

TEST REPORT

Applicant: Realme Chongqing Mobile Telecommunications Corp., Ltd.
Address: No.178 Yulong Avenue, Yufengshan, Yubei District, Chongqing, China
Equipment Type: Mobile Phone
Model Name: RMX3933
Brand Name: realme
FCC ID: 2AUYFRMX3933
Test Standard: 47 CFR Part 15 Subpart B
ANSI C63.4-2014
Sample Arrival Date: Apr. 24, 2024
Test Date: Apr. 27, 2024 - Apr. 28, 2024
Date of Issue: May 21, 2024

ISSUED BY:

Shenzhen BALUN Technology Co., Ltd.

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(Technical Director)

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Revision History

Version	Issue Date	Revisions
<u>Rev. 01</u>	<u>May 21, 2024</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	Realme Chongqing Mobile Telecommunications Corp., Ltd.
Address	No.178 Yulong Avenue, Yufengshan, Yubei District, Chongqing, China

2.2 Manufacturer Information

Manufacturer	Realme Chongqing Mobile Telecommunications Corp., Ltd.
Address	No.178 Yulong Avenue, Yufengshan, Yubei District, Chongqing, China

2.3 General Description for Equipment under Test (EUT)

EUT Name	Mobile Phone
Model Name Under Test	RMX3933
Series Model Name	N/A
Description of Model name differentiation	N/A
Hardware Version	11
Software Version	realme UI Android 14
Dimensions (Approx.)	167.26*76.67*7.84mm
Weight (Approx.)	187g
EUT ID	S01, S02
IMEI Number	S01: IMEI1: 860118070022495, IMEI2: 860118070022487 S02: IMEI1: 860118070022834, IMEI2: 860118070022826

2.4 Ancillary Equipment

Ancillary Equipment 1	Li-Polymer Battery 1	
	Brand Name	SUPERVOOC
	Model No.	BLPA75
	Capacitance	Rated: 4880mAh/19.09Wh Typical: 5000mAh/19.55Wh
	Rated Voltage	3.91V
	Limited Voltage	4.5 V
	Manufacturer	Dongguan NVT Technology Co., Ltd.
Ancillary Equipment 2	Power Supply Unit 1	
	Brand Name	SUPERVOOC
	Model No.	OP52JCUH (US Plug)
	Manufacturer	GOLDEN LAKE
	Rated Input	100-240VAC 50/60Hz 0.4A
	Rated Output	5.0VDC 2.0A 10.0W

Ancillary Equipment 3	Power Supply Unit 2	
	Brand Name	SUPERVOOC
	Model No.	OP52JCUH (US Plug)
	Manufacturer	Chenyang
	Rated Input	100-240VAC 50/60Hz 0.4A
	Rated Output	5.0VDC 2.0A 10.0W
Ancillary Equipment 4	USB Cable 1	
	Model No.	DL154
	Length (Approx.)	1.0 m
Note 1: Letter in () means plug type.		
Note 2: All adapters are tested, only the worst data of OP52JCUH (US Plug) shown in this report.		

2.5 Technical Information

Network and Wireless connectivity	2G Network GSM/GPRS/EDGE 850/1900 MHz 3G Network WCDMA/HSDPA/HSUPA Band 2/4/5 4G Network LTE FDD Band 2/4/5/7/13/66 LTE TDD Band 38/41 Bluetooth (BR+EDR+BLE) 2.4G WIFI 802.11b, 802.11g, 802.11n(HT20/40) 5G WIFI 802.11a, 802.11n(HT20/40), 802.11ac(VHT20/40/80) U-NII-1/2A/2C/3, BeiDou, Galileo, GLONASS, GPS, SBAS
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-SZ2420300-401, the changes of the EUT of this report as below:

1. The model name RMX3939 is updated to RMX3933.
2. Removed NFC function.
3. Removed leather Material Battery cover and updated the camera doco.
4. Changed camera parameters, Memory configuration, size and Weight.
5. Changed adapter.

Other hardware circuit and software are the same as EUT referred in test report BL-SZ2420300-401.

Therefore, Except for The USB mode test in this report, 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
Wireless Communications Test Set	R&S	CMW500	127801	N/A	Cal. Due 2024.12.04	☒
Laptop	Lenovo	N/A	N/A	N/A	N/A	☒
Data connector	N/A	N/A	N/A	N/A	N/A	☒
USB disk	Sandisk	N/A	N/A	N/A	32G	☒
TF Card	SAMSUNG	N/A	N/A	N/A	256G	☒
Type-C Headset	OPPO	N/A	N/A	N/A	1.12m	☒
Headset	OPPO	N/A	N/A	N/A	1.12m	☒

4.2 Test Configurations

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

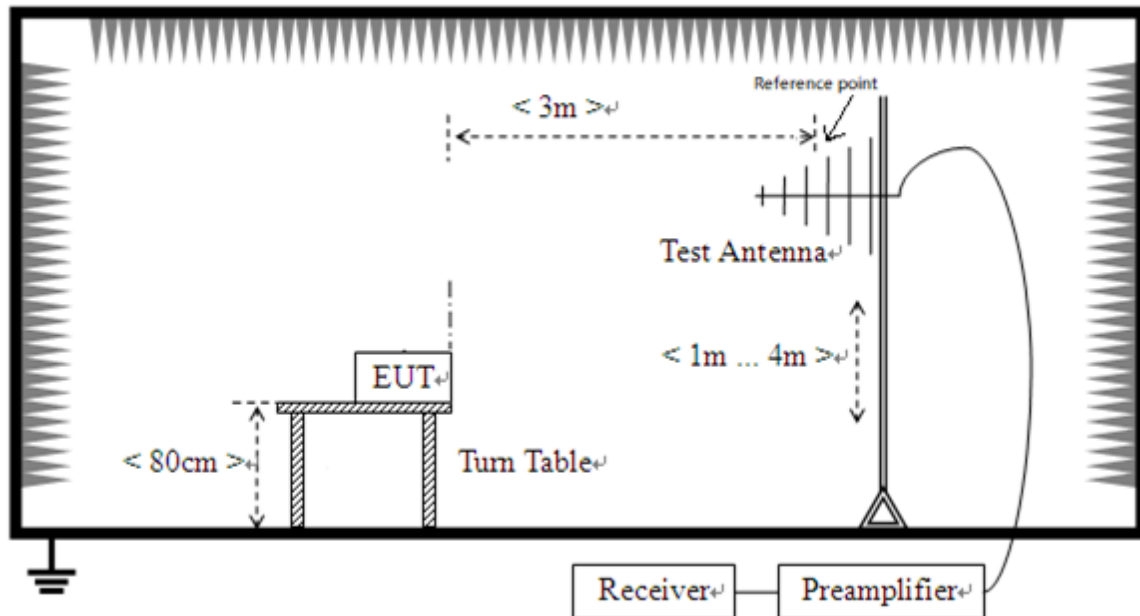
Test Mode Configuration	Description
Mode 1	<u>The GSM850 RX Test Mode</u> GSM850 RX + EUT +Adapter + USB Cable + Battery + Headset + TF Card
Mode 2	<u>The WCDMA Band 5 RX Test Mode</u> WCDMA Band 5 RX + EUT +Adapter + USB Cable + Battery + Headset + TF Card
Mode 3	<u>The FDD LTE Band 5 RX Test Mode</u> LTE Band 5 RX + EUT +Adapter + USB Cable + Battery + Headset + TF Card
Mode 4	<u>The FDD LTE Band 13 RX Test Mode</u> LTE Band 13 RX + EUT +Adapter + USB Cable + Battery + Headset + TF Card
Mode 5	<u>The Standby Test Mode</u> <u>EUT + Adapter + USB Cable + Battery + Headset + TF Card</u>
Mode 6	<u>The Rear Camera Test Mode</u> EUT + Adapter + USB Cable + Battery + Headset + TF Card
Mode 7	<u>The Front Camera Test Mode</u> EUT + Adapter + USB Cable + Battery + Headset + TF Card
Mode 8	<u>The Video Play Test Mode</u> EUT + Adapter + USB Cable + Battery + Headset + TF Card
Mode 9	<u>The USB Test Mode</u> EUT + USB Cable + Battery + Laptop + Headset + TF Card
Mode 10	<u>The OTG Test Mode</u> EUT + Battery + Data connector + USB Disk + Headset + TF Card
Mode 11	<u>The Type-C Headset Test Mode</u>

	EUT + Type-C Headset + Battery
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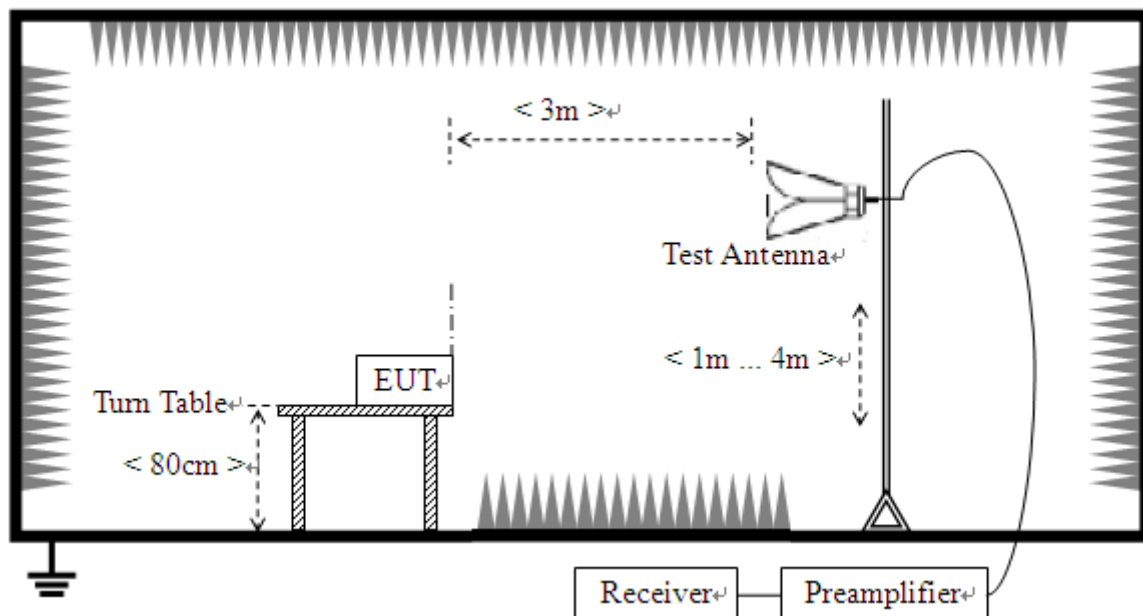
Test Case	Test Mode Configuration	Worst Mode
Radiated Emission	Mode 1~Mode 11	5, 9
Conducted Emission, AC Ports	Mode 1~Mode 9	5, 9
Note: All operation modes were tested, but only test data of the worst mode was presented in this report.		

4.3 Test Setups

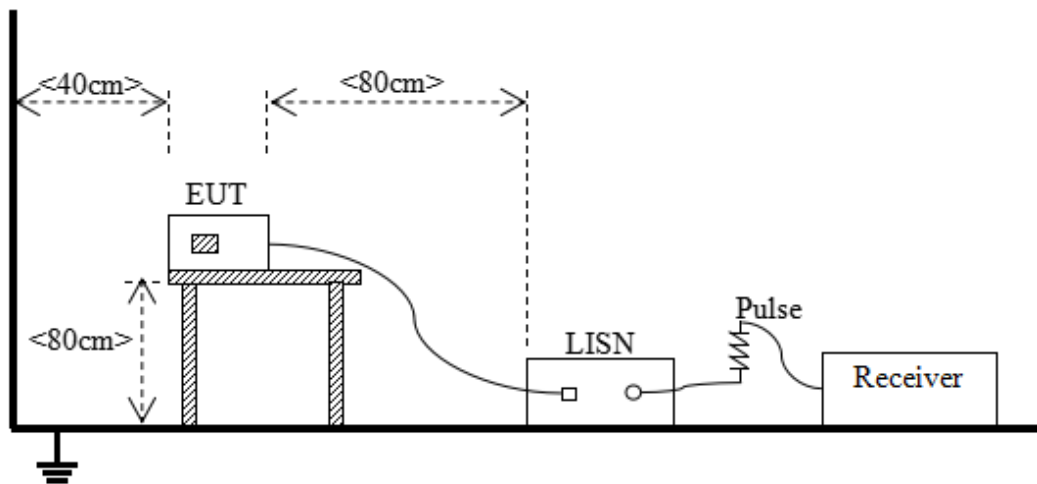
Test Setup 1



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 $\mu\text{V/m}$) = $20 \cdot \log [\text{Field Strength } (\mu\text{V/m})]$.
- 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:

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

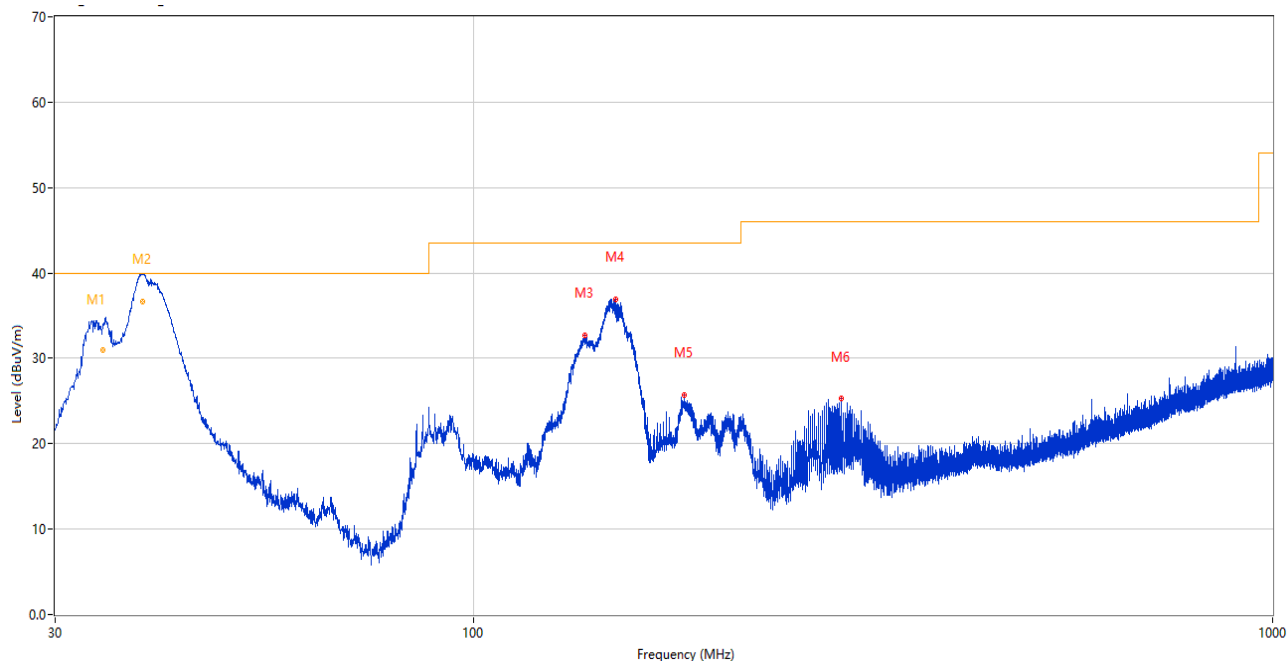
Note 2: For the test data above 1 GHz, according the ANSI C63.4-2014, where limits are specified for both average and peak (or quasi-peak) detector functions, if the peak (or quasi-peak) measured value

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	25.3℃
Humidity	55%RH	Pressure	101kPa
Test Engineer	He shichang	Test Date	2024.04.27

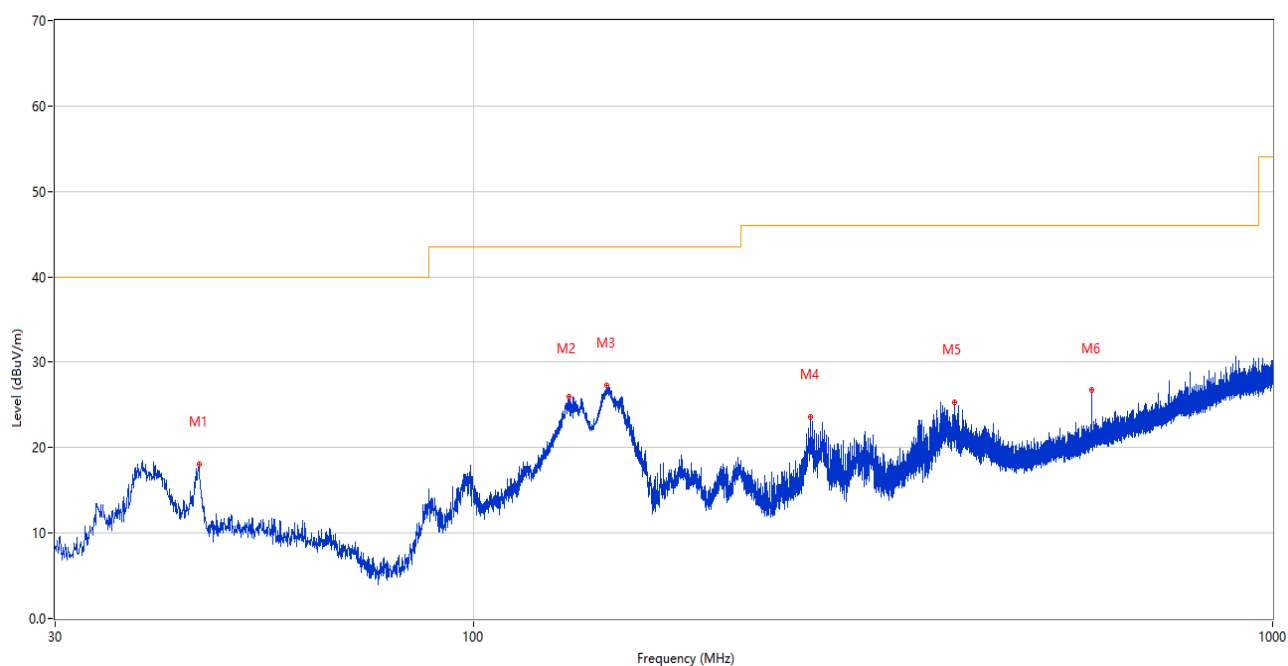
Test Mode 5

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	34.462	33.68	-28.53	40.0	6.32	Peak	245.00	101	Vertical	N/A
1*	34.462*	30.96	-28.53	40.0	9.04	QP	245.00	101	Vertical	Pass
2	38.598	38.96	-27.12	40.0	1.04	Peak	207.00	100	Vertical	N/A
2*	38.598*	36.70	-27.12	40.0	3.30	QP	207.00	100	Vertical	Pass
3	137.913	32.64	-30.20	43.5	10.86	Peak	359.00	100	Vertical	Pass
4	150.668	36.95	-30.09	43.5	6.55	Peak	360.00	100	Vertical	Pass
5	183.696	25.65	-28.12	43.5	17.85	Peak	353.00	100	Vertical	Pass
6	288.796	25.25	-23.93	46.0	20.75	Peak	345.00	200	Vertical	Pass

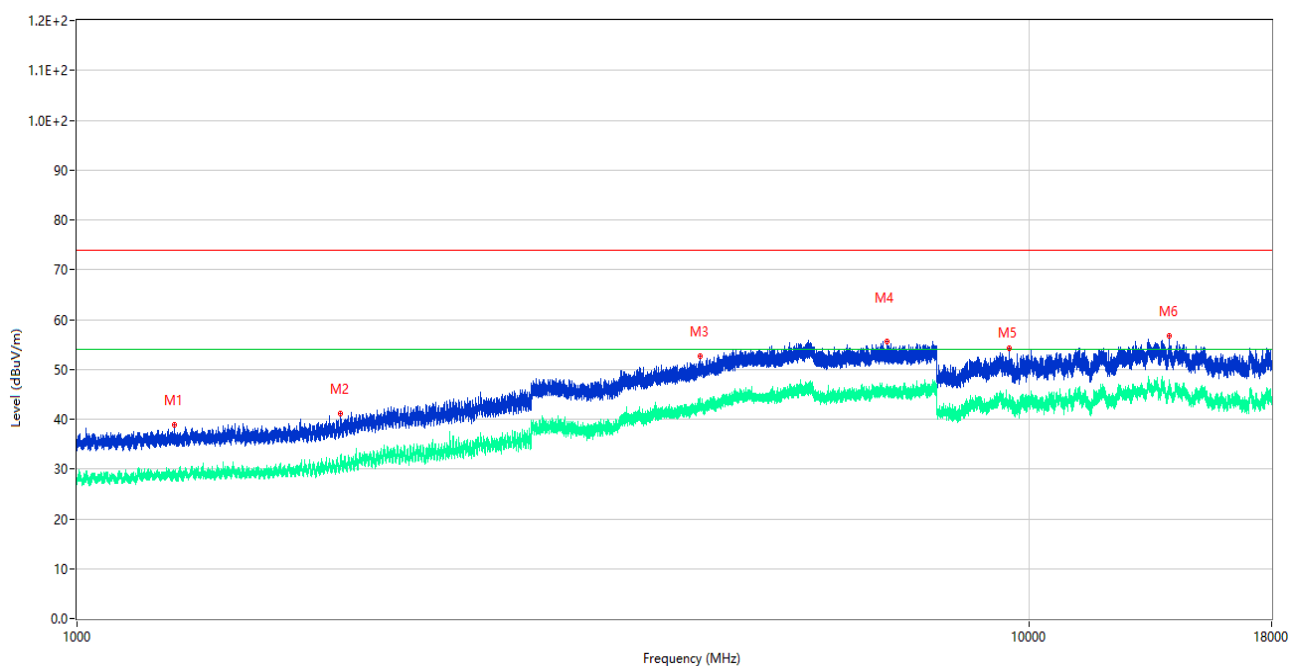
2) Test Antenna Horizontal, 30 MHz – 1 GHz



No.	Frequency (MHz)	Results (dBuV/m)	Factor (dB)	Limit (dBuV/m)	Margin (dB)	Detector	Table (Degree)	Height (cm)	Antenna	Verdict
1	45.374	18.08	-25.53	40.0	21.92	Peak	16.00	100	Horizontal	Pass
2	131.850	26.02	-29.94	43.5	17.48	Peak	142.00	200	Horizontal	Pass
3	146.836	27.31	-30.23	43.5	16.19	Peak	251.00	200	Horizontal	Pass
4	264.110	23.56	-24.51	46.0	22.44	Peak	218.00	100	Horizontal	Pass
5	400.006	25.30	-20.95	46.0	20.70	Peak	86.00	100	Horizontal	Pass
6	594.006	26.70	-16.07	46.0	19.30	Peak	352.00	200	Horizontal	Pass

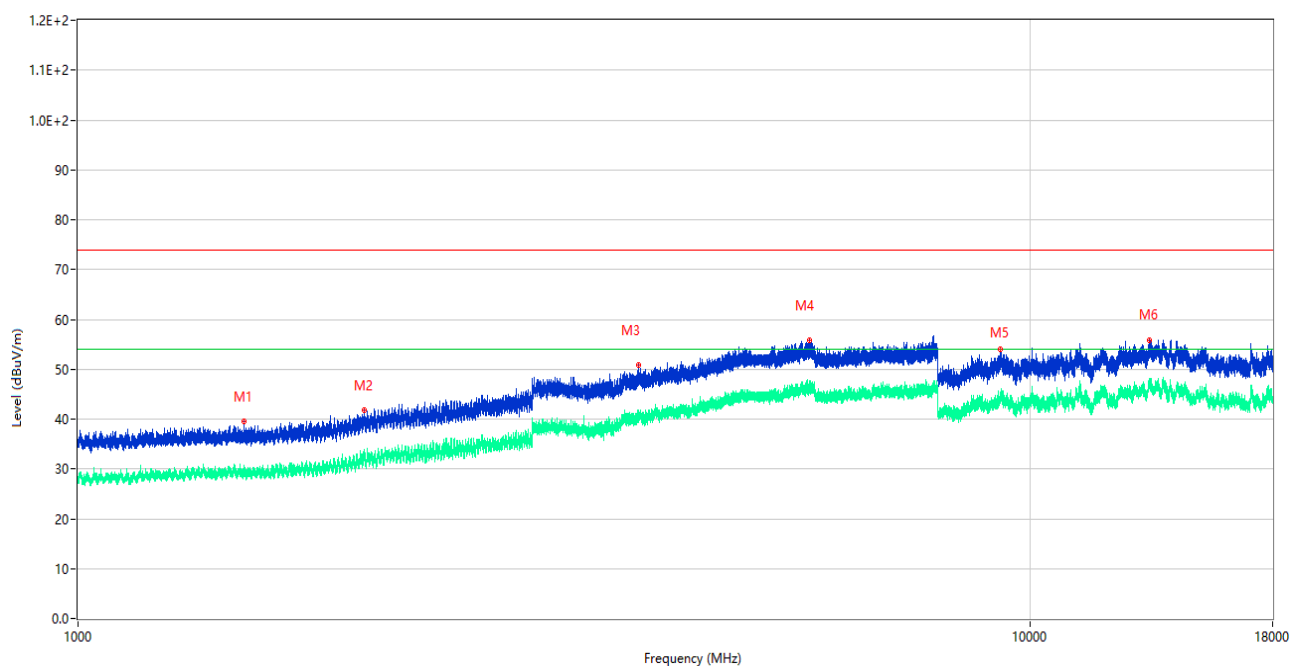
Equipment Information						
Equipment Name	Supplier	Model	Serial No.	Cal. Date	Cal. Due	Use
Frequency Below 1 GHz						
EMI Receiver	Keysight	N9038A	MY55330120	2023.09.05	2024.09.04	☒
Amplifier (30MHz-1GHz)	COM-MV	ZT30-1000M	B2017119081	2023.12.05	2024.12.04	☒
Test Antenna- Bi-Log	SCHWARZB ECK	VULB 9168	9168-00867	2022.04.12	2025.04.11	☒
Anechoic Chamber (#2)	YiHeng	9m*6m*6m	142	2021.08.19	2024.08.18	☒
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	1264.700	38.89	-16.28	74.0	35.11	Peak	143.00	100	Vertical	Pass
1**	1264.700	28.60	-16.28	54.0	25.40	AV	143.00	100	Vertical	Pass
2	1891.200	41.04	-14.69	74.0	32.96	Peak	125.00	100	Vertical	Pass
2**	1891.200	31.68	-14.69	54.0	22.32	AV	125.00	100	Vertical	Pass
3	4515.500	52.57	0.69	74.0	21.43	Peak	359.00	100	Vertical	Pass
3**	4515.500	42.04	0.69	54.0	11.96	AV	359.00	100	Vertical	Pass
4	7094.500	55.61	2.10	74.0	18.39	Peak	115.00	100	Vertical	Pass
4**	7094.500	45.23	2.10	54.0	8.77	AV	115.00	100	Vertical	Pass
5	9532.500	54.26	1.26	74.0	19.74	Peak	37.00	100	Vertical	Pass
5**	9532.500	43.59	1.26	54.0	10.41	AV	37.00	100	Vertical	Pass
6	14051.000	56.64	5.43	74.0	17.36	Peak	103.00	100	Vertical	Pass
6**	14051.000	46.48	5.43	54.0	7.52	AV	103.00	100	Vertical	Pass

4) Test Antenna Horizontal, 1 GHz – 18 GHz



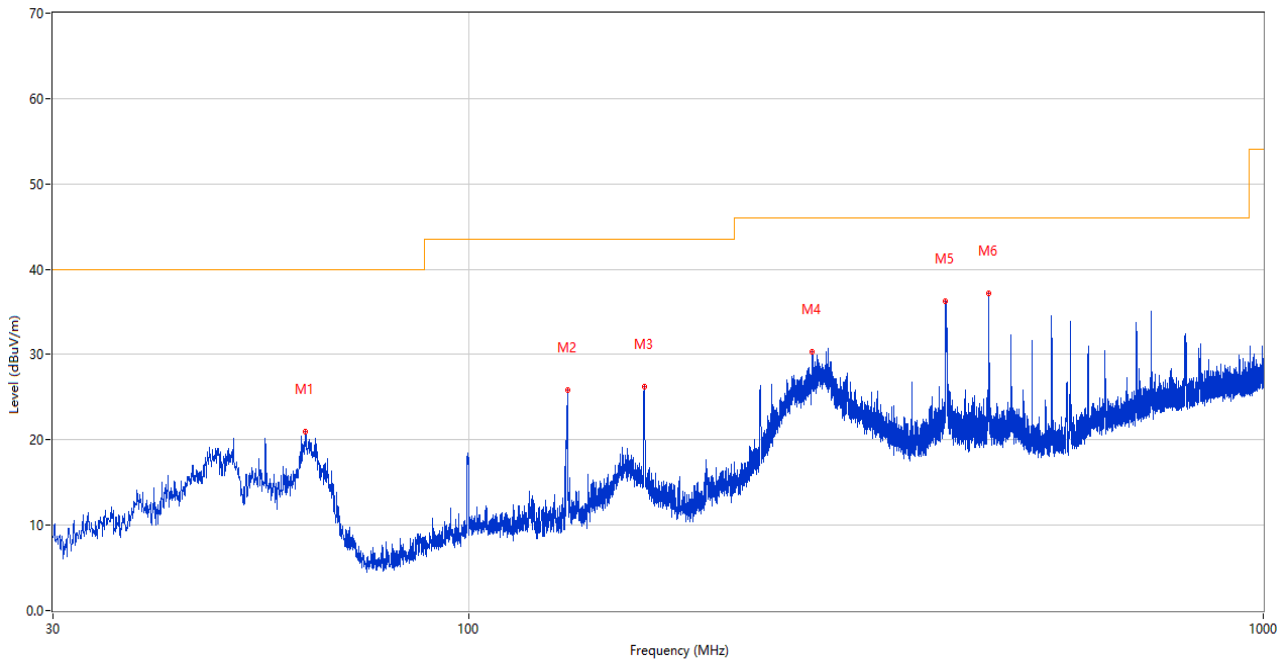
No.	Frequency (MHz)	Results (dBuV/m)	Factor (dB)	Limit (dBuV/m)	Margin (dB)	Detector	Table (Degree)	Height (cm)	Antenna	Verdict
1	1495.600	39.48	-16.05	74.0	34.52	Peak	327.00	100	Horizontal	Pass
1**	1495.600	29.61	-16.05	54.0	24.39	AV	327.00	100	Horizontal	Pass
2	1996.600	41.87	-13.83	74.0	32.13	Peak	51.00	100	Horizontal	Pass
2**	1996.600	31.62	-13.83	54.0	22.38	AV	51.00	100	Horizontal	Pass
3	3885.500	50.78	-1.77	74.0	23.22	Peak	274.00	100	Horizontal	Pass
3**	3885.500	41.24	-1.77	54.0	12.76	AV	274.00	100	Horizontal	Pass
4	5865.750	55.78	3.89	74.0	18.22	Peak	336.00	100	Horizontal	Pass
4**	5865.750	45.87	3.89	54.0	8.13	AV	336.00	100	Horizontal	Pass
5	9305.500	53.98	2.20	74.0	20.02	Peak	142.00	100	Horizontal	Pass
5**	9305.500	44.41	2.20	54.0	9.59	AV	142.00	100	Horizontal	Pass
6	13353.500	55.91	5.21	74.0	18.09	Peak	314.00	100	Horizontal	Pass
6**	13353.500	47.40	5.21	54.0	6.60	AV	314.00	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	2023.09.05	2024.09.04	☒
Amplifier (1-12GHz)	Advanced Microwave	WLA652A	1740103	2023.12.05	2024.12.04	☒
Amplifier (0.8-21GHz)	Mini-Circuits	ZVA-213-S+	225321316	2023.12.05	2024.12.04	☒
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.	S13	Temperature	20.9℃
Humidity	46%RH	Pressure	101kPa
Test Engineer	He shichang	Test Date	2024.03.07

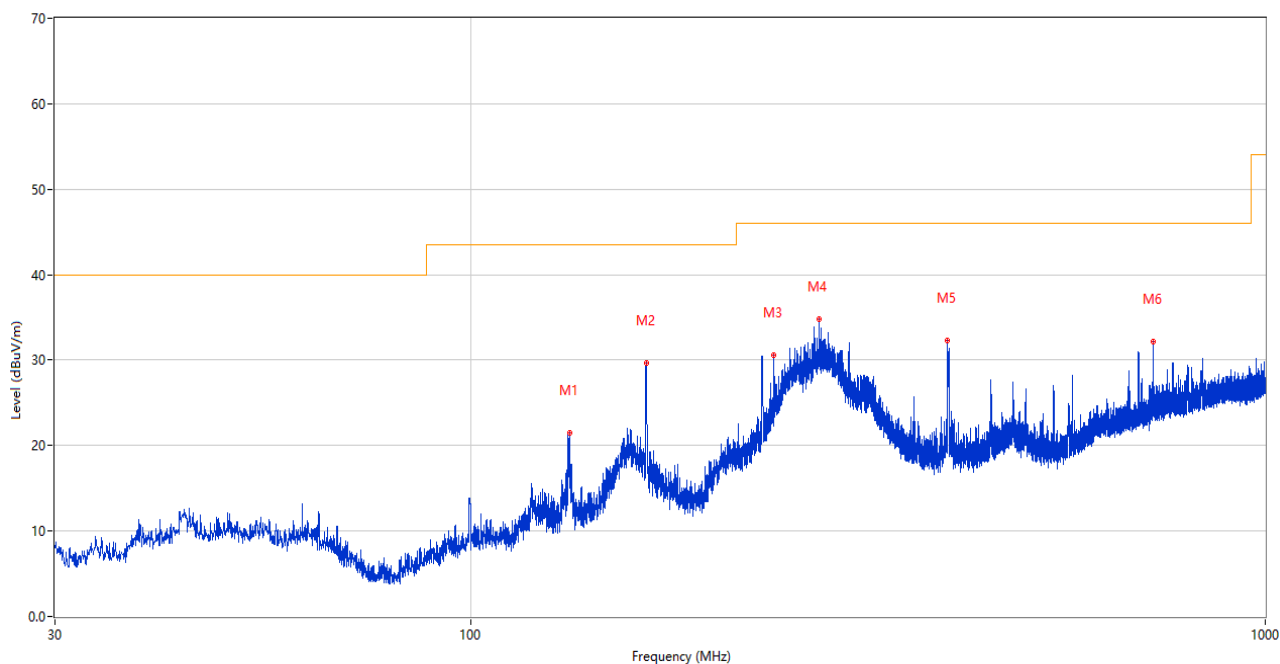
Test Mode 9

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	62.301	20.93	-27.13	40.0	19.07	Peak	220.00	100	Vertical	Pass
2	133.257	25.88	-30.00	43.5	17.62	Peak	277.00	100	Vertical	Pass
3	166.576	26.29	-29.24	43.5	17.21	Peak	199.00	100	Vertical	Pass
4	270.948	30.33	-24.40	46.0	15.67	Peak	358.00	200	Vertical	Pass
5	398.600	36.30	-21.01	46.0	9.70	Peak	360.00	100	Vertical	Pass
6	451.514	37.13	-19.86	46.0	8.87	Peak	144.00	100	Vertical	Pass

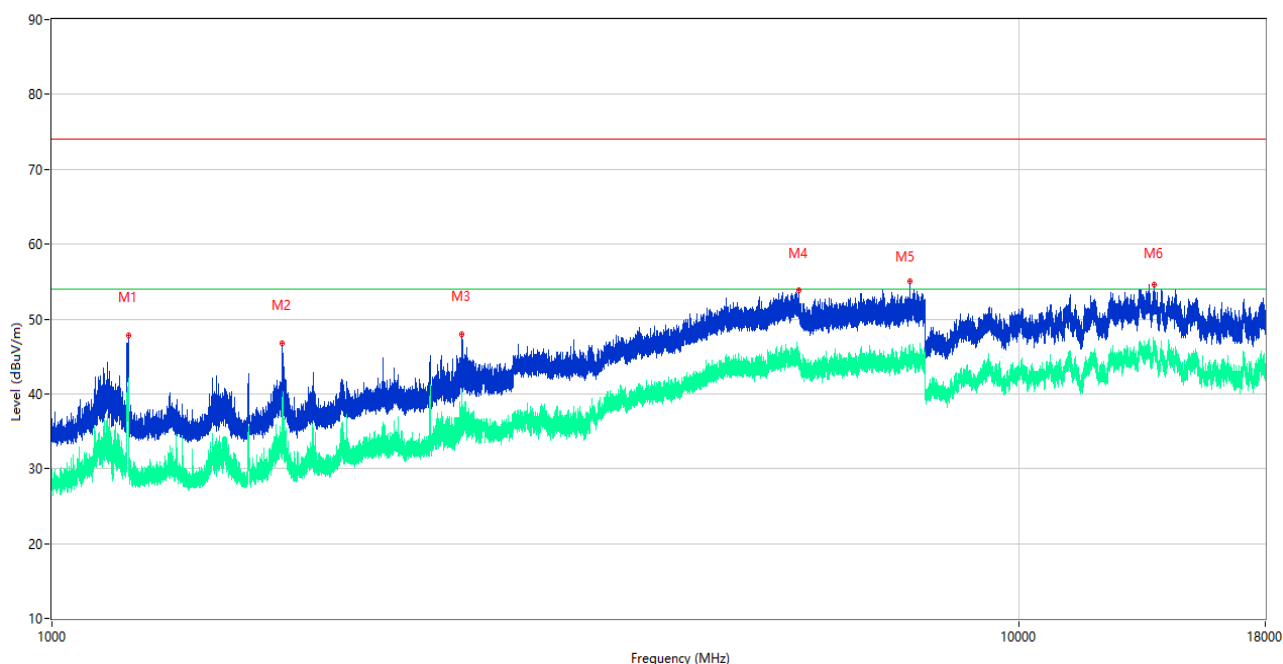
6) Test Antenna Horizontal, 30 MHz – 1 GHz



No.	Frequency (MHz)	Results (dBuV/m)	Factor (dB)	Limit (dBuV/m)	Margin (dB)	Detector	Table (Degree)	Height (cm)	Antenna	Verdict
1	133.305	21.44	-30.01	43.5	22.06	Peak	207.00	200	Horizontal	Pass
2	166.576	29.63	-29.24	43.5	13.87	Peak	118.00	200	Horizontal	Pass
3	240.830	30.57	-25.08	46.0	15.43	Peak	123.00	100	Horizontal	Pass
4	274.198	34.77	-24.41	46.0	11.23	Peak	256.00	100	Horizontal	Pass
5	398.600	32.26	-21.01	46.0	13.74	Peak	212.00	100	Horizontal	Pass
6	722.434	32.21	-13.52	46.0	13.79	Peak	231.00	100	Horizontal	Pass

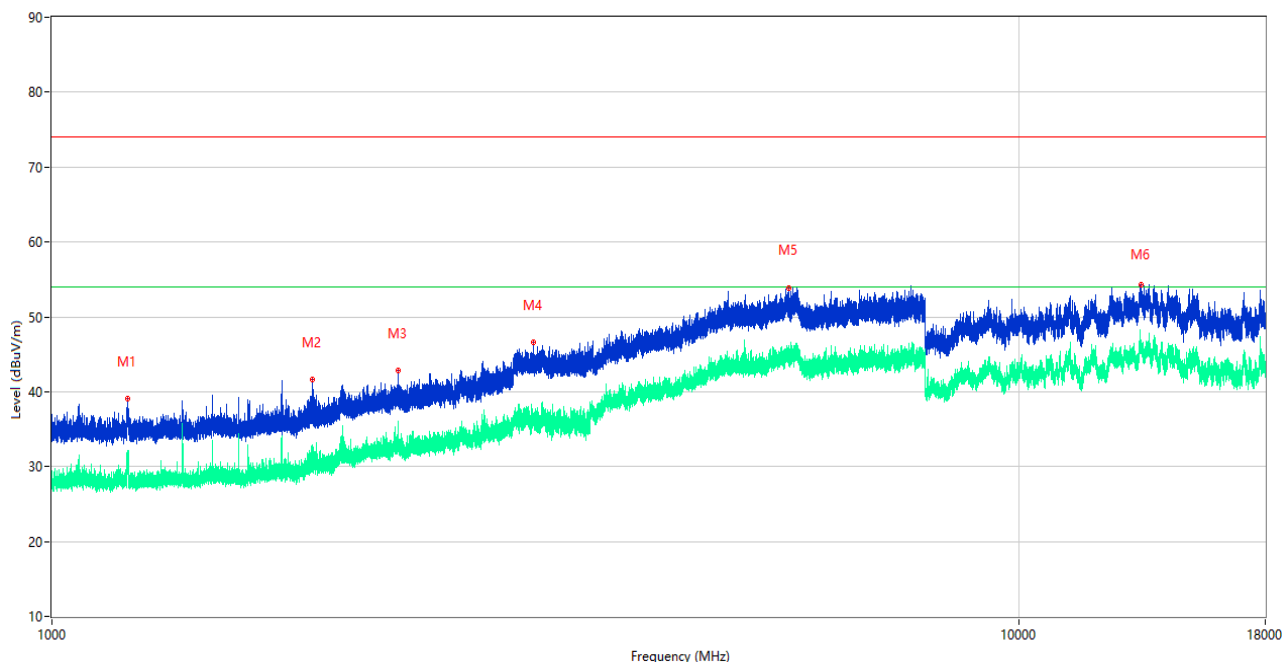
Equipment Information						
Equipment Name	Supplier	Model	Serial No.	Cal. Date	Cal. Due	Use
Frequency Below 1 GHz						
EMI Receiver	Keysight	N9038A	MY55330120	2023.09.05	2024.09.04	☒
Amplifier (30-1GHz)	COM-MV	ZT30-1000M	B2017119081	2023.12.05	2024.12.04	☒
Test Antenna- Bi-Log	SCHWARZB ECK	VULB 9168	9168-00867	2022.04.12	2025.04.11	☒
Anechoic Chamber (#2)	YiHeng	9m*6m*6m	142	2021.08.19	2024.08.18	☒
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	1199.700	47.87	-16.21	74.0	26.13	Peak	228.00	100	Vertical	Pass
1**	1199.700	36.90	-16.21	54.0	17.10	AV	228.00	100	Vertical	Pass
2	1730.500	46.82	-15.81	74.0	27.18	Peak	160.00	100	Vertical	Pass
2**	1730.500	32.17	-15.81	54.0	21.83	AV	160.00	100	Vertical	Pass
3	2657.000	48.02	-8.65	74.0	25.98	Peak	178.00	100	Vertical	Pass
3**	2657.000	36.14	-8.65	54.0	17.86	AV	178.00	100	Vertical	Pass
4	5922.000	53.85	3.40	74.0	20.15	Peak	81.00	100	Vertical	Pass
4**	5922.000	44.36	3.40	54.0	9.64	AV	81.00	100	Vertical	Pass
5	7718.250	55.07	2.18	74.0	18.93	Peak	331.00	100	Vertical	Pass
5**	7718.250	44.63	2.18	54.0	9.37	AV	331.00	100	Vertical	Pass
6	13806.500	54.64	5.73	74.0	19.36	Peak	104.00	100	Vertical	Pass
6**	13806.500	46.18	5.73	54.0	7.82	AV	104.00	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	1196.500	39.09	-16.30	74.0	34.91	Peak	289.00	100	Horizontal	Pass
1**	1196.500	29.37	-16.30	54.0	24.63	AV	289.00	100	Horizontal	Pass
2	1857.500	41.61	-15.03	74.0	32.39	Peak	262.00	100	Horizontal	Pass
2**	1857.500	29.97	-15.03	54.0	24.03	AV	262.00	100	Horizontal	Pass
3	2280.600	42.78	-11.95	74.0	31.22	Peak	150.00	100	Horizontal	Pass
3**	2280.600	32.38	-11.95	54.0	21.62	AV	150.00	100	Horizontal	Pass
4	3146.500	46.55	-5.16	74.0	27.45	Peak	253.00	100	Horizontal	Pass
4**	3146.500	36.05	-5.16	54.0	17.95	AV	253.00	100	Horizontal	Pass
5	5778.750	53.90	3.27	74.0	20.10	Peak	335.00	100	Horizontal	Pass
5**	5778.750	44.82	3.27	54.0	9.18	AV	335.00	100	Horizontal	Pass
6	13379.000	54.25	5.04	74.0	19.75	Peak	281.00	100	Horizontal	Pass
6**	13379.000	45.91	5.04	54.0	8.09	AV	281.00	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	2023.09.05	2024.09.04	☒
Amplifier (1-12GHz)	Advanced Microwave	WLA652A	1740103	2023.12.05	2024.12.04	☒
Amplifier (0.8-21GHz)	Mini- Circuits	ZVA-213-S+	225321316	2023.12.05	2024.12.04	☒
Test Antenna- Horn	SCHWARZ BECK	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	/		☒

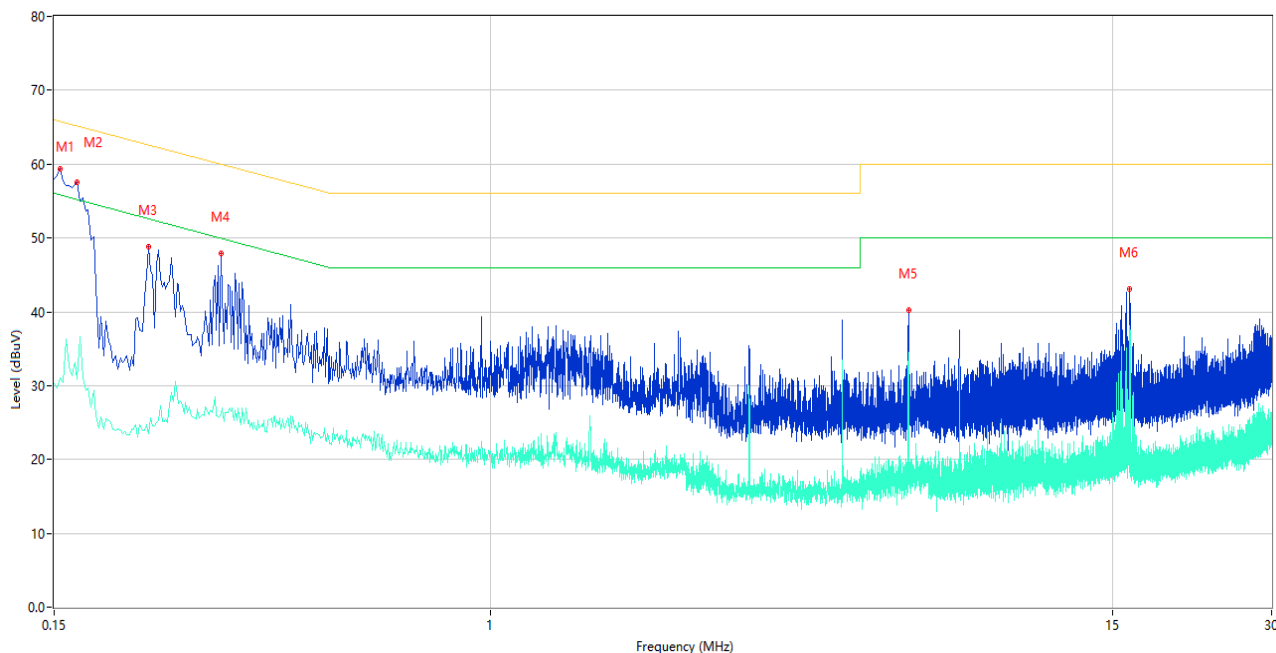
A.2 Conducted Emission, AC Ports

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.	S01	Temperature	25.3℃
Humidity	55%RH	Pressure	101kPa
Test Engineer	Yangyang	Test Date	2024.04.28

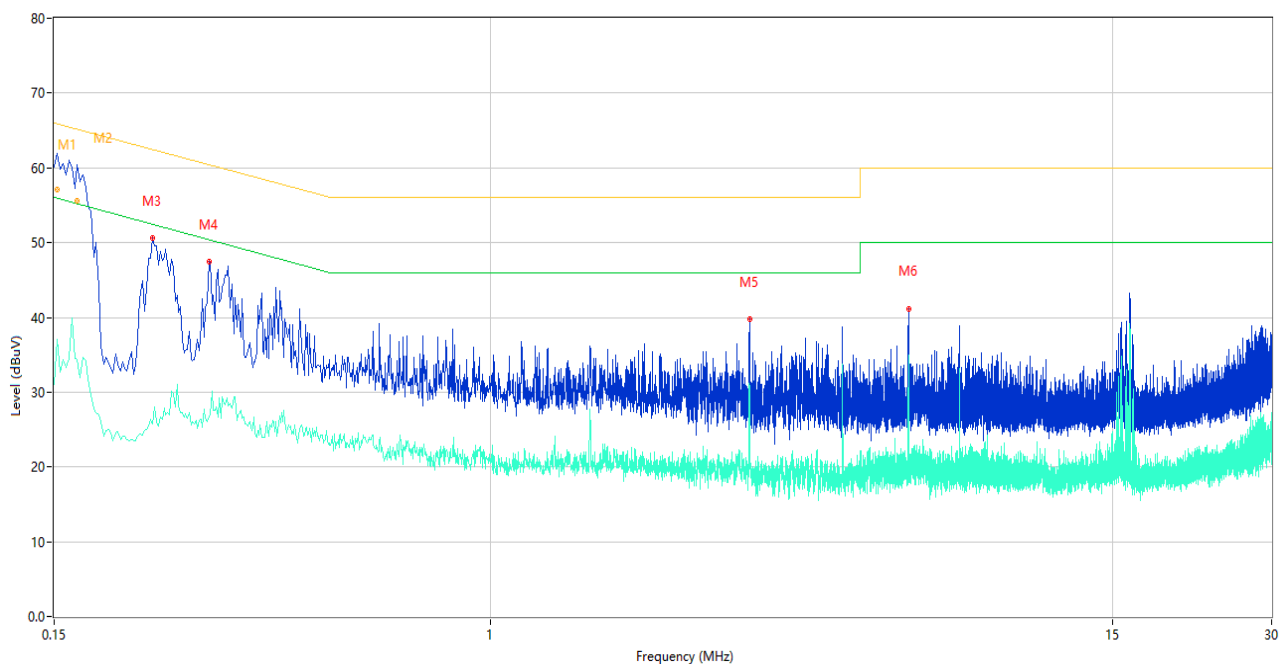
Test Mode 5

1) AC Ports - L Phase



No.	Frequency (MHz)	Results (dBuV)	Factor (dB)	Limit (dBuV)	Margin (dB)	Detector	Line	Verdict
1	0.154	59.30	10.11	65.78	6.48	Peak	L	Pass
1**	0.154	31.09	10.11	55.78	24.69	AV	L	Pass
2	0.166	57.62	10.09	65.16	7.54	Peak	L	Pass
2**	0.166	30.92	10.09	55.16	24.24	AV	L	Pass
3	0.226	48.79	10.05	62.60	13.81	Peak	L	Pass
3**	0.226	23.53	10.05	52.60	29.07	AV	L	Pass
4	0.310	47.95	10.05	59.97	12.02	Peak	L	Pass
4**	0.310	26.19	10.05	49.97	23.78	AV	L	Pass
5	6.176	40.18	10.91	60.00	19.82	Peak	L	Pass
5**	6.176	34.47	10.91	50.00	15.53	AV	L	Pass
6	16.164	43.10	12.94	60.00	16.90	Peak	L	Pass
6**	16.164	38.10	12.94	50.00	11.90	AV	L	Pass

2) AC Ports - N Phase

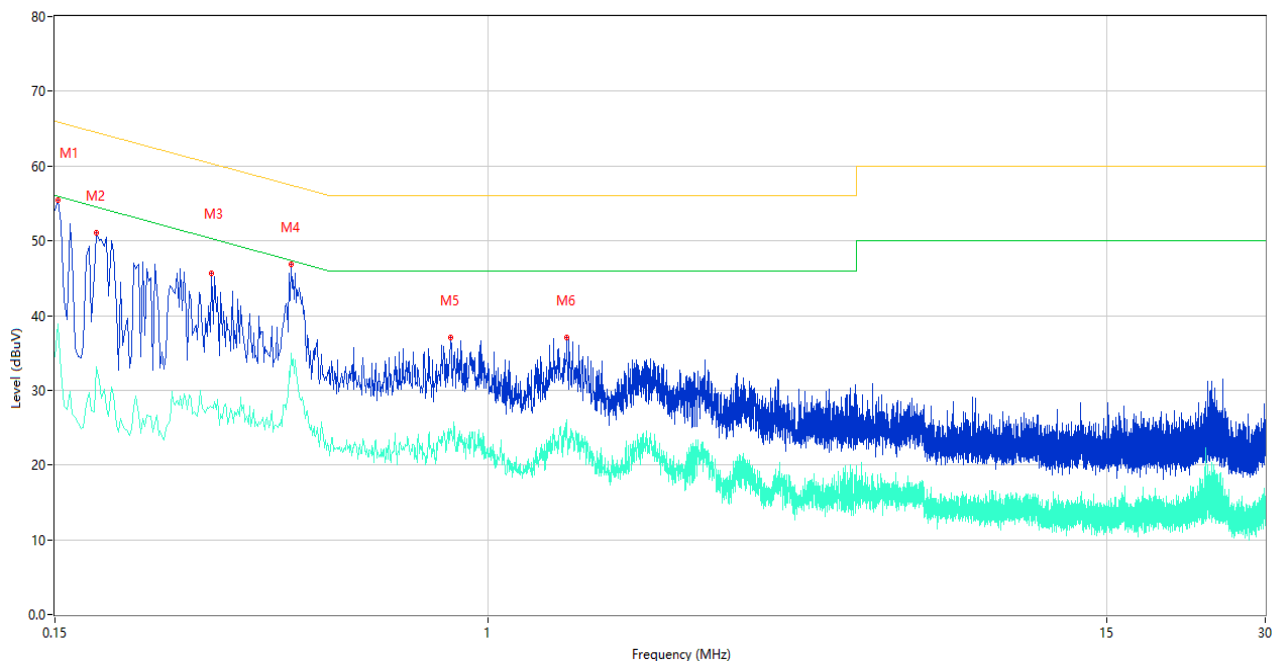


No.	Frequency (MHz)	Results (dBuV)	Factor (dB)	Limit (dBuV)	Margin (dB)	Detector	Line	Verdict
1	0.152	62.12	10.11	65.89	3.77	Peak	N	N/A
1*	0.152	57.11	10.11	65.89	8.78	QP	N	Pass
1**	0.152	37.05	10.11	55.89	18.84	AV	N	Pass
2	0.166	60.42	10.09	65.16	4.74	Peak	N	N/A
2*	0.166	55.60	10.09	65.16	9.56	QP	N	Pass
2**	0.166	34.37	10.09	55.16	20.79	AV	N	Pass
3	0.230	50.61	10.05	62.45	11.84	Peak	N	Pass
3**	0.230	25.83	10.05	52.45	26.62	AV	N	Pass
4	0.294	47.48	10.07	60.41	12.93	Peak	N	Pass
4**	0.294	26.70	10.07	50.41	23.71	AV	N	Pass
5	3.094	39.82	10.49	56.00	16.18	Peak	N	Pass
5**	3.094	28.32	10.49	46.00	17.68	AV	N	Pass
6	6.176	41.20	10.91	60.00	18.80	Peak	N	Pass
6**	6.176	33.23	10.91	50.00	16.77	AV	N	Pass

Sample No.	S10	Temperature	20.9℃
Humidity	46%RH	Pressure	101kPa
Test Engineer	Gu Shuaizhen	Test Date	2024.03.06

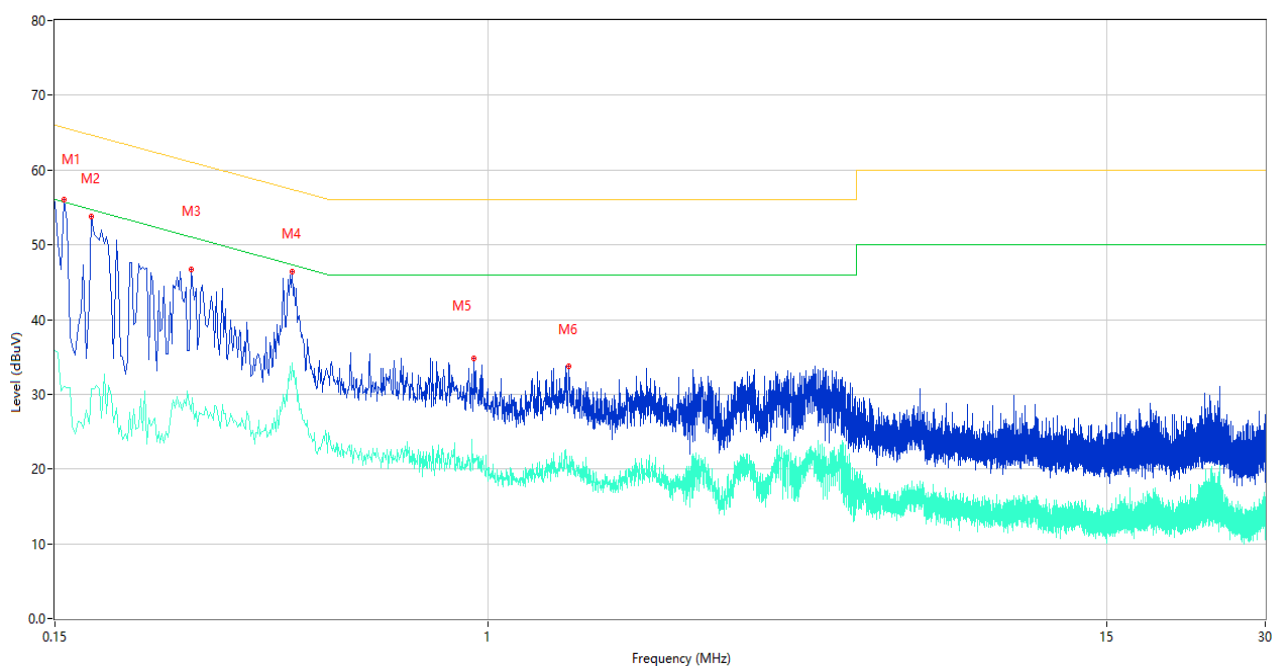
Test Mode 9

3) AC Ports - L Phase



No.	Frequency (MHz)	Results (dBuV)	Factor (dB)	Limit (dBuV)	Margin (dB)	Detector	Line	Verdict
1	0.152	55.49	9.47	65.89	10.40	Peak	L	Pass
1**	0.152	38.87	9.47	55.89	17.02	AV	L	Pass
2	0.180	51.06	9.44	64.49	13.43	Peak	L	Pass
2**	0.180	33.12	9.44	54.49	21.37	AV	L	Pass
3	0.298	45.67	9.43	60.30	14.63	Peak	L	Pass
3**	0.298	27.70	9.43	50.30	22.60	AV	L	Pass
4	0.422	46.81	9.98	57.41	10.60	Peak	L	Pass
4**	0.422	34.99	9.98	47.41	12.42	AV	L	Pass
5	0.848	37.07	9.94	56.00	18.93	Peak	L	Pass
5**	0.848	24.88	9.94	46.00	21.12	AV	L	Pass
6	1.410	37.10	10.03	56.00	18.90	Peak	L	Pass
6**	1.410	24.25	10.03	46.00	21.75	AV	L	Pass

4) AC Ports - N Phase



No.	Frequency (MHz)	Results (dBuV)	Factor (dB)	Limit (dBuV)	Margin (dB)	Detector	Line	Verdict
1	0.156	56.08	9.46	65.67	9.59	Peak	N	Pass
1**	0.156	31.10	9.46	55.67	24.57	AV	N	Pass
2	0.176	53.74	9.44	64.67	10.93	Peak	N	Pass
2**	0.176	30.81	9.44	54.67	23.86	AV	N	Pass
3	0.272	46.70	9.43	61.06	14.36	Peak	N	Pass
3**	0.272	27.68	9.43	51.06	23.38	AV	N	Pass
4	0.424	46.47	9.97	57.37	10.90	Peak	N	Pass
4**	0.424	34.25	9.97	47.37	13.12	AV	N	Pass
5	0.940	34.84	10.13	56.00	21.16	Peak	N	Pass
5**	0.940	21.13	10.13	46.00	24.87	AV	N	Pass
6	1.424	33.76	9.93	56.00	22.24	Peak	N	Pass
6**	1.424	20.34	9.93	46.00	25.66	AV	N	Pass

Equipment Information						
Equipment Name	Supplier	Model	Serial No.	Cal. Date	Cal. Due	Use
EMI Receiver	KEYSIGHT	N9010B	MY57110309	2023.09.05	2024.09.04	☒
LISN	SCHWARZ BECK	NSLK 8127	8127-687	2023.05.16	2024.05.15	☒
ISN	TESEQ	ISN T800	34449	2023.11.10	2024.11.09	☐
ISN	TESEQ	ISN T8-Cat6	53561	2023.04.23	2024.04.22	☐
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-SZ2441131-AE.PDF”.

ANNEX C EUT EXTERNAL PHOTOS

Please refer the document “BL-SZ2441131-AW.PDF”.

ANNEX D EUT INTERNAL PHOTOS

Please refer the document “BL-SZ2441131-AI.PDF”.

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--END OF REPORT--