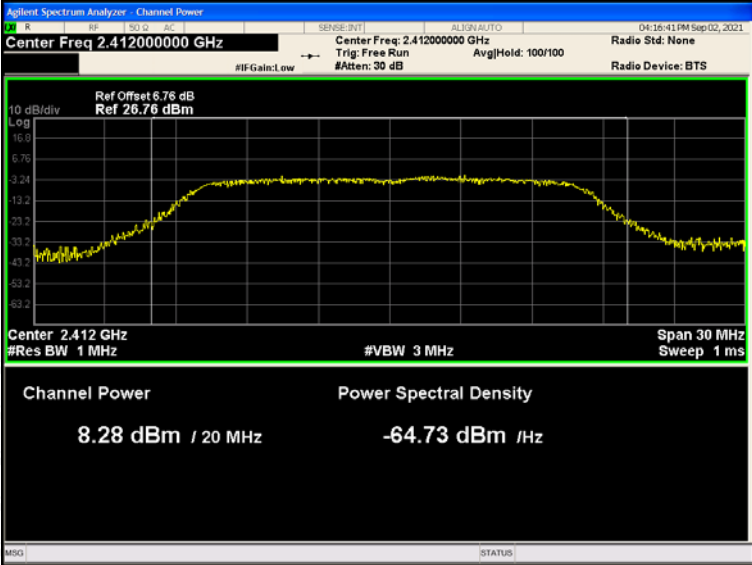
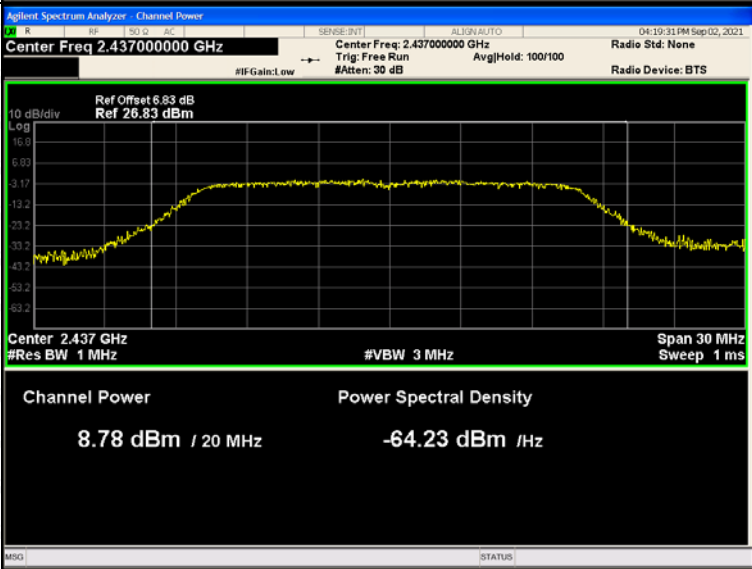
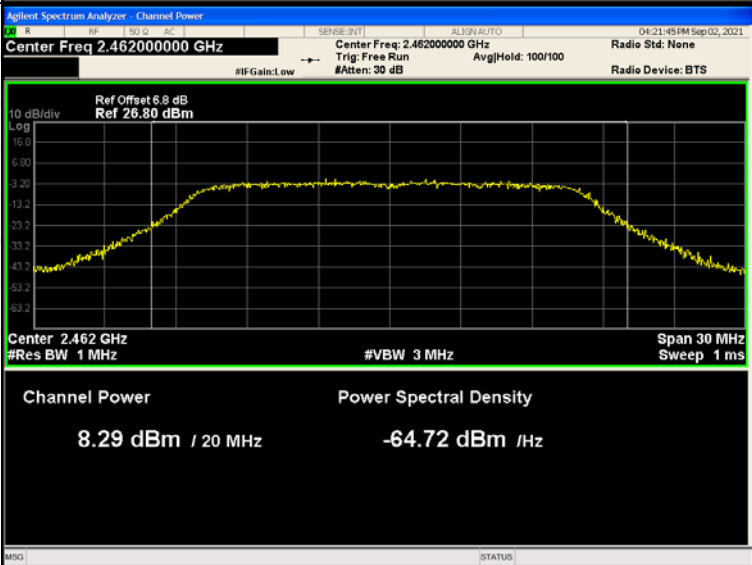
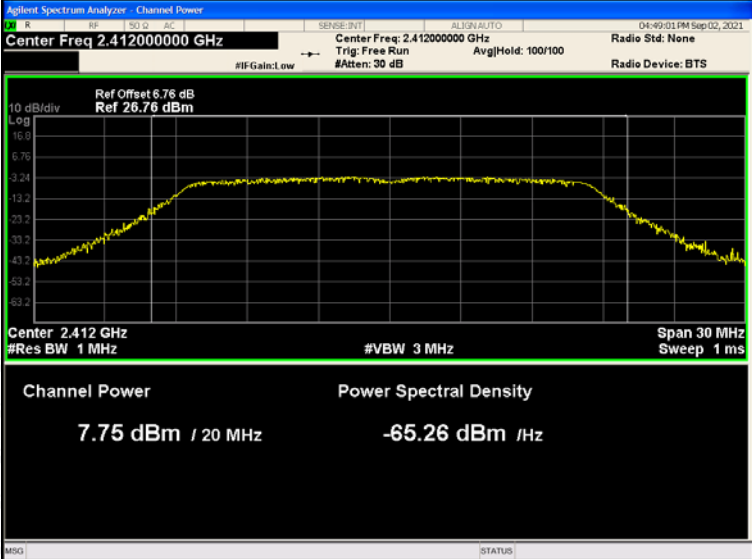
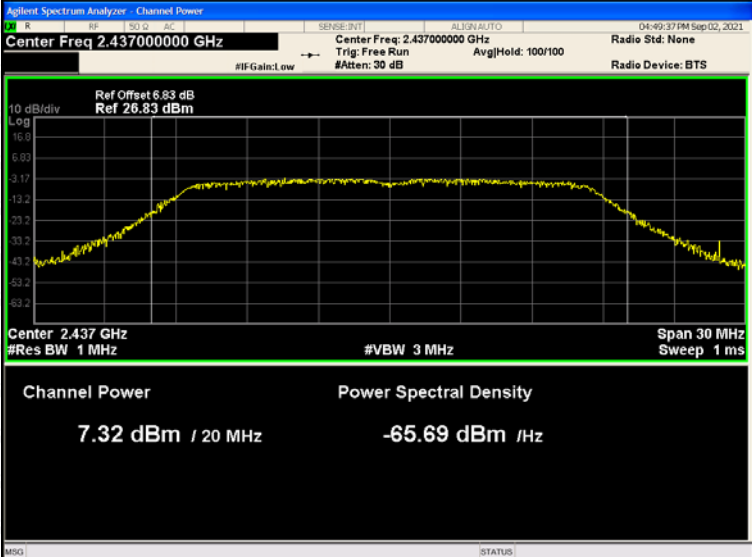
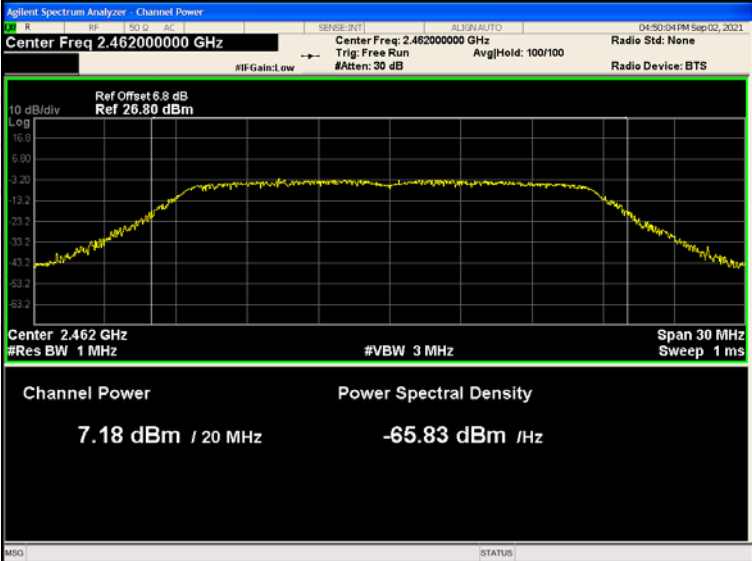


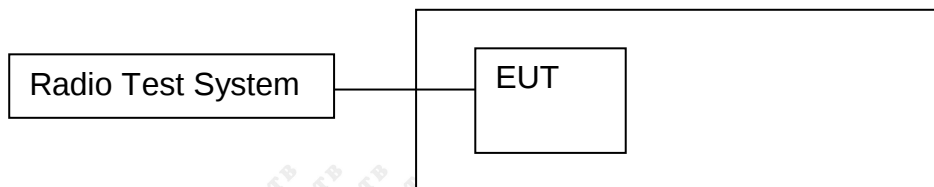
	LCH	
802.11g	MCH	
	HCH	

	LCH	 Agilent Spectrum Analyzer - Channel Power Center Freq: 2.412000000 GHz Ref Offset: 6.76 dB, Ref: 26.76 dBm Channel Power: 7.75 dBm / 20 MHz Power Spectral Density: -65.26 dBm / Hz
802.11n(HT20)	MCH	 Agilent Spectrum Analyzer - Channel Power Center Freq: 2.437000000 GHz Ref Offset: 6.83 dB, Ref: 26.83 dBm Channel Power: 7.32 dBm / 20 MHz Power Spectral Density: -65.69 dBm / Hz
	HCH	 Agilent Spectrum Analyzer - Channel Power Center Freq: 2.462000000 GHz Ref Offset: 6.8 dB, Ref: 26.80 dBm Channel Power: 7.18 dBm / 20 MHz Power Spectral Density: -65.83 dBm / Hz

802.11n(HT40)	LCH	Agilent Spectrum Analyzer - Channel Power Center Freq: 2.422000000 GHz Ref Offset: 6.77 dB Ref: 26.77 dBm Channel Power: 6.42 dBm / 40 MHz Power Spectral Density: -69.60 dBm / Hz
	MCH	Agilent Spectrum Analyzer - Channel Power Center Freq: 2.437000000 GHz Ref Offset: 6.83 dB Ref: 26.83 dBm Channel Power: 6.22 dBm / 40 MHz Power Spectral Density: -69.81 dBm / Hz
	HCH	Agilent Spectrum Analyzer - Channel Power Center Freq: 2.452000000 GHz Ref Offset: 6.81 dB Ref: 26.81 dBm Channel Power: 6.61 dBm / 40 MHz Power Spectral Density: -69.41 dBm / Hz

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	$\geq 500\text{KHz}$ (6dB bandwidth)	2400-2483.5	PASS

10.3 Test procedure

1. Rem1. Set RBW = 100 kHz.
2. Set the video bandwidth (VBW) $\geq 3 \times \text{RBW}$.
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	10.019	500	PASS
	MCH	10.115	500	PASS
	HCH	11.065	500	PASS
802.11g	LCH	16.287	500	PASS
	MCH	16.263	500	PASS
	HCH	15.67	500	PASS
802.11n(HT20)	LCH	16.908	500	PASS
	MCH	16.315	500	PASS
	HCH	17.295	500	PASS
802.11n(HT40)	LCH	34.911	500	PASS
	MCH	35.031	500	PASS
	HCH	35.036	500	PASS

ANT2:

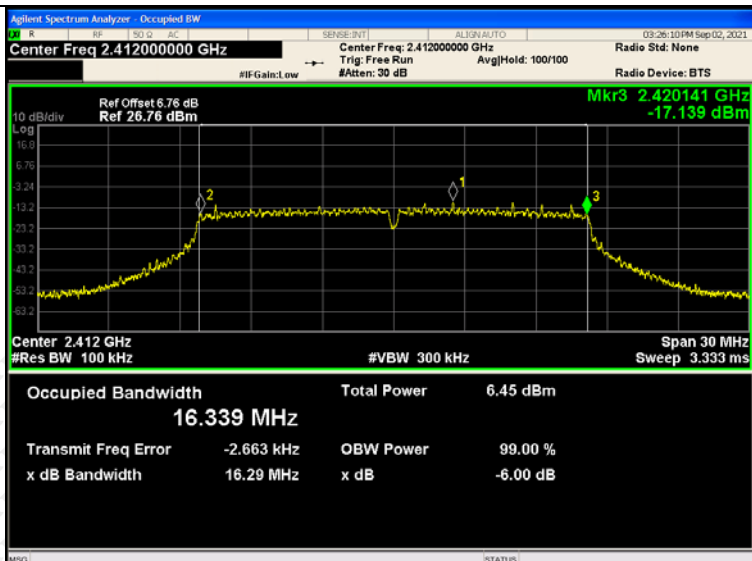
Test Mode	Frequency	6dB Bandwidth (MHz)	Limit(kHz)	Result
802.11b	LCH	10.682	500	PASS
	MCH	10.336	500	PASS
	HCH	10.243	500	PASS
802.11g	LCH	16.277	500	PASS
	MCH	15.452	500	PASS
	HCH	15.061	500	PASS
802.11n(HT20)	LCH	15.665	500	PASS
	MCH	15.376	500	PASS
	HCH	15.432	500	PASS
802.11n(HT40)	LCH	33.883	500	PASS
	MCH	33.837	500	PASS
	HCH	35.101	500	PASS

ANT1:

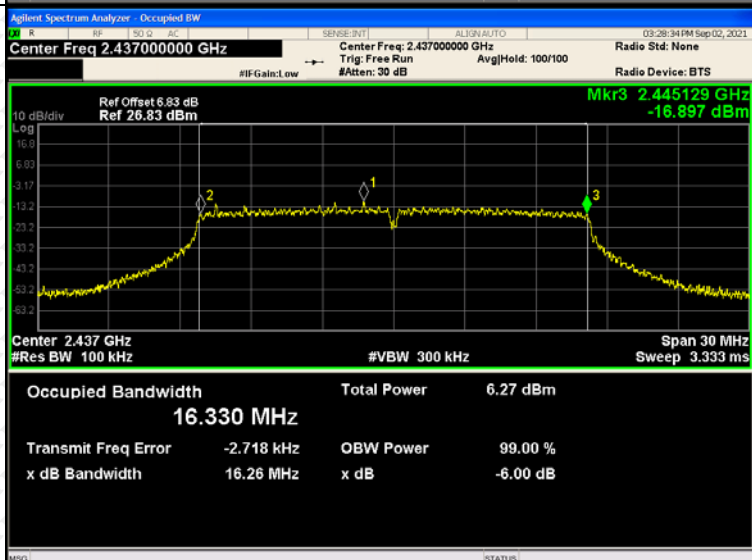
Test Graph:



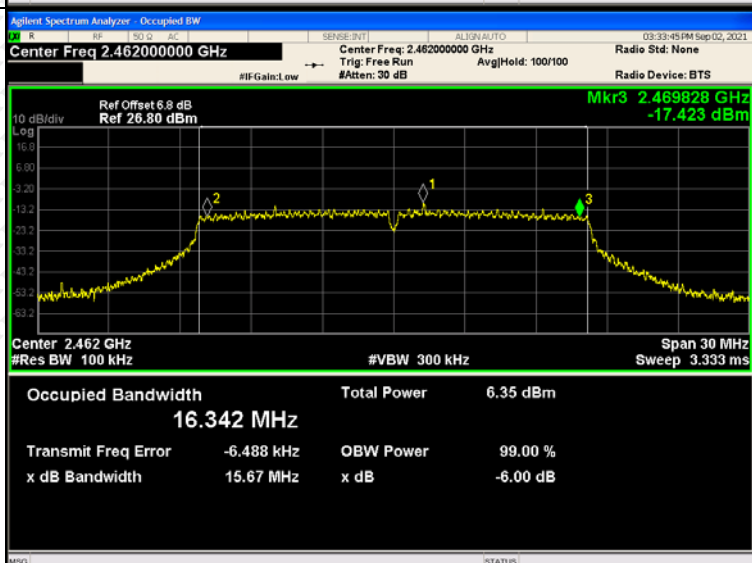
802.11g/LCH

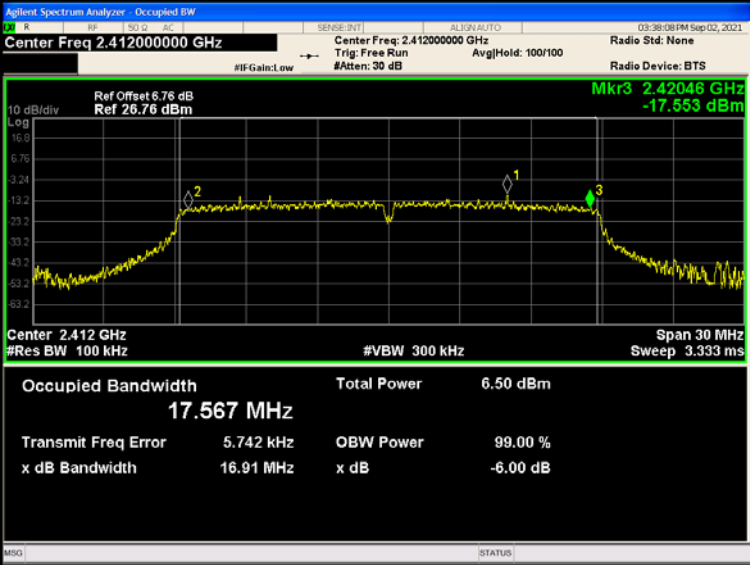
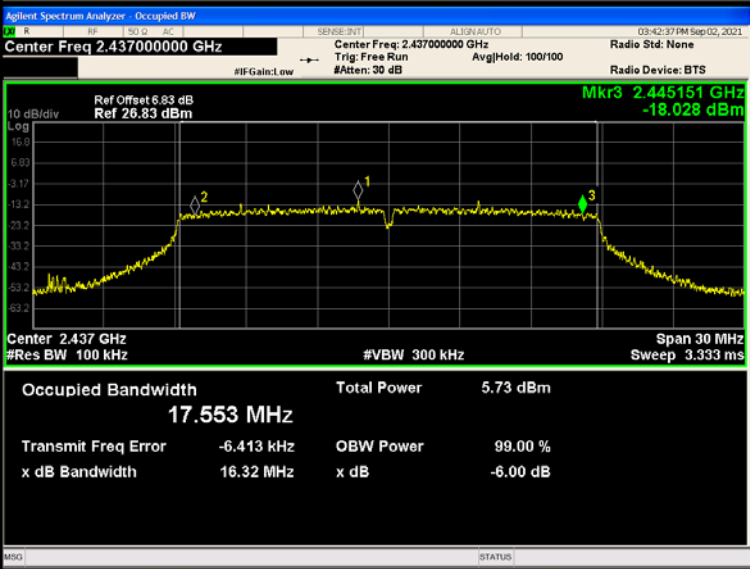
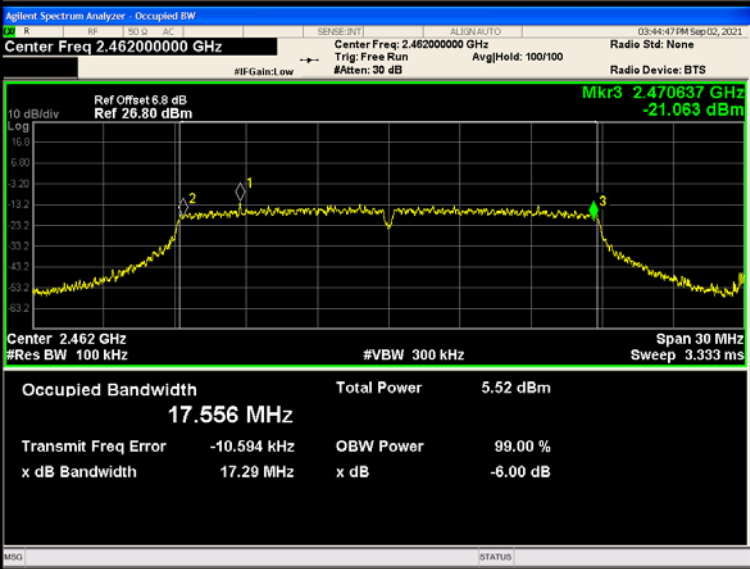


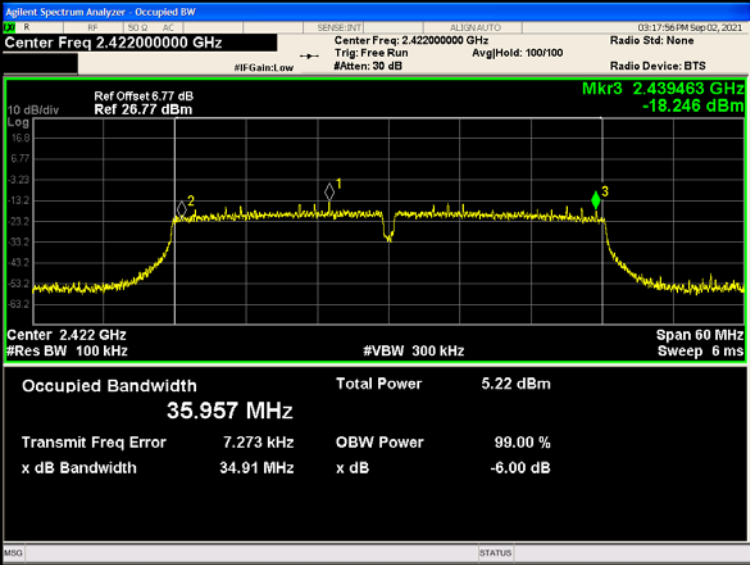
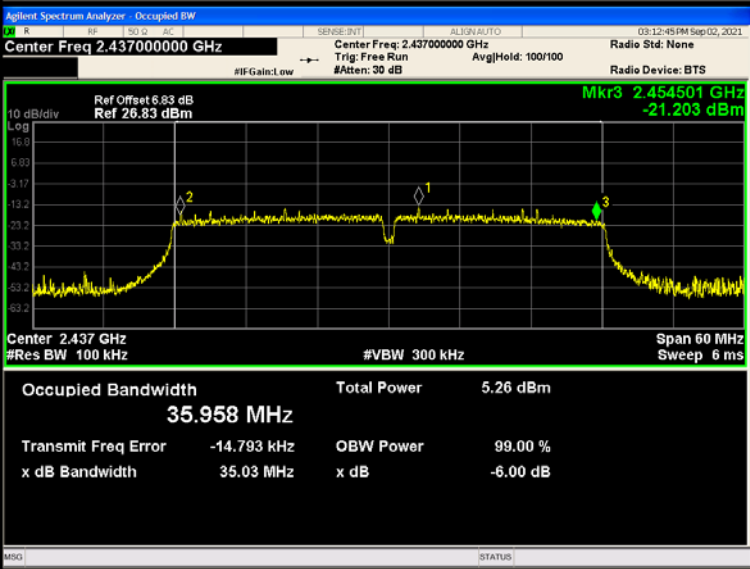
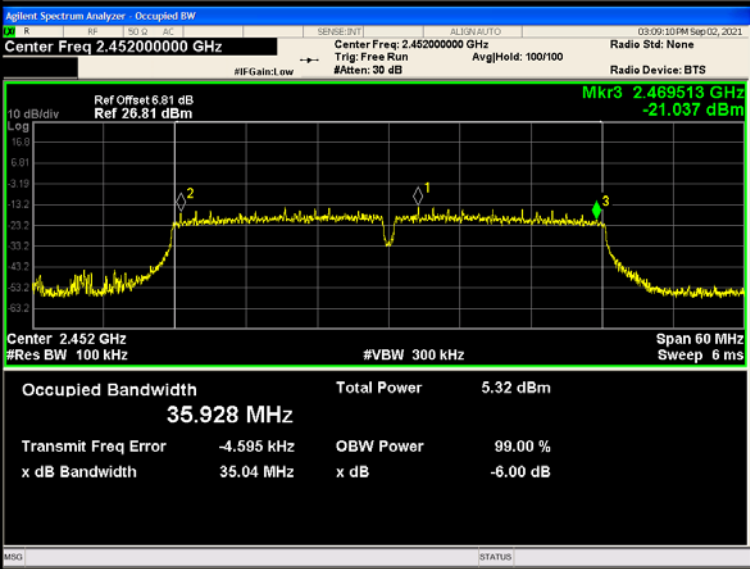
802.11g/MCH



802.11g/HCH

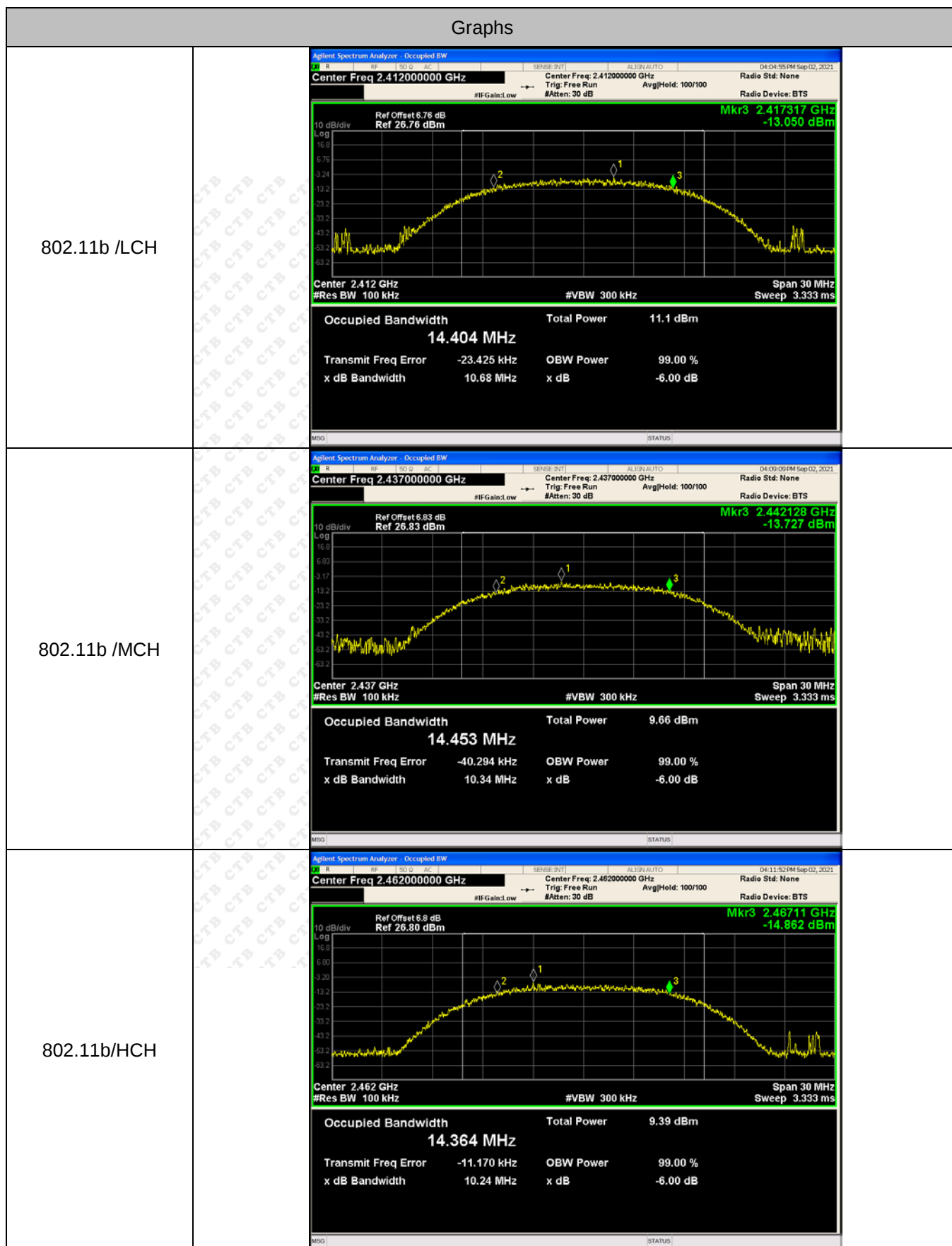


802.11n(HT20)/LC H	 Agilent Spectrum Analyzer - Occupied BW Center Freq 2.412000000 GHz Ref Offset 6.76 dB Ref 26.76 dBm Mkr3 2.42048 GHz -17.553 dBm Center 2.412 GHz #Res BW 100 kHz #VBW 300 kHz Span 30 MHz Sweep 3.333 ms Occupied Bandwidth 17.567 MHz Total Power 6.50 dBm Transmit Freq Error 5.742 kHz OBW Power 99.00 % x dB Bandwidth 16.91 MHz x dB -6.00 dB
802.11n(HT20)/MC H	 Agilent Spectrum Analyzer - Occupied BW Center Freq 2.437000000 GHz Ref Offset 6.83 dB Ref 26.83 dBm Mkr3 2.445151 GHz -18.028 dBm Center 2.437 GHz #Res BW 100 kHz #VBW 300 kHz Span 30 MHz Sweep 3.333 ms Occupied Bandwidth 17.553 MHz Total Power 5.73 dBm Transmit Freq Error -6.413 kHz OBW Power 99.00 % x dB Bandwidth 16.32 MHz x dB -6.00 dB
802.11n(HT20)/HC H	 Agilent Spectrum Analyzer - Occupied BW Center Freq 2.462000000 GHz Ref Offset 6.8 dB Ref 26.80 dBm Mkr3 2.470637 GHz -21.063 dBm Center 2.462 GHz #Res BW 100 kHz #VBW 300 kHz Span 30 MHz Sweep 3.333 ms Occupied Bandwidth 17.556 MHz Total Power 5.52 dBm Transmit Freq Error -10.594 kHz OBW Power 99.00 % x dB Bandwidth 17.29 MHz x dB -6.00 dB

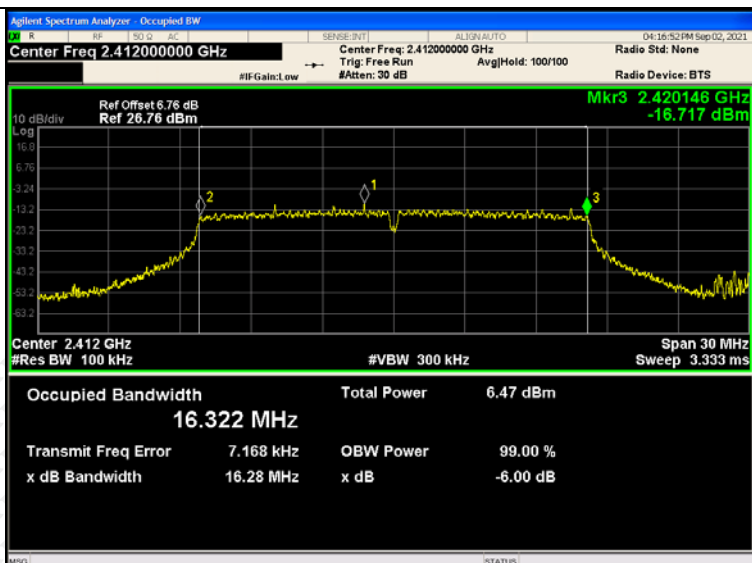
802.11n(HT40)/LC H	
802.11n(HT40)/MC H	
802.11n(HT40)/HC H	

ANT2:

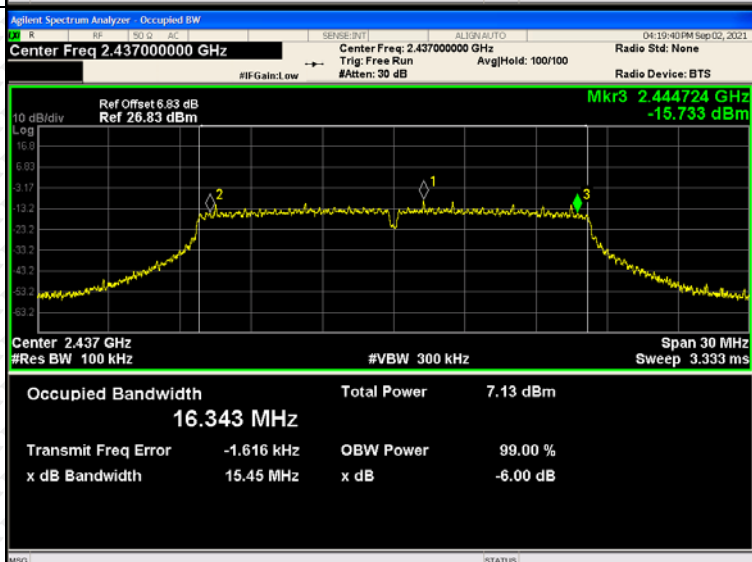
Test Graph:



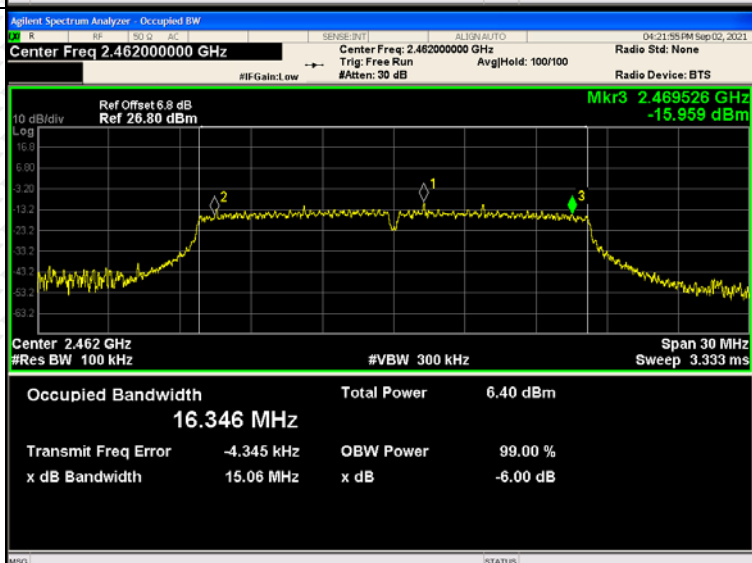
802.11g/LCH

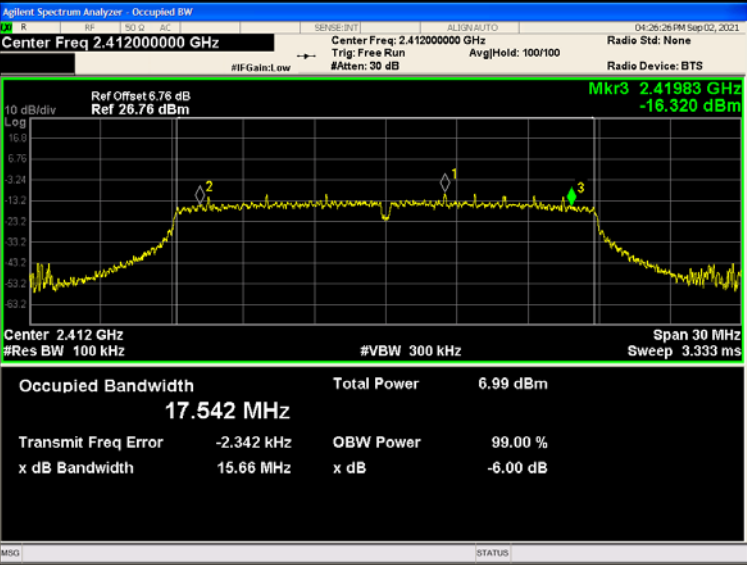
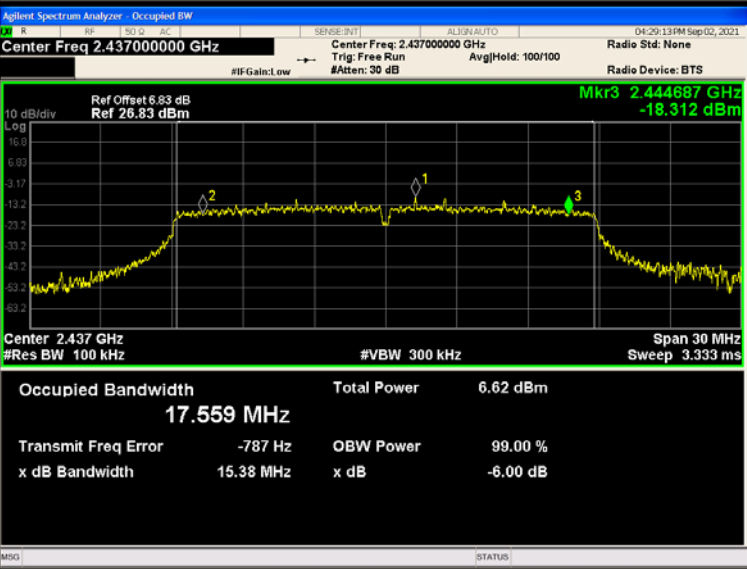
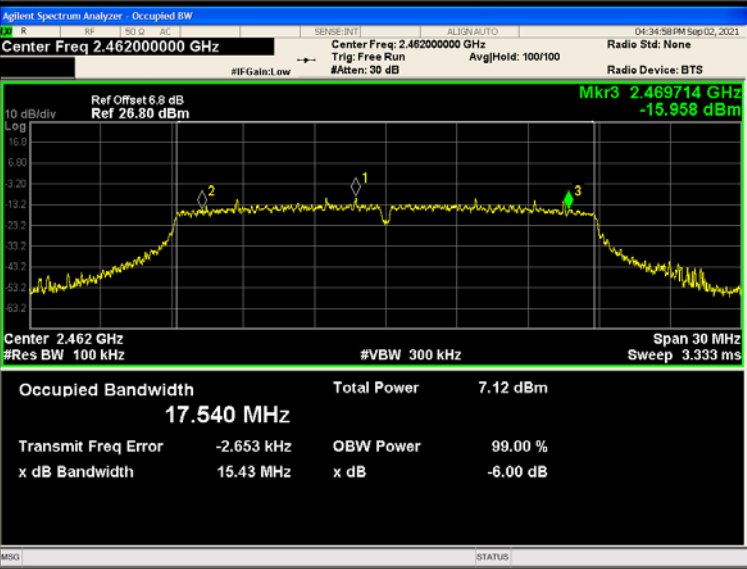


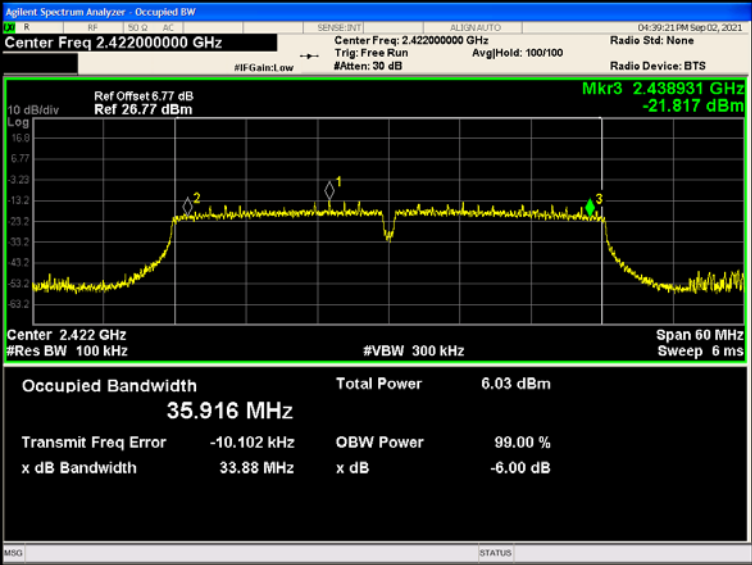
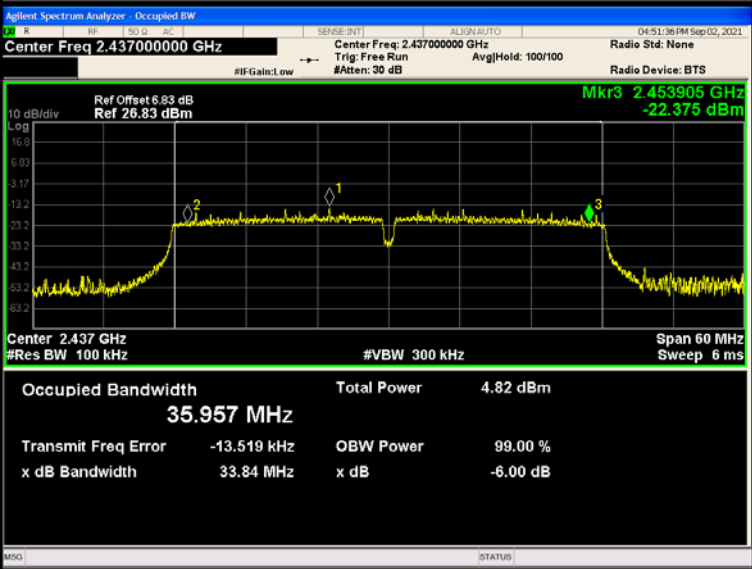
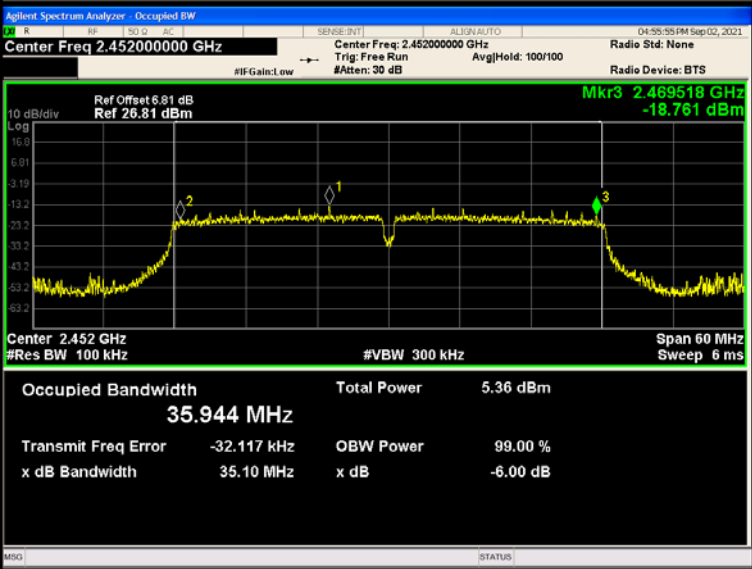
802.11g/MCH



802.11g/HCH

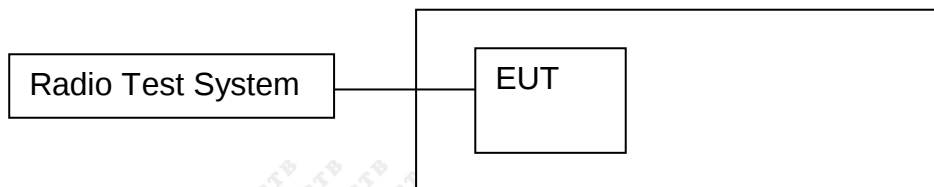


802.11n(HT20)/LC H	 Agilent Spectrum Analyzer - Occupied BW Center Freq 2.412000000 GHz Ref Offset 6.76 dB Ref 26.76 dBm Mkr3 2.41983 GHz -18.320 dBm Center 2.412 GHz #Res BW 100 kHz Span 30 MHz Sweep 3.333 ms Occupied Bandwidth 17.542 MHz Total Power 6.99 dBm Transmit Freq Error -2.342 kHz OBW Power 99.00 % x dB Bandwidth 15.66 MHz x dB -6.00 dB
802.11n(HT20)/MC H	 Agilent Spectrum Analyzer - Occupied BW Center Freq 2.437000000 GHz Ref Offset 6.83 dB Ref 26.83 dBm Mkr3 2.444687 GHz -18.312 dBm Center 2.437 GHz #Res BW 100 kHz Span 30 MHz Sweep 3.333 ms Occupied Bandwidth 17.559 MHz Total Power 6.62 dBm Transmit Freq Error -787 Hz OBW Power 99.00 % x dB Bandwidth 15.38 MHz x dB -6.00 dB
802.11n(HT20)/HC H	 Agilent Spectrum Analyzer - Occupied BW Center Freq 2.462000000 GHz Ref Offset 6.8 dB Ref 26.80 dBm Mkr3 2.469714 GHz -15.958 dBm Center 2.462 GHz #Res BW 100 kHz Span 30 MHz Sweep 3.333 ms Occupied Bandwidth 17.540 MHz Total Power 7.12 dBm Transmit Freq Error -2.653 kHz OBW Power 99.00 % x dB Bandwidth 15.43 MHz x dB -6.00 dB

802.11n(HT40)/LC H	 Agilent Spectrum Analyzer - Occupied BW Center Freq: 2.422000000 GHz Ref Offset: 6.77 dB Ref: 26.77 dBm Mkr3: 2.438931 GHz -21.817 dBm Center: 2.422 GHz #Res BW: 100 kHz #VBW: 300 kHz Span: 60 MHz Sweep: 6 ms Occupied Bandwidth: 35.916 MHz Total Power: 6.03 dBm Transmit Freq Error: -10.102 kHz OBW Power: 99.00 % x dB Bandwidth: 33.88 MHz x dB: -6.00 dB
802.11n(HT40)/MC H	 Agilent Spectrum Analyzer - Occupied BW Center Freq: 2.437000000 GHz Ref Offset: 6.83 dB Ref: 26.83 dBm Mkr3: 2.453905 GHz -22.375 dBm Center: 2.437 GHz #Res BW: 100 kHz #VBW: 300 kHz Span: 60 MHz Sweep: 6 ms Occupied Bandwidth: 35.957 MHz Total Power: 4.82 dBm Transmit Freq Error: -13.519 kHz OBW Power: 99.00 % x dB Bandwidth: 33.84 MHz x dB: -6.00 dB
802.11n(HT40)/HC H	 Agilent Spectrum Analyzer - Occupied BW Center Freq: 2.452000000 GHz Ref Offset: 6.81 dB Ref: 26.81 dBm Mkr3: 2.469518 GHz -18.761 dBm Center: 2.452 GHz #Res BW: 100 kHz #VBW: 300 kHz Span: 60 MHz Sweep: 6 ms Occupied Bandwidth: 35.944 MHz Total Power: 5.36 dBm Transmit Freq Error: -32.117 kHz OBW Power: 99.00 % x dB Bandwidth: 35.10 MHz x dB: -6.00 dB

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

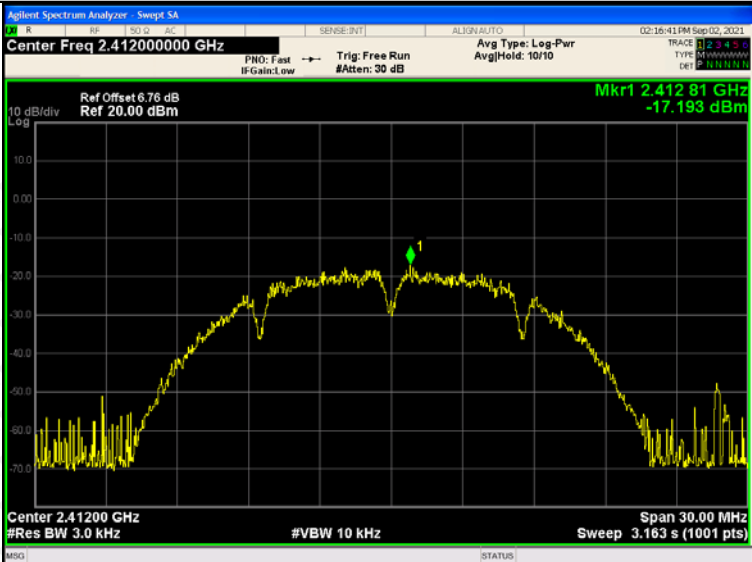
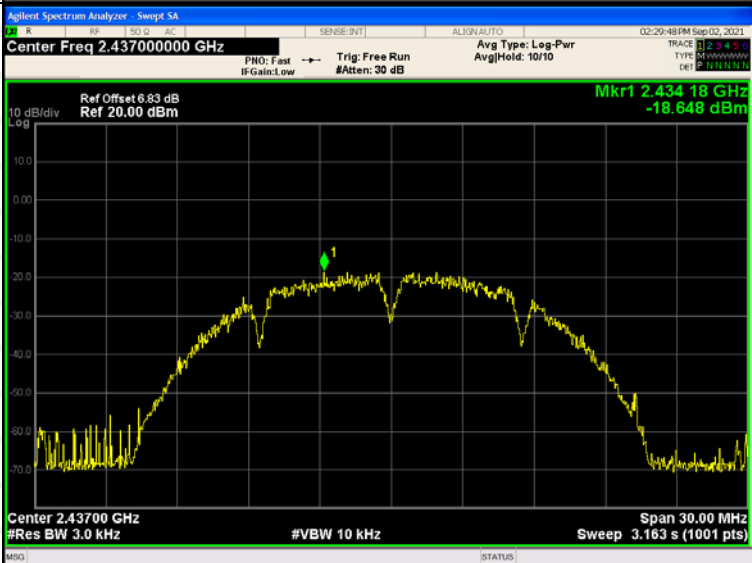
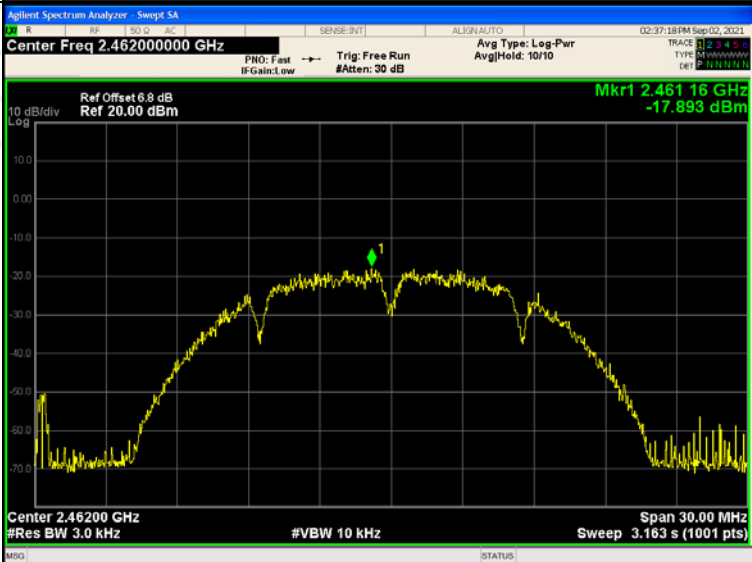
11.3 Test procedure

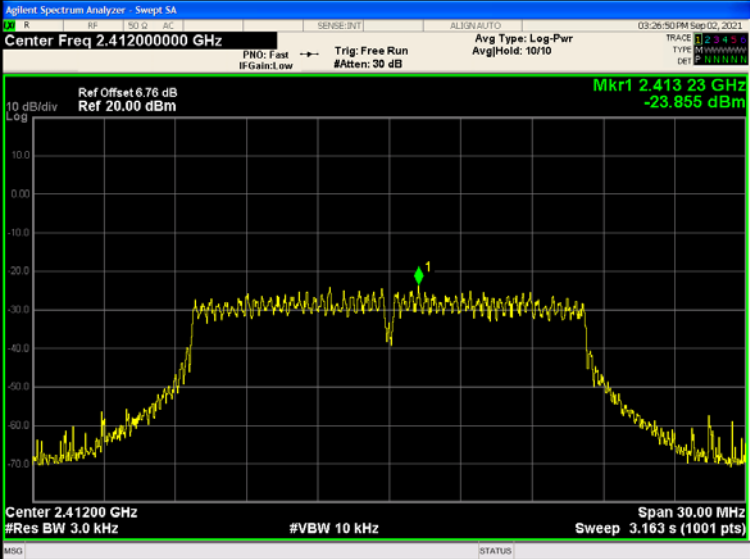
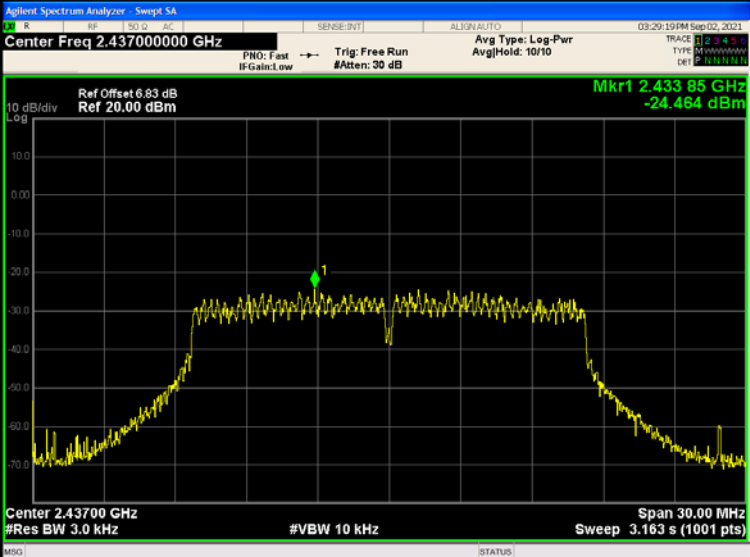
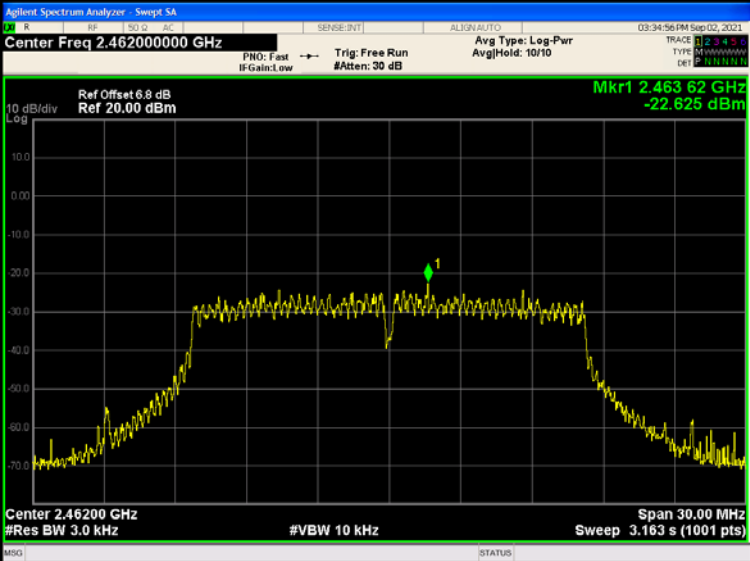
1. Set analyzer center frequency to DTS channel center frequency.
2. Set the span to 1.5 times the DTS bandwidth.
3. Set the RBW to: $3 \text{ kHz} \leq \text{RBW} \leq 100 \text{ kHz}$.
4. Set the VBW $\geq 3 \times \text{RBW}$.
5. Detector = RMS.
6. Sweep time = auto couple.
7. Trace mode = max hold.
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.

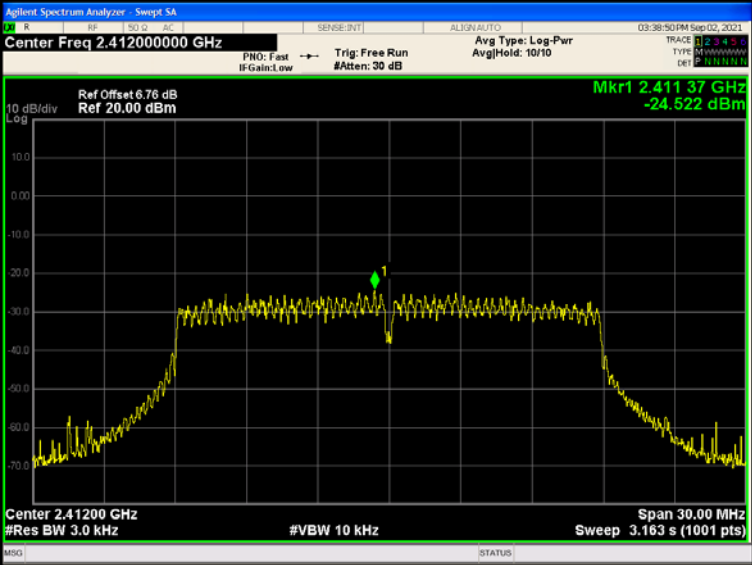
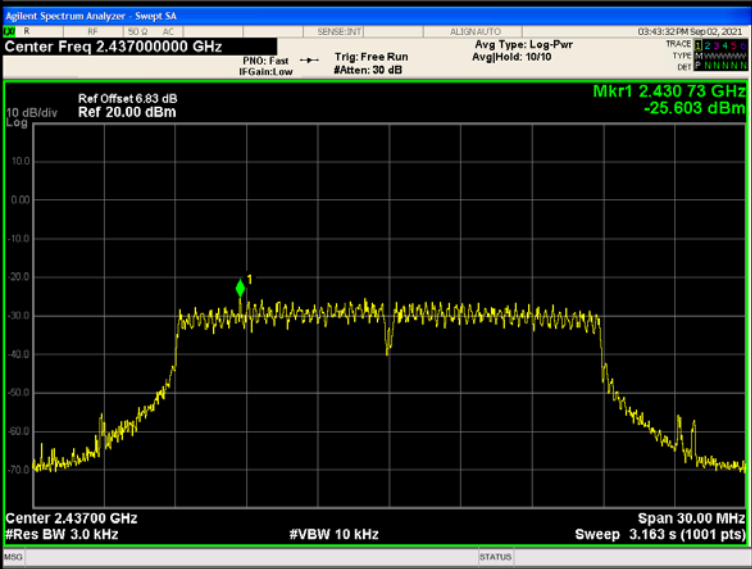
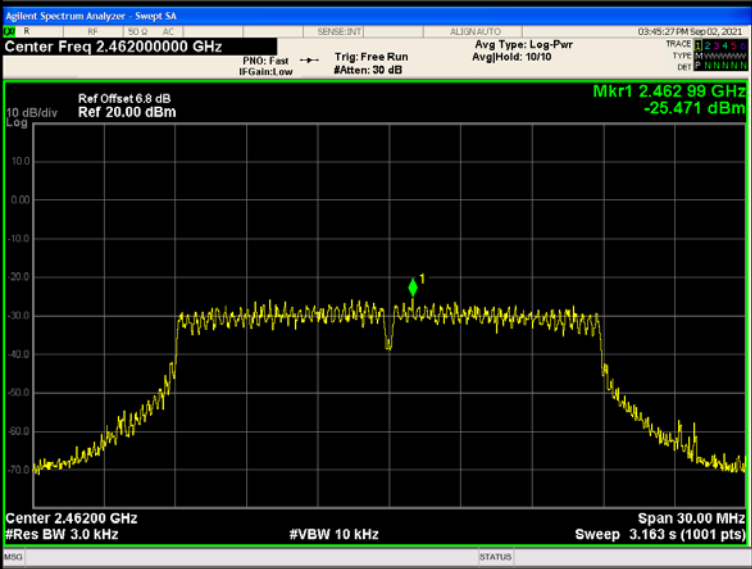
11.4 Test Result

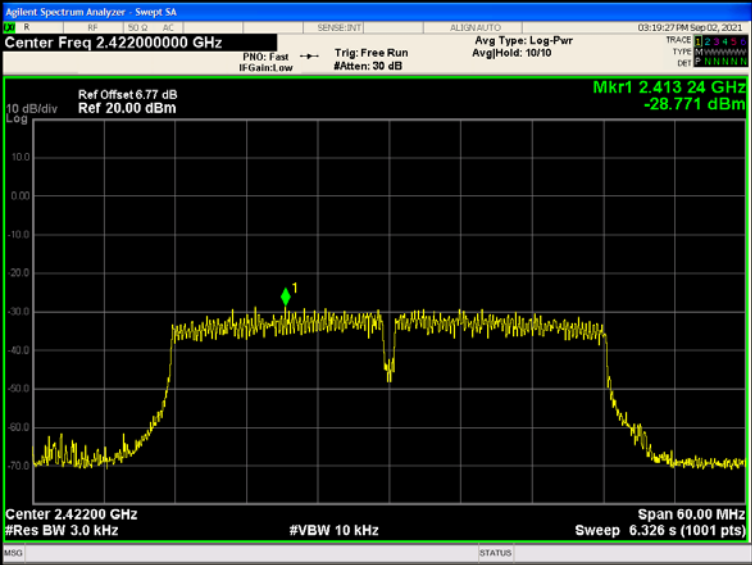
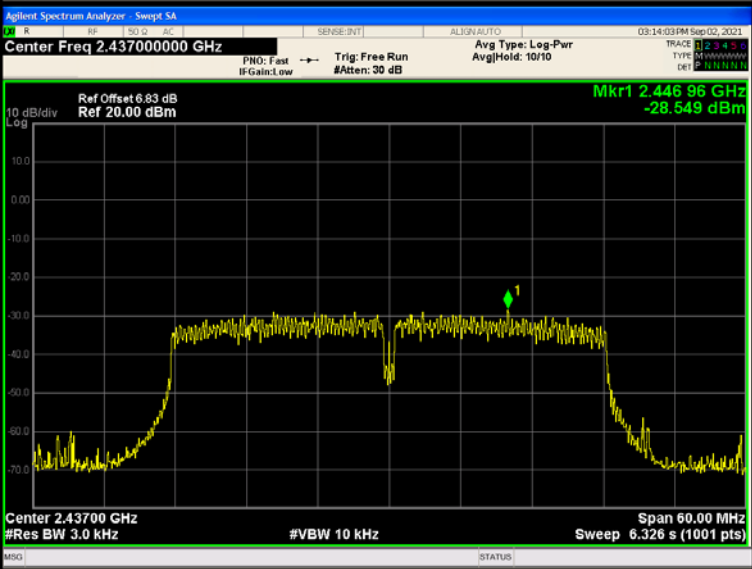
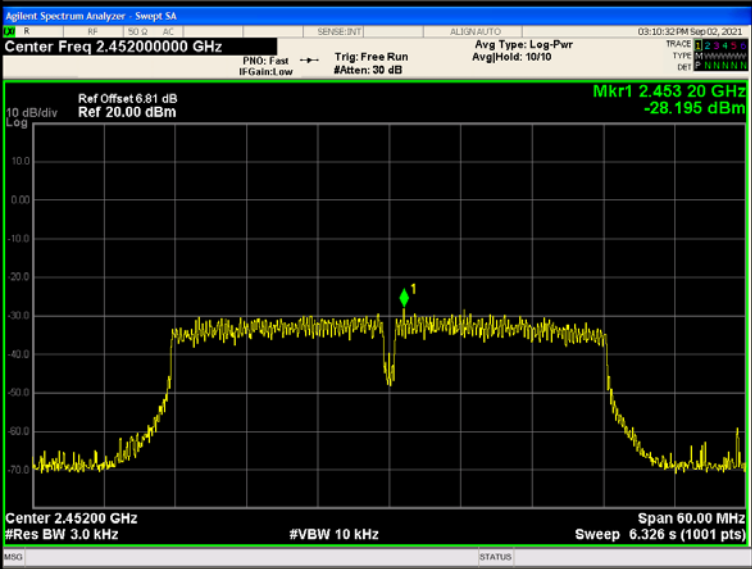
Mode	Channel.	Power Spectral Density [dBm /3KHz] ANT 1	Power Spectral Density [dBm /3KHz] ANT 2	Power Spectral Density [dBm /3KHz]Total	Limit(dBm)
802.11b	LCH	-17.193	-19.607	/	8
	MCH	-18.648	-21.115	/	8
	HCH	-17.893	-21.655	/	8
802.11g	LCH	-23.855	-23.977	/	8
	MCH	-24.464	-22.428	/	8
	HCH	-22.625	-24.123	/	8
802.11n(H T20)	LCH	-24.522	-23.208	-20.805	6.99
	MCH	-25.603	-24.444	-21.975	6.99
	HCH	-25.471	-23.014	-21.061	6.99
802.11n(H T40)	LCH	-28.771	-27.447	-25.048	6.99
	MCH	-28.549	-29.764	-26.104	6.99
	HCH	-28.195	-29.167	-25.644	6.99

ANT1: Test Graph

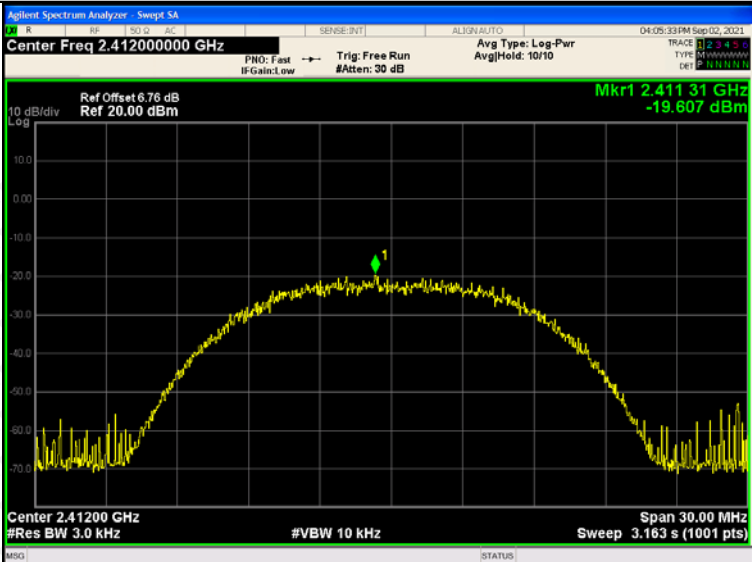
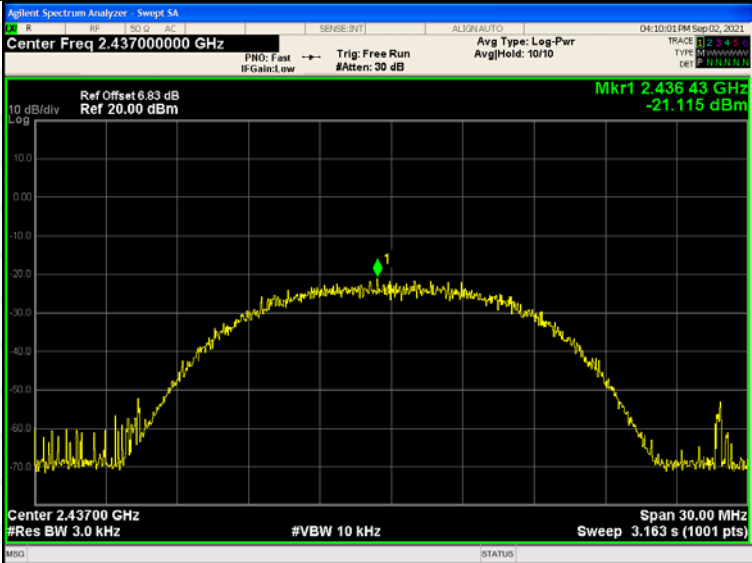
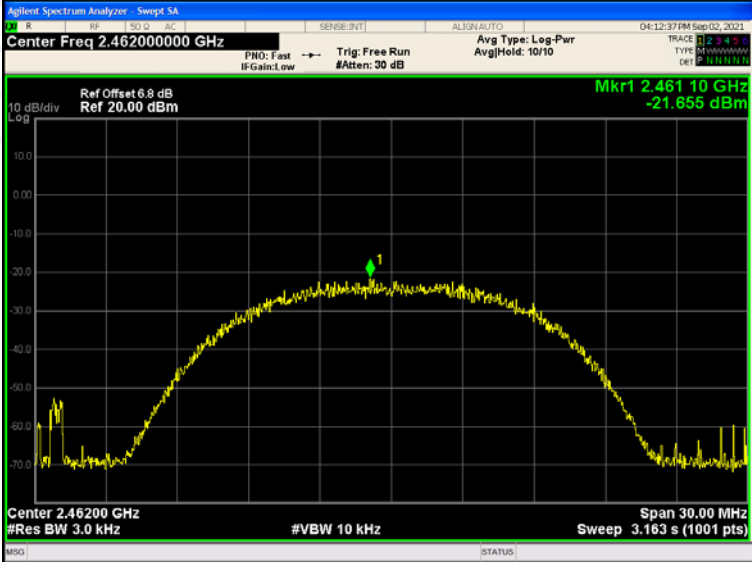
Graphs		
802.11b /LCH		
802.11b /MCH		
802.11b/HCH		

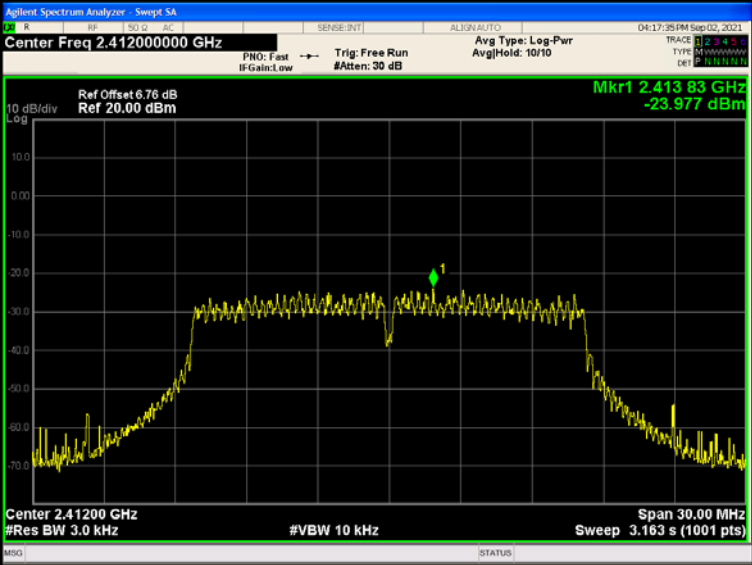
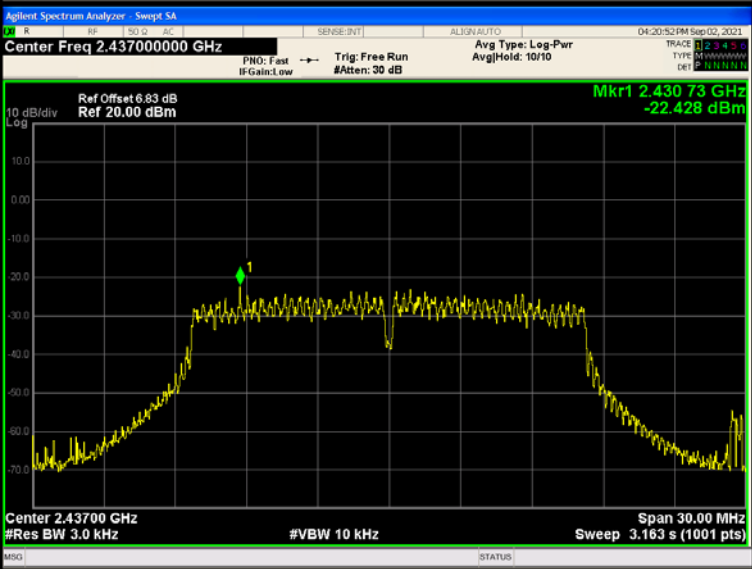
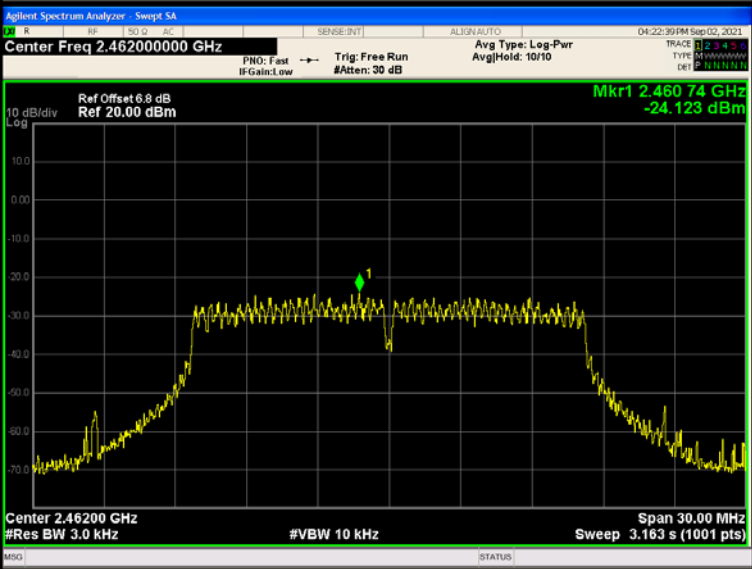
802.11g/LCH	
802.11g/MCH	
802.11g/HCH	

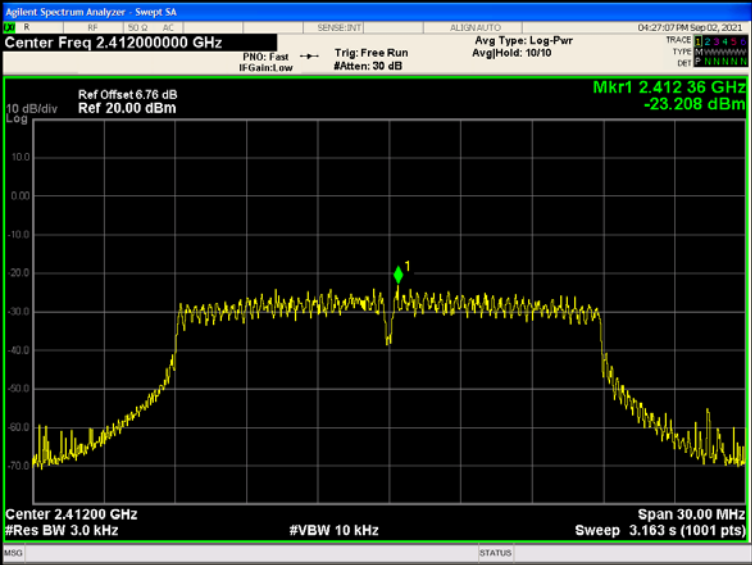
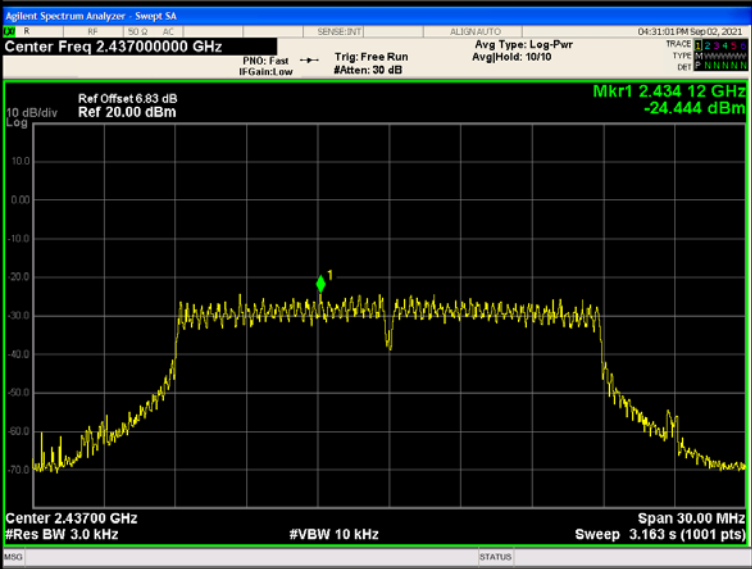
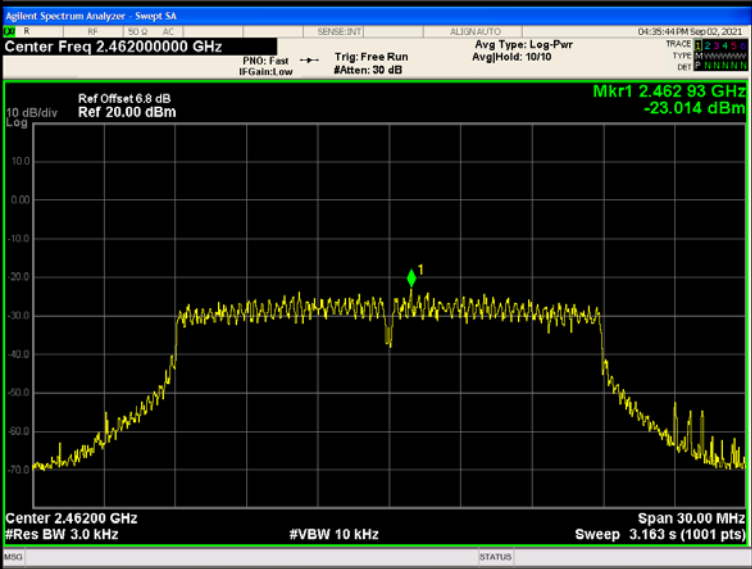
802.11n(HT20)/LC H	
802.11n(HT20)/MC H	
802.11n(HT20)/HC H	

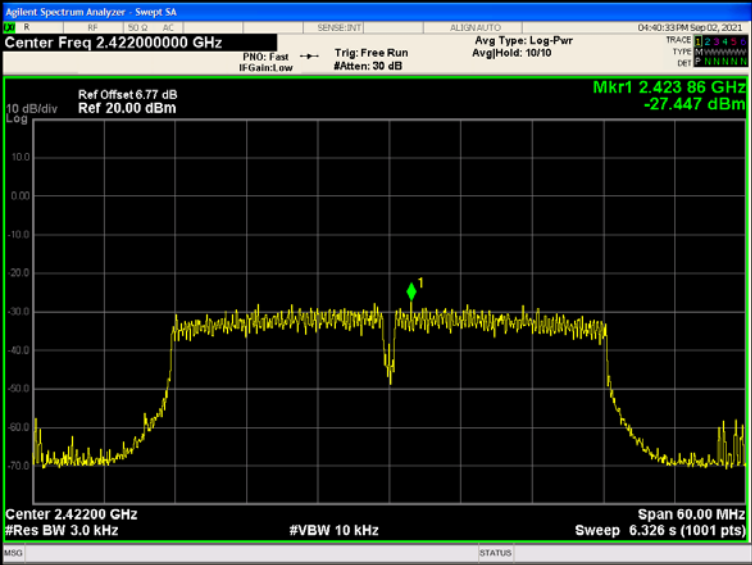
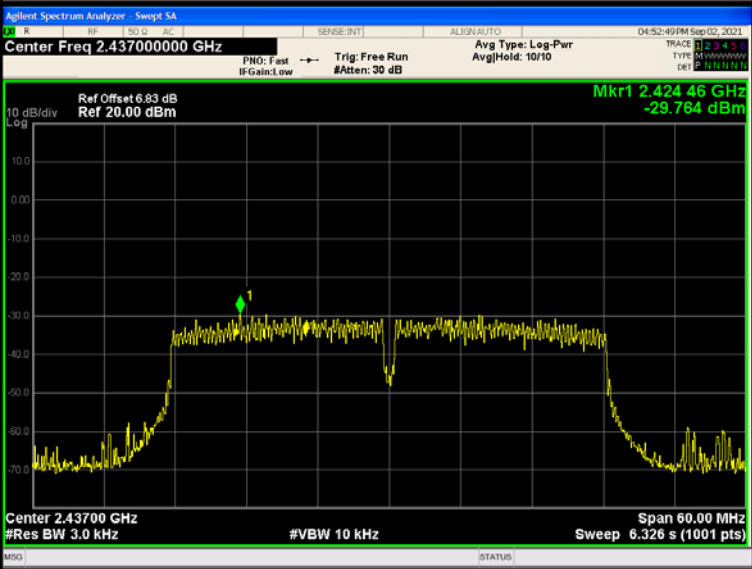
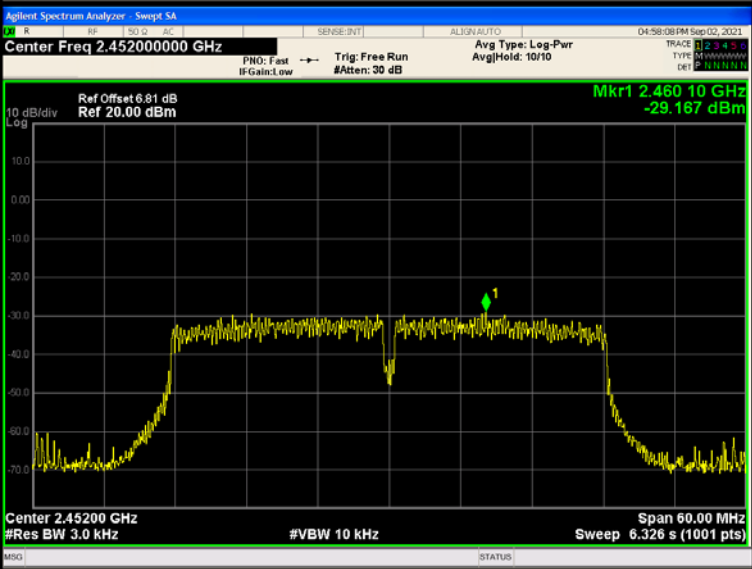
802.11n(HT40)/LC H	
802.11n(HT40)/MC H	
802.11n(HT40)/HC H	

ANT 2: Test Graph

Graphs	
802.11b /LCH	 Agilent Spectrum Analyzer - Swept SA Center Freq 2.41200000 GHz Ref Offset 6.76 dB Ref 20.00 dBm Mkr1 2.411 31 GHz -19.607 dBm Center 2.41200 GHz #Res BW 3.0 kHz #VBW 10 kHz Span 30.00 MHz Sweep 3.163 s (1001 pts)
802.11b /MCH	 Agilent Spectrum Analyzer - Swept SA Center Freq 2.43700000 GHz Ref Offset 6.83 dB Ref 20.00 dBm Mkr1 2.436 43 GHz -21.115 dBm Center 2.43700 GHz #Res BW 3.0 kHz #VBW 10 kHz Span 30.00 MHz Sweep 3.163 s (1001 pts)
802.11b/HCH	 Agilent Spectrum Analyzer - Swept SA Center Freq 2.46200000 GHz Ref Offset 6.8 dB Ref 20.00 dBm Mkr1 2.461 10 GHz -21.655 dBm Center 2.46200 GHz #Res BW 3.0 kHz #VBW 10 kHz Span 30.00 MHz Sweep 3.163 s (1001 pts)

802.11g/LCH	 Agilent Spectrum Analyzer - Swept SA Center Freq 2.41200000 GHz Ref Offset 6.76 dB Ref 20.00 dBm Mkr1 2.41383 GHz -23.977 dBm Center 2.41200 GHz #Res BW 3.0 kHz #VBW 10 kHz Span 30.00 MHz Sweep 3.163 s (1001 pts)
802.11g/MCH	 Agilent Spectrum Analyzer - Swept SA Center Freq 2.43700000 GHz Ref Offset 6.83 dB Ref 20.00 dBm Mkr1 2.43073 GHz -22.428 dBm Center 2.43700 GHz #Res BW 3.0 kHz #VBW 10 kHz Span 30.00 MHz Sweep 3.163 s (1001 pts)
802.11g/HCH	 Agilent Spectrum Analyzer - Swept SA Center Freq 2.46200000 GHz Ref Offset 6.8 dB Ref 20.00 dBm Mkr1 2.46074 GHz -24.123 dBm Center 2.46200 GHz #Res BW 3.0 kHz #VBW 10 kHz Span 30.00 MHz Sweep 3.163 s (1001 pts)

802.11n(HT20)/LC H	
802.11n(HT20)/MC H	
802.11n(HT20)/HC H	

802.11n(HT40)/LC H	
802.11n(HT40)/MC H	
802.11n(HT40)/HC H	

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 1.2dBi.

13. EUT PHOTOGRAPHS

External Photos

EUT Photo 1

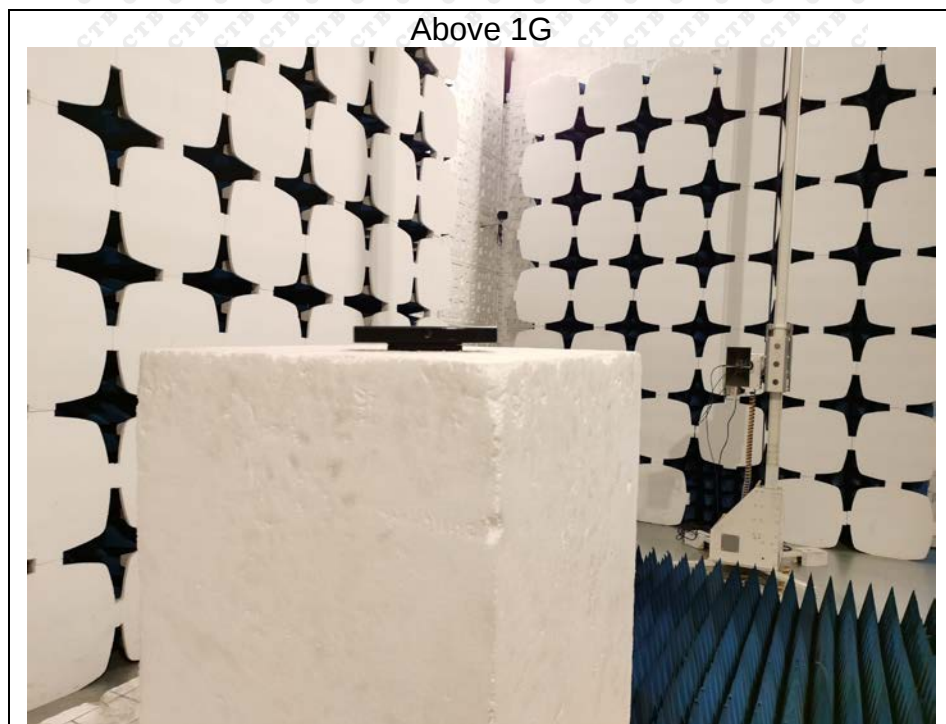
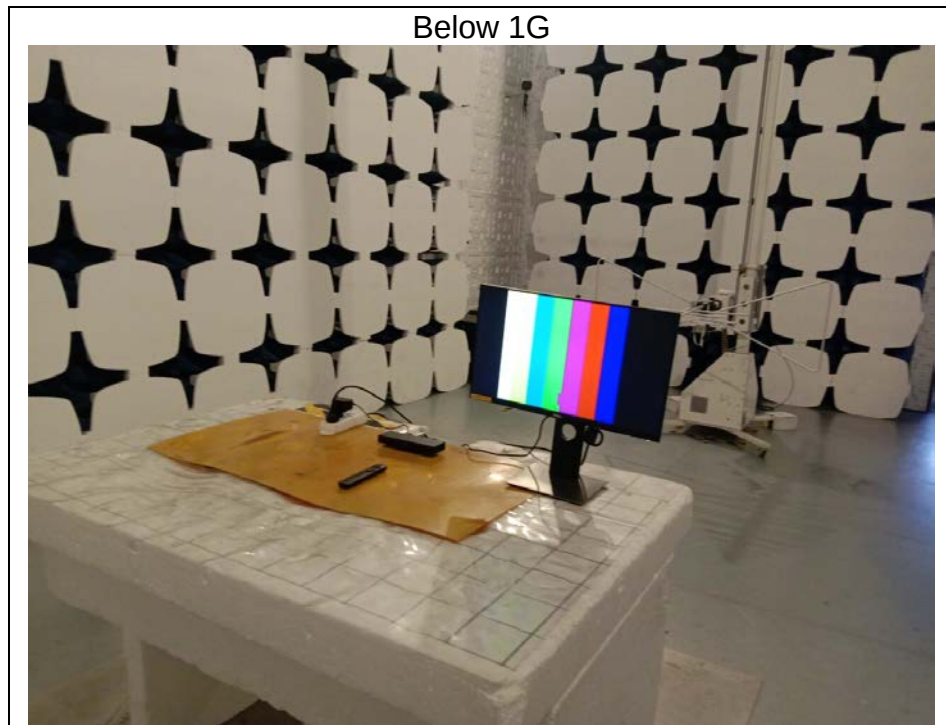


EUT Photo 2



14. EUT TEST SETUP PHOTOGRAPHS

Radiated Emission



Conducted Emission



***** END OF REPORT *****