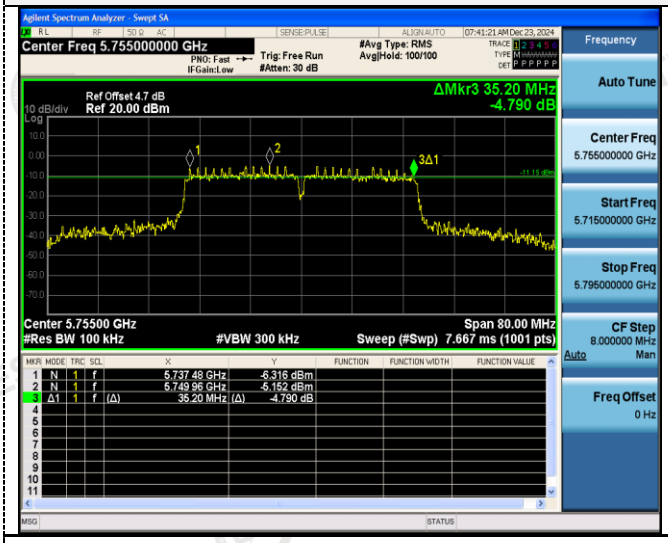
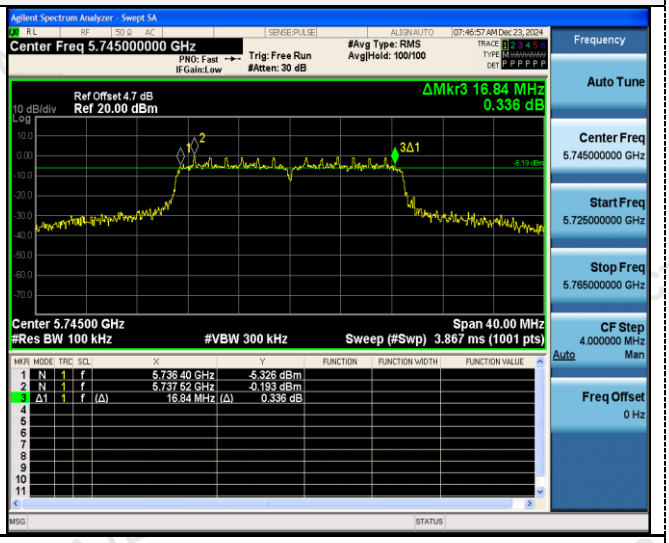
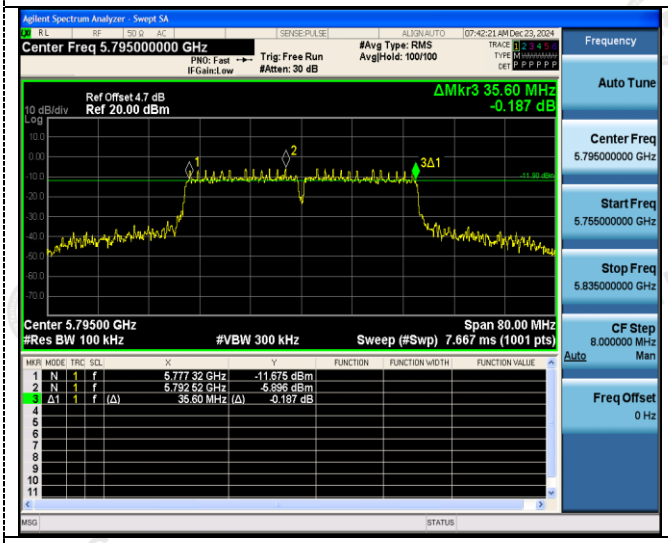
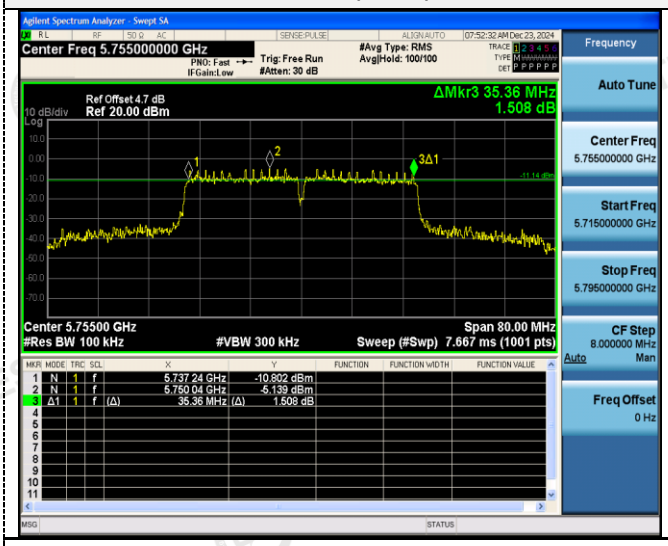
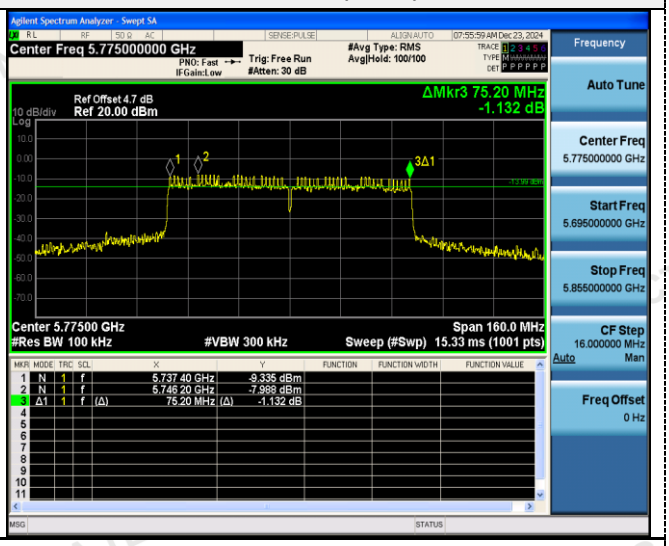
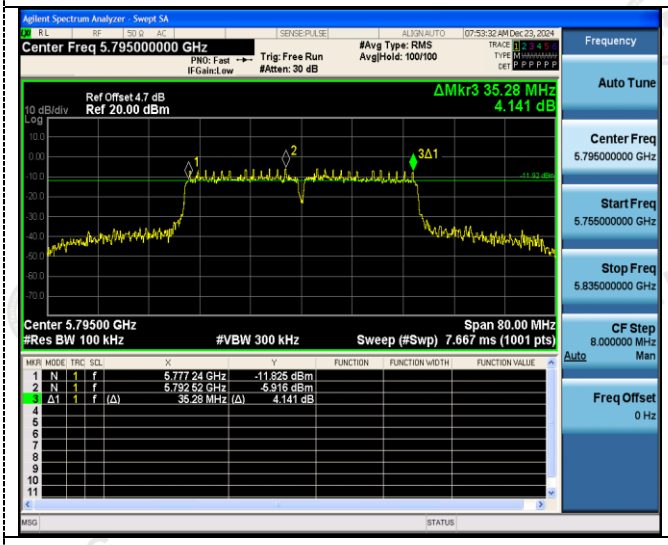
802.11n(HT40)	802.11ac(HT20)
	
CH151	CH149
	
CH159	CH157
	
	CH165

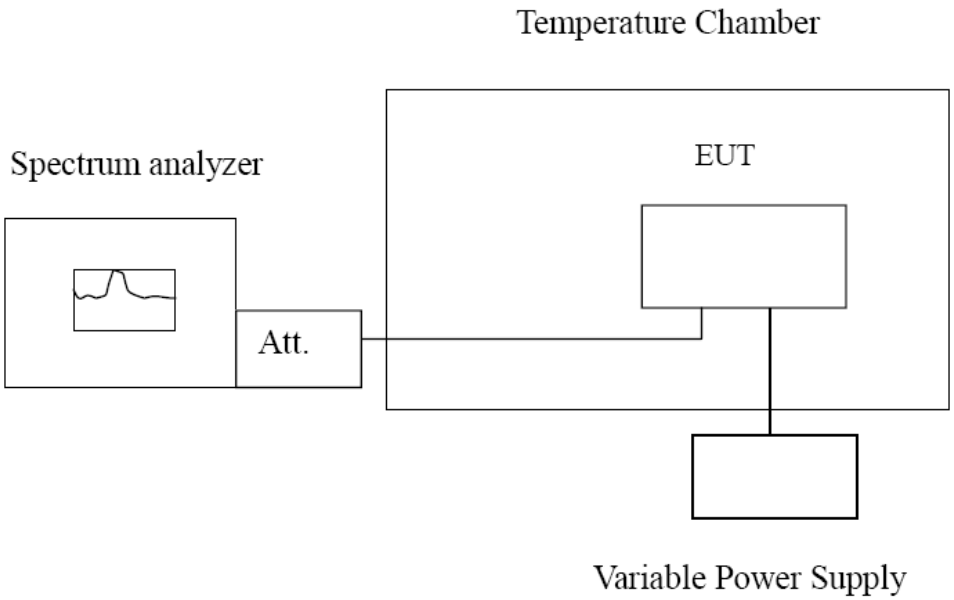
802.11ac(HT40)	802.11ac(HT80)
	
CH151	CH155
	
CH159	

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.

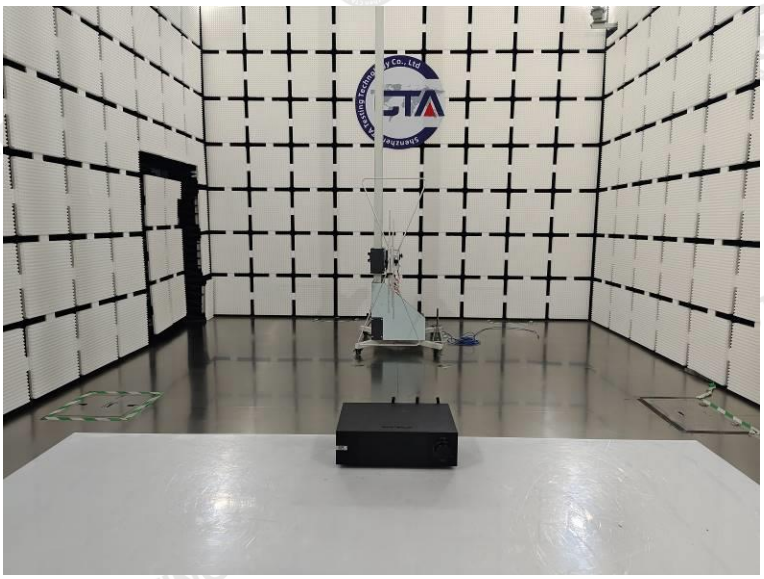
TEST RESULTS

Record worst case as below:
All antennas 802.11a / 802.11n (HT20) / 802.11n (HT40) / 802.11ac (VHT20/40/80) modes have been tested for above 1GHz test, only the worst case 802.11a antenna1 was recorded.

Reference Frequency: 802.11ac channel=36 frequency=5180MHz					
Voltage (V)	Temperature (℃)	Frequency error		Limit (ppm)	Result
		Hz	ppm		
AC 120	-30	110.42	0.021317	Within the band of operation	Pass
	-20	174.50	0.033687		
	-10	145.67	0.028122		
	0	146.89	0.028357		
	10	145.97	0.028180		
	20	99.60	0.019228		
	30	167.24	0.032286		
	40	129.37	0.024975		
	50	128.34	0.024776		
AC 132	25	195.51	0.037743		
AC 108	25	118.47	0.022871		

Reference Frequency: 802.11ac channel=149 frequency=5745MHz					
Voltage (V)	Temperature (℃)	Frequency error		Limit (ppm)	Result
		Hz	ppm		
AC 120	-30	135.88	0.023652	Within the band of operation	Pass
	-20	129.76	0.022587		
	-10	167.36	0.029131		
	0	169.79	0.029554		
	10	136.35	0.023734		
	20	144.97	0.025234		
	30	116.83	0.020336		
	40	168.37	0.029307		
	50	160.61	0.027956		
AC 132	25	150.96	0.026277		
AC 108	25	129.92	0.022614		

5 Test Setup Photos of the EUT



6 Photos of the EUT

Reference to the test report No. **CTA24121200501.**

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