

3.5.6 The Result

Test Mode	Antenna	Channel	Result [dBm]	Limit [dBm]	Verdict
11B	Ant1	2412	18.12	≤30.00	PASS
	Ant2	2412	18.74	≤30.00	PASS
	Ant1	2437	18.56	≤30.00	PASS
	Ant2	2437	18.33	≤30.00	PASS
	Ant1	2462	18.33	≤30.00	PASS
	Ant2	2462	16.33	≤30.00	PASS
11G	Ant1	2412	18.34	≤30.00	PASS
	Ant2	2412	18.47	≤30.00	PASS
	Ant1	2437	18.84	≤30.00	PASS
	Ant2	2437	16.99	≤30.00	PASS
	Ant1	2462	18.54	≤30.00	PASS
	Ant2	2462	16.16	≤30.00	PASS
11N20MIMO	Ant1	2412	15.31	≤30.00	PASS
	Ant2	2412	14.99	≤30.00	PASS
	total	2412	18.16	≤30.00	PASS
	Ant1	2437	14.24	≤30.00	PASS
	Ant2	2437	14.82	≤30.00	PASS
	total	2437	17.55	≤30.00	PASS
	Ant1	2462	13.98	≤30.00	PASS
	Ant2	2462	14.61	≤30.00	PASS
	total	2462	17.32	≤30.00	PASS
11N40MIMO	Ant1	2422	15.15	≤30.00	PASS
	Ant2	2422	15.78	≤30.00	PASS
	total	2422	18.49	≤30.00	PASS
	Ant1	2437	14.71	≤30.00	PASS
	Ant2	2437	15.51	≤30.00	PASS
	total	2437	18.14	≤30.00	PASS
	Ant1	2452	14.65	≤30.00	PASS
	Ant2	2452	15.27	≤30.00	PASS
	total	2452	17.98	≤30.00	PASS

Frequency Band	ANT 1 Antenna Gain (dBi)	ANT 2 Antenna Gain (dBi)	Correlated chains directional gain (dBi)	Peak Power Limit (dBm)
2400 MHz to 2483.5 MHz	-0.36	-0.99	2.34	30.00

Unequal antenna gains, with equal transmit powers. Directional gain is to be computed as follows:

If transmit signals are correlated, then

Directional gain = $10 \log[(10^{G1/20} + 10^{G2/20} + \dots + 10^{GN/20})^2 / N_{ANT}]$ dBi [Note the “20”s in the denominator of each exponent and the square of the sum of terms; the object is to combine the signal levels coherently.]

3.6 Power Spectral Density

3.6.1 Limit

For digitally modulated systems, the power spectral density conducted from the intentional radiator to the antenna shall not be greater than 8dBm in any 3kHz band during any time interval of continuous transmission.

3.6.2 Test Peripherals

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

3.6.3 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	

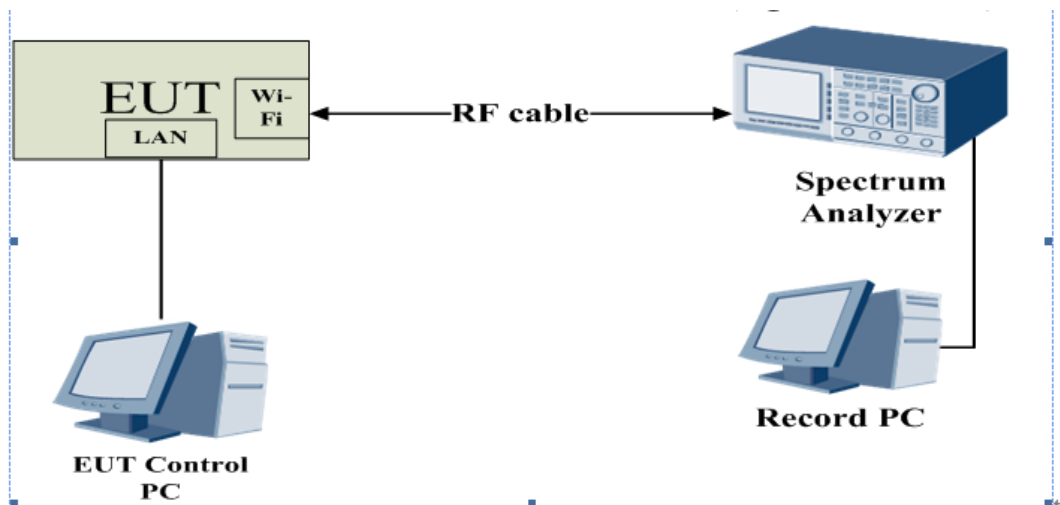
a) The EUT was directly connected to the spectrum analyzer and antenna output port as show in the block diagram below. Spectrum analyser settings as following:

RBW	3 kHz
VBW	10 kHz
Detector Mode	Peak
Trace Mode	Max Hold
Sweep Time	Auto

b) Wait for the trace to stabilize. Use the peak marker function to determine the maximum amplitude level within the RBW.

c) The value defined in step b shall be compared to the limits and be recorded.

3.6.4 Test Setup



3.6.5 The Result

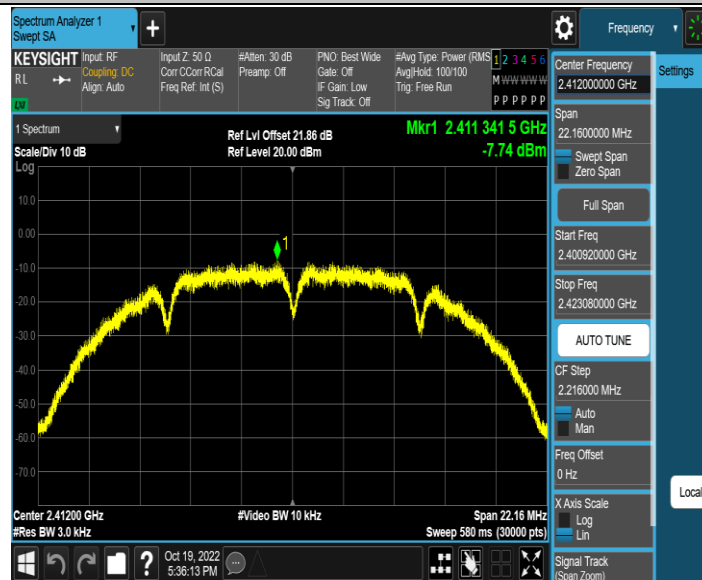
Test Mode	Antenna	Channel	Result [dBm/3-100kHz]	Limit [dBm/3kHz]	Verdict
11B	Ant1	2412	-8.55	≤8.00	PASS
	Ant2	2412	-7.74	≤8.00	PASS
	Ant1	2437	-7.90	≤8.00	PASS
	Ant2	2437	-8.14	≤8.00	PASS
	Ant1	2462	-8.19	≤8.00	PASS
	Ant2	2462	-9.62	≤8.00	PASS
11G	Ant1	2412	-16.26	≤8.00	PASS
	Ant2	2412	-14.65	≤8.00	PASS
	Ant1	2437	-15.69	≤8.00	PASS
	Ant2	2437	-17.08	≤8.00	PASS
	Ant1	2462	-15.83	≤8.00	PASS
	Ant2	2462	-17.96	≤8.00	PASS
11N20MIMO	Ant1	2412	-18.61	≤8.00	PASS
	Ant2	2412	-18.40	≤8.00	PASS
	total	2412	-15.49	≤8.00	PASS
	Ant1	2437	-20.09	≤8.00	PASS
	Ant2	2437	-19.04	≤8.00	PASS
	total	2437	-16.52	≤8.00	PASS
	Ant1	2462	-20.50	≤8.00	PASS
	Ant2	2462	-19.57	≤8.00	PASS
	total	2462	-17.00	≤8.00	PASS
11N40MIMO	Ant1	2422	-20.37	≤8.00	PASS
	Ant2	2422	-20.56	≤8.00	PASS
	total	2422	-17.45	≤8.00	PASS
	Ant1	2437	-20.30	≤8.00	PASS
	Ant2	2437	-20.40	≤8.00	PASS
	total	2437	-17.34	≤8.00	PASS
	Ant1	2452	-20.37	≤8.00	PASS
	Ant2	2452	-20.83	≤8.00	PASS
	total	2452	-17.58	≤8.00	PASS

Frequency Band	ANT 1 Antenna Gain (dBi)	ANT 2 Antenna Gain (dBi)	Correlated chains directional gain (dBi)	Power Spectral Density Limit (dBm)
2400 MHz to 2483.5 MHz	-0.36	-0.99	2.34	8.00
Unequal antenna gains, with equal transmit powers. Directional gain is to be computed as follows: If transmit signals are correlated, then Directional gain = $10 \log[(10^{G_1/20} + 10^{G_2/20} + \dots + 10^{G_N/20})^2 / N_{ANT}]$ dBi [Note the “20”s in the denominator of each exponent and the square of the sum of terms; the object is to combine the signal levels coherently.]				

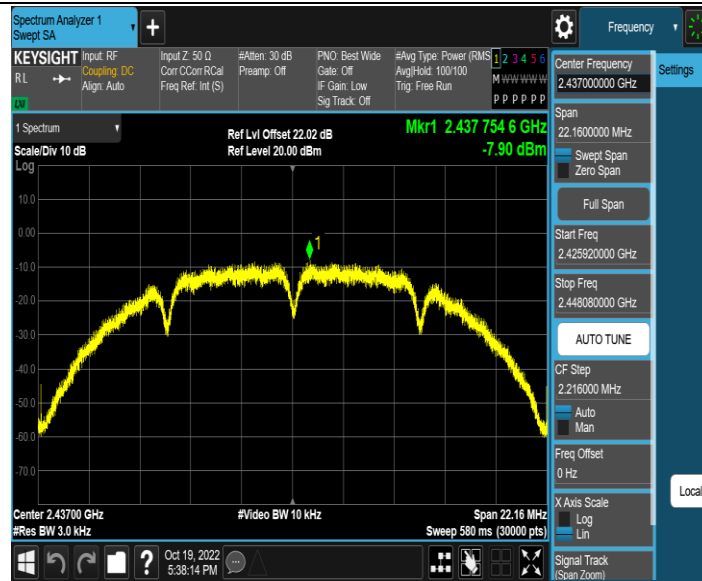
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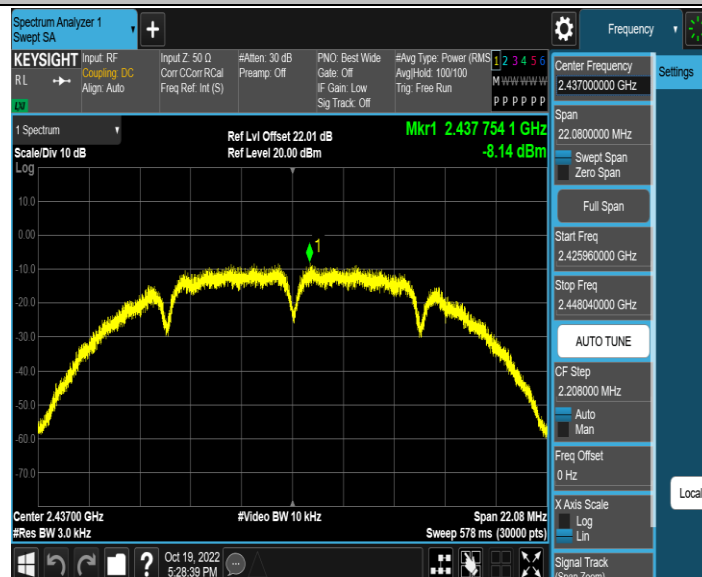
11B_Ant2_2412



11B_Ant1_2437



11B_Ant2_2437



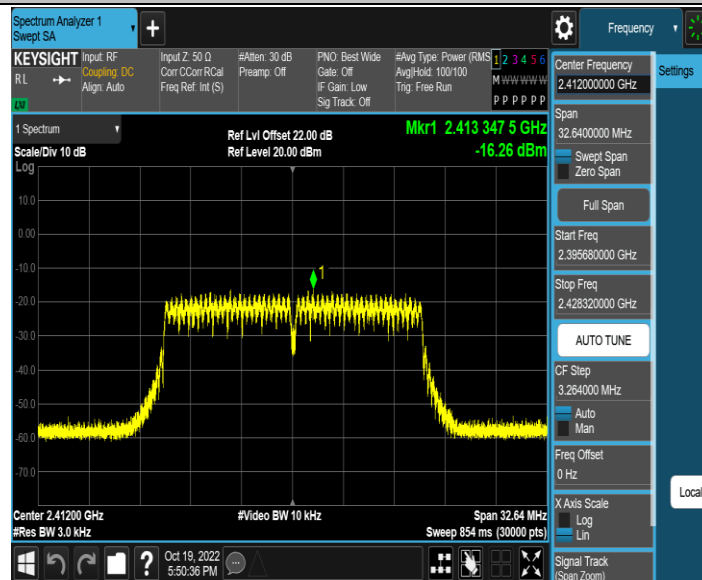
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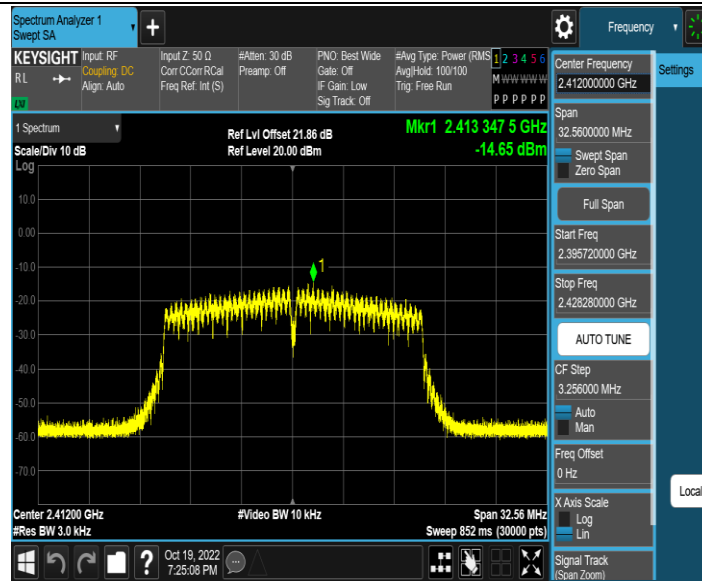
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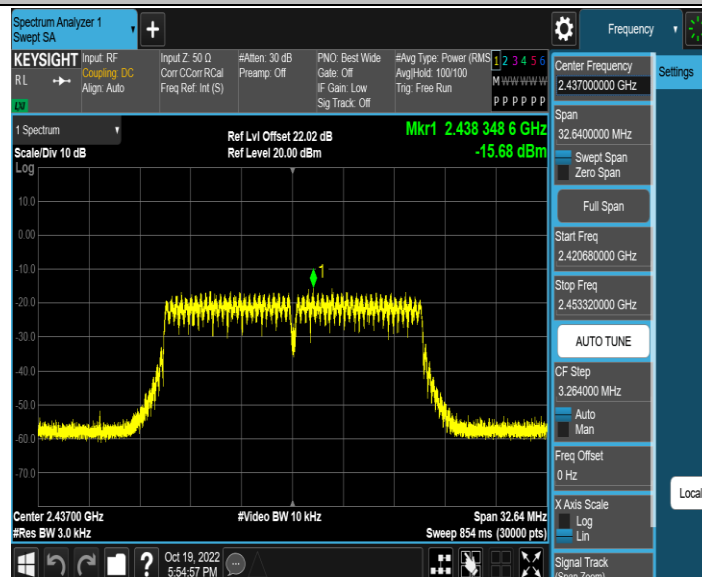
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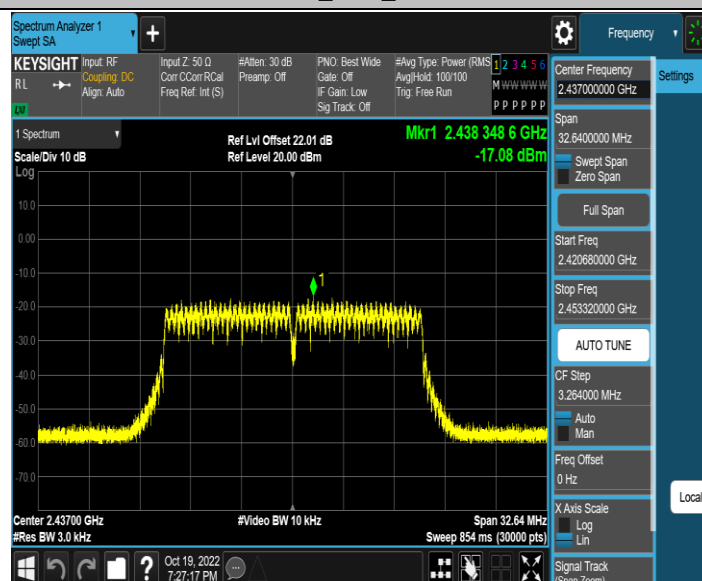
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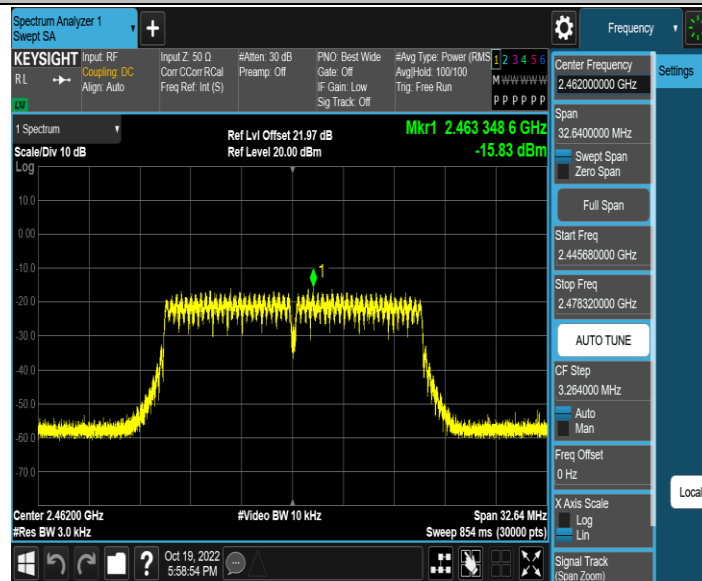
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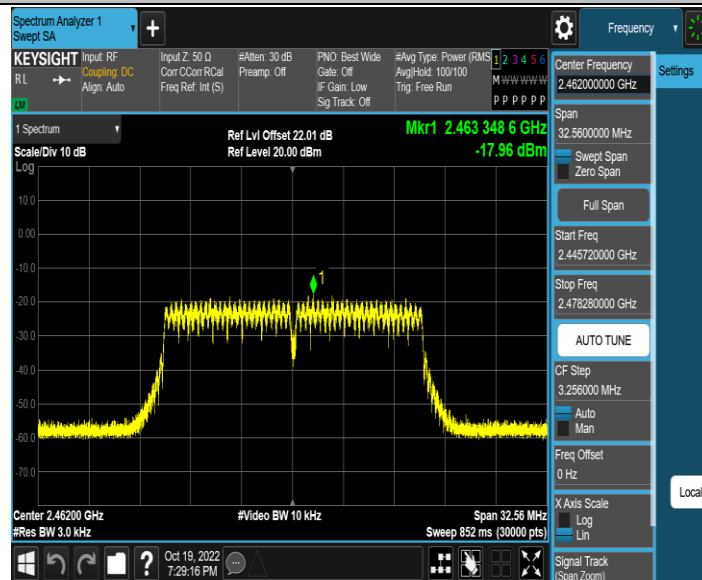
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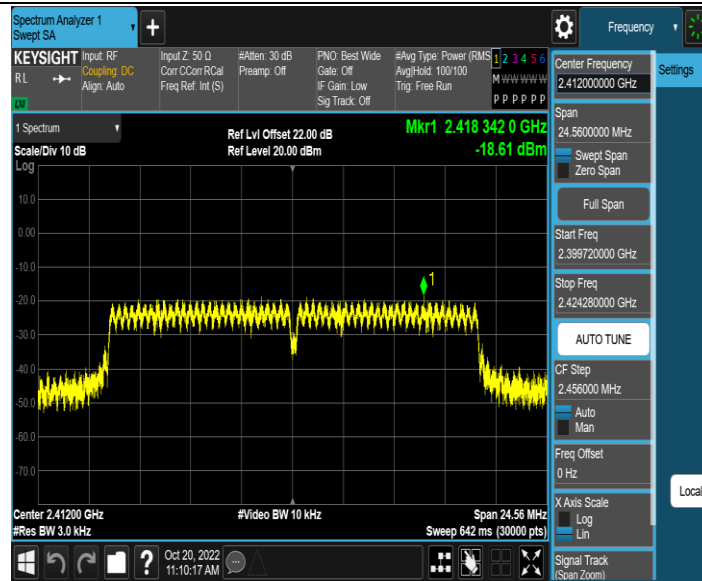
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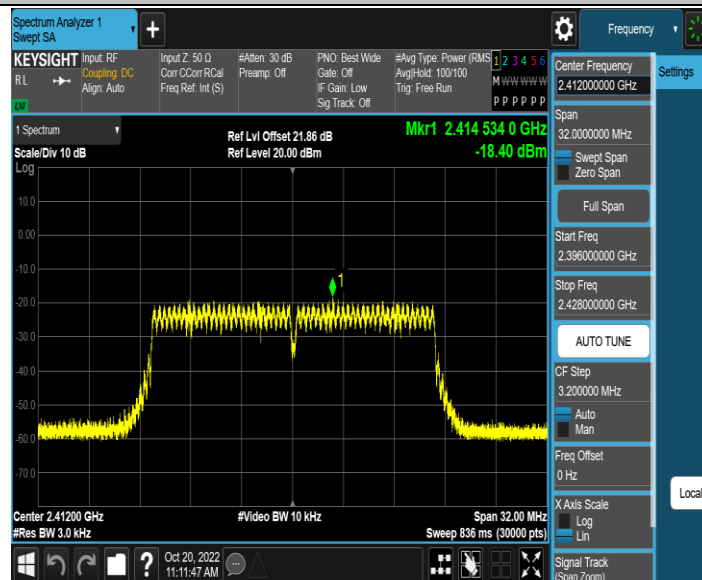
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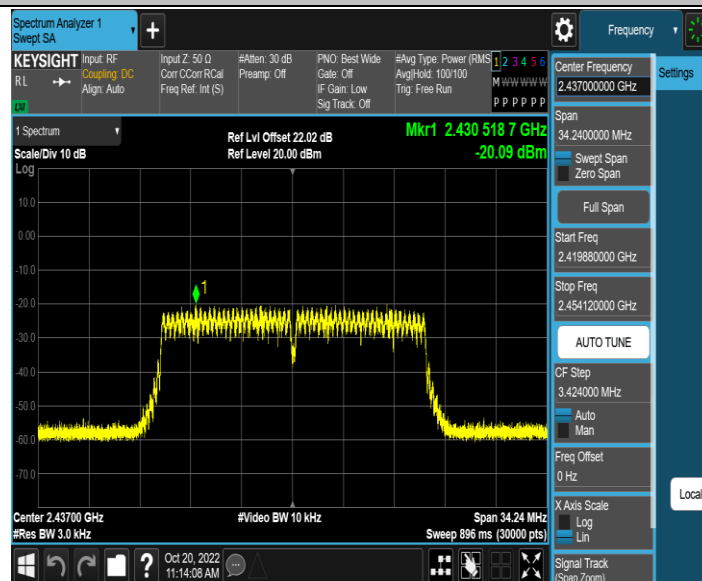
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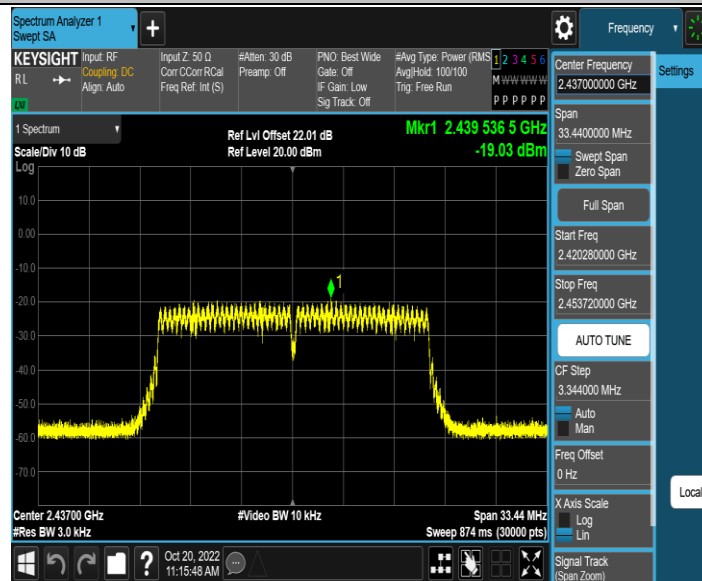
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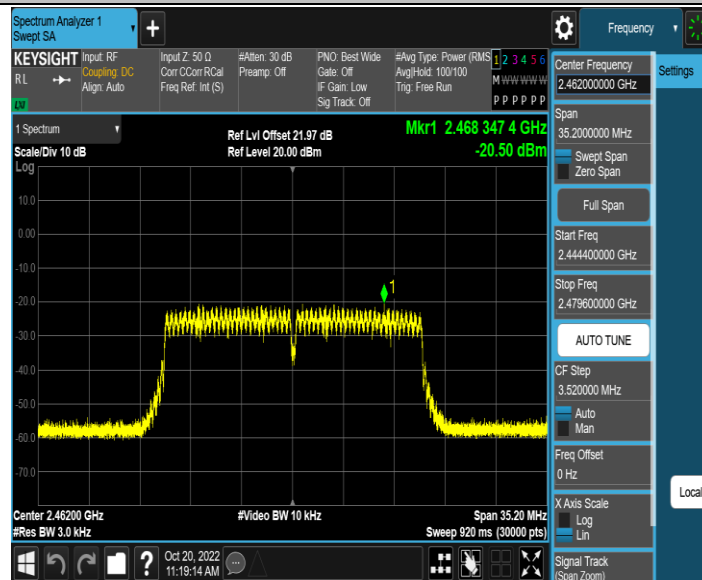
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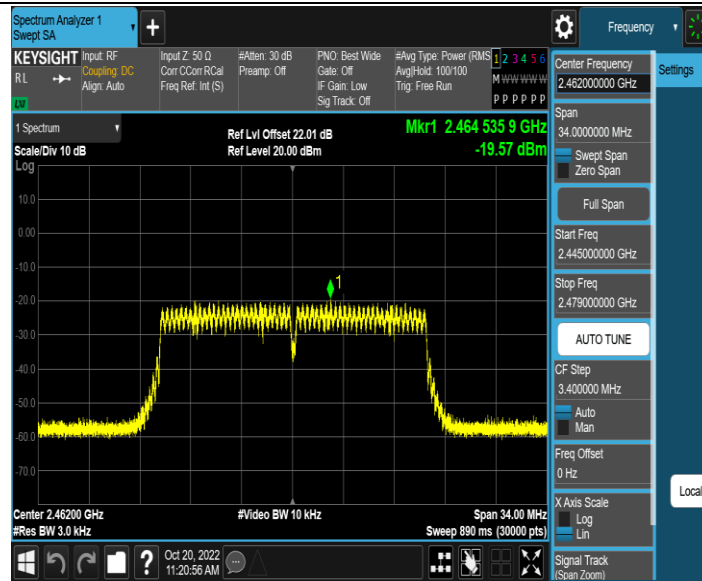
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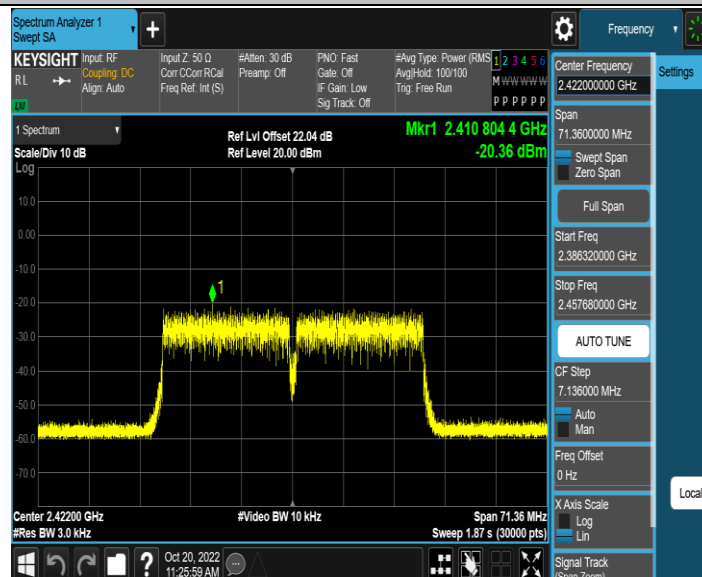
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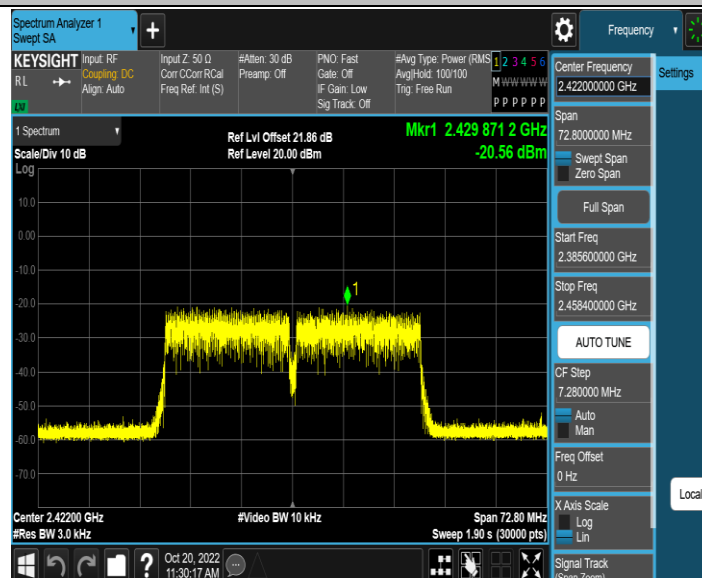
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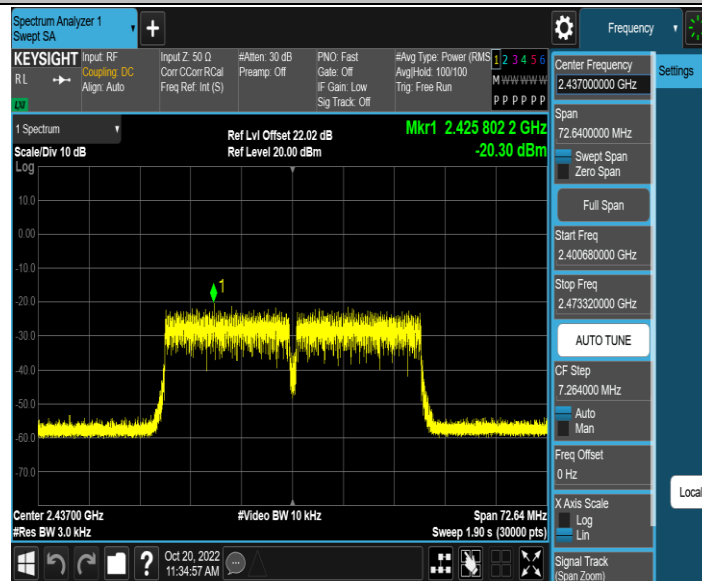
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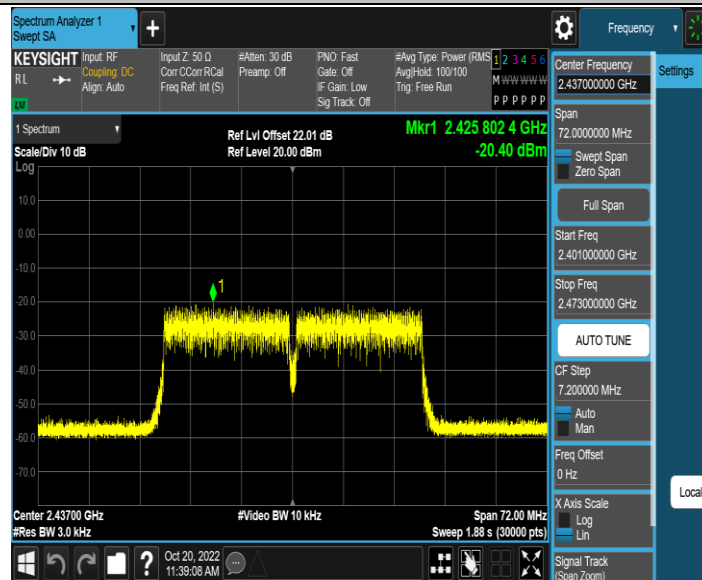
11N40MIMO_Ant2_2422



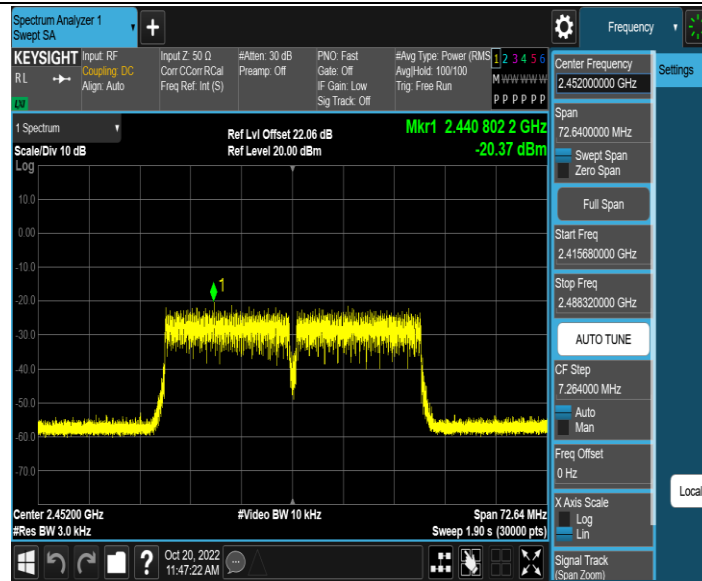
11N40MIMO_Ant1_2437



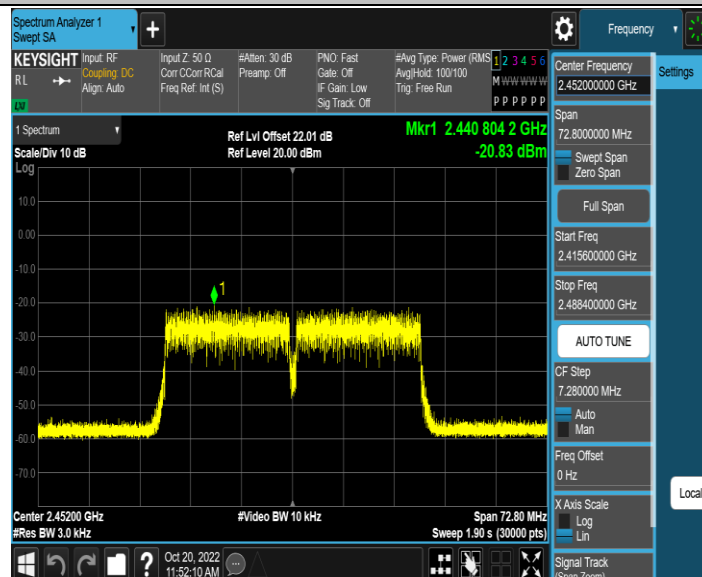
11N40MIMO_Ant2_2437



11N40MIMO_Ant1_2452



11N40MIMO_Ant2_2452



(END OF REPORT)