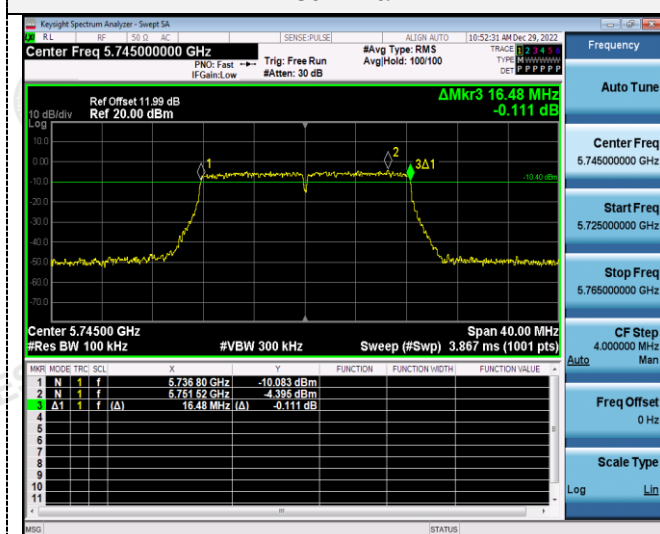
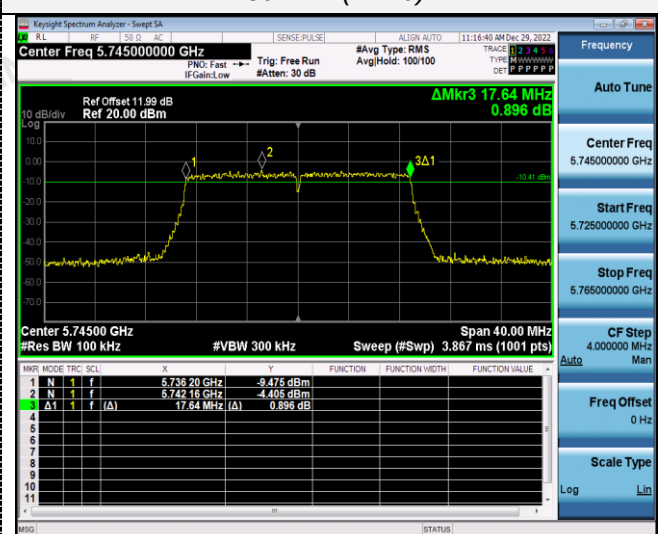


ANT 1

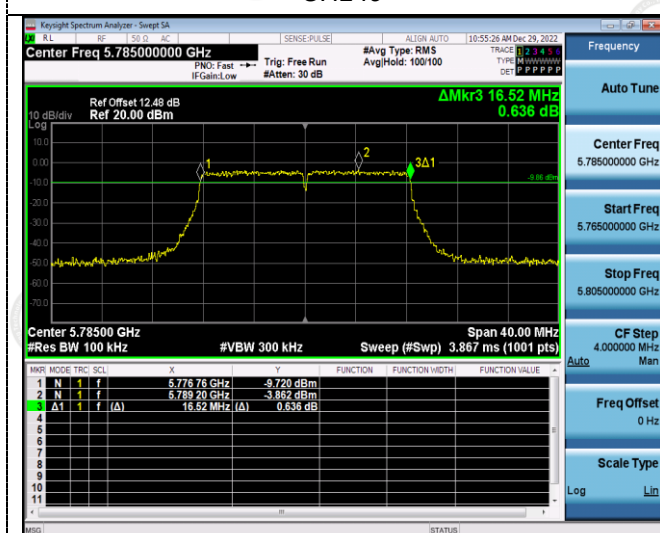
802.11a



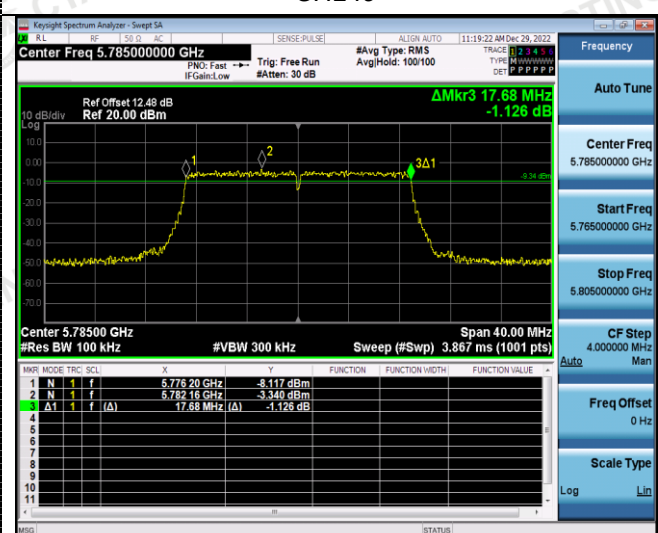
802.11n(HT20)



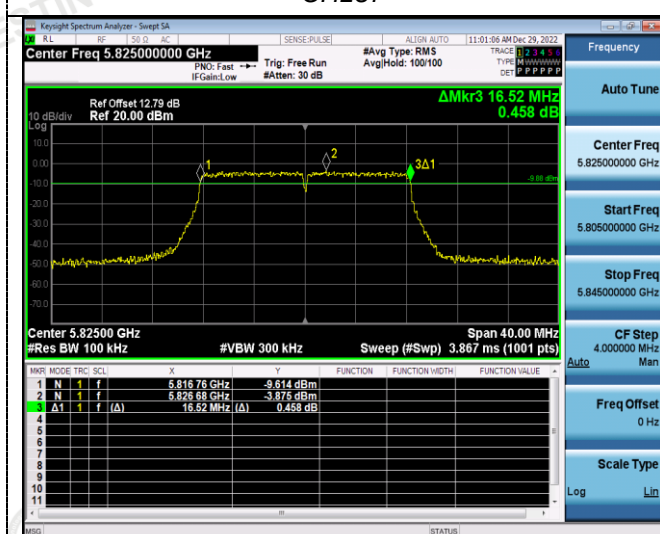
CH149



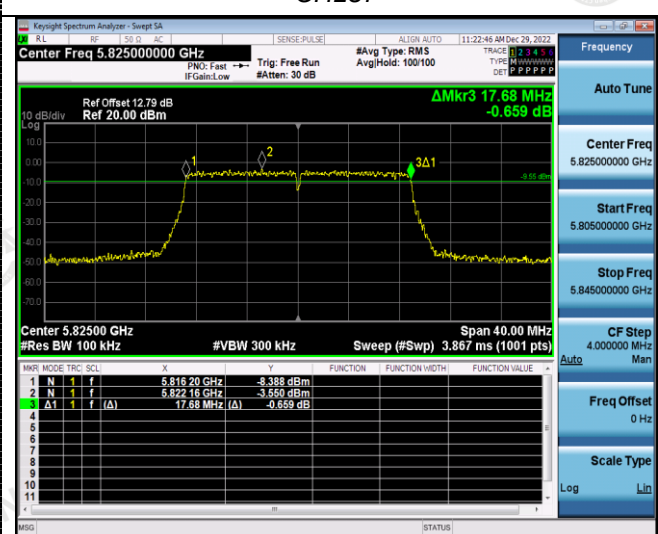
CH149



CH157



CH157



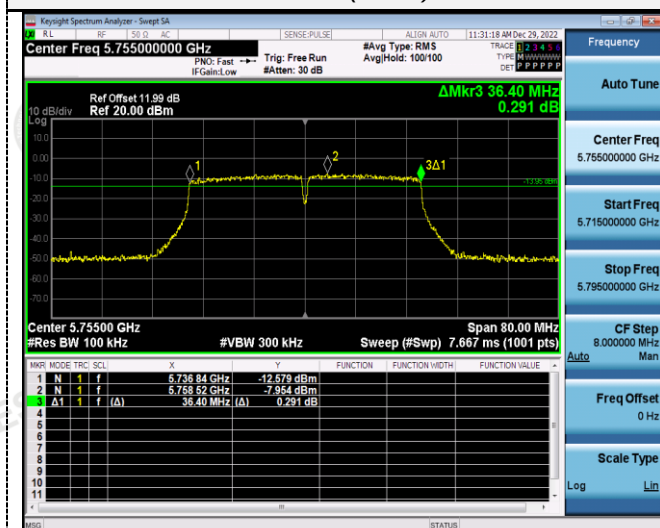
CH165



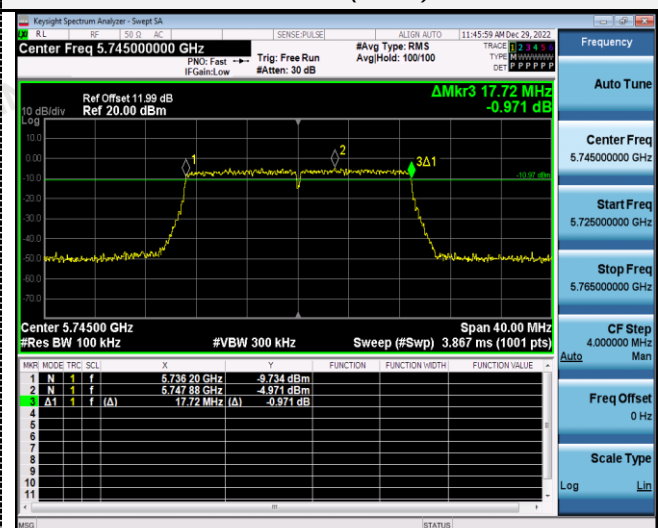
CH165



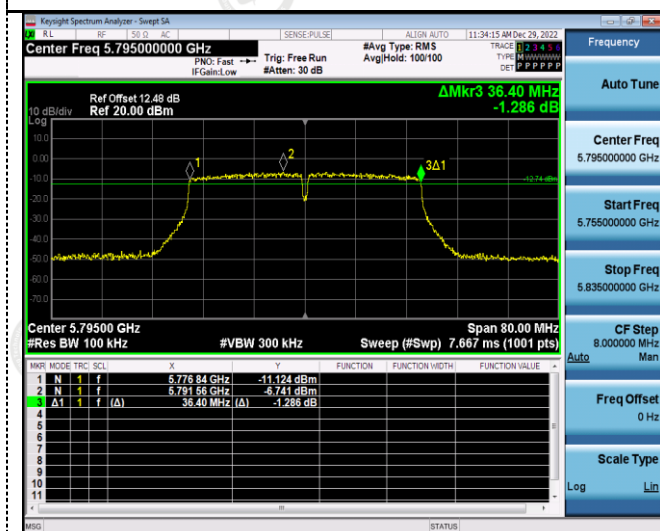
802.11n(HT40)



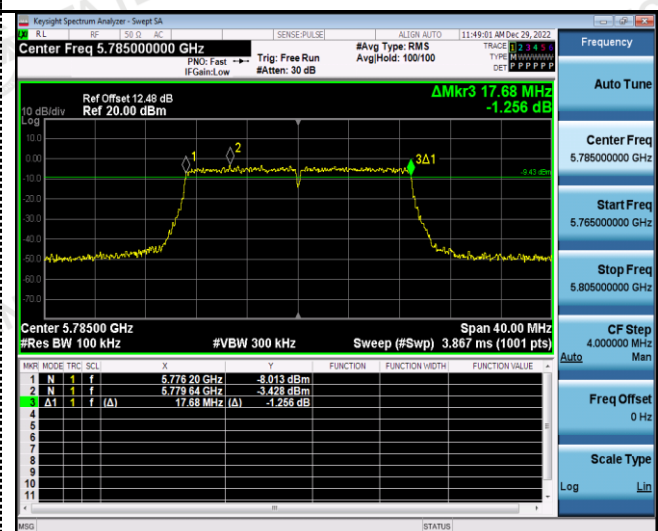
802.11ac(HT20)



CH151



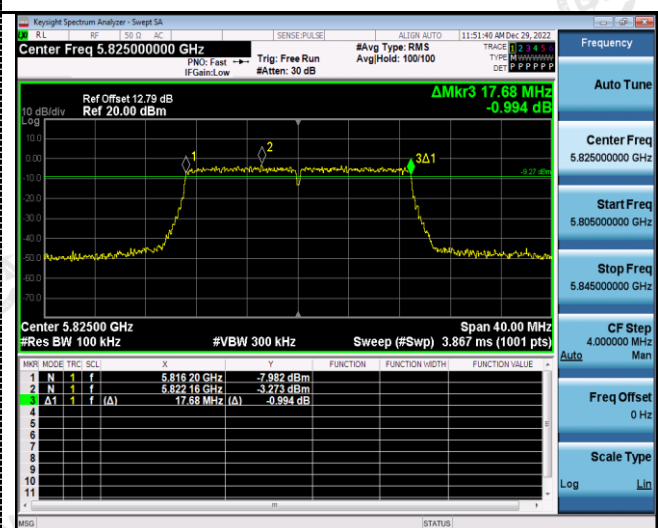
CH149



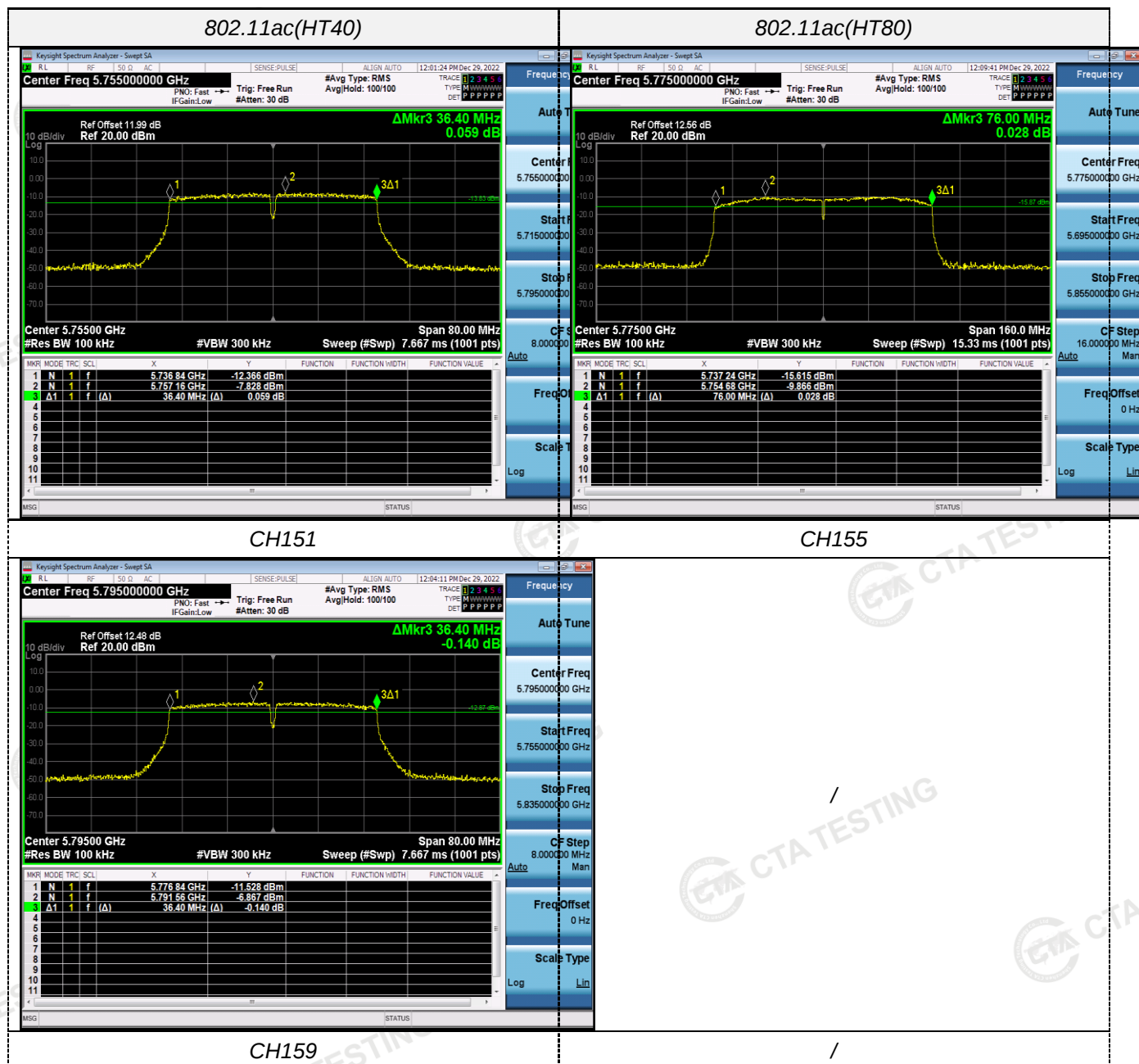
CH159



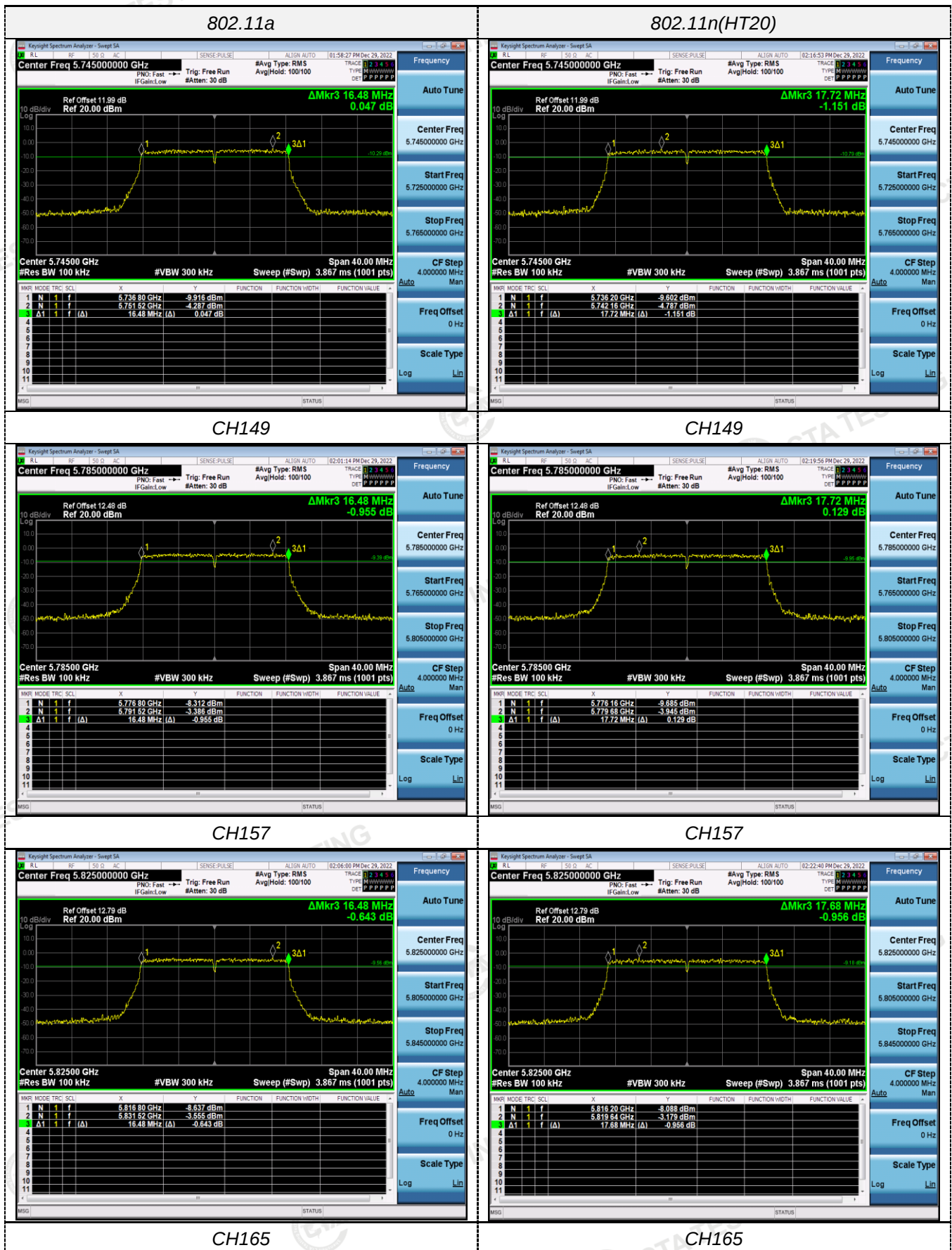
CH157



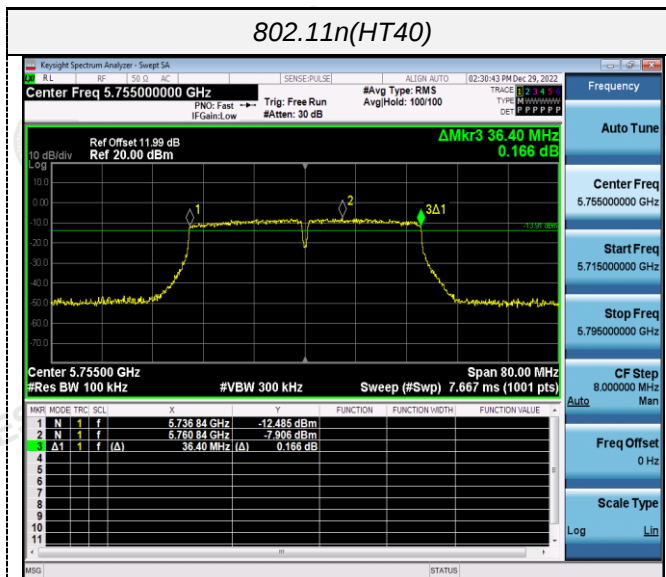
CH165



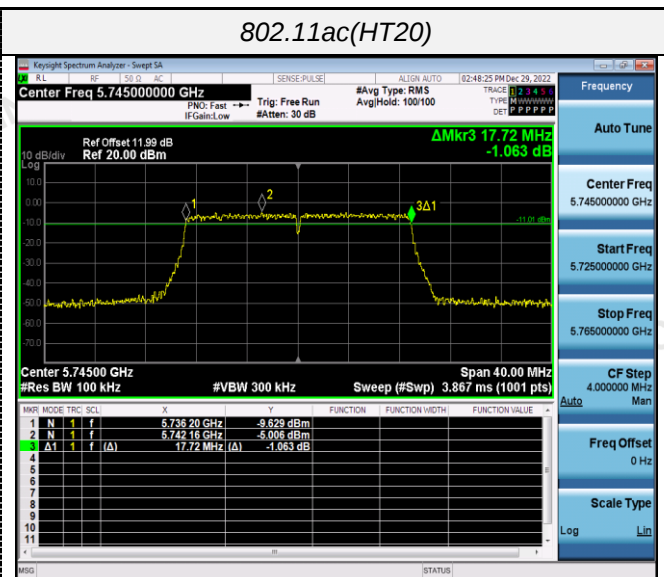
ANT 2



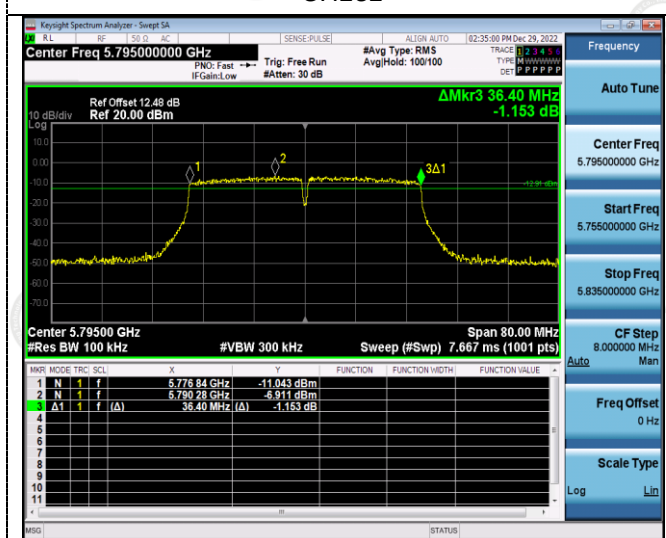
802.11n(HT40)



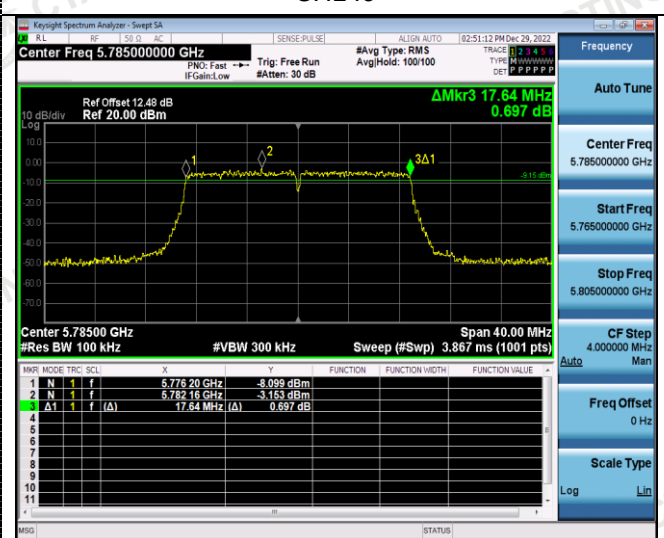
802.11ac(HT20)



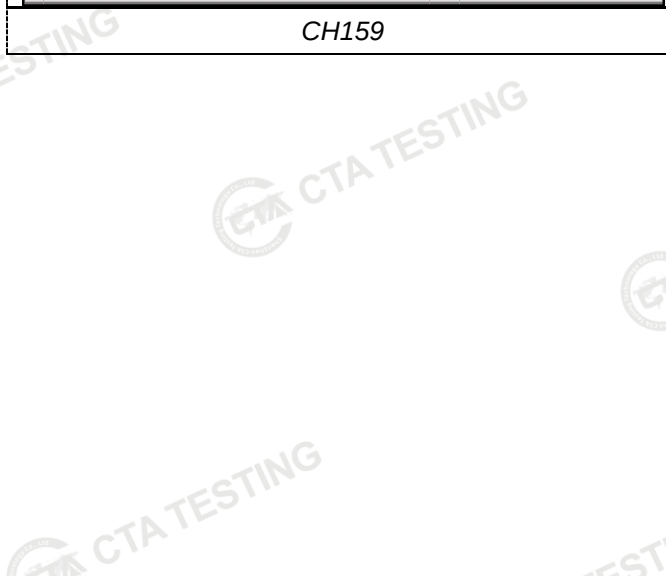
CH151



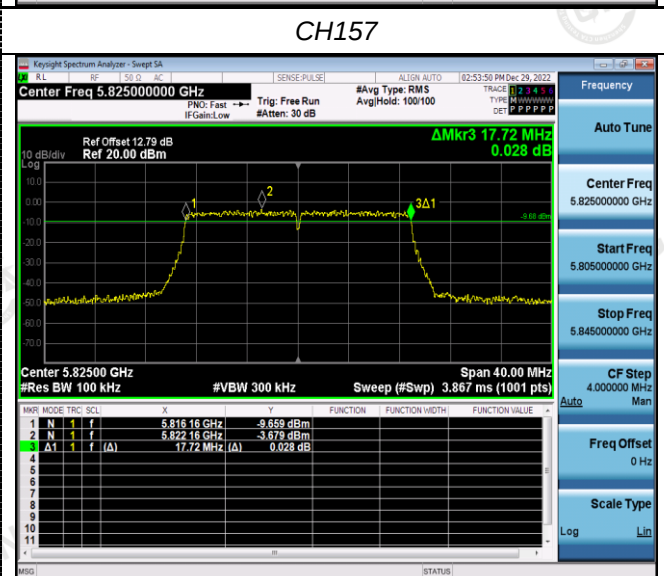
CH149



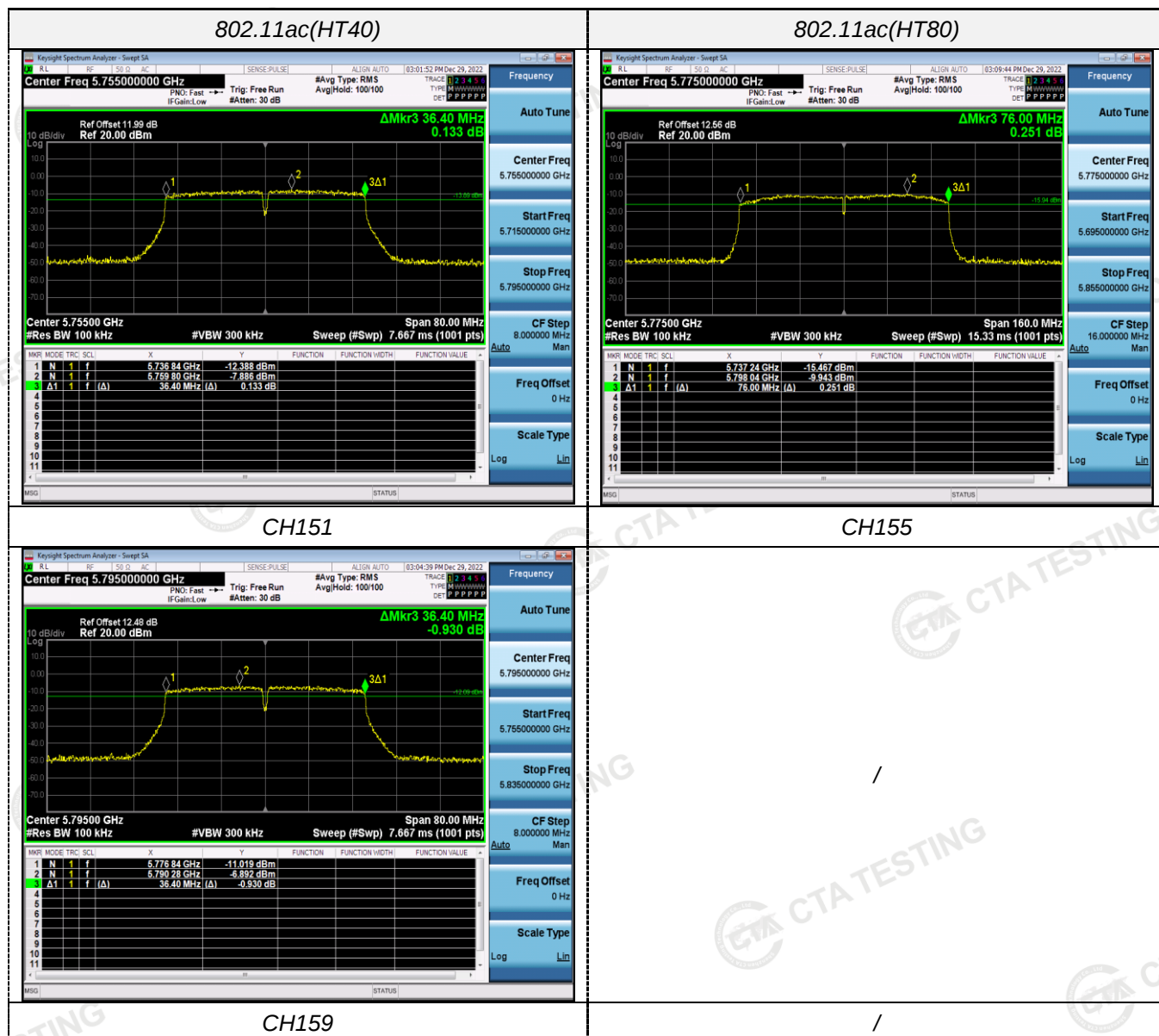
CH159



CH157



CH165

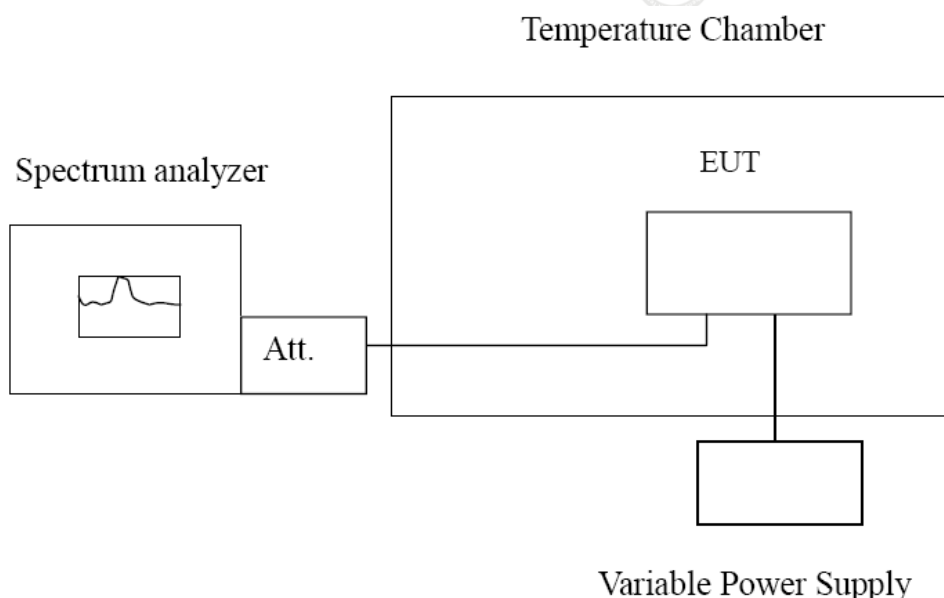


4.7 Frequency Stability

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		
AC120	-30	109.97	0.021230	Within the band of operation	Pass
	-20	174.26	0.033641		
	-10	145.59	0.028106		
	0	146.42	0.028266		
	10	145.83	0.028153		
	20	99.13	0.019137		
	30	167.57	0.032349		
	40	129.46	0.024992		
	50	128.91	0.024886		
AC132	25	195.74	0.037788	Within the band of operation	Pass
AC108	25	118.50	0.022876		

Reference Frequency: 802.11ac channel=149 frequency=5745MHz					
Voltage (V)	Temperature (°C)	Frequency error		Limit (ppm)	Result
		Hz	ppm		
AC120	-30	135.26	0.023544	Within the band of operation	Pass
	-20	130.42	0.022701		
	-10	167.52	0.029159		
	0	169.78	0.029553		
	10	136.60	0.023777		
	20	142.34	0.024776		
	30	116.83	0.020336		
	40	169.59	0.029520		
	50	160.75	0.027981		
AC132	25	150.42	0.026183	Within the band of operation	Pass
AC108	25	129.94	0.022618		

Ant2:

Reference Frequency: 802.11ac channel=36 frequency=5180MHz					
Voltage (V)	Temperature (°C)	Frequency error		Limit (ppm)	Result
		Hz	ppm		
AC120	-30	110.34	0.021301	Within the band of operation	Pass
	-20	174.67	0.033720		
	-10	146.25	0.028234		
	0	146.84	0.028347		
	10	145.41	0.028071		
	20	98.93	0.019098		
	30	168.08	0.032448		
	40	129.56	0.025012		
	50	130.27	0.025149		
AC132	25	194.43	0.037535	Within the band of operation	Pass
AC108	25	118.62	0.022900		

Reference Frequency: 802.11ac channel=149 frequency=5745MHz					
Voltage (V)	Temperature (°C)	Frequency error		Limit (ppm)	Result
		Hz	ppm		
AC120	-30	136.53	0.023765	Within the band of operation	Pass
	-20	128.74	0.022409		
	-10	167.20	0.029104		
	0	169.36	0.029480		
	10	136.48	0.023756		
	20	144.95	0.025231		
	30	117.87	0.020517		
	40	170.03	0.029596		
	50	160.58	0.027951		
AC132	25	149.62	0.026044	Within the band of operation	Pass
AC108	25	130.47	0.022710		

5 Test Setup Photos of the EUT



6 Photos of the EUT

Reference to the test report No. **CTA22121600101**

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