

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: RMX3951
Brand Name: realme
FCC ID: 2AUYFRMX3951
Test Standard: 47 CFR Part 15 Subpart B
ANSI C63.4-2014
Sample Arrival Date: Jun. 03, 2024
Test Date: Jun. 05, 2024 - Jul. 11, 2024
Date of Issue: Jul. 11, 2024

ISSUED BY:

Shenzhen BALUN Technology Co., Ltd.

Tested by: Zhang Guoxi **Checked by:** Liu Zhenxiang **Approved by:** Liao Jianming
(Technical Director)

Zhang Guoxi

Liu zhen xiang

Liao Jianming

Revision History		
Version	Issue Date	Revisions
<u>Rev. 01</u>	<u>Jul. 04, 2024</u>	<u>Initial Issue</u>
<u>Rev. 02</u>	<u>Jul. 11, 2024</u>	<u>Chapter 4.2, add testing mode</u> <u>Update report homepage testing time</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	RMX3951
Series Model Name	N/A
Description of Model name differentiation	N/A
Hardware Version	11
Software Version	realme UI 5.0
Dimensions (Approx.)	about 165.6×76.1×7.79(mm)
Weight (Approx.)	about 190g
EUT ID	S31
IMEI Number	IMEI1: 862456070025433, IMEI2:862456070025425

2.4 Ancillary Equipment

Ancillary Equipment 1	Battery	
	Brand Name	SUPERVOOC
	Model No.	BLPA17
	Serial No.	N/A
	Capacity	5000 mAh/19.45 Wh
	Rated Voltage	3.89 V
	Limit Charge Voltage	4.48 V
	Manufacturer	Shenzhen Sunwoda Intelligence Technology Co., Ltd.
Ancillary Equipment 2	Adapter 1	
	Brand Name	SUPERVOOC
	Model No.	VCB4JAUH
	Serial No.	N/A
	Rated Input	100-240V~, 50/60Hz, 1.5A
	Rated Output	5.0V= 2.0A or 5-11V= 4.1A MAX
	Manufacturer	Chenyang
Ancillary Equipment 3	Adapter 2	
	Brand Name	SUPERVOOC
	Model No.	VCB4JAUH
	Serial No.	N/A
	Rated Input	100-240V~, 50/60Hz, 1.5A
	Rated Output	5.0V= 2.0A or 5-11V= 4.1A MAX
	Manufacturer	GOLDEN LAKE
Ancillary Equipment 4	USB Cable	
	Length (Approx.)	1.0 m
Note: All adapters are tested, only the worst data of VCB4JAUH (Chenyang) shown in this report.		

2.5 Technical Information

Network and Wireless connectivity	<p>2G Network GSM/GPRS/EDGE 850/1900 MHz</p> <p>3G Network WCDMA/HSDPA/HSUPA/HSPA+ Band 2/4/5</p> <p>4G Network LTE FDD Band 2/4/5/7/12/13/17/26/66 LTE TDD Band 38/41</p> <p>LTE CA Uplink (UL): CA_7C, CA_38C, CA_41C</p> <p>LTE Downlink (DL): CA_2C, CA_7B, CA_7C, CA_38C, CA_41C, CA_41A-41A, CA_7A-7A, CA_2A-38A, CA_5A-41A, CA_5A-66A, CA_7A-66A, CA_2A-2A, CA_2A-5A, CA_2A-7A, CA_2A-12A, CA_4A-5A, CA_4A-7A, CA_5A-7A, CA_12A-66A, CA_66A-66A, CA_4A-4A, CA_26A-41A, CA_5A-38A, CA_2A-4A, CA_38A-66A, CA_26A-38A, CA_2A-66A, CA_7A-26A</p> <p>5G Network</p> <p>SA: NR n5/n7/n38/n41/n66</p> <p>NSA UL (EN-DC): DC_7A_n5A, DC_66A_n5A, DC_2A_n7A, DC_4A_n7A, DC_5A_n7A, DC_7A_n7A, DC_66A_n7A, DC_2A_n66A, DC_5A_n66A, DC_7A_n66A, DC_66A_n66A, DC_2A_n38A, DC_4A_n38A, DC_5A_n38A, DC_38A_n38A, DC_66A_n38A, DC_2A_n41A, DC_4A_n41A, DC_26A_n41A, DC_41A_n41A, DC_66A_n41A</p> <p>DL(EN-DC): DC_7C_n5A, DC_7C_n66A, DC_5A-66A_n66A, DC_7A-66A_n66A, DC_2A-5A_n66A, DC_5A-7A_n7A, DC_5A-7A_n66A, DC_66A-66A_n5A, DC_66A-66A_n7A</p> <p>NR CA Downlink (DL): CA_n5A-n7A, CA_n7B</p> <p>Bluetooth (BR+EDR+BLE)</p> <p>2.4G WIFI 802.11b, 802.11g, 802.11n(HT20/40) and VHT(20/40)</p> <p>5G WIFI 802.11a, 802.11n(HT20/40) and 802.11ac(VHT20/40/80)</p> <p>U-NII-1/2A/2C/3, GPS, GLONASS, BDS, Galileo, NFC</p>
Classification of equipment	Class B
The highest internal frequency of EUT	5850 MHz

3 SUMMARY OF TEST RESULTS

3.1 Test Standards

No.	Identity	Document Title
1	47 CFR Part 15 Subpart B	Unintentional Radiators
2	ANSI C63.4-2014	American National Standard for Methods of Measurement of Radio-Noise Emissions from Low-Voltage Electrical and Electronic Equipment in the Range of 9 kHz to 40 GHz

3.2 Verdict

No.	Description	FCC Rule	Test Verdict	Remark
1	Radiated Emission	15.109	Pass	--
2	Conducted Emission, AC Ports	15.107	Pass	--

3.3 Test Uncertainty

The following measurement uncertainty levels have been estimated for tests performed on the EUT as specified in CISPR 16-4-2. This uncertainty represents an expanded uncertainty expressed at approximately the 95% confidence level using a coverage factor of $k=2$.

Measurement	Value
Conducted emissions (9 kHz-30 MHz)	3.2 dB
Radiated emissions (30 MHz-1 GHz)-966#2	4.4 dB
Radiated emissions (1 GHz-18 GHz)-966#2	5.0 dB

4 GENERAL TEST CONFIGURATIONS

4.1 Test Enclosure List

Description	Manufacturer	Model	Serial No.	Length	Description	Use
Wireless Communications Test Set	R&S	CMW500	102318	N/A	Cal. Due 2025.05.08	<input checked="" type="checkbox"/>
Laptop	Lenovo	ThinkPad E495	N/A	N/A	N/A	<input checked="" type="checkbox"/>
Laptop	HONOR	N/A	N/A	N/A	N/A	<input checked="" type="checkbox"/>
Data connector	UGREEN	40702	N/A	N/A	N/A	<input checked="" type="checkbox"/>
USB disk	Sandisk	DTMC3G2	N/A	N/A	64G	<input checked="" type="checkbox"/>
TF Card	SAMSUNG	MB-MD256KA	N/A	N/A	256G	<input checked="" type="checkbox"/>
Headset	OPPO	MH156	N/A	1.12m	N/A	<input checked="" type="checkbox"/>
Type-C Headset	OPPO	MH156	N/A	1.12m	N/A	<input checked="" type="checkbox"/>

4.2 Test Configurations

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

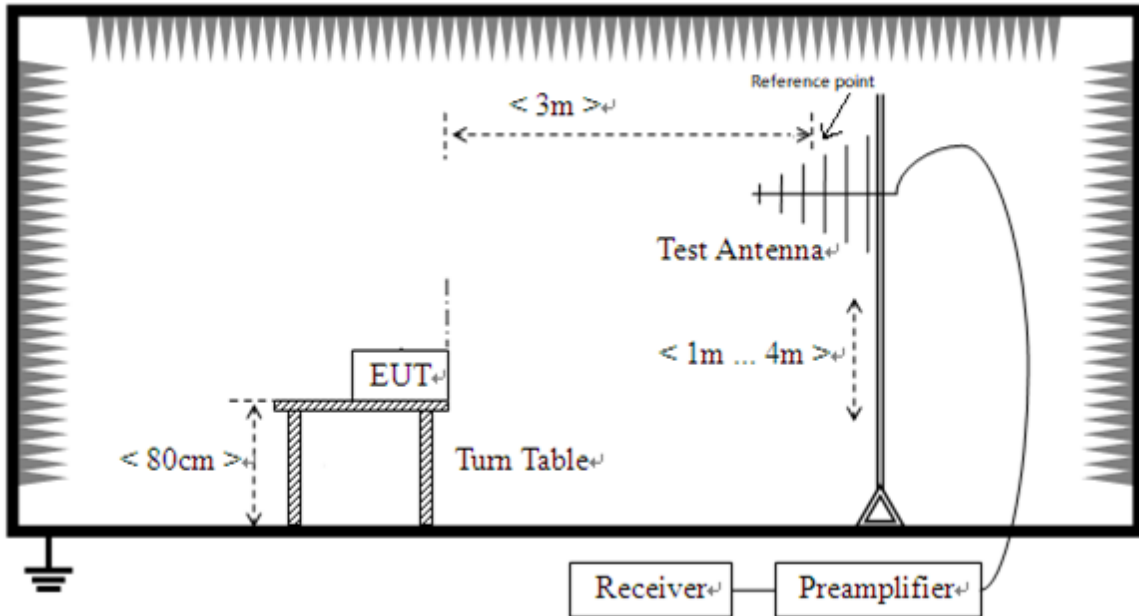
Test Mode Configuration	Description
Mode 1	<u>The GSM 850 MHz RX Test Mode</u> GSM 850 MHz RX + EUT +Adapter + USB Cable + Battery + Headset
Mode 2	<u>The EGPRS 850 MHz RX Test Mode</u> EGPRS 850 MHz RX + EUT +Adapter + USB Cable + Battery + Headset
Mode 3	<u>The WCDMA Band 5 RX Test Mode</u> WCDMA Band 5 RX + EUT +Adapter + USB Cable + Battery + Headset
Mode 4	<u>The FDD LTE Band 5 RX Test Mode</u> LTE Band 5 RX + EUT +Adapter + USB Cable + Battery + Headset
Mode 5	<u>The FDD LTE Band 12 RX Test Mode</u> LTE Band 12 RX + EUT +Adapter + USB Cable + Battery + Headset
Mode 6	<u>The FDD LTE Band 13 RX Test Mode</u> LTE Band 13 RX + EUT +Adapter + USB Cable + Battery + Headset
Mode 7	<u>The FDD LTE Band 17 RX Test Mode</u> LTE Band 17 RX + EUT +Adapter + USB Cable + Battery + Headset
Mode 8	<u>The FDD LTE Band 26 RX Test Mode</u> LTE Band 26 RX + EUT +Adapter + USB Cable + Battery + Headset
Mode 9	<u>The n5 Test Mode RX Test Mode</u> n5 RX + EUT +Adapter + USB Cable + Battery + Headset
Mode 10	<u>The Standby Test Mode</u> EUT + Adapter + USB Cable + Battery + Headset
Mode 11	<u>The Front Camera Test Mode</u> EUT + Adapter + USB Cable + Battery + Headset
Mode 12	<u>The Rear Camera Test Mode</u> EUT + Adapter + USB Cable + Battery + Headset
Mode 13	<u>The Video Play Test Mode</u> EUT + Adapter + USB Cable + Battery + Headset
Mode 14	<u>The USB Test Mode</u> EUT + USB Cable + Battery + Laptop + Headset
Mode 15	<u>The OTG Test Mode</u> EUT + Battery + Data connector + USB Disk
Mode 16	<u>The Type-C Headset Test Mode</u> EUT + Type-C Headset + Battery

Test Case	Test Mode Configuration	Worst Mode
Radiated Emission	Mode 1~Mode 16	11, 14
Conducted Emission, AC Ports	Mode 1~Mode 14	12, 14

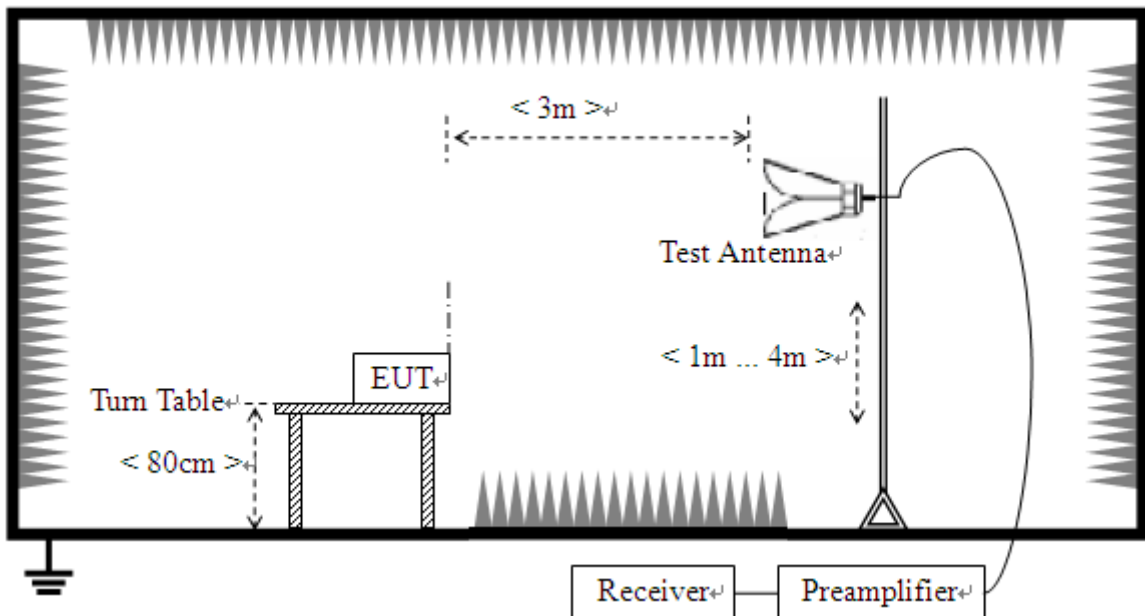
Test Case	Test Mode Configuration	Worst Mode
Note: All operation modes were tested, but only test data of the worst mode was presented in this report.		

4.3 Test Setups

Test Setup 1

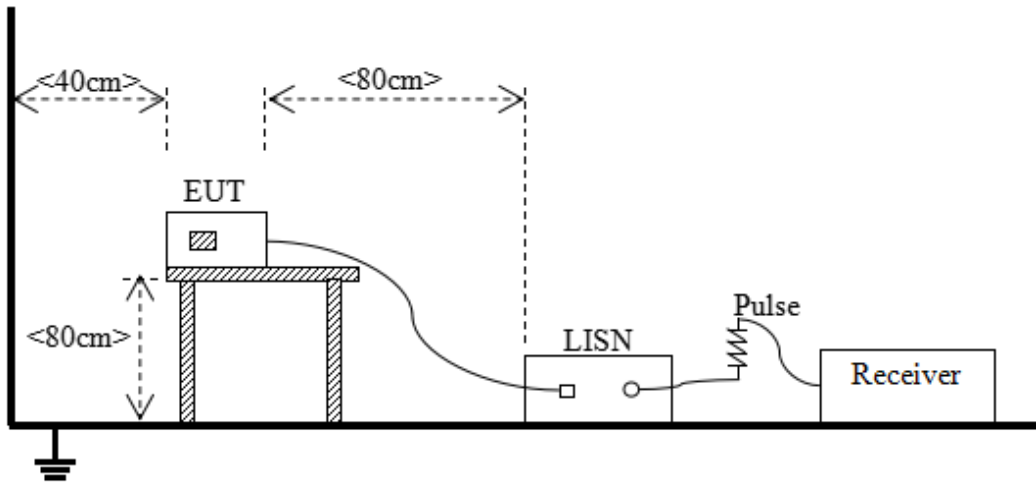


Radiated Emission (30 MHz-1 GHz)



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*log [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*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) + 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 (dBµV)	Average (dBµV)
0.15 - 0.50	79	66
0.50 - 30	73	60

Frequency range (MHz)	Class B	
	Quasi-peak (dBµV)	Average (dBµV)
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 µH 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 ≥ RBW

Sweep = 10ms

Detector function = peak & Average

Trace = max hold

5.1.2.4 Test Result and Test Equipment List

Please refer to ANNEX A.2.

NOTE:

1. Results (dB μ V) = Reading (dB μ V) + Factor (dB)

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

2. Factor = Insertion loss + Cable loss

3. Margin = Limit - Results

ANNEX A TEST RESULTS

A.1 Radiated Emission

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

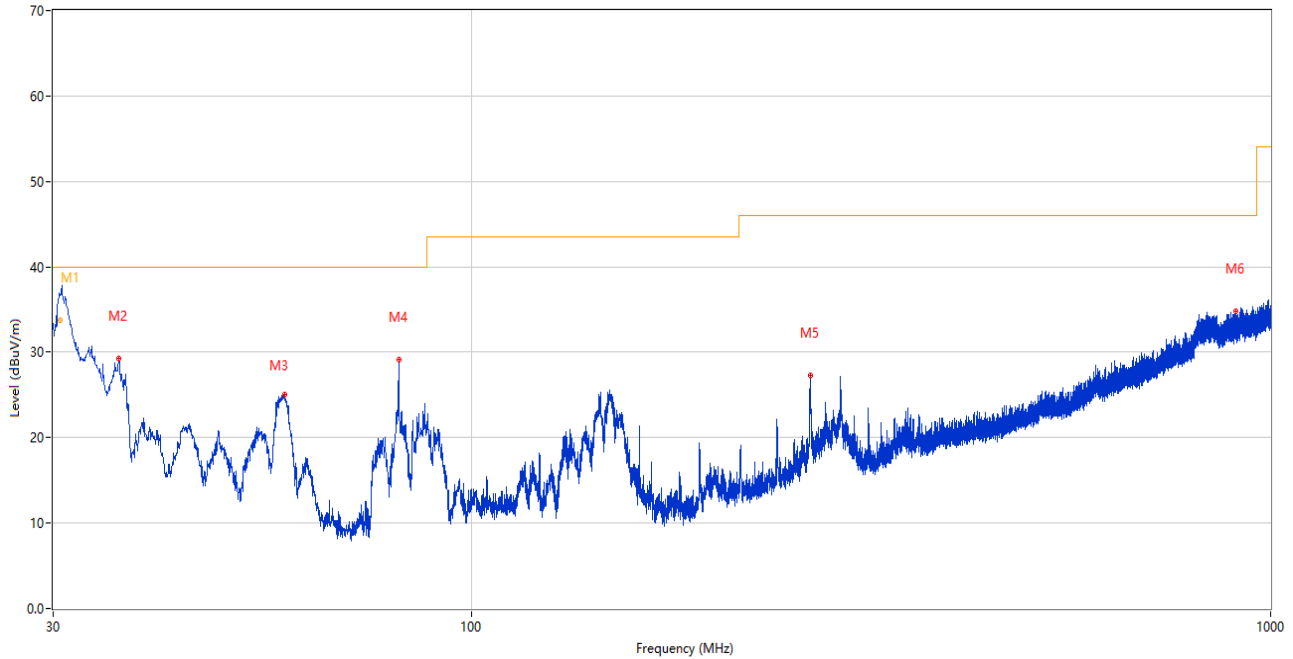
Note 2: For the test data above 1 GHz, according the ANSI C63.4-2014, where limits are specified for both average and peak (or quasi-peak) detector functions, if the peak (or quasi-peak) measured value complies with the average limit, it is unnecessary to perform an average measurement.

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

Sample No.	S31	Temperature	21.2°C
Humidity	53%RH	Pressure	101kPa
Test Engineer	He Shichang	Test Date	2024.06.05

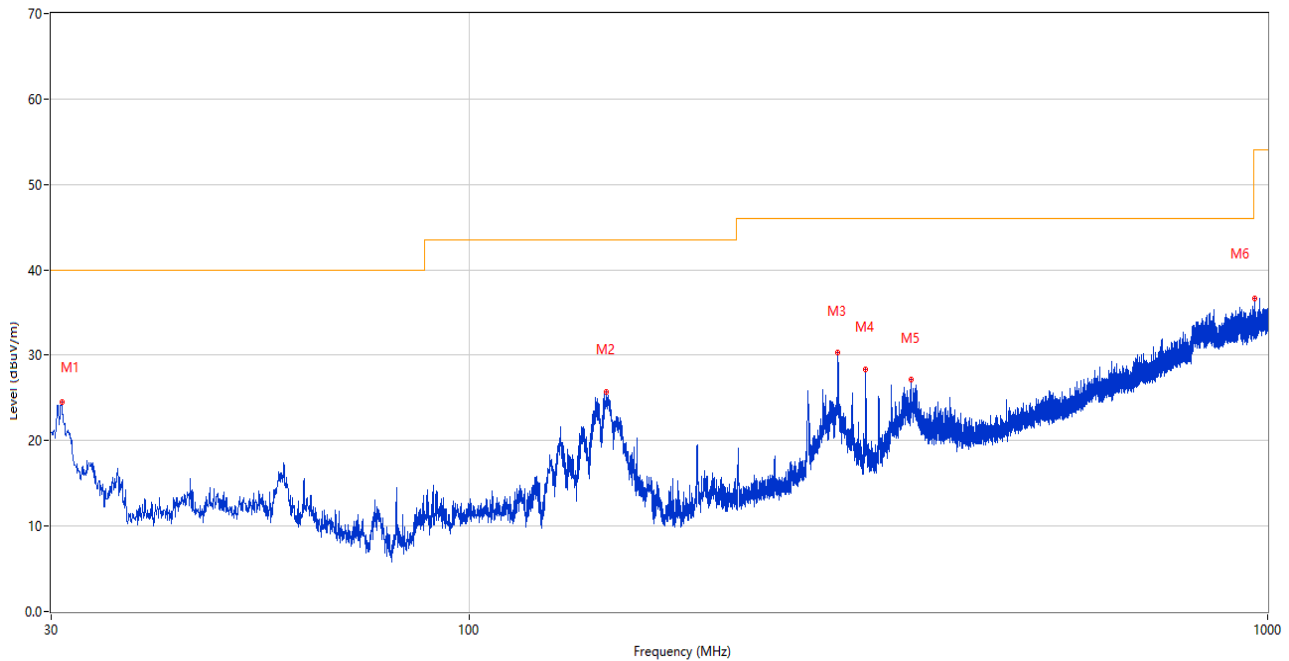
Test Mode 11

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	30.611	37.40	-28.11	40.0	2.60	Peak	121.00	101	Vertical	N/A
1*	30.611	33.72	-28.11	40.0	6.28	QP	121.00	101	Vertical	Pass
2	36.208	29.31	-26.89	40.0	10.69	Peak	138.00	100	Vertical	Pass
3	58.373	25.07	-25.59	40.0	14.93	Peak	66.00	100	Vertical	Pass
4	81.168	29.17	-29.51	40.0	10.83	Peak	63.00	100	Vertical	Pass
5	265.613	27.34	-21.79	46.0	18.66	Peak	4.00	200	Vertical	Pass
6	904.891	34.77	-4.49	46.0	11.23	Peak	300.00	200	Vertical	Pass

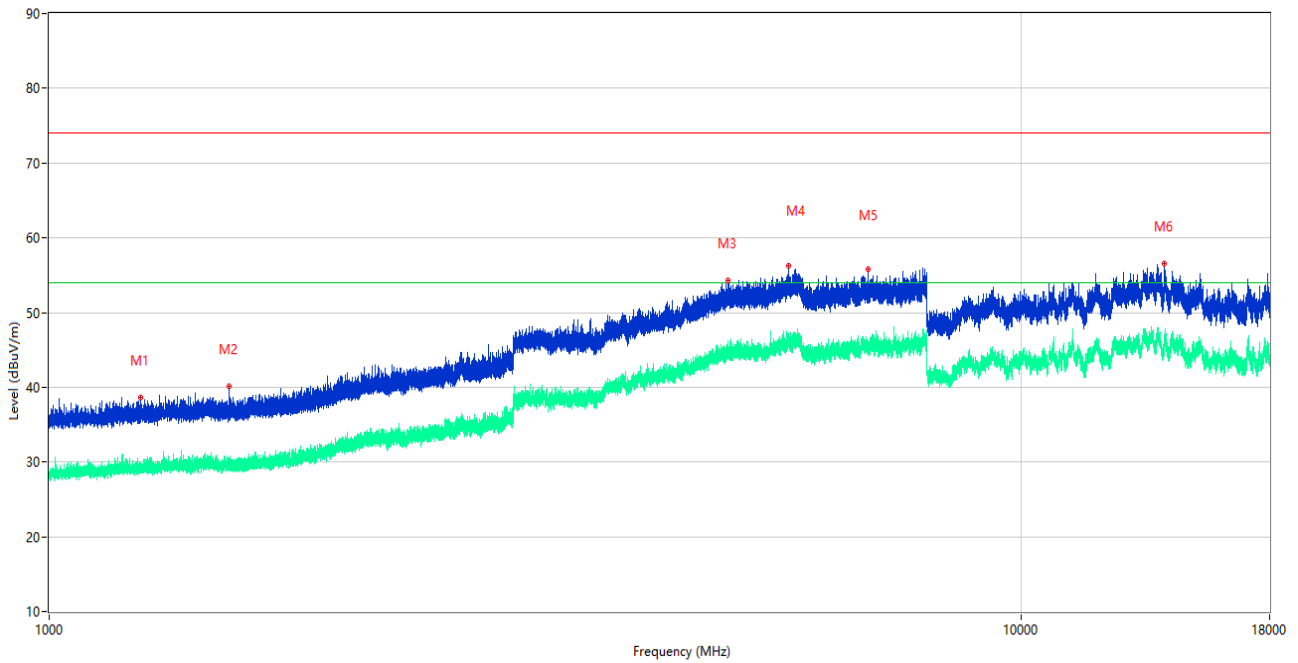
2) Test Antenna Horizontal, 30 MHz – 1 GHz



No.	Frequency (MHz)	Results (dBuV/m)	Factor (dB)	Limit (dBuV/m)	Margin (dB)	Detector	Table (Degree)	Height (cm)	Antenna	Verdict
1	30.922	24.51	-28.17	40.0	15.49	Peak	43.00	200	Horizontal	Pass
2	148.583	25.77	-28.30	43.5	17.73	Peak	160.00	200	Horizontal	Pass
3	289.863	30.26	-20.88	46.0	15.74	Peak	101.00	100	Horizontal	Pass
4	313.871	28.39	-20.25	46.0	17.61	Peak	120.00	100	Horizontal	Pass
5	357.909	27.14	-18.71	46.0	18.86	Peak	360.00	100	Horizontal	Pass
6	962.218	36.69	-3.52	54.0	17.31	Peak	213.00	200	Horizontal	Pass

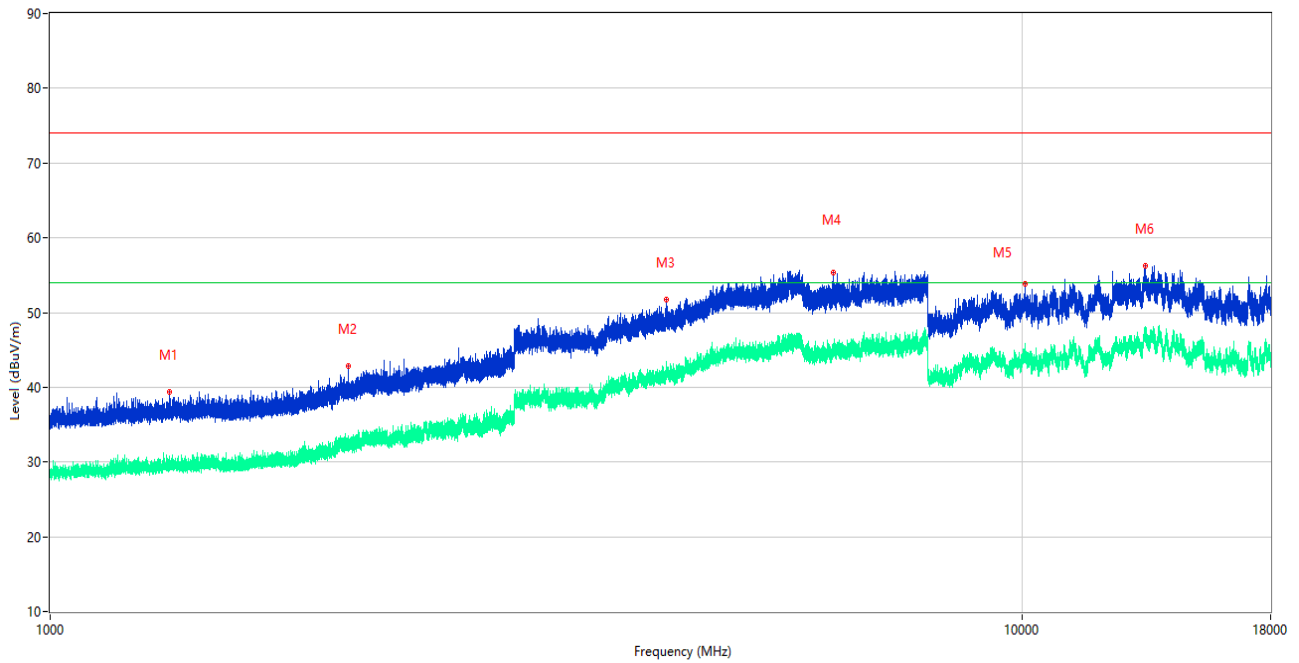
Equipment Information						
Equipment Name	Supplier	Model	Serial No.	Cal. Date	Cal. Due	Use
Frequency Below 1 GHz						
EMI Receiver	Keysight	N9038A	MY55330120	2023.09.05	2024.09.04	<input checked="" type="checkbox"/>
Amplifier (30-1GHz)	COM-MV	ZT30-1000M	B2017119081	2023.12.05	2024.12.04	<input checked="" 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	1242.000	38.59	-16.24	74.0	35.41	Peak	301.00	100	Vertical	Pass
1**	1242.000	29.31	-16.24	54.0	24.69	AV	301.00	100	Vertical	Pass
2	1530.500	40.16	-16.00	74.0	33.84	Peak	123.00	100	Vertical	Pass
2**	1530.500	29.70	-16.00	54.0	24.30	AV	123.00	100	Vertical	Pass
3	4991.250	54.28	2.11	74.0	19.72	Peak	281.00	100	Vertical	Pass
3**	4991.250	45.50	2.11	54.0	8.50	AV	281.00	100	Vertical	Pass
4	5754.750	56.23	3.38	74.0	17.77	Peak	0.00	100	Vertical	Pass
4**	5754.750	46.93	3.38	54.0	7.07	AV	0.00	100	Vertical	Pass
5	6960.500	55.77	1.30	74.0	18.23	Peak	226.00	100	Vertical	Pass
5**	6960.500	44.76	1.30	54.0	9.24	AV	226.00	100	Vertical	Pass
6	14042.000	56.50	5.08	74.0	17.50	Peak	50.00	100	Vertical	Pass
6**	14042.000	45.87	5.08	54.0	8.13	AV	50.00	100	Vertical	Pass

4) Test Antenna Horizontal, 1 GHz – 18 GHz

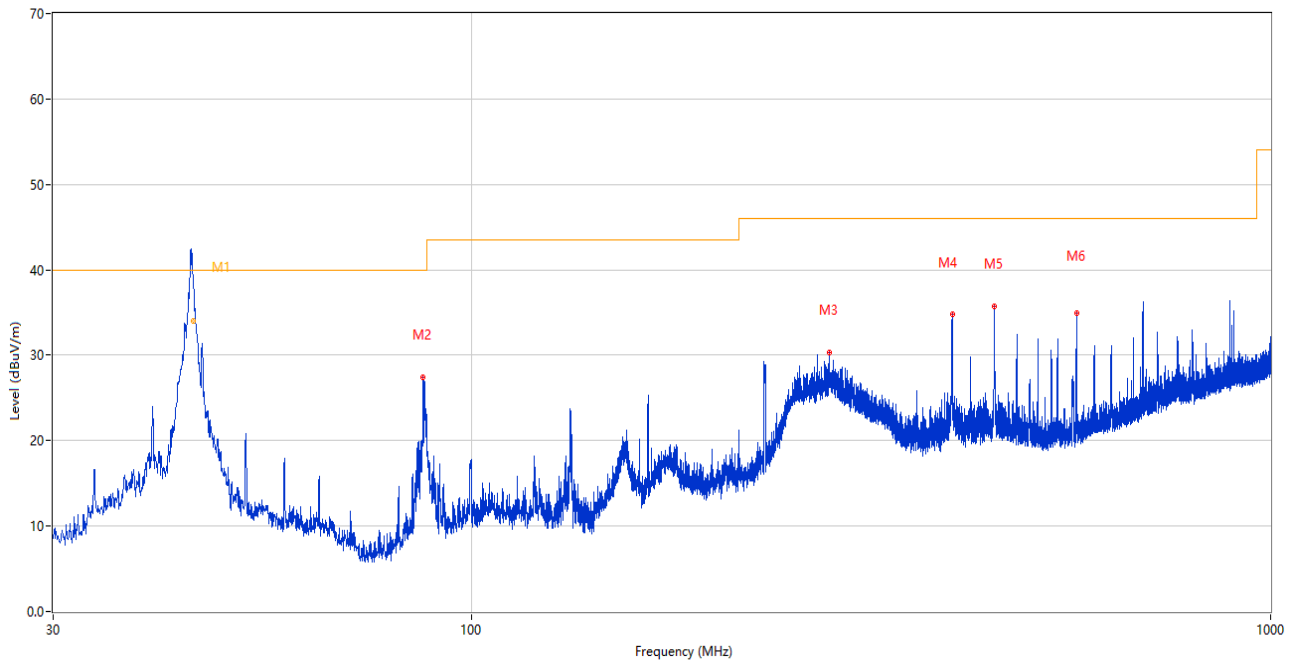


No.	Frequency (MHz)	Results (dBuV/m)	Factor (dB)	Limit (dBuV/m)	Margin (dB)	Detector	Table (Degree)	Height (cm)	Antenna	Verdict
1	1326.900	39.33	-16.03	74.0	34.67	Peak	127.00	100	Horizontal	Pass
1**	1326.900	30.74	-16.03	54.0	23.26	AV	127.00	100	Horizontal	Pass
2	2025.400	42.81	-13.47	74.0	31.19	Peak	52.00	100	Horizontal	Pass
2**	2025.400	33.51	-13.47	54.0	20.49	AV	52.00	100	Horizontal	Pass
3	4299.000	51.78	-0.28	74.0	22.22	Peak	43.00	100	Horizontal	Pass
3**	4299.000	41.78	-0.28	54.0	12.22	AV	43.00	100	Horizontal	Pass
4	6394.250	55.28	1.84	74.0	18.72	Peak	153.00	100	Horizontal	Pass
4**	6394.250	45.08	1.84	54.0	8.92	AV	153.00	100	Horizontal	Pass
5	10057.500	53.81	2.44	74.0	20.19	Peak	179.00	100	Horizontal	Pass
5**	10057.500	43.84	2.44	54.0	10.16	AV	179.00	100	Horizontal	Pass
6	13370.500	56.22	5.10	74.0	17.78	Peak	245.00	100	Horizontal	Pass
6**	13370.500	47.23	5.10	54.0	6.77	AV	245.00	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"/>
Amplifier (1-12GHz)	Advanced Microwave	WLA652A	1740103	2023.12.05	2024.12.04	<input checked="" type="checkbox"/>
Amplifier (0.8-21GHz)	Mini-Circuits	ZVA-213-S+	225321316	2023.12.05	2024.12.04	<input checked="" type="checkbox"/>
Test Antenna- Horn	SCHWARZB ECK	BBHA 9120D	01917	2022.06.09	2025.06.08	<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"/>

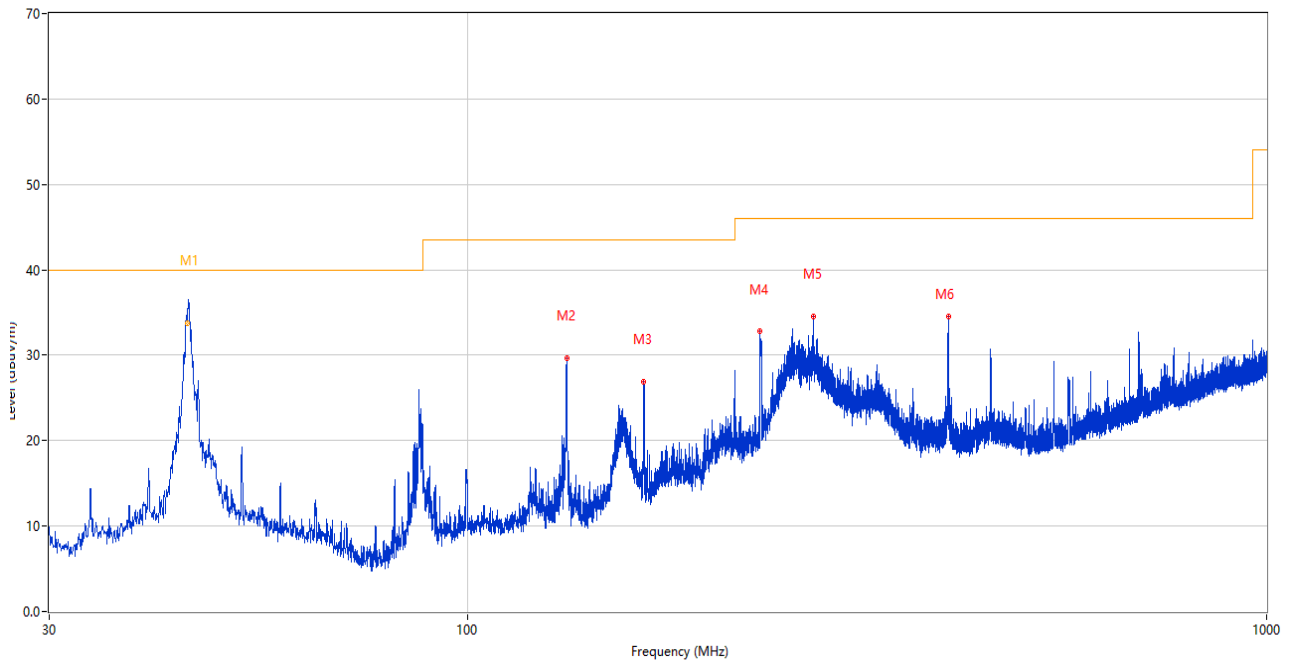
Test Mode 14

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	44.869	42.70	-25.66	40.0	-2.70	Peak	249.00	106	Vertical	N/A
1*	44.869*	33.99	-25.66	40.0	6.01	QP	249.00	106	Vertical	Pass
2	87.133	27.37	-29.37	40.0	12.63	Peak	188.00	100	Vertical	Pass
3	280.890	30.33	-24.12	46.0	15.67	Peak	299.00	200	Vertical	Pass
4	399.813	34.80	-20.95	46.0	11.20	Peak	205.00	100	Vertical	Pass
5	451.077	35.79	-19.86	46.0	10.21	Peak	153.00	100	Vertical	Pass
6	572.230	34.96	-16.98	46.0	11.04	Peak	290.00	100	Vertical	Pass

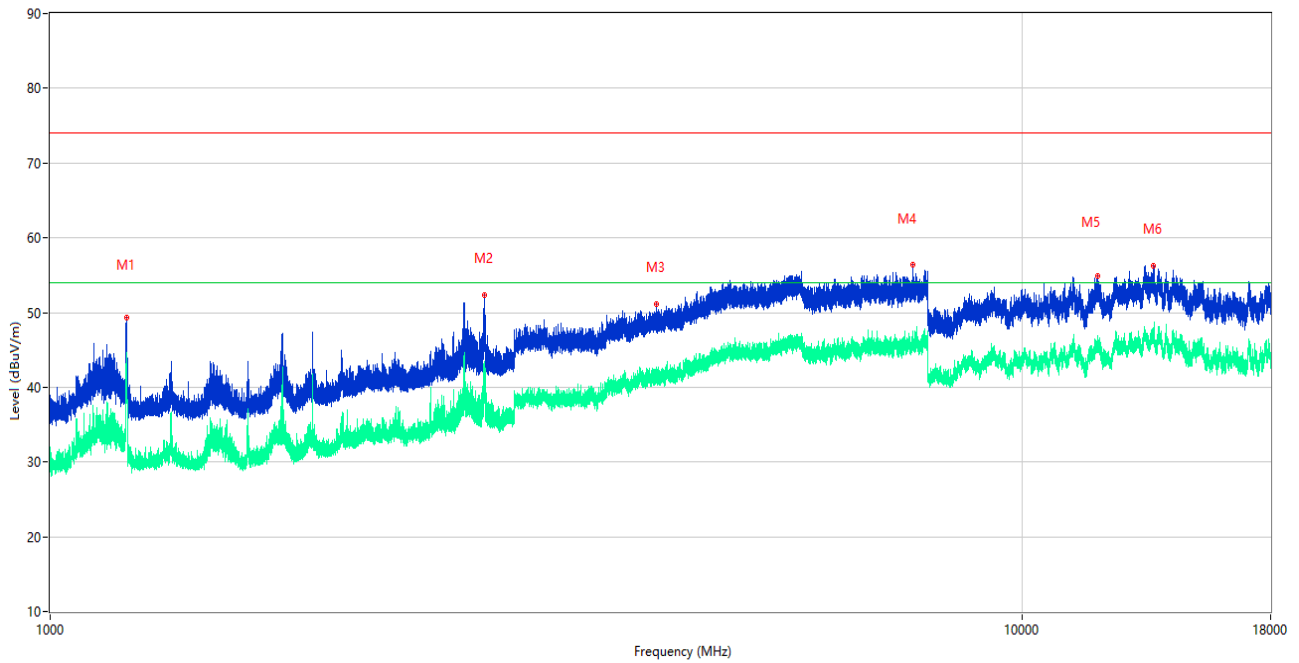
6) Test Antenna Horizontal, 30 MHz – 1 GHz



No.	Frequency (MHz)	Results (dBuV/m)	Factor (dB)	Limit (dBuV/m)	Margin (dB)	Detector	Table (Degree)	Height (cm)	Antenna	Verdict
1	44.682	40.57	-25.59	40.0	-0.57	Peak	209.00	198	Horizontal	N/A
1*	44.682*	33.78	-25.59	40.0	6.22	QP	209.00	198	Horizontal	Pass
2	133.354	29.62	-30.02	43.5	13.88	Peak	271.00	200	Horizontal	Pass
3	166.139	26.90	-29.30	43.5	16.60	Peak	225.00	200	Horizontal	Pass
4	232.536	32.76	-25.43	46.0	13.24	Peak	236.00	100	Horizontal	Pass
5	270.948	34.59	-24.40	46.0	11.41	Peak	252.00	100	Horizontal	Pass
6	399.716	34.49	-20.95	46.0	11.51	Peak	212.00	100	Horizontal	Pass

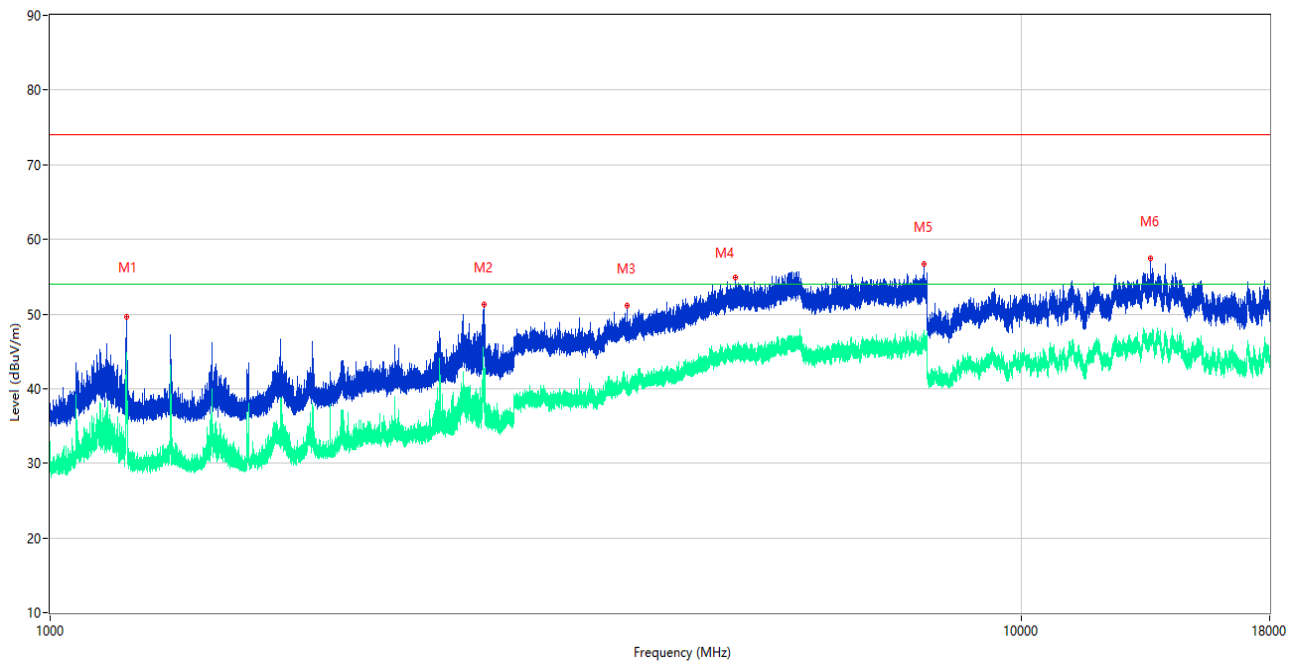
Equipment Information						
Equipment Name	Supplier	Model	Serial No.	Cal. Date	Cal. Due	Use
Frequency Below 1 GHz						
EMI Receiver	Keysight	N9038A	MY55330120	2023.09.05	2024.09.04	<input checked="" type="checkbox"/>
Amplifier (30-1GHz)	COM-MV	ZT30-1000M	B2017119081	2023.12.05	2024.12.04	<input checked="" 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	1199.600	49.27	-16.22	74.0	24.73	Peak	232.00	100	Vertical	Pass
1**	1199.600	39.04	-16.22	54.0	14.96	AV	232.00	100	Vertical	Pass
2	2794.200	52.26	-8.39	74.0	21.74	Peak	156.00	100	Vertical	Pass
2**	2794.200	40.01	-8.39	54.0	13.99	AV	156.00	100	Vertical	Pass
3	4198.750	51.08	-0.30	74.0	22.92	Peak	300.00	100	Vertical	Pass
3**	4198.750	41.92	-0.30	54.0	12.08	AV	300.00	100	Vertical	Pass
4	7721.500	56.44	2.24	74.0	17.56	Peak	53.00	100	Vertical	Pass
4**	7721.500	45.66	2.24	54.0	8.34	AV	53.00	100	Vertical	Pass
5	11956.500	54.84	2.64	74.0	19.16	Peak	360.00	100	Vertical	Pass
5**	11956.500	45.43	2.64	54.0	8.57	AV	360.00	100	Vertical	Pass
6	13647.000	56.26	5.11	74.0	17.74	Peak	34.00	100	Vertical	Pass
6**	13647.000	46.87	5.11	54.0	7.13	AV	34.00	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	1199.900	49.55	-16.21	74.0	24.45	Peak	223.00	100	Horizontal	Pass
1**	1199.900	39.63	-16.21	54.0	14.37	AV	223.00	100	Horizontal	Pass
2	2800.300	51.30	-8.13	74.0	22.70	Peak	164.00	100	Horizontal	Pass
2**	2800.300	36.75	-8.13	54.0	17.25	AV	164.00	100	Horizontal	Pass
3	3925.250	51.13	-1.66	74.0	22.87	Peak	119.00	100	Horizontal	Pass
3**	3925.250	39.71	-1.66	54.0	14.29	AV	119.00	100	Horizontal	Pass
4	5070.250	54.84	1.58	74.0	19.16	Peak	263.00	100	Horizontal	Pass
4**	5070.250	44.59	1.58	54.0	9.41	AV	263.00	100	Horizontal	Pass
5	7932.750	56.71	3.15	74.0	17.29	Peak	209.00	100	Horizontal	Pass
5**	7932.750	46.00	3.15	54.0	8.00	AV	209.00	100	Horizontal	Pass
6	13570.500	57.41	4.73	74.0	16.59	Peak	170.00	100	Horizontal	Pass
6**	13570.500	46.66	4.73	54.0	7.34	AV	170.00	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"/>
Amplifier (1-12GHz)	Advanced Microwave	WLA652A	1740103	2023.12.05	2024.12.04	<input checked="" type="checkbox"/>
Amplifier (0.8-21GHz)	Mini-Circuits	ZVA-213-S+	225321316	2023.12.05	2024.12.04	<input checked="" type="checkbox"/>
Test Antenna- Horn	SCHWARZB ECK	BBHA 9120D	01917	2022.06.09	2025.06.08	<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

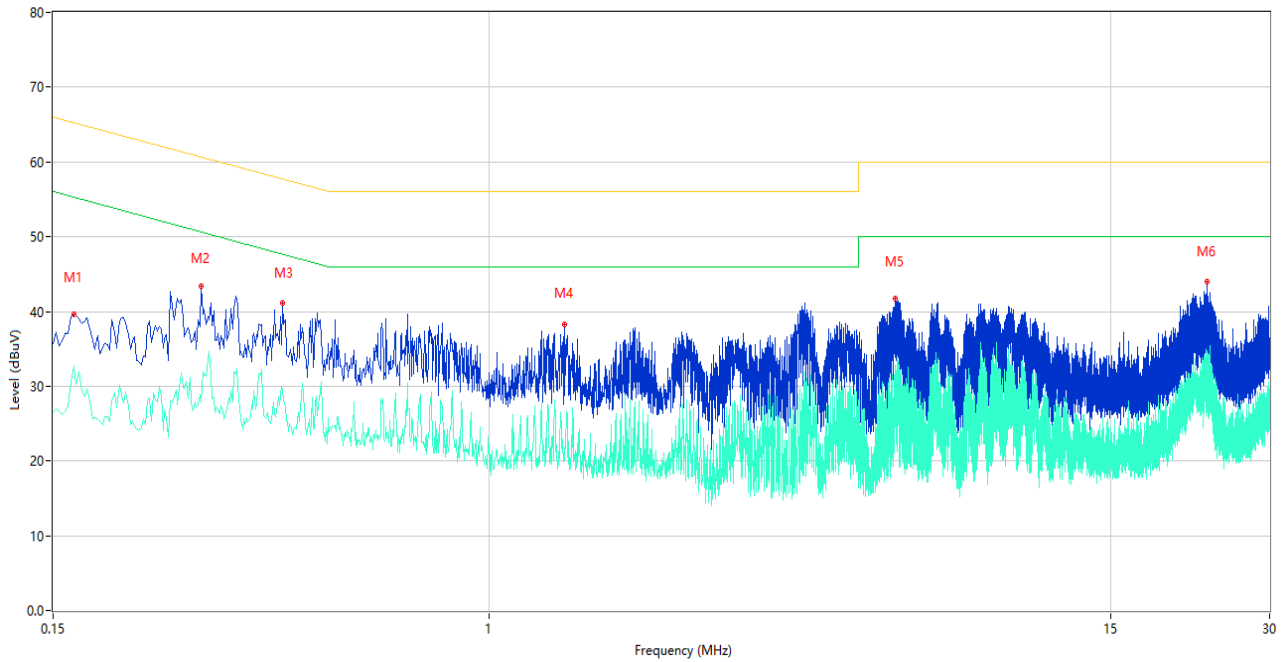
Note 1: Measurements shall be made with a quasi-peak measuring receiver in the frequency range 0.15MHz to 30 MHz. To reduce the testing time, a peak measuring receiver may be used instead of a quasi-peak measuring receiver. In case of dispute, measurement with a quasi-peak measuring receiver will take precedence.

Note 2: 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.	S31	Temperature	22.1°C
Humidity	54%RH	Pressure	101kPa
Test Engineer	Yang Yang	Test Date	2024.06.04

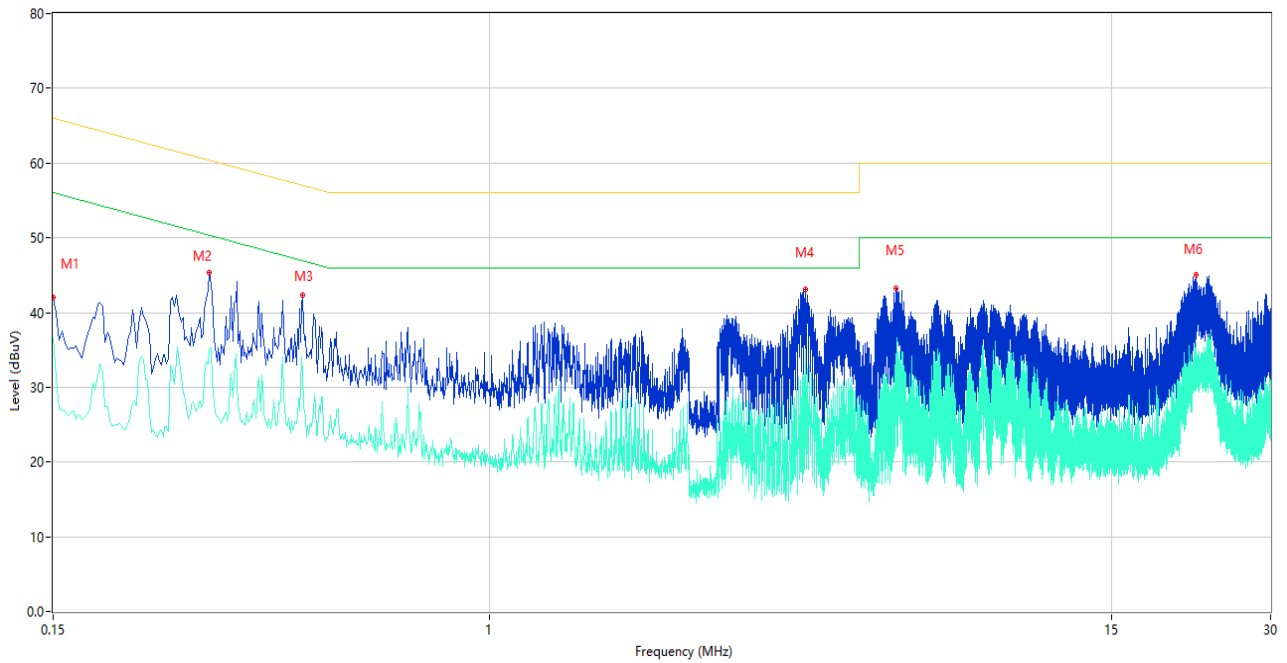
Test Mode 12

1) AC Ports - L Phase



No.	Frequency (MHz)	Results (dBuV)	Factor (dB)	Limit (dBuV)	Margin (dB)	Detector	Line	Verdict
1	0.164	39.59	10.09	65.26	25.67	Peak	L	Pass
1**	0.164	32.70	10.09	55.26	22.56	AV	L	Pass
2	0.286	43.36	10.06	60.64	17.28	Peak	L	Pass
2**	0.286	27.86	10.06	50.64	22.78	AV	L	Pass
3	0.408	41.18	10.64	57.69	16.51	Peak	L	Pass
3**	0.408	29.61	10.64	47.69	18.08	AV	L	Pass
4	1.394	38.33	10.85	56.00	17.67	Peak	L	Pass
4**	1.394	21.60	10.85	46.00	24.40	AV	L	Pass
5	5.880	41.74	10.96	60.00	18.26	Peak	L	Pass
5**	5.880	32.82	10.96	50.00	17.18	AV	L	Pass
6	22.880	43.93	13.24	60.00	16.07	Peak	L	Pass
6**	22.880	34.64	13.24	50.00	15.36	AV	L	Pass

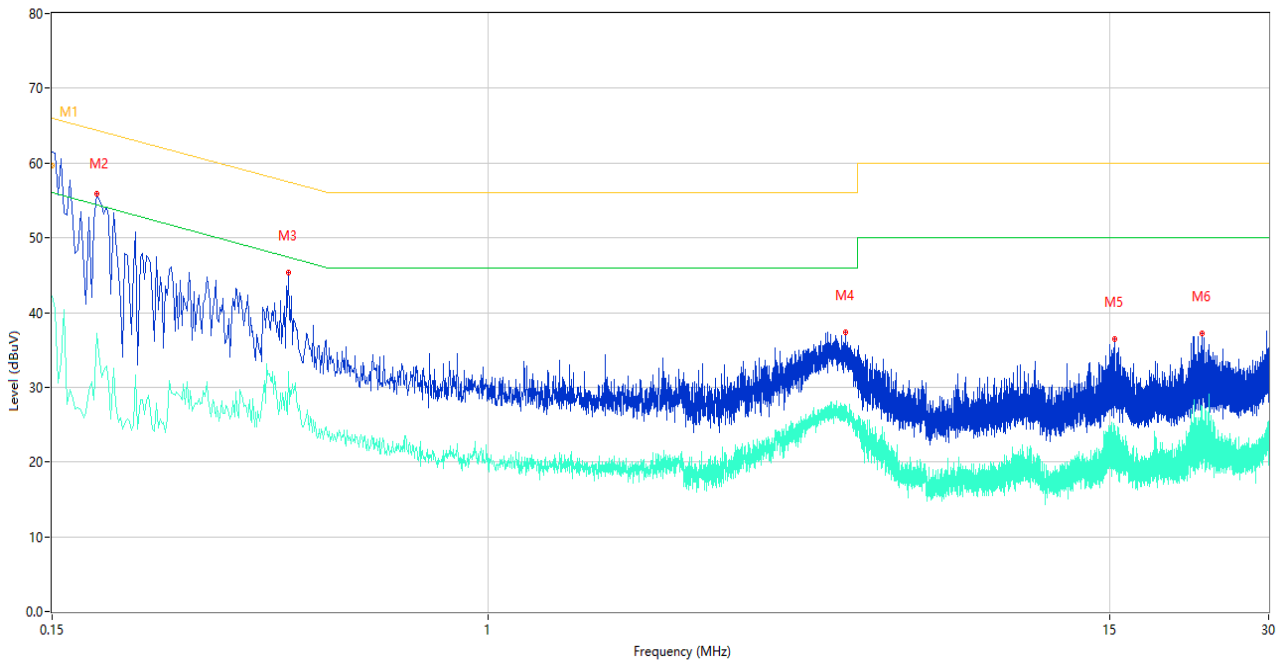
2) AC Ports - N Phase



No.	Frequency (MHz)	Results (dBuV)	Factor (dB)	Limit (dBuV)	Margin (dB)	Detector	Line	Verdict
1	0.150	42.09	10.11	66.00	23.91	Peak	N	Pass
1**	0.150	36.68	10.11	56.00	19.32	AV	N	Pass
2	0.296	45.30	10.07	60.35	15.05	Peak	N	Pass
2**	0.296	35.06	10.07	50.35	15.29	AV	N	Pass
3	0.444	42.30	10.59	56.99	14.69	Peak	N	Pass
3**	0.444	31.94	10.59	46.99	15.05	AV	N	Pass
4	3.962	43.09	10.62	56.00	12.91	Peak	N	Pass
4**	3.962	29.76	10.62	46.00	16.24	AV	N	Pass
5	5.876	43.30	10.92	60.00	16.70	Peak	N	Pass
5**	5.876	32.57	10.92	50.00	17.43	AV	N	Pass
6	21.658	45.10	13.47	60.00	14.90	Peak	N	Pass
6**	21.658	35.84	13.47	50.00	14.16	AV	N	Pass

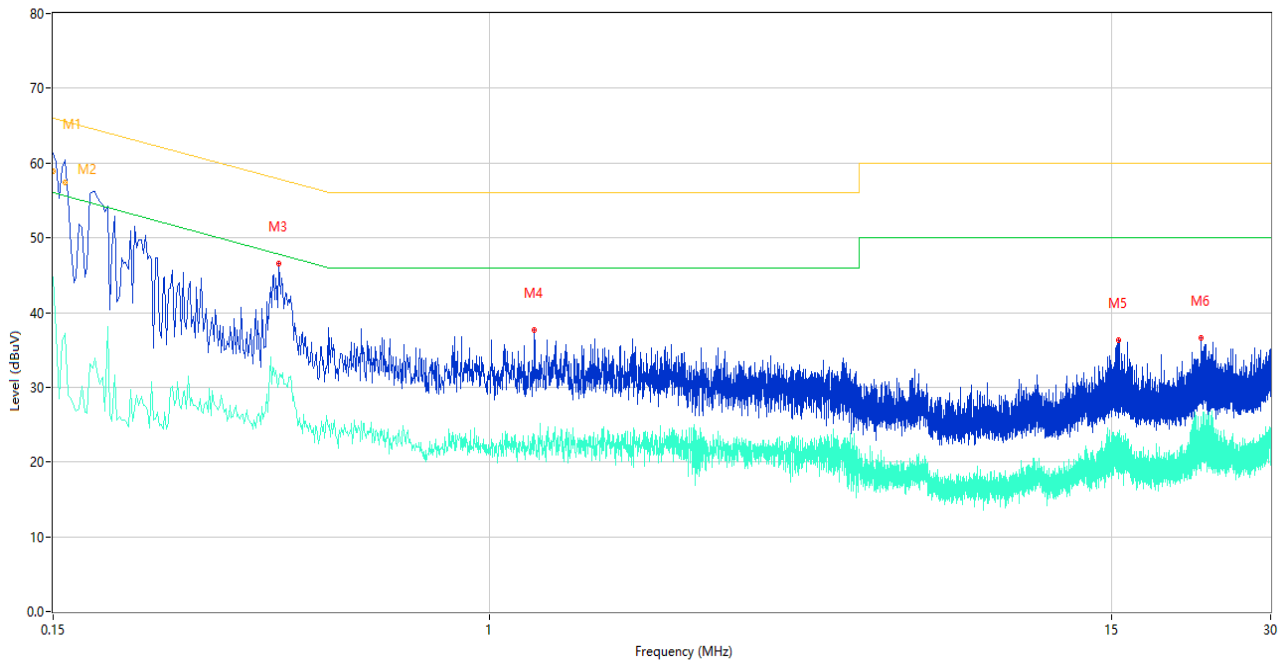
Test Mode 14

3) AC Ports - L Phase



No.	Frequency (MHz)	Results (dBuV)	Factor (dB)	Limit (dBuV)	Margin (dB)	Detector	Line	Verdict
1	0.150	63.04	10.11	66.00	2.96	Peak	L	N/A
1*	0.150	59.72	10.11	66.00	6.28	QP	L	Pass
1**	0.150	42.16	10.11	56.00	13.84	AV	L	Pass
2	0.182	55.84	10.07	64.39	8.55	Peak	L	Pass
2**	0.182	37.23	10.07	54.39	17.16	AV	L	Pass
3	0.420	45.29	10.62	57.45	12.16	Peak	L	Pass
3**	0.420	32.06	10.62	47.45	15.39	AV	L	Pass
4	4.744	37.37	10.79	56.00	18.63	Peak	L	Pass
4**	4.744	27.51	10.79	46.00	18.49	AV	L	Pass
5	15.334	36.39	12.71	60.00	23.61	Peak	L	Pass
5**	15.334	23.78	12.71	50.00	26.22	AV	L	Pass
6	22.478	37.25	13.36	60.00	22.75	Peak	L	Pass
6**	22.478	27.37	13.36	50.00	22.63	AV	L	Pass

4) AC Ports - N Phase



No.	Frequency (MHz)	Results (dBuV)	Factor (dB)	Limit (dBuV)	Margin (dB)	Detector	Line	Verdict
1	0.150	62.58	10.11	66.00	3.42	Peak	N	N/A
1*	0.150	58.92	10.11	66.00	7.08	QP	N	Pass
1**	0.150	44.77	10.11	56.00	11.23	AV	N	Pass
2	0.158	61.01	10.10	65.57	4.56	Peak	N	N/A
2*	0.158	57.42	10.10	65.57	8.15	QP	N	Pass
2**	0.158	37.22	10.10	55.57	18.35	AV	N	Pass
3	0.400	46.55	10.65	57.85	11.30	Peak	N	Pass
3**	0.400	30.81	10.65	47.85	17.04	AV	N	Pass
4	1.218	37.60	10.47	56.00	18.40	Peak	N	Pass
4**	1.218	23.64	10.47	46.00	22.36	AV	N	Pass
5	15.502	36.30	12.71	60.00	23.70	Peak	N	Pass
5**	15.502	20.44	12.71	50.00	29.56	AV	N	Pass
6	22.206	36.54	13.24	60.00	23.46	Peak	N	Pass
6**	22.206	22.95	13.24	50.00	27.05	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	2024.05.09	2025.05.08	<input checked="" type="checkbox"/>
ISN	TESEQ	ISN T800	34449	2023.11.10	2024.11.09	<input type="checkbox"/>
ISN	TESEQ	ISN T8-Cat6	53561	2024.04.24	2025.04.23	<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-SZ2460066-AE-1.PDF”.

ANNEX C EUT EXTERNAL PHOTOS

Please refer the document “BL-SZ2460066-AW.PDF”.

ANNEX D EUT INTERNAL PHOTOS

Please refer the document “BL-SZ2460066-AI.PDF”.

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--END OF REPORT--