

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	0.951	2401.544	2402.495	---	---
		2441	0.951	2440.544	2441.495	---	---
		2480	0.948	2479.547	2480.495	---	---
3DH5	Ant1	2402	1.275	2401.361	2402.636	---	---
		2441	1.275	2440.361	2441.636	---	---
		2480	1.272	2479.361	2480.633	---	---

Test Graphs





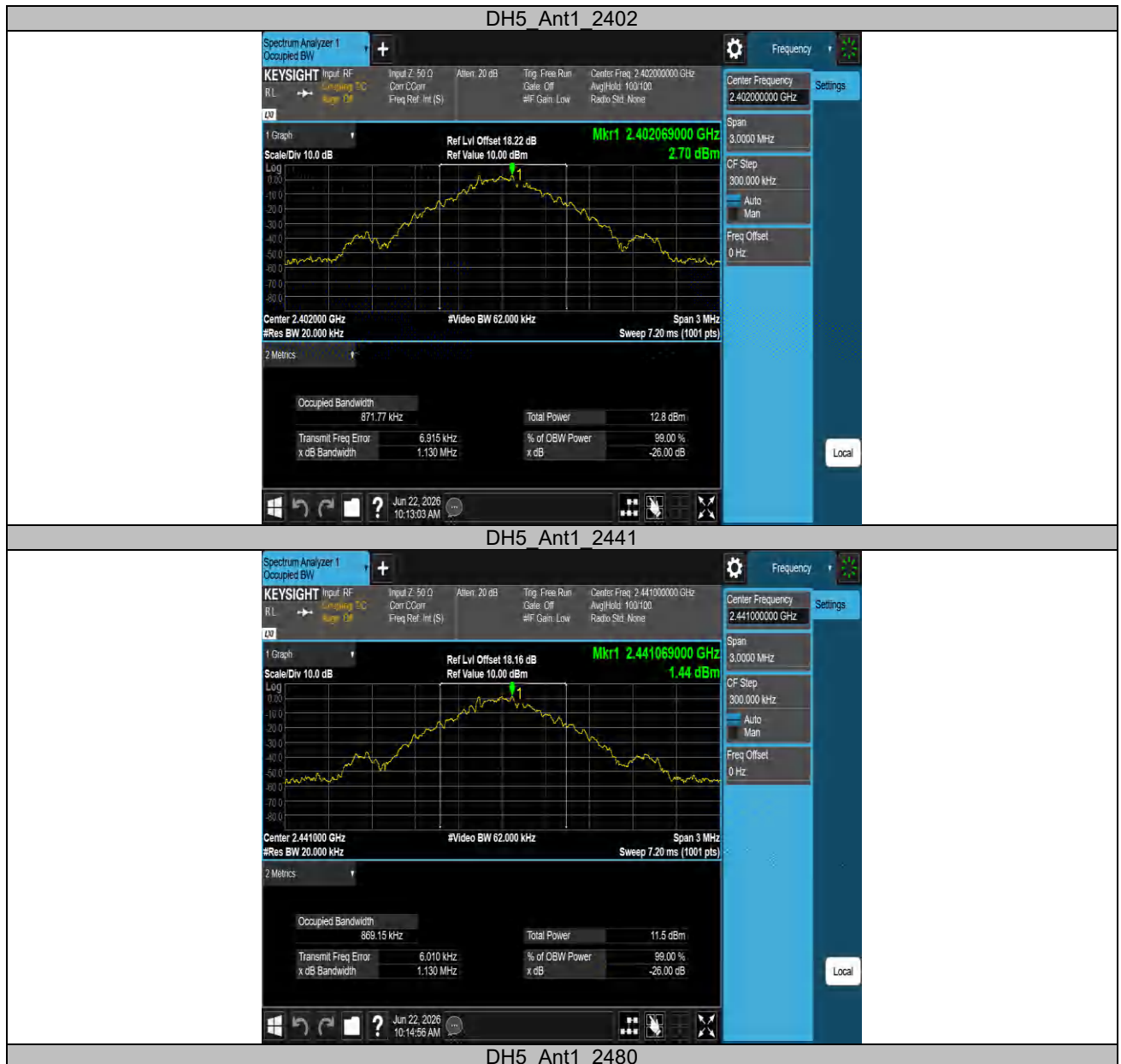


Appendix A.2: Test Results of 99% Bandwidth

Test Result

TestMode	Antenna	Channel	OCB [MHz]	FL[MHz]	FH[MHz]	Limit[MHz]	Verdict
DH5	Ant1	2402	0.87177	2401.5710	2402.4428	---	---
		2441	0.86915	2440.5714	2441.4406	---	---
		2480	0.86758	2479.5721	2480.4397	---	---
3DH5	Ant1	2402	1.1751	2401.4154	2402.5905	---	---
		2441	1.1775	2440.4146	2441.5921	---	---
		2480	1.1784	2479.4152	2480.5936	---	---

Test Graphs





3DH5 Ant1 2402



3DH5 Ant1 2441



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	1.12	≥ 0.951	PASS
3DH5	Ant1	Hop	1.096	≥ 0.850	PASS

Test Graphs

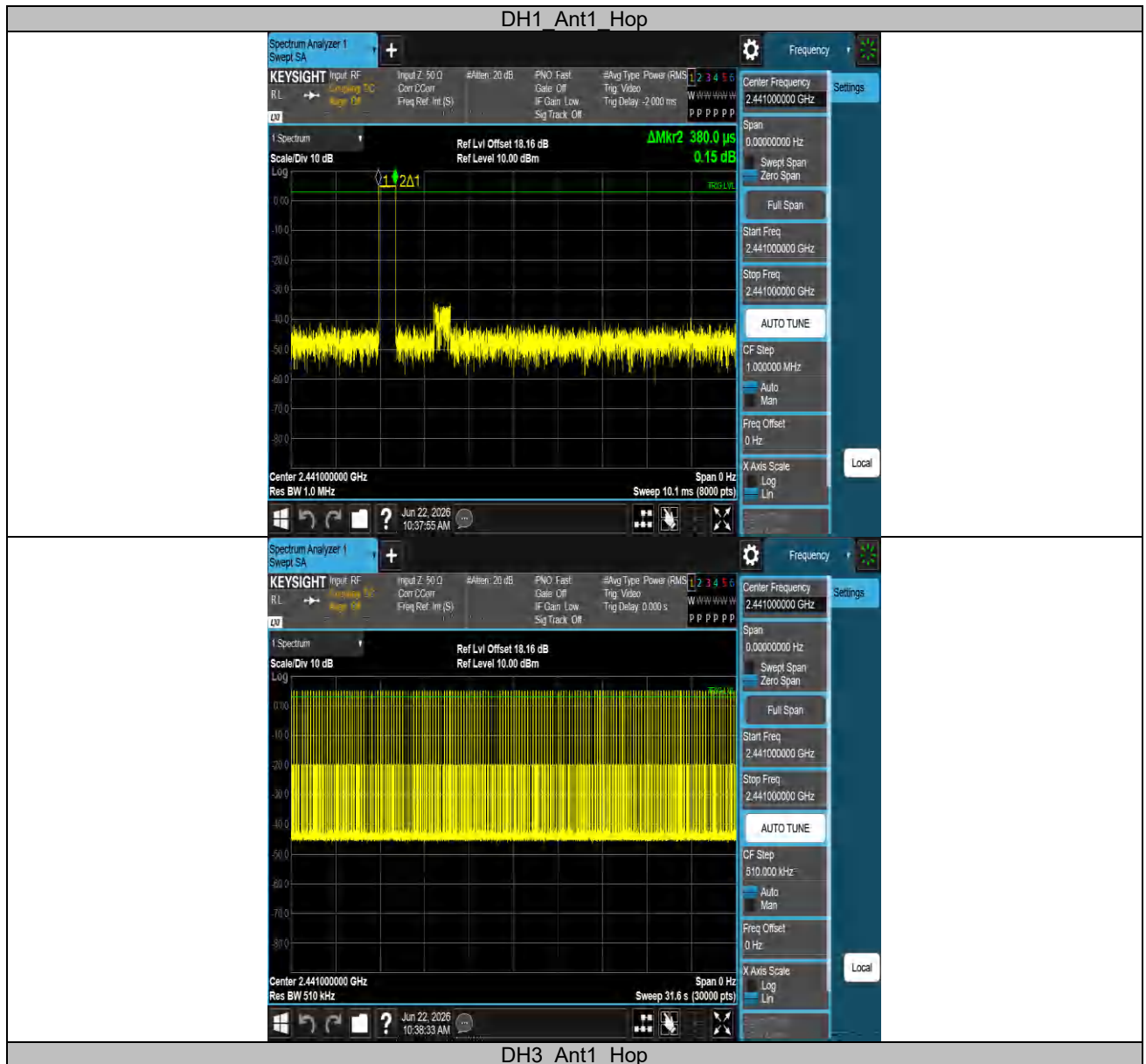


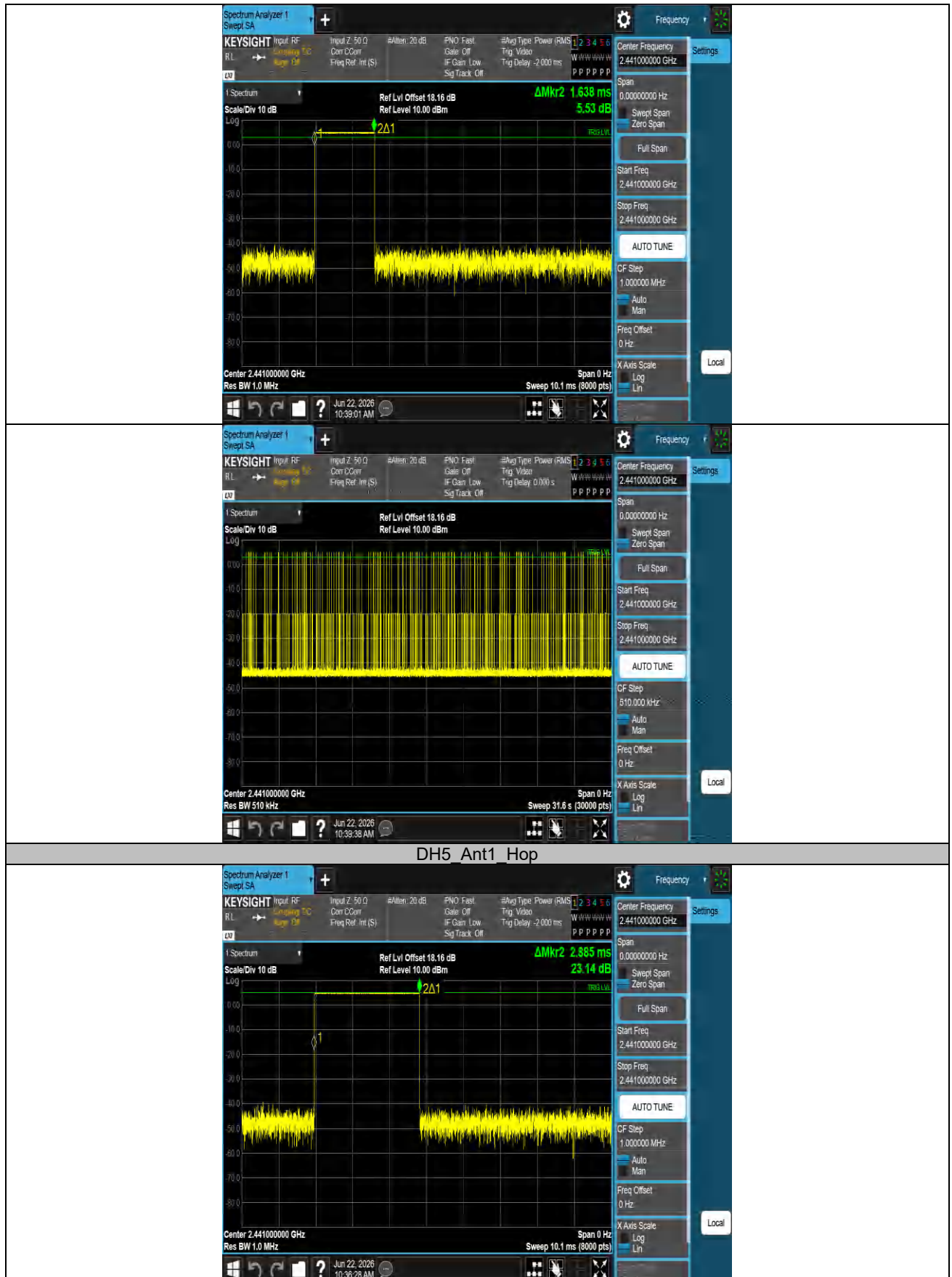
Appendix A.4: Test Results of Time of Occupancy

Test Result

TestMode	Antenna	Channel	BurstWidth [ms]	TotalHops [Num]	Result[s]	Limit[s]	Verdict
DH1	Ant1	Hop	0.380	317	0.12	≤0.4	PASS
DH3	Ant1	Hop	1.638	157	0.257	≤0.4	PASS
DH5	Ant1	Hop	2.885	100	0.289	≤0.4	PASS
3DH1	Ant1	Hop	0.390	315	0.123	≤0.4	PASS
3DH3	Ant1	Hop	1.640	149	0.244	≤0.4	PASS
3DH5	Ant1	Hop	2.892	121	0.35	≤0.4	PASS

Test Graphs



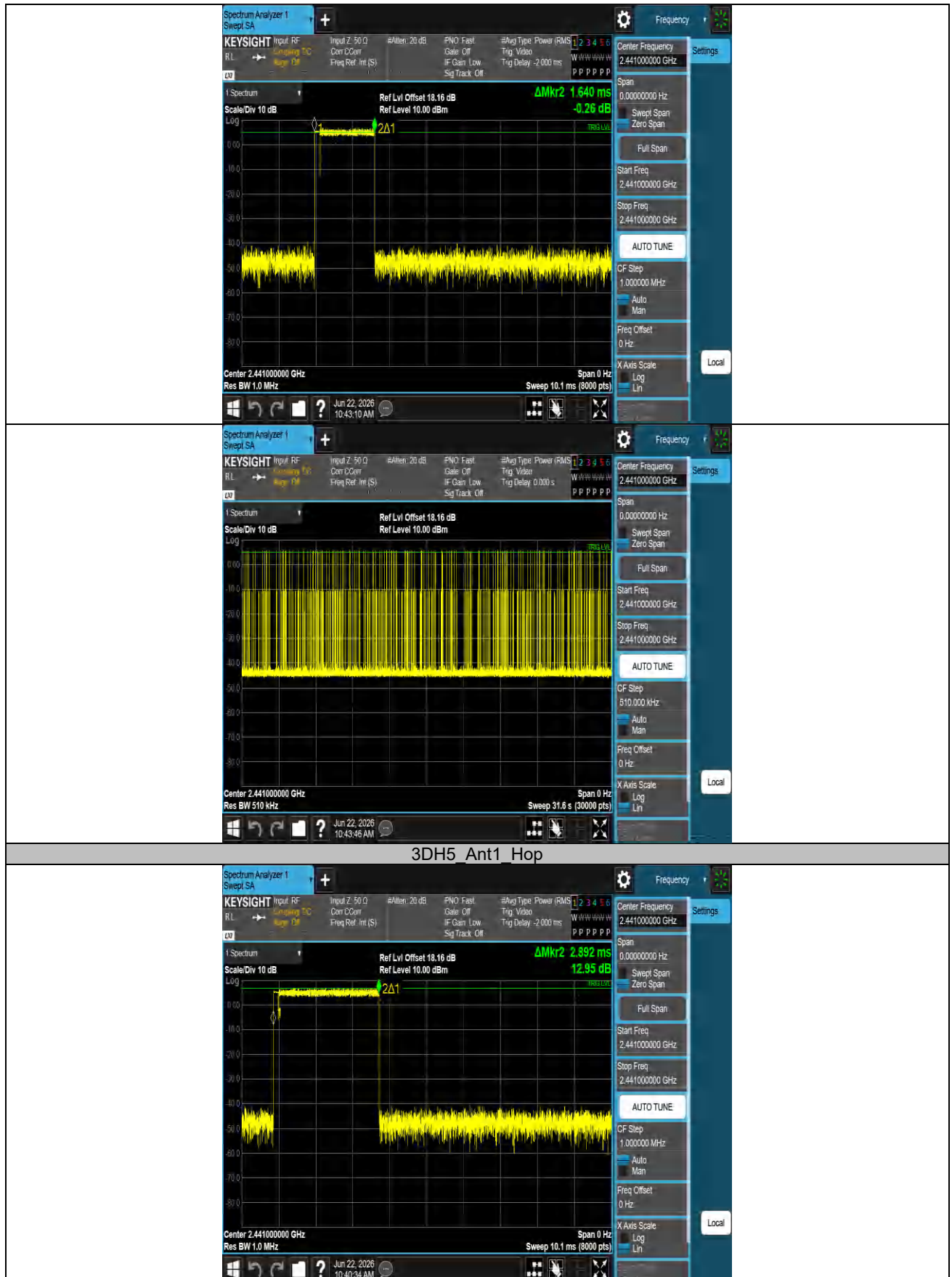




3DH1_Ant1_Hop



3DH3_Ant1_Hop



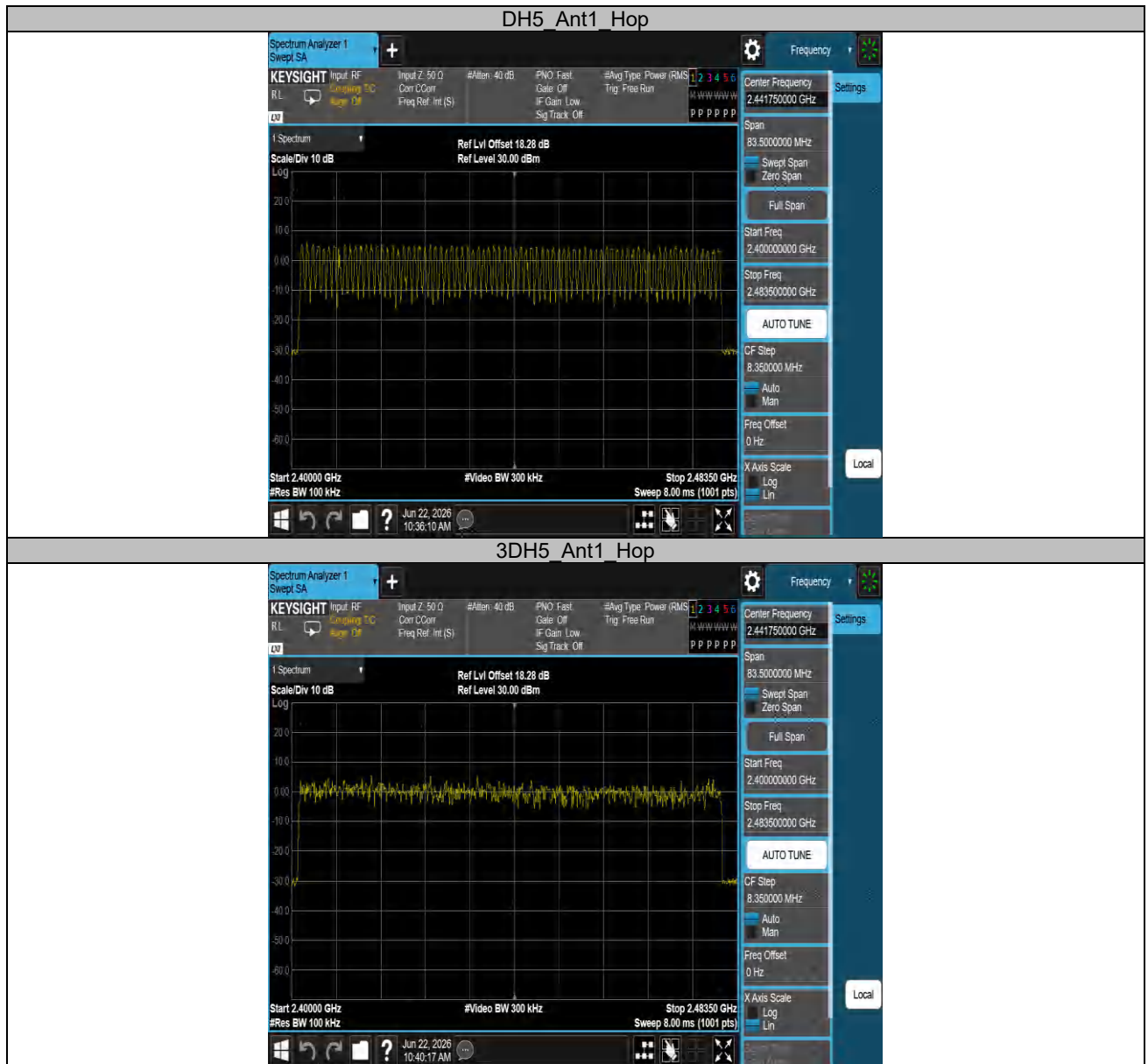


Appendix A.5: Test Results of Number of Hopping Frequency

Test Result

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

Test Graphs



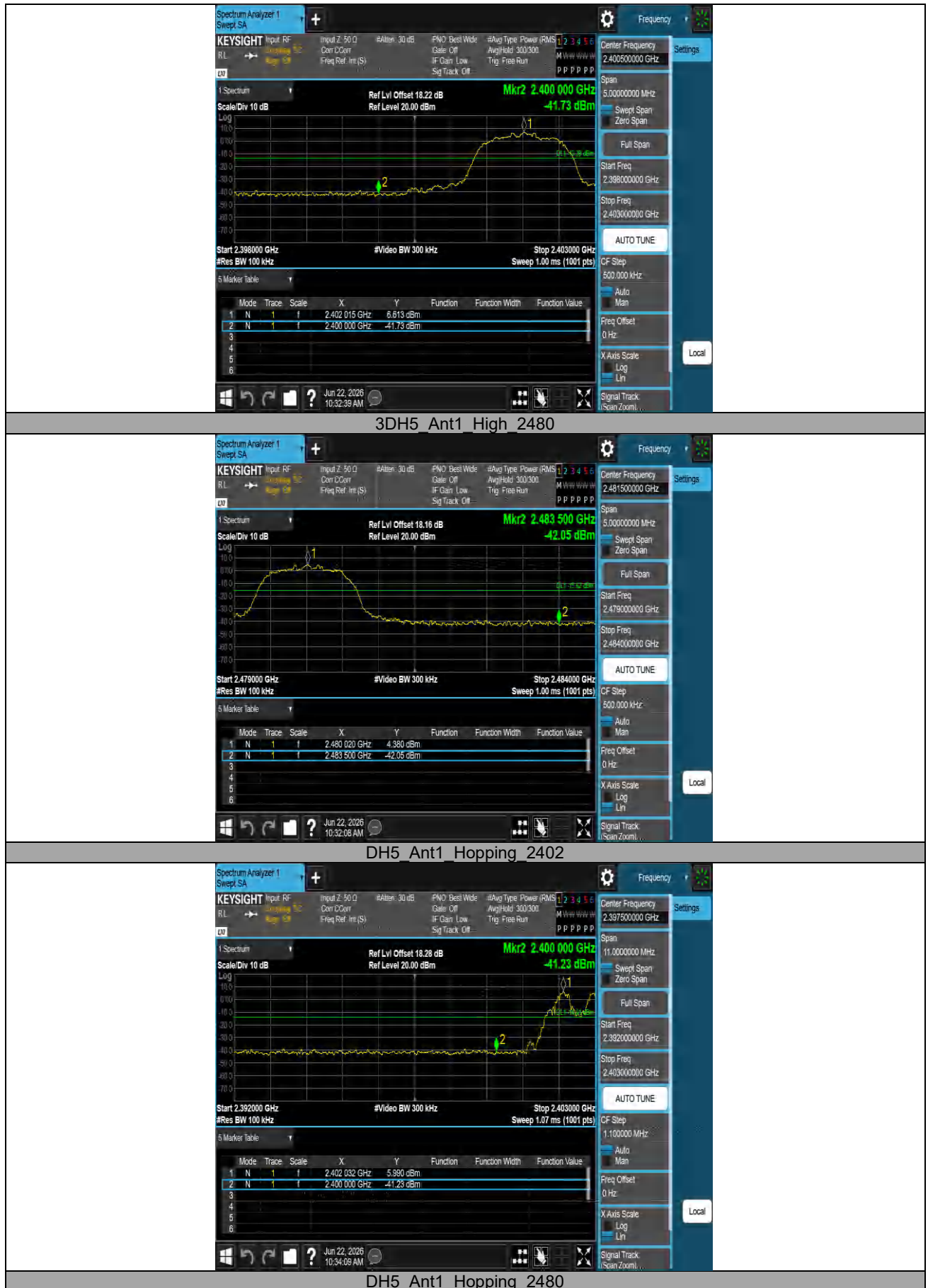
Appendix A.6: Test Results of Band Edge Measurements

Test Result

TestMode	Antenna	ChName	Channel	RefLevel [dBm]	Result [dBm]	Limit [dBm]	Verdict
DH5	Ant1	Low	2402	6.21	-41.91	≤-13.79	PASS
		High	2480	4.37	-42.91	≤-15.63	PASS
3DH5	Ant1	Low	2402	6.61	-41.73	≤-13.39	PASS
		High	2480	4.38	-42.05	≤-15.62	PASS
DH5	Ant1	Hopping	2402	5.99	-41.23	≤-14.01	PASS
		Hopping	2480	3.57	-41.38	≤-16.43	PASS
3DH5	Ant1	Hopping	2402	3.26	-42.69	≤-16.74	PASS
		Hopping	2480	1.18	-40.35	≤-18.82	PASS

Test Graphs





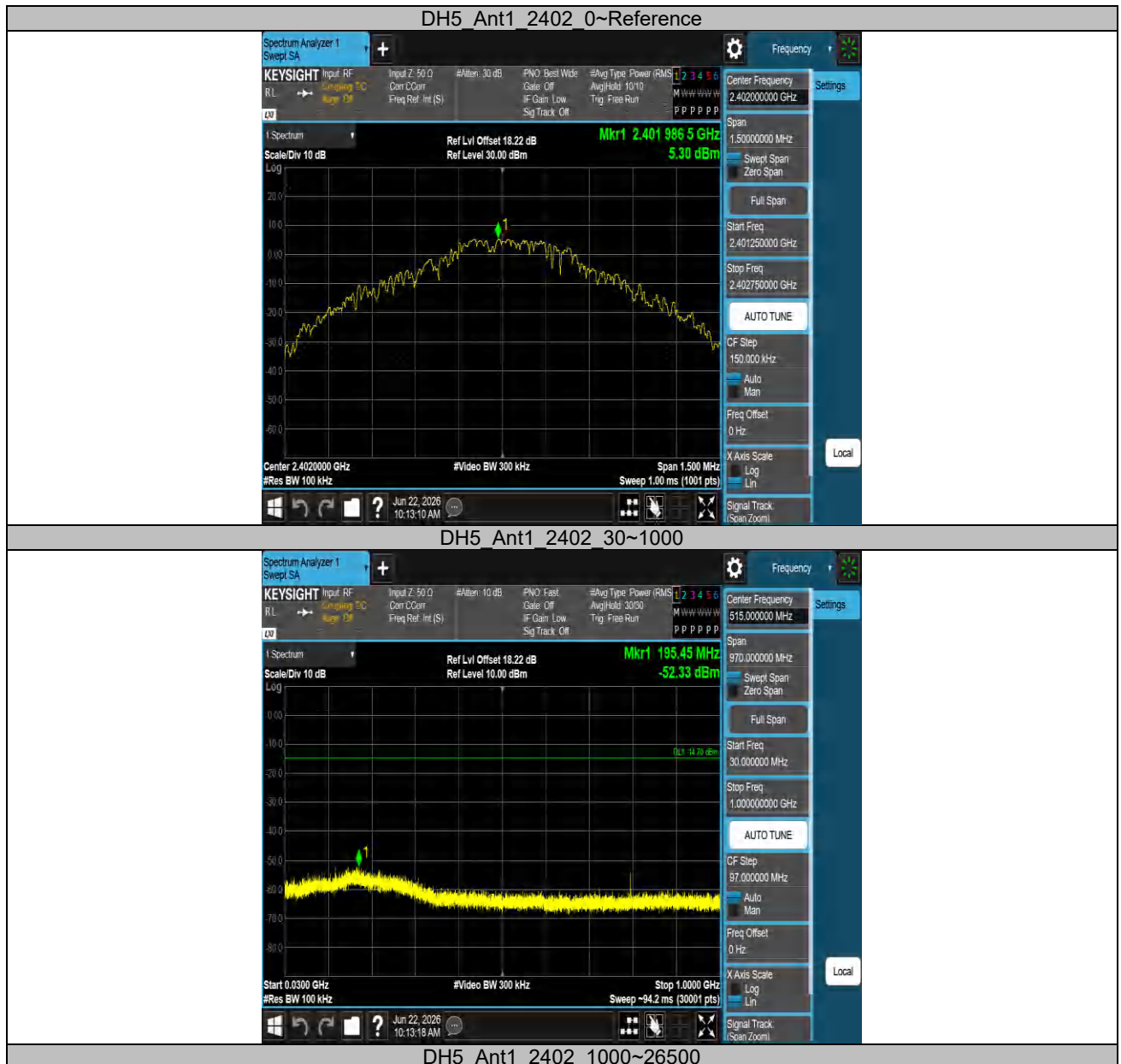


Appendix A.7: Test Results of Conducted Spurious Emission

Test Result

TestMode	Antenna	Channel	FreqRange [MHz]	RefLevel [dBm]	Result [dBm]	Limit [dBm]	Verdict
DH5	Ant1	2402	Reference	5.30	5.30	---	PASS
			30~1000	5.30	-52.34	≤-14.7	PASS
			1000~26500	5.30	-53.94	≤-14.7	PASS
		2441	Reference	4.18	4.18	---	PASS
			30~1000	4.18	-52.14	≤-15.82	PASS
			1000~26500	4.18	-53.68	≤-15.82	PASS
		2480	Reference	3.89	3.89	---	PASS
			30~1000	3.89	-52.27	≤-16.11	PASS
			1000~26500	3.89	-54.2	≤-16.11	PASS
3DH5	Ant1	2402	Reference	3.30	3.30	---	PASS
			30~1000	3.30	-52.15	≤-16.7	PASS
			1000~26500	3.30	-54.02	≤-16.7	PASS
		2441	Reference	2.45	2.45	---	PASS
			30~1000	2.45	-52.23	≤-17.55	PASS
			1000~26500	2.45	-53.95	≤-17.55	PASS
		2480	Reference	1.62	1.62	---	PASS
			30~1000	1.62	-51.62	≤-18.38	PASS
			1000~26500	1.62	-54.28	≤-18.38	PASS

Test Graphs





DH5_Ant1_2441_0~Reference



DH5_Ant1_2441_30~1000



DH5_Ant1_2441_1000~26500



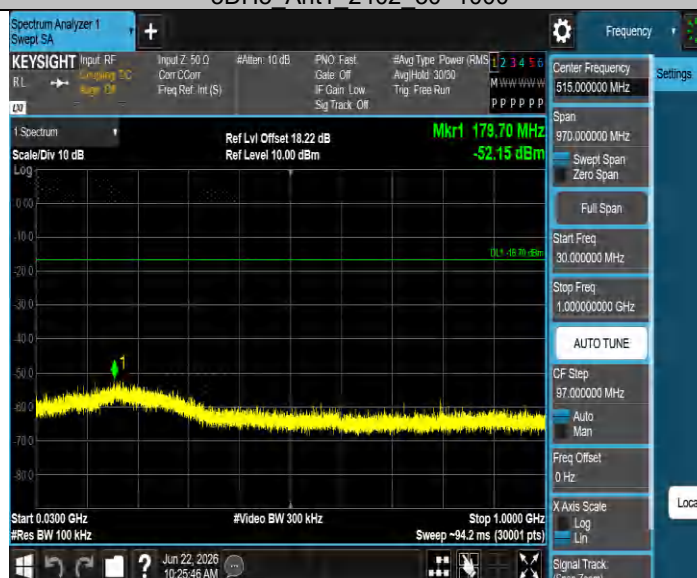
DH5 Ant1 2480 0~Reference

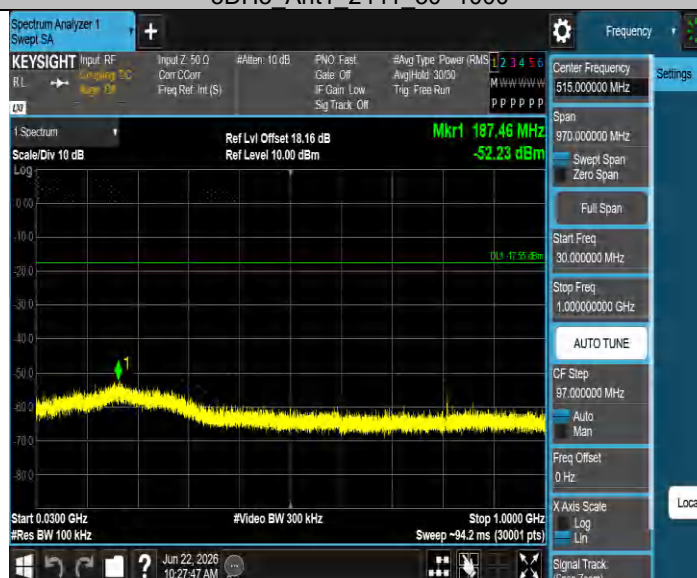


DH5 Ant1 2480 30~1000



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

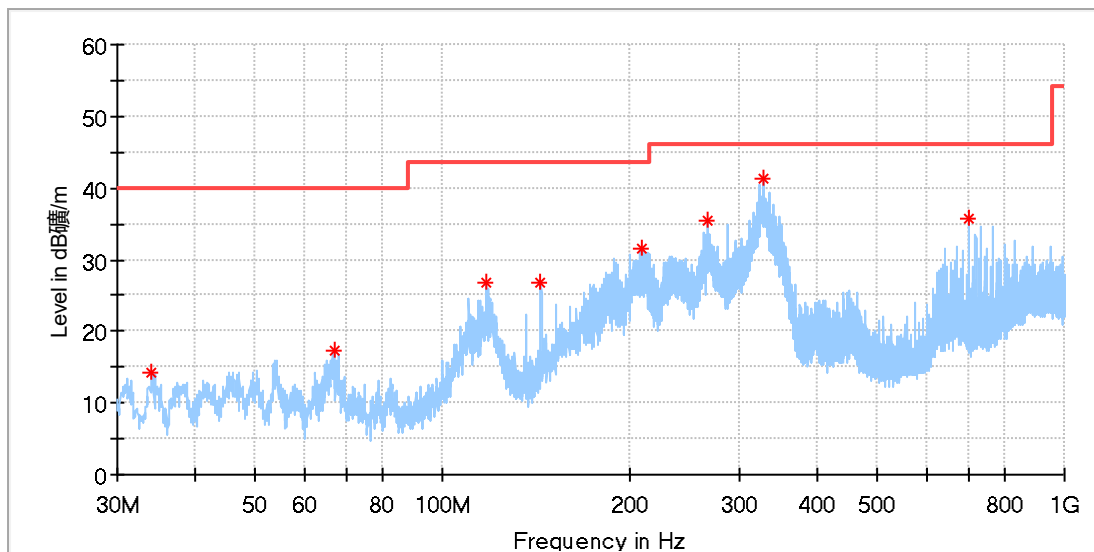
Note:

- 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.

30MHz - 1GHz

EUT Information

EUT Name:	H2 Humanoid Robot
Model:	H2 EDU
Test Mode:	BR DH5_Mid channel
Order No/Sample No:	A004293048-004
Test Voltage:	Battery
Remark:	Temp 23.8°C Humi:57%
Test Standard:	FCC 15.247
Tested By:	Kei Zhang
Reviewed By:	Terry Yin



Critical Freqs

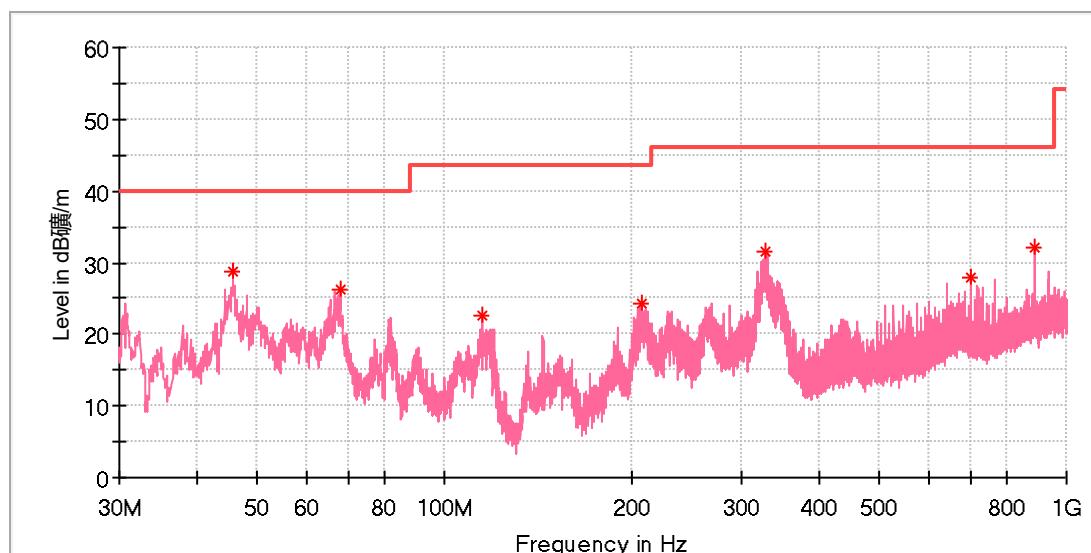
Frequency (MHz)	MaxPeak (dBμV/m)	Limit (dBμV/m)	Margin (dB)	Height (cm)	Pol	Azimuth (deg)	Corr. (dB/m)
34.095556	14.23	40.00	25.77	100.0	H	324.0	-22.3
66.860000	17.31	40.00	22.69	100.0	H	172.0	-20.9
117.353889	26.88	43.50	16.62	100.0	H	280.0	-20.3
143.975000	26.88	43.50	16.62	100.0	H	324.0	-22.4
208.480000	31.60	43.50	11.90	100.0	H	76.0	-18.9
266.302778	35.36	46.00	10.64	100.0	H	76.0	-17.0
328.328889	41.26	46.00	4.74	100.0	H	299.0	-15.4
704.042222	35.75	46.00	10.25	100.0	H	261.0	-7.9

Final Result

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

EUT Information

EUT Name: H2 Humanoid Robot
Model: H2 EDU
Test Mode: BR DH5_Mid channel
Order No/Sample No: A004293048-004
Test Voltage: Battery
Remark: Temp 23.8°C Humi:57%
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)
45.735556	28.77	40.00	11.23	100.0	V	0.0	-18.8
67.830000	26.12	40.00	13.88	100.0	V	269.0	-21.2
114.767222	22.48	43.50	21.02	100.0	V	119.0	-19.8
207.078889	24.38	43.50	19.12	100.0	V	0.0	-18.9
328.652222	31.42	46.00	14.58	100.0	V	0.0	-15.3
703.988333	27.90	46.00	18.10	100.0	V	304.0	-7.9
890.982778	32.14	46.00	13.86	100.0	V	138.0	-4.9

Final Result

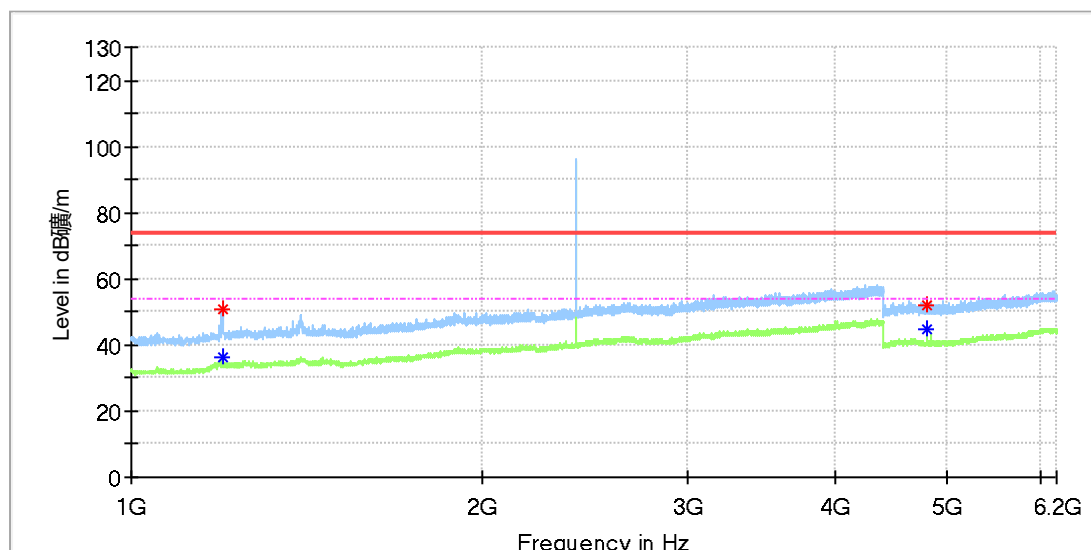
Frequency (MHz)	QuasiPeak (dBμV/m)	Limit (dBμV/m)	Margin (dB)	Height (cm)	Pol	Azimuth (deg)	Corr. (dB/m)
---	---	---	---	---		---	---

1GHz - 18GHz

Note: The highest waveform in the figure is Bluetooth Fundamental.

EUT Information

EUT Name:	H2 Humanoid Robot
Model:	H2 EDU
Test Mode:	BR DH5_Low channel
Order No/Sample No:	A004293048-004
Test Voltage:	Battery
Remark:	Temp 23.8°C Humi:57%
Test Standard:	FCC 15.247
Tested By:	Kei Zhang
Reviewed By:	Terry Yin



Critical Freqs

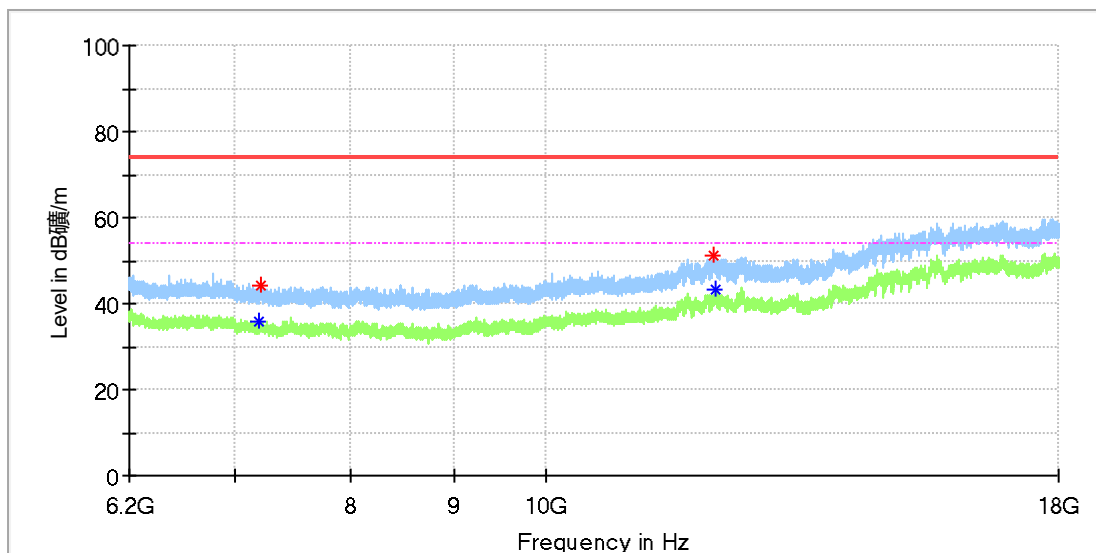
Frequency (MHz)	MaxPeak (dBμV/m)	Average (dBμV/m)	Limit (dBμV/m)	Margin (dB)	Height (cm)	Pol	Azimuth (deg)	Corr. (dB/m)
1197.000000	---	36.08	54.00	17.92	150.0	H	229.0	1.8
1199.500000	50.97	---	74.00	23.03	150.0	H	229.0	1.8
4804.000000	51.96	---	74.00	22.04	150.0	H	127.0	13.3
4804.000000	---	44.54	54.00	9.46	150.0	H	127.0	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	

EUT Information

EUT Name:	H2 Humanoid Robot
Model:	H2 EDU
Test Mode:	BR DH5_Low channel
Order No/Sample No:	A004293048-004
Test Voltage:	Battery
Remark:	Temp 23.8°C Humi:57%
Test Standard:	FCC 15.247
Tested By:	Kei Zhang
Reviewed By:	Terry Yin



Critical_Freqs

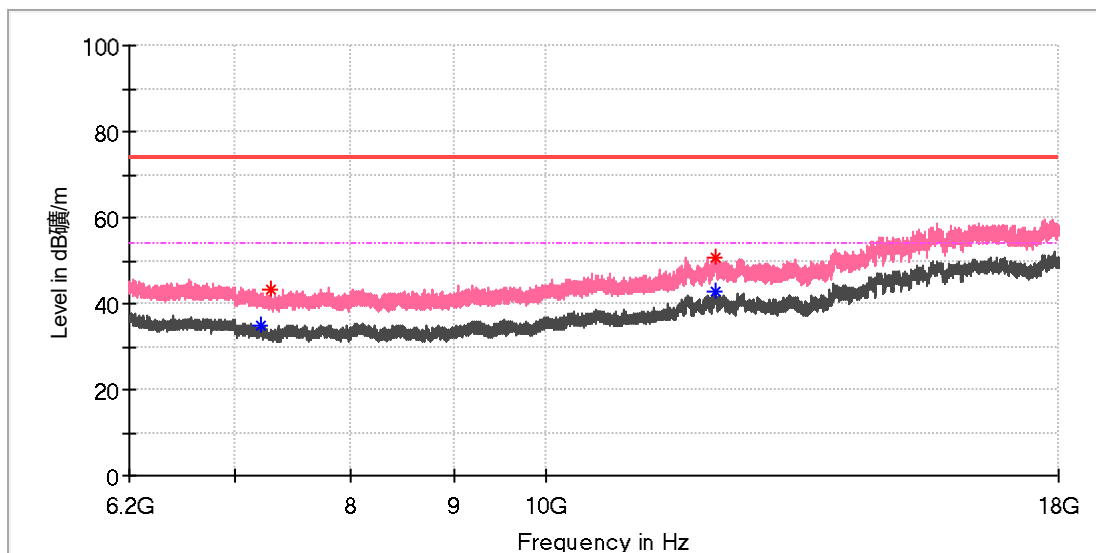
Frequency (MHz)	MaxPeak (dBµV/m)	Average (dBµV/m)	Limit (dBµV/m)	Margin (dB)	Height (cm)	Pol	Azimuth (deg)	Corr. (dB/m)
7199.558333	---	36.04	54.00	17.96	150.0	H	0.0	8.8
7203.491667	44.22	---	74.00	29.78	150.0	H	134.0	8.8
12119.666667	51.27	---	74.00	22.73	150.0	H	113.0	15.9
12149.658333	---	43.24	54.00	10.76	150.0	H	92.0	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)
93.7	59.5	59.5	60.0	-0.5	100	h	135	0.0

EUT Information

EUT Name:	H2 Humanoid Robot
Model:	H2 EDU
Test Mode:	BR DH5_Low channel
Order No/Sample No:	A004293048-004
Test Voltage:	Battery
Remark:	Temp 23.8°C Humi:57%
Test Standard:	FCC 15.247
Tested By:	Kei Zhang
Reviewed By:	Terry Yin



Critical_Freqs

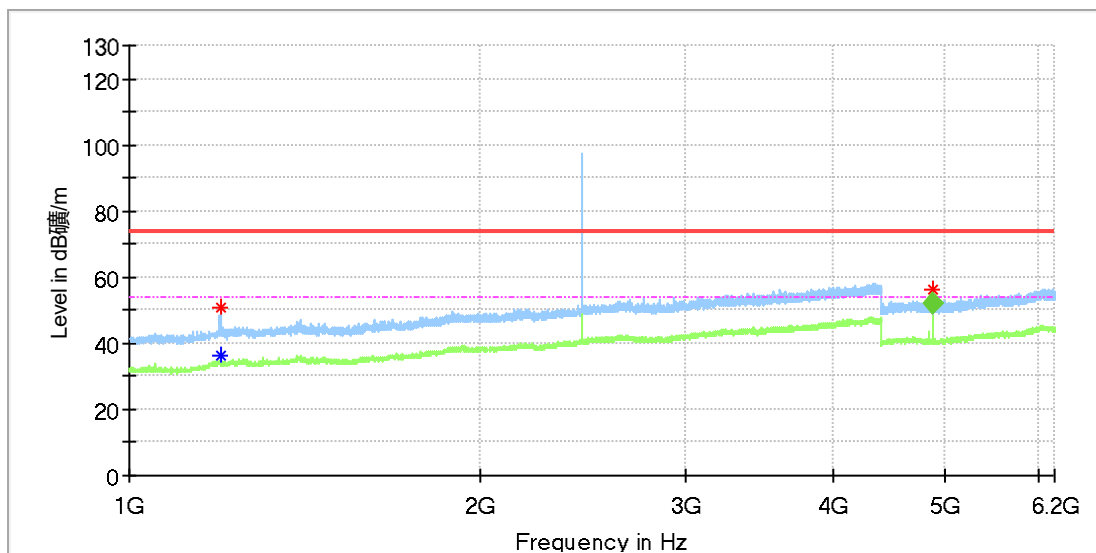
Frequency (MHz)	MaxPeak (dBμV/m)	Average (dBμV/m)	Limit (dBμV/m)	Margin (dB)	Height (cm)	Pol	Azimuth (deg)	Corr. (dB/m)
7217.258333	---	34.79	54.00	19.21	150.0	V	88.0	8.7
7294.941667	43.18	---	74.00	30.82	150.0	V	16.0	8.3
12145.233333	50.86	---	74.00	23.14	150.0	V	282.0	16.6
12155.558333	---	42.73	54.00	11.27	150.0	V	0.0	16.4

Final_Result

Frequency (MHz)	MaxPeak (dBμV/m)	Average (dBμV/m)	Limit (dBμV/m)	Margin (dB)	Height (cm)	Pol	Azimuth (deg)	Corr. (dB/m)
93.5	122.5	122.5	122.5	0	100	0	0	0

EUT Information

EUT Name: H2 Humanoid Robot
Model: H2 EDU
Test Mode: BR DH5_Mid channel
Order No/Sample No: A004293048-004
Test Voltage: Battery
Remark: Temp 23.8°C Humi:57%
Test Standard: FCC 15.247
Tested By: Kei Zhang
Reviewed By: Terry Yin



Critical Freqs

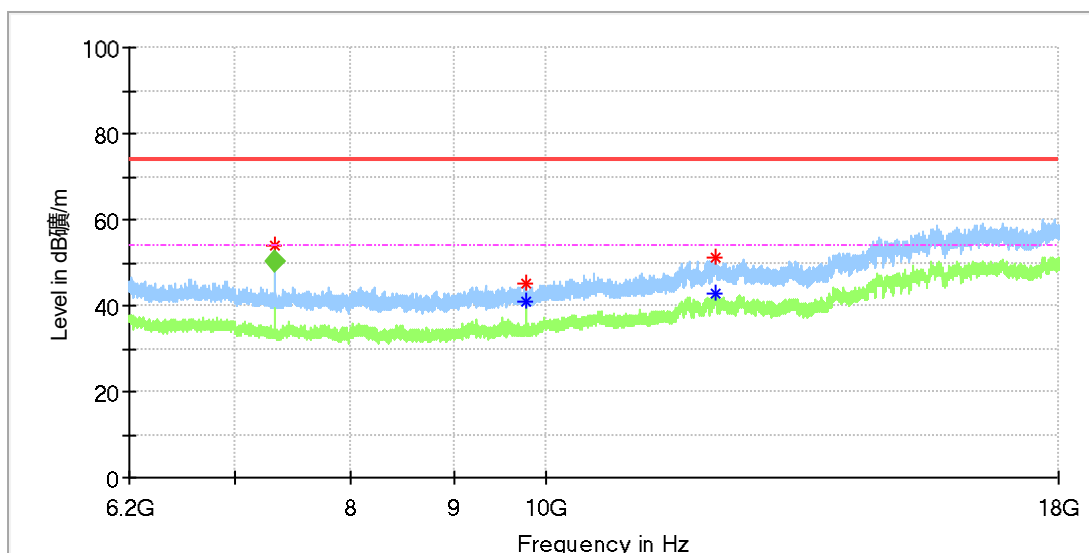
Frequency (MHz)	MaxPeak (dBμV/m)	Average (dBμV/m)	Limit (dBμV/m)	Margin (dB)	Height (cm)	Pol	Azimuth (deg)	Corr. (dB/m)
1199.000000	---	36.53	54.00	17.47	150.0	H	225.0	1.8
1199.000000	50.87	---	74.00	23.13	150.0	H	225.0	1.8
4881.500000	55.98	---	74.00	18.02	150.0	H	124.0	13.3

Final Result

Frequency (MHz)	MaxPeak (dBμV/m)	Average (dBμV/m)	Limit (dBμV/m)	Margin (dB)	Height (cm)	Pol	Azimuth (deg)	Corr. (dB/m)
4882.027778	---	51.72	54.00	2.28	150.0	H	124.0	13.3

EUT Information

EUT Name: H2 Humanoid Robot
Model: H2 EDU
Test Mode: BR DH5_Mid channel
Order No/Sample No: A004293048-004
Test Voltage: Battery
Remark: Temp 23.8°C Humi:57%
Test Standard: FCC 15.247
Tested By: Kei Zhang
Reviewed By: Terry Yin



Critical_Freqs

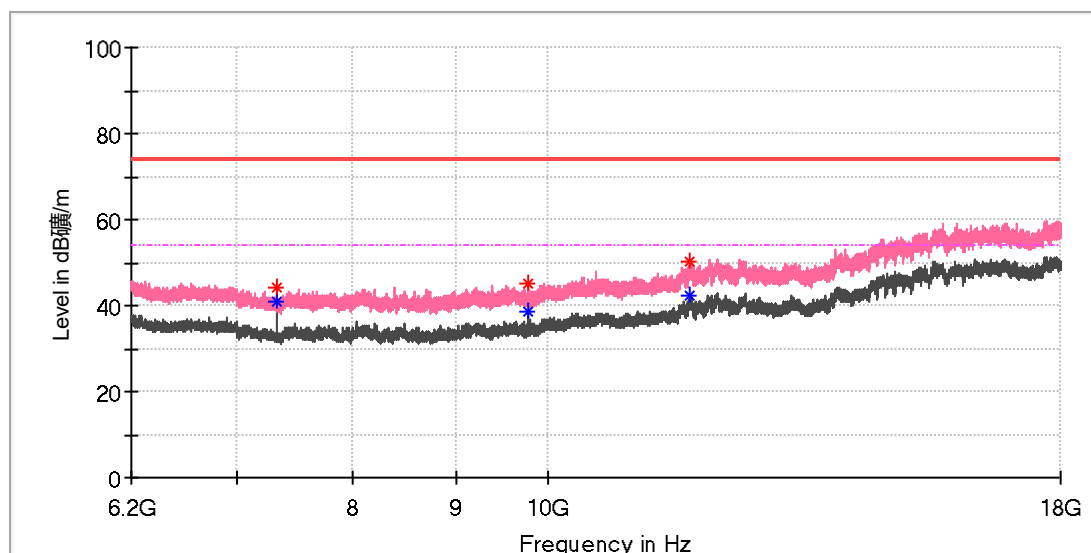
Frequency (MHz)	MaxPeak (dBμV/m)	Average (dBμV/m)	Limit (dBμV/m)	Margin (dB)	Height (cm)	Pol	Azimuth (deg)	Corr. (dB/m)
7322.966667	53.87	---	74.00	20.13	150.0	H	0.0	8.2
9763.600000	---	40.93	54.00	13.07	150.0	H	141.0	10.4
9764.583333	45.31	---	74.00	28.69	150.0	H	141.0	10.4
12142.775000	50.95	---	74.00	23.05	150.0	H	186.0	16.5
12145.725000	---	43.00	54.00	11.00	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)
7323.559167	---	50.42	54.00	3.58	150.0	H	0.0	8.2

EUT Information

EUT Name:	H2 Humanoid Robot
Model:	H2 EDU
Test Mode:	BR DH5_Mid channel
Order No/Sample No:	A004293048-004
Test Voltage:	Battery
Remark:	Temp 23.8°C Humi:57%
Test Standard:	FCC 15.247
Tested By:	Kei Zhang
Reviewed By:	Terry Yin



Critical Freqs

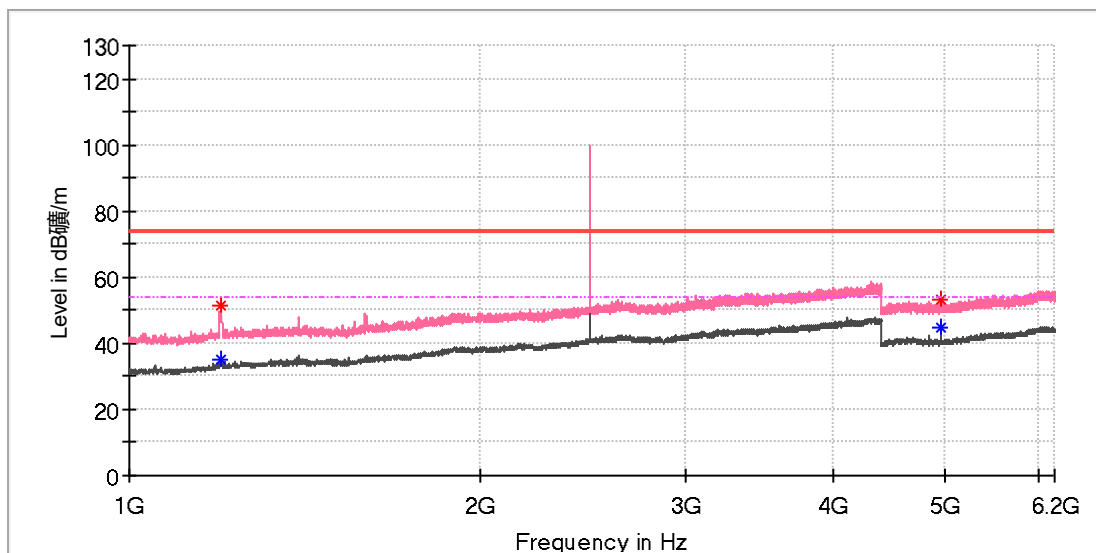
Frequency (MHz)	MaxPeak (dBμV/m)	Average (dBμV/m)	Limit (dBμV/m)	Margin (dB)	Height (cm)	PoI	Azimuth (deg)	Corr. (dB/m)
7322.966667	44.25	---	74.00	29.75	150.0	V	125.0	8.2
7322.966667	---	40.86	54.00	13.14	150.0	V	125.0	8.2
9763.600000	45.10	---	74.00	28.90	150.0	V	269.0	10.4
9764.091667	---	38.52	54.00	15.48	150.0	V	324.0	10.4
11754.358333	---	42.33	54.00	11.67	150.0	V	346.0	15.5
11763.700000	50.40	---	74.00	23.60	150.0	V	356.0	15.3

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:	H2 Humanoid Robot
Model:	H2 EDU
Test Mode:	BR DH5_High channel
Order No/Sample No:	A004293048-004
Test Voltage:	Battery
Remark:	Temp 23.8°C Humi:57%
Test Standard:	FCC 15.247
Tested By:	Kei Zhang
Reviewed By:	Terry Yin



Critical_Freqs

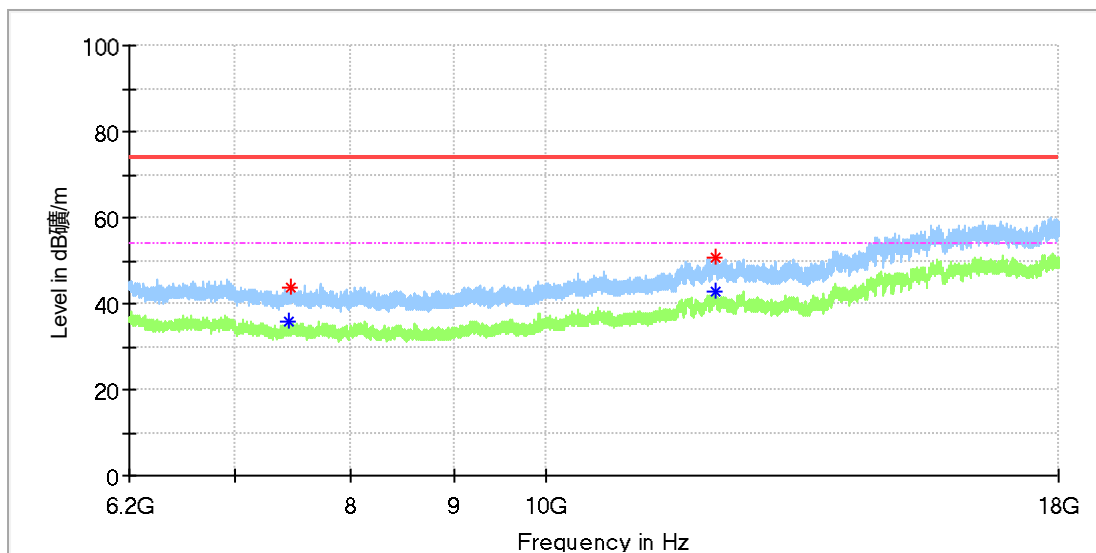
Frequency (MHz)	MaxPeak (dBμV/m)	Average (dBμV/m)	Limit (dBμV/m)	Margin (dB)	Height (cm)	Pol	Azimuth (deg)	Corr. (dB/m)
1197.500000	---	34.95	54.00	19.05	150.0	V	39.0	1.8
1198.500000	51.10	---	74.00	22.90	150.0	V	52.0	1.8
4959.500000	53.02	---	74.00	20.98	150.0	V	118.0	13.3
4960.000000	---	44.96	54.00	9.04	150.0	V	48.0	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:	H2 Humanoid Robot
Model:	H2 EDU
Test Mode:	BR DH5_High channel
Order No/Sample No:	A004293048-004
Test Voltage:	Battery
Remark:	Temp 23.8°C Humi:57%
Test Standard:	FCC 15.247
Tested By:	Kei Zhang
Reviewed By:	Terry Yin



Critical_Freqs

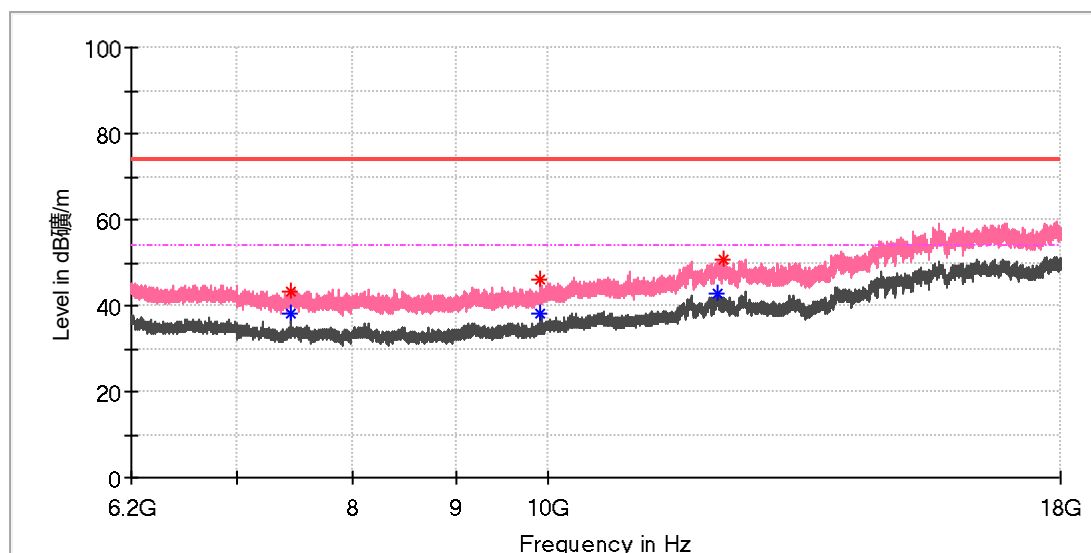
Frequency (MHz)	MaxPeak (dBμV/m)	Average (dBμV/m)	Limit (dBμV/m)	Margin (dB)	Height (cm)	Pol	Azimuth (deg)	Corr. (dB/m)
7437.525000	---	35.84	54.00	18.16	150.0	H	150.0	8.4
7460.141667	43.66	---	74.00	30.34	150.0	H	38.0	8.5
12139.333333	50.52	---	74.00	23.48	150.0	H	205.0	16.5
12150.641667	---	42.73	54.00	11.27	150.0	H	38.0	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)
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EUT Information

EUT Name:	H2 Humanoid Robot
Model:	H2 EDU
Test Mode:	BR DH5_High channel
Order No/Sample No:	A004293048-004
Test Voltage:	Battery
Remark:	Temp 23.8°C Humi:57%
Test Standard:	FCC 15.247
Tested By:	Kei Zhang
Reviewed By:	Terry Yin



Critical Freqs

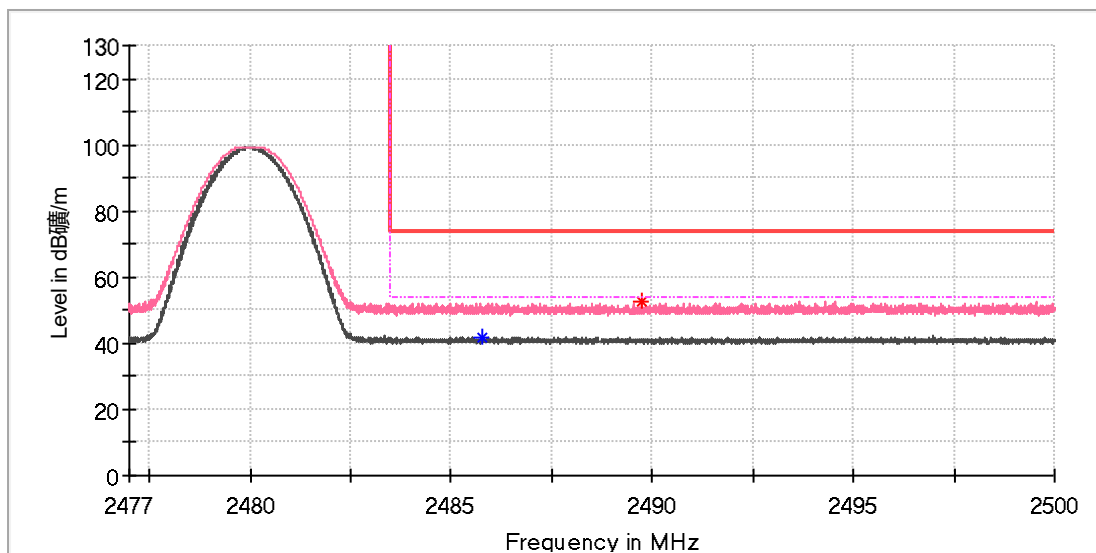
Frequency (MHz)	MaxPeak (dBμV/m)	Average (dBμV/m)	Limit (dBμV/m)	Margin (dB)	Height (cm)	Pol	Azimuth (deg)	Corr. (dB/m)
7439.000000	43.30	---	74.00	30.70	150.0	V	127.0	8.4
7439.983333	---	38.23	54.00	15.77	150.0	V	127.0	8.4
9919.458333	45.94	---	74.00	28.06	150.0	V	149.0	10.8
9919.458333	---	38.01	54.00	15.99	150.0	V	149.0	10.8
12148.183333	---	42.84	54.00	11.16	150.0	V	45.0	16.7
12221.441667	50.68	---	74.00	23.32	150.0	V	261.0	15.9

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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EUT Information

EUT Name:	H2 Humanoid Robot
Model:	H2 EDU
Test Mode:	BR DH5_High channel
Order No/Sample No:	A004293048-004
Test Voltage:	Battery
Remark:	Temp 23.8°C Humi:57%
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)
2485.794118	---	41.94	54.00	12.06	150.0	V	92.0	9.0
2489.753677	52.58	---	74.00	21.42	150.0	V	2.0	9.0

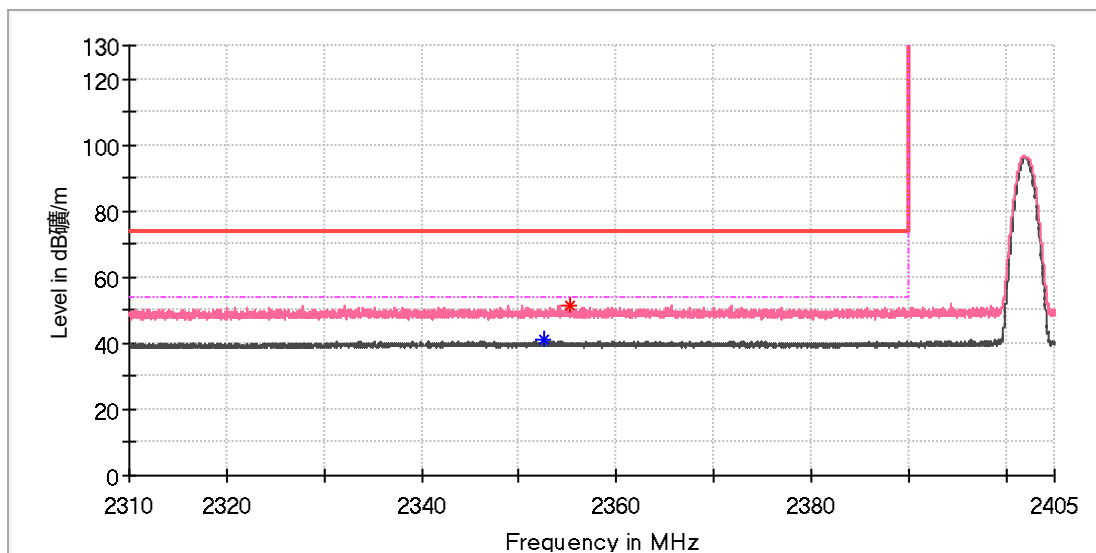
Final Result

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

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 MHz	93.750 MHz	93.750 MHz	93.750 MHz	93.750 MHz		93.750 MHz	93.750 MHz

EUT Information

EUT Name:	H2 Humanoid Robot
Model:	H2 EDU
Test Mode:	BR DH5_Low channel
Order No/Sample No:	A004293048-004
Test Voltage:	Battery
Remark:	Temp 23.8°C Humi:57%
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)
2352.673235	---	40.94	54.00	13.06	150.0	V	280.0	8.5
2355.180882	51.69	---	74.00	22.31	150.0	V	359.0	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 deg	93.750 dB/m