

# 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:** RMX3890  
**Brand Name:** realme  
**FCC ID:** 2AUYFRMX3890  
**Test Standard:** 47 CFR Part 15 Subpart B  
ANSI C63.4-2014  
**Sample Arrival Date:** Oct. 07, 2023  
**Test Date:** Oct. 12, 2023 - Oct. 20, 2023  
**Date of Issue:** Nov. 09, 2023

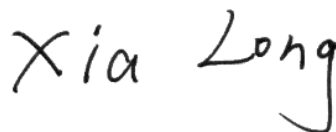
**ISSUED BY:**

Shenzhen BALUN Technology Co., Ltd.

**Tested by:** Xin Liao



**Checked by:** Xia Long



**Approved by:** Liao Jianming  
(Technical Director)



<b>Revision History</b>		
<u>Version</u>	<u>Issue Date</u>	<u>Revisions</u>
<u>Rev. 01</u>	<u>Nov. 09, 2023</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	<input checked="" type="checkbox"/> Block B, 1/F, Baisha Science and Technology Park, Shahe Xi Road, Nanshan District, Shenzhen, Guangdong Province, P. R. China
	<input type="checkbox"/> 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	RMX3890
Series Model Name	N/A
Description of Model name differentiation	N/A
Hardware Version	11
Software Version	U Edition
Dimensions (Approx.)	about 164.6mm×75.4mm×7.59mm
Weight (Approx.)	about 185g (with battery)
EUT ID	S11, S09, S07
IMEI Number	S11: IMEI1: 863463060019755; IMEI2: 863463060019748
	S09: IMEI1: 863463060019995; IMEI2: 863463060019987
	S07: IMEI1: 863463060019979; IMEI2: 863463060019961

### 2.4 Ancillary Equipment

Ancillary Equipment 1	Battery	
	Brand Name	SUPERVOOC
	Model No.	BLPA17
	Serial No.	N/A
	Capacity	Rated: 4880mAh, Typical: 5000mAh
	Rated Voltage	3.89V
	Limit Charge Voltage	4.48V
Ancillary Equipment 2	Power Supply Unit 1	
	Brand Name	SUPERVOOC
	Model No.	VCB3HDUH
	Serial No.	N/A
	Rated Input	100-240V~50/60Hz 1.2A
	Rated Output	5V, 2A or 5-11V, 3A MAX

	Manufacturer	Huizhou Golden Lake Industrial Co., Ltd.
Ancillary Equipment 3	Power Supply Unit(alternative) 2	
	Brand Name	SUPERVOOC
	Model No.	VCB3JFUH
	Serial No.	N/A
	Rated Input	100-240V~50/60Hz 1.2A
	Rated Output	5V, 2A or 5-11V, 3A MAX
	Manufacturer	Huizhou Golden Lake Industrial Co., Ltd.
Ancillary Equipment 4	Power Supply Unit(alternative) 3	
	Brand Name	SUPERVOOC
	Model No.	VCB3HDUH
	Serial No.	N/A
	Rated Input	100-240V~50/60Hz 1.2A
	Rated Output	5V, 2A or 5-11V, 3A MAX
	Manufacturer	Shenzhen Huntkey Electric Co., Ltd.
Ancillary Equipment 5	Power Supply Unit(alternative) 4	
	Brand Name	SUPERVOOC
	Model No.	VCB3JFUH
	Serial No.	N/A
	Rated Input	100-240V~50/60Hz 1.2A
	Rated Output	5V, 2A or 5-11V, 3A MAX
	Manufacturer	Jiangsu Chenyang Electron Co., Ltd.
Ancillary Equipment 6	USB Cable	
	Model No.	N/A
	Length (Approx.)	1.2m

## 2.5 Technical Information

Network and Wireless connectivity	<p>2G Network GSM/GPRS/EDGE 850/1900 MHz</p> <p>3G Network WCDMA/HSDPA/HSUPA Band 2/4/5</p> <p>4G Network LTE FDD Band 2/4/5/7/13/66</p> <p style="padding-left: 40px;">LTE TDD Band 38/41</p> <p>Bluetooth (BR+EDR+BLE)</p> <p>2.4G WIFI 802.11b, 802.11g, 802.11n(HT20/40), VHT20/40</p> <p>5G WIFI 802.11a, 802.11n(HT20/40), 802.11ac(VHT20/40/80)</p> <p>U-NII-1/2A/2C/3, Beidou, Galileo, GLONASS, GPS, NFC</p>
Classification of equipment	Class B
The highest internal frequency of EUT	5 GHz

### 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
Headset	N/A	N/A	N/A	N/A	N/A	<input checked="" type="checkbox"/>

### 4.2 Test Configurations

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

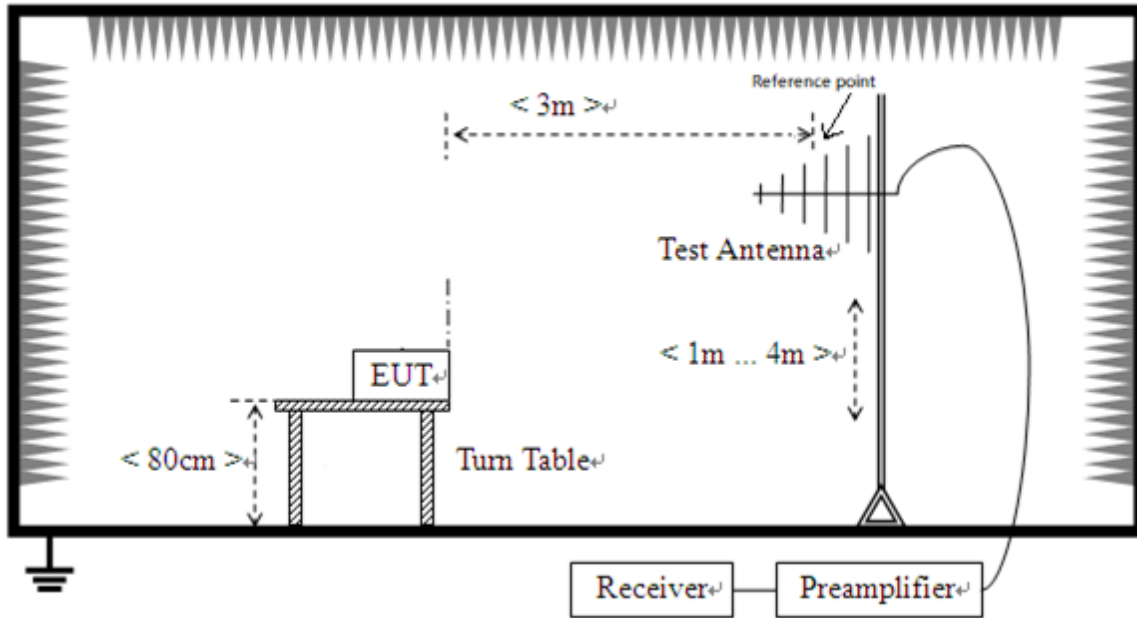
Test Mode Configuration	Description
Mode 1	<u>The Charging Test Mode</u> EUT + Adapter + USB Cable + Battery + Headset
Mode 2	<u>The Camera Test Mode</u> EUT + Adapter + USB Cable + Battery + Headset + TF Card
Mode 3	<u>The Video Play Test Mode</u> EUT + Adapter + USB Cable + Battery + Headset + TF Card
Mode 4	<u>The USB Test Mode</u> EUT + Adapter + USB Cable + Battery + Headset + TF Card

Test Case	Test Mode Configuration	Worst Mode
Radiated Emission	Mode 1~Mode 4	1, 4
Conducted Emission, AC Ports	Mode 1~Mode 4	1, 4

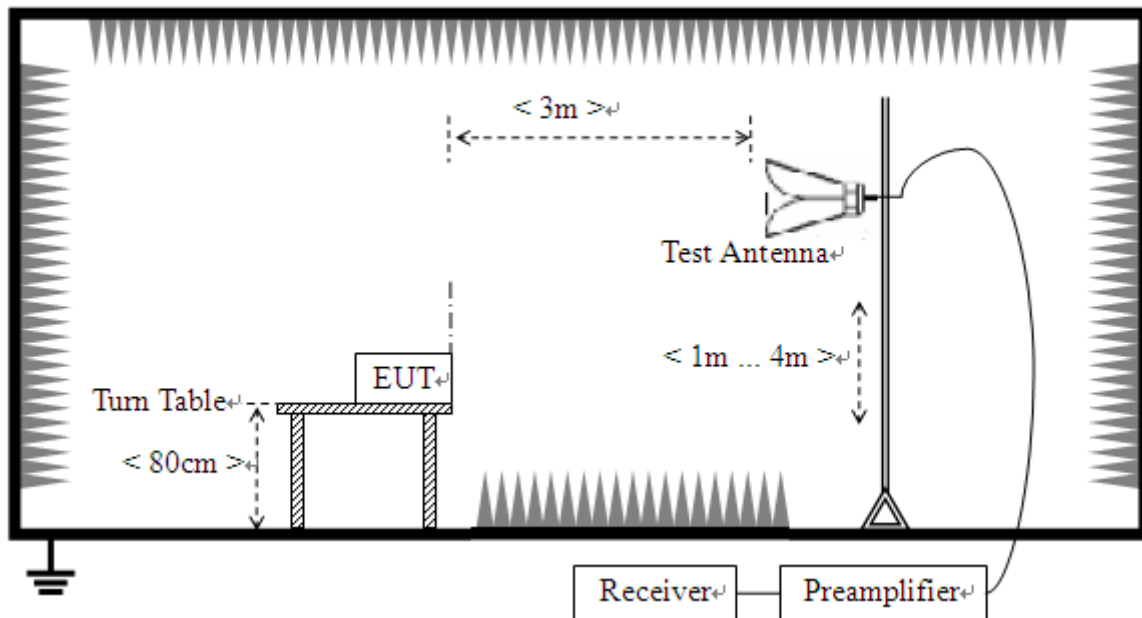
Note: Based on client request, all normal using modes of the normal function were tested, but only data of the worst mode was reported in this report.

### 4.3 Test Setups

#### Test Setup 1



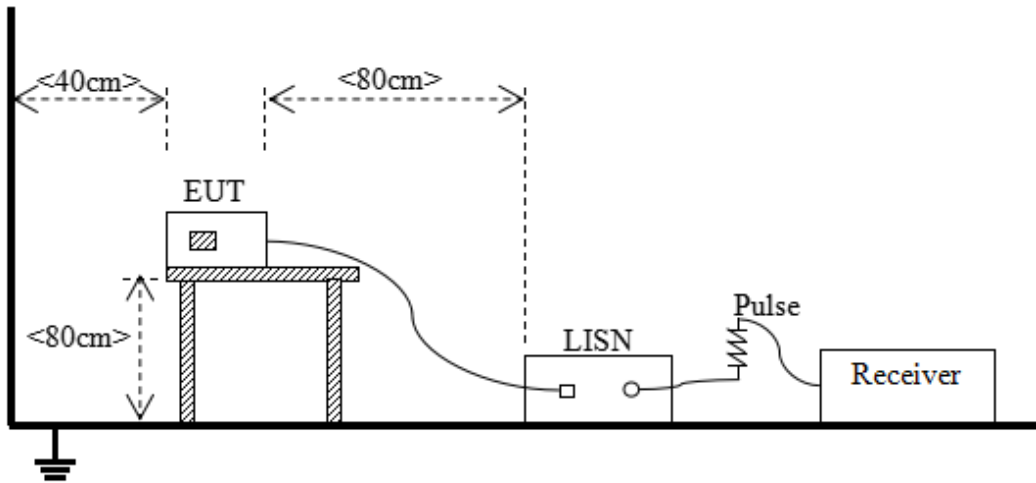
Radiated Emission (30 MHz-1 GHz)



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\*log [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 ( $F_M$ )
$F_X \leq 108$ MHz	1 GHz
$108$ MHz $\leq F_X \leq 500$ MHz	2 GHz
$500$ MHz $\leq F_X \leq 1$ GHz	5 GHz

Highest internal frequency ( $F_X$ )	Highest measurement frequency ( $F_M$ )
$F_X \geq 1$ 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 to test setup 2) 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  $0^\circ$  to  $360^\circ$ , 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  $f \geq 1$  GHz, 100 kHz for  $f < 1$  GHz

VBW  $\geq$  RBW

Sweep = auto

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

Trace = max hold

### 5.1.1.4 Test Result and Test Equipment List

Please refer to ANNEX A.1.

#### NOTE:

1. Results (dB $\mu$ V/m) = Reading (dB $\mu$ 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. Margin = Limit – Results

## 5.1.2 Conducted Emission, AC Ports

### 5.1.2.1 Test Limit

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

Frequency range (MHz)	Class B	
	Quasi-peak (dB $\mu$ V)	Average (dB $\mu$ 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 3) 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  $\Omega$ /50  $\mu$ 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 $\mu$ V) = Reading (dB $\mu$ 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.

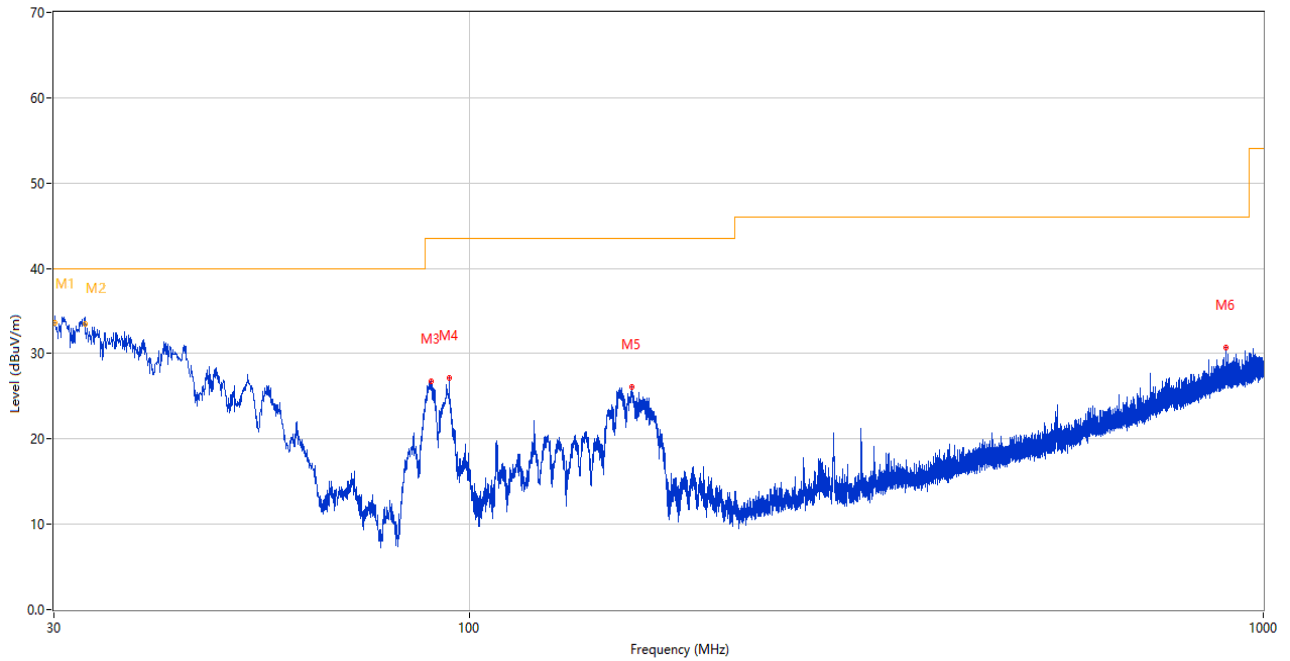
Note 2: For the test data above 1 GHz, according the ANSI C63.4-2014, where limits are specified for both average and peak (or quasi-peak) detector functions, if the peak (or quasi-peak) measured value complies with the average limit, it is unnecessary to perform an average measurement.

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.	S09	Temperature	25.5°C
Humidity	47%RH	Pressure	101kPa
Test Engineer	He Shichang	Test Date	2023.10.12

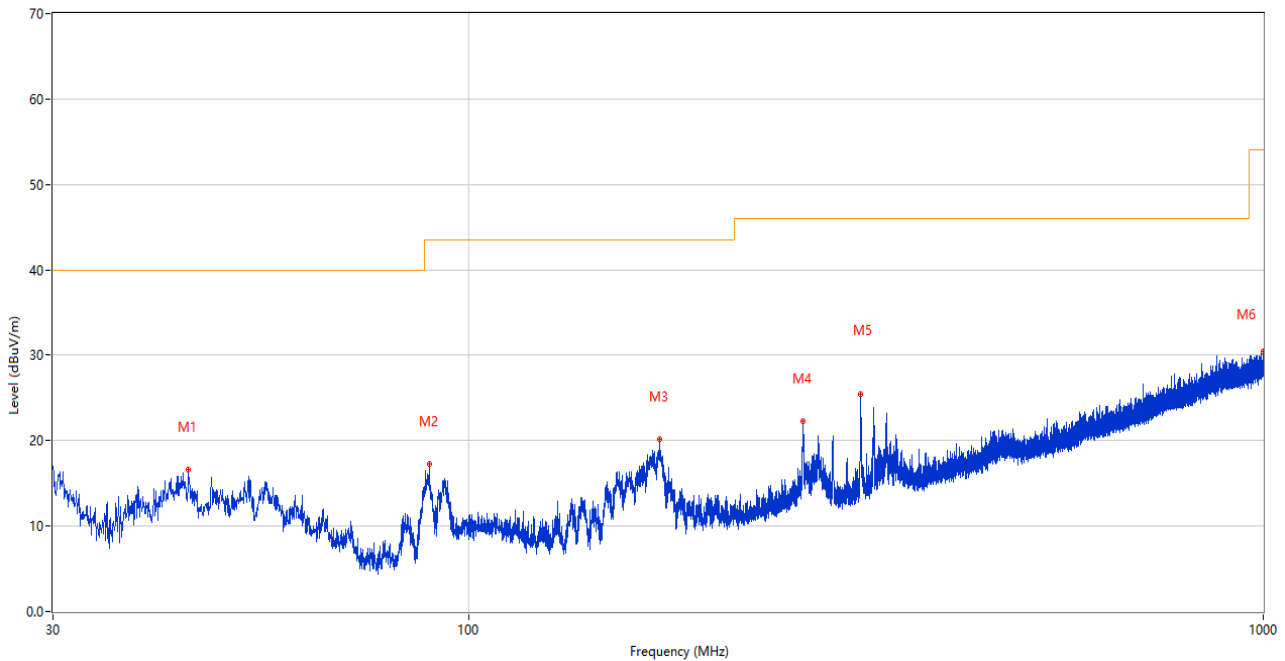
**Test Mode 1**

**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	30.049	34.56	-28.84	40.0	5.44	Peak	159.00	100	Vertical	N/A
1*	30.049*	33.98	-28.84	40.0	6.02	QP	159.00	100	Vertical	Pass
2	32.813	34.27	-28.97	40.0	5.73	Peak	283.00	100	Vertical	N/A
2*	32.813*	33.66	-28.97	40.0	6.34	QP	283.00	100	Vertical	Pass
3	89.461	26.80	-28.71	43.5	16.70	Peak	193.00	100	Vertical	Pass
4	94.408	27.17	-27.64	43.5	16.33	Peak	286.00	100	Vertical	Pass
5	160.077	26.08	-29.57	43.5	17.42	Peak	281.00	100	Vertical	Pass
6	897.131	30.77	-9.87	46.0	15.23	Peak	311.00	200	Vertical	Pass

2) Test Antenna Horizontal, 30 MHz – 1 GHz

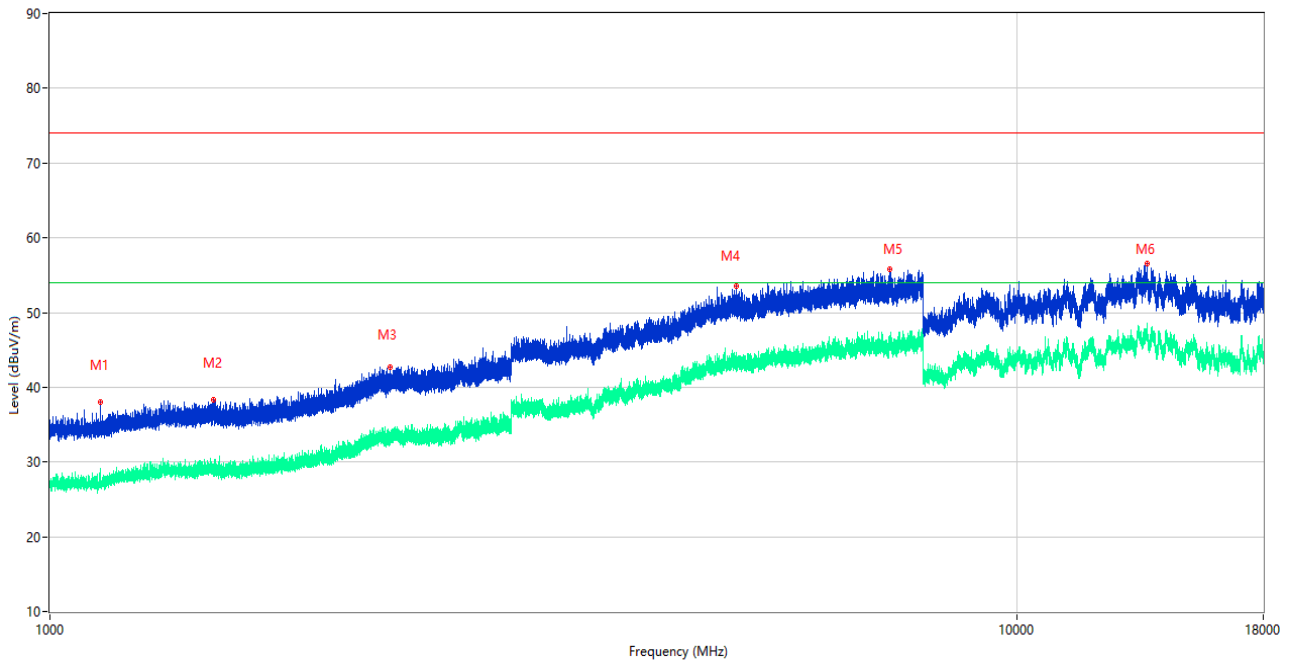


No.	Frequency (MHz)	Results (dBuV/m)	Factor (dB)	Limit (dBuV/m)	Margin (dB)	Detector	Table (Degree)	Height (cm)	Antenna	Verdict
1	44.404	16.67	-25.71	40.0	23.33	Peak	0.00	100	Horizontal	Pass
2	89.267	17.31	-28.77	43.5	26.19	Peak	217.00	200	Horizontal	Pass
3	173.900	20.11	-28.93	43.5	23.39	Peak	80.00	200	Horizontal	Pass
4	263.431	22.31	-24.51	46.0	23.69	Peak	110.00	100	Horizontal	Pass
5	311.251	25.39	-23.40	46.0	20.61	Peak	77.00	100	Horizontal	Pass
6	998.594	30.42	-8.39	54.0	23.58	Peak	235.00	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	<input checked="" type="checkbox"/>
Amplifier (30-1GHz)	COM-MV	ZT30-1000M	B2017119081	2022.12.07	2023.12.06	<input checked="" type="checkbox"/>
Test Antenna-Bi-Log	SCHWARZB ECK	VULB 9168	9168-00867	2022.04.12	2025.04.11	<input checked="" type="checkbox"/>
Anechoic Chamber (#2)	YiHeng	9m*6m*6m	142	2021.08.19	2024.08.18	<input checked="" type="checkbox"/>
Description	Supplier	Name	Version	/		Use
Test Software	BALUN	BL410-E	V22.930	/		<input checked="" type="checkbox"/>

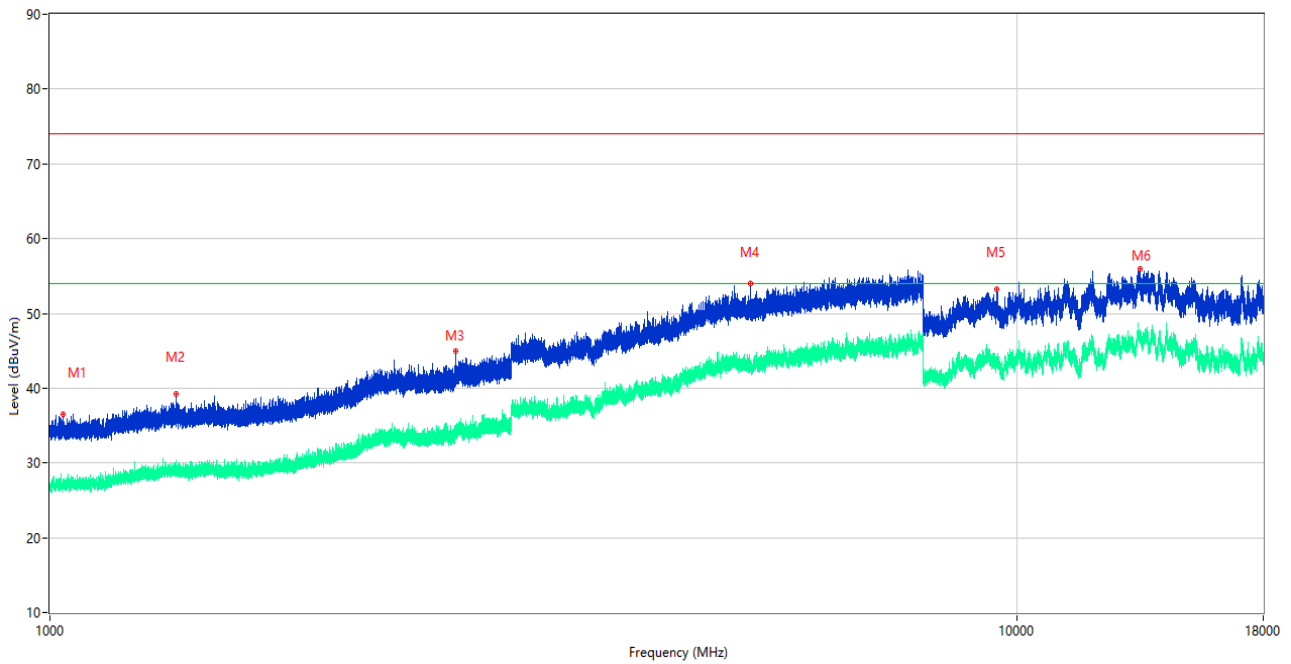


3) Test Antenna Vertical, 1 GHz – 18 GHz



No.	Frequency (MHz)	Results (dBuV/m)	Factor (dB)	Limit (dBuV/m)	Margin (dB)	Detector	Table (Degree)	Height (cm)	Antenna	Verdict
1	1127.300	38.05	-17.75	74.0	35.95	Peak	311.00	100	Vertical	Pass
1**	1127.300	26.97	-17.75	54.0	27.03	AV	311.00	100	Vertical	Pass
2	1475.900	38.31	-16.71	74.0	35.69	Peak	113.00	100	Vertical	Pass
2**	1475.900	28.94	-16.71	54.0	25.06	AV	113.00	100	Vertical	Pass
3	2246.800	42.74	-12.04	74.0	31.26	Peak	171.00	100	Vertical	Pass
3**	2246.800	32.34	-12.04	54.0	21.66	AV	171.00	100	Vertical	Pass
4	5127.000	53.51	0.20	74.0	20.49	Peak	86.00	100	Vertical	Pass
4**	5127.000	44.28	0.20	54.0	9.72	AV	86.00	100	Vertical	Pass
5	7399.250	55.83	2.52	74.0	18.17	Peak	10.00	100	Vertical	Pass
5**	7399.250	45.78	2.52	54.0	8.22	AV	10.00	100	Vertical	Pass
6	13641.000	56.53	5.06	74.0	17.47	Peak	235.00	100	Vertical	Pass
6**	13641.000	47.31	5.06	54.0	6.69	AV	235.00	100	Vertical	Pass

4) Test Antenna Horizontal, 1 GHz – 18 GHz



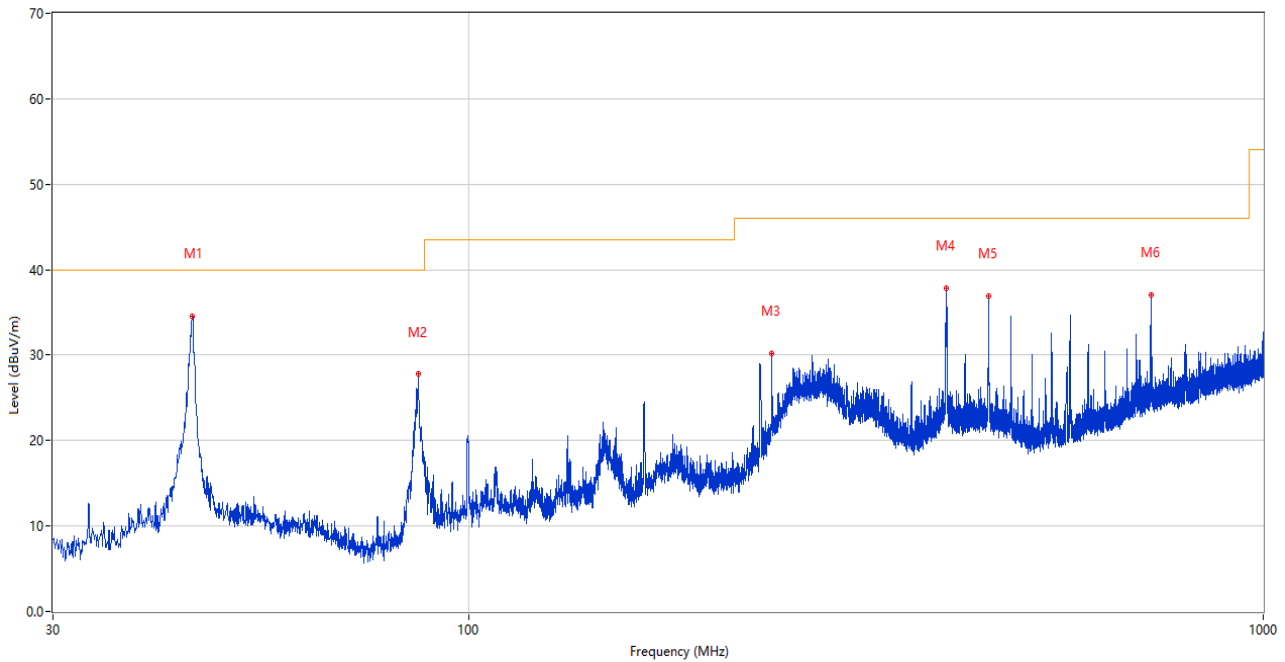
No.	Frequency (MHz)	Results (dBuV/m)	Factor (dB)	Limit (dBuV/m)	Margin (dB)	Detector	Table (Degree)	Height (cm)	Antenna	Verdict
1	1030.700	36.58	-17.66	74.0	37.42	Peak	305.00	100	Horizontal	Pass
1**	1030.700	27.38	-17.66	54.0	26.62	AV	305.00	100	Horizontal	Pass
2	1352.000	39.15	-16.70	74.0	34.85	Peak	213.00	100	Horizontal	Pass
2**	1352.000	28.43	-16.70	54.0	25.57	AV	213.00	100	Horizontal	Pass
3	2627.400	45.00	-10.26	74.0	29.00	Peak	53.00	100	Horizontal	Pass
3**	2627.400	33.77	-10.26	54.0	20.23	AV	53.00	100	Horizontal	Pass
4	5302.750	53.93	0.28	74.0	20.07	Peak	103.00	100	Horizontal	Pass
4**	5302.750	42.83	0.28	54.0	11.17	AV	103.00	100	Horizontal	Pass
5	9533.000	53.19	1.26	74.0	20.81	Peak	360.00	100	Horizontal	Pass
5**	9533.000	44.04	1.26	54.0	9.96	AV	360.00	100	Horizontal	Pass
6	13409.000	55.95	4.79	74.0	18.05	Peak	181.00	100	Horizontal	Pass
6**	13409.000	46.99	4.79	54.0	7.01	AV	181.00	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	<input checked="" type="checkbox"/>
Spectrum Analyzer	ROHDE & SCHWARZ	FSV40	101544	2023.01.03	2024.01.02	<input checked="" type="checkbox"/>
Amplifier (1-12GHz)	Advanced Microwave	WLA652A	1740103	2022.12.07	2023.12.06	<input checked="" type="checkbox"/>
Amplifier (0.8-21GHz)	Mini-Circuits	ZVA-213-S+	225321316	2022.12.07	2023.12.06	<input checked="" type="checkbox"/>
Amplifier (18-40GHz)	COM-MV	KA LNA18-40G-01	18050001	2022.12.07	2023.12.06	<input checked="" type="checkbox"/>
Test Antenna-Horn	SCHWARZB ECK	BBHA 9120D	01917	2022.06.09	2025.06.08	<input checked="" type="checkbox"/>
Test Antenna-Horn	A-INFOMW	LB-180400KF	J211060273	2021.07.02	2024.07.01	<input checked="" type="checkbox"/>
Anechoic Chamber (#2)	YiHeng	9m*6m*6m	142	2021.08.19	2024.08.18	<input checked="" type="checkbox"/>
Description	Supplier	Name	Version	/		Use
Test Software	BALUN	BL410-E	V22.930	/		<input checked="" type="checkbox"/>

Sample No.	S09	Temperature	25.5°C
Humidity	47%RH	Pressure	101kPa
Test Engineer	He Shichang	Test Date	2023.10.16

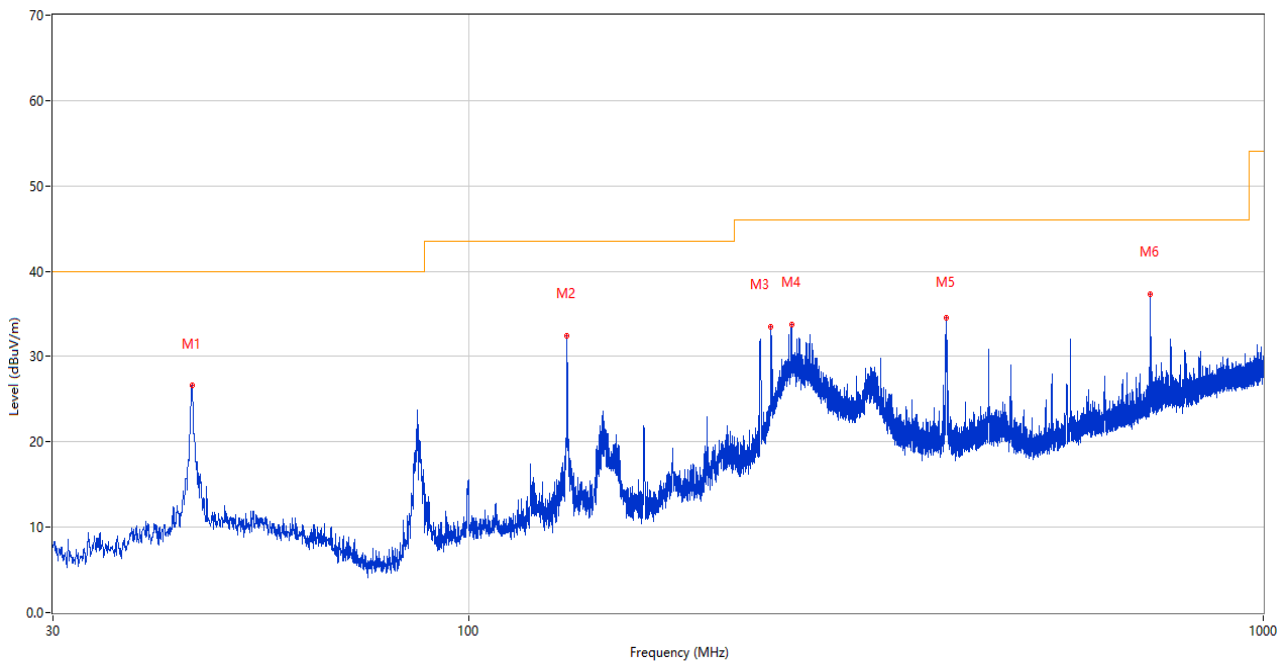
**Test Mode 4**

**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	44.938	33.98	-25.57	40.0	6.02	Peak	256.00	100	Vertical	Pass
2	86.503	27.75	-29.56	40.0	12.25	Peak	171.00	100	Vertical	Pass
3	240.781	30.15	-25.08	46.0	15.85	Peak	181.00	200	Vertical	Pass
4	399.037	37.85	-20.98	46.0	8.15	Peak	169.00	100	Vertical	Pass
5	451.368	36.94	-19.86	46.0	9.06	Peak	175.00	100	Vertical	Pass
6	722.434	37.08	-13.52	46.0	8.92	Peak	154.00	200	Vertical	Pass

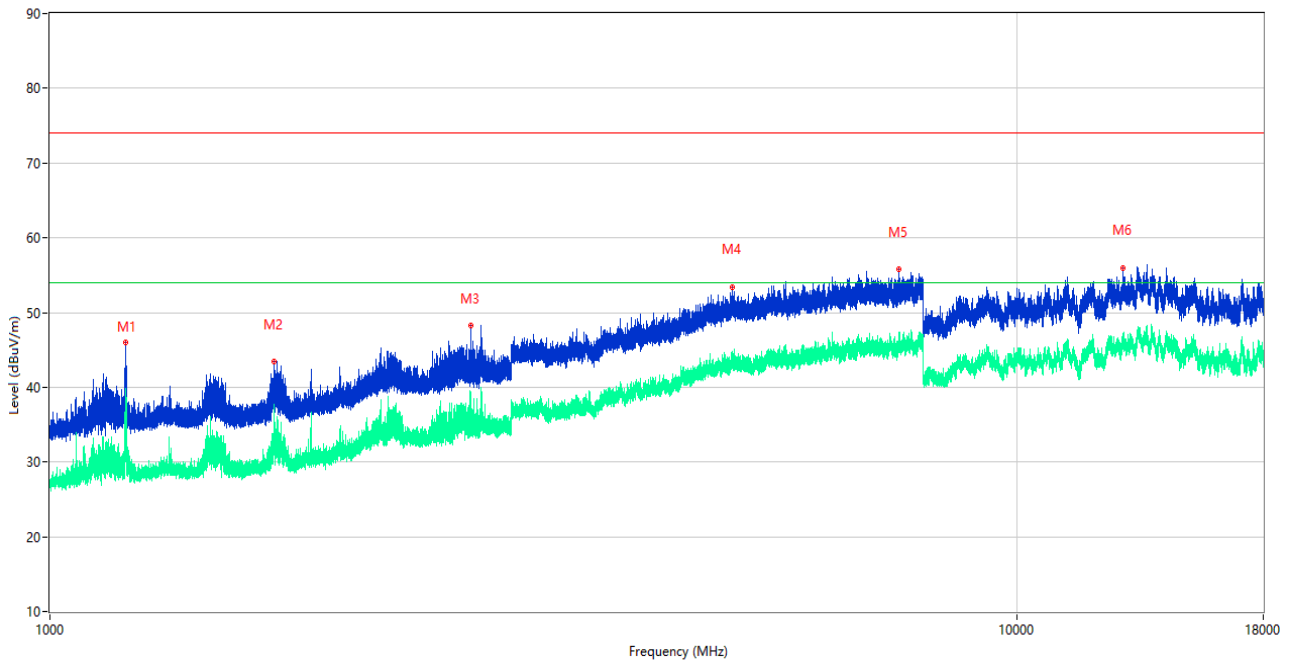
6) Test Antenna Horizontal, 30 MHz – 1 GHz



No.	Frequency (MHz)	Results (dBuV/m)	Factor (dB)	Limit (dBuV/m)	Margin (dB)	Detector	Table (Degree)	Height (cm)	Antenna	Verdict
1	44.889	26.57	-25.58	40.0	13.43	Peak	150.00	200	Horizontal	Pass
2	132.868	32.42	-29.93	43.5	11.08	Peak	252.00	200	Horizontal	Pass
3	240.005	33.55	-25.15	46.0	12.45	Peak	310.00	100	Horizontal	Pass
4	255.282	33.77	-24.68	46.0	12.23	Peak	240.00	100	Horizontal	Pass
5	399.085	34.60	-20.98	46.0	11.40	Peak	184.00	100	Horizontal	Pass
6	720.010	37.37	-13.66	46.0	8.63	Peak	327.00	100	Horizontal	Pass

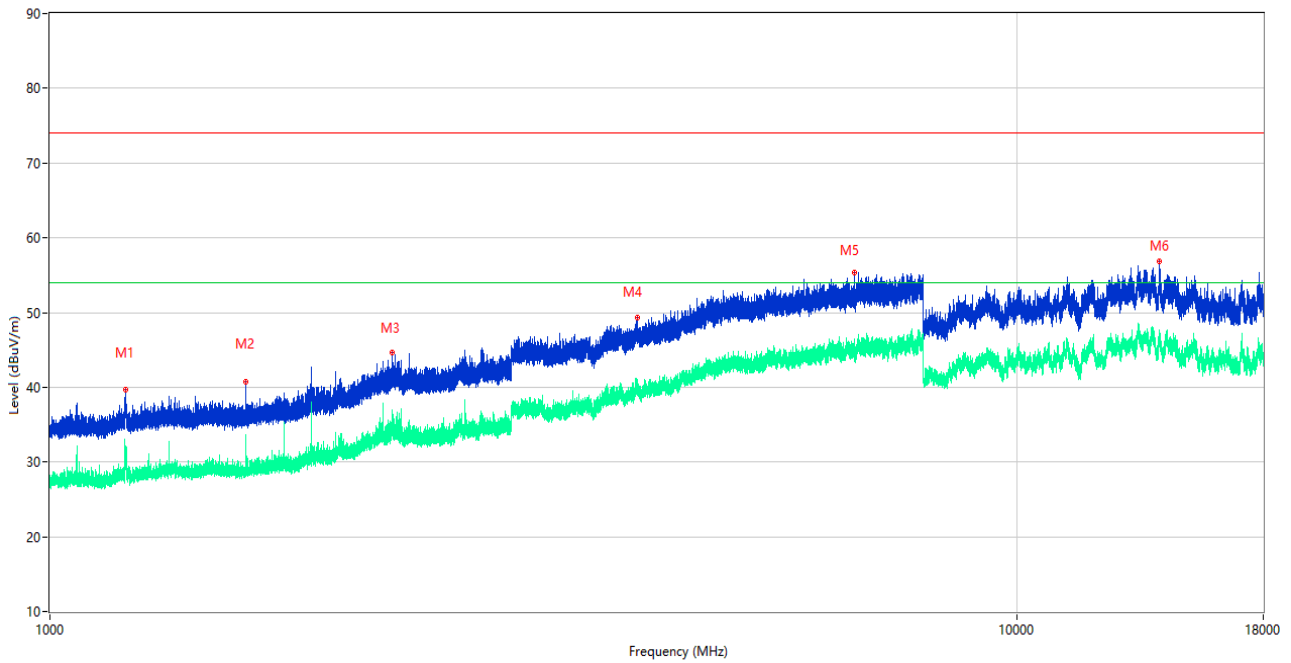
Equipment Information						
Equipment Name	Supplier	Model	Serial No.	Cal. Date	Cal. Due	Use
Frequency Below 1 GHz						
EMI Receiver	Keysight	N9038A	MY55330120	2023.09.05	2024.09.04	<input checked="" type="checkbox"/>
Amplifier (30-1GHz)	COM-MV	ZT30-1000M	B2017119081	2022.12.07	2023.12.06	<input checked="" type="checkbox"/>
Test Antenna-Bi-Log	SCHWARZB ECK	VULB 9168	9168-00867	2022.04.12	2025.04.11	<input checked="" type="checkbox"/>
Anechoic Chamber (#2)	YiHeng	9m*6m*6m	142	2021.08.19	2024.08.18	<input checked="" type="checkbox"/>
Description	Supplier	Name	Version	/		Use
Test Software	BALUN	BL410-E	V22.930	/		<input checked="" type="checkbox"/>

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	1198.900	46.07	-17.33	74.0	27.93	Peak	211.00	100	Vertical	Pass
1**	1198.900	31.66	-17.33	54.0	22.34	AV	211.00	100	Vertical	Pass
2	1705.400	43.44	-16.54	74.0	30.56	Peak	143.00	100	Vertical	Pass
2**	1705.400	33.13	-16.54	54.0	20.87	AV	143.00	100	Vertical	Pass
3	2728.600	48.29	-9.82	74.0	25.71	Peak	157.00	100	Vertical	Pass
3**	2728.600	36.19	-9.82	54.0	17.81	AV	157.00	100	Vertical	Pass
4	5075.250	53.46	0.32	74.0	20.54	Peak	0.00	100	Vertical	Pass
4**	5075.250	42.94	0.32	54.0	11.06	AV	0.00	100	Vertical	Pass
5	7564.000	55.77	2.74	74.0	18.23	Peak	219.00	100	Vertical	Pass
5**	7564.000	46.35	2.74	54.0	7.65	AV	219.00	100	Vertical	Pass
6	12873.500	56.02	3.34	74.0	17.98	Peak	0.00	100	Vertical	Pass
6**	12873.500	45.91	3.34	54.0	8.09	AV	0.00	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	1196.800	39.63	-17.41	74.0	34.37	Peak	102.00	100	Horizontal	Pass
1**	1196.800	32.07	-17.41	54.0	21.93	AV	102.00	100	Horizontal	Pass
2	1595.500	40.79	-16.89	74.0	33.21	Peak	265.00	100	Horizontal	Pass
2**	1595.500	29.22	-16.89	54.0	24.78	AV	265.00	100	Horizontal	Pass
3	2259.700	44.59	-12.20	74.0	29.41	Peak	147.00	100	Horizontal	Pass
3**	2259.700	34.74	-12.20	54.0	19.26	AV	147.00	100	Horizontal	Pass
4	4049.250	49.30	-1.93	74.0	24.70	Peak	220.00	100	Horizontal	Pass
4**	4049.250	39.71	-1.93	54.0	14.29	AV	220.00	100	Horizontal	Pass
5	6797.250	55.36	1.28	74.0	18.64	Peak	298.00	100	Horizontal	Pass
5**	6797.250	44.27	1.28	54.0	9.73	AV	298.00	100	Horizontal	Pass
6	14051.500	56.81	5.41	74.0	17.19	Peak	335.00	100	Horizontal	Pass
6**	14051.500	46.70	5.41	54.0	7.30	AV	335.00	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	<input checked="" type="checkbox"/>
Spectrum Analyzer	ROHDE & SCHWARZ	FSV40	101544	2023.01.03	2024.01.02	<input checked="" type="checkbox"/>
Amplifier (1-12GHz)	Advanced Microwave	WLA652A	1740103	2022.12.07	2023.12.06	<input checked="" type="checkbox"/>
Amplifier (0.8-21GHz)	Mini-Circuits	ZVA-213-S+	225321316	2022.12.07	2023.12.06	<input checked="" type="checkbox"/>
Amplifier (18-40GHz)	COM-MV	KA LNA18-40G-01	18050001	2022.12.07	2023.12.06	<input checked="" type="checkbox"/>
Test Antenna-Horn	SCHWARZBECK	BBHA 9120D	01917	2022.06.09	2025.06.08	<input checked="" type="checkbox"/>
Test Antenna-Horn	A-INFOMW	LB-180400KF	J211060273	2021.07.02	2024.07.01	<input checked="" type="checkbox"/>
Anechoic Chamber (#2)	YiHeng	9m*6m*6m	142	2021.08.19	2024.08.18	<input checked="" type="checkbox"/>
Description	Supplier	Name	Version	/		Use
Test Software	BALUN	BL410-E	V22.930	/		<input checked="" type="checkbox"/>



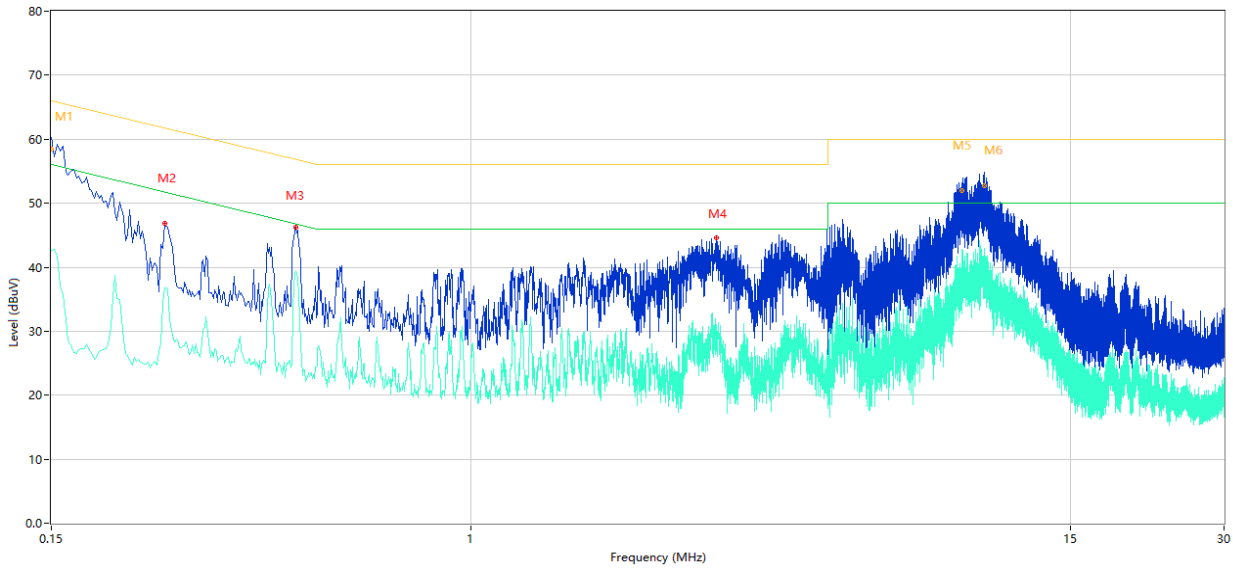
## A.2 Conducted Emission, AC Ports

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.	S09	Temperature	23.5°C
Humidity	44%RH	Pressure	101kPa
Test Engineer	Yang Yang	Test Date	2023.10.16

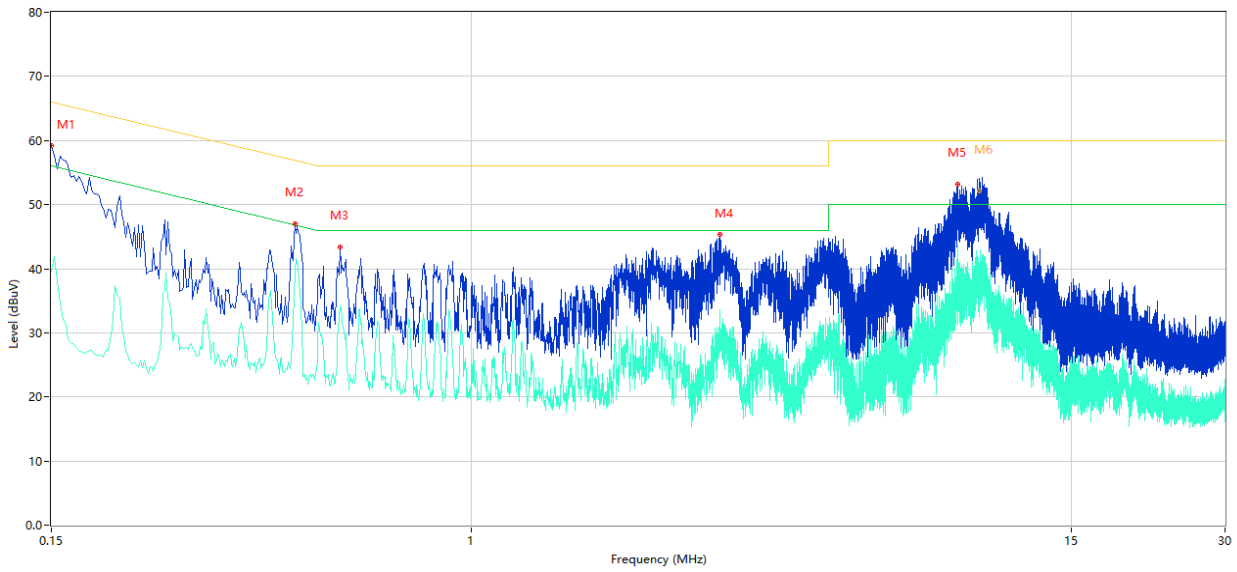
**Test Mode 1**

**1) AC Ports - L Phase**



No.	Frequency (MHz)	Results (dBuV)	Factor (dB)	Limit (dBuV)	Margin (dB)	Detector	Line	Verdict
1	0.150	60.42	9.84	66.00	5.58	Peak	L	N/A
1**	0.150*	58.92	9.84	66.00	7.08	QP	L	Pass
1***	0.150	42.70	9.84	56.00	13.30	AV	L	Pass
2	0.250	46.82	9.79	61.76	14.94	Peak	L	Pass
2**	0.250	36.69	9.79	51.76	15.07	AV	L	Pass
3	0.452	46.27	10.30	56.84	10.57	Peak	L	Pass
3**	0.452	39.49	10.30	46.84	7.35	AV	L	Pass
4	3.024	44.56	10.30	56.00	11.44	Peak	L	Pass
4**	3.024	28.96	10.30	46.00	17.04	AV	L	Pass
5	9.210	54.06	10.43	60.00	5.94	Peak	L	N/A
5**	9.210*	52.44	10.43	60.00	7.56	QP	L	Pass
5***	9.210	42.67	10.43	50.00	7.33	AV	L	Pass
6	10.154	55.23	10.44	60.00	4.77	Peak	L	N/A
6**	10.154*	53.12	10.44	60.00	6.88	QP	L	Pass
6***	10.154	42.89	10.44	50.00	7.11	AV	L	Pass

2) AC Ports - N Phase



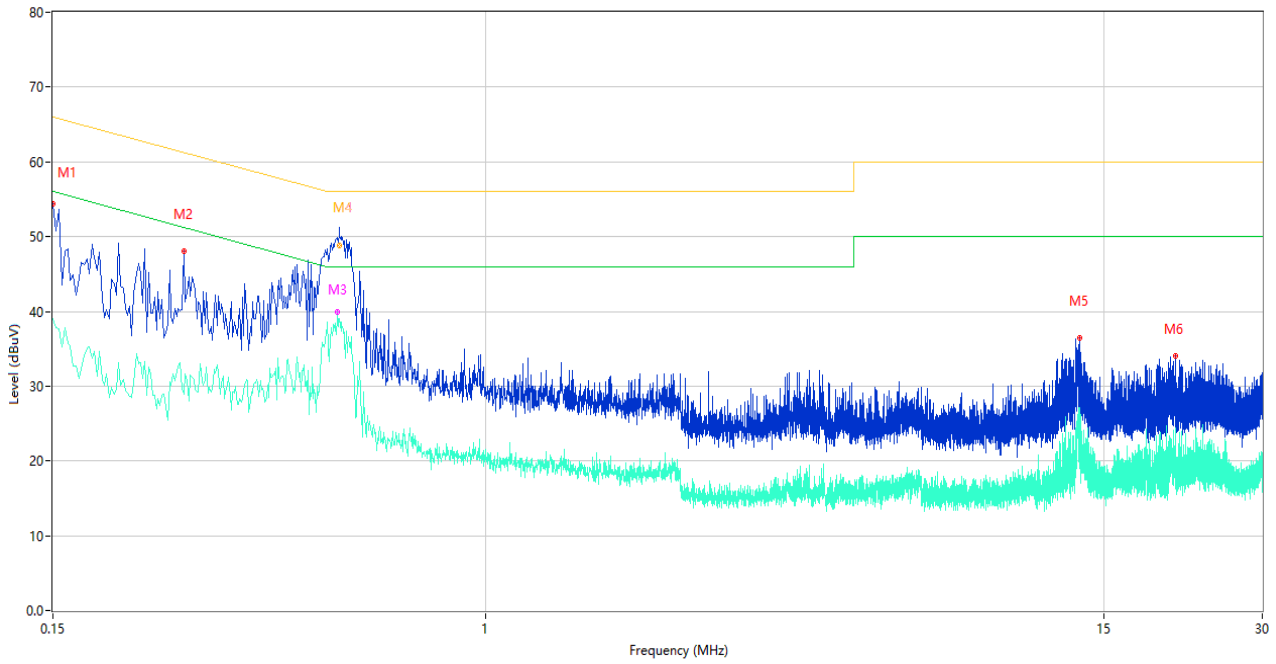
No.	Frequency (MHz)	Results (dBuV)	Factor (dB)	Limit (dBuV)	Margin (dB)	Detector	Line	Verdict
1	0.150	59.28	9.84	66.00	6.72	Peak	N	Pass
1**	0.150	39.70	9.84	56.00	16.30	AV	N	Pass
2	0.450	46.98	10.31	56.88	9.90	Peak	N	Pass
2**	0.450	39.56	10.31	46.88	7.32	AV	N	Pass
3	0.552	43.35	10.21	56.00	12.65	Peak	N	Pass
3**	0.552	34.18	10.21	46.00	11.82	AV	N	Pass
4	3.072	45.36	10.22	56.00	10.64	Peak	N	Pass
4**	3.072	28.08	10.22	46.00	17.92	AV	N	Pass
5	8.986	53.16	10.49	60.00	6.84	Peak	N	Pass
5**	8.986	34.69	10.49	50.00	15.31	AV	N	Pass
6	9.882	54.76	10.04	60.00	5.24	Peak	N	N/A
6**	9.882*	52.90	10.04	60.00	7.10	QP	N	Pass
6***	9.882	36.65	10.04	50.00	13.35	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	<input checked="" type="checkbox"/>
LISN	SCHWARZB ECK	NSLK 8127	8127-687	2023.05.16	2024.05.15	<input checked="" type="checkbox"/>
ISN	TESEQ	ISN T800	34449	2022.11.11	2023.11.10	<input type="checkbox"/>
ISN	TESEQ	ISN T8-Cat6	53561	2023.04.23	2024.04.22	<input type="checkbox"/>
Shielded Room	YiHeng Electronic Co., Ltd	3.5m*3.1m*2. 8m	112	2022.02.19	2025.02.18	<input checked="" type="checkbox"/>
Description	Supplier	Name	Version	/		Use
Test Software	BALUN	BL410-E	V22.930	/		<input checked="" type="checkbox"/>

Sample No.	S09	Temperature	23.5°C
Humidity	44%RH	Pressure	101kPa
Test Engineer	Yang Yang	Test Date	2023.10.16

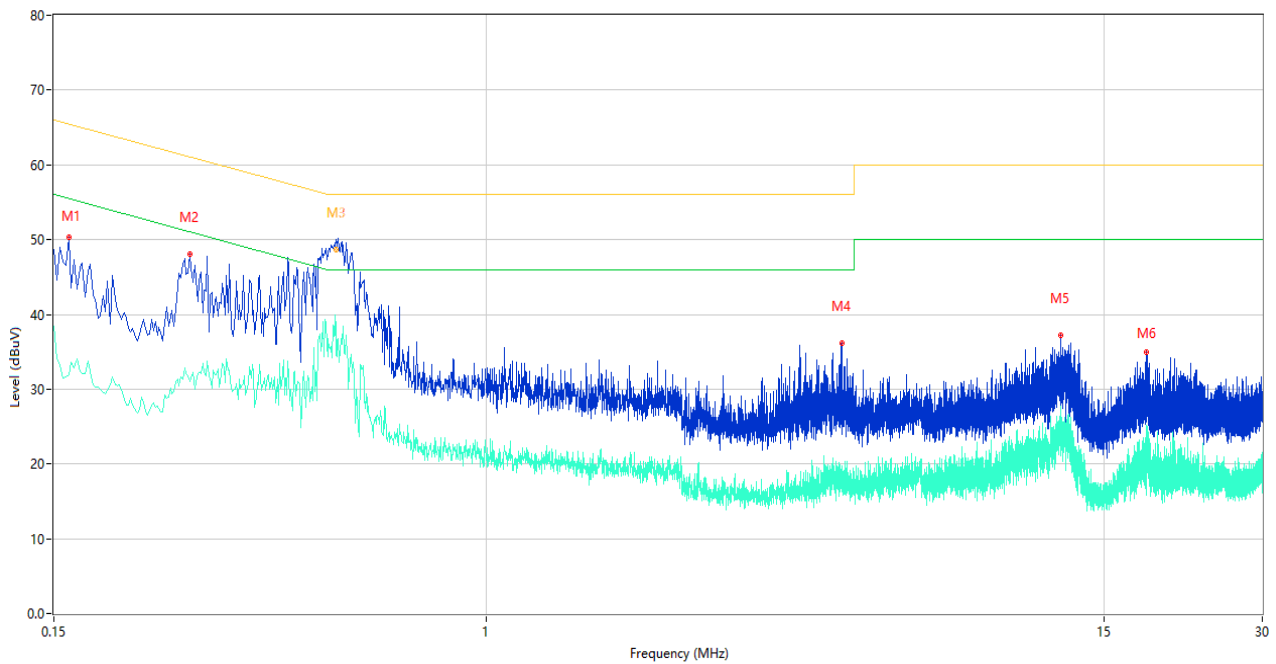
**Test Mode 4**

**3) AC Ports - L Phase**



No.	Frequency (MHz)	Results (dBuV)	Factor (dB)	Limit (dBuV)	Margin (dB)	Detector	Line	Verdict
1	0.150	54.34	9.84	66.00	11.66	Peak	L	Pass
1**	0.150	38.97	9.84	56.00	17.03	AV	L	Pass
2	0.266	48.02	9.79	61.24	13.22	Peak	L	Pass
2**	0.266	28.93	9.79	51.24	22.31	AV	L	Pass
3	0.522	49.89	10.12	56.00	6.11	Peak	L	Pass
3**	0.522	40.00	10.12	46.00	6.00	AV	L	Pass
4	0.560	50.22	10.11	56.00	5.78	Peak	L	N/A
4**	0.560*	49.12	10.11	56.00	6.88	QP	L	Pass
4***	0.560	38.79	10.11	46.00	7.21	AV	L	Pass
5	13.468	36.44	10.28	60.00	23.56	Peak	L	Pass
5**	13.468	25.34	10.28	50.00	24.66	AV	L	Pass
6	20.532	34.04	10.64	60.00	25.96	Peak	L	Pass
6**	20.532	24.37	10.64	50.00	25.63	AV	L	Pass

4) AC Ports - N Phase



No.	Frequency (MHz)	Results (dBuV)	Factor (dB)	Limit (dBuV)	Margin (dB)	Detector	Line	Verdict
1	0.160	50.35	9.83	65.46	15.11	Peak	N	Pass
1**	0.160	31.94	9.83	55.46	23.52	AV	N	Pass
2	0.272	48.06	9.79	61.06	13.00	Peak	N	Pass
2**	0.272	31.00	9.79	51.06	20.06	AV	N	Pass
3	0.516	50.43	10.11	56.00	5.57	Peak	N	N/A
3**	0.516	49.00	10.11	56.00	7.00	QP	N	Pass
3***	0.516	34.57	10.11	46.00	11.43	AV	N	Pass
4	4.742	36.08	10.26	56.00	19.92	Peak	N	Pass
4**	4.742	17.32	10.26	46.00	28.68	AV	N	Pass
5	12.406	37.14	10.37	60.00	22.86	Peak	N	Pass
5**	12.406	27.61	10.37	50.00	22.39	AV	N	Pass
6	18.058	34.98	10.54	60.00	25.02	Peak	N	Pass
6**	18.058	24.29	10.54	50.00	25.71	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	<input checked="" type="checkbox"/>
LISN	SCHWARZB ECK	NSLK 8127	8127-687	2023.05.16	2024.05.15	<input checked="" type="checkbox"/>
ISN	TESEQ	ISN T800	34449	2022.11.11	2023.11.10	<input type="checkbox"/>
ISN	TESEQ	ISN T8-Cat6	53561	2023.04.23	2024.04.22	<input type="checkbox"/>
Shielded Room	YiHeng Electronic Co., Ltd	3.5m*3.1m*2. 8m	112	2022.02.19	2025.02.18	<input checked="" type="checkbox"/>
Description	Supplier	Name	Version	/		Use
Test Software	BALUN	BL410-E	V22.930	/		<input checked="" type="checkbox"/>

## **ANNEX B TEST SETUP PHOTOS**

Please refer the document “BL-SZ23A0041-AE-1.PDF”.

## **ANNEX C EUT EXTERNAL PHOTOS**

Please refer the document “BL-SZ23A0041-AW.PDF”.

## **ANNEX D EUT INTERNAL PHOTOS**

Please refer the document “BL-SZ23A0041-AI.PDF”.



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--END OF REPORT--