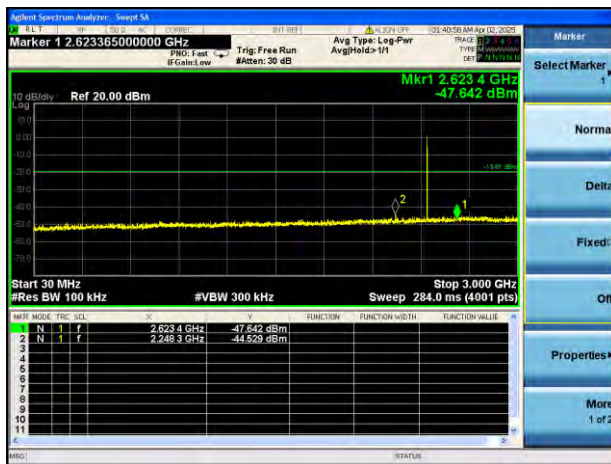
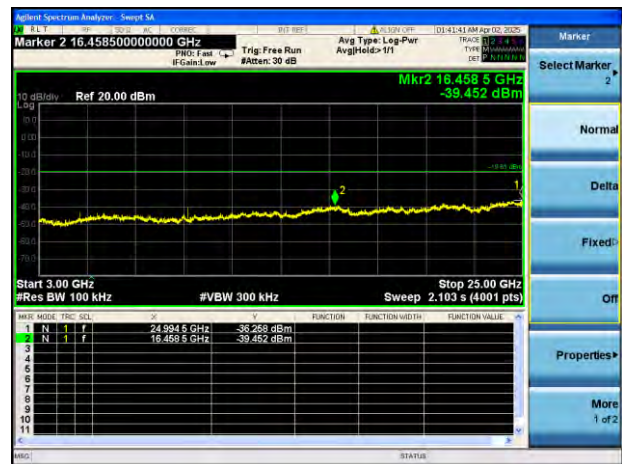


GFSK MIDDLE CHANNEL, SPURIOUS 30 MHz ~ 3 GHz



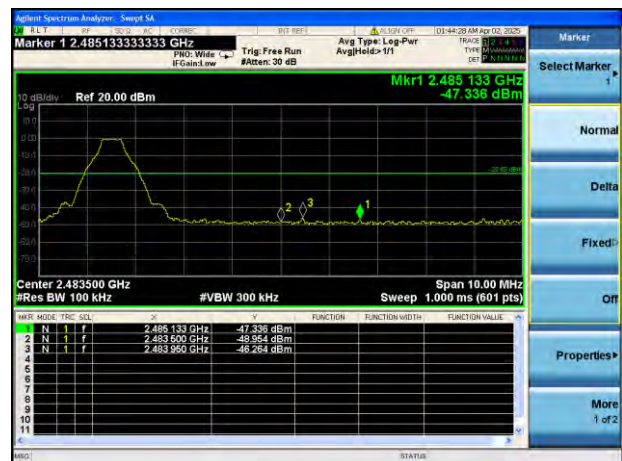
GFSK MIDDLE CHANNEL, SPURIOUS 3 GHz ~ 25 GHz



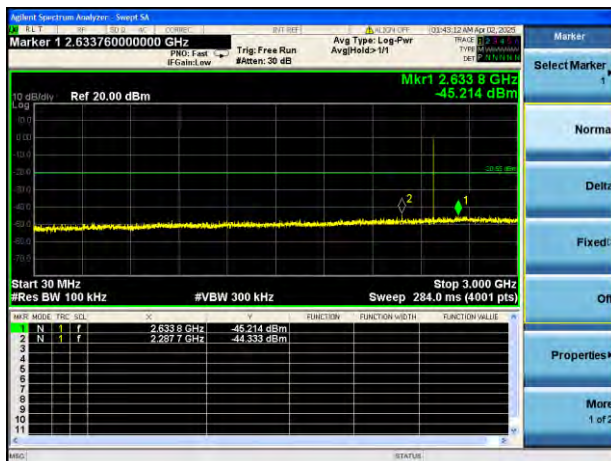
GFSK HIGH CHANNEL, CARRIER LEVEL



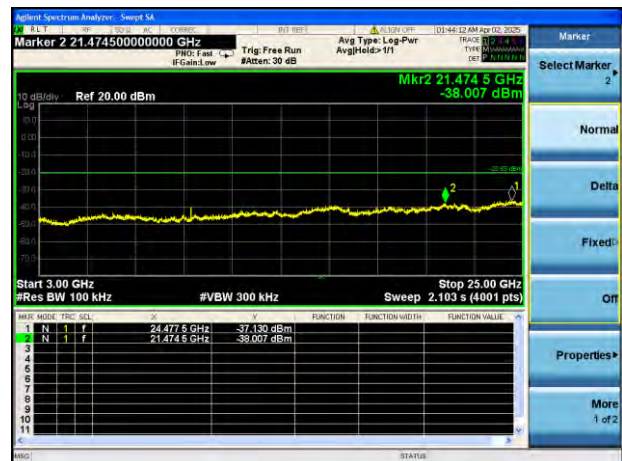
GFSK HIGH CHANNEL, BAND EDGE



GFSK HIGH CHANNEL, SPURIOUS 30 MHz ~ 3 GHz



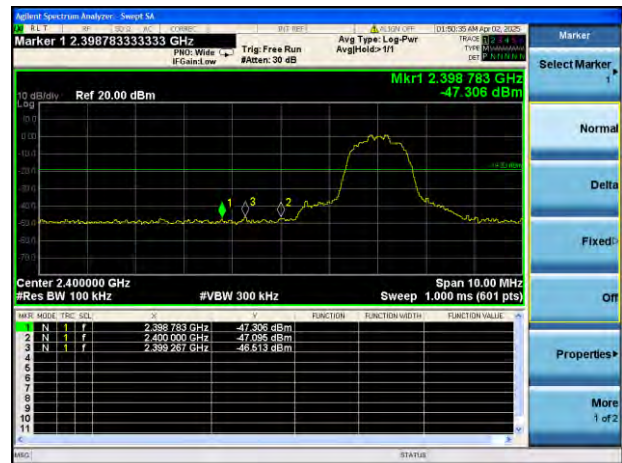
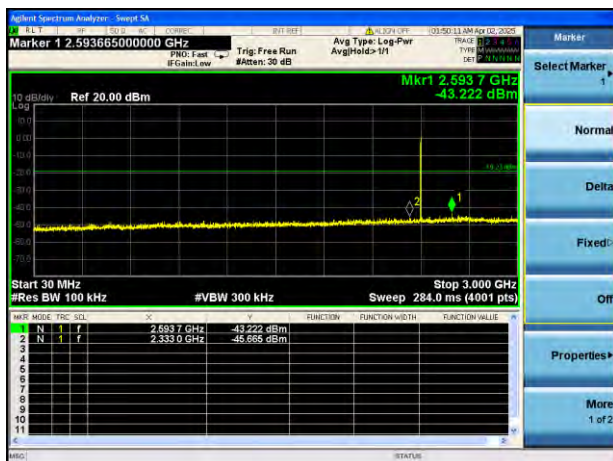
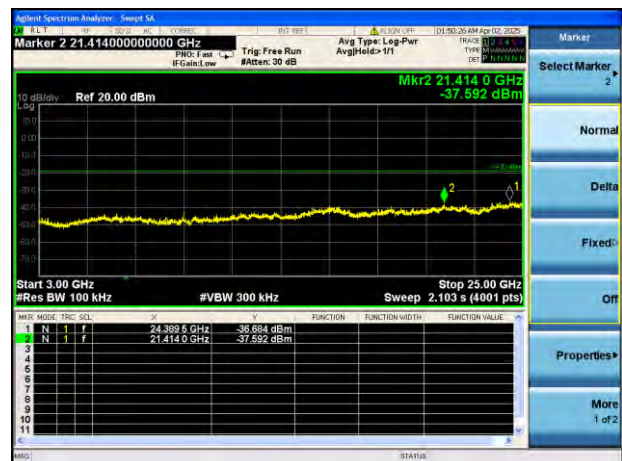
GFSK HIGH CHANNEL, SPURIOUS 3 GHz ~ 25 GHz



8-DPSK LOW CHANNEL, CARRIER LEVEL



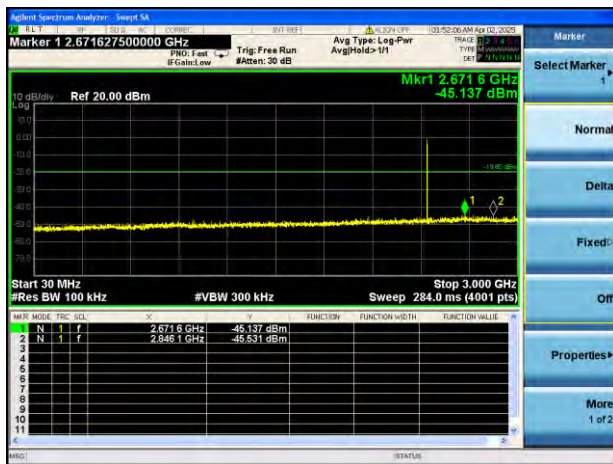
8-DPSK LOW CHANNEL, BAND EDGE

8-DPSK LOW CHANNEL, SPURIOUS
30 MHz ~ 3 GHz8-DPSK LOW CHANNEL, SPURIOUS
3 GHz ~ 25 GHz

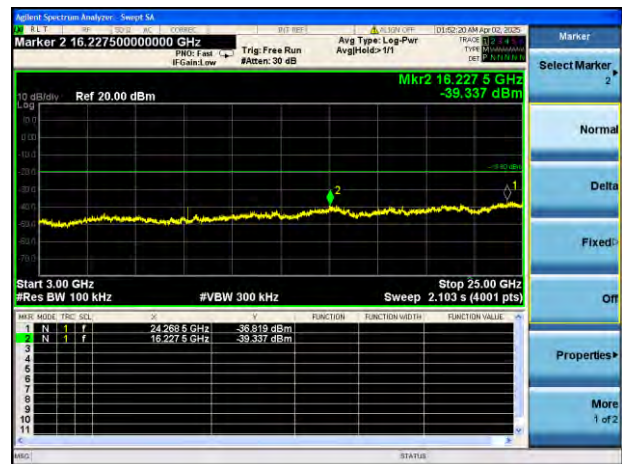
8-DPSK MIDDLE CHANNEL, CARRIER LEVEL



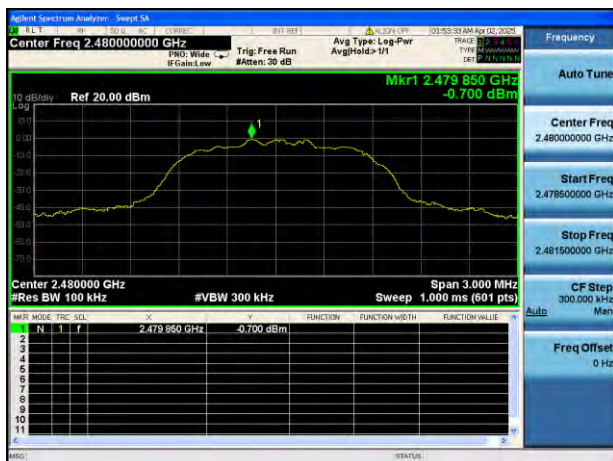
8-DPSK MIDDLE CHANNEL, SPURIOUS 30 MHz ~ 3 GHz



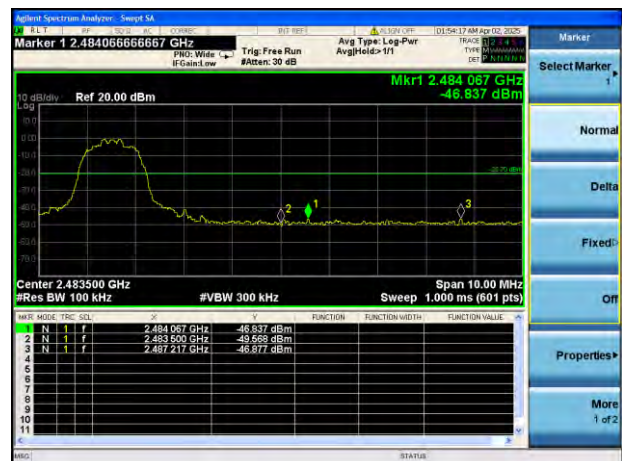
8-DPSK MIDDLE CHANNEL, SPURIOUS 3 GHz ~ 25 GHz



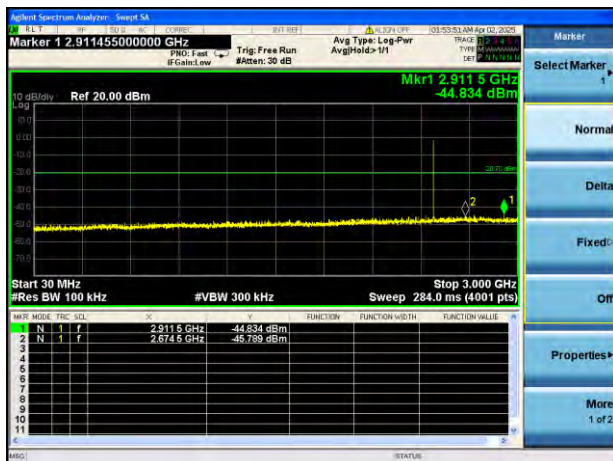
8-DPSK HIGH CHANNEL, CARRIER LEVEL



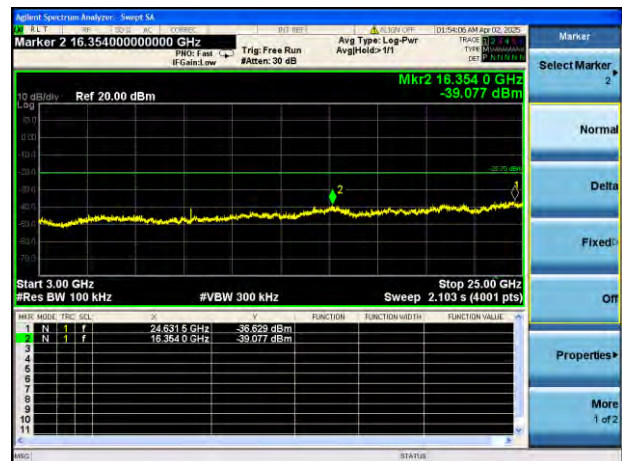
8-DPSK HIGH CHANNEL, BAND EDGE



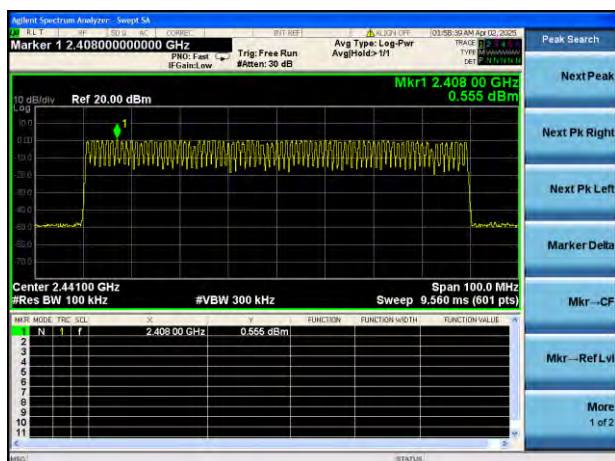
8-DPSK HIGH CHANNEL, SPURIOUS 30 MHz ~ 3 GHz



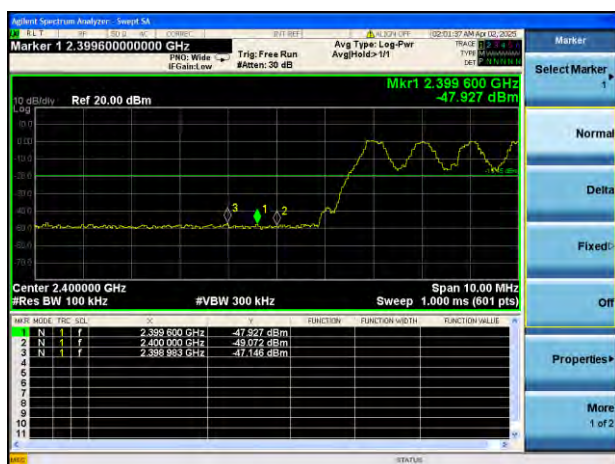
8-DPSK HIGH CHANNEL, SPURIOUS 3 GHz ~ 25 GHz



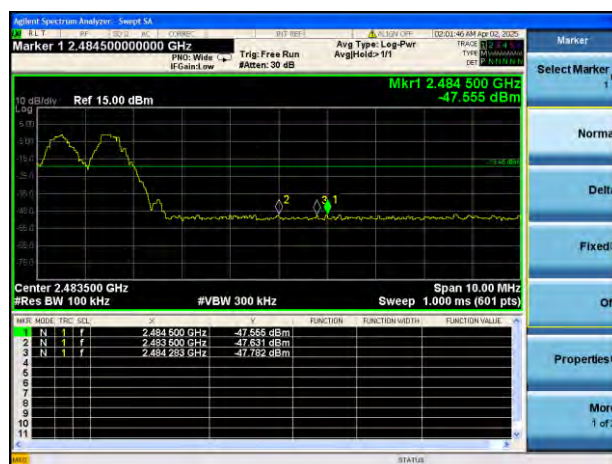
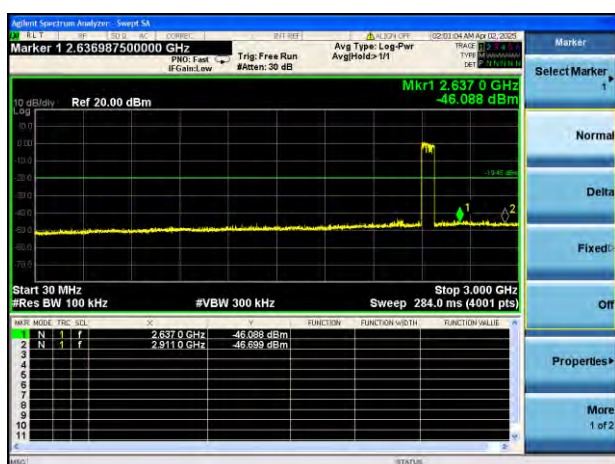
GFSK HOPPING, CARRIER LEVEL



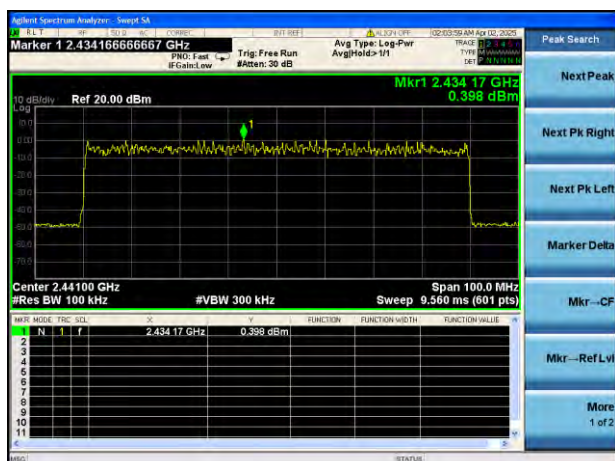
GFSK HOPPING BAND EDGE (LOW)



GFSK HOPPING BAND EDGE (HIGH)

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

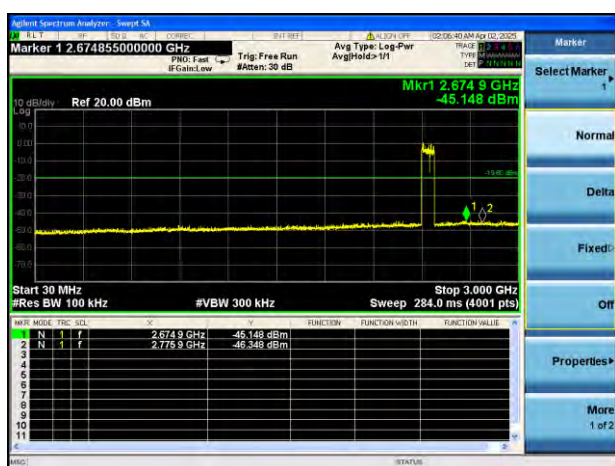
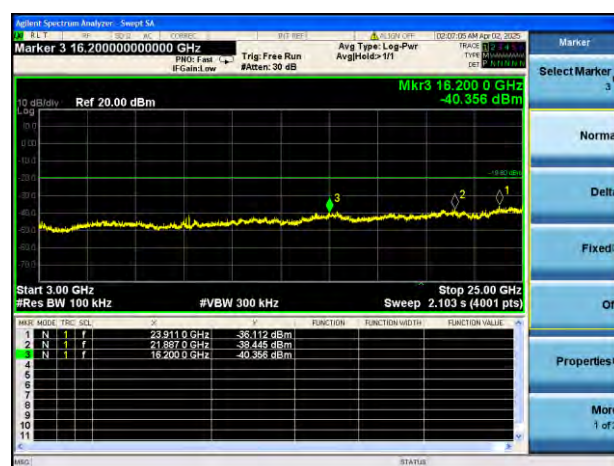
8-DPSK HOPPING, CARRIER LEVEL



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 is working in the Normal link mode. All modes have been tested and normal link mode is worst.

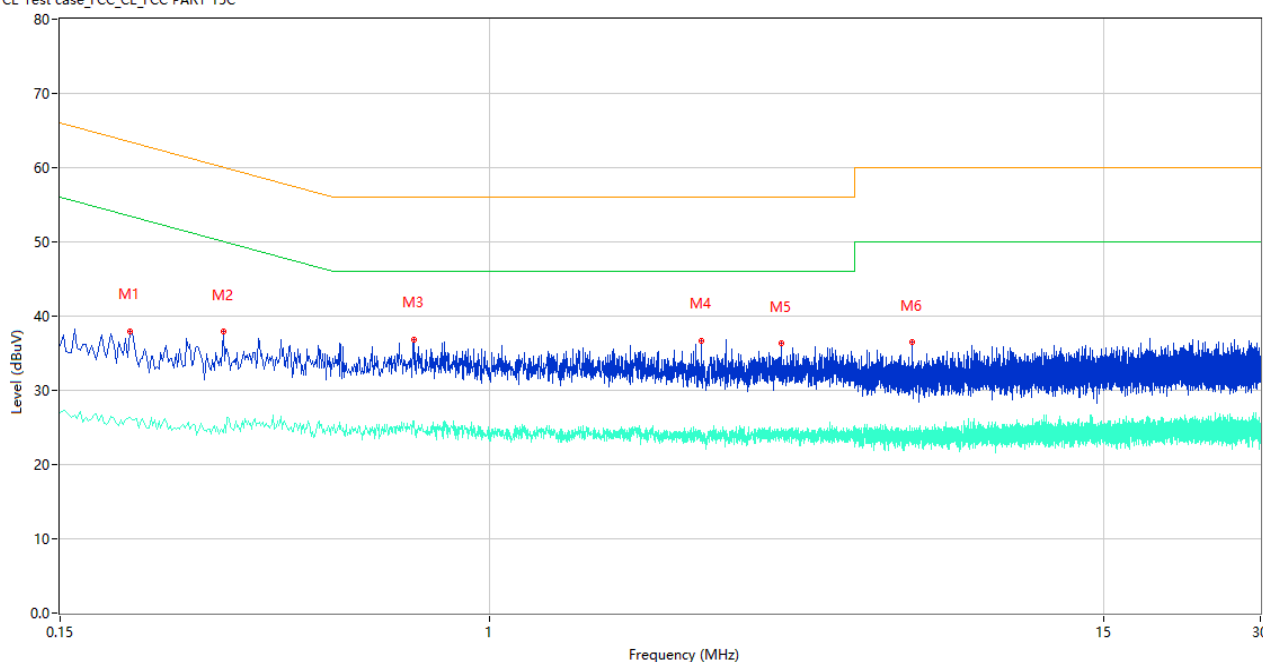
Note ²: Devices subject to Part 15 must be tested for all available U.S. voltages and frequencies (such as a nominal 120 VAC, 60 Hz and 240 VAC, 50 Hz) for which the device is capable of operation. So, The configuration 120 VAC, 60 Hz and 240 VAC, 50 Hz were tested respectively, but only the worst configuration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

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

Test Data and Plots

PHASE L

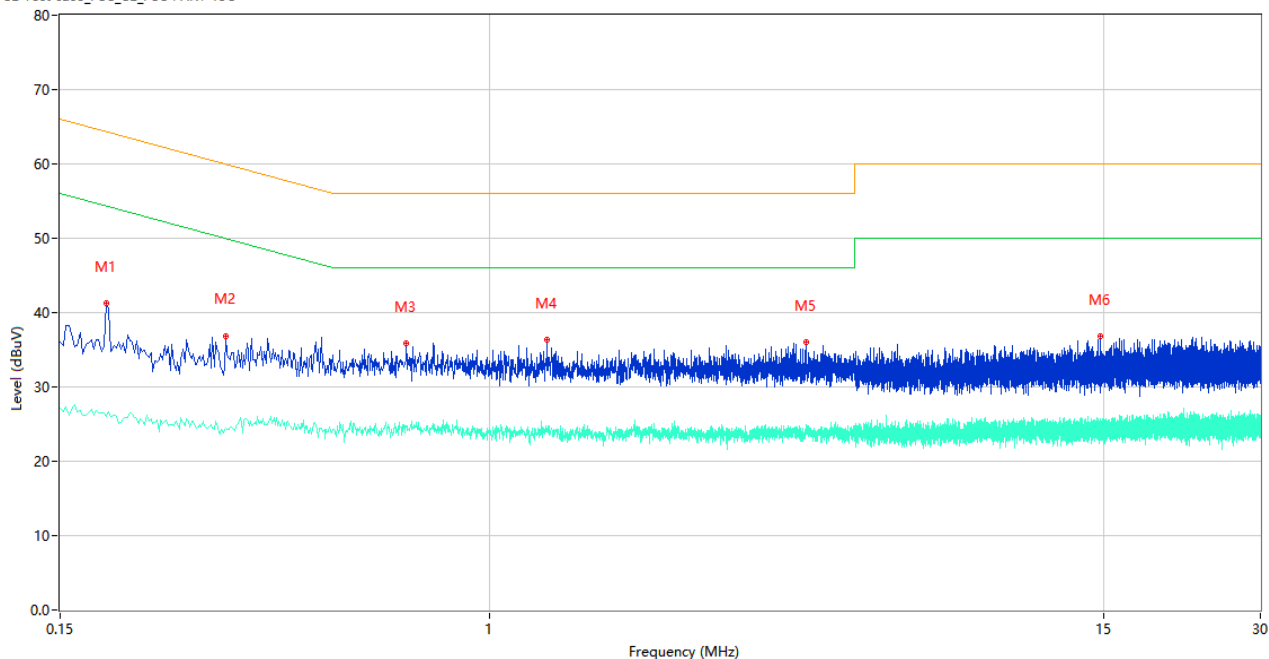
CE Test case_FCC_CE_FCC PART 15C



No.	Frequency (MHz)	Results (dBuV)	Factor (dB)	Limit (dBuV)	Margin (dB)	Detector	Line	Verdict
1	0.204	38.01	9.77	63.45	25.44	Peak	L	Pass
1**	0.204	26.34	9.77	53.45	27.11	AV	L	Pass
2	0.308	37.90	9.92	60.02	22.12	Peak	L	Pass
2**	0.308	24.33	9.92	50.02	25.69	AV	L	Pass
3	0.716	36.89	10.50	56.00	19.11	Peak	L	Pass
3**	0.716	25.92	10.50	46.00	20.08	AV	L	Pass
4	2.548	36.67	10.09	56.00	19.33	Peak	L	Pass
4**	2.548	24.32	10.09	46.00	21.68	AV	L	Pass
5	3.626	36.28	10.39	56.00	19.72	Peak	L	Pass
5**	3.626	24.89	10.39	46.00	21.11	AV	L	Pass
6	6.452	36.43	10.38	60.00	23.57	Peak	L	Pass
6**	6.452	24.60	10.38	50.00	25.40	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	0.184	41.26	9.78	64.30	23.04	Peak	N	Pass
1**	0.184	25.96	9.78	54.30	28.34	AV	N	Pass
2	0.312	36.89	10.00	59.92	23.03	Peak	N	Pass
2**	0.312	24.52	10.00	49.92	25.40	AV	N	Pass
3	0.692	35.85	10.59	56.00	20.15	Peak	N	Pass
3**	0.692	24.67	10.59	46.00	21.33	AV	N	Pass
4	1.286	36.28	10.50	56.00	19.72	Peak	N	Pass
4**	1.286	24.03	10.50	46.00	21.97	AV	N	Pass
5	4.034	36.02	10.25	56.00	19.98	Peak	N	Pass
5**	4.034	23.91	10.25	46.00	22.09	AV	N	Pass
6	14.802	36.78	10.57	60.00	23.22	Peak	N	Pass
6**	14.802	23.31	10.57	50.00	26.69	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*log[Field Strength (μV/m)].
2. In the emission tables above, the tighter limit applies at the band edges.
3. For Above 1000 MHz, the emission limit in this paragraph is based on measurement instrumentation employing an average detector, measurement using instrumentation with a peak detector function, corresponding to 20dB above the maximum permitted average limit.
4. For above 1000 MHz, limit field strength of harmonics: 54dBuV/m@3m (AV) and 74dBuV/m@3m (PK).

5.10.2 Test Setup

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

5.10.3 Test Procedure

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

The power of the EUT transmitting frequency should be ignored.

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

Use the following spectrum analyzer settings:

Span = wide enough to fully capture the emission being measured

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

VBW $\geq$ RBW

Sweep = auto

Detector function = peak

Trace = max hold

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

5.10.4 Test Result

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

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

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

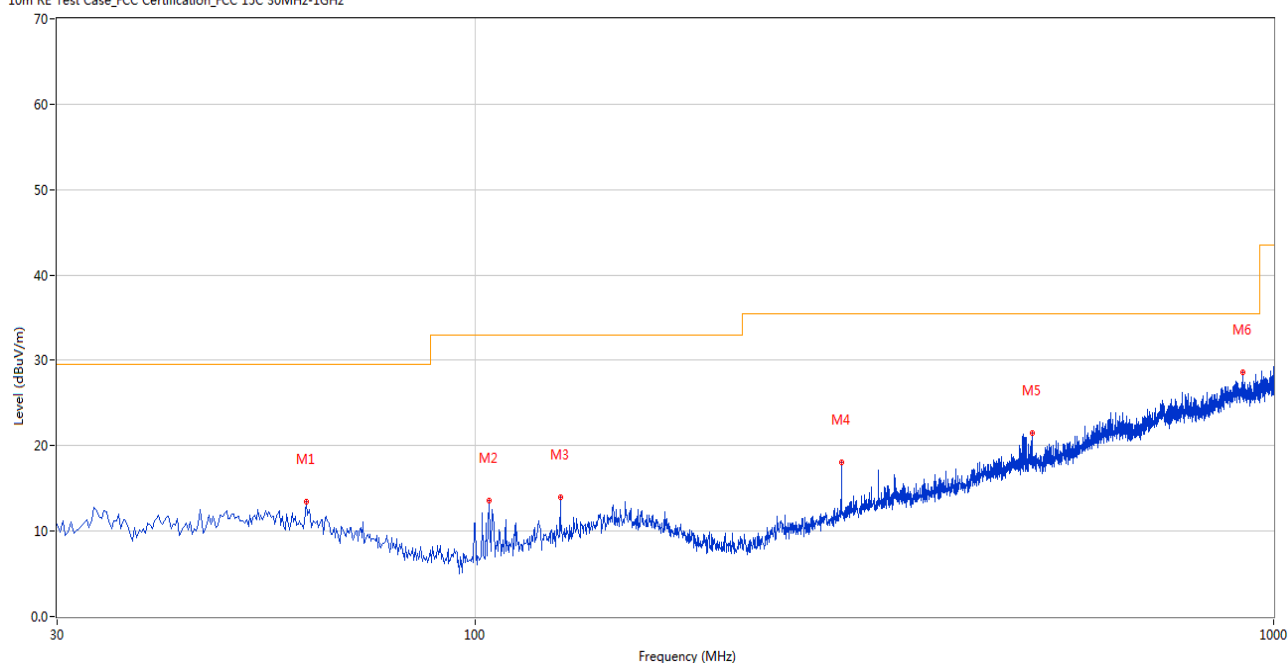
Note ⁴: Results (dBuV/m) = Original reading level of Spectrum Analyzer (dBuV/m) + Factor (dB)

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

Test Data and Plots

30 MHz to 1 GHz, ANT H

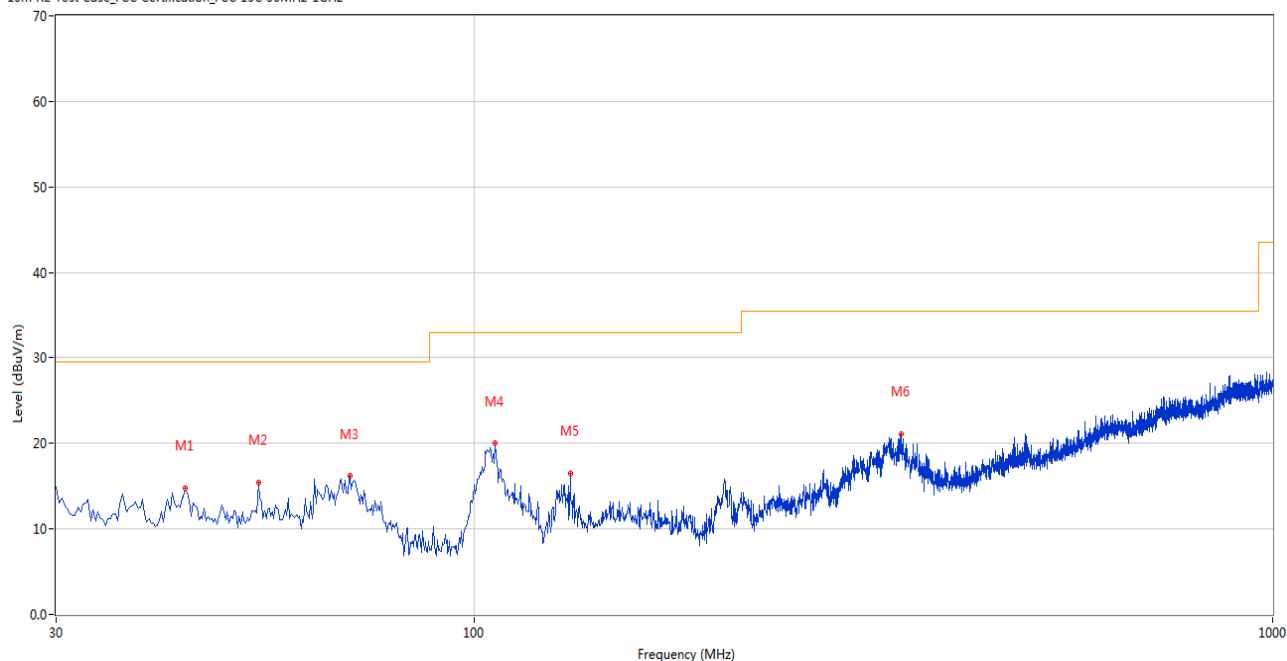
10m RE Test Case_FCC Certification_FCC 15C 30MHz-1GHz



No.	Frequency (MHz)	Results (dBuV/m)	Factor (dB)	Limit (dBuV/m)	Margin (dB)	Detector	Table (Degree)	Height (cm)	Antenna	Verdict
1	61.517	13.46	-26.81	29.5	16.04	Peak	0.00	200	Horizontal	Pass
2	104.186	13.63	-29.89	33.0	19.37	Peak	0.00	200	Horizontal	Pass
3	127.946	13.99	-27.27	33.0	19.01	Peak	84.00	200	Horizontal	Pass
4	287.956	18.02	-25.18	35.5	17.48	Peak	221.00	200	Horizontal	Pass
5	498.150	21.48	-19.48	35.5	14.02	Peak	227.00	200	Horizontal	Pass
6	915.146	28.61	-10.43	35.5	6.89	Peak	0.00	200	Horizontal	Pass

30 MHz to 1 GHz, ANT V

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



No.	Frequency (MHz)	Results (dBuV/m)	Factor (dB)	Limit (dBuV/m)	Margin (dB)	Detector	Table (Degree)	Height (cm)	Antenna	Verdict
1	43.577	14.73	-26.25	29.5	14.77	Peak	53.00	100	Vertical	Pass
2	53.759	15.46	-26.08	29.5	14.04	Peak	53.00	200	Vertical	Pass
3	70.002	16.15	-28.22	29.5	13.35	Peak	2.00	200	Vertical	Pass
4	106.368	19.98	-29.41	33.0	13.02	Peak	158.00	100	Vertical	Pass
5	132.067	16.51	-26.93	33.0	16.49	Peak	279.00	100	Vertical	Pass
6	342.504	21.07	-23.82	35.5	14.43	Peak	47.00	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	1582.500	42.41	74.0	31.59	Peak	179.00	100	Horizontal	Pass
1**	1582.500	33.06	54.0	20.94	AV	179.00	100	Horizontal	Pass
2	2402.000	91.93	74.0	-17.93	Peak	64.00	100	Horizontal	N/A
2**	2402.000	91.67	54.0	-37.67	AV	64.00	100	Horizontal	N/A
3	4804.250	49.00	74.0	25.00	Peak	38.00	150	Horizontal	Pass
3**	4804.250	42.49	54.0	11.51	AV	38.00	150	Horizontal	Pass
4	7968.750	53.63	74.0	20.37	Peak	135.00	200	Horizontal	Pass
4**	7968.750	44.15	54.0	9.85	AV	135.00	200	Horizontal	Pass
5	12966.825	53.17	74.0	20.83	Peak	107.00	200	Horizontal	Pass
5**	12966.825	43.50	54.0	10.50	AV	107.00	200	Horizontal	Pass
6	17052.113	55.03	74.0	18.97	Peak	360.00	300	Horizontal	Pass
6**	17052.113	45.99	54.0	8.01	AV	360.00	300	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	1164.000	46.83	74.0	27.17	Peak	74.00	400	Vertical	Pass
1**	1164.000	36.53	54.0	17.47	AV	74.00	400	Vertical	Pass
2	2402.200	96.99	74.0	-22.99	Peak	39.00	200	Vertical	N/A
2**	2402.200	96.62	54.0	-42.62	AV	39.00	200	Vertical	N/A
3	4804.250	48.38	74.0	25.62	Peak	0.00	100	Vertical	Pass
3**	4804.250	43.44	54.0	10.56	AV	0.00	100	Vertical	Pass
4	9608.112	50.57	74.0	23.43	Peak	100.00	100	Vertical	Pass
4**	9608.112	48.77	54.0	5.23	AV	100.00	100	Vertical	N/A
5	12507.750	53.10	74.0	20.90	Peak	360.00	200	Vertical	Pass
5**	12507.750	43.74	54.0	10.26	AV	360.00	200	Vertical	Pass
6	16982.551	55.12	74.0	18.88	Peak	204.00	400	Vertical	Pass
6**	16982.551	46.04	54.0	7.96	AV	204.00	400	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	1433.900	42.21	74.0	31.79	Peak	334.00	200	Horizontal	Pass
1**	1433.900	32.21	54.0	21.79	AV	334.00	200	Horizontal	Pass
2	2441.000	90.31	74.0	-16.31	Peak	344.00	100	Horizontal	N/A
2**	2441.000	89.87	54.0	-35.87	AV	344.00	100	Horizontal	N/A
3	4882.250	47.87	74.0	26.13	Peak	30.00	100	Horizontal	Pass
3**	4882.250	43.21	54.0	10.79	AV	30.00	100	Horizontal	Pass
4	9764.150	51.10	74.0	22.90	Peak	0.00	100	Horizontal	Pass
4**	9764.150	48.49	54.0	5.51	AV	0.00	100	Horizontal	N/A
5	12954.225	52.89	74.0	21.11	Peak	259.00	200	Horizontal	Pass
5**	12954.225	43.28	54.0	10.72	AV	259.00	200	Horizontal	Pass
6	16990.162	54.82	74.0	19.18	Peak	88.00	200	Horizontal	Pass
6**	16990.162	46.13	54.0	7.87	AV	88.00	200	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	1328.900	46.53	74.0	27.47	Peak	296.00	300	Vertical	Pass
1**	1328.900	32.25	54.0	21.75	AV	296.00	300	Vertical	Pass
2	2441.200	93.25	74.0	-19.25	Peak	341.00	200	Vertical	N/A
2**	2441.200	93.03	54.0	-39.03	AV	341.00	200	Vertical	N/A
3	4882.250	48.41	74.0	25.59	Peak	0.00	100	Vertical	Pass
3**	4882.250	43.40	54.0	10.60	AV	0.00	100	Vertical	Pass
4	9764.388	51.30	74.0	22.70	Peak	109.00	100	Vertical	Pass
4**	9764.388	48.50	54.0	5.50	AV	109.00	100	Vertical	N/A
5	12464.763	53.18	74.0	20.82	Peak	9.00	200	Vertical	Pass
5**	12464.763	43.93	54.0	10.07	AV	9.00	200	Vertical	Pass
6	14451.262	55.34	74.0	18.66	Peak	297.00	200	Vertical	Pass
6**	14451.262	45.71	54.0	8.29	AV	297.00	200	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	1333.400	44.29	74.0	29.71	Peak	220.00	100	Horizontal	Pass
1**	1333.400	34.60	54.0	19.40	AV	220.00	100	Horizontal	Pass
2	2480.000	86.19	74.0	-12.19	Peak	75.00	100	Horizontal	N/A
2**	2480.000	85.77	54.0	-31.77	AV	75.00	100	Horizontal	N/A
3	4933.750	48.90	74.0	25.10	Peak	305.00	200	Horizontal	Pass
3**	4933.750	39.68	54.0	14.32	AV	305.00	200	Horizontal	Pass
4	9920.187	52.71	74.0	21.29	Peak	334.00	100	Horizontal	Pass
4**	9920.187	48.81	54.0	5.19	AV	334.00	100	Horizontal	N/A
5	12455.500	53.54	74.0	20.46	Peak	189.00	300	Horizontal	Pass
5**	12455.500	43.77	54.0	10.23	AV	189.00	300	Horizontal	Pass
6	14447.588	55.47	74.0	18.53	Peak	88.00	400	Horizontal	Pass
6**	14447.588	46.34	54.0	7.66	AV	88.00	400	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	1233.700	49.55	74.0	24.45	Peak	325.00	400	Vertical	Pass
1**	1233.700	31.66	54.0	22.34	AV	325.00	400	Vertical	Pass
2	2480.100	88.99	74.0	-14.99	Peak	360.00	150	Vertical	N/A
2**	2480.100	88.72	54.0	-34.72	AV	360.00	150	Vertical	N/A
3	4960.250	50.10	74.0	23.90	Peak	360.00	100	Vertical	Pass
3**	4960.250	42.74	54.0	11.26	AV	360.00	100	Vertical	Pass
4	9920.425	50.93	74.0	23.07	Peak	133.00	100	Vertical	Pass
4**	9920.425	48.44	54.0	5.56	AV	133.00	100	Vertical	N/A
5	12471.412	53.37	74.0	20.63	Peak	360.00	400	Vertical	Pass
5**	12471.412	43.69	54.0	10.31	AV	360.00	400	Vertical	Pass
6	17022.975	54.85	74.0	19.15	Peak	196.00	200	Vertical	Pass
6**	17022.975	46.58	54.0	7.42	AV	196.00	200	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	1329.700	42.25	74.0	31.75	Peak	213.00	300	Horizontal	Pass
1**	1329.700	35.29	54.0	18.71	AV	213.00	300	Horizontal	Pass
2	2402.000	93.78	74.0	-19.78	Peak	84.00	100	Horizontal	N/A
2**	2402.000	91.12	54.0	-37.12	AV	84.00	100	Horizontal	N/A
3	4821.000	49.42	74.0	24.58	Peak	8.00	100	Horizontal	Pass
3**	4821.000	40.98	54.0	13.02	AV	8.00	100	Horizontal	Pass
4	9608.350	48.81	74.0	25.19	Peak	360.00	100	Horizontal	Pass
4**	9608.350	45.55	54.0	8.45	AV	360.00	100	Horizontal	Pass
5	12434.362	53.62	74.0	20.38	Peak	210.00	400	Horizontal	Pass
5**	12434.362	43.16	54.0	10.84	AV	210.00	400	Horizontal	Pass
6	14467.537	55.36	74.0	18.64	Peak	229.00	300	Horizontal	Pass
6**	14467.537	47.41	54.0	6.59	AV	229.00	300	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	1330.200	45.71	74.0	28.29	Peak	165.00	400	Vertical	Pass
1**	1330.200	36.42	54.0	17.58	AV	165.00	400	Vertical	Pass
2	2402.100	96.21	74.0	-22.21	Peak	111.00	100	Vertical	N/A
2**	2402.100	94.76	54.0	-40.76	AV	111.00	100	Vertical	N/A
3	4804.250	48.78	74.0	25.22	Peak	360.00	100	Vertical	Pass
3**	4804.250	43.84	54.0	10.16	AV	360.00	100	Vertical	Pass
4	9608.350	48.97	74.0	25.03	Peak	111.00	100	Vertical	Pass
4**	9608.350	47.54	54.0	6.46	AV	111.00	100	Vertical	Pass
5	12993.599	53.47	74.0	20.53	Peak	343.00	400	Vertical	Pass
5**	12993.599	44.24	54.0	9.76	AV	343.00	400	Vertical	Pass
6	17085.187	55.23	74.0	18.77	Peak	292.00	300	Vertical	Pass
6**	17085.187	45.36	54.0	8.64	AV	292.00	300	Vertical	Pass

8-DPSK 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	1331.000	43.83	74.0	30.17	Peak	210.00	100	Horizontal	Pass
1**	1331.000	35.67	54.0	18.33	AV	210.00	100	Horizontal	Pass
2	2440.900	90.62	74.0	-16.62	Peak	352.00	150	Horizontal	N/A
2**	2440.900	89.27	54.0	-35.27	AV	352.00	150	Horizontal	N/A
3	4885.500	49.41	74.0	24.59	Peak	360.00	200	Horizontal	Pass
3**	4885.500	39.62	54.0	14.38	AV	360.00	200	Horizontal	Pass
4	9764.388	50.90	74.0	23.10	Peak	357.00	100	Horizontal	Pass
4**	9764.388	48.71	54.0	5.29	AV	357.00	100	Horizontal	N/A
5	12489.700	53.06	74.0	20.94	Peak	98.00	100	Horizontal	Pass
5**	12489.700	43.83	54.0	10.17	AV	98.00	100	Horizontal	Pass
6	17112.750	55.04	74.0	18.96	Peak	86.00	400	Horizontal	Pass
6**	17112.750	45.70	54.0	8.30	AV	86.00	400	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	1331.300	46.16	74.0	27.84	Peak	279.00	200	Vertical	Pass
1**	1331.300	36.64	54.0	17.36	AV	279.00	200	Vertical	Pass
2	2440.900	96.58	74.0	-22.58	Peak	31.00	100	Vertical	N/A
2**	2440.900	94.99	54.0	-40.99	AV	31.00	100	Vertical	N/A
3	4882.250	47.91	74.0	26.09	Peak	0.00	100	Vertical	Pass
3**	4882.250	43.23	54.0	10.77	AV	0.00	100	Vertical	Pass
4	9764.150	52.04	74.0	21.96	Peak	74.00	100	Vertical	Pass
4**	9764.150	48.30	54.0	5.70	AV	74.00	100	Vertical	N/A
5	12494.451	53.64	74.0	20.36	Peak	218.00	200	Vertical	Pass
5**	12494.451	44.81	54.0	9.19	AV	218.00	200	Vertical	Pass
6	16963.125	55.07	74.0	18.93	Peak	140.00	400	Vertical	Pass
6**	16963.125	45.35	54.0	8.65	AV	140.00	400	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	1327.200	42.50	74.0	31.50	Peak	296.00	200	Horizontal	Pass
1**	1327.200	32.67	54.0	21.33	AV	296.00	200	Horizontal	Pass
2	2479.900	86.60	74.0	-12.60	Peak	77.00	150	Horizontal	N/A
2**	2479.900	83.29	54.0	-29.29	AV	77.00	150	Horizontal	N/A
3	4874.500	49.46	74.0	24.54	Peak	346.00	150	Horizontal	Pass
3**	4874.500	40.31	54.0	13.69	AV	346.00	150	Horizontal	Pass
4	7966.250	53.39	74.0	20.61	Peak	307.00	300	Horizontal	Pass
4**	7966.250	44.55	54.0	9.45	AV	307.00	300	Horizontal	Pass
5	12471.175	53.56	74.0	20.44	Peak	38.00	300	Horizontal	Pass
5**	12471.175	44.10	54.0	9.90	AV	38.00	300	Horizontal	Pass
6	17137.425	54.88	74.0	19.12	Peak	290.00	400	Horizontal	Pass
6**	17137.425	46.44	54.0	7.56	AV	290.00	400	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	1164.900	46.77	74.0	27.23	Peak	92.00	100	Vertical	Pass
1**	1164.900	32.26	54.0	21.74	AV	92.00	100	Vertical	Pass
2	2480.000	92.82	74.0	-18.82	Peak	40.00	100	Vertical	N/A
2**	2480.000	91.47	54.0	-37.47	AV	40.00	100	Vertical	N/A
3	4903.000	49.33	74.0	24.67	Peak	34.00	200	Vertical	Pass
3**	4903.000	39.69	54.0	14.31	AV	34.00	200	Vertical	Pass
4	9920.187	52.44	74.0	21.56	Peak	109.00	100	Vertical	Pass
4**	9920.187	49.20	54.0	4.80	AV	109.00	100	Vertical	N/A
5	12953.437	53.89	74.0	20.11	Peak	358.00	300	Vertical	Pass
5**	12953.437	42.80	54.0	11.20	AV	358.00	300	Vertical	Pass
6	14443.912	55.95	74.0	18.05	Peak	360.00	100	Vertical	Pass
6**	14443.912	44.99	54.0	9.01	AV	360.00	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

GFSK LOW CHANNEL

No.	Frequency (MHz)	Results (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Detector	Table (Degree)	Height (cm)	Antenna	Verdict
1	2324.950	55.33	74.0	18.67	Peak	210.00	150	Vertical	Pass
1**	2324.950	43.87	54.0	10.13	AV	210.00	150	Vertical	Pass
2	2389.950	53.87	74.0	20.13	Peak	271.00	100	Vertical	Pass
2**	2389.950	43.22	54.0	10.78	AV	271.00	100	Vertical	Pass

GFSK HIGH CHANNEL

No.	Frequency (MHz)	Results (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Detector	Table (Degree)	Height (cm)	Antenna	Verdict
1	2483.515	54.07	74.0	19.93	Peak	131.00	100	Vertical	Pass
1**	2483.515	43.83	54.0	10.17	AV	131.00	100	Vertical	Pass
2	2499.385	55.23	74.0	18.77	Peak	130.00	150	Vertical	Pass
2**	2499.385	43.60	54.0	10.40	AV	130.00	150	Vertical	Pass

8-DPSK LOW CHANNEL

No.	Frequency (MHz)	Results (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Detector	Table (Degree)	Height (cm)	Antenna	Verdict
1	2343.600	55.35	74.0	18.65	Peak	339.00	150	Vertical	Pass
1**	2343.600	43.56	54.0	10.44	AV	339.00	150	Vertical	Pass
2	2389.950	52.40	74.0	21.60	Peak	99.00	200	Vertical	Pass
2**	2389.950	43.16	54.0	10.84	AV	99.00	200	Vertical	Pass

8-DPSK HIGH CHANNEL

No.	Frequency (MHz)	Results (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Detector	Table (Degree)	Height (cm)	Antenna	Verdict
1	2483.515	54.44	74.0	19.56	Peak	273.00	200	Vertical	Pass
1**	2483.515	43.71	54.0	10.29	AV	273.00	200	Vertical	Pass
2	2486.995	55.98	74.0	18.02	Peak	113.00	200	Vertical	Pass
2**	2486.995	43.75	54.0	10.25	AV	113.00	200	Vertical	Pass

ANNEX A TEST SETUP PHOTOS

1 Radiated Test Photo

Below 30MHz



30MHz-1GHz



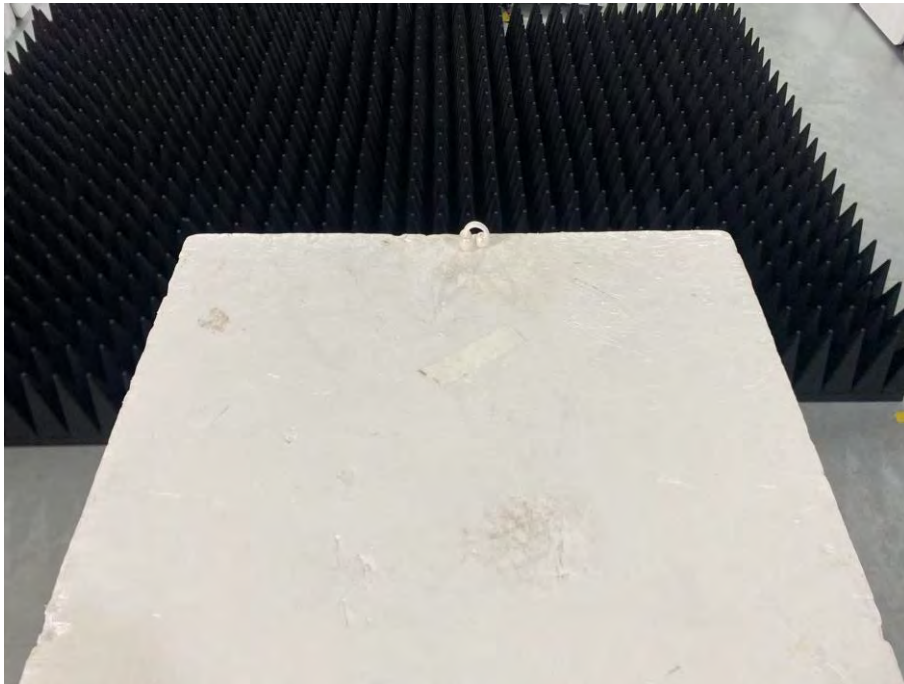
Close-up



Above 1GHz



Close-up



2 Conducted Test Photo

Conducted Test



3 Conducted Emission

Photo 1



Photo 2



ANNEX B EUT EXTERNAL PHOTOS

FRONT VIEW OF EUT



REAR VIEW OF EUT



LEFT VIEW OF EUT



RIGHT VIEW OF EUT



TOP VIEW OF EUT



BOTTOM VIEW OF EUT



Accessory-USB Cable 1



Accessory-USB Cable 2



Accessory-USB Cable 3



Accessory-Charging case



EUT+USB Cable 1



EUT+USB Cable 2



EUT+USB Cable 3



EUT+USB Cable 3

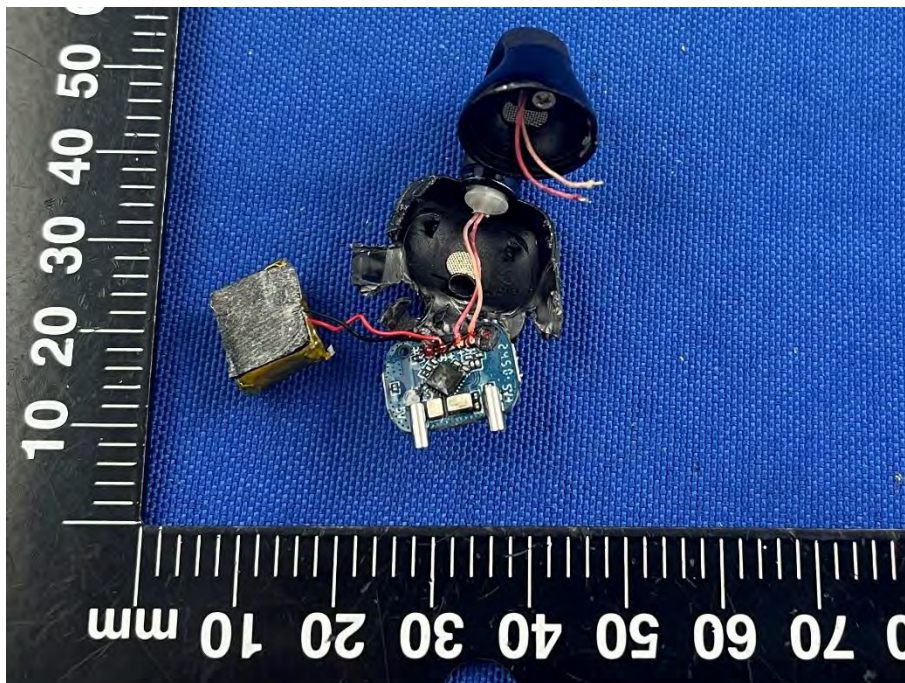


ANNEX C EUT INTERNAL PHOTOS

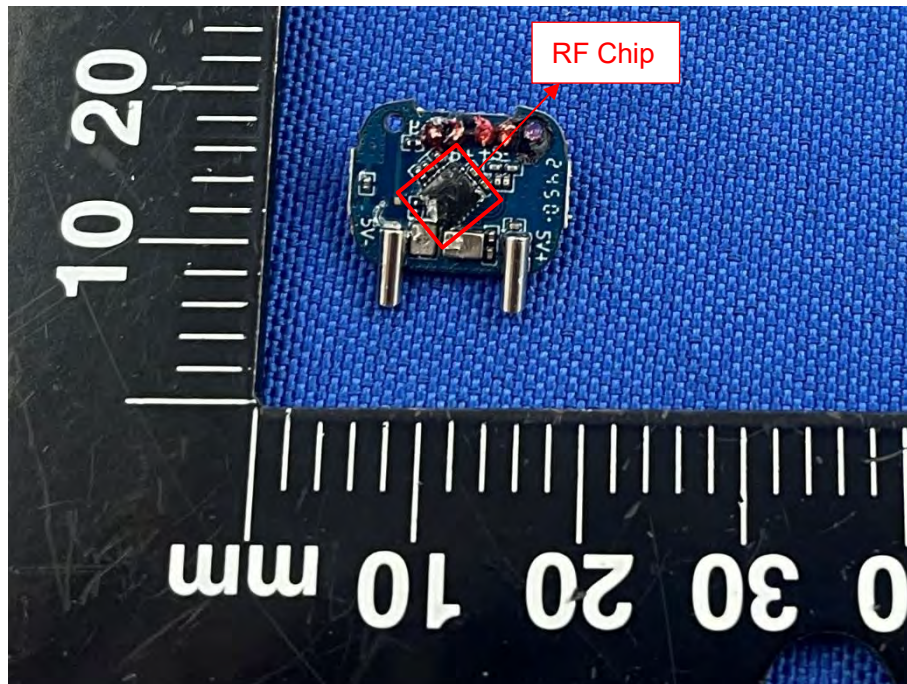
EUT UNCOVER VIEW 1



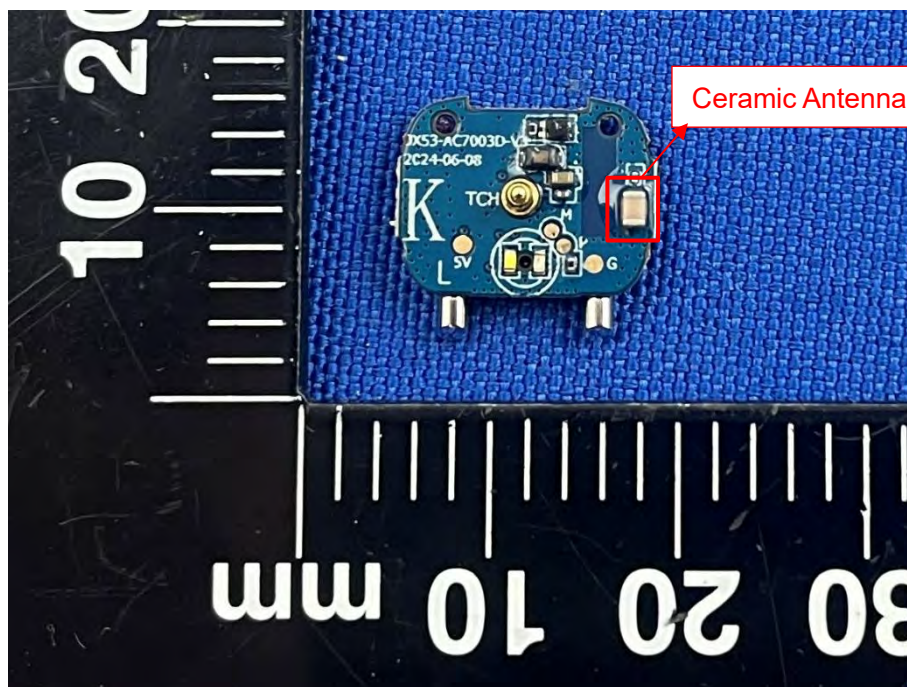
EUT UNCOVER VIEW 2



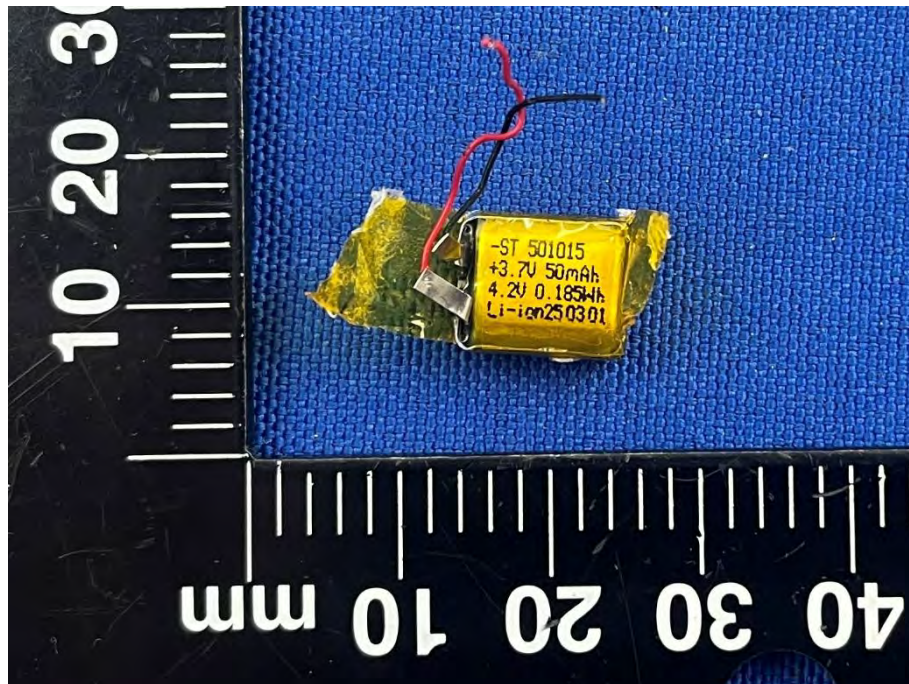
MAIN BOARD TOP VIEW



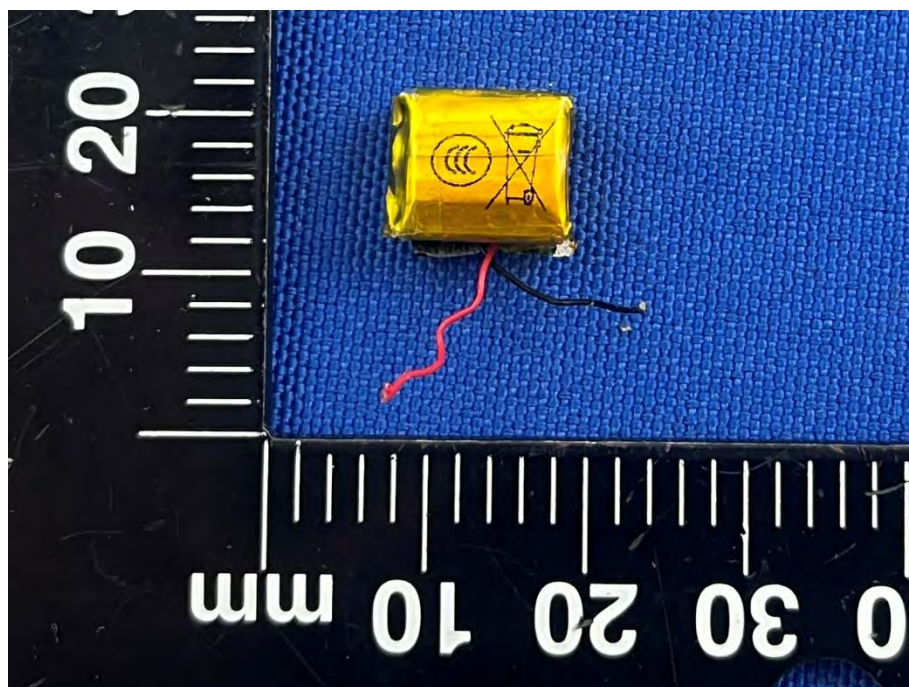
MAIN BOARD REAR VIEW



BATTERY (FRONT)



BATTERY (REAR)



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--END OF REPORT--