

MEASUREMENT REPORT

FCC ID : P27OT4221

APPLICANT : Sercomm Corporation

Application Type : Certification

Product : Dual Band ONT

Model No. : AOT-4221SR

Brand Name : Airtel

FCC Classification : Unlicensed National Information Infrastructure (UNII)

FCC Rule Part(s) : Part 15 Subpart E (Section 15.407)

Test Procedure(s) : ANSI C63.10-2013

Received Date : November 9, 2022

Test Date : November 10, 2022~November 23, 2022

Tested By : *Owen Tsai*
(Owen Tsai)

Reviewed By : *Paddy Chen*
(Paddy Chen)

Approved By : *Chenz Ker*
(Chenz Ker)



The test results only relate to the tested samples.

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 ANSI C63.10. 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 (Taiwan) Co., Ltd.

Revision History

Report No.	Version	Description	Issue Date	Note
2211TWD801-U2	1.0	Original Report	2023-01-10	

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§2.1033 General Information

Applicant	Sercomm Corporation
Applicant Address	8F, No. 3-1, YuanQu St., NanKang, Taipei 115, Taiwan, R.O.C.
Manufacturer	Sercomm Corporation
Manufacturer Address	8F, No. 3-1, YuanQu St., NanKang, Taipei 115, Taiwan, R.O.C.
Test Site	MRT Technology (Taiwan) Co., Ltd
Test Site Address	No. 38, Fuxing Second Rd., Guishan Dist., Taoyuan City 333, Taiwan (R.O.C)
MRT FCC Registration No.	291082
FCC Rule Part(s)	Part 15 Subpart E (Section 15.407)
Test Device Serial No.	#1-1 <input type="checkbox"/> Production <input checked="" type="checkbox"/> Pre-Production <input type="checkbox"/> Engineering

Test Facility / Accreditations

Measurements were performed at MRT Laboratory located in Fuxing Rd., Taoyuan, Taiwan (R.O.C)

- MRT facility is a FCC registered (Reg. No. 291082) test facility with the site description report on file and is designated by the FCC as an Accredited Test Firm.
- MRT facility is an IC registered (MRT Reg. No. 21723) test laboratory with the site description on file at Industry Canada.
- MRT Lab is accredited to ISO 17025 by the Taiwan Accreditation Foundation (TAF Cert. No. 3261) in EMC, Telecommunications and Radio testing for FCC (Designation Number: TW3261), Industry Taiwan, EU and TELEC Rules.

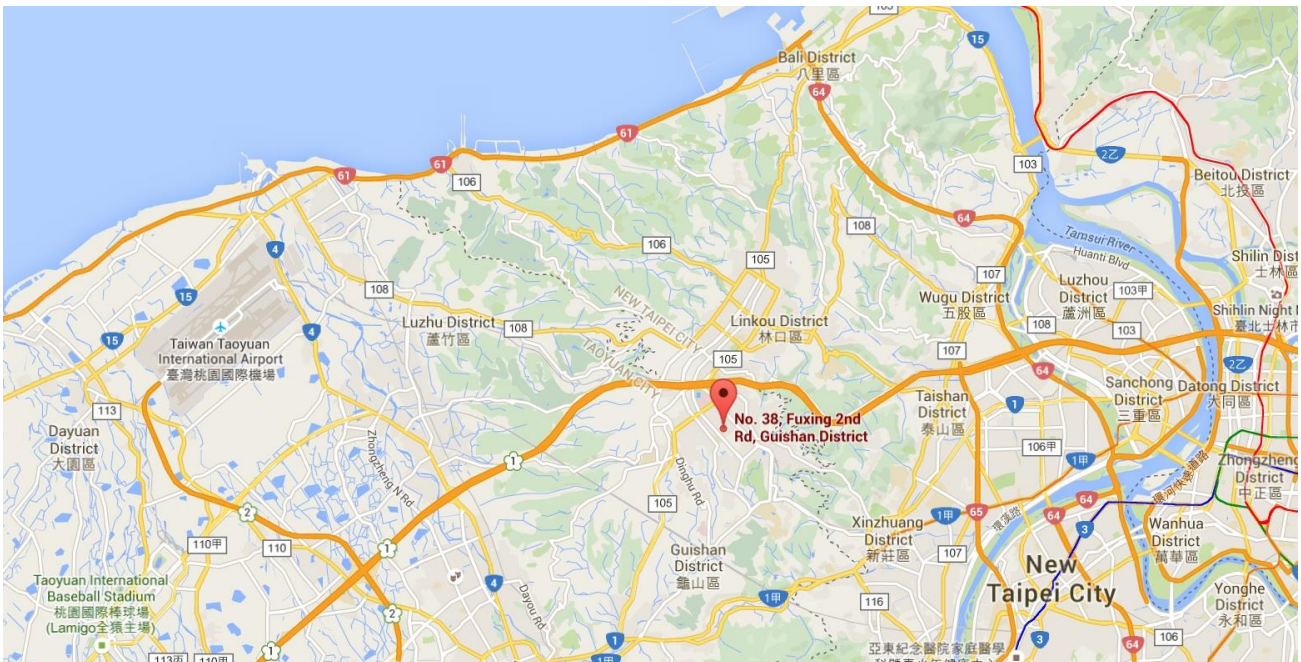
1. INTRODUCTION

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 Industry Canada Certification and Engineering Bureau.

1.2. MRT Test Location

The map below shows the location of the MRT LABORATORY, its proximity to the Taoyuan City. These measurement tests were conducted at the MRT Technology (Taiwan) Co., Ltd. Facility located at No.38, Fuxing 2nd Rd., Guishan Dist., Taoyuan City 33377, Taiwan (R.O.C).



2. PRODUCT INFORMATION

2.1. Equipment Description

Product Name:	Dual Band ONT
Model No.:	AOT-4221SR
Brand Name:	Airtel
Wi-Fi Specification:	802.11a/b/g/n/ac (2TX / 2RX)
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, 5610 MHz, 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 300Mbps 802.11ac: up to 866.7Mbps
Accessory	
Adapter#1	BRAND: airtel MODEL: MSA-C2000IS12.0-24W-IN INPUT: 90-270V ~ 50/60Hz 0.7A max. OUTPUT: DC 12.0V 2A
Adapter#2	BRAND: Wisepower MODEL: WS1202000A10F1 INPUT: 90-270V ~ 50/60Hz 0.6A OUTPUT: DC 12V 2.0A

2.2. Operation Frequencies and Channel List

802.11 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	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

802.11 n-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
126	5630 MHz	134	5670 MHz	151	5755 MHz
159	5795 MHz	--	--	--	--

802.11ac-VHT80

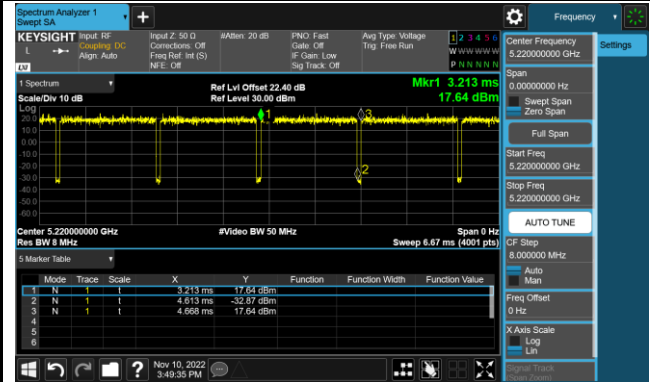
Channel	Frequency	Channel	Frequency	Channel	Frequency
42	5210 MHz	58	5290 MHz	106	5530 MHz
122	5610 MHz	138	5690 MHz	155	5775 MHz

Duty Cycle

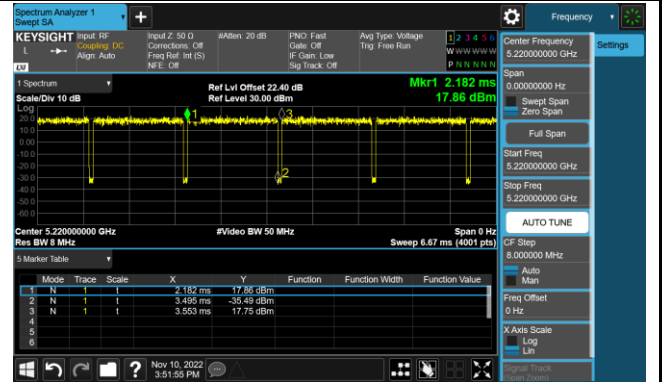
Test Mode	Duty Cycle
802.11a	96.22%
802.11n-HT20	95.77%
802.11n-HT40	91.65%
802.11ac-VHT20	95.92%
802.11ac-VHT40	91.89%
802.11ac-VHT80	84.64%

Duty Cycle

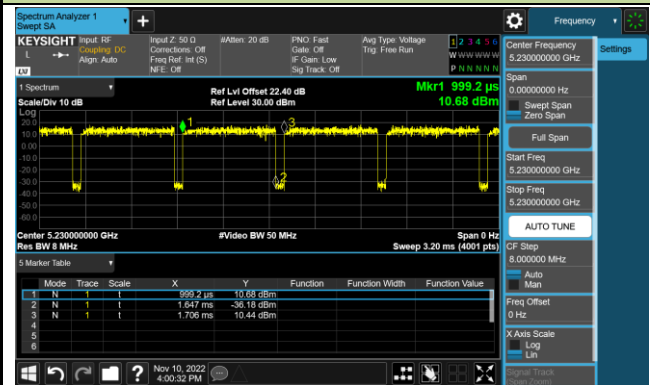
802.11a



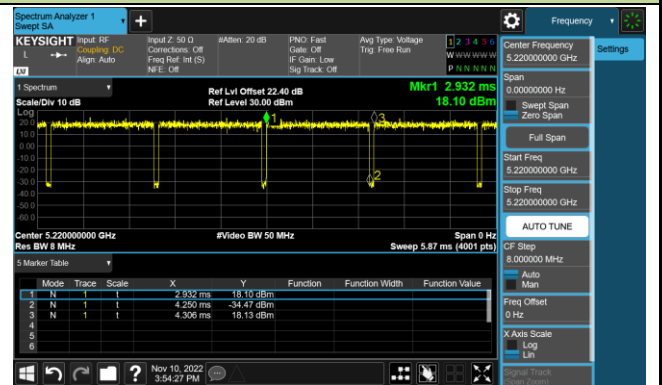
802.11n-HT20



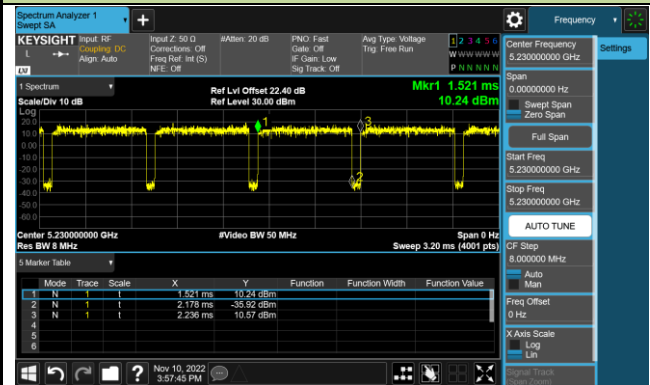
802.11n-HT40



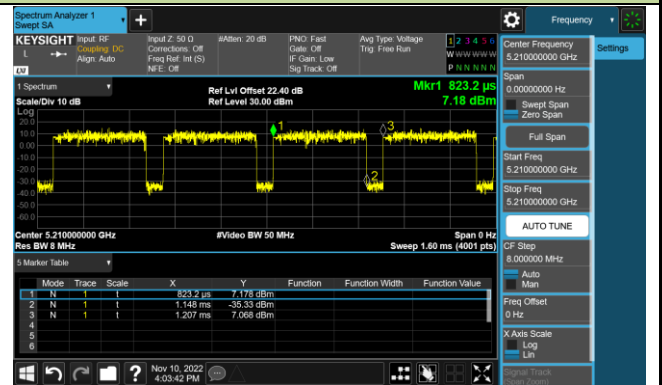
802.11ac-VHT20



802.11ac-VHT40



802.11ac-VHT80



2.3. Test Mode

Test Mode	Mode 1: Transmit by 802.11a (6Mbps) (CDD mode)
	Mode 2: Transmit by 802.11n-HT20 (MCS0) (CDD mode)
	Mode 3: Transmit by 802.11n-HT40 (MCS0) (CDD mode)
	Mode 4: Transmit by 802.11ac-VHT20 (MCS0) (CDD mode)
	Mode 5: Transmit by 802.11ac-VHT40 (MCS0) (CDD mode)
	Mode 6: Transmit by 802.11ac-VHT80 (MCS0) (CDD mode)
	Mode 7: Transmit by 802.11ac-VHT20 (MCS0) (Beam-Forming mode)
	Mode 8: Transmit by 802.11ac-VHT40 (MCS0) (Beam-Forming mode)
	Mode 9: Transmit by 802.11ac-VHT80 (MCS0) (Beam-Forming mode)

Note 1: Due to the same modulation between 802.11n, so 802.11n-HT20 and HT40 are covered by 802.11ac-VHT20 and VHT40 in this report, meanwhile, power setting for 802.11n-HT20 and HT40 will not be greater than 802.11ac-VHT20 and VHT40.

Note 2: Due to CDD mode was the worst mode, so all test items were evaluated in this report. The beamforming mode only evaluated the RF output power.

2.4. Description of Test Software

The test utility software used during testing was “MT7603 QA V0.0.1.63”.

Note: Final power setting please refer to operational description.

2.5. Test Configuration

This device was tested per the guidance of KDB 789033 D02v02r01. ANSI C63.10-2013 was used to reference the appropriate EUT setup for radiated spurious emissions testing and AC line conducted testing.

2.6. EMI Suppression Device(s)/Modifications

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

2.7. 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 device is 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.

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 9'x4'x3' 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.

Line conducted emissions test results are shown in Section 7.10.

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 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 **Dual Band ONT**, is permanently attached.
- There are no provisions for connection to an external antenna.

Conclusion:

The EUT unit complies with the requirement of §15.203.

4.1. Description of Available Antennas

Antenna Type	Frequency Band (MHz)	T _x Paths	Max Antenna Gain (dBi)	Beamforming Directional Gain (dBi)	CDD Directional Gain (dBi)	
					For Power	For PSD
PIFA Antenna	2412 ~ 2462	2	3.50	6.51	3.50	6.51
	5150 ~ 5350	2	3.20	6.21	3.20	6.21
	5470 ~ 5725	2	3.30	6.31	3.30	6.31
	5725 ~ 5850	2	3.20	6.21	3.20	6.21

Note:

1. The EUT supports Cyclic Delay Diversity (CDD) mode, and CDD signals are correlated.

If all antennas have the same gain, G_{ANT} , Directional gain = $G_{ANT} + \text{Array Gain}$, where Array Gain is as follows.

- For power spectral density (PSD) measurements on all devices,

$$\text{Array Gain} = 10 \log(N_{ANT} / N_{SS}) \text{ dB};$$

- For power measurements on IEEE 802.11 devices,

$$\text{Array Gain} = 0 \text{ dB for } N_{ANT} \leq 4;$$

2. The EUT also supports Beam Forming mode, and the Beam Forming support 802.11ac/ax, not include 802.11a/b/g/n. BF Directional gain = $G_{ANT} + 10 \log(N_{ANT})$.

3. All messages of antenna were declared by manufacturer.

5. TEST EQUIPMENT CALIBRATION DATE

Conducted Emissions – SR2

Instrument	Manufacturer	Type No.	Asset No.	Cali. Interval	Cali. Due Date
Two-Line V-Network	R&S	ENV216	MRTTWA00019	1 year	2023/3/7
Cable	Rosnol	N1C50-RG400-B 1C50-500CM	MRTTWE00013	1 year	2023/6/19
EMI Test Receiver	R&S	ESR3	MRTTWA00009	1 year	2023/3/9

Radiated Emissions – AC2

Instrument	Manufacturer	Type No.	Asset No.	Cali. Interval	Cali. Due Date
Broadband TRILOG Antenna	SCHWARZBECK	VULB 9162	MRTTWA00001	1 year	2022/12/4
EMI Test Receiver	R&S	ESR3	MRTTWA00009	1 year	2023/3/9
Signal Analyzer	R&S	FSVA3044	MRTTWA00092	1 year	2023/6/23
Active Loop Antenna	Schwarzbeck	FMZB 1519B	MRTTWA00002	1 year	2023/5/24
Broadband Hornantenna	RFSPIN	DRH18-E	MRTTWA00087	1 year	2023/5/10
Breitband Hornantenna	Schwarzbeck	BBHA 9170	MRTTWA00004	1 year	2023/3/29
Broadband Preampfier	EMC Instruments corporation	EMC118A45SE	MRTTWA00088	1 year	2023/5/9
Broadband Preampfier	SCHWARZBECK	BBV 9718	MRTTWA00005	1 year	2023/3/30
Cable	HUBERSUHNER	SF106	MRTTWE00034	1 year	2023/6/27

Conducted Test Equipment – SR5

Instrument	Manufacturer	Type No.	Asset No.	Cali. Interval	Cali. Due Date
EXA Signal Analyzer	KEYSIGHT	N9010A	MRTTWA00012	1 year	2023/10/5
EXA Signal Analyzer	KEYSIGHT	N9010B	MRTTWA00074	1 year	2023/7/19
USB Wideband Power Sensor	KEYSIGHT	U2021XA	MRTTWA00015	1 year	2023/3/16

Test Software

Software	Version	Function
e3	9.160520a	EMI Test Software
EMI	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
Measuring Uncertainty for a Level of Confidence of 95% ($U=2Uc(y)$): 150kHz~30MHz: $\pm 2.53\text{dB}$
Radiated Emission Measurement
Measuring Uncertainty for a Level of Confidence of 95% ($U=2Uc(y)$): 9kHz ~ 1GHz: $\pm 4.25\text{dB}$ 1GHz ~ 40GHz: $\pm 4.45\text{dB}$
Conducted Power (Carrier Power / Power Density)
Measuring Uncertainty for a Level of Confidence of 95% ($U=2Uc(y)$): $\pm 0.84\text{dB}$
Conducted Spurious Emission
Measuring Uncertainty for a Level of Confidence of 95% ($U=2Uc(y)$): $\pm 2.65\text{ dB}$
Occupied Bandwidth
Measuring Uncertainty for a Level of Confidence of 95% ($U=2Uc(y)$): $\pm 3.3\%$
Temp. / Humidity
Measuring Uncertainty for a Level of Confidence of 95% ($U=2Uc(y)$): $\pm 0.82^\circ\text{C}/ \pm 3\%$
Frequency Error
Measuring Uncertainty for a Level of Confidence of 95% ($U=2Uc(y)$): $\pm 78.4\text{Hz}$

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)(i), (2), (3)	Maximum Conducted Output Power	Refer to Section 7.4		Pass	Section 7.4
15.407(h)(1)	Transmit Power Control	$\leq 24\text{ dBm}$		N/A	Section 7.5
15.407(a)(1)(i), (2), (3), (5)	Power Spectral Density	Refer to Section 7.7		Pass	Section 7.6
15.407(b)(1), (4)	Undesirable Emissions	$\leq -27\text{dBm/MHz EIRP}$ $\leq -17\text{dBm/MHz EIRP}$	Radiated	Pass	Section 7.7 & 7.8
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 7.9

Notes:

- 1) Determining compliance is based on the test results met the regulation limits or requirements declared by clients, and the test results don't take into account the value of measurement uncertainty.
- 2) All channels, modes, and modulations/data rates were investigated among all UNII bands. The test results shown in the following sections represent the worst case emissions.
- 3) 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.

7.2. 26dB Bandwidth Measurement

7.2.1. Test Limit

N/A

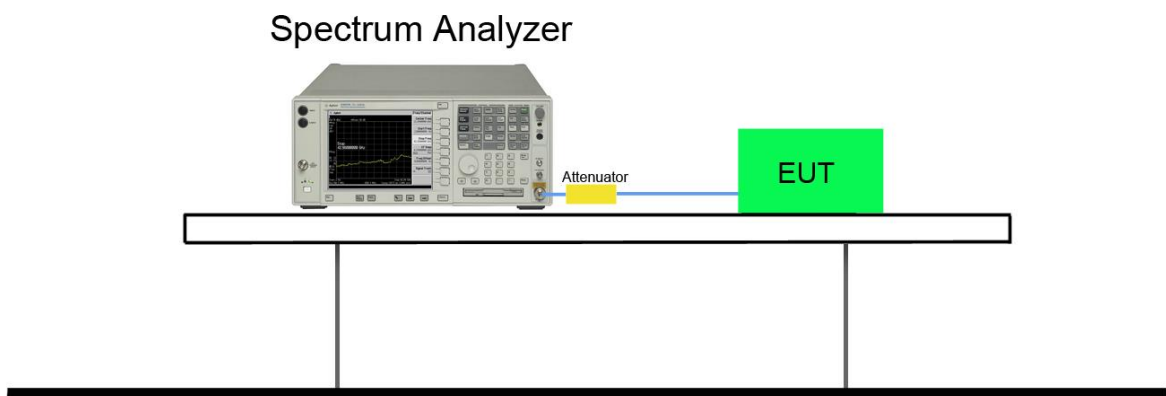
7.2.2. Test Procedure used

K DB 789033 D02v02r01 - Section C.1 / ANSI C63.10 6.9.3 / RSS-Gen 6.7

7.2.3. Test Setting

1. The analyzers' automatic bandwidth measurement capability was used to perform the 26dB bandwidth measurement. The "X" dB bandwidth parameter was set to $X = 26$. The automatic bandwidth measurement function also has the capability of simultaneously measuring the 99% occupied bandwidth. The bandwidth measurement was not influenced by any intermediated power nulls in the fundamental emission.
2. RBW = approximately 1% of the emission bandwidth.
3. VBW $\geq 3 \times$ RBW.
4. Detector = Peak.
5. Trace mode = max hold.

7.2.4. Test Setup



7.2.5. Test Result

Product	Dual Band ONT	Test Engineer	Marvin
Test Site	SR5	Test Date	2022/11/22
Test Item	26dB Bandwidth & 99% Bandwidth		

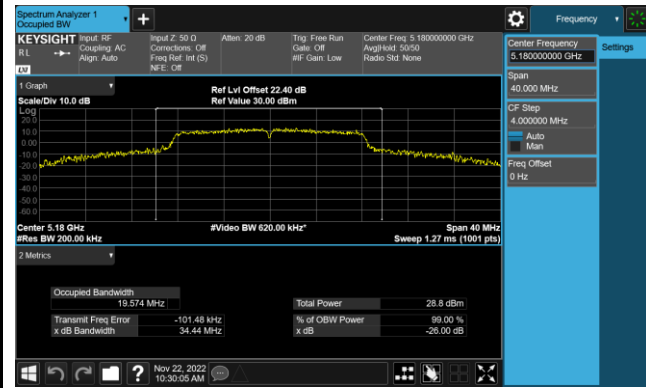
Test Mode	Channel No.	Frequency (MHz)	26dB Bandwidth (MHz)	99% Bandwidth (MHz)
Ant 1 / Ant 0+1				
802.11a	36	5180	34.44	19.574
802.11a	44	5220	36.08	22.209
802.11a	48	5240	33.87	20.788
802.11a	52	5260	19.42	16.369
802.11a	60	5300	19.25	16.385
802.11a	64	5320	19.14	16.342
802.11a	100	5500	19.33	16.349
802.11a	116	5580	19.37	16.392
802.11a	140	5700	19.34	16.352
802.11a	144	5720	19.32	16.361
802.11a	149	5745	37.13	23.920
802.11a	157	5785	35.78	23.180
802.11a	165	5825	35.76	22.681
802.11n-HT20	36	5180	29.05	18.324
802.11n-HT20	44	5220	33.58	20.681
802.11n-HT20	48	5240	33.68	19.792
802.11n-HT20	52	5260	19.94	17.528
802.11n-HT20	60	5300	19.82	17.540
802.11n-HT20	64	5320	19.77	17.549
802.11n-HT20	100	5500	19.74	17.548
802.11n-HT20	116	5580	19.58	17.573
802.11n-HT20	140	5700	19.69	17.557
802.11n-HT20	144	5720	19.52	17.542
802.11n-HT20	149	5745	39.29	24.824
802.11n-HT20	157	5785	38.03	24.159
802.11n-HT20	165	5825	37.81	23.848

Test Mode	Channel No.	Frequency (MHz)	26dB Bandwidth (MHz)	99% Bandwidth (MHz)
802.11n-HT40	38	5190	39.45	35.964
802.11n-HT40	46	5230	79.42	51.273
802.11n-HT40	54	5270	40.05	36.138
802.11n-HT40	62	5310	39.79	36.029
802.11n-HT40	102	5510	39.56	35.921
802.11n-HT40	110	5550	39.65	35.950
802.11n-HT40	134	5670	38.89	35.883
802.11n-HT40	142	5710	39.58	35.992
802.11n-HT40	151	5755	77.37	44.172
802.11n-HT40	159	5795	78.37	45.825
802.11ac-VHT20	36	5180	29.24	17.699
802.11ac-VHT20	44	5220	31.73	19.787
802.11ac-VHT20	48	5240	34.43	18.729
802.11ac-VHT20	52	5260	19.84	17.578
802.11ac-VHT20	60	5300	19.75	17.544
802.11ac-VHT20	64	5320	19.93	17.552
802.11ac-VHT20	100	5500	19.51	17.517
802.11ac-VHT20	116	5580	19.85	17.548
802.11ac-VHT20	140	5700	19.94	17.551
802.11ac-VHT20	144	5720	19.85	17.563
802.11ac-VHT20	149	5745	38.84	24.106
802.11ac-VHT20	157	5785	39.65	23.905
802.11ac-VHT20	165	5825	36.87	23.829
802.11ac-VHT40	38	5190	39.84	35.993
802.11ac-VHT40	46	5230	79.53	51.526
802.11ac-VHT40	54	5270	40.04	36.058
802.11ac-VHT40	62	5310	39.13	35.952
802.11ac-VHT40	102	5510	39.38	36.054
802.11ac-VHT40	110	5550	39.46	35.931
802.11ac-VHT40	134	5670	39.67	35.931
802.11ac-VHT40	142	5710	39.56	36.056
802.11ac-VHT40	151	5755	76.63	47.539
802.11ac-VHT40	159	5795	78.87	47.670

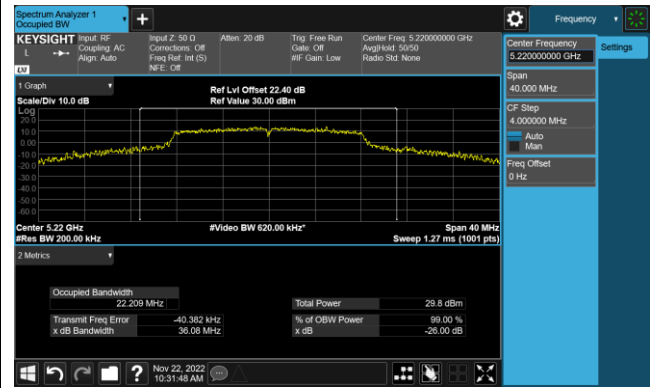
Test Mode	Channel No.	Frequency (MHz)	26dB Bandwidth (MHz)	99% Bandwidth (MHz)
802.11ac-VHT80	42	5210	79.55	75.317
802.11ac-VHT80	58	5290	79.17	75.294
802.11ac-VHT80	106	5530	79.70	75.340
802.11ac-VHT80	122	5610	78.95	75.377
802.11ac-VHT80	138	5690	79.55	75.290
802.11ac-VHT80	155	5775	109.50	75.671

802.11a 26dB Bandwidth & 99% Bandwidth - Ant 1

Channel 36 (5180MHz)



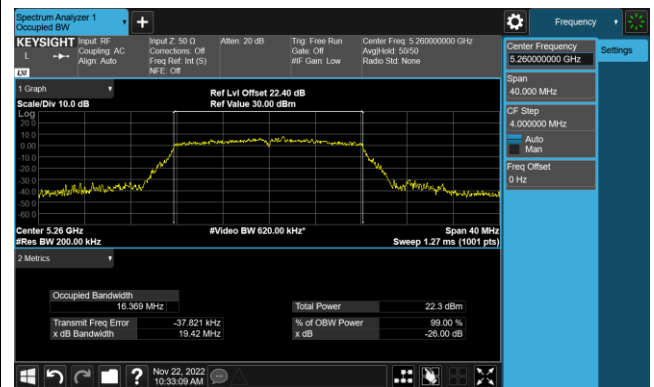
Channel 44 (5220MHz)



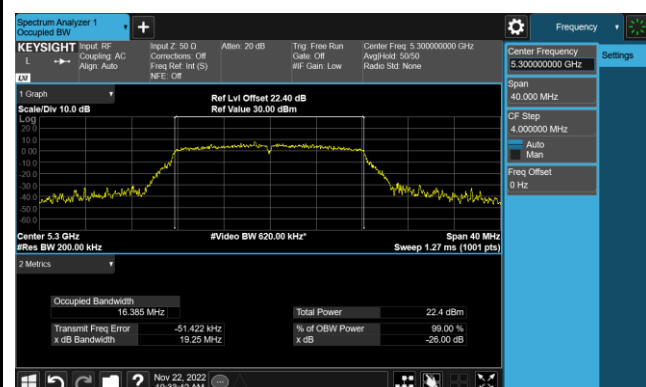
Channel 48 (5240MHz)



Channel 52 (5260MHz)



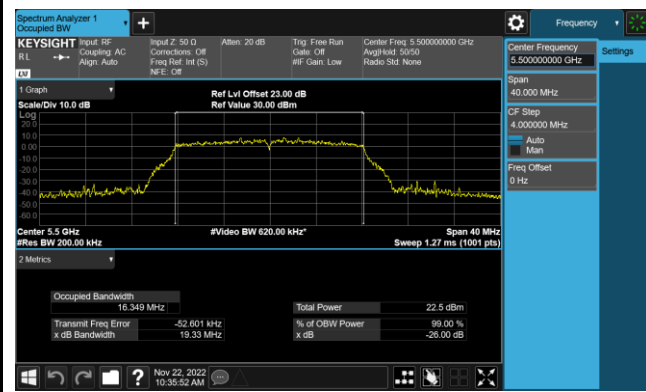
Channel 60 (5300MHz)



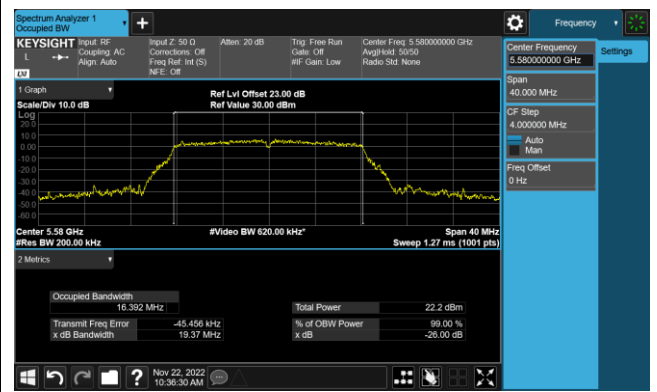
Channel 64 (5320MHz)



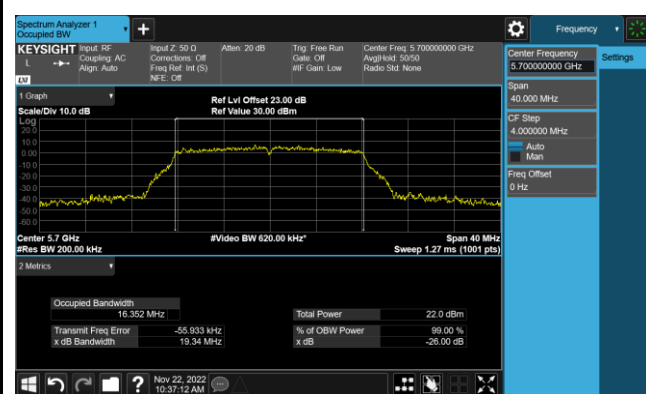
Channel 100 (5500MHz)



Channel 116 (5580MHz)



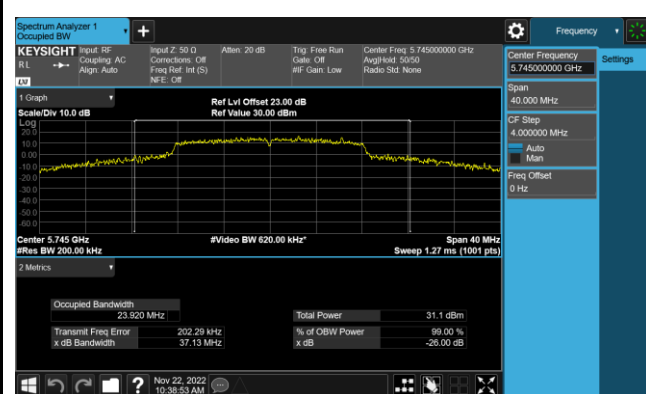
Channel 140 (5700MHz)



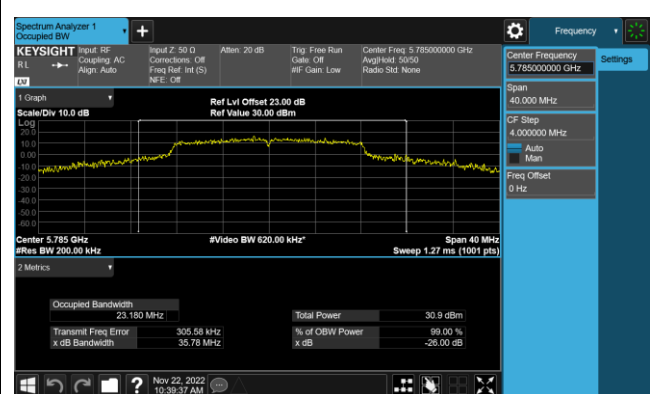
Channel 144 (5720MHz)



Channel 149 (5745MHz)



Channel 157 (5785MHz)

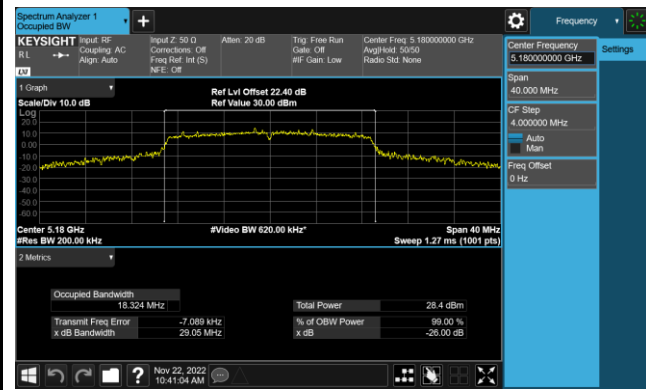


Channel 165 (5825MHz)

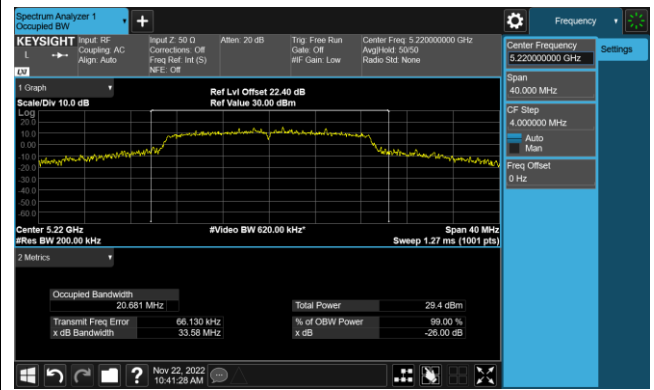


802.11n-HT20 26dB Bandwidth & 99% Bandwidth - Ant 1

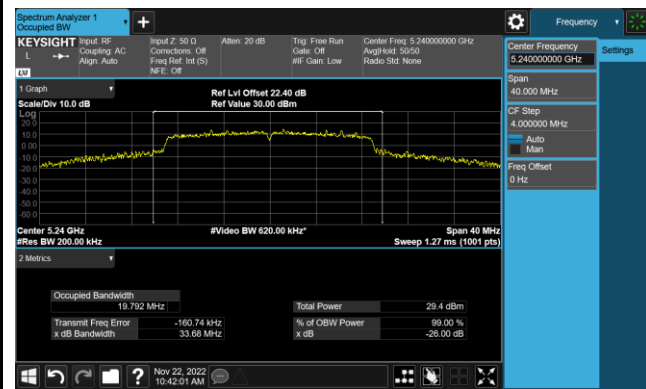
Channel 36 (5180MHz)



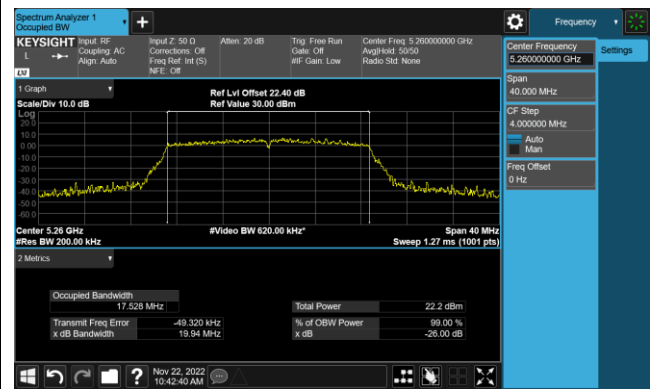
Channel 44 (5220MHz)



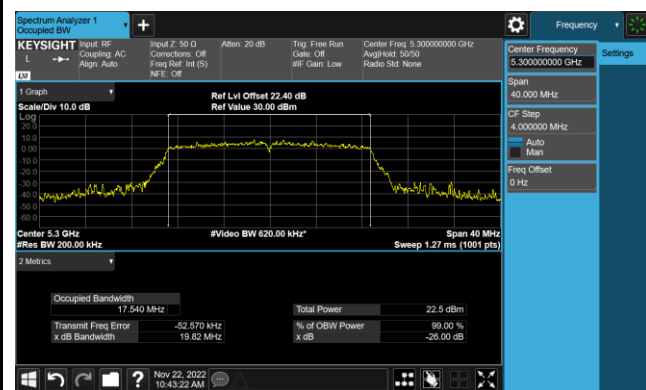
Channel 48 (5240MHz)



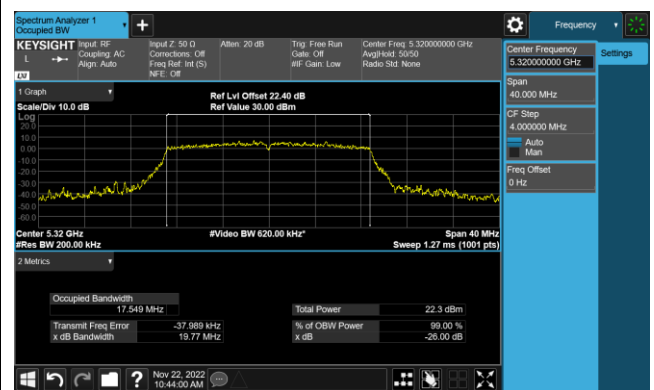
Channel 52 (5260MHz)



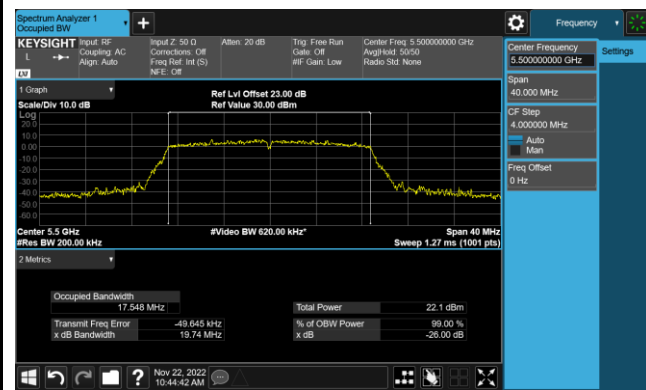
Channel 60 (5300MHz)



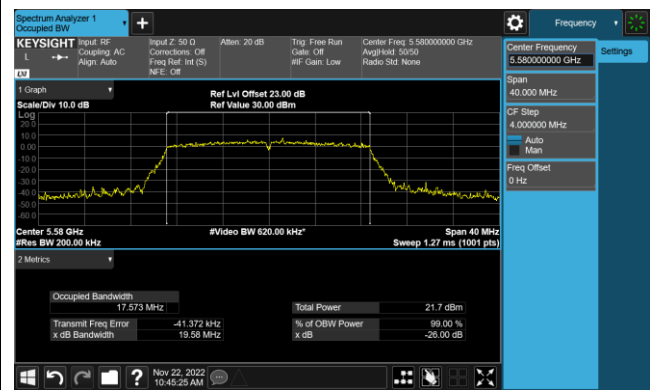
Channel 64 (5320MHz)



Channel 100 (5500MHz)



Channel 116 (5580MHz)



Channel 140 (5700MHz)



Channel 144 (5720MHz)



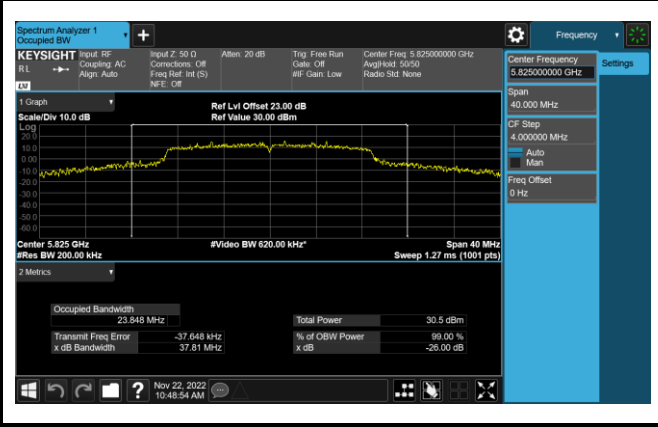
Channel 149 (5745MHz)



Channel 157 (5785MHz)

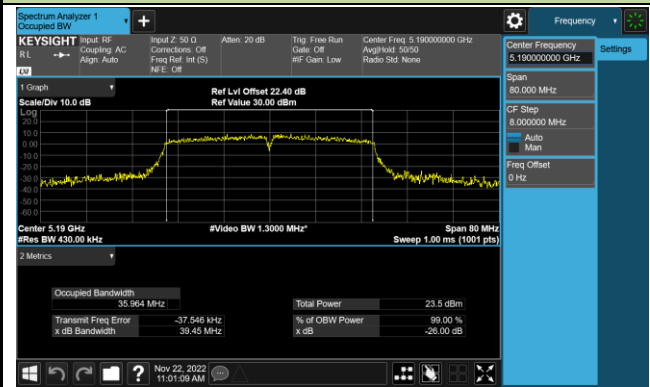


Channel 165 (5825MHz)

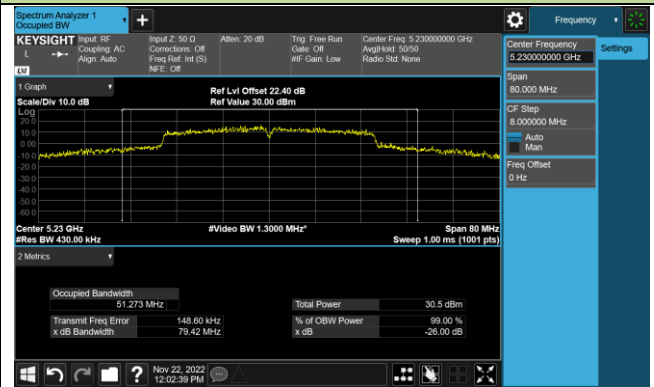


802.11n-HT40 26dB Bandwidth & 99% Bandwidth - Ant 1

Channel 38 (5190MHz)



Channel 46 (5230MHz)



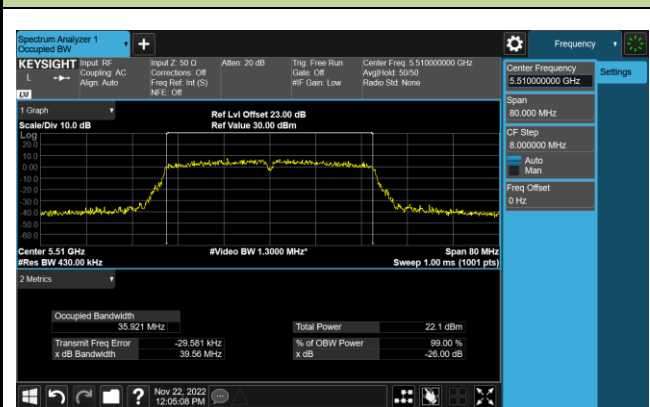
Channel 54 (5270MHz)



Channel 62 (5310MHz)



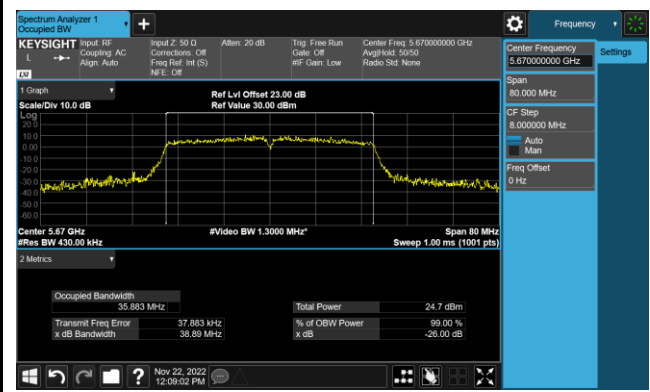
Channel 102 (5510MHz)



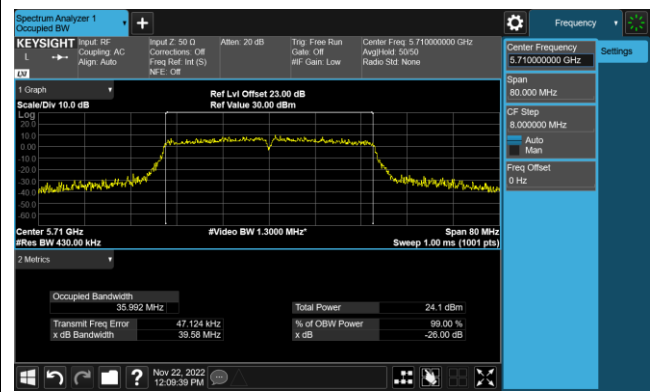
Channel 110 (5550MHz)



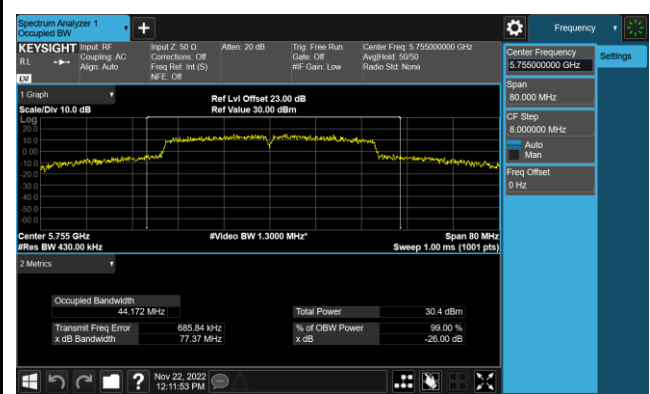
Channel 134 (5670MHz)



Channel 142 (5710MHz)



Channel 151 (5755MHz)

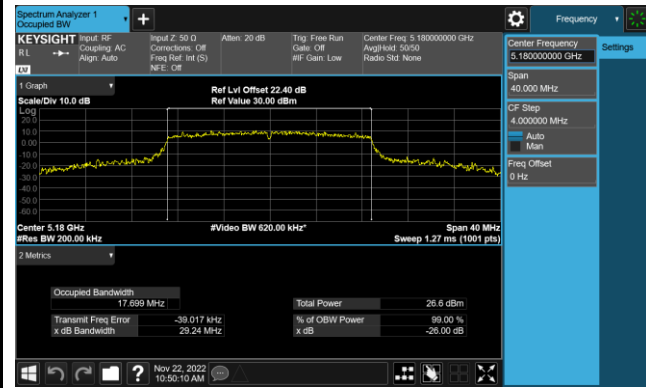


Channel 159 (5795MHz)



802.11ac-VHT20 26dB Bandwidth & 99% Bandwidth - Ant 1

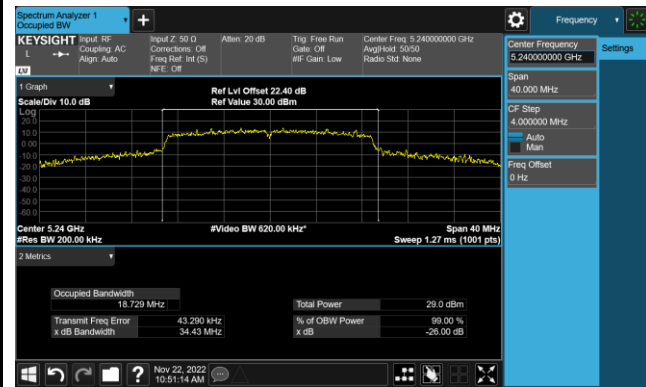
Channel 36 (5180MHz)



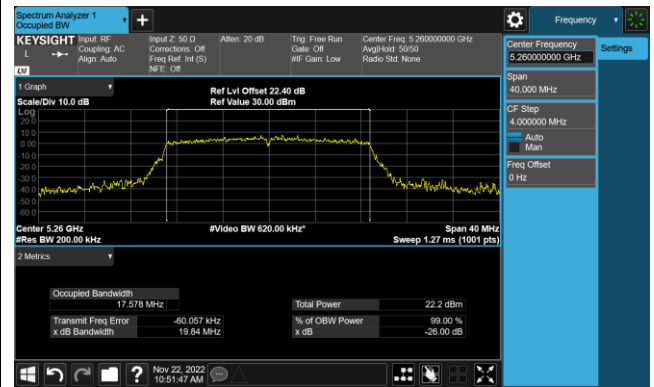
Channel 44 (5220MHz)



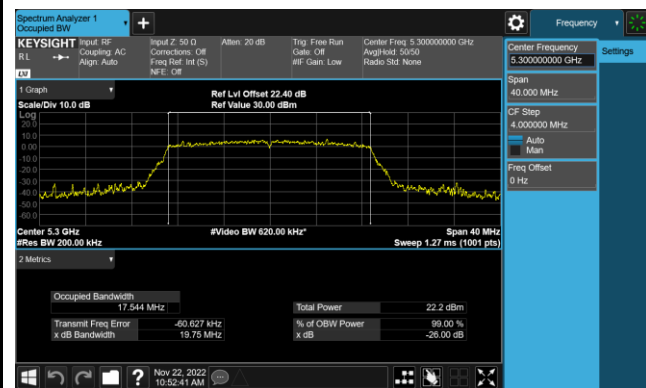
Channel 48 (5240MHz)



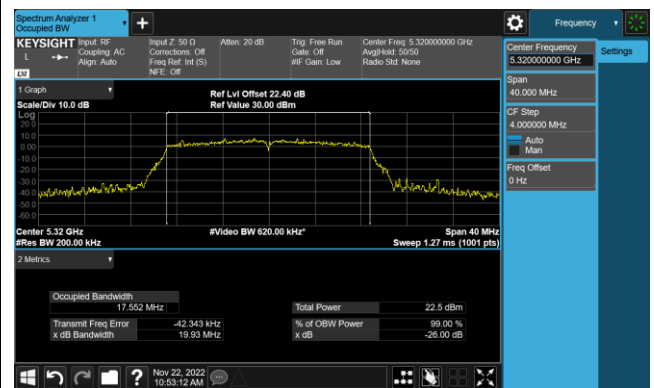
Channel 52 (5260MHz)



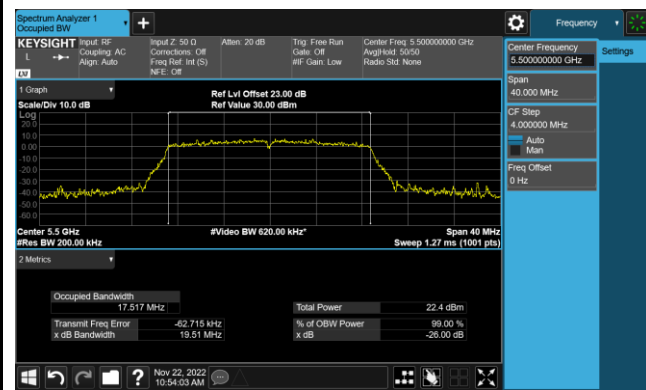
Channel 60 (5300MHz)



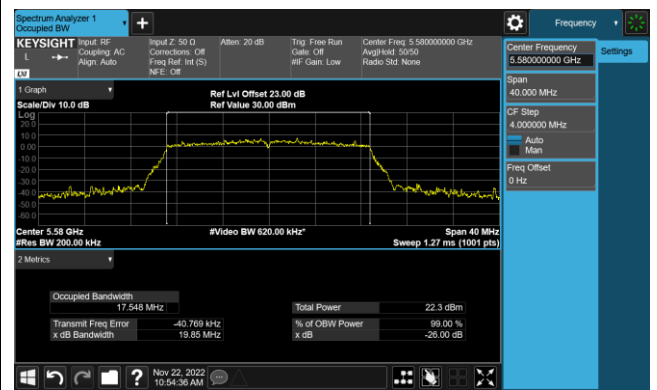
Channel 64 (5320MHz)



Channel 100 (5500MHz)



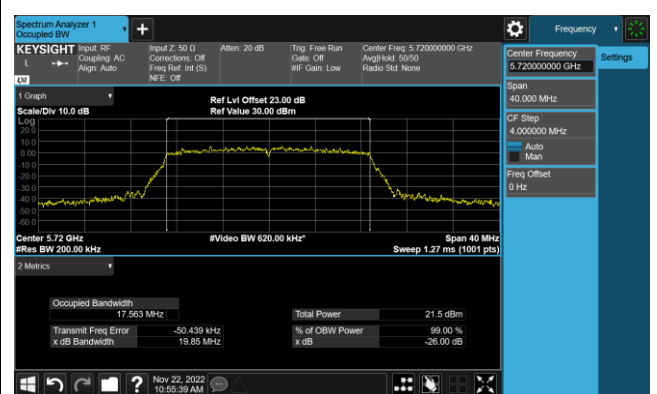
Channel 116 (5580MHz)



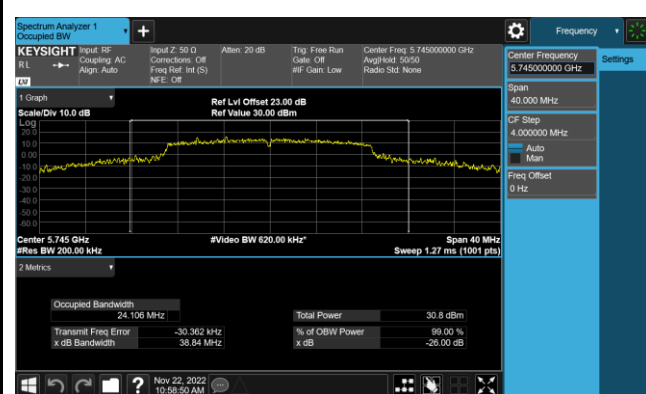
Channel 140 (5700MHz)



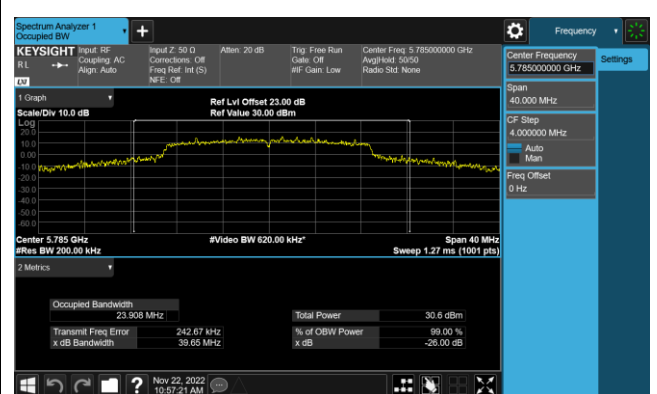
Channel 144 (5720MHz)



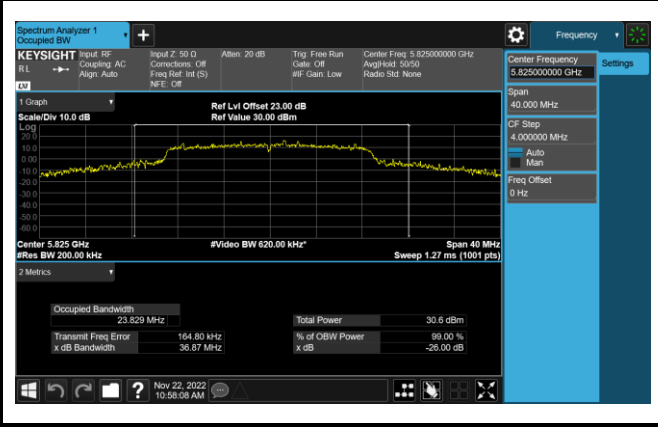
Channel 149 (5745MHz)



Channel 157 (5785MHz)

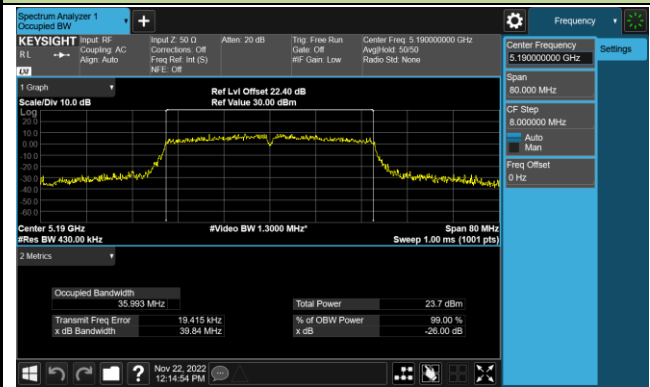


Channel 165 (5825MHz)

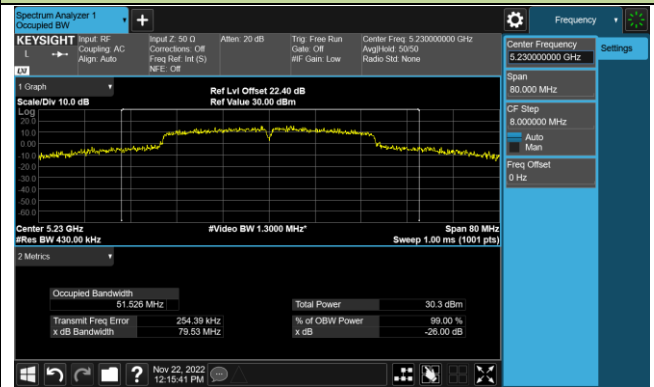


802.11ac-VHT40 26dB Bandwidth & 99% Bandwidth - Ant 1

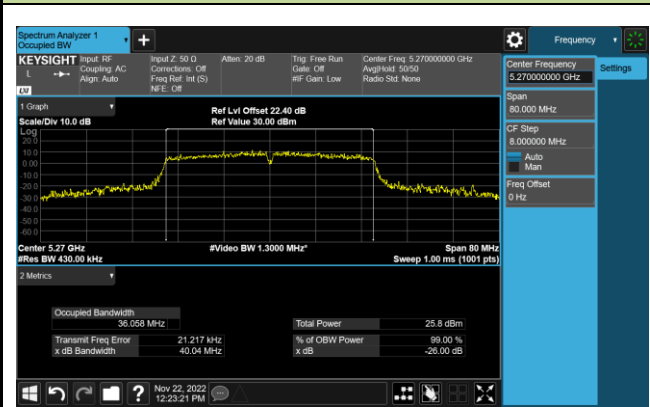
Channel 38 (5190MHz)



Channel 46 (5230MHz)



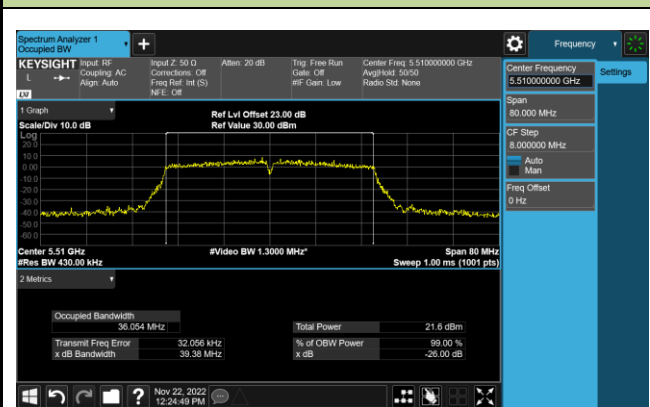
Channel 54 (5270MHz)



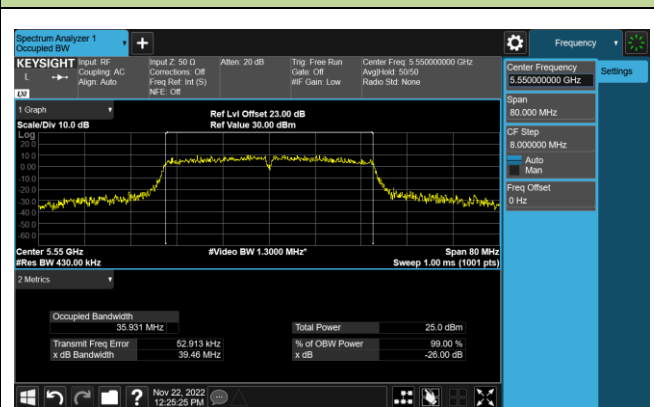
Channel 62 (5310MHz)



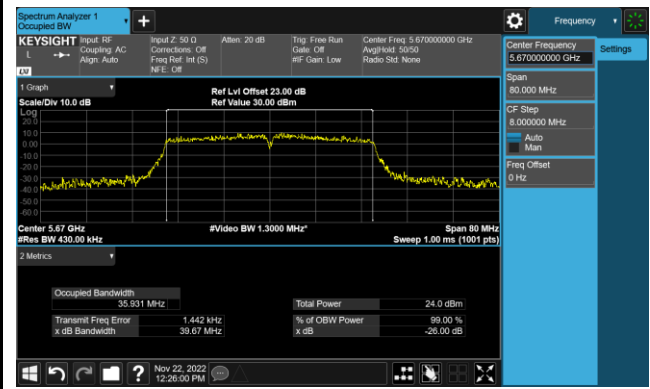
Channel 102 (5510MHz)



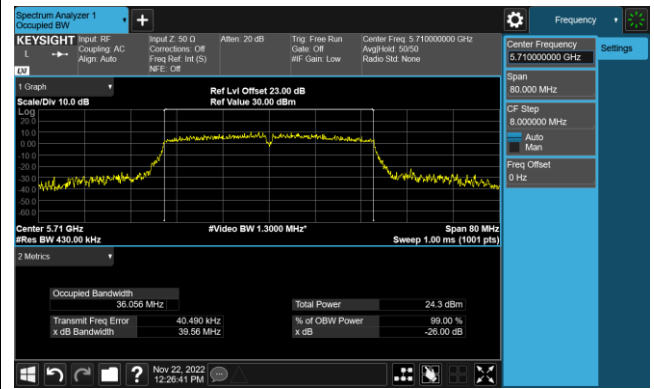
Channel 110 (5550MHz)



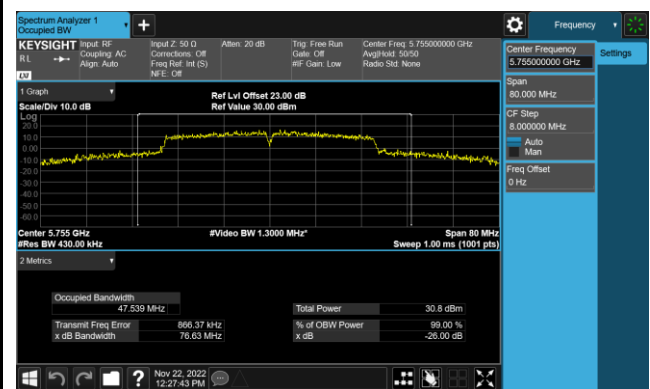
Channel 134 (5670MHz)



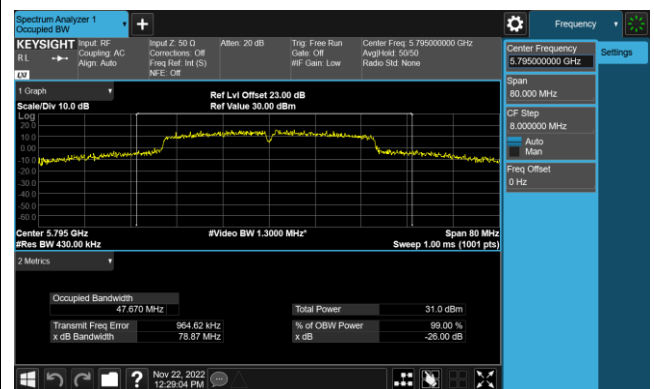
Channel 142 (5710MHz)



Channel 151 (5755MHz)

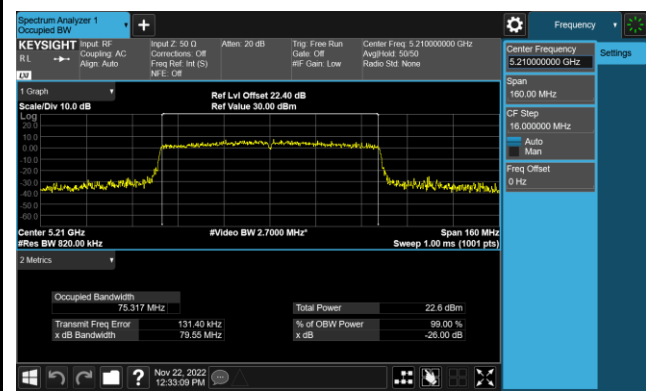


Channel 159 (5795MHz)

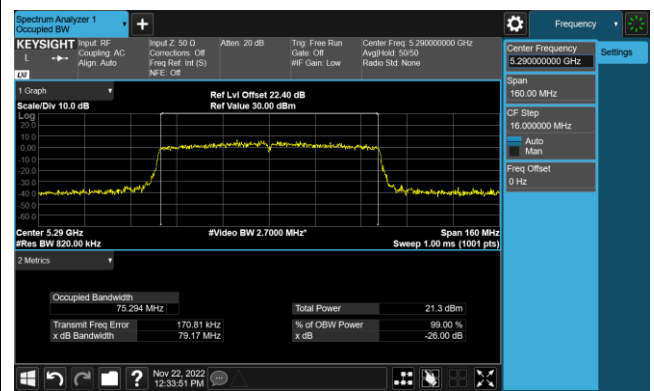


802.11ac-VHT80 26dB Bandwidth & 99% Bandwidth - Ant 1

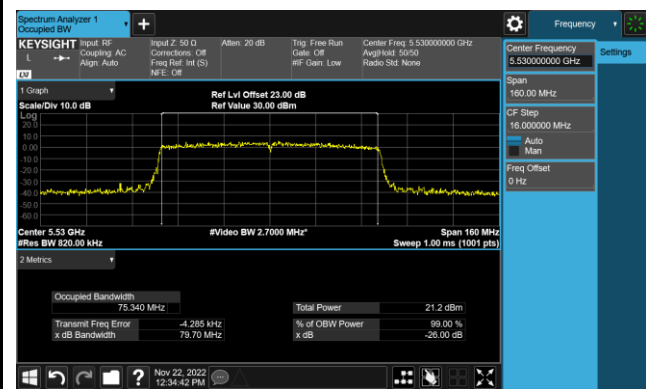
Channel 42 (5210MHz)



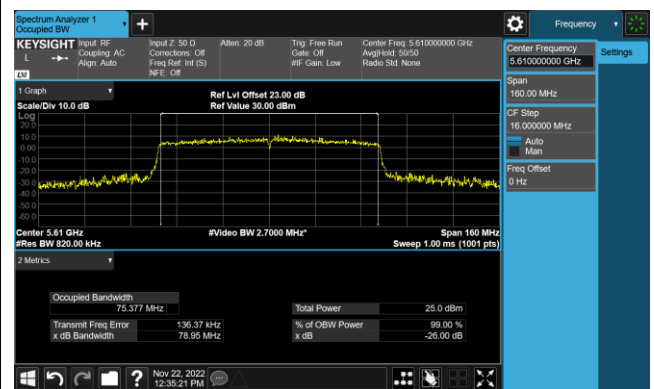
Channel 58 (5290MHz)



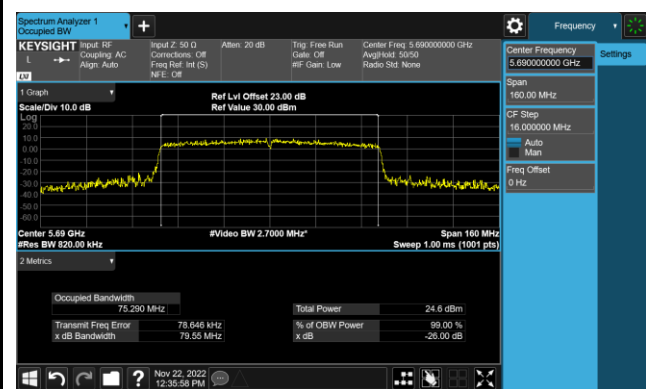
Channel 106 (5530MHz)



Channel 122 (5610MHz)



Channel 138 (5690MHz)



Channel 155 (5775MHz)

