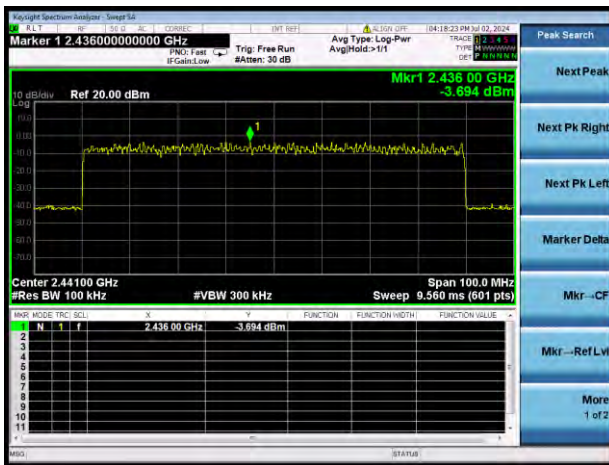


8-DPSK HOPPING, CARRIER LEVEL



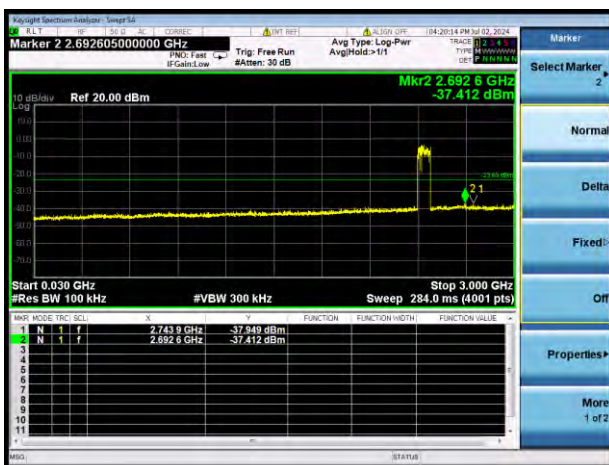
8-DPSK Hopping BAND EDGE (LOW)



8-DPSK Hopping BAND EDGE (HIGH)



8-DPSK Hopping Mode, SPURIOUS  
30 MHz ~ 3 GHz



8-DPSK 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 50 $\mu$ H/50 $\Omega$  line impedance stabilization network (LISN).

Frequency range (MHz)	Conducted Limit (dB $\mu$ V)	
	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: Not applicable.

## 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 ( $\mu\text{V}/\text{m}$ )	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 (dB $\mu\text{V}/\text{m}$ ) = 20\*log[Field Strength ( $\mu\text{V}/\text{m}$ )].
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 <sup>1</sup>: The symbol of "--" in the table which means not application.

Note <sup>2</sup>: 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 <sup>3</sup>: The EUT was tested in Link mode and the charging.

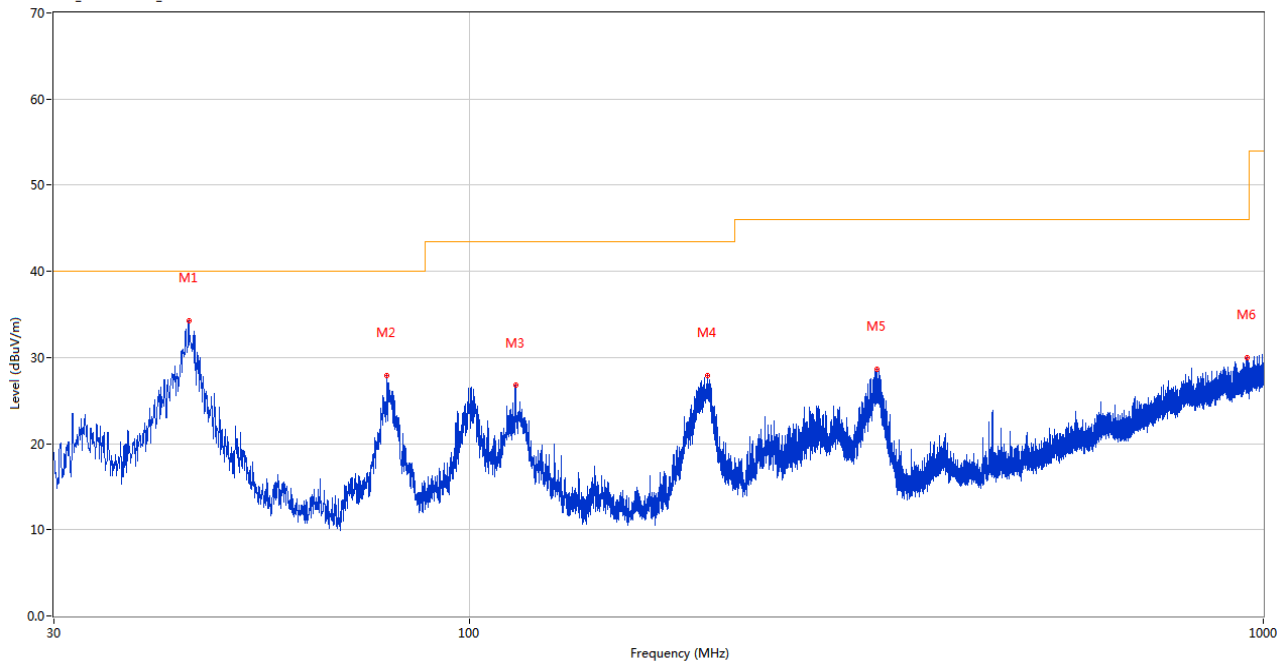
Note <sup>4</sup>: Results (dBuV/m) = Original reading level of Spectrum Analyzer (dBuV/m) + Factor (dB)

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

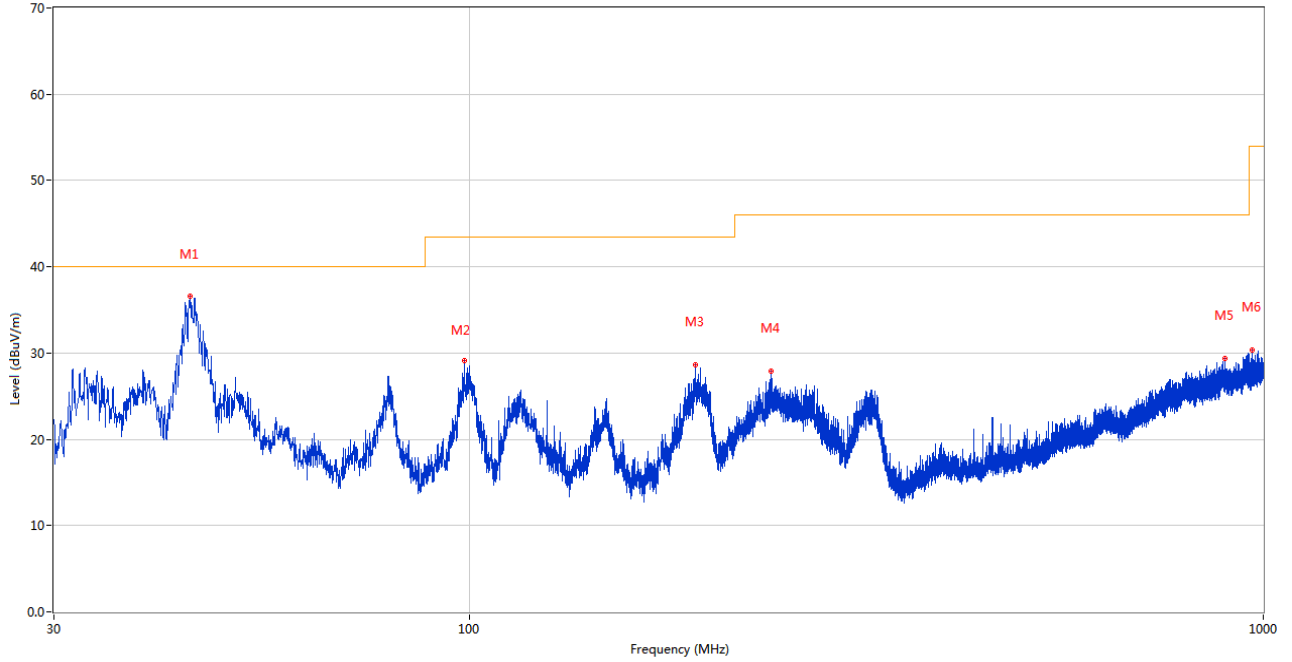
RE Test case\_FCC Part 15C\_FCC Part 15C-30MHz-1GHz



No.	Frequency (MHz)	Results (dBuV/m)	Factor (dB)	Limit (dBuV/m)	Margin (dB)	Detector	Table (Degree)	Height (cm)	Antenna	Verdict
1	44.356	34.31	-26.86	40.0	5.69	Peak	183.00	200	Horizontal	Pass
2	78.743	27.89	-30.49	40.0	12.11	Peak	95.00	200	Horizontal	Pass
3	114.341	26.74	-28.63	43.5	16.76	Peak	88.00	200	Horizontal	Pass
4	199.653	27.92	-28.73	43.5	15.58	Peak	84.00	100	Horizontal	Pass
5	325.802	28.63	-23.72	46.0	17.37	Peak	197.00	100	Horizontal	Pass
6	952.955	29.94	-9.86	46.0	16.06	Peak	124.00	200	Horizontal	Pass

30 MHz to 1 GHz, ANT V

RE Test case\_FCC Part 15C\_FCC Part 15C-30MHz-1GHz



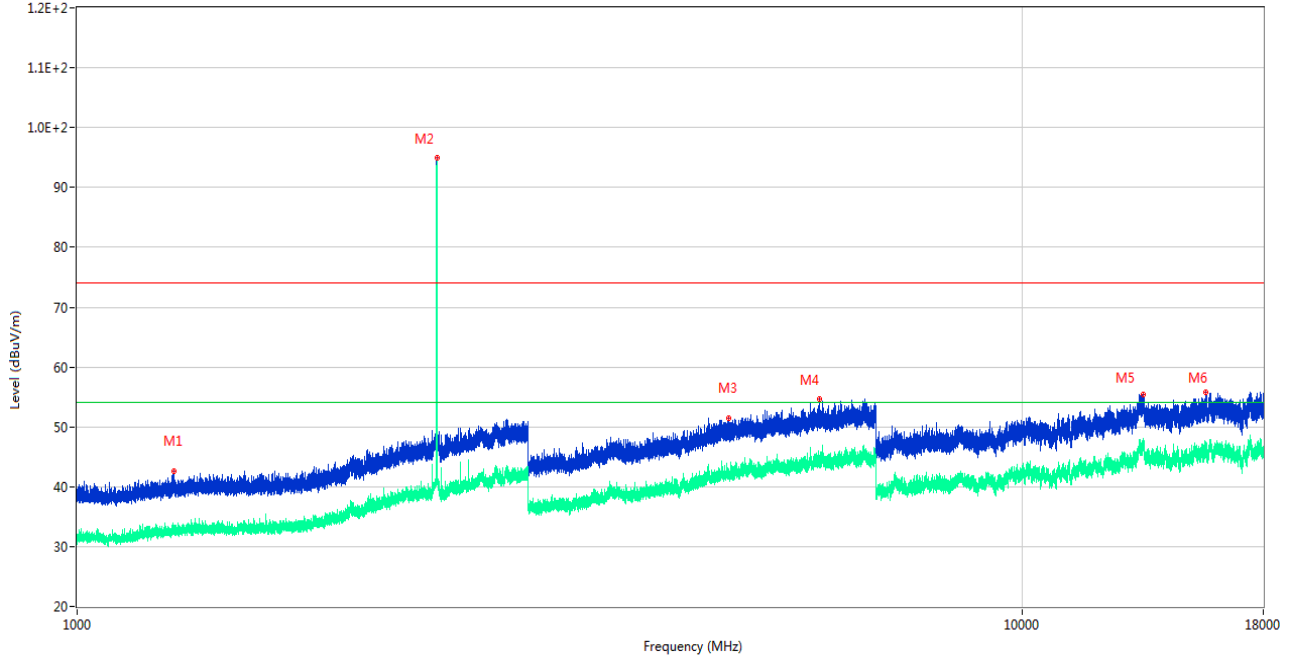
No.	Frequency (MHz)	Results (dBuV/m)	Factor (dB)	Limit (dBuV/m)	Margin (dB)	Detector	Table (Degree)	Height (cm)	Antenna	Verdict
1	44.502	36.55	-26.77	40.0	3.45	Peak	109.00	100	Vertical	Pass
2	98.579	29.14	-29.83	43.5	14.36	Peak	40.00	100	Vertical	Pass
3	192.524	28.60	-28.34	43.5	14.90	Peak	8.00	100	Vertical	Pass
4	239.714	27.89	-27.28	46.0	18.11	Peak	95.00	100	Vertical	Pass
5	894.124	29.34	-10.63	46.0	16.66	Peak	244.00	100	Vertical	Pass
6	968.669	30.31	-10.21	54.0	23.69	Peak	133.00	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**

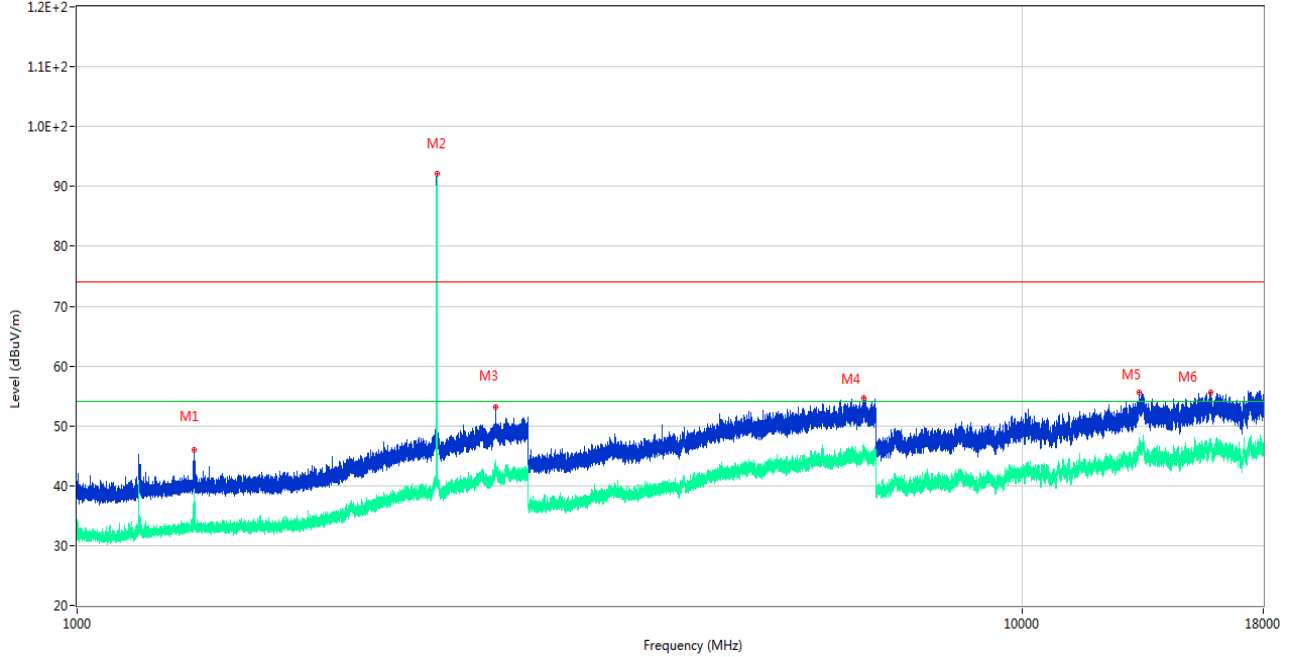
RE Test case\_FCC Part 15C\_FCC 15.247(2.4G)\_1GHz-18GHz



No.	Frequency (MHz)	Results (dBuV/m)	Factor (dB)	Limit (dBuV/m)	Margin (dB)	Detector	Table (Degree)	Height (cm)	Antenna	Verdict
1	1264.700	42.67	-17.04	74.0	31.33	Peak	360.00	400	Horizontal	Pass
1**	1264.700	33.19	-17.04	54.0	20.81	AV	360.00	400	Horizontal	Pass
2	2402.000	95.03	-9.74	74.0	-21.03	Peak	351.00	200	Horizontal	N/A
2**	2402.000	94.74	-9.74	54.0	-40.74	AV	351.00	200	Horizontal	N/A
3	4892.800	51.48	-2.86	74.0	22.52	Peak	288.00	200	Horizontal	Pass
3**	4892.800	41.87	-2.86	54.0	12.13	AV	288.00	200	Horizontal	Pass
4	6099.600	54.61	-1.72	74.0	19.39	Peak	332.00	100	Horizontal	Pass
4**	6099.600	43.88	-1.72	54.0	10.12	AV	332.00	100	Horizontal	Pass
5	13436.174	55.37	0.43	74.0	18.63	Peak	360.00	150	Horizontal	Pass
5**	13436.174	46.74	0.43	54.0	7.26	AV	360.00	150	Horizontal	Pass
6	15629.100	55.72	1.71	74.0	18.28	Peak	175.00	100	Horizontal	Pass
6**	15629.100	46.25	1.71	54.0	7.75	AV	175.00	100	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

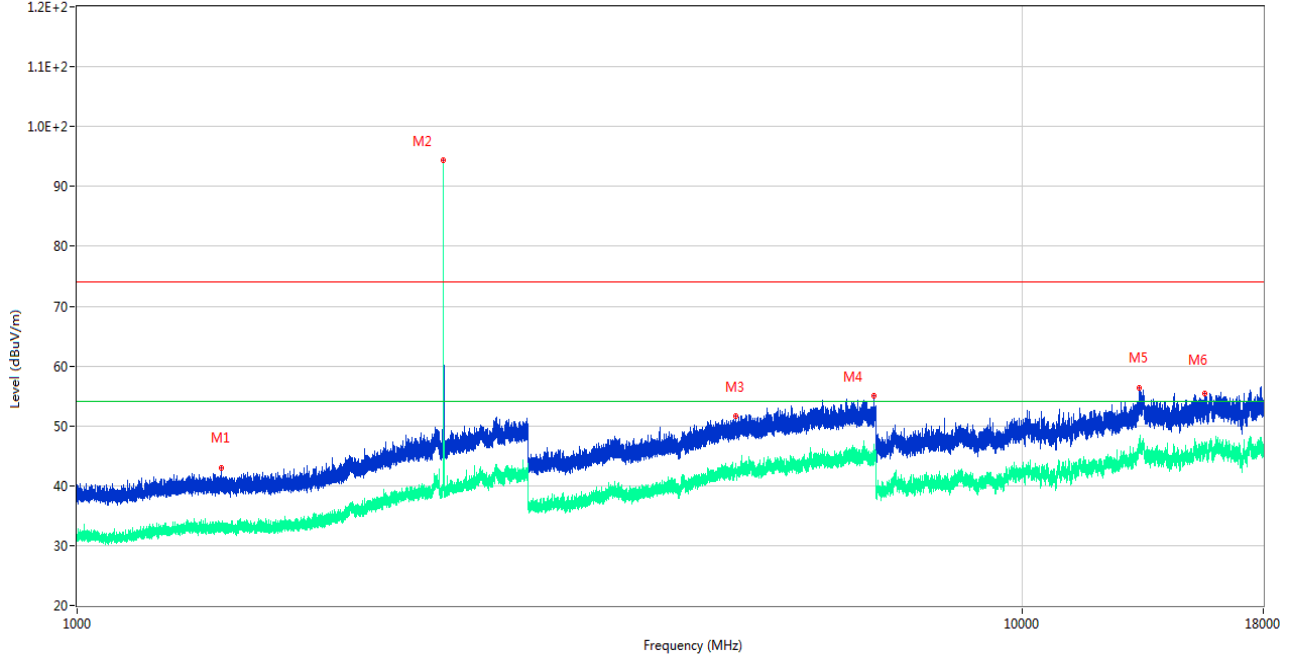


No.	Frequency (MHz)	Results (dBuV/m)	Factor (dB)	Limit (dBuV/m)	Margin (dB)	Detector	Table (Degree)	Height (cm)	Antenna	Verdict
1	1328.500	45.97	-17.09	74.0	28.03	Peak	360.00	400	Vertical	Pass
1**	1328.500	37.63	-17.09	54.0	16.37	AV	360.00	400	Vertical	Pass
2	2402.200	92.13	-9.74	74.0	-18.13	Peak	90.00	200	Vertical	N/A
2**	2402.200	91.37	-9.74	54.0	-37.37	AV	90.00	200	Vertical	N/A
3	2771.200	53.17	-8.42	74.0	20.83	Peak	34.00	150	Vertical	Pass
3**	2771.200	43.04	-8.42	54.0	10.96	AV	34.00	150	Vertical	Pass
4	6793.000	54.73	1.06	74.0	19.27	Peak	82.00	300	Vertical	Pass
4**	6793.000	45.73	1.06	54.0	8.27	AV	82.00	300	Vertical	Pass
5	13292.588	55.52	0.81	74.0	18.48	Peak	310.00	150	Vertical	Pass
5**	13292.588	45.91	0.81	54.0	8.09	AV	310.00	150	Vertical	Pass
6	15833.588	55.62	1.46	74.0	18.38	Peak	57.00	200	Vertical	Pass
6**	15833.588	45.67	1.46	54.0	8.33	AV	57.00	200	Vertical	Pass



GFSK MIDDLE CHANNEL 1 GHz to 18 GHz, ANT H

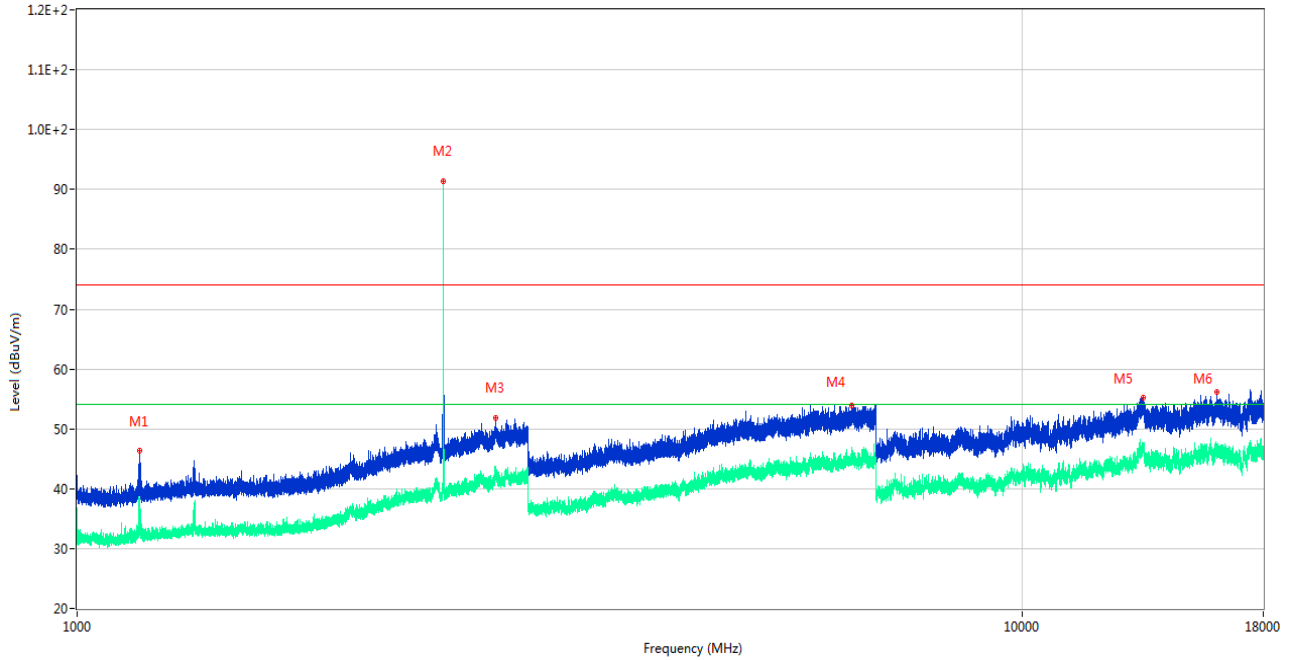
RE Test case\_FCC Part 15C\_FCC 15.247(2.4G)\_1GHz-18GHz



No.	Frequency (MHz)	Results (dBuV/m)	Factor (dB)	Limit (dBuV/m)	Margin (dB)	Detector	Table (Degree)	Height (cm)	Antenna	Verdict
1	1422.300	43.00	-16.89	74.0	31.00	Peak	97.00	300	Horizontal	Pass
1**	1422.300	33.36	-16.89	54.0	20.64	AV	97.00	300	Horizontal	Pass
2	2441.200	94.43	-12.38	74.0	-20.43	Peak	360.00	150	Horizontal	N/A
2**	2441.200	93.91	-12.38	54.0	-39.91	AV	360.00	150	Horizontal	N/A
3	4981.800	51.59	-1.61	74.0	22.41	Peak	252.00	150	Horizontal	Pass
3**	4981.800	42.63	-1.61	54.0	11.37	AV	252.00	150	Horizontal	Pass
4	6976.800	55.03	1.68	74.0	18.97	Peak	19.00	200	Horizontal	Pass
4**	6976.800	45.02	1.68	54.0	8.98	AV	19.00	200	Horizontal	Pass
5	13315.425	56.41	0.89	74.0	17.59	Peak	113.00	400	Horizontal	Pass
5**	13315.425	46.39	0.89	54.0	7.61	AV	113.00	400	Horizontal	Pass
6	15616.238	55.42	1.52	74.0	18.58	Peak	248.00	150	Horizontal	Pass
6**	15616.238	45.35	1.52	54.0	8.65	AV	248.00	150	Horizontal	Pass

GFSK MIDDLE CHANNEL 1 GHz to 18 GHz, ANT V

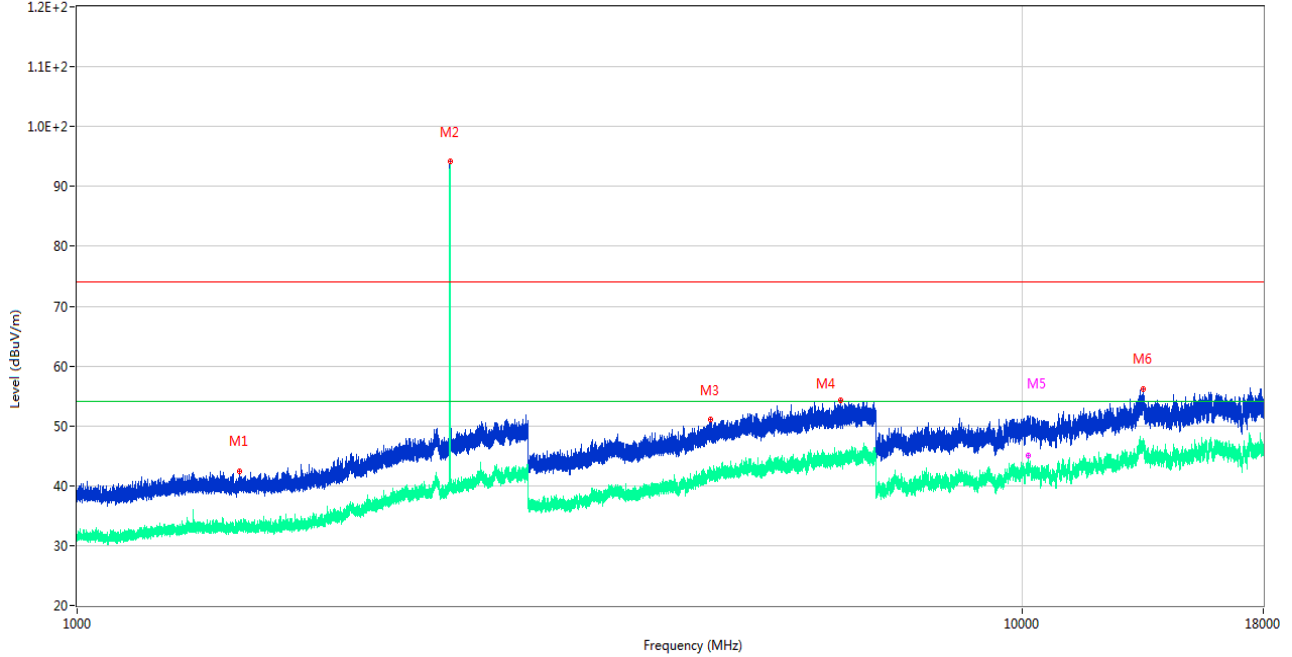
RE Test case\_FCC Part 15C\_FCC 15.247(2.4G)\_1GHz-18GHz



No.	Frequency (MHz)	Results (dBuV/m)	Factor (dB)	Limit (dBuV/m)	Margin (dB)	Detector	Table (Degree)	Height (cm)	Antenna	Verdict
1	1165.500	46.33	-17.60	74.0	27.67	Peak	32.00	200	Vertical	Pass
1**	1165.500	34.41	-17.60	54.0	19.59	AV	32.00	200	Vertical	Pass
2	2441.000	91.39	-12.38	74.0	-17.39	Peak	86.00	150	Vertical	N/A
2**	2441.000	90.85	-12.38	54.0	-36.85	AV	86.00	150	Vertical	N/A
3	2771.800	51.91	-8.57	74.0	22.09	Peak	182.00	150	Vertical	Pass
3**	2771.800	42.96	-8.57	54.0	11.04	AV	182.00	150	Vertical	Pass
4	6610.600	53.95	0.70	74.0	20.05	Peak	203.00	400	Vertical	Pass
4**	6610.600	45.63	0.70	54.0	8.37	AV	203.00	400	Vertical	Pass
5	13426.201	55.17	0.40	74.0	18.83	Peak	80.00	150	Vertical	Pass
5**	13426.201	47.40	0.40	54.0	6.60	AV	80.00	150	Vertical	Pass
6	16092.675	56.18	1.38	74.0	17.82	Peak	197.00	150	Vertical	Pass
6**	16092.675	46.28	1.38	54.0	7.72	AV	197.00	150	Vertical	Pass

GFSK HIGH CHANNEL 1 GHz to 18 GHz, ANT H

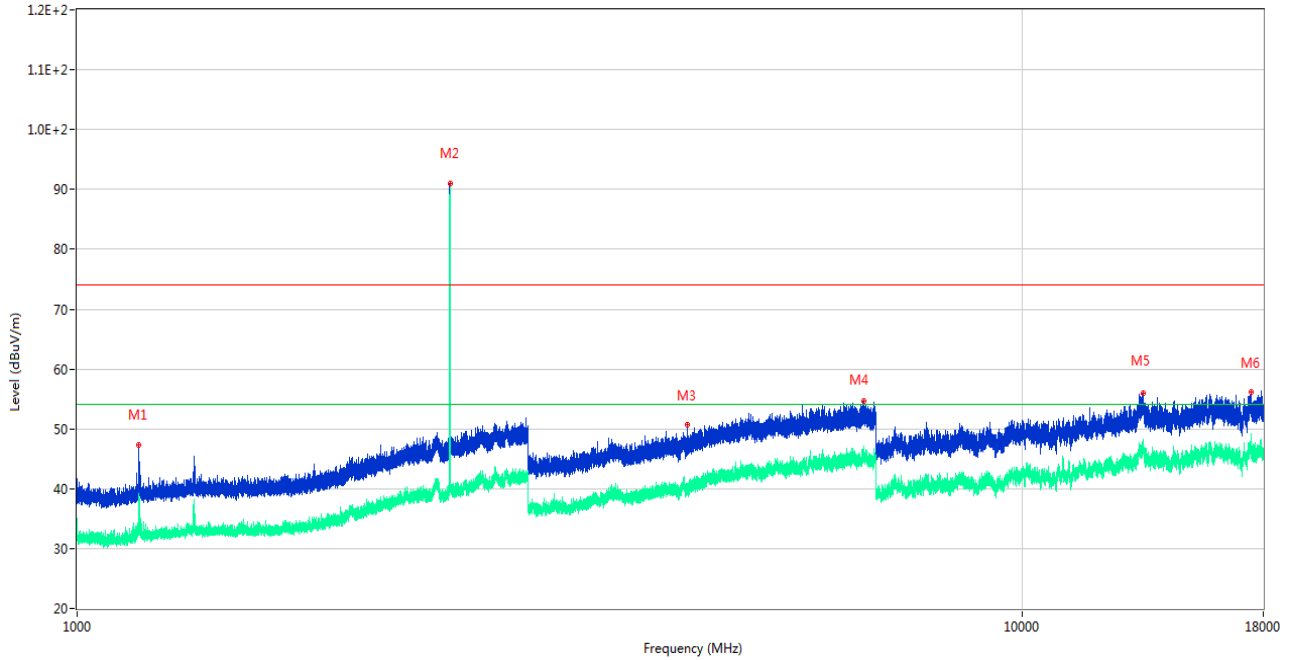
RE Test case\_FCC Part 15C\_FCC 15.247(2.4G)\_1GHz-18GHz



No.	Frequency (MHz)	Results (dBuV/m)	Factor (dB)	Limit (dBuV/m)	Margin (dB)	Detector	Table (Degree)	Height (cm)	Antenna	Verdict
1	1486.800	42.50	-16.75	74.0	31.50	Peak	264.00	400	Horizontal	Pass
1**	1486.800	33.16	-16.75	54.0	20.84	AV	264.00	400	Horizontal	Pass
2	2480.000	94.15	-11.30	74.0	-20.15	Peak	0.00	100	Horizontal	N/A
2**	2480.000	93.78	-11.30	54.0	-39.78	AV	0.00	100	Horizontal	N/A
3	4684.800	51.00	-2.63	74.0	23.00	Peak	298.00	150	Horizontal	Pass
3**	4684.800	41.51	-2.63	54.0	12.49	AV	298.00	150	Horizontal	Pass
4	6424.800	54.32	-0.55	74.0	19.68	Peak	241.00	400	Horizontal	Pass
4**	6424.800	44.87	-0.55	54.0	9.13	AV	241.00	400	Horizontal	Pass
5	10143.237	51.41	0.04	74.0	22.59	Peak	360.00	150	Horizontal	Pass
5**	10143.237	45.02	0.04	54.0	8.98	AV	360.00	150	Horizontal	Pass
6	13424.625	56.25	0.40	74.0	17.75	Peak	360.00	150	Horizontal	Pass
6**	13424.625	46.74	0.40	54.0	7.26	AV	360.00	150	Horizontal	Pass

GFSK HIGH CHANNEL 1 GHz to 18 GHz, ANT V

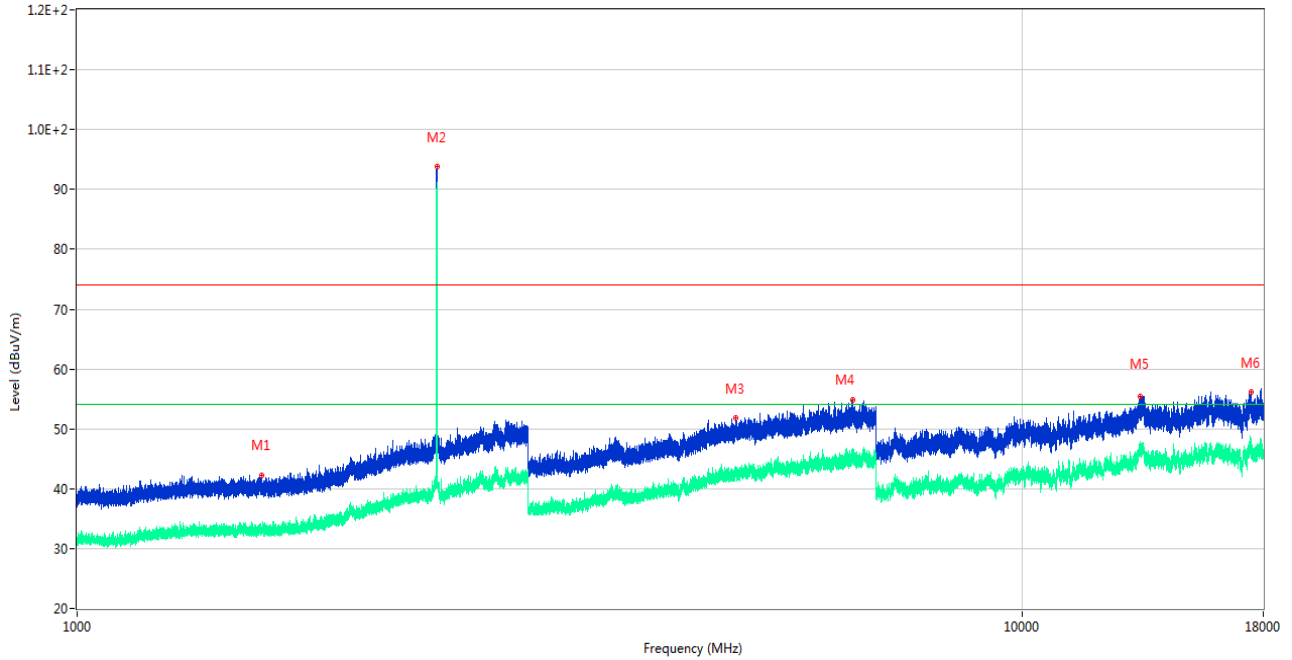
RE Test case\_FCC Part 15C\_FCC 15.247(2.4G)\_1GHz-18GHz



No.	Frequency (MHz)	Results (dBuV/m)	Factor (dB)	Limit (dBuV/m)	Margin (dB)	Detector	Table (Degree)	Height (cm)	Antenna	Verdict
1	1163.100	47.32	-17.59	74.0	26.68	Peak	5.00	100	Vertical	Pass
1**	1163.100	33.50	-17.59	54.0	20.50	AV	5.00	100	Vertical	Pass
2	2479.900	91.03	-11.32	74.0	-17.03	Peak	92.00	150	Vertical	N/A
2**	2479.900	90.10	-11.32	54.0	-36.10	AV	92.00	150	Vertical	N/A
3	4426.800	50.68	-3.97	74.0	23.32	Peak	312.00	150	Vertical	Pass
3**	4426.800	40.10	-3.97	54.0	13.90	AV	312.00	150	Vertical	Pass
4	6802.600	54.59	1.55	74.0	19.41	Peak	8.00	300	Vertical	Pass
4**	6802.600	45.54	1.55	54.0	8.46	AV	8.00	300	Vertical	Pass
5	13420.687	56.03	0.40	74.0	17.97	Peak	57.00	150	Vertical	Pass
5**	13420.687	46.19	0.40	54.0	7.81	AV	57.00	150	Vertical	Pass
6	17464.238	56.09	2.88	74.0	17.91	Peak	261.00	200	Vertical	Pass
6**	17464.238	47.81	2.88	54.0	6.19	AV	261.00	200	Vertical	Pass

8-DPSK LOW CHANNEL 1 GHz to 18 GHz, ANT H

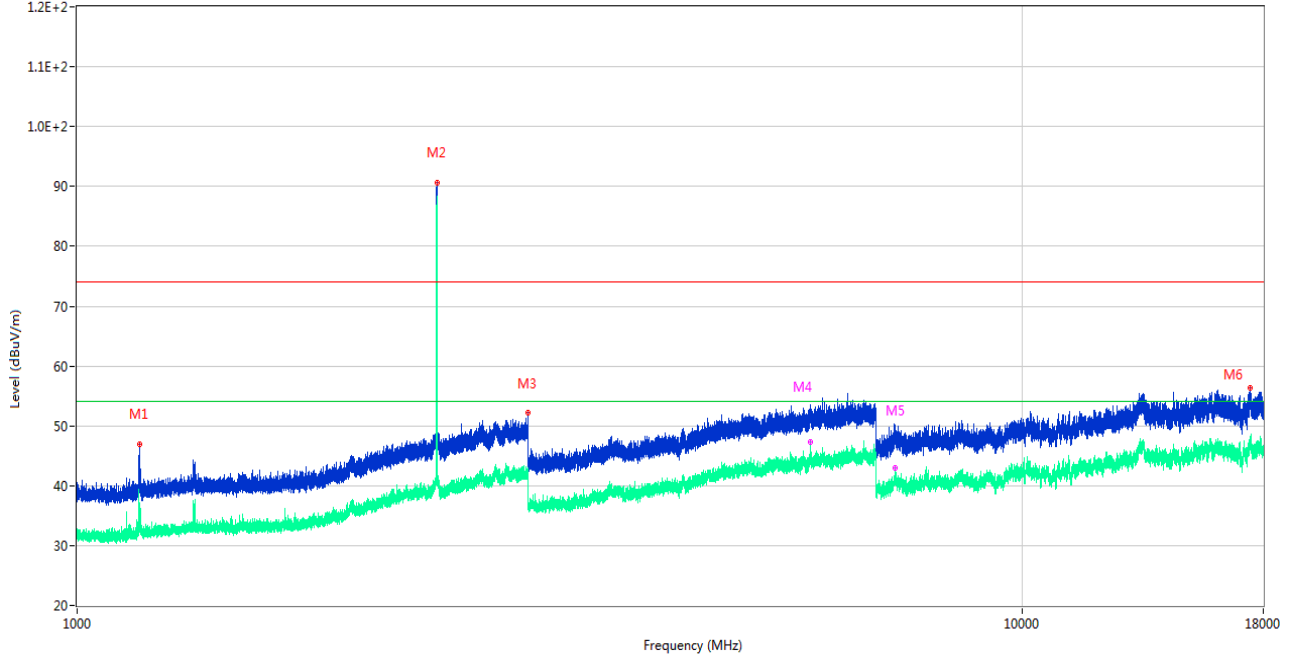
RE Test case\_FCC Part 15C\_FCC 15.247(2.4G)\_1GHz-18GHz



No.	Frequency (MHz)	Results (dBuV/m)	Factor (dB)	Limit (dBuV/m)	Margin (dB)	Detector	Table (Degree)	Height (cm)	Antenna	Verdict
1	1567.700	42.25	-17.14	74.0	31.75	Peak	253.00	300	Horizontal	Pass
1**	1567.700	33.15	-17.14	54.0	20.85	AV	253.00	300	Horizontal	Pass
2	2401.900	93.77	-9.75	74.0	-19.77	Peak	360.00	200	Horizontal	N/A
2**	2401.900	90.43	-9.75	54.0	-36.43	AV	360.00	200	Horizontal	N/A
3	4983.400	51.79	-1.68	74.0	22.21	Peak	284.00	100	Horizontal	Pass
3**	4983.400	42.90	-1.68	54.0	11.10	AV	284.00	100	Horizontal	Pass
4	6613.000	54.77	0.37	74.0	19.23	Peak	307.00	400	Horizontal	Pass
4**	6613.000	44.98	0.37	54.0	9.02	AV	307.00	400	Horizontal	Pass
5	13321.463	55.47	0.91	74.0	18.53	Peak	19.00	150	Horizontal	Pass
5**	13321.463	47.03	0.91	54.0	6.97	AV	19.00	150	Horizontal	Pass
6	17458.989	56.08	2.84	74.0	17.92	Peak	280.00	100	Horizontal	Pass
6**	17458.989	46.84	2.84	54.0	7.16	AV	280.00	100	Horizontal	Pass

8-DPSK LOW CHANNEL 1 GHz to 18 GHz, ANT V

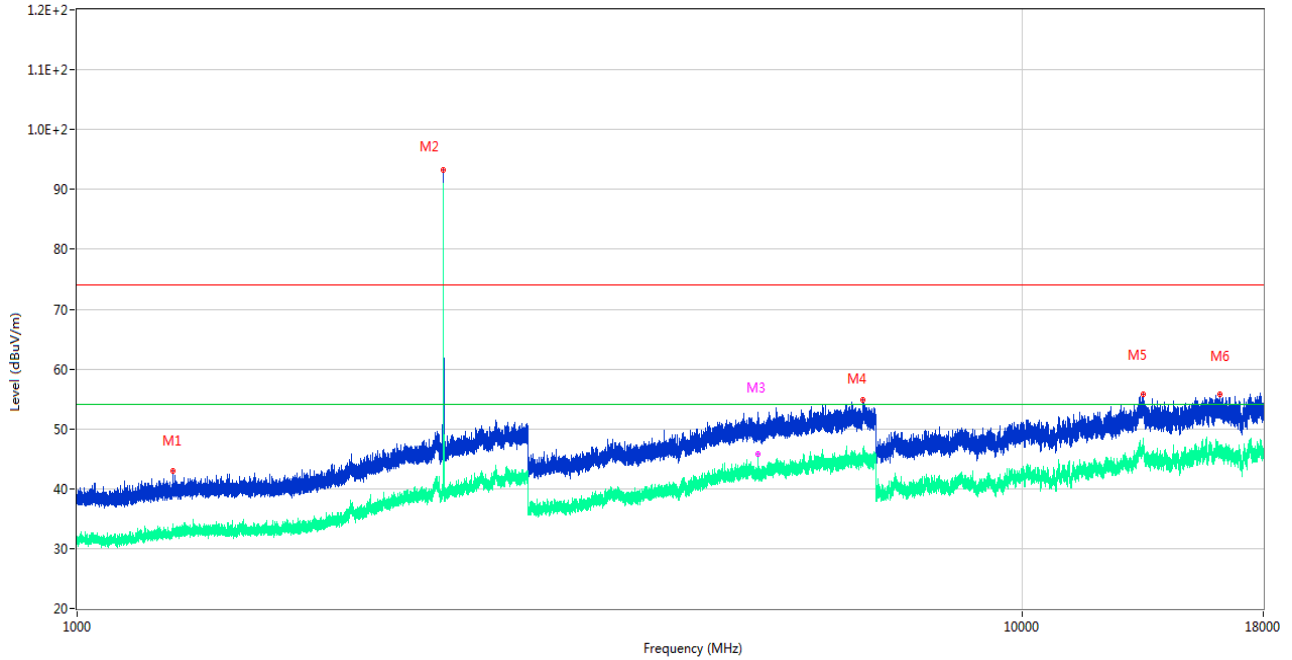
RE Test case\_FCC Part 15C\_FCC 15.247(2.4G)\_1GHz-18GHz



No.	Frequency (MHz)	Results (dBuV/m)	Factor (dB)	Limit (dBuV/m)	Margin (dB)	Detector	Table (Degree)	Height (cm)	Antenna	Verdict
1	1165.500	46.98	-17.60	74.0	27.02	Peak	17.00	100	Vertical	Pass
1**	1165.500	34.85	-17.60	54.0	19.15	AV	17.00	100	Vertical	Pass
2	2401.900	90.70	-9.75	74.0	-16.70	Peak	89.00	100	Vertical	N/A
2**	2401.900	86.71	-9.75	54.0	-32.71	AV	89.00	100	Vertical	N/A
3	2997.500	52.19	-9.21	74.0	21.81	Peak	178.00	150	Vertical	Pass
3**	2997.500	41.53	-9.21	54.0	12.47	AV	178.00	150	Vertical	Pass
4	5969.400	53.03	0.09	74.0	20.97	Peak	98.00	150	Vertical	Pass
4**	5969.400	47.34	0.09	54.0	6.66	AV	98.00	150	Vertical	Pass
5	7342.700	48.16	-3.27	74.0	25.84	Peak	240.00	150	Vertical	Pass
5**	7342.700	42.89	-3.27	54.0	11.11	AV	240.00	150	Vertical	Pass
6	17440.088	56.27	3.02	74.0	17.73	Peak	56.00	400	Vertical	Pass
6**	17440.088	46.49	3.02	54.0	7.51	AV	56.00	400	Vertical	Pass

8-DPSK MIDDLE CHANNEL 1 GHz to 18 GHz, ANT H

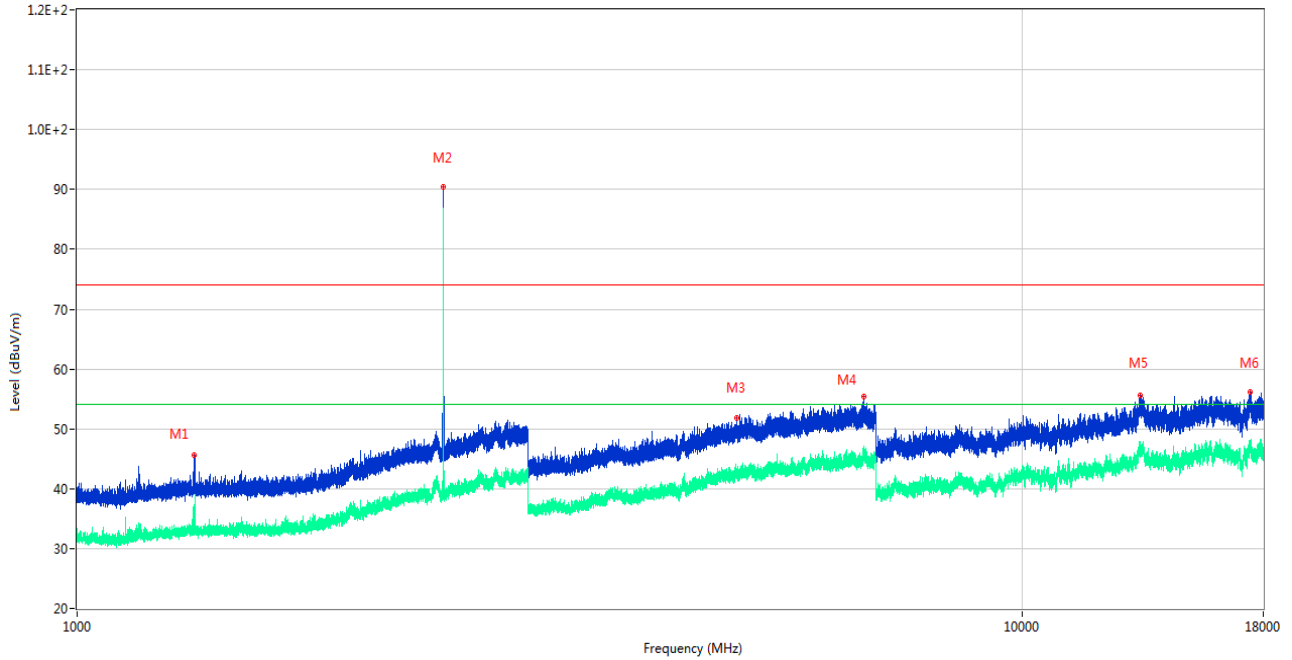
RE Test case\_FCC Part 15C\_FCC 15.247(2.4G)\_1GHz-18GHz



No.	Frequency (MHz)	Results (dBuV/m)	Factor (dB)	Limit (dBuV/m)	Margin (dB)	Detector	Table (Degree)	Height (cm)	Antenna	Verdict
1	1264.100	43.04	-17.05	74.0	30.96	Peak	334.00	400	Horizontal	Pass
1**	1264.100	32.38	-17.05	54.0	21.62	AV	334.00	400	Horizontal	Pass
2	2441.100	93.29	-12.38	74.0	-19.29	Peak	0.00	150	Horizontal	N/A
2**	2441.100	90.34	-12.38	54.0	-36.34	AV	0.00	150	Horizontal	N/A
3	5253.000	52.83	-2.00	74.0	21.17	Peak	360.00	150	Horizontal	Pass
3**	5253.000	45.79	-2.00	54.0	8.21	AV	360.00	150	Horizontal	Pass
4	6789.600	54.81	0.65	74.0	19.19	Peak	0.00	400	Horizontal	Pass
4**	6789.600	44.97	0.65	54.0	9.03	AV	0.00	400	Horizontal	Pass
5	13430.138	55.78	0.40	74.0	18.22	Peak	327.00	150	Horizontal	Pass
5**	13430.138	47.22	0.40	54.0	6.78	AV	327.00	150	Horizontal	Pass
6	16207.388	55.84	1.47	74.0	18.16	Peak	306.00	300	Horizontal	Pass
6**	16207.388	46.07	1.47	54.0	7.93	AV	306.00	300	Horizontal	Pass

8-DPSK MIDDLE CHANNEL 1 GHz to 18 GHz, ANT V

RE Test case\_FCC Part 15C\_FCC 15.247(2.4G)\_1GHz-18GHz

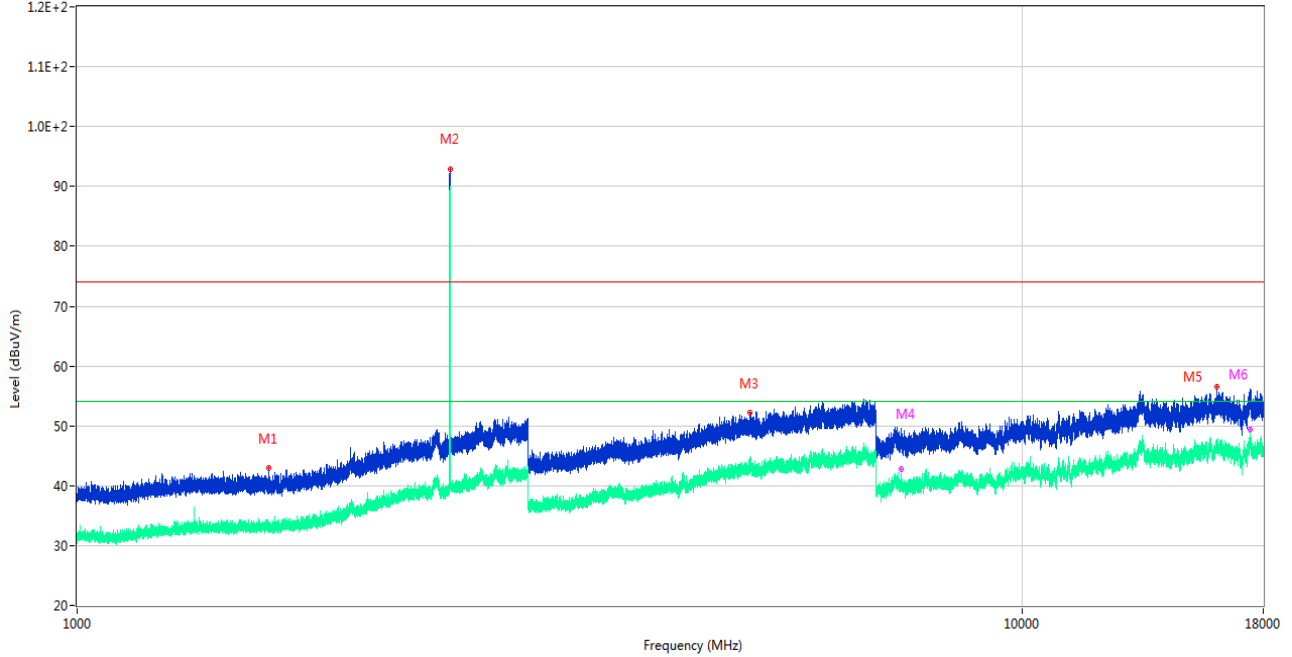


No.	Frequency (MHz)	Results (dBuV/m)	Factor (dB)	Limit (dBuV/m)	Margin (dB)	Detector	Table (Degree)	Height (cm)	Antenna	Verdict
1	1330.200	45.59	-16.99	74.0	28.41	Peak	360.00	400	Vertical	Pass
1**	1330.200	34.03	-16.99	54.0	19.97	AV	360.00	400	Vertical	Pass
2	2440.900	90.41	-12.38	74.0	-16.41	Peak	88.00	150	Vertical	N/A
2**	2440.900	86.73	-12.38	54.0	-32.73	AV	88.00	150	Vertical	N/A
3	4988.400	51.83	-2.34	74.0	22.17	Peak	354.00	200	Vertical	Pass
3**	4988.400	42.86	-2.34	54.0	11.14	AV	354.00	200	Vertical	Pass
4	6806.400	55.34	2.33	74.0	18.66	Peak	204.00	300	Vertical	Pass
4**	6806.400	45.94	2.33	54.0	8.06	AV	204.00	300	Vertical	Pass
5	13334.062	55.50	0.99	74.0	18.50	Peak	259.00	150	Vertical	Pass
5**	13334.062	46.35	0.99	54.0	7.65	AV	259.00	150	Vertical	Pass
6	17415.676	56.11	3.65	74.0	17.89	Peak	123.00	100	Vertical	Pass
6**	17415.676	46.83	3.65	54.0	7.17	AV	123.00	100	Vertical	Pass



8-DPSK HIGH CHANNEL 1 GHz to 18 GHz, ANT H

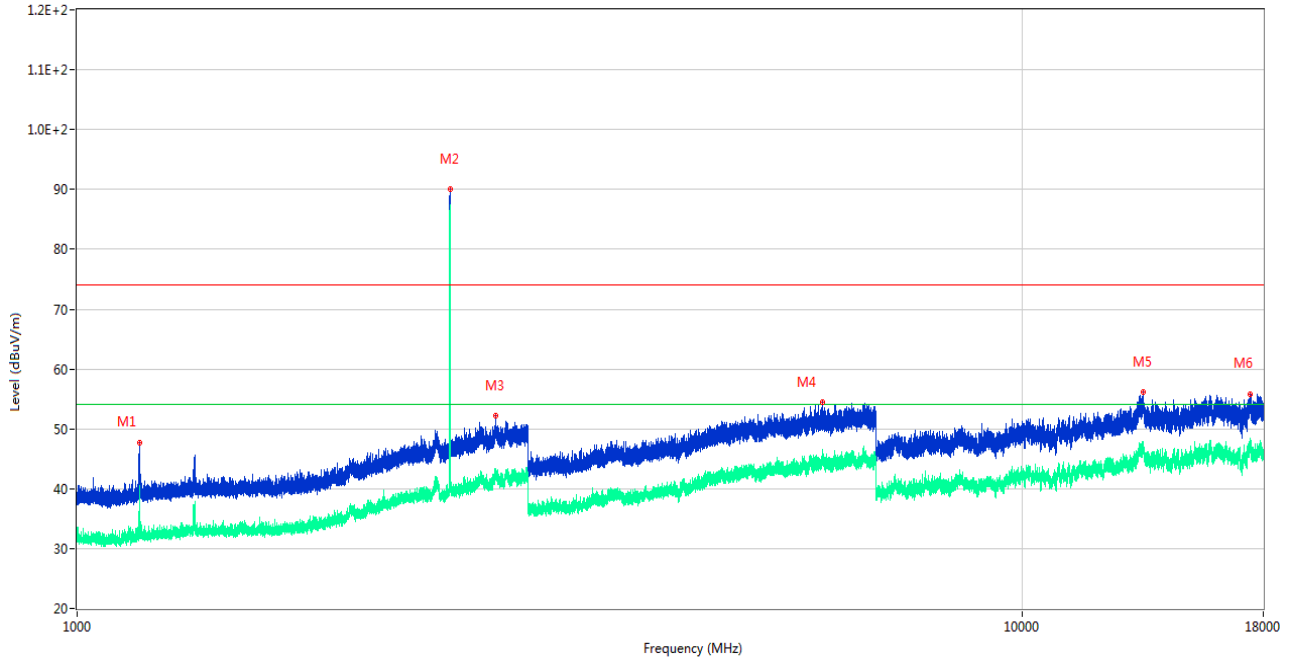
RE Test case\_FCC Part 15C\_FCC 15.247(2.4G)\_1GHz-18GHz



No.	Frequency (MHz)	Results (dBuV/m)	Factor (dB)	Limit (dBuV/m)	Margin (dB)	Detector	Table (Degree)	Height (cm)	Antenna	Verdict
1	1596.600	42.95	-17.11	74.0	31.05	Peak	124.00	100	Horizontal	Pass
1**	1596.600	33.48	-17.11	54.0	20.52	AV	124.00	100	Horizontal	Pass
2	2479.900	92.91	-11.32	74.0	-18.91	Peak	0.00	200	Horizontal	N/A
2**	2479.900	89.89	-11.32	54.0	-35.89	AV	0.00	200	Horizontal	N/A
3	5153.000	52.17	-1.40	74.0	21.83	Peak	314.00	150	Horizontal	Pass
3**	5153.000	42.89	-1.40	54.0	11.11	AV	314.00	150	Horizontal	Pass
4	7449.075	47.44	-3.24	74.0	26.56	Peak	160.00	150	Horizontal	Pass
4**	7449.075	42.74	-3.24	54.0	11.26	AV	160.00	150	Horizontal	Pass
5	16064.850	56.60	1.14	74.0	17.40	Peak	217.00	400	Horizontal	Pass
5**	16064.850	45.99	1.14	54.0	8.01	AV	217.00	400	Horizontal	Pass
6	17437.725	53.75	3.13	74.0	20.25	Peak	85.00	150	Horizontal	Pass
6**	17437.725	49.34	3.13	54.0	4.66	AV	85.00	150	Horizontal	Pass

8-DPSK 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	1165.200	47.69	-17.59	74.0	26.31	Peak	27.00	200	Vertical	Pass
1**	1165.200	38.31	-17.59	54.0	15.69	AV	27.00	200	Vertical	Pass
2	2480.000	90.10	-11.30	74.0	-16.10	Peak	88.00	150	Vertical	N/A
2**	2480.000	87.39	-11.30	54.0	-33.39	AV	88.00	150	Vertical	N/A
3	2771.200	52.22	-8.42	74.0	21.78	Peak	146.00	150	Vertical	Pass
3**	2771.200	42.57	-8.42	54.0	11.43	AV	146.00	150	Vertical	Pass
4	6154.400	54.55	0.33	74.0	19.45	Peak	360.00	100	Vertical	Pass
4**	6154.400	45.53	0.33	54.0	8.47	AV	360.00	100	Vertical	Pass
5	13437.225	56.11	0.44	74.0	17.89	Peak	315.00	150	Vertical	Pass
5**	13437.225	46.45	0.44	54.0	7.55	AV	315.00	150	Vertical	Pass
6	17417.775	55.74	3.70	74.0	18.26	Peak	179.00	300	Vertical	Pass
6**	17417.775	46.56	3.70	54.0	7.44	AV	179.00	300	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 <sup>1</sup>: The lowest and highest channels are tested to verify the band edge emissions. Please refer to the following the plots for emissions values.

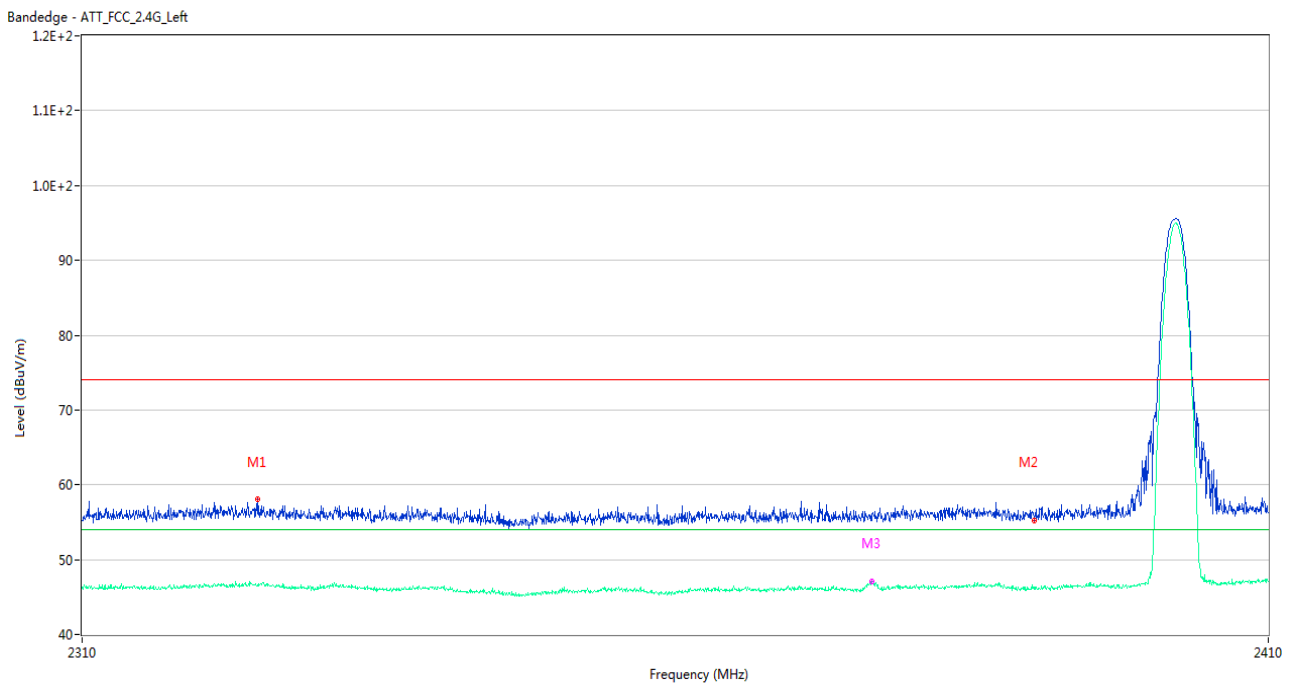
Note <sup>2</sup>: The test data all are tested in the vertical and horizontal antenna which the trace is max hold. So these plots have shown the worst case.

Note <sup>3</sup>: 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 <sup>4</sup>: The Level (dBuV/m) has been corrected by factor.

#### Test Data and Plots

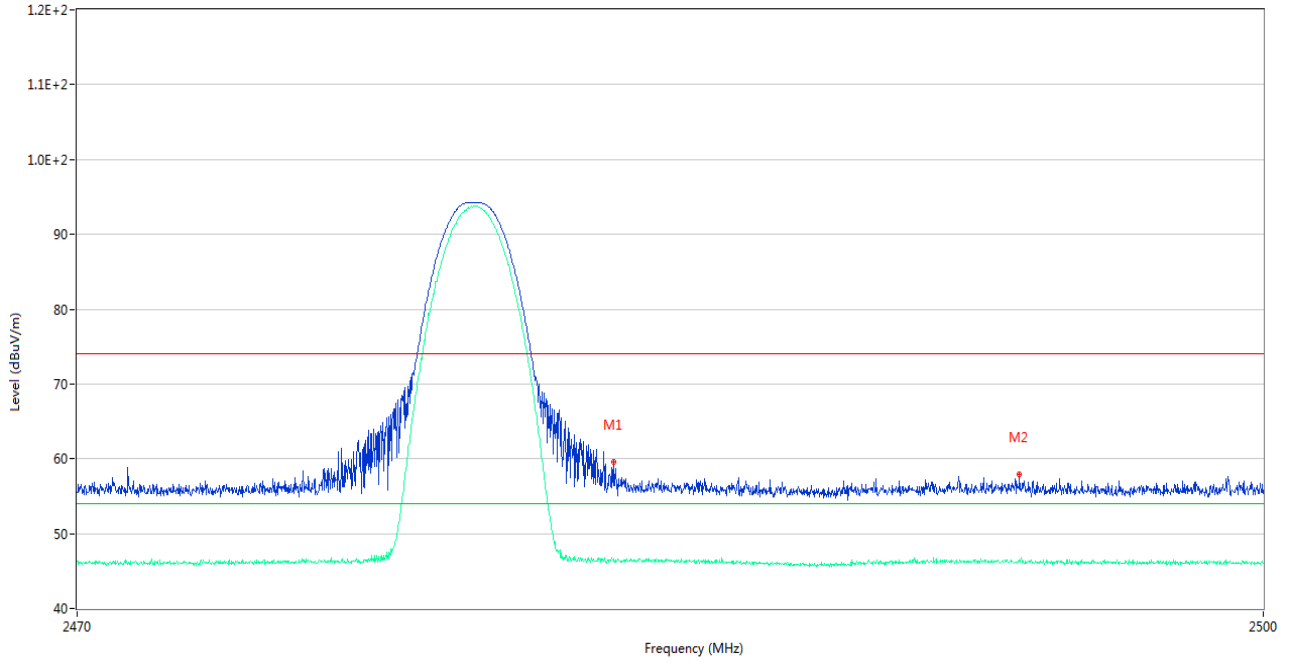
##### GFSK LOW CHANNEL



No.	Frequency (MHz)	Results (dBuV/m)	Factor (dB)	Limit (dBuV/m)	Margin (dB)	Detector	Table (Degree)	Height (cm)	Antenna	Verdict
1	2324.500	58.08	1.71	74.0	15.92	Peak	63.00	200	Horizontal	Pass
1**	2324.500	46.68	1.71	54.0	7.32	AV	63.00	200	Horizontal	Pass
2	2389.950	55.16	1.92	74.0	18.84	Peak	276.00	100	Horizontal	Pass
2**	2389.950	45.98	1.92	54.0	8.02	AV	276.00	100	Horizontal	Pass
3	2376.150	56.15	1.70	74.0	17.85	Peak	360.00	150	Horizontal	Pass
3**	2376.150	47.08	1.70	54.0	6.92	AV	360.00	150	Horizontal	Pass

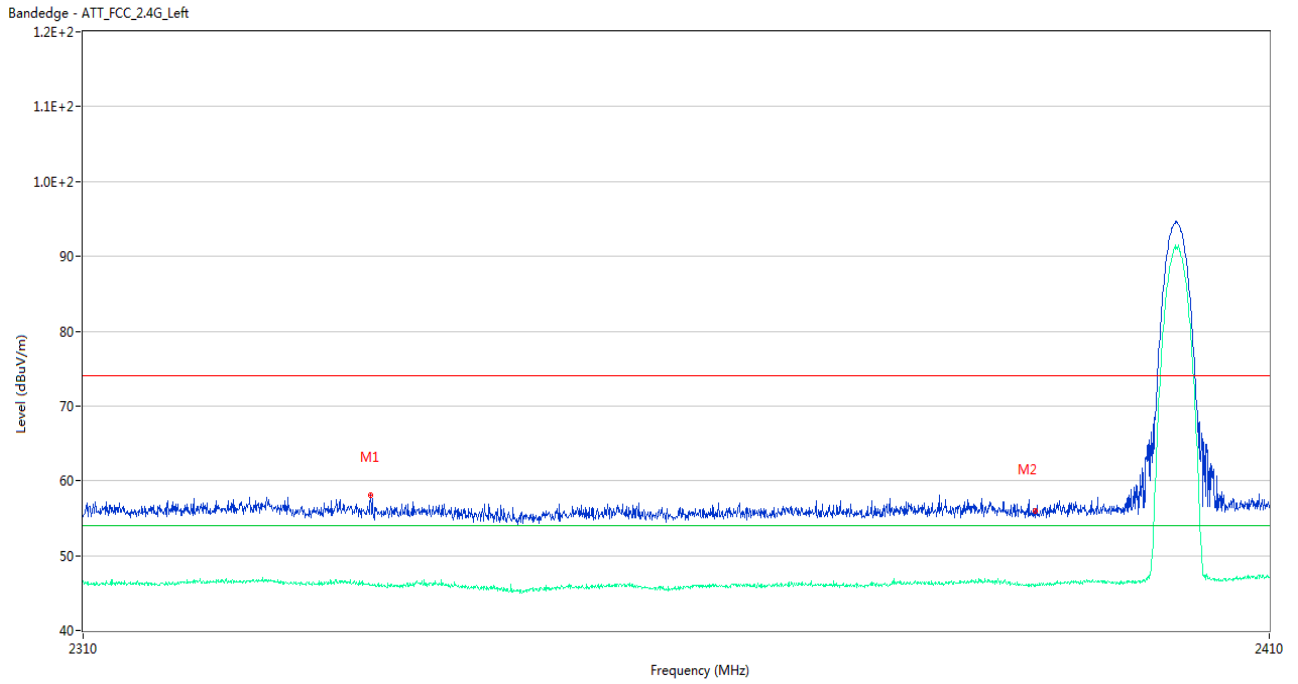
**GFSK HIGH CHANNEL**

Bandedge - ATT\_FCC\_2.4G\_Right



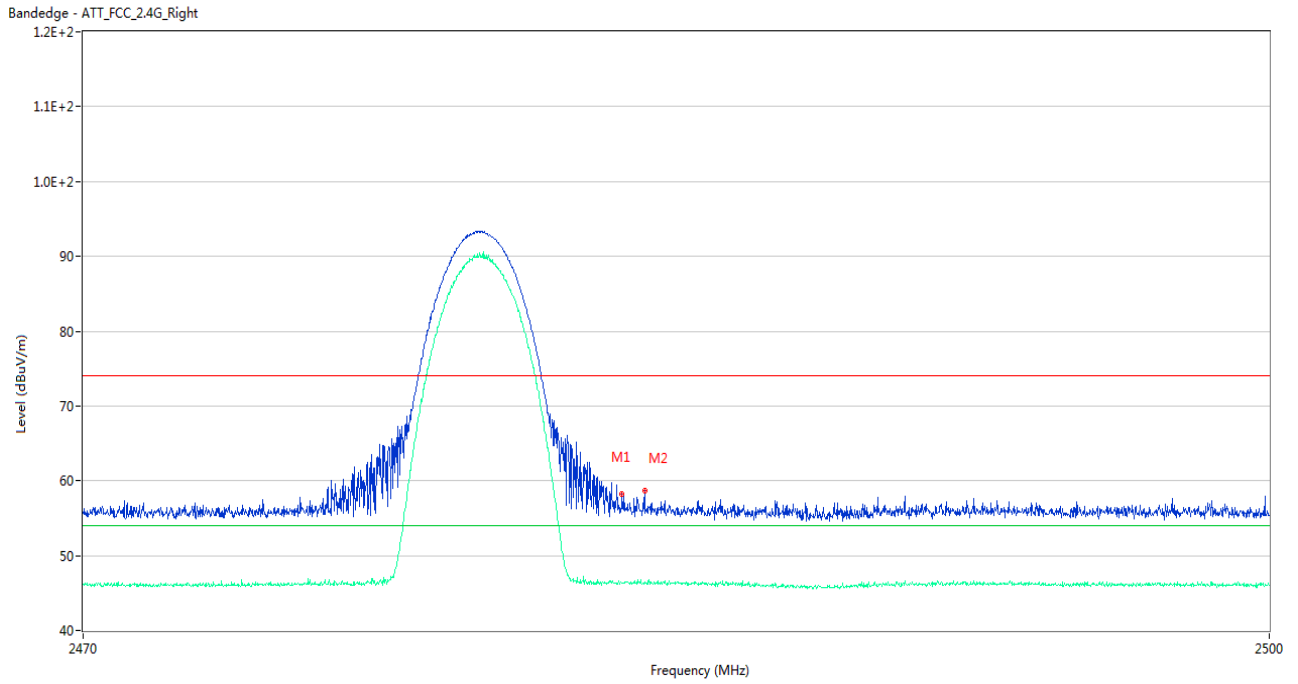
No.	Frequency (MHz)	Results (dBuV/m)	Factor (dB)	Limit (dBuV/m)	Margin (dB)	Detector	Table (Degree)	Height (cm)	Antenna	Verdict
1	2483.515	59.53	2.11	74.0	14.47	Peak	2.00	150	Horizontal	Pass
1**	2483.515	46.39	2.11	54.0	7.61	AV	2.00	150	Horizontal	Pass
2	2493.805	57.97	1.84	74.0	16.03	Peak	285.00	100	Horizontal	Pass
2**	2493.805	46.32	1.84	54.0	7.68	AV	285.00	100	Horizontal	Pass

8-DPSK LOW CHANNEL



No.	Frequency (MHz)	Results (dBuV/m)	Factor (dB)	Limit (dBuV/m)	Margin (dB)	Detector	Table (Degree)	Height (cm)	Antenna	Verdict
1	2333.850	58.14	1.21	74.0	15.86	Peak	91.00	200	Horizontal	Pass
1**	2333.850	46.07	1.21	54.0	7.93	AV	91.00	200	Horizontal	Pass
2	2389.950	55.91	1.92	74.0	18.09	Peak	196.00	150	Horizontal	Pass
2**	2389.950	45.89	1.92	54.0	8.11	AV	196.00	150	Horizontal	Pass

8-DPSK HIGH CHANNEL



No.	Frequency (MHz)	Results (dBuV/m)	Factor (dB)	Limit (dBuV/m)	Margin (dB)	Detector	Table (Degree)	Height (cm)	Antenna	Verdict
1	2483.590	58.20	2.11	74.0	15.80	Peak	16.00	150	Horizontal	Pass
1**	2483.590	46.35	2.11	54.0	7.65	AV	16.00	150	Horizontal	Pass
2	2484.160	58.62	2.13	74.0	15.38	Peak	354.00	150	Horizontal	Pass
2**	2484.160	46.44	2.13	54.0	7.56	AV	354.00	150	Horizontal	Pass

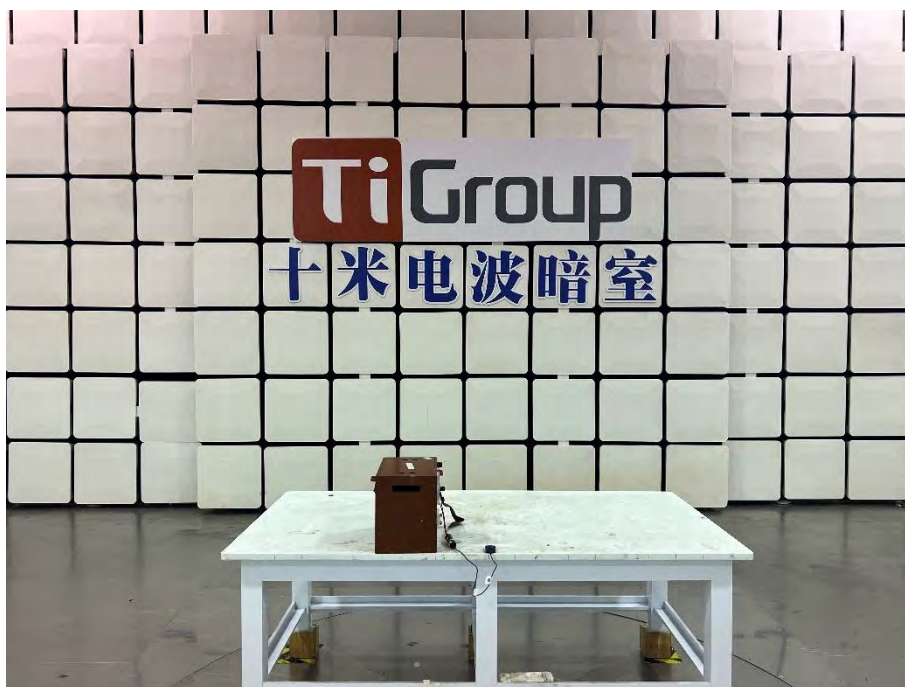
## ANNEX A TEST SETUP PHOTOS

### 1 Radiated Test Photo

Below 30MHz



Close-up





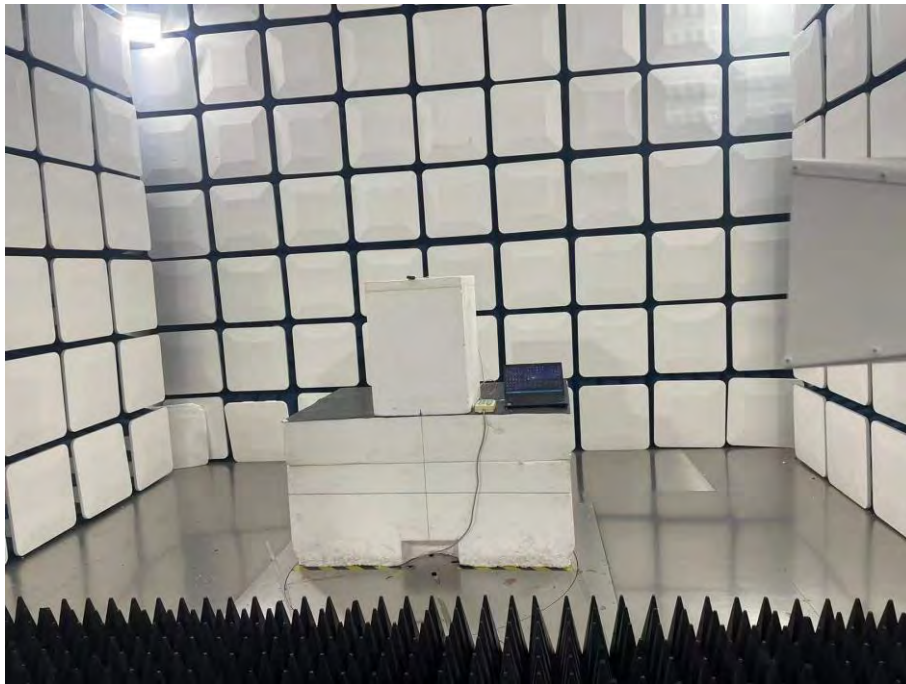
30MHz-1GHz



Close-up



Above 1GHz



Close-up



## 2 Conducted Test Photo

### Conducted Test



# ANNEX B EUT EXTERNAL PHOTOS

FRONT VIEW OF EUT



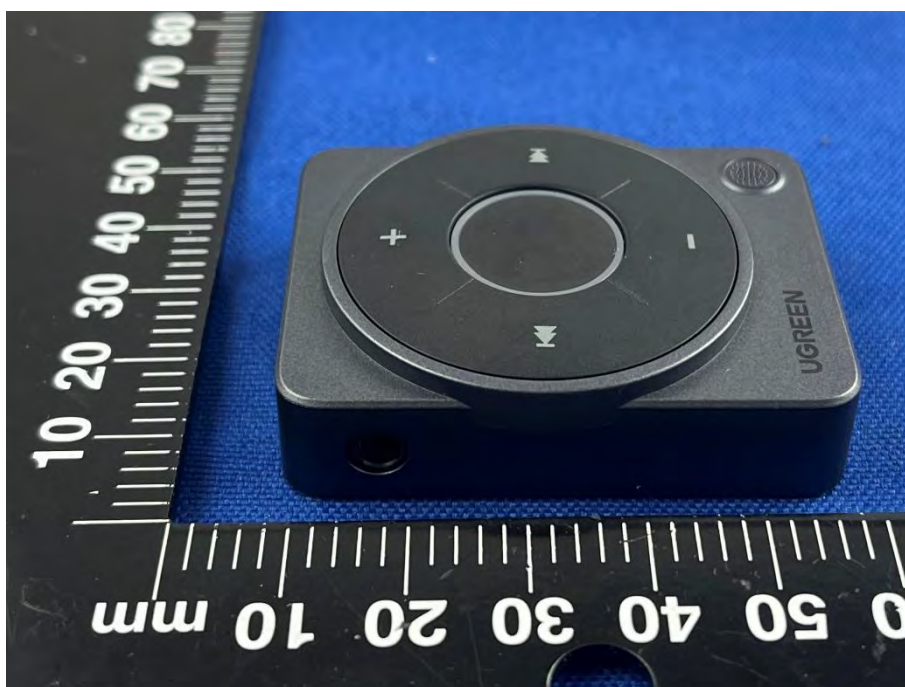
REAR VIEW OF EUT



LEFT VIEW OF EUT



RIGHT VIEW OF EUT



CLOSE-UP



TOP VIEW OF EUT



BOTTOM VIEW OF EUT



CLOSE-UP



Accessory-3.5mm Audio Adapter

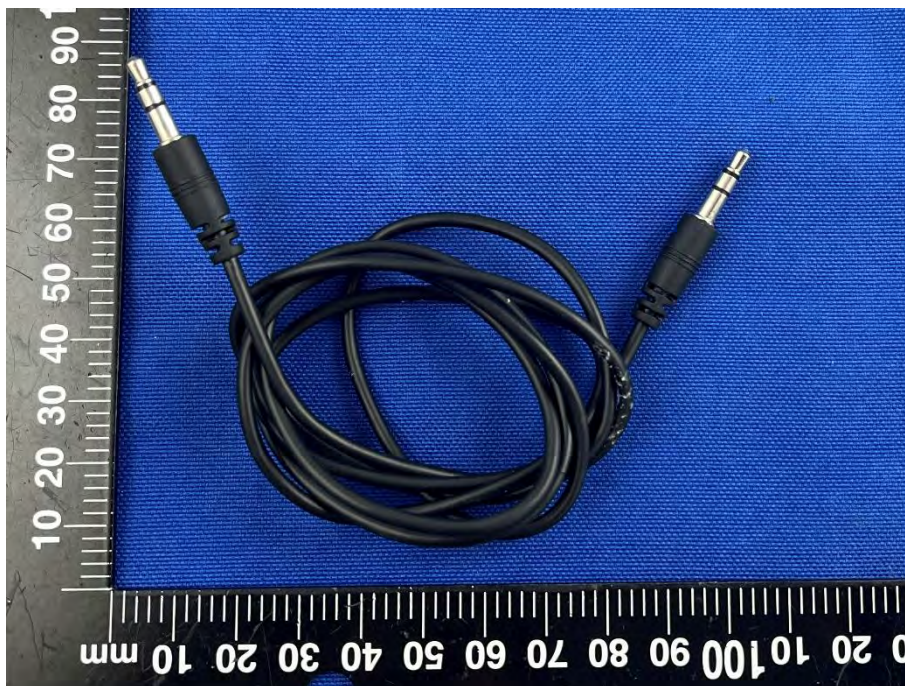


Accessory-Type-C Cable



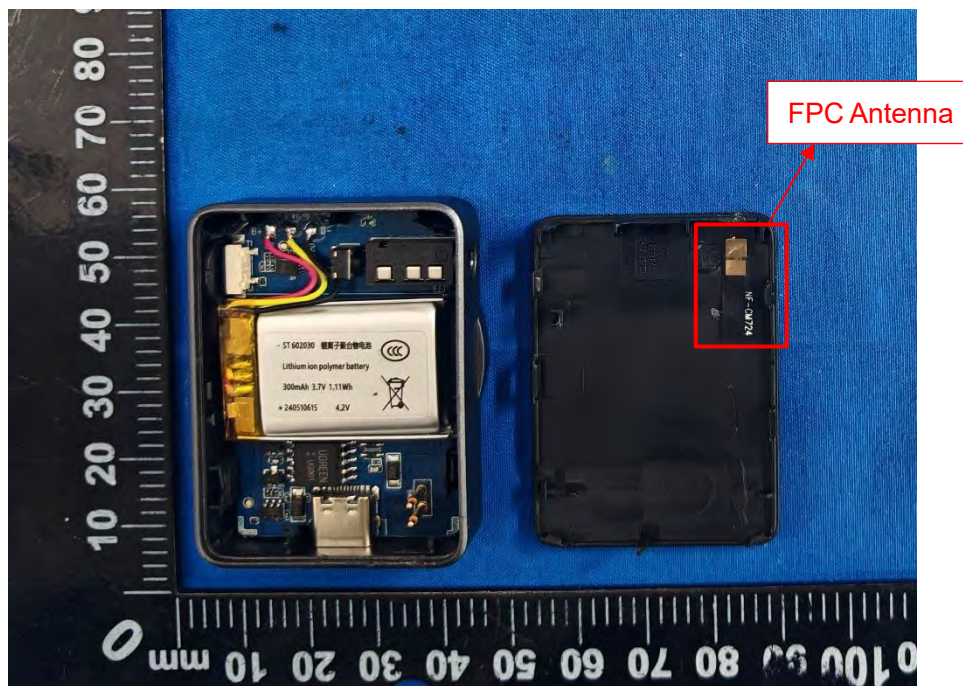


Accessory-3.5mm Audio Cable

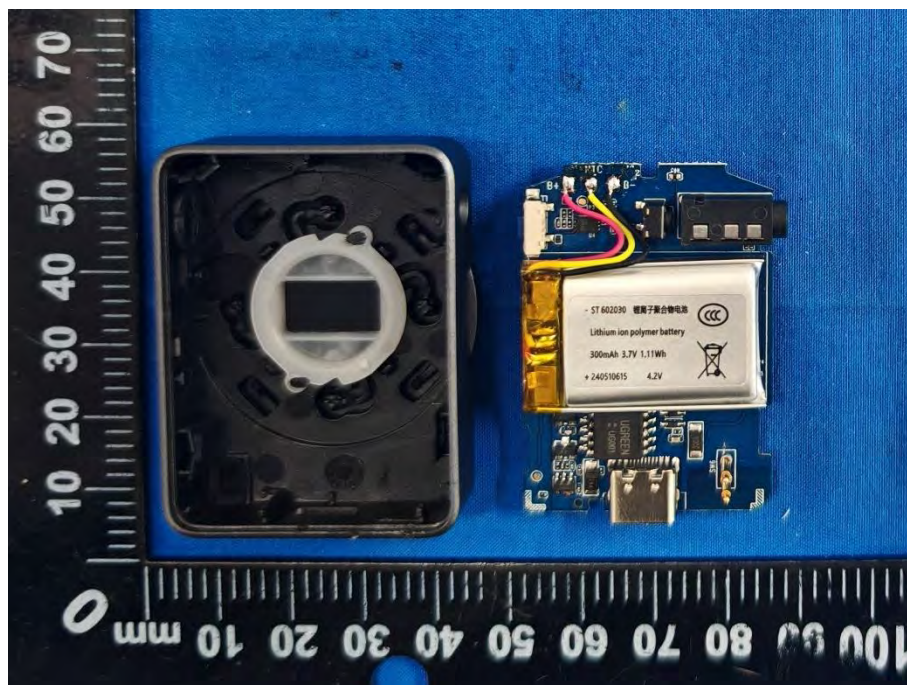


# ANNEX C EUT INTERNAL PHOTOS

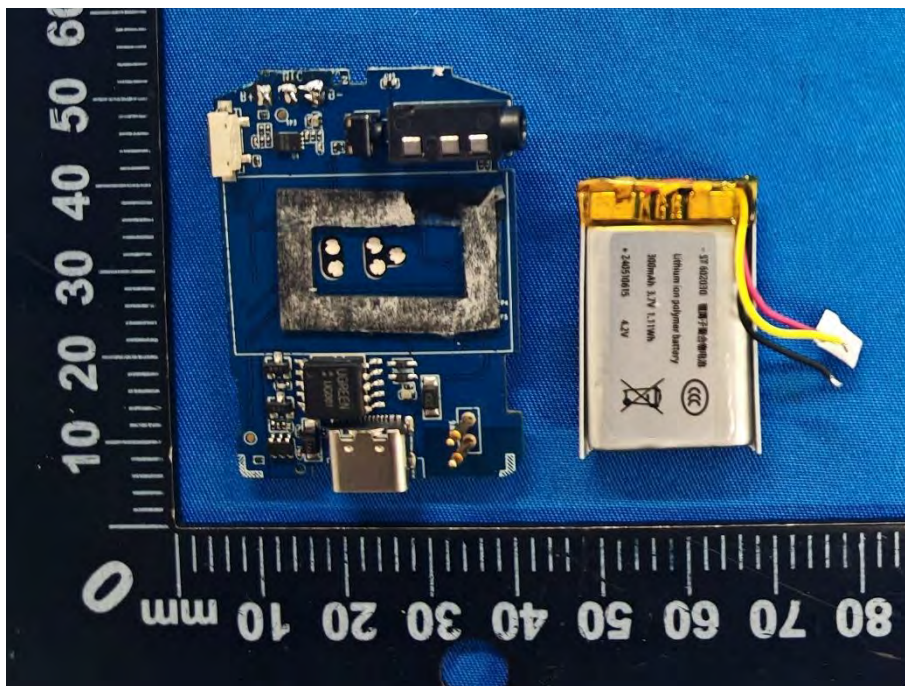
EUT UNCOVER VIEW 1



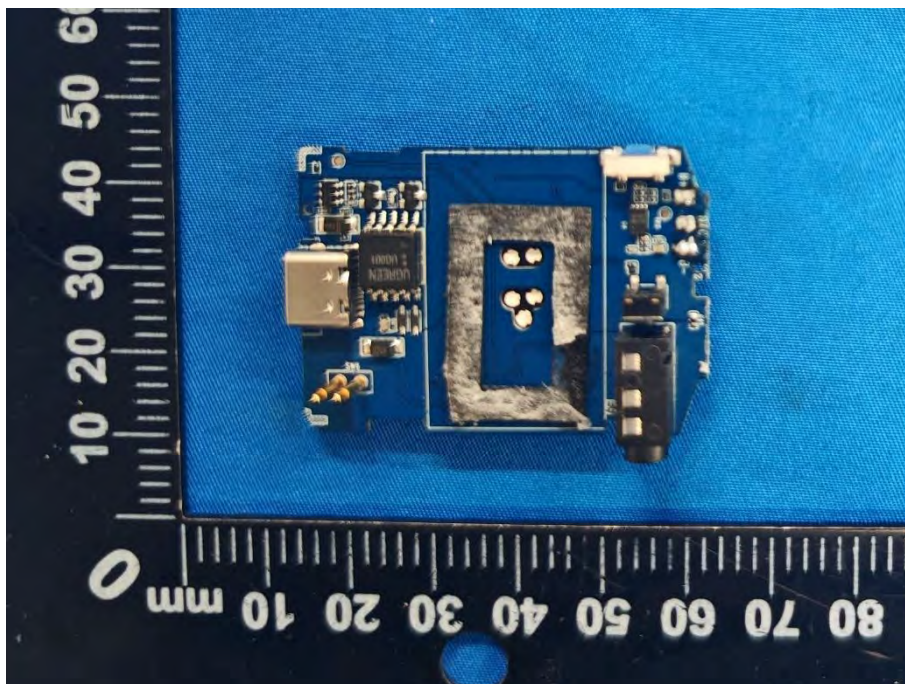
EUT UNCOVER VIEW 2



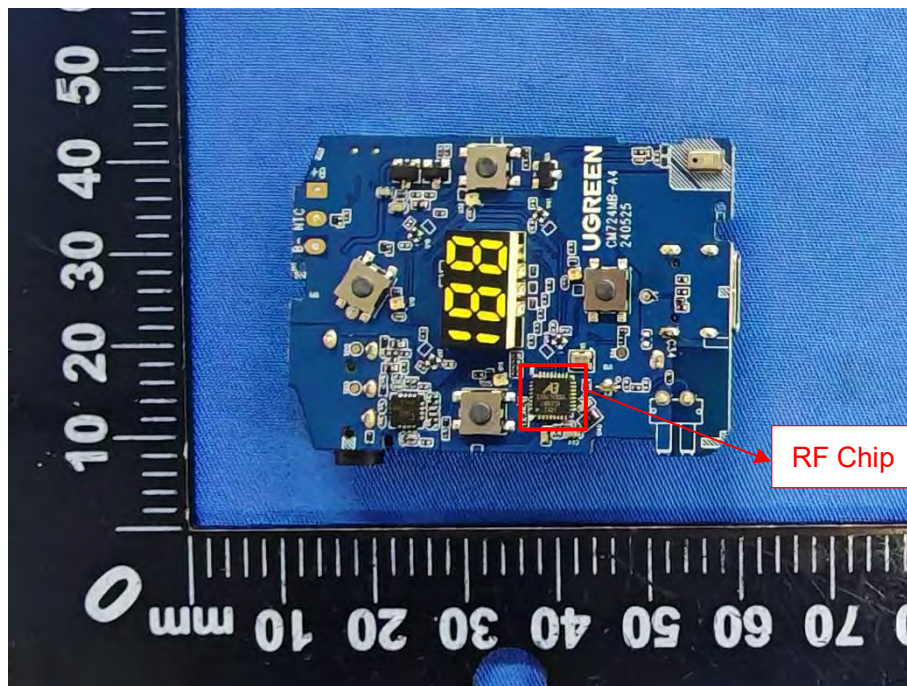
EUT UNCOVER VIEW 3



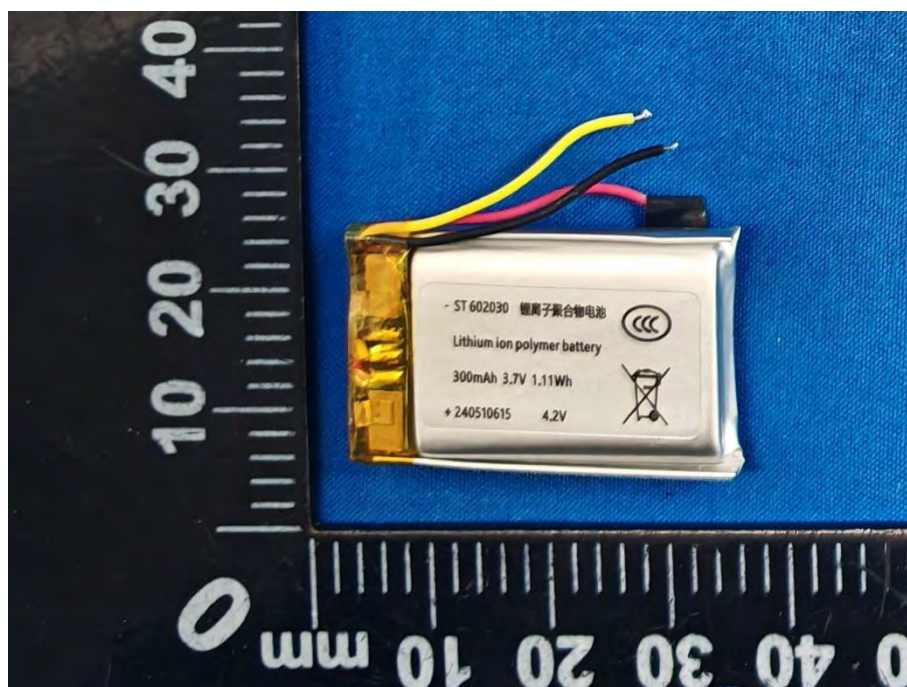
MAIN BOARD TOP VIEW



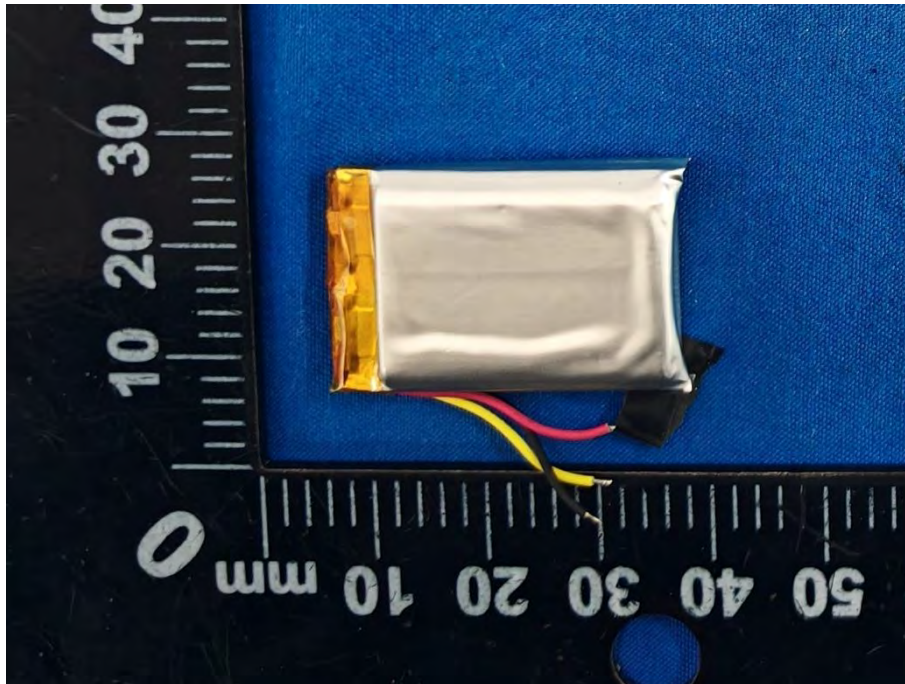
MAIN BOARD REAR VIEW



BATTERY (FRONT)



BATTERY (REAR)



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--END OF REPORT--