

TEST REPORT

Applicant: Hoperun mMax Digital Inc.
Address: 5151 California Ave., Suite 100, Irvine CA 92617, USA
Equipment Type: LD2
Model Name: LD2
Brand Name: mMax Digital
FCC ID: 2BFFBLD2
Test Standard: 47 CFR Part 15 Subpart B
ANSI C63.4-2014
Sample Arrival Date: Aug. 14, 2023
Test Date: Aug. 22, 2023 – Aug. 25, 2023
Date of Issue: Mar. 27, 2024

ISSUED BY:

Shenzhen BALUN Technology Co., Ltd.



Tested by: Zhang Guoxi

Checked by: Zhenxiang Liu

Approved by: Liao Jianming
(Technical Director)

Zhang Guoxi

Zhenxiang Liu

Zm Liao

Revision History

Version	Issue Date	Revisions
<u>Rev. 01</u>	<u>Sep. 27, 2023</u>	<u>Initial Issue</u>
<u>Rev. 02</u>	<u>Mar. 27, 2024</u>	<u>Update brand name, FCC ID number, applicant and manufacturer information.</u>

TABLE OF CONTENTS

1	GENERAL INFORMATION.....	4
1.1	Test Laboratory	4
1.2	Test Location	4
2	PRODUCT INFORMATION	5
2.1	Applicant Information	5
2.2	Manufacturer Information.....	5
2.3	General Description for Equipment under Test (EUT).....	5
2.4	Ancillary Equipment.....	5
2.5	Technical Information	6
3	SUMMARY OF TEST RESULTS	7
3.1	Test Standards	7
3.2	Verdict	7
3.3	Test Uncertainty	7
4	GENERAL TEST CONFIGURATIONS	8
4.1	Test Enclosure List.....	8
4.2	Test Configurations	8
4.3	Test Setups	9
5	TEST ITEMS	11
5.1	Emission Tests	11
ANNEX A	TEST RESULTS.....	16
A.1	Radiated Emission.....	16
A.2	Conducted Emission, AC Ports.....	29
ANNEX B	TEST SETUP PHOTOS	34

ANNEX C	EUT EXTERNAL PHOTOS.....	34
ANNEX D	EUT INTERNAL PHOTOS.....	34

1 GENERAL INFORMATION

1.1 Test Laboratory

Name	Shenzhen BALUN Technology Co., Ltd.
Address	Block B, 1/F, Baisha Science and Technology Park, Shahe Xi Road, Nanshan District, Shenzhen, Guangdong Province, P. R. China
Phone Number	+86 755 6685 0100

1.2 Test Location

Name	Shenzhen BALUN Technology Co., Ltd.
Location	☒ Block B, 1/F, Baisha Science and Technology Park, Shahe Xi Road, Nanshan District, Shenzhen, Guangdong Province, P. R. China
	☐ 1/F, Building B, Ganghongji High-tech Intelligent Industrial Park, No. 1008, Songbai Road, Yangguang Community, Xili Sub-district, Nanshan District, Shenzhen, Guangdong Province, P. R. China
Accreditation Certificate	The laboratory is a testing organization accredited by FCC as a accredited testing laboratory. The designation number is CN1196.

2 PRODUCT INFORMATION

2.1 Applicant Information

Applicant	Hoperun mMax Digital Inc.
Address	5151 California Ave., Suite 100, Irvine CA 92617, USA

2.2 Manufacturer Information

Manufacturer	Hoperun mMax Digital Inc.
Address	5151 California Ave., Suite 100, Irvine CA 92617, USA

2.3 General Description for Equipment under Test (EUT)

EUT Name	LD2
Model Name Under Test	LD2
Series Model Name	N/A
Description of Model name differentiation	N/A
Hardware Version	V01
Software Version	LTE_S0223_N_5507_0.002.00
Dimensions (Approx.)	N/A
Weight (Approx.)	N/A

2.4 Ancillary Equipment

Ancillary Equipment 1	Battery	
	Brand Name	N/A
	Model No.	178200178
	Serial No.	N/A
	Capacitance	2500mAh
	Rated Voltage	3.8Vdc
	Limited Voltage	4.35Vdc
	Manufacturer	Zhongshan Tianmao Battery Co., Ltd.
Ancillary Equipment 2	Adapter	
	Brand Name	KUNXING
	Model No.	TC387U-050100
	Serial No.	N/A
	Rated Input	100-240V~ 50/60Hz 0.25A
	Rated Output	5.0Vdc, 1.0A 5.3W
	Manufacturer	ShenZhenKunXingTechnologyCo., Ltd.

2.5 Technical Information

Network and Wireless connectivity	3G Network WCDMA/HSDPA/HSUPA Band 2/4/5 4G Network LTE FDD Band 2/4/5/12/13/66/71 Bluetooth (BR+EDR+BLE) 2.4G WIFI 802.11b, 802.11g, 802.11n(HT20/40) GPS, GLONASS
Classification of equipment	Class B
The highest internal frequency of EUT	N/A

3 SUMMARY OF TEST RESULTS

3.1 Test Standards

No.	Identity	Document Title
1	47 CFR Part 15 Subpart B	Unintentional Radiators
2	ANSI C63.4-2014	American National Standard for Methods of Measurement of Radio-Noise Emissions from Low-Voltage Electrical and Electronic Equipment in the Range of 9 kHz to 40 GHz

3.2 Verdict

No.	Description	FCC Rule	Test Verdict	Remark
1	Radiated Emission	15.109	Pass	--
2	Conducted Emission, AC Ports	15.107	Pass	--

3.3 Test Uncertainty

The following measurement uncertainty levels have been estimated for tests performed on the EUT as specified in CISPR 16-4-2. This uncertainty represents an expanded uncertainty expressed at approximately the 95% confidence level using a coverage factor of $k=2$.

Measurement	Value
Conducted emissions (9 kHz-30 MHz)	3.2 dB
Radiated emissions (30 MHz-1 GHz)-3m	4.8 dB
Radiated emissions (1 GHz-18 GHz)-3m	4.9 dB

4 GENERAL TEST CONFIGURATIONS

4.1 Test Enclosure List

Description	Manufacturer	Model	Serial No.	Length	Description	Use
Laptop	Lenovo	N/A	N/A	N/A	N/A	☒
SD Card	Sandisk	N/A	N/A	N/A	N/A	☒

4.2 Test Configurations

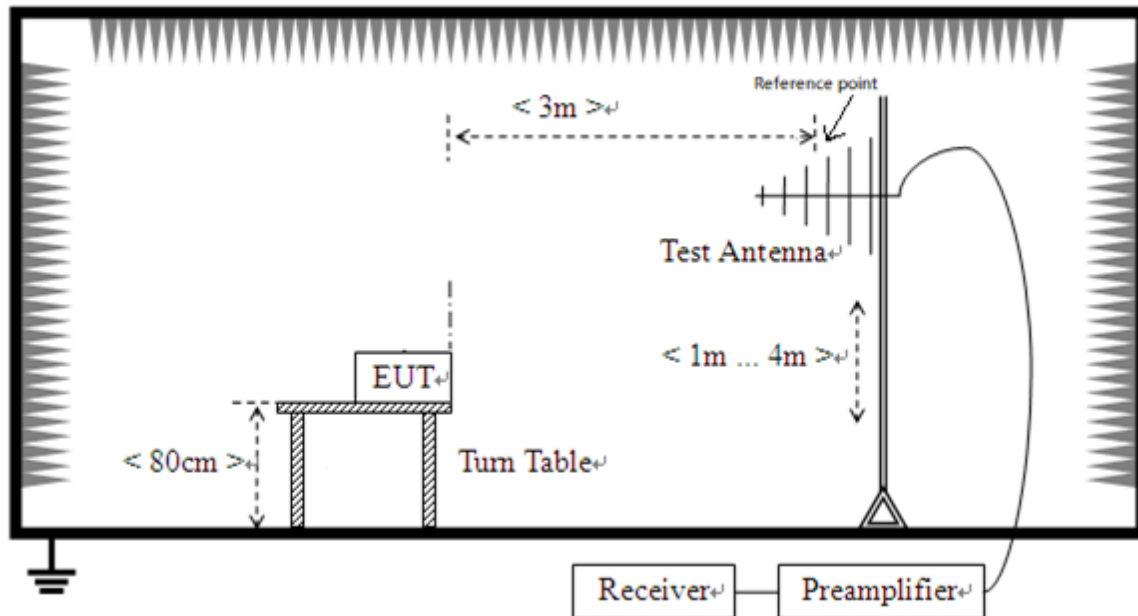
All test modes of EUT are listed in the table below.

Test Mode Configuration	Description
Mode 1	<u>The Camera Test Mode</u> EUT + Adapter + USB Cable + Battery + SD Card
Mode 2	<u>The Video Play Test Mode</u> EUT + Adapter + USB Cable + Battery + SD Card
Mode 3	<u>The USB Test Mode</u> EUT + USB Cable + Battery + Laptop + SD Card

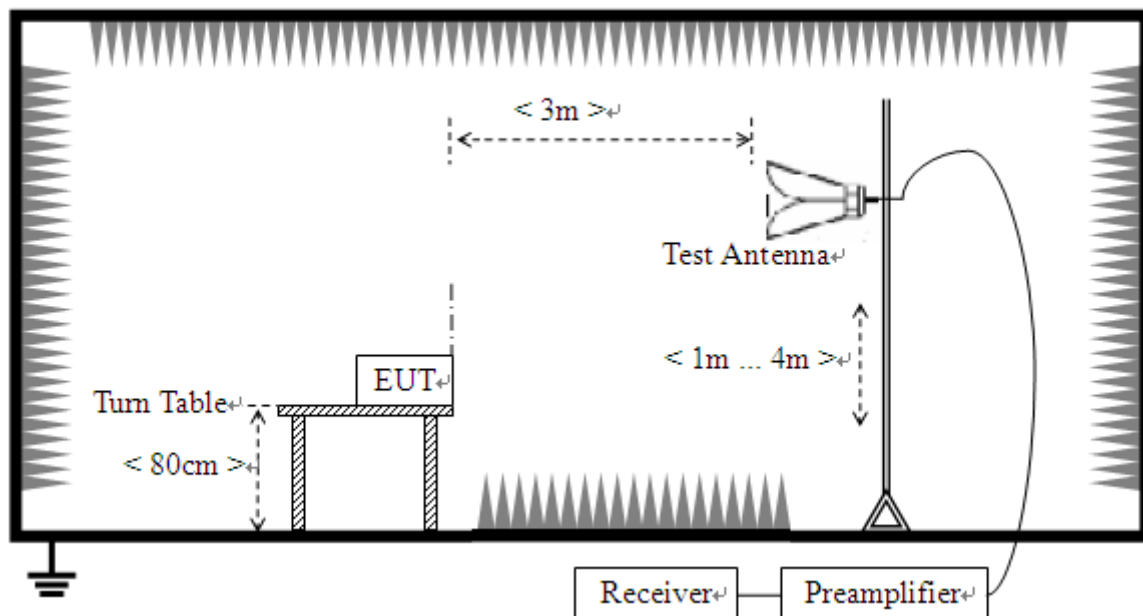
Test Case	Test Mode Configuration	Worst Mode
Radiated Emission	Mode 1~Mode 3	2
Conducted Emission, AC Ports	Mode 1~Mode 3	2
Note: Based on client request, all normal using modes of the normal function were tested, but only the worst test data of test mode is reported in this report.		

4.3 Test Setups

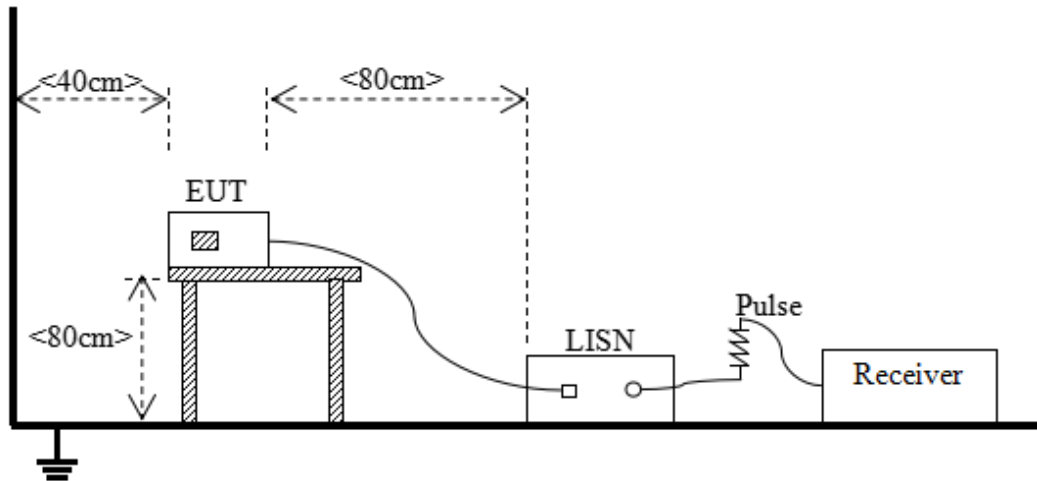
Test Setup 1



Radiated Emission (30 MHz-1 GHz)



Radiated Emission (above 1 GHz)

Test Setup 2

Conducted Emissions, AC Ports

5 TEST ITEMS

5.1 Emission Tests

5.1.1 Radiated Emission

5.1.1.1 Limit

Frequency range (MHz)	Class B (at 3 m)		Class A (at 3 m)
	Field Strength ($\mu\text{V/m}$)	Field Strength (dB $\mu\text{V/m}$)	Field Strength (dB $\mu\text{V/m}$)
30 - 88	100	40	49.5
88 - 216	150	43.5	54
216 - 960	200	46	56.9
Above 960	500	54	60

NOTE:

- 1) Field Strength (dB $\mu\text{V/m}$) = $20 \cdot \log [\text{Field Strength } (\mu\text{V/m})]$.
- 2) In the emission tables above, the tighter limit applies at the band edges.
- 3) The limits using ANSI C63.4.
- 4) For 30 MHz to 1000 MHz, the CISPR quasi-peak is employed.

For above 1000 MHz, according to the requirements of FCC 15.35, unless otherwise specified, the limit on peak radio frequency emissions is 20 dB above the maximum permitted average emission limit applicable to the equipment under test.

Frequency range (GHz)	Class B (at 3 m)			Class A (at 3 m)	
	Field Strength ($\mu\text{V/m}$)	Field Strength Average (dB $\mu\text{V/m}$)	Field Strength Peak (dB $\mu\text{V/m}$)	Field Strength Average (dB $\mu\text{V/m}$)	Field Strength Peak (dB $\mu\text{V/m}$)
1 - F_M	500	54	74	60	80

Note 1: The highest measurement frequency, F_M , in GHz, shall be determined as next Table.

Note 2: Average Class A limit at 3m L_{3m} is determined by the following conversion formula:

$$L_{3m} = L_{10m} + 20 \cdot \log(d_{10m}/d_{3m})$$

Where:

L_{3m} is Average Class A limit at 3m;

L_{10m} is Average Class A limit at 10m;

d_{10m} is Measurement distance in 10m;

d_{3m} is Measurement distance in 3m.

For this case: $L_{3m} = 49.5 + 20 \cdot \log(10/3) = 60$ (dB $\mu\text{V/m}$).

Highest internal frequency (F_X)	Highest measurement frequency (F_M)
$F_X \leq 108 \text{ MHz}$	1 GHz
$108 \text{ MHz} \leq F_X \leq 500 \text{ MHz}$	2 GHz
$500 \text{ MHz} \leq F_X \leq 1 \text{ GHz}$	5 GHz
$F_X \geq 1 \text{ GHz}$	$5 * F_X$ or 40 GHz, whichever is lower.
Note: F_X is Highest frequency generated or used in the device or on which the device operates or tunes.	

5.1.1.2 Test Setup

Refer to 4.3 section (test setup 1) for radiated emission test, the photo of test setup please refer to ANNEX B.

5.1.1.3 Test Procedure

All Radiated Emission tests were performed in X, Y, Z axis direction. And only the worst axis test condition was recorded in this test report.

An initial pre-scan was performed in the chamber using the EMI Receiver in peak detection mode. Quasi-peak measurements were conducted based on the peak sweep graph. The EUT was measured by Bi-Log antenna with 2 orthogonal polarities.

The measurement frequency range is from 30 MHz to the 5th harmonic of the maximum frequency of the EUT internal source. The Turn Table is actuated to turn from 0° to 360° , and both horizontal and vertical polarizations of the Test Antenna are used to find the maximum radiated power. Mid channels on all channel bandwidth verified. Only the worst RB size/offset presented.

Use the following spectrum analyzer settings:

Span = wide enough to fully capture the emission being measured

RBW = 1 MHz for $f \geq 1 \text{ GHz}$, 100 kHz for $f < 1 \text{ GHz}$

VBW $\geq$ RBW

Sweep = auto

Detector function = peak for $f < 1 \text{ GHz}$, peak & RMS Average for $f \geq 1 \text{ GHz}$

Trace = max hold

5.1.1.4 Test Result and Test Equipment List

Please refer to ANNEX A.1.

NOTE:

1. Results (dB μ V/m) = Reading (dB μ V/m) + Factor (dB/m)

The reading level is calculated by software which is not shown in the sheet

2. Factor (dB/m) = Antenna Factor (dB/m) + Cable Factor (dB) – Amplifier Gain (dB)

3. Over limit = Results – Limit.

5.1.2 Conducted Emission, AC Ports

5.1.2.1 Test Limit

Frequency range (MHz)	Class B	
	Quasi-peak (dB μ V)	Average (dB μ V)
0.15 - 0.50	66 to 56	56 to 46
0.50 - 5	56	46
5 - 30	60	50

NOTE:

- 1) The lower limit shall apply at the band edges.
- 2) The limit decreases linearly with the logarithm of the frequency in the range 0.15 - 0.50 MHz.

5.1.2.2 Test Setup

Refer to 4.3 section test (test setup 2) for conducted emission, the photo of test setup please refer to ANNEX B.

5.1.2.3 Test Procedure

The EUT is connected to the power mains through a LISN which provides 50 Ω /50 μ H of coupling impedance for the measuring instrument. The test frequency range is from 150 kHz to 30 MHz. The maximum conducted interference is searched using Peak (PK), Quasi-peak (QP) and Average (AV) detectors; the emission levels that are more than the AV and QP limits, and that have narrow margins from the AV and QP limits will be re-measured with AV and QP detectors. Tests for both L phase and N phase lines of the power mains connected to the EUT are performed.

Devices subject to Part 15 must be tested for all available U.S. voltages and frequencies (such as a nominal 120 VAC, 50/60 Hz and 240 VAC, 50/60 Hz) for which the device is capable of operation. A device rated for 50/60 Hz operation need not be tested at both frequencies provided the radiated and line conducted emissions are the same at both frequencies.

Use the following spectrum analyzer settings:

RBW = 9 kHz

VBW $\geq$ RBW

Sweep = 10ms

Detector function = peak & Average

Trace = max hold

5.1.2.4 Test Result and Test Equipment List

Please refer to ANNEX A.2.

NOTE:

1. Results (dBμV) = Reading (dBμV) + Factor (dB)

The reading level is calculated by software which is not shown in the sheet

2. Factor = Insertion loss + Cable loss

3. Over limit = Results – Limit.

ANNEX A TEST RESULTS

A.1 Radiated Emission

Note 1: The symbol of “--” in the table which means not application.

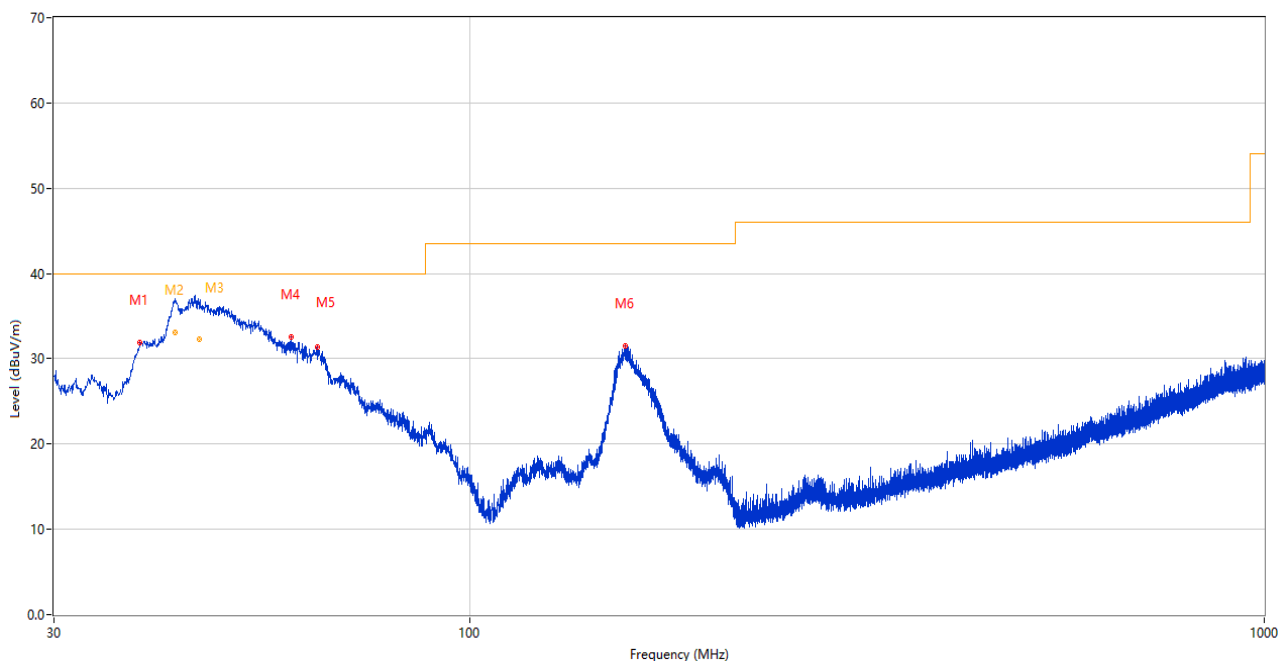
Note 2: For the test data above 1 GHz, according the ANSI C63.4-2014, where limits are specified for both average and peak (or quasi-peak) detector functions, if the peak (or quasi-peak) measured value complies with the average limit, it is unnecessary to perform an average measurement.

Note 3: The Radiated Emission is required to be investigated to the upper frequency of 5th harmonic of the highest internal frequency of EUT or 40 GHz, whichever is lower. The test results above 18GHz are only noise and are not recorded in the report.

Sample No.	S10	Temperature	23.9℃
Humidity	61%RH	Pressure	101kPa
Test Engineer	He Shichang	Test Date	2023.08.25

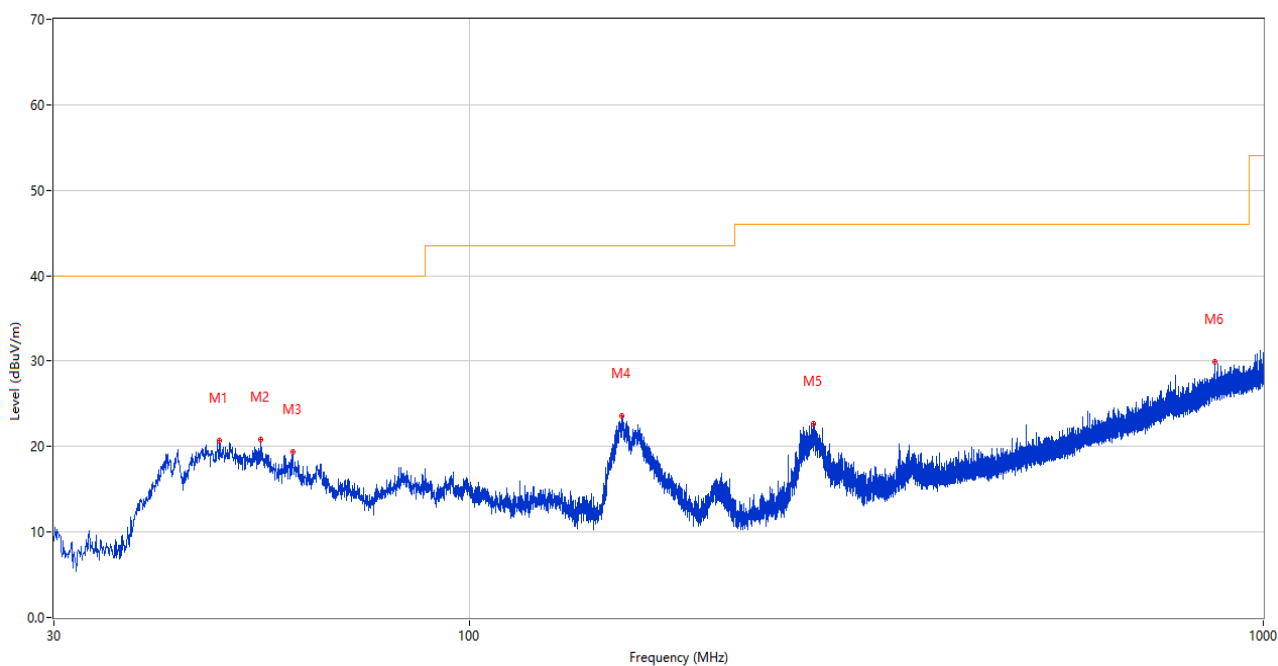
The Video Play Test Mode

1) Test Antenna Vertical, 30 MHz – 1 GHz



No.	Frequency (MHz)	Results (dBuV/m)	Factor (dB)	Limit (dBuV/m)	Margin (dB)	Detector	Table (Degree)	Height (cm)	Antenna	Verdict
1	38.487	31.93	-27.09	40.0	8.07	Peak	356.00	100	Vertical	Pass
2	42.647	36.24	-25.93	40.0	3.76	Peak	225.00	101	Vertical	N/A
2*	42.647*	33.09	-25.93	40.0	6.91	QP	225.00	101	Vertical	Pass
3	45.694	35.75	-25.52	40.0	4.25	Peak	236.00	100	Vertical	N/A
3*	45.694*	32.27	-25.52	40.0	7.73	QP	236.00	100	Vertical	Pass
4	59.585	32.62	-26.78	40.0	7.38	Peak	214.00	100	Vertical	Pass
5	64.386	31.38	-27.34	40.0	8.62	Peak	172.00	100	Vertical	Pass
6	157.216	31.56	-29.73	43.5	11.94	Peak	316.00	100	Vertical	Pass

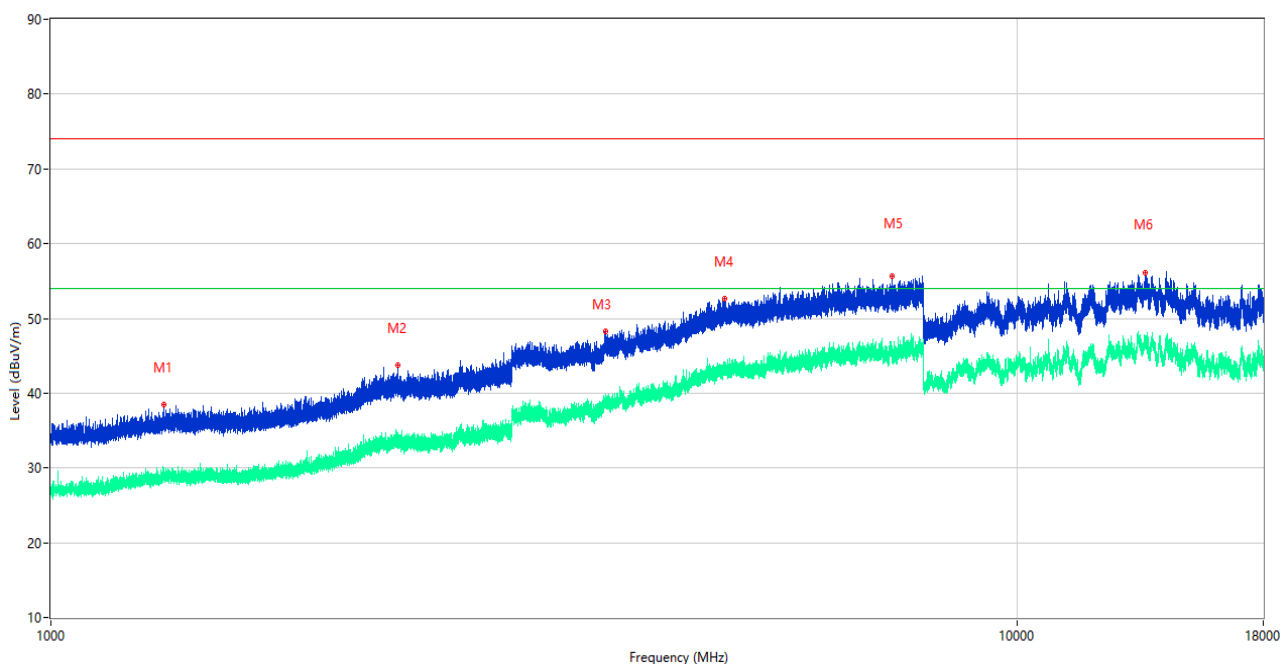
2) Test Antenna Horizontal, 30 MHz – 1 GHz



No.	Frequency (MHz)	Results (dBuV/m)	Factor (dB)	Limit (dBuV/m)	Margin (dB)	Detector	Table (Degree)	Height (cm)	Antenna	Verdict
1	48.478	20.72	-25.35	40.0	19.28	Peak	360.00	100	Horizontal	Pass
2	54.590	20.87	-25.63	40.0	19.13	Peak	313.00	100	Horizontal	Pass
3	60.022	19.44	-26.89	40.0	20.56	Peak	311.00	100	Horizontal	Pass
4	155.809	23.63	-29.80	43.5	19.87	Peak	132.00	200	Horizontal	Pass
5	271.094	22.73	-24.40	46.0	23.27	Peak	132.00	100	Horizontal	Pass
6	870.166	29.96	-10.42	46.0	16.04	Peak	174.00	100	Horizontal	Pass

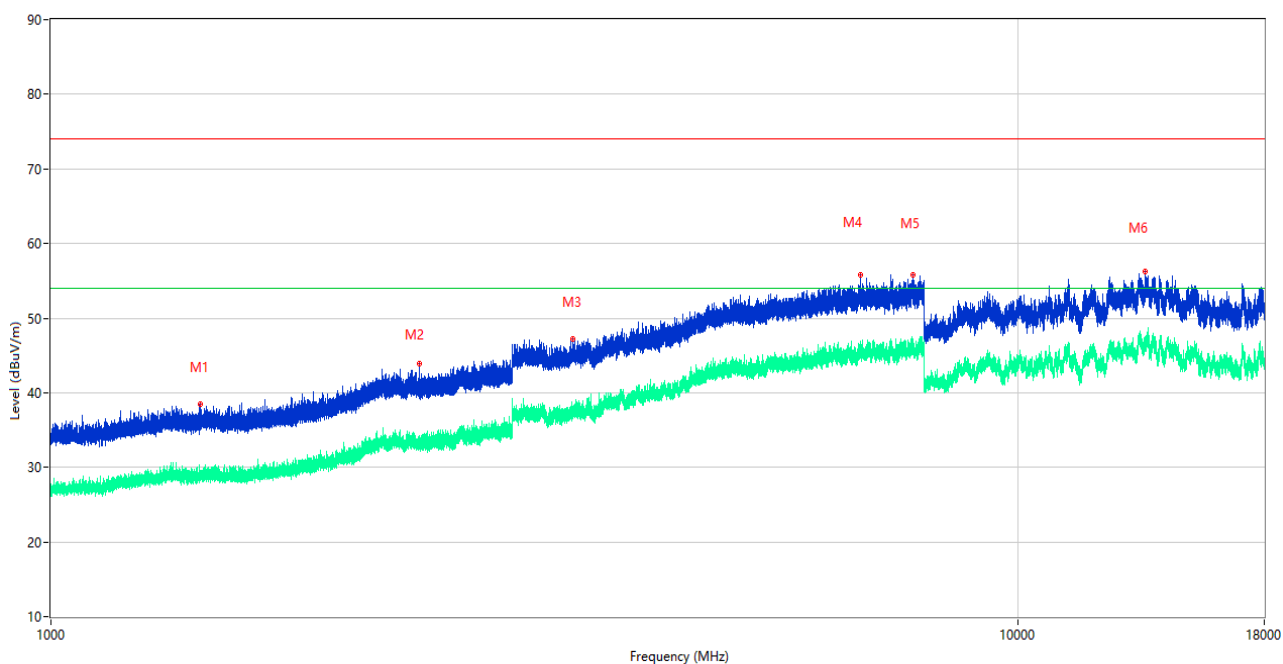
Equipment Information						
Equipment Name	Supplier	Model	Serial No.	Cal. Date	Cal. Due	Use
Frequency Below 1 GHz						
EMI Receiver	Keysight	N9038A	MY55330120	2022.09.09	2023.09.08	☒
Amplifier (30-1GHz)	COM-MV	ZT30-1000M	B2017119081	2022.12.07	2023.12.06	☒
Test Antenna- Bi-Log	SCHWARZB ECK	VULB 9168	9168-00867	2022.04.12	2025.04.11	☒
Anechoic Chamber(#2)	YiHeng	9m*6m*6m	142	2021.08.19	2024.08.18	☒
Description	Supplier	Name	Version	/		Use
Test Software	BALUN	BL410-E	V22.930	/		☒

3) Test Antenna Vertical, 1 GHz – 6 GHz



No.	Frequency (MHz)	Results (dBuV/m)	Factor (dB)	Limit (dBuV/m)	Margin (dB)	Detector	Table (Degree)	Height (cm)	Antenna	Verdict
1	1309.200	38.43	-16.34	74.0	35.57	Peak	21.00	100	Vertical	Pass
1**	1309.200	28.99	-16.34	54.0	25.01	AV	21.00	100	Vertical	Pass
2	2286.700	43.69	-11.60	74.0	30.31	Peak	43.00	100	Vertical	Pass
2**	2286.700	33.59	-11.60	54.0	20.41	AV	43.00	100	Vertical	Pass
3	3749.250	48.29	-2.80	74.0	25.71	Peak	160.00	100	Vertical	Pass
3**	3749.250	38.57	-2.80	54.0	15.43	AV	160.00	100	Vertical	Pass
4	4981.500	52.63	0.87	74.0	21.37	Peak	21.00	100	Vertical	Pass
4**	4981.500	43.21	0.87	54.0	10.79	AV	21.00	100	Vertical	Pass
5	7425.500	55.60	2.83	74.0	18.40	Peak	49.00	100	Vertical	Pass
5**	7425.500	46.32	2.83	54.0	7.68	AV	49.00	100	Vertical	Pass
6	13598.000	56.14	4.71	74.0	17.86	Peak	10.00	100	Vertical	Pass
6**	13598.000	46.79	4.71	54.0	7.21	AV	10.00	100	Vertical	Pass

4) Test Antenna Horizontal, 1 GHz – 6 GHz



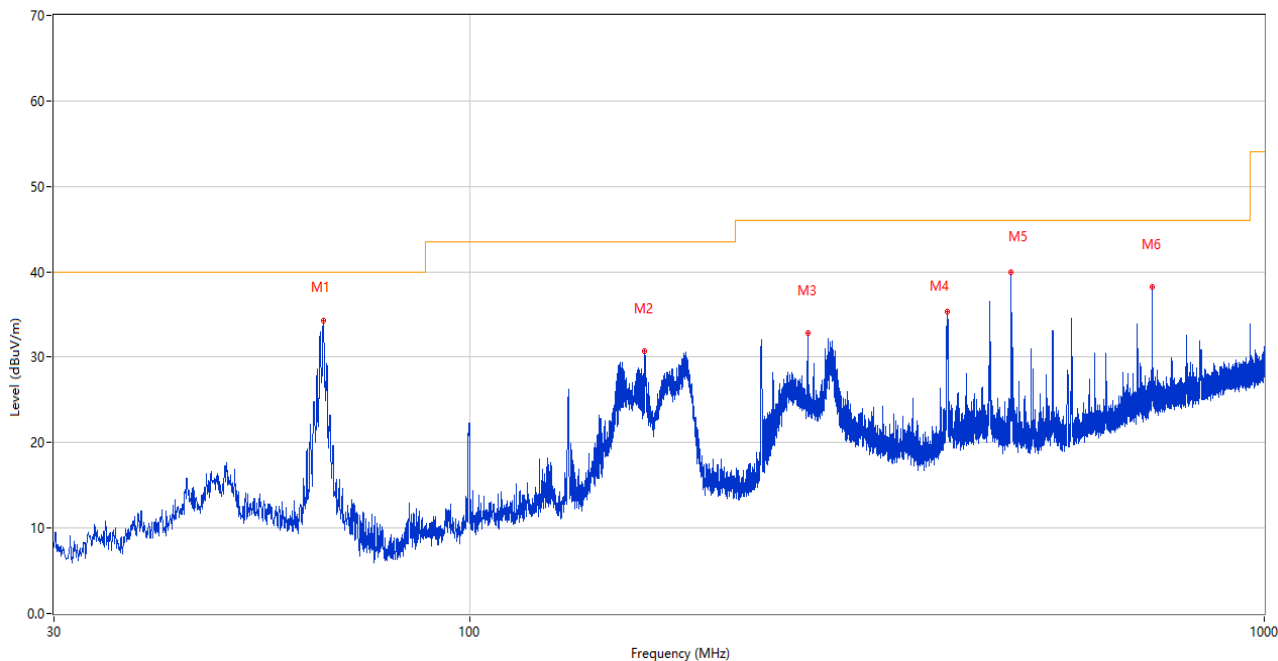
No.	Frequency (MHz)	Results (dBuV/m)	Factor (dB)	Limit (dBuV/m)	Margin (dB)	Detector	Table (Degree)	Height (cm)	Antenna	Verdict
1	1428.400	38.49	-16.51	74.0	35.51	Peak	70.00	100	Horizontal	Pass
1**	1428.400	28.66	-16.51	54.0	25.34	AV	70.00	100	Horizontal	Pass
2	2407.800	43.86	-12.20	74.0	30.14	Peak	309.00	100	Horizontal	Pass
2**	2407.800	32.59	-12.20	54.0	21.41	AV	309.00	100	Horizontal	Pass
3	3470.750	47.23	-4.93	74.0	26.77	Peak	257.00	100	Horizontal	Pass
3**	3470.750	38.17	-4.93	54.0	15.83	AV	257.00	100	Horizontal	Pass
4	6885.250	55.86	1.64	74.0	18.14	Peak	321.00	100	Horizontal	Pass
4**	6885.250	45.12	1.64	54.0	8.88	AV	321.00	100	Horizontal	Pass
5	7787.500	55.80	3.17	74.0	18.20	Peak	229.00	100	Horizontal	Pass
5**	7787.500	46.71	3.17	54.0	7.29	AV	229.00	100	Horizontal	Pass
6	13569.500	56.25	4.73	74.0	17.75	Peak	55.00	100	Horizontal	Pass
6**	13569.500	46.93	4.73	54.0	7.07	AV	55.00	100	Horizontal	Pass

Equipment Information						
Equipment Name	Supplier	Model	Serial No.	Cal. Date	Cal. Due	Use
Frequency Above 1 GHz						
EMI Receiver	Keysight	N9038A	MY55330120	2022.09.09	2023.09.08	☒
Amplifier (1-12GHz)	Advanced Microwave	WLA652A	1740103	2022.12.07	2023.12.06	☒
Amplifier (0.8-21GHz)	Mini-Circuits	ZVA-213-S+	225321316	2022.12.07	2023.12.06	☒
Test Antenna- Horn	SCHWARZB ECK	BBHA 9120D	01917	2022.06.09	2025.06.08	☒
Anechoic Chamber(#2)	YiHeng	9m*6m*6m	142	2021.08.19	2024.08.18	☒
Description	Supplier	Name	Version	/		Use
Test Software	BALUN	BL410-E	V22.930	/		☒

Sample No.	S10	Temperature	23.9℃
Humidity	61%RH	Pressure	101kPa
Test Engineer	He Shichang	Test Date	2023.08.25

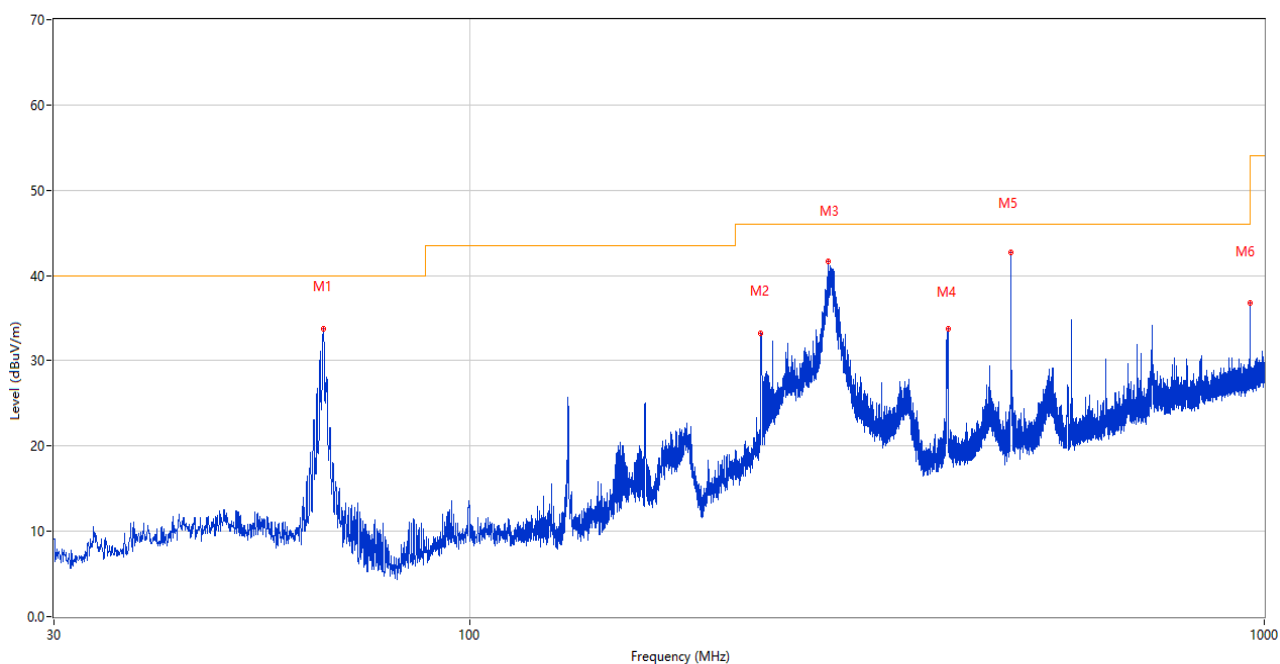
The USB Test Mode

5) Test Antenna Vertical, 30 MHz – 1 GHz



No.	Frequency (MHz)	Results (dBuV/m)	Factor (dB)	Limit (dBuV/m)	Margin (dB)	Detector	Table (Degree)	Height (cm)	Antenna	Verdict
1	65.405	34.31	-27.69	40.0	5.69	Peak	96.00	100	Vertical	Pass
2	166.188	30.75	-29.29	43.5	12.75	Peak	163.00	100	Vertical	Pass
3	266.292	32.78	-24.51	46.0	13.22	Peak	117.00	100	Vertical	Pass
4	399.328	35.33	-20.97	46.0	10.67	Peak	95.00	100	Vertical	Pass
5	480.031	39.92	-19.19	46.0	6.08	Peak	86.00	100	Vertical	Pass
6	722.774	38.29	-13.49	46.0	7.71	Peak	129.00	200	Vertical	Pass

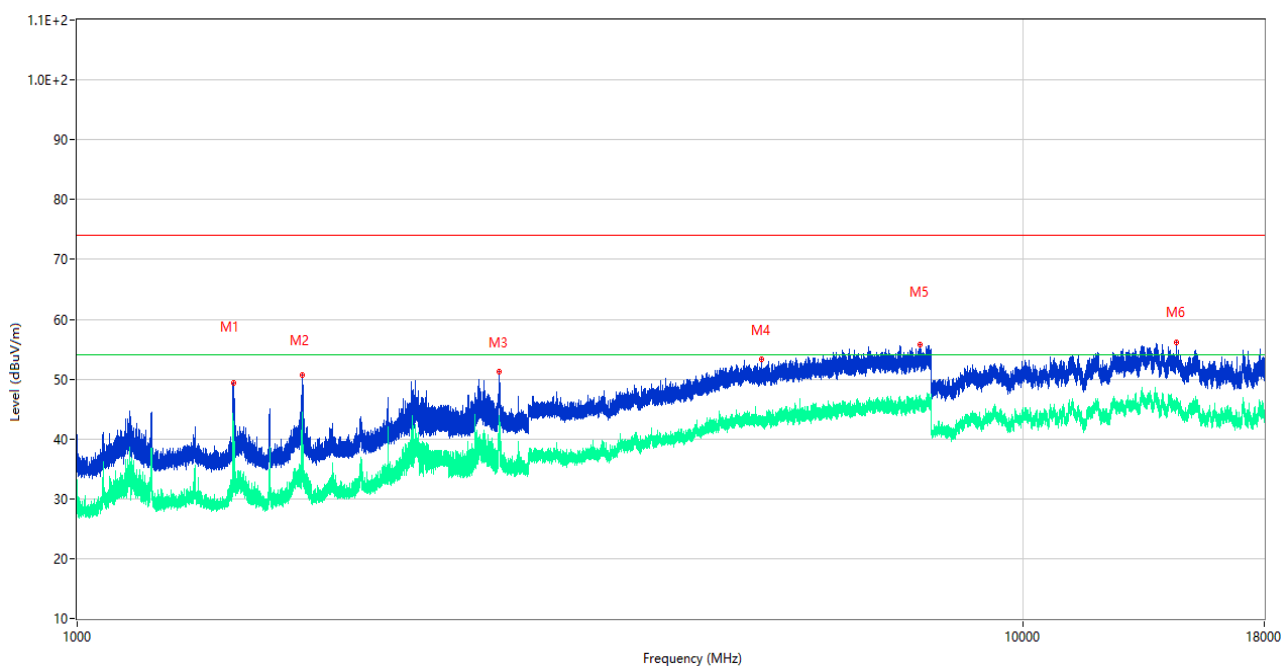
6) Test Antenna Horizontal, 30 MHz – 1 GHz



No.	Frequency (MHz)	Results (dBuV/m)	Factor (dB)	Limit (dBuV/m)	Margin (dB)	Detector	Table (Degree)	Height (cm)	Antenna	Verdict
1	65.405	33.28	-27.69	40.0	6.72	Peak	147.00	200	Horizontal	Pass
2	232.536	33.28	-25.43	46.0	12.72	Peak	68.00	100	Horizontal	Pass
3	282.539	41.69	-24.11	46.0	4.31	Peak	153.00	100	Horizontal	Pass
4	399.813	33.72	-20.95	46.0	12.28	Peak	203.00	100	Horizontal	Pass
5	479.983	42.72	-19.19	46.0	3.28	Peak	245.00	100	Horizontal	Pass
6	959.987	36.75	-9.29	46.0	9.25	Peak	231.00	100	Horizontal	Pass

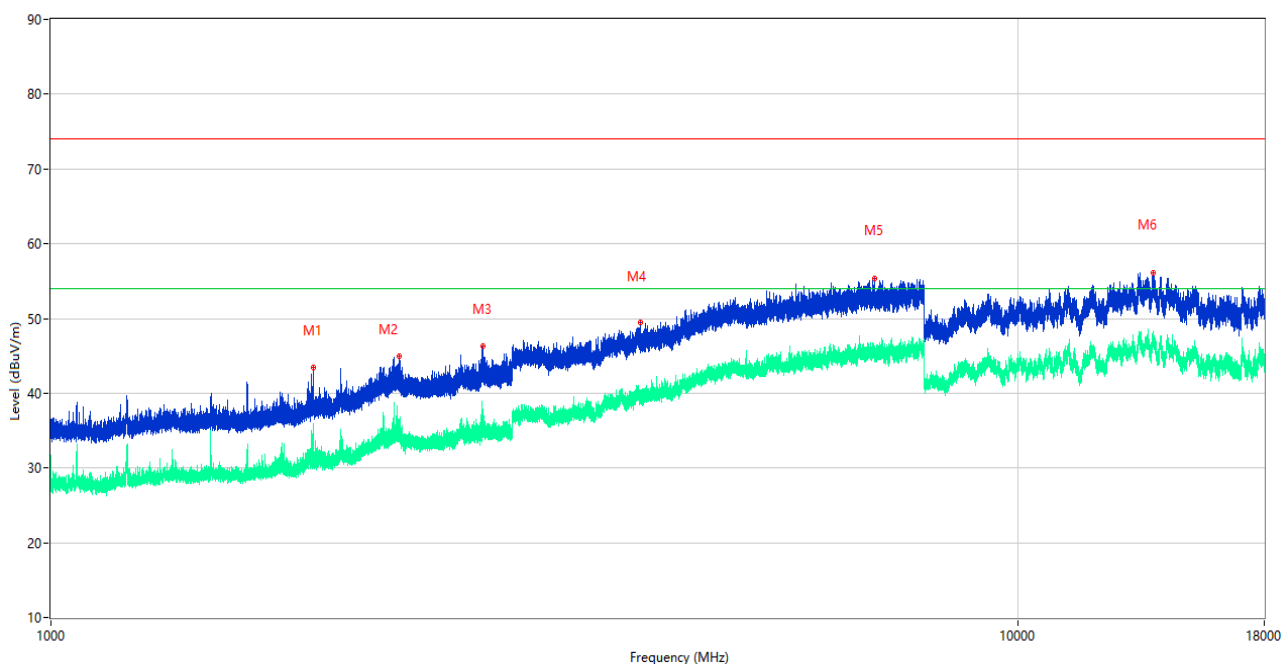
Equipment Information						
Equipment Name	Supplier	Model	Serial No.	Cal. Date	Cal. Due	Use
Frequency Below 1 GHz						
EMI Receiver	Keysight	N9038A	MY55330120	2022.09.09	2023.09.08	☒
Amplifier (30-1GHz)	COM-MV	ZT30-1000M	B2017119081	2022.12.07	2023.12.06	☒
Test Antenna- Bi-Log	SCHWARZB ECK	VULB 9168	9168-00867	2022.04.12	2025.04.11	☒
Anechoic Chamber(#2)	YiHeng	9m*6m*6m	142	2021.08.19	2024.08.18	☒
Description	Supplier	Name	Version	/		Use
Test Software	BALUN	BL410-E	V22.930	/		☒

7) Test Antenna Vertical, 1 GHz – 6 GHz



No.	Frequency (MHz)	Results (dBuV/m)	Factor (dB)	Limit (dBuV/m)	Margin (dB)	Detector	Table (Degree)	Height (cm)	Antenna	Verdict
1	1461.900	49.35	-16.50	74.0	24.65	Peak	225.00	100	Vertical	Pass
1**	1461.900	31.48	-16.50	54.0	22.52	AV	225.00	100	Vertical	Pass
2	1730.700	50.65	-16.47	74.0	23.35	Peak	202.00	100	Vertical	Pass
2**	1730.700	40.07	-16.47	54.0	13.93	AV	202.00	100	Vertical	Pass
3	2796.100	51.26	-8.91	74.0	22.74	Peak	158.00	100	Vertical	Pass
3**	2796.100	42.05	-8.91	54.0	11.95	AV	158.00	100	Vertical	Pass
4	5288.500	53.30	0.60	74.0	20.70	Peak	320.00	100	Vertical	Pass
4**	5288.500	42.90	0.60	54.0	11.10	AV	320.00	100	Vertical	Pass
5	7784.750	55.80	3.20	74.0	18.20	Peak	200.00	100	Vertical	Pass
5**	7784.750	47.15	3.20	54.0	6.85	AV	200.00	100	Vertical	Pass
6	14532.000	56.14	4.63	74.0	17.86	Peak	176.00	100	Vertical	Pass
6**	14532.000	45.74	4.63	54.0	8.26	AV	176.00	100	Vertical	Pass

8) Test Antenna Horizontal, 1 GHz – 6 GHz



No.	Frequency (MHz)	Results (dBuV/m)	Factor (dB)	Limit (dBuV/m)	Margin (dB)	Detector	Table (Degree)	Height (cm)	Antenna	Verdict
1	1866.600	43.40	-15.53	74.0	30.60	Peak	180.00	100	Horizontal	Pass
1**	1866.600	31.35	-15.53	54.0	22.65	AV	180.00	100	Horizontal	Pass
2	2292.700	44.91	-11.98	74.0	29.09	Peak	339.00	100	Horizontal	Pass
2**	2292.700	34.02	-11.98	54.0	19.98	AV	339.00	100	Horizontal	Pass
3	2797.200	46.35	-8.78	74.0	27.65	Peak	273.00	100	Horizontal	Pass
3**	2797.200	35.83	-8.78	54.0	18.17	AV	273.00	100	Horizontal	Pass
4	4070.000	49.46	-2.49	74.0	24.54	Peak	353.00	100	Horizontal	Pass
4**	4070.000	39.87	-2.49	54.0	14.13	AV	353.00	100	Horizontal	Pass
5	7118.000	55.30	1.62	74.0	18.70	Peak	61.00	100	Horizontal	Pass
5**	7118.000	44.54	1.62	54.0	9.46	AV	61.00	100	Horizontal	Pass
6	13805.500	56.07	5.74	74.0	17.93	Peak	333.00	100	Horizontal	Pass
6**	13805.500	48.20	5.74	54.0	5.80	AV	333.00	100	Horizontal	Pass

Equipment Information						
Equipment Name	Supplier	Model	Serial No.	Cal. Date	Cal. Due	Use
Frequency Above 1 GHz						
EMI Receiver	Keysight	N9038A	MY55330120	2022.09.09	2023.09.08	☒
Amplifier (1-12GHz)	Advanced Microwave	WLA652A	1740103	2022.12.07	2023.12.06	☒
Amplifier (0.8-21GHz)	Mini-Circuits	ZVA-213-S+	225321316	2022.12.07	2023.12.06	☒
Test Antenna- Horn	SCHWARZB ECK	BBHA 9120D	01917	2022.06.09	2025.06.08	☒
Anechoic Chamber(#2)	YiHeng	9m*6m*6m	142	2021.08.19	2024.08.18	☒
Description	Supplier	Name	Version	/		Use
Test Software	BALUN	BL410-E	V22.930	/		☒

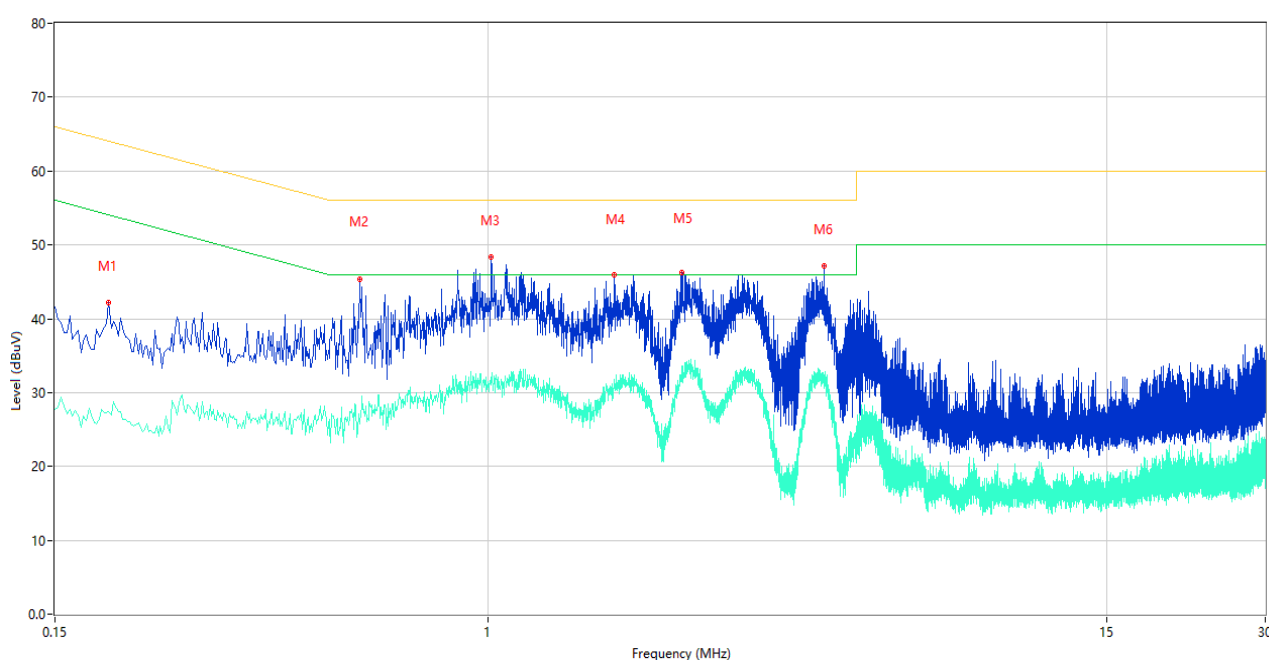
A.2 Conducted Emission, AC Ports

Note: Devices subject to Part 15 must be tested for all available U.S. voltages and frequencies (such as a nominal 120 VAC, 50/60 Hz and 240 VAC, 50/60 Hz) for which the device is capable of operation. So, The configuration 120 VAC, 60 Hz and 240 VAC, 50 Hz were tested respectively, but only the worst configuration (120 VAC, 60 Hz) shown here.

Sample No.	S10	Temperature	23.5℃
Humidity	55%RH	Pressure	101kPa
Test Engineer	Yang Yang	Test Date	2023.08.24

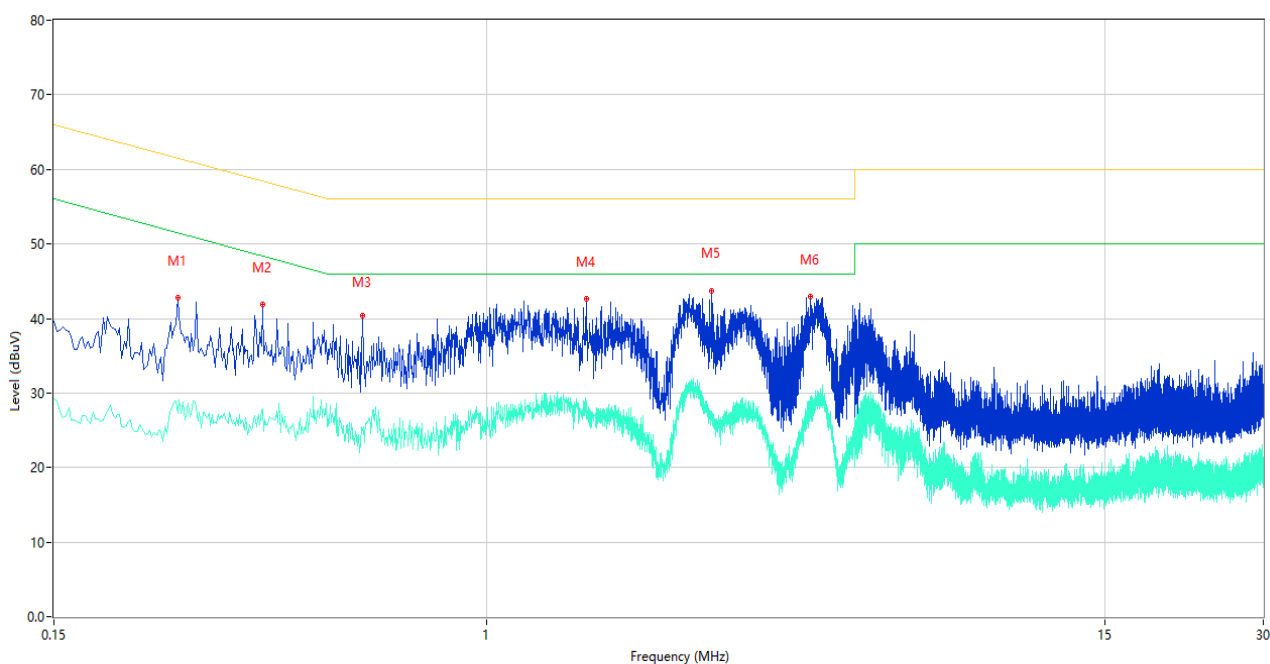
The Video Play Test Mode

1) AC Ports - L Phase



No.	Frequency (MHz)	Results (dBuV)	Factor (dB)	Limit (dBuV)	Margin (dB)	Detector	Line	Verdict
1	0.190	42.11	9.79	64.04	21.93	Peak	L	Pass
1**	0.190	27.35	9.79	54.04	26.69	AV	L	Pass
2	0.570	45.30	10.28	56.00	10.70	Peak	L	Pass
2**	0.570	25.69	10.28	46.00	20.31	AV	L	Pass
3	1.014	48.38	9.97	56.00	7.62	Peak	L	Pass
3**	1.014	31.64	9.97	46.00	14.36	AV	L	Pass
4	1.738	45.90	10.21	56.00	10.10	Peak	L	Pass
4**	1.738	31.38	10.21	46.00	14.62	AV	L	Pass
5	2.336	46.28	10.22	56.00	9.72	Peak	L	Pass
5**	2.336	33.67	10.22	46.00	12.33	AV	L	Pass
6	4.344	47.16	10.46	56.00	8.84	Peak	L	Pass
6**	4.344	32.29	10.46	46.00	13.71	AV	L	Pass

2) AC Ports - N Phase



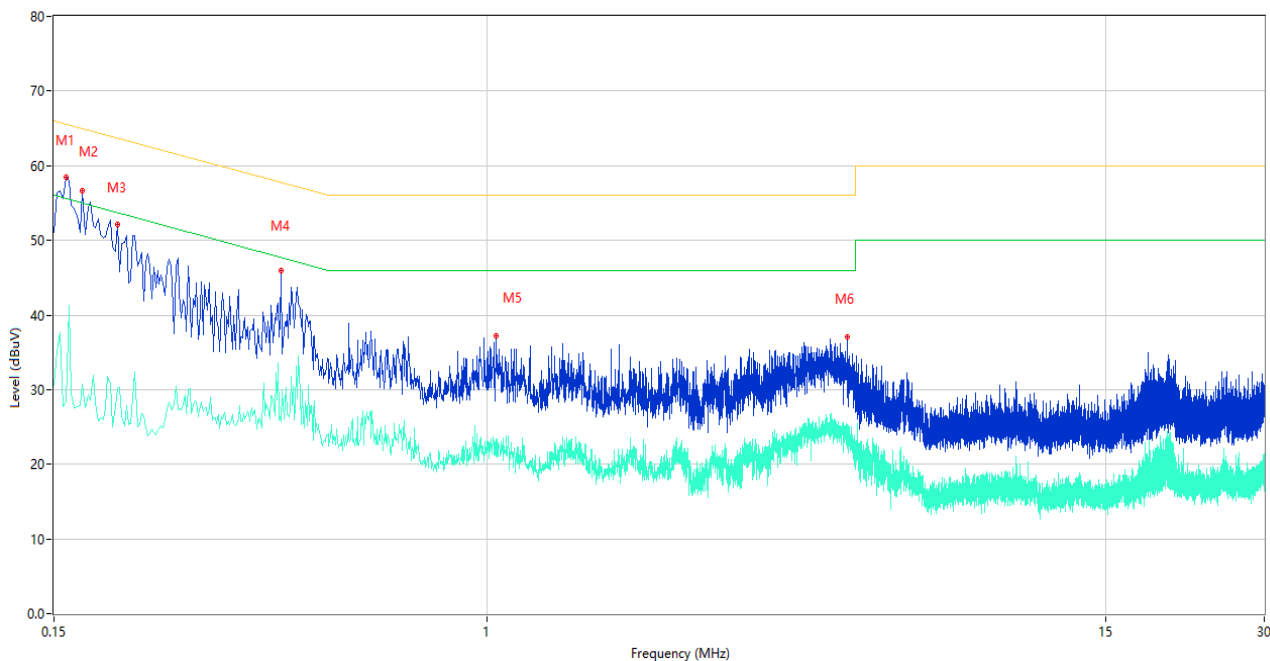
No.	Frequency (MHz)	Results (dBuV)	Factor (dB)	Limit (dBuV)	Margin (dB)	Detector	Line	Verdict
1	0.258	42.77	9.79	61.50	18.73	Peak	N	Pass
1**	0.258	27.29	9.79	51.50	24.21	AV	N	Pass
2	0.374	41.82	10.03	58.41	16.59	Peak	N	Pass
2**	0.374	27.86	10.03	48.41	20.55	AV	N	Pass
3	0.580	40.44	10.32	56.00	15.56	Peak	N	Pass
3**	0.580	24.95	10.32	46.00	21.05	AV	N	Pass
4	1.550	42.58	10.16	56.00	13.42	Peak	N	Pass
4**	1.550	26.58	10.16	46.00	19.42	AV	N	Pass
5	2.676	43.76	10.14	56.00	12.24	Peak	N	Pass
5**	2.676	26.98	10.14	46.00	19.02	AV	N	Pass
6	4.132	42.87	10.40	56.00	13.13	Peak	N	Pass
6**	4.132	29.53	10.40	46.00	16.47	AV	N	Pass

Equipment Information						
Equipment Name	Supplier	Model	Serial No.	Cal. Date	Cal. Due	Use
EMI Receiver	KEYSIGHT	N9010B	MY57110309	2022.09.09	2023.09.08	☒
LISN	SCHWARZBECK	NSLK 8127	8127-687	2023.05.16	2024.05.15	☒
Shielded Room	YiHeng Electronic Co., Ltd	3.5m*3.1m*2.8m	112	2022.02.19	2025.02.18	☒
Description	Supplier	Name	Version	/		Use
Test Software	BALUN	BL410-E	V22.930	/		☒

Sample No.	S10	Temperature	23.5℃
Humidity	55%RH	Pressure	101kPa
Test Engineer	Yang Yang	Test Date	2023.08.24

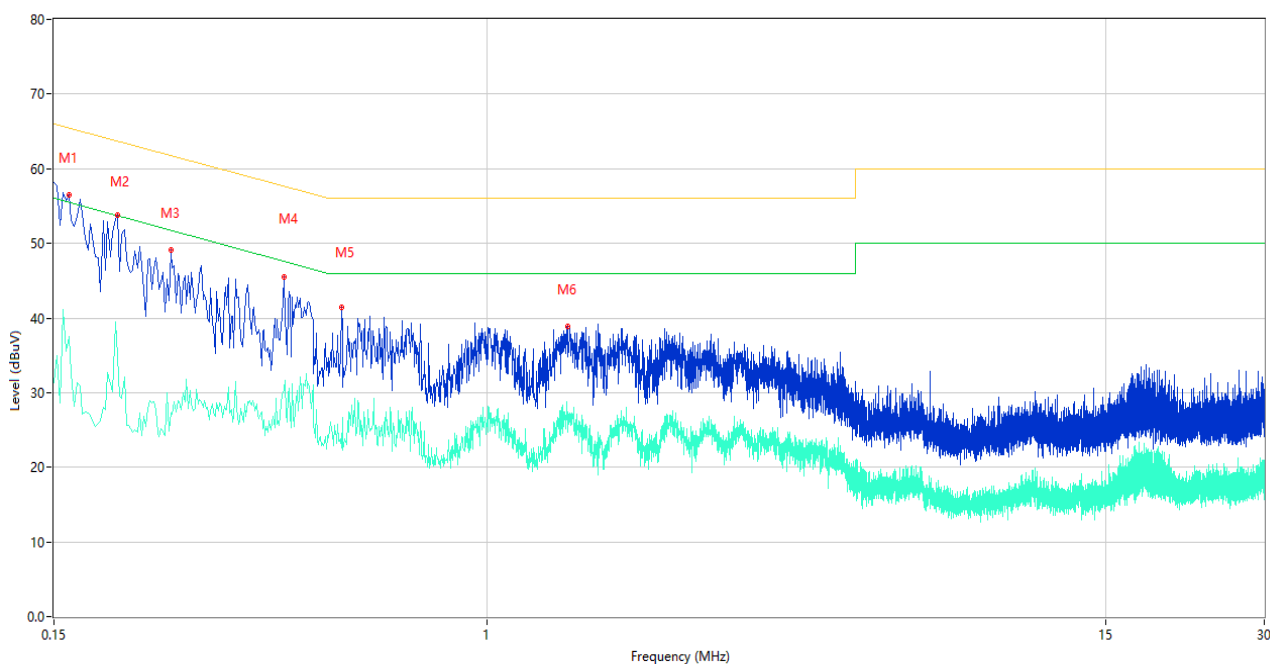
The USB Test Mode

1) AC Ports - L Phase



No.	Frequency (MHz)	Results (dBuV)	Factor (dB)	Limit (dBuV)	Margin (dB)	Detector	Line	Verdict
1	0.158	58.45	9.83	65.57	7.12	Peak	L	Pass
1**	0.158	28.39	9.83	55.57	27.18	AV	L	Pass
2	0.170	56.69	9.82	64.96	8.27	Peak	L	Pass
2**	0.170	30.76	9.82	54.96	24.20	AV	L	Pass
3	0.198	52.10	9.78	63.69	11.59	Peak	L	Pass
3**	0.198	30.09	9.78	53.69	23.60	AV	L	Pass
4	0.406	45.99	10.37	57.73	11.74	Peak	L	Pass
4**	0.406	25.84	10.37	47.73	21.89	AV	L	Pass
5	1.038	37.26	9.87	56.00	18.74	Peak	L	Pass
5**	1.038	23.37	9.87	46.00	22.63	AV	L	Pass
6	4.834	37.00	10.21	56.00	19.00	Peak	L	Pass
6**	4.834	24.10	10.21	46.00	21.90	AV	L	Pass

2) AC Ports - N Phase



No.	Frequency (MHz)	Results (dBuV)	Factor (dB)	Limit (dBuV)	Margin (dB)	Detector	Line	Verdict
1	0.160	56.50	9.83	65.46	8.96	Peak	N	Pass
1**	0.160	37.51	9.83	55.46	17.95	AV	N	Pass
2	0.198	53.79	9.78	63.69	9.90	Peak	N	Pass
2**	0.198	34.93	9.78	53.69	18.76	AV	N	Pass
3	0.250	49.05	9.79	61.76	12.71	Peak	N	Pass
3**	0.250	27.32	9.79	51.76	24.44	AV	N	Pass
4	0.410	45.53	10.37	57.65	12.12	Peak	N	Pass
4**	0.410	30.42	10.37	47.65	17.23	AV	N	Pass
5	0.528	41.46	10.14	56.00	14.54	Peak	N	Pass
5**	0.528	22.56	10.14	46.00	23.44	AV	N	Pass
6	1.420	38.83	10.41	56.00	17.17	Peak	N	Pass
6**	1.420	26.18	10.41	46.00	19.82	AV	N	Pass

ANNEX B TEST SETUP PHOTOS

Please refer the document “BL-SZ2380525-AE.PDF”.

ANNEX C EUT EXTERNAL PHOTOS

Please refer the document “BL-SZ2380525-AW.PDF”.

ANNEX D EUT INTERNAL PHOTOS

Please refer the document “BL-SZ2380525-AI.PDF”.

Statement

1. The laboratory guarantees the scientificity, accuracy and impartiality of the test, and is responsible for all the information in the report, except the information provided by the customer. The customer is responsible for the impact of the information provided on the validity of the results.
2. The report without China inspection body and laboratory Mandatory Approval (CMA) mark has no effect of proving to the society.
3. For the report with CNAS mark or A2LA mark, the items marked with "☆" are not within the accredited scope.
4. This report is invalid if it is altered, without the signature of the testing and approval personnel, or without the "inspection and testing dedicated stamp" or test report stamp.
5. The test data and results are only valid for the tested samples provided by the customer.
6. This report shall not be partially reproduced without the written permission of the laboratory.
7. Any objection shall be raised to the laboratory within 30 days after receiving the report.

--END OF REPORT--