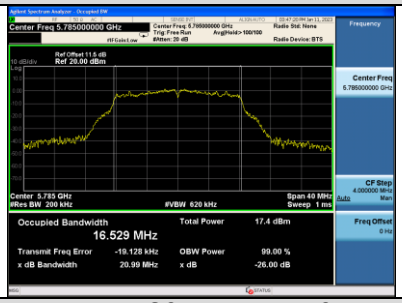
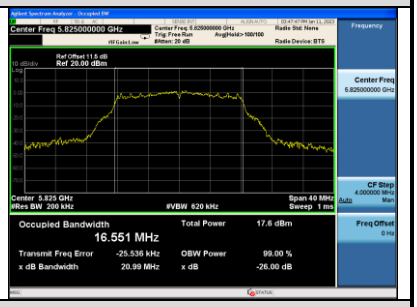
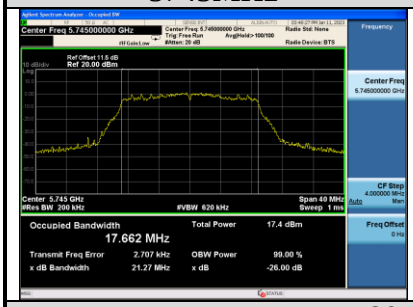
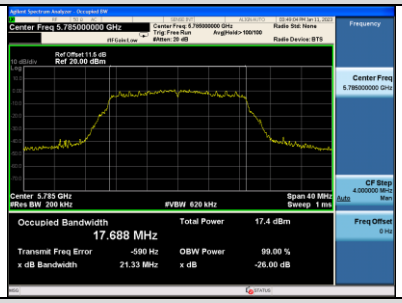
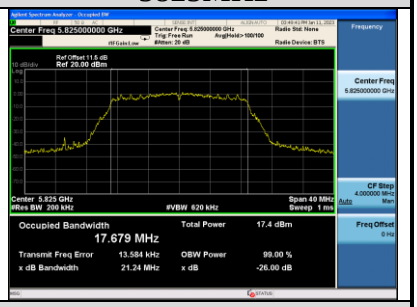
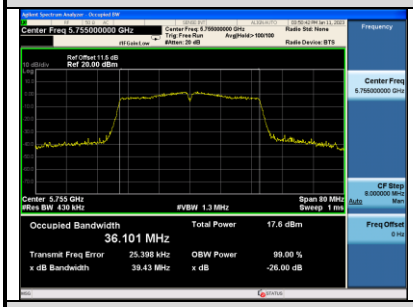
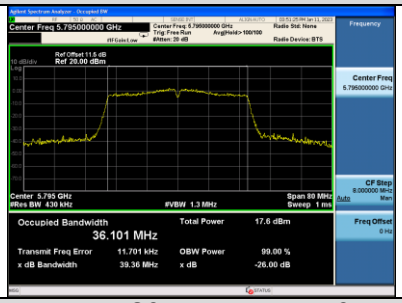
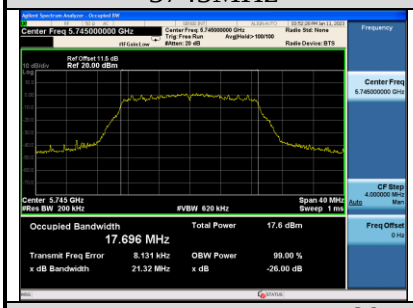
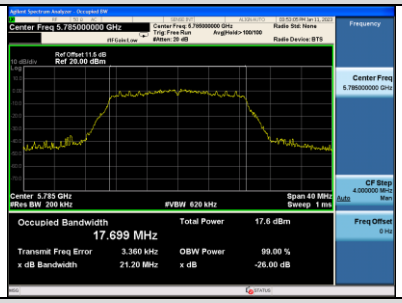
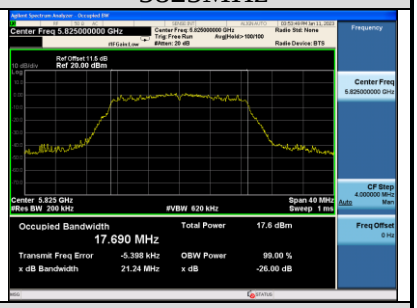
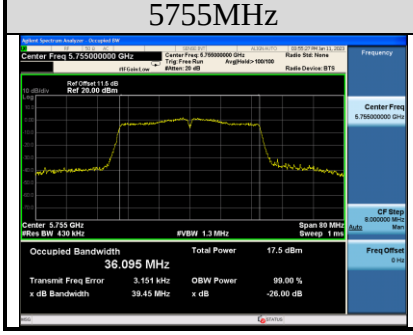
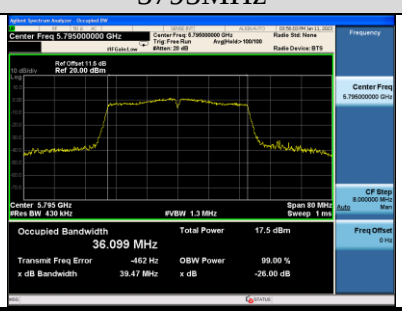
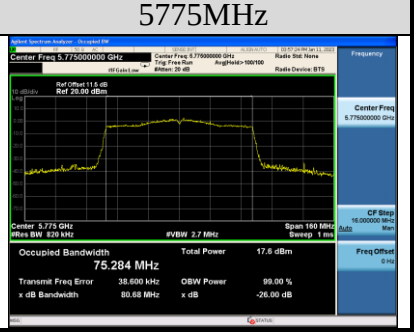
U-NII-3 Band:		
26dB bandwidth & 99% Occupied bandwidth		
IEEE 802.11a		
5745MHz	5785MHz	5825MHz
		
IEEE 802.11n HT20		
5745MHz	5785MHz	5825MHz
		
IEEE 802.11n HT40		---
5755MHz	5795MHz	---
		---
IEEE 802.11ac VHT20		
5745MHz	5785MHz	5825MHz
		
IEEE 802.11ac VHT40		IEEE 802.11ac VHT80
5755MHz	5795MHz	5775MHz
		

7. OUTPUT POWER TEST

7.1.Test Equipments

Item	Equipment	Manufacturer	Model No.	Serial No.	Last Cal.	Cal. Interval
1.	Signal Analyzer	Rohde & Schwarz	FSV40	101608	Nov.09,22	1 Year
2.	Power meter	HP	436A	3103U06658	Apr.02,23	1 Year
3.	Power Sensor	Agilent	8482B	MY41090514	Apr.02,23	1 Year
4.	Attenuator	Agilent	8491B	MY39269201	Oct.09,22	1 Year
5.	RF Cable	HUBER+SUHNER	SUCOFLEX-106	505238/6	Apr.02,23	1 Year

7.2.Limit

For the band 5.15–5.25 GHz.

For mobile and portable client devices in the 5.15–5.25 GHz band, the maximum conducted output power over the frequency band of operation shall not exceed 250 mW provided the max-imum antenna gain does not exceed 6 dBi.

For the 5.25–5.35 GHz and 5.47–5.725 GHz bands, the maximum conducted output power over the frequency bands of operation shall not exceed the lesser of 250 mW or 11 dBm + 10 log B, where B is the 26 dB emission bandwidth in megahertz.

For the band 5.725-5.85 GHz, the maximum conducted output power over the frequency band of operation shall not exceed 1 W.

7.3.Test Procedure

1. Connected the EUT's antenna port to measure device by 20dB attenuator.
   1) Measure the duty cycle, x, of the transmitter output signal as described in II.B.
   2) Set span to encompass the EBW (or, alternatively, the entire 99% occupied bandwidth) of the signal.
   3) Set RBW = 1 MHz.
   4) Set VBW ≥ 3 MHz.
   5) Number of points in sweep ≥ 2 × span / RBW. (This ensures that bin-to-bin spacing is ≤ RBW/2, so that narrowband signals are not lost between frequency bins.)
   6) Sweep time = auto.
   7) Detector = power averaging (rms), if available. Otherwise, use sample detector mode.
   8) Do not use sweep triggering. Allow the sweep to "free run."
   9) Trace average at least 100 traces in power averaging (rms) mode; however, the number of traces to be averaged shall be increased above 100 as needed to ensure that the average accurately represents the true average over the on and off periods of the transmitter.
   10) Compute power by integrating the spectrum across the EBW (or, alternatively, the entire 99% occupied bandwidth) of the signal using the instrument's band power measurement function with band limits set equal to the EBW (or occupied bandwidth) band edges. If the instrument does not have a band power function, sum the spectrum levels (in power units) at 1 MHz intervals extending across the EBW (or, alternatively, the entire 99% occupied bandwidth) of the signal.
   11) Add 10 log (1/x), where x is the duty cycle, to the measured power in order to compute the average power during the actual transmission times

Note: The cable loss and attenuator loss were offset into measure device as an amplitude offset.

7.4.Test Results

U-NII-1 Band:

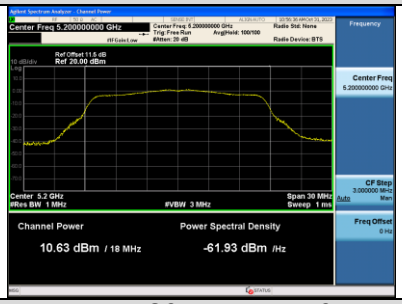
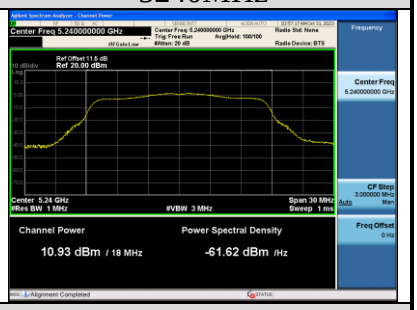
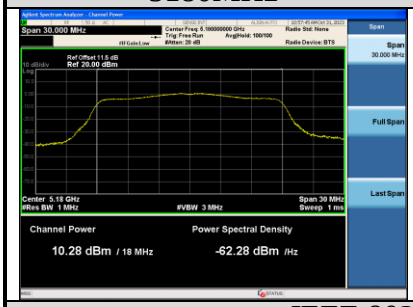
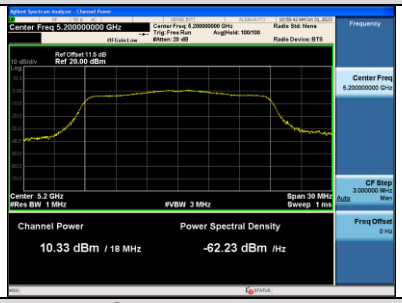
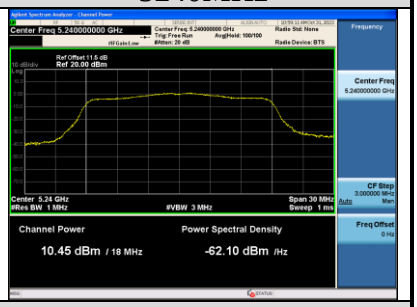
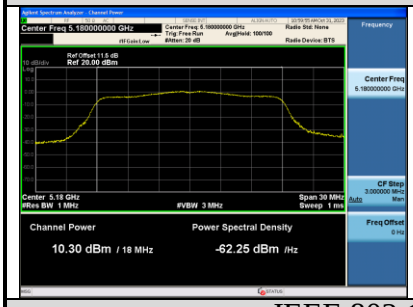
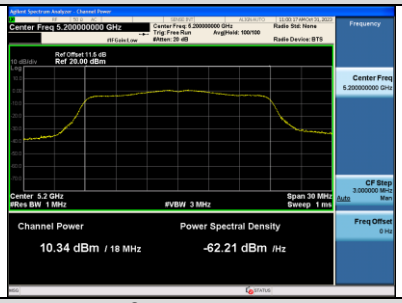
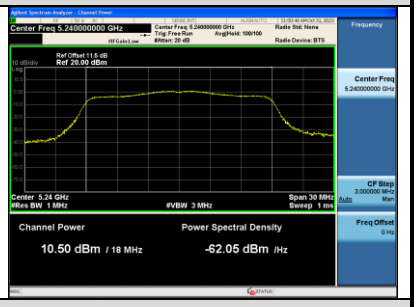
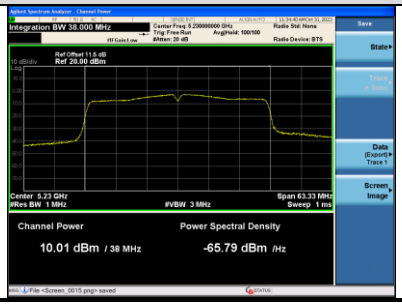
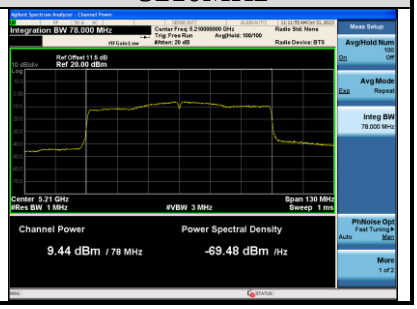
EUT: Room Booking Panel		
M/N: IAD-18010H		
Test date: 2023-10-31	Pressure: 102.1±1.0 kpa	Humidity: 53.2±3.0%
Tested by: Jerry	Test site: RF site	Temperature:22.3±0.6 ℃

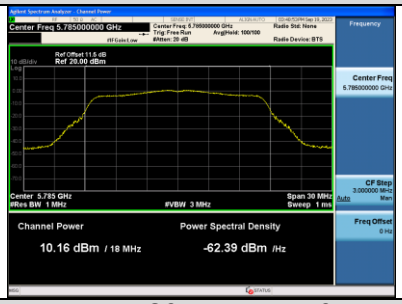
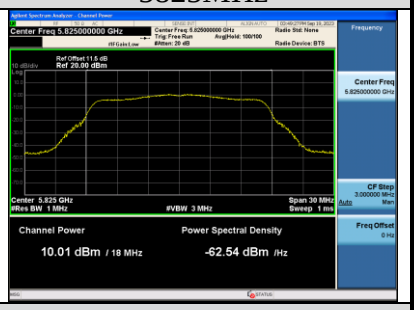
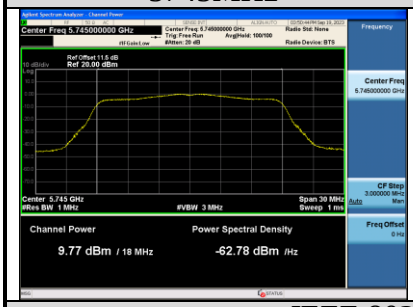
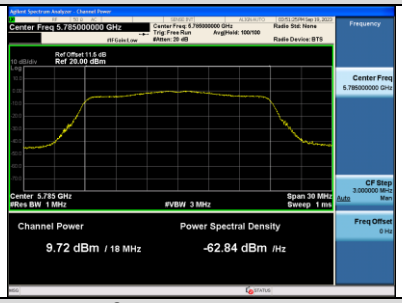
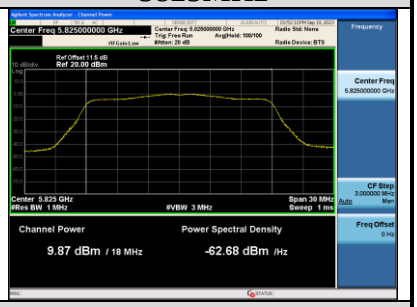
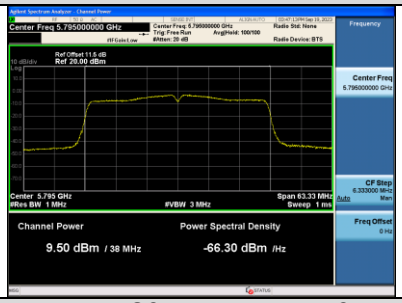
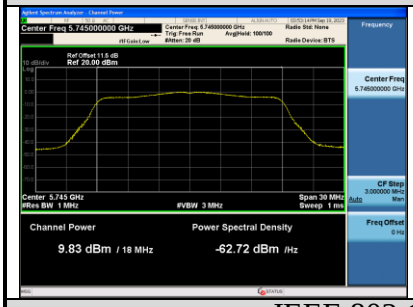
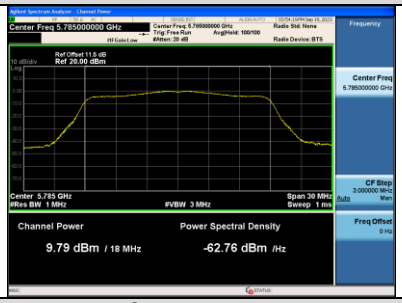
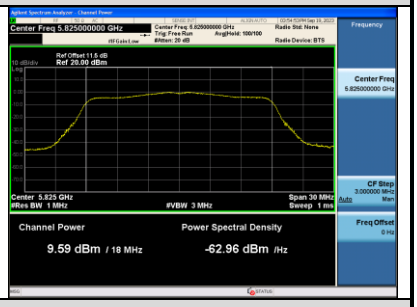
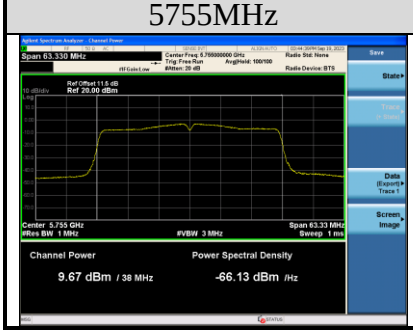
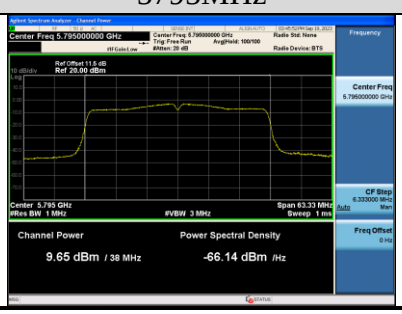
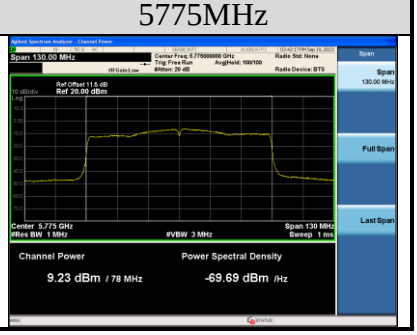
Test Mode	Frequency (MHz)	Power Setting	Output Power (dBm)	Limit (dBm)
11a	5180	Default	10.78	23.98
	5200	Default	10.63	
	5240	Default	10.93	
11n HT20	5180	Default	10.28	23.98
	5200	Default	10.33	
	5240	Default	10.45	
11n HT40	5190	Default	9.91	23.98
	5230	Default	10.02	
11ac VHT20	5180	Default	10.30	23.98
	5200	Default	10.34	
	5240	Default	10.50	
11ac VHT40	5190	Default	9.92	23.98
	5230	Default	10.01	
11ac VHT80	5210	Default	9.44	23.98
Conclusion: PASS				

U-NII-3 Band:

EUT: Room Booking Panel		
M/N: IAD-18010H		
Test date: 2023-09-19	Pressure: 102.5±1.0 kpa	Humidity: 53.6±3.0%
Tested by: Jerry	Test site: RF site	Temperature:22.4±0.6 ℃

Test Mode	Frequency (MHz)	Power Setting	Output Power (dBm)	Limit (dBm)
11a	5745	Default	10.18	30
	5785	Default	10.16	
	5825	Default	10.01	
11n HT20	5745	Default	9.77	30
	5785	Default	9.72	
	5825	Default	9.87	
11n HT40	5755	Default	9.61	30
	5795	Default	9.50	
11ac VHT20	5745	Default	9.83	30
	5785	Default	9.79	
	5825	Default	9.59	
11ac VHT40	5755	Default	9.67	30
	5795	Default	9.65	
11ac VHT80	5775	Default	9.23	30
Conclusion: PASS				

U-NII-1 Band:		
IEEE 802.11a		
5180MHz	5200MHz	5240MHz
		
IEEE 802.11n HT20		
5180MHz	5200MHz	5240MHz
		
IEEE 802.11n HT40		---
5190MHz	5230MHz	---
		---
IEEE 802.11ac VHT20		
5180MHz	5200MHz	5240MHz
		
IEEE 802.11ac VHT40		IEEE 802.11ac VHT80
5190MHz	5230MHz	5210MHz
		

U-NII-3 Band:		
IEEE 802.11a		
5745MHz	5785MHz	5825MHz
		
IEEE 802.11n HT20		
5745MHz	5785MHz	5825MHz
		
IEEE 802.11n HT40		---
5755MHz	5795MHz	---
		---
IEEE 802.11ac VHT20		
5745MHz	5785MHz	5825MHz
		
IEEE 802.11ac VHT40		IEEE 802.11ac VHT80
5755MHz	5795MHz	5775MHz
		

8. EQUIVALENT ISOTROPIC RADIATED POWER TEST

8.1.Limit

Use the test method described in FCC Part 15.407(h) (1):

Transmit power control (TPC). U-NII devices operating in the 5.25-5.35 GHz band and the 5.47-5.725 GHz band shall employ a TPC mechanism. The U-NII device is required to have the capability to operate at least 6 dB below the mean EIRP value of 30 dBm. A TPC mechanism is not required for systems with an e.i.r.p. of less than 500 mW.

8.2.Test Procedure

Use the test method described in ANSI C63.10 Annex G :

(1) Connected the EUT's antenna port to the Spectrum Analyzer by suitable attenuator ,set the Spectrum Analyzer as below:

Span: Zero
RBW:100KHz
VBW:100KHz

Read out the duty cycle(X) of the transmitter and record as X

(2) The channel power measure function of spectrum Analyzer was used to measure out average output power of transmitter.

(3)Calculated e.i.r.p according to the formula: Read + Cable loss + Atten loss + Antenna Gain + 10log(1/x)

(4)Repeated test at the lowest, the middle, and the highest frequency of the stated frequency range.

8.3.Test Results

U-NII-1 Band:

EUT: Room Booking Panel		
M/N: IAD-18010H		
Test date: 2023-09-28	Pressure: 102.5±1.0 kpa	Humidity: 53.6±3.0%
Tested by: Jerry	Test site: RF site	Temperature:22.4±0.6 ℃

Test Mode	Frequency (MHz)	EIRP (dBm)	Limit (dBm)
11a	5180	12.25	N/A
	5200	11.95	
	5240	12.4	
11n HT20	5180	11.91	N/A
	5200	11.71	
	5240	11.92	
11n HT40	5190	11.69	N/A
	5230	11.71	
11ac VHT20	5180	11.67	N/A
	5200	11.51	
	5240	11.92	
11ac VHT40	5190	11.78	N/A
	5230	11.75	
11ac VHT80	5210	11.21	N/A
Conclusion: PASS			

9. SPECTRAL DENSITY TEST

9.1.Test Equipments

Item	Equipment	Manufacturer	Model No.	Serial No.	Last Cal.	Cal. Interval
1.	PXA Signal Analyzer	Agilent	N9030A	MY51380221	Apr.07,22	1 Year
2.	RF Cable	Mini-Circults	CBL-1M-SMSM+	No.7	Oct.10,22	1 Year

9.2.Limit

Band 5150-5250 MHz:
The power spectral density shall not exceed 11 dBm in any 1.0 MHz band.
Band 5725-5850 MHz:
The power spectral density shall not exceed 30 dBm in any 500 KHz band.

9.3.Test Procedure

For the Band 5.15-5.25GHz:
The transmitter output was connected to a spectrum analyzer. Power density was measured by spectrum analyzer with 1MHz RBW and 3MHz VBW; Detector: RMS mode.

For the band 5.725-5.85 GHz:
The transmitter output was connected to a spectrum analyzer. Power density was measured by spectrum analyzer with 1MHz RBW and 3MHz VBW,RMS Detector.
So use the test method described in KDB789033 clause E

1) Set the RBW=100kHz and VBW ≥3 RBW
2) Number of points in sweep ≥ 2 Span / RBW.(This ensures that bin-to-bin spacing is ≤ RBW/2, so that narrowband signals are not lost between frequency bins.)
3) Sweep time = auto
4) Detector = RMS (i.e., power averaging), if available. Otherwise, use sample detector mode.
5) Use the “peak search” function of spectrum analyzer find the max value, then add 10log (500kHz/RBW) to the measured result.

Note: The cable loss and attenuator loss were offset into measure device as an amplitude offset.

9.4.Test Results

U-NII-1 Band:

EUT: Room Booking Panel		
M/N: IAD-18010H		
Test date: 2023-01-12	Pressure: 102.5±1.0 kpa	Humidity: 53.6±3.0%
Tested by: Carl	Test site: RF site	Temperature:22.4±0.6 ℃

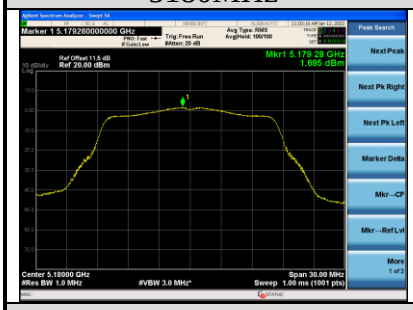
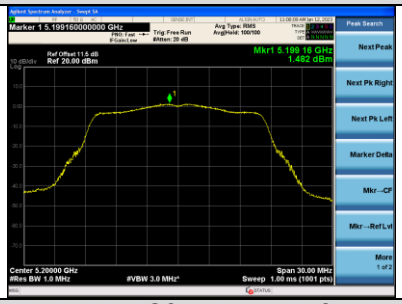
Test Mode	Frequency (MHz)	Power Spectral density (dBm/MHz)	Limit (dBm/MHz)
11a	5180	1.695	11
	5200	1.482	
	5240	1.578	
11n HT20	5180	0.915	11
	5200	0.885	
	5240	1.213	
11n HT40	5190	-2.114	11
	5230	-1.879	
11ac VHT20	5180	0.960	11
	5200	1.134	
	5240	1.065	
11ac VHT40	5190	-2.164	11
	5230	-2.028	
11ac VHT80	5210	-5.743	11
Conclusion: PASS			

U-NII-3 Band:

EUT: Room Booking Panel		
M/N: IAD-18010H		
Test date: 2023-01-12	Pressure: 102.5±1.0 kpa	Humidity: 53.6±3.0%
Tested by: Carl	Test site: RF site	Temperature:22.4±0.6 ℃

Test Mode	Frequency (MHz)	Power Spectral density (dBm/500KHz)	Limit (dBm/500KHz)
11a	5745	-0.339	30
	5785	-0.395	
	5825	-0.22	
11n HT20	5745	-1.007	30
	5785	-1.1	
	5825	-1.039	
11n HT40	5755	-4.491	30
	5795	-4.427	
11ac VHT20	5745	-0.937	30
	5785	-0.882	
	5825	-1.16	
11ac VHT40	5755	-4.264	30
	5795	-4.535	
11ac VHT80	5775	-7.544	30
Conclusion: PASS			

Note: The total result = Reading + 10 log(500kHz/100kHz)

U-NII-1 Band:		
IEEE 802.11a		
5180MHz	5200MHz	5240MHz
		
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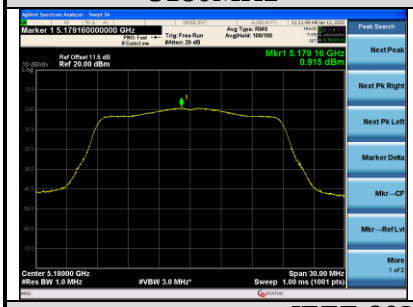
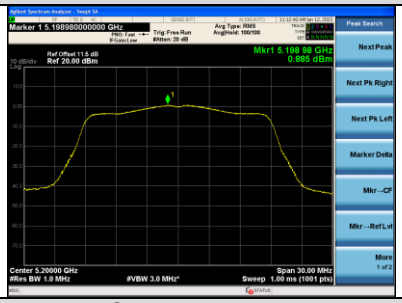
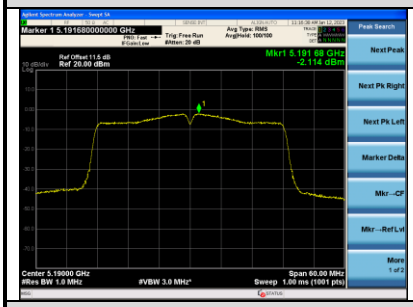
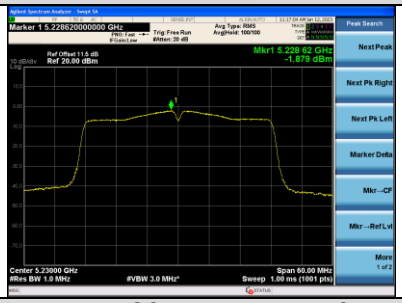
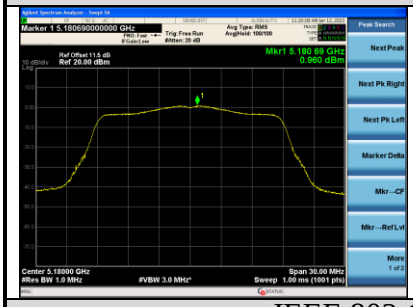
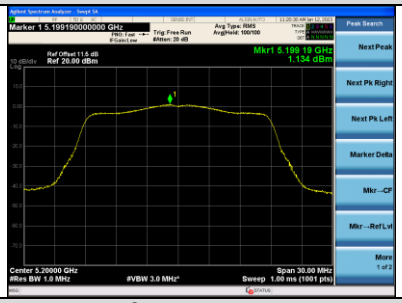
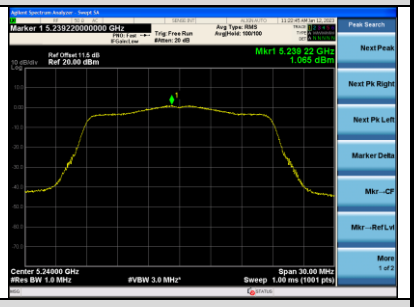
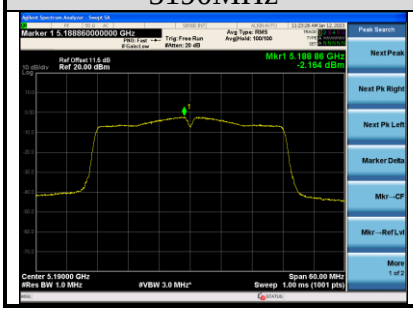
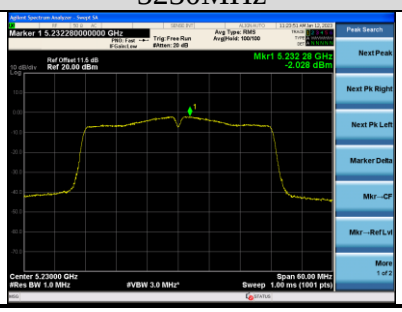
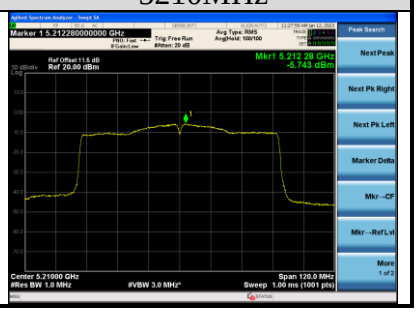
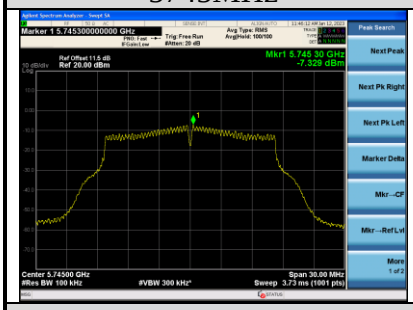
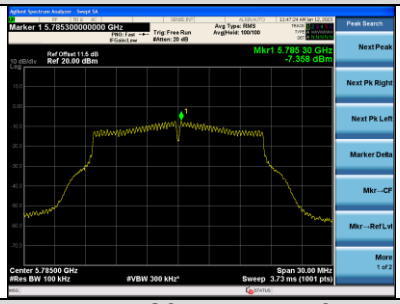
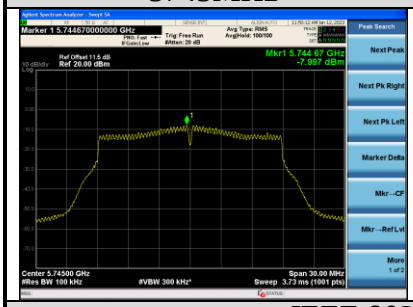
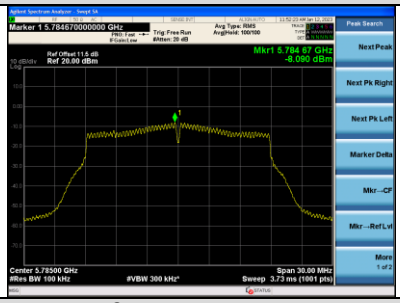
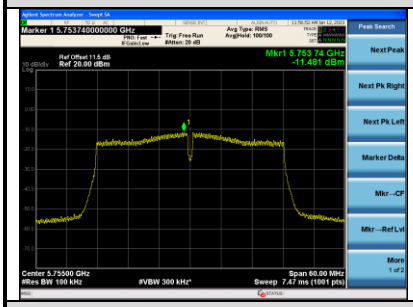
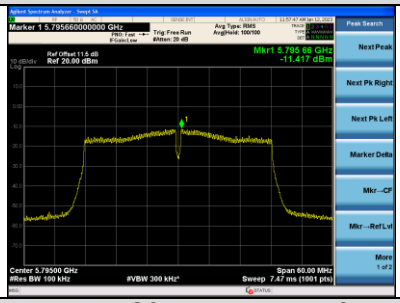
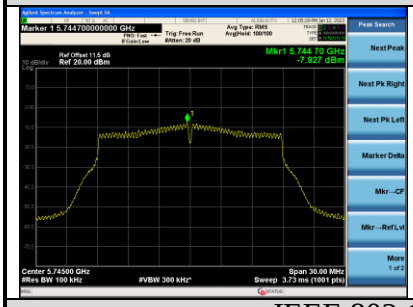
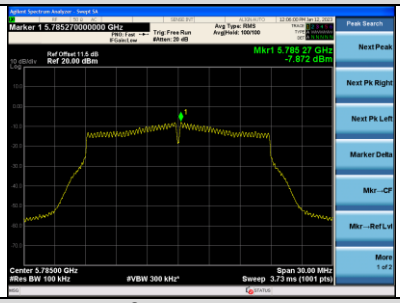
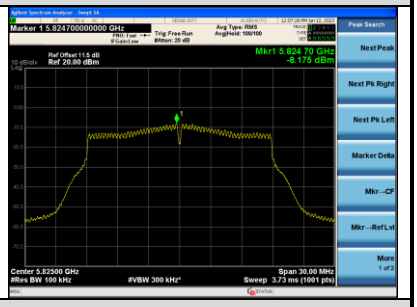
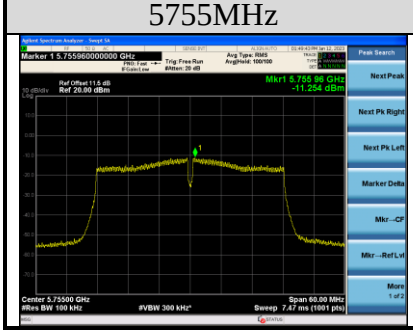
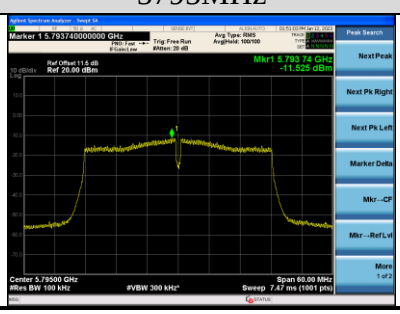
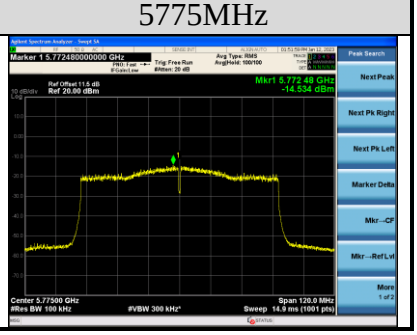
		
IEEE 802.11n HT40		---
5190MHz	5230MHz	---
		---
IEEE 802.11ac VHT20		
5180MHz	5200MHz	5240MHz
		
IEEE 802.11ac VHT40		IEEE 802.11ac VHT80
5190MHz	5230MHz	5210MHz
		

U-NII-3 Band:		
IEEE 802.11a		
5745MHz	5785MHz	5825MHz
		
IEEE 802.11n HT20		
5745MHz	5785MHz	5825MHz
		
IEEE 802.11n HT40		---
5755MHz	5795MHz	---
		---
IEEE 802.11ac VHT20		
5745MHz	5785MHz	5825MHz
		
IEEE 802.11ac VHT40		IEEE 802.11ac VHT80
5755MHz	5795MHz	5775MHz
		

10. FREQUENCY STABILITY MEASUREMENT

10.1. Test Equipments

Item	Equipment	Manufacturer	Model No.	Serial No.	Last Cal.	Cal. Interval
1.	PXA Signal Analyzer	Agilent	N9030A	MY51380221	Apr.07,22	1 Year
2.	Attenuator	Agilent	8491B	MY39269201	Oct.09,22	1 Year
3.	RF Cable	RF Cable	Mini-Circults	CBL-1M-SMS M+	No.7	1 Year

10.2. Limit

Manufacturers of U-NII devices are responsible for ensuring frequency stability such that an emission is maintained within the band of operation under all conditions of normal operation as specified in the user's manual.

10.3. Test Procedure

1. The transmitter output (antenna port) was connected to the spectrum analyzer.
   EUT have transmitted absence of modulation signal and fixed channelise. Set the spectrum analyzer span to view the entire absence of modulation emissions bandwidth. Set RBW = 10 kHz, VBW = 10 kHz with peak detector and maxhold settings. fc is declaring of channel frequency. Then the frequency error formula is (fc-f)/f × 10^{-6}ppm. The test extreme voltage is to change the primary supply voltage from 85 to 115 percent of the nominal value.
2. Extreme temperature rule is 0℃~50℃.

10.4.Test Result

EUT: Room Booking Panel		
M/N: IAD-18010H		
Test date: 2023-01-12	Pressure: 102.1±1.0 kpa	Humidity: 53.2±3.0%
Tested by: Carl	Test site: RF site	Temperature:22.3±0.6 ℃

Frequency Stability vs.Voltage:

Test Voltage	Temperature	CH	Max. Reading (MHz)	Target Frequency (MHz)	Result (ppm)
AC 120V	25℃	CH36	5179.9970	5180	0.58
		CH38	5189.9955	5190	0.87
		CH40	5199.9950	5200	0.96
		CH42	5209.9950	5210	-0.96
		CH46	5229.9945	5230	-1.05
		CH48	5239.9945	5240	-1.05
		CH149	5744.9940	5745	-1.04
		CH151	5754.9940	5755	-1.04
		CH155	5774.9940	5775	-1.04
		CH157	5784.9940	5785	-1.04
		CH159	5794.9940	5795	-1.04
		CH165	5824.9935	5825	-1.12
AC 120V	0℃	CH36	5179.9965	5180	-0.68
		CH38	5189.9965	5190	-0.67
		CH40	5199.9950	5200	-0.96
		CH42	5209.9950	5210	-0.96
		CH46	5229.9955	5230	-0.86
		CH48	5239.9955	5240	-0.86
		CH149	5744.9940	5745	-1.04
		CH151	5754.9945	5755	-0.96
		CH155	5774.9945	5775	-0.95
		CH157	5784.9945	5785	-0.95
		CH159	5794.9940	5795	-1.04
		CH165	5824.9935	5825	-1.12

AC 120V	50℃	CH36	5179.9960	5180	-0.77
		CH38	5189.9955	5190	-0.87
		CH40	5199.9955	5200	-0.87
		CH42	5209.9955	5210	-0.86
		CH46	5229.9945	5230	-1.05
		CH48	5239.9945	5240	-1.05
		CH149	5744.9940	5745	-1.04
		CH151	5754.9940	5755	-1.04
		CH155	5774.9940	5775	-1.04
		CH157	5784.9940	5785	-1.04
		CH159	5794.9935	5795	-1.12
		CH165	5824.9935	5825	-1.12

Frequency Stability vs.Temperature:

Test Voltage	Temperature	CH	Max. Reading (MHz)	Target Frequency (MHz)	Result (ppm)
AC 96V	25℃	CH36	5179.9970	5180	-0.58
		CH38	5189.9955	5190	-0.87
		CH40	5199.9950	5200	-0.96
		CH42	5209.9945	5210	-1.06
		CH46	5229.9945	5230	-1.05
		CH48	5239.9945	5240	-1.05
		CH149	5744.9940	5745	-1.04
		CH151	5754.9940	5755	-1.04
		CH155	5774.9940	5775	-1.04
		CH157	5784.9940	5785	-1.04
		CH159	5794.9940	5795	-1.04
		CH165	5824.9935	5825	-1.12
AC 96V	0℃	CH36	5179.9965	5180	-0.68
		CH38	5189.9950	5190	-0.96
		CH40	5199.9950	5200	-0.96
		CH42	5209.9950	5210	-0.96
		CH46	5229.9945	5230	-1.05
		CH48	5239.9945	5240	-1.05
		CH149	5744.9940	5745	-1.04
		CH151	5754.9940	5755	-1.04
		CH155	5774.9940	5775	-1.04
		CH157	5784.9940	5785	-1.04
		CH159	5794.9940	5795	-1.04
		CH165	5824.9940	5825	-1.03

AC 97V	50℃	CH36	5179.9965	5180	-0.68
		CH38	5189.9955	5190	-0.87
		CH40	5199.9955	5200	-0.87
		CH42	5209.9955	5210	-0.86
		CH46	5229.9950	5230	-0.96
		CH48	5239.9950	5240	-0.95
		CH149	5744.9940	5745	-1.04
		CH151	5754.9940	5755	-1.04
		CH155	5774.9940	5775	-1.04
		CH157	5784.9935	5785	-1.12
		CH159	5794.9935	5795	-1.12
		CH165	5824.9935	5825	-1.12
AC 138V	25℃	CH36	5179.9960	5180	-0.77
		CH38	5189.9955	5190	-0.87
		CH40	5199.9955	5200	-0.87
		CH42	5209.9945	5210	-1.06
		CH46	5229.9945	5230	-1.05
		CH48	5239.9945	5240	-1.05
		CH149	5744.9945	5745	-0.96
		CH151	5754.9945	5755	-0.96
		CH155	5774.9945	5775	-0.95
		CH157	5784.9945	5785	-0.95
		CH159	5794.9940	5795	-1.04
		CH165	5824.9940	5825	-1.03
AC 138V	0℃	CH36	5179.9970	5180	-0.58
		CH38	5189.9960	5190	-0.77
		CH40	5199.9955	5200	-0.87
		CH42	5209.9955	5210	-0.86
		CH46	5229.9955	5230	-0.86
		CH48	5239.9955	5240	-0.86
		CH149	5744.9940	5745	-1.04
		CH151	5754.9940	5755	-1.04
		CH155	5774.9945	5775	-0.95
		CH157	5784.9940	5785	-1.04
		CH159	5794.9940	5795	-1.04
		CH165	5824.9935	5825	-1.12

AC 138V	50℃	CH36	5179.9965	5180	-0.68
		CH38	5189.9950	5190	-0.96
		CH40	5199.9950	5200	-0.96
		CH42	5209.9945	5210	-1.06
		CH46	5229.9945	5230	-1.05
		CH48	5239.9945	5240	-1.05
		CH149	5744.9950	5745	-0.87
		CH151	5754.9950	5755	-0.87
		CH155	5774.9950	5775	-0.87
		CH157	5784.9950	5785	-0.86
		CH159	5794.9950	5795	-0.86
		CH165	5824.9945	5825	-0.94

11. ANTENNA REQUIREMENT

11.1. Standard Applicable

For intentional device, according to FCC 47 CFR Section 15.203, an intentional radiator shall be designed to ensure that no antenna other than that furnished by the responsible party shall be used with the device. And according to FCC 47 CFR Section 15.407 (a), if transmitting antennas of directional gain greater than 6dBi are used, the power shall be reduced by the amount in dB that the directional gain of the antenna exceeds 6dBi.

11.2. Antenna Connected Construction

The antennas used for this product are FPC antenna that no antenna other than that furnished by the responsible party shall be used with the device, the maximum peak gain of the transmit antenna is **U-NII-1 Band:** 3.5dBi; **U-NII-3 Band:** 5.1dBi.

12. DEVIATION TO TEST SPECIFICATIONS

[NONE]

THE END