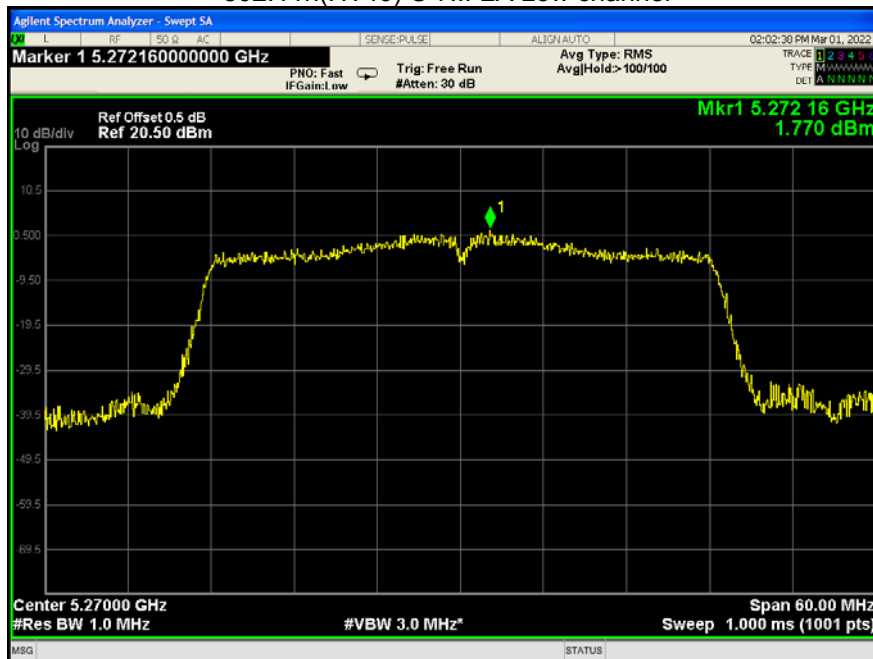


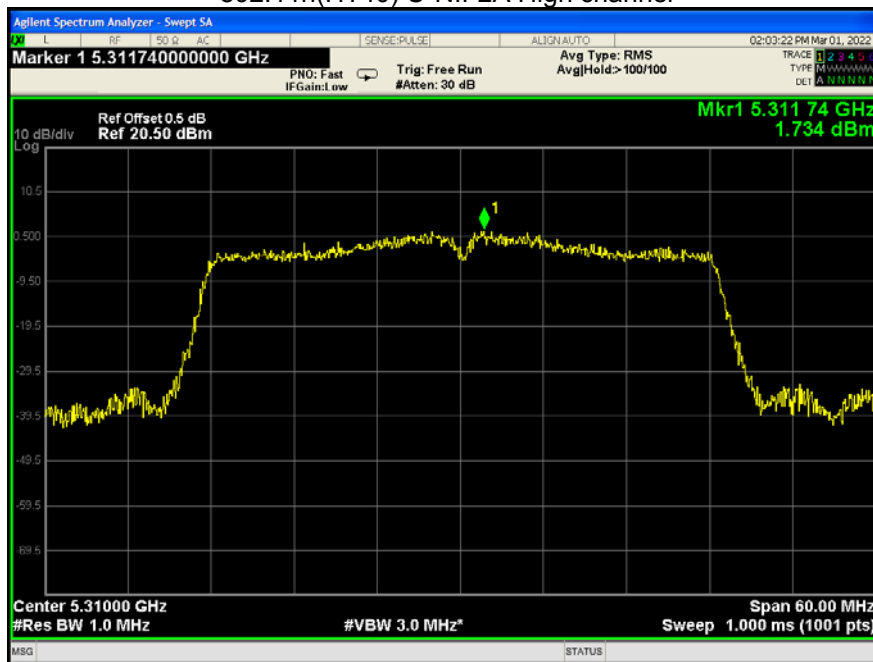
802.11ac(HT40) U-NII-2A High channel



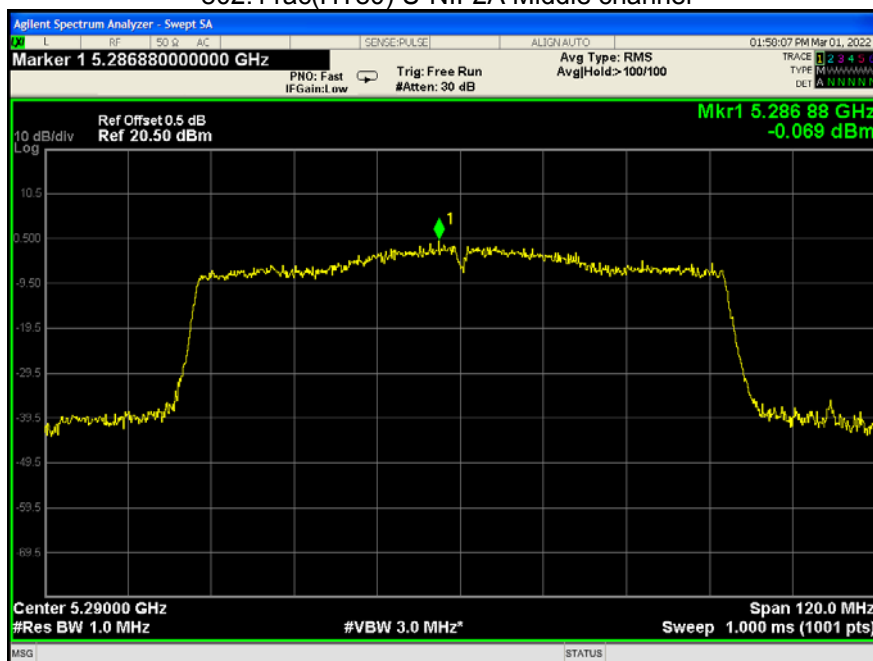
802.11n(HT40) U-NII-2A Low channel



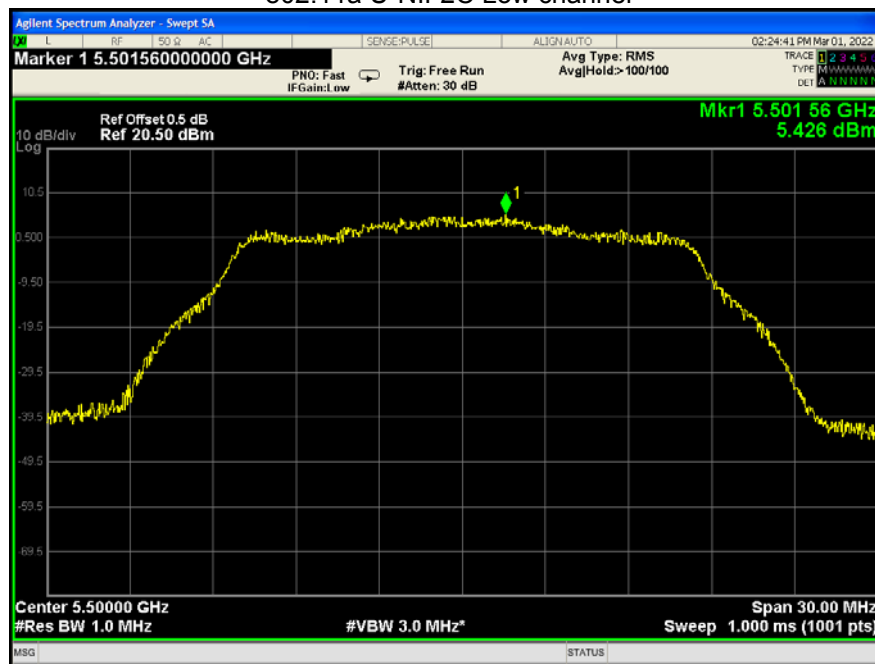
802.11n(HT40) U-NII-2A High channel



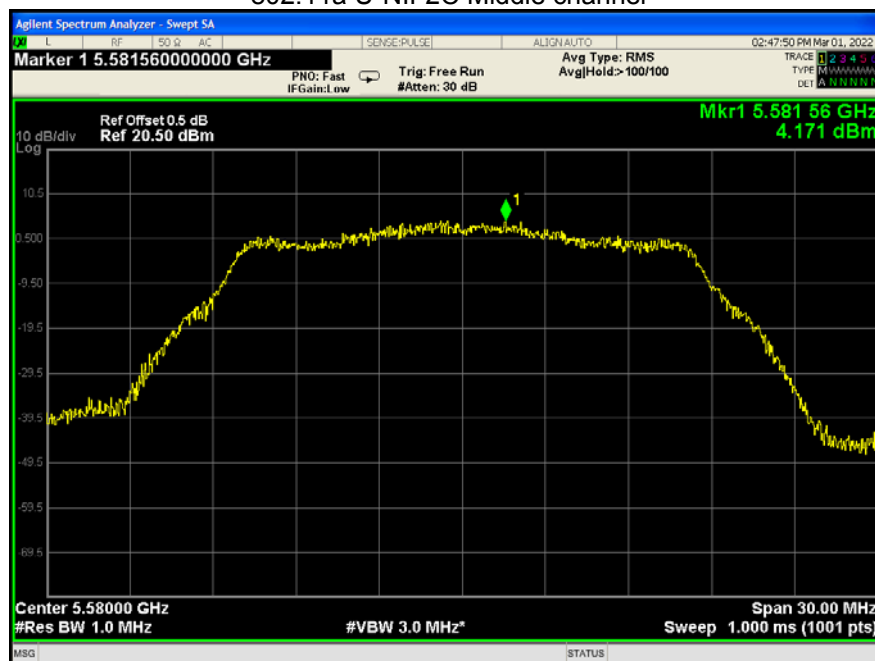
802.11ac(HT80) U-NII-2A Middle channel



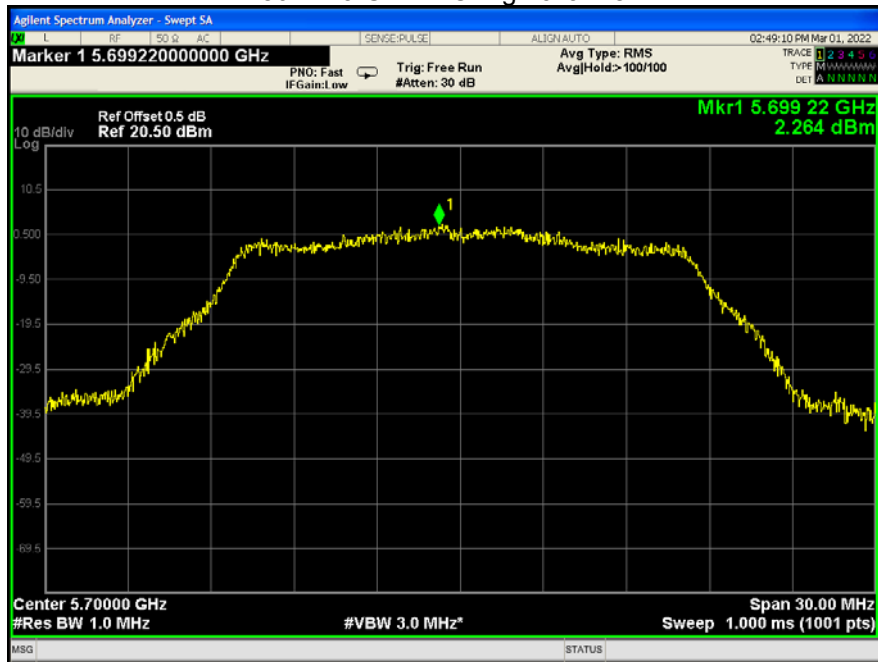
802.11a U-NII-2C Low channel



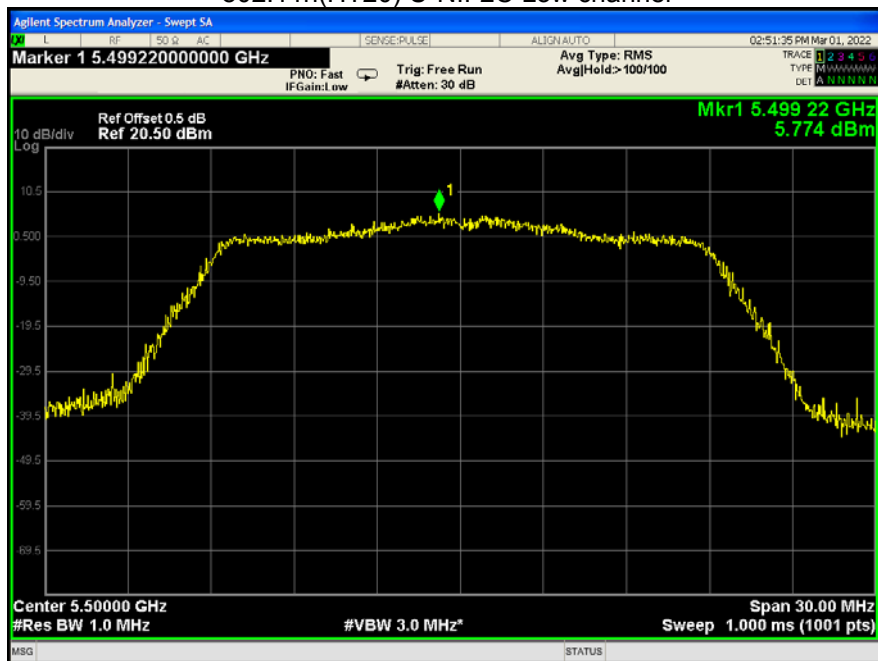
802.11a U-NII-2C Middle channel



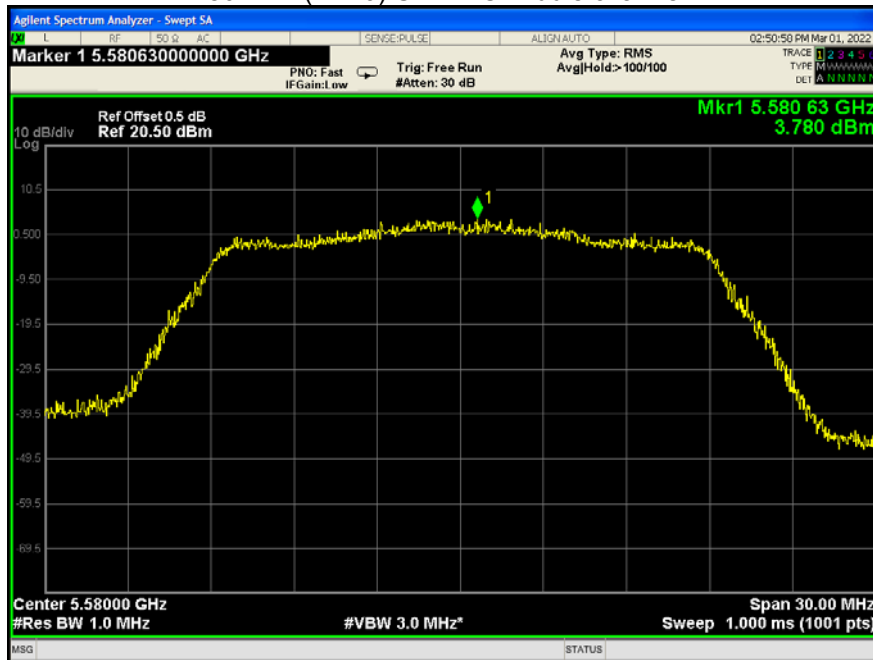
802.11a U-NII-2C High channel



802.11n(HT20) U-NII-2C Low channel



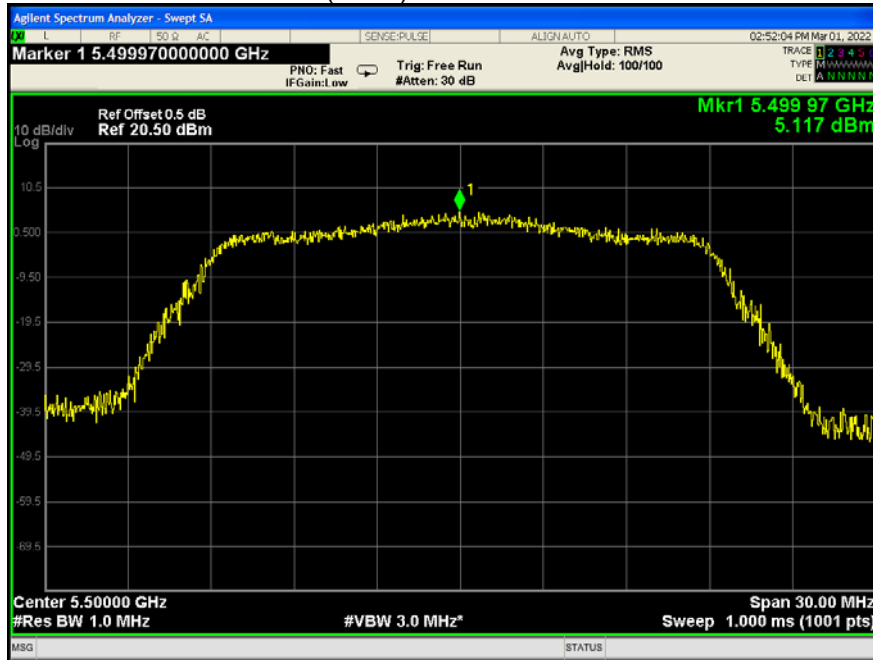
802.11n(HT20) U-NII-2C Middle channel



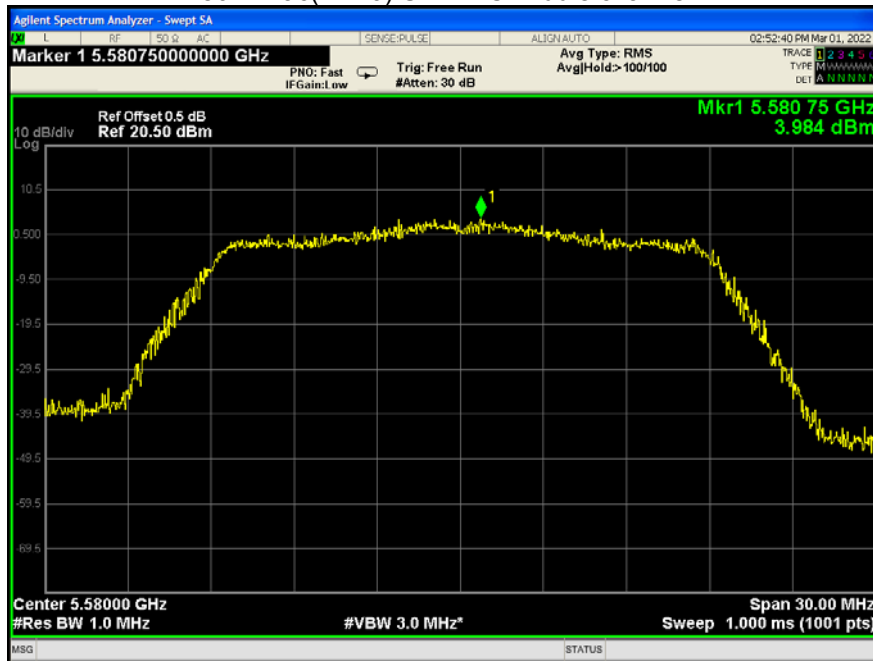
802.11n(HT20) U-NII-2C High channel



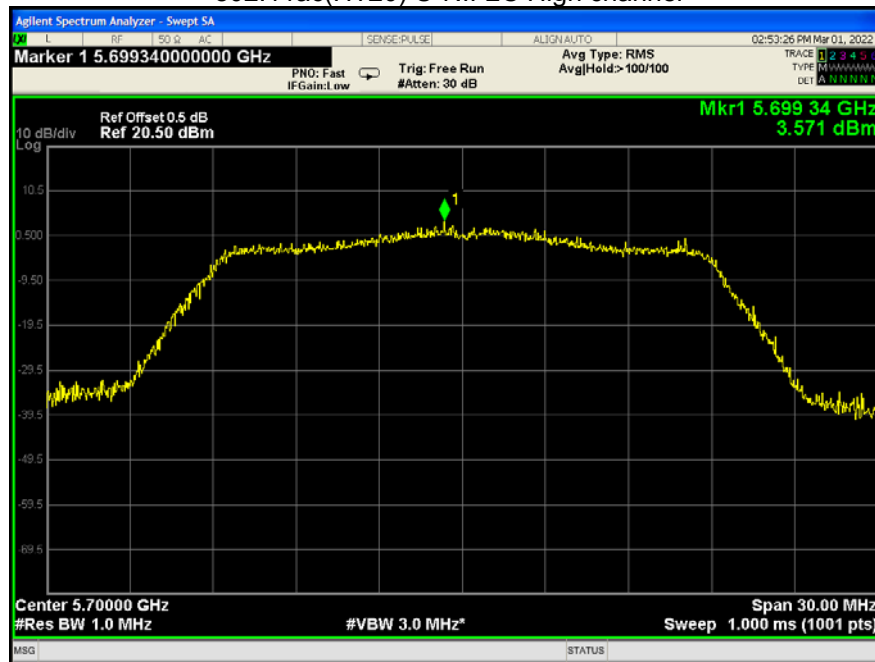
802.11ac(HT20) U-NII-2C Low channel



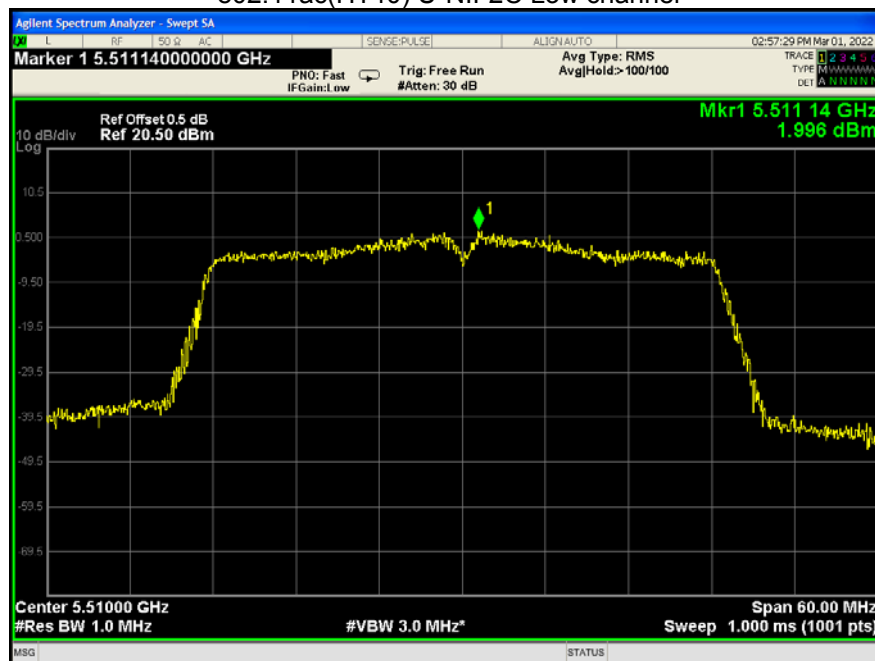
802.11ac(HT20) U-NII-2C Middle channel



802.11ac(HT20) U-NII-2C High channel



802.11ac(HT40) U-NII-2C Low channel



802.11ac(HT40) U-NII-2C Middle channel

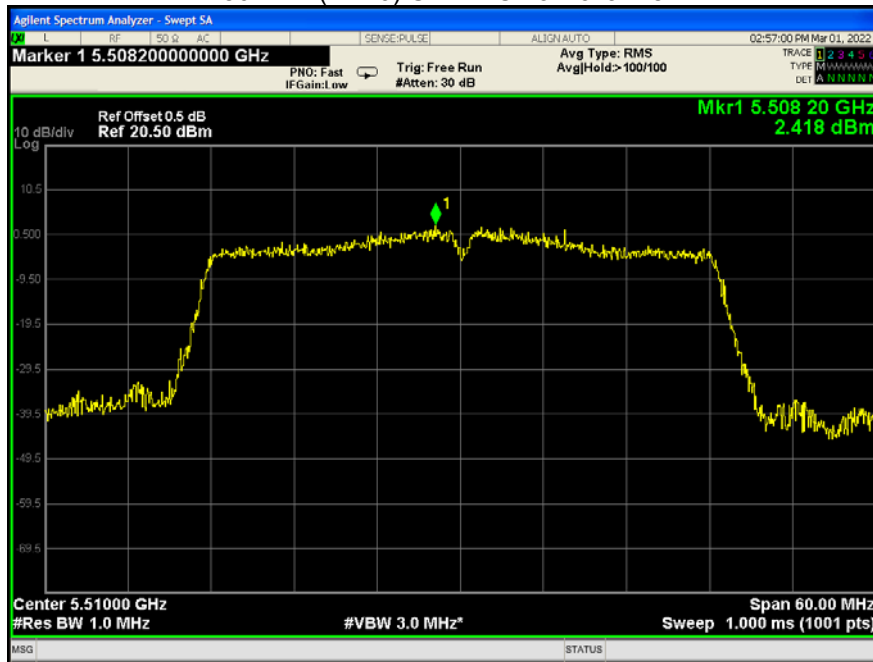


802.11ac(HT40) U-NII-2C High channel

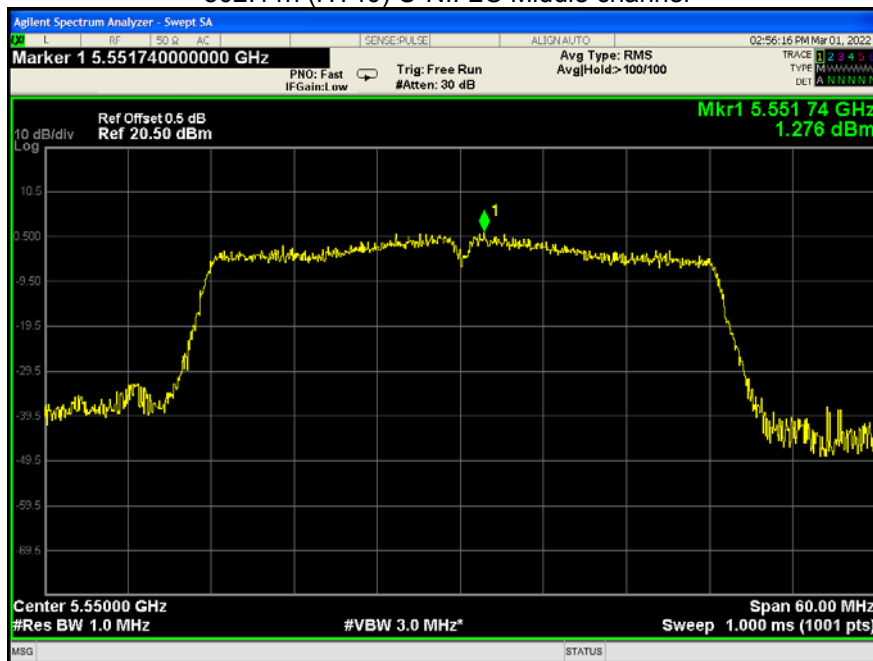




802.11n(HT40) U-NII-2C Low channel



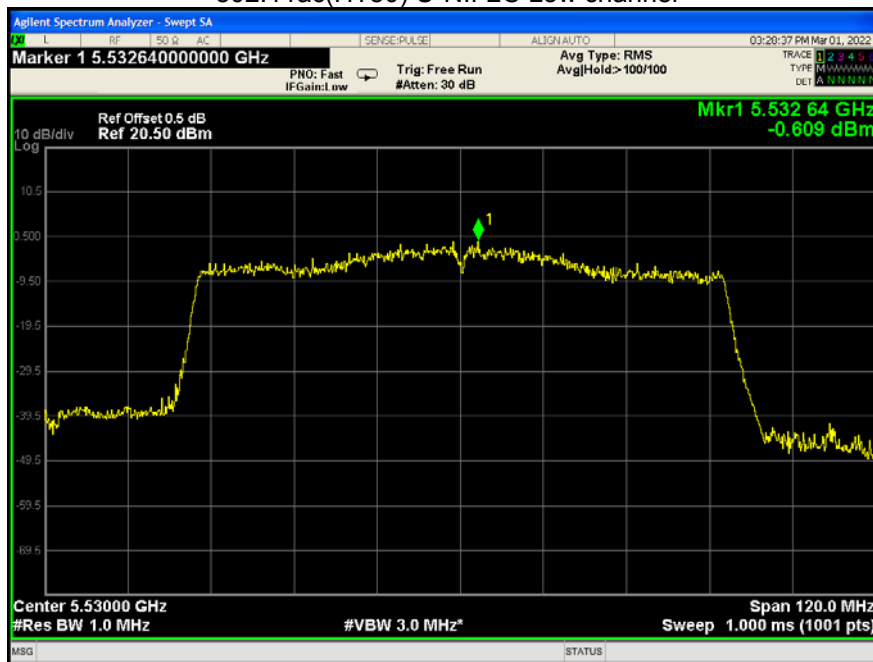
802.11n (HT40) U-NII-2C Middle channel



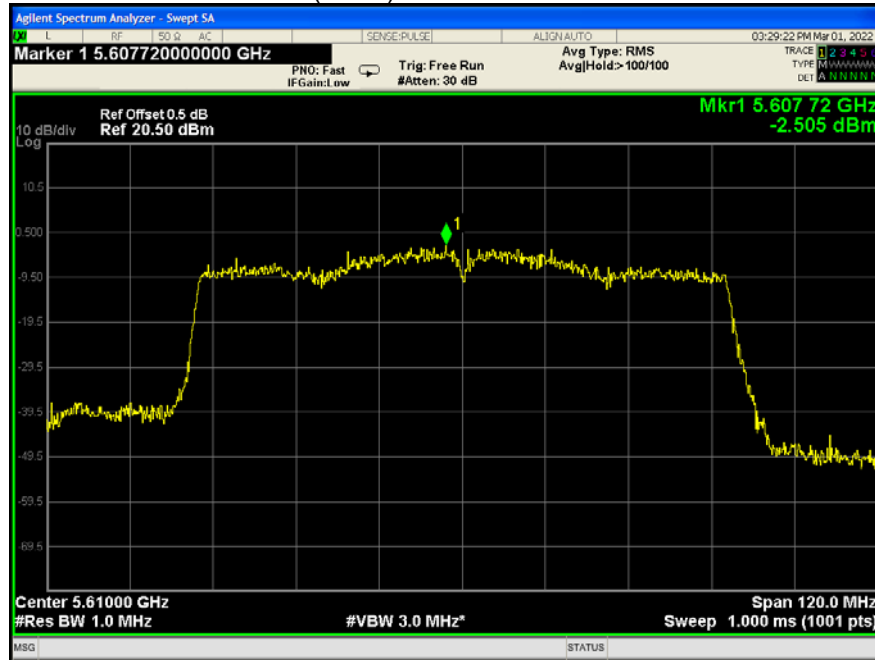
802.11n(HT40) U-NII-2C High channel



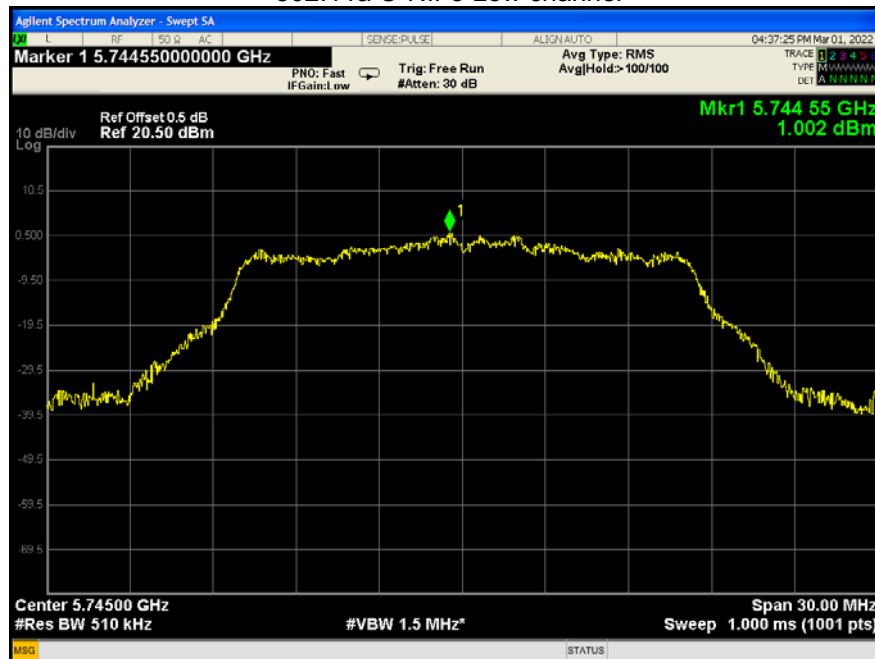
802.11ac(HT80) U-NII-2C Low channel



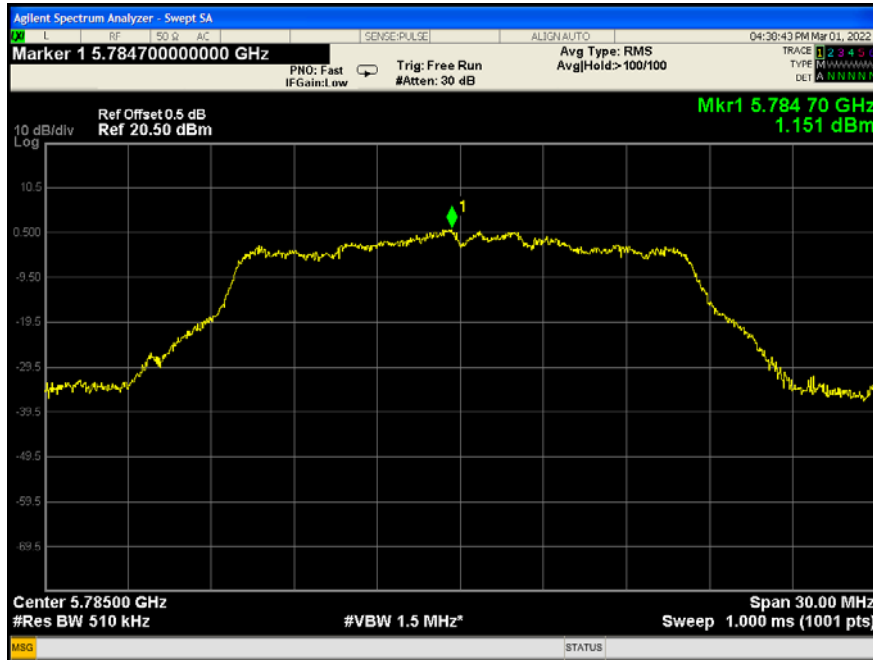
### 802.11ac(HT80) U-NII-2C Middle channel



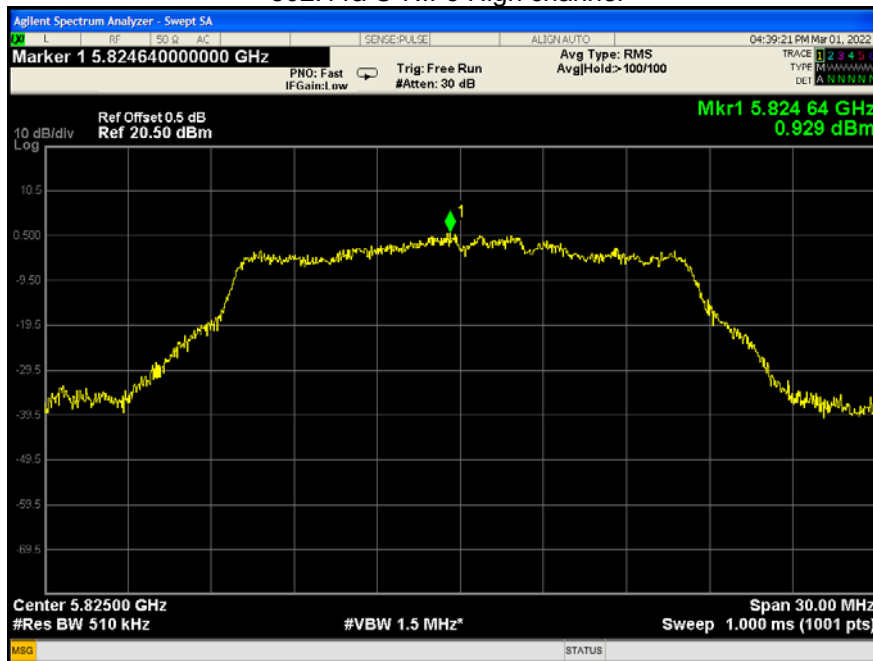
### 802.11a U-NII-3 Low channel



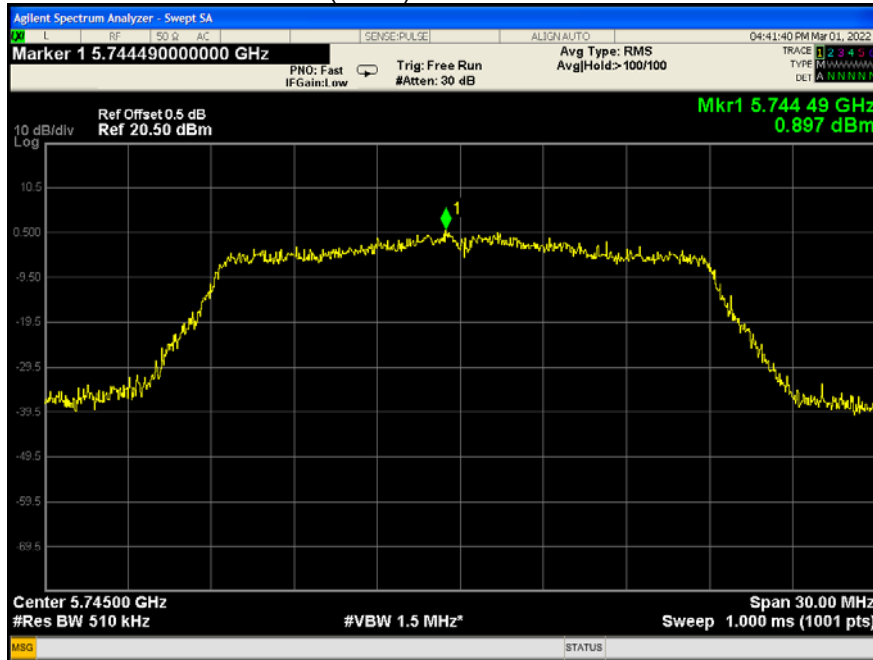
### 802.11a U-NII-3 Middle channel



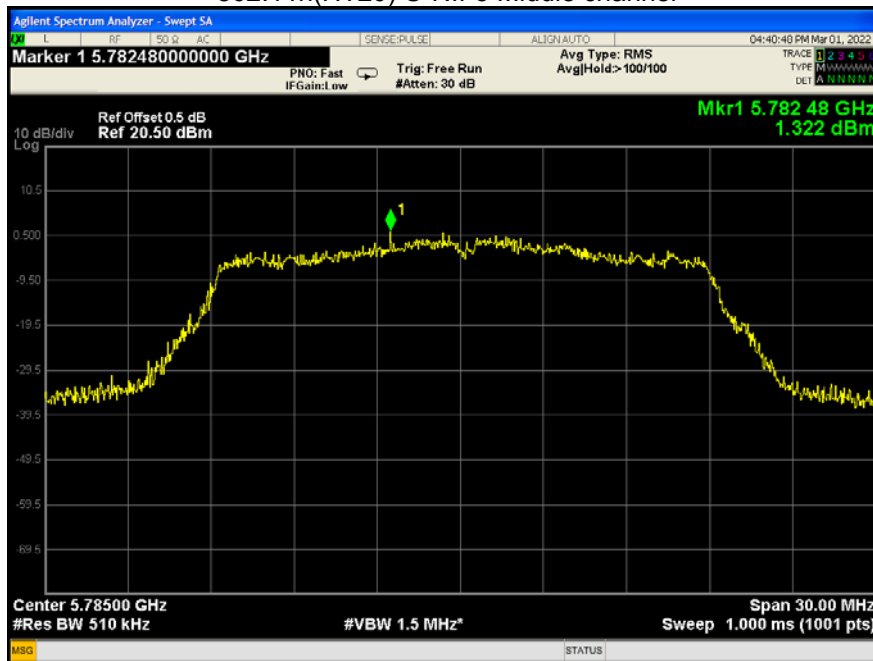
### 802.11a U-NII-3 High channel



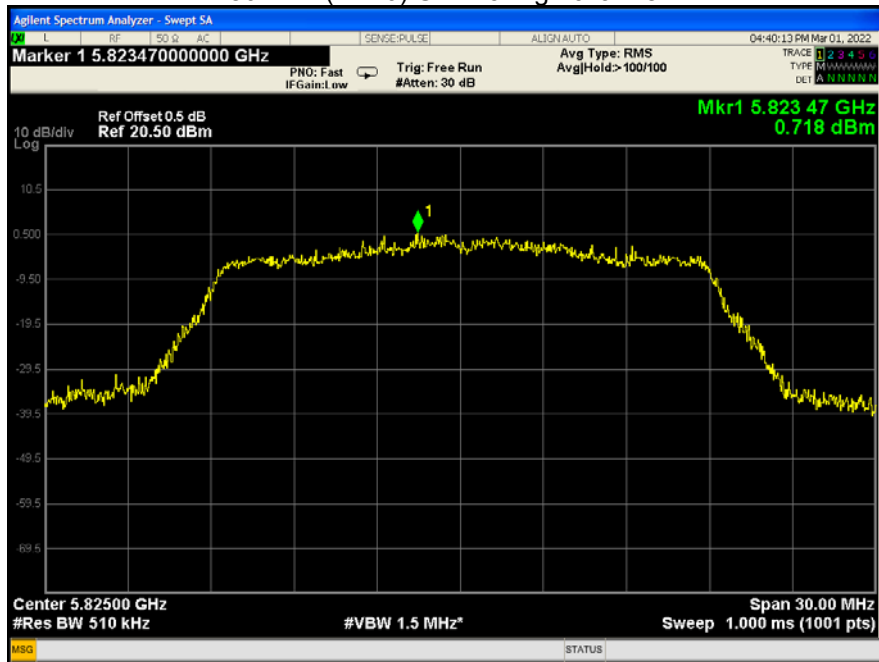
802.11n(HT20) U-NII-3 Low channel



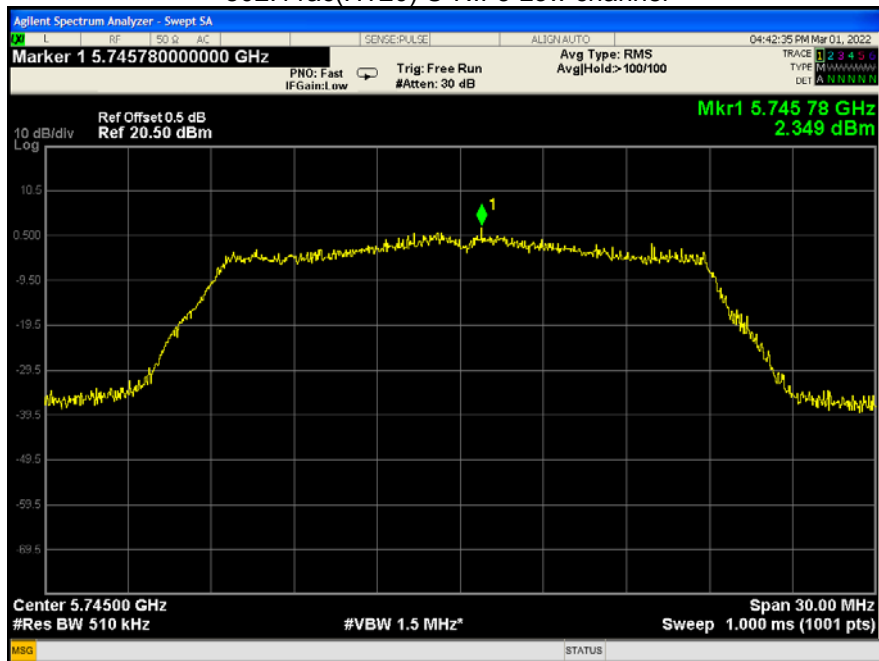
802.11n(HT20) U-NII-3 Middle channel



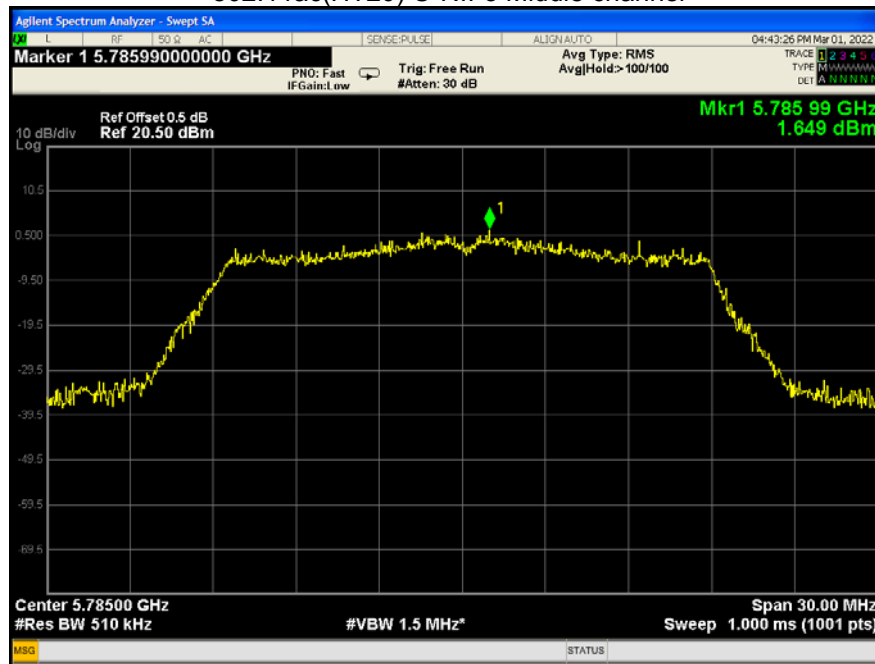
802.11n(HT20) U-NII-3 High channel



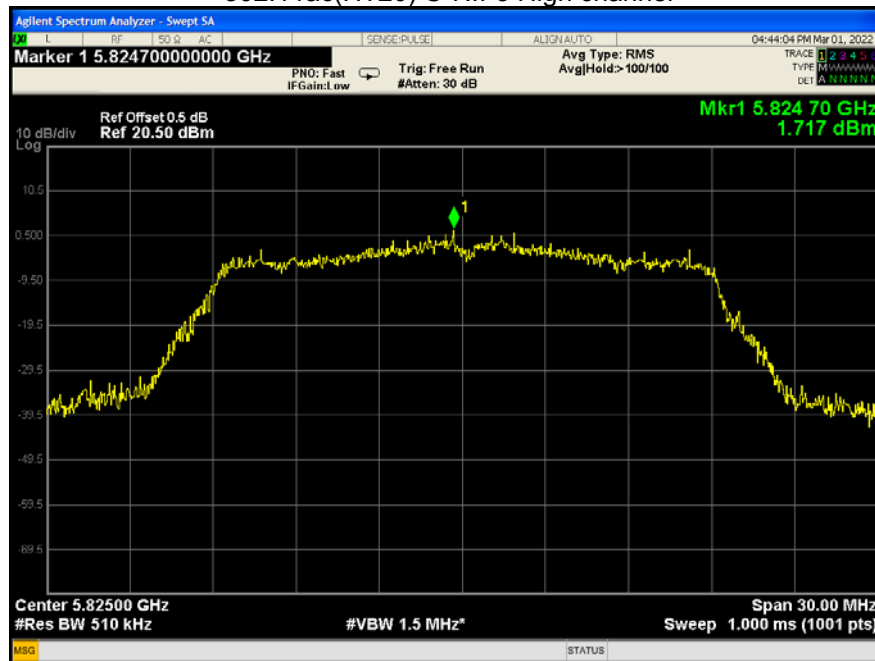
802.11ac(HT20) U-NII-3 Low channel



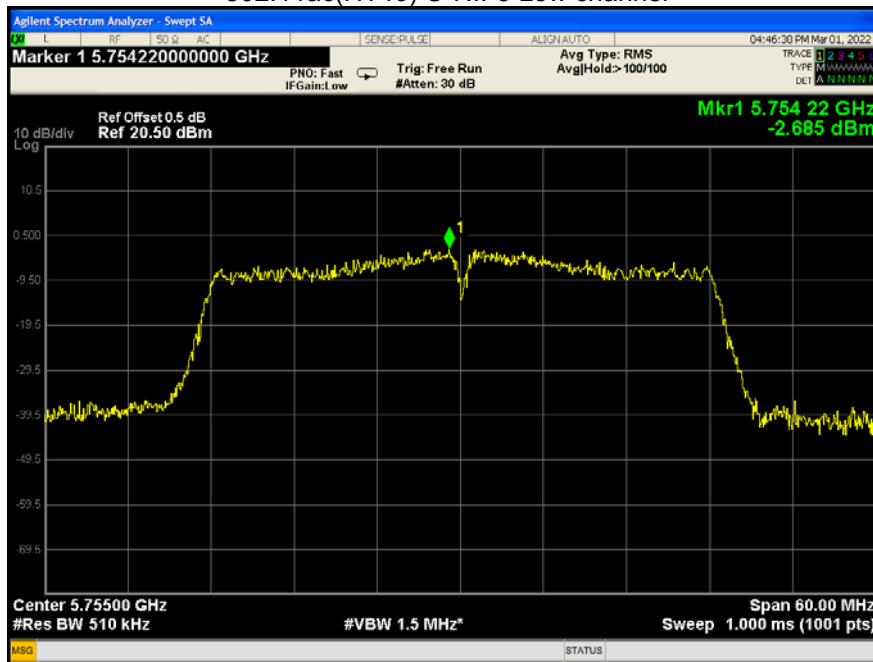
802.11ac(HT20) U-NII-3 Middle channel



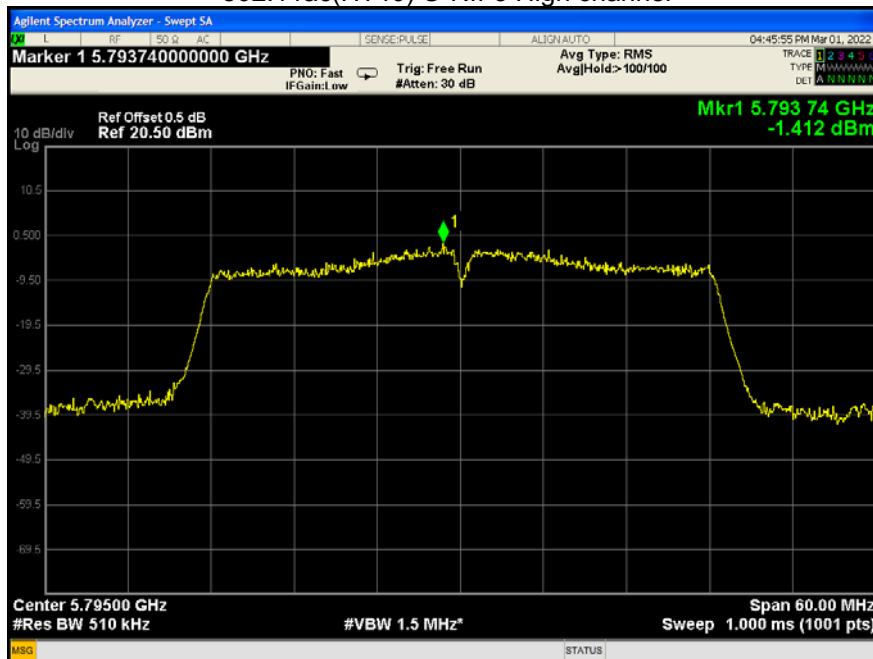
802.11ac(HT20) U-NII-3 High channel



802.11ac(HT40) U-NII-3 Low channel

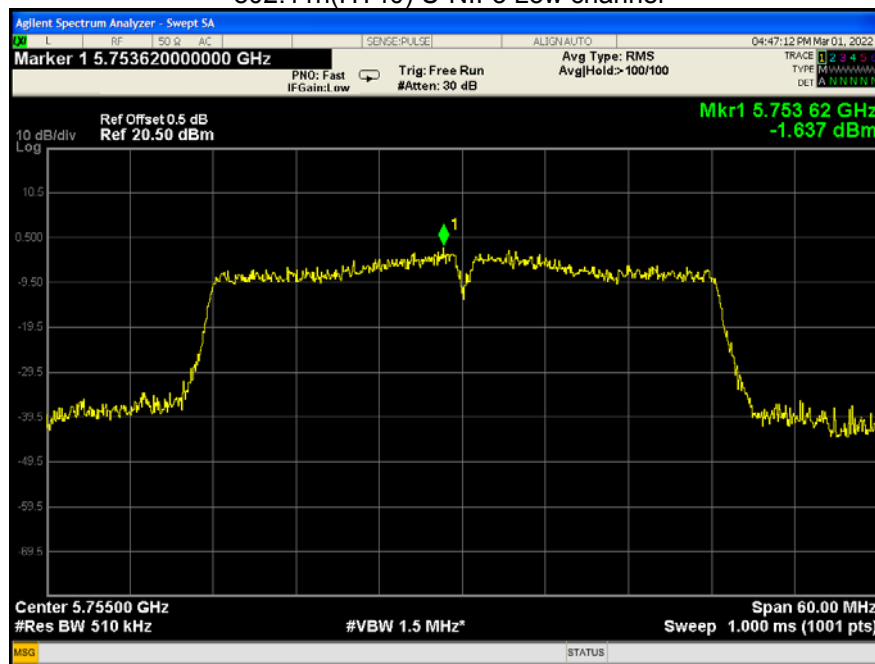


802.11ac(HT40) U-NII-3 High channel

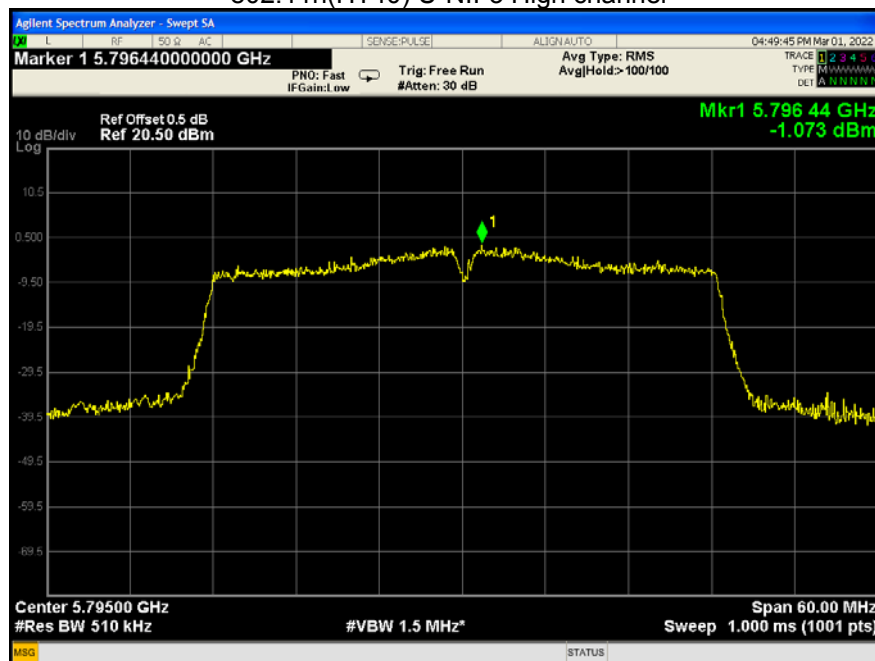




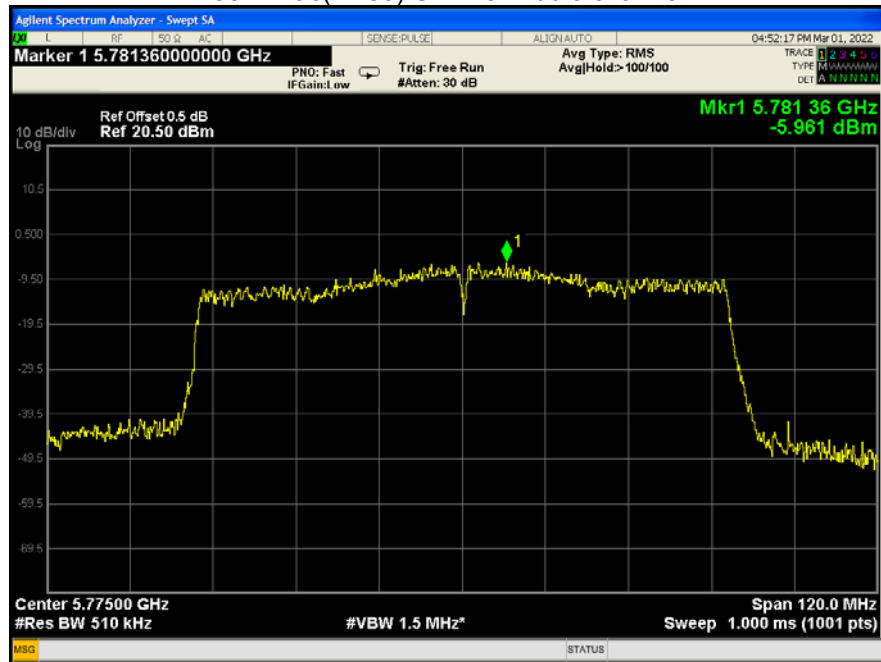
802.11n(HT40) U-NII-3 Low channel



802.11n(HT40) U-NII-3 High channel



802.11ac(HT80) U-NII-3 Middle channel



## 16 Frequency Stability

Test Requirement:	FCC CFR47 Part 15 Section 15.407(g)
Test Method:	ANSI C63.10:2013
Test 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 users manual or 20ppm.
Test Result:	PASS

### 16.1 Test Procedure:

1. The transmitter output (antenna port) was connected to the spectrum analyzer.  
EUT have transmitted absence of unmodulation 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.  $f_c$  is declaring of channel frequency. Then the frequency error formula is  $(f_c - f) / f_c \times 10^6$  ppm and the limit is less than  $\pm 20$  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  $-15^{\circ}\text{C} \sim 45^{\circ}\text{C}$ .

**16.2 Test Result:**

U-NII-1 Test Frequency:5180MHz				
Temperature (°C)	Power Supply (VDC)	Frequency Error (Hz)	Frequency Error (ppm)	Limit (ppm)
50	3.7	/	/	/
45		1807	0.3348	20
30		1801	0.3477	20
20		1800	0.3475	20
10		1802	0.3479	20
0		1808	0.3490	20
-10		1801	0.3477	20
-15		1801	0.3477	20
-30		/	/	/
20		3.15	1815	0.3504
20	4.3	1725	0.3330	20

U-NII-2A Test Frequency:5260MHz				
Temperature (°C)	Power Supply (VAC)	Frequency Error (Hz)	Frequency Error (ppm)	Limit (ppm)
50	3.7	/	/	/
45		1806	0.3433	20
30		1802	0.3426	20
20		1804	0.3430	20
10		1802	0.3426	20
0		1801	0.3424	20
-10		1809	0.3439	20
-15		1811	0.3443	20
-30		/	/	/
20		3.15	1815	0.3450
20	4.3	1787	0.3397	20

U-NII-2C Test Frequency:5500MHz				
Temperature (°C)	Power Supply (VAC)	Frequency Error (Hz)	Frequency Error (ppm)	Limit (ppm)
50	3.7	/	/	/
45		1800	0.3273	20
30		1801	0.3275	20
20		1802	0.3276	20
10		1803	0.3278	20
0		1804	0.328	20
-10		1801	0.3275	20
-15		1805	0.3282	20
-30		/	/	/
20	3.15	1813	0.3296	20
20	4.3	1784	0.3244	20

U-NII-3 Test Frequency:5785MHz				
Temperature (°C)	Power Supply (VAC)	Frequency Error (Hz)	Frequency Error (ppm)	Limit (ppm)
50	3.7	/	/	/
45		1910	0.3302	20
30		1910	0.3302	20
20		1915	0.3310	20
10		1921	0.3321	20
0		1902	0.3287	20
-10		1906	0.3295	20
-15		1915	0.3310	20
-30		/	/	/
20	3.15	1917	0.3314	20
20	4.3	1905	0.3293	20

## 17 Antenna Requirement

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. The use of a permanently attached antenna or of an antenna that uses a unique coupling to the intentional radiator shall be considered sufficient to comply with the provisions of this section. The manufacturer may design the unit so that a broken antenna can be replaced by the user, but the use of a standard antenna jack or electrical connector is prohibited. This requirement does not apply to carrier current devices or to devices operated under the provisions of §15.211, §15.213, §15.217, §15.219, or §15.221. Further, this requirement does not apply to intentional radiators that must be professionally installed, such as perimeter protection systems and some field disturbance sensors, or to other intentional radiators which, in accordance with §15.31(d), must be measured at the installation site. However, the installer shall be responsible for ensuring that the proper antenna is employed so that the limits in this part are not exceeded.

This product has an internal permanent antenna fulfil the requirement of this section.

Note: Please refer to EUT photos for more details.

## **18 Photographs of test setup and EUT.**

Note: Please refer to appendix: Appendix- SPMR14000-Photos.

=====**End of Report**=====