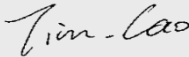
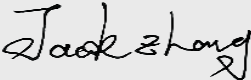




Test report No:
2390782R-RF-US-P06V08

FCC & ISED TEST REPORT

Product Name	Mobile Computer
Trademark	Elo
Model and /or type reference	EMC-M51
FCC ID	RBWEMCM51
IC	10757B-EMCM51
Applicant's name / address	Elo Touch Solutions, Inc 670 N. McCarthy Blvd., Suite 100, Milpitas, CA 95035, USA.
Test method requested, standard	47 CFR FCC Part 15 (Section 15.225) ANSI C63.10: 2013 RSS-210 Issue 11 RSS-Gen Issue 5
Verdict Summary	IN COMPLIANCE
Documented by (name / position & signature)	Tim Cao / Project Manager 
Approved by (name / position & signature)	Jack Zhang / Manager 
Date of issue	2024-11-06
Report Version	V1.0
Report template No	Template_FCC 15.225-RF-V1.0

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COMPETENCES AND GUARANTEES

DEKRA is a testing laboratory competent to carry out the tests described in this report.

In order to assure the traceability to other national and international laboratories, DEKRA has a calibration and maintenance program for its measurement equipment.

DEKRA guarantees the reliability of the data presented in this report, which is the result of the measurements and the tests performed to the item under test on the date and under the conditions stated in the report and it is based on the knowledge and technical facilities available at DEKRA at the time of performance of the test.

DEKRA is liable to the client for the maintenance of the confidentiality of all information related to the item under test and the results of the test.

The results presented in this Test Report apply only to the particular item under test established in this document.

IMPORTANT: No parts of this report may be reproduced or quoted out of context, in any form or by any means, except in full, without the previous written permission of DEKRA.

GENERAL CONDITIONS

Test Location	No. 99, Hongye Road, Suzhou Industrial Park Suzhou, 215006, P.R. China
Date(receive sample)	Mar. 20, 2024
Date (start test)	Jun. 01, 2024
Date (finish test)	Jun. 30, 2024

1. This report is only referred to the item that has undergone the test.
2. This report does not constitute or imply on its own an approval of the product by the Certification Bodies or Competent Authorities.
3. This document is only valid if complete; no partial reproduction can be made without previous written permission of DEKRA.
4. This test report cannot be used partially or in full for publicity and/or promotional purposes without previous written permission of DEKRA.

ENVIRONMENTAL CONDITIONS

The climatic conditions during the tests are within the limits specified by the manufacturer for the operation of the EUT and the test equipment. The climatic conditions during the tests were within the following limits:

Ambient temperature	15 °C – 35 °C
Relative Humidity air	30% - 60%

If explicitly required in the basic standard or applied product / product family standard the climatic values are recorded and documented separately in this test report.

POSSIBLE TEST CASE VERDICTS

Test case does not apply to test object	N/A
Test object does meet requirement	P (Pass) / PASS
Test object does not meet requirement	F (Fail) / FAIL
Not measured	N/M

ABBREVIATIONS

For the purposes of the present document, the following abbreviations apply:

EUT	: Equipment Under Test
QP	: Quasi-Peak
CAV	: CISPR Average
AV	: Average
CDN	: Coupling Decoupling Network
SAC	: Semi-Anechoic Chamber
OATS	: Open Area Test Site
BW	: Bandwidth
AM	: Amplitude Modulation
PM	: Pulse Modulation
HCP	: Horizontal Coupling Plane
VCP	: Vertical Coupling Plane
U_N	: Nominal voltage
T_x	: Transmitter
R_x	: Receiver
N/A	: Not Applicable
N/M	: Not Measured

DOCUMENT HISTORY

Report No.	Version	Description	Issued Date
2390782R-RF-US-P06V08	V1.0	Initial issue of report.	2024-11-06

REMARKS AND COMMENTS

1. The equipment under test (EUT) does meet the essential requirements of the stated standard(s)/test(s).
2. These test results on a sample of the device are for the purpose of demonstrating Compliance with 47 CFR FCC Part 15 (Section 15.225) and RSS-210 Issue 11, RSS-Gen Issue 5.
3. The measurement result is considered in conformance with the requirement if it is within the prescribed limit, It is not necessary to account the uncertainty associated with the measurement result.
4. The test results presented in this report relate only to the object tested.
5. The test report shall not be reproduced without the written approval of DEKRA Testing and Certification (Suzhou) Co., Ltd.
6. This report will not be used for social proof function in China market.
7. DEKRA declines any responsibility with the following test data provided by customer that may affect the validity of result:
 - Chapter 1.1 General Description of the Item(s);
 - Chapter 1.2 Antenna Informaion;
 - Chapter 1.3 Channel List.

USED EQUIPMENT

AC Power Line Conducted Emission / TR1

Instrument	Manufacturer	Model No.	Serial No.	Cal. Date	Next Cal. Date	Firmware Version	Software version
EMI Test Receiver	R&S	ESCI	100726	2023.08.26	2024.08.25	4.42 SP1	N/A
Two-Line V-Network	R&S	ENV 216	101189	2024.07.06	2025.07.05	N/A	N/A
Two-Line V-Network	R&S	ENV 216	101044	2023.11.08	2024.11.07	N/A	N/A
50ohm Coaxial Switch	Anritsu	MP59B	6200464462	2024.04.20	2025.04.19	N/A	N/A
Coaxial Cable	Huber+Suhner	RG 223	TR1-C1	2024.04.27	2025.04.26	N/A	N/A
Impedance Stabilization Network	Teseq GmbH	ISN ST08	31281	2023.07.04	2024.07.05	N/A	N/A
Temperature/Humidity Meter	RTS	RTS-1909	THM-012	2024.05.17	2025.05.16	N/A	N/A
Dekra test software	Dekra	N/A	N/A	N/A	N/A	N/A	N/A

Field Strength of Fundamental, E-field Emission/ Field Strength of Spurious/ Frequency Stability/ Emission Bandwidth (9KHz-1GHz) / AC2

Instrument	Manufacturer	Model No.	Serial No.	Cal. Date	Next Cal. Date	Firmware Version	Software version
EMI Test Receiver	R&S	ESCI	100573	2024.02.06	2025.02.05	4.42 SP3	N/A
Loop Antenna	R&S	HFH2-Z2E	101149	2024.03.27	2025.03.26	N/A	N/A
Bilog Antenna	Teseq GmbH	CBL6112D	27611	2024.03.20	2025.03.19	N/A	N/A
Coaxial Cable	Huber+Suhner	SUCOFLEX 106	AC2-C	2024.04.27	2025.04.26	N/A	N/A
Temperature/Humidity Meter	RTS	RTS-1909	THM-021	2024.05.17	2025.05.16	N/A	N/A
Dekra test software	Dekra	N/A	N/A	N/A	N/A	N/A	3

UNCERTAINTY

Uncertainties have been calculated according to the DEKRA internal document. The reported expanded uncertainties are based on a standard uncertainty multiplied by a coverage factor of $k=2$, providing a level of confidence of approximately 95%.

Test item	Uncertainty
AC Power Line Conducted Emission	± 2.02 dB
Radiated Emission(9KHz~30MHz)	Horizontal: 9KHz~30MHz: 2.10 dB Vertical: 30MHz~200MHz: 2.30 dB
Radiated Emission(30MHz~1GHz)	± 3.80 dB
Occupied Bandwidth	± 1 kHz

1 GENERAL INFORMATION

1.1 General Description of the Item(s)

Product Name..... :	Mobile Computer
Model No. :	EMC-M51
Trademark. :	Elo
FCC ID :	RBWEMCM51
IC :	10757B-EMCM51
Hardware Version :	V1.06
Software Version :	MT912NoGms_EQ000_2774.F53FD5F.FD20B6E.6EAD44F_240130_100_V01_T23
Manufacturer :	Elo Touch Solutions, Inc
Manufacturer Address..... :	670 N. McCarthy Blvd., Suite 100, Milpitas, CA 95035, USA.
Factory :	ShuoGe Intelligent Technology Co.,Ltd.
Factory address..... :	Room 308-310, Building 1, No.2 8th Road, Baiyang Street, Qiantang New Area, Hangzhou City, Zhejiang Province, P.R. China(310018)
Operating temperature..... :	-20 ~ +50℃
Note: This report is based on 2390782R-RF-US-P06V04. The customer stated that the new EUT has removed the WCDMA and LTE and NR modules and the rest are identical. We verified the worst channel test on the new EUT and the test results did not get worse. Therefore, this report reuses the test data of 2390782R-RF-US-P06V04.	

Wireless Specification..... :	NFC
Operating frequency range(s)..... :	13.56 MHz
Type of modulation :	ASK
Number of channel..... :	1

Rated power supply	Voltage and Frequency	
	☐	AC: 220 - 240 V, 50/60 Hz
	☐	AC: 100 - 240 V, 50/60 Hz
	☒	Battery: 3.85 Vdc
	☒	Adapter:
Adapter Model	UES45LCP-SPC	
	Input: 100-240 V ~ 50/60 Hz, 1.3 A	
	Output: 5.0 V / 3.0 A, 15.0 W;	
	9.0 V / 3.0 A, 27.0 W;	
	12.0 V / 3.0 A, 36.0 W;	
	15.0 V / 3.0 A, 45.0 W;	
	20.0 V / 2.25 A, 45.0 W Max;	
Mounting position..... :	☐	Tabletop equipment
	☐	Wall/Ceiling mounted equipment
	☐	Floor standing equipment
	☒	Hand-held/Portable equipment
	☐	Other:

1.2. Antenna information

Antenna Delivery	☒	1TX + 1RX		
	☐	2TX + 2RX		
	☐	Others:.....		
Antenna technology	☒	SISO		
	☐	MIMO	☐	CDD
			☐	Beam-forming
Antenna Type	☐	External	☐	Dipole
			☐	Sectorized
	☒	Internal	☐	Ceramic Chip
			☐	PIFA
			☒	LOOP
			☐	Others:
Antenna Gain.....	N/A			

1.3. Channel List

Frequency of Each Channel:							
Channel	Frequency	Channel	Frequency	Channel	Frequency	Channel	Frequency
01	13.56 MHz	--	--	--	--	--	--

Note: The general description of the Item(s), antenna information and channel list in clause 1 are provided and confirmed by the client.

2 DESCRIPTION OF TEST SETUP

2.1 Operating mode(s) used for tests

During the tests the following operating mode(s) has(have) been used.

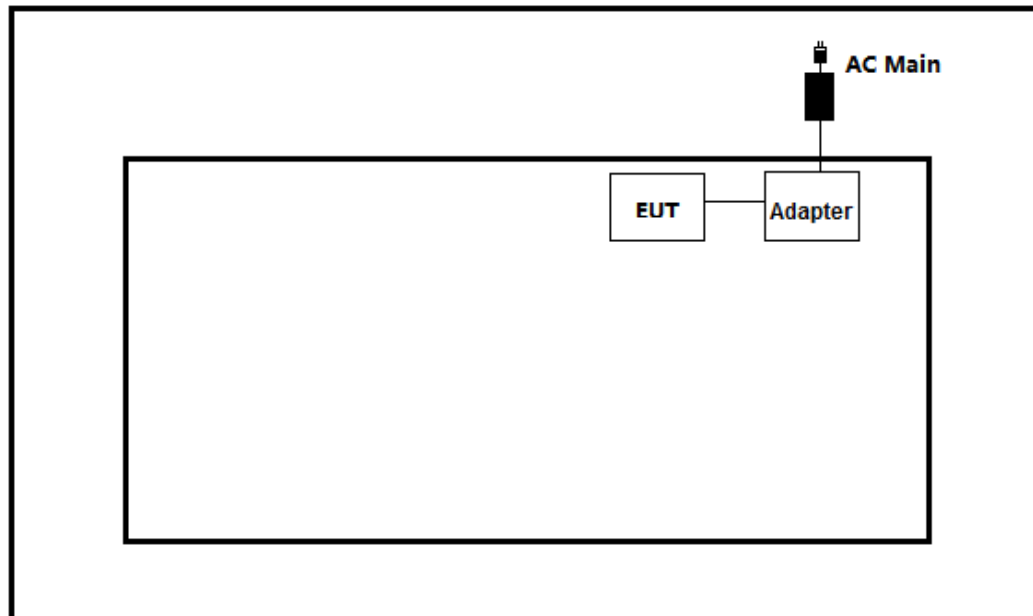
Test Mode	Mode 1: Transmit by NFC
-----------	-------------------------

2.2 Support / Auxiliary equipment / unit / Test software for the EUT

Auxiliary equipment	Type / Version	Manufacturer	Supplied by
NFC Card	N/A	N/A	N/A
software	Type / Version	Manufacturer	Supplied by
N/A	N/A	N/A	N/A

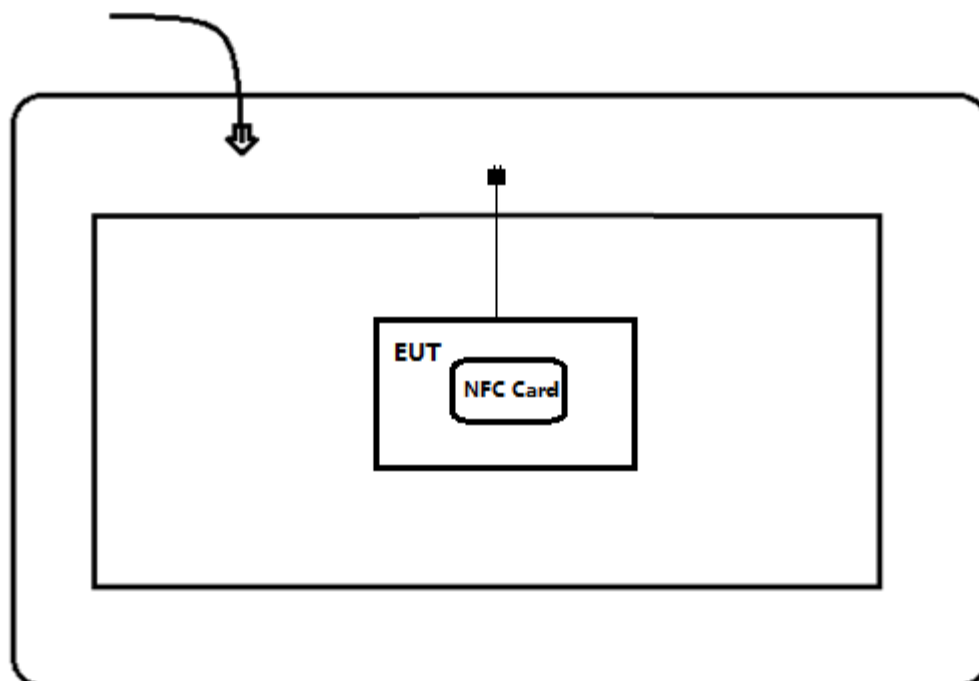
2.3 Test Configuration / Block diagram used for tests

Test setup Diagram- AC Line Conducted Emission Test



Test setup Diagram- Radiated Emission

Chamber



2.4 Testing process

1	Setup the EUT as shown in Section 2.3.
2	Execute the power on the EUT.
3	Verify that the EUT works properly.

3 VERDICT SUMMARY SECTION

This chapter presents an overview of standards and results. Refer to the next chapters for details of measured test results and applied test levels.

3.1 Standards

Standard	Year	Description
FCC CFR Title 47 Part 15 Subpart C Section 15.225	2024	Operation within the band 13.110-14.010 MHz
RSS-210 Issue 11	2024	Licence-Exempt Radio Apparatus: Category I Equipment
ANSI C63.10	2013	American National Standard of Procedures for Compliance Testing of Unlicensed Wireless Devices
RSS-Gen Issue 5 Amendment 2	2021	General Requirements for Compliance of Radio Apparatus

3.2 Overview of results

For FCC

Requirement – Test case	Basic standard(s)	Verdict	Remark
AC Power Line Conducted Emission	FCC CFR Title 47 Part 15 Subpart C Section 15.207	PASS	Test data please refer to Appendix A
Field Strength of Fundamental, E-field Emission	FCC CFR Title 47 Part 15 Subpart C Section 15.225(a)(b)(c)	PASS	Test data please refer to Appendix B
Field Strength of Spurious	FCC CFR Title 47 Part 15 Subpart C Section 15.209 & 15.225(d)	PASS	Test data please refer to Appendix C
Emission Bandwidth	FCC CFR Title 47 Part 15 Subpart C Section 15.215(c)	PASS	Test data please refer to Appendix D
Frequency Stability	FCC CFR Title 47 Part 15 Subpart C Section 15.225(e)	PASS	Test data please refer to Appendix E
Antenna Requirement	FCC CFR Title 47 Part 15 Subpart C Section 15.203	PASS	---

For ISCED

Requirement – Test case	Basic standard(s)	Verdict	Remark
AC Power Line Conducted Emission	RSS-Gen Issue 5 Section 8.8	PASS	Test data please refer to Appendix A
Field Strength of Fundamental, E-field Emission	RSS-210 Issue 11 Section B.6	PASS	Test data please refer to Appendix B
Field Strength of Spurious	RSS-210 Issue 11, Section B.6 RSS-Gen Issue 5, Section 8.9	PASS	Test data please refer to Appendix C
Emission Bandwidth	RSS-Gen Section 6.7	PASS	Test data please refer to Appendix D
Frequency Stability	RSS-210 Issue 11 Section B.6	PASS	Test data please refer to Appendix E
Antenna Requirement	RSS-Gen Section 8.3	PASS	---

3.3 Test Matrix

Test item	Model: EMC-M51
	1(#1)
AC Power Line Conducted Emission	☒
E-field Emission	☒
Field Strength of Spurious	☒
Frequency Stability	☒
Emission Bandwidth	☒
Field Strength of Fundamental	☒

3.4 Test Facility

USA	:	FCC Designation Number: CN1199
Canada	:	CAB identifier Number: CN0040

4 TEST RESULTS

4.1 AC Power Line Conducted Emission

VERDICT: PASS

4.1.1 Limit

Standard	FCC Part 15 Subpart C Paragraph 15.207; RSS-Gen Issue 5 Section 8.8	
Frequency range [MHz]	Limit: QP [dB(μV) ¹⁾	Limit: AV [dB(μV) ¹⁾
0,15 - 0,50	66 - 56 ²⁾	56 - 46 ²⁾
0,50 - 5,0	56	46
5,0 - 30	60	50

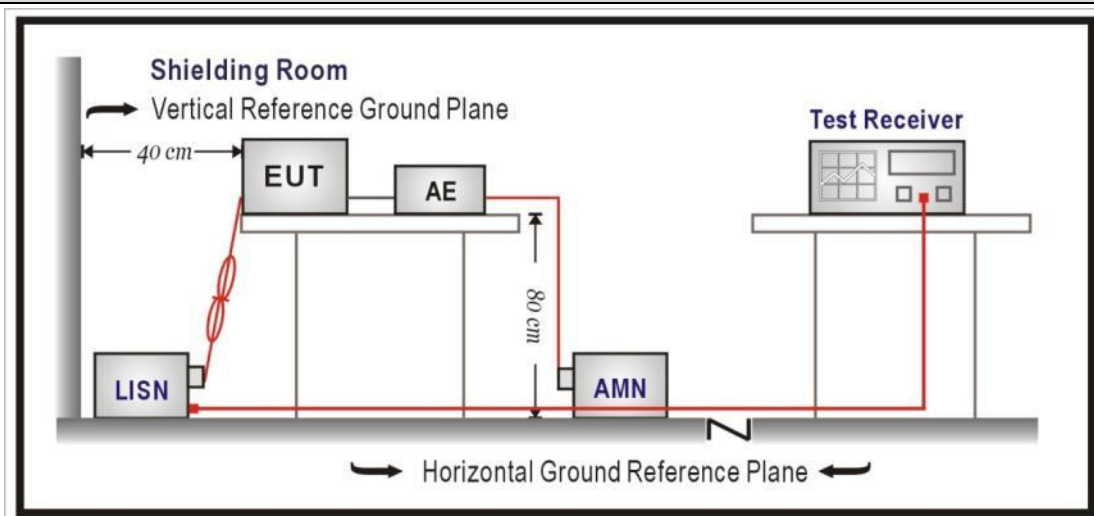
¹⁾ At the transition frequency, the lower limit applies.

²⁾ The limit decreases linearly with the logarithm of the frequency.

NOTE 1: The exclusion band for transmitters shall be considered for transmitters operating at frequencies below 30 MHz.

NOTE 2: Where the AC output port is directly connected (or via a circuit breaker) to the AC power input port of the EUT the AC power output port need not to be tested.

4.1.2 Test Setup



4.1.3 Test Procedure

	References Rule	Chapter	Item
☒	ANSI C63.10	6.2	Standard test method for ac power-line conducted emissions from unlicensed wireless devices

4.2 E-field Emission

VERDICT: PASS

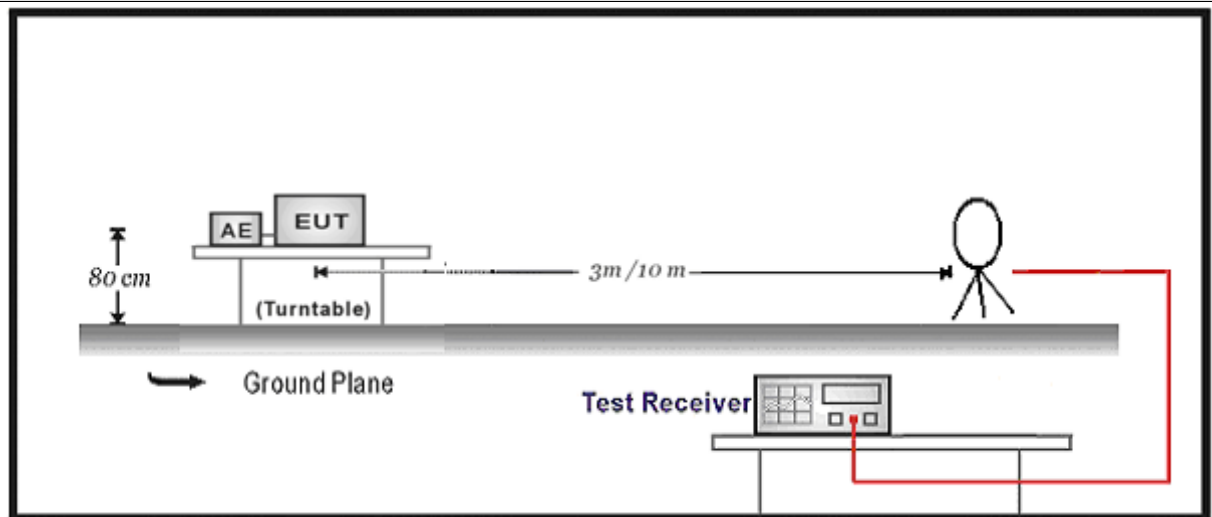
4.2.1 Limit

Standard	FCC Part 15 Subpart C Paragraph 15.225; RSS-210 Issue 11 Section B.6
-----------------	--

- (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.

4.2.2 Test Setup

Below 30MHz Test Setup:



4.2.3 Test Procedure

	References Rule	Chapter	Description
☒	ANSI C63.10	6.4	Radiated emissions from unlicensed wireless devices below 30 MHz
☐	ANSI C63.10	6.5	Radiated emissions from unlicensed wireless devices in the frequency range of 30 MHz to 1000 MHz
☐	ANSI C63.10	6.6	Radiated emissions from unlicensed wireless devices above 1 GHz

4.3 Field Strength of Spurious**VERDICT: PASS****4.3.1 Limit****Standard**FCC Part 15 Subpart C Paragraph 15. 209; RSS-210 Issue 11, Section B.6
RSS-Gen Issue 5, Section 8.9**Restricted Band Emissions Limit**

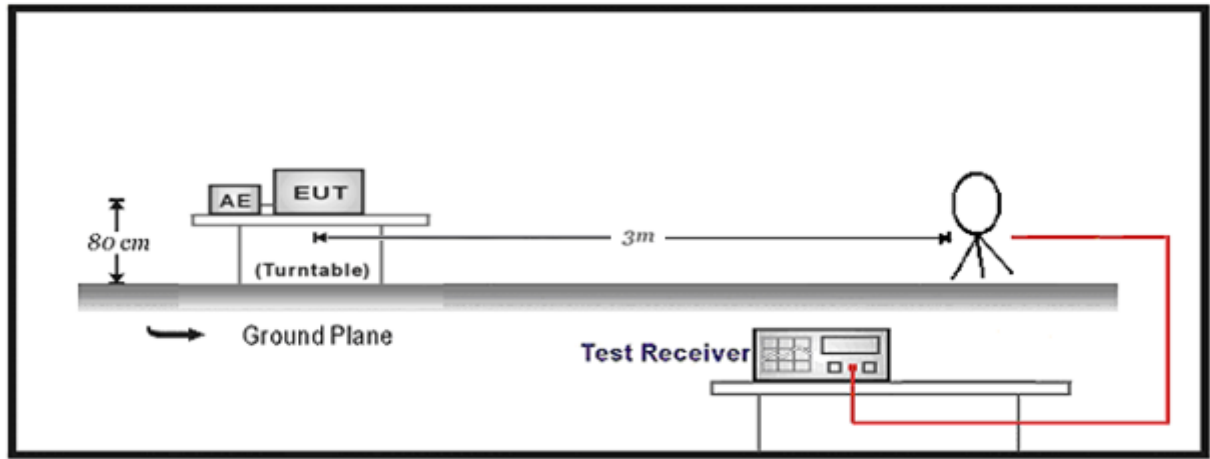
Frequency (MHz)	Field strength (μ V/m)	Field strength (dB μ V/m)	Measurement distance (m)
0.009 - 0.49	2400/F(kHz)	48.5 – 13.8	300 _(Note 1)
0.49 - 1.705	24000/F(kHz)	33.8 - 23	30 _(Note 1)
1.705 - 30	30	29.5	30 _(Note 1)
30 - 88	100	40	3 _(Note 2)
88 - 216	150	43.5	3 _(Note 2)
216 - 960	200	46	3 _(Note 2)
Above 960	500	54	3 _(Note 2)

Note 1: At frequencies below 30 MHz, measurements may be performed at a distance closer than that specified in the regulations; however, an attempt should be made to avoid making measurements in the near field. Pending the development of an appropriate measurement procedure for measurements performed below 30 MHz, when performing measurements at a closer distance than specified, the results shall be extrapolated to the specified distance by either making measurements at a minimum of two distances on at least one radial to determine the proper extrapolation factor or by using the square of an inverse linear distance extrapolation factor (40 dB/decade).

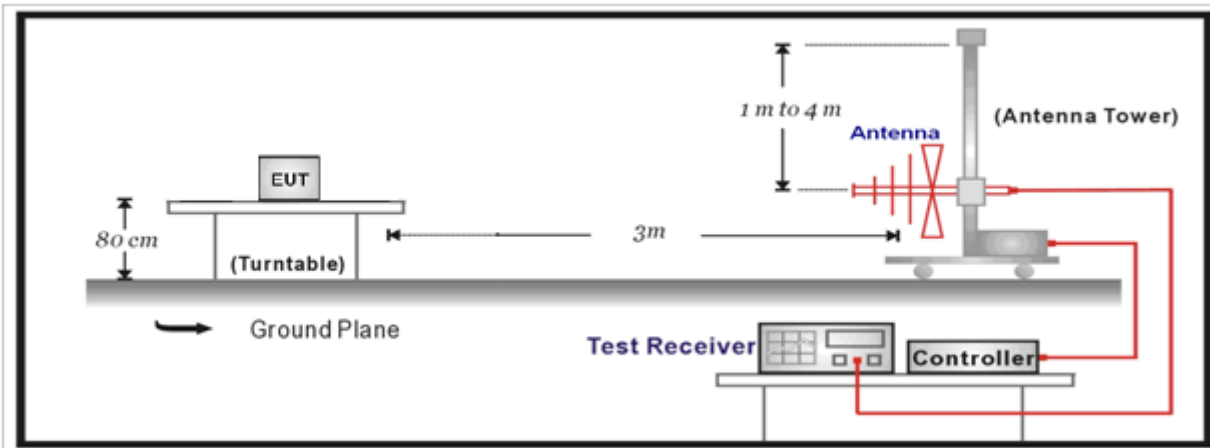
Note 2: At frequencies at or above 30 MHz, measurements may be performed at a distance other than what is specified provided: measurements are not made in the near field except where it can be shown that near field measurements are appropriate due to the characteristics of the device; and it can be demonstrated that the signal levels needed to be measured at the distance employed can be detected by the measurement equipment. Measurements shall not be performed at a distance greater than 30 meters unless it can be further demonstrated that measurements at a distance of 30 meters or less are impractical. When performing measurements at a distance other than that specified, the results shall be extrapolated to the specified distance using an extrapolation factor of 20 dB/decade (inverse linear-distance for field strength measurements; inverse-linear-distance-squared for power density measurements).

4.3.2 Test Setup

Below 30MHz Test Setup:



30MHz-1GHz Test Setup:

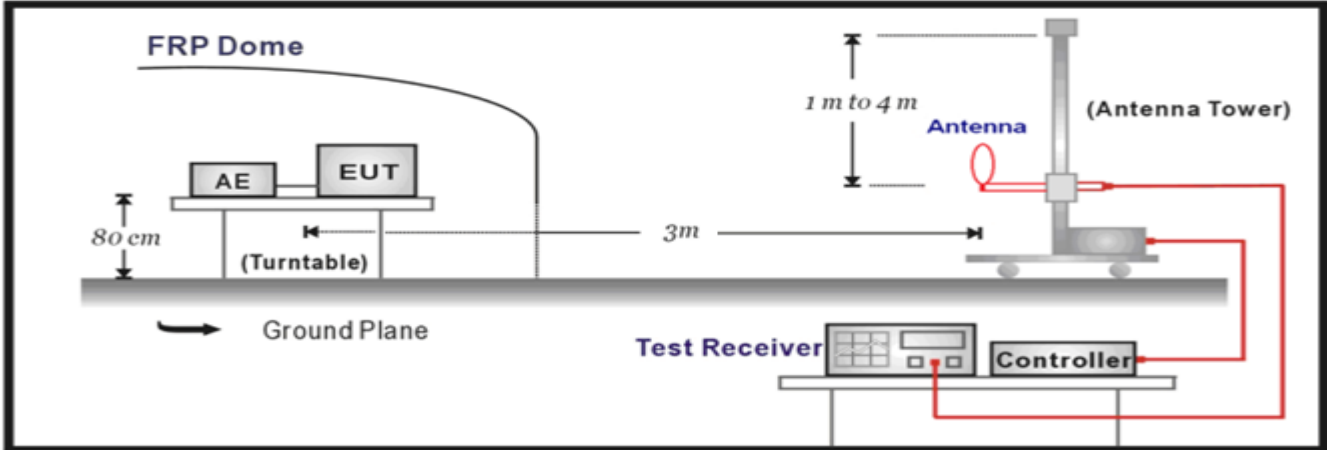


4.3.3 Test Procedure

	References Rule	Chapter	Description
	☒ ANSI C63.10	6.4	Radiated emissions from unlicensed wireless devices below 30 MHz
	☒ ANSI C63.10	6.5	Radiated emissions from unlicensed wireless devices in the frequency range of 30 MHz to 1000 MHz
	☐ ANSI C63.10	6.6	Radiated emissions from unlicensed wireless devices above 1 GHz

4.4 Emission bandwidth	VERDICT: PASS
------------------------	---------------

4.4.1 Limit	
Standard	FCC Part 15 Subpart C Paragraph 15.215; RSS-Gen Section 6.7
Within the band.	

4.4.2 Test Setup	
	

4.4.3 Test Procedure			
	Reference Rule	Chapter	Description
☒	ANSI C63.10	6.9.2	Occupied bandwidth—relative measurement procedure

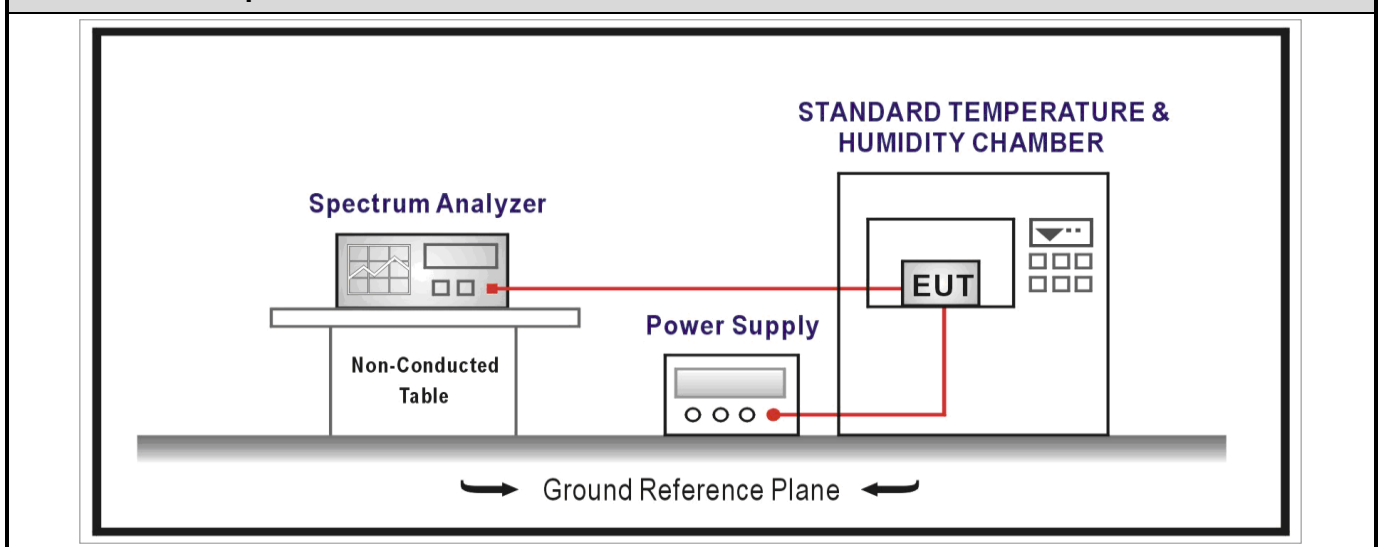
4.5 Frequency Stability

VERDICT: PASS

4.5.1 Limit:

Standard	FCC Part 15 Subpart C Paragraph 15.225(e); RSS-210 Issue 11 Section B.6
☒	The frequency tolerance of the carrier signal shall be maintained within $\pm 0.01\%$ 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.

4.5.2 Test Setup



4.5.3 Test Procedure

	References Rule	Chapter	Description
☒	ANSI C63.10	6.8	Frequency stability tests
☒	ANSI C63.10	6.8.1	Frequency stability with respect to ambient temperature
☒	ANSI C63.10	6.8.2	Frequency stability when varying supply voltage

4.6 Antenna Requirement	VERDICT: PASS
--------------------------------	----------------------

4.6.1 Limit:

Standard	FCC Part 15 Subpart E Paragraph 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 use of a standard antenna jack or electrical connector is prohibited. This requirement does not apply to carrier current devices or to devices operated under the provisions of §15.211, §15.213, §15.217, §15.219, or §15.221. Further, this requirement does not apply to intentional radiators that must be professionally installed, such as perimeter protection systems and some field disturbance sensors, or to other intentional radiators which, in accordance with §15.31(d), must be measured at the installation site. However, the installer shall be responsible for ensuring that the proper antenna is employed so that the limits in this part are not exceeded.

4.6.2 Antenna Connector Construction:

- | | |
|-------------------------------------|--|
| ☒ | The use of a permanently attached antenna |
| ☐ | The antenna use of a unique coupling to the intentional radiator |
| ☐ | The use of a nonstandard antenna jack or electrical connector |

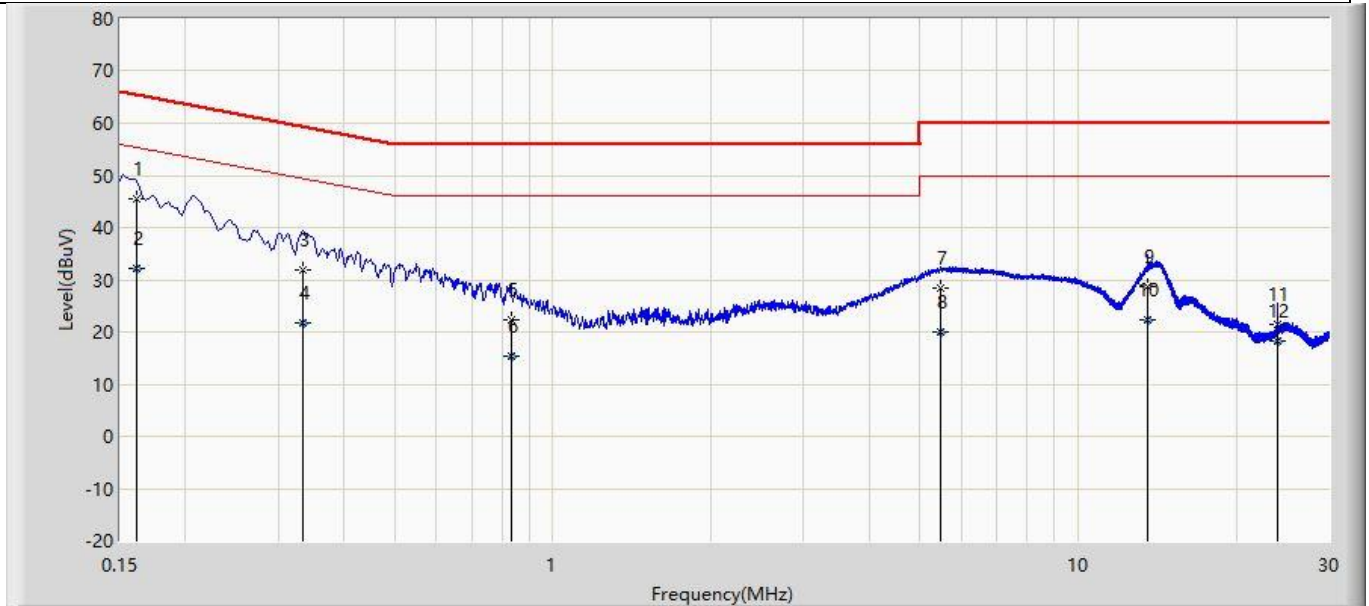
Please refer to the attached document "Internal Photograph" to show the antenna connector.

5	TEST SETUP PHOTO AND EUT PHOTO	VERDICT: PASS
---	--------------------------------	---------------

Remark: The test setup photo and EUT Photo please see appendix.

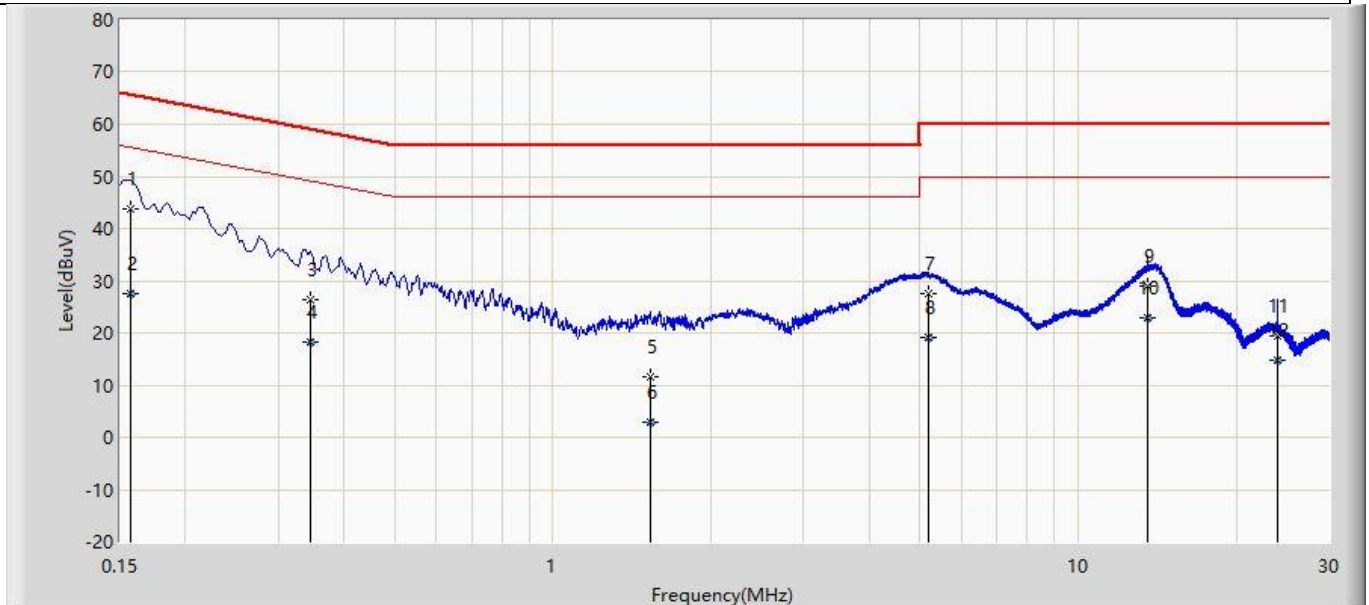
Appendix A: AC Power Line Conducted Emission

Profile: 2390782R	Page No.: 75
Engineer: Yuliu	
Site: TR1	Time: 2024/06/22 - 08:44
Limit: FCC_Part 15.207	Margin: 0
Probe: ENV216_101189(0.009-30MHz)	Polarity: Line
EUT: Mobile Computer	Power: Battery Powered
Note: Mode 1: Transmit by NFC	



N o	Mar k	Frequency (MHz)	Measure Level (dBuV)	Reading Level (dBuV)	Over Limit (dB)	Limit (dBuV)	Factor (dB)	Type
1	*	0.161	45.559	35.935	-19.840	65.399	9.624	QP
2		0.161	32.164	22.540	-23.236	55.399	9.624	AV
3		0.335	31.825	22.197	-27.514	59.339	9.628	QP
4		0.335	21.794	12.165	-27.545	49.339	9.628	AV
5		0.832	22.299	12.643	-33.701	56.000	9.656	QP
6		0.832	15.474	5.817	-30.526	46.000	9.656	AV
7		5.487	28.514	18.740	-31.486	60.000	9.774	QP
8		5.487	20.109	10.335	-29.891	50.000	9.774	AV
9		13.562	28.580	18.656	-31.420	60.000	9.924	QP
10		13.562	22.453	12.529	-27.547	50.000	9.924	AV
11		23.890	21.476	11.365	-38.524	60.000	10.111	QP
12		23.890	18.264	8.153	-31.736	50.000	10.111	AV

Profile: 2390782R	Page No.: 76
Engineer: Yuliu	
Site: TR1	Time: 2024/06/22 - 08:46
Limit: FCC_Part 15.207	Margin: 0
Probe: ENV216_101189(0.009-30MHz)	Polarity: Neutral
EUT: Mobile Computer	Power: Battery Powered
Note: Mode 1: Transmit by NFC	



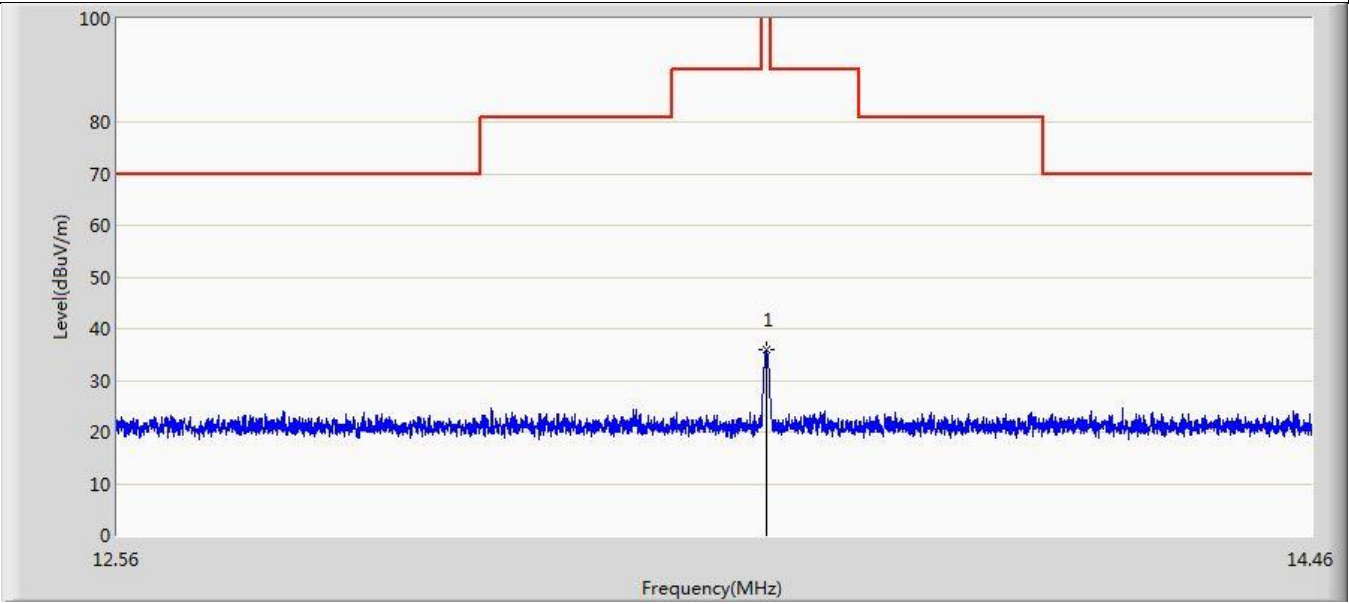
N o	Mar k	Frequency (MHz)	Measure Level (dBuV)	Reading Level (dBuV)	Over Limit (dB)	Limit (dBuV)	Factor (dB)	Type
1	*	0.157	43.833	34.203	-21.801	65.634	9.630	QP
2		0.157	27.574	17.944	-28.060	55.634	9.630	AV
3		0.346	26.307	16.667	-32.757	59.064	9.639	QP
4		0.346	18.116	8.477	-30.948	49.064	9.639	AV
5		1.534	11.472	1.788	-44.528	56.000	9.683	QP
6		1.534	2.871	-6.813	-43.129	46.000	9.683	AV
7		5.194	27.520	17.745	-32.480	60.000	9.775	QP
8		5.194	19.058	9.283	-30.942	50.000	9.775	AV
9		13.558	28.978	19.034	-31.022	60.000	9.944	QP
10		13.558	22.888	12.944	-27.112	50.000	9.944	AV
11		23.890	19.462	9.363	-40.538	60.000	10.099	QP
12		23.890	14.681	4.582	-35.319	50.000	10.099	AV

Note 1: " * ", means this data is the worst emission level.

Note 2: Measurement Level = Reading Level + Factor(Probe+Cable-Amp).

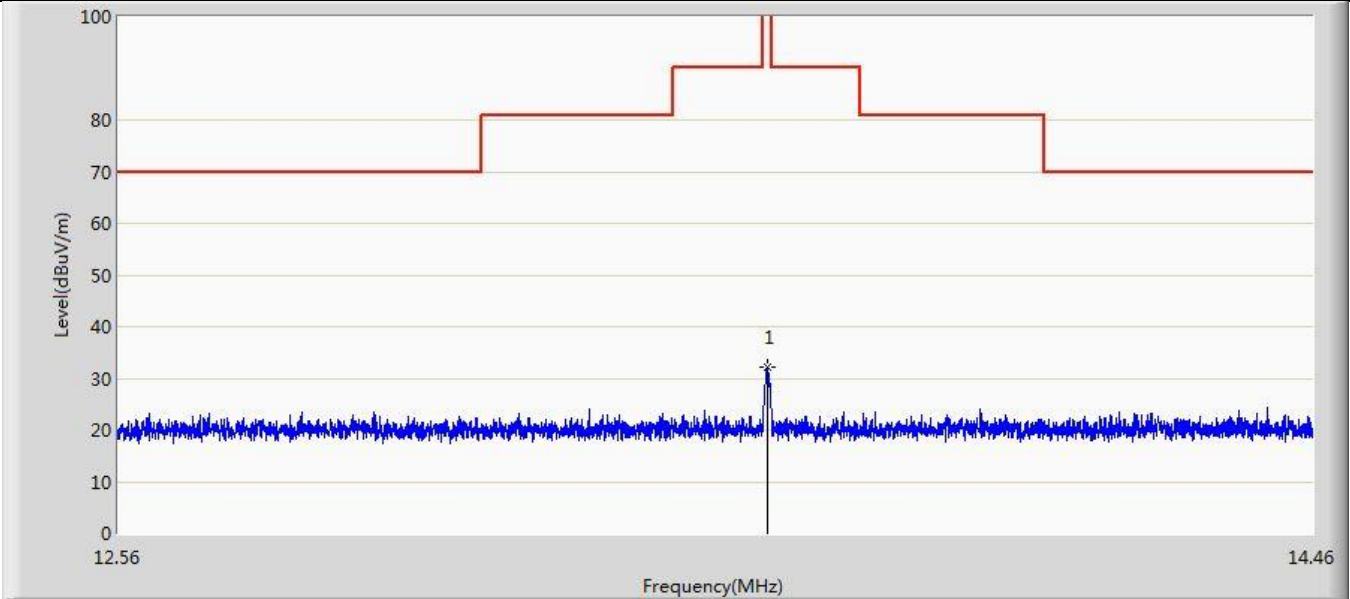
Appendix B: E-field Emission

Profile: 2390782R	Page No.: 7
Engineer: Yuliu	
Site: AC2	Time: 2024/06/25 - 08:09
Limit: 13.56 mask	Margin: 0
Probe: RF(0.009-30MHz)	Polarity: X
EUT: Mobile Computer	Power: Battery Powered
Note: Mode 1: Transmit by NFC	



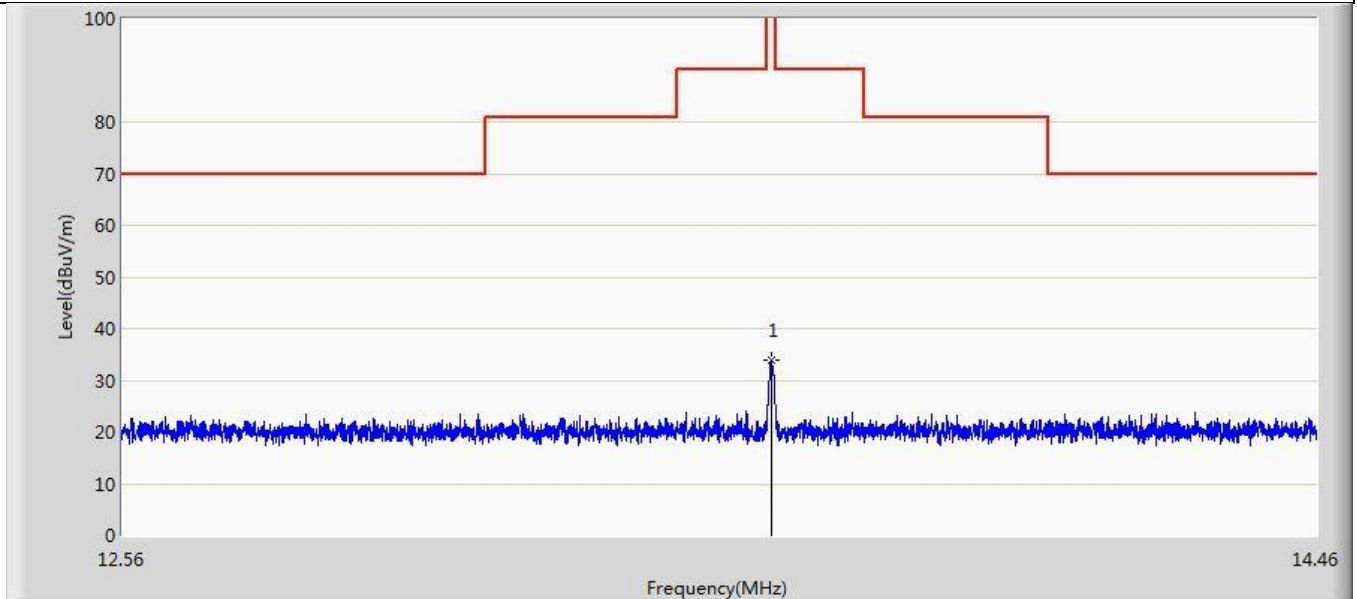
N o	Mar k	Frequency (MHz)	Measure Level (dBuV/m)	Reading Level (dBuV)	Over Limit (dB)	Limit (dBuV/m)	Factor (dB)	Type
1	*	13.559	35.883	14.831	-88.117	124.000	21.052	QP

Profile: 2390782R	Page No.: 8
Engineer: Yuliu	
Site: AC2	Time: 2024/06/25 - 08:11
Limit: 13.56 mask	Margin: 0
Probe: RF(0.009-30MHz)	Polarity: Y
EUT: Mobile Computer	Power: Battery Powered
Note: Mode 1: Transmit by NFC	



N o	Mar k	Frequency (MHz)	Measure Level (dBuV/m)	Reading Level (dBuV)	Over Limit (dB)	Limit (dBuV/m)	Factor (dB)	Type
1	*	13.560	32.054	11.502	-91.946	124.000	20.552	QP

Profile: 2390782R	Page No.: 9
Engineer: Yuliu	
Site: AC2	Time: 2024/06/25 - 08:15
Limit: 13.56 mask	Margin: 0
Probe: RF(0.009-30MHz)	Polarity: Z
EUT: Mobile Computer	Power: Battery Powered
Note: Mode 1: Transmit by NFC	

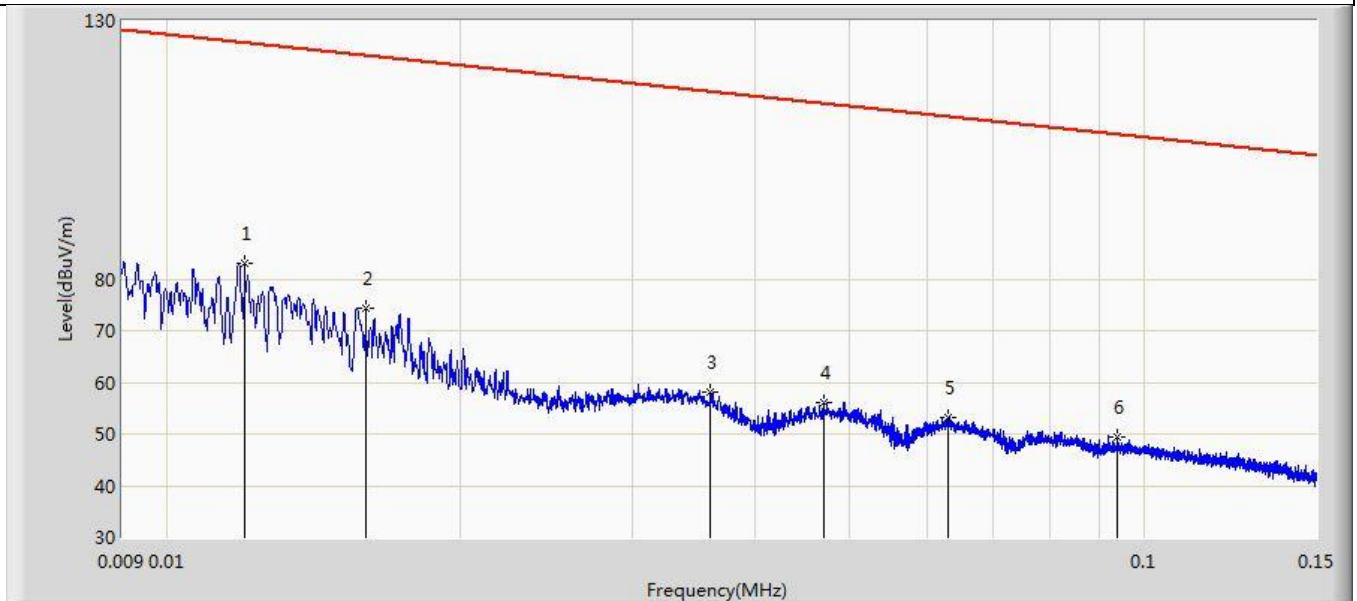


N o	Mar k	Frequency (MHz)	Measure Level (dBuV/m)	Reading Level (dBuV)	Over Limit (dB)	Limit (dBuV/m)	Factor (dB)	Type
1	*	13.559	33.778	13.226	-90.222	124.000	20.552	QP

Note : Measurement Level = Reading Level + Factor(Probe+Cable-Amp).

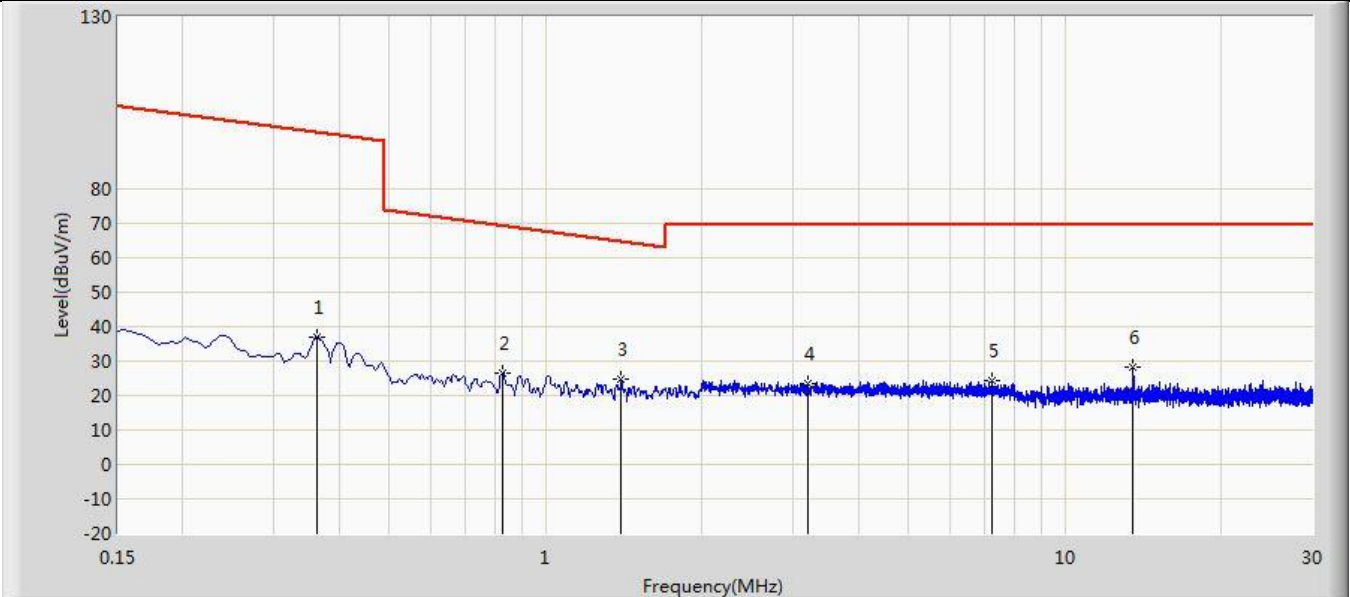
Appendix C: Field Strength of Spurious

Profile: 2390782R	Page No.: 1
Engineer: Yuliu	
Site: AC2	Time: 2024/06/25 - 07:51
Limit: 15.209	Margin: 0
Probe: RF(0.009-30MHz)	Polarity: X
EUT: Mobile Computer	Power: Battery Powered
Note: Mode 1: Transmit by NFC	



N o	Mar k	Frequency (MHz)	Measure Level (dBuV/m)	Reading Level (dBuV)	Over Limit (dB)	Limit (dBuV/m)	Factor (dB)	Type
1	*	0.012	83.145	62.020	-42.758	125.903	21.125	PK
2		0.016	74.281	53.032	-49.125	123.405	21.248	PK
3		0.036	58.147	36.278	-58.218	116.365	21.869	PK
4		0.047	55.950	33.997	-58.100	114.051	21.953	PK
5		0.063	53.234	31.298	-58.273	111.507	21.936	PK
6		0.094	49.424	27.524	-58.609	108.033	21.901	PK

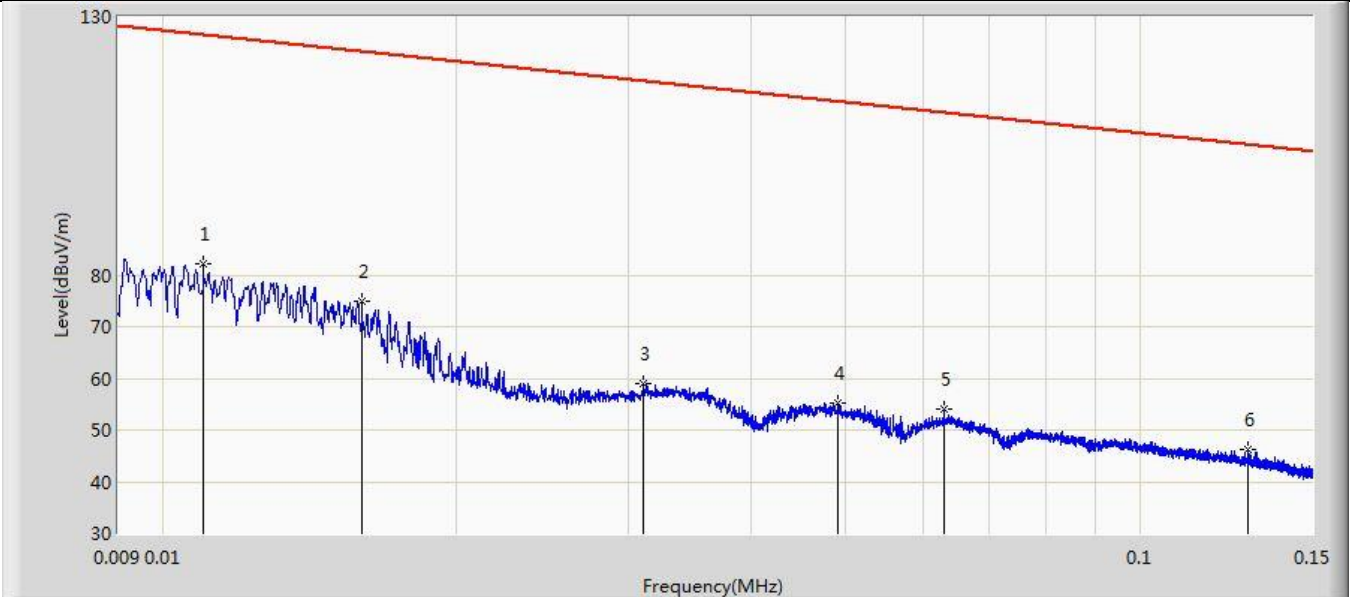
Profile: 2390782R	Page No.: 2
Engineer: Yuliu	
Site: AC2	Time: 2024/06/25 - 07:55
Limit: 15.209	Margin: 0
Probe: RF(0.009-30MHz)	Polarity: X
EUT: Mobile Computer	Power: Battery Powered
Note: Mode 1: Transmit by NFC	



N o	Mar k	Frequency (MHz)	Measure Level (dBuV/m)	Reading Level (dBuV)	Over Limit (dB)	Limit (dBuV/m)	Factor (dB)	Type
1		0.363	36.748	15.127	-59.556	96.304	21.621	PK
2		0.825	26.419	5.935	-42.769	69.188	20.484	PK
3	*	1.400	24.775	4.430	-39.833	64.607	20.344	PK
4		3.198	23.587	2.780	-45.813	69.400	20.807	PK
5		7.243	24.555	3.965	-44.845	69.400	20.590	PK
6		13.560	28.367	7.315	-41.033	69.400	21.052	PK

Note: Mark 6 is the fundamental emission.

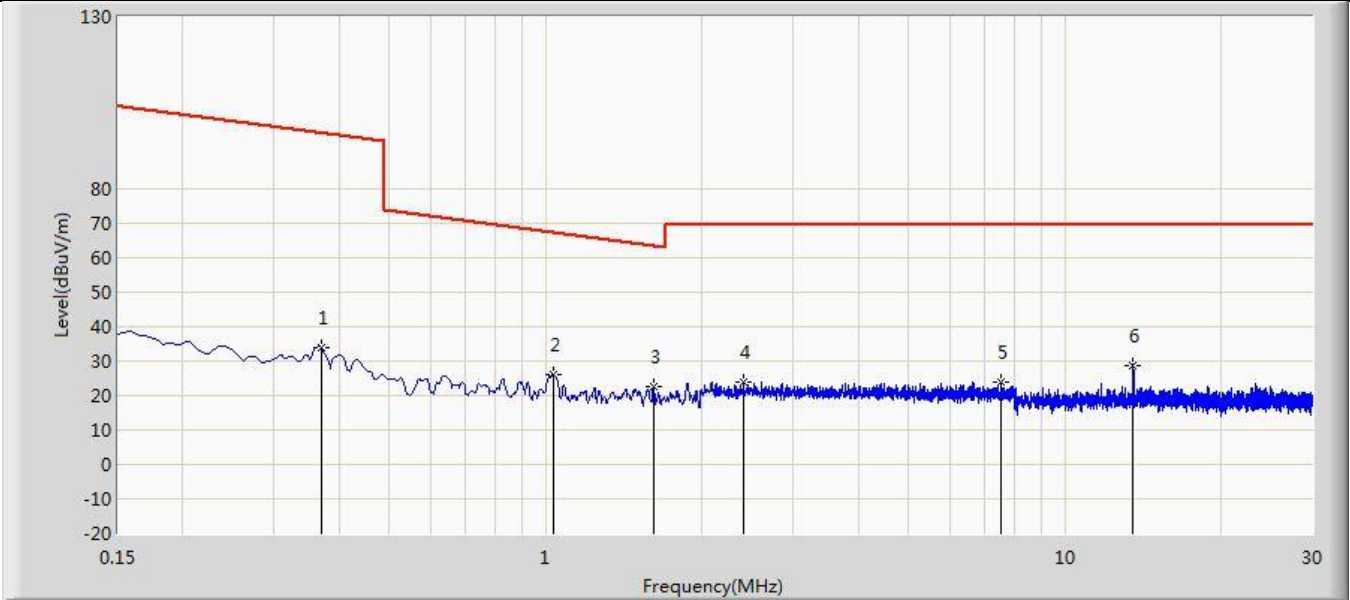
Profile: 2390782R	Page No.: 3
Engineer: Yuliu	
Site: AC2	Time: 2024/06/25 - 07:57
Limit: 15.209	Margin: 0
Probe: RF(0.009-30MHz)	Polarity: Y
EUT: Mobile Computer	Power: Battery Powered
Note: Mode 1: Transmit by NFC	



N o	Mar k	Frequency (MHz)	Measure Level (dBuV/m)	Reading Level (dBuV)	Over Limit (dB)	Limit (dBuV/m)	Factor (dB)	Type
1	*	0.011	82.040	61.447	-44.617	126.658	20.594	PK
2		0.016	74.895	54.146	-48.511	123.405	20.748	PK
3		0.031	58.891	37.677	-58.772	117.664	21.215	PK
4		0.049	55.327	33.876	-58.362	113.689	21.451	PK
5		0.063	54.001	32.565	-57.506	111.507	21.436	PK
6		0.129	46.319	24.959	-58.966	105.286	21.360	PK

Note: All the dots are base noise.

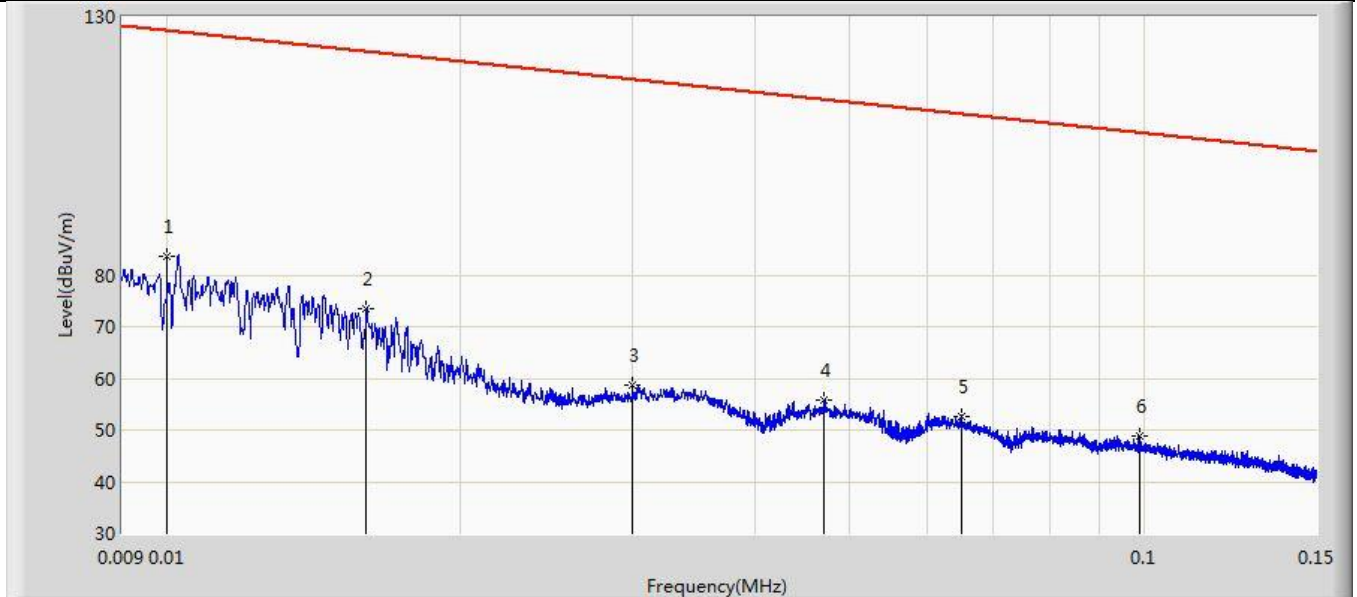
Profile: 2390782R	Page No.: 4
Engineer: Yuliu	
Site: AC2	Time: 2024/06/25 - 07:59
Limit: 15.209	Margin: 0
Probe: RF(0.009-30MHz)	Polarity: Y
EUT: Mobile Computer	Power: Battery Powered
Note: Mode 1: Transmit by NFC	



N o	Mar k	Frequency (MHz)	Measure Level (dBuV/m)	Reading Level (dBuV)	Over Limit (dB)	Limit (dBuV/m)	Factor (dB)	Type
1		0.370	34.114	13.003	-62.024	96.139	21.112	PK
2		1.034	26.018	6.548	-41.214	67.232	19.470	PK
3		1.613	22.641	2.581	-40.739	63.380	20.060	PK
4		2.407	24.075	3.668	-45.325	69.400	20.406	PK
5		7.534	23.826	3.744	-45.574	69.400	20.082	PK
6	*	13.556	28.708	8.156	-40.692	69.400	20.552	PK

Note: Mark 6 is the main frequency signal, and all other points are the base noise.

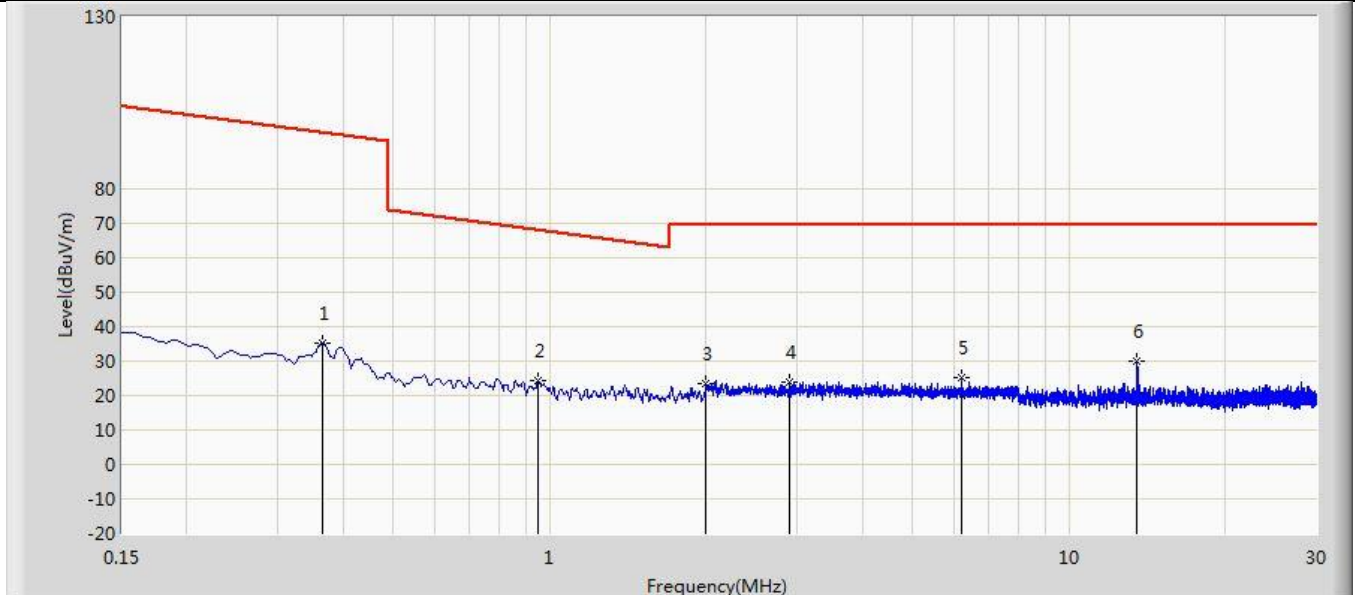
Profile: 2390782R	Page No.: 5
Engineer: Yuliu	
Site: AC2	Time: 2024/06/25 - 08:03
Limit: 15.209	Margin: 0
Probe: RF(0.009-30MHz)	Polarity: Z
EUT: Mobile Computer	Power: Battery Powered
Note: Mode 1: Transmit by NFC	



N o	Mar k	Frequency (MHz)	Measure Level (dBuV/m)	Reading Level (dBuV)	Over Limit (dB)	Limit (dBuV/m)	Factor (dB)	Type
1	*	0.010	83.580	63.018	-43.905	127.485	20.562	PK
2		0.016	73.563	52.814	-49.843	123.405	20.748	PK
3		0.030	58.598	37.415	-59.350	117.948	21.183	PK
4		0.047	55.830	34.377	-58.220	114.051	21.453	PK
5		0.065	52.730	31.296	-58.506	111.236	21.434	PK
6		0.099	48.796	27.402	-58.787	107.584	21.394	PK

Note: All the dots are base noise.

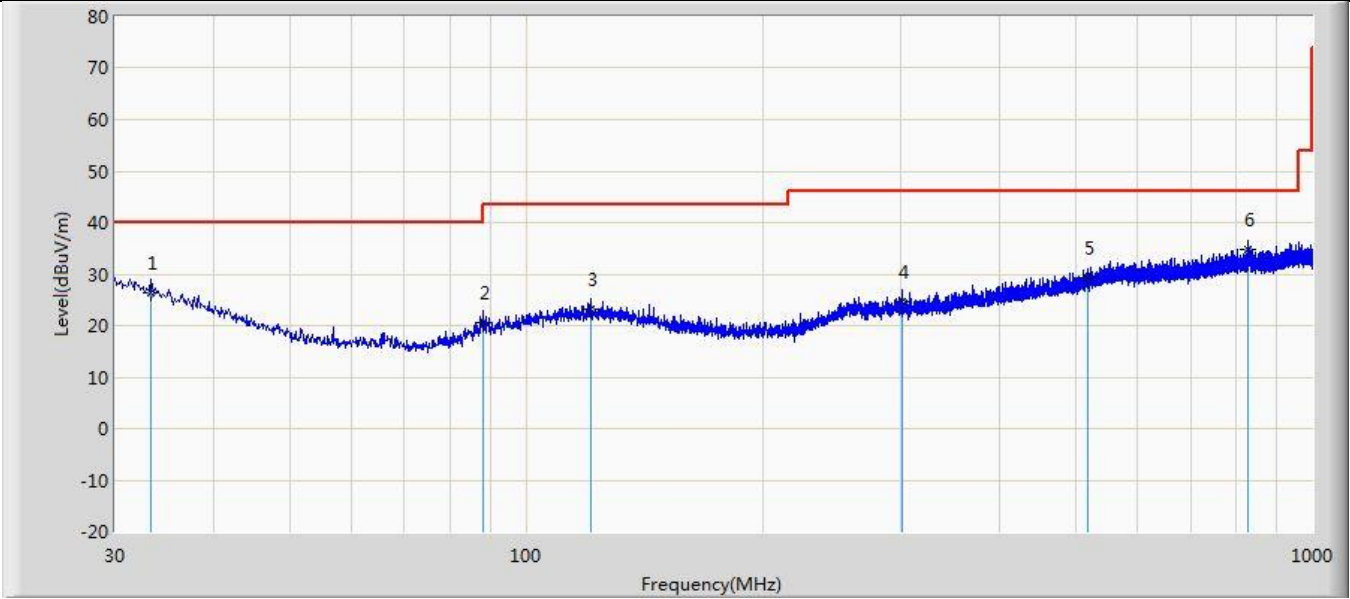
Profile: 2390782R	Page No.: 6
Engineer: Yuliu	
Site: AC2	Time: 2024/06/25 - 08:05
Limit: 15.209	Margin: 0
Probe: RF(0.009-30MHz)	Polarity: Z
EUT: Mobile Computer	Power: Battery Powered
Note: Mode 1: Transmit by NFC	



N o	Mar k	Frequency (MHz)	Measure Level (dBuV/m)	Reading Level (dBuV)	Over Limit (dB)	Limit (dBuV/m)	Factor (dB)	Type
1		0.366	35.340	14.223	-60.893	96.233	21.117	PK
2		0.952	24.439	4.854	-43.508	67.947	19.585	PK
3		2.004	23.650	3.210	-45.750	69.400	20.440	PK
4		2.900	23.710	3.366	-45.690	69.400	20.344	PK
5		6.236	25.032	4.942	-44.368	69.400	20.090	PK
6	*	13.560	30.017	9.465	-39.383	69.400	20.552	PK

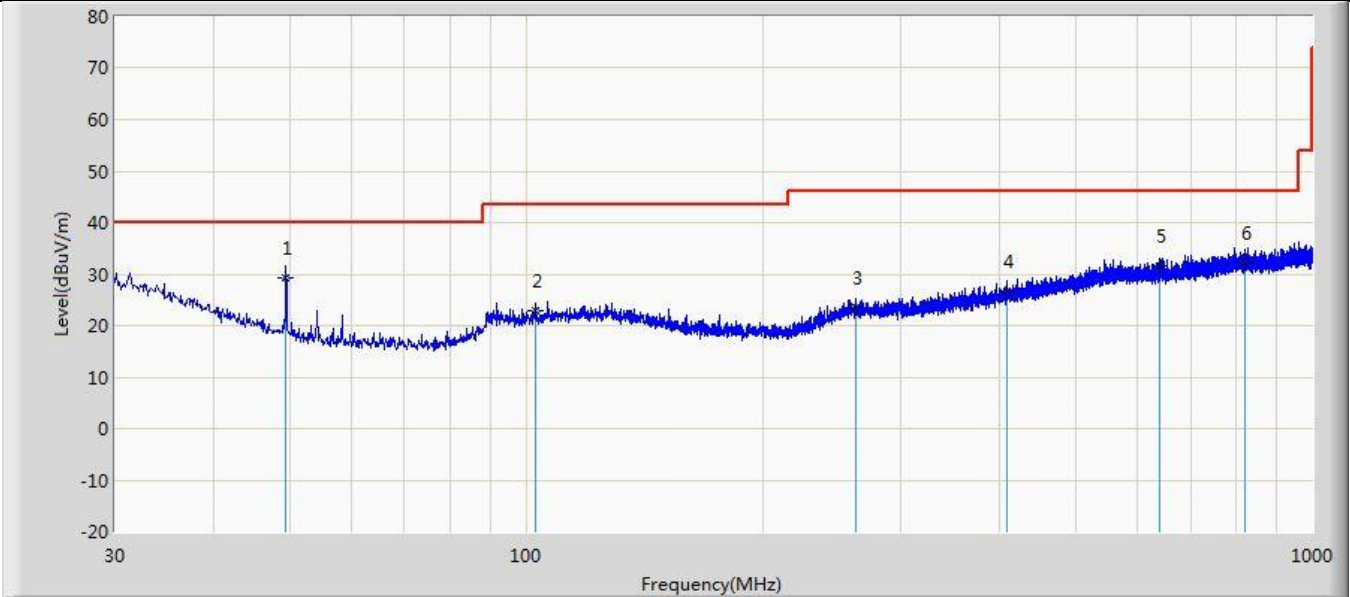
Note: Mark 6 is the main frequency signal, and all other points are the base noise.

Profile: 2390782R	Page No.: 1
Engineer: Pengchengyang	
Site: AC2	Time: 2024/06/25 - 08:19
Limit: FCC_Part 15.109_RE (3m)_Class B	Margin: 0
Probe: CBL6112D_27613(30-1000MHz)	Polarity: Horizontal
EUT: Mobile Computer	Power: Battery Powered
Note: Mode 1: Transmit by NFC	



No	Mark	Frequency (MHz)	Measure Level (dBuV/m)	Reading Level (dBuV)	Over Limit (dB)	Limit (dBuV/m)	Factor (dB)	Type
1		33.274	26.339	2.986	-13.661	40.000	23.353	QP
2		88.079	20.580	5.134	-22.920	43.500	15.445	QP
3		120.695	23.290	3.957	-20.210	43.500	19.333	QP
4		300.994	24.719	3.818	-21.281	46.000	20.901	QP
5		517.425	29.310	3.171	-16.690	46.000	26.139	QP
6	*	829.644	34.640	5.291	-11.360	46.000	29.348	QP

Profile: 2390782R	Page No.: 2
Engineer: Yuliu	
Site: AC2	Time: 2024/06/25 - 08:22
Limit: FCC_Part 15.109_RE (3m)_Class B	Margin: 0
Probe: CBL6112D_27613(30-1000MHz)	Polarity: Vertical
EUT: Mobile Computer	Power: Battery Powered
Note: Mode 1: Transmit by NFC	

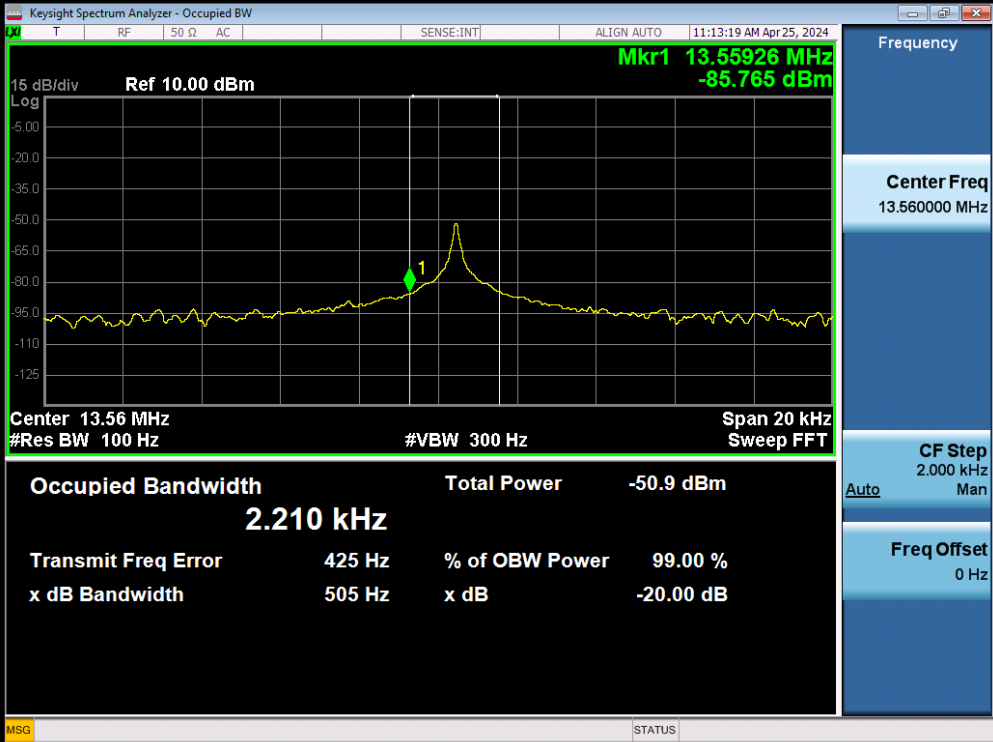


No	Mark	Frequency (MHz)	Measure Level (dBuV/m)	Reading Level (dBuV)	Over Limit (dB)	Limit (dBuV/m)	Factor (dB)	Type
1	*	49.521	29.265	14.176	-10.735	40.000	15.089	QP
2		102.750	22.862	4.470	-20.638	43.500	18.392	QP
3		262.557	23.412	2.676	-22.588	46.000	20.736	QP
4		408.543	26.670	2.860	-19.330	46.000	23.810	QP
5		638.554	31.661	4.281	-14.339	46.000	27.380	QP
6		820.671	32.198	2.828	-13.802	46.000	29.370	QP

Note 1: Mark 6 is the fundamental emission.
Note 2: " * ", means this data is the worst emission level.
Note 3: Measurement Level = Reading Level + Factor(Probe+Cable-Amp).

Appendix D: Emission Bandwidth

Frequency (MHz)	20dB Bandwidth (Hz)	99% Bandwidth (kHz)	Frequency Range Limit (MHz)	Result
13.56	505	2.210	13.553 ~ 13.567	Pass



The screenshot shows a Keysight Spectrum Analyzer interface. The main display is a log-scale plot of power (dBm) versus frequency (MHz). The center frequency is 13.56 MHz, and the span is 20 kHz. The resolution bandwidth (RBW) is 100 Hz, and the video bandwidth (VBW) is 300 Hz. The plot shows a single peak at 13.55926 MHz with a power of -85.765 dBm. The occupied bandwidth (OBW) is 2.210 kHz, and the total power is -50.9 dBm. The 99% power bandwidth is 2.210 kHz, and the 20 dB bandwidth is 505 Hz. The transmit frequency error is 425 Hz, and the percentage of OBW power is 99.00%. The x dB bandwidth is 505 Hz, and the x dB power is -20.00 dB. The interface also shows a 'Frequency' sidebar on the right with settings for Center Freq (13.560000 MHz), CF Step (2.000 kHz), and Freq Offset (0 Hz).

Center Freq	13.560000 MHz
CF Step	2.000 kHz
Freq Offset	0 Hz

Appendix E: Frequency Stability

Frequency Stability under Temperature at 0min			
Temperature Interval (°C)	Test Frequency (MHz)	Deviation (ppm)	Limit (ppm)
-20	13.56	63.22	±100
-10	13.56	63.21	±100
0	13.56	63.13	±100
10	13.56	63.23	±100
20	13.56	63.11	±100
30	13.56	63.15	±100
40	13.56	63.18	±100
50	13.56	63.22	±100
Frequency Stability under Temperature at 2min			
Temperature Interval (°C)	Test Frequency (MHz)	Deviation (ppm)	Limit (ppm)
-20	13.56	63.09	±100
-10	13.56	63.21	±100
0	13.56	63.19	±100
10	13.56	63.23	±100
20	13.56	63.21	±100
30	13.56	63.24	±100
40	13.56	63.25	±100
50	13.56	63.33	±100
Frequency Stability under Temperature at 5min			
Temperature Interval (°C)	Test Frequency (MHz)	Deviation (ppm)	Limit (ppm)
-20	13.56	63.14	±100
-10	13.56	63.22	±100
0	13.56	63.23	±100
10	13.56	63.11	±100
20	13.56	63.33	±100
30	13.56	63.22	±100
40	13.56	63.12	±100
50	13.56	63.23	±100
Frequency Stability under Temperature at 10min			
Temperature Interval (°C)	Test Frequency (MHz)	Deviation (ppm)	Limit (ppm)

-20	13.56	63.44	±100
-10	13.56	62.56	±100
0	13.56	63.11	±100
10	13.56	63.23	±100
20	13.56	63.42	±100
30	13.56	63.19	±100
40	13.56	63.12	±100
50	13.56	63.23	±100
Frequency Stability under Voltage			
DC Voltage (V)	Test Frequency (MHz)	Deviation (ppm)	Limit (ppm)
102	13.56	63.22	±100
120	13.56	63.22	±100
138	13.56	63.23	±100

_____ The End _____