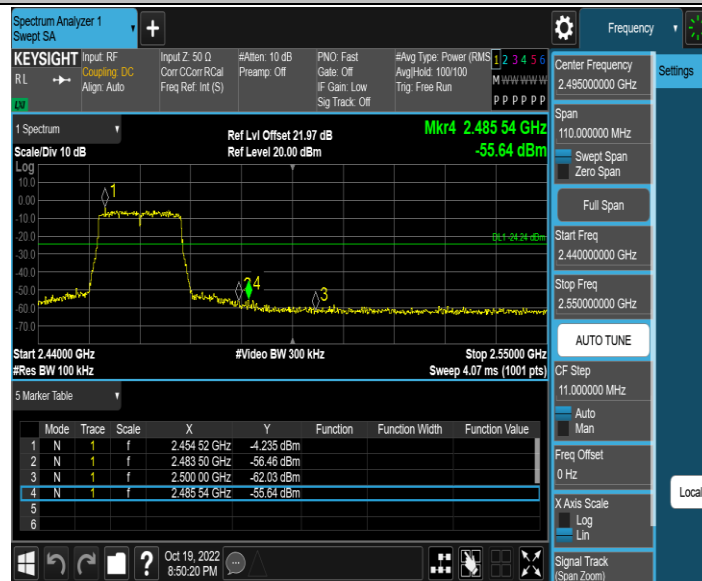
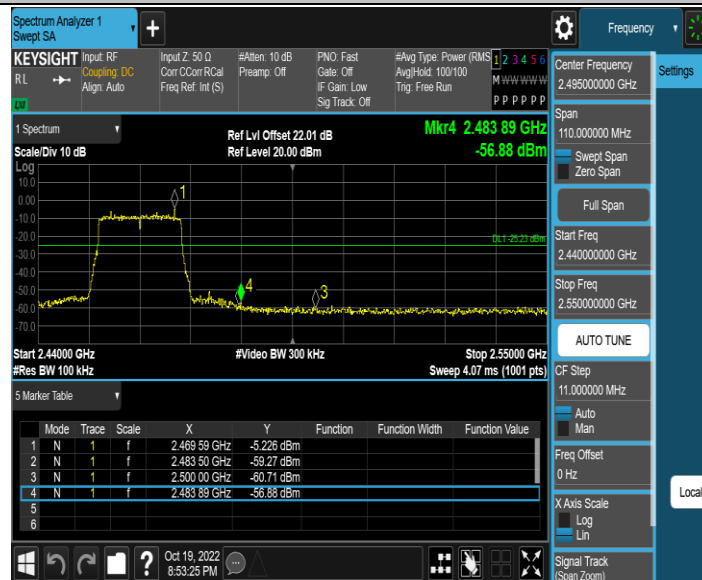


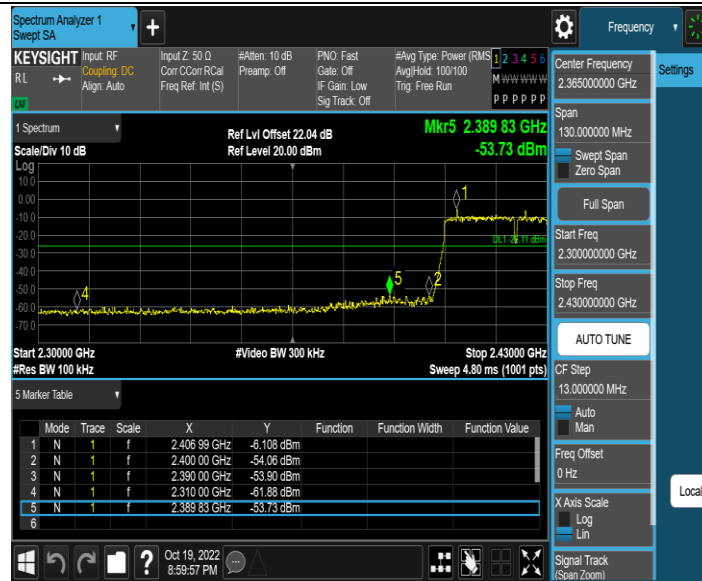
11N20MIMO_Ant1_High_2462



11N20MIMO_Ant2_High_2462



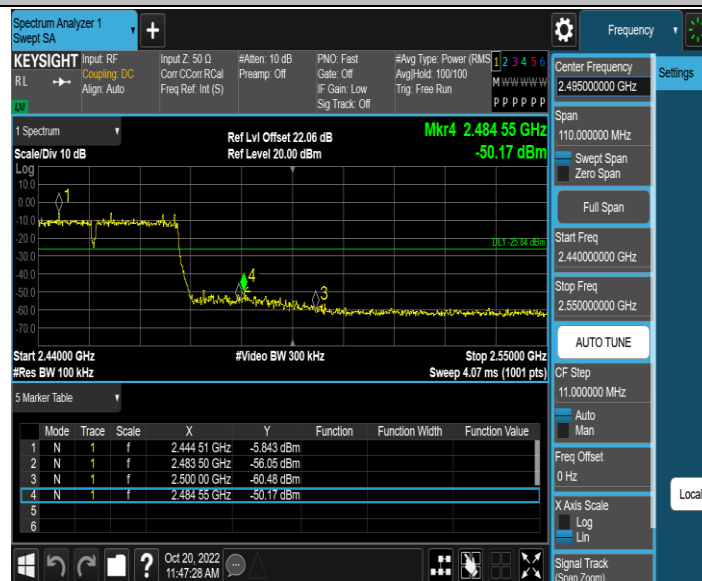
11N40MIMO_Ant1_Low_2422

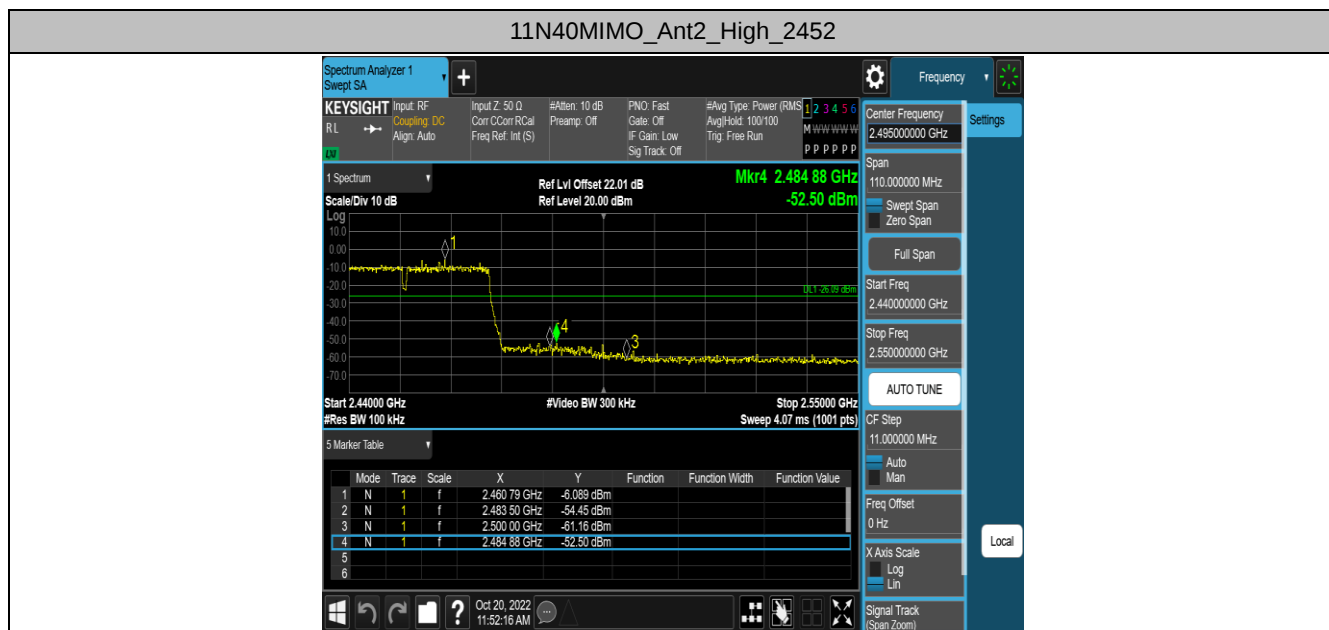


11N40MIMO_Ant2_Low_2422



11N40MIMO_Ant1_High_2452





3.4 6dB Bandwidth

3.4.1 Limit

For direct sequence systems, the minimum 6dB bandwidth shall be at least 500kHz

3.4.2 Test Peripherals

Support Equipment				
No.	Equipment	Brand Name	Model Name	Remarks
1	Record PC	Lenovo	M4500T	NA
2	Control PC	Lenovo	M4500T	NA

3.4.3 Test Procedure

Test Method	
☒ Conducted Measurement	☐ Radiated Measurement
Test Channels	
☒ Lowest, Middle and Highest Channel	☐ Lowest and Highest Channel
Environmental conditions	
☒ Normal	☐ Normal and Extreme
Note: ● : Test ○ : No Test	

a) The EUT shall be connected to the spectrum analyser, and the spectrum analyser is set as follow:

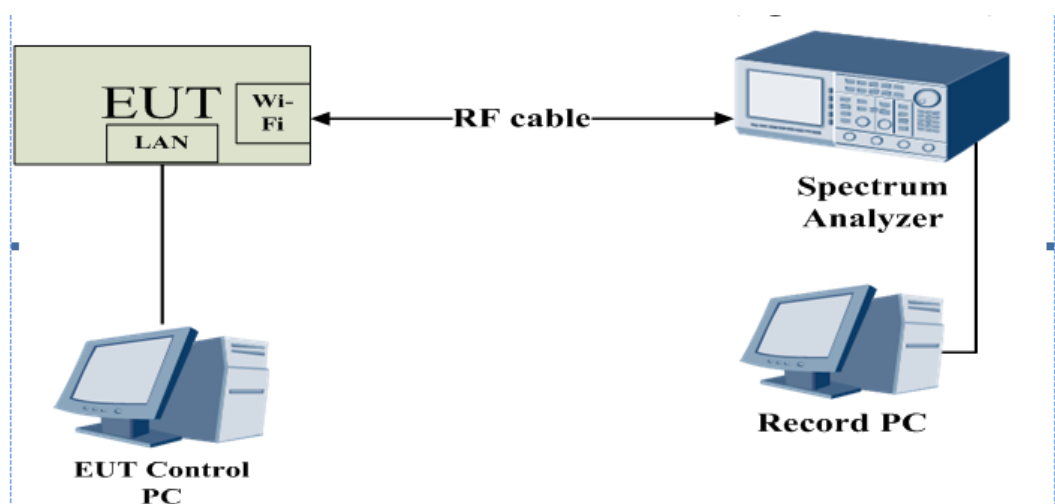
Centre Frequency	The centre frequency of the channel under test
RBW	100kHz
VBW	300kHz
Frequency span	2x Nominal Channel Bandwidth
Detector Mode	Peak
Trace Mode	Max Hold
Sweep Time	Auto Couple

b) Wait for the trace to stabilize then find the peak value of the trace and place the analyser marker on this peak.

c) Use the -6dB bandwidth function of the spectrum analyser to measure the 6dB Bandwidth of the EUT. This value shall be recorded.

d) Make sure that the power envelope is sufficiently above the noise floor of the analyser to avoid the noise signals left and right from the power envelope being taken into account by this measurement.

3.4.4 Test Setup



3.4.5 Test Result

6dB Bandwidth

TestMode	Antenna	Channel	DTS BW [MHz]	FL[MHz]	FH[MHz]	Limit[MHz]	Verdict
11B	Ant1	2412	9.840	2407.240	2417.080	0.5	PASS
	Ant2	2412	11.080	2406.040	2417.120	0.5	PASS
	Ant1	2437	11.080	2432.000	2443.080	0.5	PASS
	Ant2	2437	11.040	2431.040	2442.080	0.5	PASS
	Ant1	2462	10.120	2457.000	2467.120	0.5	PASS
	Ant2	2462	10.120	2457.000	2467.120	0.5	PASS
11G	Ant1	2412	16.320	2403.880	2420.200	0.5	PASS
	Ant2	2412	16.280	2403.920	2420.200	0.5	PASS
	Ant1	2437	16.320	2428.880	2445.200	0.5	PASS
	Ant2	2437	16.320	2428.880	2445.200	0.5	PASS
	Ant1	2462	16.320	2453.880	2470.200	0.5	PASS
	Ant2	2462	16.280	2453.880	2470.160	0.5	PASS
11N20MIMO	Ant1	2412	12.280	2406.080	2418.360	0.5	PASS
	Ant2	2412	16.000	2404.120	2420.120	0.5	PASS
	Ant1	2437	17.120	2428.720	2445.840	0.5	PASS
	Ant2	2437	16.720	2428.680	2445.400	0.5	PASS
	Ant1	2462	17.600	2453.240	2470.840	0.5	PASS
	Ant2	2462	17.000	2453.560	2470.560	0.5	PASS
11N40MIMO	Ant1	2422	35.680	2404.160	2439.840	0.5	PASS
	Ant2	2422	36.400	2403.840	2440.240	0.5	PASS
	Ant1	2437	36.320	2418.920	2455.240	0.5	PASS
	Ant2	2437	36.000	2418.920	2454.920	0.5	PASS
	Ant1	2452	36.320	2433.920	2470.240	0.5	PASS
	Ant2	2452	36.400	2433.840	2470.240	0.5	PASS

11B_Ant1_2412



11B_Ant2_2412



11B_Ant1_2437



11B_Ant2_2437



11B_Ant1_2462



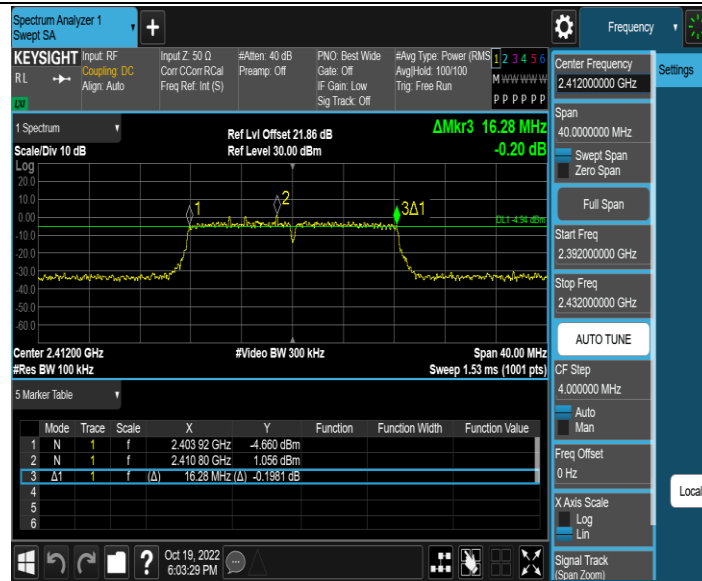
11B_Ant2_2462



11G_Ant1_2412



11G_Ant2_2412



11G_Ant1_2437



11G_Ant2_2437



11G_Ant1_2462



11G_Ant2_2462



11N20MIMO_Ant1_2412



11N20MIMO_Ant2_2412



11N20MIMO_Ant1_2437



11N20MIMO_Ant2_2437



11N20MIMO_Ant1_2462



11N20MIMO_Ant2_2462



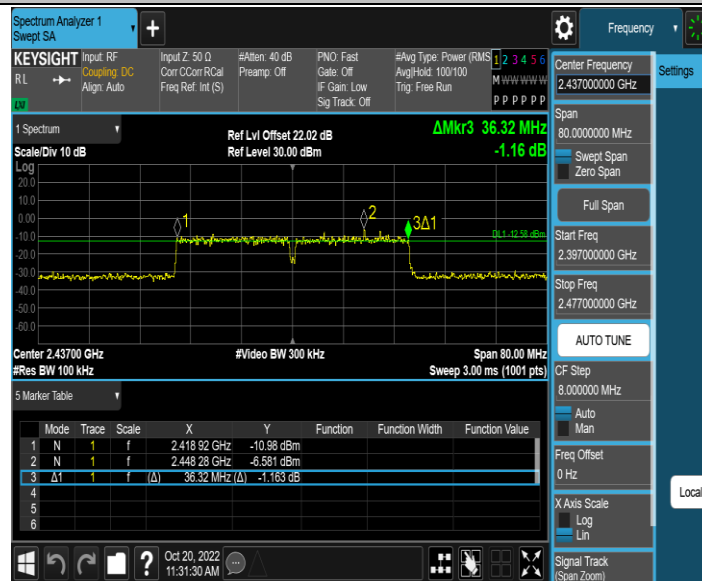
11N40MIMO_Ant1_2422



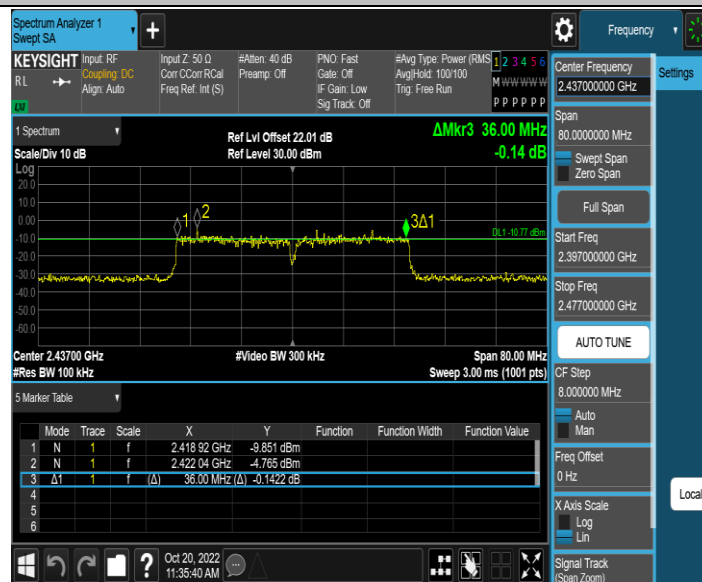
11N40MIMO_Ant2_2422



11N40MIMO_Ant1_2437



11N40MIMO_Ant2_2437



11N40MIMO_Ant1_2452



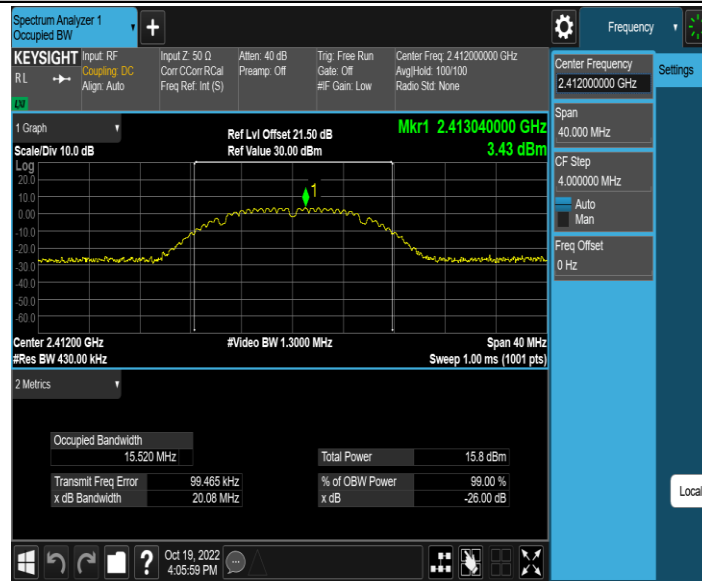
11N40MIMO_Ant2_2452



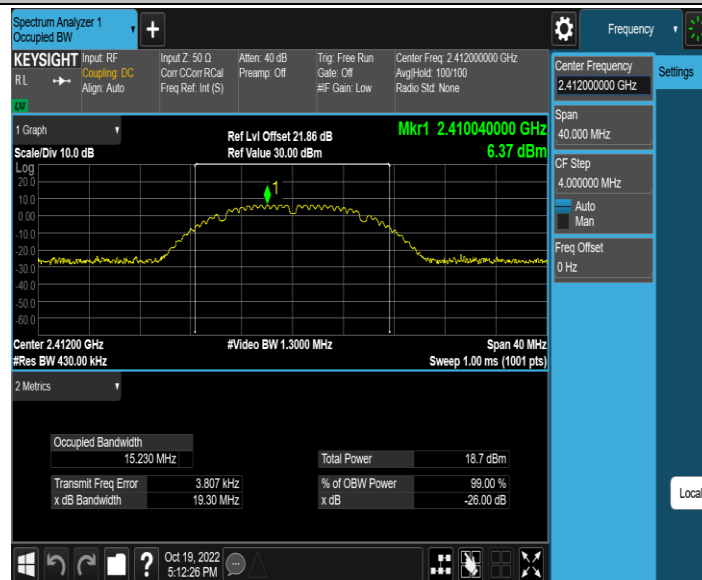
Occupied Channel Bandwidth

TestMode	Antenna	Channel	OCB [MHz]	FL[MHz]	FH[MHz]	Limit[MHz]	Verdict
11B	Ant1	2412	15.520	2404.3395	2419.8595	---	---
	Ant2	2412	15.230	2404.3888	2419.6188	---	---
	Ant1	2437	15.222	2429.4454	2444.6674	---	---
	Ant2	2437	15.407	2429.3062	2444.7132	---	---
	Ant1	2462	15.286	2454.3800	2469.6660	---	---
	Ant2	2462	15.420	2454.2850	2469.7050	---	---
11G	Ant1	2412	16.547	2403.7839	2420.3309	---	---
	Ant2	2412	16.558	2403.7617	2420.3197	---	---
	Ant1	2437	16.564	2428.7617	2445.3257	---	---
	Ant2	2437	16.645	2428.7229	2445.3679	---	---
	Ant1	2462	16.589	2453.7416	2470.3306	---	---
	Ant2	2462	16.688	2453.7379	2470.4259	---	---
11N20MIMO	Ant1	2412	17.702	2403.1589	2420.8609	---	---
	Ant2	2412	17.576	2403.2282	2420.8042	---	---
	Ant1	2437	17.834	2428.1293	2445.9633	---	---
	Ant2	2437	17.890	2428.1050	2445.9950	---	---
	Ant1	2462	17.850	2453.0942	2470.9442	---	---
	Ant2	2462	18.101	2452.9988	2471.0998	---	---
11N40MIMO	Ant1	2422	37.206	2403.4889	2440.6949	---	---
	Ant2	2422	37.413	2403.3382	2440.7512	---	---
	Ant1	2437	37.324	2418.4299	2455.7539	---	---
	Ant2	2437	36.966	2418.5538	2455.5198	---	---
	Ant1	2452	37.692	2433.2717	2470.9637	---	---
	Ant2	2452	37.102	2433.5419	2470.6439	---	---

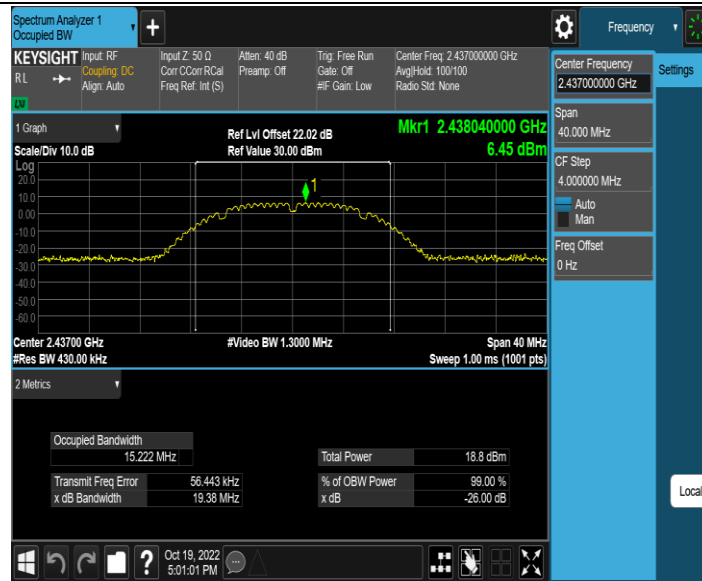
11B_Ant1_2412



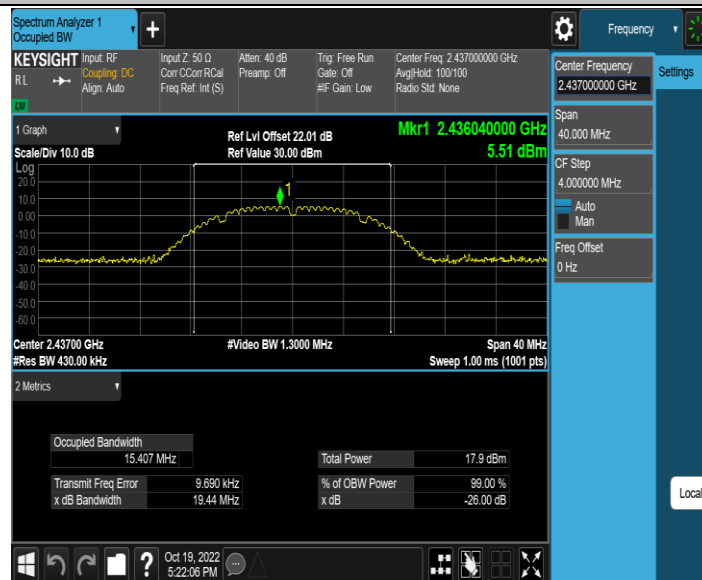
11B_Ant2_2412



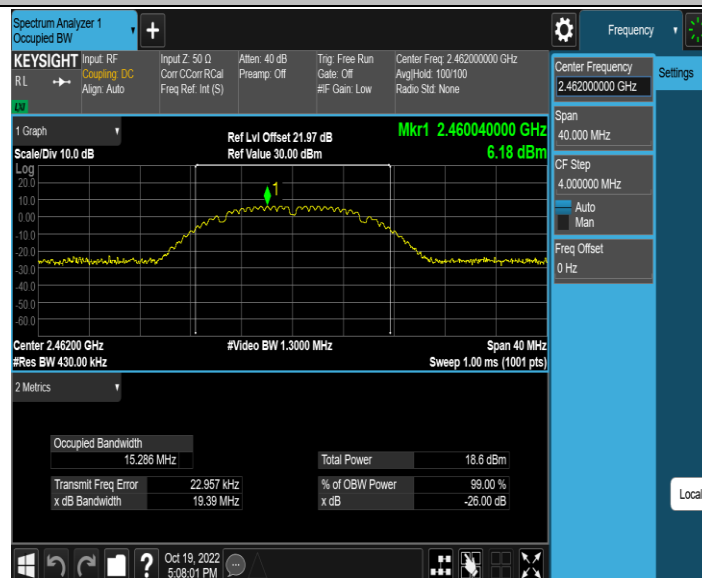
11B_Ant1_2437



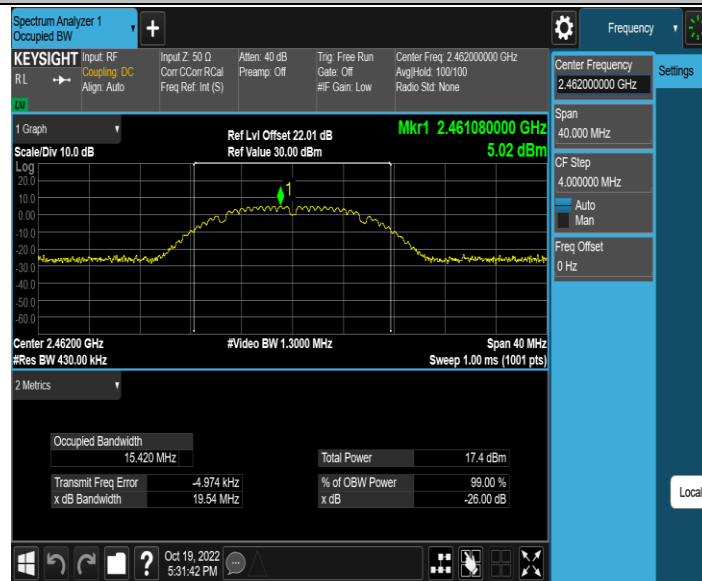
11B_Ant2_2437



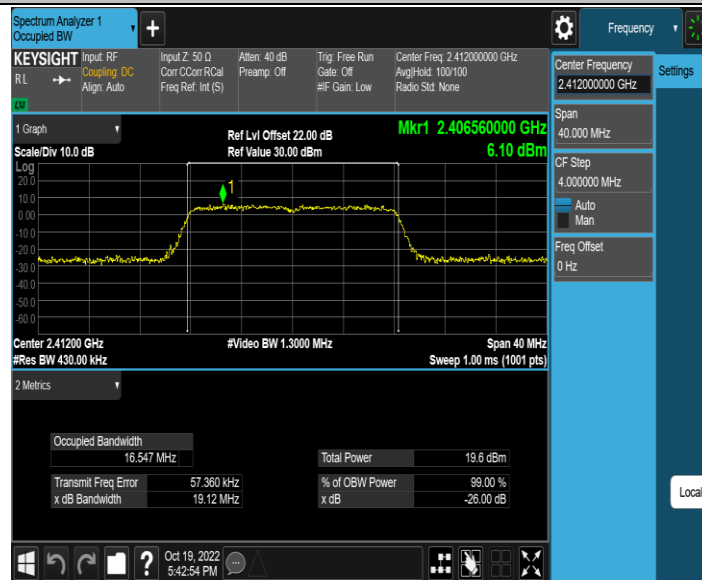
11B_Ant1_2462



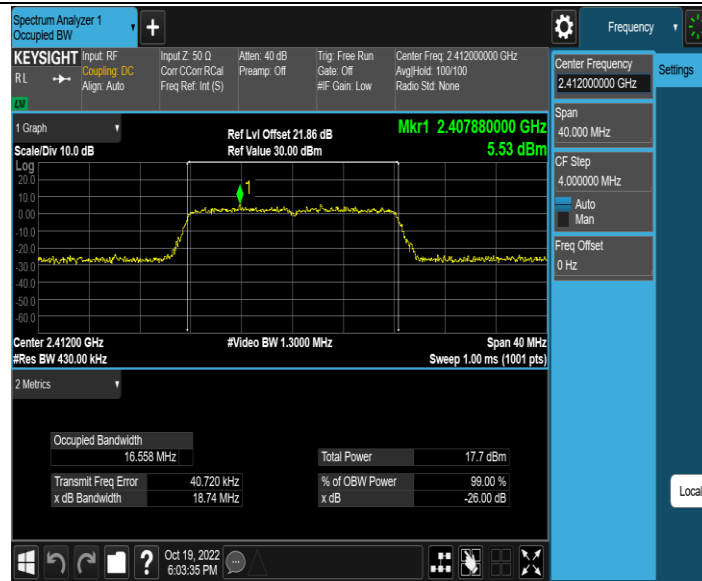
11B_Ant2_2462



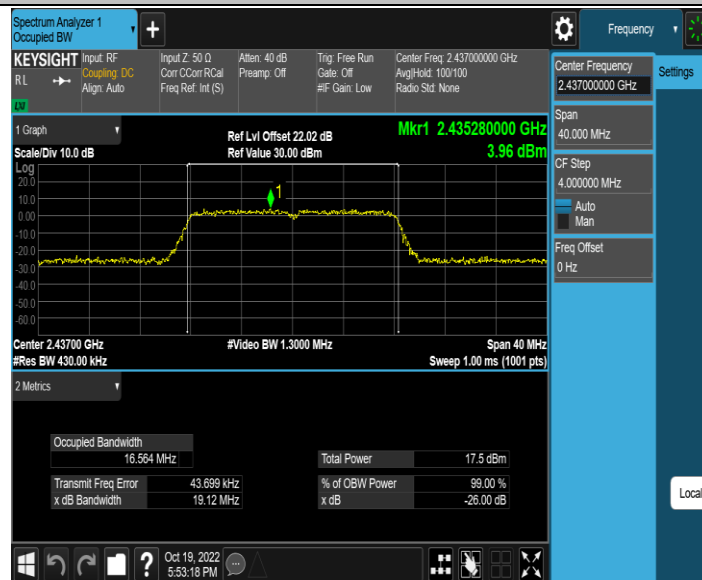
11G_Ant1_2412



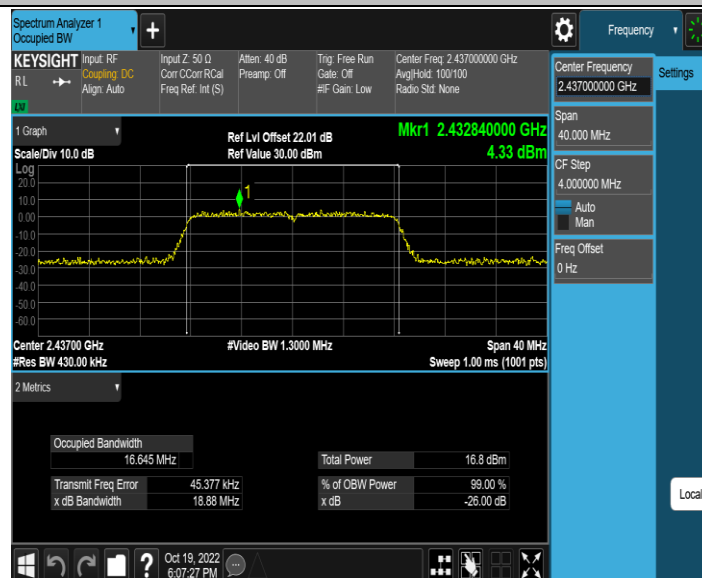
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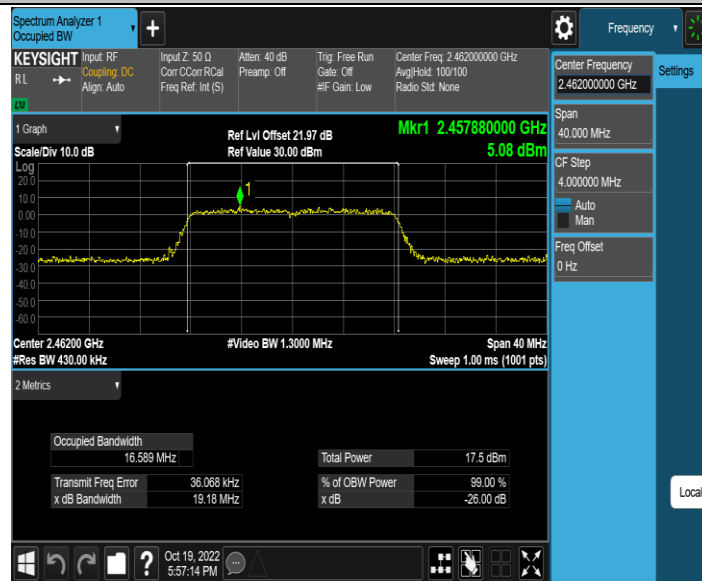
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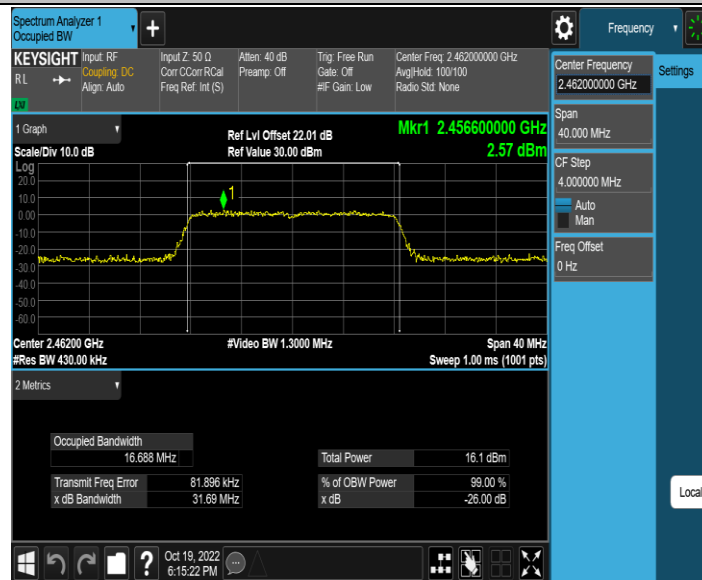
11G_Ant2_2437



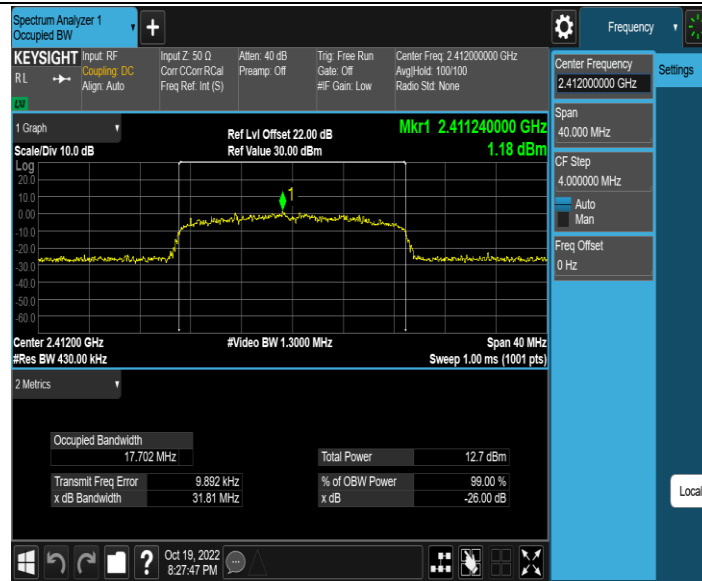
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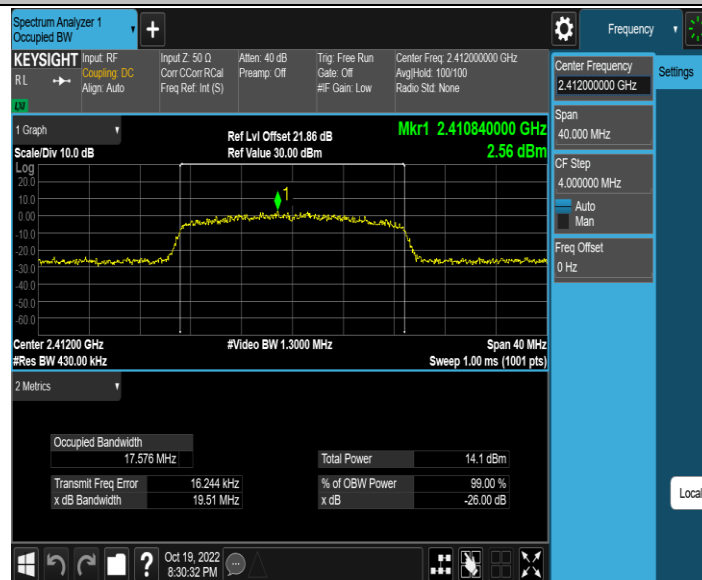
11G_Ant2_2462



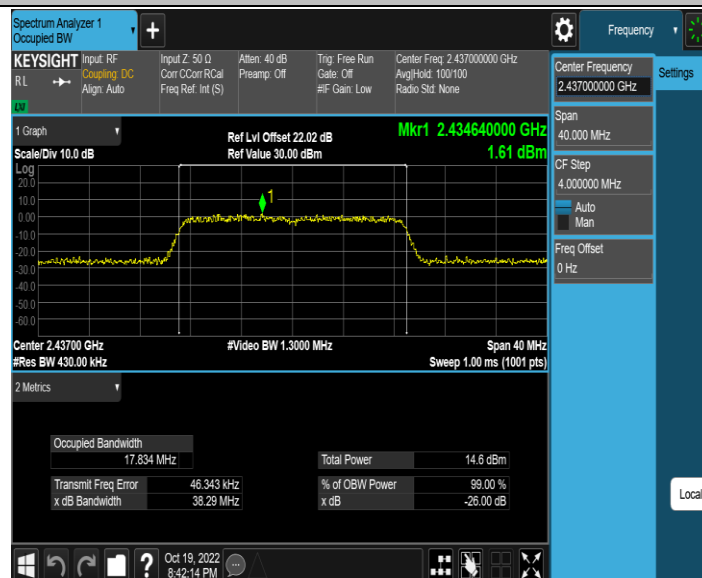
11N20MIMO_Ant1_2412



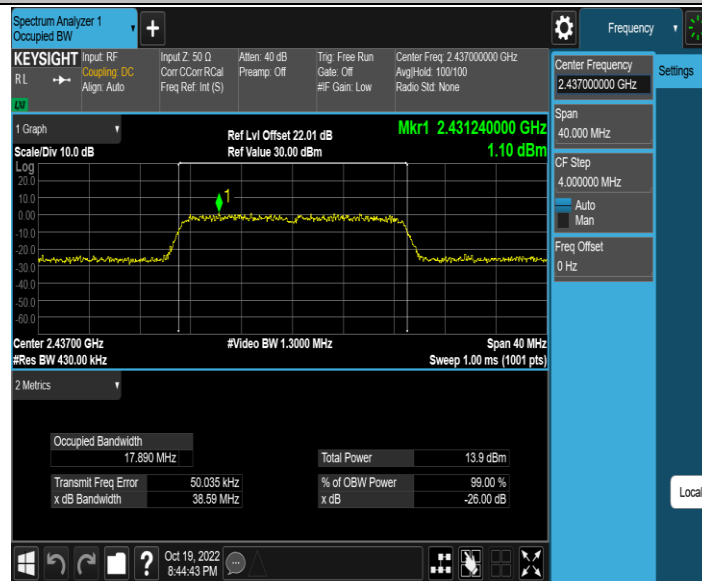
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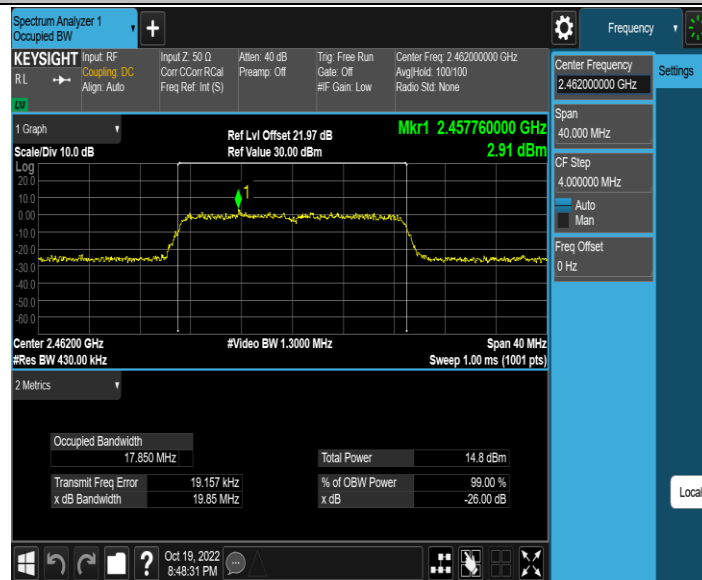
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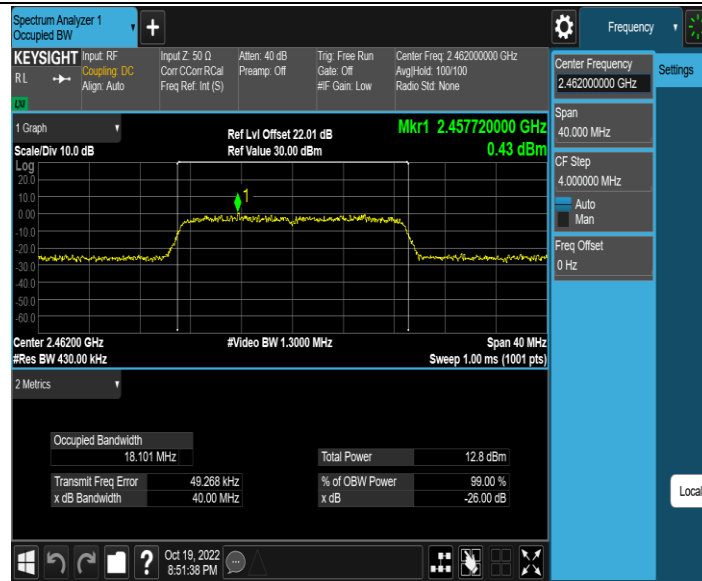
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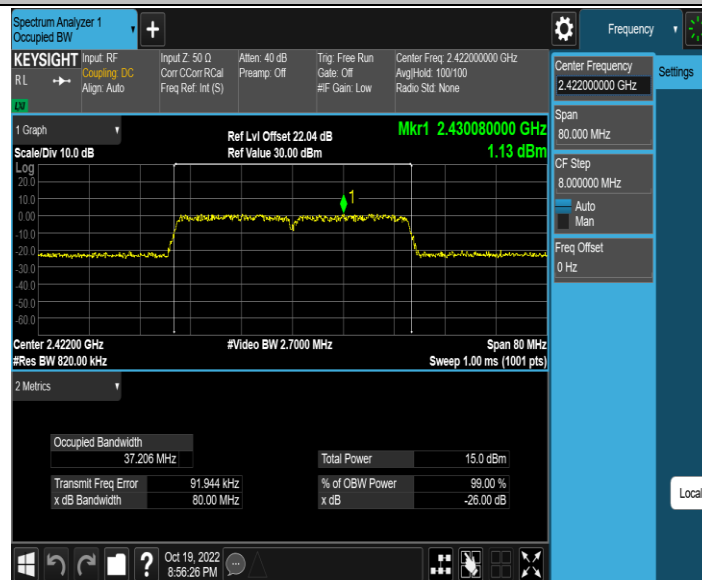
11N20MIMO_Ant1_2462



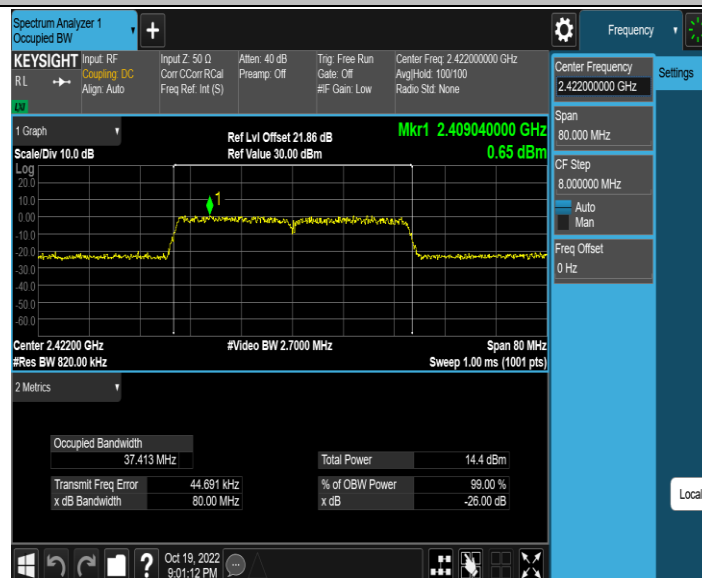
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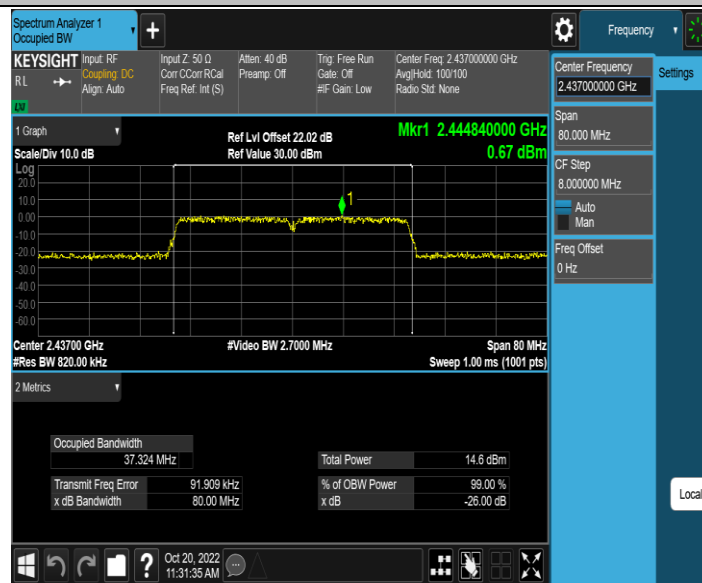
11N40MIMO_Ant1_2422



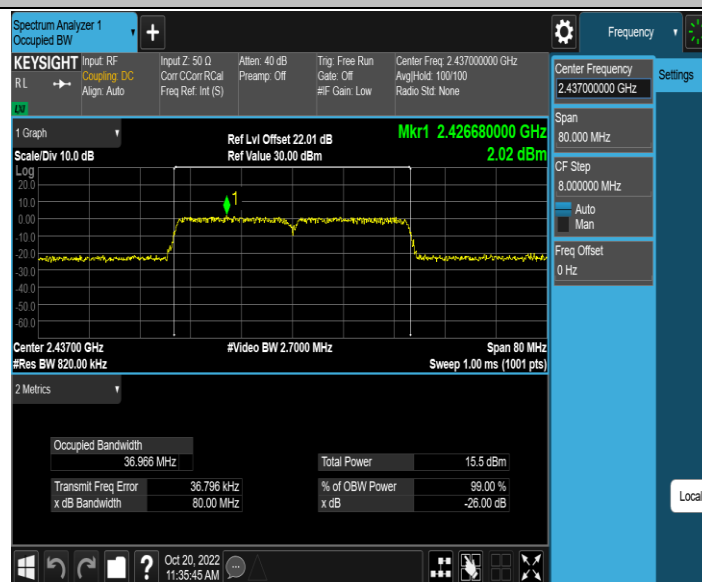
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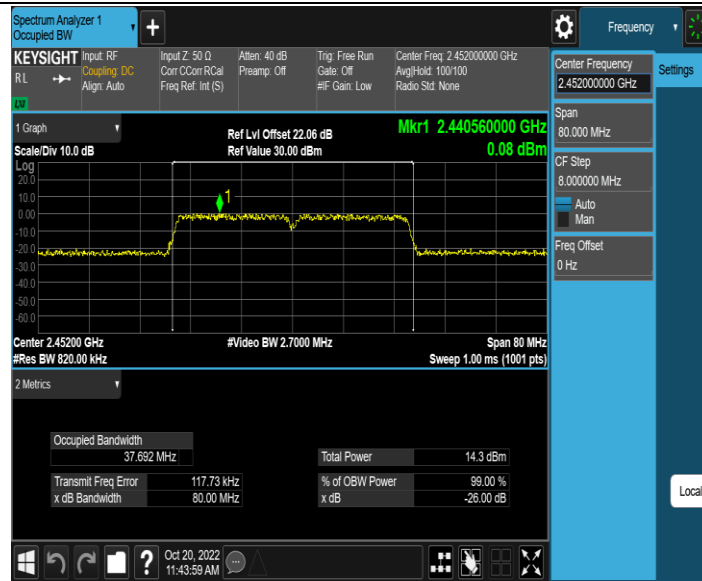
11N40MIMO_Ant1_2437



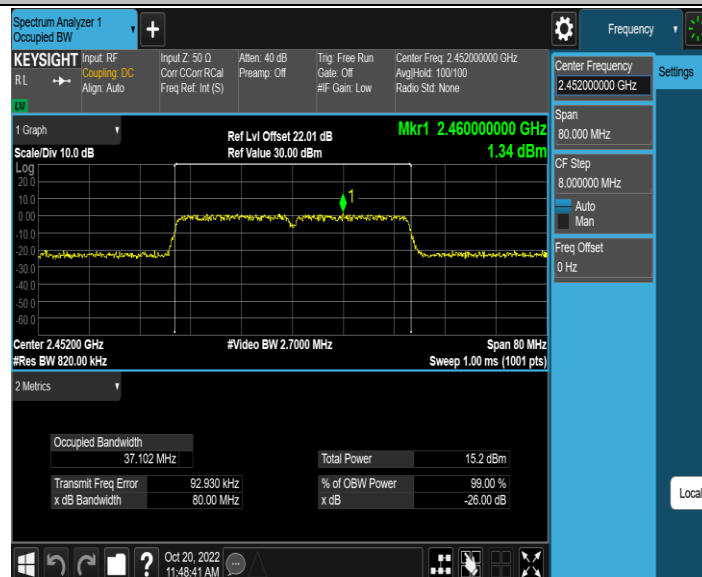
11N40MIMO_Ant2_2437



11N40MIMO_Ant1_2452



11N40MIMO_Ant2_2452



3.5 Maximum conducted output power

3.5.1 Limit

For systems using digital modulation in the 2400~2483.5MHz, The Maximum output Power shall not exceed 1W(30dBm)

3.5.2 Test Peripherals

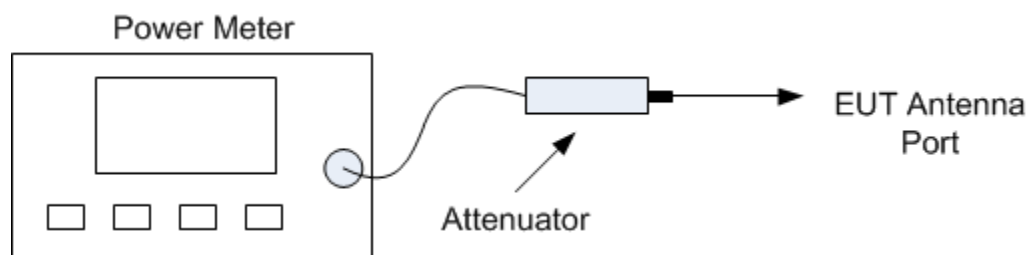
Support Equipment				
No.	Equipment	Brand Name	Model Name	Remarks
1	Record PC	Lenovo	M4500T	NA
2	Control PC	Lenovo	M4500T	NA

3.5.3 Test Procedure

Test Method	
☒ Conducted Measurement	☐ Radiated Measurement
Test Channels	
☒ Lowest, Middle and Highest Channel	☐ Lowest and Highest Channel
Environmental conditions	
☒ Normal	☐ Normal and Extreme
Note: ☒ : Test ☐ : No Test	

- The EUT was directly connected to the power meter and antenna output port as show in the block diagram below.
- The maximum output power was performed in accordance with method 11.9.1.3 of ANSI C63.10.

3.5.4 Test Setup



3.5.5 Table of Parameters of Text Software Setting

During testing channel & power controlling software provided by the customer was used to control the operating channel as well as the output power level. The RF output power selection is for the setting of RF output power expected by the customer and is going to be fixed on the firmware of the final end product.

For Power Setting value

Test Software Version	Command					
Frequency (MHz)	2412		2437		2462	
Antenna	Ant1	Ant2	Ant1	Ant2	Ant1	Ant2
IEEE 802.11b	18.5	18.5	18.5	18.5	18.5	18.5
IEEE 802.11g	10	10	10	10	10	10
Frequency (MHz)	2412		2437		2462	
IEEE 802.11n (20MHz)	9		9		9	
Frequency (MHz)	2422		2437		2452	
IEEE 802.11n (40MHz)	9		9		9	