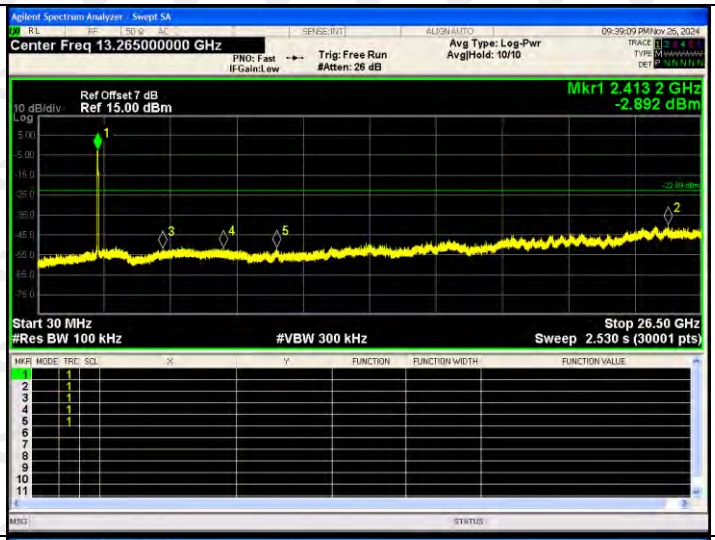
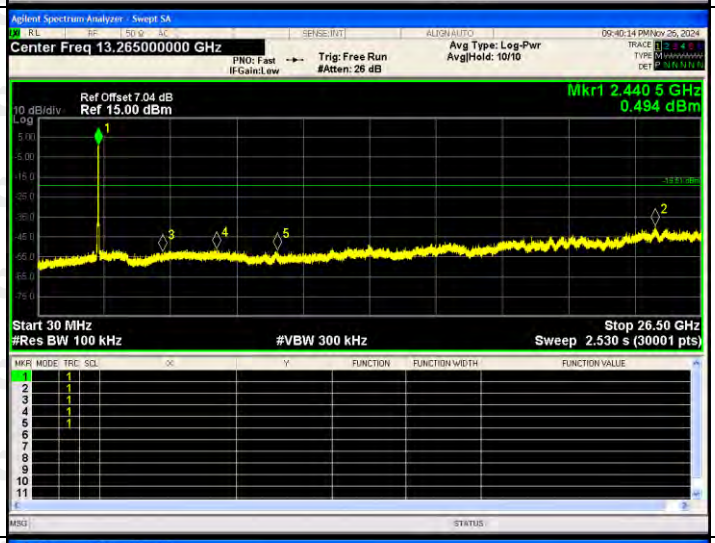
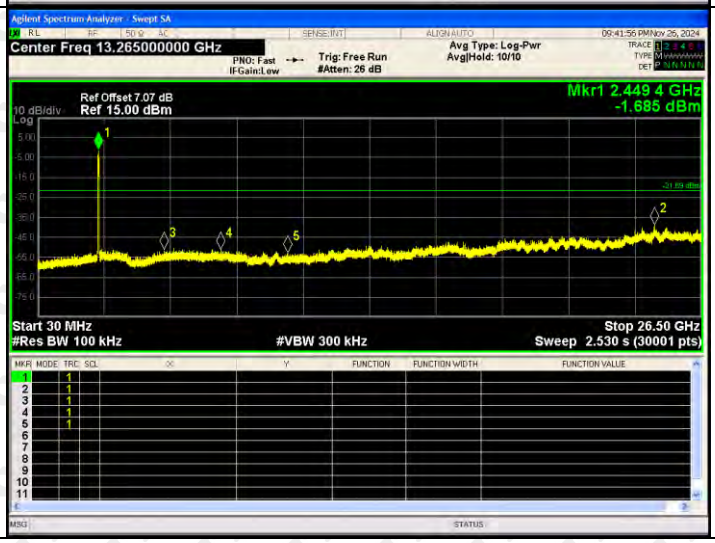
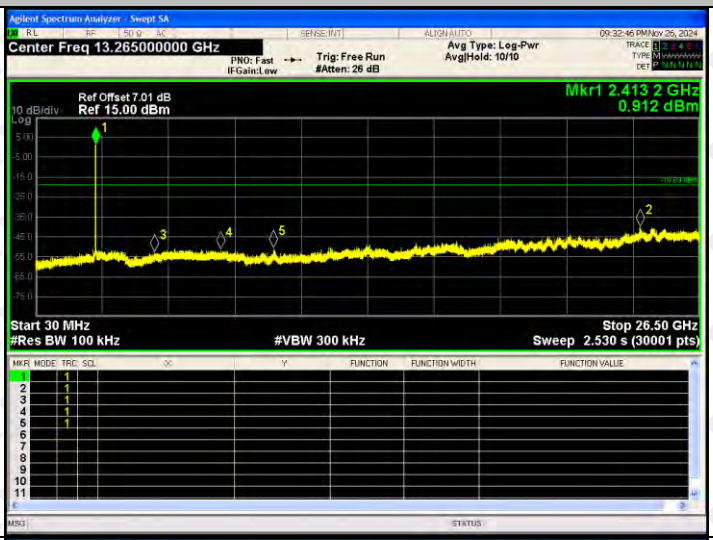
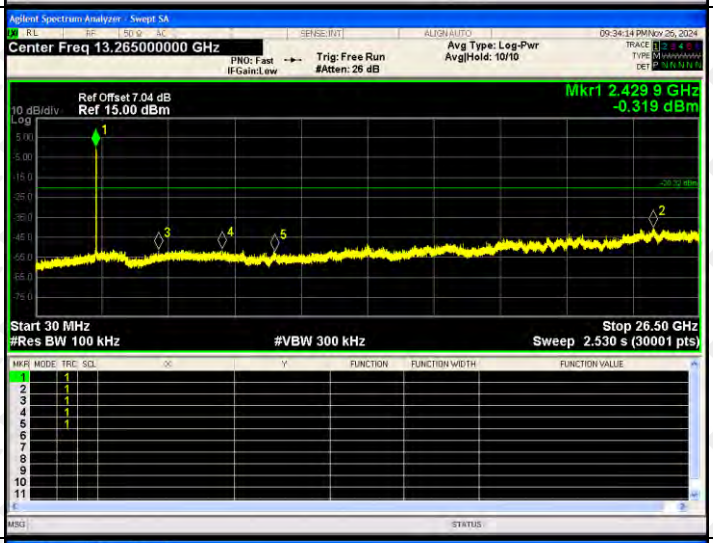
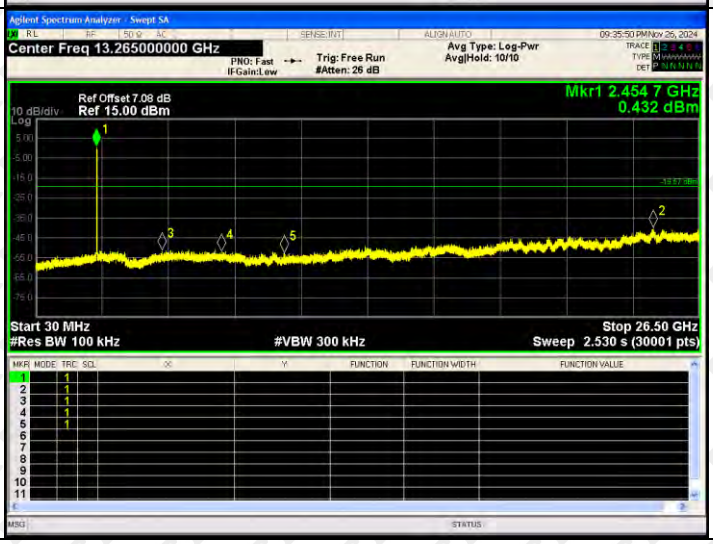
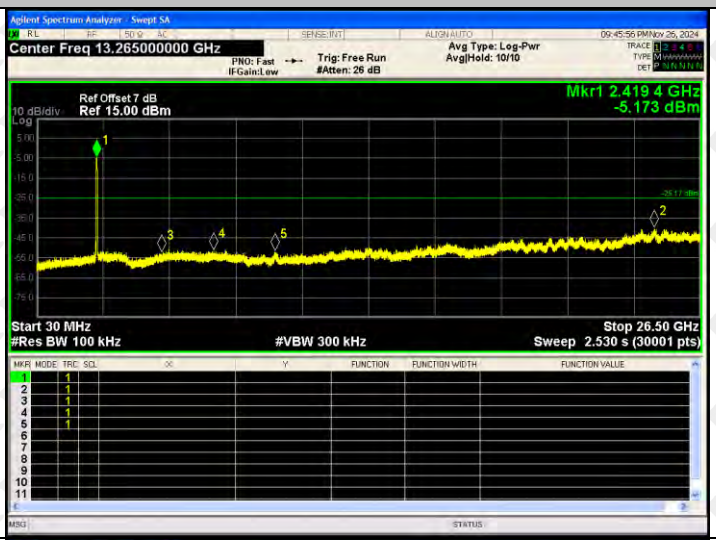
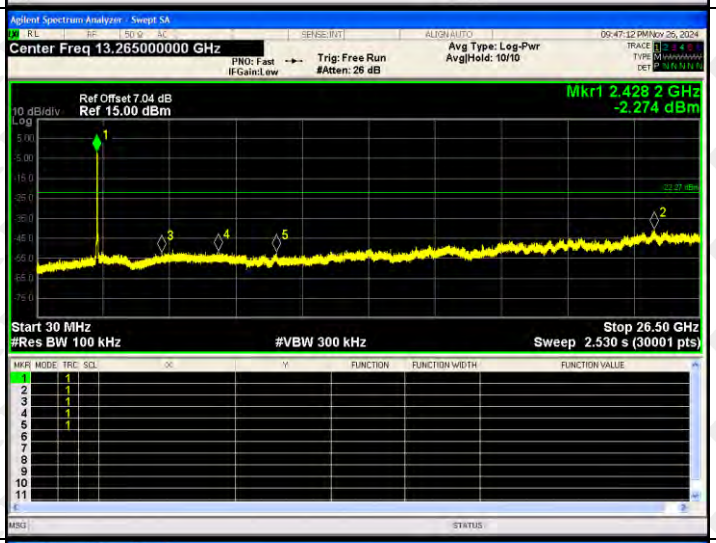
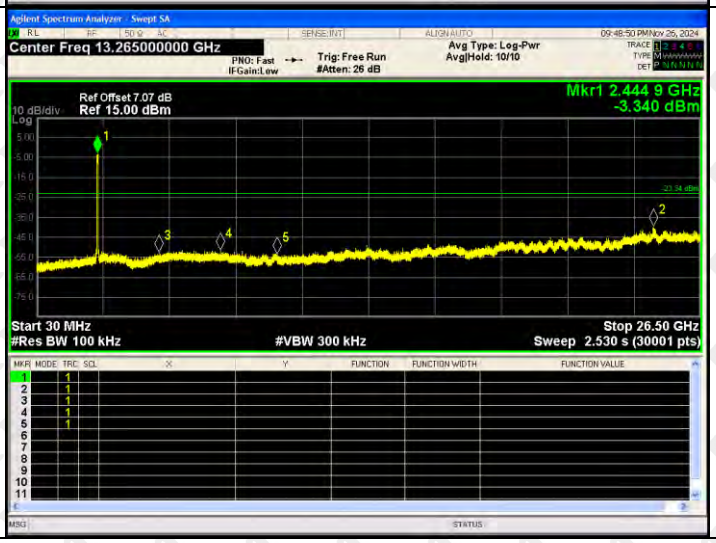
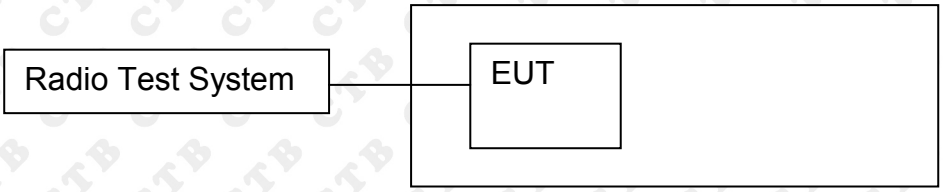
802.11n(HT40)/ LCH			
802.11 n(HT40)/MCH			
802.11 n(HT40)/HCH			

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

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

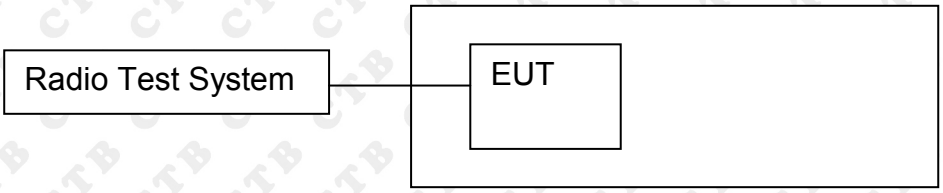
1. Remove the antenna from the EUT and then connect a low RF cable from the antenna port to the spectrum.
2. Set the spectrum analyzer: RBW = 1MHz. VBW = 3MHz. Sweep = auto; Detector Function = Peak. Channel power function is used
3. Keep the EUT in transmitting at lowest, middle and highest channel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

9.4 Test Result

Mode	Channel.	Maximum Peak Power [dBm] ant 1	Maximum Peak Power [dBm] ant 2	Total Power Peak Output Power(dBm)	Limit[dBm]
802.11b	LCH	19.789	19.761	/	30
	MCH	20.101	20.016	/	30
	HCH	20.118	20.254	/	30
802.11g	LCH	20.964	20.968	/	30
	MCH	21.552	21.5	/	30
	HCH	20.175	20.101	/	30
802.11n(HT20)	LCH	21.007	20.938	23.983	30
	MCH	21.642	21.519	24.591	30
	HCH	20.409	19.936	23.189	30
802.11n(HT40)	LCH	17.666	17.785	20.736	30
	MCH	21.923	21.583	24.767	30
	HCH	18.31	19.439	21.921	30
802.11ax(HT20)	LCH	20.258	20.199	23.239	30
	MCH	20.445	20.699	23.584	30
	HCH	20.419	19.928	23.191	30
802.11ax(HT40)	LCH	17.799	17.471	20.648	30
	MCH	21.599	20.162	23.950	30
	HCH	20.099	19.2	22.683	30

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

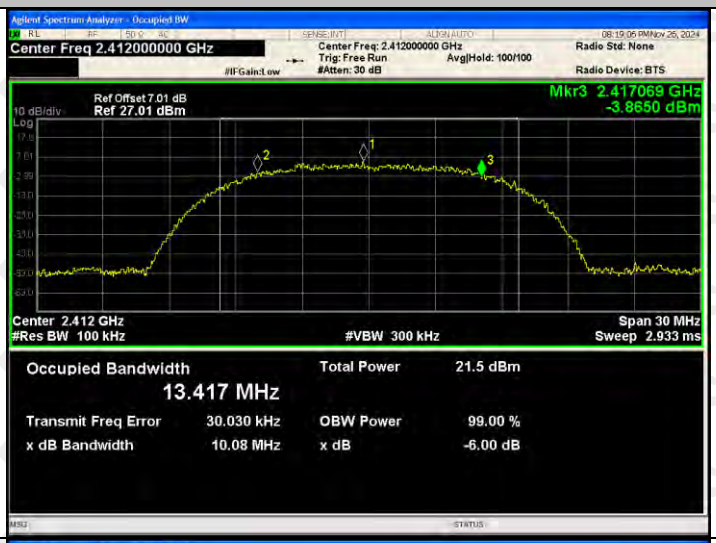
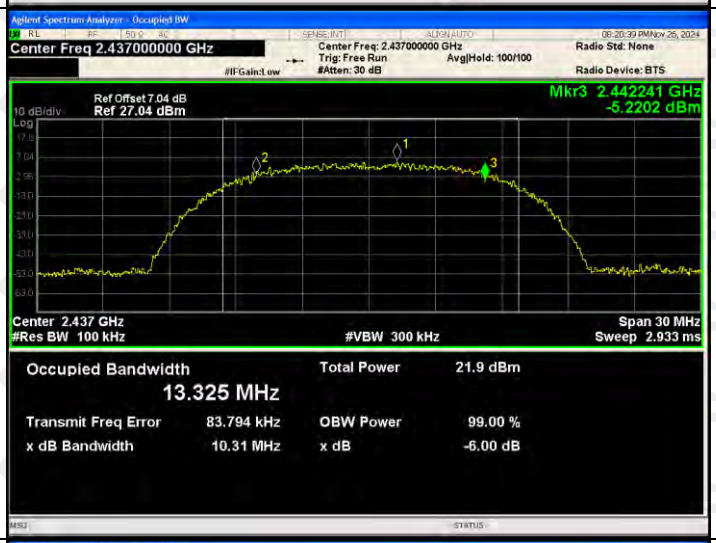
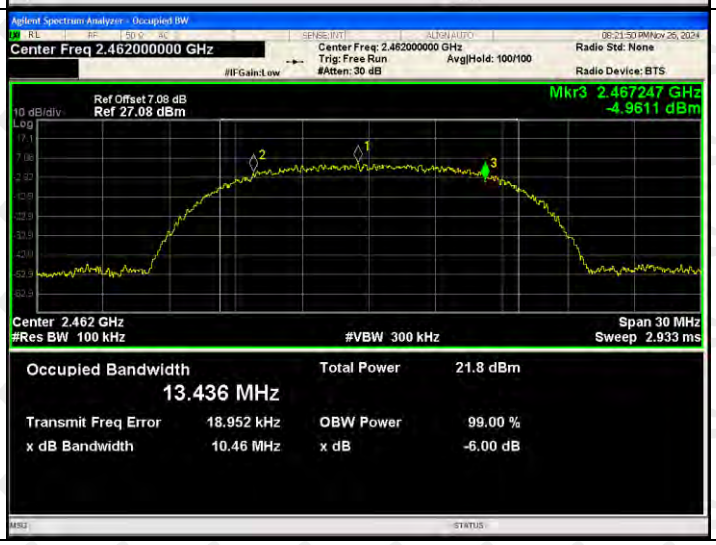
ANT1:

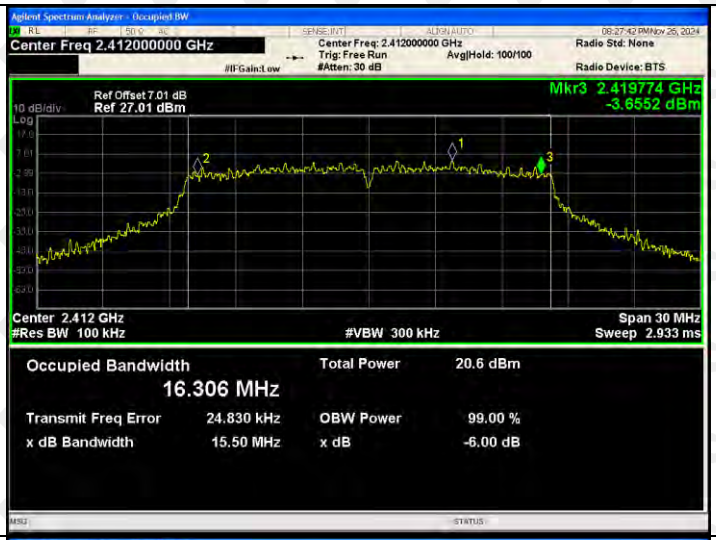
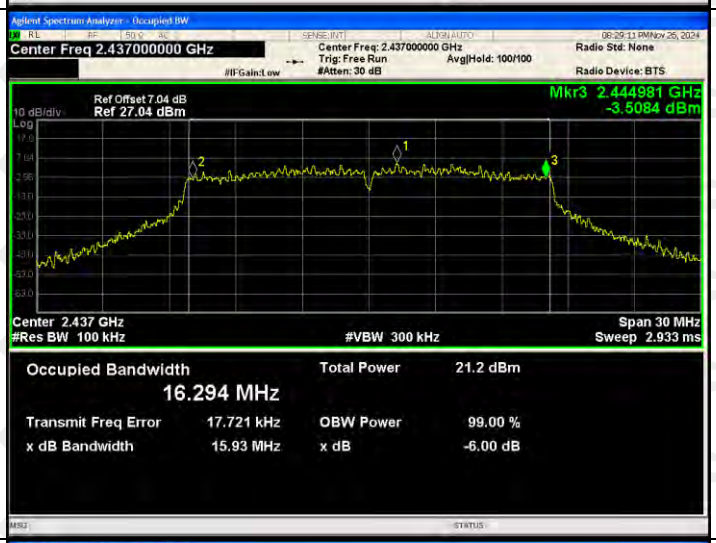
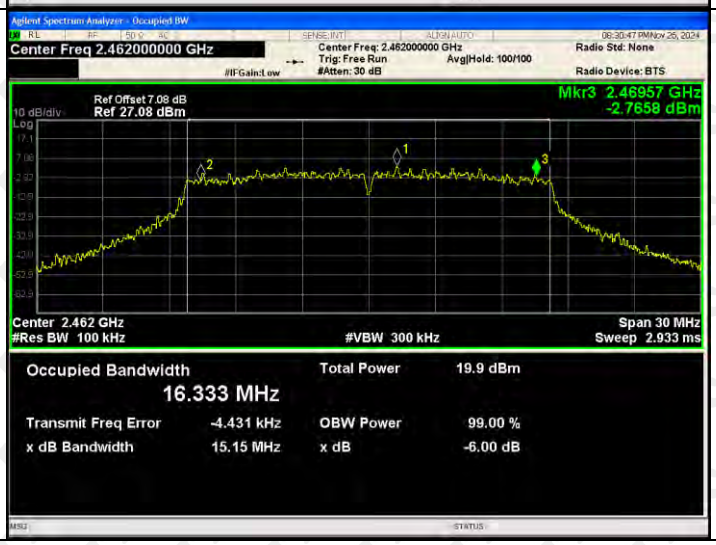
Test Mode	Frequency	6dB Bandwidth (MHz)	Limit(kHz)	Result
802.11b	LCH	10.079	500	**PASS**
	MCH	10.314	500	**PASS**
	HCH	10.456	500	**PASS**
802.11g	LCH	15.499	500	**PASS**
	MCH	15.927	500	**PASS**
	HCH	15.148	500	**PASS**
802.11n(HT20)	LCH	16.92	500	**PASS**
	MCH	17.613	500	**PASS**
	HCH	16.114	500	**PASS**
802.11n(HT40)	LCH	34.56	500	**PASS**
	MCH	32.91	500	**PASS**
	HCH	35.089	500	**PASS**
802.11ax(HT20)	LCH	19.032	500	**PASS**
	MCH	19.031	500	**PASS**
	HCH	19.04	500	**PASS**
802.11ax(HT40)	LCH	32.655	500	**PASS**
	MCH	33.873	500	**PASS**
	HCH	33.875	500	**PASS**

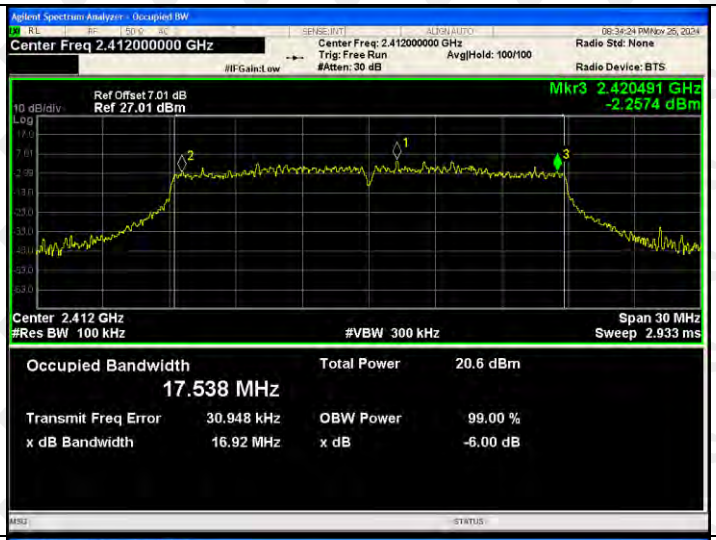
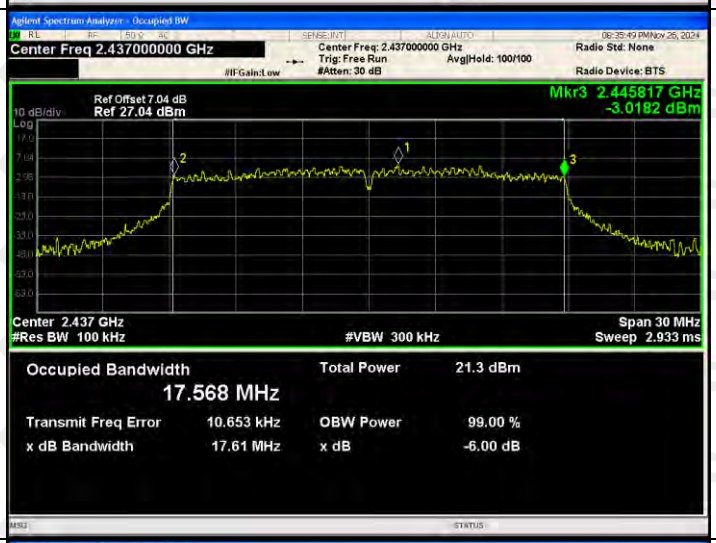
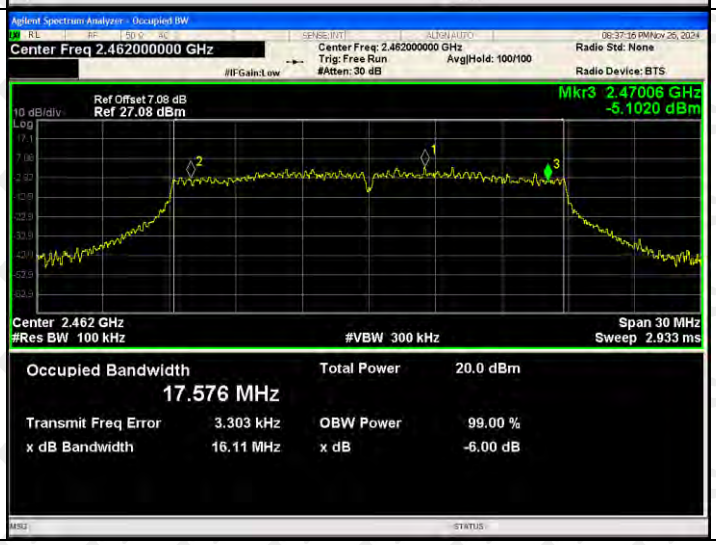
ANT2:

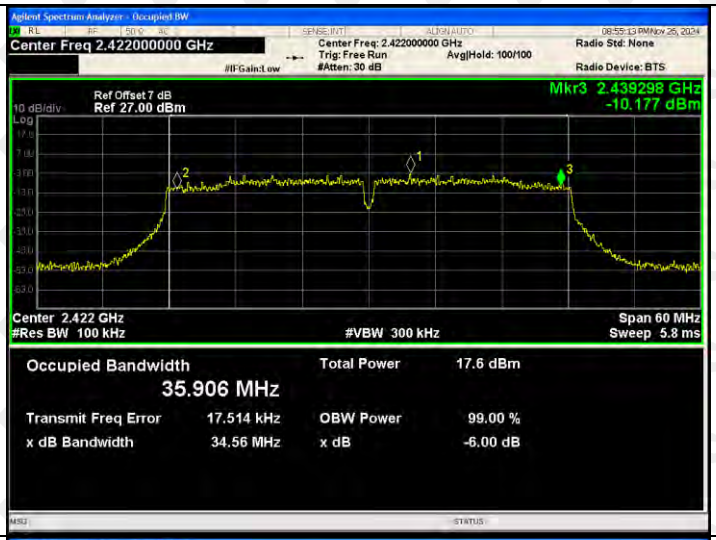
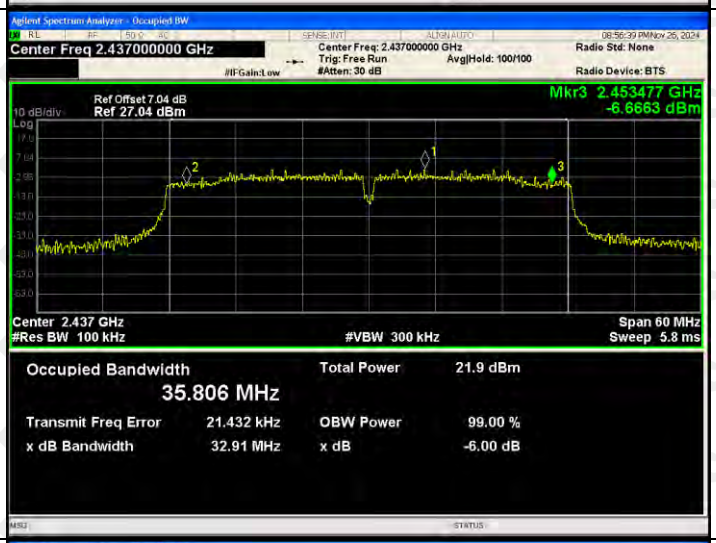
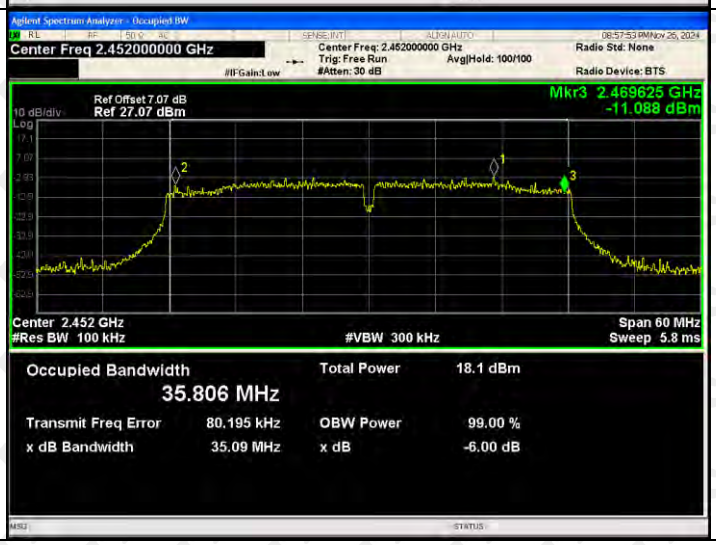
Test Mode	Frequency	6dB Bandwidth (MHz)	Limit(kHz)	Result
802.11b	LCH	10.325	500	**PASS**
	MCH	10.115	500	**PASS**
	HCH	10.346	500	**PASS**
802.11g	LCH	16.018	500	**PASS**
	MCH	15.674	500	**PASS**
	HCH	16.014	500	**PASS**
802.11n(HT20)	LCH	16.329	500	**PASS**
	MCH	15.992	500	**PASS**
	HCH	15.148	500	**PASS**
802.11n(HT40)	LCH	35.422	500	**PASS**
	MCH	35.145	500	**PASS**
	HCH	35.184	500	**PASS**
802.11ax(HT20)	LCH	18.869	500	**PASS**
	MCH	18.948	500	**PASS**
	HCH	19.022	500	**PASS**
802.11ax(HT40)	LCH	37.922	500	**PASS**
	MCH	37.898	500	**PASS**
	HCH	37.973	500	**PASS**

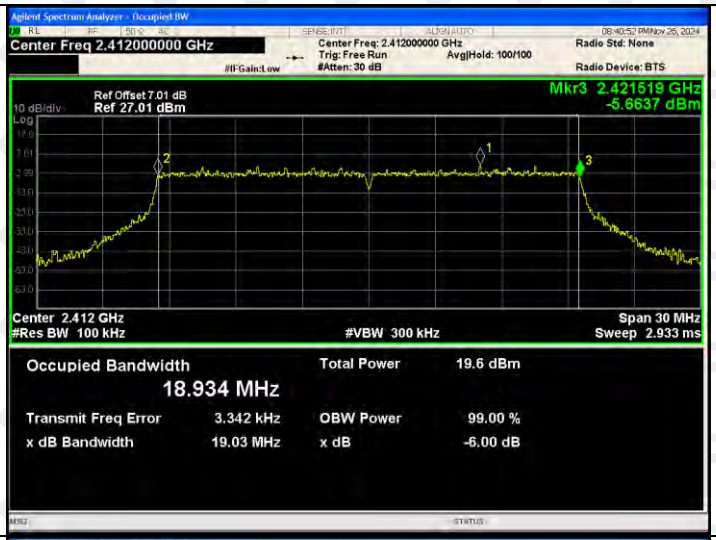
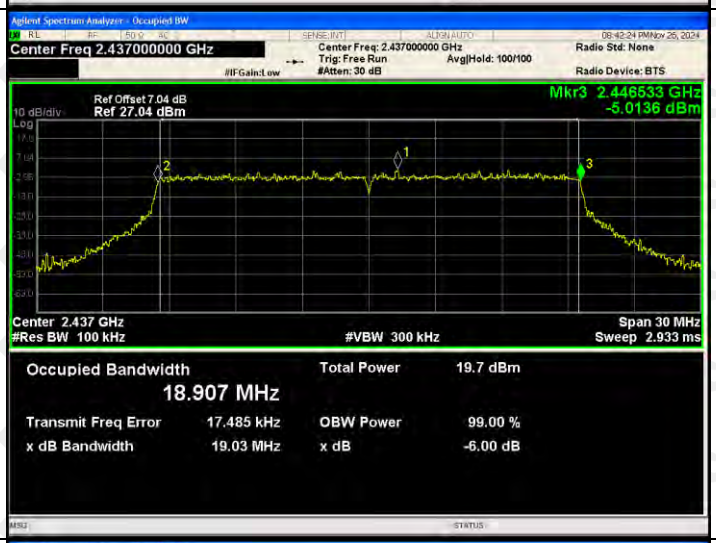
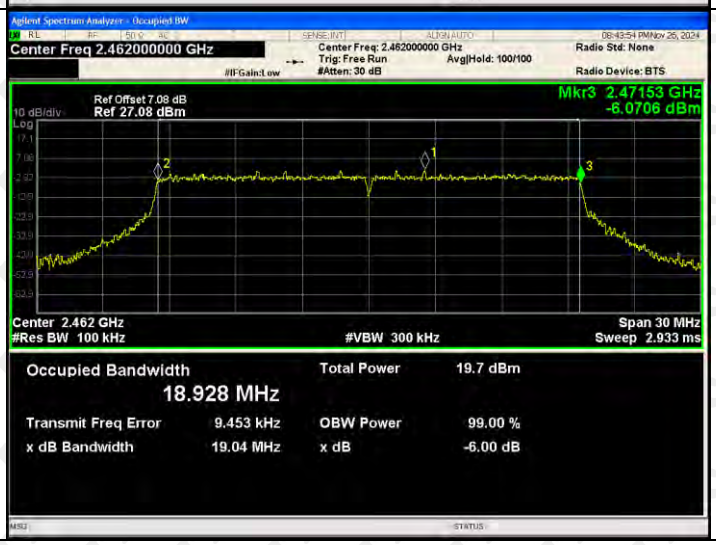
ANT1:
Test Graph:

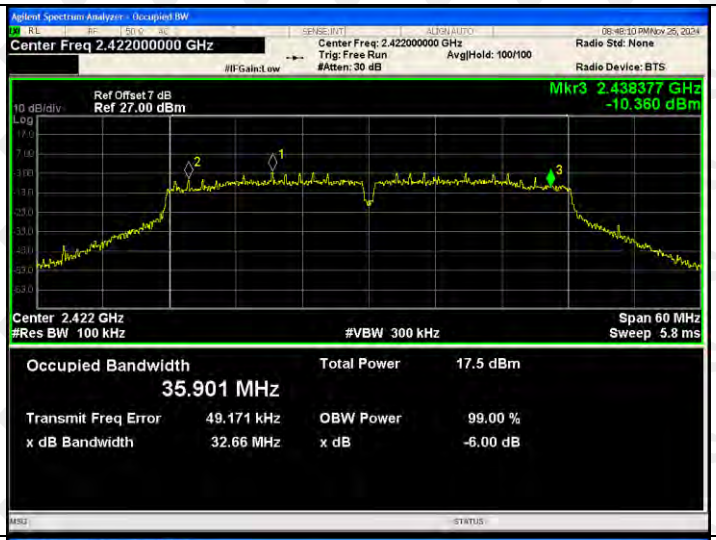
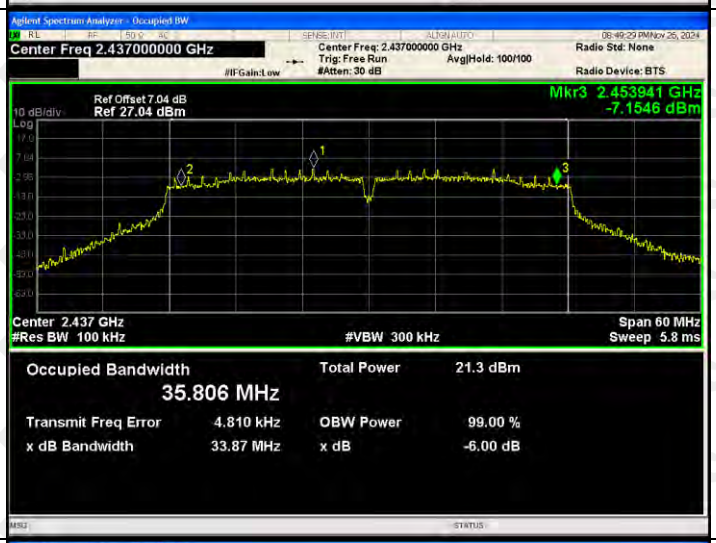
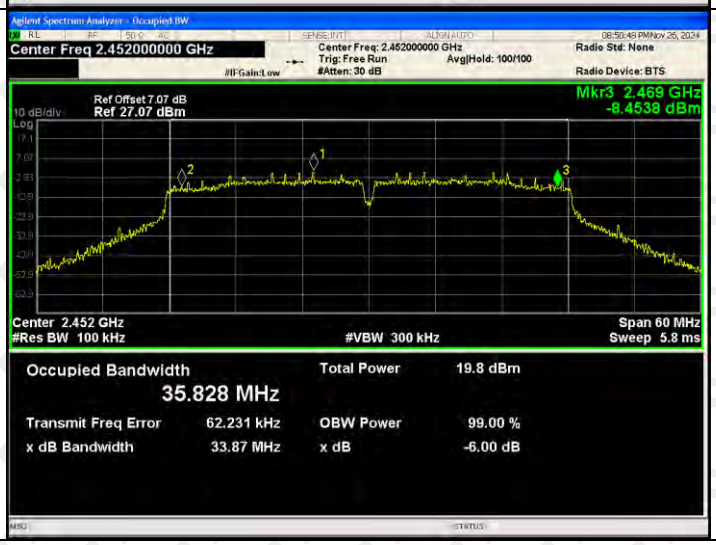
Graphs			
802.11b /LCH			
802.11b /MCH			
802.11b/HCH			

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

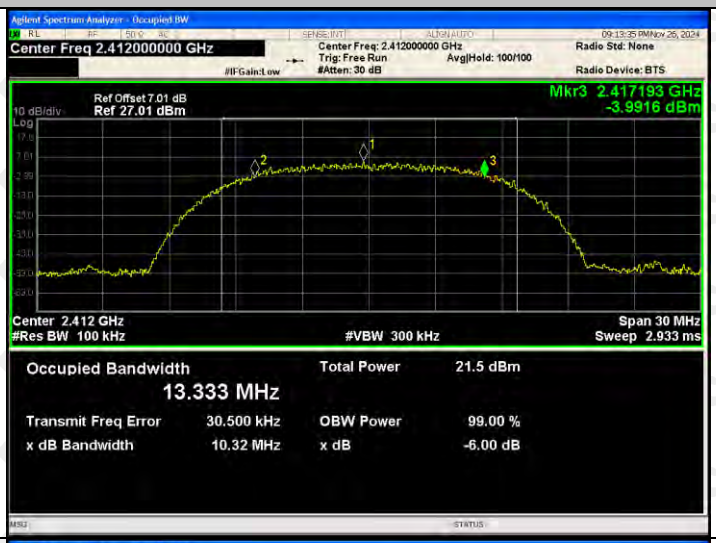
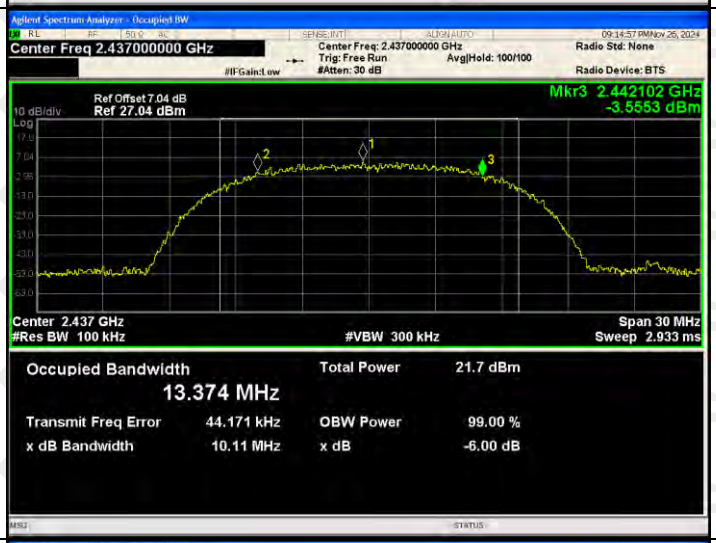
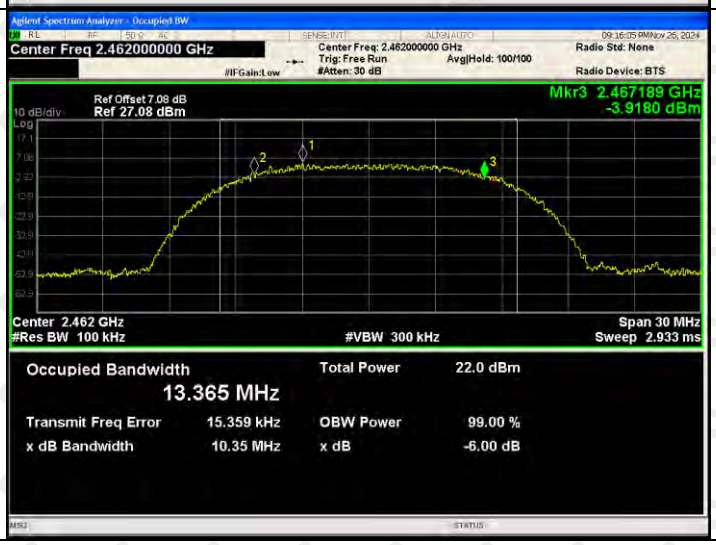
802.11n(HT20)/LCH			
802.11n(HT20)/MCH			
802.11n(HT20)/HCH			

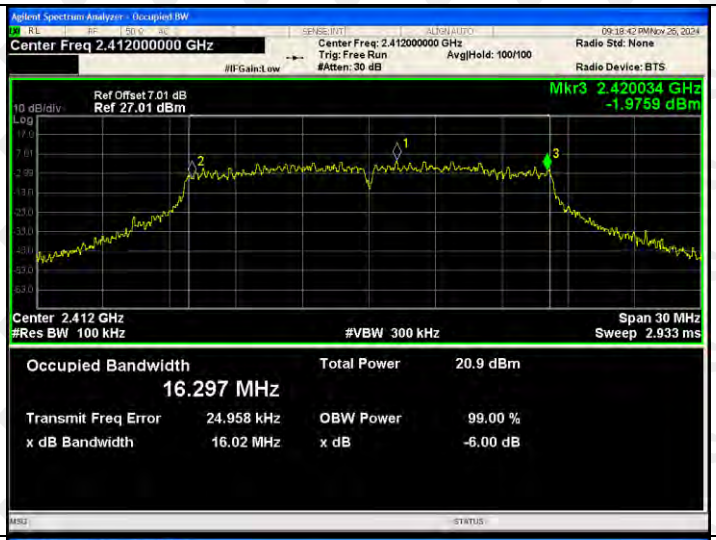
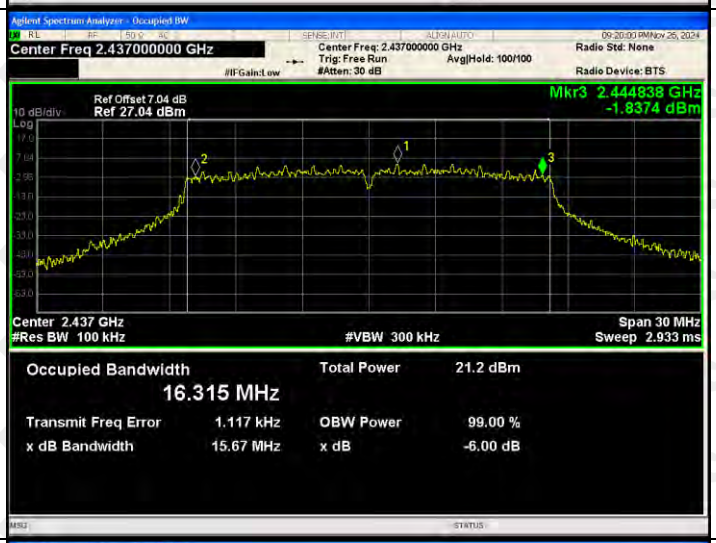
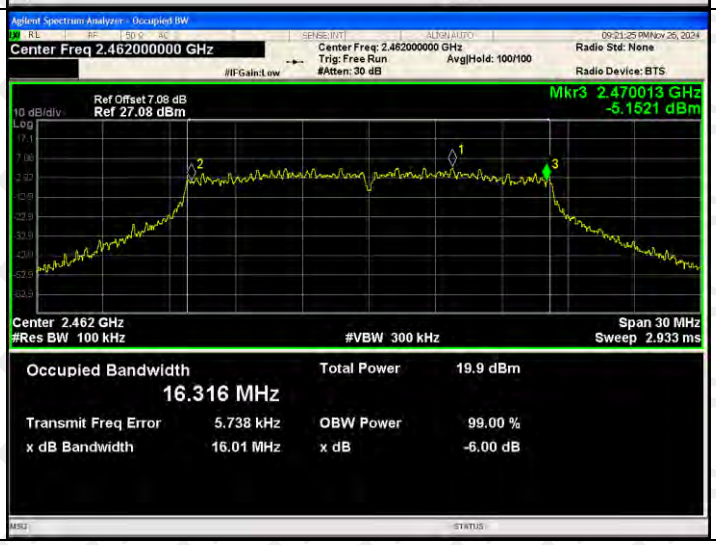
802.11n(HT40)/LCH			
802.11n(HT40)/MCH			
802.11n(HT40)/HCH			

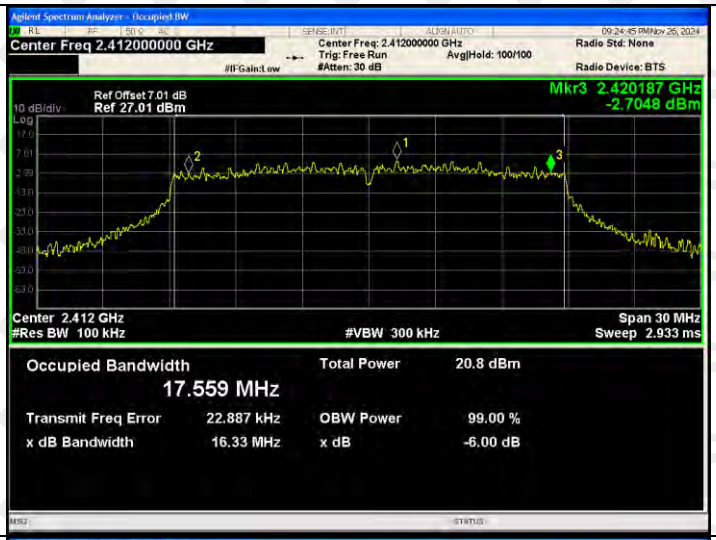
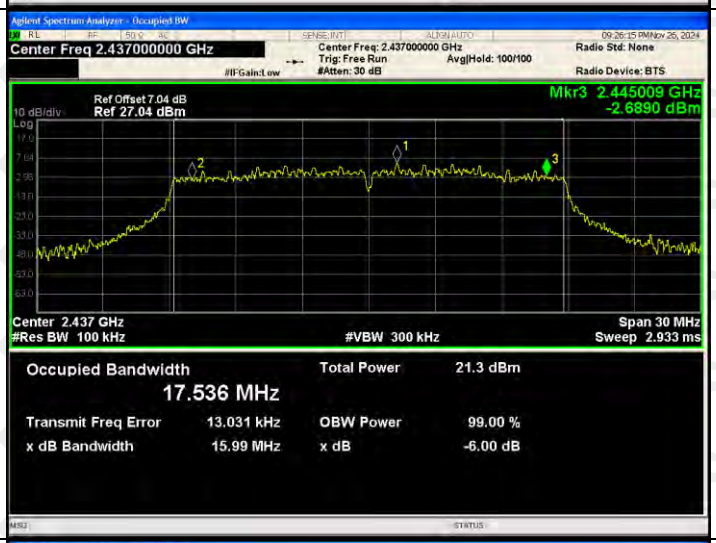
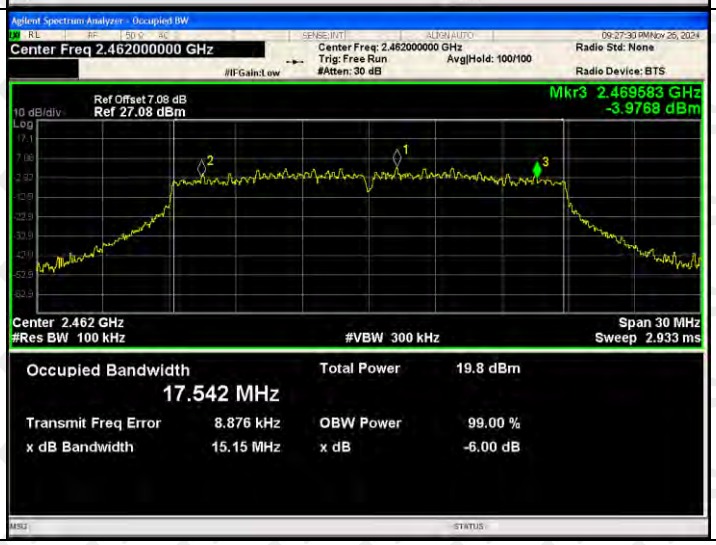
802.11ax(HT20)/LCH			
802.11ax(HT20)/MCH			
802.11ax(HT20)/HCH			

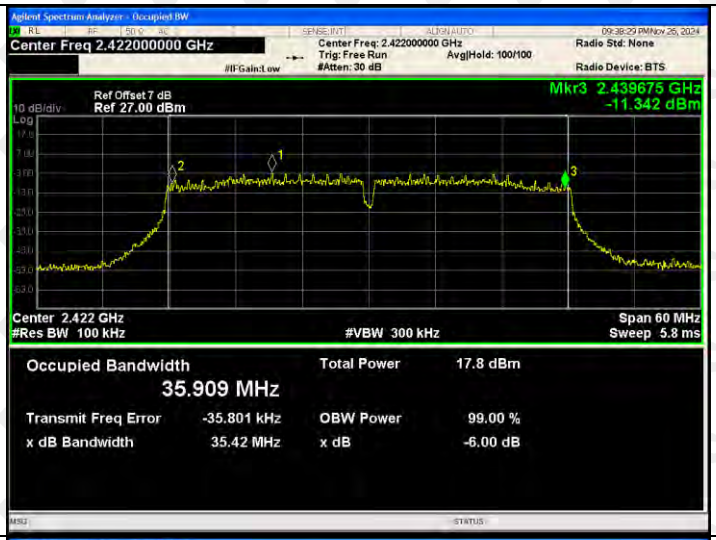
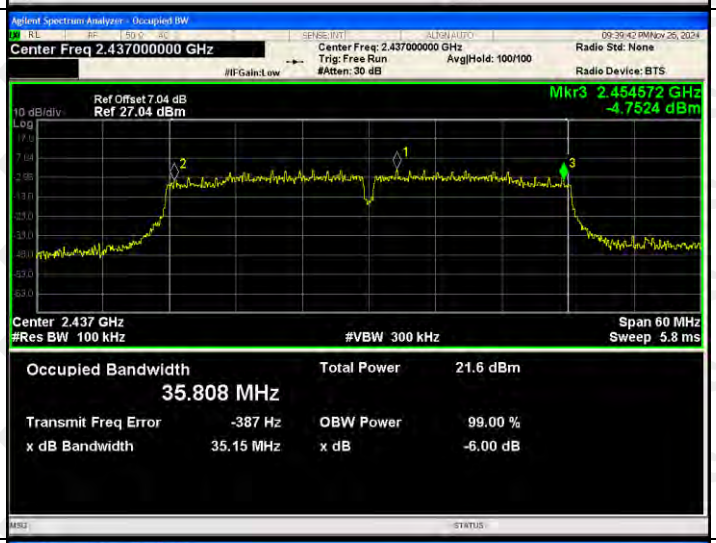
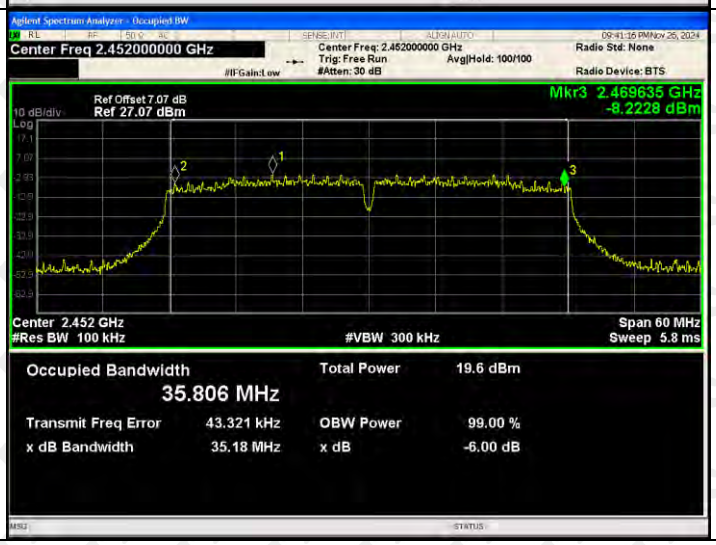
802.11ax(HT40)/LCH			
802.11ax(HT40)/MCH			
802.11ax(HT40)/HCH			

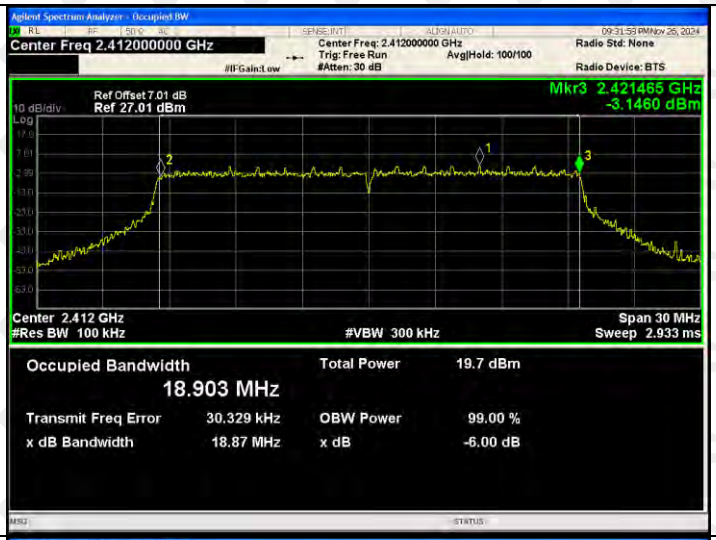
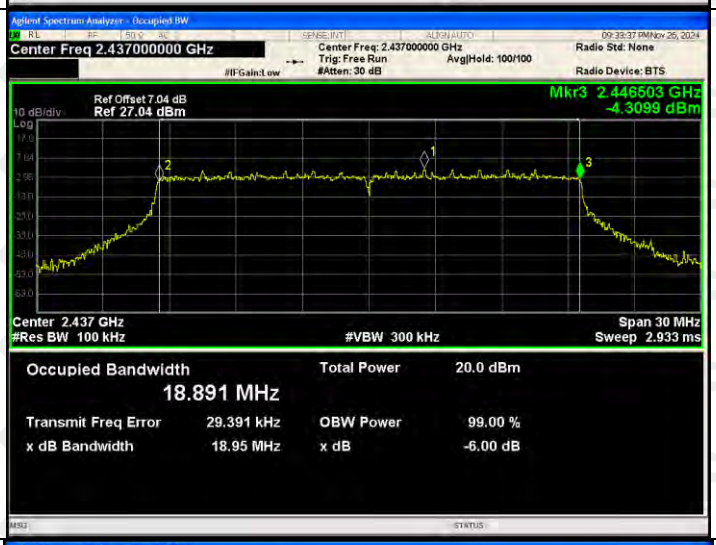
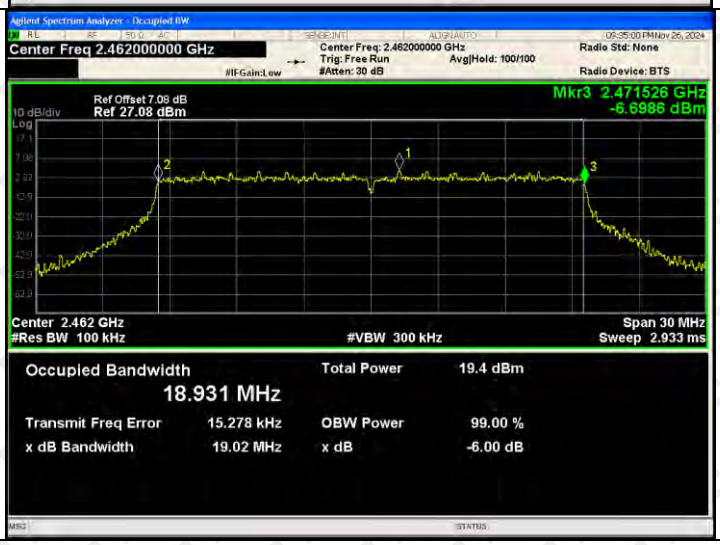
ANT2:
Test Graph:

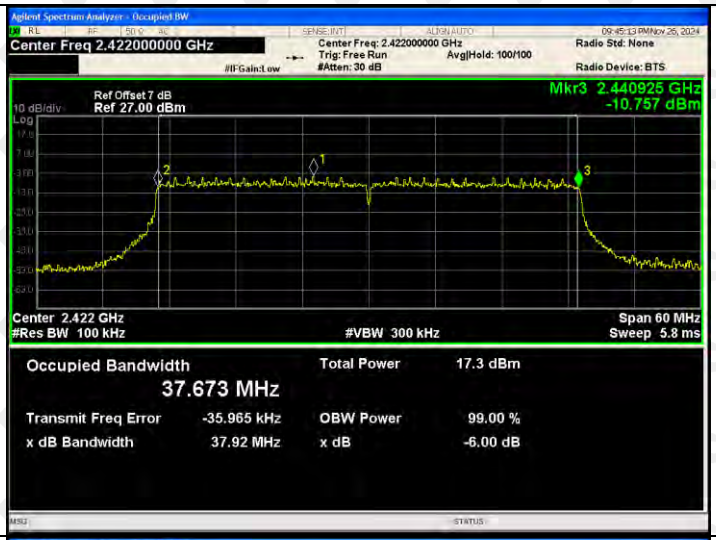
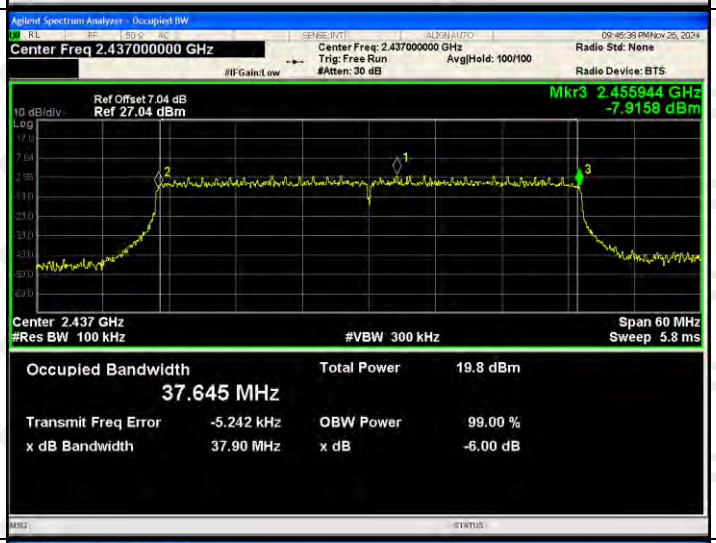
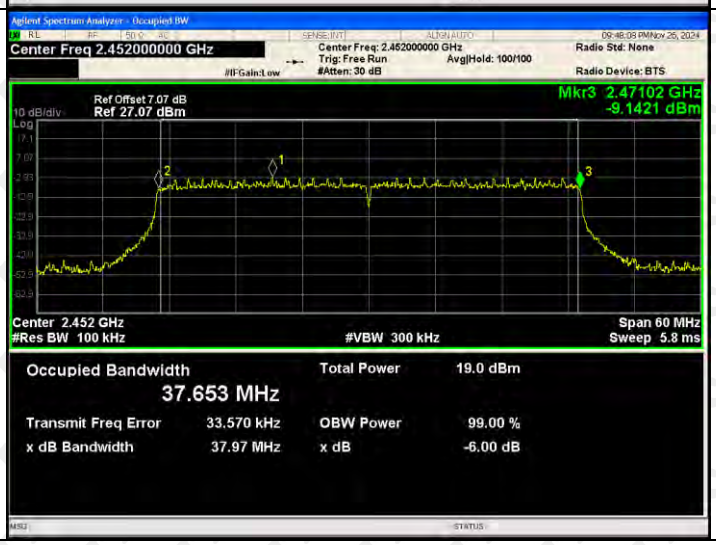
Graphs			
802.11b /LCH			
802.11b /MCH			
802.11b/HCH			

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

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

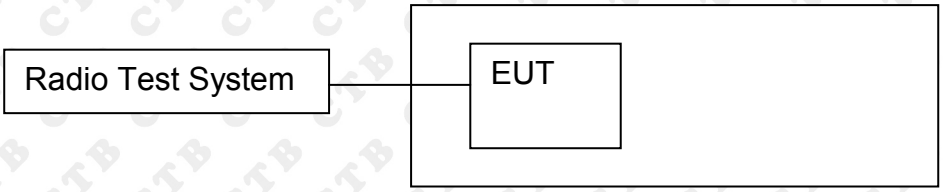
802.11n(HT40)/LCH			
802.11n(HT40)/MCH			
802.11n(HT40)/HCH			

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

802.11ax(HT40)/LCH			
802.11ax(HT40)/MCH			
802.11ax(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

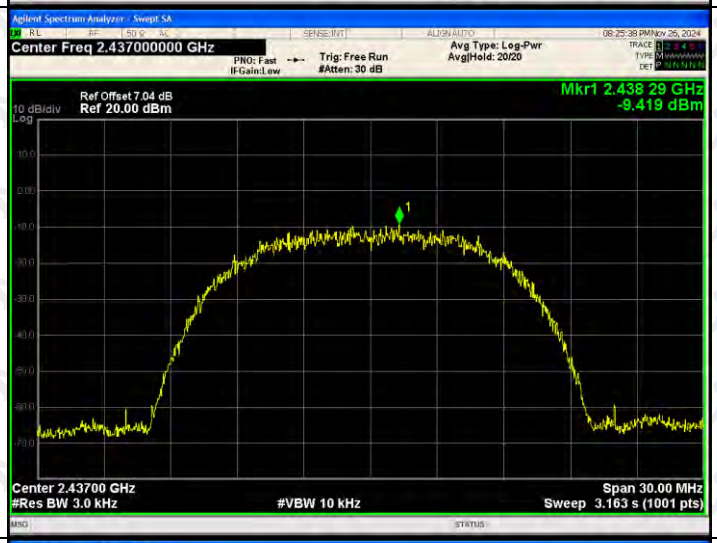
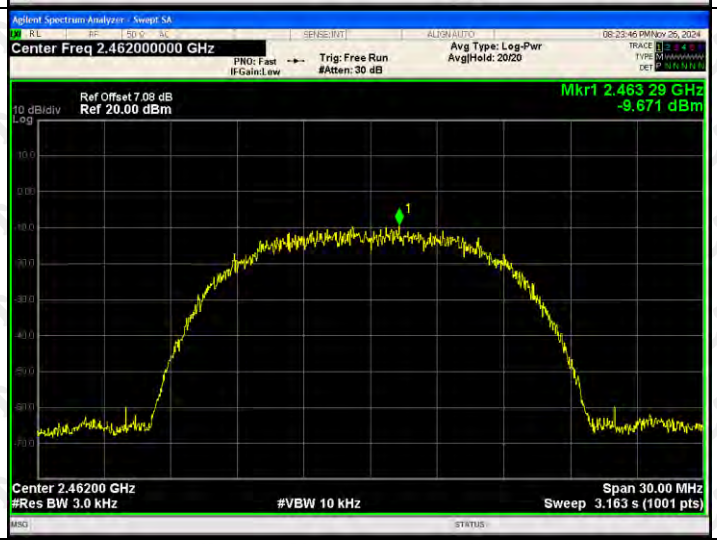
11.3 Test procedure

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 = Peak.
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.

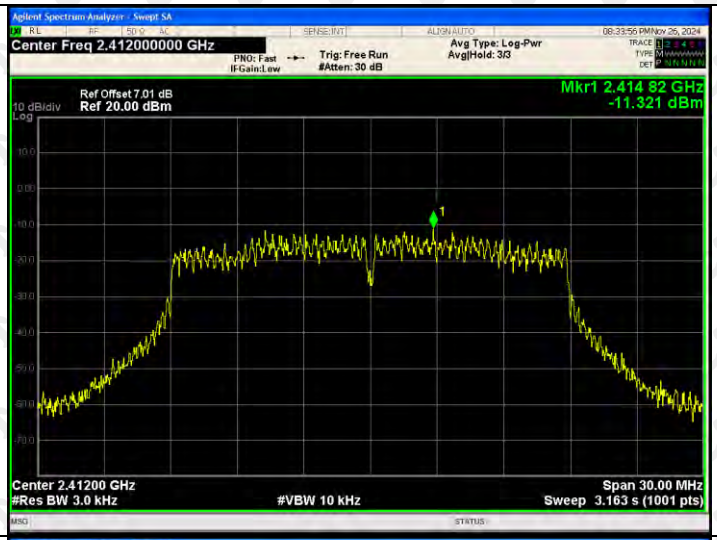
11.4 Test Result

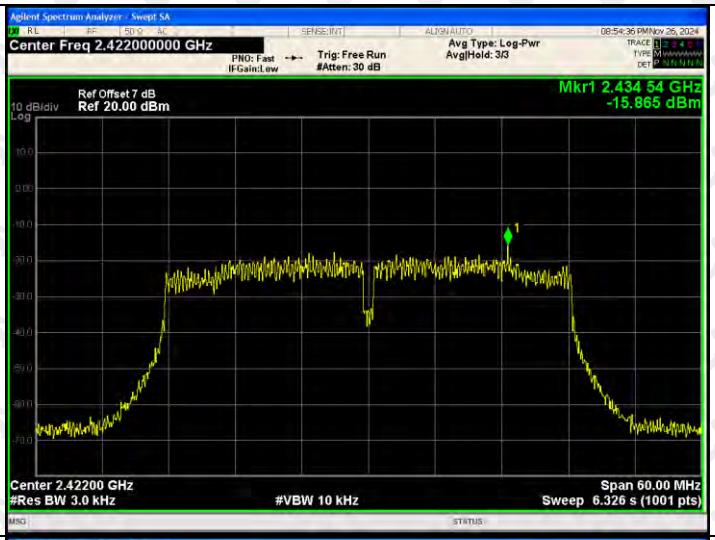
Mode	Channel.	Power Spectral Density [dBm /3kHz] ANT 1	Power Spectral Density [dBm /3kHz]] ANT 2	Power Spectral Density [dBm /3kHz]Total	Limit(dBm)
802.11b	LCH	-9.923	-10.46	/	8
	MCH	-9.419	-10.93	/	8
	HCH	-9.671	-10.635	/	8
802.11g	LCH	-11.431	-11.8	/	8
	MCH	-11.452	-10.777	/	8
	HCH	-12.622	-12.905	/	8
802.11n(HT20)	LCH	-11.321	-11.884	-8.583	8
	MCH	-10.426	-10.919	-7.655	8
	HCH	-10.292	-13.722	-8.667	8
802.11n(HT40)	LCH	-15.865	-18.427	-13.949	8
	MCH	-13.767	-14.433	-11.077	8
	HCH	-17.192	-17.045	-14.108	8
802.11ax(HT20)	LCH	-14.379	-15.1	-11.714	8
	MCH	-14.48	-14.156	-11.305	8
	HCH	-13.882	-14.899	-11.350	8
802.11ax(HT40)	LCH	-17.415	-20.24	-15.591	8
	MCH	-14.27	-17.414	-12.553	8
	HCH	-14.806	-17.811	-13.043	8

ANT1:
Test Graph

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

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

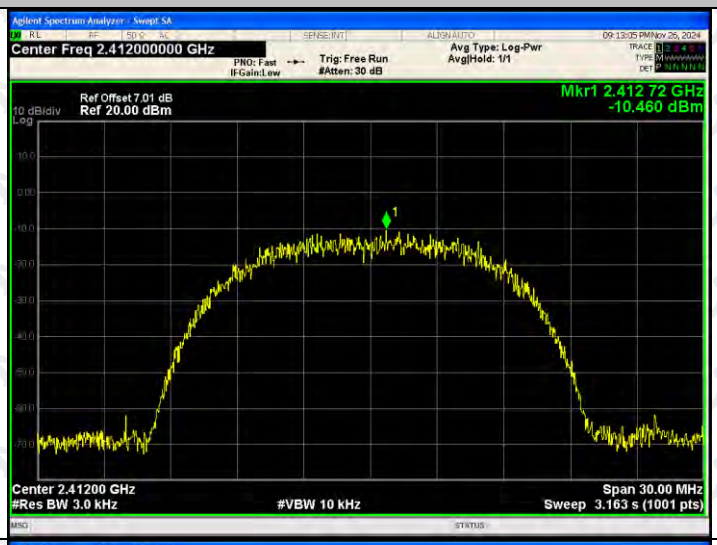
802.11n(HT20)/LCH			
802.11n(HT20)/MCH			
802.11n(HT20)/HCH			

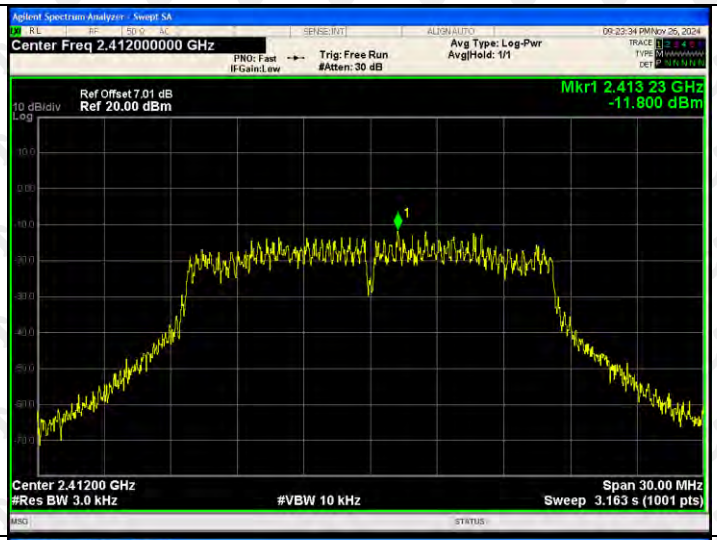
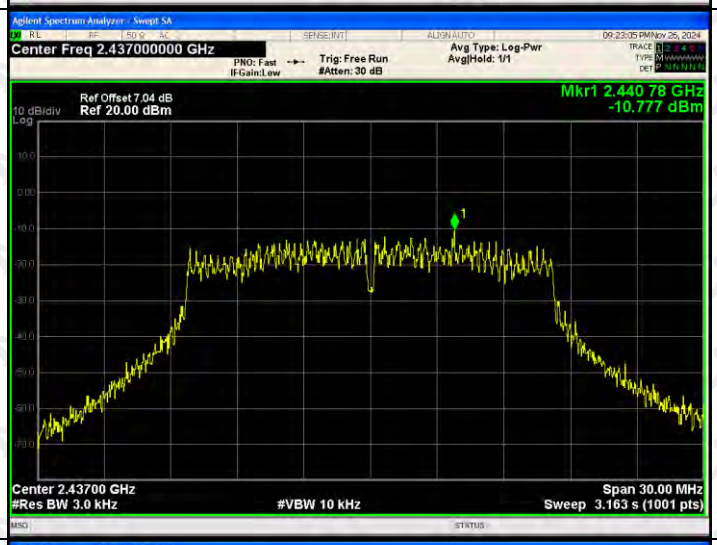
802.11n(HT40)/LCH			
802.11n(HT40)/MCH			
802.11n(HT40)/HCH			

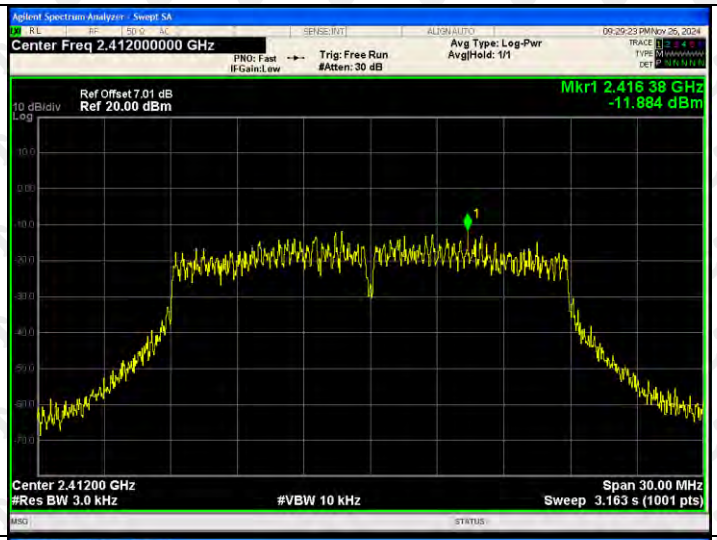
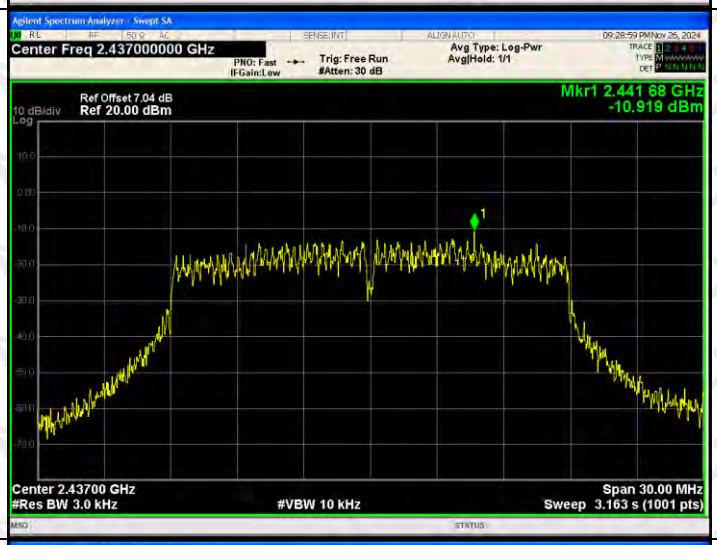
802.11ax(HT20)/LCH			
802.11ax(HT20)/MCH			
802.11ax(HT20)/HCH			

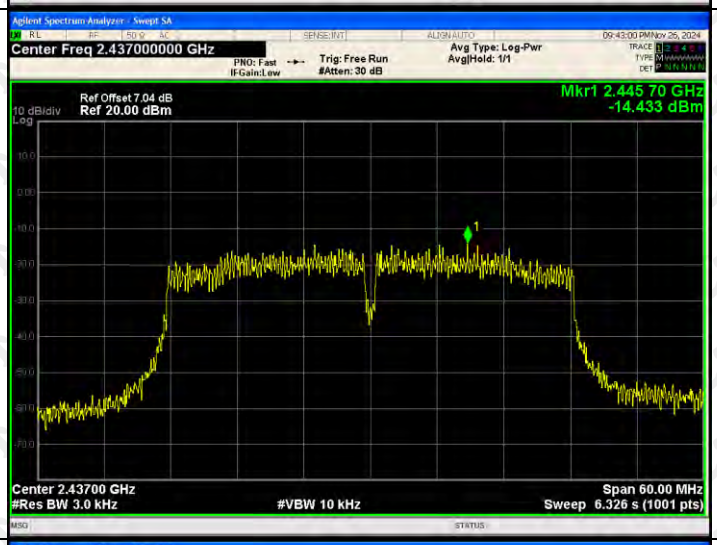
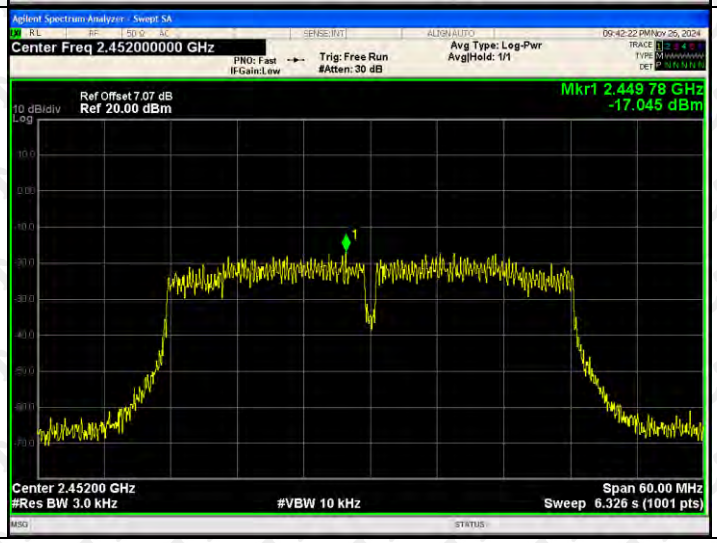
802.11ax(HT40)/LCH			
802.11ax(HT40)/MCH			
802.11ax(HT40)/HCH			

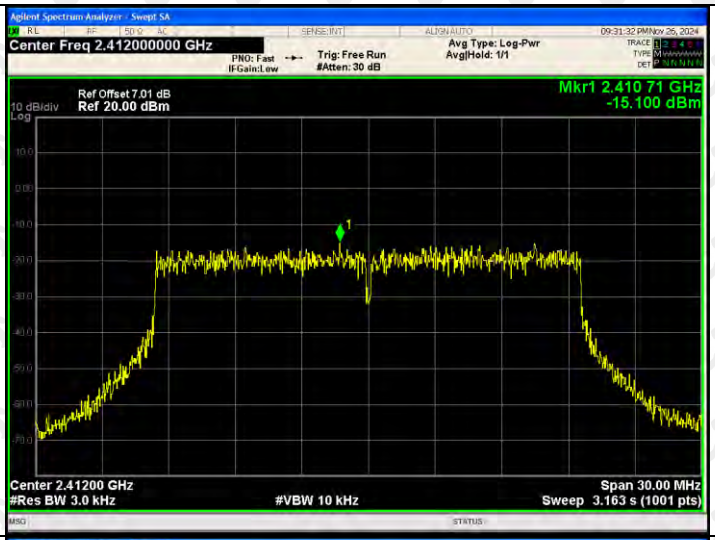
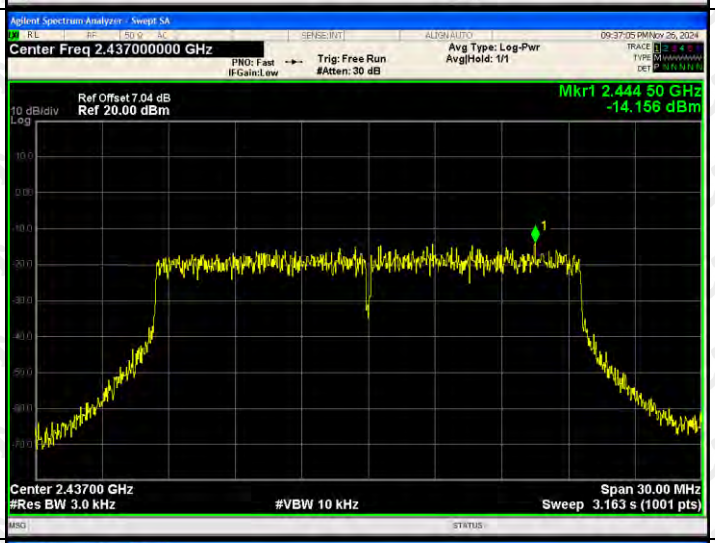
ANT 2:
Test Graph

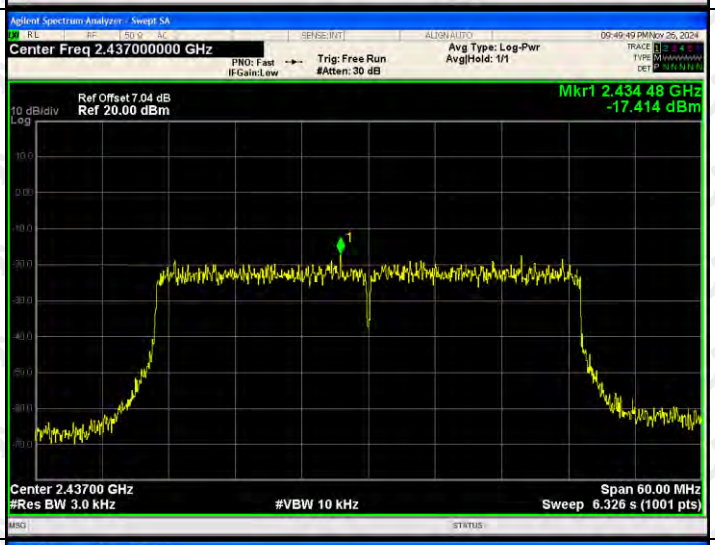
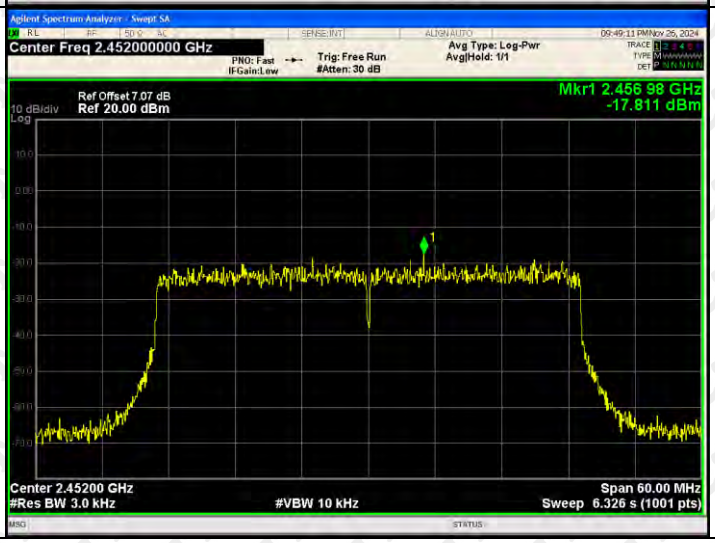
Graphs			
802.11b /LCH			
802.11b /MCH			
802.11b/HCH			

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			

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

802.11ax(HT40)/LCH			
802.11ax(HT40)/MCH			
802.11ax(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.

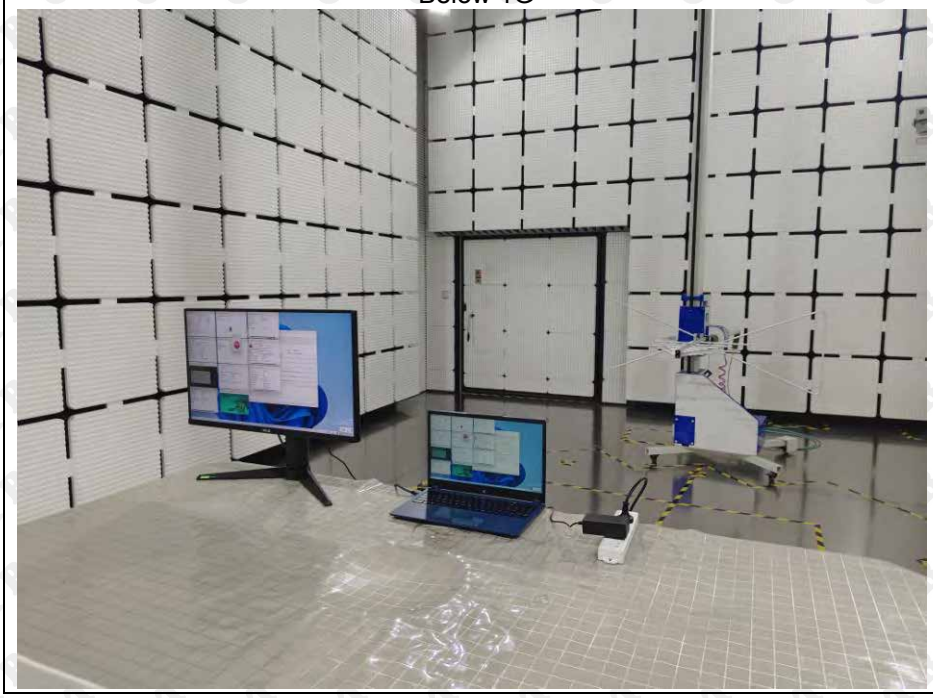
EUT Antenna:

The antenna is FPC antenna and no consideration of replacement. The best case gain of the antenna is ANT1: 1.62dBi, ANT2: 2.40dBi

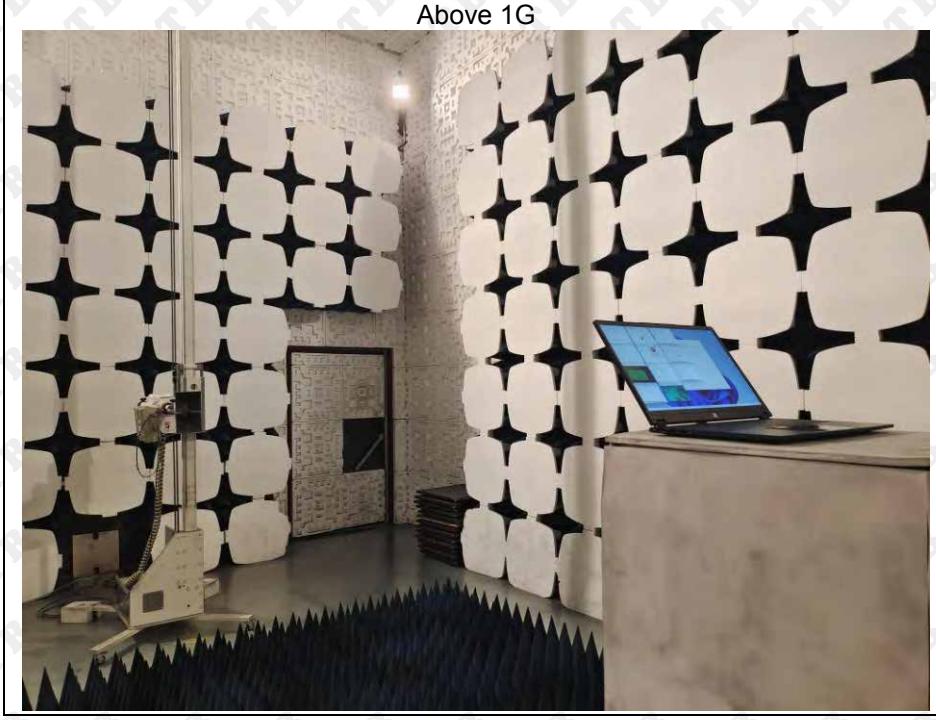
13. EUT TEST SETUP PHOTOGRAPHS

Radiated Emission

Below 1G



Above 1G



Conducted Emission

※※※※※ **END OF REPORT** ※※※※※