TEST REPORT

Applicant:	SEUIC Technologies Co., Ltd.
Address:	NO.15 Xinghuo Road, Nanjing New & High Technology Industry Development Zone, 210061, Nanjing City, Jiangsu Province, China
Equipment Type:	Portable Data Collection Terminal
Model Name:	CRUISE2 (refer to section 2.3)
Brand Name:	Seuic
FCC ID:	2AC68-CRUISE2U
Test Standard:	47 CFR Part 15 Subpart B ANSI C63.4-2014
Sample Arrival Date:	Oct. 31, 2023
Test Date:	Nov. 21, 2023 –Nov. 27, 2023
Date of Issue:	Jan. 12, 2024

ISSUED BY:

Shenzhen BALUN Technology Co., Ltd.

Tested by: Zhenxiang Liu **Checked by:** Liyao Zong **Approved by:** Liao Jianming (Technical Director)

Revision History

Version	Issue Date	Revisions
Rev. 01	Jan. 12, 2024	Initial Issue

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1 GENERAL INFORMATION

1.1 Test Laboratory

Name	Shenzhen BALUN Technology Co., Ltd.
Address	Block B, 1/F, Baisha Science and Technology Park, Shahe Xi Road, Nanshan District, Shenzhen, Guangdong Province, P. R. China
Phone Number	+86 755 6685 0100

1.2 Test Location

Name	Shenzhen BALUN Technology Co., Ltd.
Location	☑ Block B, 1/F, Baisha Science and Technology Park, Shahe Xi Road, Nanshan District, Shenzhen, Guangdong Province, P. R. China
	☐ 1/F, Building B, Ganghongji High-tech Intelligent Industrial Park, No. 1008, Songbai Road, Yangguang Community, Xili Sub-district, Nanshan District, Shenzhen, Guangdong Province, P. R. China
Accreditation Certificate	The laboratory is a testing organization accredited by FCC as a accredited testing laboratory. The designation number is CN1196.

2 PRODUCT INFORMATION

2.1 Applicant Information

Applicant	SEUIC Technologies Co., Ltd.
Address	NO.15 Xinghuo Road, Nanjing New & High Technology Industry Development Zone, 210061, Nanjing City, Jiangsu Province, China

2.2 Manufacturer Information

Manufacturer	SEUIC Technologies Co., Ltd.
Address	NO.15 Xinghuo Road, Nanjing New & High Technology Industry Development Zone, 210061, Nanjing City, Jiangsu Province, China

2.3 General Description for Equipment under Test (EUT)

EUT Name	Portable Data Collection Terminal
Model Name Under Test	CRUISE2
Series Model Name	CRUISE2U, CRUISE2S, CRUISE2C, AUTOID UTouch 2, AUTOID UTouch 2-S, AUTOID UTouch 2-C
Description of Model name differentiation	All models are same with electrical parameters and internal circuit structure, but only differ in model names and appearance colors. (this information provided by the applicant)
Hardware Version	10110
Software Version	D730_G_V1.2.3
Dimensions (Approx.)	N/A
Weight (Approx.)	N/A

2.4 Ancillary Equipment

Ancillary Equipment 1	Battery 1	
	Brand Name	N/A
	Model No.	BT01R108UTOUCH2
	Serial No.	N/A
	Capacity	5000 mAh
	Rated Voltage	3.85 V
	Limit Charge Voltage	4.40 V
Ancillary Equipment 2	Battery 2	
	Brand Name	N/A
	Model No.	BT02R108UTOUCH2
	Serial No.	N/A
	Capacity	6300 mAh
	Rated Voltage	3.60 V

	Limit Charge Voltage	4.20 V
Ancillary Equipment 3	Adapter	
	Brand Name	N/A
	Model No.	TPA-10S120150UU01
	Serial No.	N/A
	Rated Input	100-240V~, 50/60Hz, 0.6A
	Rated Output	3.6-6 V⎓ 3.0A, 6-9 V⎓ 2.0A, 9-12 V⎓ 1.5A
Ancillary Equipment 4	USB Cable	
	Length (Approx.)	1.0 m

2.5 Technical Information

Network and Wireless connectivity	2G Network GSM/GPRS/EDGE 850/1900 MHz 3G Network WCDMA/HSDPA/HSUPA Band 2/4/5 4G Network LTE FDD Band 2/4/5/7/12/13/17/25/26/66/71 LTE TDD Band 38/41 Bluetooth (BR+EDR+BLE) 2.4G WIFI 802.11b, 802.11g, 802.11n(HT20), 802.11ac(VHT20), 802.11ax(HE20) 5G WIFI 802.11a, 802.11n(HT20/40), 802.11ac(VHT20/40/80), 802.11ax(HE20/40/80) U-NII-1/2A/2C/3, GPS, GLONASS, BDS, AGPS, NFC,RFID
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 (1 GHz-18 GHz)-966#2	4.9 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	☒
TF card	Kingston	N/A	N/A	N/A	N/A	☒
Wireless Communications Test Set	R&S	CMW500	102318	N/A	Cal. Due 2024.05.15	☒

4.2 Test Configurations

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

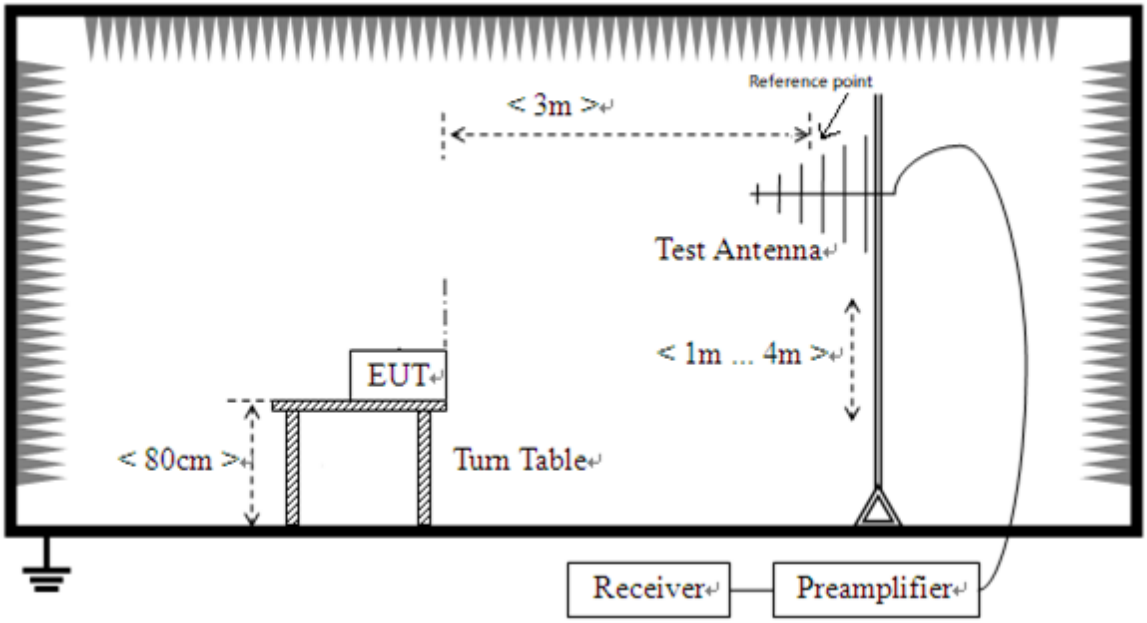
Test Mode Configuration	Description
Mode 1	The Video Play Test Mode EUT + Adapter + USB Cable + Battery + TF Card
Mode 2	The Front Camera Test Mode EUT + Adapter + USB Cable + Battery + TF Card
Mode 3	The Rear Camera Test Mode EUT + Adapter + USB Cable + Battery + TF Card
Mode 4	The Scan Code Test Mode EUT + Adapter + USB Cable + Battery + TF Card
Mode 5	The GSM 850 MHz RX Test Mode GSM 850 MHz RX + EUT +Adapter + USB Cable + Battery + TF Card
Mode 6	The EGPRS 850 MHz RX Test Mode EGPRS 850 MHz RX + EUT +Adapter + USB Cable + Battery + TF Card
Mode 7	The WCDMA Band 5 RX Test Mode WCDMA Band 5 RX + EUT +Adapter + USB Cable + Battery + TF Card
Mode 8	The FDD LTE Band 5 RX Test Mode LTE Band 5 RX + EUT +Adapter + USB Cable + Battery + TF Card
Mode 9	The FDD LTE Band 12 RX Test Mode LTE Band 12 RX + EUT +Adapter + USB Cable + Battery + TF Card
Mode 10	The FDD LTE Band 13 RX Test Mode LTE Band 13 RX + EUT +Adapter + USB Cable + Battery + TF Card
Mode 11	The FDD LTE Band 17 RX Test Mode LTE Band 17 RX + EUT +Adapter + USB Cable + Battery + TF Card
Mode 12	The FDD LTE Band 26 RX Test Mode LTE Band 26 RX + EUT +Adapter + USB Cable + Battery + TF Card
Mode 13	The FDD LTE Band 71 RX Test Mode LTE Band 71 RX + EUT +Adapter + USB Cable + Battery + TF Card

Mode 14	The USB Test Mode EUT + USB Cable + Battery + Laptop + TF Card

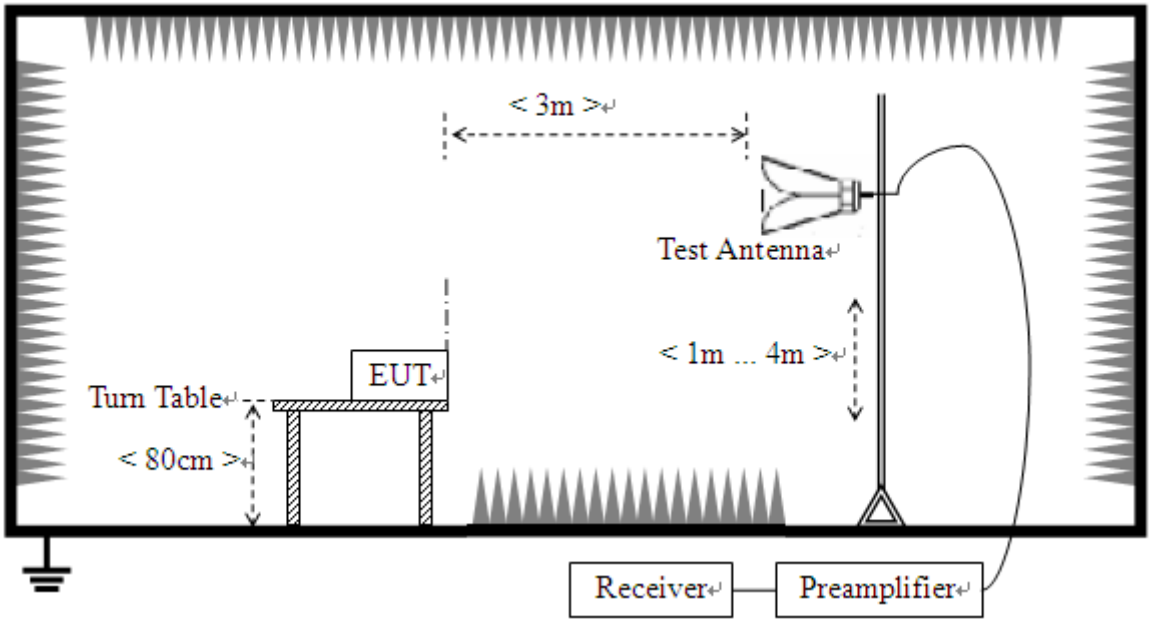
Test Case	Test Mode Configuration	Worst Mode
Radiated Emission	Mode 1~Mode 14	3, 14
Conducted Emission, AC Ports	Mode 1~Mode 14	3, 14
Note: Based on client request, all normal using modes of the normal function were tested, but only data of the worst mode was reported in this report.		

4.3 Test Setups

Test Setup 1

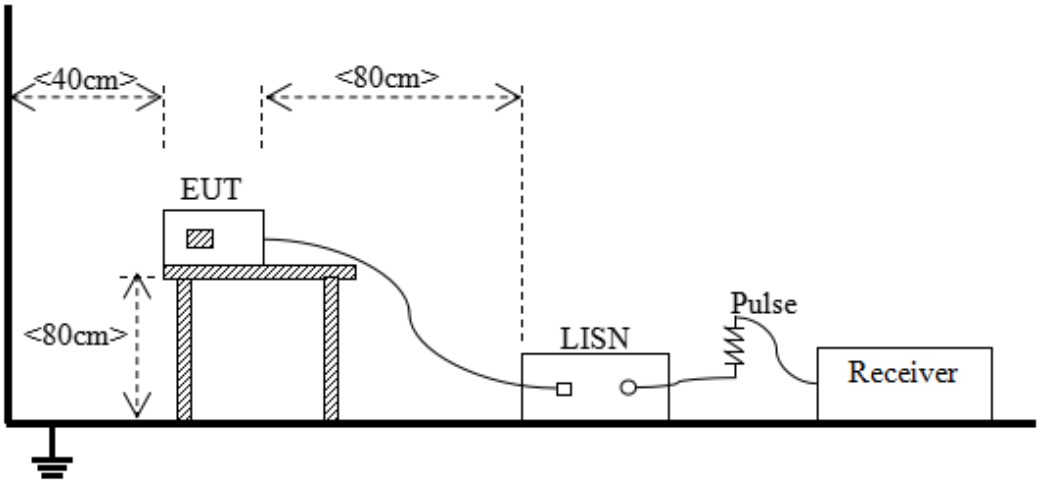


Radiated Emission (30 MHz-1 GHz)



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 (μV/m)	Field Strength (dBμV/m)	Field Strength (dBμV/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 (dBμV/m) = 20*log [Field Strength (μV/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 (μV/m)	Field Strength Average (dBμV/m)	Field Strength Peak (dBμV/m)	Field Strength Average (dBμV/m)	Field Strength Peak (dBμV/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:
$L_{3m} = L_{10m} + 20*\log(d_{10m}/d_{3m})$
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 (dBμV/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 ≥ 1 GHz, 100 kHz for f < 1 GHz

VBW ≥ RBW

Sweep = auto

Detector function = peak for f <1 GHz, peak & RMS Average for f ≥ 1 GHz

Trace = max hold

5.1.1.4 Test Result and Test Equipment List

Please refer to ANNEX A.1.

NOTE:

1. Results (dBμV/m) = Reading (dBμV/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 (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 (dBμV) = Reading (dBμV) + Factor (dB)

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

2. Factor = Insertion loss + Cable loss

3. Over limit = Results – Limit.

ANNEX A TEST RESULTS

A.1 Radiated Emission

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

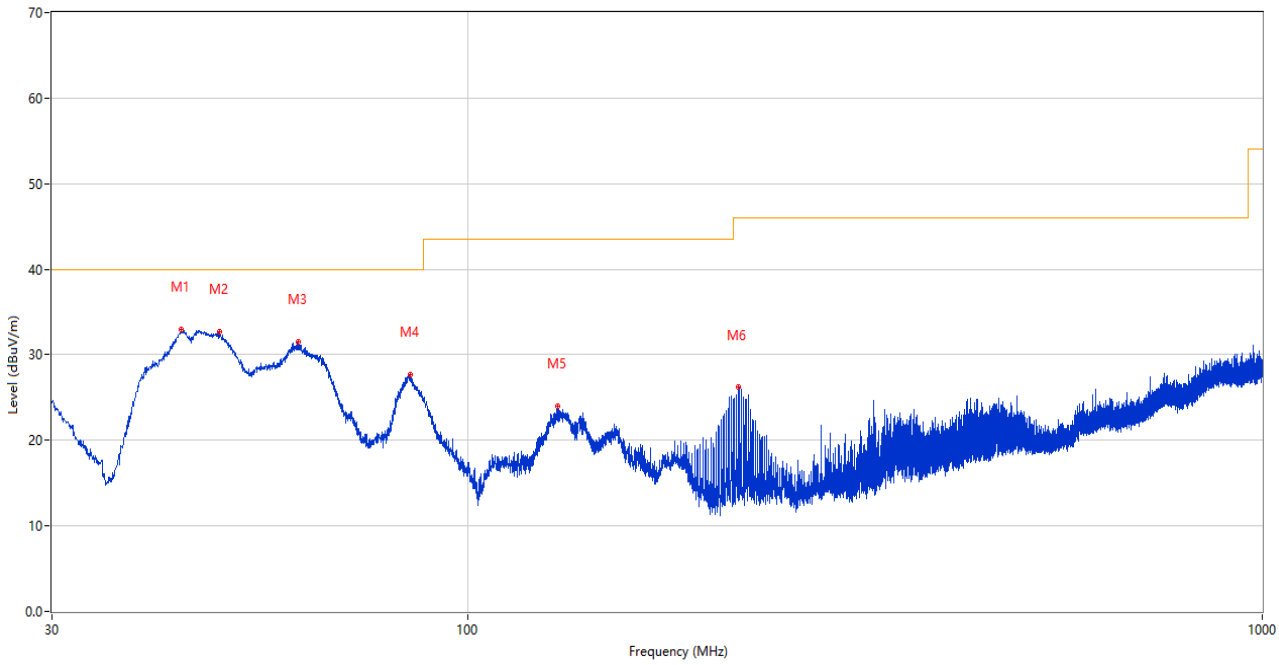
Note 2: For the test data above 1 GHz, according the ANSI C63.4-2014, where limits are specified for both average and peak (or quasi-peak) detector functions, if the peak (or quasi-peak) measured value complies with the average limit, it is unnecessary to perform an average measurement.

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.	S05	Temperature	23.2℃
Humidity	41%RH	Pressure	101kPa
Test Engineer	He Shichang	Test Date	2023.11.27

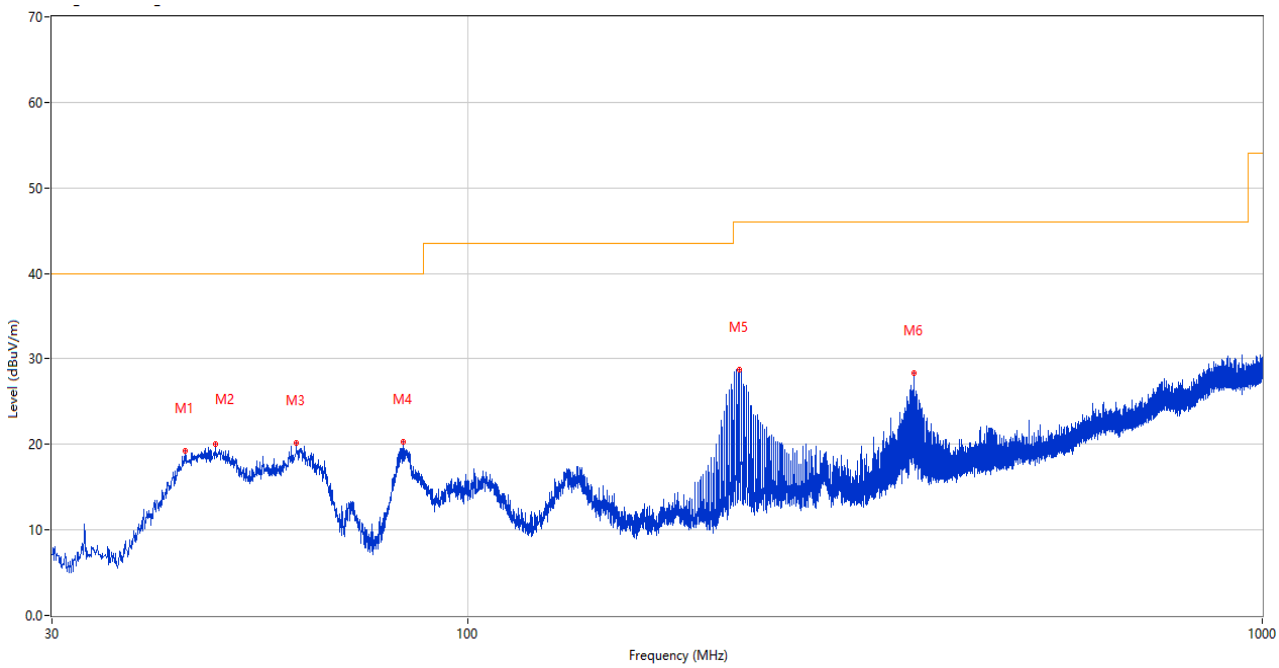
Test Mode 3

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	43.629	32.96	-26.25	40.0	7.04	Peak	103.00	100	Vertical	Pass
2	48.721	32.63	-25.20	40.0	7.37	Peak	172.00	100	Vertical	Pass
3	61.282	31.55	-26.36	40.0	8.45	Peak	118.00	100	Vertical	Pass
4	84.708	27.68	-30.93	40.0	12.32	Peak	110.00	100	Vertical	Pass
5	129.910	24.01	-29.83	43.5	19.49	Peak	286.00	100	Vertical	Pass
6	219.490	26.24	-25.93	46.0	19.76	Peak	316.00	100	Vertical	Pass

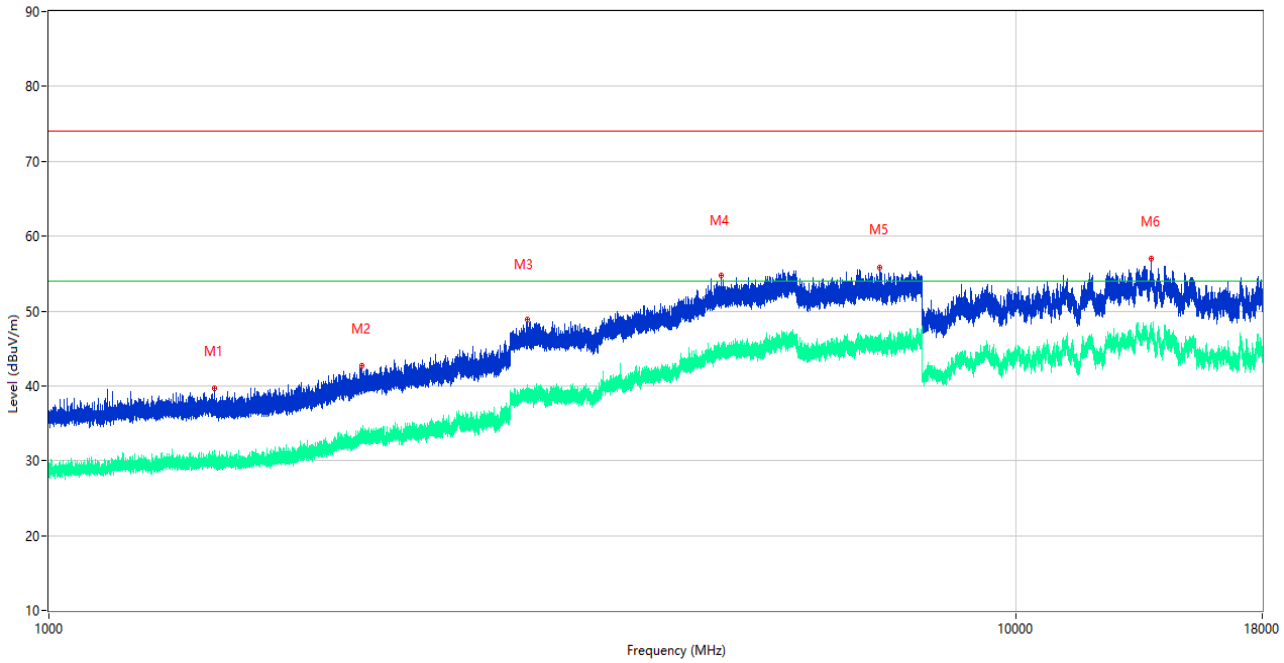
2) Test Antenna Horizontal, 30 MHz – 1 GHz



No.	Frequency (MHz)	Results (dBuV/m)	Factor (dB)	Limit (dBuV/m)	Margin (dB)	Detector	Table (Degree)	Height (cm)	Antenna	Verdict
1	44.162	19.22	-26.13	40.0	20.78	Peak	85.00	200	Horizontal	Pass
2	48.187	19.99	-25.24	40.0	20.01	Peak	127.00	100	Horizontal	Pass
3	60.846	20.20	-26.29	40.0	19.80	Peak	348.00	100	Horizontal	Pass
4	83.059	20.29	-31.40	40.0	19.71	Peak	133.00	200	Horizontal	Pass
5	219.538	28.77	-25.92	46.0	17.23	Peak	260.00	100	Horizontal	Pass
6	364.795	28.32	-22.13	46.0	17.68	Peak	290.00	100	Horizontal	Pass

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

3) Test Antenna Vertical, 1 GHz – 18 GHz



No.	Frequency (MHz)	Results (dBuV/m)	Factor (dB)	Limit (dBuV/m)	Margin (dB)	Detector	Table (Degree)	Height (cm)	Antenna	Verdict
1	1484.900	39.62	-15.93	74.0	34.38	Peak	332.00	100	Vertical	Pass
1**	1484.900	30.24	-15.93	54.0	23.76	AV	332.00	100	Vertical	Pass
2	2105.100	42.72	-12.70	74.0	31.28	Peak	198.00	100	Vertical	Pass
2**	2105.100	32.32	-12.70	54.0	21.68	AV	198.00	100	Vertical	Pass
3	3123.250	48.91	-4.50	74.0	25.09	Peak	131.00	100	Vertical	Pass
3**	3123.250	38.03	-4.50	54.0	15.97	AV	131.00	100	Vertical	Pass
4	4959.750	54.81	1.98	74.0	19.19	Peak	39.00	100	Vertical	Pass
4**	4959.750	43.93	1.98	54.0	10.07	AV	39.00	100	Vertical	Pass
5	7240.750	55.86	2.32	74.0	18.14	Peak	112.00	100	Vertical	Pass
5**	7240.750	45.42	2.32	54.0	8.58	AV	112.00	100	Vertical	Pass
6	13832.500	56.93	5.40	74.0	17.07	Peak	342.00	100	Vertical	Pass
6**	13832.500	47.01	5.40	54.0	6.99	AV	342.00	100	Vertical	Pass

4) Test Antenna Horizontal, 1 GHz – 18 GHz

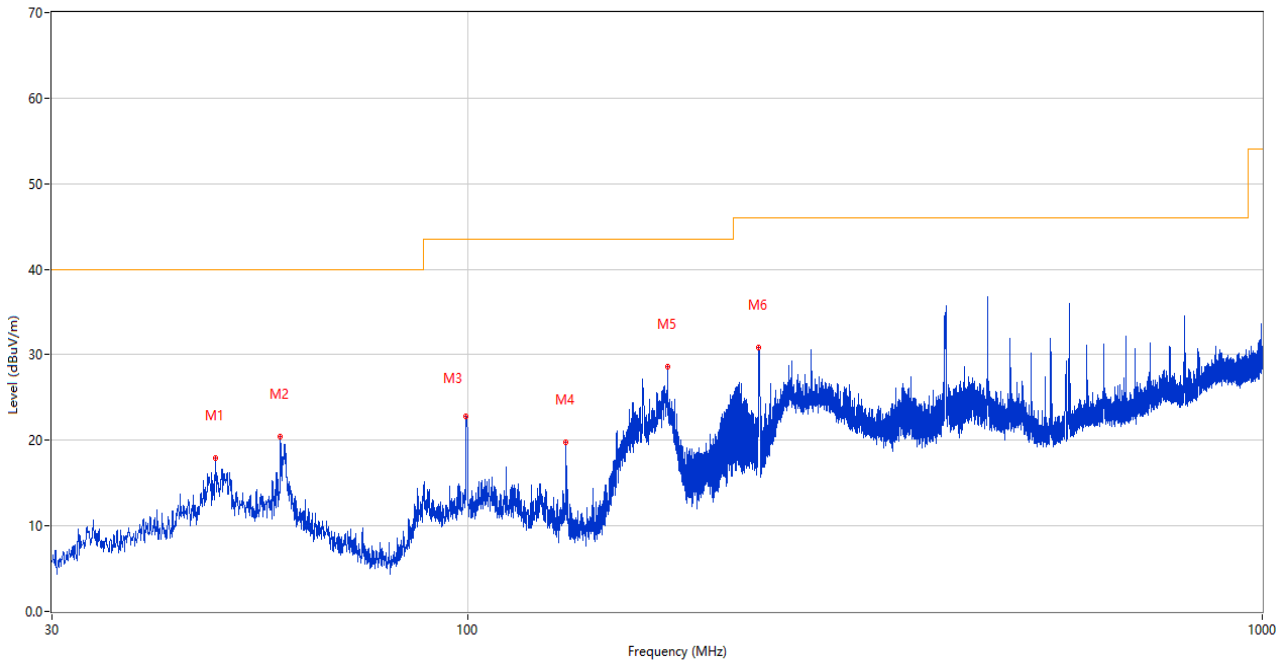
No.	Frequency (MHz)	Results (dBuV/m)	Factor (dB)	Limit (dBuV/m)	Margin (dB)	Detector	Table (Degree)	Height (cm)	Antenna	Verdict
1	1398.000	39.44	-15.87	74.0	34.56	Peak	87.00	100	Horizontal	Pass
1**	1398.000	29.72	-15.87	54.0	24.28	AV	87.00	100	Horizontal	Pass
2	2104.200	43.14	-12.71	74.0	30.86	Peak	320.00	100	Horizontal	Pass
2**	2104.200	33.08	-12.71	54.0	20.92	AV	320.00	100	Horizontal	Pass
3	3329.000	49.23	-4.15	74.0	24.77	Peak	179.00	100	Horizontal	Pass
3**	3329.000	39.06	-4.15	54.0	14.94	AV	179.00	100	Horizontal	Pass
4	4979.750	54.47	2.40	74.0	19.53	Peak	14.00	100	Horizontal	Pass
4**	4979.750	44.75	2.40	54.0	9.25	AV	14.00	100	Horizontal	Pass
5	7949.750	56.08	3.10	74.0	17.92	Peak	114.00	100	Horizontal	Pass
5**	7949.750	45.97	3.10	54.0	8.03	AV	114.00	100	Horizontal	Pass
6	14062.000	56.29	5.09	74.0	17.71	Peak	239.00	100	Horizontal	Pass
6**	14062.000	46.88	5.09	54.0	7.12	AV	239.00	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	☒
Spectrum Analyzer	ROHDE & SCHWARZ	FSV40	101544	2022.12.28	2023.12.27	☒
Amplifier (1-12GHz)	Advanced Microwave	WLA652A	1740103	2022.12.07	2023.12.06	☒
Amplifier（0.8-21GHz）	Mini-Circuits	ZVA-213-S+	225321316	2022.12.07	2023.12.06	☒
Amplifier (18-40GHz)	COM-MV	KA_LNA18-40G-01	18050001	2022.12.07	2023.12.06	☒
Test Antenna-Horn	SCHWARZBECK	BBHA 9120D	01917	2022.06.09	2025.06.08	☒
Test Antenna-Horn	A-INFOMW	LB-180400KF	J211060273	2021.07.02	2024.07.01	☒
Anechoic Chamber（#2）	YiHeng	9m*6m*6m	142	2021.08.19	2024.08.18	☒
Description	Supplier	Name	Version	/		Use
Test Software	BALUN	BL410-E	V22.930	/		☒

Sample No.	S05	Temperature	23.2℃
Humidity	41%RH	Pressure	101kPa
Test Engineer	He Shichang	Test Date	2023.11.27

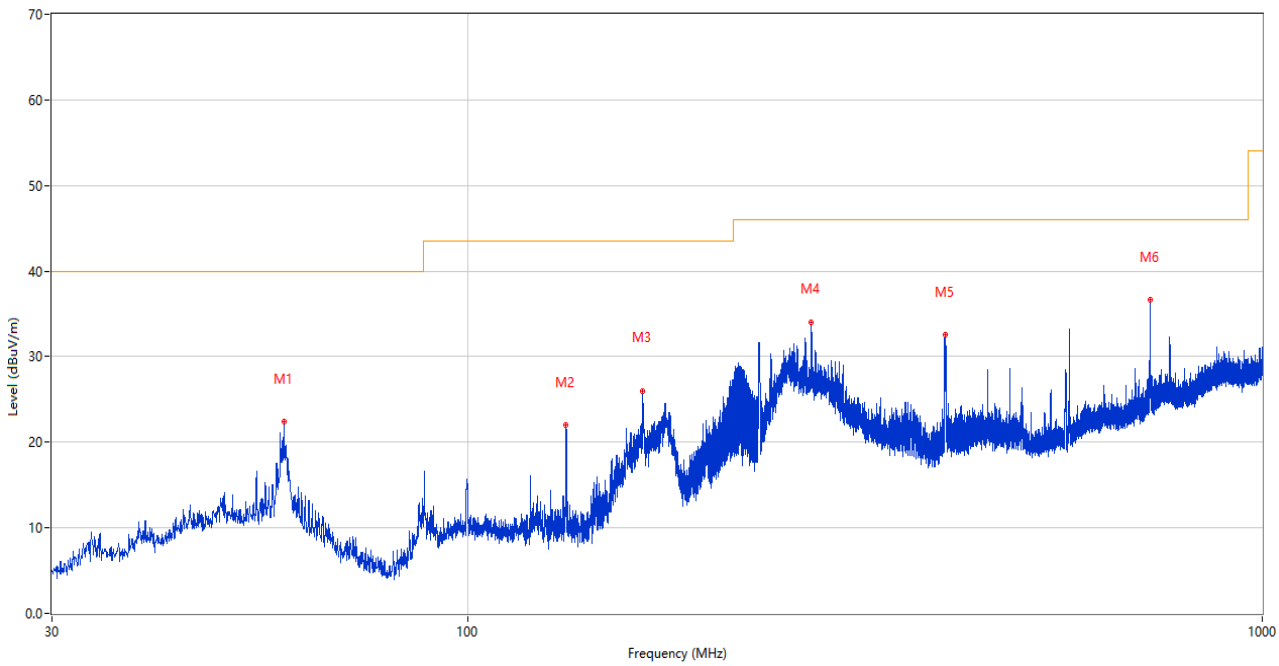
Test Mode 14

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	48.139	17.88	-25.25	40.0	22.12	Peak	257.00	100	Vertical	Pass
2	58.178	20.39	-25.75	40.0	19.61	Peak	266.00	100	Vertical	Pass
3	99.646	22.78	-26.88	43.5	20.72	Peak	274.00	100	Vertical	Pass
4	132.868	19.76	-30.02	43.5	23.74	Peak	13.00	200	Vertical	Pass
5	178.556	28.62	-28.60	43.5	14.88	Peak	80.00	100	Vertical	Pass
6	232.584	30.84	-25.29	46.0	15.16	Peak	155.00	100	Vertical	Pass

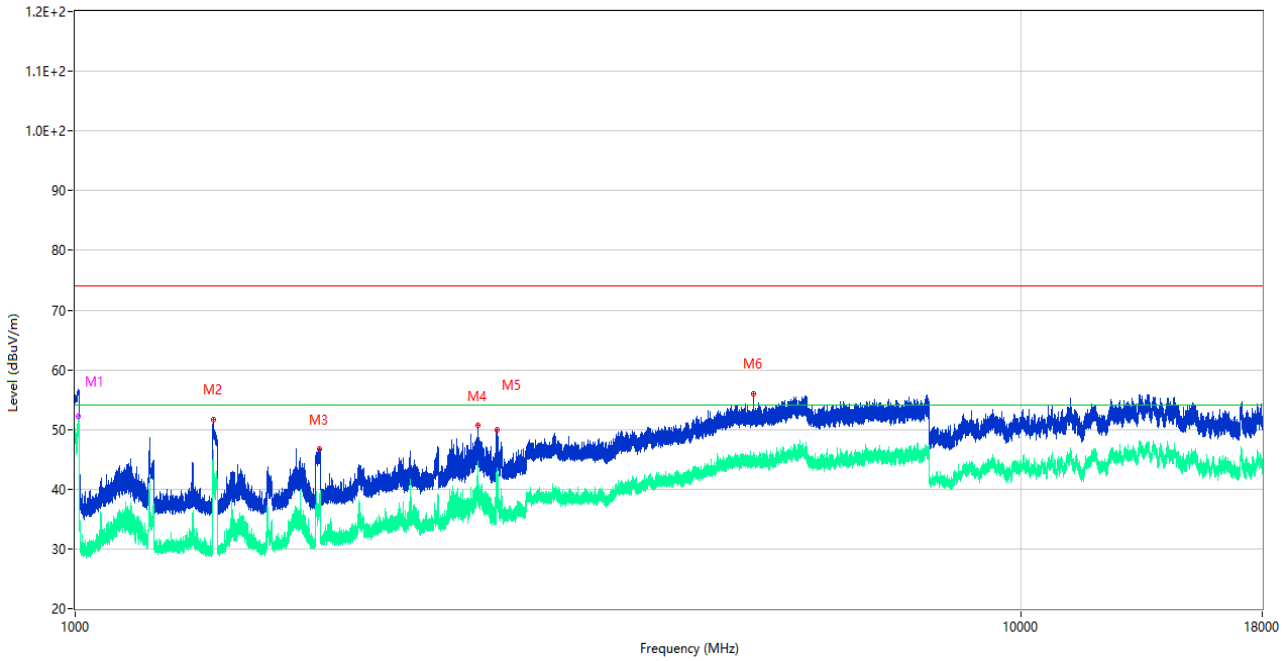
6) Test Antenna Horizontal, 30 MHz – 1 GHz



No.	Frequency (MHz)	Results (dBuV/m)	Factor (dB)	Limit (dBuV/m)	Margin (dB)	Detector	Table (Degree)	Height (cm)	Antenna	Verdict
1	58.712	22.44	-25.89	40.0	17.56	Peak	193.00	200	Horizontal	Pass
2	132.868	21.99	-30.02	43.5	21.51	Peak	318.00	200	Horizontal	Pass
3	166.188	26.01	-29.21	43.5	17.49	Peak	315.00	100	Horizontal	Pass
4	270.900	34.01	-24.37	46.0	11.99	Peak	226.00	100	Horizontal	Pass
5	398.649	32.51	-20.84	46.0	13.49	Peak	185.00	200	Horizontal	Pass
6	721.998	36.65	-13.26	46.0	9.35	Peak	223.00	100	Horizontal	Pass

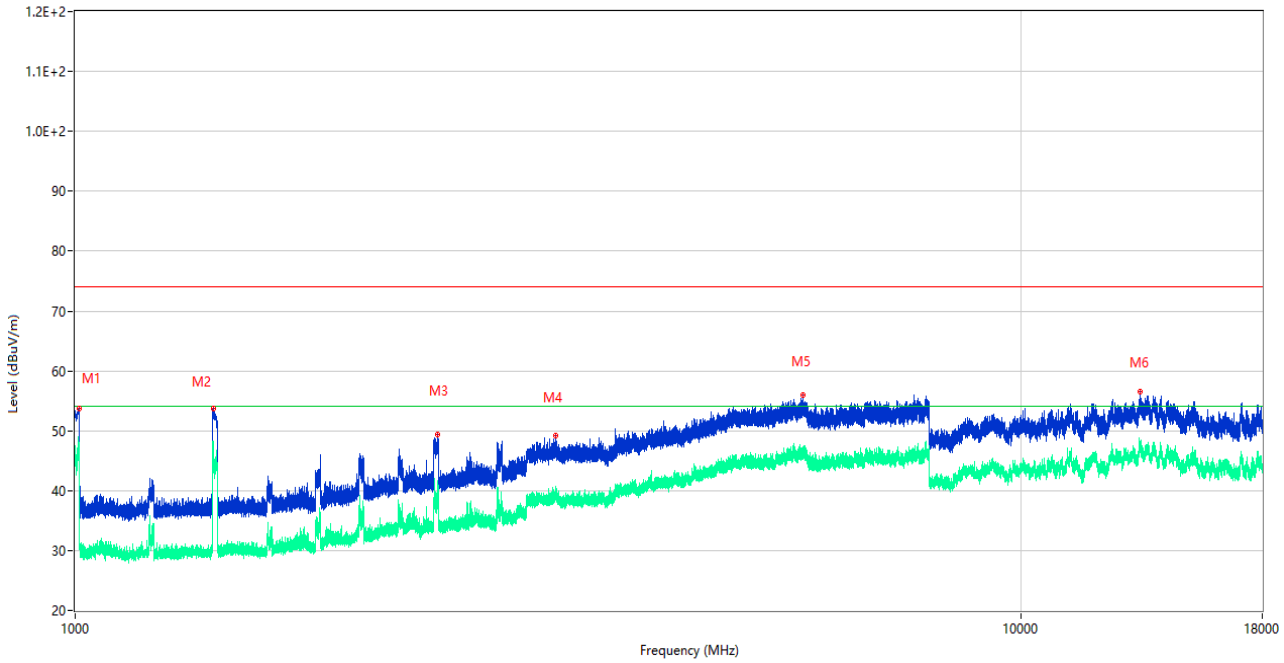
Equipment Information						
Equipment Name	Supplier	Model	Serial No.	Cal. Date	Cal. Due	Use
Frequency Below 1 GHz						
EMI Receiver	Keysight	N9038A	MY55330120	2023.09.05	2024.09.04	☒
Amplifier (30-1GHz)	COM-MV	ZT30-1000M	B2017119081	2022.12.07	2023.12.06	☒
Test Antenna-Bi-Log	SCHWARZBECK	VULB 9168	9168-00867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

7) Test Antenna Vertical, 1 GHz – 18 GHz



No.	Frequency (MHz)	Results (dBuV/m)	Factor (dB)	Limit (dBuV/m)	Margin (dB)	Detector	Table (Degree)	Height (cm)	Antenna	Verdict
1	1008.600	55.92	-15.98	74.0	18.08	Peak	24.00	100	Vertical	Pass
1**	1008.600	52.25	-15.98	54.0	1.75	AV	24.00	100	Vertical	N/A
1**	1008.600*	47.880	-15.98	54.0	6.12	AV	24.00	100	Vertical	Pass
2	1399.500	51.64	-15.82	74.0	22.36	Peak	257.00	100	Vertical	Pass
2**	1399.500	43.98	-15.82	54.0	10.02	AV	257.00	100	Vertical	Pass
3	1813.100	46.68	-15.17	74.0	27.32	Peak	350.00	100	Vertical	Pass
3**	1813.100	38.04	-15.17	54.0	15.96	AV	350.00	100	Vertical	Pass
4	2665.800	50.62	-8.83	74.0	23.38	Peak	187.00	100	Vertical	Pass
4**	2665.800	39.60	-8.83	54.0	14.40	AV	187.00	100	Vertical	Pass
5	2796.500	49.97	-8.31	74.0	24.03	Peak	165.00	100	Vertical	Pass
5**	2796.500	40.48	-8.31	54.0	13.52	AV	165.00	100	Vertical	Pass
6	5219.500	56.02	1.89	74.0	17.98	Peak	236.00	100	Vertical	Pass
6**	5219.500	46.20	1.89	54.0	7.80	AV	236.00	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	1008.900	53.64	-15.95	74.0	20.36	Peak	106.00	100	Horizontal	Pass
1**	1008.900	47.80	-15.95	54.0	6.20	AV	106.00	100	Horizontal	Pass
2	1399.200	53.78	-15.80	74.0	20.22	Peak	80.00	100	Horizontal	Pass
2**	1399.200	46.66	-15.80	54.0	7.34	AV	80.00	100	Horizontal	Pass
3	2417.100	49.33	-11.60	74.0	24.67	Peak	119.00	100	Horizontal	Pass
3**	2417.100	38.06	-11.60	54.0	15.94	AV	119.00	100	Horizontal	Pass
4	3220.250	49.21	-4.72	74.0	24.79	Peak	264.00	100	Horizontal	Pass
4**	3220.250	40.18	-4.72	54.0	13.82	AV	264.00	100	Horizontal	Pass
5	5880.000	55.94	3.94	74.0	18.06	Peak	246.00	100	Horizontal	Pass
5**	5880.000	45.64	3.94	54.0	8.36	AV	246.00	100	Horizontal	Pass
6	13378.500	56.50	5.04	74.0	17.50	Peak	110.00	100	Horizontal	Pass
6**	13378.500	47.03	5.04	54.0	6.97	AV	110.00	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	☒
Spectrum Analyzer	ROHDE & SCHWARZ	FSV40	101544	2022.12.28	2023.12.27	☒
Amplifier (1-12GHz)	Advanced Microwave	WLA652A	1740103	2022.12.07	2023.12.06	☒
Amplifier（0.8-21GHz）	Mini-Circuits	ZVA-213-S+	225321316	2022.12.07	2023.12.06	☒
Amplifier (18-40GHz)	COM-MV	KA_LNA18-40G-01	18050001	2022.12.07	2023.12.06	☒
Test Antenna-Horn	SCHWARZBECK	BBHA 9120D	01917	2022.06.09	2025.06.08	☒
Test Antenna-Horn	A-INFOMW	LB-180400KF	J211060273	2021.07.02	2024.07.01	☒
Anechoic Chamber（#2）	YiHeng	9m*6m*6m	142	2021.08.19	2024.08.18	☒
Description	Supplier	Name	Version	/		Use
Test Software	BALUN	BL410-E	V22.930	/		☒

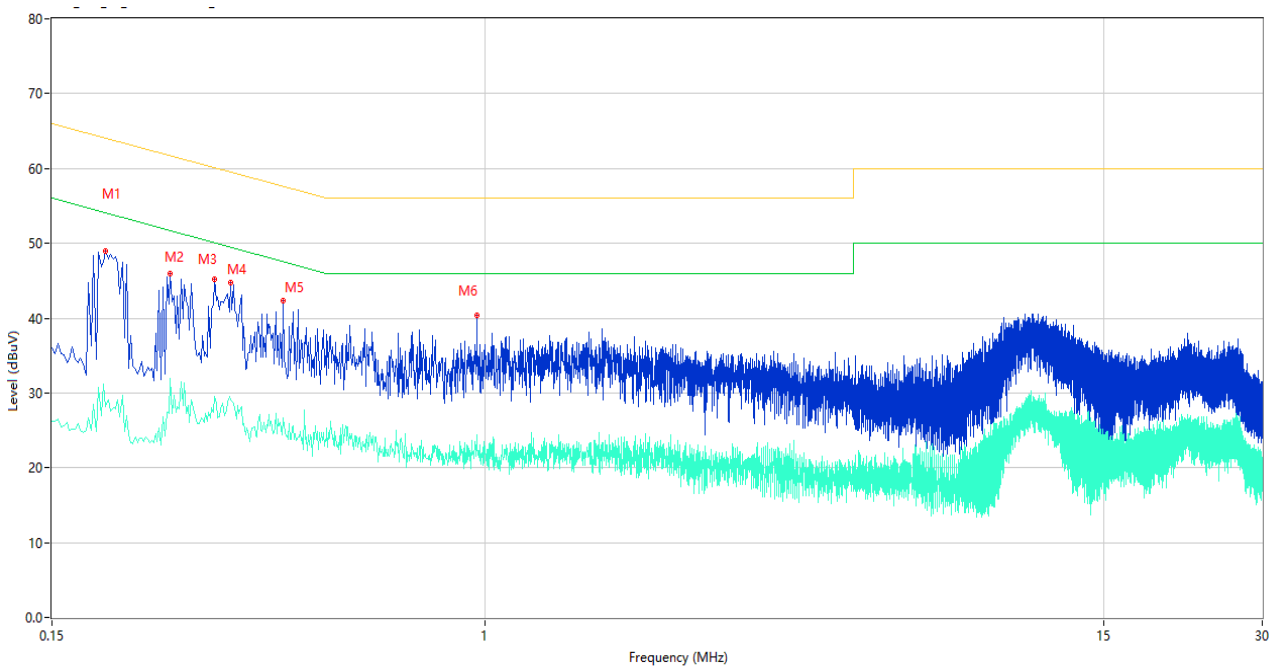
A.2 Conducted Emission, AC Ports

Note: Devices subject to Part 15 must be tested for all available U.S. voltages and frequencies (such as a nominal 120 VAC, 50/60 Hz and 240 VAC, 50/60 Hz) for which the device is capable of operation. So, The configuration 120 VAC, 60 Hz and 240 VAC, 50 Hz were tested respectively, but only the worst configuration (120 VAC, 60 Hz) shown here.

Sample No.	S05	Temperature	23.8℃
Humidity	46%RH	Pressure	101kPa
Test Engineer	Yang Yang	Test Date	2023.11.21

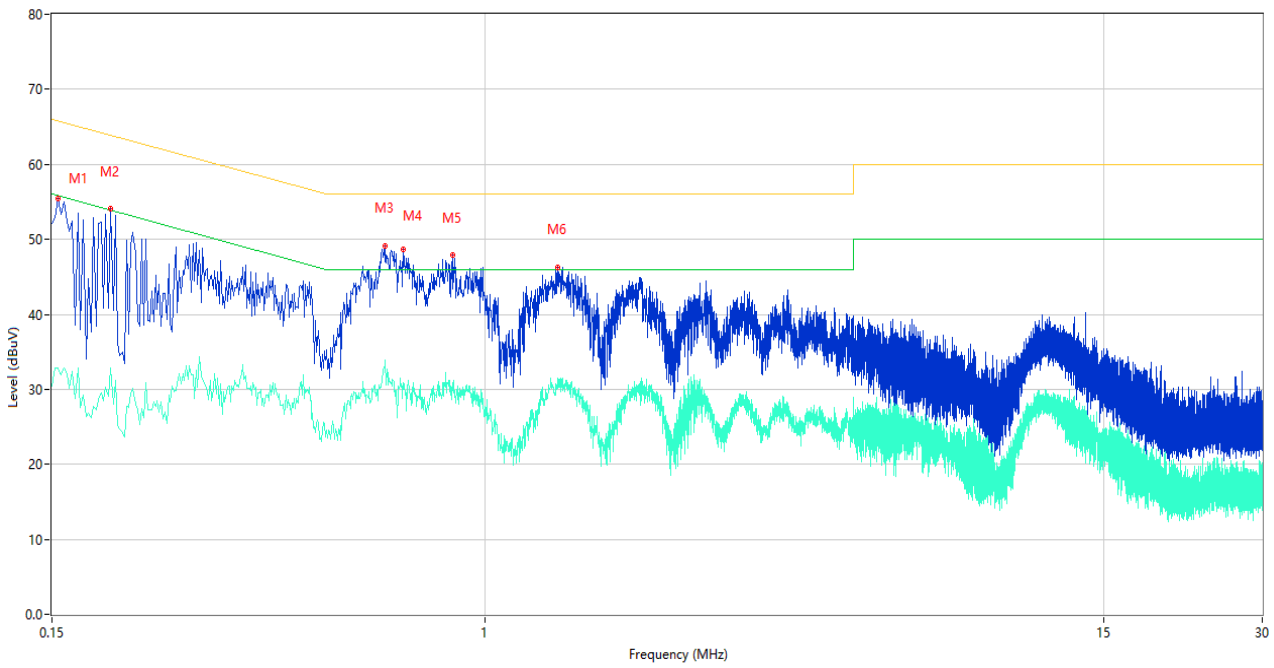
Test Mode 3

1) AC Ports - L Phase



No.	Frequency (MHz)	Results (dBuV)	Factor (dB)	Limit (dBuV)	Margin (dB)	Detector	Line	Verdict
1	0.190	48.91	9.43	64.04	15.13	Peak	L	Pass
1**	0.190	28.12	9.43	54.04	25.92	AV	L	Pass
2	0.252	45.96	9.43	61.69	15.73	Peak	L	Pass
2**	0.252	31.93	9.43	51.69	19.76	AV	L	Pass
3	0.306	45.18	9.42	60.08	14.90	Peak	L	Pass
3**	0.306	29.48	9.42	50.08	20.60	AV	L	Pass
4	0.328	44.76	9.37	59.50	14.74	Peak	L	Pass
4**	0.328	29.08	9.37	49.50	20.42	AV	L	Pass
5	0.412	42.27	9.99	57.61	15.34	Peak	L	Pass
5**	0.412	26.60	9.99	47.61	21.01	AV	L	Pass
6	0.964	40.38	10.10	56.00	15.62	Peak	L	Pass
6**	0.964	24.47	10.10	46.00	21.53	AV	L	Pass

2) AC Ports - N Phase



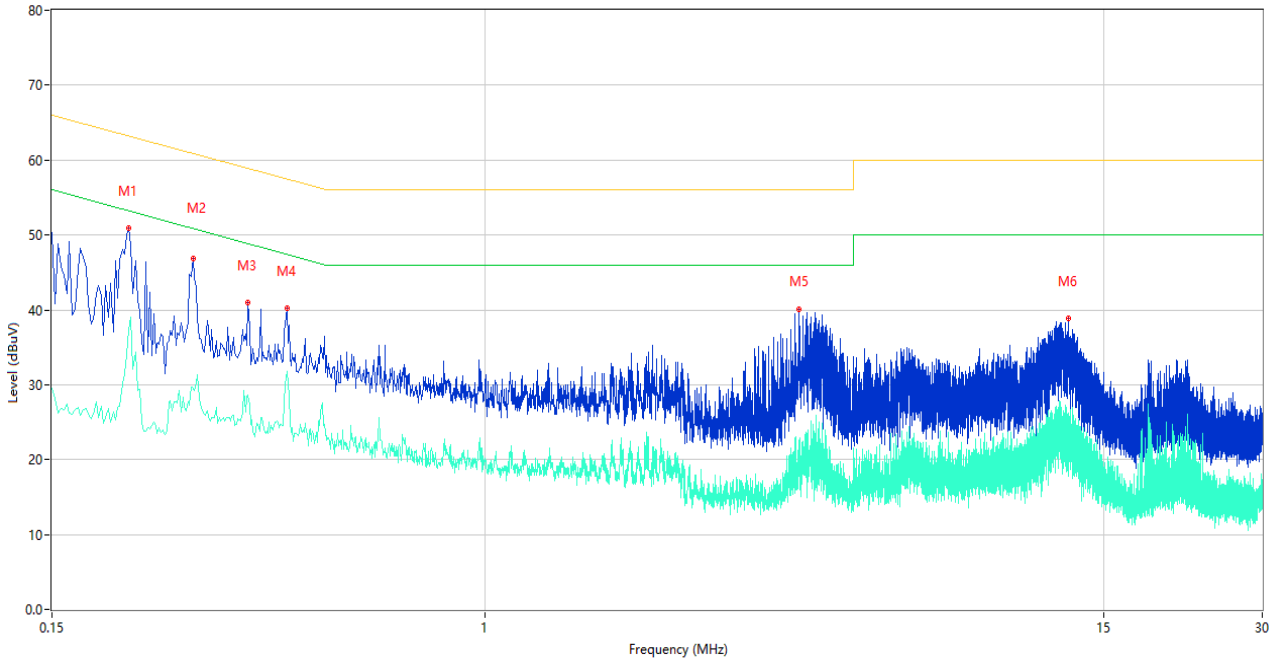
No.	Frequency (MHz)	Results (dBuV)	Factor (dB)	Limit (dBuV)	Margin (dB)	Detector	Line	Verdict
1	0.154	55.37	9.47	65.78	10.41	Peak	N	Pass
1**	0.154	32.77	9.47	55.78	23.01	AV	N	Pass
2	0.194	54.08	9.43	63.86	9.78	Peak	N	Pass
2**	0.194	32.84	9.43	53.86	21.02	AV	N	Pass
3	0.646	49.16	9.66	56.00	6.84	Peak	N	Pass
3**	0.646	33.83	9.66	46.00	12.17	AV	N	Pass
4	0.698	48.68	10.07	56.00	7.32	Peak	N	Pass
4**	0.698	30.88	10.07	46.00	15.12	AV	N	Pass
5	0.866	47.88	9.74	56.00	8.12	Peak	N	Pass
5**	0.866	30.85	9.74	46.00	15.15	AV	N	Pass
6	1.374	46.25	9.94	56.00	9.75	Peak	N	Pass
6**	1.374	31.48	9.94	46.00	14.52	AV	N	Pass

Equipment Information						
Equipment Name	Supplier	Model	Serial No.	Cal. Date	Cal. Due	Use
EMI Receiver	KEYSIGHT	N9010B	MY57110309	2023.09.05	2024.09.04	☒
LISN	SCHWARZBECK	NSLK 8127	8127-687	2023.05.16	2024.05.15	☒
ISN	TESEQ	ISN T800	34449	2023.11.10	2024.11.09	☐
ISN	TESEQ	ISN T8-Cat6	53561	2023.04.23	2024.04.22	☐
Shielded Room	YiHeng Electronic Co., Ltd	3.5m*3.1m*2.8m	112	2022.02.19	2025.02.18	☒
Description	Supplier	Name	Version	/		Use
Test Software	BALUN	BL410-E	V22.930	/		☒

Sample No.	S05	Temperature	23.8℃
Humidity	46%RH	Pressure	101kPa
Test Engineer	Yang Yang	Test Date	2023.11.21

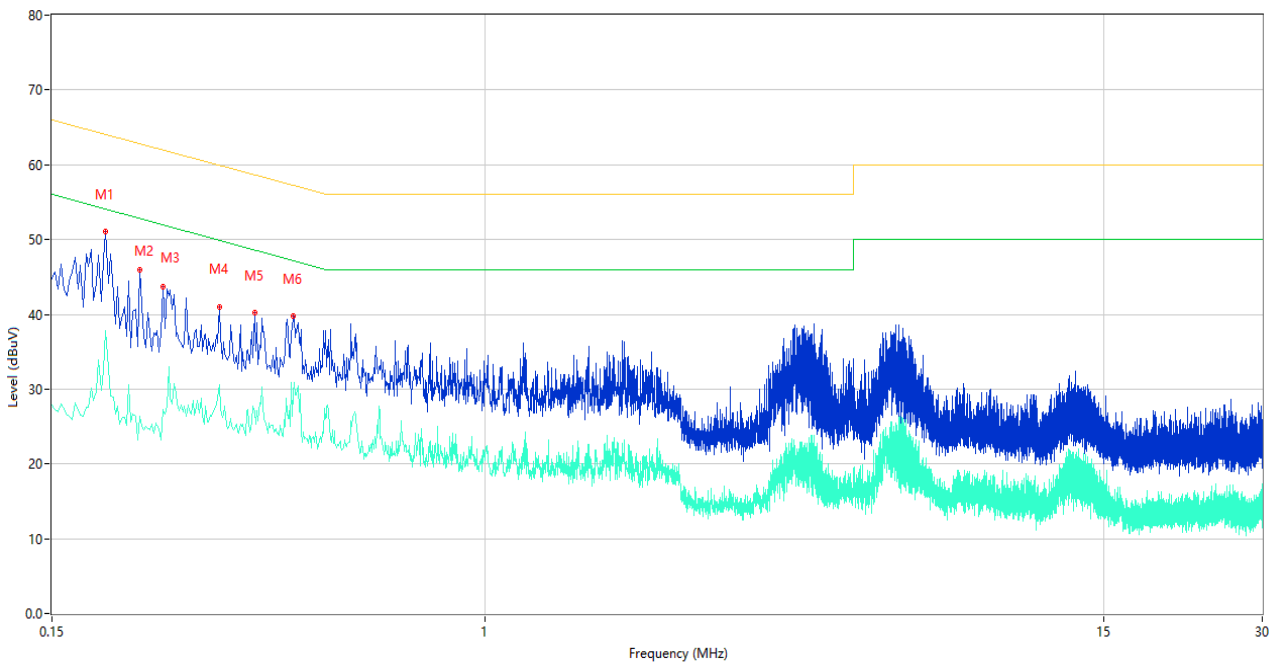
Test Mode 14

3) AC Ports - L Phase



No.	Frequency (MHz)	Results (dBuV)	Factor (dB)	Limit (dBuV)	Margin (dB)	Detector	Line	Verdict
1	0.210	50.93	9.42	63.21	12.28	Peak	L	Pass
1**	0.210	37.34	9.42	53.21	15.87	AV	L	Pass
2	0.278	46.86	9.43	60.88	14.02	Peak	L	Pass
2**	0.278	29.57	9.43	50.88	21.31	AV	L	Pass
3	0.354	40.92	9.39	58.87	17.95	Peak	L	Pass
3**	0.354	28.68	9.39	48.87	20.19	AV	L	Pass
4	0.420	40.19	9.98	57.45	17.26	Peak	L	Pass
4**	0.420	31.73	9.98	47.45	15.72	AV	L	Pass
5	3.946	40.00	9.48	56.00	16.00	Peak	L	Pass
5**	3.946	22.57	9.48	46.00	23.43	AV	L	Pass
6	12.816	38.82	7.87	60.00	21.18	Peak	L	Pass
6**	12.816	26.00	7.87	50.00	24.00	AV	L	Pass

4) AC Ports - N Phase



No.	Frequency (MHz)	Results (dBuV)	Factor (dB)	Limit (dBuV)	Margin (dB)	Detector	Line	Verdict
1	0.190	51.03	9.43	64.04	13.01	Peak	N	Pass
1**	0.190	37.82	9.43	54.04	16.22	AV	N	Pass
2	0.220	45.91	9.42	62.82	16.91	Peak	N	Pass
2**	0.220	26.32	9.42	52.82	26.50	AV	N	Pass
3	0.244	43.75	9.43	61.96	18.21	Peak	N	Pass
3**	0.244	27.28	9.43	51.96	24.68	AV	N	Pass
4	0.312	41.04	9.41	59.92	18.88	Peak	N	Pass
4**	0.312	30.65	9.41	49.92	19.27	AV	N	Pass
5	0.364	40.19	9.52	58.64	18.45	Peak	N	Pass
5**	0.364	27.08	9.52	48.64	21.56	AV	N	Pass
6	0.432	39.77	9.96	57.21	17.44	Peak	N	Pass
6**	0.432	29.47	9.96	47.21	17.74	AV	N	Pass

Equipment Information						
Equipment Name	Supplier	Model	Serial No.	Cal. Date	Cal. Due	Use
EMI Receiver	KEYSIGHT	N9010B	MY57110309	2023.09.05	2024.09.04	☒
LISN	SCHWARZBECK	NSLK 8127	8127-687	2023.05.16	2024.05.15	☒
ISN	TESEQ	ISN T800	34449	2023.11.10	2024.11.09	☐
ISN	TESEQ	ISN T8-Cat6	53561	2023.04.23	2024.04.22	☐
Shielded Room	YiHeng Electronic Co., Ltd	3.5m*3.1m*2.8m	112	2022.02.19	2025.02.18	☒
Description	Supplier	Name	Version	/		Use
Test Software	BALUN	BL410-E	V22.930	/		☒

ANNEX B TEST SETUP PHOTOS

Please refer the document “BL-SZ23A1194-AE-1.PDF”.

ANNEX C EUT EXTERNAL PHOTOS

Please refer the document “BL-SZ23A1194-AW.PDF”.

ANNEX D EUT INTERNAL PHOTOS

Please refer the document “BL-SZ23A1194-AI.PDF”.

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--END OF REPORT--