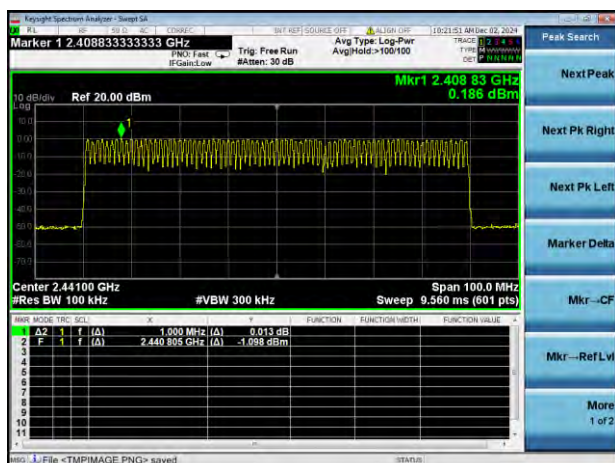
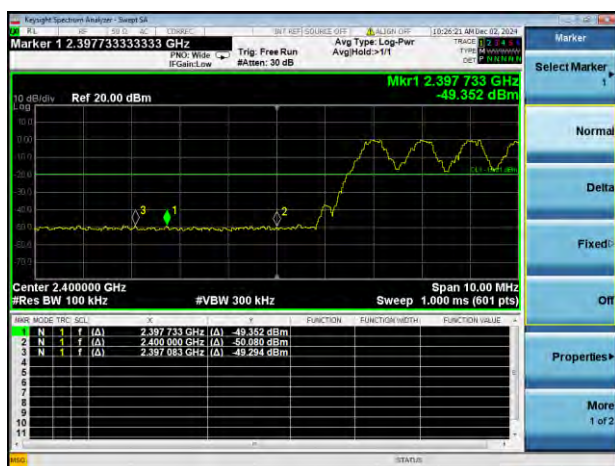


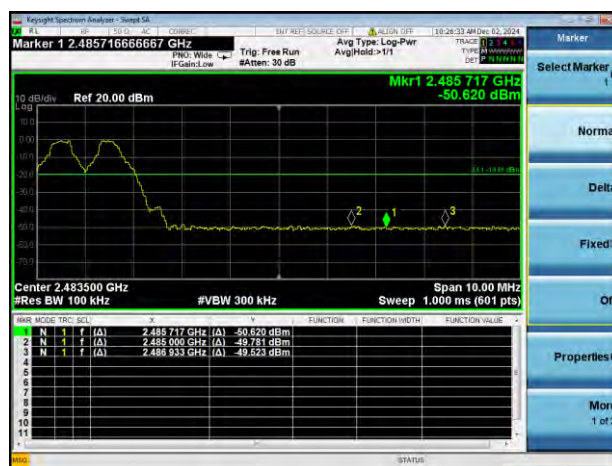
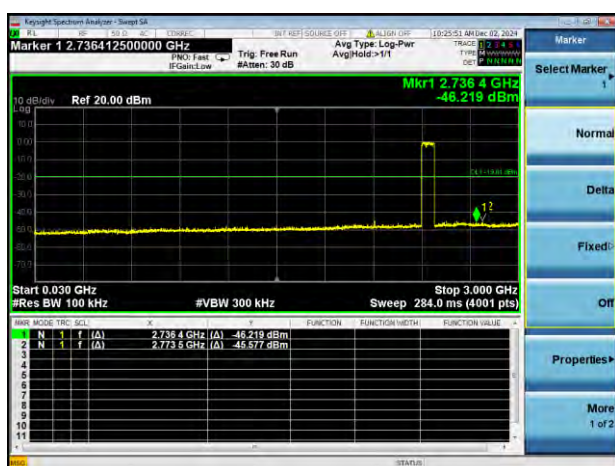
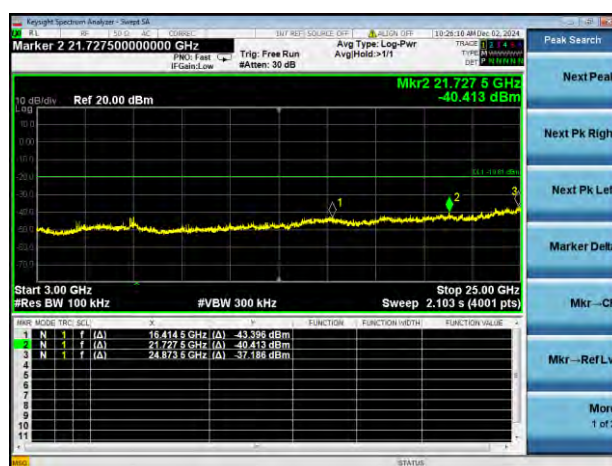
GFSK HOPPING, CARRIER LEVEL



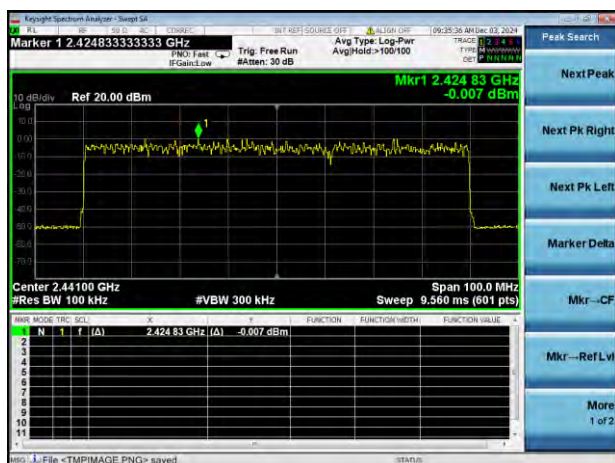
GFSK HOPPING BAND EDGE (LOW)



GFSK HOPPING BAND EDGE (HIGH)

GFSK Hopping Mode, SPURIOUS
30 MHz ~ 3 GHzGFSK Hopping Mode, SPURIOUS
3GHz ~ 25 GHz

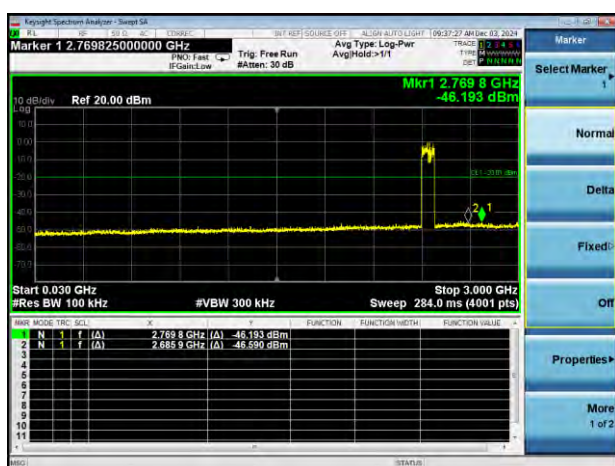
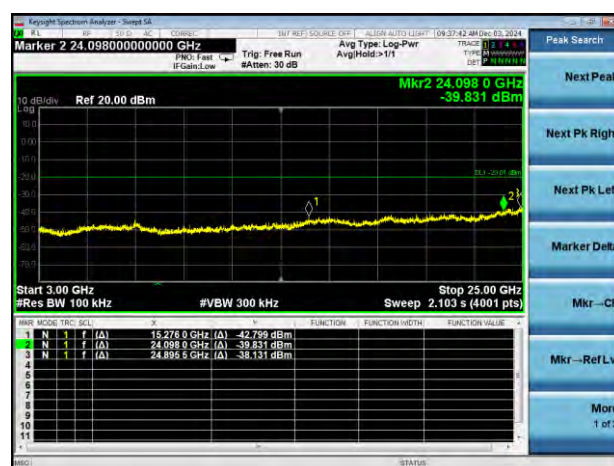
8-DPSK HOPPING, CARRIER LEVEL



8-DPSK Hopping BAND EDGE (LOW)



8-DPSK Hopping BAND EDGE (HIGH)

8-DPSK Hopping Mode, SPURIOUS
30 MHz ~ 3 GHz8-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 μ H/50 Ω line impedance stabilization network (LISN).

Frequency range (MHz)	Conducted Limit (dB μ 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 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.

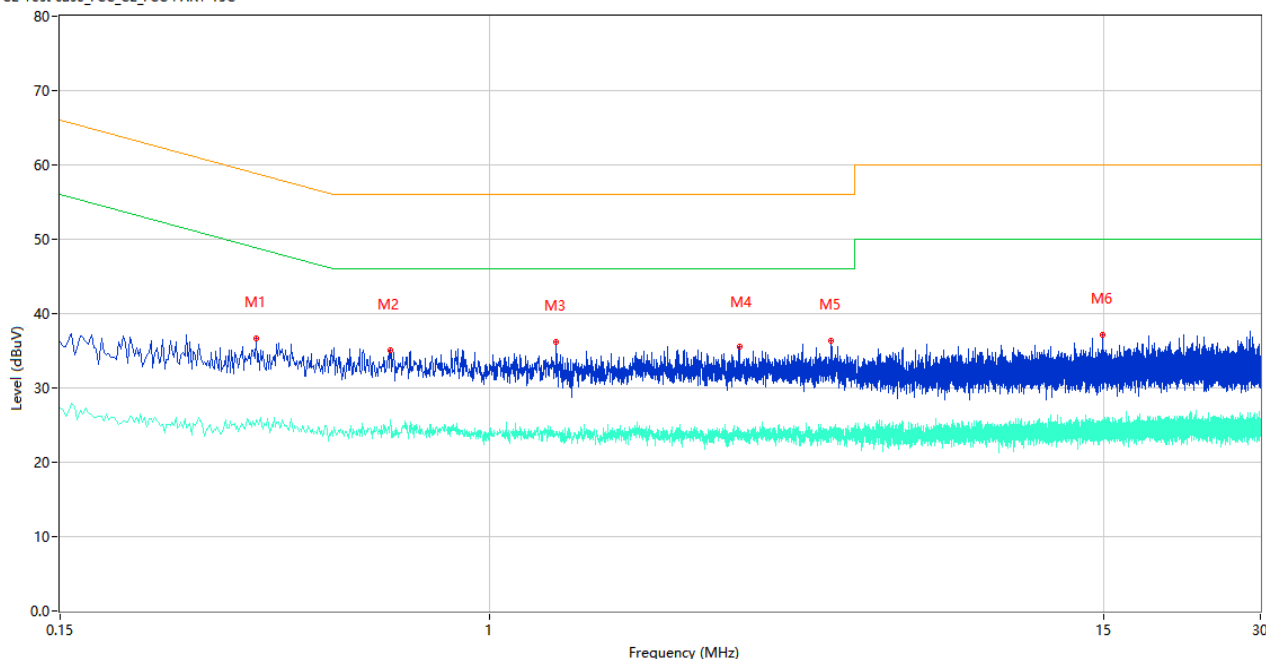
Note ³: Results (dBuV) = Original reading level of Spectrum Analyzer (dBuV) + Factor (dB)

Test Data and Plots

TX Mode

PHASE L

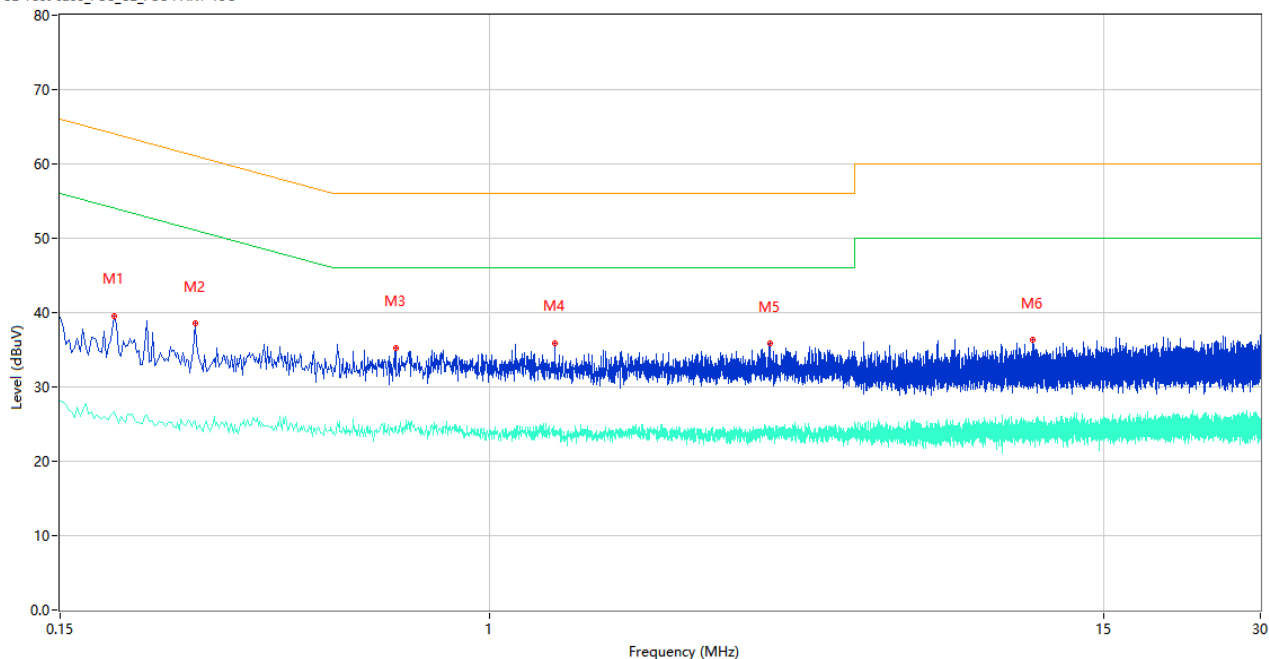
CE Test case_FCC_CE_FCC PART 15C



No.	Frequency (MHz)	Results (dBuV)	Factor (dB)	Limit (dBuV)	Margin (dB)	Detector	Line	Verdict
1	0.356	36.59	10.73	58.82	22.23	Peak	L	Pass
1**	0.356	25.75	10.73	48.82	23.07	AV	L	Pass
2	0.644	35.08	10.20	56.00	20.92	Peak	L	Pass
2**	0.644	25.66	10.20	46.00	20.34	AV	L	Pass
3	1.338	36.19	10.12	56.00	19.81	Peak	L	Pass
3**	1.338	24.15	10.12	46.00	21.85	AV	L	Pass
4	3.006	35.53	10.25	56.00	20.47	Peak	L	Pass
4**	3.006	23.49	10.25	46.00	22.51	AV	L	Pass
5	4.516	36.32	10.42	56.00	19.68	Peak	L	Pass
5**	4.516	23.76	10.42	46.00	22.24	AV	L	Pass
6	14.916	37.10	10.96	60.00	22.90	Peak	L	Pass
6**	14.916	24.80	10.96	50.00	25.20	AV	L	Pass

PHASE N

CE Test case_FCC_CE_FCC PART 15C

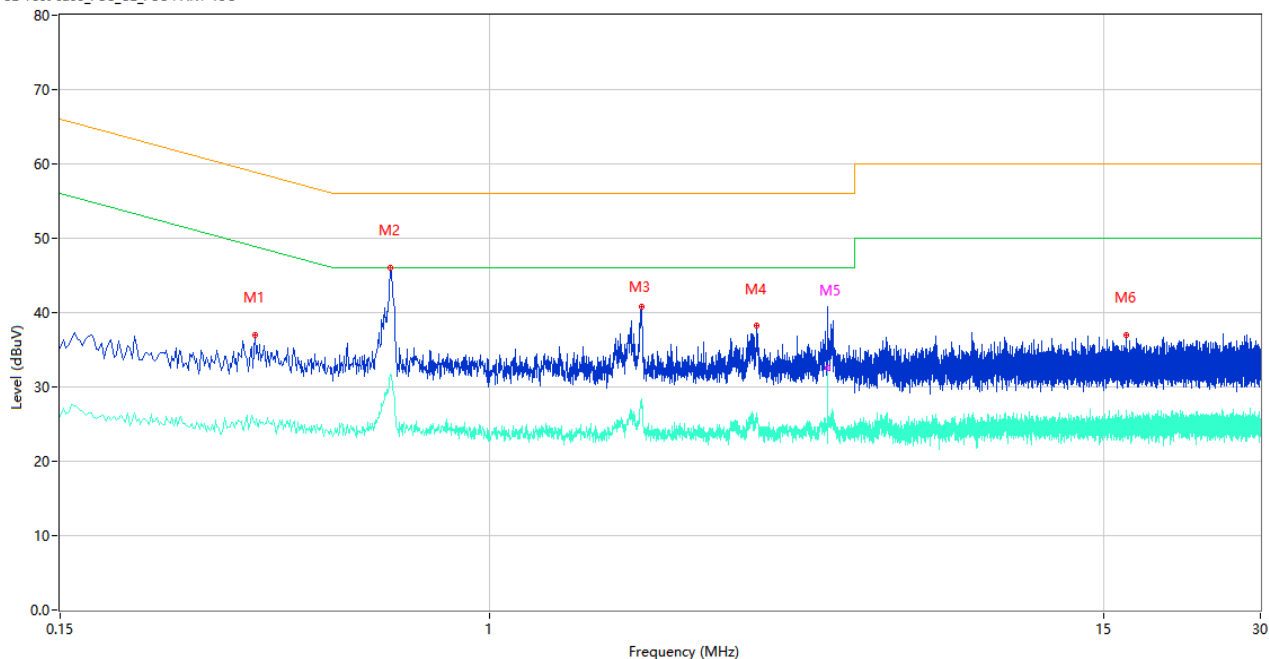


No.	Frequency (MHz)	Results (dBuV)	Factor (dB)	Limit (dBuV)	Margin (dB)	Detector	Line	Verdict
1	0.190	39.54	9.78	64.04	24.50	Peak	N	Pass
1**	0.190	26.66	9.78	54.04	27.38	AV	N	Pass
2	0.272	38.54	9.76	61.06	22.52	Peak	N	Pass
2**	0.272	25.46	9.76	51.06	25.60	AV	N	Pass
3	0.660	35.27	10.30	56.00	20.73	Peak	N	Pass
3**	0.660	24.83	10.30	46.00	21.17	AV	N	Pass
4	1.332	35.88	10.18	56.00	20.12	Peak	N	Pass
4**	1.332	23.66	10.18	46.00	22.34	AV	N	Pass
5	3.452	35.87	10.28	56.00	20.13	Peak	N	Pass
5**	3.452	24.64	10.28	46.00	21.36	AV	N	Pass
6	10.970	36.30	10.65	60.00	23.70	Peak	N	Pass
6**	10.970	24.90	10.65	50.00	25.10	AV	N	Pass

RX Mode

PHASE L

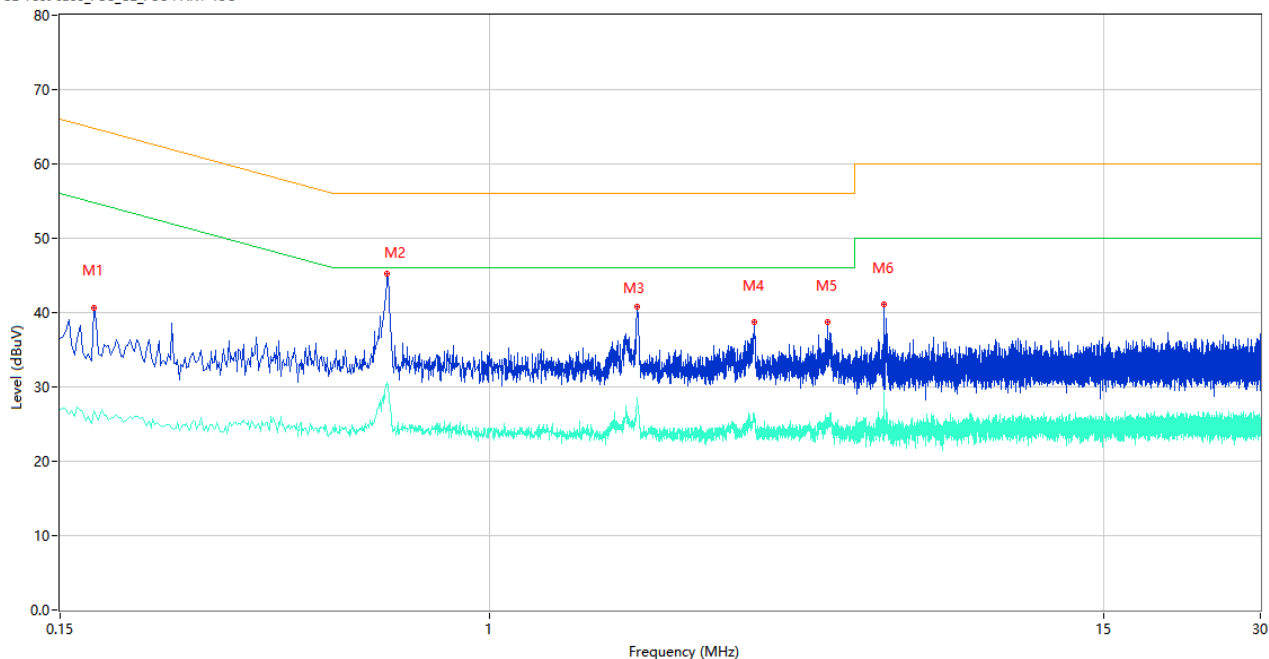
CE Test case_FCC_CE_FCC PART 15C



No.	Frequency (MHz)	Results (dBuV)	Factor (dB)	Limit (dBuV)	Margin (dB)	Detector	Line	Verdict
1	0.354	36.99	10.74	58.87	21.88	Peak	L	Pass
1**	0.354	24.95	10.74	48.87	23.92	AV	L	Pass
2	0.644	46.05	10.20	56.00	9.95	Peak	L	Pass
2**	0.644	31.70	10.20	46.00	14.30	AV	L	Pass
3	1.952	40.77	10.17	56.00	15.23	Peak	L	Pass
3**	1.952	28.47	10.17	46.00	17.53	AV	L	Pass
4	3.246	38.19	10.05	56.00	17.81	Peak	L	Pass
4**	3.246	26.47	10.05	46.00	19.53	AV	L	Pass
5	4.432	40.75	10.14	56.00	15.25	Peak	L	Pass
5**	4.432	32.52	10.14	46.00	13.48	AV	L	Pass
6	16.606	36.99	10.96	60.00	23.01	Peak	L	Pass
6**	16.606	25.52	10.96	50.00	24.48	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	0.174	40.69	9.78	64.77	24.08	Peak	N	Pass
1**	0.174	26.80	9.78	54.77	27.97	AV	N	Pass
2	0.636	45.16	10.20	56.00	10.84	Peak	N	Pass
2**	0.636	30.39	10.20	46.00	15.61	AV	N	Pass
3	1.916	40.83	10.54	56.00	15.17	Peak	N	Pass
3**	1.916	28.56	10.54	46.00	17.44	AV	N	Pass
4	3.208	38.68	10.22	56.00	17.32	Peak	N	Pass
4**	3.208	26.35	10.22	46.00	19.65	AV	N	Pass
5	4.436	38.67	10.11	56.00	17.33	Peak	N	Pass
5**	4.436	25.84	10.11	46.00	20.16	AV	N	Pass
6	5.682	41.08	10.16	60.00	18.92	Peak	N	Pass
6**	5.682	29.31	10.16	50.00	20.69	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) = $20 \times \log[\text{Field Strength } (\mu\text{V/m})]$.
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)

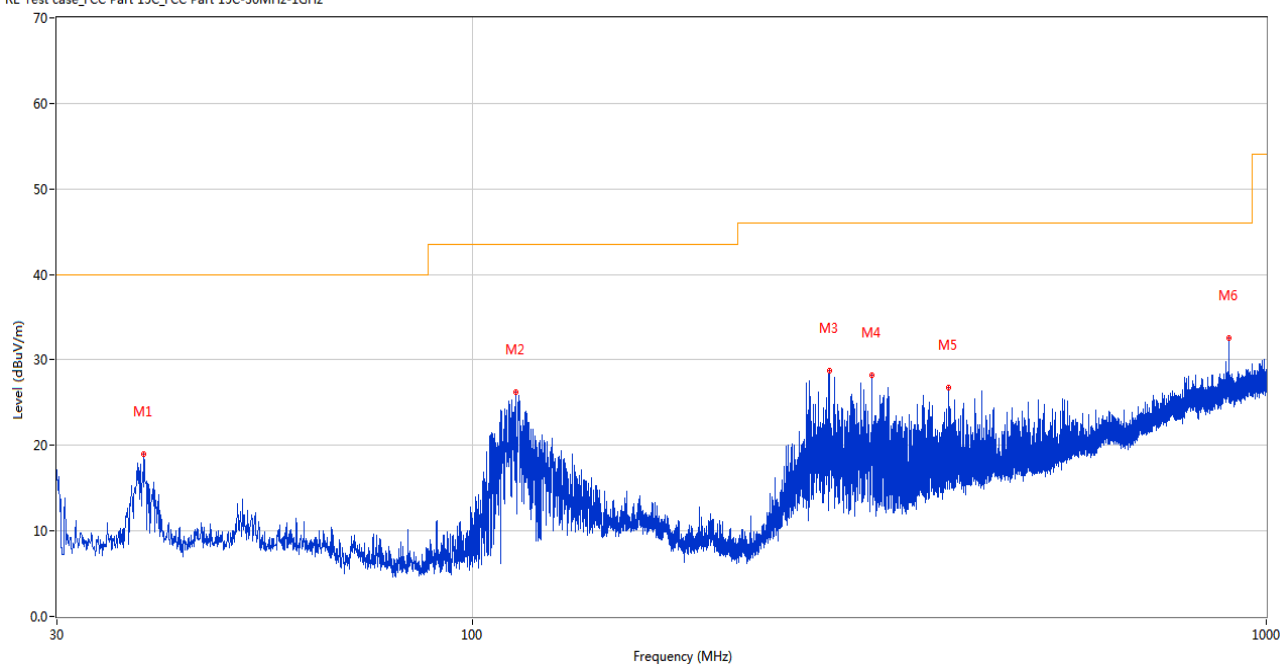
The low frequency, which started from 9 kHz to 30 MHz, was pre-scanned and the result which was 20 dB lower than the limit line per 15.31(o) was not reported.

Test Data and Plots

TX Mode

30 MHz to 1 GHz, ANT H

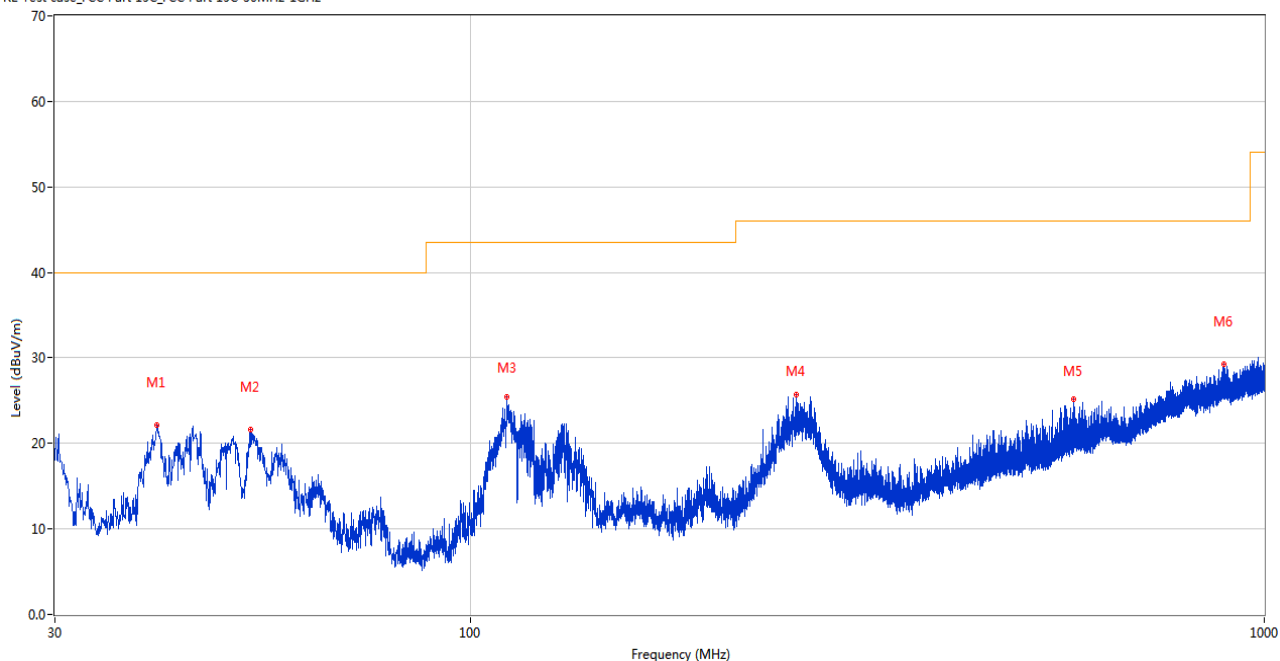
RE Test case_FCC Part 15C_FCC Part 15C-30MHz-1GHz



No.	Frequency (MHz)	Results (dBuV/m)	Factor (dB)	Limit (dBuV/m)	Margin (dB)	Detector	Table (Degree)	Height (cm)	Antenna	Verdict
1	38.633	19.04	-26.81	40.0	20.96	Peak	42.00	100	Horizontal	Pass
2	113.565	26.28	-28.57	43.5	17.22	Peak	6.00	200	Horizontal	Pass
3	282.151	28.77	-25.54	46.0	17.23	Peak	90.00	100	Horizontal	Pass
4	318.818	28.18	-24.03	46.0	17.82	Peak	82.00	100	Horizontal	Pass
5	398.600	26.77	-21.28	46.0	19.23	Peak	87.00	100	Horizontal	Pass
6	897.471	32.61	-10.79	46.0	13.39	Peak	72.00	100	Horizontal	Pass

30 MHz to 1 GHz, ANT V

RE Test case_FCC Part 15C_FCC Part 15C:30MHz-1GHz

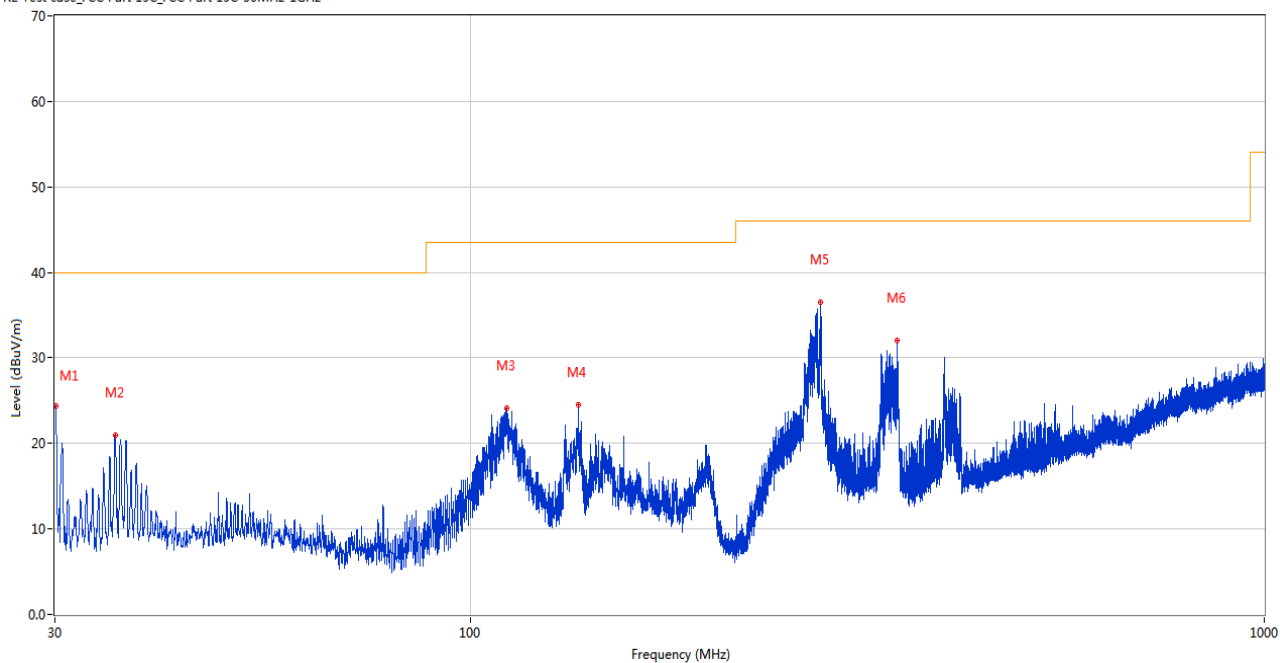


No.	Frequency (MHz)	Results (dBuV/m)	Factor (dB)	Limit (dBuV/m)	Margin (dB)	Detector	Table (Degree)	Height (cm)	Antenna	Verdict
1	40.331	22.17	-26.07	40.0	17.83	Peak	104.00	100	Vertical	Pass
2	52.892	21.67	-26.65	40.0	18.33	Peak	147.00	100	Vertical	Pass
3	111.238	25.42	-28.72	43.5	18.08	Peak	256.00	100	Vertical	Pass
4	257.707	25.69	-26.57	46.0	20.31	Peak	135.00	200	Vertical	Pass
5	574.946	25.22	-16.69	46.0	20.78	Peak	135.00	200	Vertical	Pass
6	890.778	29.22	-10.57	46.0	16.78	Peak	256.00	100	Vertical	Pass

RX Mode

30 MHz to 1 GHz, ANT H

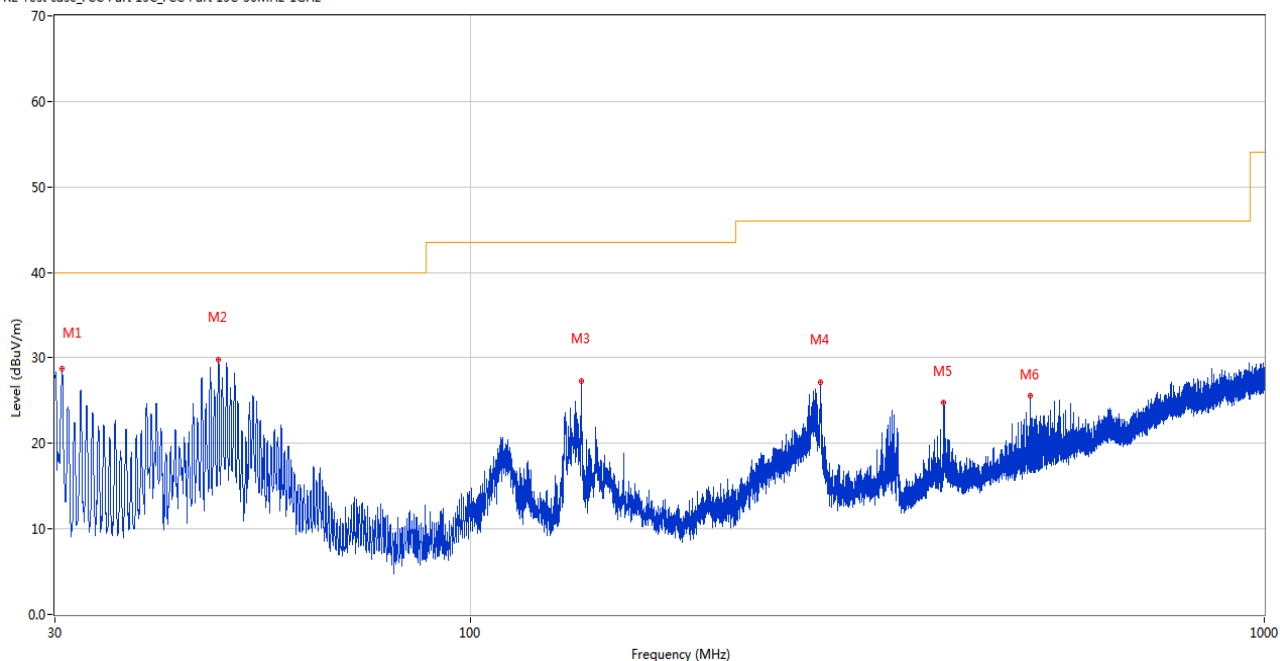
RE Test case_FCC Part 15C_FCC Part 15C:30MHz-1GHz



No.	Frequency (MHz)	Results (dBuV/m)	Factor (dB)	Limit (dBuV/m)	Margin (dB)	Detector	Table (Degree)	Height (cm)	Antenna	Verdict
1	30.049	24.43	-27.72	40.0	15.57	Peak	254.00	100	Horizontal	Pass
2	35.723	21.00	-27.17	40.0	19.00	Peak	120.00	100	Horizontal	Pass
3	111.092	24.18	-28.73	43.5	19.32	Peak	184.00	200	Horizontal	Pass
4	136.894	24.45	-26.38	43.5	19.05	Peak	175.00	200	Horizontal	Pass
5	276.186	36.54	-25.95	46.0	9.46	Peak	115.00	100	Horizontal	Pass
6	345.056	32.04	-23.76	46.0	13.96	Peak	130.00	100	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	30.631	28.68	-27.63	40.0	11.32	Peak	166.00	100	Vertical	Pass
2	48.236	29.77	-26.94	40.0	10.23	Peak	239.00	100	Vertical	Pass
3	138.107	27.30	-26.34	43.5	16.20	Peak	7.00	100	Vertical	Pass
4	275.992	27.21	-25.96	46.0	18.79	Peak	107.00	200	Vertical	Pass
5	394.962	24.72	-21.32	46.0	21.28	Peak	6.00	100	Vertical	Pass
6	507.289	25.57	-19.06	46.0	20.43	Peak	126.00	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

No.	Frequency (MHz)	Results (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Detector	Table (Degree)	Height (cm)	Antenna	Verdict
1	1573.200	42.45	74.0	31.55	Peak	121.00	400	Horizontal	Pass
1**	1573.200	32.46	54.0	21.54	AV	121.00	400	Horizontal	Pass
2	2401.900	103.51	74.0	-29.51	Peak	280.00	150	Horizontal	N/A
2**	2401.900	102.56	54.0	-48.56	AV	280.00	150	Horizontal	N/A
3	4803.750	53.72	74.0	20.28	Peak	304.00	100	Horizontal	Pass
3**	4803.750	49.00	54.0	5.00	AV	304.00	100	Horizontal	Pass
4	4804.250	53.59	74.0	20.41	Peak	49.00	100	Horizontal	Pass
4**	4804.250	50.25	54.0	3.75	AV	49.00	100	Horizontal	Pass
5	7939.250	53.68	74.0	20.32	Peak	49.00	300	Horizontal	Pass
5**	7939.250	44.10	54.0	9.90	AV	49.00	300	Horizontal	Pass
6	9608.350	51.25	74.0	22.75	Peak	281.00	100	Horizontal	Pass
6**	9608.350	48.13	54.0	5.87	AV	281.00	100	Horizontal	Pass

GFSK LOW CHANNEL 1 GHz to 18 GHz, ANT V

No.	Frequency (MHz)	Results (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Detector	Table (Degree)	Height (cm)	Antenna	Verdict
1	1331.300	45.54	74.0	28.46	Peak	40.00	300	Vertical	Pass
1**	1331.300	38.15	54.0	15.85	AV	40.00	300	Vertical	Pass
2	2402.200	92.95	74.0	-18.95	Peak	0.00	200	Vertical	N/A
2**	2402.200	92.55	54.0	-38.55	AV	0.00	200	Vertical	N/A
3	4804.250	51.70	74.0	22.30	Peak	109.00	100	Vertical	Pass
3**	4804.250	49.41	54.0	4.59	AV	109.00	100	Vertical	Pass
4	4804.500	52.30	74.0	21.70	Peak	109.00	200	Vertical	Pass
4**	4804.500	48.25	54.0	5.75	AV	109.00	200	Vertical	Pass
5	7971.000	53.84	74.0	20.16	Peak	247.00	300	Vertical	Pass
5**	7971.000	45.03	54.0	8.97	AV	247.00	300	Vertical	Pass
6	9608.350	49.09	74.0	24.91	Peak	297.00	100	Vertical	Pass
6**	9608.350	45.41	54.0	8.59	AV	297.00	100	Vertical	Pass

GFSK MIDDLE CHANNEL 1 GHz to 18 GHz, ANT H

No.	Frequency (MHz)	Results (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Detector	Table (Degree)	Height (cm)	Antenna	Verdict
1	1548.000	41.57	74.0	32.43	Peak	284.00	300	Horizontal	Pass
1**	1548.000	31.95	54.0	22.05	AV	284.00	300	Horizontal	Pass
2	2441.000	102.76	74.0	-28.76	Peak	276.00	150	Horizontal	N/A
2**	2441.000	102.21	54.0	-48.21	AV	276.00	150	Horizontal	N/A
3	4882.250	53.40	74.0	20.60	Peak	353.00	150	Horizontal	Pass
3**	4882.250	50.41	54.0	3.59	AV	353.00	150	Horizontal	Pass
4	4882.500	52.59	74.0	21.41	Peak	74.00	100	Horizontal	Pass
4**	4882.500	50.55	54.0	3.45	AV	74.00	100	Horizontal	Pass
5	6893.750	53.43	74.0	20.57	Peak	293.00	400	Horizontal	Pass
5**	6893.750	44.56	54.0	9.44	AV	293.00	400	Horizontal	Pass
6	9764.388	49.40	74.0	24.60	Peak	268.00	100	Horizontal	Pass
6**	9764.388	46.18	54.0	7.82	AV	268.00	100	Horizontal	Pass

GFSK MIDDLE CHANNEL 1 GHz to 18 GHz, ANT V

No.	Frequency (MHz)	Results (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Detector	Table (Degree)	Height (cm)	Antenna	Verdict
1	1331.500	44.81	74.0	29.19	Peak	43.00	400	Vertical	Pass
1**	1331.500	36.89	54.0	17.11	AV	43.00	400	Vertical	Pass
2	2441.000	94.38	74.0	-20.38	Peak	87.00	100	Vertical	N/A
2**	2441.000	93.91	54.0	-39.91	AV	87.00	100	Vertical	N/A
3	4882.000	51.89	74.0	22.11	Peak	134.00	100	Vertical	Pass
3**	4882.000	46.13	54.0	7.87	AV	134.00	100	Vertical	Pass
4	4882.500	49.62	74.0	24.38	Peak	154.00	100	Vertical	Pass
4**	4882.500	46.22	54.0	7.78	AV	154.00	100	Vertical	Pass
5	7963.500	53.38	74.0	20.62	Peak	36.00	300	Vertical	Pass
5**	7963.500	44.14	54.0	9.86	AV	36.00	300	Vertical	Pass
6	9764.150	52.75	74.0	21.25	Peak	327.00	100	Vertical	Pass
6**	9764.150	47.39	54.0	6.61	AV	327.00	100	Vertical	Pass

GFSK HIGH CHANNEL 1 GHz to 18 GHz, ANT H

No.	Frequency (MHz)	Results (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Detector	Table (Degree)	Height (cm)	Antenna	Verdict
1	1431.100	41.81	74.0	32.19	Peak	355.00	100	Horizontal	Pass
1**	1431.100	32.64	54.0	21.36	AV	355.00	100	Horizontal	Pass
2	2480.100	102.39	74.0	-28.39	Peak	277.00	200	Horizontal	N/A
2**	2480.100	101.98	54.0	-47.98	AV	277.00	200	Horizontal	N/A
3	4959.500	52.38	74.0	21.62	Peak	14.00	200	Horizontal	Pass
3**	4959.500	44.50	54.0	9.50	AV	14.00	200	Horizontal	Pass
4	4960.250	51.81	74.0	22.19	Peak	360.00	100	Horizontal	Pass
4**	4960.250	48.74	54.0	5.26	AV	360.00	100	Horizontal	Pass
5	6907.500	53.51	74.0	20.49	Peak	53.00	400	Horizontal	Pass
5**	6907.500	44.59	54.0	9.41	AV	53.00	400	Horizontal	Pass
6	9920.187	49.00	74.0	25.00	Peak	279.00	100	Horizontal	Pass
6**	9920.187	46.46	54.0	7.54	AV	279.00	100	Horizontal	Pass

GFSK HIGH CHANNEL 1 GHz to 18 GHz, ANT V

No.	Frequency (MHz)	Results (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Detector	Table (Degree)	Height (cm)	Antenna	Verdict
1	1161.100	44.30	74.0	29.70	Peak	54.00	200	Vertical	Pass
1**	1161.100	33.04	54.0	20.96	AV	54.00	200	Vertical	Pass
2	2480.000	91.87	74.0	-17.87	Peak	90.00	100	Vertical	N/A
2**	2480.000	91.46	54.0	-37.46	AV	90.00	100	Vertical	N/A
3	4959.500	49.24	74.0	24.76	Peak	111.00	150	Vertical	Pass
3**	4959.500	41.16	54.0	12.84	AV	111.00	150	Vertical	Pass
4	4960.500	48.27	74.0	25.73	Peak	53.00	100	Vertical	Pass
4**	4960.500	44.11	54.0	9.89	AV	53.00	100	Vertical	Pass
5	7168.500	53.26	74.0	20.74	Peak	268.00	200	Vertical	Pass
5**	7168.500	43.51	54.0	10.49	AV	268.00	200	Vertical	Pass
6	9920.187	51.05	74.0	22.95	Peak	313.00	100	Vertical	Pass
6**	9920.187	47.48	54.0	6.52	AV	313.00	100	Vertical	Pass

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

No.	Frequency (MHz)	Results (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Detector	Table (Degree)	Height (cm)	Antenna	Verdict
1	1400.200	42.09	74.0	31.91	Peak	0.00	100	Horizontal	Pass
1**	1400.200	33.72	54.0	20.28	AV	0.00	100	Horizontal	Pass
2	2402.100	103.34	74.0	-29.34	Peak	302.00	150	Horizontal	N/A
2**	2402.100	102.53	54.0	-48.53	AV	302.00	150	Horizontal	N/A
3	4803.750	52.71	74.0	21.29	Peak	327.00	200	Horizontal	Pass
3**	4803.750	47.88	54.0	6.12	AV	327.00	200	Horizontal	Pass
4	4804.000	52.15	74.0	21.85	Peak	0.00	100	Horizontal	Pass
4**	4804.000	48.76	54.0	5.24	AV	0.00	100	Horizontal	Pass
5	7931.750	53.13	74.0	20.87	Peak	228.00	100	Horizontal	Pass
5**	7931.750	44.26	54.0	9.74	AV	228.00	100	Horizontal	Pass
6	9608.112	49.43	74.0	24.57	Peak	285.00	100	Horizontal	Pass
6**	9608.112	46.83	54.0	7.17	AV	285.00	100	Horizontal	Pass

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

No.	Frequency (MHz)	Results (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Detector	Table (Degree)	Height (cm)	Antenna	Verdict
1	1330.800	45.23	74.0	28.77	Peak	39.00	400	Vertical	Pass
1**	1330.800	34.50	54.0	19.50	AV	39.00	400	Vertical	Pass
2	2401.800	94.88	74.0	-20.88	Peak	73.00	100	Vertical	N/A
2**	2401.800	92.37	54.0	-38.37	AV	73.00	100	Vertical	N/A
3	4804.000	50.61	74.0	23.39	Peak	92.00	200	Vertical	Pass
3**	4804.000	45.05	54.0	8.95	AV	92.00	200	Vertical	Pass
4	4804.250	49.49	74.0	24.51	Peak	325.00	100	Vertical	Pass
4**	4804.250	45.73	54.0	8.27	AV	325.00	100	Vertical	Pass
5	7947.250	53.84	74.0	20.16	Peak	53.00	300	Vertical	Pass
5**	7947.250	44.53	54.0	9.47	AV	53.00	300	Vertical	Pass
6	9608.112	49.37	74.0	24.63	Peak	302.00	100	Vertical	Pass
6**	9608.112	44.97	54.0	9.03	AV	302.00	100	Vertical	Pass

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

o.	Frequency (MHz)	Results (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Detector	Table (Degree)	Height (cm)	Antenna	Verdict
1	1592.900	42.46	74.0	31.54	Peak	312.00	200	Horizontal	Pass
1**	1592.900	33.01	54.0	20.99	AV	312.00	200	Horizontal	Pass
2	2441.100	103.19	74.0	-29.19	Peak	286.00	150	Horizontal	N/A
2**	2441.100	101.71	54.0	-47.71	AV	286.00	150	Horizontal	N/A
3	3423.000	44.14	74.0	29.86	Peak	360.00	100	Horizontal	Pass
3**	3423.000	42.17	54.0	11.83	AV	360.00	100	Horizontal	Pass
4	4881.750	53.51	74.0	20.49	Peak	348.00	200	Horizontal	Pass
4**	4881.750	46.87	54.0	7.13	AV	348.00	200	Horizontal	Pass
5	4882.250	52.53	74.0	21.47	Peak	348.00	100	Horizontal	Pass
5**	4882.250	48.47	54.0	5.53	AV	348.00	100	Horizontal	Pass
6	9764.388	49.14	74.0	24.86	Peak	322.00	100	Horizontal	Pass
6**	9764.388	45.10	54.0	8.90	AV	322.00	100	Horizontal	Pass

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

No.	Frequency (MHz)	Results (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Detector	Table (Degree)	Height (cm)	Antenna	Verdict
1	1330.200	46.36	74.0	27.64	Peak	126.00	400	Vertical	Pass
1**	1330.200	35.86	54.0	18.14	AV	126.00	400	Vertical	Pass
2	2440.900	94.60	74.0	-20.60	Peak	92.00	150	Vertical	N/A
2**	2440.900	92.05	54.0	-38.05	AV	92.00	150	Vertical	N/A
3	4882.250	50.65	74.0	23.35	Peak	151.00	150	Vertical	Pass
3**	4882.250	44.43	54.0	9.57	AV	151.00	150	Vertical	Pass
4	7958.000	53.37	74.0	20.63	Peak	209.00	400	Vertical	Pass
4**	7958.000	45.46	54.0	8.54	AV	209.00	400	Vertical	Pass
5	9764.150	50.85	74.0	23.15	Peak	315.00	100	Vertical	Pass
5**	9764.150	47.68	54.0	6.32	AV	315.00	100	Vertical	Pass
6	14478.037	54.75	74.0	19.25	Peak	292.00	100	Vertical	Pass
6**	14478.037	46.01	54.0	7.99	AV	292.00	100	Vertical	Pass

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

No.	Frequency (MHz)	Results (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Detector	Table (Degree)	Height (cm)	Antenna	Verdict
1	1401.400	42.25	74.0	31.75	Peak	31.00	300	Horizontal	Pass
1**	1401.400	31.85	54.0	22.15	AV	31.00	300	Horizontal	Pass
2	2480.100	102.18	74.0	-28.18	Peak	267.00	100	Horizontal	N/A
2**	2480.100	101.31	54.0	-47.31	AV	267.00	100	Horizontal	N/A
3	4960.000	52.62	74.0	21.38	Peak	347.00	100	Horizontal	Pass
3**	4960.000	47.11	54.0	6.89	AV	347.00	100	Horizontal	Pass
4	4960.250	51.80	74.0	22.20	Peak	360.00	100	Horizontal	Pass
4**	4960.250	48.30	54.0	5.70	AV	360.00	100	Horizontal	Pass
5	7964.500	53.42	74.0	20.58	Peak	360.00	400	Horizontal	Pass
5**	7964.500	44.83	54.0	9.17	AV	360.00	400	Horizontal	Pass
6	9920.187	49.97	74.0	24.03	Peak	73.00	100	Horizontal	Pass
6**	9920.187	46.81	54.0	7.19	AV	73.00	100	Horizontal	Pass

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

No.	Frequency (MHz)	Results (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Detector	Table (Degree)	Height (cm)	Antenna	Verdict
1	1161.100	45.68	74.0	28.32	Peak	66.00	100	Vertical	Pass
1**	1161.100	35.19	54.0	18.81	AV	66.00	100	Vertical	Pass
2	2480.200	91.86	74.0	-17.86	Peak	93.00	150	Vertical	N/A
2**	2480.200	90.17	54.0	-36.17	AV	93.00	150	Vertical	N/A
3	4960.500	48.30	74.0	25.70	Peak	113.00	100	Vertical	Pass
3**	4960.500	42.71	54.0	11.29	AV	113.00	100	Vertical	Pass
4	4961.000	49.01	74.0	24.99	Peak	35.00	150	Vertical	Pass
4**	4961.000	41.07	54.0	12.93	AV	35.00	150	Vertical	Pass
5	7921.500	54.57	74.0	19.43	Peak	231.00	300	Vertical	Pass
5**	7921.500	44.71	54.0	9.29	AV	231.00	300	Vertical	Pass
6	9920.187	51.10	74.0	22.90	Peak	315.00	100	Vertical	Pass
6**	9920.187	47.87	54.0	6.13	AV	315.00	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.

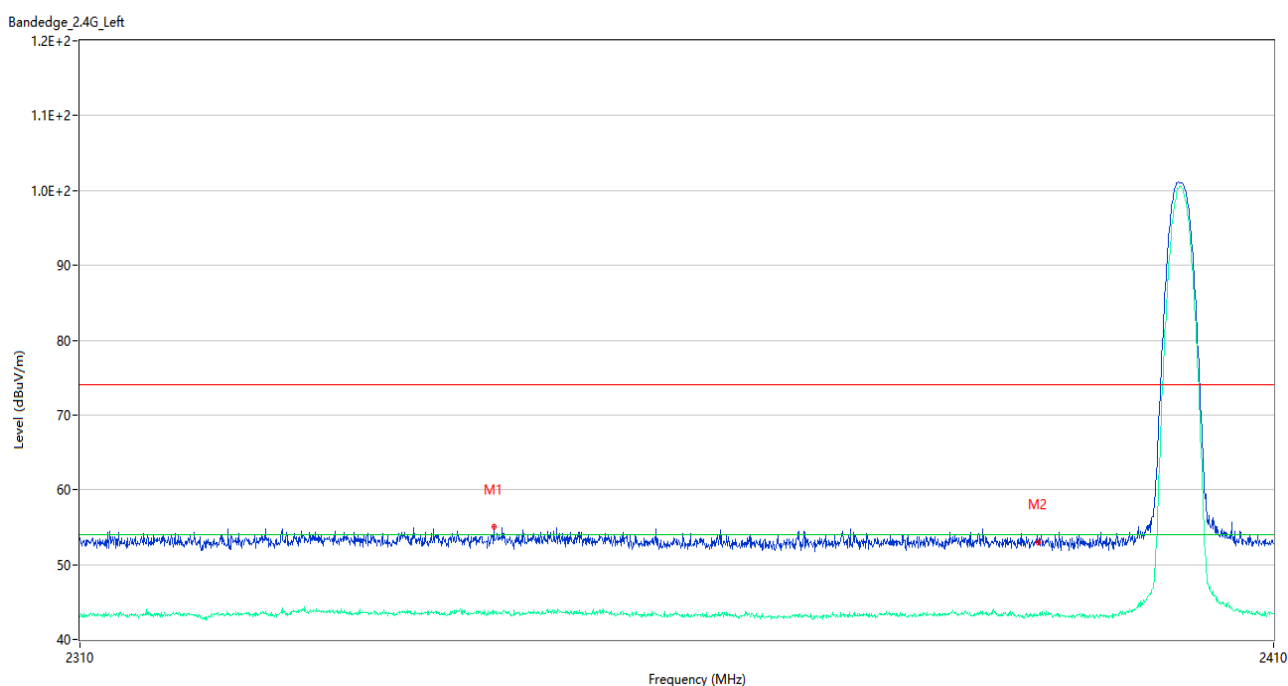
Note ²: The test data all are tested in the vertical and horizontal antenna which the trace is max hold. So these plots have shown the worst case.

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.

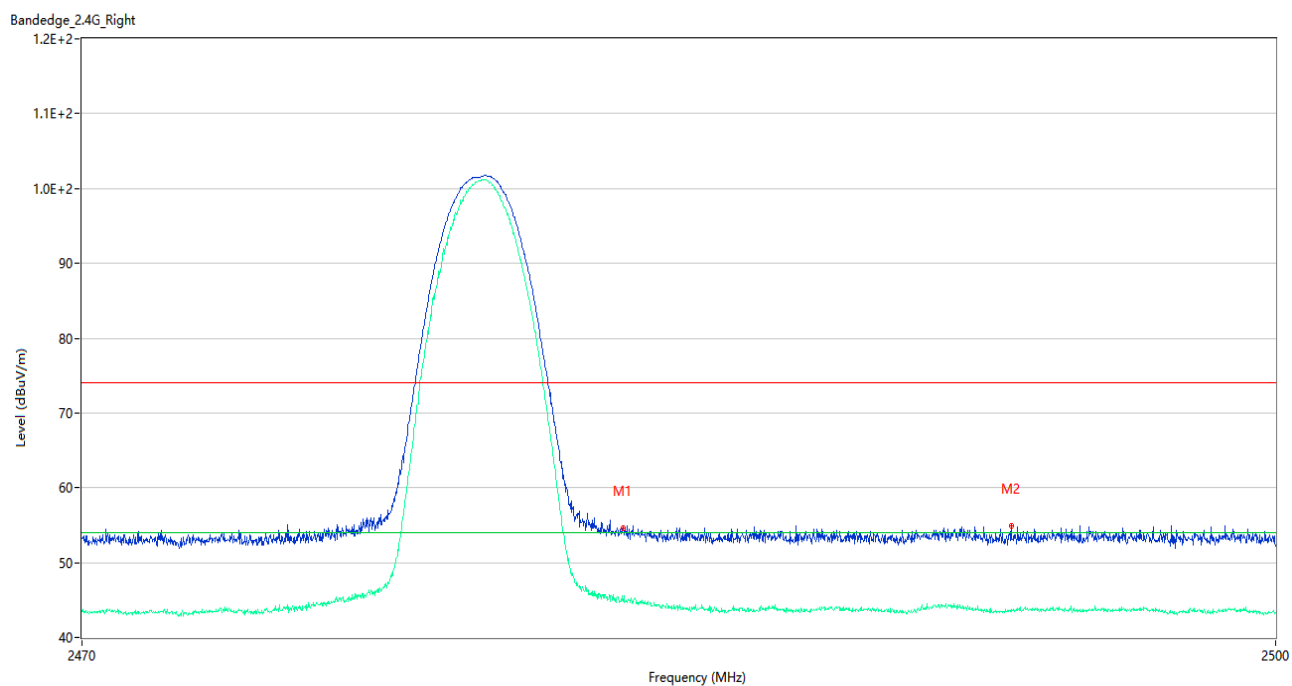
Test Data and Plots

GFSK LOW CHANNEL



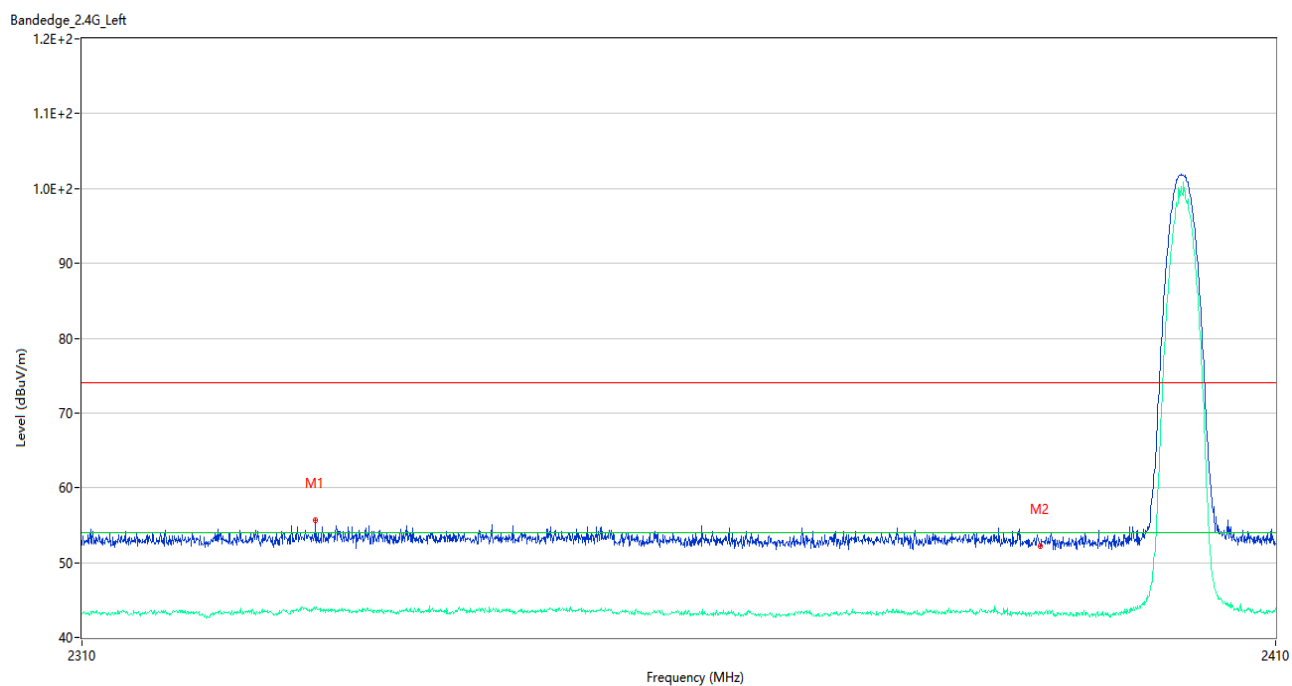
No.	Frequency (MHz)	Results (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Detector	Table (Degree)	Height (cm)	Antenna	Verdict
1	2344.200	55.11	74.0	18.89	Peak	46.00	100	Horizontal	Pass
1**	2344.200	43.46	54.0	10.54	AV	46.00	100	Horizontal	Pass
2	2389.950	53.02	74.0	20.98	Peak	160.00	200	Horizontal	Pass
2**	2389.950	43.17	54.0	10.83	AV	160.00	200	Horizontal	Pass

GFSK HIGH CHANNEL



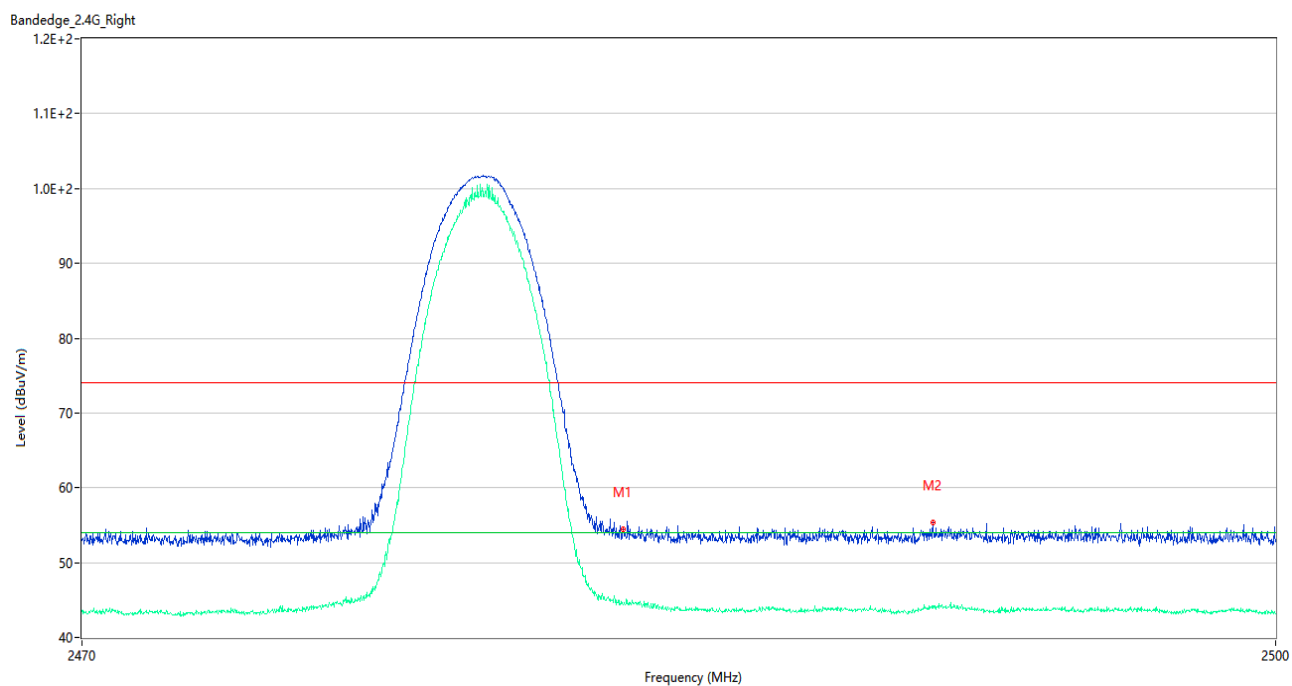
No.	Frequency (MHz)	Results (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Detector	Table (Degree)	Height (cm)	Antenna	Verdict
1	2483.560	54.59	74.0	19.41	Peak	275.00	100	Horizontal	Pass
1**	2483.560	44.88	54.0	9.12	AV	275.00	100	Horizontal	Pass
2	2493.325	54.95	74.0	19.05	Peak	59.00	200	Horizontal	Pass
2**	2493.325	43.73	54.0	10.27	AV	59.00	200	Horizontal	Pass

8-DPSK LOW CHANNEL



No.	Frequency (MHz)	Results (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Detector	Table (Degree)	Height (cm)	Antenna	Verdict
1	2329.250	55.63	74.0	18.37	Peak	165.00	150	Horizontal	Pass
1**	2329.250	43.97	54.0	10.03	AV	165.00	150	Horizontal	Pass
2	2389.950	52.20	74.0	21.80	Peak	20.00	150	Horizontal	Pass
2**	2389.950	43.17	54.0	10.83	AV	20.00	150	Horizontal	Pass

8-DPSK HIGH CHANNEL

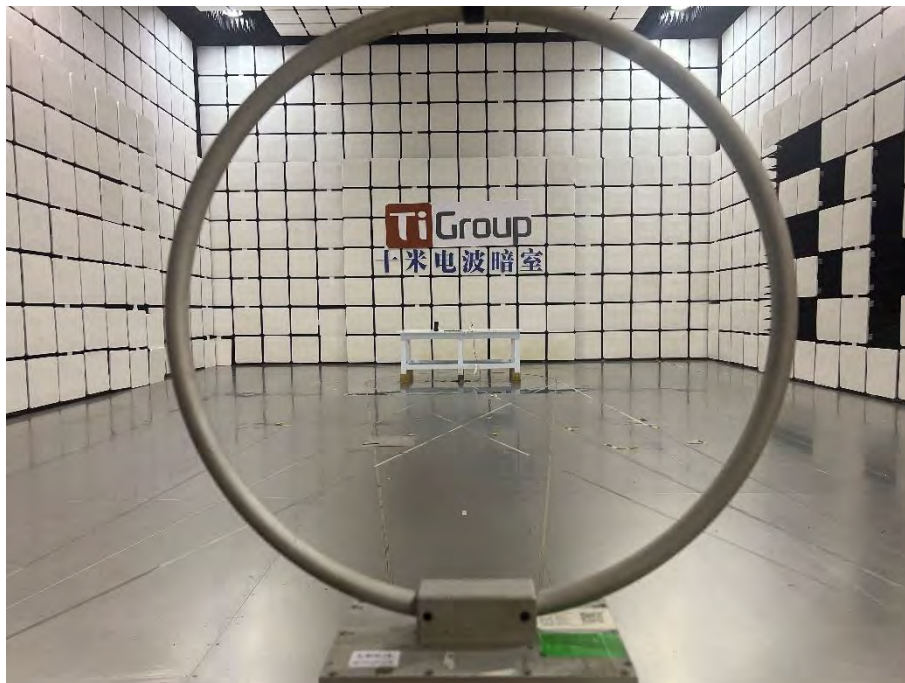


No.	Frequency (MHz)	Results (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Detector	Table (Degree)	Height (cm)	Antenna	Verdict
1	2483.560	54.44	74.0	19.56	Peak	264.00	200	Horizontal	Pass
1**	2483.560	44.43	54.0	9.57	AV	264.00	200	Horizontal	Pass
2	2491.345	55.41	74.0	18.59	Peak	323.00	100	Horizontal	Pass
2**	2491.345	44.21	54.0	9.79	AV	323.00	100	Horizontal	Pass

ANNEX A TEST SETUP PHOTOS

1 Radiated Test Photo

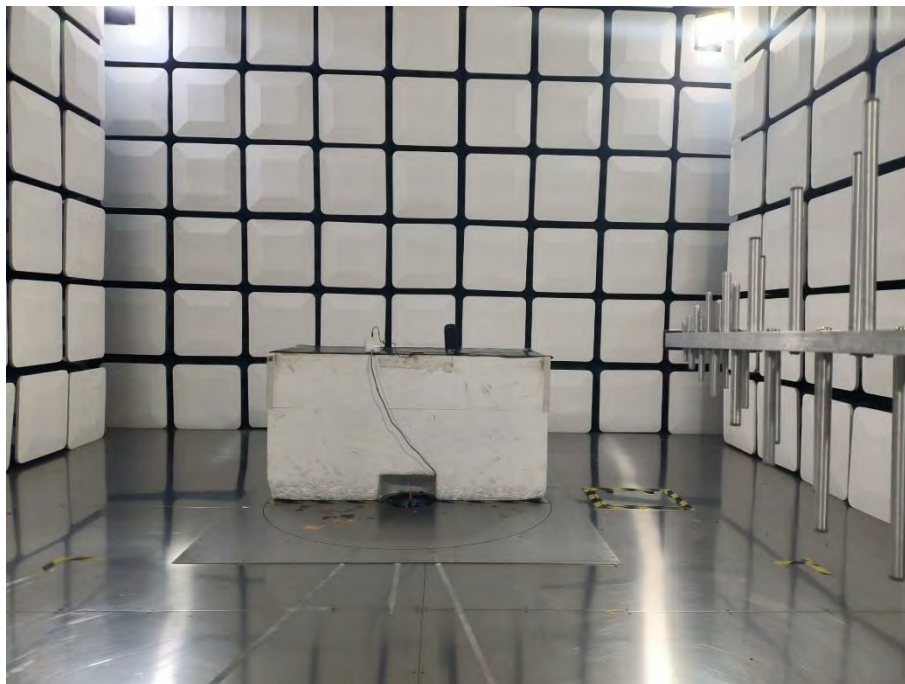
Below 30MHz-TX Mode



Close-up-TX Mode



30MHz-1GHz-TX Mode



Close-up-TX Mode



Below 30MHz-RX Mode



Close-up-RX Mode



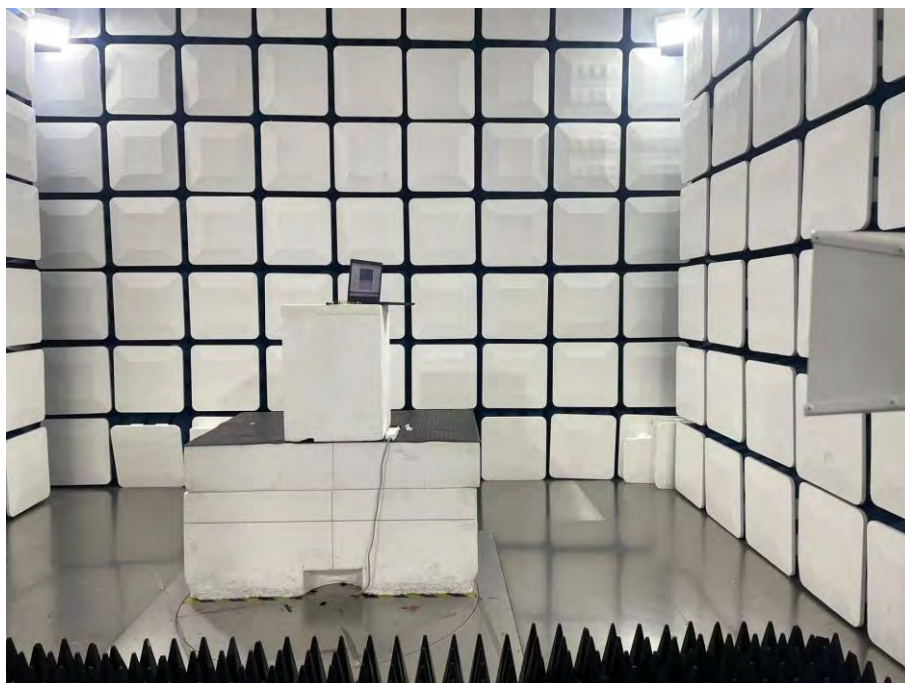
30MHz-1GHz-RX Mode



Close-up-RX Mode



Above 1GHz

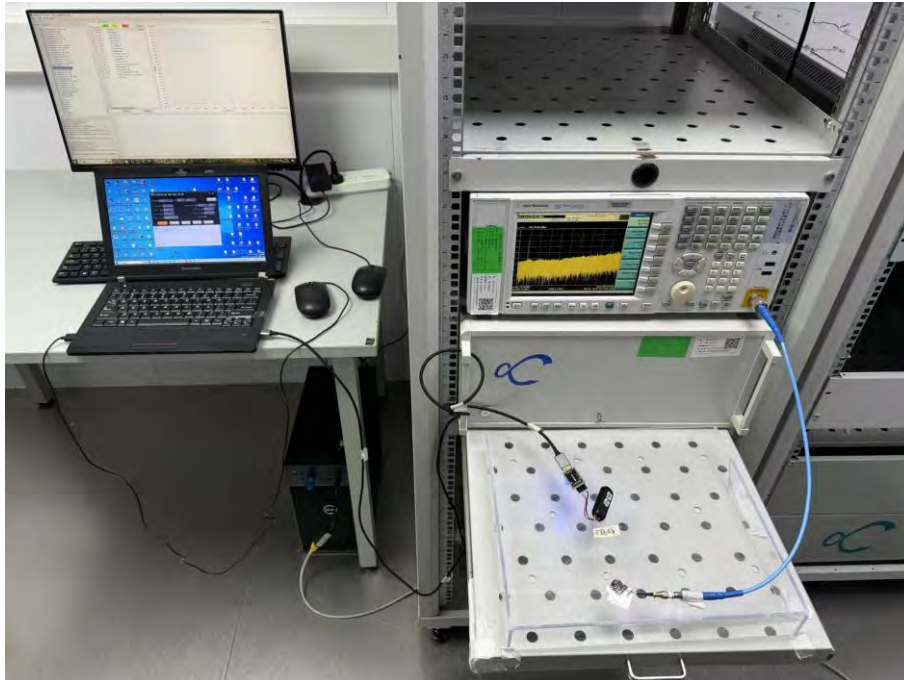


Close-up



2 Conducted Test Photo

Conducted Test



3 Conducted Emission

Photo 1-TX Mode

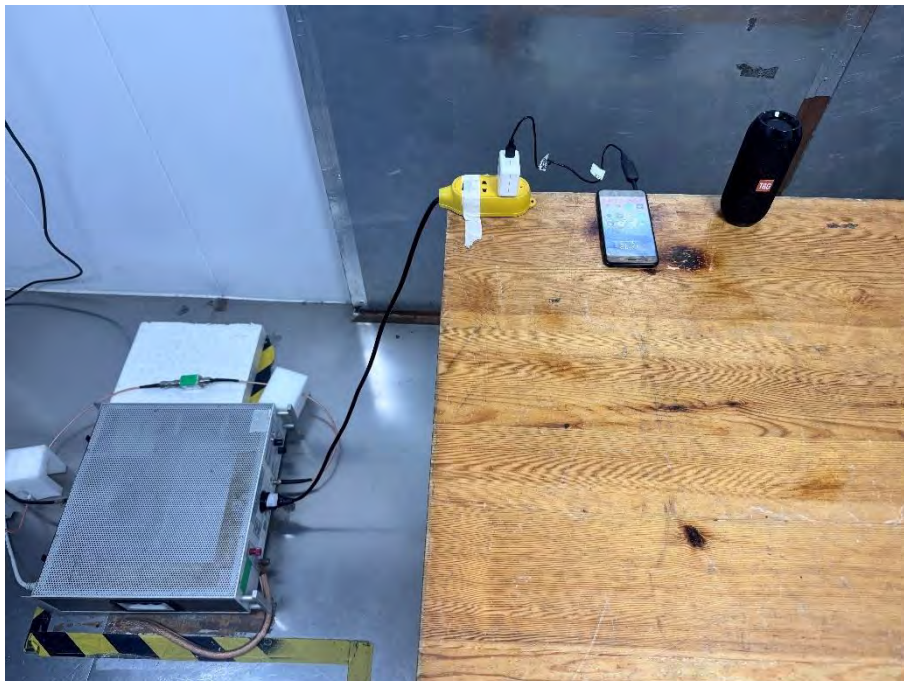


Photo 2-TX Mode

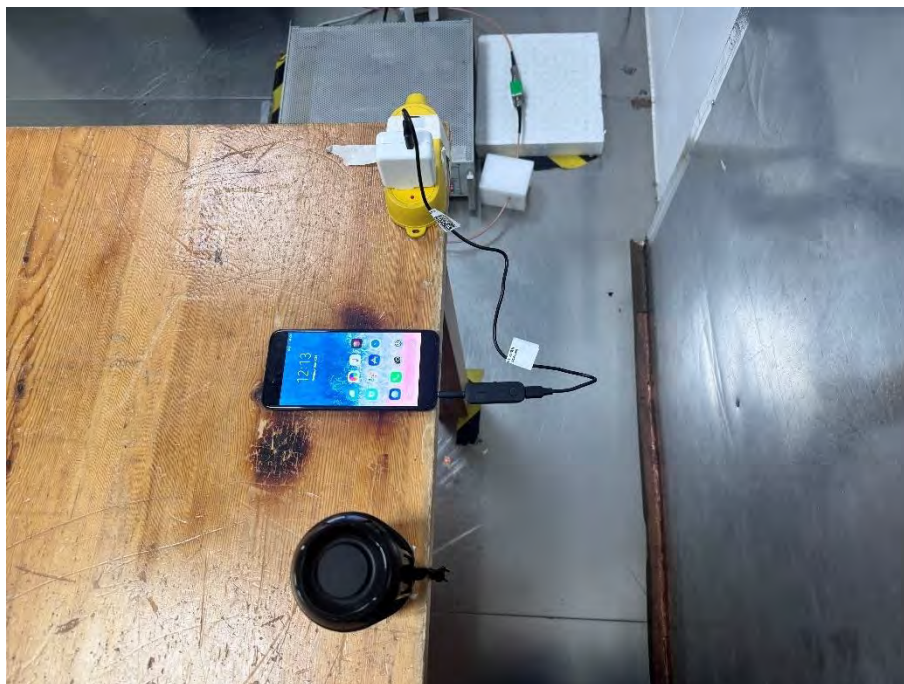


Photo 3-RX Mode

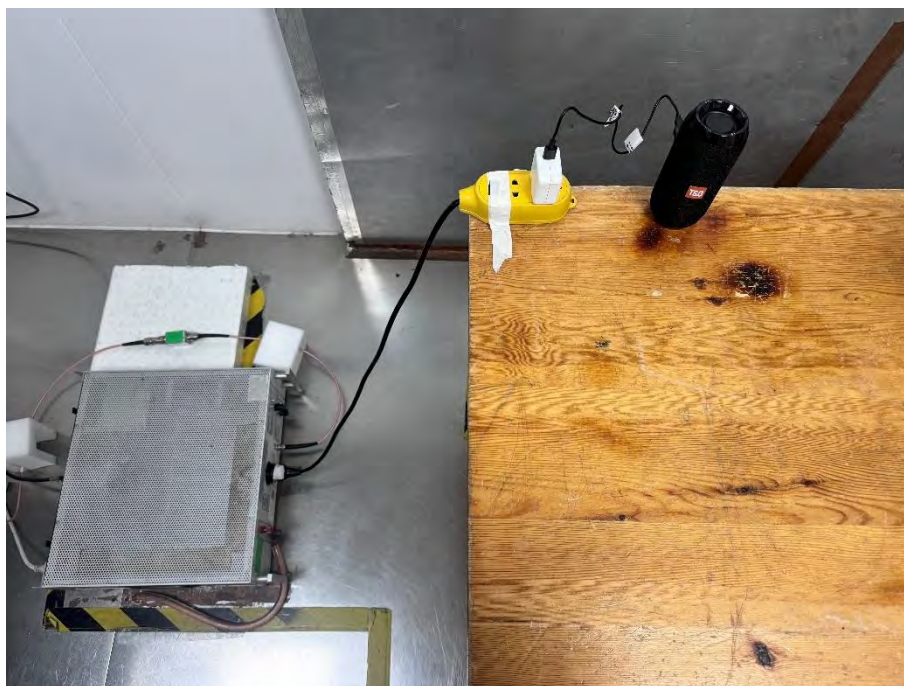


Photo 4-RX Mode



ANNEX B EUT EXTERNAL PHOTOS

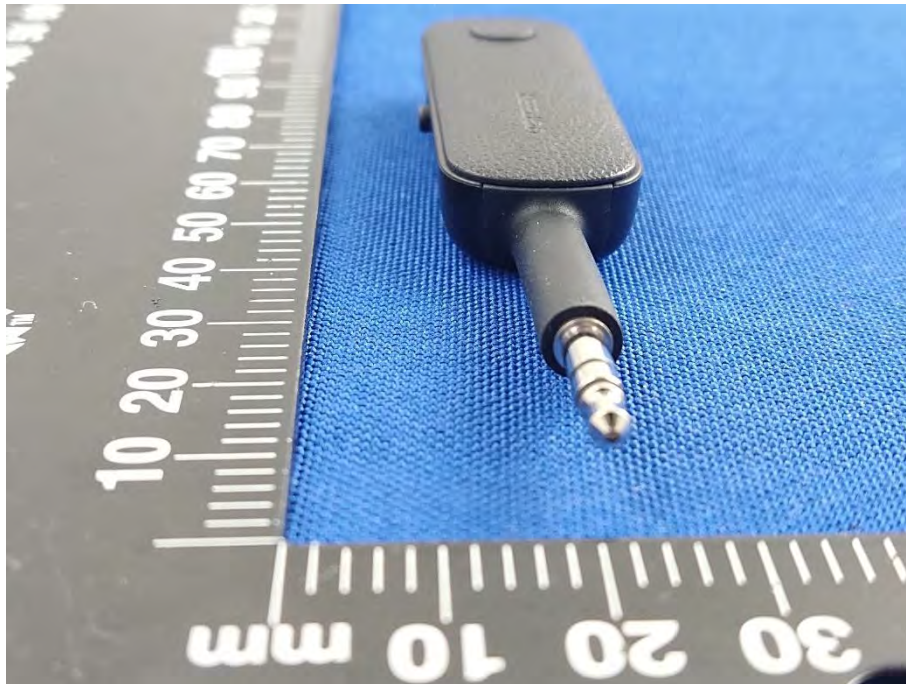
FRONT VIEW OF EUT



REAR VIEW OF EUT



LEFT VIEW OF EUT



RIGHT VIEW OF EUT



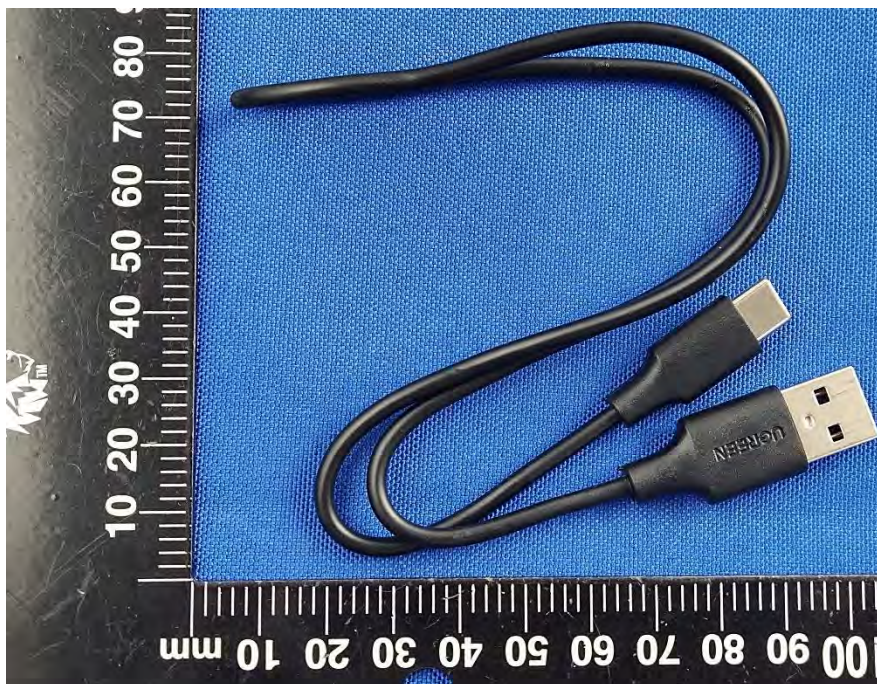
CLOSE-UP



TOP VIEW OF EUT

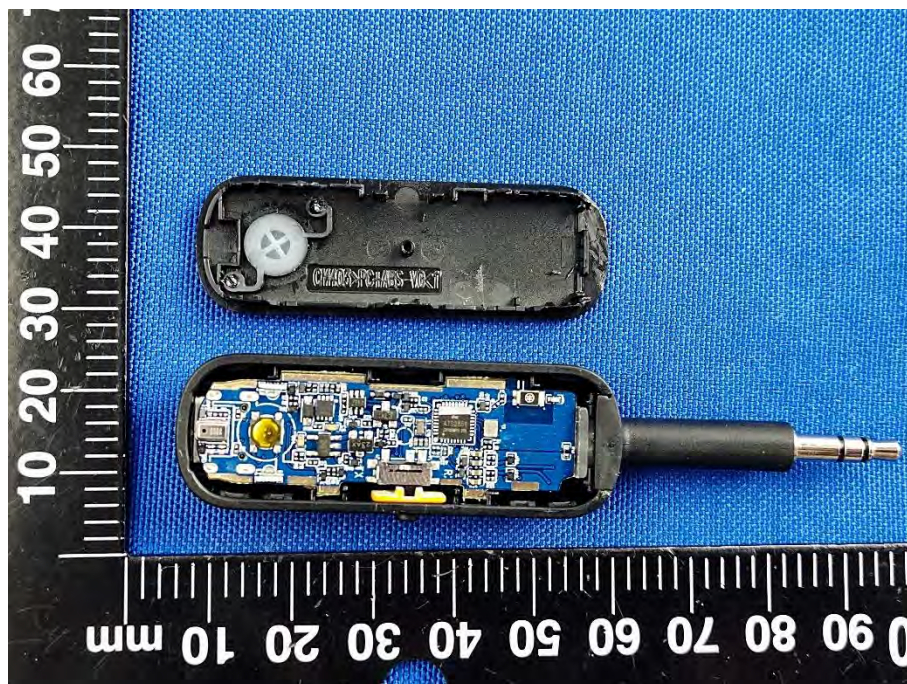


BOTTOM VIEW OF EUT

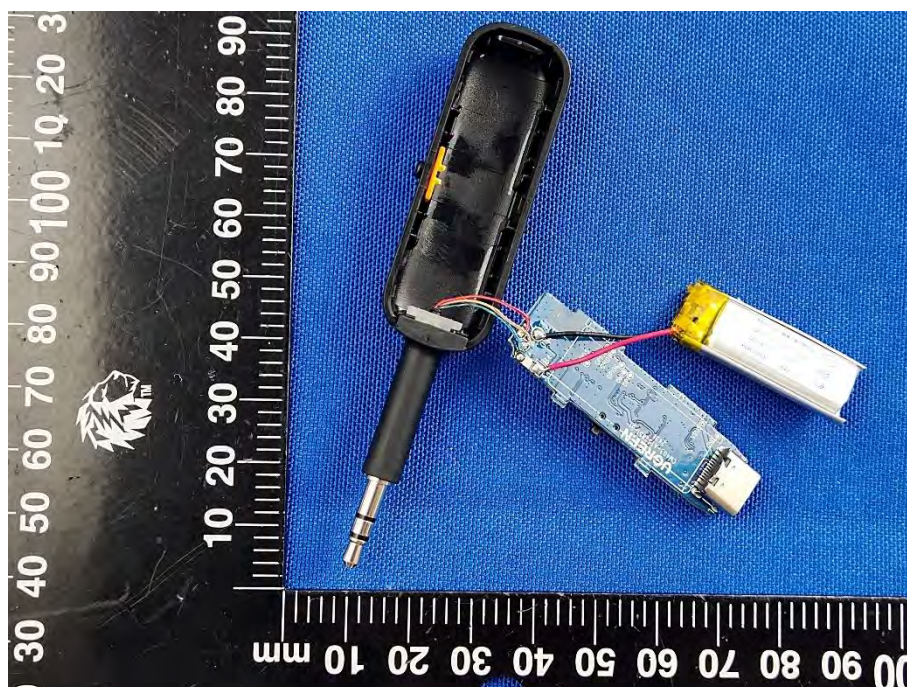


ANNEX C EUT INTERNAL PHOTOS

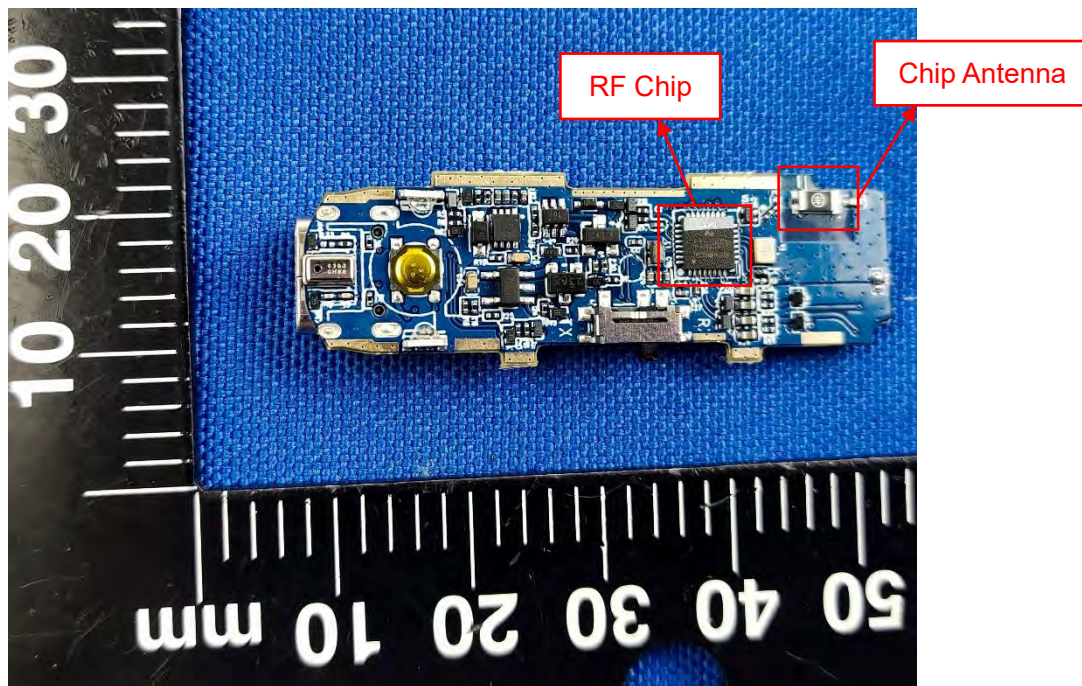
EUT UNCOVER VIEW 1



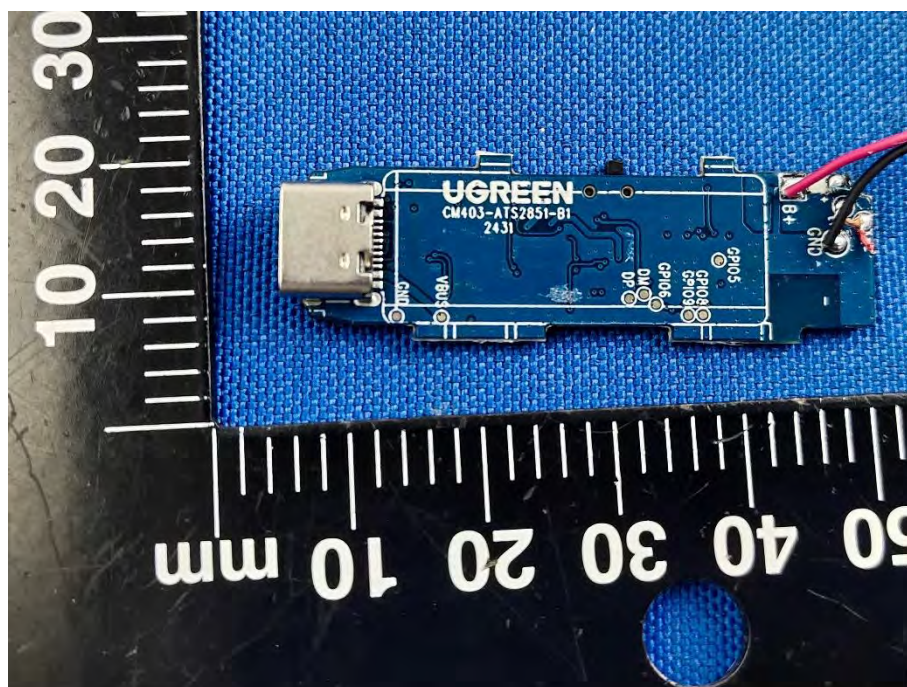
EUT UNCOVER VIEW 2



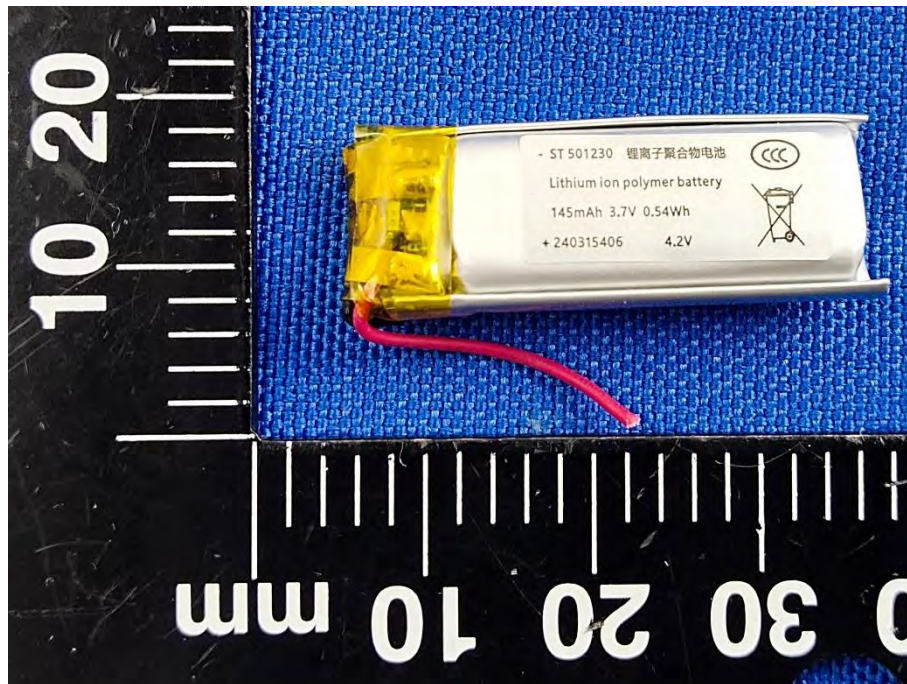
MAIN BOARD TOP VIEW



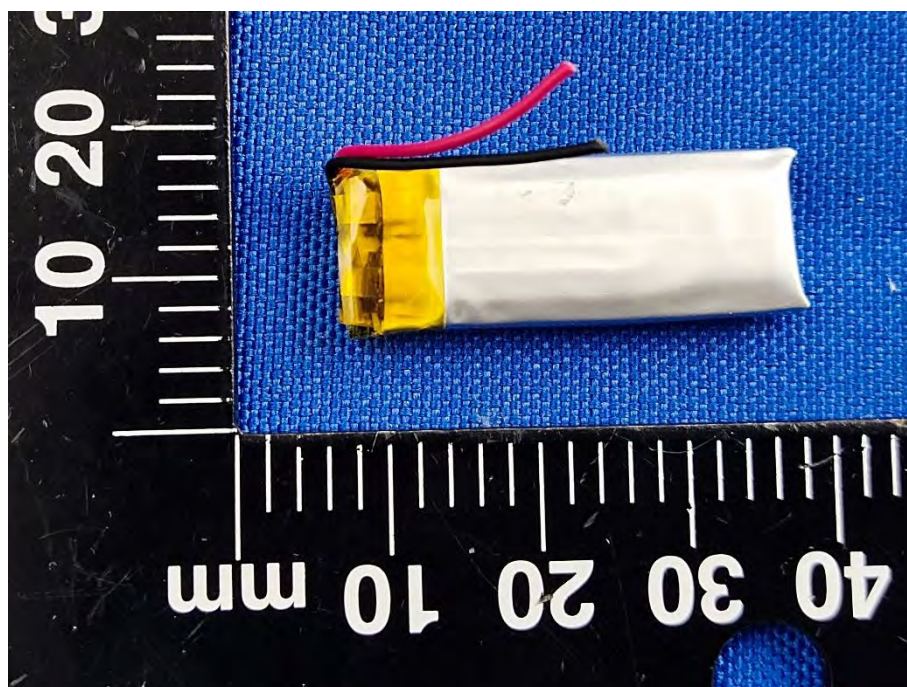
MAIN BOARD REAR VIEW



BATTERY (FRONT)



BATTERY (REAR)



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--END OF REPORT--