

5.9.4 Test Result

Note ¹: The EUT was tested in charging mode.

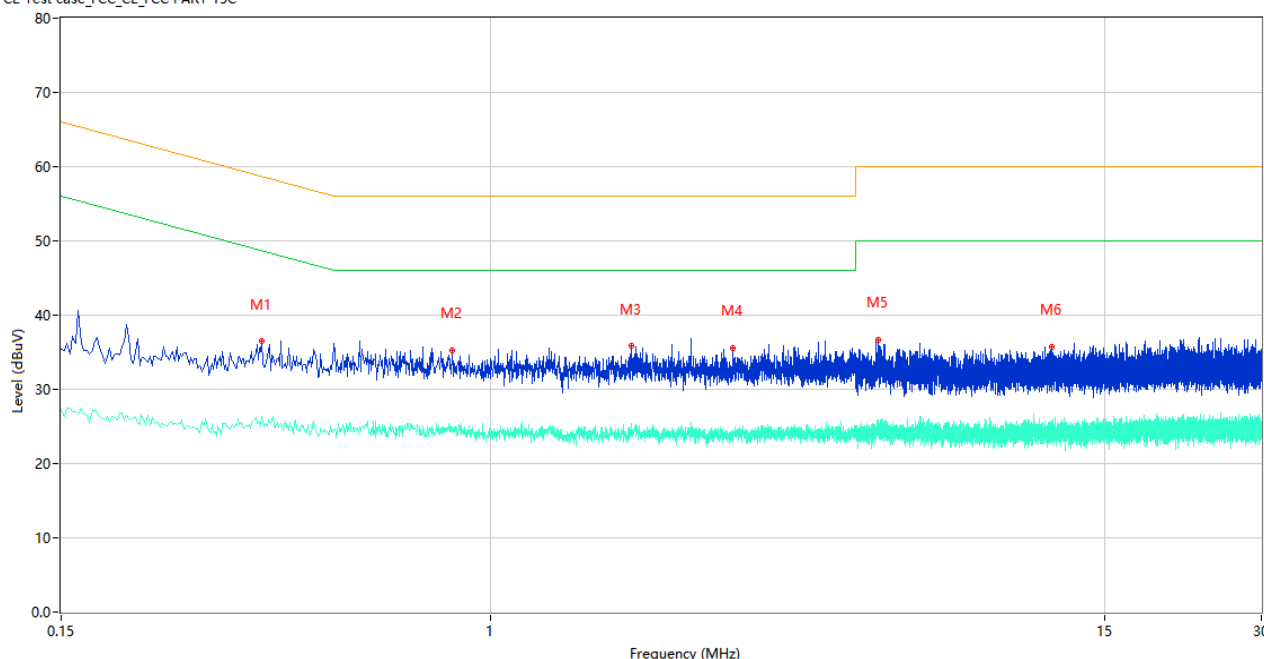
Note ²: Devices subject to Part 15 must be tested for all available U.S. voltages and frequencies (such as a nominal 120 VAC, 60 Hz and 240 VAC, 50 Hz) for which the device is capable of operation. So, The configuration 120 VAC, 60 Hz and 240 VAC, 50 Hz were tested respectively, but only the worst configuration (120 VAC, 60 Hz) shown here.

Note ³: Results (dBuV) = Original reading level of Spectrum Analyzer (dBuV) + Factor (dB)

Test Data and Plots

PHASE L

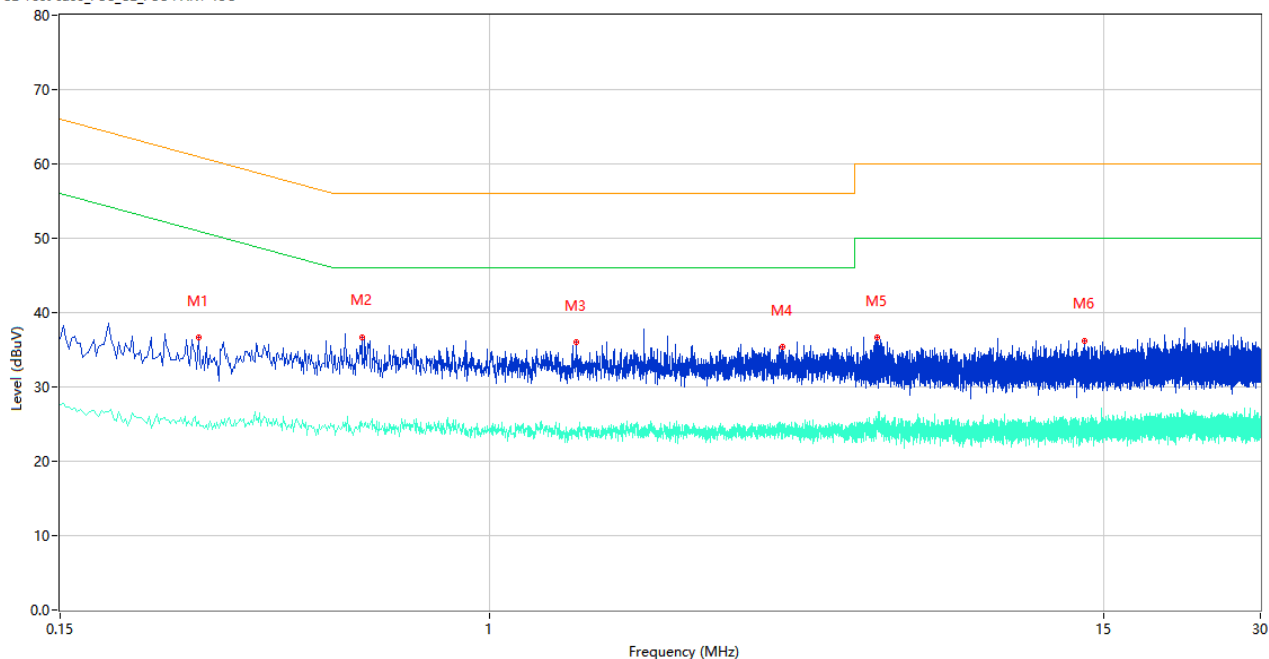
CE Test case_FCC_CE_FCC PART 15C



No.	Frequency (MHz)	Results (dBuV)	Factor (dB)	Limit (dBuV)	Margin (dB)	Detector	Line	Verdict
1	0.364	36.51	10.70	58.64	22.13	Peak	L	Pass
1**	0.364	26.41	10.70	48.64	22.23	AV	L	Pass
2	0.844	35.25	10.61	56.00	20.75	Peak	L	Pass
2**	0.844	24.82	10.61	46.00	21.18	AV	L	Pass
3	1.860	35.82	10.25	56.00	20.18	Peak	L	Pass
3**	1.860	25.33	10.25	46.00	20.67	AV	L	Pass
4	2.910	35.60	10.03	56.00	20.40	Peak	L	Pass
4**	2.910	24.17	10.03	46.00	21.83	AV	L	Pass
5	5.522	36.69	10.45	60.00	23.31	Peak	L	Pass
5**	5.522	25.72	10.45	50.00	24.28	AV	L	Pass
6	11.868	35.73	10.69	60.00	24.27	Peak	L	Pass
6**	11.868	24.99	10.69	50.00	25.01	AV	L	Pass

PHASE N

CE Test case_FCC_CE_FCC PART 15C



No.	Frequency (MHz)	Results (dBuV)	Factor (dB)	Limit (dBuV)	Margin (dB)	Detector	Line	Verdict
1	0.276	36.65	9.76	60.94	24.29	Peak	N	Pass
1**	0.276	25.36	9.76	50.94	25.58	AV	N	Pass
2	0.568	36.71	10.08	56.00	19.29	Peak	N	Pass
2**	0.568	24.87	10.08	46.00	21.13	AV	N	Pass
3	1.466	35.98	10.13	56.00	20.02	Peak	N	Pass
3**	1.466	23.33	10.13	46.00	22.67	AV	N	Pass
4	3.640	35.32	10.41	56.00	20.68	Peak	N	Pass
4**	3.640	25.02	10.41	46.00	20.98	AV	N	Pass
5	5.518	36.64	10.44	60.00	23.36	Peak	N	Pass
5**	5.518	25.43	10.44	50.00	24.57	AV	N	Pass
6	13.838	36.24	10.51	60.00	23.76	Peak	N	Pass
6**	13.838	23.57	10.51	50.00	26.43	AV	N	Pass

5.10 Radiated Spurious Emission

5.10.1 Limit

FCC §15.209&15.247(d)

Radiated emission outside the frequency band attenuation below the general limits specified in FCC section 15.209(a) is not required. In addition, radiated emissions which fall in the restricted bands, as defined in FCC section 15.205(a), must also comply with the radiated emission limits specified in FCC section 15.209(a).

According to FCC section 15.209 (a), except as provided elsewhere in this subpart, the emissions from an intentional radiator shall not exceed the field strength levels specified in the following table:

Frequency (MHz)	Field Strength (μV/m)	Measurement Distance (m)
0.009 - 0.490	2400/F(kHz)	300
0.490 - 1.705	24000/F(kHz)	30
1.705 - 30.0	30	30
30 - 88	100	3
88 - 216	150	3
216 - 960	200	3
Above 960	500	3

Note:

1. Field Strength (dBμV/m) = 20*log[Field Strength (μV/m)].
2. In the emission tables above, the tighter limit applies at the band edges.
3. For Above 1000 MHz, the emission limit in this paragraph is based on measurement instrumentation employing an average detector, measurement using instrumentation with a peak detector function, corresponding to 20dB above the maximum permitted average limit.
4. For above 1000 MHz, limit field strength of harmonics: 54dBuV/m@3m (AV) and 74dBuV/m@3m (PK).

5.10.2 Test Setup

See section 4.5.3 to 4.5.5 for test setup description for the antenna port. The photo of test setup please refer to ANNEX A.

5.10.3 Test Procedure

The measurement frequency range is from 9 kHz to the 10th harmonic of the fundamental frequency. The Turn Table is actuated to turn from 0° to 360°, and both horizontal and vertical polarizations of the Test Antenna are used to find the maximum radiated power. Mid channels on all channel bandwidth verified. Only the worst RB size/offset presented.

The power of the EUT transmitting frequency should be ignored.

All Spurious Emission tests were performed in X, Y, Z axis direction. And only the worst axis test condition was recorded in this test report.

Use the following spectrum analyzer settings:

Span = wide enough to fully capture the emission being measured

RBW = 1 MHz for $f \geq 1$ GHz, 100 kHz for $f < 1$ GHz

VBW $\geq$ RBW

Sweep = auto

Detector function = peak

Trace = max hold

For measurement below 1GHz, If the emission level of the EUT measured by the peak detector is 3 dB lower than the applicable limit, the peak emission level will be reported, Otherwise, the emission measurement will be repeated using the quasi-peak detector and reported.

5.10.4 Test Result

Note ¹: The symbol of “--” in the table which means not application.

Note ²: For the test data above 1 GHz, according the ANSI C63.10-2013, where limits are specified for both average and peak (or quasi-peak) detector functions, if the peak (or quasi-peak) measured value complies with the average limit, it is unnecessary to perform an average measurement.

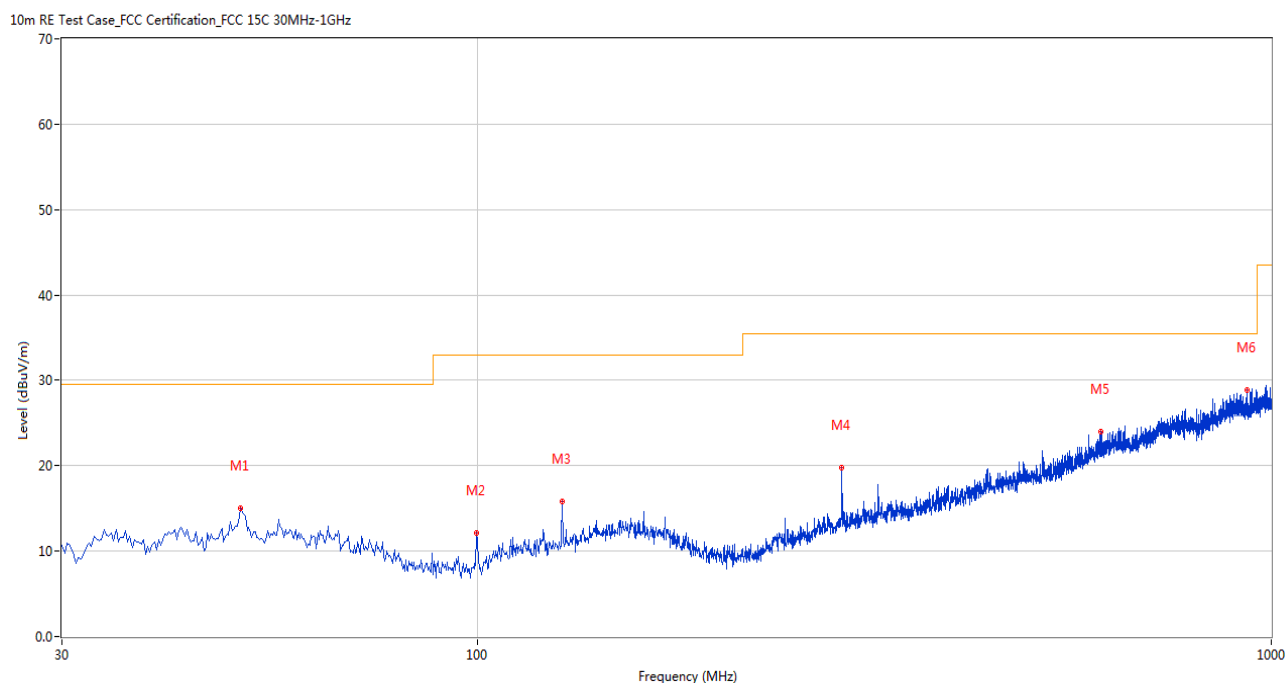
Note ³: The EUT was tested in Link mode and the charging.

Note ⁴: Results (dBuV/m) = Original reading level of Spectrum Analyzer (dBuV/m) + Factor (dB)

The low frequency, which started from 9 kHz to 30 MHz, was pre-scanned and the result which was 20 dB lower than the limit line per 15.31(o) was not reported.

Test Data and Plots

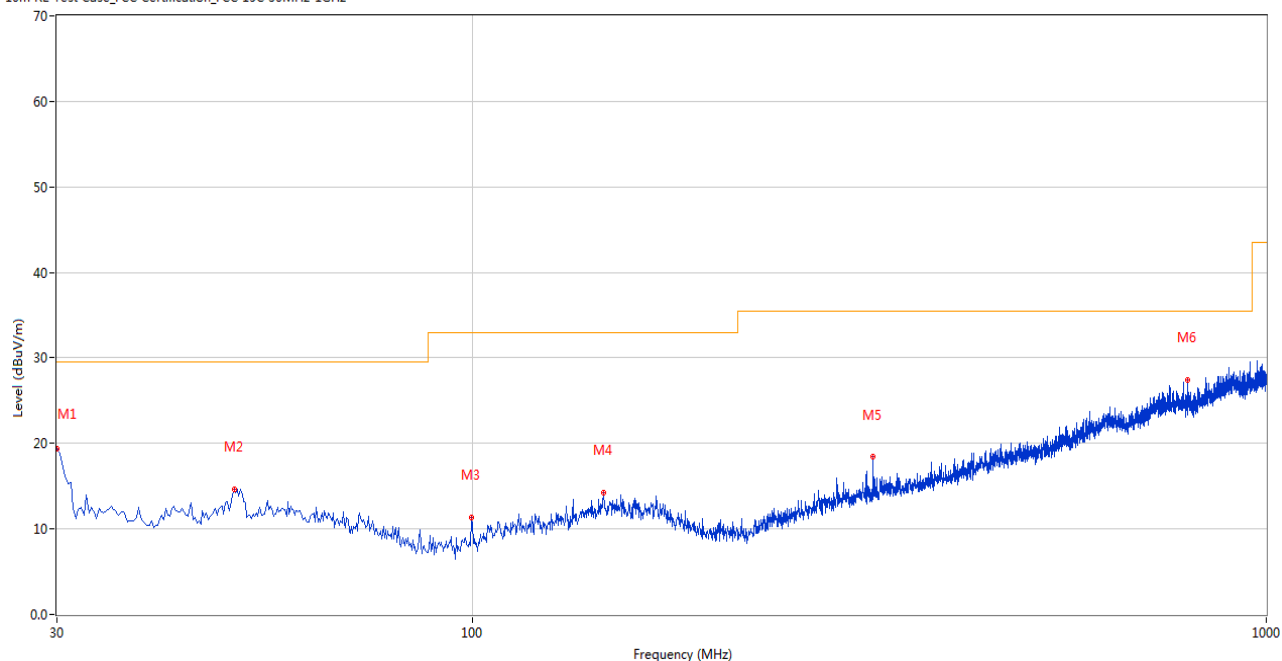
30 MHz to 1 GHz, ANT H



No.	Frequency (MHz)	Results (dBuV/m)	Factor (dB)	Limit (dBuV/m)	Margin (dB)	Detector	Table (Degree)	Height (cm)	Antenna	Verdict
1	50.365	15.06	-26.01	29.5	14.44	Peak	47.00	200	Horizontal	Pass
2	99.823	12.15	-30.52	33.0	20.85	Peak	189.00	100	Horizontal	Pass
3	127.946	15.85	-27.49	33.0	17.15	Peak	360.00	200	Horizontal	Pass
4	287.956	19.80	-25.01	35.5	15.70	Peak	350.00	200	Horizontal	Pass
5	609.673	23.96	-16.63	35.5	11.54	Peak	230.00	100	Horizontal	Pass
6	930.905	28.82	-10.76	35.5	6.68	Peak	291.00	100	Horizontal	Pass

30 MHz to 1 GHz, ANT V

10m RE Test Case_FCC Certification_FCC 15C 30MHz-1GHz



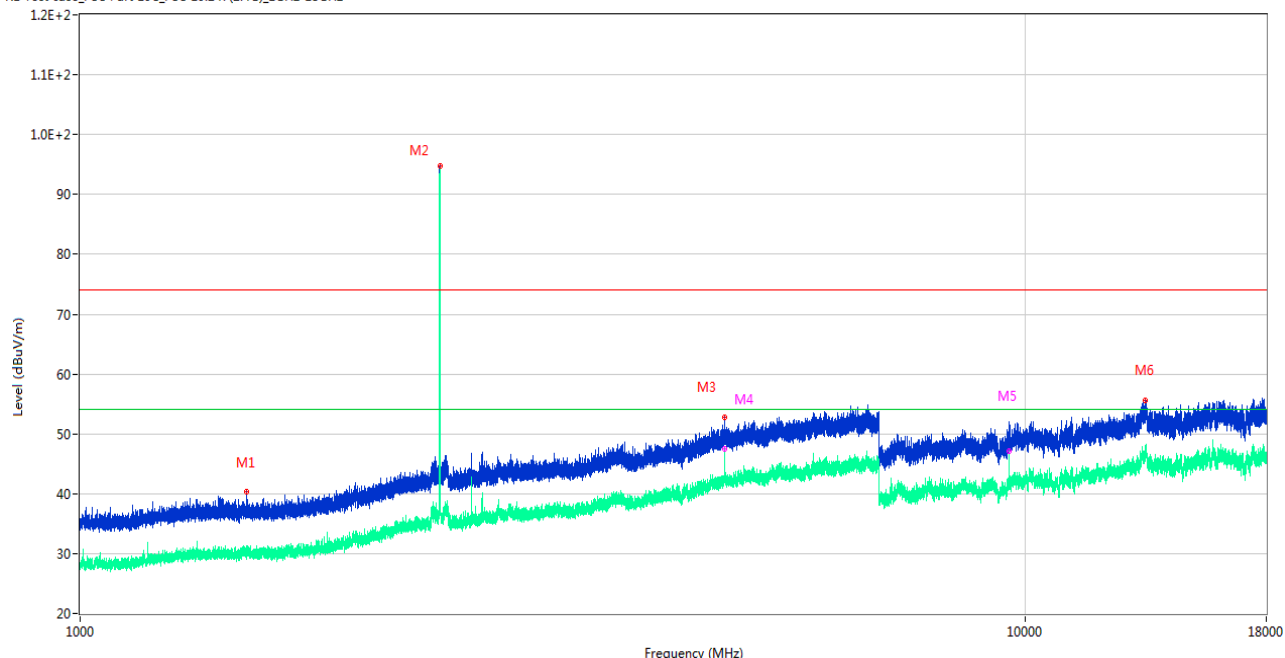
No.	Frequency (MHz)	Results (dBuV/m)	Factor (dB)	Limit (dBuV/m)	Margin (dB)	Detector	Table (Degree)	Height (cm)	Antenna	Verdict
1	30.000	19.41	-28.25	29.5	10.09	Peak	360.00	200	Vertical	Pass
2	50.122	14.66	-26.06	29.5	14.84	Peak	360.00	200	Vertical	Pass
3	99.823	11.30	-30.52	33.0	21.70	Peak	87.00	100	Vertical	Pass
4	146.371	14.23	-25.85	33.0	18.77	Peak	265.00	100	Vertical	Pass
5	319.958	18.40	-24.11	35.5	17.10	Peak	360.00	200	Vertical	Pass
6	797.078	27.44	-12.84	35.5	8.06	Peak	315.00	100	Vertical	Pass

Note 1: The marked spikes near 2400 MHz with circle should be ignored because they are Fundamental signal.

Note 2: The spurious from 18GHz-25GHz is noise only, do not show on the report.

GFSK LOW CHANNEL 1 GHz to 18 GHz, ANT H

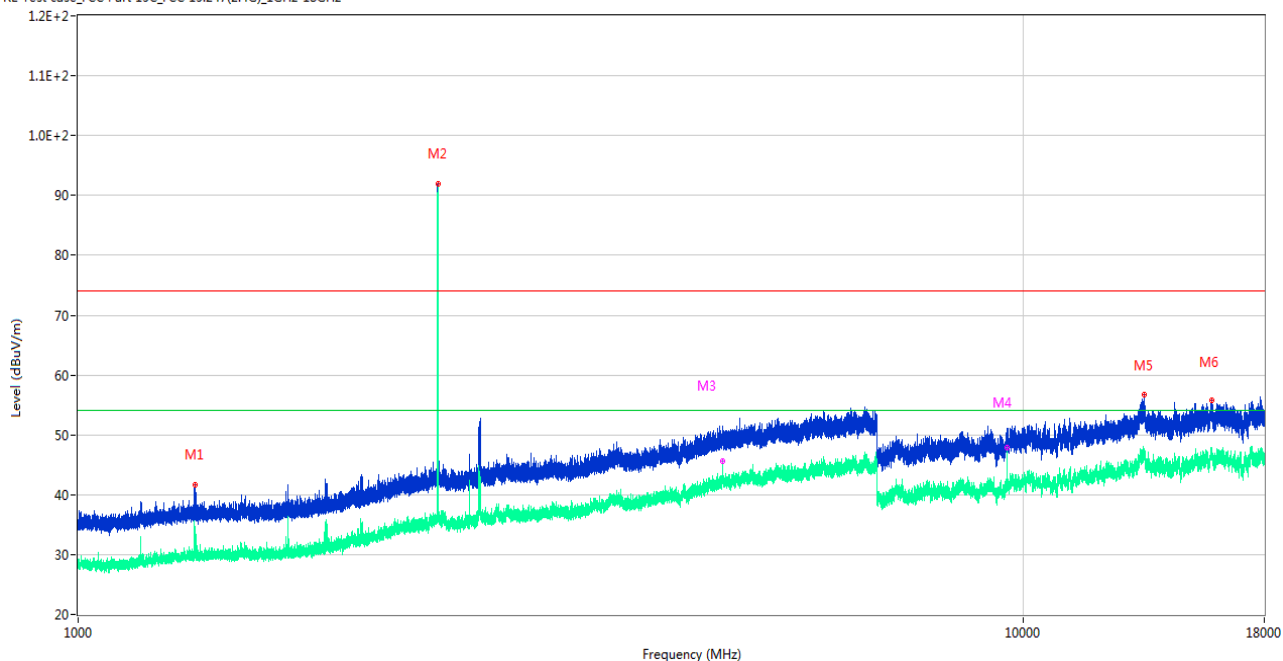
RE Test case_FCC Part 15C_FCC 15.247(2.4G)_1GHz-18GHz



No.	Frequency (MHz)	Results (dBuV/m)	Factor (dB)	Limit (dBuV/m)	Margin (dB)	Detector	Table (Degree)	Height (cm)	Antenna	Verdict
1	1500.600	40.25	-16.86	74.0	33.75	Peak	144.00	100	Horizontal	Pass
1**	1500.600	30.69	-16.86	54.0	23.31	AV	144.00	100	Horizontal	Pass
2	2402.100	94.78	-9.74	74.0	-20.78	Peak	334.00	100	Horizontal	N/A
2**	2402.100	94.47	-9.74	54.0	-40.47	AV	334.00	100	Horizontal	N/A
3	4803.600	52.75	-2.89	74.0	21.25	Peak	83.00	200	Horizontal	Pass
3**	4803.600	45.05	-2.89	54.0	8.95	AV	83.00	200	Horizontal	Pass
4	4804.000	51.14	-2.85	74.0	22.86	Peak	221.00	150	Horizontal	Pass
4**	4804.000	47.53	-2.85	54.0	6.47	AV	221.00	150	Horizontal	Pass
5	9608.200	51.47	-0.01	74.0	22.53	Peak	293.00	150	Horizontal	Pass
5**	9608.200	47.11	-0.01	54.0	6.89	AV	293.00	150	Horizontal	Pass
6	13411.763	55.57	0.47	74.0	18.43	Peak	32.00	150	Horizontal	Pass
6**	13411.763	46.55	0.47	54.0	7.45	AV	32.00	150	Horizontal	Pass

GFSK LOW CHANNEL 1 GHz to 18 GHz, ANT V

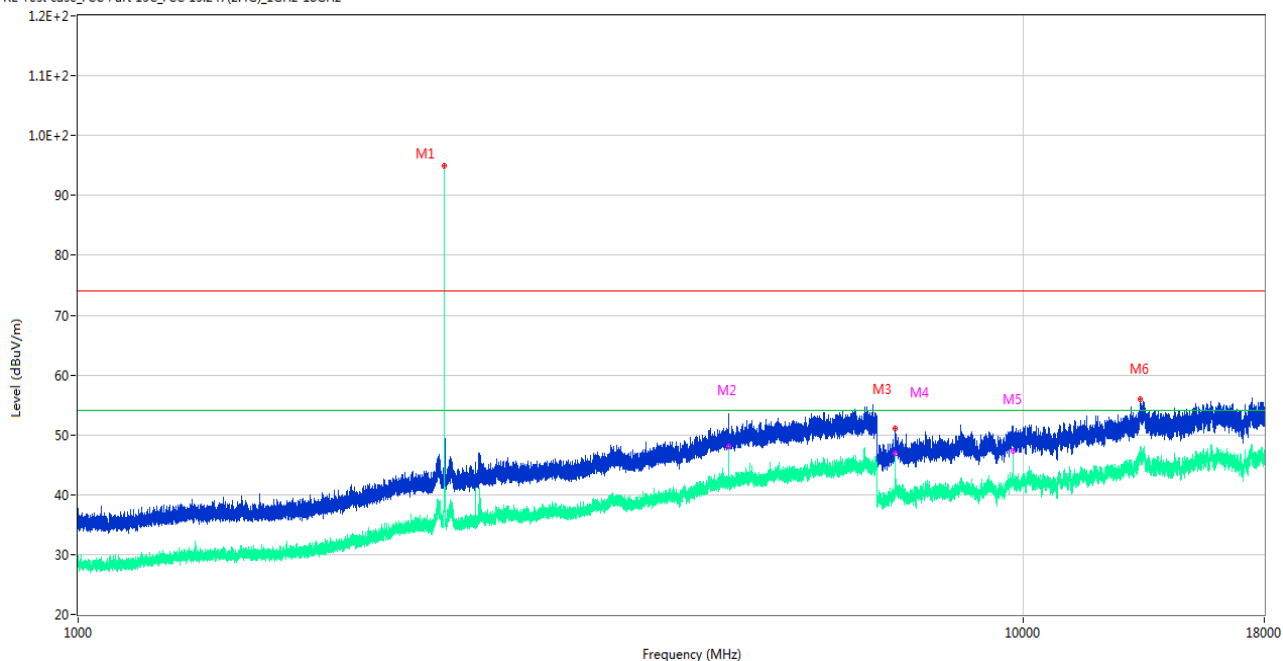
RE Test case_FCC Part 15C_FCC 15.247(2.4G)_1GHz-18GHz



No.	Frequency (MHz)	Results (dBuV/m)	Factor (dB)	Limit (dBuV/m)	Margin (dB)	Detector	Table (Degree)	Height (cm)	Antenna	Verdict
1	1328.400	41.69	-17.10	74.0	32.31	Peak	135.00	300	Vertical	Pass
1**	1328.400	30.07	-17.10	54.0	23.93	AV	135.00	300	Vertical	Pass
2	2402.100	92.03	-9.74	74.0	-18.03	Peak	129.00	150	Vertical	N/A
2**	2402.100	91.60	-9.74	54.0	-37.60	AV	129.00	150	Vertical	N/A
3	4804.200	50.78	-2.83	74.0	23.22	Peak	308.00	150	Vertical	Pass
3**	4804.200	45.53	-2.83	54.0	8.47	AV	308.00	150	Vertical	Pass
4	9608.487	49.49	-0.01	74.0	24.51	Peak	248.00	150	Vertical	Pass
4**	9608.487	47.81	-0.01	54.0	6.19	AV	248.00	150	Vertical	Pass
5	13426.987	56.66	0.40	74.0	17.34	Peak	34.00	150	Vertical	Pass
5**	13426.987	46.91	0.40	54.0	7.09	AV	34.00	150	Vertical	Pass
6	15843.826	55.77	1.39	74.0	18.23	Peak	169.00	150	Vertical	Pass
6**	15843.826	46.40	1.39	54.0	7.60	AV	169.00	150	Vertical	Pass

GFSK MIDDLE CHANNEL 1 GHz to 18 GHz, ANT H

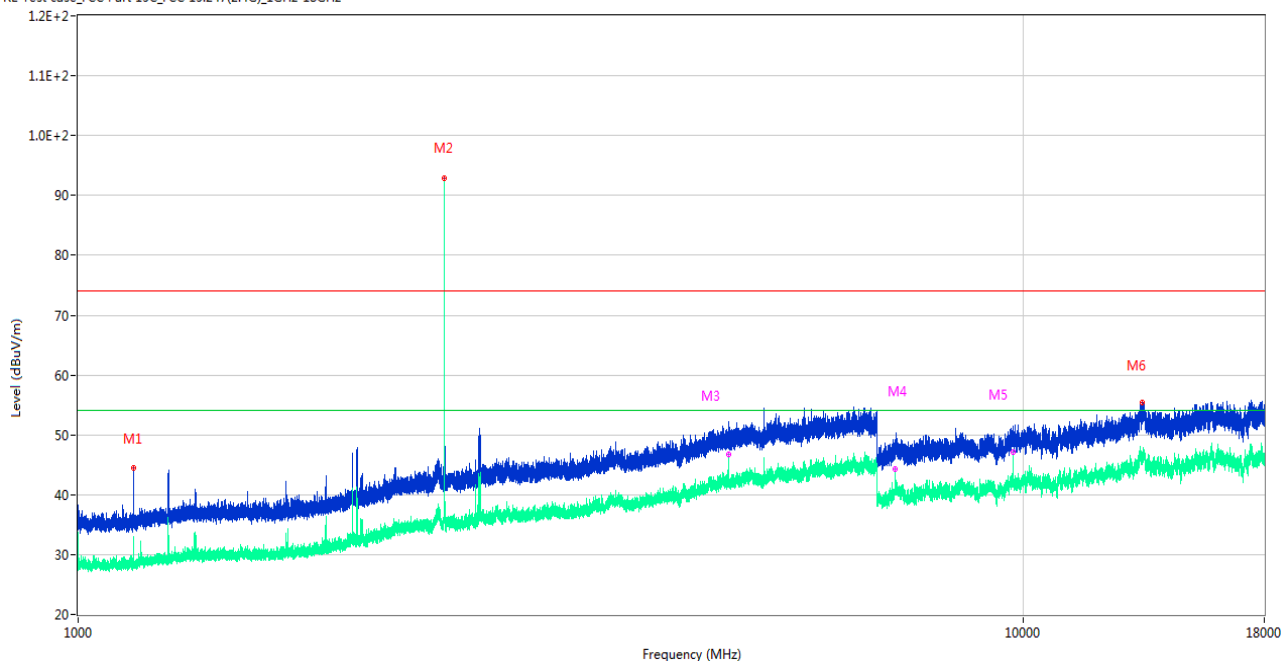
RE Test case_FCC Part 15C_FCC 15.247(2.4G)_1GHz-18GHz



No.	Frequency (MHz)	Results (dBuV/m)	Factor (dB)	Limit (dBuV/m)	Margin (dB)	Detector	Table (Degree)	Height (cm)	Antenna	Verdict
1	2441.100	94.88	-12.38	74.0	-20.88	Peak	214.00	150	Horizontal	N/A
1**	2441.100	94.61	-12.38	54.0	-40.61	AV	214.00	150	Horizontal	N/A
2	4882.000	53.48	-2.61	74.0	20.52	Peak	67.00	150	Horizontal	Pass
2**	4882.000	47.97	-2.61	54.0	6.03	AV	67.00	150	Horizontal	Pass
3	7322.862	51.04	-3.34	74.0	22.96	Peak	45.00	150	Horizontal	Pass
3**	7322.862	45.52	-3.34	54.0	8.48	AV	45.00	150	Horizontal	Pass
4	7323.438	49.67	-3.37	74.0	24.33	Peak	45.00	150	Horizontal	Pass
4**	7323.438	46.90	-3.37	54.0	7.10	AV	45.00	150	Horizontal	Pass
5	9764.312	51.07	-0.38	74.0	22.93	Peak	326.00	150	Horizontal	Pass
5**	9764.312	47.28	-0.38	54.0	6.72	AV	326.00	150	Horizontal	Pass
6	13316.737	55.94	0.89	74.0	18.06	Peak	207.00	150	Horizontal	Pass
6**	13316.737	46.51	0.89	54.0	7.49	AV	207.00	150	Horizontal	Pass

GFSK MIDDLE CHANNEL 1 GHz to 18 GHz, ANT V

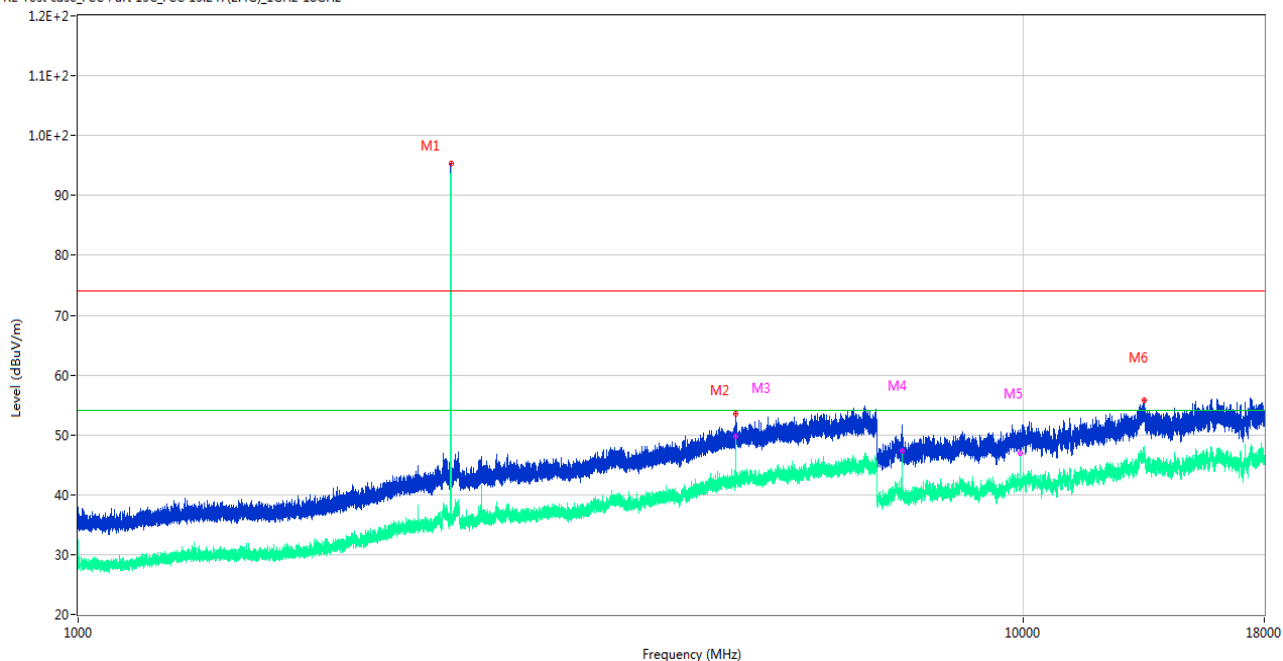
RE Test case_FCC Part 15C_FCC 15.247(2.4G)_1GHz-18GHz



No.	Frequency (MHz)	Results (dBuV/m)	Factor (dB)	Limit (dBuV/m)	Margin (dB)	Detector	Table (Degree)	Height (cm)	Antenna	Verdict
1	1144.800	44.39	-17.93	74.0	29.61	Peak	64.00	300	Vertical	Pass
1**	1144.800	28.39	-17.93	54.0	25.61	AV	64.00	300	Vertical	Pass
2	2440.800	92.94	-12.38	74.0	-18.94	Peak	103.00	150	Vertical	N/A
2**	2440.800	91.07	-12.38	54.0	-37.07	AV	103.00	150	Vertical	N/A
3	4882.000	51.41	-2.61	74.0	22.59	Peak	97.00	150	Vertical	Pass
3**	4882.000	46.73	-2.61	54.0	7.27	AV	97.00	150	Vertical	Pass
4	7323.150	49.28	-3.36	74.0	24.72	Peak	12.00	150	Vertical	Pass
4**	7323.150	44.26	-3.36	54.0	9.74	AV	12.00	150	Vertical	Pass
5	9764.312	50.73	-0.38	74.0	23.27	Peak	323.00	150	Vertical	Pass
5**	9764.312	47.10	-0.38	54.0	6.90	AV	323.00	150	Vertical	Pass
6	13371.600	55.43	0.69	74.0	18.57	Peak	15.00	150	Vertical	Pass
6**	13371.600	45.86	0.69	54.0	8.14	AV	15.00	150	Vertical	Pass

GFSK HIGH CHANNEL 1 GHz to 18 GHz, ANT H

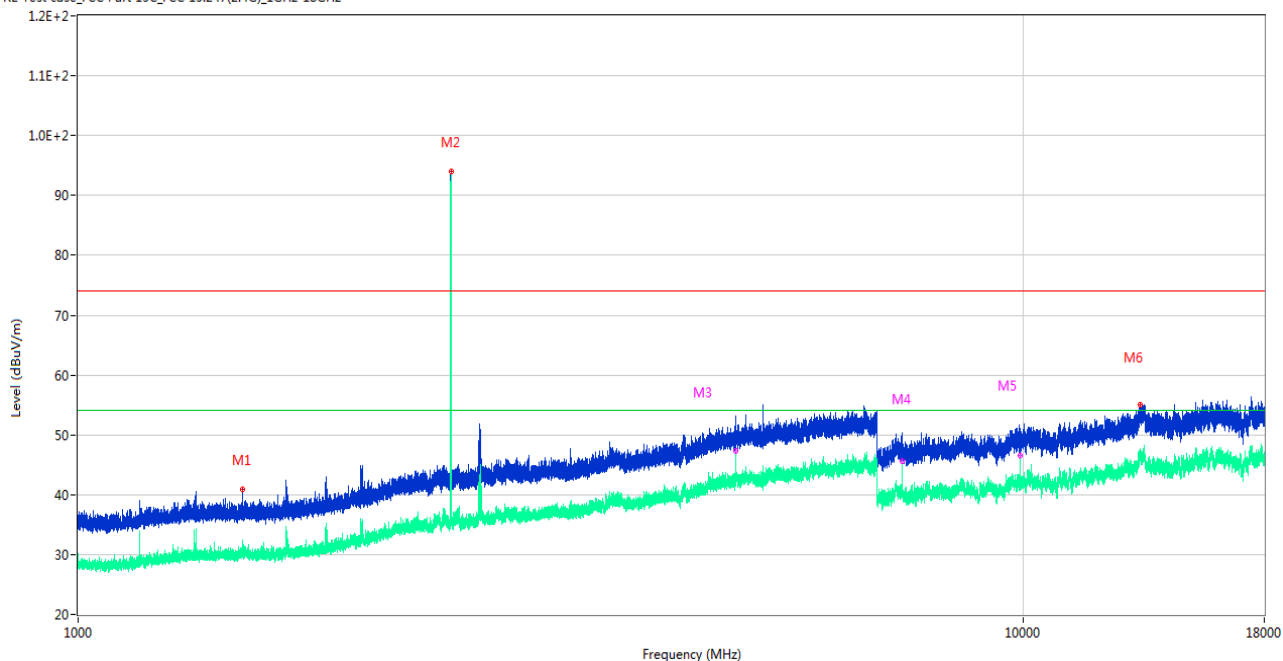
RE Test case_FCC Part 15C_FCC 15.247(2.4G)_1GHz-18GHz



No.	Frequency (MHz)	Results (dBuV/m)	Factor (dB)	Limit (dBuV/m)	Margin (dB)	Detector	Table (Degree)	Height (cm)	Antenna	Verdict
1	2479.900	95.30	-11.32	74.0	-21.30	Peak	39.00	200	Horizontal	N/A
1**	2479.900	94.32	-11.32	54.0	-40.32	AV	39.00	200	Horizontal	N/A
2	4959.600	53.47	-2.24	74.0	20.53	Peak	300.00	100	Horizontal	Pass
2**	4959.600	46.87	-2.24	54.0	7.13	AV	300.00	100	Horizontal	Pass
3	4960.200	52.88	-2.26	74.0	21.12	Peak	331.00	150	Horizontal	Pass
3**	4960.200	49.85	-2.26	54.0	4.15	AV	331.00	150	Horizontal	Pass
4	7440.450	51.04	-3.49	74.0	22.96	Peak	46.00	150	Horizontal	Pass
4**	7440.450	47.36	-3.49	54.0	6.64	AV	46.00	150	Horizontal	Pass
5	9920.137	50.78	-1.07	74.0	23.22	Peak	233.00	150	Horizontal	Pass
5**	9920.137	47.02	-1.07	54.0	6.98	AV	233.00	150	Horizontal	Pass
6	13421.213	55.71	0.40	74.0	18.29	Peak	244.00	150	Horizontal	Pass
6**	13421.213	47.23	0.40	54.0	6.77	AV	244.00	150	Horizontal	Pass

GFSK HIGH CHANNEL 1 GHz to 18 GHz, ANT V

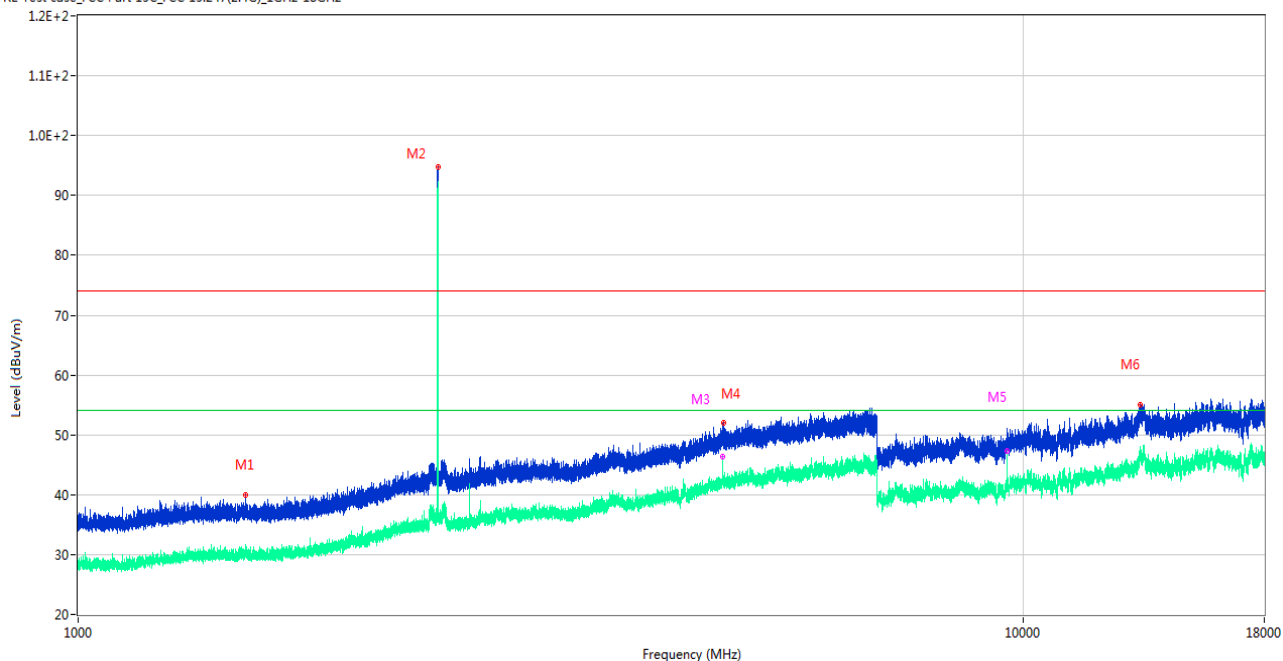
RE Test case_FCC Part 15C_FCC 15.247(2.4G)_1GHz-18GHz



No.	Frequency (MHz)	Results (dBuV/m)	Factor (dB)	Limit (dBuV/m)	Margin (dB)	Detector	Table (Degree)	Height (cm)	Antenna	Verdict
1	1494.200	40.82	-16.87	74.0	33.18	Peak	70.00	300	Vertical	Pass
1**	1494.200	29.81	-16.87	54.0	24.19	AV	70.00	300	Vertical	Pass
2	2479.900	93.98	-11.32	74.0	-19.98	Peak	102.00	100	Vertical	N/A
2**	2479.900	93.27	-11.32	54.0	-39.27	AV	102.00	100	Vertical	N/A
3	4960.200	53.15	-2.26	74.0	20.85	Peak	90.00	150	Vertical	Pass
3**	4960.200	47.29	-2.26	54.0	6.71	AV	90.00	150	Vertical	Pass
4	7440.450	50.17	-3.49	74.0	23.83	Peak	134.00	150	Vertical	Pass
4**	7440.450	45.55	-3.49	54.0	8.45	AV	134.00	150	Vertical	Pass
5	9920.137	51.15	-1.07	74.0	22.85	Peak	360.00	150	Vertical	Pass
5**	9920.137	46.61	-1.07	54.0	7.39	AV	360.00	150	Vertical	Pass
6	13298.888	54.95	0.86	74.0	19.05	Peak	67.00	150	Vertical	Pass
6**	13298.888	46.64	0.86	54.0	7.36	AV	67.00	150	Vertical	Pass

$\pi/4$ -DQPSK LOW CHANNEL 1 GHz to 18 GHz, ANT H

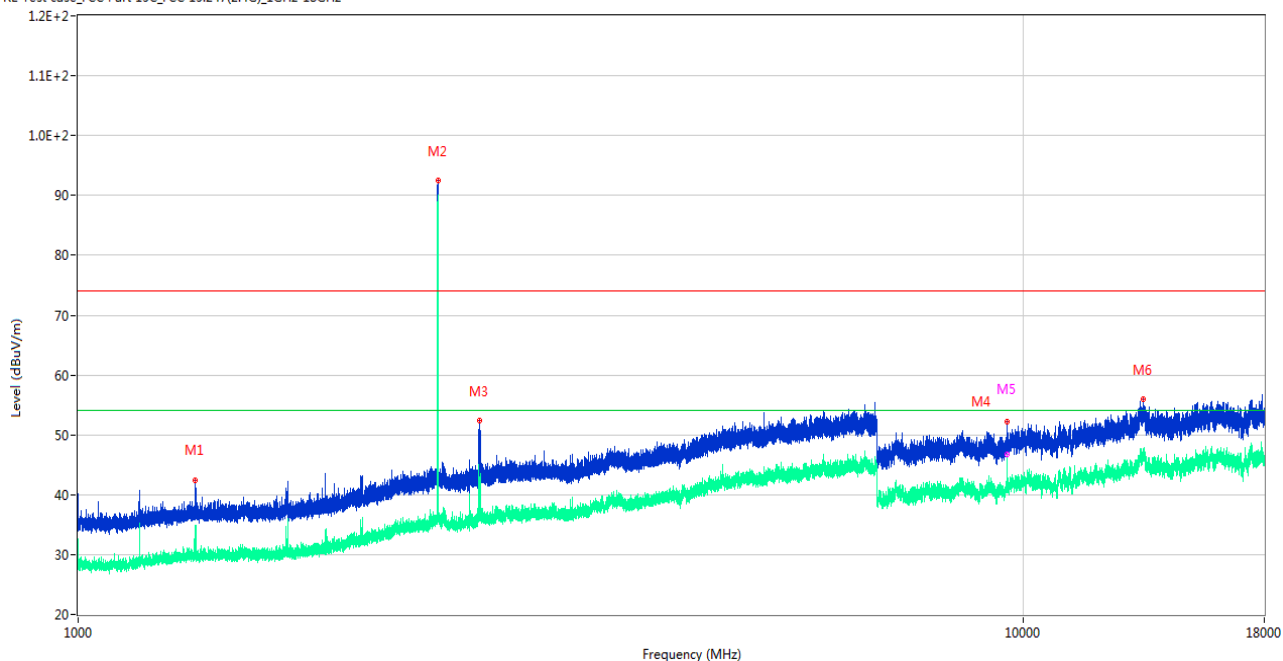
RE Test case_FCC Part 15C_FCC 15.247(2.4G)_1GHz-18GHz



No.	Frequency (MHz)	Results (dBuV/m)	Factor (dB)	Limit (dBuV/m)	Margin (dB)	Detector	Table (Degree)	Height (cm)	Antenna	Verdict
1	1503.300	40.01	-16.99	74.0	33.99	Peak	287.00	100	Horizontal	Pass
1**	1503.300	30.46	-16.99	54.0	23.54	AV	287.00	100	Horizontal	Pass
2	2402.200	94.77	-9.74	74.0	-20.77	Peak	213.00	100	Horizontal	N/A
2**	2402.200	92.29	-9.74	54.0	-38.29	AV	213.00	100	Horizontal	N/A
3	4804.200	51.09	-2.83	74.0	22.91	Peak	67.00	150	Horizontal	Pass
3**	4804.200	46.35	-2.83	54.0	7.65	AV	67.00	150	Horizontal	Pass
4	4824.000	52.05	-1.97	74.0	21.95	Peak	41.00	150	Horizontal	Pass
4**	4824.000	42.39	-1.97	54.0	11.61	AV	41.00	150	Horizontal	Pass
5	9608.200	51.02	-0.01	74.0	22.98	Peak	306.00	150	Horizontal	Pass
5**	9608.200	47.27	-0.01	54.0	6.73	AV	306.00	150	Horizontal	Pass
6	13300.200	55.11	0.87	74.0	18.89	Peak	360.00	150	Horizontal	Pass
6**	13300.200	46.64	0.87	54.0	7.36	AV	360.00	150	Horizontal	Pass

$\pi/4$ -DQPSK LOW CHANNEL 1 GHz to 18 GHz, ANT V

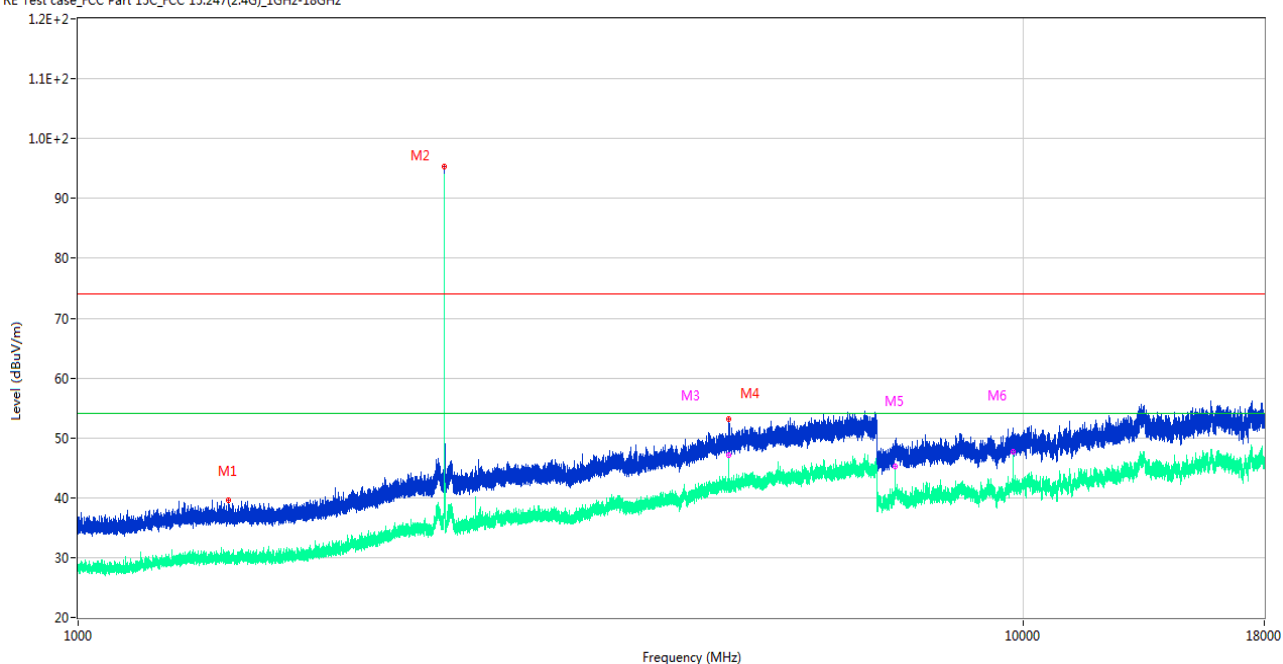
RE Test case_FCC Part 15C_FCC 15.247(2.4G)_1GHz-18GHz



No.	Frequency (MHz)	Results (dBuV/m)	Factor (dB)	Limit (dBuV/m)	Margin (dB)	Detector	Table (Degree)	Height (cm)	Antenna	Verdict
1	1329.500	42.42	-17.03	74.0	31.58	Peak	138.00	200	Vertical	Pass
1**	1329.500	31.05	-17.03	54.0	22.95	AV	138.00	200	Vertical	Pass
2	2402.100	92.41	-9.74	74.0	-18.41	Peak	102.00	100	Vertical	N/A
2**	2402.100	89.60	-9.74	54.0	-35.60	AV	102.00	100	Vertical	N/A
3	2656.900	52.30	-11.09	74.0	21.70	Peak	204.00	100	Vertical	Pass
3**	2656.900	38.36	-11.09	54.0	15.64	AV	204.00	100	Vertical	Pass
4	9608.200	52.16	-0.01	74.0	21.84	Peak	353.00	150	Vertical	Pass
4**	9608.200	46.59	-0.01	54.0	7.41	AV	353.00	150	Vertical	Pass
5	9608.487	50.48	-0.01	74.0	23.52	Peak	284.00	150	Vertical	Pass
5**	9608.487	46.69	-0.01	54.0	7.31	AV	284.00	150	Vertical	Pass
6	13413.599	55.90	0.44	74.0	18.10	Peak	303.00	300	Vertical	Pass
6**	13413.599	47.21	0.44	54.0	6.79	AV	303.00	300	Vertical	Pass

$\pi/4$ -DQPSK MIDDLE CHANNEL 1 GHz to 18 GHz, ANT H

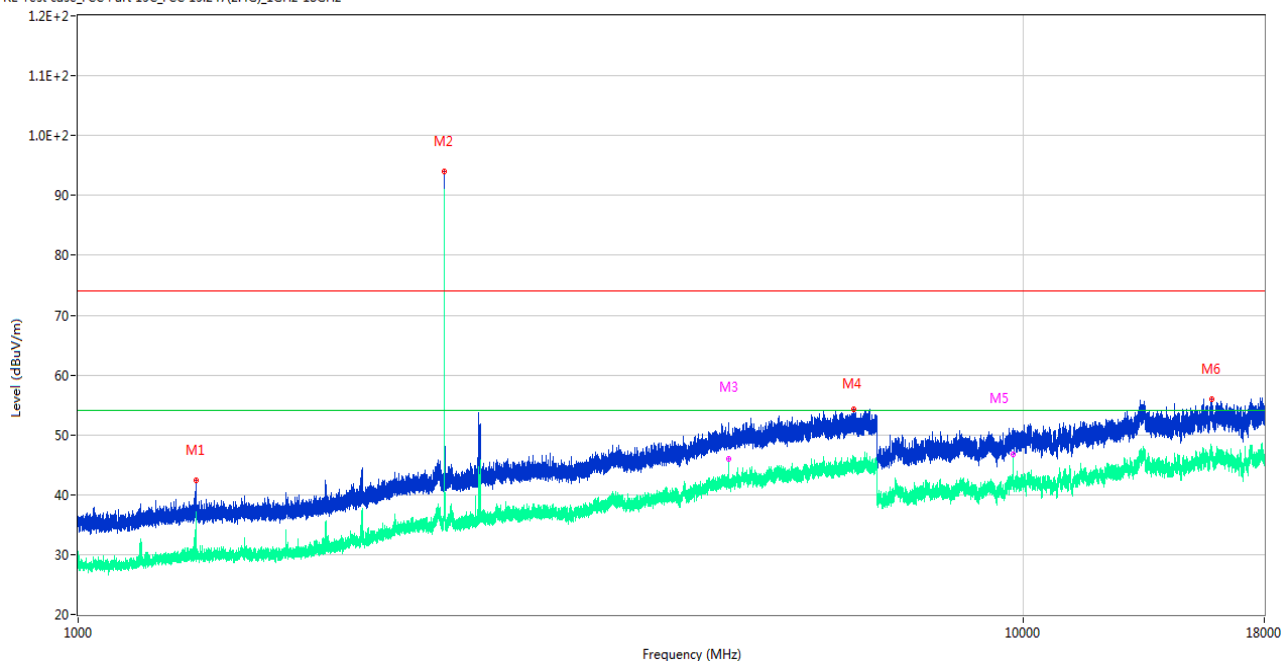
RE Test case_FCC Part 15C_FCC 15.247(2.4G)_1GHz-18GHz



No.	Frequency (MHz)	Results (dBuV/m)	Factor (dB)	Limit (dBuV/m)	Margin (dB)	Detector	Table (Degree)	Height (cm)	Antenna	Verdict
1	1442.000	39.58	-17.07	74.0	34.42	Peak	0.00	300	Horizontal	Pass
1**	1442.000	29.54	-17.07	54.0	24.46	AV	0.00	300	Horizontal	Pass
2	2441.300	95.29	-12.38	74.0	-21.29	Peak	209.00	200	Horizontal	N/A
2**	2441.300	93.60	-12.38	54.0	-39.60	AV	209.00	200	Horizontal	N/A
3	4882.200	52.17	-2.60	74.0	21.83	Peak	298.00	150	Horizontal	Pass
3**	4882.200	47.10	-2.60	54.0	6.90	AV	298.00	150	Horizontal	Pass
4	4882.600	53.08	-2.57	74.0	20.92	Peak	71.00	200	Horizontal	Pass
4**	4882.600	46.02	-2.57	54.0	7.98	AV	71.00	200	Horizontal	Pass
5	7323.438	49.29	-3.37	74.0	24.71	Peak	236.00	150	Horizontal	Pass
5**	7323.438	45.23	-3.37	54.0	8.77	AV	236.00	150	Horizontal	Pass
6	9764.025	51.62	-0.38	74.0	22.38	Peak	305.00	150	Horizontal	Pass
6**	9764.025	47.71	-0.38	54.0	6.29	AV	305.00	150	Horizontal	Pass

$\pi/4$ -DQPSK MIDDLE CHANNEL 1 GHz to 18 GHz, ANT V

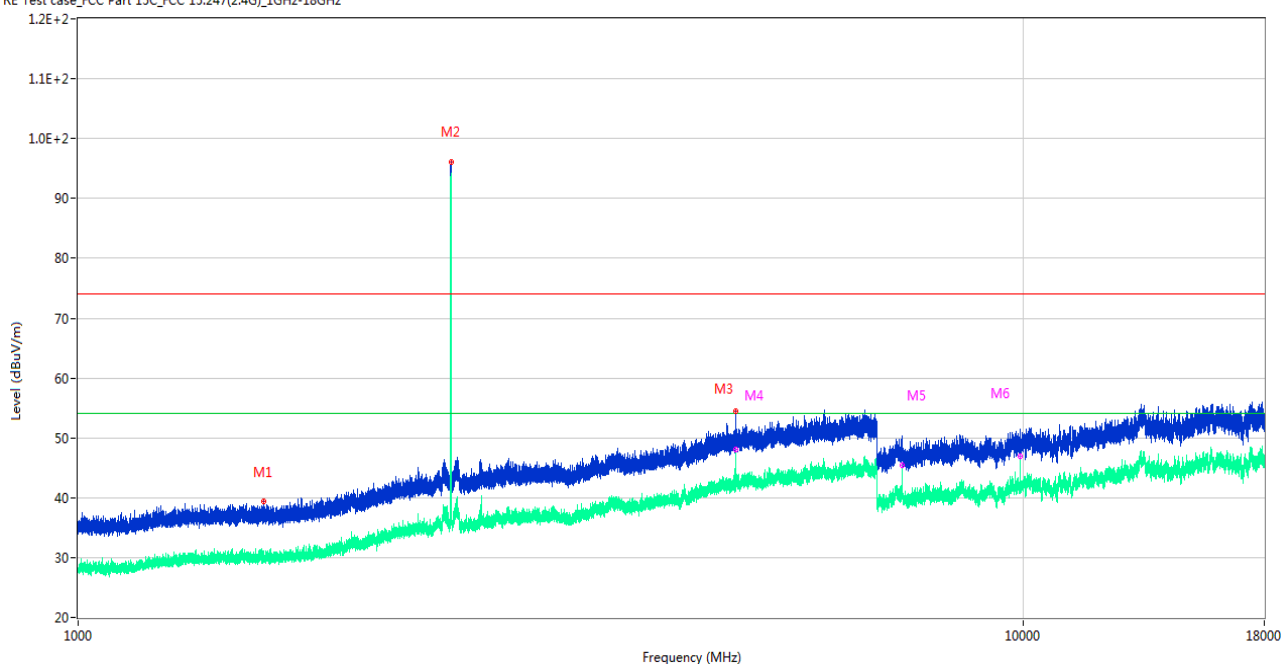
RE Test case_FCC Part 15C_FCC 15.247(2.4G)_1GHz-18GHz



No.	Frequency (MHz)	Results (dBuV/m)	Factor (dB)	Limit (dBuV/m)	Margin (dB)	Detector	Table (Degree)	Height (cm)	Antenna	Verdict
1	1331.800	42.45	-17.07	74.0	31.55	Peak	99.00	200	Vertical	Pass
1**	1331.800	34.75	-17.07	54.0	19.25	AV	99.00	200	Vertical	Pass
2	2440.900	94.04	-12.38	74.0	-20.04	Peak	99.00	150	Vertical	N/A
2**	2440.900	90.49	-12.38	54.0	-36.49	AV	99.00	150	Vertical	N/A
3	4882.200	50.72	-2.60	74.0	23.28	Peak	342.00	150	Vertical	Pass
3**	4882.200	46.06	-2.60	54.0	7.94	AV	342.00	150	Vertical	Pass
4	6611.800	54.33	0.60	74.0	19.67	Peak	342.00	150	Vertical	Pass
4**	6611.800	45.72	0.60	54.0	8.28	AV	342.00	150	Vertical	Pass
5	9764.312	50.99	-0.38	74.0	23.01	Peak	360.00	150	Vertical	Pass
5**	9764.312	46.72	-0.38	54.0	7.28	AV	360.00	150	Vertical	Pass
6	15846.713	56.05	1.36	74.0	17.95	Peak	343.00	100	Vertical	Pass
6**	15846.713	48.09	1.36	54.0	5.91	AV	343.00	100	Vertical	Pass

$\pi/4$ -DQPSK HIGH CHANNEL 1 GHz to 18 GHz, ANT H

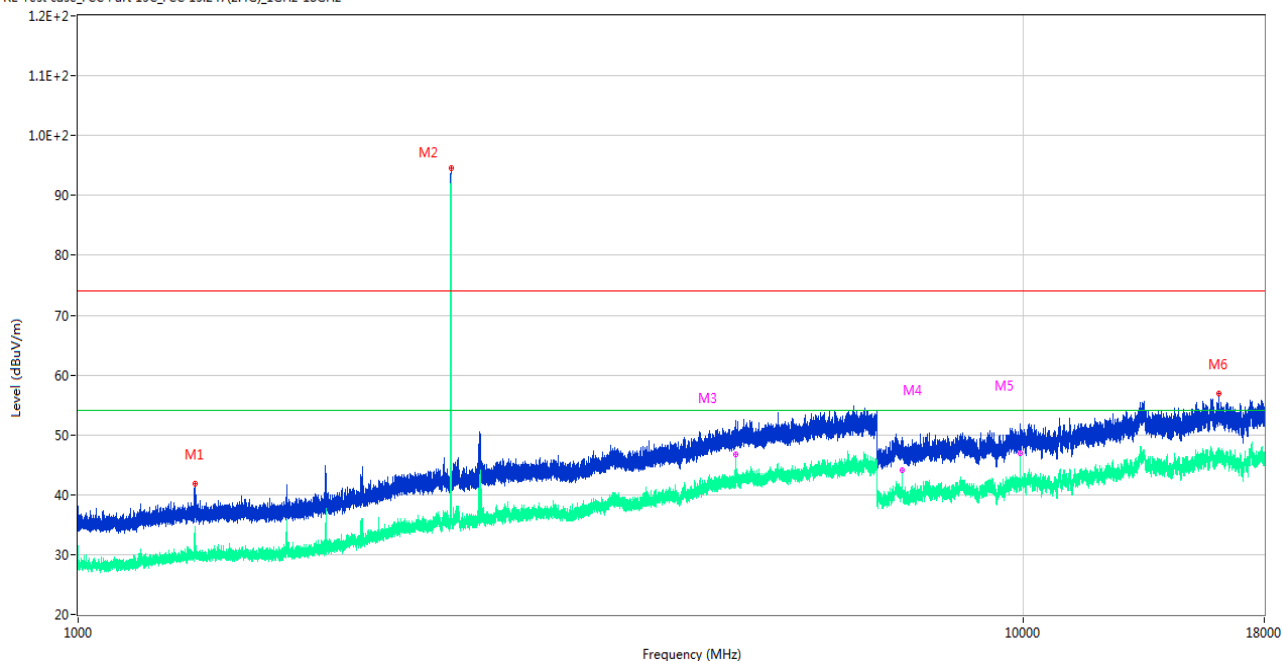
RE Test case_FCC Part 15C_FCC 15.247(2.4G)_1GHz-18GHz



No.	Frequency (MHz)	Results (dBuV/m)	Factor (dB)	Limit (dBuV/m)	Margin (dB)	Detector	Table (Degree)	Height (cm)	Antenna	Verdict
1	1573.200	39.32	-17.09	74.0	34.68	Peak	0.00	200	Horizontal	Pass
1**	1573.200	29.57	-17.09	54.0	24.43	AV	0.00	200	Horizontal	Pass
2	2480.200	96.15	-11.29	74.0	-22.15	Peak	39.00	100	Horizontal	N/A
2**	2480.200	92.99	-11.29	54.0	-38.99	AV	39.00	100	Horizontal	N/A
3	4960.000	54.43	-2.23	74.0	19.57	Peak	72.00	150	Horizontal	Pass
3**	4960.000	46.27	-2.23	54.0	7.73	AV	72.00	150	Horizontal	Pass
4	4960.200	52.25	-2.26	74.0	21.75	Peak	214.00	150	Horizontal	Pass
4**	4960.200	48.13	-2.26	54.0	5.87	AV	214.00	150	Horizontal	Pass
5	7440.450	49.18	-3.49	74.0	24.82	Peak	30.00	150	Horizontal	Pass
5**	7440.450	45.38	-3.49	54.0	8.62	AV	30.00	150	Horizontal	Pass
6	9920.137	50.49	-1.07	74.0	23.51	Peak	274.00	150	Horizontal	Pass
6**	9920.137	46.86	-1.07	54.0	7.14	AV	274.00	150	Horizontal	Pass

$\pi/4$ -DQPSK HIGH CHANNEL 1 GHz to 18 GHz, ANT V

RE Test case_FCC Part 15C_FCC 15.247(2.4G)_1GHz-18GHz



No.	Frequency (MHz)	Results (dBuV/m)	Factor (dB)	Limit (dBuV/m)	Margin (dB)	Detector	Table (Degree)	Height (cm)	Antenna	Verdict
1	1330.900	41.82	-17.00	74.0	32.18	Peak	97.00	300	Vertical	Pass
1**	1330.900	29.70	-17.00	54.0	24.30	AV	97.00	300	Vertical	Pass
2	2480.100	94.57	-11.29	74.0	-20.57	Peak	103.00	100	Vertical	N/A
2**	2480.100	93.39	-11.29	54.0	-39.39	AV	103.00	100	Vertical	N/A
3	4960.000	51.82	-2.23	74.0	22.18	Peak	76.00	150	Vertical	Pass
3**	4960.000	46.75	-2.23	54.0	7.25	AV	76.00	150	Vertical	Pass
4	7440.450	48.20	-3.49	74.0	25.80	Peak	312.00	150	Vertical	Pass
4**	7440.450	44.10	-3.49	54.0	9.90	AV	312.00	150	Vertical	Pass
5	9920.137	50.14	-1.07	74.0	23.86	Peak	0.00	150	Vertical	Pass
5**	9920.137	47.00	-1.07	54.0	7.00	AV	0.00	150	Vertical	Pass
6	16097.662	56.83	1.26	74.0	17.17	Peak	82.00	100	Vertical	Pass
6**	16097.662	47.80	1.26	54.0	6.20	AV	82.00	100	Vertical	Pass

5.11 Band Edge (Restricted-band band-edge)

5.11.1 Limit

FCC §15.209&15.247(d)

Radiated emission outside the frequency band attenuation below the general limits specified in FCC section 15.209(a) is not required. In addition, radiated emissions which fall in the restricted bands, as defined in FCC section 15.205(a), must also comply with the radiated emission limits specified in FCC section 15.209(a).

5.11.2 Test Setup

See section 4.5.3 to 4.5.5 for test setup description for the antenna port. The photo of test setup please refer to ANNEX A.

5.11.3 Test Procedure

The measurement frequency range is from 9 kHz to the 10th harmonic of the fundamental frequency. The Turn Table is actuated to turn from 0° to 360°, and both horizontal and vertical polarizations of the Test Antenna are used to find the maximum radiated power. Mid channels on all channel bandwidth verified. Only the worst RB size/offset presented.

The power of the EUT transmitting frequency should be ignored.

All Spurious Emission tests were performed in X, Y, Z axis direction. And only the worst axis test condition was recorded in this test report.

Use the following spectrum analyzer settings:

Span = wide enough to fully capture the emission being measured

RBW = 1 MHz for $f \geq 1$ GHz, 100 kHz for $f < 1$ GHz

VBW $\geq$ RBW

Sweep = auto

Detector function = peak

Trace = max hold

For measurement below 1GHz, If the emission level of the EUT measured by the peak detector is 3 dB lower than the applicable limit, the peak emission level will be reported, Otherwise, the emission measurement will be repeated using the quasi-peak detector and reported.

5.11.4 Test Result

Note ¹: The lowest and highest channels are tested to verify the band edge emissions. Please refer to the following the plots for emissions values.

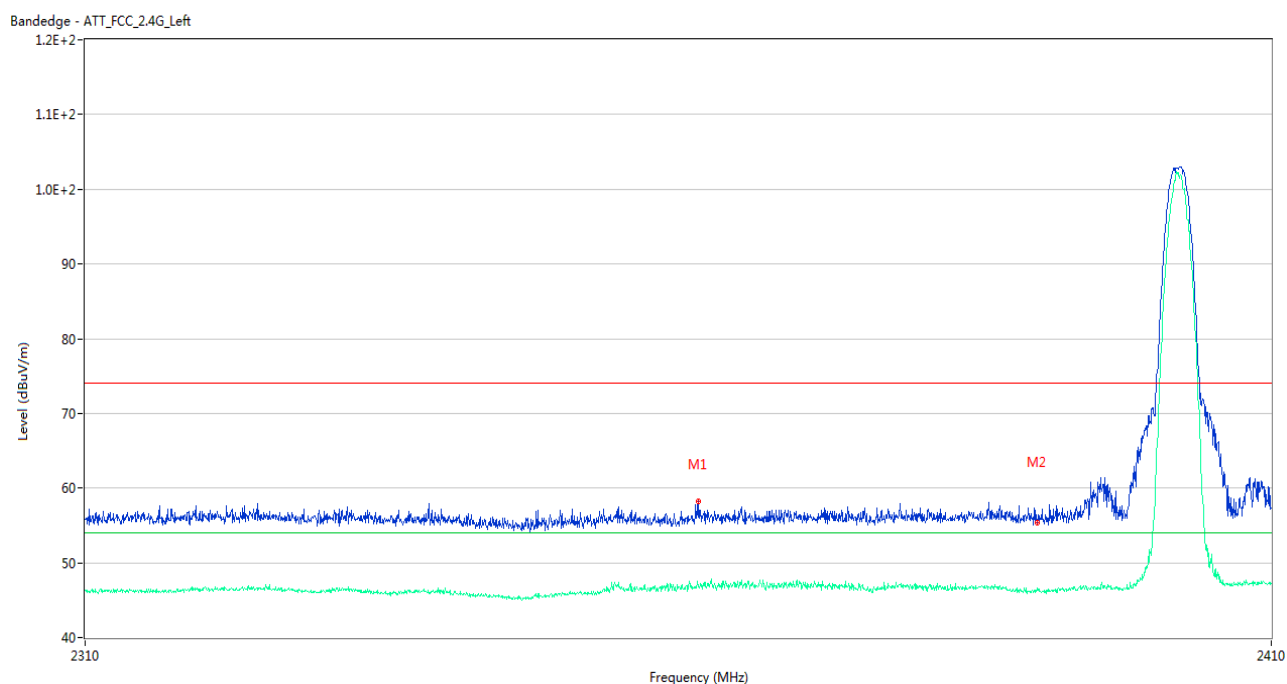
Note ²: The test data all are tested in the vertical and horizontal antenna which the trace is max hold. So these plots have shown the worst case.

Note ³: According the ANSI C63.10-2013, where limits are specified for both average and peak (or quasi-peak) detector functions, if the peak (or quasi-peak) measured value complies with the average limit, it is unnecessary to perform an average measurement.

Note ⁴: The Level (dBuV/m) has been corrected by factor.

Test Data and Plots

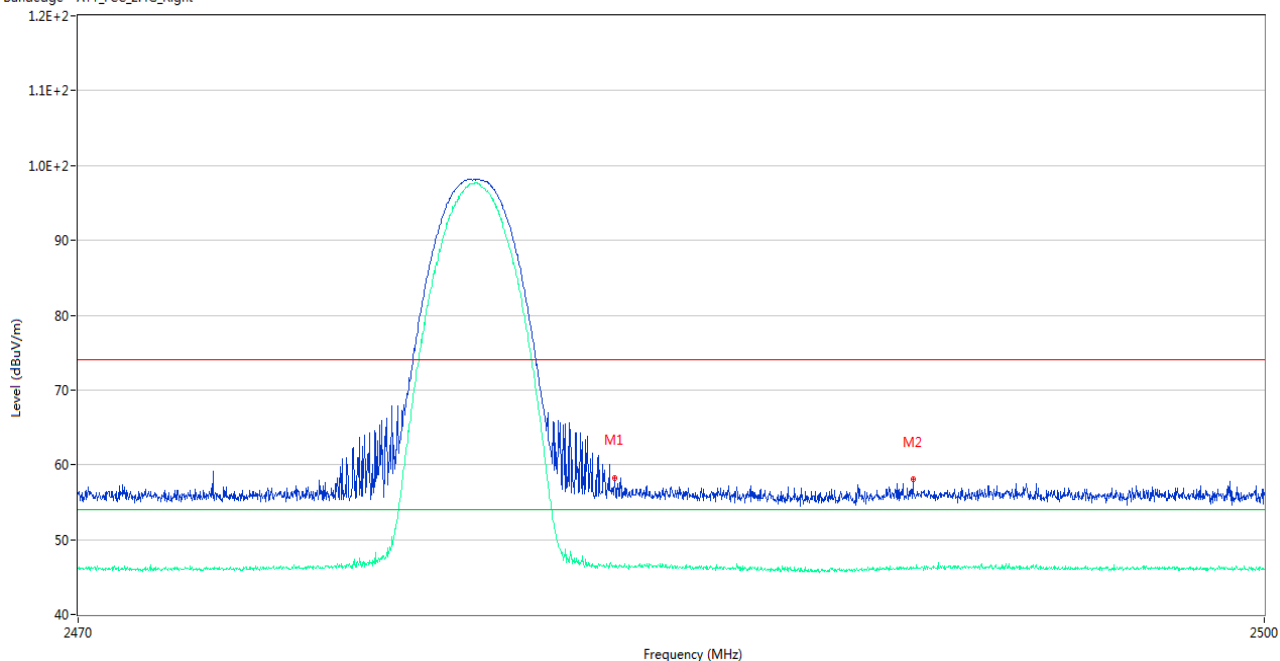
GFSK LOW CHANNEL



No.	Frequency (MHz)	Results (dBuV/m)	Factor (dB)	Limit (dBuV/m)	Margin (dB)	Detector	Table (Degree)	Height (cm)	Antenna	Verdict
1	2361.200	58.21	1.63	74.0	15.79	Peak	326.00	100	Horizontal	Pass
1**	2361.200	46.97	1.63	54.0	7.03	AV	326.00	100	Horizontal	Pass
2	2389.950	55.31	1.92	74.0	18.69	Peak	312.00	150	Horizontal	Pass
2**	2389.950	46.26	1.92	54.0	7.74	AV	312.00	150	Horizontal	Pass

GFSK HIGH CHANNEL

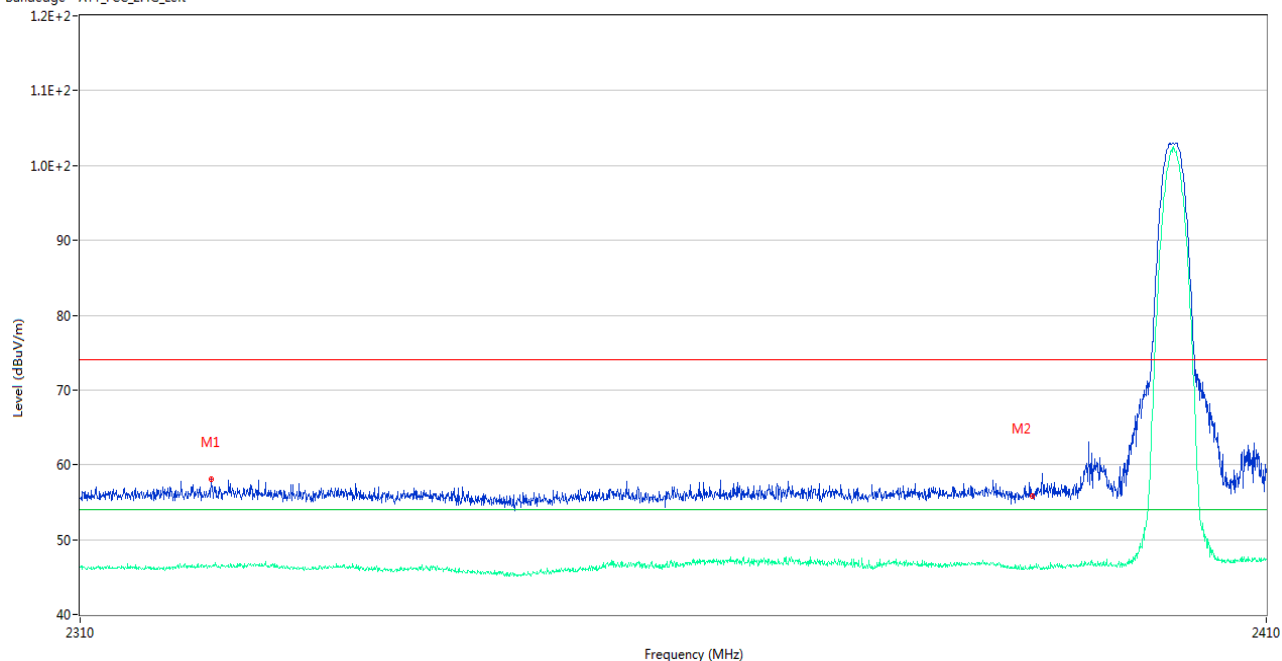
Bandedge - ATT_FCC_2.4G_Right



No.	Frequency (MHz)	Results (dBuV/m)	Factor (dB)	Limit (dBuV/m)	Margin (dB)	Detector	Table (Degree)	Height (cm)	Antenna	Verdict
1	2483.515	58.30	2.11	74.0	15.70	Peak	284.00	200	Horizontal	Pass
1**	2483.515	46.38	2.11	54.0	7.62	AV	284.00	200	Horizontal	Pass
2	2491.075	58.08	1.84	74.0	15.92	Peak	250.00	200	Horizontal	Pass
2**	2491.075	46.35	1.84	54.0	7.65	AV	250.00	200	Horizontal	Pass

$\pi/4$ -DQPSK LOW CHANNEL

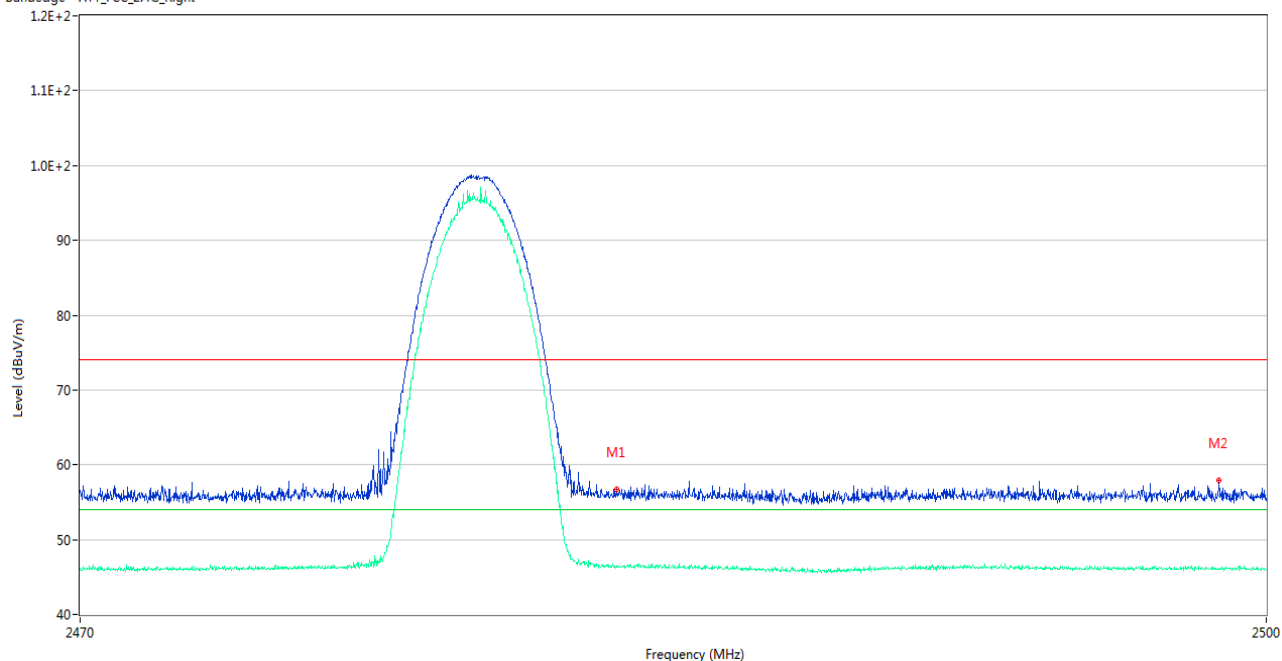
Bandedge - ATT_FCC_2.4G_Left



No.	Frequency (MHz)	Results (dBuV/m)	Factor (dB)	Limit (dBuV/m)	Margin (dB)	Detector	Table (Degree)	Height (cm)	Antenna	Verdict
1	2320.850	58.07	1.61	74.0	15.93	Peak	201.00	200	Horizontal	Pass
1**	2320.850	46.34	1.61	54.0	7.66	AV	201.00	200	Horizontal	Pass
2	2389.950	55.84	1.92	74.0	18.16	Peak	216.00	100	Horizontal	Pass
2**	2389.950	46.27	1.92	54.0	7.73	AV	216.00	100	Horizontal	Pass

$\pi/4$ -DQPSK HIGH CHANNEL

Bandedge - ATT_FCC_2.4G_Right

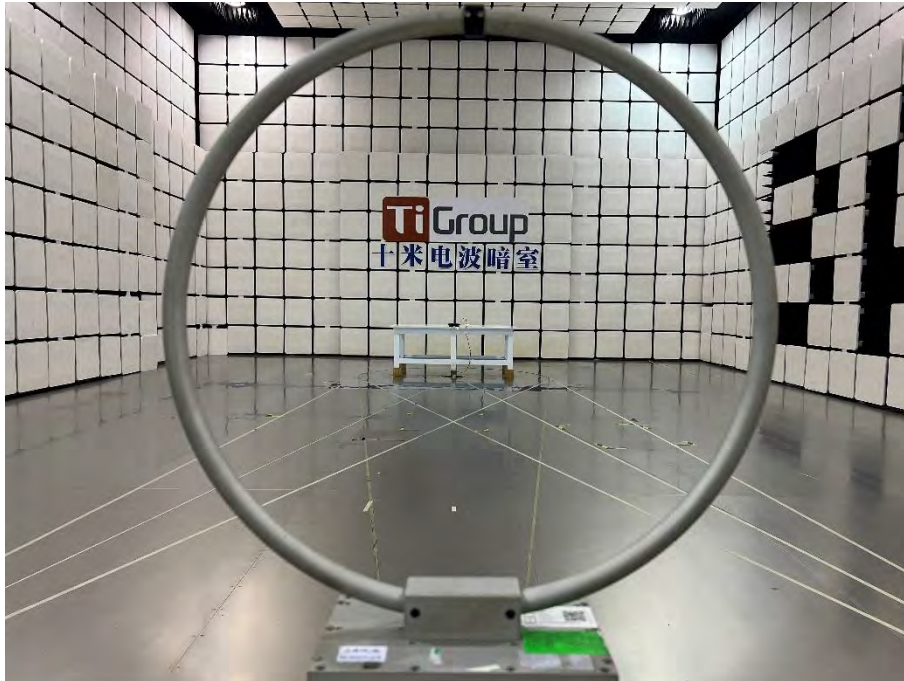


No.	Frequency (MHz)	Results (dBuV/m)	Factor (dB)	Limit (dBuV/m)	Margin (dB)	Detector	Table (Degree)	Height (cm)	Antenna	Verdict
1	2483.530	56.73	2.11	74.0	17.27	Peak	276.00	150	Horizontal	Pass
1**	2483.530	46.35	2.11	54.0	7.65	AV	276.00	150	Horizontal	Pass
2	2498.800	57.92	1.65	74.0	16.08	Peak	313.00	100	Horizontal	Pass
2**	2498.800	46.02	1.65	54.0	7.98	AV	313.00	100	Horizontal	Pass

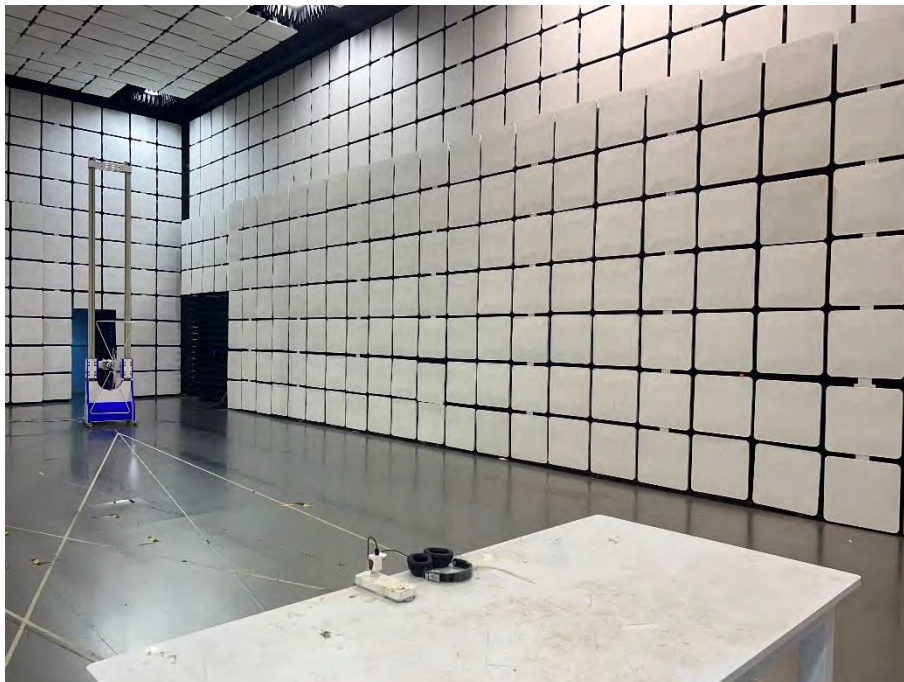
ANNEX A TEST SETUP PHOTOS

1 Radiated Test Photo

Below 30MHz



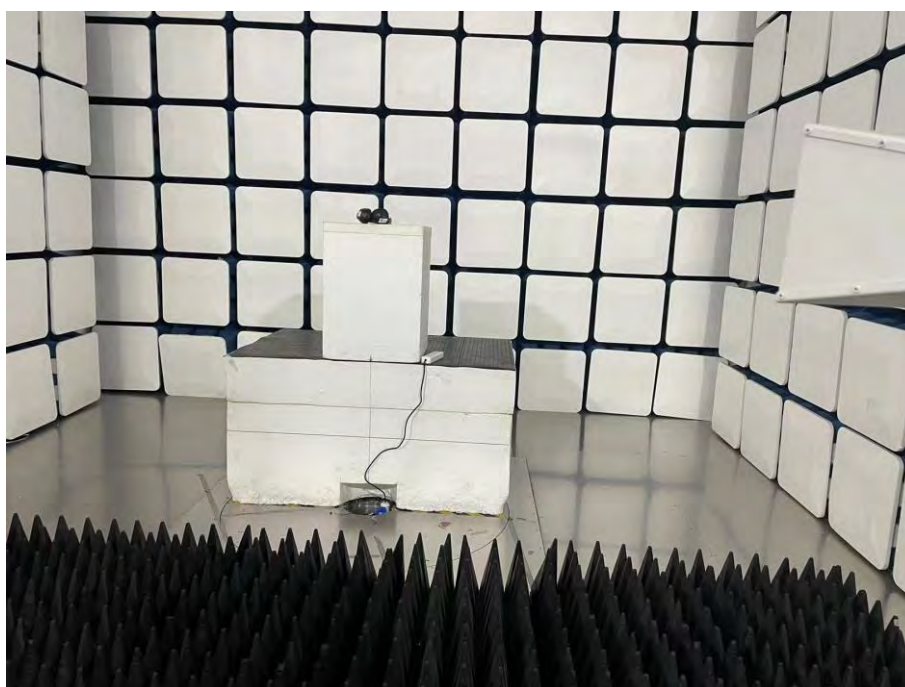
30MHz-1GHz



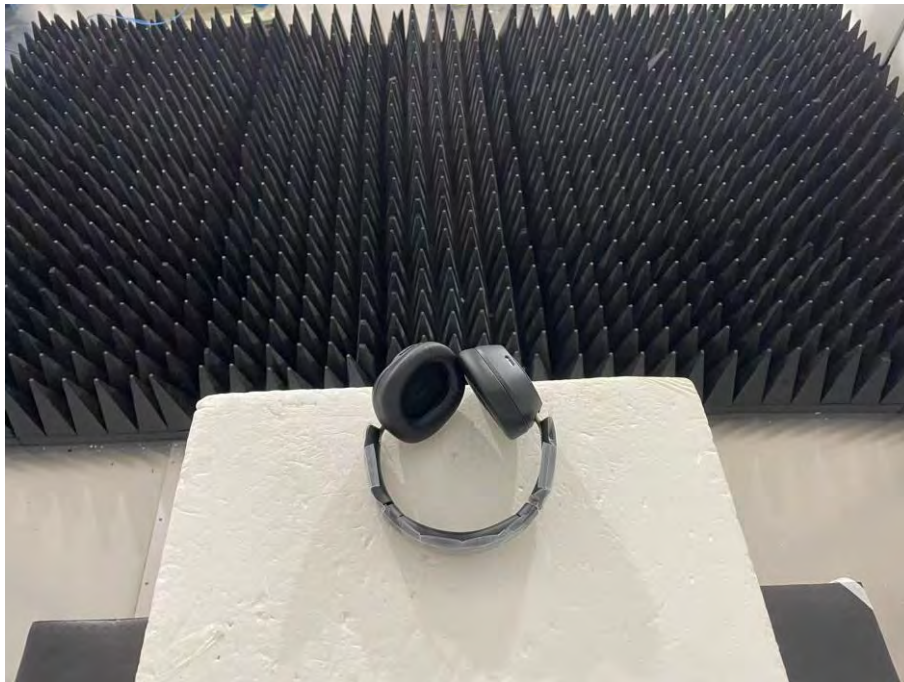
Close-up



Above 1GHz



Close-up



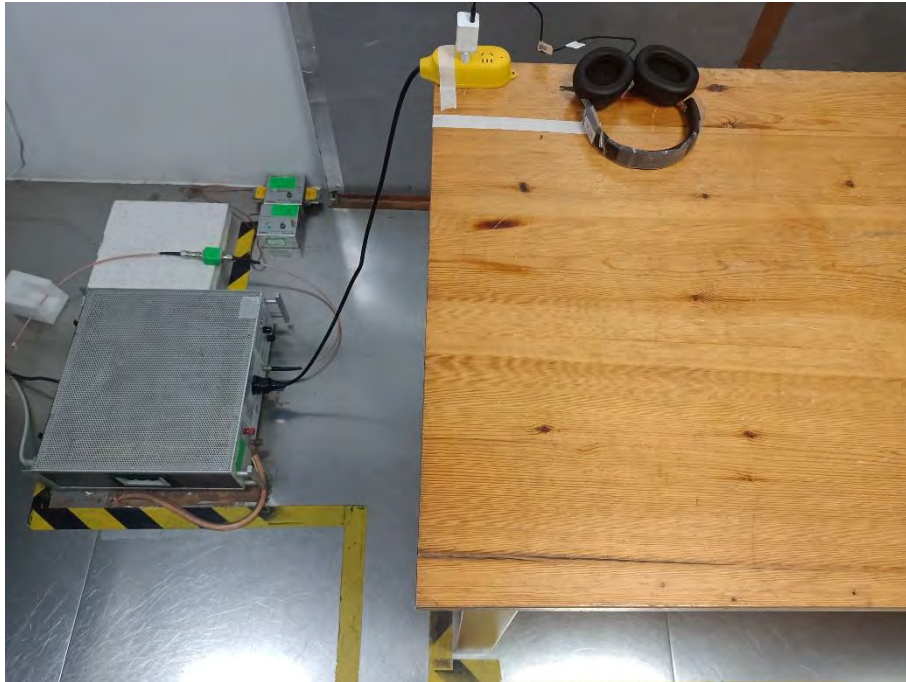
2 Conducted Test Photo

Conducted Test



3 Conducted Emissions

Test Photo 1



Test Photo 2



ANNEX B EUT EXTERNAL PHOTOS

FRONT VIEW OF EUT



REAR VIEW OF EUT



LEFT VIEW OF EUT



RIGHT VIEW OF EUT



TOP VIEW OF EUT



BOTTOM VIEW OF EUT



Accessory-USB to Type-C Cable



Accessory-Type-C to Type-C Cable



FRONT VIEW OF EUT



REAR VIEW OF EUT



FRONT VIEW OF EUT



REAR VIEW OF EUT



ANNEX C EUT INTERNAL PHOTOS

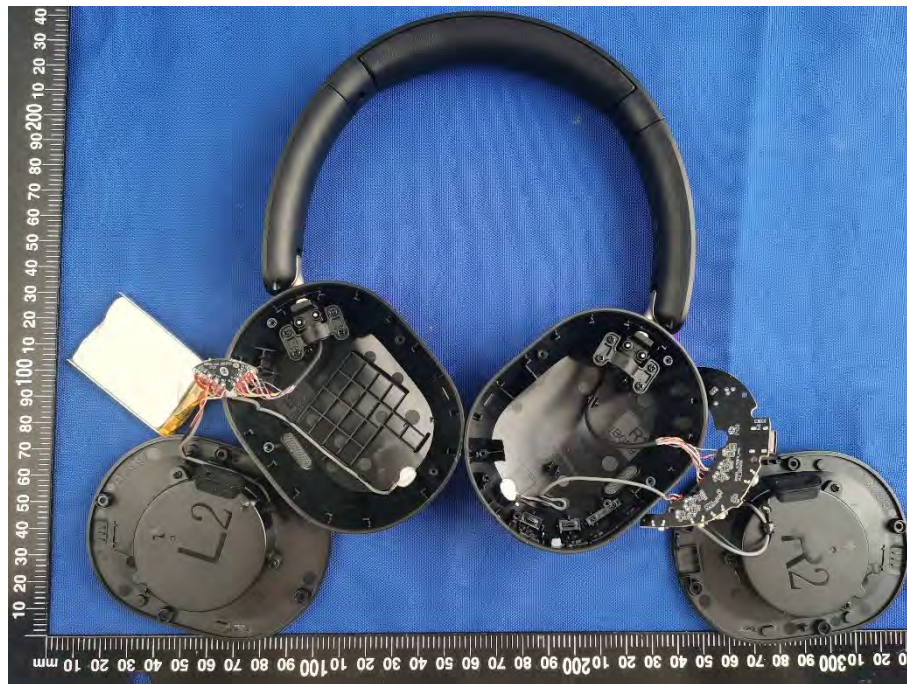
EUT UNCOVER VIEW 1



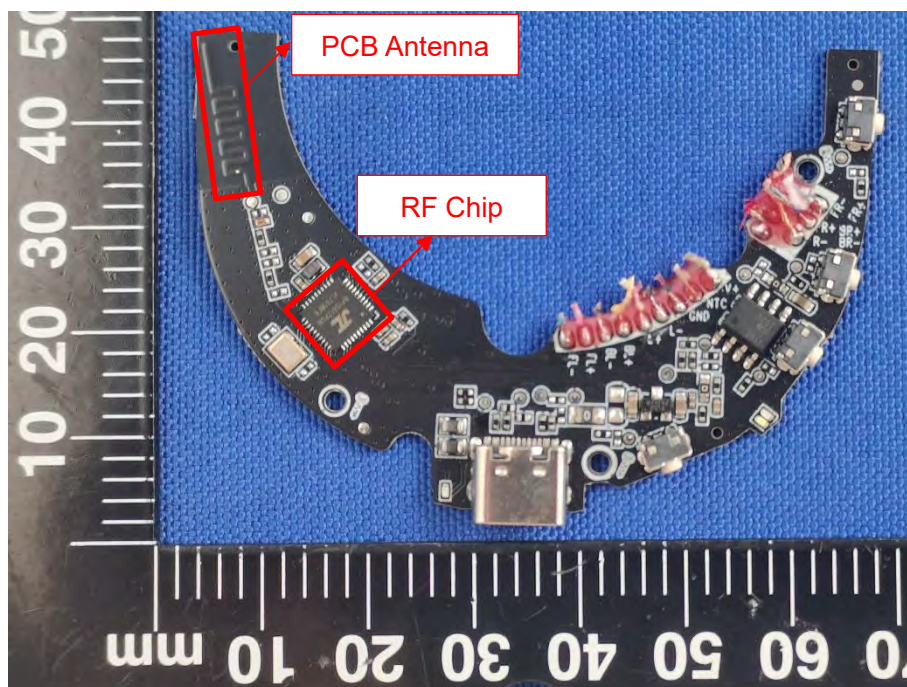
EUT UNCOVER VIEW 2



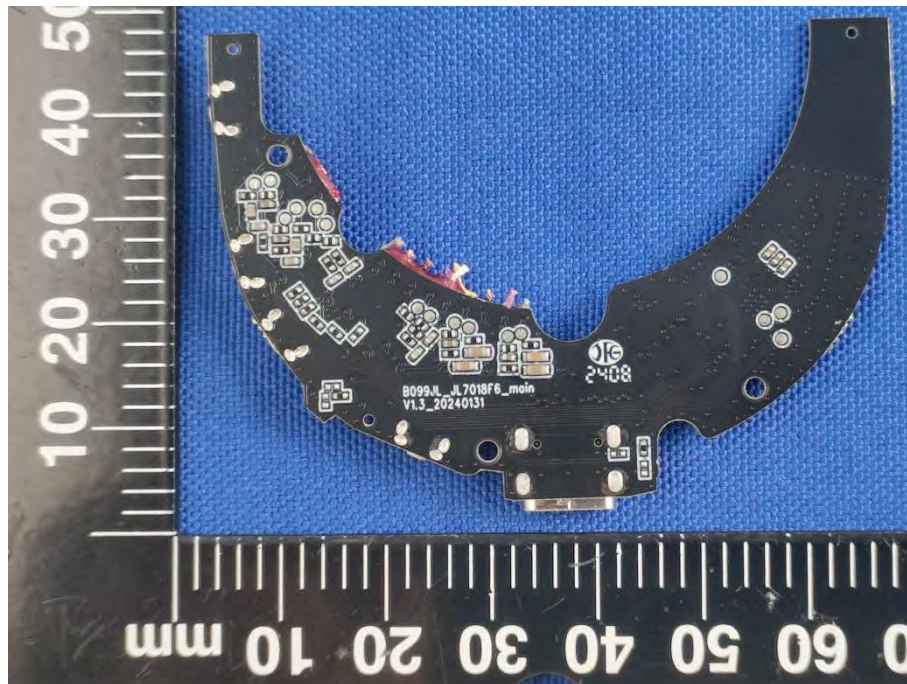
EUT UNCOVER VIEW 3



MAIN BOARD TOP VIEW



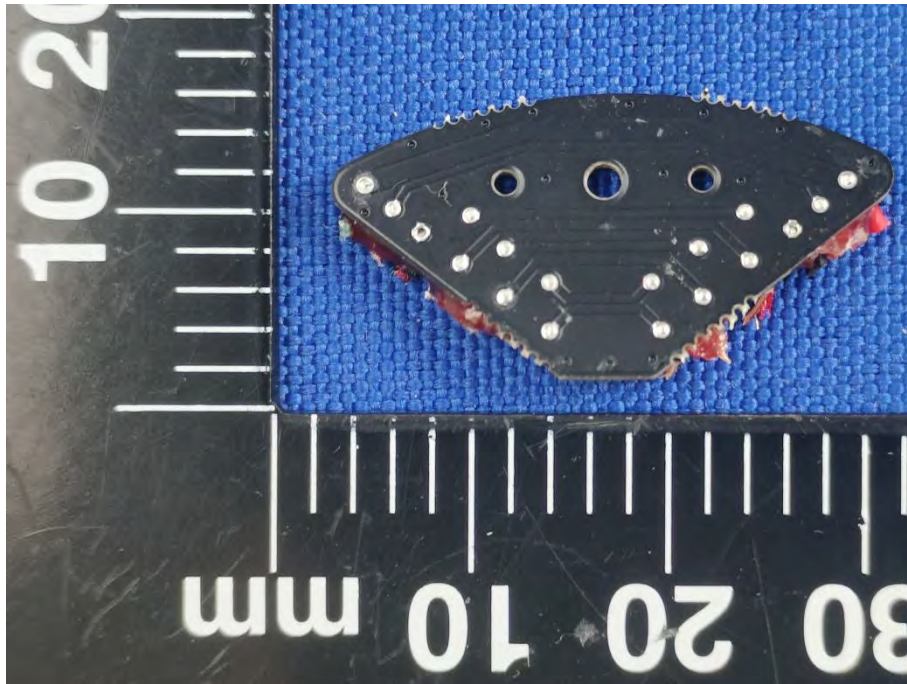
MAIN BOARD REAR VIEW



SECONDARY BOARD 1 TOP VIEW



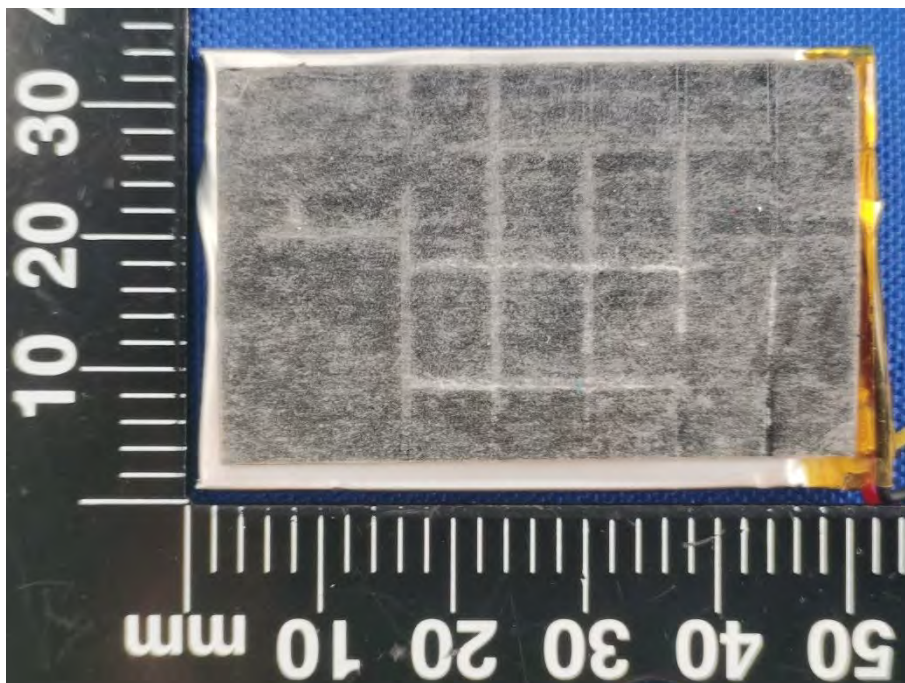
SECONDARY BOARD 1 REAR VIEW



BATTERY (FRONT)



BATTERY (REAR)



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--END OF REPORT--