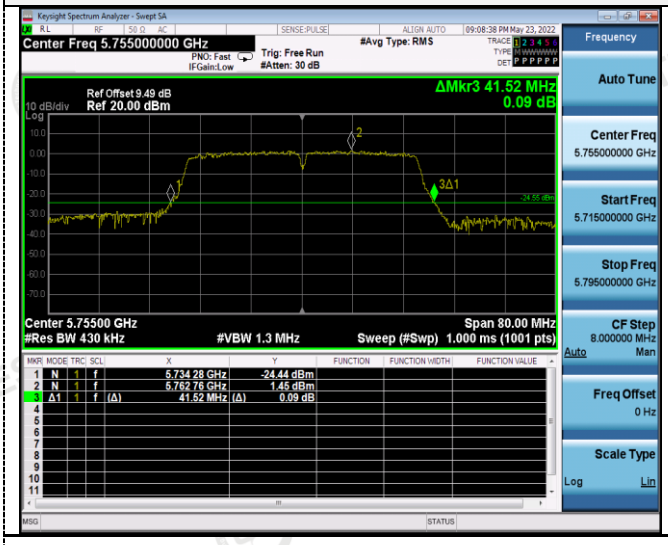
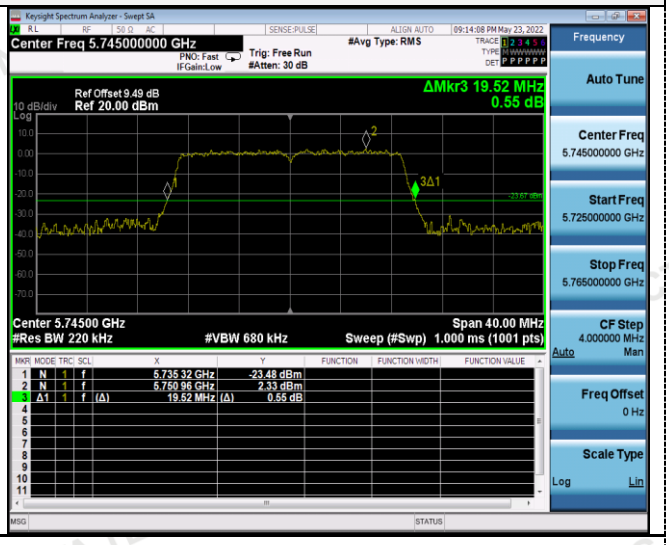
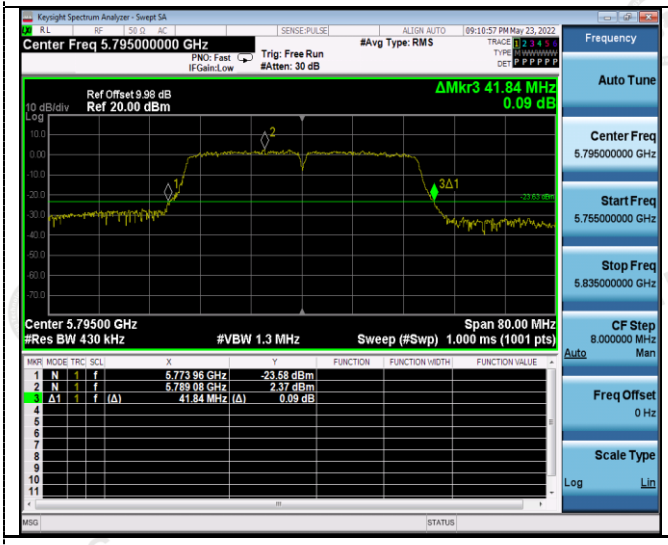
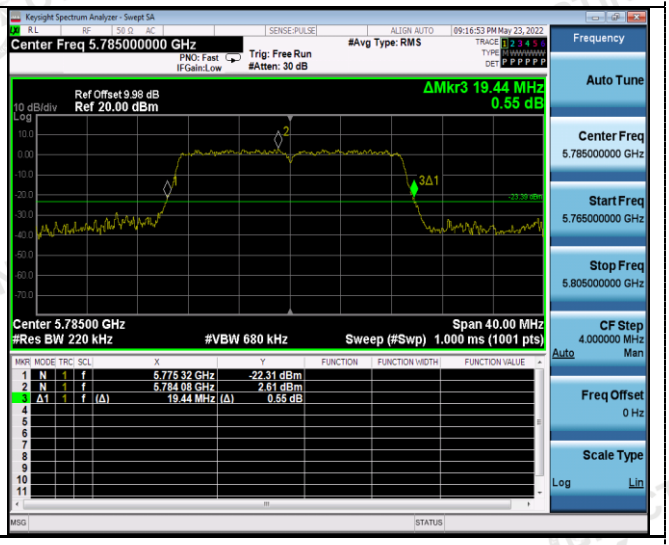
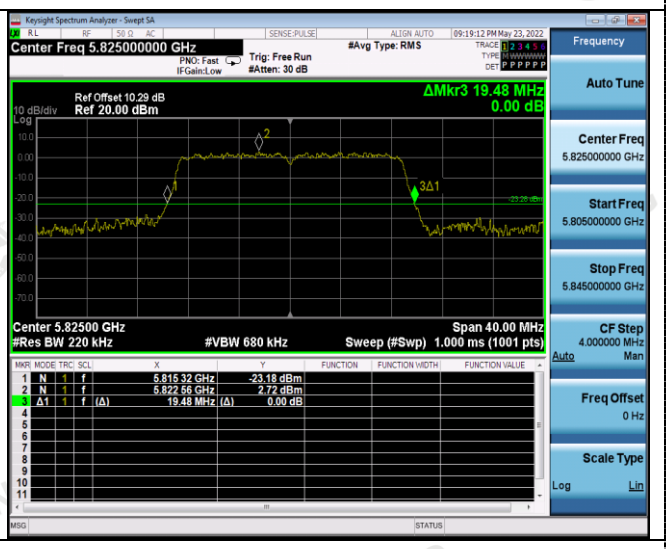
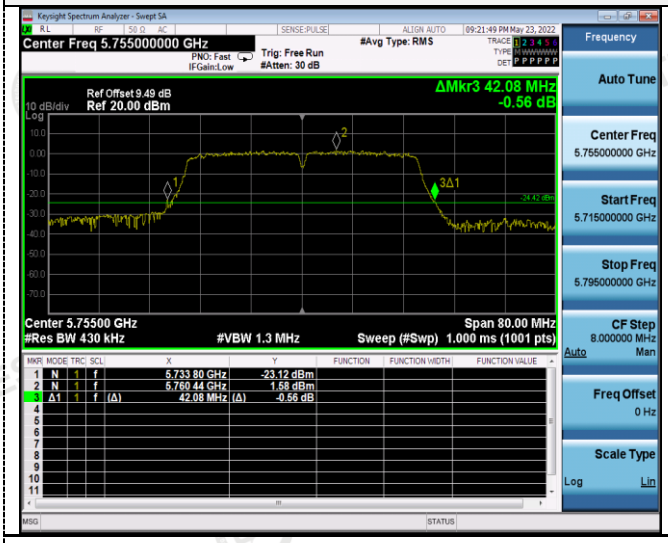
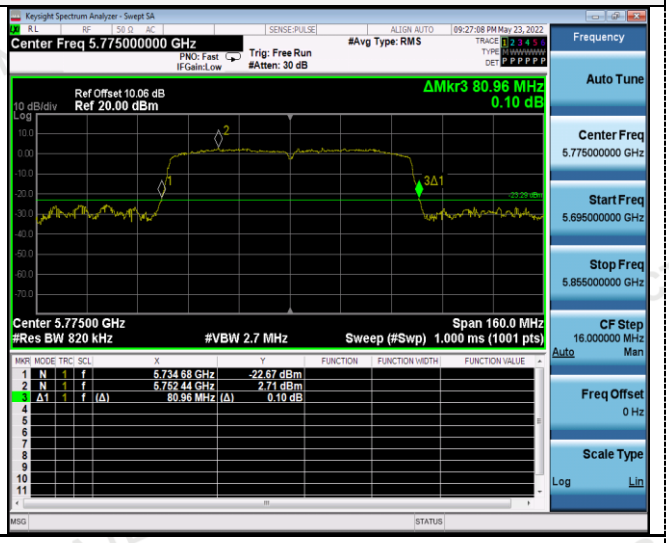
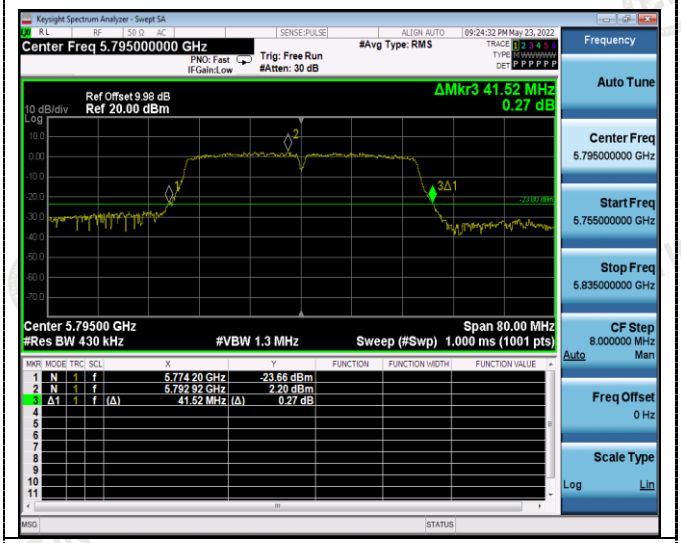
802.11n(HT40)	802.11ac(HT20)
	
CH151	CH149
	
CH159	CH157
	
	CH165

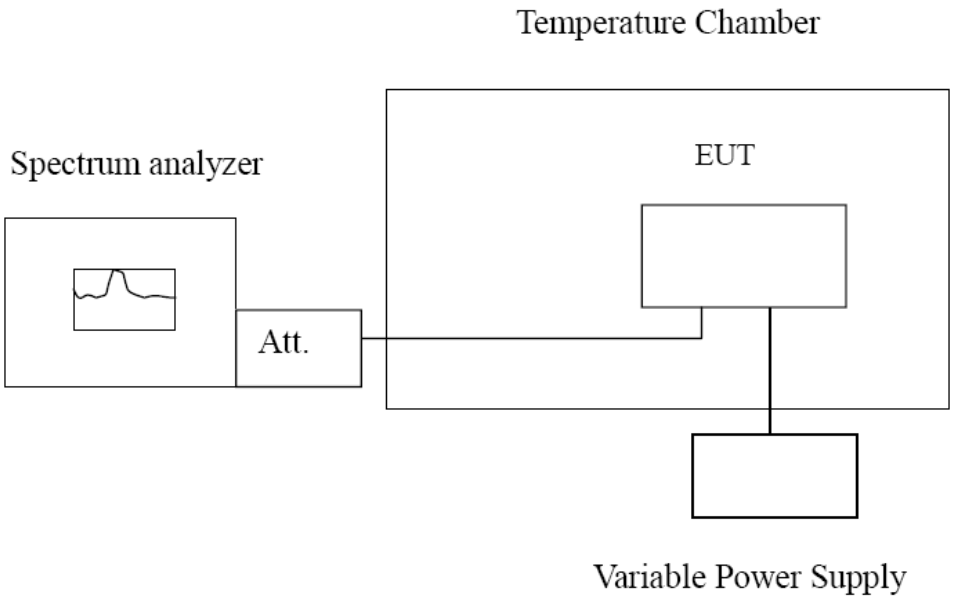
802.11ac(HT40)	802.11ac(HT80)
	
CH151	CH155
	
CH159	

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℃ operating frequency as reference frequency. Turn EUT off and set the chamber temperature to -30℃. After the temperature stabilized for approximately 30 minutes recorded the frequency. Repeat step measure with 10℃ increased per stage until the highest temperature of +50℃ reached.

Frequency Stability under Voltage Variations:
Set chamber temperature to 20℃. 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 (±15%) and endpoint, record the maximum frequency change.

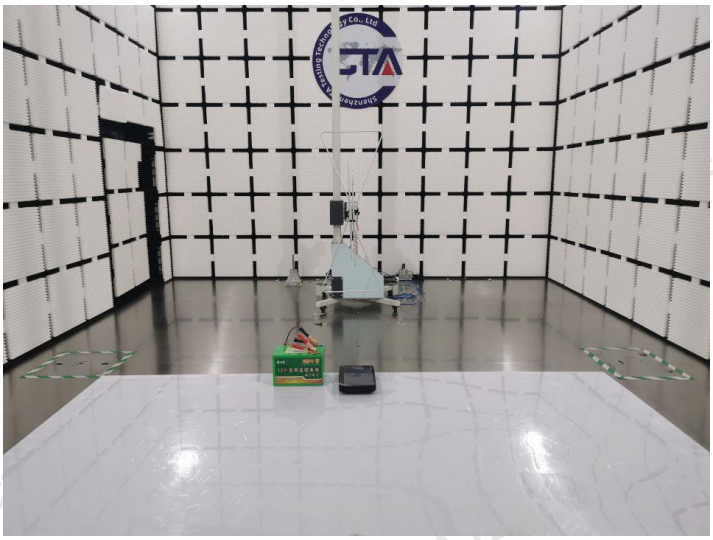
TEST RESULTS

Record worst case as below:

Reference Frequency: 802.11ac channel=36 frequency=5180MHz					
Voltage (V)	Temperature (℃)	Frequency error		Limit (ppm)	Result
		Hz	ppm		
AC120	-30	108.78	0.018935	Within the band of operation	Pass
	-20	171.93	0.029927		
	-10	139.34	0.024254		
	0	111.56	0.019419		
	10	142.27	0.024764		
	20	97.10	0.016902		
	30	165.33	0.028778		
	40	127.46	0.022186		
	50	126.28	0.021981		
AC132	25	193.29	0.033645		
AC108	25	114.49	0.018935		

Reference Frequency: 802.11ac channel=149 frequency=5745MHz					
Voltage (V)	Temperature (℃)	Frequency error		Limit (ppm)	Result
		Hz	ppm		
AC120	-30	135.45	0.023577	Within the band of operation	Pass
	-20	127.58	0.022207		
	-10	165.70	0.028842		
	0	166.39	0.028963		
	10	133.41	0.023222		
	20	128.70	0.022402		
	30	112.28	0.019544		
	40	168.48	0.029326		
	50	156.88	0.027307		
AC132	25	148.69	0.025882		
AC108	25	117.49	0.020451		

5 Test Setup Photos of the EUT



6 Photos of the EUT

Reference to the test report No. **CTA22051600201**

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