TEST PROCEDURE

a. The EUT was placed on the top of a rotating table 0.8/1.5 meters above the ground at a 3 meter chamber test site. The table was rotated 360 degrees to determine the position of the highest radiation.

b. White measuring the radiated emission below 1GHz, the EUT was set 3 meters away from the interference-receiving antenna, which was mounted on the top of a variable-height antenna tower. White measuring the radiated emission above 1GHz, the EUT was set 3 meters away from the interference-receiving antenna

c. The antenna is a broadband antenna, and its height is varied from one meter to four meters above the ground to determine the maximum value of the field strength. Both horizontal and vertical polarization of the antenna are set to make the measurement.

d. For each suspected emission, the EUT was arranged to its worst case and then the antenna was tuned to heights from 1 meter to 4 meters and the table was turned from 0 degrees to 360 degrees to find the maximum reading.

e. The test-receiver system was set to Peak Detect Function and Specified Bandwidth with Maximum Hold Mode.

f. If the emission level of the EUT in peak mode was 10 dB lower than the limit specified, then testing could be stopped and the peak values of the EUT would be reported. Otherwise the emissions that did not have 10 dB margin would be re-tested one by one using peak, quasi-peak or average method as specified and then reported in a data sheet.

g. The tests were performed in accordance with 558074 D01 DTS Meas Guidance v03r03.

NOTE：

1. The resolution bandwidth and video bandwidth of test receiver/spectrum analyzer is 120 KHz for Peak detection (PK) and Quasi-peak detection (QP) at frequency below 1GHz.

2. The resolution bandwidth and video bandwidth of test receiver/spectrum analyzer is 1 MHz for Peak detection and frequency above 1GHz.

3. The resolution bandwidth of test receiver/spectrum analyzer is 1 MHz and the video bandwidth is 10 Hz for Average detection (AV) at frequency above 1GHz.

4. No emission is found between lowest internal used/generated frequency to 30MHz (9kHz~30MHz)

TEST RESULTS

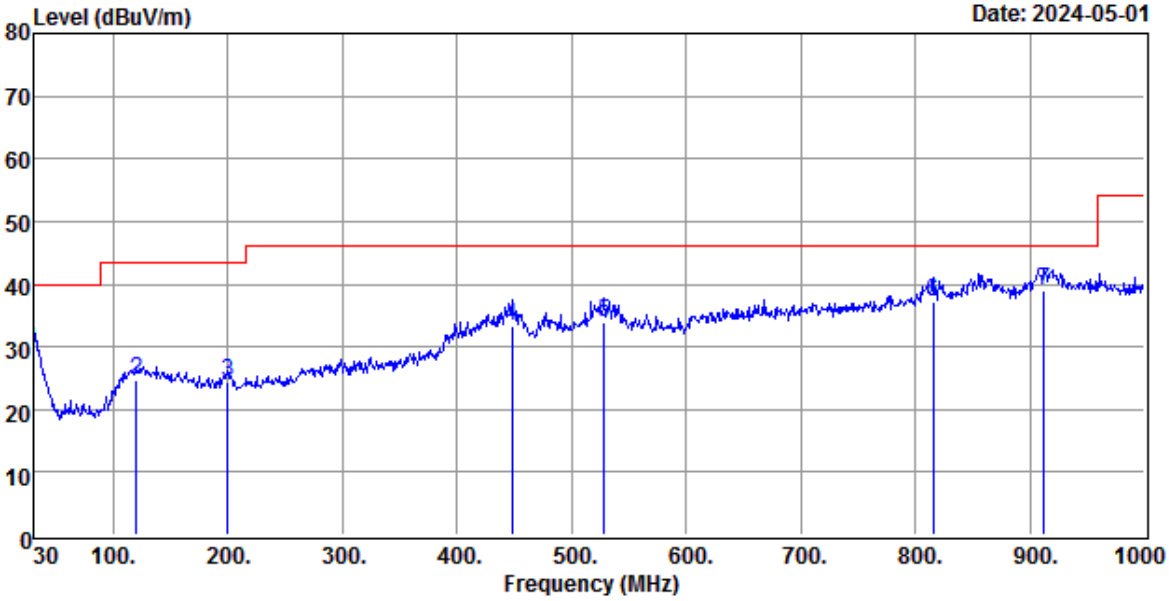
No non-compliance noted.

8.6.2 WORST-CASE RADIATED EMISSION BELOW 1 GHz

Product Name	Audio Device	Test Date	2024/05/01
Model	HG12	Test By	Peter Chu
Test Mode	TX	TEMP& Humidity	25.6℃/55%

Horizontal

(The chart below shows the highest readings taken from the final data.)



Freq	Reading	C.F	Result	Limit	Margin	Detector
MHz	dBuV	dB	dBuV/m	dBuV/m	dB	
30.000	1.75	27.68	29.43	40.00	-10.57	QP
120.210	2.91	21.79	24.70	43.50	-18.80	QP
199.750	3.07	21.21	24.28	43.50	-19.22	QP
448.070	6.87	26.53	33.40	46.00	-12.60	QP
528.580	5.90	27.99	33.89	46.00	-12.11	QP
815.700	4.42	32.70	37.12	46.00	-8.88	QP
912.700	5.20	33.79	38.99	46.00	-7.01	QP

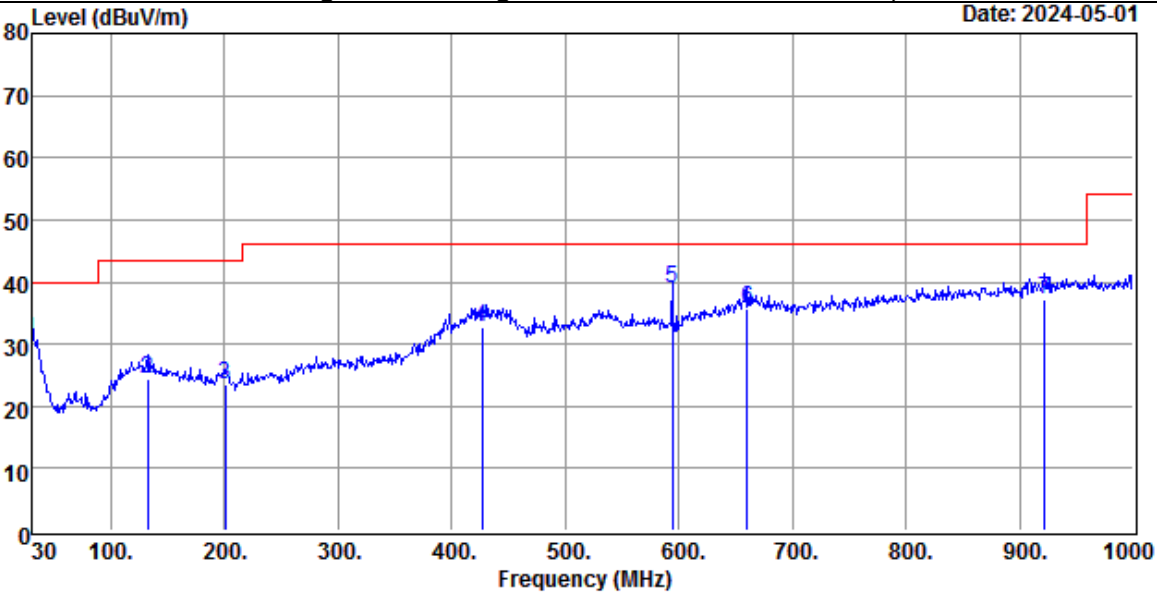
Remark:

1. No emission found between lowest internal used/generated frequency in 9kHz~30MHz.
2. Radiated emissions measured in frequency range from 30 MHz to 1000MHz were made with an instrument using peak/quasi-peak detector mode.
3. Quasi-peak test would be performed if the peak result were greater than the quasi-peak limit or as required by the applicant.
4. Measurements above show only up to 6 maximum emissions noted, or would be lesser, with " N/A " remark, if no specific emissions from the EUT are recorded (ie: margin>10dB from the applicable limit) and considered that's already beyond the background noise floor.
5. Result (Emission at 3m Level) = Receiver Reading + C.F
   C.F = Antenna Factor +Cable Loss
   Margin= Result -Limits
6. That the limit for signals below 1GHz is a QP limit and peak readings are below the QP limit.
7. The fundamental signal is not shown in the test data because measurements at fundamental frequency are shown separately and were ignored during the 30 – 1000 MHz scan.

Product Name	Audio Device	Test Date	2024/05/01
Model	HG12	Test By	Peter Chu
Test Mode	TX	TEMP& Humidity	25.6℃/55%

Vertical

(The chart below shows the highest readings taken from the final data.)



Freq	Reading	C.F	Result	Limit	Margin	Detector
MHz	dBuV	dB	dBuV/m	dBuV/m	dB	
30.000	3.06	27.68	30.74	40.00	-9.26	QP
131.850	2.82	21.47	24.29	43.50	-19.21	QP
200.720	2.53	20.92	23.45	43.50	-20.05	QP
426.730	6.48	26.10	32.58	46.00	-13.42	QP
594.540	10.48	28.59	39.07	46.00	-6.93	QP
660.500	5.40	30.42	35.82	46.00	-10.18	QP
922.400	3.17	34.02	37.19	46.00	-8.81	QP

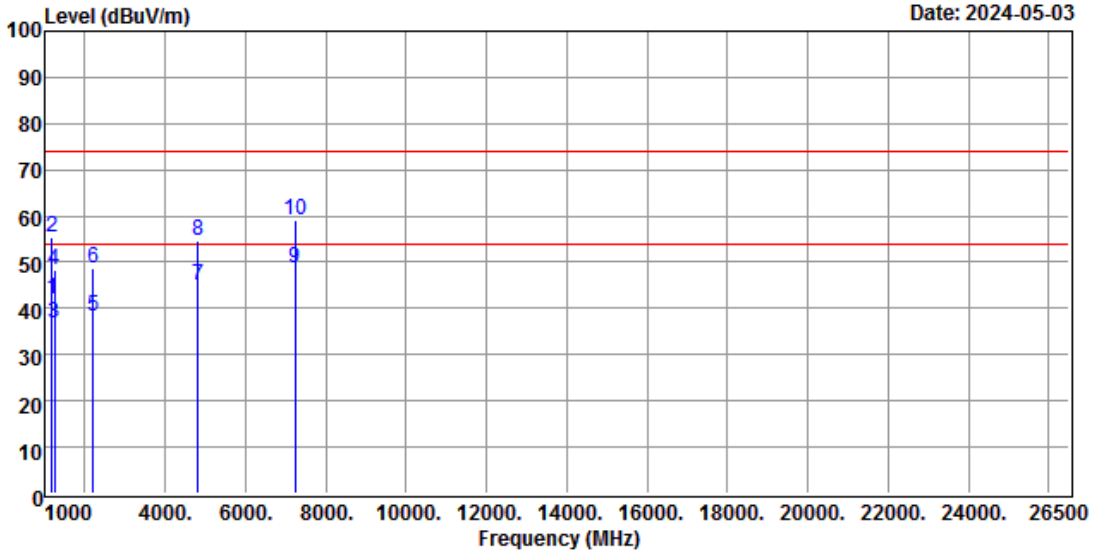
Remark:

1. No emission found between lowest internal used/generated frequency in 9kHz~30MHz.
2. Radiated emissions measured in frequency range from 30 MHz to 1000MHz were made with an instrument using peak/quasi-peak detector mode.
3. Quasi-peak test would be performed if the peak result were greater than the quasi-peak limit or as required by the applicant.
4. Measurements above show only up to 6 maximum emissions noted, or would be lesser, with " N/A " remark, if no specific emissions from the EUT are recorded (ie: margin>10dB from the applicable limit) and considered that's already beyond the background noise floor.
5. Result (Emission at 3m Level) = Receiver Reading + C.F
   C.F = Antenna Factor +Cable Loss
   Margin= Result -Limits
6. That the limit for signals below 1GHz is a QP limit and peak readings are below the QP limit.
7. The fundamental signal is not shown in the test data because measurements at fundamental frequency are shown separately and were ignored during the 30 – 1000 MHz scan.

8.6.3 TRANSMITTER RADIATED EMISSION ABOVE 1 GHz

Product Name	Audio Device	Test Date	2024/05/03
Model	HG12	Test By	Peter Chu
Test Mode	IEEE 802.11b TX (CH Low)	TEMP& Humidity	25.6℃/55%

Vertical



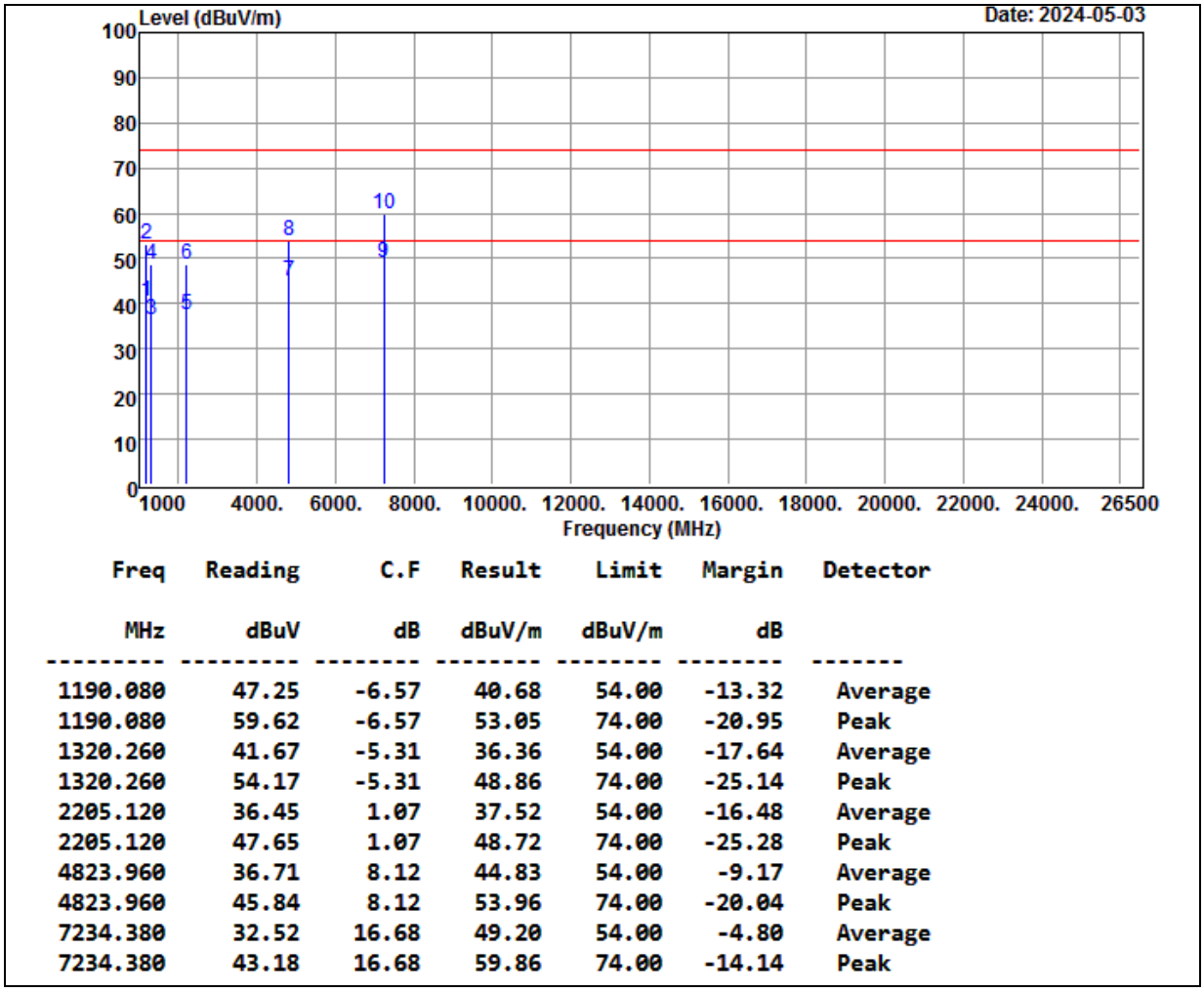
Freq	Reading	C.F	Result	Limit	Margin	Detector
MHz	dBuV	dB	dBuV/m	dBuV/m	dB	
1190.150	48.65	-6.57	42.08	54.00	-11.92	Average
1190.150	62.05	-6.57	55.48	74.00	-18.52	Peak
1255.050	42.69	-6.00	36.69	54.00	-17.31	Average
1255.050	54.27	-6.00	48.27	74.00	-25.73	Peak
2210.350	37.28	1.13	38.41	54.00	-15.59	Average
2210.350	47.63	1.13	48.76	74.00	-25.24	Peak
4823.850	36.81	8.12	44.93	54.00	-9.07	Average
4823.850	46.37	8.12	54.49	74.00	-19.51	Peak
7235.820	31.84	16.69	48.53	54.00	-5.47	Average
7235.820	42.23	16.69	58.92	74.00	-15.08	Peak

Remark:

1. AF: Antenna Factor, Cable: Cable Loss, Pre-Amp: Preamplifier gain, Filter: High Pass Filter Insertion Loss (2.4~2.5(GHz))
2. Spectrum analyzer setting P(Peak): RBW=1MHz, VBW=3MHz, A(Average): RBW=1MHz, VBW≧1/T
3. The result basic equation calculation is as follow:
   C.F= AF Factor + Cable Loss – Preamp Gain + Filter Loss
   Result = Reading + C.F, Margin = Result - Limit
4. The other emission levels were 10dB below the limit
5. The test distance is 3m.

Product Name	Audio Device	Test Date	2024/05/03
Model	HG12	Test By	Peter Chu
Test Mode	IEEE 802.11b TX (CH Low)	TEMP& Humidity	25.6℃/55%

Horizontal



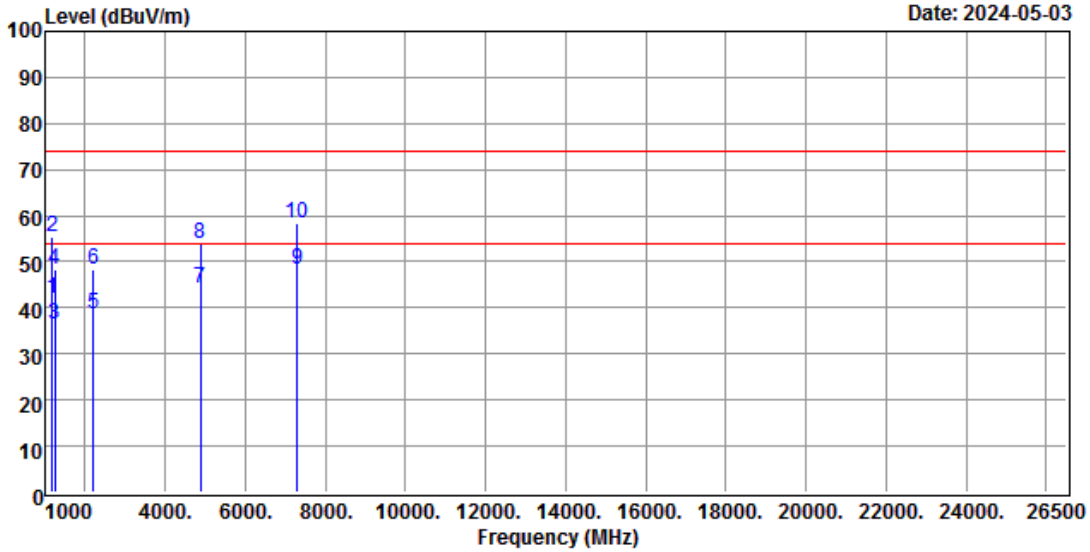
Freq	Reading	C.F	Result	Limit	Margin	Detector
MHz	dBuV	dB	dBuV/m	dBuV/m	dB	
1190.080	47.25	-6.57	40.68	54.00	-13.32	Average
1190.080	59.62	-6.57	53.05	74.00	-20.95	Peak
1320.260	41.67	-5.31	36.36	54.00	-17.64	Average
1320.260	54.17	-5.31	48.86	74.00	-25.14	Peak
2205.120	36.45	1.07	37.52	54.00	-16.48	Average
2205.120	47.65	1.07	48.72	74.00	-25.28	Peak
4823.960	36.71	8.12	44.83	54.00	-9.17	Average
4823.960	45.84	8.12	53.96	74.00	-20.04	Peak
7234.380	32.52	16.68	49.20	54.00	-4.80	Average
7234.380	43.18	16.68	59.86	74.00	-14.14	Peak

Remark:

1. Spectrum analyzer setting P(Peak): RBW=1MHz, VBW=3MHz, A(Average): RBW=1MHz, VBW≧1/T
2. The result basic equation calculation is as follow:
   C.F= AF Factor + Cable Loss – Preamp Gain + Filter Loss
   Result = Reading + C.F, Margin = Result - Limit
3. The other emission levels were 10dB below the limit
4. The test distance is 3m.

Product Name	Audio Device	Test Date	2024/05/03
Model	HG12	Test By	Peter Chu
Test Mode	IEEE 802.11b TX (CH Middle)	TEMP& Humidity	25.6℃/55%

Vertical



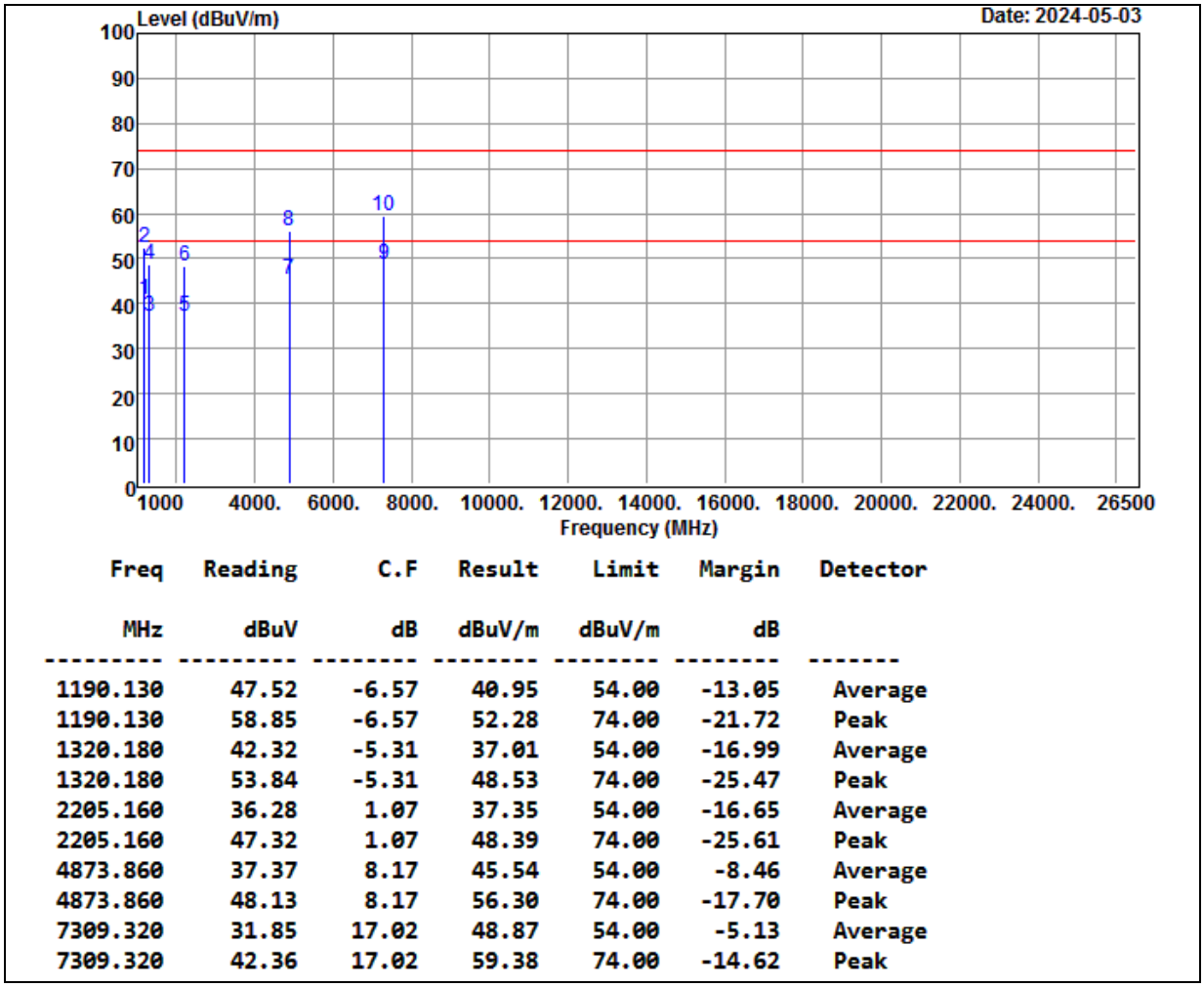
Freq	Reading	C.F	Result	Limit	Margin	Detector
MHz	dBuV	dB	dBuV/m	dBuV/m	dB	
1190.180	48.58	-6.57	42.01	54.00	-11.99	Average
1190.180	61.85	-6.57	55.28	74.00	-18.72	Peak
1255.140	42.44	-6.00	36.44	54.00	-17.56	Average
1255.140	54.39	-6.00	48.39	74.00	-25.61	Peak
2210.420	37.38	1.13	38.51	54.00	-15.49	Average
2210.420	47.28	1.13	48.41	74.00	-25.59	Peak
4873.650	36.19	8.17	44.36	54.00	-9.64	Average
4873.650	45.83	8.17	54.00	74.00	-20.00	Peak
7310.050	31.45	17.02	48.47	54.00	-5.53	Average
7310.050	41.52	17.02	58.54	74.00	-15.46	Peak

Remark:

1. Spectrum analyzer setting P(Peak): RBW=1MHz, VBW=3MHz, A(Average): RBW=1MHz, VBW≧1/T
2. The result basic equation calculation is as follow:
   C.F= AF Factor + Cable Loss – Preamp Gain + Filter Loss
   Result = Reading + C.F, Margin = Result - Limit
3. The other emission levels were 10dB below the limit
4. The test distance is 3m.

Product Name	Audio Device	Test Date	2024/05/03
Model	HG12	Test By	Peter Chu
Test Mode	IEEE 802.11b TX (CH Middle)	TEMP& Humidity	25.6℃/55%

Horizontal



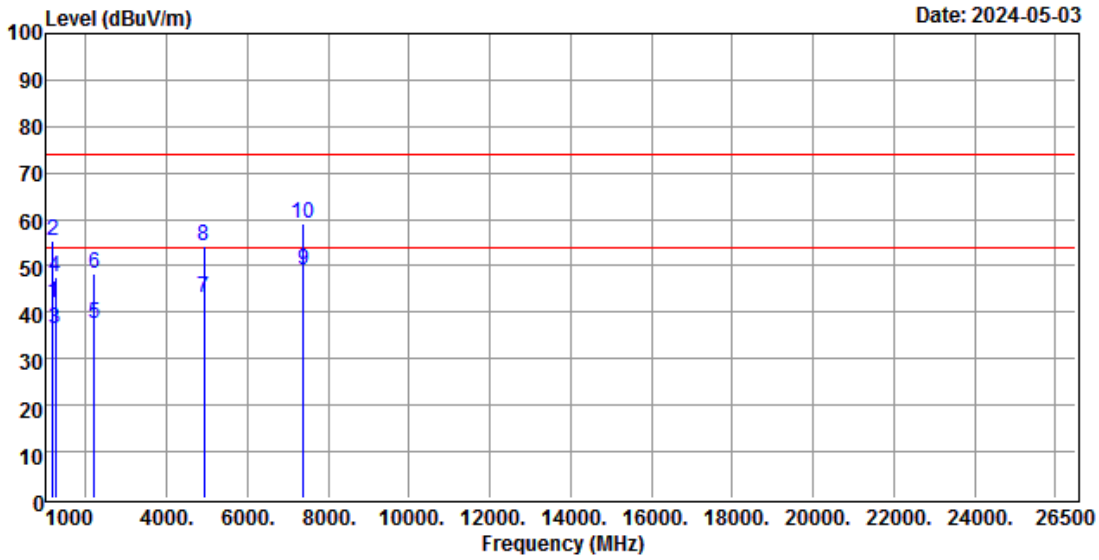
Freq	Reading	C.F	Result	Limit	Margin	Detector
MHz	dBuV	dB	dBuV/m	dBuV/m	dB	
1190.130	47.52	-6.57	40.95	54.00	-13.05	Average
1190.130	58.85	-6.57	52.28	74.00	-21.72	Peak
1320.180	42.32	-5.31	37.01	54.00	-16.99	Average
1320.180	53.84	-5.31	48.53	74.00	-25.47	Peak
2205.160	36.28	1.07	37.35	54.00	-16.65	Average
2205.160	47.32	1.07	48.39	74.00	-25.61	Peak
4873.860	37.37	8.17	45.54	54.00	-8.46	Average
4873.860	48.13	8.17	56.30	74.00	-17.70	Peak
7309.320	31.85	17.02	48.87	54.00	-5.13	Average
7309.320	42.36	17.02	59.38	74.00	-14.62	Peak

Remark:

1. Spectrum analyzer setting P(Peak): RBW=1MHz, VBW=3MHz, A(Average): RBW=1MHz, VBW≧1/T
2. The result basic equation calculation is as follow:
   C.F= AF Factor + Cable Loss – Preamp Gain + Filter Loss
   Result = Reading + C.F, Margin = Result - Limit
3. The other emission levels were 10dB below the limit
4. The test distance is 3m.

Product Name	Audio Device	Test Date	2024/05/03
Model	HG12	Test By	Peter Chu
Test Mode	IEEE 802.11b TX (CH High)	TEMP& Humidity	25.6℃/55%

Vertical



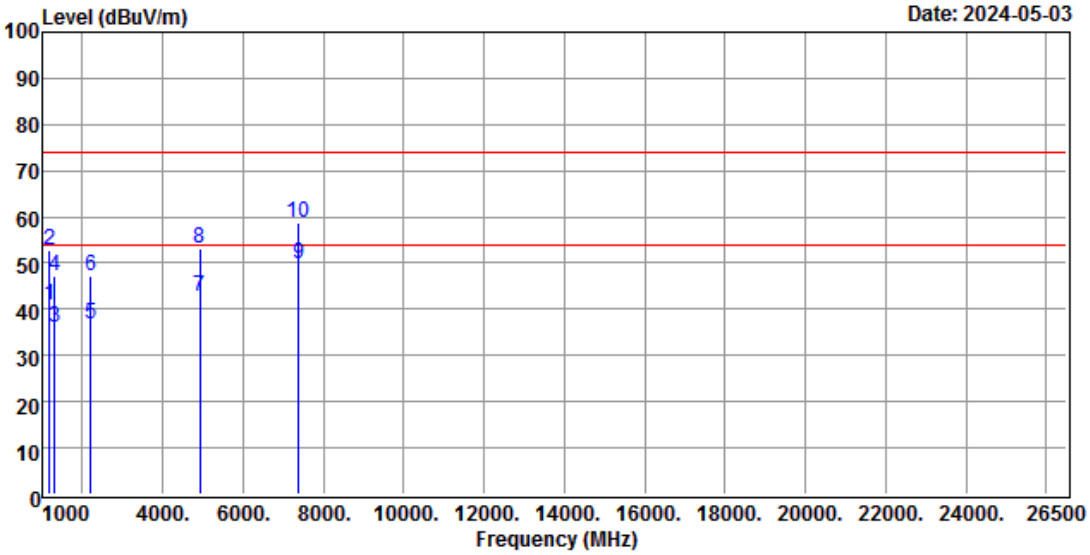
Freq	Reading	C.F	Result	Limit	Margin	Detector
MHz	dBuV	dB	dBuV/m	dBuV/m	dB	
1190.220	48.65	-6.57	42.08	54.00	-11.92	Average
1190.220	61.78	-6.57	55.21	74.00	-18.79	Peak
1255.080	42.29	-6.00	36.29	54.00	-17.71	Average
1255.080	53.63	-6.00	47.63	74.00	-26.37	Peak
2210.280	36.48	1.13	37.61	54.00	-16.39	Average
2210.280	47.28	1.13	48.41	74.00	-25.59	Peak
4923.720	34.88	8.28	43.16	54.00	-10.84	Average
4923.720	45.82	8.28	54.10	74.00	-19.90	Peak
7387.420	31.62	17.27	48.89	54.00	-5.11	Average
7387.420	41.82	17.27	59.09	74.00	-14.91	Peak

Remark:

1. Spectrum analyzer setting P(Peak): RBW=1MHz, VBW=3MHz, A(Average): RBW=1MHz, VBW≧1/T
2. The result basic equation calculation is as follow:
   C.F= AF Factor + Cable Loss – Preamp Gain + Filter Loss
   Result = Reading + C.F, Margin = Result - Limit
3. The other emission levels were 10dB below the limit
4. The test distance is 3m.

Product Name	Audio Device	Test Date	2024/05/03
Model	HG12	Test By	Peter Chu
Test Mode	IEEE 802.11b TX (CH High)	TEMP& Humidity	25.6℃/55%

Horizontal



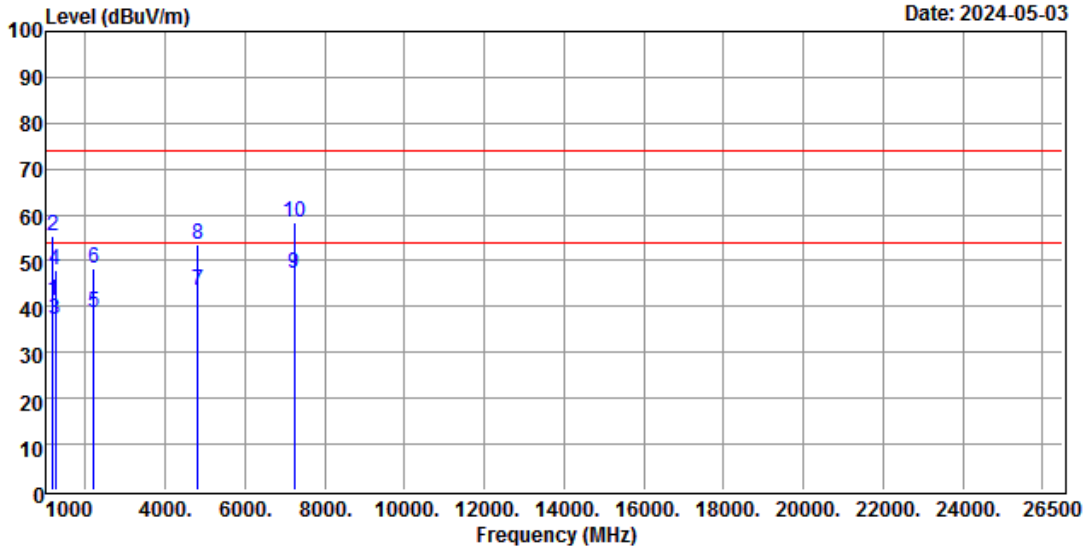
Freq	Reading	C.F	Result	Limit	Margin	Detector
MHz	dBuV	dB	dBuV/m	dBuV/m	dB	
1190.140	47.62	-6.57	41.05	54.00	-12.95	Average
1190.140	59.35	-6.57	52.78	74.00	-21.22	Peak
1320.170	41.42	-5.31	36.11	54.00	-17.89	Average
1320.170	52.36	-5.31	47.05	74.00	-26.95	Peak
2205.160	35.82	1.07	36.89	54.00	-17.11	Average
2205.160	46.32	1.07	47.39	74.00	-26.61	Peak
4923.820	34.57	8.29	42.86	54.00	-11.14	Average
4923.820	44.84	8.29	53.13	74.00	-20.87	Peak
7386.850	32.42	17.27	49.69	54.00	-4.31	Average
7386.850	41.62	17.27	58.89	74.00	-15.11	Peak

Remark:

1. Spectrum analyzer setting P(Peak): RBW=1MHz, VBW=3MHz, A(Average): RBW=1MHz, VBW≧1/T
2. The result basic equation calculation is as follow:
   C.F= AF Factor + Cable Loss – Preamp Gain + Filter Loss
   Result = Reading + C.F, Margin = Result - Limit
3. The other emission levels were 10dB below the limit
4. The test distance is 3m.

Product Name	Audio Device	Test Date	2024/05/03
Model	HG12	Test By	Peter Chu
Test Mode	IEEE 802.11g TX (CH Low)	TEMP& Humidity	25.6℃/55%

Vertical



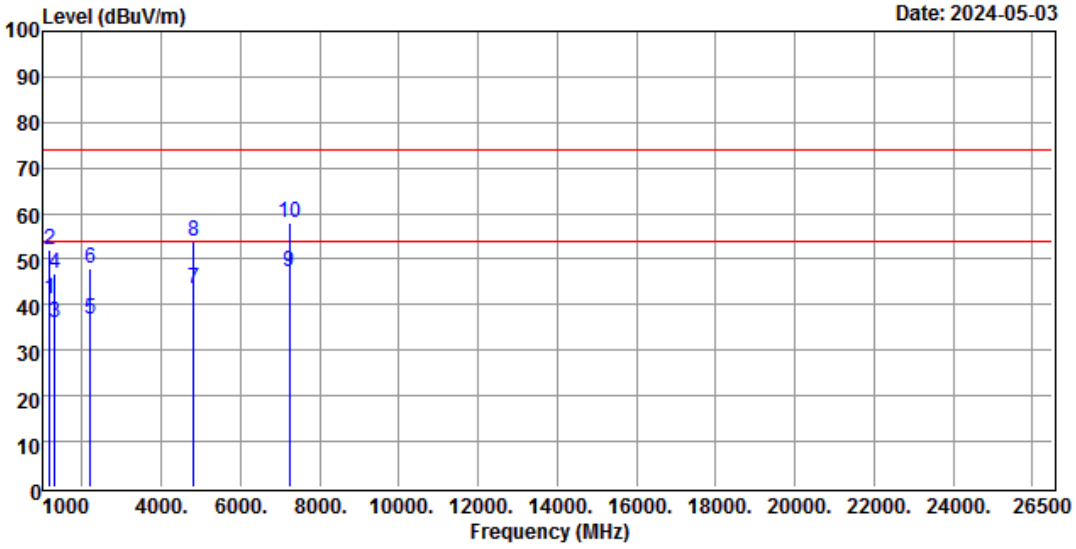
Freq	Reading	C.F	Result	Limit	Margin	Detector
MHz	dBuV	dB	dBuV/m	dBuV/m	dB	
1190.180	47.95	-6.57	41.38	54.00	-12.62	Average
1190.180	61.78	-6.57	55.21	74.00	-18.79	Peak
1255.120	43.09	-6.00	37.09	54.00	-16.91	Average
1255.120	53.90	-6.00	47.90	74.00	-26.10	Peak
2210.350	37.48	1.13	38.61	54.00	-15.39	Average
2210.350	47.38	1.13	48.51	74.00	-25.49	Peak
4824.680	35.27	8.12	43.39	54.00	-10.61	Average
4824.680	45.47	8.12	53.59	74.00	-20.41	Peak
7236.230	30.58	16.69	47.27	54.00	-6.73	Average
7236.230	41.52	16.69	58.21	74.00	-15.79	Peak

Remark:

1. Spectrum analyzer setting P(Peak): RBW=1MHz, VBW=3MHz, A(Average): RBW=1MHz, VBW≧1/T
2. The result basic equation calculation is as follow:
   C.F= AF Factor + Cable Loss – Preamp Gain + Filter Loss
   Result = Reading + C.F, Margin = Result - Limit
3. The other emission levels were 10dB below the limit
4. The test distance is 3m.

Product Name	Audio Device	Test Date	2024/05/03
Model	HG12	Test By	Peter Chu
Test Mode	IEEE 802.11g TX (CH Low)	TEMP& Humidity	25.6℃/55%

Horizontal



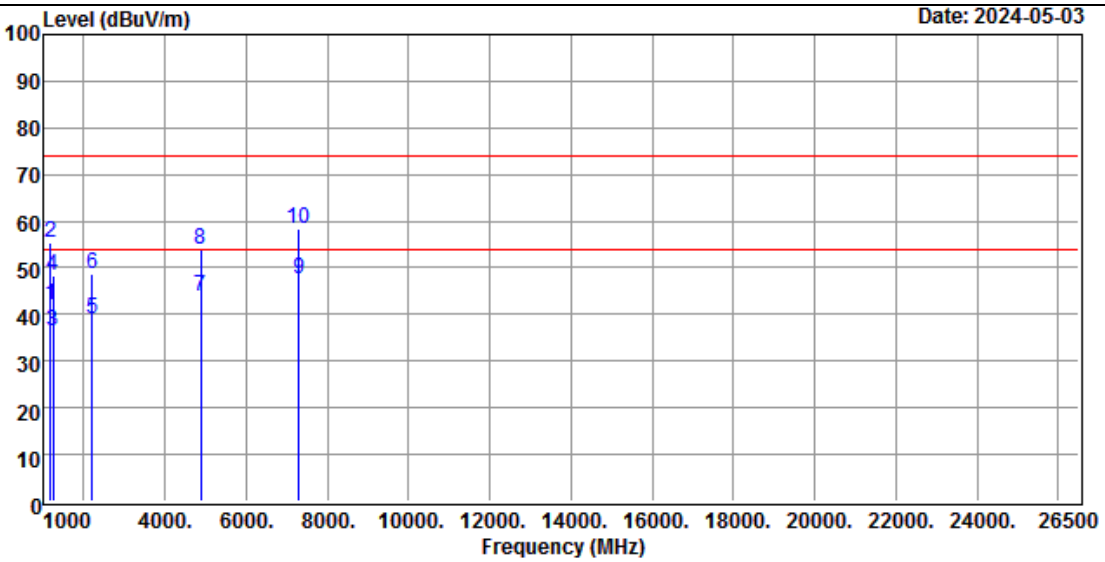
Freq	Reading	C.F	Result	Limit	Margin	Detector
MHz	dBuV	dB	dBuV/m	dBuV/m	dB	
1190.100	47.68	-6.57	41.11	54.00	-12.89	Average
1190.100	58.58	-6.57	52.01	74.00	-21.99	Peak
1320.420	41.35	-5.31	36.04	54.00	-17.96	Average
1320.420	52.31	-5.31	47.00	74.00	-27.00	Peak
2205.150	35.62	1.07	36.69	54.00	-17.31	Average
2205.150	46.89	1.07	47.96	74.00	-26.04	Peak
4824.780	35.27	8.12	43.39	54.00	-10.61	Average
4824.780	45.81	8.12	53.93	74.00	-20.07	Peak
7235.280	30.68	16.69	47.37	54.00	-6.63	Average
7235.280	41.28	16.69	57.97	74.00	-16.03	Peak

Remark:

1. Spectrum analyzer setting P(Peak): RBW=1MHz, VBW=3MHz, A(Average): RBW=1MHz, VBW≧1/T
2. The result basic equation calculation is as follow:
   C.F= AF Factor + Cable Loss – Preamp Gain + Filter Loss
   Result = Reading + C.F, Margin = Result - Limit
3. The other emission levels were 10dB below the limit
4. The test distance is 3m.

Product Name	Audio Device	Test Date	2024/05/03
Model	HG12	Test By	Peter Chu
Test Mode	IEEE 802.11g TX (CH Middle)	TEMP& Humidity	25.6℃/55%

Vertical



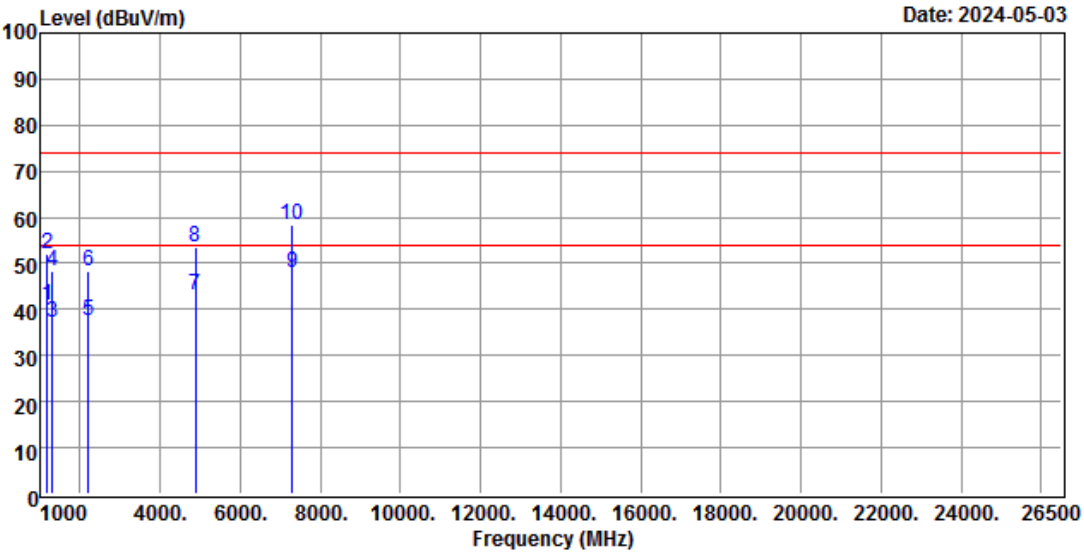
Freq	Reading	C.F	Result	Limit	Margin	Detector
MHz	dBuV	dB	dBuV/m	dBuV/m	dB	
1190.180	48.58	-6.57	42.01	54.00	-11.99	Average
1190.180	61.85	-6.57	55.28	74.00	-18.72	Peak
1255.140	42.44	-6.00	36.44	54.00	-17.56	Average
1255.140	54.39	-6.00	48.39	74.00	-25.61	Peak
2210.420	37.75	1.13	38.88	54.00	-15.12	Average
2210.420	47.62	1.13	48.75	74.00	-25.25	Peak
4872.460	35.62	8.18	43.80	54.00	-10.20	Average
4872.460	45.88	8.18	54.06	74.00	-19.94	Peak
7308.650	30.53	17.01	47.54	54.00	-6.46	Average
7308.650	41.54	17.01	58.55	74.00	-15.45	Peak

Remark:

1. Spectrum analyzer setting P(Peak): RBW=1MHz, VBW=3MHz, A(Average): RBW=1MHz, VBW≧1/T
2. The result basic equation calculation is as follow:
   C.F= AF Factor + Cable Loss – Preamp Gain + Filter Loss
   Result = Reading + C.F, Margin = Result - Limit
3. The other emission levels were 10dB below the limit
4. The test distance is 3m.

Product Name	Audio Device	Test Date	2024/05/03
Model	HG12	Test By	Peter Chu
Test Mode	IEEE 802.11g TX (CH Middle)	TEMP& Humidity	25.6℃/55%

Horizontal



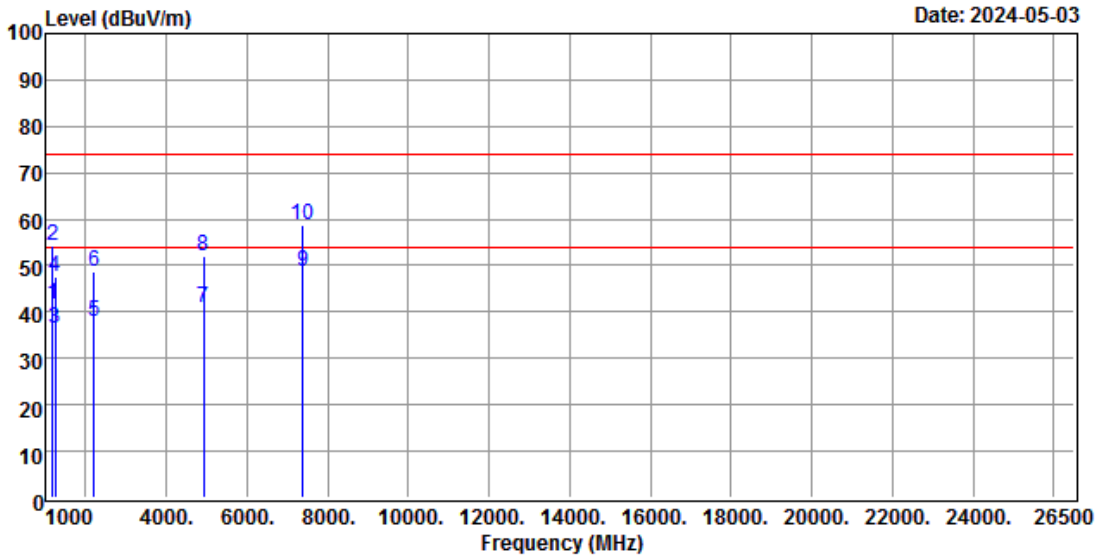
Freq	Reading	C.F	Result	Limit	Margin	Detector
MHz	dBuV	dB	dBuV/m	dBuV/m	dB	
1190.190	47.36	-6.57	40.79	54.00	-13.21	Average
1190.190	58.59	-6.57	52.02	74.00	-21.98	Peak
1320.140	42.67	-5.31	37.36	54.00	-16.64	Average
1320.140	53.78	-5.31	48.47	74.00	-25.53	Peak
2205.240	36.65	1.07	37.72	54.00	-16.28	Average
2205.240	47.42	1.07	48.49	74.00	-25.51	Peak
4874.380	34.83	8.17	43.00	54.00	-11.00	Average
4874.380	45.24	8.17	53.41	74.00	-20.59	Peak
7310.320	30.84	17.02	47.86	54.00	-6.14	Average
7310.320	41.48	17.02	58.50	74.00	-15.50	Peak

Remark:

1. Spectrum analyzer setting P(Peak): RBW=1MHz, VBW=3MHz, A(Average): RBW=1MHz, VBW≧1/T
2. The result basic equation calculation is as follow:
   C.F= AF Factor + Cable Loss – Preamp Gain + Filter Loss
   Result = Reading + C.F, Margin = Result - Limit
3. The other emission levels were 10dB below the limit
4. The test distance is 3m.

Product Name	Audio Device	Test Date	2024/05/03
Model	HG12	Test By	Peter Chu
Test Mode	IEEE 802.11g TX (CH High)	TEMP& Humidity	25.6℃/55%

Vertical



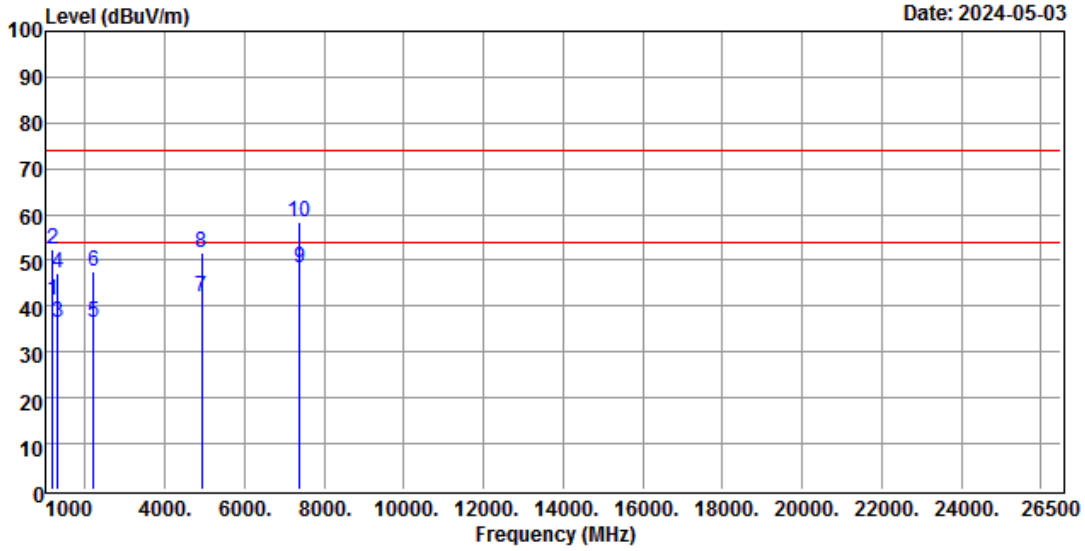
Freq	Reading	C.F	Result	Limit	Margin	Detector
MHz	dBuV	dB	dBuV/m	dBuV/m	dB	
1190.160	48.38	-6.57	41.81	54.00	-12.19	Average
1190.160	60.68	-6.57	54.11	74.00	-19.89	Peak
1255.200	42.43	-6.00	36.43	54.00	-17.57	Average
1255.200	53.49	-6.00	47.49	74.00	-26.51	Peak
2210.150	36.82	1.13	37.95	54.00	-16.05	Average
2210.150	47.65	1.13	48.78	74.00	-25.22	Peak
4924.280	32.67	8.29	40.96	54.00	-13.04	Average
4924.280	43.61	8.29	51.90	74.00	-22.10	Peak
7385.720	31.28	17.27	48.55	54.00	-5.45	Average
7385.720	41.65	17.27	58.92	74.00	-15.08	Peak

Remark:

1. Spectrum analyzer setting P(Peak): RBW=1MHz, VBW=3MHz, A(Average): RBW=1MHz, VBW≧1/T
2. The result basic equation calculation is as follow:
   C.F= AF Factor + Cable Loss – Preamp Gain + Filter Loss
   Result = Reading + C.F, Margin = Result - Limit
3. The other emission levels were 10dB below the limit
4. The test distance is 3m.

Product Name	Audio Device	Test Date	2024/05/03
Model	HG12	Test By	Peter Chu
Test Mode	IEEE 802.11g TX (CH High)	TEMP& Humidity	25.6℃/55%

Horizontal



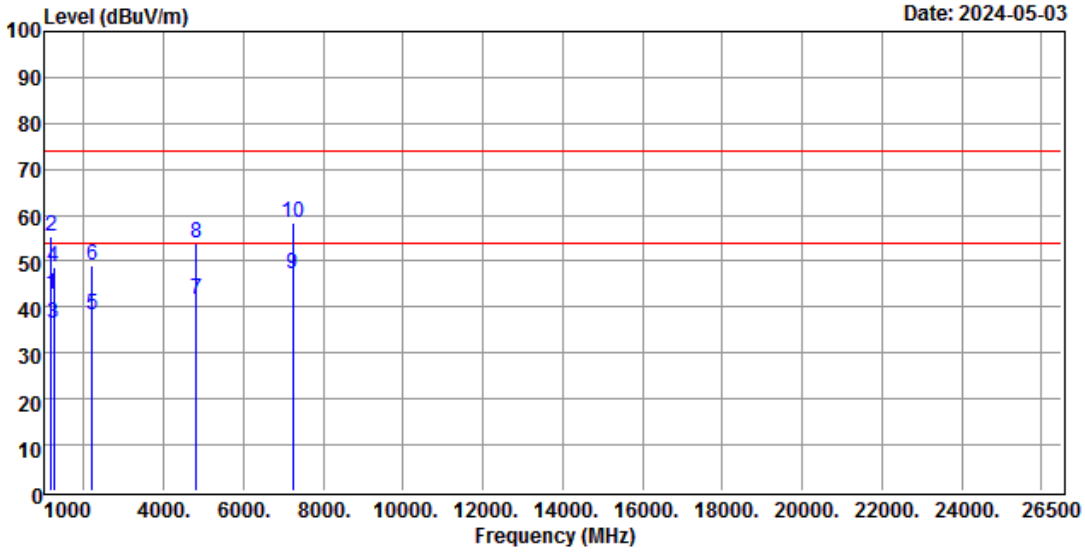
Freq	Reading	C.F	Result	Limit	Margin	Detector
MHz	dBuV	dB	dBuV/m	dBuV/m	dB	
1190.220	47.82	-6.57	41.25	54.00	-12.75	Average
1190.220	58.85	-6.57	52.28	74.00	-21.72	Peak
1320.150	41.65	-5.31	36.34	54.00	-17.66	Average
1320.150	52.58	-5.31	47.27	74.00	-26.73	Peak
2205.230	35.48	1.07	36.55	54.00	-17.45	Average
2205.230	46.62	1.07	47.69	74.00	-26.31	Peak
4924.150	33.61	8.29	41.90	54.00	-12.10	Average
4924.150	43.41	8.29	51.70	74.00	-22.30	Peak
7388.280	30.87	17.28	48.15	54.00	-5.85	Average
7388.280	41.26	17.28	58.54	74.00	-15.46	Peak

Remark:

1. Spectrum analyzer setting P(Peak): RBW=1MHz, VBW=3MHz, A(Average): RBW=1MHz, VBW≧1/T
2. The result basic equation calculation is as follow:
   C.F= AF Factor + Cable Loss – Preamp Gain + Filter Loss
   Result = Reading + C.F, Margin = Result - Limit
3. The other emission levels were 10dB below the limit
4. The test distance is 3m.

Product Name	Audio Device	Test Date	2024/05/03
Model	HG12	Test By	Peter Chu
Test Mode	IEEE 802.11n HT20 TX (CH Low)	TEMP& Humidity	25.6℃/55%

Vertical



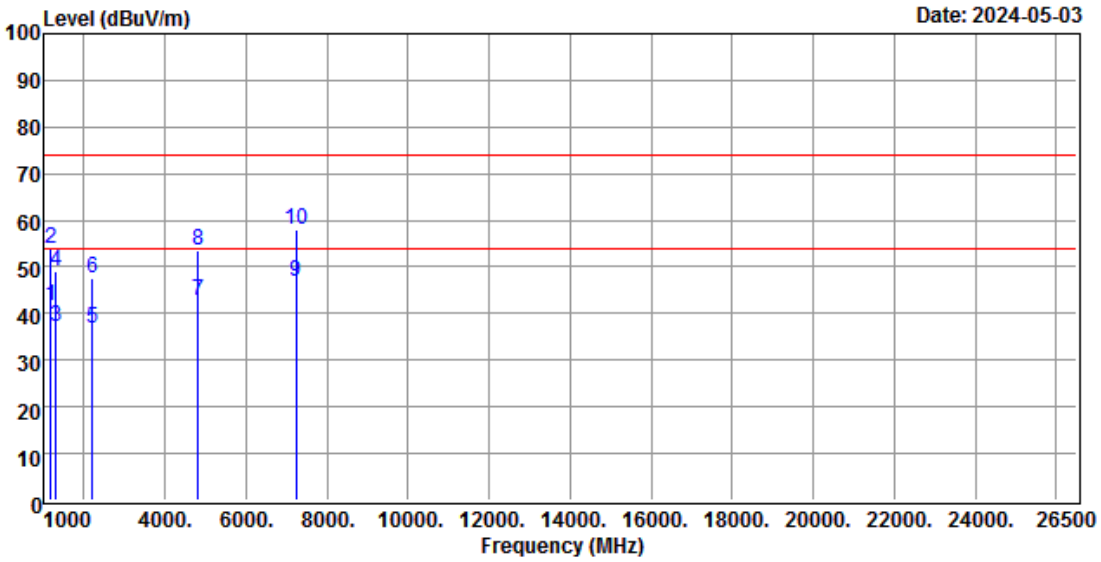
Freq	Reading	C.F	Result	Limit	Margin	Detector
MHz	dBuV	dB	dBuV/m	dBuV/m	dB	
1190.060	49.28	-6.57	42.71	54.00	-11.29	Average
1190.060	61.86	-6.57	55.29	74.00	-18.71	Peak
1255.230	42.33	-6.00	36.33	54.00	-17.67	Average
1255.230	54.73	-6.00	48.73	74.00	-25.27	Peak
2210.280	37.33	1.13	38.46	54.00	-15.54	Average
2210.280	47.82	1.13	48.95	74.00	-25.05	Peak
4822.750	33.68	8.11	41.79	54.00	-12.21	Average
4822.750	45.82	8.11	53.93	74.00	-20.07	Peak
7236.230	30.36	16.69	47.05	54.00	-6.95	Average
7236.230	41.85	16.69	58.54	74.00	-15.46	Peak

Remark:

1. Spectrum analyzer setting P(Peak): RBW=1MHz, VBW=3MHz, A(Average): RBW=1MHz, VBW≧1/T
2. The result basic equation calculation is as follow:
   C.F= AF Factor + Cable Loss – Preamp Gain + Filter Loss
   Result = Reading + C.F, Margin = Result - Limit
3. The other emission levels were 10dB below the limit
4. The test distance is 3m.

Product Name	Audio Device	Test Date	2024/05/03
Model	HG12	Test By	Peter Chu
Test Mode	IEEE 802.11n HT20 TX (CH Low)	TEMP& Humidity	25.6℃/55%

Horizontal



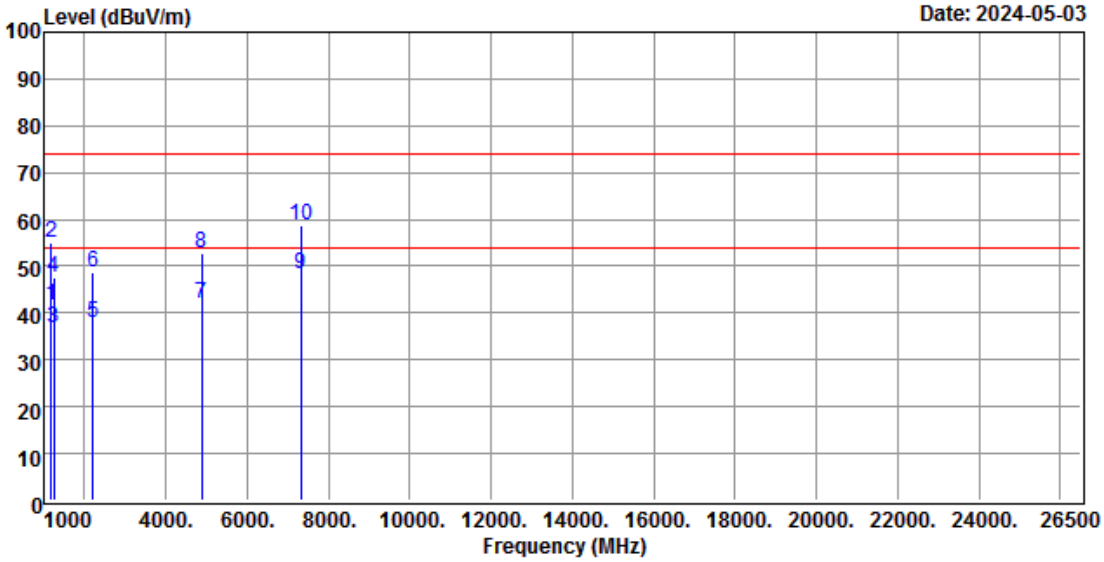
Freq	Reading	C.F	Result	Limit	Margin	Detector
MHz	dBuV	dB	dBuV/m	dBuV/m	dB	
1190.140	48.25	-6.57	41.68	54.00	-12.32	Average
1190.140	60.32	-6.57	53.75	74.00	-20.25	Peak
1320.180	42.36	-5.31	37.05	54.00	-16.95	Average
1320.180	54.42	-5.31	49.11	74.00	-24.89	Peak
2205.280	35.75	1.07	36.82	54.00	-17.18	Average
2205.280	46.62	1.07	47.69	74.00	-26.31	Peak
4823.360	34.57	8.12	42.69	54.00	-11.31	Average
4823.360	45.27	8.12	53.39	74.00	-20.61	Peak
7237.840	30.29	16.70	46.99	54.00	-7.01	Average
7237.840	41.33	16.70	58.03	74.00	-15.97	Peak

Remark:

1. Spectrum analyzer setting P(Peak): RBW=1MHz, VBW=3MHz, A(Average): RBW=1MHz, VBW≧1/T
2. The result basic equation calculation is as follow:
   C.F= AF Factor + Cable Loss – Preamp Gain + Filter Loss
   Result = Reading + C.F, Margin = Result - Limit
3. The other emission levels were 10dB below the limit
4. The test distance is 3m.

Product Name	Audio Device	Test Date	2024/05/03
Model	HG12	Test By	Peter Chu
Test Mode	IEEE 802.11n HT20 TX (CH Middle)	TEMP& Humidity	25.6℃/55%

Vertical



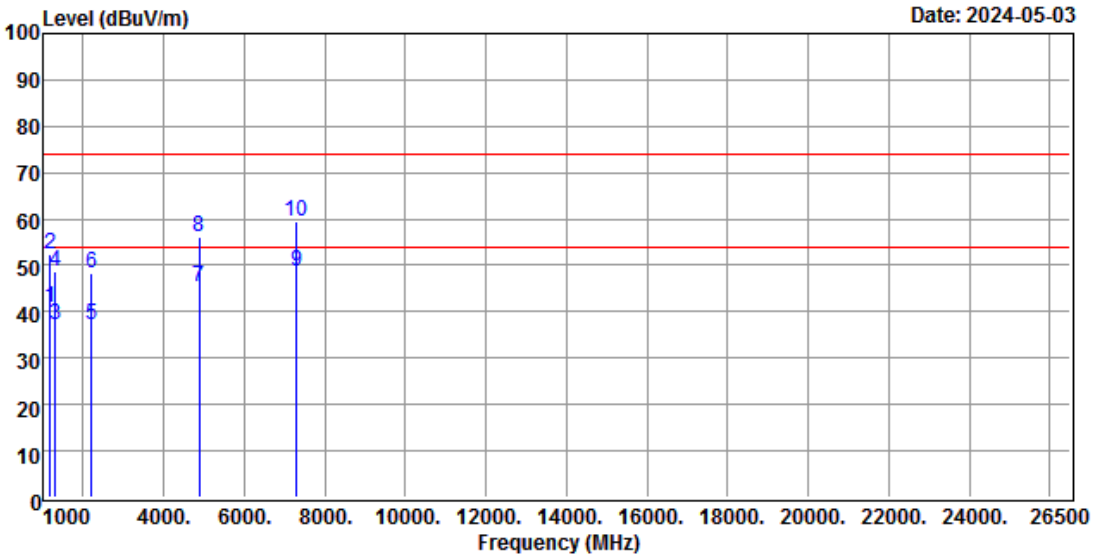
Freq	Reading	C.F	Result	Limit	Margin	Detector
MHz	dBuV	dB	dBuV/m	dBuV/m	dB	
1190.110	48.28	-6.57	41.71	54.00	-12.29	Average
1190.110	61.74	-6.57	55.17	74.00	-18.83	Peak
1255.220	42.86	-6.00	36.86	54.00	-17.14	Average
1255.220	53.76	-6.00	47.76	74.00	-26.24	Peak
2210.340	36.95	1.13	38.08	54.00	-15.92	Average
2210.340	47.55	1.13	48.68	74.00	-25.32	Peak
4874.350	33.68	8.17	41.85	54.00	-12.15	Average
4874.350	44.73	8.17	52.90	74.00	-21.10	Peak
7312.340	31.20	17.03	48.23	54.00	-5.77	Average
7312.340	41.63	17.03	58.66	74.00	-15.34	Peak

Remark:

1. Spectrum analyzer setting P(Peak): RBW=1MHz, VBW=3MHz, A(Average): RBW=1MHz, VBW≧1/T
2. The result basic equation calculation is as follow:
   C.F= AF Factor + Cable Loss – Preamp Gain + Filter Loss
   Result = Reading + C.F, Margin = Result - Limit
3. The other emission levels were 10dB below the limit
4. The test distance is 3m.

Product Name	Audio Device	Test Date	2024/05/03
Model	HG12	Test By	Peter Chu
Test Mode	IEEE 802.11n HT20 TX (CH Middle)	TEMP& Humidity	25.6℃/55%

Horizontal



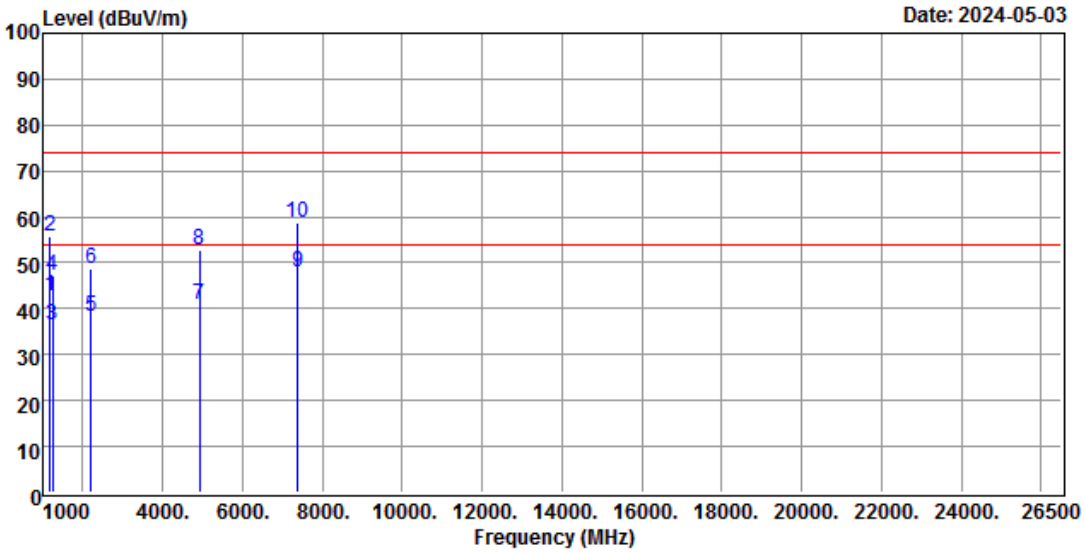
Freq	Reading	C.F	Result	Limit	Margin	Detector
MHz	dBuV	dB	dBuV/m	dBuV/m	dB	
1190.130	47.52	-6.57	40.95	54.00	-13.05	Average
1190.130	58.85	-6.57	52.28	74.00	-21.72	Peak
1320.180	42.32	-5.31	37.01	54.00	-16.99	Average
1320.180	53.84	-5.31	48.53	74.00	-25.47	Peak
2205.160	36.28	1.07	37.35	54.00	-16.65	Average
2205.160	47.32	1.07	48.39	74.00	-25.61	Peak
4873.860	37.37	8.17	45.54	54.00	-8.46	Average
4873.860	48.13	8.17	56.30	74.00	-17.70	Peak
7309.320	31.85	17.02	48.87	54.00	-5.13	Average
7309.320	42.36	17.02	59.38	74.00	-14.62	Peak

Remark:

1. Spectrum analyzer setting P(Peak): RBW=1MHz, VBW=3MHz, A(Average): RBW=1MHz, VBW≧1/T
2. The result basic equation calculation is as follow:
   C.F= AF Factor + Cable Loss – Preamp Gain + Filter Loss
   Result = Reading + C.F, Margin = Result - Limit
3. The other emission levels were 10dB below the limit
4. The test distance is 3m.

Product Name	Audio Device	Test Date	2024/05/03
Model	HG12	Test By	Peter Chu
Test Mode	IEEE 802.11n HT20 TX (CH High)	TEMP& Humidity	25.6℃/55%

Vertical



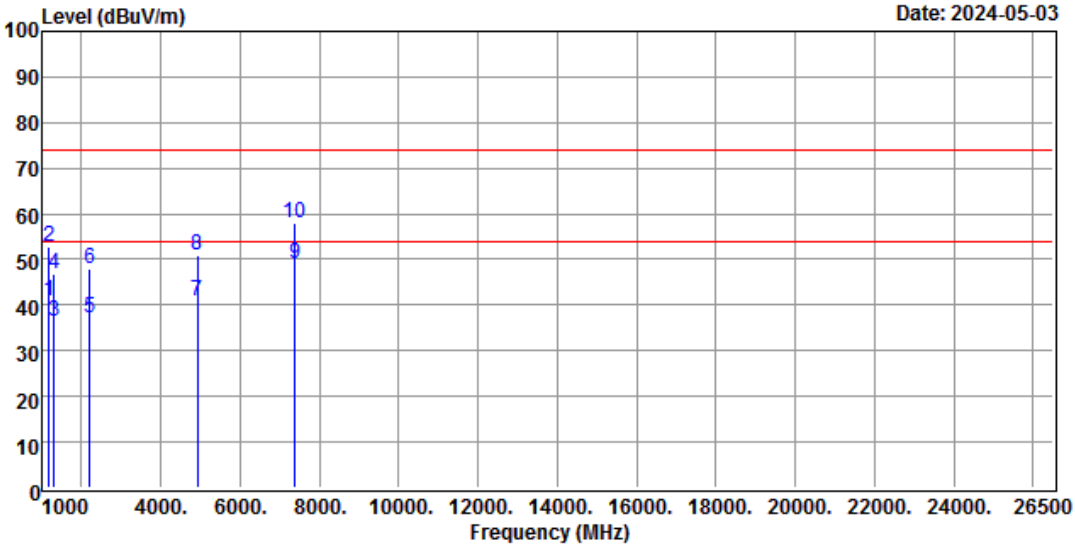
Freq	Reading	C.F	Result	Limit	Margin	Detector
MHz	dBuV	dB	dBuV/m	dBuV/m	dB	
1190.080	49.26	-6.57	42.69	54.00	-11.31	Average
1190.080	62.38	-6.57	55.81	74.00	-18.19	Peak
1255.260	42.49	-6.00	36.49	54.00	-17.51	Average
1255.260	53.39	-6.00	47.39	74.00	-26.61	Peak
2210.320	37.18	1.13	38.31	54.00	-15.69	Average
2210.320	47.63	1.13	48.76	74.00	-25.24	Peak
4926.880	32.74	8.30	41.04	54.00	-12.96	Average
4926.880	44.38	8.30	52.68	74.00	-21.32	Peak
7386.480	30.84	17.27	48.11	54.00	-5.89	Average
7386.480	41.36	17.27	58.63	74.00	-15.37	Peak

Remark:

1. Spectrum analyzer setting P(Peak): RBW=1MHz, VBW=3MHz, A(Average): RBW=1MHz, VBW≧1/T
2. The result basic equation calculation is as follow:
   C.F= AF Factor + Cable Loss – Preamp Gain + Filter Loss
   Result = Reading + C.F, Margin = Result - Limit
3. The other emission levels were 10dB below the limit
4. The test distance is 3m.

Product Name	Audio Device	Test Date	2024/05/03
Model	HG12	Test By	Peter Chu
Test Mode	IEEE 802.11n HT20 TX (CH High)	TEMP& Humidity	25.6℃/55%

Horizontal



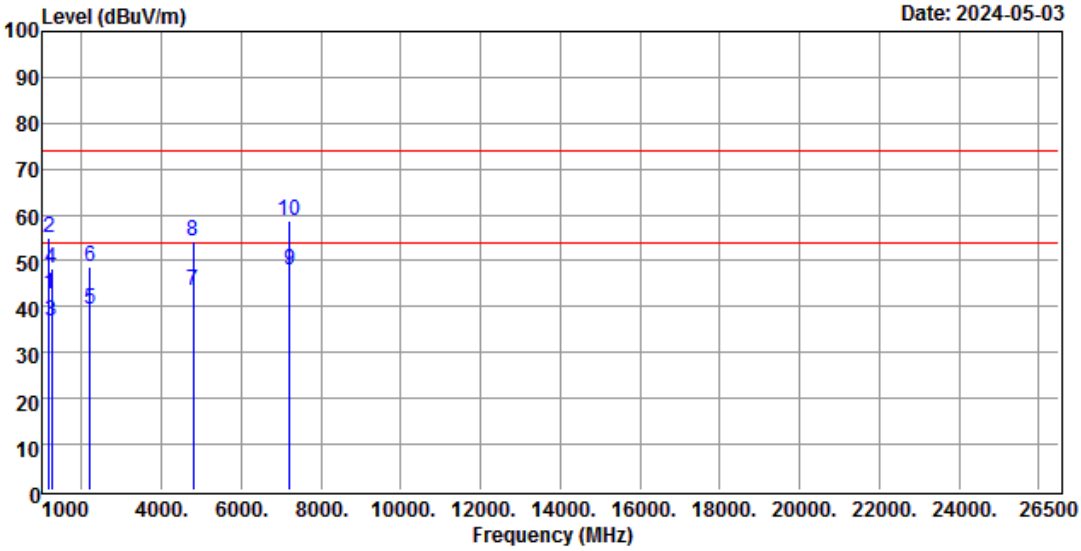
Freq	Reading	C.F	Result	Limit	Margin	Detector
MHz	dBuV	dB	dBuV/m	dBuV/m	dB	
1190.180	47.55	-6.57	40.98	54.00	-13.02	Average
1190.180	59.18	-6.57	52.61	74.00	-21.39	Peak
1320.350	41.64	-5.31	36.33	54.00	-17.67	Average
1320.350	52.21	-5.31	46.90	74.00	-27.10	Peak
2205.120	36.08	1.07	37.15	54.00	-16.85	Average
2205.120	46.75	1.07	47.82	74.00	-26.18	Peak
4920.650	32.44	8.27	40.71	54.00	-13.29	Average
4920.650	42.47	8.27	50.74	74.00	-23.26	Peak
7388.380	31.63	17.28	48.91	54.00	-5.09	Average
7388.380	40.88	17.28	58.16	74.00	-15.84	Peak

Remark:

1. Spectrum analyzer setting P(Peak): RBW=1MHz, VBW=3MHz, A(Average): RBW=1MHz, VBW≧1/T
2. The result basic equation calculation is as follow:
   C.F= AF Factor + Cable Loss – Preamp Gain + Filter Loss
   Result = Reading + C.F, Margin = Result - Limit
3. The other emission levels were 10dB below the limit
4. The test distance is 3m.

Product Name	Audio Device	Test Date	2024/05/03
Model	HG12	Test By	Peter Chu
Test Mode	Bluetooth 4.0 TX (CH Low)	TEMP& Humidity	25.6℃/55%

Vertical



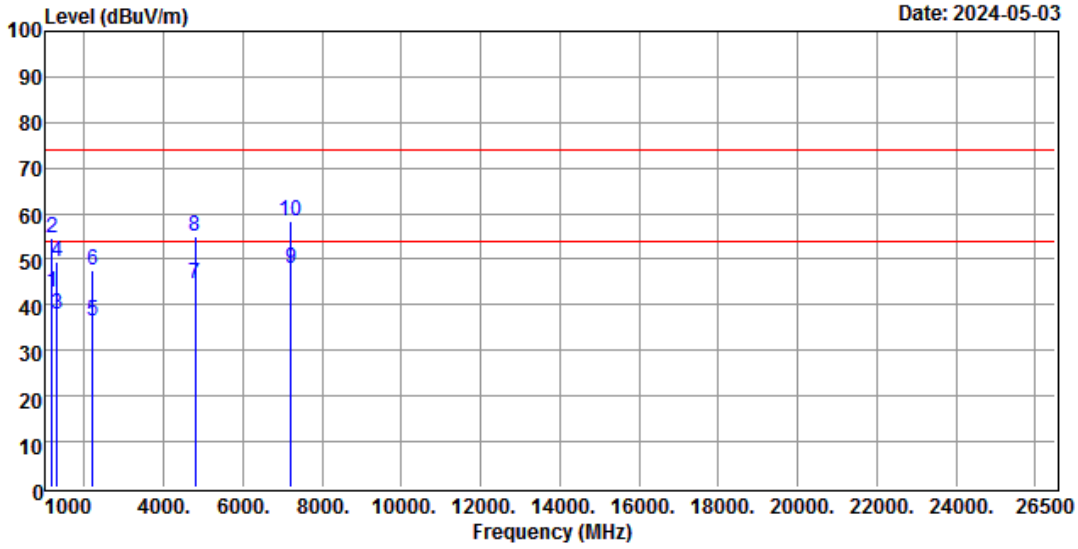
Freq	Reading	C.F	Result	Limit	Margin	Detector
MHz	dBuV	dB	dBuV/m	dBuV/m	dB	
1190.130	49.35	-6.57	42.78	54.00	-11.22	Average
1190.130	61.62	-6.57	55.05	74.00	-18.95	Peak
1255.180	42.63	-6.00	36.63	54.00	-17.37	Average
1255.180	54.39	-6.00	48.39	74.00	-25.61	Peak
2210.160	38.26	1.13	39.39	54.00	-14.61	Average
2210.160	47.57	1.13	48.70	74.00	-25.30	Peak
4803.650	35.27	8.06	43.33	54.00	-10.67	Average
4803.650	46.07	8.06	54.13	74.00	-19.87	Peak
7205.860	31.41	16.51	47.92	54.00	-6.08	Average
7205.860	42.22	16.51	58.73	74.00	-15.27	Peak

Remark:

1. Spectrum analyzer setting P(Peak): RBW=1MHz, VBW=3MHz, A(Average): RBW=1MHz, VBW≧1/T
2. The result basic equation calculation is as follow:
   C.F= AF Factor + Cable Loss – Preamp Gain + Filter Loss
   Result = Reading + C.F, Margin = Result - Limit
3. The other emission levels were 10dB below the limit
4. The test distance is 3m.

Product Name	Audio Device	Test Date	2024/05/03
Model	HG12	Test By	Peter Chu
Test Mode	Bluetooth 4.0 TX (CH Low)	TEMP& Humidity	25.6℃/55%

Horizontal



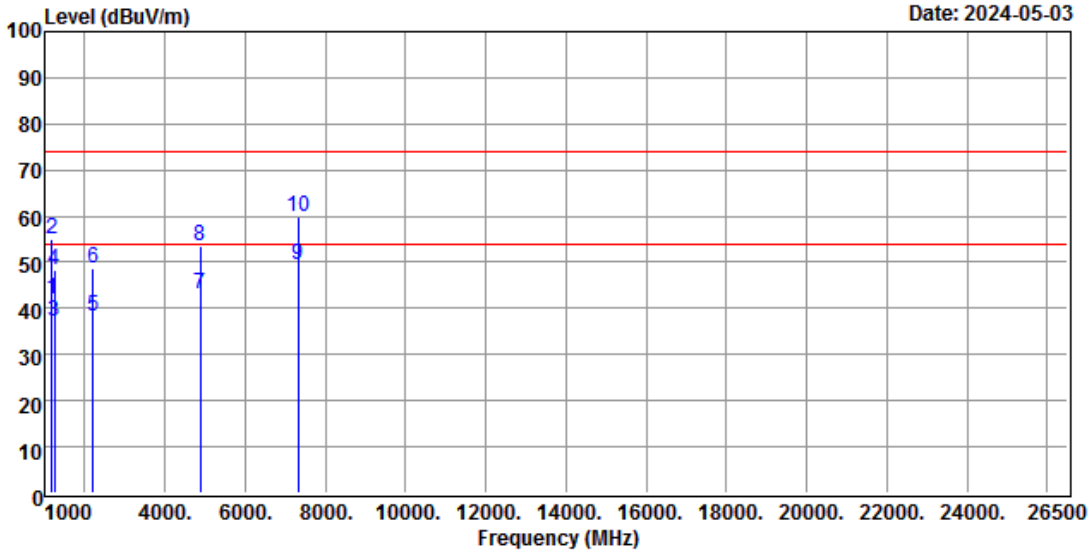
Freq	Reading	C.F	Result	Limit	Margin	Detector
MHz	dBuV	dB	dBuV/m	dBuV/m	dB	
1190.100	49.32	-6.57	42.75	54.00	-11.25	Average
1190.100	61.18	-6.57	54.61	74.00	-19.39	Peak
1320.290	43.27	-5.31	37.96	54.00	-16.04	Average
1320.290	54.64	-5.31	49.33	74.00	-24.67	Peak
2205.230	35.46	1.07	36.53	54.00	-17.47	Average
2205.230	46.38	1.07	47.45	74.00	-26.55	Peak
4803.580	36.47	8.06	44.53	54.00	-9.47	Average
4803.580	46.87	8.06	54.93	74.00	-19.07	Peak
7206.120	31.61	16.51	48.12	54.00	-5.88	Average
7206.120	41.84	16.51	58.35	74.00	-15.65	Peak

Remark:

1. Spectrum analyzer setting P(Peak): RBW=1MHz, VBW=3MHz, A(Average): RBW=1MHz, VBW≧1/T
2. The result basic equation calculation is as follow:
   C.F= AF Factor + Cable Loss – Preamp Gain + Filter Loss
   Result = Reading + C.F, Margin = Result - Limit
3. The other emission levels were 10dB below the limit
4. The test distance is 3m.

Product Name	Audio Device	Test Date	2024/05/03
Model	HG12	Test By	Peter Chu
Test Mode	Bluetooth 4.0 TX (CH Middle)	TEMP& Humidity	25.6℃/55%

Vertical



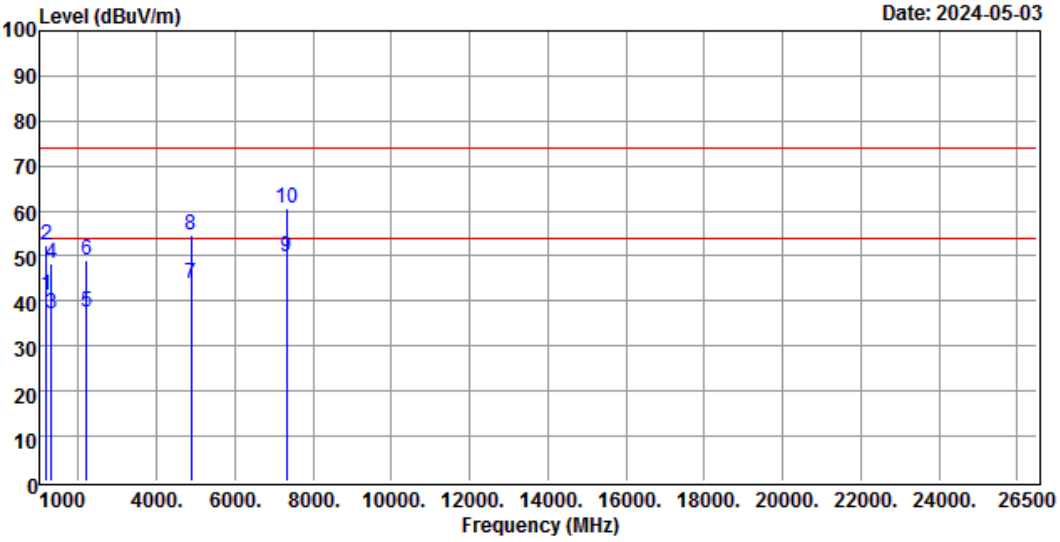
Freq	Reading	C.F	Result	Limit	Margin	Detector
MHz	dBuV	dB	dBuV/m	dBuV/m	dB	
1190.080	48.65	-6.57	42.08	54.00	-11.92	Average
1190.080	61.68	-6.57	55.11	74.00	-18.89	Peak
1255.160	43.09	-6.00	37.09	54.00	-16.91	Average
1255.160	54.26	-6.00	48.26	74.00	-25.74	Peak
2210.280	37.12	1.13	38.25	54.00	-15.75	Average
2210.280	47.62	1.13	48.75	74.00	-25.25	Peak
4884.280	34.85	8.17	43.02	54.00	-10.98	Average
4884.280	45.39	8.17	53.56	74.00	-20.44	Peak
7325.420	32.29	17.05	49.34	54.00	-4.66	Average
7325.420	42.87	17.05	59.92	74.00	-14.08	Peak

Remark:

1. Spectrum analyzer setting P(Peak): RBW=1MHz, VBW=3MHz, A(Average): RBW=1MHz, VBW≧1/T
2. The result basic equation calculation is as follow:
   C.F= AF Factor + Cable Loss – Preamp Gain + Filter Loss
   Result = Reading + C.F, Margin = Result - Limit
3. The other emission levels were 10dB below the limit
4. The test distance is 3m.

Product Name	Audio Device	Test Date	2024/05/03
Model	HG12	Test By	Peter Chu
Test Mode	Bluetooth 4.0 TX (CH Middle)	TEMP& Humidity	25.6℃/55%

Horizontal



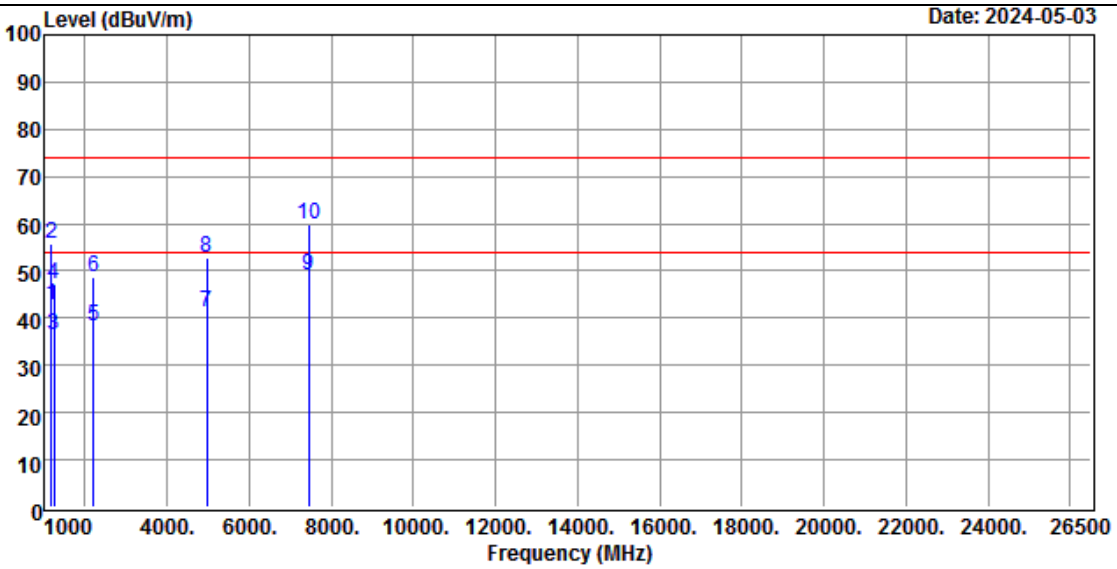
Freq	Reading	C.F	Result	Limit	Margin	Detector
MHz	dBuV	dB	dBuV/m	dBuV/m	dB	
1190.220	47.67	-6.57	41.10	54.00	-12.90	Average
1190.220	59.13	-6.57	52.56	74.00	-21.44	Peak
1320.240	42.57	-5.31	37.26	54.00	-16.74	Average
1320.240	53.61	-5.31	48.30	74.00	-25.70	Peak
2205.350	36.62	1.07	37.69	54.00	-16.31	Average
2205.350	47.85	1.07	48.92	74.00	-25.08	Peak
4884.180	35.82	8.17	43.99	54.00	-10.01	Average
4884.180	46.35	8.17	54.52	74.00	-19.48	Peak
7326.450	32.63	17.05	49.68	54.00	-4.32	Average
7326.450	43.73	17.05	60.78	74.00	-13.22	Peak

Remark:

1. Spectrum analyzer setting P(Peak): RBW=1MHz, VBW=3MHz, A(Average): RBW=1MHz, VBW≧1/T
2. The result basic equation calculation is as follow:
   C.F= AF Factor + Cable Loss – Preamp Gain + Filter Loss
   Result = Reading + C.F, Margin = Result - Limit
3. The other emission levels were 10dB below the limit
4. The test distance is 3m.

Product Name	Audio Device	Test Date	2024/05/03
Model	HG12	Test By	Peter Chu
Test Mode	Bluetooth 4.0 TX (CH High)	TEMP& Humidity	25.6℃/55%

Vertical



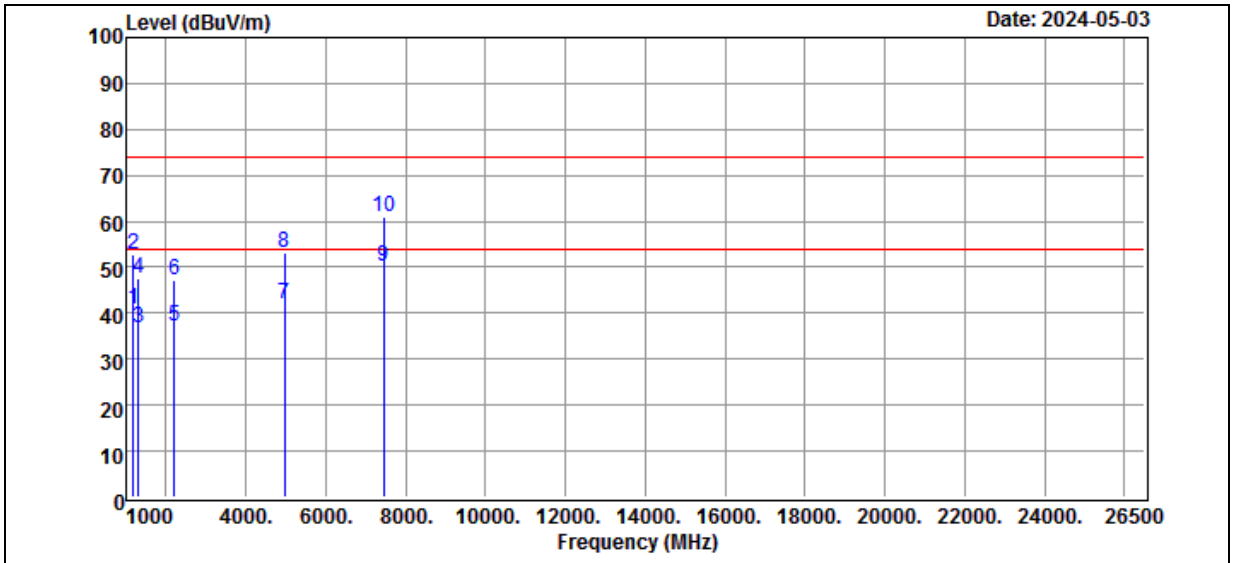
Freq	Reading	C.F	Result	Limit	Margin	Detector
MHz	dBuV	dB	dBuV/m	dBuV/m	dB	
1190.080	49.26	-6.57	42.69	54.00	-11.31	Average
1190.080	62.38	-6.57	55.81	74.00	-18.19	Peak
1255.260	42.49	-6.00	36.49	54.00	-17.51	Average
1255.260	53.39	-6.00	47.39	74.00	-26.61	Peak
2210.320	37.18	1.13	38.31	54.00	-15.69	Average
2210.320	47.63	1.13	48.76	74.00	-25.24	Peak
4959.520	32.73	8.51	41.24	54.00	-12.76	Average
4959.520	44.37	8.51	52.88	74.00	-21.12	Peak
7439.760	31.68	17.50	49.18	54.00	-4.82	Average
7439.760	42.32	17.50	59.82	74.00	-14.18	Peak

Remark:

1. Spectrum analyzer setting P(Peak): RBW=1MHz, VBW=3MHz, A(Average): RBW=1MHz, VBW≧1/T
2. The result basic equation calculation is as follow:
   C.F= AF Factor + Cable Loss – Preamp Gain + Filter Loss
   Result = Reading + C.F, Margin = Result - Limit
3. The other emission levels were 10dB below the limit
4. The test distance is 3m.

Product Name	Audio Device	Test Date	2024/05/03
Model	HG12	Test By	Peter Chu
Test Mode	Bluetooth 4.0 TX (CH High)	TEMP& Humidity	25.6℃/55%

Horizontal



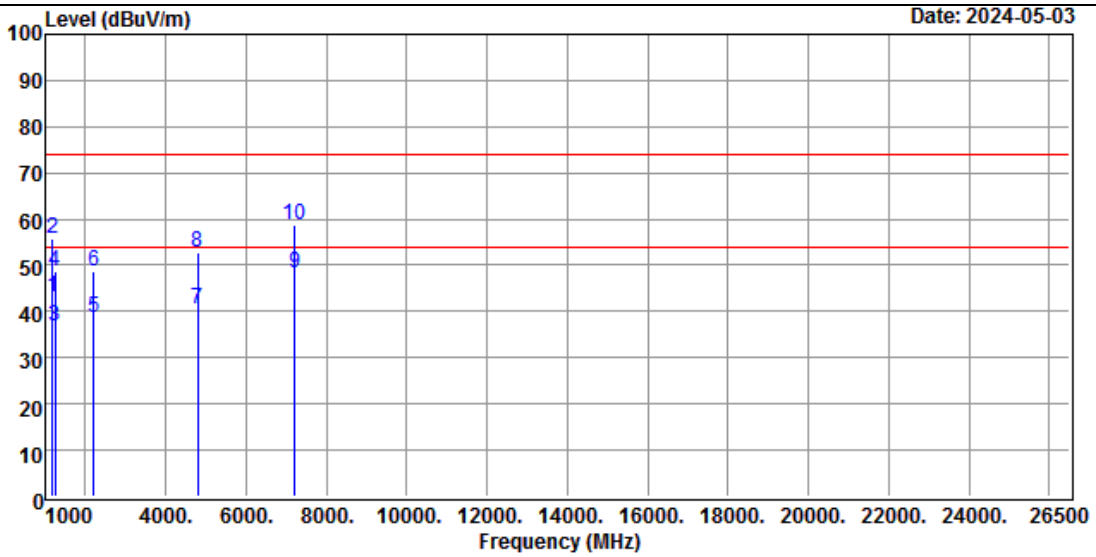
Freq	Reading	C.F	Result	Limit	Margin	Detector
MHz	dBuV	dB	dBuV/m	dBuV/m	dB	
1190.220	47.63	-6.57	41.06	54.00	-12.94	Average
1190.220	59.34	-6.57	52.77	74.00	-21.23	Peak
1320.260	42.17	-5.31	36.86	54.00	-17.14	Average
1320.260	52.73	-5.31	47.42	74.00	-26.58	Peak
2205.240	36.25	1.07	37.32	54.00	-16.68	Average
2205.240	45.96	1.07	47.03	74.00	-26.97	Peak
4960.150	33.42	8.51	41.93	54.00	-12.07	Average
4960.150	44.75	8.51	53.26	74.00	-20.74	Peak
7439.760	32.58	17.50	50.08	54.00	-3.92	Average
7439.760	43.50	17.50	61.00	74.00	-13.00	Peak

Remark:

1. Spectrum analyzer setting P(Peak): RBW=1MHz, VBW=3MHz, A(Average): RBW=1MHz, VBW≧1/T
2. The result basic equation calculation is as follow:
   C.F= AF Factor + Cable Loss – Preamp Gain + Filter Loss
   Result = Reading + C.F, Margin = Result - Limit
3. The other emission levels were 10dB below the limit
4. The test distance is 3m.

Product Name	Audio Device	Test Date	2024/05/03
Model	HG12	Test By	Peter Chu
Test Mode	Bluetooth 5.0 TX (CH Low)	TEMP& Humidity	25.6℃/55%

Vertical



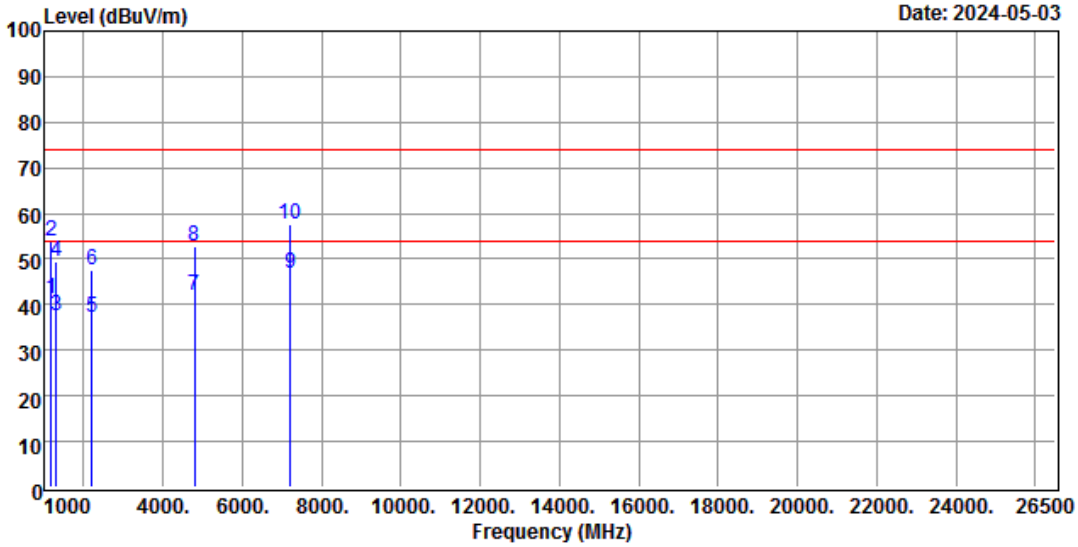
Freq	Reading	C.F	Result	Limit	Margin	Detector
MHz	dBuV	dB	dBuV/m	dBuV/m	dB	
1190.080	49.53	-6.57	42.96	54.00	-11.04	Average
1190.080	62.18	-6.57	55.61	74.00	-18.39	Peak
1255.280	42.66	-6.00	36.66	54.00	-17.34	Average
1255.280	54.86	-6.00	48.86	74.00	-25.14	Peak
2210.230	37.48	1.13	38.61	54.00	-15.39	Average
2210.230	47.65	1.13	48.78	74.00	-25.22	Peak
4805.850	32.41	8.06	40.47	54.00	-13.53	Average
4805.850	44.61	8.06	52.67	74.00	-21.33	Peak
7205.730	31.67	16.51	48.18	54.00	-5.82	Average
7205.730	42.37	16.51	58.88	74.00	-15.12	Peak

Remark:

1. Spectrum analyzer setting P(Peak): RBW=1MHz, VBW=3MHz, A(Average): RBW=1MHz, VBW≧1/T
2. The result basic equation calculation is as follow:
   C.F= AF Factor + Cable Loss – Preamp Gain + Filter Loss
   Result = Reading + C.F, Margin = Result - Limit
3. The other emission levels were 10dB below the limit
4. The test distance is 3m.

Product Name	Audio Device	Test Date	2024/05/03
Model	HG12	Test By	Peter Chu
Test Mode	Bluetooth 5.0 TX (CH Low)	TEMP& Humidity	25.6℃/55%

Horizontal



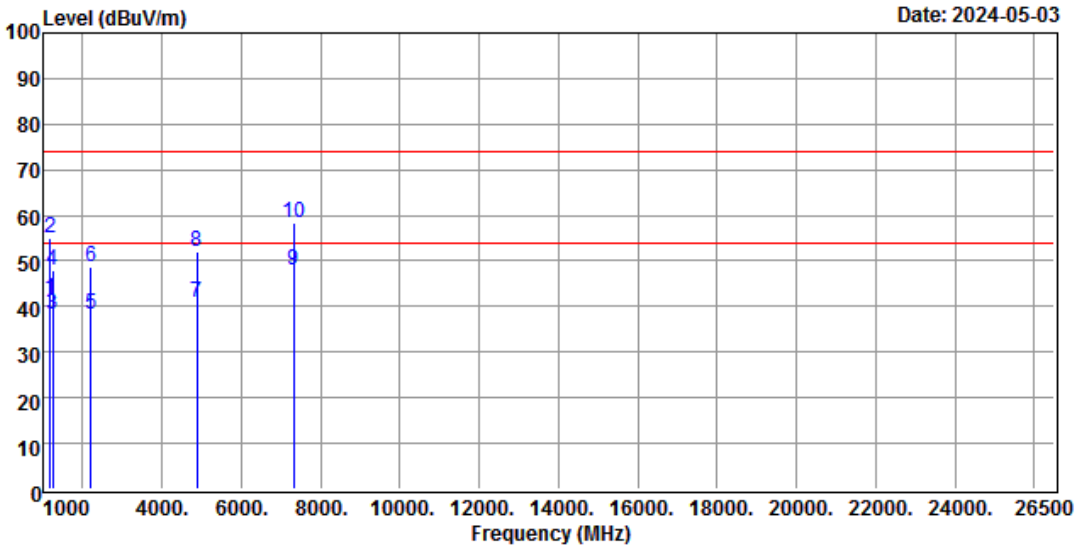
Freq	Reading	C.F	Result	Limit	Margin	Detector
MHz	dBuV	dB	dBuV/m	dBuV/m	dB	
1190.160	47.86	-6.57	41.29	54.00	-12.71	Average
1190.160	60.65	-6.57	54.08	74.00	-19.92	Peak
1320.150	42.74	-5.31	37.43	54.00	-16.57	Average
1320.150	54.62	-5.31	49.31	74.00	-24.69	Peak
2205.180	36.18	1.07	37.25	54.00	-16.75	Average
2205.180	46.63	1.07	47.70	74.00	-26.30	Peak
4804.520	33.77	8.06	41.83	54.00	-12.17	Average
4804.520	44.61	8.06	52.67	74.00	-21.33	Peak
7205.820	30.37	16.51	46.88	54.00	-7.12	Average
7205.820	41.17	16.51	57.68	74.00	-16.32	Peak

Remark:

1. Spectrum analyzer setting P(Peak): RBW=1MHz, VBW=3MHz, A(Average): RBW=1MHz, VBW≧1/T
2. The result basic equation calculation is as follow:
   C.F= AF Factor + Cable Loss – Preamp Gain + Filter Loss
   Result = Reading + C.F, Margin = Result - Limit
3. The other emission levels were 10dB below the limit
4. The test distance is 3m.

Product Name	Audio Device	Test Date	2024/05/03
Model	HG12	Test By	Peter Chu
Test Mode	Bluetooth 5.0 TX (CH Middle)	TEMP& Humidity	25.6℃/55%

Vertical



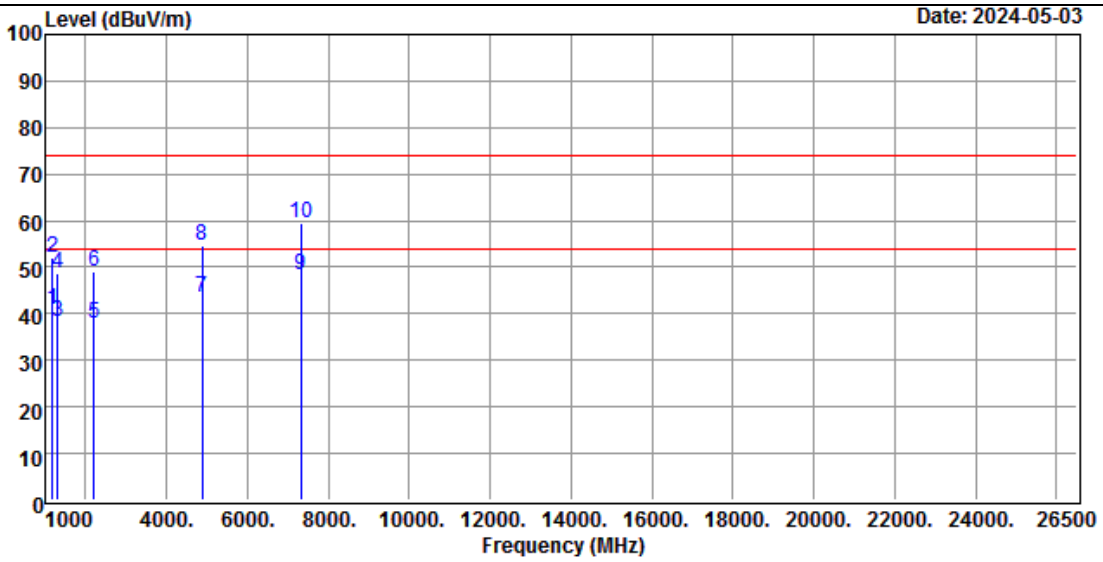
Freq	Reading	C.F	Result	Limit	Margin	Detector
MHz	dBuV	dB	dBuV/m	dBuV/m	dB	
1190.140	48.34	-6.57	41.77	54.00	-12.23	Average
1190.140	61.68	-6.57	55.11	74.00	-18.89	Peak
1255.180	44.39	-6.00	38.39	54.00	-15.61	Average
1255.180	53.87	-6.00	47.87	74.00	-26.13	Peak
2210.260	37.18	1.13	38.31	54.00	-15.69	Average
2210.260	47.42	1.13	48.55	74.00	-25.45	Peak
4882.680	32.85	8.16	41.01	54.00	-12.99	Average
4882.680	43.79	8.16	51.95	74.00	-22.05	Peak
7326.350	30.85	17.05	47.90	54.00	-6.10	Average
7326.350	41.47	17.05	58.52	74.00	-15.48	Peak

Remark:

1. Spectrum analyzer setting P(Peak): RBW=1MHz, VBW=3MHz, A(Average): RBW=1MHz, VBW≧1/T
2. The result basic equation calculation is as follow:
   C.F= AF Factor + Cable Loss – Preamp Gain + Filter Loss
   Result = Reading + C.F, Margin = Result - Limit
3. The other emission levels were 10dB below the limit
4. The test distance is 3m.

Product Name	Audio Device	Test Date	2024/05/03
Model	HG12	Test By	Peter Chu
Test Mode	Bluetooth 5.0 TX (CH Middle)	TEMP& Humidity	25.6℃/55%

Horizontal



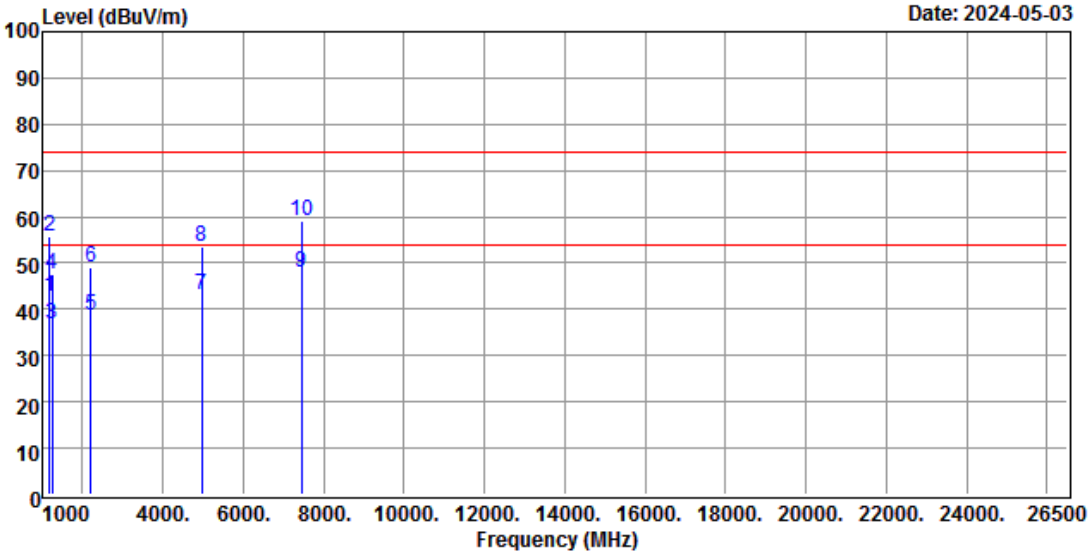
Freq	Reading	C.F	Result	Limit	Margin	Detector
MHz	dBuV	dB	dBuV/m	dBuV/m	dB	
1190.050	47.62	-6.57	41.05	54.00	-12.95	Average
1190.050	58.64	-6.57	52.07	74.00	-21.93	Peak
1320.250	43.47	-5.31	38.16	54.00	-15.84	Average
1320.250	54.15	-5.31	48.84	74.00	-25.16	Peak
2205.300	36.68	1.07	37.75	54.00	-16.25	Average
2205.300	48.06	1.07	49.13	74.00	-24.87	Peak
4882.740	35.43	8.16	43.59	54.00	-10.41	Average
4882.740	46.39	8.16	54.55	74.00	-19.45	Peak
7326.340	31.19	17.05	48.24	54.00	-5.76	Average
7326.340	42.49	17.05	59.54	74.00	-14.46	Peak

Remark:

1. Spectrum analyzer setting P(Peak): RBW=1MHz, VBW=3MHz, A(Average): RBW=1MHz, VBW≧1/T
2. The result basic equation calculation is as follow:
   C.F= AF Factor + Cable Loss – Preamp Gain + Filter Loss
   Result = Reading + C.F, Margin = Result - Limit
3. The other emission levels were 10dB below the limit
4. The test distance is 3m.

Product Name	Audio Device	Test Date	2024/05/03
Model	HG12	Test By	Peter Chu
Test Mode	Bluetooth 5.0 TX (CH High)	TEMP& Humidity	25.6℃/55%

Vertical



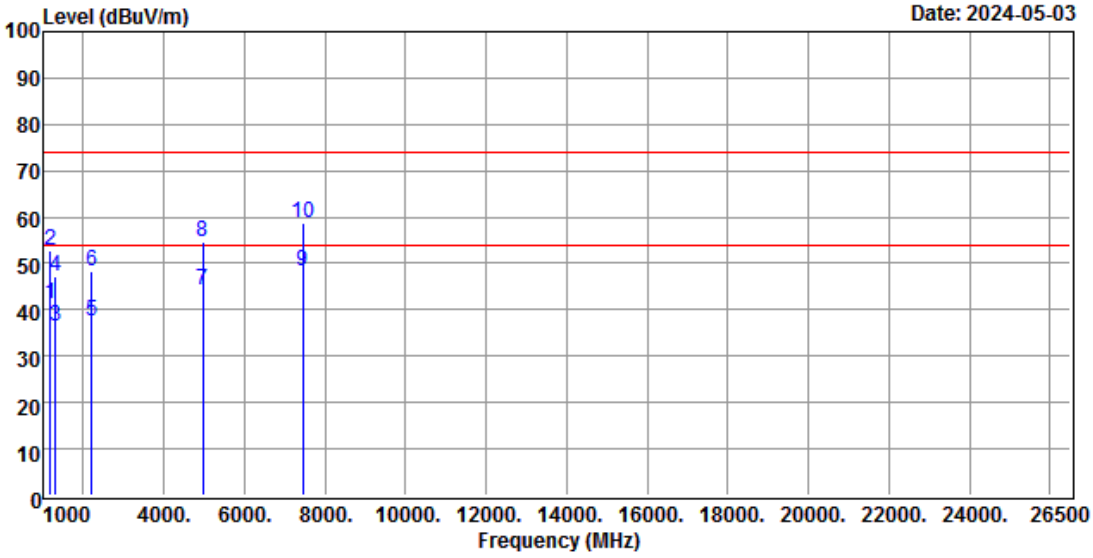
Freq	Reading	C.F	Result	Limit	Margin	Detector
MHz	dBuV	dB	dBuV/m	dBuV/m	dB	
1190.080	49.42	-6.57	42.85	54.00	-11.15	Average
1190.080	62.26	-6.57	55.69	74.00	-18.31	Peak
1255.190	42.69	-6.00	36.69	54.00	-17.31	Average
1255.190	53.63	-6.00	47.63	74.00	-26.37	Peak
2210.400	37.62	1.13	38.75	54.00	-15.25	Average
2210.400	47.85	1.13	48.98	74.00	-25.02	Peak
4958.860	34.65	8.50	43.15	54.00	-10.85	Average
4958.860	44.86	8.50	53.36	74.00	-20.64	Peak
7439.230	30.48	17.50	47.98	54.00	-6.02	Average
7439.230	41.52	17.50	59.02	74.00	-14.98	Peak

Remark:

1. Spectrum analyzer setting P(Peak): RBW=1MHz, VBW=3MHz, A(Average): RBW=1MHz, VBW≧1/T
2. The result basic equation calculation is as follow:
   C.F= AF Factor + Cable Loss – Preamp Gain + Filter Loss
   Result = Reading + C.F, Margin = Result - Limit
3. The other emission levels were 10dB below the limit
4. The test distance is 3m.

Product Name	Audio Device	Test Date	2024/05/03
Model	HG12	Test By	Peter Chu
Test Mode	Bluetooth 5.0 TX (CH High)	TEMP& Humidity	25.6℃/55%

Horizontal



Freq	Reading	C.F	Result	Limit	Margin	Detector
MHz	dBuV	dB	dBuV/m	dBuV/m	dB	
1190.060	47.83	-6.57	41.26	54.00	-12.74	Average
1190.060	59.42	-6.57	52.85	74.00	-21.15	Peak
1320.430	41.85	-5.31	36.54	54.00	-17.46	Average
1320.430	52.44	-5.31	47.13	74.00	-26.87	Peak
2205.180	36.45	1.07	37.52	54.00	-16.48	Average
2205.180	47.08	1.07	48.15	74.00	-25.85	Peak
4959.180	35.84	8.50	44.34	54.00	-9.66	Average
4959.180	46.25	8.50	54.75	74.00	-19.25	Peak
7440.720	30.86	17.50	48.36	54.00	-5.64	Average
7440.720	41.16	17.50	58.66	74.00	-15.34	Peak

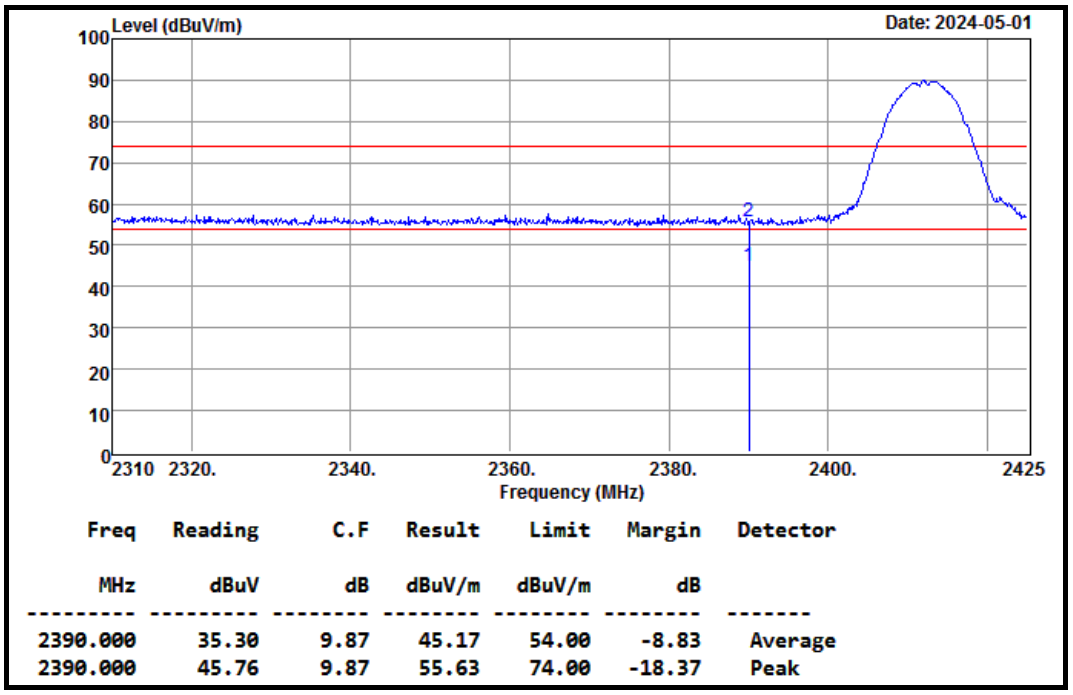
Remark:

1. Spectrum analyzer setting P(Peak): RBW=1MHz, VBW=3MHz, A(Average): RBW=1MHz, VBW≧1/T
2. The result basic equation calculation is as follow:
   C.F= AF Factor + Cable Loss – Preamp Gain + Filter Loss
   Result = Reading + C.F, Margin = Result - Limit
3. The other emission levels were 10dB below the limit
4. The test distance is 3m.

8.6.4 RESTRICTED BAND EDGES

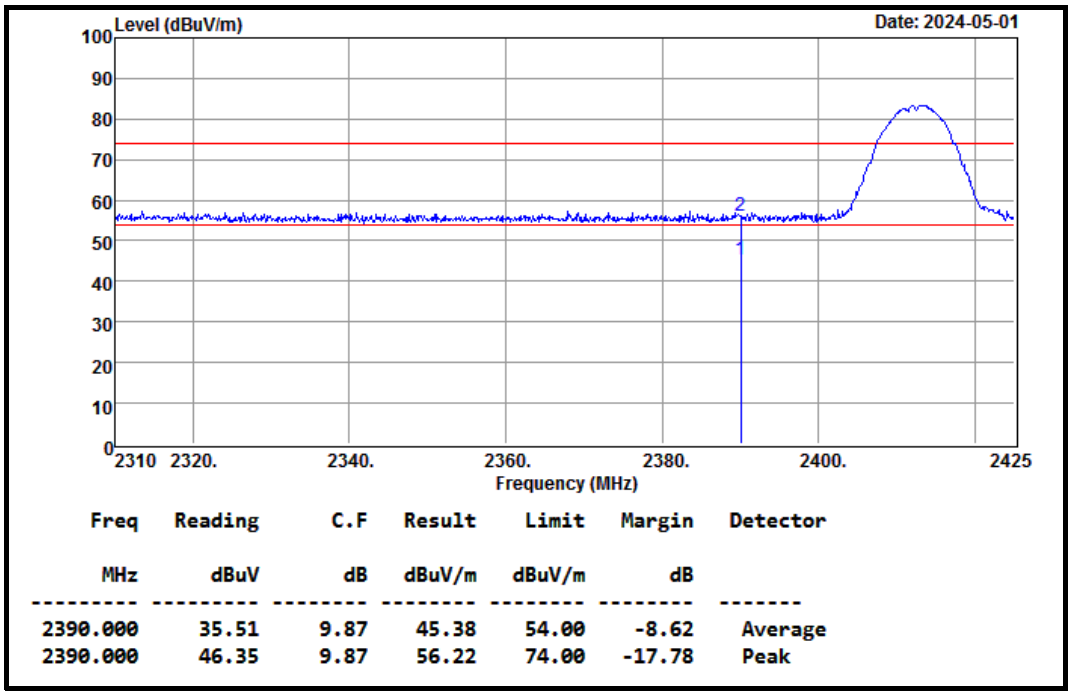
Product Name	Audio Device	Test Date	2024/05/01
Model	HG12	Test By	Peter Chu
Test Mode	IEEE 802.11b TX (CH Low)	TEMP& Humidity	25.6℃, 55%

Horizontal



Freq	Reading	C.F	Result	Limit	Margin	Detector
MHz	dBuV	dB	dBuV/m	dBuV/m	dB	
2390.000	35.30	9.87	45.17	54.00	-8.83	Average
2390.000	45.76	9.87	55.63	74.00	-18.37	Peak

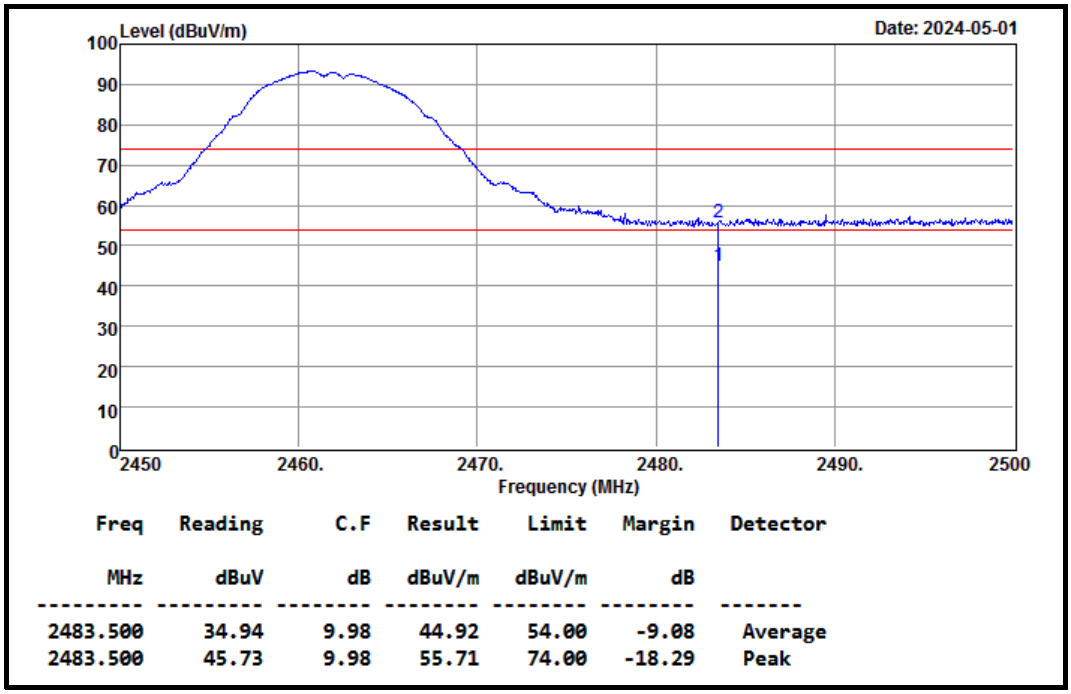
Vertical



Freq	Reading	C.F	Result	Limit	Margin	Detector
MHz	dBuV	dB	dBuV/m	dBuV/m	dB	
2390.000	35.51	9.87	45.38	54.00	-8.62	Average
2390.000	46.35	9.87	56.22	74.00	-17.78	Peak

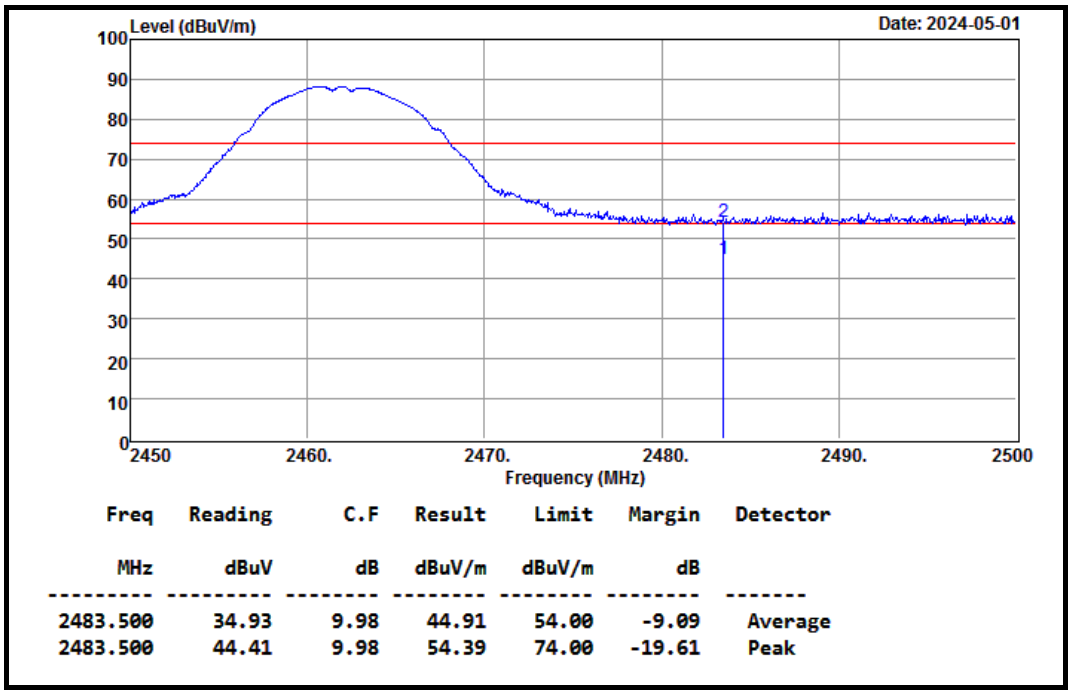
Product Name	Audio Device	Test Date	2024/05/01
Model	HG12	Test By	Peter Chu
Test Mode	IEEE 802.11b TX (CH High)	TEMP& Humidity	25.6℃, 55%

Horizontal



Freq	Reading	C.F	Result	Limit	Margin	Detector
MHz	dBuV	dB	dBuV/m	dBuV/m	dB	
2483.500	34.94	9.98	44.92	54.00	-9.08	Average
2483.500	45.73	9.98	55.71	74.00	-18.29	Peak

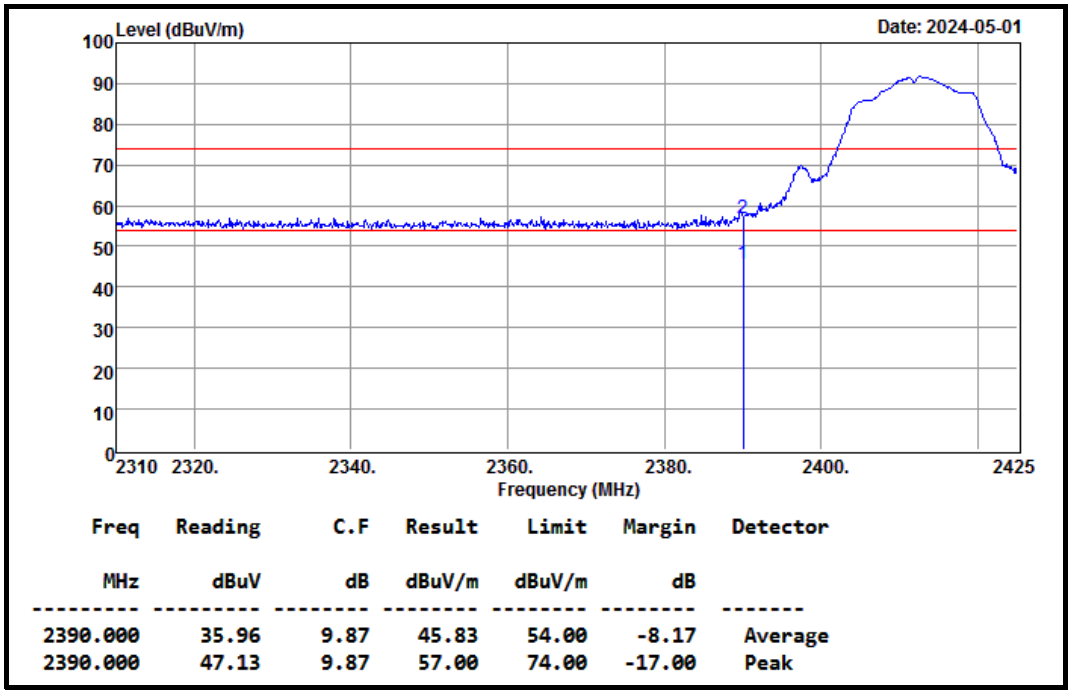
Vertical



Freq	Reading	C.F	Result	Limit	Margin	Detector
MHz	dBuV	dB	dBuV/m	dBuV/m	dB	
2483.500	34.93	9.98	44.91	54.00	-9.09	Average
2483.500	44.41	9.98	54.39	74.00	-19.61	Peak

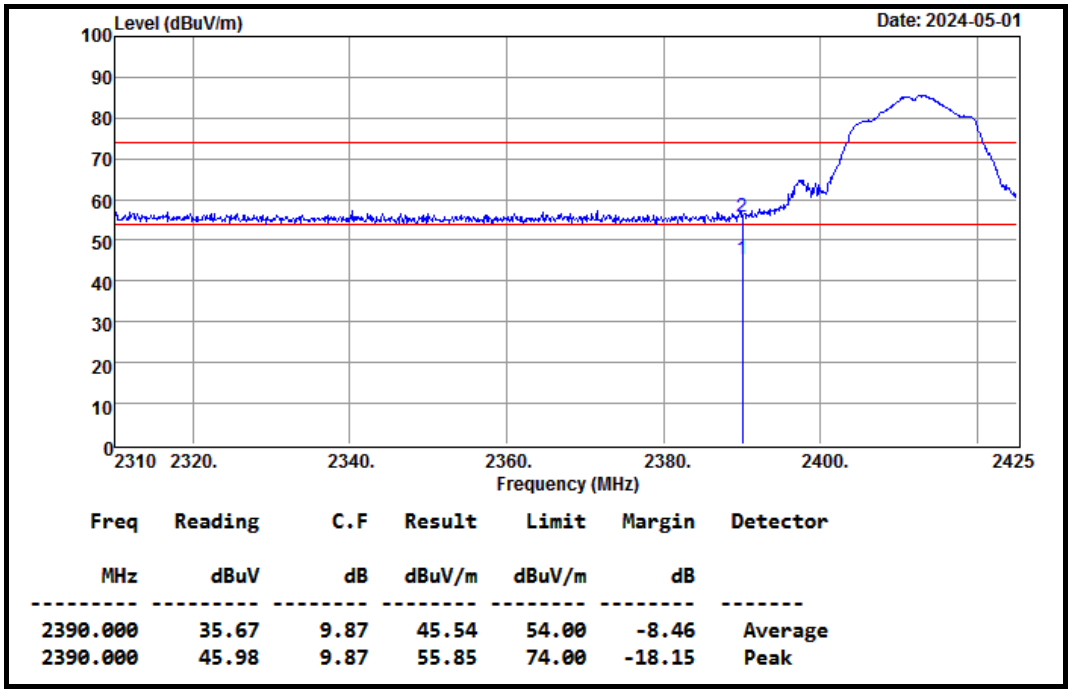
Product Name	Audio Device	Test Date	2024/05/01
Model	HG12	Test By	Peter Chu
Test Mode	IEEE 802.11g TX (CH Low)	TEMP& Humidity	25.6℃, 55%

Horizontal



Freq	Reading	C.F	Result	Limit	Margin	Detector
MHz	dBuV	dB	dBuV/m	dBuV/m	dB	
2390.000	35.96	9.87	45.83	54.00	-8.17	Average
2390.000	47.13	9.87	57.00	74.00	-17.00	Peak

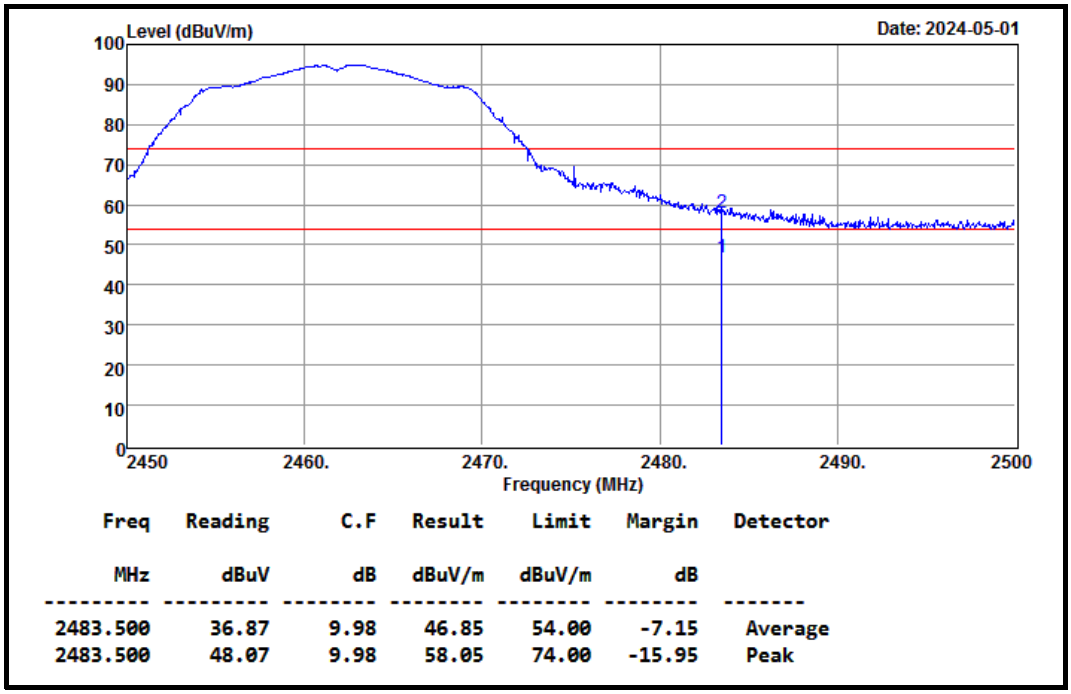
Vertical



Freq	Reading	C.F	Result	Limit	Margin	Detector
MHz	dBuV	dB	dBuV/m	dBuV/m	dB	
2390.000	35.67	9.87	45.54	54.00	-8.46	Average
2390.000	45.98	9.87	55.85	74.00	-18.15	Peak

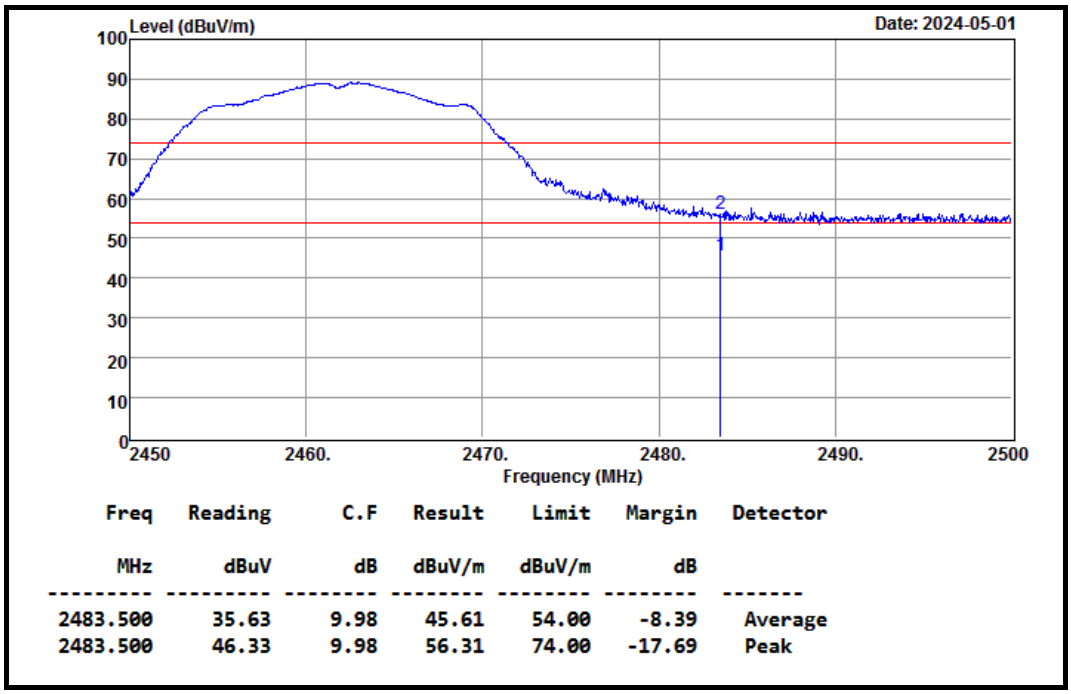
Product Name	Audio Device	Test Date	2024/05/01
Model	HG12	Test By	Peter Chu
Test Mode	IEEE 802.11g TX (CH High)	TEMP& Humidity	25.6℃, 55%

Horizontal



Freq	Reading	C.F	Result	Limit	Margin	Detector
MHz	dBuV	dB	dBuV/m	dBuV/m	dB	
2483.500	36.87	9.98	46.85	54.00	-7.15	Average
2483.500	48.07	9.98	58.05	74.00	-15.95	Peak

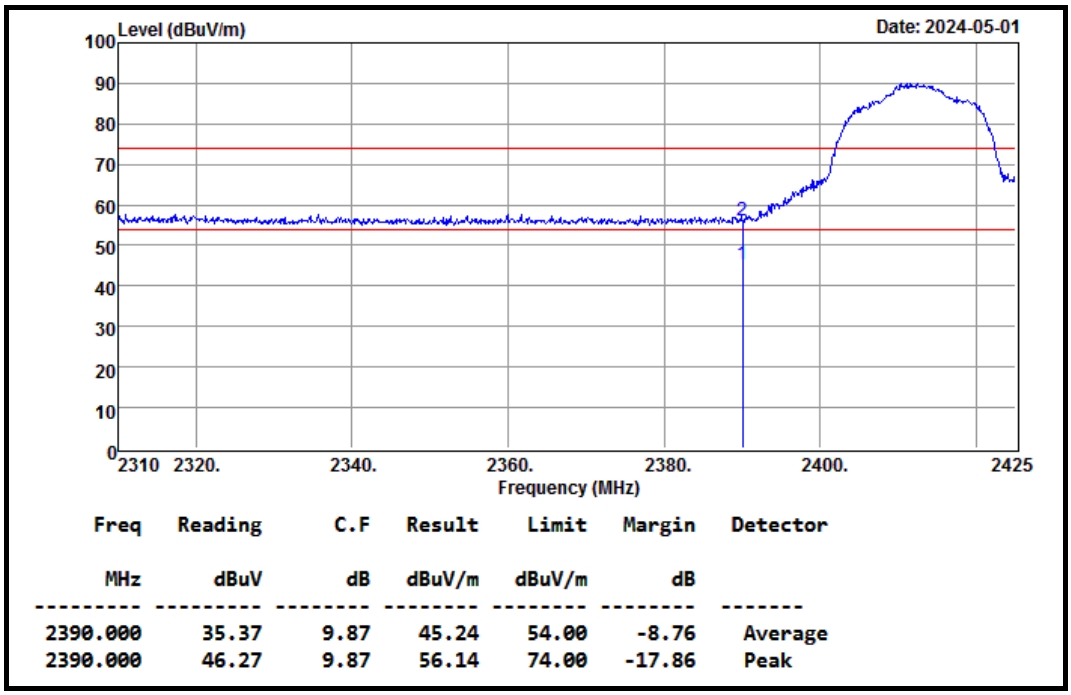
Vertical



Freq	Reading	C.F	Result	Limit	Margin	Detector
MHz	dBuV	dB	dBuV/m	dBuV/m	dB	
2483.500	35.63	9.98	45.61	54.00	-8.39	Average
2483.500	46.33	9.98	56.31	74.00	-17.69	Peak

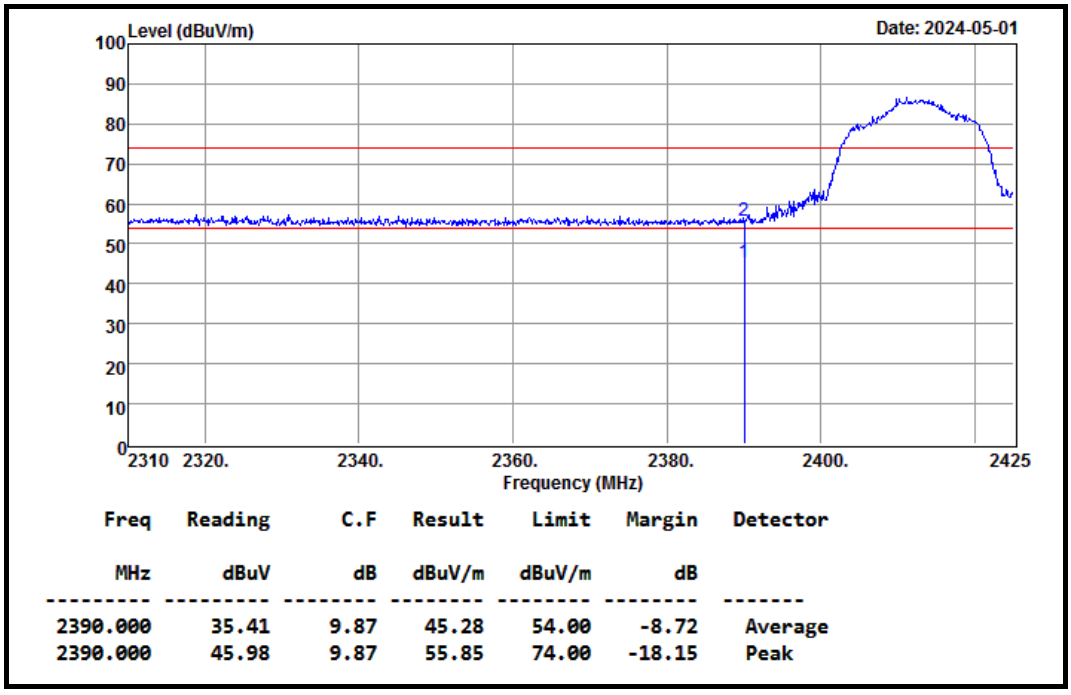
Product Name	Audio Device	Test Date	2024/05/01
Model	HG12	Test By	Peter Chu
Test Mode	IEEE 802.11n HT20 TX (CH Low)	TEMP& Humidity	25.6℃, 55%

Horizontal



Freq	Reading	C.F	Result	Limit	Margin	Detector
MHz	dBuV	dB	dBuV/m	dBuV/m	dB	
2390.000	35.37	9.87	45.24	54.00	-8.76	Average
2390.000	46.27	9.87	56.14	74.00	-17.86	Peak

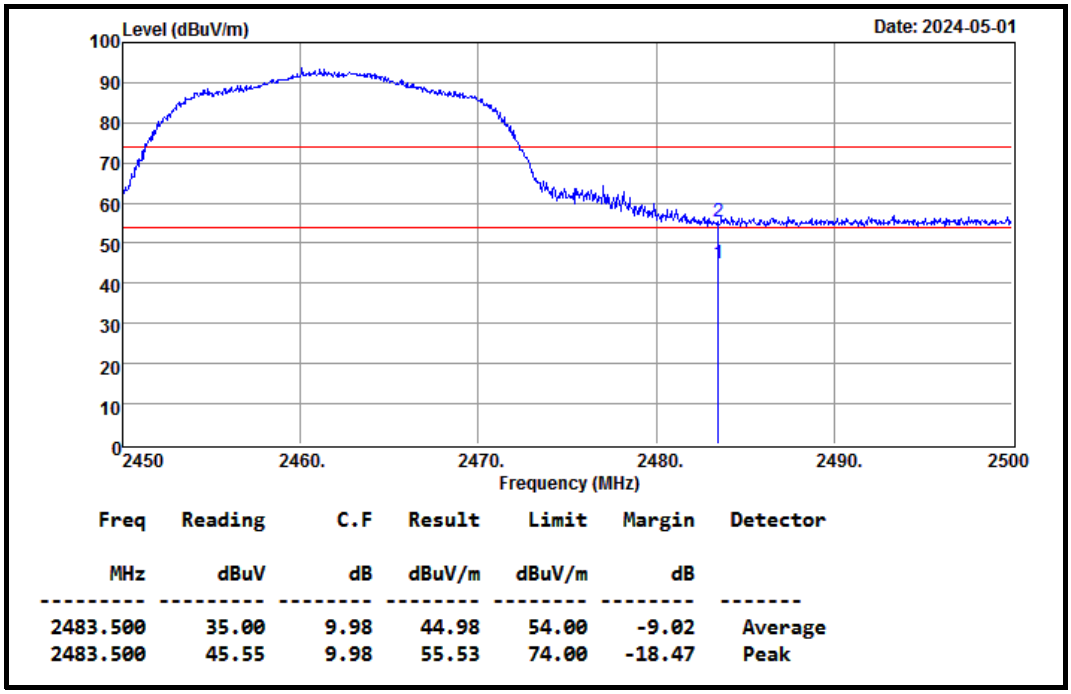
Vertical



Freq	Reading	C.F	Result	Limit	Margin	Detector
MHz	dBuV	dB	dBuV/m	dBuV/m	dB	
2390.000	35.41	9.87	45.28	54.00	-8.72	Average
2390.000	45.98	9.87	55.85	74.00	-18.15	Peak

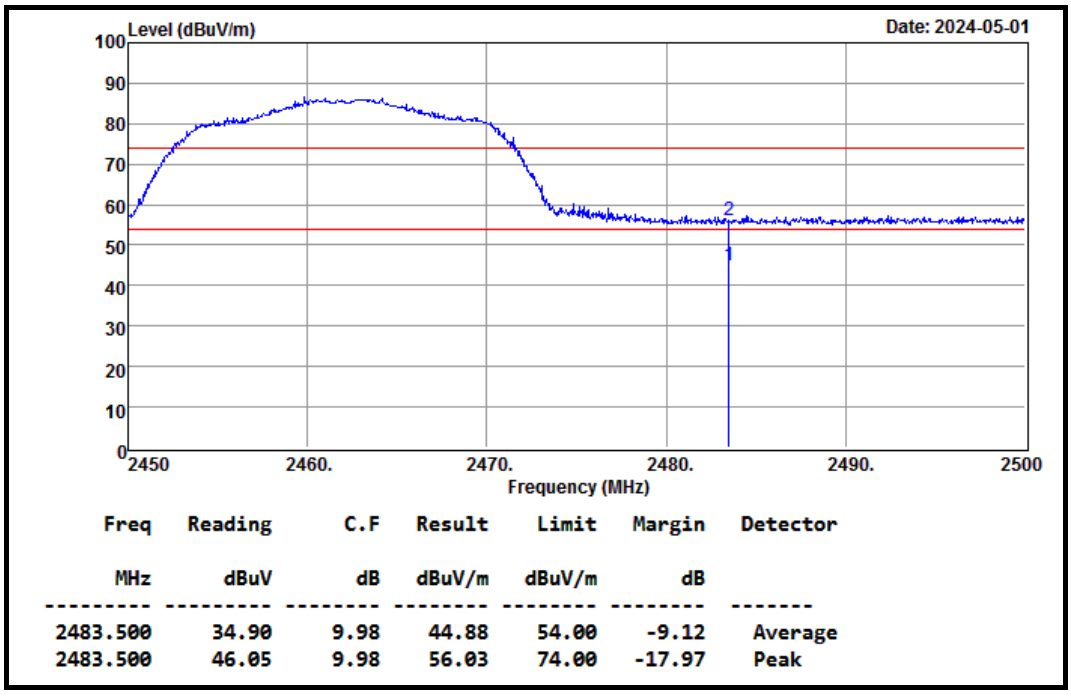
Product Name	Audio Device	Test Date	2024/05/01
Model	HG12	Test By	Peter Chu
Test Mode	IEEE 802.11n HT20 TX (CH High)	TEMP& Humidity	25.6℃, 55%

Horizontal



Freq	Reading	C.F	Result	Limit	Margin	Detector
MHz	dBuV	dB	dBuV/m	dBuV/m	dB	
2483.500	35.00	9.98	44.98	54.00	-9.02	Average
2483.500	45.55	9.98	55.53	74.00	-18.47	Peak

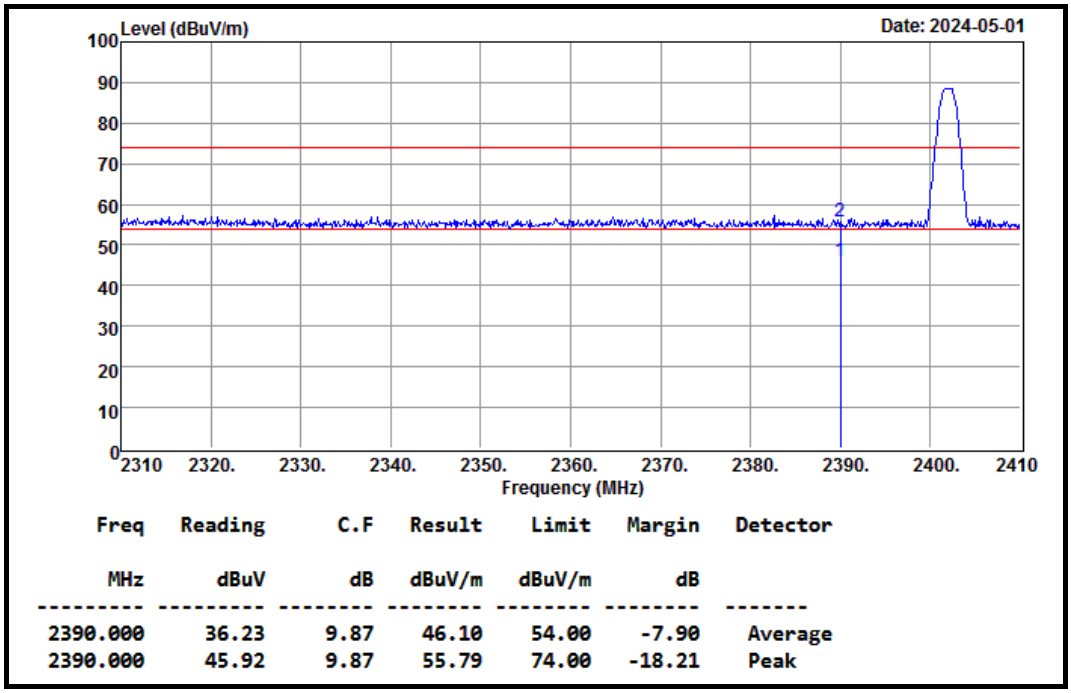
Vertical



Freq	Reading	C.F	Result	Limit	Margin	Detector
MHz	dBuV	dB	dBuV/m	dBuV/m	dB	
2483.500	34.90	9.98	44.88	54.00	-9.12	Average
2483.500	46.05	9.98	56.03	74.00	-17.97	Peak

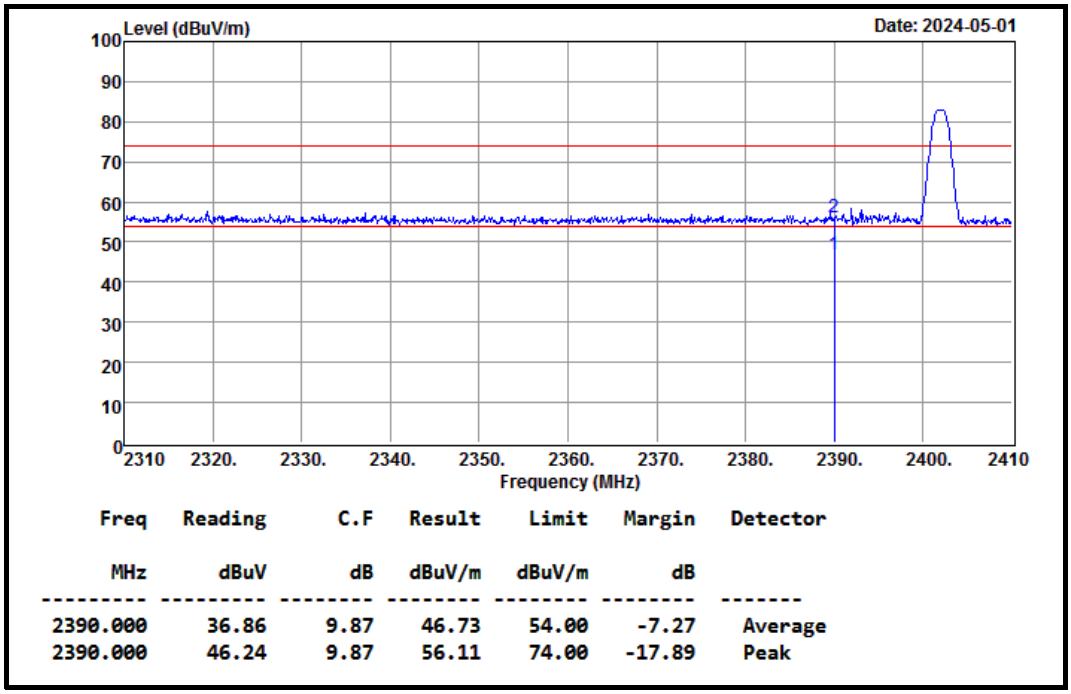
Product Name	Audio Device	Test Date	2024/05/01
Model	HG12	Test By	Peter Chu
Test Mode	Bluetooth 4.0 TX (CH Low)	TEMP& Humidity	25.6℃, 55%

Horizontal



Freq	Reading	C.F	Result	Limit	Margin	Detector
MHz	dBuV	dB	dBuV/m	dBuV/m	dB	
2390.000	36.23	9.87	46.10	54.00	-7.90	Average
2390.000	45.92	9.87	55.79	74.00	-18.21	Peak

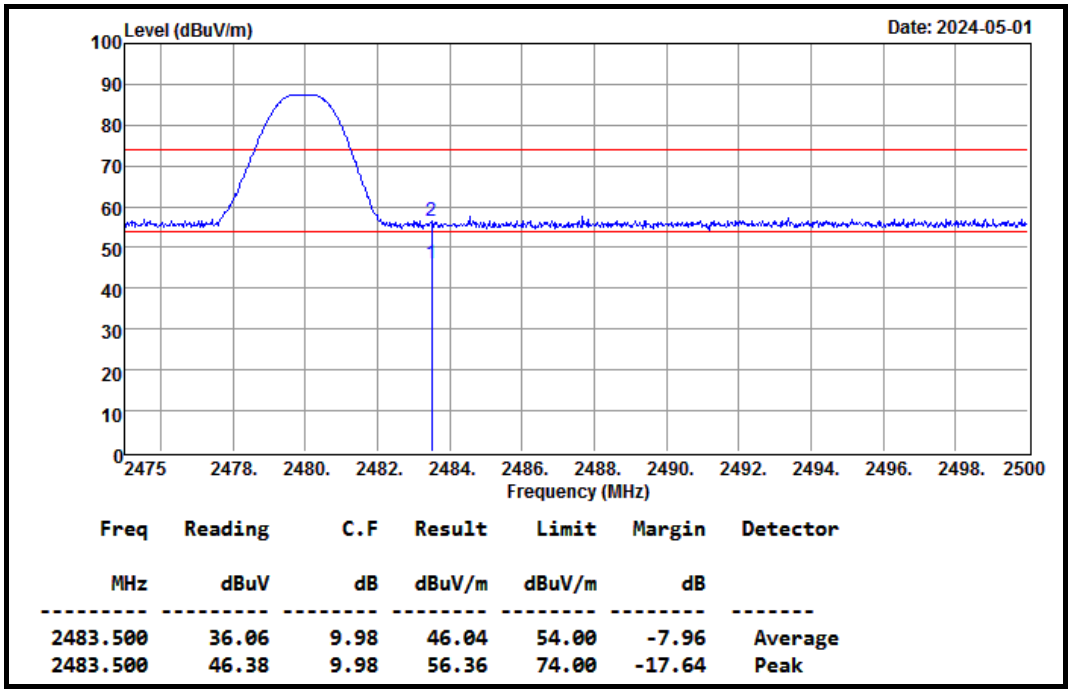
Vertical



Freq	Reading	C.F	Result	Limit	Margin	Detector
MHz	dBuV	dB	dBuV/m	dBuV/m	dB	
2390.000	36.86	9.87	46.73	54.00	-7.27	Average
2390.000	46.24	9.87	56.11	74.00	-17.89	Peak

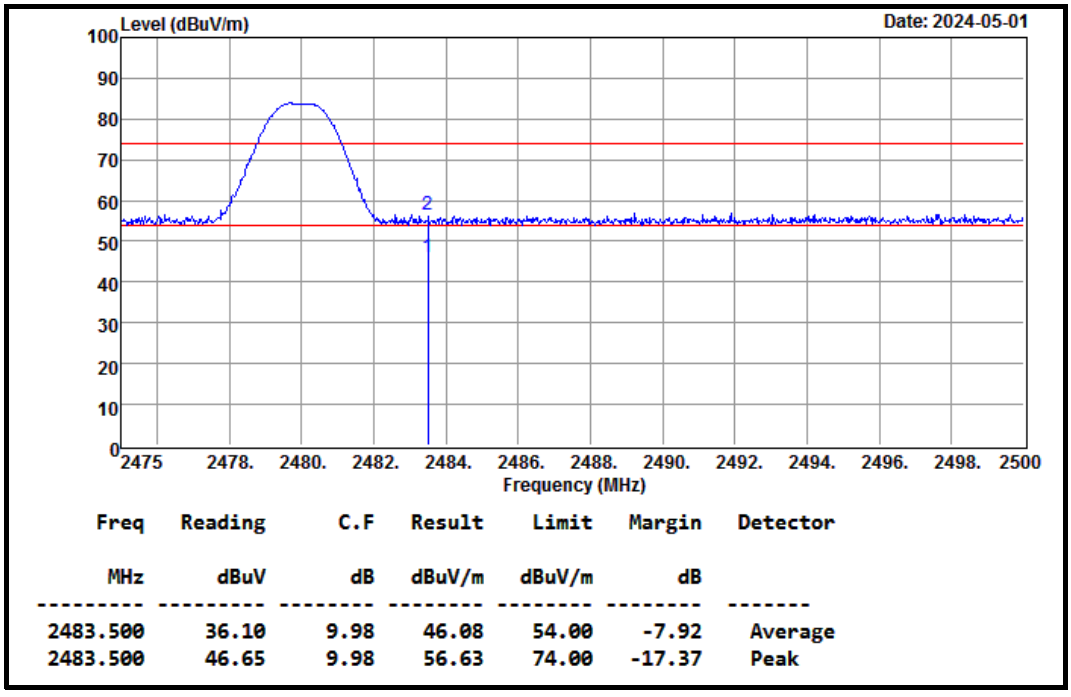
Product Name	Audio Device	Test Date	2024/05/01
Model	HG12	Test By	Peter Chu
Test Mode	Bluetooth 4.0 TX (CH High)	TEMP& Humidity	25.6℃, 55%

Horizontal



Freq	Reading	C.F	Result	Limit	Margin	Detector
MHz	dBuV	dB	dBuV/m	dBuV/m	dB	
2483.500	36.06	9.98	46.04	54.00	-7.96	Average
2483.500	46.38	9.98	56.36	74.00	-17.64	Peak

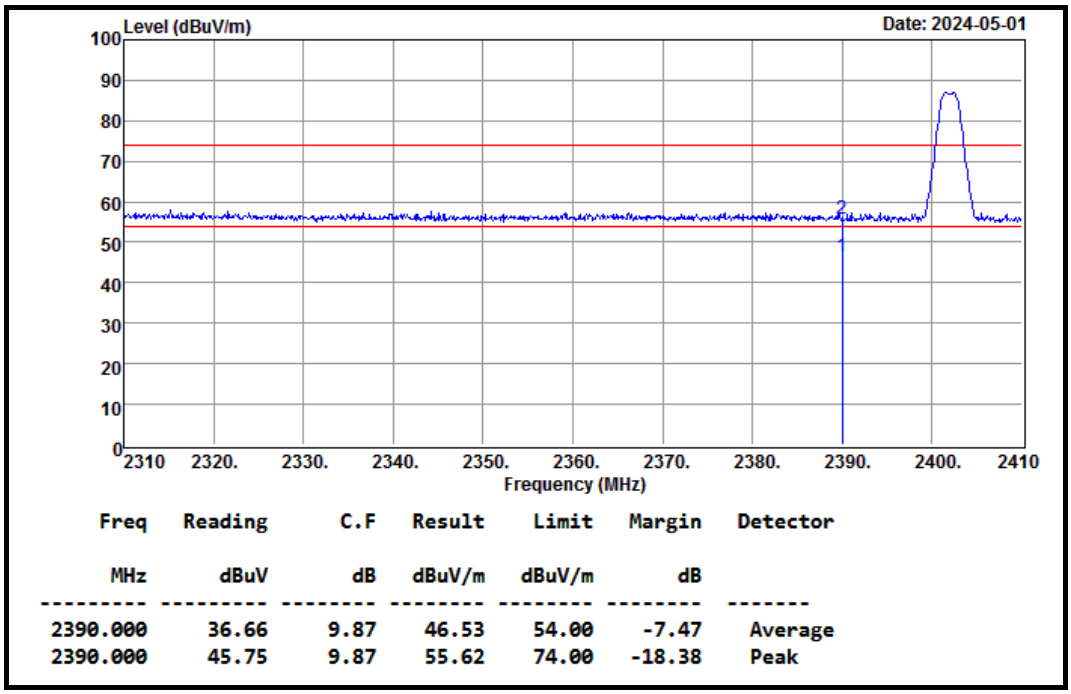
Vertical



Freq	Reading	C.F	Result	Limit	Margin	Detector
MHz	dBuV	dB	dBuV/m	dBuV/m	dB	
2483.500	36.10	9.98	46.08	54.00	-7.92	Average
2483.500	46.65	9.98	56.63	74.00	-17.37	Peak

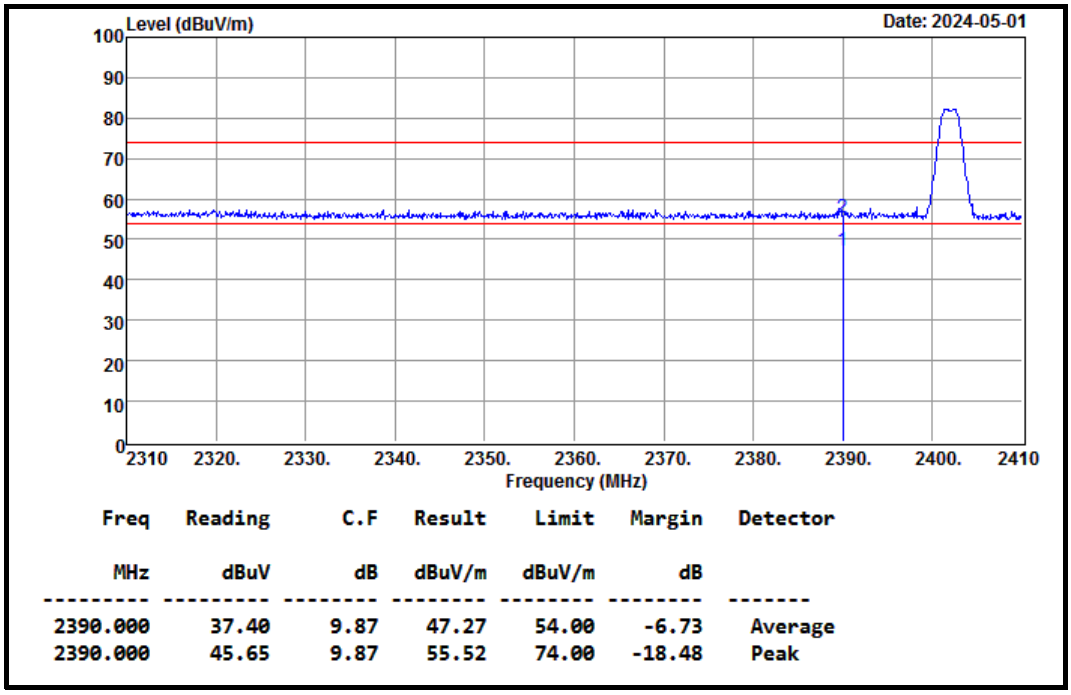
Product Name	Audio Device	Test Date	2024/05/01
Model	HG12	Test By	Peter Chu
Test Mode	Bluetooth 5.0 TX (CH Low)	TEMP& Humidity	25.6℃, 55%

Horizontal



Freq	Reading	C.F	Result	Limit	Margin	Detector
MHz	dBuV	dB	dBuV/m	dBuV/m	dB	
2390.000	36.66	9.87	46.53	54.00	-7.47	Average
2390.000	45.75	9.87	55.62	74.00	-18.38	Peak

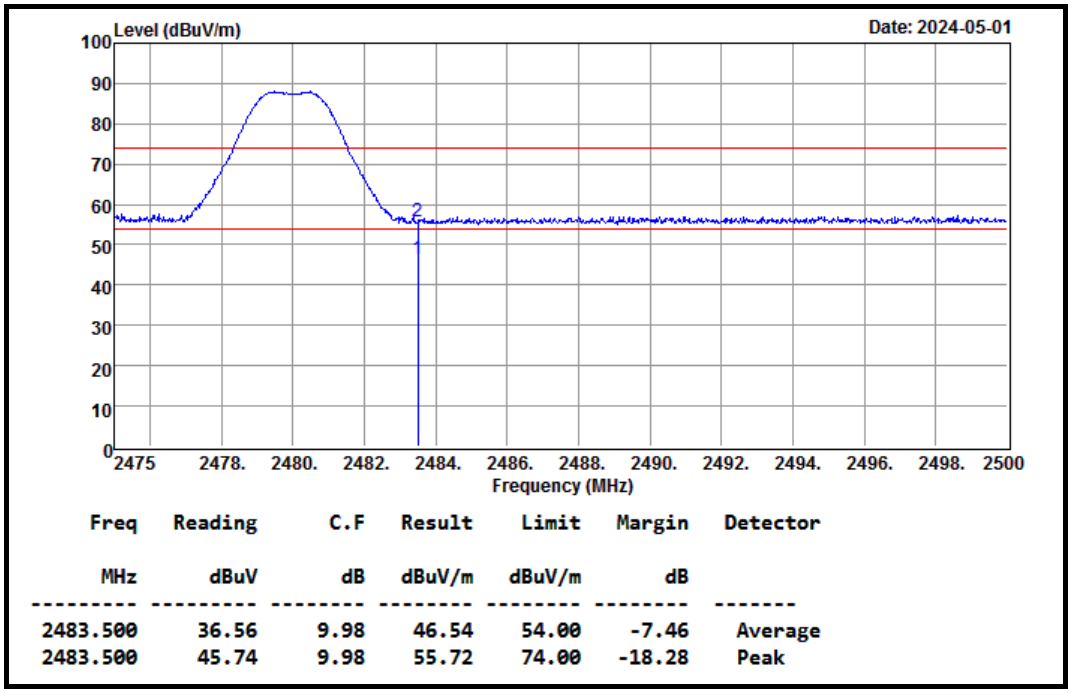
Vertical



Freq	Reading	C.F	Result	Limit	Margin	Detector
MHz	dBuV	dB	dBuV/m	dBuV/m	dB	
2390.000	37.40	9.87	47.27	54.00	-6.73	Average
2390.000	45.65	9.87	55.52	74.00	-18.48	Peak

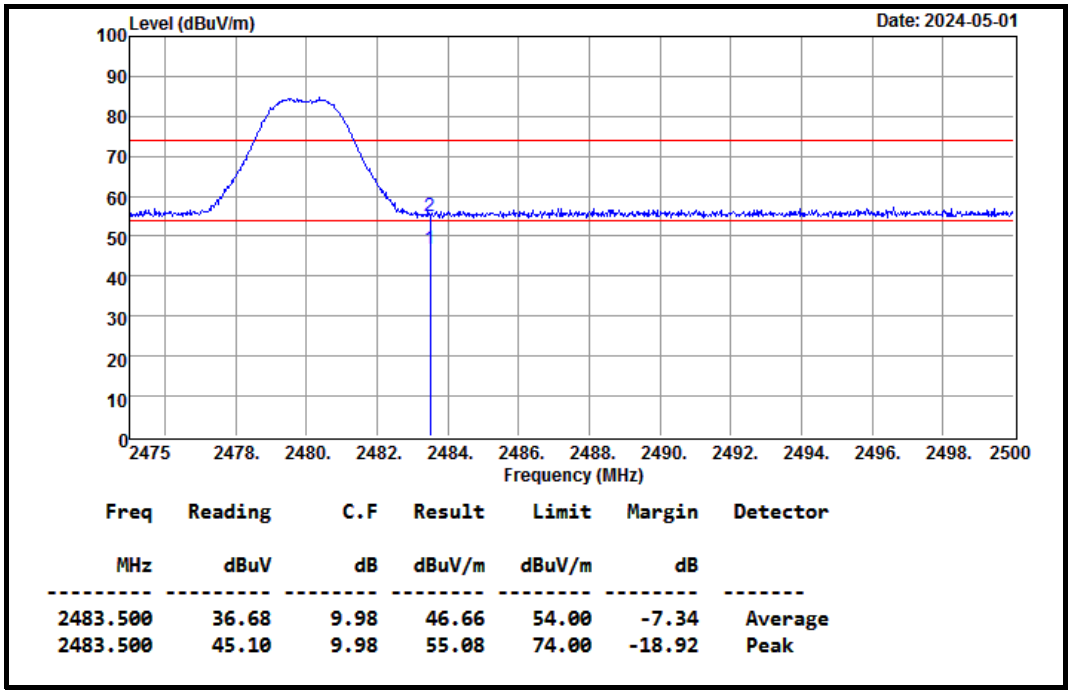
Product Name	Audio Device	Test Date	2024/05/01
Model	HG12	Test By	Peter Chu
Test Mode	Bluetooth 5.0 TX (CH High)	TEMP& Humidity	25.6℃, 55%

Horizontal



Freq	Reading	C.F	Result	Limit	Margin	Detector
MHz	dBuV	dB	dBuV/m	dBuV/m	dB	
2483.500	36.56	9.98	46.54	54.00	-7.46	Average
2483.500	45.74	9.98	55.72	74.00	-18.28	Peak

Vertical



Freq	Reading	C.F	Result	Limit	Margin	Detector
MHz	dBuV	dB	dBuV/m	dBuV/m	dB	
2483.500	36.68	9.98	46.66	54.00	-7.34	Average
2483.500	45.10	9.98	55.08	74.00	-18.92	Peak

8.7 POWERLINE CONDUCTED EMISSIONS

LIMITS

§ 15.207 (a) Except as shown in paragraph (b) and (c) this section, for an intentional radiator that is designed to be connected to the public utility (AC) power line, the radio frequency voltage that is conducted back onto the AC power line on any frequency or frequencies within the band 150 kHz to 30 MHz shall not exceed the limits in the following table, as measured using a 50 μH/50 ohms line impedance stabilization network (LISN). Compliance with the provisions of this paragraph shall be based on the measurement of the radio frequency voltage between each power line and ground at the power terminal.

The lower limit applies at the boundary between the frequency ranges.

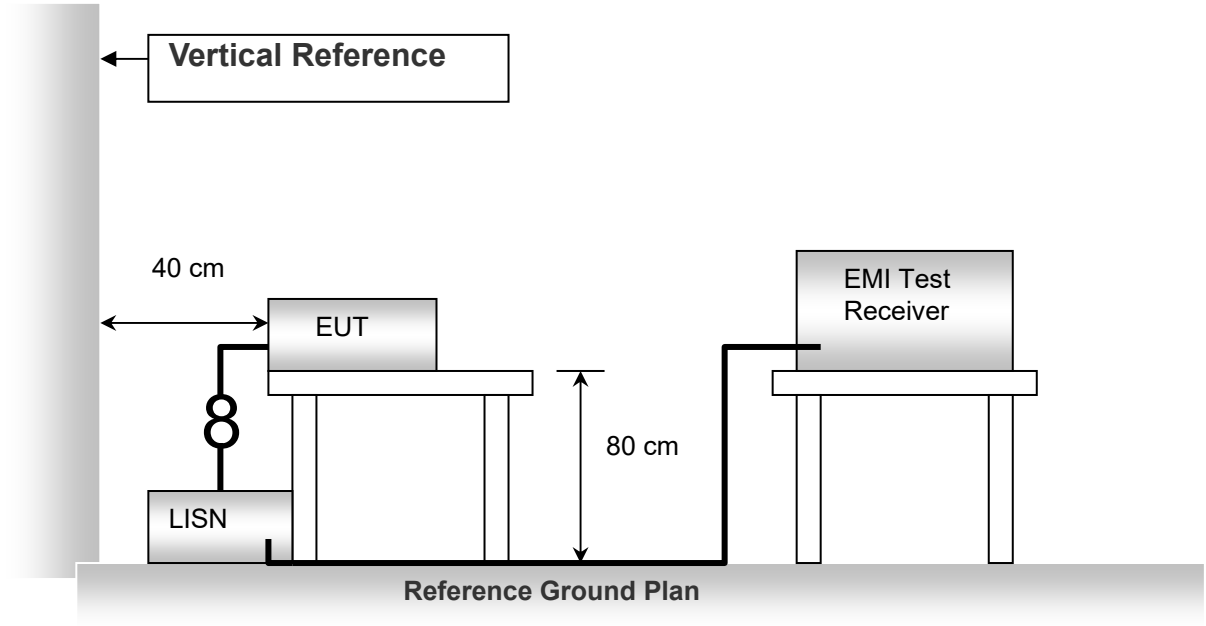
Frequency of Emission (MHz)	Conducted limit (dBμv)	
	Quasi-peak	Average
0.15 - 0.5	66 to 56	56 to 46
0.5 - 5	56	46
5 - 30	60	50

TEST EQUIPMENTS

The following test equipments are used during the conducted power line tests：

Conducted Emission room #1					
Name of Equipment	**Manufacturer**	**Model**	**Serial Number**	**Calibration Date**	**Calibration Due**
BNC Coaxial Cable	CCS	BNC50	11	01/15/2024	01/14/2025
EMI Test Receiver	R&S	ESCI7	100856	06/15/2023	06/14/2024
LISN	R&S	ENV216	101495	07/12/2023	07/11/2024
LISN	R&S	NNLK 8130	8130124	01/19/2024	01/18/2025
Pulse Limiter	SCHWARZBECK	VTSD 9561-F	797	01/15/2024	01/14/2025
Software	e3(v6.101222)				

TEST SETUP



TEST PROCEDURE

The EUT is placed on a non-conducting table 40 cm from the vertical ground plane and 80cm above the horizontal ground plane. The EUT IS CONFIGURED IN ACCORDANCE WITH ANSI C63.10.

The resolution bandwidth is set to 9 kHz for both quasi-peak detection and average detection measurements.

Line conducted data is recorded for both NEUTRAL and LINE.

TEST RESULTS

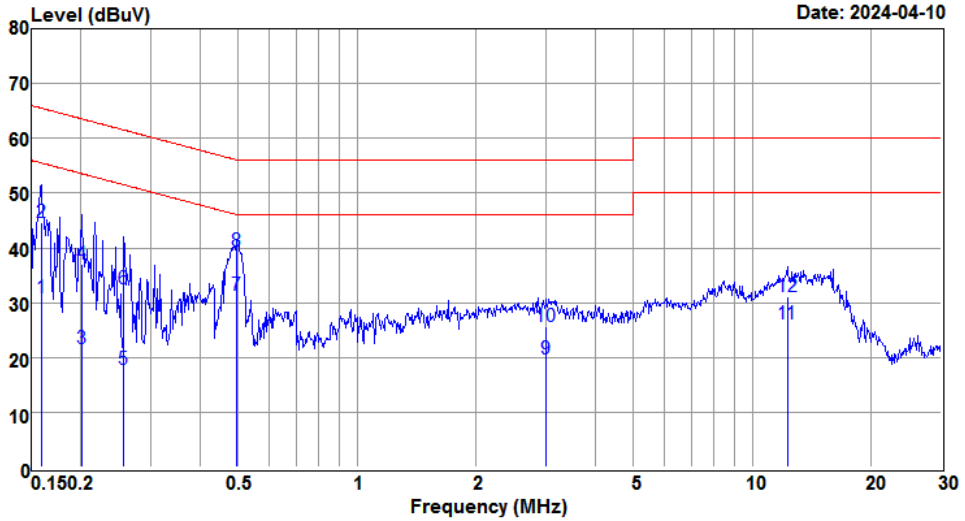
No non-compliance noted.

Test Voltage: AC 120V, 60Hz

Model No.	HG12	Test Mode	Normal Operation
Environmental Conditions	25.4℃, 45% RH	Resolution Bandwidth	9 kHz
Tested by	Peter Chu		

Line

(The chart below shows the highest readings taken from the final data.)



Freq	Reading Level	C.F	Result	Limit	Over Limit	Detector
MHz	dBuV	dB	dBuV	dBuV	dB	
0.159	20.15	10.63	30.78	55.52	-24.74	Average
0.159	33.98	10.63	44.61	65.52	-20.91	QP
0.201	10.93	10.59	21.52	53.58	-32.06	Average
0.201	26.49	10.59	37.08	63.58	-26.50	QP
0.258	7.31	10.59	17.90	51.51	-33.61	Average
0.258	21.93	10.59	32.52	61.51	-28.99	QP
0.497	20.61	10.71	31.32	46.05	-14.73	Average
0.497	28.65	10.71	39.36	56.05	-16.69	QP
3.009	8.83	10.97	19.80	46.00	-26.20	Average
3.009	14.77	10.97	25.74	56.00	-30.26	QP
12.253	11.94	14.08	26.02	50.00	-23.98	Average
12.253	17.09	14.08	31.17	60.00	-28.83	QP

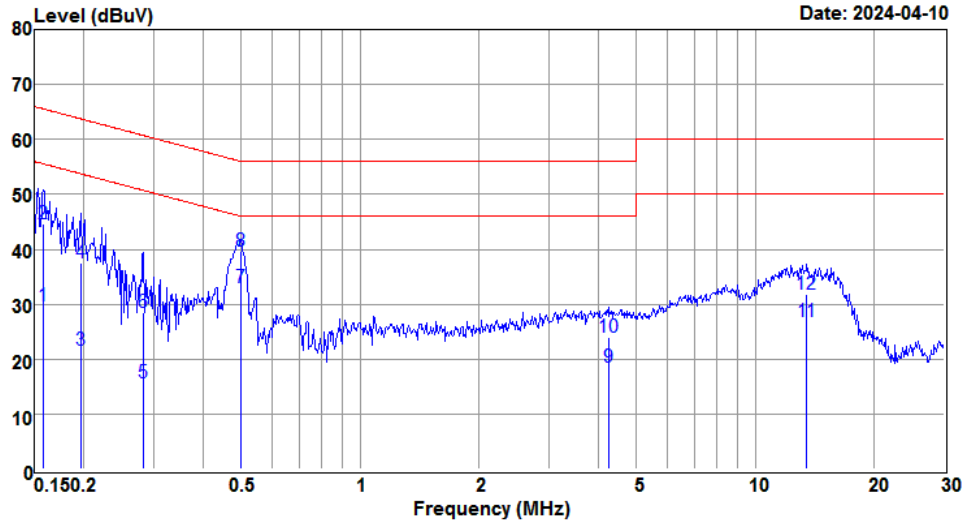
NOTE:

1. Measured Level (dBuV) = LISN Factor (dB) + Cable Loss (dB)+ Meter Reading (dBuV)
2. Over Limit (dBuV) = Measured Level (dBuV) – Limits (dBuV)

Model No.	HG12	Test Mode	Normal Operation
Environmental Conditions	25.4℃, 45% RH	Resolution Bandwidth	9 kHz
Tested by	Peter Chu		

Neutral

(The chart below shows the highest readings taken from the final data.)



Freq	Reading Level	C.F	Result	Limit	Over Limit	Detector
MHz	dBuV	dB	dBuV	dBuV	dB	
0.158	19.01	10.60	29.61	55.56	-25.95	Average
0.158	34.02	10.60	44.62	65.56	-20.94	QP
0.197	11.09	10.56	21.65	53.76	-32.11	Average
0.197	26.92	10.56	37.48	63.76	-26.28	QP
0.283	5.18	10.56	15.74	50.72	-34.98	Average
0.283	17.94	10.56	28.50	60.72	-32.22	QP
0.499	22.36	10.68	33.04	46.01	-12.97	Average
0.499	28.96	10.68	39.64	56.01	-16.37	QP
4.247	7.32	11.24	18.56	46.00	-27.44	Average
4.247	12.85	11.24	24.09	56.00	-31.91	QP
13.479	11.97	14.76	26.73	50.00	-23.27	Average
13.479	17.02	14.76	31.78	60.00	-28.22	QP

NOTE:

1. Measured Level (dBuV) = LISN Factor (dB) + Cable Loss (dB)+ Meter Reading (dBuV)
2. Over Limit (dBuV) = Measured Level (dBuV) – Limits (dBuV)

9. ANTENNA REQUIREMENT

9.1 STANDARD APPLICABLE

For intentional device, according to FCC 47 CFR Section 15.203, an intentional radiator shall be designed to ensure that no antenna other than that furnished by the responsible party shall be used with the device.

And according to FCC 47 CFR Section 15.247 (b), if transmitting antennas of directional gain greater than 6dBi are used, the power shall be reduced by the amount in dB that the directional gain of the antenna exceeds 6dBi.

9.2 ANTENNA CONNECTED CONSTRUCTION

Type: WLAN ANTENNA
Model: DB1EM60-I0195-S
Manufacturer: BRITO
Gain: 4.63 dBi

=== END of Report ===