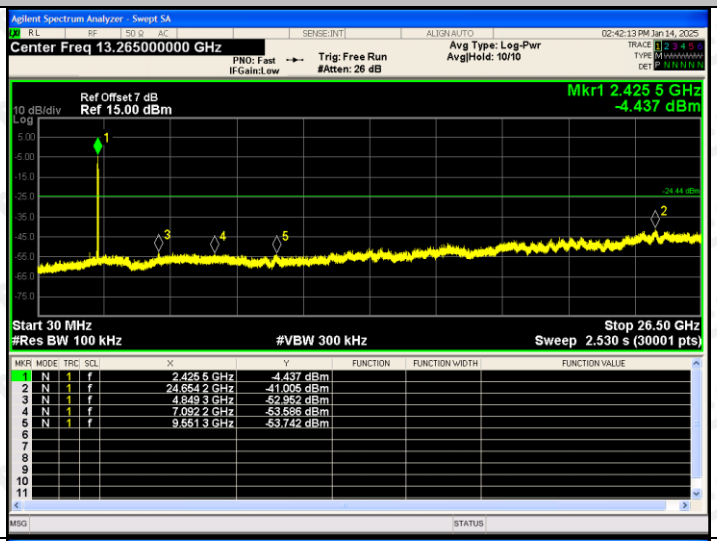
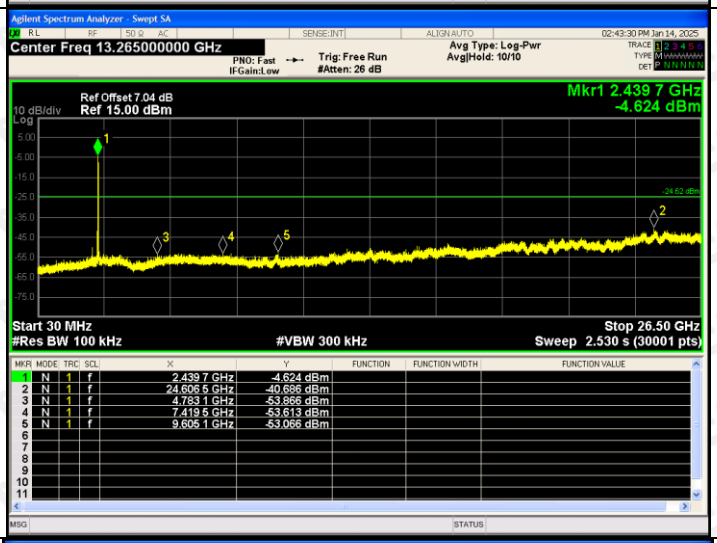
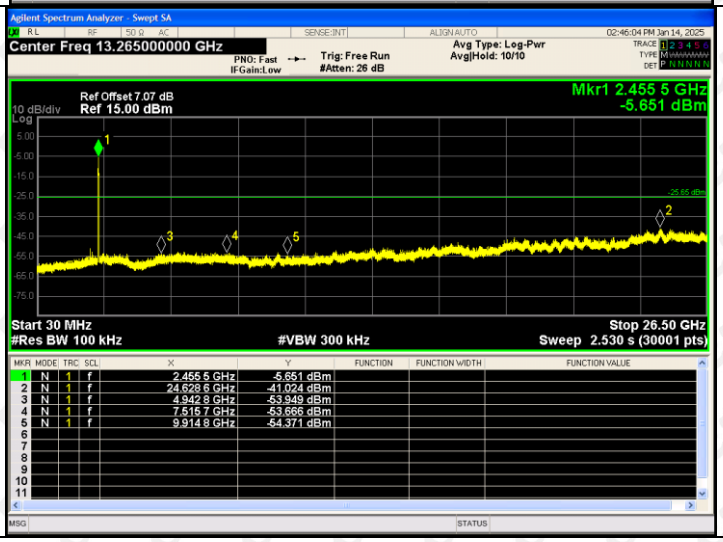
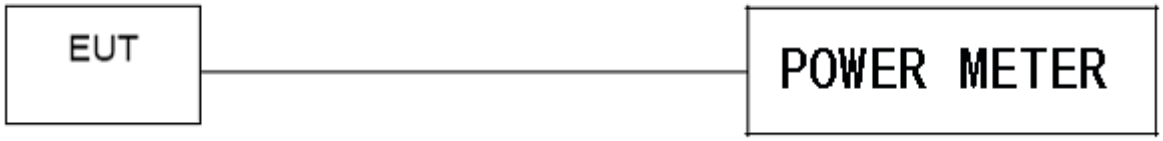
RF Conducted Spurious Emissions Graphs		
802.11ax(HT40)/LCH		
802.11 ax(HT40)/MCH		
802.11 ax(HT40)/HCH		

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)	Maximum Conducted Output Power	1 watt or 30dBm	2400-2483.5	PASS

9.3 Test procedure

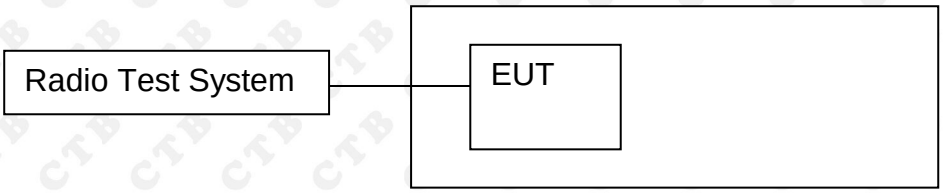
1. The EUT was directly connected to the Power meter

9.4 Test Result

Mode	Channel.	Maximum Peak Output Power [dBm]	Limit [dBm]	Verdict
802.11b	LCH	17.666	30	PASS
	MCH	16.846	30	PASS
	HCH	15.053	30	PASS
802.11g	LCH	15.805	30	PASS
	MCH	15.150	30	PASS
	HCH	13.635	30	PASS
802.11n(HT20)	LCH	16.494	30	PASS
	MCH	15.838	30	PASS
	HCH	14.189	30	PASS
802.11n(HT40)	LCH	16.389	30	PASS
	MCH	15.913	30	PASS
	HCH	15.228	30	PASS
802.11ax(HT20)	LCH	16.325	30	PASS
	MCH	15.701	30	PASS
	HCH	14.238	30	PASS
802.11ax(HT40)	LCH	16.106	30	PASS
	MCH	15.718	30	PASS
	HCH	14.825	30	PASS

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

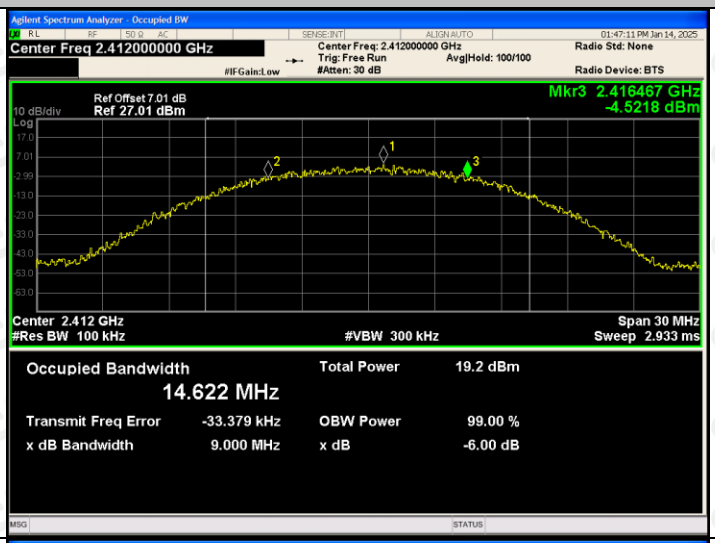
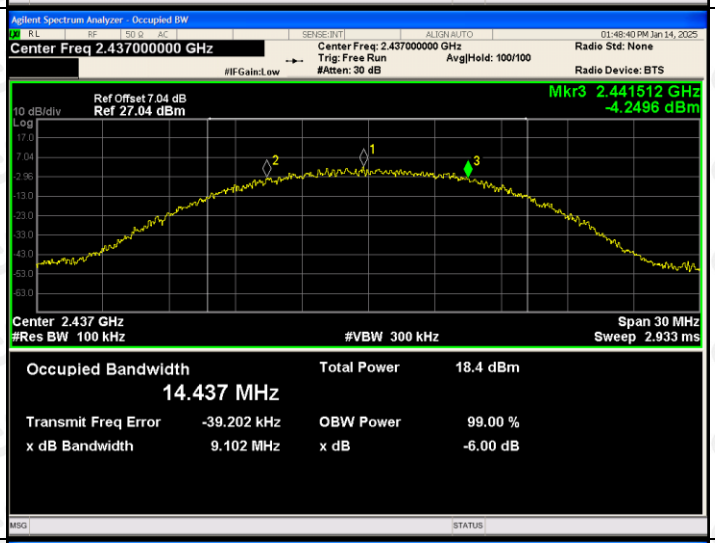
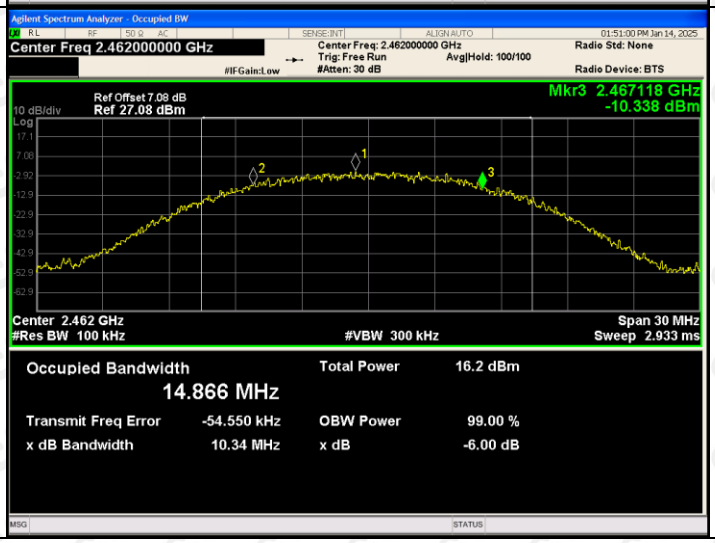
10.3 Test procedure

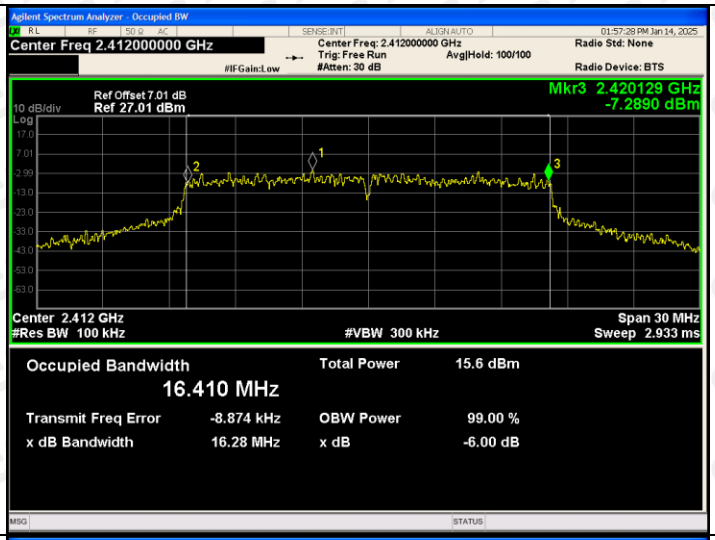
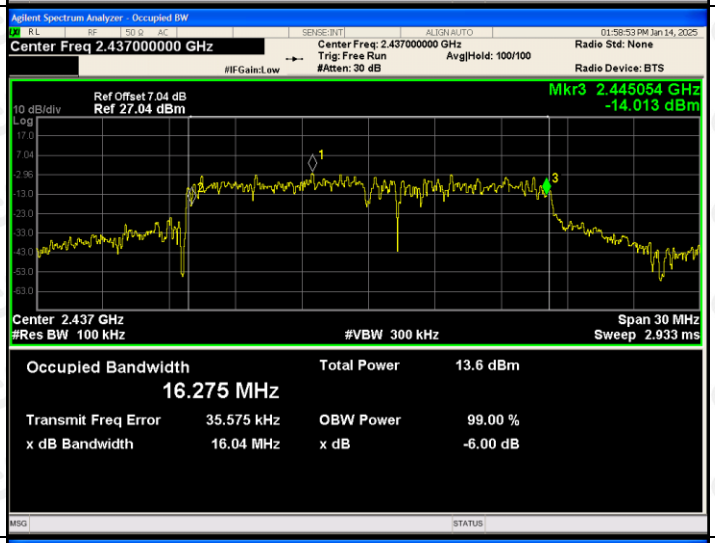
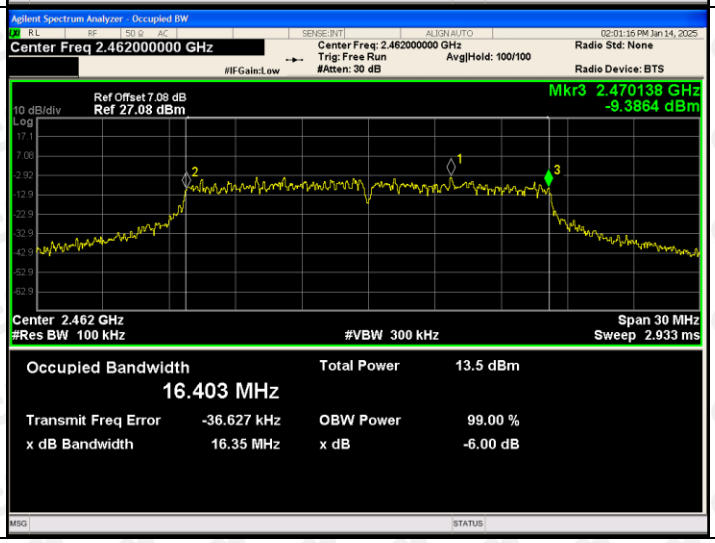
1. Rem1. Set RBW = 100 kHz.
2. Set the video bandwidth (VBW) ≥ 3 x RBW.
3. Detector = Peak.
4. Trace mode = max hold.
5. Sweep = auto couple.
6. Allow the trace to stabilize.
7. Measure the maximum width of the emission that is constrained by the frequencies associated with the two outermost amplitude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

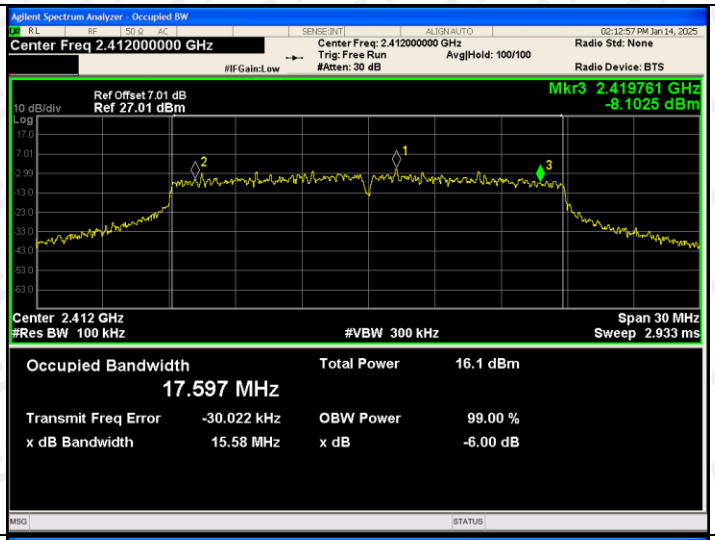
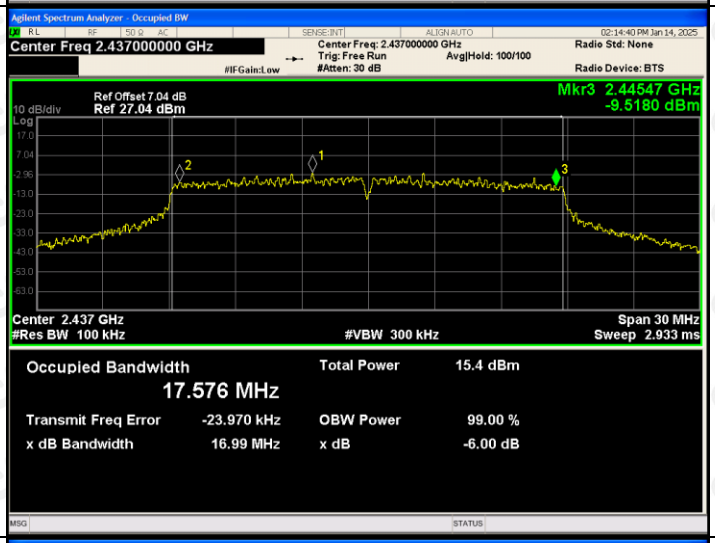
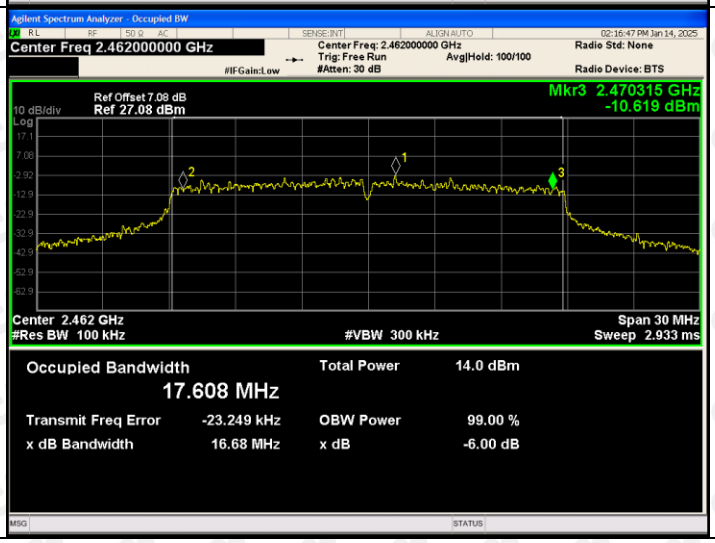
10.4 Test Result

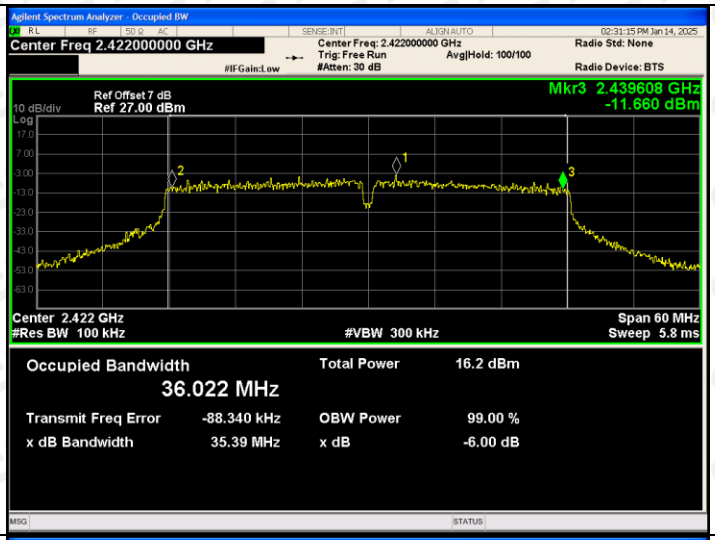
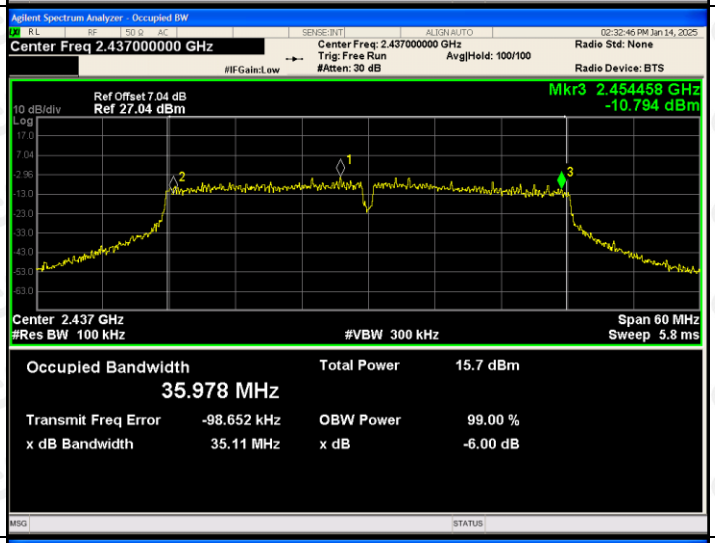
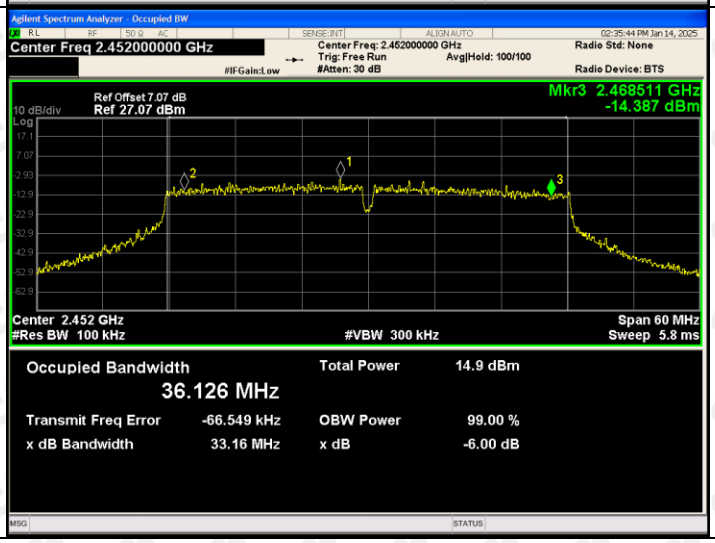
Test Mode	Frequency	6dB Bandwidth (MHz)	Limit(kHz)	Result
802.11b	LCH	9.000	500	PASS
	MCH	9.102	500	PASS
	HCH	10.344	500	PASS
802.11g	LCH	16.275	500	PASS
	MCH	16.038	500	PASS
	HCH	16.349	500	PASS
802.11n(HT20)	LCH	15.582	500	PASS
	MCH	16.988	500	PASS
	HCH	16.676	500	PASS
802.11n(HT40)	LCH	35.393	500	PASS
	MCH	35.113	500	PASS
	HCH	33.156	500	PASS
802.11ax(HT20)	LCH	16.831	500	PASS
	MCH	16.440	500	PASS
	HCH	17.706	500	PASS
802.11ax(HT40)	LCH	32.876	500	PASS
	MCH	36.390	500	PASS
	HCH	36.533	500	PASS

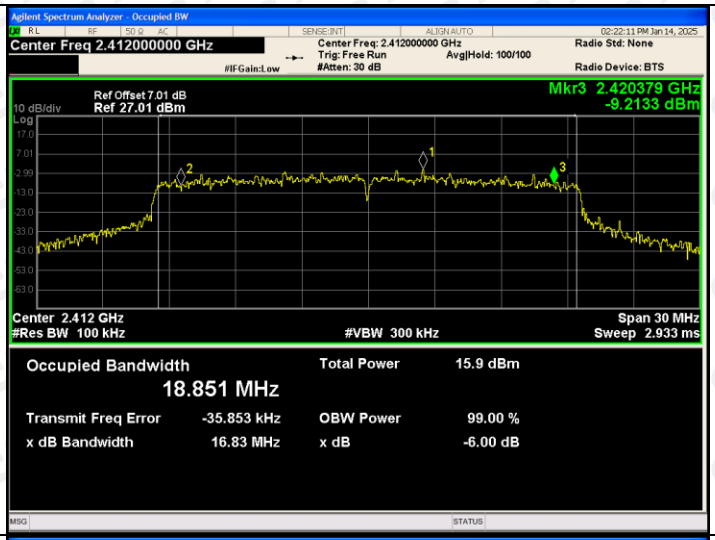
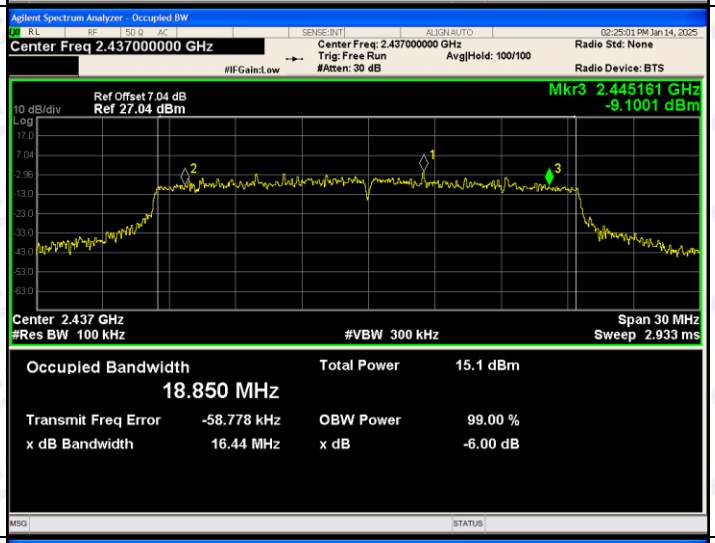
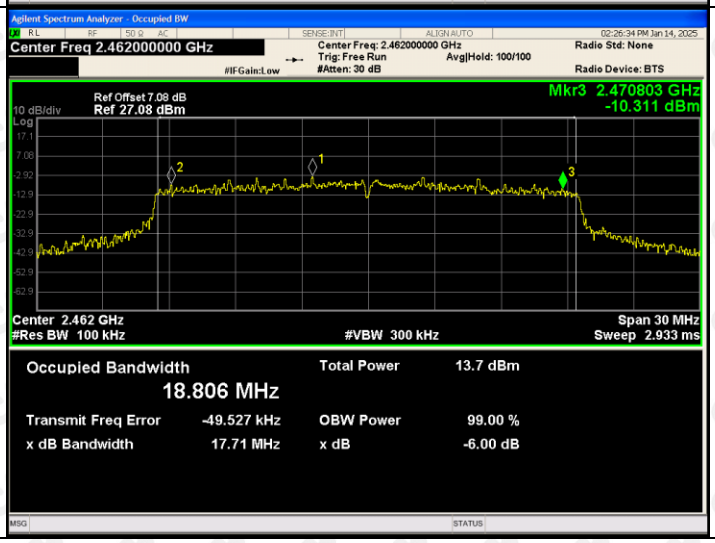
Test Graph:

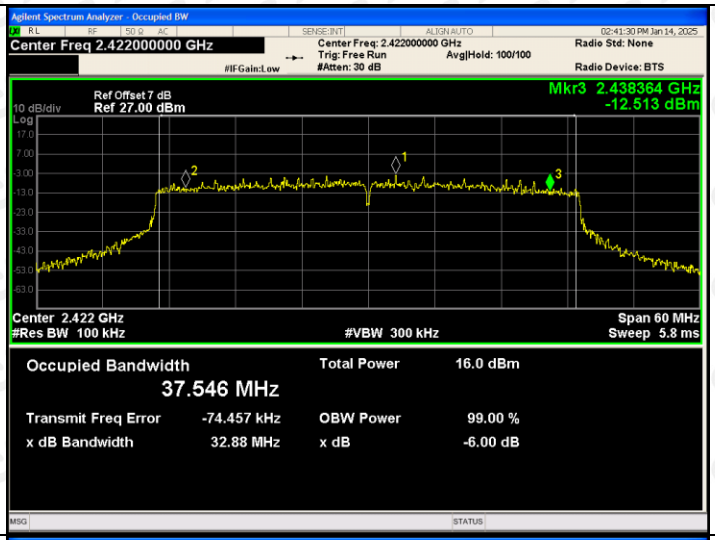
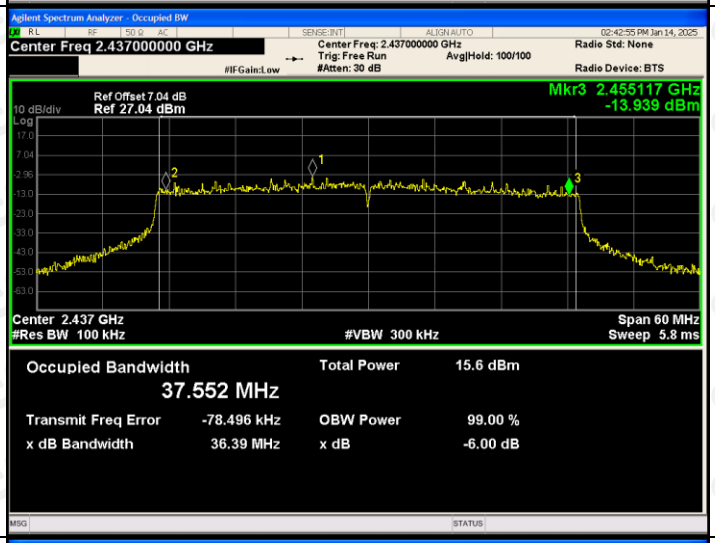
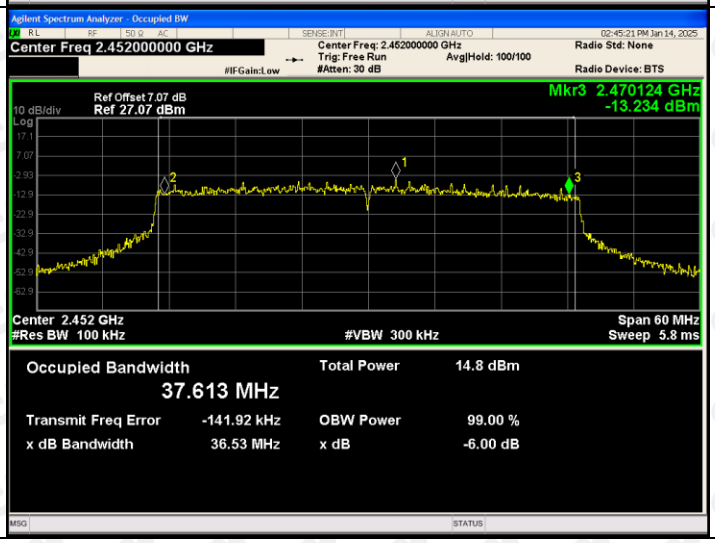
Graphs	
802.11b /LCH	
802.11b /MCH	
802.11b/HCH	

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

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

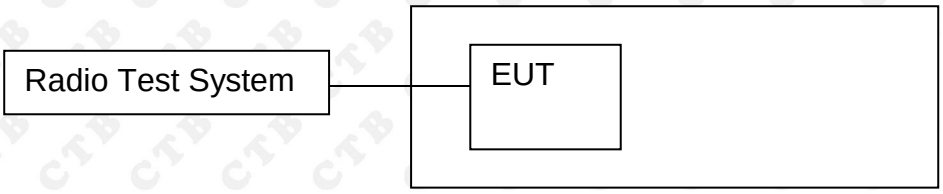
802.11n(HT40)/LCH			
802.11n(HT40)/MCH			
802.11n(HT40)/HCH			

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

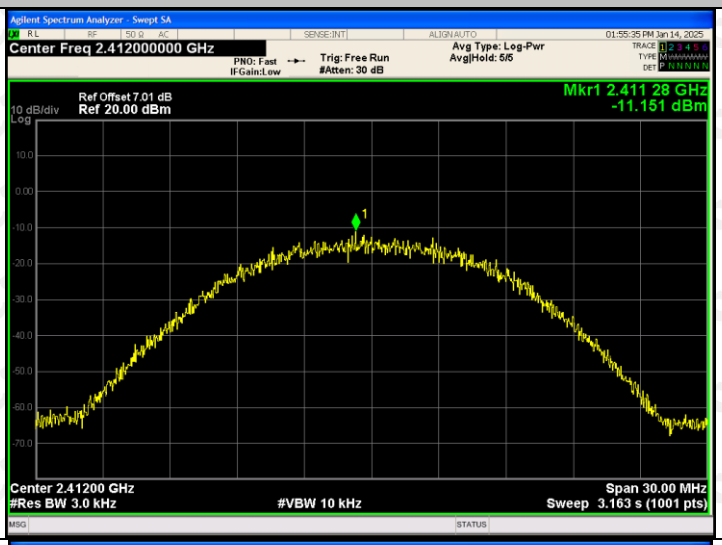
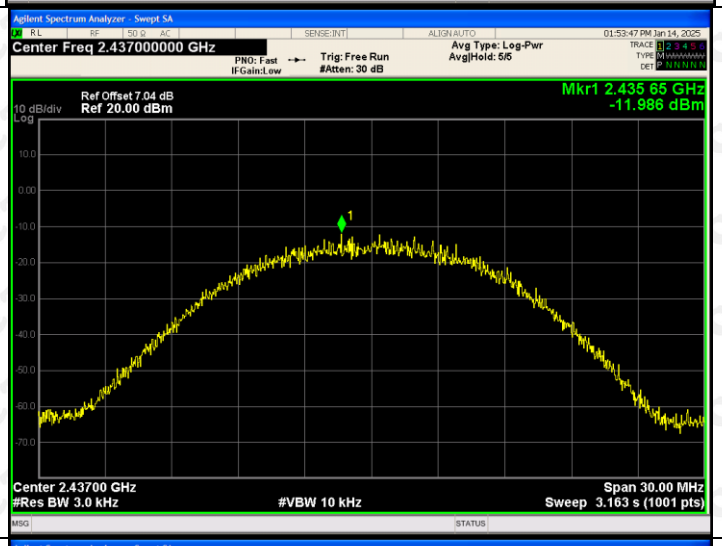
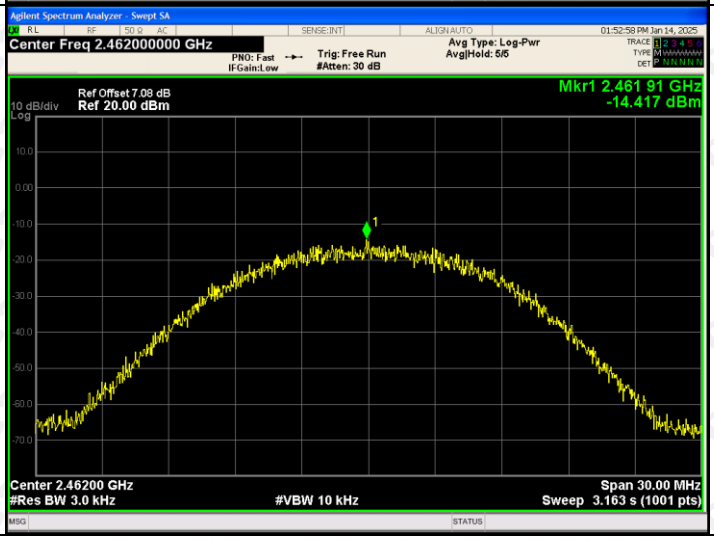
11.3 Test procedure

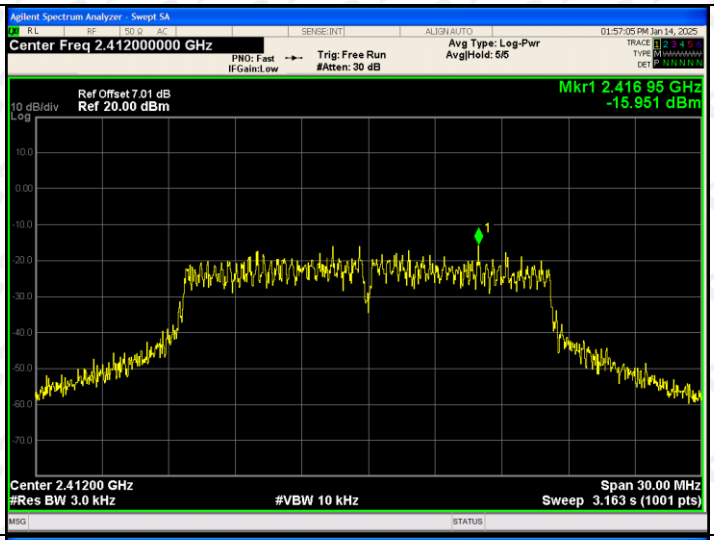
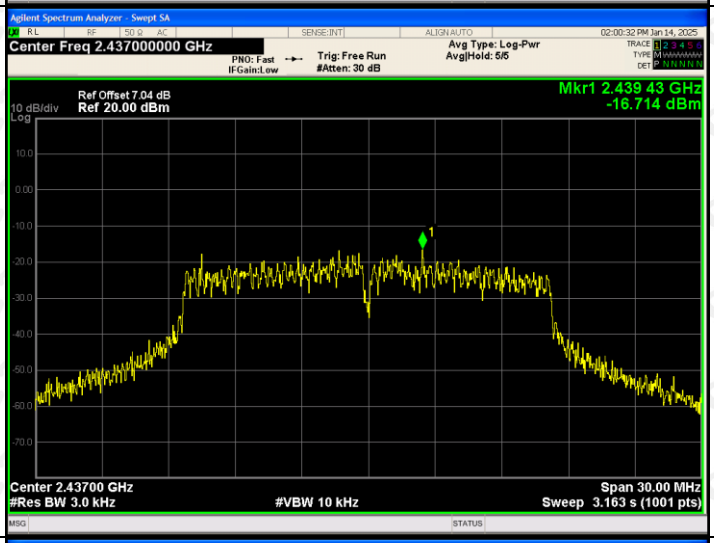
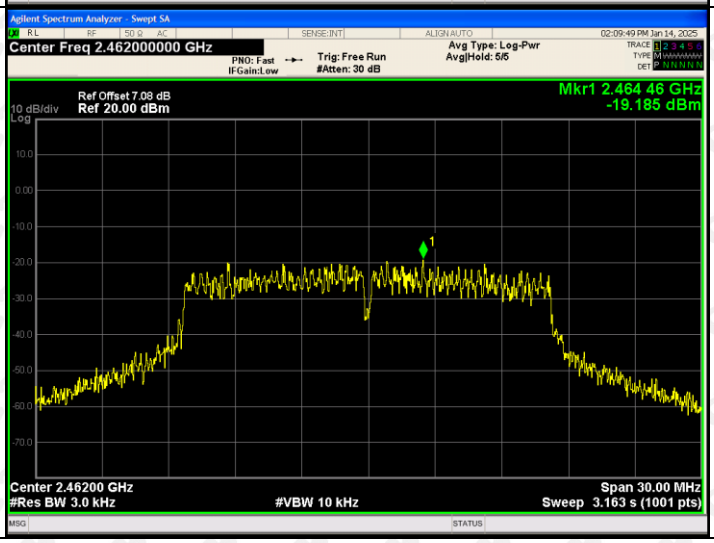
1. Set analyzer center frequency to DTS channel center frequency.
2. Set the span to 1.5 times the DTS bandwidth.
3. Set the RBW to: 3 kHz ≤ RBW ≤ 100 kHz.
4. Set the VBW ≥ 3 x RBW.
5. Detector = PEAK.
6. Sweep time = auto couple.
7. Trace mode = max hold.
8. Allow trace to fully stabilize.
9. Use the 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.

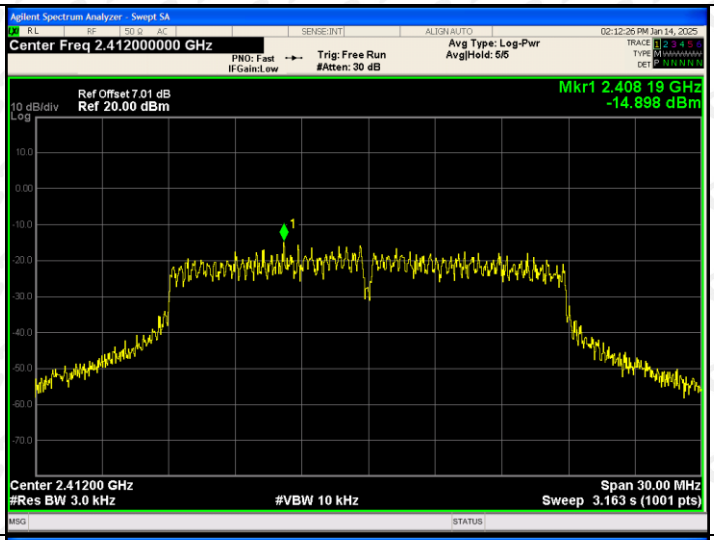
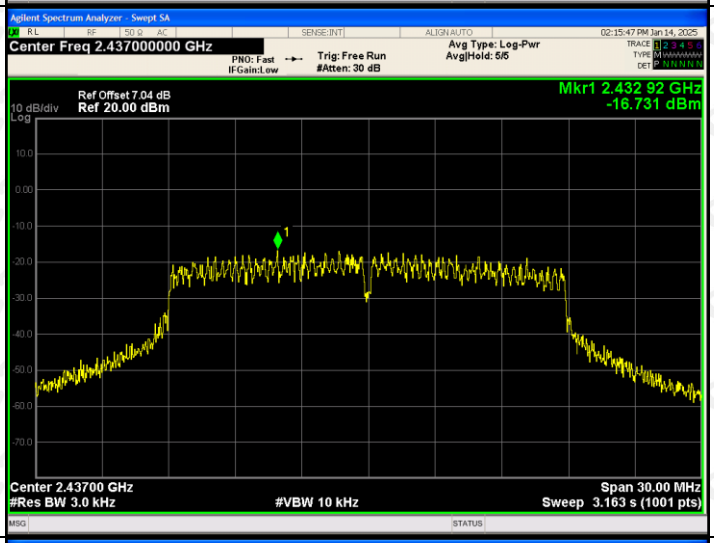
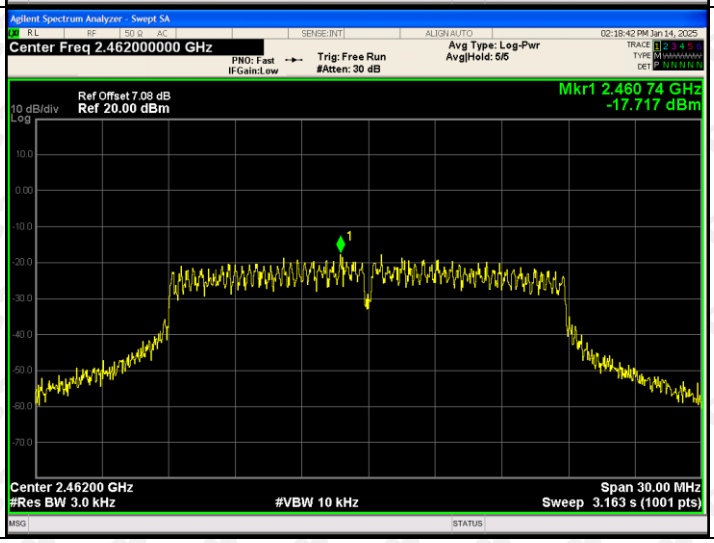
11.4 Test Result

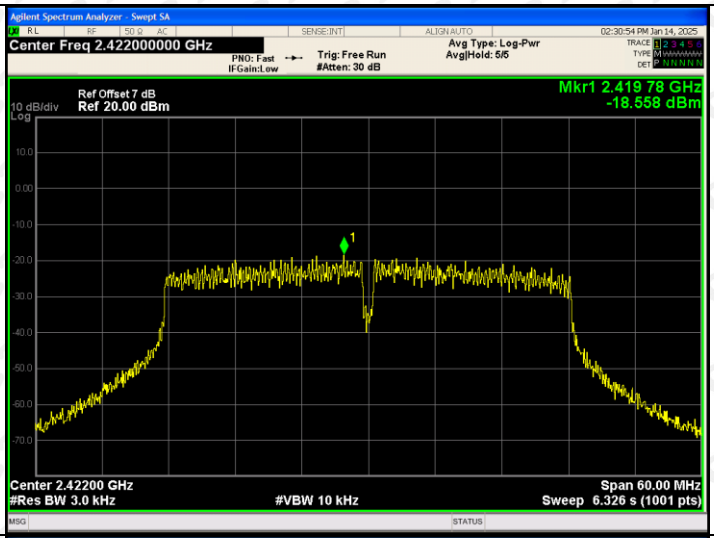
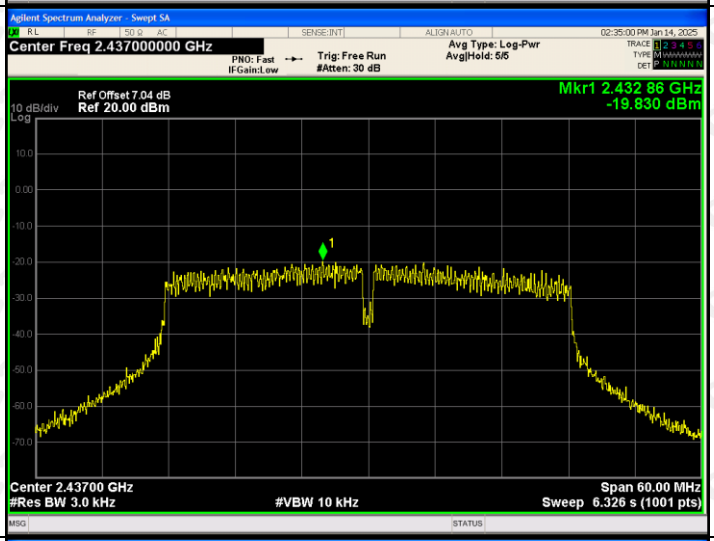
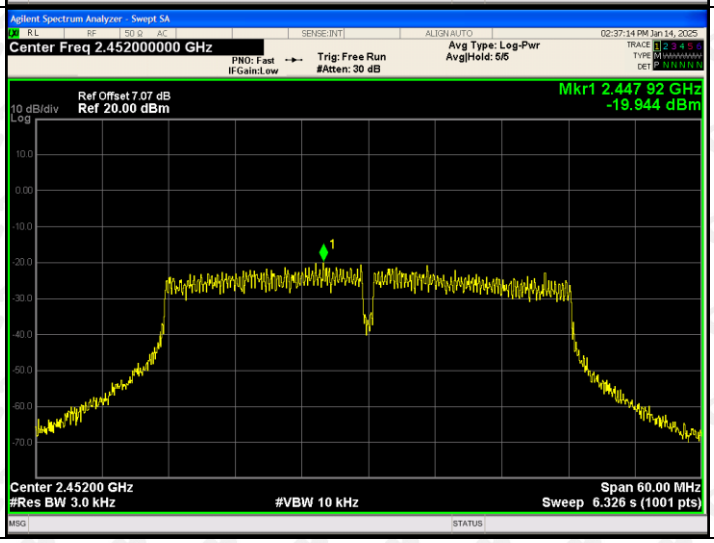
Mode	Channel.	Power Spectral Density [dBm /3kHz]	Limit(8 dBm (in any 3kHz))	Verdict
802.11b	LCH	-11.151	8	PASS
	MCH	-11.986	8	PASS
	HCH	-14.417	8	PASS
802.11g	LCH	-15.951	8	PASS
	MCH	-16.714	8	PASS
	HCH	-19.185	8	PASS
802.11n(HT20)	LCH	-14.898	8	PASS
	MCH	-16.731	8	PASS
	HCH	-17.717	8	PASS
802.11n(HT40)	LCH	-18.558	8	PASS
	MCH	-19.830	8	PASS
	HCH	-19.944	8	PASS
802.11ax(HT20)	LCH	-17.840	8	PASS
	MCH	-18.030	8	PASS
	HCH	-19.849	8	PASS
802.11ax(HT40)	LCH	-20.776	8	PASS
	MCH	-20.890	8	PASS
	HCH	-20.527	8	PASS

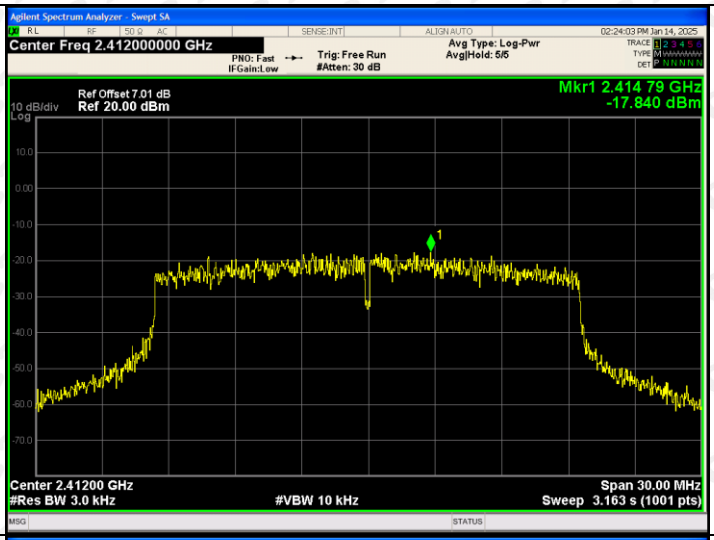
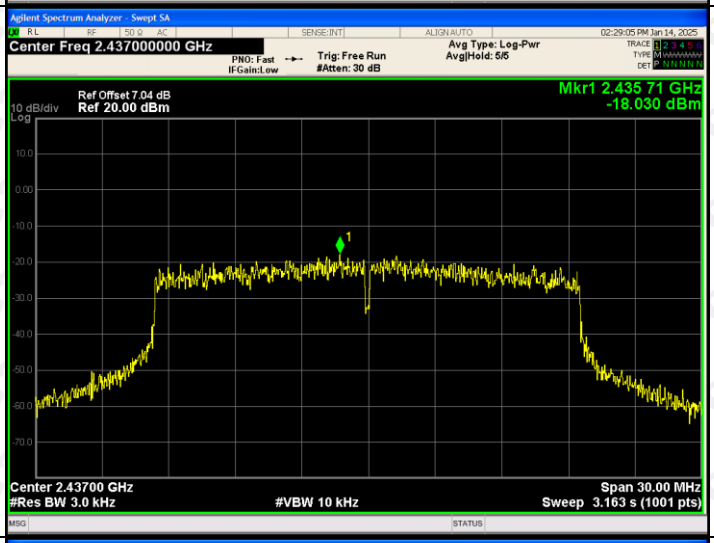
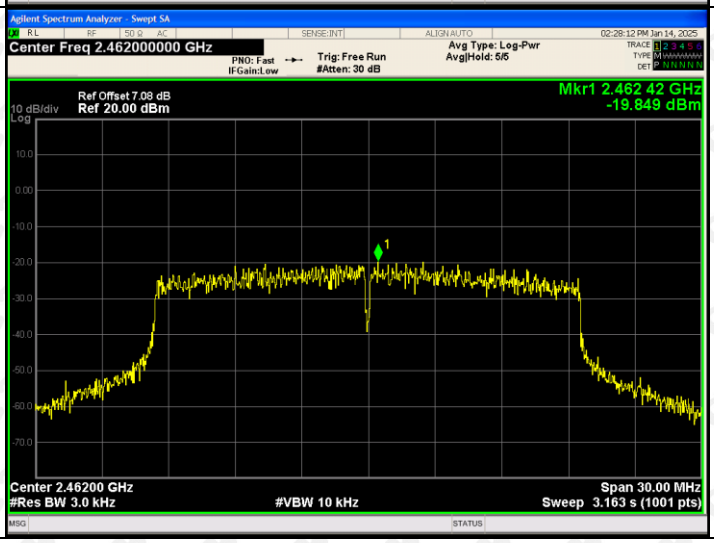
Test Graph

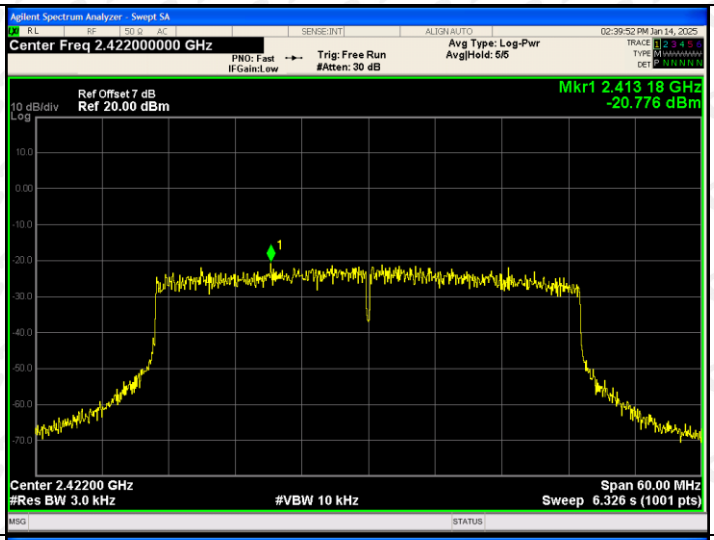
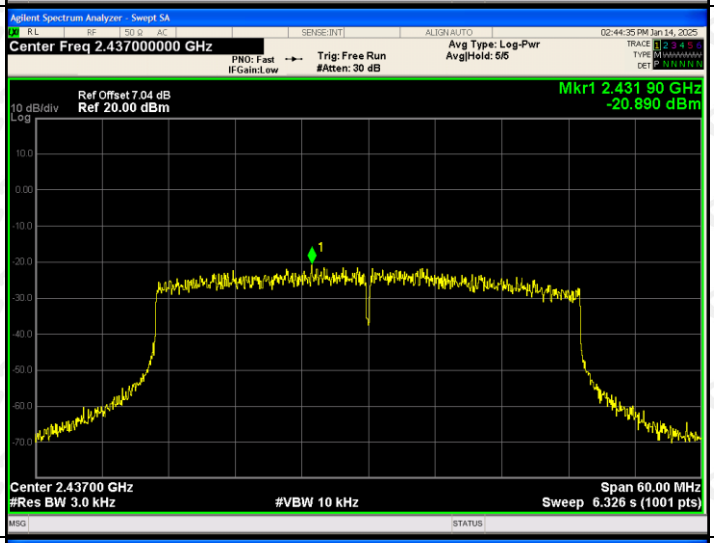
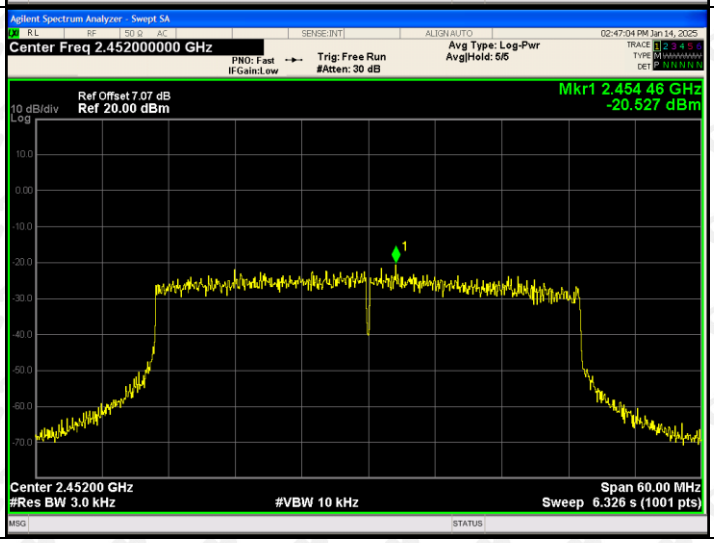
Graphs		
802.11b /LCH		
802.11b /MCH		
802.11b/HCH		

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		

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 2.64dBi.

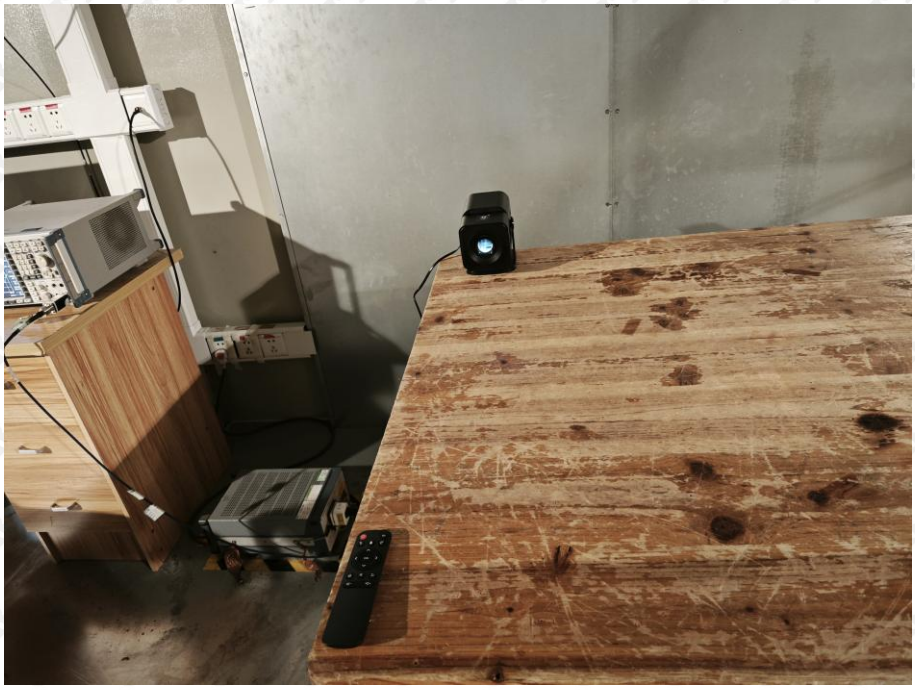
13. EUT TEST SETUP PHOTOGRAPHS

Radiated Emission

Below 1G

Above 1G

Conducted Emission



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