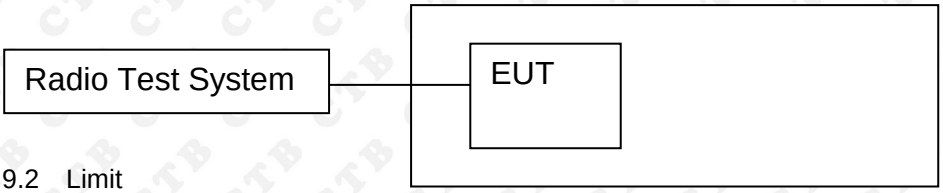
9. COUDUCTED OUTPUT POWER

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

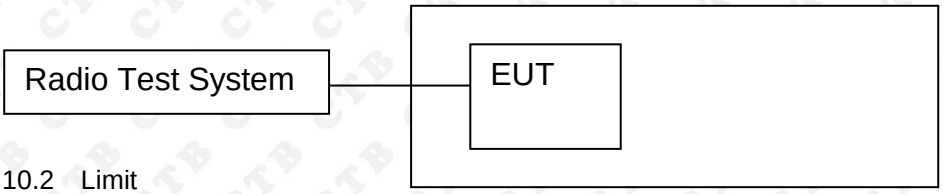
1. Remove the antenna from the EUT and then connect a low RF cable from the antenna port to the spectrum.
2. Set the spectrum analyzer: RBW = 1MHz. VBW = 3MHz. Sweep = auto; Detector Function = Peak. Channel power function is used
3. Keep the EUT in transmitting at lowest, middle and highest channel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

9.4 Test Result

Mode	Channel.	Maximum Output Power [dBm] ant 1	Maximum Output Power [dBm] ant 2	Total Power Conducted Output Power(PK)	Limit[dBm]
802.11b	LCH	14.332	14.765	/	30
	MCH	14.164	14.515	/	30
	HCH	14.66	14.593	/	30
802.11g	LCH	13.408	13.594	/	30
	MCH	13.227	13.41	/	30
	HCH	13.113	13.754	/	30
802.11n(HT20)	LCH	13.889	13.551	16.734	30
	MCH	13.643	13.822	16.744	30
	HCH	13.58	13.212	16.410	30
802.11n(HT40)	LCH	12.666	12.626	15.656	30
	MCH	12.848	12.544	15.709	30
	HCH	12.804	12.436	15.634	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

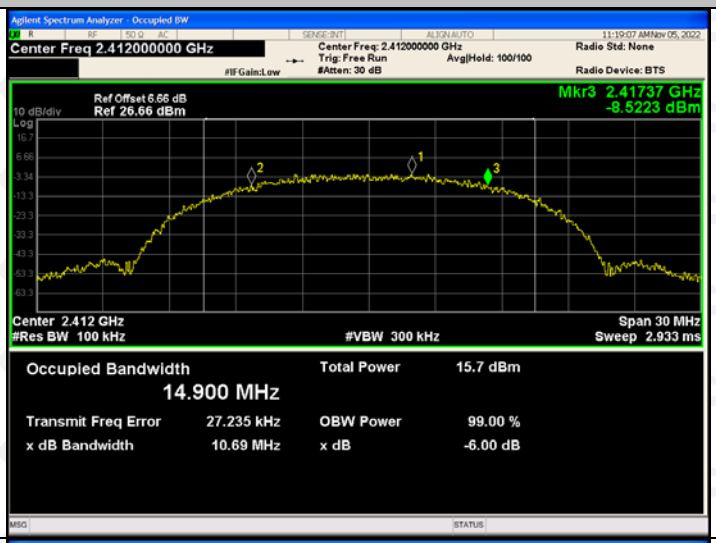
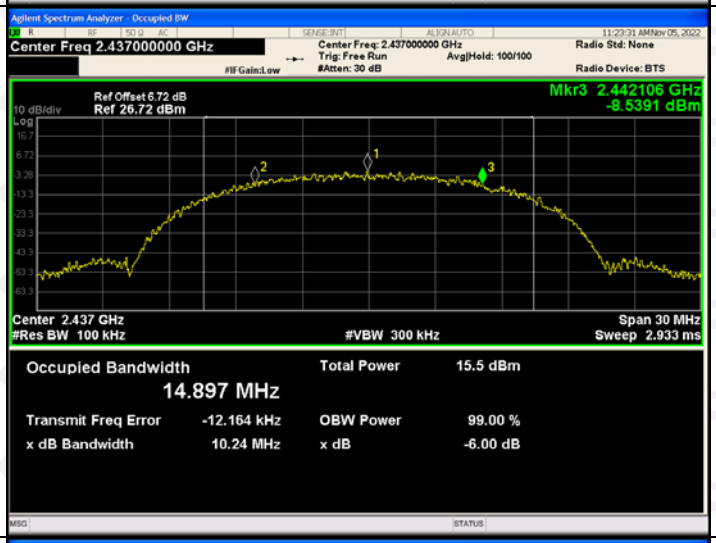
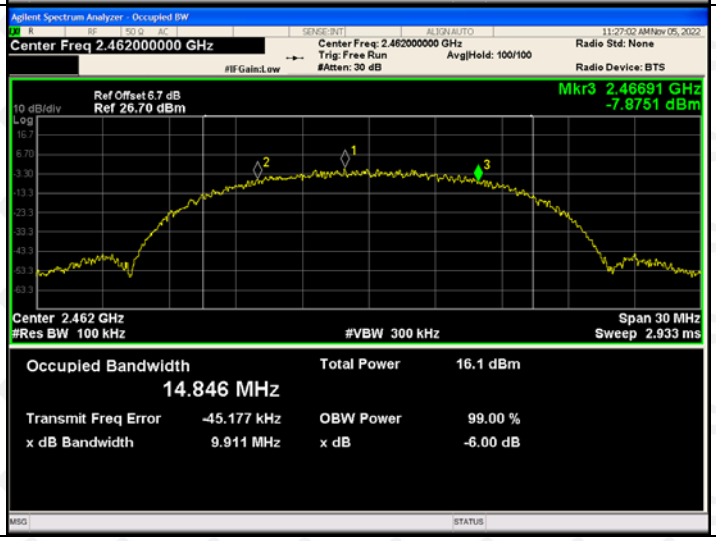
ANT1:

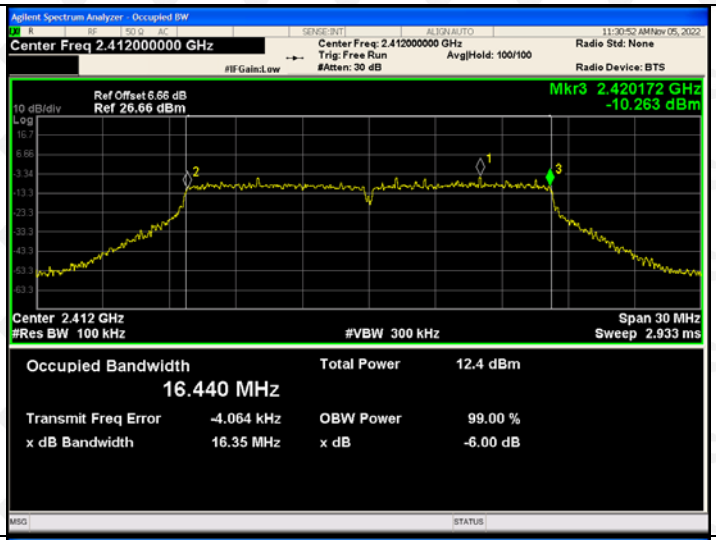
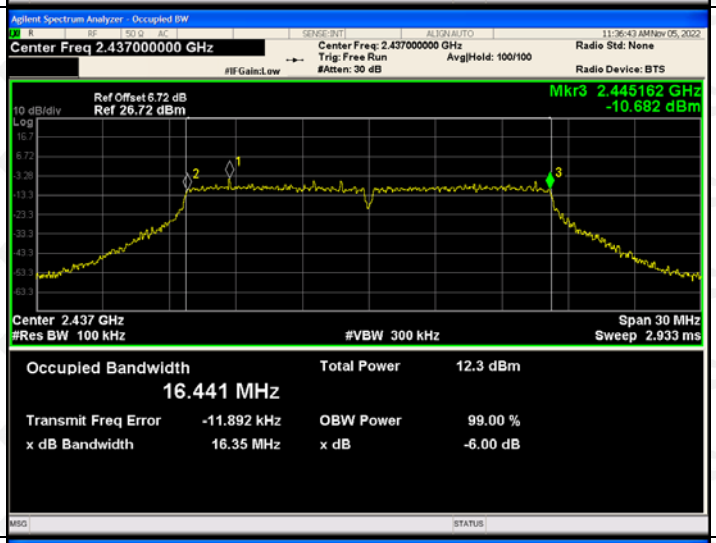
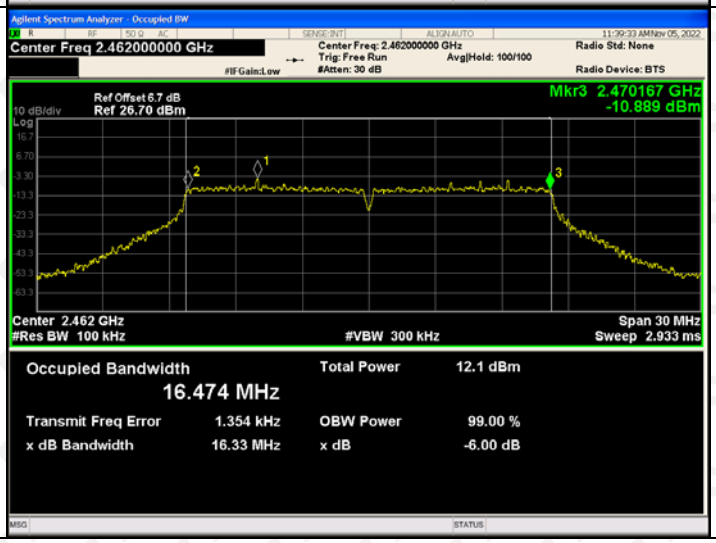
Test Mode	Frequency	6dB Bandwidth (MHz)	Limit(kHz)	Result
802.11b	LCH	10.685	500	**PASS**
	MCH	10.237	500	**PASS**
	HCH	9.911	500	**PASS**
802.11g	LCH	16.352	500	**PASS**
	MCH	16.347	500	**PASS**
	HCH	16.332	500	**PASS**
802.11n(HT20)	LCH	17.565	500	**PASS**
	MCH	17.288	500	**PASS**
	HCH	17.079	500	**PASS**
802.11n(HT40)	LCH	35.172	500	**PASS**
	MCH	35.399	500	**PASS**
	HCH	35.568	500	**PASS**

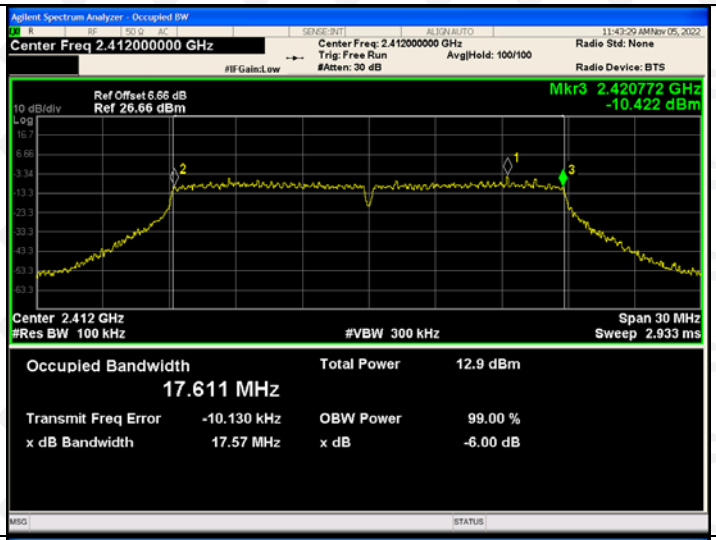
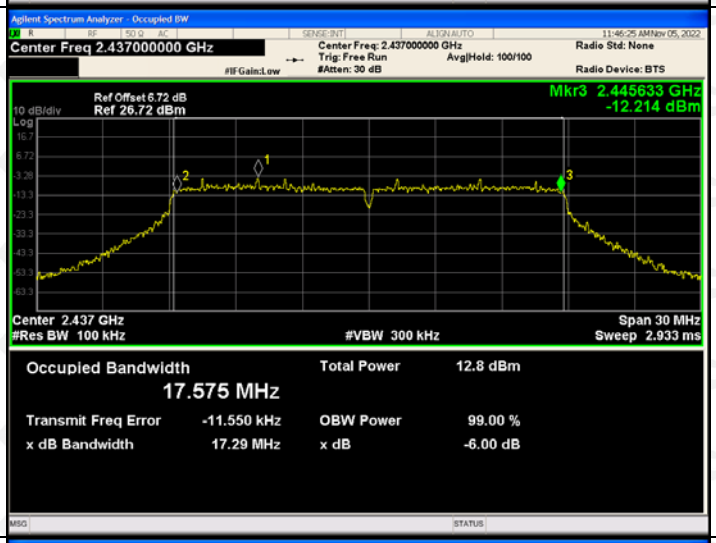
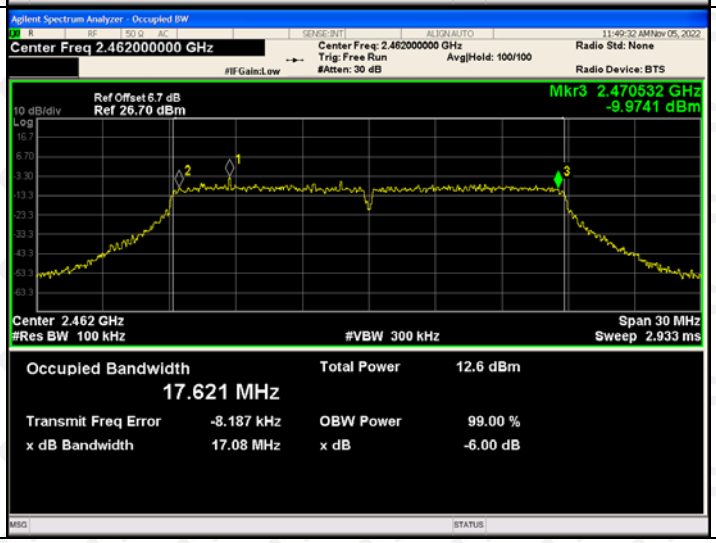
ANT2:

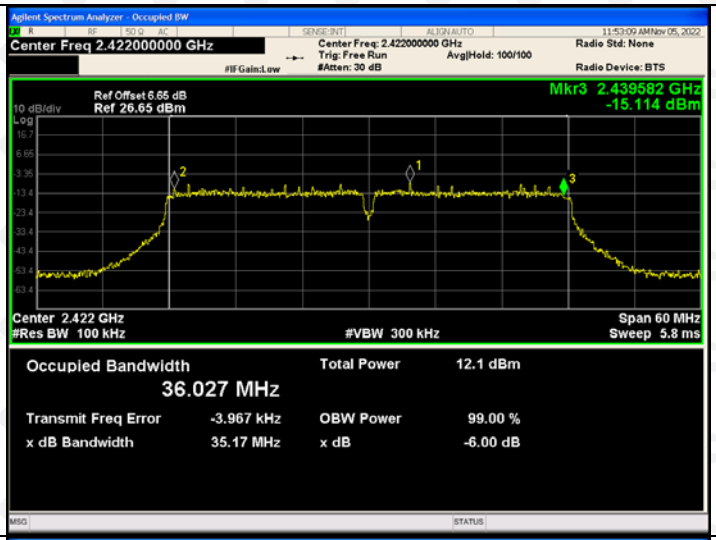
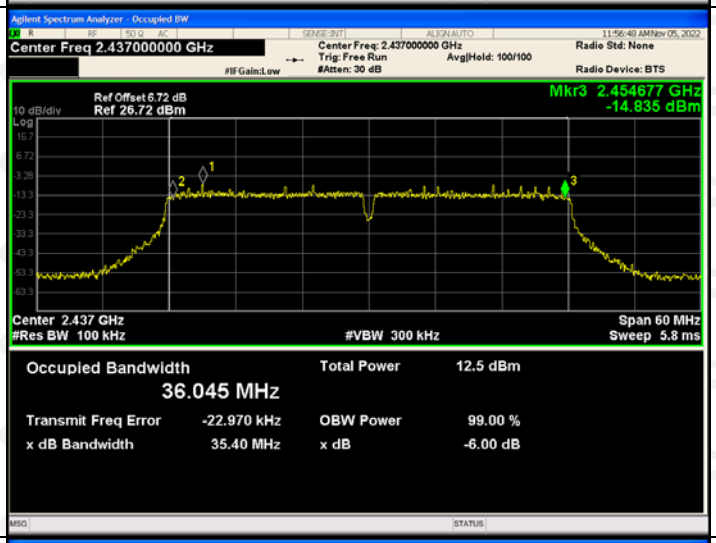
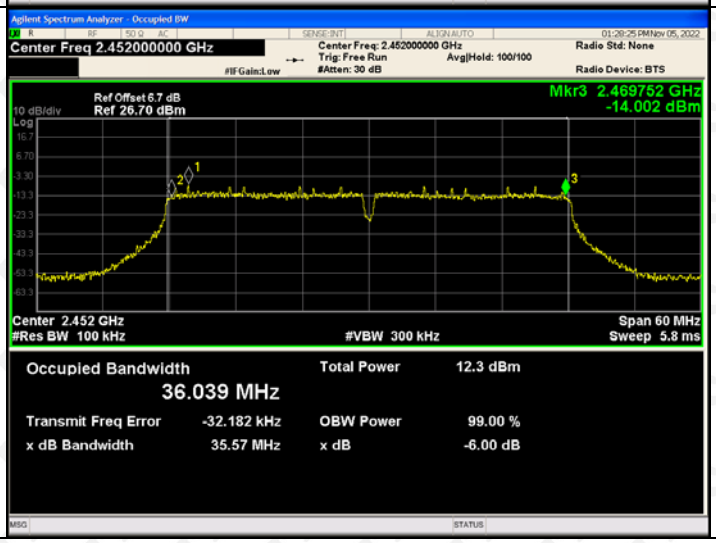
Test Mode	Frequency	6dB Bandwidth (MHz)	Limit(kHz)	Result
802.11b	LCH	10.7	500	**PASS**
	MCH	10.613	500	**PASS**
	HCH	10.656	500	**PASS**
802.11g	LCH	16.345	500	**PASS**
	MCH	16.323	500	**PASS**
	HCH	16.359	500	**PASS**
802.11n(HT20)	LCH	17.277	500	**PASS**
	MCH	17.027	500	**PASS**
	HCH	17.208	500	**PASS**
802.11n(HT40)	LCH	35.447	500	**PASS**
	MCH	35.344	500	**PASS**
	HCH	35.204	500	**PASS**

ANT1:
Test Graph:

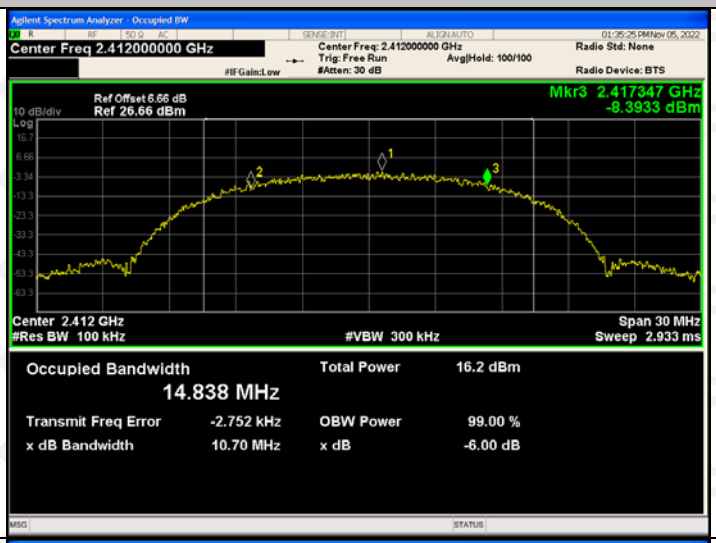
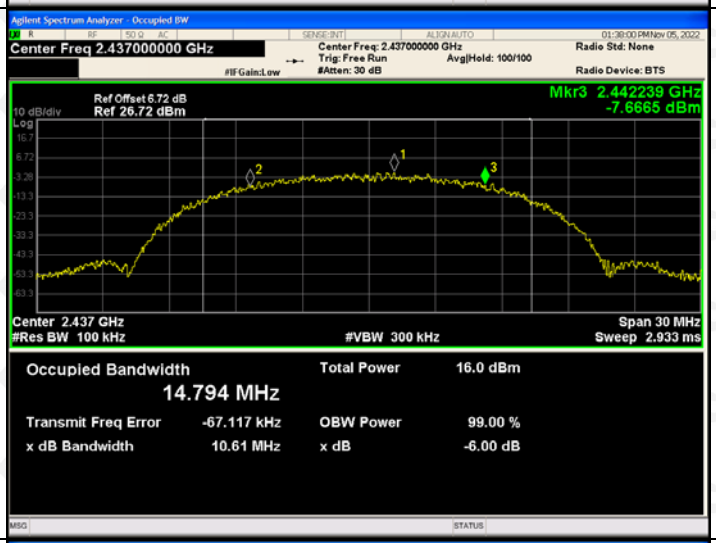
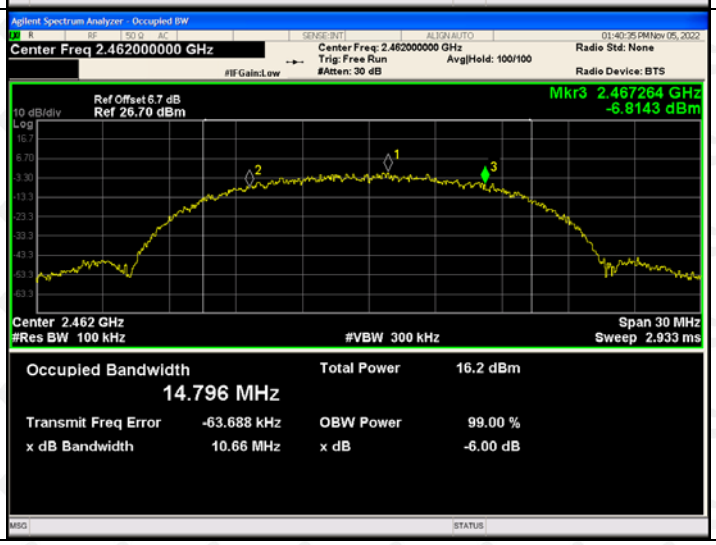
Graphs		
802.11b /LCH		
802.11b /MCH		
802.11b/HCH		

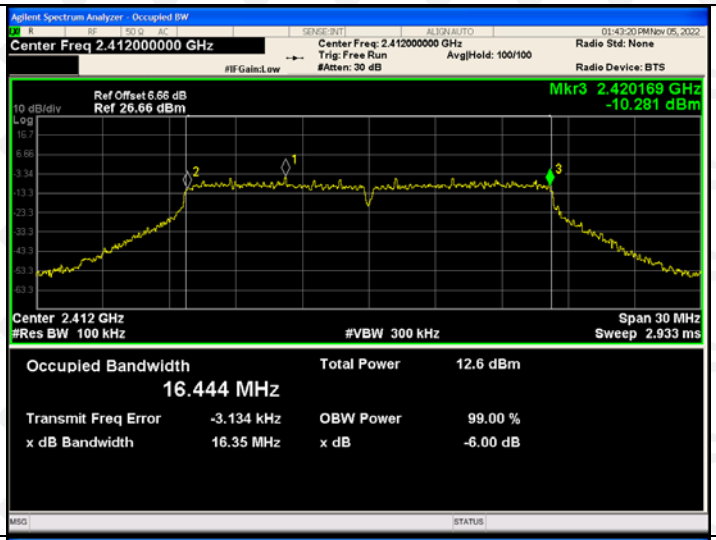
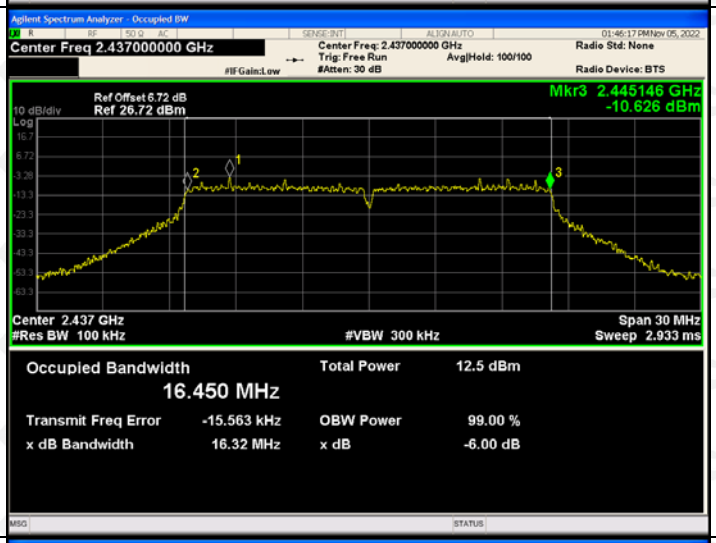
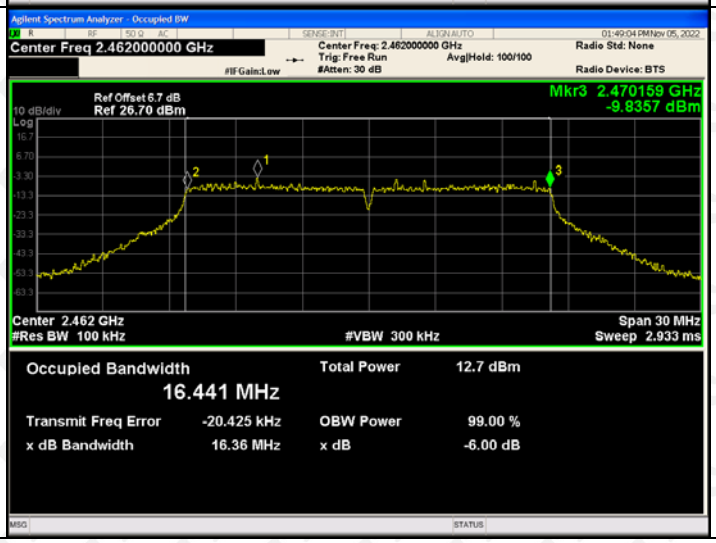
802.11g/LCH			
802.11g/MCH			
802.11g/HCH			

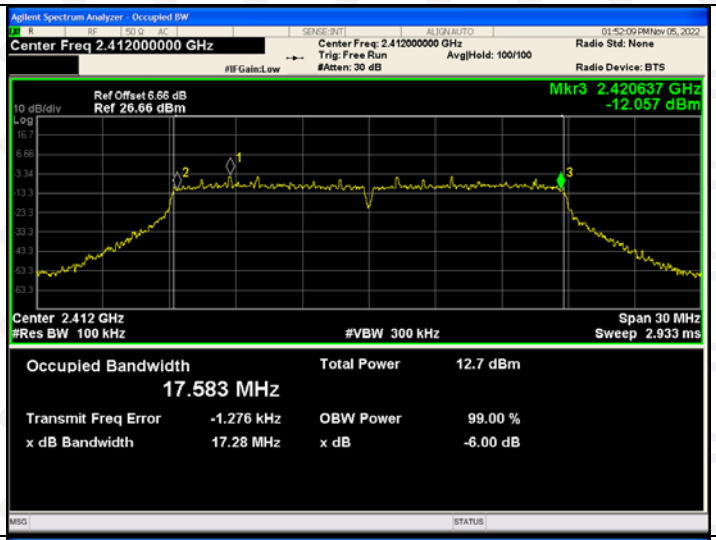
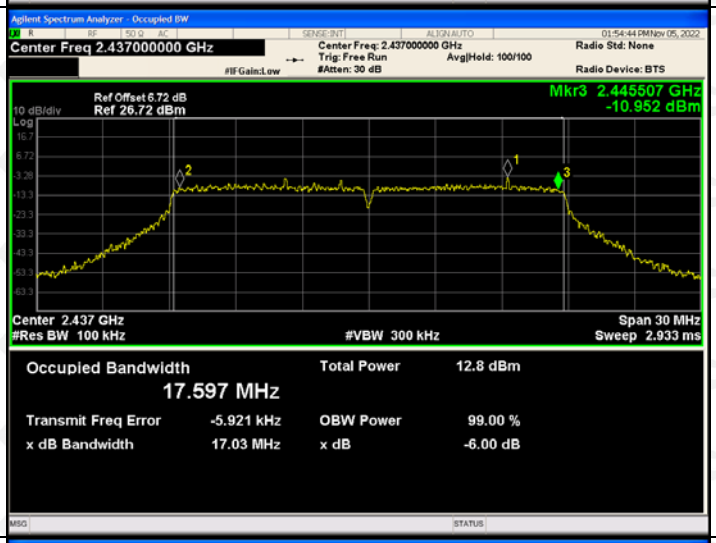
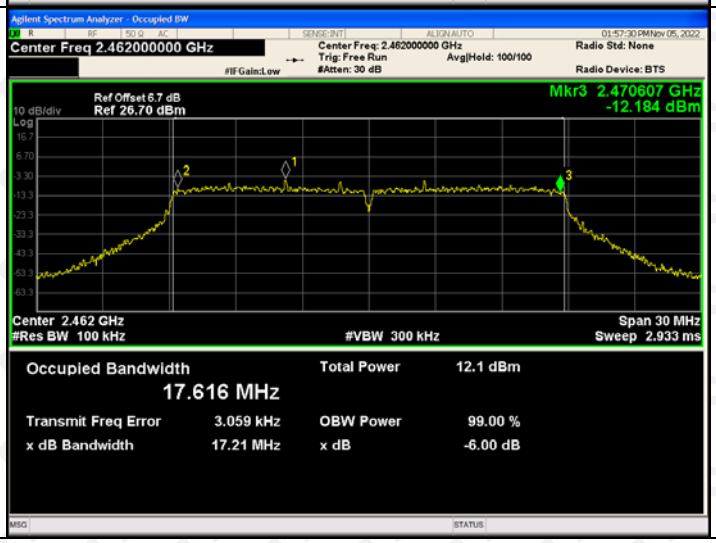
802.11n(HT20)/LCH			
802.11n(HT20)/MCH			
802.11n(HT20)/HCH			

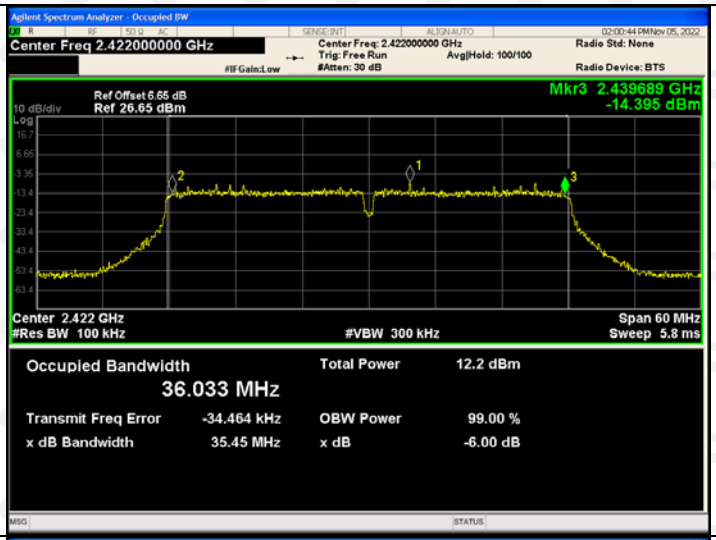
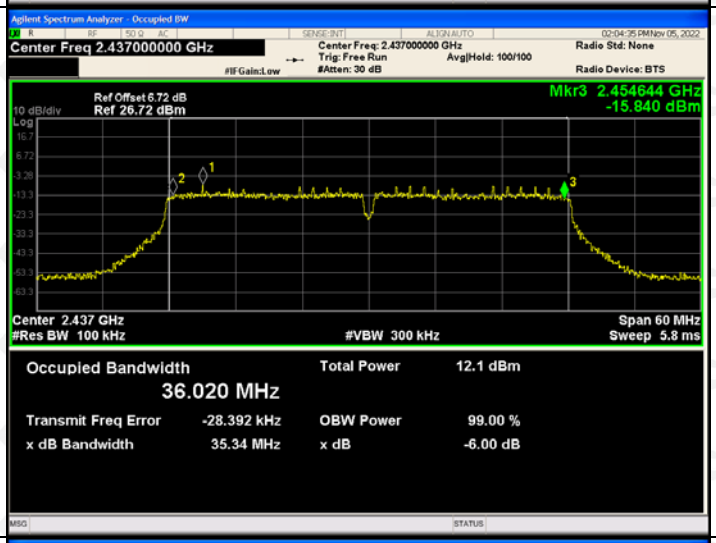
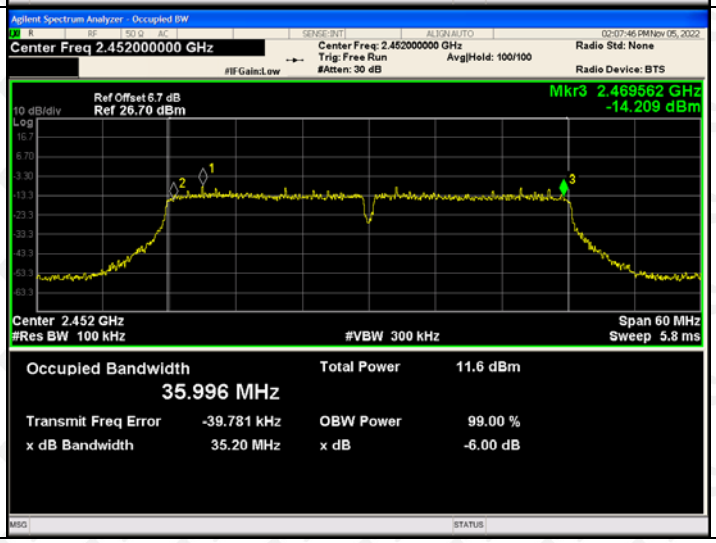
802.11n(HT40)/LCH			
802.11n(HT40)/MCH			
802.11n(HT40)/HCH			

ANT2:
Test Graph:

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

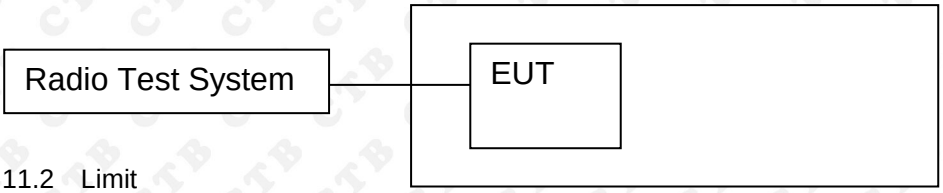
802.11g/LCH			
802.11g/MCH			
802.11g/HCH			

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

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

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

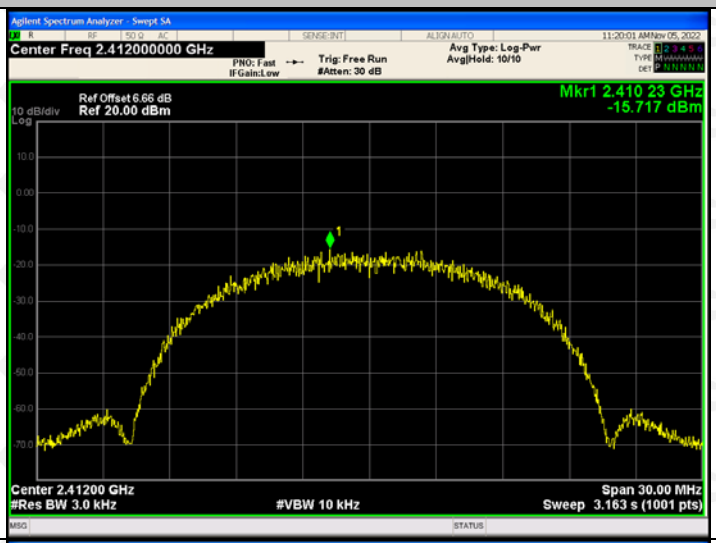
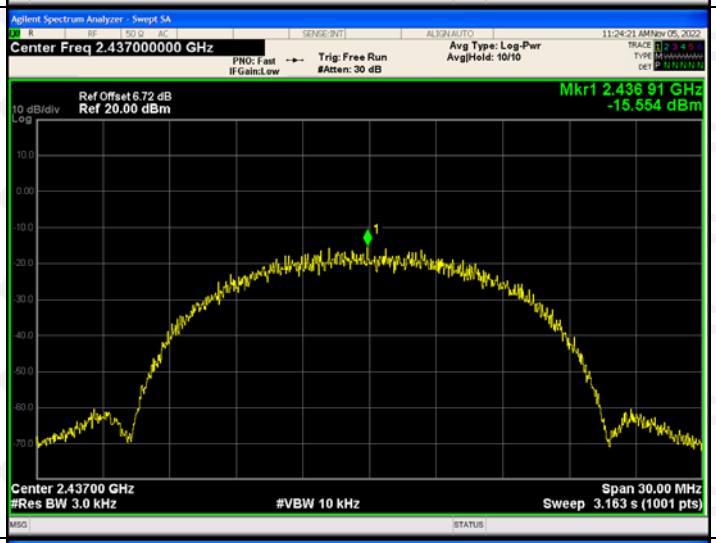
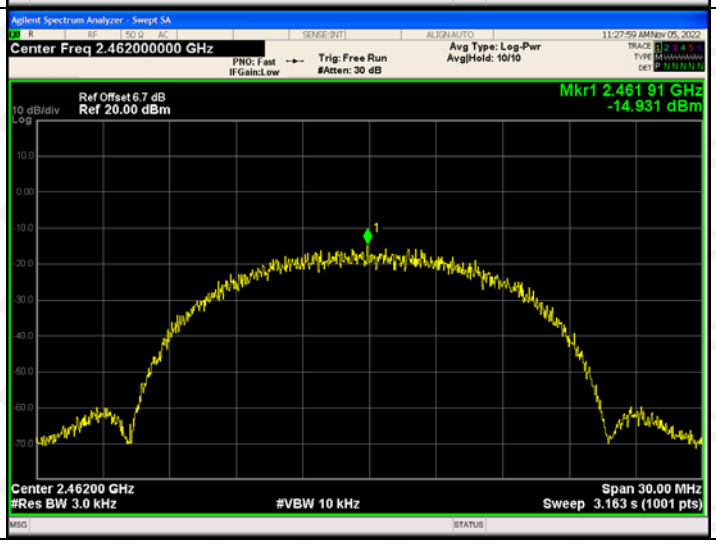
11.3 Test procedure

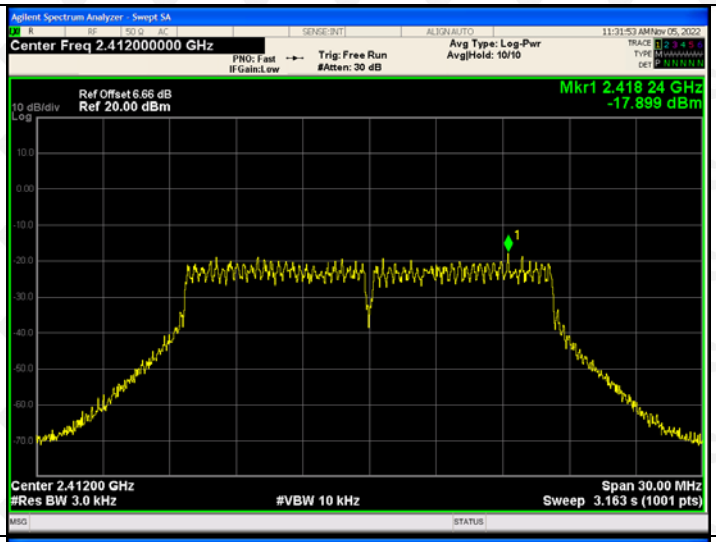
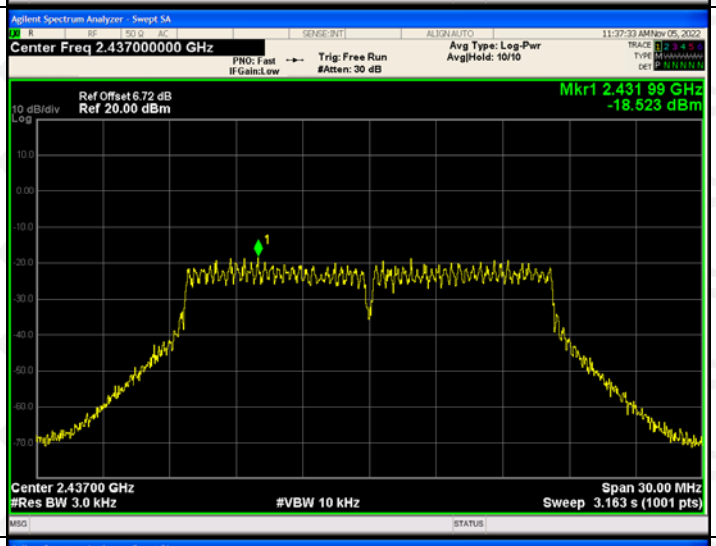
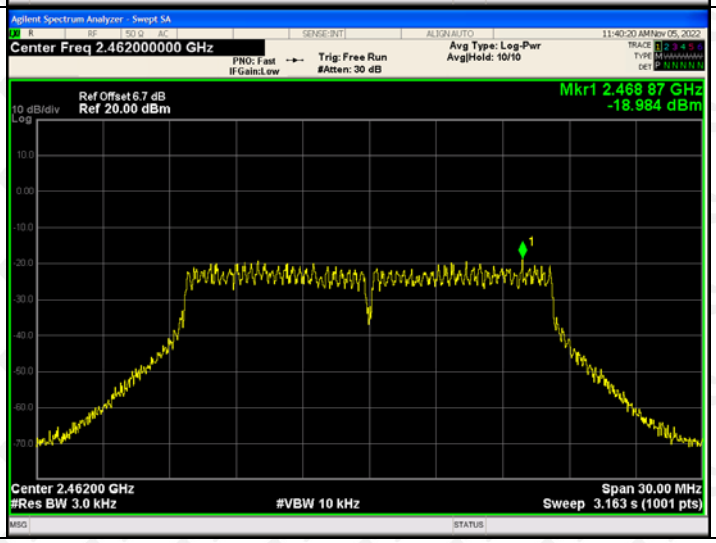
1. Set analyzer center frequency to DTS channel center frequency.
2. Set the span to 1.5 times the DTS bandwidth.
3. Set the RBW to: 3 kHz ≤ RBW ≤ 100 kHz.
4. Set the VBW ≥ 3 x RBW.
5. Detector = Peak.
6. Sweep time = auto couple.
7. Trace mode = max hold.
8. Allow trace to fully stabilize.
9. Use the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

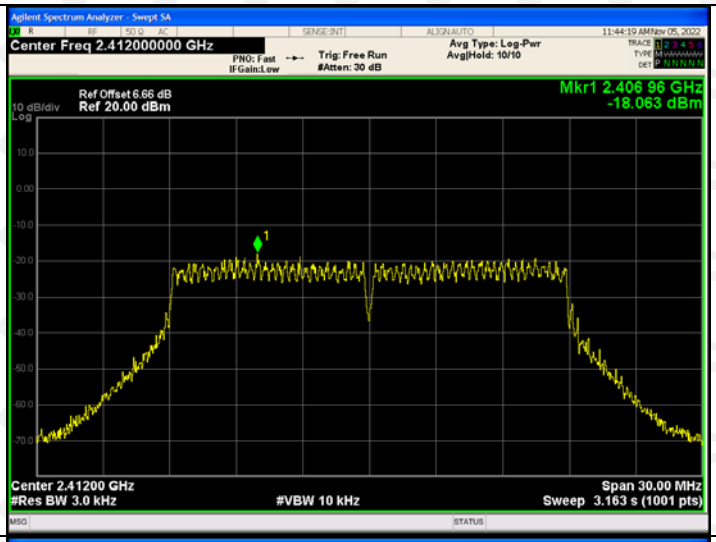
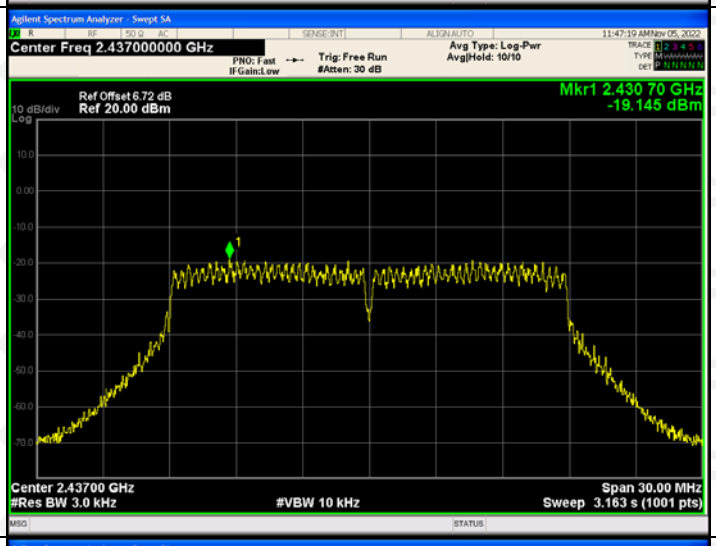
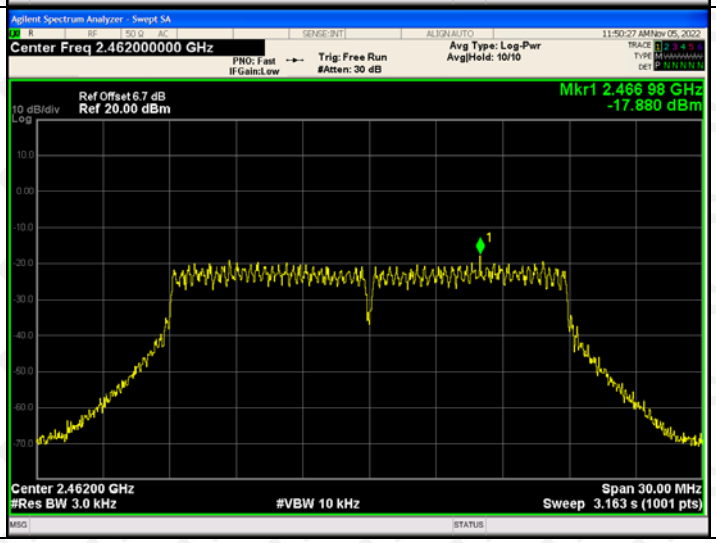
11.4 Test Result

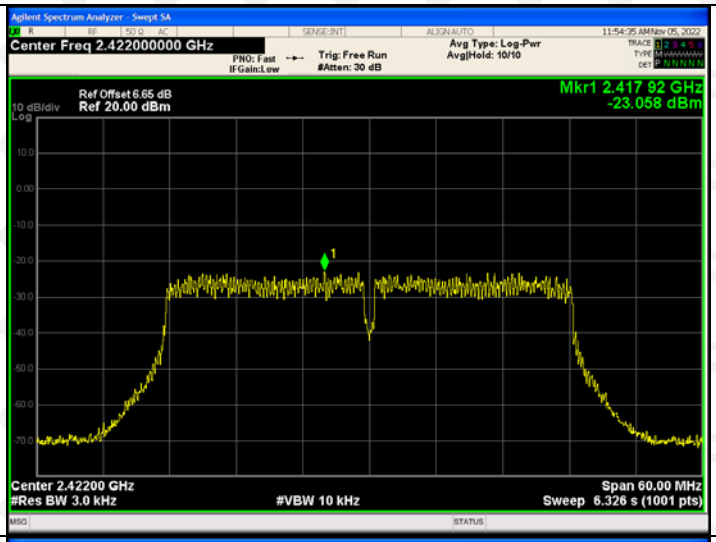
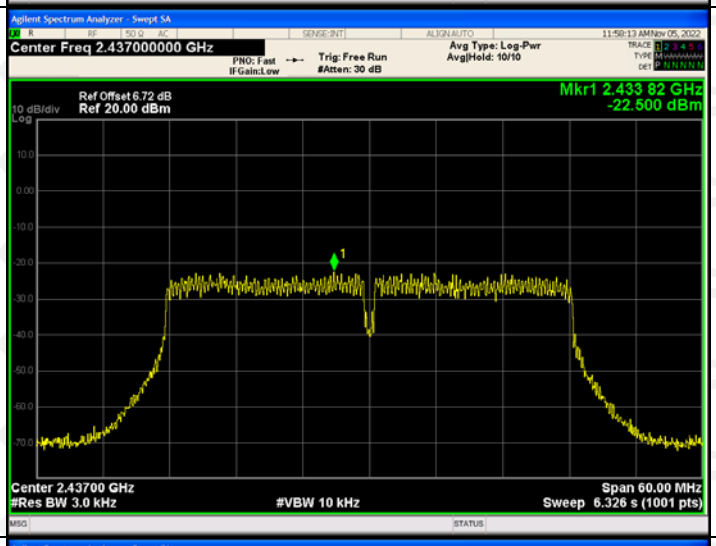
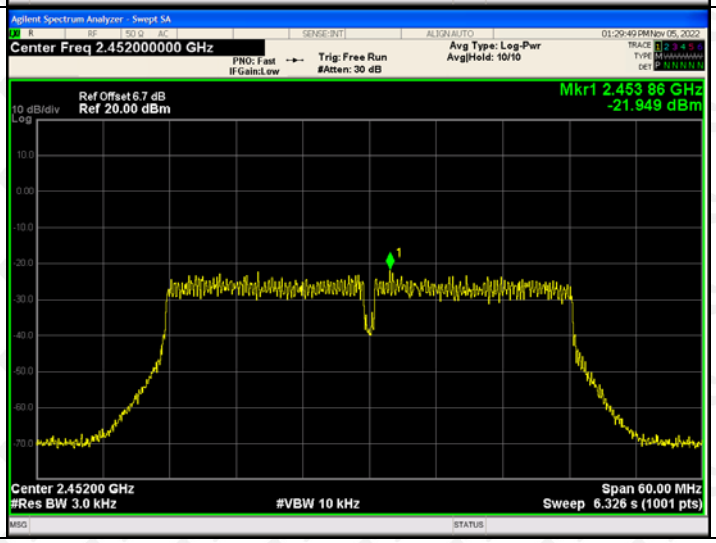
Mode	Channel.	Power Spectral Density [dBm /3KHz] ANT 1	Power Spectral Density [dBm /3KHz]] ANT 2	Power Spectral Density [dBm /3KHz]Total	Limit(dBm)
802.11b	LCH	-15.717	-14.976	/	6.32
	MCH	-15.554	-15.093	/	6.32
	HCH	-14.931	-14.792	/	6.32
802.11g	LCH	-17.899	-18.154	/	6.32
	MCH	-18.523	-18.178	/	6.32
	HCH	-18.984	-18.231	/	6.32
802.11n(HT20)	LCH	-18.063	-19.672	-15.783	6.32
	MCH	-19.145	-19.001	-16.062	6.32
	HCH	-17.88	-18.587	-15.209	6.32
802.11n(HT40)	LCH	-23.058	-22.9	-19.968	6.32
	MCH	-22.5	-21.325	-18.863	6.32
	HCH	-21.949	-23.077	-19.466	6.32

ANT1:
Test Graph

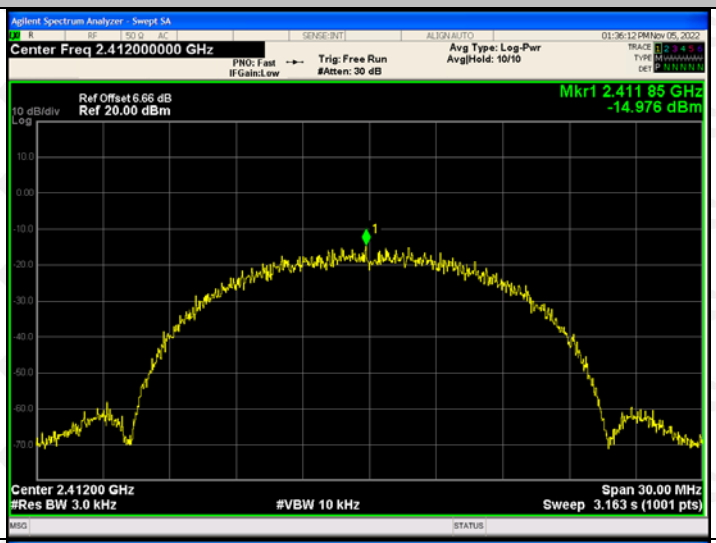
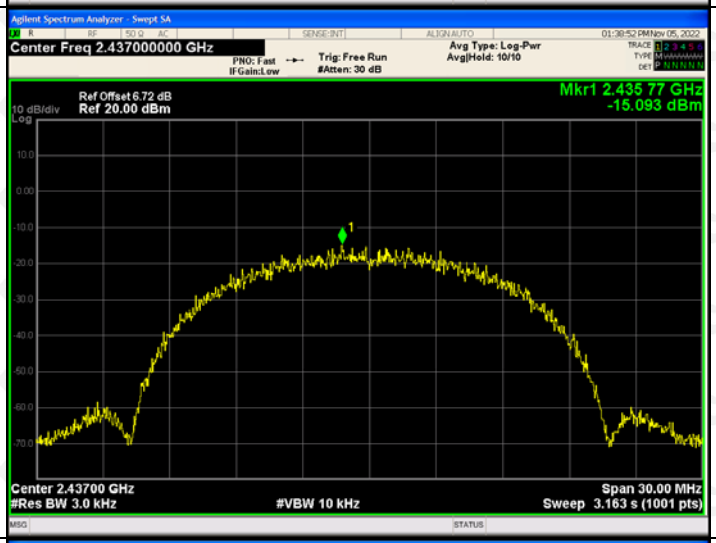
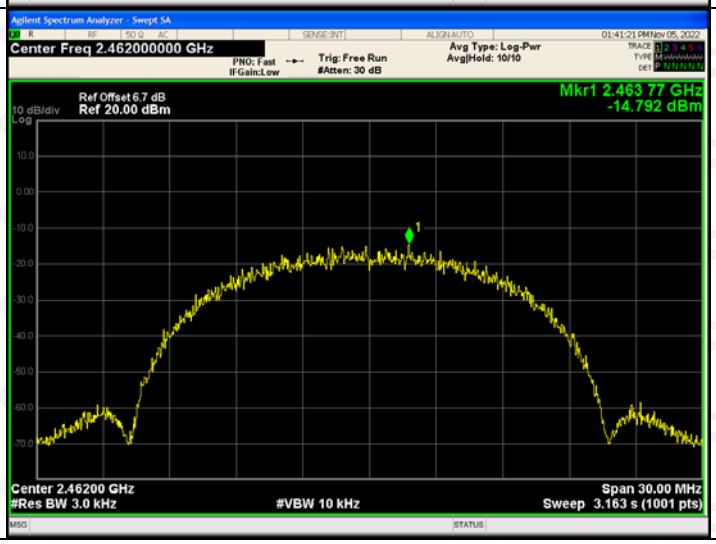
Graphs		
802.11b /LCH		
802.11b /MCH		
802.11b/HCH		

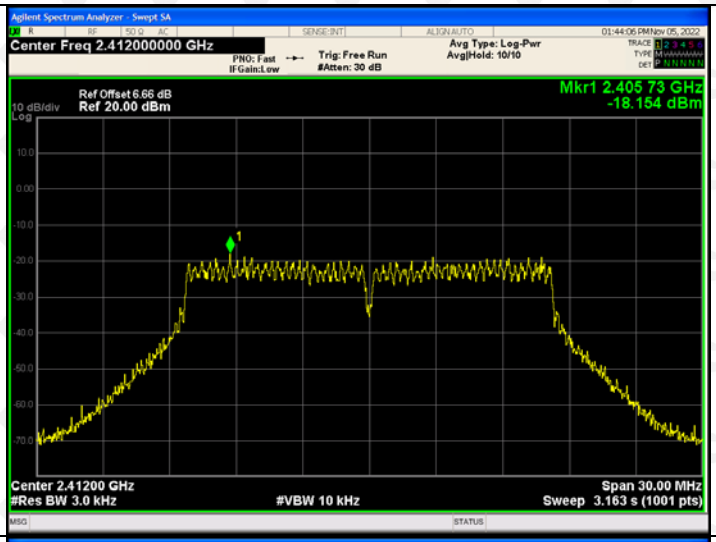
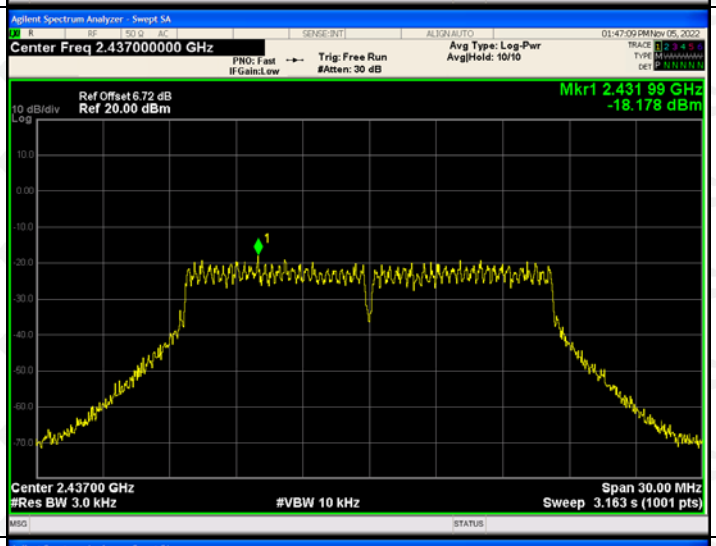
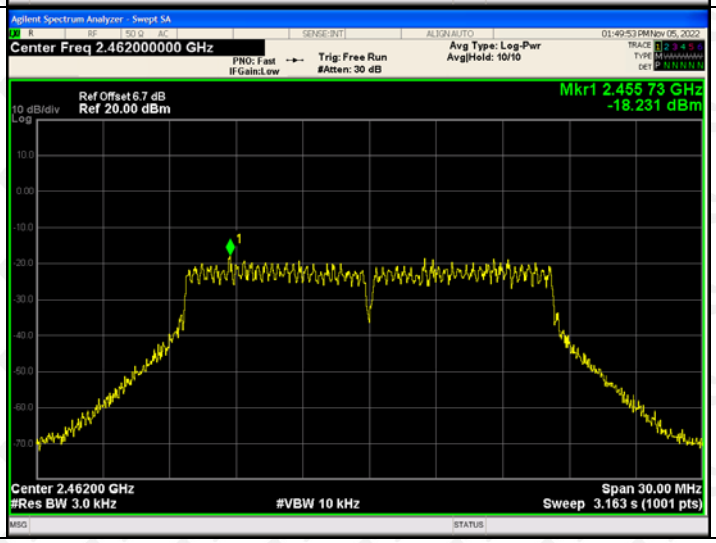
802.11g/LCH			
802.11g/MCH			
802.11g/HCH			

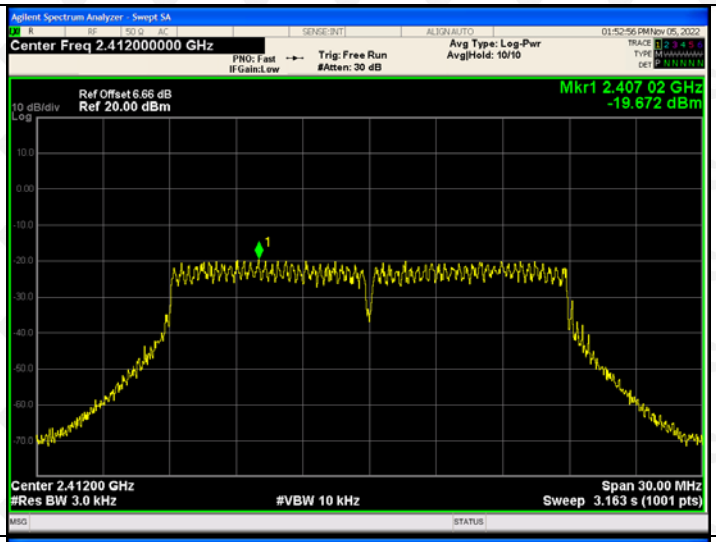
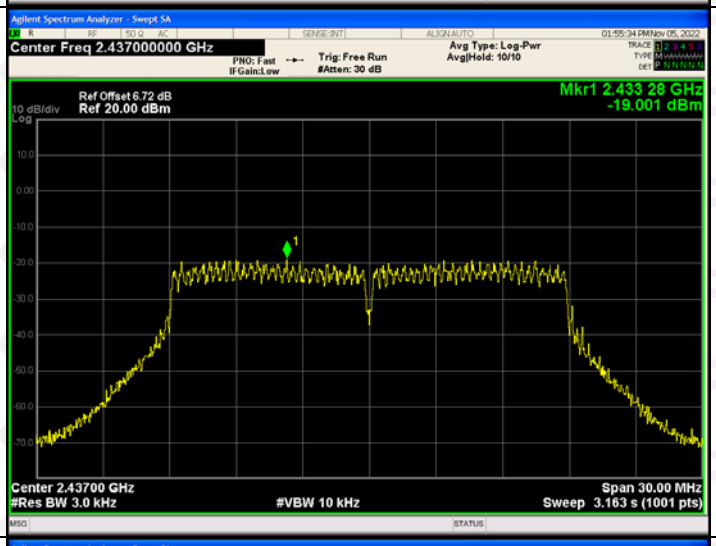
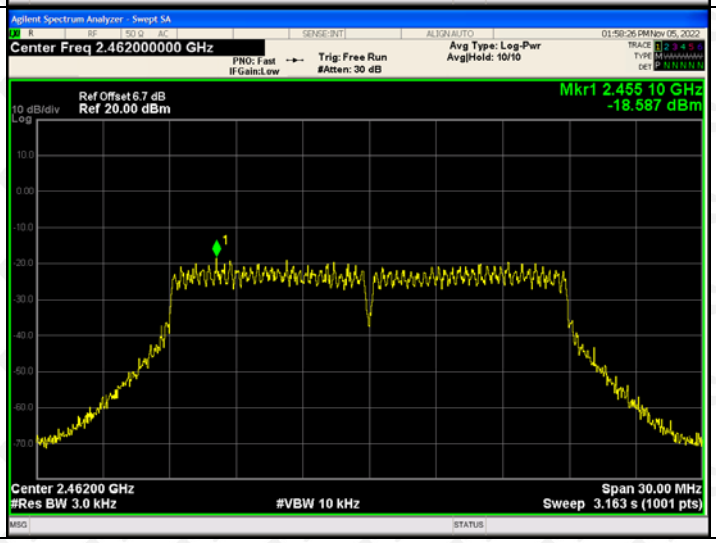
802.11n(HT20)/LCH			
802.11n(HT20)/MCH			
802.11n(HT20)/HCH			

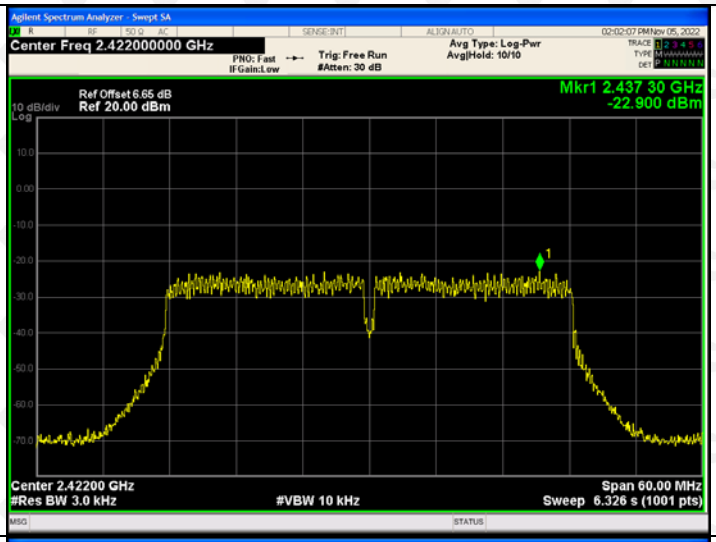
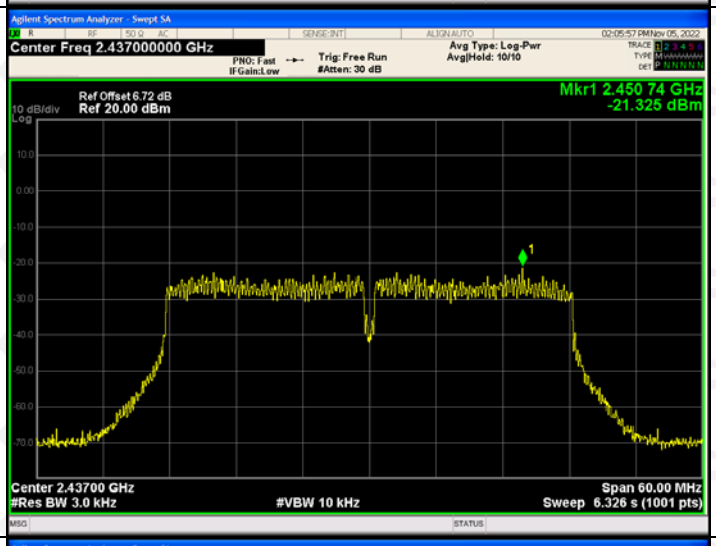
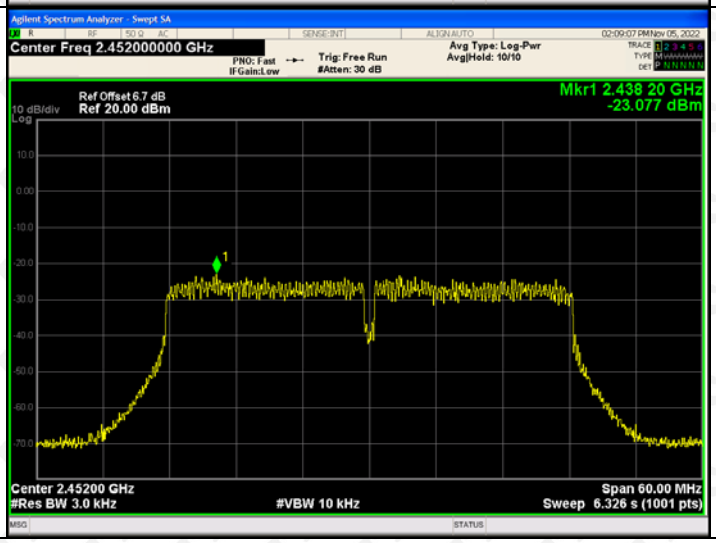
802.11n(HT40)/LCH			
802.11n(HT40)/MCH			
802.11n(HT40)/HCH			

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			

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 PIFA antenna and no consideration of replacement. The best case gain of the antenna is 4.67dBi.

13. EUT PHOTOGRAPHS

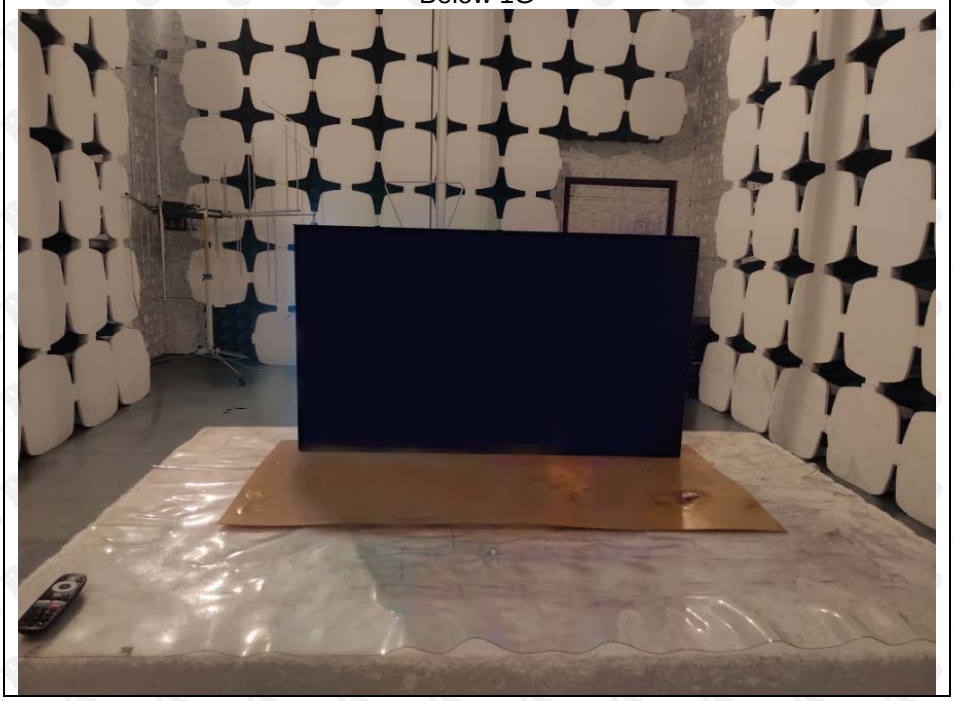
External Photos
EUT Photo 1

EUT Photo 2

14. EUT TEST SETUP PHOTOGRAPHS

Radiated Emission

Below 1G



Above 1G

Conducted Emission

※※※※※ END OF REPORT ※※※※※