FCC PART 15.225

TEST REPORT

For

ONEKEY LIMITED

Rm 1517, 15F Amiata Industrial Building, 58 Lei Muk Road, Kwai Chung, Hong Kong

FCC ID: 2BB8VP1

Report Type:	**Product Name:**
Original Report	Crypto Hardware Wallet

Report Number:	RKSA240710002-00C
Report Date:	2024-09-04
Reviewed By:	Bard Liu
Approved By:	Kyle Xu
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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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REPORT REVISION HISTORY

Number of Revisions	Report No.	Version	Issue Date	Description
0	RKSA240710002-00C	R1V1	2024-09-04	Initial Release

GENERAL INFORMATION

Product Description for Equipment under Test (EUT)

Applicant:	ONEKEY LIMITED
Tested Model:	OneKey Pro
Product Name:	Crypto Hardware Wallet
Power Supply:	DC 5V or DC 3.8V from battery
RF Function:	NFC
Modulation type：	ASK
Operating Band/Frequency:	13.56 MHz
Antenna Type:	Coil Antenna

All measurement and tested data in this report was gathered from production sample serial number: RKSA240710002-1 (Assigned by BACL (Kunshan). The EUT supplied by the applicant was received on 2024-07-10.)

Objective

This Type approval report is prepared for *ONEKEY LIMITED* in accordance with Part 2- Subpart J, and Part 15-Subparts A and C of the Federal Communication Commission's rules.

The objective is to determine the Compliance of the EUT with FCC rules, sec 15.203, 15.205, 15.207, 15.209 and 15.225.

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.

Measurement Uncertainty

Item		Uncertainty
AC Power Lines Conducted Emissions		3.19 dB
RF conducted test with spectrum		0.9dB
Radiated emission	9 kHz~150 kHz	3.8 dB
	150 kHz~30 MHz	3.4 dB
	30MHz~1GHz	6.11dB
Occupied Bandwidth		0.5kHz
RF Frequency		$\pm 0.08\times10^{-6}$
Temperature		1.0℃
Humidity		6%
Supply voltages		±0.4%

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

Justification

The system was configured for testing in a typical fashion (as normally used by a typical user).

EUT Exercise Software

The EUT is tested in the engineering mode.

Equipment Modifications

No modification on the EUT.

Support Equipment List and Details

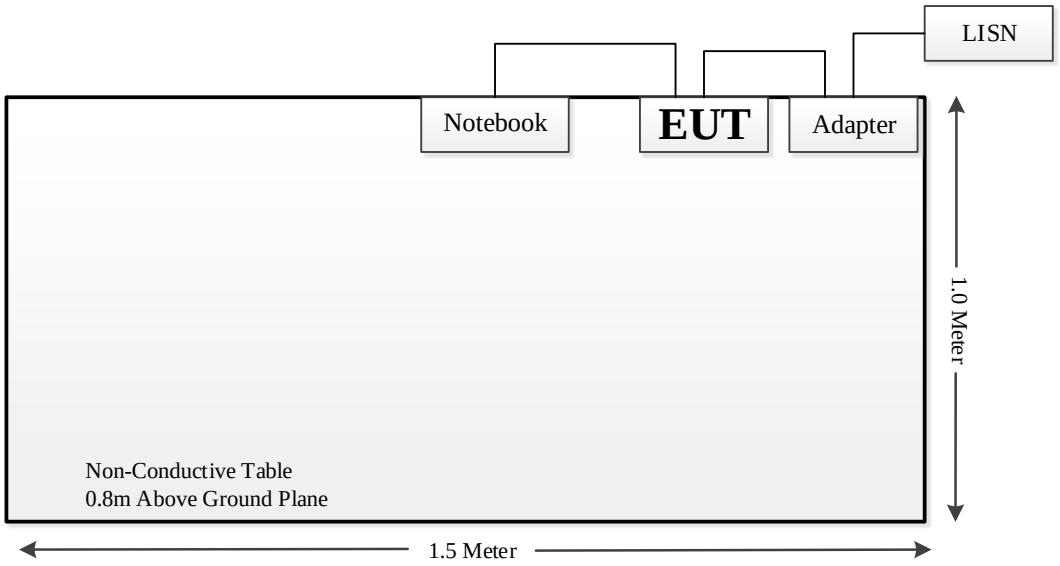
Manufacturer	Description	Model	Serial Number
Dell	Notebook	E6410	3094742521
XIAMEN DONGANG ILLUMINATION TECHNOLOGY CO., LTD	Adapter	DA-0052000UL001	Unknown

External I/O Cable

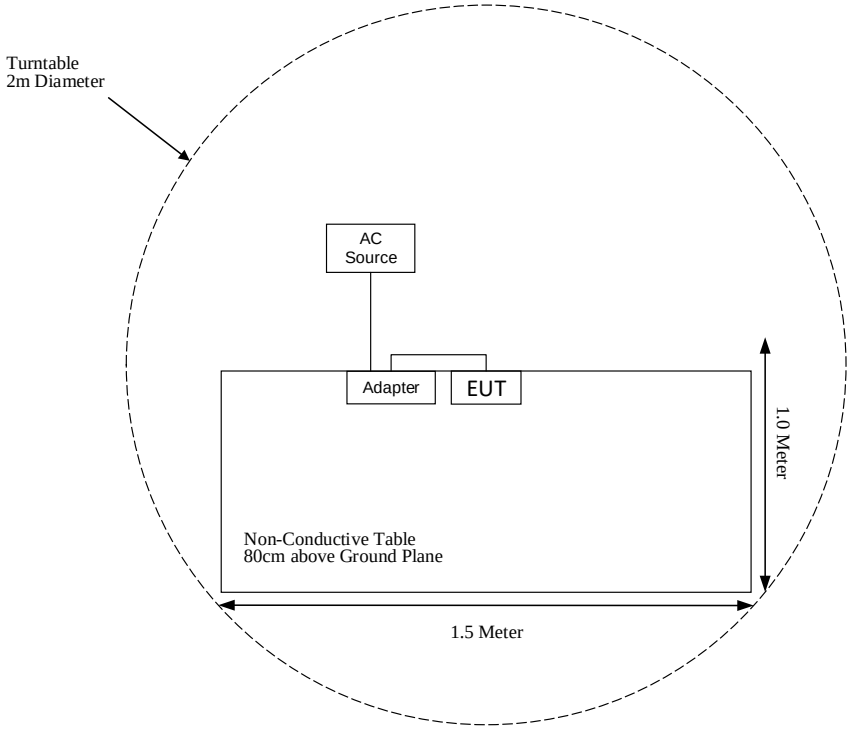
Cable Description	Length (m)	From Port	To
Data Cable	1.0	EUT	Notebook
Power Cable	1.0	AC Source/LISN	Adapter
USB Cable	1.0	Adapter	EUT

Block Diagram of Test Setup

For Conducted Emissions:



For Radiated Emissions (Below 30 MHz & Above 30 MHz):



TEST EQUIPMENT LIST

Manufacturer	Description	Model	Serial Number	Calibration Date	Calibration Due Date
Radiated Emission Test					
Rohde & Schwarz	EMI Test Receiver	ESCI	100195	2024-04-23	2025-04-22
Sunol Sciences	Hybrid Antenna	JB3	A090314-1	2023-11-11	2024-11-10
Sonoma Instrument	Amplifier	310N	171205	2024-04-23	2025-04-22
Narda	6dB Attenuator	773-6	10690812-2-1	2023-11-11	2024-11-10
ETS-LINDGREN	Loop Antenna	6512	00108100	2023-11-09	2024-11-08
Rohde & Schwarz	Auto Test Software	EMC32	100361	N/A	N/A
MICRO-COAX	Coaxial Cable	Cable-8	008	2024-04-23	2025-04-22
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
20dB Emission Bandwidth					
Rohde & Schwarz	EMI Test Receiver	ESCI	100195	2024-04-23	2025-04-22
ETS-LINDGREN	Loop Antenna	6512	108100	2023-11-09	2024-11-08
Sonoma Instrument	Pre-amplifier	310N	171205	2024-04-23	2025-04-22
MICRO-COAX	Coaxial Cable	Cable-8	008	2024-04-23	2025-04-22
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
Frequency Stability					
BACL	Temperature & Humidity Chamber	BTH-150	30023	2024-04-25	2025-04-24
Rohde & Schwarz	EMI Test Receiver	ESCI	100195	2024-04-23	2025-04-22
ETS-LINDGREN	Loop Antenna	6512	108100	2023-11-09	2024-11-08
MICRO-COAX	Coaxial Cable	Cable-6	006	2024-04-23	2025-04-22
EAST	Regulated DC Power Supply	MCH-303D-II	14070562	2024-04-23	2025-04-22
Conducted Emission Test					
Rohde & Schwarz	EMI Test Receiver	ESR	101746	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	2024-04-23	2025-04-22
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).

SUMMARY OF TEST RESULTS

FCC Rules	Description of Test	Result
§1.1310 & §2.1093	RF Exposure	Compliant
§15.203	Antenna Requirement	Compliant
§15.207 (a)	AC Line Conducted Emissions	Compliant
§15.225 §15.209 §15.205	Radiated Emission Test	Compliant
§15.225(e)	Frequency Stability	Compliant
§15.215(c)	20dB Emission Bandwidth Testing	Compliant

FCC§1.1310 & §2.1093 - RF Exposure

Applicable Standard

According to KDB447498 D01 General RF Exposure Guidance v06: 4.3. General SAR test exclusion Guidance

c) For frequencies below 100 MHz, the following may be considered for SAR test exclusion (also illustrated in Appendix C):
1) For test separation distances > 50 mm and < 200 mm, the power threshold at the corresponding test separation distance at 100 MHz in step b) is multiplied by [1 + log(100/f(MHz))]
2) For test separation distances ≤ 50 mm, the power threshold determined by the equation in c) 1) for 50 mm and 100 MHz is multiplied by ½
3) SAR measurement procedures are not established below 100 MHz.

Measurement Result:

For NFC, the power of EUT: E Field@3m is 80.90 dBuV/m = -14.30 dBm(0.04mW)

Note: E[dBμV/m] = EIRP[dBm] + 95.2 for d = 3 m.

SAR test exclusion threshold for NFC (13.56MHz) separation distance < 50mm

= [474*(1 + log(100/f(MHz)))]/2

= 443 mW

>0.04 mW

Result: Compliant.

FCC§15.203 - ANTENNA REQUIREMENT

Applicable Standard

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.

Antenna Connected Construction

The EUT has a coil antenna for 13.56 MHz, the antenna was permanently attached, fulfill the requirement of this section, please refer to the EUT photos.

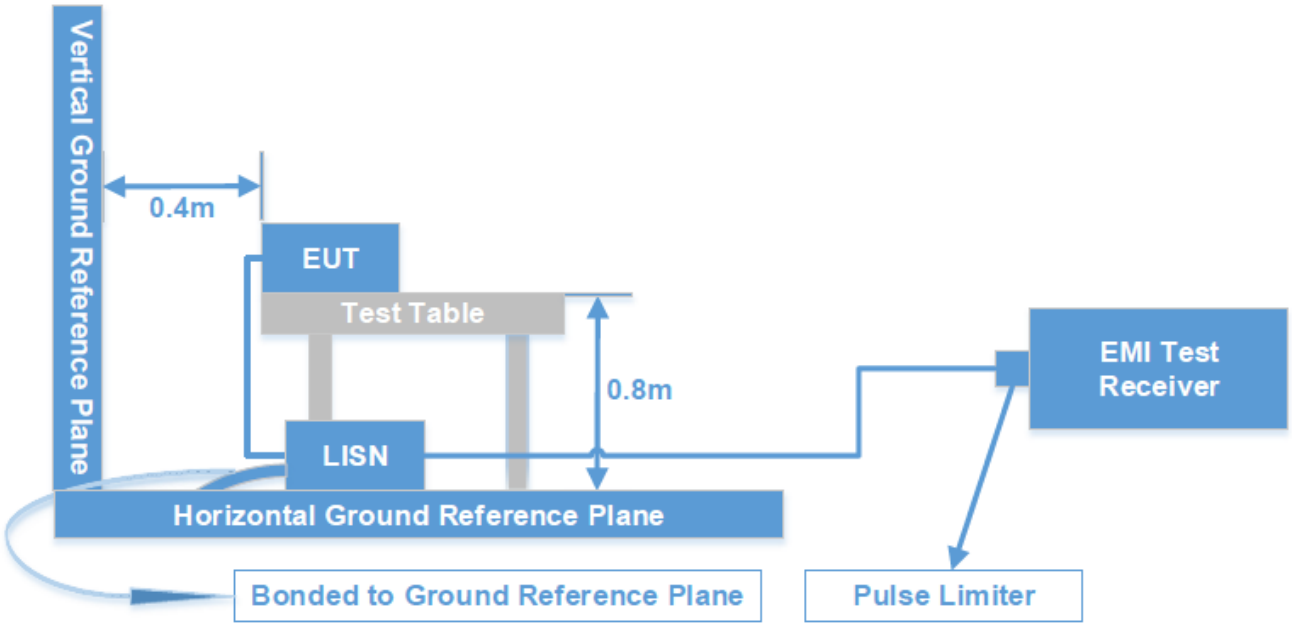
Result: Compliant.

FCC §15.207 (a) – AC LINE CONDUCTED EMISSIONS

Applicable Standard

FCC§15.207(a)

Test System Setup



The setup of EUT is according with per ANSI C63.10-2013 measurement procedure. The specification used was with the FCC Part 15.207 limits.

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

During the conducted emission test, the EUT or adapter 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§15.225, §15.205 & §15.209 - RADIATED EMISSIONS TEST

Applicable Standard

As per FCC Part 15.225

(a) The field strength of any emissions within the band 13.553–13.567 MHz shall not exceed 15,848 microvolts/meter at 30 meters.

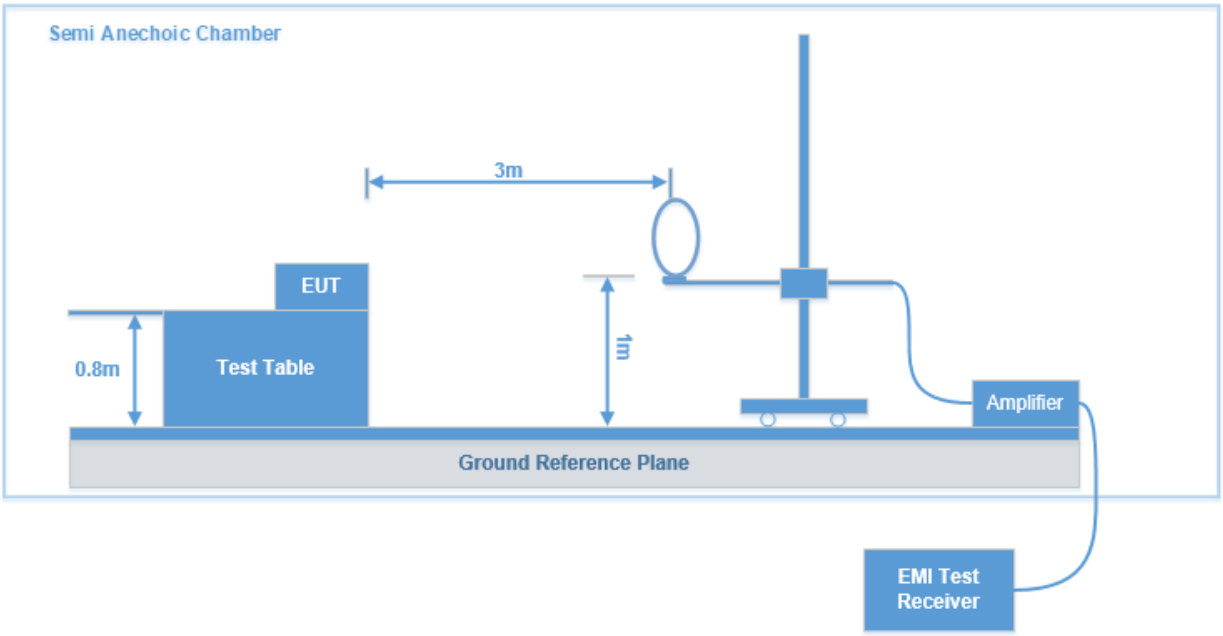
(b) Within the bands 13.410–13.553 MHz and 13.567–13.710 MHz, the field strength of any emissions shall not exceed 334 microvolts/meter at 30 meters.

(c) Within the bands 13.110–13.410 MHz and 13.710–14.010 MHz the field strength of any emissions shall not exceed 106 microvolts/meter at 30 meters.

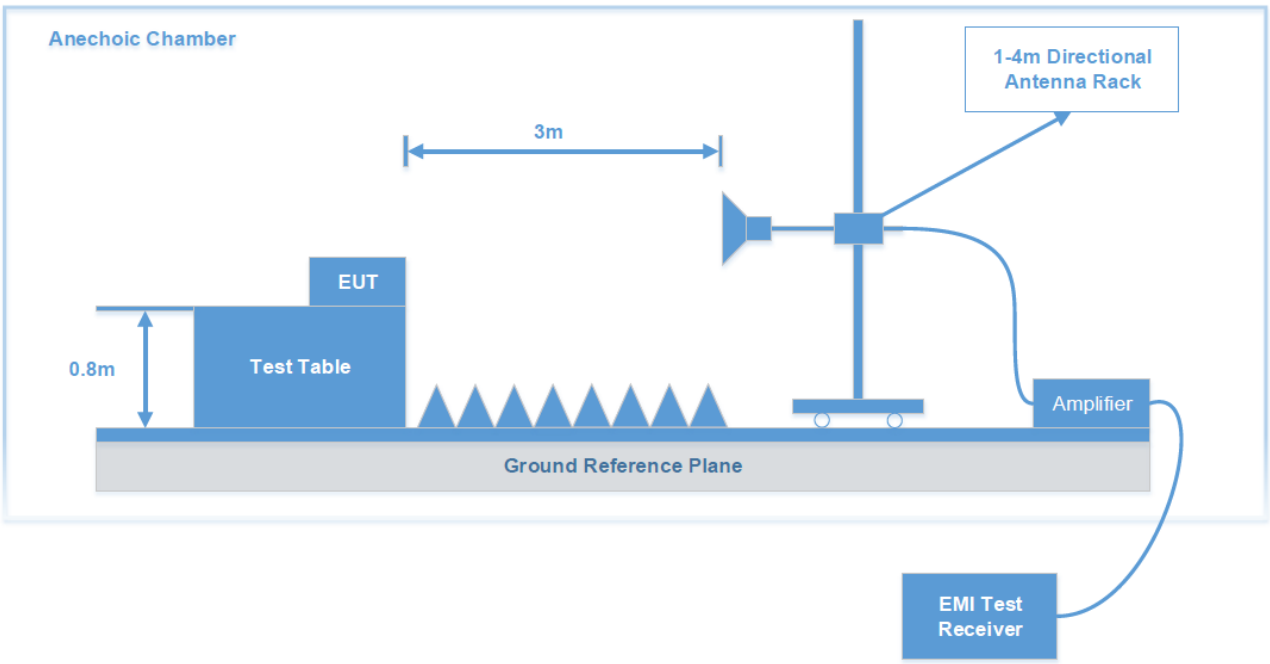
(d) The field strength of any emissions appearing outside of the 13.110–14.010 MHz band shall not exceed the general radiated emission limits in §15.209.

Test System Setup

9 kHz - 30 MHz:



30 MHz - 1 GHz:



The radiated emission tests were performed in the 3-meter chamber a test site, using the setup accordance with the ANSI C63.10. The specification used was the FCC Part Subpart C limits.

The spacing between the peripherals was 10 cm.

EMI Test Receiver Setup

According to FCC Rules, 47 CFR 15.33, the EUT emissions were investigated up to 1000 MHz.

During the radiated emission test, the EMI test Receiver 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

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.

All final data was recorded in Quasi-peak detection mode except for the frequency bands 9–90 kHz, 110–490 kHz, average detection modes for frequency bands 9–90 kHz and 110–490 kHz.

If the maximized peak measured value complies with under the QP/Average limit more than 6dB, then it is unnecessary to perform QP/Average measurement.

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:

Corrected Amplitude (dBμV/m) = Meter Reading (dBμV) + Antenna Factor (dB/m) + Cable Loss (dB) - 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:

Margin (dB) = Limit (dBμV/m) – Corrected Amplitude (dBμV/m)

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

Test Results Summary

According to the data in the following table, the EUT complied with the FCC Part 15.209, 15.205, 15.225.

Test Data: See Appendix

FCC§15.225(e) - FREQUENCY STABILITY

Applicable Standard

The frequency tolerance of the carrier signal shall be maintained within ±0.01% of the operating frequency over a temperature variation of −20 degrees to +50 degrees C at normal supply voltage, and for a variation in the primary supply voltage from 85% to 115% of the rated supply voltage at a temperature of 20 degrees C. For battery operated equipment, the equipment tests shall be performed using a new battery.

Test Procedure

a) Supply the EUT with a nominal ac voltage or install a new or fully charged battery in the EUT.
If possible, a dummy load shall be connected to the EUT because an antenna near the metallic walls of an environmental test chamber could affect the output frequency of the EUT. If the EUT is equipped with a permanently attached, adjustable-length antenna, then the EUT shall be placed in the center of the chamber with the antenna adjusted to the shortest length possible. Turn ON the EUT and tune it to one of the number of frequencies shown in 5.6.

b) Couple the unlicensed wireless device output to the measuring instrument by connecting an antenna to the measuring instrument with a suitable length of coaxial cable and placing the measuring antenna near the EUT (e.g., 15 cm away), or by connecting a dummy load to the measuring instrument, through an attenuator if necessary.
NOTE-an instrument that has an adequate level of accuracy as specified by the procuring or regulatory agency is the recommended measuring instrument.

c) Adjust the location of the measurement antenna and the controls on the measurement instrument to obtain a suitable signal level (i.e., a level that will not overload the measurement instrument but is strong enough to allow measurement of the operating or fundamental frequency of the EUT).

d) Turn the EUT OFF and place it inside the environmental temperature chamber. For devices that have oscillator heaters, energize only the heater circuit.

e) Set the temperature control on the chamber to the highest specified in the regulatory requirements for the type of device and allow the oscillator heater and the chamber temperature to stabilize.

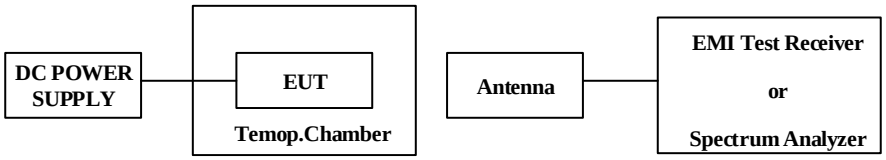
f) While maintaining a constant temperature inside the environmental chamber, turn the EUT ON and record the operating frequency at startup, and at 2 minutes, 5 minutes, and 10 minutes after the EUT is energized. Four measurements in total are made.

g) Measure the frequency at each of frequencies specified in 5.6.

h) Switch OFF the EUT but do not switch OFF the oscillator heater.

i) Lower the chamber temperature by not more that 10 °C, and allow the temperature inside the chamber to stabilize.

j) Repeat step f) through step i) down to the lowest specified temperature.



Test Data: See Appendix

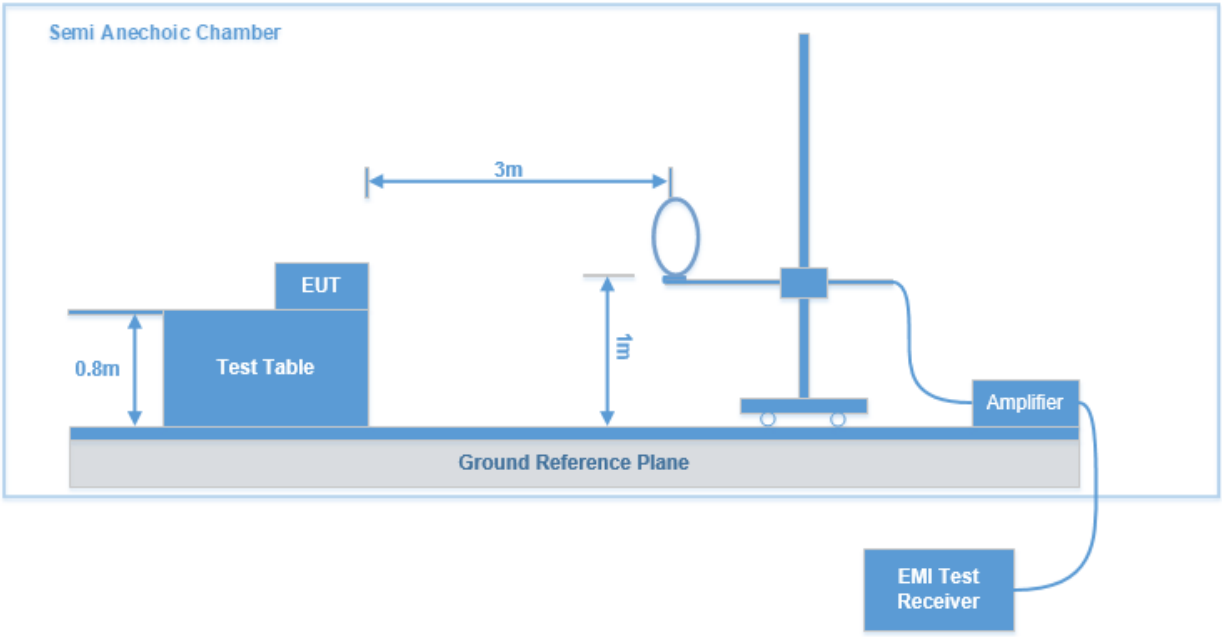
§15.215(c) - 20dB EMISSION BANDWIDTH TESTING

Requirement

Per 15.215 (c) Intentional radiators operating under the alternative provisions to the general emission limits, as contained in §§ 15.217 through 15.257 and in Subpart E of this part, must be designed to ensure that the 20 dB bandwidth of the emission, or whatever bandwidth may otherwise be specified in the specific rule section under which the equipment operates, is contained within the frequency band designated in the rule section under which the equipment is operated. The requirement to contain the designated bandwidth of the emission within the specified frequency band includes the effects from frequency sweeping, frequency hopping and other modulation techniques that may be employed as well as the frequency stability of the transmitter over expected variations in temperature and supply voltage. If a frequency stability is not specified in the regulations, it is recommended that the fundamental emission be kept within at least the central 80% of the permitted band in order to minimize the possibility of out-of-band operation.

Test Procedure

Measure the frequency difference of two frequencies that were attenuated 20 dB from the reference level. Record the frequency difference as the emission bandwidth.



Test Data: See Appendix

EUT PHOTOGRAPHS

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

TEST SETUP PHOTOGRAPHS

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

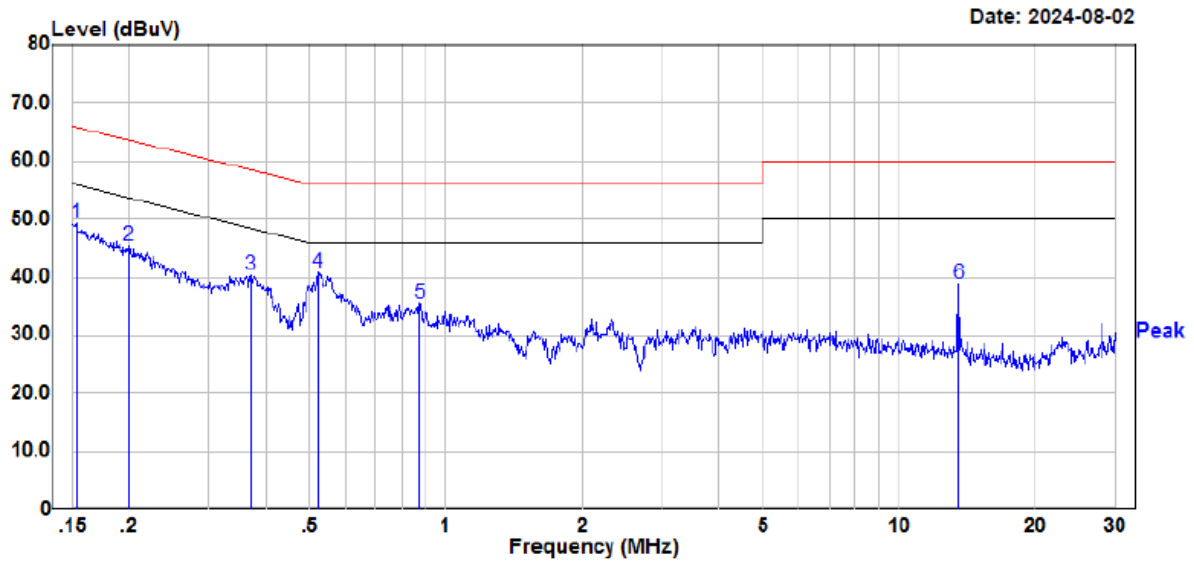
Appendix - TEST DATA

Test Item:	AC LINE CONDUCTED EMISSIONS	RADIATED EMISSIONS		FREQUENCY STABILITY	20dB EMISSION BANDWIDTH TESTING
		9 kHz - 30 MHz	30 MHz – 1 GHz		
Test Date:	2024-08-02	2024-09-03	2024-09-03	2024-09-03	2024-09-03
Temperature:	27.7 ℃	25.8 ℃	25.8 ℃	25.8 ℃	25.8 ℃
Relative Humidity:	45 %	52 %	52 %	52 %	52 %
ATM Pressure:	100.6 kPa	101.2 kPa	101.2 kPa	101.2 kPa	101.2 kPa
Test Result:	Pass	Pass	Pass	Pass	Pass
Test Engineer:	Leah Li	Grace Luo	Grace Luo	Grace Luo	Grace Luo

AC LINE CONDUCTED EMISSIONS

EUT operation mode: Transmitting

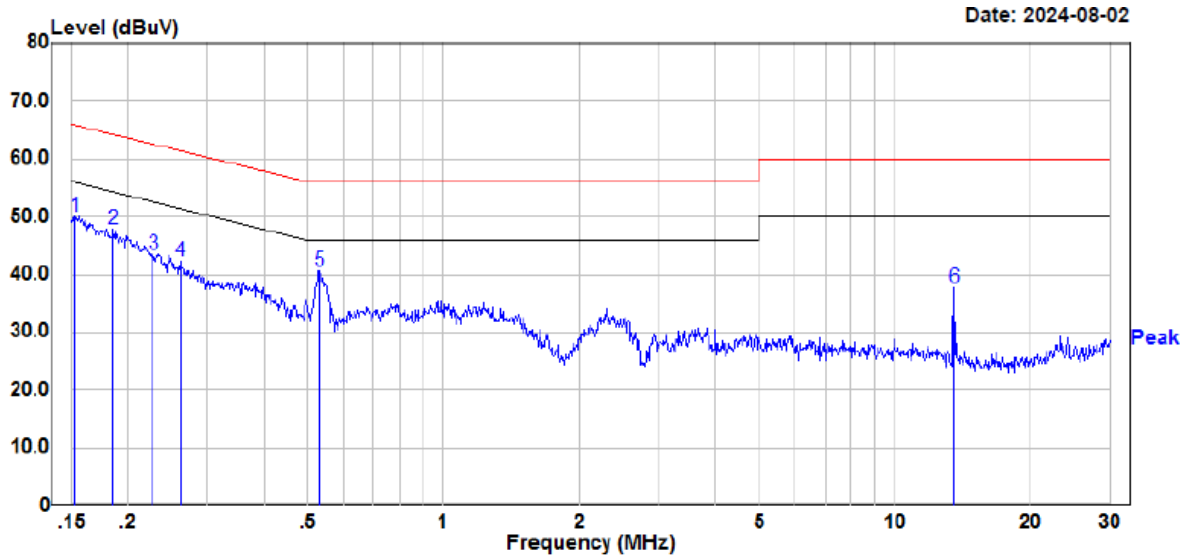
AC 120V/60 Hz, Line




```
Site                  : CE
Condition             : limit\FCC Part 15.207
                      : DET:Peak
Project               : RKSA240710002
Model                 : OneKey Pro
Phase                 : L
Voltage               : 120V/60Hz
Mode                  : SRD
Test Equipment        : ENV216,ESR
Temperature           : 27.7℃
Humidity              : 45%
Atmospheric pressure: 100.6kPa
Test Engineer         : Leah Li
```

	Freq	Read Level	Factor	Level	Limit Line	Over Limit	Remark
	MHz	dBuV	dB	dBuV	dBuV	dB	
1	0.153	29.11	20.12	49.23	65.83	-16.60	Peak
2	0.199	25.33	20.11	45.44	63.64	-18.20	Peak
3	0.370	20.10	20.20	40.30	58.51	-18.21	Peak
4	0.522	20.74	20.12	40.86	56.00	-15.14	Peak
5	0.871	15.66	19.86	35.52	56.00	-20.48	Peak
6	13.514	19.21	19.78	38.99	60.00	-21.01	Peak

AC 120V/60 Hz, Neutral



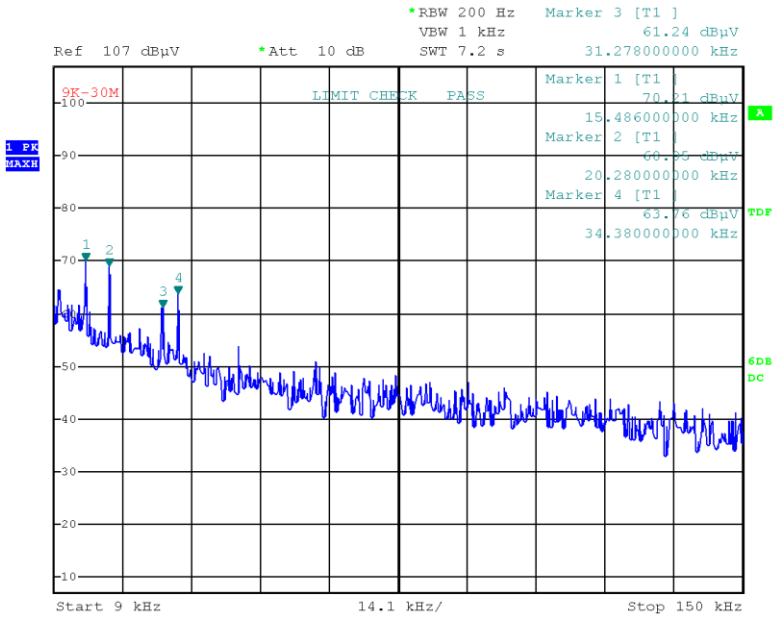

```
Site                  : CE
Condition             : limit\FCC Part 15.207
                      : DET:Peak
Project               : RKSA240710002
Model                 : OneKey Pro
Phase                 : N
Voltage               : 120V/60Hz
Mode                  : SRD
Test Equipment        : ENV216,ESR
Temperature           : 27.7℃
Humidity              : 45%
Atmospheric pressure: 100.6kPa
Test Engineer         : Leah Li
```

	Freq	Read Level	Factor	Level	Limit Line	Over Limit	Remark
	MHz	dBuV	dB	dBuV	dBuV	dB	
1	0.152	30.01	20.12	50.13	65.88	-15.75	Peak
2	0.185	27.71	20.11	47.82	64.26	-16.44	Peak
3	0.227	23.35	20.12	43.47	62.56	-19.09	Peak
4	0.261	22.06	20.14	42.20	61.40	-19.20	Peak
5	0.529	20.52	20.12	40.64	56.00	-15.36	Peak
6	13.514	17.82	19.78	37.60	60.00	-22.40	Peak

RADIATED EMISSIONS TEST

Test mode: Transmitting

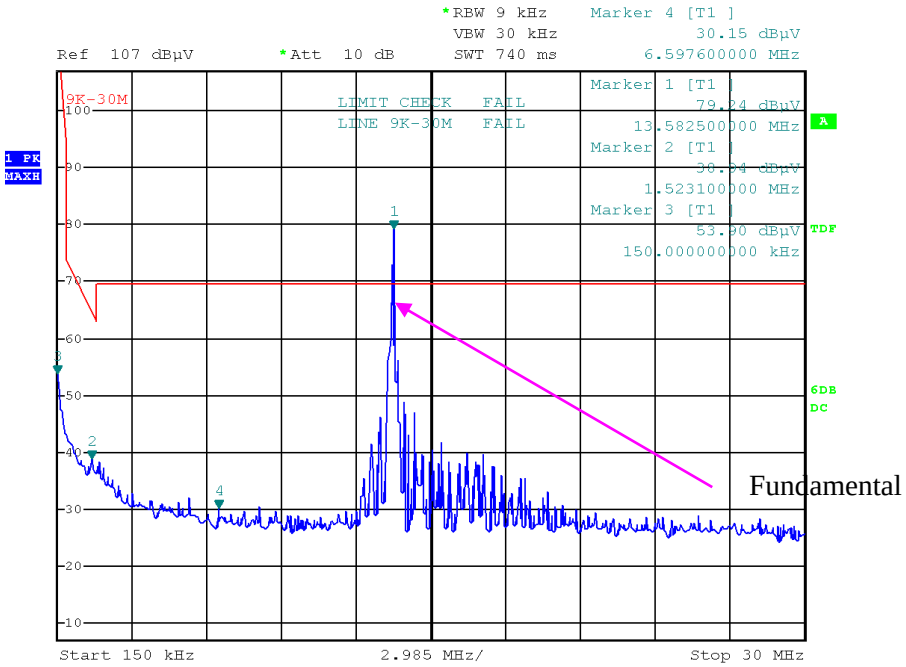
For Ground-parallel
1) 9 kHz~150 kHz:



Project No.RKSA240710002 Tester:Grace Luo
Date: 3.SEP.2024 19:04:30

Frequency (kHz)	Corrected Amplitude (dBµV/m)@3m	Detector PK/QP/Ave.	Corrected Factor (dB/m)	Limit (dBµV/m) @3m	Margin (dB)
15.49	70.21	PK	52.87	123.80	53.59
20.28	68.95	PK	49.92	121.46	52.51
31.28	61.24	PK	46.06	116.88	55.64
34.38	63.73	PK	46.06	116.88	53.15

2) 150 kHz~30 MHz:

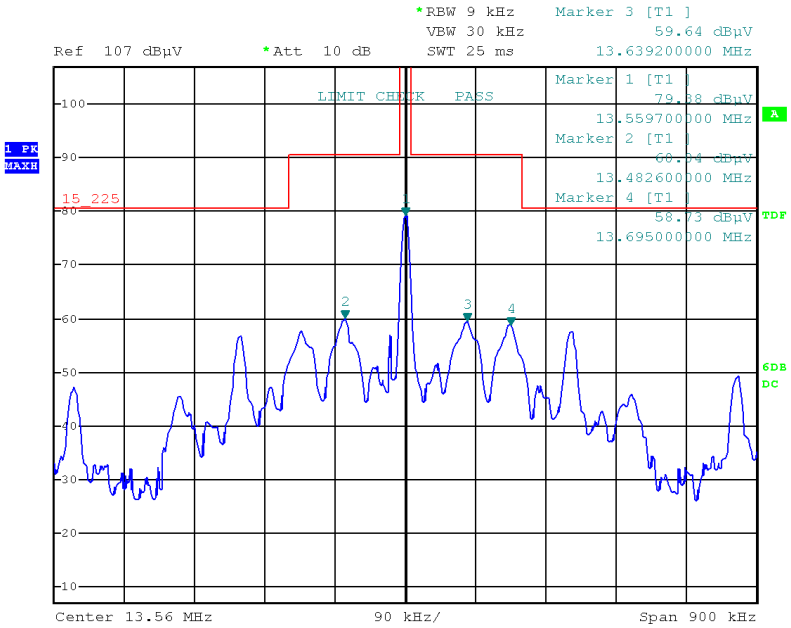


Project No.RKSA240710002 Tester:Grace Luo

Date: 3.SEP.2024 18:48:37

Frequency (MHz)	Corrected Amplitude (dBµV/m)@3m	Detector PK/QP/Ave.	Corrected Factor (dB/m)	Limit (dBµV/m) @3m	Margin (dB)
1.52	38.94	PK	8.16	63.97	25.03
0.15	53.90	PK	50.90	104.08	50.18
6.60	30.15	PK	6.94	69.54	39.39

3) 13.11 MHz~14.01 MHz:

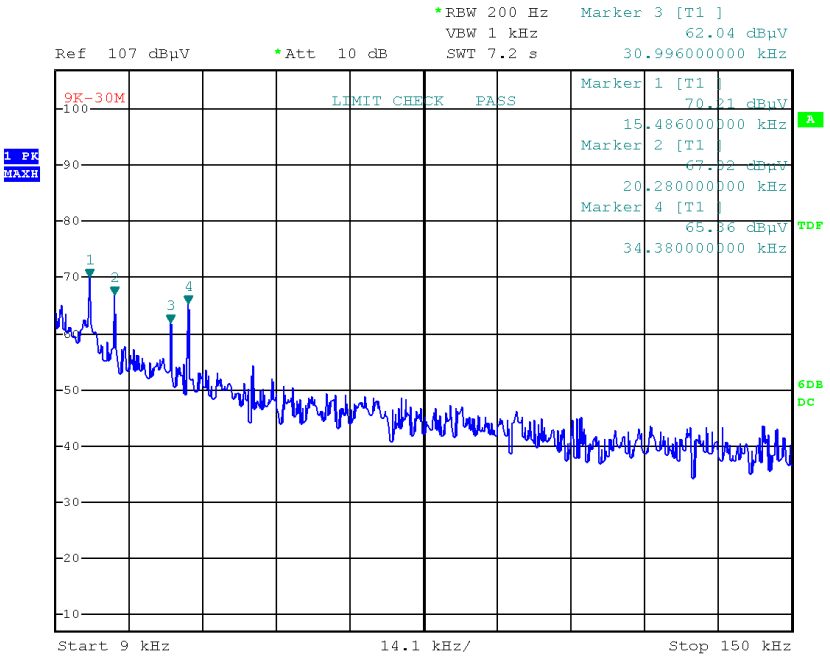


Project No.RKSA240710002 Tester:Grace Luo

Date: 3.SEP.2024 18:32:23

Frequency (MHz)	Corrected Amplitude (dBµV/m)@3m	Detector PK/QP/Ave.	Corrected Factor (dB/m)	Limit (dBµV/m) @3m	Margin (dB)
13.56	79.88	PK	3.63	124.00	44.12
13.48	60.94	PK	3.64	90.50	29.56
13.64	59.64	PK	3.63	90.50	30.86
13.70	58.73	PK	3.62	90.50	31.77

For Perpendicular
1) 9 kHz~150 kHz:

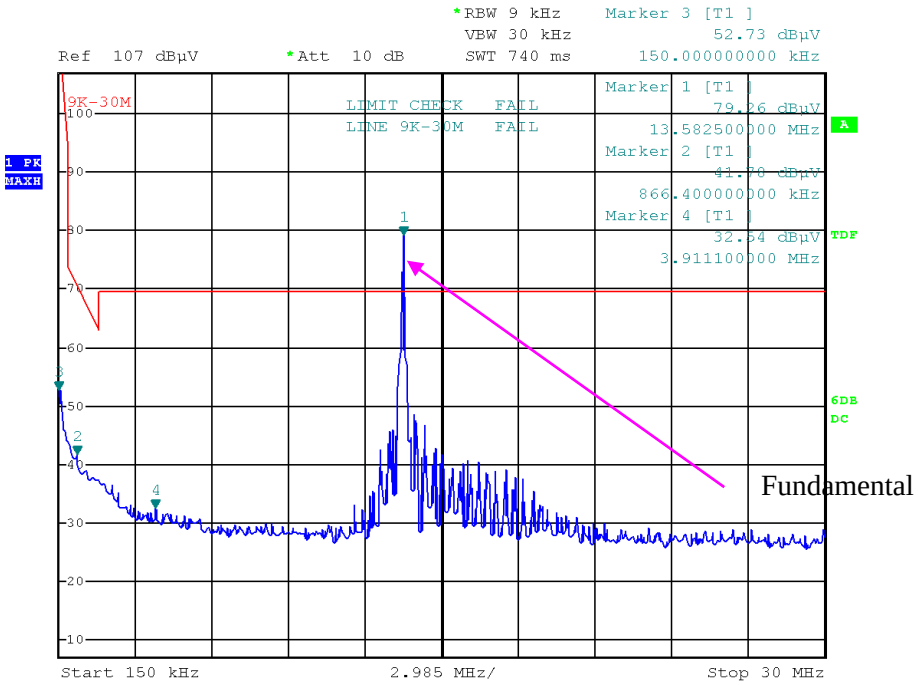


Project No.RKSA240710002 Tester:Grace Luo

Date: 3.SEP.2024 18:56:41

Frequency (kHz)	Corrected Amplitude (dBµV/m)@3m	Detector PK/QP/Ave.	Corrected Factor (dB/m)	Limit (dBµV/m) @3m	Margin (dB)
15.49	70.21	PK	52.87	123.80	53.59
20.28	67.02	PK	49.92	121.46	54.44
31.00	62.04	PK	46.94	117.78	55.74
34.38	65.36	PK	46.06	116.88	51.52

2) 150 kHz~30 MHz:

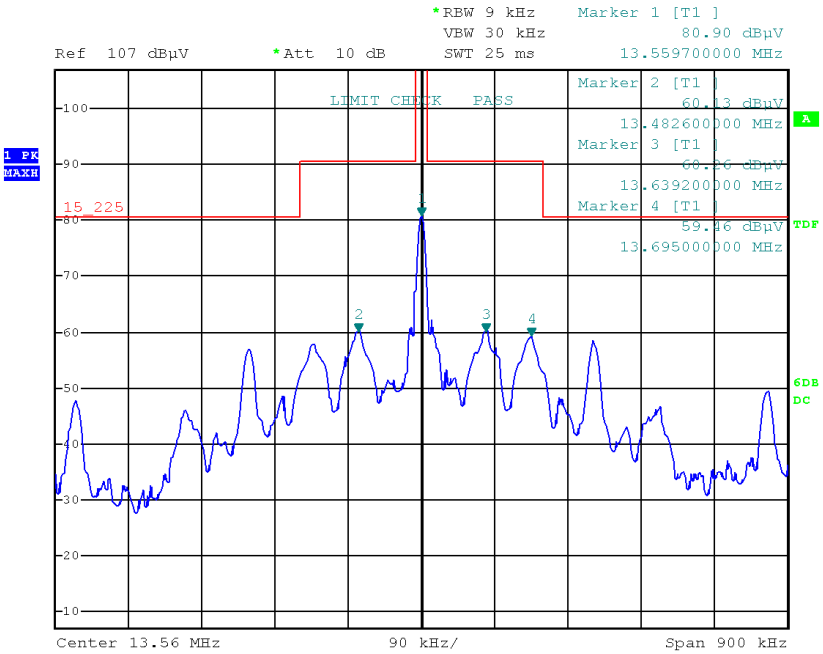


Project No.RKSA240710002 Tester:Grace Luo

Date: 3.SEP.2024 18:44:54

Frequency (MHz)	Corrected Amplitude (dBµV/m)@3m	Detector PK/QP/Ave.	Corrected Factor (dB/m)	Limit (dBµV/m) @3m	Margin (dB)
0.87	41.70	PK	18.84	68.81	27.11
0.15	52.73	PK	50.90	104.08	51.35
3.91	32.54	PK	18.21	69.54	37.00

3) 13.11 MHz~14.01 MHz:



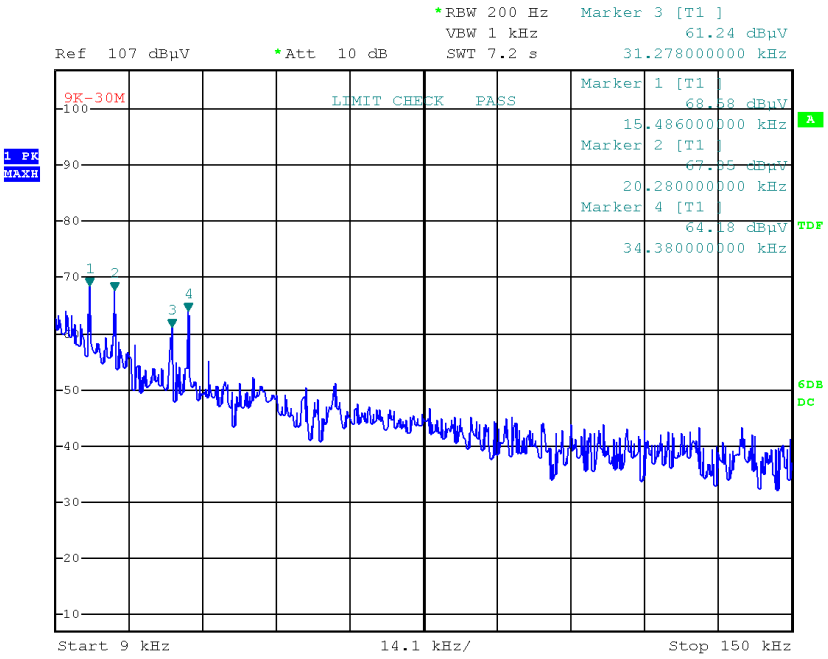
Project No.RKSA240710002 Tester:Grace Luo

Date: 3.SEP.2024 18:25:13

Frequency (MHz)	Corrected Amplitude (dBµV/m)@3m	Detector PK/QP/Ave.	Corrected Factor (dB/m)	Limit (dBµV/m) @3m	Margin (dB)
13.56	80.90	PK	3.63	124.00	43.10
13.48	60.13	PK	3.64	90.50	30.37
13.64	60.26	PK	3.63	90.50	30.24
13.70	59.46	PK	3.62	90.50	31.04

For Parallel

1) 9 kHz~150 kHz:

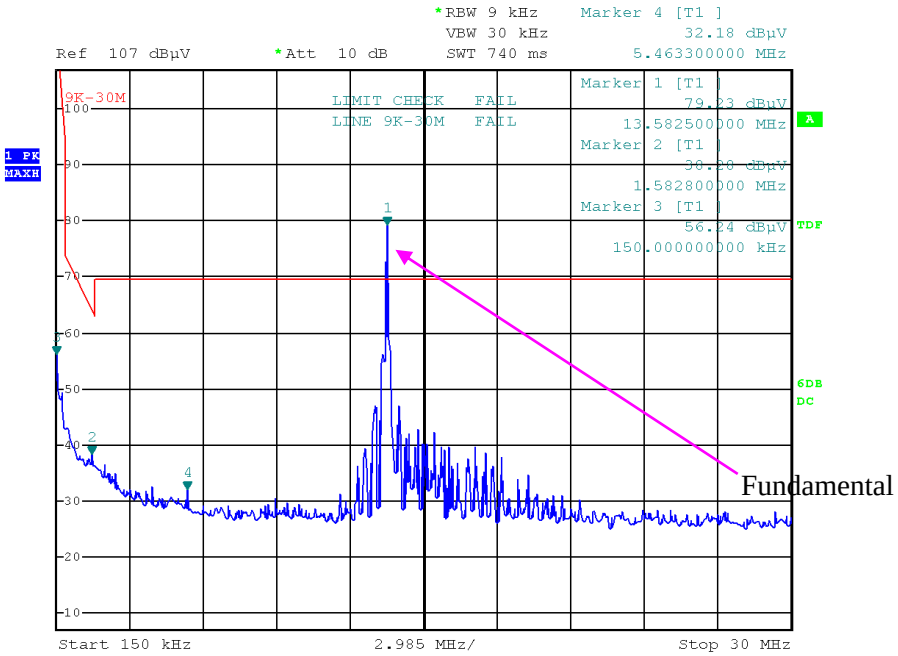


Project No.RKSA240710002 Tester:Grace Luo

Date: 3.SEP.2024 19:00:06

Frequency (kHz)	Corrected Amplitude (dBµV/m)@3m	Detector PK/QP/Ave.	Corrected Factor (dB/m)	Limit (dBµV/m) @3m	Margin (dB)
15.49	68.58	PK	52.87	123.80	55.22
20.28	67.35	PK	49.92	121.46	54.11
31.28	61.24	PK	46.06	116.88	55.64
34.38	64.18	PK	46.06	116.88	52.70

2) 150 kHz~30 MHz:

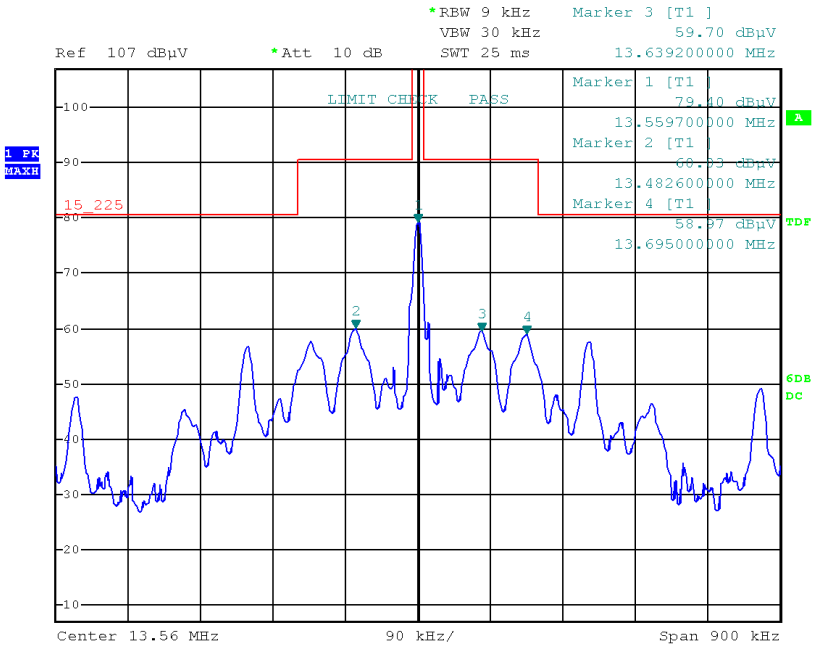


Project No.RKSA240710002 Tester:Grace Luo

Date: 3.SEP.2024 18:53:18

Frequency (MHz)	Corrected Amplitude (dBµV/m)@3m	Detector PK/QP/Ave.	Corrected Factor (dB/m)	Limit (dBµV/m) @3m	Margin (dB)
1.58	38.28	PK	8.94	63.63	25.35
0.15	56.24	PK	50.90	104.08	47.84
5.46	32.18	PK	7.79	69.54	37.36

3) 13.11 MHz~14.01 MHz:



Project No.RKSA240710002 Tester:Grace Luo

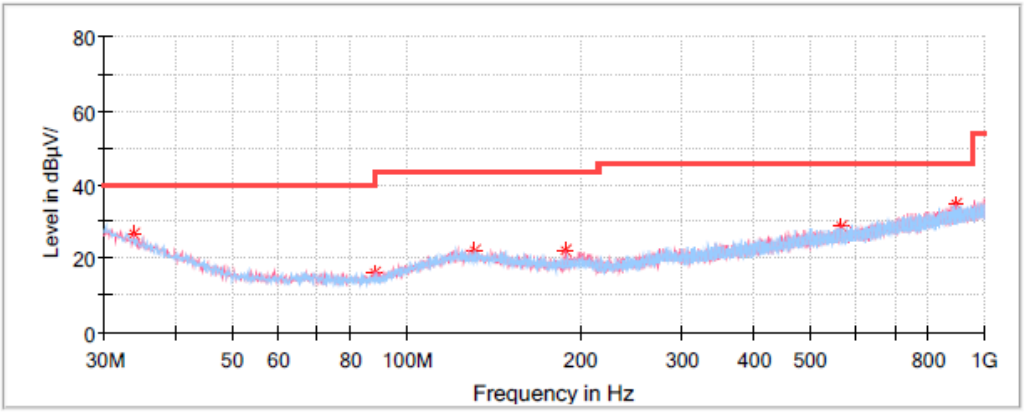
Date: 3.SEP.2024 18:28:48

Frequency (MHz)	Corrected Amplitude (dBµV/m)@3m	Detector PK/QP/Ave.	Corrected Factor (dB/m)	Limit (dBµV/m) @3m	Margin (dB)
13.56	79.40	PK	3.63	124.00	44.60
13.48	60.93	PK	3.64	90.52	29.59
13.64	59.70	PK	3.63	90.52	30.82
13.70	58.97	PK	3.62	90.52	31.55

30 MHz ~1 GHz:

Common Information

Project No:	RKSA240710002
EUT Model:	OneKey Pro
Test Mode:	SRD
Standard:	FCC Part 15.205 &FCC Part 15.209&FCC Part 15.225
Test Equipment:	ESCI, JB3, 310N
Temperature:	25.8℃
Humidity:	52%
Barometric Pressure:	101.2kPa
Test Engineer:	Grace Luo
Test Date:	2024/9/3



Critical_Freqs

Frequency (MHz)	MaxPeak (dBµ V/m)	Limit (dBµ V/m)	Margin (dB)	Pol	Corr. (dB/m)
33.758750	26.48	40.00	13.52	V	-7.3
87.836250	16.22	40.00	23.78	V	-17.0
131.122500	22.29	43.50	21.21	H	-11.2
188.110000	22.00	43.50	21.50	V	-12.7
564.470000	28.93	46.00	17.07	V	-4.7
896.452500	34.85	46.00	11.15	V	0.9

FREQUENCY STABILITY

Test Mode: Transmitting.

Test Result: Compliant

F_0 =13.56MHz				
Power Supply(V_{DC})	**Temperature (°C)**	**Measured Frequency (MHz)**	**Frequency Error (%)**	**Part 15.225 Limit**
3.8	-30	13.559705	-0.00218	±0.01%
	-20	13.559775	-0.00166	±0.01%
	-10	13.559865	-0.00100	±0.01%
	0	13.559975	-0.00018	±0.01%
	10	13.559915	-0.00063	±0.01%
	20	13.560125	0.00092	±0.01%
	30	13.559505	-0.00365	±0.01%
	40	13.559885	-0.00085	±0.01%
	50	13.559785	-0.00159	±0.01%
3.42	20	13.559735	-0.00195	±0.01%
4.18	20	13.559675	-0.00240	±0.01%

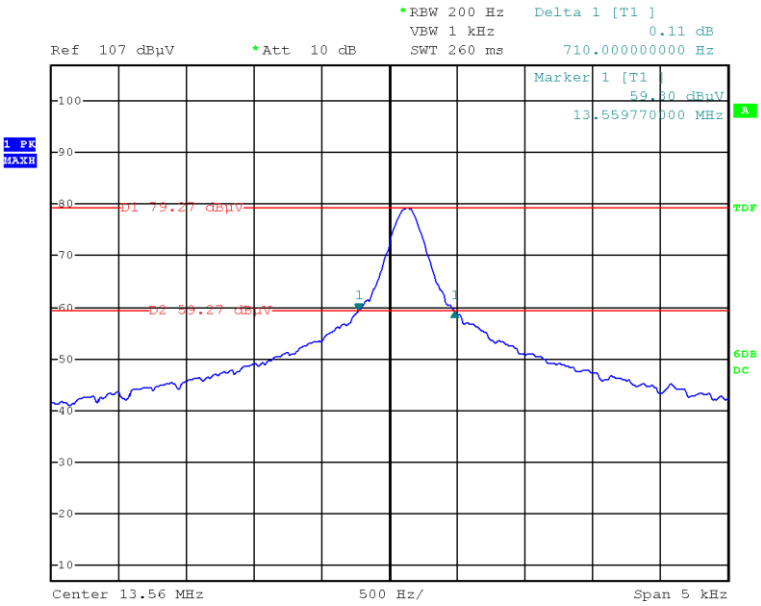
20dB EMISSION BANDWIDTH TESTING

Test Mode: Transmitting

Test Result: Compliant

Frequency (MHz)	20 dB Bandwidth (kHz)
13.56	0.71

20 dB Emission Bandwidth-13.56MHz



Project No.RKSA240710002 Tester:Grace Luo

Date: 3.SEP.2024 18:41:24

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 *******