FCC RADIO TEST REPORT

FCC ID	:	CNFAMFR1
Equipment	:	Camera
Brand Name	:	GoPro
Model Name	:	AMLF1
Applicant	:	GoPro, Inc. 3025 Clearview Way San Mateo, CA 94402 United States of America
Manufacturer	:	GoPro, Inc. 3025 Clearview Way San Mateo, CA 94402 United States of America
Standard	:	FCC Part 15 Subpart C §15.247

The product was received on May 22, 2025 and testing was performed from May 28, 2025 to Jun. 19, 2025. We, Sporton International Inc. Wensan Laboratory, would like to declare that the tested sample has been evaluated in accordance with the test procedures and has been in compliance with the applicable technical standards.

The test results in this variant report apply exclusively to the tested model / sample. Without written approval from Sporton International Inc. Wensan Laboratory, the test report shall not be reproduced except in full.

Louis Wu

Approved by: Louis Wu

Sporton International Inc. Wensan Laboratory
No.58, Aly. 75, Ln. 564, Wenhua 3rd, Rd., Guishan Dist., Taoyuan City 333010, Taiwan (R.O.C.)

Table of Contents

History of this test report **3**
Summary of Test Result **4**
1 General Description **5**
1.1 Product Feature of Equipment Under Test 5
1.2 Modification of EUT 5
1.3 Testing Location 5
1.4 Applicable Standards 6
2 Test Configuration of Equipment Under Test **7**
2.1 Carrier Frequency Channel 7
2.2 Test Mode 8
2.3 Connection Diagram of Test System 9
2.4 Support Unit used in test configuration and system 9
2.5 EUT Operation Test Setup 9
3 Test Result **10**
3.1 Output Power Measurement 10
3.2 Radiated Band Edges and Spurious Emission Measurement 11
3.3 AC Conducted Emission Measurement 15
3.4 Antenna Requirements 17
4 List of Measuring Equipment **18**
5 Measurement Uncertainty **20**
Appendix A. Conducted Test Results
Appendix B. AC Conducted Emission Test Result
Appendix C. Radiated Spurious Emission Test Result
Appendix D. Duty Cycle Plots
Appendix E. Setup Photographs

History of this test report

Report No.	Version	Description	Issue Date
FR551331B	01	Initial issue of report	Jul. 01, 2025

Summary of Test Result

Report Clause	Ref Std. Clause	Test Items	Result (PASS/FAIL)	Remark
-	15.247(a)(2)	6dB Bandwidth	Not Required	See Note
-	2.1049	99% Occupied Bandwidth	Not Required	See Note
3.1	15.247(b)(3) 15.247(b)(4)	Output Power	Pass	-
-	15.247(e)	Power Spectral Density	Not Required	See Note
-	15.247(d)	Conducted Band Edges and Spurious Emission	Not Required	See Note
3.2	15.247(d)	Radiated Band Edges and Spurious Emission	Pass	-
3.3	15.207	AC Conducted Emission	Pass	-
3.4	15.203	Antenna Requirement	Pass	-

Note:

1. Not required means after assessing, test items are not necessary to carry out.
2. This is a variant report which can be referred Product Equality Declaration. All the test cases were performed on original report which can be referred to Sporton Report Number FR3D2932B. Based on the original report, the test cases were verified.

Conformity Assessment Condition:
1. The test results (PASS/FAIL) with all measurement uncertainty excluded are presented against the regulation limits or in accordance with the requirements stipulated by the applicant/manufacturer who shall bear all the risks of non-compliance that may potentially occur if measurement uncertainty is taken into account. 2. The measurement uncertainty please refer to each test result in the section “Measurement Uncertainty”.
Disclaimer:
The product specifications of the EUT presented in the test report that may affect the test assessments are declared by the manufacturer who shall take full responsibility for the authenticity.

Reviewed by: Lewis Ho

Report Producer: Freda Wu

1 General Description

1.1 Product Feature of Equipment Under Test

Product Feature
General Specs Bluetooth, Wi-Fi 2.4GHz 802.11b/g/n, Wi-Fi 5GHz 802.11a/n/ac. **Antenna Type** Bluetooth: FPC Loop Antenna

Antenna information		
2400 MHz ~ 2483.5 MHz	Peak Gain (dBi)	0.07

Remark: The EUT's information above is declared by manufacturer. Please refer to Disclaimer in report summary.

1.2 Modification of EUT

No modifications made to the EUT during the testing.

1.3 Testing Location

Test Site	Sporton International Inc. Wensan Laboratory
Test Site Location	No.58, Aly. 75, Ln. 564, Wenhua 3rd, Rd., Guishan Dist., Taoyuan City 333010, Taiwan (R.O.C.) TEL: +886-3-327-0868 FAX: +886-3-327-0855
Test Site No.	**Sporton Site No.**
	TH05-HY, CO07-HY, 03CH22-HY

Note: The test site complies with ANSI C63.4 2014 requirement.

FCC designation No.: TW3786

1.4 Applicable Standards

According to the specifications declared by the manufacturer, the EUT must comply with the requirements of the following standards:

- FCC Part 15 Subpart C §15.247
- FCC KDB Publication No. 558074 D01 15.247 Meas Guidance v05r02
- FCC KDB 414788 D01 Radiated Test Site v01r01
- ANSI C63.10-2013

Remark:

1. All the test items were validated and recorded in accordance with the standards without any modification during the testing.
2. The TAF code is not including all the FCC KDB listed without accreditation.
3. This EUT has also been tested and complied with the requirements of FCC Part 15, Subpart B, recorded in a separate test report.

2 Test Configuration of Equipment Under Test

2.1 Carrier Frequency Channel

Frequency Band	Channel	Freq. (MHz)	Channel	Freq. (MHz)
2400-2483.5 MHz	0	2402	21	2444
	1	2404	22	2446
	2	2406	23	2448
	3	2408	24	2450
	4	2410	25	2452
	5	2412	26	2454
	6	2414	27	2456
	7	2416	28	2458
	8	2418	29	2460
	9	2420	30	2462
	10	2422	31	2464
	11	2424	32	2466
	12	2426	33	2468
	13	2428	34	2470
	14	2430	35	2472
	15	2432	36	2474
	16	2434	37	2476
	17	2436	38	2478
	18	2438	39	2480
	19	2440	-	-
	20	2442	-	-

2.2 Test Mode

a. The EUT has been associated with peripherals and configuration operated in a manner tended to maximize its emission characteristics in a typical application. Frequency range investigated: conduction emission (150 kHz to 30 MHz), radiation emission (9 kHz to the 10th harmonic of the highest fundamental frequency or to 40 GHz, whichever is lower). For radiated measurement, the measured emission level of the EUT was maximized by rotating the EUT on a turntable, adjusting the orientation of the EUT and EUT antenna in three orthogonal axis (X: flat, Y: portrait, Z: landscape), and adjusting the measurement antenna orientation, following C63.10 exploratory test procedures and only the worst case emissions were reported in this report.

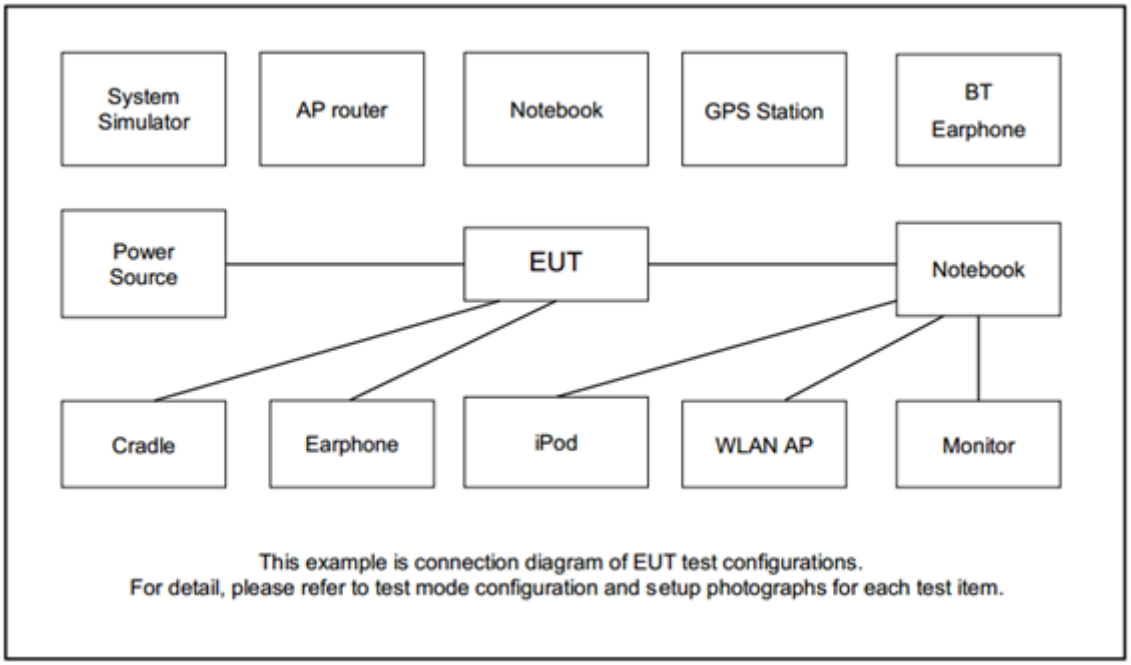
b. AC power line Conducted Emission was tested under maximum output power.

Test Cases	
AC Conducted Emission	Mode 1 : BT TX + USB Cable + Adapter Mode 2 : BLE TX + USB Cable + Adapter Mode 3 : WLAN TX + USB Cable + Adapter

Remark:

1. The worst case of Conducted Emission is mode 2; only the test data of it was reported.
2. For Radiated Test Cases, the tests were performed with USB cable option 1 (C-A).
3. For radiation spurious emission, the modulation and the data rate picked for testing are determined by the Max. RF conducted power.
4. The detailed Radiated test modes are shown in Appendix C..

2.3 Connection Diagram of Test System



2.4 Support Unit used in test configuration and system

Item	Equipment	Brand Name	Model Name	FCC ID	Data Cable	Power Cord
1.	Adapter	ASUS	PA-1100-01	N/A	N/A	N/A

2.5 EUT Operation Test Setup

The RF test items, utility “Tera Term Version 4.95” was installed in Notebook which was programmed in order to make the EUT get into the engineering modes to provide channel selection, power level, data rate and the application type and for continuous transmitting signals.

3 Test Result

3.1 Output Power Measurement

3.1.1 Limit of Output Power

For systems using digital modulation in the 2400-2483.5 MHz, the limit for output power is 30 dBm. If transmitting antenna of directional gain greater than 6 dBi is used, the peak output power from the intentional radiator shall be reduced below the above stated value by the amount in dB that the directional gain of the antenna exceeds 6 dBi. In case of point-to-point operation, the limit has to be reduced by 1 dB for every 3 dB that the directional gain of the antenna exceeds 6 dBi.

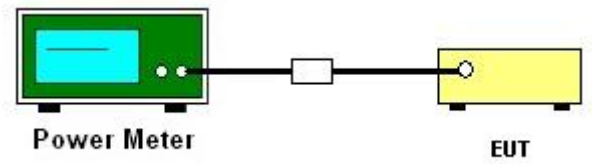
3.1.2 Measuring Instruments

Please refer to the measuring equipment list in this test report.

3.1.3 Test Procedures

1. For Average Power, the testing follows ANSI C63.10 Section 11.9.2.3.2 Method AVGPM-G
2. The RF output of EUT is connected to the power meter by RF cable and attenuator.
3. The path loss is compensated to the results for each measurement.
4. Set the maximum power setting and enable the EUT to transmit continuously.
5. Measure the conducted output power and record the results in the test report.

3.1.4 Test Setup



3.1.5 Test Result of Average Output Power

Please refer to Appendix A.

3.2 Radiated Band Edges and Spurious Emission Measurement

3.2.1 Limit of Radiated Band Edges and Spurious Emission

In any 100 kHz bandwidth outside the intentional radiator frequency band, all harmonics/spurious must be at least 20 dB below the highest emission level within the authorized band. If the transmitter complies with the conducted power limits based on the use of RMS averaging over a time interval, the attenuation required shall be 30 dB instead of 20 dB. In addition, radiated emissions which fall in the restricted bands must also comply with the limits as below.

Frequency (MHz)	Field Strength (microvolts/meter)	Measurement Distance (meters)
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

3.2.2 Measuring Instruments

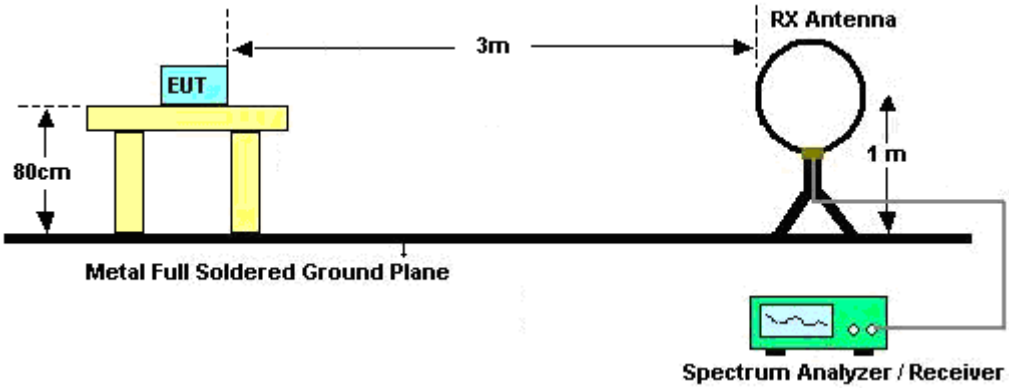
Please refer to the measuring equipment list in this test report.

3.2.3 Test Procedures

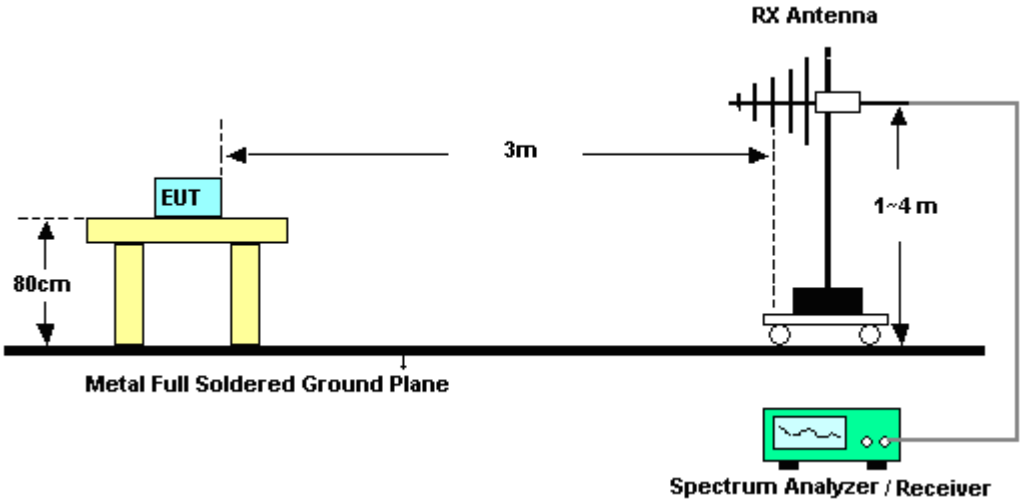
1. The testing follows the ANSI C63.10 Section 11.12.1 Radiated emission measurements.
2. The EUT is arranged to its worst case and then tune the antenna tower (from 1 m to 4 m) and turntable (from 0 degree to 360 degrees) to find the maximum reading. A pre-amp and a high pass filter are used for the test in order to get better signal level.
3. The EUT is placed on a turntable with 0.8 meter for frequency below 1 GHz and 1.5 meter for frequency above 1 GHz respectively above ground.
4. The EUT is set 3 meters away from the receiving antenna, which is mounted on the top of a variable height antenna tower.
5. Corrected Reading: Antenna Factor + Cable Loss + Read Level - Preamp Factor = Level
6. Radiated testing below 1 GHz is performed by adjusting the antenna tower from 1 m to 4 m and by rotating the turn table from 0 degree to 360 degrees to find the peak maximum hold reading. When there is no suspected emission found and the emission level is with at least 6 dB margin against QP limit line, the position is marked as "-".
7. Radiated testing above 1 GHz is performed by adjusting the antenna tower from 1 m to 4 m and by rotating the turn table from 0 degree to 360 degrees to find the peak maximum hold reading for scanning all frequencies. When there is no suspected emission found and the harmonic emission level is with at least 6 dB margin against average limit line, the position is marked as "-".
8. Use the following spectrum analyzer settings:
   (1) Span shall wide enough to fully capture the emission being measured;
   (2) Set RBW = 100 kHz for f < 1 GHz; VBW ≥ RBW; Sweep = auto; Detector function = peak; Trace = max hold;
   (3) Set RBW = 1 MHz, VBW = 3 MHz for f ≥ 1 GHz for peak measurement.
   For average measurement:
   - VBW = 10 Hz, when duty cycle is no less than 98 percent.
   - VBW ≥ 1/T, when duty cycle is less than 98 percent where T is the minimum transmission duration over which the transmitter is on and is transmitting at its maximum power control level for the tested mode of operation.

3.2.4 Test Setup

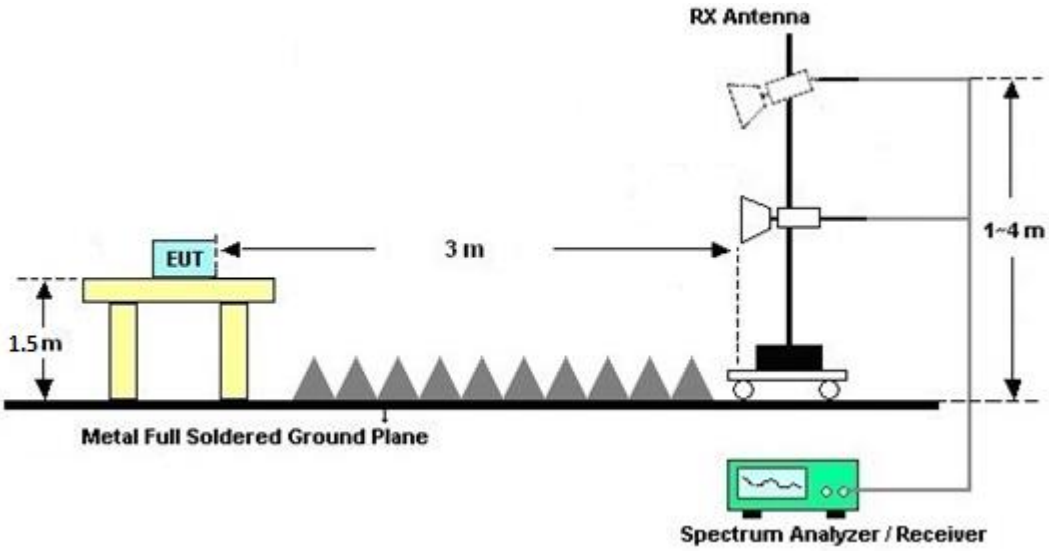
For radiated test below 30MHz



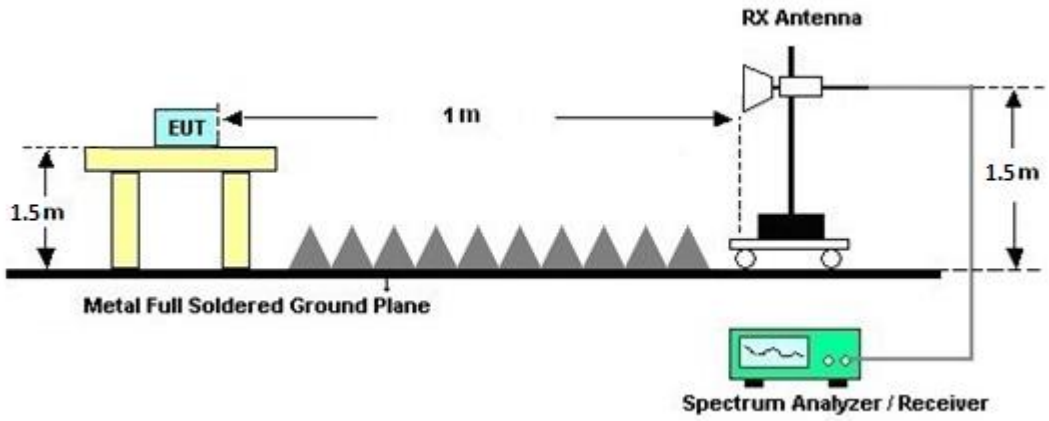
For radiated test from 30MHz to 1GHz



For radiated test from 1GHz to 18GHz



For radiated test above 18GHz



3.2.5 Test Results of Radiated Spurious Emissions (9 kHz ~ 30 MHz)

The low frequency, which starts from 9 kHz to 30 MHz, is pre-scanned and the result which is 20 dB lower than the limit line is not reported.

There is adequate comparison measurement of both open-field test site and alternative test site - semi-Anechoic chamber according to 414788 D01 Radiated Test Site v01r01, and the result comes out very similar.

3.2.6 Test Result of Radiated Spurious at Band Edges

Please refer to Appendix C.

3.2.7 Duty Cycle

Please refer to Appendix D.

3.2.8 Test Result of Radiated Spurious Emission (30 MHz ~ 10th Harmonic)

Please refer to Appendix C.

3.3 AC Conducted Emission Measurement

3.3.1 Limit of AC Conducted Emission

For equipment 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 or frequencies within the band 150 kHz to 30 MHz shall not exceed the limits in the following table.

Frequency of emission (MHz)	Conducted limit (dBμV)	
	Quasi-peak	Average
0.15-0.5	66 to 56*	56 to 46*
0.5-5	56	46
5-30	60	50

*Decreases with the logarithm of the frequency.

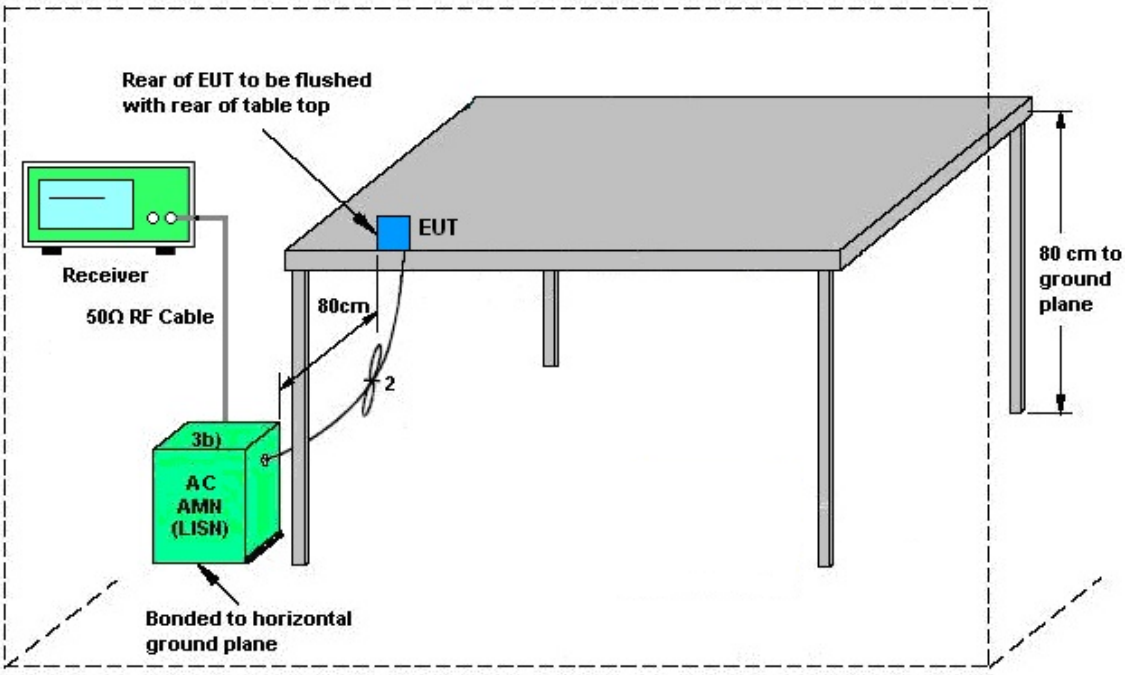
3.3.2 Measuring Instruments

Please refer to the measuring equipment list in this test report.

3.3.3 Test Procedures

1. The EUT is placed 0.4 meter away from the conducting wall of the shielding room, and is kept at least 80 centimeters from any other grounded conducting surface.
2. Connect EUT to the power mains through a line impedance stabilization network (LISN).
3. All the support units are connecting to the other LISN.
4. The LISN provides 50 ohm coupling impedance for the measuring instrument.
5. The FCC states that a 50 ohm, 50 microhenry LISN shall be used.
6. Both Line and Neutral shall be tested in order to find out the maximum conducted emission.
7. The frequency range from 150 kHz to 30 MHz is scanned.
8. Set the test-receiver system to Peak Detect Function and specified bandwidth (IF Bandwidth = 9 kHz) with Maximum Hold Mode. Then measurement is also conducted by Average Detector and Quasi-Peak Detector Function respectively.

3.3.4 Test Setup



AMN = Artificial mains network (LISN)
AE = Associated equipment
EUT = Equipment under test
ISN = Impedance stabilization network

3.3.5 Test Result of AC Conducted Emission

Please refer to Appendix B.

3.4 Antenna Requirements

3.4.1 Standard Applicable

An intentional radiator shall be designed to ensure that no antenna other than that furnished by the responsible party shall be used with the device. The use of a permanently attached antenna or of an antenna that uses a unique coupling to the intentional radiator shall be considered sufficient to comply with the provisions of this section. The manufacturer may design the unit so that a broken antenna can be replaced by the user, but the use of a standard antenna jack or electrical connector is prohibited. This requirement does not apply to carrier current devices or to devices operated under the provisions of § 15.211, 15.213, 15.217, 15.219, 15.221, or § 15.236. Further, this requirement does not apply to intentional radiators that must be professionally installed, such as perimeter protection systems and some field disturbance sensors, or to other intentional radiators which, in accordance with § 15.31(d), must be measured at the installation site. However, the installer shall be responsible for ensuring that the proper antenna is employed so that the limits in this part are not exceeded.

3.4.2 Antenna Anti-Replacement Construction

Antenna permanently attached.

4 List of Measuring Equipment

Instrument	Brand Name	Model No.	Serial No.	Characteristics	Calibration Date	Test Date	Due Date	Remark
Loop Antenna	Rohde & Schwarz	HFH2-Z2	100488	9kHz~30MHz	Aug. 29, 2024	May 28, 2025~ Jun. 02, 2025	Aug. 28, 2025	Radiation (03CH22-HY)
Bilog Antenna with 6dB	TESEQ & WOKEN	CBL 6111D & 00802N1D-06	63304 & 002	30MHz~1GHz	Dec. 17, 2024	May 28, 2025~ Jun. 02, 2025	Dec. 16, 2025	Radiation (03CH22-HY)
Amplifier	SONOMA	310N	421581	N/A	Jul. 14, 2024	May 28, 2025~ Jun. 02, 2025	Jul. 13, 2025	Radiation (03CH22-HY)
Double Ridged Guide Horn Antenna	RFSPIN	DRH18-E	LE2C04A18EN	1GHz~18GHz	May 20, 2025	May 28, 2025~ Jun. 02, 2025	May 19, 2026	Radiation (03CH22-HY)
SHF-EHF Horn Antenna	SCHWARZBECK	BBHA 9170	1223	18GHz-40GHz	Jun. 24, 2024	May 28, 2025~ Jun. 02, 2025	Jun. 23, 2025	Radiation (03CH22-HY)
Amplifier	EMEC	EM01G18GA	060877	N/A	Sep. 27, 2024	May 28, 2025~ Jun. 02, 2025	Sep. 26, 2025	Radiation (03CH22-HY)
Preamplifier	EMEC	EM18G40G	060872	18-40GHz	Nov. 29, 2024	May 28, 2025~ Jun. 02, 2025	Nov. 28, 2025	Radiation (03CH22-HY)
Signal Analyzer	Keysight	N9010B	MY62170278	10Hz~44GHz	Sep. 24, 2024	May 28, 2025~ Jun. 02, 2025	Sep. 23, 2025	Radiation (03CH22-HY)
EMI Test Receiver	Keysight	N9038A(MXE)	MY57290111	3Hz~26.5GHz	Nov. 22, 2024	May 28, 2025~ Jun. 02, 2025	Nov. 21, 2025	Radiation (03CH22-HY)
Hygrometer	TECPEL	DTM-303A	TP211469	N/A	Dec. 24, 2024	May 28, 2025~ Jun. 02, 2025	Dec. 23, 2025	Radiation (03CH22-HY)
Controller	EMEC	EM1000	N/A	Control Turn table & Ant Mast	N/A	May 28, 2025~ Jun. 02, 2025	N/A	Radiation (03CH22-HY)
Antenna Mast	ChainTek	MBS-520-1	N/A	1m~4m	N/A	May 28, 2025~ Jun. 02, 2025	N/A	Radiation (03CH22-HY)
Turn Table	ChainTek	T-200-S-1	N/A	0~360 Degree	N/A	May 28, 2025~ Jun. 02, 2025	N/A	Radiation (03CH22-HY)
Software	Audix	E3	RK-002347	N/A	N/A	May 28, 2025~ Jun. 02, 2025	N/A	Radiation (03CH22-HY)
RF Cable	HUBER + SUHNER	SUCOFLEX 102	803951/2	9kHz~30MHz	Mar. 05, 2025	May 28, 2025~ Jun. 02, 2025	Mar. 04, 2026	Radiation (03CH22-HY)
RF Cable	HUBER + SUHNER	SUCOFLEX 102	804390/2,804611/2,804615/2	N/A	Oct. 23, 2024	May 28, 2025~ Jun. 02, 2025	Oct. 22, 2025	Radiation (03CH22-HY)
RF Cable	HUBER + SUHNER/EMCI	SUCOFLEX 102/EMCI01Y-KM-KM-500/EMCI01Y-KM-KM-9000	804611/2,240914, 25043351,25043350	30MHz~40GHz	May 19, 2025	May 28, 2025~ Jun. 02, 2025	May 18, 2026	Radiation (03CH22-HY)

Instrument	Brand Name	Model No.	Serial No.	Characteristics	Calibration Date	Test Date	Due Date	Remark
Hygrometer	TECPEL	DTM-303A	TP201996	N/A	Nov. 01, 2024	Jun. 03, 2025	Oct. 30, 2025	Conducted (TH05-HY)
Power Sensor	DARE	RPR3006W	13I00030SNO31 (NO:182)	9kHz~6GHz	Jan. 09, 2025	Jun. 03, 2025	Jan. 08, 2026	Conducted (TH05-HY)
Signal Analyzer	Rohde & Schwarz	FSV3044	101467	10HZ~44GHZ	Jan. 14, 2025	Jun. 03, 2025	Jan. 13, 2026	Conducted (TH05-HY)
Switch Control Mainframe	E-Instument	ETF-1405-0	EC1900157 (BOX6)	N/A	Feb. 10, 2025	Jun. 03, 2025	Feb. 09, 2026	Conducted (TH05-HY)
Software	Sporton	BTWIFI_Final_version_240513	N/A	Conducted Other Test Item	N/A	Jun. 03, 2025	N/A	Conducted (TH05-HY)
AC Power Source	ACPOWER	AFC-11003G	F317040033	N/A	N/A	Jun. 19, 2025	N/A	Conduction (CO07-HY)
Software	Rohde & Schwarz	EMC32 V10.30	N/A	N/A	N/A	Jun. 19, 2025	N/A	Conduction (CO07-HY)
Pulse Limiter	SCHWARZBECK	VTSD 9561-F N	9561-F N00373	9kHz-200MHz	Oct. 23, 2024	Jun. 19, 2025	Oct. 22, 2025	Conduction (CO07-HY)
RF Cable	HUBER + SUHNER	RG 214/U	1358175	9kHz~30MHz	Mar. 3, 2025	Jun. 19, 2025	Mar. 2, 2026	Conduction (CO07-HY)
Two-Line V-Network	TESEQ	NNB 51	45051	N/A	Mar. 24, 2025	Jun. 19, 2025	Mar. 23, 2026	Conduction (CO07-HY)
Four-Line V-Network	TESEQ	NNB 52	36122	N/A	Mar. 26, 2025	Jun. 19, 2025	Mar. 25, 2026	Conduction (CO07-HY)
EMI Test Receiver	Rohde & Schwarz	ESR3	102317	9kHz~3.6GHz	Sep. 23, 2024	Jun. 19, 2025	Sep. 22, 2025	Conduction (CO07-HY)
EMI Test Receiver	Rohde & Schwarz	ESCI7	100724	9kHz~7GHz	Feb. 13, 2025	Jun. 19, 2025	Feb. 12, 2026	Conduction (CO07-HY)

5 Measurement Uncertainty

Uncertainty of Conducted Emission Measurement (150 kHz ~ 30 MHz)

Measuring Uncertainty for a Level of Confidence of 95% (U = 2Uc(y))	3.7 dB

Uncertainty of Radiated Emission Measurement (30 MHz ~ 1000 MHz)

Measuring Uncertainty for a Level of Confidence of 95% (U = 2Uc(y))	6.6 dB

Uncertainty of Radiated Emission Measurement (1000 MHz ~ 6000 MHz)

Measuring Uncertainty for a Level of Confidence of 95% (U = 2Uc(y))	5.2 dB

Uncertainty of Radiated Emission Measurement (6000 MHz ~ 18000 MHz)

Measuring Uncertainty for a Level of Confidence of 95% (U = 2Uc(y))	5.0 dB

Uncertainty of Radiated Emission Measurement (18000 MHz ~ 40000 MHz)

Measuring Uncertainty for a Level of Confidence of 95% (U = 2Uc(y))	5.7 dB

Appendix A. Test Result of Conducted Test Items

Test Engineer:	joseph hu	Temperature:	21~25	°C
Test Date:	2025/6/3	Relative Humidity:	51~54	%

TEST RESULTS DATA
Average Power Table

Mod.	Data Rate	N_{TX}	CH.	Freq. (MHz)	Average Conducted Power (dBm)	Conducted Power Limit (dBm)	DG (dBi)	EIRP Power (dBm)	EIRP Power Limit (dBm)	Pass /Fail
BLE	1Mbps	1	0	2402	7.35	30.00	0.07	7.42	36.00	Pass
BLE	1Mbps	1	19	2440	7.08	30.00	0.07	7.15	36.00	Pass
BLE	1Mbps	1	39	2480	6.38	30.00	0.07	6.45	36.00	Pass

Report Number : FR551331B

TEST RESULTS DATA
Average Power Table

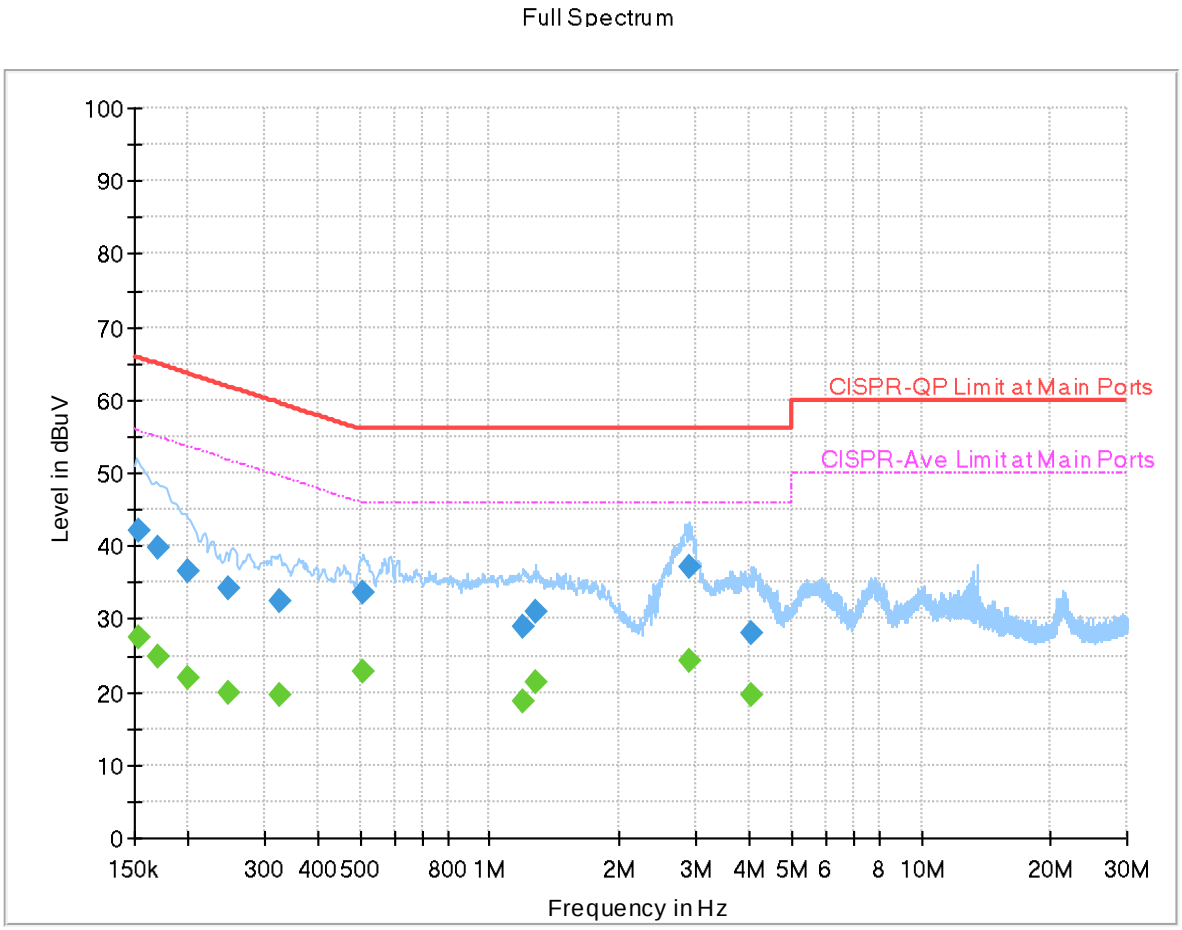
Mod.	Data Rate	NTX	CH.	Freq. (MHz)	Average Conducted Power (dBm)	Conducted Power Limit (dBm)	DG (dBi)	EIRP Power (dBm)	EIRP Power Limit (dBm)	Pass /Fail
BLE	2Mbps	1	0	2402	7.41	30.00	0.07	7.48	36.00	Pass
BLE	2Mbps	1	19	2440	7.16	30.00	0.07	7.23	36.00	Pass
BLE	2Mbps	1	39	2480	6.76	30.00	0.07	6.83	36.00	Pass

Appendix B. AC Conducted Emission Test Results

Test Engineer :	Louis Chung	**Temperature :**	22.9~25.3℃
		Relative Humidity :	44.1~52%

EUT Information

Report NO :	551331
Test Mode :	Mode 2
Test Voltage :	120Vac/60Hz
Phase :	Line



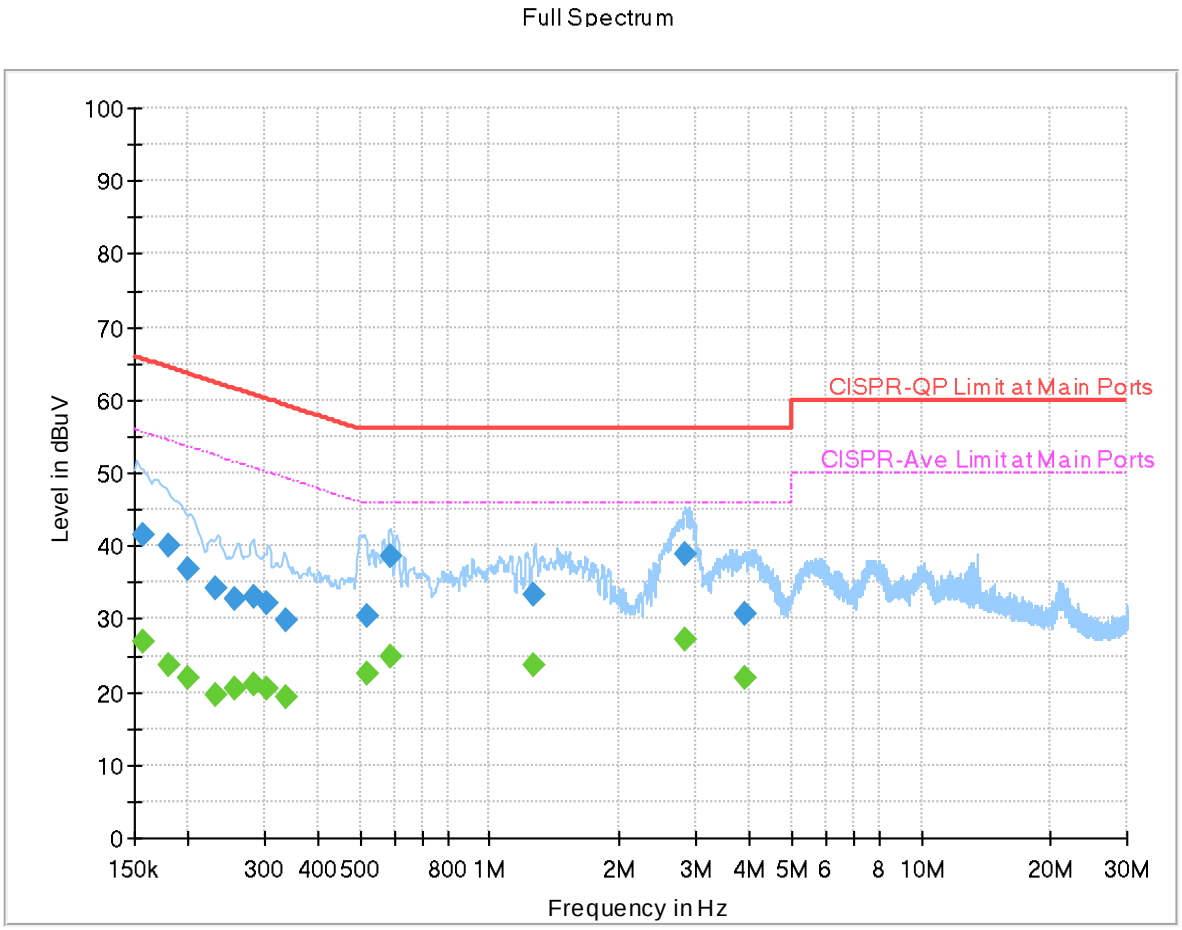
Final_Result

Frequency (MHz)	QuasiPeak (dBuV)	CAverage (dBuV)	Limit (dBuV)	Margin (dB)	Line	PE	Corr. (dB)
0.153915	---	27.61	55.79	28.18	L1	FLO	20.0
0.153915	42.06	---	65.79	23.73	L1	FLO	20.0
0.169800	---	24.82	54.97	30.15	L1	FLO	20.0
0.169800	39.87	---	64.97	25.10	L1	FLO	20.0
0.198690	---	21.80	53.67	31.87	L1	FLO	20.0
0.198690	36.68	---	63.67	26.99	L1	FLO	20.0
0.248370	---	19.79	51.81	32.02	L1	FLO	20.0
0.248370	34.14	---	61.81	27.67	L1	FLO	20.0
0.326850	---	19.55	49.53	29.98	L1	FLO	20.0
0.326850	32.57	---	59.53	26.96	L1	FLO	20.0
0.504960	---	22.67	46.00	23.33	L1	FLO	20.0
0.504960	33.75	---	56.00	22.25	L1	FLO	20.0
1.191300	---	18.77	46.00	27.23	L1	FLO	20.0
1.191300	28.82	---	56.00	27.18	L1	FLO	20.0
1.275990	---	21.46	46.00	24.54	L1	FLO	20.0
1.275990	30.90	---	56.00	25.10	L1	FLO	20.0
2.892750	---	24.18	46.00	21.82	L1	FLO	20.1
2.892750	37.01	---	56.00	18.99	L1	FLO	20.1
4.054200	---	19.45	46.00	26.55	L1	FLO	20.1

4.054200	**27.97**	**---**	**56.00**	**28.03**	**L1**	**FLO**	**20.1**

EUT Information

Report NO :	551331
Test Mode :	Mode 2
Test Voltage :	120Vac/60Hz
Phase :	Neutral



Final_Result

Frequency (MHz)	QuasiPeak (dBuV)	CAverage (dBuV)	Limit (dBuV)	Margin (dB)	Line	PE	Corr. (dB)
0.156750	---	26.95	55.63	28.68	N	FLO	20.0
0.156750	41.42	---	65.63	24.21	N	FLO	20.0
0.179250	---	23.65	54.52	30.87	N	FLO	20.0
0.179250	39.95	---	64.52	24.57	N	FLO	20.0
0.199500	---	21.89	53.63	31.74	N	FLO	20.0
0.199500	36.75	---	63.63	26.88	N	FLO	20.0
0.231000	---	19.71	52.41	32.70	N	FLO	20.0
0.231000	34.31	---	62.41	28.10	N	FLO	20.0
0.256920	---	20.43	51.53	31.10	N	FLO	20.0
0.256920	32.88	---	61.53	28.65	N	FLO	20.0
0.284010	---	20.98	50.70	29.72	N	FLO	20.0
0.284010	32.90	---	60.70	27.80	N	FLO	20.0
0.303000	---	20.47	50.16	29.69	N	FLO	20.0
0.303000	32.05	---	60.16	28.11	N	FLO	20.0
0.338370	---	19.19	49.24	30.05	N	FLO	20.0
0.338370	29.83	---	59.24	29.41	N	FLO	20.0
0.519000	---	22.47	46.00	23.53	N	FLO	20.0
0.519000	30.47	---	56.00	25.53	N	FLO	20.0
0.588030	---	24.98	46.00	21.02	N	FLO	20.0

0.588030	38.49	---	56.00	17.51	N	FLO	20.0
1.266360	---	23.54	46.00	22.46	N	FLO	20.0
1.266360	33.42	---	56.00	22.58	N	FLO	20.0
2.840910	---	27.08	46.00	18.92	N	FLO	20.1
2.840910	39.01	---	56.00	16.99	N	FLO	20.1
3.902280	---	21.84	46.00	24.16	N	FLO	20.1
3.902280	30.73	---	56.00	25.27	N	FLO	20.1

Appendix C. Radiated Spurious Emission Test Data

Test Engineer :	Ken Kuo and York Huang	**Relative Humidity(%):**	58.7~63.5
		Temperature(℃):	19.9~23.5

Note symbol

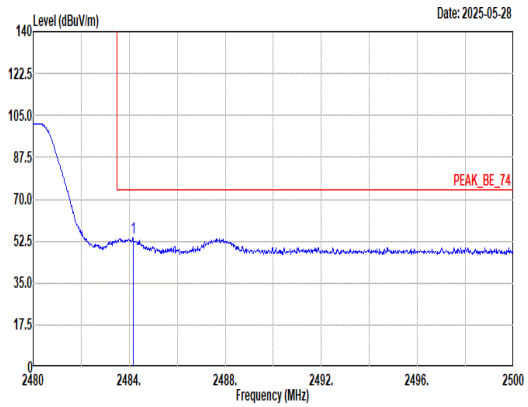
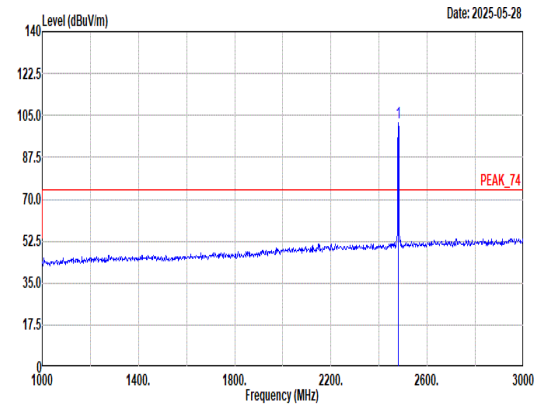
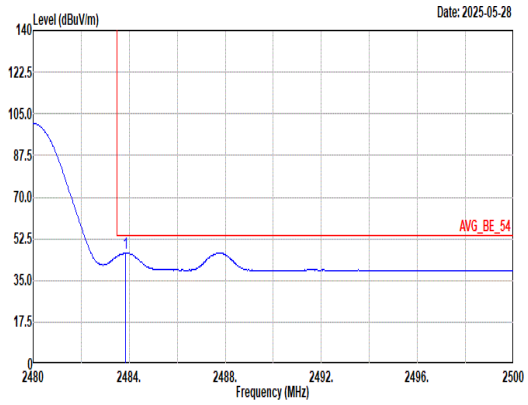
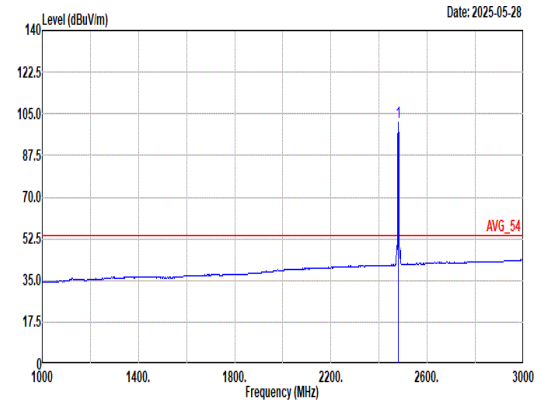
-L	**Low channel location**
-R	**High channel location**

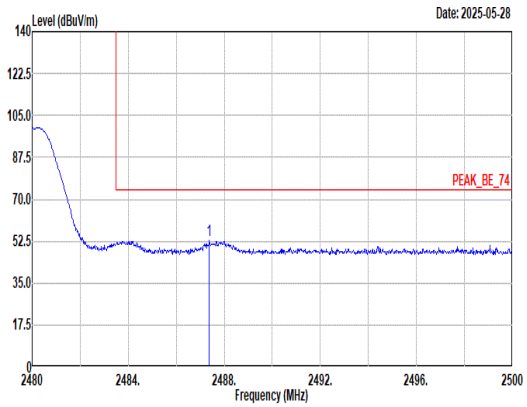
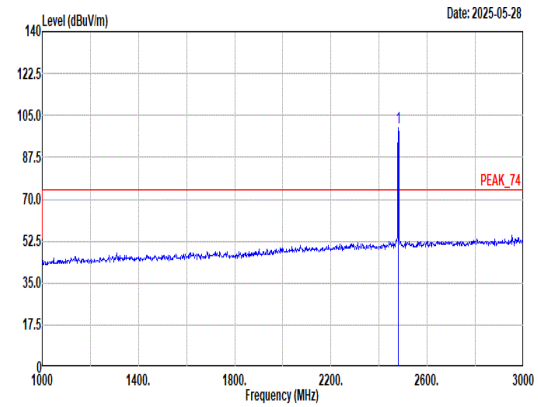
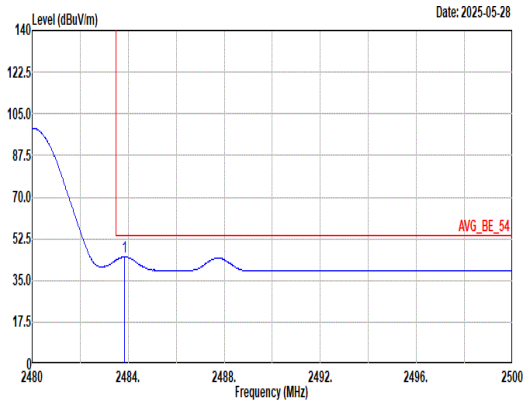
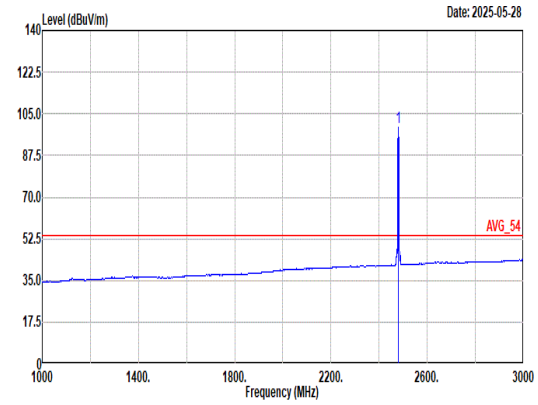
B1. Radiated Spurious Emission Test Modes

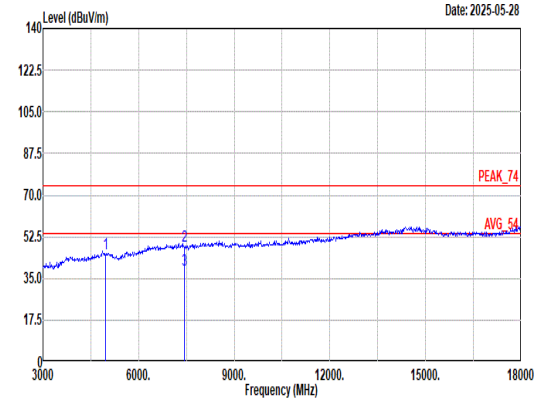
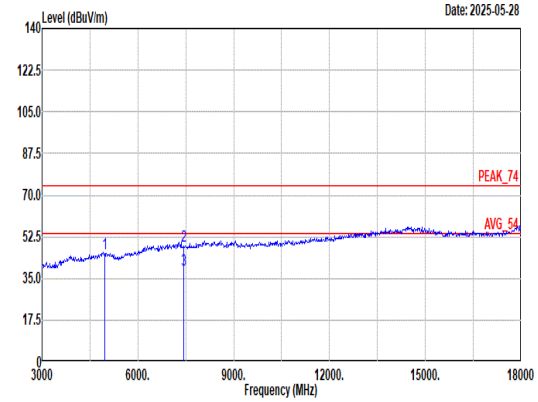
Mode	Band (MHz)	Antenna	Modulation	Channel	Frequency	Data Rate	RU	Remark
Mode 1	2400-2483.5	1	Bluetooth-LE GSFK	39	2480	1Mbps	-	-
Mode 2	2400-2483.5	1	Bluetooth-LE GSFK	39	2480	1Mbps	-	LF
Mode 3	2400-2483.5	1	Bluetooth-LE GSFK	39	2480	1Mbps	-	SHF

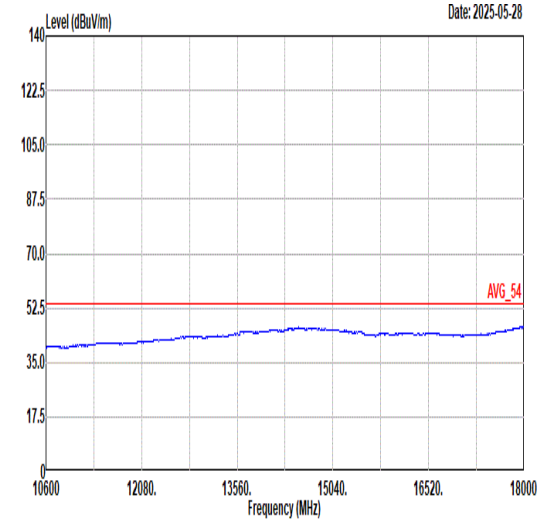
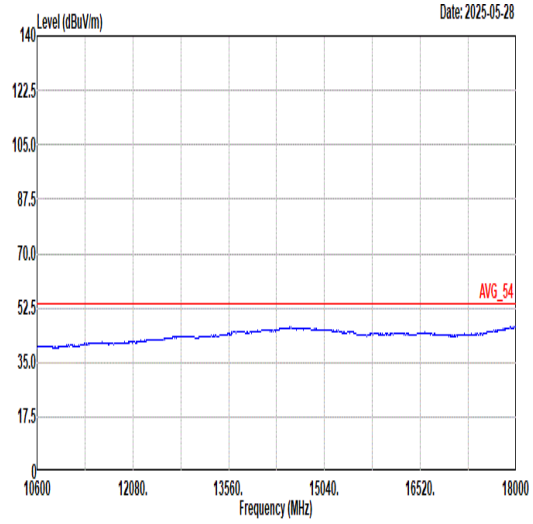
B2. Summary of each worse mode

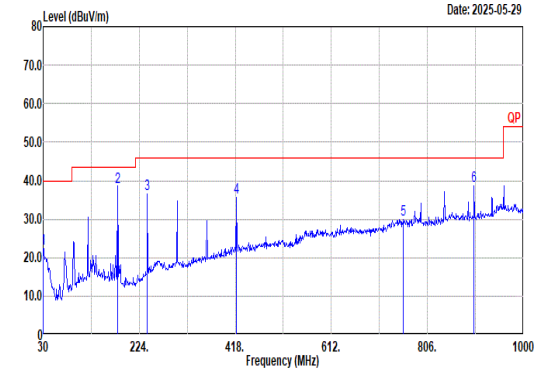
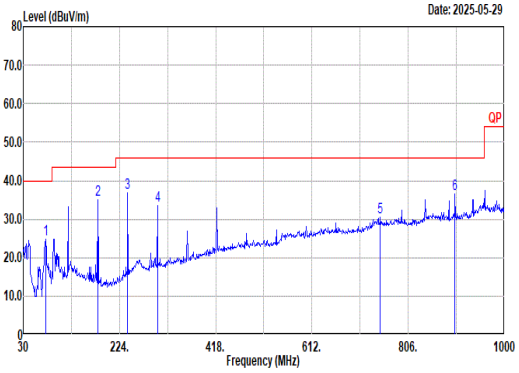
Mode	Modulation	Ch.	Freq. (MHz)	Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Pol.	Peak Avg.	Result	RU	Remark
1	Bluetooth-LE GSFK	39	2483.84	46.57	54.00	-7.43	H	Avg.	Pass	-	Band Edge
	Bluetooth-LE GSFK	39	7440.00	38.77	54.00	-15.23	H	Avg.	Pass	-	Harmonic
2	Bluetooth-LE GSFK	39	180.35	38.47	43.50	-5.03	H	QP	Pass	-	LF
3	Bluetooth-LE GSFK	39	23694.27	41.28	74.00	-32.72	H	Peak	Pass	-	SHF

Mode	1	
	Band Edge	
	2400-2483.5_Bluetooth-LE GSFK_CH39_2480MHz	
ANT	1	
Pol.	Horizontal	Fundamental
Peak	 Site : 03CH22-HY Condition: PEAK_BE_74 3m DRH18-E_LE2C04A18EN_250520 HORIZONTAL : RBW:1000.000kHz VBW:3000.000kHz SWT:Auto 1 2484.16 53.74 74.00 -20.26 42.01 26.74 8.18 32.65 9.46 100 204 Peak	 Site : 03CH22-HY Condition: PEAK_74 3m DRH18-E_LE2C04A18EN_250520 HORIZONTAL : RBW:1000.000kHz VBW:3000.000kHz SWT:Auto 1 2480.00 101.79 ------ ------ 90.10 26.70 8.18 32.65 9.46 100 204 Peak
Avg	 Site : 03CH22-HY Condition: AVG_BE_54 3m DRH18-E_LE2C04A18EN_250520 HORIZONTAL : RBW:1000.000kHz VBW:0.510kHz SWT:Auto 1 2483.84 46.57 54.00 -7.43 34.84 26.74 8.18 32.65 9.46 100 204 Average	 Site : 03CH22-HY Condition: AVG_54 3m DRH18-E_LE2C04A18EN_250520 HORIZONTAL : RBW:1000.000kHz VBW:0.510kHz SWT:Auto 1 2480.00 101.20 ------ ------ 89.51 26.70 8.18 32.65 9.46 100 204 Average

Mode	1	
	Band Edge	
	2400-2483.5_Bluetooth-LE GSFK_CH39_2480MHz	
ANT	1	
Pol.	Vertical	Fundamental
Peak	 Site : 03CH22-HY Condition: PEAK_BE_74 3m DRH18-E_LE2C04A18EN_250520 VERTICAL : RBW:1000.000kHz VBW:3000.000kHz SWT:Auto 1 2487.38 52.62 74.00 -21.38 40.86 26.77 8.18 32.65 9.46 363 147 Peak	 Site : 03CH22-HY Condition: PEAK_74 3m DRH18-E_LE2C04A18EN_250520 VERTICAL : RBW:1000.000kHz VBW:3000.000kHz SWT:Auto 1 2480.00 99.94 ------ ------ 88.25 26.70 8.18 32.65 9.46 363 147 Peak
Avg	 Site : 03CH22-HY Condition: AVG_BE_54 3m DRH18-E_LE2C04A18EN_250520 VERTICAL : RBW:1000.000kHz VBW:0.510kHz SWT:Auto 1 2483.86 44.88 54.00 -9.12 33.15 26.74 8.18 32.65 9.46 363 147 Average	 Site : 03CH22-HY Condition: AVG_54 3m DRH18-E_LE2C04A18EN_250520 VERTICAL : RBW:1000.000kHz VBW:0.510kHz SWT:Auto 1 2480.00 99.36 ------ ------ 87.67 26.70 8.18 32.65 9.46 363 147 Average

Mode	1	
	Harmonic	
	2400-2483.5_Bluetooth-LE GSFK_CH39_2480MHz	
ANT	1	
Pol.	Horizontal	Vertical
Peak Avg	 Site : 03CH22-HY Condition: PEAK_74 3m DRH18-E_LE2C04A18EN_250520 HORIZONTAL Freq Level Limit Line Margin Read Level Ant Factor Cable Loss Preamp Factor Aux Factor APos TPos Remark MHz dBuV/m dBuV/m dB dBuV dB/m dB dB dB cm deg 1 4960.00 45.40 74.00 -28.60 33.67 32.60 11.72 33.67 1.08 -- -- Peak 2 7440.00 48.60 74.00 -25.40 32.80 37.26 14.30 36.79 1.03 -- -- Peak 3 7440.00 38.77 54.00 -15.23 22.97 37.26 14.30 36.79 1.03 -- -- Average	 Site : 03CH22-HY Condition: PEAK_74 3m DRH18-E_LE2C04A18EN_250520 VERTICAL Freq Level Limit Line Margin Read Level Ant Factor Cable Loss Preamp Factor Aux Factor APos TPos Remark MHz dBuV/m dBuV/m dB dBuV dB/m dB dB dB cm deg 1 4960.00 45.24 74.00 -28.76 33.51 32.60 11.72 33.67 1.08 -- -- Peak 2 7440.00 48.40 74.00 -25.60 32.60 37.26 14.30 36.79 1.03 -- -- Peak 3 7440.00 38.64 54.00 -15.36 22.84 37.26 14.30 36.79 1.03 -- -- Average

Mode	1	
	Harmonic	
	2400-2483.5_Bluetooth-LE GSFK_CH39_2480MHz	
ANT	1	
Pol.	Horizontal	Vertical
10.6G ~18G Avg	 Site : 03CH22-HY Condition: AVG_54 3m DRH18-E_LE2C04A18EN_250520 HORIZONTAL	 Site : 03CH22-HY Condition: AVG_54 3m DRH18-E_LE2C04A18EN_250520 VERTICAL

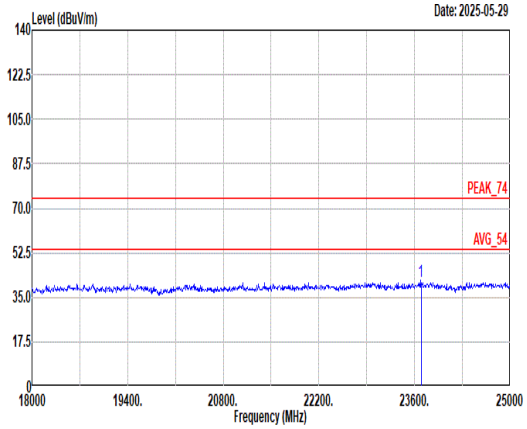
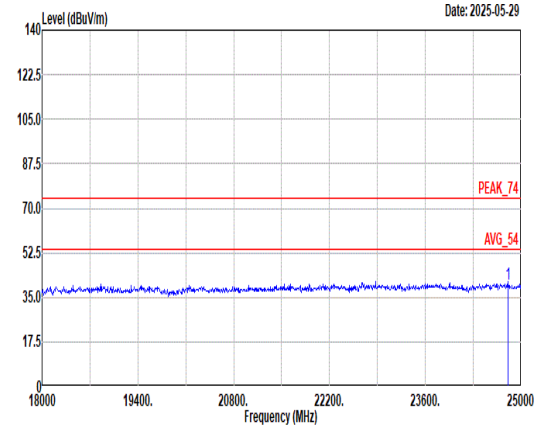
Mode	2	
	LF	
	2400-2483.5_Bluetooth-LE GSFK_CH39_2480MHz	
ANT	1	
Pol.	Horizontal	Vertical
QP/ Peak		

Site : 03CH22-HY
Condition: QP 3m Bilog_63304_241217 HORIZONTAL

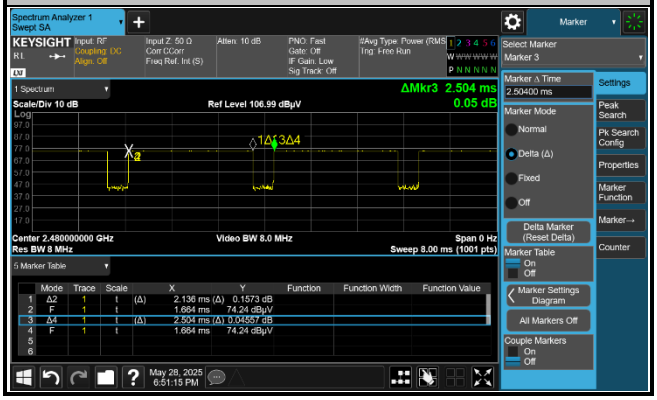
	Freq	Level	Limit Line	Margin	Read Level	Ant Factor	Cable Loss	Preamp Factor	Aux Factor	APos	TPos	Remark
	MHz	dBuV/m	dBuV/m	dB	dBuV	dB/m	dB	dB	dB	cm	deg	
1	30.00	22.43	40.00	-17.57	28.90	25.30	0.85	32.67	0.05	--	--	Peak
2	180.35	38.47	43.50	-5.03	54.00	14.86	2.16	32.63	0.08	118	1	QP
3	240.49	36.45	46.00	-9.55	49.11	17.37	2.52	32.62	0.07	--	--	Peak
4	420.91	35.62	46.00	-10.38	42.17	22.62	3.47	32.76	0.12	--	--	Peak
5	757.50	29.85	46.00	-16.15	29.39	28.30	4.59	32.58	0.15	--	--	Peak
6	900.09	38.77	46.00	-7.23	36.32	29.20	4.94	31.85	0.16	--	--	Peak

Site : 03CH22-HY
Condition: QP 3m Bilog_63304_241217 VERTICAL

	Freq	Level	Limit Line	Margin	Read Level	Ant Factor	Cable Loss	Preamp Factor	Aux Factor	APos	TPos	Remark
	MHz	dBuV/m	dBuV/m	dB	dBuV	dB/m	dB	dB	dB	cm	deg	
1	75.59	24.62	40.00	-15.38	42.97	12.86	1.42	32.69	0.06	--	--	Peak
2	180.35	35.12	43.50	-8.38	50.65	14.86	2.16	32.63	0.08	--	--	Peak
3	240.49	36.76	46.00	-9.24	49.42	17.37	2.52	32.62	0.07	--	--	Peak
4	300.63	33.57	46.00	-12.43	43.87	19.39	2.86	32.62	0.07	--	--	Peak
5	749.74	30.54	46.00	-15.46	30.15	28.29	4.58	32.62	0.14	--	--	Peak
6	900.09	36.52	46.00	-9.48	34.07	29.20	4.94	31.85	0.16	--	--	Peak

Mode	3	
	SHF	
	2400-2483.5_Bluetooth-LE GSFK_CH39_2480MHz	
ANT	1	
Pol.	Horizontal	Vertical
Peak	 Site : 03CH22-HY Condition: PEAK_74 1m SHF_1223_240624 HORIZONTAL Freq Level Limit Line Margin Read Level Ant Factor Cable Loss Preamp Factor Aux Factor APos TPos Remark MHz dBuV/m dBuV/m dB dBuV dB/m dB dB dB cm deg 1 23694.27 41.28 74.00 -32.72 46.23 38.90 25.89 60.20 -9.54 -- -- PEAK	 Site : 03CH22-HY Condition: PEAK_74 1m SHF_1223_240624 VERTICAL Freq Level Limit Line Margin Read Level Ant Factor Cable Loss Preamp Factor Aux Factor APos TPos Remark MHz dBuV/m dBuV/m dB dBuV dB/m dB dB dB cm deg 1 24811.29 40.10 74.00 -33.90 43.91 39.32 26.66 60.25 -9.54 -- -- PEAK

Appendix D. Duty Cycle Plots

Antenna	Band	Duty Cycle (%)	T(us)	1/T(kHz)	VBW Setting
1	Bluetooth - LE for 1Mbps	85.30	2136	0.47	510Hz

Bluetooth - LE for 1Mbps