

Project No: TM-2412000436P

Report No.: TMWK2412004781KR

FCC ID: 2AGBW9290038165X

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RADIO TEST REPORT

FCC 47 CFR PART 15 SUBPART E

Test Standard	FCC Part 15.407
Product name	Digital device
Brand Name	PHILIPS , hue, @ignify
Model No.	9290038165
Test Result	Pass
Statements of Conformity	Determination of compliance is based on the results of the compliance measurement, not taking into account measurement instrumentation uncertainty.

The test Result was tested by Compliance Certification Services Inc. The test data, data evaluation, test procedures, and equipment configurations shown in this report were given in ANSI C63.10-2020 and compliance standards.

The test results of this report relate only to the tested sample (EUT) identified in this report.

The test Report of full or partial shall not copy. Without written approval of Compliance Certification Services Inc.(Wugu Laboratory)

Approved by:



Shawn Wu
Supervisor

Unless otherwise stated the results shown in this test report refer only to the sample(s) tested and such sample(s) are retained for 90 days only.
除非另有說明，此報告結果僅對測試之樣品負責，同時此樣品僅保留90天。本報告未經本公司書面許可，不可部份複製。

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Revision History

Rev.	Issue Date	Revisions	Effect Page	Revised By
00	August 22, 2025	Initial Issue	ALL	Peggy Tsai
01	September 2, 2025	See the following Note Rev. (01)	P.12, 41, 45, 107, 108, 127, 128, 147, 148, 171, 172	Peggy Tsai

Rev. (01)

1. Modify test summery.
2. Modify test procedure, test setup and test result in section 4.3.
3. Added note in section 4.5.4.



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1. GENERAL INFORMATION

1.1 EUT INFORMATION

Applicant	Signify (China) Investment Co., Ltd. Building no.9, Lane 888, Tianlin Road, Minhang District, Shanghai, 200233, China
Manufacturer	Signify (China) Investment Co., Ltd. Building no.9, Lane 888, Tianlin Road, Minhang District, Shanghai, 200233, China
Equipment	Digital device
Model No.	9290038165
Model Discrepancy	N/A
Trade Name	PHILIPS , hue , Signify
Received Date	December 31, 2024
Date of Test	January 13 ~ 20, 2025
Power Operation	12V-24VAC, 10VA, 50/60Hz
HW Version	MB: C version SB: B version LB: B version
FW Version	V5.0.10R10DK

Remark:

1. For more details, please refer to the User's manual of the EUT.
2. Disclaimer: Antenna information is provided by the applicant, test results of this report are applicable to the sample EUT received.



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1.2 EUT CHANNEL INFORMATION

Frequency Range	UNII-1	
	IEEE 802.11a	5180 ~ 5240 MHz
	IEEE 802.11n HT20	5180 ~ 5240 MHz
	IEEE 802.11ac VHT20	5180 ~ 5240 MHz
	IEEE 802.11n HT40	5190 ~ 5230 MHz
	IEEE 802.11ac VHT40	5190 ~ 5230 MHz
	IEEE 802.11ac VHT80	5210 MHz
	UNII-2a	
	IEEE 802.11a	5260 ~ 5320 MHz
	IEEE 802.11n HT20	5260 ~ 5320 MHz
	IEEE 802.11ac VHT20	5260 ~ 5320 MHz
	IEEE 802.11n HT40	5270 ~ 5310 MHz
	IEEE 802.11ac VHT40	5270 ~ 5310 MHz
	IEEE 802.11ac VHT80	5290 MHz
	UNII-2c	
	IEEE 802.11a	5500 ~ 5700 MHz
	IEEE 802.11n HT20	5500 ~ 5700 MHz
	IEEE 802.11ac VHT20	5500 ~ 5700 MHz
	IEEE 802.11n HT40	5510 ~ 5670 MHz
	IEEE 802.11ac VHT40	5510 ~ 5670 MHz
	IEEE 802.11ac VHT80	5530 ~ 5610 MHz
	UNII-3	
	IEEE 802.11a	5745 ~ 5825 MHz
	IEEE 802.11n HT20	5745 ~ 5825 MHz
	IEEE 802.11ac VHT20	5745 ~ 5825 MHz
	IEEE 802.11n HT40	5755 ~ 5795 MHz
	IEEE 802.11ac VHT40	5755 ~ 5795 MHz
	IEEE 802.11ac VHT80	5775 MHz

Modulation Type	1. IEEE 802.11a mode: OFDM 2. IEEE 802.11n HT 20 MHz mode: OFDM 3. IEEE 802.11n HT 40 MHz mode: OFDM 4. IEEE 802.11ac VHT 20 MHz mode: OFDM 5. IEEE 802.11ac VHT 40 MHz mode: OFDM 6. IEEE 802.11ac VHT 80 MHz mode: OFDM
-----------------	--

Remark:

1. Refer as ANSI C63.10-2020 for test channels

Number of frequencies to be tested		
Frequency range in which device operates	Number of frequencies	Location in frequency range of operation
☐ 1 MHz or less	1	Middle
☐ 1 MHz to 10 MHz	2	1 near top and 1 near bottom
☒ More than 10 MHz	3	1 near top, 1 near middle, and 1 near bottom



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1.3 ANTENNA INFORMATION

Antenna Type	☒ PIFA ☐ PCB ☐ Dipole ☐ Coils
Antenna Gain	Band I (5150-5250 MHz): Gain: 4.4 dBi Band II (5250~5350 MHz): Gain: 4.4 dBi Band III (5470-5725 MHz): Gain: 4.4 dBi Band IV (5725-5850MHz): Gain: 4.4 dBi
Antenna Connector	i-pex

Note:

1.The antenna(s) of the EUT are permanently attached and there are no provisions for connection to an external antenna. So the EUT complies with the requirements of §15.203.



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1.4 MEASUREMENT UNCERTAINTY

PARAMETER	UNCERTAINTY
AC Powerline Conducted Emission	± 2.21 dB
Channel Bandwidth	± 2.79 dB
RF output power (Spectrum)	± 2.74 dB
Power Spectral density	± 2.74 dB
Radiated Emission_9kHz-30MHz	± 3.492 dB
Radiated Emission_30MHz-200MHz	± 3.62 dB
Radiated Emission_200MHz-1GHz	± 3.899 dB
Radiated Emission_1GHz-6GHz	± 5.063 dB
Radiated Emission_6GHz-18GHz	± 5.122 dB
Radiated Emission_18GHz-26GHz	± 3.032 dB
Radiated Emission_26GHz-40GHz	± 3.271 dB

Remark:

1. This uncertainty represents an expanded uncertainty expressed at approximately the 95% confidence level using a coverage factor of $k=2$
2. ISO/IEC 17025 requires that an estimate of the measurement uncertainties associated with the emissions test results be included in the report.

1.5 FACILITIES AND TEST LOCATION

All measurement facilities used to collect the measurement data are located at

☒ No.11, Wugong 6th Rd., Wugu Dist., New Taipei City, Taiwan.

CAB identifier: TW1309

Test site	Test Engineer	Remark
AC Conduction Room	Ben Yang	-
Radiation	Tony Chao 、 Ray Li	-
RF Conducted	Jerry Chang	-

Remark: The lab has been recognized as the FCC accredited lab. under the KDB 974614 D01 and is listed in the FCC public Access Link (PAL) database, FCC Registration No. :444940, the FCC Designation No.:TW1309



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1.6 INSTRUMENT CALIBRATION

Conducted_FCC/IC/NCC (All)					
Name of Equipment	Manufacturer	Model	Serial Number	Calibration Date	Calibration Due
PXA Signal Analyzer	Keysight	N9030B	MY62291089	2024-10-04	2025-10-03
Power Sensor	Anritsu	MA2411B	1911387	2024-08-30	2025-08-29
Power Sensor	Anritsu	MA2411B	1911386	2024-07-19	2025-07-18
Power Meter	Anritsu	ML2496A	2136002	2024-07-19	2025-07-18
DC Blocks	Marvelous Microwave	MVE6411	MVE-001	2024-08-08	2025-08-07
Attenuator	Marvelous Microwave Inc	MVE2213-10	08	2024-11-07	2025-11-06
Software	Radio Test Software Ver. 21				

966A_Radiated					
Name of Equipment	Manufacturer	Model	Serial Number	Calibration Date	Calibration Due
Signal Analyzer	KEYSIGHT	N9010A	MY52220817	2024-03-15	2025-03-14
Thermo-Hygro Meter	WISEWIND	1206	D07	2024-11-26	2025-11-25
Active Loop Antenna	SCHWARZBECK	FMZB 1513-60	1513-60-028	2024-12-11	2025-12-10
Bi-Log Antenna	Sunol Sciences	JB3	A030105	2024-07-12	2025-07-11
Preamplifier	EMEC	EM330	060609	2024-02-21	2025-02-20
Cable	Huber+Suhner	104PEA	20995+21000+182330	2024-08-07	2025-08-06
Horn Antenna	ETC	MCTD 1209	DRH13M02003	2024-12-20	2025-12-19
Preamplifier	HP	8449B	3008A00965	2024-12-18	2025-12-17
Cable	EMCI	EMC101G	221011+221012+221213	2024-10-11	2025-10-10
Attenuator	Mini-Circuits	BW-S9W5	BWS9W5-09-966A-01	2024-02-07	2025-02-06
High Pass Filter	TITAN	T04H70002600050S01	211215-7-3	2025-01-15	2026-01-14
Horn Antenna	SCHWARZBECK	BBHA9170	1047	2024-12-06	2025-12-05
Pre-Amplifier	EMCI	EMC184045SE	980860	2024-12-02	2025-12-01
Turn Table	CCS	CC-T-1F	N/A	N.C.R	N.C.R
Controller	CCS	CC-C-1F	N/A	N.C.R	N.C.R
Antenna Tower	CCS	CC-A-1F	N/A	N.C.R	N.C.R
Site Validation	CCS	966A	N/A	2024-08-03	2025-08-02
Software	e3 V9-210616c				

Remark:

- Each piece of equipment is scheduled for calibration once a year.
- N.C.R. = No Calibration Required.



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AC Mains Conduction					
Name of Equipment	Manufacturer	Model	Serial Number	Calibration Date	Calibration Due
EMI Test Receiver	R&S	ESCI	100064	2024-06-14	2025-06-13
LISN	TESEQ	LN2-16N	22012	2024-02-29	2025-02-27
Cable	Woken	SFL402	185A	2024-07-08	2025-07-07
Software	e3 V6-110812				

- Remark:**
- 1. Each piece of equipment is scheduled for calibration once a year.
 - 2. N.C.R. = No Calibration Required.



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1.7 SUPPORT AND EUT ACCESSORIES EQUIPMENT

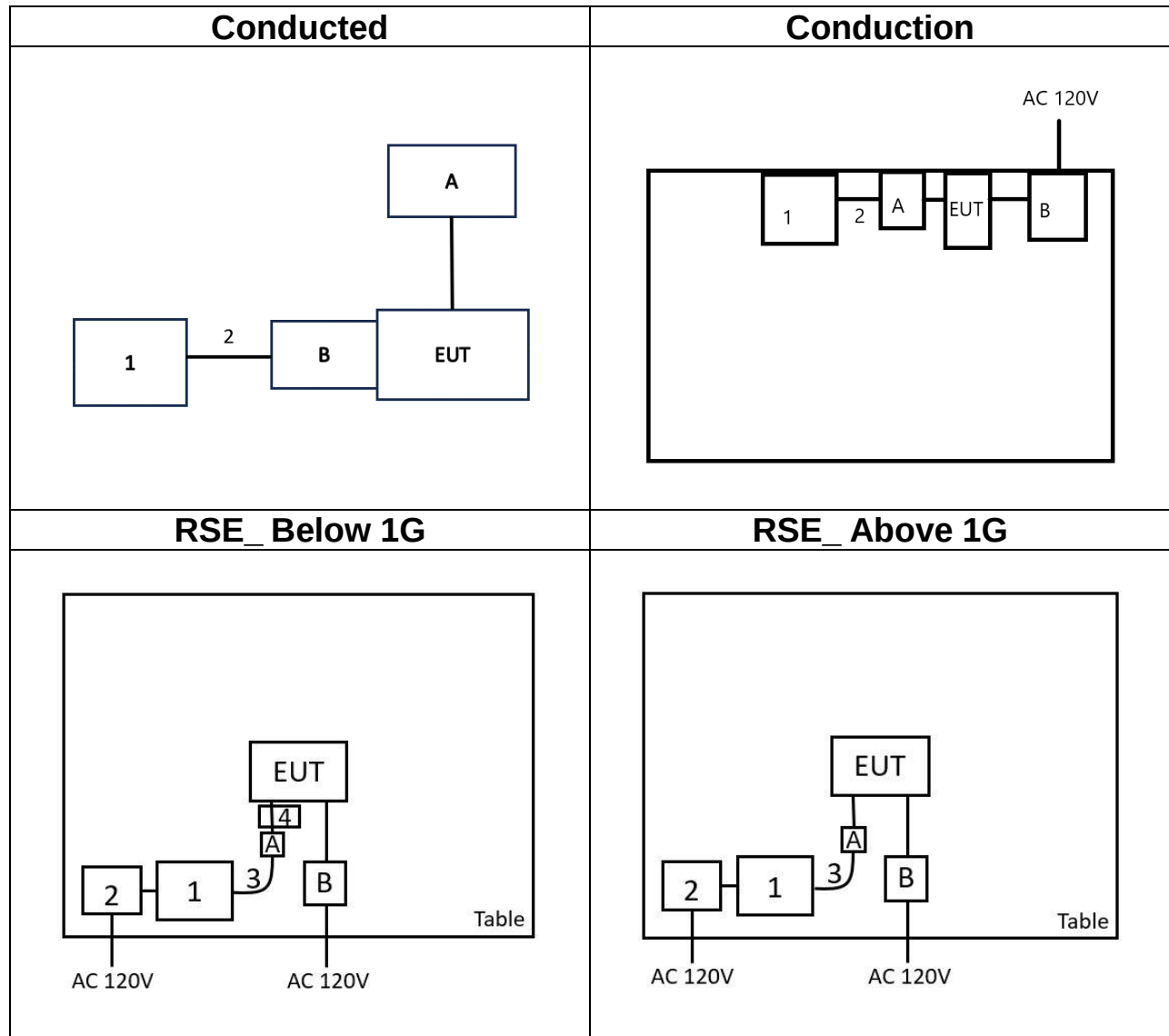
EUT Accessories Equipment						
No.	Equipment	Brand	Model	Series No.	FCC ID	IC
	N/A					

Support Equipment (Conducted)					
No.	Equipment	Brand	Model	Series No.	FCC ID
1	NB(I)	Lenovo	X260	N/A	N/A
2	USB to RS232	SUNBOX	USC-232G	N/A	N/A
A	Adapter	WUYELIN	PS-AC2440	N/A	N/A
B	Test kit	N/A	N/A	N/A	N/A

Support Equipment (Conduction)					
No.	Equipment	Brand	Model	Series No.	FCC ID
1	NB(D)	Lenovo	ThinkPad X260	N/A	N/A
2	USB to RS232	SUNBOX	USC-232G	N/A	N/A
A	Test kit	N/A	N/A	N/A	N/A
B	Adapter	WUYELIN	PS-AC2440	N/A	N/A

Support Equipment (RSE)					
No.	Equipment	Brand	Model	Series No.	FCC ID
1	NB(D)	Lenovo	ThinkPad X260	N/A	N/A
2	Adapter	Lenovo	ADLX45DLC3A	N/A	N/A
3	USB to RS232	SUNBOX	USC-232G	N/A	N/A
4	SUPPRESSION CORES	KINGCORE	RC 16*16*8-M	N/A	N/A
A	Test jig	N/A	N/A	N/A	N/A
B	Adapter	WUYELIN	PS-AC2440	N/A	N/A

1.8 TEST SET UP DIAGRAM



1.9 TEST PROGRAM

The EUT connection corresponds to the surrounding fixture control board.
This EUT uses "Tera Term" software and setup command to set the frequency, modulation, and power to allow the sample to continuously transmit.

1.10 TEST METHODOLOGY AND APPLIED STANDARDS

The test methodology, setups and results comply with all requirements in accordance with ANSI C63.10-2020, FCC Part 2, FCC Part 15.407, KDB 789033 D02 v02r01, KDB 905462 D02 v02.



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2. TEST SUMMERY

FCC Standard Sec.	Chapter	Test Item	Result
15.203	1.3	Antenna Requirement	Pass
15.207	4.1	AC Conducted Emission	Pass
15.407(a)	4.2	26dB Bandwidth	Pass
15.407(e)	4.2	6dB Bandwidth	Pass
2.1049	4.2	Occupied Bandwidth (99%)	Pass
15.407(a)	4.3	Output Power Measurement	Pass
15.407(a)	4.4	Power Spectral Density	Pass
15.407(b)	4.5	Radiation Band Edge	Pass
15.407(b)	4.5	Radiation Spurious Emission	Pass



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3. DESCRIPTION OF TEST MODES

3.1 THE WORST MODE OF OPERATING CONDITION

Operation mode	1. IEEE 802.11a mode: 6Mbps 2. IEEE 802.11n HT20 mode: MCS0 3. IEEE 802.11n HT40 mode: MCS0 4. IEEE 802.11ac VHT20 mode: MCS0 5. IEEE 802.11ac VHT40 mode: MCS0 6. IEEE 802.11ac VHT80 mode: MCS0																																																									
Operating Frequency	<table><tr><td></td><td>Mode</td><td>Frequency Range (MHz)</td></tr><tr><td rowspan="6">U-NII-1</td><td>IEEE 802.11a</td><td>5180, 5220, 5240</td></tr><tr><td>IEEE 802.11n HT20</td><td>5180, 5220, 5240</td></tr><tr><td>IEEE 802.11n HT40</td><td>5190, 5230</td></tr><tr><td>IEEE 802.11ac VHT20</td><td>5180, 5220, 5240</td></tr><tr><td>IEEE 802.11ac VHT40</td><td>5190, 5230</td></tr><tr><td>IEEE 802.11ac VHT80</td><td>5210</td></tr><tr><td rowspan="6">U-NII-2a</td><td>IEEE 802.11a</td><td>5260, 5300, 5320</td></tr><tr><td>IEEE 802.11n HT20</td><td>5260, 5300, 5320</td></tr><tr><td>IEEE 802.11n HT40</td><td>5270, 5310</td></tr><tr><td>IEEE 802.11ac VHT20</td><td>5260, 5300, 5320</td></tr><tr><td>IEEE 802.11ac VHT40</td><td>5270, 5310</td></tr><tr><td>IEEE 802.11ac VHT80</td><td>5290</td></tr><tr><td rowspan="6">U-NII-2c</td><td>IEEE 802.11a</td><td>5500, 5580, 5700</td></tr><tr><td>IEEE 802.11n HT20</td><td>5500, 5580, 5700</td></tr><tr><td>IEEE 802.11n HT40</td><td>5510, 5550, 5670</td></tr><tr><td>IEEE 802.11ac VHT20</td><td>5500, 5580, 5700</td></tr><tr><td>IEEE 802.11ac VHT40</td><td>5510, 5550, 5670</td></tr><tr><td>IEEE 802.11ac VHT80</td><td>5530, 5610</td></tr><tr><td rowspan="6">U-NII-3</td><td>IEEE 802.11a</td><td>5745, 5785, 5825</td></tr><tr><td>IEEE 802.11n HT20</td><td>5745, 5785, 5825</td></tr><tr><td>IEEE 802.11n HT40</td><td>5755, 5795</td></tr><tr><td>IEEE 802.11ac VHT20</td><td>5745, 5785, 5825</td></tr><tr><td>IEEE 802.11ac VHT40</td><td>5755, 5795</td></tr><tr><td>IEEE 802.11ac VHT80</td><td>5775</td></tr></table>				Mode	Frequency Range (MHz)	U-NII-1	IEEE 802.11a	5180, 5220, 5240	IEEE 802.11n HT20	5180, 5220, 5240	IEEE 802.11n HT40	5190, 5230	IEEE 802.11ac VHT20	5180, 5220, 5240	IEEE 802.11ac VHT40	5190, 5230	IEEE 802.11ac VHT80	5210	U-NII-2a	IEEE 802.11a	5260, 5300, 5320	IEEE 802.11n HT20	5260, 5300, 5320	IEEE 802.11n HT40	5270, 5310	IEEE 802.11ac VHT20	5260, 5300, 5320	IEEE 802.11ac VHT40	5270, 5310	IEEE 802.11ac VHT80	5290	U-NII-2c	IEEE 802.11a	5500, 5580, 5700	IEEE 802.11n HT20	5500, 5580, 5700	IEEE 802.11n HT40	5510, 5550, 5670	IEEE 802.11ac VHT20	5500, 5580, 5700	IEEE 802.11ac VHT40	5510, 5550, 5670	IEEE 802.11ac VHT80	5530, 5610	U-NII-3	IEEE 802.11a	5745, 5785, 5825	IEEE 802.11n HT20	5745, 5785, 5825	IEEE 802.11n HT40	5755, 5795	IEEE 802.11ac VHT20	5745, 5785, 5825	IEEE 802.11ac VHT40	5755, 5795	IEEE 802.11ac VHT80	5775
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	IEEE 802.11ac VHT40	5755, 5795																																																								
	IEEE 802.11ac VHT80	5775																																																								
Operation Transmitter	1. IEEE 802.11a mode: 1T1R(SISO) 2. IEEE 802.11n HT20 mode: 1T1R(SISO) 3. IEEE 802.11n HT40 mode: 1T1R(SISO) 4. IEEE 802.11ac VHT20 mode: 1T1R(SISO)) 5. IEEE 802.11ac VHT40 mode: 1T1R(SISO) 6. IEEE 802.11ac VHT80 mode: 1T1R(SISO)																																																									

Remark:

1. EUT pre-scanned data rate of output power for each mode, the worst data rate were recorded in this report.



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3.2 THE WORST MODE OF MEASUREMENT

AC Power Line Conduction Emission	
Test Condition	AC Power line conduction emission for line and neutral
Power supply Mode	Mode 1: EUT Power by Adapter
Worst Mode	☒ Mode 1 ☐ Mode 2 ☐ Mode 3 ☐ Mode 4

Radiated Emission Measurement Above 1G	
Test Condition	Radiated Emission Above 1G
Power supply Mode	Mode 1: EUT power by Adapter
Worst Mode	☒ Mode 1 ☐ Mode 2 ☐ Mode 3 ☐ Mode 4
Worst Position	☐ Placed in fixed position. ☐ Placed in fixed position at X-Plane (E2-Plane) ☒ Placed in fixed position at Y-Plane (E1-Plane) ☐ Placed in fixed position at Z-Plane (H-Plane)

Radiated Emission Measurement Below 1G	
Test Condition	Radiated Emission Below 1G
Power supply Mode	Mode 1: EUT power by Adapter
Worst Mode	☒ Mode 1 ☐ Mode 2 ☐ Mode 3 ☐ Mode 4

Remark:

1. The worst mode was record in this test report.
2. AC power line conducted emission were performed the EUT transmit at the highest output power channel as worse case.
3. EUT pre-scanned in three axis ,X,Y, Z and two polarity, for radiated measurement. The worst case(Y-Plane) were recorded in this report



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3.3 EUT DUTY CYCLE

Temperature: 17.5 ~ 22.3°C

Test date: January 13 ~ 20, 2025

Humidity: 45 ~ 51% RH

Tested by: Jerry Chang

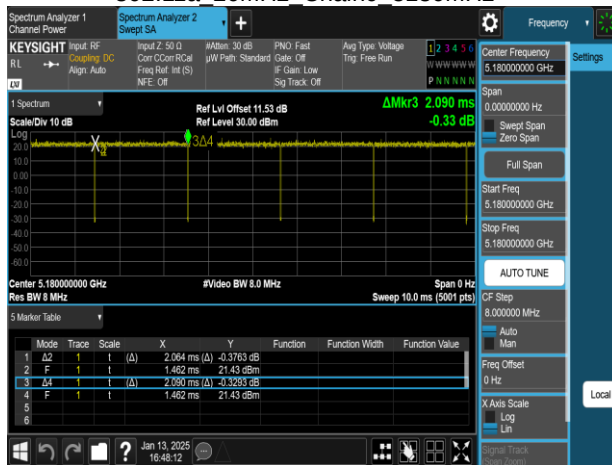
Mode	Duty Cycle (%) =Ton / (Ton+Toff)	Duty Factor (dB) =10*log (1/Duty Cycle)	1/T (kHz)	VBW setting (kHz)
802.11a	98.76	0.05	0.48	0.01
802.11n_20	98.67	0.06	0.52	0.01
802.11ac_20	88.50	0.53	5.00	5.00
802.11n_40	97.33	0.12	1.05	2.00
802.11ac_40	81.16	0.91	8.93	9.00
802.11ac_80	95.04	0.22	2.17	3.00



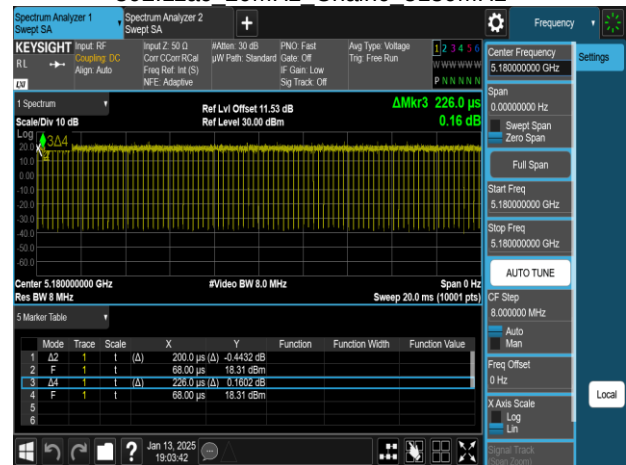
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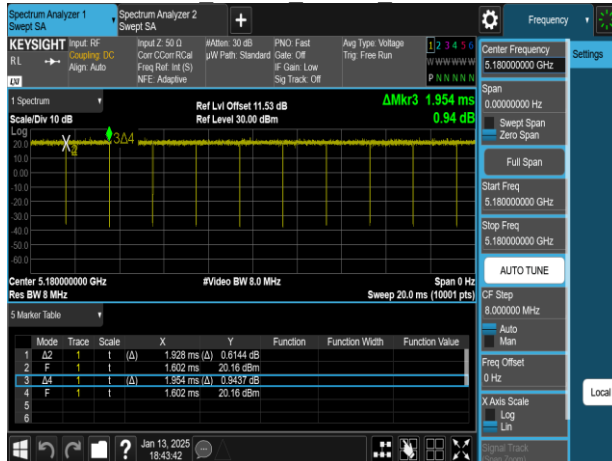
802.11a 20MHz Chain0 5180MHz



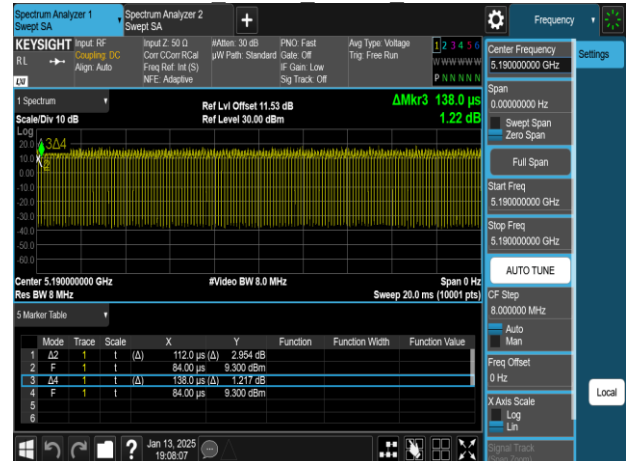
802.11ac 20MHz Chain0 5180MHz



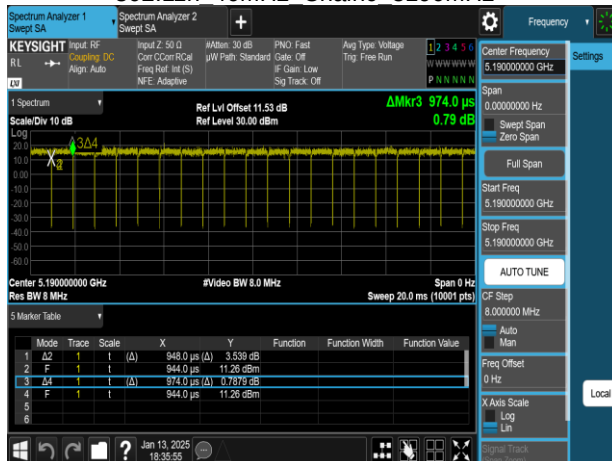
802.11n 20MHz Chain0 5180MHz



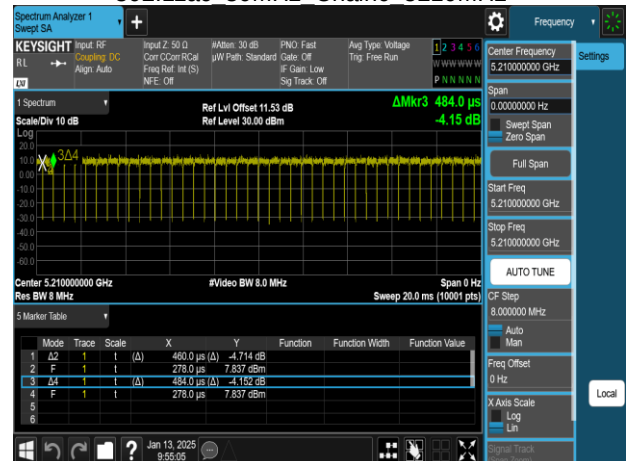
802.11ac 40MHz Chain0 5190MHz



802.11n 40MHz Chain0 5190MHz



802.11ac 80MHz Chain0 5210MHz



4. TEST RESULT

4.1 AC POWER LINE CONDUCTED EMISSION

4.1.1 Test Limit

According to §15.207(a),

Frequency Range (MHz)	Limits(dB μ V)	
	Quasi-peak	Average
0.15 to 0.50	66 to 56*	56 to 46*
0.50 to 5	56	46
5 to 30	60	50

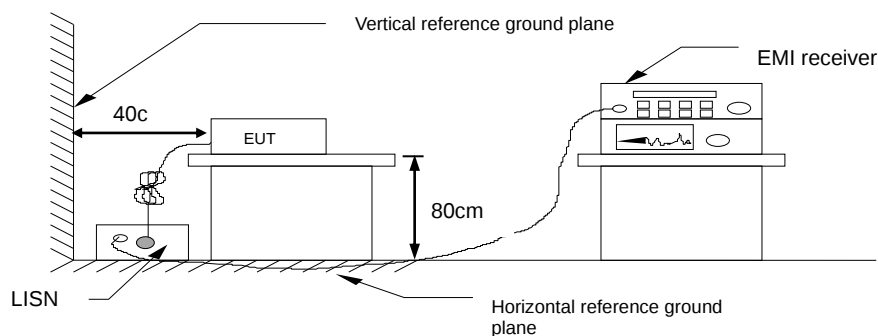
* Decreases with the logarithm of the frequency.

4.1.2 Test Procedure

Test method Refer as ANSI C63.10-2020,

1. The EUT was placed on a non-conducted table, which is 0.8m above horizontal ground plane and 0.4m above vertical ground plane.
2. EUT connected to the line impedance stabilization network (LISN)
3. Receiver set RBW of 9kHz and Detector Peak, and note as quasi-peak and average.
4. Maximum procedure was performed on the six highest emissions to ensure EUT compliance.
5. Recorded Line for Neutral and Line.

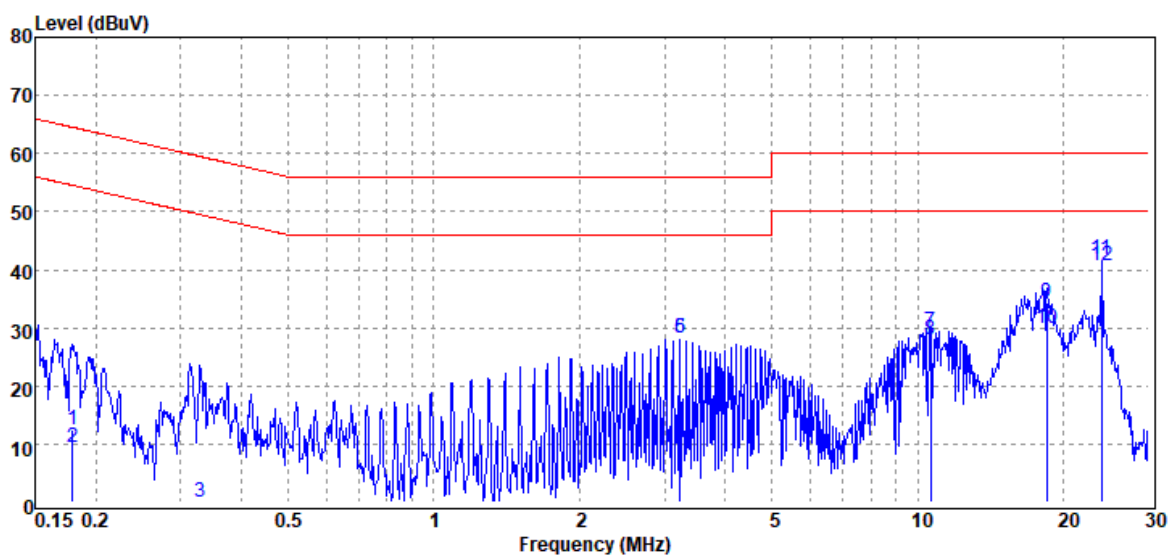
4.1.3 Test Setup



4.1.4 Test Result

Project No : TM-2412000436P
Operation Mode : 5G
Test Chamber : Conduction
Probe : LINE
Note :

Test Date : 2025-01-20
Temp./Humi. : 23.4°C / 54%
Engineer : Ben Yang
Test Voltage : AC 120V/60Hz



Freq. MHz	Detector Mode PK/QP/AV	Spectrum Read Level dBμV	Factor dB	Actual FS dBμV	Limit dBμV	Margin dB
0.179	QP	12.29	0.29	12.58	64.52	-51.94
0.179	Average	9.10	0.29	9.39	54.52	-45.13
0.329	QP	-0.50	0.38	-0.12	59.48	-59.60
0.329	Average	-4.58	0.38	-4.20	49.48	-53.68
3.223	QP	28.02	0.22	28.24	56.00	-27.76
3.223	Average	27.95	0.22	28.17	46.00	-17.83
10.652	QP	29.10	0.36	29.46	60.00	-30.54
10.652	Average	27.72	0.36	28.08	50.00	-21.92
18.494	QP	33.82	0.46	34.28	60.00	-25.72
18.494	Average	29.32	0.46	29.78	50.00	-20.22
24.000	QP	41.27	0.54	41.81	60.00	-18.19
24.000	Average	40.26	0.54	40.80	50.00	-9.20

Note: 1. Actual FS= Spectrum Read Level + Factor

Note: 2. Margin= Actual FS - Limit

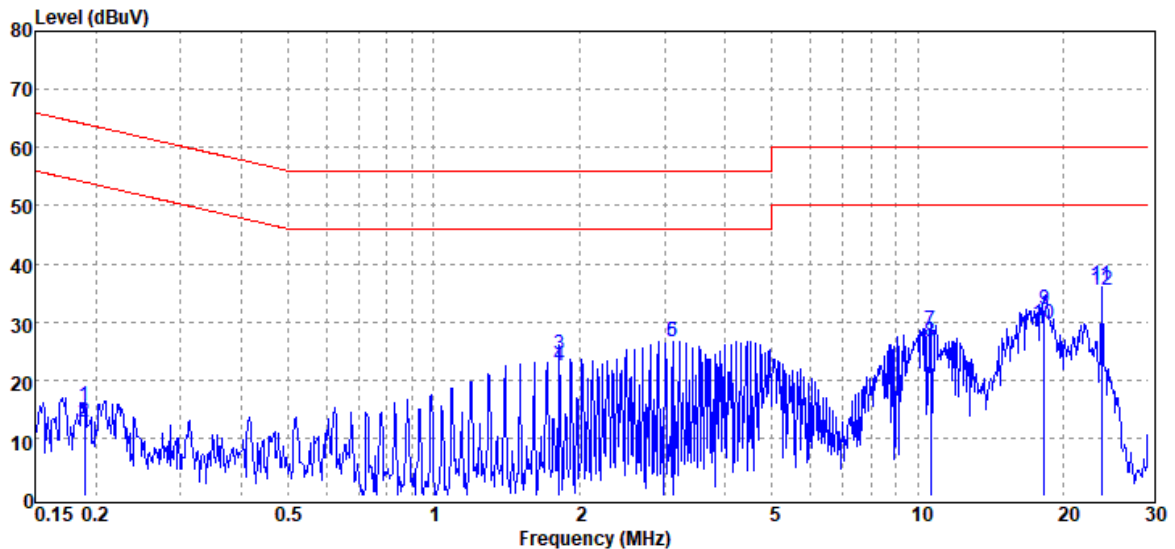


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Project No : TM-2412000436P
Operation Mode : 5G
Test Chamber : Conduction
Probe : NEUTRAL
Note :

Test Date : 2025-01-20
Temp./Humi. : 23.4°C / 54%
Engineer : Ben Yang
Test Voltage : AC 120V/60Hz



Freq. MHz	Detector Mode PK/QP/AV	Spectrum Read Level dBμV	Factor dB	Actual FS dBμV	Limit dBμV	Margin dB
0.190	QP	15.16	0.31	15.47	64.04	-48.57
0.190	Average	12.33	0.31	12.64	54.04	-41.40
1.818	QP	24.25	0.16	24.41	56.00	-31.59
1.818	Average	22.23	0.16	22.39	46.00	-23.61
3.116	QP	26.41	0.19	26.60	56.00	-29.40
3.116	Average	26.40	0.19	26.59	46.00	-19.41
10.651	QP	28.10	0.34	28.44	60.00	-31.56
10.651	Average	26.33	0.34	26.67	50.00	-23.33
18.288	QP	31.77	0.43	32.20	60.00	-27.80
18.288	Average	29.24	0.43	29.67	50.00	-20.33
24.000	QP	35.87	0.50	36.37	60.00	-23.63
24.000	Average	34.93	0.50	35.43	50.00	-14.57

Note: 1. Actual FS= Spectrum Read Level + Factor

Note: 2. Margin= Actual FS - Limit



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4.2 26dB BANDWIDTH, 6dB BANDWIDTH AND OCCUPIED BANDWIDTH(99%)

4.2.1 Test Limit

26 dB Bandwidth : For reporting purposes only.

6 dB Bandwidth : Least 500kHz.

Occupied Bandwidth(99%) : For reporting purposes only.

4.2.2 Test Procedure

26dB

1. This measurement setting are specified in section D of KDB 789033 D02 General UNII Test Procedures New Rules v02r01.
2. Set RBW: approximately 1% of the emission bandwidth.
3. Set the VBW>RBW.
4. Detoctor = Peak.
5. Trace mode = max hold.
6. Measure the maximum width of the emission that is 26dB down from the peak of the emission. Compare this with the RBW setting of the analyser. Readjust RBW and repeat measurement as needed until the RBW/EBW ratio is approximately 1%.

6dB

1. This measurement setting are specified in section D of KDB 789033 D02 General UNII Test Procedures New Rules v02r01.
2. Set RBW = 100 kHz.
3. Set the video bandwidth (VBW) $\geq 3 \times$ RBW.
4. Detoctor = Peak.
5. Trace mode = max hold.
6. Sweep = auto couple.
7. Allow the trace to stabilize.
8. Measure the maximum width of the emission that is constrained by the frequencies associated with the two outermost amplitude points (upper and lower frequencies) that are attenuated by 6 dB relative to the maximum level measured in the fundamental emission.



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99%

1. This measurement setting are specified in section D of KDB 789033 D02 General UNII Test Procedures New Rules v02r01.
2. Set center frequency to the nominal EUT channel center frequency.
3. Set span = 1.5 times to 5.0 times the OBW.
4. Set RBW = 1 % to 5% of the OBW.
5. Set VBW $\geq 3 \times \text{RBW}$

4.2.3 Test Setup

Refer to section 1.8.



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4.2.4 Test Result

Temperature: 17.5 ~ 22.3°C
Humidity: 45 ~ 51% RH

Test date: January 13 ~ 20, 2025
Tested by: Jerry Chang

Occupied Bandwidth(99%)

802.11a_Ch0

Freq. (MHz)	26dB BW (MHz)	10 Log (B) (dB)
5180	20.84	13.190
5220	29.59	14.710
5240	29.36	14.680
5260	29.86	14.750
5300	29.86	14.750
5320	21.20	13.260
5500	21.14	13.250
5580	21.25	13.270
5700	21.07	13.240

802.11a_Ch0

Freq. (MHz)	6dB BW (MHz)	10 Log (B) (dB)
5745	16.31	12.120
5785	16.40	12.150
5825	16.50	12.170

802.11a_Ch0

Freq. (MHz)	Measured Freq. (MHz)	Limit (MHz)
5240	5248.546940	< 5250
5745	5736.720249	> 5725

Note: The measurement results of all 6dBc test channels are greater than 500kHz.

802.11n_HT20_Ch0

Freq. (MHz)	26dB BW (MHz)	10 Log (B) (dB)
5180	21.35	13.290
5220	29.76	14.740
5240	27.48	14.390
5260	29.91	14.760
5300	29.62	14.720
5320	21.55	13.330
5500	21.68	13.360
5580	21.91	13.410
5700	21.35	13.290

802.11n_HT20_Ch0

Freq. (MHz)	6dB BW (MHz)	10 Log (B) (dB)
5745	16.95	12.290
5785	17.57	12.450
5825	17.64	12.460

802.11n_HT20_Ch0

Freq. (MHz)	Measured Freq. (MHz)	Limit (MHz)
5240	5249.035243	< 5250
5745	5735.236255	> 5725

Note: The measurement results of all 6dBc test channels are greater than 500kHz.

802.11n_HT40_Ch0

Freq. (MHz)	26dB BW (MHz)	10 Log (B) (dB)
5190	40.06	16.030
5230	48.41	16.850
5270	49.85	16.980
5310	39.63	15.980
5510	39.88	16.010
5550	40.10	16.030
5670	39.64	15.980

802.11n_HT40_Ch0

Freq. (MHz)	6dB BW (MHz)	10 Log (B) (dB)
5755	36.38	15.610
5795	36.47	15.620

802.11n_HT40_Ch0

Freq. (MHz)	Measured Freq. (MHz)	Limit (MHz)
5230	5248.246804	< 5250
5755	5736.838298	> 5725

Note: The measurement results of all 6dBc test channels are greater than 500kHz.

802.11ac_VHT80_Ch0

Freq. (MHz)	26dB BW (MHz)	10 Log (B) (dB)
5210	81.60	19.120
5290	80.79	19.070
5530	80.88	19.080
5610	109.70	20.400

802.11ac_VHT80_Ch0

Freq. (MHz)	6dB BW (MHz)	10 Log (B) (dB)
5775	75.04	18.750

802.11ac_VHT80_Ch0

Freq. (MHz)	Measured Freq. (MHz)	Limit (MHz)
5210	5247.813907	< 5250
5775	5737.008055	> 5725

Note: The measurement results of all 6dBc test channels are greater than 500kHz.



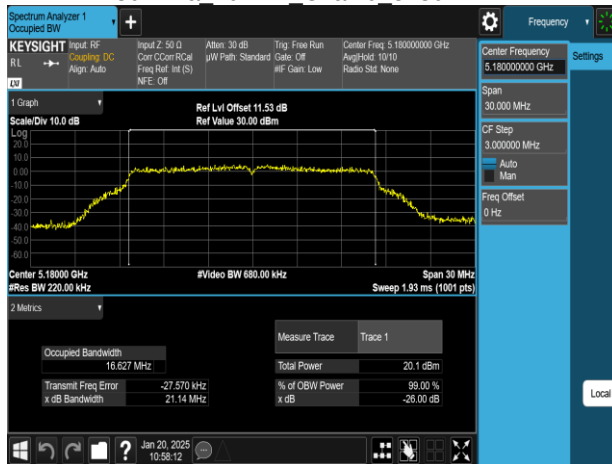
Project No: TM-2412000436P
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Test Data

Occupied Bandwidth(99%)

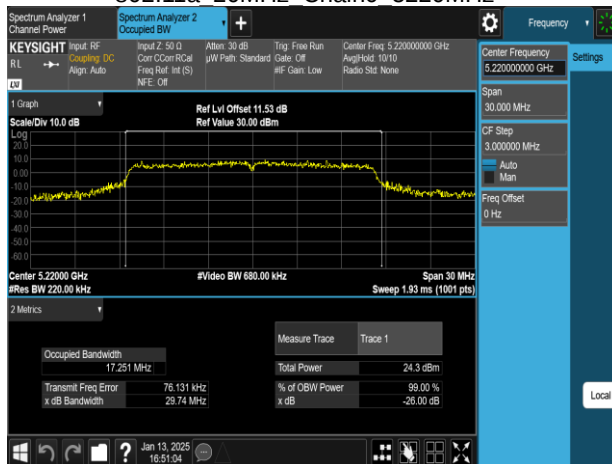
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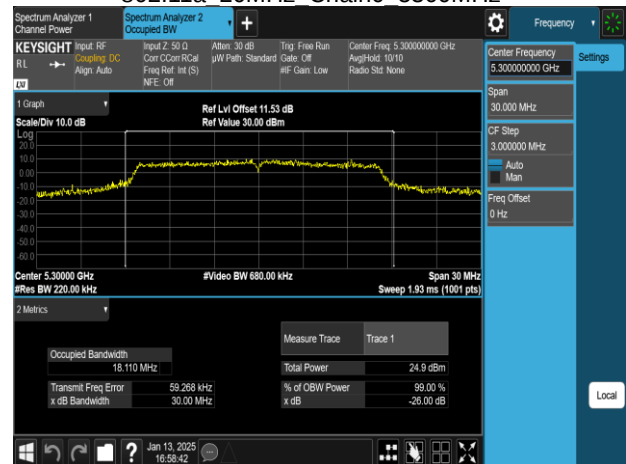
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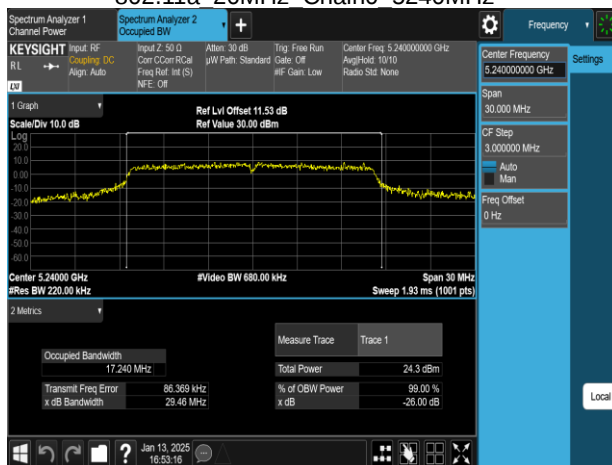
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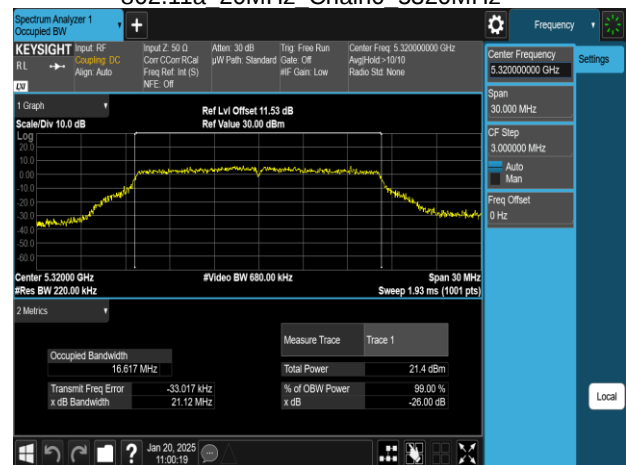
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802.11a 20MHz Chain0 5240MHz



802.11a 20MHz Chain0 5320MHz

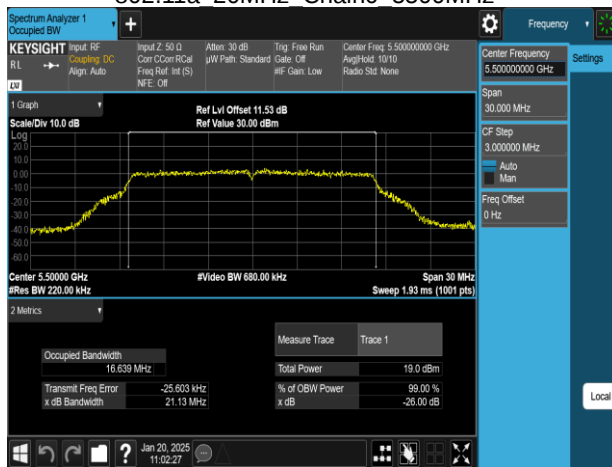




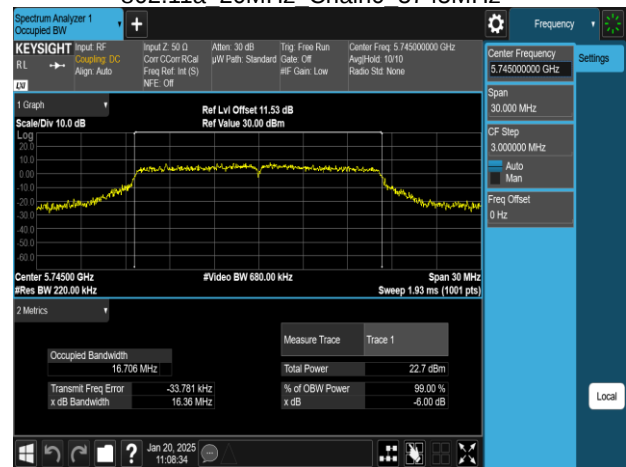
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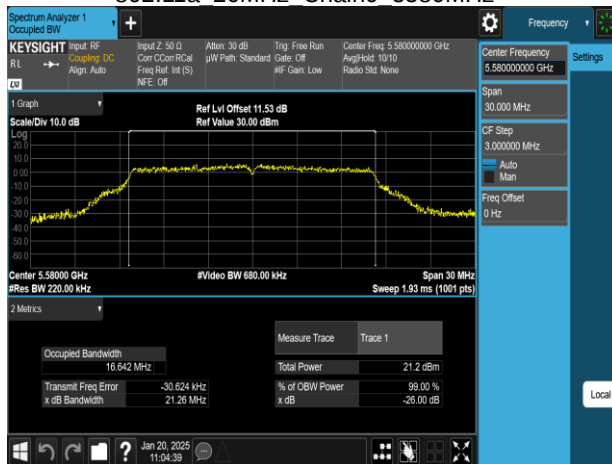
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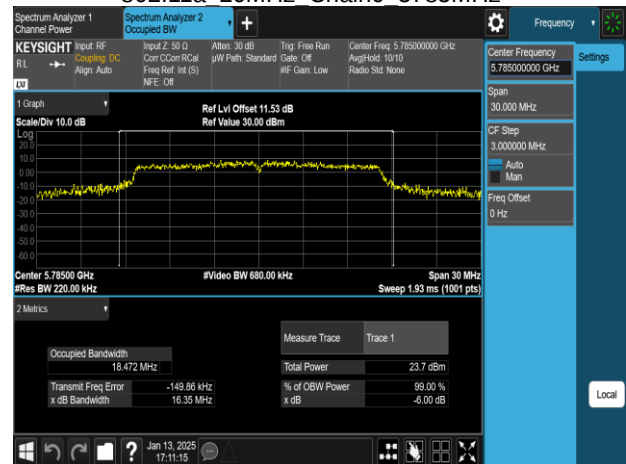
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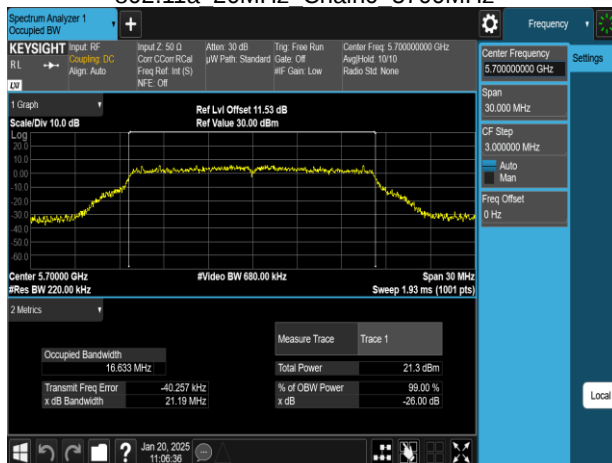
802.11a 20MHz Chain0 5580MHz



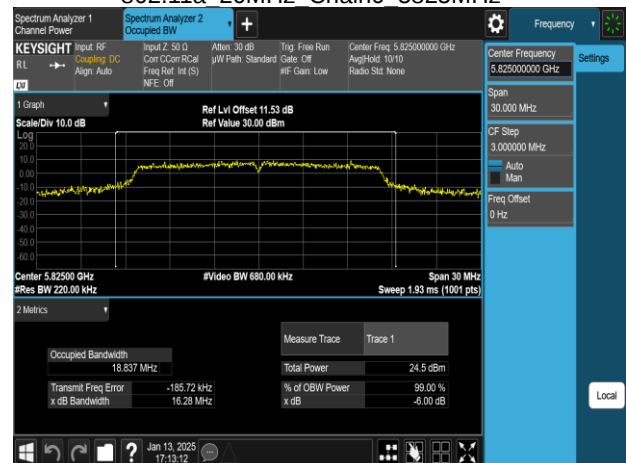
802.11a 20MHz Chain0 5785MHz



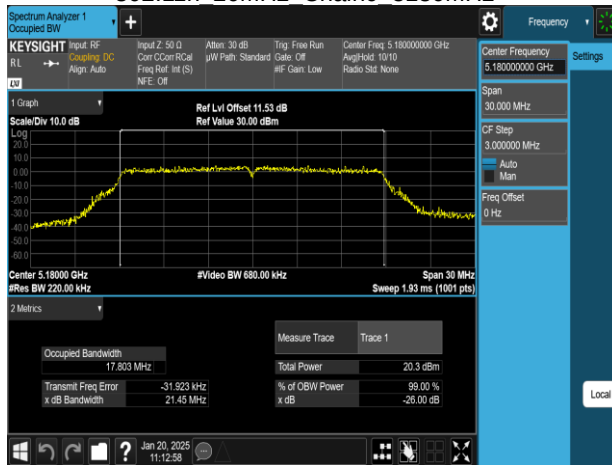
802.11a 20MHz Chain0 5700MHz



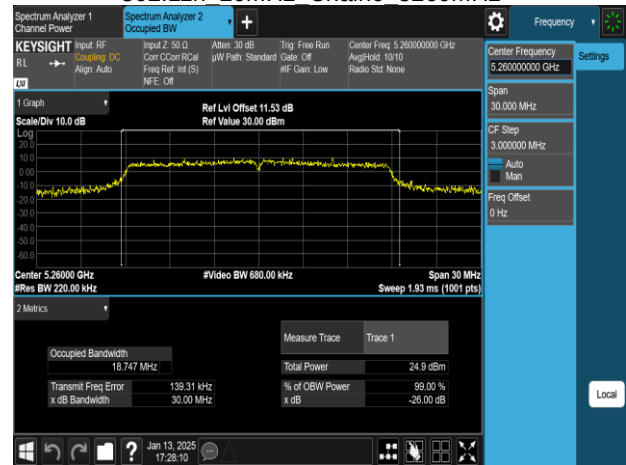
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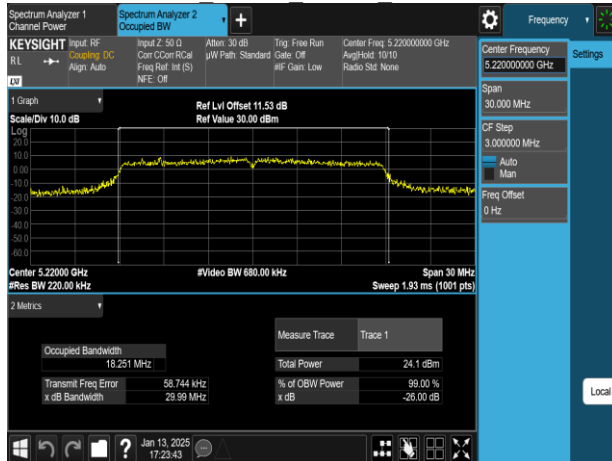
802.11n 20MHz Chain0 5180MHz



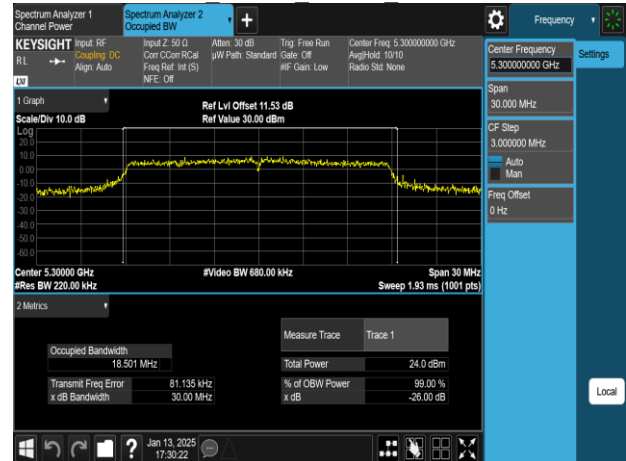
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802.11n 20MHz Chain0 5220MHz



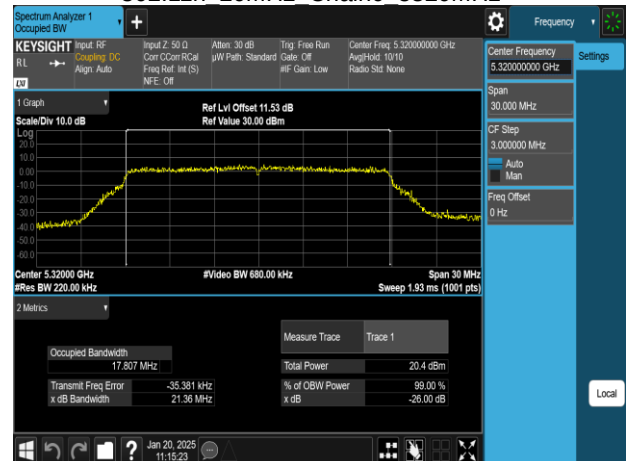
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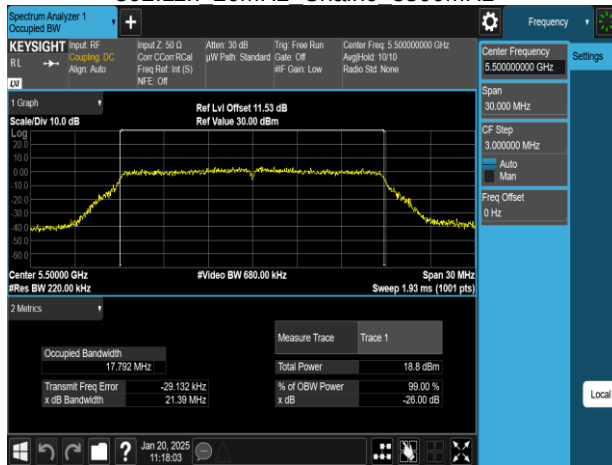
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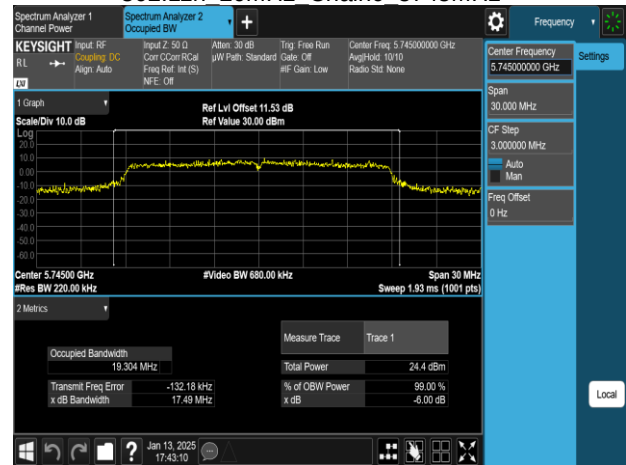
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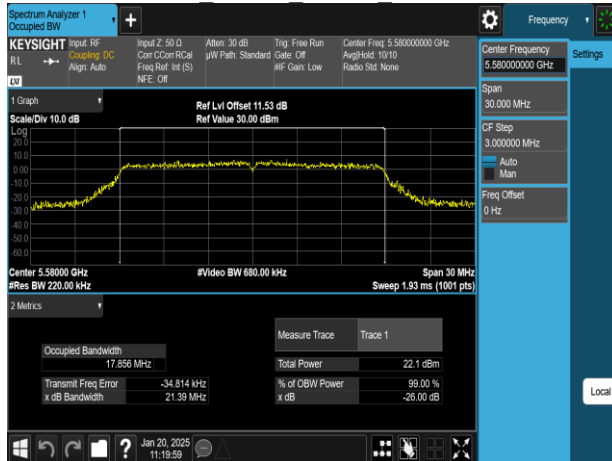
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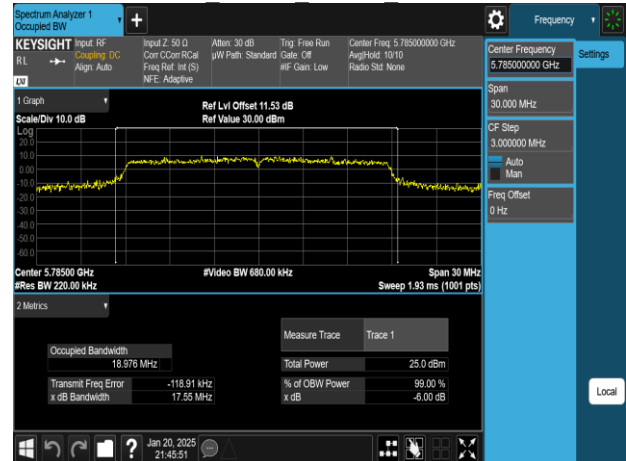
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802.11n 20MHz Chain0 5580MHz



802.11n 20MHz Chain0 5785MHz



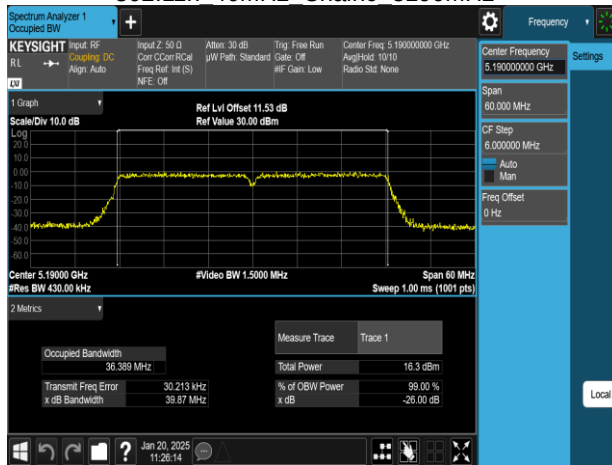
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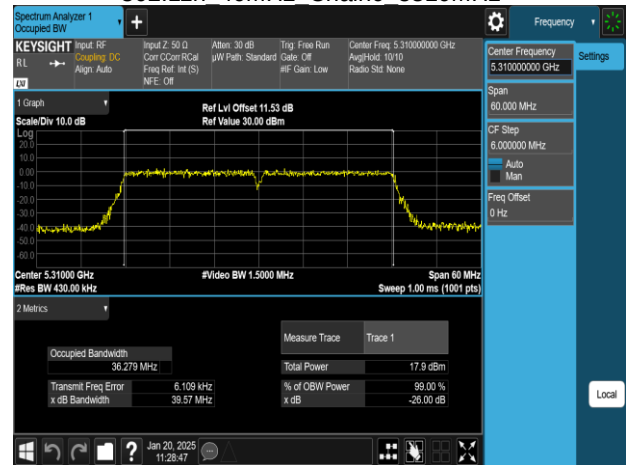
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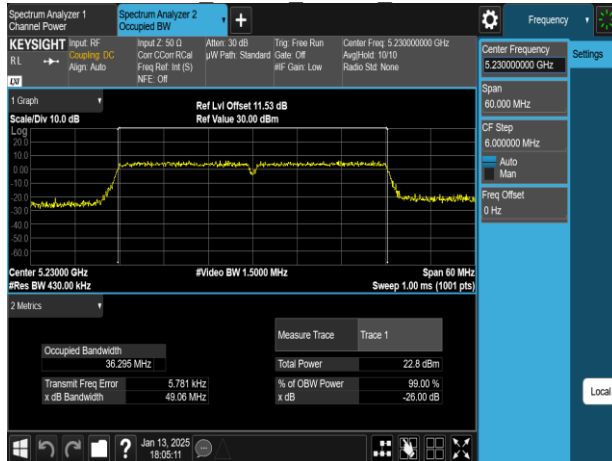
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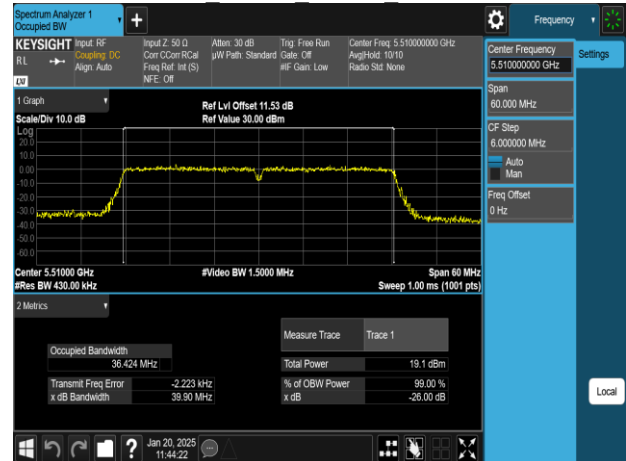
802.11n 40MHz Chain0 5310MHz



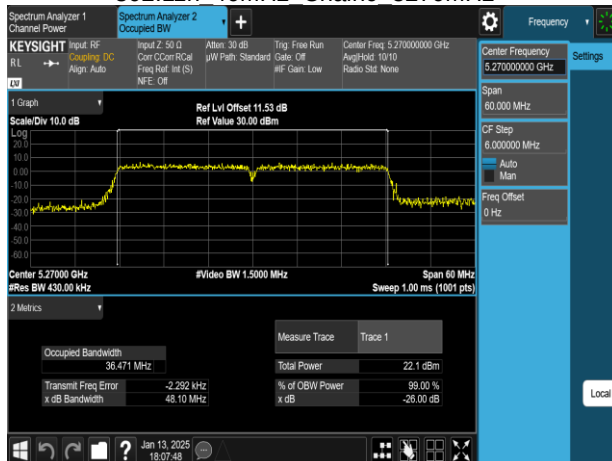
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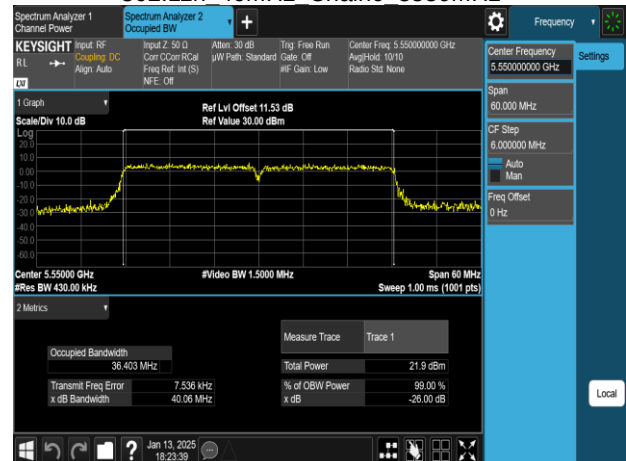
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802.11n 40MHz Chain0 5270MHz



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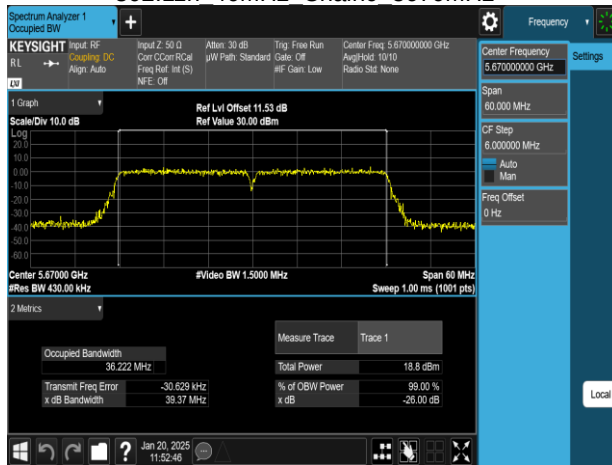




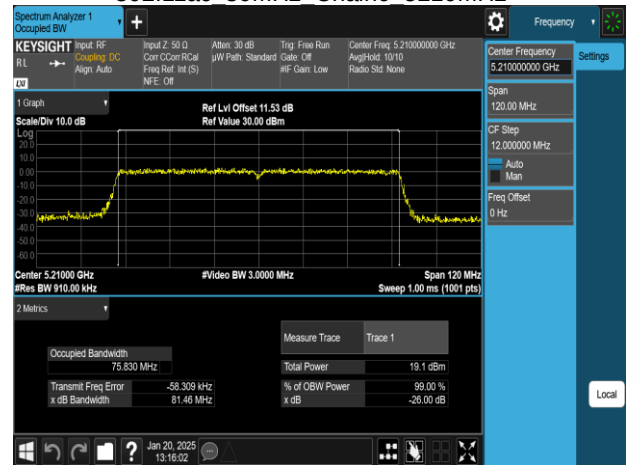
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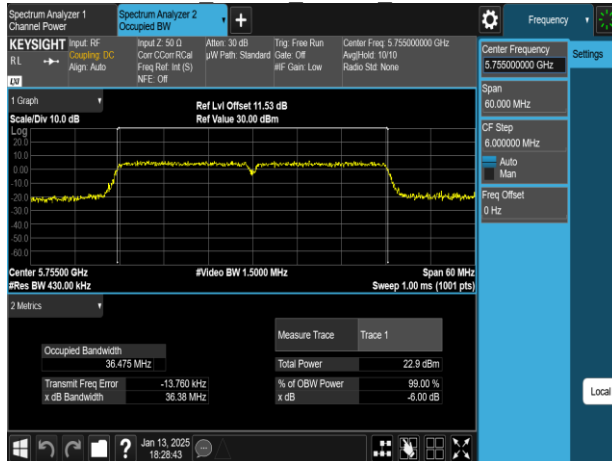
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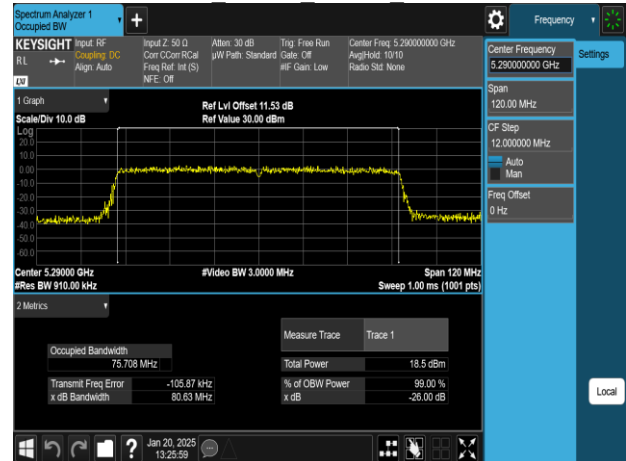
802.11ac 80MHz Chain0 5210MHz



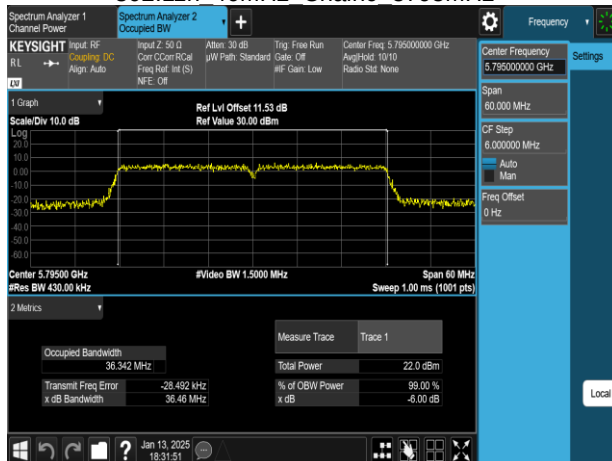
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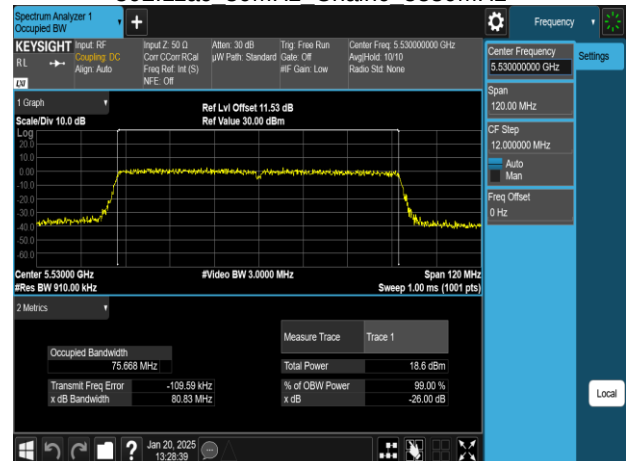
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802.11n 40MHz Chain0 5795MHz



802.11ac 80MHz Chain0 5530MHz

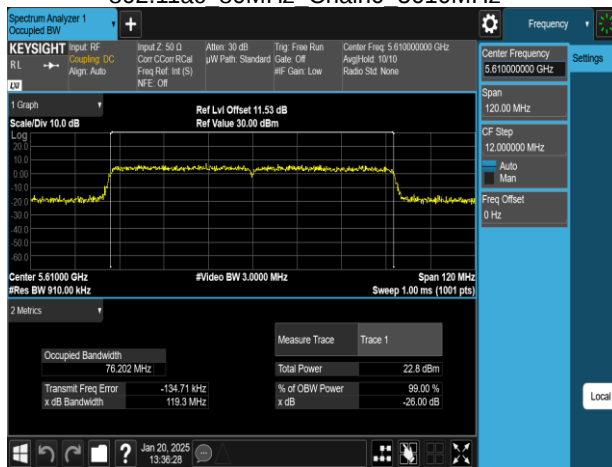




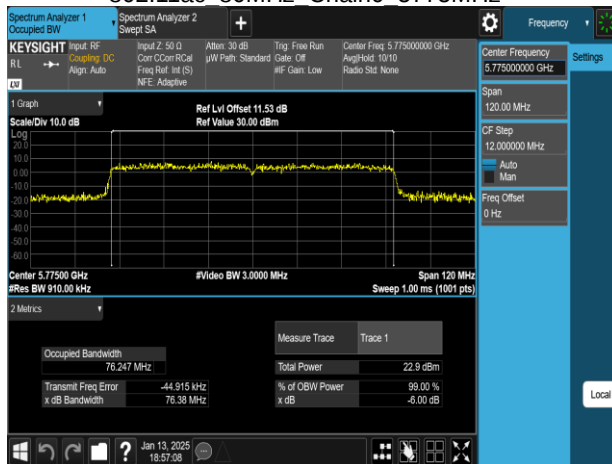
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802.11ac 80MHz Chain0 5610MHz



802.11ac 80MHz Chain0 5775MHz

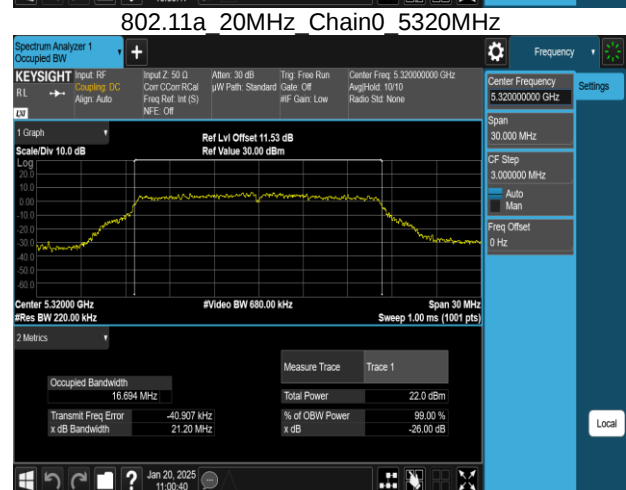
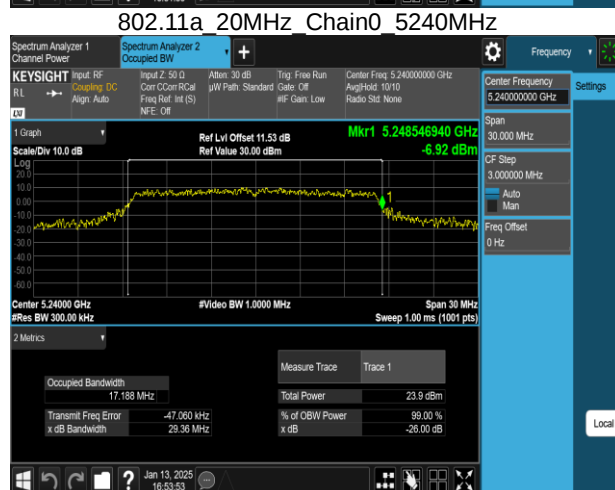
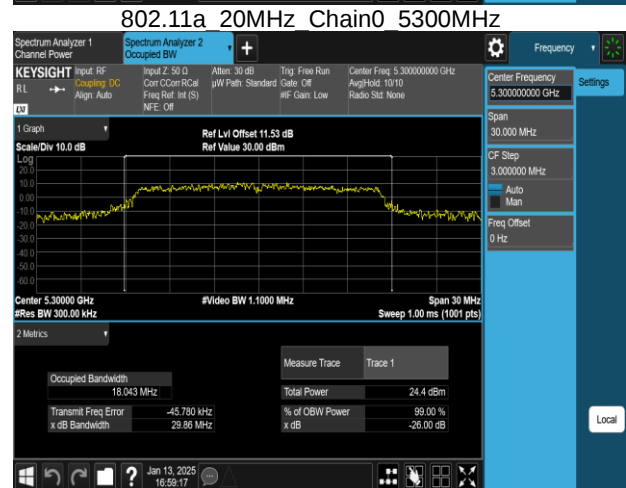
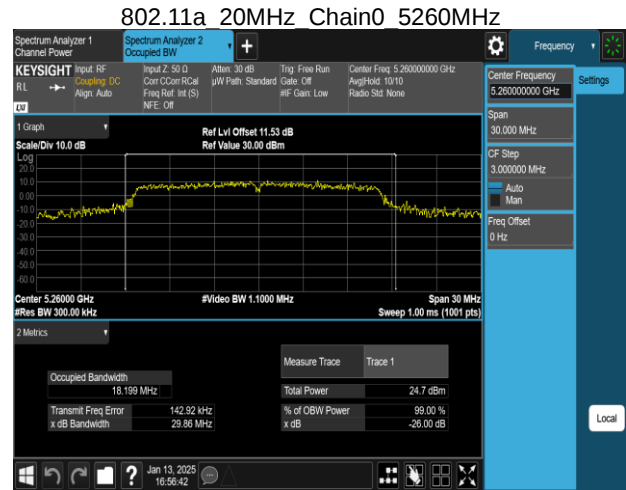
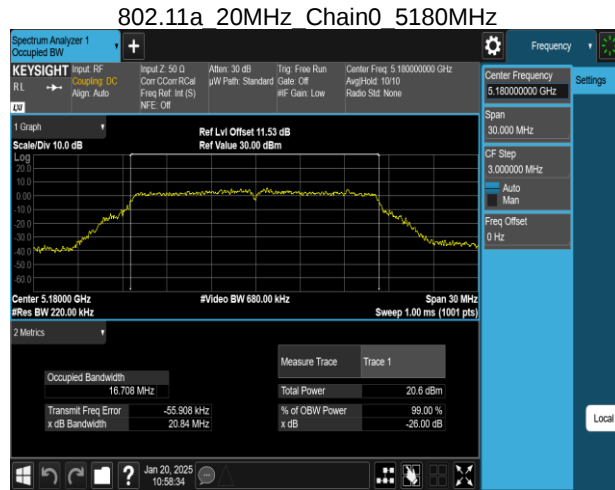




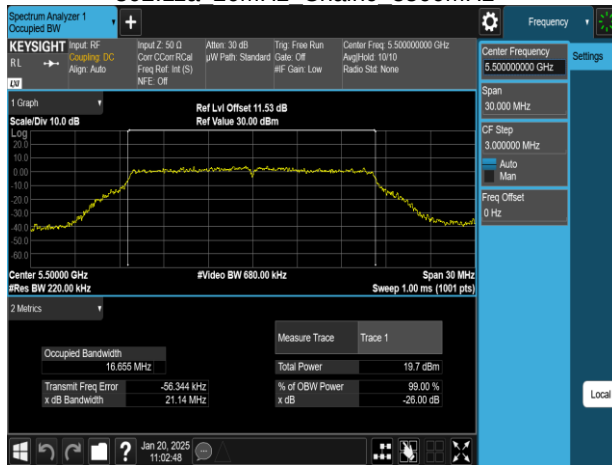
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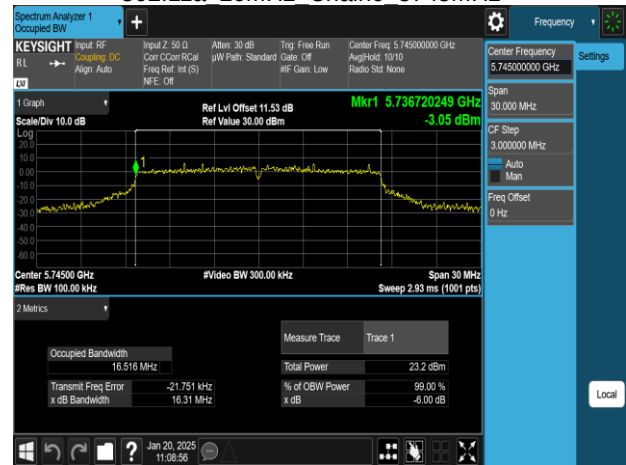
6 dB Bandwidth & 26 dB Bandwidth



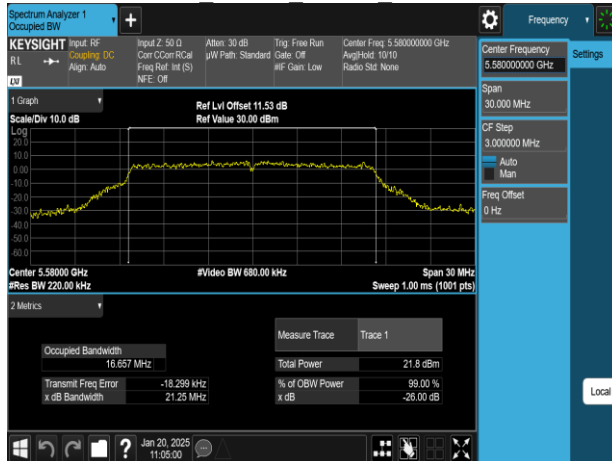
802.11a 20MHz Chain0 5500MHz



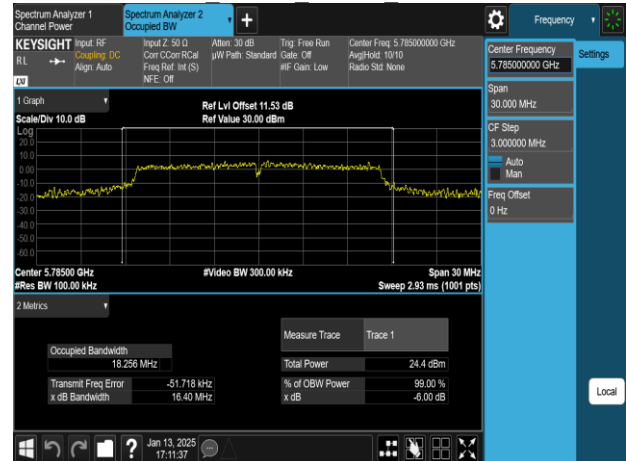
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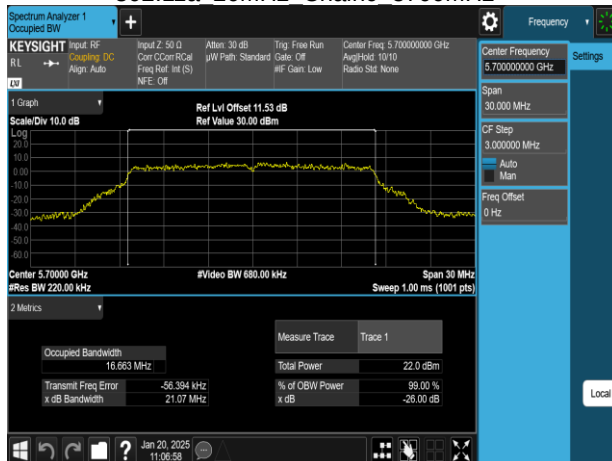
802.11a 20MHz Chain0 5580MHz



802.11a 20MHz Chain0 5785MHz



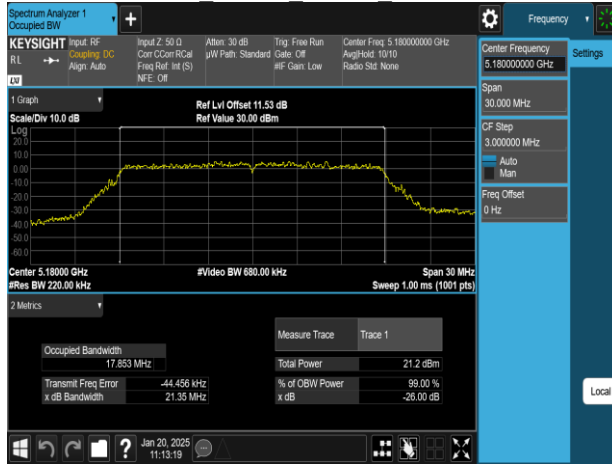
802.11a 20MHz Chain0 5700MHz



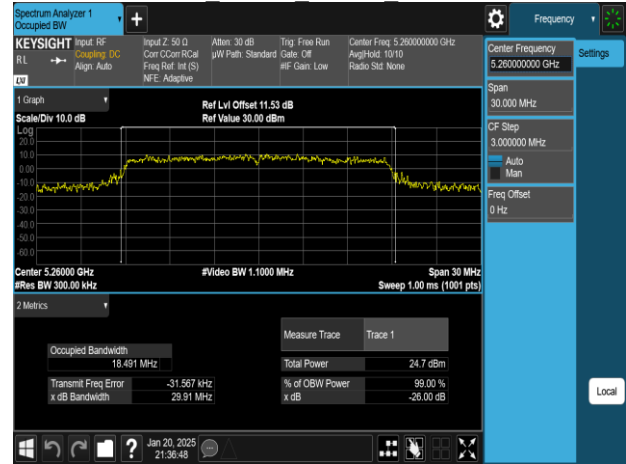
802.11a 20MHz Chain0 5825MHz



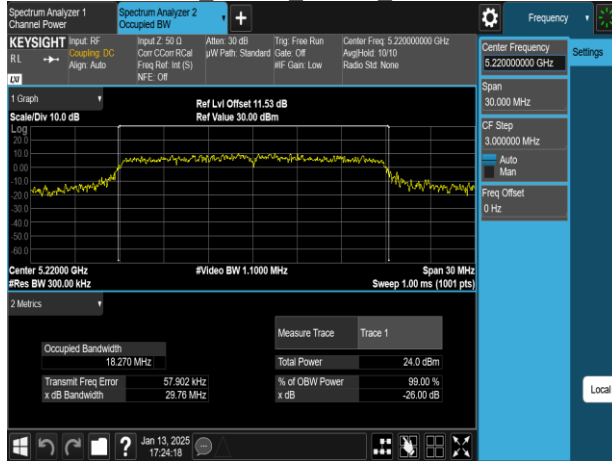
802.11n 20MHz Chain0 5180MHz



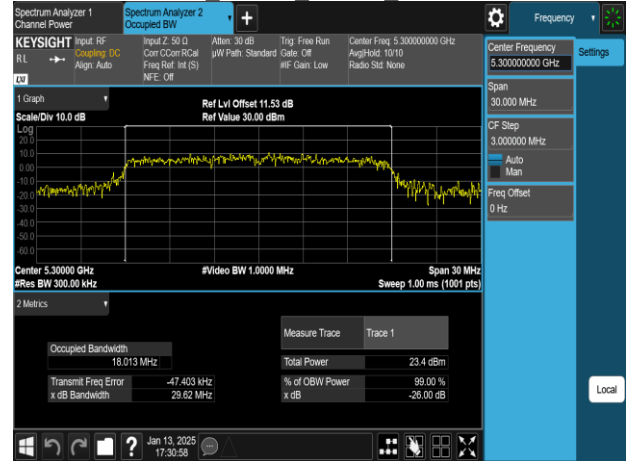
802.11n 20MHz Chain0 5260MHz



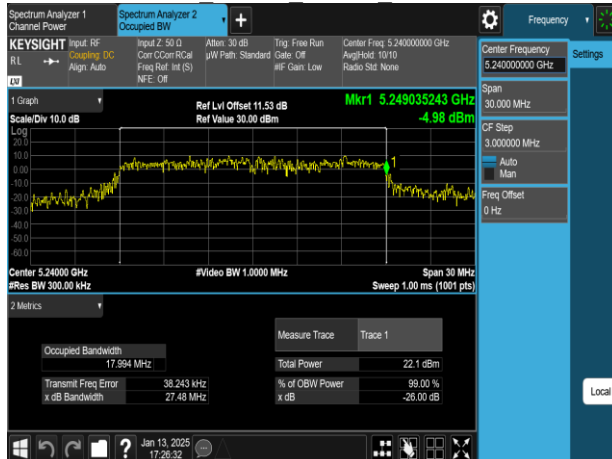
802.11n 20MHz Chain0 5220MHz



802.11n 20MHz Chain0 5300MHz



802.11n 20MHz Chain0 5240MHz



802.11n 20MHz Chain0 5320MHz

