

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	0.948	2401.523	2402.471	---	PASS
		2441	0.945	2440.523	2441.468	---	PASS
		2480	0.936	2479.529	2480.465	---	PASS
3DH5	Ant1	2402	1.320	2401.325	2402.645	---	PASS
		2441	1.329	2440.325	2441.654	---	PASS
		2480	1.332	2479.325	2480.657	---	PASS

Test Graphs





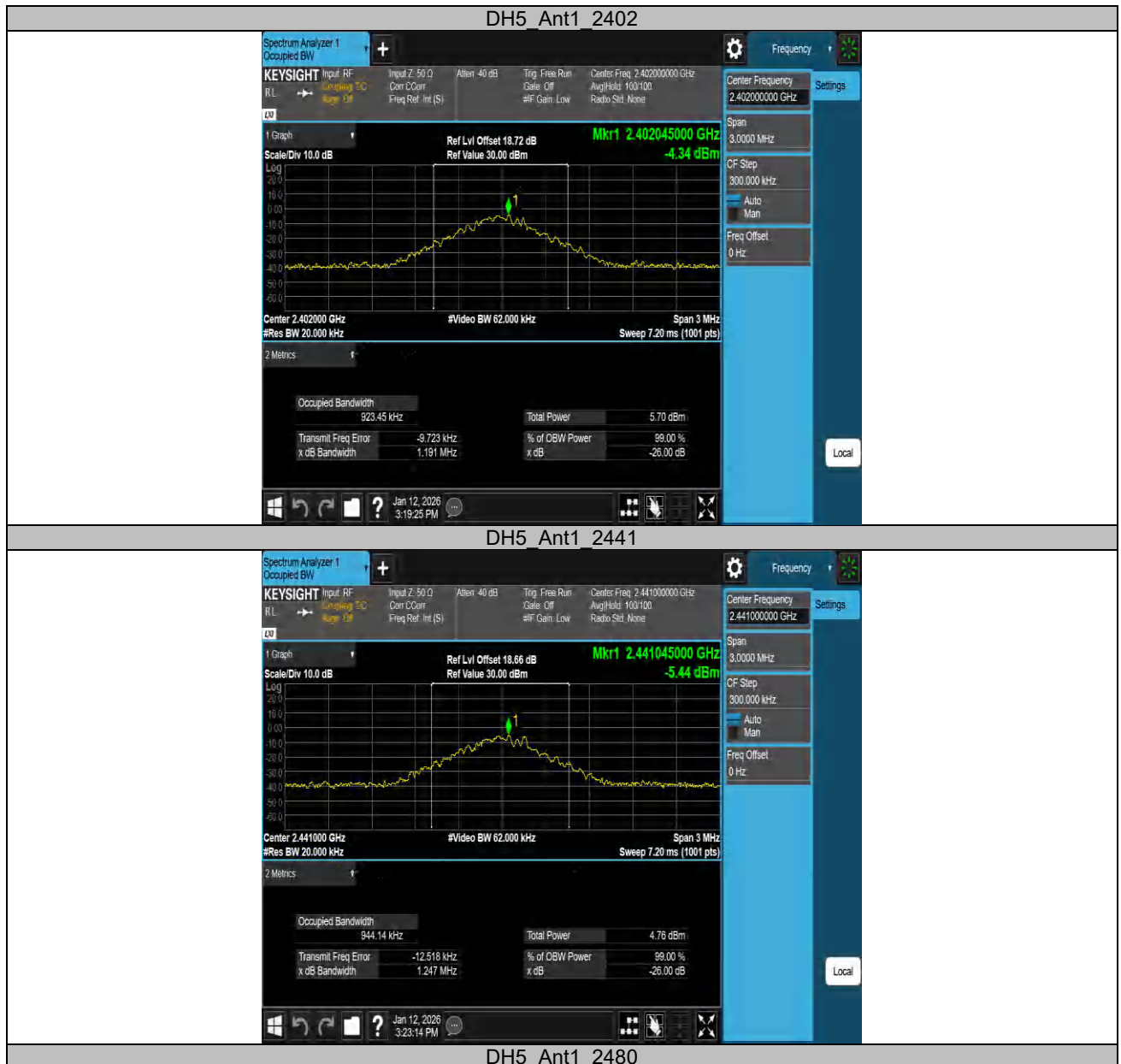


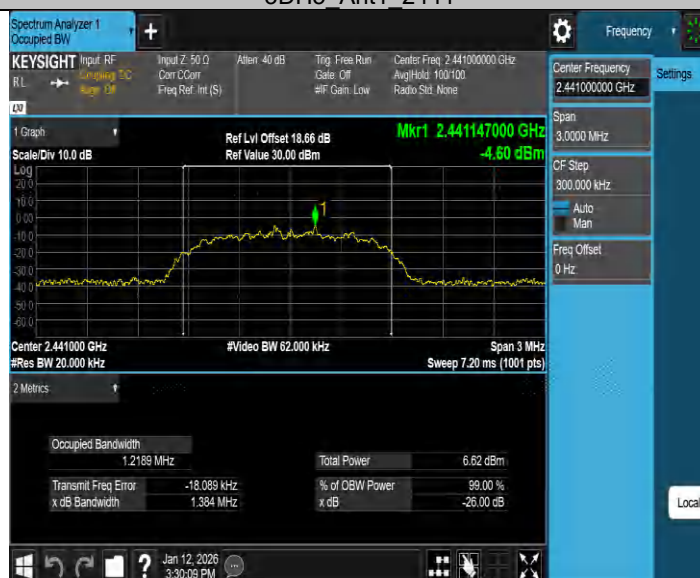
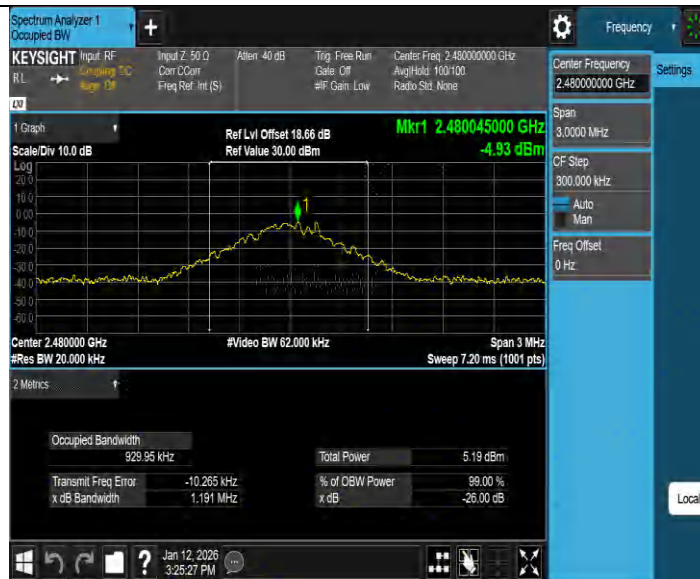
Appendix A.2: Test Results of 99% Bandwidth

Test Result

TestMode	Antenna	Channel	OCB [MHz]	FL[MHz]	FH[MHz]	Limit[MHz]	Verdict
DH5	Ant1	2402	0.92345	2401.5286	2402.4520	---	PASS
		2441	0.94414	2440.5154	2441.4596	---	PASS
		2480	0.92995	2479.5248	2480.4547	---	PASS
3DH5	Ant1	2402	1.2204	2401.3718	2402.5922	---	PASS
		2441	1.2189	2440.3725	2441.5914	---	PASS
		2480	1.2226	2479.3703	2480.5929	---	PASS

Test Graphs





3DH5 Ant1 2480



Appendix A.3: Test Results of Carrier Frequency Separation

Test Result

TestMode	Antenna	Channel	Result[MHz]	Limit[MHz]	Verdict
DH5	Ant1	Hop	1.01	≥ 0.948	PASS
3DH5	Ant1	Hop	1.144	≥ 0.888	PASS

Test Graphs

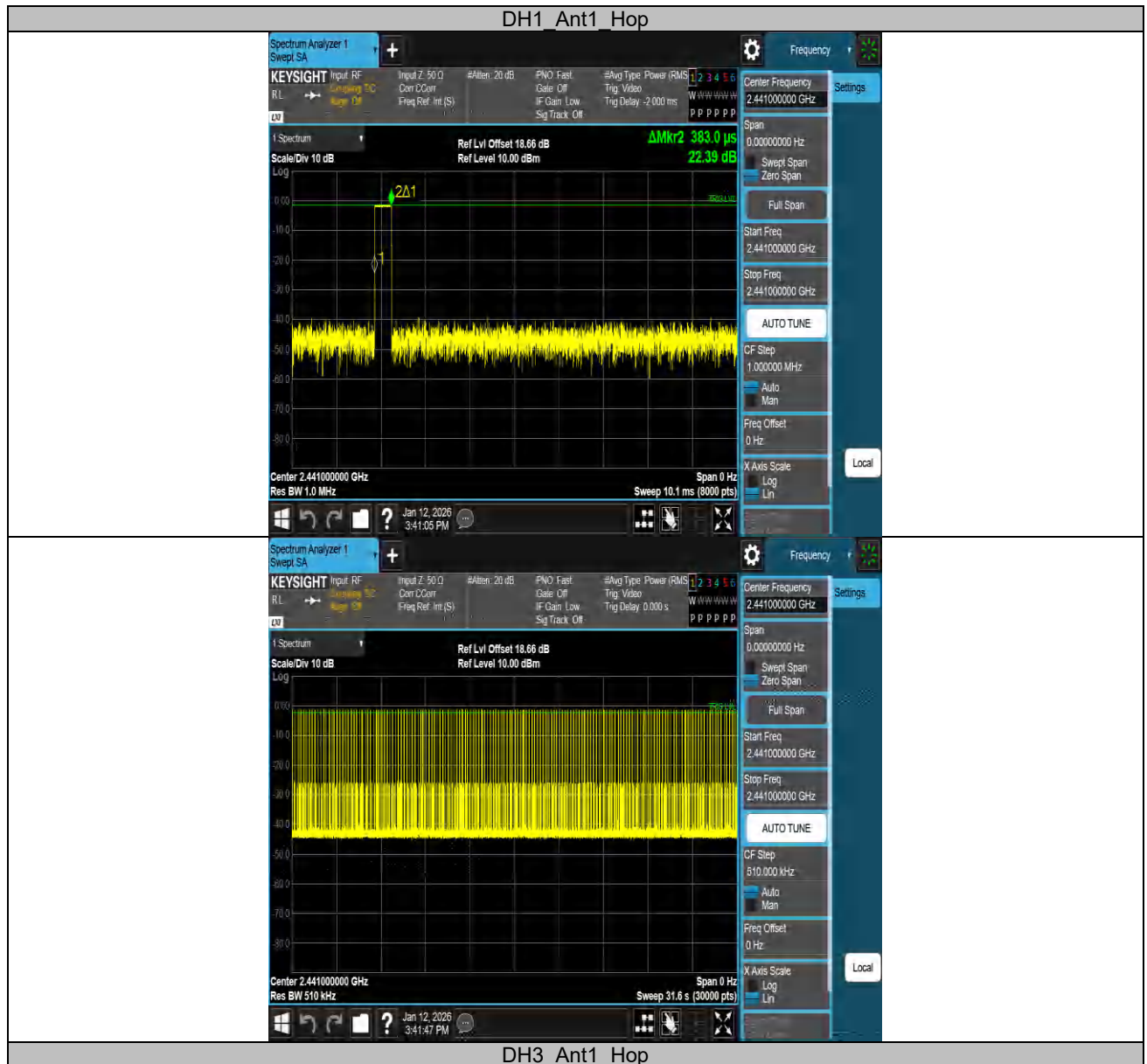


Appendix A.4: Test Results of Time of Occupancy

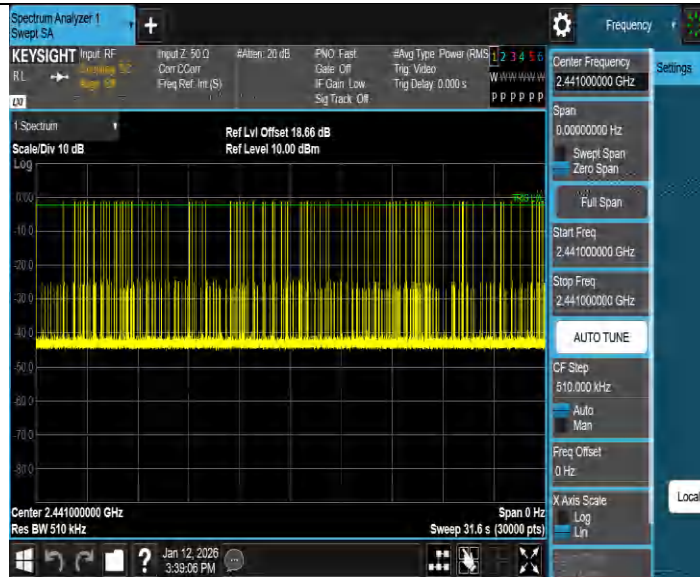
Test Result

TestMode	Antenna	Channel	BurstWidth [ms]	TotalHops [Num]	Result[s]	Limit[s]	Verdict
DH1	Ant1	Hop	0.383	308	0.118	≤0.4	PASS
DH3	Ant1	Hop	1.638	148	0.242	≤0.4	PASS
DH5	Ant1	Hop	2.887	112	0.323	≤0.4	PASS
3DH1	Ant1	Hop	0.384	308	0.118	≤0.4	PASS
3DH3	Ant1	Hop	1.635	152	0.249	≤0.4	PASS
3DH5	Ant1	Hop	2.885	124	0.358	≤0.4	PASS

Test Graphs







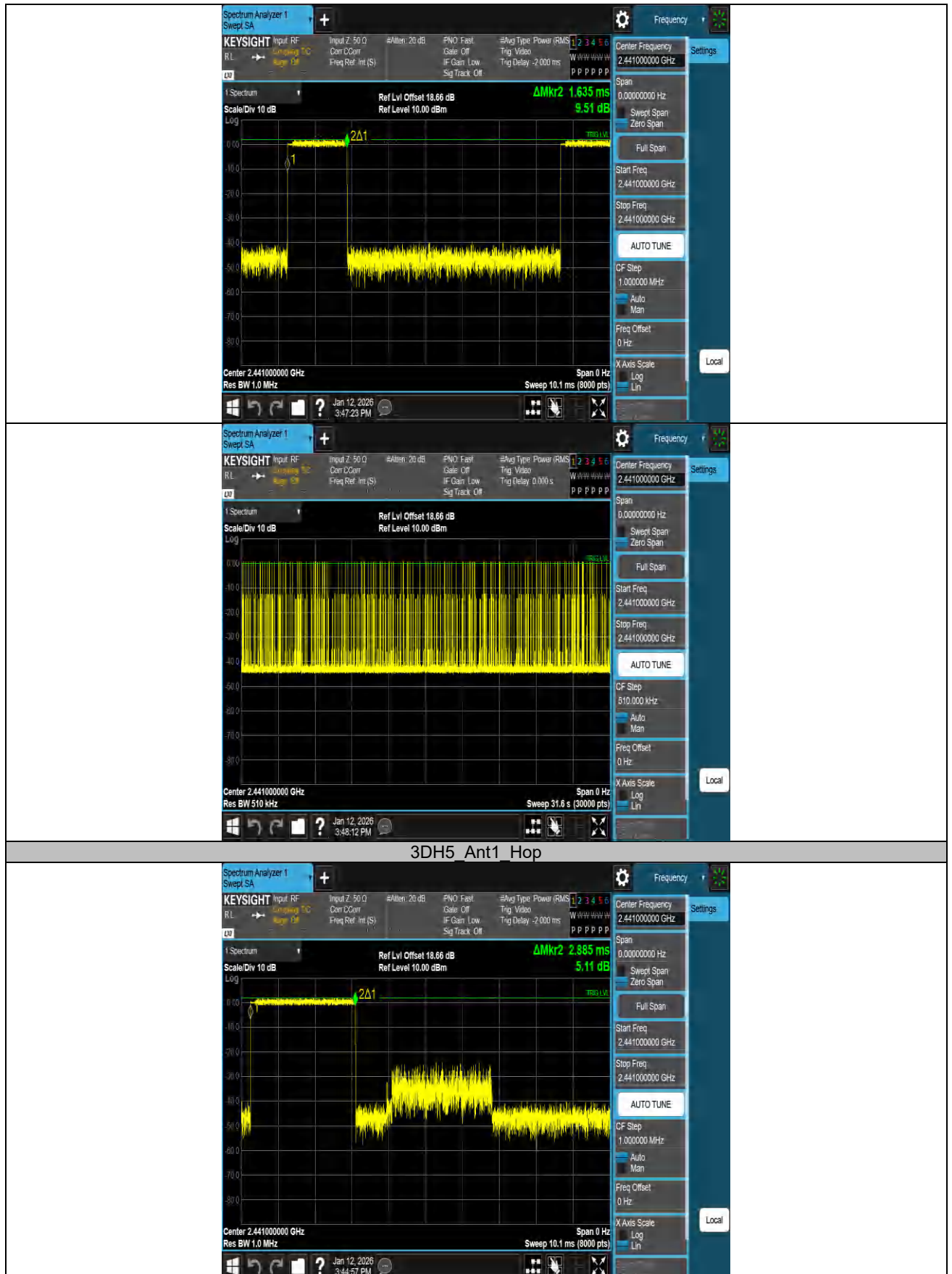
3DH1_Ant1_Hop



3DH3_Ant1_Hop



3DH3_Ant1_Hop





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

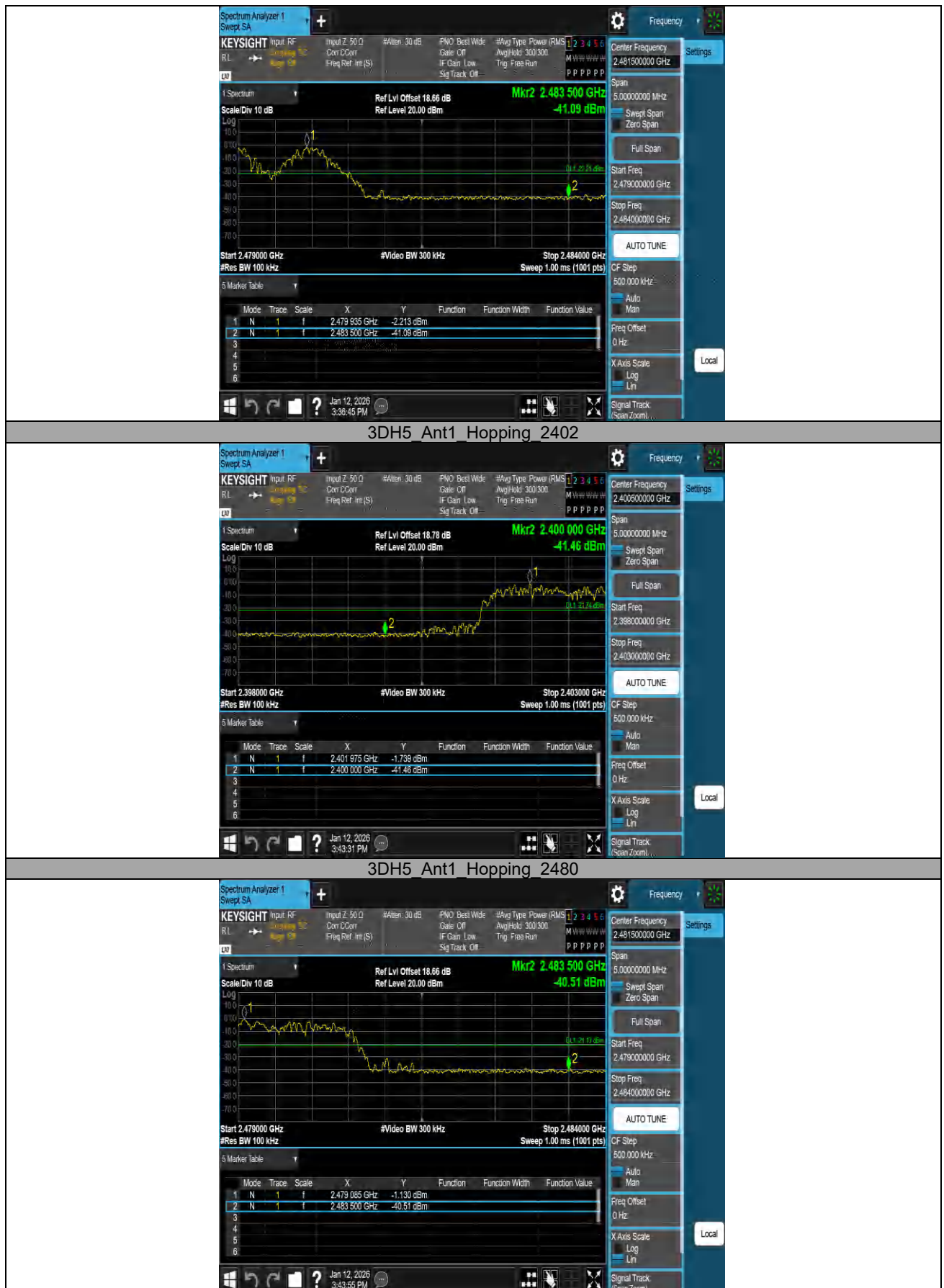
Test Result

TestMode	Antenna	ChName	Channel	RefLevel [dBm]	Result [dBm]	Limit [dBm]	Verdict
DH5	Ant1	Low	2402	-0.96	-41.09	≤-20.96	PASS
		High	2480	-1.76	-41.74	≤-21.76	PASS
3DH5	Ant1	Low	2402	0.44	-41.40	≤-19.56	PASS
		High	2480	-1.09	-40.75	≤-21.09	PASS
DH5	Ant1	Hopping	2402	-0.97	-41.54	≤-20.97	PASS
		Hopping	2480	-2.21	-41.09	≤-22.21	PASS
3DH5	Ant1	Hopping	2402	-1.74	-41.46	≤-21.74	PASS
		Hopping	2480	-1.13	-40.51	≤-21.13	PASS

Test Graphs





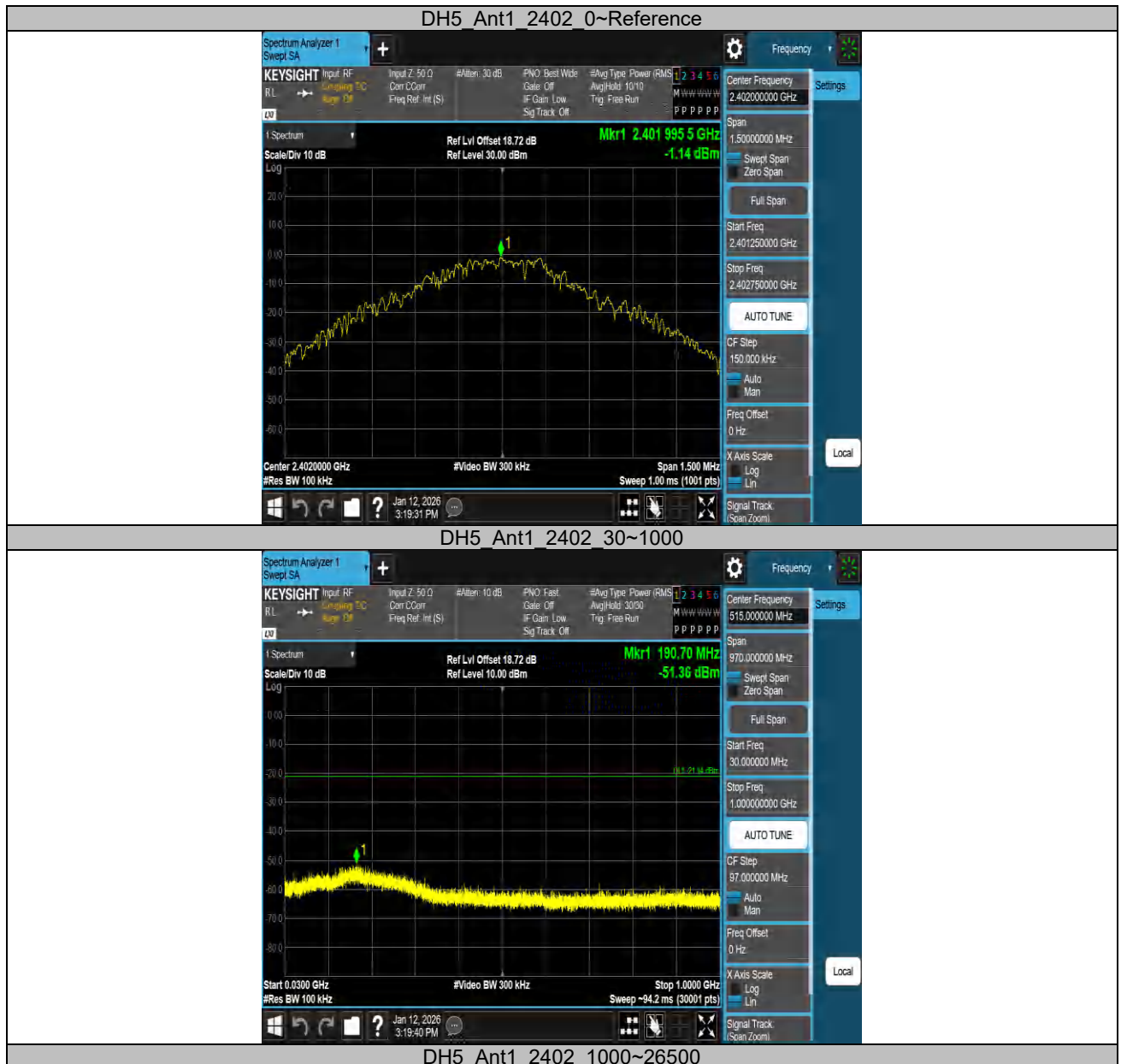


Appendix A.7: Test Results of Conducted Spurious Emission

Test Result

TestMode	Antenna	Channel	FreqRange [MHz]	RefLevel [dBm]	Result [dBm]	Limit [dBm]	Verdict
DH5	Ant1	2402	Reference	-1.14	-1.14	---	PASS
			30~1000	-1.14	-51.36	≤-21.14	PASS
			1000~26500	-1.14	-53.42	≤-21.14	PASS
		2441	Reference	-2.58	-2.58	---	PASS
			30~1000	-2.58	-50.87	≤-22.58	PASS
			1000~26500	-2.58	-54.15	≤-22.58	PASS
		2480	Reference	-2.31	-2.31	---	PASS
			30~1000	-2.31	-50.25	≤-22.31	PASS
			1000~26500	-2.31	-53.85	≤-22.31	PASS
3DH5	Ant1	2402	Reference	-0.67	-0.67	---	PASS
			30~1000	-0.67	-51.43	≤-20.67	PASS
			1000~26500	-0.67	-53.86	≤-20.67	PASS
		2441	Reference	-2.35	-2.35	---	PASS
			30~1000	-2.35	-51.32	≤-22.35	PASS
			1000~26500	-2.35	-53.44	≤-22.35	PASS
		2480	Reference	-1.63	-1.63	---	PASS
			30~1000	-1.63	-50.61	≤-21.63	PASS
			1000~26500	-1.63	-54.41	≤-21.63	PASS

Test Graphs





DH5 Ant1 2441 0~Reference

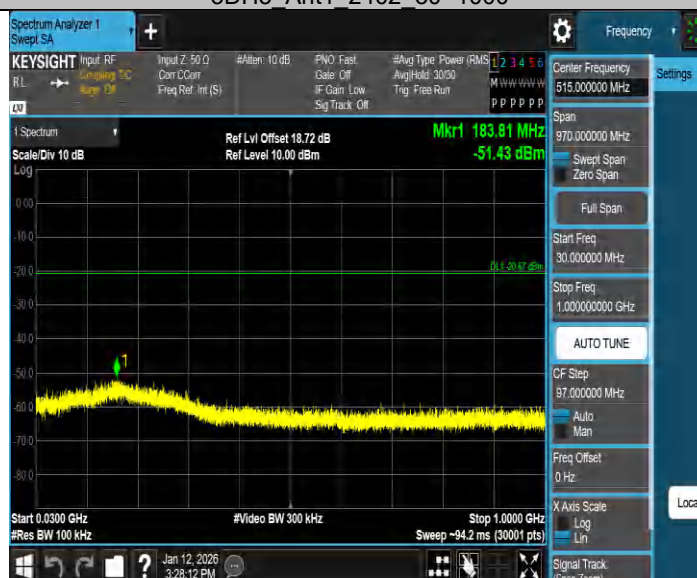


DH5 Ant1 2441 30~1000



DH5 Ant1 2441 1000~26500







3DH5_Ant1_2441_0~Reference



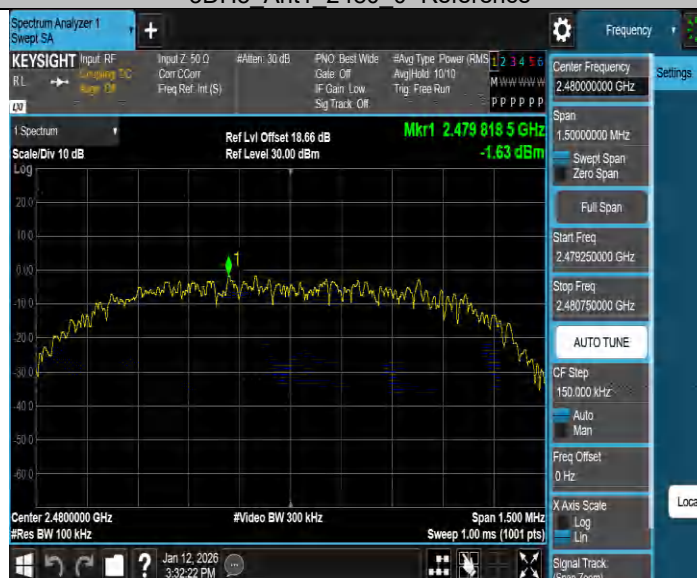
3DH5_Ant1_2441_30~1000



3DH5_Ant1_2441_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

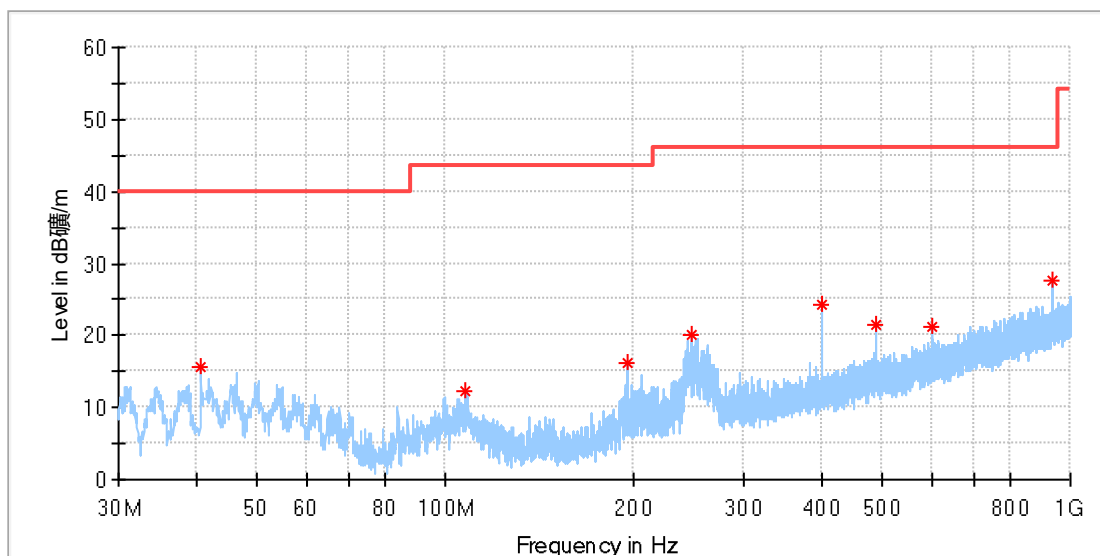
Note:

- 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 (EUT1#)

EUT Information

EUT Name:	reMarkable RM12A
Model:	RM12A
Test Mode:	BR_DH5_Mid channel
Order No/Sample No:	168564257/A004156581-003
Test Voltage:	Battery
Remark:	Temp 22 Humi:55%
Test Standard:	FCC 15.247
Tested By:	Kei Zhang
Reviewed By:	Terry Yin



Critical Freqs

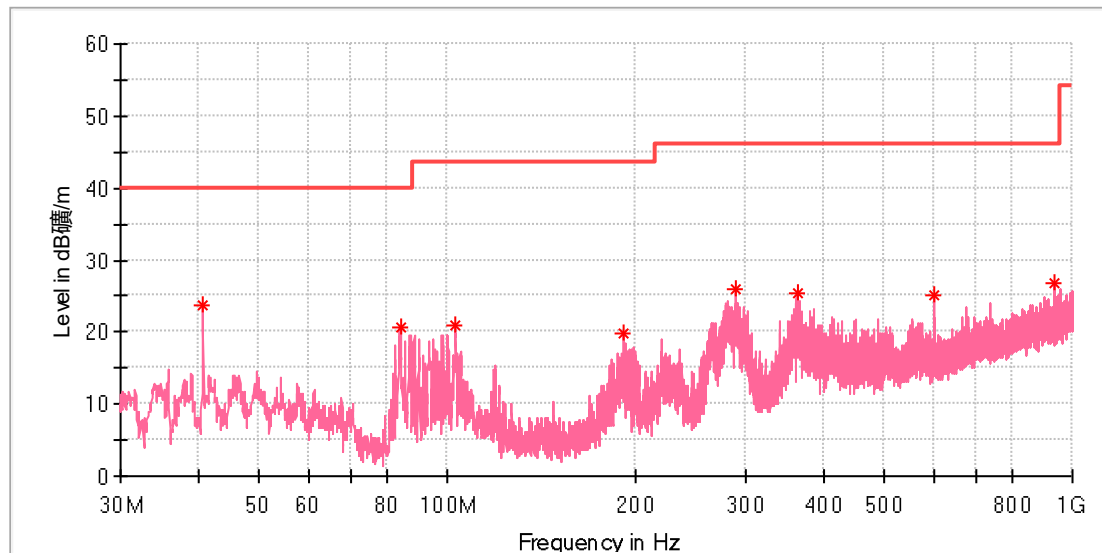
Frequency (MHz)	MaxPeak (dBμV/m)	Limit (dBμV/m)	Margin (dB)	Height (cm)	Pol	Azimuth (deg)	Corr. (dB/m)
40.670000	15.68	40.00	24.32	100.0	H	244.0	-20.0
107.923333	12.15	43.50	31.35	100.0	H	272.0	-19.1
195.385000	16.16	43.50	27.34	100.0	H	356.0	-19.3
248.357778	20.16	46.00	25.84	100.0	H	359.0	-17.4
400.001111	24.21	46.00	21.79	100.0	H	287.0	-13.8
488.217222	21.53	46.00	24.47	100.0	H	123.0	-12.0
600.036667	21.13	46.00	24.87	100.0	H	47.0	-9.7
938.405000	27.69	46.00	18.31	100.0	H	244.0	-4.4

Final Result

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

EUT Information

EUT Name: reMarkable RM12A
Model: RM12A
Test Mode: BR_DH5_Mid channel
Order No/Sample No: 168564257/A004156581-003
Test Voltage: Battery
Remark: Temp 22 Humi:55%
Test Standard: FCC 15.247
Tested By: Kei Zhang
Reviewed By: Terry Yin



Critical Freqs

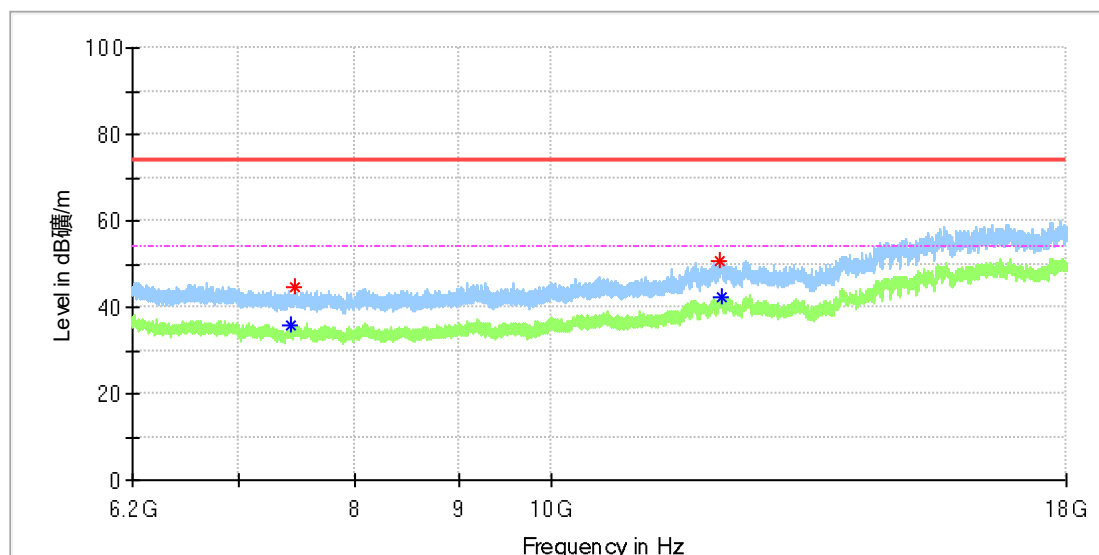
Frequency (MHz)	MaxPeak (dBμV/m)	Limit (dBμV/m)	Margin (dB)	Height (cm)	Pol	Azimuth (deg)	Corr. (dB/m)
40.670000	23.76	40.00	16.24	100.0	V	308.0	-20.0
84.050556	20.65	40.00	19.35	100.0	V	6.0	-22.7
102.857778	21.04	43.50	22.46	100.0	V	189.0	-19.0
191.073889	19.81	43.50	23.69	100.0	V	243.0	-19.6
290.283333	26.05	46.00	19.95	100.0	V	93.0	-16.5
362.386667	25.31	46.00	20.69	100.0	V	54.0	-14.6
600.036667	25.17	46.00	20.83	100.0	V	77.0	-9.7
936.950000	26.85	46.00	19.15	100.0	V	86.0	-4.4

Final Result

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

EUT Information

EUT Name:	reMarkable RM12A
Model:	RM12A
Test Mode:	BR_DH5_Mid channel
Order No/Sample No:	168564257/A004156581-003
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)
7421.791667	---	35.88	54.00	18.12	150.0	H	135.0	8.4
7464.075000	44.45	---	74.00	29.55	150.0	H	67.0	8.6
12116.225000	50.70	---	74.00	23.30	150.0	H	270.0	15.9
12152.116667	---	42.32	54.00	11.68	150.0	H	56.0	16.6

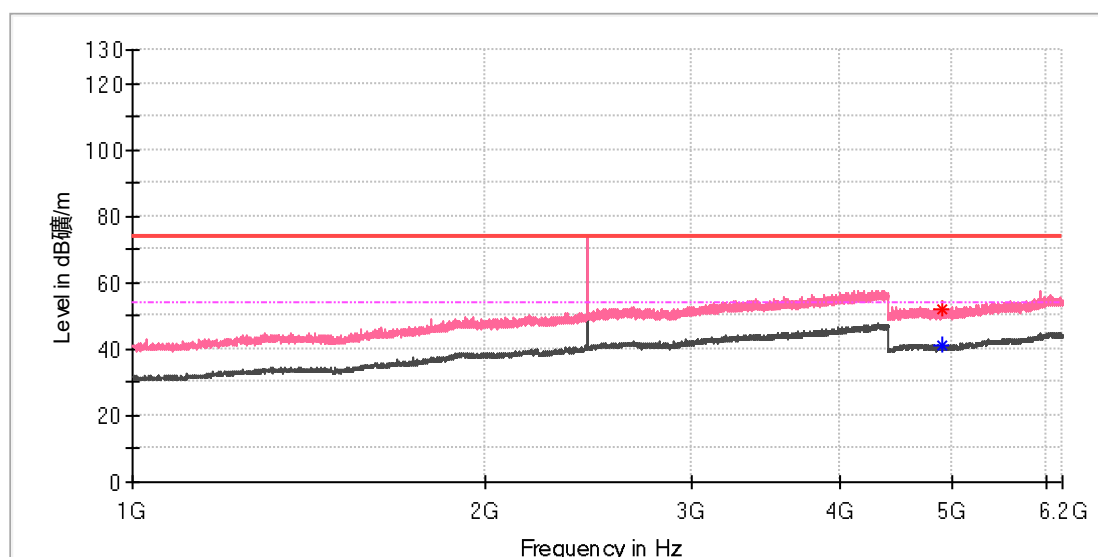
Final Result

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)
---	---	---	---	---	---		---	---

EUT Information

EUT Name:	reMarkable RM12A
Model:	RM12A
Test Mode:	BR_DH5_Mid channel
Order No/Sample No:	168564257/A004156581-006
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)
4898.500000	---	41.26	54.00	12.74	150.0	V	4.0	13.3
4906.500000	51.96	---	74.00	22.04	150.0	V	84.0	13.3

Final Result

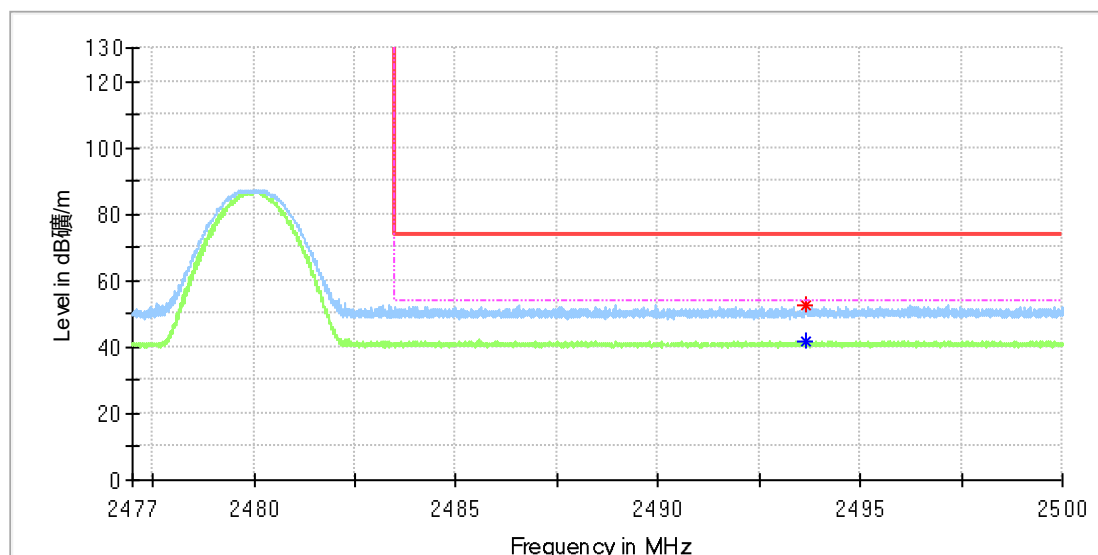
Frequency (MHz)	MaxPeak (dBμV/m)	Average (dBμV/m)	Limit (dBμV/m)	Margin (dB)	Height (cm)	Pol	Azimuth (deg)	Corr. (dB/m)
100.0	100.0	100.0	100.0	100.0	100.0		100.0	100.0

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:	reMarkable RM12A
Model:	RM12A
Test Mode:	BR_DH5_High channel
Order No/Sample No:	168564257/A004156581-003
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)
2493.632353	52.70	---	74.00	21.30	150.0	H	86.0	9.0
2493.669118	---	41.82	54.00	12.18	150.0	H	93.0	9.0

Final Result

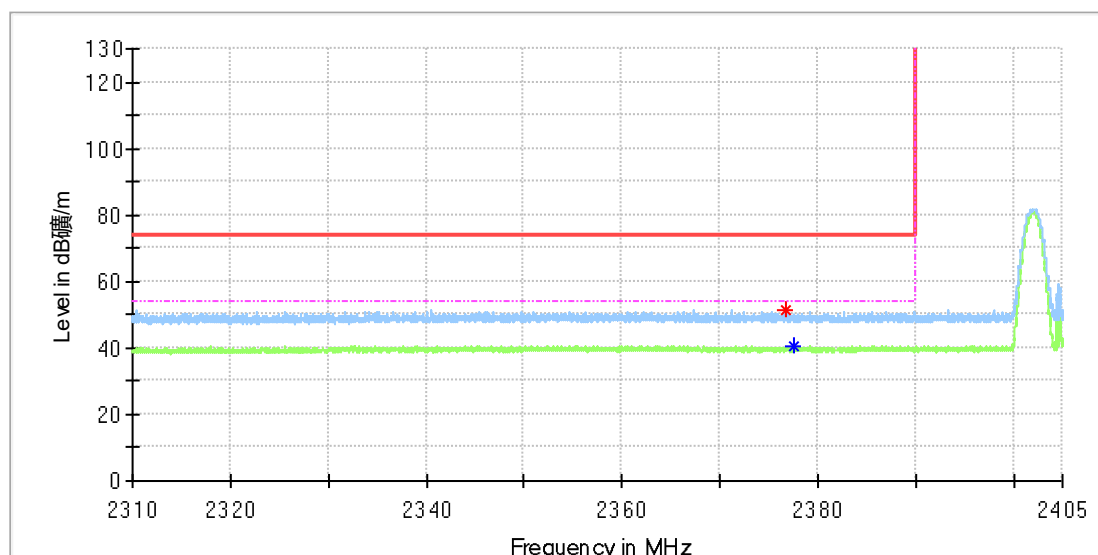
Frequency (MHz)	MaxPeak (dBμV/m)	Average (dBμV/m)	Limit (dBμV/m)	Margin (dB)	Height (cm)	Pol	Azimuth (deg)	Corr. (dB/m)
---	---	---	---	---	---		---	---

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

EUT2#

EUT Information

EUT Name:	reMarkable RM12A
Model:	RM12A
Test Mode:	BR_DH5_Low channel
Order No/Sample No:	168564257/A004156581-006
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)
2376.841765	51.29	---	74.00	22.71	150.0	H	336.0	8.5
2377.547941	---	40.50	54.00	13.50	150.0	H	0.0	8.5

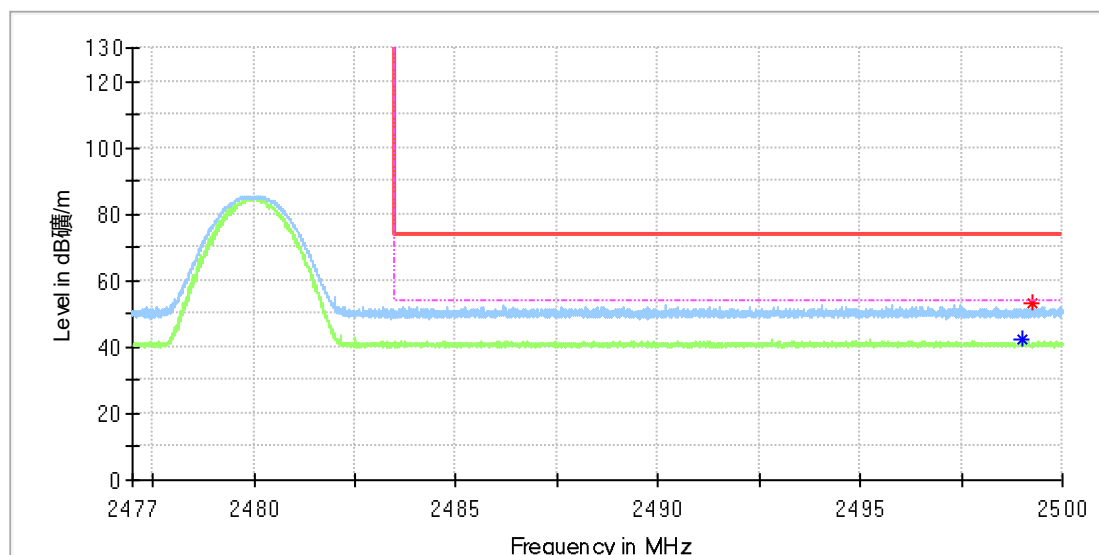
Final Result

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

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:	reMarkable RM12A
Model:	RM12A
Test Mode:	BR_DH5_High channel
Order No/Sample No:	168564257/A004156581-006
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)
2499.003677	---	42.23	54.00	11.77	150.0	H	268.0	9.0
2499.261029	52.95	---	74.00	21.05	150.0	H	358.0	9.0

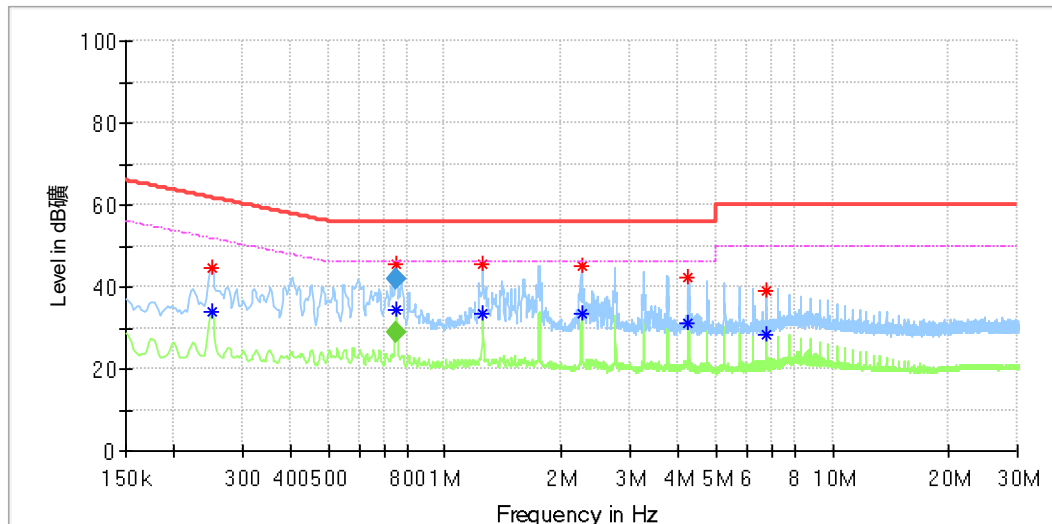
Final Result

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: reMarkable RM12A
Order Number: 168564257_Item370
Model: RM12A
Test Mode: Charging + Bluetooth Link
Test Voltage: AC 120V/ 60Hz
Test Standard: FCC Part 15C
Test By:/Review By: Aric Wang/Murphy Chen
Tem./Hum./Pressure: 24.0°C/49.3%/101kPa
Remark: SR 2



Critical Freqs

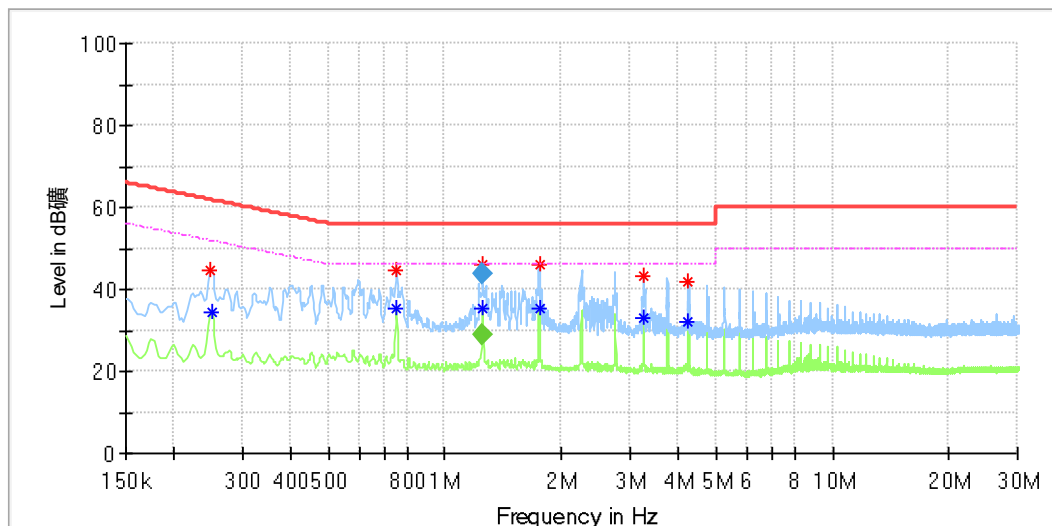
Frequency (MHz)	MaxPeak (dBμV)	Average (dBμV)	Limit (dBμV)	Margin (dB)	Line	Corr. (dB)
0.250	44.6	---	61.77	17.21	L1	9.7
0.250	---	33.9	51.77	17.88	L1	9.7
0.749	45.6	---	56.00	10.38	L1	9.7
0.749	---	34.6	46.00	11.42	L1	9.7
1.247	---	33.7	46.00	12.28	L1	9.6
1.249	45.6	---	56.00	10.40	L1	9.6
2.249	---	33.6	46.00	12.43	L1	9.6
2.249	45.2	---	56.00	10.85	L1	9.6
4.249	---	31.3	46.00	14.72	L1	9.7
4.249	42.1	---	56.00	13.90	L1	9.7
6.749	---	28.4	50.00	21.56	L1	9.9
6.749	39.0	---	60.00	20.96	L1	9.9

Final Result

Frequency (MHz)	QuasiPeak (dBμV)	Average (dBμV)	Limit (dBμV)	Margin (dB)	Meas. Time (ms)	Bandwidth (kHz)	Line	Corr. (dB)
0.749	---	29.0	46.00	17.01	1000.0	9.0	L1	9.7
0.749	42.1	---	56.00	13.92	1000.0	9.0	L1	9.7

EUT Information

EUT Name: reMarkable RM12A
Order Number: 168564257_Item370
Model: RM12A
Test Mode: Charging + Bluetooth Link
Test Voltage: AC 120V/ 60Hz
Test Standard: FCC Part 15C
Test By:/Review By: Aric Wang/Murphy Chen
Tem./Hum./Pressure: 24.0°C/49.3%/101kPa
Remark: SR 2



Critical_Freqs

Frequency (MHz)	MaxPeak (dBμV)	Average (dBμV)	Limit (dBμV)	Margin (dB)	Line	Corr. (dB)
0.247	44.5	---	61.86	17.38	N	9.9
0.250	---	34.5	51.77	17.23	N	9.9
0.749	---	35.3	46.00	10.74	N	9.8
0.752	44.6	---	56.00	11.36	N	9.8
1.249	---	35.3	46.00	10.65	N	9.8
1.249	45.9	---	56.00	10.05	N	9.8
1.749	45.9	---	56.00	10.11	N	9.9
1.749	---	35.1	46.00	10.88	N	9.9
3.249	43.4	---	56.00	12.64	N	9.8
3.249	---	33.2	46.00	12.82	N	9.8
4.247	41.7	---	56.00	14.27	N	9.7
4.249	---	32.0	46.00	14.03	N	9.7

Final_Result

Frequency (MHz)	QuasiPeak (dBμV)	Average (dBμV)	Limit (dBμV)	Margin (dB)	Meas. Time (ms)	Bandwidth (kHz)	Line	Corr. (dB)
1.249	43.5	---	56.00	12.53	1000.0	9.0	N	9.8
1.249	---	28.9	46.00	17.08	1000.0	9.0	N	9.8