RF TEST REPORT

Report No.:	20240317G05418X-W3
Product Name:	TUBE Thermal Imaging Scope
Model No.:	TS60, BOLT TX60C
FCC ID:	2AY3N-2D-00
Applicant:	InfiRay Technologies Co., Ltd.
Address:	Room 301, Building C3, Hefei Innovation Industrial Park, NO.800 Wangjiang West Road, Hefei National High-tech Industry Development District, Anhui, P.R.China
Dates of Testing:	03/29/2024 - 05/10/2024
Issued by:	CCIC Southern Testing Co., Ltd.
Lab Location:	Electronic Testing Building, No.43, Shahe Road, Xili Street, Nanshan District, Shenzhen, Guangdong, China. **Tel**：86 755 26627338 **E-Mail**：manager@ccic-set.com

Test Report

Product.....:	TUBE Thermal Imaging Scope
Brand Name .....:	InfiRay
Applicant.....:	InfiRay Technologies Co., Ltd.
Applicant Address.....:	Room 301, Building C3, Hefei Innovation Industrial Park, NO.800 Wangjiang West Road, Hefei National High-tech Industry Development District, Anhui, P.R.China
Manufacturer.....:	InfiRay Technologies Co., Ltd.
Manufacturer Address.....:	Room 301, Building C3, Hefei Innovation Industrial Park, NO.800 Wangjiang West Road, Hefei National High-tech Industry Development District, Anhui, P.R.China
Test Standards.....:	47 CFR Part 15 Subpart C 15.247 ANSI C63.10-2020
Test Result.....:	Pass

Tested by .....:	Chuiwang Zhang	2024.06.20
	Chuiwang Zhang, Test Engineer	
Reviewed by.....:	Sun Jiaohui	2024.06.20
	Sun Jiaohui, Senior Engineer	
Approved by.....:	Chris You	2024.06.20
	Chris You, Manager	

TABLE OF CONTENTS

Change History		
Issue	Date	Reason for change
1.0	2024.06.20	First edition

1. General Information

1.1. EUT Description

Product Name	TUBE Thermal Imaging Scope	
Model No.	TS60, BOLT TX60C	
EUT supports Radios application	Bluetooth V5.0	
Frequency Range	2402MHz~2480MHz	
Channel Number	79	
Bit Rate of Transmitter	1/2/3Mbps	
Modulation Type	GFSK, π/4-DQPSK, 8DPSK	
Antenna Type	Internal Antenna	
Antenna Gain	-2.14dBi	
Power supply	Internal	Rechargeable Li-ion Battery DC3.6V/6200mAh*2
	External	Rechargeable Li-ion Battery DC3.6V/3200mAh

Note 1: For a more detailed description, please refer to Specification or User's Manual supplied by the applicant and/or manufacturer.

Note 2: a. When power on, the EUT will scan the whole frequency until aConnection command from the other BT devices.

b. When receiving the signal from the other BT devices, The EUT transmit aresponse signal.

c. The other devices receive the response signal and recognize it, then send aconnection command to establish the connection.

d. After the connection establish successfully, the data transmission is beginning.At the same time, the both devices will shift frequencies in synchronization per asame pseudo randomly ordered list of hopping frequencies, the hopping rate is1600 times per second.

e. The bandwidth of the receiver, which is set to a fixed width by the software.

Note 3: Bluetooth signal has 9 packages 1DH1, 1DH3, 1DH5, 2DH1, 2DH3, 2DH5, 3DH1, 3DH3, 3DH5, DH5 package is largest, we are testing DH5 in the document.

Note 4: The information of antenna gain and cable loss is provided by the manufacturer and our lab is not responsible for the accuracy of the antenna gain and cable loss information.

Note 5: That the BOLT TX60C have the same technical construction including circuit diagram, PCB Layout, components and component layout, all electrical construction and mechanical construction, with TS60. The difference lies only in name of the different models

1.2. Test Standards and Results

The purpose of the report is to conduct testing according to the following FCC certification standards:

No.	Identity	Document Title
1	47 CFR Part 15 Subpart C	Radio Frequency Devices
2	ANSI C63.10-2020	American National Standard for Testing Unlicensed Wireless Devices
3	KDB 558074 D01 15.247 Meas Guidance v05r02	Cuidance for Compliance Measurement on Digital Transmission Systems, Frequency Hopping Spread Spectrum Systems, and Hybrid System Devices Operating under Section 15.247 of the FCC Rules

Test detailed items/section required by FCC rules and results are as below:

No.	Section in CFR 47	Description	Result
1	15.203 15.247(c)	Antenna Requirement	PASS
2	15.247 (a)(1)(iii)	Number of Hopping Frequency	PASS
3	15.247 (b)(1)	Peak Output Power	PASS
4	15.247 (a)(1)	20dB Emission Bandwidth	PASS
5	15.247 (a)(1)	Carrier Frequency Separation	PASS
6	15.247 (a)(1)(iii)	Time of Occupancy (Dwell time)	PASS
7	15.247(d)	Conducted Band Edge and Spurious Emission	PASS
8	15.207	AC Power Line Conducted Emission	PASS
9	15.205 15.209 15.247(c)	Radiated Band Edges and Spurious Emission	PASS

Note 1: The tests of Conducted Emission and Radiated Emission were performed according to the method of measurements prescribed in ANSI C63.10-2020.

Note 2: These RF tests were performed according to the method of measurements prescribed in KDB 558074 D01 15.247 Meas Guidance v05r02.

1.3. Frequency Hopping System Requirements

1.3.1. Standard Applicable

According to FCC Part 15.247(a)(1), The system shall hop to channel frequencies that are selected at the systemhopping rate from a pseudo randomly ordered list of hopping frequencies. Each frequency must be used equallyon the average by each transmitter. The system receivers shall have input bandwidths that match the hoppingchannel bandwidths of their corresponding transmitters and shall shift frequencies in synchronization with thetransmitted signals.

(g) Frequency hopping spread spectrum systems are not required to employ all available hopping channels duringeach transmission. However, the system, consisting of both the transmitter and the receiver, must be designed tocomply with all of the regulations in this section should the transmitter be presented with a continuous data (orinformation) stream. In addition, a system employing short transmission bursts must comply with the definition ofa frequency hopping system and must distribute its transmissions over the minimum number of hopping channelsspecified in this section.

(h) The incorporation of intelligence within a frequency hopping spread spectrum system that permits the systemto recognize other users within the spectrum band so that it individually andindependently chooses and adapts itshopsets to avoid hopping on occupied channels is permitted. The coordination of frequency hopping systems inany other manner for the express purpose of avoiding the simultaneous occupancy of individual hoppingfrequencies by multiple transmitters is not permitted.

1.3.2. Frequency Hopping System

This transmitter device is frequency hopping device, and complies with FCC part 15.247 rule.

This device uses Bluetooth radio which operates in 2400-2483.5 MHz band. Bluetooth uses a radio technologycalled frequency-hopping spread spectrum, which chops up the data being sent and transmits chunks of it on up to79 bands (1 MHz each; centred from 2402 to 2480 MHz) in the range 2,400-2,483.5 MHz. The transmitterswitches hop frequencies 1,600 times per second to assure a high degree of data security. All Bluetooth devicesparticipating in a given piconet are synchronized to the frequency-hopping channel for the piconet. The frequency hopping sequence is determined by the master's device address and the phase of the hopping sequence (thefrequency to hop at a specific time) is determined by the master's internal clock. Therefore, all slaves in a piconetmust know the master's device address and must synchronize their clocks with the master's clock.

Adaptive Frequency Hopping (AFH) was introduced in the Bluetooth specification to provide an effective way fora Bluetooth radio to counteract normal interference. AFH identifies "bad" channels, where either other wirelessdevices are interfering with the Bluetooth signal or the Bluetooth signal is interfering with another device. TheAFH-enabled Bluetooth device will then communicate with other devices within its piconet to share details of anyidentified bad channels. The devices will then switch to alternative available "good" channels, away from theareas of interference, thus having no impact on the bandwidth used.

This device was tested with a bluetooth system receiver to check that the device maintained hopping synchronization, and the device complied with these requirements for ANSI C63.10-2020 and FCC Part 15.247 rule.

Carrier Frequency and channel List:

Channel	Frequency	Channel	Frequency	Channel	Frequency	Channel	Frequency
0	2402MHz	20	2422MHz	40	2442MHz	60	2462MHz
1	2403MHz	21	2423MHz	41	2443MHz	61	2463MHz
2	2404MHz	22	2424MHz	42	2444MHz	62	2464MHz
3	2405MHz	23	2425MHz	43	2445MHz	63	2465MHz
4	2406MHz	24	2426MHz	44	2446MHz	64	2466MHz
5	2407MHz	25	2427MHz	45	2447MHz	65	2467MHz
…	…	…	…	…	…	…	…
15	2417MHz	35	2437MHz	55	2457MHz	75	2477MHz
16	2418MHz	36	2438MHz	56	2458MHz	76	2478MHz
17	2419MHz	37	2439MHz	57	2459MHz	77	2479MHz
18	2420MHz	38	2440MHz	58	2460MHz	78	2480MHz
19	2421MHz	39	2441MHz	59	2461MHz		

Note 1: F(MHz) = 2402+1*n (0<=n<=78).

Note 2: Channel 0, 39 &78 selected for GFSK, π/4-DQPSK and 8DPSK as Lowest, Middle and Highest Channel.

1.4. Table for Supporting Units

No.	Equipment	Brand Name	Model Name	Manufacturer	Serial No.	Note
1	Laptop	HP	TPN-Q221	HP	5CD14347QB	FCC DOC

1.5. EUT Operation Test Setup

For RF test items, an engineering test program was provided and enable to make EUT transmitting.

1.6. Test environment and mode

During the measurement, the environmental conditions were within the listed ranges:

Operating Environment	
Temperature	15°C - 35°C
Humidity	30% -60%
Atmospheric Pressure	86KPa-106KPa
Test mode:	
Non-hopping mode:	Keep the EUT in continuous transmitting mode with worst case data rate.
Hopping mode:	Keep the EUT in hopping mode.

1.7. Facilities and Accreditations

FCC-Registration No.: CN1283

CCIC Southern Testing Co., Ltd EMC Laboratory has been registered and fully described in a report filed with the FCC (Federal Communications Commission). The acceptance letter from the FCC is maintained in our files. Designation Number: CN1283, valid time is until Jun. 30th, 2025.

ISED Registration: 11185A

CCIC Southern Testing Co., Ltd. EMC Laboratory has been registered by Certification and Engineering Bureau of Industry Canada for the performance of radiated measurements with Registration No. 11185A on Aug. 04, 2016, valid time is until Jun. 30th, 2025.

CAB number: CN0064

A2LA Code: 5721.01

CCIC-SET is a third party testing organization accredited by A2LA according to ISO/IEC 17025. The accreditation certificate number is 5721.01.

2. Test Requirement

2.1. Antenna requirement

2.1.1. Applicable Standard

According to FCC 15.203, 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.

And according to FCC 47 CFR Section 15.247(c), if transmitting antennas of directional gain greater than 6dBi are used, the power shall be reduced by the amount in dB that the directional gain of the antenna exceeds 6dBi.

2.1.2. Antenna Information

Antenna Category: Internal Antenna

A internal Antenna was soldered to the antenna port of EUT via an adaptor cable, can't be removed.

Antenna General Information:

No.	EUT	Operating frequency range	Ant. Type	Ant. Gain
1	TUBE Thermal Imaging Scope	2412-2462MHz	Internal	-2.14dBi

2.1.3. Result: comply

The EUT has a permanently and irreplaceable attached antenna. Please refer to the EUT internal photos.

2.2. Number of Hopping Frequency

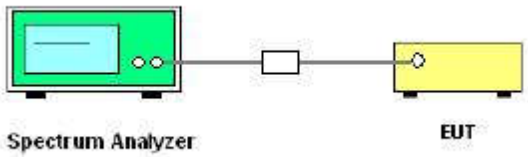
2.2.1. Limit of Number of Hopping Frequency

Frequency hopping systems operating in the 2400MHz to 2483.5MHz bands shall use at least 15 hopping frequencies.

2.2.2. Measuring Instruments

The measuring equipment is listed in the section 3 of this test report.

2.2.3. Test Setup



2.2.4. Test Procedure

1. The testing follows the Measurement Procedure of ANSI C63.10-2020 Section 7.8.3.
2. The RF output of EUT was connected to the spectrum analyzer by RF cable and attenuator. The path loss was compensated to the results for each measurement.
3. Set to the maximum power setting and enable the EUT transmit continuously.
4. Enable the EUT hopping function.
5. Use the following spectrum analyzer settings:

   Span: The frequency band of operation / RBW: Set the RBW to less than 30% of the channel spacing or the 20 dB bandwidth, Whichever is smaller / VBW ≥ RBW / Sweep: Auto / Detector function: Peak / Trace: Max hold / Allow the trace to stabilize.
6. The number of hopping frequency used is defined as the number of total channel.
7. Record the measurement results in the test report.

2.2.5. Test Results of Number of Hopping Frequency

Please refer to Appendix A for detail.

2.3. Maximum Conducted Output Power

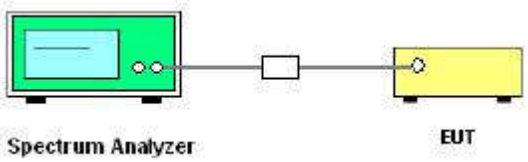
2.3.1. Limit of Maximum Conducted Output Power

For frequency hopping systems operating in the 2400-2483.5 MHz band employing at least 75 non-overlapping hopping channels: 1 watt. For all other frequency hopping systems in the 2400-2483.5 MHz band: 0.125 watts.

2.3.2. Measuring Instruments

The measuring equipment is listed in the section 3 of this test report.

2.3.3. Test Setup



2.3.4. Test Procedures

1. The testing follows the Measurement Procedure of ANSI C63.10-2020 Section 7.8.5.
2. The RF output of EUT was connected to Spectrum analyzer by RF cable and attenuator. The pathloss was compensated to the results for each measurement.
3. Set to the maximum power setting and enable the EUT transmit continuously.
4. Use the following spectrum analyzer settings:

   Set span to be Approximately five times the 20 dB bandwidth, centered on a hopping channel / RBW > 20 dB bandwidth of the emission being measured / VBW ≥ RBW / Sweep: Auto / Detector function: Peak / Trace: Max hold / Allow trace to stabilize / Use the marker-to-peak function to set the marker to the peak of the emission.
5. Record the measurement results in the test report.

2.3.5. Test Result of Maximum Conducted Output Power

Please refer to Appendix A for detail.

2.4. 20dB Emission Bandwidth

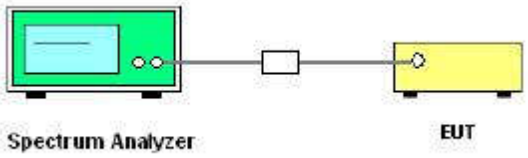
2.4.1. Definition

According to FCC §15.247(a)(1), the 20dB bandwidth is known as the 99% emission bandwidth, or 20dB bandwidth (10*log1% = 20dB) taking the total RF output power.

2.4.2. Measuring Instruments

The measuring equipment is listed in the section 3 of this test report.

2.4.3. Test Setup



2.4.4. Test Procedure

1. The testing follows the Measurement Procedure of ANSI C63.10-2020 Section 7.8.6.
2. The RF output of EUT was connected to the spectrum analyzer by RF cable and attenuator. The path loss was compensated to the results for each measurement.
3. Set to the maximum power setting and enable the EUT transmit continuously.
4. Use the spectrum analyzer “Channel Bandwidth” function to easurement the 20dB EBW and 99% OBW.
5. For 20dB EBW Use the following spectrum analyzer settings:

   Using the X dB bandwidth mode of the instrument's automatic bandwidth measurement function, X is set to 20 dB / The spectrum analyzer center frequency is set to the EUT channel center frequency / Set span to be approximately 2 to 5 times the OBW / RBW ≥ 1% to 5% of the OBW / VBW shall be approximately three times RBW / Sweep: Auto / Detector mode: Peak / Trace mode: Max hold.
6. Record the measurement results in the test report.

2.4.5. Test Results of 20dB Emission Bandwidth

Please refer to Appendix A for detail.

2.5. Carried Frequency Separation

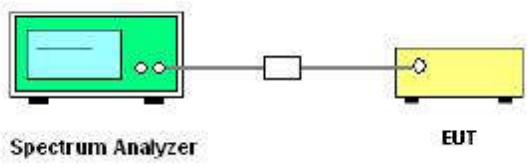
2.5.1. Limit of Carried Frequency Separation

Frequency hopping systems shall have hopping channel carrier frequencies separated by a minimum of 25kHz or two-thirds of the 20dB bandwidth of the hopping channel, whichever is greater.

2.5.2. Measuring Instruments

The measuring equipment is listed in the section 3 of this test report.

2.5.3. Test Setup



2.5.4. Test Procedure

1. The testing follows the Measurement Procedure of ANSI C63.10-2020 Section 7.8.2.
2. The RF output of EUT was connected to the spectrum analyzer by RF cable and attenuator. The path loss was compensated to the results for each measurement.
3. Set to the maximum power setting and enable the EUT transmit continuously.
4. Enable the EUT hopping function.
5. Use the following spectrum analyzer settings:

   Span: wide enough to capture the peaks of two adjacent channels /

   RBW: Start with the RBW set to approximately 30% of the channel spacing / VBW ≥ RBW /

   Sweep: Auto / Detector function: Peak / Trace: Max hold / Allow the trace to stabilize /

   Use the marker-delta function to determine the separation between the peaks of the adjacent channels.
6. Record the measurement results in the test report.

2.5.5. Test Results of Carried Frequency Separation

Please refer to Appendix A for detail.

2.6. Dwell time

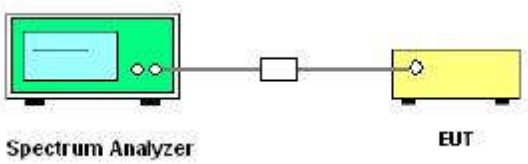
2.6.1. Limit of Dwell Time

The average time of occupancy on any channel shall not be greater than 0.4 seconds within a period of 0.4 seconds multiplied by the number of hopping channels employed.

2.6.2. Measuring Instruments

The measuring equipment is listed in the section 3 of this test report.

2.6.3. Test Setup



2.6.4. Test Procedure

1. The testing follows the Measurement Procedure of ANSI C63.10-2020 Section 7.8.4.
2. The RF output of EUT was connected to the spectrum analyzer by RF cable and attenuator.The path loss was compensated to the results for each measurement.
3. Set to the maximum power setting and enable the EUT transmit continuously.
4. Enable the EUT hopping function.
5. Use the following spectrum analyzer settings:

   Span: Zero span, centered on a hopping channel / RBW shall be ≤ channel spacing and where possible RBW should be set >> 1 / T, where T is the expected dwell time per channel / VBW ≥ RBW / Sweep: As necessary to capture the entire dwell time per hopping channel / Detector function: Peak / Trace: Max hold.
6. Record the measurement results in the test report.

2.6.5. Test Results of Dwell Time

Please refer to Appendix A for detail.

2.7. Conducted Spurious Emissions

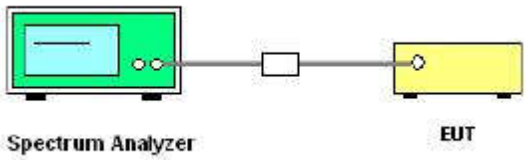
2.7.1. Limit of Conducted Spurious Emissions

In any 100 kHz bandwidth outside the frequency band in which the intentional radiator is perating, the radio frequency power that is produced by the intentional radiator shall be at least 20 dB below that in the 100 kHz bandwidth within the band that.

2.7.2. Measuring Instruments

The measuring equipment is listed in the section 3 of this test report.

2.7.3. Test Setup



2.7.4. Test Procedure

1. The testing follows the Measurement Procedure of ANSI C63.10-2020 Section 7.8.7.1.
2. The RF output of EUT was connected to the spectrum analyzer by RF cable and attenuator. The path loss was compensated to the results for each measurement.
3. Set to the maximum power setting and enable the EUT transmit continuously.
4. Use the following spectrum analyzer settings:

   Set the frequency range to 30MHz~25GHz / RBW: 100kHz / VBW: 300kHz / Detector: Peak / Sweep time: Auto couple / Trace mode: Max hold / Allow trace to fully stabilize / Use the peak marker function to determine the maximum amplitude level.
5. Record the measurement results in the test report.
6. The RF fundamental frequency should be excluded against the limit line in the operating frequency band.

2.7.5. Test Results of Conducted Spurious Emissions

Please refer to Appendix A for detail.

2.8. Conducted Band Edge

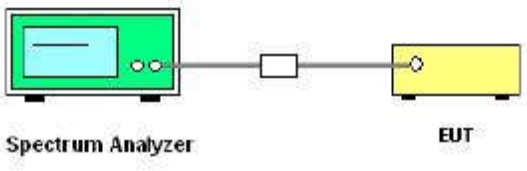
2.8.1. Limit of Conducted Band Edge

In any 100 kHz bandwidth outside the frequency band in which the intentional radiator is perating, the radio frequency power that is produced by the intentional radiator shall be at least 20 dB below that in the 100 kHz bandwidth within the band that.

2.8.2. Measuring Instruments

The measuring equipment is listed in the section 3 of this test report.

2.8.3. Test Setup



2.8.1. Test Procedure

1. The testing follows the Measurement Procedure of ANSI C63.10-2020 Section 7.8.7.2.
2. The RF output of EUT was connected to the spectrum analyzer by RF cable and attenuator. The path loss was compensated to the results for each measurement.
3. Set to the maximum power setting and enable the EUT transmit continuously.
4. Use the following spectrum analyzer settings:

   Span: Wide enough to capture the peak level of the emission operating on the channel closest to the band edge, as well as any modulation products that fall outside of the authorized band of operation / RBW: 100kHz / VBW: 300kHz / Detector: Peak / Sweep time: Auto couple / Trace mode: Max hold / Allow trace to fully stabilize / Use the peak marker function to determine the maximum power level.
5. Enable hopping function of the EUT and then repeat step 3 and 4.
6. Record the measurement results in the test report.
7. The RF fundamental frequency should be excluded against the limit line in the operating frequency band.

2.8.2. Test Results of Conducted Band Edge

Please refer to Appendix A for detail.

2.9. Radiated Band Edges and Spurious Emission

2.9.1. Limit of Radiated Band Edges and Spurious Emission

In any 100 kHz bandwidth outside the frequency band in which the intentional radiator is operating, the radio frequency power that is produced by the intentional radiator shall be at least 20 dB below that in the 100 kHz bandwidth within the band that contains the highest level. If the transmitter uses an RMS average conducted power limit, the attenuation required under this paragraph shall be 30 dB instead of 20 dB. In addition, radiated emissions which fall in the estricted bands, as defi ned in §15.205(a), must also comply with the radiated emission limits specifi ed in §15.209(a).

§15.209(a) Radiated emission limits:

Frequency (MHz)	Field Strength (μV/m)	Measurement Distance (m)
0.009 - 0.490	2400/F(kHz)	300
0.490 - 1.705	24000/F(kHz)	30
1.705 - 30.0	30	30
30 - 88	100	3
88 - 216	150	3
216 - 960	200	3
Above 960	500	3

Restricted bands of operation refer to §15.205 (a):

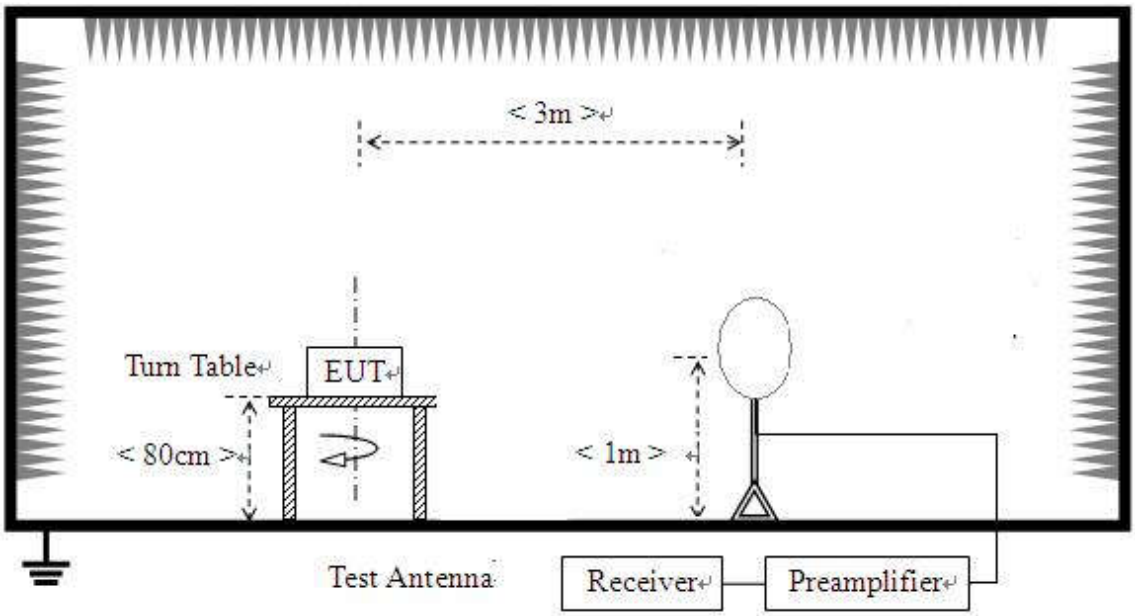
MHz	MHz	MHz	GHz
0.090-0.110	16.42-16.423	399.9-410	4.5-5.15
[1]0.495-0.505	16.69475-16.69525	608-614	5.35-5.46
2.1735-2.1905	16.80425-16.80475	960-1240	7.25-7.75
4.125-4.128	25.5-25.67	1300-1427	8.025-8.5
4.17725-4.17775	37.5-38.25	1435-1626.5	9.0-9.2
4.20725-4.20775	73-74.6	1645.5-1646.5	9.3-9.5
6.215-6.218	74.8-75.2	1660-1710	10.6-12.7
6.26775-6.26825	108-121.94	1718.8-1722.2	13.25-13.4
6.31175-6.31225	123-138	2200-2300	14.47-14.5
8.291-8.294	149.9-150.05	2310-2390	15.35-16.2
8.362-8.366	156.52475-156.52525	2483.5-2500	17.7-21.4
8.37625-8.38675	156.7-156.9	2690-2900	22.01-23.12
8.41425-8.41475	162.0125-167.17	3260-3267	23.6-24.0
12.29-12.293	167.72-173.2	3332-3339	31.2-31.8
12.51975-12.52025	240-285	3345.8-3358	36.43-36.5
12.57675-12.57725	322-335.4	3600-4400	([2])
13.36-13.41	/	/	/
Note: [1]Until February 1, 1999, this restricted band shall be 0.490-0.510 MHz. [2]Above 38.6.			

2.9.2. Measuring Instruments

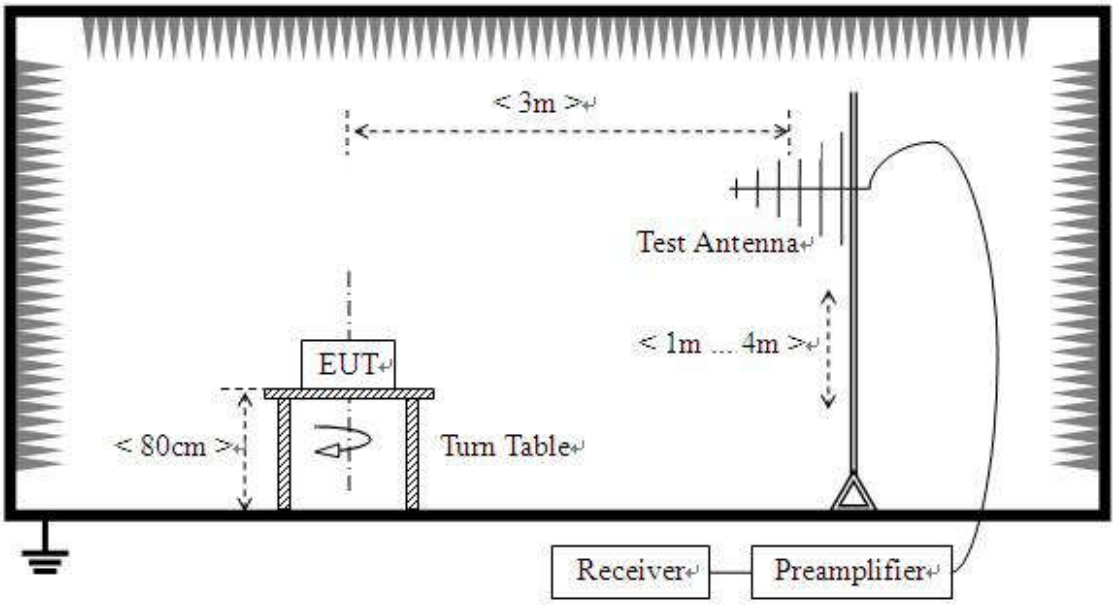
The measuring equipment is listed in the section 3 of this test report.

2.9.3. Test Setup

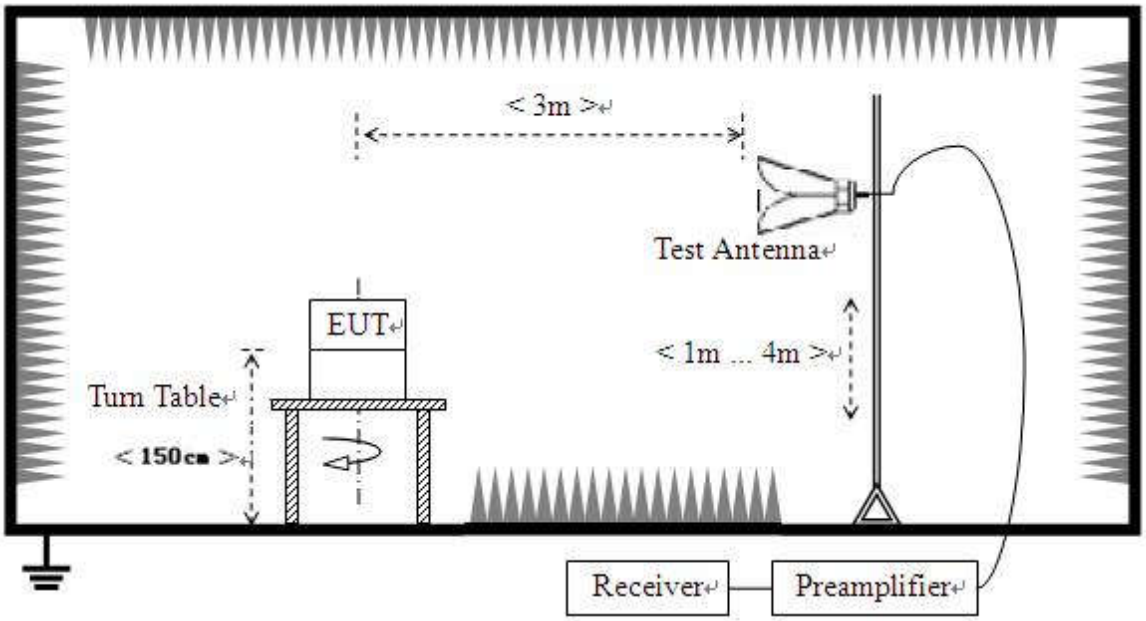
For radiated emissions from 9kHz to 30MHz



For radiated emissions from 30MHz to1GHz



For radiated emissions above 1GHz



2.9.4. Test Procedure

1. The EUT was placed on the top of a rotating table 0.8m for below 1GHz and 1.5m for above 1GHz above the ground at a 3 meters semi-anechoic chamber.
2. The EUT was set 3 meters from the interference receiving antenna, which was mounted on thetop of a variable height antenna tower.
3. Height of receiving antenna is varied from one meter to four meters above the ground to determine the maximum value of the field strength. Both horizontal and vertical polarizations of the antenna are set to make the measurement.
4. For each suspected emission, the EUT was arranged to its worst case and then the antenna was tuned to heights from 1 meter to 4 meters and the rotatable table was turned from 0 degrees to 360 degrees to find the maximum reading.
5. The test-receiver system was set to Peak Detect Function and Specified Bandwidth with Maximum Hold Mode.
6. If the emission level of the EUT in peak mode was lower than the limit specified, then testing could be stopped and the peak values of the EUT would be reported.Otherwise the emissions would be re-tested one by one using peak, quasi-peak or average method as specified and then

reported in a data sheet.

7. For the radiated emission test above 1GHz:

Place the measurement antenna away from each area of the EUT determined to be a source of emissions at the specified measurement distance, while keeping the measurement antenna aimed at the source of emissions at each frequency of significant emissions, with polarization oriented for maximum response. The measurement antenna may have to be higher or lower than the EUT, depending on the radiation pattern of the emission and staying aimed at the emission source for receiving the maximum signal. The final measurement antenna elevation shall be that which maximizes the emissions. The measurement antenna elevation for maximum emissions shall be restricted to a range of heights of from 1 m to 4 m above the ground or reference ground plane.

NOTE:

1. The resolution bandwidth and video bandwidth of test receiver/spectrum analyzer is 120kHz for Quasi-peak detection at frequency below 1GHz.
2. The resolution bandwidth of test receiver/spectrum analyzer is 1MHz and video bandwidth is 3MHz for Peak detection at frequency above 1GHz.
3. The resolution bandwidth of test receiver/spectrum analyzer is 1MHz and the video bandwidth is ≥ 1/T(Duty cycle < 98%) or 10Hz(Duty cycle > 98%) for Average detection (AV) at frequency above 1GHz.
4. All radiated emission tests were performed in X, Y, Z axis direction. And only the worst axis test condition was recorded in this test report.

2.9.5. Test Results of Radiated Band Edge and Spurious Emission

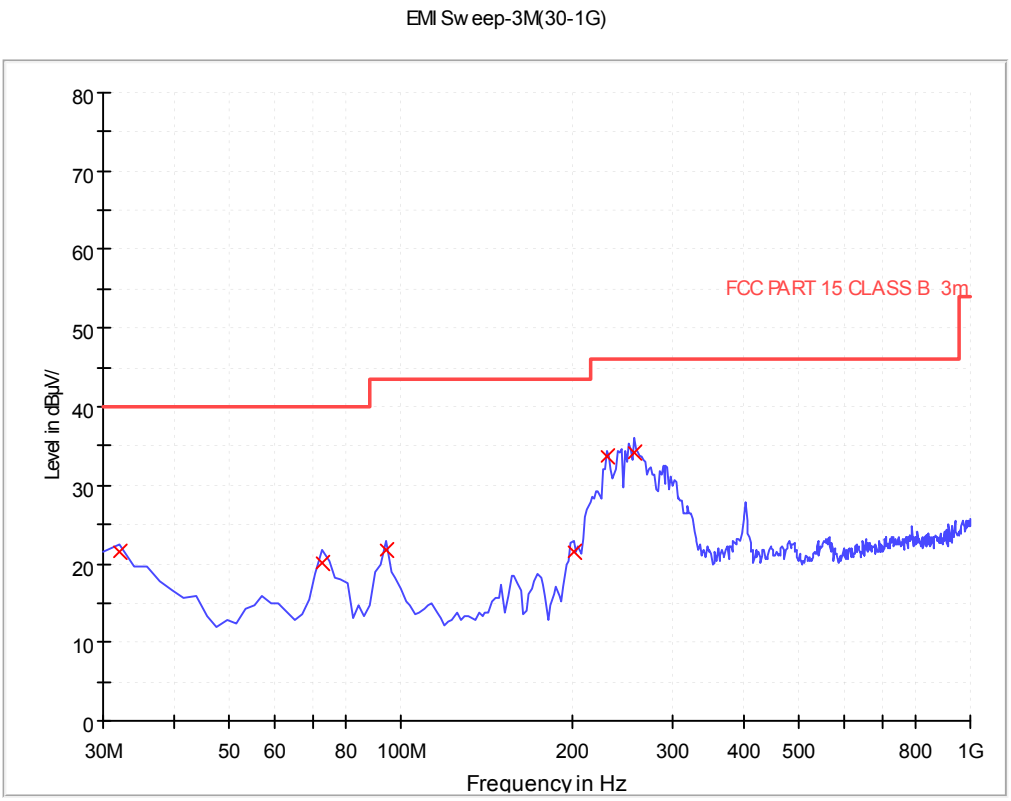
For 9 kHz to 30MHz, The amplitude of spurious emissions which are attenuated by more than 20dB below the permissible value has no need to be reported.

For 30MHz to 1GHz, All of the EUT Configure mode were tested and found 3DH5_2480MHz channel is the worst mode, the worst case is recorded in this report.

For 1GHz to 25GHz, All EUT configuration modes were tested, this report reflects worst-case (3DH5_8DPSK) test results only.

For 30MHz to 1000MHz

Test site:	3M anechoic chamber	Environment:	Temp: 23℃; Humi:48%;101kPa
Operator:	Deng ShanFei	Test Date:	2024.04.29
Test Mode:	BT - TX	Test Result:	Pass



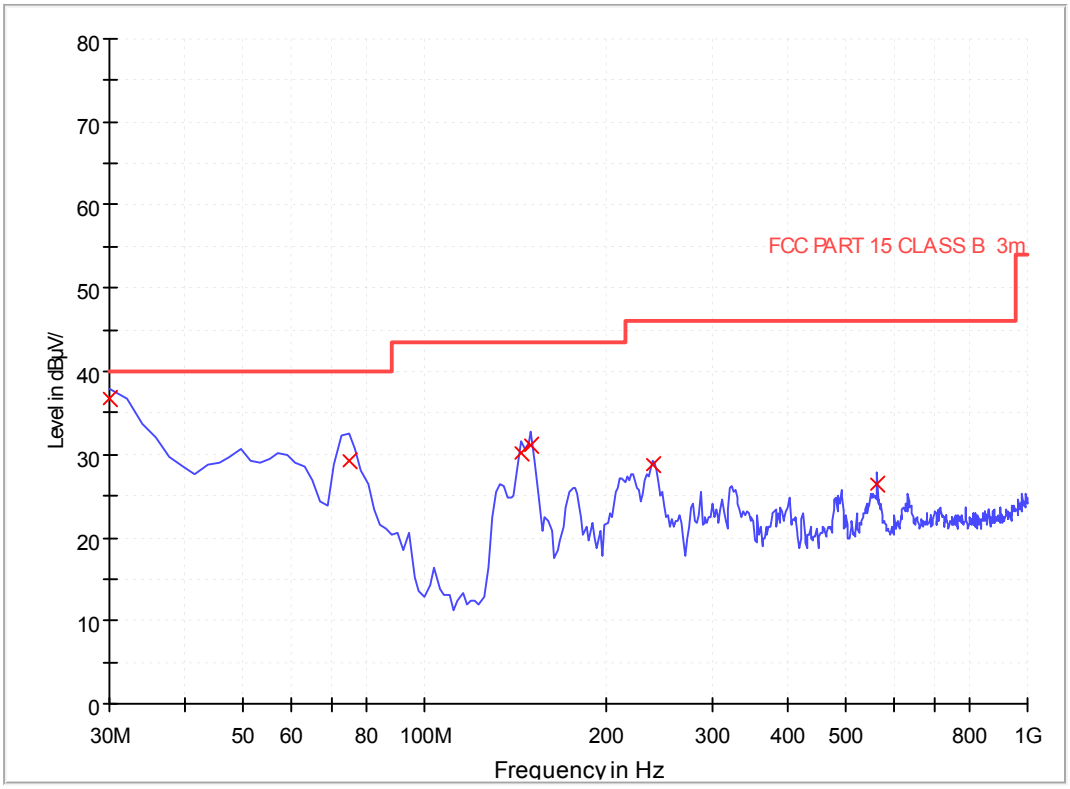
Frequency (MHz)	QuasiPeak (dBÌV/m)	Bandwidth (kHz)	Height (cm)	Polarity	Corr. (dB/m)	Margin - QPK	Limit - QPK
31.960000	21.63	120.000	100.0	H	20.1	18.37	40.0
72.760000	20.23	120.000	100.0	H	8.7	19.77	40.0
94.160000	21.79	120.000	100.0	H	11.7	21.71	43.5
201.080000	21.52	120.000	100.0	H	10.8	21.98	43.5
230.240000	33.70	120.000	100.0	H	12.7	12.30	46.0
257.440000	34.07	120.000	100.0	H	14.3	11.93	46.0

Remark:

1. Emission Level(dBuV/m) = Raw Value(dBuV) + Correction Factor(dB/m).
2. Correction Factor(dB/m) = Antenna Factor(dB/m) + Cable Factor(dB).
3. Margin value = Limit value - Emission Level.
4. The emission levels of other frequencies are very lower than the limit and not show in test report.
5. Only the antenna height (from 1m to 4m) at maximum reading are recorded.

Test site:	3M anechoic chamber	Environment:	Temp: 23℃; Humi:48%;101kPa
Operator:	Deng ShanFei	Test Date:	2024.04.29
Test Mode:	BT - TX	Test Result:	Pass

EMI Sweep-3M(30-1G)



Frequency (MHz)	QuasiPeak (dBµV/m)	Bandwidth (kHz)	Height (cm)	Polarity	Corr. (dB/m)	Margin - QPK	Limit - QPK
30.000000	36.62	120.000	100.0	V	21.1	3.38	40.0
74.720000	29.27	120.000	100.0	V	9.0	10.73	40.0
144.680000	30.29	120.000	100.0	V	13.8	13.21	43.5
150.520000	31.07	120.000	100.0	V	13.1	12.43	43.5
238.000000	28.67	120.000	100.0	V	18.3	17.33	46.0
562.640000	26.34	120.000	100.0	V	20.3	19.66	46.0

Remark:

1. Emission Level(dBuV/m) = Raw Value(dBuV) + Correction Factor(dB/m).
2. Correction Factor(dB/m) = Antenna Factor(dB/m) + Cable Factor(dB).
3. Margin value = Limit value - Emission Level.
4. The emission levels of other frequencies are very lower than the limit and not show in test report.
5. Only the antenna height (from 1m to 4m) at maximum reading are recorded.

For 1GHz to 25GHz

8DPSK_2402MHz									
Frequency (MHz)	Emssion Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Antenna Height (m)	Table Angle (Degree)	Raw Value (dBuV/m)	Correction Factor (dB/m)	Polarity	Detector
2390.00	52.67	74.00	-21.33	1.50	120	55.76	-3.09	Horizontal	Peak
2390.00	43.01	54.00	-10.99	1.50	120	46.10	-3.09	Horizontal	Average
4804.00	45.19	74.00	-28.81	1.50	120	43.93	1.26	Horizontal	Peak
4804.00	35.55	54.00	-18.45	1.50	120	34.29	1.26	Horizontal	Average
7206.00	50.27	74.00	-23.73	1.50	120	44.10	6.17	Horizontal	Peak
7206.00	40.27	54.00	-13.73	1.50	120	34.10	6.17	Horizontal	Average
2390.00	52.48	74.00	-21.52	1.50	260	55.57	-3.09	Vertical	Peak
2390.00	43.66	54.00	-10.34	1.50	260	46.75	-3.09	Vertical	Average
4804.00	45.94	74.00	-28.06	1.50	260	44.68	1.26	Vertical	Peak
4804.00	36.63	54.00	-17.37	1.50	260	35.37	1.26	Vertical	Average
7206.00	49.21	74.00	-24.79	1.50	260	43.04	6.17	Vertical	Peak
7206.00	39.63	54.00	-14.37	1.50	260	33.46	6.17	Vertical	Average
8DPSK_2441MHz									
Frequency (MHz)	Emssion Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Antenna Height (m)	Table Angle (Degree)	Raw Value (dBuV/m)	Correction Factor (dB/m)	Polarity	Detector
4882.00	44.65	74.00	-29.35	1.50	120	43.72	0.93	Horizontal	Peak
4882.00	35.05	54.00	-18.95	1.50	120	34.12	0.93	Horizontal	Average
7323.00	50.22	74.00	-23.78	1.50	120	44.61	5.61	Horizontal	Peak
7323.00	39.51	54.00	-14.49	1.50	120	33.90	5.61	Horizontal	Average
4882.00	46.19	74.00	-27.81	1.50	260	45.26	0.93	Vertical	Peak
4882.00	36.21	54.00	-17.79	1.50	260	35.28	0.93	Vertical	Average
7323.00	48.95	74.00	-25.05	1.50	260	43.34	5.61	Vertical	Peak
7323.00	40.29	54.00	-13.71	1.50	260	34.68	5.61	Vertical	Average

Remark:

1. Emission Level(dBuV/m) = Raw Value(dBuV) + Correction Factor(dB/m)

2. Correction Factor(dB/m) = Antenna Factor(dB/m) + Cable Factor(dB) - Pre-Amplifier Factor(dB)

3. Margin value = Emission Level – Limit value

4.The emission levels of other frequencies are very lower than the limit and not show in test report.

5.Tnly the antenna height (from 1m to 4m) and turntable angle (from 0 degrees to 360 degrees) at maximum reading are recorded.

8DPSK_2480MHz									
Frequency (MHz)	Emssion Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Antenna Height (m)	Table Angle (Degree)	Raw Value (dBuV/m)	Correction Factor (dB/m)	Polarity	Detector
2483.50	53.28	74.00	-20.72	1.50	120	58.03	-4.75	Horizontal	Peak
2483.50	44.06	54.00	-9.94	1.50	120	48.81	-4.75	Horizontal	Average
4960.00	47.36	74.00	-26.64	1.50	120	47.12	0.24	Horizontal	Peak
4960.00	36.59	54.00	-17.41	1.50	120	36.35	0.24	Horizontal	Average
7440.00	50.37	74.00	-23.63	1.50	120	44.55	5.82	Horizontal	Peak
7440.00	41.33	54.00	-12.67	1.50	120	35.51	5.82	Horizontal	Average
2483.50	53.31	74.00	-20.69	1.50	260	58.06	-4.75	Vertical	Peak
2483.50	43.34	54.00	-10.66	1.50	260	48.09	-4.75	Vertical	Average
4960.00	46.89	74.00	-27.11	1.50	260	46.65	0.24	Vertical	Peak
4960.00	37.43	54.00	-16.57	1.50	260	37.19	0.24	Vertical	Average
7440.00	49.45	74.00	-24.55	1.50	260	43.63	5.82	Vertical	Peak
7440.00	39.89	54.00	-14.11	1.50	260	34.07	5.82	Vertical	Average

Remark:

1. Emission Level(dBuV/m) = Raw Value(dBuV) + Correction Factor(dB/m)

2. Correction Factor(dB/m) = Antenna Factor(dB/m) + Cable Factor(dB) - Pre-Amplifier Factor(dB)

3. Margin value = Emission Level – Limit value

4.The emission levels of other frequencies are very lower than the limit and not show in test report.

5.Tnly the antenna height (from 1m to 4m) and turntable angle (from 0 degrees to 360 degrees) at maximum reading are recorded.

2.10. AC Power Line Conducted Emission

2.10.1. Limit of AC Power Line Conducted Emission

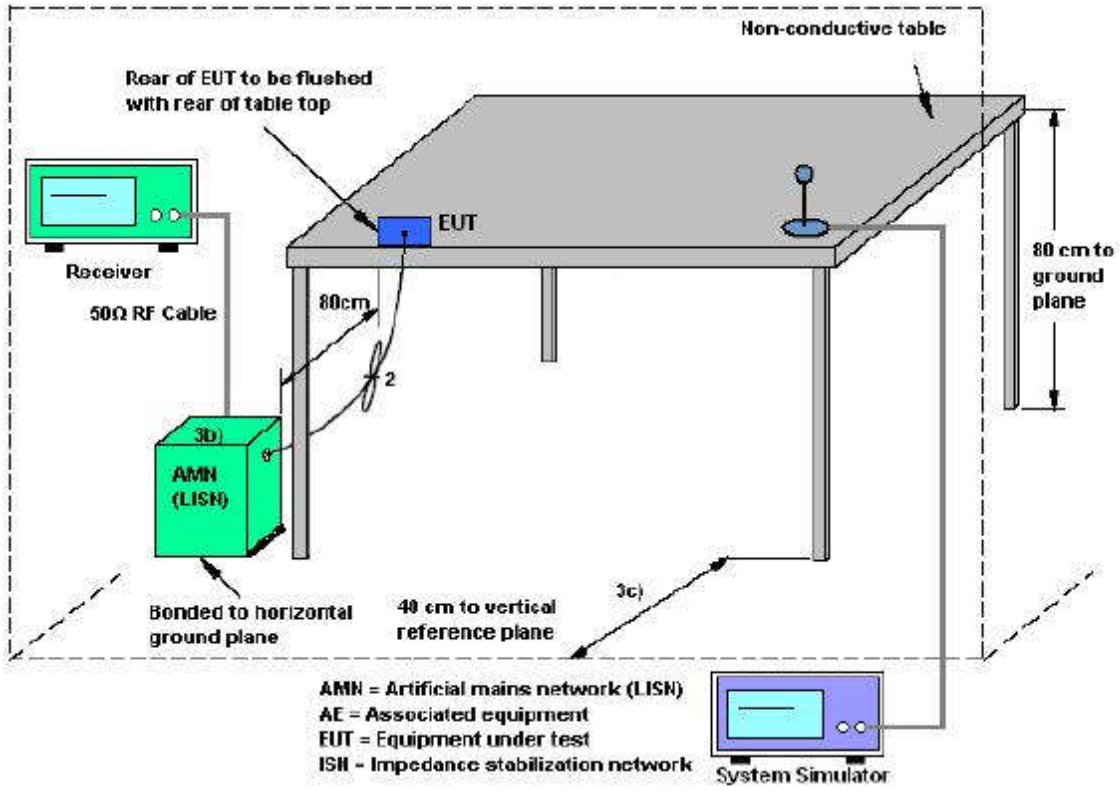
For equipment that is designed to be connected to the public utility (AC) power line, the radio frequency voltage that is conducted back onto the AC power line on any frequency or frequencies within the band 150 kHz to 30 MHz shall not exceed the limits in the following table.

Frequency range (MHz)	Conducted Limit (dBμV)	
	Quai-peak	Average
0.15 - 0.50	66 to 56	56 to 46
0.50 - 5	56	46
5 - 30	60	50

2.10.2. Measuring Instruments

The measuring equipment is listed in the section 3 of this test report.

2.10.3. Test Setup



2.10.4. Test Procedures

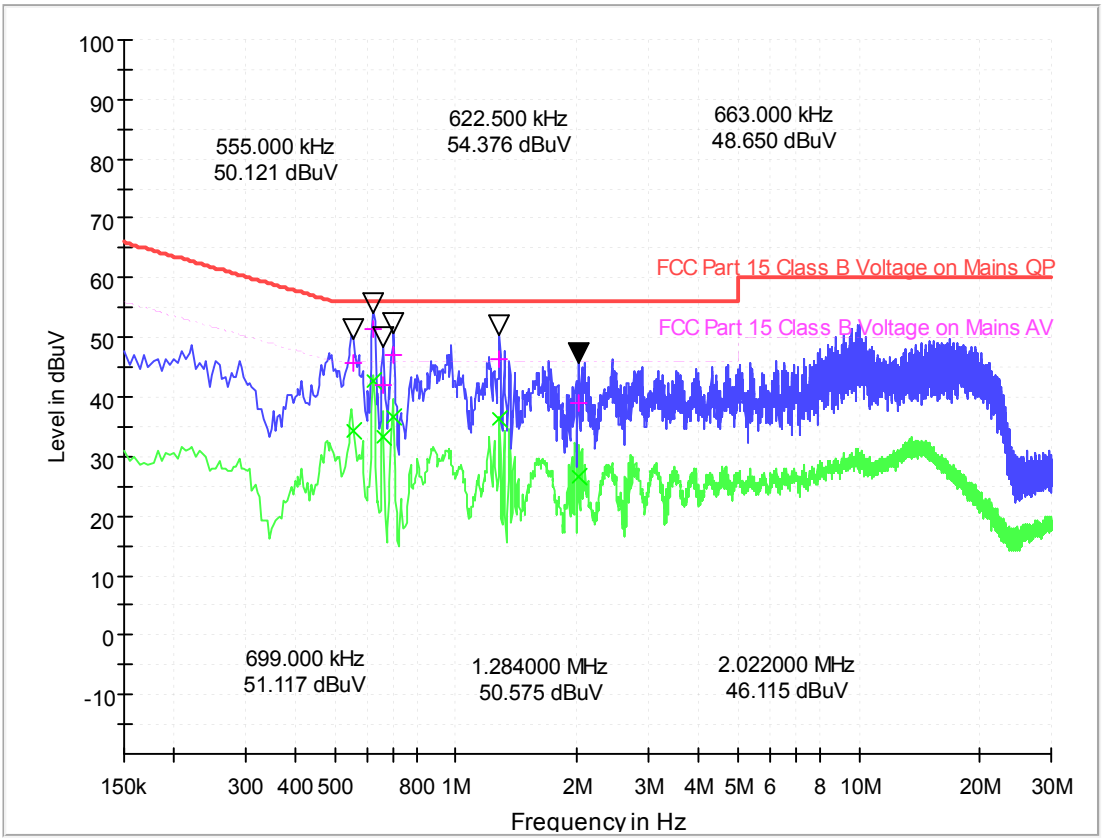
1. The EUT was placed 0.4 meter from the conducting wall of the shielding room was kept at least80 centimeters from any other grounded conducting surface.
2. Connect EUT to the power mains through a line impedance stabilization network (LISN).
3. All the support units are connecting to the other LISN.
4. The LISN provides 50 ohm coupling impedance for the measuring instrument.
5. The FCC states that a 50 ohm, 50 micrometry LISN should be used.
6. Both sides of AC line were checked for maximum conducted interference.
7. The frequency range from 150 kHz to 30 MHz was searched.
8. Set the test-receiver system to Peak Detect Function and specified bandwidth (IF Bandwidth = 9kHz) with Maximum Hold Mode. Then measurement is also conducted by Average Detector and Quasi-Peak Detector Function respectively.

2.10.5. Test Results of AC Power Line Conducted Emission

The EUT configuration of the emission tests is Bluetooth Link + Charging from Adapter.

All of the EUT Configure mode were tested and found 3DH5_2480MHz channel is the worst mode, the worst case is recorded in this report.

Test site:	Shield ROOM 1	Environment:	Temp: 23℃; Humi:53%;101kPa
Operator:	ZHANG QIANYU	Test Date:	2024.04.29
Test Mode:	BT- TX	Test Part:	L Line

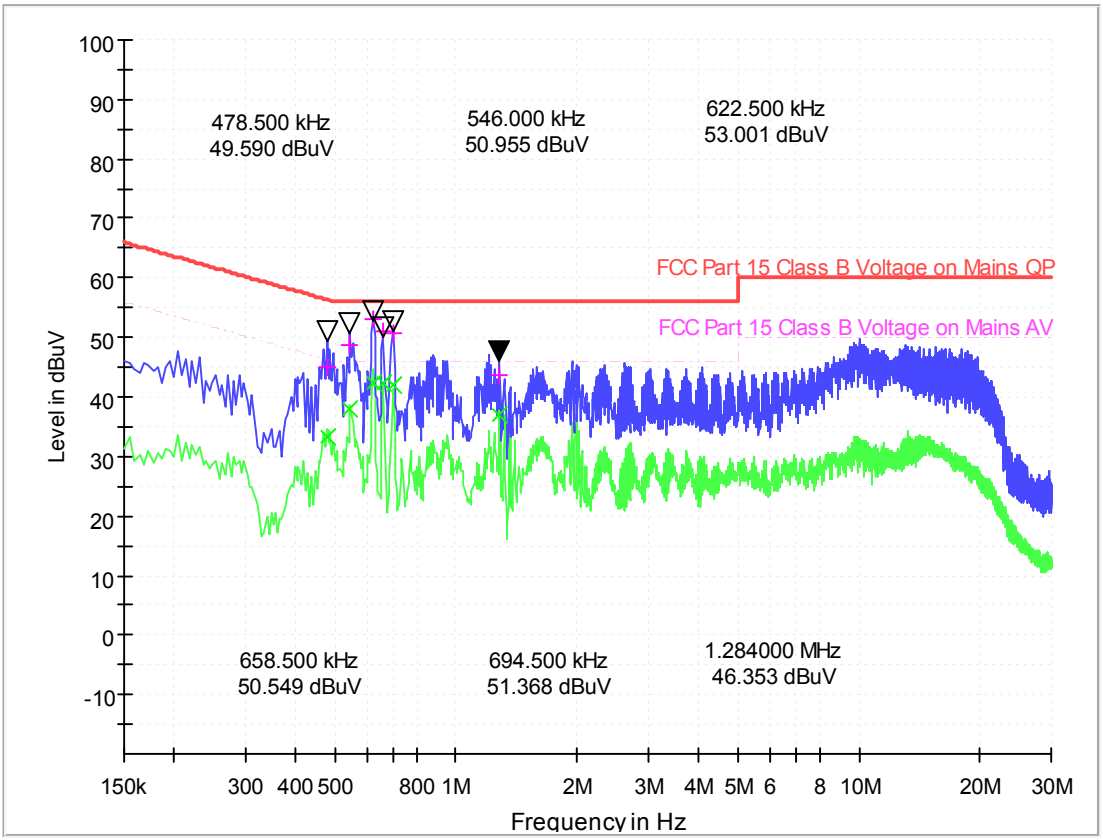


Frequency (MHz)	QuasiPeak (dBµV)	Average (dBµV)	Corr.Factor (dB)	Margin - QPK	Limit - QPK (dBµV)	Margin - AV (dB)	Limit - AV (dBµV)
0.555000	45.58	34.46	10.8	10.42	56.0	11.54	46.0
0.622500	51.46	42.70	10.8	4.54	56.0	3.30	46.0
0.663000	42.15	33.32	10.8	13.85	56.0	12.68	46.0
0.699000	47.02	36.80	10.8	8.98	56.0	9.20	46.0
1.284000	46.35	36.39	10.7	9.65	56.0	9.61	46.0
2.022000	39.08	26.58	10.7	16.92	56.0	19.42	46.0

Test Result : Pass

Note: Final Level = Receiver Read level + Correction factor.

Test site:	Shield ROOM 1	Environment:	Temp: 23℃; Humi:53%;101kPa
Operator:	ZHANG QIANYU	Test Date:	2024.04.29
Test Mode:	BT - TX	Test Part:	N Line



Frequency (MHz)	QuasiPeak (dBµV)	Average (dBµV)	Corr.Factor (dB)	Margin - QPK	Limit - QPK (dBµV)	Margin - AV (dB)	Limit - AV (dBµV)
0.478500	45.16	33.35	10.9	11.21	56.4	13.02	46.4
0.546000	48.69	37.97	10.9	7.31	56.0	8.03	46.0
0.622500	52.92	42.43	10.9	3.08	56.0	3.57	46.0
0.658500	51.08	42.20	10.9	4.92	56.0	3.80	46.0
0.694500	50.69	42.17	10.9	5.31	56.0	3.83	46.0
1.284000	43.61	37.06	10.8	12.39	56.0	8.94	46.0

Test Result : Pass

Note: Final Level = Receiver Read level + Correction factor.

3. List of measuring equipment

Item	Test Equipment	Manufacturer	Model No.	Serial No.	Cal Date	Due Date
1	EMI Test Receiver	ROHDE&SCHWARZ	ESW26	A180502935	2023.06.08	2024.06.07
2	5M Anechoic Chamber	Albatross	SAC-5MAC 12.8x6.8x6.4m	A0304210	2022.06.09	2025.06.08
3	Loop Antenna	Schwarz beck	HFH2-Z2	A0304220	2022.05.02	2025.05.01
4	Broadband antenna (30MHz~1GHz)	R&S	HL562	A0304224	2023.06.08	2024.06.07
5	Broadband antenna (30MHz~1GHz)	R&S	HL562	A0304224	2023.06.08	2026.06.07
6	EMI Horn Ant. (1-18G)	ETC	MCTD-1209	A150402241	2023.05.16	2026.05.15
7	Horn antenna (18GHz~26.5GHz)	AR	AT4510	A0804450	2023.06.01	2026.05.31
8	Amplifier 30M~1GHz	MILMEGA	80RF1000-1000	A140101634	2023.10.20	2024.10.19
9	Amplifier 1G~18GHz	MILMEGA	AS0104R-800/400	A160302517	2023.10.20	2024.10.19
10	Spectrum Analyzer	KEYSIGHT	N9030A	A160702554	2024.01.18	2025.01.17
11	Test Receiver	R&S	ESIB7	A0501375	2024.02.28	2025.02.27
12	Broadband Ant.	ETC	MCTD 2786	A150402240	2023.05.22	2026.05.21
13	3M Anechoic Chamber	Albatross	SAC-3MAC 9*6*6m	A0412375	2024.02.27	2027.02.26
14	Test Receiver	KEYSIGHT	N9038A	A141202036	2023.06.12	2024.06.11
15	LISN	ROHDE&SCHWARZ	ENV216	A140701847	2023.06.08	2024.06.07

4. Uncertainty of Evaluation

The measurement uncertainties shown below were calculated in accordance with the requirements of ANSI C63.10-2020. All the measurement uncertainty value were shown with a coverage K=2 to indicate 95% level of confidence . The measurement data show herein meets or exceeds the CISPR measurement uncertainty values specified in CISPR 16-4-2 and can be compared directly to specified limit to determine compliance.

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

Measuring Uncertainty for a level of confidence of 95%(U=2Uc(y))	2.8dB

Uncertainty of Radiated Emission Measurement (9kHz~30MHz)

Measuring Uncertainty for a level of confidence of 95%(U=2Uc(y))	3.5dB

Uncertainty of Radiated Emission Measurement (30MHz~1GHz)

Measuring Uncertainty for a level of confidence of 95%(U=2Uc(y))	3.91dB

Uncertainty of Radiated Emission Measurement (1GHz~18GHz)

Measuring Uncertainty for a level of confidence of 95%(U=2Uc(y))	4.5dB

Uncertainty of Radiated Emission Measurement (18GHz~40GHz)

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

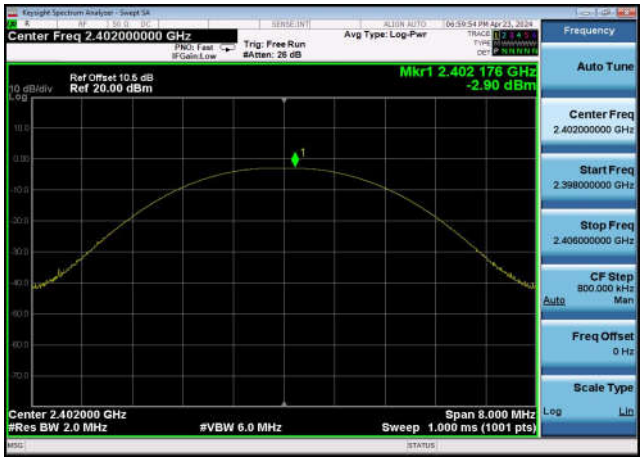
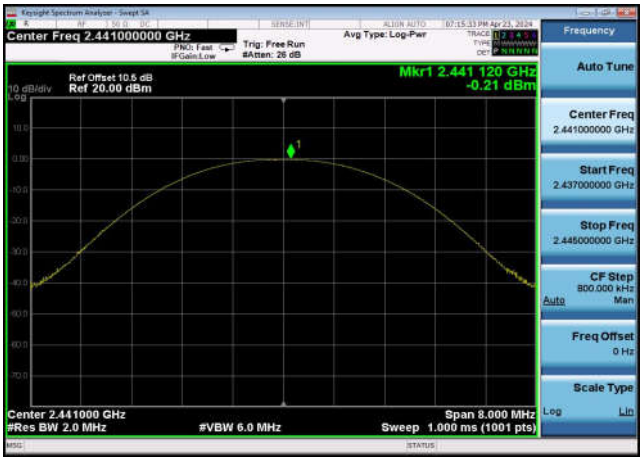
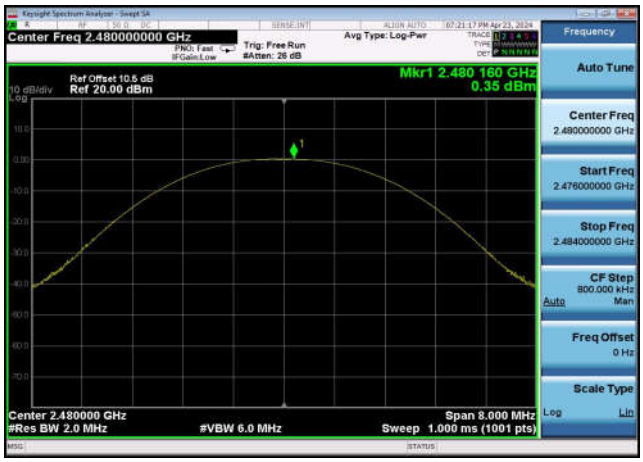
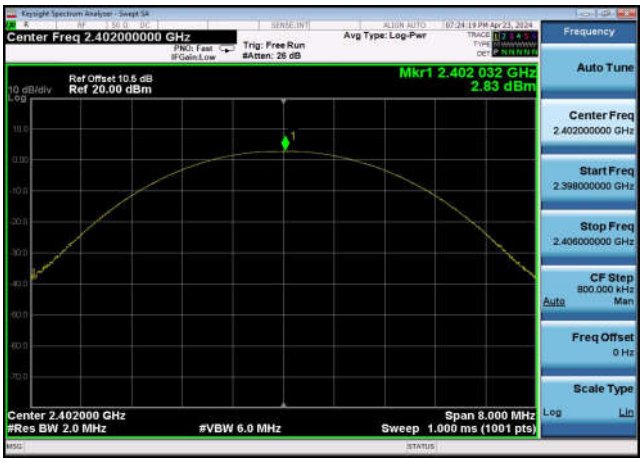
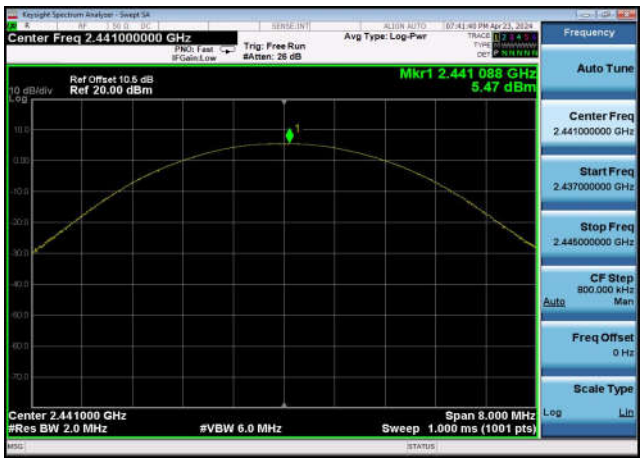
Uncertainty of RF Conducted Measurement (9kHz~40GHz)

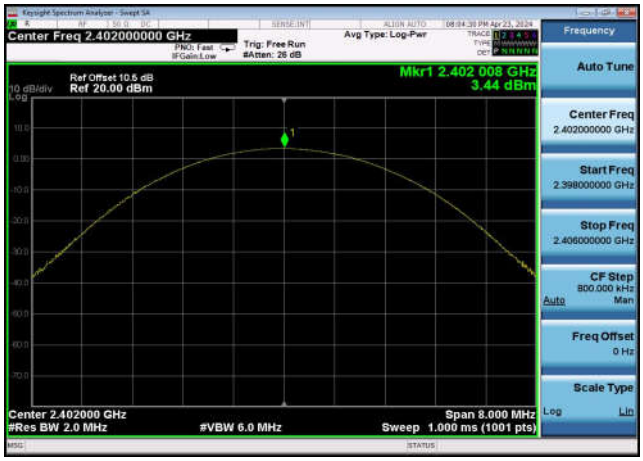
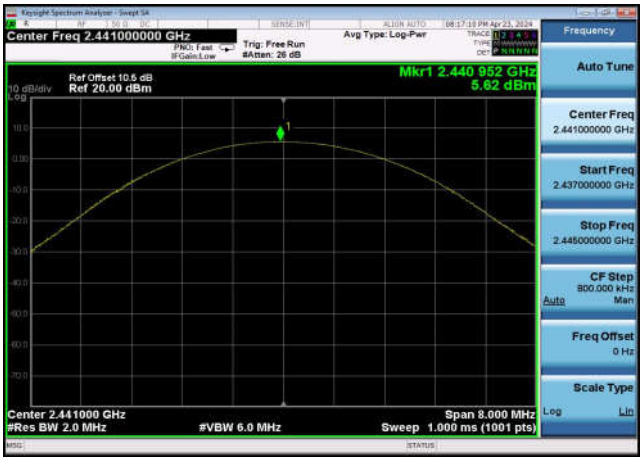
Measuring Uncertainty for a level of confidence of 95%(U=2Uc(y))	1.3dB

Appendix A

RF Output Power
Test Result and Data

BT Maximum Output Power					
Mode	Test Frequency	Packet Type	Power (dBm)	Limit (dBm)	Result
GFSK	2402	DH5	-2.90	30.00	Pass
GFSK	2441	DH5	-0.21	30.00	Pass
GFSK	2480	DH5	0.35	30.00	Pass
π/4-DQPSK	2402	2DH5	2.83	30.00	Pass
π/4-DQPSK	2441	2DH5	5.48	30.00	Pass
π/4-DQPSK	2480	2DH5	6.53	30.00	Pass
8DPSK	2402	3DH5	3.44	30.00	Pass
8DPSK	2441	3DH5	5.62	30.00	Pass
8DPSK	2480	3DH5	6.79	30.00	Pass

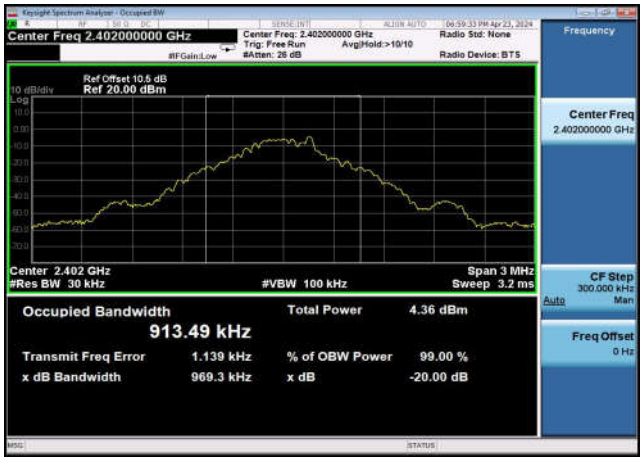
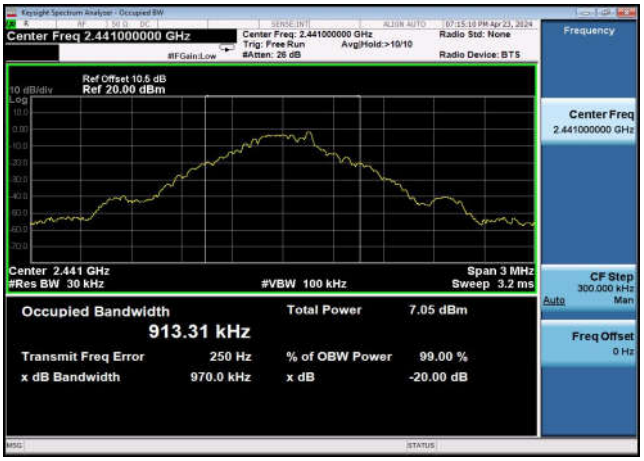
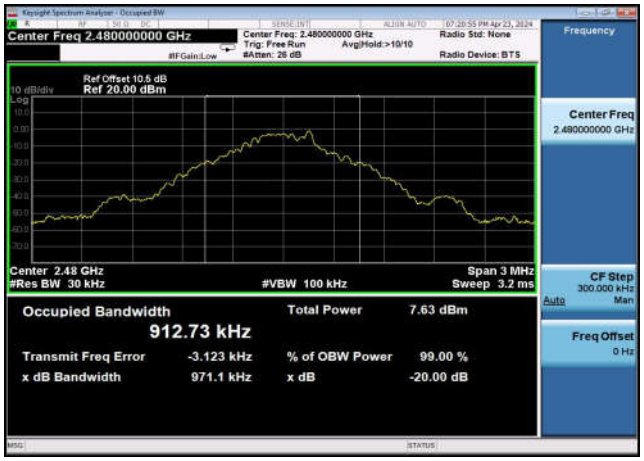
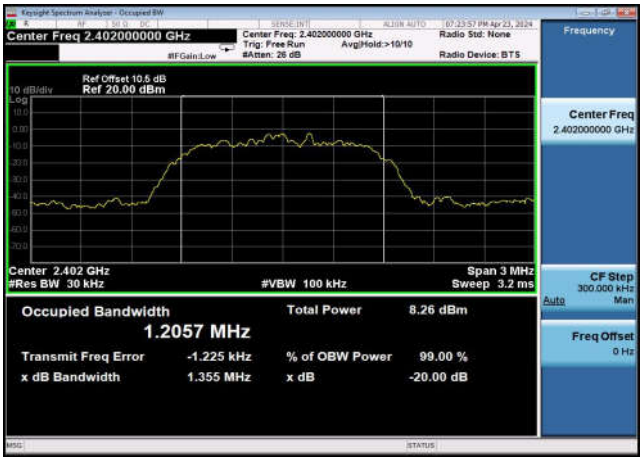
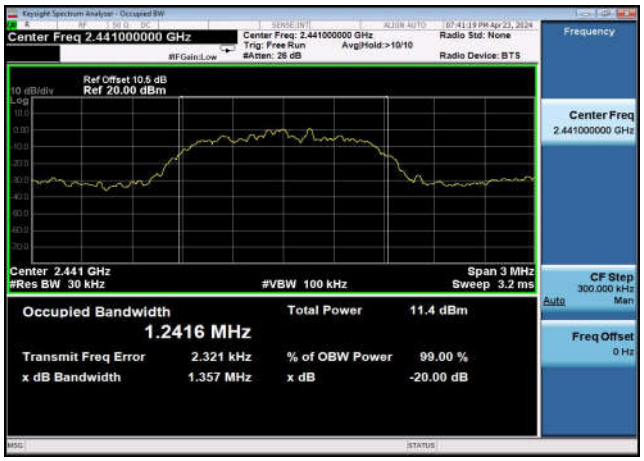
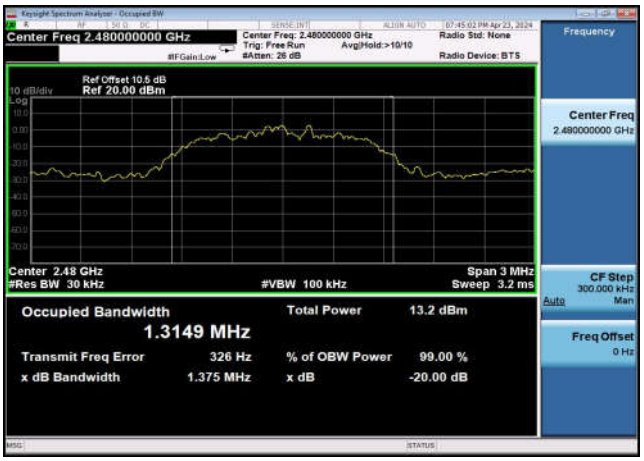
Output Power：GFSK,2402MHz,DH5	Output Power：GFSK,2441MHz,DH5
	
Output Power：GFSK,2480MHz,DH5	**Output Power：DQPSK,2402MHz,2DH5**
	
Output Power：DQPSK,2441MHz,2DH5	**Output Power：DQPSK,2480MHz,2DH5**
	

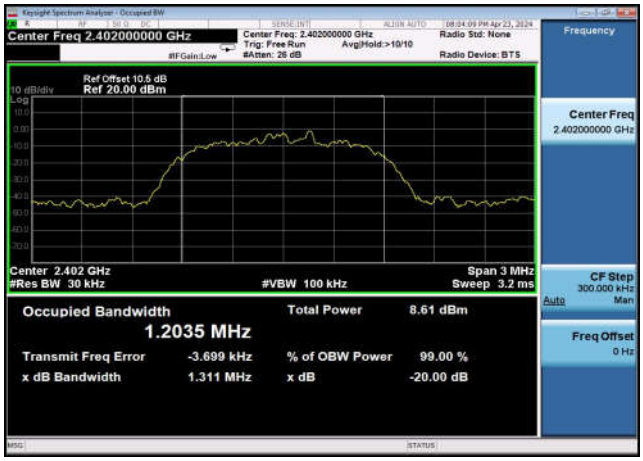
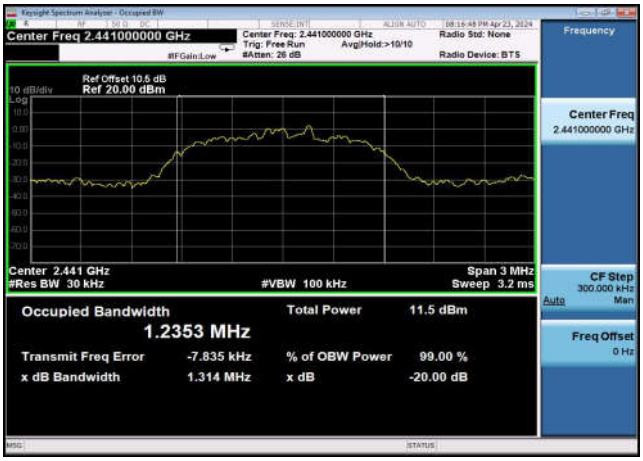
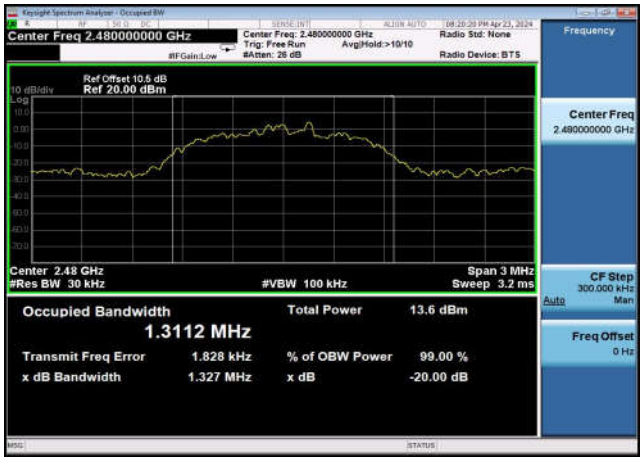
Output Power：8DPSK,2402MHz,3DH5	Output Power：8DPSK,2441MHz,3DH5
	
Output Power：8DPSK,2480MHz,3DH5	
	

20dB Emission Bandwidth

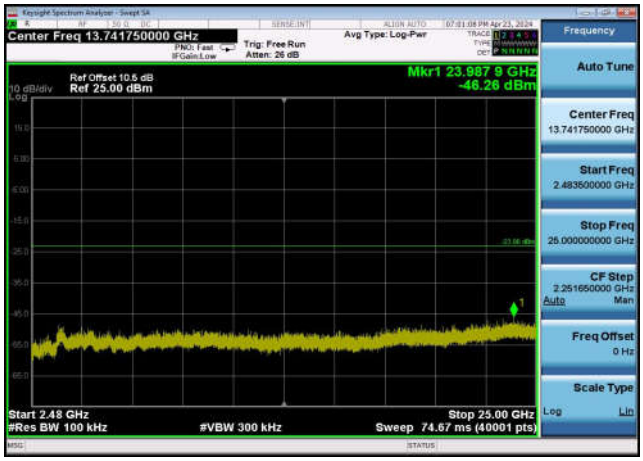
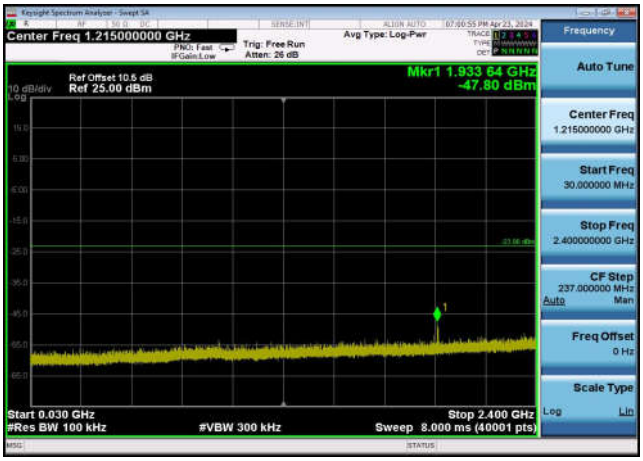
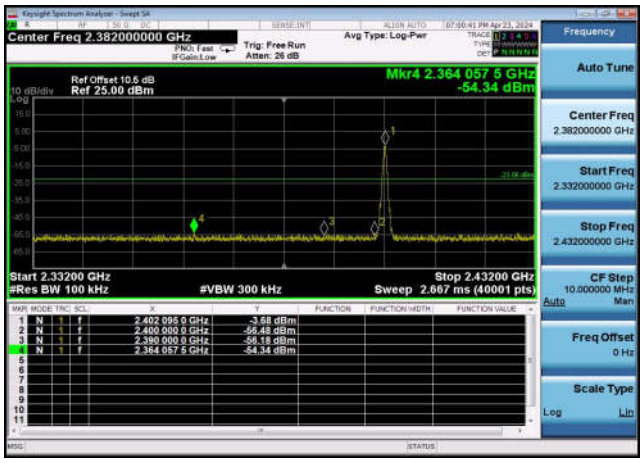
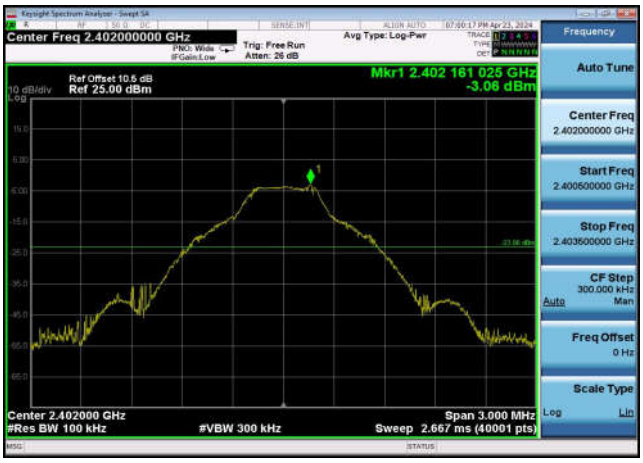
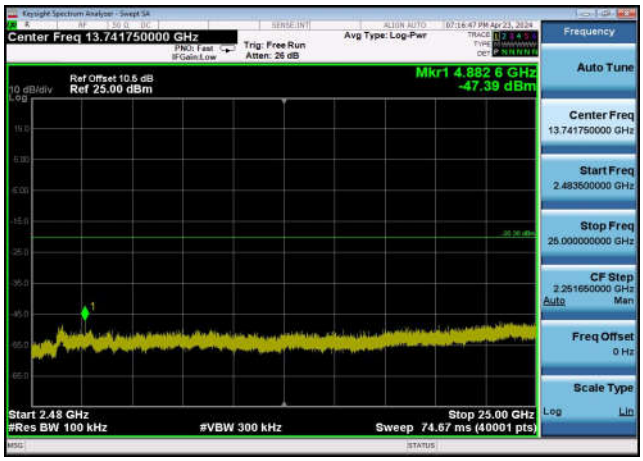
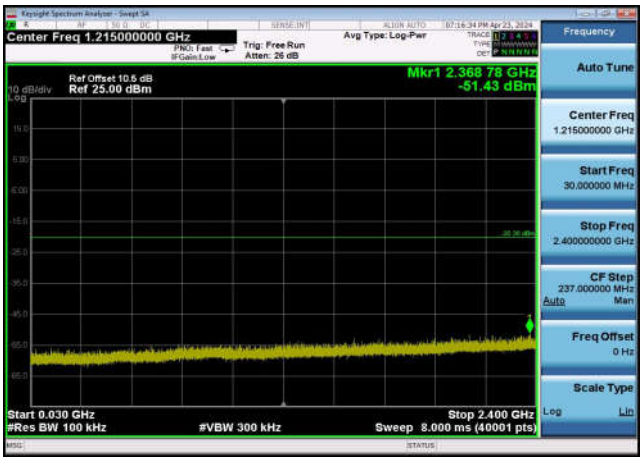
Test Result and Data

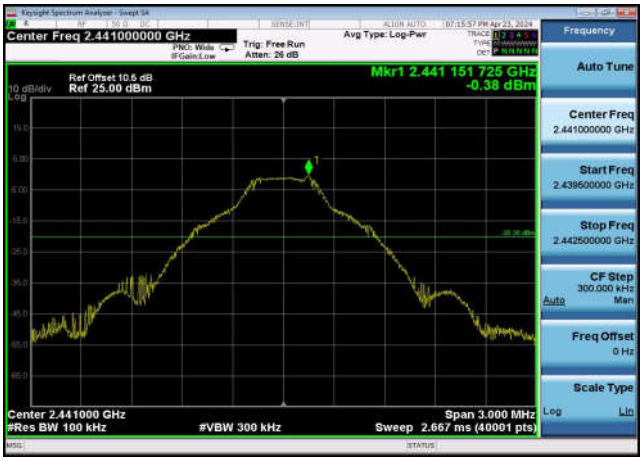
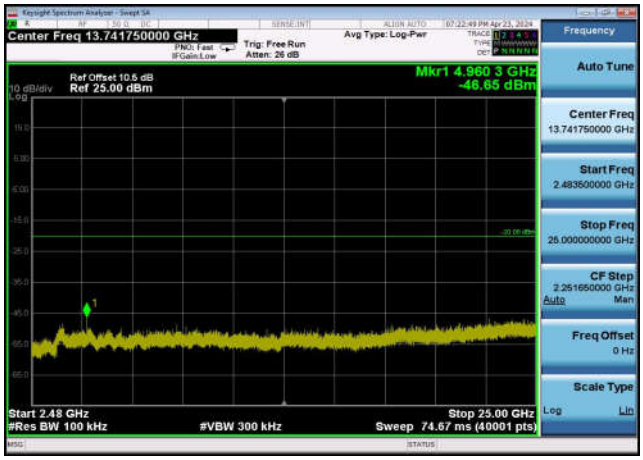
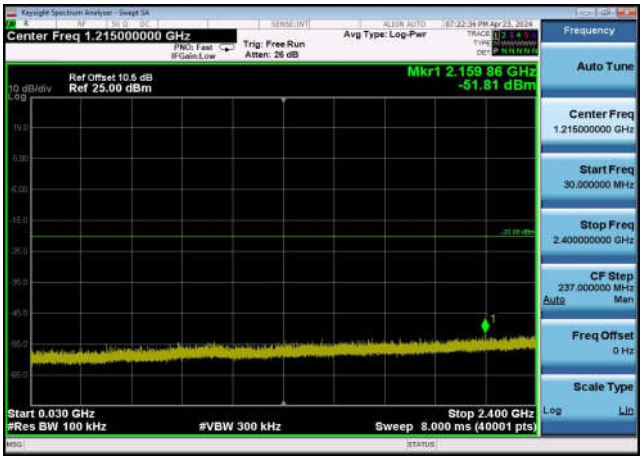
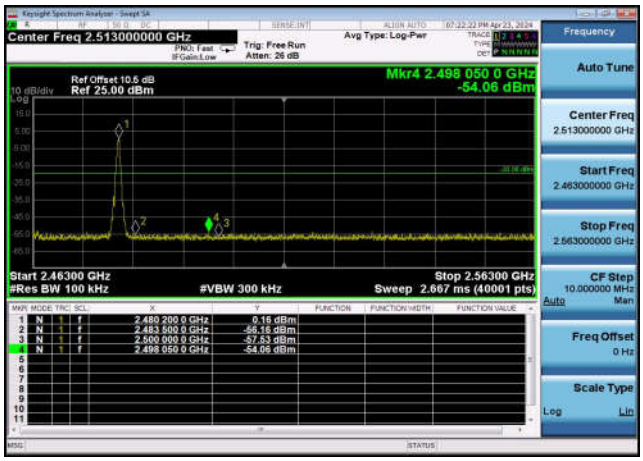
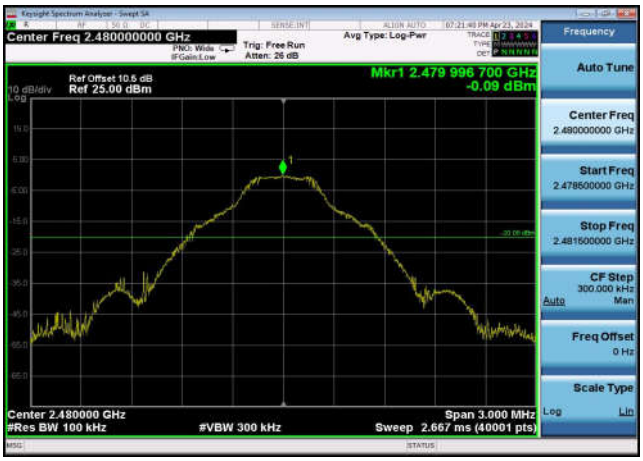
BT 20dB Emission Bandwidth				
Mode	Test Frequency	Packet Type	20dB EBW(kHz)	Result
GFSK	2402	DH5	969.266	Pass
GFSK	2441	DH5	970.04	Pass
GFSK	2480	DH5	971.117	Pass
π/4-DQPSK	2402	2DH5	1355.334	Pass
π/4-DQPSK	2441	2DH5	1357.496	Pass
π/4-DQPSK	2480	2DH5	1375.279	Pass
8DPSK	2402	3DH5	1310.79	Pass
8DPSK	2441	3DH5	1314.134	Pass
8DPSK	2480	3DH5	1327.44	Pass

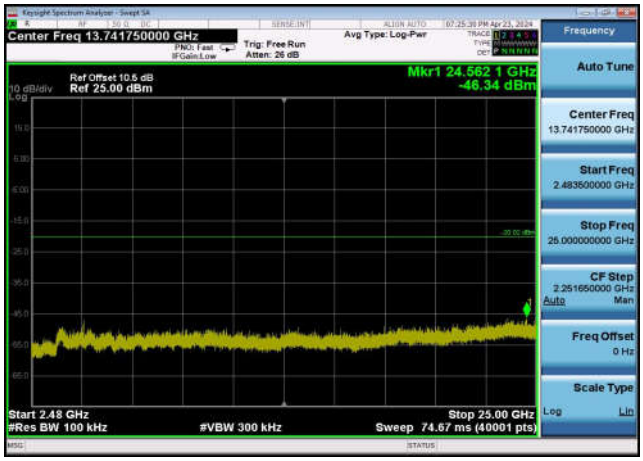
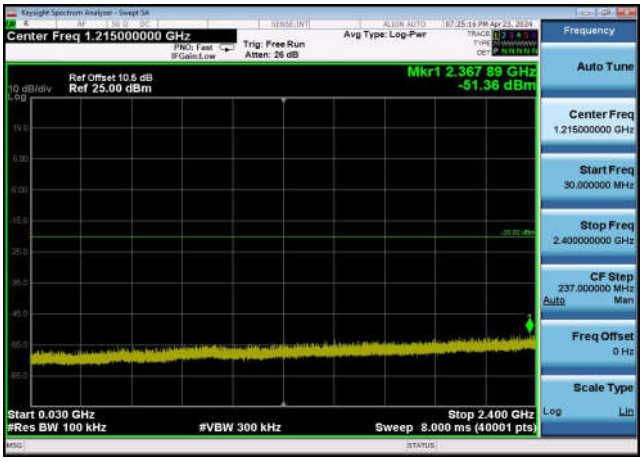
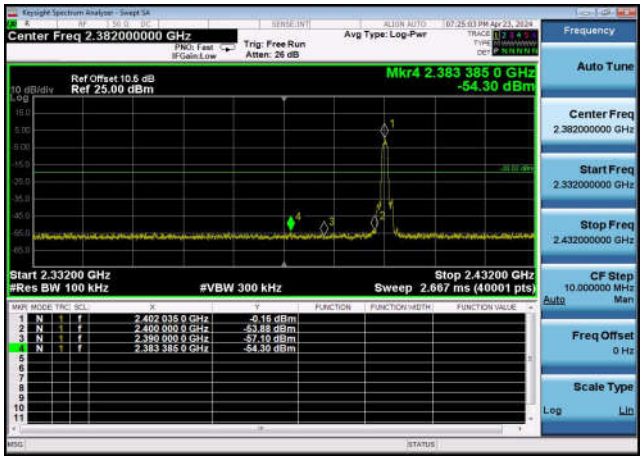
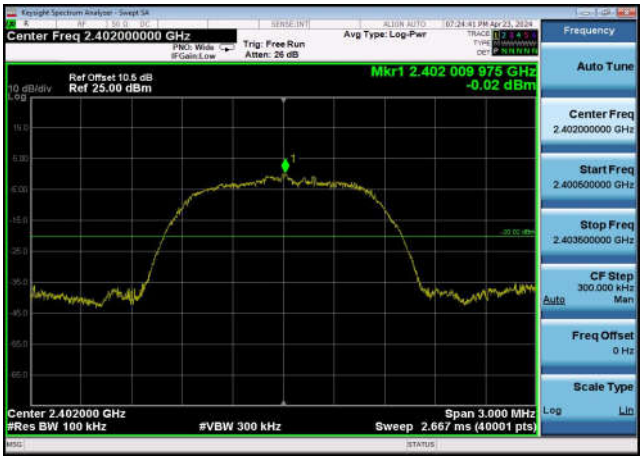
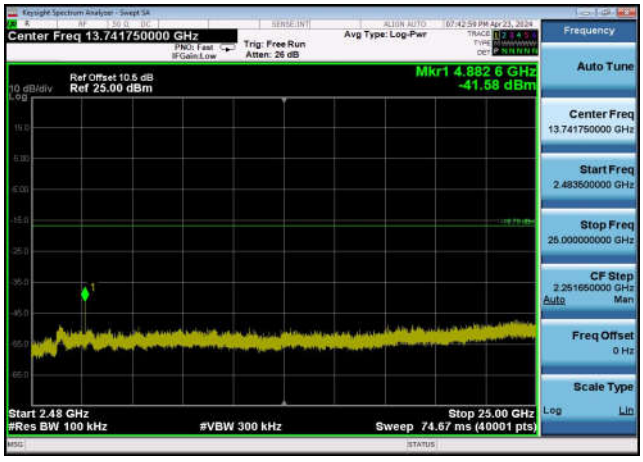
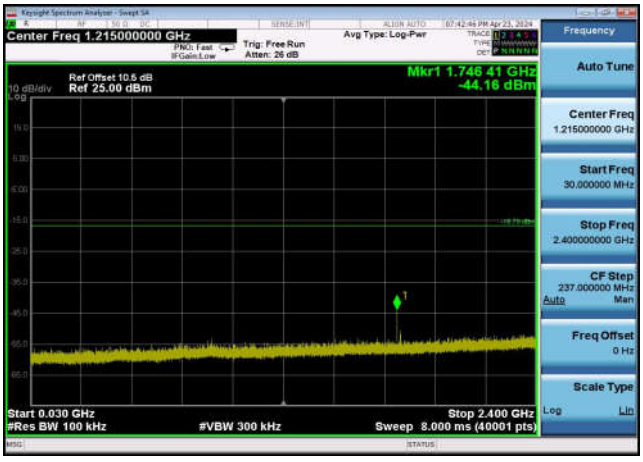
20dB Bandwidth：GFSK,2402MHz,DH5	20dB Bandwidth：GFSK,2441MHz,DH5
	
20dB Bandwidth：GFSK,2480MHz,DH5	20dB Bandwidth：DQPSK,2402MHz,2DH5
	
20dB Bandwidth：DQPSK,2441MHz,2DH5	20dB Bandwidth：DQPSK,2480MHz,2DH5
	

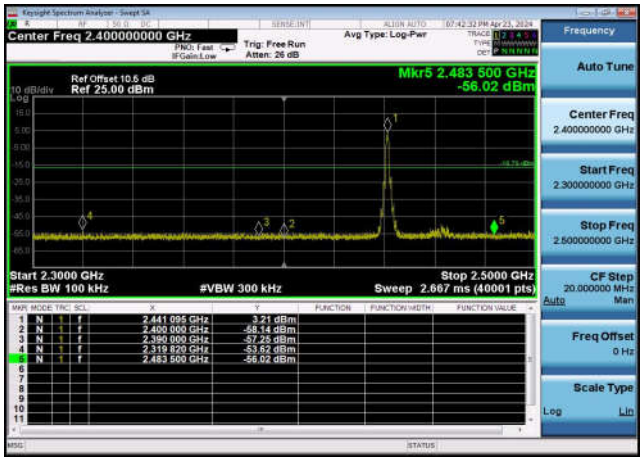
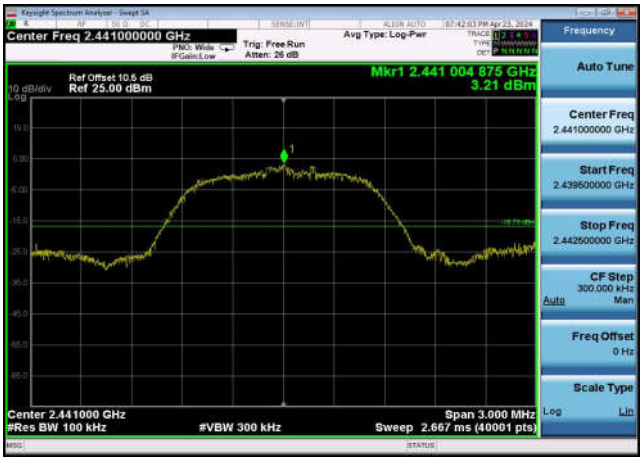
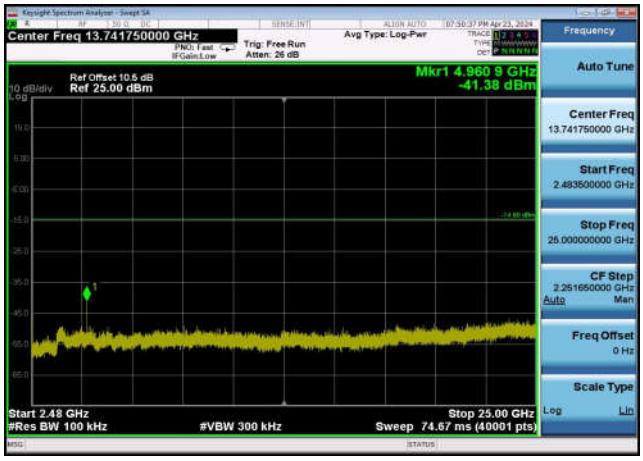
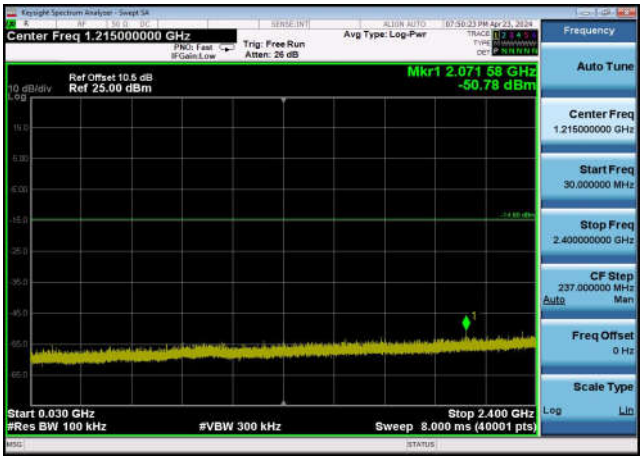
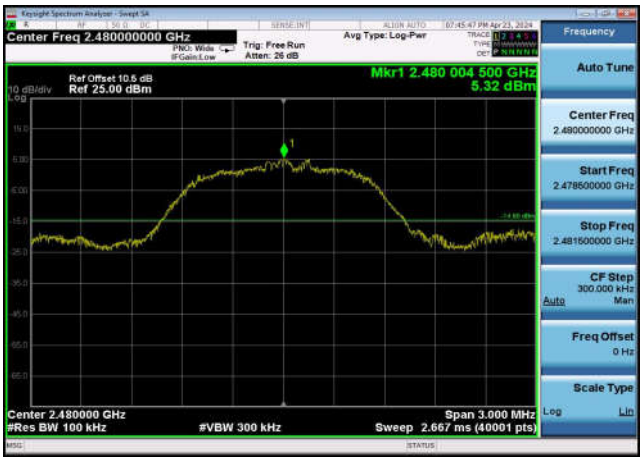
20dB Bandwidth：8DPSK,2402MHz,3DH5	20dB Bandwidth：8DPSK,2441MHz,3DH5
	
20dB Bandwidth：8DPSK,2480MHz,3DH5	
	

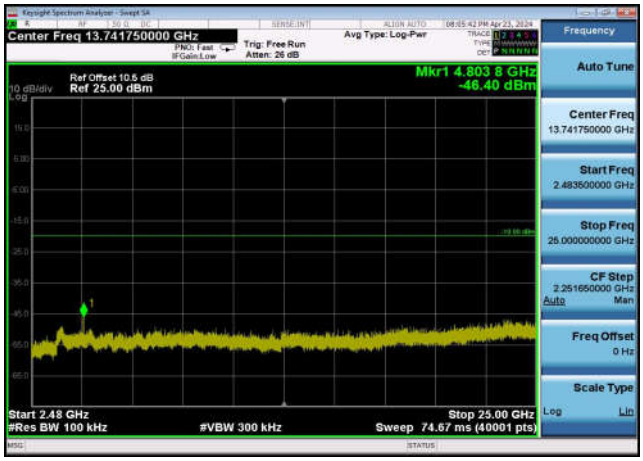
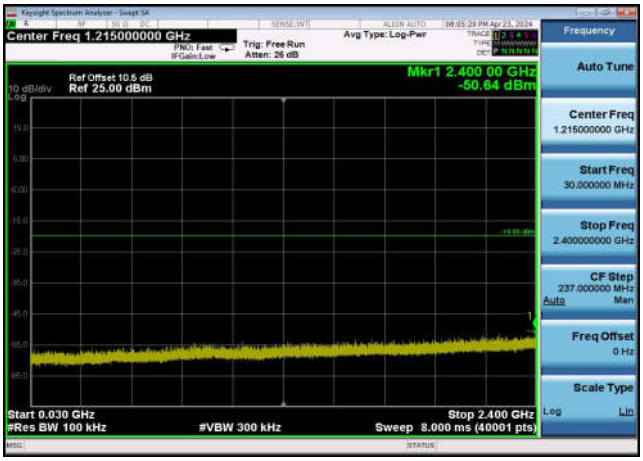
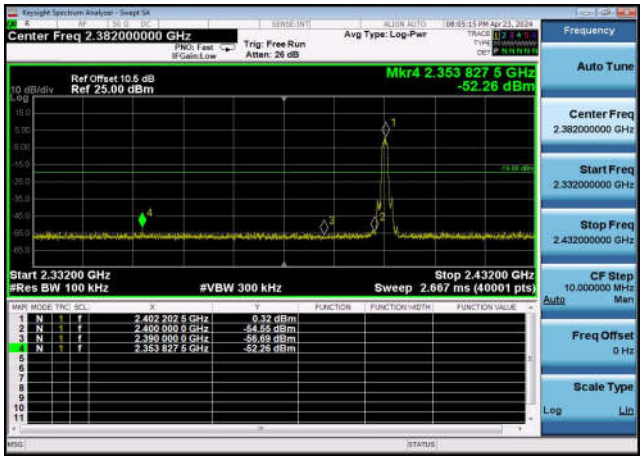
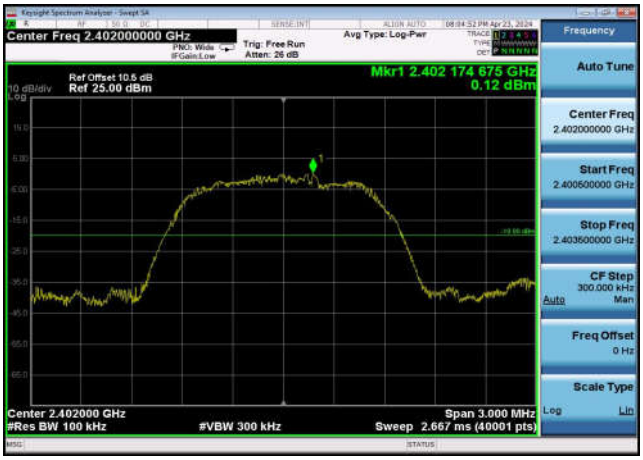
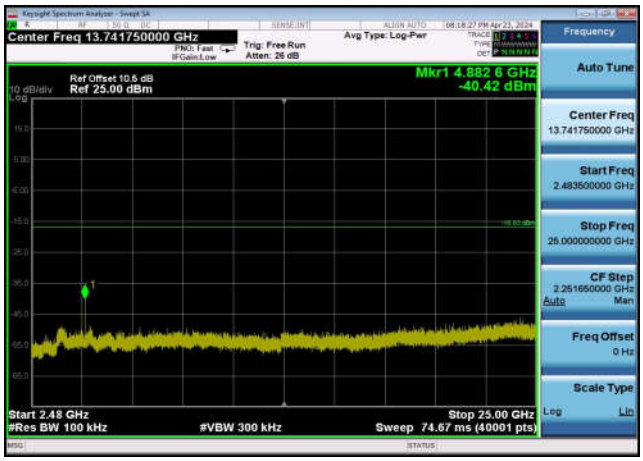
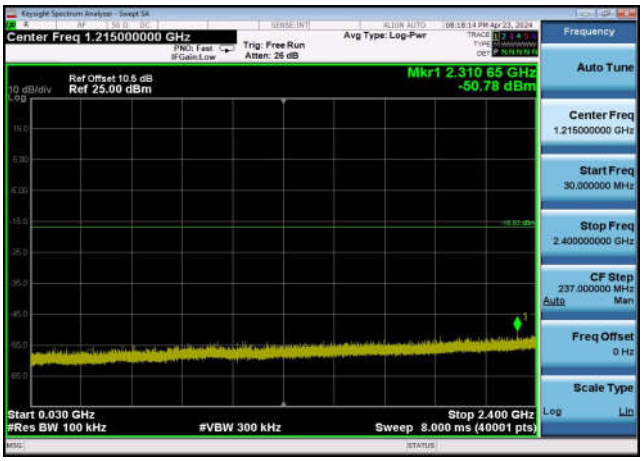
Transmitter Spurious Emission and Bandedge

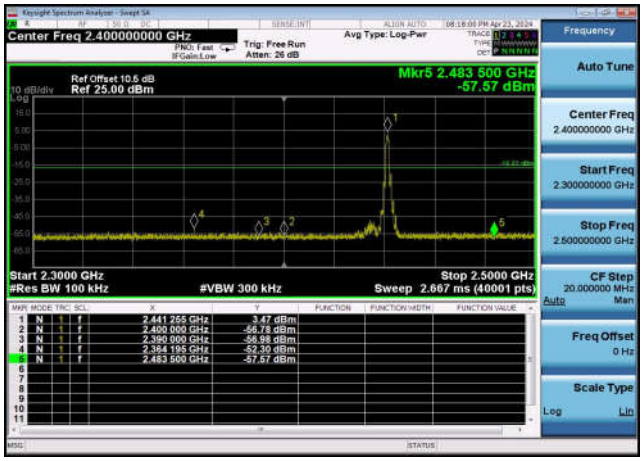
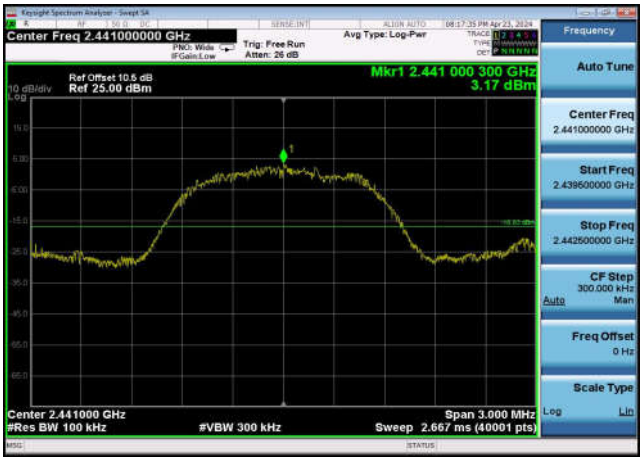
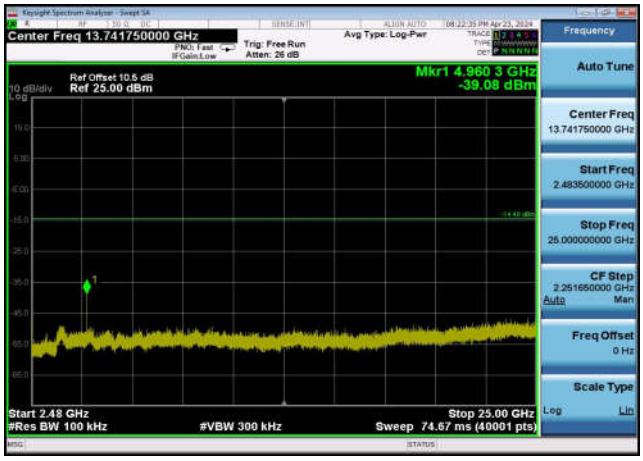
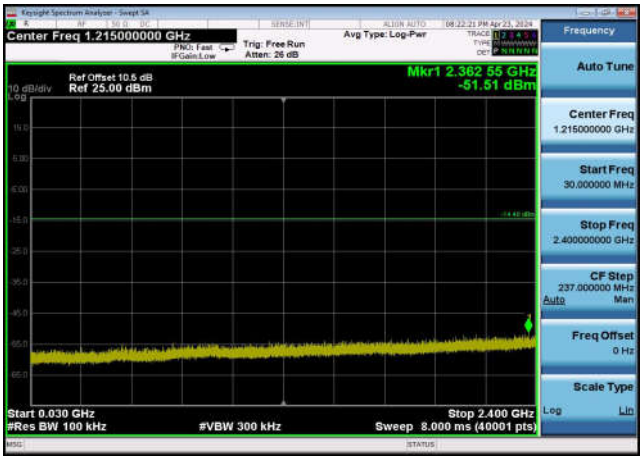
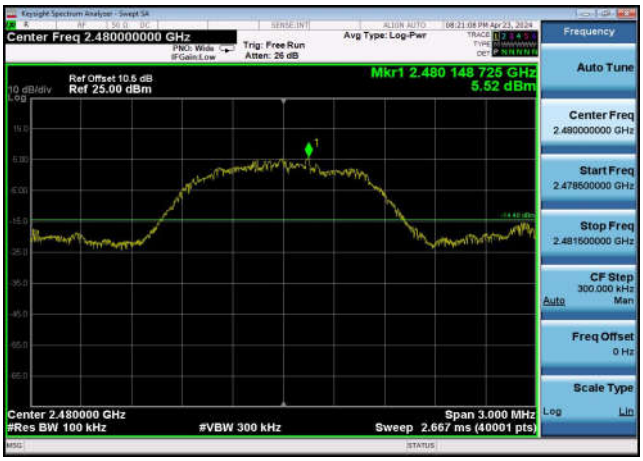
Conducted Emission：GFSK,2402,DH5 ,2483.5MHz~25000MHz	Conducted Emission：GFSK,2402,DH5 ,30MHz~2400MHz
	
Conducted Emission：GFSK,2402,DH5 ,Band Edge HoppingOFF	Conducted Emission：GFSK,2402,DH5 ,Reference Level
	
Conducted Emission：GFSK,2441,DH5 ,2483.5MHz~25000MHz	Conducted Emission：GFSK,2441,DH5 ,30MHz~2400MHz
	

Conducted Emission：GFSK,2441,DH5 ,Band Edge HoppingOFF	Conducted Emission：GFSK,2441,DH5 ,Reference Level
	
Conducted Emission：GFSK,2480,DH5 ,2483.5MHz~25000MHz	Conducted Emission：GFSK,2480,DH5 ,30MHz~2400MHz
	
Conducted Emission：GFSK,2480,DH5 ,Band Edge HoppingOFF	Conducted Emission：GFSK,2480,DH5 ,Reference Level
	

Conducted Emission：DQPSK,2402,2DH5 ,2483.5MHz~25000MHz	Conducted Emission：DQPSK,2402,2DH5 ,30MHz~2400MHz
	
Conducted Emission：DQPSK,2402,2DH5 ,Band Edge HoppingOFF	Conducted Emission：DQPSK,2402,2DH5 ,Reference Level
	
Conducted Emission：DQPSK,2441,2DH5 ,2483.5MHz~25000MHz	Conducted Emission：DQPSK,2441,2DH5 ,30MHz~2400MHz
	

Conducted Emission：DQPSK,2441,2DH5 ,Band Edge HoppingOFF	Conducted Emission：DQPSK,2441,2DH5 ,Reference Level
	
Conducted Emission：DQPSK,2480,2DH5 ,2483.5MHz~25000MHz	Conducted Emission：DQPSK,2480,2DH5 ,30MHz~2400MHz
	
Conducted Emission：DQPSK,2480,2DH5 ,Band Edge HoppingOFF	Conducted Emission：DQPSK,2480,2DH5 ,Reference Level
	

Conducted Emission：8DPSK,2402,3DH5 ,2483.5MHz~25000MHz	Conducted Emission：8DPSK,2402,3DH5 ,30MHz~2400MHz
	
Conducted Emission：8DPSK,2402,3DH5 ,Band Edge HoppingOFF	Conducted Emission：8DPSK,2402,3DH5 ,Reference Level
	
Conducted Emission：8DPSK,2441,3DH5 ,2483.5MHz~25000MHz	Conducted Emission：8DPSK,2441,3DH5 ,30MHz~2400MHz
	

Conducted Emission：8DPSK,2441,3DH5 ,Band Edge HoppingOFF	Conducted Emission：8DPSK,2441,3DH5 ,Reference Level
	
Conducted Emission：8DPSK,2480,3DH5 ,2483.5MHz~25000MHz	Conducted Emission：8DPSK,2480,3DH5 ,30MHz~2400MHz
	
Conducted Emission：8DPSK,2480,3DH5 ,Band Edge HoppingOFF	Conducted Emission：8DPSK,2480,3DH5 ,Reference Level
	

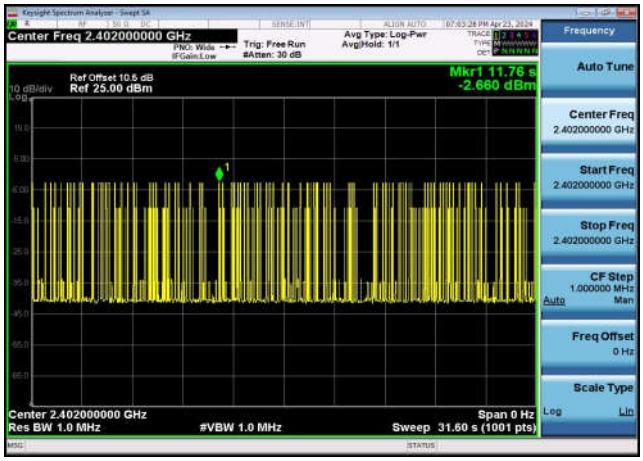
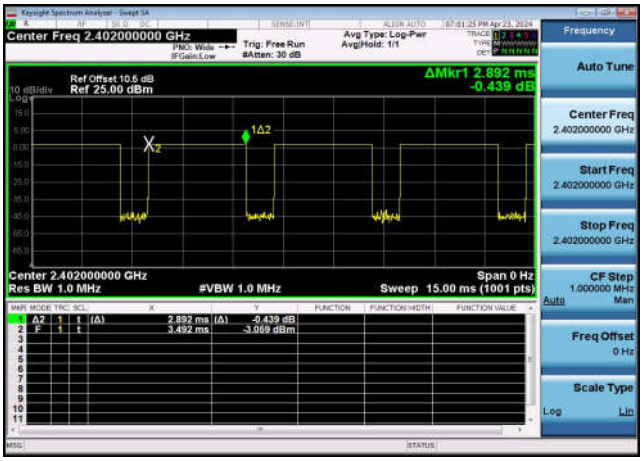
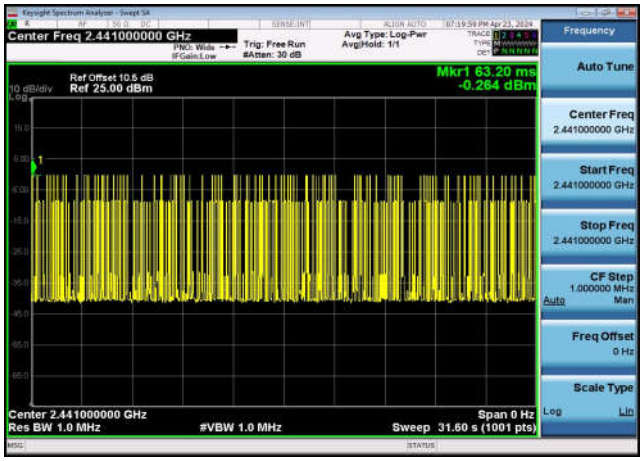
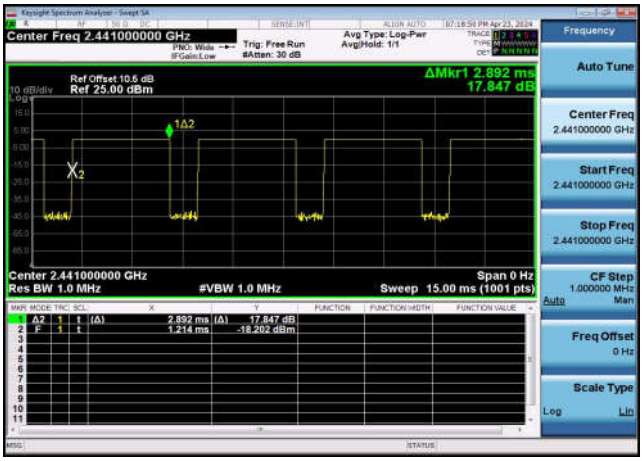
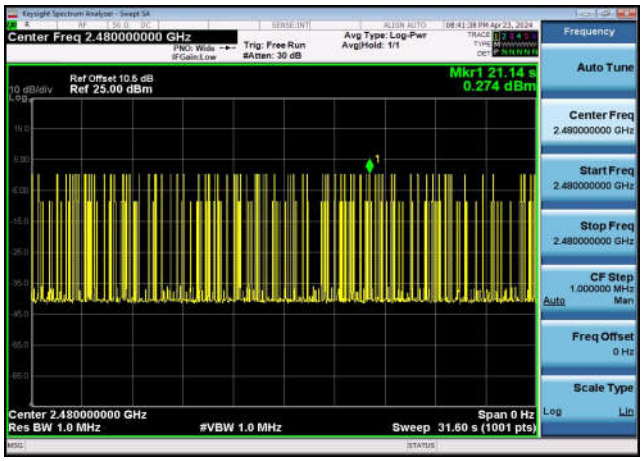
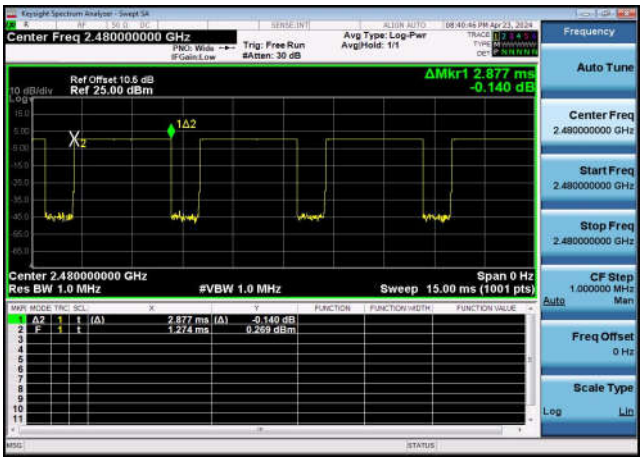
Hopping On Mode
Test Result and Data

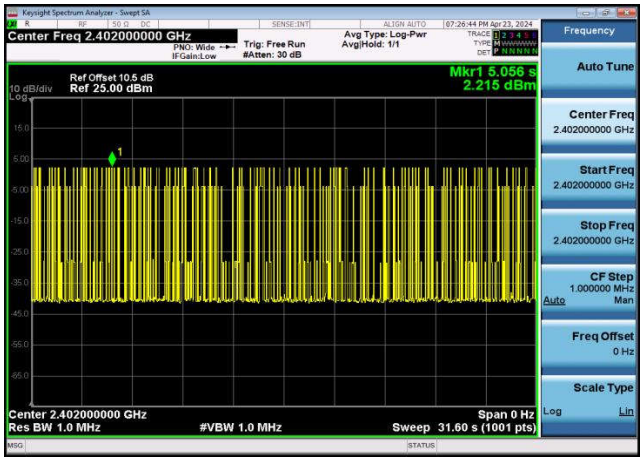
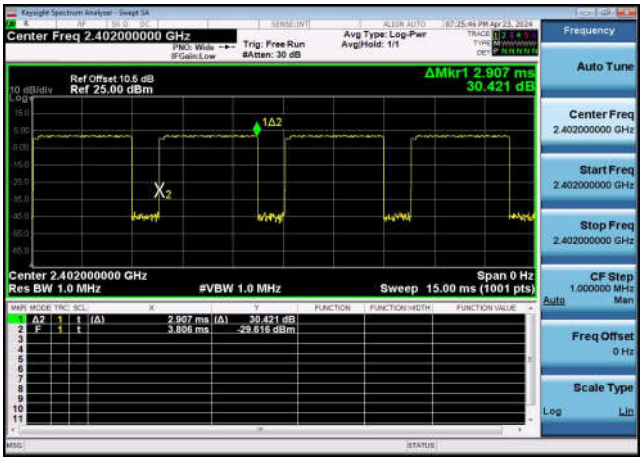
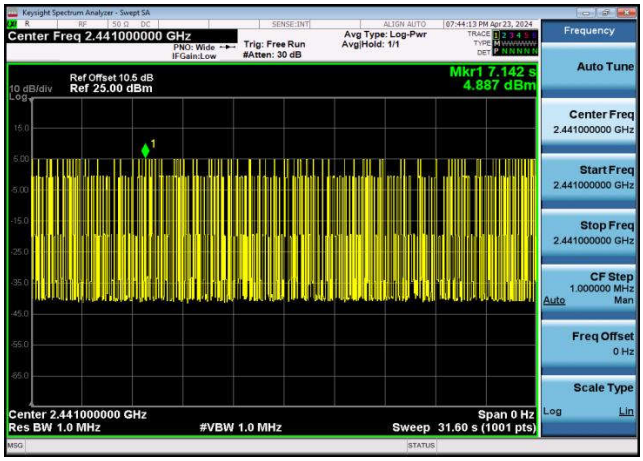
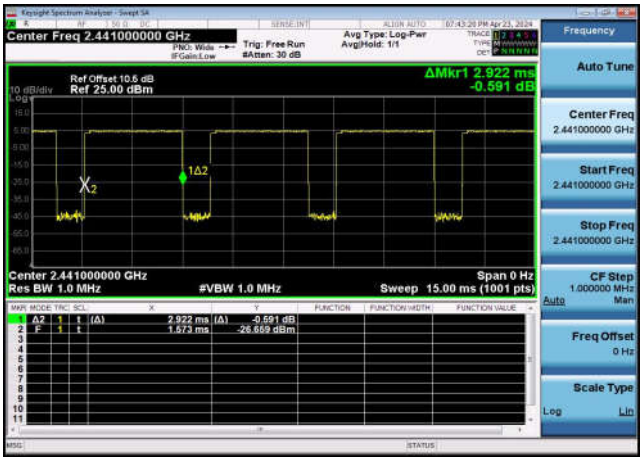
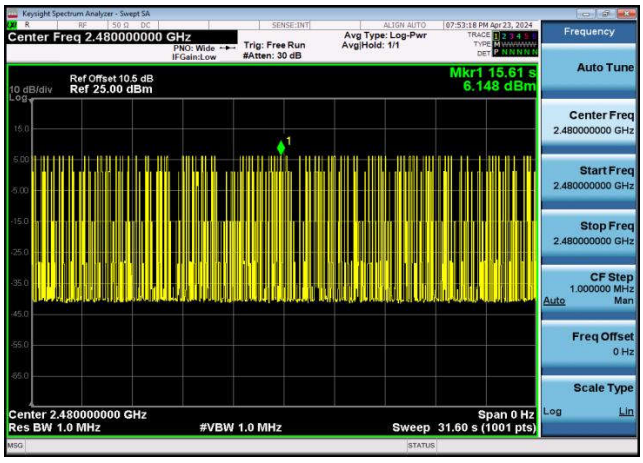
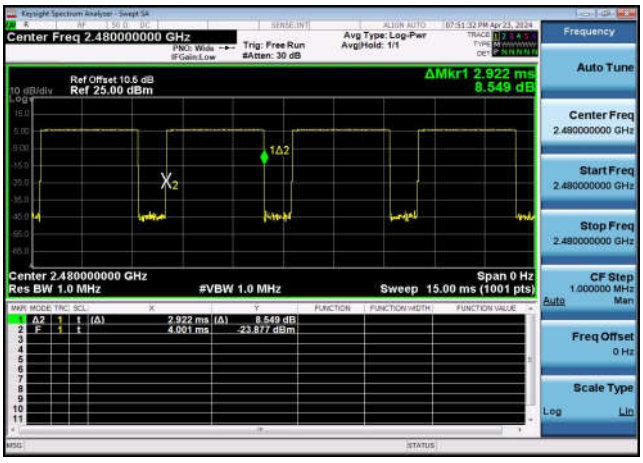
Conducted Emission：GFSK,2402,DH5 ,Band Edge	Conducted Emission：GFSK,2480,DH5 ,Band Edge
	
Conducted Emission：DQPSK,2402,2DH5 ,Band Edge	Conducted Emission：DQPSK,2480,2DH5 ,Band Edge
	
Conducted Emission：8DPSK,2402,3DH5 ,Band Edge	Conducted Emission：8DPSK,2480,3DH5 ,Band Edge
	

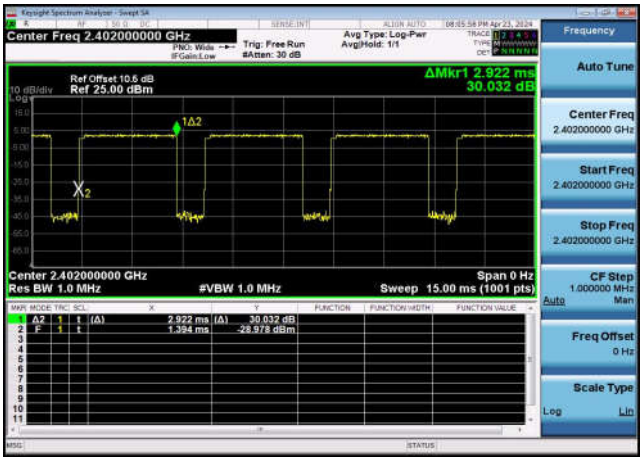
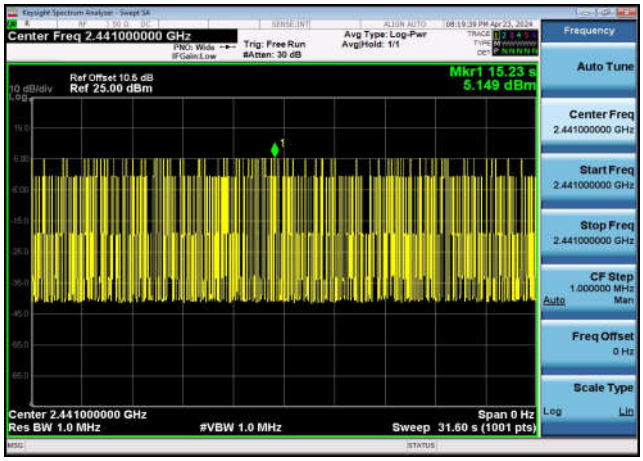
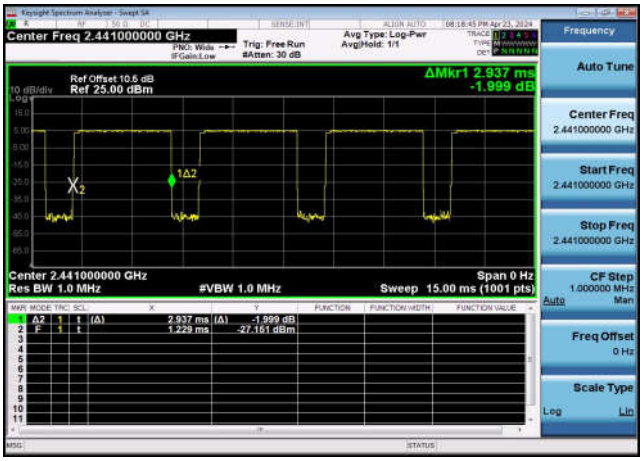
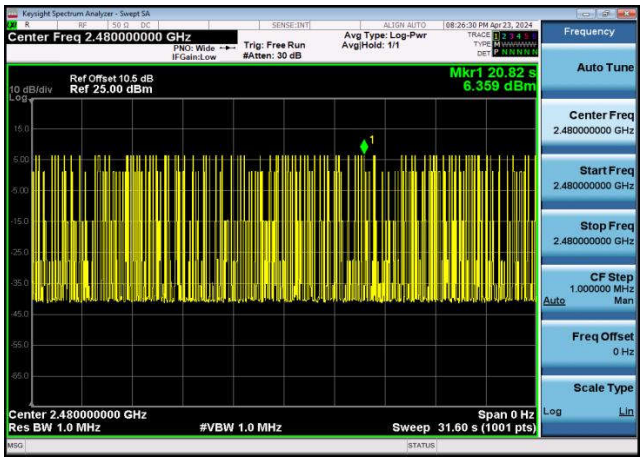
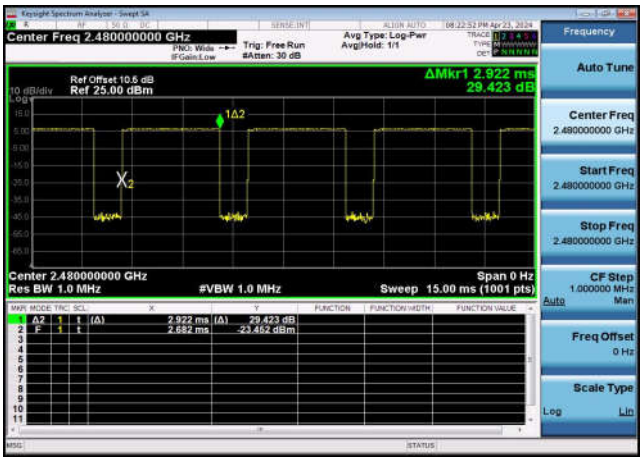
Dwell Time

Test Result and Data

BT Dwell Time						
Mode	Test Frequency	Packet Type	Transmission Time (ms)	Number	Dwell Time (ms)	Result
GFSK	2402	DH5	2.89	94	271.86	Pass
GFSK	2441	DH5	2.89	99	286.32	Pass
GFSK	2480	DH5	2.88	87	250.31	Pass
π/4-DQPSK	2402	2DH5	2.91	105	305.24	Pass
π/4-DQPSK	2441	2DH5	2.92	89	260.06	Pass
π/4-DQPSK	2480	2DH5	2.92	98	286.36	Pass
8DPSK	2402	3DH5	2.92	88	257.14	Pass
8DPSK	2441	3DH5	2.94	78	229.09	Pass
8DPSK	2480	3DH5	2.92	92	268.83	Pass

GFSK,2402,DH5,Transmission Number	GFSK,2402,DH5,Transmission Time
	
GFSK,2441,DH5,Transmission Number	GFSK,2441,DH5,Transmission Time
	
GFSK,2480,DH5,Transmission Number	GFSK,2480,DH5,Transmission Time
	

DQPSK,2402,2DH5,Transmission Number	DQPSK,2402,2DH5,Transmission Time
	
DQPSK,2441,2DH5,Transmission Number	DQPSK,2441,2DH5,Transmission Time
	
DQPSK,2480,2DH5,Transmission Number	DQPSK,2480,2DH5,Transmission Time
	

8DPSK,2402,3DH5,Transmission Number	8DPSK,2402,3DH5,Transmission Time
	
8DPSK,2441,3DH5,Transmission Number	8DPSK,2441,3DH5,Transmission Time
	
8DPSK,2480,3DH5,Transmission Number	8DPSK,2480,3DH5,Transmission Time
	

Carrier Frequency Separation
Test Result and Data

BT Carrier Frequency Separation						
Mode	Test Frequency	Packet Type	Range (MHz~MHz)	Separation (kHz)	Min Limit (kHz)	Result
GFSK	Hopping	DH5	2401.5MHz~2403.5MHz	1005	969.266	Pass
GFSK	Hopping	DH5	2440.5MHz~2442.5MHz	1001	970.04	Pass
GFSK	Hopping	DH5	2478.5MHz~2480.5MHz	955.04	971.117	Pass
π/4-DQPSK	Hopping	2DH5	2401.5MHz~2403.5MHz	1036.96	903.556	Pass
π/4-DQPSK	Hopping	2DH5	2440.5MHz~2442.5MHz	1176.82	904.997	Pass
π/4-DQPSK	Hopping	2DH5	2478.5MHz~2480.5MHz	997	916.853	Pass
8DPSK	Hopping	3DH5	2401.5MHz~2403.5MHz	1048.95	873.860	Pass
8DPSK	Hopping	3DH5	2440.5MHz~2442.5MHz	1003	876.089	Pass
8DPSK	Hopping	3DH5	2478.5MHz~2480.5MHz	1180.82	884.960	Pass

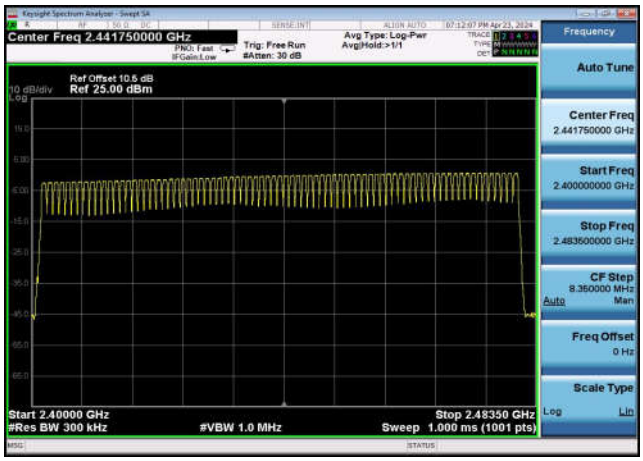
GFSK,HoppingDH5,2401.5~2403.5	GFSK,HoppingDH5,2440.5~2442.5
	
GFSK,HoppingDH5,2478.5~2480.5	DQPSK,Hopping2DH5,2401.5~2403.5
	
DQPSK,Hopping2DH5,2440.5~2442.5	DQPSK,Hopping2DH5,2478.5~2480.5
	

8DPSK,Hopping3DH5,2401.5~2403.5	8DPSK,Hopping3DH5,2440.5~2442.5
	
8DPSK,Hopping3DH5,2478.5~2480.5	
	

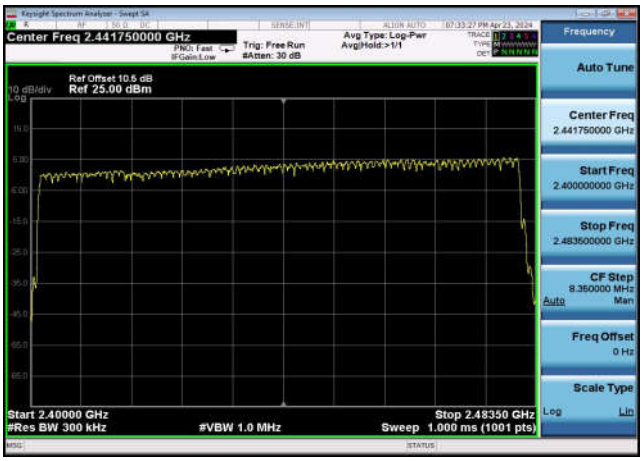
Hopping Channel Numbers
Test Result and Data

BT Number Of Hopping Channels					
Mode	Test Frequency	Packet Type	Test Range(MHz~MHz)	Limit	Result
GFSK	Hopping	DH5	2400~2483.5	≥15	Pass
pi/4DQPSK	Hopping	2DH5	2400~2483.5	≥15	Pass
8DPSK	Hopping	3DH5	2400~2483.5	≥15	Pass

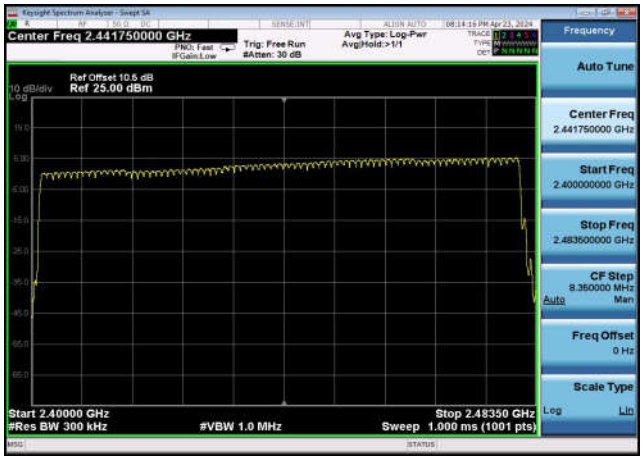
Number Of Hopping Channels：GFSK ,HoppingMhz,DH5__2400~2483.5



Number Of Hopping Channels：DQPSK ,HoppingMhz,2DH5__2400~2483.5



Number Of Hopping Channels：8DPSK ,HoppingMhz,3DH5__2400~2483.5



END OF REPORT