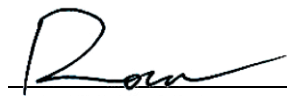


FCC RADIO TEST REPORT

Applicant..... : Hetaida Technology Co., Ltd.
Address..... : 8F,9F, 2#Building Scientific Research Center, Songhu Intelligent Valley, No.6 Minfu Road, Liaobu Town, Dongguan City, Guangdong Province, China
Manufacturer..... : Hetaida Technology Co., Ltd.
Address..... : 8F,9F, 2#Building Scientific Research Center, Songhu Intelligent Valley, No.6 Minfu Road, Liaobu Town, Dongguan City, Guangdong Province, China
Factory..... : Hetaida Technology Co., Ltd.
Address..... : 8F,9F, 2#Building Scientific Research Center, Songhu Intelligent Valley, No.6 Minfu Road, Liaobu Town, Dongguan City, Guangdong Province, China
Product Name..... : Infrared Body Thermometer
Brand Name..... : N/A
Model No. : T8851US, T8851EU, T8851C(For model difference refer to section 2.)
FCC ID..... : 2A6V4T8851
Measurement Standard.... : 47 CFR FCC PART 15 Subpart E (section 407)
Receipt Date of Samples.... : November 21, 2023
Date of Tested..... : November 21, 2023 to March 08, 2024
Date of Report..... : March 08, 2024

This report shows that above equipment is technically compliant with the requirements of the standards above. All test results in this report apply only to the tested sample(s). Without prior written approval of Dongguan Nore Testing Center Co., Ltd, this report shall not be reproduced except in full.



Prepared by

Rose Hu / Project Engineer



Approved by

Iori Fan / Authorized Signatory

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Revision History

Report Number	Description	Issued Date
NTC2311497FV00	Initial Issue	2024-03-08

1. Summary of Test Result

FCC Rules	Description of Test	Result	Remarks
§15.207 (a)	AC Power Conducted Emission	N/A*	See note
§15.407(a)	Max. Conducted Output Power	PASS	---
§15.407(a)	26dB Spectrum Bandwidth and 99% Occupied Bandwidth	PASS	---
§15.407(e)	6dB Bandwidth	PASS	---
§15.407(a)	Power Spectral Density	PASS	---
§15.407(b) §15.205	Radiated Emissions	PASS	---
§15.407(b)	Band Edge Emissions	PASS	---
§15.407(g)	Frequency Stability	PASS	---
§15.203	Antenna Requirement	PASS	---
§15.407(h)	Dynamic Frequency Selection	PASS	---

Note: This product will not be connected to the AC mains while the normal using, therefore the AC Power Conducted Emission test is not applicable.

2. General Description of EUT

Product Information	
Product name:	Infrared Body Thermometer
Main Model Name:	T8851US
Additional Model Name:	T8851EU, T8851C
Model Difference:	These models have the same circuit schematic, construction, PCB Layout and critical components. Their difference is model number.
S/N:	2311-5728
Brand Name	N/A
Hardware version:	V0.4
Software version:	V10
Rating:	DC 5V come from Charging base or DC 3.7V li-ion battery
Classification:	Class B
Typical arrangement:	Tabletop
I/O Port:	Refer to the user's manual
Accessories Information	
Adapter:	N/A
Cable:	USB Line: 0.80m unshielded, detachable USB Line for charging base: 0.80m unshielded, undetachable
Other:	N/A
Additional Information	
Note:	According to the model difference and the requirements of the manufacturer, all tests were performed on model T8851US.
Remark:	All the information above are provided by the manufacturer. More detailed feature of the EUT please refers to the user manual.

Technical Specification	
Frequency Range:	5180-5240MHz 5260-5320MHz, 5500-5700MHz 5745-5825MHz
Modulation Technology:	OFDM
Modulation Type:	BPSK, QPSK for 802.11a 256QAM, 64QAM, 16QAM, QPSK, BPSK for 802.11n
Number of Channel:	U-NII-1, U-NII-2A: 4 Channel for 802.11a/n(HT20) 2 Channel for 802.11n(HT40) U-NII-2C: 11 Channel for 802.11a/n(HT20) 5 Channel for 802.11n(HT40) U-NII-3: 5 Channel for 802.11a/n(HT20) 2 Channel for 802.11n(HT40)
Antenna Type:	PCB
Number of Antenna	1
Antenna Gain:	-1.81 dBi maximum (Declared by the manufacturer)
Beamforming Gain:	Not support
Type:	Client without Radar detection.

Channel List					
U-NII-1 Band 5180-5240MHz					
IEEE 802.11a/n(HT20)		IEEE 802.11n(HT40)		---	
Channel	Frequency MHz	Channel	Frequency MHz	-	-
36	5180	38	5190	-	-
40	5200	46	5230	-	-
44	5220	-	-	-	-
48	5240	-	-	-	-
U-NII-2A Band 5260-5320MHz					
52	5260	54	5270	-	-
56	5280	62	5310	-	-
60	5300	-	-	-	-
64	5320	-	-	-	-
U-NII-2C Band 5500-5700MHz					
100	5500	102	5510	-	-
104	5520	110	5550	-	-
108	5540	118	5590	-	-
112	5560	126	5630	-	-
116	5580	134	5670	-	-
132	5660	-	-	-	-
136	5680	-	-	-	-
140	5700	-	-	-	-

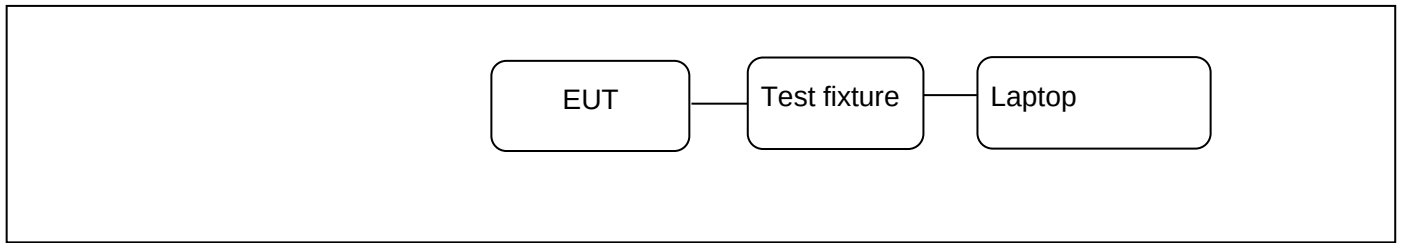
U-NII-3 Band 5745~5825MHz					
IEEE 802.11a/n(HT20)		IEEE 802.11n(HT40)		---	
Channel	Frequency MHz	Channel	Frequency MHz	-	-
149	5745	151	5755	-	-
153	5765	159	5795	-	-
157	5785	-	-	-	-
161	5805	-	-	-	-
165	5825	-	-	-	-

3. Test Channels and Modes Detail

No.	Mode	Channel	Frequency (MHz)	Remark
1	TX	36	5180	IEEE 802.11a/n(HT20)
		40	5200	IEEE 802.11a/n(HT20)
		48	5240	IEEE 802.11a/n(HT20)
		52	5260	IEEE 802.11a/n(HT20)
		60	5300	IEEE 802.11a/n(HT20)
		64	5320	IEEE 802.11a/n(HT20)
		100	5500	IEEE 802.11a/n(HT20)
		116	5580	IEEE 802.11a/n(HT20)
		140	5700	IEEE 802.11a/n(HT20)
		149	5745	IEEE 802.11a/n(HT20)
		157	5785	IEEE 802.11a/n(HT20)
		165	5825	IEEE 802.11a/n(HT20)
		38	5190	IEEE 802.11n(HT40)
		46	5230	IEEE 802.11n(HT40)
		54	5270	IEEE 802.11n(HT40)
		62	5310	IEEE 802.11n(HT40)
		102	5510	IEEE 802.11n(HT40)
		134	5670	IEEE 802.11n(HT40)
		151	5755	IEEE 802.11n(HT40)
		159	5795	IEEE 802.11n(HT40)
2.	Normal Mode	---	---	---

Note: TX mode means that the EUT was programmed to be in continuously transmitting mode.

4. Configuration of EUT



5. Modification of EUT

No modifications are made to the EUT during all test items.

6. Description of Support Device

The EUT has been tested as an independent unit together with other necessary accessories or support units. The following support units or accessories were used to form a representative test configuration during the tests.

No.	Equipment	Brand	M/N	S/N	Cable Specification	Remarks
1.	Laptop	DELL	VOSTR0340 0	H3K2XA01	I/P: AC 100-240V 50-60Hz, 1.3A O/P: DC 19.5V 2.31A 45W AC Line: 1.13m unshielded DC Line: 1.15m unshielded with a core	Provide by the Lab
2.	Adapter	DELL	HA45NM14 0	---		Provide by the Lab
3.	Test fixture	---	---	---	----	Provide by the manufacturer

Software	Power Setting				
	Mode	U-NII-1	U-NII-2A	U-NII-2C	U-NII-3
UI_mptool	IEEE 802.11a	110	110	100	120
	IEEE 802.11n(HT20)	110	110	100	115
	IEEE 802.11n(HT40)	100	100	100	115

7. Test Facility and Location

Test Site	:	Dongguan Nore Testing Center Co., Ltd. (Dongguan NTC Co., Ltd.)
Accreditations and Authorizations	:	The Laboratory has been assessed and proved to be in compliance with CNAS/CL01 Listed by CNAS, August 13, 2018 The Certificate Registration Number is L5795. The Certificate is valid until August 13, 2024 The Laboratory has been assessed and proved to be in compliance with ISO17025 Listed by A2LA, November 01, 2017 The Certificate Registration Number is 4429.01 The Certificate is valid until March 31, 2024 Listed by FCC, November 06, 2017 Test Firm Registration Number is 907417 Listed by Industry Canada, June 08, 2017 The Certificate Registration Number is 46405-9743A
Test Site Location	:	Building D, Gaosheng Science and Technology Park, Hongtu Road, Nancheng District, Dongguan City, Guangdong Province, China

8. Applicable Standards and References

According to the specifications of the manufacturer, the EUT must comply with the requirements of the following standards:

Test Standards:

47 CFR Part 15, Subpart E, 15.407

ANSI C63.10-2013

References Test Guidance:

KDB 789033 D02 v02r01, KDB 905462 D03 v01r02, KDB 905462 D02 v02

9. Deviations and Abnormalities from Standard Conditions

No additions, deviations and exclusions from the standard.

10. Test Conditions

No.	Test Item	Test Mode	Test Voltage	Tested by	Remarks
1.	AC Power Conducted Emission	---	---	---	---
2.	Max. Conducted Output Power	1	DC 3.7V	Sean	See note 1
3.	26dB Spectrum Bandwidth and 99% Occupied Bandwidth	1	DC 3.7V	Sean	See note 1
4.	6dB Bandwidth	1	DC 3.7V	Sean	See note 1
5.	Power Spectral Density	1	DC 3.7V	Sean	See note 1
6.	Radiated Emissions	1	DC 3.7V	Sean	See note 1,3
7.	Band Edge Emissions	1	DC 3.7V	Sean	See note 1
8.	Frequency Stability	1	DC 3.3V	Sean	See note 1
9.	Antenna Requirement	---	---	---	---
10.	Dynamic Frequency Selection	2	DC 3.7V	Sean	See note 1

Note:

- The testing climatic conditions for temperature, humidity, and atmospheric pressure are within: 15~35℃, 30~70%, 86~106kPa.
- As the EUT can be operated multiple positions, all X,Y,Z axis were considered during the test and only the worst case X was recorded.
- This product will not be connected to the AC mains while the normal using, therefore the AC Power Conducted Emission test is not applicable.
- For test voltage DC 3.7V was come from internal li-ion battery.

11. Measurement Uncertainty

No.	Test Item	Frequency	Uncertainty	Remarks
1.	Conducted Emission	150KHz ~ 30MHz	± 2.52 dB	---
2.	Radiated Emission	9kHz ~ 30MHz	± 5.66 dB	
		30MHz ~ 1GHz	± 5.66 dB	---
		1GHz ~ 18GHz	± 5.19 dB	---
		18GHz ~ 40GHz	± 5.19 dB	
3.	Conducted Spurious Emissions	10Hz ~ 40GHz	± 1.18 dB	---
4.	RF Output Power	10Hz ~ 40GHz	± 1.18 dB	
5.	Power Spectral Density	10Hz ~ 40GHz	± 1.06 dB	
6.	Occupied Channel Bandwidth	---	$\pm 0.72\%$	---

Note:

1. This uncertainty represents an expanded uncertainty expressed at approximately the 95% confidence level using a coverage factor of $k=2$.
2. The measurement uncertainty levels above are estimated and calculated according to CISPR 16-4-2.
3. The conformity assessment statement in this report is based solely on the test results, measurement uncertainty is excluded.

12. Sample Calculations

Conducted Emission						
Freq. (MHz)	Reading Level (dBUV)	Correct Factor (dB)	Measurement (dBUV)	Limit (dBUV)	Over (dB)	Detector
0.1900	30.10	10.60	40.70	79.00	-38.30	QP
Where, Freq. = Emission frequency in MHz Reading Level = Spectrum Analyzer/Receiver Reading Corrector Factor = Insertion loss of LISN + Cable Loss + RF Switching Unit attenuation Measurement = Reading + Corrector Factor Limit = Limit stated in standard Margin = Measurement - Limit Detector = Reading for Quasi-Peak / Average / Peak						

Radiated Spurious Emissions and Restricted Bands						
Freq. (MHz)	Reading Level (dBUV)	Correct Factor (dB/m)	Measurement (dBUV/m)	Limit (dBUV/m)	Over (dB)	Detector
656.6200	24.39	1.41	25.80	46.00	-20.20	QP
Where, Freq. = Emission frequency in MHz Reading Level = Spectrum Analyzer/Receiver Reading Corrector Factor = Antenna Factor + Cable Loss - Pre-amplifier Measurement = Reading + Corrector Factor Limit = Limit stated in standard Over = Margin, which calculated by Measurement - Limit Detector = Reading for Quasi-Peak / Average / Peak						

Note: For all conducted test items, the spectrum analyzer offset or transducer is derived from RF cable loss and attenuator factor. The offset or transducer is equal to the RF cable loss plus attenuator factor.

13. Duty cycle

Operation Band (MHz)	Mode	Ton (ms)	Ton+off (ms)	Duty Cycle (%)	1/T minimum VBW (kHz)	Duty Cycle Factor (dB)
U-NII-1	802.11a	---	---	100.00%	1.00	0
	802.11n(HT20)	---	---	100.00%	1.00	0
	802.11n(HT40)	---	---	100.00%	1.00	0
U-NII-2A	802.11a	---	---	100.00%	1.00	0
	802.11n(HT20)	---	---	100.00%	1.00	0
	802.11n(HT40)	---	---	100.00%	1.00	0
U-NII-2C	802.11a	---	---	100.00%	1.00	0
	802.11n(HT20)	---	---	100.00%	1.00	0
	802.11n(HT40)	---	---	100.00%	1.00	0
U-NII-3	802.11a	---	---	100.00%	1.00	0
	802.11n(HT20)	---	---	100.00%	1.00	0
	802.11n(HT40)	---	---	100.00%	1.00	0

Remark: Duty Cycle= (Ton/ Ton+off)*100%

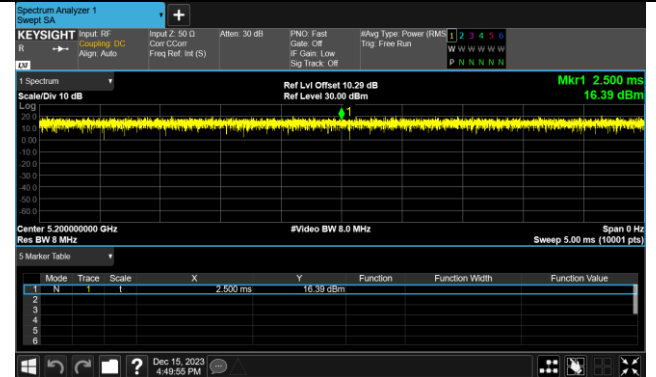
Duty Cycle factor=10*log(1/ Duty cycle)

U-NII-1 Band

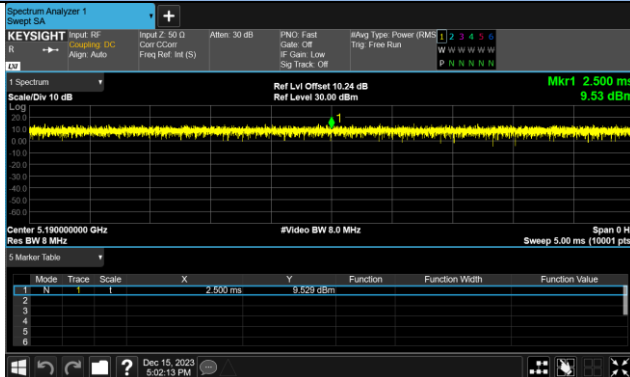
IEEE 802.11a



IEEE 802.11n(HT20)



IEEE 802.11n(HT40)



U-NII-2A Band

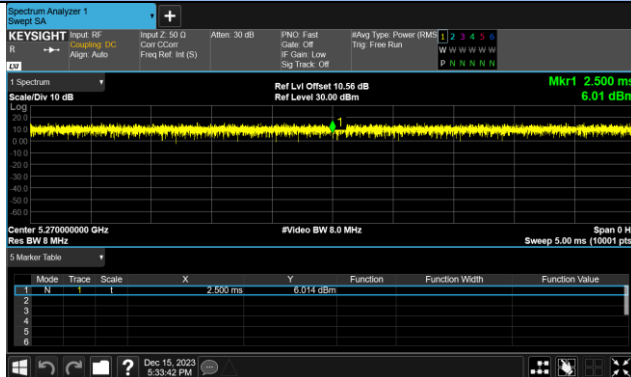
IEEE 802.11a



IEEE 802.11n(HT20)

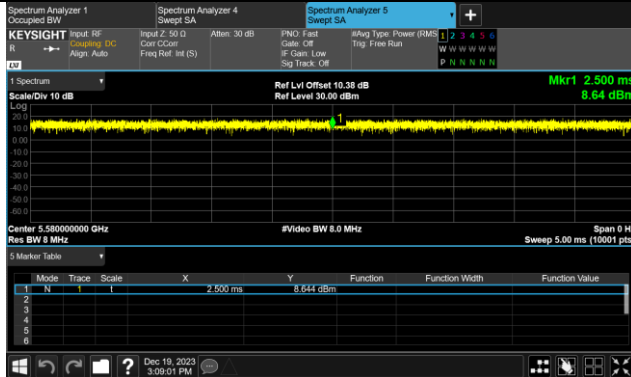


IEEE 802.11n(HT40)

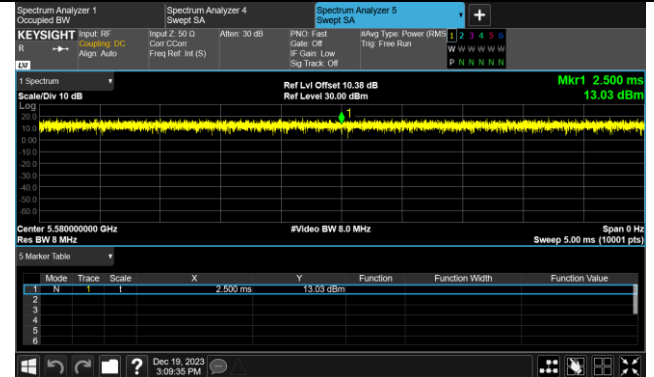


U-NII-2C Band

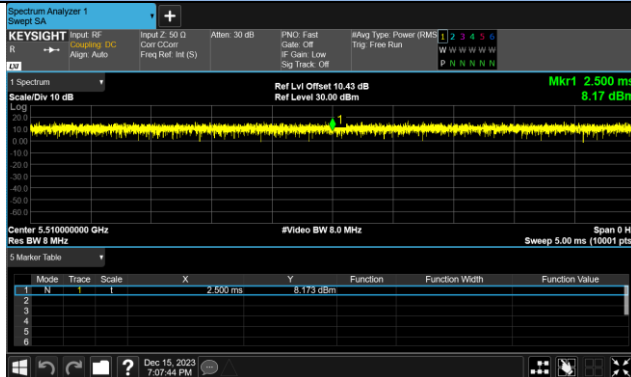
IEEE 802.11a



IEEE 802.11n(HT20)

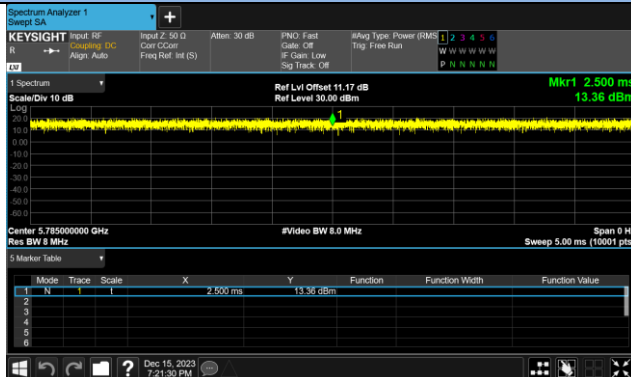


IEEE 802.11n(HT40)

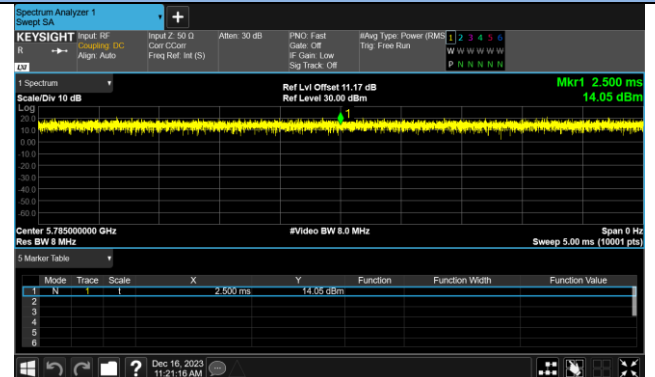


U-NII-3 Band

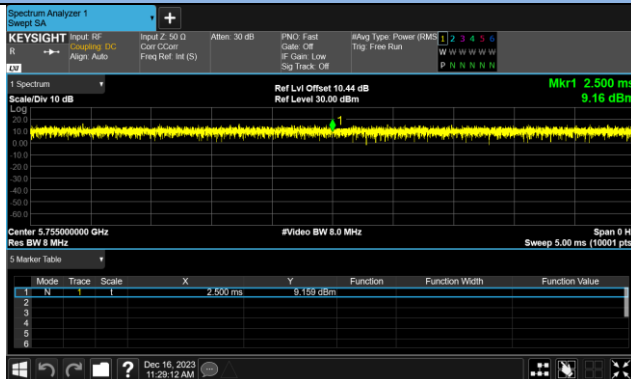
IEEE 802.11a



IEEE 802.11n(HT20)



IEEE 802.11n(HT40)



14. Test Items and Results

14.1 Conducted Emissions Measurement

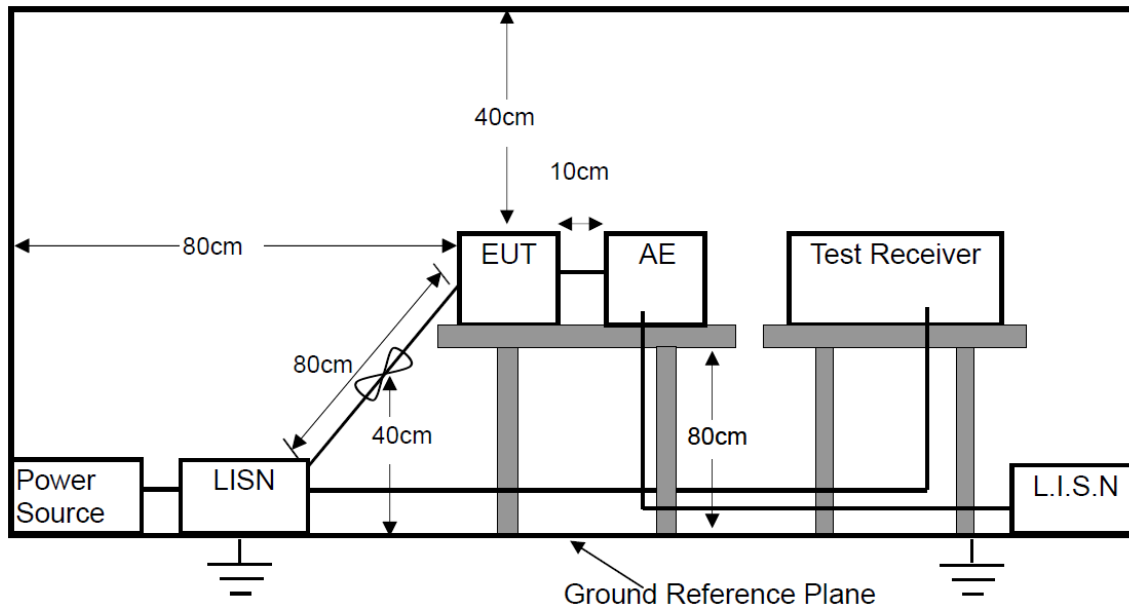
LIMITS

According to the requirements of FCC PART 15.207, the limits are as follows:

Frequency (MHz)	Quasi-peak	Average
0.15 to 0.5	66 to 56	56 to 46
0.5 to 5	56	46
5 to 30	60	50

Note: 1. If the limits for the average detector are met when using the quasi-peak detector, then the limits for the measurements with the average detector are considered to be met.
2. The lower limit shall apply at the transition frequencies.
3. The limit decreases linearly with the logarithm of the frequency in the range 0.15 MHz to 0.5MHz.

BLOCK DIAGRAM OF TEST SETUP



TEST PROCEDURES

- a. The EUT was placed on a wooden table 0.8m height from the metal ground plan and 0.4m from the conducting wall of the shielding room and it was kept at 0.8m from any other grounded conducting surface.
- b. All I/O cables and support devices were positioned as per ANSI C63.10.
- c. Connect mains power port of the EUT to a line impedance stabilization network (LISN).
- d. Connect all support devices to the other LISN and AAN, if needed.
- e. Scan the frequency range from 150KHz to 30MHz at both sides of AC line for maximum conducted interference checking and record the test data.

TEST RESULTS

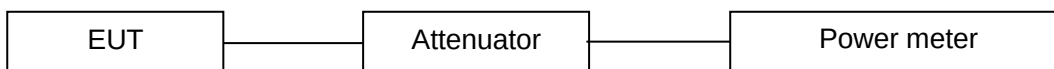
Not applicable

14.2 Maximum Conducted Output Power Measurement

LIMITS

Operation Band	EUT category	Limit
☒ 5180~5240MHz	☐ Outdoor Access Point	1 Watt (30dBm) (Max. e.i.r.p $\leq$ 125mW(21dBm) at any elevation angle above 30 degrees as measured from the horizon)
	☐ Fixed point-to-point Access Point	1 Watt (30dBm)
	☐ Indoor Access Point	1 Watt (30dBm)
	☒ Mobile and Portable client device	250mW (24dBm)
☒ 5260~5320MHz	-	250mW (24dBm)
☒ 5500~5700MHz	-	250mW (24dBm)
☒ 5745~5825MHz	-	1 Watt (30dBm)

BLOCK DIAGRAM OF TEST SETUP



TEST PROCEDURES

1. The transmitter output (antenna port) was connected to the power meter.
2. Test was performed in accordance with KDB789033 v02r01 for compliance testing of Unlicensed National Information Infrastructure (U-NII) Device -section (E) Maximum conducted output power.
3. Measurement using a power meter (PM) =b Method PM-G (Measurement using a gated RF average power meter).

TEST RESULTS

PASS

Please refer to the following table.

U-NII-1			
Frequency MHz	Data Rate Mbps	Average Output Power dBm	Limit dBm
IEEE 802.11a Mode (OFDM, Antenna Gain=-1.81dBi)			
Channel: 5180	6	14.725	24.00
Channel: 5200	6	13.740	24.00
Channel: 5240	6	13.440	24.00
IEEE 802.11n(HT20)Mode (OFDM, Antenna Gain=-1.81dBi)			
Channel: 5180	MCS 8	13.475	24.00
Channel: 5200	MCS 8	13.684	24.00
Channel: 5240	MCS 8	13.427	24.00
IEEE 802.11n(HT40) Mode (OFDM, Antenna Gain=-1.81dBi)			
Channel: 5190	MCS 8	9.970	24.00
Channel: 5230	MCS 8	11.097	24.00
Note: 1. Duty Cycle Factor was considered during the test.			

U-NII-2A			
Frequency MHz	Data Rate Mbps	Average Output Power dBm	Limit dBm
IEEE 802.11a Mode (OFDM, Antenna Gain=-1.81dBi)			
Channel: 5260	6	15.140	24
Channel: 5300	6	14.415	24
Channel: 5320	6	13.709	24
IEEE 802.11n(HT20)Mode (OFDM, Antenna Gain=-1.81dBi)			
Channel: 5260	MCS 8	14.993	24.00
Channel: 5300	MCS 8	14.359	24.00
Channel: 5320	MCS 8	14.257	24.00
IEEE 802.11n(HT40) Mode (OFDM, Antenna Gain=-1.81dBi)			
Channel: 5270	MCS 8	12.134	24.00
Channel: 5310	MCS 8	11.054	24.00
Note: 1. Duty Cycle Factor was considered during the test.			

U-NII-2C			
Frequency MHz	Data Rate Mbps	Average Output Power dBm	Limit dBm
IEEE 802.11a Mode (OFDM, Antenna Gain=-1.81dBi)			
Channel: 5500	6	13.145	24.00
Channel: 5580	6	11.298	24.00
Channel: 5700	6	11.105	24.00
IEEE 802.11n(HT20)Mode (OFDM, Antenna Gain=-1.81dBi)			
Channel: 5500	MCS 8	12.881	24.00
Channel: 5580	MCS 8	11.182	24.00
Channel: 5700	MCS 8	11.095	24.00
IEEE 802.11n(HT40) Mode (OFDM, Antenna Gain=-1.81dBi)			
Channel: 5510	MCS 8	12.533	24.00
Channel: 5670	MCS 8	11.084	24.00
Note: 1. Duty Cycle Factor was considered during the test.			

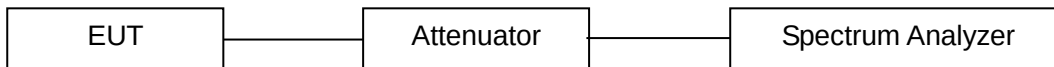
U-NII-3			
Frequency MHz	Data Rate Mbps	Average Output Power dBm	Limit dBm
IEEE 802.11a Mode (OFDM, Antenna Gain=-1.81dBi)			
Channel: 5745	6	14.904	30.00
Channel: 5785	6	14.434	30.00
Channel: 5825	6	14.466	30.00
IEEE 802.11n(HT20)Mode (OFDM, Antenna Gain=-1.81dBi)			
Channel: 5745	MCS 8	13.624	30.00
Channel: 5785	MCS 8	13.866	30.00
Channel: 5825	MCS 8	13.637	30.00
IEEE 802.11n(HT40) Mode (OFDM, Antenna Gain=-1.81dBi)			
Channel: 5755	MCS 8	13.184	30.00
Channel: 5795	MCS 8	12.857	30.00
Note: 1. Duty Cycle Factor was considered during the test.			

14.3 6dB Bandwidth Measurement

LIMITS

The minimum 6dB bandwidth shall be at least 500 kHz

BLOCK DIAGRAM OF TEST SETUP



TEST PROCEDURES

The antenna port of the EUT was connected to the input of a spectrum analyzer. Analyzer was set as below according to ANSI C63.10 clause 11.8.1:

- a. Set the RBW = 100KHz.
- b. Set the VBW $\geq 3 \times$ RBW
- c. Set the Detector = peak.
- d. Set the Sweep time = auto couple.
- e. Set the Trace mode = max hold.
- f. Allow trace to fully stabilize.
- g. 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.

TEST RESULTS

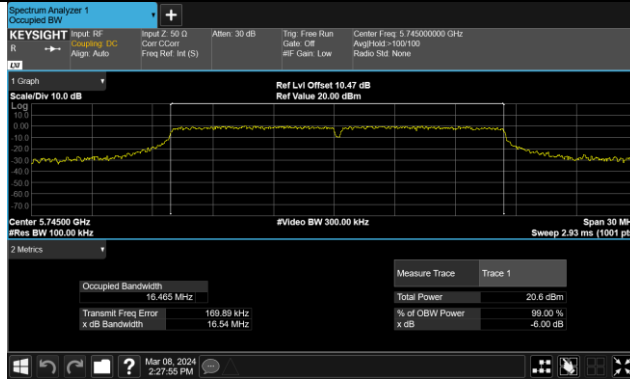
PASS

Please refer to the following tables.

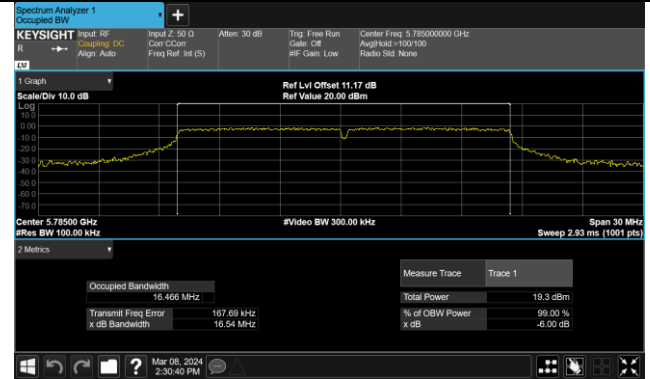
U-NII-3			
Frequency MHz	Data Rate Mbps	6dB Bandwidth MHz	Limit
IEEE 802.11a Mode (OFDM)			
Channel: 5745	6	16.54	>500KHz
Channel: 5785	6	16.54	>500KHz
Channel: 5825	6	16.53	>500KHz
IEEE 802.11n(HT20) Mode (OFDM)			
Channel: 5745	MCS0	17.73	>500KHz
Channel: 5785	MCS0	17.78	>500KHz
Channel: 5825	MCS0	17.75	>500KHz
IEEE 802.11n(HT40) Mode (OFDM)			
Channel: 5755	MCS0	36.39	>500KHz
Channel: 5795	MCS0	36.34	>500KHz

U-NII-3

IEEE 802.11a Low Channel



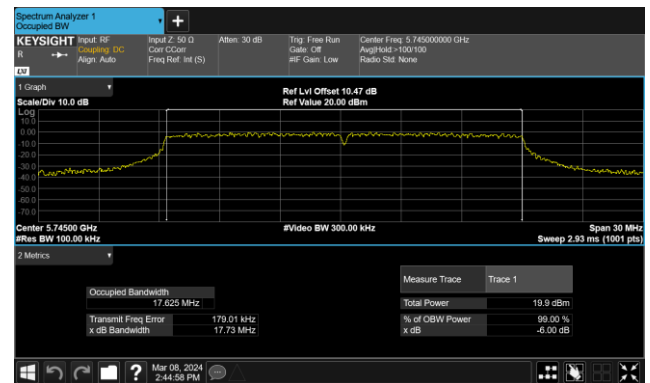
IEEE 802.11a Middle Channel



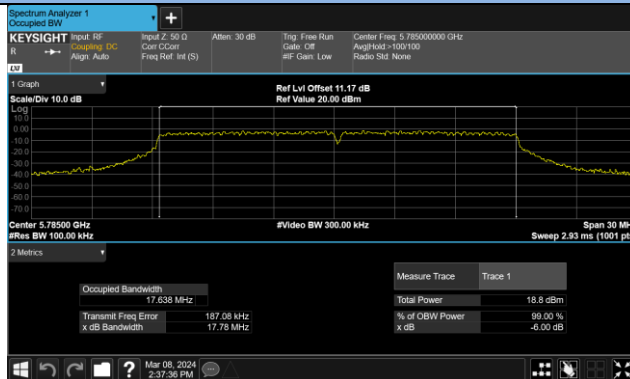
IEEE 802.11a High Channel



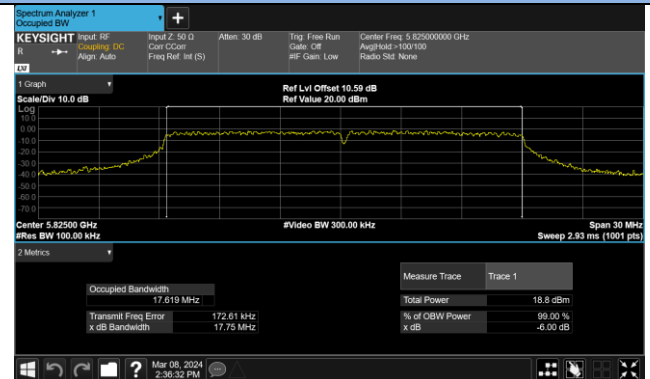
IEEE 802.11n(HT20) Low Channel



IEEE 802.11n(HT20) Middle Channel

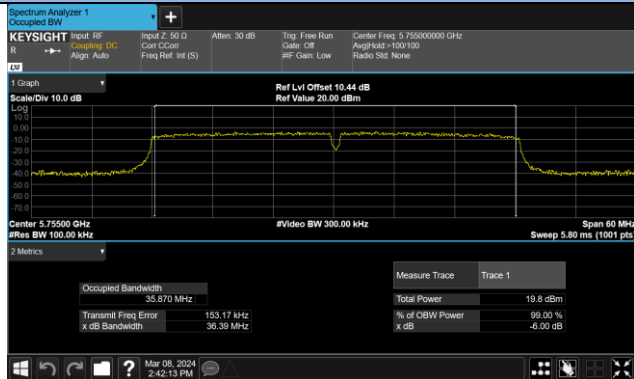


IEEE 802.11n(HT20) High Channel

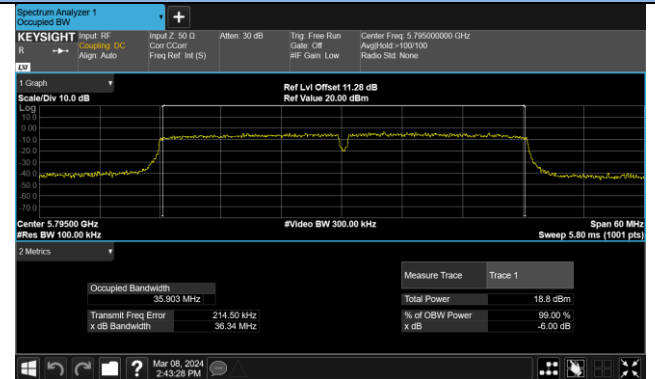


U-NII-3

IEEE 802.11n(HT40) Low Channel



IEEE 802.11n(HT40) High Channel

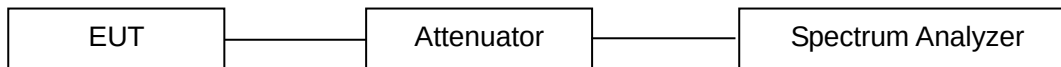


14.4 26dB Bandwidth & 99% Occupied Bandwidth

LIMITS

No restriction limits.

BLOCK DIAGRAM OF TEST SETUP



TEST PROCEDURES

The antenna port of the EUT was connected to the input of a spectrum analyzer.

Analyzer was set as below according to FCC KDB789033(v02r01):

- a. For 26dB bandwidth, Set the RBW = Approximately 1% of the emission bandwidth
 - b. Set the VBW > RBW
 - c. Detector = peak.
 - d. Sweep time = auto couple.
 - e. Trace mode = max hold.
 - f. Allow trace to fully stabilize.
 - g. 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 26 dB relative to the maximum level measured in the fundamental emission.
-
1. For 99% occupied bandwidth, Set the RBW = 1% to 5% of the OBW
 2. Set the VBW $\geq 3 \times$ RBW
 3. Detector = peak.
 4. Span = 1.5 times to 5.0 times the OBW
 5. Sweep time = auto couple.
 6. Trace mode = max hold. Allow trace to fully stabilize.
 7. Use the 99% power bandwidth function of the spectrum analyzer measure the occupied bandwidth.

TEST RESULTS

PASS

Please refer to the following table.

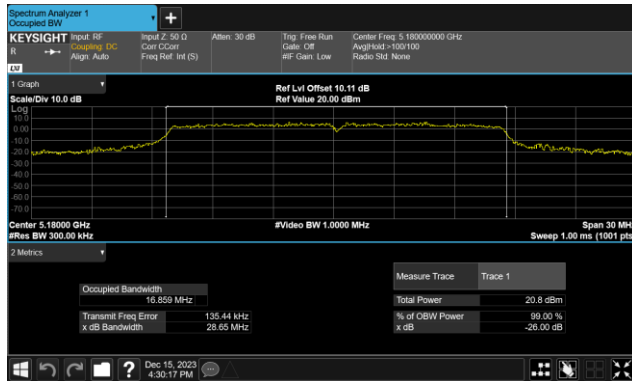
U-NII-1			
Frequency MHz	Data Rate Mbps	26dB Bandwidth MHz	99% Occupied Bandwidth MHz
IEEE 802.11a Mode (OFDM)			
Channel: 5180	6	28.65	---
Channel: 5200	6	27.96	---
Channel: 5240	6	24.56	---
IEEE 802.11n(HT20) Mode (OFDM)			
Channel: 5180	MCS0	29.86	---
Channel: 5200	MCS0	29.94	---
Channel: 5240	MCS0	30.00	---
IEEE 802.11n(HT40) Mode (OFDM)			
Channel: 5190	MCS0	38.52	---
Channel: 5230	MCS0	38.16	---

U-NII-2A			
Frequency MHz	Data Rate Mbps	26dB Bandwidth MHz	99% Occupied Bandwidth MHz
IEEE 802.11a Mode (OFDM)			
Channel: 5260	6	30.00	---
Channel: 5300	6	24.37	---
Channel: 5320	6	23.99	---
IEEE 802.11n(HT20) Mode (OFDM)			
Channel: 5260	MCS0	30.00	---
Channel: 5300	MCS0	29.31	---
Channel: 5320	MCS0	29.47	---
IEEE 802.11n(HT40) Mode (OFDM)			
Channel: 5270	MCS0	38.39	---
Channel: 5310	MCS0	38.81	---

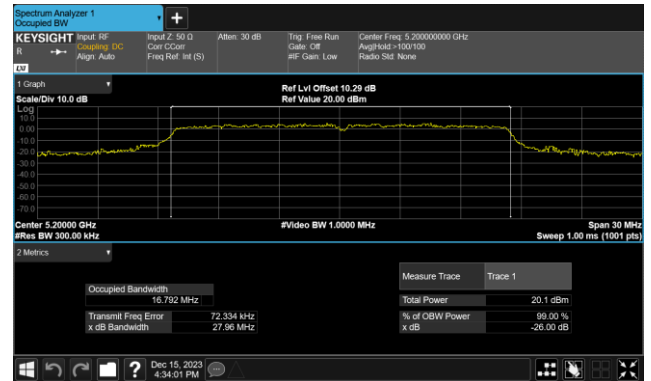
U-NII-2C			
Frequency MHz	Data Rate Mbps	26dB Bandwidth MHz	99% Occupied Bandwidth MHz
IEEE 802.11a Mode (OFDM)			
Channel: 5500	6	20.92	---
Channel: 5580	6	22.09	---
Channel: 5700	6	20.60	---
IEEE 802.11n(HT20) Mode (OFDM)			
Channel: 5500	MCS0	21.74	---
Channel: 5580	MCS0	21.18	---
Channel: 5700	MCS0	21.65	---
IEEE 802.11n(HT40) Mode (OFDM)			
Channel: 5510	MCS0	38.33	---
Channel: 5670	MCS0	38.22	---

U-NII-1 / 26dB Bandwidth

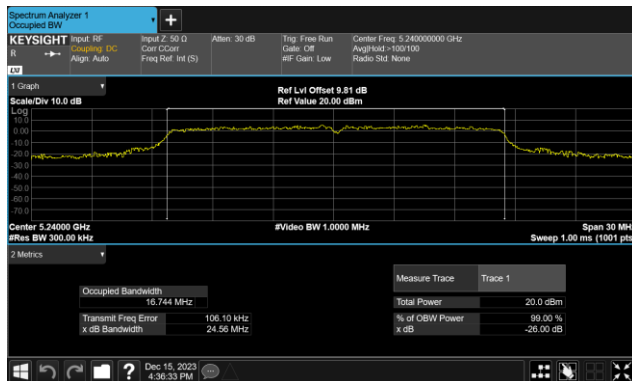
IEEE 802.11a Low Channel



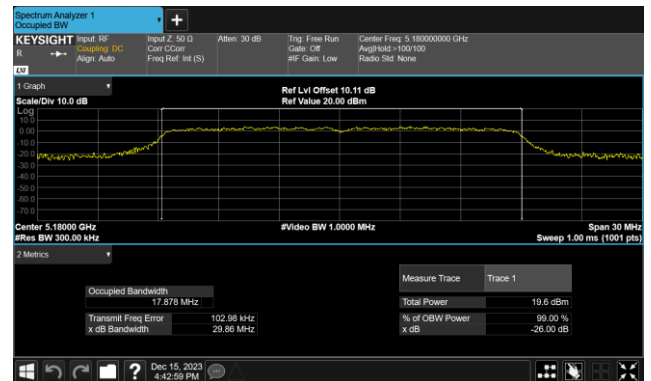
IEEE 802.11a Middle Channel



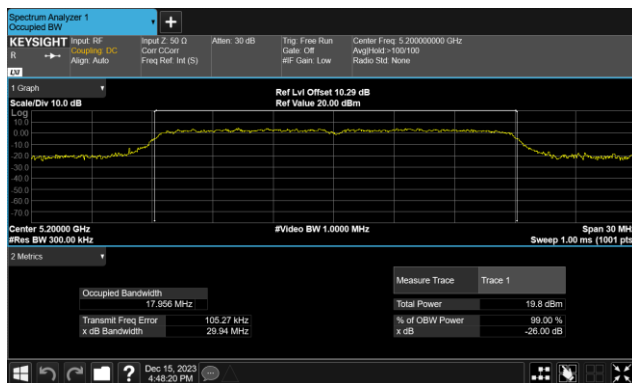
IEEE 802.11a High Channel



IEEE 802.11n(HT20) Low Channel



IEEE 802.11n(HT20) Middle Channel

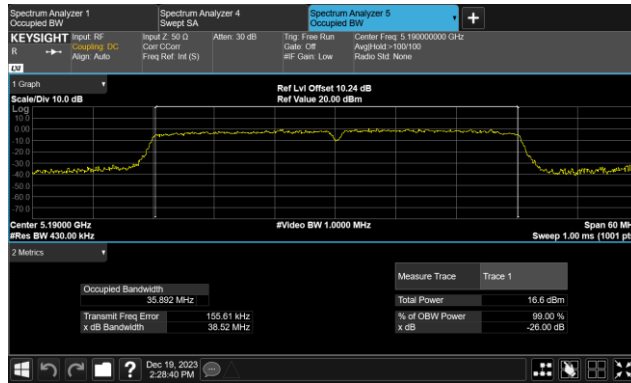


IEEE 802.11n(HT20) High Channel



U-NII-1 / 26dB Bandwidth

IEEE 802.11n(HT40) Low Channel

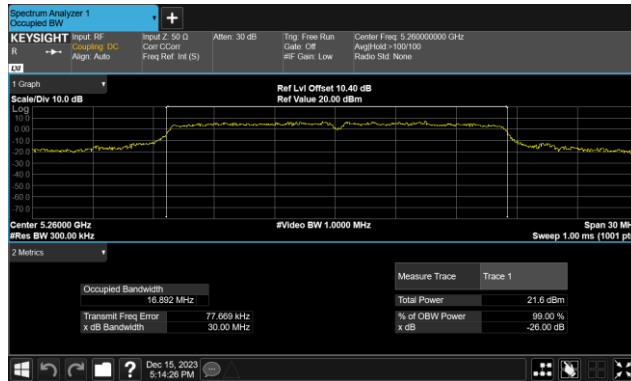


IEEE 802.11n(HT40) High Channel

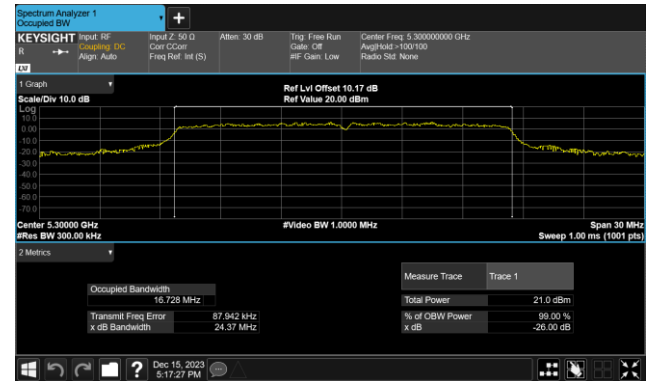


U-NII-2A / 26dB Bandwidth

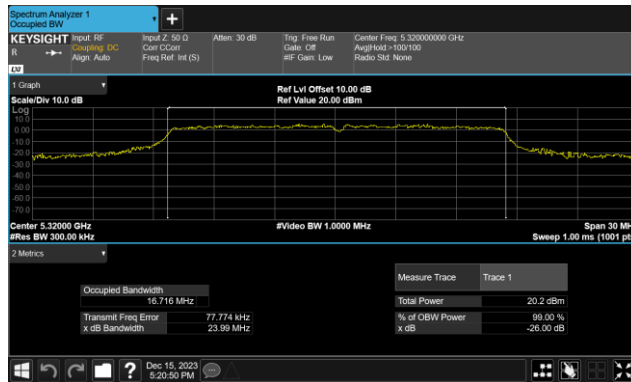
IEEE 802.11a Low Channel



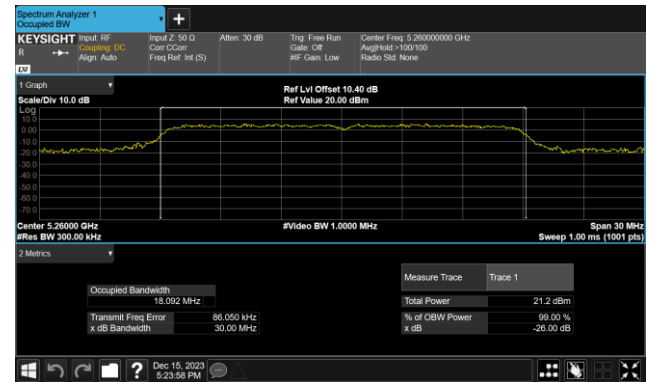
IEEE 802.11a Middle Channel



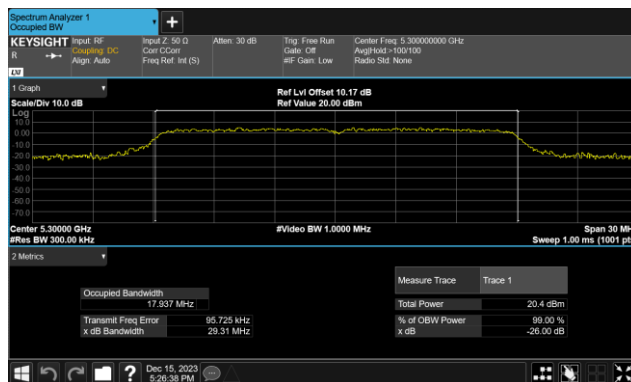
IEEE 802.11a High Channel



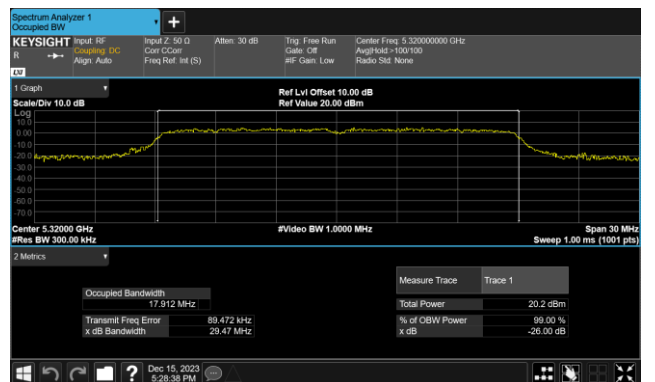
IEEE 802.11n(HT20) Low Channel



IEEE 802.11n(HT20) Middle Channel

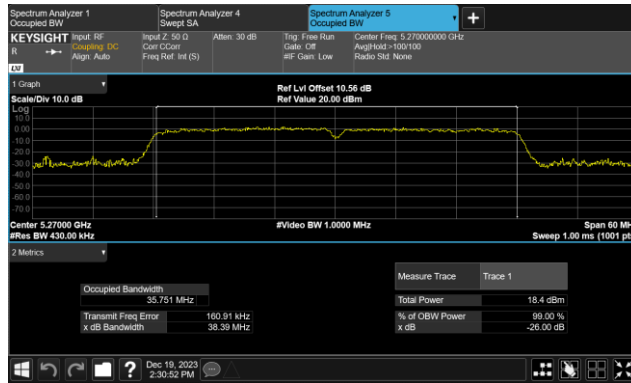


IEEE 802.11n(HT20) High Channel

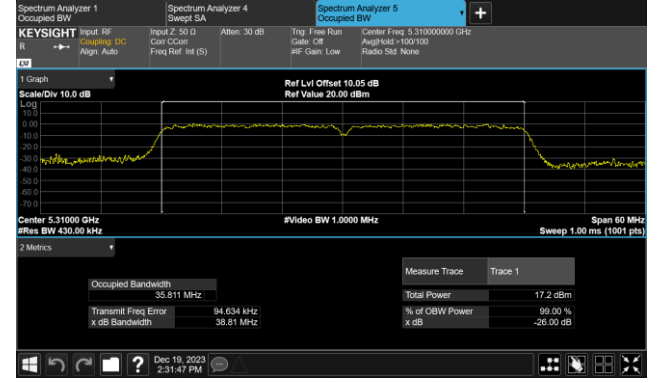


U-NII-2A / 26dB Bandwidth

IEEE 802.11n(HT40) Low Channel

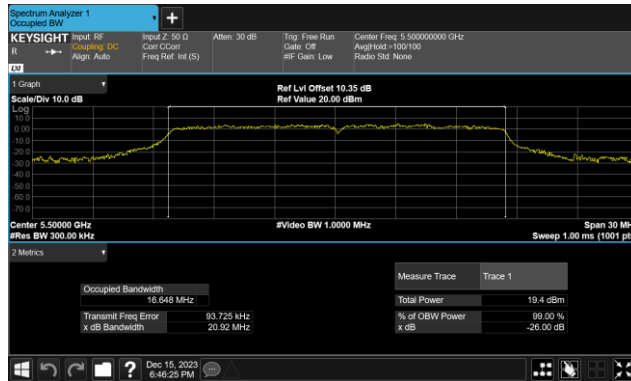


IEEE 802.11n(HT40) High Channel

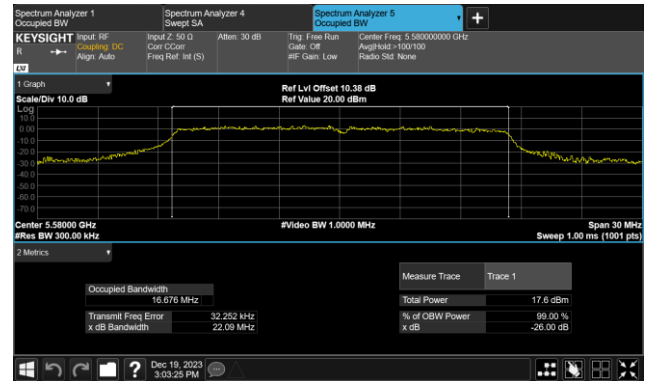


U-NII-2C / 26dB Bandwidth

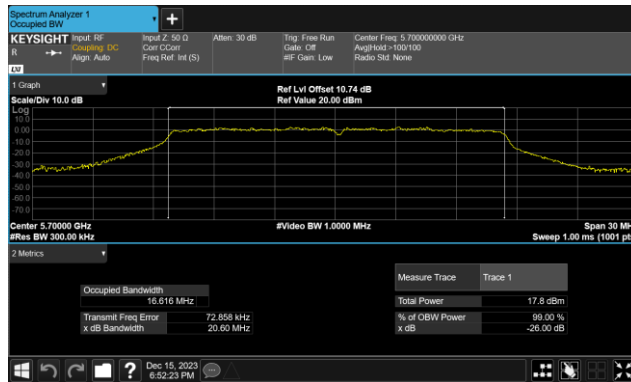
IEEE 802.11a Low Channel



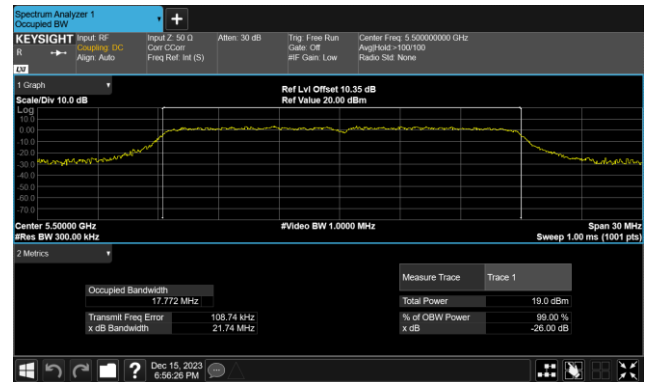
IEEE 802.11a Middle Channel



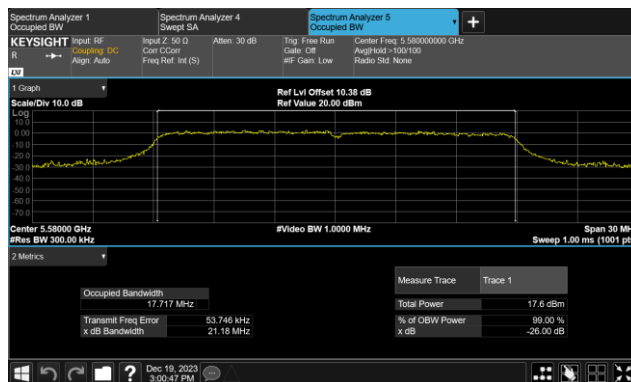
IEEE 802.11a High Channel



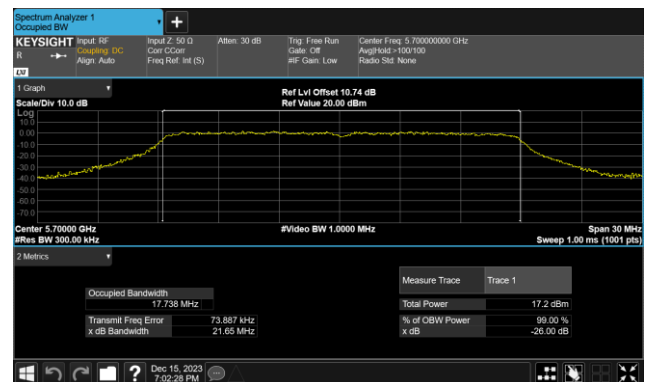
IEEE 802.11n(HT20) Low Channel



IEEE 802.11n(HT20) Middle Channel

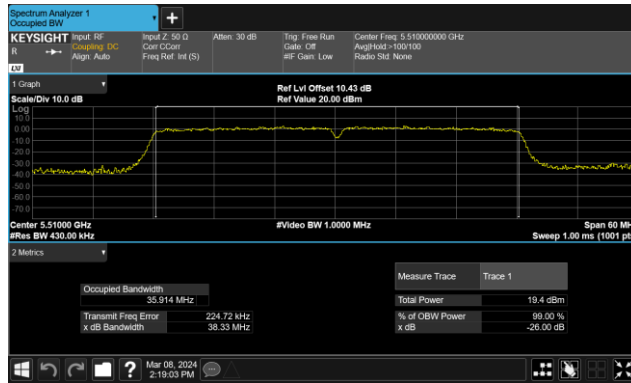


IEEE 802.11n(HT20) High Channel

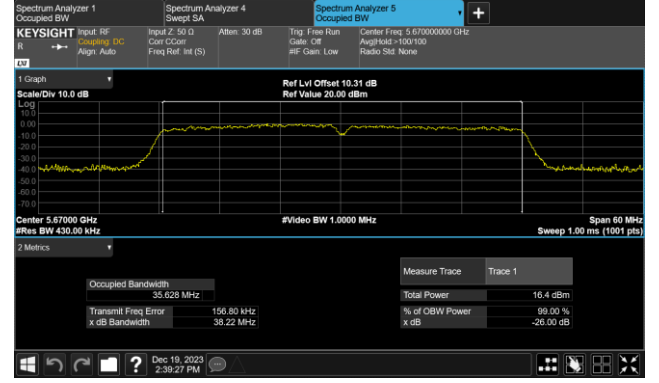


U-NII-2C / 26dB Bandwidth

IEEE 802.11n(HT40) Low Channel



IEEE 802.11n(HT40) High Channel

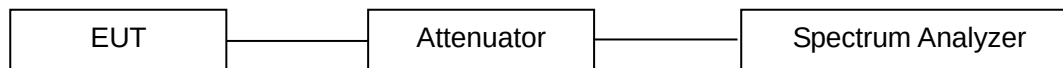


14.5 Power Spectral Density

LIMITS

Operation Band		Limit
☒ 5180~5240MHz	☐ Outdoor access point	17 dBm/MHz
	☐ Indoor access point	17 dBm/MHz
	☐ Fixed point-to-point access points	17 dBm/MHz
	☒ Client devices	11 dBm/MHz
☒ 5260~5320MHz	-	11 dBm/MHz
☒ 5500~5700MHz	-	11 dBm/MHz
☒ 5745~5825MHz	-	30 dBm/500kHz

BLOCK DIAGRAM OF TEST SETUP



TEST PROCEDURES

The antenna port of the EUT was connected to the input of a spectrum analyzer.

Analyzer was set as below according to FCC KDB789033 (v02r01):

- Set analyzer center frequency to center frequency
- Set the RBW to: 1MHz
- Set the VBW to: 3MHz
- Detector = RMS
- Sweep time = auto couple
- Trace Average = 100 times
- If measured bandwidth of Maximum PSD is specified in 500kHz, add $10\log(500\text{kHz}/\text{RBW})$ to the measured result, whereas RBW (<500kHz) is the reduced resolution bandwidth of the spectrum analyzer set during measurement. Allow trace to fully stabilize.

TEST RESULTS

PASS

Please refer to the following test plots.

U-NII-1					
Frequency MHz	Data Rate Mbps	Duty Cycle Factor (dB)	PSD dBm/MHz	Total PSD with duty cycle factor	Limit dBm/ MHz
IEEE 802.11a Mode (OFDM, Antenna Gain=-1.81dBi)					
Channel: 5180	6	0	9.63	9.63	11
Channel: 5200	6		9.08	9.08	11
Channel: 5240	6		8.96	8.96	11
IEEE 802.11n(HT20)Mode (OFDM, Antenna Gain=-1.81dBi)					
Channel: 5180	MCS 8	0	7.85	7.85	11
Channel: 5200	MCS 8		7.37	7.37	11
Channel: 5240	MCS 8		7.65	7.65	11
IEEE 802.11n(HT40) Mode (OFDM, Antenna Gain=-1.81dBi)					
Channel: 5190	MCS 8	0	2.73	2.73	11
Channel: 5230	MCS 8		2.46	2.46	11
Note: 1. Please refer to section 13 for duty cycle factor					

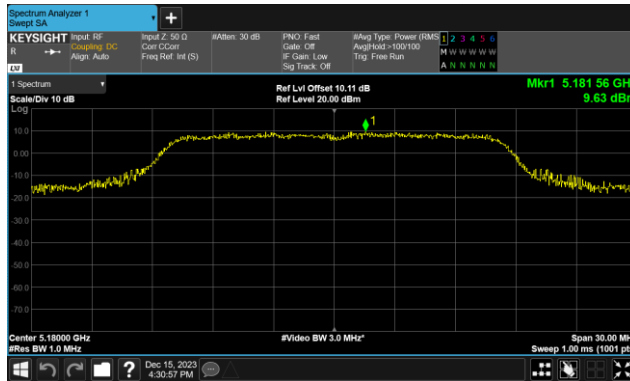
U-NII-2A					
Frequency MHz	Data Rate Mbps	Duty Cycle Factor (dB)	PSD dBm/MHz	Total PSD with duty cycle factor	Limit dBm/ MHz
IEEE 802.11a Mode (OFDM, Antenna Gain=-1.81dBi)					
Channel: 5260	6	0	10.23	10.23	11
Channel: 5300	6		9.68	9.68	11
Channel: 5320	6		9.30	9.30	11
IEEE 802.11n(HT20)Mode (OFDM, Antenna Gain=-1.81dBi)					
Channel: 5260	MCS 8	0	8.70	8.70	11
Channel: 5300	MCS 8		8.66	8.66	11
Channel: 5320	MCS 8		8.33	8.33	11
IEEE 802.11n(HT40) Mode (OFDM, Antenna Gain=-1.81dBi)					
Channel: 5270	MCS 8	0	3.65	3.65	11
Channel: 5310	MCS 8		2.90	2.90	11
Note: 1. Please refer to section 13 for duty cycle factor					

U-NII-2C					
Frequency MHz	Data Rate Mbps	Duty Cycle Factor (dB)	PSD dBm/MHz	Total PSD with duty cycle factor	Limit dBm/ MHz
IEEE 802.11a Mode (OFDM, Antenna Gain=-1.81dBi)					
Channel: 5500	6	0	8.99	8.99	11
Channel: 5580	6		6.81	6.81	11
Channel: 5700	6		7.18	7.18	11
IEEE 802.11n(HT20)Mode (OFDM, Antenna Gain=-1.81dBi)					
Channel: 5500	MCS 8	0	7.44	7.44	11
Channel: 5580	MCS 8		6.30	6.30	11
Channel: 5700	MCS 8		5.82	5.82	11
IEEE 802.11n(HT40) Mode (OFDM, Antenna Gain=-1.81dBi)					
Channel: 5510	MCS 8	0	4.62	4.62	11
Channel: 5670	MCS 8		3.28	3.28	11
Note: 1. Please refer to section 13 for duty cycle factor					

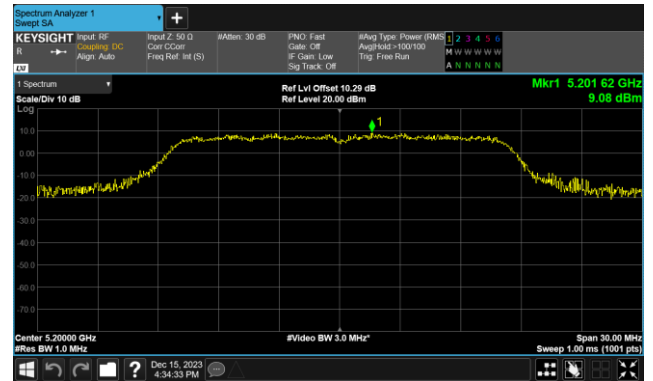
U-NII-3					
Frequency MHz	Data Rate Mbps	Duty Cycle Factor (dB)	PSD dBm/MHz	Total PSD with duty cycle factor	Limit dBm/ 500KHz
IEEE 802.11a Mode (OFDM, Antenna Gain=-1.81dBi)					
Channel: 5745	6	0	8.14	8.14	30
Channel: 5785	6		7.40	7.40	30
Channel: 5825	6		7.67	7.67	30
IEEE 802.11n(HT20)Mode (OFDM, Antenna Gain=-1.81dBi)					
Channel: 5745	MCS 8	0	5.87	5.87	30
Channel: 5785	MCS 8		6.56	6.56	30
Channel: 5825	MCS 8		5.89	5.89	30
IEEE 802.11n(HT40) Mode (OFDM, Antenna Gain=-1.81dBi)					
Channel: 5755	MCS 8	0	2.94	2.94	30
Channel: 5795	MCS 8		2.07	2.07	30
Note: 1. Please refer to section 13 for duty cycle factor					

U-NII-1

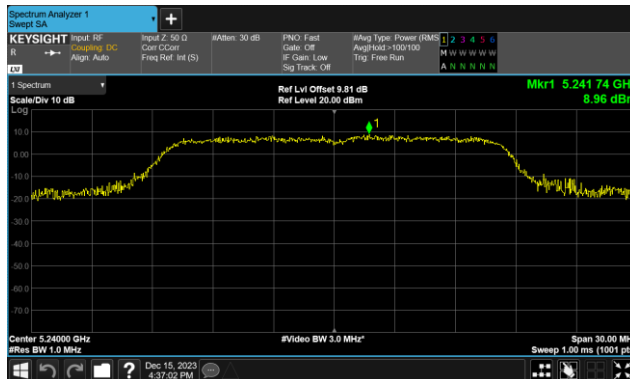
IEEE 802.11a Low Channel



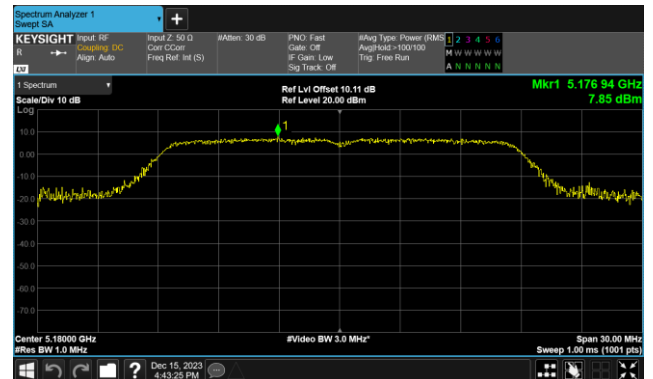
IEEE 802.11a Middle Channel



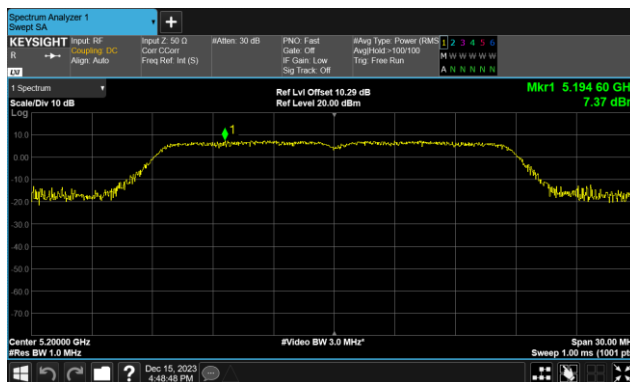
IEEE 802.11a High Channel



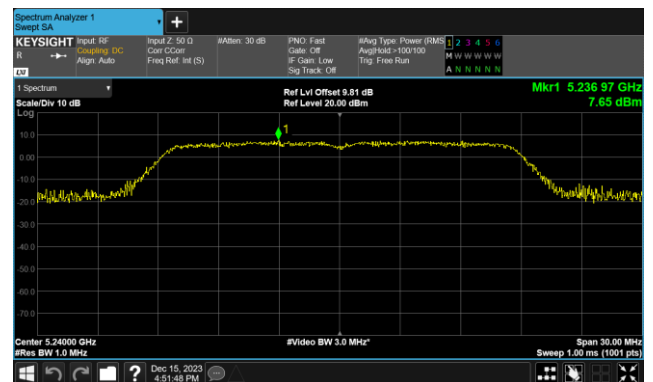
IEEE 802.11n(HT20) Low Channel_ANT 1



IEEE 802.11n(HT20) Middle Channel_ANT 1

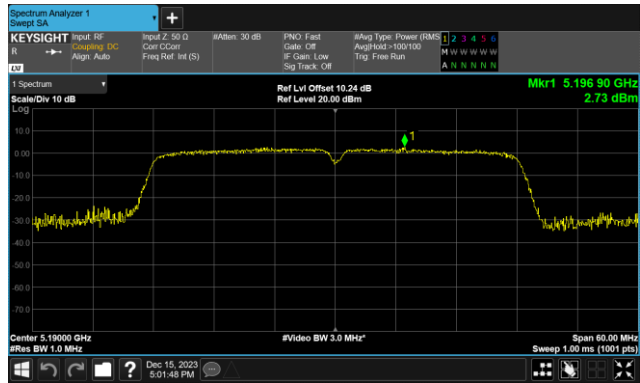


IEEE 802.11n(HT20) High Channel_ANT 1

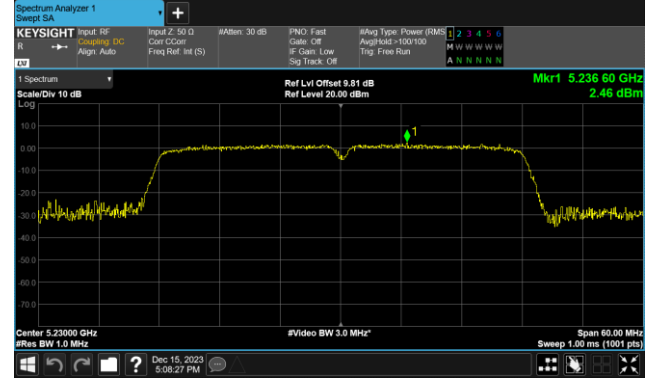


U-NII-1

IEEE 802.11n(HT40) Low Channel_ANT 1

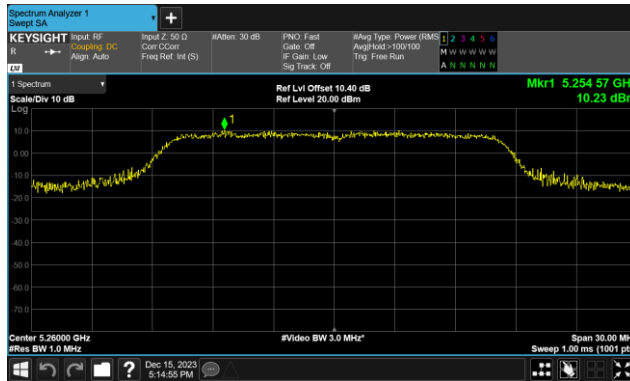


IEEE 802.11n(HT40) High Channel_ANT 1

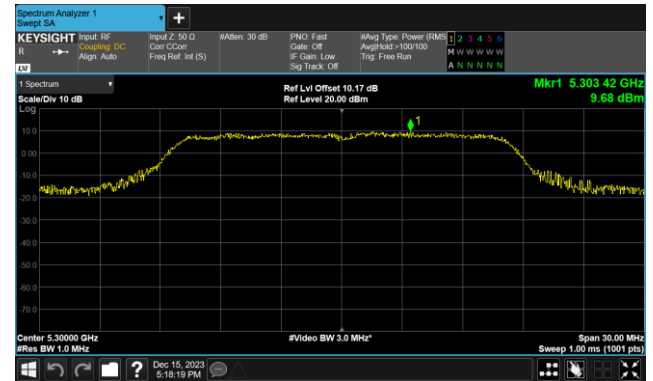


U-NII-2A

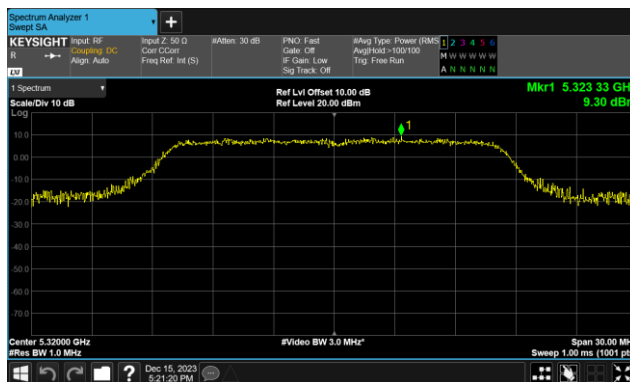
IEEE 802.11a Low Channel



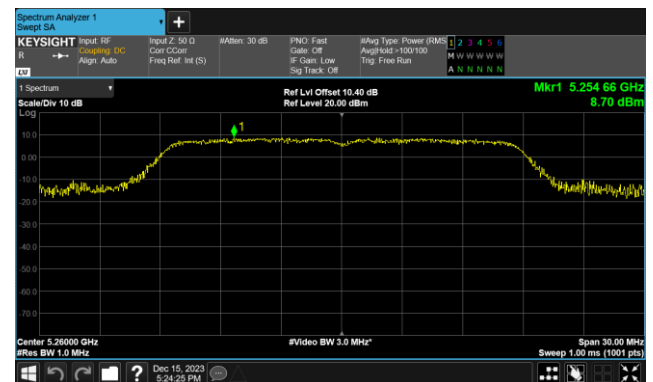
IEEE 802.11a Middle Channel



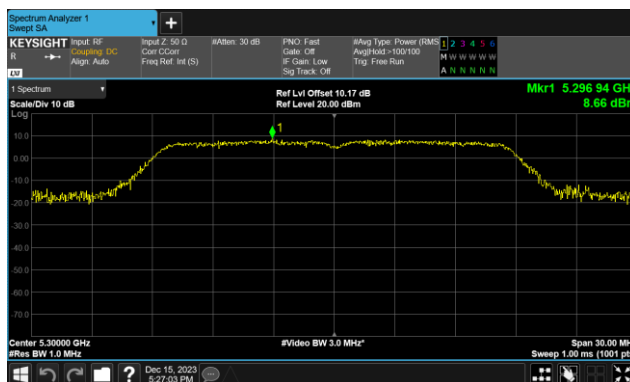
IEEE 802.11a High Channel



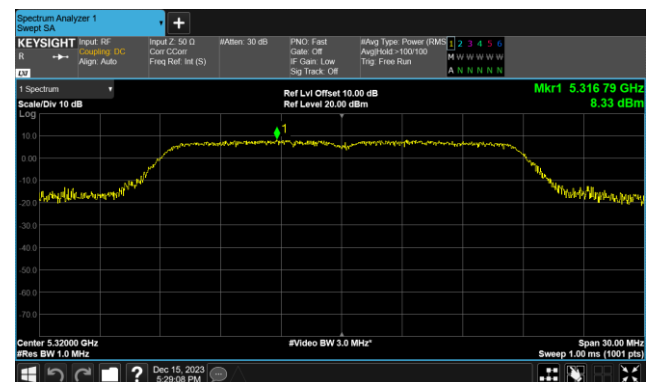
IEEE 802.11n(HT20) Low Channel_ANT 1



IEEE 802.11n(HT20) Middle Channel_ANT 1

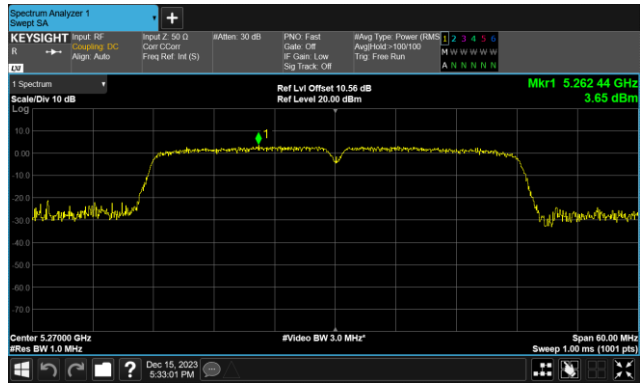


IEEE 802.11n(HT20) High Channel_ANT 1



U-NII-2A

IEEE 802.11n(HT40) Low Channel_ANT 1



IEEE 802.11n(HT40) High Channel_ANT 1

