RF TEST REPORT

Report No.: SET2022-04868

Product Name: 5G NR Multi model smart phone

Model No.: ZTE 7540N

FCC ID: SRQ-ZTE7540N

Applicant: ZTE CORPORATION.

Address: ZTE Plaza, Keji Road South, Hi-Tech, Industrial Park,Nanshan District, Shenzhen, Guangdong, P.R.China.

Dates of Testing: 2022.04.08-2022.06.07

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 **Fax:** 86 755 26627238

Test Report

Product Name.....:	5G NR Multi model smart phone
Brand Name.....:	ZTE
Trade Name.....:	ZTE
Applicant.....:	ZTE CORPORATION.
Applicant Address.....:	ZTE Plaza, Keji Road South, Hi-Tech, Industrial Park,Nanshan District, Shenzhen, Guangdong, P.R.China.
Manufacturer.....:	ZTE CORPORATION.
Manufacturer Address .....:	ZTE Plaza, Keji Road South, Hi-Tech, Industrial Park,Nanshan District, Shenzhen, Guangdong, P.R.China.
Test Standards.....:	47 CFR Part 15 Subpart C ANSI C63.10-2013
Test Result .....:	PASS

Tested by .....: 2022.06.07

Sun, Test Engineer

Reviewed by .....: 2022.06.07

Chris You, Senior Engineer

Approved by .....: 2022.06.07

ShuangwenZhang, Manager

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Change History		
Issue	Date	Reason for change
1.0	2022.04.29	First edition
2.0	2022.06.07	Re-measure the 20dB bandwidth GFSK middle channel. Updated Dwell Time data and Carrier Frequency Separation limit.

1. General Information

1.1. EUT Description

EUT Type	5G NR Multi model smart phone
Hardware Version	zs9A
Software Version	MyOS11.0.1_7540N_VFPT
Bit Rate of Transmitter	1/2/3Mbps
Modulation Type	GFSK, π/4-DQPSK, 8DPSK
Antenna Type	Internal Antenna
Antenna Gain	-2.5dBi
Power supply	Rechargeable Li-Polymer Battery DC3.85V/3900mAh

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.

1.2. Test Standards and Results

The objective of the report is to perform testing according to below standards for the EUT FCC ID Certification:

No.	Identity	Document Title
1	47 CFR Part 15 Subpart C	Radio Frequency Devices
2	ANSI C63.10-2013	American National Standard for Testing Unlicensed Wireless Devices

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

No.	Section in CFR 47	Description	Result
1	15.203	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 Occupied 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 Spurious Emission	PASS
8	15.247(d)	Conducted Band Edge	PASS
9	15.207	AC Power Line Conducted Emission	PASS
10	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 C63.10-2013.

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 C63.10-2013 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	Notebook	DELL	PP11L	DELL	H5914A03	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. Facilities and Accreditations

1.6.1. Facilities

CNAS-Lab Code: L1659

CCIC-SET is a third party testing organization accredited by China National Accreditation Service for Conformity Assessment (CNAS) according to ISO/IEC 17025. The accreditation certificate number is L1659.

FCC-Registration No.: 406086

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 April 19th, 2023.

ISED Registration: 11185A-1

CAB identifier: CN0064

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-1 on Aug. 04, 2016, valid time is until Jun. 30th, 2023.

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.

1.6.2. Test Environment Conditions

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

Temperature (°C):	15°C - 35°C
Relative Humidity (%):	30% -60%
Atmospheric Pressure (kPa):	86KPa-106KPa

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	5G NR Multi model smart phone	2412-2462MHz	Internal	-2.5dBi

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

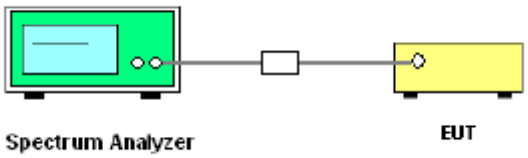
2.2.1. Limit of Number of Hopping Frequency

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 C63.10-2013 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

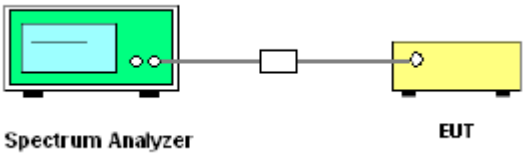
2.3.1. Limit of Peak Output Power

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 C63.10-2013 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 Peak Output Power

Please refer to Appendix A for detail

2.4. 20dB Bandwidth

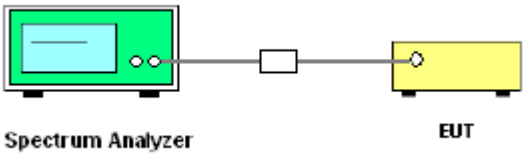
2.4.1. Definition

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 C63.10-2013 Section 7.8.7.
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:

   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.
5. Record the measurement results in the test report.

2.4.5. Test Results of 20dB Bandwidth

Please refer to Appendix A for detail

2.5. Carried Frequency Separation

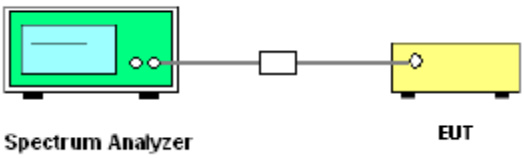
2.5.1. Limit of Carried Frequency Separation

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 C63.10-2013 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

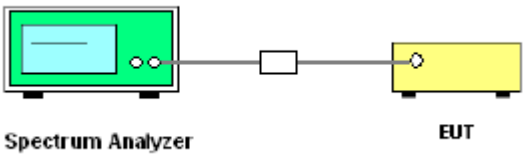
2.6.1. Limit of Dwell Time

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 C63.10-2013 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

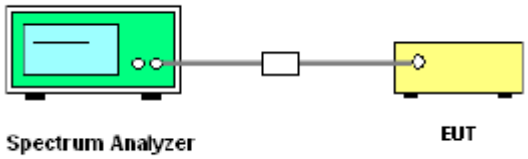
2.7.1. Limit of Conducted Spurious Emissions

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 C63.10-2013 Section 7.8.8
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

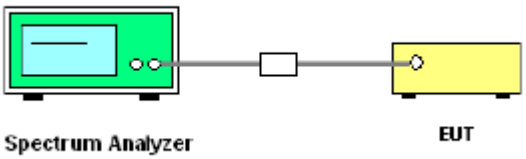
2.8.1. Limit of Conducted Band Edge

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 C63.10-2013 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 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):

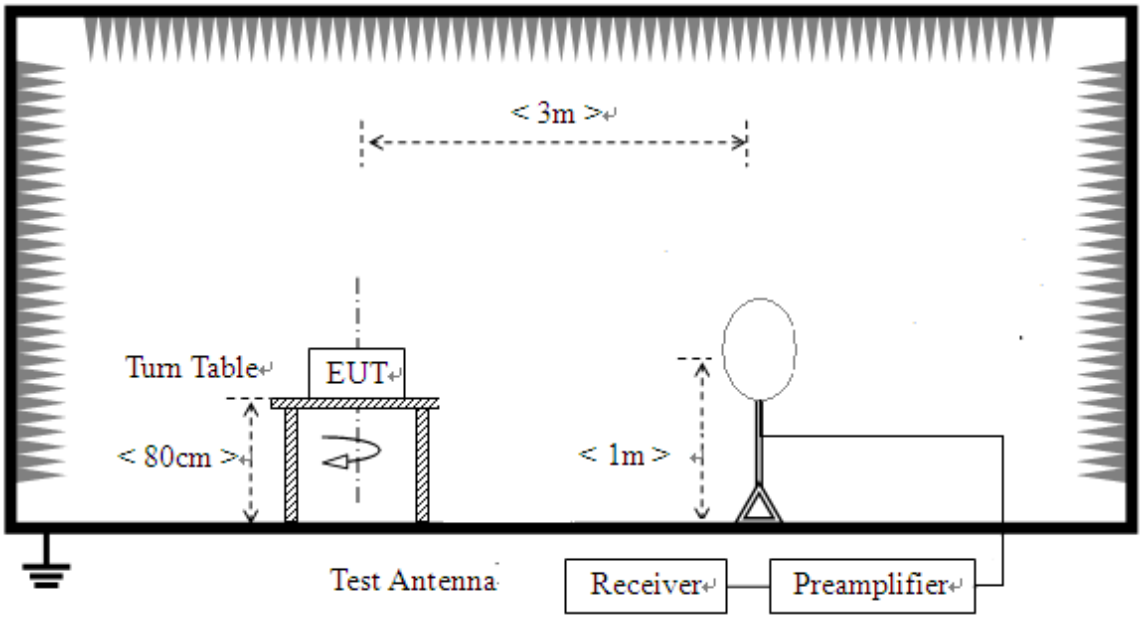
MHz	MHz	MHz	GHz
0.090-0.110	16.42-16.423	399.9-410	4.5-5.15
[1]0.495-0.505	16.69475-16.69525	608-614	5.35-5.46
2.1735-2.1905	16.80425-16.80475	960-1240	7.25-7.75
4.125-4.128	25.5-25.67	1300-1427	8.025-8.5
4.17725-4.17775	37.5-38.25	1435-1626.5	9.0-9.2
4.20725-4.20775	73-74.6	1645.5-1646.5	9.3-9.5
6.215-6.218	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

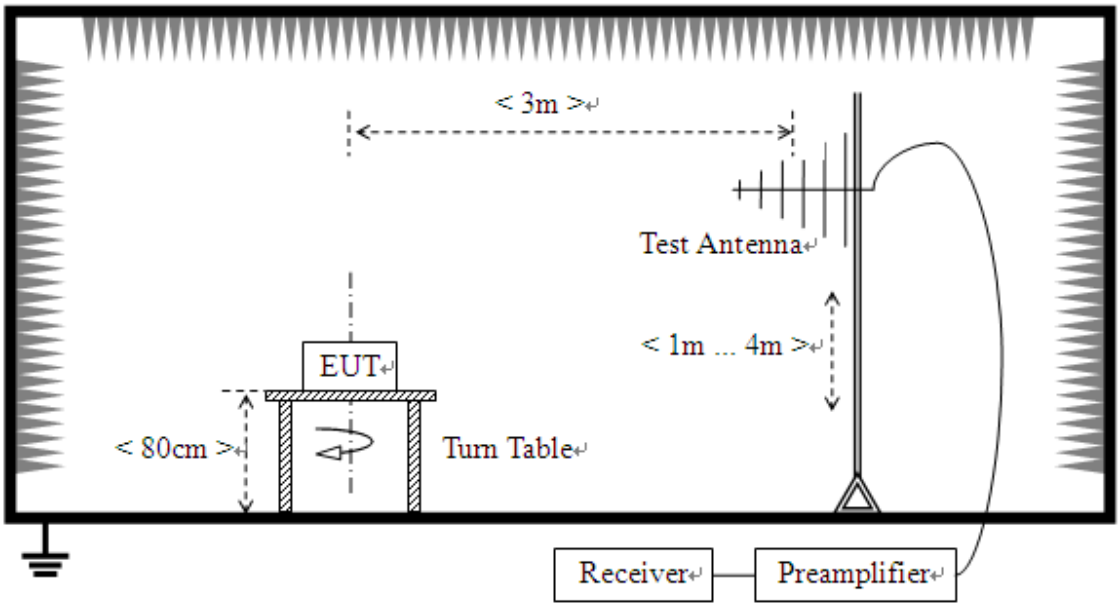
The measuring equipment is listed in the section 3 of this test report.

2.9.3. Test Setup

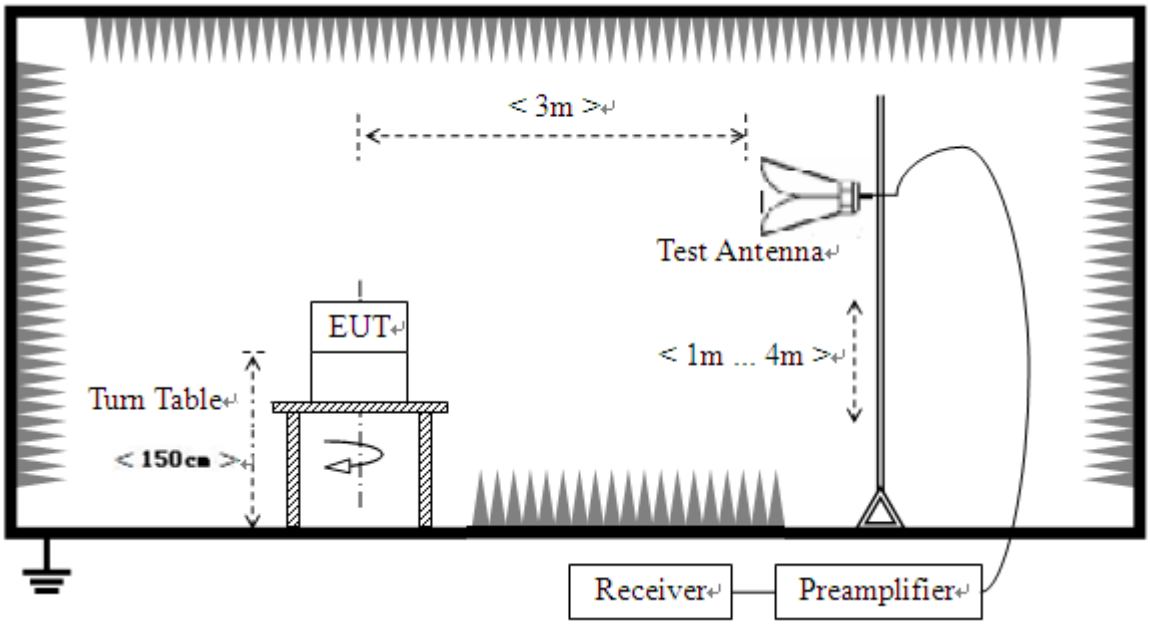
For radiated emissions from 9kHz to 30MHz



For radiated emissions from 30MHz to1GHz



For radiated emissions above 1GHz



2.9.4. Test Procedure

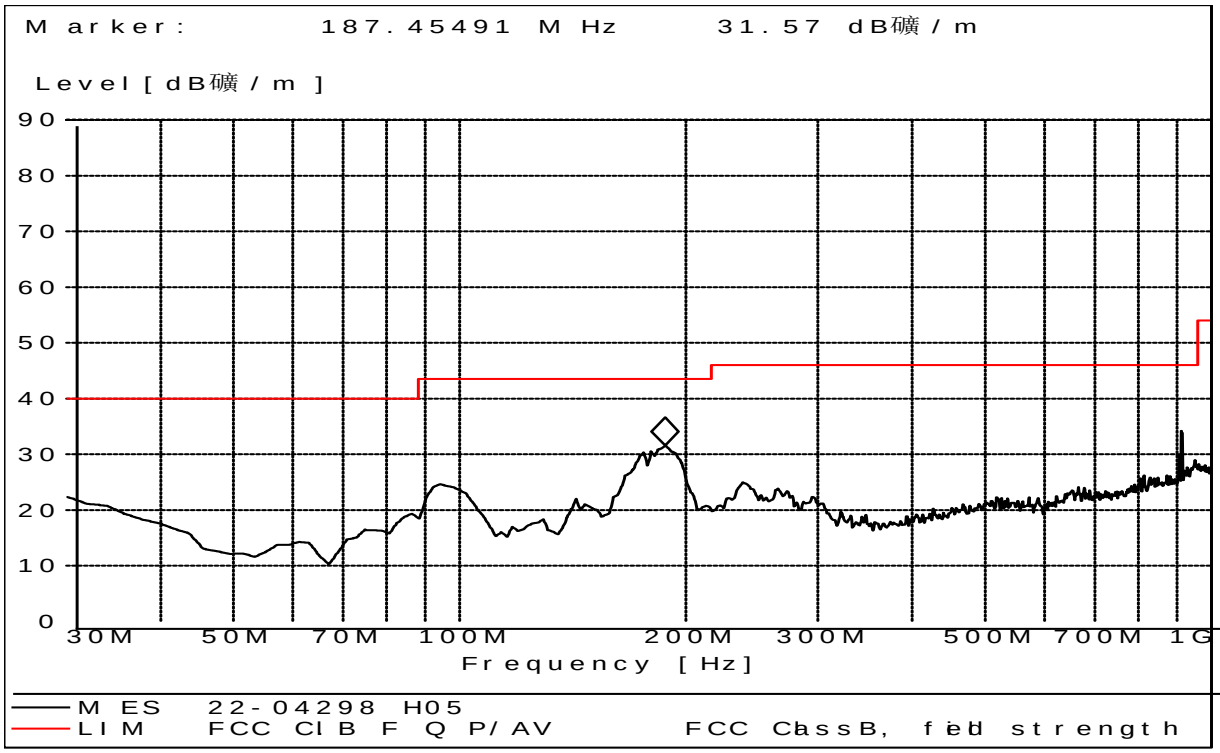
1. The EUT was placed on the top of a rotating table 0.8m for below 1GHz and 1.5m for above 1GHz above the ground at a 3 meters semi-anechoic chamber.
2. The EUT was set 3 meters from the interference receiving antenna, which was mounted on thetop of a variable height antenna tower.
3. Height of receiving 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. Set to the maximum power setting and enable the EUT transmit continuously.
6. Use the following spectrum analyzer settings:
   (1) Span shall wide enough to fully capture the emission being measured.
   (2) Set RBW = 100kHz for f < 1GHz, RBW = 1MHz for f > 1GHz ; VBW ≥ RBW; Sweep = Auto; Detector function = Peak; Trace = Max hold.
   (3) For average measurement: use duty cycle correction factor method per 15.35(c).
   Duty cycle = On time/100 milliseconds.
   On time = $N_1*L_1+N_2*L_2+...+N_{n-1}*LN_{n-1}+Nn*Ln$.
   Where N_1 is number of type 1 pulses, L1 is length of type 1 pulses, etc.
   Average Emission Level = Peak Emission Level + 20*log(Duty cycle).
7. Corrected Reading: Antenna Factor + Cable Loss + Read Level - Preamp Factor = Level.

2.9.5. Test Results of Radiated Band Edge and Spurious Emission

For 9kHz 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 1000MHz

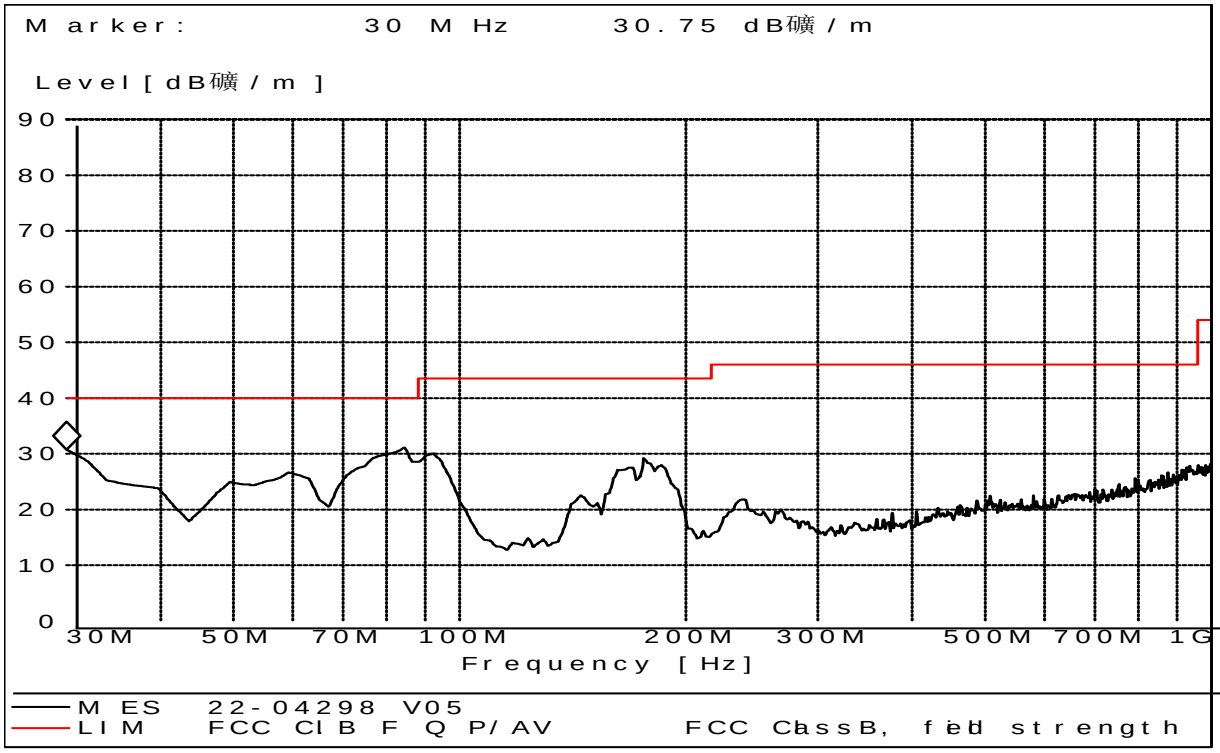


Frequency (MHz)	QuasiPeak (dBµV/m)	Bandwidth (kHz)	Corr.Factor (dB/m)	Antenna height (cm)	Limit (dBµV/m)	Margin (dB)	Polarity
30.660000	21.23	120.000	19.3	100.0	40.0	18.77	Horizontal
94.150000	22.36	120.000	9.9	100.0	43.5	21.14	Horizontal
142.720000	21.11	120.000	12.6	100.0	43.5	22.39	Horizontal
175.990000	28.77	120.000	11.9	100.0	43.5	14.73	Horizontal
188.120000	30.70	120.000	11.0	100.0	43.5	12.80	Horizontal
237.990000	22.35	120.000	11.7	100.0	46.0	23.65	Horizontal

Test Result : Pass

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 other emission levels were very low against the limit.



Frequency (MHz)	QuasiPeak (dBµV/m)	Bandwidth (kHz)	Corr.Factor (dB/m)	Antenna height (cm)	Limit (dBµV/m)	Margin (dB)	Polarity
30.870000	29.17	120.000	19.3	100.0	40.0	10.83	Vertical
58.160000	26.30	120.000	8.6	100.0	40.0	13.70	Vertical
83.420000	30.18	120.000	8.5	100.0	40.0	9.82	Vertical
93.120000	28.70	120.000	9.9	100.0	43.5	14.80	Vertical
175.790000	27.26	120.000	11.9	100.0	43.5	16.24	Vertical
239.920000	21.38	120.000	11.7	100.0	46.0	24.62	Vertical

Test Result : Pass

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 other emission levels were very low against the limit.

For 1GHz to 25GHz

GFSK_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	44.39	74.00	-29.61	1.60	150	43.09	1.30	Horizontal	Peak
2390.00	36.53	54.00	-17.47	1.60	150	35.23	1.30	Horizontal	Average
4804.00	55.40	74.00	-18.60	1.60	150	49.00	6.40	Horizontal	Peak
4804.00	44.11	54.00	-9.89	1.60	150	37.71	6.40	Horizontal	Average
7206.00	48.17	74.00	-25.83	1.60	150	38.87	9.30	Horizontal	Peak
7206.00	39.41	54.00	-14.59	1.60	150	30.11	9.30	Horizontal	Average
2390.00	43.87	74.00	-30.13	1.70	190	42.57	1.30	Vertical	Peak
2390.00	36.94	54.00	-17.06	1.70	190	35.64	1.30	Vertical	Average
4804.00	51.93	74.00	-22.07	1.70	190	45.53	6.40	Vertical	Peak
4804.00	41.36	54.00	-12.64	1.70	190	34.96	6.40	Vertical	Average
7206.00	48.62	74.00	-25.38	1.70	190	39.32	9.30	Vertical	Peak
7206.00	39.63	54.00	-14.37	1.70	190	30.33	9.30	Vertical	Average
GFSK_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	55.89	74.00	-18.11	1.60	150	49.49	6.40	Horizontal	Peak
4882.00	44.31	54.00	-9.69	1.60	150	37.91	6.40	Horizontal	Average
7323.00	48.27	74.00	-25.73	1.60	150	38.87	9.40	Horizontal	Peak
7323.00	39.78	54.00	-14.22	1.60	150	30.38	9.40	Horizontal	Average
4882.00	52.11	74.00	-21.89	1.70	190	45.71	6.40	Vertical	Peak
4882.00	41.62	54.00	-12.38	1.70	190	35.22	6.40	Vertical	Average
7323.00	48.55	74.00	-25.45	1.70	190	39.15	9.40	Vertical	Peak
7323.00	39.61	54.00	-14.39	1.70	190	30.21	9.40	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.

GFSK_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	45.65	74.00	-28.35	1.60	150	43.05	2.60	Horizontal	Peak
2483.50	35.98	54.00	-18.02	1.60	150	33.38	2.60	Horizontal	Average
4960.00	53.61	74.00	-20.39	1.60	150	46.91	6.70	Horizontal	Peak
4960.00	43.24	54.00	-10.76	1.60	150	36.54	6.70	Horizontal	Average
7440.00	45.87	74.00	-28.13	1.60	150	36.37	9.50	Horizontal	Peak
7440.00	35.46	54.00	-18.54	1.60	150	25.96	9.50	Horizontal	Average
2483.50	44.37	74.00	-29.63	1.70	190	41.77	2.60	Vertical	Peak
2483.50	35.58	54.00	-18.42	1.70	190	32.98	2.60	Vertical	Average
4960.00	57.23	74.00	-16.77	1.70	190	50.53	6.70	Vertical	Peak
4960.00	46.50	54.00	-7.50	1.70	190	39.80	6.70	Vertical	Average
7440.00	46.78	74.00	-27.22	1.70	190	37.28	9.50	Vertical	Peak
7440.00	38.66	54.00	-15.34	1.70	190	29.16	9.50	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.

π/4-DQPSK _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	44.23	74.00	-29.77	1.60	150	42.93	1.30	Horizontal	Peak
2390.00	36.60	54.00	-17.40	1.60	150	35.30	1.30	Horizontal	Average
4804.00	55.31	74.00	-18.69	1.60	150	48.91	6.40	Horizontal	Peak
4804.00	43.72	54.00	-10.28	1.60	150	37.32	6.40	Horizontal	Average
7206.00	47.68	74.00	-26.32	1.60	150	38.38	9.30	Horizontal	Peak
7206.00	39.05	54.00	-14.95	1.60	150	29.75	9.30	Horizontal	Average
2390.00	43.84	74.00	-30.16	1.70	190	42.54	1.30	Vertical	Peak
2390.00	37.42	54.00	-16.58	1.70	190	36.12	1.30	Vertical	Average
4804.00	51.87	74.00	-22.13	1.70	190	45.47	6.40	Vertical	Peak
4804.00	40.90	54.00	-13.10	1.70	190	34.50	6.40	Vertical	Average
7206.00	48.97	74.00	-25.03	1.70	190	39.67	9.30	Vertical	Peak
7206.00	40.03	54.00	-13.97	1.70	190	30.73	9.30	Vertical	Average
π/4-DQPSK _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	55.58	74.00	-18.42	1.60	150	49.18	6.40	Horizontal	Peak
4882.00	44.23	54.00	-9.77	1.60	150	37.83	6.40	Horizontal	Average
7323.00	48.30	74.00	-25.70	1.60	150	38.90	9.40	Horizontal	Peak
7323.00	39.51	54.00	-14.49	1.60	150	30.11	9.40	Horizontal	Average
4882.00	52.45	74.00	-21.55	1.70	190	46.05	6.40	Vertical	Peak
4882.00	41.38	54.00	-12.62	1.70	190	34.98	6.40	Vertical	Average
7323.00	48.64	74.00	-25.36	1.70	190	39.24	9.40	Vertical	Peak
7323.00	39.21	54.00	-14.79	1.70	190	29.81	9.40	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.

π/4-DQPSK _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	45.67	74.00	-28.33	1.60	150	43.07	2.60	Horizontal	Peak
2483.50	36.25	54.00	-17.75	1.60	150	33.65	2.60	Horizontal	Average
4960.00	53.64	74.00	-20.36	1.60	150	46.94	6.70	Horizontal	Peak
4960.00	43.00	54.00	-11.00	1.60	150	36.30	6.70	Horizontal	Average
7440.00	45.90	74.00	-28.10	1.60	150	36.40	9.50	Horizontal	Peak
7440.00	35.94	54.00	-18.06	1.60	150	26.44	9.50	Horizontal	Average
2483.50	44.10	74.00	-29.90	1.70	190	41.50	2.60	Vertical	Peak
2483.50	35.84	54.00	-18.16	1.70	190	33.24	2.60	Vertical	Average
4960.00	57.61	74.00	-16.39	1.70	190	50.91	6.70	Vertical	Peak
4960.00	46.48	54.00	-7.52	1.70	190	39.78	6.70	Vertical	Average
7440.00	47.26	74.00	-26.74	1.70	190	37.76	9.50	Vertical	Peak
7440.00	38.47	54.00	-15.53	1.70	190	28.97	9.50	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.

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	44.23	74.00	-29.77	1.60	150	42.93	1.30	Horizontal	Peak
2390.00	36.34	54.00	-17.66	1.60	150	35.04	1.30	Horizontal	Average
4804.00	55.35	74.00	-18.65	1.60	150	48.95	6.40	Horizontal	Peak
4804.00	43.34	54.00	-10.66	1.60	150	36.94	6.40	Horizontal	Average
7206.00	48.03	74.00	-25.97	1.60	150	38.73	9.30	Horizontal	Peak
7206.00	39.31	54.00	-14.69	1.60	150	30.01	9.30	Horizontal	Average
2390.00	43.89	74.00	-30.11	1.70	190	42.59	1.30	Vertical	Peak
2390.00	37.86	54.00	-16.14	1.70	190	36.56	1.30	Vertical	Average
4804.00	51.87	74.00	-22.13	1.70	190	45.47	6.40	Vertical	Peak
4804.00	41.00	54.00	-13.00	1.70	190	34.60	6.40	Vertical	Average
7206.00	49.08	74.00	-24.92	1.70	190	39.78	9.30	Vertical	Peak
7206.00	40.48	54.00	-13.52	1.70	190	31.18	9.30	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	56.00	74.00	-18.00	1.60	150	49.60	6.40	Horizontal	Peak
4882.00	43.95	54.00	-10.05	1.60	150	37.55	6.40	Horizontal	Average
7323.00	48.11	74.00	-25.89	1.60	150	38.71	9.40	Horizontal	Peak
7323.00	39.12	54.00	-14.88	1.60	150	29.72	9.40	Horizontal	Average
4882.00	52.64	74.00	-21.36	1.70	190	46.24	6.40	Vertical	Peak
4882.00	41.58	54.00	-12.42	1.70	190	35.18	6.40	Vertical	Average
7323.00	48.14	74.00	-25.86	1.70	190	38.74	9.40	Vertical	Peak
7323.00	39.30	54.00	-14.70	1.70	190	29.90	9.40	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.

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	45.19	74.00	-28.81	1.60	150	42.59	2.60	Horizontal	Peak
2483.50	36.31	54.00	-17.69	1.60	150	33.71	2.60	Horizontal	Average
4960.00	53.64	74.00	-20.36	1.60	150	46.94	6.70	Horizontal	Peak
4960.00	42.63	54.00	-11.37	1.60	150	35.93	6.70	Horizontal	Average
7440.00	45.41	74.00	-28.59	1.60	150	35.91	9.50	Horizontal	Peak
7440.00	36.26	54.00	-17.74	1.60	150	26.76	9.50	Horizontal	Average
2483.50	43.70	74.00	-30.30	1.70	190	41.10	2.60	Vertical	Peak
2483.50	36.12	54.00	-17.88	1.70	190	33.52	2.60	Vertical	Average
4960.00	57.84	74.00	-16.16	1.70	190	51.14	6.70	Vertical	Peak
4960.00	46.82	54.00	-7.18	1.70	190	40.12	6.70	Vertical	Average
7440.00	47.29	74.00	-26.71	1.70	190	37.79	9.50	Vertical	Peak
7440.00	37.98	54.00	-16.02	1.70	190	28.48	9.50	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.

2.10. AC Power Line Conducted Emission

2.10.1. Limit of AC Power Line Conducted Emission

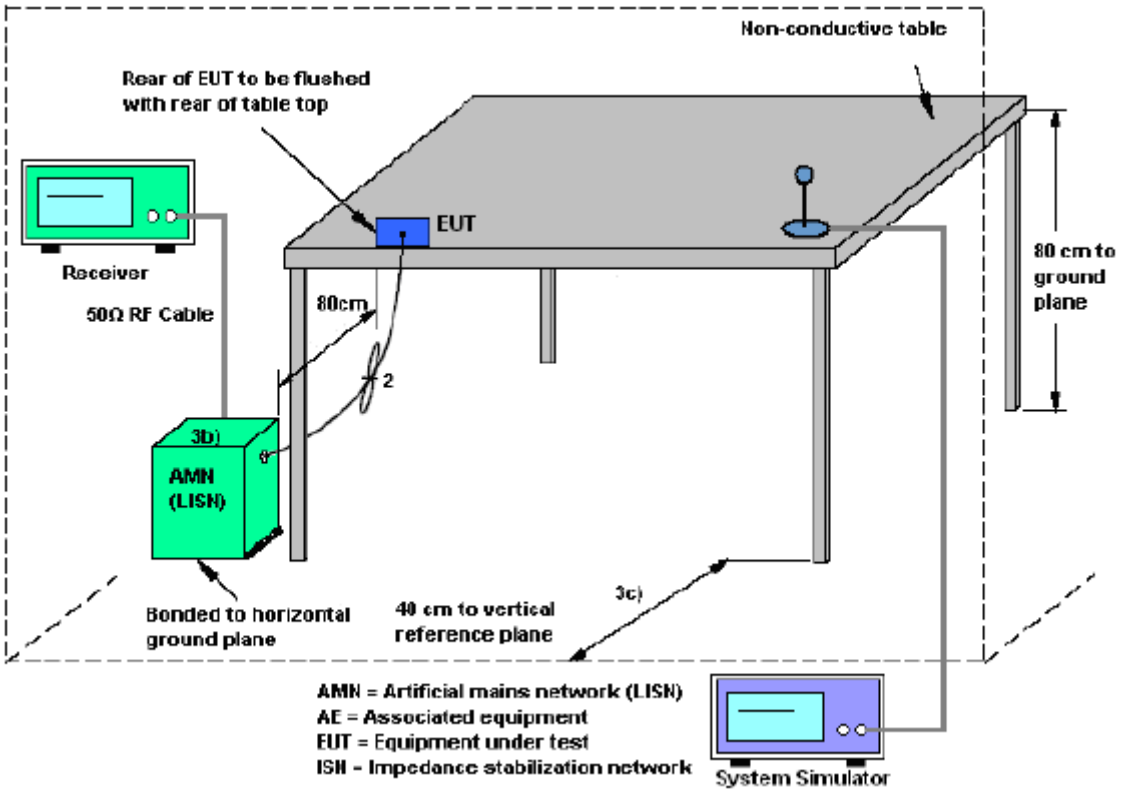
For equipment that is designed to be connected to the public utility (AC) power line, the radio frequency voltage that is conducted back onto the AC power line on any frequency or frequencies within the band 150 kHz to 30 MHz shall not exceed the limits in the following table.

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



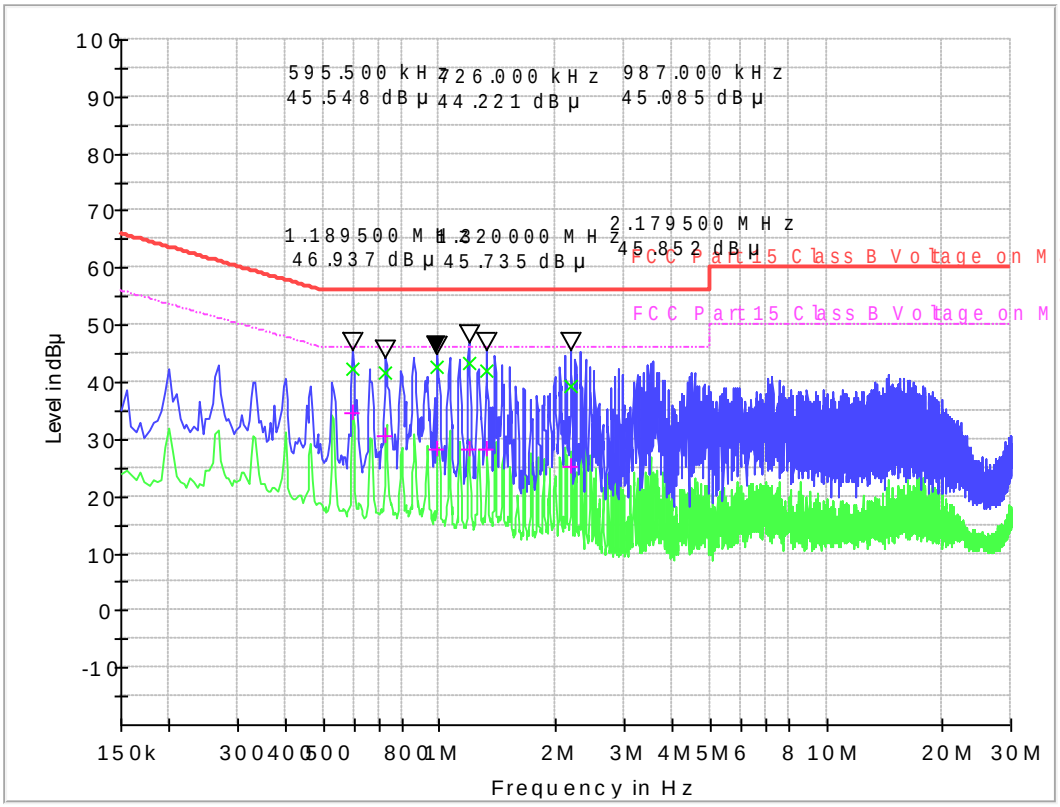
2.10.4. Test Procedures

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 + USB Cable (Charging from Adapter).

Line Phase



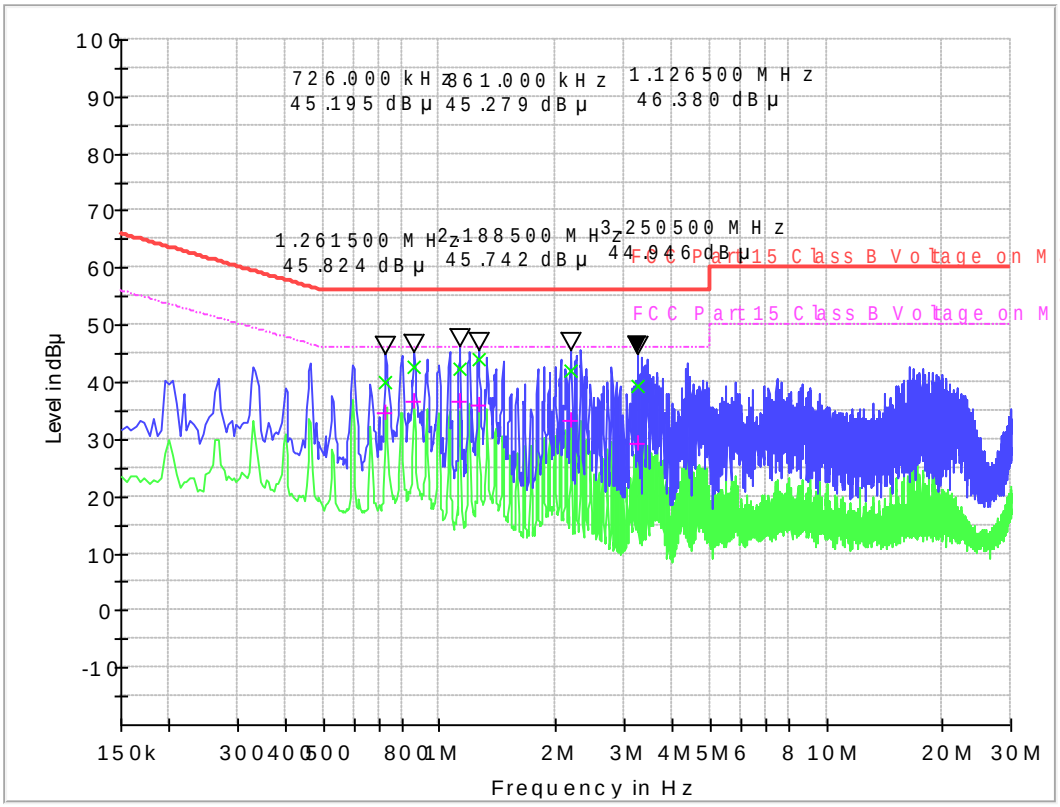
Frequency (MHz)	QuasiPeak (dB µ V)	Average (dB µ V)	Cabel Loss (dB)	Corr.Factor (dB)	Margin - QPK	Limit - QPK (dB µ V)	Margin - AV (dB)	Limit - AV (dB µ V)
0.595500	42.40	34.74	0.2	10.2	13.60	56.0	11.26	46.0
0.726000	41.57	30.77	0.2	10.2	14.43	56.0	15.23	46.0
0.987000	42.59	28.32	0.2	10.2	13.41	56.0	17.68	46.0
1.189500	43.40	28.25	0.2	10.2	2.60	56.0	17.75	46.0
1.320000	42.17	28.33	0.2	10.2	13.83	56.0	17.67	46.0
2.179500	39.33	25.36	0.2	10.2	16.67	56.0	20.64	46.0

Test Result : Pass

Remark:

1. Correction factor = Cabel loss+ attenuation factor.
2. attenuation factor = 10dB.

Neutral Phase



Frequency (MHz)	QuasiPeak (dB µ V)	Average (dB µ V)	Cabel Loss (dB)	Corr.Factor (dB)	Margin - QPK (dB)	Limit - QPK (dB µ V)	Margin - AV (dB)	Limit - AV (dB µ V)
0.726000	39.92	34.73	0.2	10.2	16.08	56.0	11.27	46.0
0.861000	42.79	36.61	0.2	10.2	13.21	56.0	9.39	46.0
1.126500	42.27	36.51	0.2	10.2	13.73	56.0	9.49	46.0
1.261500	43.93	36.14	0.2	10.2	12.07	56.0	9.86	46.0
2.188500	42.02	33.13	0.2	10.2	13.98	56.0	12.87	46.0
3.250500	39.47	29.18	0.3	10.3	16.53	56.0	16.82	46.0

Test Result : Pass

Remark:

1. Correction factor = Cabel loss+ attenuation factor.
2. attenuation factor = 10dB.

3. List of measuring equipment

Item	Test Equipment	Manufacturer	Model No.	Serial No.	Cal Date	Due Date
1	EMI TEST RECEIVER	KEYSIGHT	N9038A	A141202036	2021.08.03	2022.08.02
2	Power Meter	R&S	NRP-Z31	102872	2021.05.08	2022.05.07
3	Power Meter	R&S	NRP-Z31	102872	2022.04.21	2023.04.20
4	TURNTABLE	ETS	2088	2149	N/A	N/A
5	ANTENNA MAST	ETS	2075	2346	N/A	N/A
6	EMI TEST Software	R&S	ESK1	N/A	N/A	N/A
7	Horn antenna (18GHz~26.5GHz)	AR	AT4003A	325306	2020.09.16	2022.09.15
8	Amplifier 30M~1GHz	MILMEGA	80RF1000-1000	A140101634	2021.12.23	2022.12.22
9	Amplifier 1G~18GHz	MILMEGA	AS0104R-800/400	A160302517	2021.12.23	2022.12.22
10	High pass filter	Compliance Direction systems	BSU-6	34202	2021.11.09	2022.11.08
11	Horn Antenna	R&S	ESIB7	A0501375	2020.06.24	2022.06.22
12	ULTRA-BROADBAND ANTENNA	SCHWARZBECK	VULB9160	A0805560	2019.05.24	2022.05.23
13	Passive Loop Antenna	SCHWARZBECK	FMZB 1519B	A180903206	2020.07.22	2023.07.21
14	Temperature chamber	TABAI	PS-232	A8708054	2021.09.24	2022.09.23
15	Spectrum Analyzer	KEYSIGHT	N9030A	A160702554	2022.03.25	2023.03.24
16	Power Supply	R&S	ESIB26	A0304218	2021.12.23	2022.12.22
17	LISN	ROHDE&SCHWARZ	ENV216	A140701847	2021.08.11	2022.08.10
18	Test software	ECIT	Eagle	V2.0	N/A	N/A

4. Uncertainty of Evaluation

The measurement uncertainties shown below were calculated in accordance with the requirements of ANSI C63.10-2013. 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

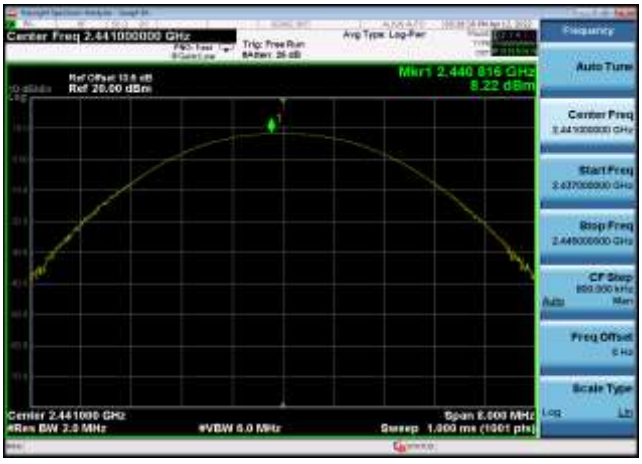
Uncertainty of RF Conducted Measurement (9KHz~40GHz)

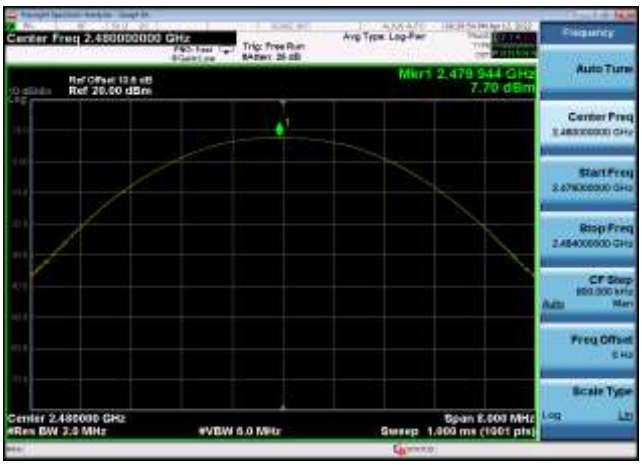
Measuring Uncertainty for a level of confidence of 95%(U=2Uc(y))	1.3dB

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	7.58	30	Pass
GFSK	2441	DH5	8.24	30	Pass
GFSK	2480	DH5	8.78	30	Pass
π/4-DQPSK	2402	2DH5	7.53	21	Pass
π/4-DQPSK	2441	2DH5	8.22	21	Pass
π/4-DQPSK	2480	2DH5	8.07	21	Pass
8DPSK	2402	3DH5	7.32	21	Pass
8DPSK	2441	3DH5	7.97	21	Pass
8DPSK	2480	3DH5	7.70	21	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 Bandwidth

Test Result and Data

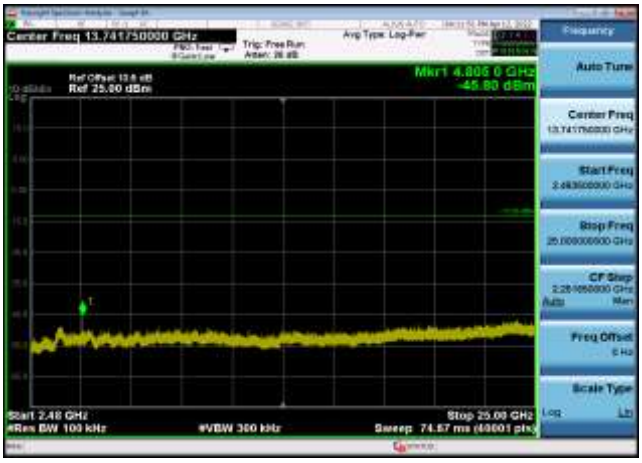
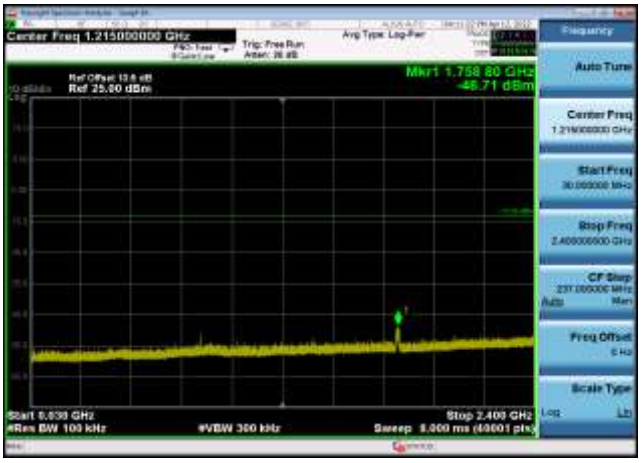
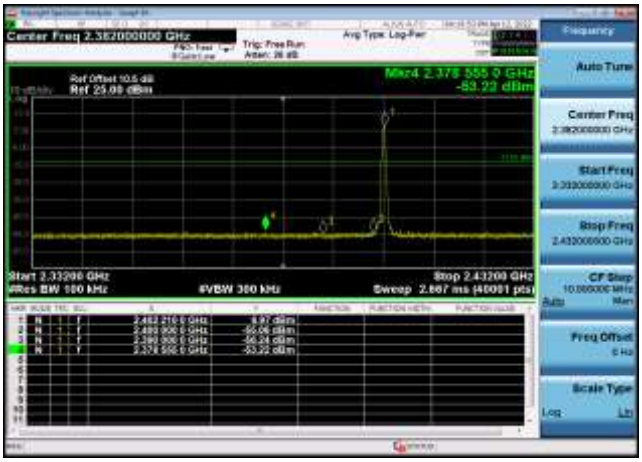
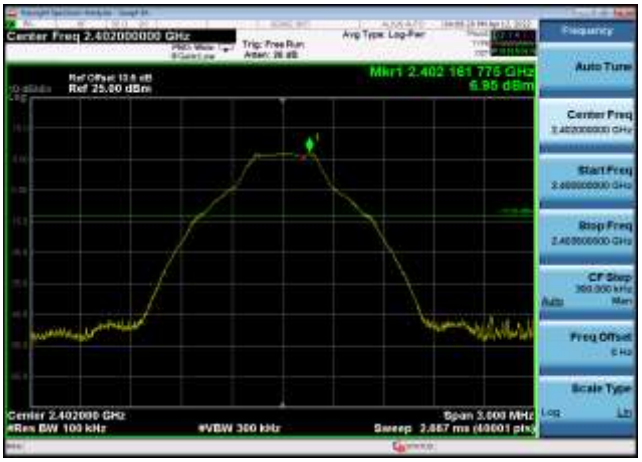
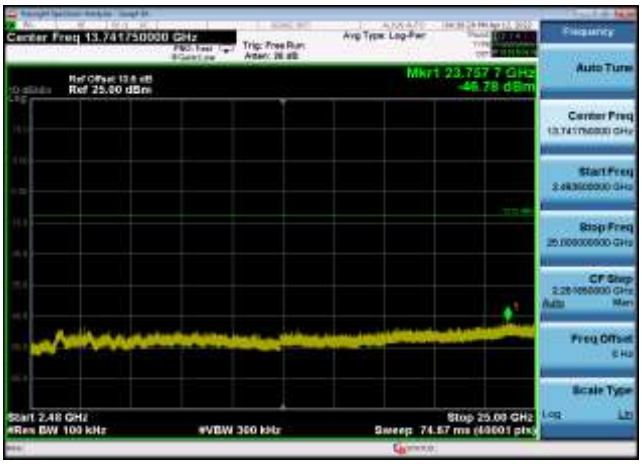
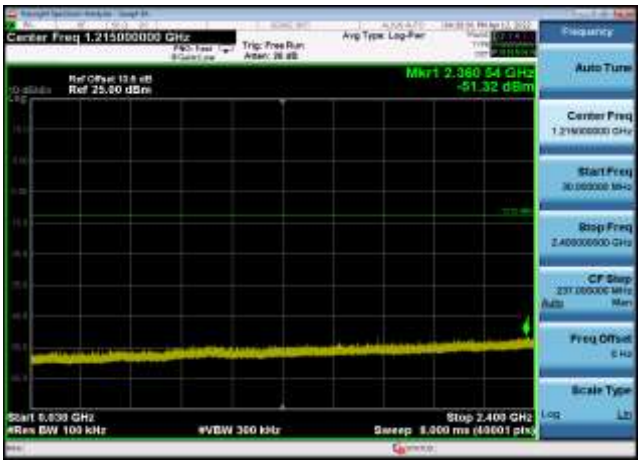
BT Occupied 20dB Bandwidth				
Mode	Test Frequency	Packet Type	-20dB Bandwidth (kHz)	Result
GFSK	2402	DH5	861.200	Pass
GFSK	2441	DH5	805.700	Pass
GFSK	2480	DH5	863.569	Pass
π/4-DQPSK	2402	2DH5	1258.337	Pass
π/4-DQPSK	2441	2DH5	1263.798	Pass
π/4-DQPSK	2480	2DH5	1258.719	Pass
8DPSK	2402	3DH5	1255.326	Pass
8DPSK	2441	3DH5	1257.318	Pass
8DPSK	2480	3DH5	1255.799	Pass

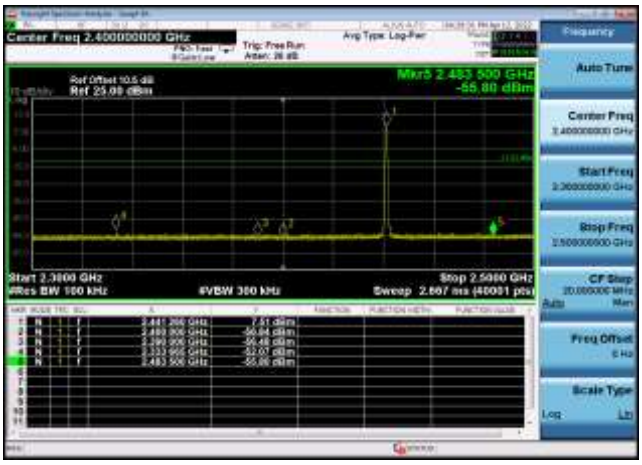
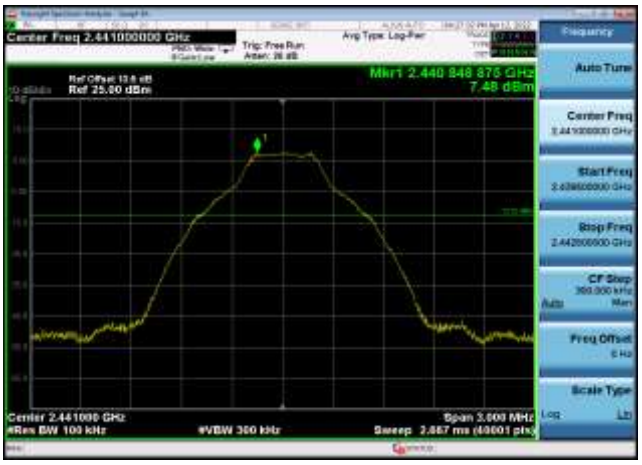
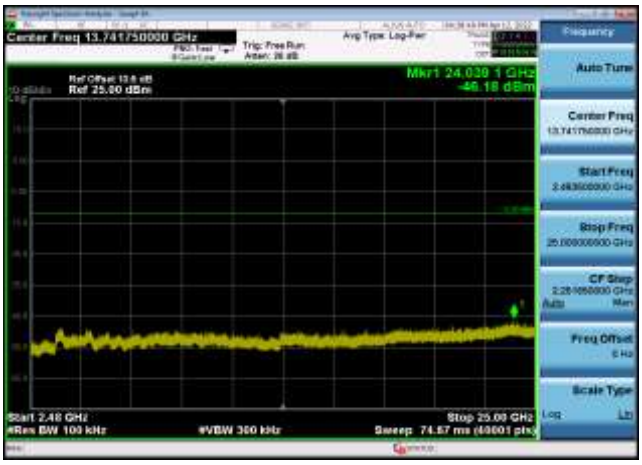
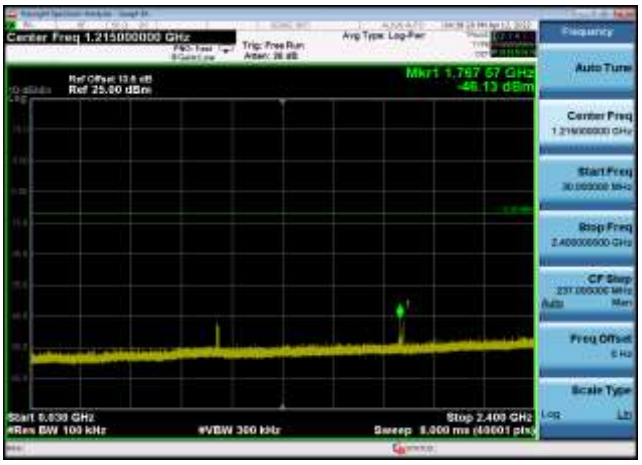
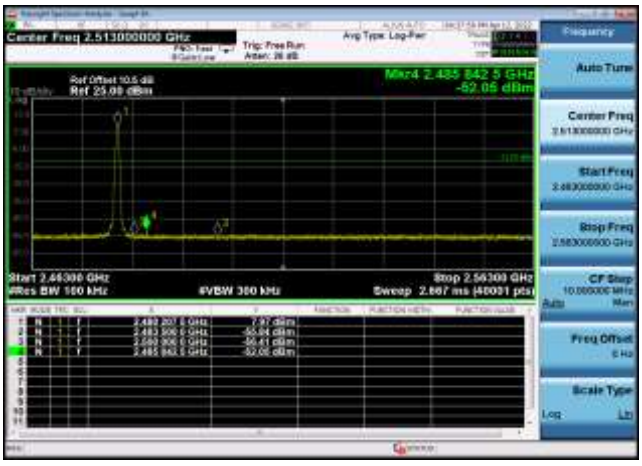
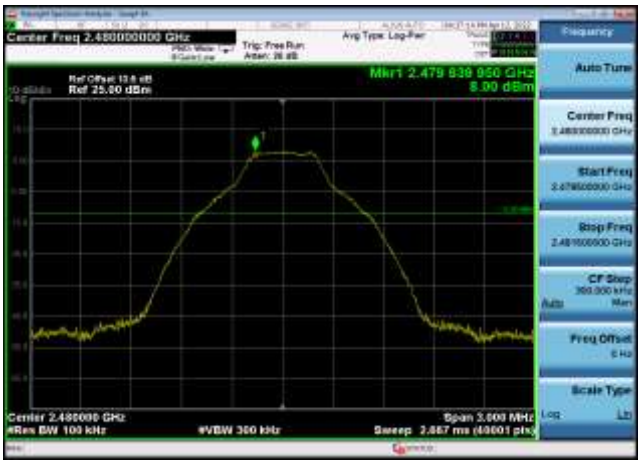
20dB Bandwidth：GFSK,2402MHz,DH5	20dB Bandwidth：GFSK,2441MHz,DH5
	
20dB Bandwidth：GFSK,2480MHz,DH5	20dB Bandwidth：DQPSK,2402MHz,2DH5
	
20dB Bandwidth：DQPSK,2441MHz,2DH5	20dB Bandwidth：DQPSK,2480MHz,2DH5
	

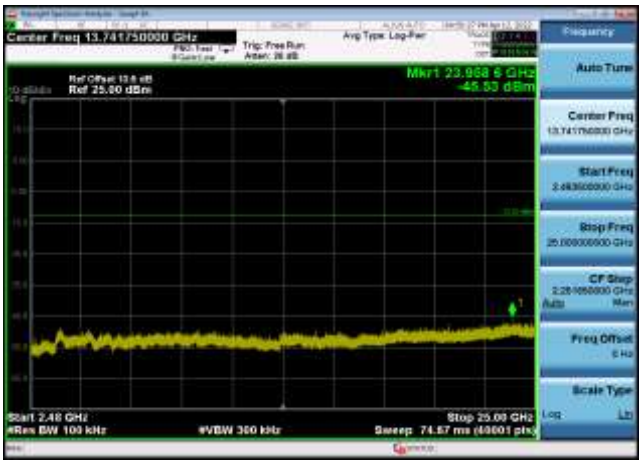
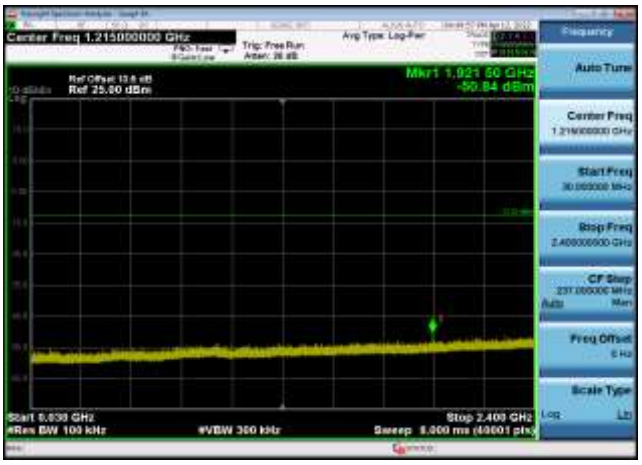
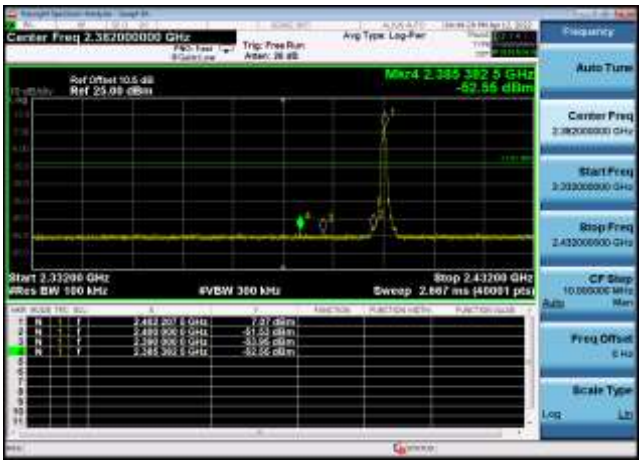
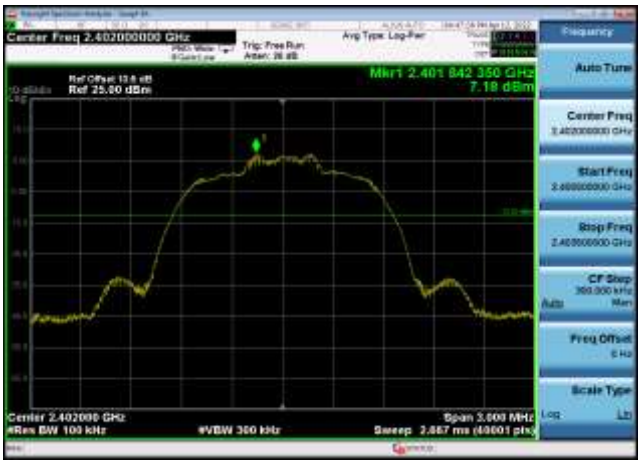
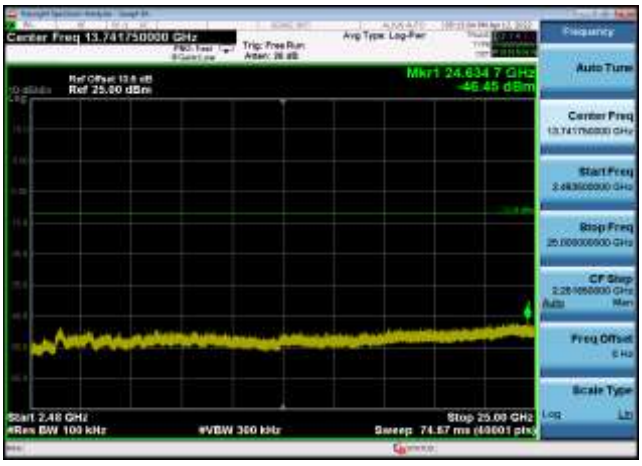
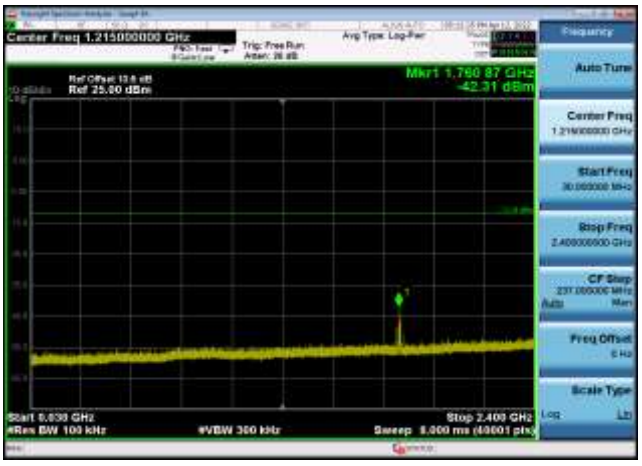
20dB Bandwidth：8DPSK,2402MHz,3DH5	20dB Bandwidth：8DPSK,2441MHz,3DH5
	
20dB Bandwidth：8DPSK,2480MHz,3DH5	
	

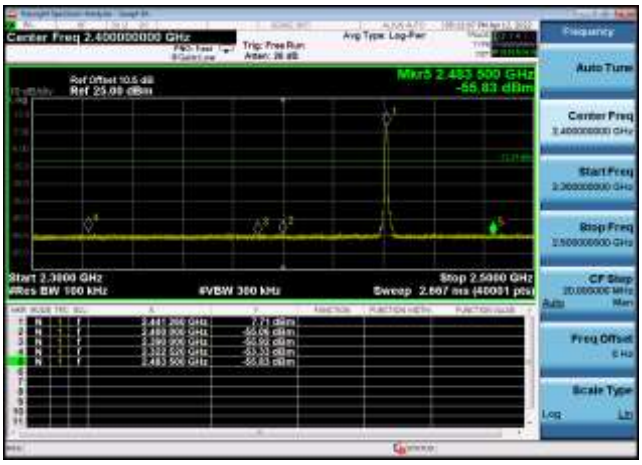
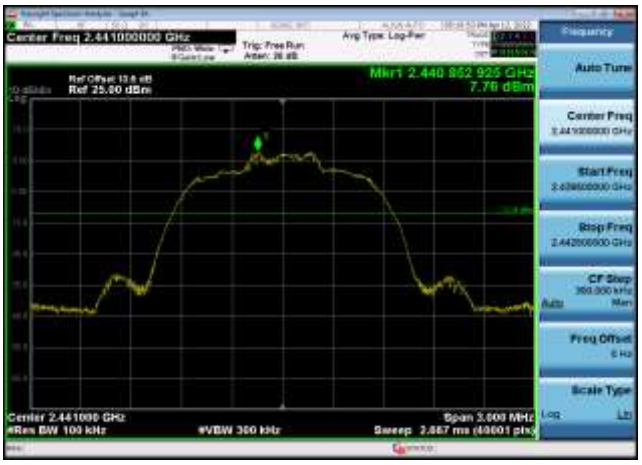
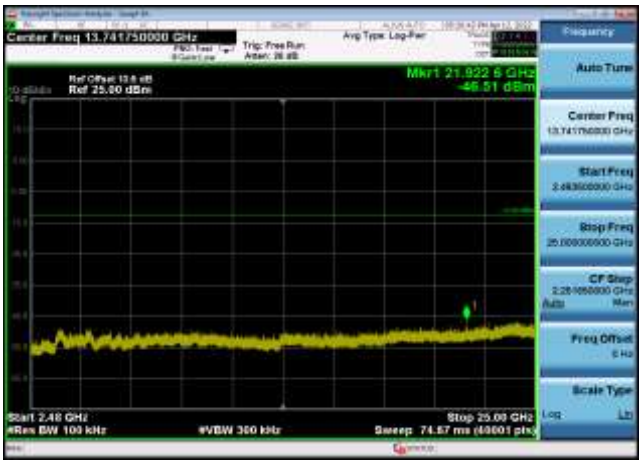
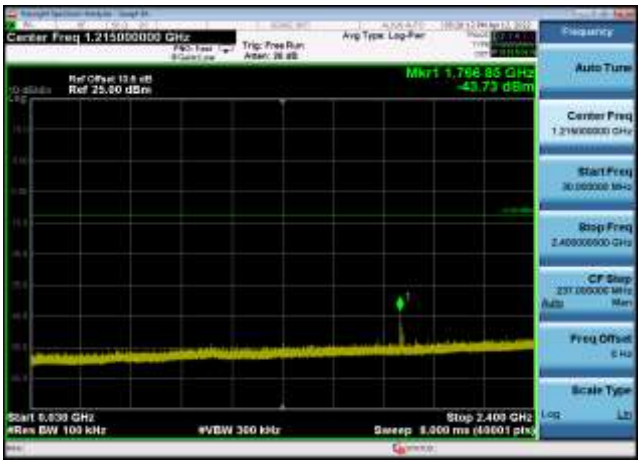
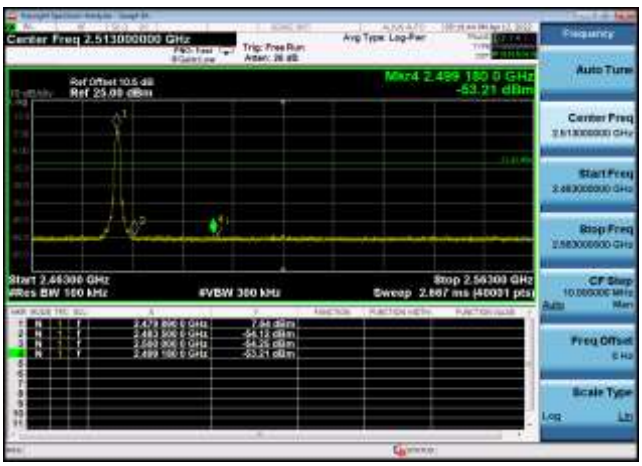
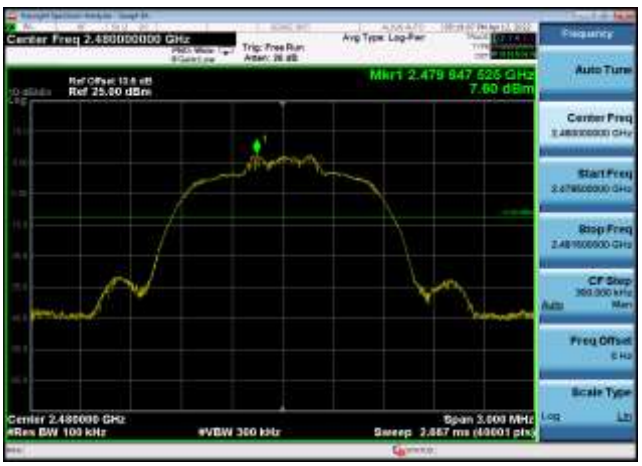
Transmitter Spurious Emission and Bandedge

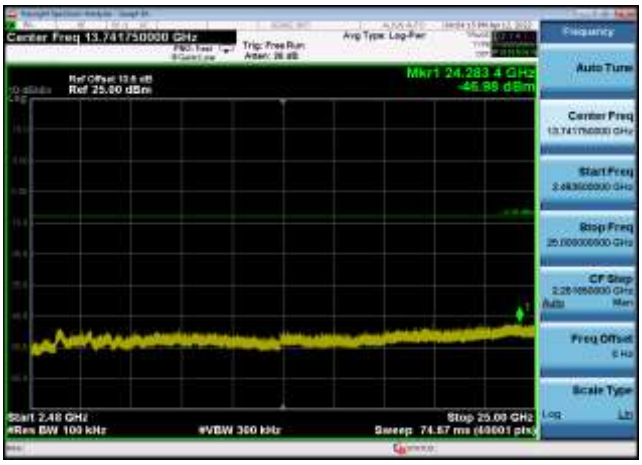
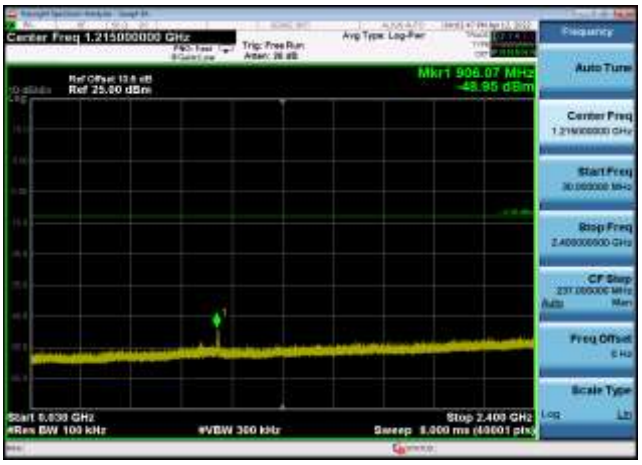
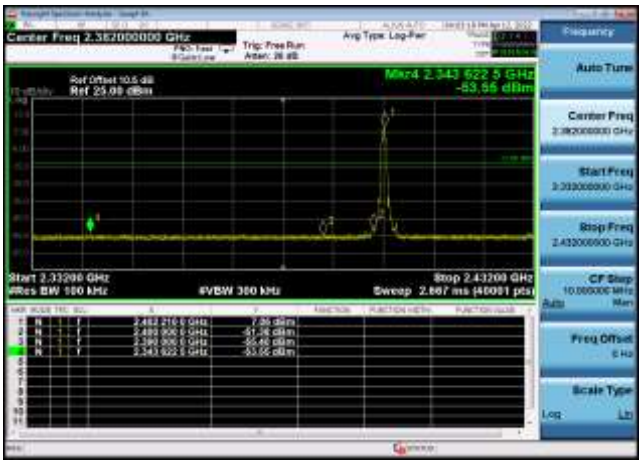
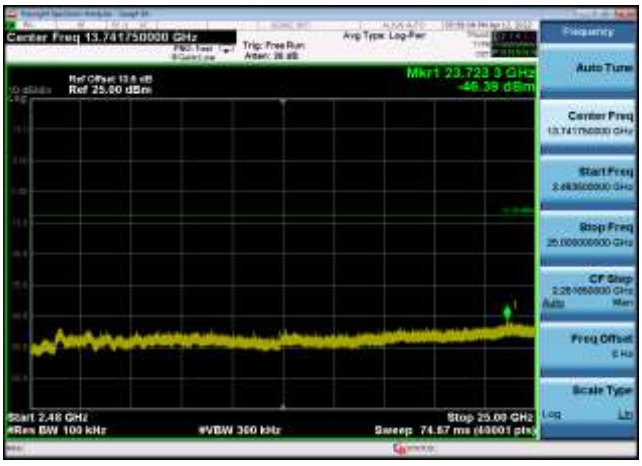
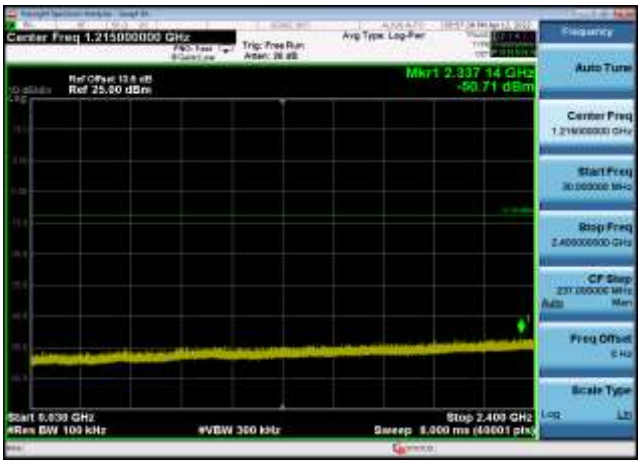
Test Result and Data

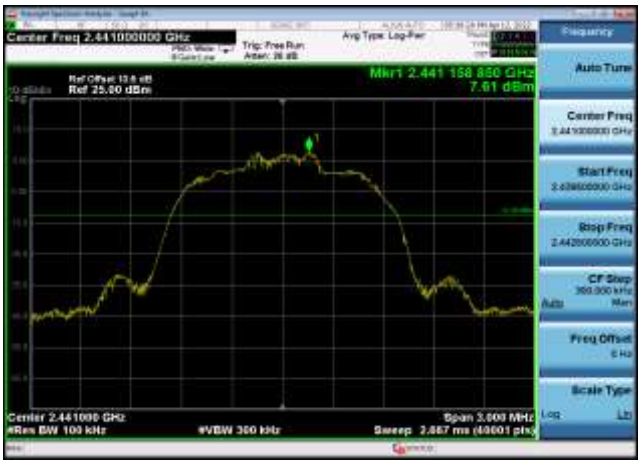
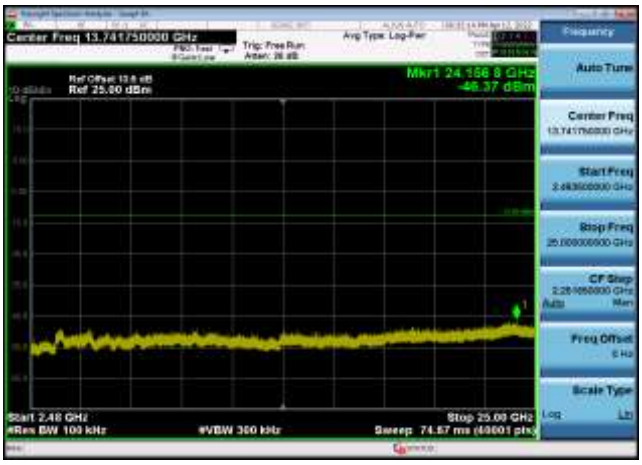
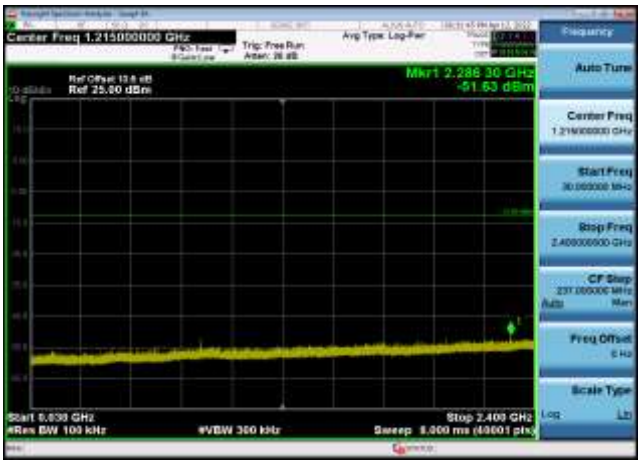
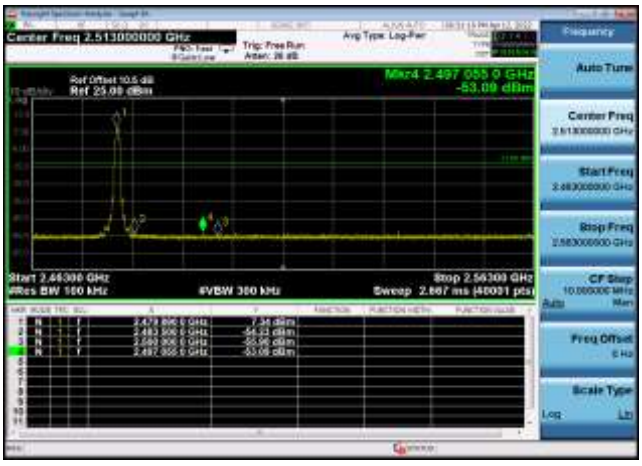
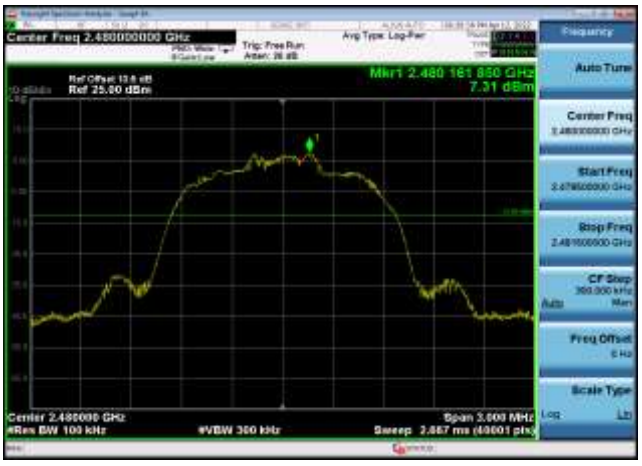
Conducted Emission：GFSK,2402,DH5 ,2483.5MHz~25000MHz	Conducted Emission：GFSK,2402,DH5 ,30MHz~2400MHz
	
Conducted Emission：GFSK,2402,DH5 ,Band Edge HoppingOFF	Conducted Emission：GFSK,2402,DH5 ,Reference Level
	
Conducted Emission：GFSK,2441,DH5 ,2483.5MHz~25000MHz	Conducted Emission：GFSK,2441,DH5 ,30MHz~2400MHz
	

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
	

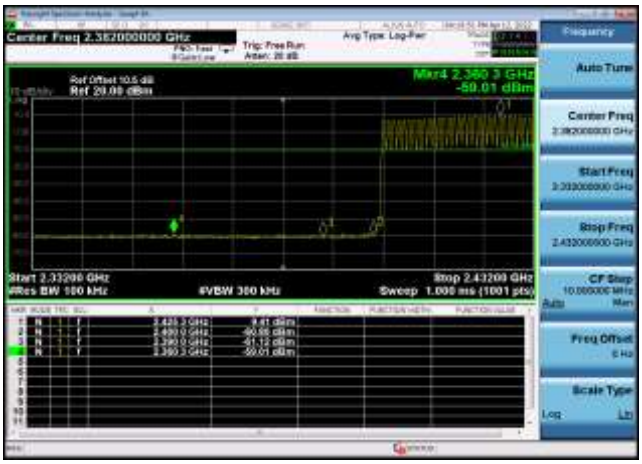
Conducted Emission：DQPSK,2402,2DH5 ,2483.5MHz~25000MHz	Conducted Emission：DQPSK,2402,2DH5 ,30MHz~2400MHz
	
Conducted Emission：DQPSK,2402,2DH5 ,Band Edge HoppingOFF	Conducted Emission：DQPSK,2402,2DH5 ,Reference Level
	
Conducted Emission：DQPSK,2441,2DH5 ,2483.5MHz~25000MHz	Conducted Emission：DQPSK,2441,2DH5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

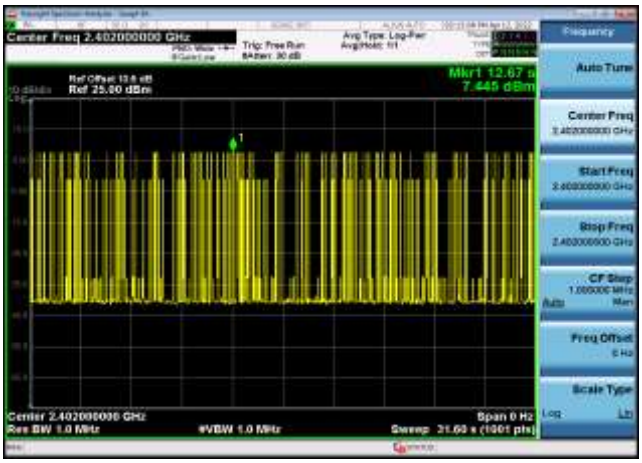
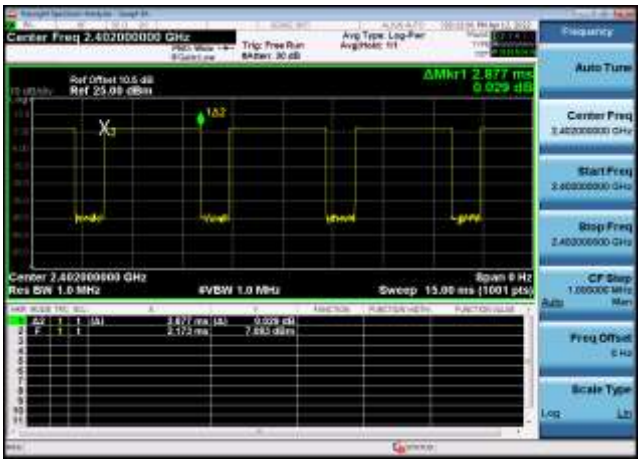
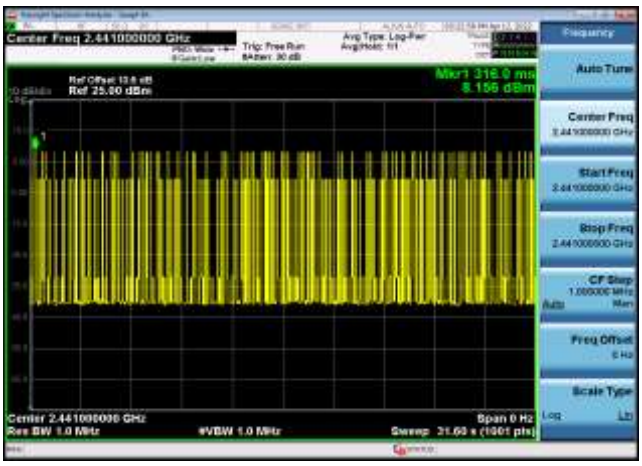
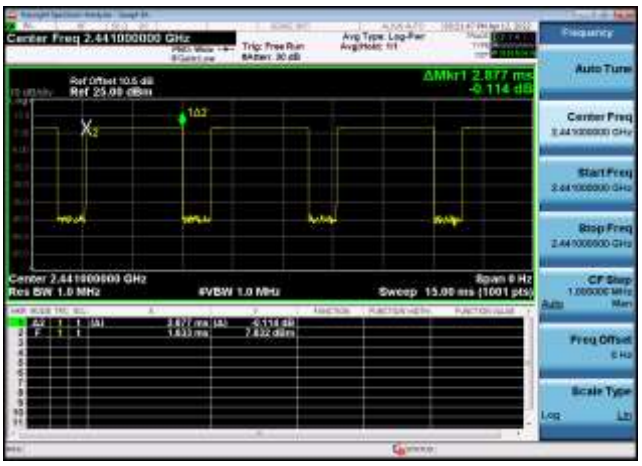
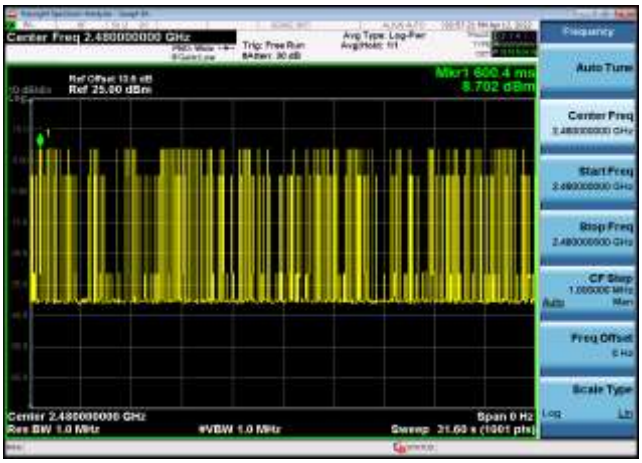
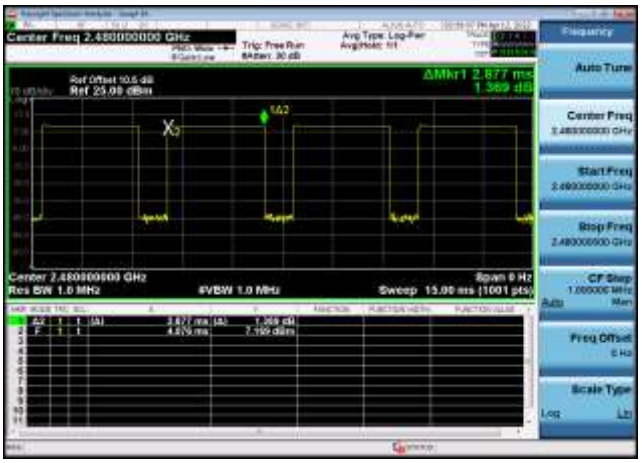
Hopping On Mode
Test Result and Data

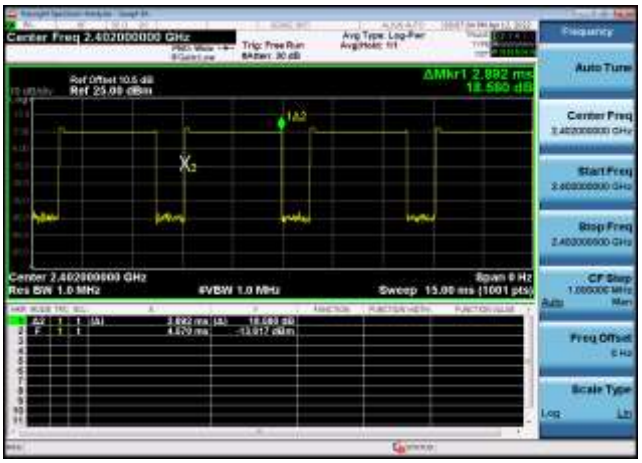
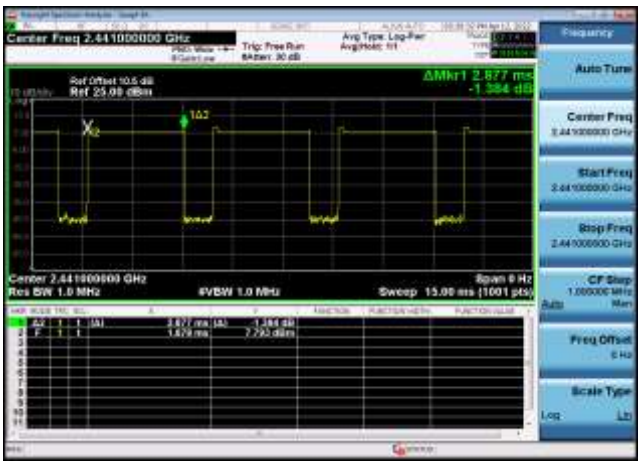
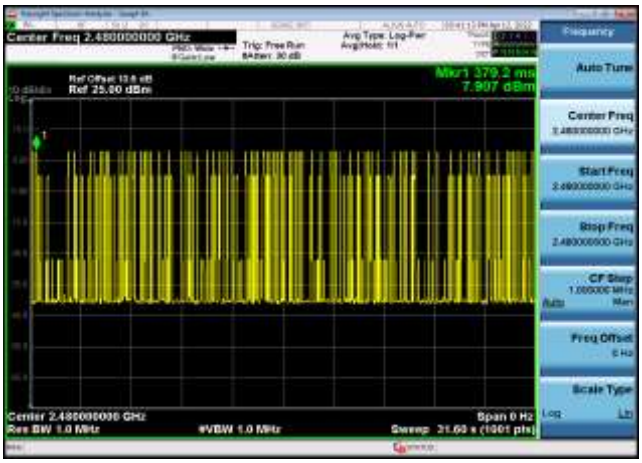
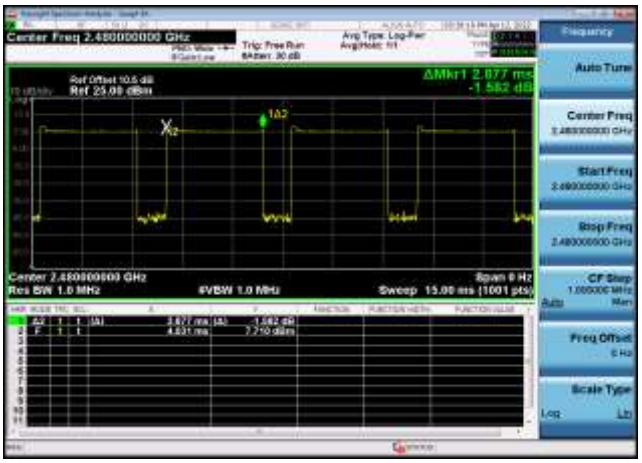
Conducted Emission：GFSK,2402,DH5 ,Band Edge	Conducted Emission：GFSK,2480,DH5 ,Band Edge
	
Conducted Emission：DQPSK,2402,2DH5 ,Band Edge	Conducted Emission：DQPSK,2480,2DH5 ,Band Edge
	
Conducted Emission：8DPSK,2402,3DH5 ,Band Edge	Conducted Emission：8DPSK,2480,3DH5 ,Band Edge
	

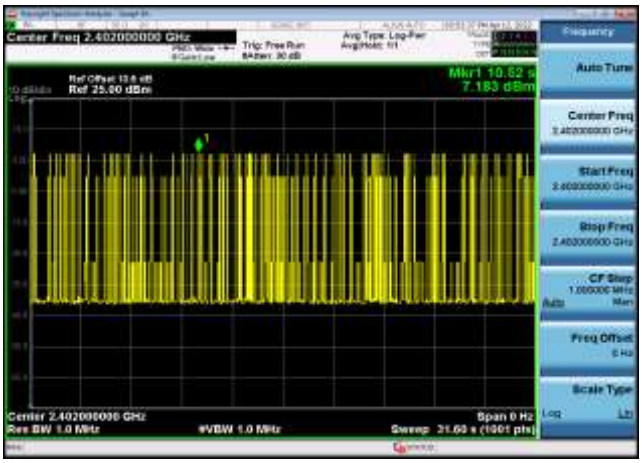
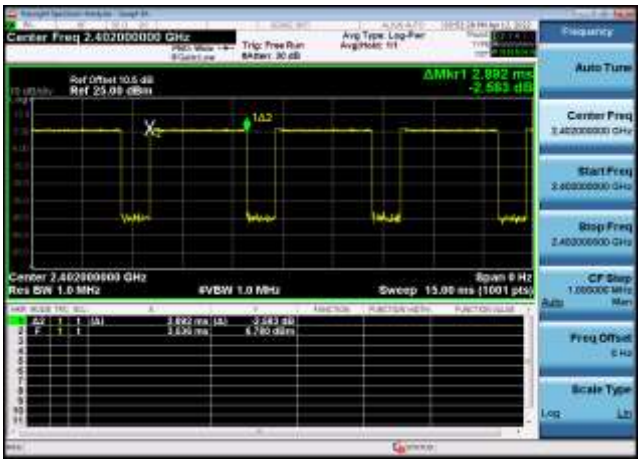
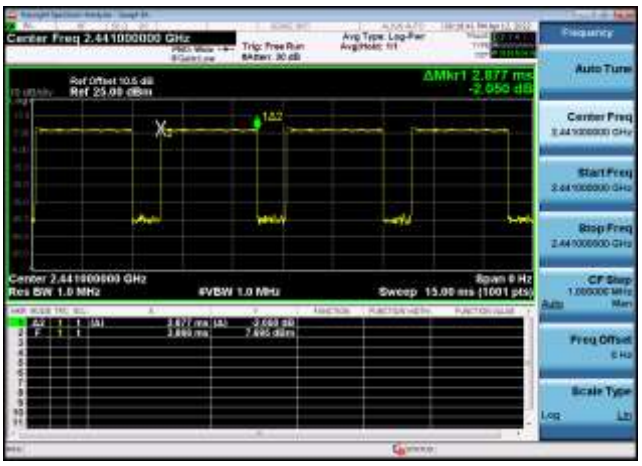
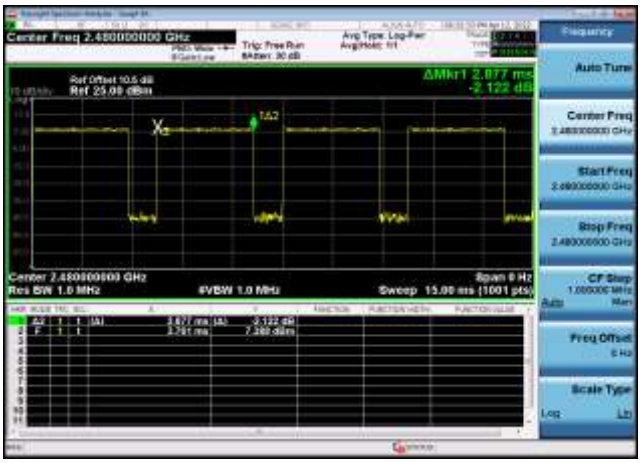
Dwell Time

Test Result and Data

BT Dwell Time						
Mode	Test Frequency	Packet Type	Transmission Time(ms)	Number	Dwell Time(ms)	Result
GFSK	2402	DH5	2.88	93	267.57	Pass
GFSK	2441	DH5	2.88	87	250.31	Pass
GFSK	2480	DH5	2.88	86	247.43	Pass
π/4-DQPSK	2402	2DH5	2.89	86	248.72	Pass
π/4-DQPSK	2441	2DH5	2.88	81	233.05	Pass
π/4-DQPSK	2480	2DH5	2.88	87	250.31	Pass
8DPSK	2402	3DH5	2.89	86	248.72	Pass
8DPSK	2441	3DH5	2.88	81	233.05	Pass
8DPSK	2480	3DH5	2.88	78	224.42	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

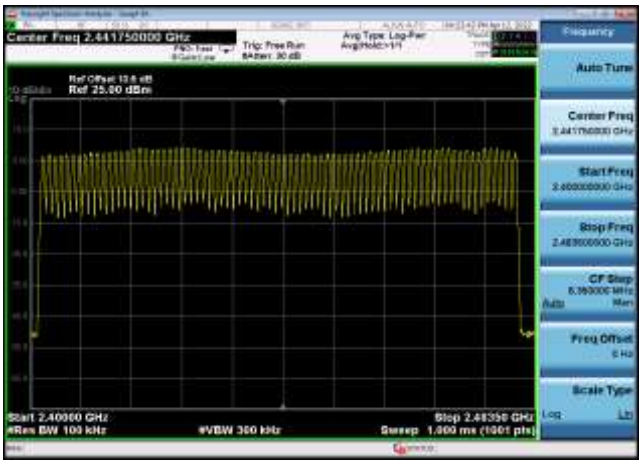
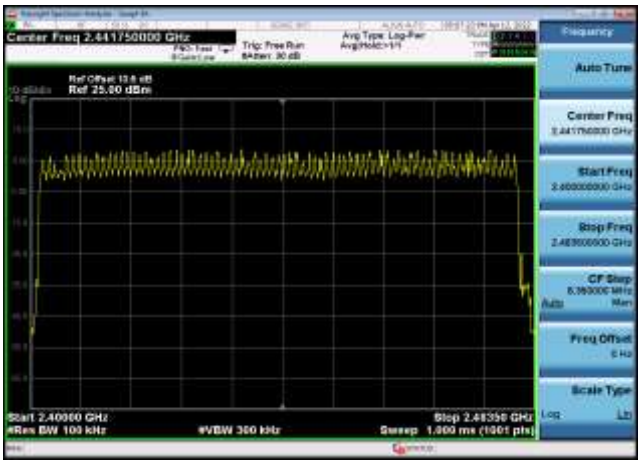
BT Carrier Frequency Separation						
Mode	Test Frequency	Packet Type	Range (MHz~MHz)	Separation (KHz)	Limit (KHz)	Result
GFSK	Hopping	DH5	2401.5MHz~2403.5MHz	1078.92	⩾861.200	Pass
GFSK	Hopping	DH5	2440.5MHz~2442.5MHz	1082.92	⩾805.700	Pass
GFSK	Hopping	DH5	2478.5MHz~2480.5MHz	955.04	⩾863.569	Pass
π/4-DQPSK	Hopping	2DH5	2401.5MHz~2403.5MHz	1152.85	⩾838.891	Pass
π/4-DQPSK	Hopping	2DH5	2440.5MHz~2442.5MHz	925.07	⩾842.532	Pass
π/4-DQPSK	Hopping	2DH5	2478.5MHz~2480.5MHz	1184.82	⩾839.146	Pass
8DPSK	Hopping	3DH5	2401.5MHz~2403.5MHz	993.01	⩾836.884	Pass
8DPSK	Hopping	3DH5	2440.5MHz~2442.5MHz	861.14	⩾838.212	Pass
8DPSK	Hopping	3DH5	2478.5MHz~2480.5MHz	995.00	⩾837.199	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