

FCC ID: 2AU3BU9W34

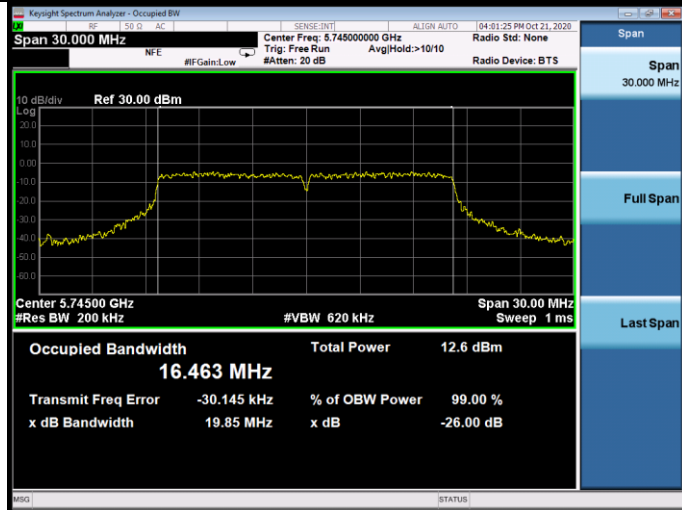
U-NII-3 Band:

26dB bandwidth

ANT B

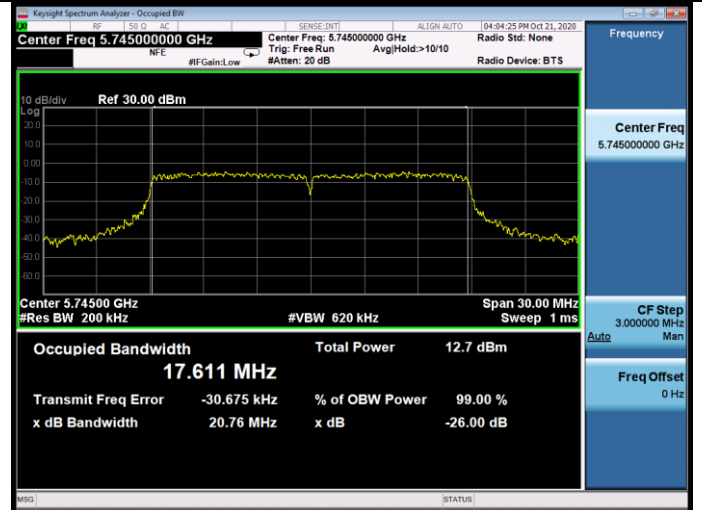
11a

5745MHz

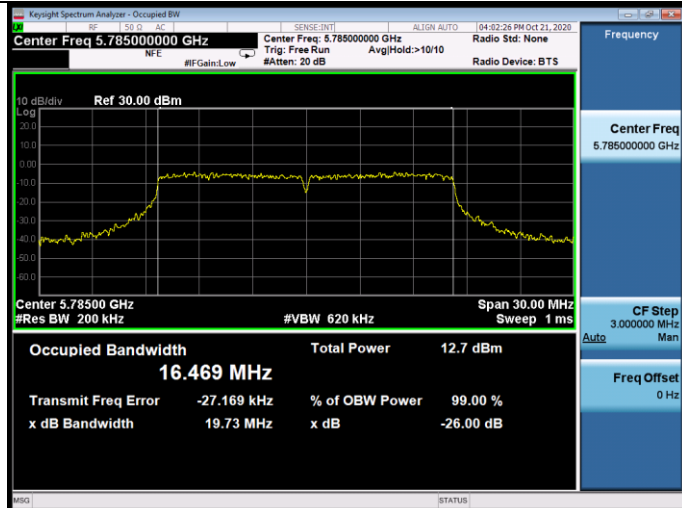


11n HT20

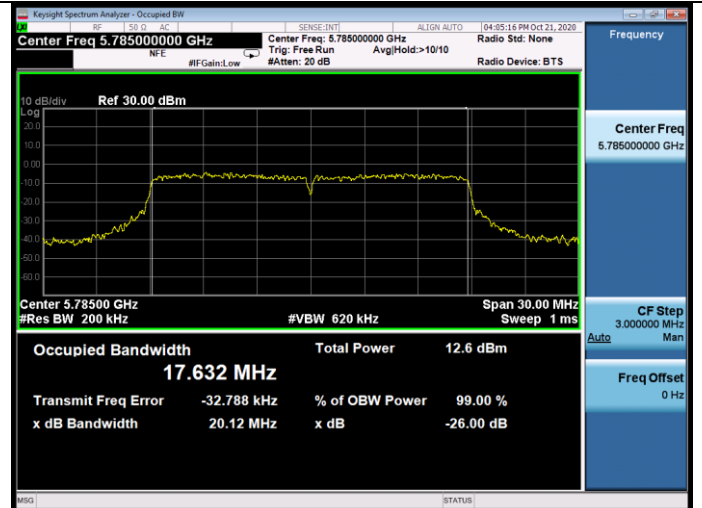
5745MHz



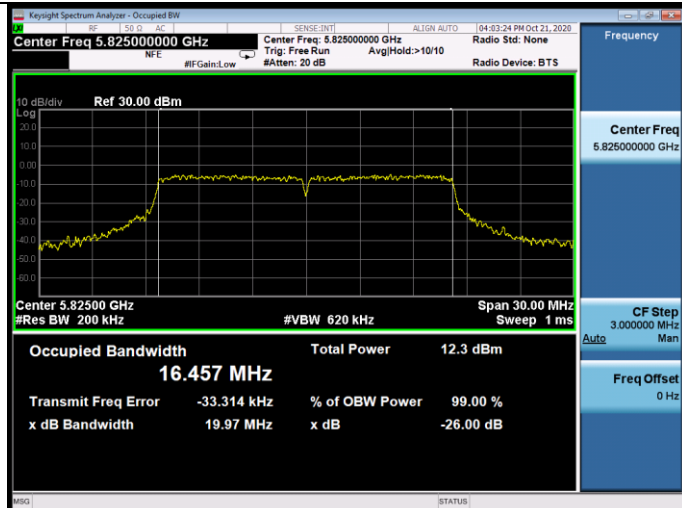
5785MHz



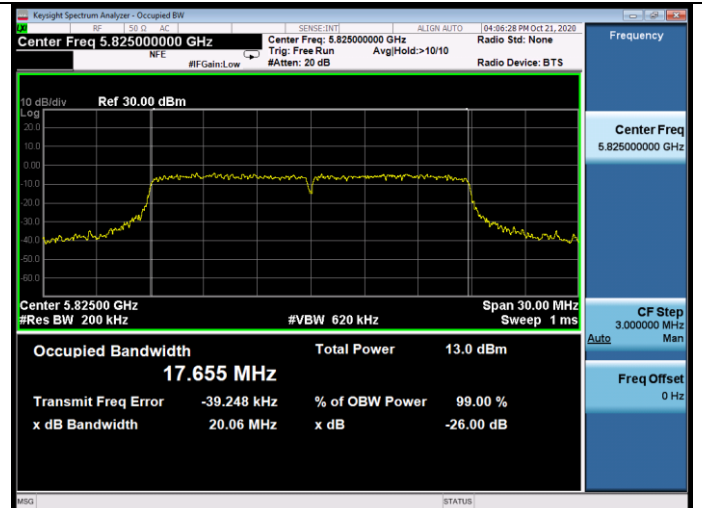
5785MHz



5825MHz

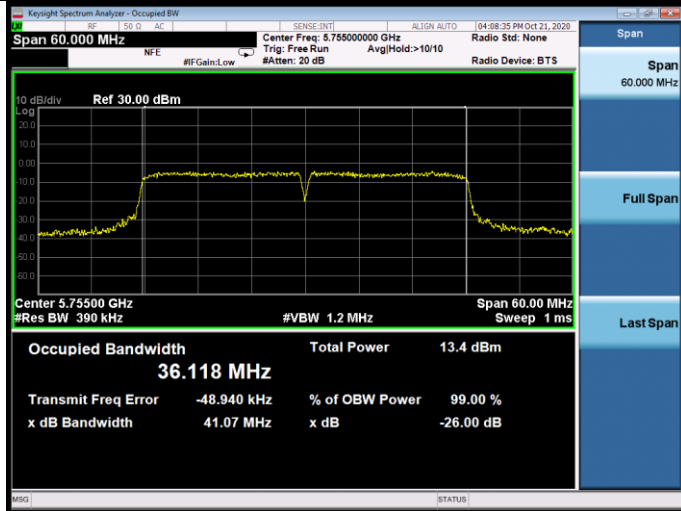


5825MHz

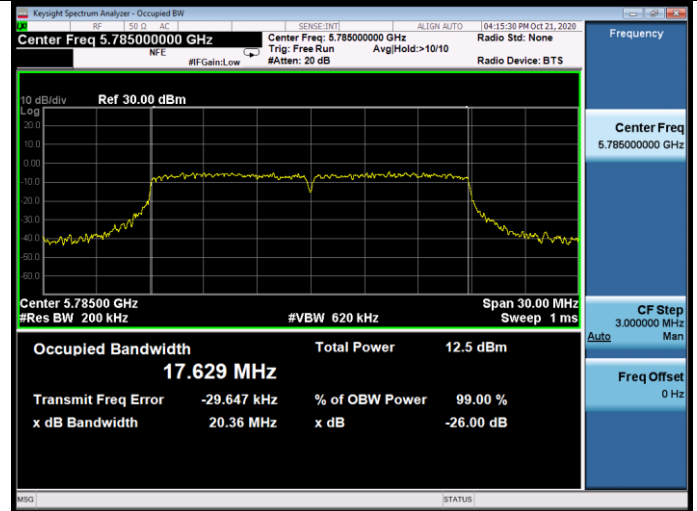


11n HT40

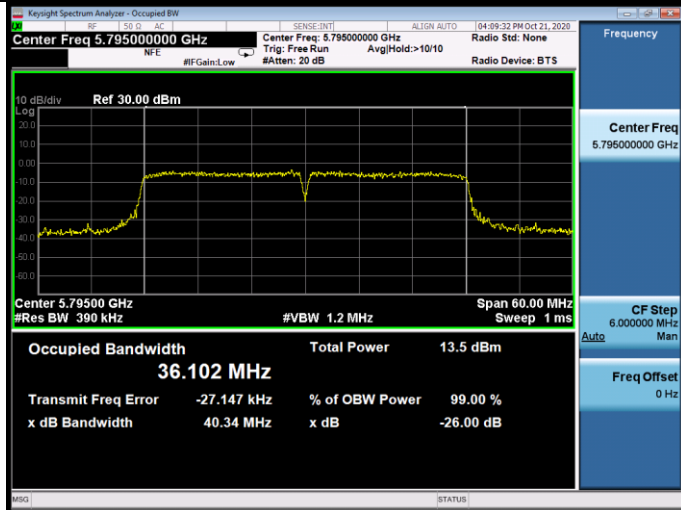
5755MHz



5785MHz



5795MHz

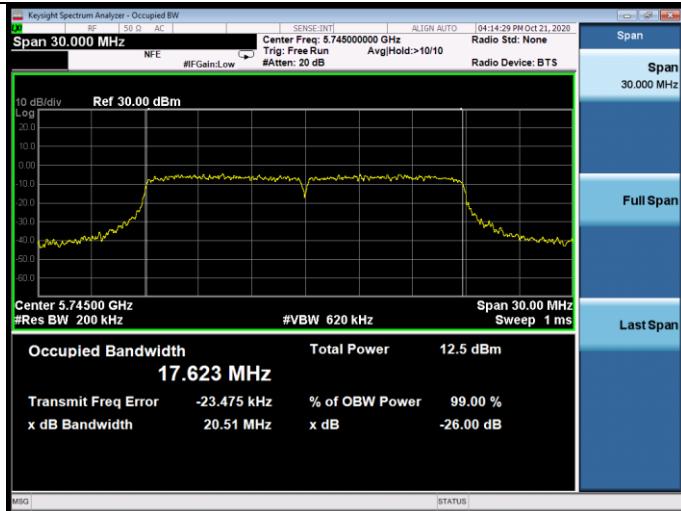


5825MHz



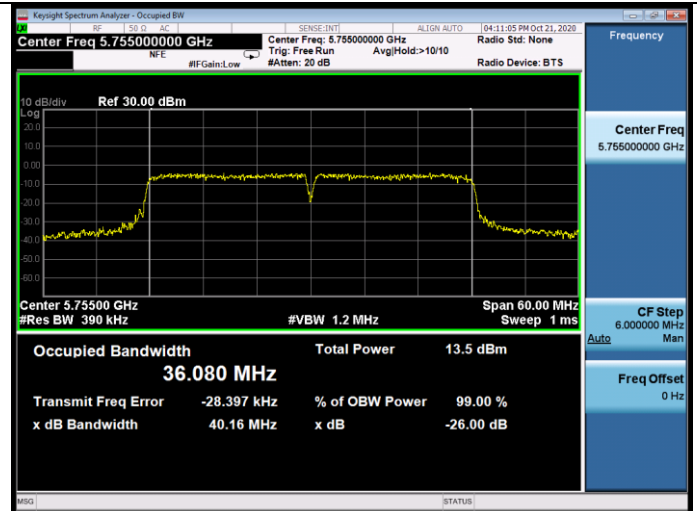
11ac VHT20

5745MHz



11ac VHT40

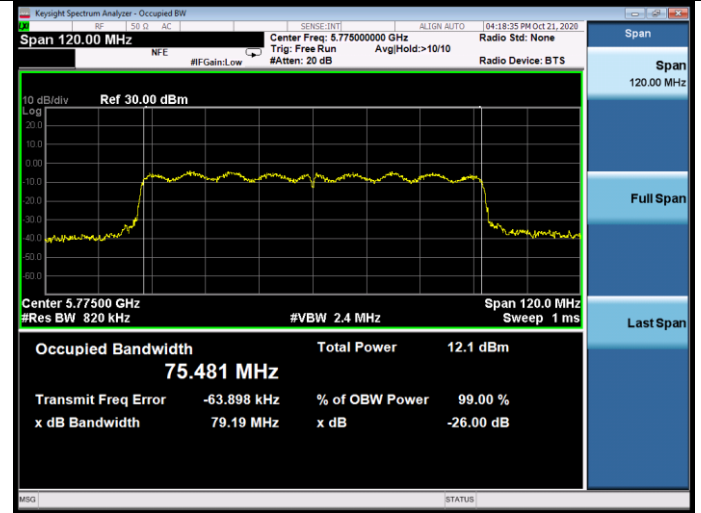
5755MHz



11ac VHT80

5795MHz

5775MHz



7. OUTPUT POWER TEST

7.1. Test Equipment

Item	Equipment	Manufacturer	Model No.	Serial No.	Last Cal.	Cal. Interval
1.	PXA Signal Analyzer	Agilent	N9030A	MY51380221	Apr.12,20	1 Year
2.	Power meter	Anritsu	ML2487A	6K00002472	Apr.11,20	1 Year
3.	Power sensor	Anritsu	MA2491A	033005	Apr.11,20	1 Year
4.	Attenuator	Agilent	8491B	MY39269201	Oct.12,20	1 Year
5.	RF Cable	EMCI	EMC102-KM-KM 3500	170702	Apr.12,20	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 $11 \text{ dBm} + 10 \log B$, 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: WiFi module		
M/N: U9W34		
Test date: 2020-10-17	Pressure: 102.1 ±1.0 kpa	Humidity: 51.1 ±3.0%
Tested by: Leo	Test site: RF site	Temperature: 22.8 ±0.6 °C

Test Mode	Frequency (MHz)	Maximum Conducted output power (dBm)		Limit (dBm)
		ANT A	ANT B	
11a	5180	13.10	12.23	23.98
	5200	12.86	12.34	
	5240	13.22	13.51	
11n HT20	5180	12.58	12.56	23.98
	5200	12.41	12.94	
	5240	13.11	12.99	
11n HT40	5190	13.41	12.29	23.98
	5230	13.26	12.74	
11ac VHT20	5180	12.12	12.47	23.98
	5200	12.37	12.59	
	5240	12.89	12.19	
11ac VHT40	5190	13.52	13.48	23.98
	5230	13.19	12.57	
11ac VHT80	5210	12.89	13.23	23.98
Conclusion: PASS				

U-NII-3 Band:

EUT: WiFi module		
M/N: U9W34		
Test date: 2020-10-17	Pressure: 102.1 ±1.0 kpa	Humidity: 51.1 ±3.0%
Tested by: Leo	Test site: RF site	Temperature: 22.8 ±0.6 °C

Test Mode	Frequency (MHz)	Maximum Conducted output power (dBm)		Limit (dBm)
		ANT A	ANT B	
11a	5745	12.78	13.18	30
	5785	13.09	12.92	
	5825	13.07	13.01	
11n HT20	5745	12.64	12.53	30
	5785	13.11	12.93	
	5825	12.72	13.05	
11n HT40	5755	13.26	13.65	30
	5795	13.02	13.24	
11ac VHT20	5745	12.45	12.23	30
	5785	12.54	12.72	
	5825	12.75	12.31	
11ac VHT40	5755	13.38	13.62	30
	5795	13.43	13.32	
11ac VHT80	5775	12.79	12.40	30

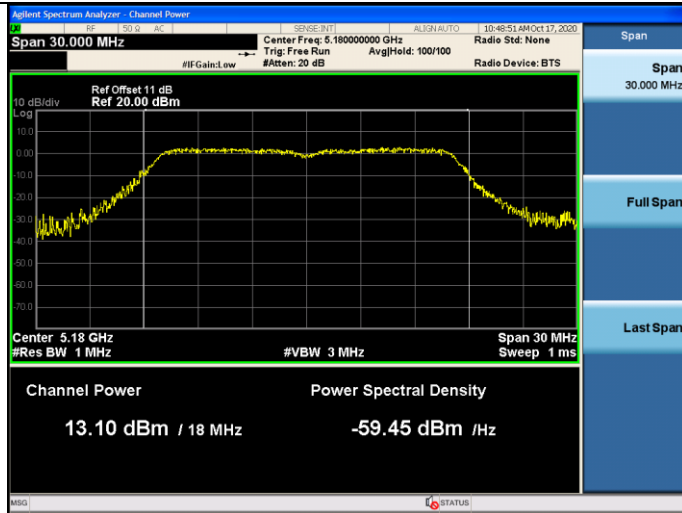
Conclusion: PASS

U-NII-1 Band:

ANT A

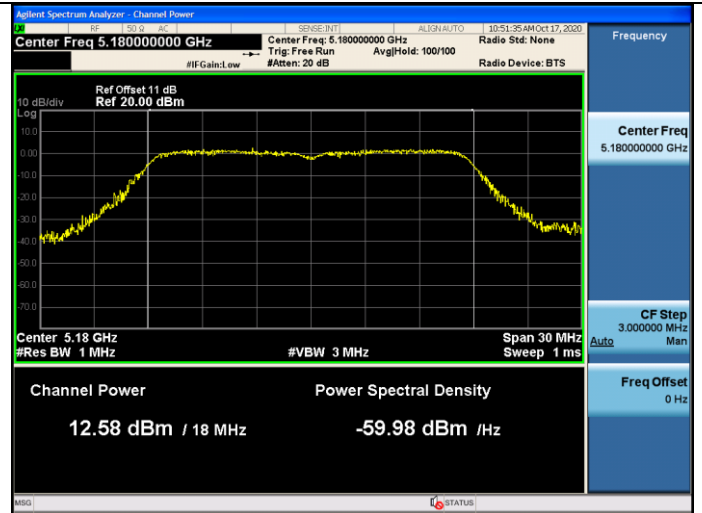
11a

5180MHz

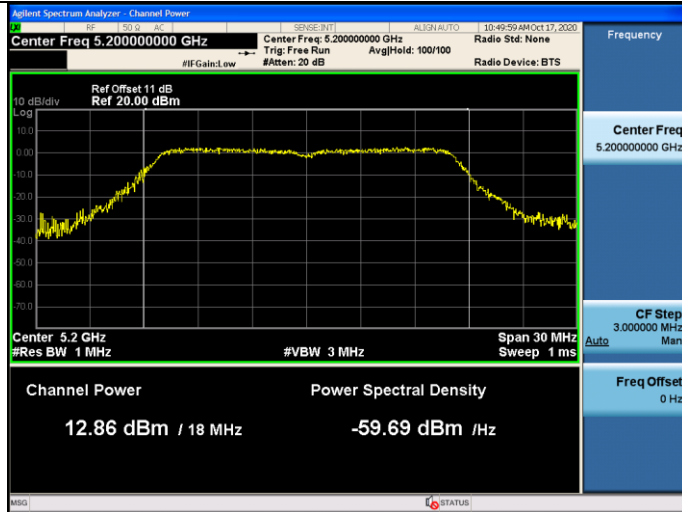


11n HT20

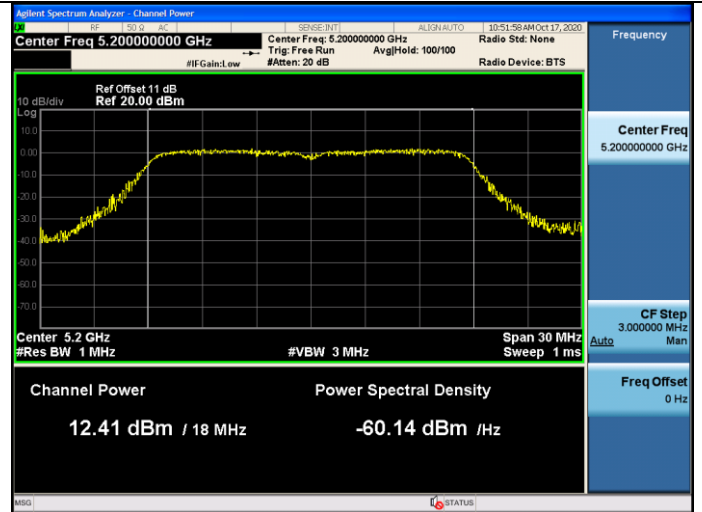
5180MHz



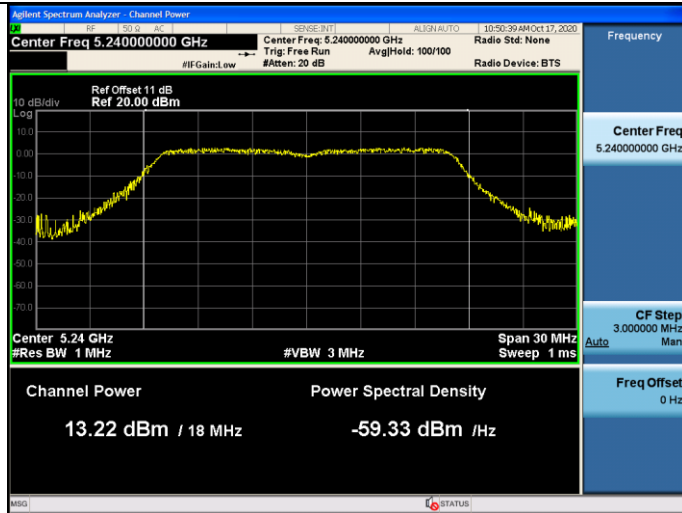
5200MHz



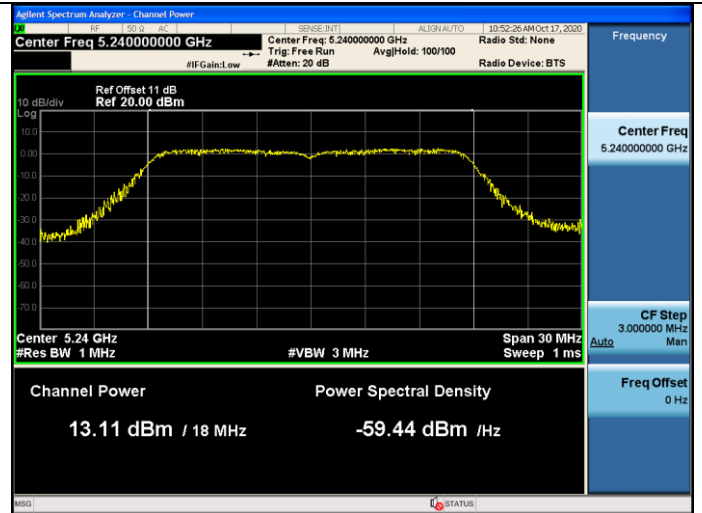
5200MHz



5240MHz

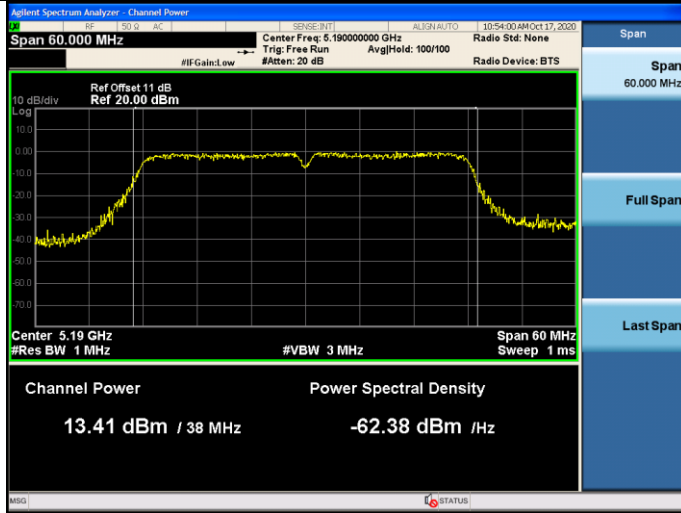


5240MHz

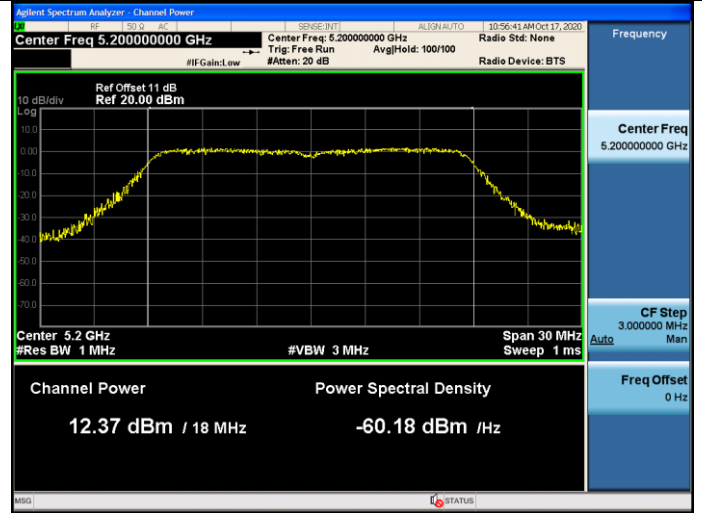


11n HT40

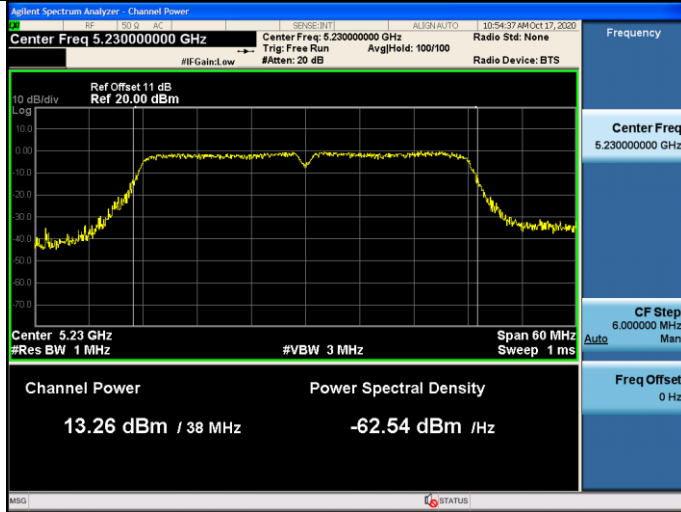
5190MHz



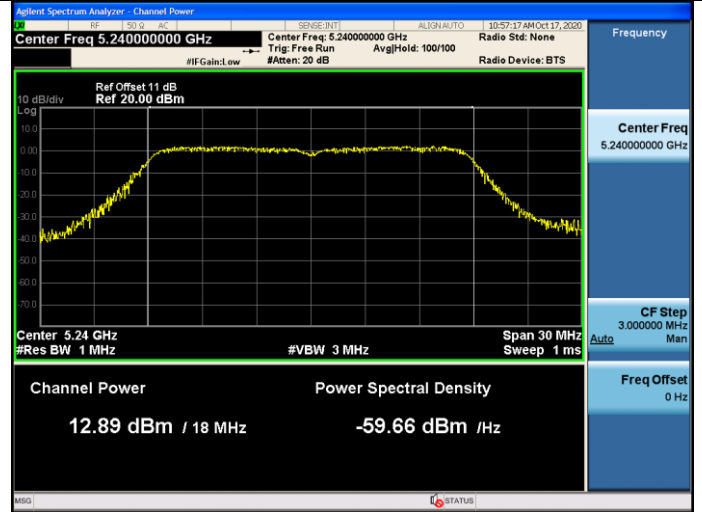
5200MHz



5230MHz

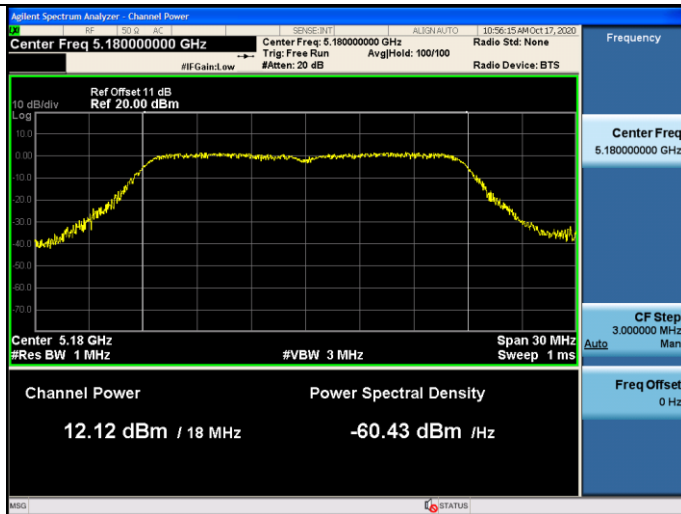


5240MHz



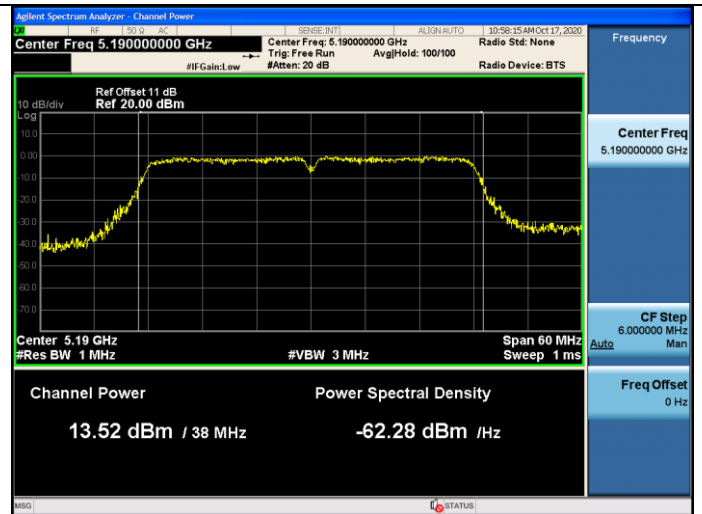
11ac VHT20

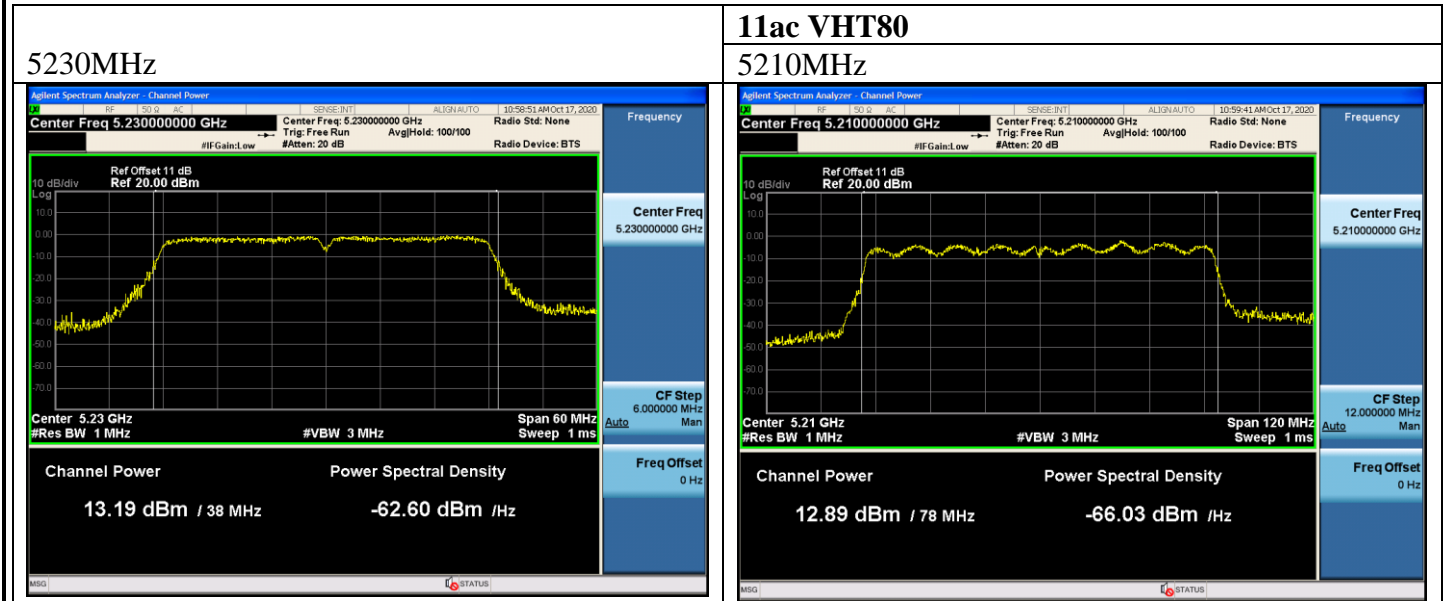
5180MHz



11ac VHT40

5190MHz





U-NII-1 Band:

ANT B

11a

5180MHz

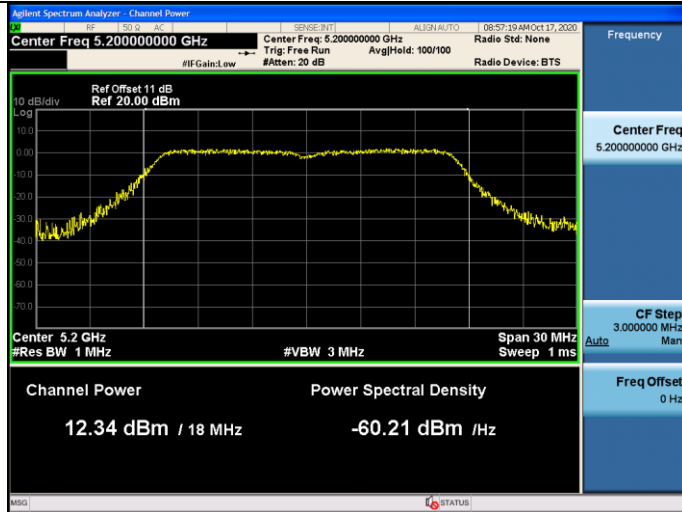


11n HT20

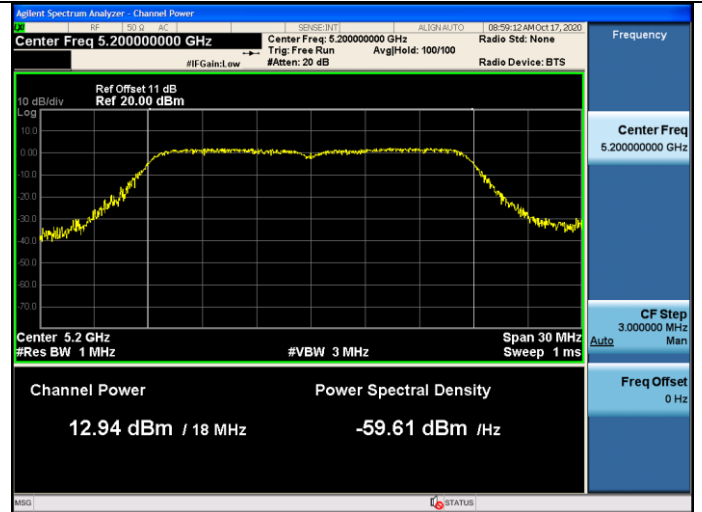
5180MHz



5200MHz



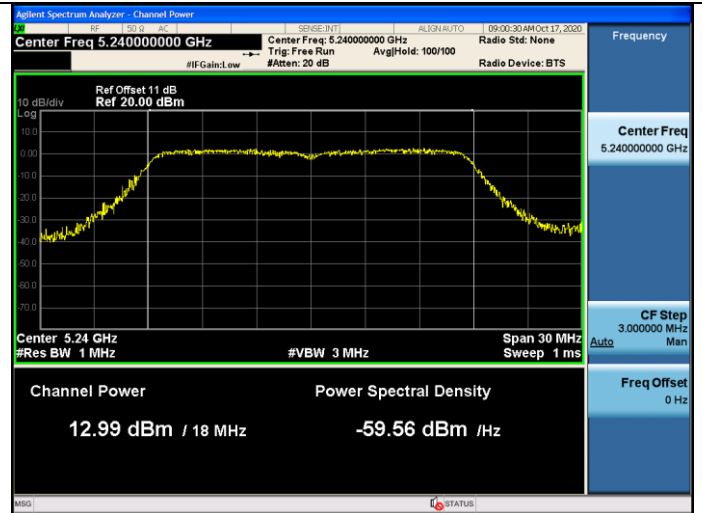
5200MHz



5240MHz

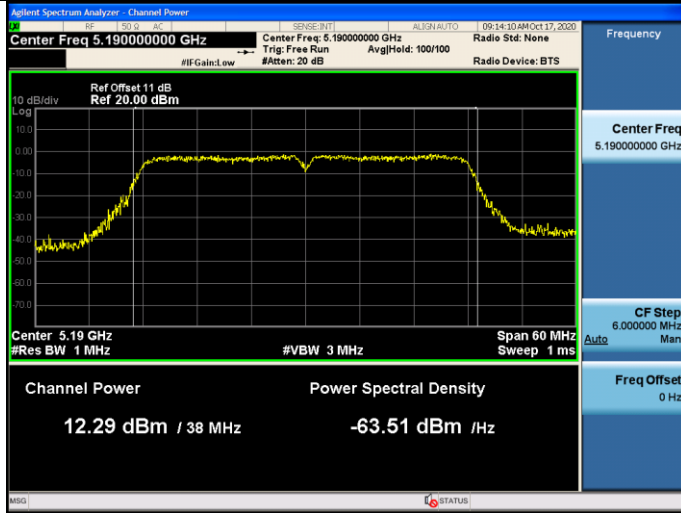


5240MHz

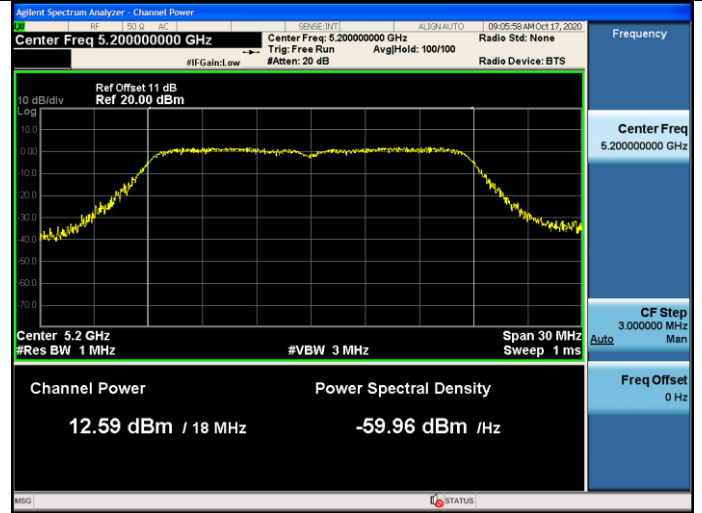


11n HT40

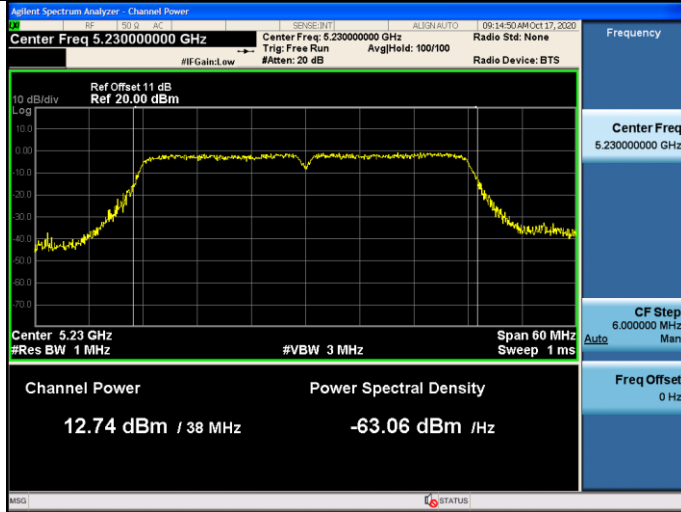
5190MHz



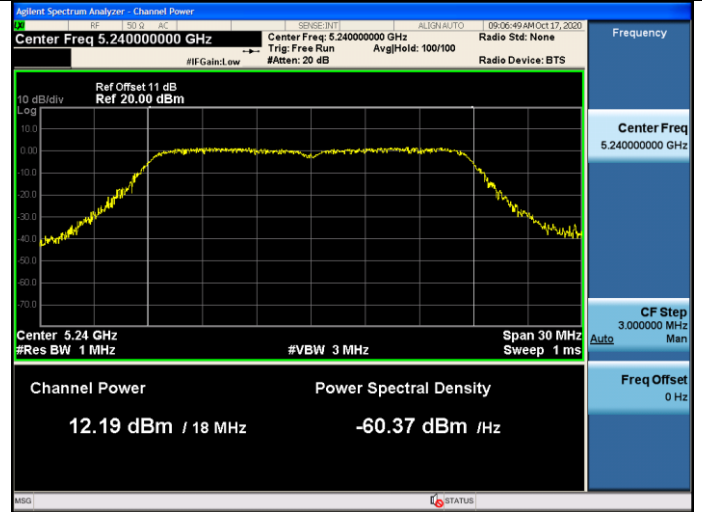
5200MHz



5230MHz



5240MHz



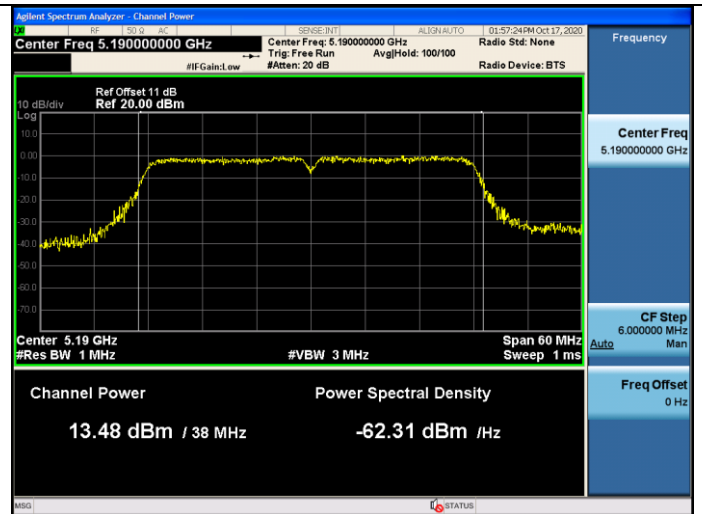
11ac VHT20

5180MHz



11ac VHT40

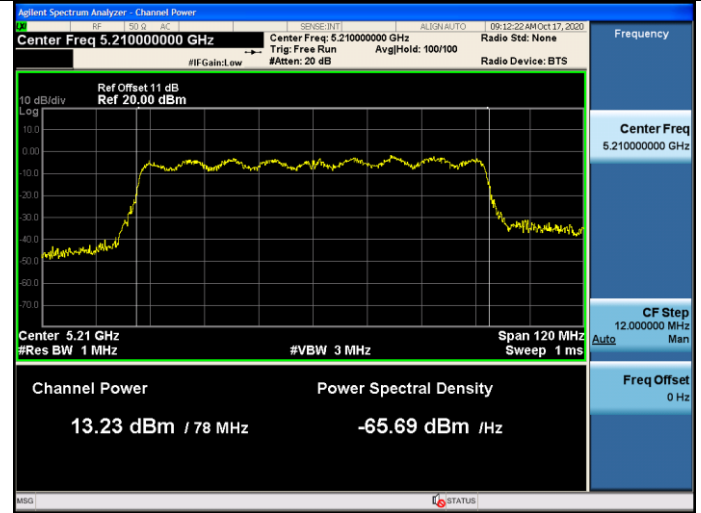
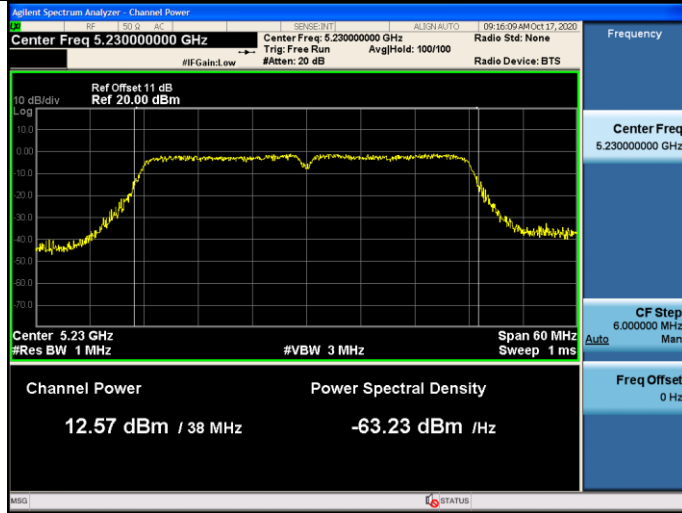
5190MHz



11ac VHT80

5230MHz

5210MHz



U-NII-3 Band:

ANT A

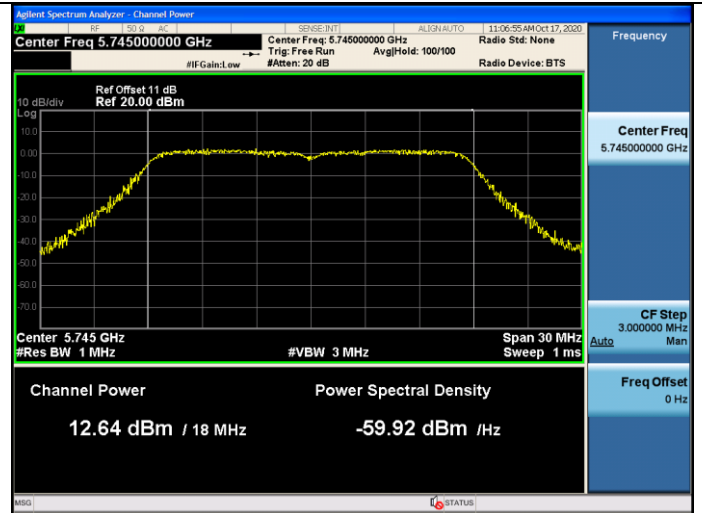
11a

5745MHz

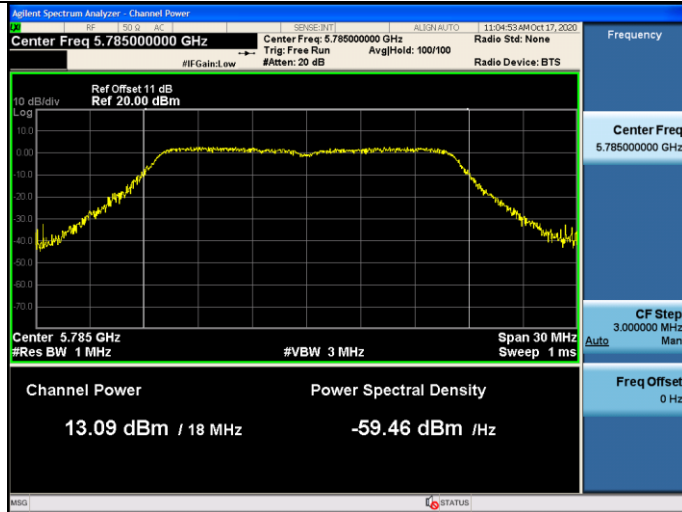


11n HT20

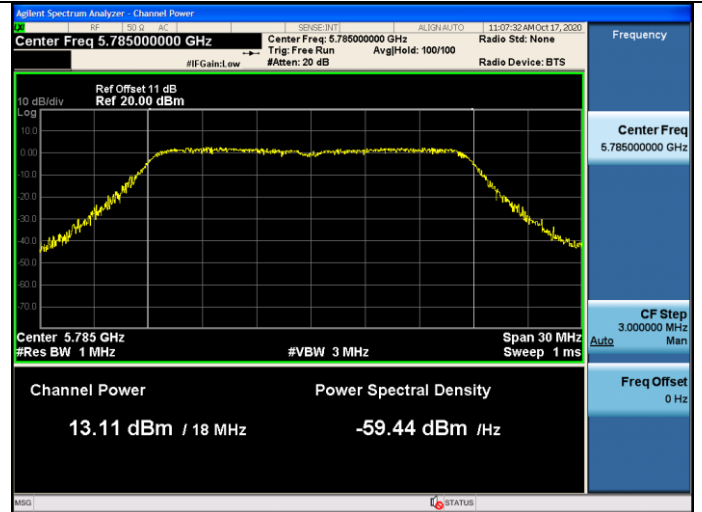
5745MHz



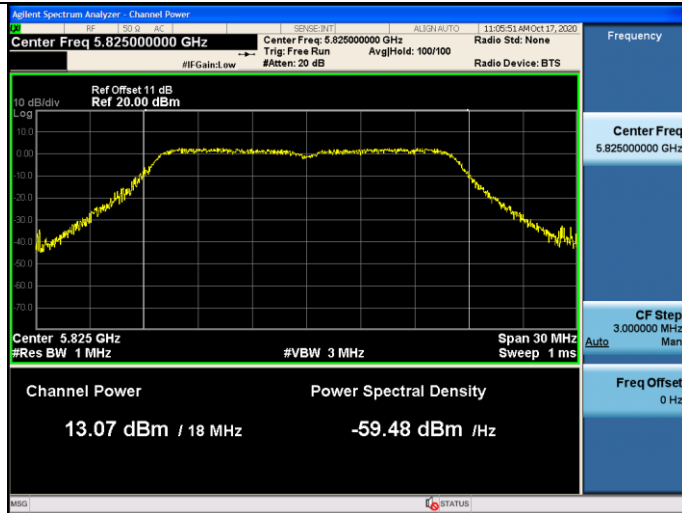
5785MHz



5785MHz



5825MHz

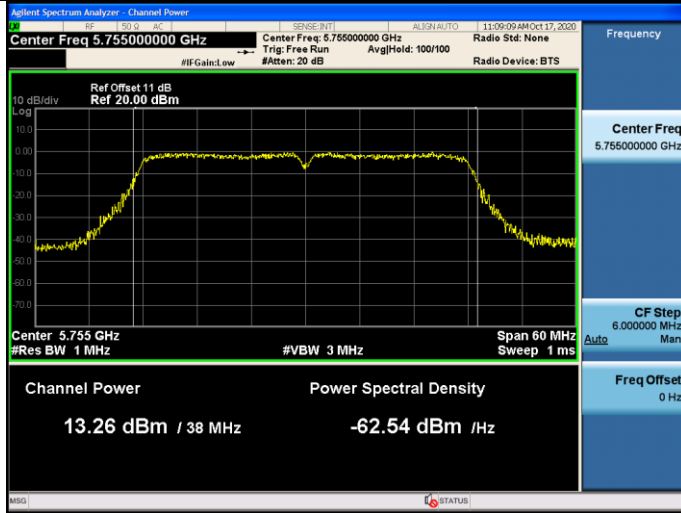


5825MHz

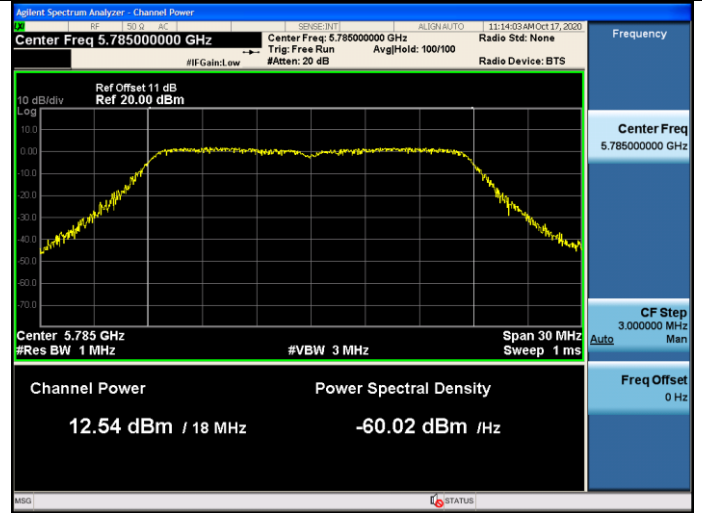


11n HT40

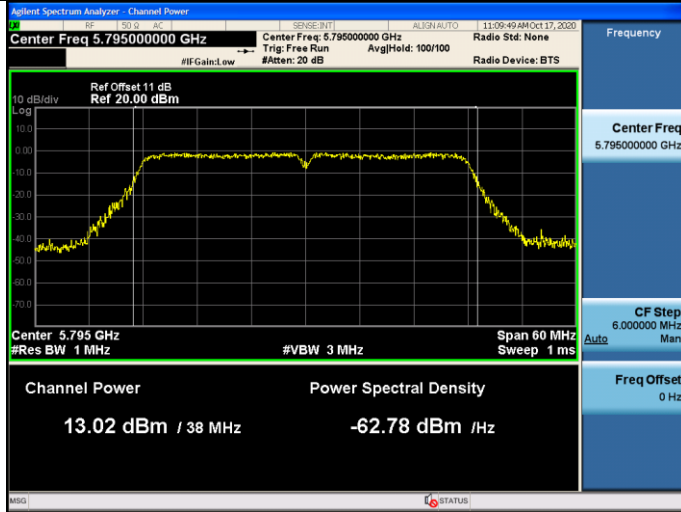
5755MHz



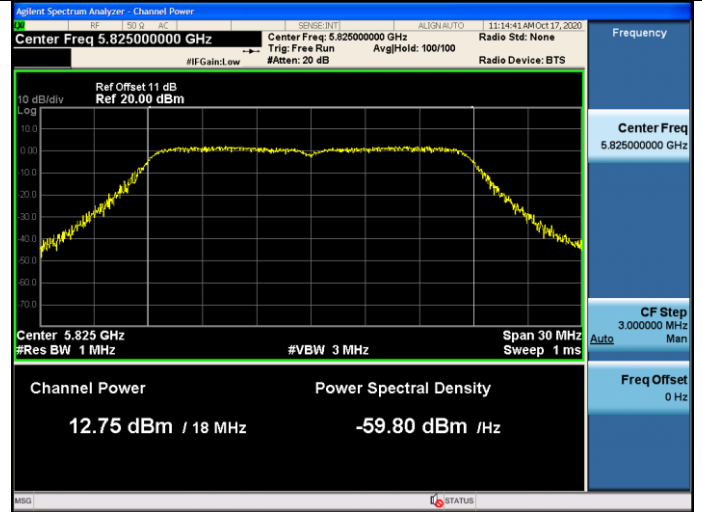
5785MHz



5795MHz

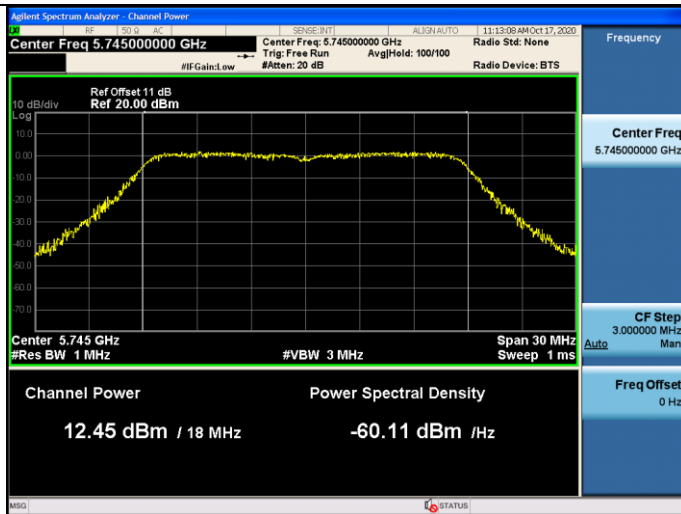


5825MHz



11ac VHT20

5745MHz



11ac VHT40

5755MHz

