

## Appendix A: Test Results of 2.4GHz SDR

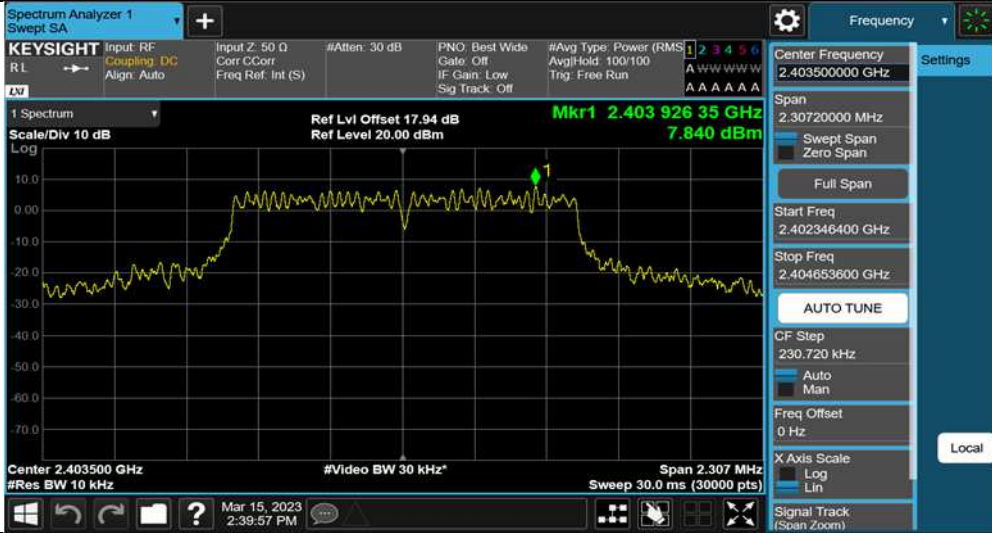
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## Appendix A.1: Test Results of Conducted Power Spectral Density

### 2.4GHz SDR, 1.4MHz BW

TestMode	Channel	Antenna	Result[dBm/10kHz]	Result[dBm/3kHz]	Limit[dBm/3kHz]	Verdict
1.4M-MIMO	2405.5	Ant1	7.84	2.64	≤8.00	PASS
		Ant2	6.99	1.79	≤8.00	PASS
		Total	10.45	5.25	≤8.00	PASS
	2435.5	Ant1	7.45	2.25	≤8.00	PASS
		Ant2	7.29	2.09	≤8.00	PASS
		Total	10.38	5.18	≤8.00	PASS
	2468.5	Ant1	3.79	-1.41	≤8.00	PASS
		Ant2	2.15	-3.05	≤8.00	PASS
		Total	6.06	0.86	≤8.00	PASS

1.4M-MIMO\_Ant1\_2403.5



1.4M-MIMO\_Ant2\_2403.5



1.4M-MIMO\_Ant1\_2435.5



1.4M-MIMO\_Ant2\_2435.5



1.4M-MIMO\_Ant1\_2469.5



1.4M-MIMO\_Ant2\_2469.5



**2.4GHz SDR, 1.4MHz BW CA mode**

TestMode	Channel	Antenna	Result[dBm/10kHz]	Result[dBm/3kHz]	Limit[dBm/3kHz]	Verdict
1.4MCA-MIMO	2405.5	Ant1	7.87	2.67	≤8.00	PASS
		Ant2	7.86	2.66	≤8.00	PASS
		Total	10.88	5.68	≤8.00	PASS
	2435.5	Ant1	7.68	2.48	≤8.00	PASS
		Ant2	7.89	2.69	≤8.00	PASS
		Total	10.80	5.6	≤8.00	PASS
	2468.5	Ant1	4.42	-0.78	≤8.00	PASS
		Ant2	3.88	-1.32	≤8.00	PASS
		Total	7.17	1.97	≤8.00	PASS



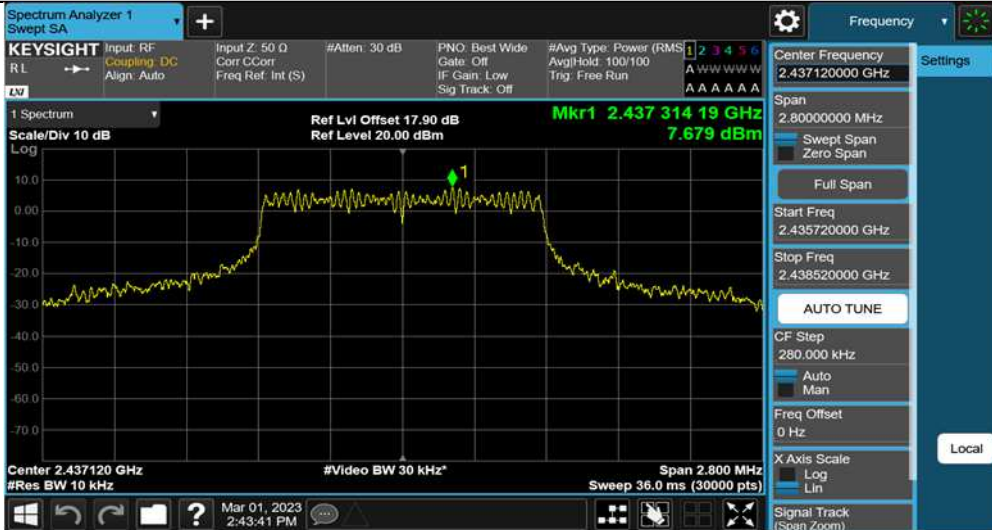
1.4MCA-MIMO\_Ant1\_2405.12



1.4MCA-MIMO\_Ant2\_2405.12



1.4MCA-MIMO\_Ant1\_2437.12



1.4MCA-MIMO\_Ant2\_2437.12



1.4MCA-MIMO\_Ant1\_2471.12



1.4MCA-MIMO\_Ant2\_2471.12



**2.4GHz SDR, 3MHz BW**

TestMode	Channel	Antenna	Result[dBm/10kHz]	Limit[dBm/3kHz]	Verdict
3M-MIMO	2405.5	Ant1	5.62	≤8.00	PASS
		Ant2	6.83	≤8.00	PASS
		Total	9.27	≤8.00	PASS
	2435.5	Ant1	4.24	≤8.00	PASS
		Ant2	5.90	≤8.00	PASS
		Total	8.16	≤8.00	PASS
	2468.5	Ant1	2.33	≤8.00	PASS
		Ant2	3.01	≤8.00	PASS
		Total	5.69	≤8.00	PASS



3M-MIMO\_Ant1\_2405.5



3M-MIMO\_Ant2\_2405.5



3M-MIMO\_Ant1\_2435.5



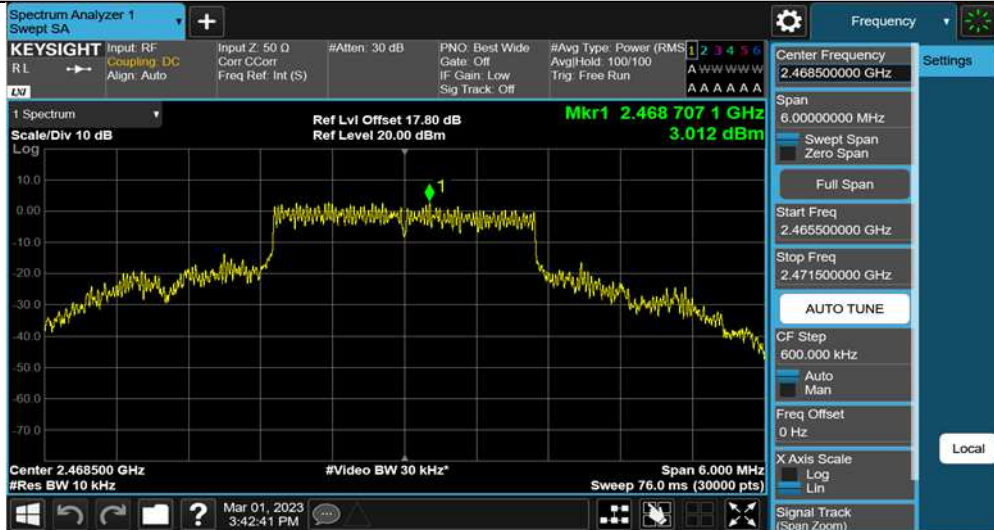
3M-MIMO\_Ant2\_2435.5



3M-MIMO\_Ant1\_2468.5



3M-MIMO\_Ant2\_2468.5



**2.4GHz SDR, 3MHz BW CA mode**

TestMode	Channel	Antenna	Result[dBm/3-100kHz]	Limit[dBm/3kHz]	Verdict
3MCA-MIMO	2408.2	Ant1	5.94	≤8.00	PASS
		Ant2	4.99	≤8.00	PASS
		Total	8.50	≤8.00	PASS
	2438.2	Ant1	4.81	≤8.00	PASS
		Ant2	4.71	≤8.00	PASS
		Total	7.77	≤8.00	PASS
	2471.2	Ant1	-0.83	≤8.00	PASS
		Ant2	-4.15	≤8.00	PASS
		Total	0.83	≤8.00	PASS

3MCA-MIMO\_Ant1\_2408.2



3MCA-MIMO\_Ant2\_2408.2



3MCA-MIMO\_Ant1\_2438.2





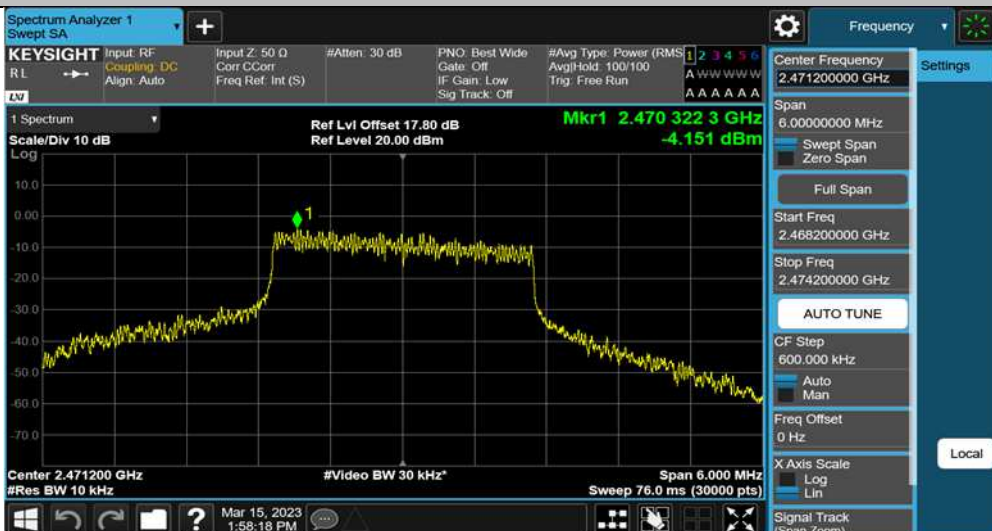
3MCA-MIMO\_Ant2\_2438.2



3MCA-MIMO\_Ant1\_2471.2



3MCA-MIMO\_Ant2\_2471.2

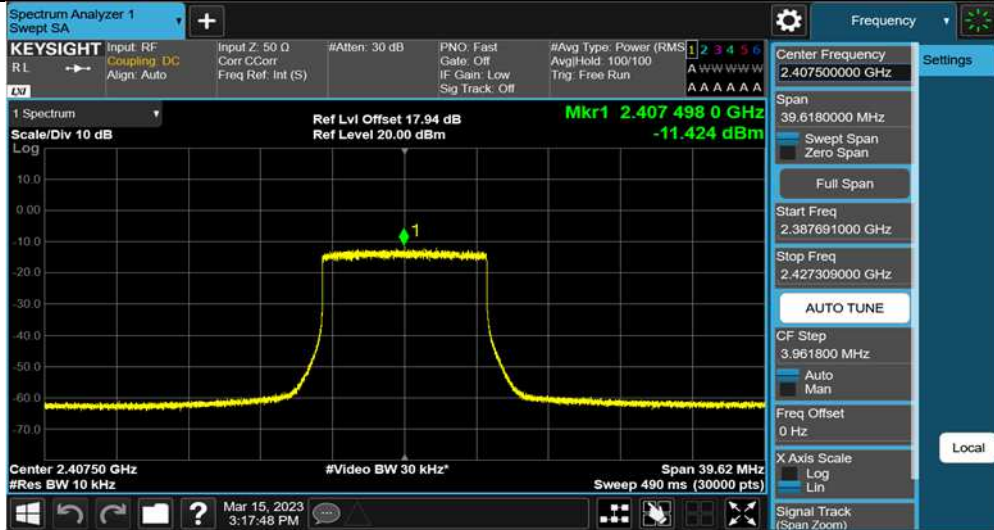




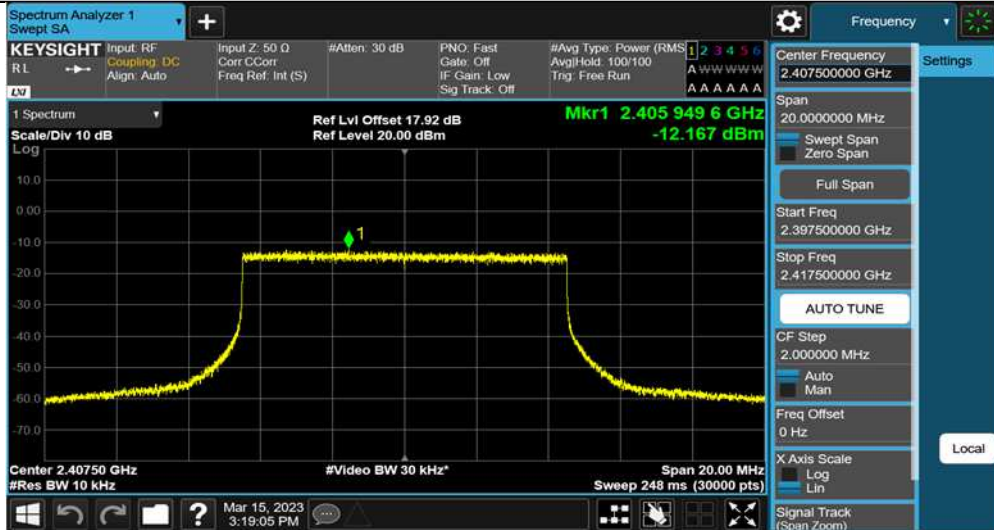
**2.4GHz SDR, 10MHz BW**

TestMode	Channel	Antenna	Result[dBm/3-100kHz]	Limit[dBm/3kHz]	Verdict
10M-MIMO	2407.5	Ant1	-11.42	≤8.00	PASS
		Ant2	-12.17	≤8.00	PASS
		Total	-8.77	≤8.00	PASS
	2437.5	Ant1	-12.36	≤8.00	PASS
		Ant2	-12.99	≤8.00	PASS
		Total	-9.65	≤8.00	PASS
	2467.5	Ant1	-13.83	≤8.00	PASS
		Ant2	-14.05	≤8.00	PASS
		Total	-10.93	≤8.00	PASS

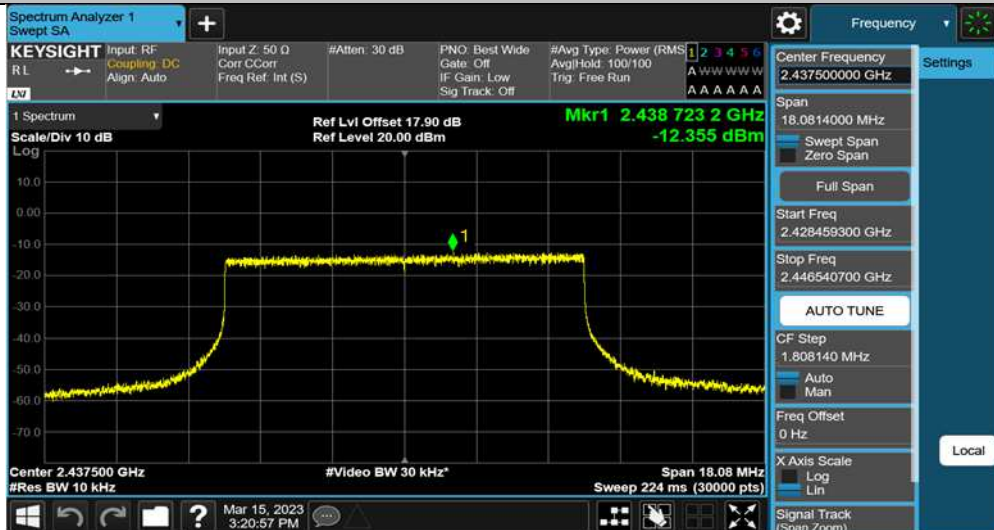
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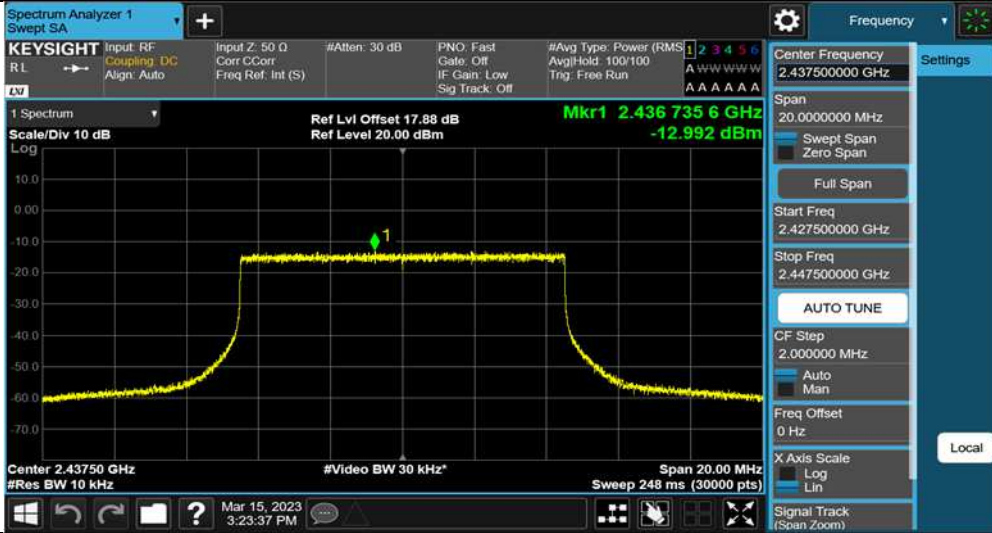
10M-MIMO\_Ant2\_2407.5



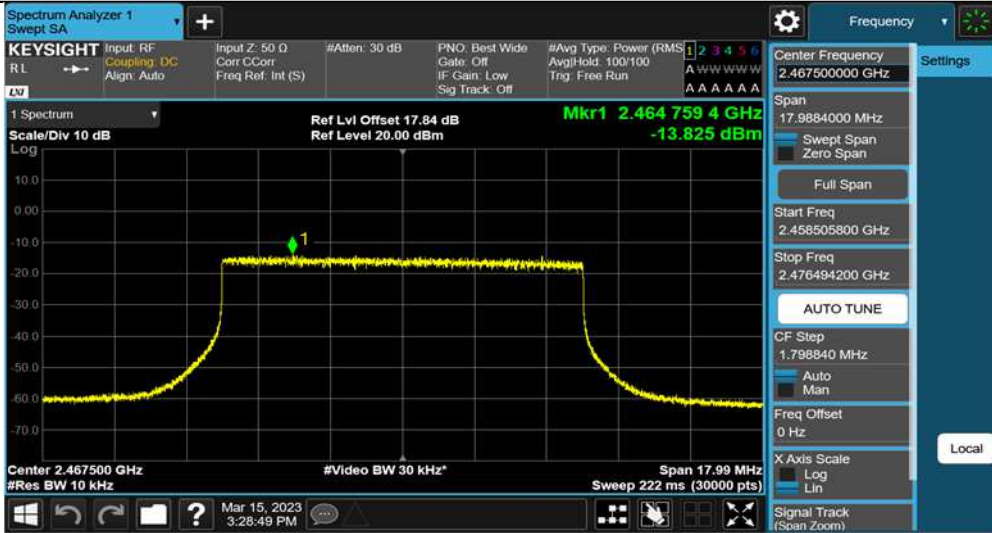
10M-MIMO\_Ant1\_2437.5



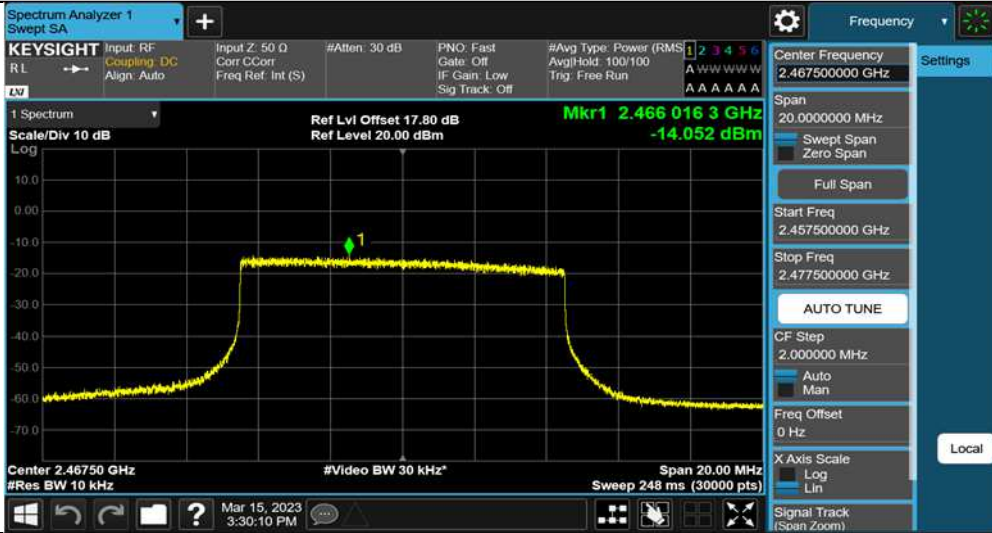
10M-MIMO\_Ant2\_2437.5



10M-MIMO\_Ant1\_2467.5



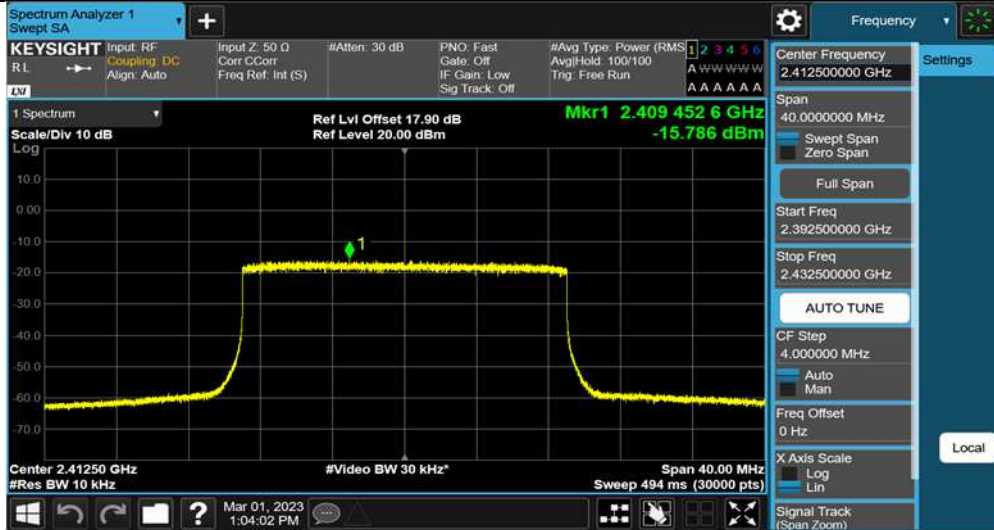
10M-MIMO\_Ant2\_2467.5



**2.4GHz SDR, 20MHz BW**

TestMode	Channel	Antenna	Result[dBm/3-100kHz]	Limit[dBm/3kHz]	Verdict
20M-MIMO	2412.5	Ant1	-15.79	≤8.00	PASS
		Ant2	-15.15	≤8.00	PASS
		Total	-12.45	≤8.00	PASS
	2437.5	Ant1	-15.79	≤8.00	PASS
		Ant2	-12.11	≤8.00	PASS
		Total	-10.56	≤8.00	PASS
	2462.5	Ant1	-19.81	≤8.00	PASS
		Ant2	-18.39	≤8.00	PASS
		Total	-16.03	≤8.00	PASS

20M-MIMO\_Ant1\_2412.5



20M-MIMO\_Ant2\_2412.5

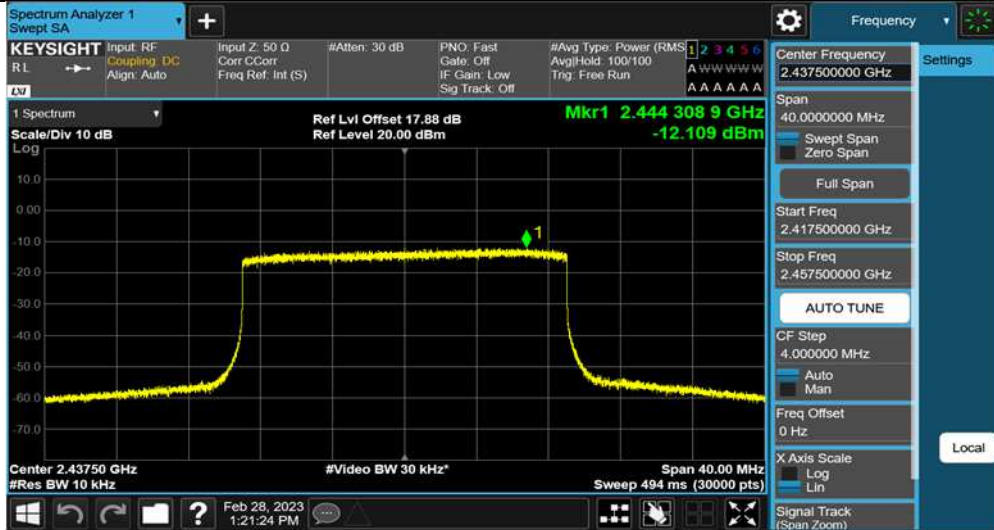


20M-MIMO\_Ant1\_2437.5





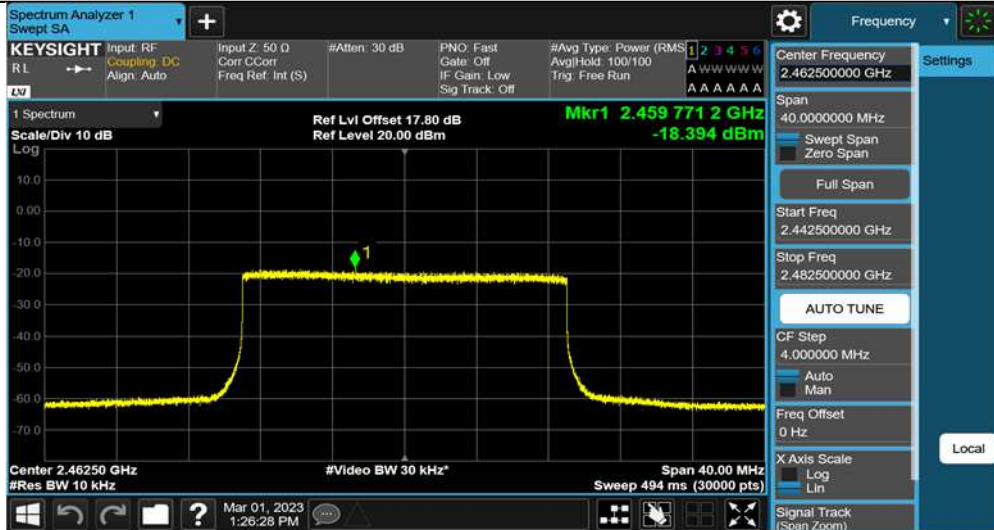
20M-MIMO\_Ant2\_2437.5



20M-MIMO\_Ant1\_2462.5



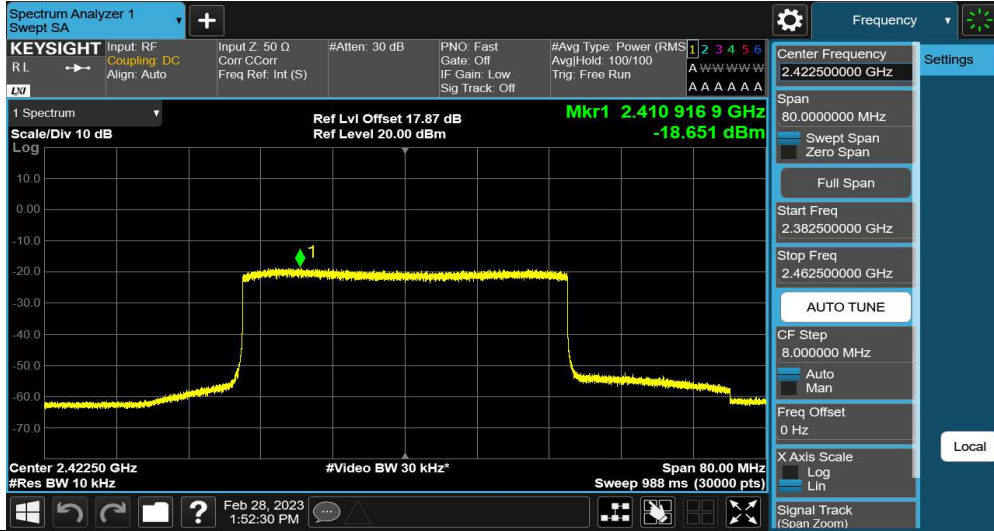
20M-MIMO\_Ant2\_2462.5



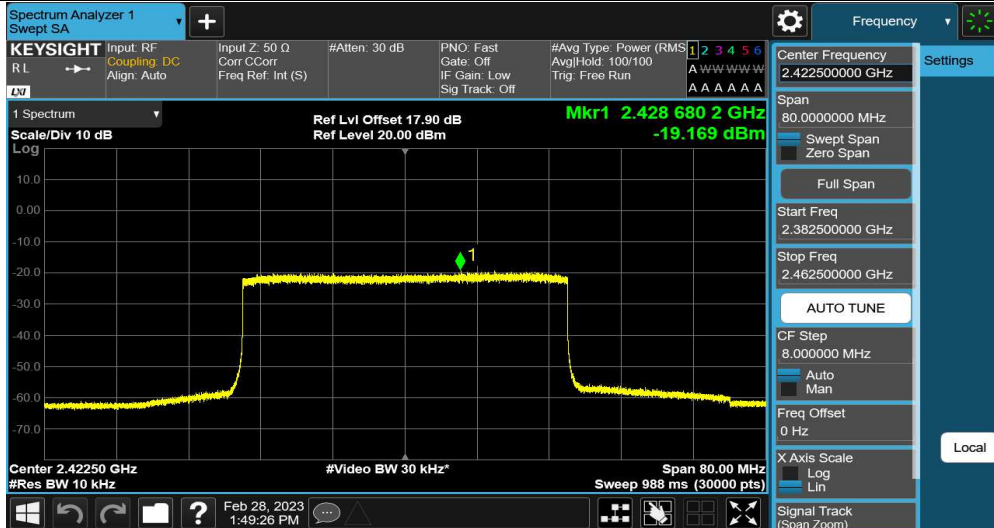
**2.4GHz SDR, 40MHz BW**

TestMode	Channel	Antenna	Result[dBm/3-100kHz]	Limit[dBm/3kHz]	Verdict
40M-MIMO	2422.5	Ant1	-18.65	≤8.00	PASS
		Ant2	-19.17	≤8.00	PASS
		Total	-15.89	≤8.00	PASS
	2437.5	Ant1	-15.39	≤8.00	PASS
		Ant2	-16.25	≤8.00	PASS
		Total	-12.79	≤8.00	PASS
	2452.5	Ant1	-18.31	≤8.00	PASS
		Ant2	-19.01	≤8.00	PASS
		Total	-15.64	≤8.00	PASS

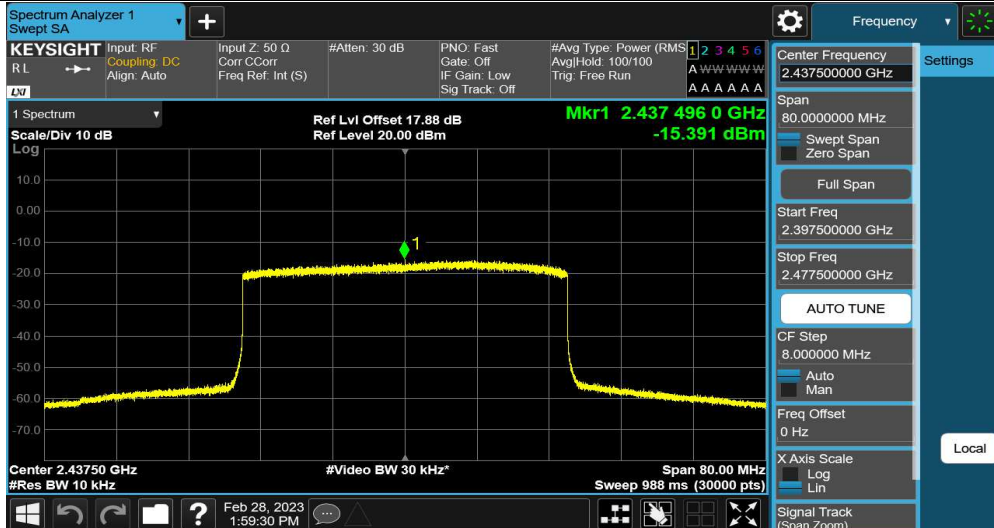
40M-MIMO\_Ant1\_2422.5



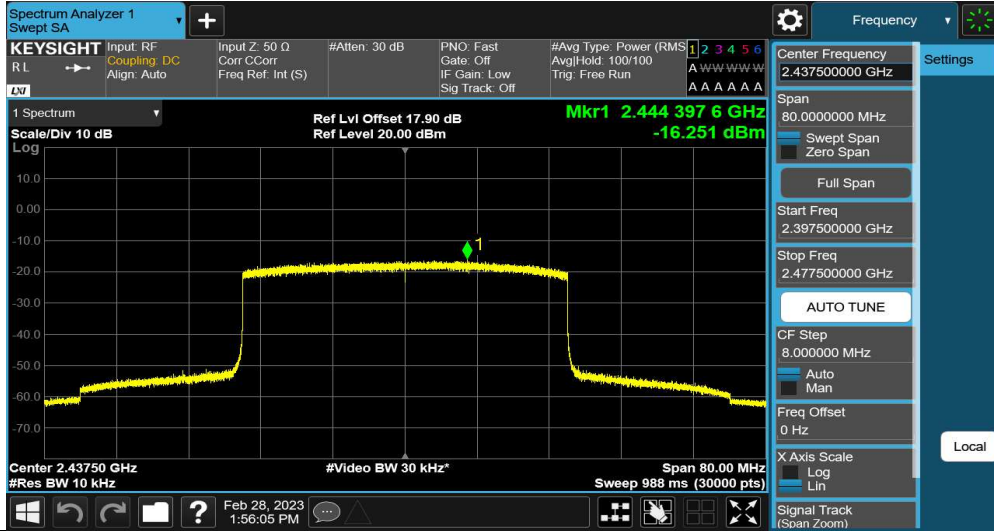
40M-MIMO\_Ant2\_2422.5



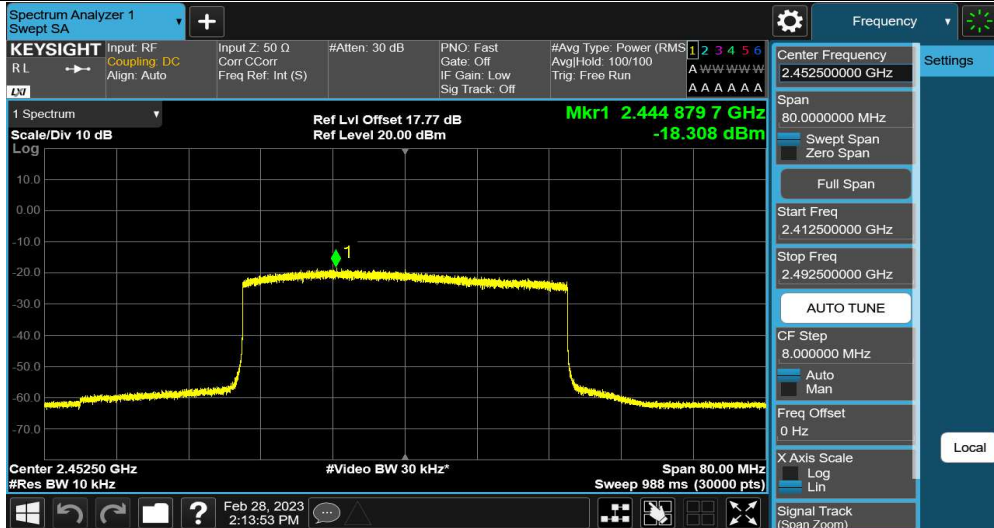
40M-MIMO\_Ant1\_2437.5



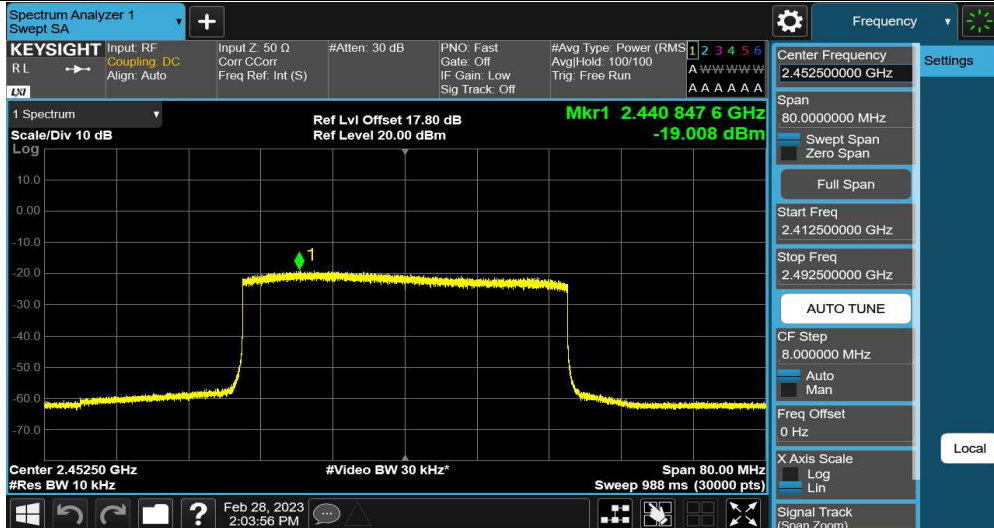
40M-MIMO\_Ant2\_2437.5



40M-MIMO\_Ant1\_2452.5



40M-MIMO\_Ant2\_2452.5





### Appendix A.2: Test Results of 6dB Bandwidth

#### 2.4GHz SDR, 1.4MHz BW

TestMode	Antenna	Channel	DTS BW[MHz]	FL[MHz]	FH[MHz]	Limit[MHz]	Verdict
1.4M-MIMO	Ant1	2403.5	1.126	2402.934	2404.060	0.5	PASS
		2435.5	1.100	2434.954	2436.054	0.5	PASS
		2469.5	1.092	2468.943	2470.035	0.5	PASS

1.4M-MIMO\_Ant1\_2403.5



1.4M-MIMO\_Ant1\_2435.5



1.4M-MIMO\_Ant1\_2469.5





2.4GHz SDR, 1.4MHz BW CA mode

TestMode	Antenna	Channel	DTS BW[MHz]	FL[MHz]	FH[MHz]	Limit[MHz]	Verdict
1.4MCA-MIMO	Ant1	2405.12	1.109	2404.560	2405.669	0.5	PASS
		2437.12	1.098	2436.566	2437.663	0.5	PASS
		2471.12	1.064	2470.580	2471.644	0.5	PASS

1.4MCA-MIMO\_Ant1\_2405.12



1.4MCA-MIMO\_Ant1\_2437.12



1.4MCA-MIMO\_Ant1\_2471.12



2.4GHz SDR, 3MHz BW

TestMode	Antenna	Channel	DTS BW[MHz]	FL[MHz]	FH[MHz]	Limit[MHz]	Verdict
3M-MIMO	Ant1	2405.5	2.190	2404.408	2406.598	0.5	PASS
		2435.5	2.172	2434.420	2436.592	0.5	PASS
		2468.5	2.196	2467.396	2469.592	0.5	PASS

3M-MIMO\_Ant1\_2405.5



3M-MIMO\_Ant1\_2435.5



3M-MIMO\_Ant1\_2468.5



2.4GHz SDR, 3MHz BW CA mode

TestMode	Antenna	Channel	DTS BW[MHz]	FL[MHz]	FH[MHz]	Limit[MHz]	Verdict
3MCA-MIMO	Ant1	2408.2	2.208	2407.096	2409.304	0.5	PASS
		2438.2	2.202	2437.096	2439.298	0.5	PASS
		2471.2	2.178	2470.090	2472.268	0.5	PASS

3MCA-MIMO\_Ant1\_2408.2



3MCA-MIMO\_Ant1\_2438.2



3MCA-MIMO\_Ant1\_2471.2





2.4GHz SDR, 10MHz BW

TestMode	Antenna	Channel	DTS BW[MHz]	FL[MHz]	FH[MHz]	Limit[MHz]	Verdict
10M-MIMO	Ant1	2407.5	9.020	2403.000	2412.020	0.5	PASS
		2437.5	8.960	2433.040	2442.000	0.5	PASS
		2467.5	9.000	2462.980	2471.980	0.5	PASS

10M-MIMO\_Ant1\_2407.5



10M-MIMO\_Ant1\_2437.5



10M-MIMO\_Ant1\_2467.5

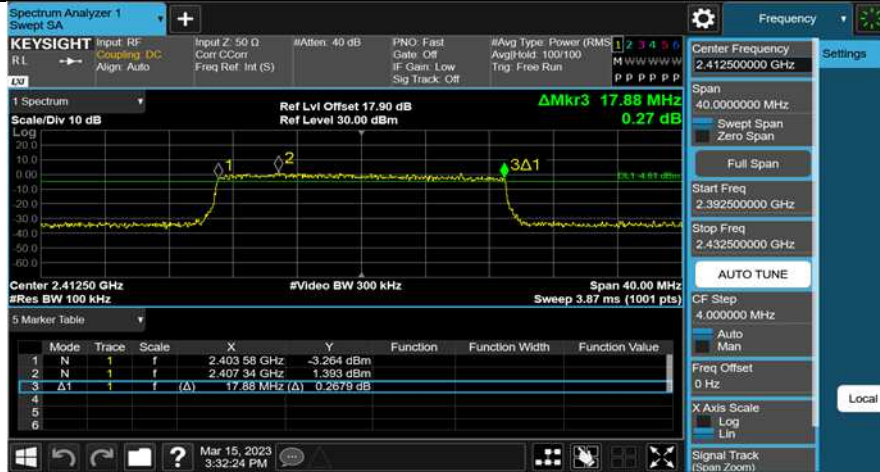




2.4GHz SDR, 20MHz BW

TestMode	Antenna	Channel	DTS BW[MHz]	FL[MHz]	FH[MHz]	Limit[MHz]	Verdict
20M-MIMO	Ant1	2412.5	17.880	2403.580	2421.460	0.5	PASS
		2437.5	18.000	2428.500	2446.500	0.5	PASS
		2462.5	17.840	2453.540	2471.380	0.5	PASS

20M-MIMO\_Ant1\_2412.5



20M-MIMO\_Ant1\_2437.5



20M-MIMO\_Ant1\_2462.5



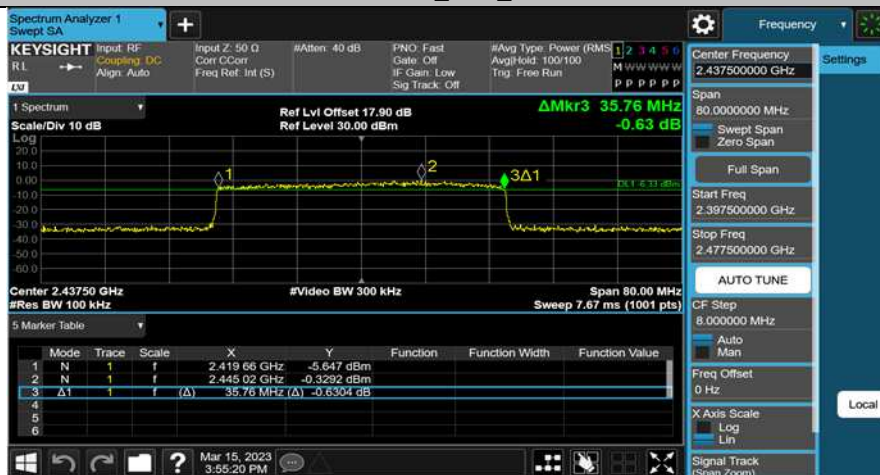
2.4GHz SDR, 40MHz BW

TestMode	Antenna	Channel	DTS BW[MHz]	FL[MHz]	FH[MHz]	Limit[MHz]	Verdict
40M-MIMO	Ant1	2422.5	35.920	2404.580	2440.500	0.5	PASS
		2437.5	35.760	2419.660	2455.420	0.5	PASS
		2452.5	35.600	2434.580	2470.180	0.5	PASS

40M-MIMO\_Ant1\_2422.5



40M-MIMO\_Ant1\_2437.5



40M-MIMO\_Ant1\_2452.5



### Appendix A.3: Test Results of 99% Bandwidth

#### 2.4GHz SDR, 1.4MHz BW

TestMode	Antenna	Channel	OCB [MHz]	FL[MHz]	FH[MHz]	Limit[MHz]	Verdict
1.4M-MIMO	Ant1	2403.5	1.1536	2402.9162	2404.0698	---	PASS
		2435.5	1.1803	2434.9083	2436.0886	---	PASS
		2469.5	1.2629	2468.8102	2470.0731	---	PASS

1.4M-MIMO\_Ant1\_2403.5



1.4M-MIMO\_Ant1\_2435.5



1.4M-MIMO\_Ant1\_2469.5

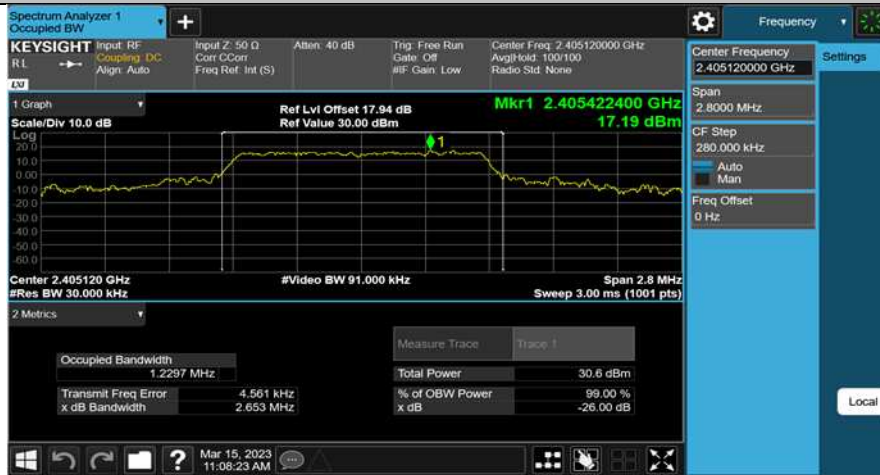




2.4GHz SDR, 1.4MHz BW CA mode

TestMode	Antenna	Channel	OCB [MHz]	FL[MHz]	FH[MHz]	Limit[MHz]	Verdict
1.4MCA-MIMO	Ant1	2405.12	1.2297	2404.5097	2405.7394	---	PASS
		2437.12	1.2114	2436.5181	2437.7295	---	PASS
		2471.12	1.3083	2470.3783	2471.6866	---	PASS

1.4MCA-MIMO\_Ant1\_2405.12



1.4MCA-MIMO\_Ant1\_2437.12



1.4MCA-MIMO\_Ant1\_2471.12





2.4GHz SDR, 3MHz BW

TestMode	Antenna	Channel	OCB [MHz]	FL[MHz]	FH[MHz]	Limit[MHz]	Verdict
3M-MIMO	Ant1	2405.5	2.3420	2404.3409	2406.6829	---	PASS
		2435.5	2.3615	2434.3547	2436.7162	---	PASS
		2468.5	2.4769	2467.1624	2469.6393	---	PASS

3M-MIMO\_Ant1\_2405.5



3M-MIMO\_Ant1\_2435.5



3M-MIMO\_Ant1\_2468.5



2.4GHz SDR, 3MHz BW CA mode

TestMode	Antenna	Channel	OCB [MHz]	FL[MHz]	FH[MHz]	Limit[MHz]	Verdict
3MCA-MIMO	Ant1	2408.2	2.2269	2407.0672	2409.2941	---	PASS
		2438.2	2.3065	2437.0604	2439.3669	---	PASS
		2471.2	2.6245	2469.7119	2472.3364	---	PASS

3MCA-MIMO\_Ant1\_2408.2



3MCA-MIMO\_Ant1\_2438.2



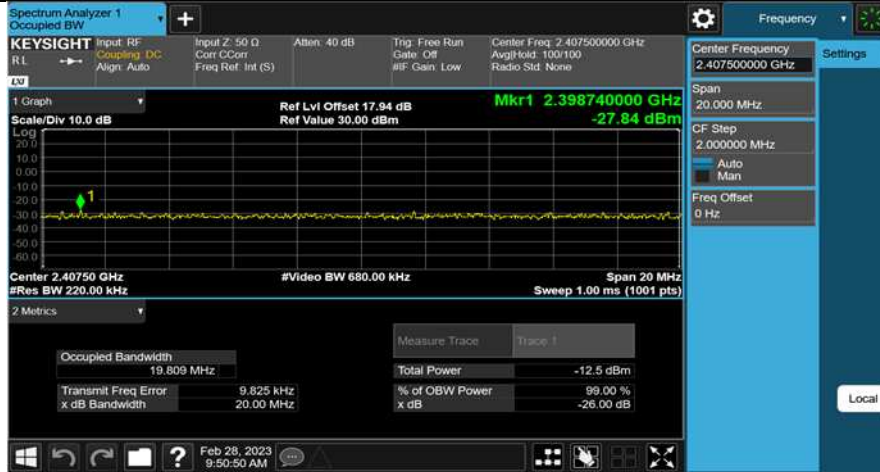
3MCA-MIMO\_Ant1\_2471.2



2.4GHz SDR, 10MHz BW

TestMode	Antenna	Channel	OCB [MHz]	FL[MHz]	FH[MHz]	Limit[MHz]	Verdict
10M-MIMO	Ant1	2407.5	19.809	2397.6053	2417.4143	---	PASS
		2437.5	9.0407	2432.9970	2442.0377	---	PASS
		2467.5	8.9942	2462.9797	2471.9739	---	PASS

10M-MIMO\_Ant1\_2407.5



10M-MIMO\_Ant1\_2437.5



10M-MIMO\_Ant1\_2467.5



2.4GHz SDR, 20MHz BW

TestMode	Antenna	Channel	OCB [MHz]	FL[MHz]	FH[MHz]	Limit[MHz]	Verdict
20M-MIMO	Ant1	2412.5	17.795	2403.5991	2421.3941	---	PASS
		2437.5	17.863	2428.5714	2446.4344	---	PASS
		2462.5	17.876	2453.5197	2471.3957	---	PASS

20M-MIMO\_Ant1\_2412.5



20M-MIMO\_Ant1\_2437.5



20M-MIMO\_Ant1\_2462.5

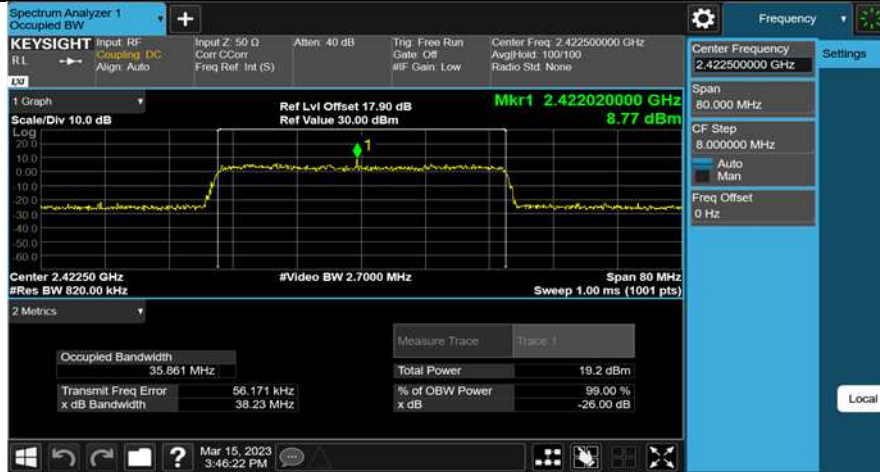




2.4GHz SDR, 40MHz BW

TestMode	Antenna	Channel	OCB [MHz]	FL[MHz]	FH[MHz]	Limit[MHz]	Verdict
40M-MIMO	Ant1	2422.5	35.861	2404.6257	2440.4867	---	PASS
		2437.5	35.680	2419.6265	2455.3065	---	PASS
		2452.5	35.727	2434.4946	2470.2216	---	PASS

40M-MIMO\_Ant1\_2422.5



40M-MIMO\_Ant1\_2437.5



40M-MIMO\_Ant1\_2452.5



### Appendix A.4: Test Results of Conducted Spurious Emissions Measured in 100 kHz Bandwidth

#### Bandedge

2.4GHz SDR, 1.4MHz BW\_Bandedge

TestMode	Antenna	ChName	Channel	RefLevel [dBm]	Result [dBm]	Limit [dBm]	Verdict
1.4M-MIMO	Ant1	Low	2403.5	22.98	-35.40	≤-7.12	PASS
		High	2469.5	19.79	-44.64	≤-10.21	PASS

1.4M-MIMO\_Ant1\_Low\_2403.5



1.4M-MIMO\_Ant1\_High\_2469.5



2.4GHz SDR, 1.4MHz BW CA mode

TestMode	Antenna	ChName	Channel	RefLevel [dBm]	Result [dBm]	Limit [dBm]	Verdict
1.4MCA-MIMO	Ant1	Low	2405.12	23.77	-33.55	≤-6.23	PASS
		High	2471.12	18.88	-34.80	≤-11.12	PASS

1.4MCA-MIMO\_Ant1\_Low\_2405.12



1.4MCA-MIMO\_Ant1\_High\_2471.12



2.4GHz SDR, 3MHz BW

TestMode	Antenna	ChName	Channel	RefLevel [dBm]	Result [dBm]	Limit [dBm]	Verdict
3M-MIMO	Ant1	Low	2405.5	19.48	-35.63	≤-10.52	PASS
		High	2468.5	16.48	-43.66	≤-13.52	PASS

3M-MIMO\_Ant1\_Low\_2405.5



3M-MIMO\_Ant1\_High\_2468.5





2.4GHz SDR, 3MHz BW CA mode

TestMode	Antenna	ChName	Channel	RefLevel [dBm]	Result [dBm]	Limit [dBm]	Verdict
3MCA-MIMO	Ant1	Low	2408.2	19.26	-39.29	≤-10.74	PASS
		High	2471.2	13.03	-43.77	≤-16.97	PASS

3MCA-MIMO\_Ant1\_Low\_2408.2



3MCA-MIMO\_Ant1\_High\_2471.2

