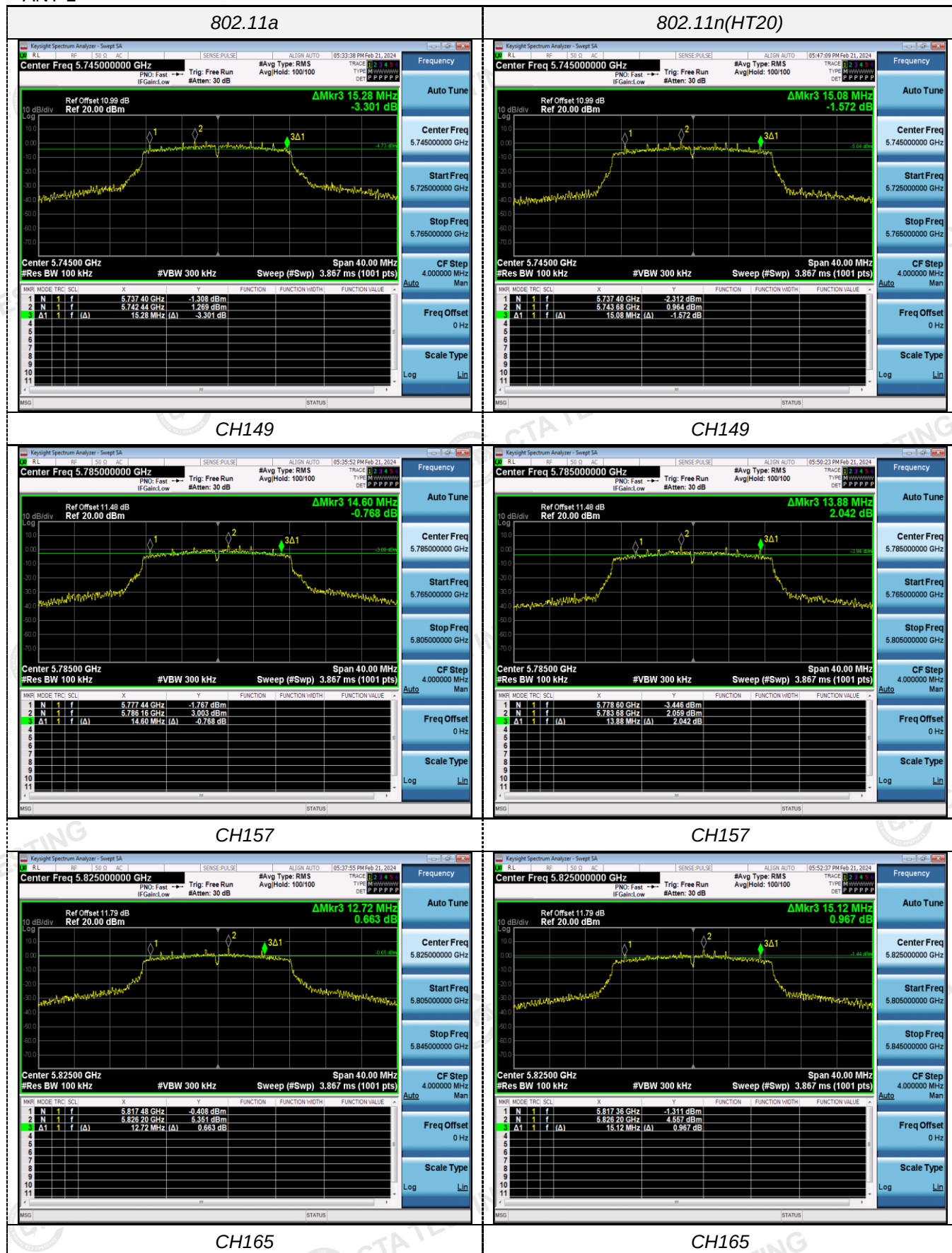
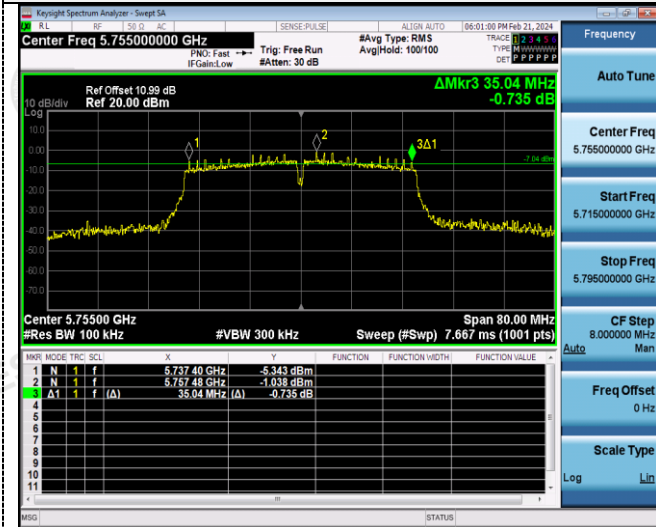


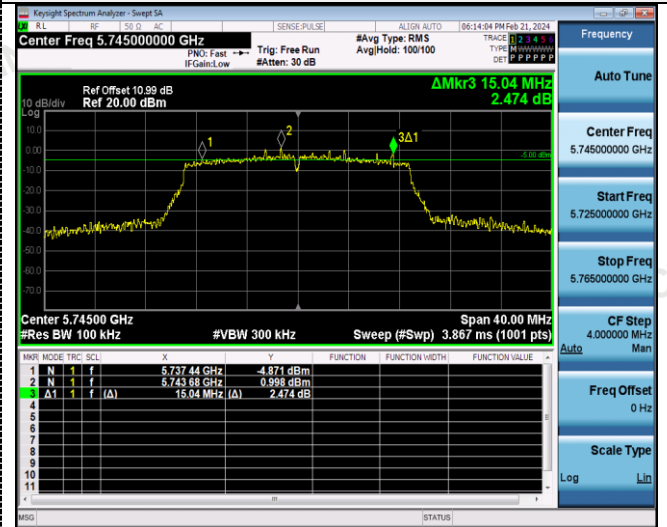
ANT 1



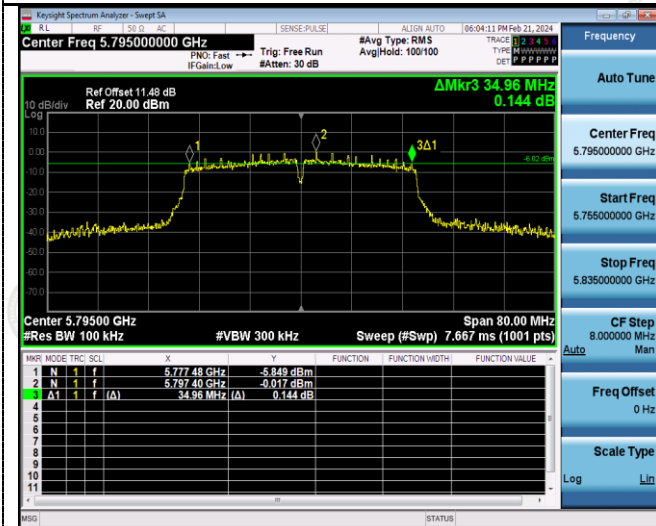
802.11n(HT40)



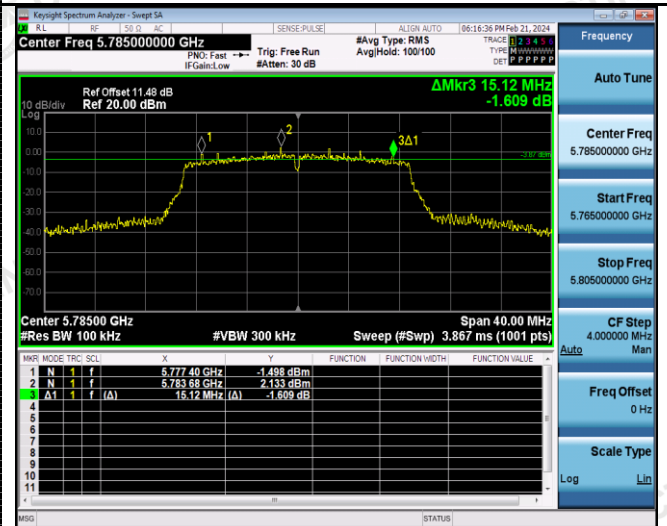
802.11ac(HT20)



CH151



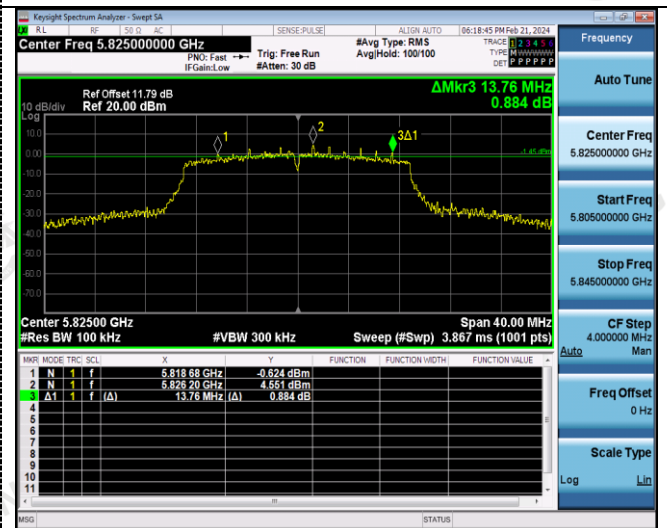
CH149



CH159

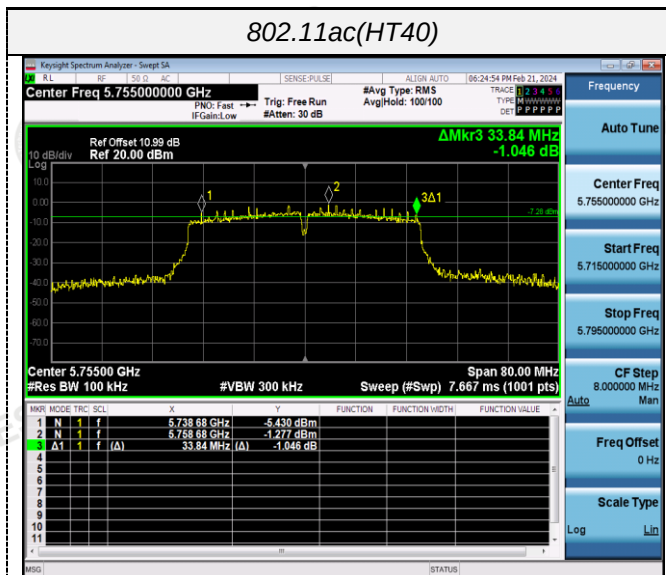


CH157



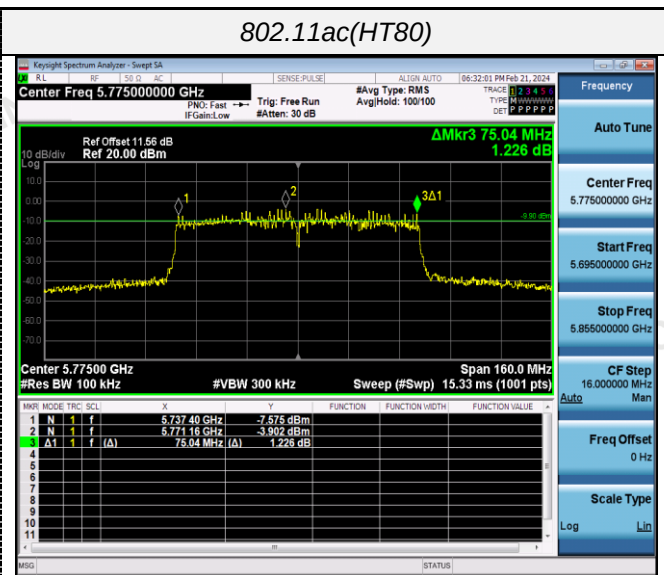
CH165

802.11ac(HT40)

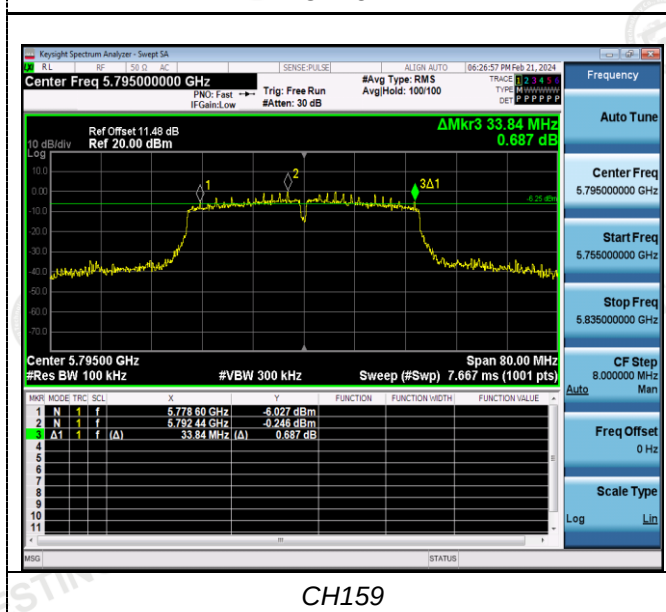


CH151

802.11ac(HT80)

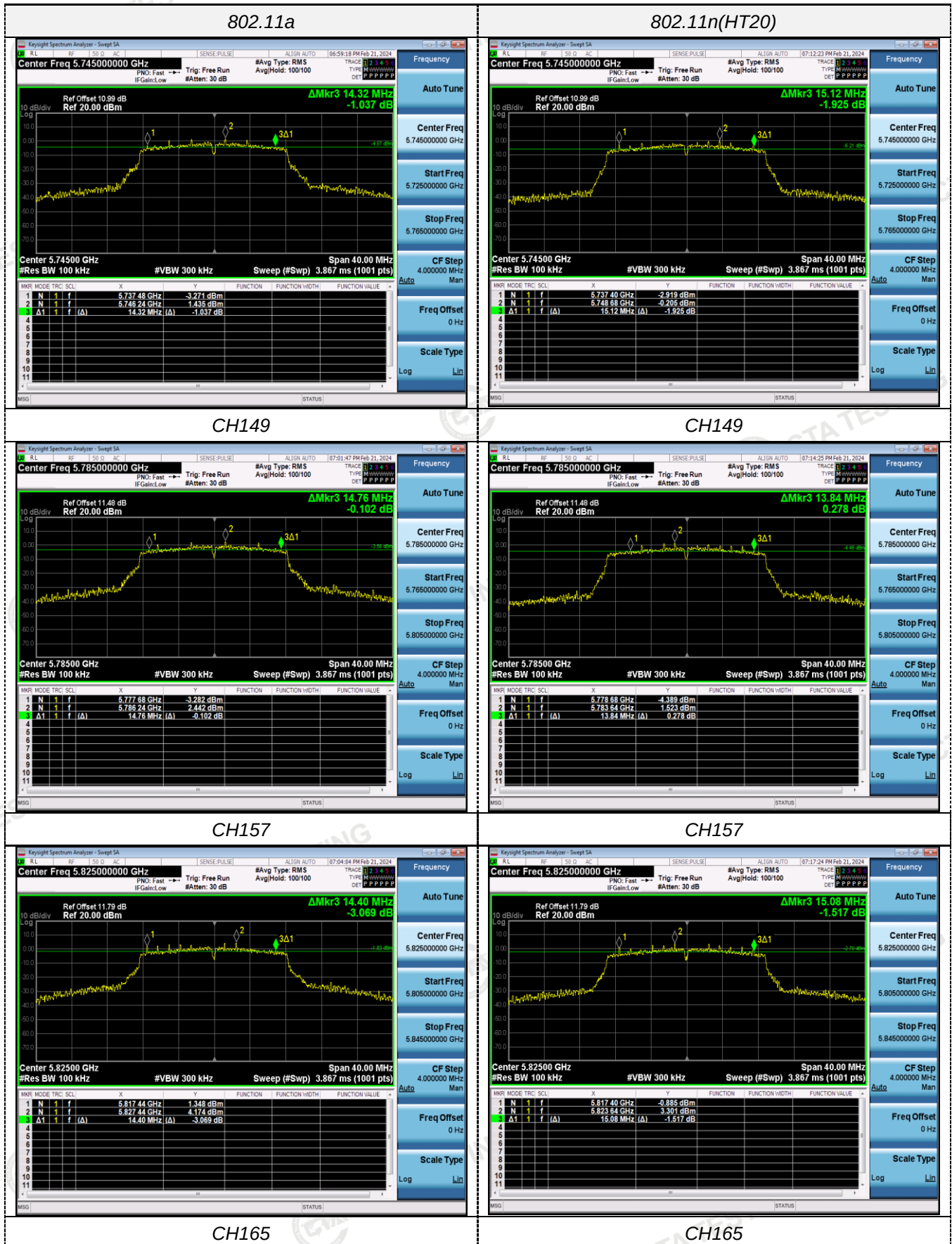


CH155

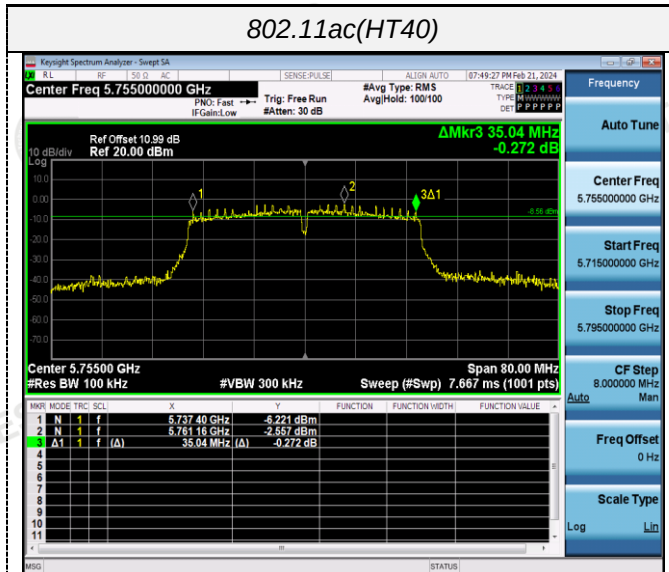


CH159

ANT 2

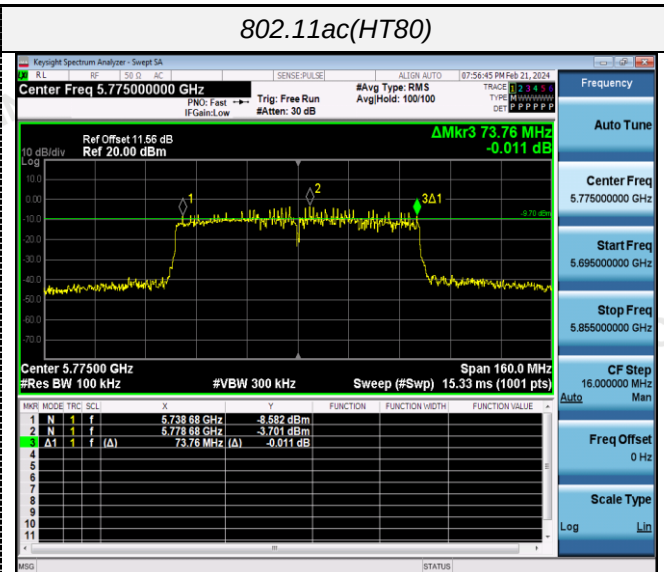


802.11ac(HT40)

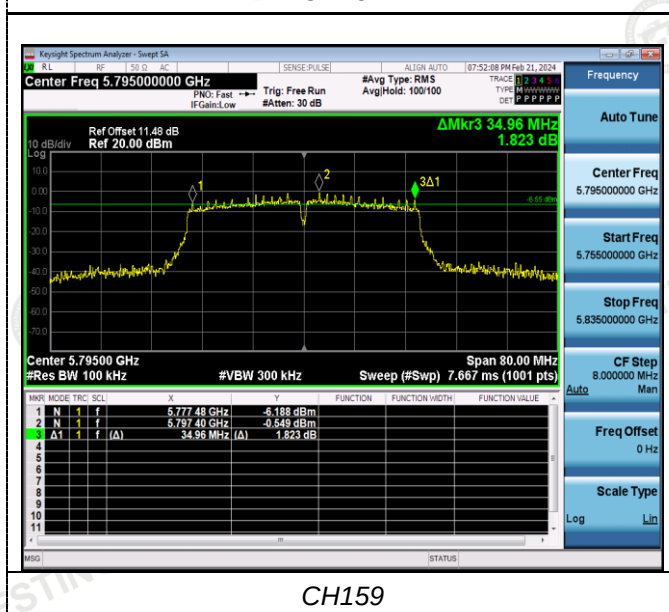


CH151

802.11ac(HT80)



CH155



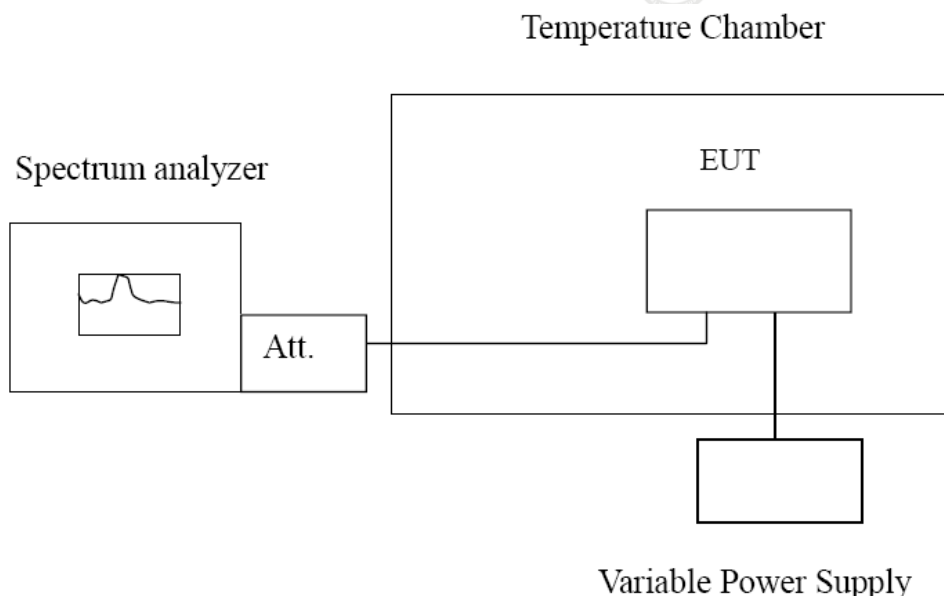
CH159

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:

Ant1:

Reference Frequency: 802.11ac channel=36 frequency=5180MHz					
Voltage (V)	Temperature (°C)	Frequency error		Limit (ppm)	Result
		Hz	ppm		
DC 7.70	-30	110.71	0.021373	Within the band of operation	Pass
	-20	174.78	0.033741		
	-10	145.25	0.028041		
	0	146.68	0.028317		
	10	146.04	0.028193		
	20	99.60	0.019228		
	30	167.43	0.032322		
	40	129.61	0.025021		
	50	128.76	0.024857		
DC 8.86	25	195.66	0.037772	Within the band of operation	Pass
DC 6.55	25	118.47	0.022871		

Reference Frequency: 802.11ac channel=149 frequency=5745MHz					
Voltage (V)	Temperature (°C)	Frequency error		Limit (ppm)	Result
		Hz	ppm		
DC 7.70	-30	135.87	0.023650	Within the band of operation	Pass
	-20	129.60	0.022559		
	-10	167.45	0.029147		
	0	169.87	0.029568		
	10	136.23	0.023713		
	20	144.56	0.025163		
	30	116.66	0.020306		
	40	168.66	0.029358		
	50	160.74	0.027979		
DC 8.86	25	150.99	0.026282	Within the band of operation	Pass
DC 6.55	25	129.77	0.022588		

Ant2:

Reference Frequency: 802.11ac channel=36 frequency=5180MHz					
Voltage (V)	Temperature (°C)	Frequency error		Limit (ppm)	Result
		Hz	ppm		
DC 7.70	-30	110.55	0.021342	Within the band of operation	Pass
	-20	174.35	0.033658		
	-10	145.29	0.028048		
	0	146.80	0.028340		
	10	146.11	0.028207		
	20	99.41	0.019191		
	30	167.49	0.032334		
	40	129.31	0.024963		
	50	128.50	0.024807		
DC 8.86	25	195.60	0.037761	Within the band of operation	Pass
DC 6.55	25	118.72	0.022919		

Reference Frequency: 802.11ac channel=149 frequency=5745MHz					
Voltage (V)	Temperature (°C)	Frequency error		Limit (ppm)	Result
		Hz	ppm		
DC 7.70	-30	135.81	0.023640	Within the band of operation	Pass
	-20	129.51	0.022543		
	-10	167.46	0.029149		
	0	169.93	0.029579		
	10	136.71	0.023796		
	20	144.96	0.025232		
	30	116.39	0.020259		
	40	168.16	0.029271		
	50	160.40	0.027920		
DC 8.86	25	150.61	0.026216	Within the band of operation	Pass
DC 6.55	25	129.59	0.022557		

5 Test Setup Photos of the EUT



6 Photos of the EUT

Reference to the test report No. CTA24012000701.

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