FCC RADIO TEST REPORT

FCC ID	:	2AQM7-AG31E
Equipment	:	Asset Gateway Mini
Brand Name	:	Motive
Model Name	:	AG-31.5
Marketing Name	:	Asset Gateway Mini
Applicant	:	Motive Technologies, Inc. 1355 Market St., Fl. 11, San Francisco, CA 94103
Manufacturer	:	Motive Technologies, Inc. 1355 Market St., Fl. 11, San Francisco, CA 94103
Standard	:	FCC Part 15 Subpart C §15.247

The product was received on Apr. 23, 2026 and testing was performed from May 04, 2026 to Jun. 18, 2026. 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 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.)

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History of this test report

Report No.	Version	Description	Issue Date
FR641508-01	01	Initial issue of report	Jul. 17, 2026

Summary of Test Result

Report Clause	Ref Std. Clause	Test Items	Result (PASS/FAIL)	Remark
3.1	15.247(a)(2)	6dB Bandwidth	Pass	-
3.1	2.1049	99% Occupied Bandwidth	Pass	-
3.2	15.247(b)(3) 15.247(b)(4)	Output Power	Pass	-
3.3	15.247(e)	Power Spectral Density	Pass	-
3.4	15.247(d)	Conducted Band Edges and Spurious Emission	Pass	-
3.5	15.247(d)	Radiated Band Edges and Spurious Emission	Pass	-
-	15.207	AC Conducted Emission	Not Required	See Note
3.5.1	15.203	Antenna Requirement	Pass	-

Note: The power source method of the EUT is to use Battery (DC power source), and there is no other AC power port, after assessing, AC Conduction Emission test is not required.

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: Keven Cheng

Report Producer: Freda Wu

1 General Description

1.1 Product Feature of Equipment Under Test

Product Feature
General Specs LTE Cat M1/ NB IoT, Bluetooth-LE and GNSS. **Antenna Type** Bluetooth-LE: IFA Antenna GNSS: Passive Antenna

Antenna information		
2400 MHz ~ 2483.5 MHz	Peak Gain (dBi)	3.01

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

The test location is accredited based on TAF code 3786 designated by NCC (National Communication Commission).

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.)

FCC designation No.: TW3786

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

1.4 Applicable Standards

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

- FCC KDB Publication No. 558074 D01 15.247 Meas Guidance v05r02
- FCC KDB 414788 D01 Radiated Test Site v01r01
- FCC Part 15 Subpart C §15.247
- ANSI C63.10-2020 + Cor.1-2023

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	-	-

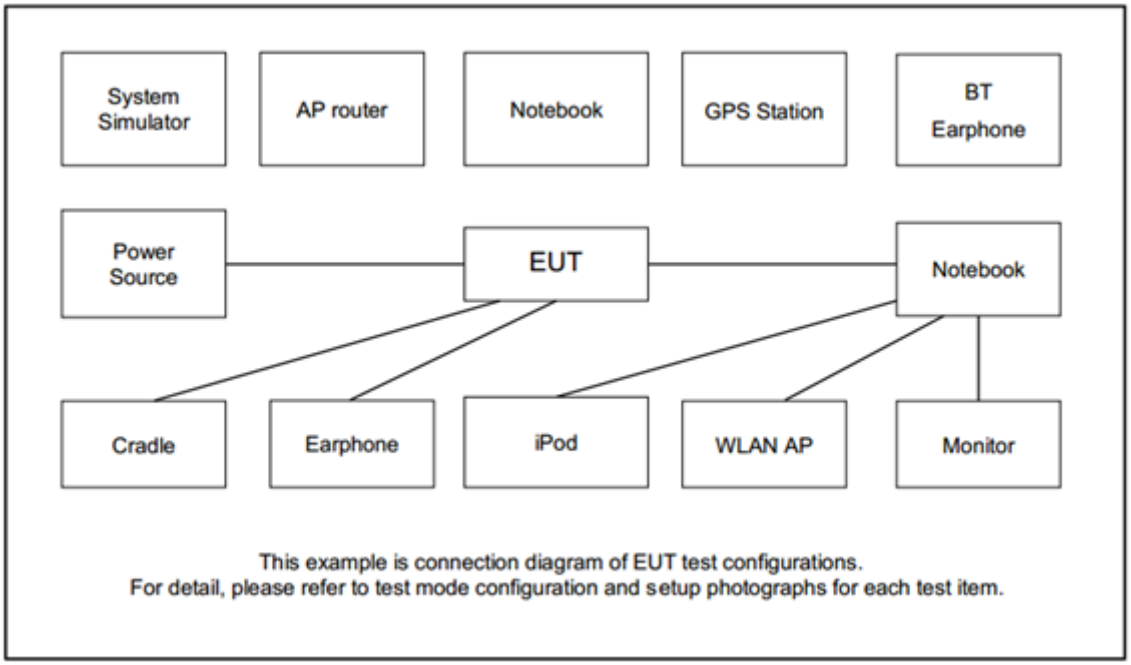
2.2 Test Mode

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: 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..

The following summary table is showing all test modes to demonstrate in compliance with the standard.

Summary table of Test Cases	
Test Item	**Data Rate / Modulation**
Conducted Test Cases	**Bluetooth – LE / GFSK**
	Mode 1: Bluetooth Tx CH00_2402 MHz_1Mbps Mode 2: Bluetooth Tx CH19_2440 MHz_1Mbps Mode 3: Bluetooth Tx CH39_2480 MHz_1Mbps Mode 4: Bluetooth Tx CH00_2402 MHz_2Mbps Mode 5: Bluetooth Tx CH19_2440 MHz_2Mbps Mode 6: Bluetooth Tx CH39_2480 MHz_2Mbps
Remark: 1. For radiation spurious emission, the modulation and the data rate picked for testing are determined by the Max. RF conducted power. 2. The detailed Radiated test modes are shown in Appendix B.	

2.3 Connection Diagram of Test System



2.4 EUT Operation Test Setup

The RF test items, utility "Tera Term V4.95" 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.

2.5 Measurement Results Explanation Example

For all conducted test items:

The offset level is set in the spectrum analyzer to compensate the RF cable loss and attenuator factor between EUT conducted output port and spectrum analyzer. With the offset compensation, the spectrum analyzer reading level is exactly the EUT RF output level.

Example :

The spectrum analyzer offset is derived from RF cable loss and attenuator factor.

Offset = RF cable loss + attenuator factor.

Following shows an offset computation example with cable loss 4.2 dB and 10 dB attenuator.

Offset(dB) = RF cable loss(dB) + attenuator factor(dB).

= 4.2 + 10 = 14.2 (dB)

3 Test Result

3.1 6dB and 99% Bandwidth Measurement

3.1.1 Limit of 6dB and 99% Bandwidth

The minimum 6 dB bandwidth shall be at least 500 kHz.

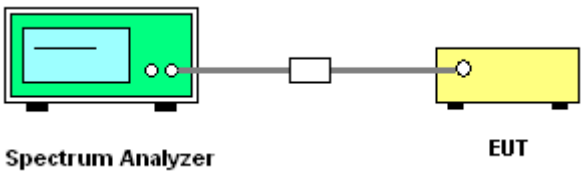
3.1.2 Measuring Instruments

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

3.1.3 Test Procedures

1. The testing follows the ANSI C63.10 Section 6.9.3 (OBW) and 11.8.1 (6dB BW).
2. The RF output of EUT is connected to the spectrum analyzer by RF cable and attenuator. The path loss is compensated to the results for each measurement.
3. Set the maximum power setting and enable the EUT to transmit continuously.
4. Make the measurement with the spectrum analyzer's resolution bandwidth (RBW) = 1% to 5% of the OBW but not less than 100 kHz. Set the Video bandwidth VBW ≥ 3 * RBW. In order to make an accurate measurement. The 6dB bandwidth must be greater than 500 kHz.
5. For 99% Bandwidth Measurement, the spectrum analyzer's resolution bandwidth (RBW) is set 1-5% of the emission bandwidth, and set the Video bandwidth (VBW) ≥ 3 * RBW.
6. Measure and record the results in the test report.

3.1.4 Test Setup



3.1.5 Test Result of 6dB Bandwidth

Please refer to Appendix A.

3.1.6 Test Result of 99% Occupied Bandwidth

Please refer to Appendix A.

3.2 Output Power Measurement

3.2.1 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.

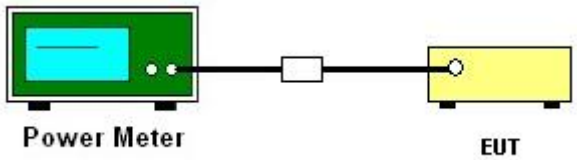
3.2.2 Measuring Instruments

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

3.2.3 Test Procedures

1. For Peak Power, the testing follows ANSI C63.10 Section 11.9.1.2 PKPM1.
2. For Average Power, the testing follows ANSI C63.10 Section 11.9.2.3.2 Method AVGPM-G
3. The RF output of EUT is connected to the power meter by RF cable and attenuator.
4. The path loss is compensated to the results for each measurement.
5. Set the maximum power setting and enable the EUT to transmit continuously.
6. Measure the conducted output power and record the results in the test report.

3.2.4 Test Setup



3.2.5 Test Result of Peak Output Power

Please refer to Appendix A.

3.2.6 Test Result of Average Output Power (Reporting Only)

Please refer to Appendix A.

3.3 Power Spectral Density Measurement

3.3.1 Limit of Power Spectral Density

The peak power spectral density shall not be greater than 8 dBm in any 3 kHz band at any time interval of continuous transmission.

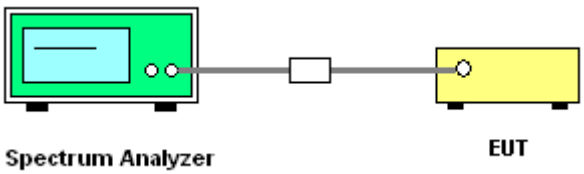
3.3.2 Measuring Instruments

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

3.3.3 Test Procedures

1. The testing follows the ANSI C63.10 Section 11.10.2 Method PKPSD.
2. The RF output of EUT is connected to the spectrum analyzer by RF cable and attenuator. The path loss is compensated to the results for each measurement.
3. Set the maximum power setting and enable the EUT to transmit continuously.
4. Make the measurement with the spectrum analyzer's resolution bandwidth (RBW) = 3 kHz. Video bandwidth (VBW) = 10 kHz. In order to make an accurate measurement, set the span to 1.5 times DTS Channel Bandwidth. (6 dB BW)
5. Detector = peak, Sweep time = No faster than coupled (auto) time, Trace mode = max hold, Allow trace to fully stabilize. Use the peak marker function to determine the maximum power level.
6. Measure and record the results in the test report.
7. The Measured power density (dBm)/ 100 kHz is a reference level and is used as 20 dBc down limit line for Conducted Band Edges and Conducted Spurious Emission.

3.3.4 Test Setup



3.3.5 Test Result of Power Spectral Density

Please refer to Appendix A.

3.4 Conducted Band Edges and Spurious Emission Measurement

3.4.1 Limit of Conducted Band Edges and Spurious Emission

In any 100 kHz bandwidth outside the intentional radiation frequency band, the radio frequency power shall be at least 20 dB below the highest level of the radiated power. In addition, radiated emissions which fall in the restricted bands must also comply with the radiated emission limits.

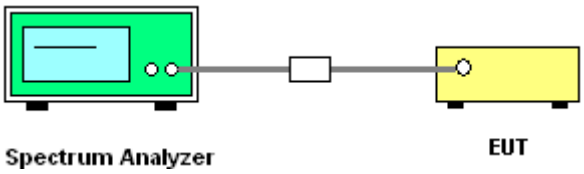
3.4.2 Measuring Instruments

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

3.4.3 Test Procedure

1. The testing follows the ANSI C63.10 Section 11.11.3 Emission level measurement.
2. The RF output of EUT is connected to the spectrum analyzer by RF cable and attenuator. The path loss is compensated to the results for each measurement.
3. Set the maximum power setting and enable the EUT to transmit continuously.
4. Set RBW = 100 kHz, VBW = 300 kHz, Peak Detector. Unwanted Emissions measured in any 100 kHz bandwidth outside of the authorized frequency band shall be attenuated by at least 20 dB relative to the maximum in-band peak PSD level in 100 kHz when maximum peak conducted output power procedure is used. If the transmitter complies with the conducted power limits based on the use of RMS averaging over a time interval, the attenuation required under this paragraph shall be 30 dB instead of 20 dB.
5. Measure and record the results in the test report.
6. The RF fundamental frequency should be excluded against the limit line in the operating frequency band.

3.4.4 Test Setup



3.4.5 Test Result of Conducted Band Edges Plots

Please refer to Appendix A.

3.4.6 Test Result of Conducted Spurious Emission Plots

Please refer to Appendix A.

3.5 Radiated Band Edges and Spurious Emission Measurement

3.5.1 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. 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

3.5.2 Measuring Instruments

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

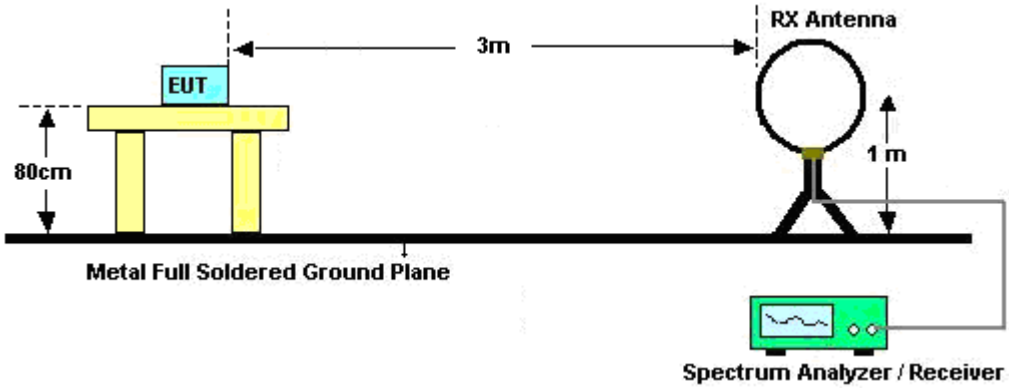
3.5.3 Test Procedures

1. 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.
2. The EUT is set 3 meters away from the receiving antenna, which is mounted on the top of a variable height antenna tower.
3. For each suspected emission, 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 to comply with the guidelines.
4. Set the maximum power setting and enable the EUT to transmit continuously.
5. 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, RBW = 1 MHz for f>1 GHz ; VBW ≥ RBW; Sweep = auto; Detector function = peak; Trace = max hold for peak
   (3) For average measurement: use duty cycle correction factor method per 15.35(c).
   Duty cycle = On time/100 milliseconds
   On time = $N_1*L_1+N_2*L_2+...+N_{n-1}*LN_{n-1}+N_n*L_n$
   Where N_1 is number of type 1 pulses, L_1 is length of type 1 pulses, etc.
   Average Emission Level = Peak Emission Level + 20*log (Duty cycle)
6. Corrected Reading: Antenna Factor + Cable Loss + Read Level - Preamp Factor = Level
7. 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 "-".
8. 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 "-".

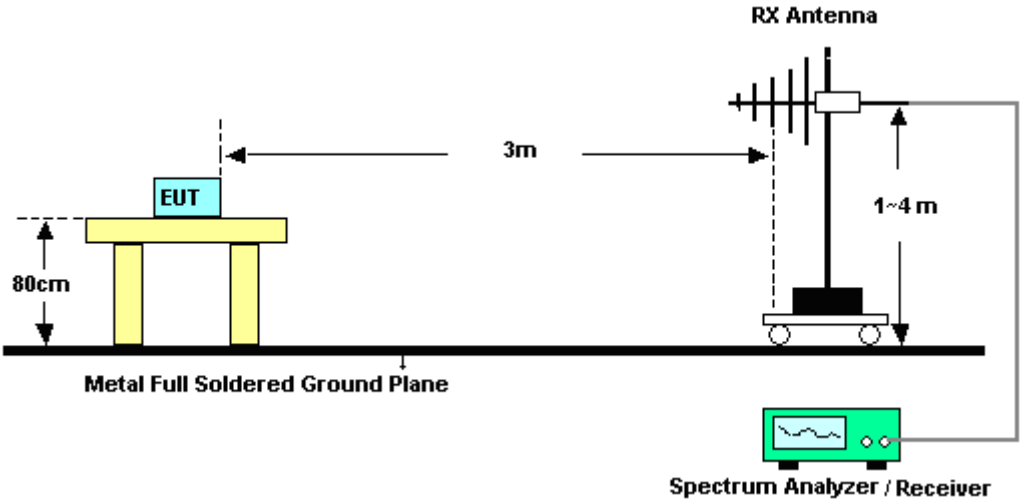
   Note: The average levels are calculated from the peak level corrected with duty cycle correction factor derived from 20log (dwell time/100ms). This correction is only for signals with the fundamental signal, such as band-edge and harmonic. Other spurious signals that are independent of the signal would not use this correction.

3.5.4 Test Setup

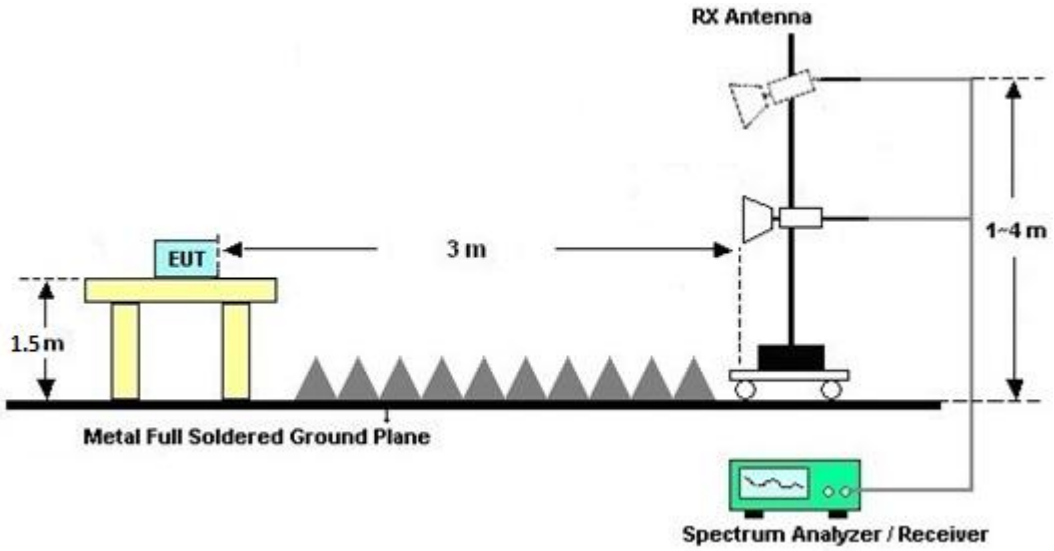
For radiated test below 30MHz



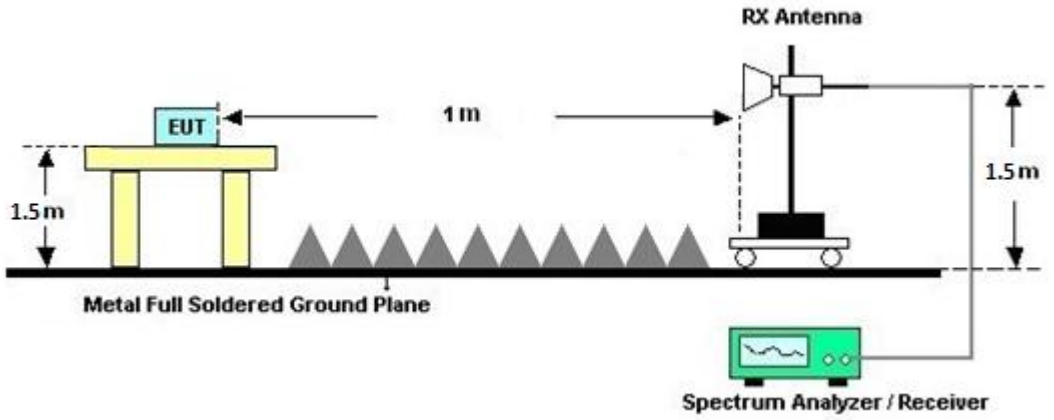
For radiated test from 30MHz to 1GHz



For radiated test from 1GHz to 18GHz



For radiated test above 18GHz



3.5.5 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.

3.5.6 Test Result of Radiated Spurious at Band Edges

Please refer to Appendix B.

3.5.7 Duty Cycle

Please refer to Appendix C.

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

Please refer to Appendix B.

3.6 Antenna Requirements

3.6.1 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.

3.6.2 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
Bilog Antenna with 6dB pad	TESEQ & VGT	CBL 6111D & VFA_Z-04002-N-06	66925 & 24006	30MHz~1GHz	Apr. 12, 2026	May 19, 2026~ May 28, 2026	Apr. 11, 2027	Radiation (03CH11-HY)
Bilog Antenna	TESEQ	CBL 6111D & 00800N1D01N -06	37059 & 01	30MHz~1GHz	Nov. 26, 2025	May 19, 2026~ May 28, 2026	Nov. 25, 2026	Radiation (03CH11-HY)
Loop Antenna	Rohde & Schwarz	HFH2-Z2E	101108	9 kHz~30 MHz	Dec. 11, 2025	May 19, 2026~ May 28, 2026	Dec. 10, 2026	Radiation (03CH11-HY)
Double Ridged Guide Horn Antenna	SCHWARZBECK	BBHA 9120 D	9120D-01620	1GHz~18GHz	Sep. 15, 2025	May 19, 2026~ May 28, 2026	Sep. 14, 2026	Radiation (03CH11-HY)
SHF-EHF Horn Antenna	SCHWARZBECK	BBHA 9170	1225	18GHz~40GHz	Jul. 02, 2025	May 19, 2026~ May 28, 2026	Jul. 01, 2026	Radiation (03CH11-HY)
Amplifier	SONOMA	310N	187312	9kHz~1GHz	Dec. 06, 2025	May 19, 2026~ May 28, 2026	Dec. 05, 2026	Radiation (03CH11-HY)
Preamplifier	Keysight	83017A	MY53270080	1GHz~26.5GHz	Mar. 23, 2026	May 19, 2026~ May 28, 2026	Mar. 22, 2027	Radiation (03CH11-HY)
Preamplifier	E-INSTRUMENT TECH LTD.	ERA-100M-18G-56-01-A70	EC1900249	1GHz~18GHz	Jan. 20, 2026	May 19, 2026~ May 28, 2026	Jan. 19, 2027	Radiation (03CH11-HY)
Preamplifier	EMEC	EM18G40G	060873	18GHz~40GHz	Aug. 26, 2025	May 19, 2026~ May 28, 2026	Aug. 25, 2026	Radiation (03CH11-HY)
Signal Analyzer	Keysight	N9010A	MY54200485	10Hz~44GHz	Aug. 27, 2025	May 19, 2026~ May 28, 2026	Aug. 26, 2026	Radiation (03CH11-HY)
EMI Test Receiver	Keysight	N9038A(MXE)	MY55420170	20MHz~8.4GHz	Jul. 22, 2025	May 19, 2026~ May 28, 2026	Jul. 21, 2026	Radiation (03CH11-HY)
Controller	EMEC	EM 1000	N/A	Control Turn table & Ant Mast	N/A	May 19, 2026~ May 28, 2026	N/A	Radiation (03CH11-HY)
Antenna Mast	EMEC	AM-BS-4500-B	N/A	1~4m	N/A	May 19, 2026~ May 28, 2026	N/A	Radiation (03CH11-HY)
Turn Table	EMEC	TT 2000	N/A	0~360 Degree	N/A	May 19, 2026~ May 28, 2026	N/A	Radiation (03CH11-HY)
Software	Audix	E3	RK-002391	N/A	N/A	May 19, 2026~ May 28, 2026	N/A	Radiation (03CH11-HY)
USB Data Logger	TECPEL	TR-32	HE17XM6804	N/A	Dec. 15, 2025	May 19, 2026~ May 28, 2026	Dec. 14, 2026	Radiation (03CH11-HY)
Hygrometer	TECPEL	DTM-303B	TP200880	N/A	Aug. 26, 2025	May 19, 2026~ May 28, 2026	Aug. 25, 2026	Radiation (03CH11-HY)
RF Cable	HUBER + SUHNER	SUCOFLEX 102	804013/2	30M~40G	Mar. 04, 2026	May 19, 2026~ May 28, 2026	Mar. 03, 2027	Radiation (03CH11-HY)
RF Cable	HUBER + SUHNER	SUCOFLEX 102	803951/2	9K~30M	Mar. 04, 2026	May 19, 2026~ May 28, 2026	Mar. 03, 2027	Radiation (03CH11-HY)
RF Cable	HUBER + SUHNER	SUCOFLEX 102	803951/2	30M~40G	Mar. 04, 2026	May 19, 2026~ May 28, 2026	Mar. 03, 2027	Radiation (03CH11-HY)
RF Cable	HUBER + SUHNER	SUCOFLEX 102	805139 2	9K~30M	Mar. 04, 2026	May 19, 2026~ May 28, 2026	Mar. 03, 2027	Radiation (03CH11-HY)
RF Cable	HUBER + SUHNER	SUCOFLEX 102	805139 2	30M~40G	Mar. 04, 2026	May 19, 2026~ May 28, 2026	Mar. 03, 2027	Radiation (03CH11-HY)
Attenuator	HONOVA	5910 SMA-50-005	0028	N/A	Sep. 09, 2025	May 19, 2026~ May 28, 2026	Sep. 08, 2026	Radiation (03CH11-HY)
Filter	Wainwright	WHKX12-2700-3000-18000-60SS	SN3	3GHz High Pass Filter	Sep. 09, 2025	May 19, 2026~ May 28, 2026	Sep. 08, 2026	Radiation (03CH11-HY)
Filter	Wainwright	WLK4-1000-1530-8000-40SS	SN11	1.53GHz Low Pass Filter	Sep. 09, 2025	May 19, 2026~ May 28, 2026	Sep. 08, 2026	Radiation (03CH11-HY)

Instrument	Brand Name	Model No.	Serial No.	Characteristics	Calibration Date	Test Date	Due Date	Remark
Hygrometer	TECPEL	DTM-303A	TP201996	N/A	Nov. 04, 2025	May 04, 2026~ Jun. 18, 2026	Nov. 03, 2026	Conducted (TH05-HY)
Power Sensor	DARE	RPR3006W	17I00015SNO 37 (NO:167)	10MHz~6GHz	Nov. 14, 2025	May 04, 2026~ Jun. 18, 2026	Nov. 13, 2026	Conducted (TH05-HY)
Signal Analyzer	Rohde & Schwarz	FSV40	101566	10Hz~40GHz	Aug. 29, 2025	May 04, 2026~ Jun. 18, 2026	Aug. 28, 2026	Conducted (TH05-HY)
Programmable Power Supply	GW Instek	PSS-2005	EL883644	Voltage:0~20V; Current:0~5A	Nov. 14. 2025	May 04, 2026~ Jun. 18, 2026	Nov. 13. 2026	Conducted (TH05-HY)
Switch Control Mainframe	E-Instument	ETF-1405-0	EC1900067 (BOX7)	N/A	Jul. 02, 2025	May 04, 2026~ Jun. 18, 2026	Jul. 01, 2026	Conducted (TH05-HY)
Software	Sporton	BTWIFI_Final_ version_240513	N/A	Conducted Other Test Item	N/A	May 04, 2026~ Jun. 18, 2026	N/A	Conducted (TH05-HY)

5 Measurement Uncertainty

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

Measuring Uncertainty for a Level of Confidence of 95% (U = 2Uc(y))	6.5 dB

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

Measuring Uncertainty for a Level of Confidence of 95% (U = 2Uc(y))	4.9 dB

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

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

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

Measuring Uncertainty for a Level of Confidence of 95% (U = 2Uc(y))	4.9 dB

Appendix A. Test Result of Conducted Test Items

Test Engineer:	Cheng Huang	Temperature:	21~25	°C
Test Date:	2026/5/4~2026/6/18	Relative Humidity:	51~54	%

TEST RESULTS DATA
6dB and 99% Occupied Bandwidth

Mod.	Data Rate	NTX	CH.	Freq. (MHz)	99% Occupied BW (MHz)	6dB BW (MHz)	6dB BW Limit (MHz)	Pass/Fail
BLE	1Mbps	1	0	2402	1.062	0.964	0.50	Pass
BLE	1Mbps	1	19	2440	1.051	0.960	0.50	Pass
BLE	1Mbps	1	39	2480	1.051	0.963	0.50	Pass

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	1Mbps	1	0	2402	7.65	30.00	3.01	10.66	36.00	Pass
BLE	1Mbps	1	19	2440	7.40	30.00	3.01	10.41	36.00	Pass
BLE	1Mbps	1	39	2480	7.18	30.00	3.01	10.19	36.00	Pass

TEST RESULTS DATA
Peak Power Density

Mod.	Data Rate	NTX	CH.	Freq. (MHz)	Peak PSD (dBm /100kHz)	Peak PSD (dBm /3kHz)	DG (dBi)	Peak PSD Limit (dBm /3kHz)	Pass/Fail
BLE	1Mbps	1	0	2402	8.23	-6.22	3.01	8.00	Pass
BLE	1Mbps	1	19	2440	7.87	-4.81	3.01	8.00	Pass
BLE	1Mbps	1	39	2480	7.85	-5.23	3.01	8.00	Pass

Note: PSD (dBm/ 100kHz) is a reference level used for Conducted Band Edges and Conducted Spurious Emission 30dBc limit.

TEST RESULTS DATA
6dB and 99% Occupied Bandwidth

Mod.	Data Rate	NTX	CH.	Freq. (MHz)	99% Occupied BW (MHz)	6dB BW (MHz)	6dB BW Limit (MHz)	Pass/Fail
BLE	2Mbps	1	0	2402	2.061	1.467	0.50	Pass
BLE	2Mbps	1	19	2440	2.048	1.468	0.50	Pass
BLE	2Mbps	1	39	2480	2.055	1.483	0.50	Pass

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	7.65	30.00	3.01	10.66	36.00	Pass
BLE	2Mbps	1	19	2440	7.42	30.00	3.01	10.43	36.00	Pass
BLE	2Mbps	1	39	2480	7.35	30.00	3.01	10.36	36.00	Pass

TEST RESULTS DATA
Peak Power Density

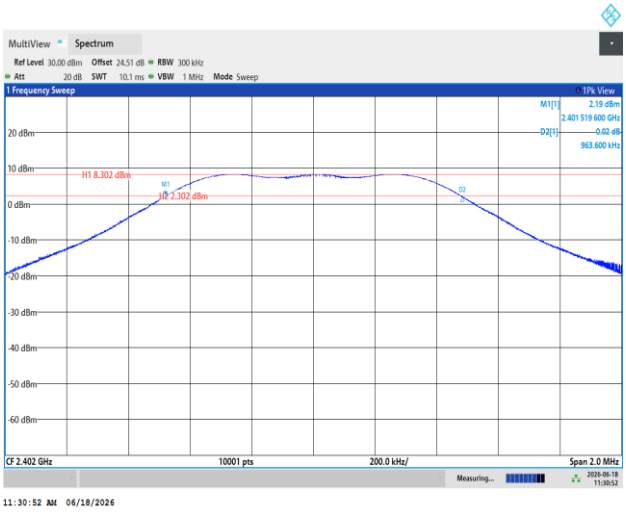
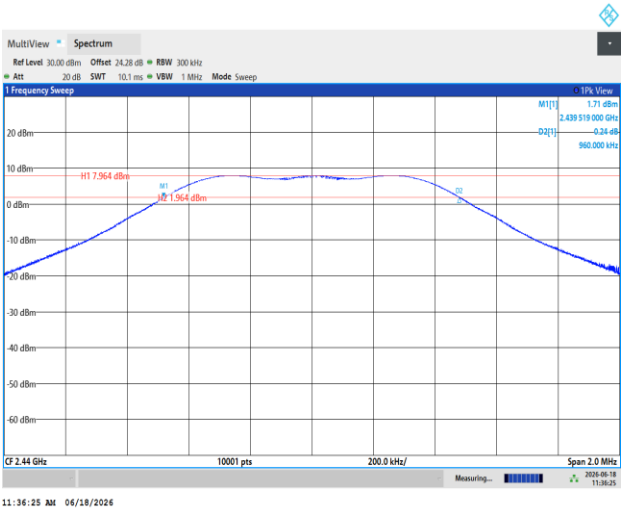
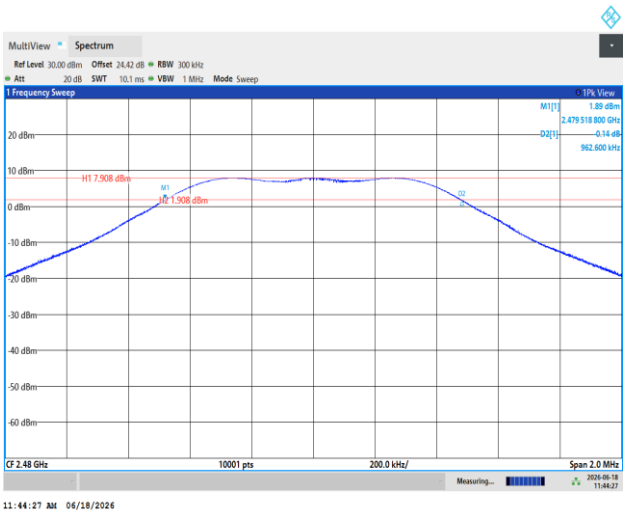
Mod.	Data Rate	NTX	CH.	Freq. (MHz)	Peak PSD (dBm /100kHz)	Peak PSD (dBm /3kHz)	DG (dBi)	Peak PSD Limit (dBm /3kHz)	Pass/Fail
BLE	2Mbps	1	0	2402	8.22	-7.78	3.01	8.00	Pass
BLE	2Mbps	1	19	2440	7.84	-8.37	3.01	8.00	Pass
BLE	2Mbps	1	39	2480	7.86	-7.28	3.01	8.00	Pass

Note: PSD (dBm/ 100kHz) is a reference level used for Conducted Band Edges and Conducted Spurious Emission 30dBc limit.

Number of TX = 1, Ant. 1 (Measured)

6dB Bandwidth

<1M>

6 dB Bandwidth Plot on Channel 00	6 dB Bandwidth Plot on Channel 19
	
6 dB Bandwidth Plot on Channel 39	
	

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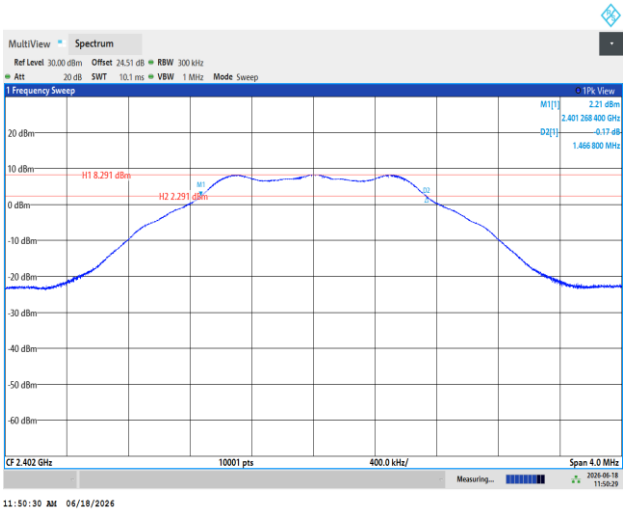
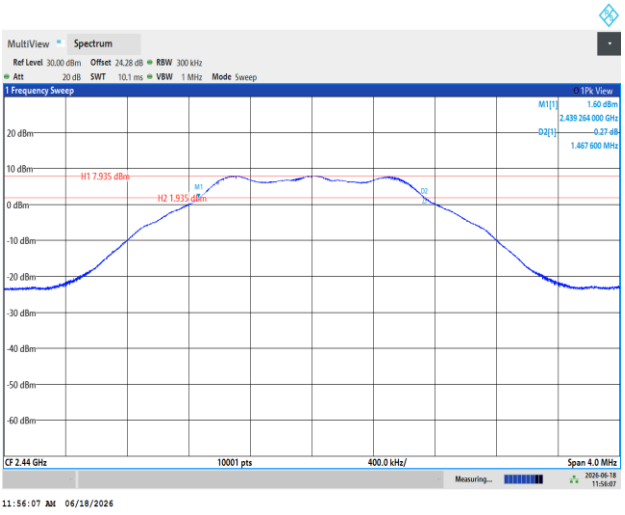
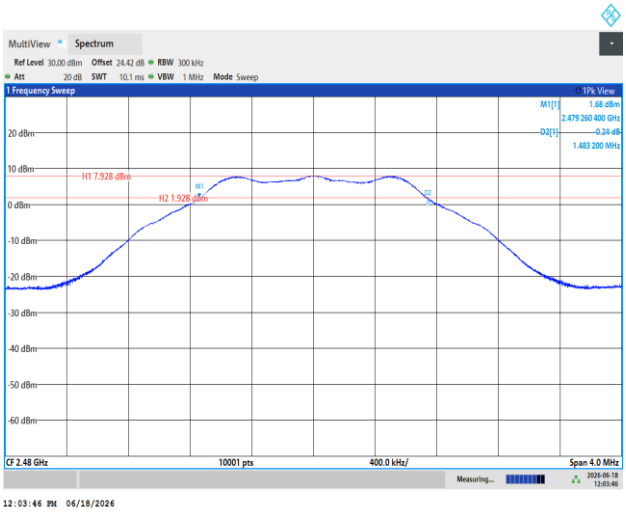
6 dB Bandwidth Plot on Channel 00	6 dB Bandwidth Plot on Channel 19
	
6 dB Bandwidth Plot on Channel 39	
	

99% Occupied Bandwidth

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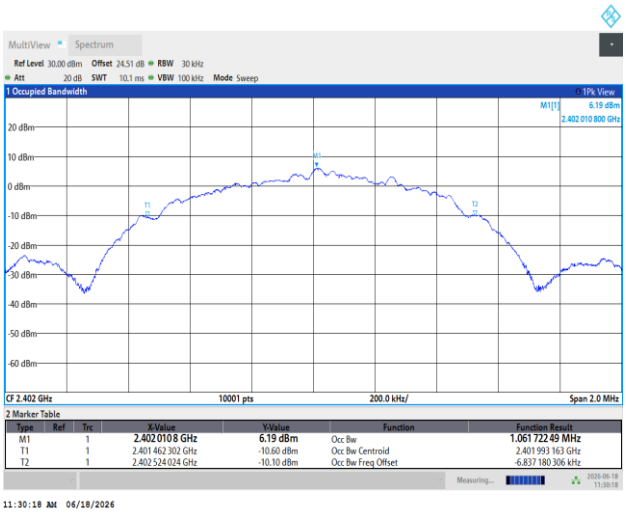
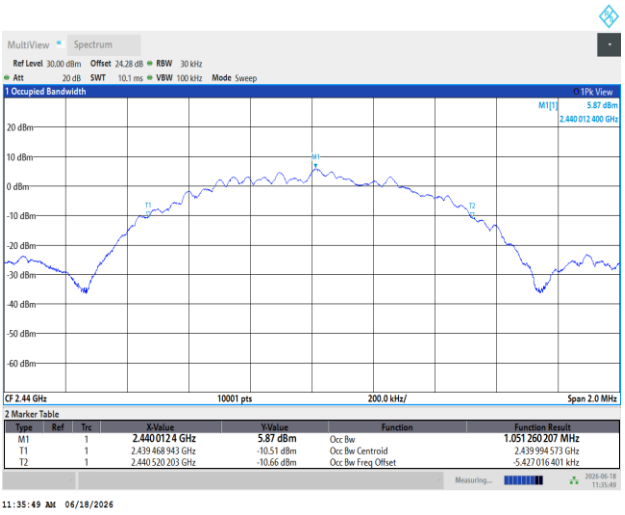
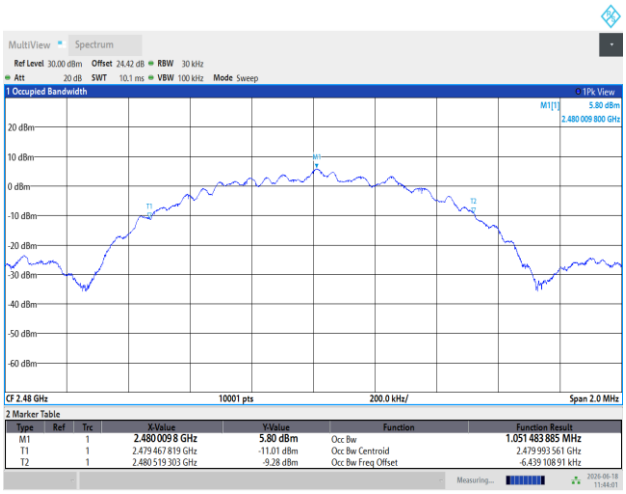
99% Occupied Bandwidth Plot on Channel 00	99% Occupied Bandwidth Plot on Channel 19
	
99% Occupied Bandwidth Plot on Channel 39	
	

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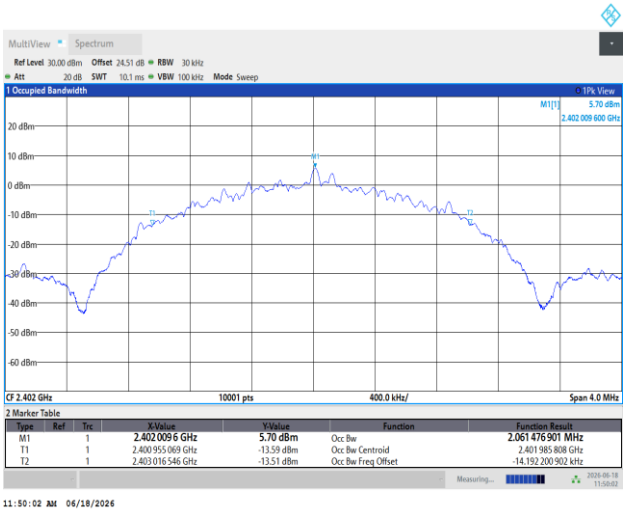
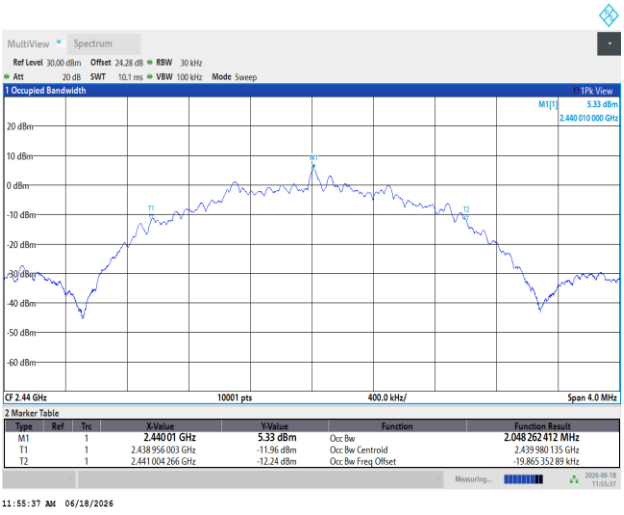
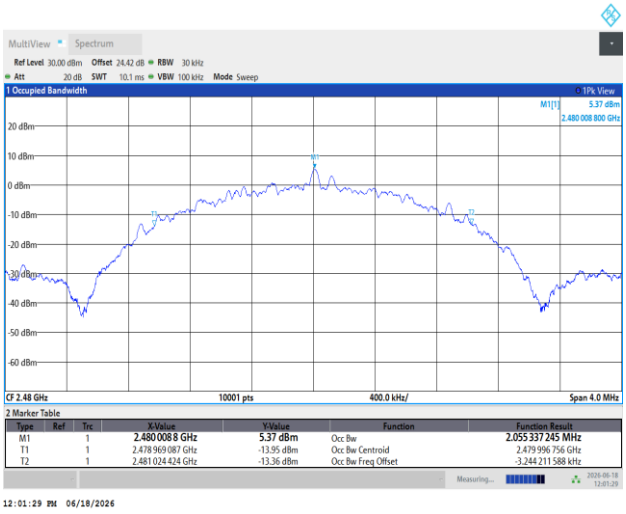
99% Occupied Bandwidth Plot on Channel 00	99% Occupied Bandwidth Plot on Channel 19
	
99% Occupied Bandwidth Plot on Channel 39	
	

Power Spectral Density (dBm/3kHz)

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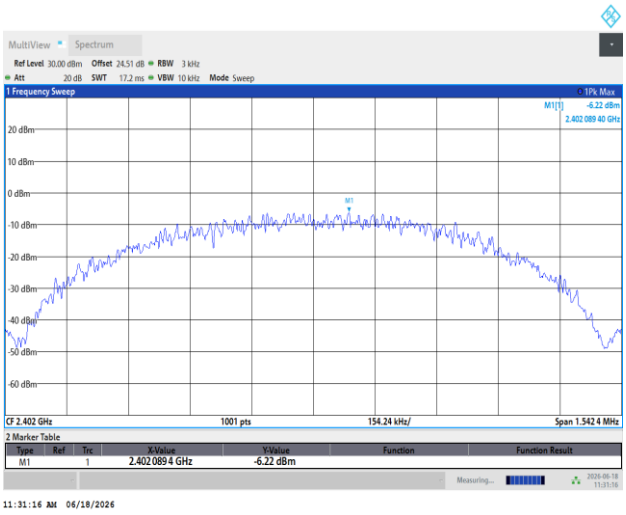
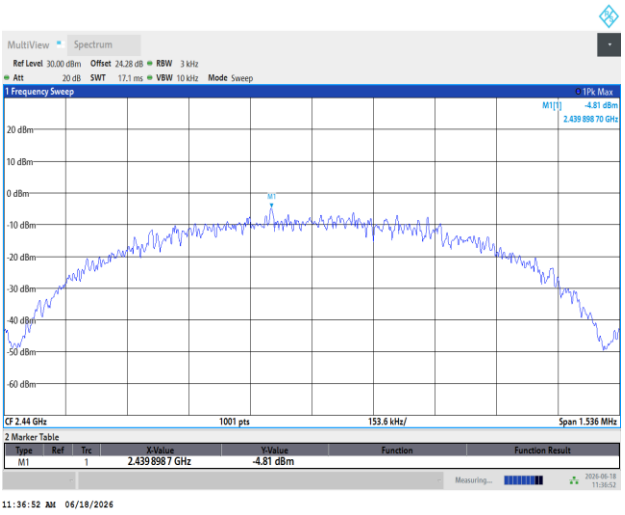
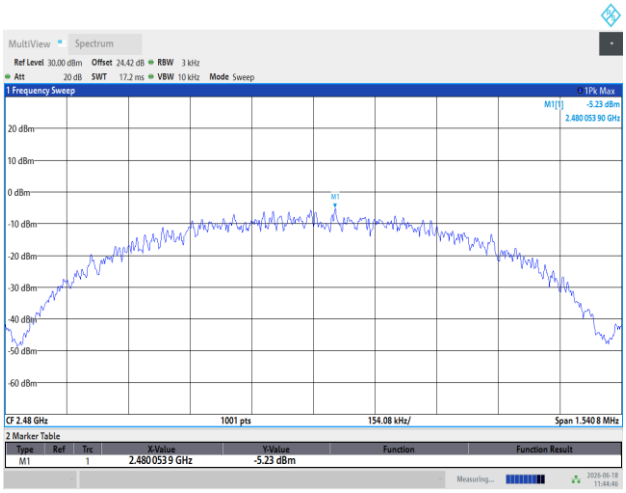
Power Density (dBm/3kHz) Plot Channel 00	Power Density (dBm/3kHz) Plot Channel 19
	
Power Density (dBm/3kHz) Plot Channel 39	
	

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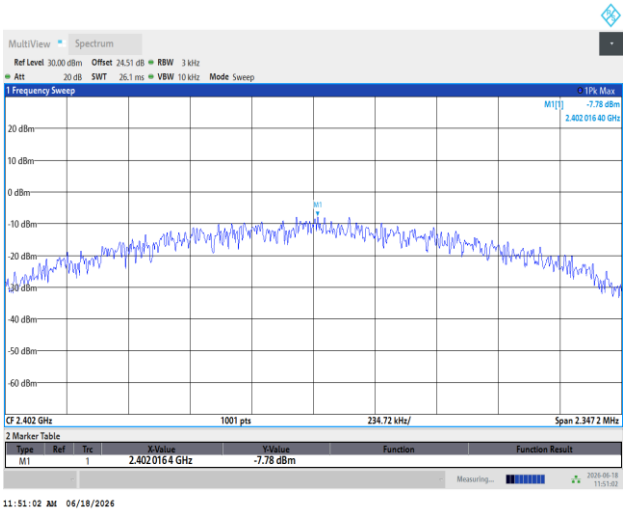
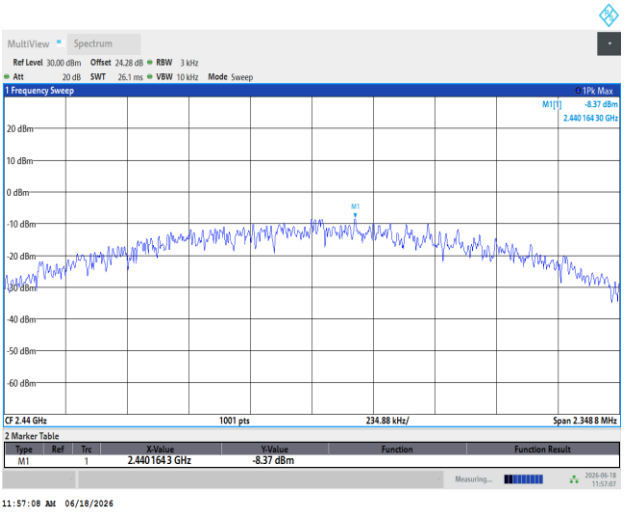
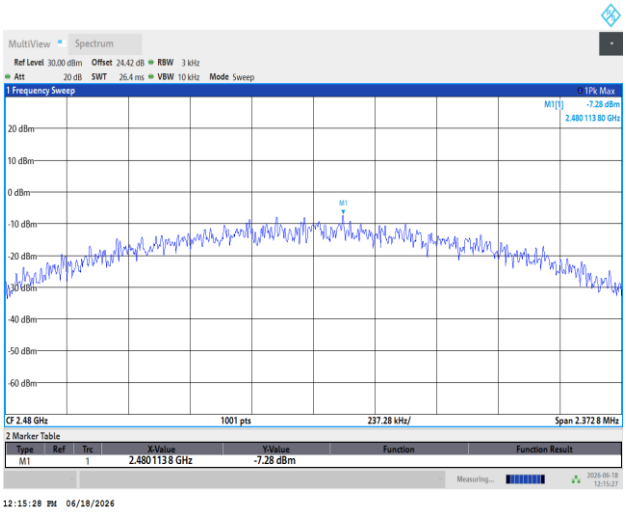
Power Density (dBm/3kHz) Plot Channel 00	Power Density (dBm/3kHz) Plot Channel 19
	
Power Density (dBm/3kHz) Plot Channel 39	
	

Band Edge and Conducted Spurious Emission

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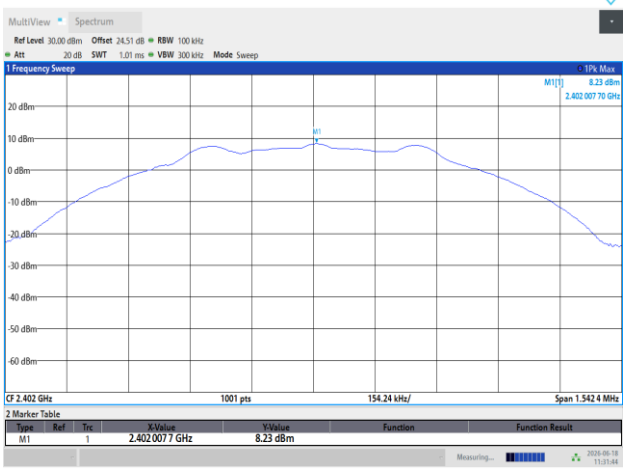
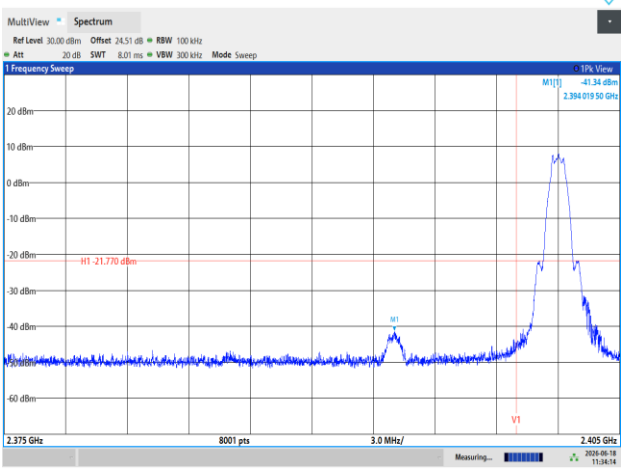
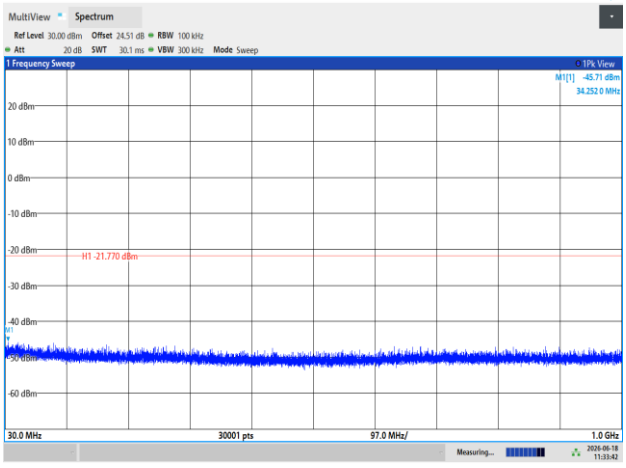
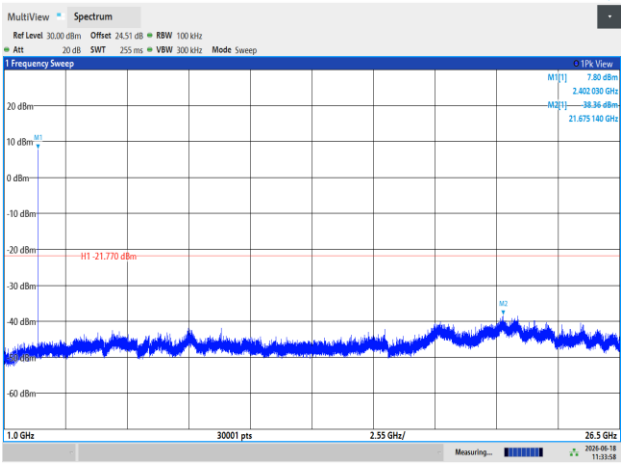
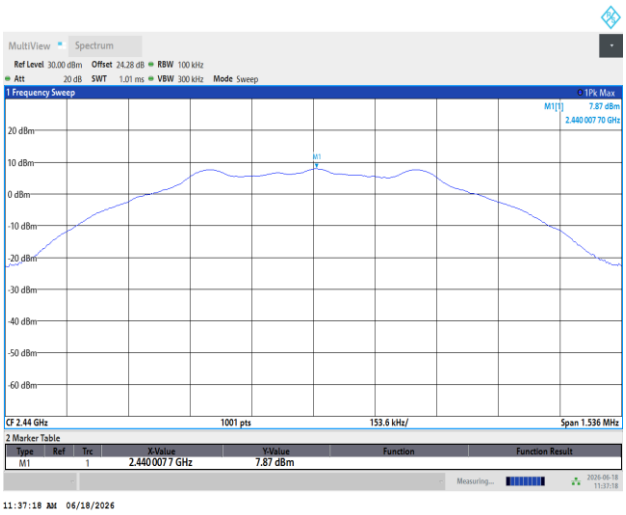
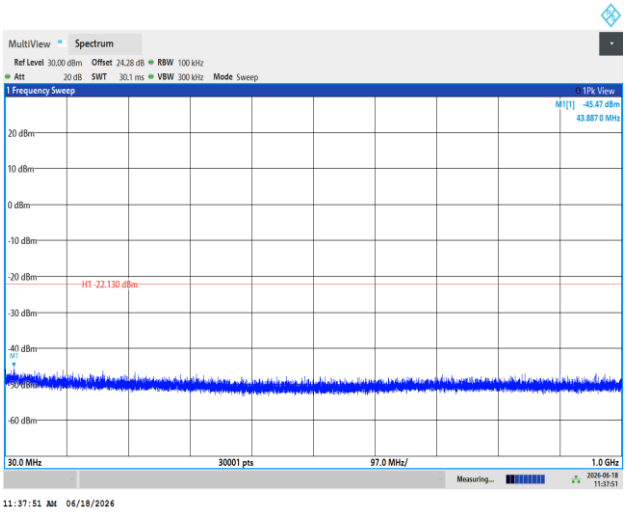
Channel 00	
100kHz PSD reference Level Plot	**Plot on Channel 00**
	
Spurious Emission 30MHz~1GHz Plot	**Spurious Emission 1GHz~26.5GHz Plot**
	

Channel 19

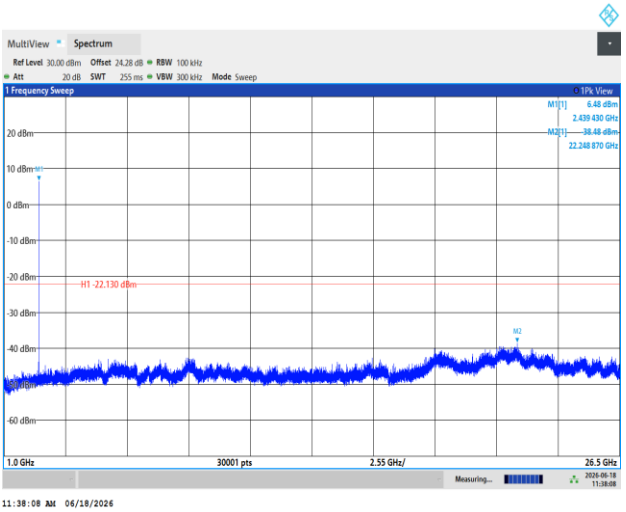
100kHz PSD reference Level Plot

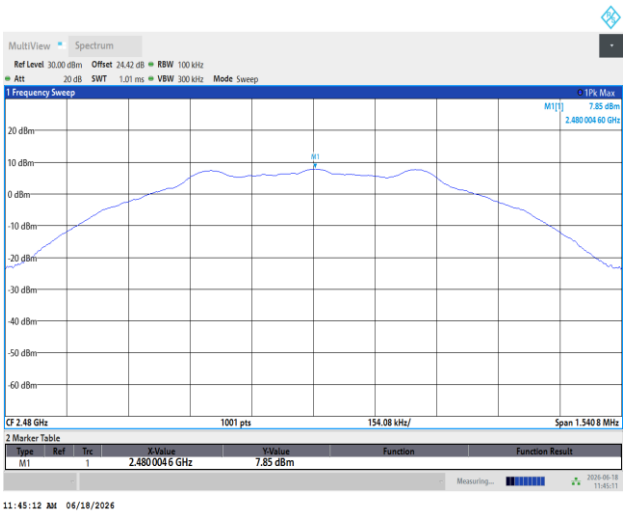
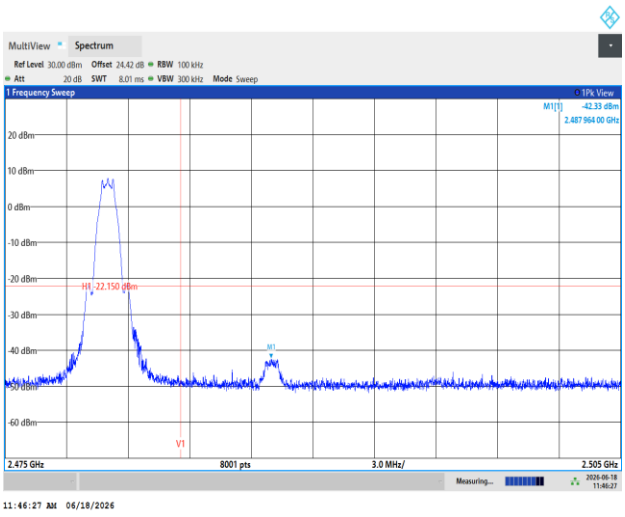
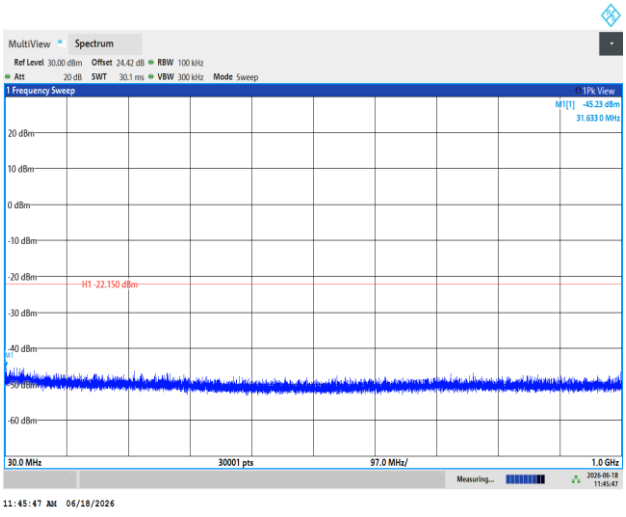
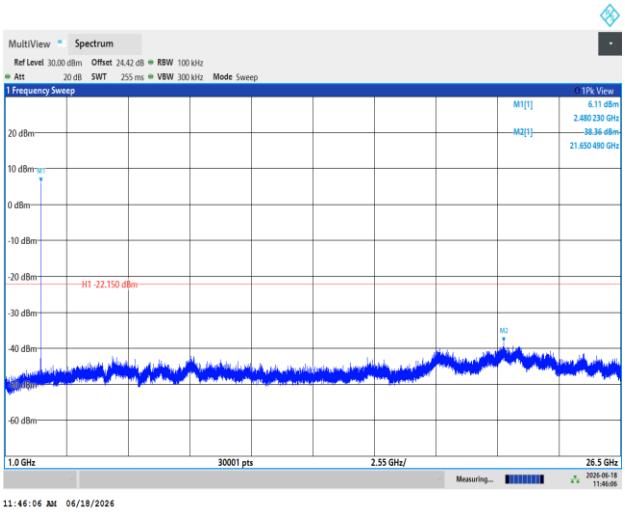


Spurious Emission 30MHz~1GHz Plot



Spurious Emission 1GHz~26.5GHz Plot



Channel 39	
100kHz PSD reference Level Plot	**Plot on Channel 39**
	
Spurious Emission 30MHz~1GHz Plot	**Spurious Emission 1GHz~26.5GHz Plot**
	

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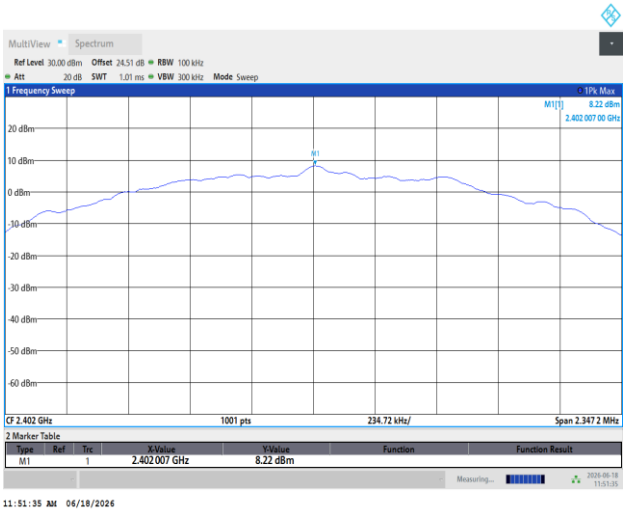
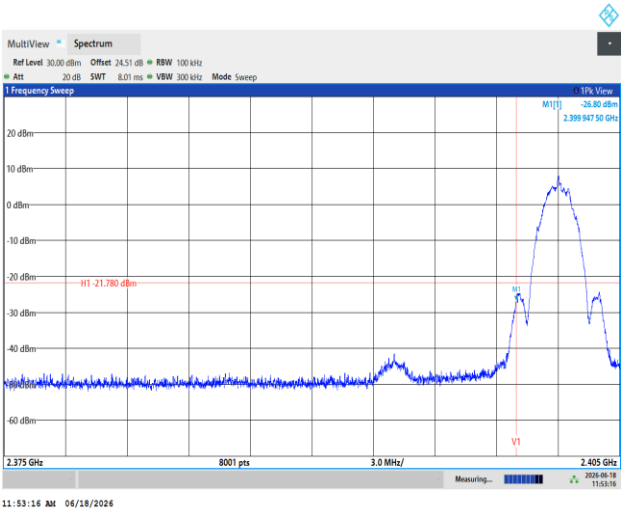
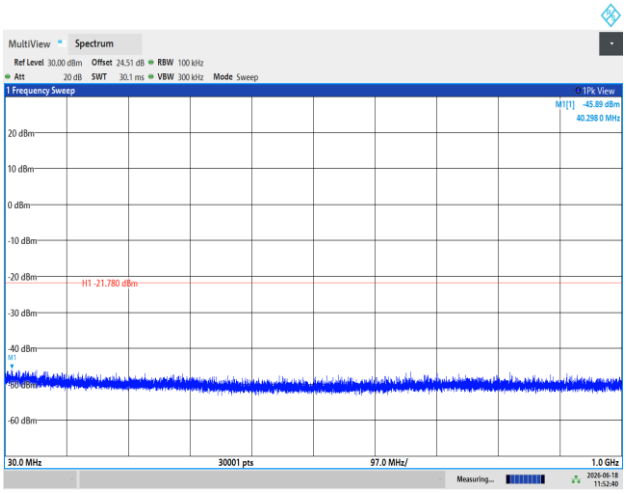
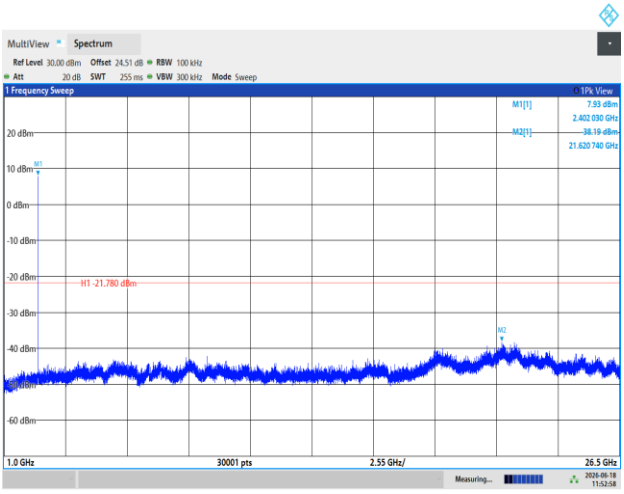
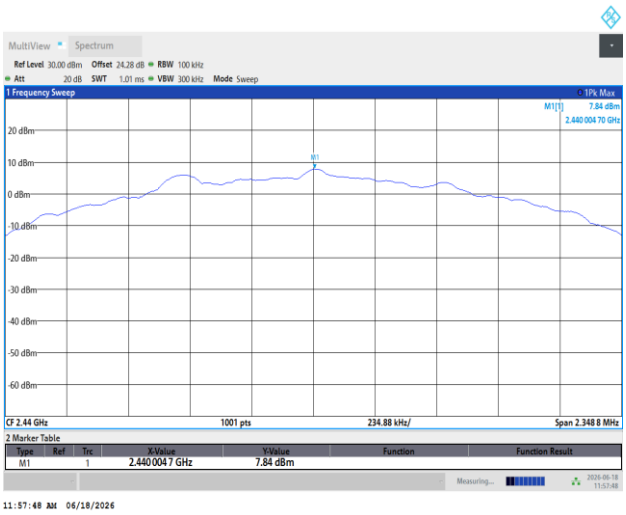
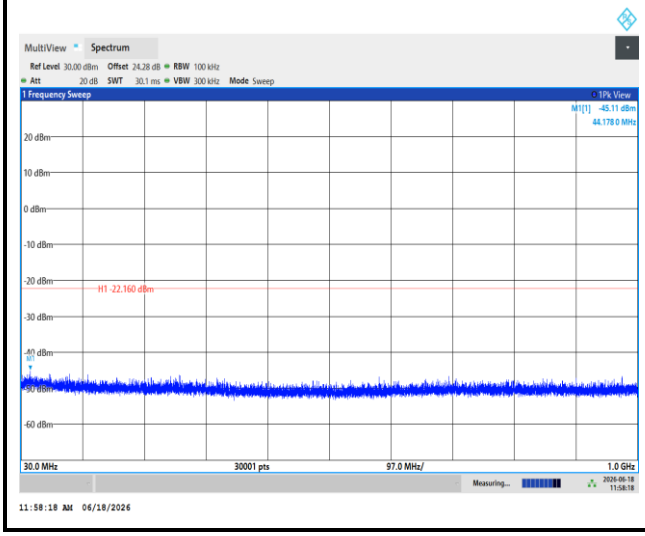
Channel 00	
100kHz PSD reference Level Plot	Plot on Channel 00
	
Spurious Emission 30MHz~1GHz Plot	Spurious Emission 1GHz~26.5GHz Plot
	

Channel 19

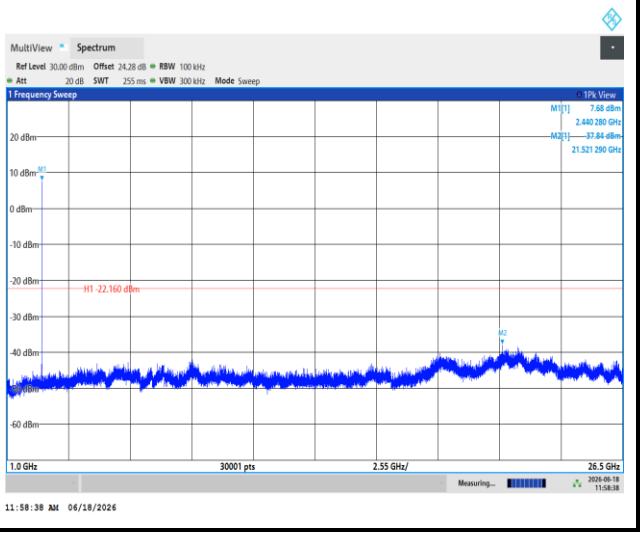
100kHz PSD reference Level Plot

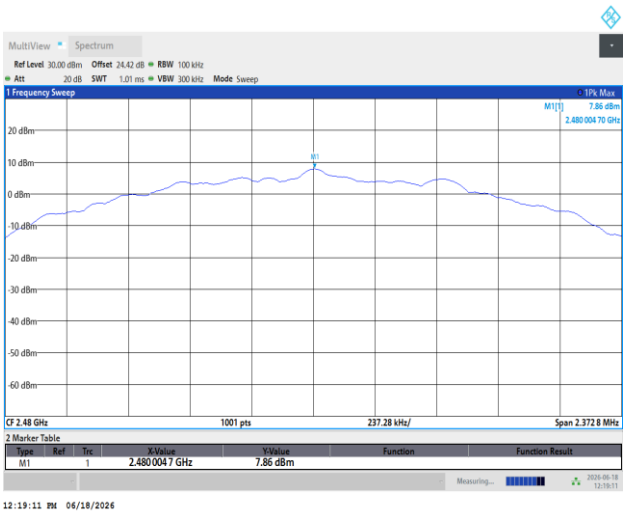
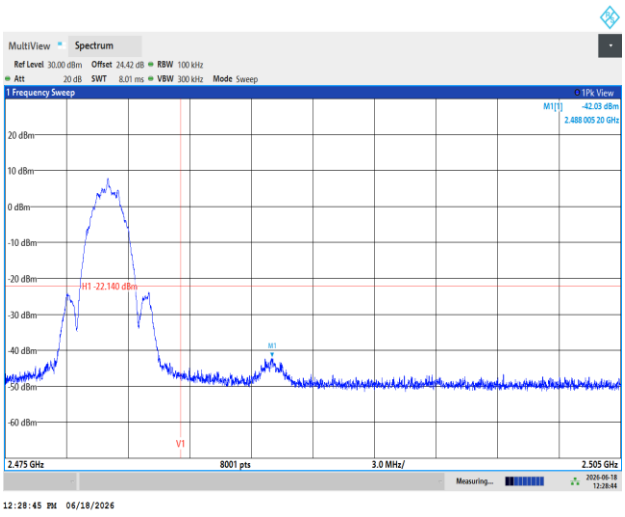
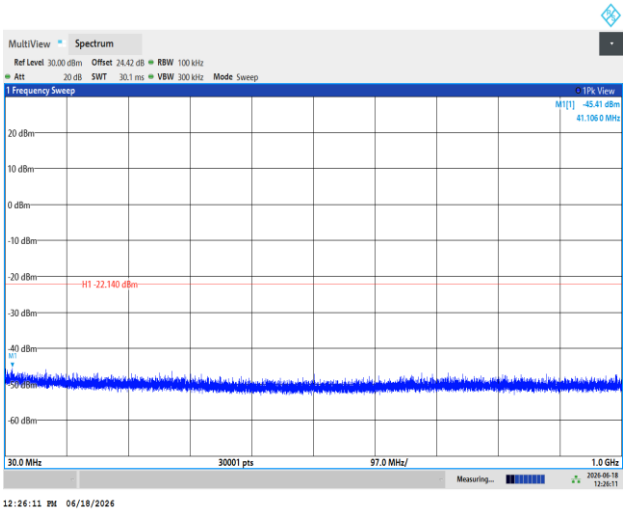
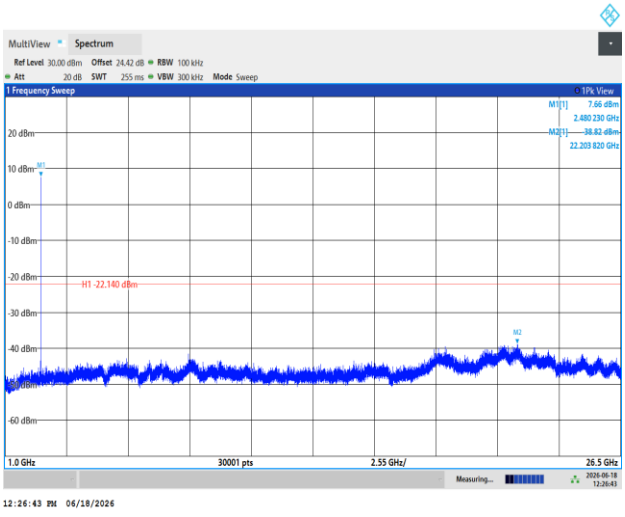


Spurious Emission 30MHz~1GHz Plot



Spurious Emission 1GHz~26.5GHz Plot



Channel 39	
100kHz PSD reference Level Plot	**Plot on Channel 39**
	
Spurious Emission 30MHz~1GHz Plot	**Spurious Emission 1GHz~26.5GHz Plot**
	

Appendix B. Radiated Spurious Emission Test Data

Test Engineer :	Daniel Lee, Bill Chang, Fu Chen and Troye Hsieh	**Temperature :**	19.1~21.9°C
		Relative Humidity :	50.1~66.9%

Note symbol

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

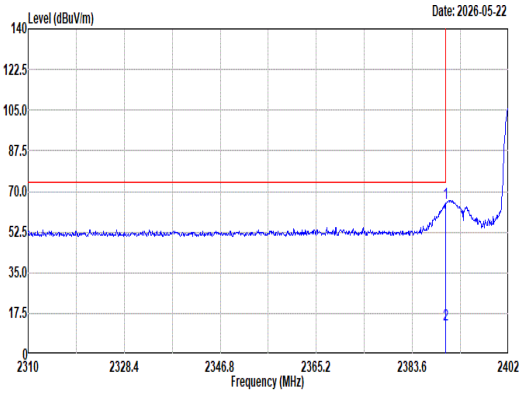
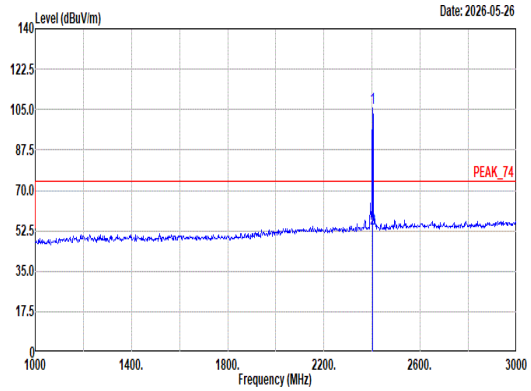
B1. Radiated Spurious Emission Test Modes

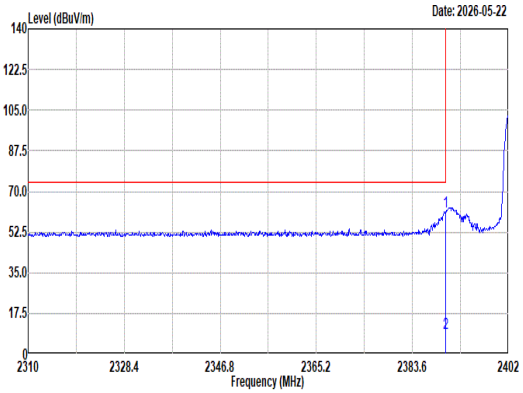
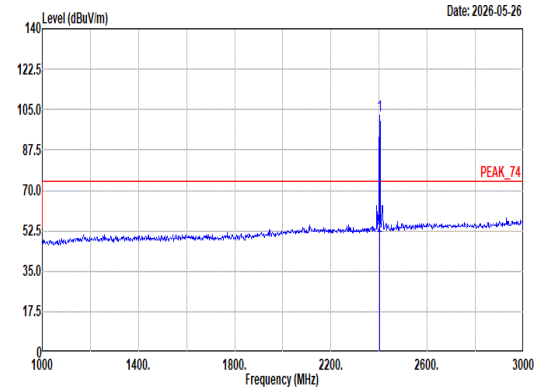
Mode	Band (MHz)	Antenna	Modulation	Channel	Frequency	Data Rate	RU	Remark
Mode 1	2400-2483.5	1	Bluetooth-LE GSFK	00	2402	1Mbps	-	-
Mode 2	2400-2483.5	1	Bluetooth-LE GSFK	19	2440	1Mbps	-	-
Mode 3	2400-2483.5	1	Bluetooth-LE GSFK	39	2480	1Mbps	-	-
Mode 4	2400-2483.5	1	Bluetooth-LE GSFK	00	2402	2Mbps	-	-
Mode 5	2400-2483.5	1	Bluetooth-LE GSFK	19	2440	2Mbps	-	-
Mode 6	2400-2483.5	1	Bluetooth-LE GSFK	39	2480	2Mbps	-	-
Mode 7	2400-2483.5	1	Bluetooth-LE GSFK	00	2402	1Mbps	-	LF
Mode 8	2400-2483.5	1	Bluetooth-LE GSFK	00	2402	1Mbps	-	SHF

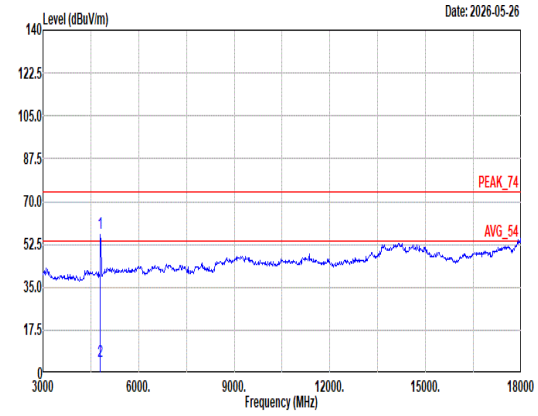
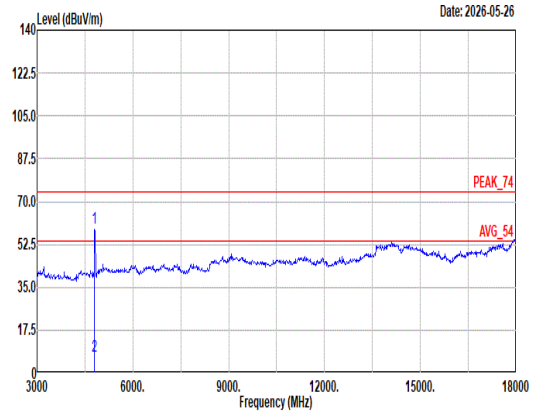
B2. Summary of each worse mode

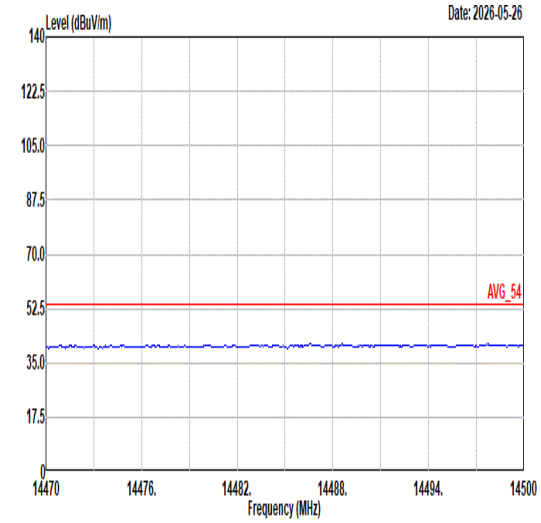
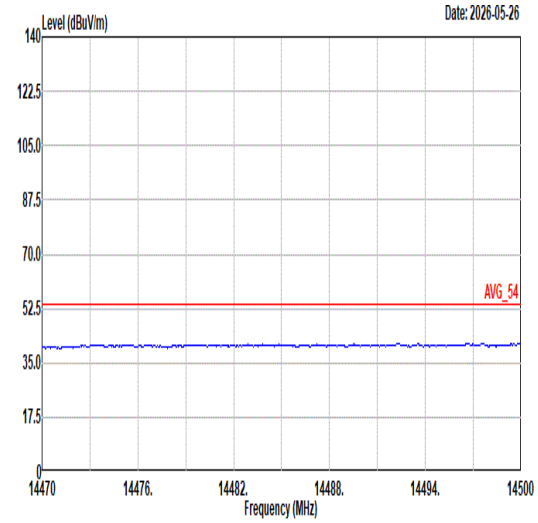
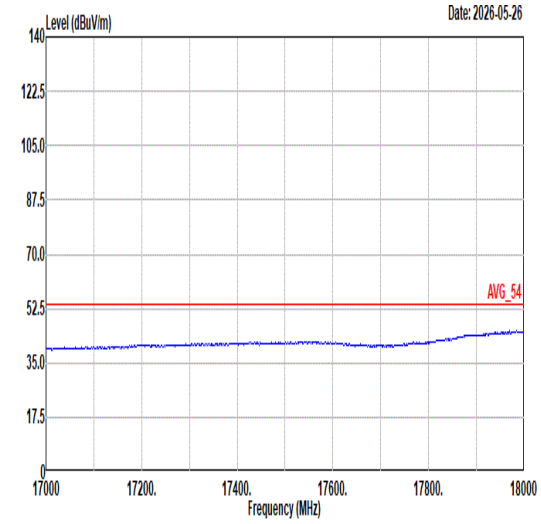
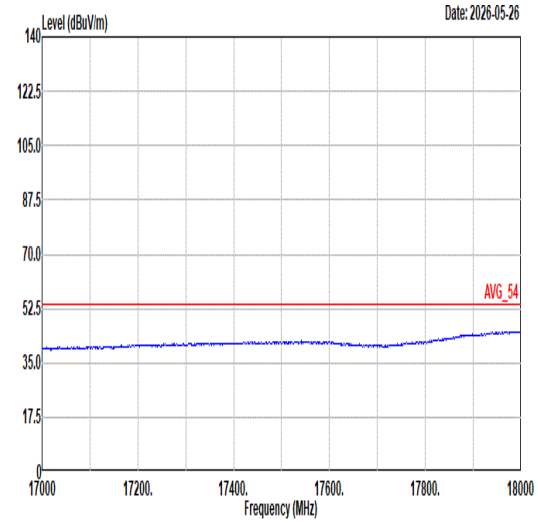
Mode	Modulation	Ch.	Freq. (MHz)	Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Pol.	Peak Avg.	Result	RU	Remark
1	Bluetooth-LE GSFK	00	2389.95	64.89	74.00	-9.11	H	Peak	Pass	-	Band Edge
	Bluetooth-LE GSFK	00	4804.00	59.39	74.00	-14.61	V	Peak	Pass	-	Harmonic
2	Bluetooth-LE GSFK	19	2376.04	54.97	74.00	-19.03	H	Peak	Pass	-	Band Edge
	Bluetooth-LE GSFK	19	4880.00	59.75	74.00	-14.25	V	Peak	Pass	-	Harmonic
3	Bluetooth-LE GSFK	39	2483.62	62.13	74.00	-11.87	H	Peak	Pass	-	Band Edge
	Bluetooth-LE GSFK	39	4960.00	59.97	74.00	-14.03	V	Peak	Pass	-	Harmonic
4	Bluetooth-LE GSFK	00	2389.95	54.59	74.00	-19.41	V	Peak	Pass	-	Band Edge
	Bluetooth-LE GSFK	00	4804.00	59.26	74.00	-14.74	H	Peak	Pass	-	Harmonic
5	Bluetooth-LE GSFK	19	2496.04	53.97	74.00	-20.03	V	Peak	Pass	-	Band Edge
	Bluetooth-LE GSFK	19	4880.00	59.38	74.00	-14.62	H	Peak	Pass	-	Harmonic
6	Bluetooth-LE GSFK	39	2483.60	59.37	74.00	-14.63	H	Peak	Pass	-	Band Edge

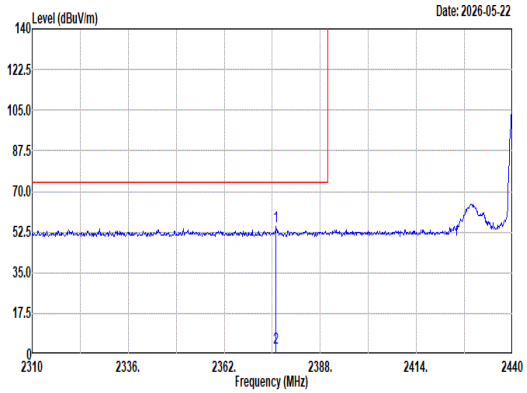
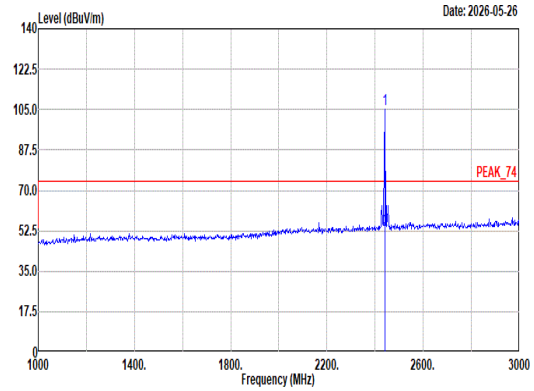
Mode	Modulation	Ch.	Freq. (MHz)	Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Pol.	Peak Avg.	Result	RU	Remark
6	Bluetooth-LE GSFK	39	4960.00	58.42	74.00	-15.58	H	Peak	Pass	-	Harmonic
7	LF	00	162.89	37.47	43.50	-6.03	H	QP	Pass	-	LF
8	SHF	00	18174.43	41.89	74.00	-32.11	H	Peak	Pass	-	SHF

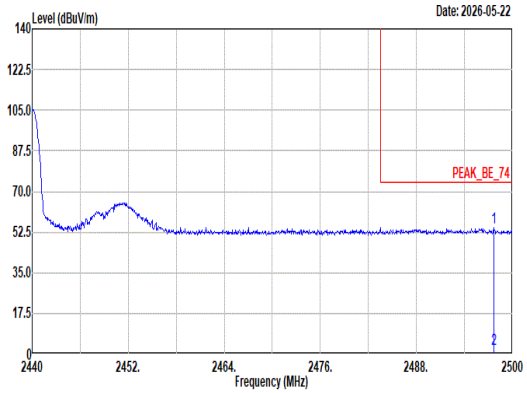
Mode	1	
	Band Edge	
	2400-2483.5_Bluetooth-LE GSFK_CH00_2402MHz	
ANT	1	
Pol.	Horizontal	Fundamental
Peak	 Site : 03CH11-HY Condition: PEAK_BE_74 3m 9120D_01620_250915 HORIZONTAL : RBW:1000.000kHz VBW:3000.000kHz SWT:Auto Limit Read Ant Cable Preamp Aux APos TPos Freq Level Line Margin Level Factor Loss Factor Factor Remark MHz dBuV/m dBuV/m dB dBuV dB/m dB dB dB cm deg 1 2389.95 64.89 74.00 -9.11 53.89 27.30 6.65 33.07 10.12 264 203 Peak 2 2389.95 12.49 54.00 -41.51 -- -- -- -- -- -- -- AVERAGE	 Site : 03CH11-HY Condition: PEAK_74 3m 9120D_01620_250915 HORIZONTAL : RBW:1000.000kHz VBW:3000.000kHz SWT:Auto Limit Read Ant Cable Preamp Aux APos TPos Freq Level Line Margin Level Factor Loss Factor Factor Remark MHz dBuV/m dBuV/m dB dBuV dB/m dB dB dB cm deg 1 2402.00 105.91 ------ ------ 94.87 27.32 6.66 33.06 10.12 264 203 Peak 2 2402.00 53.51 ------ ------ -- -- -- -- -- -- -- Average

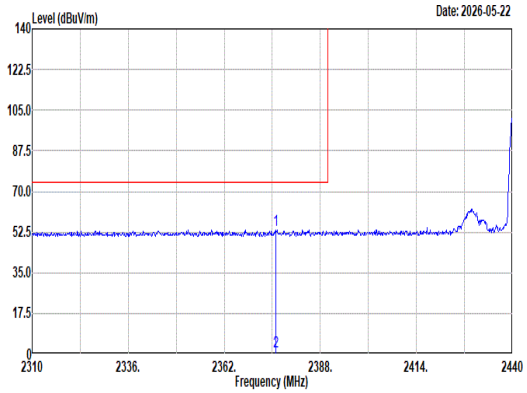
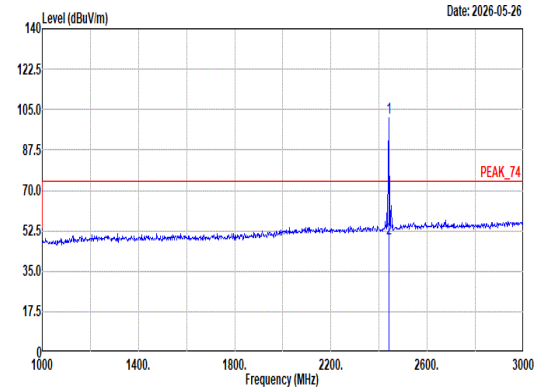
Mode	1	
	Band Edge	
	2400-2483.5_Bluetooth-LE GSFK_CH00_2402MHz	
ANT	1	
Pol.	Vertical	Fundamental
Peak	 Site : 03CH11-HY Condition: PEAK_BE_74 3m 9120D_01620_250915 VERTICAL : RBW:1000.000kHz VBW:3000.000kHz SWT:Auto Freq Level Limit Line Margin Read Level Ant Factor Cable Loss Preamp Factor Aux Factor APos TPos Remark MHz dBuV/m dBuV/m dB dBuV dB/m dB dB dB cm deg 1 2389.95 61.39 74.00 -12.61 50.39 27.30 6.65 33.07 10.12 326 157 Peak 2 2389.95 8.99 54.00 -45.01 -- -- -- -- -- -- -- AVERAGE	 Site : 03CH11-HY Condition: PEAK_74 3m 9120D_01620_250915 VERTICAL : RBW:1000.000kHz VBW:3000.000kHz SWT:Auto 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 2402.00 102.62 ------ ------ 91.58 27.32 6.66 33.06 10.12 326 157 Peak 2 2402.00 50.22 ------ ------ -- -- -- -- -- -- -- Average

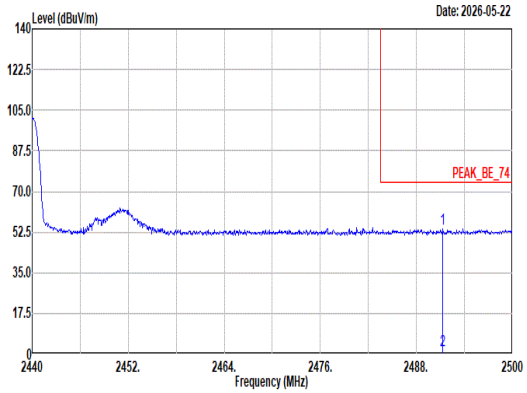
Mode	1	
	Harmonic	
	2400-2483.5_Bluetooth-LE GSFK_CH00_2402MHz	
ANT	1	
Pol.	Horizontal	Vertical
Peak Avg	 Site : 03CH11-HY Condition: PEAK_74 3m 9120D_01620_250915 HORIZONTAL Freq Level Limit Line Margin Read Level Ant Factor Cable Loss Preamp Factor Aux Factor APos TPos Remark MHz dBuV/m dBuV/m dB dBuV dB/m dB dB dB cm deg 1 4804.00 57.20 74.00 -16.80 80.81 32.32 10.29 67.17 0.95 353 226 Peak 2 4804.00 4.80 54.00 -49.20 -- -- -- -- -- -- -- Average	 Site : 03CH11-HY Condition: PEAK_74 3m 9120D_01620_250915 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 4804.00 59.39 74.00 -14.61 83.00 32.32 10.29 67.17 0.95 358 11 Peak 2 4804.00 6.99 54.00 -47.01 -- -- -- -- -- -- -- Average

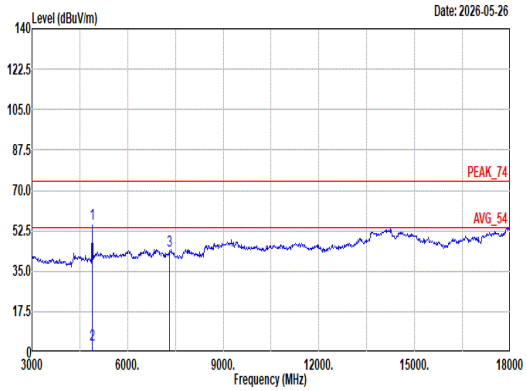
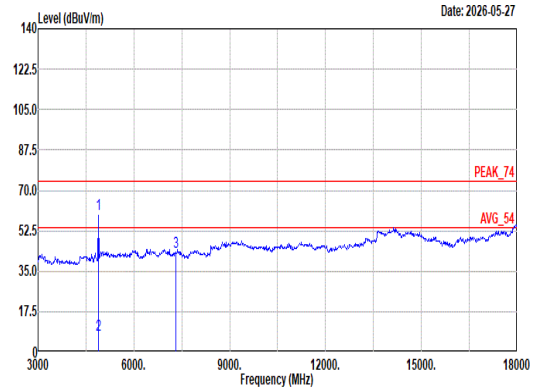
Mode	1	
	Harmonic	
	2400-2483.5_Bluetooth-LE GSFK_CH00_2402MHz	
ANT	1	
Pol.	Horizontal	Vertical
14.47G ~14.5G Avg	 Site : 03CH11-HY Condition: AVG_54 3m 9120D_01620_250915 HORIZONTAL	 Site : 03CH11-HY Condition: AVG_54 3m 9120D_01620_250915 VERTICAL
17G ~18G Avg	 Site : 03CH11-HY Condition: AVG_54 3m 9120D_01620_250915 HORIZONTAL	 Site : 03CH11-HY Condition: AVG_54 3m 9120D_01620_250915 VERTICAL

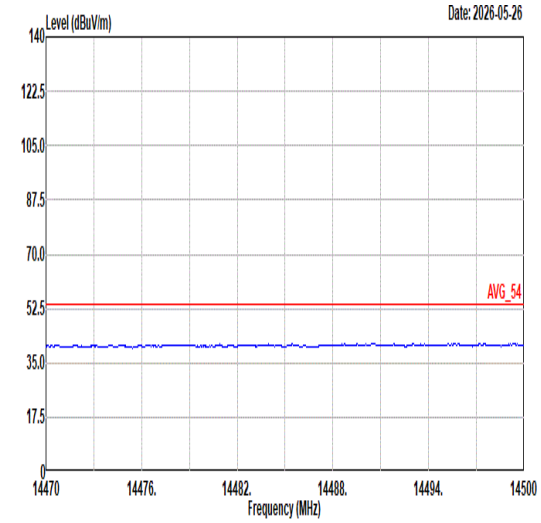
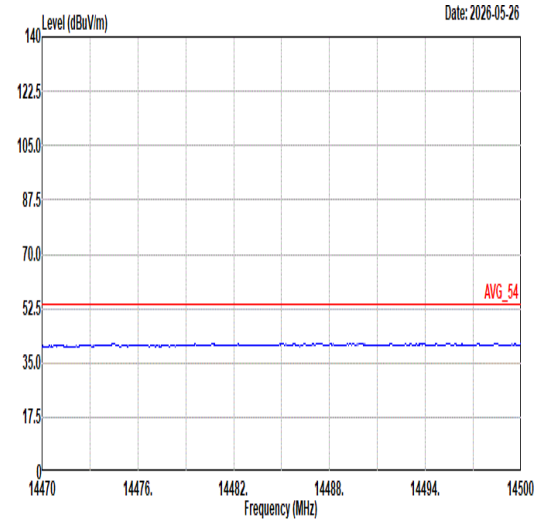
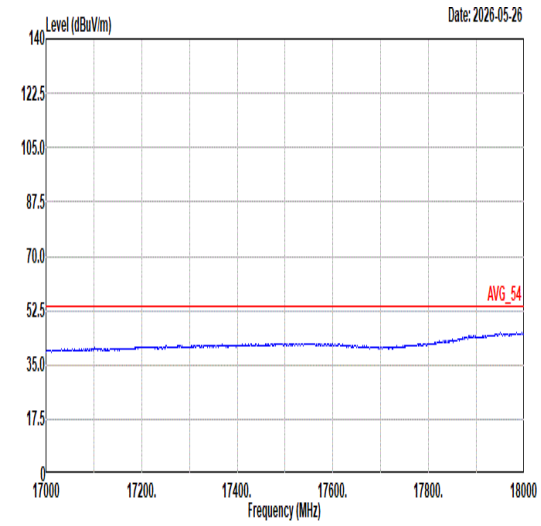
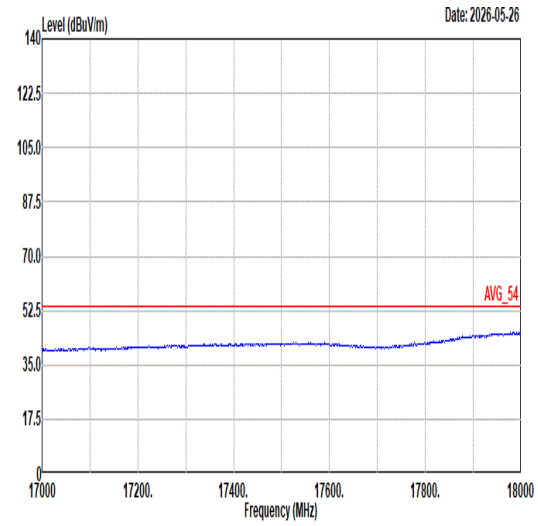
Mode	2	
	Band Edge - L	
	2400-2483.5_Bluetooth-LE GSFK_CH19_2440MHz	
ANT	1	
Pol.	Horizontal	Fundamental
Peak	 Site : 03CH11-HY Condition: PEAK_BE_74 3m 9120D_01620_250915 HORIZONTAL : RBW:1000.000kHz VBW:3000.000kHz SWT:Auto Freq Level Limit Line Margin Read Level Ant Factor Cable Loss Preamp Factor Aux Factor APos TPos Remark MHz dBuV/m dBuV/m dB dBuV dB/m dB dB dB cm deg 1 2376.04 54.97 74.00 -19.03 44.10 27.20 6.63 33.08 10.12 291 199 Peak 2 2376.04 2.57 54.00 -51.43 -- -- -- -- -- -- -- AVERAGE	 Site : 03CH11-HY Condition: PEAK_74 3m 9120D_01620_250915 HORIZONTAL : RBW:1000.000kHz VBW:3000.000kHz SWT:Auto 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 2440.00 105.12 ------ ------ 93.82 27.50 6.72 33.04 10.12 291 199 Peak 2 2440.00 52.72 ------ ------ -- -- -- -- -- -- -- Average

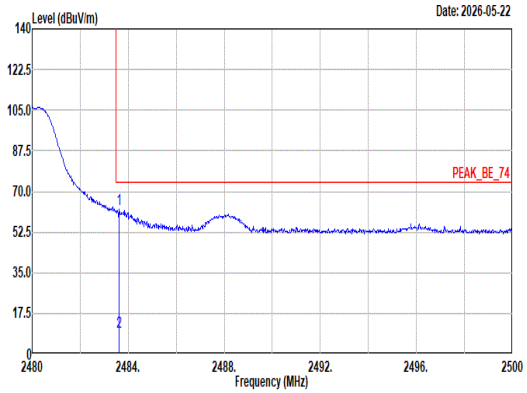
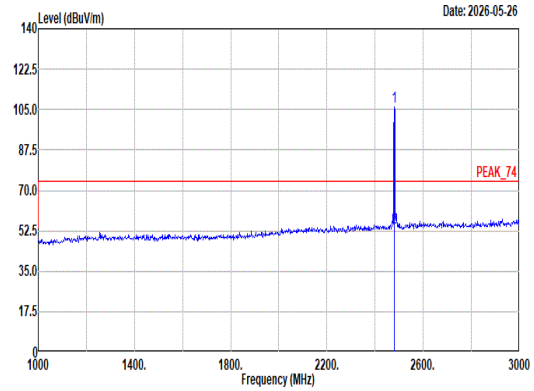
Mode	2	
	Band Edge - R	
	2400-2483.5_Bluetooth-LE GSFK_CH19_2440MHz	
ANT	1	
Pol.	Horizontal	Fundamental
Peak	 Site : 03CH11-HY Condition: PEAK_BE_74 3m 9120D_01620_250915 HORIZONTAL : RBW:1000.000kHz VBW:3000.000kHz SWT:Auto Limit Read Ant Cable Preamp Aux APos TPos Freq Level Line Margin Level Factor Loss Factor Factor Remark MHz dBuV/m dBuV/m dB dBuV dB/m dB dB dB cm deg 1 2497.72 54.27 74.00 -19.73 42.54 27.80 6.80 32.99 10.12 291 199 Peak 2 2497.72 1.87 54.00 -52.13 -- -- -- -- -- -- -- AVERAGE	Blank

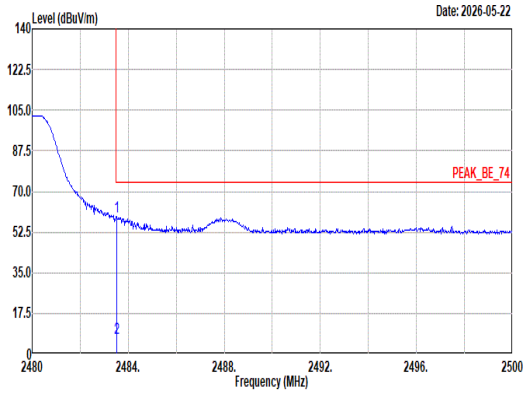
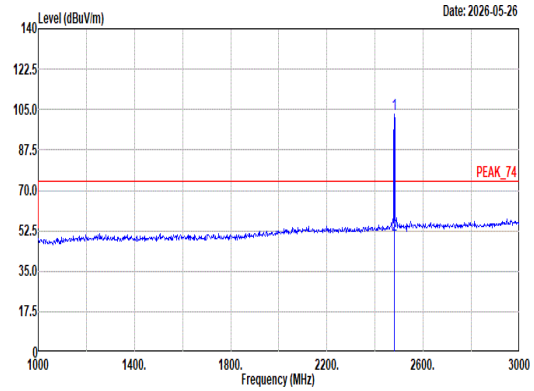
Mode	2	
	Band Edge - L	
	2400-2483.5_Bluetooth-LE GSFK_CH19_2440MHz	
ANT	1	
Pol.	Vertical	Fundamental
Peak	 Site : 03CH11-HY Condition: PEAK_BE_74 3m 9120D_01620_250915 VERTICAL : RBW:1000.000kHz VBW:3000.000kHz SWT:Auto Freq Level Limit Line Margin Read Level Ant Factor Cable Loss Preamp Factor Aux Factor APos TPos Remark MHz dBuV/m dBuV/m dB dBuV dB/m dB dB dB cm deg 1 2376.04 53.58 74.00 -20.42 42.71 27.20 6.63 33.08 10.12 117 337 Peak 2 2376.04 1.18 54.00 -52.82 -- -- -- -- -- -- -- AVERAGE	 Site : 03CH11-HY Condition: PEAK_74 3m 9120D_01620_250915 VERTICAL : RBW:1000.000kHz VBW:3000.000kHz SWT:Auto 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 2440.00 101.59 ------ ------ 90.29 27.50 6.72 33.04 10.12 117 337 Peak 2 2440.00 49.19 ------ ------ -- -- -- -- -- -- -- Average

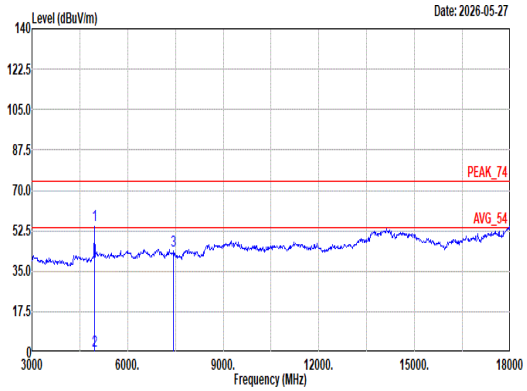
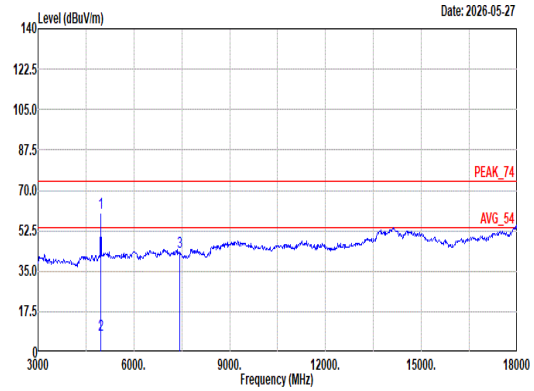
Mode	2	
	Band Edge - R	
	2400-2483.5_Bluetooth-LE GSFK_CH19_2440MHz	
ANT	1	
Pol.	Vertical	Fundamental
Peak	 Site : 03CH11-HY Condition: PEAK_BE_74 3m 9120D_01620_250915 VERTICAL : RBW:1000.000kHz VBW:3000.000kHz SWT:Auto Limit Read Ant Cable Preamp Aux APos TPos Freq Level Line Margin Level Factor Loss Factor Factor Remark MHz dBuV/m dBuV/m dB dBuV dB/m dB dB dB cm deg 1 2491.30 53.95 74.00 -20.05 42.24 27.80 6.79 33.00 10.12 117 337 Peak 2 2491.30 1.55 54.00 -52.45 -- -- -- -- -- -- -- AVERAGE	Blank

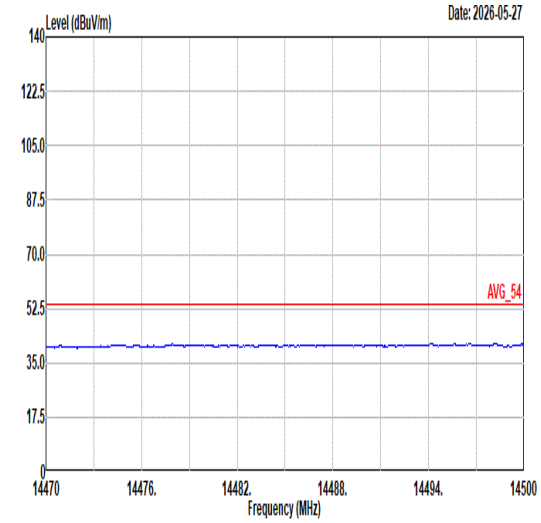
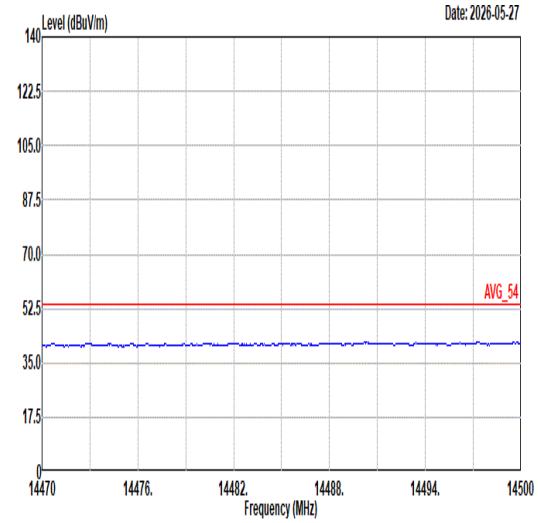
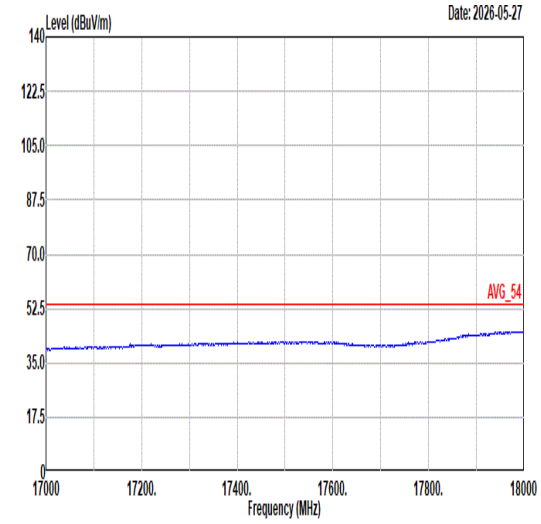
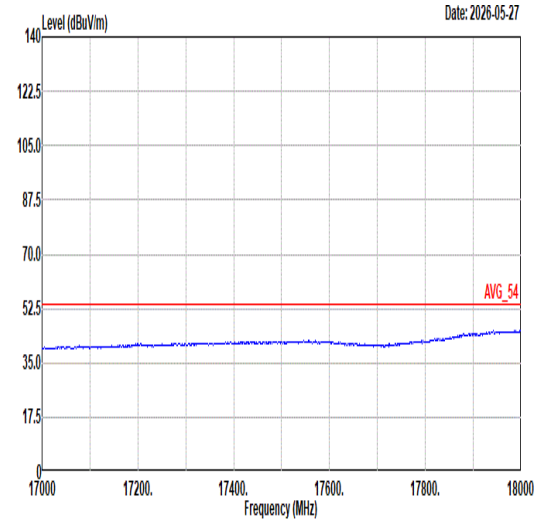
Mode	2	
	Harmonic	
	2400-2483.5_Bluetooth-LE GSFK_CH19_2440MHz	
ANT	1	
Pol.	Horizontal	Vertical
Peak Avg	 Site : 03CH11-HY Condition: PEAK_74 3m 9120D_01620_250915 HORIZONTAL Freq Level Limit Line Margin Read Level Ant Factor Cable Loss Preamp Factor Aux Factor APos TPos Remark MHz dBuV/m dBuV/m dB dBuV dB/m dB dB dB cm deg 1 4880.00 55.72 74.00 -18.28 78.59 32.62 10.67 67.11 0.95 400 235 Peak 2 4880.00 3.32 54.00 -50.68 -- -- -- -- -- -- -- Average 3 7320.00 43.68 74.00 -30.32 58.99 36.82 13.78 66.10 0.19 -- -- Peak 4 7320.00 -8.72 54.00 -62.72 -- -- -- -- -- -- -- Average	 Site : 03CH11-HY Condition: PEAK_74 3m 9120D_01620_250915 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 4880.00 59.75 74.00 -14.25 82.62 32.62 10.67 67.11 0.95 198 58 Peak 2 4880.00 7.35 54.00 -46.65 -- -- -- -- -- -- -- Average 3 7320.00 43.42 74.00 -30.58 58.73 36.82 13.78 66.10 0.19 -- -- Peak 4 7320.00 -8.98 54.00 -62.98 -- -- -- -- -- -- -- Average

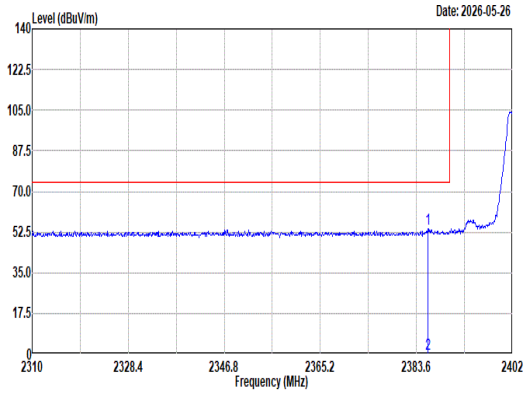
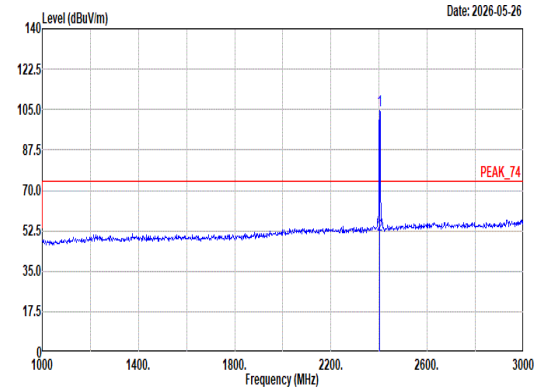
Mode	2	
	Harmonic	
	2400-2483.5_Bluetooth-LE GSFK_CH19_2440MHz	
ANT	1	
Pol.	Horizontal	Vertical
14.47G ~14.5G Avg	 Site : 03CH11-HY Condition: AVG_54 3m 9120D_01620_250915 HORIZONTAL	 Site : 03CH11-HY Condition: AVG_54 3m 9120D_01620_250915 VERTICAL
17G ~18G Avg	 Site : 03CH11-HY Condition: AVG_54 3m 9120D_01620_250915 HORIZONTAL	 Site : 03CH11-HY Condition: AVG_54 3m 9120D_01620_250915 VERTICAL

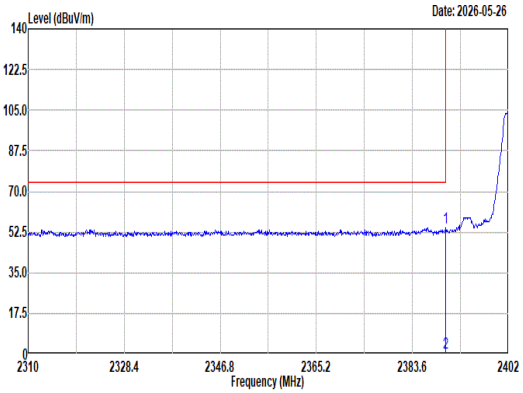
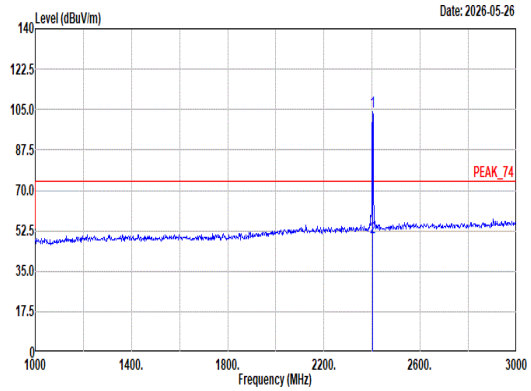
Mode	3	
	Band Edge	
	2400-2483.5_Bluetooth-LE GSFK_CH39_2480MHz	
ANT	1	
Pol.	Horizontal	Fundamental
Peak	 Site : 03CH11-HY Condition: PEAK_BE_74 3m 9120D_01620_250915 HORIZONTAL : RBW:1000.000kHz VBW:3000.000kHz SWT:Auto Freq Level Limit Line Margin Read Level Ant Factor Cable Loss Preamp Factor Aux Factor APos TPos Remark MHz dBuV/m dBuV/m dB dBuV dB/m dB dB dB cm deg 1 2483.62 62.13 74.00 -11.87 50.56 27.67 6.78 33.00 10.12 283 203 Peak 2 2483.62 9.73 54.00 -44.27 -- -- -- -- -- -- -- AVERAGE	 Site : 03CH11-HY Condition: PEAK_74 3m 9120D_01620_250915 HORIZONTAL : RBW:1000.000kHz VBW:3000.000kHz SWT:Auto 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 2480.00 106.22 ------ ------ 94.73 27.60 6.78 33.01 10.12 283 203 Peak 2 2480.00 53.82 ------ ------ -- -- -- -- -- -- -- Average

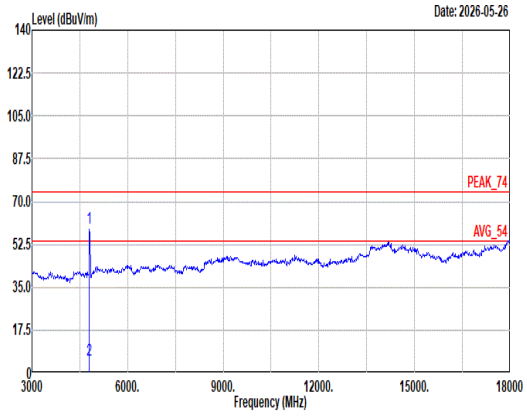
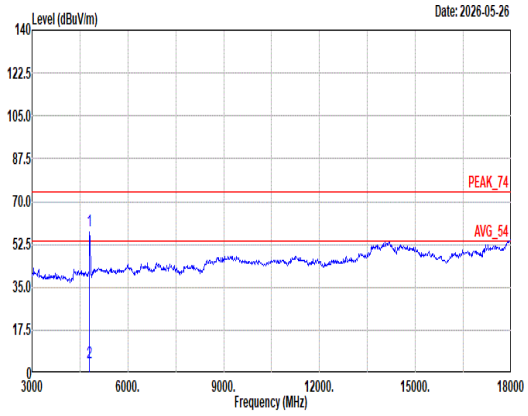
Mode	3	
	Band Edge	
	2400-2483.5_Bluetooth-LE GSFK_CH39_2480MHz	
ANT	1	
Pol.	Vertical	Fundamental
Peak	 Site : 03CH11-HY Condition: PEAK_BE_74 3m 9120D_01620_250915 VERTICAL : RBW:1000.000kHz VBW:3000.000kHz SWT:Auto Freq Level Limit Line Margin Read Level Ant Factor Cable Loss Preamp Factor Aux Factor APos TPos Remark MHz dBuV/m dBuV/m dB dBuV dB/m dB dB dB cm deg 1 2483.52 59.34 74.00 -14.66 47.77 27.67 6.78 33.00 10.12 105 96 Peak 2 2483.52 6.94 54.00 -47.06 -- -- -- -- -- -- -- AVERAGE	 Site : 03CH11-HY Condition: PEAK_74 3m 9120D_01620_250915 VERTICAL : RBW:1000.000kHz VBW:3000.000kHz SWT:Auto 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 2480.00 102.91 ------ ------ 91.42 27.60 6.78 33.01 10.12 105 96 Peak 2 2480.00 50.51 ------ ------ -- -- -- -- -- -- -- Average

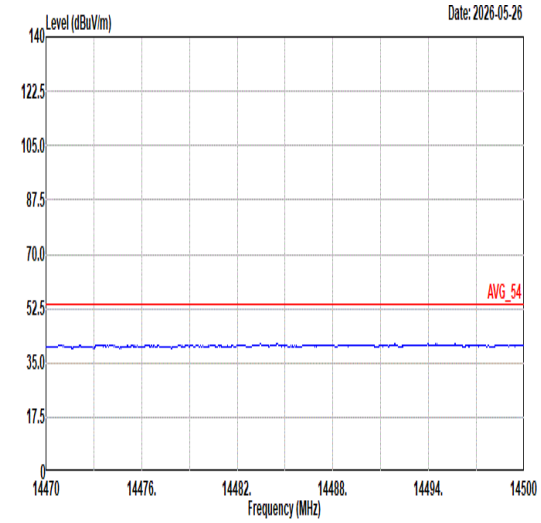
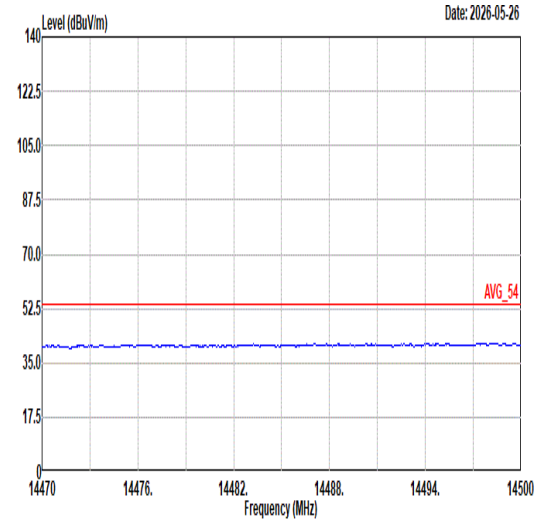
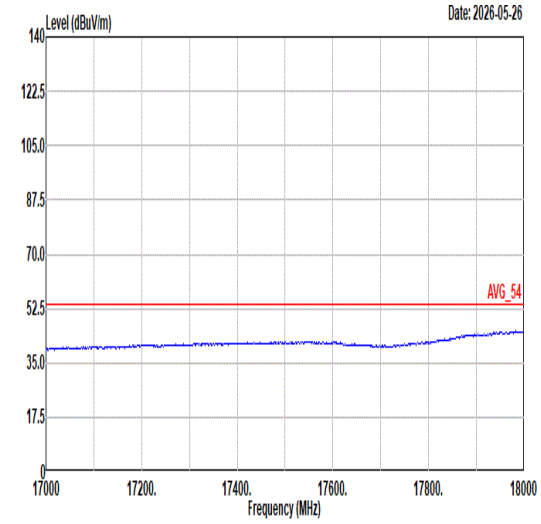
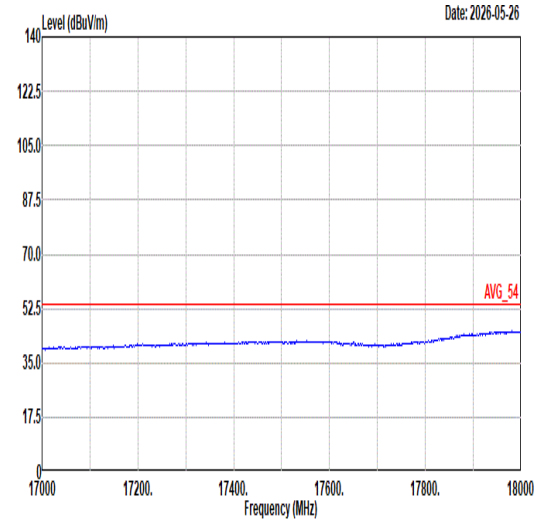
Mode	3	
	Harmonic	
	2400-2483.5_Bluetooth-LE GSFK_CH39_2480MHz	
ANT	1	
Pol.	Horizontal	Vertical
Peak Avg	 Site : 03CH11-HY Condition: PEAK_74 3m 9120D_01620_250915 HORIZONTAL Freq Level Limit Line Margin Read Level Ant Factor Cable Loss Preamp Factor Aux Factor APos TPos Remark MHz dBuV/m dBuV/m dB dBuV dB/m dB dB dB cm deg 1 4960.00 54.88 74.00 -19.12 76.97 32.94 11.06 67.05 0.96 370 218 Peak 2 4960.00 0.68 54.00 -53.32 -- -- -- -- -- -- -- Average 3 7440.00 43.80 74.00 -30.20 59.64 36.30 13.87 66.19 0.18 -- -- Peak 4 7440.00 -8.60 54.00 -62.60 -- -- -- -- -- -- -- Average	 Site : 03CH11-HY Condition: PEAK_74 3m 9120D_01620_250915 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 59.97 74.00 -14.03 82.06 32.94 11.06 67.05 0.96 193 22 Peak 2 4960.00 7.57 54.00 -46.43 -- -- -- -- -- -- -- Average 3 7440.00 43.08 74.00 -30.92 58.92 36.30 13.87 66.19 0.18 -- -- Peak 4 7440.00 -9.32 54.00 -63.32 -- -- -- -- -- -- -- Average

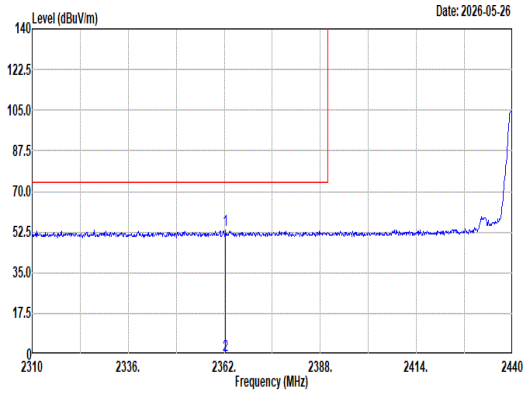
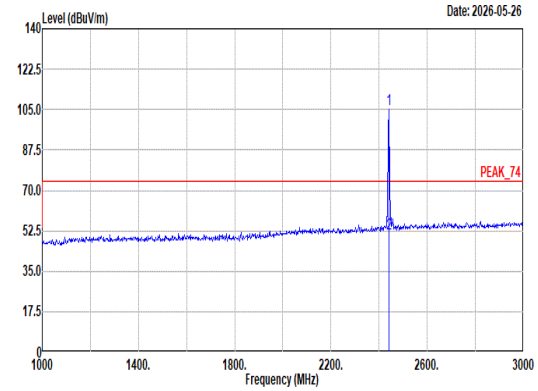
Mode	3	
	Harmonic	
	2400-2483.5_Bluetooth-LE GSFK_CH39_2480MHz	
ANT	1	
Pol.	Horizontal	Vertical
14.47G ~14.5G Avg	 Site : 03CH11-HY Condition: AVG_54 3m 9120D_01620_250915 HORIZONTAL	 Site : 03CH11-HY Condition: AVG_54 3m 9120D_01620_250915 VERTICAL
17G ~18G Avg	 Site : 03CH11-HY Condition: AVG_54 3m 9120D_01620_250915 HORIZONTAL	 Site : 03CH11-HY Condition: AVG_54 3m 9120D_01620_250915 VERTICAL

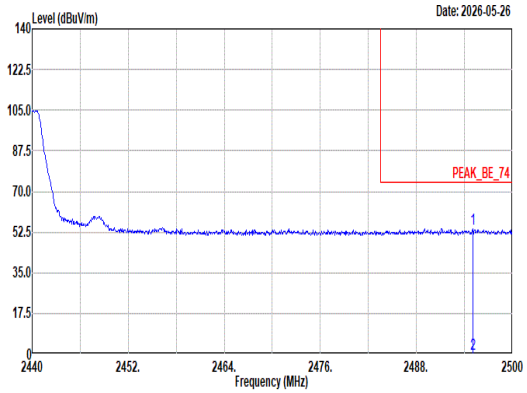
Mode	4	
	Band Edge	
	2400-2483.5_Bluetooth-LE GSFK_CH00_2402MHz	
ANT	1	
Pol.	Horizontal	Fundamental
Peak	 Site : 03CH11-HY Condition: PEAK_BE_74 3m 9120D_01620_250915 HORIZONTAL : RBW:1000.000kHz VBW:3000.000kHz SWT:Auto Freq Level Limit Line Margin Read Level Ant Factor Cable Loss Preamp Factor Aux Factor APos TPos Remark MHz dBuV/m dBuV/m dB dBuV dB/m dB dB dB cm deg 1 2385.81 53.92 74.00 -20.08 42.98 27.26 6.64 33.08 10.12 220 0 Peak 2 2385.81 -0.06 54.00 -54.06 -- -- -- -- -- -- -- AVERAGE	 Site : 03CH11-HY Condition: PEAK_74 3m 9120D_01620_250915 HORIZONTAL : RBW:1000.000kHz VBW:3000.000kHz SWT:Auto 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 2402.00 104.60 ------ ------ 93.56 27.32 6.66 33.06 10.12 220 0 Peak 2 2402.00 50.62 ------ ------ -- -- -- -- -- -- -- Average

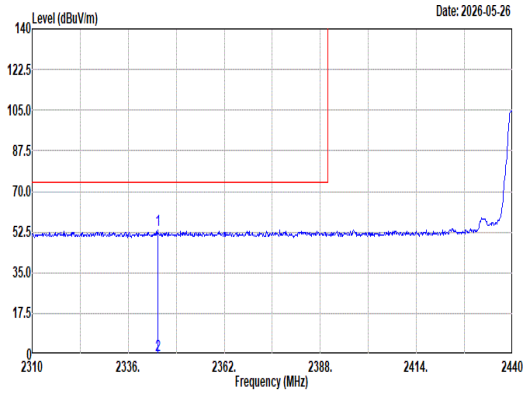
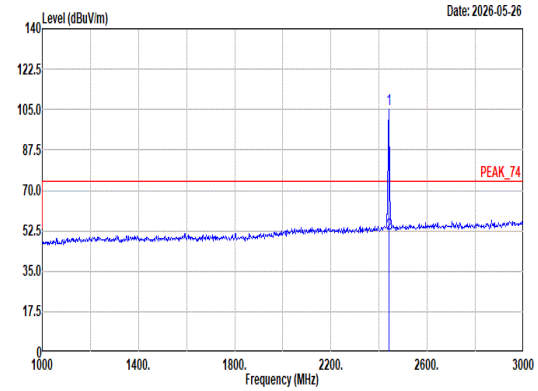
Mode	4	
	Band Edge	
	2400-2483.5_Bluetooth-LE GSFK_CH00_2402MHz	
ANT	1	
Pol.	Vertical	Fundamental
Peak	 Site : 03CH11-HY Condition: PEAK_BE_74 3m 9120D_01620_250915 VERTICAL : RBW:1000.000kHz VBW:3000.000kHz SWT:Auto Freq Level Limit Line Margin Read Level Ant Factor Cable Loss Preamp Factor Aux Factor APos TPos Remark MHz dBuV/m dBuV/m dB dBuV dB/m dB dB dB cm deg 1 2389.95 54.59 74.00 -19.41 43.59 27.30 6.65 33.07 10.12 100 198 Peak 2 2389.95 0.61 54.00 -53.39 -- -- -- -- -- -- -- AVERAGE	 Site : 03CH11-HY Condition: PEAK_74 3m 9120D_01620_250915 VERTICAL : RBW:1000.000kHz VBW:3000.000kHz SWT:Auto 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 2402.00 103.83 ------ ------ 92.79 27.32 6.66 33.06 10.12 100 198 Peak 2 2402.00 49.85 ------ ------ -- -- -- -- -- -- -- Average

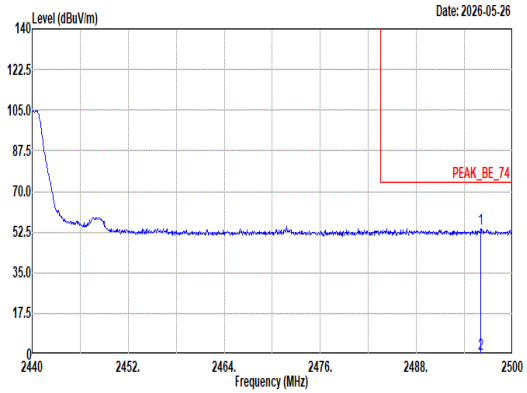
Mode	4	
	Harmonic	
	2400-2483.5_Bluetooth-LE GSFK_CH00_2402MHz	
ANT	1	
Pol.	Horizontal	Vertical
Peak Avg	 Site : 03CH11-HY Condition: PEAK_74 3m 9120D_01620_250915 HORIZONTAL Freq Level Limit Line Margin Read Level Ant Factor Cable Loss Preamp Factor Aux Factor APos TPos Remark MHz dBuV/m dBuV/m dB dBuV dB/m dB dB dB cm deg 1 4804.00 59.26 74.00 -14.74 82.87 32.32 10.29 67.17 0.95 233 328 Peak 2 4804.00 5.28 54.00 -48.72 -- -- -- -- -- -- -- Average	 Site : 03CH11-HY Condition: PEAK_74 3m 9120D_01620_250915 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 4804.00 58.23 74.00 -15.77 81.84 32.32 10.29 67.17 0.95 228 84 Peak 2 4804.00 4.25 54.00 -49.75 -- -- -- -- -- -- -- Average

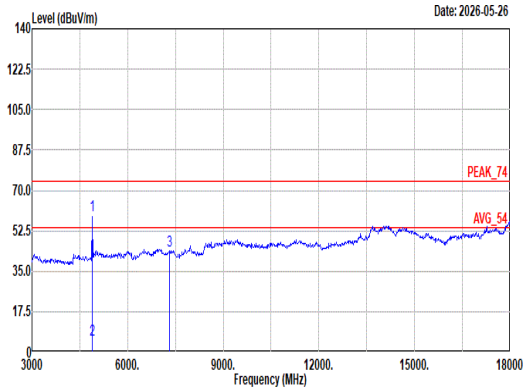
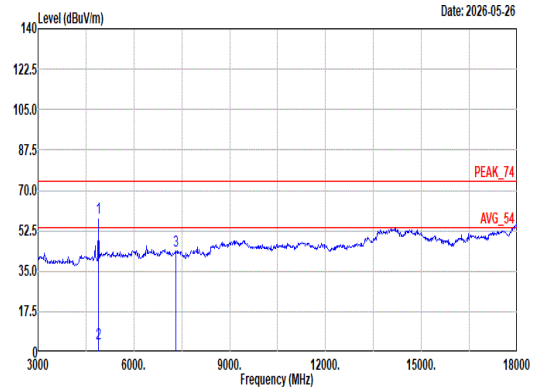
Mode	4	
	Harmonic	
	2400-2483.5_Bluetooth-LE GSFK_CH00_2402MHz	
ANT	1	
Pol.	Horizontal	Vertical
14.47G ~14.5G Avg	 Site : 03CH11-HY Condition: AVG_54 3m 9120D_01620_250915 HORIZONTAL	 Site : 03CH11-HY Condition: AVG_54 3m 9120D_01620_250915 VERTICAL
17G ~18G Avg	 Site : 03CH11-HY Condition: AVG_54 3m 9120D_01620_250915 HORIZONTAL	 Site : 03CH11-HY Condition: AVG_54 3m 9120D_01620_250915 VERTICAL

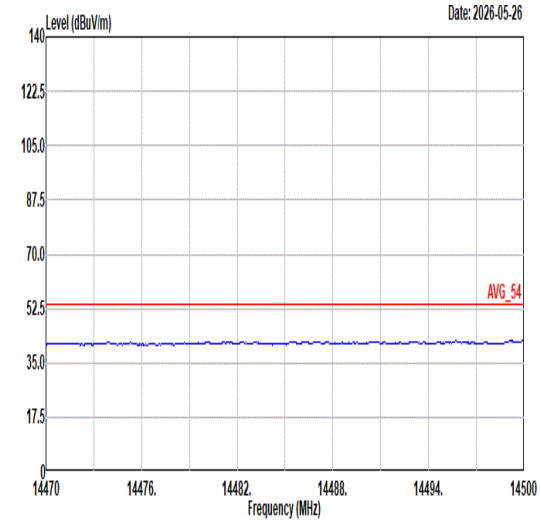
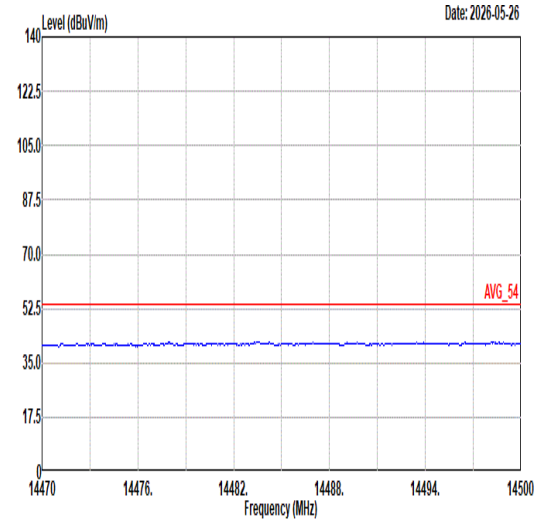
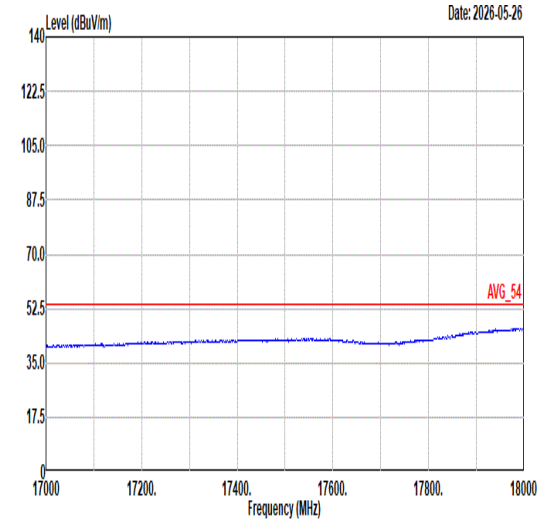
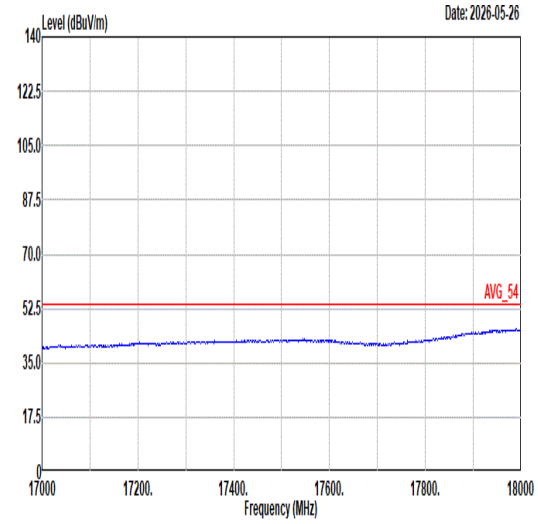
Mode	5	
	Band Edge - L	
	2400-2483.5_Bluetooth-LE GSFK_CH19_2440MHz	
ANT	1	
Pol.	Horizontal	Fundamental
Peak	 Site : 03CH11-HY Condition: PEAK_BE_74 3m 9120D_01620_250915 HORIZONTAL : RBW:1000.000kHz VBW:3000.000kHz SWT:Auto Freq Level Limit Line Margin Read Level Ant Factor Cable Loss Preamp Factor Aux Factor APos TPos Remark MHz dBuV/m dBuV/m dB dBuV dB/m dB dB dB cm deg 1 2362.39 53.23 74.00 -20.77 42.39 27.20 6.61 33.09 10.12 109 360 Peak 2 2362.39 -0.75 54.00 -54.75 -- -- -- -- -- -- -- AVERAGE	 Site : 03CH11-HY Condition: PEAK_74 3m 9120D_01620_250915 HORIZONTAL : RBW:1000.000kHz VBW:3000.000kHz SWT:Auto 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 2440.00 105.05 ------ ------ 93.75 27.50 6.72 33.04 10.12 109 360 Peak 2 2440.00 51.07 ------ ------ -- -- -- -- -- -- -- Average

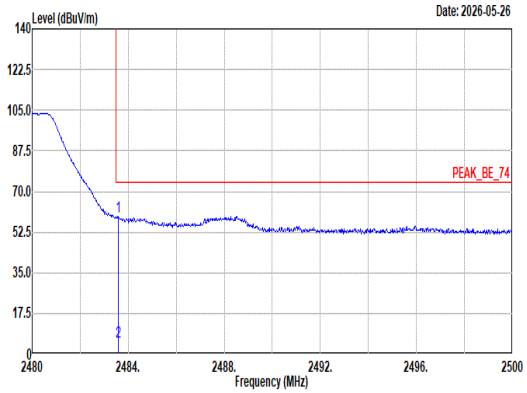
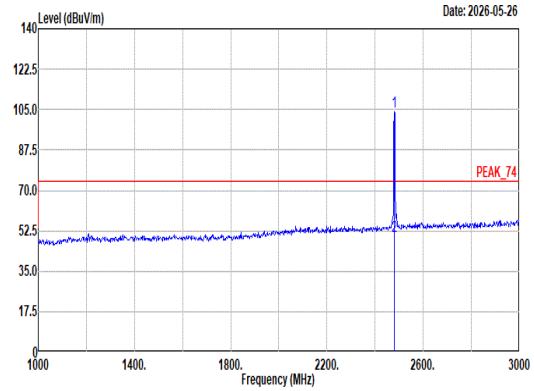
Mode	5	
	Band Edge - R	
	2400-2483.5_Bluetooth-LE GSFK_CH19_2440MHz	
ANT	1	
Pol.	Horizontal	Fundamental
Peak	 Site : 03CH11-HY Condition: PEAK_BE_74 3m 9120D_01620_250915 HORIZONTAL : RBW:1000.000kHz VBW:3000.000kHz SWT:Auto Limit Read Ant Cable Preamp Aux APos TPos Freq Level Line Margin Level Factor Loss Factor Factor Remark MHz dBuV/m dBuV/m dB dBuV dB/m dB dB dB cm deg 1 2495.02 53.77 74.00 -20.23 42.04 27.80 6.80 32.99 10.12 109 360 Peak 2 2495.02 -0.21 54.00 -54.21 -- -- -- -- -- -- -- AVERAGE	Blank

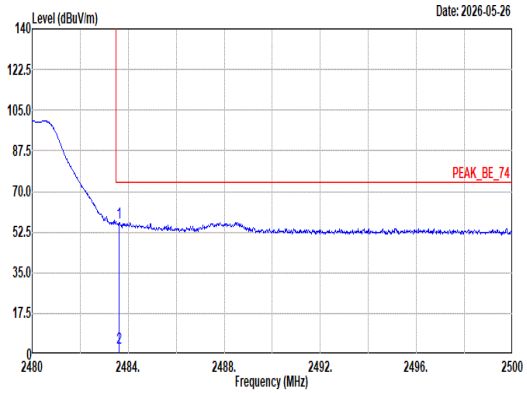
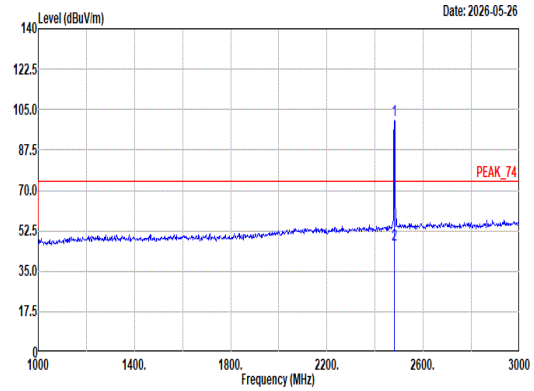
Mode	5	
	Band Edge - L	
	2400-2483.5_Bluetooth-LE GSFK_CH19_2440MHz	
ANT	1	
Pol.	Vertical	Fundamental
Peak	 Site : 03CH11-HY Condition: PEAK_BE_74 3m 9120D_01620_250915 VERTICAL : RBW:1000.000kHz VBW:3000.000kHz SWT:Auto Limit Read Ant Cable Preamp Aux APos TPos Freq Level Line Margin Level Factor Loss Factor Factor Remark MHz dBuV/m dBuV/m dB dBuV dB/m dB dB dB cm deg 1 2343.93 53.60 74.00 -20.40 42.81 27.20 6.58 33.11 10.12 147 235 Peak 2 2343.93 -0.38 54.00 -54.38 -- -- -- -- -- -- -- AVERAGE	 Site : 03CH11-HY Condition: PEAK_74 3m 9120D_01620_250915 VERTICAL : RBW:1000.000kHz VBW:3000.000kHz SWT:Auto Limit Read Ant Cable Preamp Aux APos TPos Freq Level Line Margin Level Factor Loss Factor Factor Remark MHz dBuV/m dBuV/m dB dBuV dB/m dB dB dB cm deg 1 2440.00 105.03 ------ ------ 93.73 27.50 6.72 33.04 10.12 147 235 Peak 2 2440.00 51.05 ------ ------ -- -- -- -- -- -- -- Average

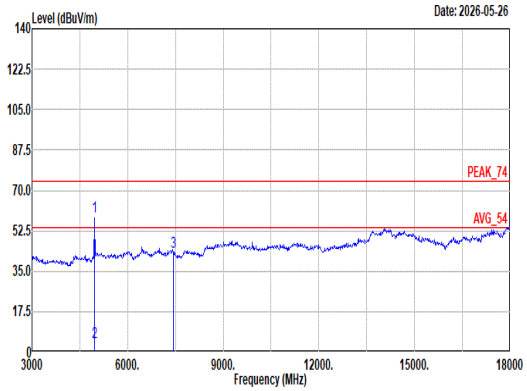
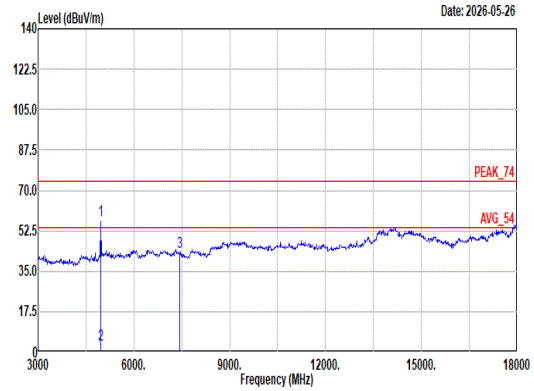
Mode	5	
	Band Edge - R	
	2400-2483.5_Bluetooth-LE GSFK_CH19_2440MHz	
ANT	1	
Pol.	Vertical	Fundamental
Peak	 Site : 03CH11-HY Condition: PEAK_BE_74 3m 9120D_01620_250915 VERTICAL : RBW:1000.000kHz VBW:3000.000kHz SWT:Auto Limit Read Ant Cable Preamp Aux APos TPos Freq Level Line Margin Level Factor Loss Factor Factor Remark MHz dBuV/m dBuV/m dB dBuV dB/m dB dB dB cm deg 1 2496.04 53.97 74.00 -20.03 42.24 27.80 6.80 32.99 10.12 147 235 Peak 2 2496.04 -0.01 54.00 -54.01 -- -- -- -- -- -- -- AVERAGE	Blank

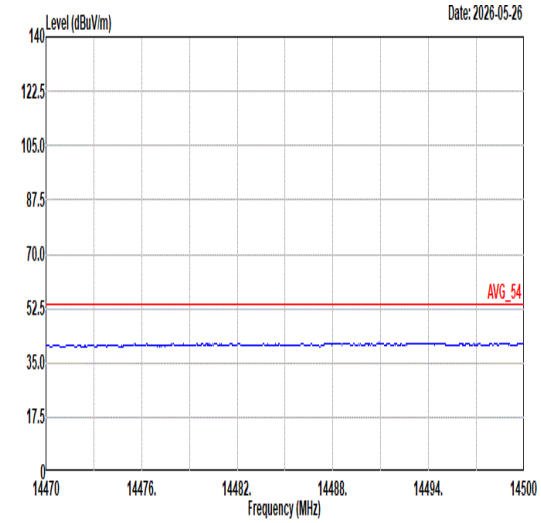
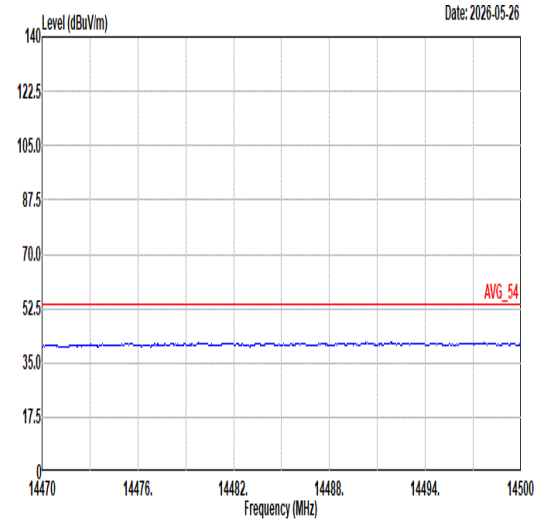
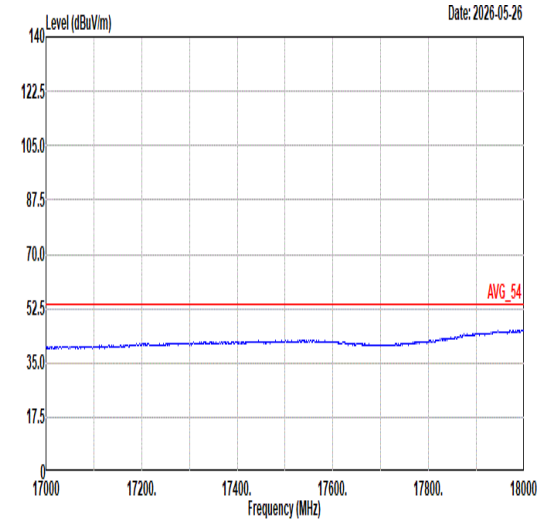
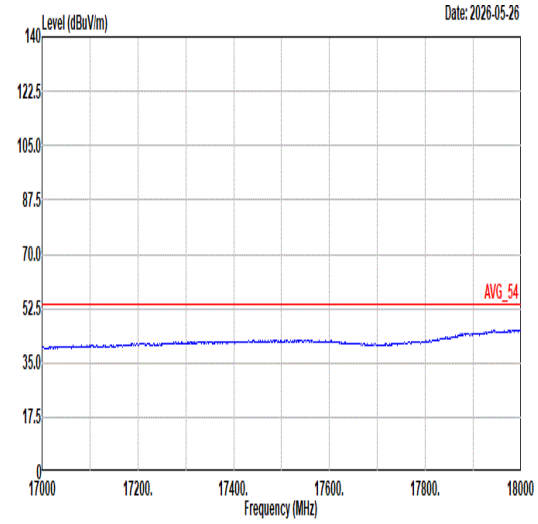
Mode	5	
	Harmonic	
	2400-2483.5_Bluetooth-LE GSFK_CH19_2440MHz	
ANT	1	
Pol.	Horizontal	Vertical
Peak Avg	 Site : 03CH11-HY Condition: PEAK_74 3m 9120D_01620_250915 HORIZONTAL Freq Level Limit Line Margin Read Level Ant Factor Cable Loss Preamp Factor Aux Factor APos TPos Remark MHz dBuV/m dBuV/m dB dBuV dB/m dB dB dB cm deg 1 4880.00 59.38 74.00 -14.62 82.25 32.62 10.67 67.11 0.95 207 329 Peak 2 4880.00 5.40 54.00 -48.60 -- -- -- -- -- -- -- Average 3 7320.00 43.86 74.00 -30.14 59.17 36.82 13.78 66.10 0.19 -- -- Peak 4 7320.00 -10.12 54.00 -64.12 -- -- -- -- -- -- -- Average	 Site : 03CH11-HY Condition: PEAK_74 3m 9120D_01620_250915 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 4880.00 57.85 74.00 -16.15 80.72 32.62 10.67 67.11 0.95 202 61 Peak 2 4880.00 3.87 54.00 -50.13 -- -- -- -- -- -- -- Average 3 7320.00 43.95 74.00 -30.05 59.26 36.82 13.78 66.10 0.19 -- -- Peak 4 7320.00 -10.03 54.00 -64.03 -- -- -- -- -- -- -- Average

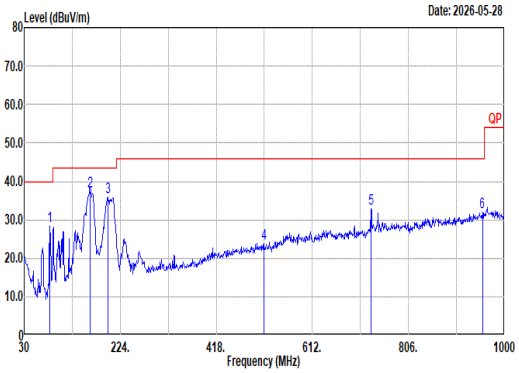
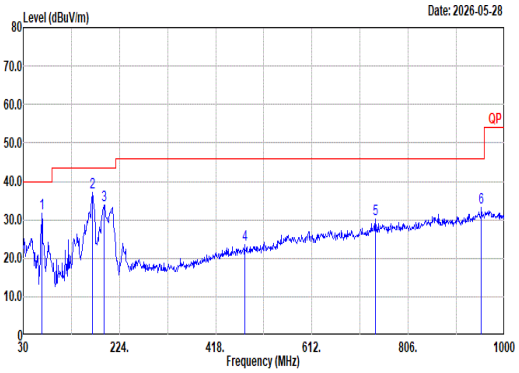
Mode	5	
	Harmonic	
	2400-2483.5_Bluetooth-LE GSFK_CH19_2440MHz	
ANT	1	
Pol.	Horizontal	Vertical
14.47G ~14.5G Avg	 Site : 03CH11-HY Condition: AVG_54 3m 9120D_01620_250915 HORIZONTAL	 Site : 03CH11-HY Condition: AVG_54 3m 9120D_01620_250915 VERTICAL
17G ~18G Avg	 Site : 03CH11-HY Condition: AVG_54 3m 9120D_01620_250915 HORIZONTAL	 Site : 03CH11-HY Condition: AVG_54 3m 9120D_01620_250915 VERTICAL

Mode	6	
	Band Edge	
	2400-2483.5_Bluetooth-LE GSFK_CH39_2480MHz	
ANT	1	
Pol.	Horizontal	Fundamental
Peak	 Site : 03CH11-HY Condition: PEAK_BE_74 3m 9120D_01620_250915 HORIZONTAL : RBW:1000.000kHz VBW:3000.000kHz SWT:Auto 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 2483.60 59.37 74.00 -14.63 47.80 27.67 6.78 33.00 10.12 100 358 Peak 2 2483.60 5.39 54.00 -48.61 -- -- -- -- -- -- -- AVERAGE	 Site : 03CH11-HY Condition: PEAK_74 3m 9120D_01620_250915 HORIZONTAL : RBW:1000.000kHz VBW:3000.000kHz SWT:Auto 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 2480.00 104.04 ------ ------ 92.55 27.60 6.78 33.01 10.12 100 358 Peak 2 2480.00 50.06 ------ ------ -- -- -- -- -- -- -- Average

Mode	6	
	Band Edge	
	2400-2483.5_Bluetooth-LE GSFK_CH39_2480MHz	
ANT	1	
Pol.	Vertical	Fundamental
Peak	 Site : 03CH11-HY Condition: PEAK_BE_74 3m 9120D_01620_250915 VERTICAL : RBW:1000.000kHz VBW:3000.000kHz SWT:Auto 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 2483.62 56.68 74.00 -17.32 45.11 27.67 6.78 33.00 10.12 400 261 Peak 2 2483.62 2.70 54.00 -51.30 -- -- -- -- -- -- -- AVERAGE	 Site : 03CH11-HY Condition: PEAK_74 3m 9120D_01620_250915 VERTICAL : RBW:1000.000kHz VBW:3000.000kHz SWT:Auto 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 2480.00 100.52 ------ ------ 89.03 27.60 6.78 33.01 10.12 400 261 Peak 2 2480.00 46.54 ------ ------ -- -- -- -- -- -- -- Average

Mode	6	
	Harmonic	
	2400-2483.5_Bluetooth-LE GSFK_CH39_2480MHz	
ANT	1	
Pol.	Horizontal	Vertical
Peak Avg	 Site : 03CH11-HY Condition: PEAK_74 3m 9120D_01620_250915 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 58.42 74.00 -15.58 80.51 32.94 11.06 67.05 0.96 247 329 Peak 2 4960.00 4.44 54.00 -49.56 -- -- -- -- -- -- -- Average 3 7440.00 43.38 74.00 -30.62 59.22 36.30 13.87 66.19 0.18 -- -- Peak 4 7440.00 -10.60 54.00 -64.60 -- -- -- -- -- -- -- Average	 Site : 03CH11-HY Condition: PEAK_74 3m 9120D_01620_250915 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 57.23 74.00 -16.77 79.32 32.94 11.06 67.05 0.96 214 84 Peak 2 4960.00 3.25 54.00 -50.75 -- -- -- -- -- -- -- Average 3 7440.00 43.26 74.00 -30.74 59.10 36.30 13.87 66.19 0.18 -- -- Peak 4 7440.00 -10.72 54.00 -64.72 -- -- -- -- -- -- -- Average

Mode	6	
	Harmonic	
	2400-2483.5_Bluetooth-LE GSFK_CH39_2480MHz	
ANT	1	
Pol.	Horizontal	Vertical
14.47G ~14.5G Avg	 Site : 03CH11-HY Condition: AVG_54 3m 9120D_01620_250915 HORIZONTAL	 Site : 03CH11-HY Condition: AVG_54 3m 9120D_01620_250915 VERTICAL
17G ~18G Avg	 Site : 03CH11-HY Condition: AVG_54 3m 9120D_01620_250915 HORIZONTAL	 Site : 03CH11-HY Condition: AVG_54 3m 9120D_01620_250915 VERTICAL

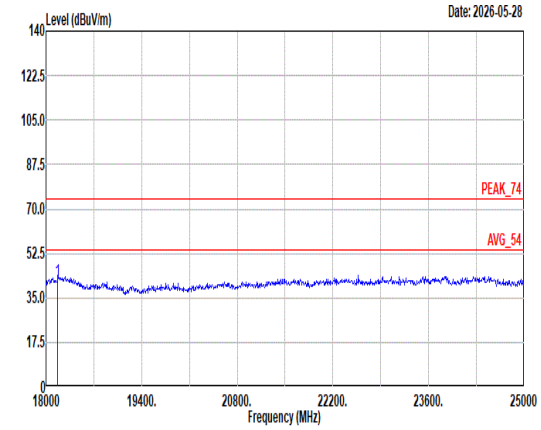
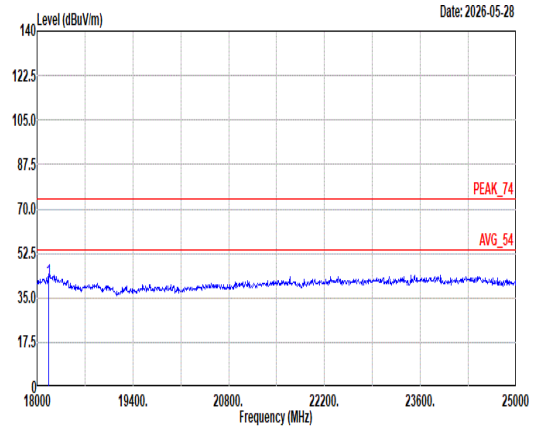
Mode	7	
	LF	
	2400-2483.5_Bluetooth-LE GSFK_CH00_2402MHz	
ANT	1	
Pol.	Horizontal	Vertical
QP/ Peak		

Site : 03CH11-HY
Condition: QP 3m Bilog_66925 & 24006_260412 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	82.38	28.28	40.00	-11.72	45.52	13.59	1.19	32.06	0.04	--	--	Peak
2	162.89	37.47	43.50	-6.03	51.72	16.08	1.70	32.07	0.04	150	75	QP
3	198.78	36.01	43.50	-7.49	51.32	14.81	1.90	32.04	0.02	--	--	Peak
4	514.03	23.85	46.00	-22.15	28.54	24.17	3.06	32.01	0.09	--	--	Peak
5	730.34	32.96	46.00	-13.04	33.10	27.48	3.68	31.91	0.61	--	--	Peak
6	955.38	32.08	46.00	-13.92	27.23	30.94	4.16	30.66	0.41	--	--	Peak

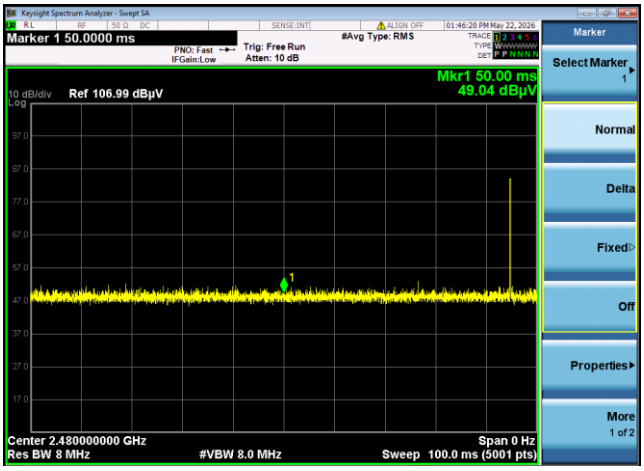
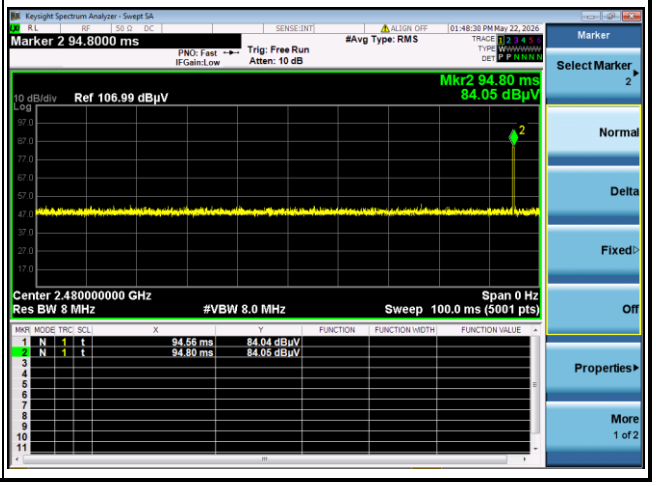
Site : 03CH11-HY
Condition: QP 3m Bilog_66925 & 24006_260412 VERTICAL

	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	67.83	31.78	40.00	-8.22	50.77	11.84	1.08	31.98	0.07	--	--	Peak
2	169.68	37.18	43.50	-6.32	51.86	15.55	1.75	32.03	0.05	--	--	Peak
3	192.96	33.87	43.50	-9.63	49.31	14.66	1.88	32.02	0.04	--	--	Peak
4	476.20	23.56	46.00	-22.44	29.07	23.46	2.95	32.00	0.08	--	--	Peak
5	740.04	30.26	46.00	-15.74	30.07	27.79	3.71	31.89	0.58	--	--	Peak
6	953.44	33.13	46.00	-12.87	28.45	30.80	4.15	30.68	0.41	--	--	Peak

Mode	8	
	SHF	
	2400-2483.5_Bluetooth-LE GSFK_CH00_2402MHz	
ANT	1	
Pol.	Horizontal	Vertical
Peak	 Site : 03CH11-HY Condition: PEAK_74 1m SHF_1225_250702 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 18174.43 41.89 74.00 -32.11 55.27 38.10 22.47 64.41 -9.54 -- -- PEAK	 Site : 03CH11-HY Condition: PEAK_74 1m SHF_1225_250702 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 18169.34 41.78 74.00 -32.22 55.17 38.08 22.47 64.40 -9.54 -- -- PEAK

Appendix C. Duty Cycle Plots

<1Mbps>

Bluetooth - LE for 1Mbps	Bluetooth - LE for 1Mbps
	

Note:

1. Worst case Duty cycle = on time/100 milliseconds = 2 * 0.24 / 100 = 0.48 %
2. Worst case Duty cycle correction factor = 20*log(Duty cycle) = -52.40 dB

Duty Cycle Correction Factor Consideration for AFH mode:

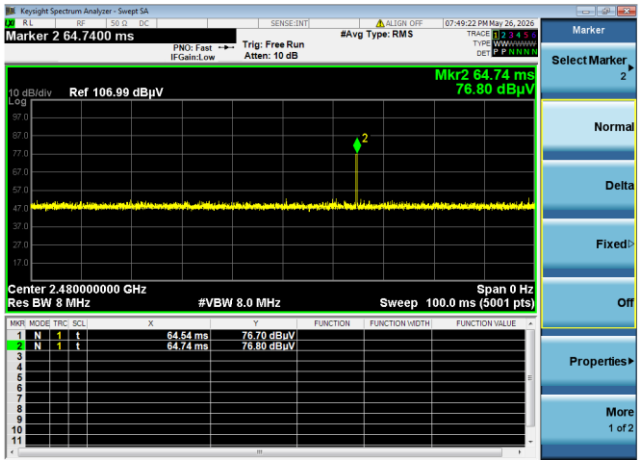
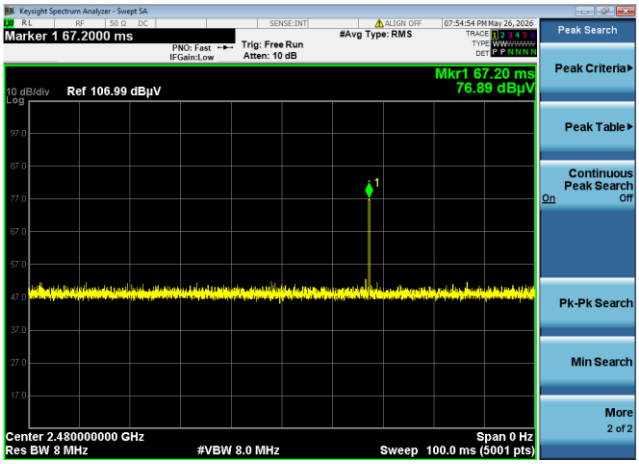
The maximum possible ON time:

0.24 ms x 2 = 0.48 ms

Worst case Duty Cycle Correction factor, which is derived from the maximum possible ON time,

20 x log(0.48 ms/100 ms) = -52.40 dB

<2Mbps>

Bluetooth - LE for 2Mbps	Bluetooth - LE for 2Mbps
	

Note:

3. Worst case Duty cycle = on time/100 milliseconds = 2 * 0.2 / 100 = 0.4 %
4. Worst case Duty cycle correction factor = 20*log(Duty cycle) = -53.98 dB

Duty Cycle Correction Factor Consideration for AFH mode:

The maximum possible ON time:

0.2 ms x 2 = 0.4 ms

Worst case Duty Cycle Correction factor, which is derived from the maximum possible ON time,

20 x log(0.4 ms/100 ms) = -53.98 dB