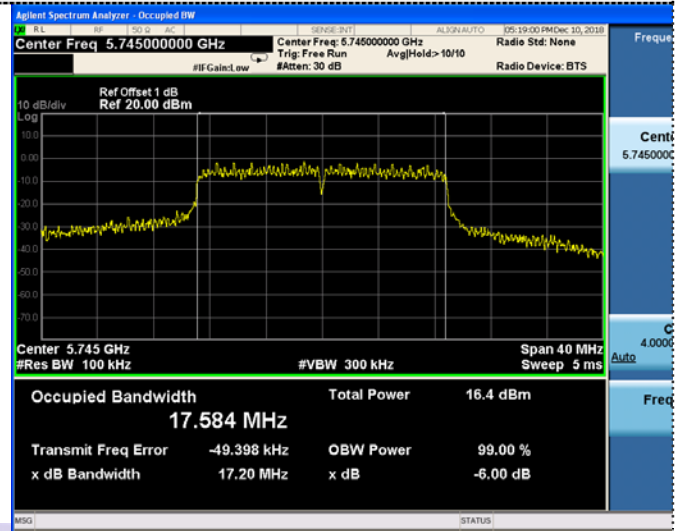
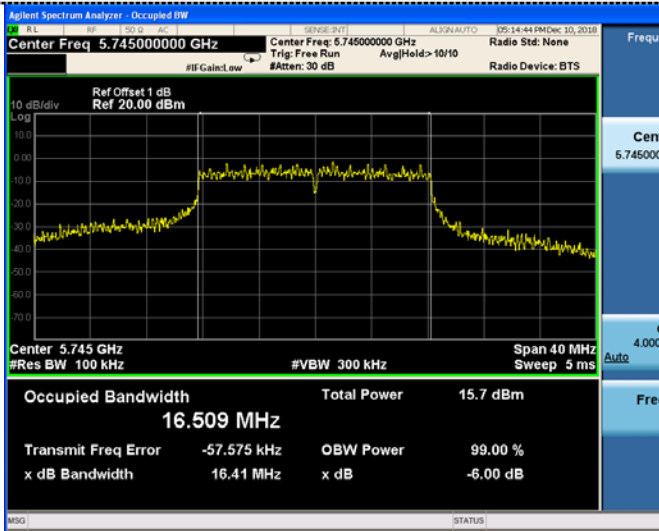


Ant.1

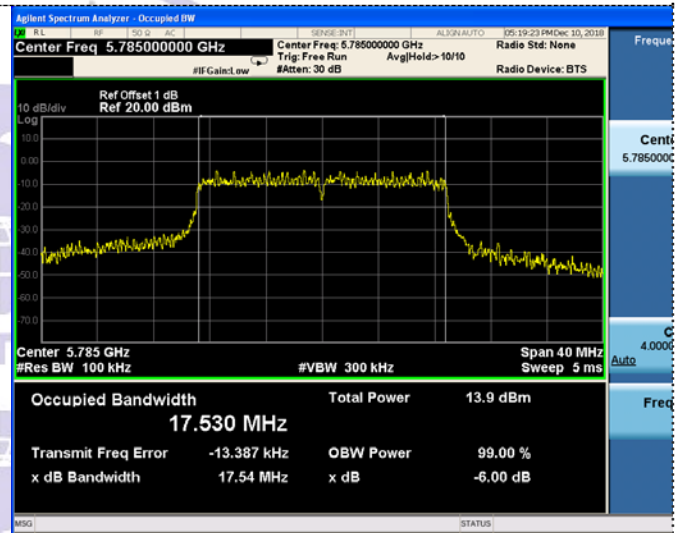
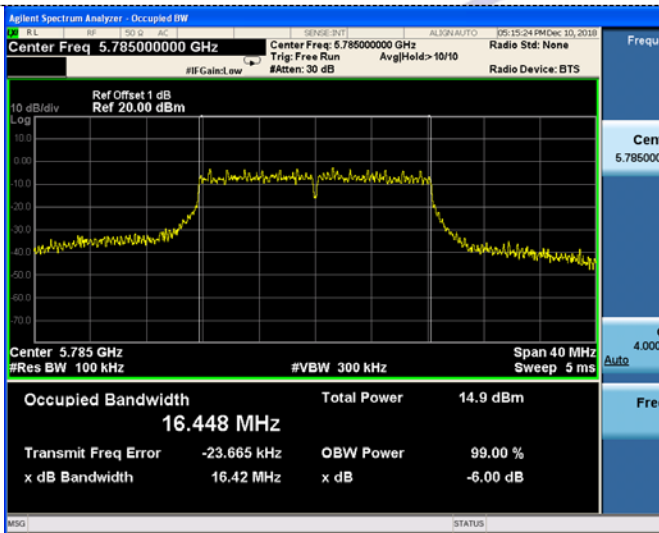
802.11a

802.11n(HT20)



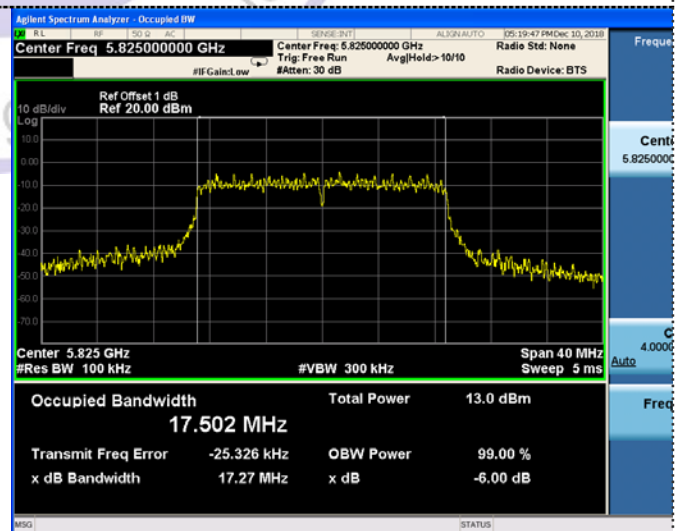
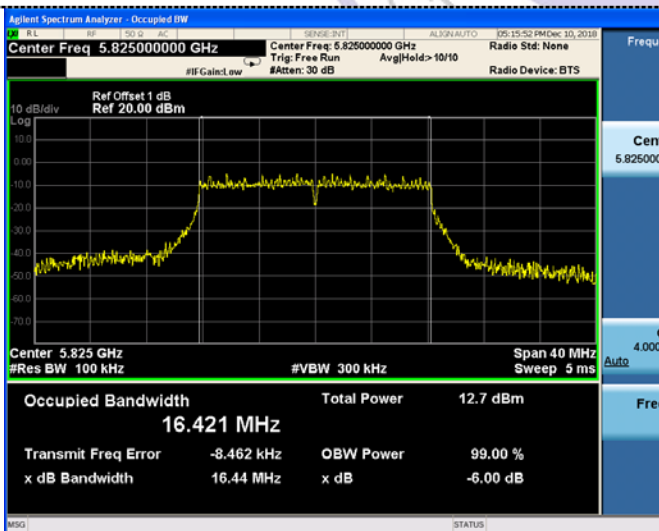
CH149

CH149



CH157

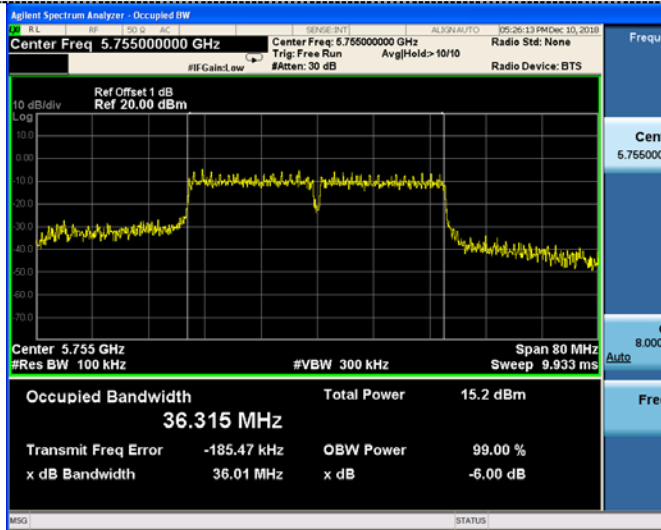
CH157



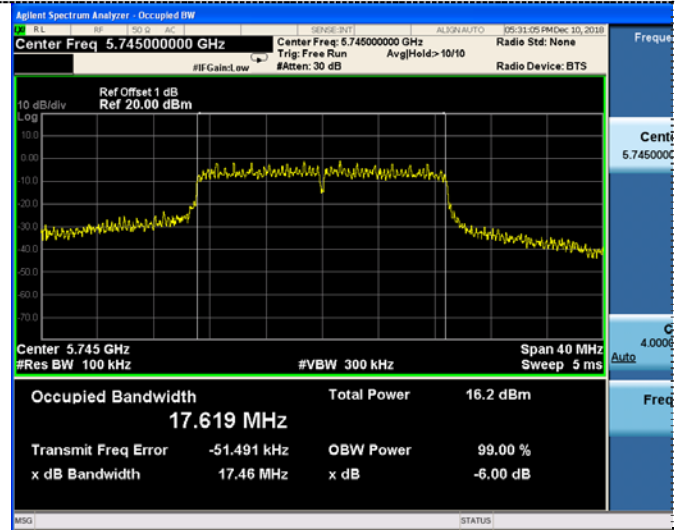
CH165

CH165

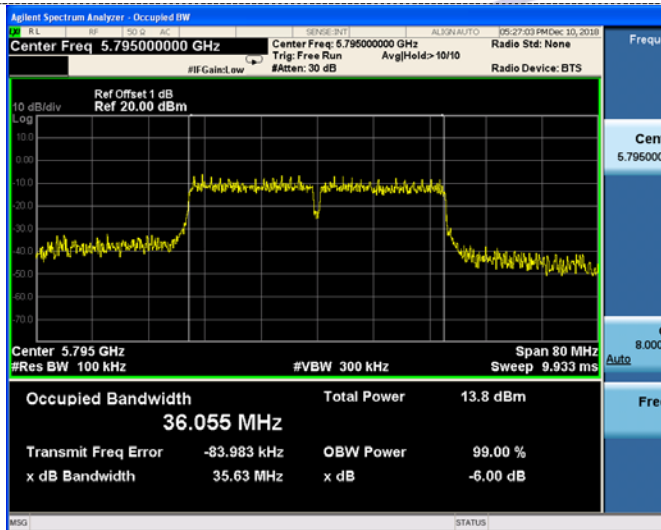
802.11n(HT40)



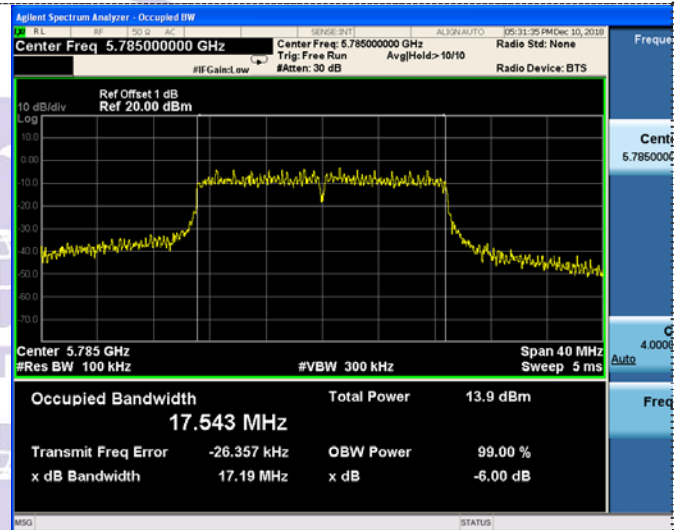
802.11ac(HT20)



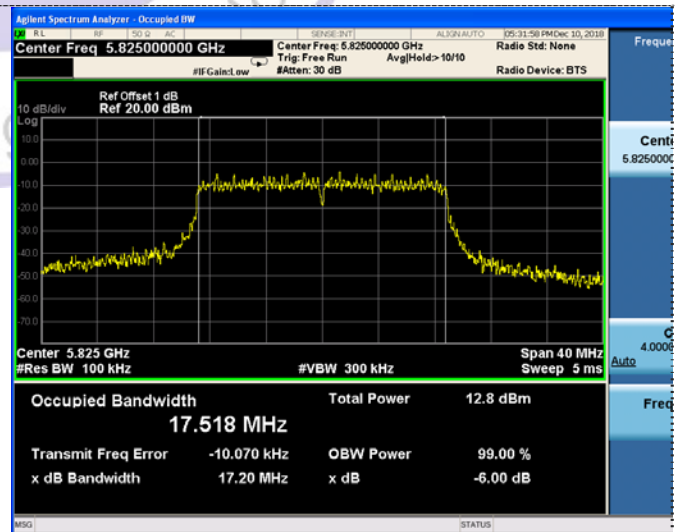
CH151



CH149



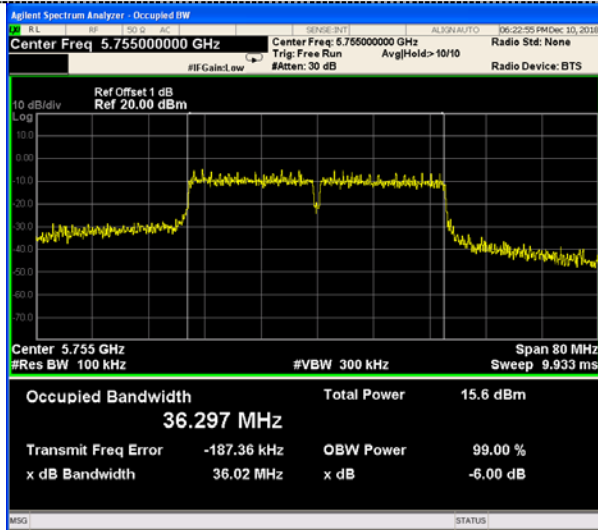
CH159



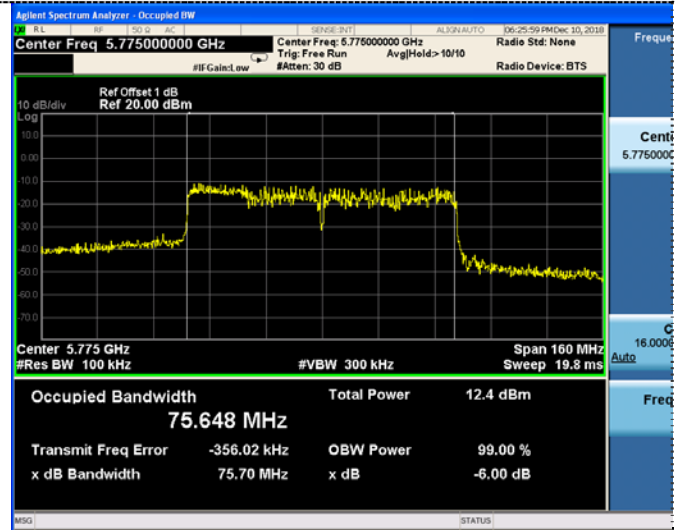
CH157

CH165

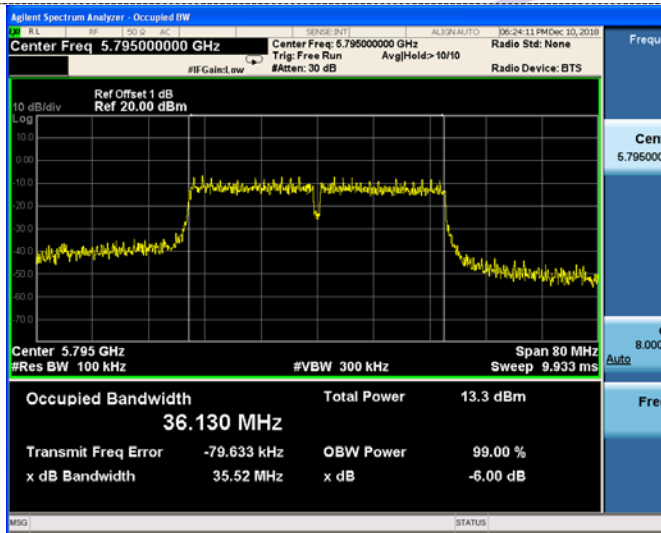
802.11ac(HT40)



802.11ac(HT80)



CH151



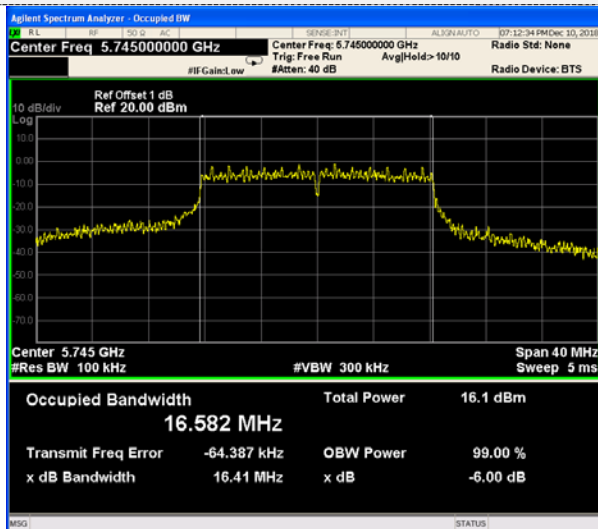
CH155



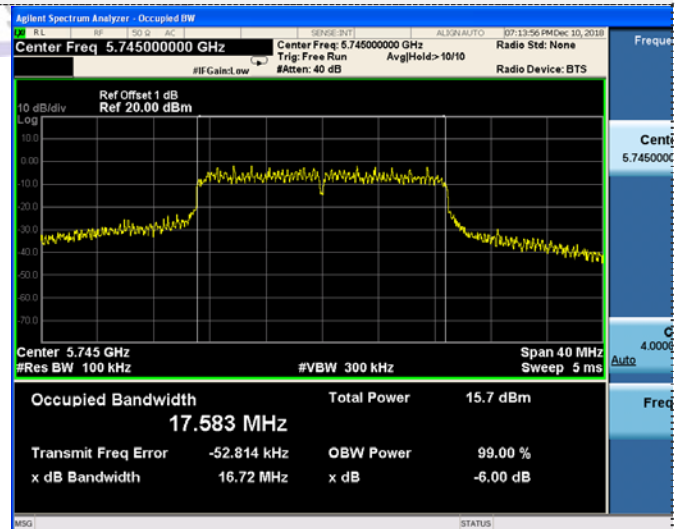
CH159

Ant.2

802.11a

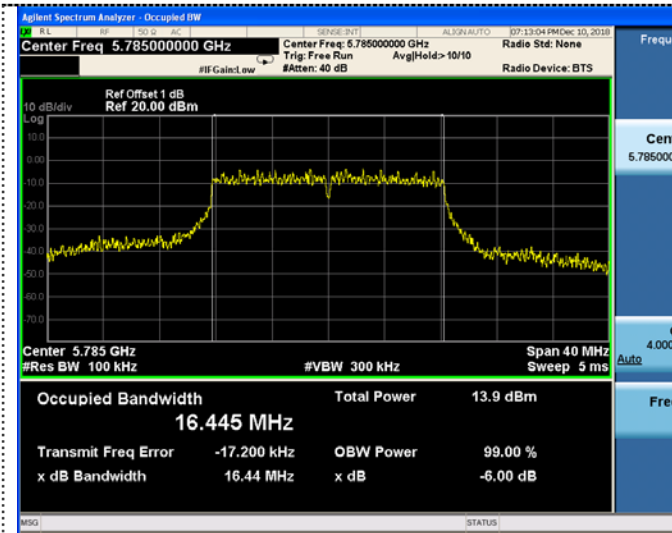


802.11n(HT20)

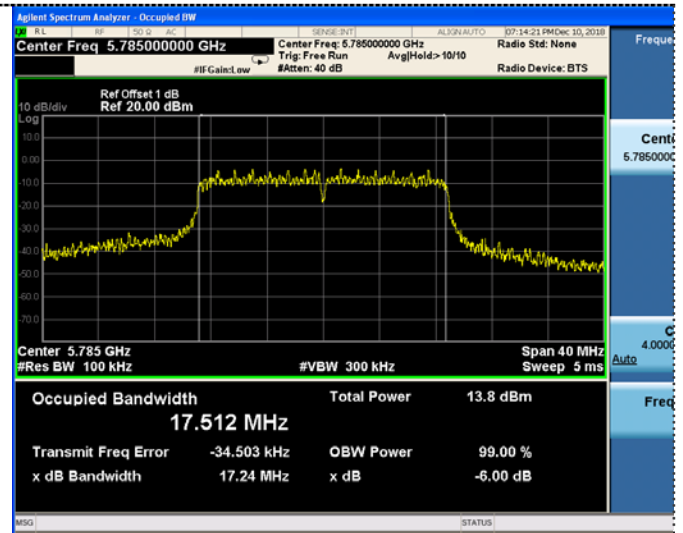


CH149

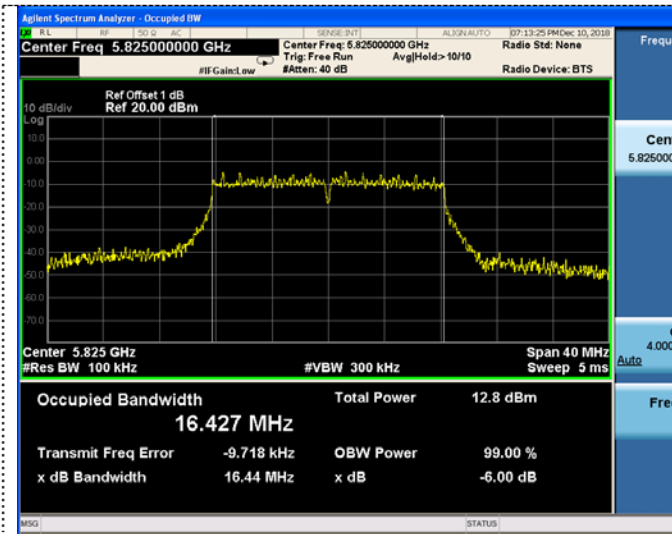
CH149



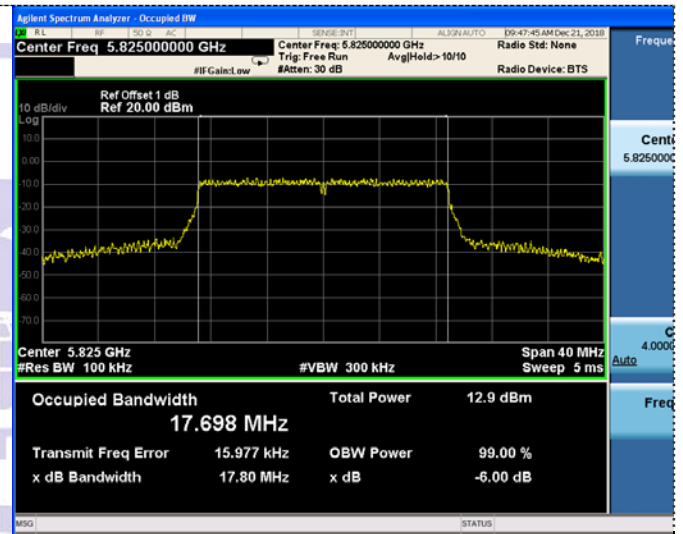
CH157



CH157



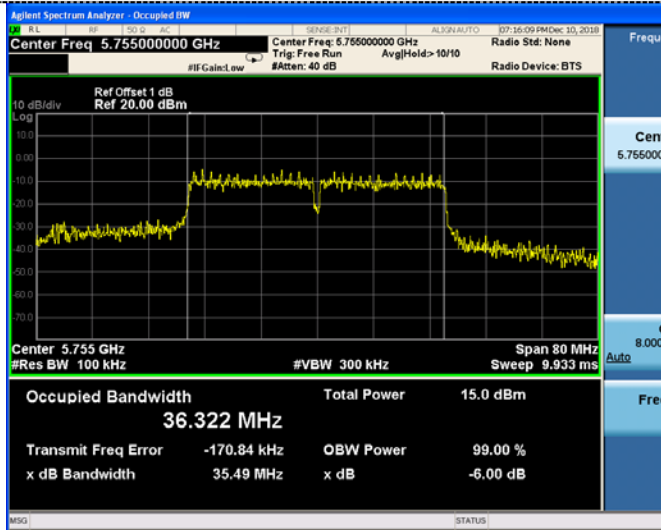
CH165



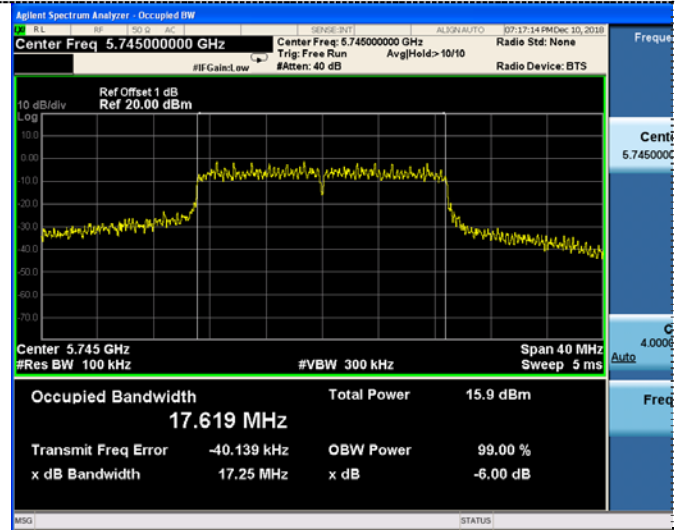
CH165



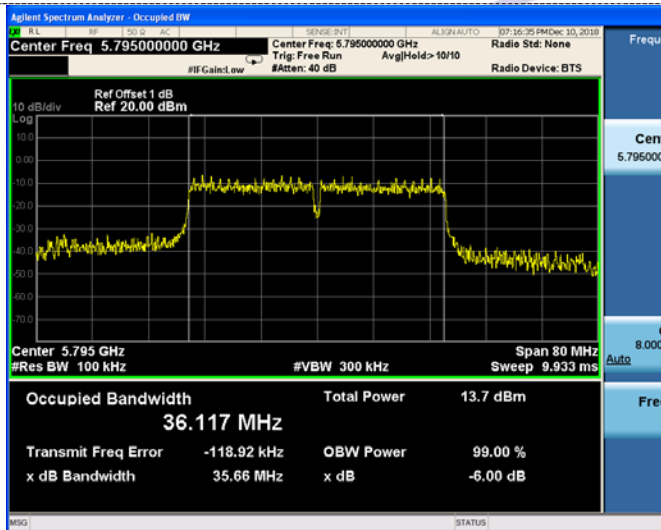
802.11n(HT40)



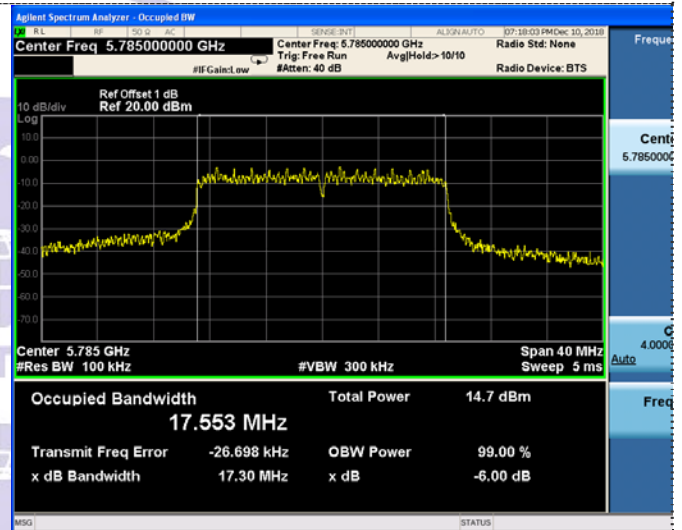
802.11ac(HT20)



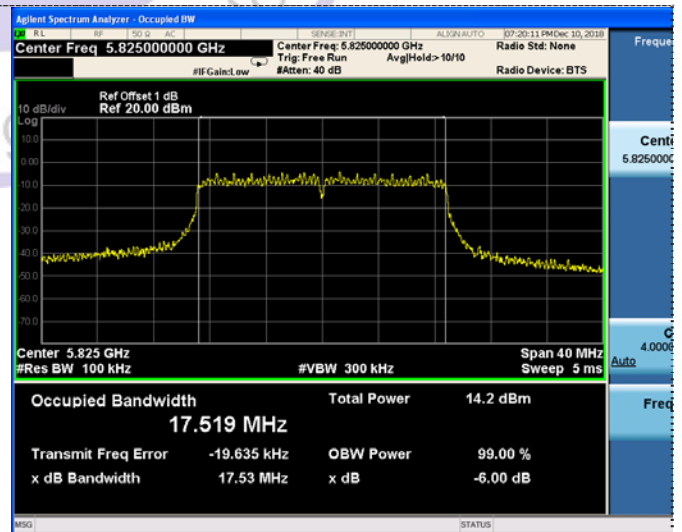
CH151



CH149

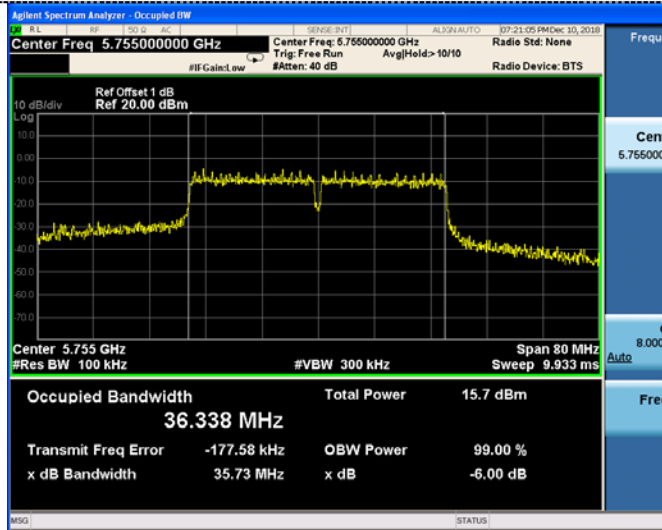


CH159

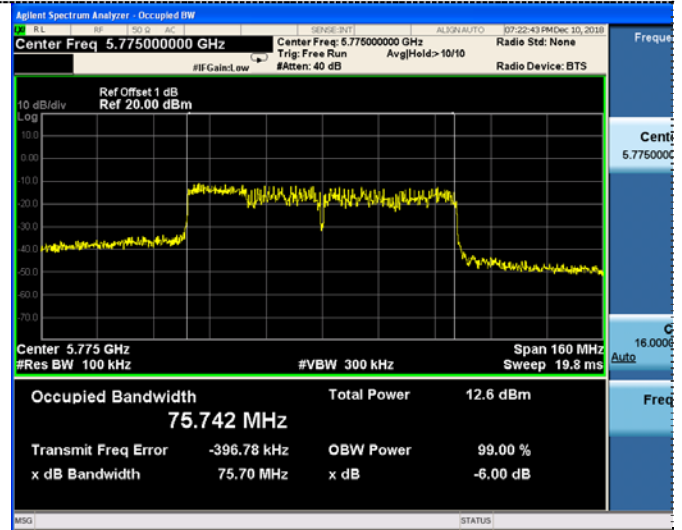


CH165

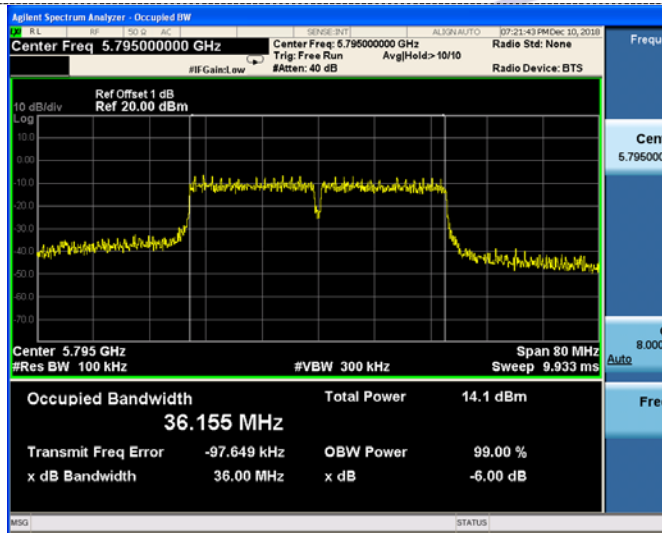
802.11ac(HT40)



802.11ac(HT80)



CH151



CH155



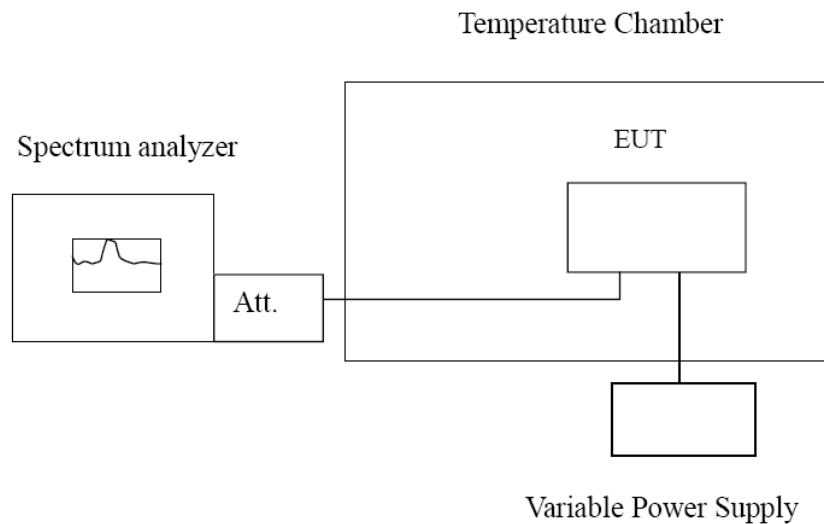
CH159

### 3.7. 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

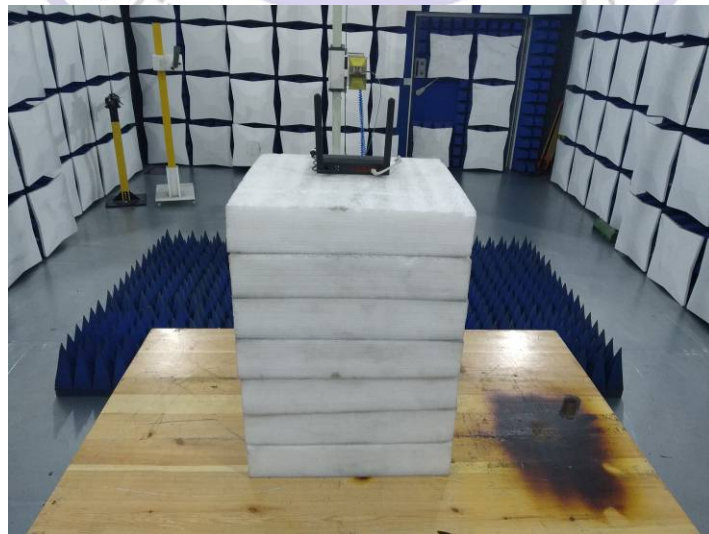
Record worst case (802.11a ant.1) as below:

Reference Frequency: 802.11a channel=36 frequency=5180MHz					
Voltage ( V )	Temperature (°C)	Frequency error		Limit (ppm)	Result
		Hz	ppm		
120	-30	493	0.095	Within the band of operation	Pass
	-20	604	0.117		
	-10	711	0.137		
	0	738	0.142		
	10	625	0.121		
	20	433	0.084		
	30	598	0.115		
	40	540	0.104		
	50	578	0.112		
138	25	811	0.157		
102	25	656	0.127		

Reference Frequency: 802.11a channel=149 frequency=5745MHz					
Voltage ( V )	Temperature (°C)	Frequency error		Limit (ppm)	Result
		Hz	ppm		
120	-30	472	0.082	Within the band of operation	Pass
	-20	509	0.089		
	-10	640	0.111		
	0	592	0.103		
	10	615	0.107		
	20	409	0.071		
	30	582	0.101		
	40	491	0.085		
	50	617	0.107		
138	25	584	0.102		
102	25	631	0.110		



### 4. Test Setup Photos of the EUT



## 5. Photos of the EUT

Reference to the test report No. CTL1808037031-WF02

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

