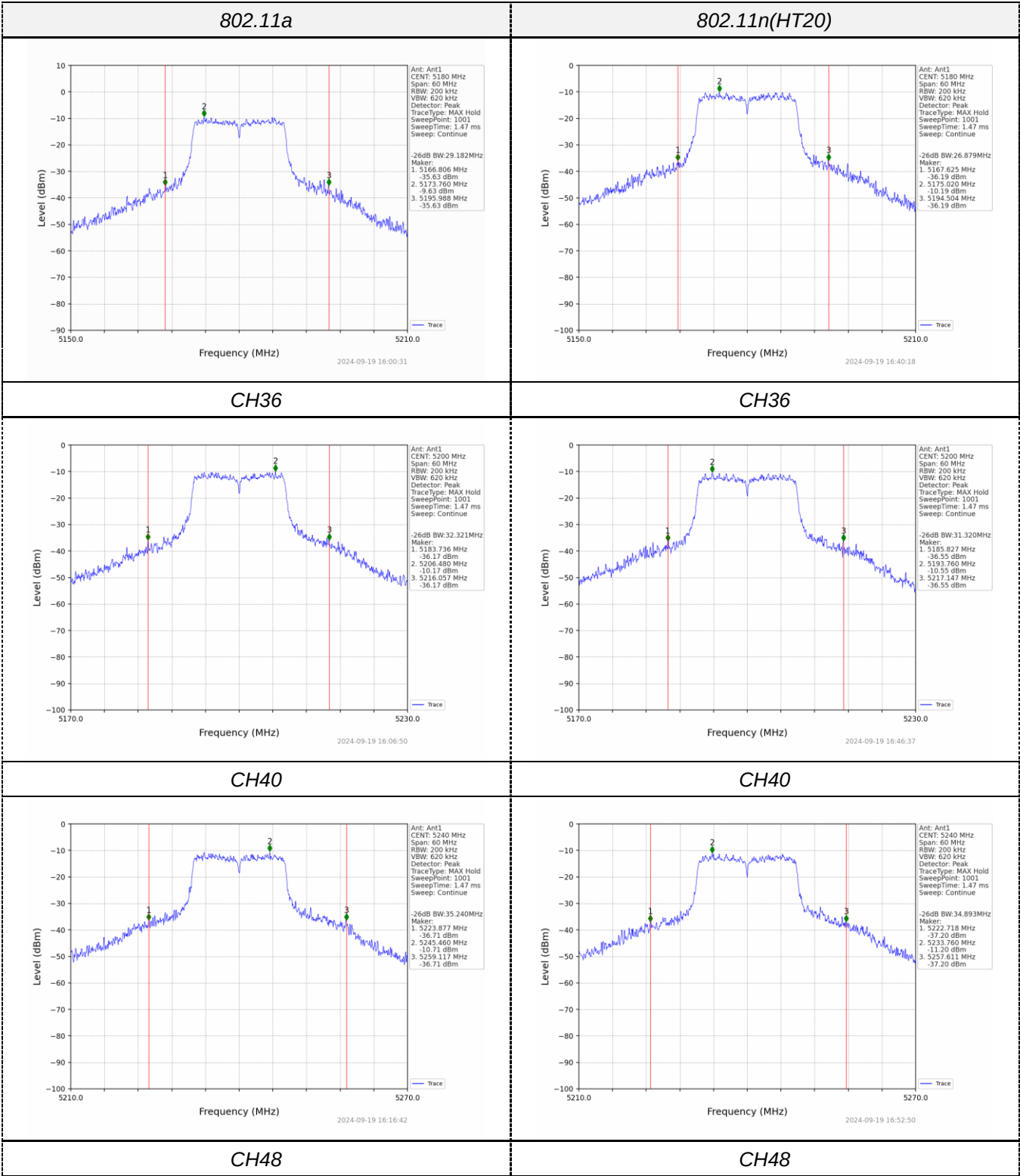
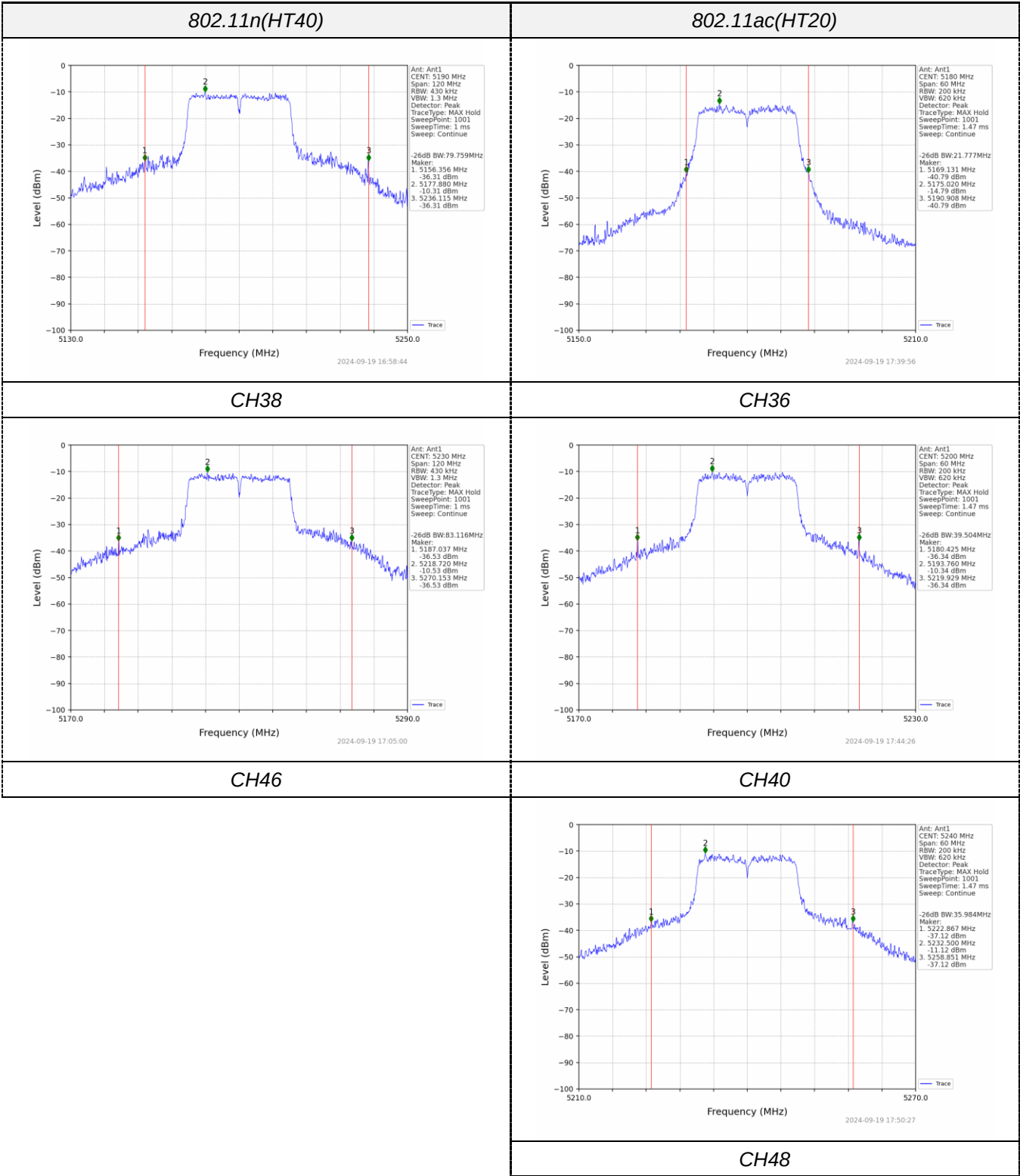
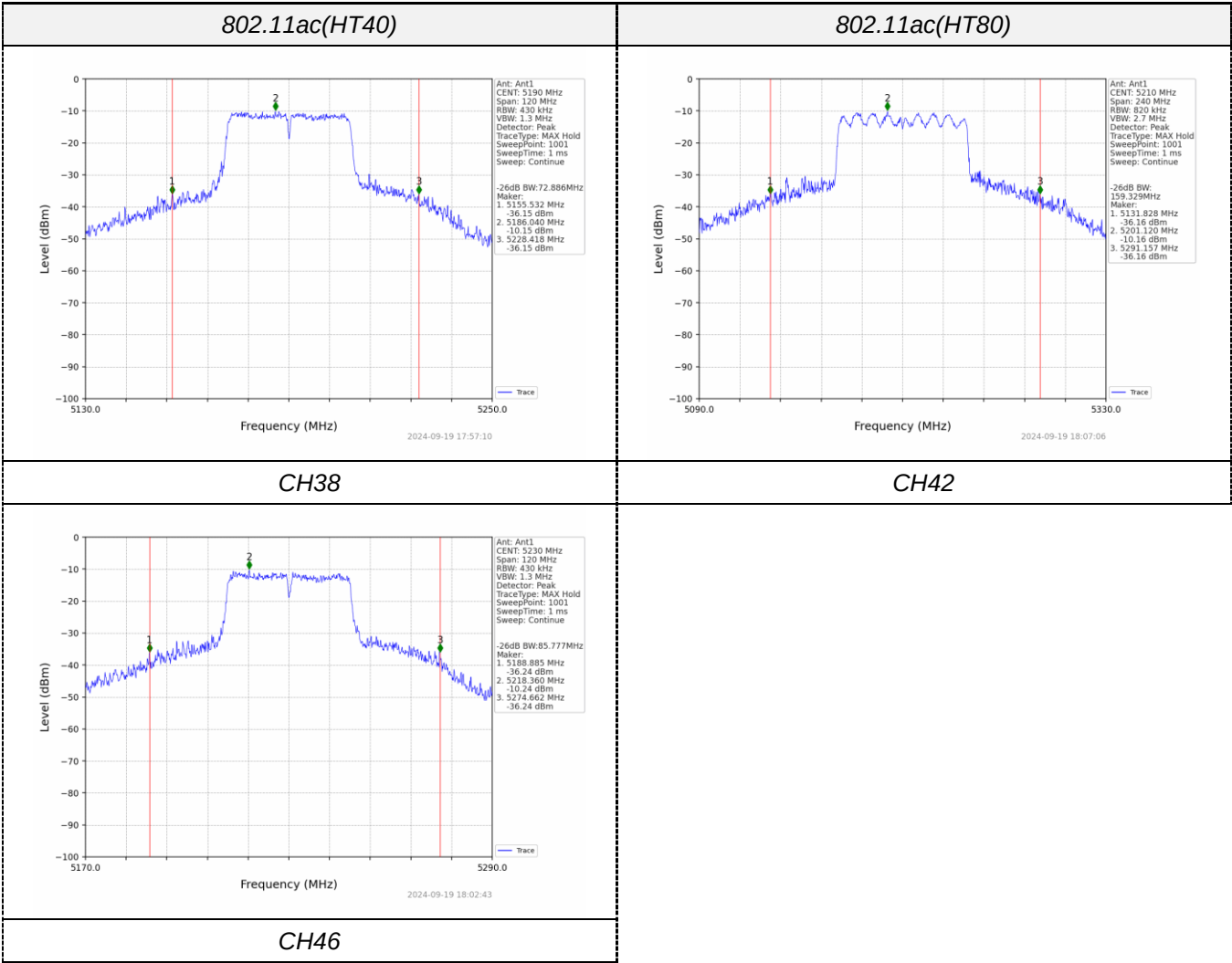


ANT 2







4.6 Minimum Emission Bandwidth (6dB Bandwidth)

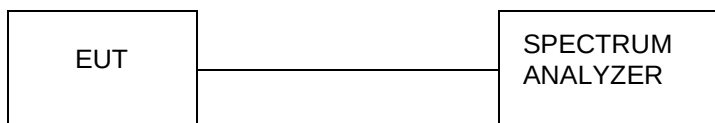
Limit

Within the 5.725-5.85 GHz band, the minimum 6 dB bandwidth of U-NII devices shall be at least 500 kHz.

Test Procedure

1. Set resolution bandwidth (RBW) = 100 kHz
2. Set the video bandwidth 3 x RBW.
3. Detector = Peak.
4. Trace mode = Max hold.
5. Measure the maximum width of the emission that is constrained by the frequencies associated with the two outermost amplitude points (upper and lower frequencies) that are attenuated by 6 dB relative to the maximum level measured in the fundamental emission.

Test Configuration



Test Results

ANT 1

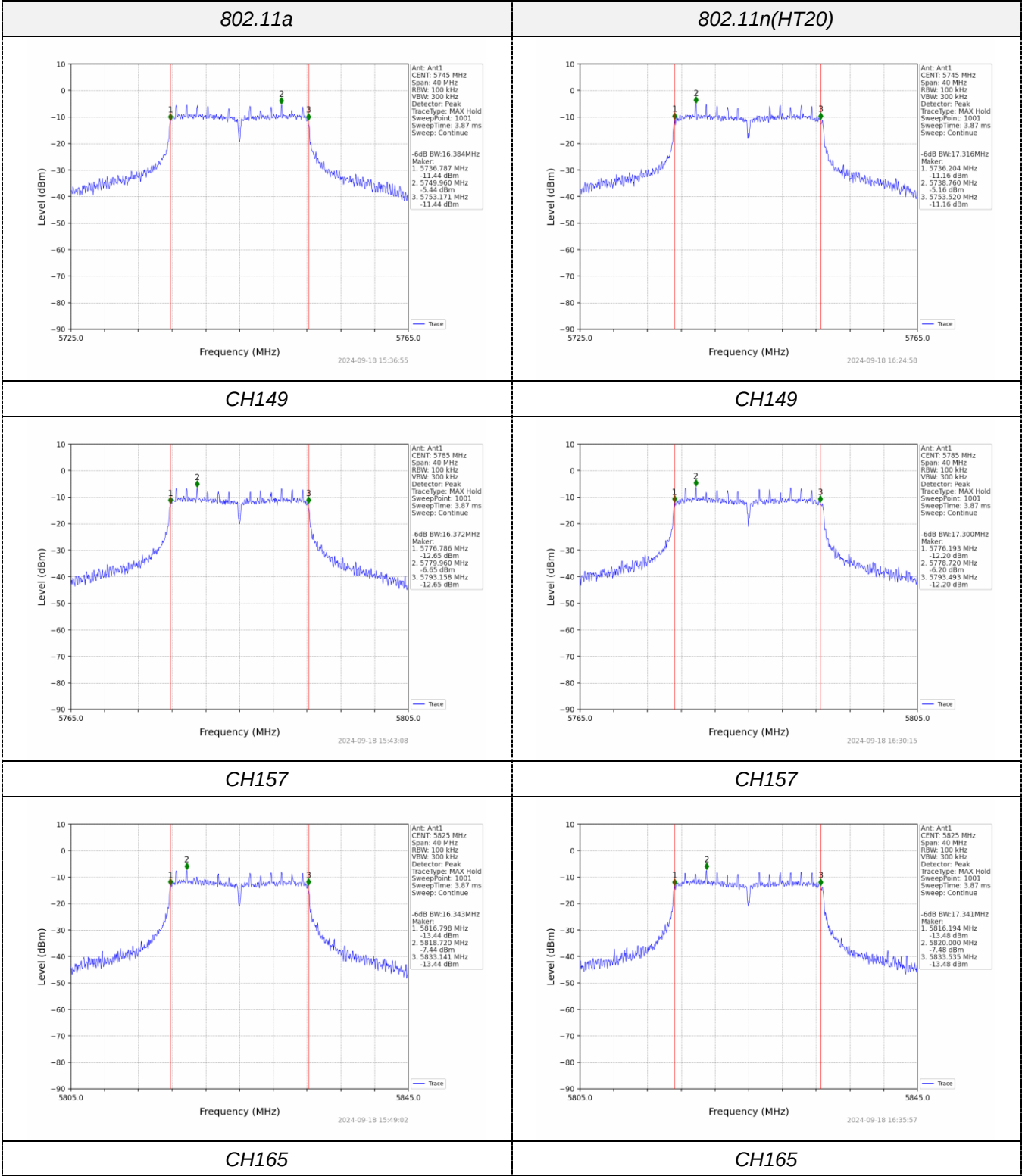
Type	Bands	Channel	6dB Bandwidth (MHz)	Limit (KHz)	Result
802.11a	U-NII 3	149	16.384	≥500KHz	Pass
		157	16.372		
		165	16.343		
802.11n(HT20)	U-NII 3	149	17.316		
		157	17.300		
		165	17.341		
802.11n(HT40)	U-NII 3	151	35.767		
		159	36.044		
802.11ac(HT20)	U-NII 3	149	17.335		
		157	17.344		
		165	17.334		
802.11ac(HT40)	U-NII 3	151	35.937		
		159	36.008		
802.11ac(HT80)	U-NII 3	155	75.180		

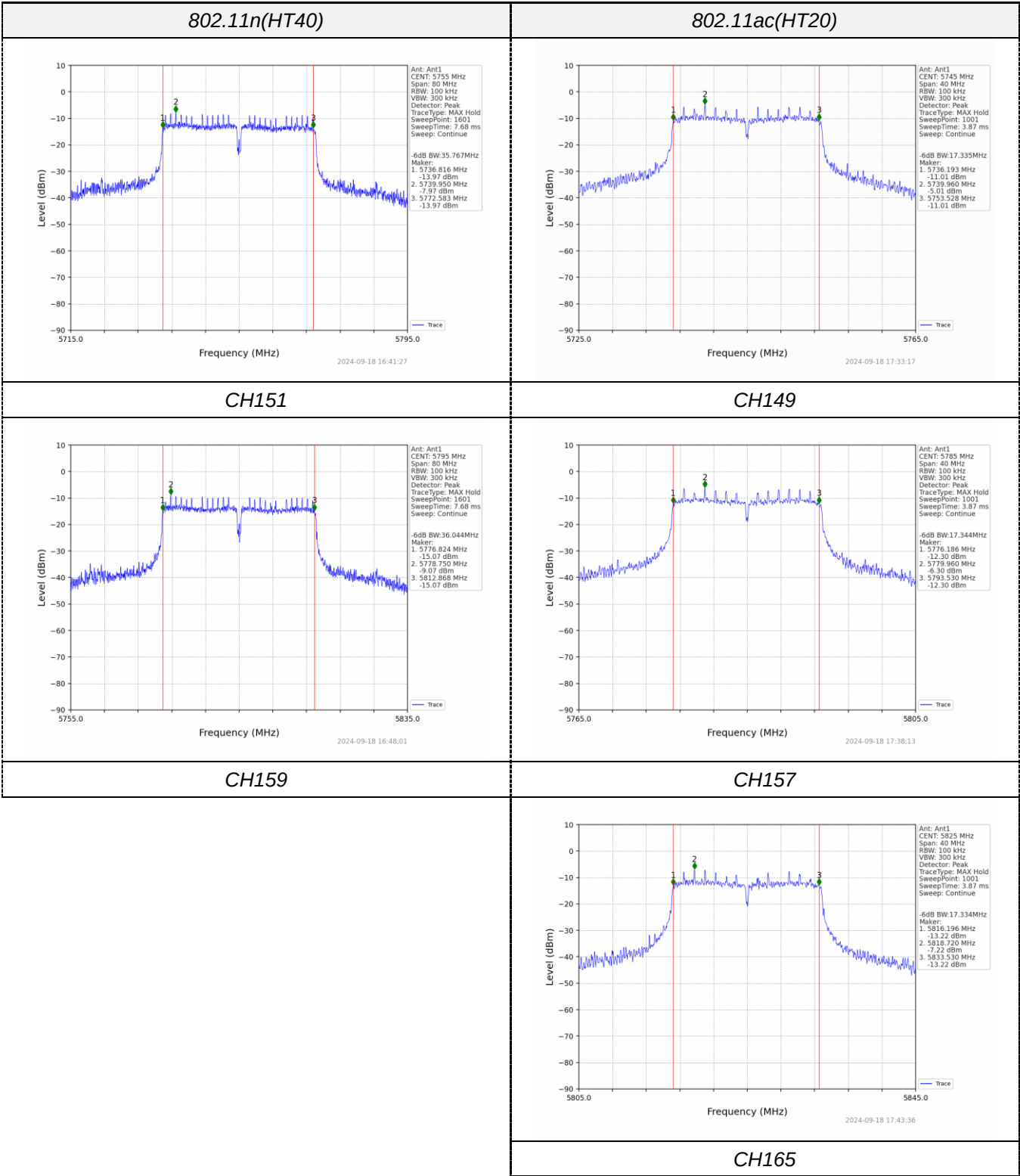
ANT 2

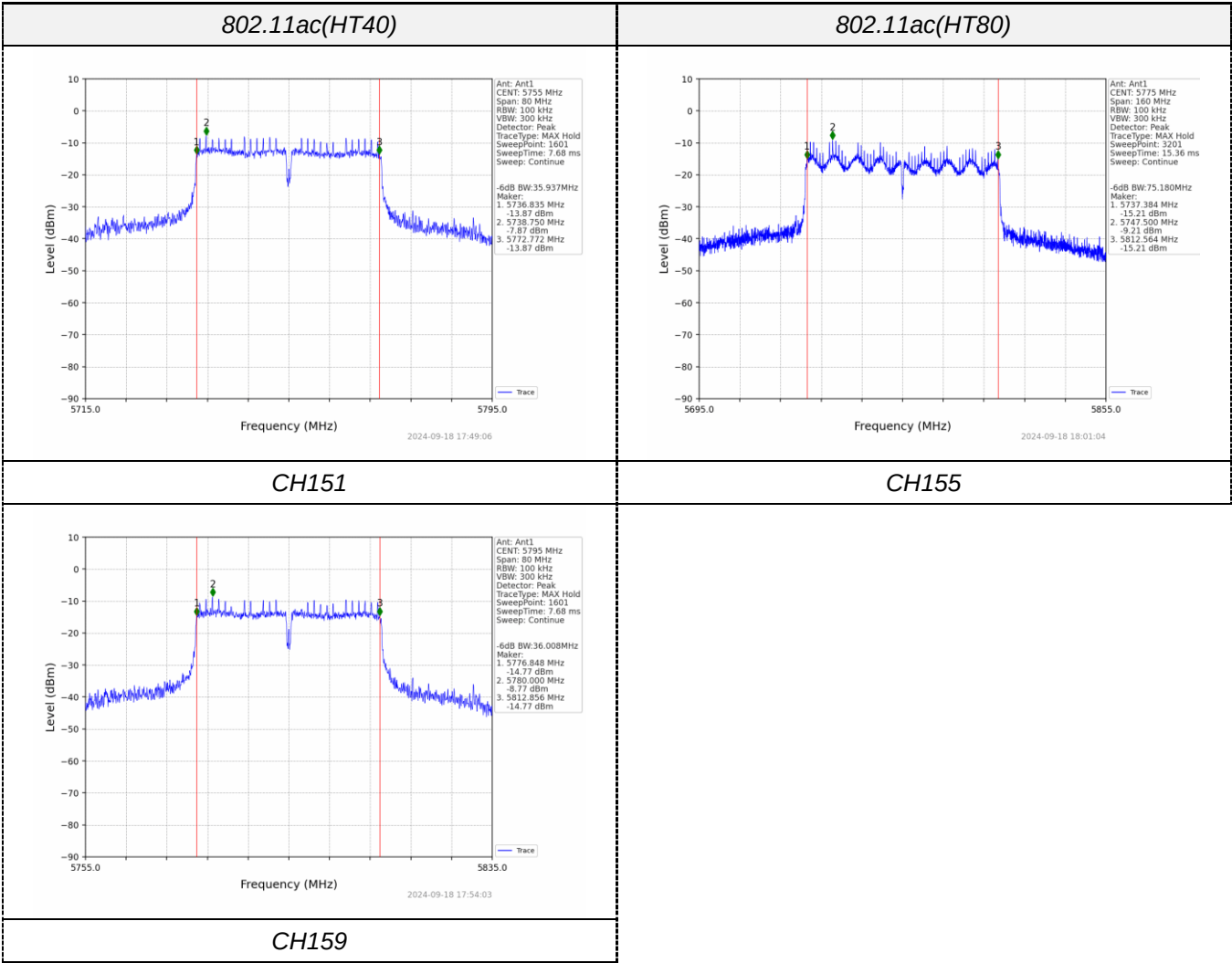
Type	Bands	Channel	6dB Bandwidth (MHz)	Limit (KHz)	Result
802.11a	U-NII 3	149	16.361	≥500KHz	Pass
		157	16.367		
		165	16.351		
802.11n(HT20)	U-NII 3	149	17.140		
		157	17.527		
		165	17.105		
802.11n(HT40)	U-NII 3	151	36.018		
		159	35.992		
802.11ac(HT20)	U-NII 3	149	16.996		
		157	17.252		
		165	17.235		
802.11ac(HT40)	U-NII 3	151	35.741		
		159	35.610		
802.11ac(HT80)	U-NII 3	155	75.133		

Test plot as follows:

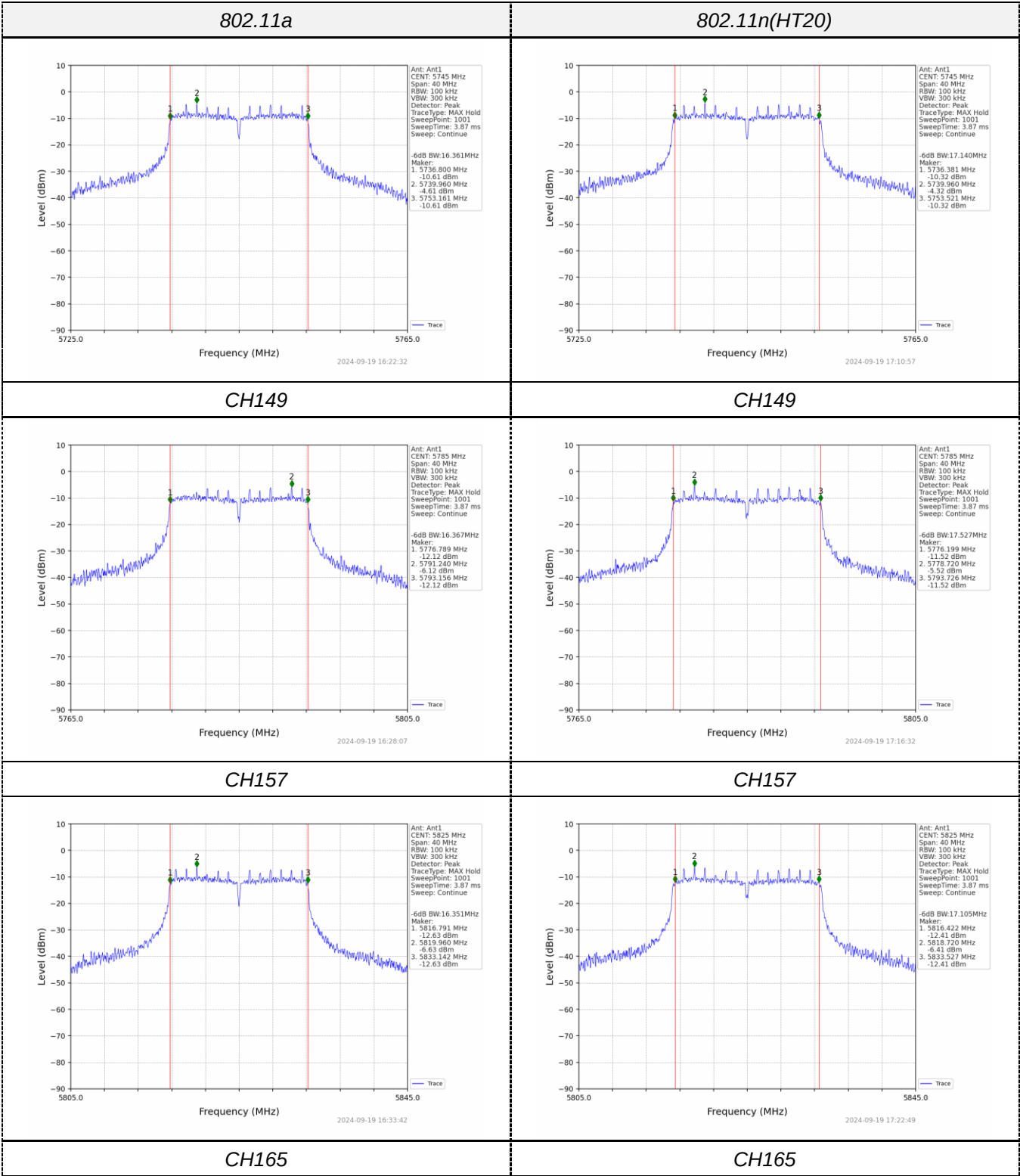
ANT 1

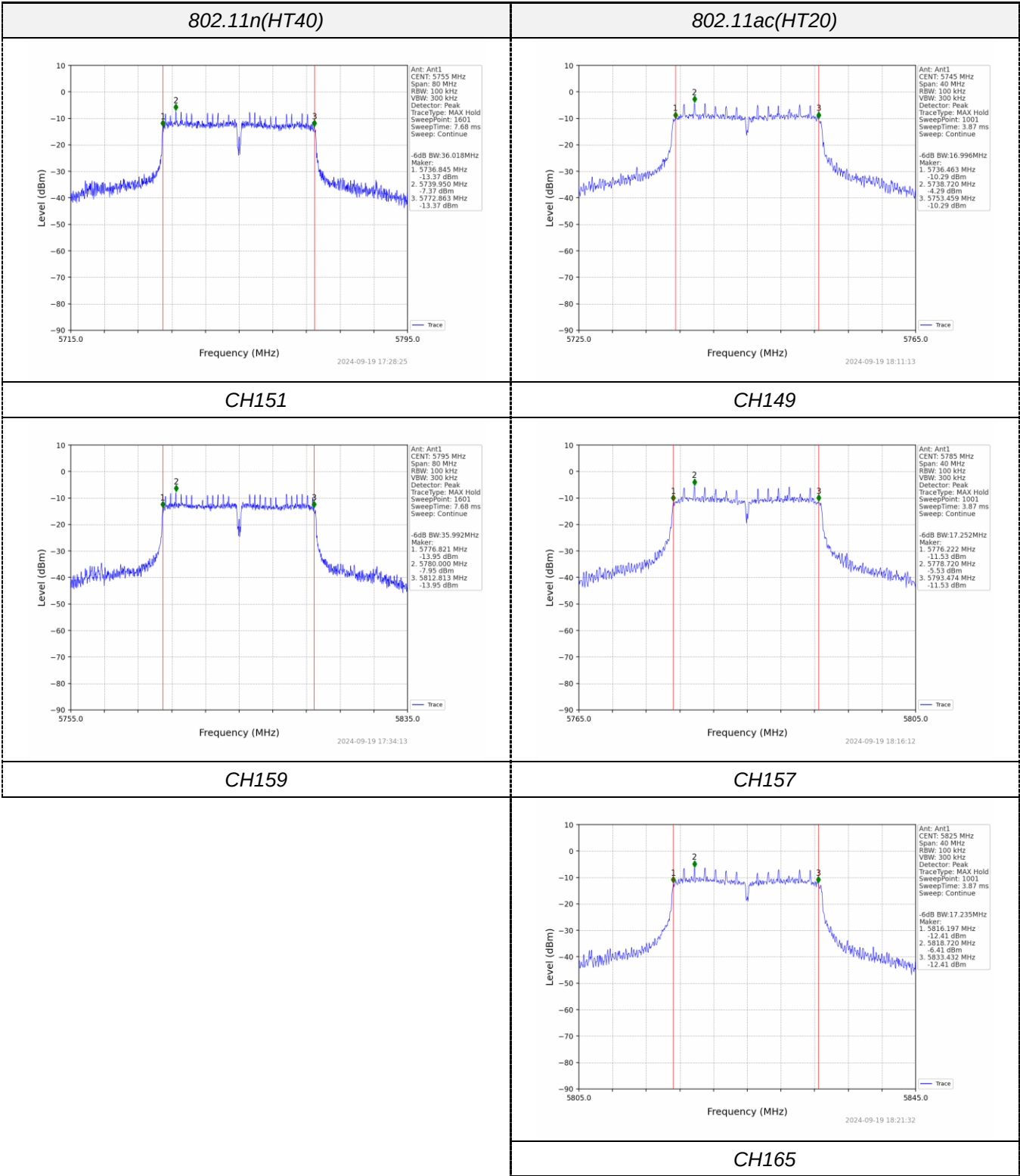


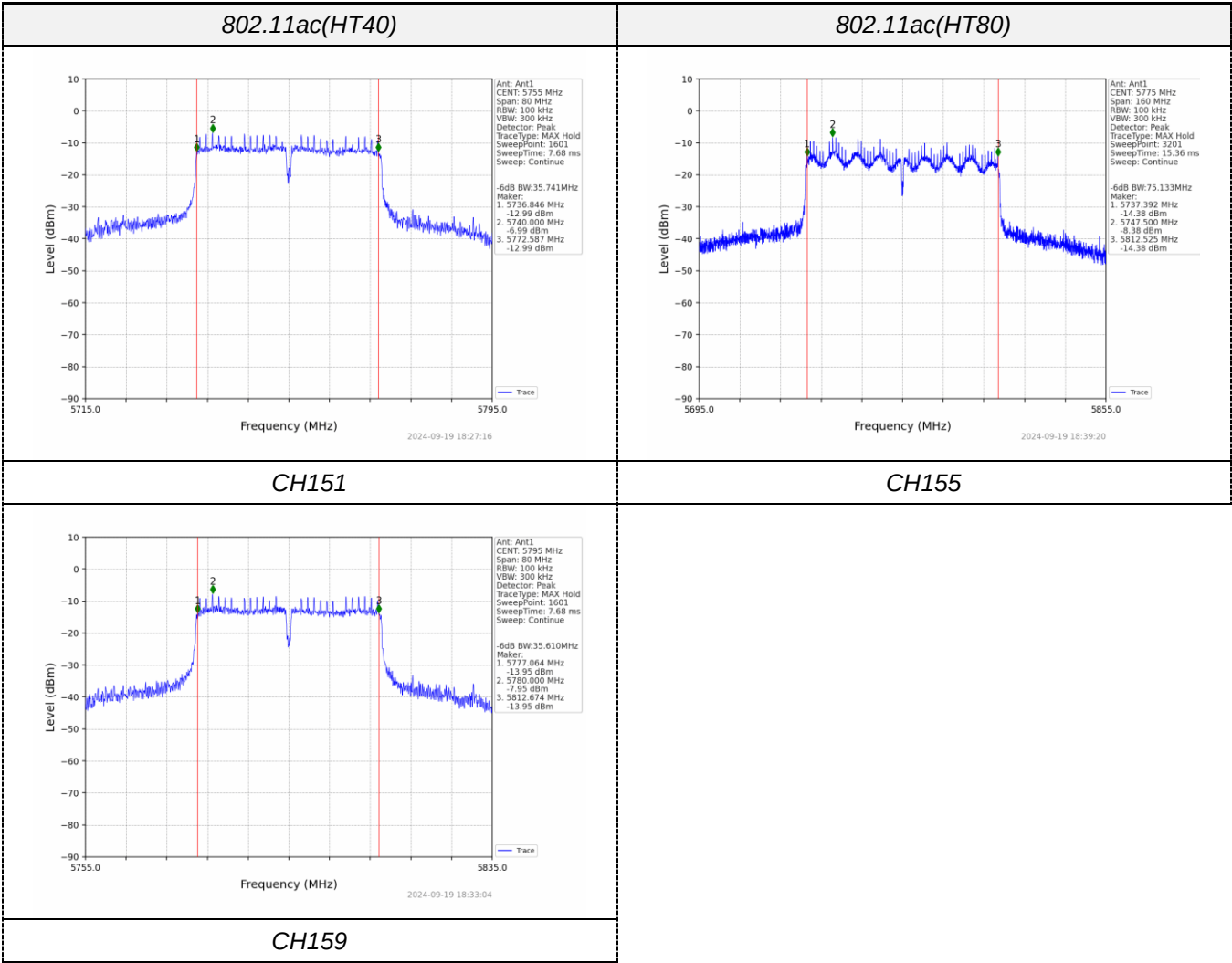




ANT 2





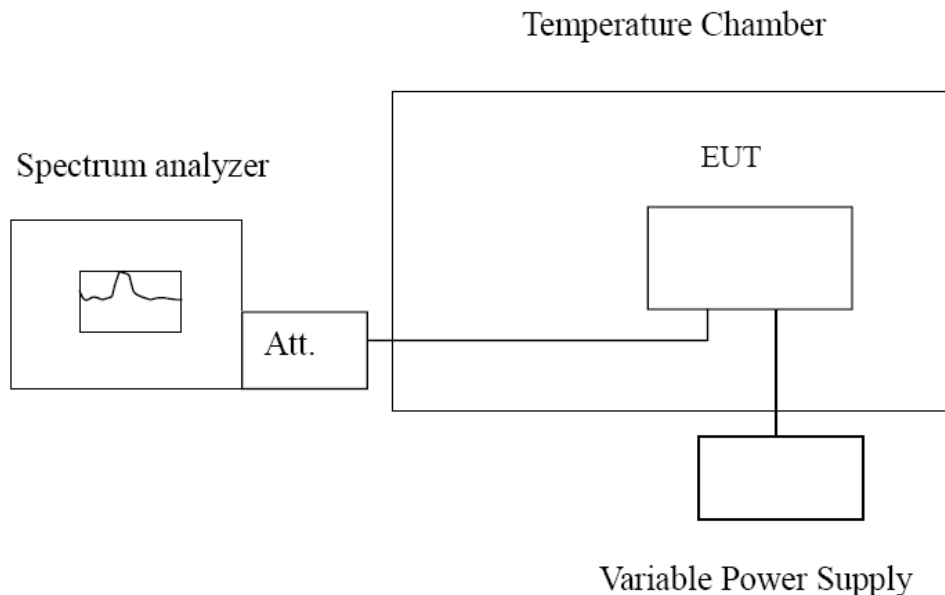


4.7 Frequency Stability

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.

TEST CONFIGURATION



TEST PROCEDURE

Frequency Stability under Temperature Variations:

The equipment under test was connected to an external AC or DC power supply and input rated voltage. RF output was connected to a frequency counter or spectrum analyzer via feed through attenuators. The EUT was placed inside the temperature chamber. Set the spectrum analyzer RBW low enough to obtain the desired frequency resolution and measure EUT 20°C operating frequency as reference frequency. Turn EUT off and set the chamber temperature to -30°C. After the temperature stabilized for approximately 30 minutes recorded the frequency. Repeat step measure with 10°C increased per stage until the highest temperature of +50°C reached.

Frequency Stability under Voltage Variations:

Set chamber temperature to 20°C. Use a variable AC power supply / DC power source to power the EUT and set the voltage to rated voltage. Set the spectrum analyzer RBW low enough to obtain the desired frequency resolution and recorded the frequency. Reduce the input voltage to specify extreme voltage variation ($\pm 15\%$) and endpoint, record the maximum frequency change.

TEST RESULTS

Record worst case as below:

Reference Frequency: 802.11ac channel=36 frequency=5180MHz					
Voltage (V)	Temperature (°C)	Frequency error		Limit (ppm)	Result
		Hz	ppm		
AC120	-30	0	0.000000	Within the band of operation	Pass
	-20	0	0.000000		
	-10	20	0.003861		
	0	40	0.007722		
	10	-20	-0.003861		
	20	0	0.000000		
	30	40	0.007722		
	40	0	0.000000		
	50	-20	-0.003861		
AC132	25	-20	-0.003861	Within the band of operation	Pass
AC108	25	-60	-0.011583		

Reference Frequency: 802.11ac channel=149 frequency=5745MHz					
Voltage (V)	Temperature (°C)	Frequency error		Limit (ppm)	Result
		Hz	ppm		
AC120	-30	-40	-0.006963	Within the band of operation	Pass
	-20	-20	-0.003481		
	-10	-20	-0.003481		
	0	0	0.000000		
	10	-20	-0.003481		
	20	-40	-0.006963		
	30	0	0.000000		
	40	0	0.000000		
	50	0	0.000000		
AC132	25	40	0.006963	Within the band of operation	Pass
AC108	25	20	0.003481		

5 Test Setup Photos of the EUT

Reference to the **appendix I** for details.

6 Photos of the EUT

Reference to the **appendix II** for details.

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