

TEST REPORT

Applicant: vivo Mobile Communication Co., Ltd.
Address: No.1, vivo Road, Chang'an, Dongguan, Guangdong, China
Equipment Type: Mobile Phone
Model Name: V2441
Brand Name: vivo
FCC ID: 2AUCY-V2441
Test Standard: 47 CFR Part 15 Subpart B
ANSI C63.4-2014
Sample Arrival Date: Jan. 07, 2025
Test Date: Jan. 08, 2025 - Jan. 09, 2025
Date of Issue: Feb. 11, 2025

ISSUED BY:

Shenzhen BALUN Technology Co., Ltd.

Tested by: Qiu Yongjing

Checked by: Liu Zhenxiang

Approved by: Tolan Tu
(Testing Director)

Qiu Yongjing

Liu Zhenxiang

Tolan Tu

Revision History

Version	Issue Date	Revisions
<u>Rev. 01</u>	<u>Feb. 11, 2025</u>	<u>Initial Issue</u>

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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	vivo Mobile Communication Co., Ltd.
Address	No.1, vivo Road, Chang'an, Dongguan, Guangdong, China

2.2 Manufacturer Information

Manufacturer	vivo Mobile Communication Co., Ltd.
Address	No.1, vivo Road, Chang'an, Dongguan, Guangdong, China

2.3 General Description for Equipment under Test (EUT)

EUT Name	Mobile Phone
Model Name Under Test	V2441
Series Model Name	N/A
Description of Model name differentiation	N/A
Hardware Version	MP_0.1
Software Version	N/A
Dimensions (Approx.)	163.96*75.3*8.495mm
Weight (Approx.)	193g

2.4 Ancillary Equipment

Ancillary Equipment 1	Battery	
	Brand Name	N/A
	Model No.	BA93
	Serial No.	N/A
	Capacity	Minimal Capacity:6380mAh Typical capacity: 6500mAh
	Rated Voltage	3.91V
	Limit Charge Voltage	4.1V
	Manufacturer	Dongguan NVT Technology CO.,LTD.
Ancillary Equipment 2	Adapter	
	Brand Name	N/A
	Model No.	V9082L0A1-US
	Serial No.	N/A
	Rated Input	100-240V~, 50/60Hz, 2.5A
	Rated Output	DC5V/3A-9V/2A-11V/8.2A
	Manufacturer	Huizhuo Golden Lake Industrial Co.,Ltd
Ancillary Equipment 3	USB Cable	
	Length (Approx.)	1.0m

2.5 Technical Information

Network and Wireless connectivity	2G Network GSM/GPRS/EDGE 850/1900 3G Network WCDMA/HSDPA/HSUPA Band 2/4/5 4G Network LTE FDD Band 2/4/5/7/13/18/19/26/66 LTE TDD Band 38/41 Bluetooth (BR+EDR+BLE) WIFI 802.11b, 802.11g, WIFI 802.11a, 802.11n(HT20/40) and 802.11ac(VHT20/40/80) GPS, GLONASS, BDS, Galileo, QZSS, NFC
Classification of equipment	Class B
The highest internal frequency of EUT	5850 MHz

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)-966#2	4.4 dB
Radiated emissions (1 GHz-18 GHz)-966#2	5.0 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	☒
Data connector	HBR	type-c to USB 3.0	N/A	N/A	N/A	☒
USB disk	Sandisk	CZ73-32G	N/A	N/A	32G	☒
TYPE-C Earphone	OPPO	MH156	N/A	1.12m	N/A	☒

4.2 Test Configurations

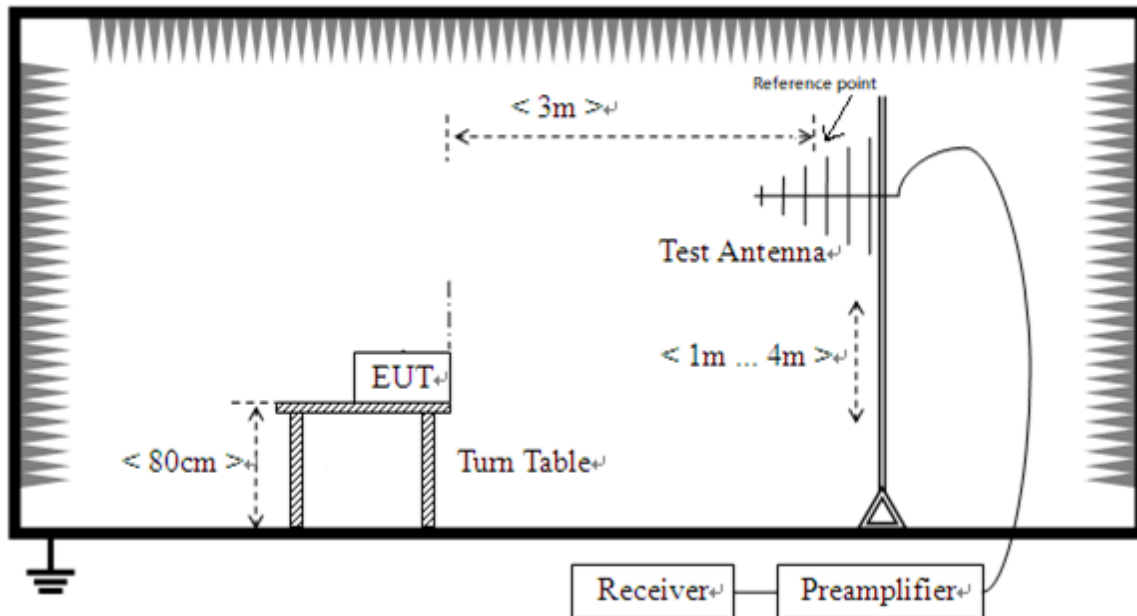
All test modes of EUT are listed in the table below.

Test Mode Configuration	Description
Mode 1	<u>The Only Charing Test Mode</u> EUT + Adapter + USB Cable + Battery
Mode 2	<u>The Rear Camera Test Mode</u> EUT + Adapter + USB Cable + Battery
Mode 3	<u>The Front Camera Test Mode</u> EUT + Adapter + USB Cable + Battery
Mode 4	<u>The Video Play Test Mode</u> EUT + Adapter + USB Cable + Battery
Mode 5	<u>The USB Test Mode</u> EUT + USB Cable + Battery + Laptop
Mode 6	<u>The OTG Test Mode</u> EUT + Battery + Data connector + USB disk
Mode 7	<u>The Type-C Headset Test Mode</u> EUT + Type-C Headset + Battery

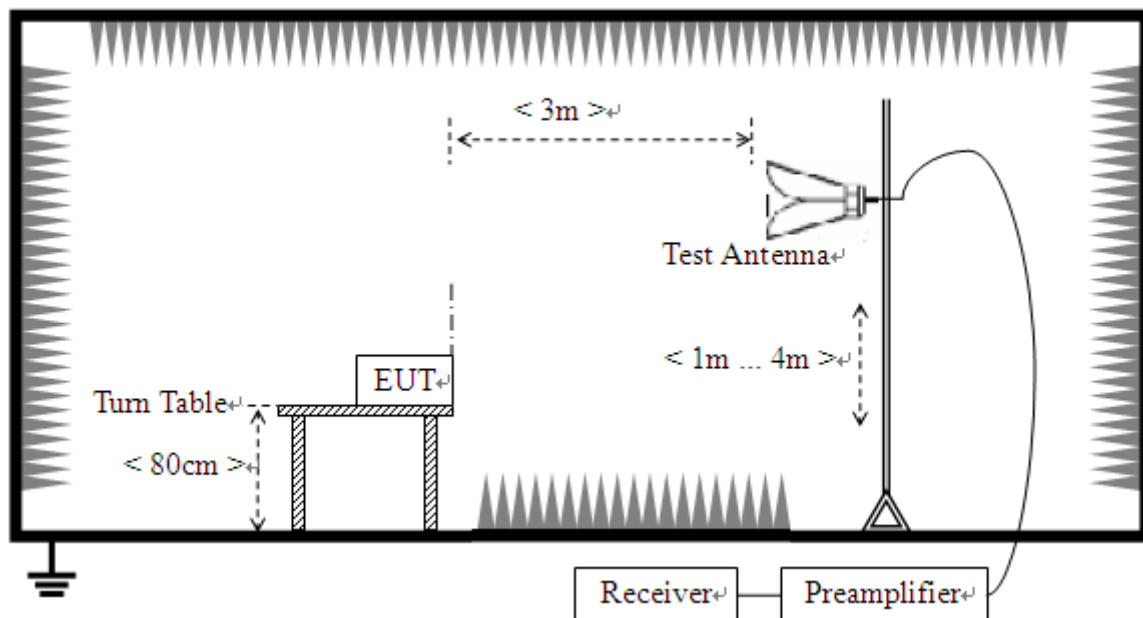
Test Case	Test Mode Configuration	Worst Mode
Radiated Emission	Mode 1~Mode 7	1, 5
Conducted Emission, AC Ports	Mode 1~Mode 5	1, 5
Note: All operation modes were tested, but only test data of the worst mode was presented in this report.		

4.3 Test Setups

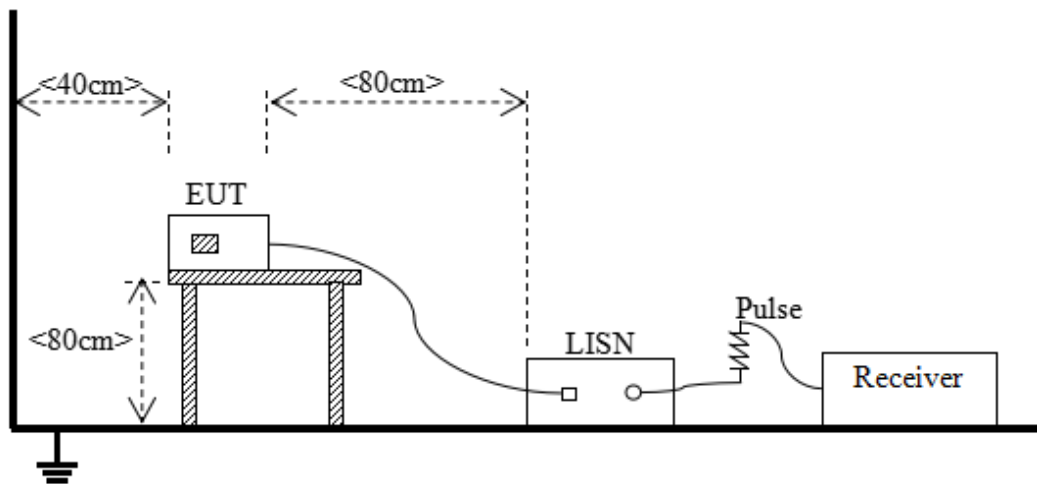
Test Setup 1



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 $\mu\text{V/m}$) = $20 \times \log [\text{Field Strength } (\mu\text{V/m})]$.
- 2) In the emission tables above, the tighter limit applies at the band edges.
- 3) 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:

$$L_{3m} = L_{10m} + 20 \times \log(d_{10m}/d_{3m})$$
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: $L_{3m} = 49.5 + 20 \times \log(10/3) = 60$ (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) + 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. Margin = Limit - Results

5.1.2 Conducted Emission, AC Ports

5.1.2.1 Test Limit

Frequency range (MHz)	Class A	
	Quasi-peak (dB μ V)	Average (dB μ V)
0.15 - 0.50	79	66
0.50 - 30	73	60

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 (dB μ V) = Reading (dB μ V) + Factor (dB)

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

2. Factor = Insertion loss + Cable loss

3. Margin = Limit - Results

ANNEX A TEST RESULTS

A.1 Radiated Emission

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

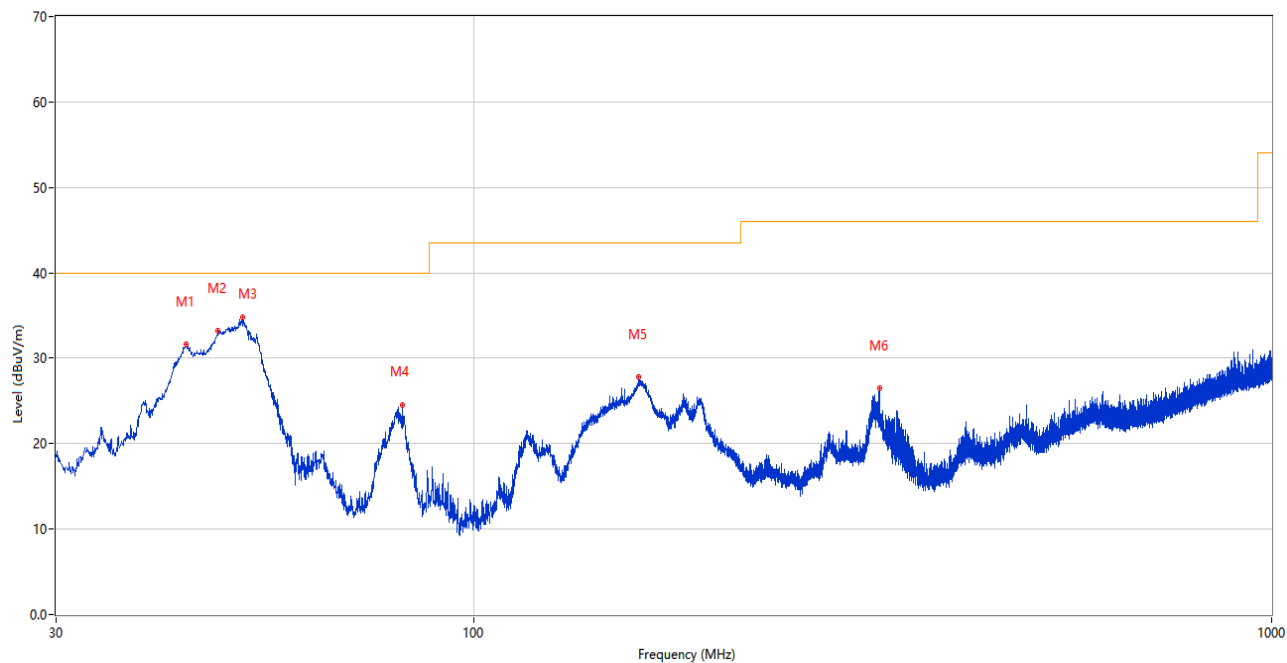
Note 2: For the test data above 1 GHz, according the ANSI C63.4-2014, where limits are specified for both average and peak (or quasi-peak) detector functions, if the peak (or quasi-peak) measured value complies with the average limit, it is unnecessary to perform an average measurement.

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.	S04	Temperature	21.0℃
Humidity	48%RH	Pressure	101kPa
Test Engineer	He Shichang	Test Date	2025.01.08

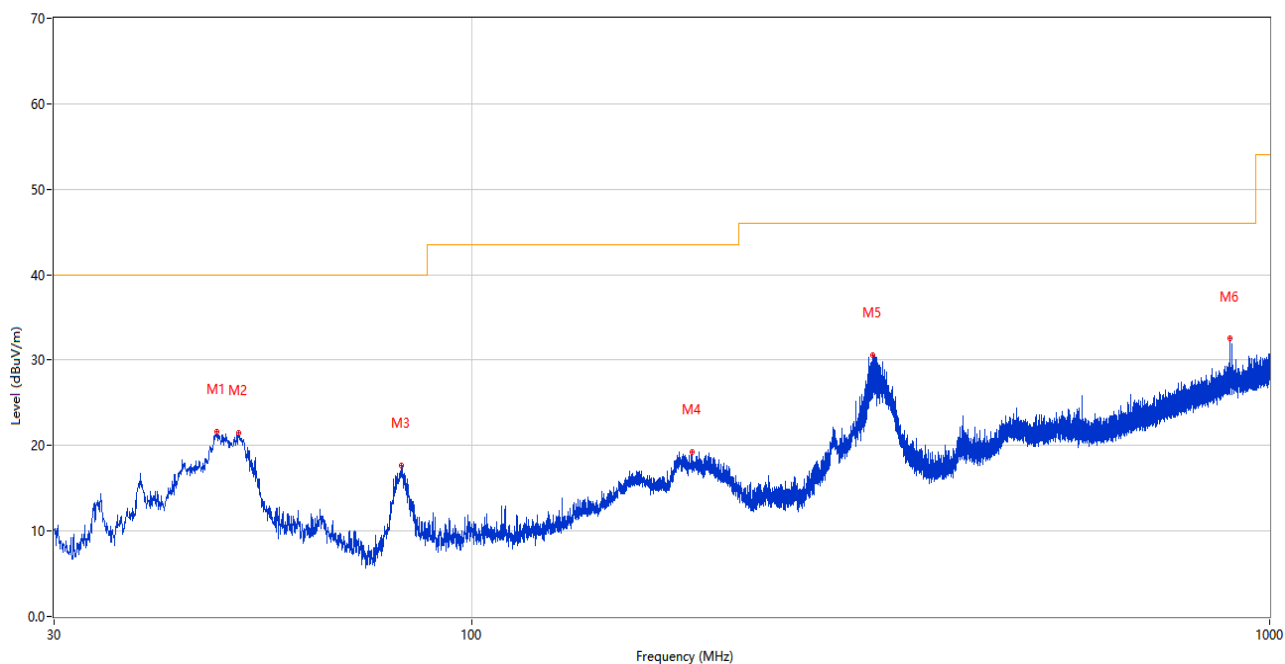
Test Mode 1

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	43.677	31.58	-25.21	40.0	8.42	Peak	318.00	100	Vertical	Pass
2	47.848	33.26	-24.86	40.0	6.74	Peak	173.00	100	Vertical	Pass
3	51.389	34.75	-24.09	40.0	5.25	Peak	212.00	200	Vertical	Pass
4	81.555	24.53	-30.62	40.0	15.47	Peak	210.00	200	Vertical	Pass
5	161.241	27.78	-29.38	43.5	15.72	Peak	233.00	100	Vertical	Pass
6	322.746	26.49	-23.06	46.0	19.51	Peak	213.00	200	Vertical	Pass

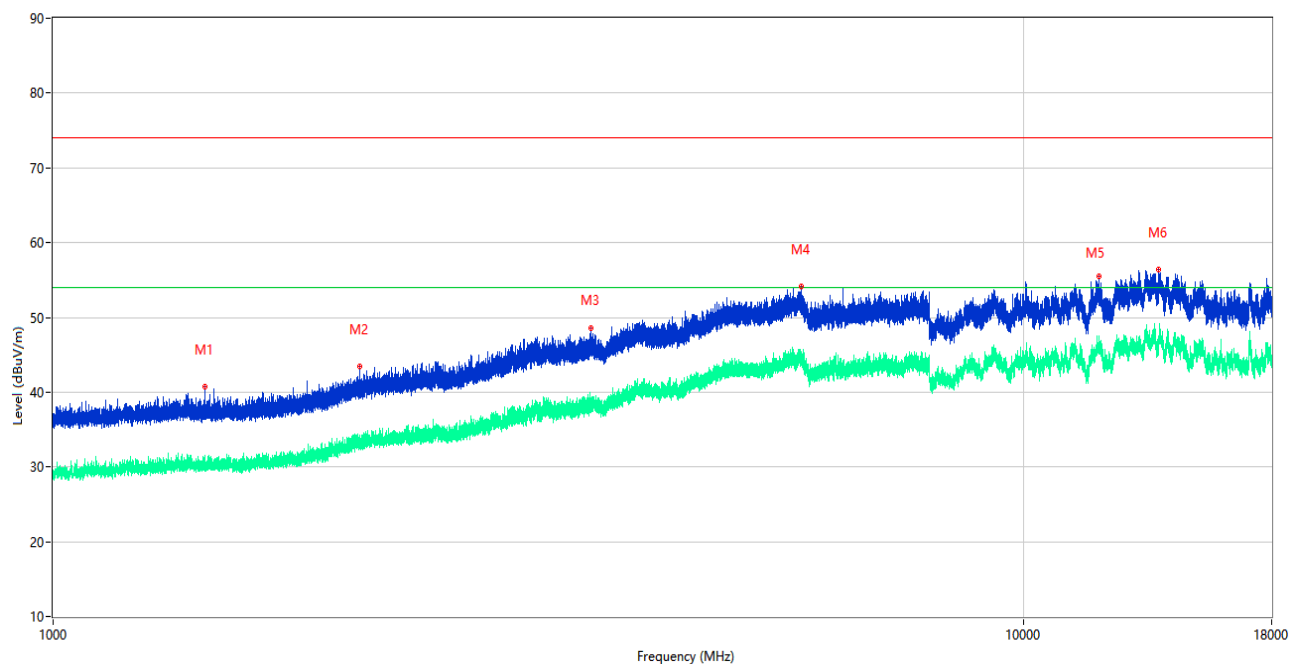
2) Test Antenna Horizontal, 30 MHz – 1 GHz



No.	Frequency (MHz)	Results (dBuV/m)	Factor (dB)	Limit (dBuV/m)	Margin (dB)	Detector	Table (Degree)	Height (cm)	Antenna	Verdict
1	48.042	21.59	-24.95	40.0	18.41	Peak	200.00	100	Horizontal	Pass
2	51.097	21.47	-24.34	40.0	18.53	Peak	308.00	100	Horizontal	Pass
3	81.798	17.64	-30.34	40.0	22.36	Peak	128.00	200	Horizontal	Pass
4	189.128	19.29	-27.22	43.5	24.21	Peak	187.00	100	Horizontal	Pass
5	317.896	30.56	-23.22	46.0	15.44	Peak	52.00	100	Horizontal	Pass
6	892.136	32.50	-10.00	46.0	13.50	Peak	234.00	200	Horizontal	Pass

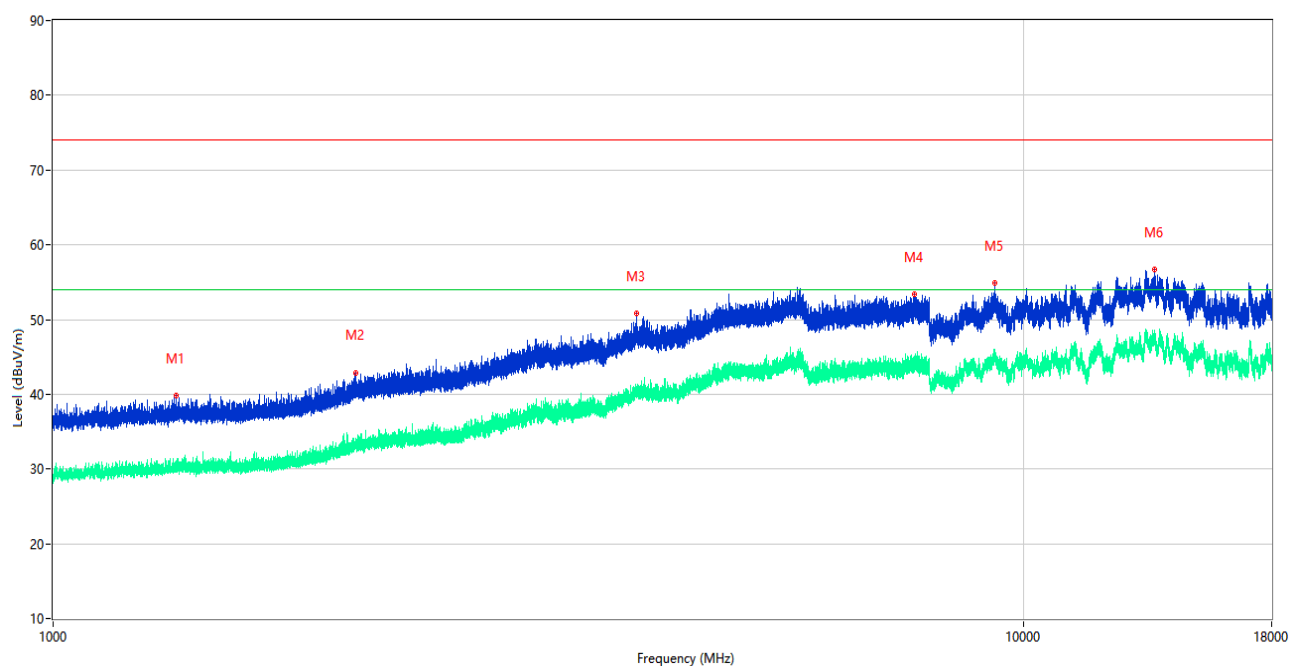
Equipment Information						
Equipment Name	Supplier	Model	Serial No.	Cal. Date	Cal. Due	Use
Frequency Below 1 GHz						
EMI Receiver	Keysight	N9038A	MY55330120	2024.08.01	2025.07.31	☒
Amplifier (30-1GHz)	COM-MV	ZT30-1000M	B2017119081	2024.11.28	2025.11.27	☒
Test Antenna- Bi-Log	SCHWARZB ECK	VULB 9168	9168-00867	2022.04.12	2025.04.11	☒
Anechoic Chamber (#2)	YiHeng	9m*6m*6m	142	2024.07.21	2027.07.20	☒
Description	Supplier	Name	Version	/		Use
Test Software	BALUN	BL410-E	V22.930	/		☒

3) Test Antenna Vertical, 1 GHz – 18 GHz



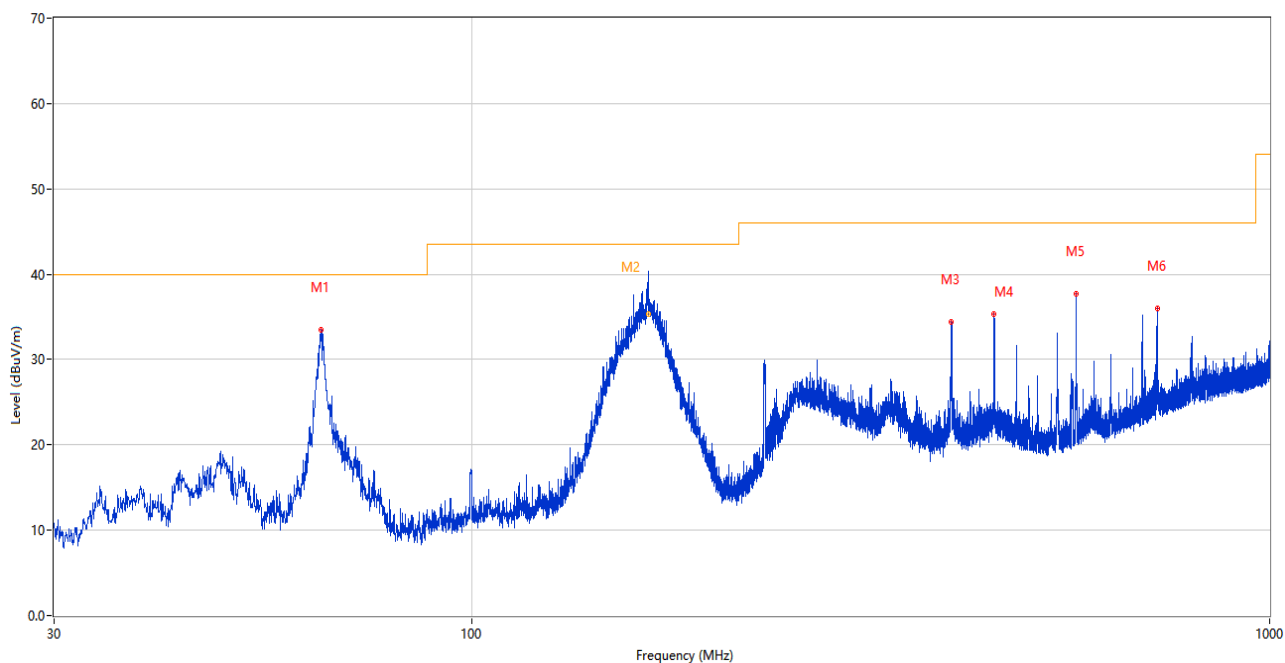
No.	Frequency (MHz)	Results (dBuV/m)	Factor (dB)	Limit (dBuV/m)	Margin (dB)	Detector	Table (Degree)	Height (cm)	Antenna	Verdict
1	1432.640	40.77	-15.46	74.0	33.23	Peak	279.00	100	Vertical	Pass
1**	1432.640	31.06	-15.46	54.0	22.94	AV	279.00	100	Vertical	Pass
2	2069.380	43.39	-12.07	74.0	30.61	Peak	98.00	100	Vertical	Pass
2**	2069.380	33.28	-12.07	54.0	20.72	AV	98.00	100	Vertical	Pass
3	3582.580	48.52	-4.87	74.0	25.48	Peak	269.00	100	Vertical	Pass
3**	3582.580	37.87	-4.87	54.0	16.13	AV	269.00	100	Vertical	Pass
4	5905.160	54.18	1.77	74.0	19.82	Peak	236.00	100	Vertical	Pass
4**	5905.160	43.52	1.77	54.0	10.48	AV	236.00	100	Vertical	Pass
5	11940.500	55.44	2.58	74.0	18.56	Peak	360.00	100	Vertical	Pass
5**	11940.500	46.91	2.58	54.0	7.09	AV	360.00	100	Vertical	Pass
6	13780.000	56.35	4.91	74.0	17.65	Peak	151.00	100	Vertical	Pass
6**	13780.000	46.98	4.91	54.0	7.02	AV	151.00	100	Vertical	Pass

4) Test Antenna Horizontal, 1 GHz – 18 GHz



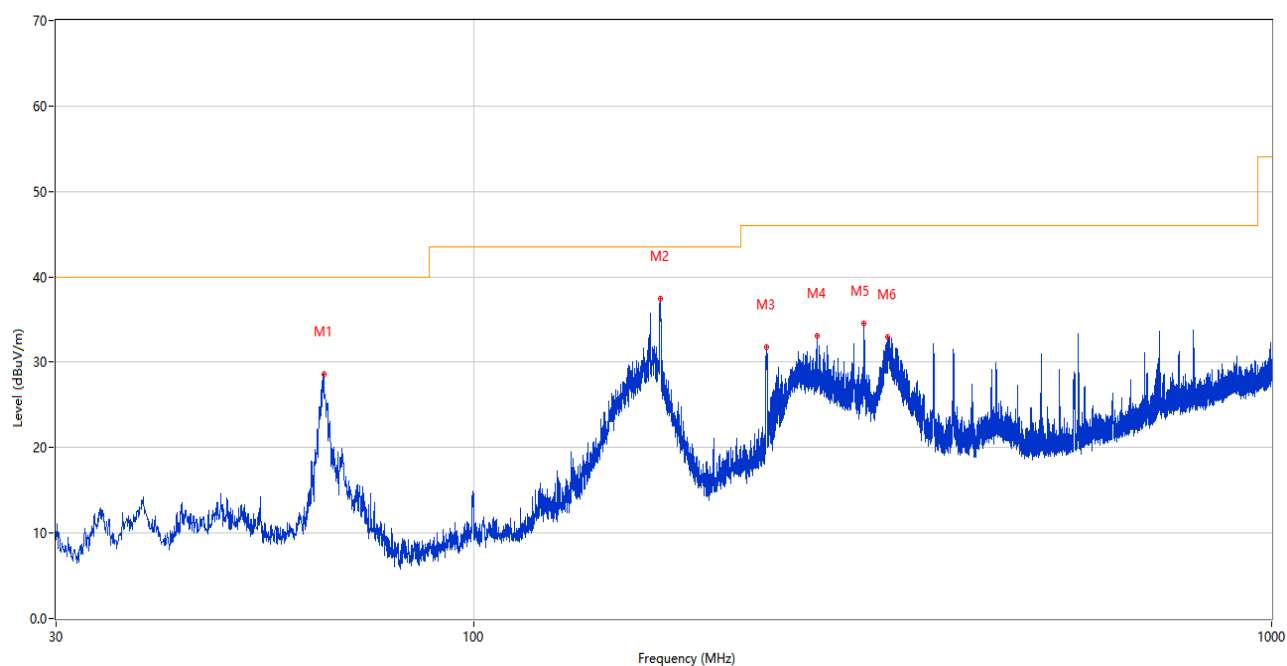
No.	Frequency (MHz)	Results (dBuV/m)	Factor (dB)	Limit (dBuV/m)	Margin (dB)	Detector	Table (Degree)	Height (cm)	Antenna	Verdict
1	1337.610	39.82	-15.56	74.0	34.18	Peak	173.00	100	Horizontal	Pass
1**	1337.610	30.49	-15.56	54.0	23.51	AV	173.00	100	Horizontal	Pass
2	2052.350	42.89	-12.30	74.0	31.11	Peak	178.00	100	Horizontal	Pass
2**	2052.350	33.93	-12.30	54.0	20.07	AV	178.00	100	Horizontal	Pass
3	3990.940	50.83	-1.63	74.0	23.17	Peak	306.00	100	Horizontal	Pass
3**	3990.940	39.87	-1.63	54.0	14.13	AV	306.00	100	Horizontal	Pass
4	7715.980	53.38	0.17	74.0	20.62	Peak	295.00	100	Horizontal	Pass
4**	7715.980	44.04	0.17	54.0	9.96	AV	295.00	100	Horizontal	Pass
5	9330.000	54.82	2.17	74.0	19.18	Peak	237.00	100	Horizontal	Pass
5**	9330.000	44.95	2.17	54.0	9.05	AV	237.00	100	Horizontal	Pass
6	13639.500	56.64	5.04	74.0	17.36	Peak	64.00	100	Horizontal	Pass
6**	13639.500	47.11	5.04	54.0	6.89	AV	64.00	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	2024.08.01	2025.07.31	☒
Amplifier (1-12GHz)	Advanced Microwave	WLA652A	1740103	2024.11.28	2025.11.27	☒
Amplifier (0.8-21GHz)	Mini-Circuits	ZVA-213-S+	225321316	2024.11.28	2025.11.27	☒
Test Antenna- Horn	SCHWARZB ECK	BBHA 9120D	01917	2022.06.09	2025.06.08	☒
Anechoic Chamber (#2)	YiHeng	9m*6m*6m	142	2024.07.21	2027.07.20	☒
Description	Supplier	Name	Version	/		Use
Test Software	BALUN	BL410-E	V22.930	/		☒

Test Mode 5**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	64.871	33.50	-26.56	40.0	6.50	Peak	289.00	100	Vertical	Pass
2	166.446	40.39	-29.04	43.5	3.11	Peak	295.00	106	Vertical	N/A
2*	166.446	35.29	-29.04	43.5	8.21	QP	295.00	106	Vertical	Pass
3	398.503	34.42	-21.07	46.0	11.58	Peak	135.00	200	Vertical	Pass
4	451.707	35.29	-19.84	46.0	10.71	Peak	169.00	100	Vertical	Pass
5	572.279	37.67	-16.93	46.0	8.33	Peak	145.00	100	Vertical	Pass
6	722.919	36.04	-13.52	46.0	9.96	Peak	154.00	200	Vertical	Pass

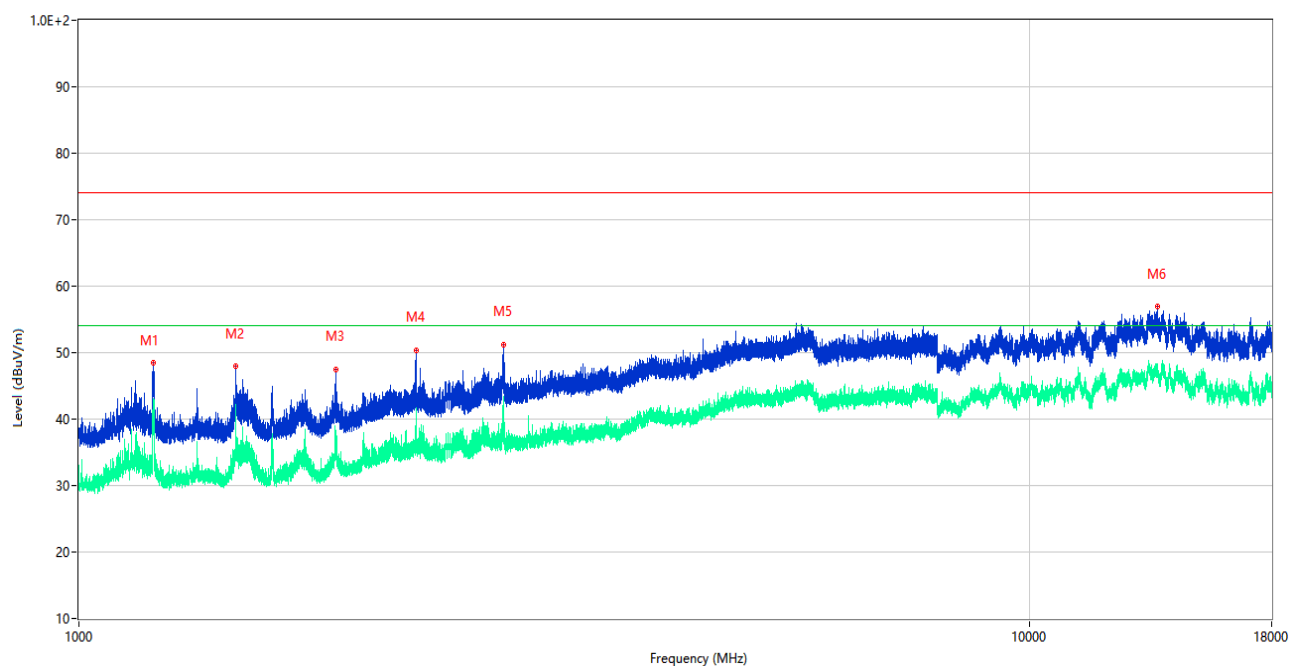
6) Test Antenna Horizontal, 30 MHz – 1 GHz



No.	Frequency (MHz)	Results (dBuV/m)	Factor (dB)	Limit (dBuV/m)	Margin (dB)	Detector	Table (Degree)	Height (cm)	Antenna	Verdict
1	64.969	28.60	-26.68	40.0	11.40	Peak	178.00	200	Horizontal	Pass
2	171.474	37.49	-28.70	43.5	6.01	Peak	320.00	200	Horizontal	Pass
3	233.264	31.81	-25.41	46.0	14.19	Peak	94.00	100	Horizontal	Pass
4	269.832	33.13	-24.63	46.0	12.87	Peak	232.00	100	Horizontal	Pass
5	308.633	34.54	-23.39	46.0	11.46	Peak	246.00	100	Horizontal	Pass
6	329.924	32.90	-22.80	46.0	13.10	Peak	84.00	100	Horizontal	Pass

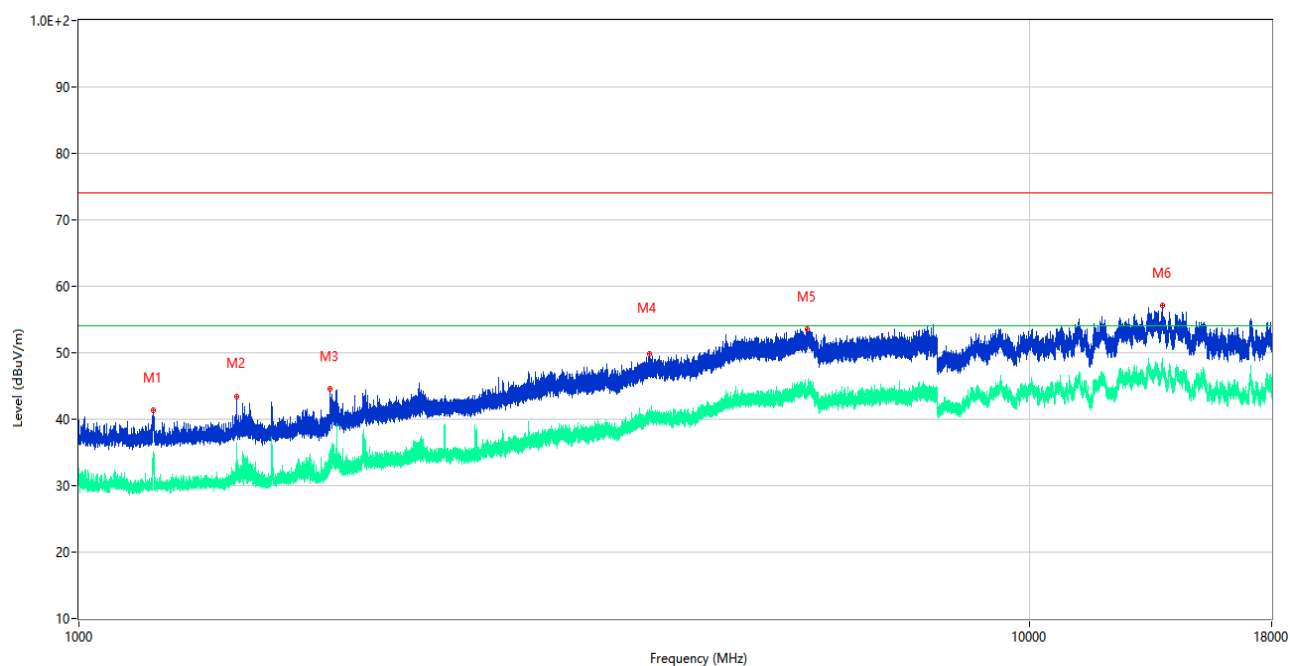
Equipment Information						
Equipment Name	Supplier	Model	Serial No.	Cal. Date	Cal. Due	Use
Frequency Below 1 GHz						
EMI Receiver	Keysight	N9038A	MY55330120	2024.08.01	2025.07.31	☒
Amplifier (30-1GHz)	COM-MV	ZT30-1000M	B2017119081	2024.11.28	2025.11.27	☒
Test Antenna- Bi-Log	SCHWARZB ECK	VULB 9168	9168-00867	2022.04.12	2025.04.11	☒
Anechoic Chamber (#2)	YiHeng	9m*6m*6m	142	2024.07.21	2027.07.20	☒
Description	Supplier	Name	Version	/		Use
Test Software	BALUN	BL410-E	V22.930	/		☒

7) Test Antenna Vertical, 1 GHz – 18 GHz



No.	Frequency (MHz)	Results (dBuV/m)	Factor (dB)	Limit (dBuV/m)	Margin (dB)	Detector	Table (Degree)	Height (cm)	Antenna	Verdict
1	1198.640	48.55	-15.73	74.0	25.45	Peak	223.00	100	Vertical	Pass
1**	1198.640	39.55	-15.73	54.0	14.45	AV	223.00	100	Vertical	Pass
2	1462.020	47.91	-15.55	74.0	26.09	Peak	223.00	100	Vertical	Pass
2**	1462.020	35.01	-15.55	54.0	18.99	AV	223.00	100	Vertical	Pass
3	1863.330	47.53	-14.40	74.0	26.47	Peak	213.00	100	Vertical	Pass
3**	1863.330	36.37	-14.40	54.0	17.63	AV	213.00	100	Vertical	Pass
4	2263.600	50.39	-12.19	74.0	23.61	Peak	238.00	100	Vertical	Pass
4**	2263.600	35.64	-12.19	54.0	18.36	AV	238.00	100	Vertical	Pass
5	2796.210	51.18	-8.36	74.0	22.82	Peak	173.00	100	Vertical	Pass
5**	2796.210	39.56	-8.36	54.0	14.44	AV	173.00	100	Vertical	Pass
6	13635.500	57.00	5.01	74.0	17.00	Peak	332.00	100	Vertical	Pass
6**	13635.500	47.42	5.01	54.0	6.58	AV	332.00	100	Vertical	Pass

8) Test Antenna Horizontal, 1 GHz – 18 GHz



No.	Frequency (MHz)	Results (dBuV/m)	Factor (dB)	Limit (dBuV/m)	Margin (dB)	Detector	Table (Degree)	Height (cm)	Antenna	Verdict
1	1197.210	41.31	-15.78	74.0	32.69	Peak	234.00	100	Horizontal	Pass
1**	1197.210	33.29	-15.78	54.0	20.71	AV	234.00	100	Horizontal	Pass
2	1465.140	43.42	-15.57	74.0	30.58	Peak	219.00	100	Horizontal	Pass
2**	1465.140	32.90	-15.57	54.0	21.10	AV	219.00	100	Horizontal	Pass
3	1837.980	44.54	-14.87	74.0	29.46	Peak	258.00	100	Horizontal	Pass
3**	1837.980	32.15	-14.87	54.0	21.85	AV	258.00	100	Horizontal	Pass
4	3989.840	49.76	-1.68	74.0	24.24	Peak	296.00	100	Horizontal	Pass
4**	3989.840	41.13	-1.68	54.0	12.87	AV	296.00	100	Horizontal	Pass
5	5843.340	53.49	2.21	74.0	20.51	Peak	286.00	100	Horizontal	Pass
5**	5843.340	44.31	2.21	54.0	9.69	AV	286.00	100	Horizontal	Pass
6	13813.500	57.05	5.64	74.0	16.95	Peak	73.00	100	Horizontal	Pass
6**	13813.500	47.59	5.64	54.0	6.41	AV	73.00	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	2024.08.01	2025.07.31	☒
Amplifier (1-12GHz)	Advanced Microwave	WLA652A	1740103	2024.11.28	2025.11.27	☒
Amplifier (0.8-21GHz)	Mini-Circuits	ZVA-213-S+	225321316	2024.11.28	2025.11.27	☒
Test Antenna- Horn	SCHWARZB ECK	BBHA 9120D	01917	2022.06.09	2025.06.08	☒
Anechoic Chamber (#2)	YiHeng	9m*6m*6m	142	2024.07.21	2027.07.20	☒
Description	Supplier	Name	Version	/		Use
Test Software	BALUN	BL410-E	V22.930	/		☒

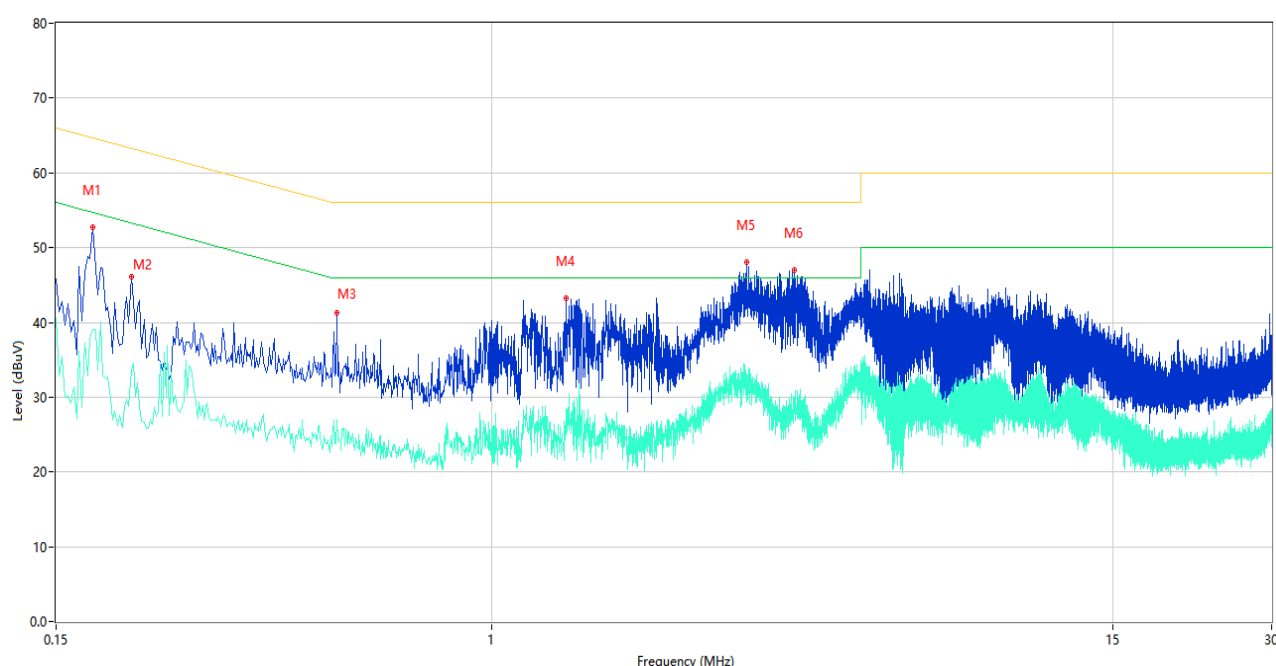
A.2 Conducted Emission, AC Ports

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.	S04	Temperature	21.0℃
Humidity	48%RH	Pressure	101kPa
Test Engineer	Yang Yang	Test Date	2025.01.08

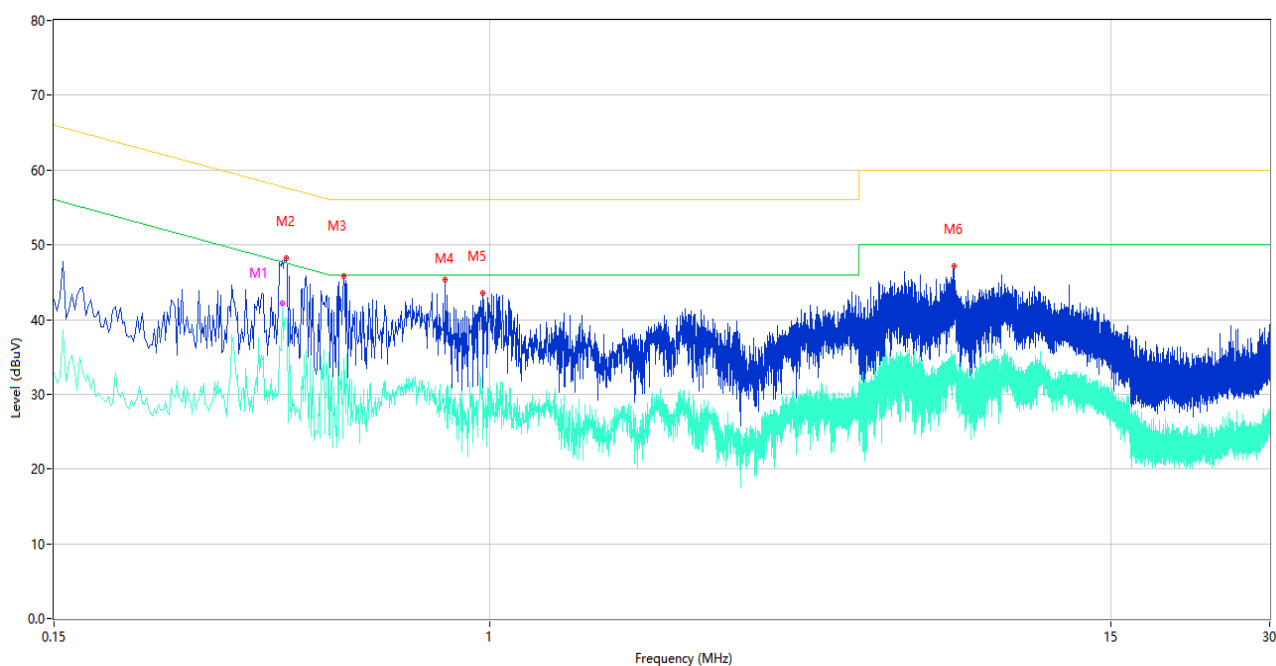
Test Mode 1

1) AC Ports - L Phase



No.	Frequency (MHz)	Results (dBuV)	Factor (dB)	Limit (dBuV)	Margin (dB)	Detector	Line	Verdict
1	0.176	52.74	10.06	64.67	11.93	Peak	L	Pass
1**	0.176	39.02	10.06	54.67	15.65	AV	L	Pass
2	0.208	46.12	10.03	63.28	17.16	Peak	L	Pass
2**	0.208	33.65	10.03	53.28	19.63	AV	L	Pass
3	0.510	41.32	10.34	56.00	14.68	Peak	L	Pass
3**	0.510	26.98	10.34	46.00	19.02	AV	L	Pass
4	1.388	43.22	10.84	56.00	12.78	Peak	L	Pass
4**	1.388	28.54	10.84	46.00	17.46	AV	L	Pass
5	3.044	48.04	10.94	56.00	7.96	Peak	L	Pass
5**	3.044	29.34	10.94	46.00	16.66	AV	L	Pass
6	3.744	46.99	11.36	56.00	9.01	Peak	L	Pass
6**	3.744	29.16	11.36	46.00	16.84	AV	L	Pass

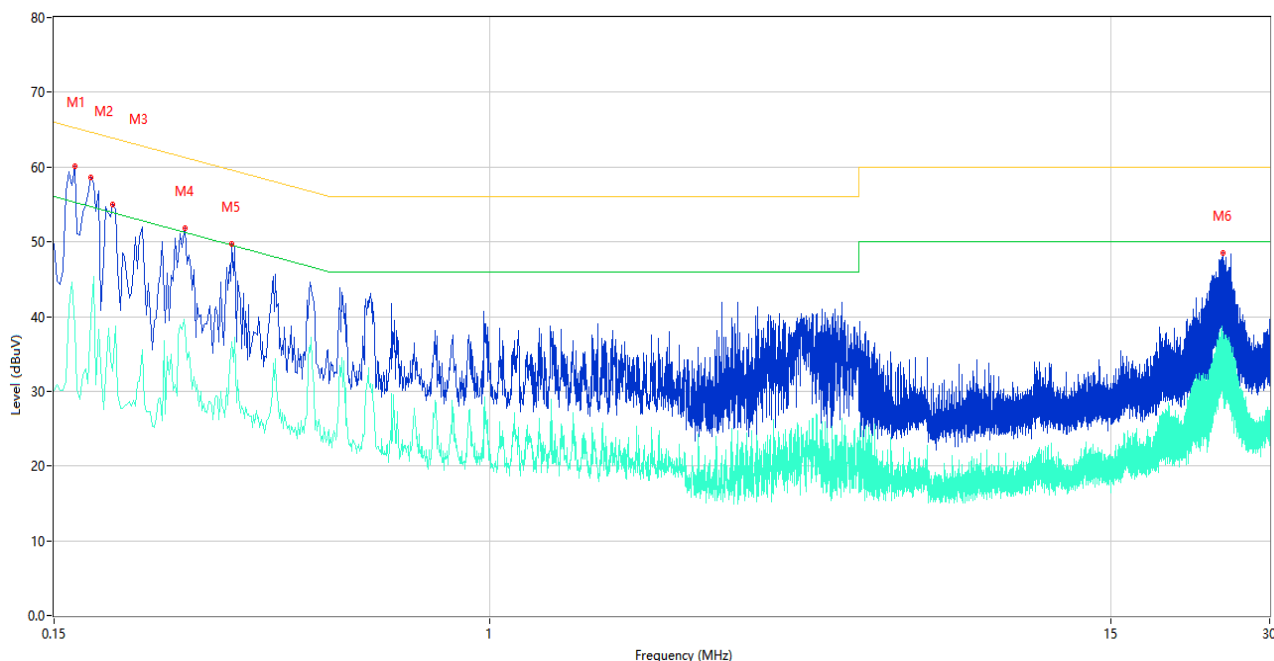
2) AC Ports - N Phase



No.	Frequency (MHz)	Results (dBuV)	Factor (dB)	Limit (dBuV)	Margin (dB)	Detector	Line	Verdict
1	0.406	47.85	10.61	57.73	9.88	Peak	N	Pass
1**	0.406	42.14	10.61	47.73	5.59	AV	N	Pass
2	0.412	48.21	10.60	57.61	9.40	Peak	N	Pass
2**	0.412	40.21	10.60	47.61	7.40	AV	N	Pass
3	0.530	45.77	10.39	56.00	10.23	Peak	N	Pass
3**	0.530	34.79	10.39	46.00	11.21	AV	N	Pass
4	0.826	45.28	10.25	56.00	10.72	Peak	N	Pass
4**	0.826	26.36	10.25	46.00	19.64	AV	N	Pass
5	0.970	43.51	10.74	56.00	12.49	Peak	N	Pass
5**	0.970	30.70	10.74	46.00	15.30	AV	N	Pass
6	7.576	47.09	11.76	60.00	12.91	Peak	N	Pass
6**	7.576	35.09	11.76	50.00	14.91	AV	N	Pass

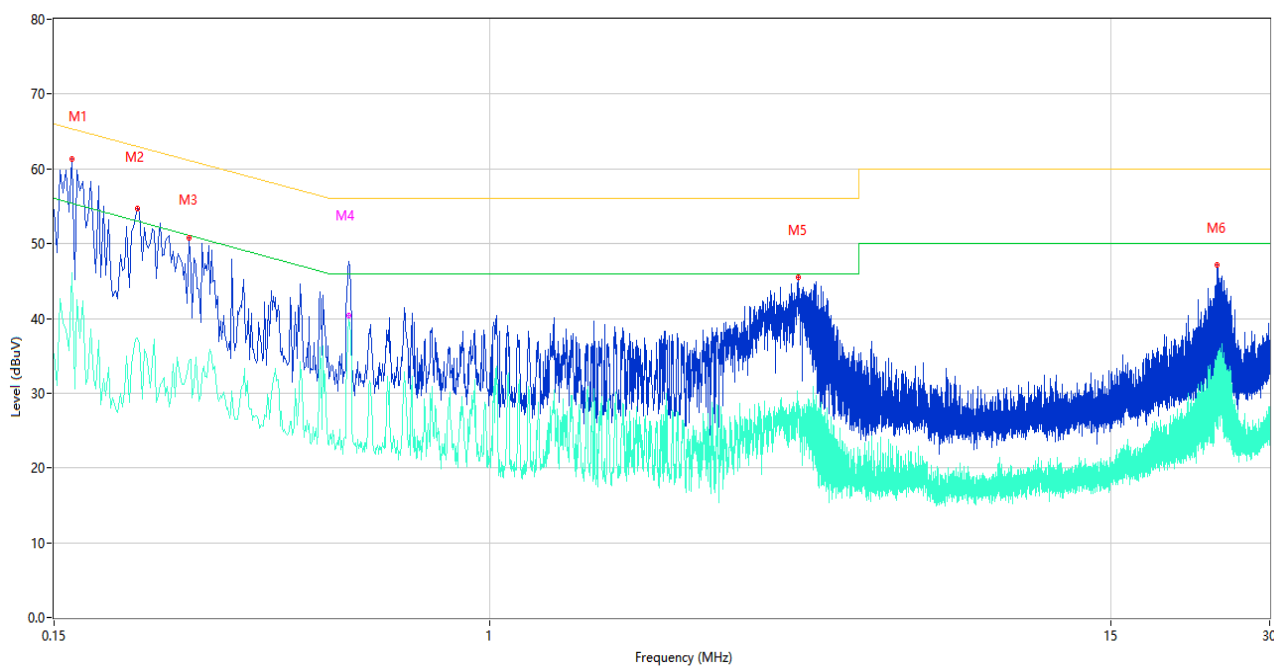
Test Mode 5

3) AC Ports - L Phase



No.	Frequency (MHz)	Results (dBuV)	Factor (dB)	Limit (dBuV)	Margin (dB)	Detector	Line	Verdict
1	0.164	60.10	10.09	65.26	5.16	Peak	L	Pass
1**	0.164	38.62	10.09	55.26	16.64	AV	L	Pass
2	0.176	58.55	10.06	64.67	6.12	Peak	L	Pass
2**	0.176	39.68	10.06	54.67	14.99	AV	L	Pass
3	0.194	55.02	10.04	63.86	8.84	Peak	L	Pass
3**	0.194	32.62	10.04	53.86	21.24	AV	L	Pass
4	0.266	51.80	10.03	61.24	9.44	Peak	L	Pass
4**	0.266	38.24	10.03	51.24	13.00	AV	L	Pass
5	0.326	49.74	9.99	59.55	9.81	Peak	L	Pass
5**	0.326	36.57	9.99	49.55	12.98	AV	L	Pass
6	24.504	48.44	15.88	60.00	11.56	Peak	L	Pass
6**	24.504	36.90	15.88	50.00	13.10	AV	L	Pass

4) AC Ports - N Phase



No.	Frequency (MHz)	Results (dBuV)	Factor (dB)	Limit (dBuV)	Margin (dB)	Detector	Line	Verdict
1	0.162	61.29	10.09	65.36	4.07	Peak	N	Pass
1**	0.162	46.13	10.09	55.36	9.23	AV	N	Pass
2	0.216	54.66	10.03	62.97	8.31	Peak	N	Pass
2**	0.216	37.29	10.03	52.97	15.68	AV	N	Pass
3	0.270	50.84	10.03	61.12	10.28	Peak	N	Pass
3**	0.270	34.28	10.03	51.12	16.84	AV	N	Pass
4	0.542	47.68	10.43	56.00	8.32	Peak	N	Pass
4**	0.542	40.41	10.43	46.00	5.59	AV	N	Pass
5	3.848	45.44	10.77	56.00	10.56	Peak	N	Pass
5**	3.848	26.61	10.77	46.00	19.39	AV	N	Pass
6	23.812	47.13	15.71	60.00	12.87	Peak	N	Pass
6**	23.812	34.89	15.71	50.00	15.11	AV	N	Pass

Equipment Information						
Equipment Name	Supplier	Model	Serial No.	Cal. Date	Cal. Due	Use
EMI Receiver	KEYSIGHT	N9010B	MY57110309	2024.08.01	2025.07.31	☒
LISN	SCHWARZB ECK	NSLK 8127	8127-687	2024.05.09	2025.05.08	☒
ISN	TESEQ	ISN T800	34449	2024.11.06	2025.11.05	☐
ISN	TESEQ	ISN T8-Cat6	53561	2024.04.24	2025.04.23	☐
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	/		☒

ANNEX B TEST SETUP PHOTOS

Please refer the document “BL-SZ2510222-AE-1.PDF”.

ANNEX C EUT EXTERNAL PHOTOS

Please refer the document “BL-SZ2510222-AW.PDF”.

ANNEX D EUT INTERNAL PHOTOS

Please refer the document “BL-SZ2510222-AI.PDF”.

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