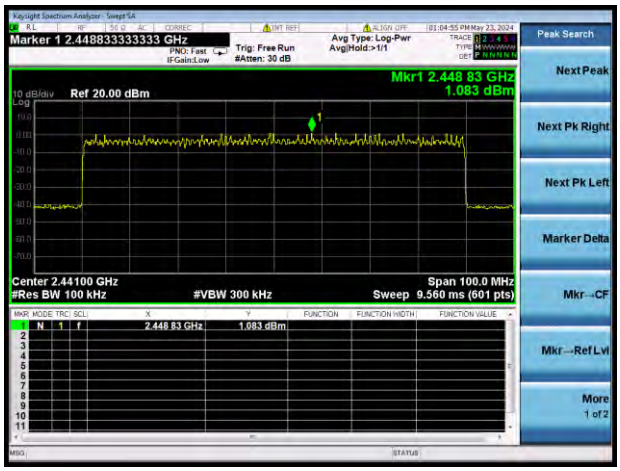
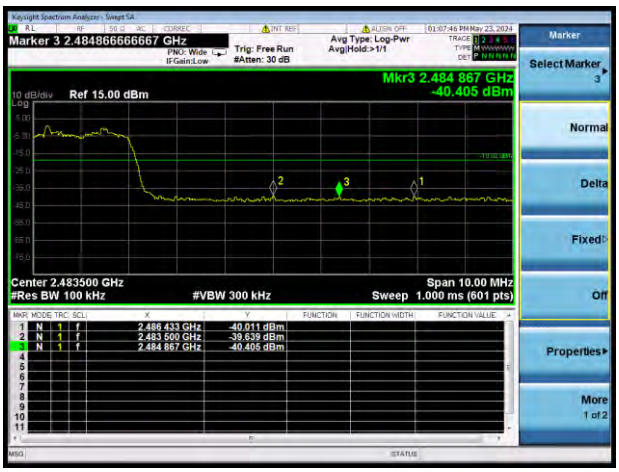
π/4-DQPSK HOPPING, CARRIER LEVEL

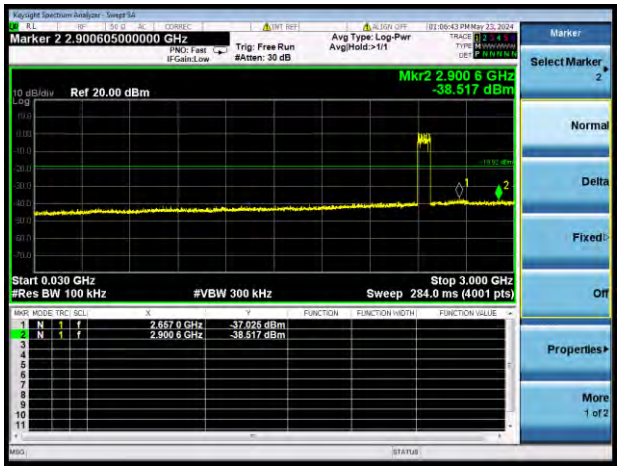


π/4-DQPSK Hopping BAND EDGE (LOW)

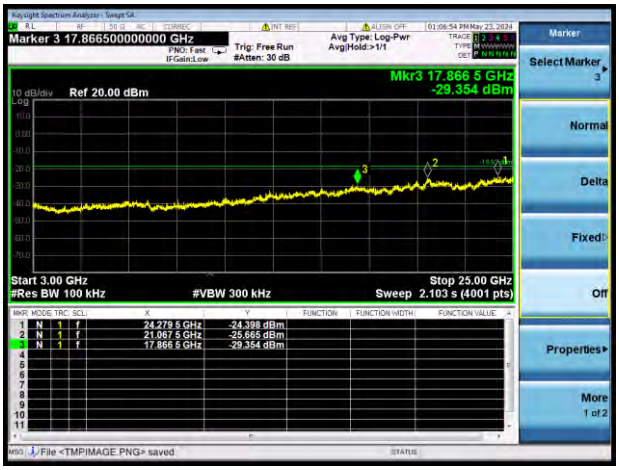
π/4-DQPSK Hopping BAND EDGE (HIGH)



π/4-DQPSK Hopping Mode, SPURIOUS
30 MHz ~ 3 GHz



π/4-DQPSK Hopping Mode, SPURIOUS
3GHz ~ 25 GHz



5.9 Conducted Emission

5.9.1 Limit

FCC §15.207

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 within the band 150 kHz to 30 MHz shall not exceed the limits in the following table, as measured using a 50μH/50Ω line impedance stabilization network (LISN).

Frequency range (MHz)	Conducted Limit (dBμV)	
	Quai-peak	Average
0.15 - 0.50	66 to 56	56 to 46
0.50 - 5	56	46
0.50 - 30	60	50

5.9.2 Test Setup

See section 4.5.2 for test setup description for the AC power supply port. The photo of test setup please refer to ANNEX A.

5.9.3 Test Procedure

The maximum conducted interference is searched using Peak (PK), if the emission levels more than the AV and QP limits, and that have narrow margins from the AV and QP limits will be re-measured with AV and QP detectors. Tests for both L phase and N phase lines of the power mains connected to the EUT are performed. Refer to recorded points and plots below.
Devices subject to Part 15 must be tested for all available U.S. voltages and frequencies (such as a nominal 120 VAC, 50/60 Hz and 240 VAC, 50/60 Hz) for which the device is capable of operation. A device rated for 50/60 Hz operation need not be tested at both frequencies provided the radiated and line conducted emissions are the same at both frequencies.

5.9.4 Test Result

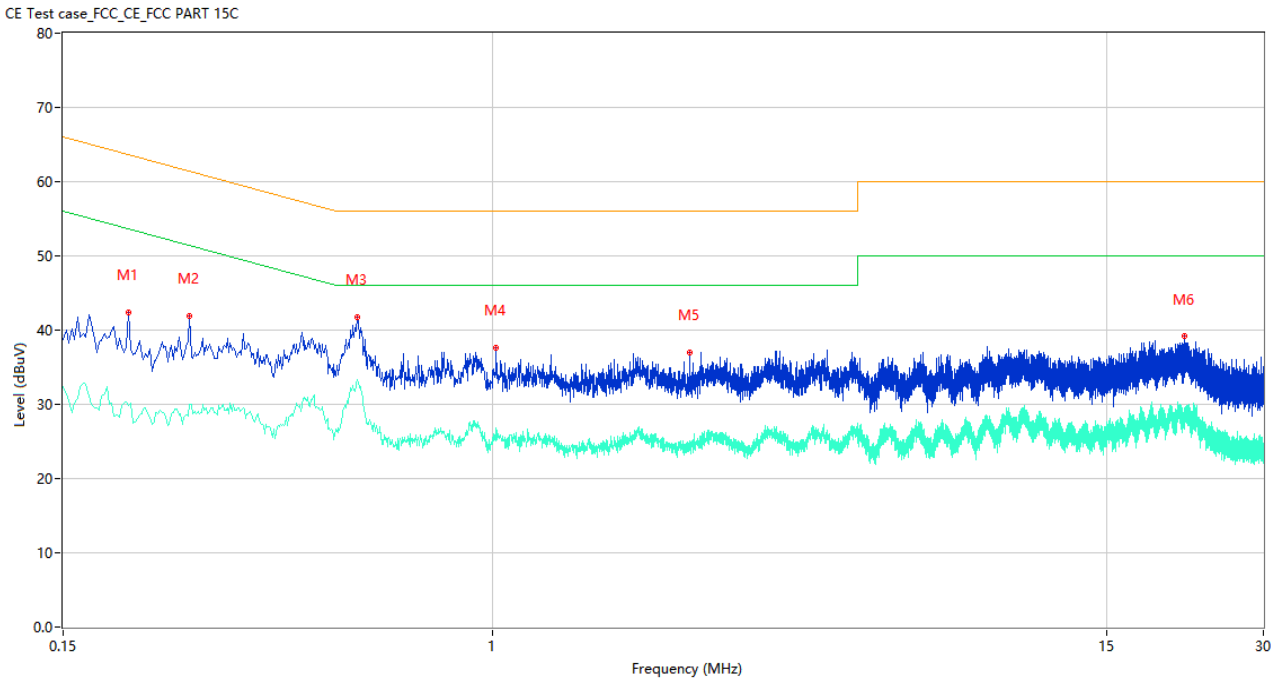
Note [1]: The EUT was tested in charging mode.

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)

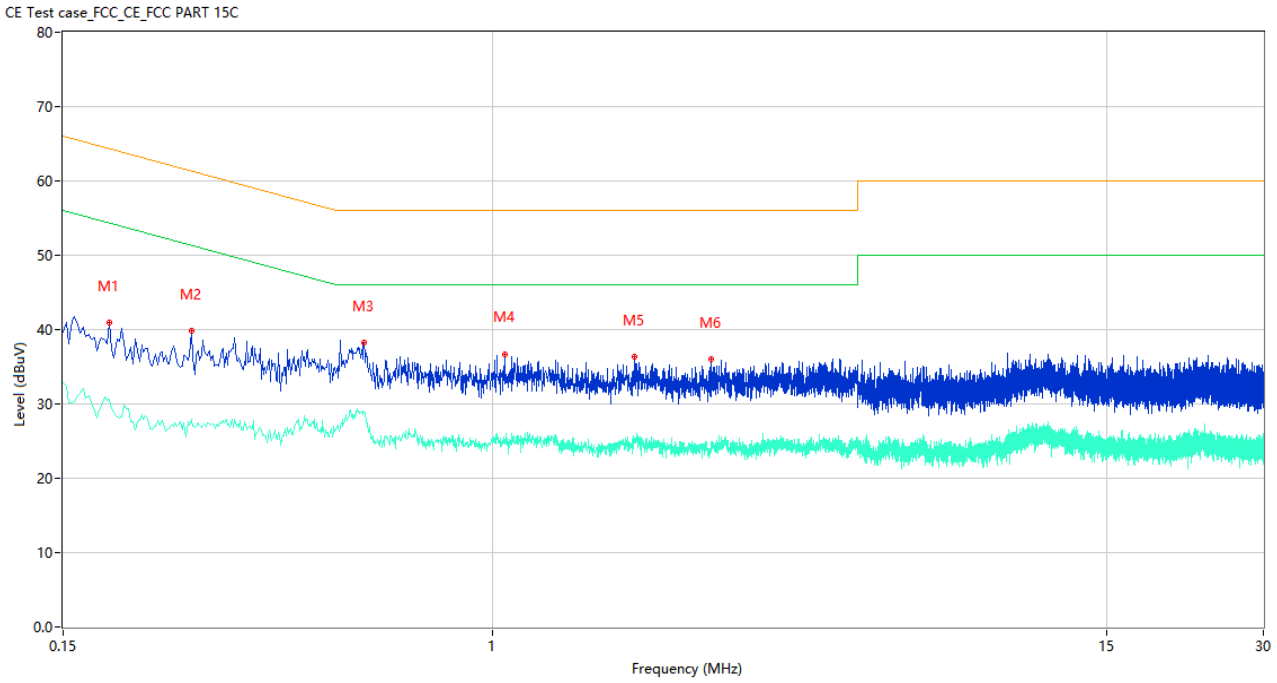
Test Data and Plots

PHASE L



No.	Frequency (MHz)	Results (dBuV)	Factor (dB)	Limit (dBuV)	Margin (dB)	Detector	Line	Verdict
1	0.200	42.39	9.77	63.61	21.22	Peak	L	Pass
1**	0.200	29.86	9.77	53.61	23.75	AV	L	Pass
2	0.262	41.93	9.76	61.37	19.44	Peak	L	Pass
2**	0.262	30.04	9.76	51.37	21.33	AV	L	Pass
3	0.550	41.76	10.03	56.00	14.24	Peak	L	Pass
3**	0.550	33.30	10.03	46.00	12.70	AV	L	Pass
4	1.014	37.64	10.03	56.00	18.36	Peak	L	Pass
4**	1.014	26.89	10.03	46.00	19.11	AV	L	Pass
5	2.384	37.05	10.22	56.00	18.95	Peak	L	Pass
5**	2.384	24.50	10.22	46.00	21.50	AV	L	Pass
6	21.222	39.15	10.95	60.00	20.85	Peak	L	Pass
6**	21.222	28.27	10.95	50.00	21.73	AV	L	Pass

PHASE N



No.	Frequency (MHz)	Results (dBuV)	Factor (dB)	Limit (dBuV)	Margin (dB)	Detector	Line	Verdict
1	0.184	40.95	9.78	64.30	23.35	Peak	N	Pass
1**	0.184	30.59	9.78	54.30	23.71	AV	N	Pass
2	0.264	39.81	9.76	61.30	21.49	Peak	N	Pass
2**	0.264	27.92	9.76	51.30	23.38	AV	N	Pass
3	0.566	38.18	10.07	56.00	17.82	Peak	N	Pass
3**	0.566	28.87	10.07	46.00	17.13	AV	N	Pass
4	1.052	36.69	10.16	56.00	19.31	Peak	N	Pass
4**	1.052	25.16	10.16	46.00	20.84	AV	N	Pass
5	1.872	36.31	10.41	56.00	19.69	Peak	N	Pass
5**	1.872	25.32	10.41	46.00	20.68	AV	N	Pass
6	2.620	36.01	9.93	56.00	19.99	Peak	N	Pass
6**	2.620	24.88	9.93	46.00	21.12	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 ≥ 1 GHz, 100 kHz for f < 1 GHz
VBW ≥ 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.

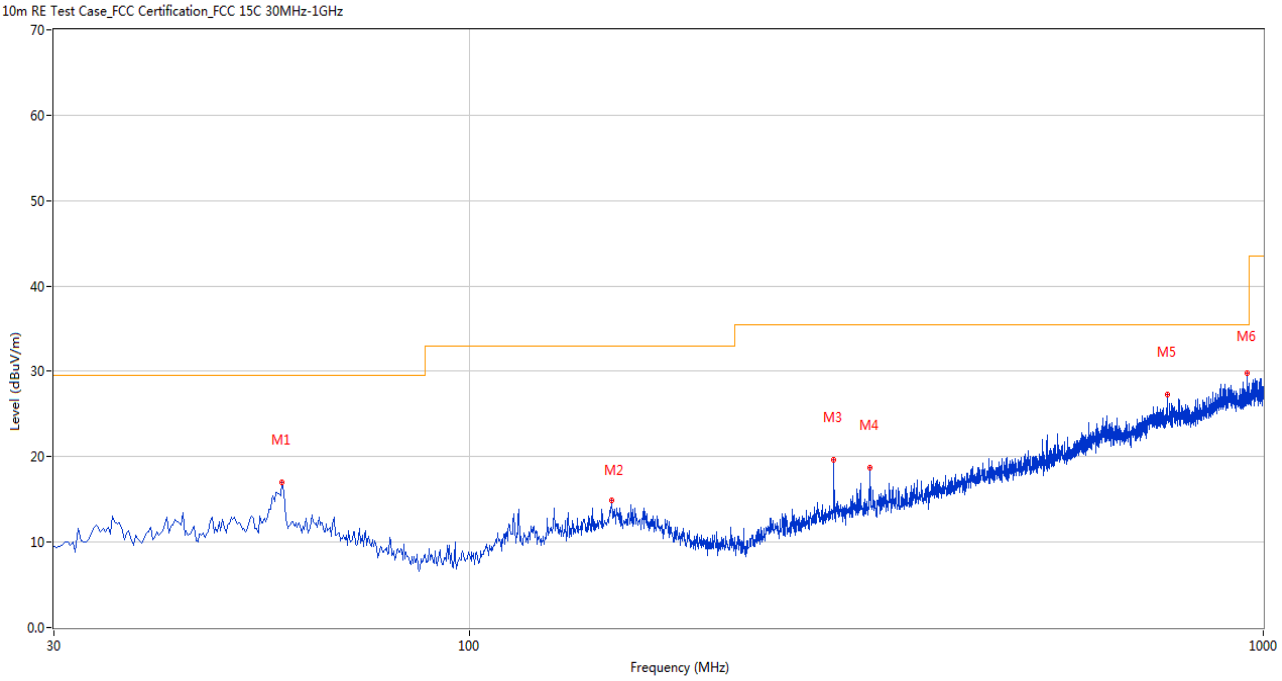
Note [3]: The EUT was tested in Link mode and the charging.

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.

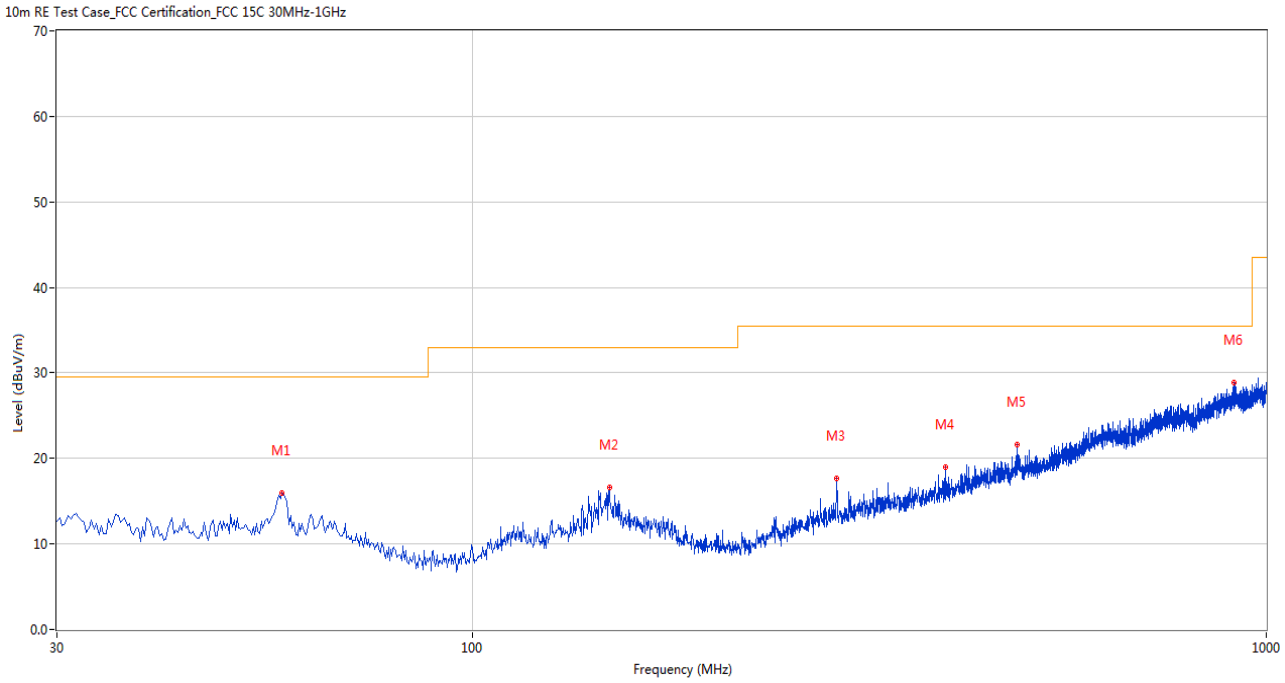
Test Data and Plots

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	58.123	17.04	-26.34	29.5	12.46	Peak	0.00	200	Horizontal	Pass
2	150.977	14.96	-25.75	33.0	18.04	Peak	31.00	200	Horizontal	Pass
3	287.956	19.61	-25.01	35.5	15.89	Peak	90.00	200	Horizontal	Pass
4	319.958	18.70	-24.11	35.5	16.80	Peak	0.00	200	Horizontal	Pass
5	757.803	27.27	-13.19	35.5	8.23	Peak	280.00	200	Horizontal	Pass
6	954.179	29.81	-10.42	35.5	5.69	Peak	117.00	200	Horizontal	Pass

30 MHz to 1 GHz, ANT V

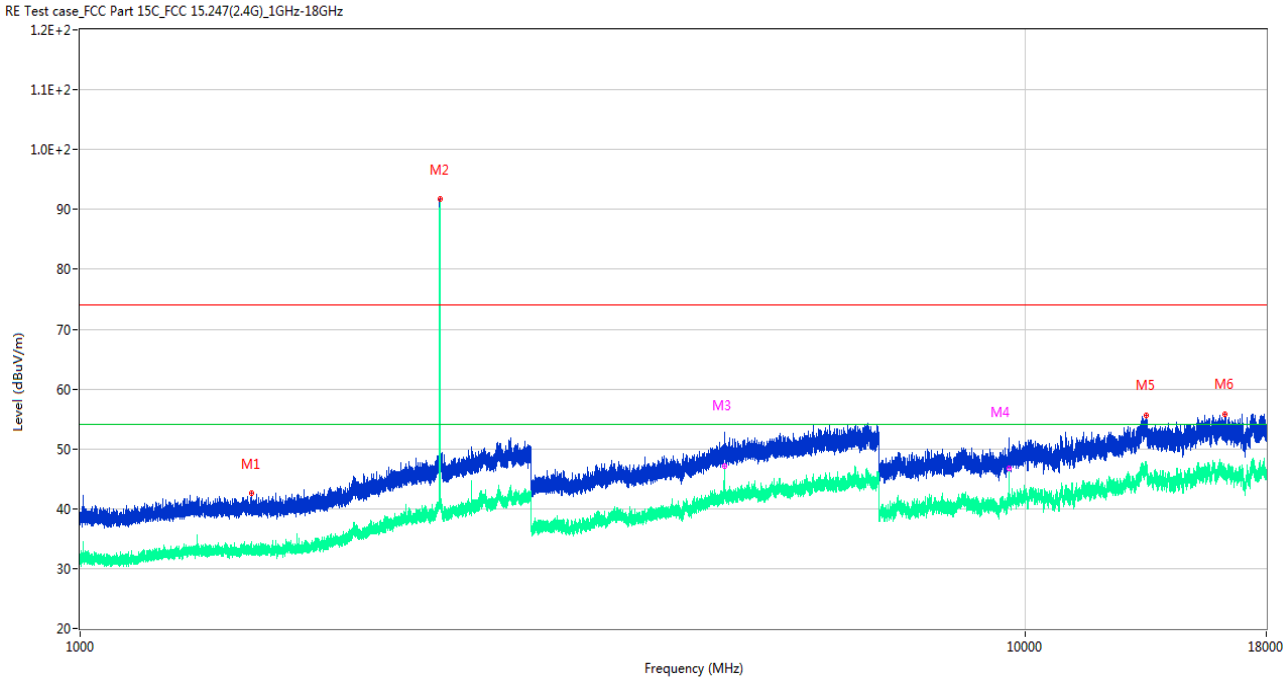


No.	Frequency (MHz)	Results (dBuV/m)	Factor (dB)	Limit (dBuV/m)	Margin (dB)	Detector	Table (Degree)	Height (cm)	Antenna	Verdict
1	57.638	15.91	-26.29	29.5	13.59	Peak	194.00	100	Vertical	Pass
2	148.795	16.65	-25.90	33.0	16.35	Peak	353.00	100	Vertical	Pass
3	287.956	17.71	-25.01	35.5	17.79	Peak	172.00	100	Vertical	Pass
4	395.114	18.96	-22.64	35.5	16.54	Peak	0.00	100	Vertical	Pass
5	485.301	21.57	-19.96	35.5	13.93	Peak	0.00	200	Vertical	Pass
6	909.813	28.89	-10.69	35.5	6.61	Peak	0.00	200	Vertical	Pass

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

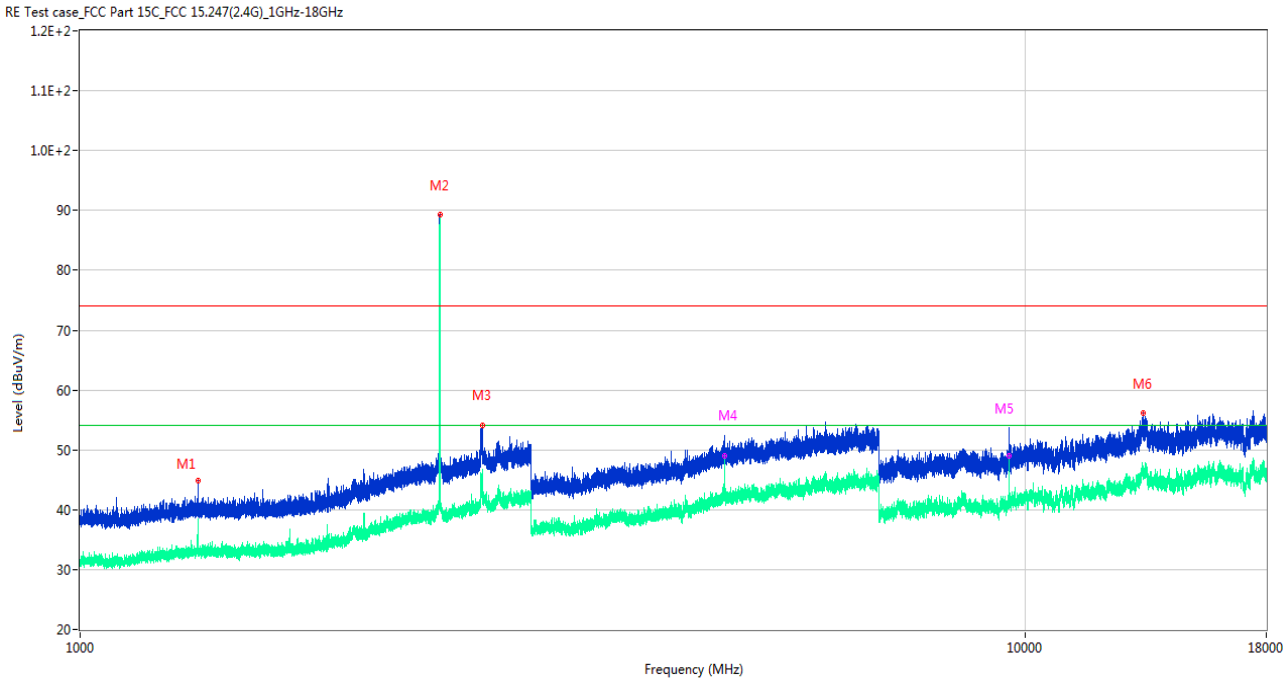
Note 2: The spurious from 18GHz-25GHz is noise only, do not show on the report.

GFSK LOW CHANNEL 1 GHz to 18 GHz, ANT H



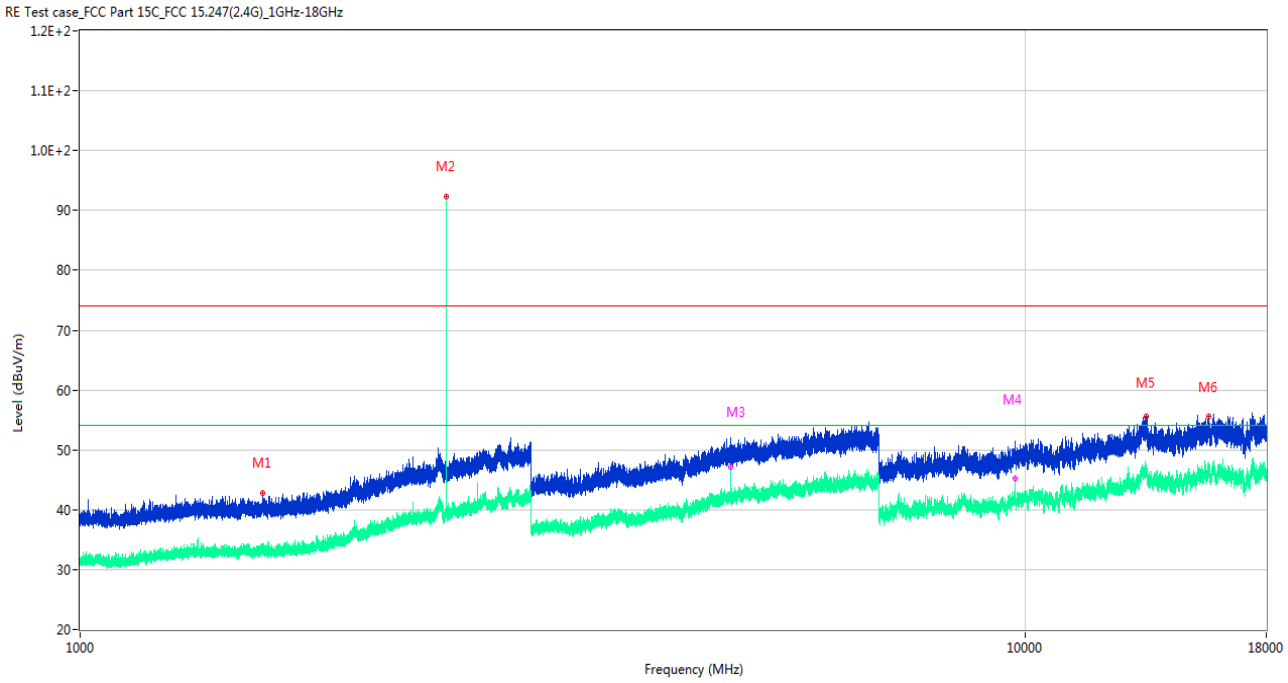
No.	Frequency (MHz)	Results (dBuV/m)	Factor (dB)	Limit (dBuV/m)	Margin (dB)	Detector	Table (Degree)	Height (cm)	Antenna	Verdict
1	1519.000	42.53	-17.24	74.0	31.47	Peak	198.00	100	Horizontal	Pass
1**	1519.000	33.17	-17.24	54.0	20.83	AV	198.00	100	Horizontal	Pass
2	2402.100	91.72	-9.74	74.0	-17.72	Peak	61.00	100	Horizontal	N/A
2**	2402.100	91.50	-9.74	54.0	-37.50	AV	61.00	100	Horizontal	N/A
3	4804.200	52.14	-2.83	74.0	21.86	Peak	44.00	150	Horizontal	Pass
3**	4804.200	47.07	-2.83	54.0	6.93	AV	44.00	150	Horizontal	Pass
4	9608.200	50.56	-0.01	74.0	23.44	Peak	15.00	150	Horizontal	Pass
4**	9608.200	46.83	-0.01	54.0	7.17	AV	15.00	150	Horizontal	Pass
5	13440.900	55.55	0.49	74.0	18.45	Peak	0.00	150	Horizontal	Pass
5**	13440.900	46.84	0.49	54.0	7.16	AV	0.00	150	Horizontal	Pass
6	16281.413	55.88	1.02	74.0	18.12	Peak	317.00	300	Horizontal	Pass
6**	16281.413	46.95	1.02	54.0	7.05	AV	317.00	300	Horizontal	Pass

GFSK LOW CHANNEL 1 GHz to 18 GHz, ANT V



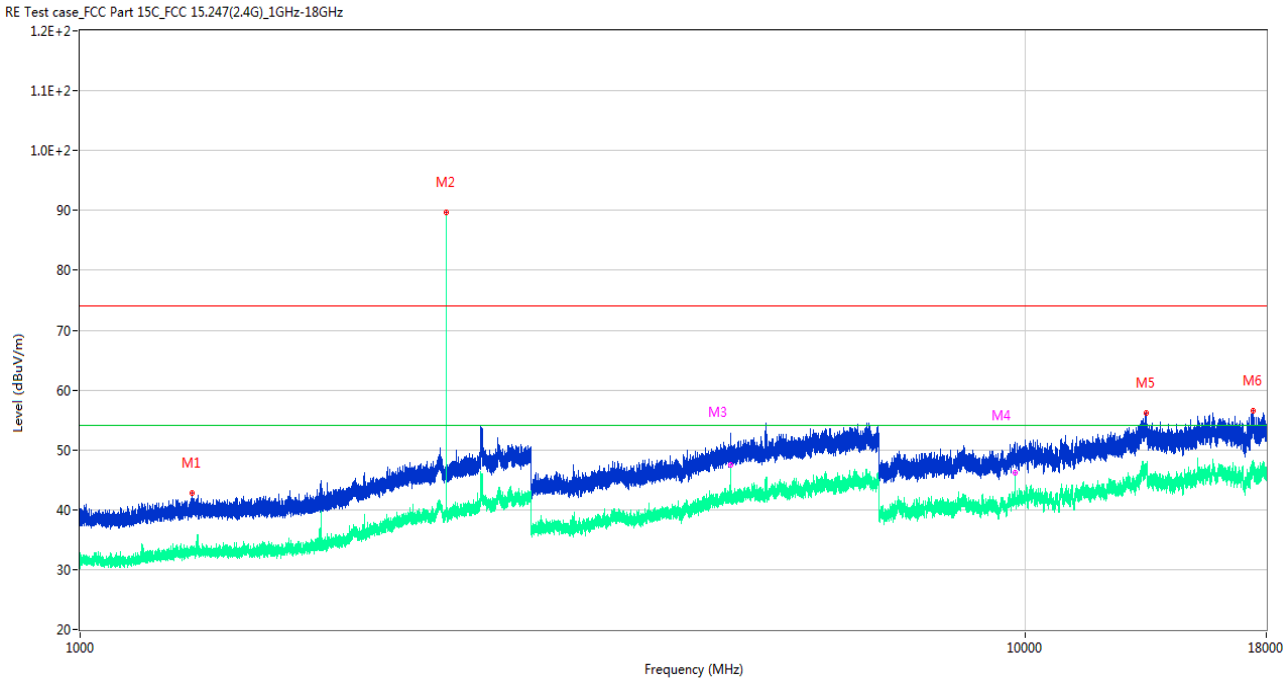
No.	Frequency (MHz)	Results (dBuV/m)	Factor (dB)	Limit (dBuV/m)	Margin (dB)	Detector	Table (Degree)	Height (cm)	Antenna	Verdict
1	1331.900	44.84	-17.08	74.0	29.16	Peak	88.00	400	Vertical	Pass
1**	1331.900	35.82	-17.08	54.0	18.18	AV	88.00	400	Vertical	Pass
2	2401.800	89.21	-9.75	74.0	-15.21	Peak	75.00	100	Vertical	N/A
2**	2401.800	88.16	-9.75	54.0	-34.16	AV	75.00	100	Vertical	N/A
3	2663.600	54.12	-10.82	74.0	19.88	Peak	205.00	150	Vertical	Pass
3**	2663.600	45.65	-10.82	54.0	8.35	AV	205.00	150	Vertical	Pass
4	4804.200	51.94	-2.83	74.0	22.06	Peak	301.00	150	Vertical	Pass
4**	4804.200	49.02	-2.83	54.0	4.98	AV	301.00	150	Vertical	Pass
5	9608.200	53.72	-0.01	74.0	20.28	Peak	278.00	150	Vertical	Pass
5**	9608.200	48.93	-0.01	54.0	5.07	AV	278.00	150	Vertical	Pass
6	13323.563	56.09	0.92	74.0	17.91	Peak	294.00	150	Vertical	Pass
6**	13323.563	47.22	0.92	54.0	6.78	AV	294.00	150	Vertical	Pass

GFSK MIDDLE CHANNEL 1 GHz to 18 GHz, ANT H



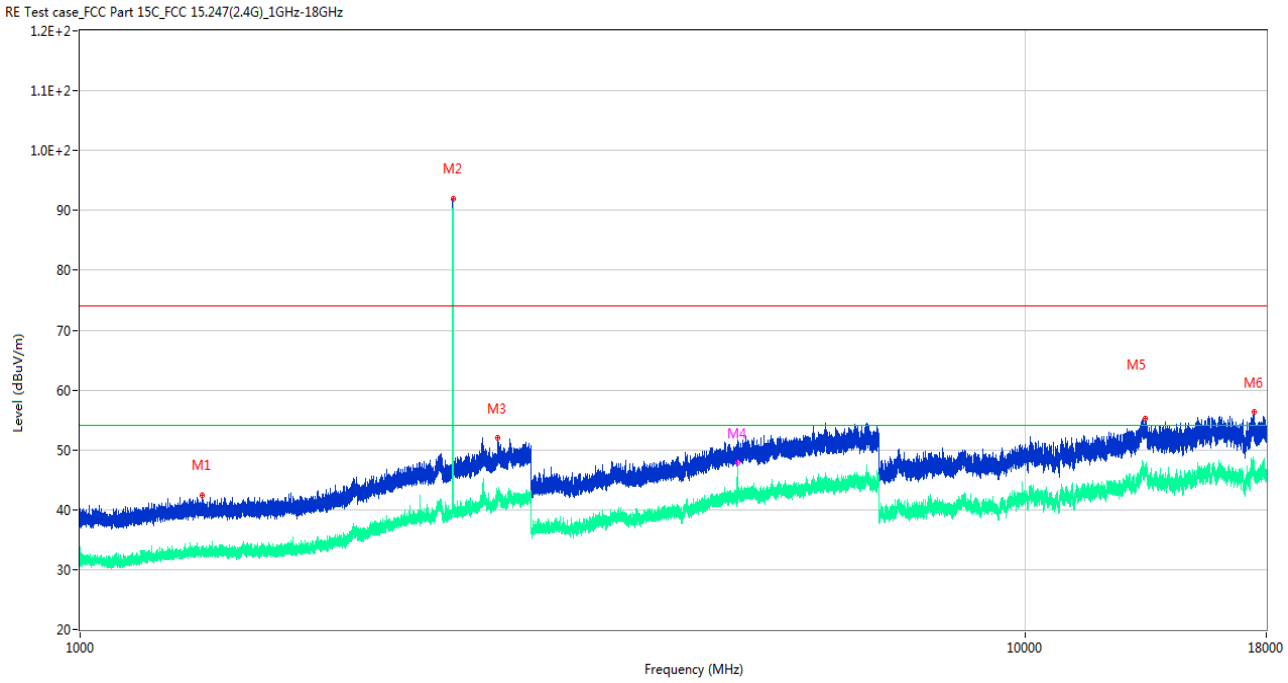
No.	Frequency (MHz)	Results (dBuV/m)	Factor (dB)	Limit (dBuV/m)	Margin (dB)	Detector	Table (Degree)	Height (cm)	Antenna	Verdict
1	1561.400	42.82	-16.81	74.0	31.18	Peak	4.00	400	Horizontal	Pass
1**	1561.400	33.29	-16.81	54.0	20.71	AV	4.00	400	Horizontal	Pass
2	2441.100	92.40	-12.38	74.0	-18.40	Peak	76.00	150	Horizontal	N/A
2**	2441.100	92.09	-12.38	54.0	-38.09	AV	76.00	150	Horizontal	N/A
3	4882.000	51.34	-2.61	74.0	22.66	Peak	360.00	150	Horizontal	Pass
3**	4882.000	47.06	-2.61	54.0	6.94	AV	360.00	150	Horizontal	Pass
4	9764.025	50.29	-0.38	74.0	23.71	Peak	0.00	150	Horizontal	Pass
4**	9764.025	45.25	-0.38	54.0	8.75	AV	0.00	150	Horizontal	Pass
5	13434.863	55.51	0.42	74.0	18.49	Peak	338.00	150	Horizontal	Pass
5**	13434.863	46.74	0.42	54.0	7.26	AV	338.00	150	Horizontal	Pass
6	15655.088	55.52	1.19	74.0	18.48	Peak	338.00	100	Horizontal	Pass
6**	15655.088	44.69	1.19	54.0	9.31	AV	338.00	100	Horizontal	Pass

GFSK MIDDLE CHANNEL 1 GHz to 18 GHz, ANT V



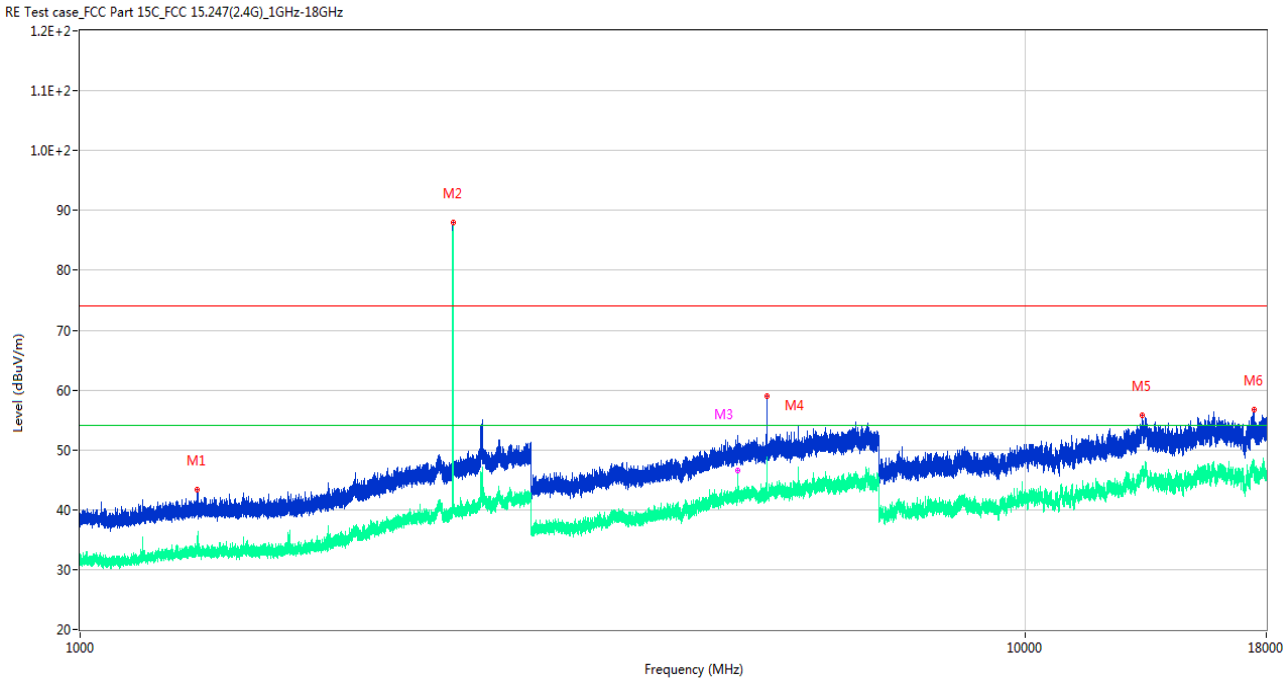
No.	Frequency (MHz)	Results (dBuV/m)	Factor (dB)	Limit (dBuV/m)	Margin (dB)	Detector	Table (Degree)	Height (cm)	Antenna	Verdict
1	1312.900	42.80	-16.90	74.0	31.20	Peak	48.00	400	Vertical	Pass
1**	1312.900	32.96	-16.90	54.0	21.04	AV	48.00	400	Vertical	Pass
2	2440.800	89.68	-12.38	74.0	-15.68	Peak	72.00	200	Vertical	N/A
2**	2440.800	88.80	-12.38	54.0	-34.80	AV	72.00	200	Vertical	N/A
3	4882.000	51.56	-2.61	74.0	22.44	Peak	96.00	150	Vertical	Pass
3**	4882.000	47.54	-2.61	54.0	6.46	AV	96.00	150	Vertical	Pass
4	9764.312	50.18	-0.38	74.0	23.82	Peak	207.00	150	Vertical	Pass
4**	9764.312	46.17	-0.38	54.0	7.83	AV	207.00	150	Vertical	Pass
5	13425.150	56.19	0.40	74.0	17.81	Peak	0.00	150	Vertical	Pass
5**	13425.150	46.99	0.40	54.0	7.01	AV	0.00	150	Vertical	Pass
6	17426.176	56.54	3.58	74.0	17.46	Peak	266.00	400	Vertical	Pass
6**	17426.176	47.52	3.58	54.0	6.48	AV	266.00	400	Vertical	Pass

GFSK HIGH CHANNEL 1 GHz to 18 GHz, ANT H



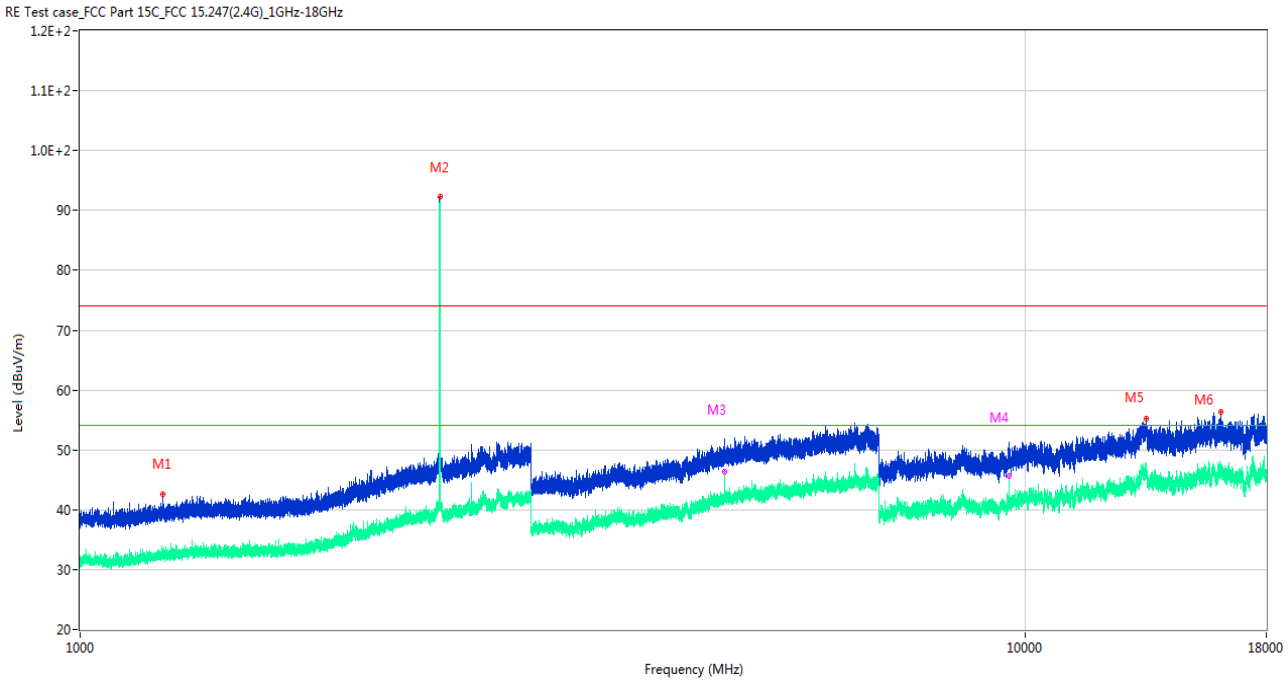
No.	Frequency (MHz)	Results (dBuV/m)	Factor (dB)	Limit (dBuV/m)	Margin (dB)	Detector	Table (Degree)	Height (cm)	Antenna	Verdict
1	1347.600	42.43	-16.82	74.0	31.57	Peak	187.00	300	Horizontal	Pass
1**	1347.600	33.91	-16.82	54.0	20.09	AV	187.00	300	Horizontal	Pass
2	2480.100	91.99	-11.29	74.0	-17.99	Peak	77.00	150	Horizontal	N/A
2**	2480.100	91.72	-11.29	54.0	-37.72	AV	77.00	150	Horizontal	N/A
3	2768.900	51.99	-8.76	74.0	22.01	Peak	221.00	200	Horizontal	Pass
3**	2768.900	41.85	-8.76	54.0	12.15	AV	221.00	200	Horizontal	Pass
4	4960.200	51.26	-2.26	74.0	22.74	Peak	74.00	150	Horizontal	Pass
4**	4960.200	47.82	-2.26	54.0	6.18	AV	74.00	150	Horizontal	Pass
5	13407.300	55.15	0.53	74.0	18.85	Peak	0.00	150	Horizontal	Pass
5**	13407.300	46.51	0.53	54.0	7.49	AV	0.00	150	Horizontal	Pass
6	17463.187	56.28	2.87	74.0	17.72	Peak	0.00	100	Horizontal	Pass
6**	17463.187	46.86	2.87	54.0	7.14	AV	0.00	100	Horizontal	Pass

GFSK HIGH CHANNEL 1 GHz to 18 GHz, ANT V



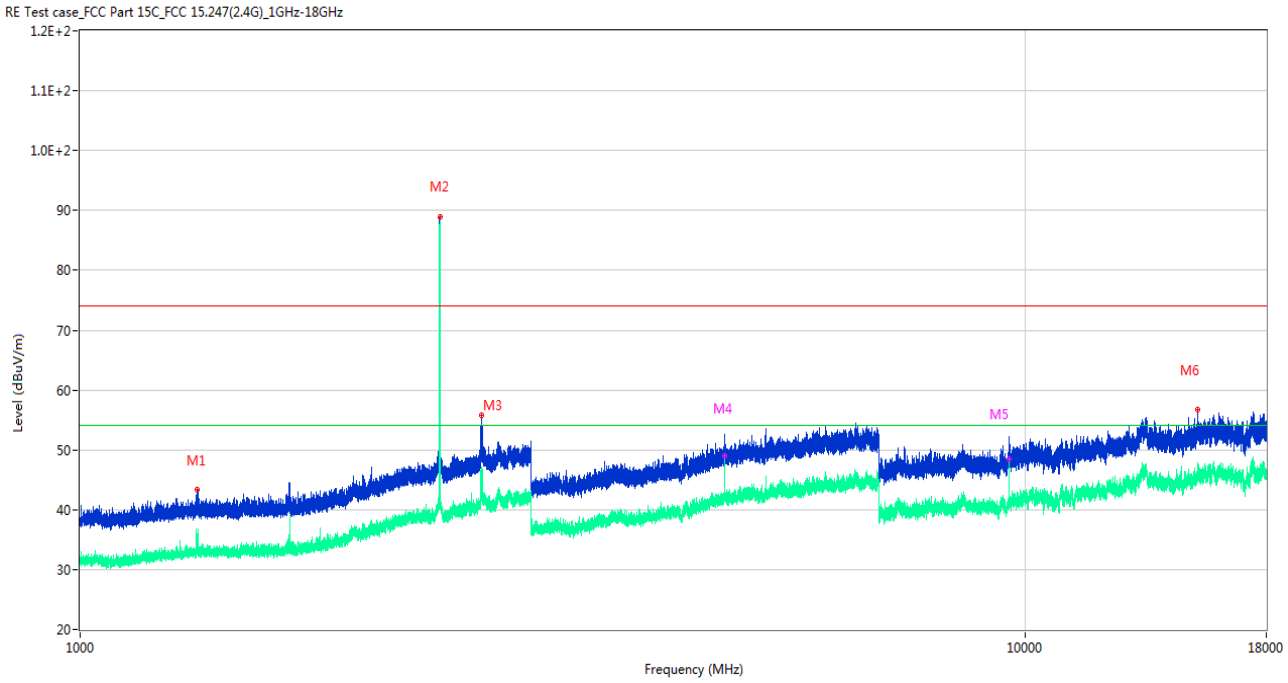
No.	Frequency (MHz)	Results (dBuV/m)	Factor (dB)	Limit (dBuV/m)	Margin (dB)	Detector	Table (Degree)	Height (cm)	Antenna	Verdict
1	1331.300	43.27	-17.03	74.0	30.73	Peak	89.00	100	Vertical	Pass
1**	1331.300	33.81	-17.03	54.0	20.19	AV	89.00	100	Vertical	Pass
2	2479.900	87.92	-11.32	74.0	-13.92	Peak	67.00	150	Vertical	N/A
2**	2479.900	87.18	-11.32	54.0	-33.18	AV	67.00	150	Vertical	N/A
3	4960.000	52.30	-2.23	74.0	21.70	Peak	102.00	150	Vertical	Pass
3**	4960.000	46.60	-2.23	54.0	7.40	AV	102.00	150	Vertical	Pass
4	5331.600	58.92	-2.37	74.0	15.08	Peak	66.00	200	Vertical	Pass
4**	5331.600	48.83	-2.37	54.0	5.17	AV	66.00	200	Vertical	Pass
5	13298.888	55.75	0.86	74.0	18.25	Peak	126.00	150	Vertical	Pass
5**	13298.888	46.05	0.86	54.0	7.95	AV	126.00	150	Vertical	Pass
6	17466.599	56.65	2.89	74.0	17.35	Peak	317.00	300	Vertical	Pass
6**	17466.599	46.20	2.89	54.0	7.80	AV	317.00	300	Vertical	Pass

π/4-DQPSK LOW CHANNEL 1 GHz to 18 GHz, ANT H



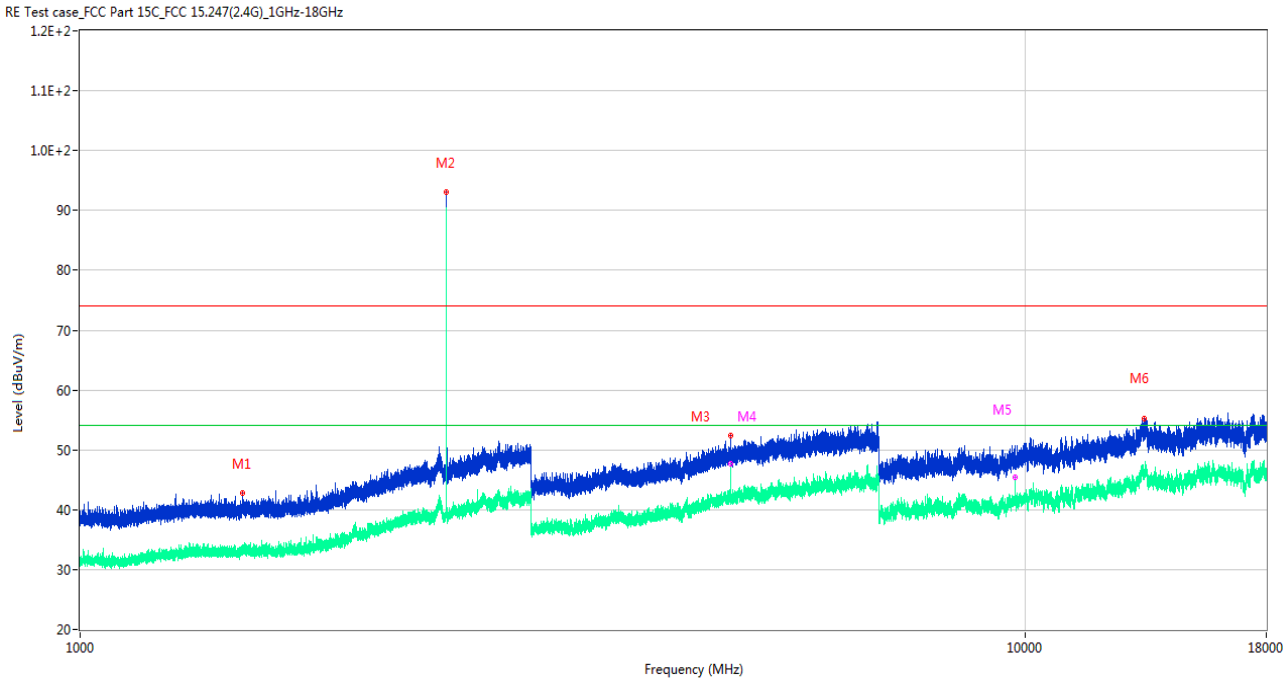
No.	Frequency (MHz)	Results (dBuV/m)	Factor (dB)	Limit (dBuV/m)	Margin (dB)	Detector	Table (Degree)	Height (cm)	Antenna	Verdict
1	1224.400	42.68	-17.37	74.0	31.32	Peak	242.00	400	Horizontal	Pass
1**	1224.400	33.12	-17.37	54.0	20.88	AV	242.00	400	Horizontal	Pass
2	2402.300	92.26	-9.73	74.0	-18.26	Peak	61.00	150	Horizontal	N/A
2**	2402.300	91.45	-9.73	54.0	-37.45	AV	61.00	150	Horizontal	N/A
3	4804.400	49.80	-2.80	74.0	24.20	Peak	41.00	150	Horizontal	Pass
3**	4804.400	46.37	-2.80	54.0	7.63	AV	41.00	150	Horizontal	Pass
4	9608.200	50.60	-0.01	74.0	23.40	Peak	269.00	150	Horizontal	Pass
4**	9608.200	45.60	-0.01	54.0	8.40	AV	269.00	150	Horizontal	Pass
5	13443.000	55.25	0.53	74.0	18.75	Peak	207.00	150	Horizontal	Pass
5**	13443.000	45.51	0.53	54.0	8.49	AV	207.00	150	Horizontal	Pass
6	16127.588	56.28	0.91	74.0	17.72	Peak	360.00	300	Horizontal	Pass
6**	16127.588	47.47	0.91	54.0	6.53	AV	360.00	300	Horizontal	Pass

π/4-DQPSK LOW CHANNEL 1 GHz to 18 GHz, ANT V



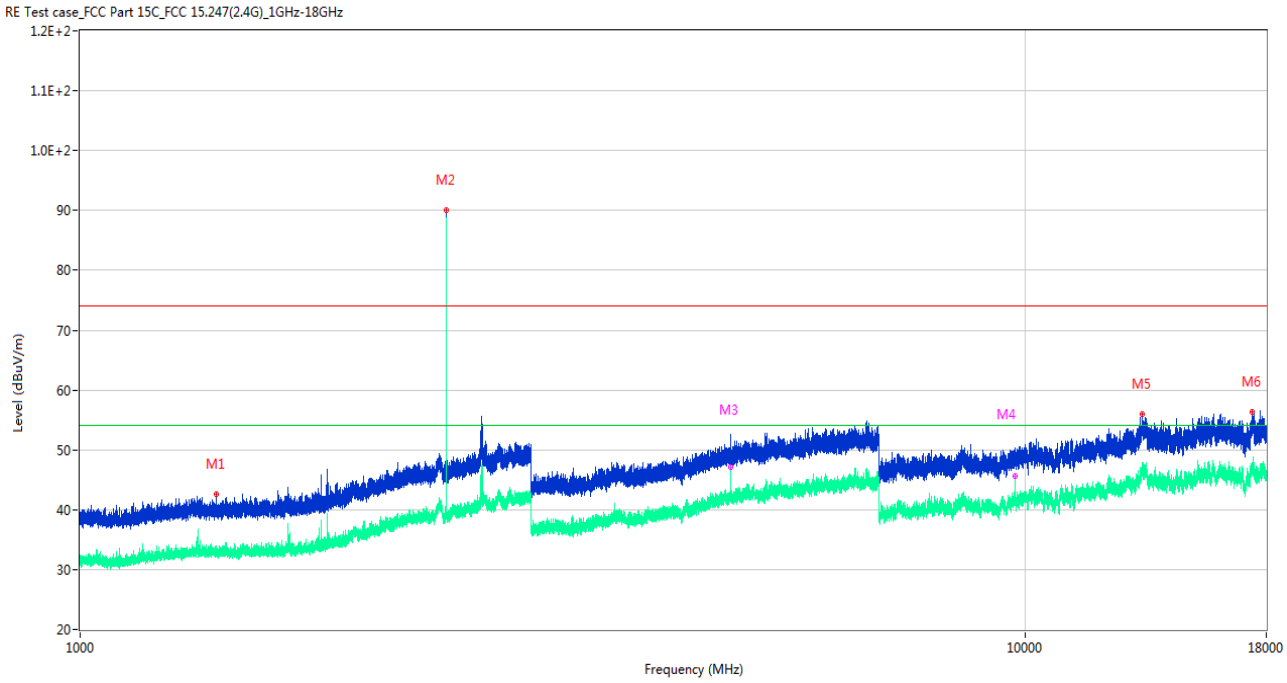
No.	Frequency (MHz)	Results (dBuV/m)	Factor (dB)	Limit (dBuV/m)	Margin (dB)	Detector	Table (Degree)	Height (cm)	Antenna	Verdict
1	1329.100	43.27	-17.06	74.0	30.73	Peak	70.00	200	Vertical	Pass
1**	1329.100	32.65	-17.06	54.0	21.35	AV	70.00	200	Vertical	Pass
2	2402.200	88.95	-9.74	74.0	-14.95	Peak	70.00	100	Vertical	N/A
2**	2402.200	88.51	-9.74	54.0	-34.51	AV	70.00	100	Vertical	N/A
3	2662.600	55.85	-10.80	74.0	18.15	Peak	197.00	200	Vertical	Pass
3**	2662.600	44.94	-10.80	54.0	9.06	AV	197.00	200	Vertical	Pass
4	4804.200	51.55	-2.83	74.0	22.45	Peak	111.00	150	Vertical	Pass
4**	4804.200	48.97	-2.83	54.0	5.03	AV	111.00	150	Vertical	Pass
5	9608.200	51.22	-0.01	74.0	22.78	Peak	270.00	150	Vertical	Pass
5**	9608.200	48.47	-0.01	54.0	5.53	AV	270.00	150	Vertical	Pass
6	15233.776	56.68	0.99	74.0	17.32	Peak	84.00	150	Vertical	Pass
6**	15233.776	46.34	0.99	54.0	7.66	AV	84.00	150	Vertical	Pass

π/4-DQPSK MIDDLE CHANNEL 1 GHz to 18 GHz, ANT H



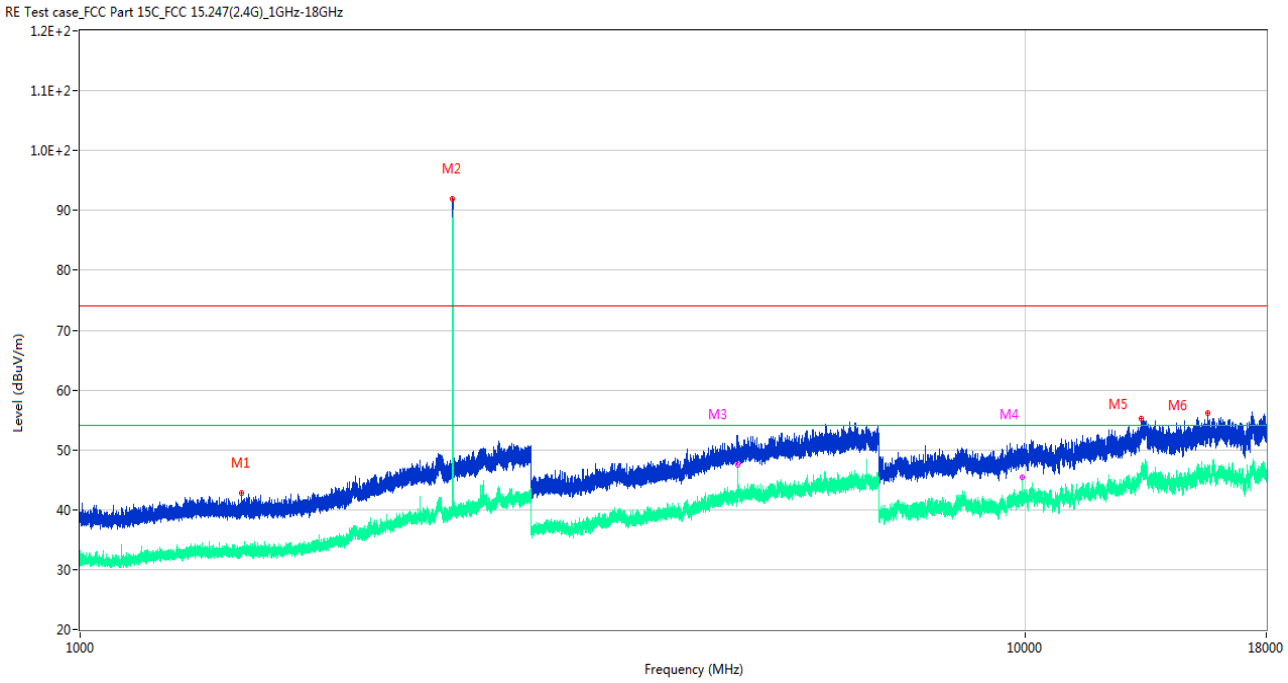
No.	Frequency (MHz)	Results (dBuV/m)	Factor (dB)	Limit (dBuV/m)	Margin (dB)	Detector	Table (Degree)	Height (cm)	Antenna	Verdict
1	1484.900	42.72	-16.75	74.0	31.28	Peak	74.00	100	Horizontal	Pass
1**	1484.900	32.80	-16.75	54.0	21.20	AV	74.00	100	Horizontal	Pass
2	2441.100	93.01	-12.38	74.0	-19.01	Peak	81.00	100	Horizontal	N/A
2**	2441.100	89.78	-12.38	54.0	-35.78	AV	81.00	100	Horizontal	N/A
3	4881.600	52.48	-2.64	74.0	21.52	Peak	80.00	150	Horizontal	Pass
3**	4881.600	44.46	-2.64	54.0	9.54	AV	80.00	150	Horizontal	Pass
4	4882.200	51.38	-2.60	74.0	22.62	Peak	67.00	150	Horizontal	Pass
4**	4882.200	47.67	-2.60	54.0	6.33	AV	67.00	150	Horizontal	Pass
5	9764.025	50.76	-0.38	74.0	23.24	Peak	260.00	150	Horizontal	Pass
5**	9764.025	45.47	-0.38	54.0	8.53	AV	260.00	150	Horizontal	Pass
6	13382.100	55.27	0.64	74.0	18.73	Peak	360.00	150	Horizontal	Pass
6**	13382.100	45.74	0.64	54.0	8.26	AV	360.00	150	Horizontal	Pass

π/4-DQPSK MIDDLE CHANNEL 1 GHz to 18 GHz, ANT V



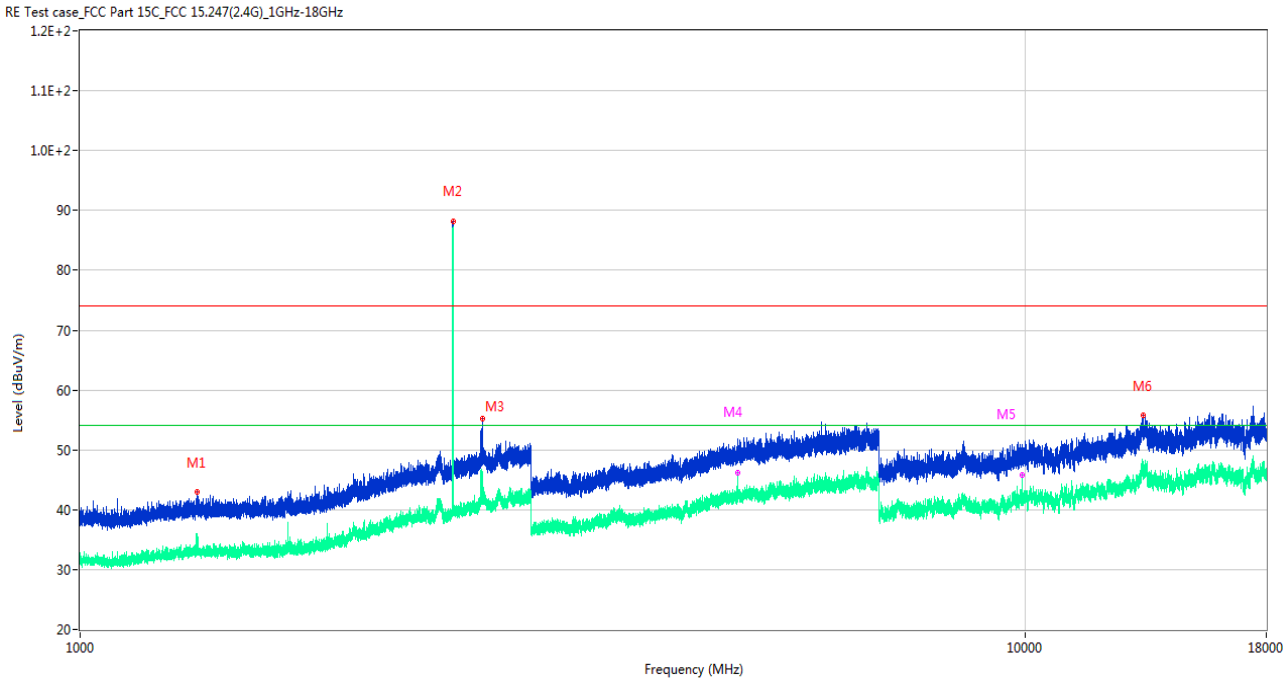
No.	Frequency (MHz)	Results (dBuV/m)	Factor (dB)	Limit (dBuV/m)	Margin (dB)	Detector	Table (Degree)	Height (cm)	Antenna	Verdict
1	1392.400	42.65	-17.11	74.0	31.35	Peak	91.00	400	Vertical	Pass
1**	1392.400	32.49	-17.11	54.0	21.51	AV	91.00	400	Vertical	Pass
2	2441.100	90.06	-12.38	74.0	-16.06	Peak	78.00	150	Vertical	N/A
2**	2441.100	88.65	-12.38	54.0	-34.65	AV	78.00	150	Vertical	N/A
3	4882.000	50.67	-2.61	74.0	23.33	Peak	290.00	150	Vertical	Pass
3**	4882.000	47.17	-2.61	54.0	6.83	AV	290.00	150	Vertical	Pass
4	9764.312	49.86	-0.38	74.0	24.14	Peak	273.00	150	Vertical	Pass
4**	9764.312	45.53	-0.38	54.0	8.47	AV	273.00	150	Vertical	Pass
5	13293.638	55.93	0.82	74.0	18.07	Peak	218.00	150	Vertical	Pass
5**	13293.638	45.63	0.82	54.0	8.37	AV	218.00	150	Vertical	Pass
6	17399.136	56.40	3.15	74.0	17.60	Peak	259.00	200	Vertical	Pass
6**	17399.136	46.44	3.15	54.0	7.56	AV	259.00	200	Vertical	Pass

π/4-DQPSK HIGH CHANNEL 1 GHz to 18 GHz, ANT H



No.	Frequency (MHz)	Results (dBuV/m)	Factor (dB)	Limit (dBuV/m)	Margin (dB)	Detector	Table (Degree)	Height (cm)	Antenna	Verdict
1	1482.200	42.85	-17.05	74.0	31.15	Peak	64.00	200	Horizontal	Pass
1**	1482.200	32.64	-17.05	54.0	21.36	AV	64.00	200	Horizontal	Pass
2	2479.700	91.94	-11.35	74.0	-17.94	Peak	78.00	100	Horizontal	N/A
2**	2479.700	88.58	-11.35	54.0	-34.58	AV	78.00	100	Horizontal	N/A
3	4960.400	51.01	-2.29	74.0	22.99	Peak	73.00	150	Horizontal	Pass
3**	4960.400	47.41	-2.29	54.0	6.59	AV	73.00	150	Horizontal	Pass
4	9920.137	50.10	-1.07	74.0	23.90	Peak	257.00	150	Horizontal	Pass
4**	9920.137	45.51	-1.07	54.0	8.49	AV	257.00	150	Horizontal	Pass
5	13263.188	55.14	0.68	74.0	18.86	Peak	306.00	150	Horizontal	Pass
5**	13263.188	44.75	0.68	54.0	9.25	AV	306.00	150	Horizontal	Pass
6	15625.425	56.12	1.72	74.0	17.88	Peak	306.00	150	Horizontal	Pass
6**	15625.425	45.11	1.72	54.0	8.89	AV	306.00	150	Horizontal	Pass

π/4-DQPSK HIGH CHANNEL 1 GHz to 18 GHz, ANT V



No.	Frequency (MHz)	Results (dBuV/m)	Factor (dB)	Limit (dBuV/m)	Margin (dB)	Detector	Table (Degree)	Height (cm)	Antenna	Verdict
1	1328.600	42.92	-17.09	74.0	31.08	Peak	87.00	400	Vertical	Pass
1**	1328.600	36.07	-17.09	54.0	17.93	AV	87.00	400	Vertical	Pass
2	2479.900	88.20	-11.32	74.0	-14.20	Peak	71.00	200	Vertical	N/A
2**	2479.900	87.26	-11.32	54.0	-33.26	AV	71.00	200	Vertical	N/A
3	2667.100	55.13	-10.56	74.0	18.87	Peak	207.00	150	Vertical	Pass
3**	2667.100	43.92	-10.56	54.0	10.08	AV	207.00	150	Vertical	Pass
4	4960.000	51.79	-2.23	74.0	22.21	Peak	194.00	150	Vertical	Pass
4**	4960.000	46.25	-2.23	54.0	7.75	AV	194.00	150	Vertical	Pass
5	9920.137	49.12	-1.07	74.0	24.88	Peak	212.00	150	Vertical	Pass
5**	9920.137	45.87	-1.07	54.0	8.13	AV	212.00	150	Vertical	Pass
6	13331.438	55.84	0.96	74.0	18.16	Peak	263.00	150	Vertical	Pass
6**	13331.438	48.10	0.96	54.0	5.90	AV	263.00	150	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 ≥ 1 GHz, 100 kHz for f < 1 GHz
VBW ≥ RBW
Sweep = auto
Detector function = peak
Trace = max hold

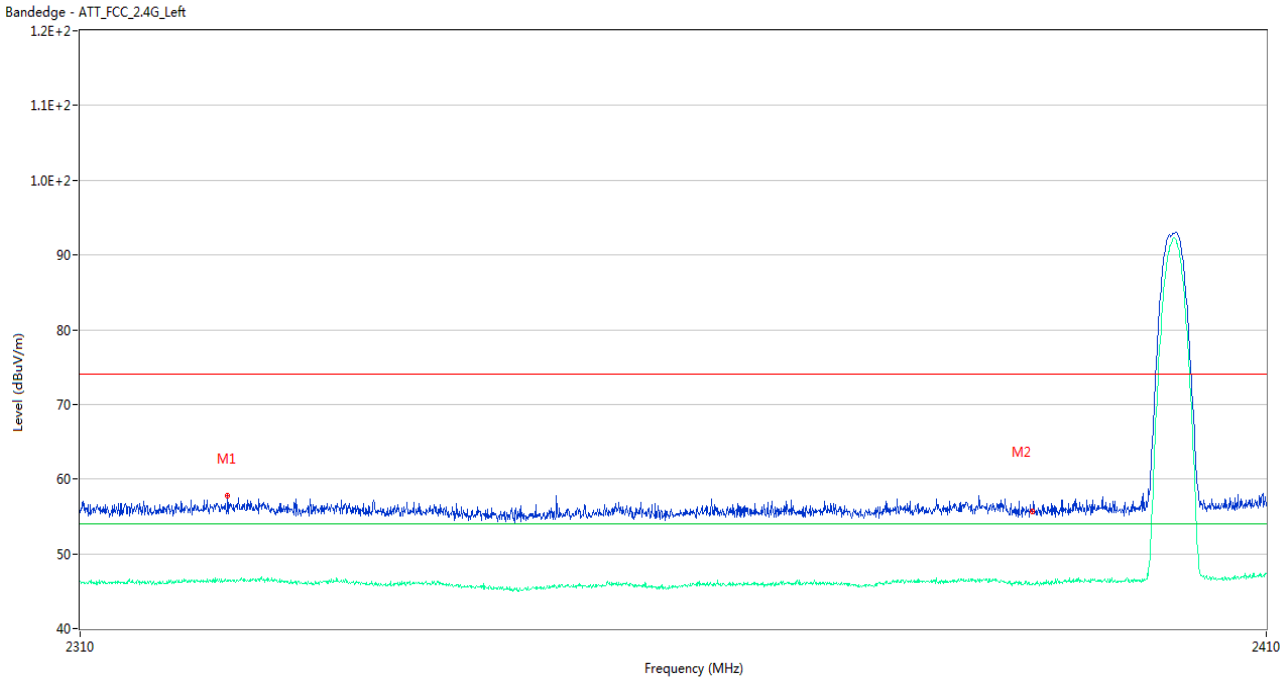
For measurement below 1GHz, If the emission level of the EUT measured by the peak detector is 3 dB lower than the applicable limit, the peak emission level will be reported, Otherwise, the emission measurement will be repeated using the quasi-peak detector and reported.

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.

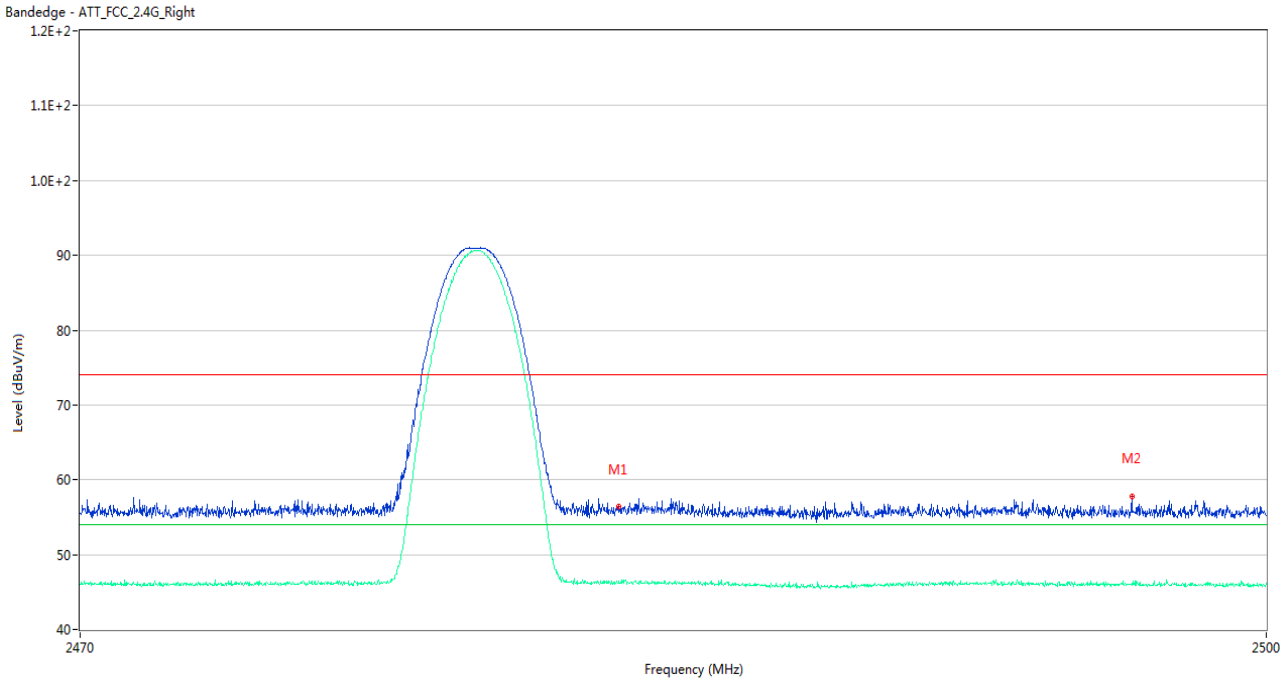
Test Data and Plots

GFSK LOW CHANNEL



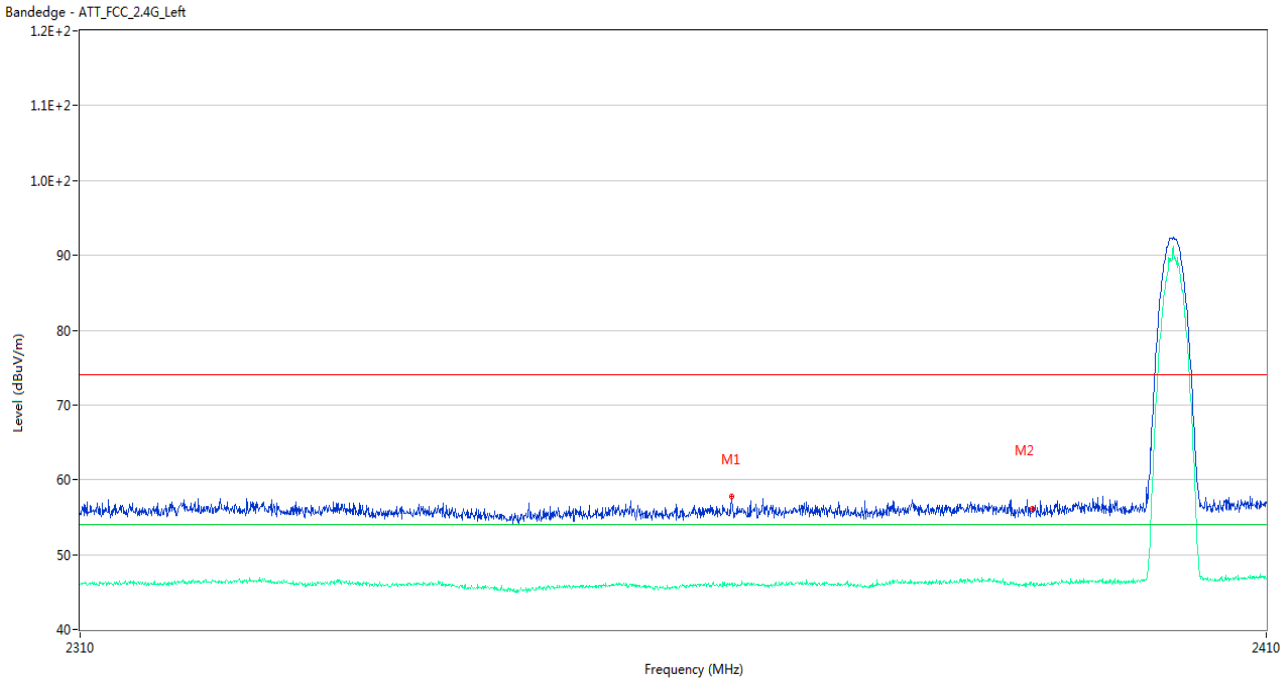
No.	Frequency (MHz)	Results (dBuV/m)	Factor (dB)	Limit (dBuV/m)	Margin (dB)	Detector	Table (Degree)	Height (cm)	Antenna	Verdict
1	2322.200	57.79	1.63	74.0	16.21	Peak	278.00	100	Horizontal	Pass
1**	2322.200	46.25	1.63	54.0	7.75	AV	278.00	100	Horizontal	Pass
2	2389.950	55.69	1.92	74.0	18.31	Peak	125.00	200	Horizontal	Pass
2**	2389.950	46.03	1.92	54.0	7.97	AV	125.00	200	Horizontal	Pass

GFSK HIGH CHANNEL



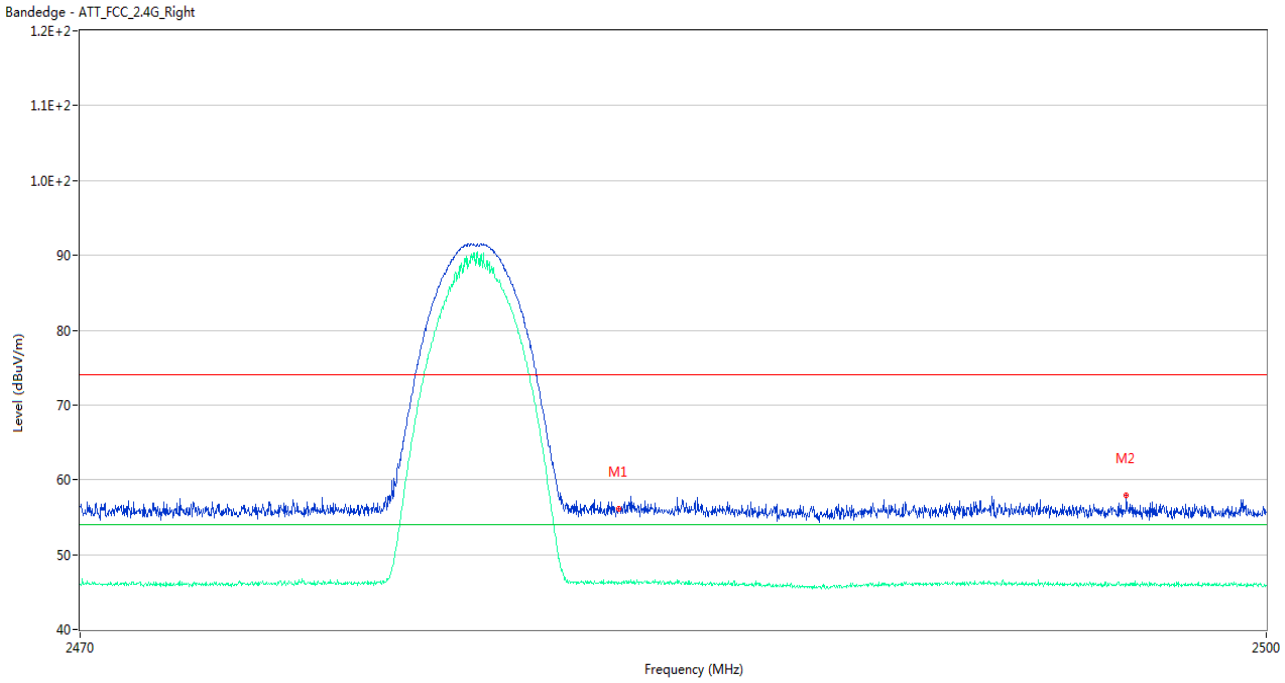
No.	Frequency (MHz)	Results (dBuV/m)	Factor (dB)	Limit (dBuV/m)	Margin (dB)	Detector	Table (Degree)	Height (cm)	Antenna	Verdict
1	2483.575	56.43	2.11	74.0	17.57	Peak	15.00	150	Horizontal	Pass
1**	2483.575	46.21	2.11	54.0	7.79	AV	15.00	150	Horizontal	Pass
2	2496.580	57.84	1.70	74.0	16.16	Peak	85.00	150	Horizontal	Pass
2**	2496.580	45.93	1.70	54.0	8.07	AV	85.00	150	Horizontal	Pass

π/4-DQPSK LOW CHANNEL



No.	Frequency (MHz)	Results (dBuV/m)	Factor (dB)	Limit (dBuV/m)	Margin (dB)	Detector	Table (Degree)	Height (cm)	Antenna	Verdict
1	2364.400	57.76	1.74	74.0	16.24	Peak	54.00	100	Horizontal	Pass
1**	2364.400	46.22	1.74	54.0	7.78	AV	54.00	100	Horizontal	Pass
2	2389.950	56.18	1.92	74.0	17.82	Peak	215.00	100	Horizontal	Pass
2**	2389.950	46.05	1.92	54.0	7.95	AV	215.00	100	Horizontal	Pass

π/4-DQPSK HIGH CHANNEL



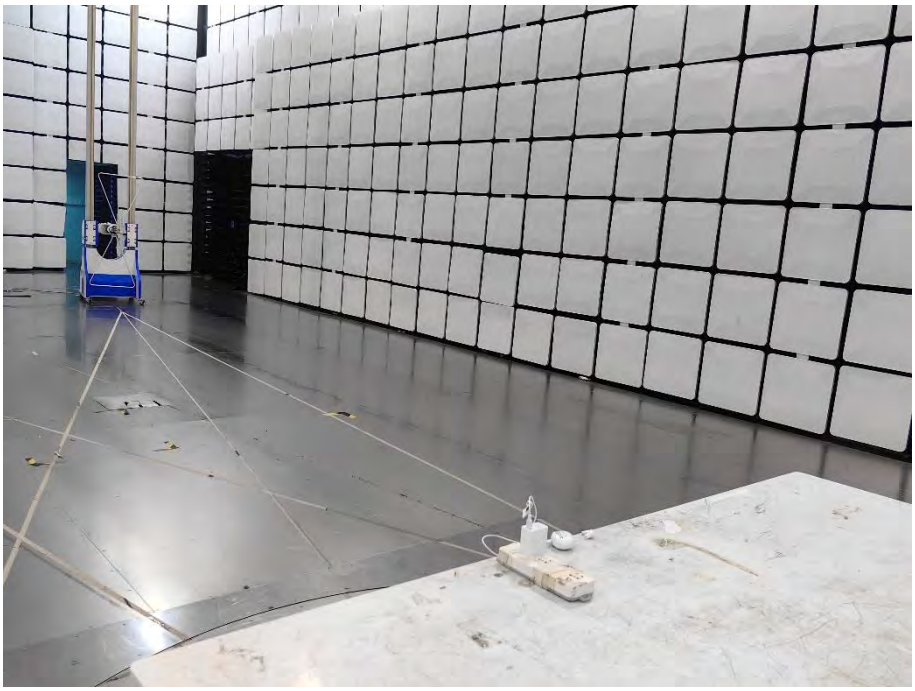
No.	Frequency (MHz)	Results (dBuV/m)	Factor (dB)	Limit (dBuV/m)	Margin (dB)	Detector	Table (Degree)	Height (cm)	Antenna	Verdict
1	2483.575	56.10	2.11	74.0	17.90	Peak	262.00	100	Horizontal	Pass
1**	2483.575	46.20	2.11	54.0	7.80	AV	262.00	100	Horizontal	Pass
2	2496.445	57.86	1.70	74.0	16.14	Peak	133.00	100	Horizontal	Pass
2**	2496.445	45.86	1.70	54.0	8.14	AV	133.00	100	Horizontal	Pass

ANNEX A TEST SETUP PHOTOS

1 Radiated Test Photo

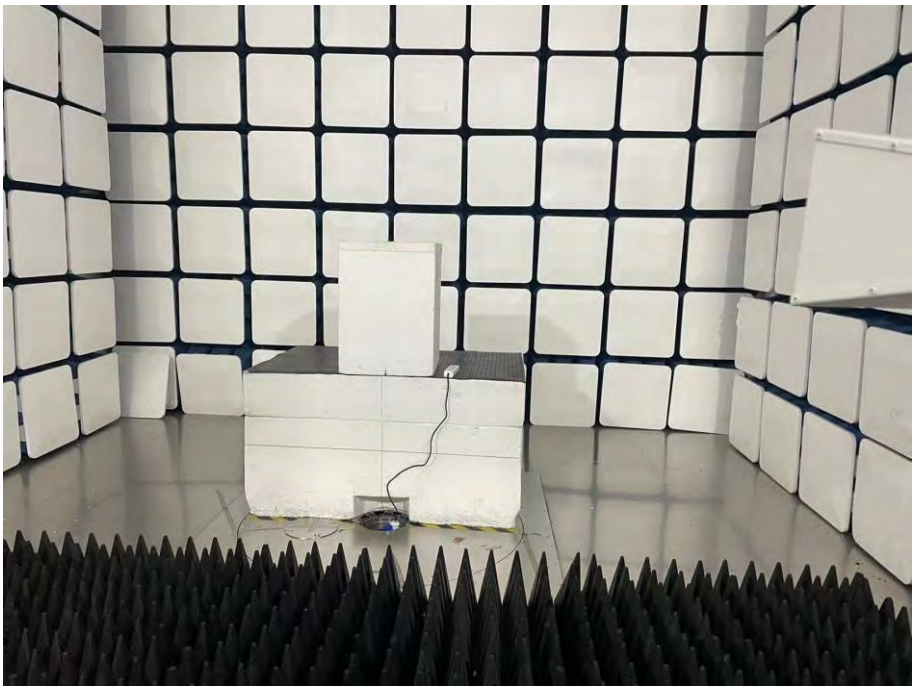
Below 30MHz

30MHz-1GHz



Close-up

Above 1GHz



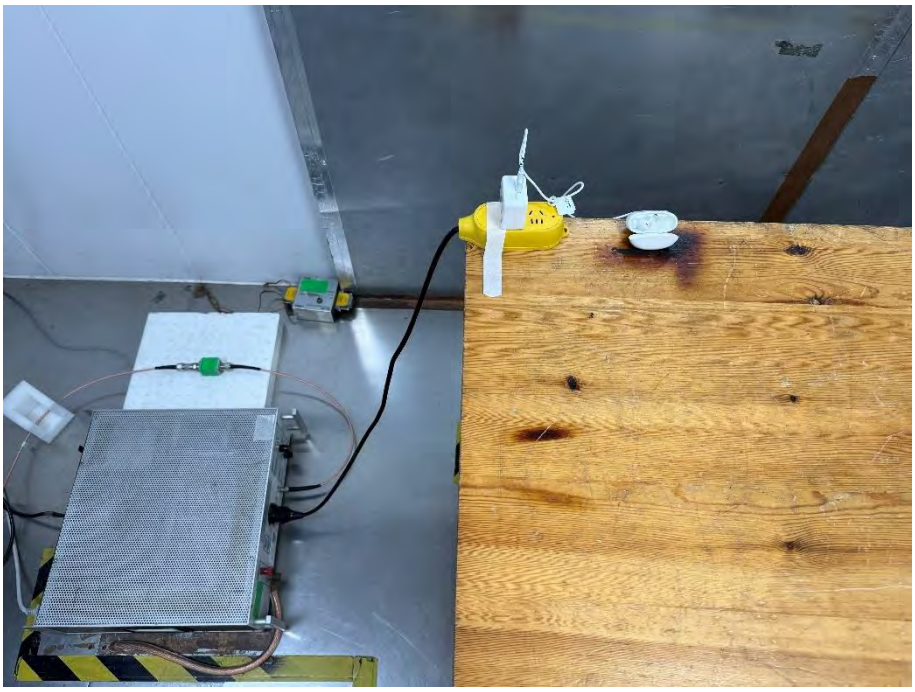
Close-up

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-Type-C Cable

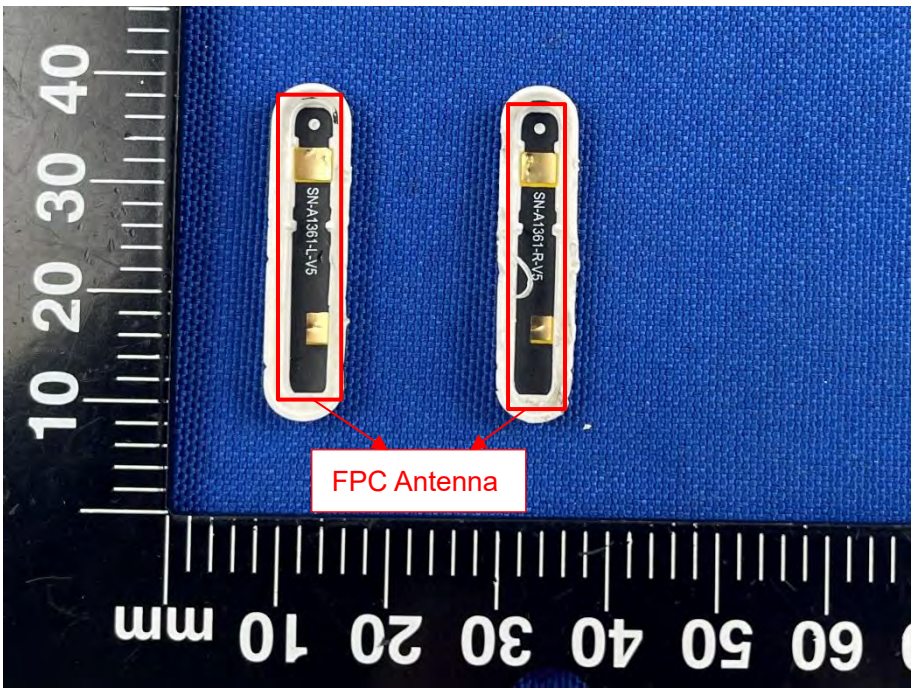
Accessory-Charging Case

ANNEX C EUT INTERNAL PHOTOS

EUT UNCOVER VIEW 1

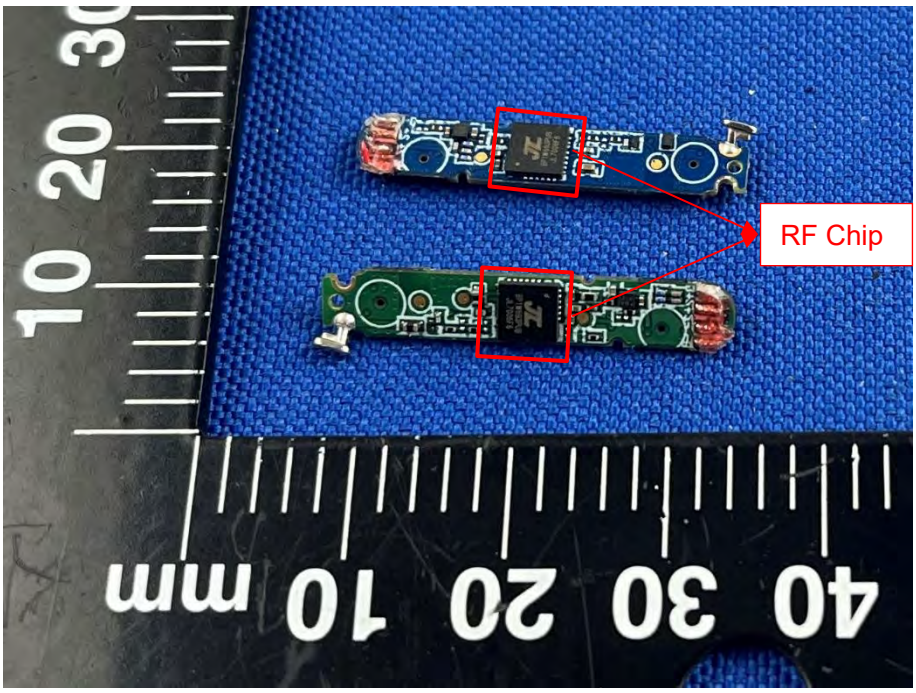
EUT UNCOVER VIEW 2

CLOSE-UP

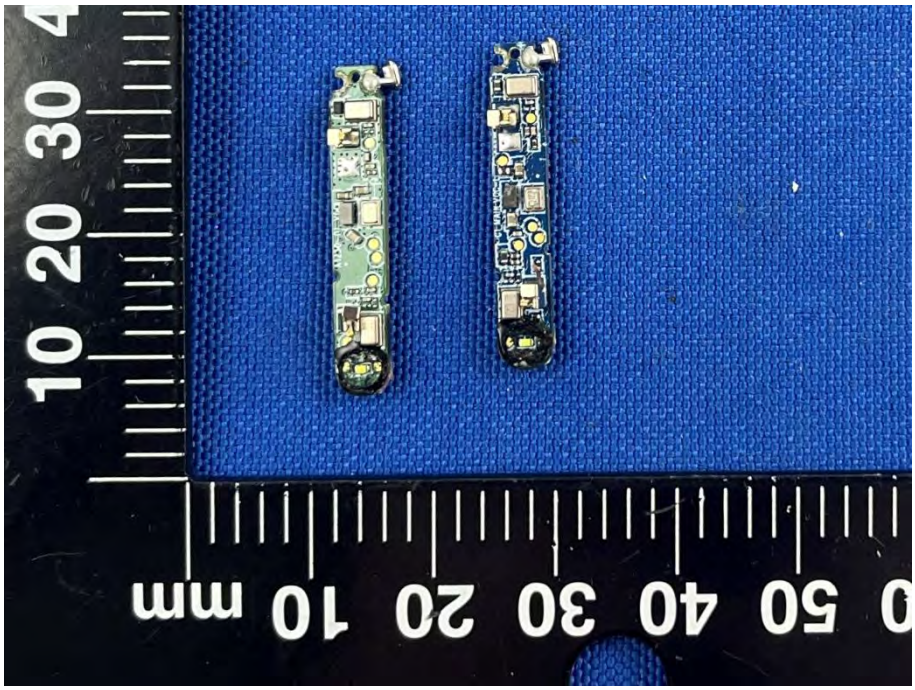


EUT UNCOVER VIEW 3

MAIN BOARD TOP VIEW

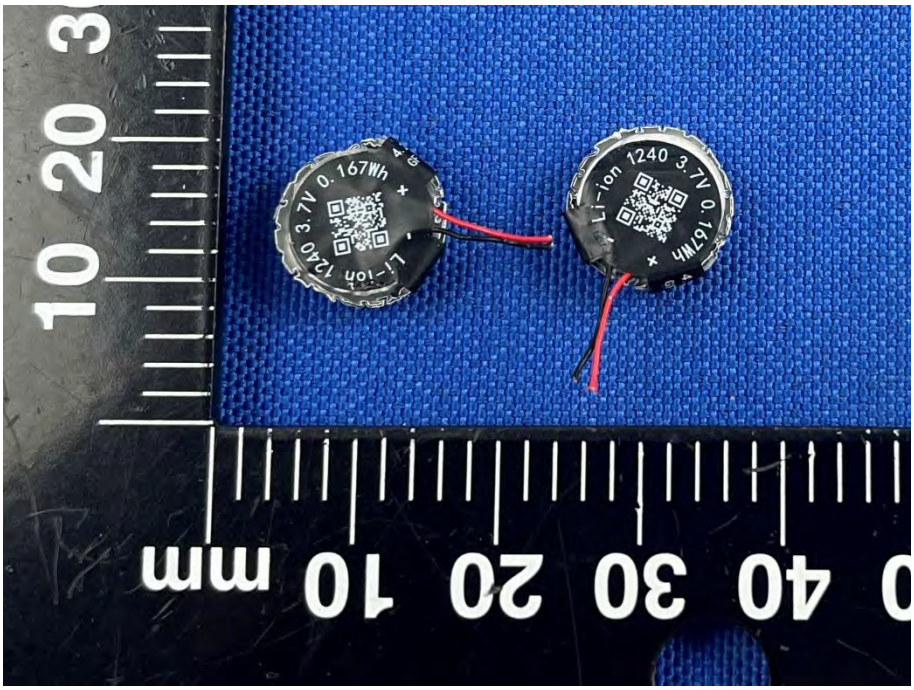


MAIN BOARD REAR VIEW



BATTERY (FRONT)

BATTERY (REAR)



Statement

1. The laboratory guarantees the scientificity, accuracy and impartiality of the test, and is responsible for all the information in the report, except the information provided by the customer. The customer is responsible for the impact of the information provided on the validity of the results.
2. The report without China inspection body and laboratory Mandatory Approval (CMA) mark has no effect of proving to the society.
3. For the report with CNAS mark or A2LA mark, the items marked with "☆" are not within the accredited scope.
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--END OF REPORT--