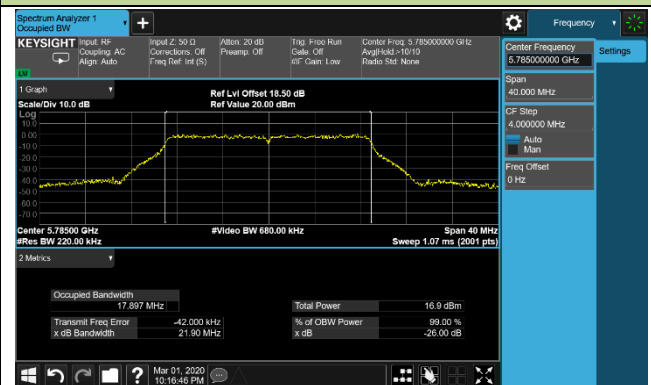
Channel 144 (5720MHz)



Channel 149 (5745MHz)

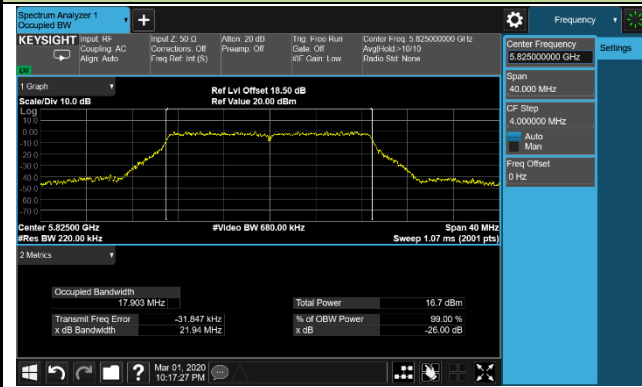


Channel 157 (5785MHz)



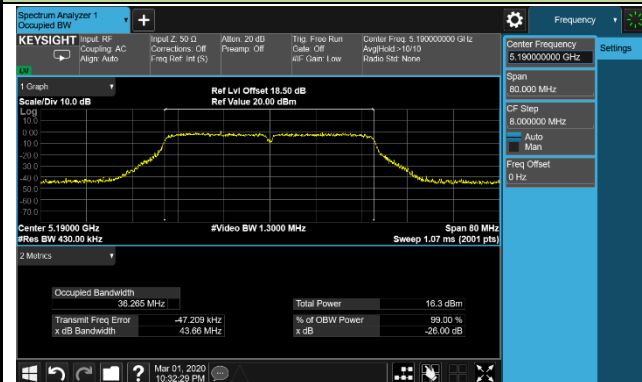
802.11ac-VHT20 26dB Bandwidth

Channel 165 (5825MHz)

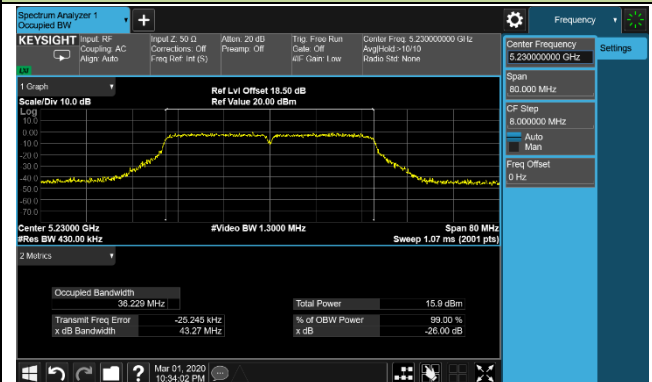


802.11ac-VHT40 26dB Bandwidth

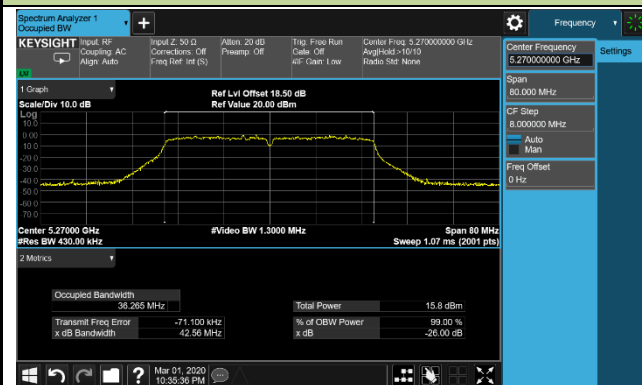
Channel 38 (5190MHz)



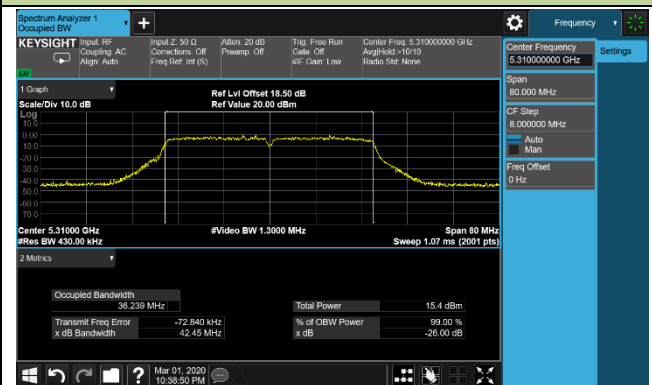
Channel 46 (5230MHz)



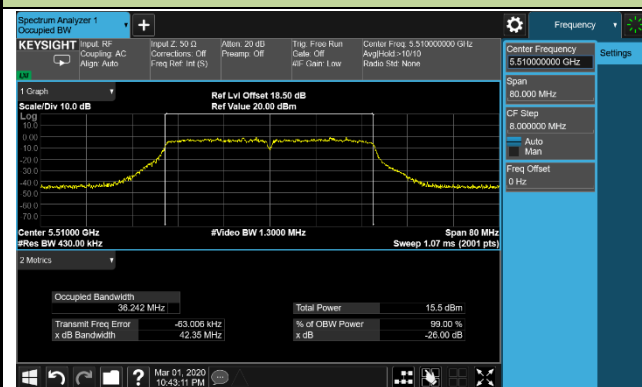
Channel 54 (5270MHz)



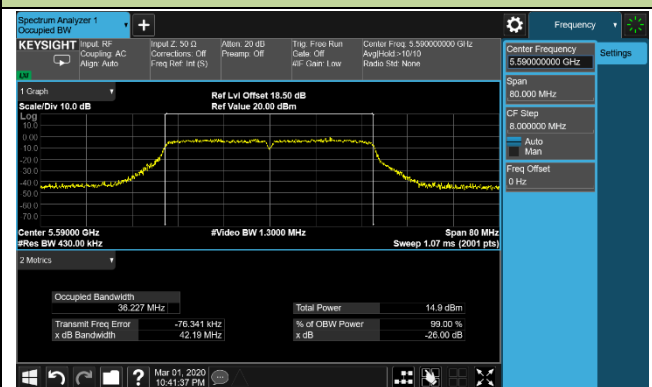
Channel 62 (5310MHz)



Channel 102 (5510MHz)

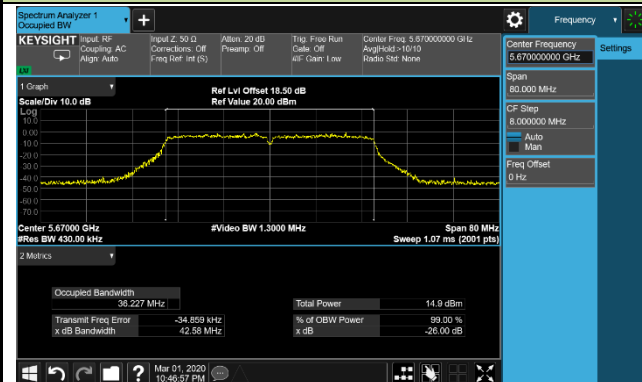


Channel 110 (5550MHz)

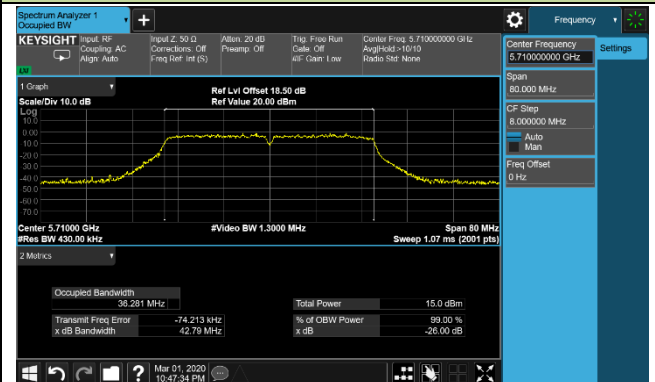


802.11ac-VHT40 26dB Bandwidth

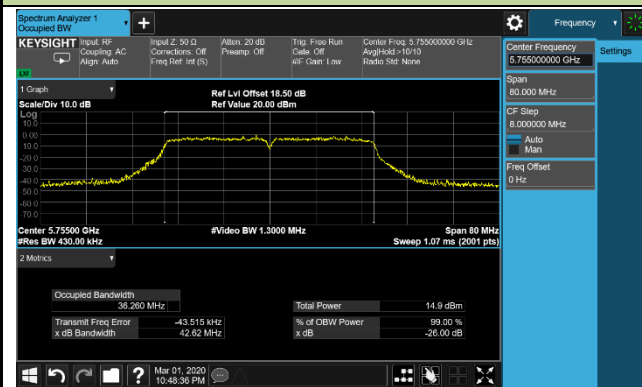
Channel 134 (5670MHz)



Channel 142 (5710MHz)



Channel 151 (5755MHz)



Channel 159 (5795MHz)

