

Appendix A: Test Results of Bluetooth BR & EDR

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Appendix A.1: Test Results of 20dB Bandwidth

Test Result

TestMode	Antenna	Channel	20db EBW[MHz]	FL[MHz]	FH[MHz]	Limit[MHz]	Verdict
DH5	Ant1	2402	1.032	2401.481	2402.513	---	PASS
		2441	1.008	2440.484	2441.492	---	PASS
		2480	1.005	2479.505	2480.510	---	PASS
3DH5	Ant1	2402	1.239	2401.361	2402.600	---	PASS
		2441	1.236	2440.364	2441.600	---	PASS
		2480	1.251	2479.355	2480.606	---	PASS

DH5 Ant1 2402





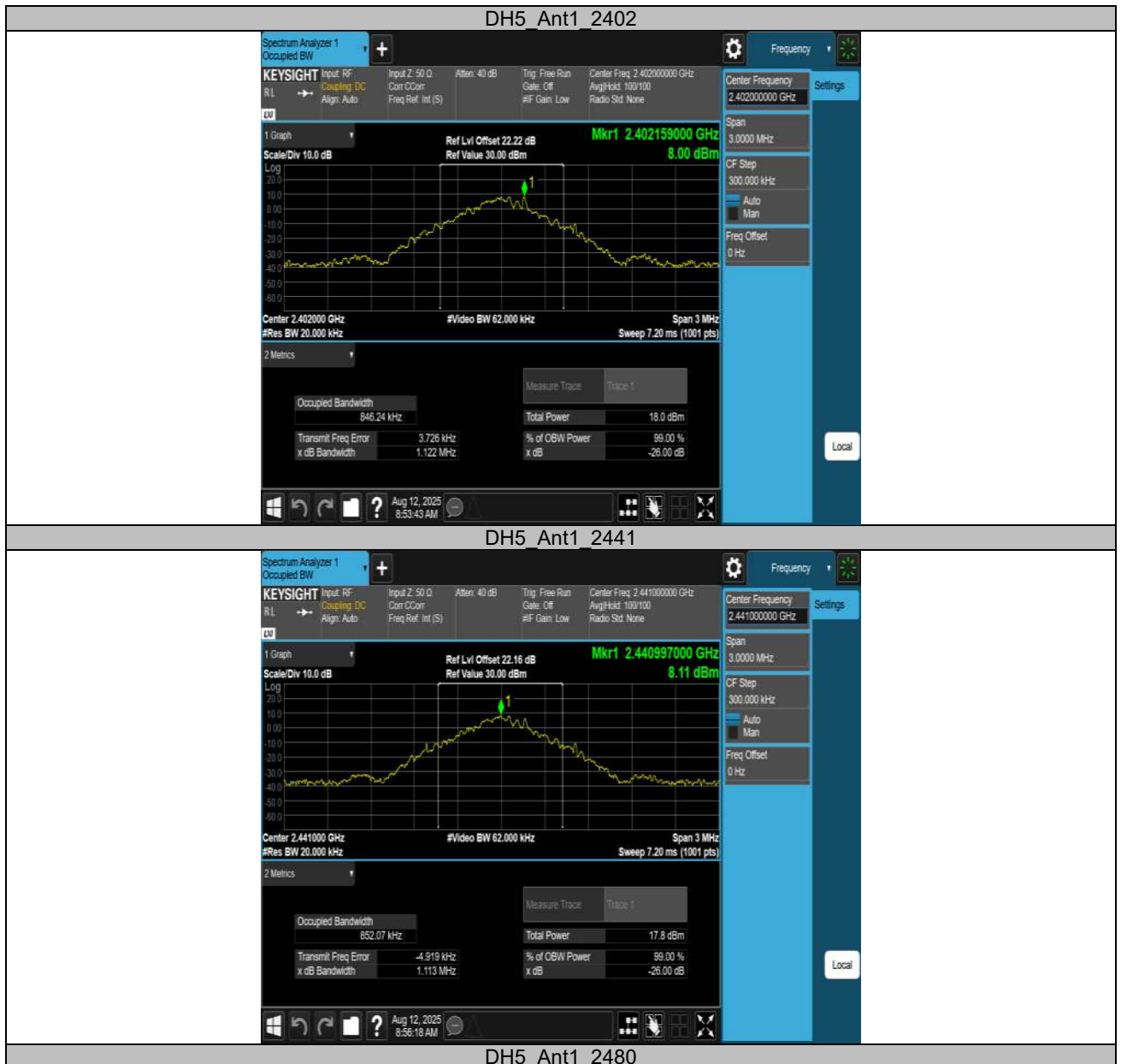


Appendix A.2: Test Results of 99% Bandwidth

Test Result

TestMode	Antenna	Channel	OCB [MHz]	FL[MHz]	FH[MHz]	Limit[MHz]	Verdict
DH5	Ant1	2402	0.84624	2401.5806	2402.4269	---	PASS
		2441	0.85207	2440.5690	2441.4211	---	PASS
		2480	0.85164	2479.5827	2480.4343	---	PASS
3DH5	Ant1	2402	1.1668	2401.4079	2402.5747	---	PASS
		2441	1.1676	2440.4053	2441.5729	---	PASS
		2480	1.1645	2479.4096	2480.5741	---	PASS

Test Graphs







Appendix A.3: Test Results of Carrier Frequency Separation

Test Result

TestMode	Antenna	Channel	Result[MHz]	Limit[MHz]	Verdict
DH5	Ant1	Hop	1.088	≥ 1.032	PASS
3DH5	Ant1	Hop	1.158	≥ 0.834	PASS

Test Graphs

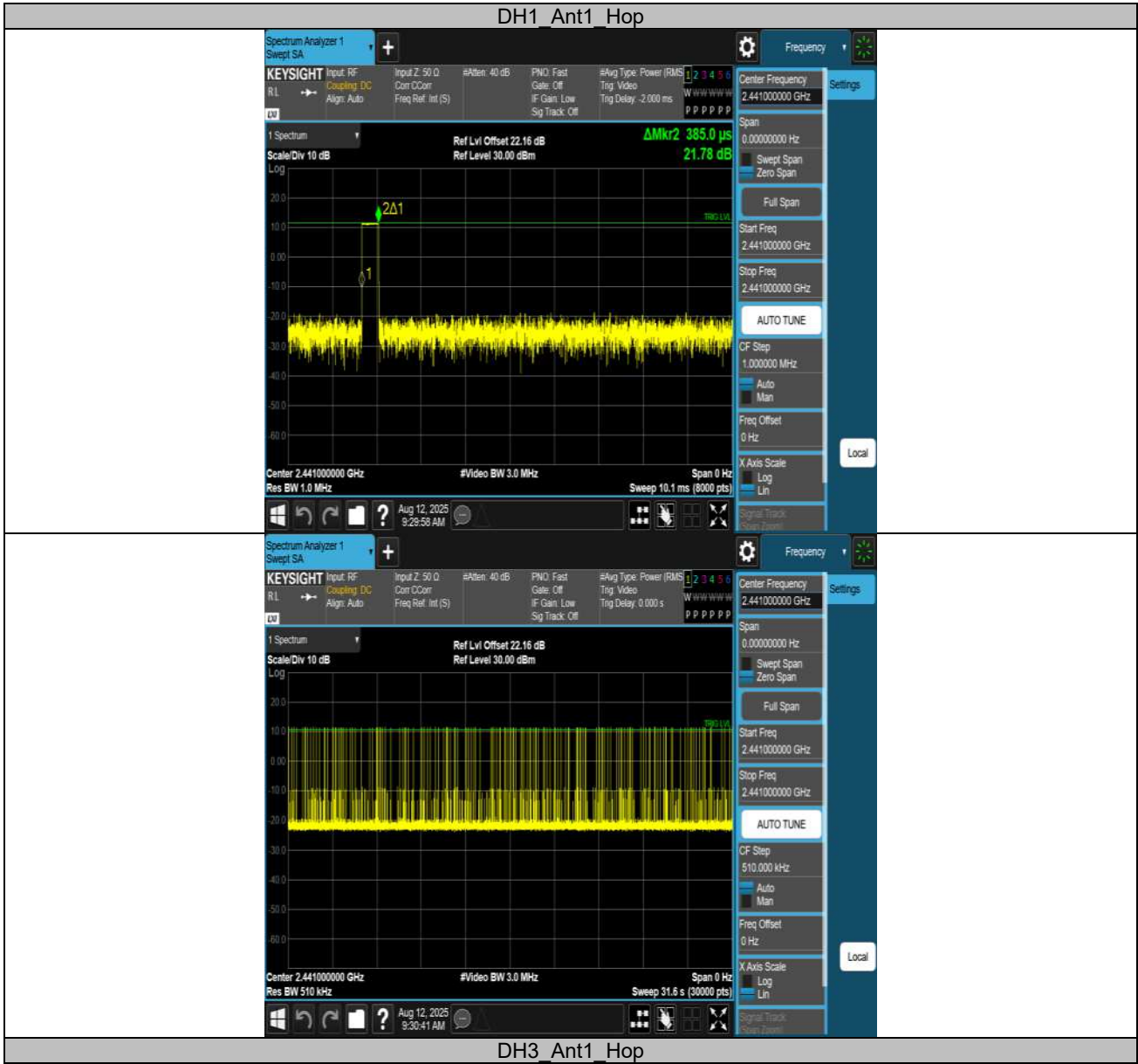


Appendix A.4: Test Results of Time of Occupancy

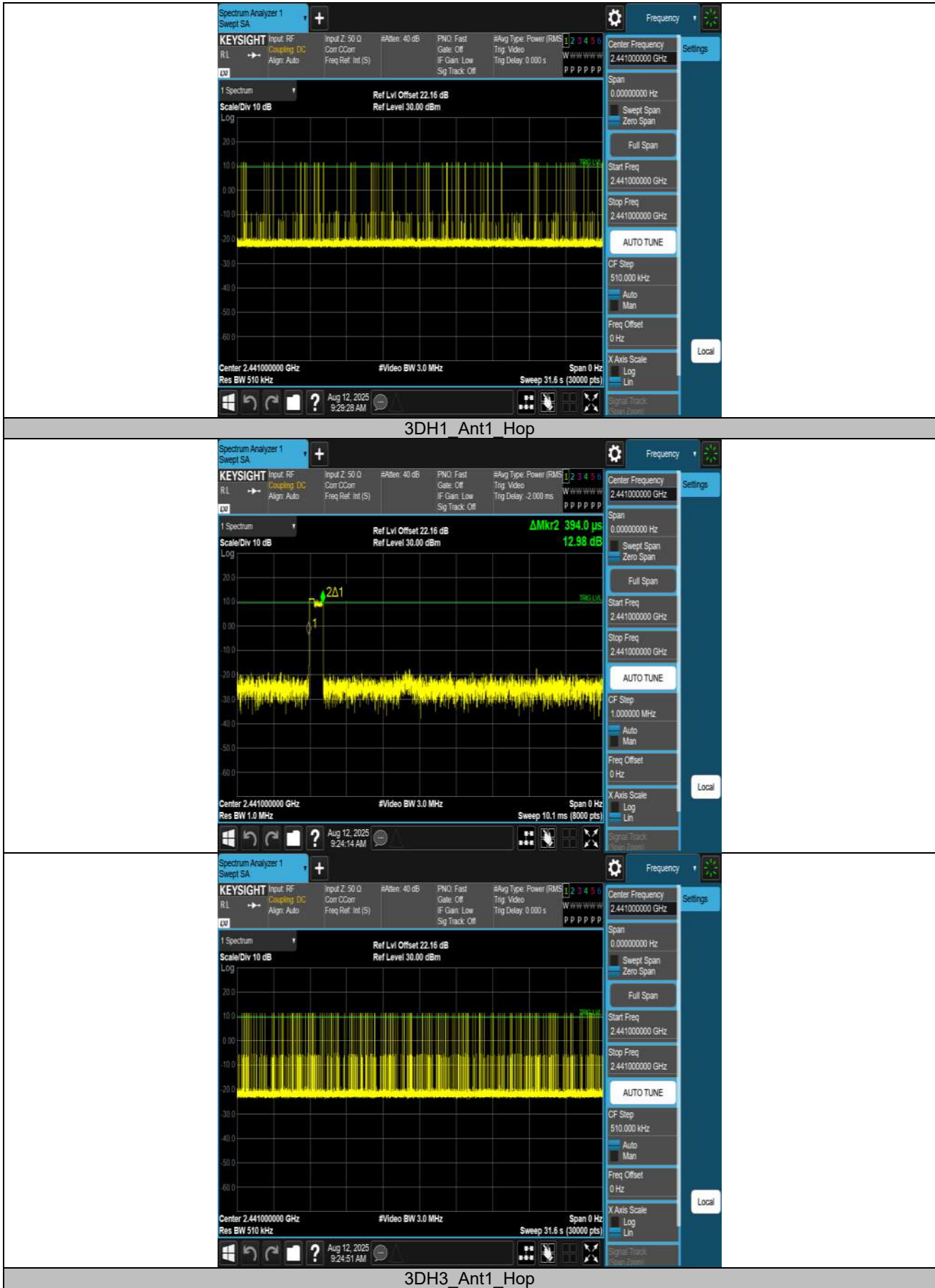
Test Result

TestMode	Antenna	Channel	BurstWidth [ms]	TotalHops [Num]	Result[s]	Limit[s]	Verdict
DH1	Ant1	Hop	0.385	150	0.058	≤0.4	PASS
DH3	Ant1	Hop	1.640	105	0.172	≤0.4	PASS
DH5	Ant1	Hop	2.888	75	0.217	≤0.4	PASS
3DH1	Ant1	Hop	0.394	165	0.065	≤0.4	PASS
3DH3	Ant1	Hop	1.644	96	0.158	≤0.4	PASS
3DH5	Ant1	Hop	2.894	81	0.234	≤0.4	PASS

Test Graphs









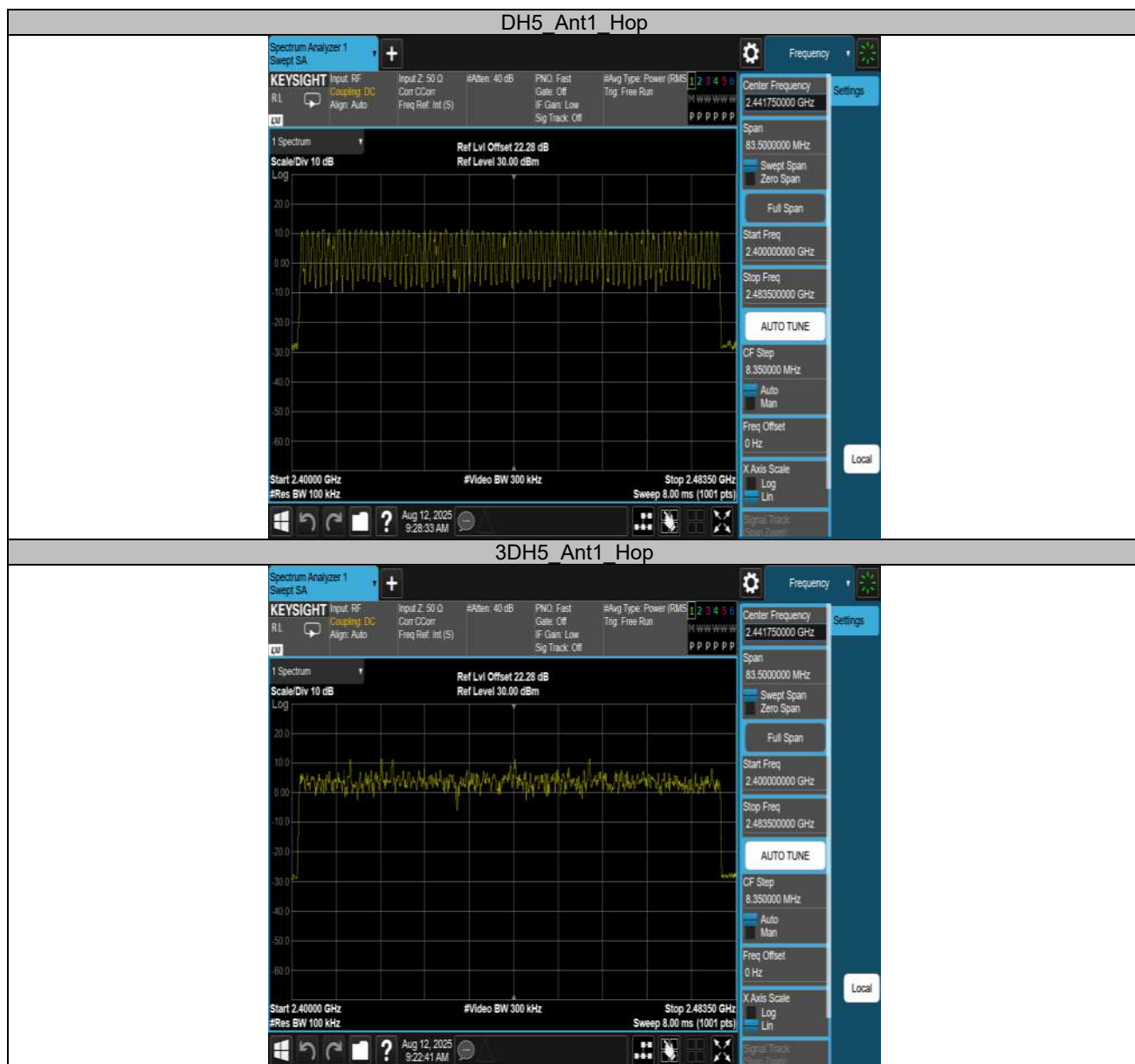


Appendix A.5: Test Results of Number of Hopping Frequency

Test Result

TestMode	Antenna	Channel	Result[Num]	Limit[Num]	Verdict
DH5	Ant1	Hop	79	≥15	PASS
3DH5	Ant1	Hop	79	≥15	PASS

Test Graphs



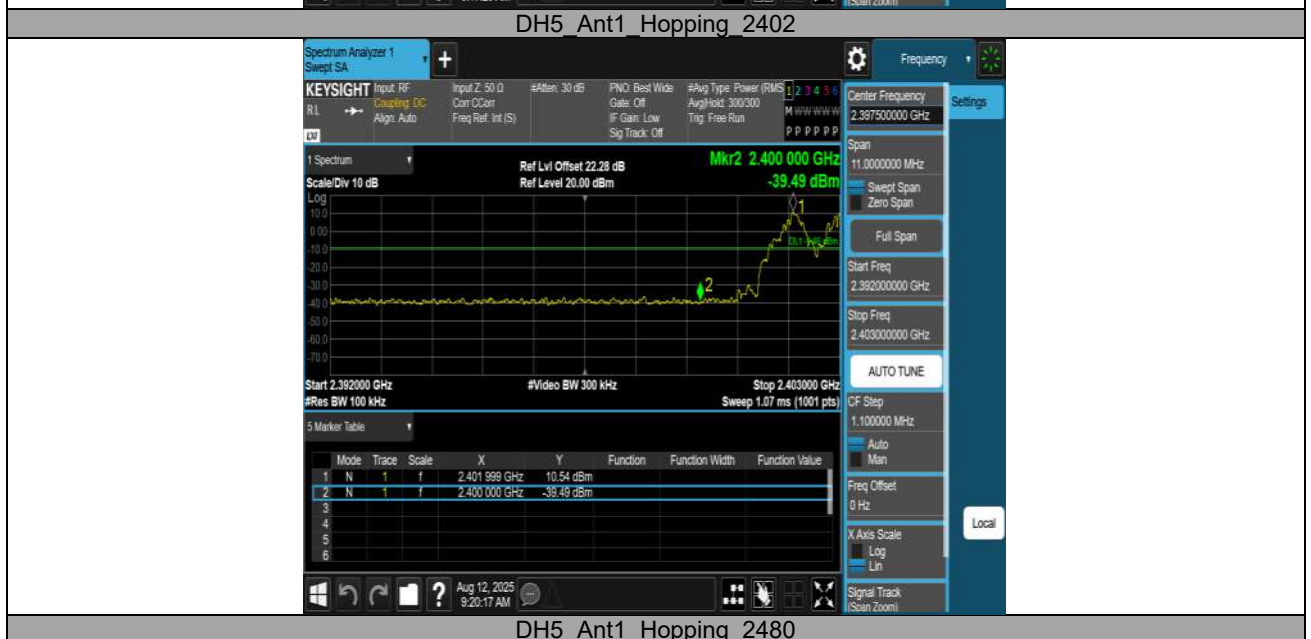
Appendix A.6: Test Results of Band Edge Measurements

Test Result

TestMode	Antenna	ChName	Channel	RefLevel [dBm]	Result [dBm]	Limit [dBm]	Verdict
DH5	Ant1	Low	2402	11.71	-39.82	≤-8.29	PASS
		High	2480	11.30	-38.77	≤-8.71	PASS
3DH5	Ant1	Low	2402	11.85	-38.85	≤-8.15	PASS
		High	2480	11.29	-39.96	≤-8.71	PASS
DH5	Ant1	Hopping	2402	10.54	-39.49	≤-9.46	PASS
		Hopping	2480	10.72	-39.75	≤-9.28	PASS
3DH5	Ant1	Hopping	2402	6.57	-38.13	≤-13.43	PASS
		Hopping	2480	5.59	-38.71	≤-14.41	PASS

Test Graphs





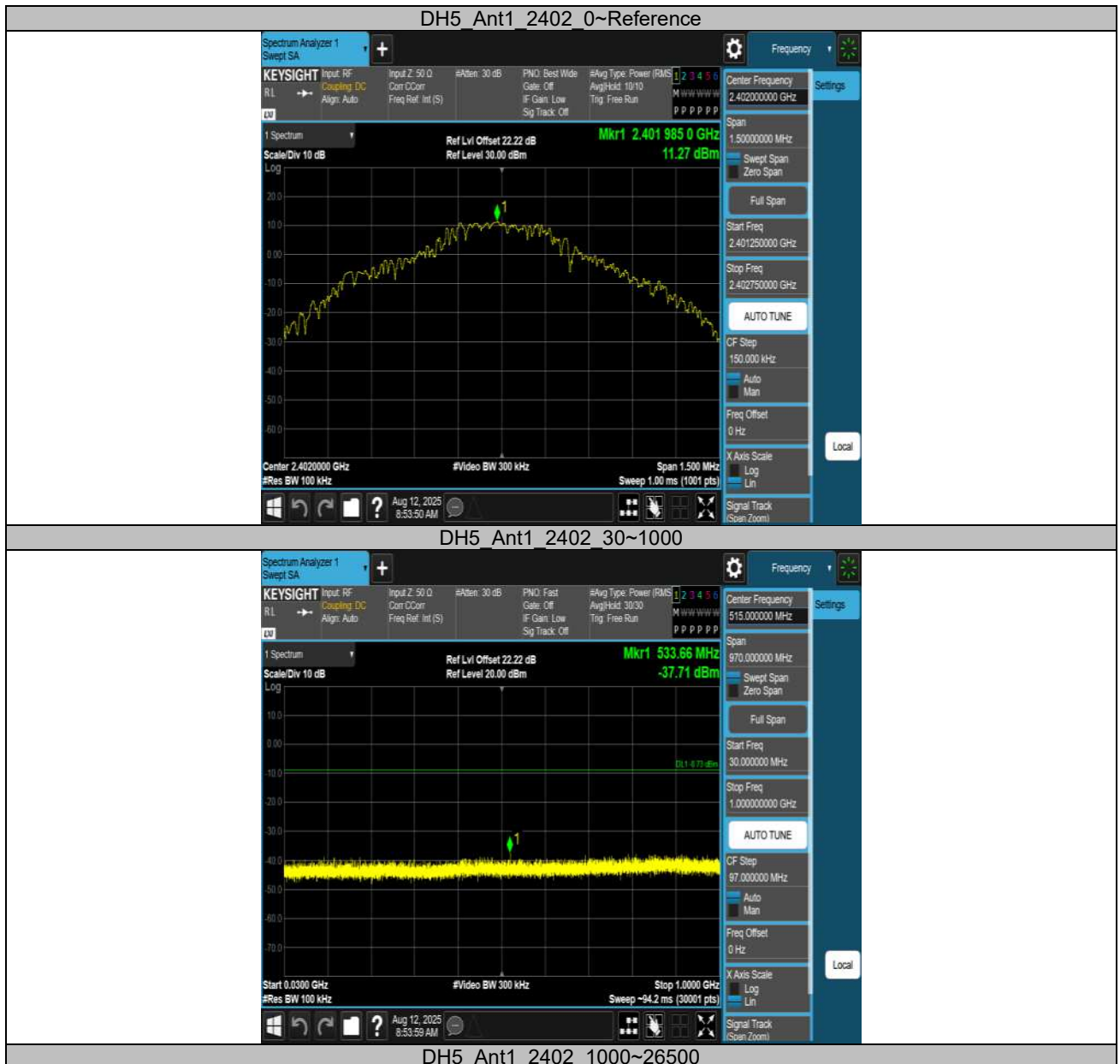


Appendix A.7: Test Results of Conducted Spurious Emission

Test Result

TestMode	Antenna	Channel	FreqRange [MHz]	RefLevel [dBm]	Result [dBm]	Limit [dBm]	Verdict
DH5	Ant1	2402	Reference	11.27	11.27	---	PASS
			30~1000	11.27	-37.71	≤-8.73	PASS
			1000~26500	11.27	-28.41	≤-8.73	PASS
		2441	Reference	11.22	11.22	---	PASS
			30~1000	11.22	-36.98	≤-8.78	PASS
			1000~26500	11.22	-28.13	≤-8.78	PASS
		2480	Reference	10.16	10.16	---	PASS
			30~1000	10.16	-36.59	≤-9.84	PASS
			1000~26500	10.16	-28.68	≤-9.84	PASS
3DH5	Ant1	2402	Reference	8.73	8.73	---	PASS
			30~1000	8.73	-36.65	≤-11.27	PASS
			1000~26500	8.73	-28.02	≤-11.27	PASS
		2441	Reference	9.51	9.51	---	PASS
			30~1000	9.51	-37.51	≤-10.49	PASS
			1000~26500	9.51	-28.08	≤-10.49	PASS
		2480	Reference	10.99	10.99	---	PASS
			30~1000	10.99	-37.58	≤-9.01	PASS
			1000~26500	10.99	-28.48	≤-9.01	PASS

Test Graphs





DH5 Ant1 2441 0~Reference



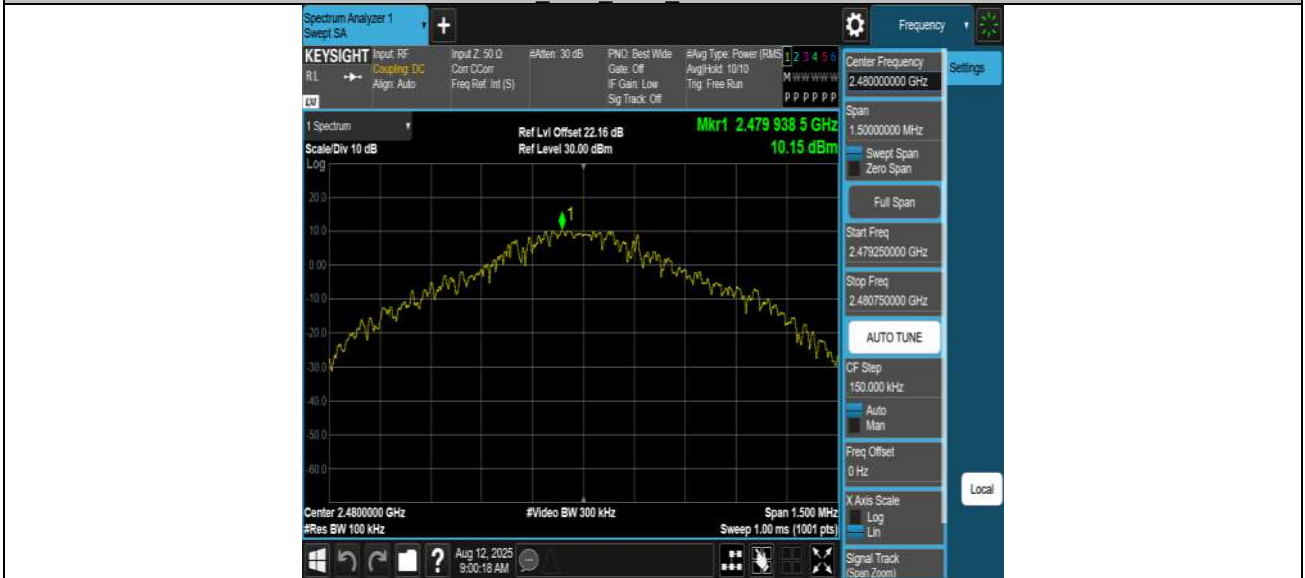
DH5 Ant1 2441 30~1000



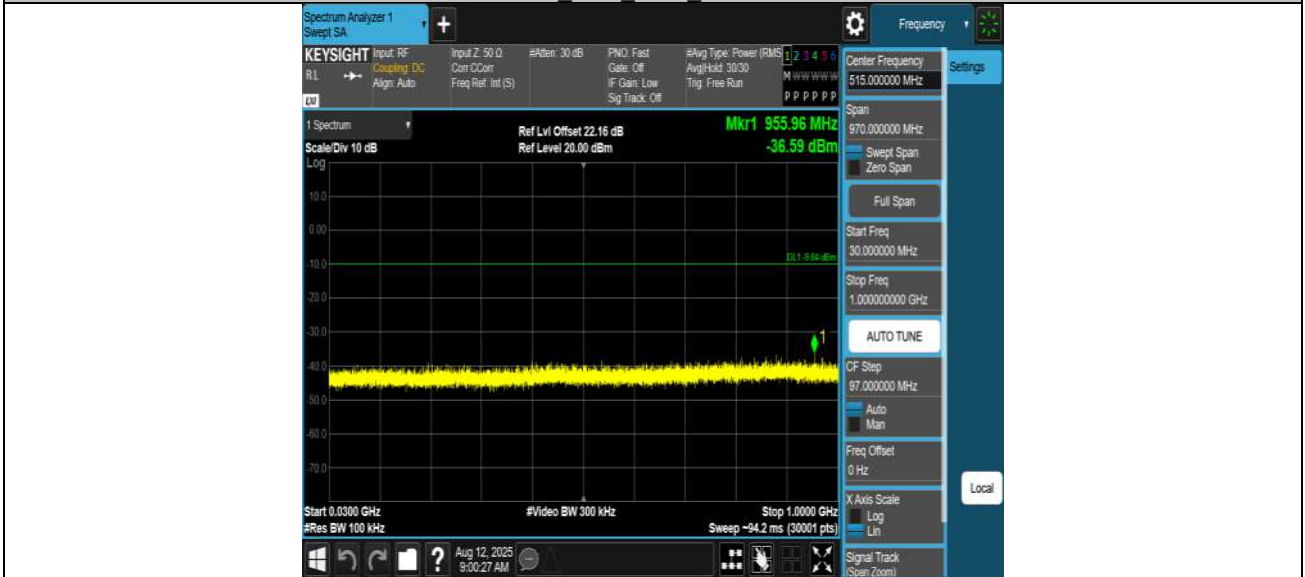
DH5 Ant1 2441 1000~26500



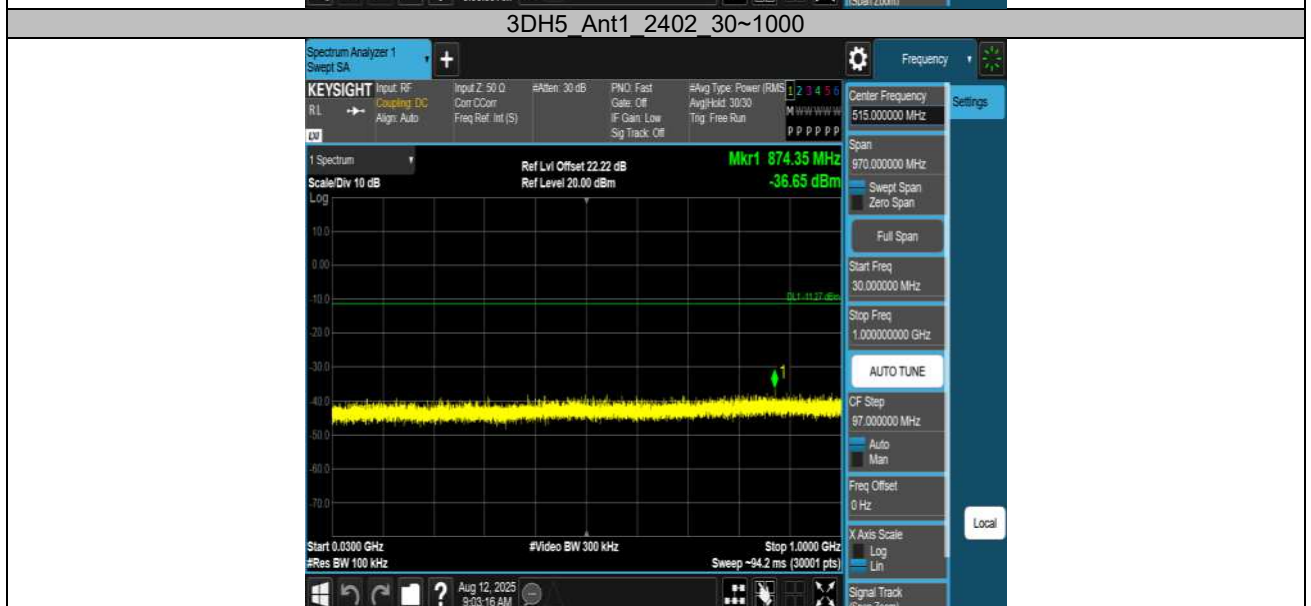
DH5 Ant1 2480 0~Reference

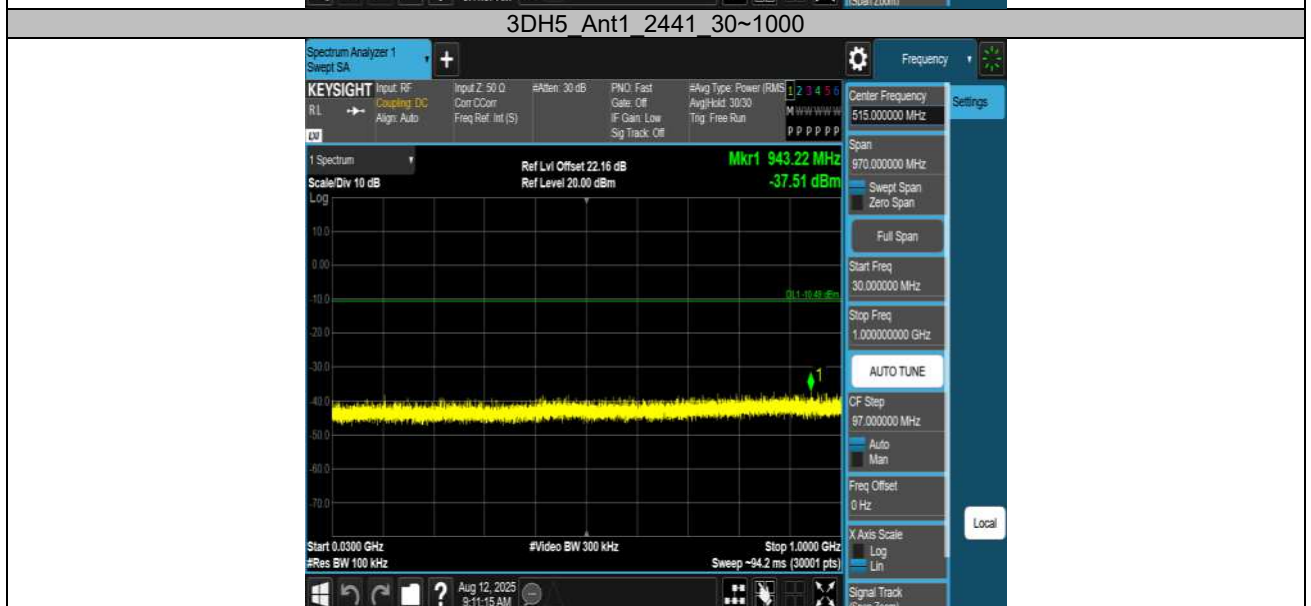


DH5 Ant1 2480 30~1000



DH5 Ant1 2480 1000~26500







3DH5_Ant1_2480_0~Reference



3DH5_Ant1_2480_30~1000



3DH5_Ant1_2480_1000~26500



Appendix A.8: Test Results of Radiated Spurious Emissions

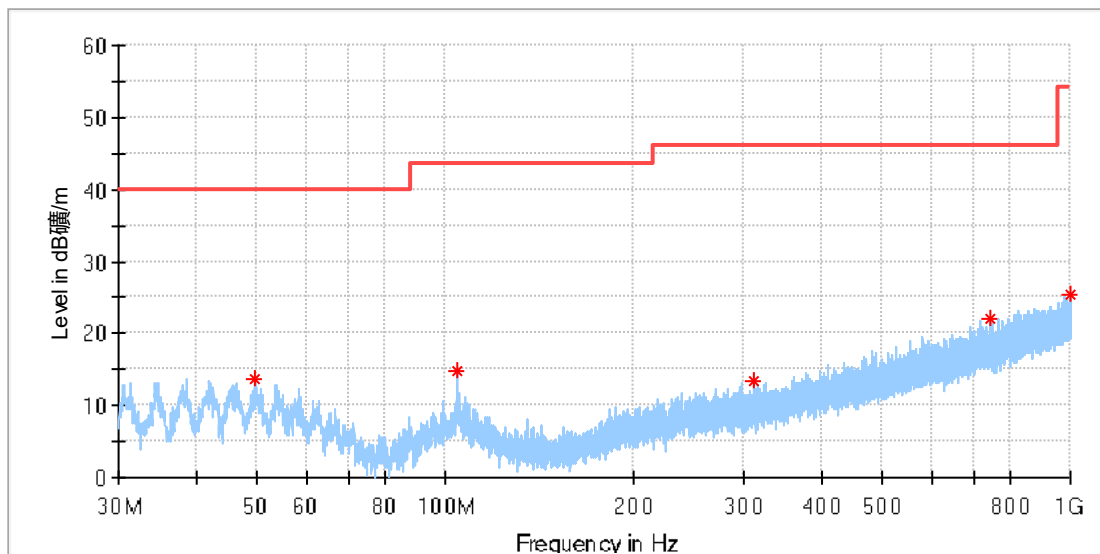
Note:

- 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.

30 MHz - 1GHz

EUT Information

EUT Name:	Lenovo Dual-Mode Wireless ANC Headset 6550
Model:	LB310NC
Test Mode:	BR_DH5_Mid channel
Order No/Sample No:	168562141/A004038636-001
Test Voltage:	Battery
Remark:	Temp 22 Humi:55%
Test Standard:	FCC 15.247
Tested By:	Kei Zhang
Reviewed By:	Terry Yin



Critical Freqs

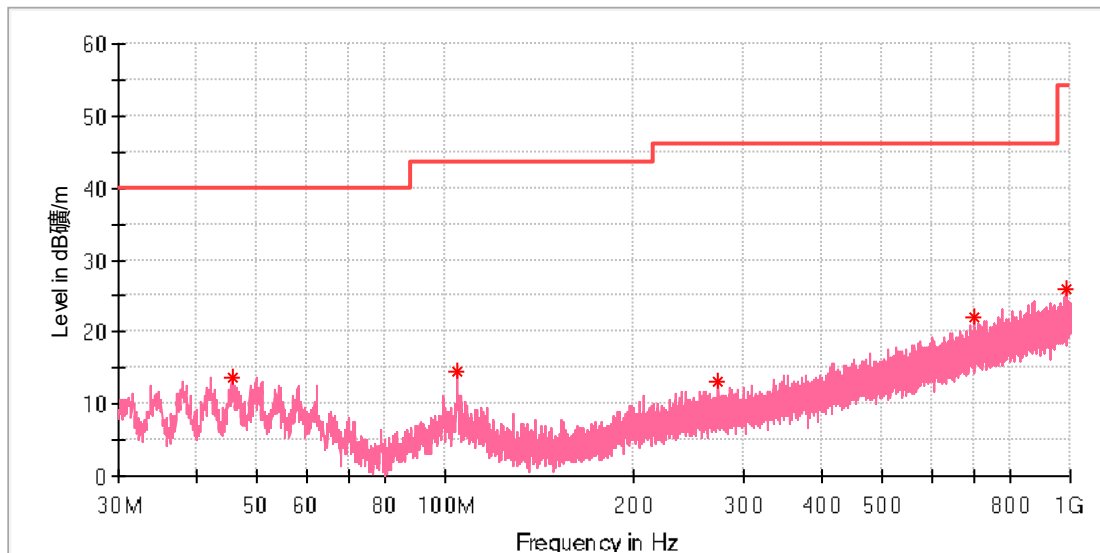
Frequency (MHz)	MaxPeak (dBμV/m)	Limit (dBμV/m)	Margin (dB)	Height (cm)	Pol	Azimuth (deg)	Corr. (dB/m)
49.735769	13.61	40.00	26.39	100.0	H	14.0	-18.4
104.690000	14.85	43.50	28.65	100.0	H	49.0	-18.9
310.852308	13.43	46.00	32.57	100.0	H	184.0	-16.0
742.502308	22.15	46.00	23.85	100.0	H	306.0	-7.2
997.537692	25.48	54.00	28.52	100.0	H	158.0	-3.5

Final Result

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

EUT Name: Lenovo Dual-Mode Wireless ANC Headset 6550
Model: LB310NC
Test Mode: BR_DH5_Mid channel
Order No/Sample No: 168562141/A004038636-001
Test Voltage: Battery
Remark: Temp 22 Humi:55%
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)
45.557308	13.71	40.00	26.29	100.0	V	227.0	-18.9
104.764615	14.41	43.50	29.09	100.0	V	262.0	-18.9
273.693846	13.22	46.00	32.78	100.0	V	192.0	-16.9
701.128077	22.00	46.00	24.00	100.0	V	5.0	-7.9
988.919615	25.83	54.00	28.17	100.0	V	227.0	-3.7

Final Result

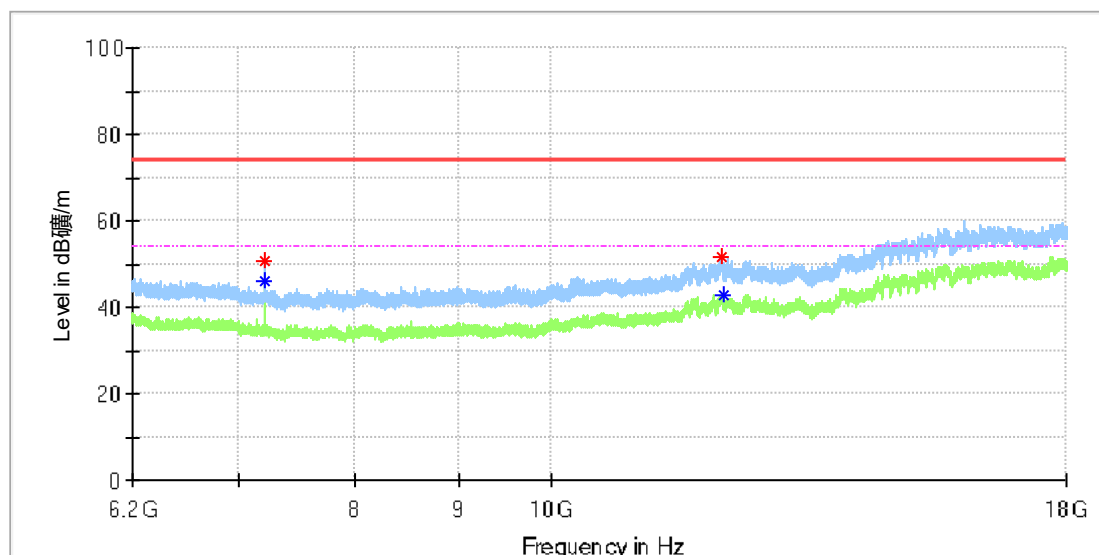
Frequency (MHz)	QuasiPeak (dBμV/m)	Limit (dBμV/m)	Margin (dB)	Height (cm)	Pol	Azimuth (deg)	Corr. (dB/m)
---	---	---	---	---		---	---

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

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:	Lenovo Dual-Mode Wireless ANC Headset 6550
Model:	LB310NC
Test Mode:	BR_DH5_Low channel
Order No/Sample No:	168562141/A004038636-001
Test Voltage:	Battery
Remark:	Temp 22 Humi:55%
Test Standard:	FCC 15.247
Tested By:	Kei Zhang
Reviewed By:	Terry Yin



Critical Freqs

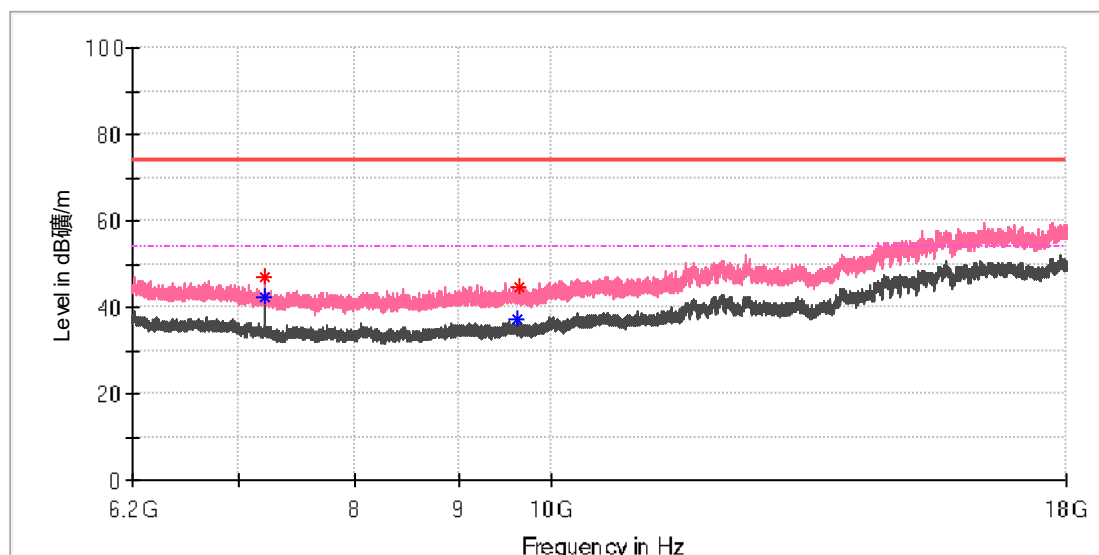
Frequency (MHz)	MaxPeak (dBμV/m)	Average (dBμV/m)	Limit (dBμV/m)	Margin (dB)	Height (cm)	Pol	Azimuth (deg)	Corr. (dB/m)
7205.458333	---	45.84	54.00	8.16	150.0	H	239.0	8.8
7205.950000	50.92	---	74.00	23.08	150.0	H	239.0	8.8
12136.383333	51.82	---	74.00	22.18	150.0	H	0.0	16.4
12168.341667	---	42.91	54.00	11.09	150.0	H	284.0	15.8

Final Result

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

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Order No/Sample No:	168562141/A004038636-001
Test Voltage:	Battery
Remark:	Temp 22 Humi:55%
Test Standard:	FCC 15.247
Tested By:	Kei Zhang
Reviewed By:	Terry Yin



Critical Freqs

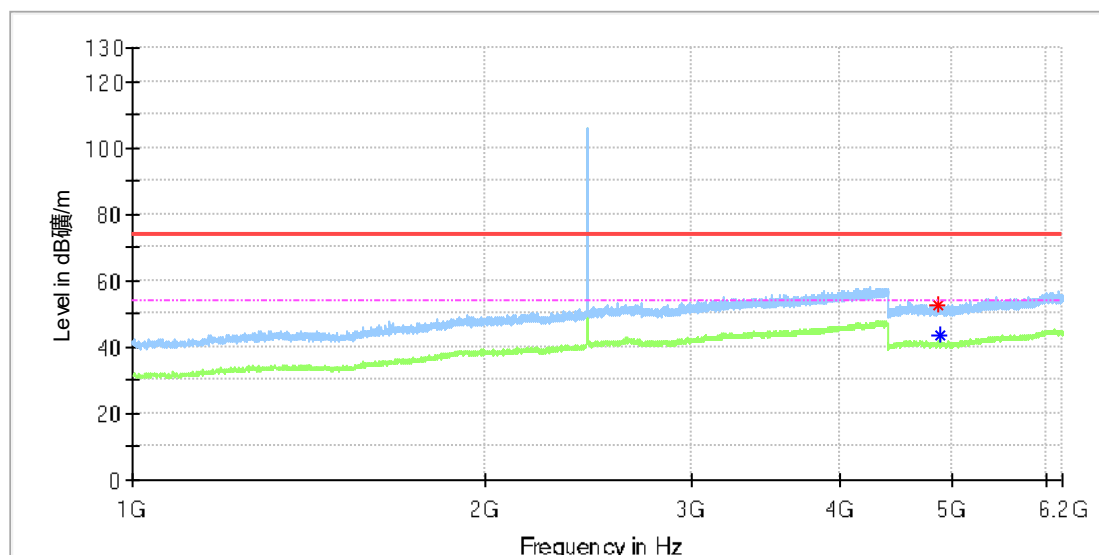
Frequency (MHz)	MaxPeak (dBμV/m)	Average (dBμV/m)	Limit (dBμV/m)	Margin (dB)	Height (cm)	Pol	Azimuth (deg)	Corr. (dB/m)
7205.458333	---	42.40	54.00	11.60	150.0	V	187.0	8.8
7206.441667	47.00	---	74.00	27.00	150.0	V	179.0	8.8
9613.641667	---	37.38	54.00	16.62	150.0	V	294.0	10.4
9640.683333	44.82	---	74.00	29.18	150.0	V	86.0	10.4

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:	Lenovo Dual-Mode Wireless ANC Headset 6550
Model:	LB310NC
Test Mode:	BR_DH5_Mid channel
Order No/Sample No:	168562141/A004038636-001
Test Voltage:	Battery
Remark:	Temp 22 Humi:55%
Test Standard:	FCC 15.247
Tested By:	Kei Zhang
Reviewed By:	Terry Yin



Critical_Freqs

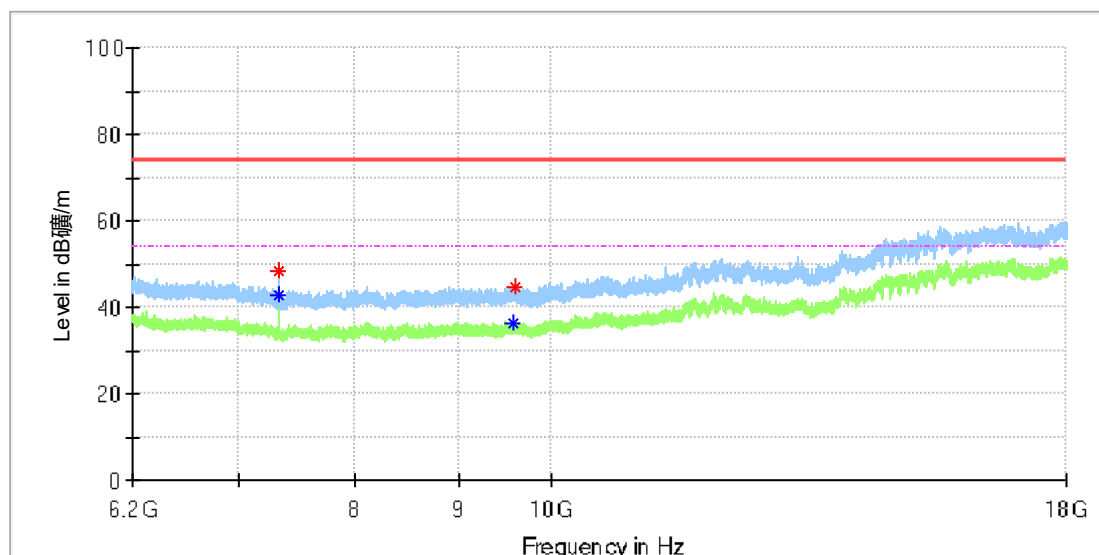
Frequency (MHz)	MaxPeak (dBµV/m)	Average (dBµV/m)	Limit (dBµV/m)	Margin (dB)	Height (cm)	Pol	Azimuth (deg)	Corr. (dB/m)
4858.500000	52.44	---	74.00	21.56	150.0	H	248.0	13.3
4882.000000	---	43.60	54.00	10.40	150.0	H	73.0	13.3

Final Result

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

EUT Information

EUT Name:	Lenovo Dual-Mode Wireless ANC Headset 6550
Model:	LB310NC
Test Mode:	BR_DH5_Mid channel
Order No/Sample No:	168562141/A004038636-001
Test Voltage:	Battery
Remark:	Temp 22 Humi:55%
Test Standard:	FCC 15.247
Tested By:	Kei Zhang
Reviewed By:	Terry Yin



Critical_Freqs

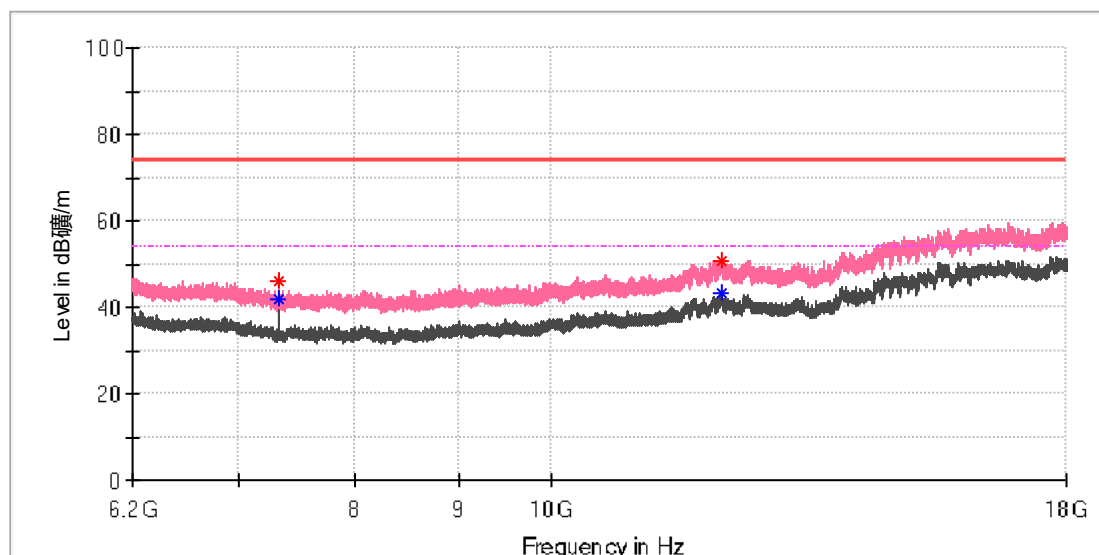
Frequency (MHz)	MaxPeak (dBμV/m)	Average (dBμV/m)	Limit (dBμV/m)	Margin (dB)	Height (cm)	Pol	Azimuth (deg)	Corr. (dB/m)
7322.966667	48.19	---	74.00	25.81	150.0	H	240.0	8.2
7322.966667	---	42.75	54.00	11.25	150.0	H	240.0	8.2
9582.666667	---	36.38	54.00	17.62	150.0	H	0.0	10.3
9592.991667	44.71	---	74.00	29.29	150.0	H	274.0	10.3

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:	Lenovo Dual-Mode Wireless ANC Headset 6550
Model:	LB310NC
Test Mode:	BR_DH5_Mid channel
Order No/Sample No:	168562141/A004038636-001
Test Voltage:	Battery
Remark:	Temp 22 Humi:55%
Test Standard:	FCC 15.247
Tested By:	Kei Zhang
Reviewed By:	Terry Yin



Critical_Freqs

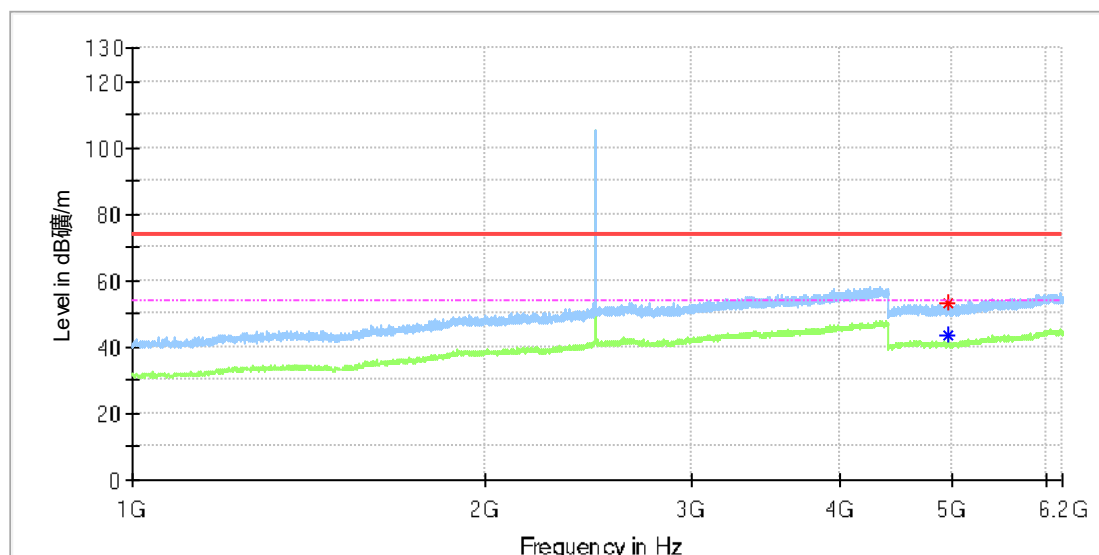
Frequency (MHz)	MaxPeak (dBμV/m)	Average (dBμV/m)	Limit (dBμV/m)	Margin (dB)	Height (cm)	Pol	Azimuth (deg)	Corr. (dB/m)
7322.966667	45.83	---	74.00	28.17	150.0	V	313.0	8.2
7322.966667	---	41.69	54.00	12.31	150.0	V	313.0	8.2
12137.366667	50.78	---	74.00	23.22	150.0	V	19.0	16.4
12141.791667	---	43.39	54.00	10.61	150.0	V	177.0	16.5

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:	Lenovo Dual-Mode Wireless ANC Headset 6550
Model:	LB310NC
Test Mode:	BR_DH5_High channel
Order No/Sample No:	168562141/A004038636-001
Test Voltage:	Battery
Remark:	Temp 22 Humi:55%
Test Standard:	FCC 15.247
Tested By:	Kei Zhang
Reviewed By:	Terry Yin



Critical_Freqs

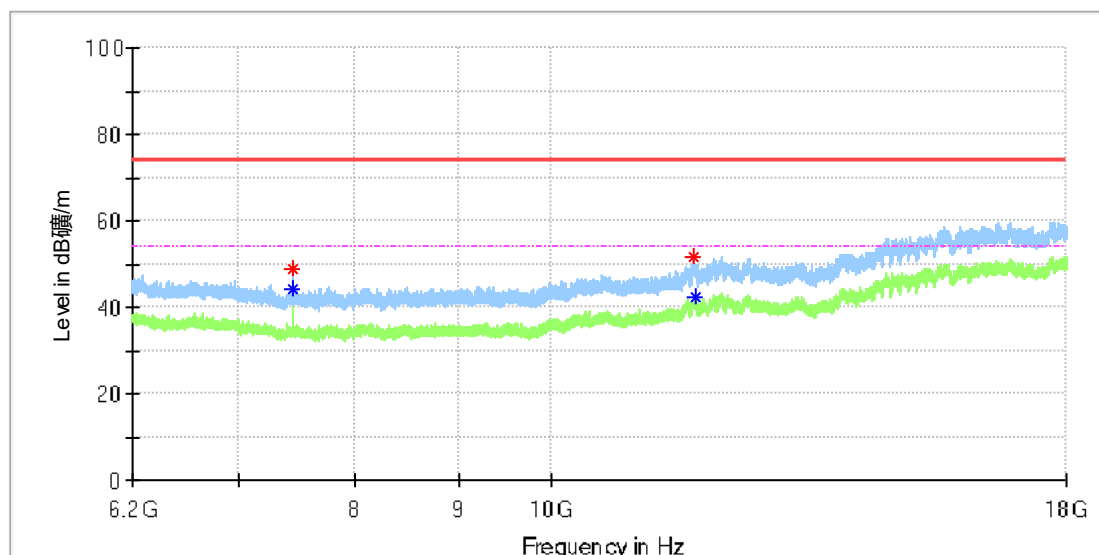
Frequency (MHz)	MaxPeak (dBµV/m)	Average (dBµV/m)	Limit (dBµV/m)	Margin (dB)	Height (cm)	Pol	Azimuth (deg)	Corr. (dB/m)
4952.500000	53.41	---	74.00	20.59	150.0	H	322.0	13.3
4959.500000	---	43.27	54.00	10.73	150.0	H	205.0	13.3

Final Result

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

EUT Information

EUT Name:	Lenovo Dual-Mode Wireless ANC Headset 6550
Model:	LB310NC
Test Mode:	BR_DH5_High channel
Order No/Sample No:	168562141/A004038636-001
Test Voltage:	Battery
Remark:	Temp 22 Humi:55%
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)
7439.983333	48.68	---	74.00	25.32	150.0	H	253.0	8.4
7439.983333	---	44.00	54.00	10.00	150.0	H	253.0	8.4
11757.308333	51.67	---	74.00	22.33	150.0	H	350.0	15.4
11783.858333	---	42.42	54.00	11.58	150.0	H	322.0	15.1

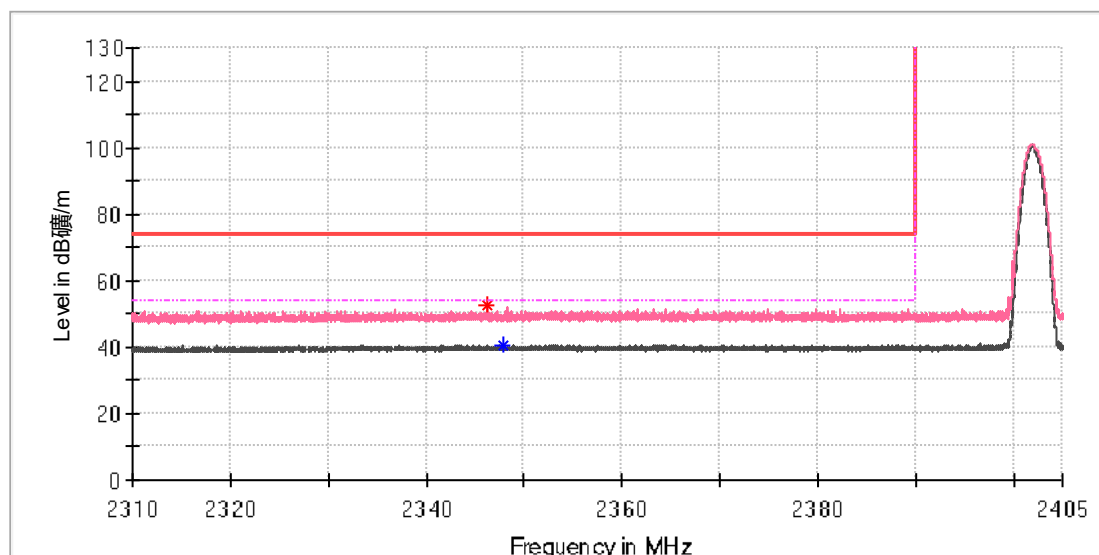
Final Result

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	122.5	122.5	0	100	h	135	0

EUT Information

EUT Name:	Lenovo Dual-Mode Wireless ANC Headset 6550
Model:	LB310NC
Test Mode:	BR_DH5_Low channel
Order No/Sample No:	168562141/A004038636-001
Test Voltage:	Battery
Remark:	Temp 22 Humi:55%
Test Standard:	FCC 15.247
Tested By:	Kei Zhang
Reviewed By:	Terry Yin



Critical_Freqs

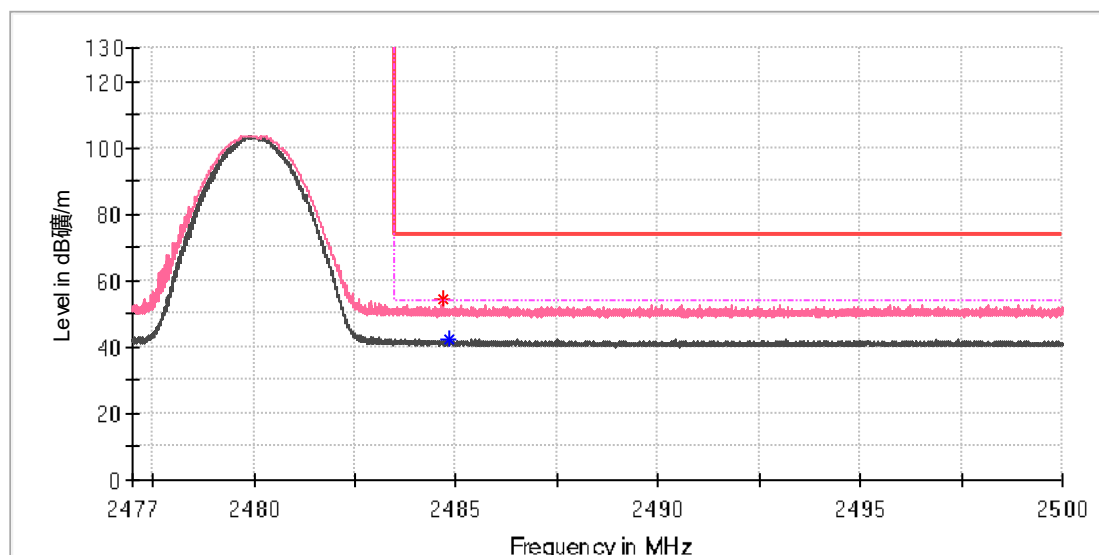
Frequency (MHz)	MaxPeak (dBµV/m)	Average (dBµV/m)	Limit (dBµV/m)	Margin (dB)	Height (cm)	Pol	Azimuth (deg)	Corr. (dB/m)
2346.323530	52.83	---	74.00	21.17	150.0	V	160.0	8.5
2347.846324	---	40.48	54.00	13.52	150.0	V	55.0	8.5

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:	Lenovo Dual-Mode Wireless ANC Headset 6550
Model:	LB310NC
Test Mode:	BR_DH5_High channel
Order No/Sample No:	168562141/A004038636-001
Test Voltage:	Battery
Remark:	Temp 22 Humi:55%
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)
2484.691471	54.32	---	74.00	19.68	150.0	V	32.0	9.0
2484.850441	---	42.13	54.00	11.87	150.0	V	135.0	9.0

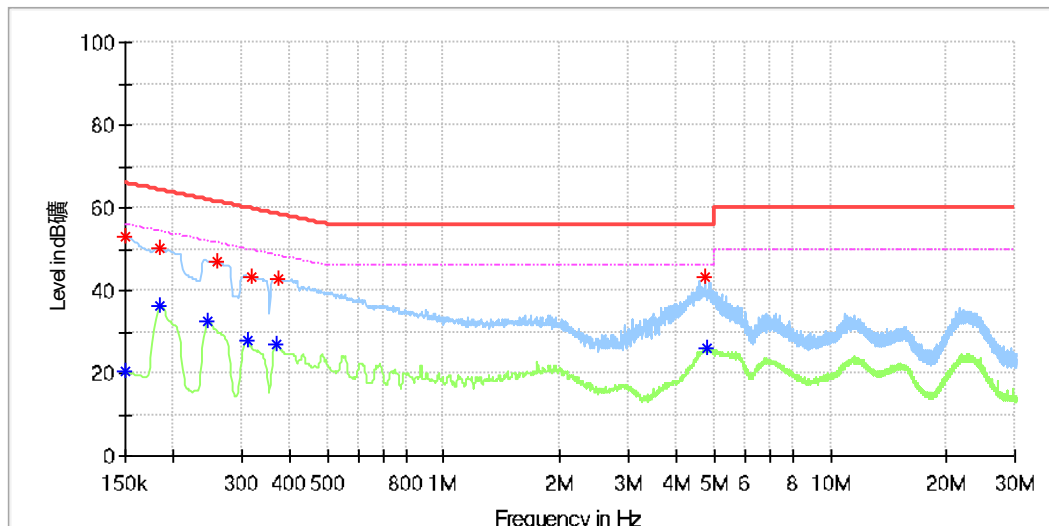
Final Result

Frequency (MHz)	MaxPeak (dBμV/m)	Average (dBμV/m)	Limit (dBμV/m)	Margin (dB)	Height (cm)	Pol	Azimuth (deg)	Corr. (dB/m)
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Appendix A.10: Test Results of Conducted Emission on AC Mains

EUT Information

EUT Name:	Lenovo Dual-Mode Wireless ANC Headset 6550
Order Number:	168562141 420
Model:	LB310NC
Test Mode:	Charging + BT audio play+MIC
Test Voltage:	AC 120V/60Hz
Test Standard:	FCC Part 15
Test By:/Review By:	Soloman Wu/Murphy Chen
Tem./Hum./Pressure:	24.3°C/51.5%/101kPa
Remark:	SR2



Critical_Freqs

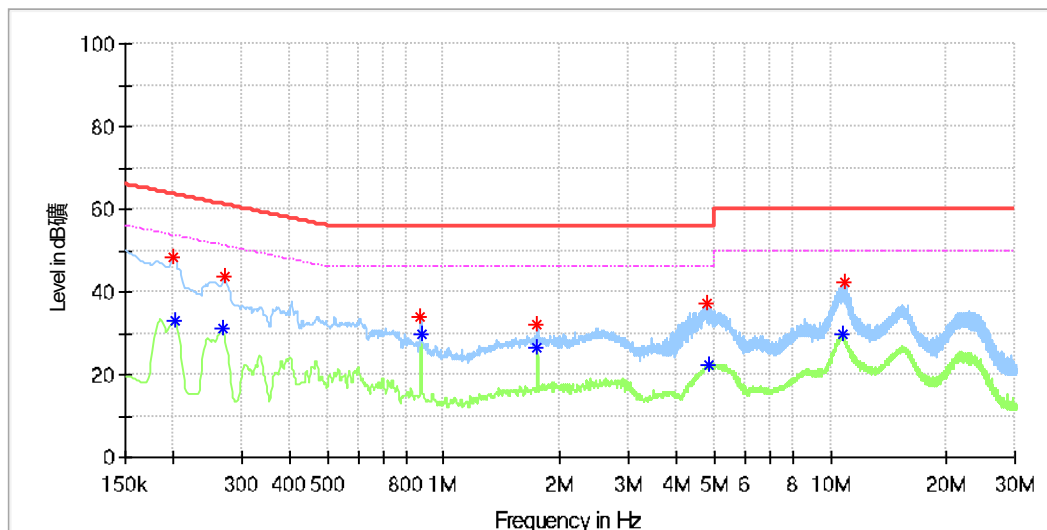
Frequency (MHz)	MaxPeak (dBμV)	Average (dBμV)	Limit (dBμV)	Margin (dB)	Line	Corr. (dB)
0.150	---	20.26	56.00	35.74	L1	10.2
0.150	53.15	---	66.00	12.85	L1	10.2
0.183	50.03	---	64.34	14.31	L1	10.2
0.185	---	36.15	54.27	18.12	L1	10.2
0.246	---	32.53	51.89	19.35	L1	10.2
0.259	46.90	---	61.45	14.55	L1	10.2
0.311	---	27.83	49.95	22.12	L1	10.2
0.317	43.28	---	59.77	16.49	L1	10.2
0.371	---	27.16	48.49	21.33	L1	10.2
0.372	42.69	---	58.45	15.76	L1	10.2
4.734	43.44	---	56.00	12.56	L1	10.4
4.793	---	26.10	46.00	19.90	L1	10.4

Final Result

[illegible]

EUT Information

EUT Name:	Lenovo Dual-Mode Wireless ANC Headset 6550
Order Number:	168562141 420
Model:	LB310NC
Test Mode:	Charging + BT audio play+MIC
Test Voltage:	AC 120V/60Hz
Test Standard:	FCC Part 15
Test By:/Review By:	Soloman Wu/Murphy Chen
Tem./Hum./Pressure:	24.3°C/51.5%/101kPa
Remark:	SR2



Critical Freqs

Frequency (MHz)	MaxPeak (dBμV)	Average (dBμV)	Limit (dBμV)	Margin (dB)	Line	Corr. (dB)
0.200	48.56	---	63.62	15.06	N	10.2
0.201	---	33.13	53.55	20.42	N	10.2
0.268	---	30.98	51.19	20.21	N	10.2
0.271	43.73	---	61.09	17.36	N	10.2
0.871	33.78	---	56.00	22.22	N	10.3
0.873	---	29.78	46.00	16.22	N	10.3
1.745	32.23	---	56.00	23.77	N	10.3
1.745	---	26.38	46.00	19.62	N	10.3
4.803	37.01	---	56.00	18.99	N	10.4
4.870	---	22.51	46.00	23.49	N	10.4
10.768	---	29.75	50.00	20.25	N	10.6
10.913	42.24	---	60.00	17.76	N	10.6

Final Result

Frequency (MHz)	QuasiPeak (dBμV)	CAverage (dBμV)	Limit (dBμV)	Margin (dB)	Meas. Time (ms)	Bandwidth (kHz)	Line	Corr. (dB)
93.5	122.5	122.5	122.5	0	100	9	1	0