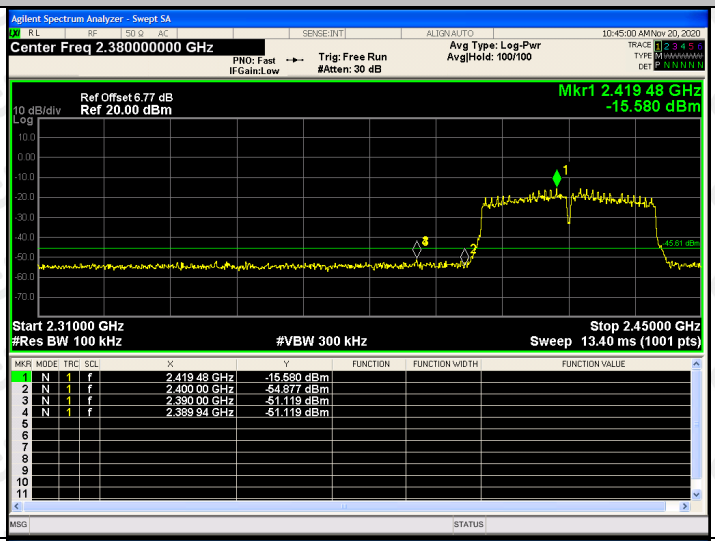
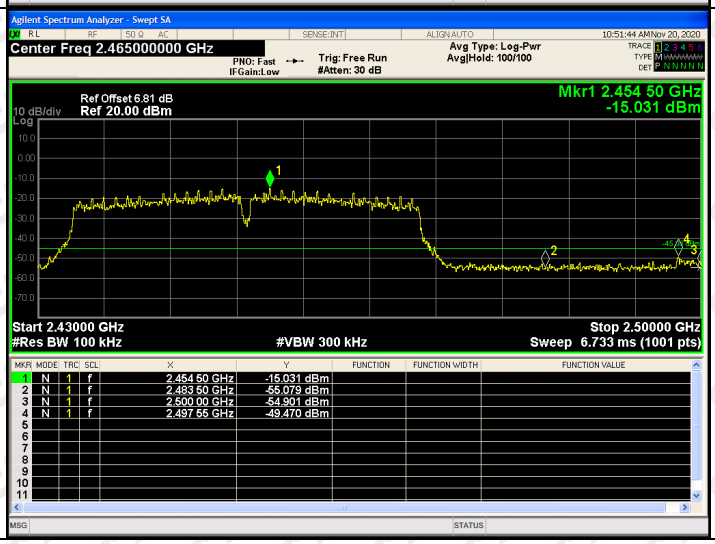
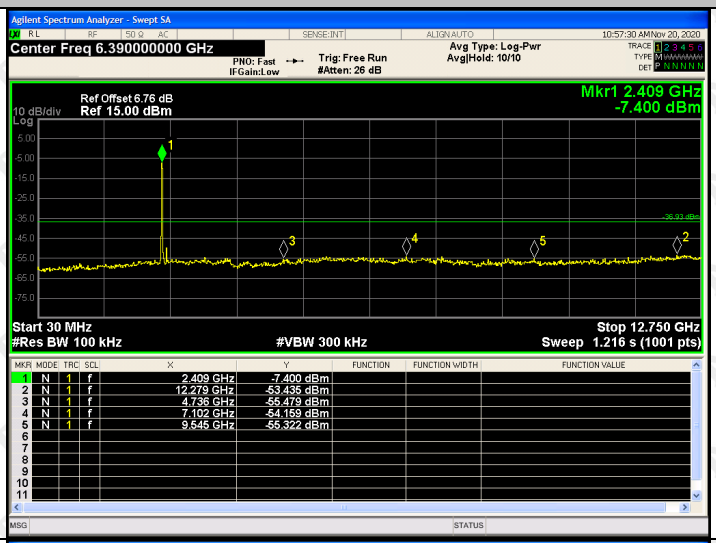
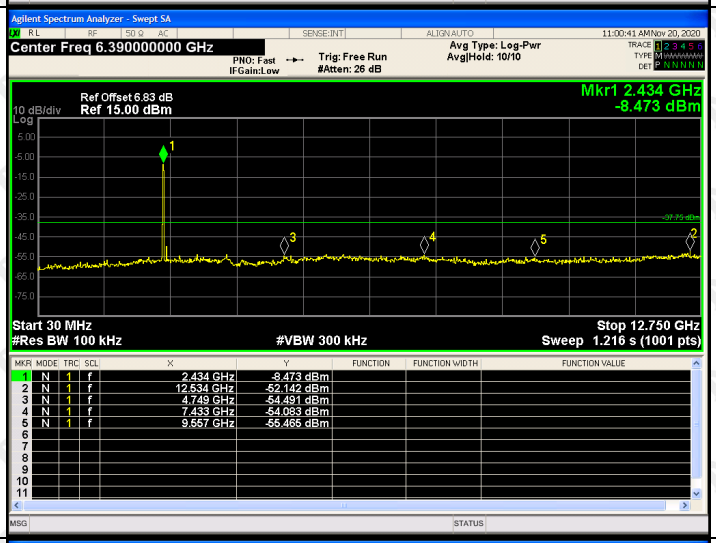
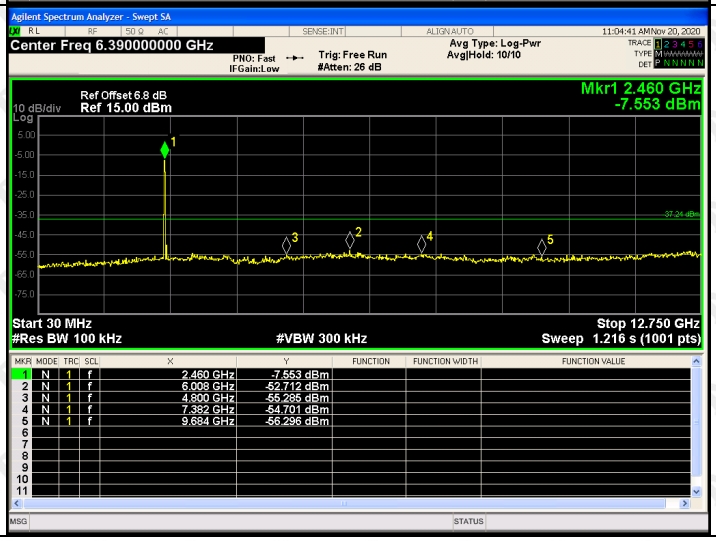
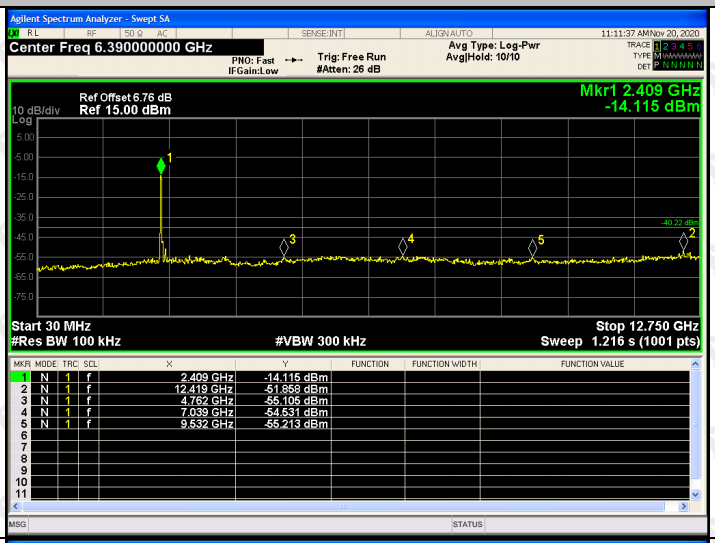
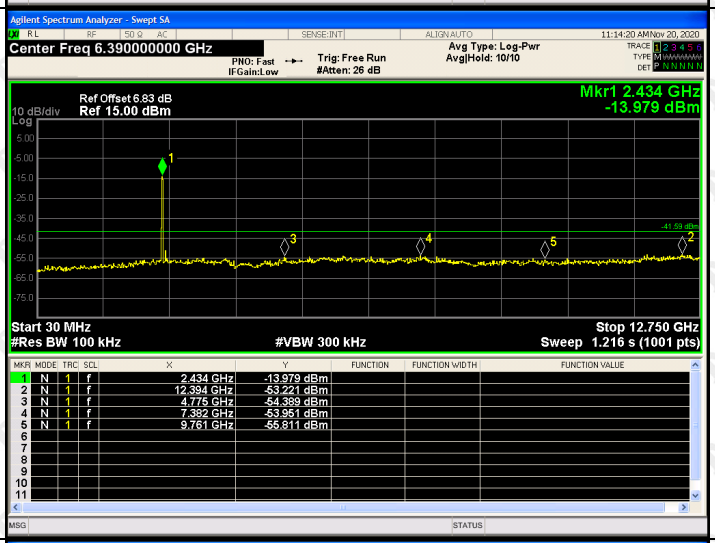
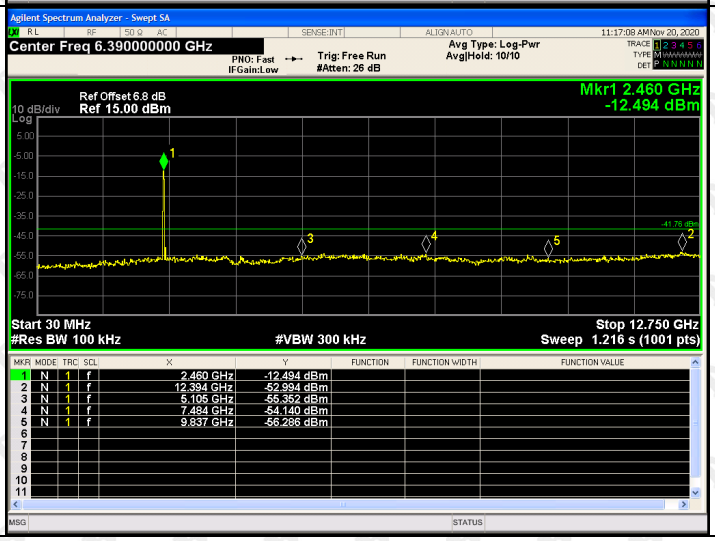
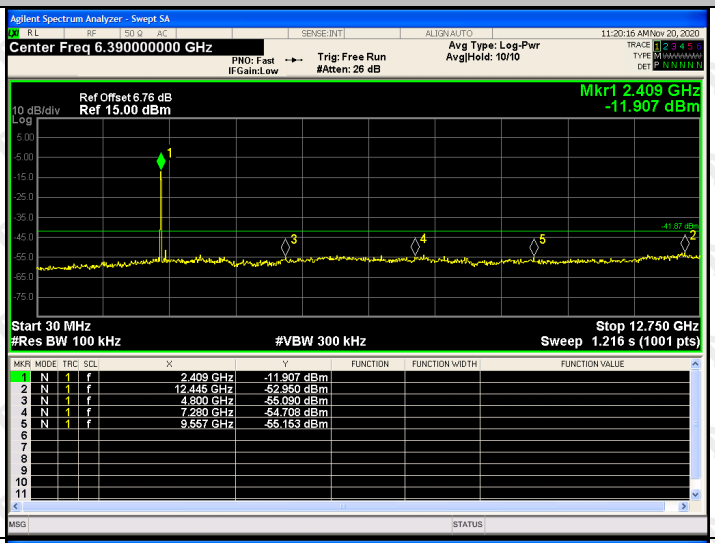
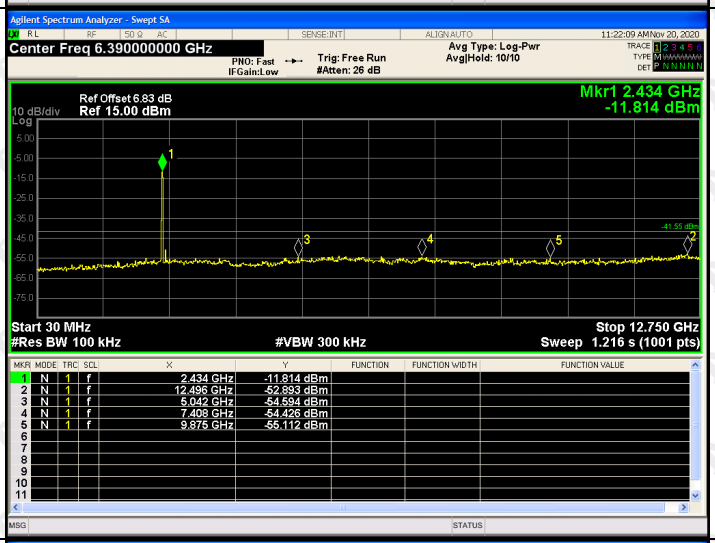
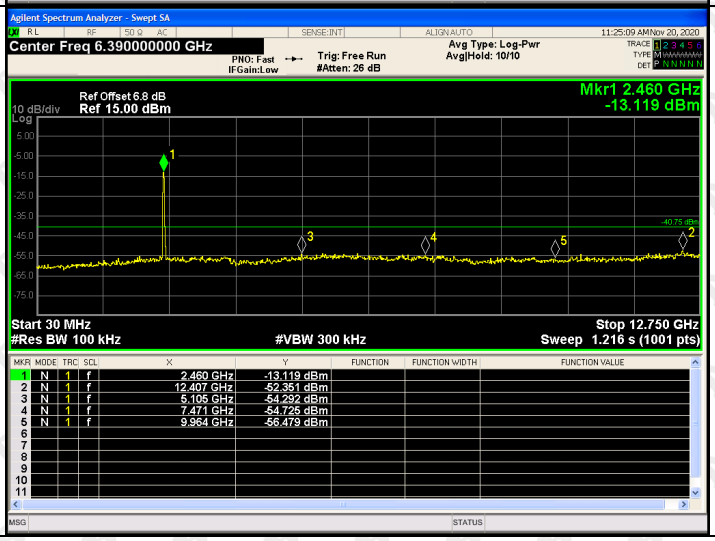
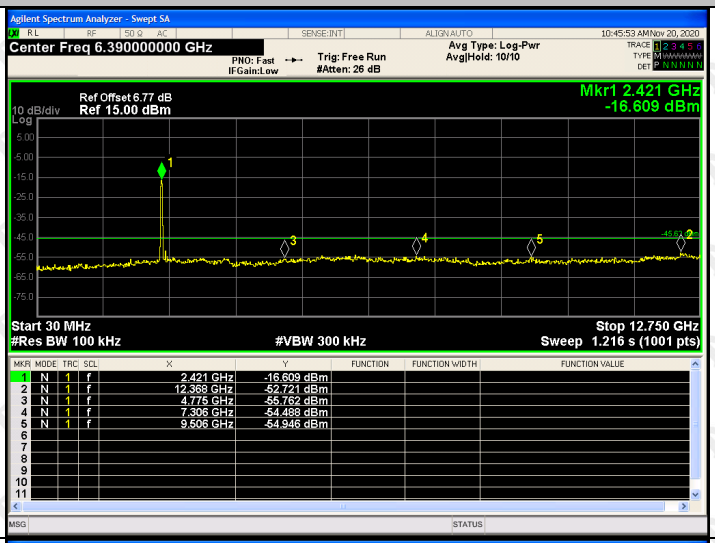
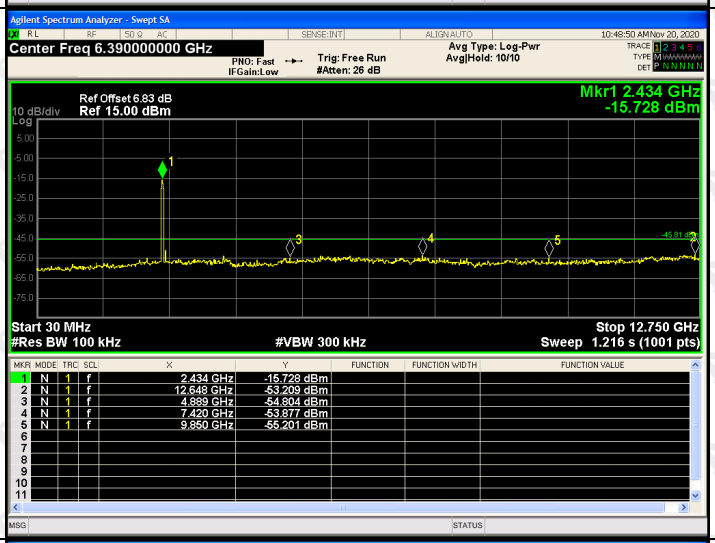
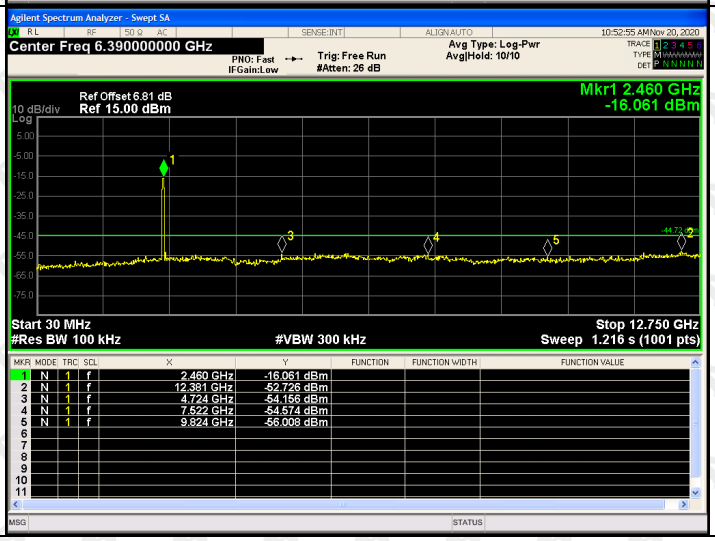
BAND EDGE Graphs			
802.11n(HT40)/L CH			
802.11n(HT40)/H CH			

RF Conducted Spurious Emissions Graphs			
802.11b /LCH			
802.11b /MCH			
802.11b /HCH			

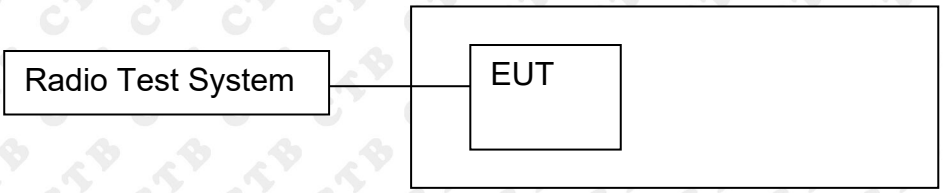
RF Conducted Spurious Emissions Graphs			
802.11g /LCH			
802.11g /MCH			
802.11g /HCH			

RF Conducted Spurious Emissions Graphs			
802.11n (HT20)/ LCH			
802.11 n(HT20) /MCH			
802.11 n(HT20) /HCH			

RF Conducted Spurious Emissions Graphs			
802.11 n(HT40) /LCH			
802.11 n(HT40) /MCH			
802.11 n(HT40) /HCH			

9. COUDUCTED OUTPUT POWER

9.1 Block Diagram Of Test Setup



9.2 Limit

FCC Part15 (15.247) , Subpart C				
Section	Test Item	Limit	Frequency Range (MHz)	Result
15.247(b)(3)	Peak Output Power	1 watt or 30dBm	2400-2483.5	PASS

9.3 Test procedure

1. Remove the antenna from the EUT and then connect a low RF cable from the antenna port to the spectrum.
2. Set the spectrum analyzer: RBW = 1MHz. VBW = 3MHz. Sweep = auto; Detector Function = RMS. Channel power function is used
3. Keep the EUT in transmitting at lowest, middle and highest channel individually. Record the max value.

9.4 Test Result

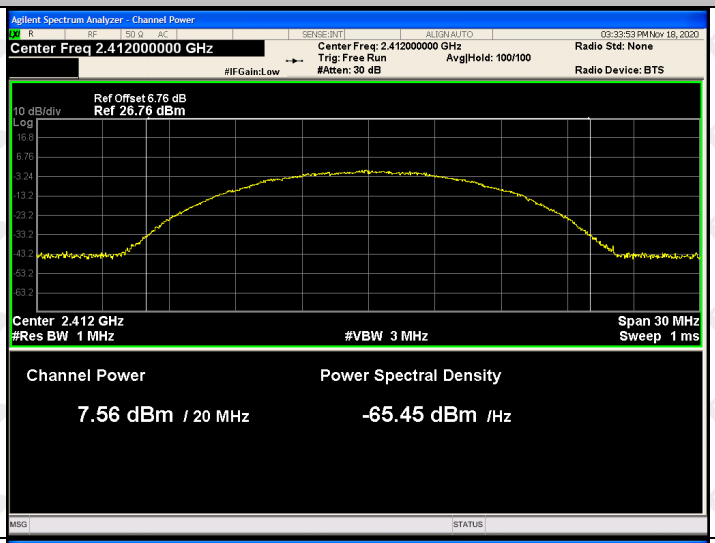
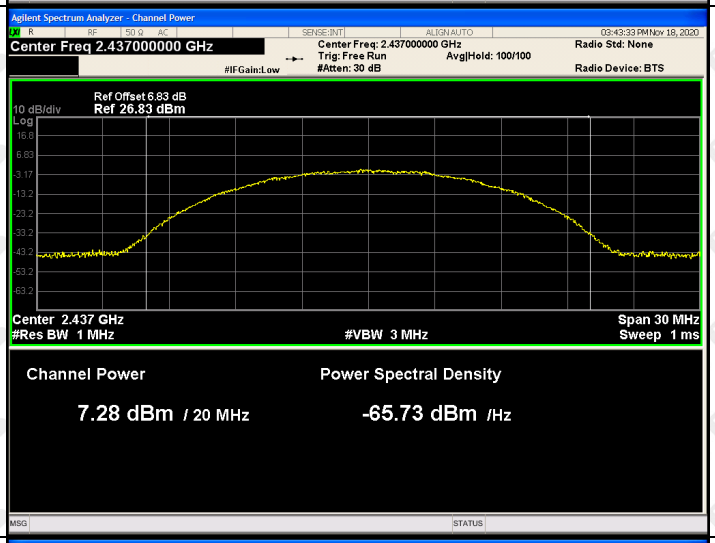
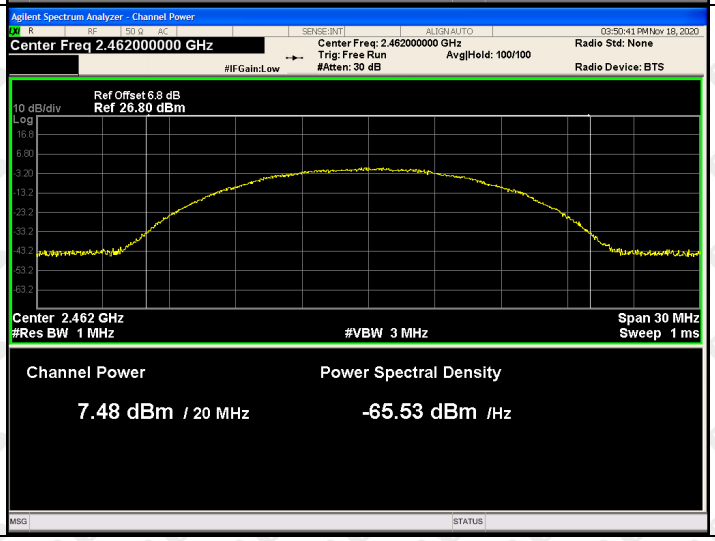
ANT 1

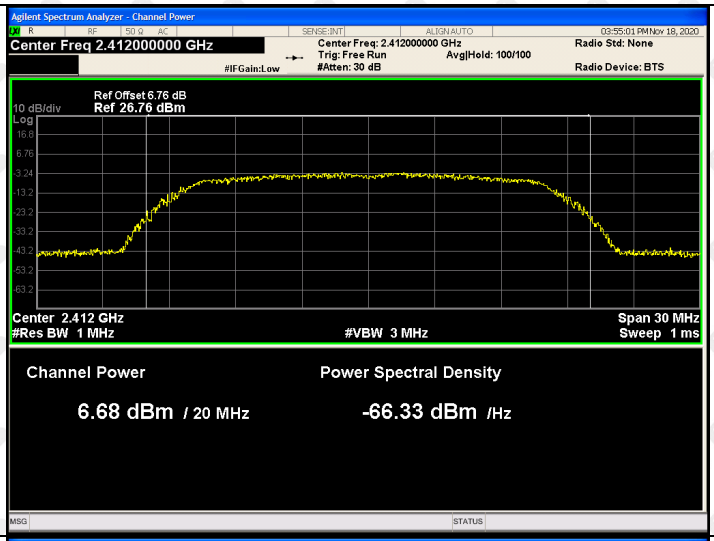
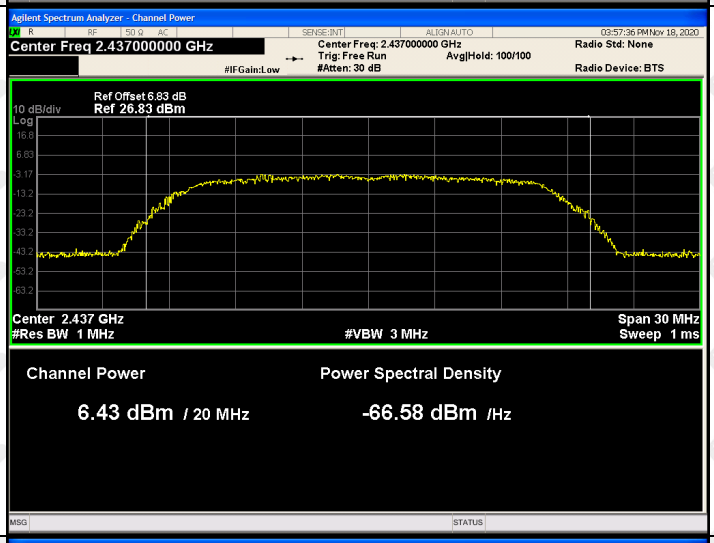
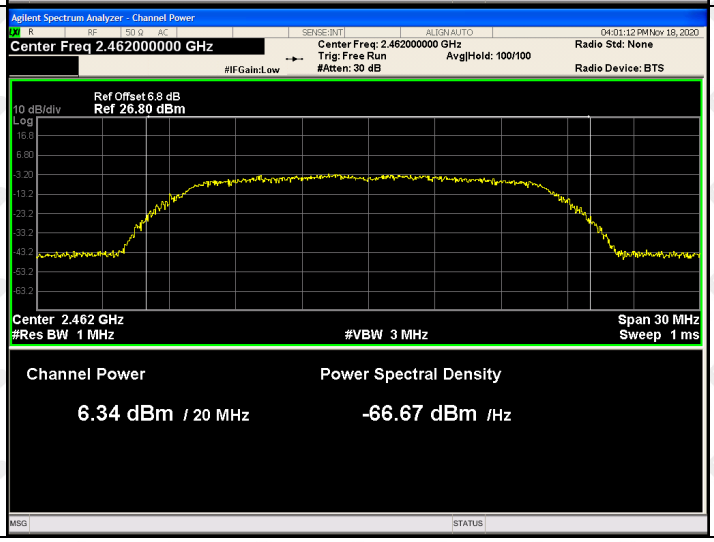
Mode	Channel.	Maximum Output Power [dBm]	Limit[dBm]	Verdict
802.11b	LCH	7.558	30	PASS
	MCH	7.28	30	PASS
	HCH	7.479	30	PASS
802.11g	LCH	6.684	30	PASS
	MCH	6.426	30	PASS
	HCH	6.337	30	PASS
802.11n(HT20)	LCH	5.801	30	PASS
	MCH	5.455	30	PASS
	HCH	5.000	30	PASS
802.11n(HT40)	LCH	3.863	30	PASS
	MCH	3.978	30	PASS
	HCH	3.976	30	PASS

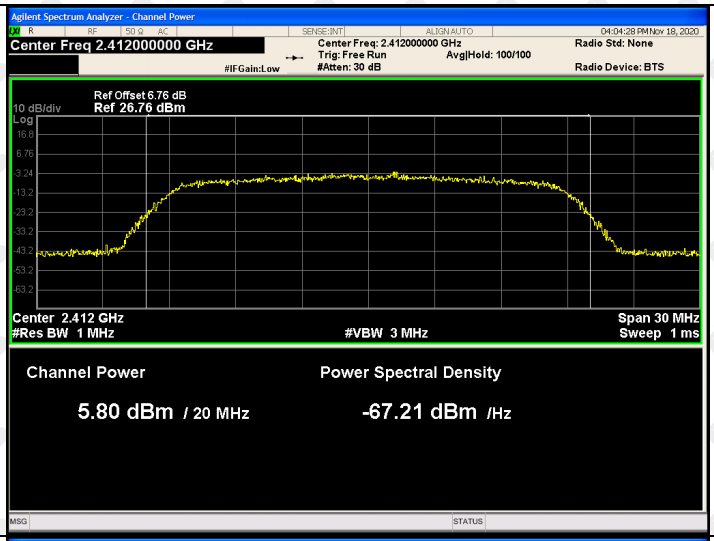
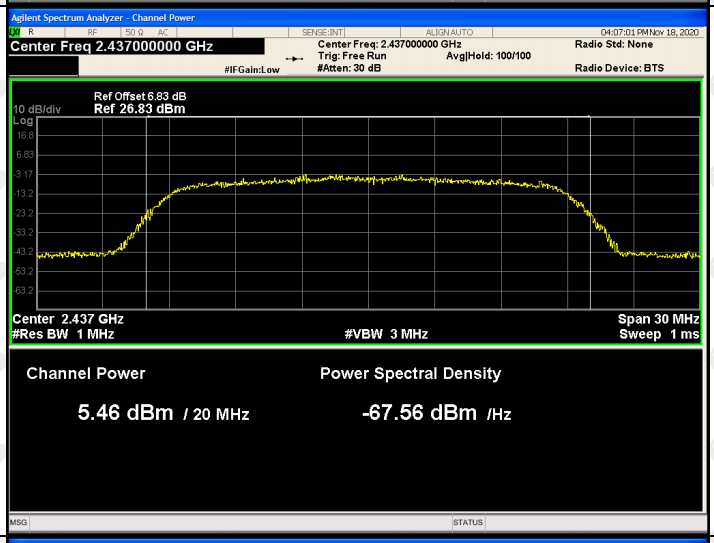
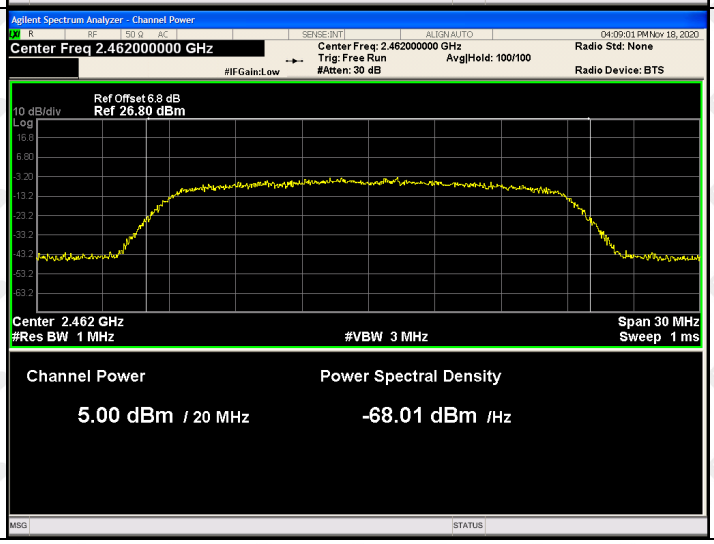
ANT 2 +ANT 3

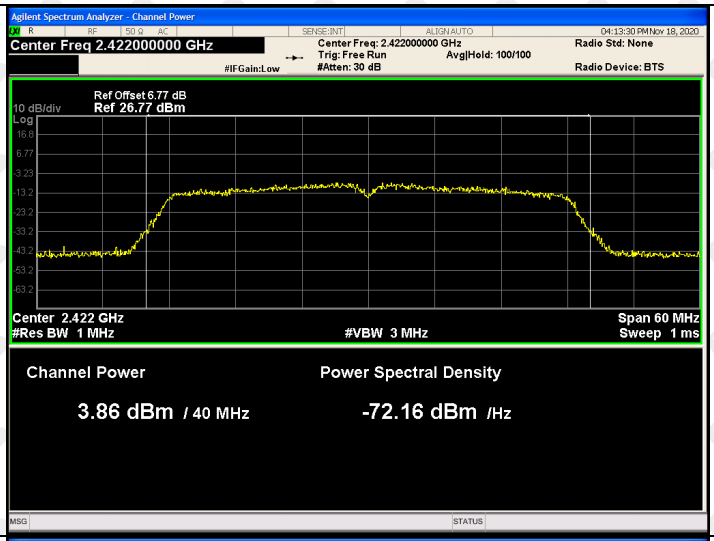
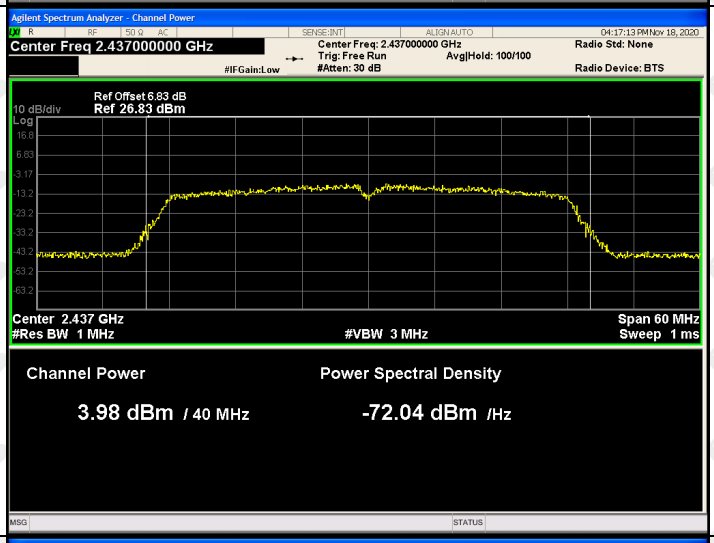
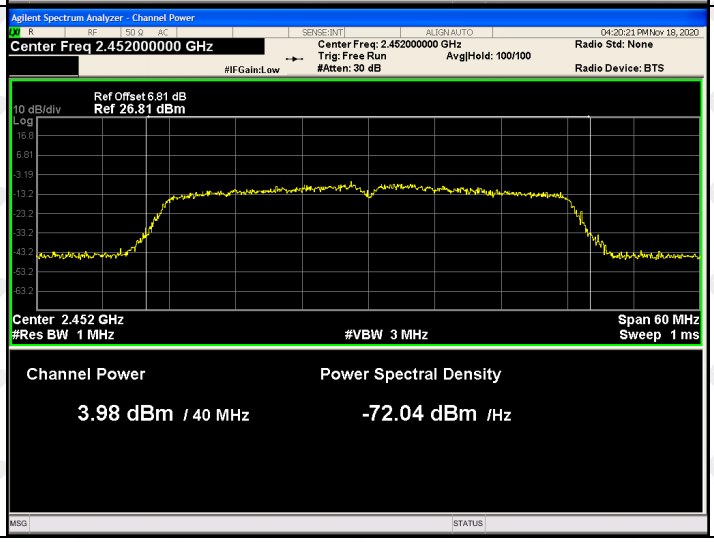
Mode	Channel.	Maximum Output Power [dBm] ant 2	Maximum Output Power [dBm] ant 3	Total Power Conducted Output Power(PK)	Limit[dBm]
802.11b	LCH	7.545	7.677	\	30
	MCH	7.21	7.371	\	30
	HCH	7.469	7.643	\	30
802.11g	LCH	6.592	6.775	\	30
	MCH	6.255	6.332	\	30
	HCH	6.449	6.492	\	30
802.11n(HT20)	LCH	5.343	5.862	8.621	30
	MCH	5.082	5.507	8.311	30
	HCH	5.622	5.643	8.643	30
802.11n(HT40)	LCH	3.384	3.847	6.632	30
	MCH	3.371	3.921	6.665	30
	HCH	3.878	3.773	6.836	30

ANT1

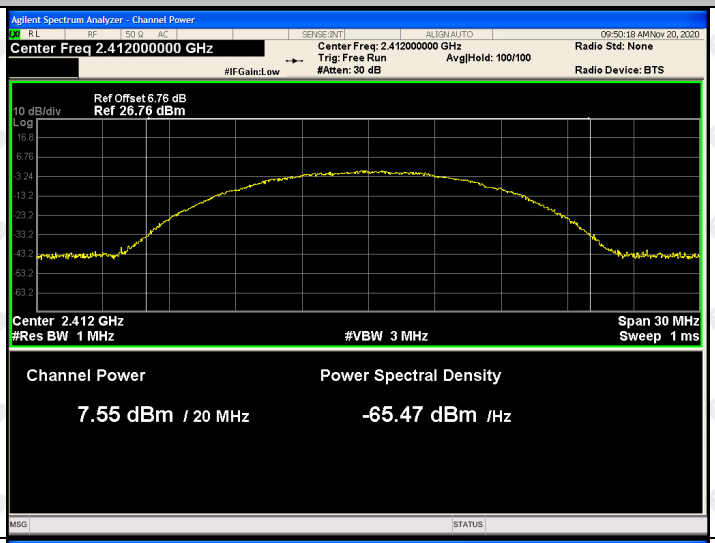
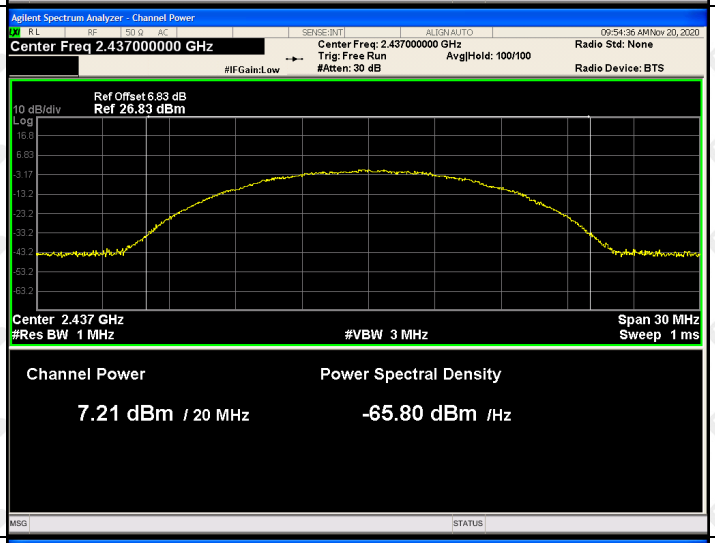
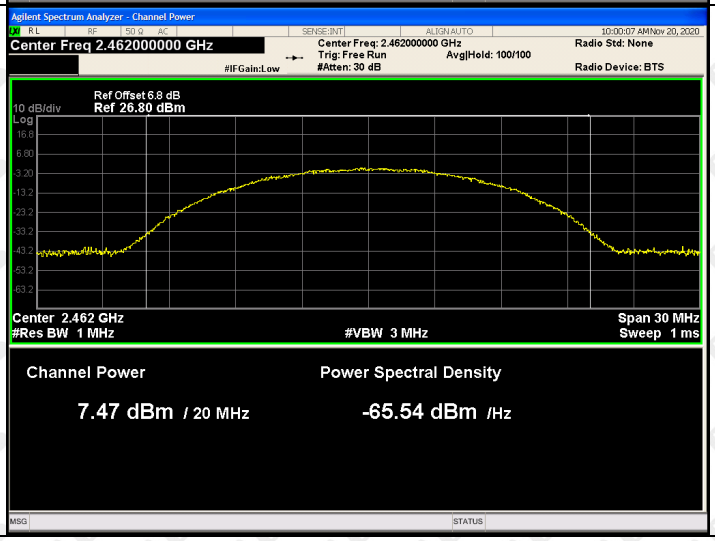
Mode	Channel.	Maximum Output Power [dBm]
802.11b	LCH	
	MCH	
	HCH	

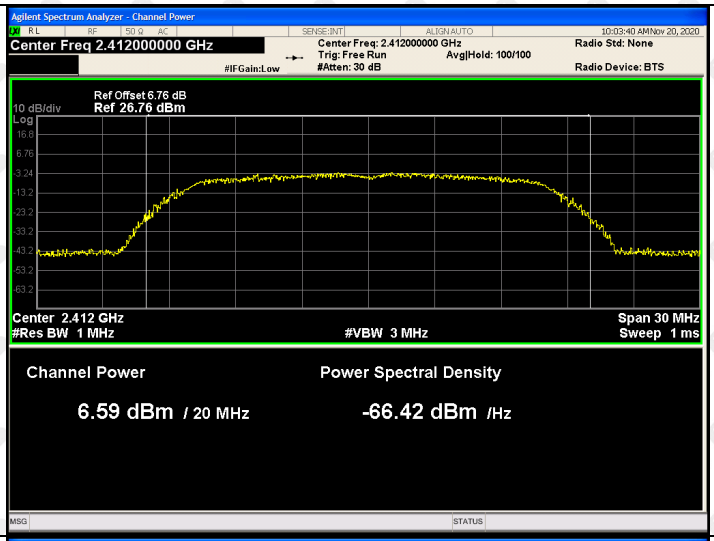
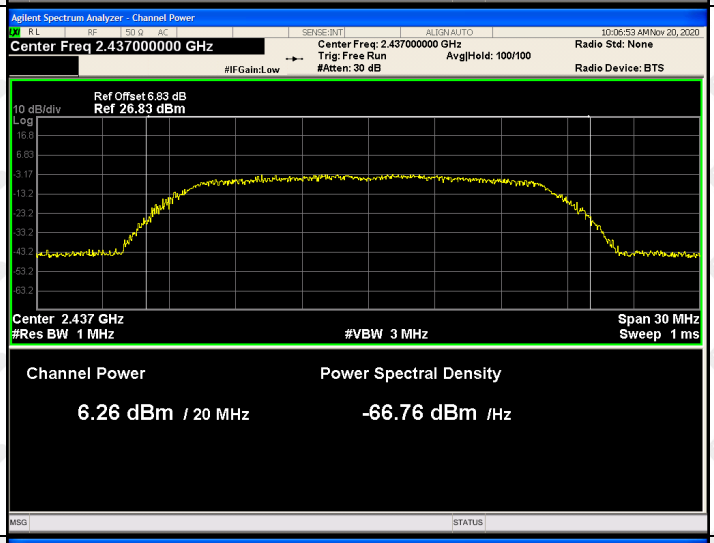
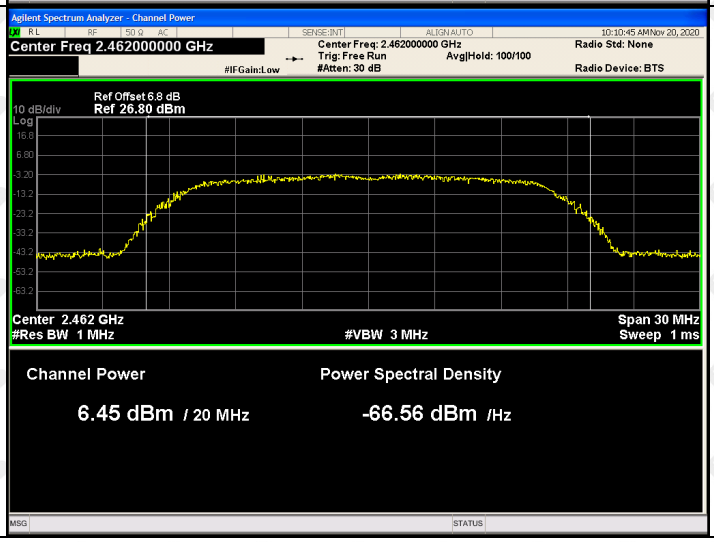
802.11g	LCH		
	MCH		
	HCH		

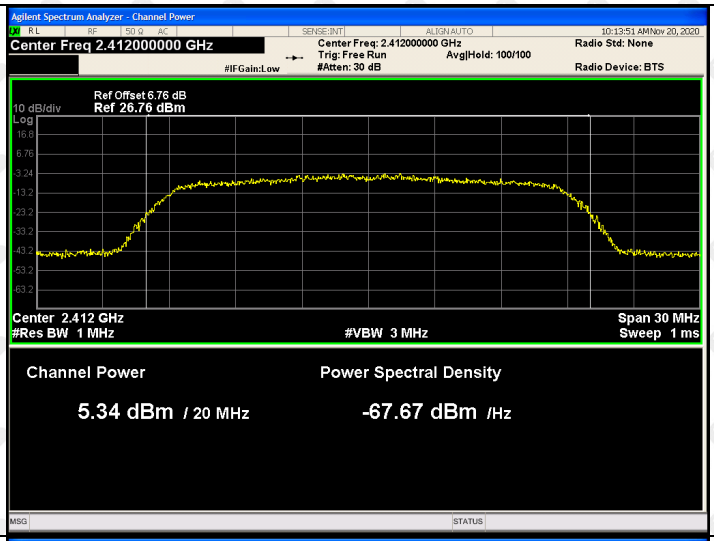
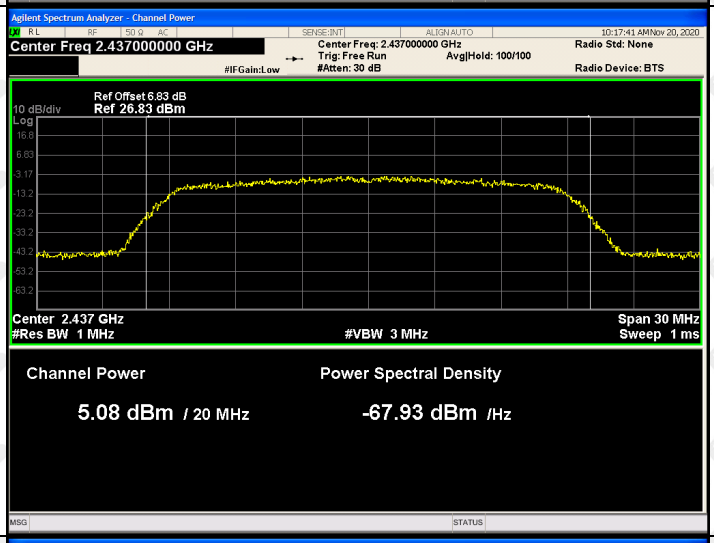
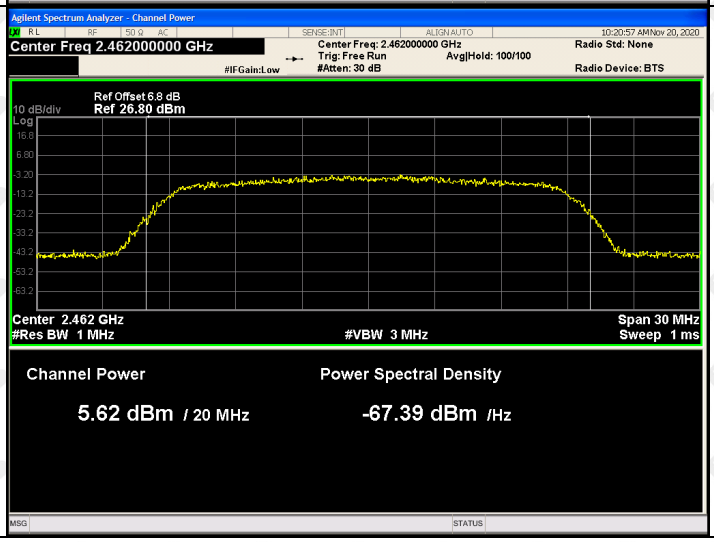
802.11n(HT20)	LCH		
	MCH		
	HCH		

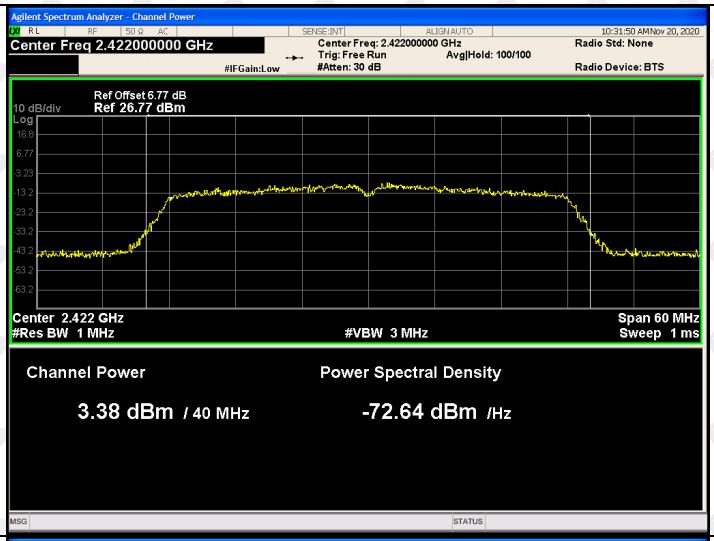
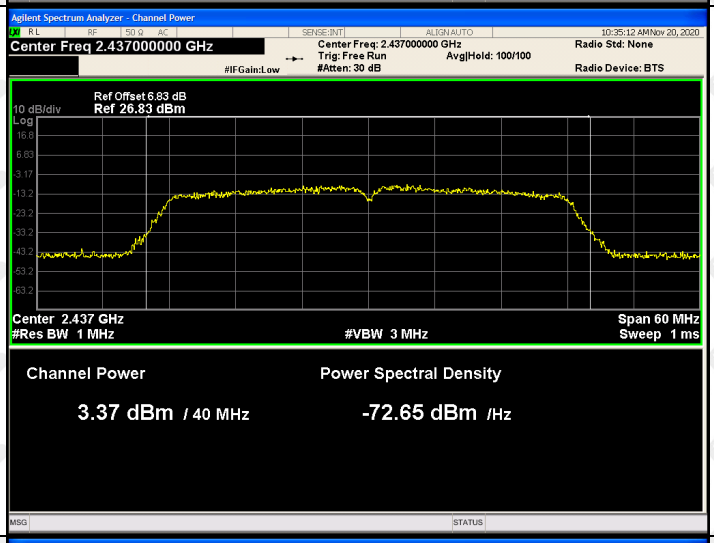
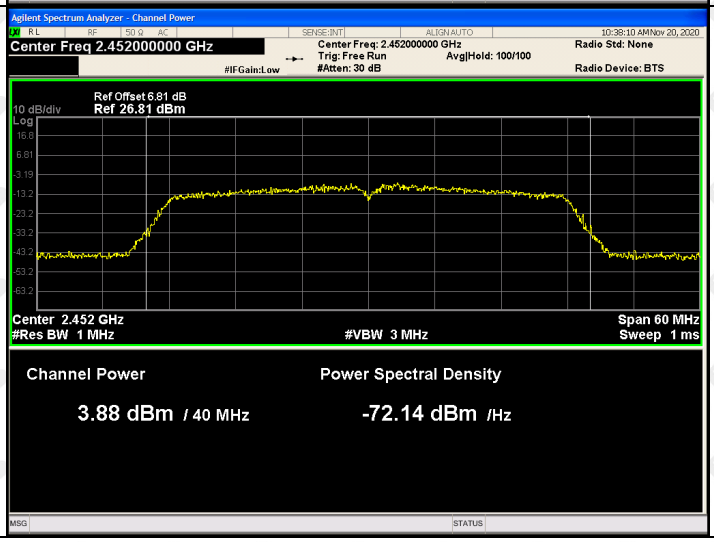
802.11n(HT40)	LCH			
	MCH			
	HCH			

ANT2

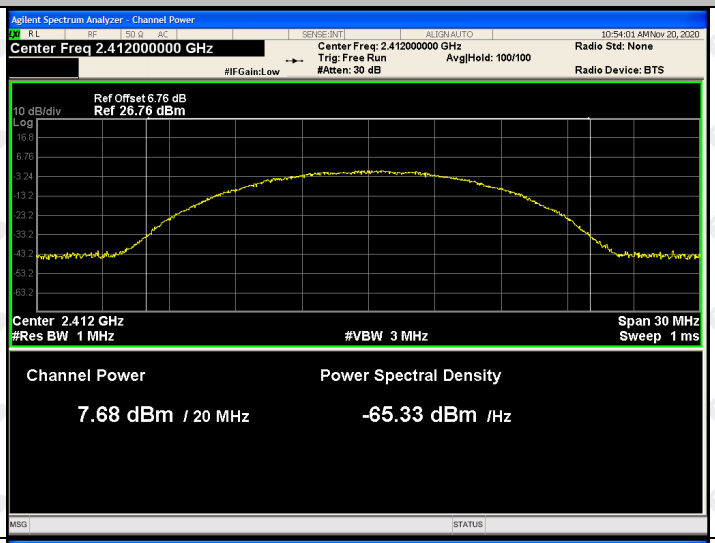
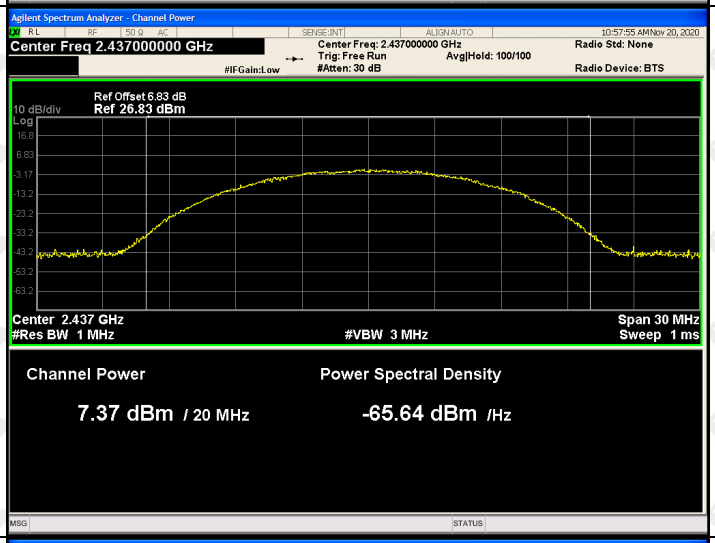
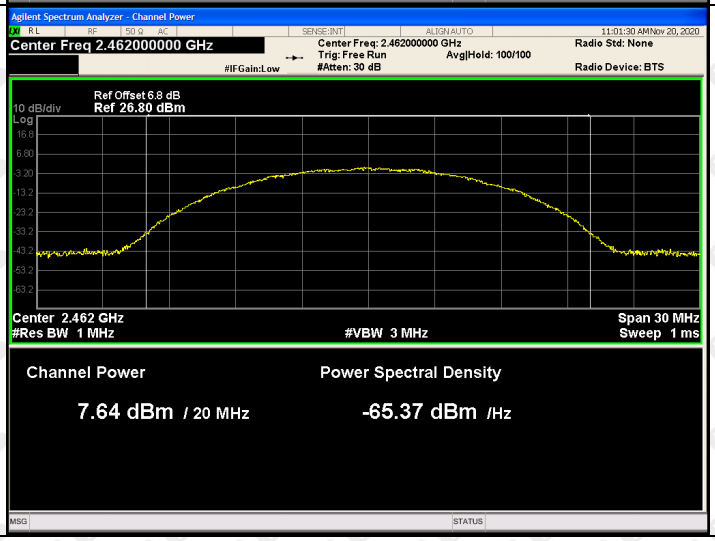
Mode	Channel.	Maximum Output Power [dBm]
802.11b	LCH	
	MCH	
	HCH	

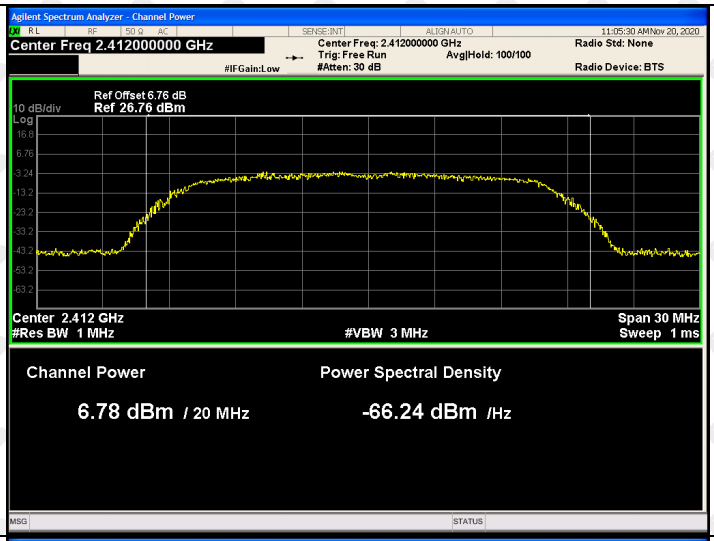
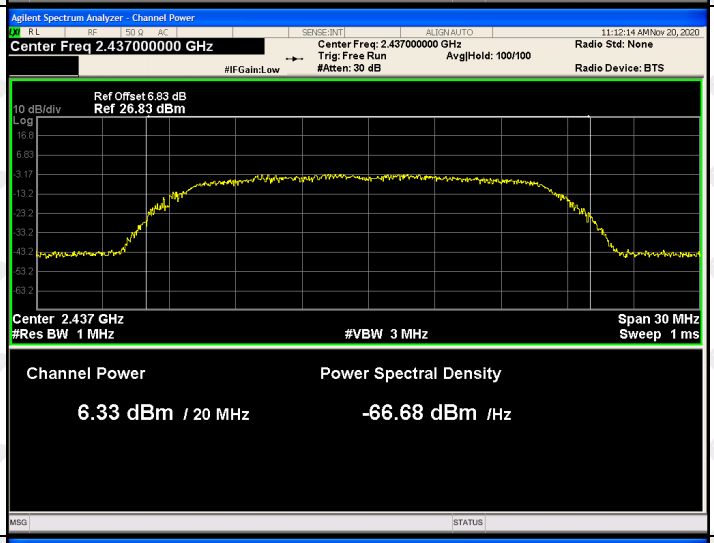
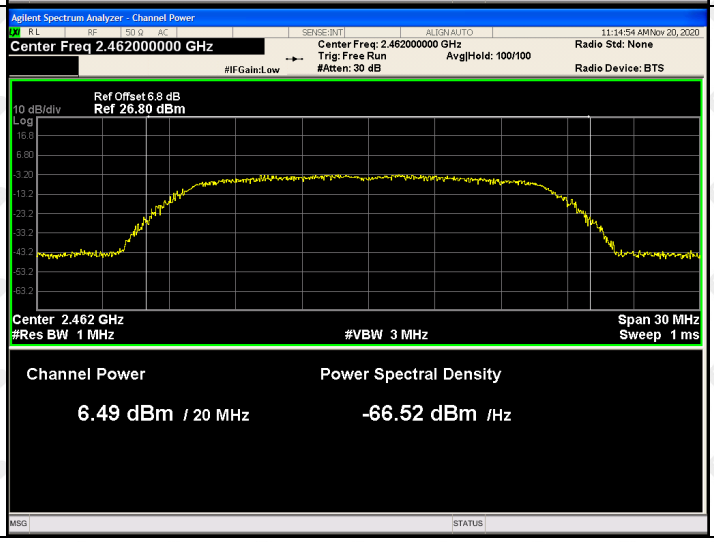
802.11g	LCH		
	MCH		
	HCH		

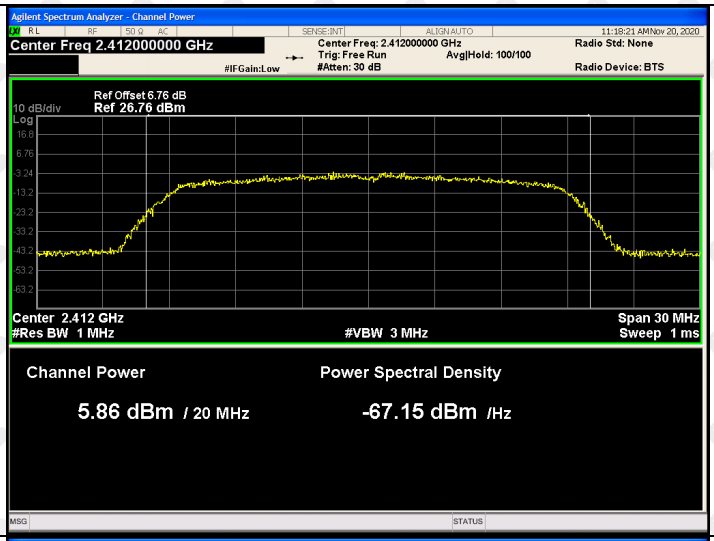
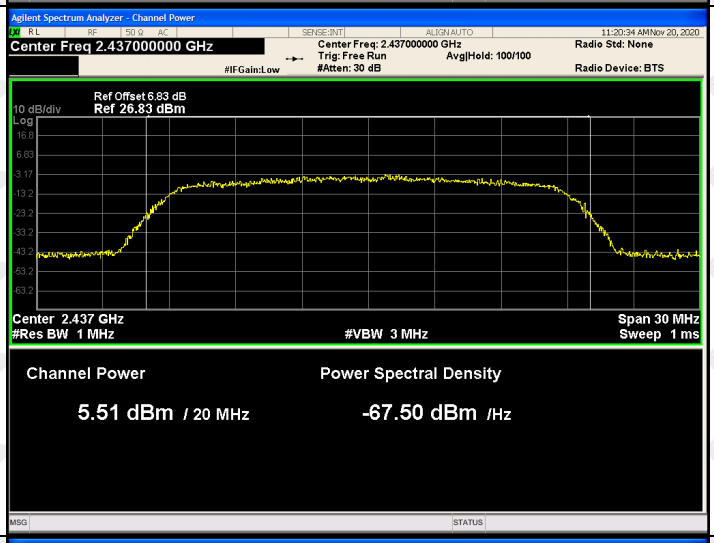
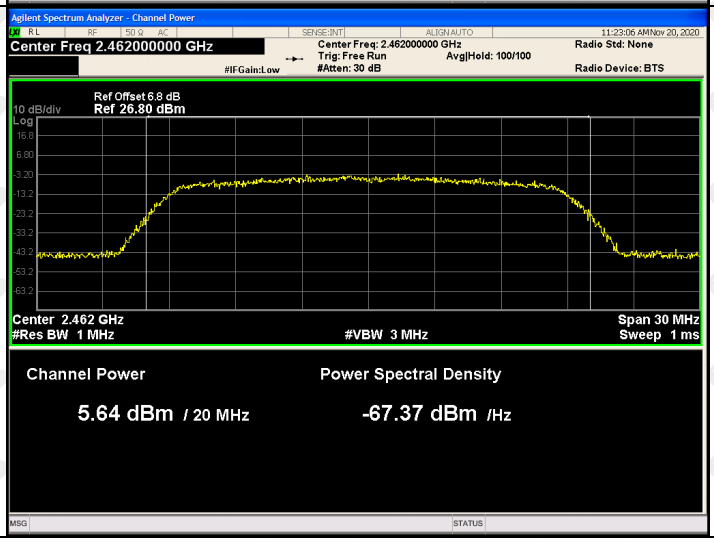
802.11n(HT20)	LCH			
	MCH			
	HCH			

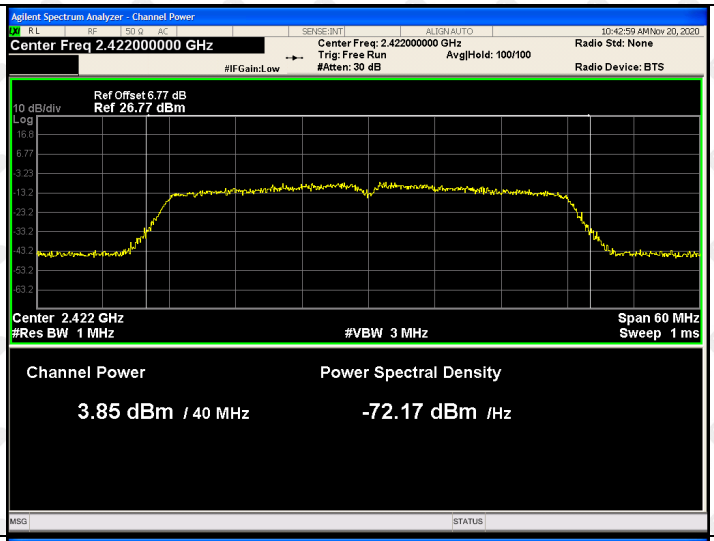
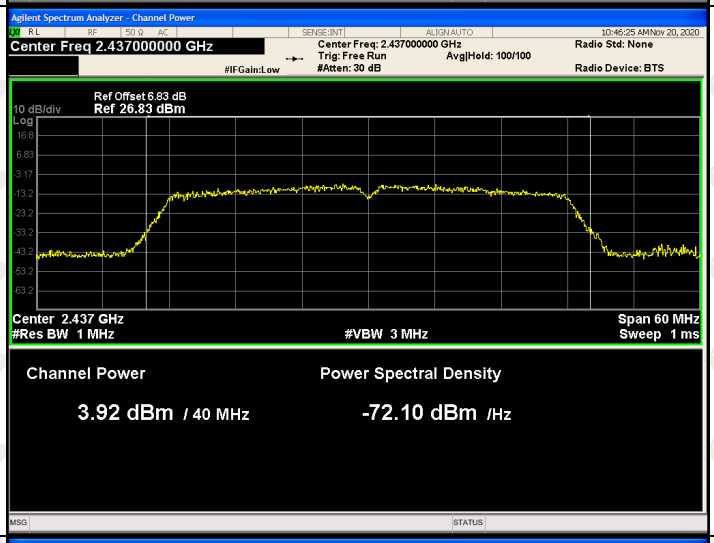
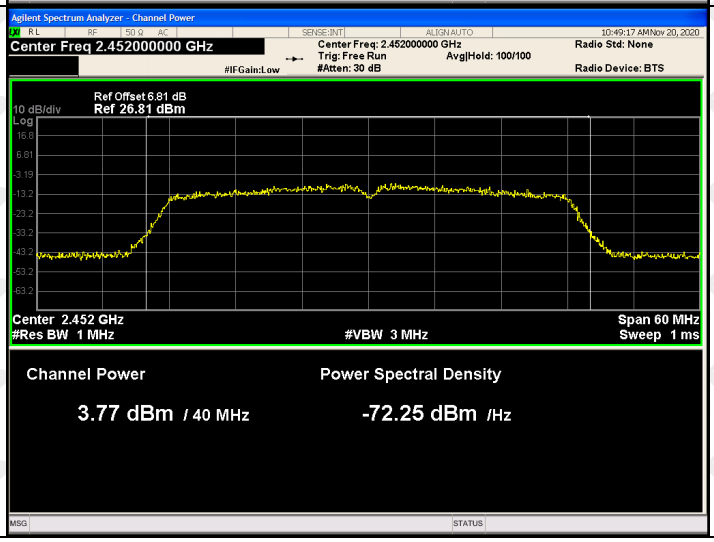
802.11n(HT40)	LCH		
	MCH		
	HCH		

ANT3

Mode	Channel.	Maximum Output Power [dBm]
802.11b	LCH	
	MCH	
	HCH	

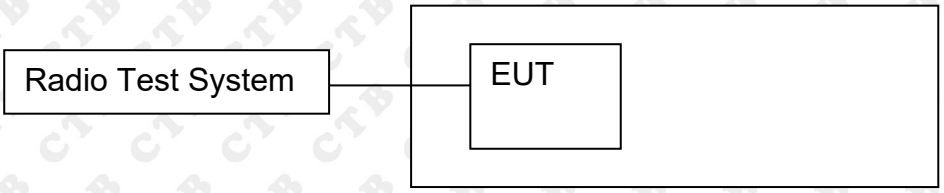
802.11g	LCH		
	MCH		
	HCH		

802.11n(HT20)	LCH		
	MCH		
	HCH		

802.11n(HT40)	LCH		
	MCH		
	HCH		

10. 6DB OCCUPIED BANDWIDTH

10.1 Block Diagram Of Test Setup



10.2 Limit

FCC Part15 (15.247) , Subpart C				
Section	Test Item	Limit	Frequency Range (MHz)	Result
15.247(a)(2)	Bandwidth	>= 500KHz (6dB bandwidth)	2400-2483.5	PASS

10.3 Test procedure

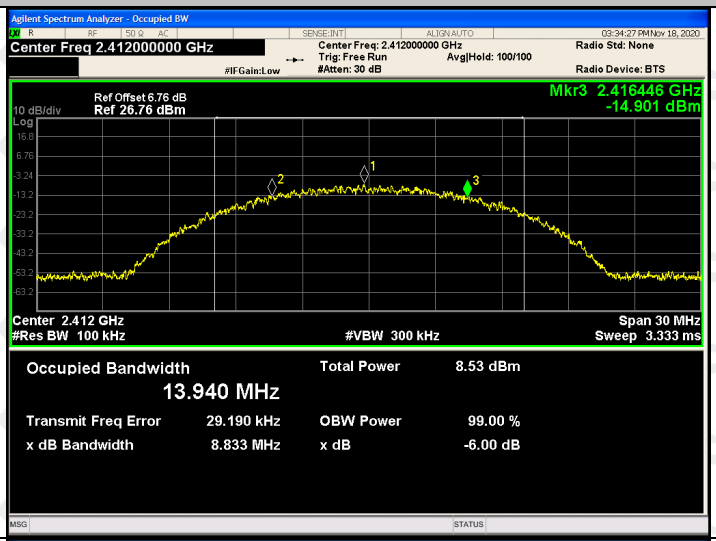
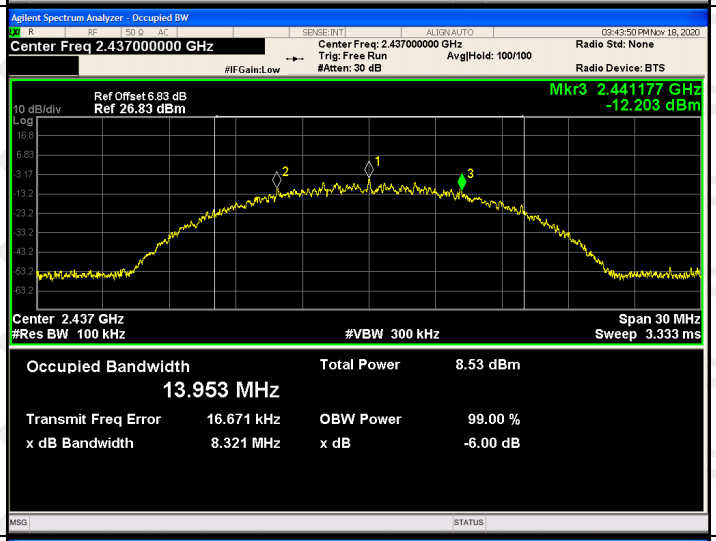
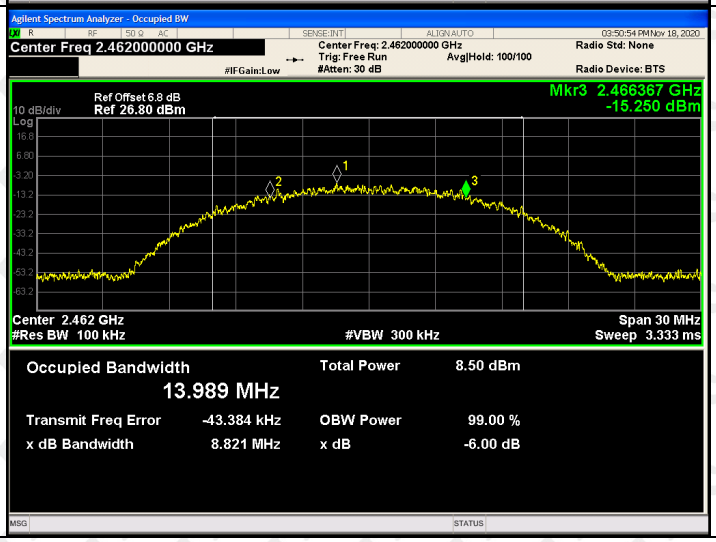
1. Rem1. Set RBW = 100 kHz.
2. Set the video bandwidth (VBW) ≥ 3 x RBW.
3. Detector = Peak.
4. Trace mode = max hold.
5. Sweep = auto couple.
6. Allow the trace to stabilize.
7. Measure the maximum width of the emission that is constrained by the frequencies associated with the two outermost amplitude points (upper and lower frequencies) that are attenuated by 6 dB relative to the maximum level measured in the fundamental emission.

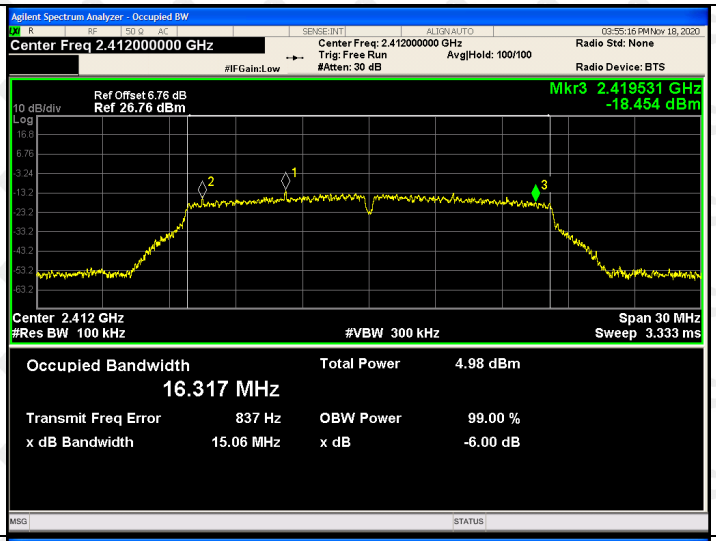
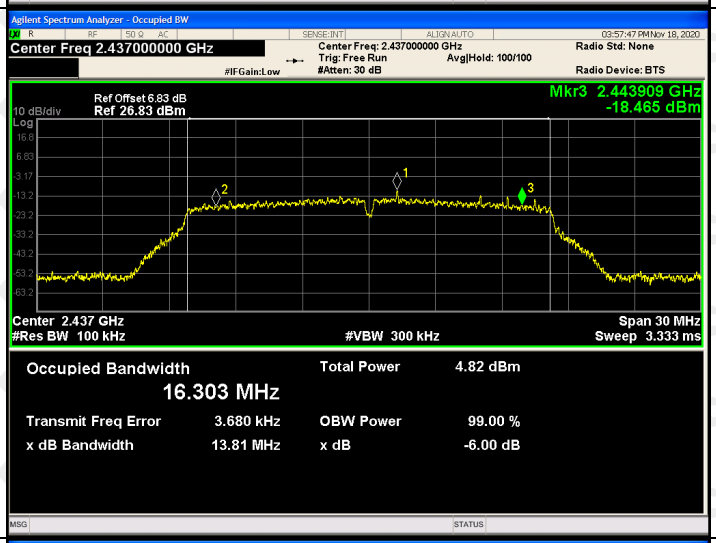
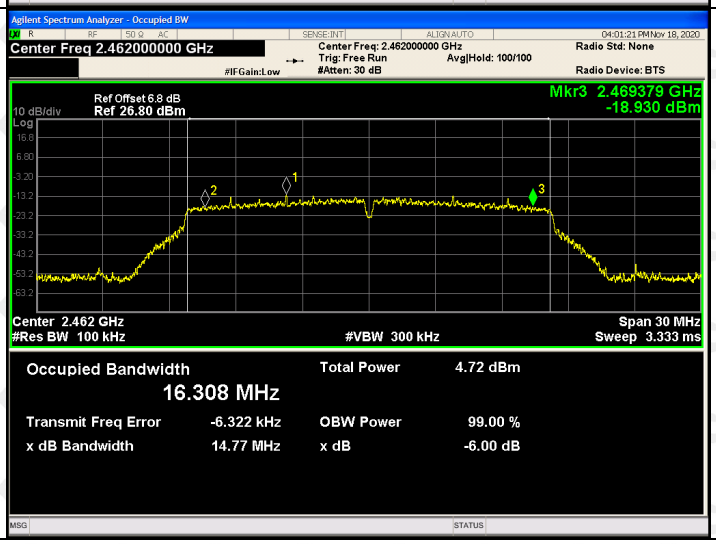
10.4 Test Result

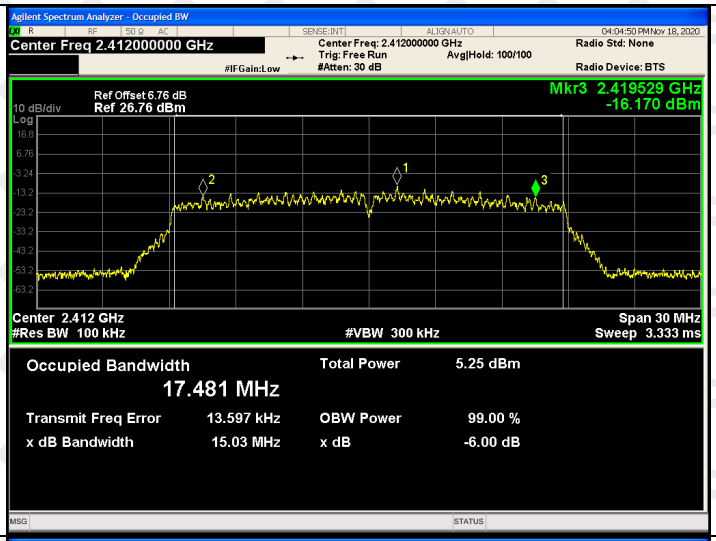
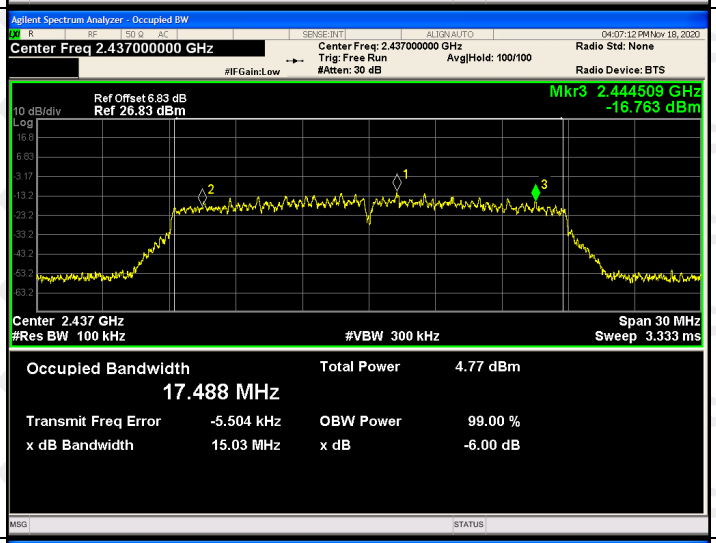
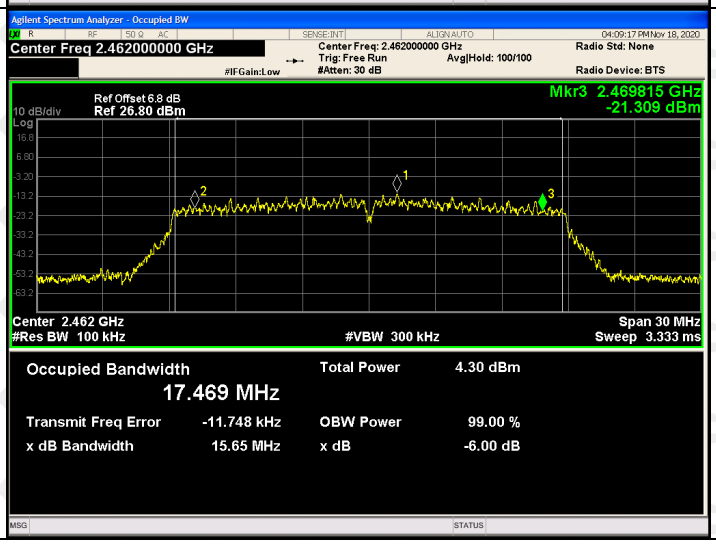
ANT 1

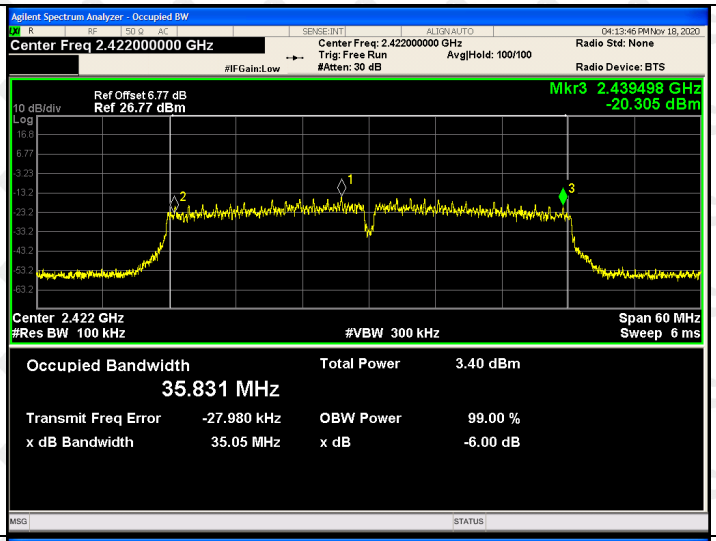
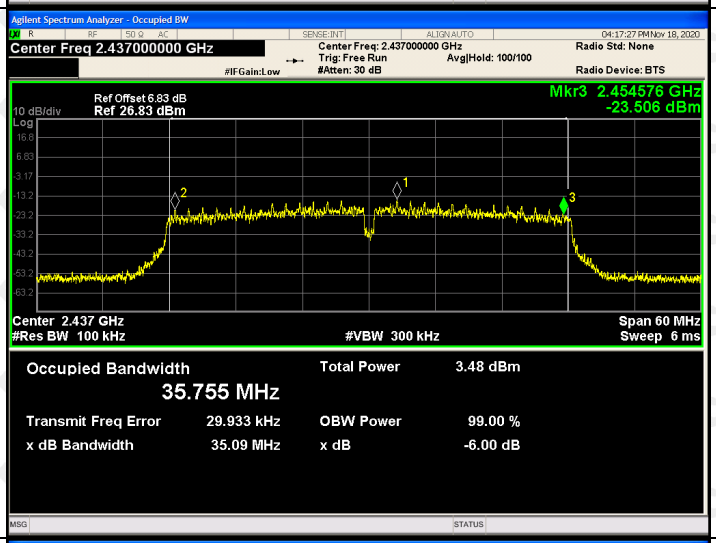
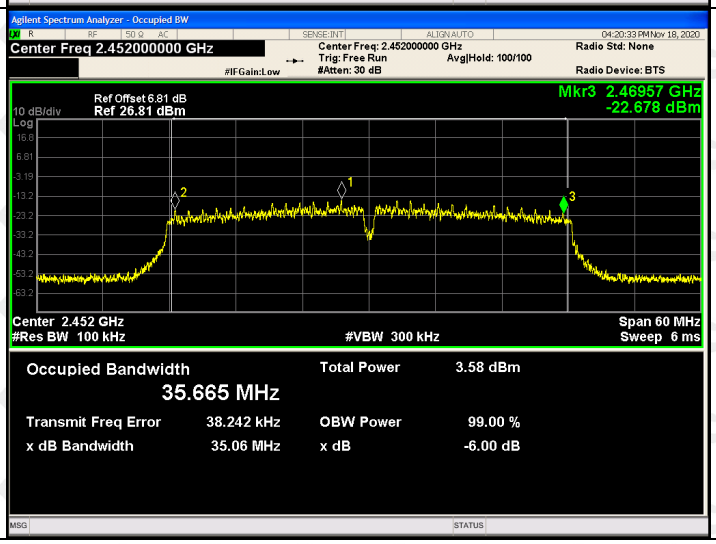
Test Mode	Frequency	6dB Bandwidth (MHz)	Limit(kHz)	Result
802.11b	LCH	8.833	500	**PASS**
	MCH	8.321	500	**PASS**
	HCH	8.821	500	**PASS**
802.11g	LCH	15.061	500	**PASS**
	MCH	13.811	500	**PASS**
	HCH	14.772	500	**PASS**
802.11n(HT20)	LCH	15.03	500	**PASS**
	MCH	15.028	500	**PASS**
	HCH	15.654	500	**PASS**
802.11n(HT40)	LCH	35.052	500	**PASS**
	MCH	35.092	500	**PASS**
	HCH	35.063	500	**PASS**

Test Graph1:

Graphs		
802.11b /LCH			
802.11b /MCH			
802.11b/HCH			

802.11g/LCH		
802.11g/MCH		
802.11g/HCH		

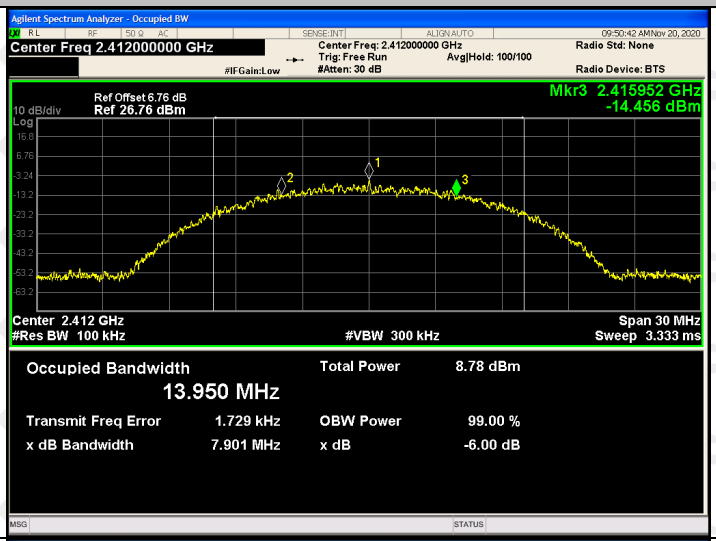
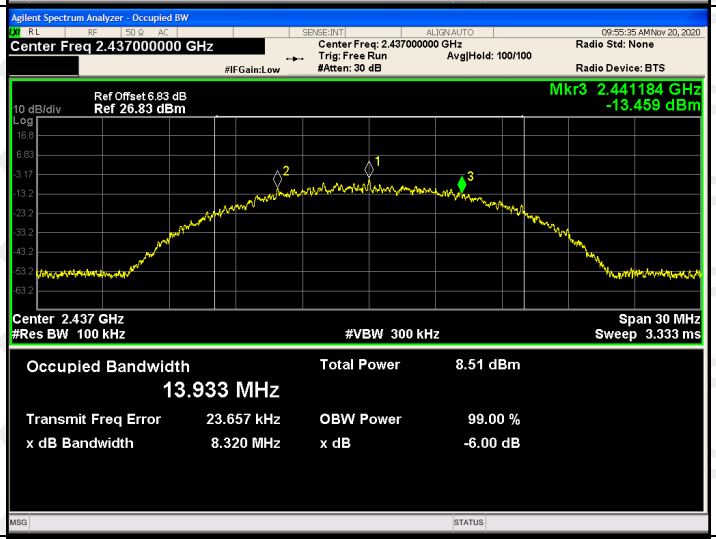
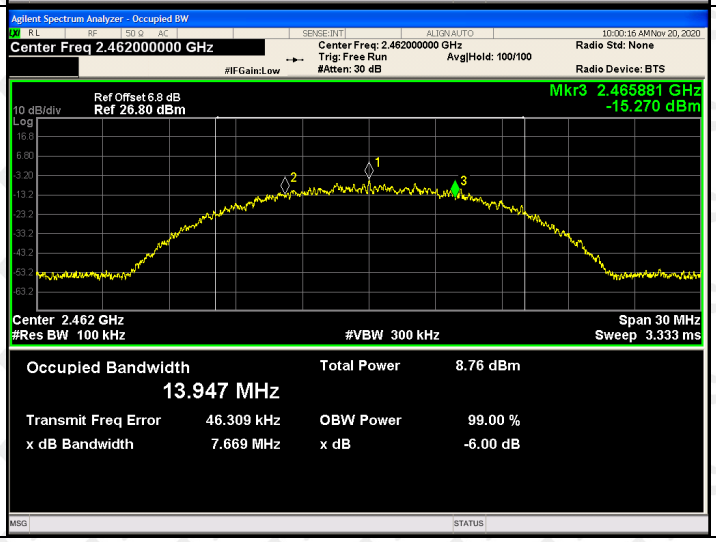
802.11n(HT20)/LCH		
802.11n(HT20)/MCH		
802.11n(HT20)/HCH		

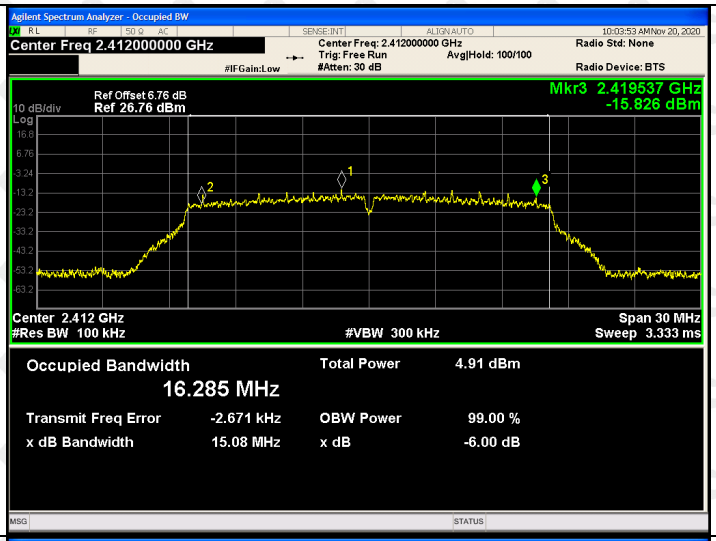
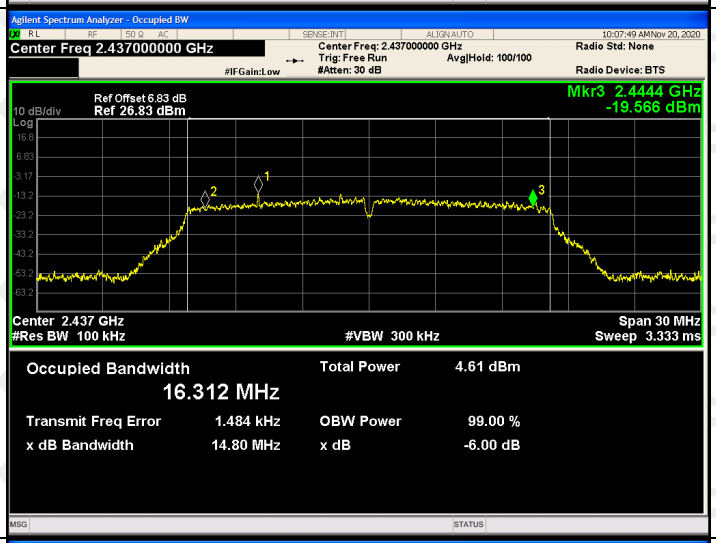
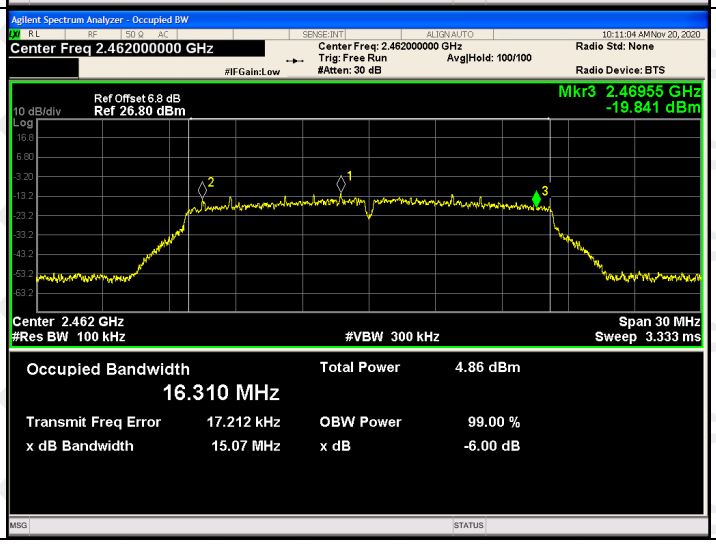
802.11n(HT40)/LCH		
802.11n(HT40)/MCH		
802.11n(HT40)/HCH		

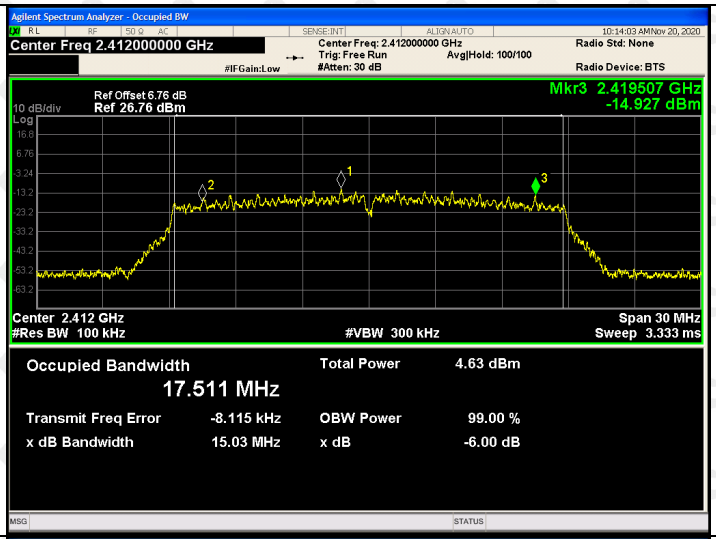
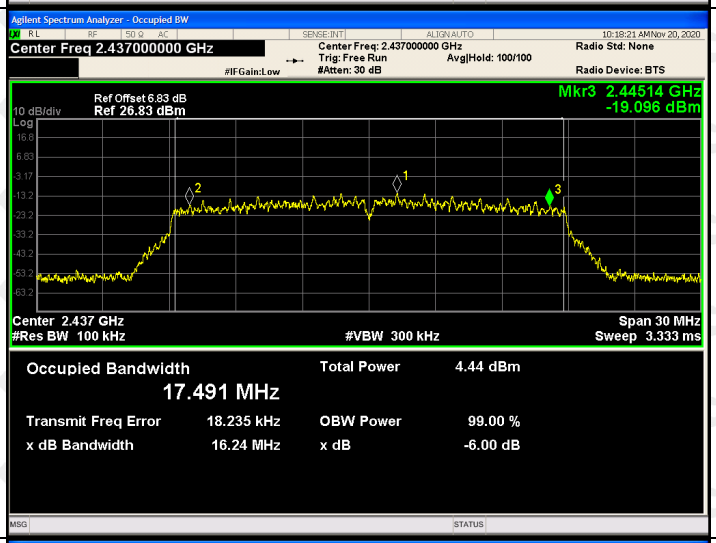
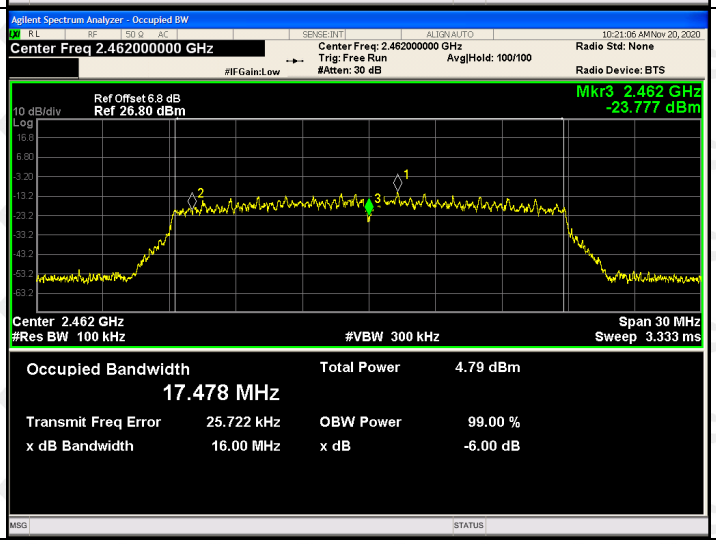
ANT 2

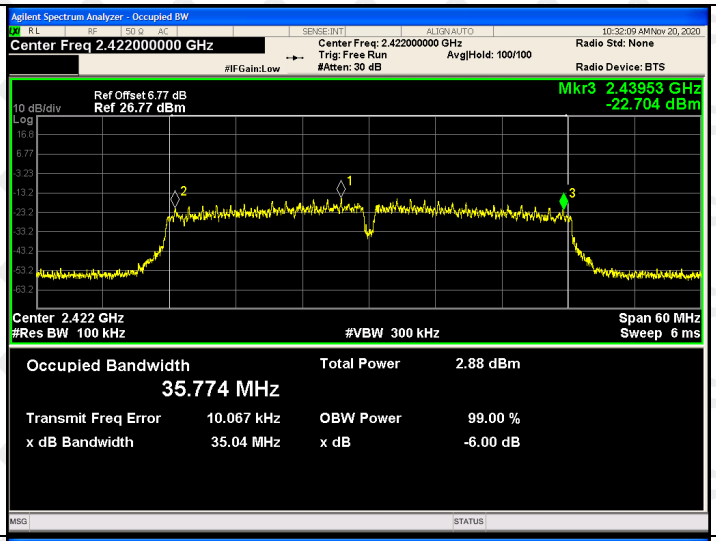
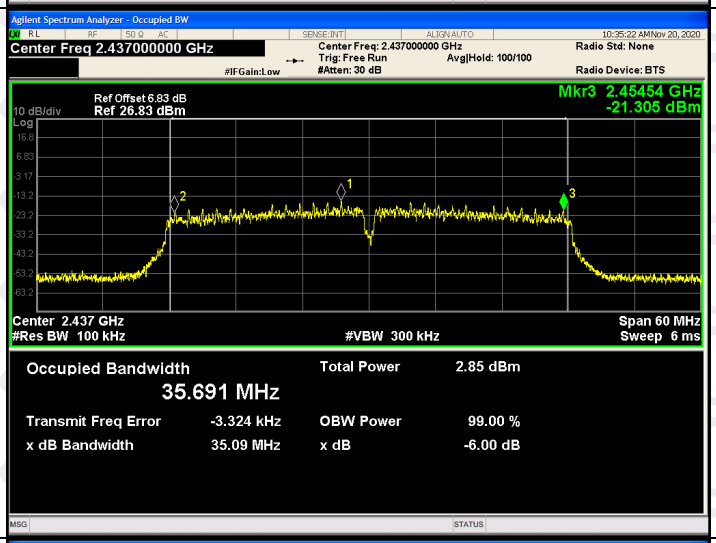
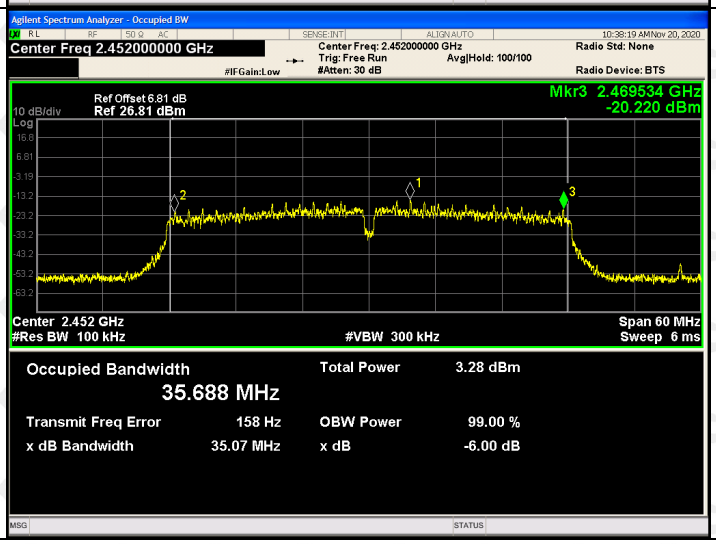
Test Mode	Frequency	6dB Bandwidth (MHz)	Limit(kHz)	Result
802.11b	LCH	7.901	500	**PASS**
	MCH	8.32	500	**PASS**
	HCH	7.669	500	**PASS**
802.11g	LCH	15.079	500	**PASS**
	MCH	14.798	500	**PASS**
	HCH	15.066	500	**PASS**
802.11n(HT20)	LCH	15.03	500	**PASS**
	MCH	16.244	500	**PASS**
	HCH	16.004	500	**PASS**
802.11n(HT40)	LCH	35.041	500	**PASS**
	MCH	35.086	500	**PASS**
	HCH	35.067	500	**PASS**

Test Graph:
ANT 2

Graphs		
802.11b /LCH		
802.11b /MCH		
802.11b/HCH		

802.11g/LCH		
802.11g/MCH		
802.11g/HCH		

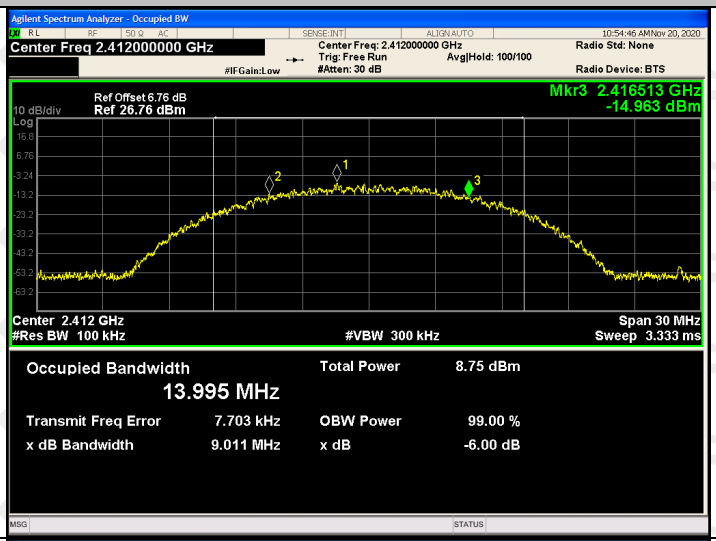
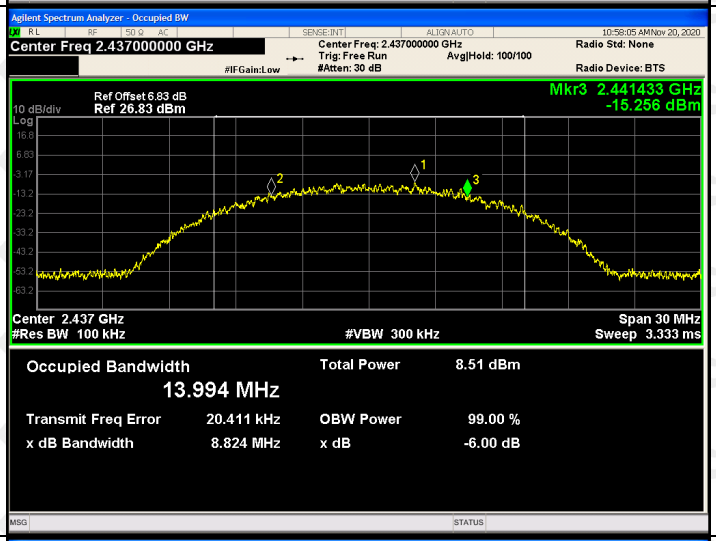
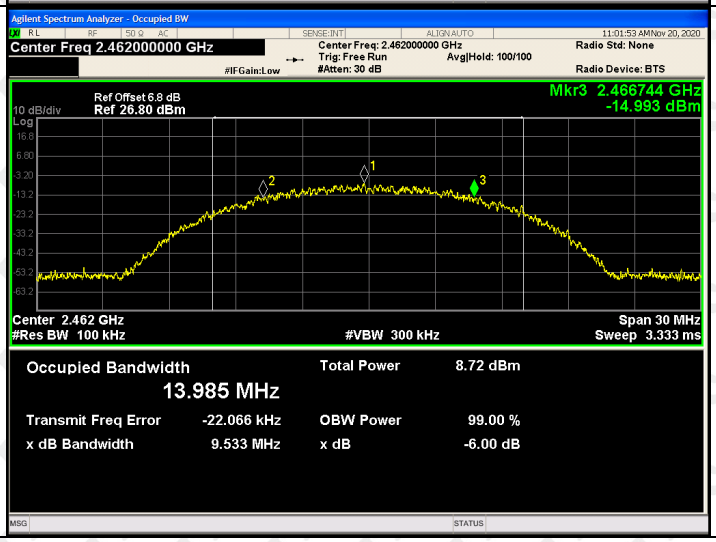
802.11n(HT20)/LCH		
802.11n(HT20)/MCH		
802.11n(HT20)/HCH		

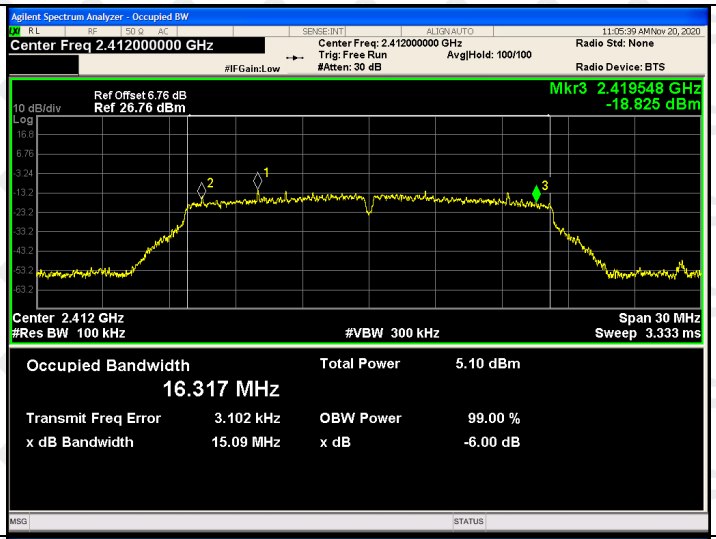
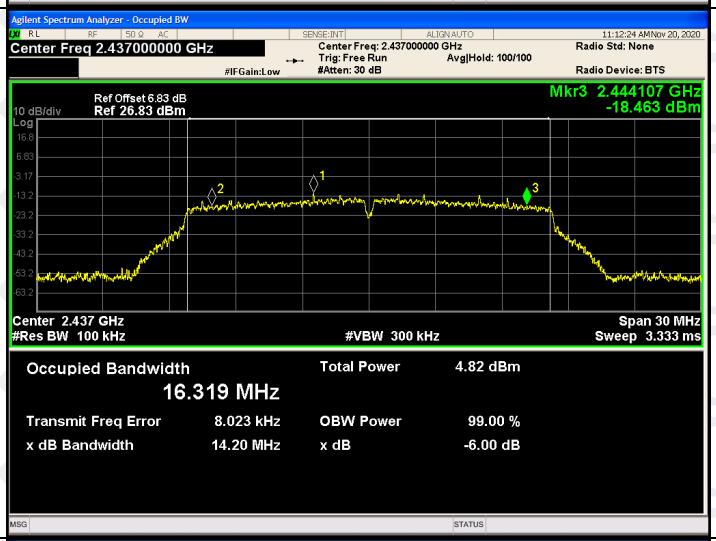
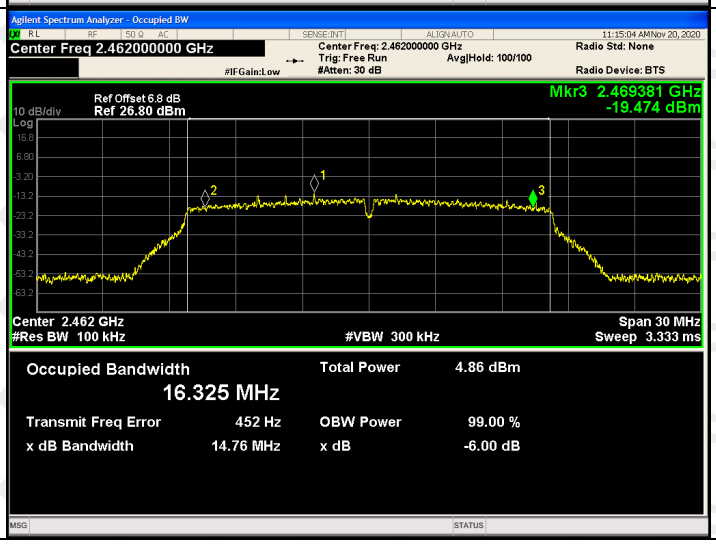
802.11n(HT40)/LCH		
802.11n(HT40)/MCH		
802.11n(HT40)/HCH		

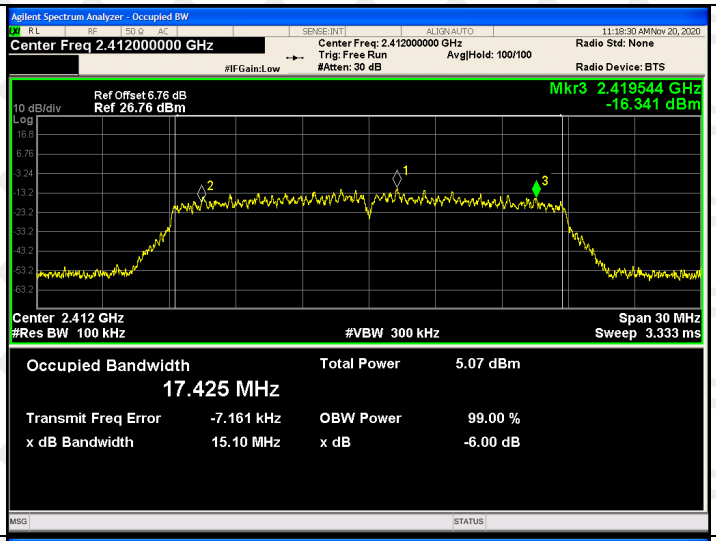
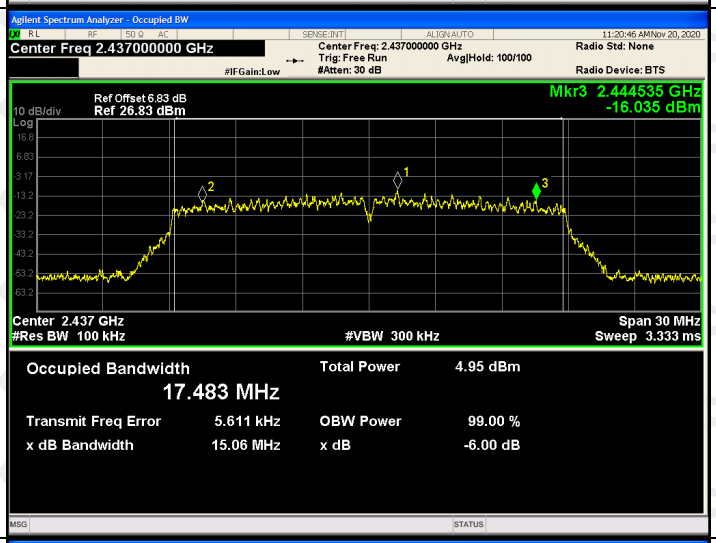
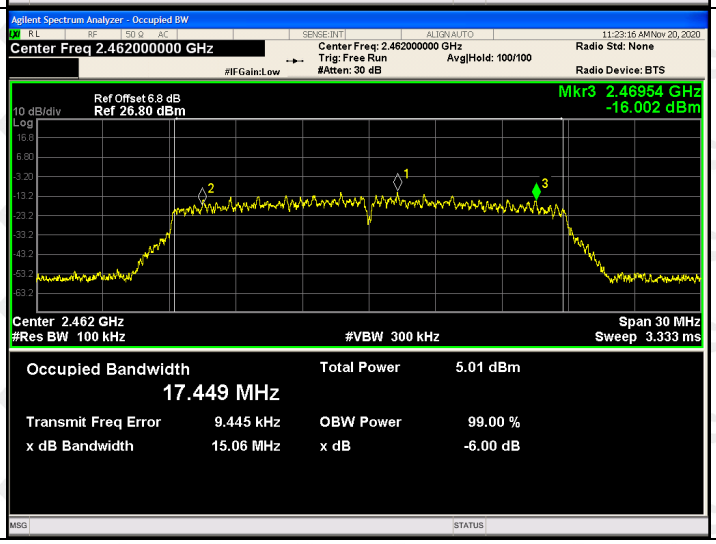
ANT 3

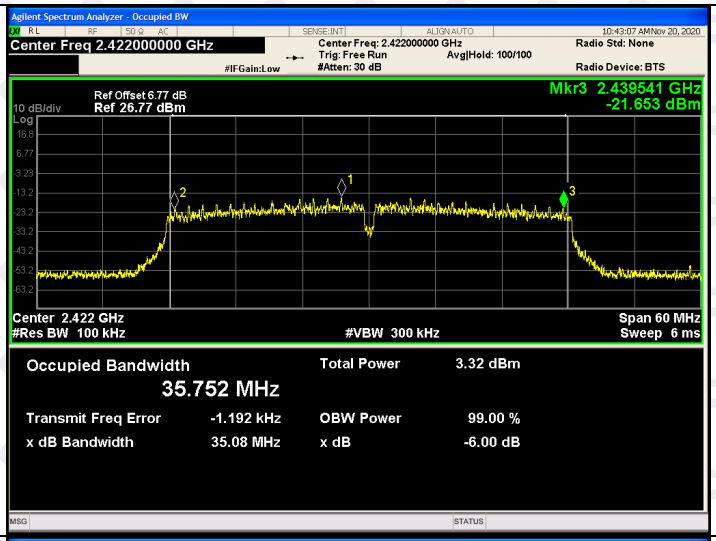
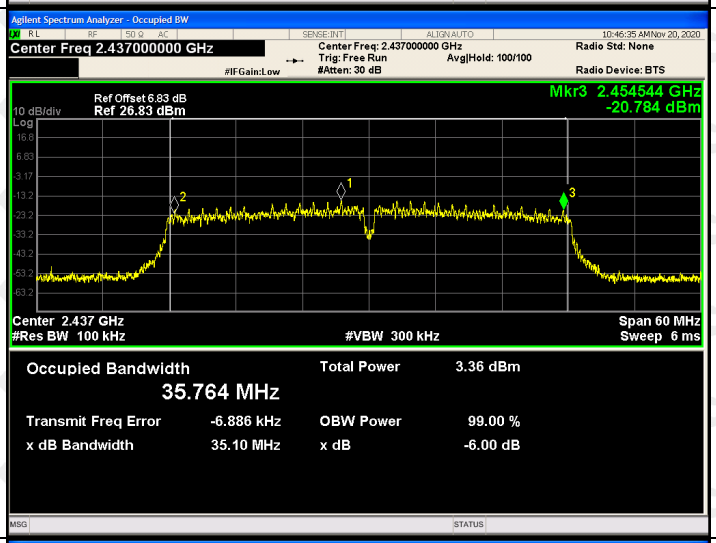
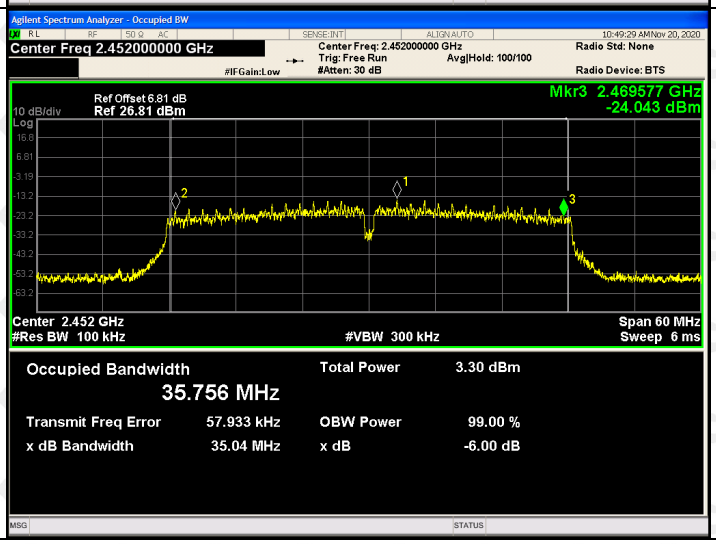
Test Mode	Frequency	6dB Bandwidth (MHz)	Limit(kHz)	Result
802.11b	LCH	9.011	500	**PASS**
	MCH	8.824	500	**PASS**
	HCH	9.533	500	**PASS**
802.11g	LCH	15.089	500	**PASS**
	MCH	14.198	500	**PASS**
	HCH	14.762	500	**PASS**
802.11n(HT20)	LCH	15.103	500	**PASS**
	MCH	15.058	500	**PASS**
	HCH	15.061	500	**PASS**
802.11n(HT40)	LCH	35.085	500	**PASS**
	MCH	35.102	500	**PASS**
	HCH	35.037	500	**PASS**

Test Graph:

Graphs		
802.11b /LCH		
802.11b /MCH		
802.11b/HCH		

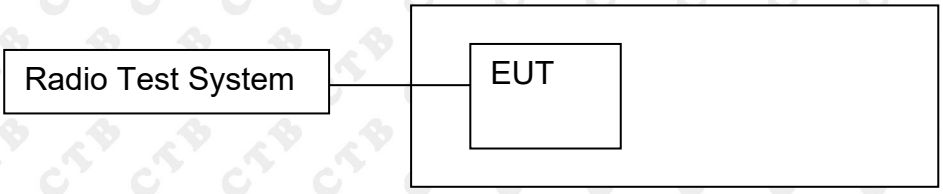
802.11g/LCH		
802.11g/MCH		
802.11g/HCH		

802.11n(HT20)/LCH		
802.11n(HT20)/MCH		
802.11n(HT20)/HCH		

802.11n(HT40)/LCH		
802.11n(HT40)/MCH		
802.11n(HT40)/HCH		

11. POWER SPECTRAL DENSITY

11.1 Block Diagram Of Test Setup



11.2 Limit

FCC Part15 (15.247) , Subpart C				
Section	Test Item	Limit	Frequency Range (MHz)	Result
15.247	Power Spectral Density	8 dBm (in any 3KHz)	2400-2483.5	PASS

11.3 Test procedure

1. Set analyzer center frequency to DTS channel center frequency.
2. Set the span to 1.5 times the DTS bandwidth.
3. Set the RBW to: 3 kHz ≤ RBW ≤ 100 kHz.
4. Set the VBW ≥ 3 x RBW.
5. Detector = RMS.
6. Sweep time = auto couple.
7. Trace mode = max hold.
8. Allow trace to fully stabilize.
9. Use the peak marker function to determine the maximum amplitude level within the RBW.
10. If measured value exceeds limit, reduce RBW (no less than 3 kHz) and repeat.

11.4 Test Result

ANT 1

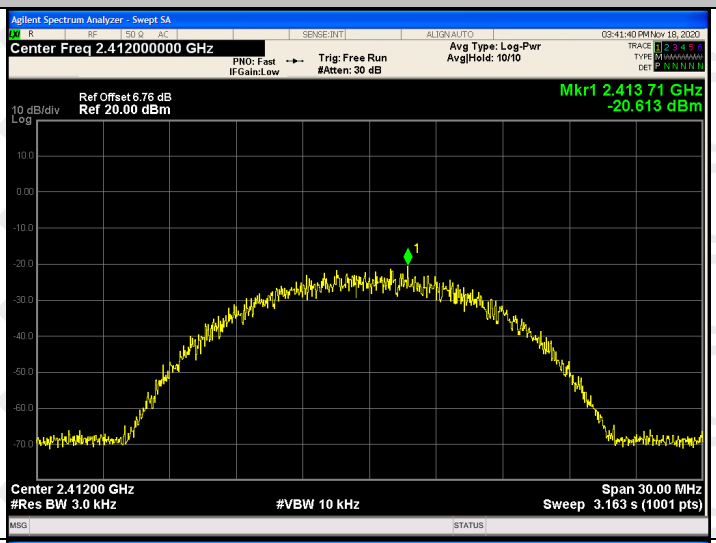
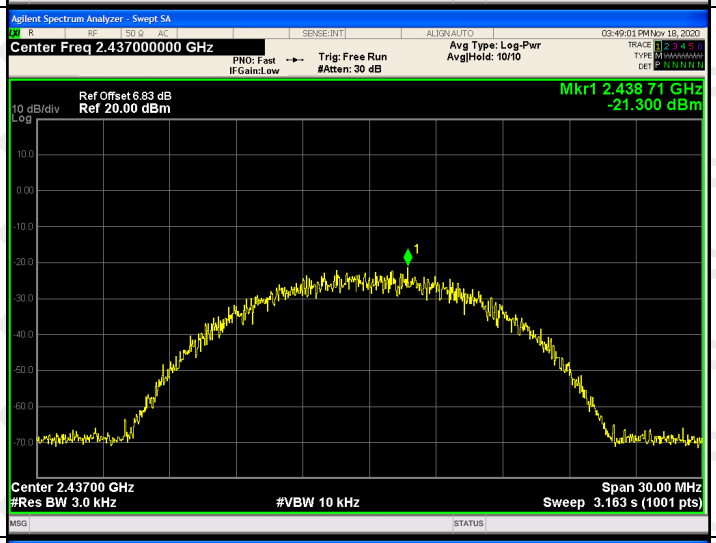
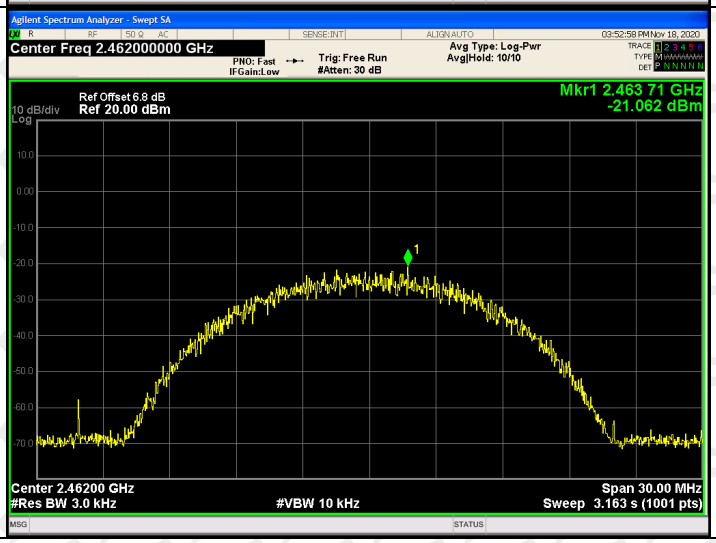
Mode	Channel.	Power Spectral Density (dBm/3KHz)	Limit(dBm)	Verdict
802.11b	LCH	-20.613	8	PASS
	MCH	-21.3	8	PASS
	HCH	-21.062	8	PASS
802.11g	LCH	-25.592	8	PASS
	MCH	-26.118	8	PASS
	HCH	-27.038	8	PASS
802.11n(HT20)	LCH	-26.687	8	PASS
	MCH	-27.184	8	PASS
	HCH	-26.921	8	PASS
802.11n(HT40)	LCH	-32.116	8	PASS
	MCH	-32.046	8	PASS
	HCH	-32.068	8	PASS

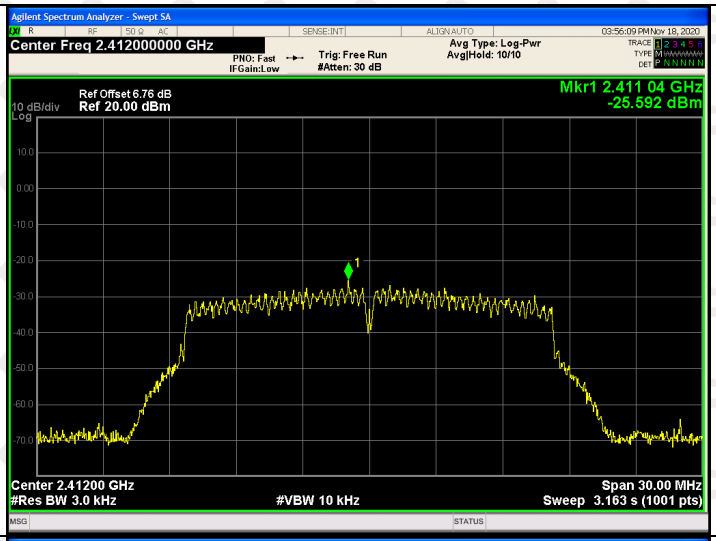
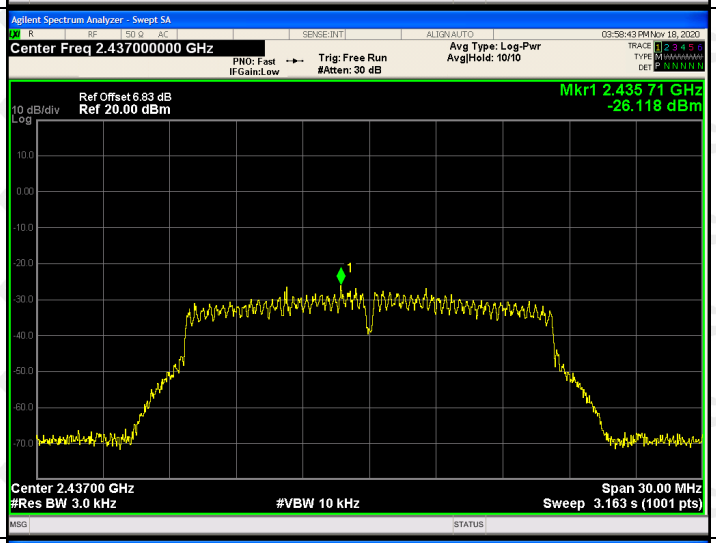
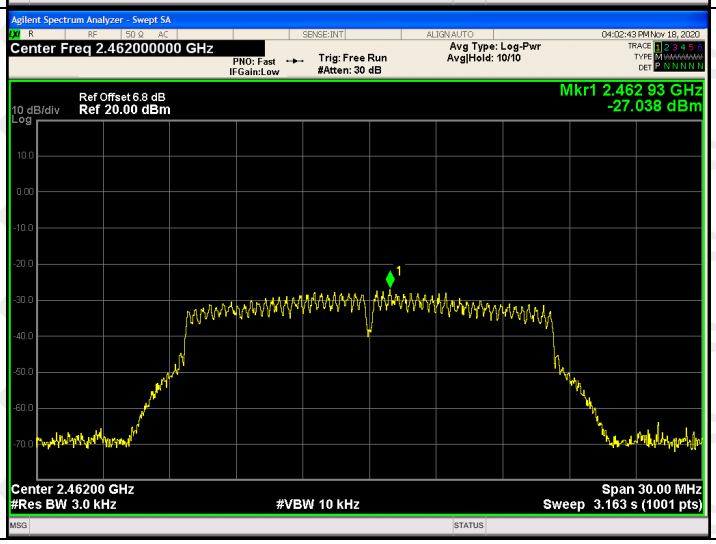
ANT 2+ANT 3

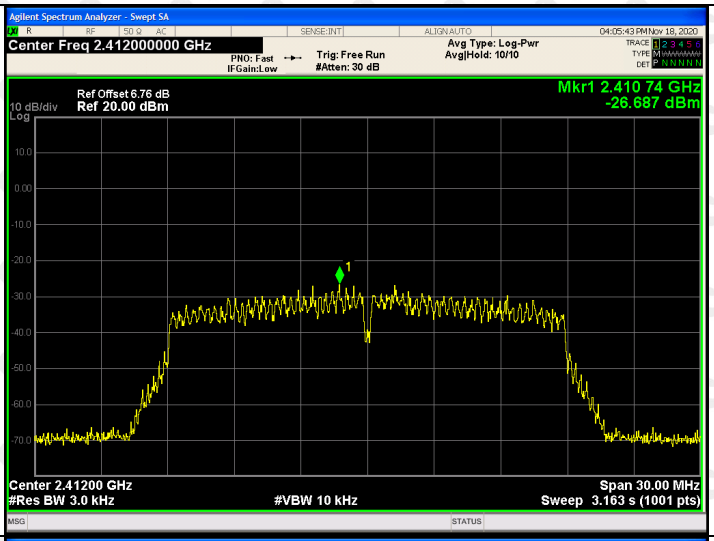
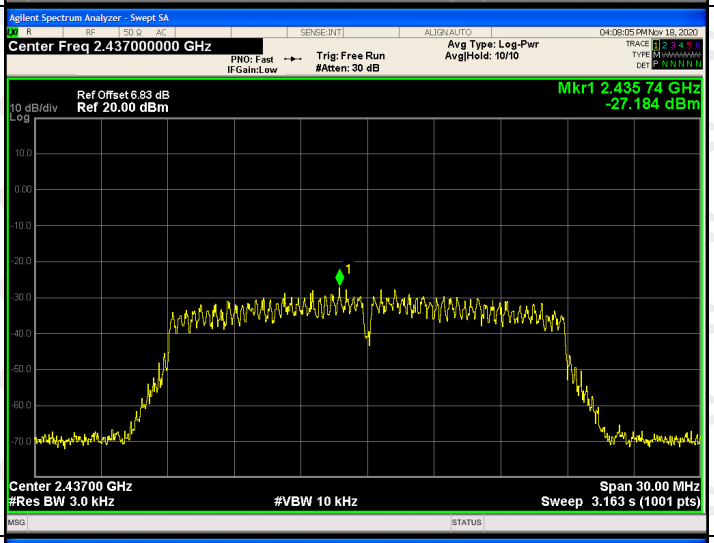
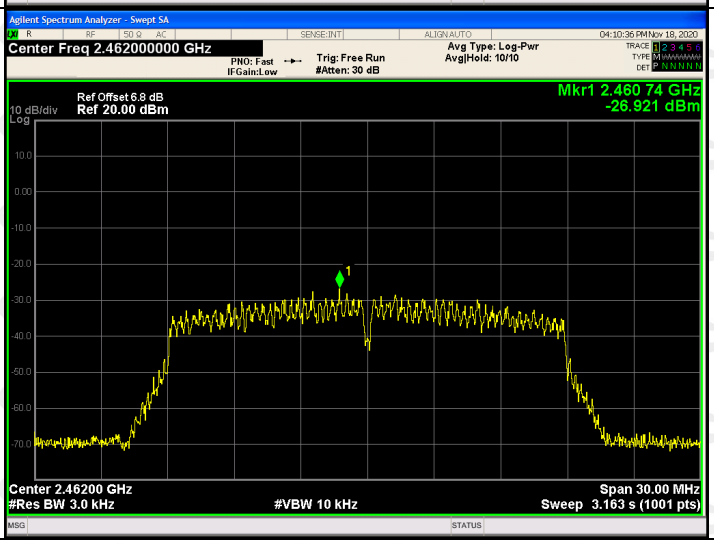
Mode	Channel.	Power Spectral Density (dBm/3KHz) ANT 2	Power Spectral Density (dBm/3KHz)ANT 3	Carrier Frequency Separation [MHz] Total	Limit(dBm)
802.11b	LCH	-21.14	-20.711	/	8
	MCH	-21.587	-19.611	/	8
	HCH	-20.999	-19.678	/	8
802.11g	LCH	-26.107	-26.671	/	8
	MCH	-27.418	-26.93	/	8
	HCH	-26.644	-26.321	/	8
802.11n(HT20)	LCH	-27.633	-27.246	-24.425	8
	MCH	-26.93	-26.905	-23.907	8
	HCH	-27.377	-26.478	-23.894	8
802.11n(HT40)	LCH	-31.864	-32.269	-29.051	8
	MCH	-33.101	-31.651	-29.305	8
	HCH	-32.314	-32.24	-29.267	8

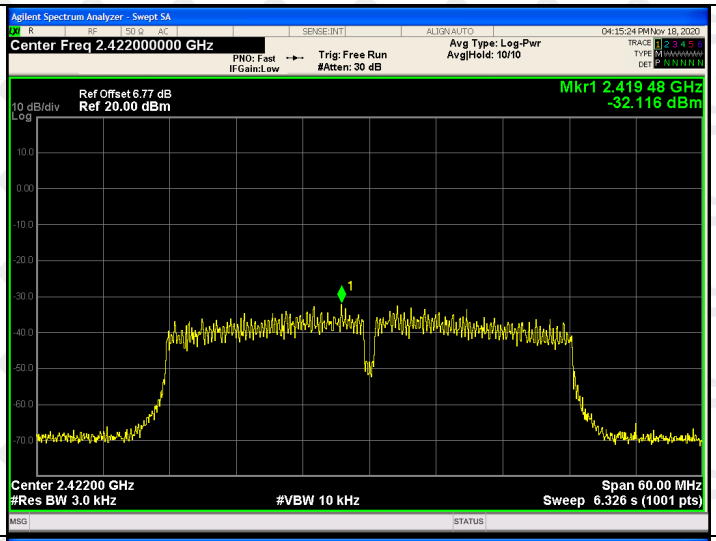
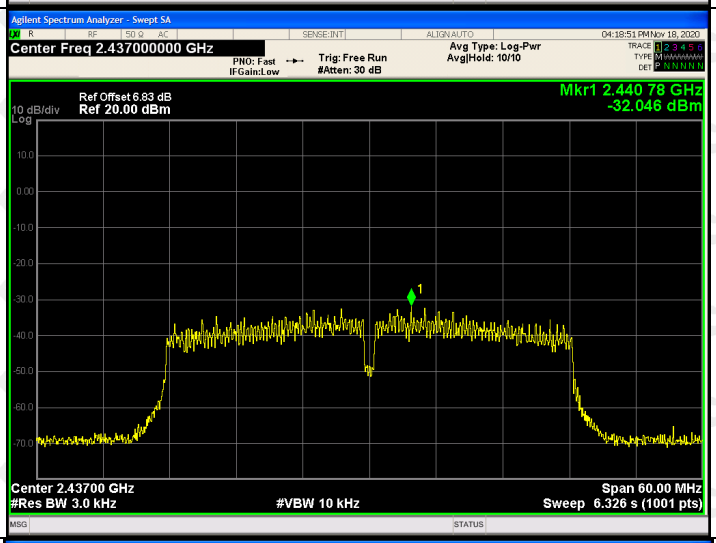
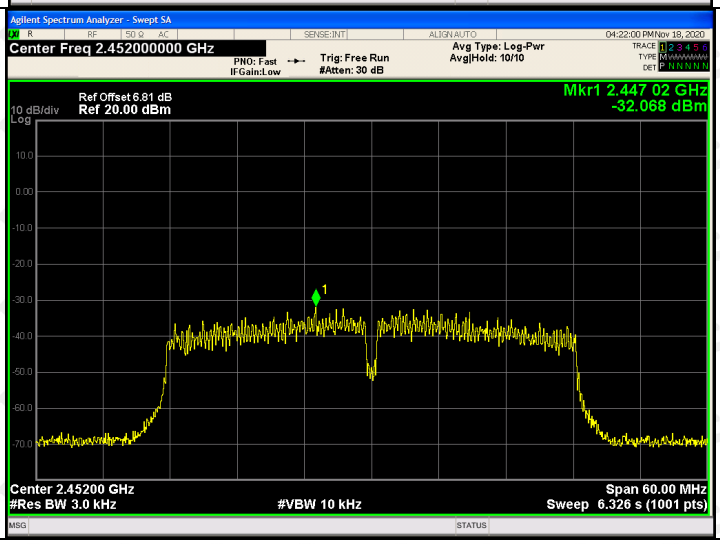
Test Graph:

ANT 1

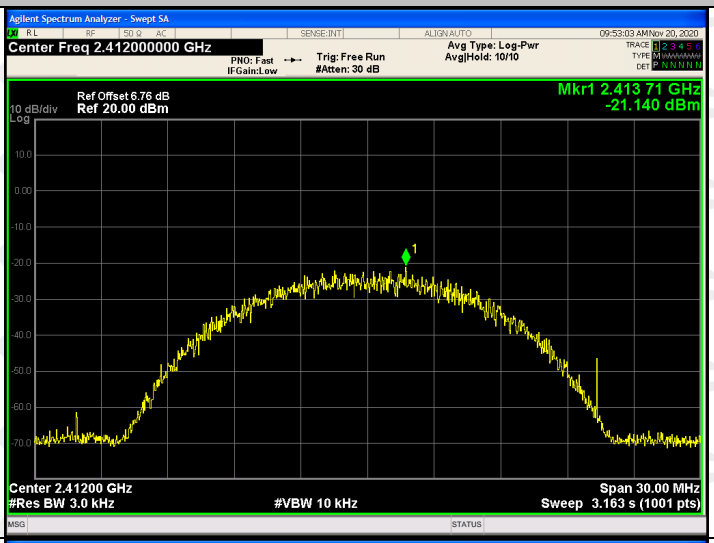
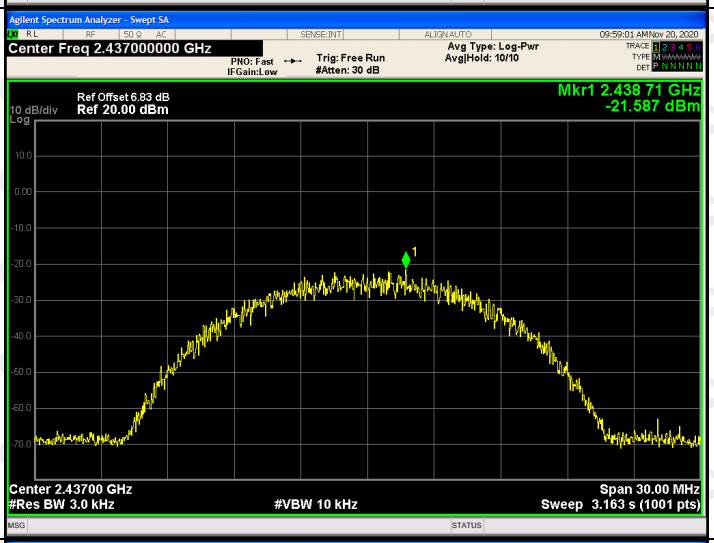
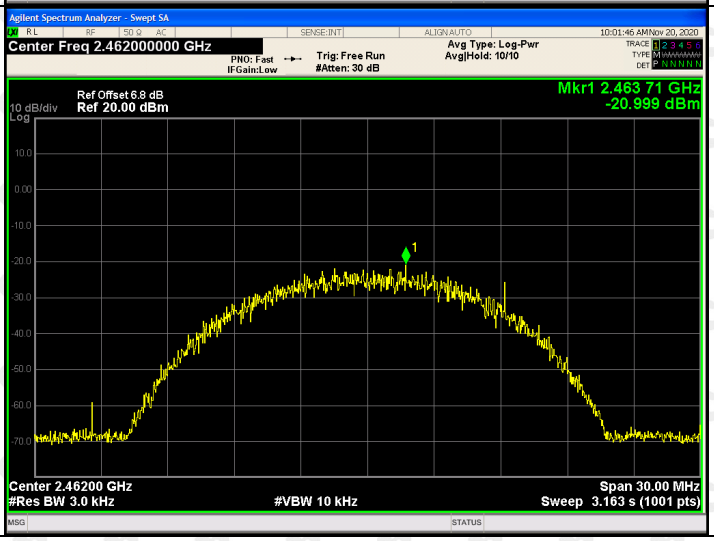
Graphs	
802.11b /LCH	
802.11b /MCH	
802.11b/HCH	

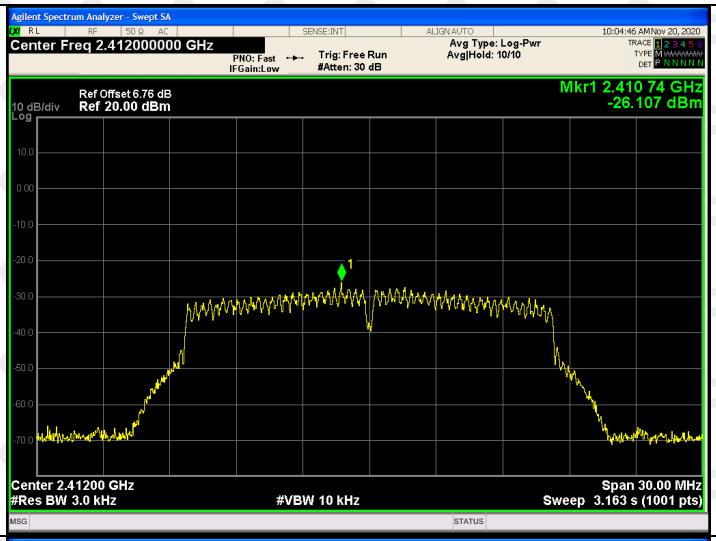
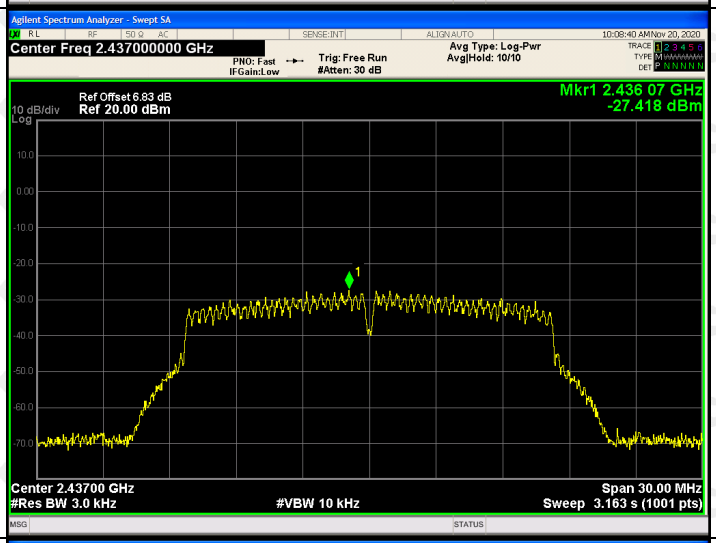
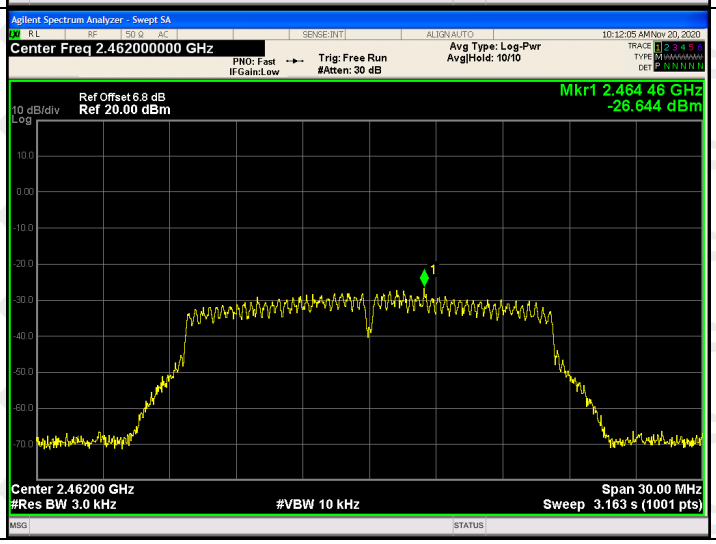
802.11g/LCH		
802.11g/MCH		
802.11g/HCH		

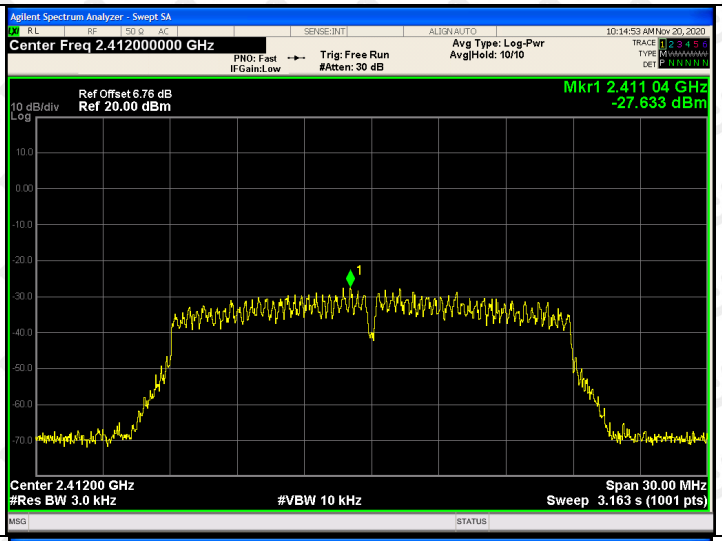
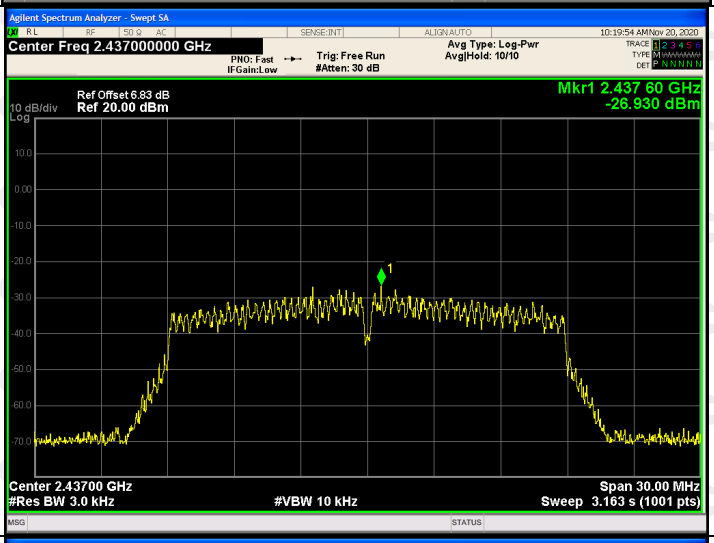
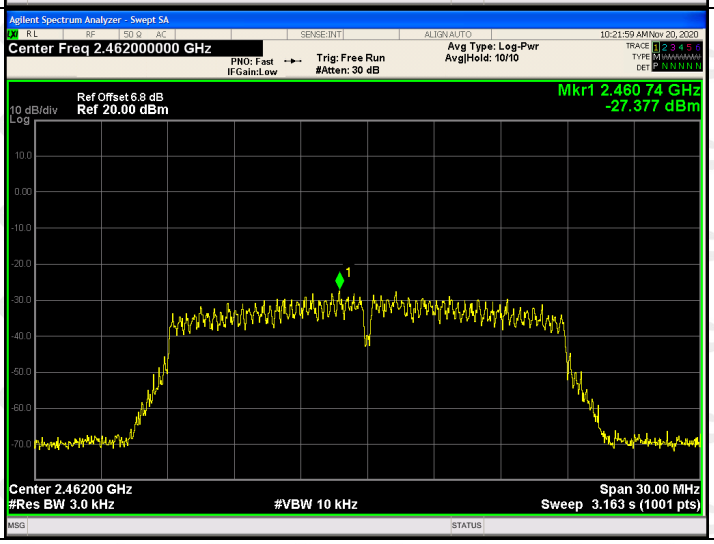
802.11n(HT20)/LCH		
802.11n(HT20)/MCH		
802.11n(HT20)/HCH		

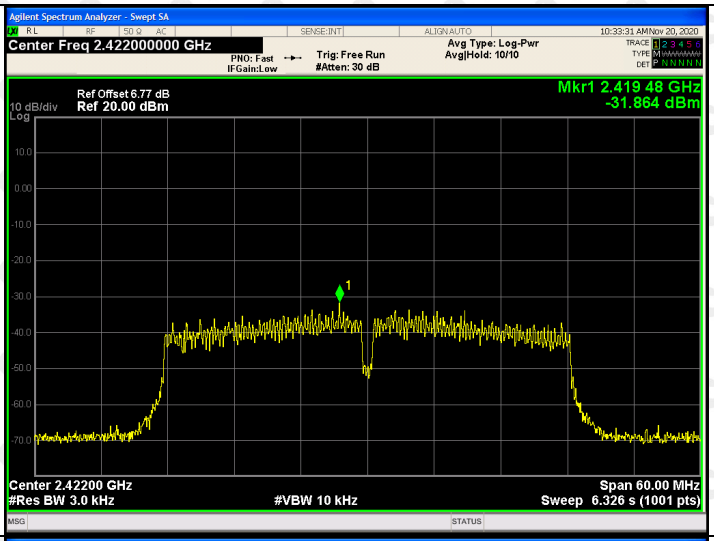
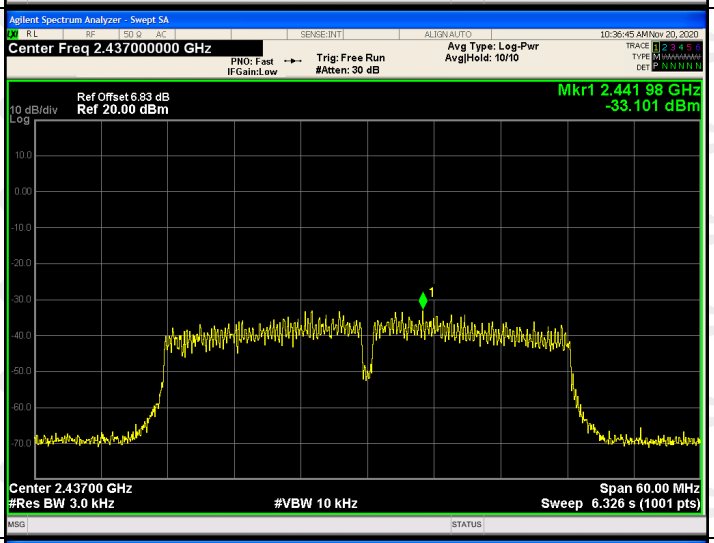
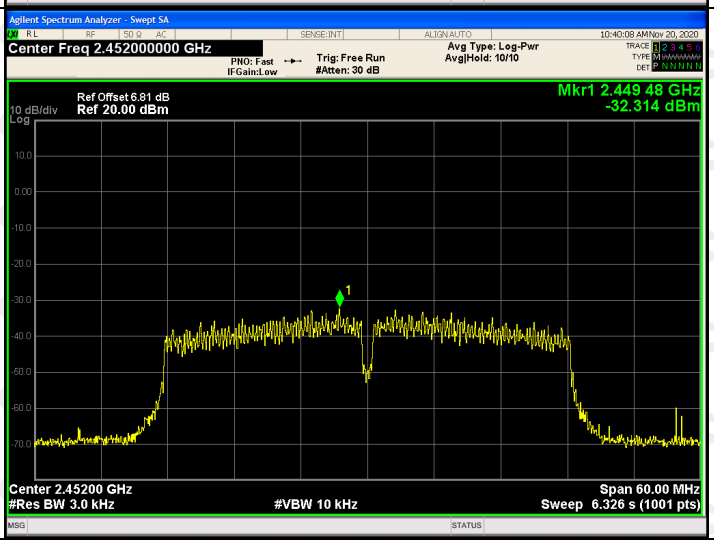
802.11n(HT40)/LCH		
802.11n(HT40)/MCH		
802.11n(HT40)/HCH		

ANT 2

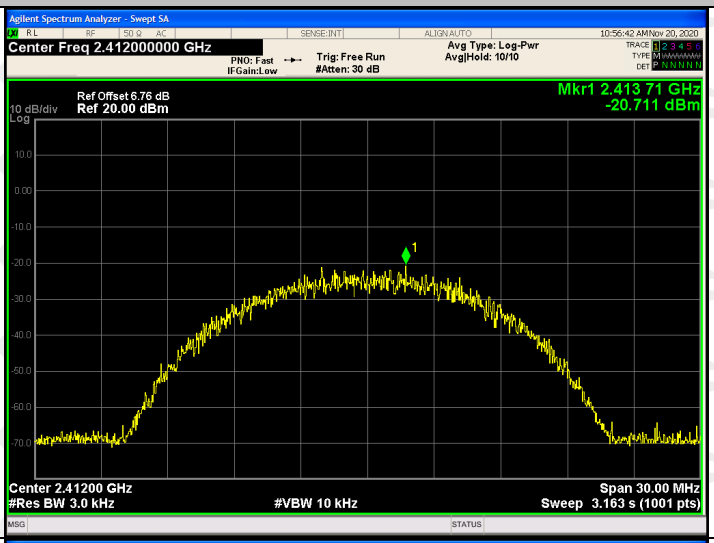
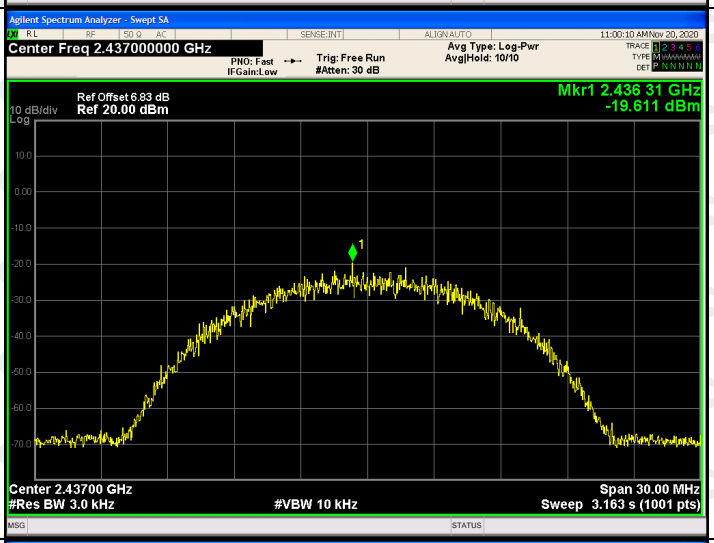
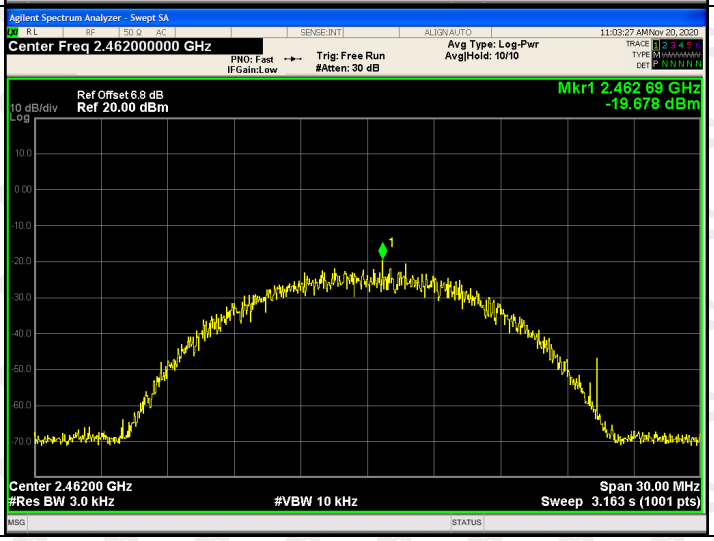
Graphs		
802.11b /LCH		
802.11b /MCH		
802.11b/HCH		

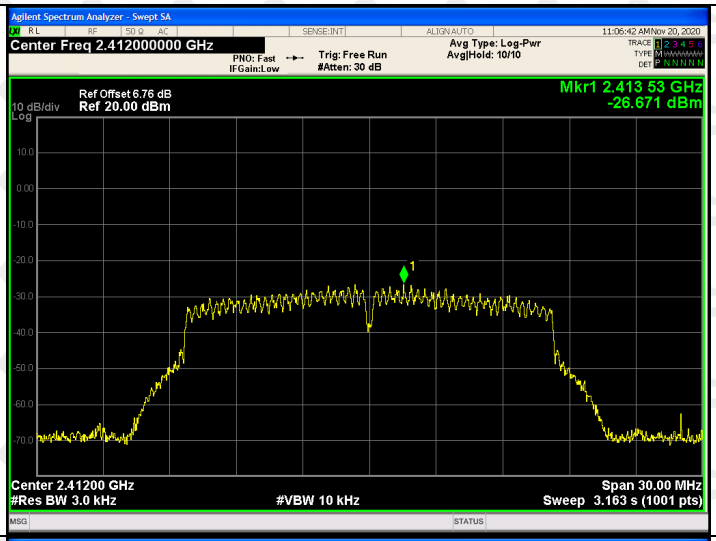
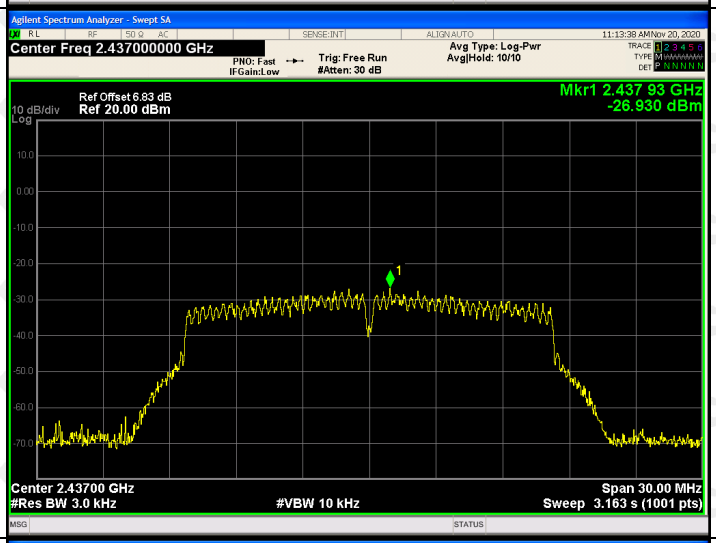
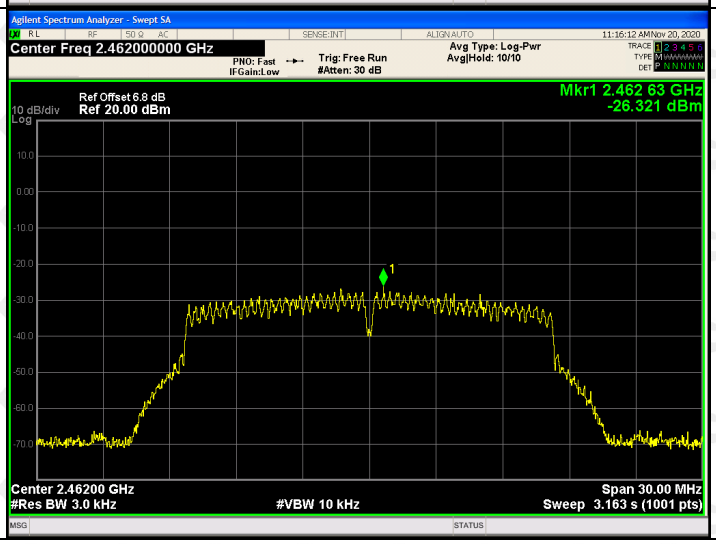
802.11g/LCH		
802.11g/MCH		
802.11g/HCH		

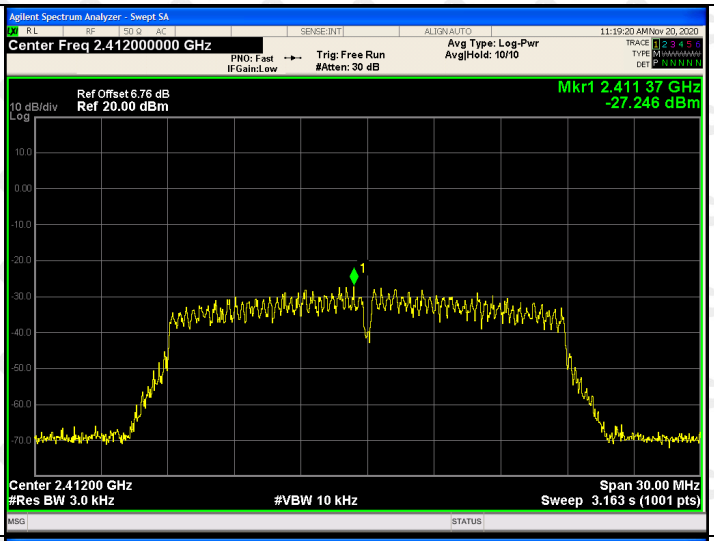
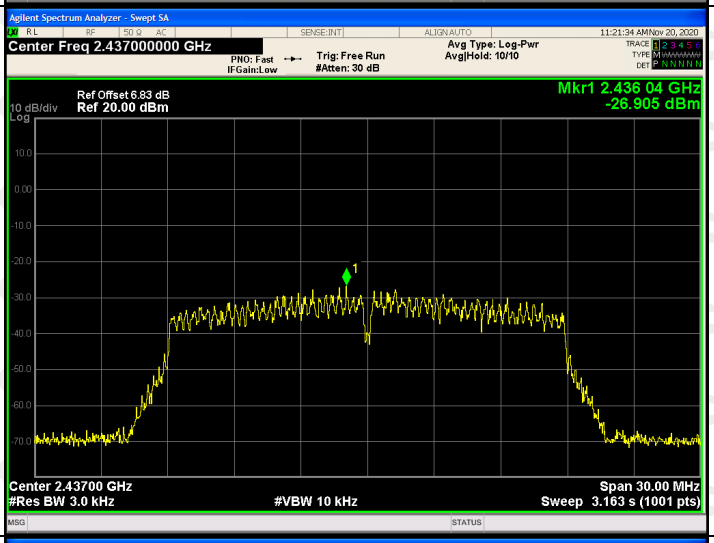
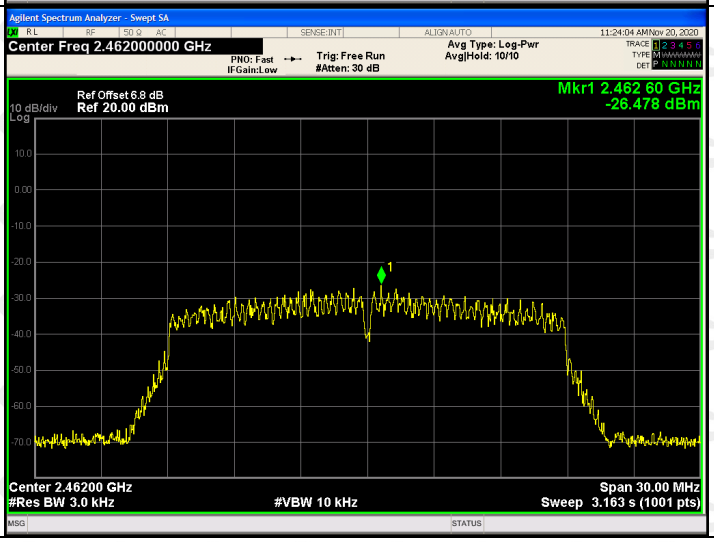
802.11n(HT20)/LCH		
802.11n(HT20)/MCH		
802.11n(HT20)/HCH		

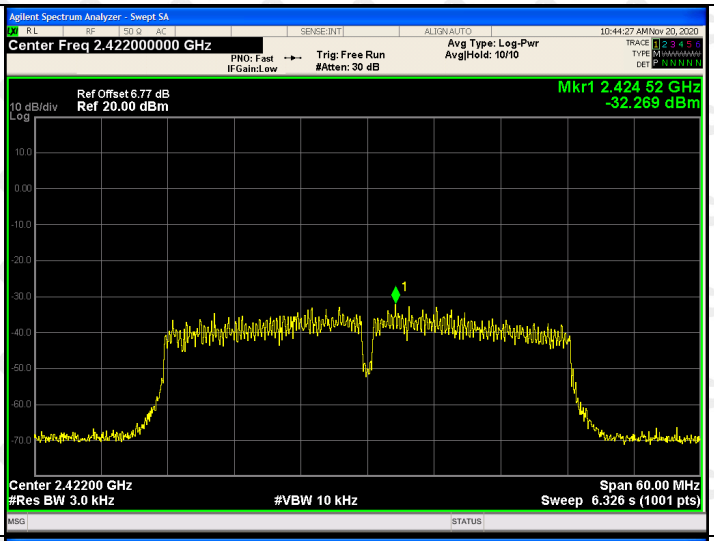
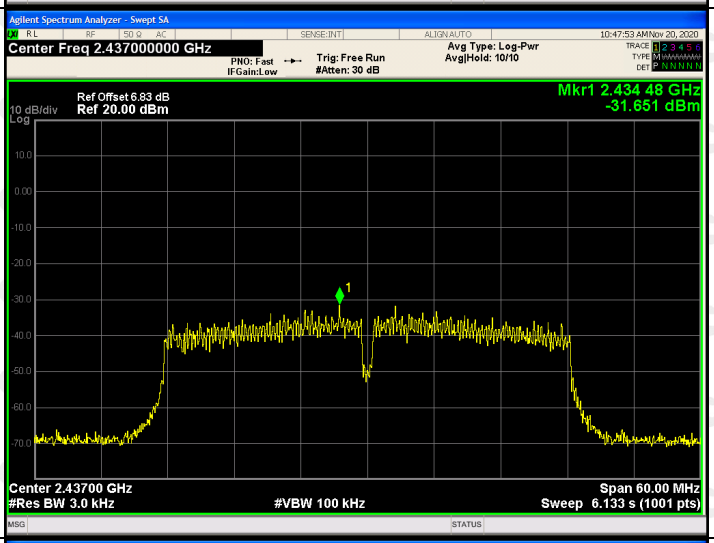
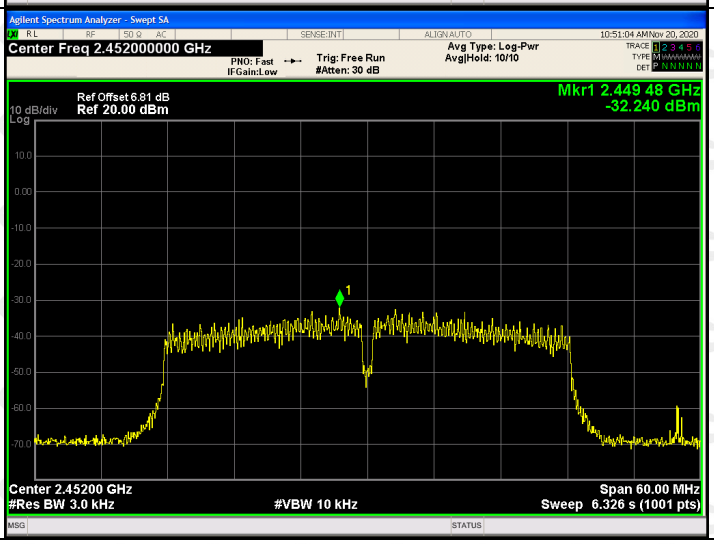
802.11n(HT40)/LCH		
802.11n(HT40)/MCH		
802.11n(HT40)/HCH		

ANT 3

Graphs		
802.11b /LCH		
802.11b /MCH		
802.11b/HCH		

802.11g/LCH		
802.11g/MCH		
802.11g/HCH		

802.11n(HT20)/LCH		
802.11n(HT20)/MCH		
802.11n(HT20)/HCH		

802.11n(HT40)/LCH		
802.11n(HT40)/MCH		
802.11n(HT40)/HCH		

12. ANTENNA REQUIREMENT

15.203 requirement:

An intentional radiator shall be designed to ensure that no antenna other than that furnished by the responsible party shall be used with the device. The use of a permanently attached antenna or of an antenna that uses a unique coupling to the intentional radiator, the manufacturer may design the unit so that a broken antenna can be replaced by the user, but the use of a standard antenna jack or electrical connector is prohibited.

15.247(b) (4) requirement:

The conducted output power limit specified in paragraph (b) of this section is based on the use of antennas with directional gains that do not exceed 6 dBi. Except as shown in paragraph (c) of this section, if transmitting antennas of directional gain greater than 6 dBi are used, the conducted output power from the intentional radiator shall be reduced below the stated values in paragraphs (b)(1), (b)(2), and (b)(3) of this section, as appropriate, by the amount in dB that the directional gain of the antenna exceeds 6 dBi.

EUT Antenna:

The antenna is Internal Antenna and no consideration of replacement. The best case gain of the antenna is 2.0dBi.

13. EUT PHOTOGRAPHS

EUT Photo 1

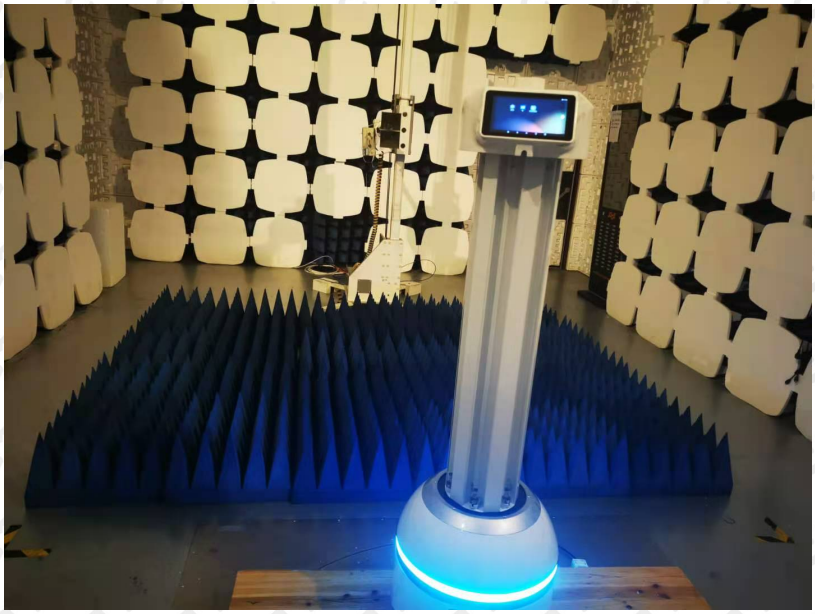
EUT Photo 2

14. EUT TEST SETUP PHOTOGRAPHS

Radiated Emissions

Below 1G

Above 1G



Conducted Emissions

※※※※※ END OF REPORT ※※※※※