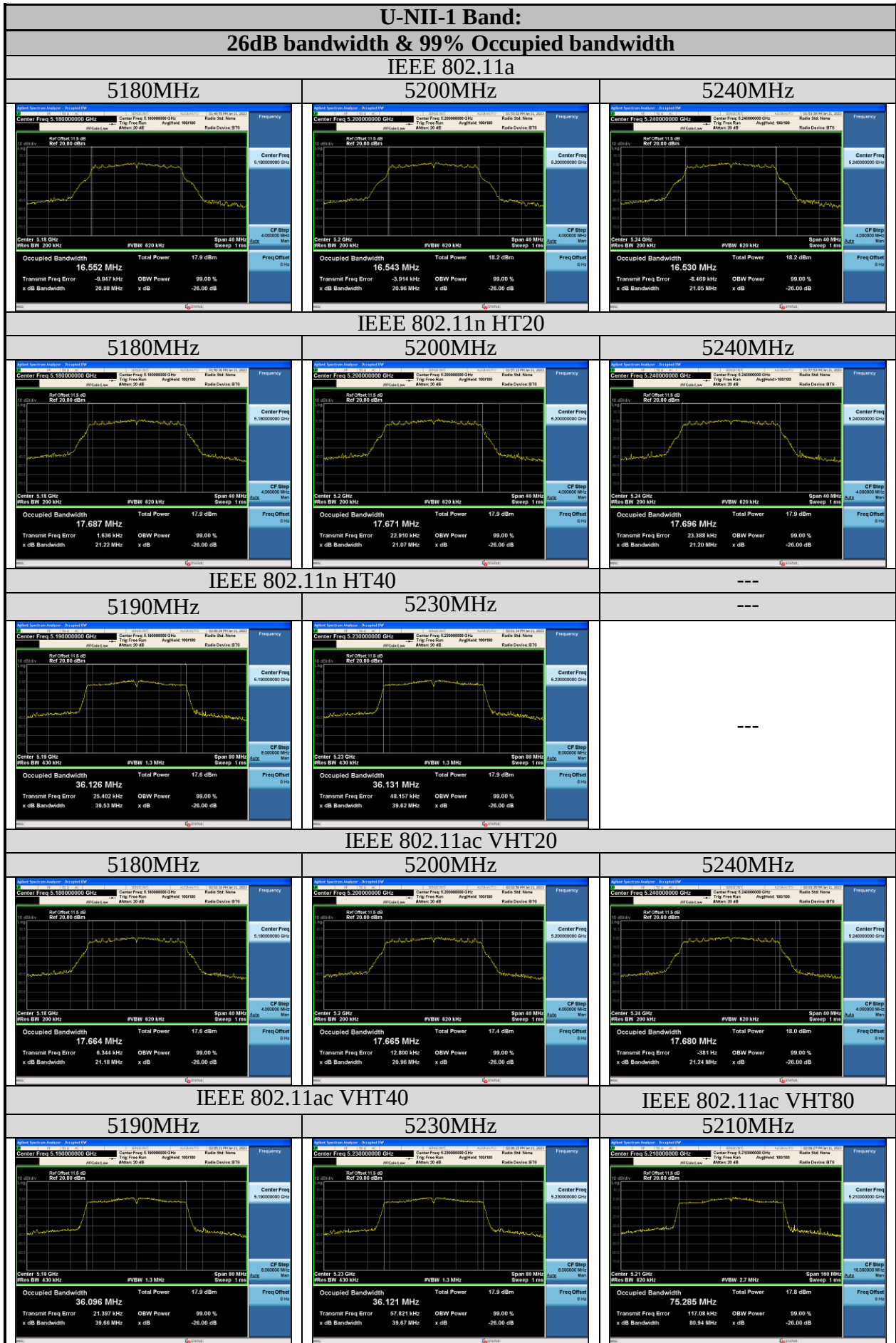
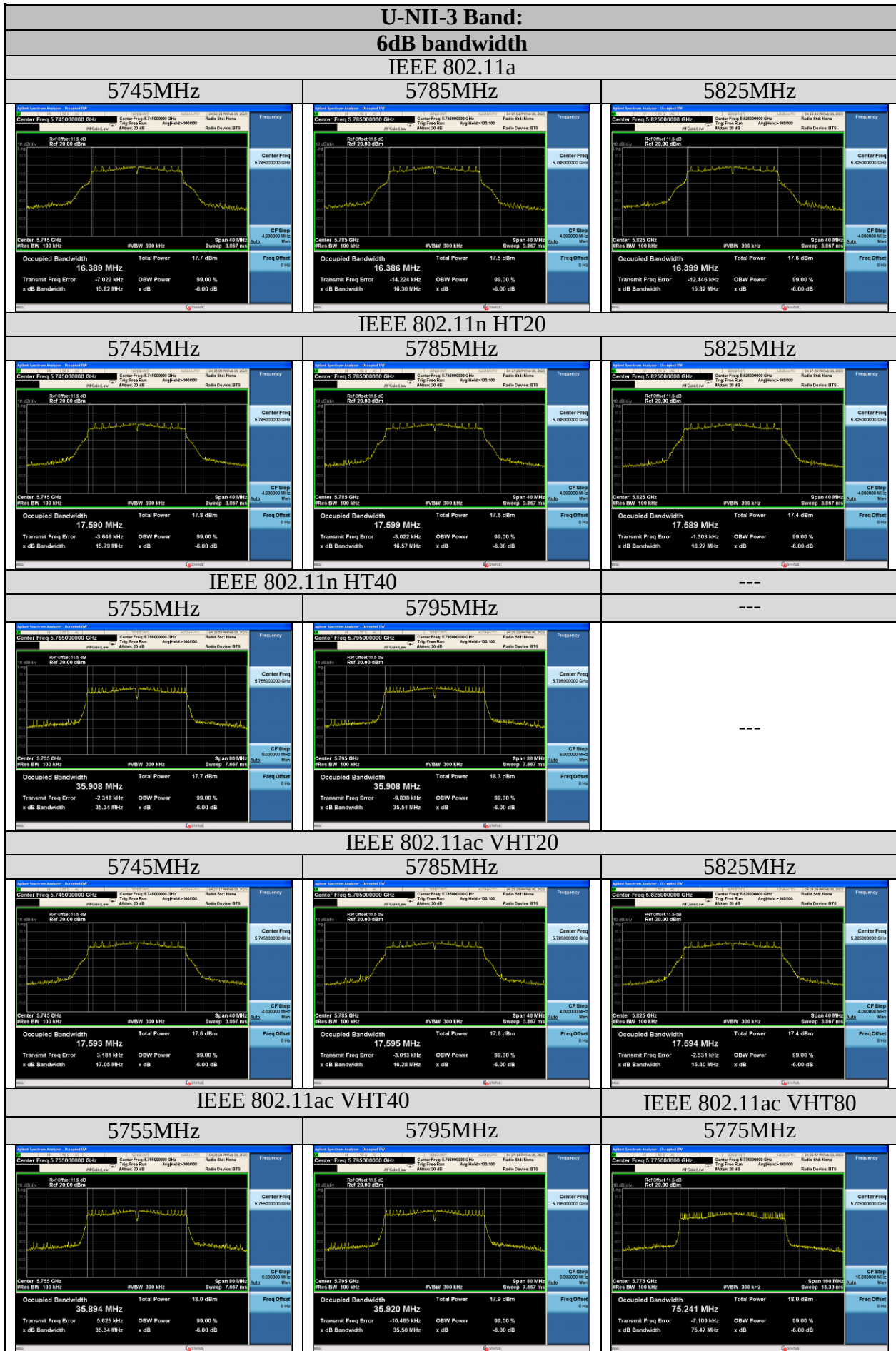
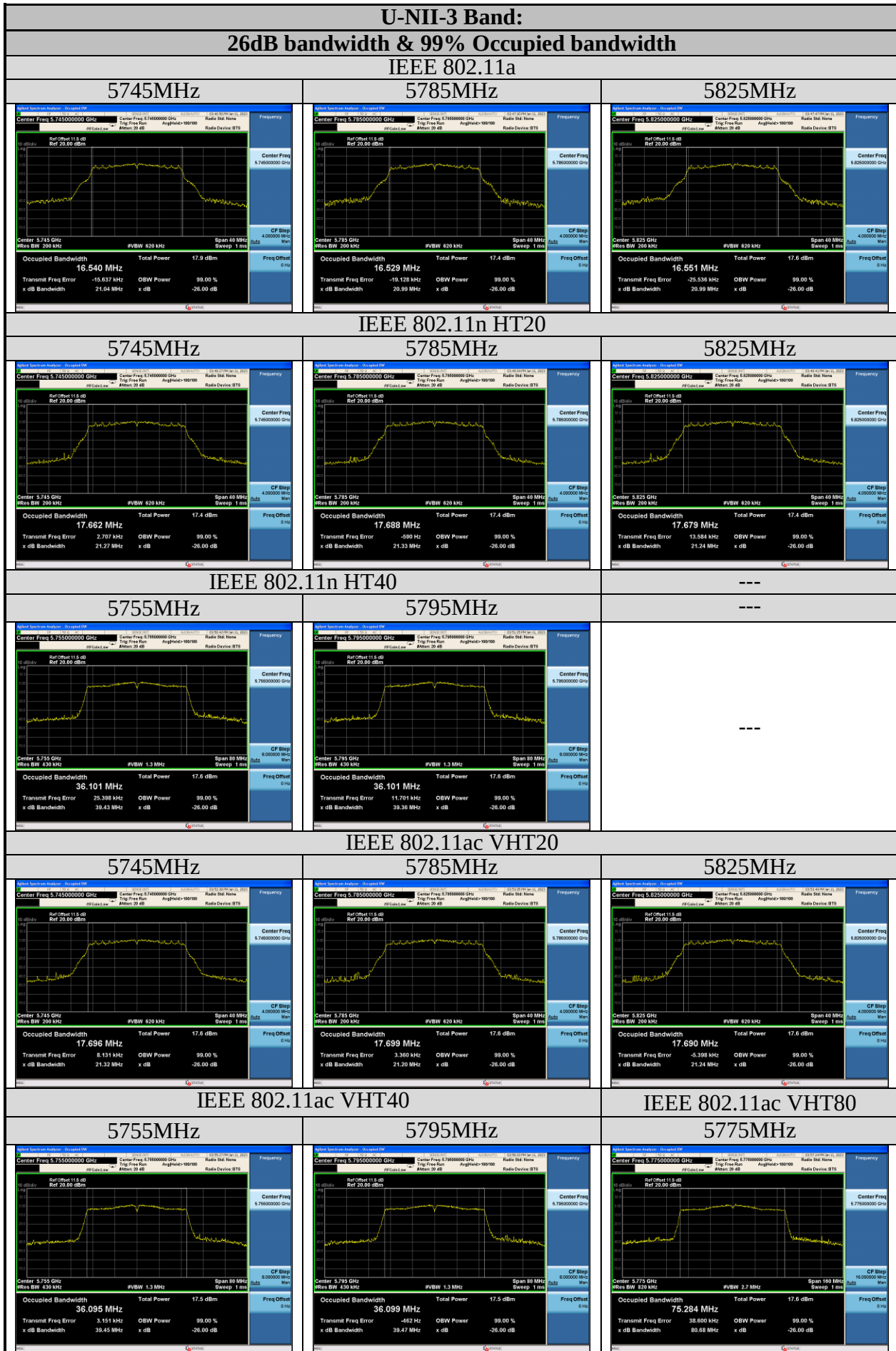








7. OUTPUT POWER TEST

7.1. Test Equipments

Item	Equipment	Manufacturer	Model No.	Serial No.	Last Cal.	Cal. Interval
1.	Signal Analyzer	Rohde & Schwarz	FSV40	101608	Nov.07,24	1 Year
2.	Power meter	HP	436A	3103U06658	Mar.10,25	1 Year
3.	Power Sensor	Anritsu	MA2491A	032516	Jun.19,24	1 Year
4.	Attenuator(10dB)	Agilent	8491B	MY39269201	Mar.10,25	1 Year
5.	RF Cable	HUBER+SUHNER	SUCOFLEX-106	190423	Mar.16,24	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 maximum 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 $\geq$ 3 MHz.
- 5) Number of points in sweep $\geq 2 \times \text{span} / \text{RBW}$. (This ensures that bin-to-bin spacing is $\leq \text{RBW}/2$, 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-18010A		
Test date:2025-05-12	Pressure: 101.8±1.0 kpa	Humidity: 52.1±3.0%
Tested by: Carl	Test site: RF site	Temperature:21.6±0.6 °C

Test Mode	Frequency (MHz)	Power Setting	Output Power (dBm)	Limit (dBm)
11a	5180	Default	10.37	23.98
	5200	Default	10.04	
	5240	Default	9.84	
11n HT20	5180	Default	10.00	23.98
	5200	Default	9.72	
	5240	Default	9.47	
11n HT40	5190	Default	8.74	23.98
	5230	Default	8.42	
11ac VHT20	5180	Default	9.99	23.98
	5200	Default	9.68	
	5240	Default	9.51	
11ac VHT40	5190	Default	8.75	23.98
	5230	Default	8.43	
11ac VHT80	5210	Default	7.92	23.98
Conclusion:Pass				

U-NII-3 Band:

EUT: Room Booking Panel

M/N: IAD-18010A

Test date:2025-05-12

Pressure: 101.8±1.0 kpa

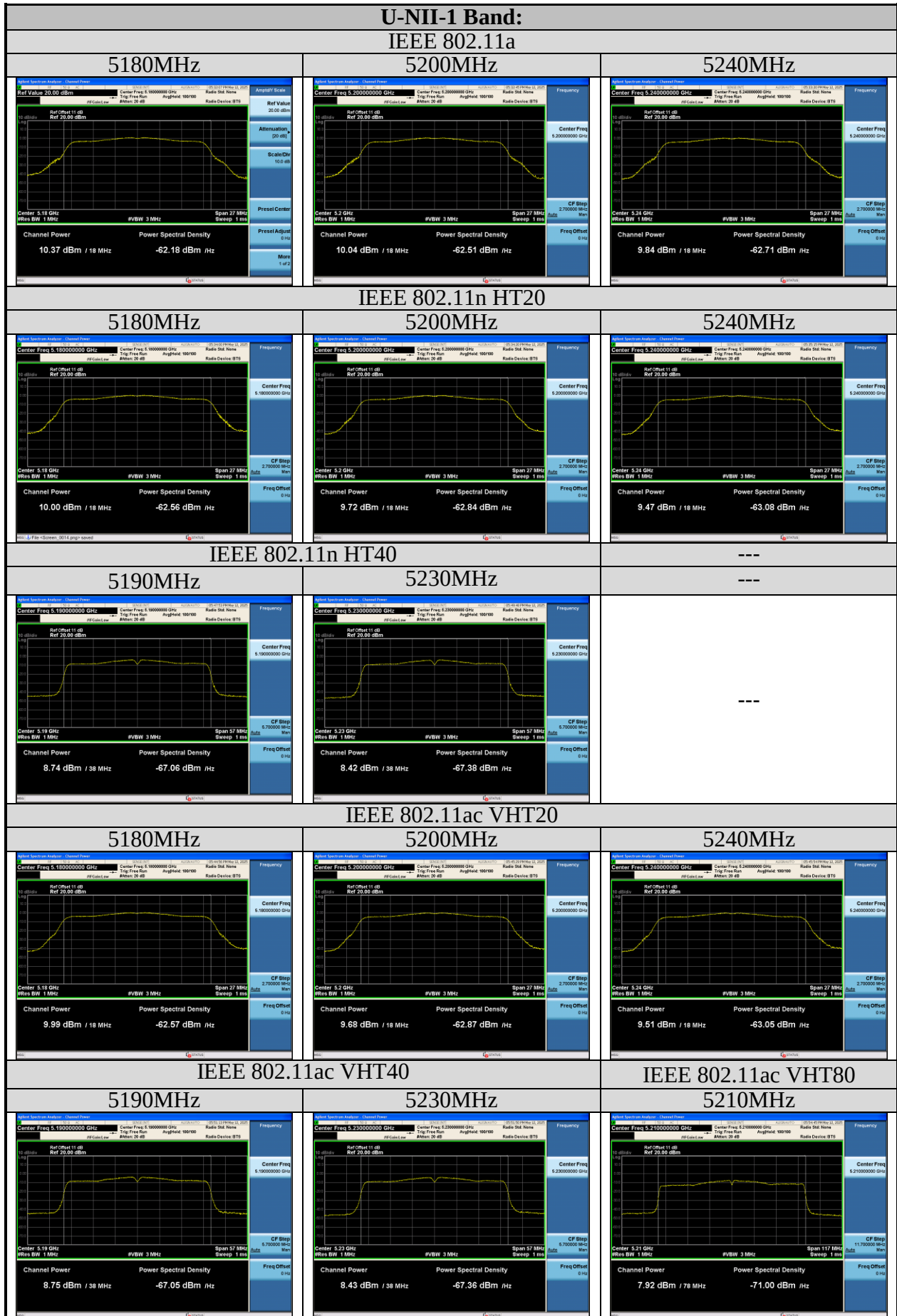
Humidity: 52.1±3.0%

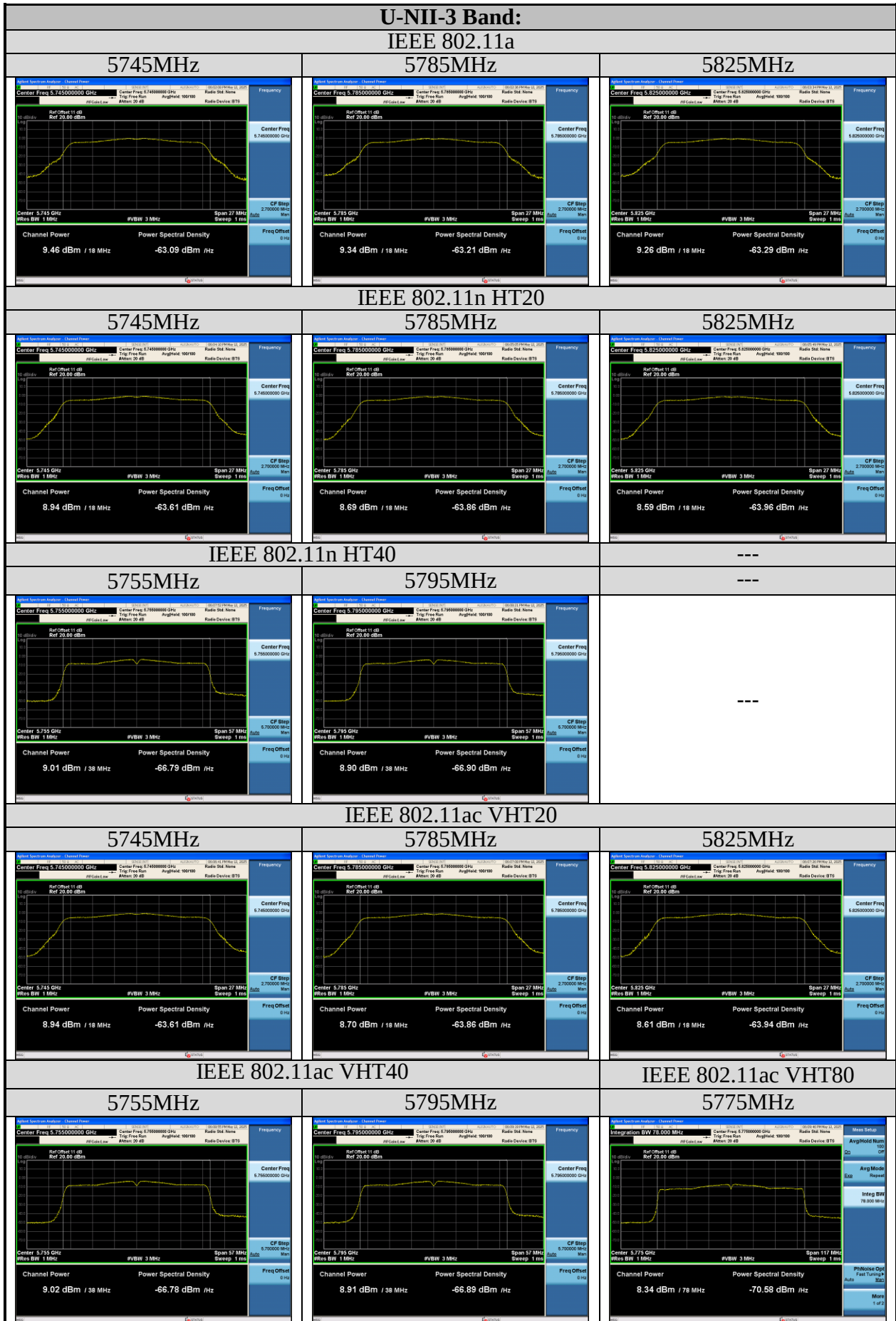
Tested by: Carl

Test site: RF site

Temperature:21.6±0.6 °C

Test Mode	Frequency (MHz)	Power Setting	Output Power (dBm)	Limit (dBm)
11a	5745	Default	9.46	30
	5785	Default	9.34	
	5825	Default	9.26	
11n HT20	5745	Default	8.94	30
	5785	Default	8.69	
	5825	Default	8.59	
11n HT40	5755	Default	9.01	30
	5795	Default	8.90	
11ac VHT20	5745	Default	8.94	30
	5785	Default	8.70	
	5825	Default	8.61	
11ac VHT40	5755	Default	9.02	30
	5795	Default	8.91	
11ac VHT80	5775	Default	8.34	30
Conclusion:Pass				





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 + $10\log(1/x)$

(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-18010A		
Test date:2025-06-12	Pressure: 101.8±1.0 kpa	Humidity: 52.1±3.0%
Tested by: Carl	Test site: RF site	Temperature:21.6±0.6 °C

Test Mode	Frequency (MHz)	EIRP (dBm)	Limit (dBm)
11a	5180	13.87	N/A
	5200	13.54	
	5240	13.34	
11n HT20	5180	13.5	N/A
	5200	13.22	
	5240	12.97	
11n HT40	5190	12.24	N/A
	5230	11.92	
11ac VHT20	5180	13.49	N/A
	5200	13.18	
	5240	13.01	
11ac VHT40	5190	12.25	N/A
	5230	11.93	
11ac VHT80	5210	11.42	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-Circuits	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 $\leq$ 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 $10\log(500\text{kHz}/\text{RBW})$ 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-18010A		
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 °C

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-18010A		
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 °C

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)

