

Appendix B: Test Results of 2.4GHz Wi-Fi

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Appendix B.1: Test Results of 6dB Bandwidth

Test Result

TestMode	Antenna	Frequency[MHz]	DTS BW [MHz]	FL[MHz]	FH[MHz]	Limit[MHz]	Verdict
11B	Ant1	2412	9.200	2407.400	2416.600	0.5	PASS
	Ant2	2412	9.040	2407.480	2416.520	0.5	PASS
	Ant1	2437	8.680	2432.480	2441.160	0.5	PASS
	Ant2	2437	8.600	2432.960	2441.560	0.5	PASS
	Ant1	2462	8.600	2457.480	2466.080	0.5	PASS
	Ant2	2462	9.000	2457.520	2466.520	0.5	PASS
11G	Ant1	2412	15.080	2404.680	2419.760	0.5	PASS
	Ant2	2412	13.600	2404.840	2418.440	0.5	PASS
	Ant1	2437	16.000	2429.000	2445.000	0.5	PASS
	Ant2	2437	15.560	2428.880	2444.440	0.5	PASS
	Ant1	2462	16.000	2454.080	2470.080	0.5	PASS
	Ant2	2462	15.680	2454.040	2469.720	0.5	PASS
11N20MIMO	Ant1	2412	16.840	2403.640	2420.480	0.5	PASS
	Ant2	2412	16.640	2403.560	2420.200	0.5	PASS
	Ant1	2437	16.600	2428.440	2445.040	0.5	PASS
	Ant2	2437	17.120	2428.320	2445.440	0.5	PASS
	Ant1	2462	16.400	2453.800	2470.200	0.5	PASS
	Ant2	2462	17.240	2453.240	2470.480	0.5	PASS
11N40MIMO	Ant1	2422	34.480	2404.080	2438.560	0.5	PASS
	Ant2	2422	33.520	2404.080	2437.600	0.5	PASS
	Ant1	2437	35.200	2419.160	2454.360	0.5	PASS
	Ant2	2437	32.560	2419.160	2451.720	0.5	PASS
	Ant1	2452	35.120	2434.400	2469.520	0.5	PASS
	Ant2	2452	35.040	2434.080	2469.120	0.5	PASS
11AX20MIMO	Ant1	2412	14.880	2406.000	2420.880	0.5	PASS
	Ant2	2412	16.360	2403.720	2420.080	0.5	PASS
	Ant1	2437	16.000	2429.200	2445.200	0.5	PASS
	Ant2	2437	16.320	2429.160	2445.480	0.5	PASS
	Ant1	2462	17.560	2453.600	2471.160	0.5	PASS
	Ant2	2462	18.080	2453.160	2471.240	0.5	PASS
11AX40MIMO	Ant1	2422	32.080	2405.280	2437.360	0.5	PASS
	Ant2	2422	32.000	2403.440	2435.440	0.5	PASS
	Ant1	2437	29.040	2424.760	2453.800	0.5	PASS
	Ant2	2437	35.200	2418.440	2453.640	0.5	PASS
	Ant1	2452	36.720	2433.840	2470.560	0.5	PASS
	Ant2	2452	37.120	2433.600	2470.720	0.5	PASS

Test Graphs

11B_Ant1_2412



11B_Ant2_2412



11B_Ant1_2437









11N20MIMO Ant1 2412



11N20MIMO Ant2 2412



11N20MIMO Ant1 2437





11N40MIMO Ant1 2422



11N40MIMO Ant2 2422



11N40MIMO Ant1 2437



11N40MIMO Ant2 2437



11N40MIMO Ant1 2452



11N40MIMO Ant2 2452



11AX20MIMO_Ant1_2412



11AX20MIMO_Ant2_2412



11AX20MIMO_Ant1_2437



11AX20MIMO_Ant2_2437



11AX20MIMO_Ant1_2462



11AX20MIMO_Ant2_2462





11AX40MIMO_Ant2_2452



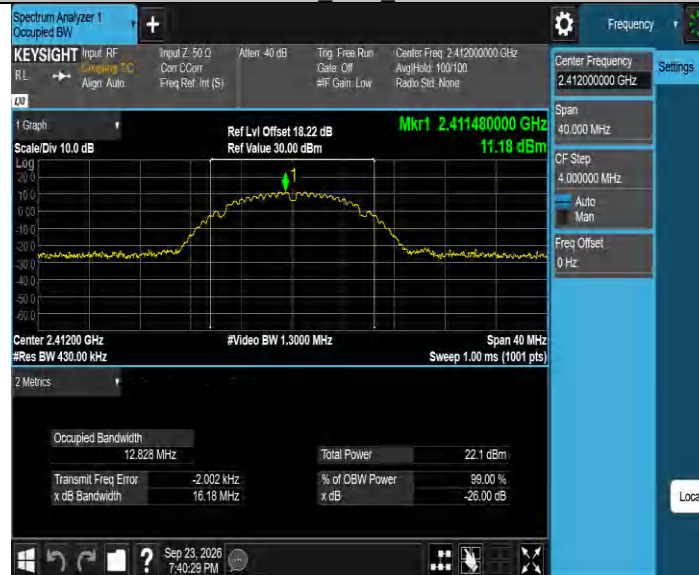
Appendix B.2: Test Results of 99% Bandwidth

Test Result

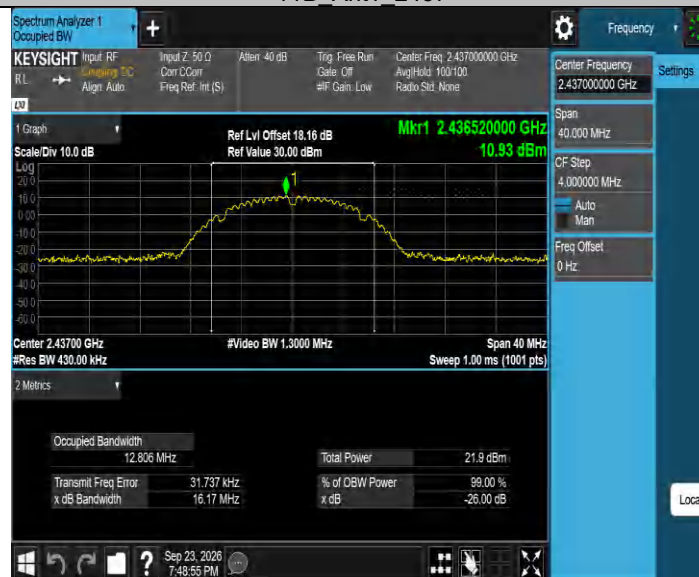
TestMode	Antenna	Channel Frequency[MHz]	OCB [MHz]	FL[MHz]	FH[MHz]	Limit[MHz]	Verdict
11B	Ant1	2412	12.828	2405.5840	2418.4120	---	---
		2437	12.806	2430.6287	2443.4347	---	---
		2462	12.794	2455.6431	2468.4371	---	---
11G	Ant1	2412	16.798	2403.5975	2420.3955	---	---
		2437	16.770	2428.6260	2445.3960	---	---
		2462	16.794	2453.5815	2470.3755	---	---
11N20MIMO	Ant1	2412	17.926	2403.0235	2420.9495	---	---
		2437	17.918	2428.0457	2445.9637	---	---
		2462	17.906	2453.0205	2470.9265	---	---
11N40MIMO	Ant1	2422	36.627	2403.5684	2440.1954	---	---
		2437	36.480	2418.7176	2455.1976	---	---
		2452	36.488	2433.6770	2470.1650	---	---
11AX20MIMO	Ant1	2412	18.922	2402.5492	2421.4712	---	---
		2437	18.984	2427.5241	2446.5081	---	---
		2462	19.008	2452.5006	2471.5086	---	---
11AX40MIMO	Ant1	2422	37.966	2402.9540	2440.9200	---	---
		2437	37.871	2418.0202	2455.8912	---	---
		2452	37.853	2432.9517	2470.8047	---	---

Test Graphs

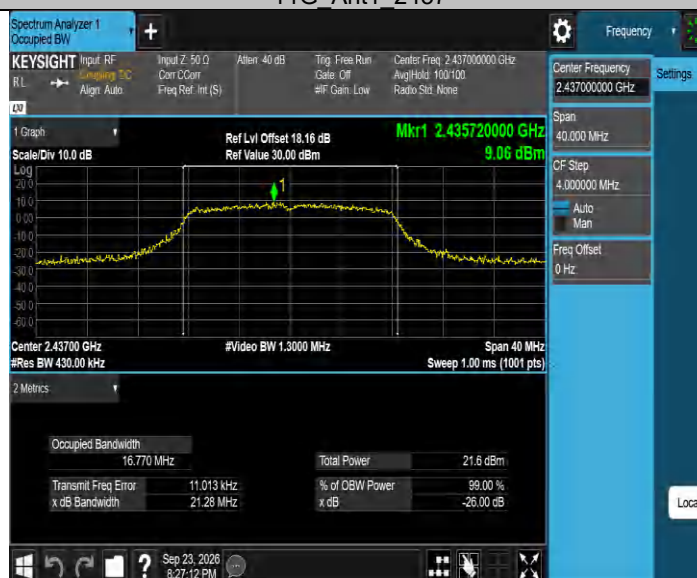
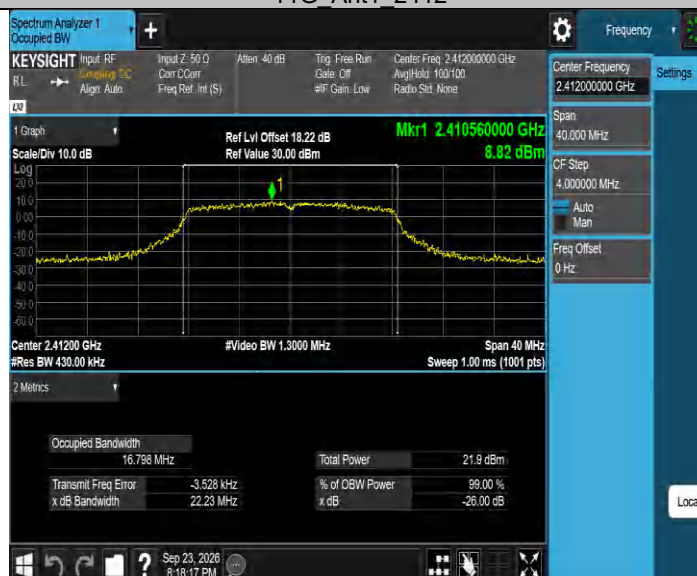
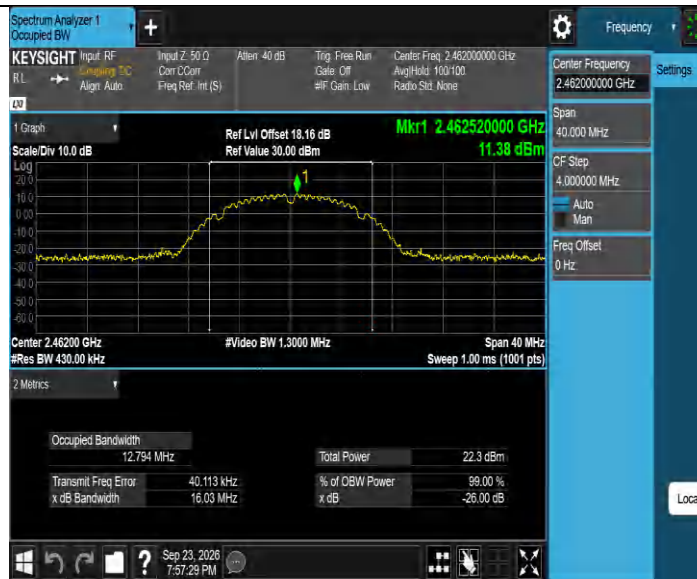
11B_Ant1_2412

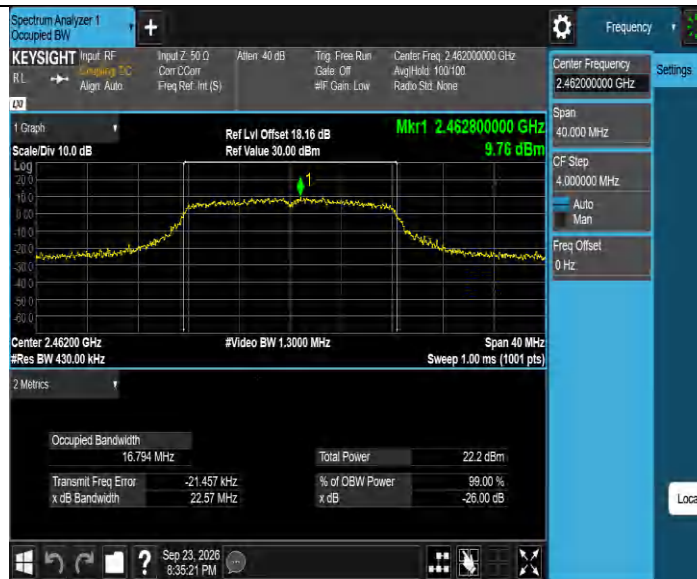


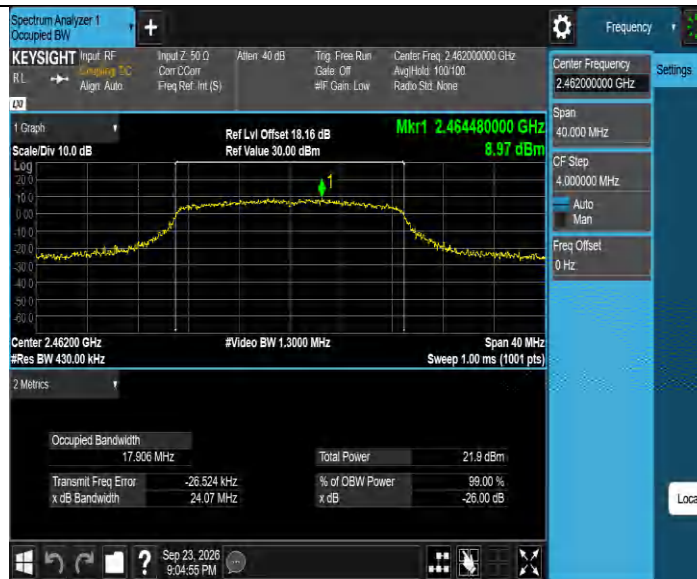
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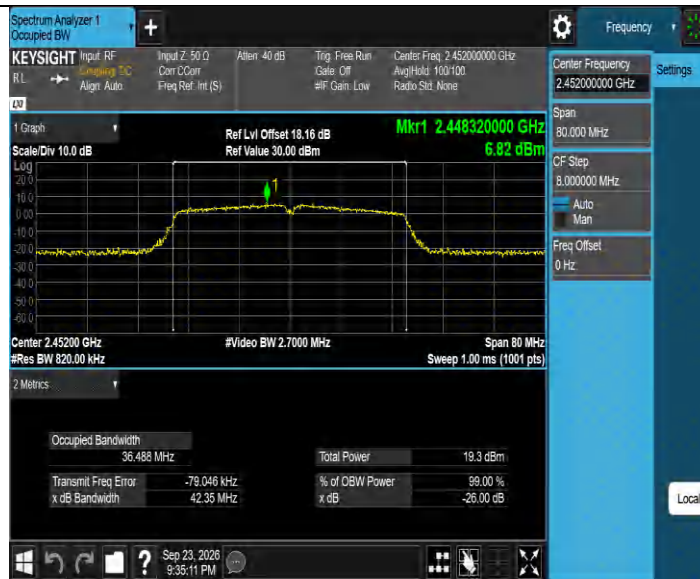


11B_Ant1_2462

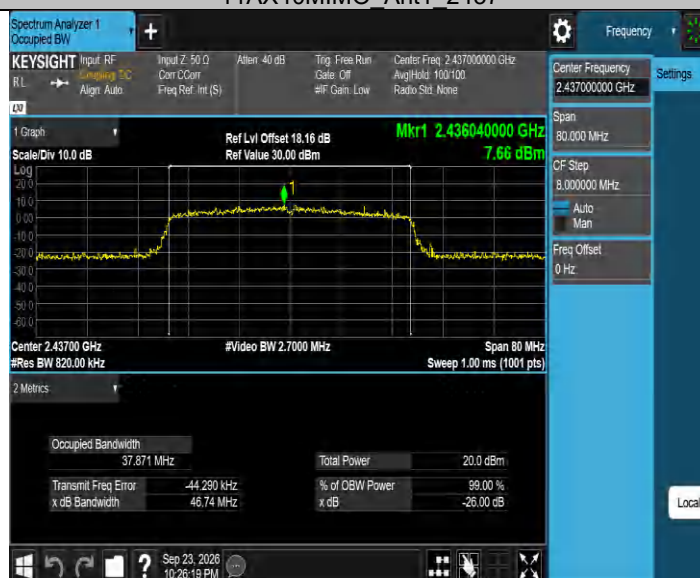








11AX20MIMO_Ant1_2462



11AX40MIMO_Ant1_2452



Appendix B.3: Test Results of Conducted Power Spectral Density

Test Result

TestMode	Antenna	Frequency[MHz]	Result[dBm/3-100kHz]	Limit[dBm/3kHz]	Verdict
11B	Ant1	2412	-2.99	≤8.00	PASS
	Ant2	2412	-4.03	≤8.00	PASS
	Ant1	2437	-2.56	≤8.00	PASS
	Ant2	2437	-4.00	≤8.00	PASS
	Ant1	2462	-2.70	≤8.00	PASS
	Ant2	2462	-2.64	≤8.00	PASS
11G	Ant1	2412	-8.75	≤8.00	PASS
	Ant2	2412	-10.16	≤8.00	PASS
	Ant1	2437	-8.35	≤8.00	PASS
	Ant2	2437	-10.32	≤8.00	PASS
	Ant1	2462	-7.68	≤8.00	PASS
	Ant2	2462	-11.01	≤8.00	PASS
11N20MIMO	Ant1	2412	-6.93	≤8.00	PASS
	Ant2	2412	-9.80	≤8.00	PASS
	total	2412	-5.12	≤8.00	PASS
	Ant1	2437	-7.69	≤8.00	PASS
	Ant2	2437	-9.97	≤8.00	PASS
	total	2437	-5.67	≤8.00	PASS
	Ant1	2462	-5.01	≤8.00	PASS
	Ant2	2462	-10.43	≤8.00	PASS
11N40MIMO	total	2462	-3.91	≤8.00	PASS
	Ant1	2422	-11.56	≤8.00	PASS
	Ant2	2422	-15.25	≤8.00	PASS
	total	2422	-10.01	≤8.00	PASS
	Ant1	2437	-31.40	≤8.00	PASS
	Ant2	2437	-16.15	≤8.00	PASS
	total	2437	-16.02	≤8.00	PASS
	Ant1	2452	-14.20	≤8.00	PASS
11AX20MIMO	Ant2	2452	-16.82	≤8.00	PASS
	total	2452	-12.31	≤8.00	PASS
	Ant1	2412	-8.37	≤8.00	PASS
	Ant2	2412	-11.56	≤8.00	PASS
	total	2412	-6.67	≤8.00	PASS
	Ant1	2437	-7.98	≤8.00	PASS
	Ant2	2437	-11.35	≤8.00	PASS
	total	2437	-6.34	≤8.00	PASS
11AX40MIMO	Ant1	2462	-8.60	≤8.00	PASS
	Ant2	2462	-11.59	≤8.00	PASS
	total	2462	-6.83	≤8.00	PASS
	Ant1	2422	-15.38	≤8.00	PASS
	Ant2	2422	-16.69	≤8.00	PASS
	total	2422	-12.98	≤8.00	PASS
	Ant1	2437	-14.73	≤8.00	PASS
	Ant2	2437	-16.80	≤8.00	PASS
	total	2437	-12.63	≤8.00	PASS
	Ant1	2452	-14.30	≤8.00	PASS
	Ant2	2452	-15.64	≤8.00	PASS
	total	2452	-11.91	≤8.00	PASS

Test Graphs

11B_Ant1_2412



11B_Ant2_2412



11B_Ant1_2437



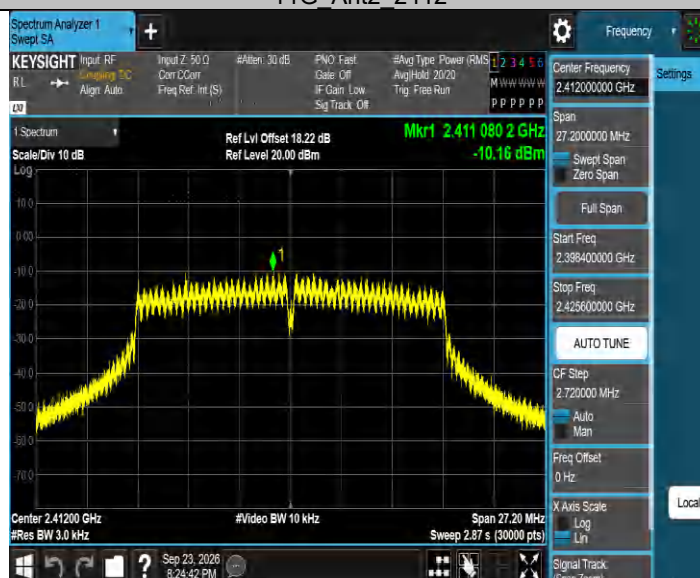
11B Ant2 2437

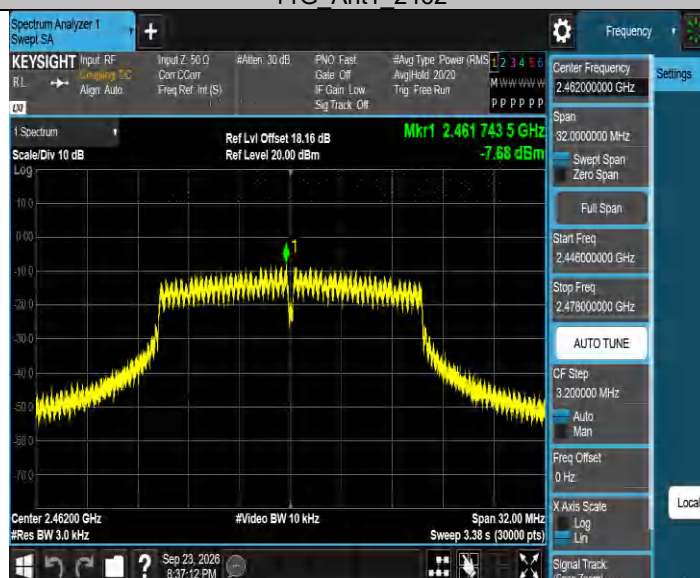
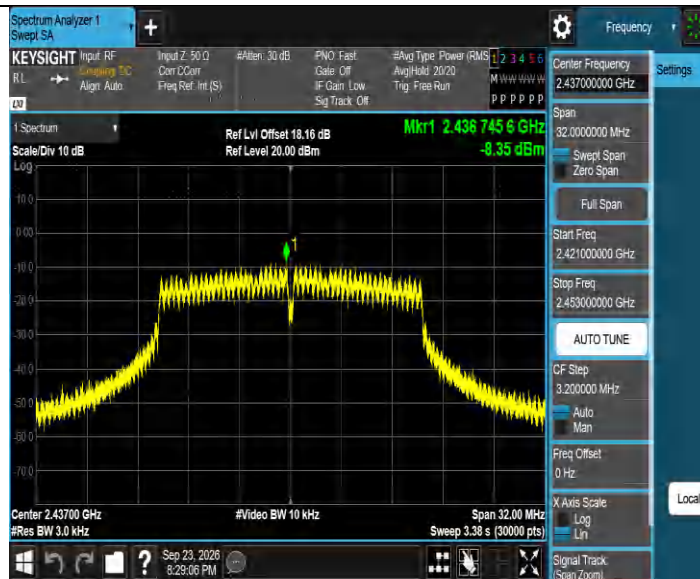


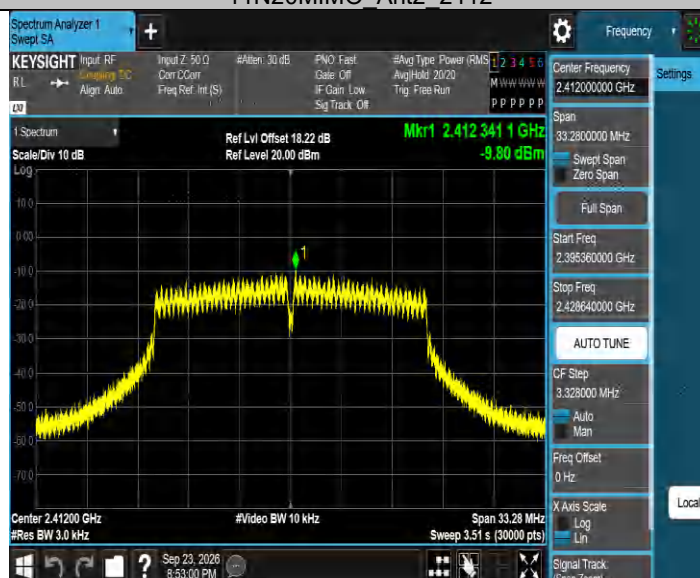
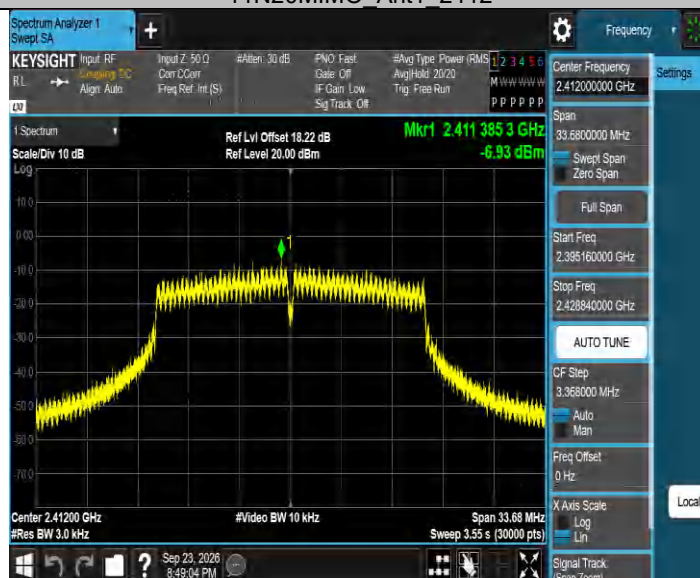
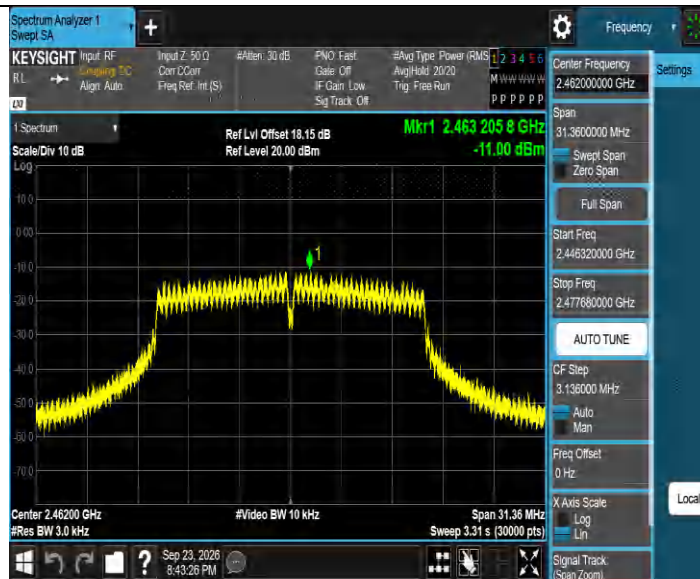
11B Ant1 2462

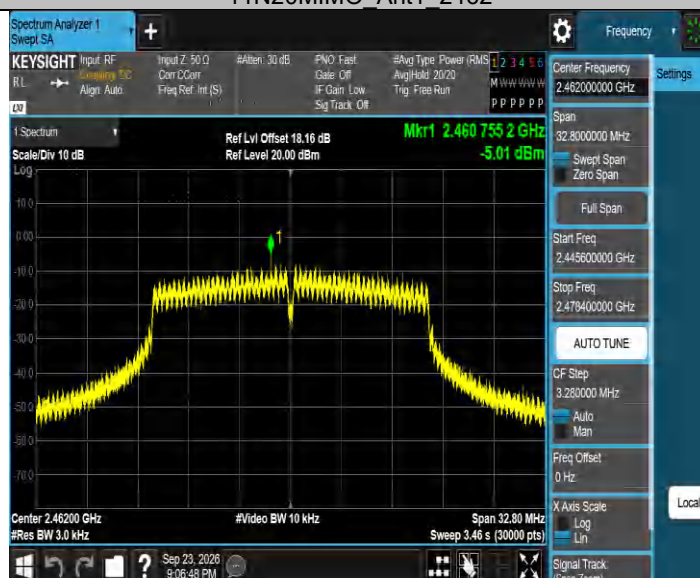
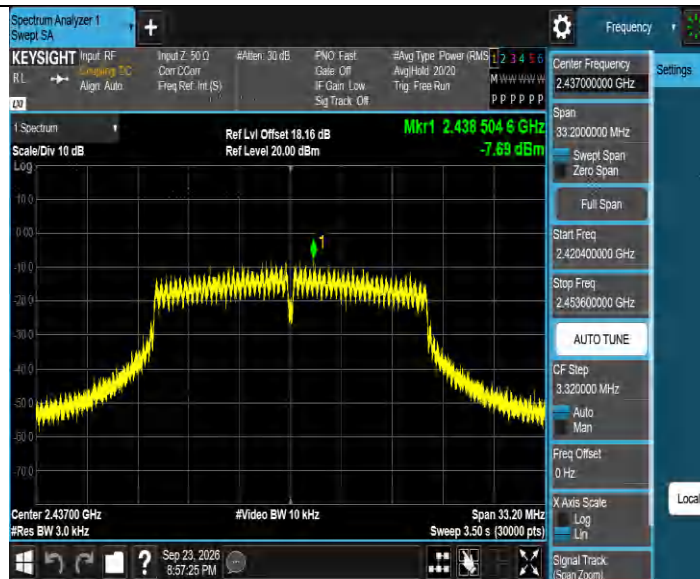


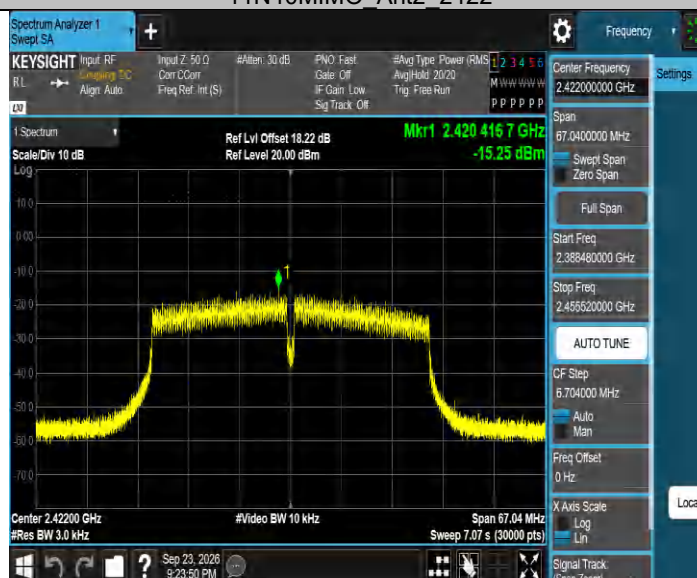
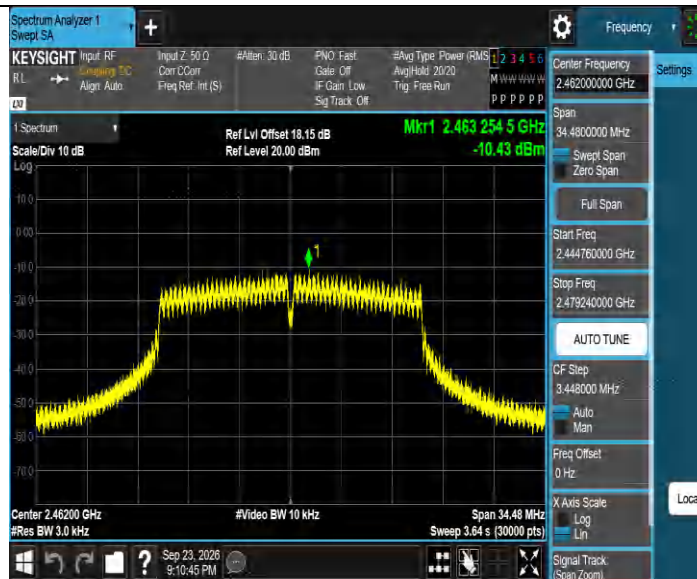
11B Ant2 2462

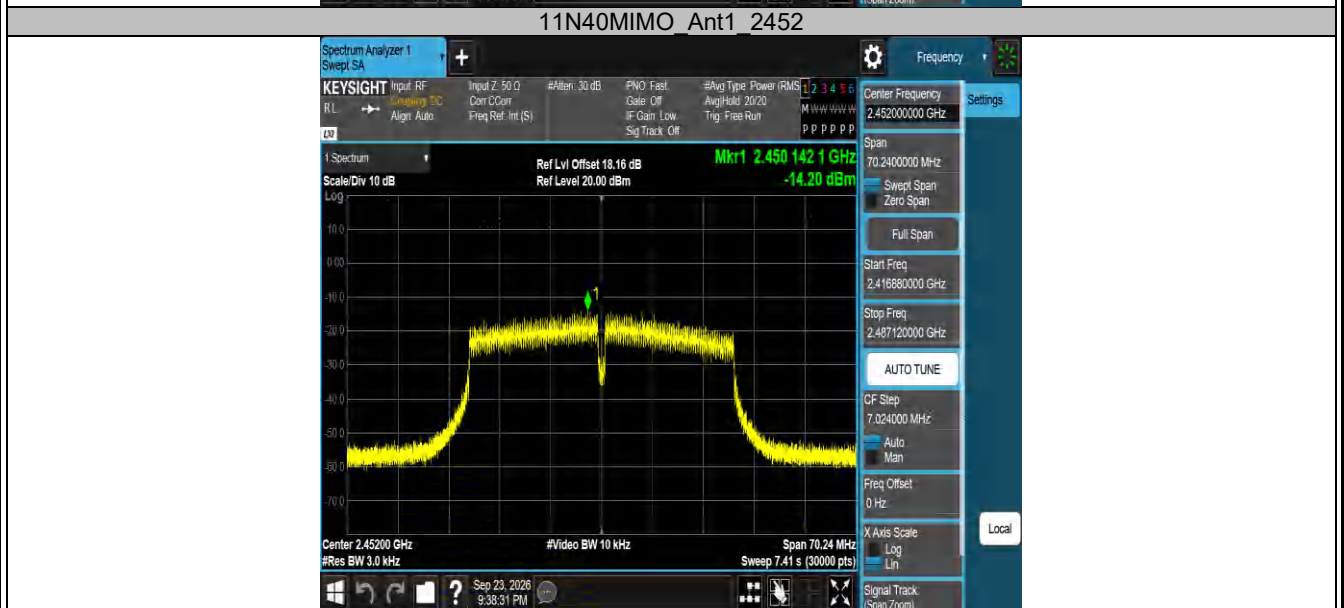
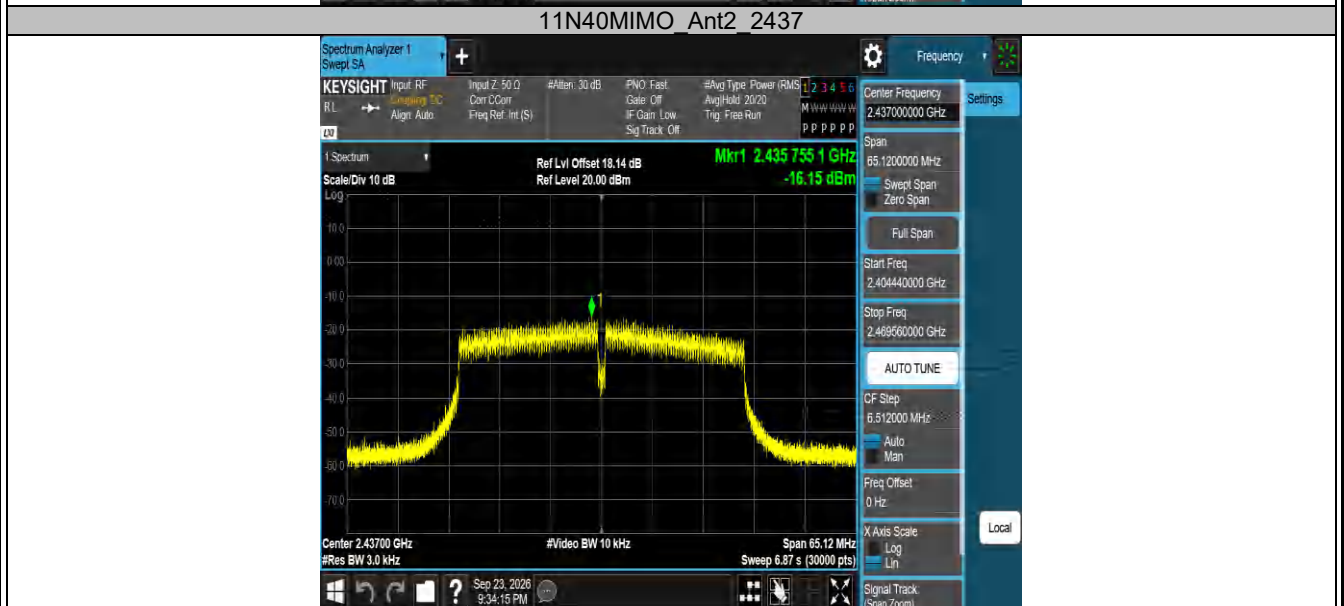
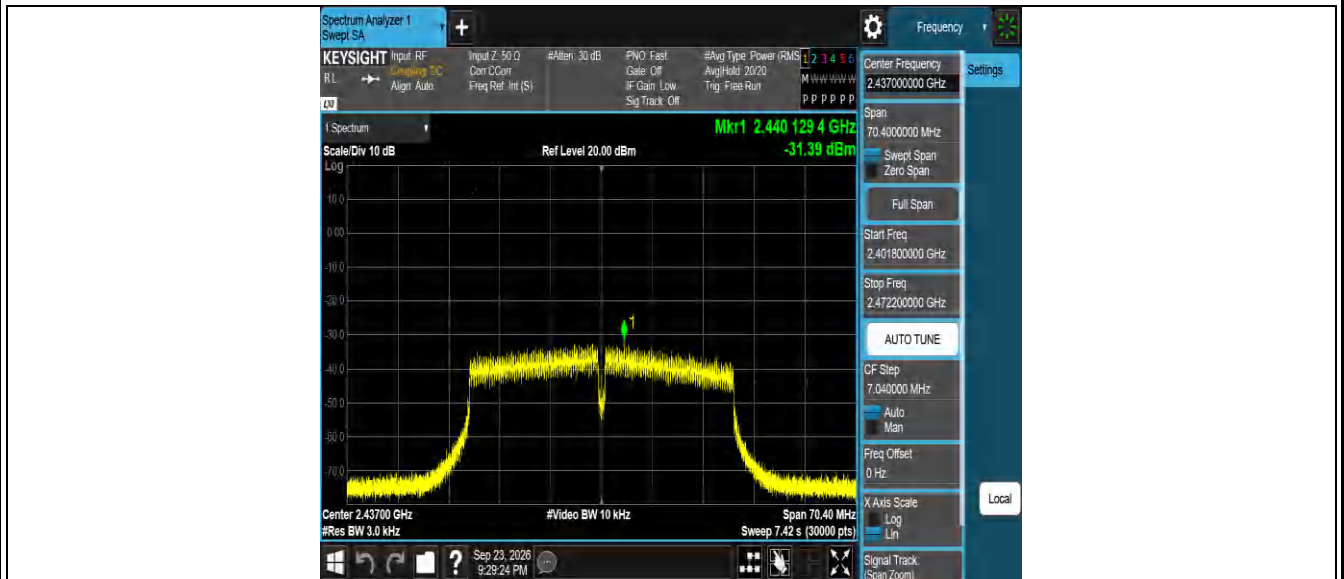


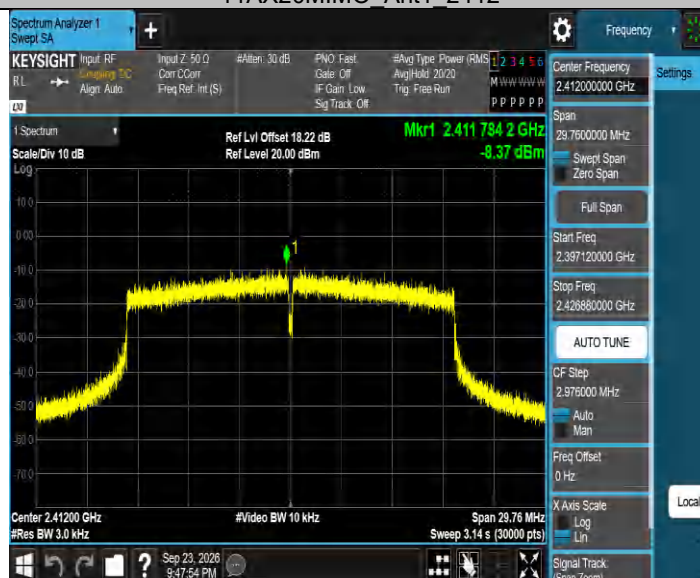
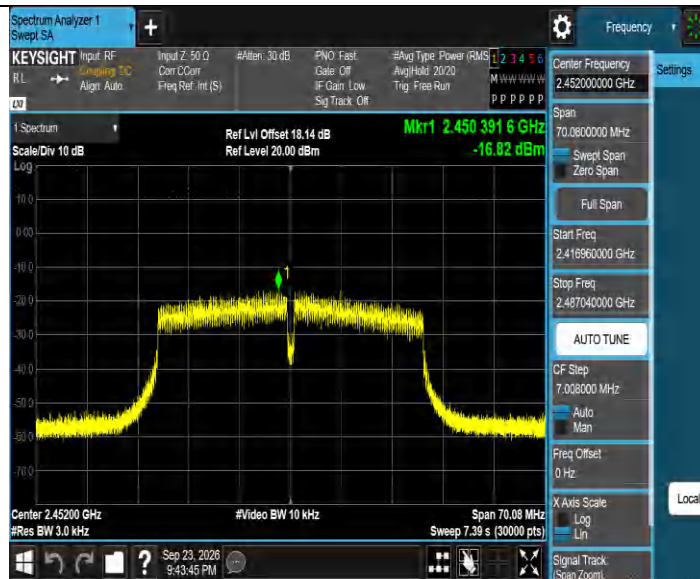


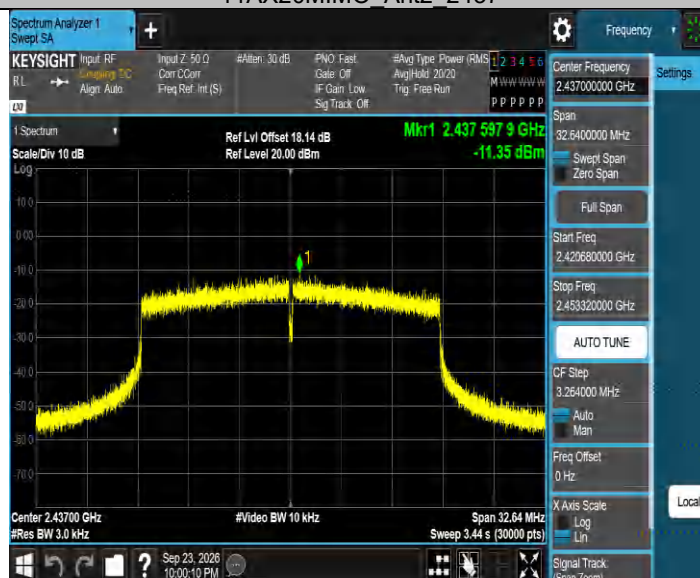
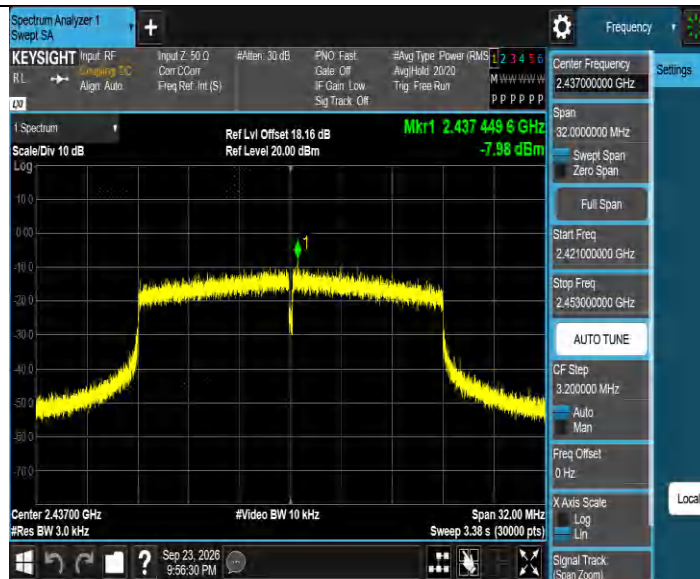


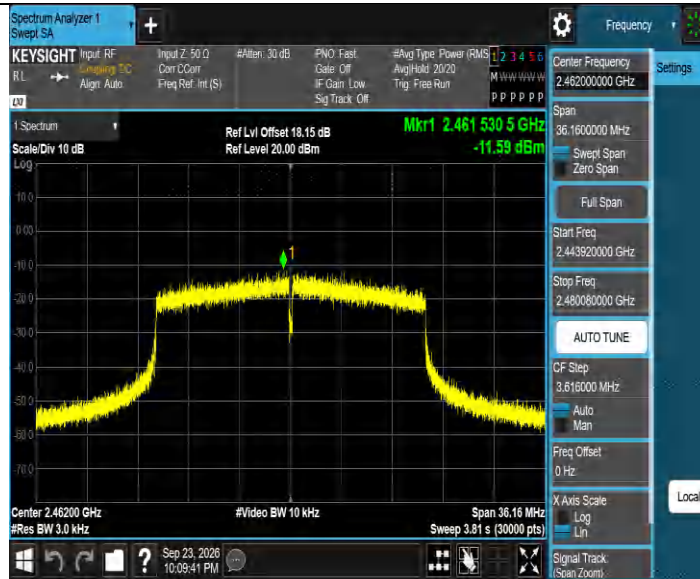




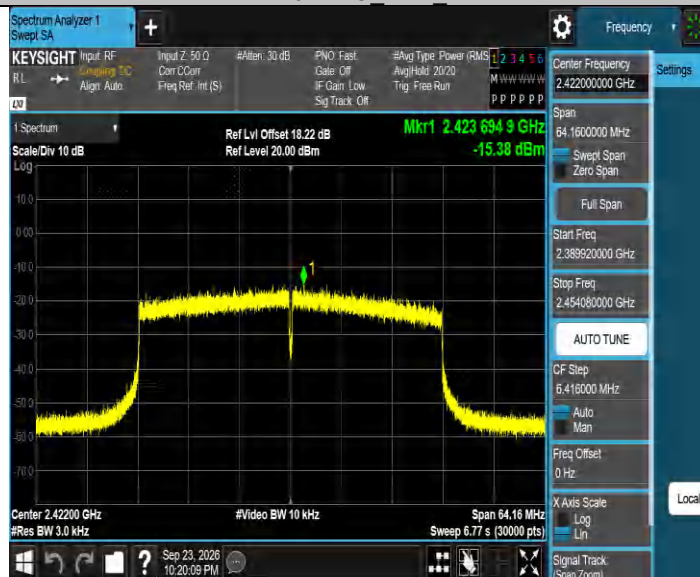




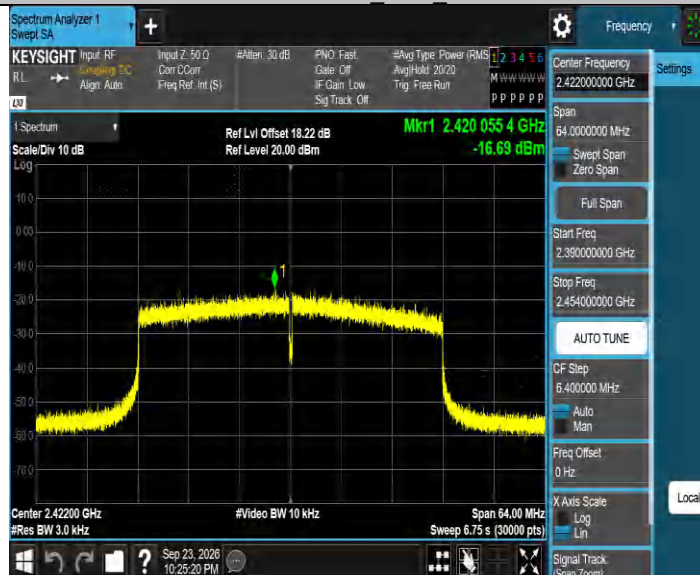




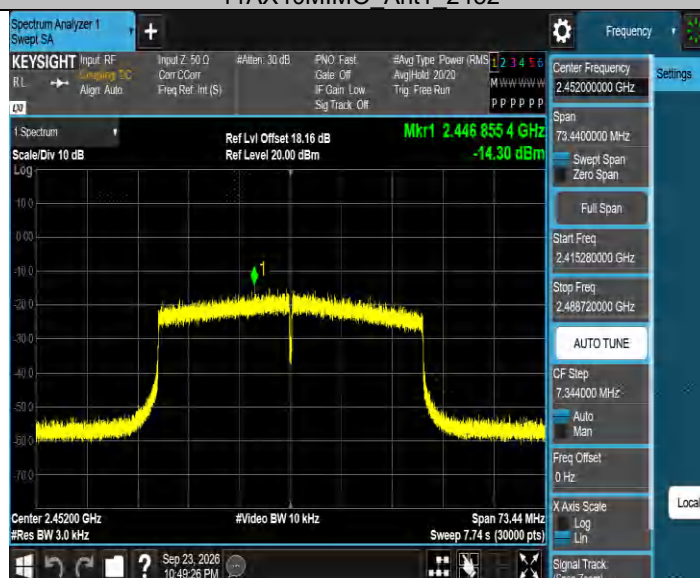
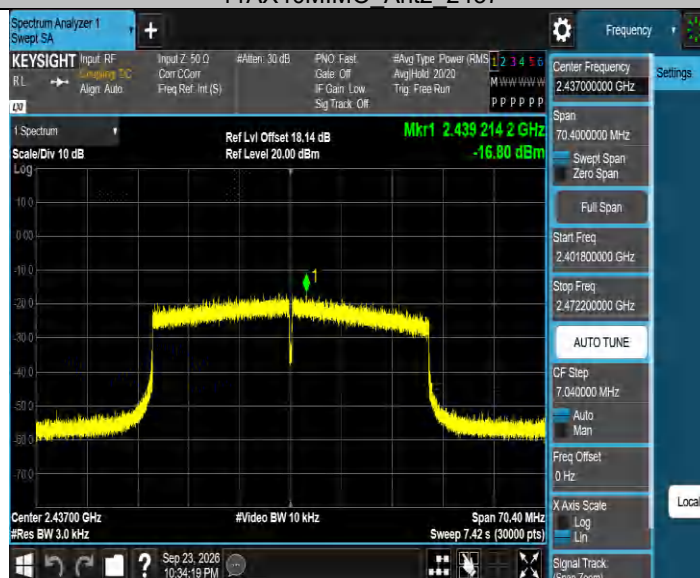
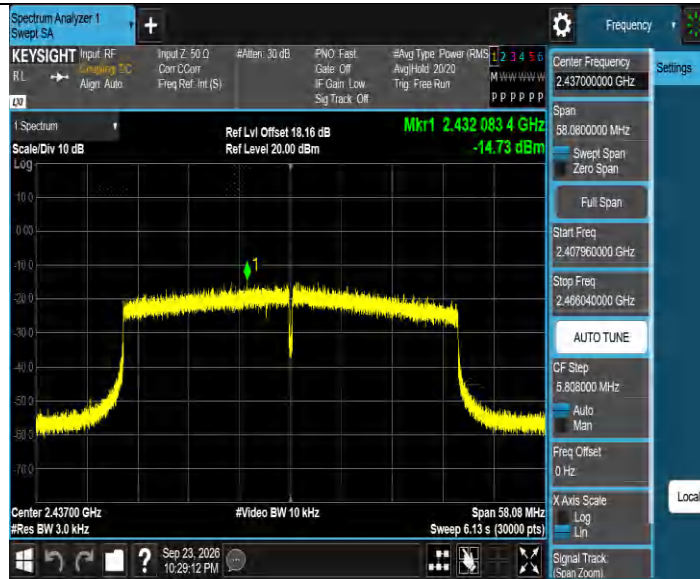
11AX40MIMO_Ant1_2422

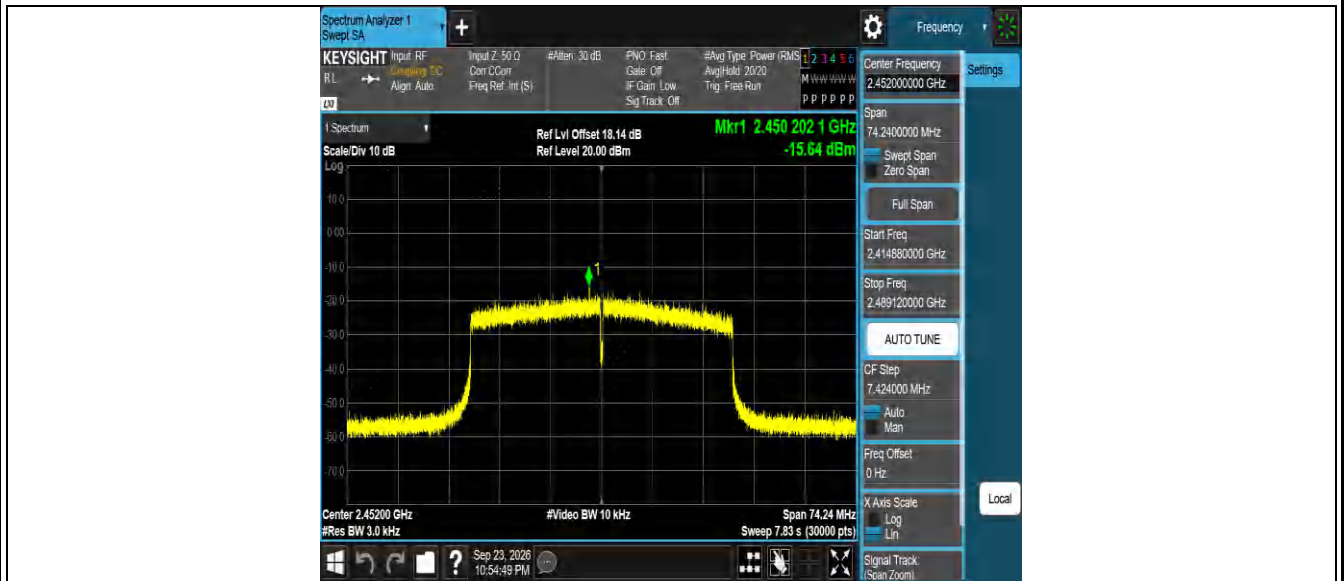


11AX40MIMO_Ant2_2422



11AX40MIMO_Ant1_2437





Appendix B.4: Test Results of Band Edge Measurements

Test Result

TestMode	Antenna	ChName	Frequency[MHz]	RefLevel[dBm]	Result[dBm]	Limit[dBm]	Verdict
11B	Ant1	Low	2412	10.54	-35.29	≤-9.46	PASS
		High	2462	9.88	-37.72	≤-10.12	PASS
11G	Ant1	Low	2412	5.08	-28.55	≤-14.92	PASS
		High	2462	6.32	-37.54	≤-13.68	PASS
11N20MIMO	Ant1	Low	2412	3.19	-25.15	≤-16.81	PASS
		High	2462	5.68	-37.75	≤-14.32	PASS
11N40MIMO	Ant1	Low	2422	-0.62	-32.9	≤-20.62	PASS
		High	2452	-0.22	-38.47	≤-20.22	PASS
11AX20MIMO	Ant1	Low	2412	4.12	-28.9	≤-15.88	PASS
		High	2462	5.08	-36.2	≤-14.92	PASS
11AX40MIMO	Ant1	Low	2422	-0.98	-32.41	≤-20.98	PASS
		High	2452	-2.17	-38.55	≤-22.17	PASS

Test Graphs

11B Ant1 Low 2412



11B Ant1 High 2462



11G Ant1 Low 2412









Appendix B.5: Test Results of Conducted Spurious Emissions

Test Result

TestMode	Antenna	Frequency[MHz]	FreqRange [Mhz]	RefLevel [dBm]	Result [dBm]	Limit [dBm]	Verdict
11B	Ant1	2412	Reference	9.03	9.03	---	PASS
			30~1000	9.03	-53.42	≤-10.97	PASS
			1000~26500	9.03	-29.81	≤-10.97	PASS
		2437	Reference	7.39	7.39	---	PASS
			30~1000	7.39	-54.05	≤-12.61	PASS
			1000~26500	7.39	-31.2	≤-12.61	PASS
		2462	Reference	8.91	8.91	---	PASS
			30~1000	8.91	-54.18	≤-11.09	PASS
			1000~26500	8.91	-29.99	≤-11.09	PASS
11G	Ant1	2412	Reference	3.16	3.16	---	PASS
			30~1000	3.16	-53.26	≤-16.84	PASS
			1000~26500	3.16	-42.91	≤-16.84	PASS
		2437	Reference	4.19	4.19	---	PASS
			30~1000	4.19	-54.04	≤-15.81	PASS
			1000~26500	4.19	-43.03	≤-15.81	PASS
		2462	Reference	2.45	2.45	---	PASS
			30~1000	2.45	-53.49	≤-17.55	PASS
			1000~26500	2.45	-42.73	≤-17.55	PASS
11N20MIMO	Ant1	2412	Reference	4.63	4.63	---	PASS
			30~1000	4.63	-53.58	≤-15.37	PASS
			1000~26500	4.63	-41.81	≤-15.37	PASS
		2437	Reference	1.68	1.68	---	PASS
			30~1000	1.68	-53.48	≤-18.32	PASS
			1000~26500	1.68	-42.9	≤-18.32	PASS
		2462	Reference	1.96	1.96	---	PASS
			30~1000	1.96	-53.58	≤-18.04	PASS
			1000~26500	1.96	-43.35	≤-18.04	PASS
11N40MIMO	Ant1	2422	Reference	-4.14	-4.14	---	PASS
			30~1000	-4.14	-53.4	≤-24.14	PASS
			1000~26500	-4.14	-43.61	≤-24.14	PASS
		2437	Reference	-2.78	-2.78	---	PASS
			30~1000	-2.78	-53.7	≤-22.78	PASS
			1000~26500	-2.78	-43.45	≤-22.78	PASS
		2452	Reference	-2.97	-2.97	---	PASS
			30~1000	-2.97	-52.85	≤-22.97	PASS
			1000~26500	-2.97	-42.78	≤-22.97	PASS
11AX20MIMO	Ant1	2412	Reference	1.96	1.96	---	PASS
			30~1000	1.96	-53	≤-18.04	PASS
			1000~26500	1.96	-42.8	≤-18.04	PASS
		2437	Reference	2.03	2.03	---	PASS
			30~1000	2.03	-53.95	≤-17.97	PASS
			1000~26500	2.03	-42.9	≤-17.97	PASS
		2462	Reference	2.84	2.84	---	PASS
			30~1000	2.84	-53.35	≤-17.16	PASS
			1000~26500	2.84	-41.47	≤-17.16	PASS
11AX40MIMO	Ant1	2422	Reference	-1.36	-1.36	---	PASS
			30~1000	-1.36	-53.92	≤-21.36	PASS
			1000~26500	-1.36	-43.41	≤-21.36	PASS
		2437	Reference	-2.64	-2.64	---	PASS
			30~1000	-2.64	-53.53	≤-22.64	PASS
			1000~26500	-2.64	-43.39	≤-22.64	PASS
		2452	Reference	-3.47	-3.47	---	PASS
			30~1000	-3.47	-53.59	≤-23.47	PASS
			1000~26500	-3.47	-43.94	≤-23.47	PASS

Test Graphs

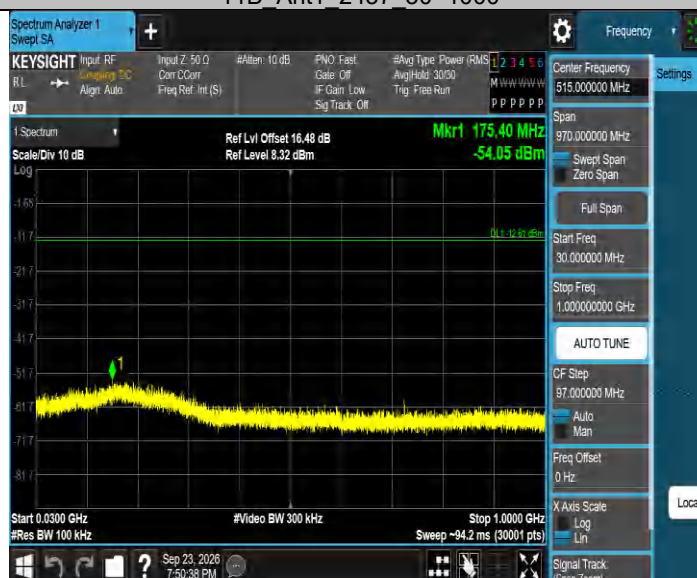
11B_Ant1_2412_0~Reference



11B_Ant1_2412_30~1000



11B_Ant1_2412_1000~26500





11B_Ant1_2462_0~Reference



11B_Ant1_2462_30~1000



11B_Ant1_2462_1000~26500



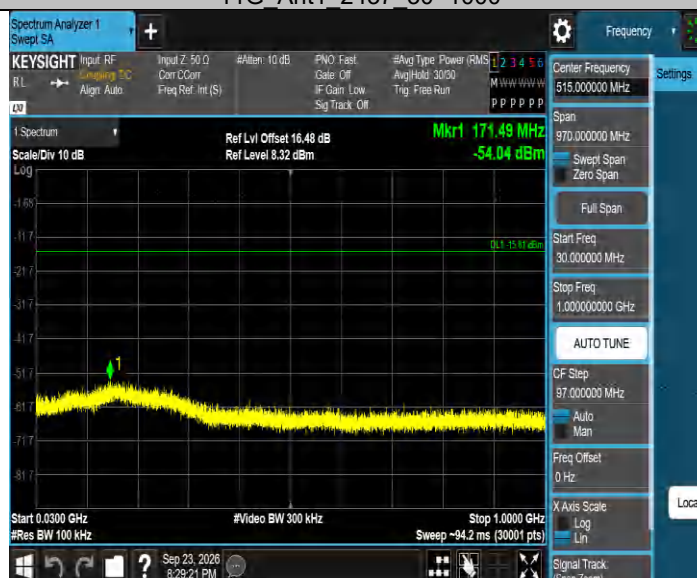
11G Ant1_2412_0~Reference



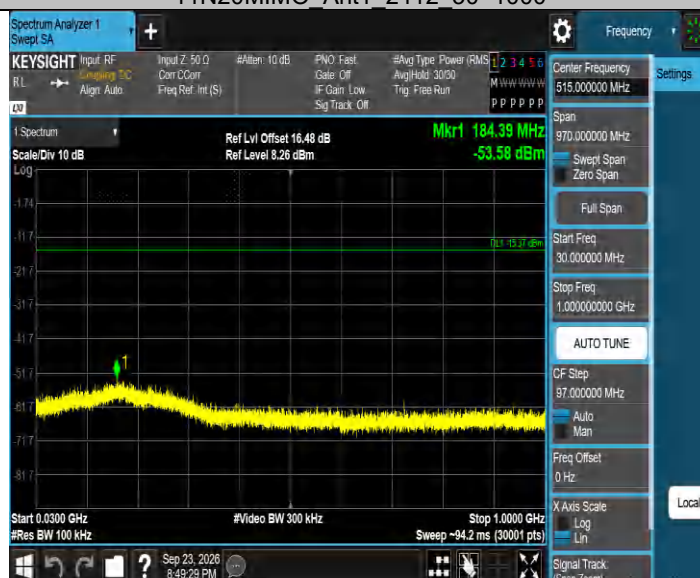
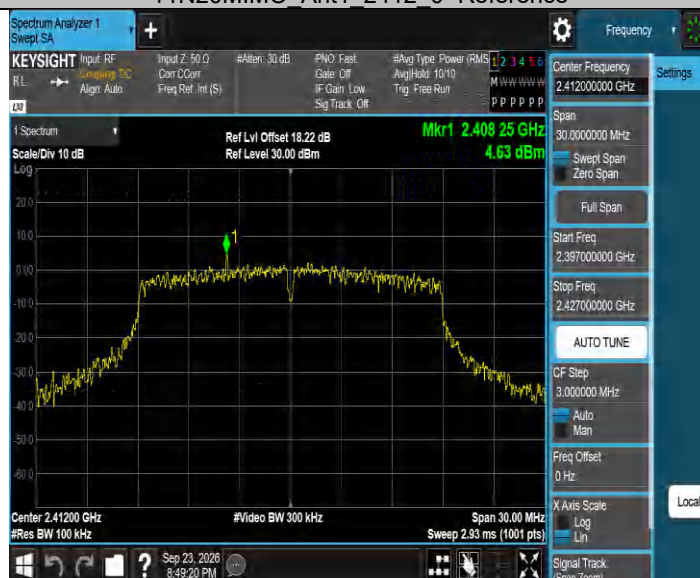
11G Ant1_2412_30~1000



11G Ant1_2412_1000~26500

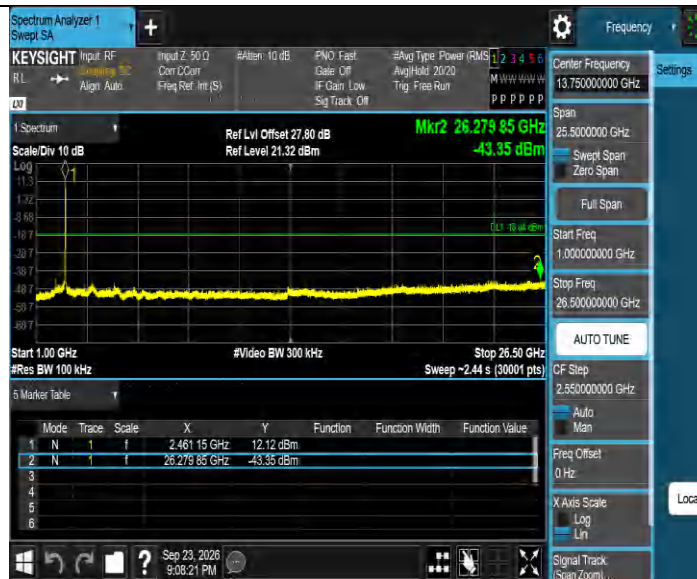












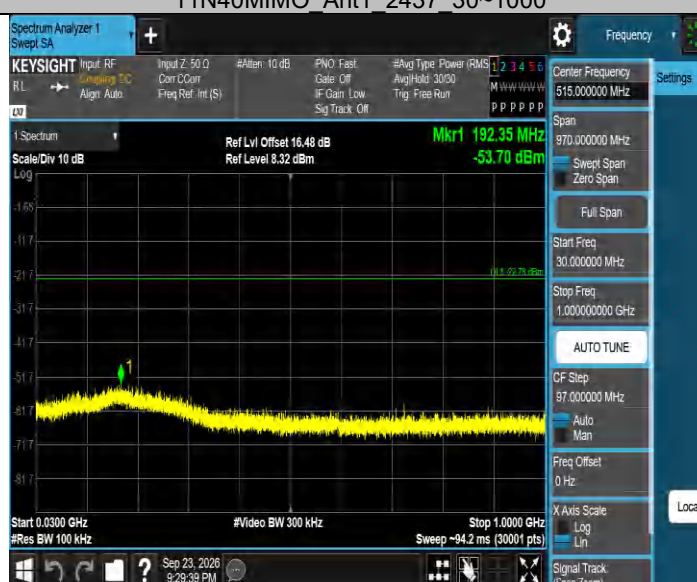
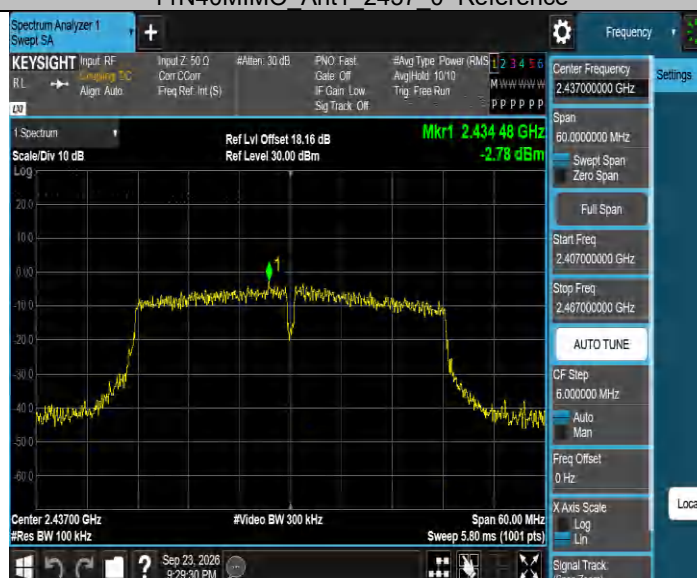
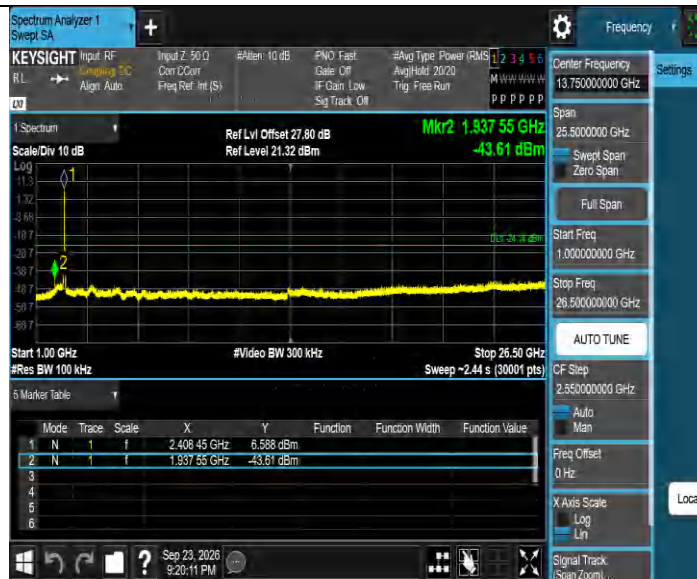
11N40MIMO_Ant1_2422_0~Reference

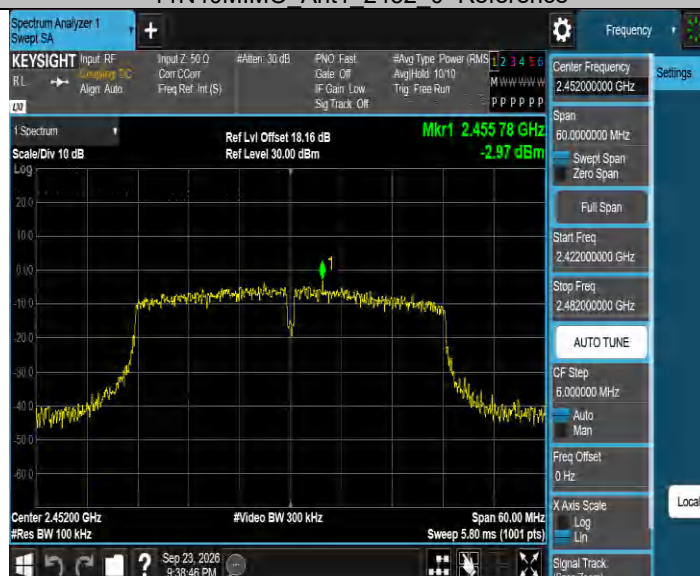


11N40MIMO_Ant1_2422_30~1000



11N40MIMO_Ant1_2422_1000~26500







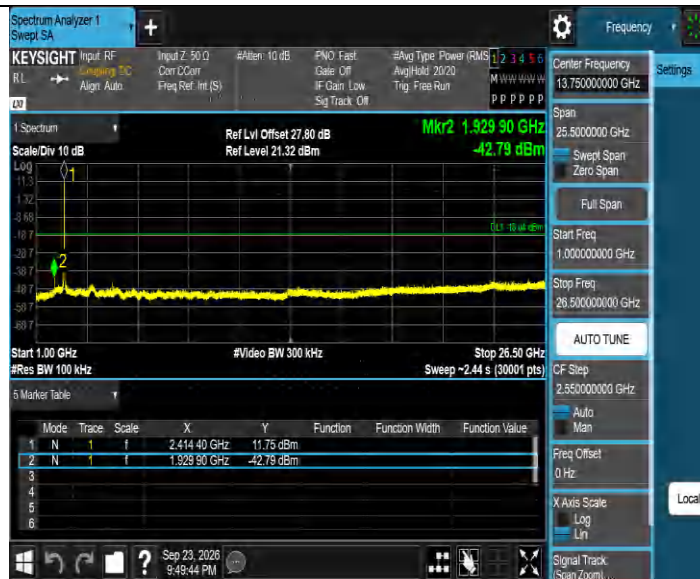
11AX20MIMO Ant1 2412 0~Reference



11AX20MIMO Ant1 2412 30~1000



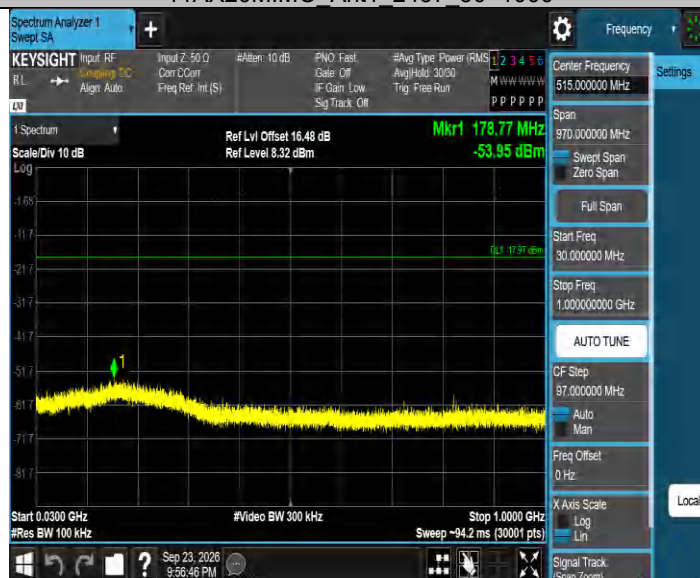
11AX20MIMO Ant1 2412 1000~26500



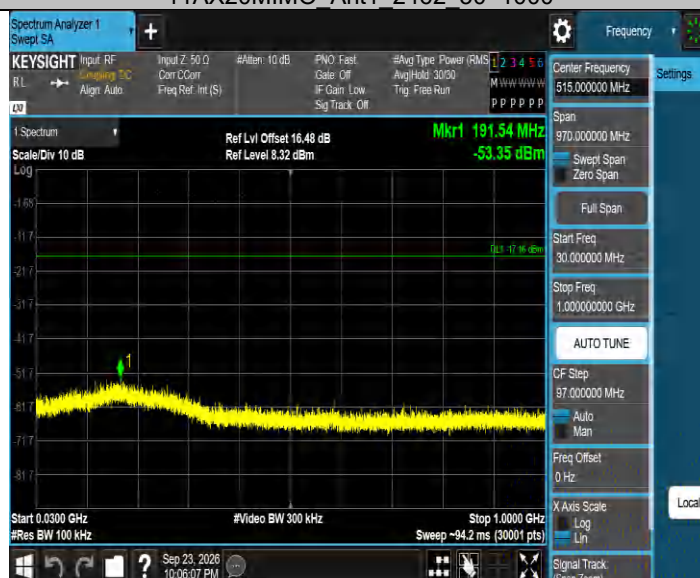
11AX20MIMO Ant1 2437 0~Reference

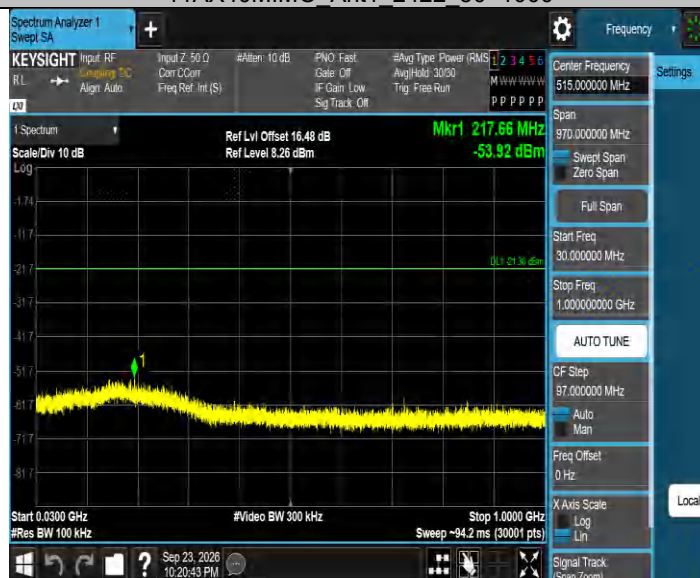


11AX20MIMO Ant1 2437 30~1000



11AX20MIMO Ant1 2437 1000~26500



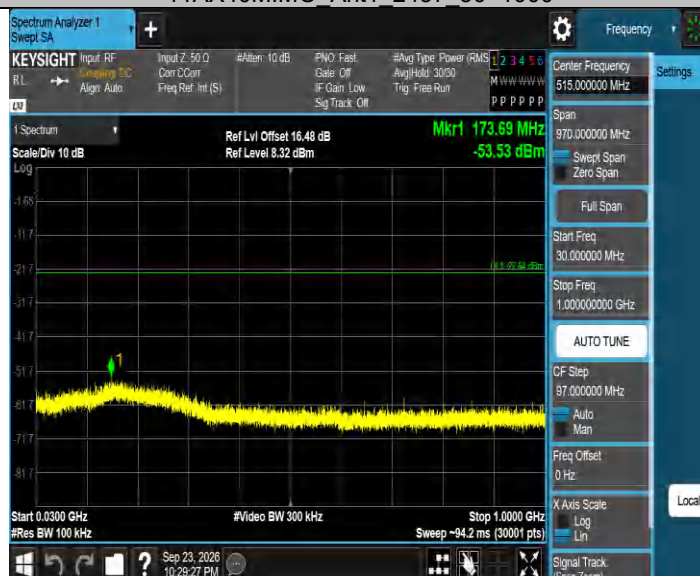




11AX40MIMO Ant1 2437 0~Reference



11AX40MIMO Ant1 2437 30~1000



11AX40MIMO Ant1 2437 1000~26500





Appendix B.6: Test Results of Radiated Spurious Emissions

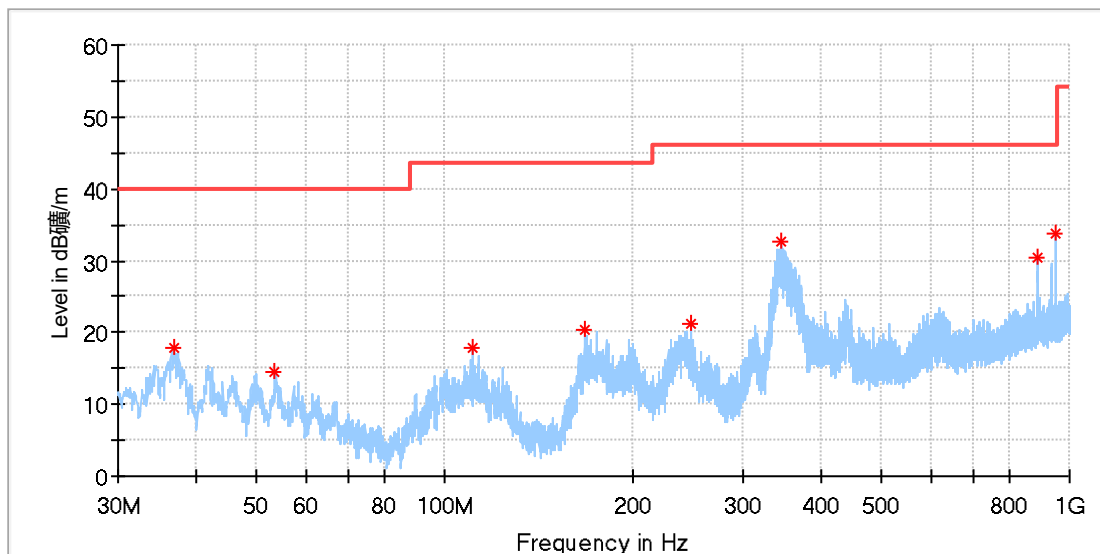
Note:

- 1) This testing was carried out on different modulations, but only the worst case was presented in this report.
- 2) Testing was carried out within frequency range 9kHz to the tenth harmonics. The measurement results below 30MHz and 18GHz - 26.5GHz were greater than 20dB below the limit, so only the radiated spurious emissions from 30MHz to 18GHz were reported.

30MHz - 1GHz

EUT Information

EUT Name:	Dolphin Sense
Model:	AMZN-DS100-G1R-M
Test Mode:	WIFI2.4G
Order No/Sample No:	A004385930-002
Test Voltage:	DC 12V
Remark:	Temp 23 Humi:53%
Test Standard:	FCC 15.247
Tested By:	Kei Zhang
Reviewed By:	Terry Yin



Critical Freqs

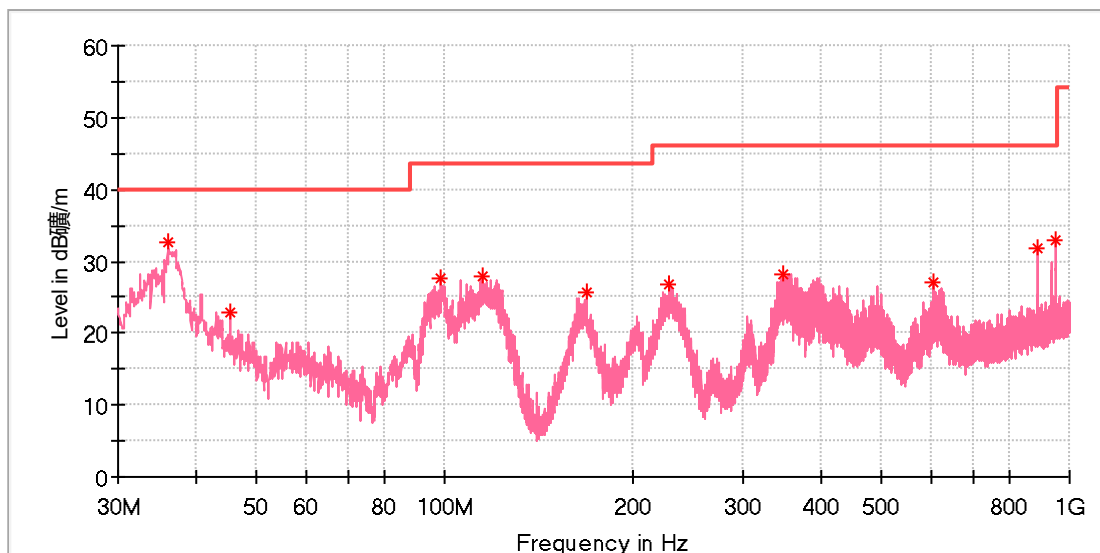
Frequency (MHz)	MaxPeak (dBμV/m)	Limit (dBμV/m)	Margin (dB)	Height (cm)	Pol	Azimuth (deg)	Corr. (dB/m)
36.951667	17.93	40.00	22.07	100.0	H	0.0	-21.2
53.549444	14.56	40.00	25.44	100.0	H	0.0	-18.5
110.725556	17.94	43.50	25.56	100.0	H	196.0	-19.3
167.308889	20.24	43.50	23.26	100.0	H	154.0	-21.5
247.010556	21.17	46.00	24.83	100.0	H	190.0	-17.5
345.411667	32.76	46.00	13.24	100.0	H	161.0	-15.0
890.875000	30.49	46.00	15.51	100.0	H	6.0	-4.9
950.368333	33.81	46.00	12.19	100.0	H	14.0	-4.3

Final Result

Frequency (MHz)	QuasiPeak (dBμV/m)	Limit (dBμV/m)	Margin (dB)	Height (cm)	Pol	Azimuth (deg)	Corr. (dB/m)
---	---	---	---	---	---	---	---

EUT Information

EUT Name: Dolphin Sense
Model: AMZN-DS100-G1R-M
Test Mode: WIFI2.4G
Order No/Sample No: A004385930-002
Test Voltage: DC 12V
Remark: Temp 23 Humi:53%
Test Standard: FCC 15.247
Tested By: Kei Zhang
Reviewed By: Terry Yin



Critical_Freqs

Frequency (MHz)	MaxPeak (dBμV/m)	Limit (dBμV/m)	Margin (dB)	Height (cm)	Pol	Azimuth (deg)	Corr. (dB/m)
36.035556	32.65	40.00	7.35	100.0	V	329.0	-21.6
45.412222	22.87	40.00	17.13	100.0	V	194.0	-18.9
98.600556	27.67	43.50	15.83	100.0	V	338.0	-19.3
115.198333	27.94	43.50	15.56	100.0	V	357.0	-19.9
168.710000	25.73	43.50	17.77	100.0	V	209.0	-21.4
228.688333	26.82	46.00	19.18	100.0	V	285.0	-18.2
347.998333	28.31	46.00	17.69	100.0	V	20.0	-14.9
606.665000	27.11	46.00	18.89	100.0	V	238.0	-9.5
890.982778	31.84	46.00	14.16	100.0	V	0.0	-4.9
950.368333	32.83	46.00	13.17	100.0	V	216.0	-4.3

Final_Result

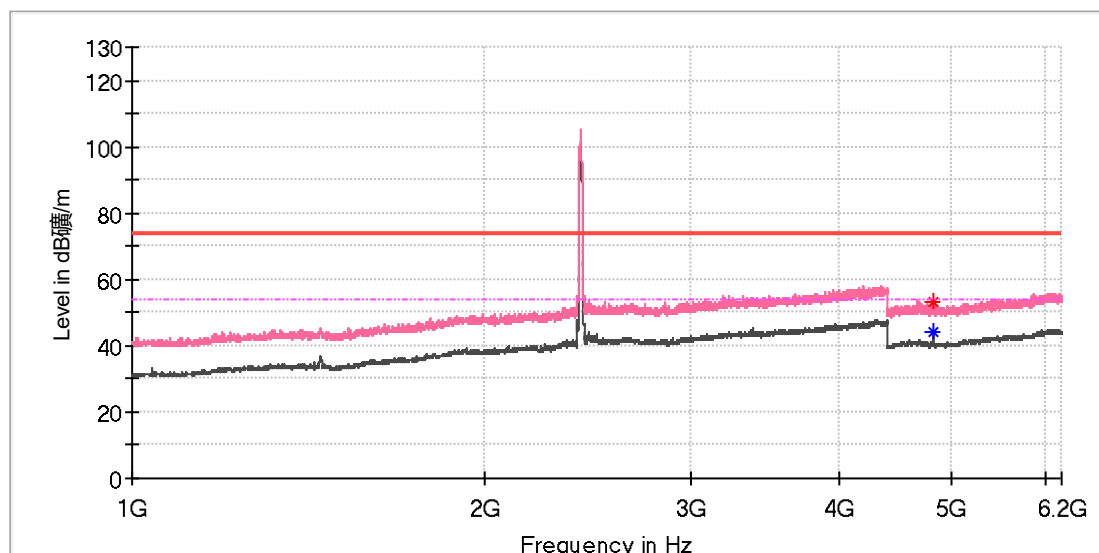
Frequency (MHz)	QuasiPeak (dBμV/m)	Limit (dBμV/m)	Margin (dB)	Height (cm)	Pol	Azimuth (deg)	Corr. (dB/m)
---	---	---	---	---	---	---	---

1GHz - 18GHz

Note: The highest waveform in the figure is Wi-Fi Fundamental.

EUT Information

EUT Name:	Dolphin Sense
Model:	AMZN-DS100-G1R-M
Test Mode:	WIFI 2.4G_11b_Ch1
Order No/Sample No:	A004385930-002
Test Voltage:	DC 12V
Remark:	Temp 23 Humi:53%
Test Standard:	FCC 15.247
Tested By:	Kei Zhang
Reviewed By:	Terry Yin



Critical Freqs

Frequency (MHz)	MaxPeak (dBµV/m)	Average (dBµV/m)	Limit (dBµV/m)	Margin (dB)	Height (cm)	Pol	Azimuth (deg)	Corr. (dB/m)
4824.000000	---	44.40	54.00	9.60	150.0	V	36.0	13.3
4824.000000	52.97	---	74.00	21.03	150.0	V	36.0	13.3

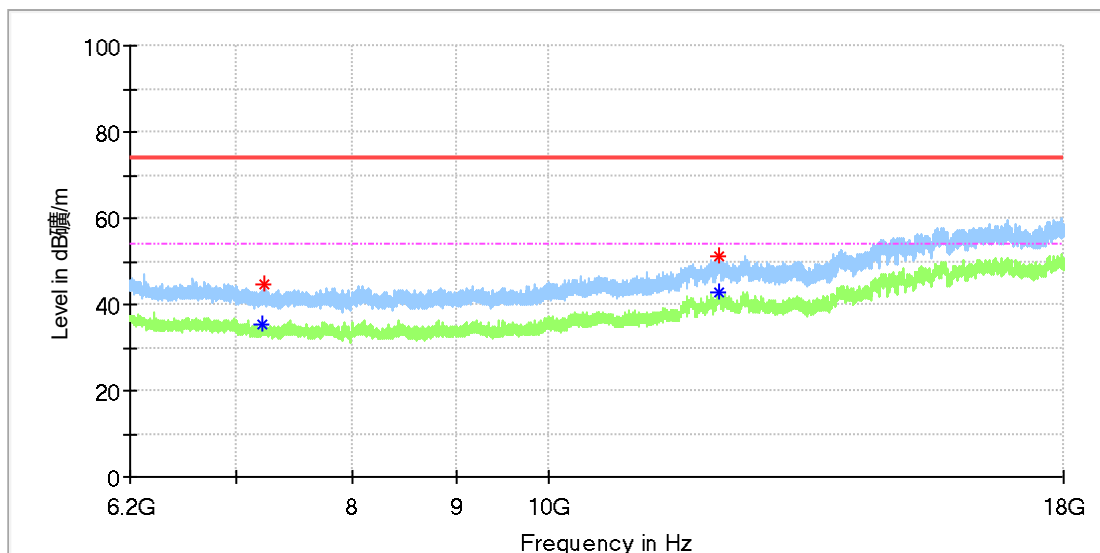
Final Result

Frequency (MHz)	MaxPeak (dBμV/m)	Average (dBμV/m)	Limit (dBμV/m)	Margin (dB)	Height (cm)	Pol	Azimuth (deg)	Corr. (dB/m)
100.0	100.0	100.0	100.0	100.0	100.0		100.0	100.0

EUT Information

EUT Information

EUT Name:	Dolphin Sense
Model:	AMZN-DS100-G1R-M
Test Mode:	WIFI 2.4G_11b_Ch6
Order No/Sample No:	A004385930-002
Test Voltage:	DC 12V
Remark:	Temp 23 Humi:53%
Test Standard:	FCC 15.247
Tested By:	Kei Zhang
Reviewed By:	Terry Yin



Critical_Freqs

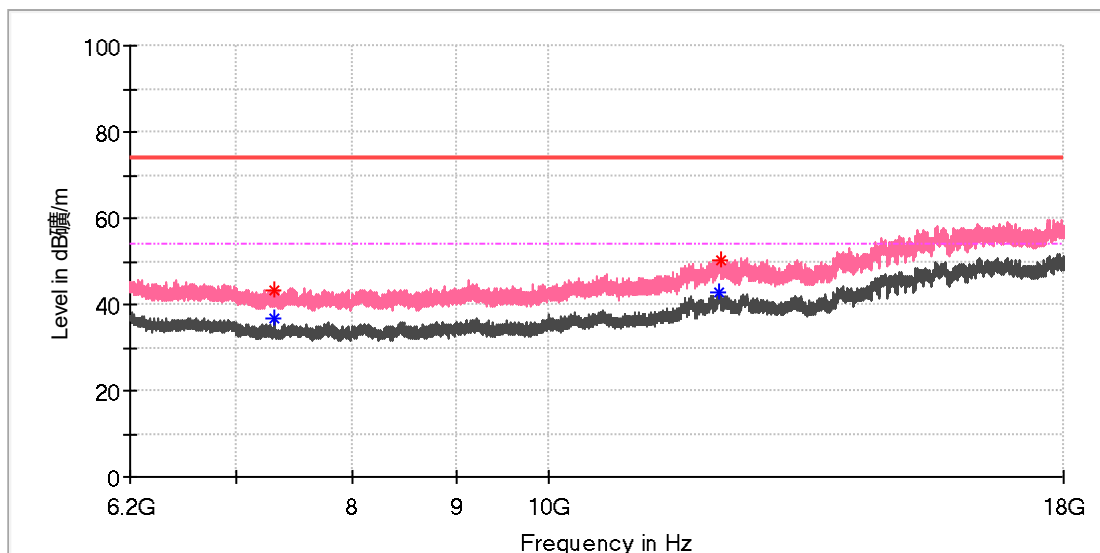
Frequency (MHz)	MaxPeak (dBµV/m)	Average (dBµV/m)	Limit (dBµV/m)	Margin (dB)	Height (cm)	Pol	Azimuth (deg)	Corr. (dB/m)
7217.750000	---	35.40	54.00	18.60	150.0	H	278.0	8.7
7228.566667	44.86	---	74.00	29.14	150.0	H	0.0	8.7
12140.316667	50.95	---	74.00	23.05	150.0	H	344.0	16.5
12149.658333	---	42.67	54.00	11.33	150.0	H	332.0	16.7

Final Result

Frequency (MHz)	MaxPeak (dBμV/m)	Average (dBμV/m)	Limit (dBμV/m)	Margin (dB)	Height (cm)	Pol	Azimuth (deg)	Corr. (dB/m)
---	---	---	---	---	---		---	---

EUT Information

EUT Name:	Dolphin Sense
Model:	AMZN-DS100-G1R-M
Test Mode:	WIFI 2.4G_11b_Ch6
Order No/Sample No:	A004385930-002
Test Voltage:	DC 12V
Remark:	Temp 23 Humi:53%
Test Standard:	FCC 15.247
Tested By:	Kei Zhang
Reviewed By:	Terry Yin



Critical_Freqs

Frequency (MHz)	MaxPeak (dBμV/m)	Average (dBμV/m)	Limit (dBμV/m)	Margin (dB)	Height (cm)	PoI	Azimuth (deg)	Corr. (dB/m)
7312.641667	43.28	---	74.00	30.72	150.0	V	128.0	8.2
7312.641667	---	36.89	54.00	17.11	150.0	V	128.0	8.2
12149.166667	---	42.86	54.00	11.14	150.0	V	51.0	16.7
12164.900000	50.10	---	74.00	23.90	150.0	V	5.0	16.0

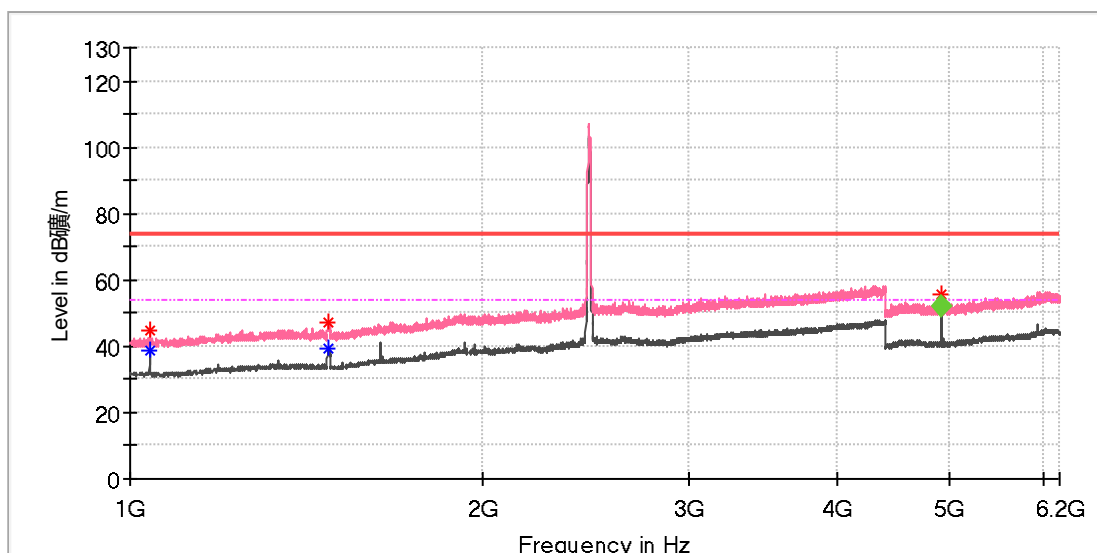
Final Result

Frequency (MHz)	MaxPeak (dBμV/m)	Average (dBμV/m)	Limit (dBμV/m)	Margin (dB)	Height (cm)	Pol	Azimuth (deg)	Corr. (dB/m)
---	---	---	---	---	---		---	---

Frequency (MHz)	MaxPeak (dBμV/m)	Average (dBμV/m)	Limit (dBμV/m)	Margin (dB)	Height (cm)	Pol	Azimuth (deg)	Corr. (dB/m)
---	---	---	---	---	---		---	---

EUT Information

EUT Name: Dolphin Sense
Model: AMZN-DS100-G1R-M
Test Mode: WIFI 2.4G_11b_Ch11
Order No/Sample No: A004385930-002
Test Voltage: DC 12V
Remark: Temp 23 Humi:53%
Test Standard: FCC 15.247
Tested By: Kei Zhang
Reviewed By: Terry Yin



Critical_Freqs

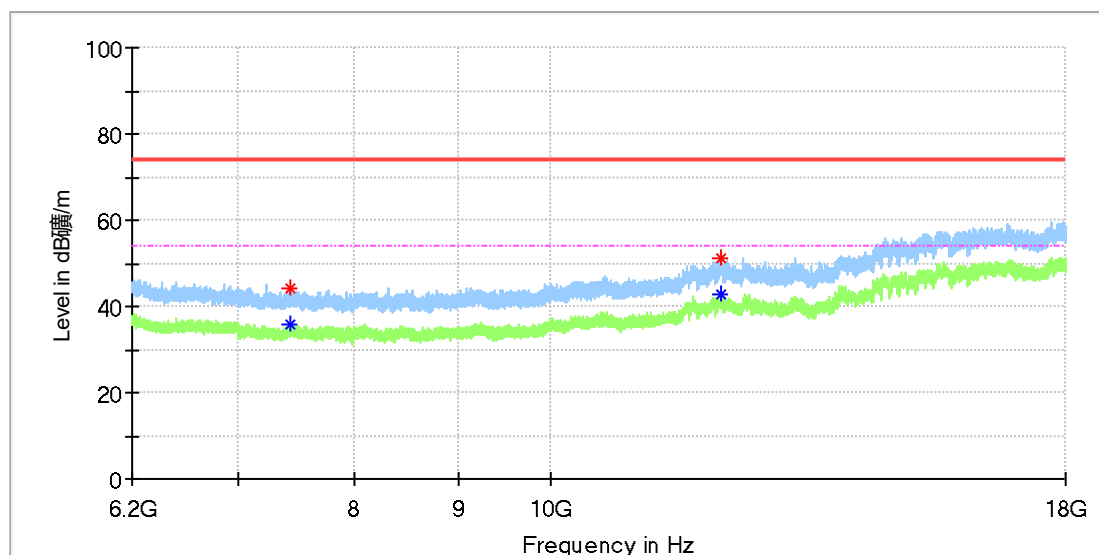
Frequency (MHz)	MaxPeak (dBμV/m)	Average (dBμV/m)	Limit (dBμV/m)	Margin (dB)	Height (cm)	Pol	Azimuth (deg)	Corr. (dB/m)
1039.500000	44.66	---	74.00	29.34	150.0	V	330.0	0.5
1039.500000	---	38.65	54.00	15.35	150.0	V	330.0	0.5
1476.000000	---	39.15	54.00	14.85	150.0	V	206.0	2.5
1478.000000	46.89	---	74.00	27.11	150.0	V	206.0	2.5
4924.000000	55.83	---	74.00	18.17	150.0	V	47.0	13.3

Final_Result

Frequency (MHz)	MaxPeak (dBμV/m)	Average (dBμV/m)	Limit (dBμV/m)	Margin (dB)	Height (cm)	Pol	Azimuth (deg)	Corr. (dB/m)
4924.016667	---	51.82	54.00	2.18	150.0	V	47.0	13.3

EUT Information

EUT Name:	Dolphin Sense
Model:	AMZN-DS100-G1R-M
Test Mode:	WIFI 2.4G_11b_Ch11
Order No/Sample No:	A004385930-002
Test Voltage:	DC 12V
Remark:	Temp 23 Humi:53%
Test Standard:	FCC 15.247
Tested By:	Kei Zhang
Reviewed By:	Terry Yin



Critical Freqs

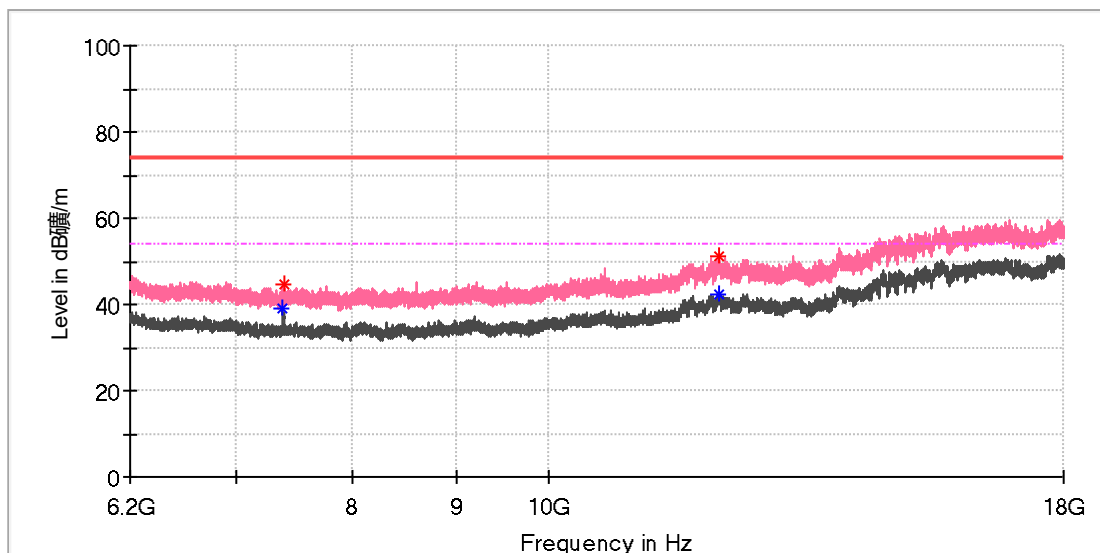
Frequency (MHz)	MaxPeak (dBμV/m)	Average (dBμV/m)	Limit (dBμV/m)	Margin (dB)	Height (cm)	Pol	Azimuth (deg)	Corr. (dB/m)
7422.283333	44.19	---	74.00	29.81	150.0	H	22.0	8.4
7430.641667	---	35.90	54.00	18.10	150.0	H	295.0	8.4
12137.366667	---	42.71	54.00	11.29	150.0	H	0.0	16.4
12145.725000	50.97	---	74.00	23.03	150.0	H	205.0	16.6

Final Result

Frequency (MHz)	MaxPeak (dBμV/m)	Average (dBμV/m)	Limit (dBμV/m)	Margin (dB)	Height (cm)	Pol	Azimuth (deg)	Corr. (dB/m)
---	---	---	---	---	---		---	---

EUT Information

EUT Name:	Dolphin Sense
Model:	AMZN-DS100-G1R-M
Test Mode:	WIFI 2.4G_11b_Ch11
Order No/Sample No:	A004385930-002
Test Voltage:	DC 12V
Remark:	Temp 23 Humi:53%
Test Standard:	FCC 15.247
Tested By:	Kei Zhang
Reviewed By:	Terry Yin



Critical Freqs

Frequency (MHz)	MaxPeak (dBµV/m)	Average (dBµV/m)	Limit (dBµV/m)	Margin (dB)	Height (cm)	Pol	Azimuth (deg)	Corr. (dB/m)
7384.425000	---	39.29	54.00	14.71	150.0	V	207.0	8.2
7385.900000	44.65	---	74.00	29.35	150.0	V	119.0	8.2
12144.741667	---	42.46	54.00	11.54	150.0	V	229.0	16.6
12151.625000	51.32	---	74.00	22.68	150.0	V	107.0	16.6

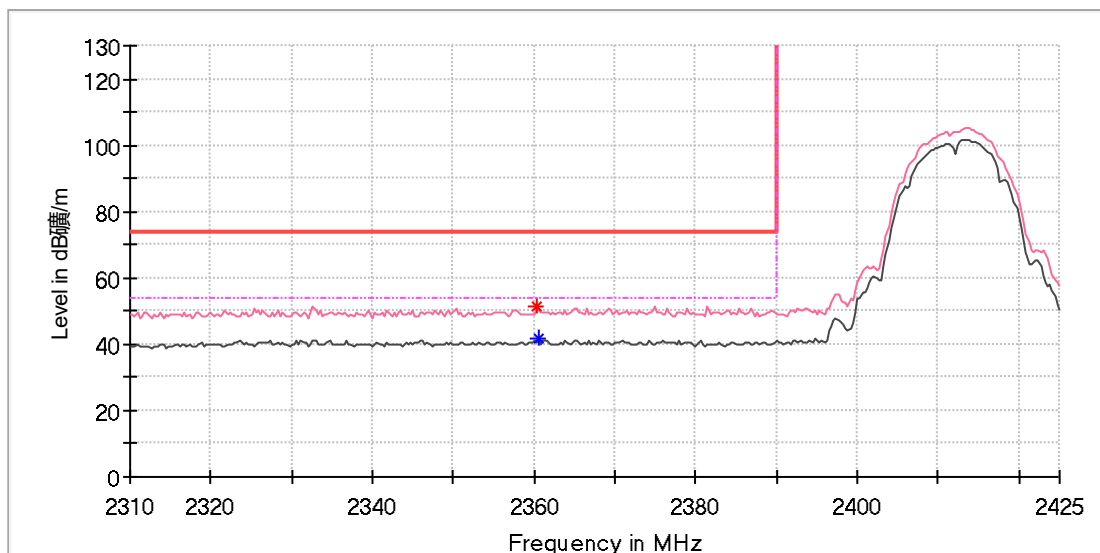
Final Result

Frequency (MHz)	MaxPeak (dBμV/m)	Average (dBμV/m)	Limit (dBμV/m)	Margin (dB)	Height (cm)	Pol	Azimuth (deg)	Corr. (dB/m)
---	---	---	---	---	---		---	---

Frequency (MHz)	MaxPeak (dBμV/m)	Average (dBμV/m)	Limit (dBμV/m)	Margin (dB)	Height (cm)	Pol	Azimuth (deg)	Corr. (dB/m)
93.7	122.5	118.5	120.0	1.5	100.0	h	135.0	0.0

EUT Information

EUT Name:	Dolphin Sense
Model:	AMZN-DS100-G1R-M
Test Mode:	WIFI 2.4G_11b_Ch1
Order No/Sample No:	A004385930-002
Test Voltage:	DC 12V
Remark:	Temp 23 Humi:53%
Test Standard:	FCC 15.247
Tested By:	Kei Zhang
Reviewed By:	Terry Yin



Critical Freqs

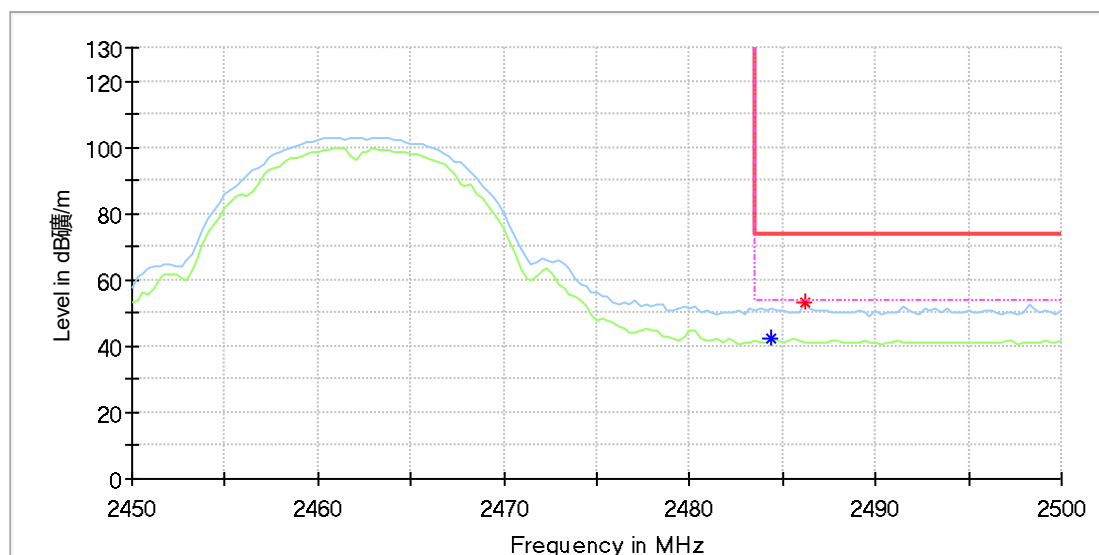
Frequency (MHz)	MaxPeak (dBμV/m)	Average (dBμV/m)	Limit (dBμV/m)	Margin (dB)	Height (cm)	Pol	Azimuth (deg)	Corr. (dB/m)
2360.294118	51.67	---	74.00	22.33	150.0	V	264.0	8.5
2360.588235	---	41.56	54.00	12.44	150.0	V	264.0	8.5

Final Result

Frequency (MHz)	MaxPeak (dBμV/m)	Average (dBμV/m)	Limit (dBμV/m)	Margin (dB)	Height (cm)	Pol	Azimuth (deg)	Corr. (dB/m)
93.750 MHz	93.750 dBμV/m	93.750 dBμV/m	93.750 dBμV/m	93.750 dB	93.750 cm	93.750	93.750	93.750

EUT Information

EUT Name:	Dolphin Sense
Model:	AMZN-DS100-G1R-M
Test Mode:	WIFI 2.4G_11b_Ch11
Order No/Sample No:	A004385930-002
Test Voltage:	DC 12V
Remark:	Temp 23 Humi:53%
Test Standard:	FCC 15.247
Tested By:	Kei Zhang
Reviewed By:	Terry Yin



Critical Freqs

Frequency (MHz)	MaxPeak (dBμV/m)	Average (dBμV/m)	Limit (dBμV/m)	Margin (dB)	Height (cm)	Pol	Azimuth (deg)	Corr. (dB/m)
2484.411765	---	42.28	54.00	11.72	150.0	H	164.0	9.0
2486.176471	52.96	---	74.00	21.04	150.0	H	322.0	9.0

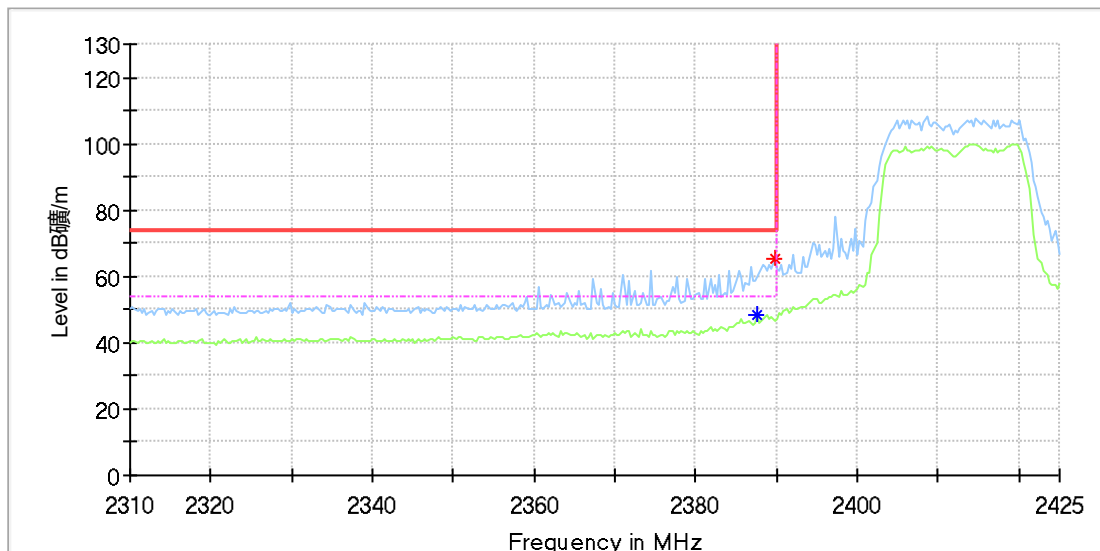
Final Result

Frequency (MHz)	MaxPeak (dBμV/m)	Average (dBμV/m)	Limit (dBμV/m)	Margin (dB)	Height (cm)	Pol	Azimuth (deg)	Corr. (dB/m)
100.000000	100.000000	100.000000	100.000000	100.000000	100.000000		100.000000	100.000000

Wi-Fi 802.11 g mode

EUT Information

EUT Name:	Dolphin Sense
Model:	AMZN-DS100-G1R-M
Test Mode:	WIFI 2.4G_11g_Ch1
Order No/Sample No:	A004385930-002
Test Voltage:	DC 12V
Remark:	Temp 23 Humi:53%
Test Standard:	FCC 15.247
Tested By:	Kei Zhang
Reviewed By:	Terry Yin



Critical_Freqs

Frequency (MHz)	MaxPeak (dBμV/m)	Average (dBμV/m)	Limit (dBμV/m)	Margin (dB)	Height (cm)	Pol	Azimuth (deg)	Corr. (dB/m)
2387.647059	---	48.16	54.00	5.84	150.0	H	205.0	8.5
2389.705882	65.43	---	74.00	8.57	150.0	H	12.0	8.5

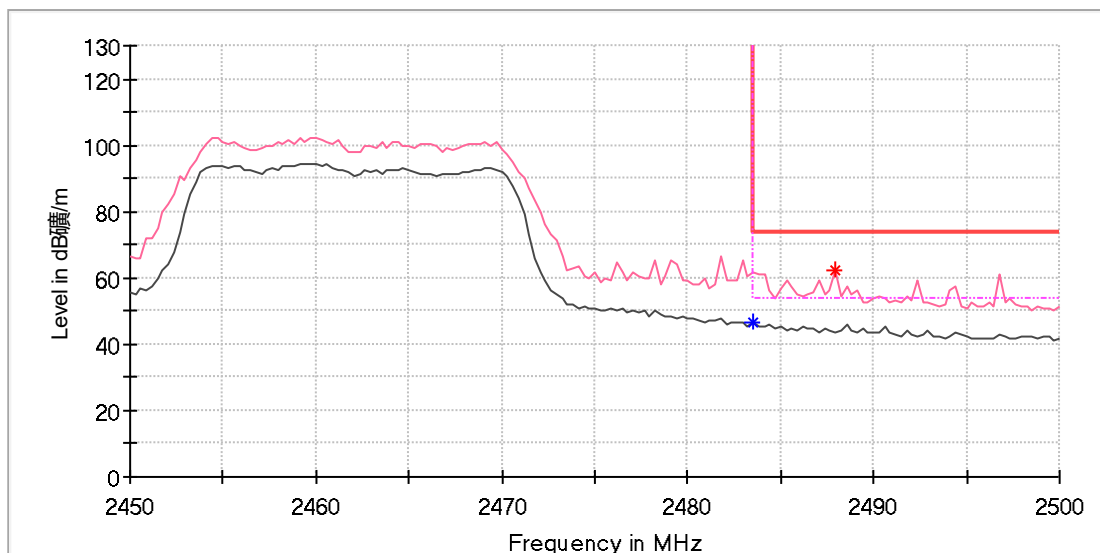
Final Result

Frequency (MHz)	MaxPeak (dBµV/m)	Average (dBµV/m)	Limit (dBµV/m)	Margin (dB)	Height (cm)	Pol	Azimuth (deg)	Corr. (dB/m)
---	---	---	---	---	---		---	---

EUT Information

EUT Information

EUT Name:	Dolphin Sense
Model:	AMZN-DS100-G1R-M
Test Mode:	WIFI 2.4G_11g_Ch11
Order No/Sample No:	A004385930-002
Test Voltage:	DC 12V
Remark:	Temp 23 Humi:53%
Test Standard:	FCC 15.247
Tested By:	Kei Zhang
Reviewed By:	Terry Yin



Critical_Freqs

Frequency (MHz)	MaxPeak (dBμV/m)	Average (dBμV/m)	Limit (dBμV/m)	Margin (dB)	Height (cm)	Pol	Azimuth (deg)	Corr. (dB/m)
2483.529412	---	46.28	54.00	7.72	150.0	V	0.0	9.0
2487.941177	62.27	---	74.00	11.73	150.0	V	28.0	9.0

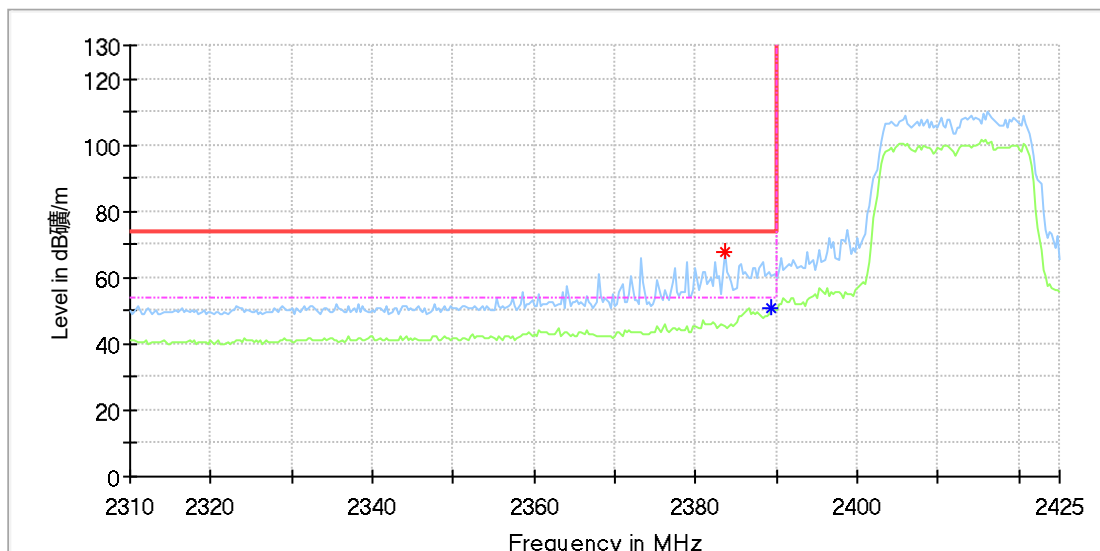
Final_Result

Frequency (MHz)	MaxPeak (dBμV/m)	Average (dBμV/m)	Limit (dBμV/m)	Margin (dB)	Height (cm)	Pol	Azimuth (deg)	Corr. (dB/m)
90.000	-78.00	-78.00	-78.00	22.00	100.00	V	0.00	0.00

Wi-Fi 802.11 n(HT20) mode

EUT Information

EUT Name:	Dolphin Sense
Model:	AMZN-DS100-G1R-M
Test Mode:	WIFI 2.4G_11n20_Ch1
Order No/Sample No:	A004385930-002
Test Voltage:	DC 12V
Remark:	Temp 23 Humi:53%
Test Standard:	FCC 15.247
Tested By:	Kei Zhang
Reviewed By:	Terry Yin



Critical Freqs

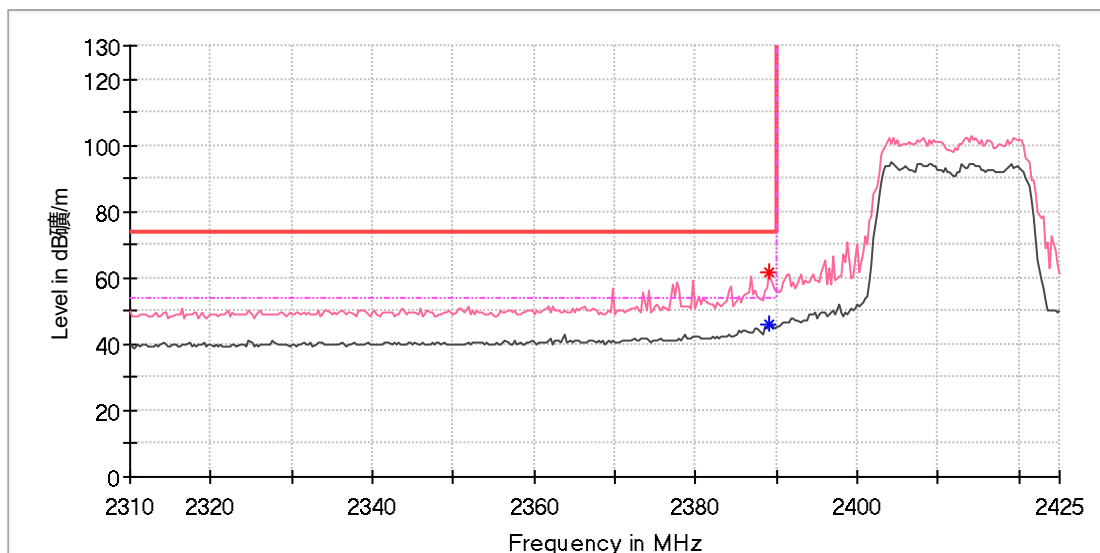
Frequency (MHz)	MaxPeak (dBµV/m)	Average (dBµV/m)	Limit (dBµV/m)	Margin (dB)	Height (cm)	Pol	Azimuth (deg)	Corr. (dB/m)
2383.529412	67.64	---	74.00	6.36	150.0	H	70.0	8.5
2389.411765	---	50.93	54.00	3.07	150.0	H	170.0	8.5

Final Result

Frequency (MHz)	MaxPeak (dBμV/m)	Average (dBμV/m)	Limit (dBμV/m)	Margin (dB)	Height (cm)	Pol	Azimuth (deg)	Corr. (dB/m)
---	---	---	---	---	---		---	---

EUT Information

EUT Name:	Dolphin Sense
Model:	AMZN-DS100-G1R-M
Test Mode:	WIFI 2.4G_11n20_Ch1
Order No/Sample No:	A004385930-002
Test Voltage:	DC 12V
Remark:	Temp 23 Humi:53%
Test Standard:	FCC 15.247
Tested By:	Kei Zhang
Reviewed By:	Terry Yin



Critical_Freqs

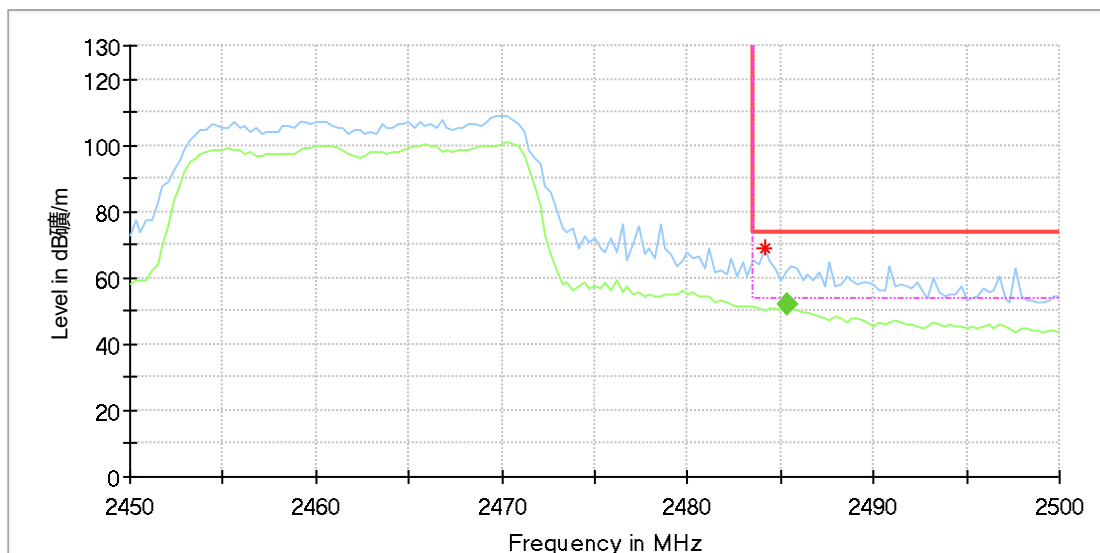
Frequency (MHz)	MaxPeak (dBμV/m)	Average (dBμV/m)	Limit (dBμV/m)	Margin (dB)	Height (cm)	Pol	Azimuth (deg)	Corr. (dB/m)
2389.117647	---	45.86	54.00	8.14	150.0	V	287.0	8.5
2389.117647	61.97	---	74.00	12.03	150.0	V	287.0	8.5

Final Result

Frequency (MHz)	MaxPeak (dBμV/m)	Average (dBμV/m)	Limit (dBμV/m)	Margin (dB)	Height (cm)	PoI	Azimuth (deg)	Corr. (dB/m)
900 000 000	900 000 000	900 000 000	900 000 000	900 000 000	900 000 000		900 000 000	900 000 000

EUT Information

EUT Name: Dolphin Sense
Model: AMZN-DS100-G1R-M
Test Mode: WIFI 2.4G_11n20_Ch11
Order No/Sample No: A004385930-002
Test Voltage: DC 12V
Remark: Temp 23 Humi:53%
Test Standard: FCC 15.247
Tested By: Kei Zhang
Reviewed By: Terry Yin



Critical_Freqs

Frequency (MHz)	MaxPeak (dBμV/m)	Average (dBμV/m)	Limit (dBμV/m)	Margin (dB)	Height (cm)	Pol	Azimuth (deg)	Corr. (dB/m)
2484.117647	68.98	---	74.00	5.02	150.0	H	99.0	9.0

Final_Result

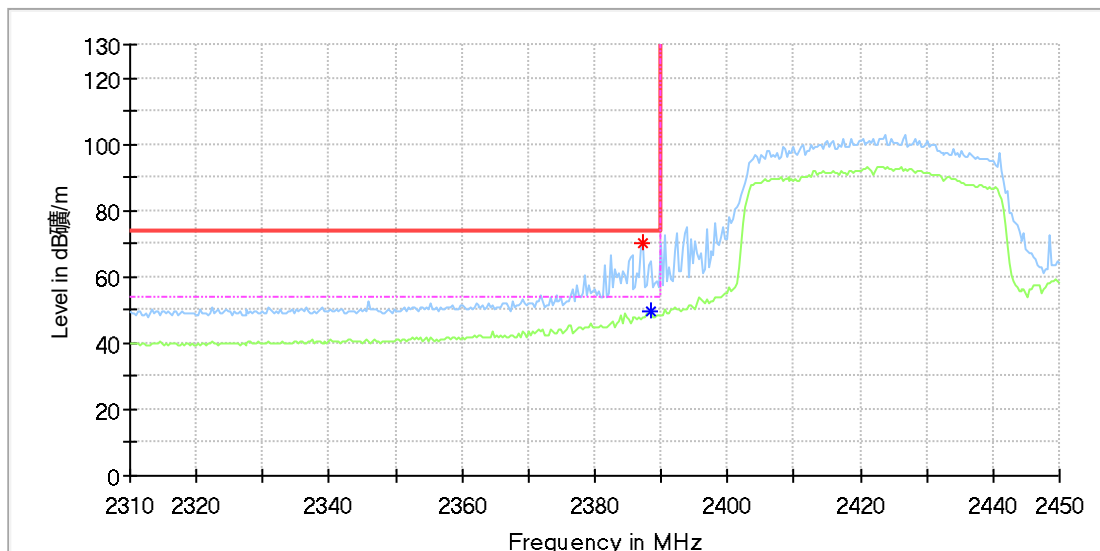
Frequency (MHz)	MaxPeak (dBμV/m)	Average (dBμV/m)	Limit (dBμV/m)	Margin (dB)	Height (cm)	Pol	Azimuth (deg)	Corr. (dB/m)
2485.294118	---	51.90	54.00	2.10	150.0	H	92.0	9.0

EUT Information

Wi-Fi 802.11 ax(HE40) mode

EUT Information

EUT Name:	Dolphin Sense
Model:	AMZN-DS100-G1R-M
Test Mode:	WIFI 2.4G_11ax40_Ch3
Order No/Sample No:	A004385930-002
Test Voltage:	DC 12V
Remark:	Temp 23 Humi:53%
Test Standard:	FCC 15.247
Tested By:	Kei Zhang
Reviewed By:	Terry Yin



Critical_Freqs

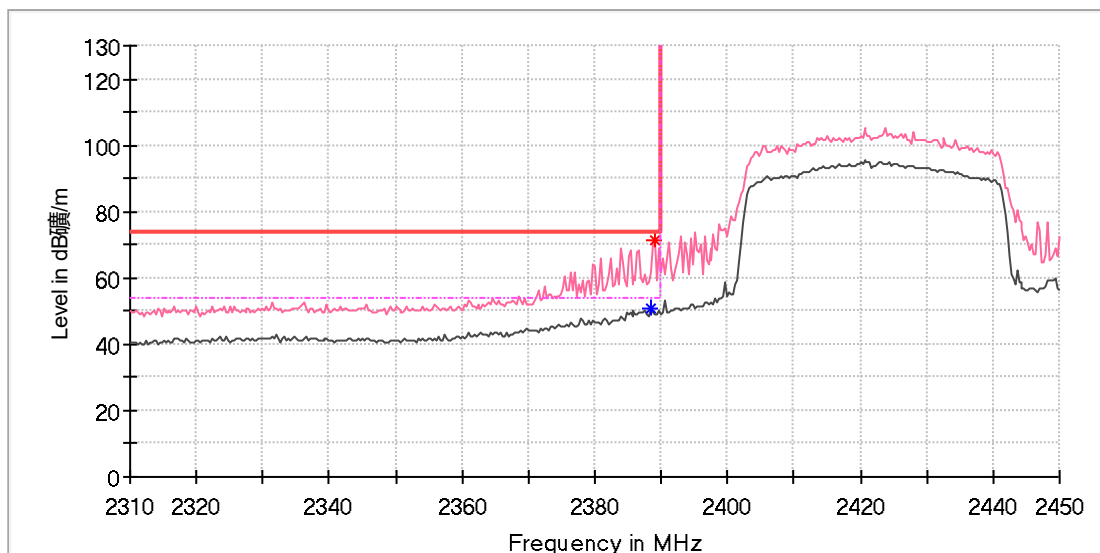
Frequency (MHz)	MaxPeak (dBµV/m)	Average (dBµV/m)	Limit (dBµV/m)	Margin (dB)	Height (cm)	Pol	Azimuth (deg)	Corr. (dB/m)
2387.352941	70.34	---	74.00	3.66	150.0	H	345.0	8.5
2388.529412	---	49.31	54.00	4.69	150.0	H	345.0	8.5

Final Result

Frequency (MHz)	MaxPeak (dBμV/m)	Average (dBμV/m)	Limit (dBμV/m)	Margin (dB)	Height (cm)	Pol	Azimuth (deg)	Corr. (dB/m)
93.7	122.0	118.0	120.0	2.0	30.0	V	135	0.0

EUT Information

EUT Name:	Dolphin Sense
Model:	AMZN-DS100-G1R-M
Test Mode:	WIFI 2.4G_11ax40_Ch3
Order No/Sample No:	A004385930-002
Test Voltage:	DC 12V
Remark:	Temp 23 Humi:53%
Test Standard:	FCC 15.247
Tested By:	Kei Zhang
Reviewed By:	Terry Yin



Critical_Freqs

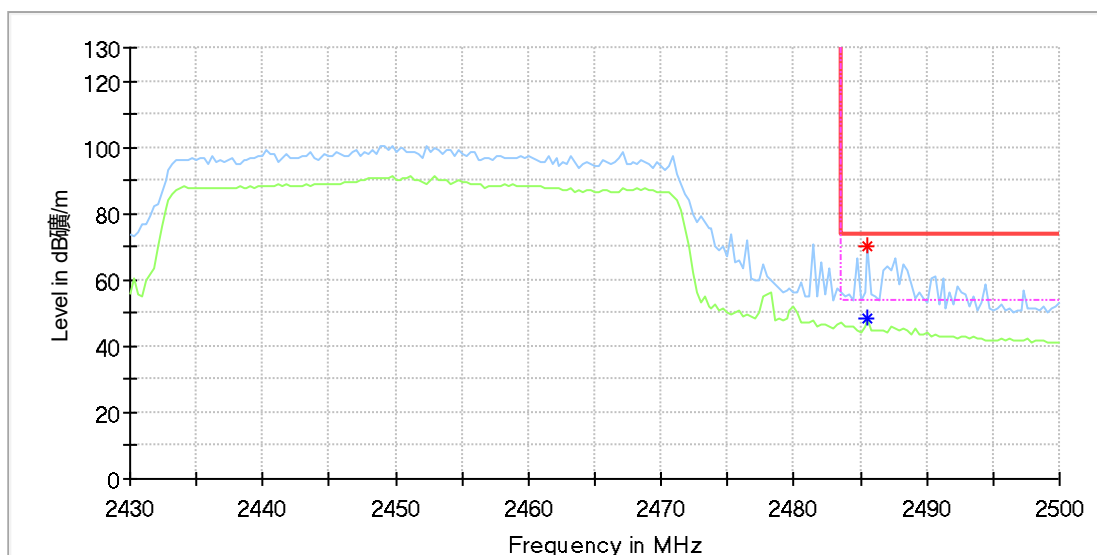
Frequency (MHz)	MaxPeak (dBμV/m)	Average (dBμV/m)	Limit (dBμV/m)	Margin (dB)	Height (cm)	Pol	Azimuth (deg)	Corr. (dB/m)
2388.529412	---	50.97	54.00	3.03	150.0	V	285.0	8.5
2389.117647	71.09	---	74.00	2.91	150.0	V	232.0	8.5

Final Result

Frequency (MHz)	MaxPeak (dBμV/m)	Average (dBμV/m)	Limit (dBμV/m)	Margin (dB)	Height (cm)	Pol	Azimuth (deg)	Corr. (dB/m)
93.750000	120.000000	110.000000	120.000000	0.000000	100.000000	000	000	000

EUT Information

EUT Name:	Dolphin Sense
Model:	AMZN-DS100-G1R-M
Test Mode:	WIFI 2.4G_11ax40_Ch9
Order No/Sample No:	A004385930-002
Test Voltage:	DC 12V
Remark:	Temp 23 Humi:53%
Test Standard:	FCC 15.247
Tested By:	Kei Zhang
Reviewed By:	Terry Yin



Critical Freqs

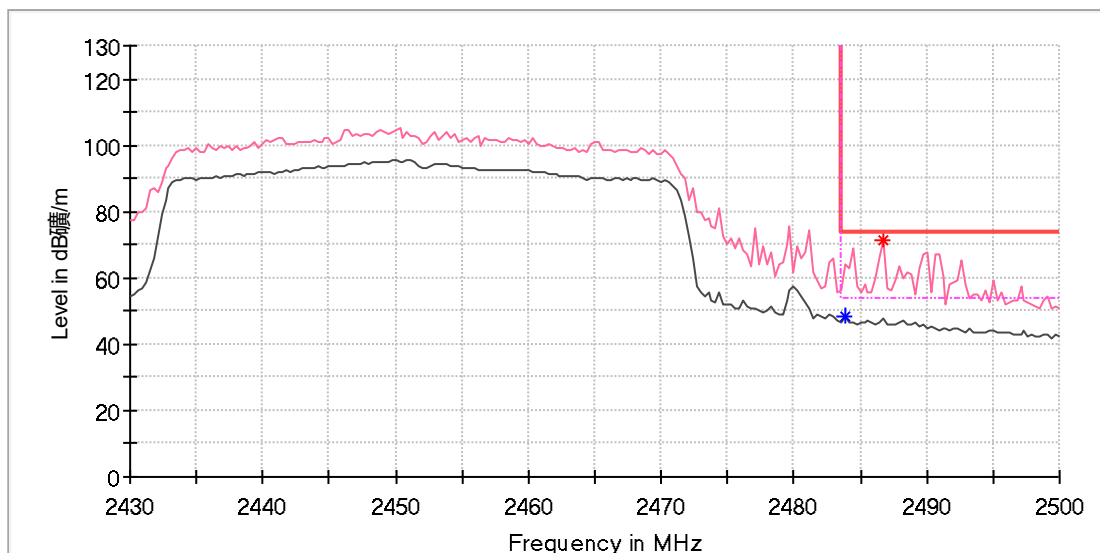
Frequency (MHz)	MaxPeak (dBμV/m)	Average (dBμV/m)	Limit (dBμV/m)	Margin (dB)	Height (cm)	Pol	Azimuth (deg)	Corr. (dB/m)
2485.588235	---	48.19	54.00	5.81	150.0	H	163.0	9.0
2485.588235	69.98	---	74.00	4.02	150.0	H	163.0	9.0

Final Result

Frequency (MHz)	MaxPeak (dBμV/m)	Average (dBμV/m)	Limit (dBμV/m)	Margin (dB)	Height (cm)	Pol	Azimuth (deg)	Corr. (dB/m)
93.750 MHz	120.000 dBμV/m	110.000 dBμV/m	120.000 dBμV/m	0.000 dB	300.000 cm	000	000	0.000 dB/m

EUT Information

EUT Name:	Dolphin Sense
Model:	AMZN-DS100-G1R-M
Test Mode:	WIFI 2.4G_11ax40_Ch9
Order No/Sample No:	A004385930-002
Test Voltage:	DC 12V
Remark:	Temp 23 Humi:53%
Test Standard:	FCC 15.247
Tested By:	Kei Zhang
Reviewed By:	Terry Yin



Critical_Freqs

Frequency (MHz)	MaxPeak (dBµV/m)	Average (dBµV/m)	Limit (dBµV/m)	Margin (dB)	Height (cm)	Pol	Azimuth (deg)	Corr. (dB/m)
2483.823529	---	48.08	54.00	5.92	150.0	V	96.0	9.0
2486.764706	71.19	---	74.00	2.81	150.0	V	91.0	9.0

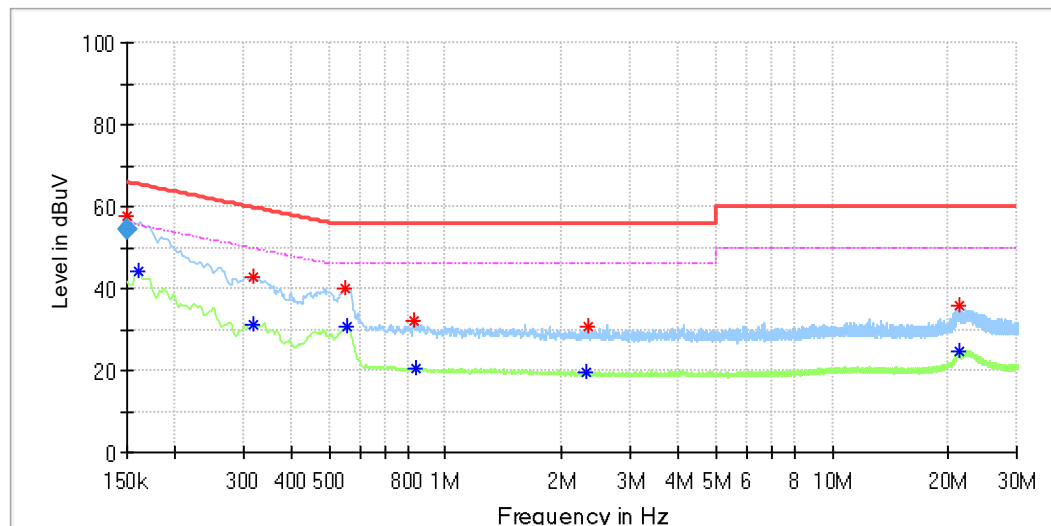
Final_Result

Frequency (MHz)	MaxPeak (dBμV/m)	Average (dBμV/m)	Limit (dBμV/m)	Margin (dB)	Height (cm)	Pol	Azimuth (deg)	Corr. (dB/m)
93.750 MHz	100.000 dBμV/m	90.000 dBμV/m	100.000 dBμV/m	0.000 dB	100.000 cm	000.000	000.000	000.000

Appendix B.8: Test Results of Conducted Emission on AC Mains

EUT Information

EUT Name: Dolphin Sense
Model: AMZN-DS100-G1R-M
Sample: A004385930-001~002
Test Mode: Wireless Connecting
Test Voltage: AC 120V60Hz
Remark: Temp:24.3 ; Humi:51.1%
Test standard: FCC Part 15B
Tested By: Xin Zhang
Reviewed by: Charlie Zha



Critical_Freqs

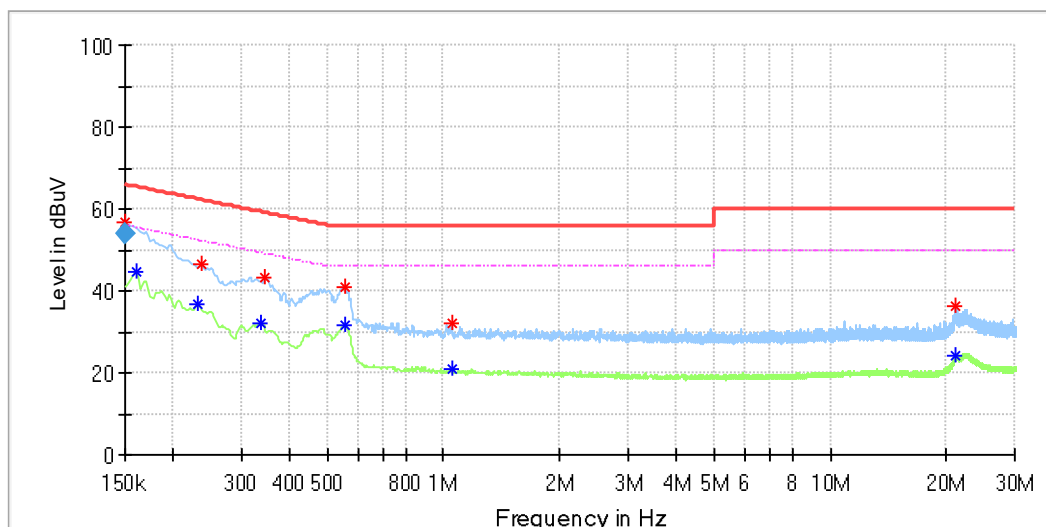
Frequency (MHz)	MaxPeak (dBuV)	Average (dBuV)	Limit (dBuV)	Margin (dB)	Line	Corr. (dB)
0.15	57.76	---	66.00	8.24	L1	9.53
0.16	---	44.42	55.47	11.05	L1	9.58
0.32	---	30.96	49.79	18.83	L1	9.59
0.32	42.59	---	59.79	17.20	L1	9.59
0.55	39.88	---	56.00	16.12	L1	9.54
0.56	---	30.70	46.00	15.30	L1	9.55
0.83	32.11	---	56.00	23.89	L1	9.71
0.84	---	20.34	46.00	25.66	L1	9.70
2.31	---	19.66	46.00	26.34	L1	9.59
2.32	30.62	---	56.00	25.38	L1	9.59
21.25	35.89	---	60.00	24.11	L1	9.80
21.31	---	24.70	50.00	25.30	L1	9.80

Final_Result

Frequency (MHz)	QuasiPeak (dBuV)	Average (dBuV)	Limit (dBuV)	Margin (dB)	Meas. Time (ms)	Bandwidth (kHz)	Line	Corr. (dB)
0.15	54.25	---	66.00	11.75	1000.00	9.00	L1	9.53

EUT Information

EUT Name: Dolphin Sense
Model: AMZN-DS100-G1R-M
Sample: A004385930-001~002
Test Mode: Wireless Connecting
Test Voltage: AC 120V60Hz
Remark: Temp:24.3 ; Humi:51.1%
Test standard: FCC Part 15B
Tested By: Xin Zhang
Reviewed by: Charlie Zha



Critical Freqs

Frequency (MHz)	MaxPeak (dBuV)	Average (dBuV)	Limit (dBuV)	Margin (dB)	Line	Corr. (dB)
0.15	56.81	---	66.00	9.19	N	9.73
0.16	---	44.46	55.47	11.01	N	9.78
0.23	---	36.62	52.38	15.75	N	9.94
0.24	46.31	---	62.20	15.89	N	9.94
0.34	---	31.96	49.29	17.32	N	9.94
0.35	43.49	---	59.05	15.56	N	9.95
0.55	40.93	---	56.00	15.07	N	9.92
0.56	---	31.56	46.00	14.44	N	9.92
1.05	32.13	---	56.00	23.87	N	9.77
1.05	---	20.86	46.00	25.14	N	9.77
21.09	---	24.28	50.00	25.72	N	9.75
21.12	36.26	---	60.00	23.74	N	9.75

Final Result

Frequency (MHz)	QuasiPeak (dBuV)	Average (dBuV)	Limit (dBuV)	Margin (dB)	Meas. Time (ms)	Bandwidth (kHz)	Line	Corr. (dB)
0.15	53.72	---	66.00	12.28	1000.00	9.00	N	9.73