

TEST REPORT

Applicant: Xiaomi Communications Co., Ltd.
Address: #019, 9th Floor, Building 6, 33 Xi'erqi Middle Road,
Haidian District, Beijing, China, 100085
Equipment Type: Mobile Phone
Model Name: 23124RA7EO
Brand Name: Redmi
FCC ID: 2AFZZA7EO
Test Standard: 47 CFR Part 15 Subpart B
ANSI C63.4-2014
Sample Arrival Date: Oct. 16, 2023
Test Date: Oct. 23, 2023 - Oct. 28, 2023
Date of Issue: Nov. 27, 2023

ISSUED BY:

Shenzhen BALUN Technology Co., Ltd.

Tested by: Zhenxiang Liu

Checked by: Xia Long

Approved by: Liao Jianming
(Technical Director)

Zhenxiang Liu

Xia Long

Jianming Liao

Revision History		
Version	Issue Date	Revisions
<u>Rev. 01</u>	<u>Nov. 27, 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	Xiaomi Communications Co., Ltd.
Address	#019, 9th Floor, Building 6, 33 Xi'erqi Middle Road, Haidian District, Beijing, China, 100085

2.2 Manufacturer Information

Manufacturer	Xiaomi Communications Co., Ltd.
Address	#019, 9th Floor, Building 6, 33 Xi'erqi Middle Road, Haidian District, Beijing, China, 100085

2.3 General Description for Equipment under Test (EUT)

EUT Name	Mobile Phone
Model Name Under Test	23124RA7EO
Series Model Name	N/A
Description of Model name differentiation	N/A
Hardware Version	135100N7
Software Version	MIUI14
Dimensions (Approx.)	N/A
Weight (Approx.)	N/A
EUT ID	S04
IMEI Number	IMEI 1:861678060030500
	IMEI 2:861678060030518

2.4 Ancillary Equipment

Please refer the document "BL-SZ23A0971-AW EUT external photo.pdf".

2.5 Technical Information

Network and Wireless connectivity	2G Network GSM/GPRS/EDGE 850/900/1800/1900 3G Network WCDMA/HSDPA/HSUPA/DC-HSDPA Band 1/5/8 4G Network FDD LTE Band 1/3/5/7/8/20/28 TDD LTE Band 38/40/41 LTE CA Uplink (UL): CA_7C, CA_38C, CA_40C Bluetooth (BR+EDR+BLE) 2.4G WIFI 802.11b, 802.11g, 802.11n(HT20) 5G WIFI 802.11a, 802.11n(HT20/40) and 802.11ac(VHT20/40/80) U-NII-1/2A/2C/3, GPS, GLONASS, Galileo, BDS, SBAS, FM receiver, 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	4.8 dB
Radiated emissions (30 MHz-1 GHz)-966#4	4.4 dB
Radiated emissions (1 GHz-18 GHz)-966#2	4.9 dB
Radiated emissions (1 GHz-18 GHz)-966#4	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	<input checked="" type="checkbox"/>
TF card	Kingston	N/A	N/A	N/A	N/A	<input checked="" type="checkbox"/>
USB disk	Sandisk	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 Video Play Test Mode</u> EUT + Adapter + USB Cable + Battery + Headset + TF Card
Mode 2	<u>The Front Camera Test Mode</u> EUT + Adapter + USB Cable + Battery + Headset + TF Card
Mode 3	<u>The Rear Camera Test Mode</u> EUT + Adapter + USB Cable + Battery + Headset + TF Card
Mode 4	<u>The Standby Test Mode</u> EUT + Adapter + USB Cable + Battery + Headset + TF Card
Mode 5	<u>The FM Test Mode</u> EUT + Adapter + USB Cable + Battery + Headset + TF Card
Mode 6	<u>The GSM 850 MHz RX Test Mode</u> GSM 850 MHz RX + EUT + Adapter + USB Cable + Battery + TF Card + Headset
Mode 7	<u>The EGPRS 850 MHz RX Test Mode</u> EGPRS 850 MHz RX + EUT + Adapter + USB Cable + Battery + TF Card + Headset
Mode 8	<u>The WCDMA Band 5 RX Test Mode</u> WCDMA Band 5 RX + EUT + Adapter + USB Cable + Battery + TF Card + Headset
Mode 9	<u>The FDD LTE Band 5 RX Test Mode</u> LTE Band 5 RX + EUT + Adapter + USB Cable + Battery + TF Card + Headset
Mode 10	<u>The USB Test Mode</u> EUT + USB Cable + Battery + Laptop + Headset + TF Card
Mode 11	<u>The OTG Test Mode</u> EUT + Battery + Data connector + USB Disk + Headset + TF Card

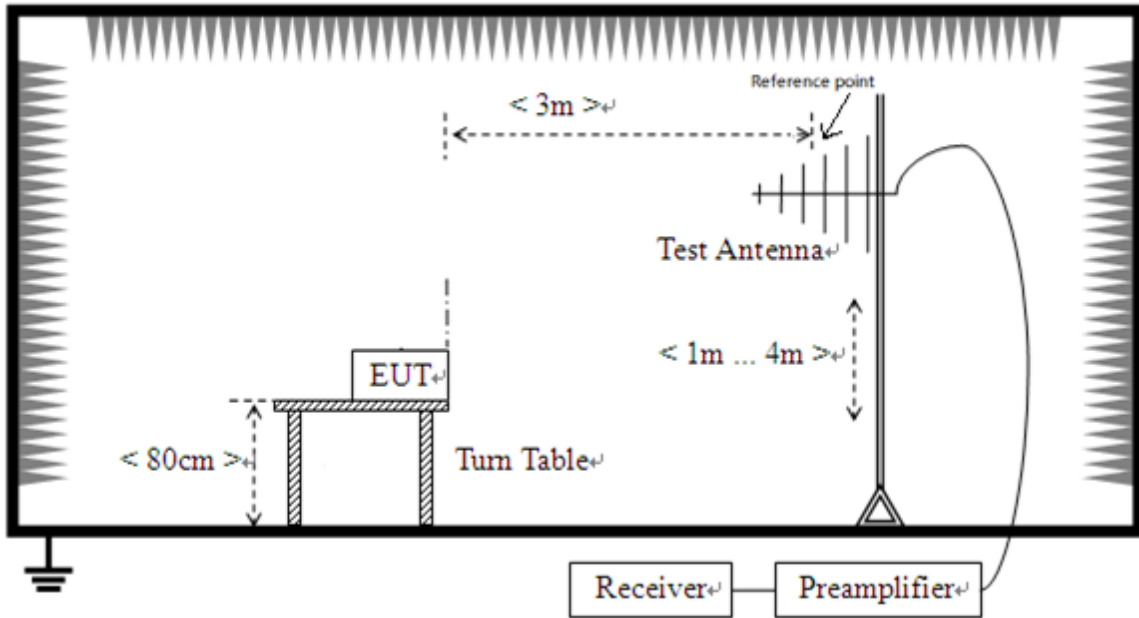
Test Case	Test Mode Configuration	Worst Mode
Radiated Emission	Mode 1~Mode 11	3, 10

Test Case	Test Mode Configuration	Worst Mode
Conducted Emission, AC Ports	Mode 1~Mode 11	3, 10

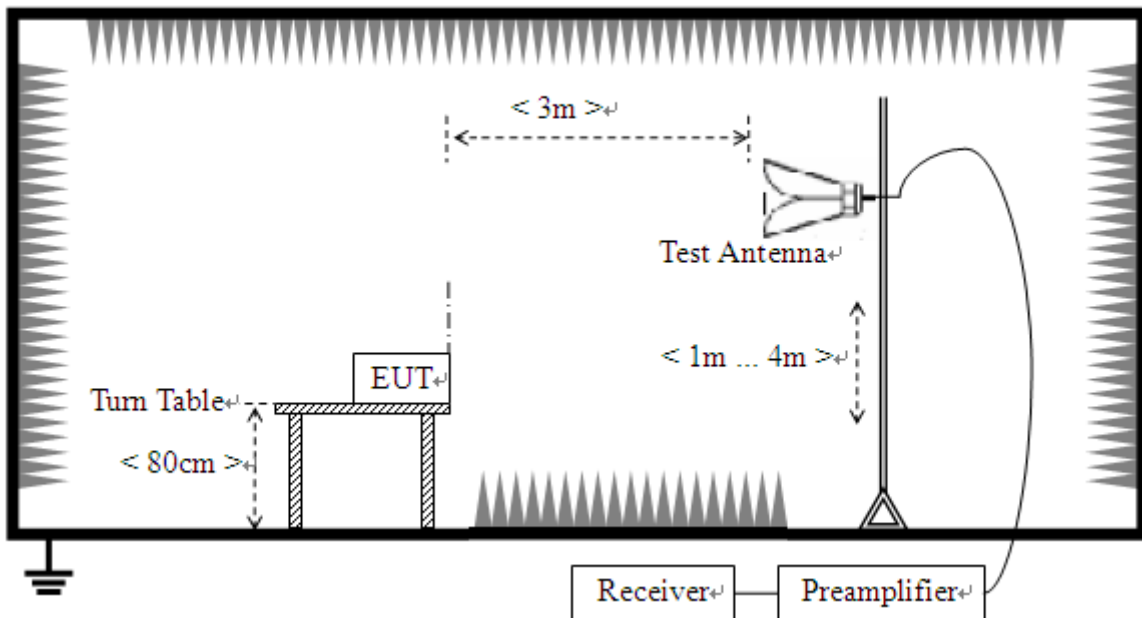
Note: Based on client request, all normal using modes of the normal function were tested, but only data of the worst mode was reported in this report.

4.3 Test Setups

Test Setup 1

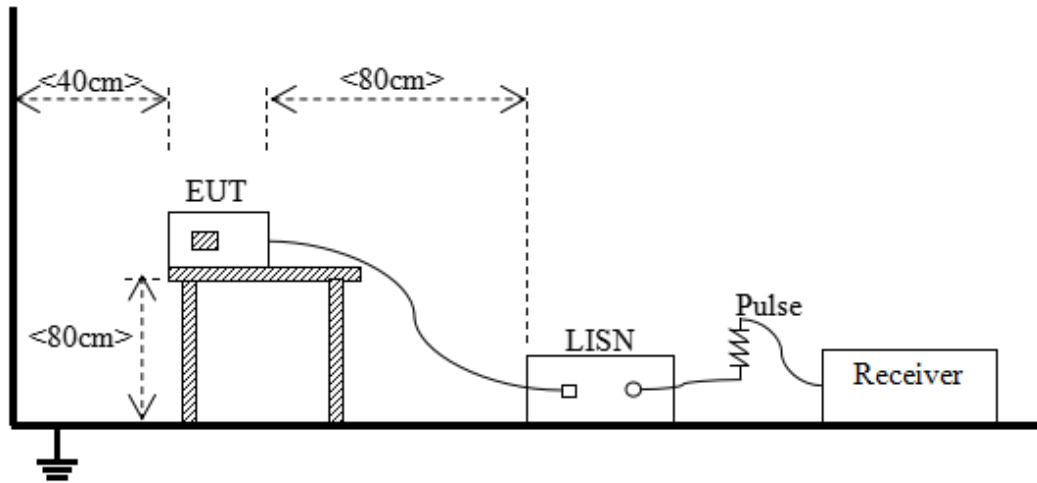


Radiated Emission (30 MHz-1 GHz)



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 $\mu\text{V/m}$) = $20 \cdot \log$ [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.

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
$F_X \geq 1$ 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) 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 $f \geq 1$ 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 μ V/m) = Reading (dB μ V/m) + Factor (dB/m)

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

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

3. Over limit = Results – Limit.

5.1.2 Conducted Emission, AC Ports

5.1.2.1 Test Limit

Frequency range (MHz)	Class 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. Over limit = Results – Limit.

ANNEX A TEST RESULTS

A.1 Radiated Emission

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

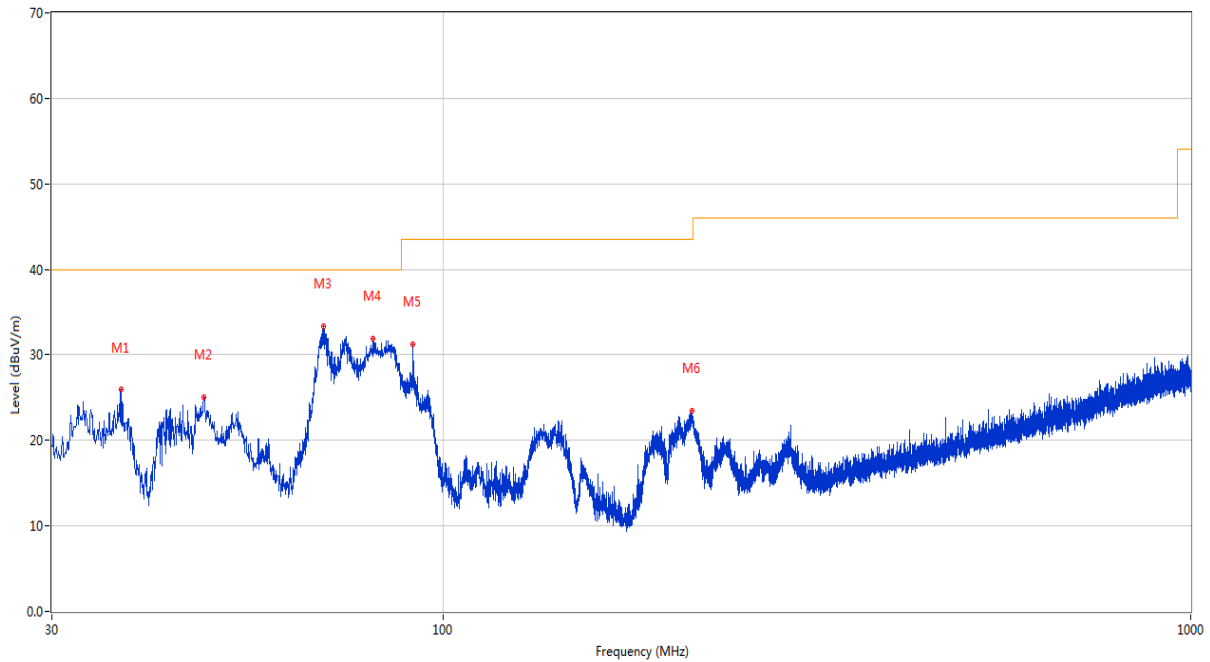
Note 2: For the test data above 1 GHz, according the ANSI C63.4-2014, where limits are specified for both average and peak (or quasi-peak) detector functions, if the peak (or quasi-peak) measured value complies with the average limit, it is unnecessary to perform an average measurement.

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

Sample No.	S02	Temperature	25.3°C
Humidity	57%RH	Pressure	101kPa
Test Engineer	Xiao Tangqi	Test Date	2023.10.30

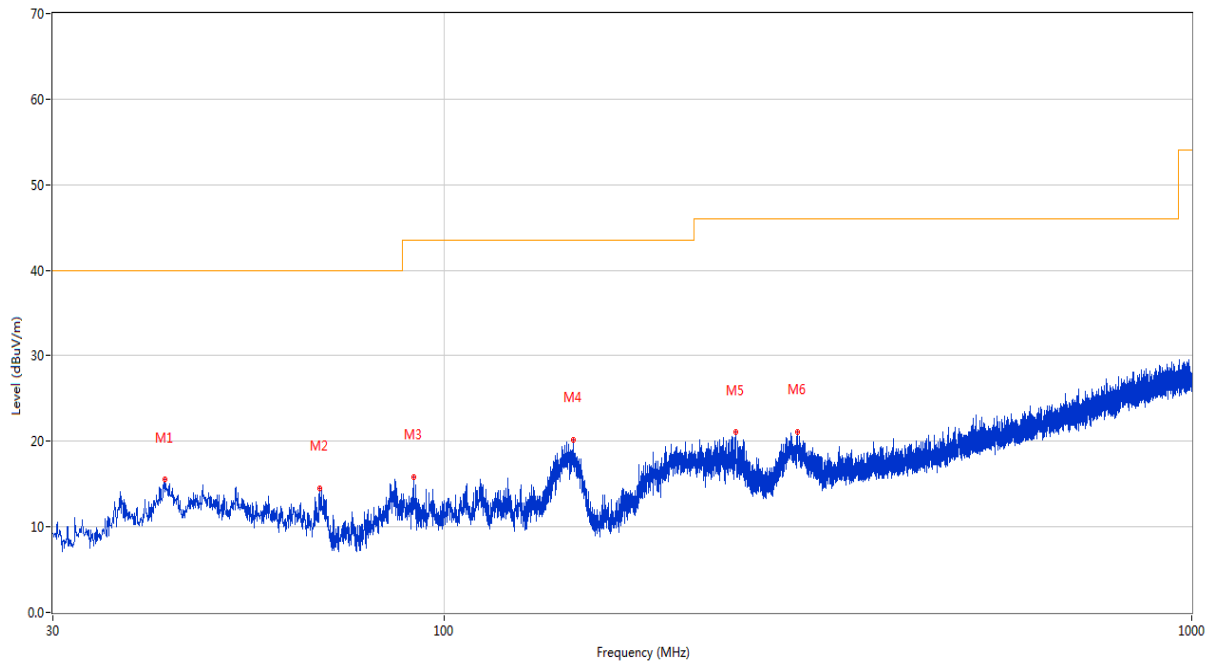
Test Mode 3

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	37.130	25.91	-24.61	40.0	14.09	Peak	189.90	100	Vertical	Pass
2	47.945	25.05	-22.65	40.0	14.95	Peak	164.50	100	Vertical	Pass
3	69.188	33.30	-26.65	40.0	6.70	Peak	49.90	100	Vertical	Pass
4	80.731	31.87	-28.48	40.0	8.13	Peak	49.90	100	Vertical	Pass
5	91.207	31.20	-25.82	43.5	12.30	Peak	133.20	100	Vertical	Pass
6	215.124	23.49	-23.78	43.5	20.01	Peak	194.10	100	Vertical	Pass

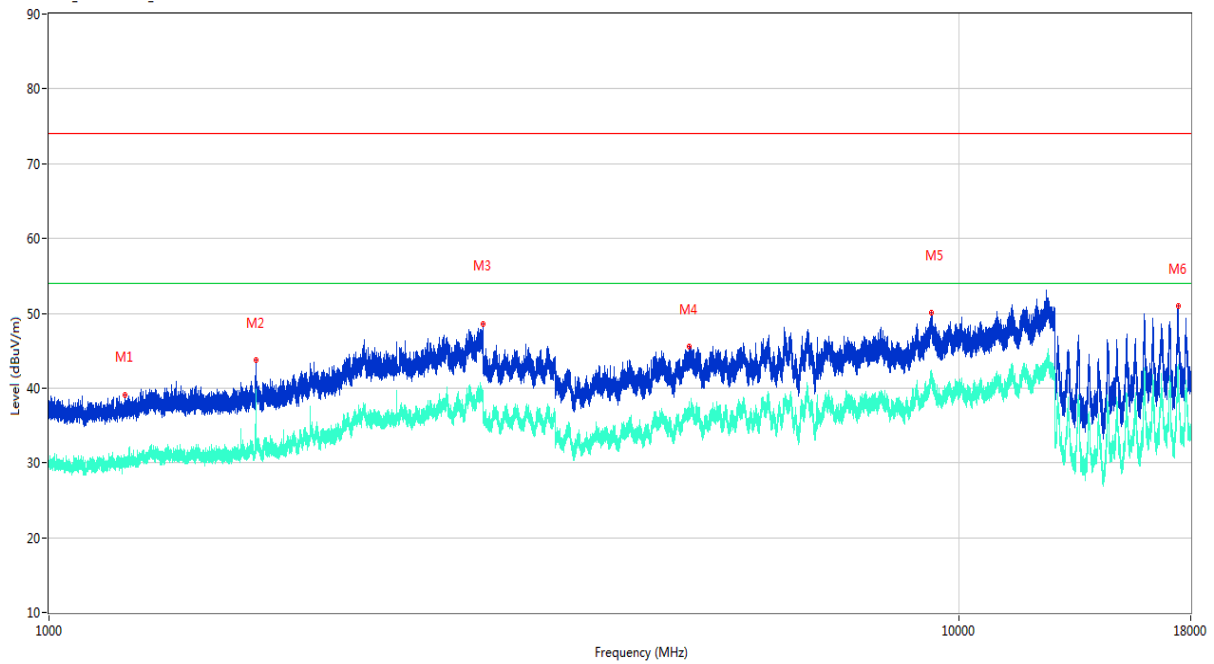
2) Test Antenna Horizontal, 30 MHz – 1 GHz



No.	Frequency (MHz)	Results (dBuV/m)	Factor (dB)	Limit (dBuV/m)	Margin (dB)	Detector	Table (Degree)	Height (cm)	Antenna	Verdict
1	42.416	15.49	-23.43	40.0	24.51	Peak	278.10	100	Horizontal	Pass
2	68.170	14.53	-25.93	40.0	25.47	Peak	357.20	100	Horizontal	Pass
3	91.207	15.80	-25.82	43.5	27.70	Peak	0.60	200	Horizontal	Pass
4	148.874	20.20	-28.14	43.5	23.30	Peak	141.60	100	Horizontal	Pass
5	245.971	21.03	-23.09	46.0	24.97	Peak	249.00	100	Horizontal	Pass
6	296.702	21.09	-21.61	46.0	24.91	Peak	313.30	100	Horizontal	Pass

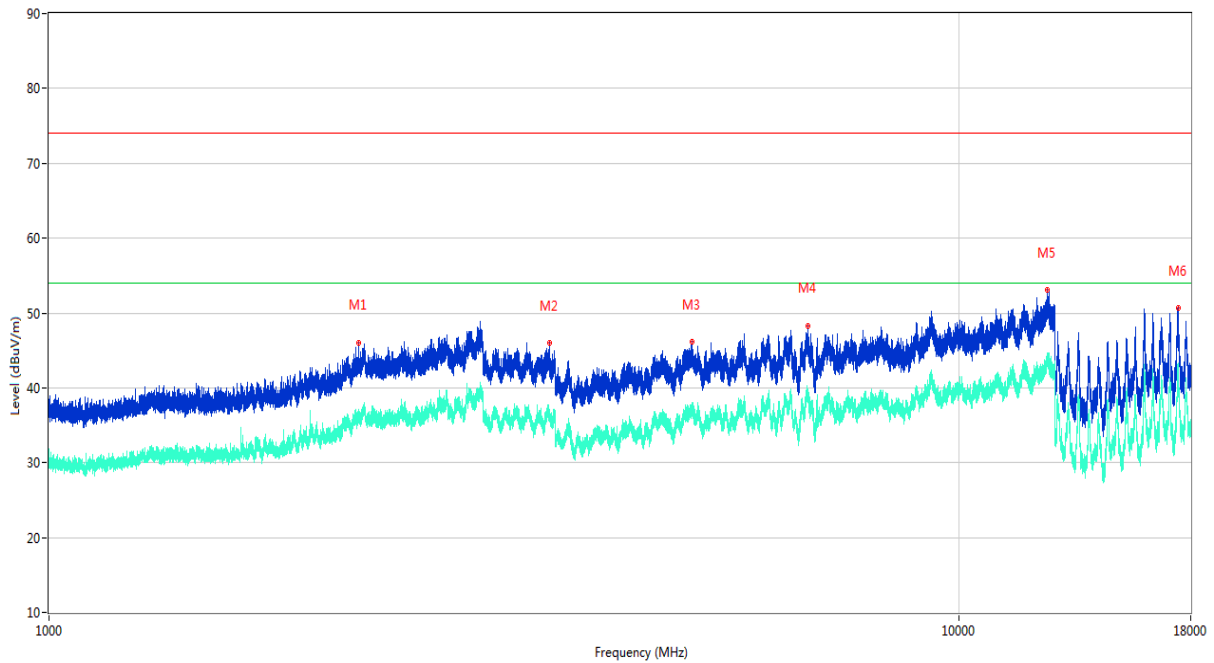
Equipment Information						
Equipment Name	Supplier	Model	Serial No.	Cal. Date	Cal. Due	Use
Frequency Below 1 GHz						
EMI Receiver	Keysight	N9038A	MY53220118	2023.09.05	2024.09.04	<input checked="" type="checkbox"/>
Amplifier (30-1GHz)	COM-MV	ZT30-1000M	B2017119082	2022.12.07	2023.12.06	<input checked="" type="checkbox"/>
Test Antenna-Bi-Log	SCHWARZB ECK	VULB 9163	9163-624	2021.08.20	2024.08.19	<input checked="" type="checkbox"/>
Anechoic Chamber	ChangNing	9m*6m*6m	101	2023.03.04	2026.03.03	<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	1213.200	39.13	-15.97	74.0	34.87	Peak	26.60	100	Vertical	Pass
1**	1213.200	30.65	-15.97	54.0	23.35	AV	26.60	100	Vertical	Pass
2	1687.600	43.75	-14.75	74.0	30.25	Peak	310.70	100	Vertical	Pass
2**	1687.600	39.77	-14.75	54.0	14.23	AV	310.70	100	Vertical	Pass
3	2997.400	48.52	-5.94	74.0	25.48	Peak	208.30	100	Vertical	Pass
3**	2997.400	39.12	-5.94	54.0	14.88	AV	208.30	100	Vertical	Pass
4	5051.400	45.60	-3.29	74.0	28.40	Peak	208.70	100	Vertical	Pass
4**	5051.400	36.48	-3.29	54.0	17.52	AV	208.70	100	Vertical	Pass
5	9336.225	50.06	20.49	74.0	23.94	Peak	357.50	100	Vertical	Pass
5**	9336.225	41.39	20.49	54.0	12.61	AV	357.50	100	Vertical	Pass
6	17427.751	50.91	25.71	74.0	23.09	Peak	19.10	100	Vertical	Pass
6**	17427.751	42.17	25.71	54.0	11.83	AV	19.10	100	Vertical	Pass

4) Test Antenna Horizontal, 1 GHz – 18 GHz



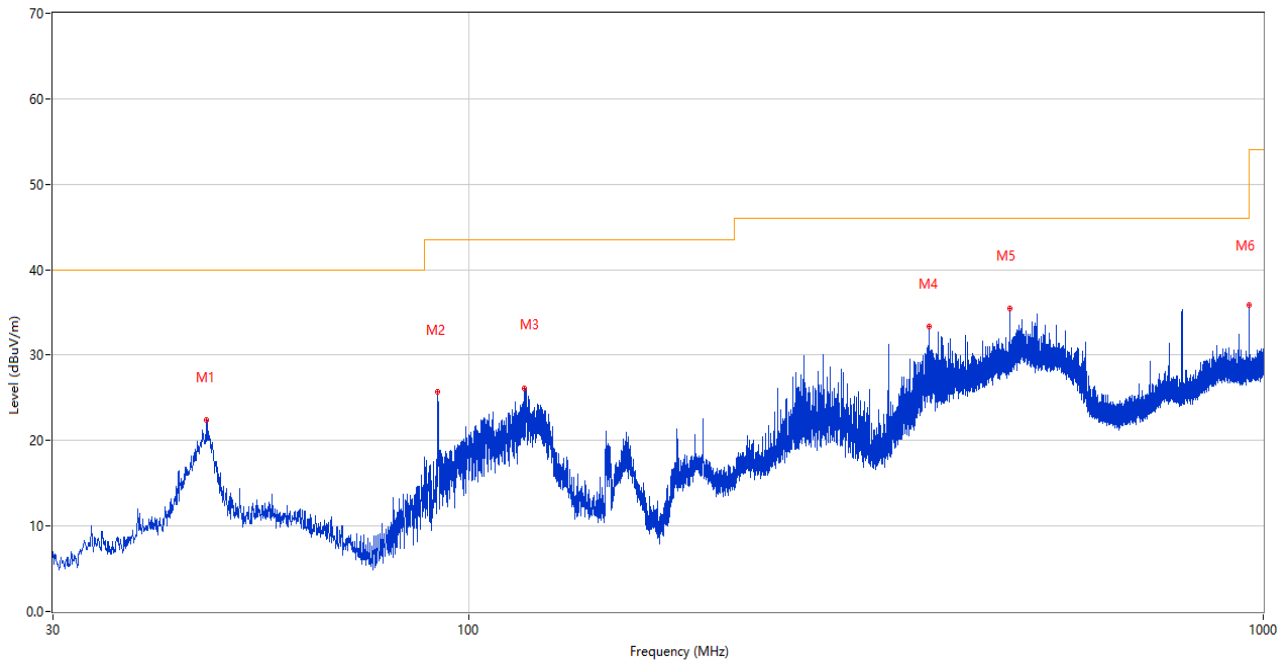
No.	Frequency (MHz)	Results (dBuV/m)	Factor (dB)	Limit (dBuV/m)	Margin (dB)	Detector	Table (Degree)	Height (cm)	Antenna	Verdict
1	2188.700	46.06	-10.25	74.0	27.94	Peak	15.60	100	Horizontal	Pass
1**	2188.700	36.61	-10.25	54.0	17.39	AV	15.60	100	Horizontal	Pass
2	3547.800	45.96	-6.75	74.0	28.04	Peak	39.10	100	Horizontal	Pass
2**	3547.800	36.55	-6.75	54.0	17.45	AV	39.10	100	Horizontal	Pass
3	5091.400	46.14	-3.32	74.0	27.86	Peak	0.00	100	Horizontal	Pass
3**	5091.400	37.10	-3.32	54.0	16.90	AV	0.00	100	Horizontal	Pass
4	6829.600	48.32	-1.69	74.0	25.68	Peak	198.60	100	Horizontal	Pass
4**	6829.600	39.67	-1.69	54.0	14.33	AV	198.60	100	Horizontal	Pass
5	12515.112	53.02	21.33	74.0	20.98	Peak	222.10	100	Horizontal	Pass
5**	12515.112	43.99	21.33	54.0	10.01	AV	222.10	100	Horizontal	Pass
6	17430.901	50.71	25.76	74.0	23.29	Peak	28.80	100	Horizontal	Pass
6**	17430.901	42.53	25.76	54.0	11.47	AV	28.80	100	Horizontal	Pass

Equipment Information						
Equipment Name	Supplier	Model	Serial No.	Cal. Date	Cal. Due	Use
Frequency Above 1 GHz						
EMI Receiver	Keysight	N9038A	MY53220118	2023.09.05	2024.09.04	<input checked="" type="checkbox"/>
Spectrum Analyzer	ROHDE & SCHWARZ	FSV40	101544	2022.12.28	2023.12.27	<input checked="" type="checkbox"/>
Amplifier (1-12GHz)	COM-MV	DLNAB-1000-12000-002	18080279	2022.12.07	2023.12.06	<input checked="" type="checkbox"/>
Amplifier (0.8-21GHz)	Mini-Circuits	ZVA-213-S+	619201336	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	1148	2022.04.12	2025.04.11	<input checked="" type="checkbox"/>
Test Antenna-Horn	A-INFOMW	LB-180400KF	J211060273	2021.07.02	2024.07.01	<input checked="" type="checkbox"/>
Anechoic Chamber	ChangNing	9m*6m*6m	101	2023.03.04	2026.03.03	<input checked="" type="checkbox"/>
Description	Supplier	Name	Version	/		Use
Test Software	BALUN	BL410-E	V22.930	/		<input checked="" type="checkbox"/>

Sample No.	S04	Temperature	26.3°C
Humidity	52%RH	Pressure	101kPa
Test Engineer	He Shichang	Test Date	2023.10.27

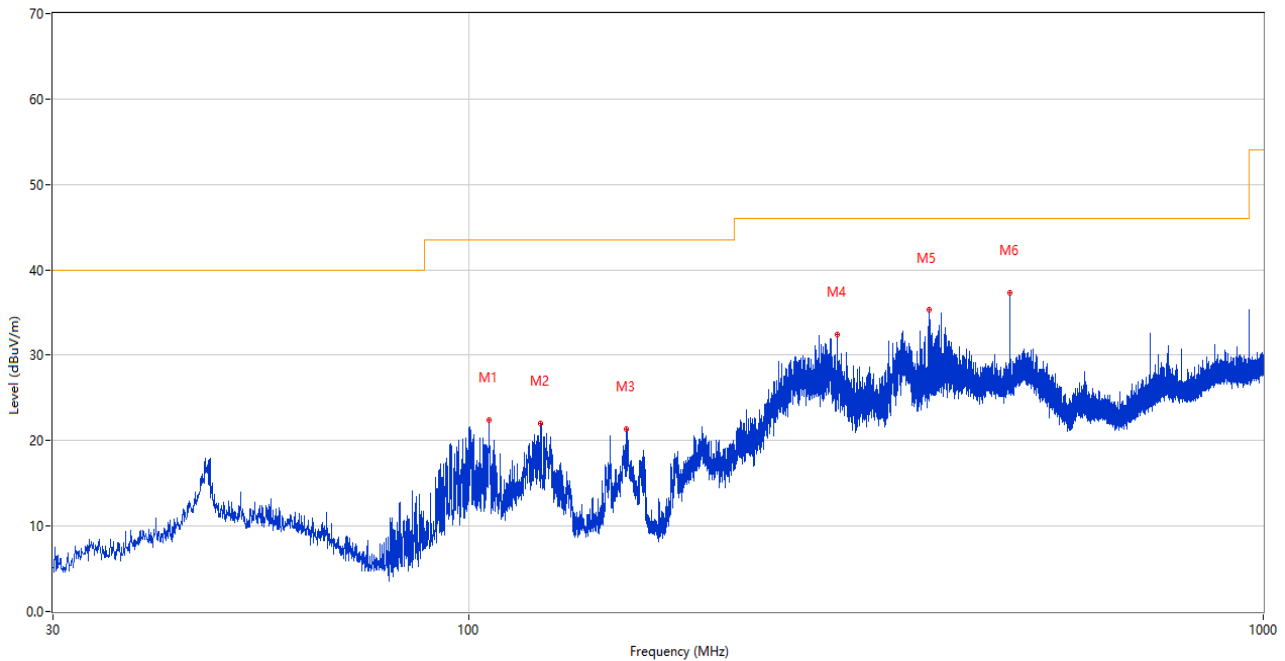
Test Mode 10

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	46.830	22.37	-25.55	40.0	17.63	Peak	128.00	100	Vertical	Pass
2	91.547	25.68	-28.36	43.5	17.82	Peak	18.00	100	Vertical	Pass
3	117.688	26.15	-28.77	43.5	17.35	Peak	360.00	100	Vertical	Pass
4	379.588	33.30	-21.51	46.0	12.70	Peak	126.00	100	Vertical	Pass
5	479.983	35.50	-19.16	46.0	10.50	Peak	25.00	100	Vertical	Pass
6	959.987	35.81	-8.98	46.0	10.19	Peak	44.00	100	Vertical	Pass

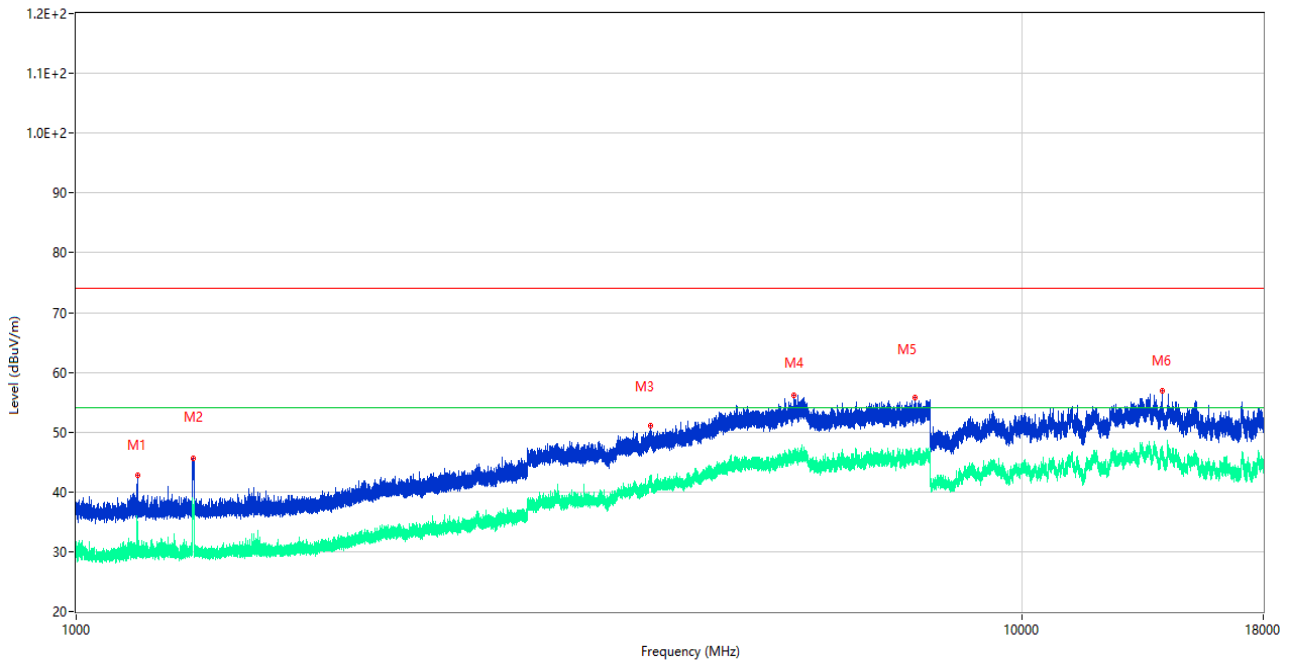
6) Test Antenna Horizontal, 30 MHz – 1 GHz



No.	Frequency (MHz)	Results (dBuV/m)	Factor (dB)	Limit (dBuV/m)	Margin (dB)	Detector	Table (Degree)	Height (cm)	Antenna	Verdict
1	106.193	22.36	-27.04	43.5	21.14	Peak	86.00	200	Horizontal	Pass
2	123.072	21.97	-29.35	43.5	21.53	Peak	97.00	200	Horizontal	Pass
3	158.040	21.31	-29.50	43.5	22.19	Peak	70.00	200	Horizontal	Pass
4	290.784	32.38	-23.80	46.0	13.62	Peak	248.00	100	Horizontal	Pass
5	380.073	35.31	-21.45	46.0	10.69	Peak	51.00	100	Horizontal	Pass
6	480.031	37.26	-19.16	46.0	8.74	Peak	196.00	100	Horizontal	Pass

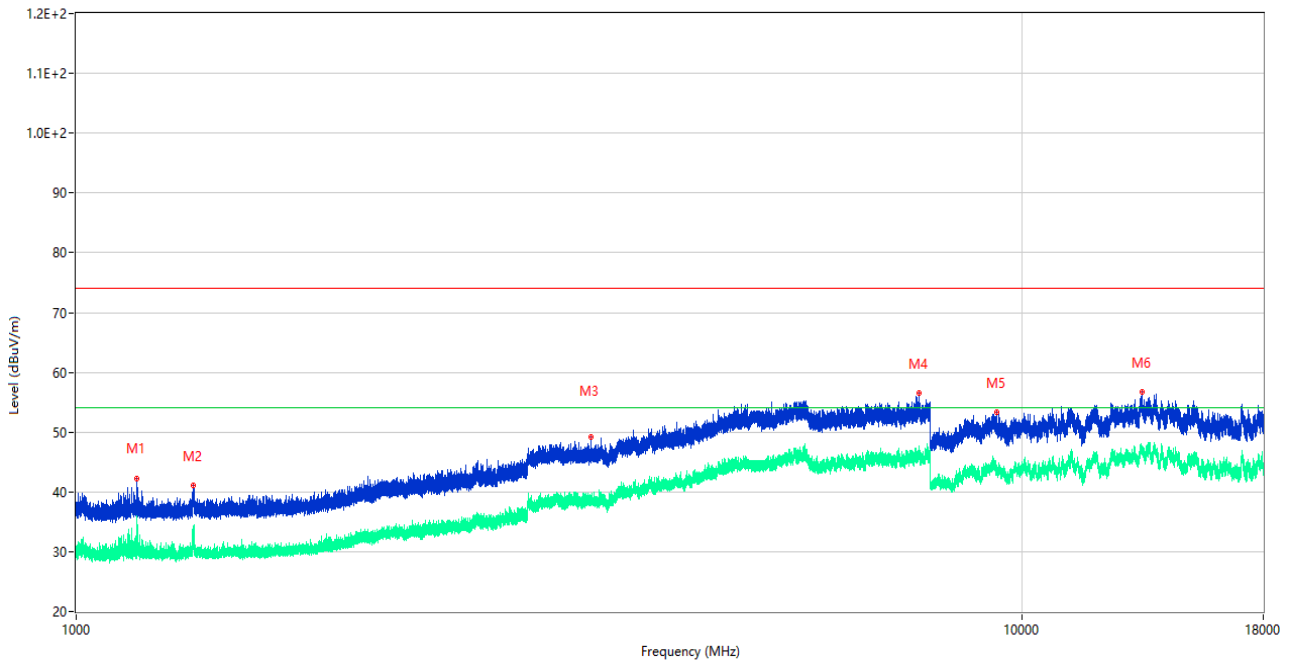
Equipment Information						
Equipment Name	Supplier	Model	Serial No.	Cal. Date	Cal. Due	Use
Frequency Below 1 GHz						
EMI Receiver	Keysight	N9038A	MY55330120	2023.09.05	2024.09.04	<input checked="" type="checkbox"/>
Amplifier (30-1GHz)	COM-MV	ZT30-1000M	B2017119081	2022.12.07	2023.12.06	<input checked="" type="checkbox"/>
Test Antenna-Bi-Log	SCHWARZB ECK	VULB 9168	9168-00867	2022.04.12	2025.04.11	<input checked="" type="checkbox"/>
Anechoic Chamber	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	1161.700	42.83	-16.05	74.0	31.17	Peak	270.00	100	Vertical	Pass
1**	1161.700	29.67	-16.05	54.0	24.33	AV	270.00	100	Vertical	Pass
2	1329.100	45.57	-16.06	74.0	28.43	Peak	213.00	100	Vertical	Pass
2**	1329.100	37.63	-16.06	54.0	16.37	AV	213.00	100	Vertical	Pass
3	4050.000	51.02	-0.54	74.0	22.98	Peak	59.00	100	Vertical	Pass
3**	4050.000	42.01	-0.54	54.0	11.99	AV	59.00	100	Vertical	Pass
4	5745.500	56.12	3.16	74.0	17.88	Peak	50.00	100	Vertical	Pass
4**	5745.500	46.54	3.16	54.0	7.46	AV	50.00	100	Vertical	Pass
5	7707.250	55.84	2.47	74.0	18.16	Peak	14.00	100	Vertical	Pass
5**	7707.250	45.46	2.47	54.0	8.54	AV	14.00	100	Vertical	Pass
6	14074.500	56.91	4.69	74.0	17.09	Peak	185.00	100	Vertical	Pass
6**	14074.500	46.12	4.69	54.0	7.88	AV	185.00	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	1159.700	42.26	-16.09	74.0	31.74	Peak	71.00	100	Horizontal	Pass
1**	1159.700	35.94	-16.09	54.0	18.06	AV	71.00	100	Horizontal	Pass
2	1329.400	41.07	-16.10	74.0	32.93	Peak	67.00	100	Horizontal	Pass
2**	1329.400	31.17	-16.10	54.0	22.83	AV	67.00	100	Horizontal	Pass
3	3499.500	49.28	-4.21	74.0	24.72	Peak	43.00	100	Horizontal	Pass
3**	3499.500	38.16	-4.21	54.0	15.84	AV	43.00	100	Horizontal	Pass
4	7783.000	56.47	3.17	74.0	17.53	Peak	126.00	100	Horizontal	Pass
4**	7783.000	47.24	3.17	54.0	6.76	AV	126.00	100	Horizontal	Pass
5	9410.000	53.25	1.77	74.0	20.75	Peak	148.00	100	Horizontal	Pass
5**	9410.000	43.65	1.77	54.0	10.35	AV	148.00	100	Horizontal	Pass
6	13388.500	56.68	4.98	74.0	17.32	Peak	360.00	100	Horizontal	Pass
6**	13388.500	47.13	4.98	54.0	6.87	AV	360.00	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	2022.12.28	2023.12.27	<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"/>

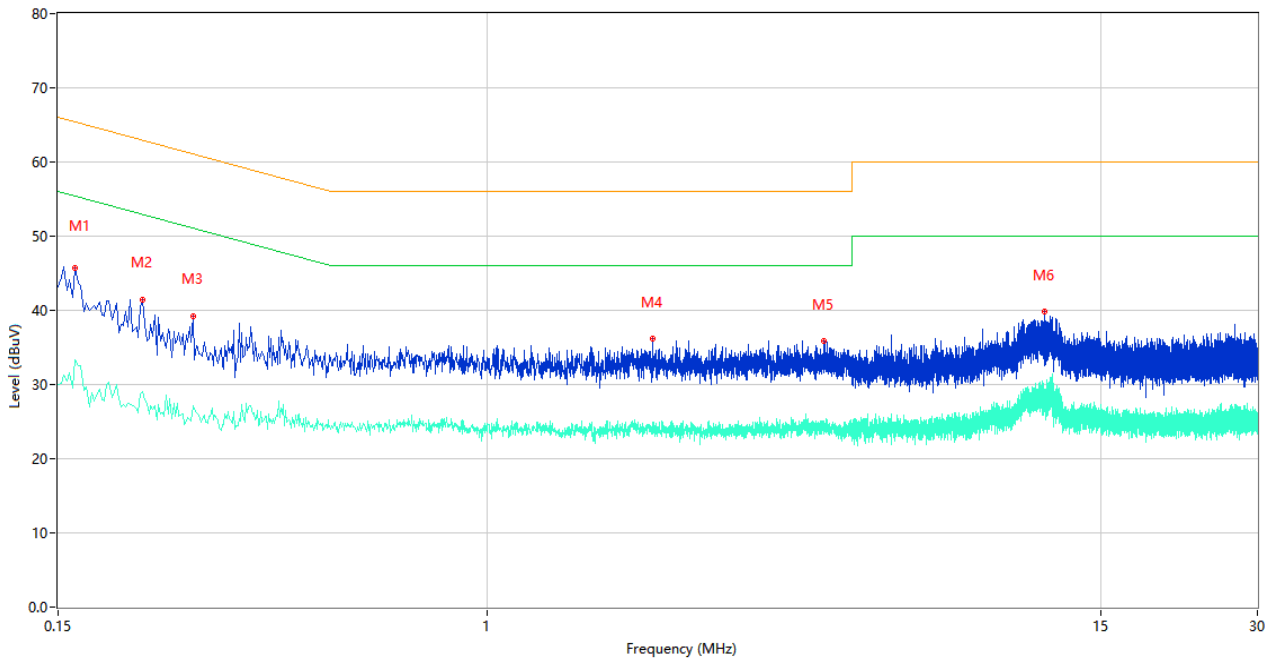
A.2 Conducted Emission, AC Ports

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	23.6°C
Humidity	58%RH	Pressure	101kPa
Test Engineer	Yang Yang	Test Date	2023.10.31

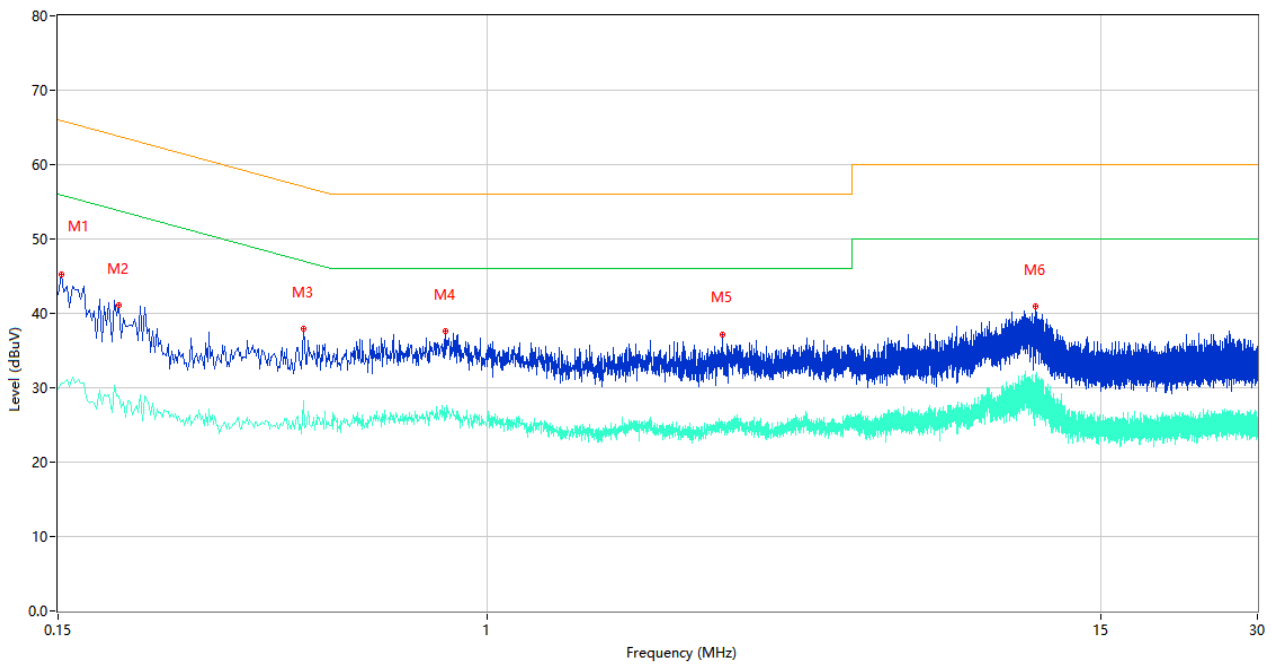
Test Mode 3

1) AC Ports - L Phase



No.	Frequency (MHz)	Results (dBuV)	Factor (dB)	Limit (dBuV)	Margin (dB)	Detector	Line	Verdict
1	0.162	45.72	9.78	65.36	19.64	Peak	L	Pass
1**	0.162	33.33	9.78	55.36	22.03	AV	L	Pass
2	0.218	41.48	9.77	62.89	21.41	Peak	L	Pass
2**	0.218	28.98	9.77	52.89	23.91	AV	L	Pass
3	0.272	39.23	9.76	61.06	21.83	Peak	L	Pass
3**	0.272	27.13	9.76	51.06	23.93	AV	L	Pass
4	2.074	36.14	10.19	56.00	19.86	Peak	L	Pass
4**	2.074	24.86	10.19	46.00	21.14	AV	L	Pass
5	4.414	35.85	10.27	56.00	20.15	Peak	L	Pass
5**	4.414	24.62	10.27	46.00	21.38	AV	L	Pass
6	11.724	39.82	10.28	60.00	20.18	Peak	L	Pass
6**	11.724	28.66	10.28	50.00	21.34	AV	L	Pass

2) AC Ports - N Phase



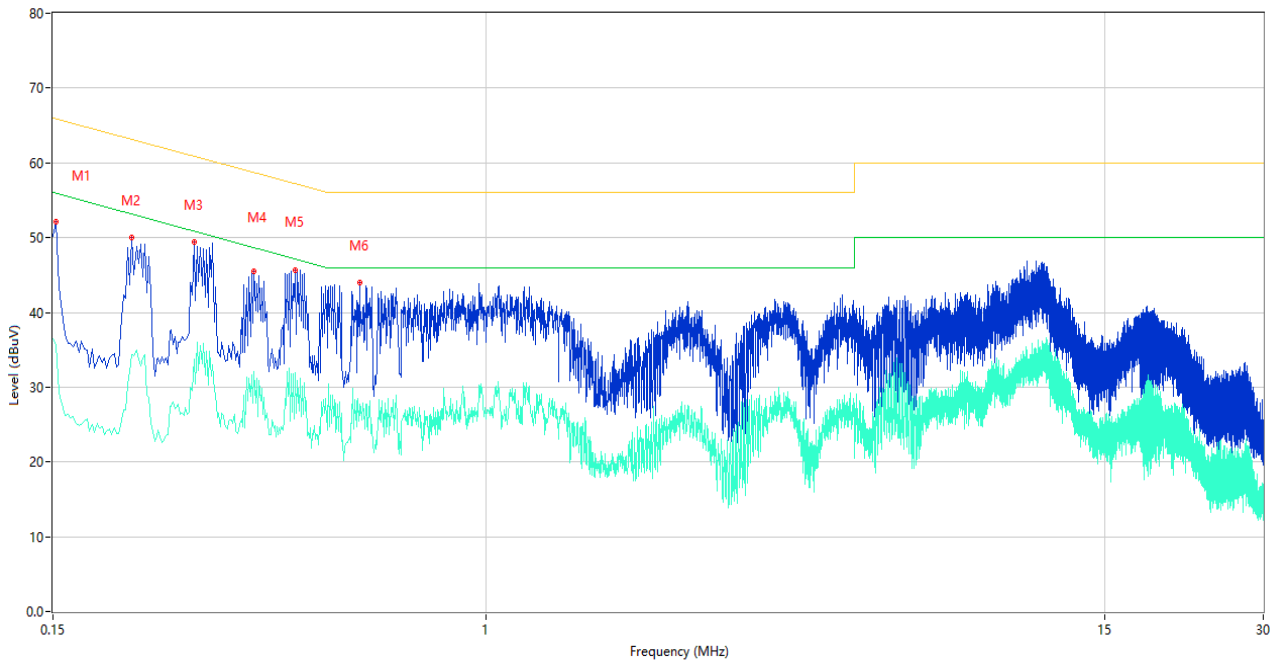
No.	Frequency (MHz)	Results (dBuV)	Factor (dB)	Limit (dBuV)	Margin (dB)	Detector	Line	Verdict
1	0.152	45.25	9.78	65.89	20.64	Peak	N	Pass
1**	0.152	30.60	9.78	55.89	25.29	AV	N	Pass
2	0.196	41.07	9.77	63.78	22.71	Peak	N	Pass
2**	0.196	28.96	9.77	53.78	24.82	AV	N	Pass
3	0.444	37.89	10.09	56.99	19.10	Peak	N	Pass
3**	0.444	28.18	10.09	46.99	18.81	AV	N	Pass
4	0.830	37.60	10.58	56.00	18.40	Peak	N	Pass
4**	0.830	26.68	10.58	46.00	19.32	AV	N	Pass
5	2.828	37.15	9.99	56.00	18.85	Peak	N	Pass
5**	2.828	25.46	9.99	46.00	20.54	AV	N	Pass
6	11.278	40.94	10.50	60.00	19.06	Peak	N	Pass
6**	11.278	31.68	10.50	50.00	18.32	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	SCHWARZBECK	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.	S04	Temperature	23.6°C
Humidity	58%RH	Pressure	101kPa
Test Engineer	Yang Yang	Test Date	2023.10.31

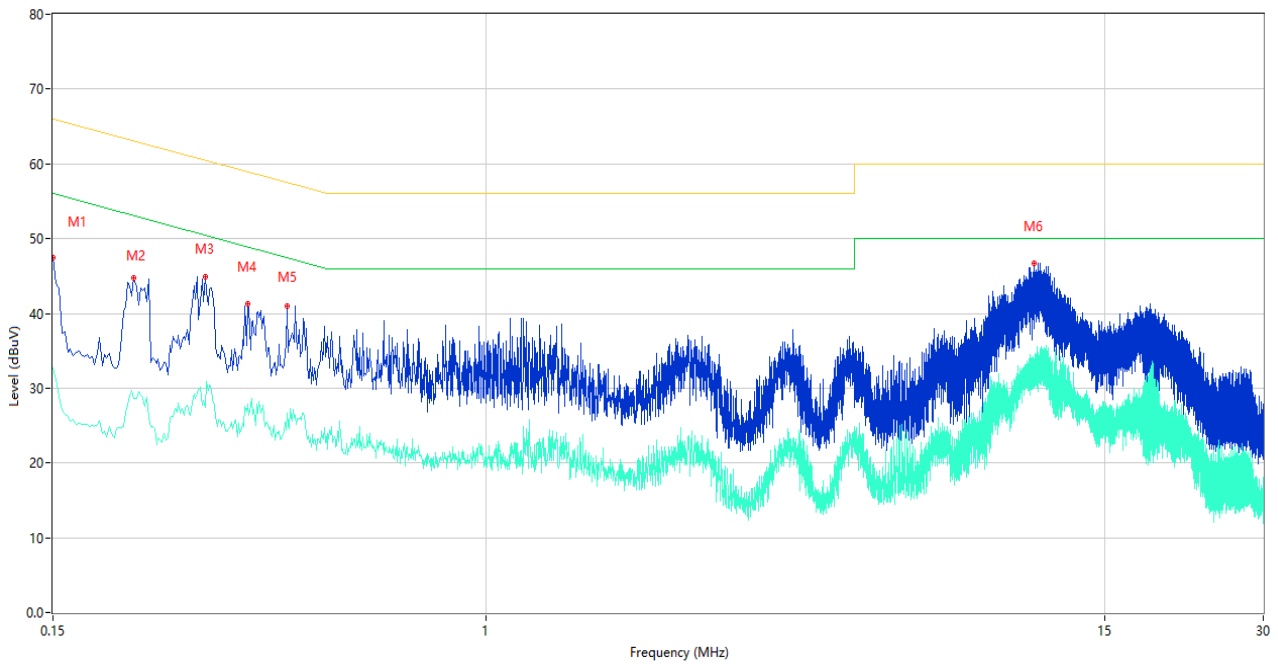
Test Mode 10

3) AC Ports - L Phase



No.	Frequency (MHz)	Results (dBuV)	Factor (dB)	Limit (dBuV)	Margin (dB)	Detector	Line	Verdict
1	0.152	52.14	9.47	65.89	13.75	Peak	L	Pass
1**	0.152	35.67	9.47	55.89	20.22	AV	L	Pass
2	0.212	50.01	9.42	63.13	13.12	Peak	L	Pass
2**	0.212	34.28	9.42	53.13	18.85	AV	L	Pass
3	0.278	49.46	9.43	60.88	11.42	Peak	L	Pass
3**	0.278	33.77	9.43	50.88	17.11	AV	L	Pass
4	0.362	45.56	9.50	58.68	13.12	Peak	L	Pass
4**	0.362	32.07	9.50	48.68	16.61	AV	L	Pass
5	0.434	45.65	9.96	57.18	11.53	Peak	L	Pass
5**	0.434	31.95	9.96	47.18	15.23	AV	L	Pass
6	0.574	43.94	9.91	56.00	12.06	Peak	L	Pass
6**	0.574	27.69	9.91	46.00	18.31	AV	L	Pass

4) AC Ports - N Phase



No.	Frequency (MHz)	Results (dBuV)	Factor (dB)	Limit (dBuV)	Margin (dB)	Detector	Line	Verdict
1	0.150	47.53	9.47	66.00	18.47	Peak	N	Pass
1**	0.150	32.66	9.47	56.00	23.34	AV	N	Pass
2	0.214	44.71	9.42	63.05	18.34	Peak	N	Pass
2**	0.214	28.66	9.42	53.05	24.39	AV	N	Pass
3	0.292	44.96	9.43	60.47	15.51	Peak	N	Pass
3**	0.292	27.41	9.43	50.47	23.06	AV	N	Pass
4	0.352	41.29	9.36	58.92	17.63	Peak	N	Pass
4**	0.352	27.84	9.36	48.92	21.08	AV	N	Pass
5	0.418	40.93	9.98	57.49	16.56	Peak	N	Pass
5**	0.418	26.74	9.98	47.49	20.75	AV	N	Pass
6	10.984	46.74	8.49	60.00	13.26	Peak	N	Pass
6**	10.984	30.89	8.49	50.00	19.11	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	SCHWARZBECK	NSLK 8127	8127-687	2023.05.16	2024.05.15	<input checked="" type="checkbox"/>
ISN	TESEQ	ISN T800	34449	2023.11.10	2024.11.09	<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-SZ23A0971-AE-1.PDF”.

ANNEX C EUT EXTERNAL PHOTOS

Please refer the document “BL-SZ23A0971-AW.PDF”.

ANNEX D EUT INTERNAL PHOTOS

Please refer the document “BL-SZ23A0971-AI.PDF”.

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--END OF REPORT--