

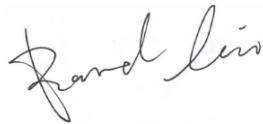
**FCC PART 15.247
TEST REPORT**

For

Shanghai Xiangcheng Communication Technology Co.,Ltd

6th Floor, Building 10, No.3000 Longdong Avenue, Pudong New District, Shanghai, China

FCC ID: 2A2UU-P14

Report Type: Class II permissive change Report	Product Name: Smart POS Terminal
Report Number: RKSA240620011-00C	
Report Date: 2025-05-20	
Reviewed By: Bard Liu	
Approved By: Kyle Xu	
Prepared By: Bay Area Compliance Laboratories Corp. (Kunshan) No.248 Chenghu Road, Kunshan, Jiangsu Province, China Tel: +86-512-86175000 Fax: +86-512-88934268 www.baclcorp.com.cn	

Note: This test report is prepared for the customer shown above and for the device described herein. It may not be duplicated or used in part without prior written consent from Bay Area Compliance Laboratories Corp. (Kunshan). This report must not be used by the customer to claim product certification, approval, or endorsement by NVLAP, or any agency of the U.S.Government.

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DOCUMENT HISTORY

Revision	Release Time	Description of Revision	Report Number
R1V1	2025-05-20	Class II permissive change Report	RKSA240620011-00C

FILING DESCRIPTION

Report Number	Information about changes
RKSA240620011-00C	Adapter; Battery; Wifi/BT Antenna; WWAN Antenna; SIM card slot, Memory, Add 2.4G Hotspot function

Note:

This is a C2PC report, based on CR231168756-00B★ grant on 03/11/2024, the details as below:

1. Add an adapter, its model is LM-603U-050200U02UL.
2. Add a new battery, its model is F50051MA, the supplier is Dongguan HongDe Battery Co.Ltd
3. Add a new battery, the model is F50051MA (only model name different with original.)
4. Change the wifi/BT Antenna.
5. Change the SIM card slot.
6. Change the WWAN Antenna.
7. Change memory from Vender: BIWIN Vender Model :BWCC2X32N2A-16G-X to Vender: LONGSYS Vender Model :FLXC2002G-N2
8. Add 2.4G WiFi Hotspot function through software which not affect RF performance

For above changes, we “Spot Check With Maximum Conducted Output Power”, and tested “Conducted Emissions” and “Radiated Emissions” and update related photos, other data and photos were referred to the original report CR231168756-00B★.

GENERAL INFORMATION

Product Description for Equipment under Test (EUT)

Applicant:	Shanghai Xiangcheng Communication Technology Co.,Ltd
Tested Model:	P14
Product Name:	Smart POS Terminal
Power Supply:	DC 3.8V from battery or DC 5V charging by adapter
RF Function:	Classic BT
Operating Band/Frequency:	2402-2480 MHz
★Maximum Output Power:	10.92dBm
Channel Number:	79
Channel Separation:	1 MHz
Modulation Type:	GFSK, $\pi/4$ -DQPSK, 8DPSK
Antenna Type:	IFA Antenna
★Maximum Antenna Gain:	1.89 dBi

Adapter Information:

Model: LM-603U-050200U02UL

Input: 100-240V, 50/60Hz, 0.35A

Output: 5V, 2000mA, 10.0W

Note: The maximum antenna gain is provided by the applicant.

All measurement and tested data in this report was gathered from production sample serial number:

RKSA240620011-1 (Assigned by BACL (Kunshan). The EUT supplied by the applicant was received on 2024-06-20.)

Objective

This test report is prepared for *Shanghai Xiangcheng Communication Technology Co.,Ltd* in accordance with Part 2-Subpart J, Part 15-Subparts A and C of the Federal Communication Commissions rules.

The tests were performed in order to determine Compliance with FCC Part 15, Subpart C, section 15.203, 15.205, 15.207, 15.209 and 15.247 rules.

Test Methodology

All measurements contained in this report were conducted with ANSI C63.10-2013, American National Standard of Procedures for Compliance Testing of Unlicensed Wireless Devices and 558074 D01 15.247 Meas Guidance v05r02.

Measurement Uncertainty

Item		Uncertainty
AC Power Lines Conducted Emissions		3.19dB
RF conducted test with spectrum		0.9dB
RF Output Power with Power meter		0.5dB
Radiated emission	9 kHz~150 kHz	3.8dB
	150 kHz~30 MHz	3.4dB
	30MHz~1GHz	6.11dB
	1GHz~6GHz	4.45dB
	6GHz~18GHz	5.23dB
	18GHz~40GHz	5.65dB
Occupied Bandwidth		0.5kHz
Temperature		1.0°C
Humidity		6%

Test Facility

The Test site used by Bay Area Compliance Laboratories Corp. (Kunshan) to collect test data is located on the No.248 Chenghu Road, Kunshan, Jiangsu Province, China.

Bay Area Compliance Laboratories Corp. (Kunshan) is accredited in accordance with ISO/IEC 17025:2017 by NVLAP (Lab code: 600338-0), and the lab has been recognized as the FCC accredited lab under the KDB 974614 D01, the FCC Designation No. : CN5055.

SYSTEM TEST CONFIGURATION

Description of Test Configuration

Channel list:

Channel	Frequency (MHz)	Channel	Frequency (MHz)
0	2402	40	2442
1	2403	...	...
...	...	...	...
...	...	78	2480
39	2441	/	/

EUT was tested with Channel 0, 39 and 78.

EUT Exercise Software

RF test tool: Engineer mode

★Power level: default

Note: The power level was declared by the applicant.

Special Accessories

No special accessory.

Equipment Modifications

No modification was made to the EUT tested.

Support Equipment List and Details

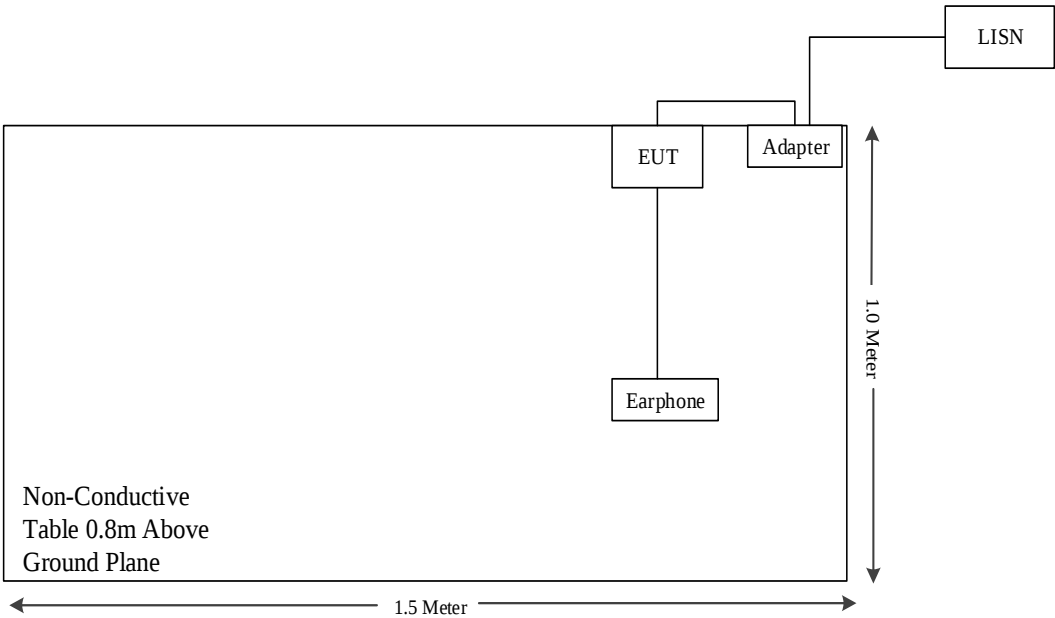
Manufacturer	Description	Model	Serial Number
Unknown	Earphone	Unknown	Unknown

External I/O Cable

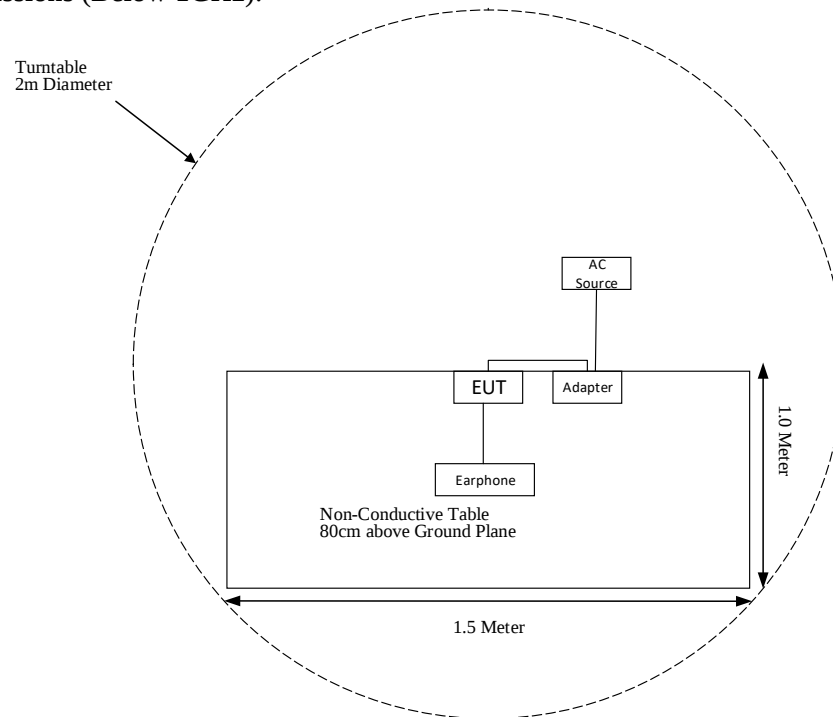
Cable Description	Length (m)	From Port	To
Power Cable 1	1.0	AC Source/LISN	Adapter
USB Cable 1	1.0	Adapter	EUT
Audio Cable 1	1.0	EUT	Earphone

Block Diagram of Test Setup

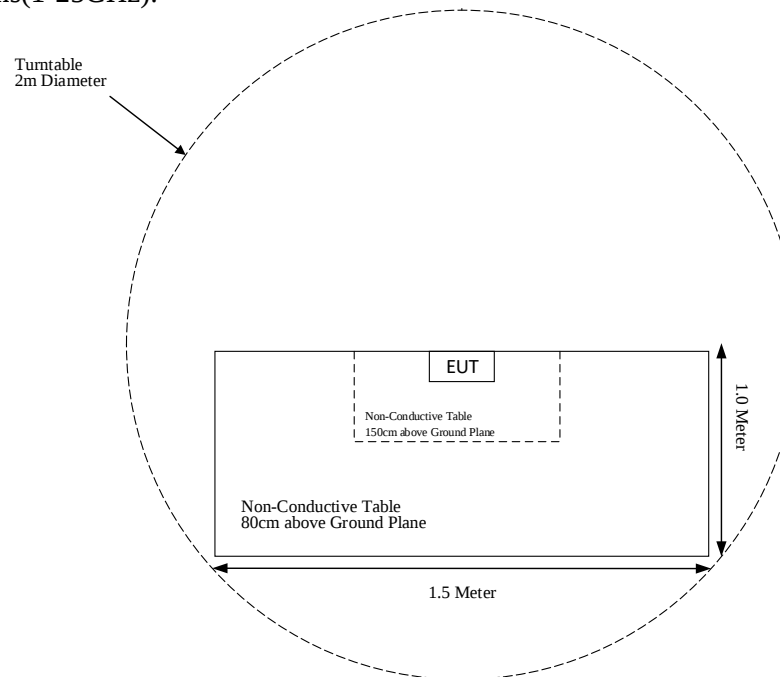
For Conducted Emissions:



For Radiated Emissions (Below 1GHz):



For Radiated Emissions(1-25GHz):



SUMMARY OF TEST RESULTS

FCC Rules	Description of Test	Result	Remark
§15.203	Antenna Requirement	Compliant	---
§15.207(a)	AC Line Conducted Emissions	Compliant	---
§15.205, §15.209 & §15.247(d)	Radiated Emissions & Restricted Bands Emissions	Compliant	---
§15.247(a)(1)	20 dB Emission Bandwidth	---	See Note★
§15.247(a)(1)	Channel Separation Test	---	See Note★
§15.247(a)(1)(iii)	Time of Occupancy (Dwell Time)	---	See Note★
§15.247(a)(1)(iii)	Quantity of hopping channel Test	---	See Note★
§15.247(b)(1)	Peak Output Power Measurement	Reporting	---
§15.247(d)	Band edges	---	See Note★

Note: The changes will not affect test data, the data are referred to original report CR231168756-00B★ which provided by applicant.

TEST EQUIPMENT LIST

Manufacturer	Description	Model	Serial Number	Calibration Date	Calibration Due Date
Radiated Emission Test (Chamber #1)					
Rohde & Schwarz	EMI Test Receiver	ESCI	100195	2024-04-23	2025-04-22
Sunol Sciences	Broadband Antenna	JB3	A090314-1	2023-11-11	2024-11-10
Narda	6dB Attenuator	773-6	10690812-2-1	2023-11-11	2024-11-10
BACL	Active Loop Antenna	1313-1A	4041511	2024-11-22	2027-11-21
Sonoma Instrument	Pre-amplifier	310N	171205	2024-04-23	2025-04-22
Rohde & Schwarz	Auto Test Software	EMC32	100361	N/A	N/A
MICRO-COAX	Coaxial Cable	Cable-8	008	2024-04-25	2025-04-24
MICRO-COAX	Coaxial Cable	Cable-9	009	2024-04-23	2025-04-22
MICRO-COAX	Coaxial Cable	Cable-10	010	2024-04-23	2025-04-22
Radiated Emission Test (Chamber #2)					
Rohde & Schwarz	EMI Test Receiver	ESU40	100207/040	2024-04-25	2025-04-24
ETS-LINDGREN	Horn Antenna	3115	9311-4159	2024-12-02	2025-12-01
ETS-LINDGREN	Horn Antenna	3116	2516	2024-12-12	2027-12-11
A.H.Systems, inc	Amplifier	PAM-0118P	512	2024-04-25	2025-04-24
SELECTOR	Amplifier	EM18G40G	060726	2024-04-25	2025-04-24
MICRO-TRONICS	Band Reject Filter	BRM50702	G024	2024-08-05	2025-08-04
Narda	Attenuator	10dB	010	2024-04-23	2025-04-22
Rohde & Schwarz	Auto test Software	EMC32	100361	N/A	N/A
MICRO-COAX	Coaxial Cable	Cable-6	006	2024-04-25	2025-04-24
MICRO-COAX	Coaxial Cable	Cable-11	011	2024-04-25	2025-04-24
MICRO-COAX	Coaxial Cable	Cable-12	012	2024-04-25	2025-04-24
MICRO-COAX	Coaxial Cable	Cable-13	013	2024-04-25	2025-04-24
RF Conducted Test					
Narda	Attenuator	10 dB	N/A	2024-04-23	2025-04-22
Anritsu	Power Sensor	MA24418A	12621	2024-04-23	2025-04-22
Unknown	RF Cable	RF Cable C01	C01	Each Time	N/A
Conducted Emission Test					
Rohde & Schwarz	EMI Test Receiver	ESR	1316.3003K03-101746-zn	2024-04-23	2025-04-22
Rohde & Schwarz	LISN	ENV216	101115	2024-04-23	2025-04-22
Audix	Test Software	e3	V9	N/A	N/A
Rohde & Schwarz	Pulse limiter	ESH3-Z2	100552	2024-04-24	2025-04-23
MICRO-COAX	Coaxial Cable	Cable-15	015	2024-04-23	2025-04-22

Statement of Traceability: Bay Area Compliance Laboratories Corp. (Kunshan) attests that all calibrations have been performed in accordance to requirements that traceable to National Primary Standards and International System of Units (SI).

FCC §15.203 - ANTENNA REQUIREMENT

Applicable Standard

According to § 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. The manufacturer may design the unit so that a broken antenna can be replaced by the user, but the user of a standard antenna jack or electrical connector is prohibited. The structure and application of the EUT were analyzed to determine Compliant with section §15.203 of the rules. §15.203 state that the subject device must meet the following criteria:

- a. Antenna must be permanently attached to the unit.
- b. Antenna must use a unique type of connector to attach to the EUT.
- c. Unit must be professionally installed, and installer shall be responsible for verifying that the correct antenna is employed with the unit.

And according to FCC 47 CFR section 15.247 (b), if the 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 6 dBi.

Antenna Connector Construction

The EUT has an IFA antenna which was permanently attached, and the antenna gain is 1.89 dBi, fulfill the requirement of this section. Please refer to the EUT photos.

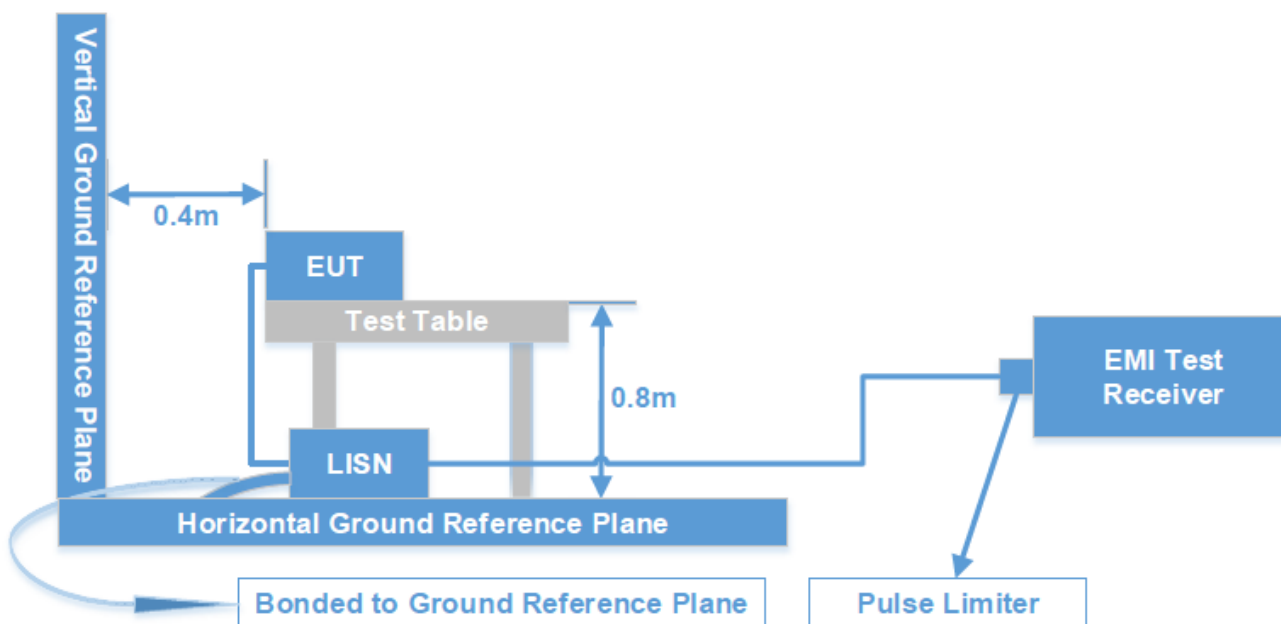
Result: Compliant.

FCC §15.207 (a) - AC LINE CONDUCTED EMISSIONS

Applicable Standard

FCC §15.207(a)

Test System Setup



The measurement procedure of EUT setup is according with ANSI C63.10-2013. The related limit was specified in FCC Part 15.207.

The spacing between the peripherals was 10 cm.

EMI Test Receiver Setup

The EMI test receiver was set to investigate the spectrum from 150 kHz to 30 MHz.

During the conducted emission test, the EMI test receiver was set with the following configurations:

Frequency Range	RBW	VBW
150 kHz - 30 MHz	9 kHz	30 kHz

Test Procedure

ANSI C63.10-2013 clause 6.2

During the conducted emission test, the EUT was connected to the outlet of the LISN.

Maximizing procedure was performed on the six (6) highest emissions of the EUT.

If the maximum peak value of the emissions is below the average limit, the QP value and average value measurement will not need to be performed and only record the maximum peak measured value to meet the requirements.

Level & Over Limit Calculation

The Level is calculated by adding LISN VDF (Voltage Division Factor), Cable Loss and Transient Limiter Attenuation from the Meter Reading. The basic equation is as follows:

Factor (dB) = LISN VDF (dB) + Cable Loss (dB) + Transient Limiter Attenuation (dB)

Level (dBμV) = Read level (dBμV) + Factor (dB)

The “**Over Limit**” column of the following data tables indicates the degree of compliance with the applicable limit. For example, an Over Limit of 7 dB means the emission is 7 dB above the limit. The equation for Over Limit calculation is as follows:

Over Limit (dB) = Level (dBμV) - Limit (dBμV)

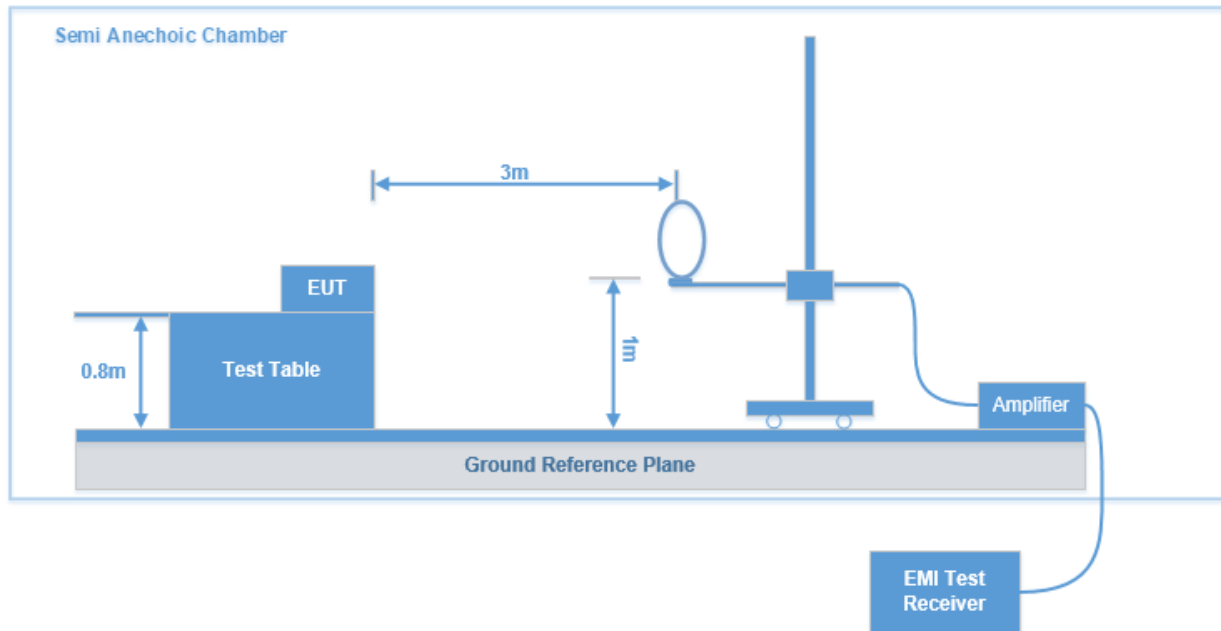
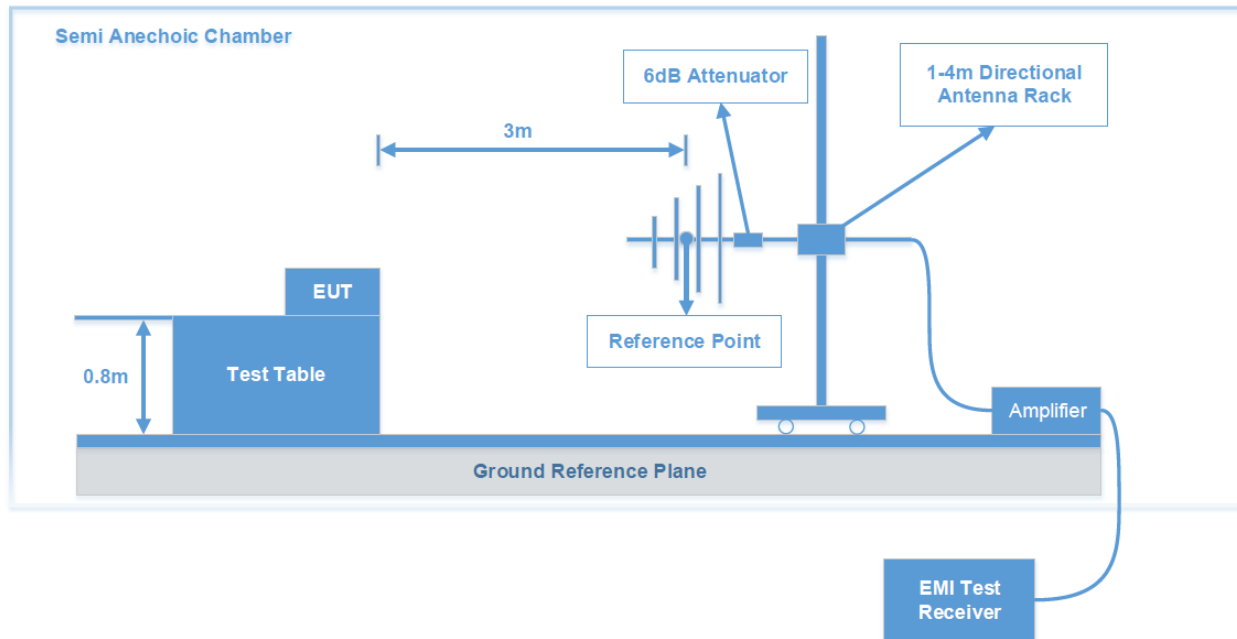
Test Results Summary

According to the recorded data in following table, the EUT complied with the FCC Part 15.207.

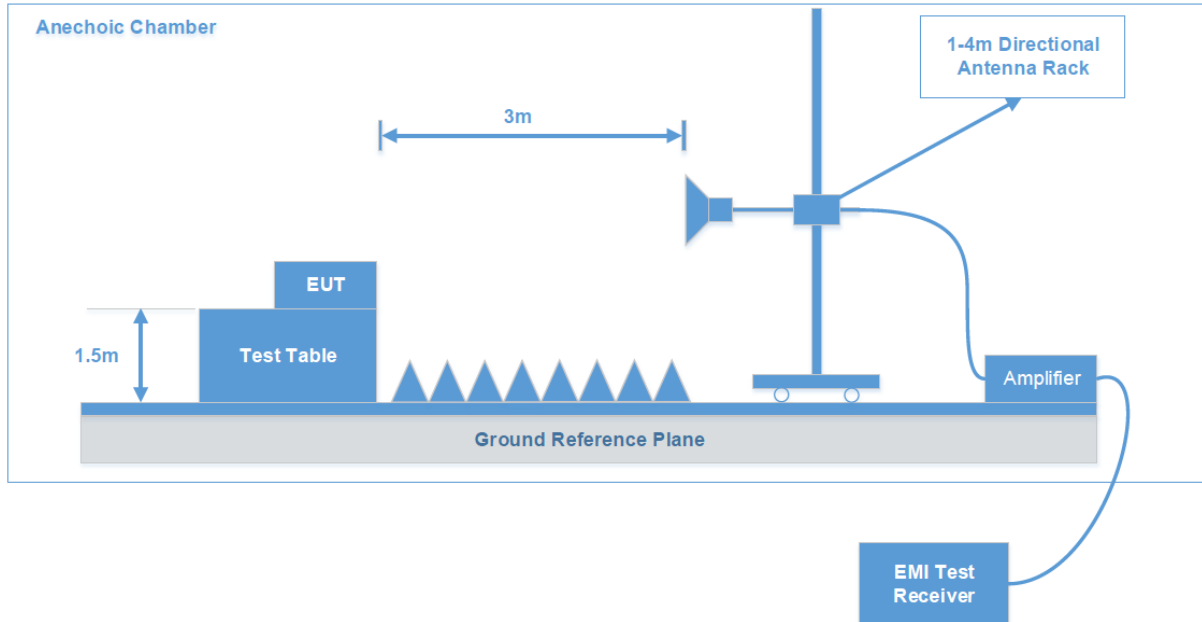
Test Data: See Appendix

FCC §15.205, §15.209 & §15.247(d) – RADIATED EMISSIONS**Applicable Standard**

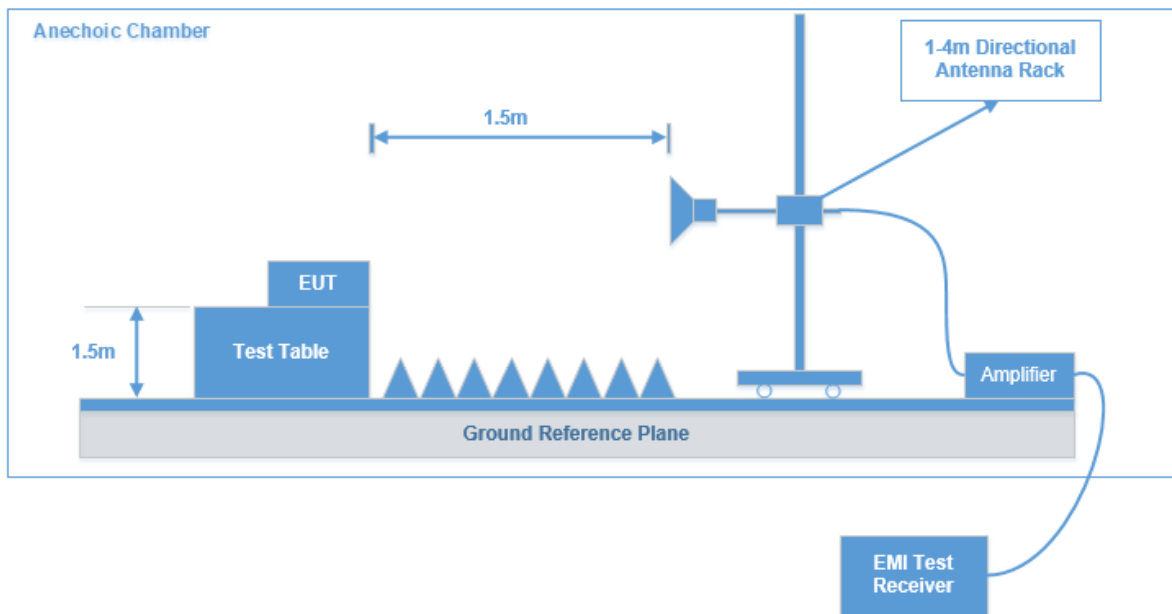
FCC §15.205; §15.209; §15.247(d)

Test System Setup**9 kHz-30 MHz:****30 MHz-1 GHz:**

1GHz-18GHz:



18 GHz-25 GHz:



The radiated emission tests were performed in the 3 meters test site, using the setup accordance with the ANSI C63.10-2013. The specification used was the FCC 15.209, and FCC 15.247 limits.

EMI Test Receiver Setup

During the radiated emission test, the EMI test receiver Setup was set with the following configurations:

Frequency Range	RBW	VBW	IF B/W	Measurement
9 kHz - 150 kHz	200 Hz	1 kHz	200 Hz	QP/Average
150 kHz - 30 MHz	9 kHz	30 kHz	9 kHz	QP/ Average
30 MHz - 1000 MHz	100 kHz	300 kHz	/	Peak
	/	/	120 kHz	QP
Above 1GHz	1MHz	3 MHz	/	Peak
	1MHz	3 MHz	/	Average

Test Procedure

Maximizing procedure was performed on the highest emissions to ensure that the EUT complied with all installation combinations.

If the measured peak level of the emissions that the measuring receiver reading level plus corrected factor is at least 6 dB below the QP emission limit, there's no need to record the measured QP level of the emissions in the report.

For 9 kHz-30MHz test, the lowest height of the magnetic antenna shall be 1 m above the ground and three antenna orientations (parallel, perpendicular, and ground-parallel) shall be measured.

Corrected Amplitude & Margin Calculation

The Corrected Amplitude is calculated by adding the Antenna Factor and Cable Loss, and subtracting the Amplifier Gain from the Meter Reading. The basic equation is as follows:

$$\text{Corrected Amplitude (dB}\mu\text{V/m)} = \text{Meter Reading (dB}\mu\text{V)} + \text{Antenna Factor (dB/m)} + \text{Cable Loss (dB)} - \text{Amplifier Gain (dB)}$$

The “Margin” column of the following data tables indicates the degree of compliance with the applicable limit. For example, a margin of 7dB means the emission is 7dB below the limit. The equation for margin calculation is as follows:

$$\text{Margin (dB)} = \text{Limit (dB}\mu\text{V/m)} - \text{Corrected Amplitude (dB}\mu\text{V/m)}$$

Note: The QuasiPeak (dB μ V/m), MaxPeak (dB μ V/m), Average (dB μ V/m) which shown in the data table are all Corrected Amplitude.

Test Results Summary

According to the recorded data in following table, the EUT complied with the FCC Title 47, Part 15, Subpart C, section 15.205, 15.209 and 15.247.

Test Data: See Appendix

FCC §15.247(b) (3) - MAXIMUM CONDUCTED OUTPUT POWER

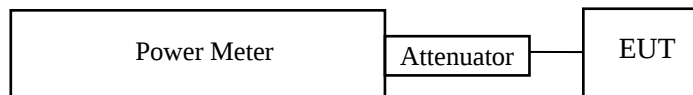
Applicable Standard

According to FCC §15.247(b) (3), for systems using digital modulation in the 902-928 MHz, 2400-2483.5 MHz, and 5725-5850 MHz bands: 1 Watt. As an alternative to a peak power measurement, Compliance with the one Watt limit can be based on a measurement of the maximum conducted output power. Maximum Conducted Output Power is defined as the total transmit power delivered to all antennas and antenna elements averaged across all symbols in the signaling alphabet when the transmitter is operating at its maximum power control level. Power must be summed across all antennas and antenna elements. The average must not include any time intervals during which the transmitter is off or is transmitting at a reduced power level. If multiple modes of operation are possible (e.g., alternative modulation methods), the maximum conducted output power is the highest total transmit power occurring in any mode.

Test Procedure

According to ANSI C63.10-2013 sub-clause 11.9.1.3

The maximum peak conducted output power may be measured using a broadband peak RF power meter. The power meter shall have a video bandwidth that is greater than or equal to the DTS bandwidth and shall use a fast-responding diode detector.



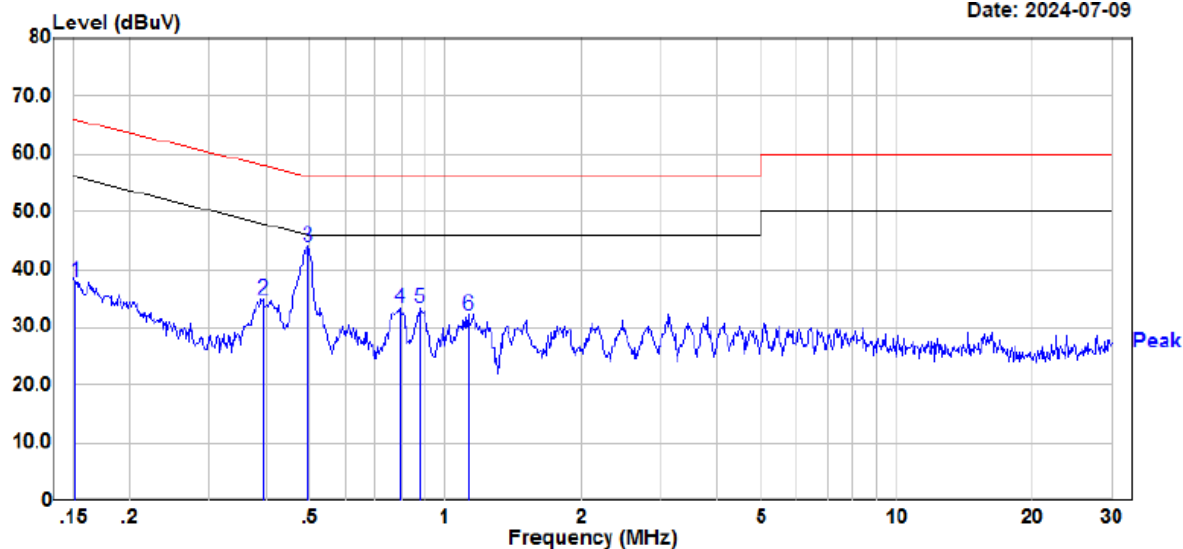
Test Data: See Appendix

APPENDIX - TEST DATA

Environmental Conditions & Test Information

Test Item:	AC LINE CONDUCTED EMISSIONS	SPURIOUS EMISSIONS		
		9 kHz-30 MHz	30 MHz-1 GHz	1 GHz - 18 GHz
Test Date:	2024-07-09	2024-12-19	2024-10-25	2025-01-07
Temperature:	28.1 °C	22.7 °C	20.2 °C	22.3 °C
Relative Humidity:	48 %	54 %	58 %	47 %
ATM Pressure:	100.4 kPa	102.8 kPa	102.6 kPa	102.6 kPa
Test Result:	Pass	Pass	Pass	Pass
Test Engineer:	Leah Li	Jerry Yan	Leah Li	Destine Hu

Test Item:	SPURIOUS EMISSIONS	SPOT CHECK WITH MAXIMUM CONDUCTED OUTPUT POWER
	18 GHz - 25 GHz	
Test Date:	2025-01-16	2024-10-30
Temperature:	22.5°C	20.3 °C
Relative Humidity:	46 %	52 %
ATM Pressure:	102.5 kPa	101.4 kPa
Test Result:	Pass	Pass
Test Engineer:	Hugh Wu	Destine Hu

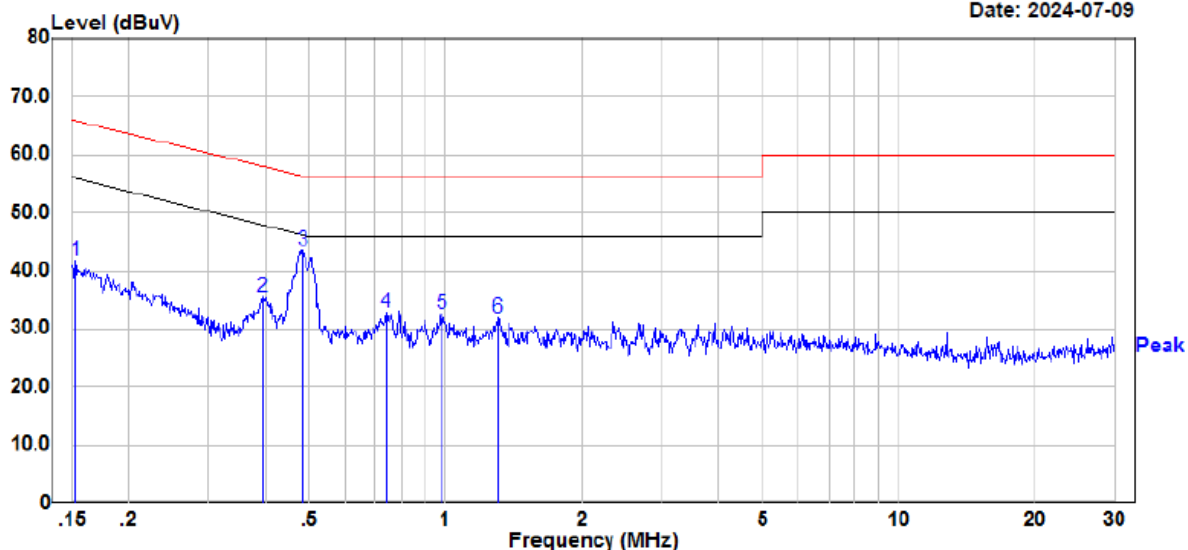
AC LINE CONDUCTED EMISSIONS*EUT operation mode: Transmitting in maximum output power mode GFSK mode middle channel***Line:****Date: 2024-07-09**

Site : CE
Condition : limit\FCC PART 15.207
Project No. : RKSA240620011
Model : P14
Phase : L
Voltage : 120V/60Hz
Mode : BT
Test Equipment : ENV216,ESR
Temperature : 28.1℃
Humidity : 48%
Atmospheric pressure: 100.4kPa
Test Engineer : Leah Li

		Read		Limit	Over	
	Freq	Level	Factor	Level	Line	Limit Remark
	MHz	dBuV	dB	dBuV	dBuV	dB
1	0.152	17.95	20.12	38.07	65.92	-27.85 Peak
2	0.394	14.71	20.20	34.91	57.97	-23.06 Peak
3	0.496	23.94	20.14	44.08	56.06	-11.98 Peak
4	0.793	13.37	19.95	33.32	56.00	-22.68 Peak
5	0.876	13.43	19.85	33.28	56.00	-22.72 Peak
6	1.124	12.45	19.79	32.24	56.00	-23.76 Peak

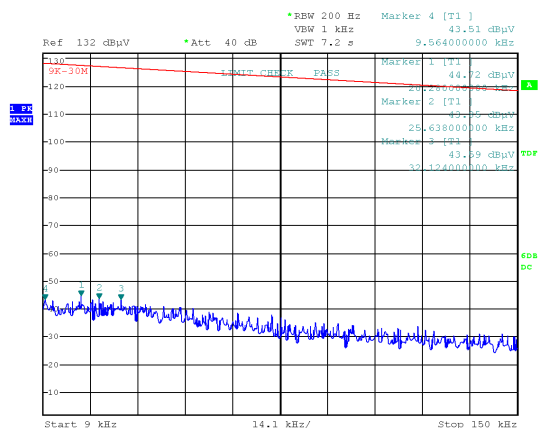
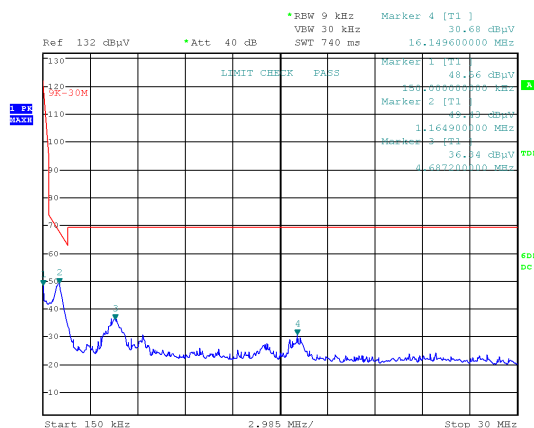
Neutral:

Date: 2024-07-09



Site : CE
Condition : limit\FCC PART 15.207
: DET:Peak
Project No. : RKSA240620011
Model : P14
Phase : N
Voltage : 120V/60Hz
Mode : BT
Test Equipment : ENV216,ESR
Temperature : 28.1°C
Humidity : 48%
Atmospheric pressure: 100.4kPa
Test Engineer : Leah Li

	Freq	Read Level	Factor	Level	Limit Line	Over Limit	Remark
	MHz	dBuV	dB	dBuV	dBuV	dB	
1	0.152	21.64	20.12	41.76	65.88	-24.12	Peak
2	0.394	15.29	20.20	35.49	57.97	-22.48	Peak
3	0.484	23.40	20.16	43.56	56.27	-12.71	Peak
4	0.739	12.93	20.02	32.95	56.00	-23.05	Peak
5	0.982	12.78	19.74	32.52	56.00	-23.48	Peak
6	1.305	12.11	19.88	31.99	56.00	-24.01	Peak

RADIATED EMISSIONS*EUT operation mode: Transmitting**After pre-scan in the X, Y and Z axes of orientation, the worst case X axes is below:***9 kHz - 30 MHz: (Transmitting in maximum output power GFSK mode and middle channel)****Parallel(worst case)****9kHz-150kHz****150kHz-30MHz**Project No. RKSA240620011
Date: 19.DEC.2024 14:16:48

Tester: Jerry Yan

Project No. RKSA240620011
Date: 19.DEC.2024 14:22:46

Tester: Jerry Yan

9kHz-150kHz

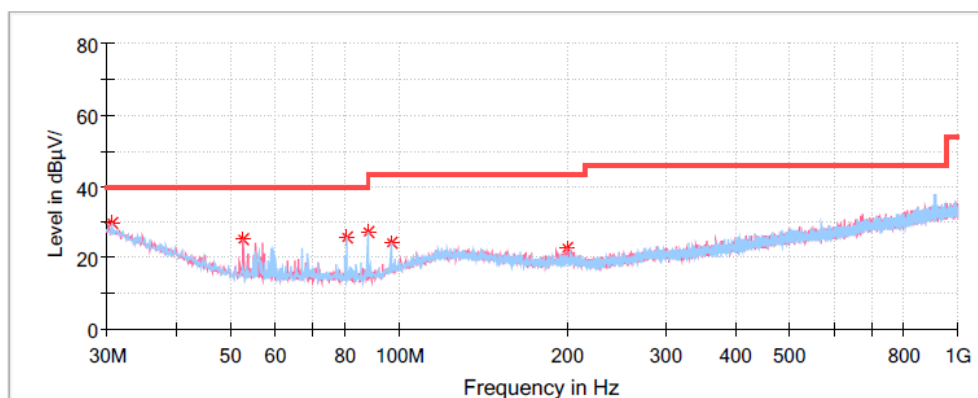
Frequency (MHz)	Corrected Amplitude (dBμV/m) @3m	Detector PK/QP/Ave.	Corrected Factor (dB/m)	Limit (dBμV/m) @3m	Margin (dB)
0.009564	43.51	PK	-0.42	127.99	84.48
0.020280	44.72	PK	-0.56	121.46	76.74
0.025638	43.85	PK	-0.59	119.43	75.58
0.032124	43.59	PK	-0.95	117.47	73.88

150kHz-30MHz

Frequency (MHz)	Corrected Amplitude (dBμV/m) @3m	Detector PK/QP/Ave.	Corrected Factor (dB/m)	Limit (dBμV/m) @3m	Margin (dB)
0.15000	48.56	PK	-11.34	104.08	55.52
1.16490	49.43	PK	-28.15	66.28	16.85
4.68720	36.34	PK	-32.01	69.54	33.20
16.14960	30.68	PK	-33.20	69.54	38.86

30MHz-1GHz:**Transmitting in maximum output power mode GFSK mode middle channel****Middle Channel: 2441 MHz****Common Information**

Project No:	RKSA240620011
EUT Model:	P14
Test Mode:	Transmitting in BT mode middle channel
Standard:	FCC Part 15.205 & FCC Part 15.209 & FCC Part 15.247
Test Equipment:	ESCI, JB3, 310N
Receiver Setting:	RBW:120 kHz, VBW: 300 kHz, Sweep Time: Auto
Temperature:	20.2°C
Humidity:	58%
Barometric Pressure:	102.6kPa
Test Engineer:	Leah Li
Test Date:	2024/10/25

**Critical_Freqs**

Frequency (MHz)	MaxPeak (dBμ V/m)	Limit (dBμ V/m)	Margin (dB)	Pol	Corr. (dB/m)
30.606250	29.72	40.00	10.28	H	-5.1
52.673750	25.11	40.00	14.89	V	-17.0
80.682500	25.46	40.00	14.54	H	-17.3
87.836250	27.01	40.00	12.99	H	-17.0
96.687500	24.05	43.50	19.45	H	-15.3
199.992500	22.81	43.50	20.69	V	-12.2

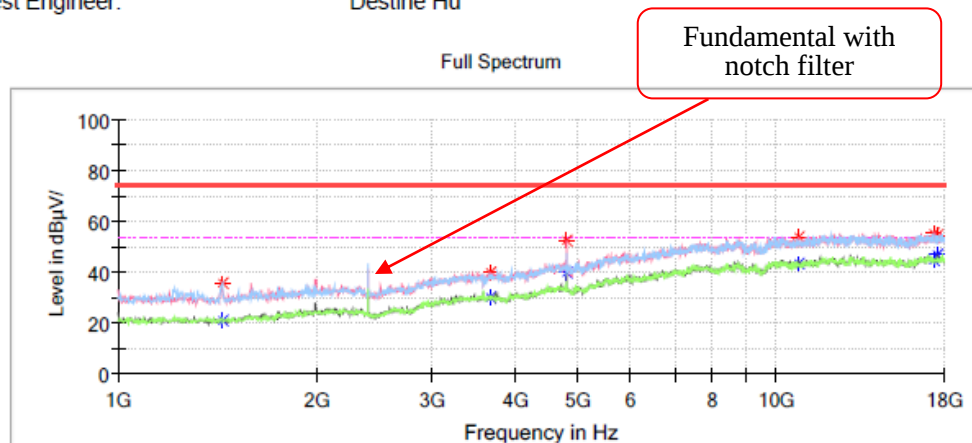
1GHz-18GHz:

GFSK:

Low Channel: 2402 MHz

Common Information

Project No.: RKSA240620011
Test Mode: BT
Standard: FCC Part 15.205&FCC Part 15.209&FCC Part 15.247
Receiver Setting: RBW: 1MHz, VBW: 3MHz, Sweep Time: Auto
Test Engineer: Destine Hu

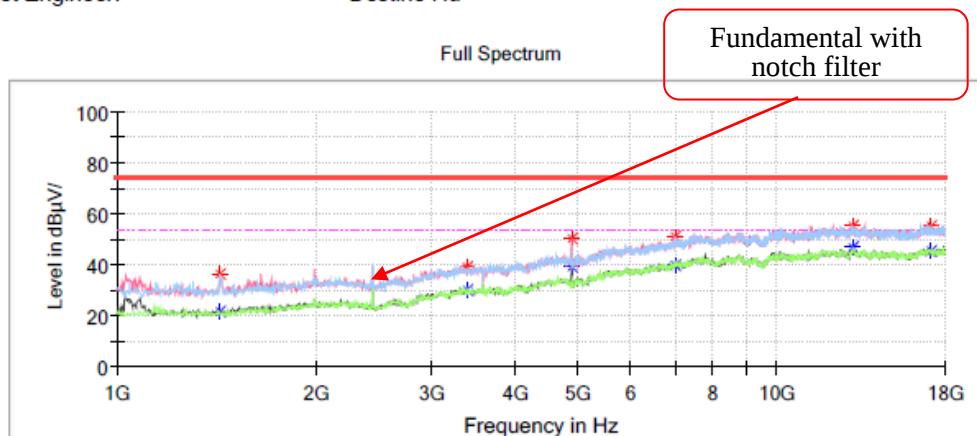
**Critical Freqs**

Frequency (MHz)	MaxPeak (dB µ V/m)	Average (dB µ V/m)	Limit (dB µ V/m)	Margin (dB)	Pol	Corr. (dB/m)
1438.600000	---	21.31	54.00	32.69	H	-14.8
1438.600000	35.75	---	74.00	38.25	H	-14.8
3675.800000	---	30.07	54.00	23.93	V	-6.2
3675.800000	39.85	---	74.00	34.15	V	-6.2
4804.600000	---	39.82	54.00	14.18	V	-3.2
4804.600000	52.10	---	74.00	21.90	V	-3.2
10843.000000	---	43.04	54.00	10.96	V	7.2
10843.000000	53.90	---	74.00	20.10	V	7.2
17347.200000	---	44.88	54.00	9.12	H	11.8
17347.200000	55.55	---	74.00	18.45	H	11.8
17605.600000	---	46.60	54.00	7.40	H	11.6
17605.600000	54.46	---	74.00	19.54	H	11.6

Middle Channel: 2441 MHz

Common Information

Project No.: RKSA240620011
Test Mode: BT
Standard: FCC Part 15.205&FCC Part 15.209&FCC Part 15.247
Receiver Setting: RBW: 1MHz, VBW: 3MHz, Sweep Time: Auto
Test Engineer: Destine Hu

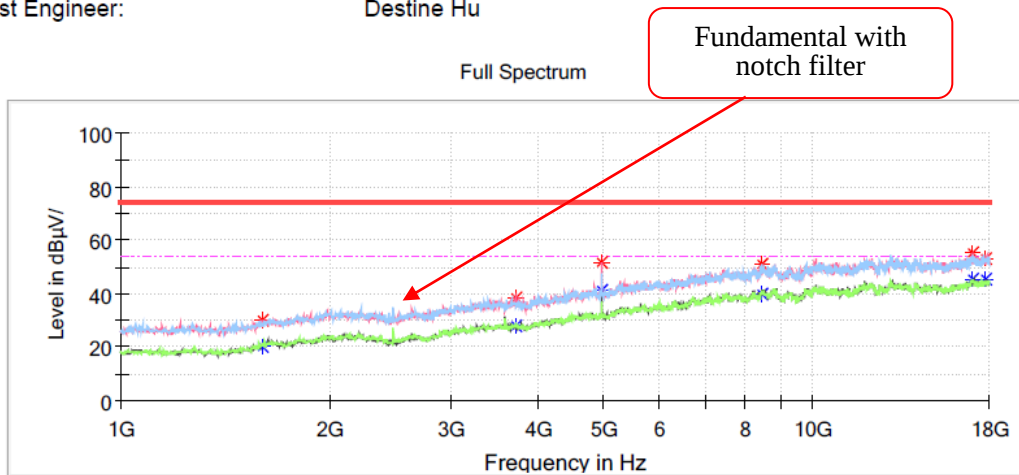


Critical Freqs

Frequency (MHz)	MaxPeak (dB μ V/m)	Average (dB μ V/m)	Limit (dB μ V/m)	Margin (dB)	Pol	Corr. (dB/m)
1431.800000	---	21.48	54.00	32.52	H	-14.8
1431.800000	36.06	---	74.00	37.94	H	-14.8
3386.800000	---	29.93	54.00	24.07	V	-6.8
3386.800000	39.28	---	74.00	34.72	V	-6.8
4879.400000	---	38.94	54.00	15.06	V	-2.9
4879.400000	50.30	---	74.00	23.70	V	-2.9
6997.600000	---	40.18	54.00	13.82	H	2.6
6997.600000	50.87	---	74.00	23.13	H	2.6
13053.000000	---	46.93	54.00	7.07	H	9.7
13053.000000	55.23	---	74.00	18.77	H	9.7
17102.400000	---	45.79	54.00	8.21	H	12.1
17102.400000	55.53	---	74.00	18.47	H	12.1

High Channel: 2480 MHz**Common Information**

Project No.: RKSA240620011
Test Mode: BT
Standard: FCC Part 15.205&FCC Part 15.209&FCC Part 15.247
Receiver Setting: RBW: 1MHz, VBW: 3MHz, Sweep Time: Auto
Test Engineer: Destine Hu

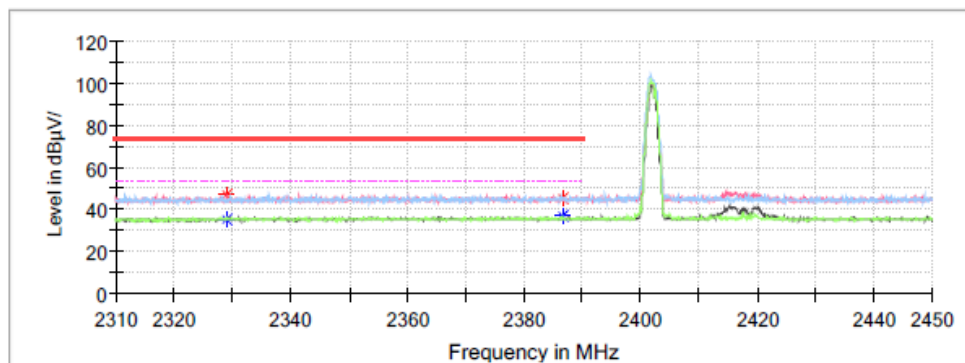
**Critical_Freqs**

Frequency (MHz)	MaxPeak (dB μ V/m)	Average (dB μ V/m)	Limit (dB μ V/m)	Margin (dB)	Pol	Corr. (dB/m)
1601.800000	---	20.21	54.00	33.79	V	-13.9
1601.800000	29.93	---	74.00	44.07	V	-13.9
3713.200000	---	28.00	54.00	26.00	V	-6.9
3713.200000	38.34	---	74.00	35.66	V	-6.9
4957.600000	---	41.02	54.00	12.98	V	-3.6
4957.600000	51.98	---	74.00	22.02	V	-3.6
8452.800000	50.80	---	74.00	23.20	H	4.2
8452.800000	---	39.81	54.00	14.19	H	4.2
17061.600000	55.19	---	74.00	18.81	V	11.2
17061.600000	---	45.19	54.00	8.81	V	11.2
17782.400000	53.01	---	74.00	20.99	H	11.2
17782.400000	---	45.70	54.00	8.30	H	11.2

Band Edge:**Left Side****Common Information**

Project No.: RKSA240620011
Test Mode: BT
Standard: FCC Part 15.205&FCC Part 15.209&FCC Part 15.247
Receiver Setting: RBW: 1MHz, VBW: 3MHz, Sweep Time: Auto
Test Engineer: Destine Hu

Full Spectrum

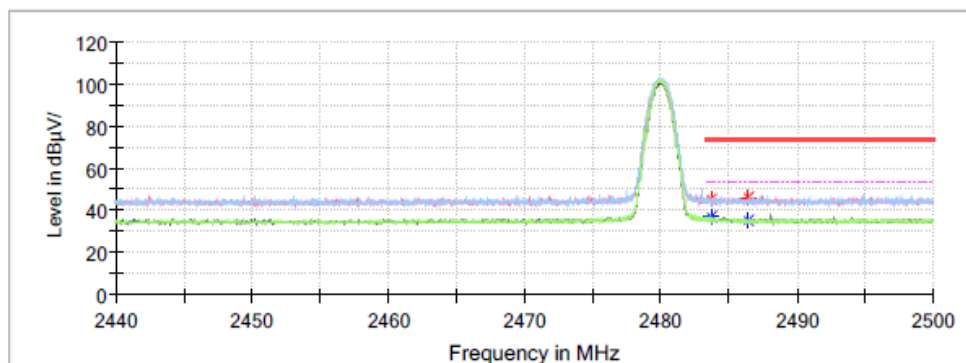
**Critical Freqs**

Frequency (MHz)	MaxPeak (dB μ V/m)	Average (dB μ V/m)	Limit (dB μ V/m)	Margin (dB)	Pol	Corr. (dB/m)
2328.928000	47.00	---	74.00	27.00	V	-0.8
2328.928000	---	35.43	54.00	18.57	V	-0.8
2386.608000	45.08	---	74.00	28.92	H	-0.6
2386.608000	---	36.72	54.00	17.28	H	-0.6

Right Side**Common Information**

Project No.: RKSA240620011
Test Mode: BT
Standard: FCC Part 15.205&FCC Part 15.209&FCC Part 15.247
Receiver Setting: RBW: 1MHz, VBW: 3MHz, Sweep Time: Auto
Test Engineer: Destine Hu

Full Spectrum

**Critical Freqs**

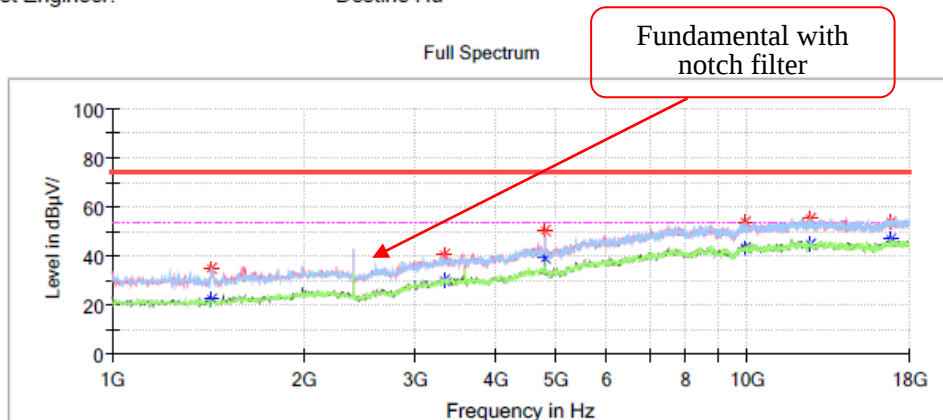
Frequency (MHz)	MaxPeak (dB μ V/m)	Average (dB μ V/m)	Limit (dB μ V/m)	Margin (dB)	Pol	Corr. (dB/m)
2483.704000	---	37.06	54.00	16.94	H	-0.3
2483.704000	45.53	---	74.00	28.47	H	-0.3
2486.392000	---	35.03	54.00	18.97	V	-0.2
2486.392000	46.43	---	74.00	27.57	V	-0.2

$\pi/4$ -DQPSK:

Low Channel: 2402 MHz

Common Information

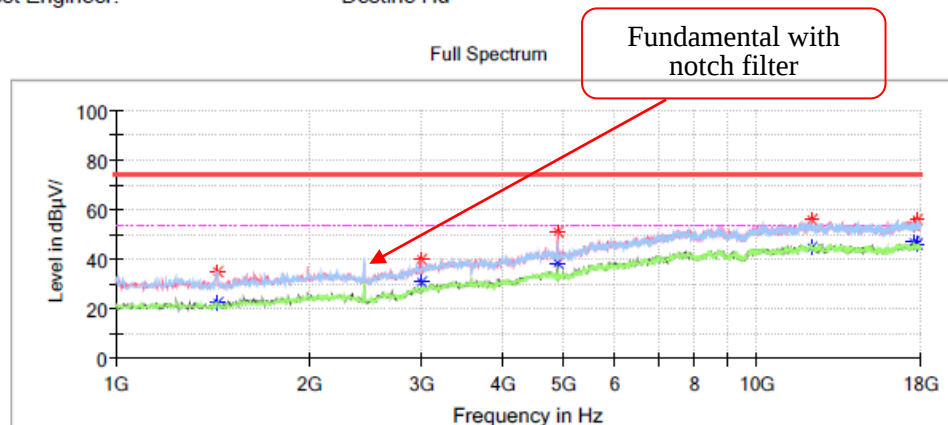
Project No.:	RKSA240620011
Test Mode:	BT
Standard:	FCC Part 15.205&FCC Part 15.209&FCC Part 15.247
Receiver Setting:	RBW: 1MHz, VBW: 3MHz, Sweep Time: Auto
Test Engineer:	Destine Hu

**Critical Freqs**

Frequency (MHz)	MaxPeak (dB μ V/m)	Average (dB μ V/m)	Limit (dB μ V/m)	Margin (dB)	Pol	Corr. (dB/m)
1435.200000	---	22.06	54.00	31.94	H	-14.8
1435.200000	35.12	---	74.00	38.88	H	-14.8
3322.200000	---	29.96	54.00	24.04	V	-7.1
3322.200000	40.49	---	74.00	33.51	V	-7.1
4804.600000	---	39.42	54.00	14.58	V	-3.2
4804.600000	50.12	---	74.00	23.88	V	-3.2
9928.400000	---	43.50	54.00	10.50	H	6.9
9928.400000	53.58	---	74.00	20.42	H	6.9
12590.600000	55.31	---	74.00	18.69	H	9.7
12590.600000	---	44.81	54.00	9.19	H	9.7
16776.000000	53.50	---	74.00	20.50	H	11.6
16776.000000	---	46.84	54.00	7.16	H	11.6

Middle Channel: 2441 MHz**Common Information**

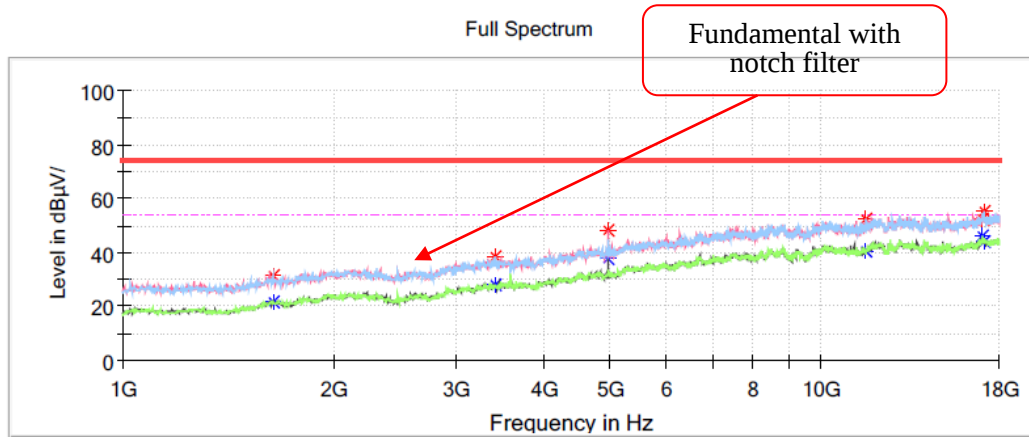
Project No.: RKSA240620011
Test Mode: BT
Standard: FCC Part 15.205&FCC Part 15.209&FCC Part 15.247
Receiver Setting: RBW: 1MHz, VBW: 3MHz, Sweep Time: Auto
Test Engineer: Destine Hu

**Critical Freqs**

Frequency (MHz)	MaxPeak (dB μ V/m)	Average (dB μ V/m)	Limit (dB μ V/m)	Margin (dB)	Pol	Corr. (dB/m)
1438.600000	35.15	---	74.00	38.85	H	-14.8
1438.600000	---	22.09	54.00	31.91	H	-14.8
2992.400000	---	30.54	54.00	23.46	V	-8.5
2992.400000	39.74	---	74.00	34.26	V	-8.5
4882.800000	---	38.56	54.00	15.44	V	-2.9
4882.800000	50.91	---	74.00	23.09	V	-2.9
12165.600000	55.98	---	74.00	18.02	V	9.2
12165.600000	---	44.41	54.00	9.59	V	9.2
17609.000000	---	46.69	54.00	7.31	H	11.6
17609.000000	53.82	---	74.00	20.18	H	11.6
17806.200000	---	45.89	54.00	8.11	H	11.8
17806.200000	56.19	---	74.00	17.81	H	11.8

High Channel: 2480 MHz**Common Information**

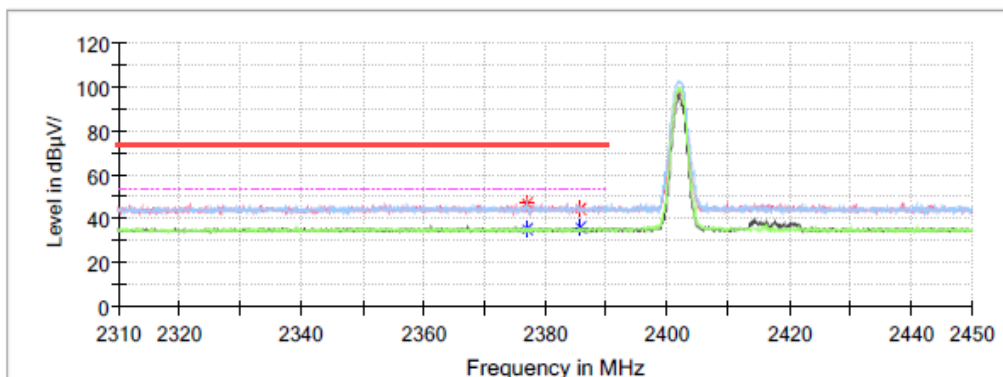
Project No.:	RKSA240620011
Test Mode:	BT
Standard:	FCC Part 15.205&FCC Part 15.209&FCC Part 15.247
Receiver Setting:	RBW: 1MHz, VBW: 3MHz, Sweep Time: Auto
Test Engineer:	Destine Hu

**Critical_Freqs**

Frequency (MHz)	MaxPeak (dB μ V/m)	Average (dB μ V/m)	Limit (dB μ V/m)	Margin (dB)	Pol	Corr. (dB/m)
1639.200000	---	21.49	54.00	32.51	V	-13.6
1639.200000	31.41	---	74.00	42.59	V	-13.6
3410.600000	---	28.29	54.00	25.71	H	-7.6
3410.600000	38.35	---	74.00	35.65	H	-7.6
4957.600000	---	37.92	54.00	16.08	V	-3.6
4957.600000	47.94	---	74.00	26.06	V	-3.6
11563.800000	---	40.88	54.00	13.12	H	7.8
11563.800000	52.45	---	74.00	21.55	H	7.8
17031.000000	---	45.93	54.00	8.07	V	11.2
17031.000000	52.77	---	74.00	21.23	V	11.2
17139.800000	---	44.09	54.00	9.91	H	11.0
17139.800000	55.36	---	74.00	18.64	H	11.0

Band Edge:**Left Side****Common Information**

Project No.: RKSA240620011
Test Mode: BT
Standard: FCC Part 15.205&FCC Part 15.209&FCC Part 15.247
Receiver Setting: RBW: 1MHz, VBW: 3MHz, Sweep Time: Auto
Test Engineer: Destine Hu

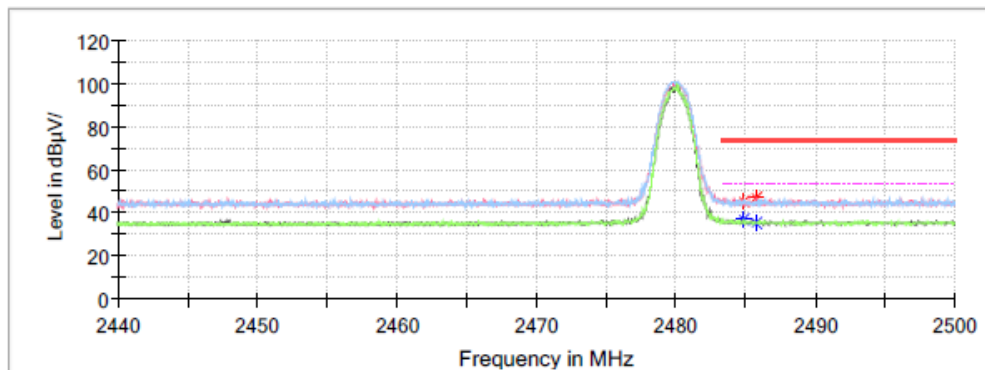
Full Spectrum**Critical_Freqs**

Frequency (MHz)	MaxPeak (dB μ V/m)	Average (dB μ V/m)	Limit (dB μ V/m)	Margin (dB)	Pol	Corr. (dB/m)
2377.088000	46.89	---	74.00	27.11	H	-0.6
2377.088000	---	35.09	54.00	18.91	H	-0.6
2385.712000	44.66	---	74.00	29.34	V	-0.6
2385.712000	---	36.19	54.00	17.81	V	-0.6

Right Side**Common Information**

Project No.: RKSA240620011
Test Mode: BT
Standard: FCC Part 15.205&FCC Part 15.209&FCC Part 15.247
Receiver Setting: RBW: 1MHz, VBW: 3MHz, Sweep Time: Auto
Test Engineer: Destine Hu

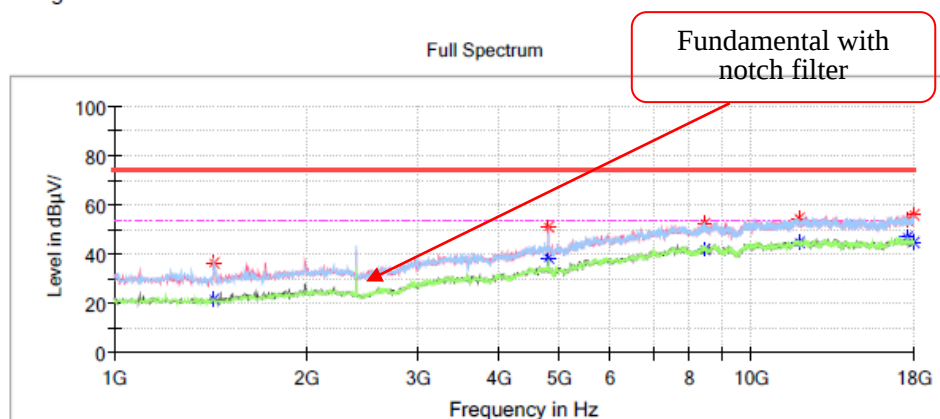
Full Spectrum

**Critical Freqs**

Frequency (MHz)	MaxPeak (dB μ V/m)	Average (dB μ V/m)	Limit (dB μ V/m)	Margin (dB)	Pol	Corr. (dB/m)
2484.832000	---	37.07	54.00	16.93	H	-0.3
2484.832000	45.32	---	74.00	28.68	H	-0.3
2485.744000	---	35.13	54.00	18.87	V	-0.2
2485.744000	46.81	---	74.00	27.19	V	-0.2

8DPSK:**Low Channel: 2402 MHz****Common Information**

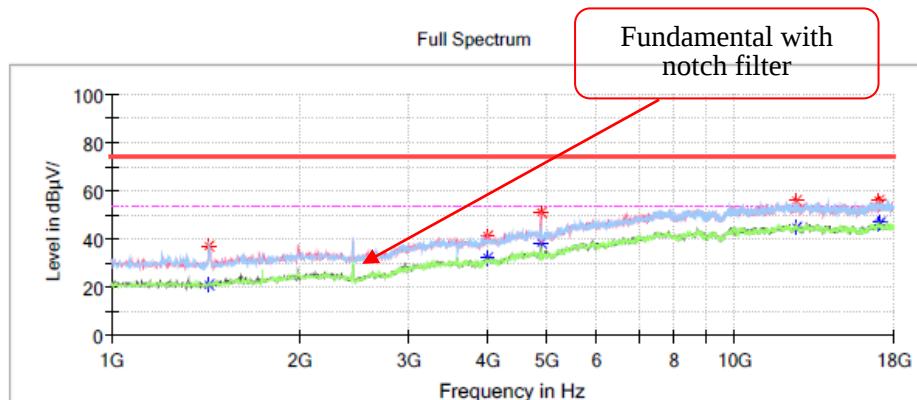
Project No.: RKSA240620011
Test Mode: BT
Standard: FCC Part 15.205&FCC Part 15.209&FCC Part 15.247
Receiver Setting: RBW: 1MHz, VBW: 3MHz, Sweep Time: Auto
Test Engineer: Destine Hu

**Critical Freqs**

Frequency (MHz)	MaxPeak (dB μ V/m)	Average (dB μ V/m)	Limit (dB μ V/m)	Margin (dB)	Pol	Corr. (dB/m)
1435.200000	---	22.03	54.00	31.97	H	-14.8
1435.200000	36.37	---	74.00	37.63	H	-14.8
4804.600000	---	38.72	54.00	15.28	V	-3.2
4804.600000	50.75	---	74.00	23.25	V	-3.2
8422.200000	---	42.01	54.00	11.99	V	5.2
8422.200000	52.71	---	74.00	21.29	V	5.2
11849.400000	---	44.75	54.00	9.25	H	8.9
11849.400000	54.89	---	74.00	19.11	H	8.9
17585.200000	---	46.78	54.00	7.22	V	11.6
17585.200000	53.56	---	74.00	20.44	V	11.6
17979.600000	---	45.09	54.00	8.91	V	11.9
17979.600000	56.12	---	74.00	17.88	V	11.9

Middle Channel: 2441 MHz**Common Information**

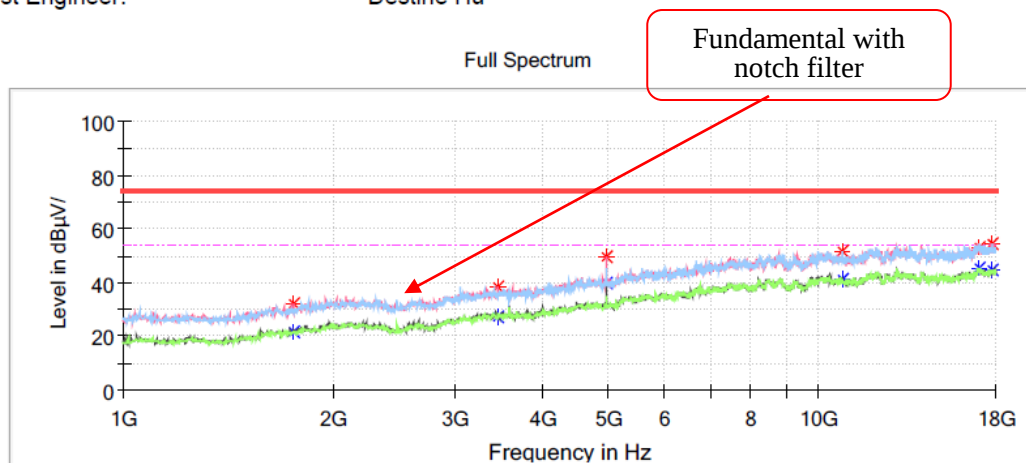
Project No.: RKSA240620011
Test Mode: BT
Standard: FCC Part 15.205&FCC Part 15.209&FCC Part 15.247
Receiver Setting: RBW: 1MHz, VBW: 3MHz, Sweep Time: Auto
Test Engineer: Destine Hu

**Critical Freqs**

Frequency (MHz)	MaxPeak (dB µ V/m)	Average (dB µ V/m)	Limit (dB µ V/m)	Margin (dB)	Pol	Corr. (dB/m)
1435.200000	---	21.26	54.00	32.74	H	-14.8
1435.200000	37.11	---	74.00	36.89	H	-14.8
4022.600000	---	31.96	54.00	22.04	V	-5.8
4022.600000	41.25	---	74.00	32.75	V	-5.8
4882.800000	---	38.30	54.00	15.70	V	-2.9
4882.800000	51.08	---	74.00	22.92	V	-2.9
12526.000000	---	44.84	54.00	9.16	H	9.7
12526.000000	55.65	---	74.00	18.35	H	9.7
17037.800000	56.02	---	74.00	17.98	H	12.2
17037.800000	---	45.99	54.00	8.01	H	12.2
17102.400000	54.35	---	74.00	19.65	V	12.1
17102.400000	---	46.82	54.00	7.18	V	12.1

High Channel: 2480 MHz**Common Information**

Project No.: RKSA240620011
Test Mode: BT
Standard: FCC Part 15.205&FCC Part 15.209&FCC Part 15.247
Receiver Setting: RBW: 1MHz, VBW: 3MHz, Sweep Time: Auto
Test Engineer: Destine Hu

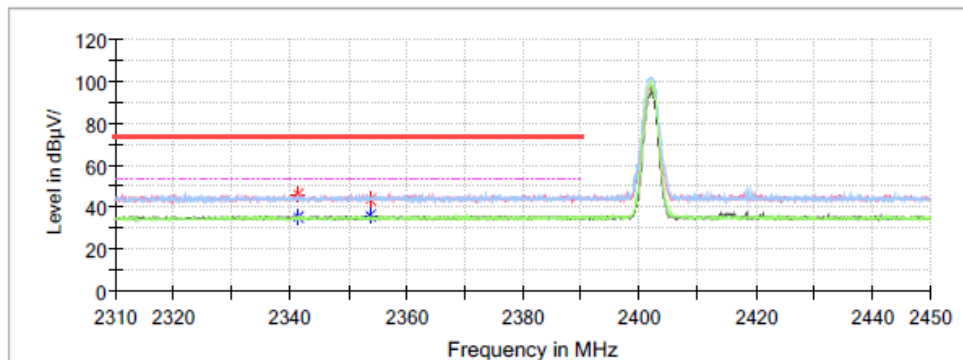
**Critical_Freqs**

Frequency (MHz)	MaxPeak (dB μ V/m)	Average (dB μ V/m)	Limit (dB μ V/m)	Margin (dB)	Pol	Corr. (dB/m)
1758.200000	---	21.91	54.00	32.09	V	-12.6
1758.200000	32.03	---	74.00	41.97	V	-12.6
3461.600000	---	27.35	54.00	26.65	H	-7.4
3461.600000	38.51	---	74.00	35.49	H	-7.4
4957.600000	---	39.81	54.00	14.19	V	-3.6
4957.600000	49.73	---	74.00	24.27	V	-3.6
10849.800000	---	40.92	54.00	13.08	H	6.3
10849.800000	52.07	---	74.00	21.93	H	6.3
17037.800000	---	45.59	54.00	8.41	V	11.2
17037.800000	53.10	---	74.00	20.90	V	11.2
17785.800000	---	45.05	54.00	8.95	H	11.2
17785.800000	54.79	---	74.00	19.21	H	11.2

Band Edge:**Left Side****Common Information**

Project No.: RKSA240620011
Test Mode: BT
Standard: FCC Part 15.205&FCC Part 15.209&FCC Part 15.247
Receiver Setting: RBW: 1MHz, VBW: 3MHz, Sweep Time: Auto
Test Engineer: Destine Hu

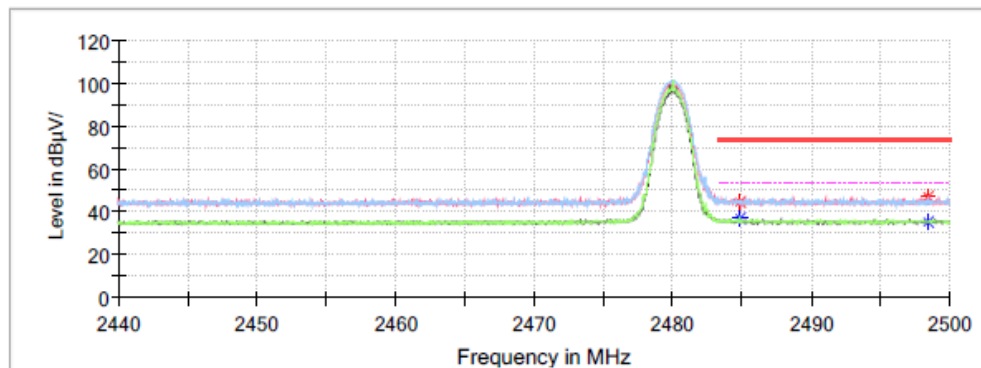
Full Spectrum

**Critical Freqs**

Frequency (MHz)	MaxPeak (dB μ V/m)	Average (dB μ V/m)	Limit (dB μ V/m)	Margin (dB)	Pol	Corr. (dB/m)
2341.472000	46.27	---	74.00	27.73	V	-0.7
2341.472000	---	35.24	54.00	18.76	V	-0.7
2353.736000	43.69	---	74.00	30.31	V	-0.7
2353.736000	---	35.97	54.00	18.03	V	-0.7

Right Side**Common Information**

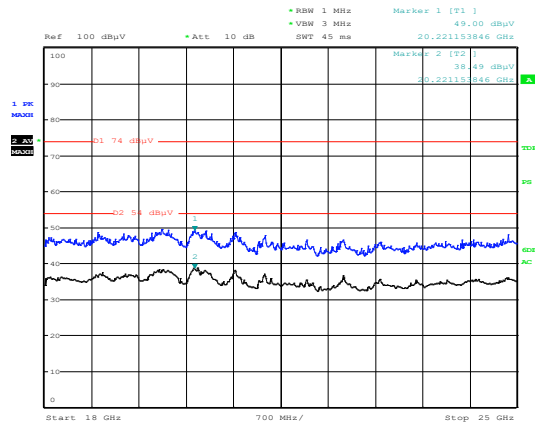
Project No.: RKSA240620011
Test Mode: BT
Standard: FCC Part 15.205&FCC Part 15.209&FCC Part 15.247
Receiver Setting: RBW: 1MHz, VBW: 3MHz, Sweep Time: Auto
Test Engineer: Destine Hu

Full Spectrum**Critical_Freqs**

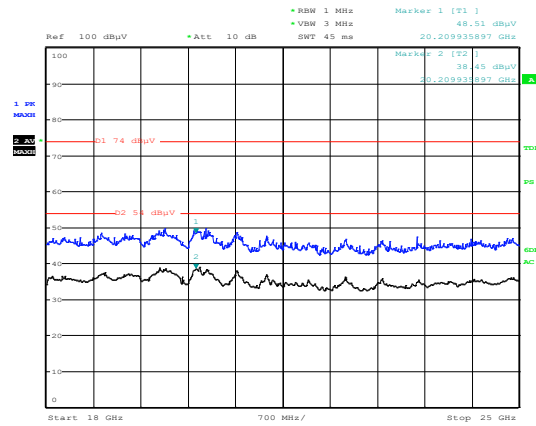
Frequency (MHz)	MaxPeak (dB μ V/m)	Average (dB μ V/m)	Limit (dB μ V/m)	Margin (dB)	Pol	Corr. (dB/m)
2484.928000	---	36.70	54.00	17.30	H	-0.3
2484.928000	44.77	---	74.00	29.23	H	-0.3
2498.416000	---	35.34	54.00	18.66	H	-0.2
2498.416000	46.72	---	74.00	27.28	H	-0.2

18GHz-25GHz: Transmitting in maximum output power mode and channel

Horizontal



Vertical



Project No : RKSA240620011
Date: 16.JAN.2025 10:04:00

Tester : Hugh Wu

Project No : RKSA240620011
Date: 16.JAN.2025 10:23:31

Tester : Hugh Wu

Frequency (MHz)	Max Peak (dBμV/m)	Average (dBμV/m)	Limit (dBμV/m)	Margin (dB)	Pol	Corr. (dB/m)
20209.94	---	38.45	54	15.55	V	12.47
20209.94	48.51	---	74	25.49	V	12.47
20221.15	---	38.49	54	15.51	H	12.48
20221.15	49.00	---	74	25	H	12.48

Note: The test distance is 3m. The limit is 74dBμV/m (Peak) and 54dBμV/m (Average).

SPOT CHECK WITH MAXIMUM CONDUCTED OUTPUT POWER**Test Result:** Compliant.*EUT operation mode: Transmitting*

Mode	Channel	Frequency (MHz)	Max Conducted Peak Output Power (dBm)	Limit (dBm)	Result
BDR Mode (GFSK)	Low	2402	9.40	21	Pass
	Middle	2441	9.48	21	Pass
	High	2480	9.06	21	Pass

Note: The Spot Check data were similar to the original data.

EUT PHOTOGRAPHS

Please refer to the attachment EXHIBIT A - E UT EXTERNAL PHOTOGRAPHS and EXHIBIT B - EUT INTERNAL PHOTOGRAPHS.

TEST SETUP PHOTOGRAPHS

Please refer to the attachment EXHIBIT C - TEST SETUP PHOTOGRAPHS.

Declarations

1. The laboratory is not responsible for the authenticity of any information provided by the applicant. Information from the applicant that may affect test results is marked with “★”.
2. The test data was only valid for the test sample(s).
3. This report is valid only with a valid digital signature. The digital signature may be available only under the Adobe software above version 7.0.
4. Otherwise required by the applicant or Product Regulations, Decision Rule in this report did not consider the uncertainty.
5. The extended uncertainty given in this report is obtained by combining the standard uncertainty times the coverage factor $k=2$ with the 95.45% confidence interval.

******* END OF REPORT *******