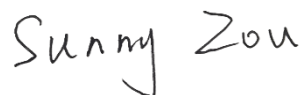


TEST REPORT

Applicant: vivo Mobile Communication Co., Ltd.
Address: No.1, vivo Road, Chang'an, Dongguan, Guangdong, China
Equipment Type: Mobile Phone
Model Name: V2419 (refer to section 2.3)
Brand Name: vivo
FCC ID: 2AUCY-V2419
Test Standard: 47 CFR Part 15 Subpart B
ANSI C63.4-2014
Sample Arrival Date: Aug. 27, 2024
Test Date: Aug. 29, 2024 - Sep. 03, 2024
Date of Issue: Feb. 17, 2025

ISSUED BY:

Shenzhen BALUN Technology Co., Ltd.

Tested by: Qiu Yongjing**Checked by:** Liu Zhenxiang**Approved by:** Sunny Zou
(Technical Director)

Revision History

Version	Issue Date	Revisions
<u>Rev. 01</u>	<u>Feb. 17, 2025</u>	<u>Initial Issue</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	6
2.5	Technical Information	8
3	SUMMARY OF TEST RESULTS	9
3.1	Test Standards	9
3.2	Verdict	9
3.3	Test Uncertainty	9
4	GENERAL TEST CONFIGURATIONS	10
4.1	Test Enclosure List	10
4.2	Test Configurations	11
4.3	Test Setups	12
5	TEST ITEMS	14
5.1	Emission Tests	14
ANNEX A	TEST RESULTS	19
A.1	Radiated Emission	19
A.2	Conducted Emission, AC Ports	32
ANNEX B	TEST SETUP PHOTOS	37
ANNEX C	EUT EXTERNAL PHOTOS	37

ANNEX D EUT INTERNAL PHOTOS 37

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	V2419
Series Model Name	V2458
Description of Model name differentiation	All models are same with electrical parameters and internal circuit structure, but only differ in model name. (this information provided by the customer)
Hardware Version	MP_0.1
Software Version	PD2420F_EX_A_14.0.5.2.W30
Dimensions (Approx.)	165.66*76.03*8.24mm
Weight (Approx.)	198g

2.4 Ancillary Equipment

Ancillary Equipment 1	Battery 1	
	Brand Name	N/A
	Model No.	BA60
	Serial No.	N/A
	Capacity	Rated Capacity: 5050mAh Typical capacity: 5150mAh
	Rated Voltage	3.85V
	Limit Charge Voltage	4.39V
	Manufacturer	SUNWODA Electronic Co., Ltd.
Ancillary Equipment 2	Adapter 1	
	Brand Name	N/A
	Model No.	V1530L0B0-EU (EU Plug)
	Serial No.	N/A
	Rated Input	100-240V~50/60Hz, 0.5A
	Rated Output	5.0V $\equiv$ 3.0A
	Manufacturer	Dongguan Aohai Technology Co., Ltd.
Ancillary Equipment 3	Adapter 2	
	Brand Name	N/A
	Model No.	V1530L0B0-US (US Plug)
	Serial No.	N/A
	Rated Input	100-240V~50/60Hz, 0.5A
	Rated Output	5.0V $\equiv$ 3.0A
	Manufacturer	Dongguan Aohai Technology Co., Ltd.
Ancillary Equipment 4	USB Cable 1	
	Model No.	BK-C-50-B
Ancillary Equipment 5	battery cover 1	
	Model No.	Kaixin AC-211CG-U2/0.5-Y1-SL
	Manufacturer	TONGDA (SHISHI) TECHNOLOGY Co., Ltd.
Ancillary Equipment 6	battery cover 2	
	Model No.	FD101-50
	Manufacturer	Zosun Optoelectronic Technology CO., LTD.
Ancillary Equipment 7	battery cover 3	
	Model No.	DFS-PM13-45-0500
	Manufacturer	Zosun Optoelectronic Technology CO., LTD.
Ancillary Equipment 8	battery cover 4	
	Model No.	DXM-HI050
	Manufacturer	Zosun Optoelectronic Technology CO., LTD.
Ancillary Equipment 9	battery cover 5	
	Model No.	Kaixin AC-211CG-U2/0.5-Y1-SL
	Manufacturer	Zhejiang Decotec Co., Ltd.
Ancillary Equipment 10	Adapter 3	

	Brand Name	N/A
	Model No.	V4440L0A0-US (US Plug)
	Serial No.	N/A
	Rated Input	100-240V~50/60Hz, 1.1A
	Rated Output	5.0V $\equiv$ 3.0A or 9.0V $\equiv$ 2.0A or 11.0V $\equiv$ 4.0A
	Manufacturer	Dongguan Aohai Technology Co., Ltd.
Ancillary Equipment 11	USB Cable 2	
	Model No.	BK-C-49-B
Ancillary Equipment 12	Battery 2	
	Brand Name	N/A
	Model No.	BA86
	Serial No.	N/A
	Capacity	Rated Capacity: 5050mAh Typical capacity: 5150mAh
	Rated Voltage	3.85V
	Limit Charge Voltage	4.39V
	Manufacturer	SUNWODA Electronic Co., Ltd.
Note 1: Letter in () means plug type. Note 2: All adapters are tested, only the worst data of V4440L0A0-US (US Plug) shown in this report. Note 3: All USB Cables are tested, only the worst data of BK-C-49-B shown in this report. Note 3: All batteries are tested, only the worst data of BA86 shown in this report.		

2.5 Technical Information

Network and Wireless connectivity	2G Network GSM/GPRS/EDGE 850/1900MHz 3G Network WCDMA/HSDPA/HSUPA/HSPA+ Band 2/4/5 4G Network FDD LTE Band 2/4/5/7/13/18/19/26/66 TDD-LTE Band 38/41 WIFI 802.11b, 802.11g, WIFI 802.11a, 802.11n(HT20/40) and 802.11ac(VHT20/40/80) Bluetooth (BR+EDR+BLE) GPS, Galileo, GLONASS, BDS, QZSS, FM receiver
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	--

Note:

Compared with the EUT of test report BL-SZ2481209-401, the changes of the EUT of this report as below:

1. The battery is changed from BA60 to BA86, and the charging power is changed from 15W to 44W.
2. Add the chargers V4440L0A0-US, and the USB line BK-C-49-B.
3. Add the model name V2458.

Other hardware circuit and software are the same as EUT referred in test report BL-SZ2481209-401.

Therefore, all the worst-case modes in the original report have been retested.

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	HONOR	KPRC-W10	N/A	N/A	N/A	☒
Earphone	N/A	N/A	N/A	1.25m	N/A	☒
TF Card	Samsung	MB-MD256KA	N/A	N/A	256G	☒

4.2 Test Configurations

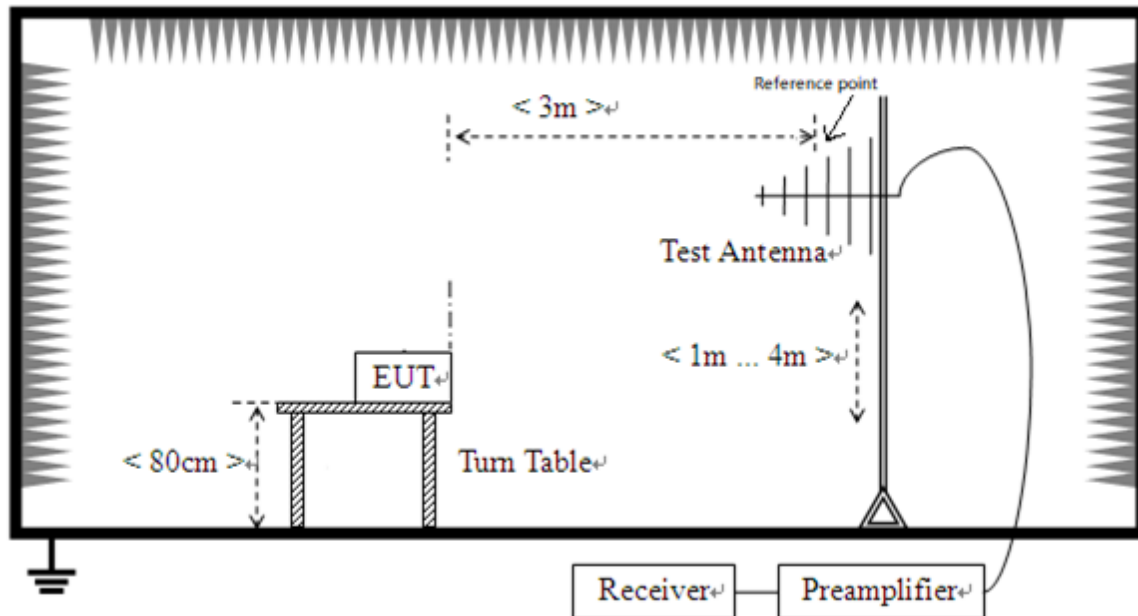
All test modes of EUT are listed in the table below.

Test Mode Configuration	Description
Mode 1	<u>The Only Charing Test Mode</u> EUT + Adapter + USB Cable + Battery + Headset + TF Card
Mode 2	<u>The USB Test Mode</u> EUT + USB Cable + Battery + Laptop + Headset + TF Card

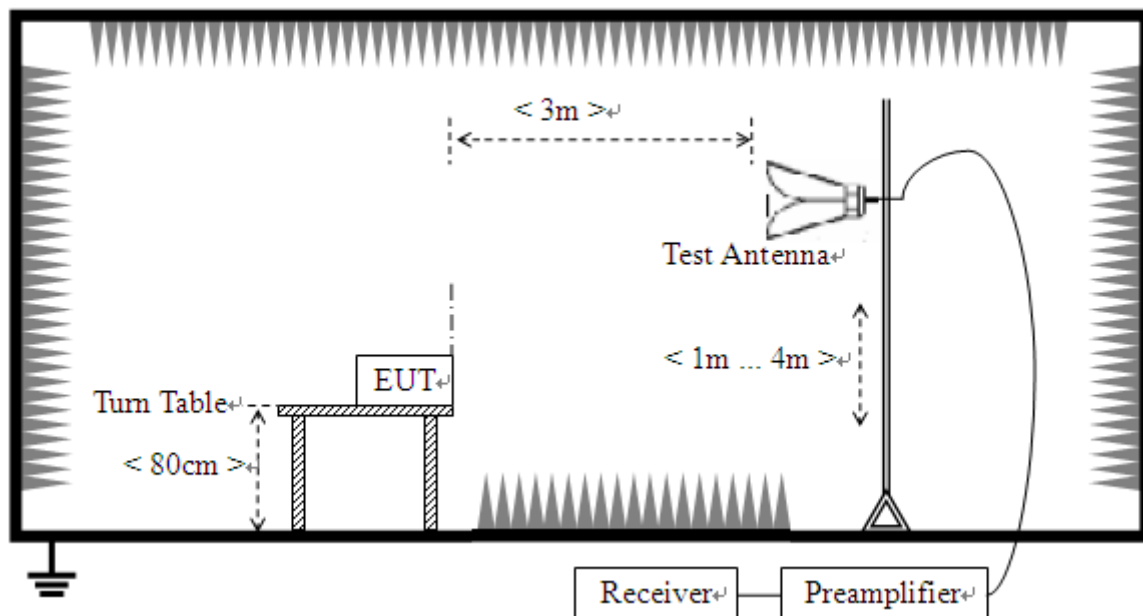
Test Case	Test Mode Configuration	Worst Mode
Radiated Emission	Mode 1~Mode 2	1, 2
Conducted Emission, AC Ports	Mode 1~Mode 2	1, 2

4.3 Test Setups

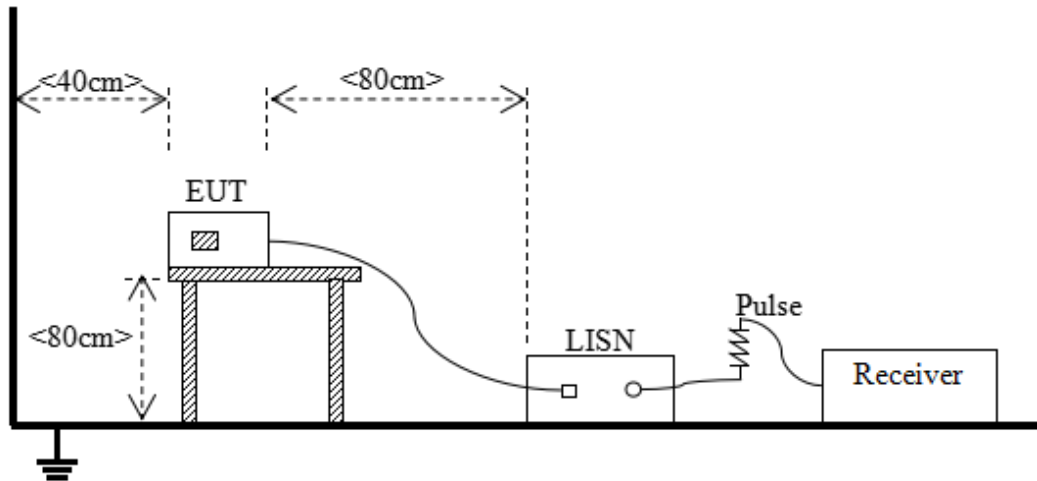
Test Setup 1



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 (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. Margin = Limit - Results

ANNEX A TEST RESULTS

A.1 Radiated Emission

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

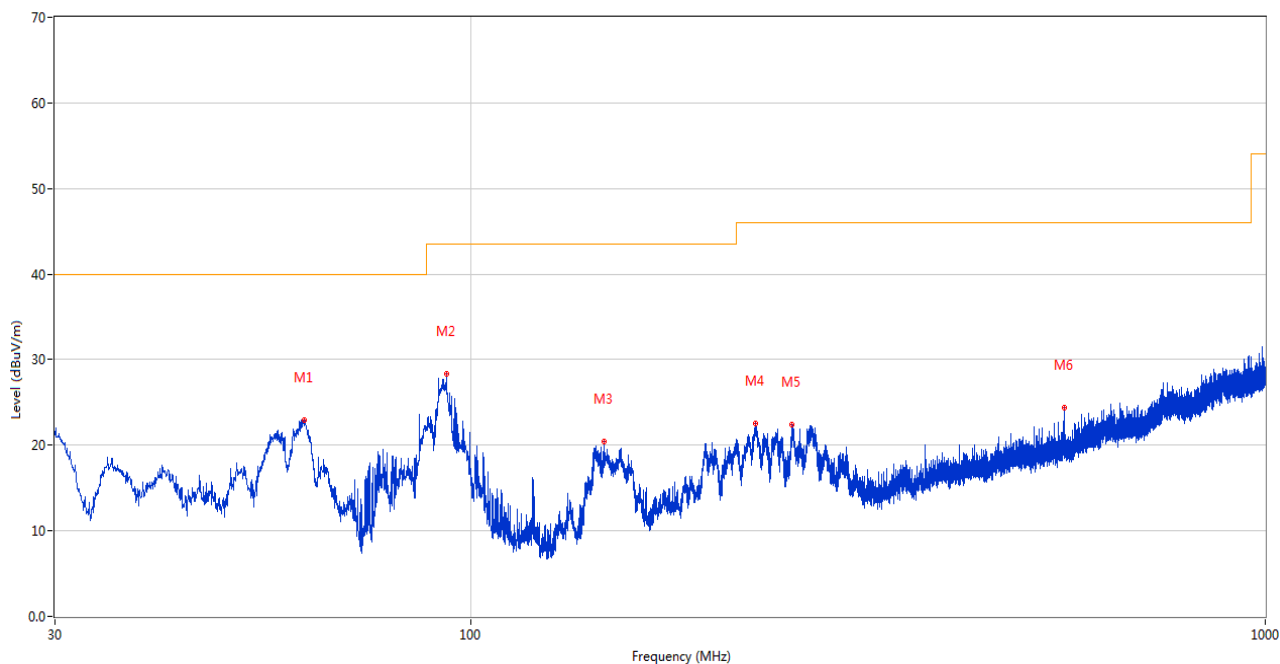
Note 2: For the test data above 1 GHz, according the ANSI C63.4-2014, where limits are specified for both average and peak (or quasi-peak) detector functions, if the peak (or quasi-peak) measured value complies with the average limit, it is unnecessary to perform an average measurement.

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.	S01	Temperature	24.8℃
Humidity	56%RH	Pressure	101kPa
Test Engineer	He Shichang	Test Date	2025.02.12

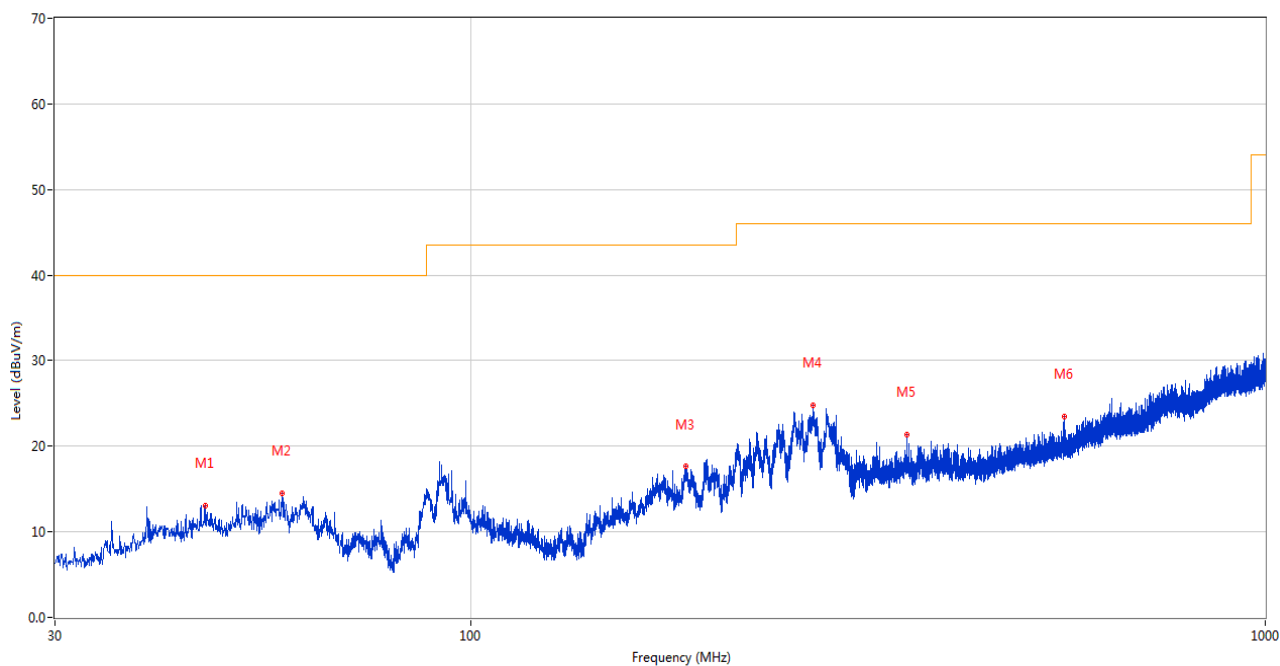
Test Mode 1

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	61.767	22.98	-26.40	40.0	17.02	Peak	72.80	100	Vertical	Pass
2	93.390	28.35	-27.70	43.5	15.15	Peak	114.00	100	Vertical	Pass
3	147.322	20.39	-29.94	43.5	23.11	Peak	351.70	100	Vertical	Pass
4	228.171	22.53	-25.41	46.0	23.47	Peak	131.50	100	Vertical	Pass
5	253.973	22.46	-24.03	46.0	23.54	Peak	119.90	100	Vertical	Pass
6	558.019	24.34	-16.67	46.0	21.66	Peak	47.40	100	Vertical	Pass

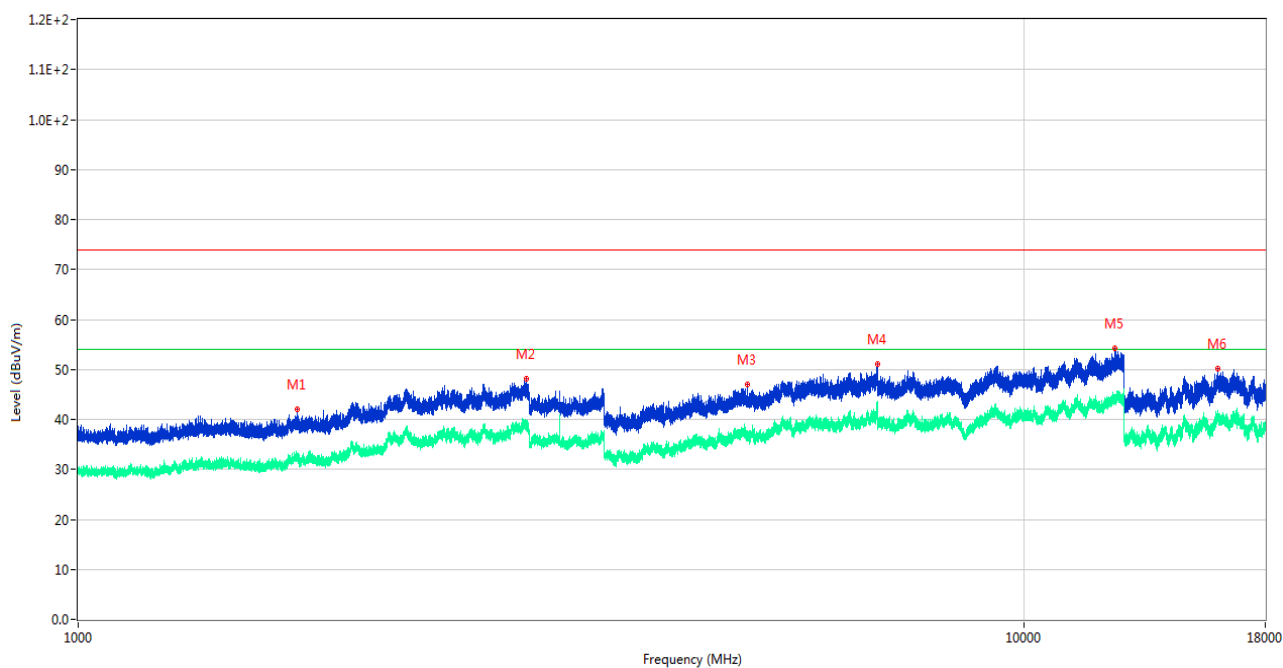
2) Test Antenna Horizontal, 30 MHz – 1 GHz



No.	Frequency (MHz)	Results (dBuV/m)	Factor (dB)	Limit (dBuV/m)	Margin (dB)	Detector	Table (Degree)	Height (cm)	Antenna	Verdict
1	46.344	13.10	-25.03	40.0	26.90	Peak	22.40	200	Horizontal	Pass
2	57.888	14.50	-25.63	40.0	25.50	Peak	360.60	200	Horizontal	Pass
3	186.461	17.60	-27.10	43.5	25.90	Peak	264.00	200	Horizontal	Pass
4	270.124	24.74	-23.98	46.0	21.26	Peak	268.50	100	Horizontal	Pass
5	353.834	21.33	-21.00	46.0	24.67	Peak	289.20	100	Horizontal	Pass
6	557.971	23.46	-16.67	46.0	22.54	Peak	110.60	200	Horizontal	Pass

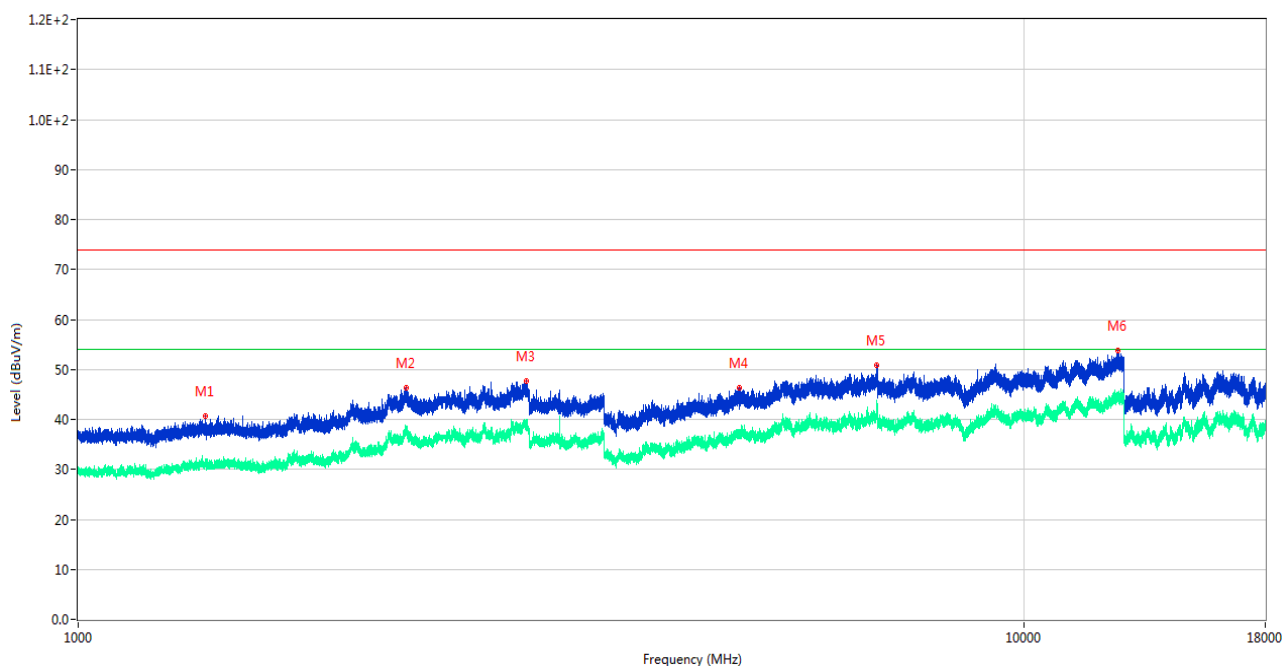
Equipment Information						
Equipment Name	Supplier	Model	Serial No.	Cal. Date	Cal. Due	Use
Frequency Below 1 GHz						
EMI Receiver	Keysight	N9038A	MY55330120	2024.08.01	2025.07.31	☒
Amplifier (30-1GHz)	COM-MV	ZT30-1000M	B2017119081	2024.11.28	2025.11.27	☒
Test Antenna- Bi-Log	SCHWARZB ECK	VULB 9168	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	1705.500	41.96	-14.34	74.0	32.04	Peak	0.50	100	Vertical	Pass
1**	1705.500	31.83	-14.34	54.0	22.17	AV	0.50	100	Vertical	Pass
2	2976.500	48.11	-6.29	74.0	25.89	Peak	79.40	100	Vertical	Pass
2**	2976.500	38.46	-6.29	54.0	15.54	AV	79.40	100	Vertical	Pass
3	5106.000	47.07	-3.95	74.0	26.93	Peak	146.90	100	Vertical	Pass
3**	5106.000	36.76	-3.95	54.0	17.24	AV	146.90	100	Vertical	Pass
4	6999.400	50.97	0.46	74.0	23.03	Peak	184.90	100	Vertical	Pass
4**	6999.400	43.07	0.46	54.0	10.93	AV	184.90	100	Vertical	Pass
5	12480.900	54.26	21.23	74.0	19.74	Peak	359.50	100	Vertical	Pass
5**	12480.900	44.25	21.23	54.0	9.75	AV	359.50	100	Vertical	Pass
6	16029.412	50.17	25.58	74.0	23.83	Peak	96.60	100	Vertical	Pass
6**	16029.412	40.50	25.58	54.0	13.50	AV	96.60	100	Vertical	Pass

4) Test Antenna Horizontal, 1 GHz – 18 GHz

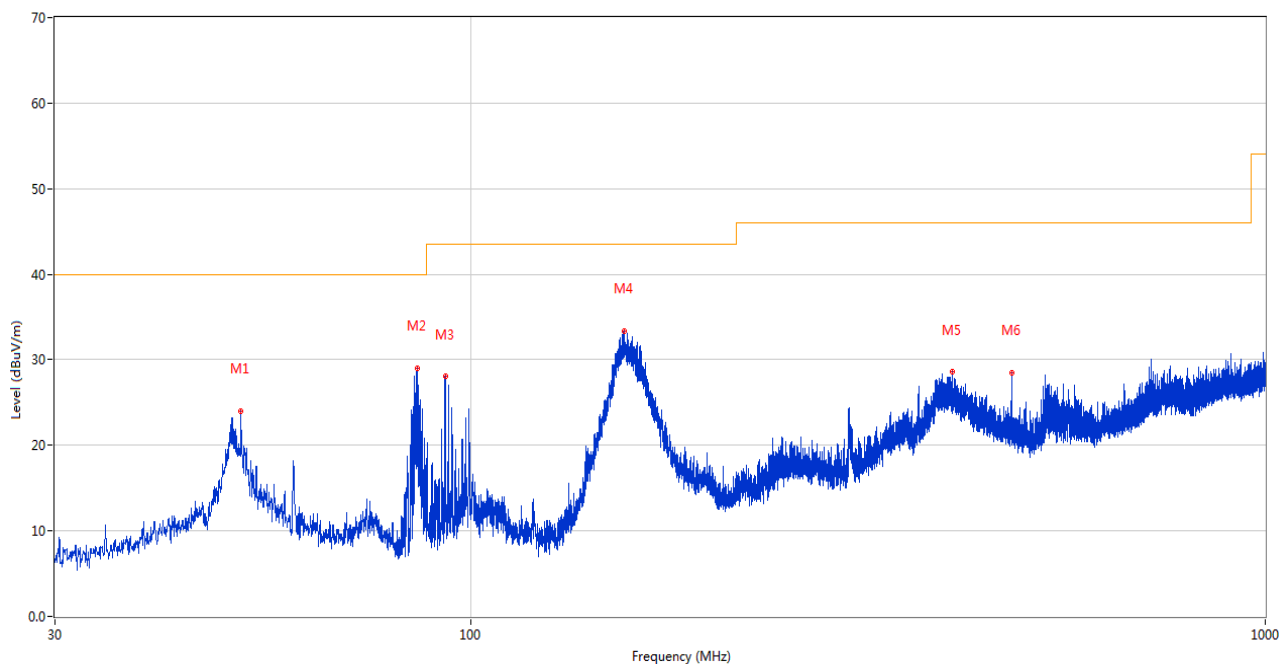


No.	Frequency (MHz)	Results (dBuV/m)	Factor (dB)	Limit (dBuV/m)	Margin (dB)	Detector	Table (Degree)	Height (cm)	Antenna	Verdict
1	1363.100	40.72	-15.29	74.0	33.28	Peak	0.90	100	Horizontal	Pass
1**	1363.100	30.67	-15.29	54.0	23.33	AV	0.90	100	Horizontal	Pass
2	2221.600	46.39	-8.23	74.0	27.61	Peak	259.80	100	Horizontal	Pass
2**	2221.600	38.29	-8.23	54.0	15.71	AV	259.80	100	Horizontal	Pass
3	2976.400	47.73	-6.29	74.0	26.27	Peak	200.30	100	Horizontal	Pass
3**	2976.400	38.84	-6.29	54.0	15.16	AV	200.30	100	Horizontal	Pass
4	4997.000	46.24	-3.80	74.0	27.76	Peak	208.80	100	Horizontal	Pass
4**	4997.000	36.95	-3.80	54.0	17.05	AV	208.80	100	Horizontal	Pass
5	6996.000	50.84	0.38	74.0	23.16	Peak	93.00	100	Horizontal	Pass
5**	6996.000	42.71	0.38	54.0	11.29	AV	93.00	100	Horizontal	Pass
6	12563.700	53.71	21.96	74.0	20.29	Peak	158.60	100	Horizontal	Pass
6**	12563.700	44.33	21.96	54.0	9.67	AV	158.60	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	/		☒

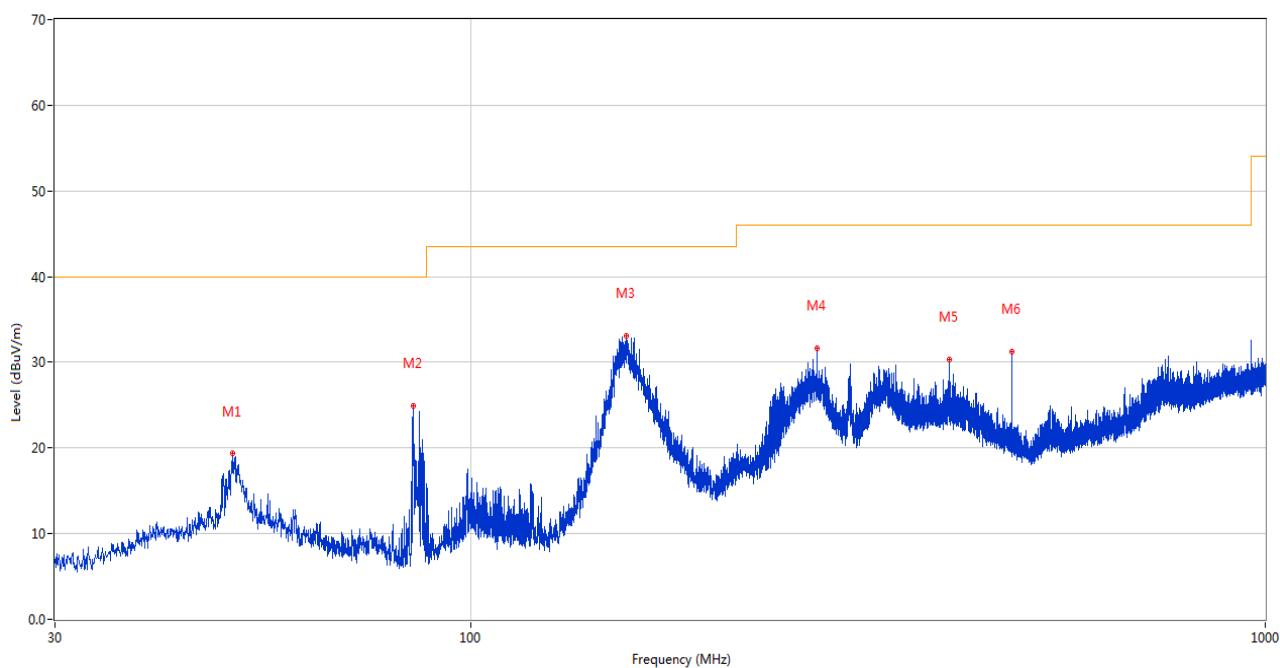
Test Mode 2

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	51.437	24.03	-24.76	40.0	15.97	Peak	320.30	100	Vertical	Pass
2	85.824	29.06	-30.03	40.0	10.94	Peak	8.50	100	Vertical	Pass
3	92.905	28.02	-27.68	43.5	15.48	Peak	86.90	100	Vertical	Pass
4	156.197	33.30	-29.26	43.5	10.20	Peak	241.90	100	Vertical	Pass
5	404.032	28.55	-20.36	46.0	17.45	Peak	8.50	100	Vertical	Pass
6	479.983	28.44	-18.81	46.0	17.56	Peak	322.50	100	Vertical	Pass

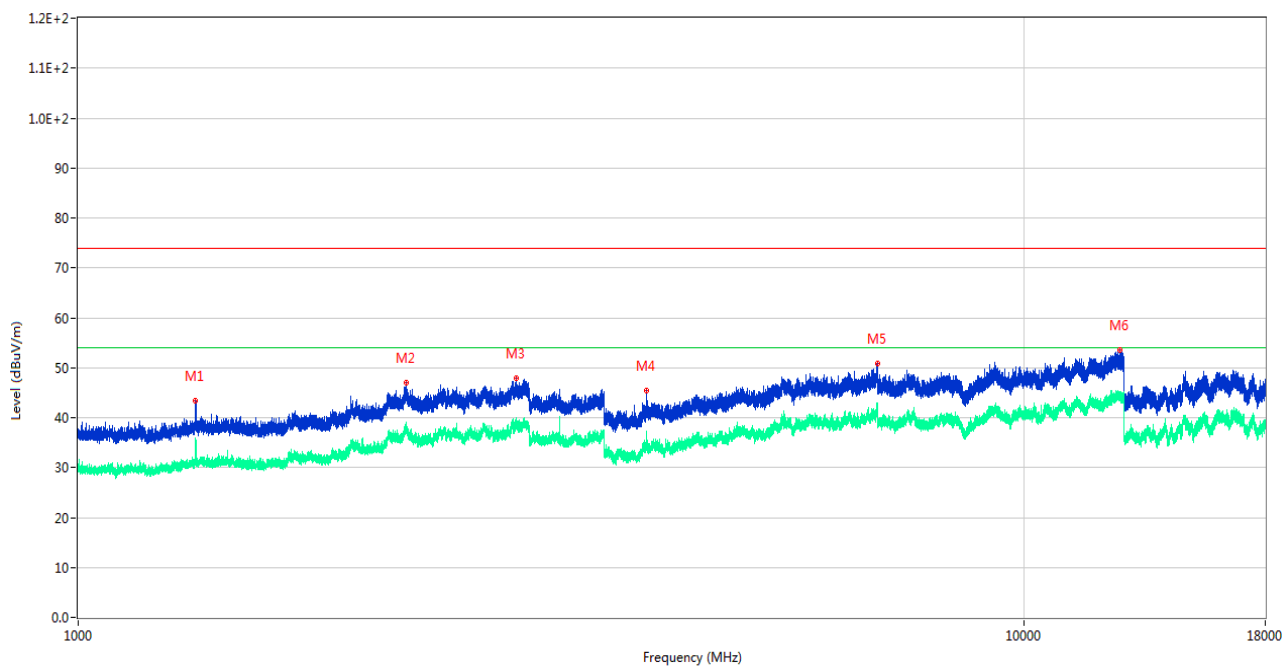
6) Test Antenna Horizontal, 30 MHz – 1 GHz



No.	Frequency (MHz)	Results (dBuV/m)	Factor (dB)	Limit (dBuV/m)	Margin (dB)	Detector	Table (Degree)	Height (cm)	Antenna	Verdict
1	50.127	19.32	-24.98	40.0	20.68	Peak	160.00	200	Horizontal	Pass
2	84.757	24.89	-30.39	40.0	15.11	Peak	59.80	200	Horizontal	Pass
3	156.828	33.06	-29.20	43.5	10.44	Peak	11.40	200	Horizontal	Pass
4	272.888	31.67	-23.75	46.0	14.33	Peak	224.20	100	Horizontal	Pass
5	399.813	30.29	-20.49	46.0	15.71	Peak	270.10	200	Horizontal	Pass
6	479.983	31.28	-18.81	46.0	14.72	Peak	310.40	100	Horizontal	Pass

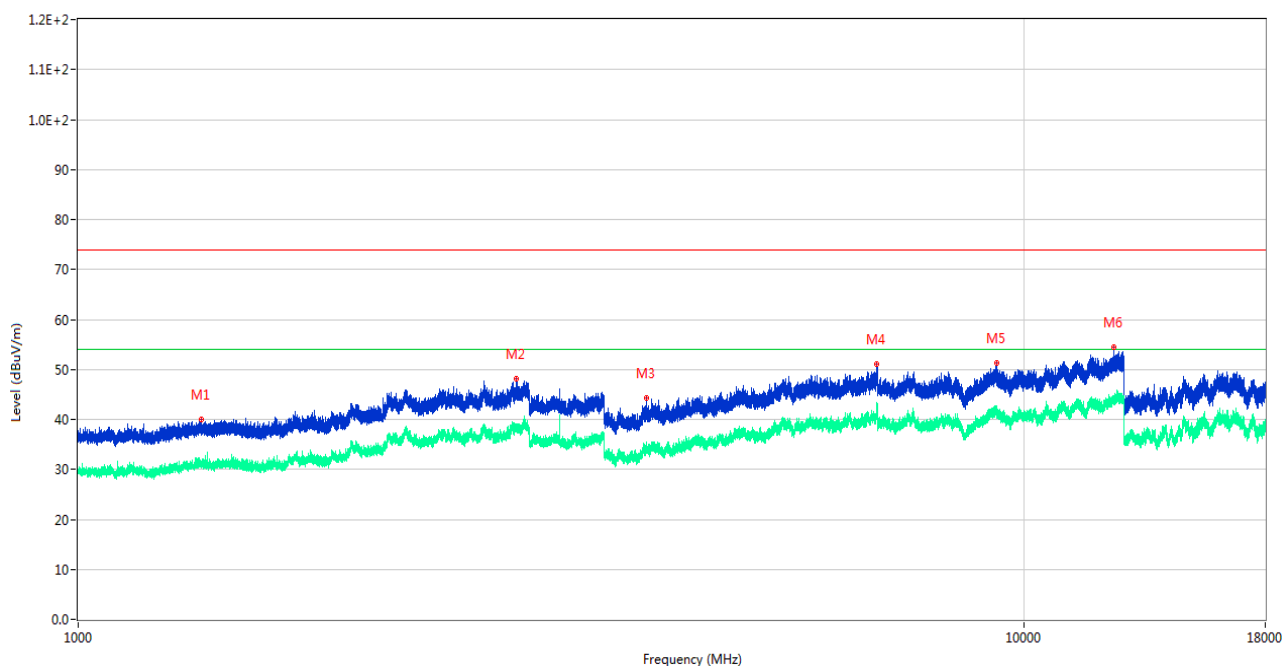
Equipment Information						
Equipment Name	Supplier	Model	Serial No.	Cal. Date	Cal. Due	Use
Frequency Below 1 GHz						
EMI Receiver	Keysight	N9038A	MY55330120	2024.08.01	2025.07.31	☒
Amplifier (30-1GHz)	COM-MV	ZT30-1000M	B2017119081	2023.12.05	2024.12.04	☒
Test Antenna- Bi-Log	SCHWARZB ECK	VULB 9168	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	1331.000	43.30	-15.57	74.0	30.70	Peak	190.90	100	Vertical	Pass
1**	1331.000	31.82	-15.57	54.0	22.18	AV	190.90	100	Vertical	Pass
2	2222.300	46.98	-8.26	74.0	27.02	Peak	250.90	100	Vertical	Pass
2**	2222.300	38.17	-8.26	54.0	15.83	AV	250.90	100	Vertical	Pass
3	2908.900	47.87	-6.75	74.0	26.13	Peak	54.30	100	Vertical	Pass
3**	2908.900	38.01	-6.75	54.0	15.99	AV	54.30	100	Vertical	Pass
4	3986.400	45.32	-6.06	74.0	28.68	Peak	165.30	100	Vertical	Pass
4**	3986.400	34.15	-6.06	54.0	19.85	AV	165.30	100	Vertical	Pass
5	6996.600	50.86	0.40	74.0	23.14	Peak	218.40	100	Vertical	Pass
5**	6996.600	42.41	0.40	54.0	11.59	AV	218.40	100	Vertical	Pass
6	12641.901	53.63	21.54	74.0	20.37	Peak	359.10	100	Vertical	Pass
6**	12641.901	44.62	21.54	54.0	9.38	AV	359.10	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	1349.100	39.90	-15.17	74.0	34.10	Peak	141.70	100	Horizontal	Pass
1**	1349.100	31.39	-15.17	54.0	22.61	AV	141.70	100	Horizontal	Pass
2	2907.900	48.19	-6.67	74.0	25.81	Peak	264.40	100	Horizontal	Pass
2**	2907.900	38.16	-6.67	54.0	15.84	AV	264.40	100	Horizontal	Pass
3	3985.000	44.24	-6.01	74.0	29.76	Peak	153.90	100	Horizontal	Pass
3**	3985.000	35.07	-6.01	54.0	18.93	AV	153.90	100	Horizontal	Pass
4	6996.000	51.10	0.38	74.0	22.90	Peak	37.30	100	Horizontal	Pass
4**	6996.000	43.24	0.38	54.0	10.76	AV	37.30	100	Horizontal	Pass
5	9351.750	51.21	20.39	74.0	22.79	Peak	262.90	100	Horizontal	Pass
5**	9351.750	40.86	20.39	54.0	13.14	AV	262.90	100	Horizontal	Pass
6	12438.350	54.41	21.50	74.0	19.59	Peak	125.00	100	Horizontal	Pass
6**	12438.350	43.76	21.50	54.0	10.24	AV	125.00	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	/		☒

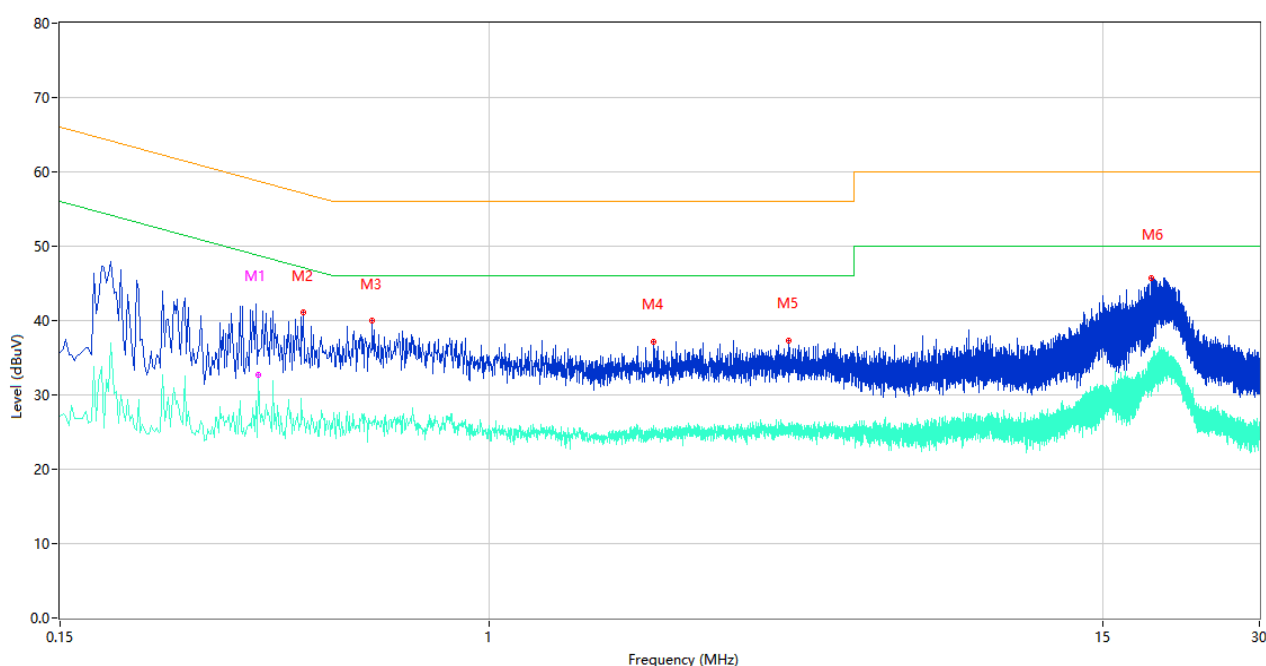
A.2 Conducted Emission, AC Ports

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.	S01	Temperature	22.3℃
Humidity	58%RH	Pressure	101kPa
Test Engineer	Yang Yang	Test Date	2025.02.12

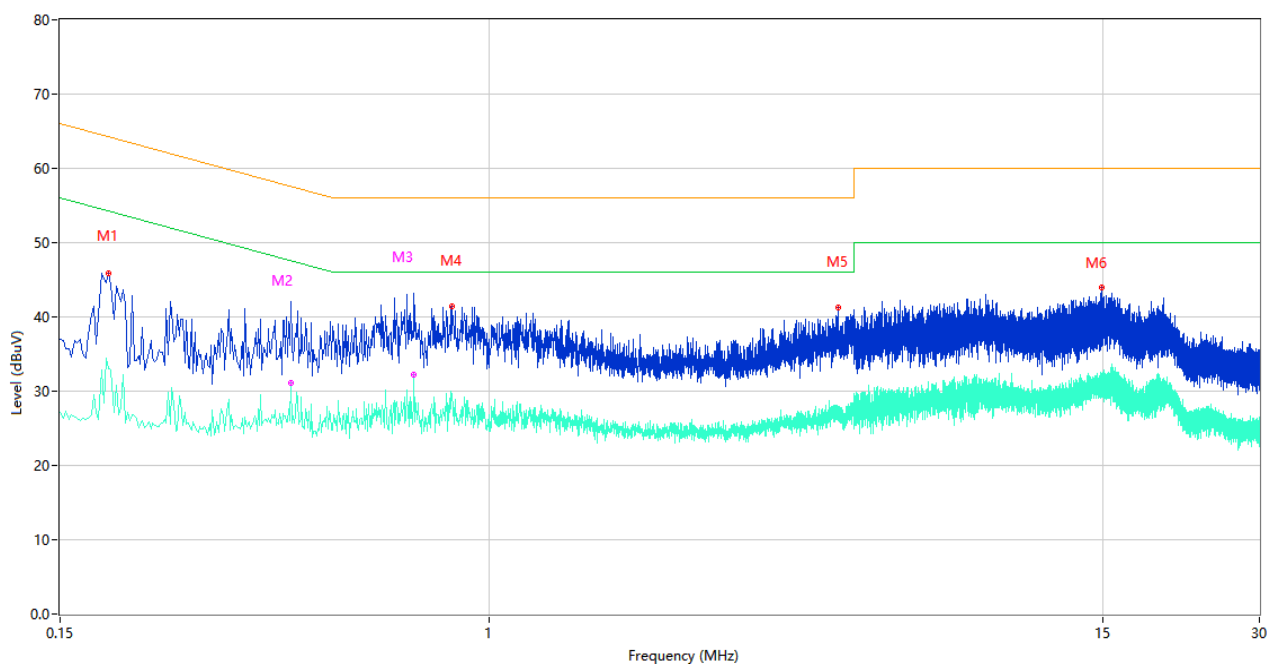
Test Mode 1

1) AC Ports - L Phase



No.	Frequency (MHz)	Results (dBuV)	Factor (dB)	Limit (dBuV)	Margin (dB)	Detector	Line	Verdict
1	0.360	36.07	10.72	58.73	22.66	Peak	L	Pass
1**	0.360	32.75	10.72	48.73	15.98	AV	L	Pass
2	0.440	41.08	10.13	57.06	15.98	Peak	L	Pass
2**	0.440	26.96	10.13	47.06	20.10	AV	L	Pass
3	0.596	39.98	10.15	56.00	16.02	Peak	L	Pass
3**	0.596	25.84	10.15	46.00	20.16	AV	L	Pass
4	2.062	37.21	10.33	56.00	18.79	Peak	L	Pass
4**	2.062	25.91	10.33	46.00	20.09	AV	L	Pass
5	3.746	37.32	10.46	56.00	18.68	Peak	L	Pass
5**	3.746	25.38	10.46	46.00	20.62	AV	L	Pass
6	18.612	45.66	10.81	60.00	14.34	Peak	L	Pass
6**	18.612	34.95	10.81	50.00	15.05	AV	L	Pass

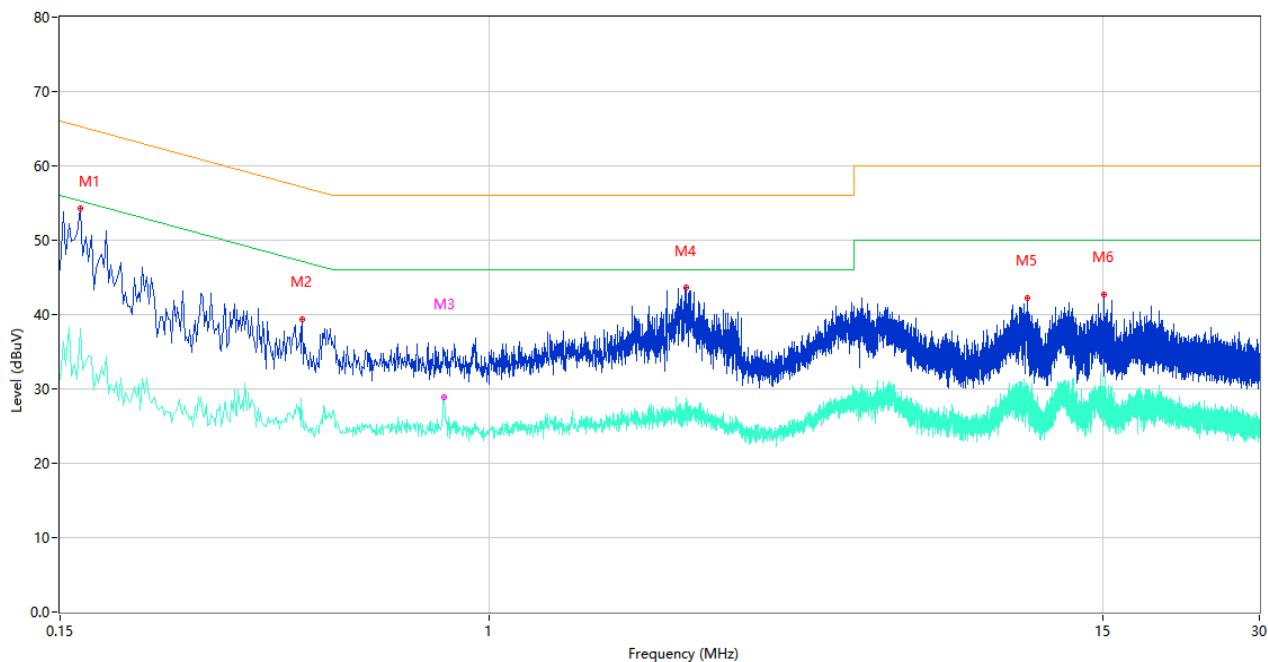
2) AC Ports - N Phase



No.	Frequency (MHz)	Results (dBuV)	Factor (dB)	Limit (dBuV)	Margin (dB)	Detector	Line	Verdict
1	0.186	45.80	9.78	64.21	18.41	Peak	N	Pass
1**	0.186	33.04	9.78	54.21	21.17	AV	N	Pass
2	0.416	42.08	10.38	57.53	15.45	Peak	N	Pass
2**	0.416	31.13	10.38	47.53	16.40	AV	N	Pass
3	0.716	43.18	10.50	56.00	12.82	Peak	N	Pass
3**	0.716	32.17	10.50	46.00	13.83	AV	N	Pass
4	0.848	41.49	10.62	56.00	14.51	Peak	N	Pass
4**	0.848	29.75	10.62	46.00	16.25	AV	N	Pass
5	4.664	41.34	10.19	56.00	14.66	Peak	N	Pass
5**	4.664	27.95	10.19	46.00	18.05	AV	N	Pass
6	14.914	44.03	10.95	60.00	15.97	Peak	N	Pass
6**	14.914	32.11	10.95	50.00	17.89	AV	N	Pass

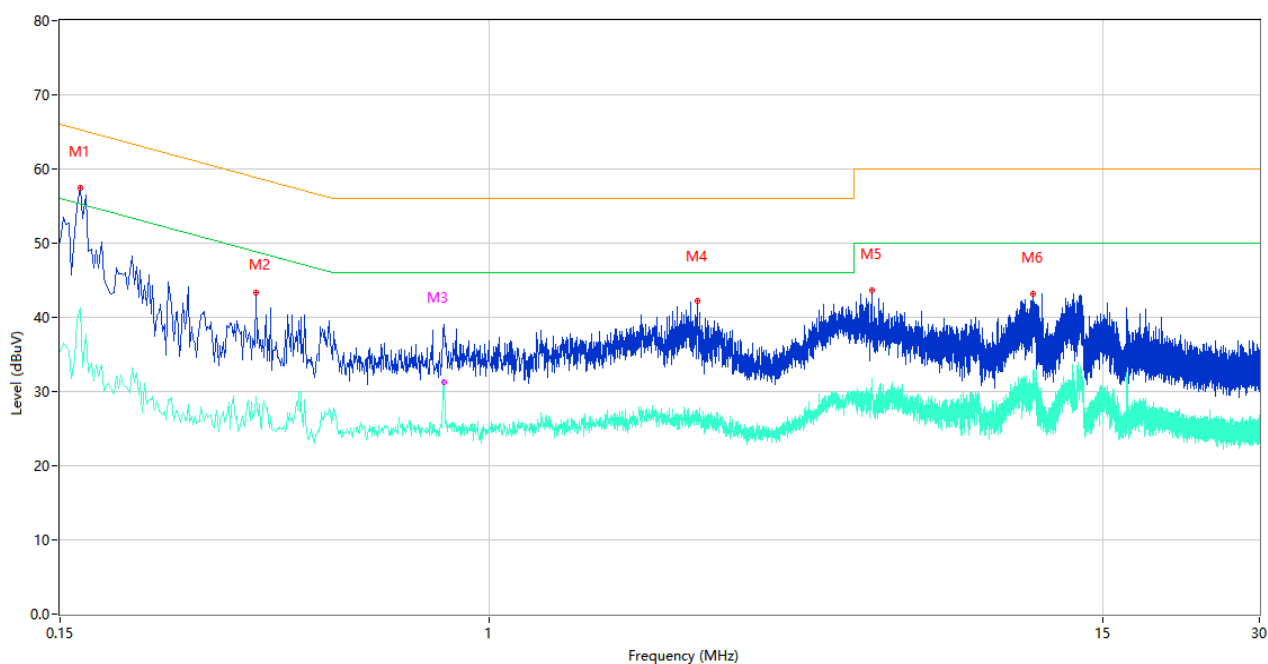
Test Mode 2

3) AC Ports - L Phase



No.	Frequency (MHz)	Results (dBuV)	Factor (dB)	Limit (dBuV)	Margin (dB)	Detector	Line	Verdict
1	0.164	54.21	9.78	65.26	11.05	Peak	L	Pass
1**	0.164	38.14	9.78	55.26	17.12	AV	L	Pass
2	0.438	39.37	10.15	57.10	17.73	Peak	L	Pass
2**	0.438	27.16	10.15	47.10	19.94	AV	L	Pass
3	0.818	34.43	10.56	56.00	21.57	Peak	L	Pass
3**	0.818	28.93	10.56	46.00	17.07	AV	L	Pass
4	2.380	43.64	10.20	56.00	12.36	Peak	L	Pass
4**	2.380	28.71	10.20	46.00	17.29	AV	L	Pass
5	10.740	42.24	10.42	60.00	17.76	Peak	L	Pass
5**	10.740	30.40	10.42	50.00	19.60	AV	L	Pass
6	15.086	42.71	10.76	60.00	17.29	Peak	L	Pass
6**	15.086	30.37	10.76	50.00	19.63	AV	L	Pass

4) AC Ports - N Phase



No.	Frequency (MHz)	Results (dBuV)	Factor (dB)	Limit (dBuV)	Margin (dB)	Detector	Line	Verdict
1	0.164	57.39	9.78	65.26	7.87	Peak	N	Pass
1**	0.164	41.26	9.78	55.26	14.00	AV	N	Pass
2	0.356	43.41	10.73	58.82	15.41	Peak	N	Pass
2**	0.356	29.34	10.73	48.82	19.48	AV	N	Pass
3	0.818	37.45	10.56	56.00	18.55	Peak	N	Pass
3**	0.818	31.24	10.56	46.00	14.76	AV	N	Pass
4	2.504	42.16	10.16	56.00	13.84	Peak	N	Pass
4**	2.504	26.10	10.16	46.00	19.90	AV	N	Pass
5	5.410	43.58	10.07	60.00	16.42	Peak	N	Pass
5**	5.410	31.73	10.07	50.00	18.27	AV	N	Pass
6	11.028	43.15	10.54	60.00	16.85	Peak	N	Pass
6**	11.028	31.59	10.54	50.00	18.41	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-SZ2520273-AE.PDF”.

ANNEX C EUT EXTERNAL PHOTOS

Please refer the document “BL-SZ2520273-AW.PDF”.

ANNEX D EUT INTERNAL PHOTOS

Please refer the document “BL-SZ2520273-AI.PDF”.

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--END OF REPORT--