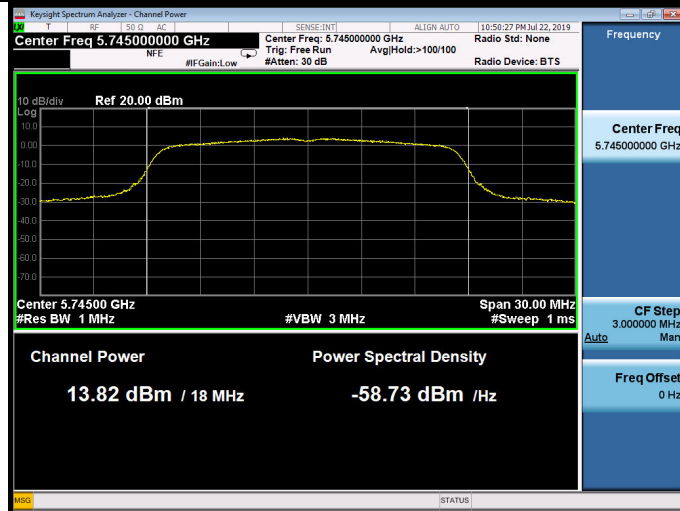


U-NII-3 Band:

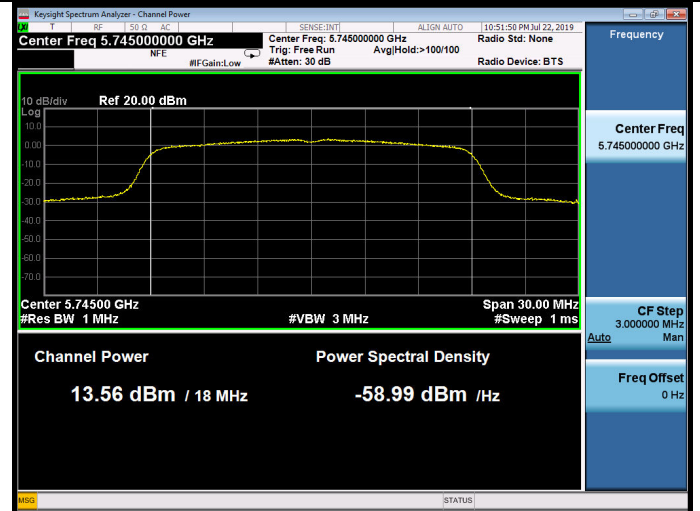
11a

5745MHz

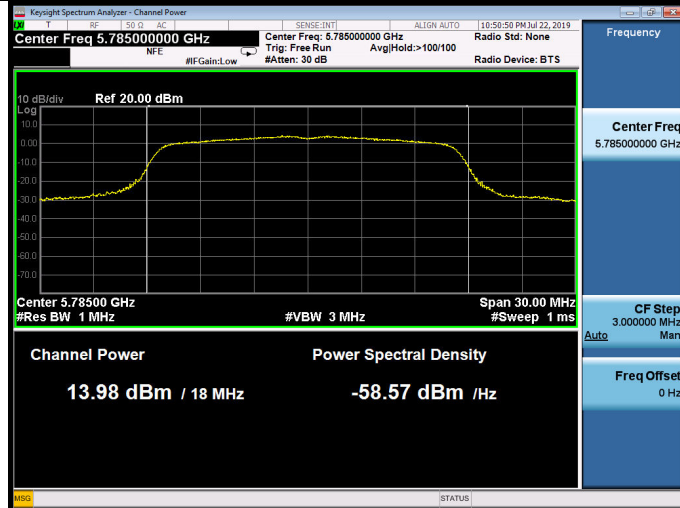


11n HT20

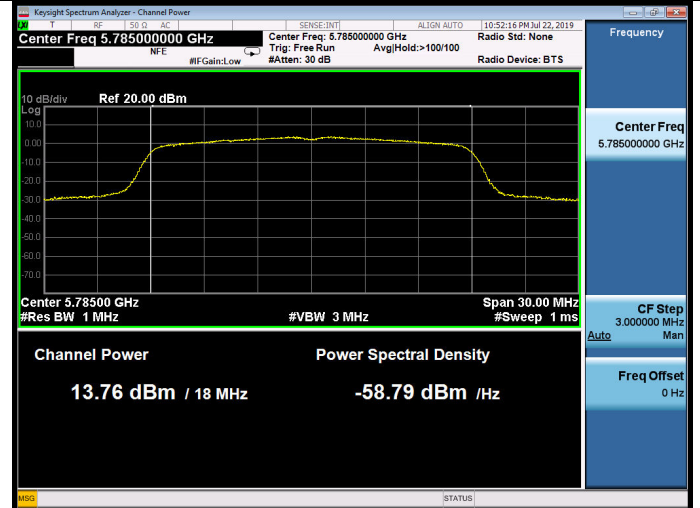
5745MHz



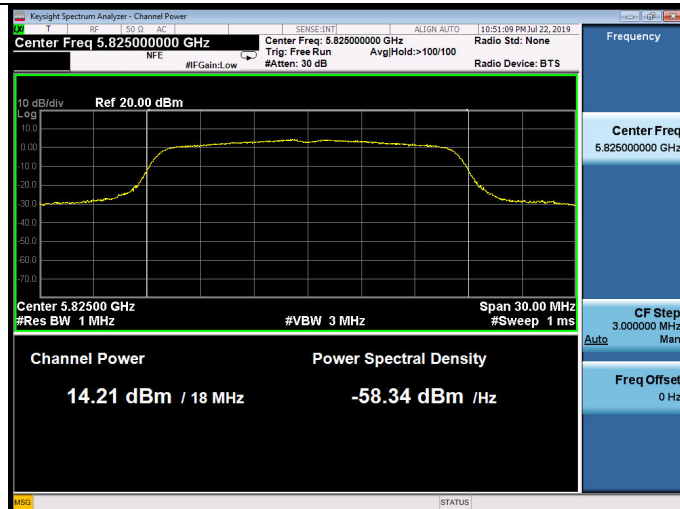
5785MHz



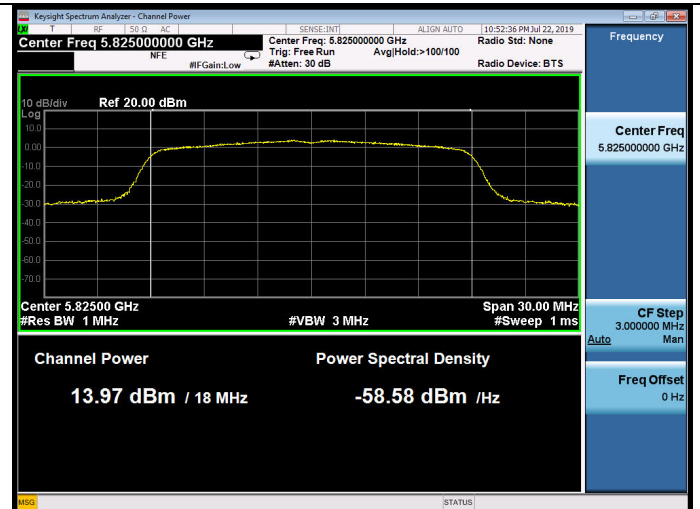
5785MHz



5825MHz

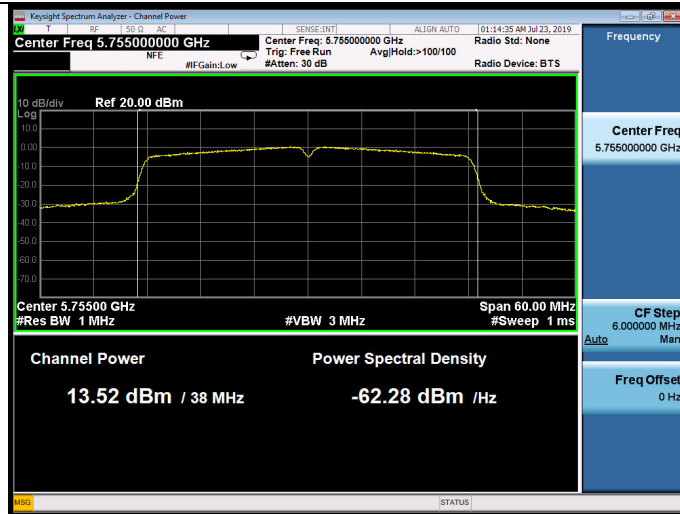


5825MHz

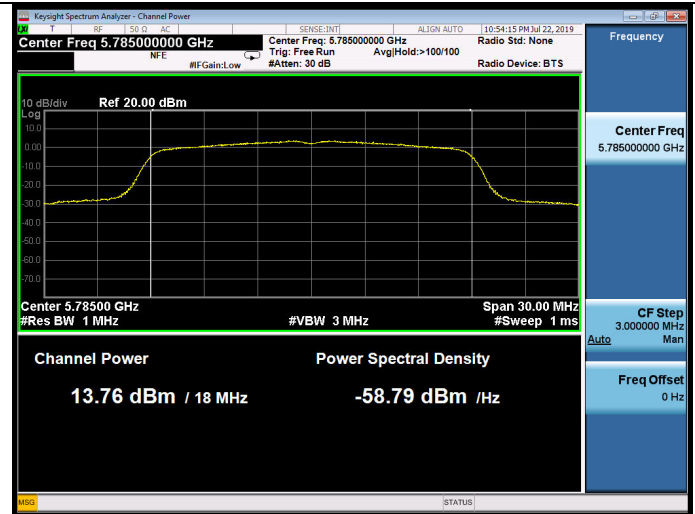


11n HT40

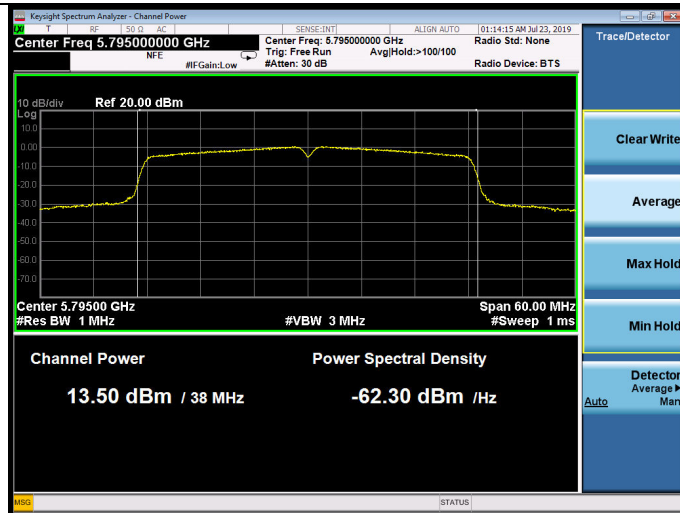
5755MHz



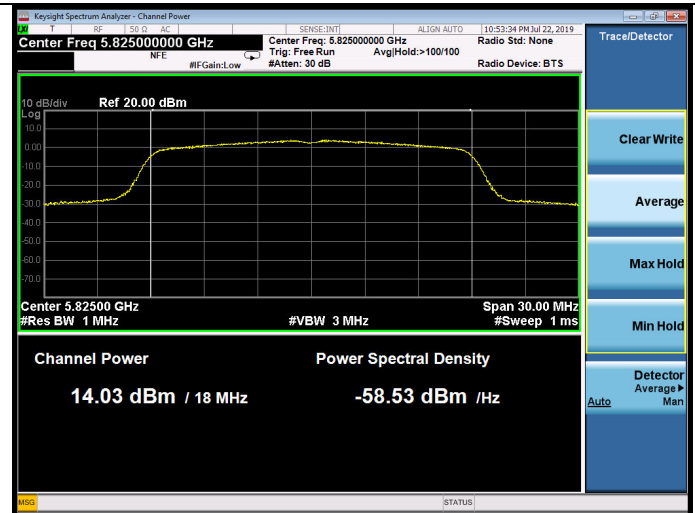
5785MHz



5795MHz

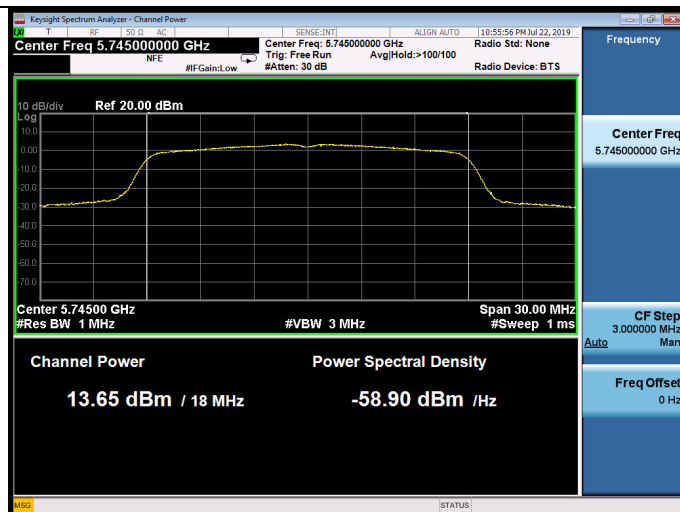


5825MHz



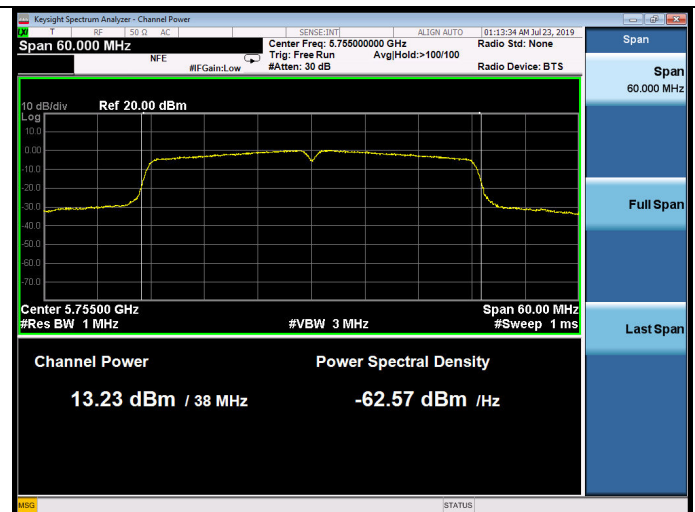
11ac VHT20

5745MHz

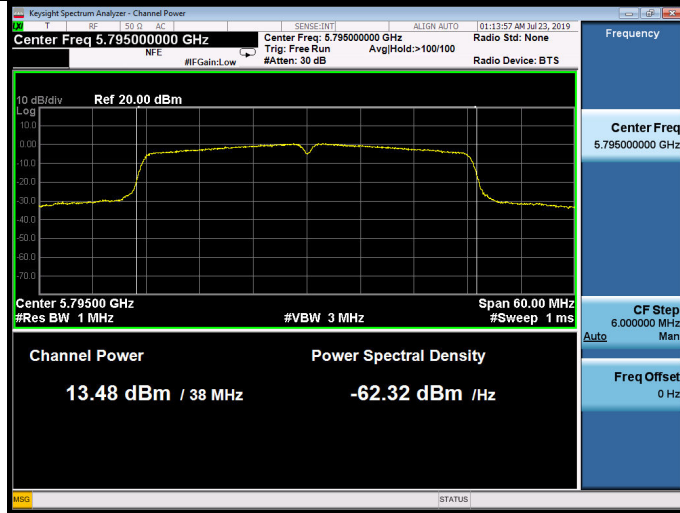


11ac VHT40

5755MHz

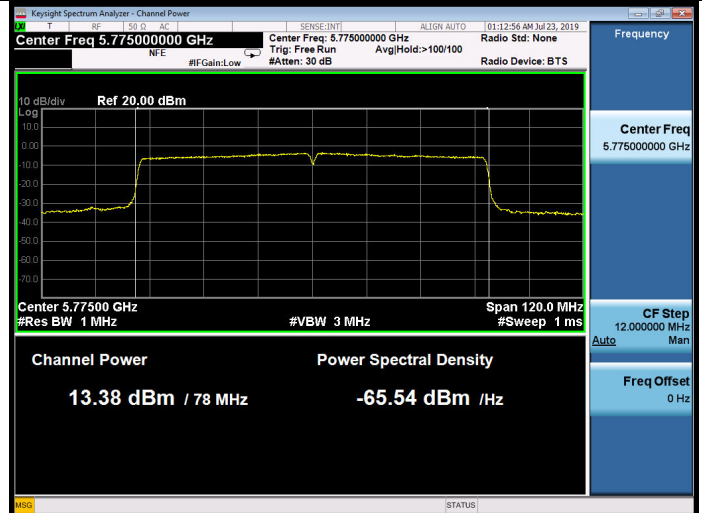


5795MHz



11ac VHT80

5775MHz



8. SPECTRAL DENSITY TEST

8.1. Test Equipment

Item	Equipment	Manufacturer	Model No.	Serial No.	Last Cal.	Cal. Interval
1.	PXA Signal Analyzer	Agilent	N9030A	MY51380221	Jun.30,19	1 Year
2.	Attenuator	Agilent	8491B	MY39262165	Oct.14,18	1 Year
3.	RF Cable	Mini-Circuits	CBL-1M-SMSM+	No.4	Oct.14,18	1 Year

8.2. Limit

Band 5150-5250 MHz:

The power spectral density shall not exceed 11 dBm in any 1.0 MHz band.

Band 5250-5350 MHz:

The power spectral density shall not exceed 11 dBm in any 1.0 MHz band.

Band 5470-5725 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.

8.3. Test Procedure

Use the test method described in ANSI C63.10 clause 12.5:

For the Band 5.15-5.35GHz; 5.47-5.725 GHz:

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 =3MHz
- 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.

8.4. Test Results

U-NII-1 Band:

EUT: COSMO		
M/N: COSMO COMMUNICATOR		
Test date: 2019-08-28	Pressure: 102.3±1.0 kpa	Humidity: 53.6±3.0%
Tested by: Garry	Test site: RF site	Temperature: 25.5±0.6 °C

Test Mode	Frequency (MHz)	Power density (dBm/MHz)	Limit (dBm/MHz)
11a	5180	2.336	11
	5200	2.425	
	5240	2.284	
11n HT20	5180	1.964	11
	5200	2.064	
	5240	2.343	
11n HT40	5190	-0.721	11
	5230	-0.406	
11ac VHT20	5180	2.018	11
	5200	2.001	
	5240	2.407	
11ac VHT40	5190	-0.555	11
	5230	-1.105	
11ac VHT80	5210	-4.227	11
Conclusion: PASS			

Note: Antenna Gain= 0.6dBi<6dBi.

U-NII-2A Band:

EUT: COSMO		
M/N: COSMO COMMUNICATOR		
Test date: 2019-08-28	Pressure: 102.3±1.0 kpa	Humidity: 53.6±3.0%
Tested by: Garry	Test site: RF site	Temperature: 25.5±0.6 °C

Test Mode	Frequency (MHz)	Power density (dBm/MHz)	Limit (dBm/MHz)
11a	5260	2.765	11
	5300	2.985	
	5320	2.809	
11n HT20	5260	2.495	11
	5300	2.589	
	5320	2.599	
11n HT40	5270	-1.087	11
	5310	-0.573	
11ac VHT20	5260	2.161	11
	5300	2.650	
	5320	2.080	
11ac VHT40	5270	-0.501	11
	5310	-0.796	
11ac VHT80	5290	-4.462	11

Conclusion: PASS

Note: Antenna Gain= 0.6dBi<6dBi.

U-NII-2C Band:

EUT: COSMO		
M/N: COSMO COMMUNICATOR		
Test date: 2019-08-28	Pressure: 102.3±1.0 kpa	Humidity: 53.6±3.0%
Tested by: Garry	Test site: RF site	Temperature: 25.5±0.6 °C

Test Mode	Frequency (MHz)	Power density (dBm/MHz)	Limit (dBm/MHz)
11a	5500	3.038	11
	5600	3.203	
	5700	2.850	
11n HT20	5500	2.659	11
	5600	2.489	
	5700	2.848	
11n HT40	5510	-0.843	11
	5590	-0.107	
	5670	-0.466	
11ac VHT20	5500	2.512	11
	5600	2.756	
	5700	2.624	
11ac VHT40	5510	-0.355	11
	5590	-0.557	
	5670	-0.028	
11ac VHT80	5530	-3.489	11
	5610	-3.360	
Conclusion: PASS			

Note: Antenna Gain= 0.4dBi<6dBi.

U-NII-3 Band:

EUT: COSMO		
M/N: COSMO COMMUNICATOR		
Test date: 2019-08-28	Pressure: 102.3±1.0 kpa	Humidity: 53.6±3.0%
Tested by: Garry	Test site: RF site	Temperature: 25.5±0.6 °C

Test Mode	Frequency (MHz)	Power density (dBm/500KHz)	Limit (dBm/500KHz)
11a	5745	1.356	30
	5785	1.878	
	5825	2.154	
11n HT20	5745	1.663	30
	5785	0.630	
	5825	1.734	
11n HT40	5755	-2.455	30
	5795	-1.772	
11ac VHT20	5745	1.171	30
	5785	1.233	
	5825	1.174	
11ac VHT40	5755	-2.126	30
	5795	-2.565	
11ac VHT80	5775	-5.850	30
Conclusion: PASS			

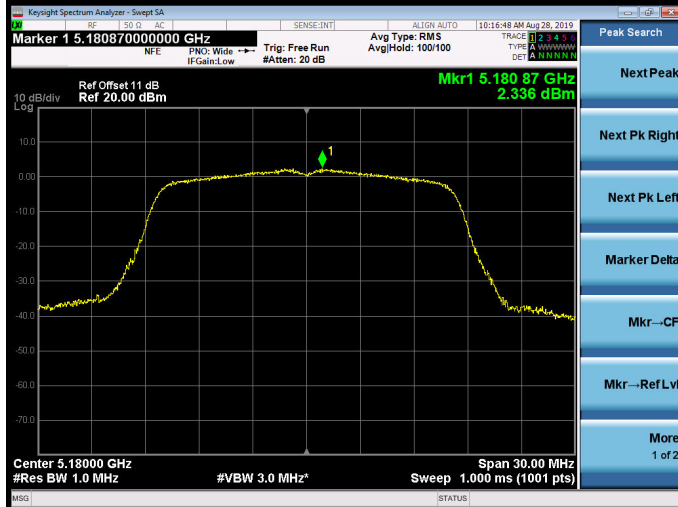
Notes: 1. Antenna Gain= 0.3dBi<6dBi.

2. The total result = Reading + 10log(500kHz/100kHz)

U-NII-1 Band:

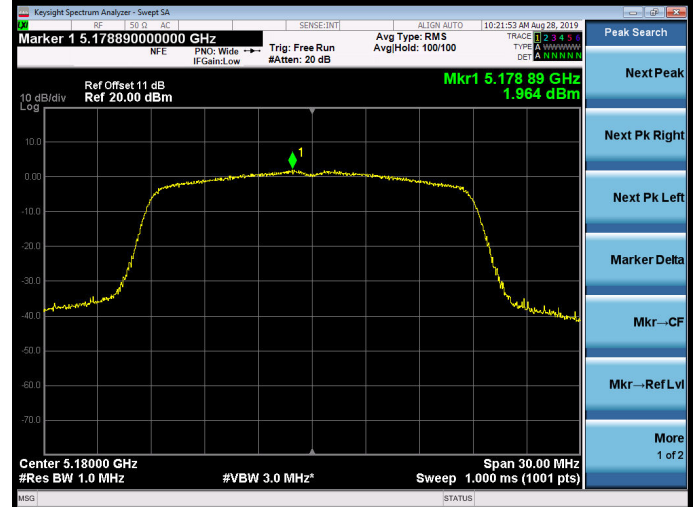
11a

5180MHz

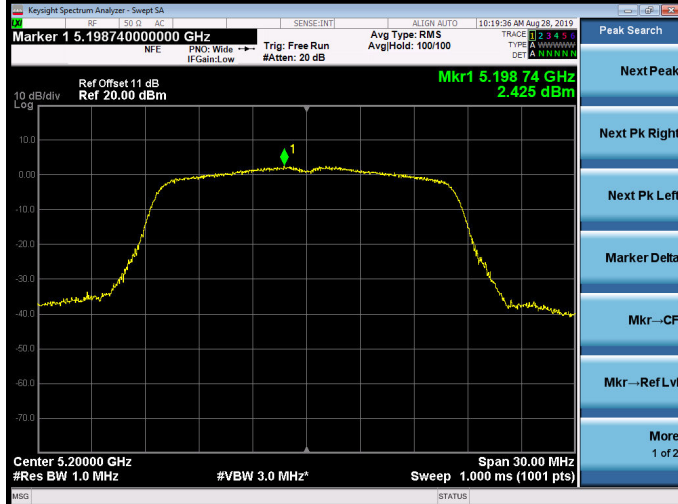


11n HT20

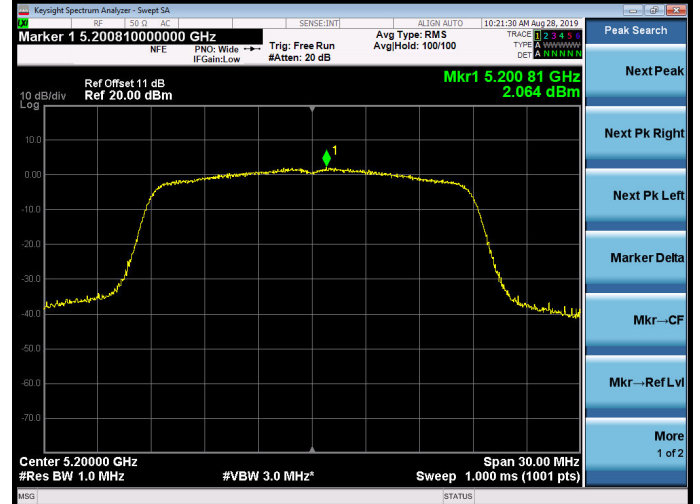
5180MHz



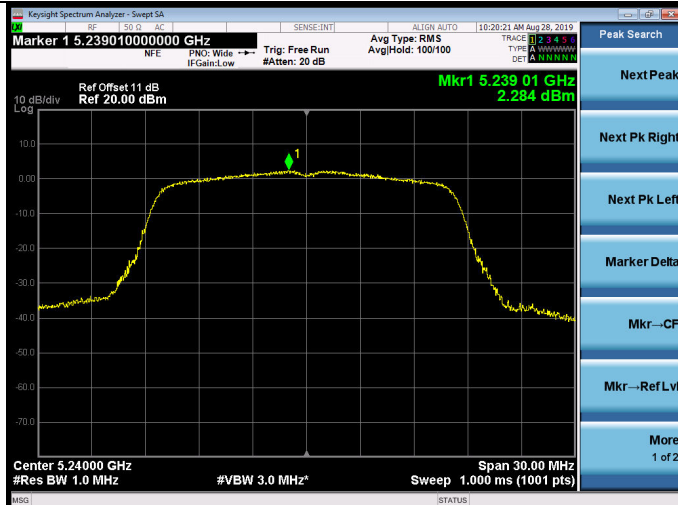
5200MHz



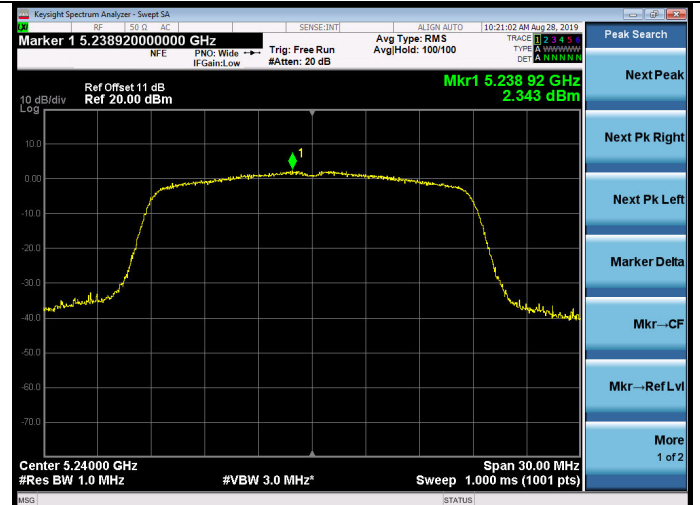
5200MHz



5240MHz

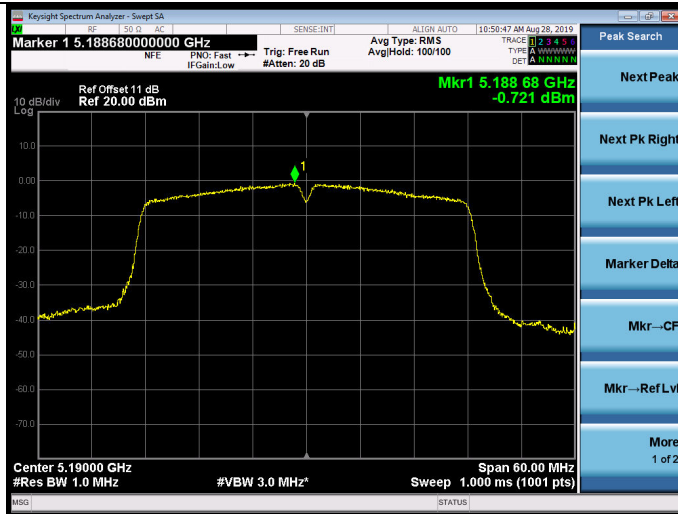


5240MHz

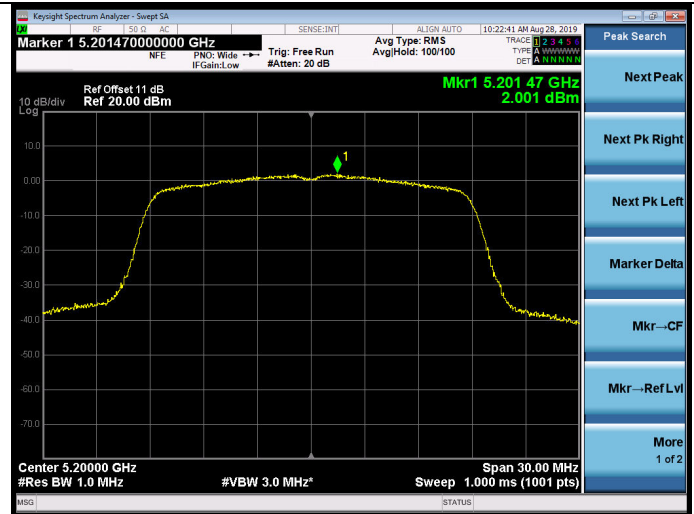


11n HT40

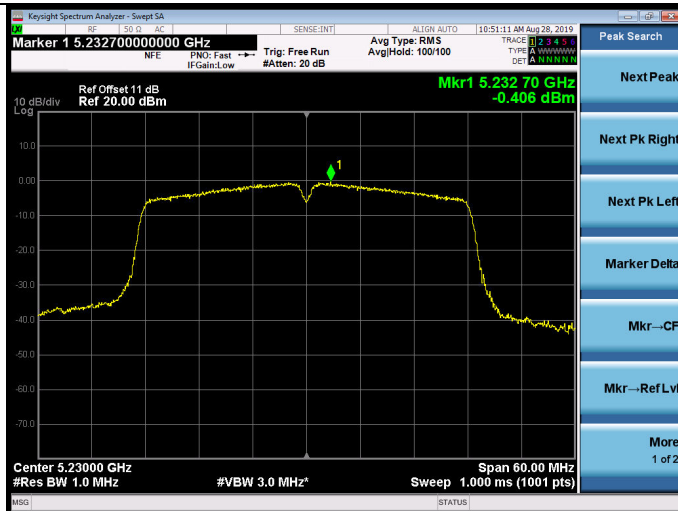
5190MHz



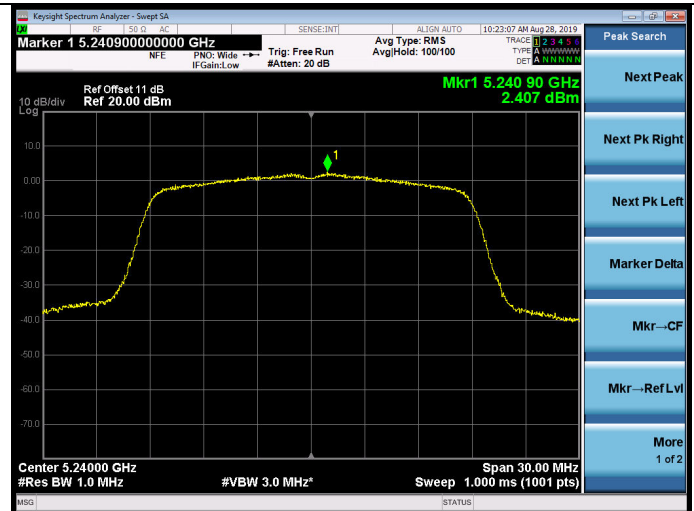
5200MHz



5230MHz

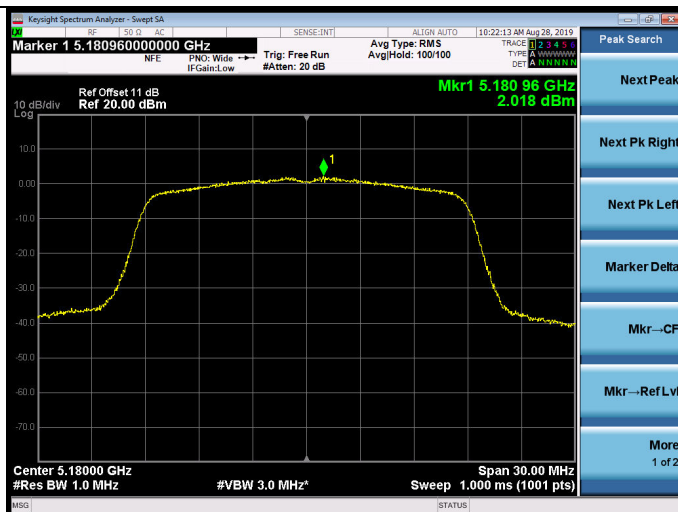


5240MHz



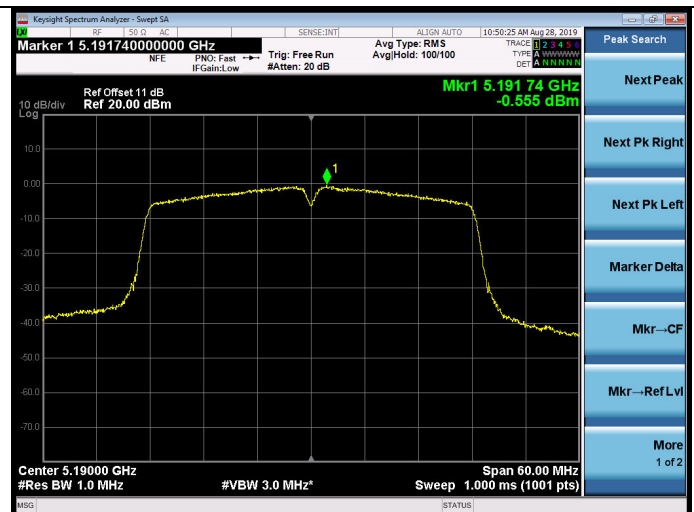
11ac VHT20

5180MHz

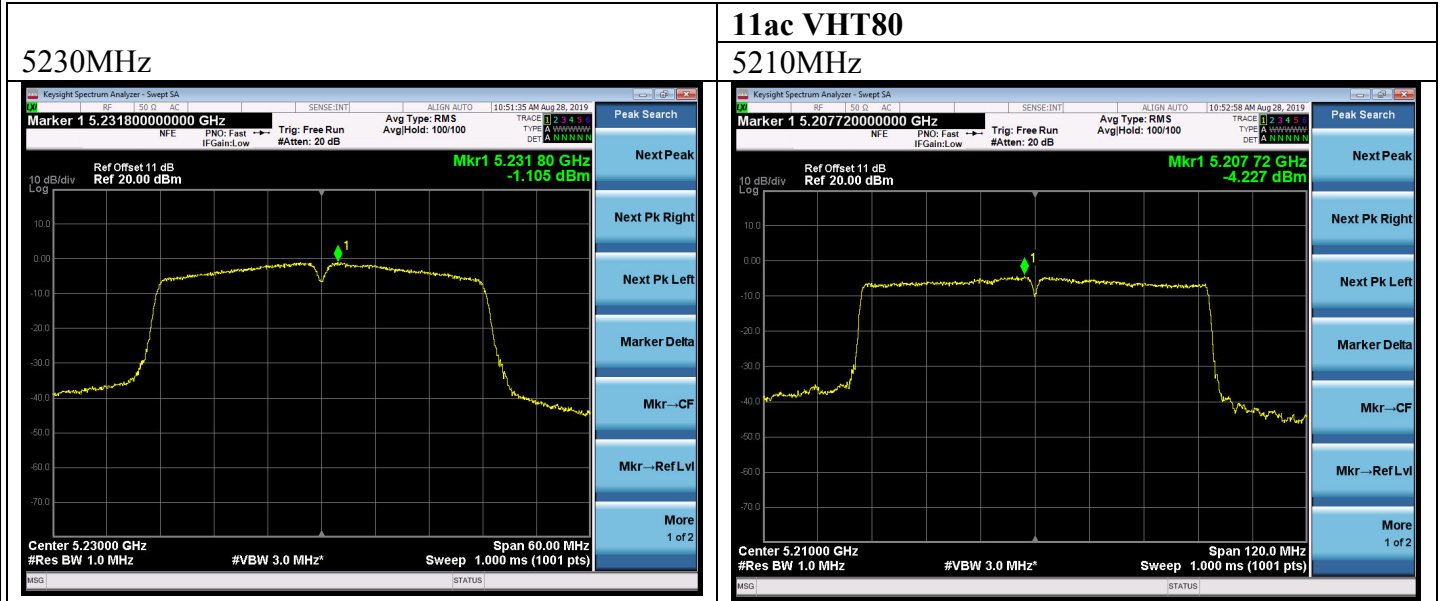


11ac VHT40

5190MHz



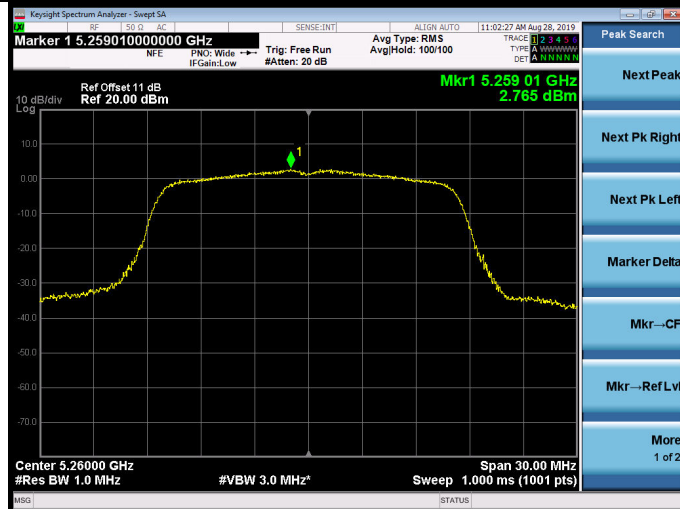
FCC ID: 2A07Q-COSMO



U-NII-2A Band:

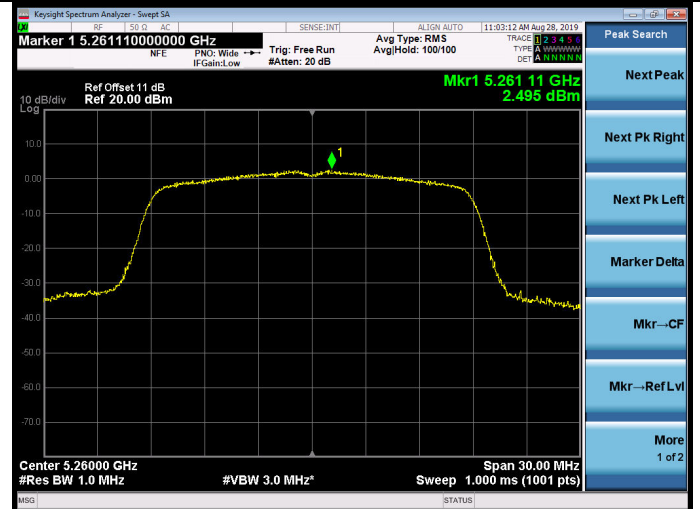
11a

5260MHz

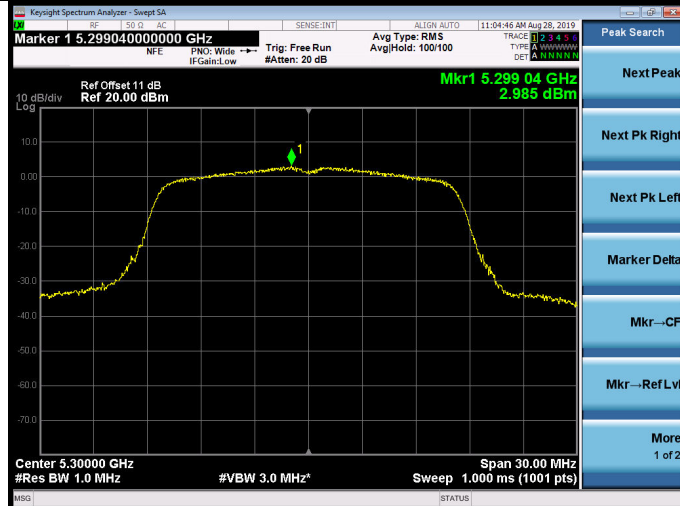


11n HT20

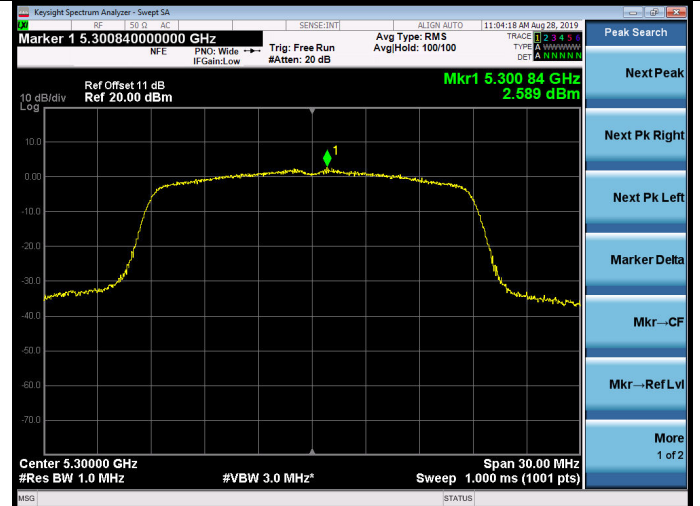
5260MHz



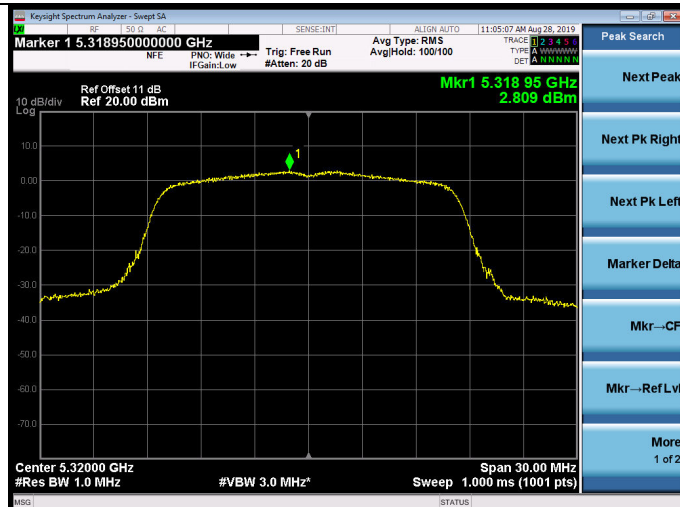
5300MHz



5300MHz



5320MHz



5320MHz

