

EMC MEASUREMENT REPORT

Applicant: HAN Networks Co., Ltd.

Address: 101-A16, 1st Floor, Building 3, No.9 compound, Yongfeng Road, Haidian District, Beijing, P.R. China

Product: HAN Access Point

Model No.: AP411

Brand Name: HANNETWORKS, HAN NETWORKS

FCC Rule Part(s): FCC Part 15 Subpart B

Test Procedure: ANSI C63.4 - 2014

Result: Complies

Received Date: 2023-03-14

Test Date: 2023-06-25

Reviewed By:

Jame Yuan

Approved By:

Robin Wu



The test results relate only to the samples tested.

This equipment has been shown to be capable of compliance with the applicable technical standards as indicated in the measurement report and was tested in accordance with the measurement procedures specified in ANSI C63.4-2014. Test results reported herein relate only to the item(s) tested.

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Revision History

Report No.	Version	Description	Issue Date	Note
2303RSU029-U8	V01	Initial Report	2023-09-01	Valid

Note: This report is a copy report based on MRT original report (Report No. 2303RSU028-U8). Only applicant information and product information (name, model and brand name) has changed in this report.

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1. General Information

1.1. Applicant

HAN Networks Co., Ltd.

101-A16, 1st Floor, Building 3, No.9 compound, Yongfeng Road, Haidian District, Beijing, P.R. China

1.2. Manufacturer

HAN Networks Co., Ltd.

101-A16, 1st Floor, Building 3, No.9 compound, Yongfeng Road, Haidian District, Beijing, P.R. China

1.3. Testing Facility

☒	Test Site – MRT Suzhou Laboratory Laboratory Location (Suzhou - Wuzhong) D8 Building, No.2 Tian’edang Rd., Wuzhong Economic Development Zone, Suzhou, China Laboratory Location (Suzhou - SIP) 4b Building, Liando U Valley, No.200 Xingpu Rd., Shengpu Town, Suzhou Industrial Park, China Laboratory Accreditations A2LA: 3628.01 CNAS: L10551 FCC: CN1166 ISED: CN0001 VCCI: ☐ R-20025 ☐ G-20034 ☐ C-20020 ☐ T-20020 ☐ R-20141 ☐ G-20134 ☐ C-20103 ☐ T-20104
☐	Test Site – MRT Shenzhen Laboratory Laboratory Location (Shenzhen) 1G, Building A, Junxiangda Building, Zhongshanyuan Road West, Nanshan District, Shenzhen, China Laboratory Accreditations A2LA: 3628.02 CNAS: L10551 FCC: CN1284 ISED: CN0105
☐	Test Site – MRT Taiwan Laboratory Laboratory Location (Taiwan) No. 38, Fuxing 2nd Rd., Guishan Dist., Taoyuan City 333, Taiwan (R.O.C.) Laboratory Accreditations TAF: 3261 FCC: 291082, TW3261 ISED: TW3261

1.4. Product Information

Product Name	HAN Access Point
Model No.	AP411
EUT Identification No.	20230614Sample#02
Wi-Fi Specification	802.11a/b/g/n/ac/ax
Bluetooth Specification	V5.1 Single Mode
Antenna Information	Refer to Section 1.7
Power Type	AC Adapter Input or PoE Input
Operating Environment	Indoor Use
Accessories	
AC Adapter	Model: ADP-50GR B Input: 100-240V ~ 50/60Hz, 1.3A Output: 48.0V, 1.042A, 50.1W MAX
PoE Injector	Model: PD-9001GR/AT/AC Input: 100-240V ~ 0.67A, 50/60Hz Output: 55.0V, 0.6A
Remark:	
1. The information of EUT was provided by the manufacturer, and the accuracy of the information shall be the responsibility of the manufacturer.	
2. AC Power Adapter and PoE Injector are not sold with Product.	

2. Test Configuration

2.1. Test Mode

Mode 1: AP411 powered by adapter + Eth0 and Eth1 port connect to notebook via LAN cable + Connect to mobile phone via 2.4G/5G/6G Wi-Fi + Connect to mobile phone via BLE + Plug USB flash and make it reading/writing.

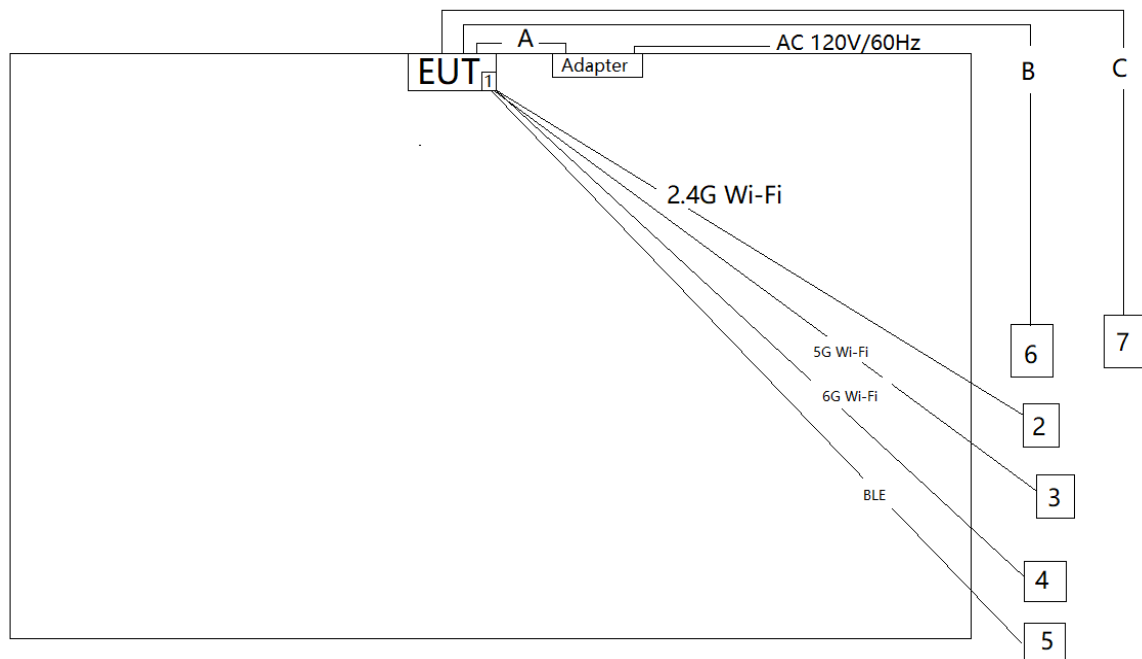
Mode 2: AP411 powered by PoE (Eth0 Port) + Eth1 port connect to notebook via LAN cable + Connect to mobile phone via 2.4G/5G/6G Wi-Fi + Connect to mobile phone via BLE + Plug USB flash and make it reading/writing.

Mode 3: AP411 powered by adapter + Make it in 2.4G/5G/6G Wi-Fi and BLE receiving mode.

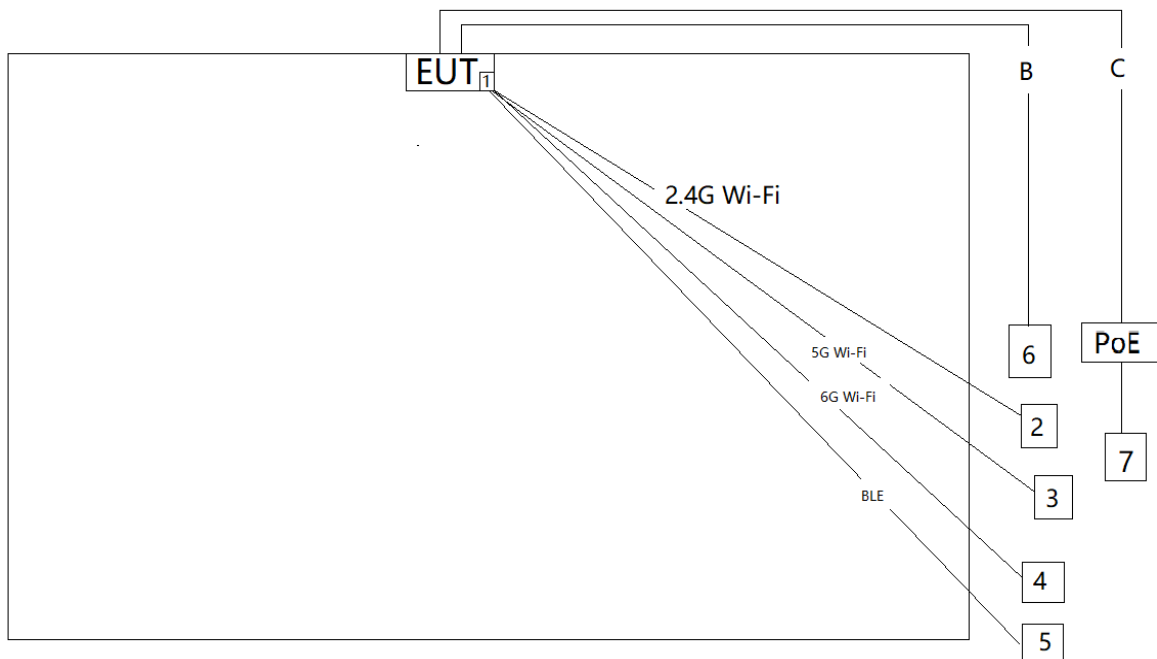
2.2. Configuration of Tested System

The measurement procedures and appropriate EUT setup described in the ANSI C63.4-2014 was used in the measurement.

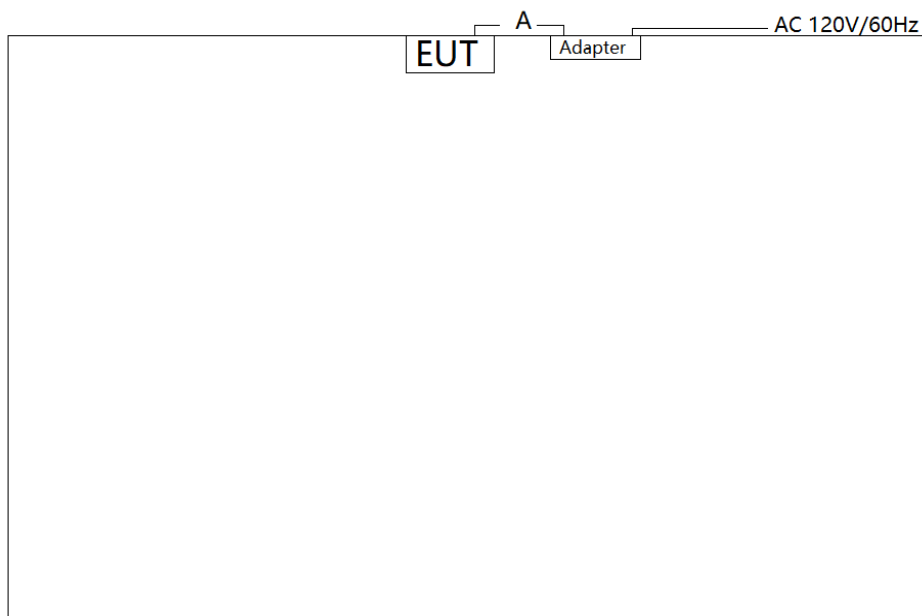
Mode 1



Mode 2



Mode 3



Cable Type		Cable Spec.	Length
A	DC Power Cable	Shielding	1.6m
B	LAN Cable	Non-Shielding	>10.0m
C	LAN Cable	Non-Shielding	>10.0m

No.	Product	Manufacturer	Model No.
1	USB Flash	Samsung	64G
2	Mobile Phone	Apple	iPhone 6S
3	Mobile Phone	Apple	iPhone 13
4	Mobile Phone	Vivo	X90 Pro
5	Mobile Phone	OPPO	PHK110
6	Notebook	Lenovo	E495
7	Notebook	HP	TPN-Q263

2.3. EMI Suppression Device(s)/Modifications

No EMI suppression device(s) were added and/or no modifications were made during testing.

3. Measuring Instrument

Instrument Name	Manufacturer	Model No.	Asset No.	Cali. Interval	Cal. Due Date	Test Site
EMI Test Receiver	R&S	ESR7	MRTSUE06001	1 year	2023-12-28	WZ-AC1
Horn Antenna	Schwarzbeck	BBHA 9120D	MRTSUE06023	1 year	2023-08-22	WZ-AC1
Preamplifier	Agilent	83017A	MRTSUE06076	1 year	2024-05-07	WZ-AC1
TRILOG Antenna	Schwarzbeck	VULB 9168	MRTSUE06172	1 year	2024-06-09	WZ-AC1
Anechoic Chamber	TDK	WZ-AC1	MRTSUE06212	1 year	2024-04-20	WZ-AC1
Thermohygrometer	testo	608-H1	MRTSUE06403	1 year	2024-05-31	WZ-AC1
Signal Analyzer	Keysight	N9010B	MRTSUE06607	1 year	2023-12-28	WZ-AC1
Thermohygrometer	testo	608-H1	MRTSUE11039	1 year	2023-11-01	WZ-AC1
TRILOG Antenna	Schwarzbeck	VULB 9162	MRTSUE06022	1 year	2024-05-15	WZ-AC1
Two-Line V-Network	R&S	ENV216	MRTSUE06002	1 year	2024-05-23	WZ-SR2
Shielding Room	MIX-BEP	WZ-SR2	MRTSUE06215	5 years	2026-12-20	WZ-SR2
Four-Line V-Network	R&S	ENV432	MRTSUE06615	1 year	2023-10-08	WZ-SR2
EMI Test Receiver	R&S	ESR3	MRTSUE06909	1 year	2023-10-27	WZ-SR2
Thermohygrometer	testo	608-H1	MRTSUE06404	1 year	2024-05-31	WZ-SR2

Software	Version	Function
EMI Software	V3.0.0	EMI Test Software
Controller_MF 7802	2.03C	RE Antenna & turntable

4. Decision Rules and Measurement Uncertainty

4.1. Decision Rules

The Decision Rule is based on Simple Acceptance in accordance with ISO Guide 98-4: 2012 Clause 8.2.
(Measurement uncertainty is not taken into account when stating conformity with a specified requirement.)

4.2. Measurement Uncertainty

Where relevant, the following test 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 $k = 2$.

Conducted Emission Measurement	
The maximum measurement uncertainty is evaluated as:	
	9kHz~150kHz: 3.58dB
	150kHz~30MHz: 3.20dB
Radiated Emission Measurement	
The maximum measurement uncertainty is evaluated as:	
Horizontal:	30MHz~200MHz: 3.85dB
	200MHz~1GHz: 4.36dB
	1GHz~40GHz: 4.98dB
Vertical:	30MHz~200MHz: 4.06dB
	200MHz~1GHz: 5.28dB
	1GHz~40GHz: 4.91dB

5. Test Result

5.1. Summary

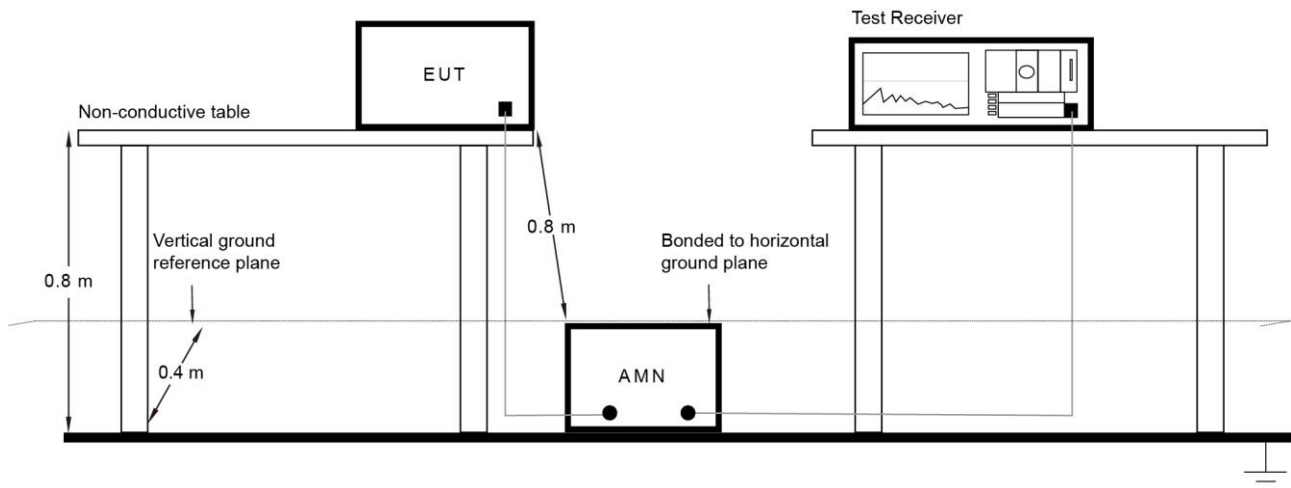
FCC Part Section(s)	Test Description	Verdict
15.107	Conducted Emission	Pass
15.109	Radiated Emission	Pass

5.2. Conducted Emission

5.2.1. Test Limit

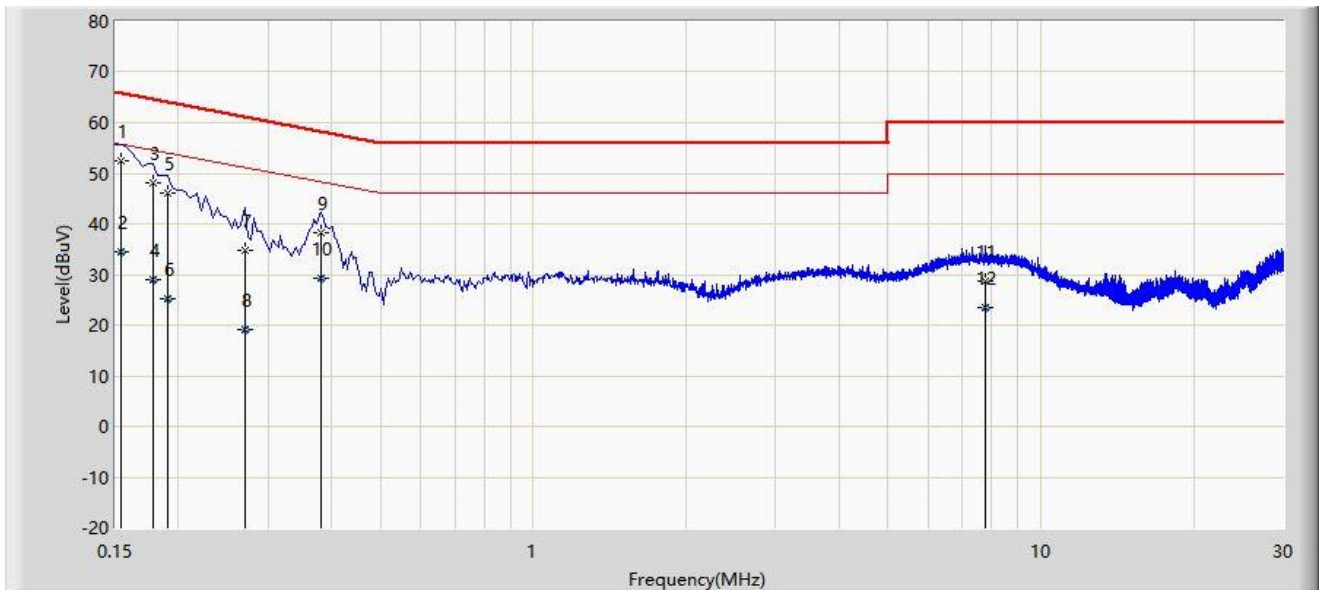
FCC Part 15.107 Conducted Emission Limits				
Frequency Range (MHz)	Class A Limits		Class B Limits	
	QP dB(μ V)	AV dB(μ V)	QP dB(μ V)	AV dB(μ V)
0.15 ~ 0.5	79	66	66 to 56	56 to 46
0.5 ~ 5	73	60	56	46
5 ~ 30	73	60	60	50

5.2.2. Test Setup



5.2.3. Test Result

Site: WZ-SR2	Test Date: 2023/06/25
Temperature: 21.2°C	Humidity: 68.8%
Limit: FCC_Part15.107_CE_AC Power_Class B	Engineer: Alin Zhou
Probe: ENV216_101683_Filter Off	Polarity: Line
EUT: HAN Access Point	Power: AC 120V/60Hz
Test Mode 1	



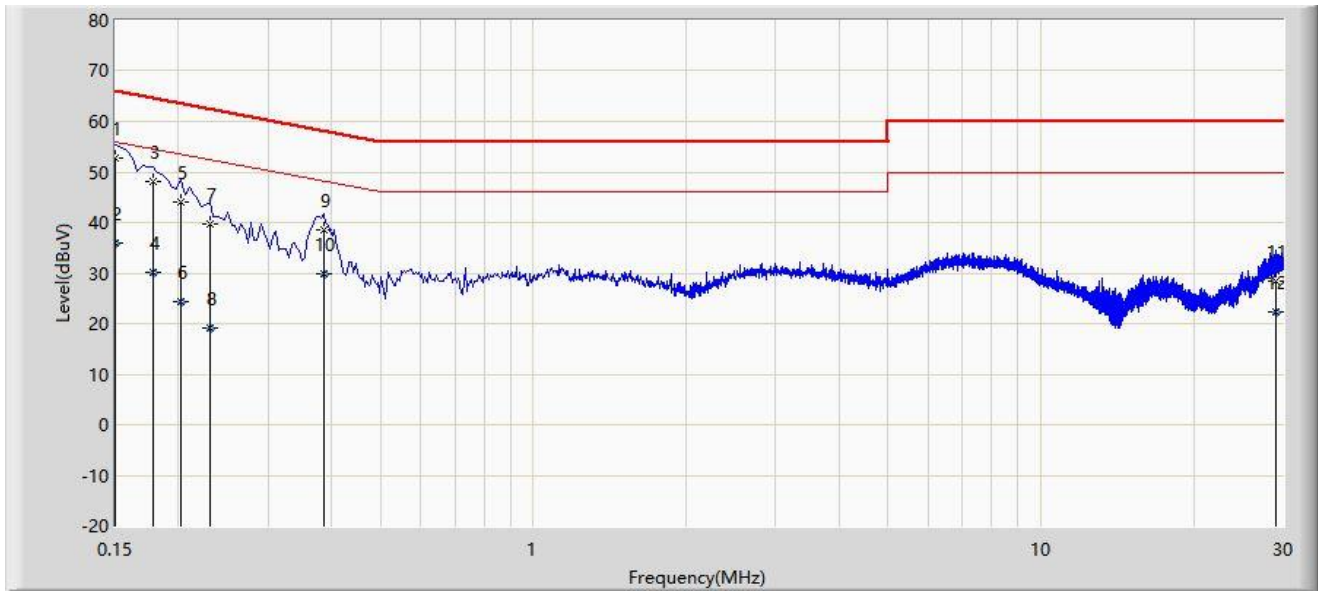
No	Mark	Frequency (MHz)	Measure Level (dBμV)	Reading Level (dBμV)	Margin (dB)	Limit (dBμV)	Factor (dB)	Type
1	*	0.154	52.464	42.861	-13.317	65.781	9.604	QP
2		0.154	34.566	24.963	-21.215	55.781	9.604	AV
3		0.178	48.096	38.486	-16.482	64.578	9.610	QP
4		0.178	29.043	19.432	-25.536	54.578	9.610	AV
5		0.190	46.057	36.444	-17.979	64.037	9.613	QP
6		0.190	25.155	15.542	-28.881	54.037	9.613	AV
7		0.270	34.732	25.094	-26.386	61.118	9.637	QP
8		0.270	19.163	9.525	-31.955	51.118	9.637	AV
9		0.382	38.393	28.704	-19.843	58.236	9.689	QP
10		0.382	29.394	19.705	-18.842	48.236	9.689	AV
11		7.782	28.812	18.561	-31.188	60.000	10.250	QP
12		7.782	23.527	13.277	-26.473	50.000	10.250	AV

Note 1: " * ", means this data is the worst emission level.

Note 2: Measure Level (dBμV) = Reading Level (dBμV) + Factor (dB).

Note 3: Factor (dB) = Cable Loss (dB) + LISN Factor (dB).

Site: WZ-SR2	Test Date: 2023/06/25
Temperature: 21.2°C	Humidity: 68.8%
Limit: FCC_Part15.107_CE_AC Power_Class B	Engineer: Alin Zhou
Probe: ENV216_101683_Filter Off	Polarity: Neutral
EUT: HAN Access Point	Power: AC 120V/60Hz
Test Mode 1	



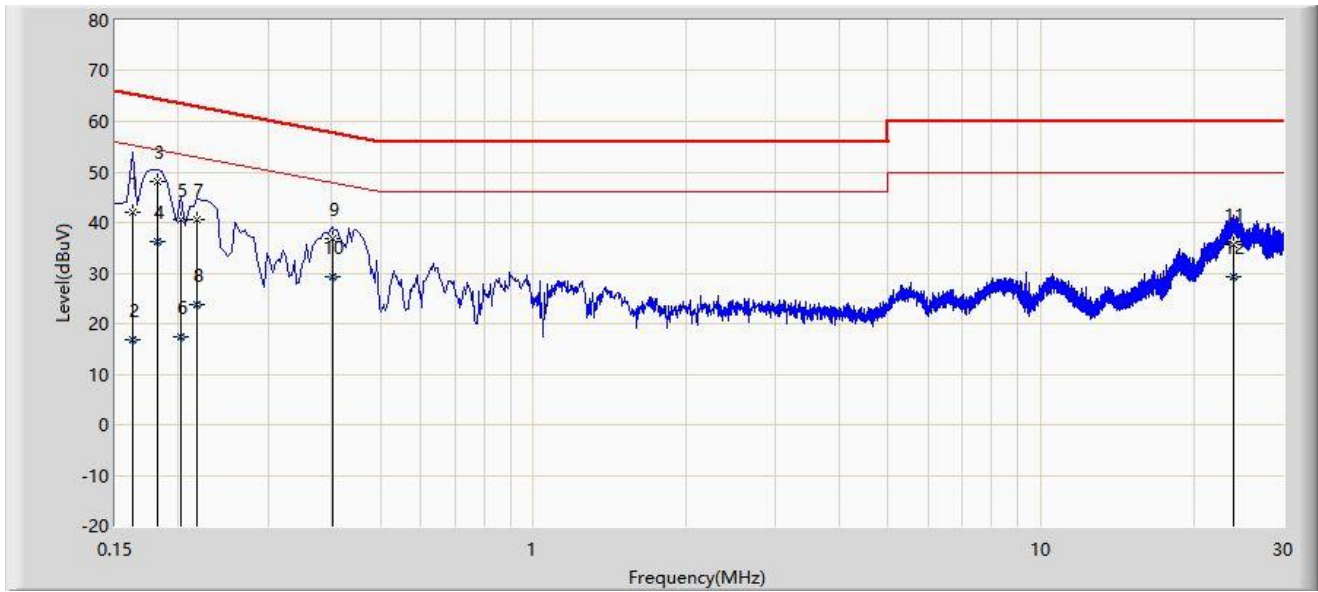
No	Mark	Frequency (MHz)	Measure Level (dBμV)	Reading Level (dBμV)	Margin (dB)	Limit (dBμV)	Factor (dB)	Type
1	*	0.150	52.613	43.046	-13.387	66.000	9.568	QP
2		0.150	35.974	26.406	-20.026	56.000	9.568	AV
3		0.178	48.098	38.511	-16.481	64.578	9.586	QP
4		0.178	30.245	20.658	-24.333	54.578	9.586	AV
5		0.202	43.954	34.351	-19.574	63.528	9.603	QP
6		0.202	24.367	14.764	-29.161	53.528	9.603	AV
7		0.230	39.639	30.022	-22.811	62.450	9.617	QP
8		0.230	19.075	9.458	-33.375	52.450	9.617	AV
9		0.386	38.429	28.741	-19.720	58.149	9.688	QP
10		0.386	29.750	20.062	-18.399	48.149	9.688	AV
11		29.018	28.511	17.298	-31.489	60.000	11.213	QP
12		29.018	22.298	11.085	-27.702	50.000	11.213	AV

Note 1: " * ", means this data is the worst emission level.

Note 2: Measure Level (dBμV) = Reading Level (dBμV) + Factor (dB).

Note 3: Factor (dB) = Cable Loss (dB) + LISN Factor (dB).

Site: WZ-SR2	Test Date: 2023/06/25
Temperature: 21.2°C	Humidity: 68.8%
Limit: FCC_Part15.107_CE_AC Power_Class B	Engineer: Alin Zhou
Probe: ENV216_101683_Filter Off	Polarity: Line
EUT: HAN Access Point	Power: AC 120V/60Hz
Test Mode 2	



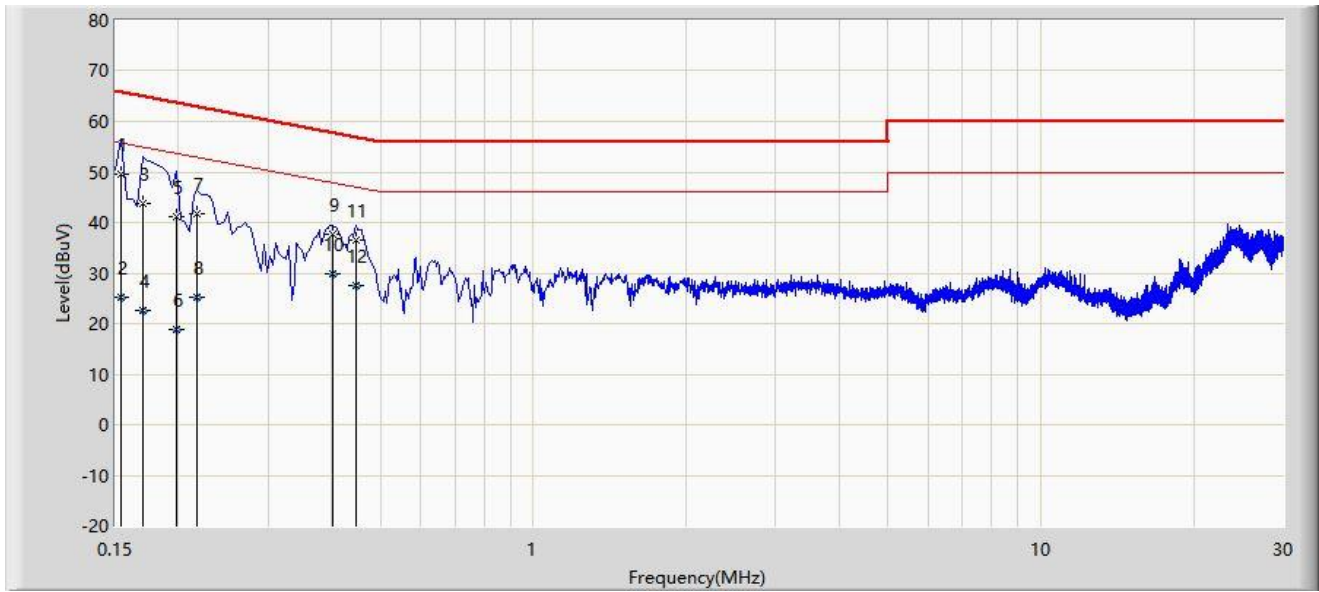
No	Mark	Frequency (MHz)	Measure Level (dBμV)	Reading Level (dBμV)	Margin (dB)	Limit (dBμV)	Factor (dB)	Type
1		0.162	42.124	32.517	-23.237	65.361	9.607	QP
2		0.162	16.771	7.164	-38.590	55.361	9.607	AV
3	*	0.182	48.102	38.490	-16.292	64.394	9.611	QP
4		0.182	36.260	26.649	-18.134	54.394	9.611	AV
5		0.202	40.667	31.050	-22.861	63.528	9.616	QP
6		0.202	17.249	7.632	-36.279	53.528	9.616	AV
7		0.218	40.610	30.988	-22.285	62.895	9.622	QP
8		0.218	23.886	14.264	-29.009	52.895	9.622	AV
9		0.402	36.816	27.117	-20.996	57.812	9.699	QP
10		0.402	29.234	19.534	-18.578	47.812	9.699	AV
11		23.958	35.518	24.526	-24.482	60.000	10.993	QP
12		23.958	29.380	18.388	-20.620	50.000	10.993	AV

Note 1: " * ", means this data is the worst emission level.

Note 2: Measure Level (dBμV) = Reading Level (dBμV) + Factor (dB).

Note 3: Factor (dB) = Cable Loss (dB) + LISN Factor (dB)

Site: WZ-SR2	Test Date: 2023/06/25
Temperature: 21.2°C	Humidity: 68.8%
Limit: FCC_Part15.107_CE_AC Power_Class B	Engineer: Alin Zhou
Probe: ENV216_101683_Filter Off	Polarity: Neutral
EUT: HAN Access Point	Power: AC 120V/60Hz
Test Mode 2	



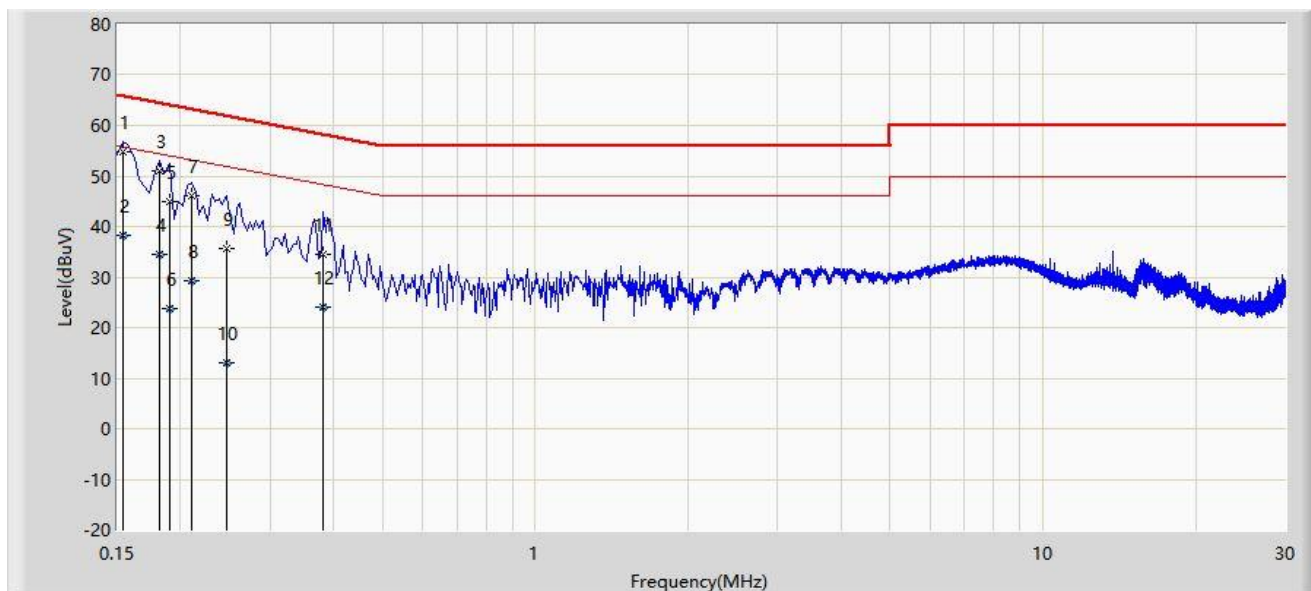
No	Mark	Frequency (MHz)	Measure Level (dBμV)	Reading Level (dBμV)	Margin (dB)	Limit (dBμV)	Factor (dB)	Type
1	*	0.154	49.687	40.118	-16.094	65.781	9.569	QP
2		0.154	25.315	15.746	-30.466	55.781	9.569	AV
3		0.170	43.790	34.210	-21.171	64.960	9.581	QP
4		0.170	22.591	13.011	-32.369	54.960	9.581	AV
5		0.198	41.120	31.519	-22.574	63.694	9.601	QP
6		0.198	18.849	9.248	-34.845	53.694	9.601	AV
7		0.218	41.619	32.006	-21.276	62.895	9.613	QP
8		0.218	25.214	15.602	-27.680	52.895	9.613	AV
9		0.402	37.560	27.863	-20.252	57.812	9.696	QP
10		0.402	29.818	20.121	-17.994	47.812	9.696	AV
11		0.446	36.611	26.889	-20.339	56.949	9.722	QP
12		0.446	27.659	17.937	-19.290	46.949	9.722	AV

Note 1: " * ", means this data is the worst emission level.

Note 2: Measure Level (dBμV) = Reading Level (dBμV) + Factor (dB).

Note 3: Factor (dB) = Cable Loss (dB) + LISN Factor (dB).

Site: WZ-SR2	Test Date: 2023/06/25
Temperature: 21.2°C	Humidity: 68.8%
Limit: FCC_Part15.107_CE_AC Power_Class B	Engineer: Alin Zhou
Probe: ENV216_101683_Filter Off	Polarity: Line
EUT: HAN Access Point	Power: AC 120V/60Hz
Test Mode 3	



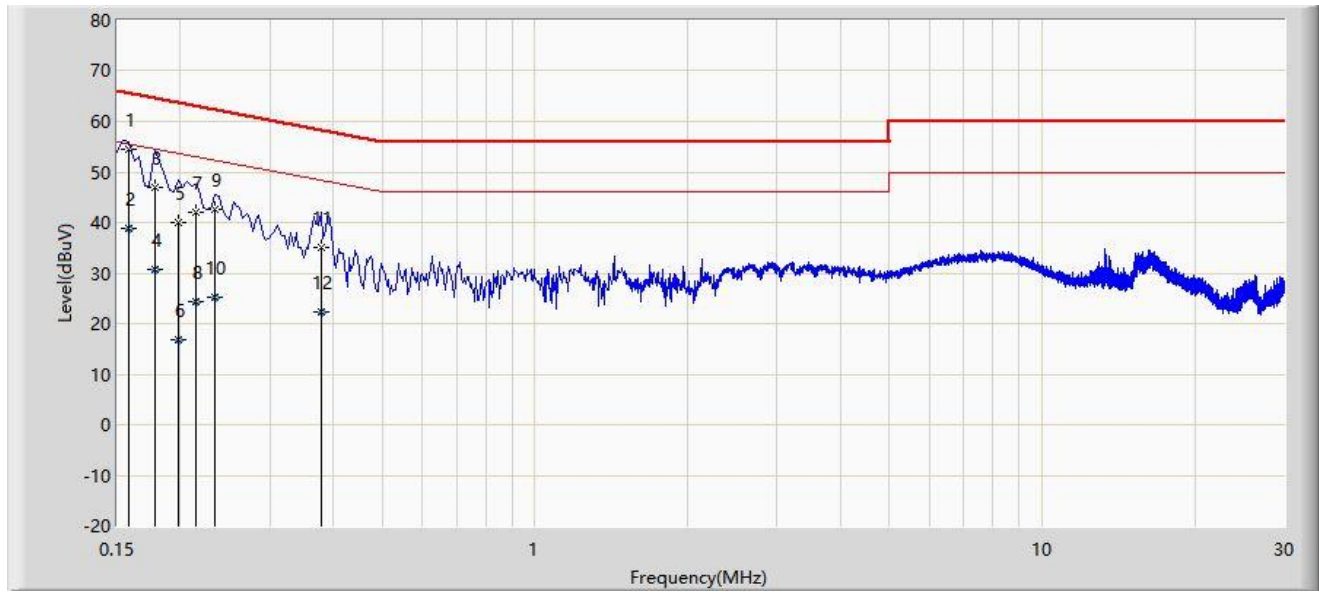
No	Mark	Frequency (MHz)	Measure Level (dBμV)	Reading Level (dBμV)	Margin (dB)	Limit (dBμV)	Factor (dB)	Type
1	*	0.154	54.744	45.140	-11.037	65.781	9.604	QP
2		0.154	38.344	28.740	-17.438	55.781	9.604	AV
3		0.182	50.958	41.347	-13.436	64.394	9.611	QP
4		0.182	34.386	24.774	-20.008	54.394	9.611	AV
5		0.190	44.929	35.316	-19.108	64.037	9.613	QP
6		0.190	23.692	14.078	-30.345	54.037	9.613	AV
7		0.210	45.954	36.335	-17.251	63.205	9.620	QP
8		0.210	29.186	19.567	-24.019	53.205	9.620	AV
9		0.246	35.623	25.993	-26.268	61.891	9.630	QP
10		0.246	12.980	3.349	-38.912	51.891	9.630	AV
11		0.382	34.508	24.819	-23.728	58.236	9.689	QP
12		0.382	23.967	14.278	-24.269	48.236	9.689	AV

Note 1: " * ", means this data is the worst emission level.

Note 2: Measure Level (dBμV) = Reading Level (dBμV) + Factor (dB).

Note 3: Factor (dB) = Cable Loss (dB) + LISN Factor (dB).

Site: WZ-SR2	Test Date: 2023/06/25
Temperature: 21.2°C	Humidity: 68.8%
Limit: FCC_Part15.107_CE_AC Power_Class B	Engineer: Alin Zhou
Probe: ENV216_101683_Filter Off	Polarity: Neutral
EUT: HAN Access Point	Power: AC 120V/60Hz
Test Mode 3	



No	Mark	Frequency (MHz)	Measure Level (dBμV)	Reading Level (dBμV)	Margin (dB)	Limit (dBμV)	Factor (dB)	Type
1	*	0.158	54.510	44.940	-11.058	65.568	9.571	QP
2		0.158	38.960	29.390	-16.608	55.568	9.571	AV
3		0.178	47.059	37.472	-17.520	64.578	9.586	QP
4		0.178	30.582	20.995	-23.997	54.578	9.586	AV
5		0.198	39.984	30.382	-23.710	63.694	9.601	QP
6		0.198	16.948	7.347	-36.746	53.694	9.601	AV
7		0.214	41.987	32.377	-21.062	63.049	9.611	QP
8		0.214	24.332	14.721	-28.717	53.049	9.611	AV
9		0.234	42.519	32.901	-19.788	62.307	9.619	QP
10		0.234	25.153	15.535	-27.154	52.307	9.619	AV
11		0.378	34.928	25.245	-23.395	58.323	9.683	QP
12		0.378	22.315	12.632	-26.009	48.323	9.683	AV

Note 1: " * ", means this data is the worst emission level.

Note 2: Measure Level (dBμV) = Reading Level (dBμV) + Factor (dB).

Note 3: Factor (dB) = Cable Loss (dB) + LISN Factor (dB).

5.3. Radiated Emission

5.3.1. Test Limit

FCC Part 15.109 Class B Limits		
Frequency (MHz)	Distance (m)	Level (dBµV/m)
30 - 88	3	40
88 - 216	3	43.5
216 - 960	3	46
Above 960	3	54

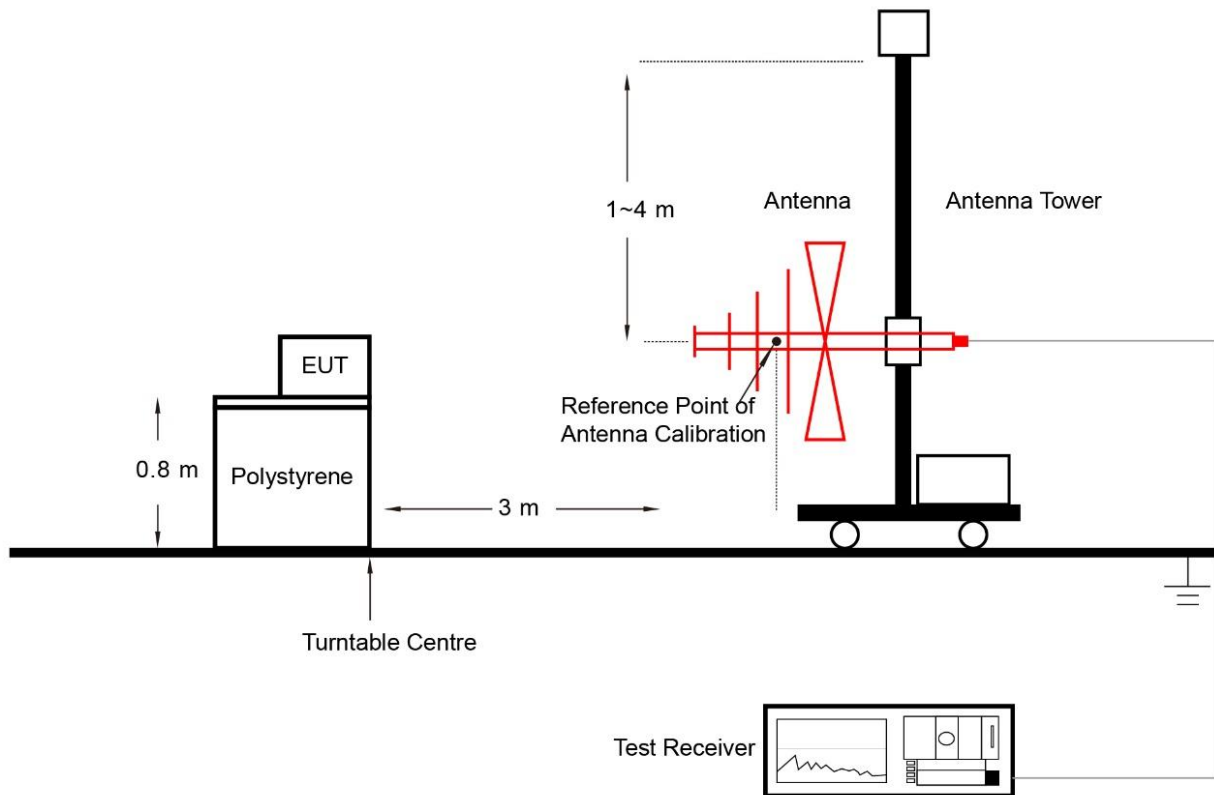
Note 1: The lower limit shall apply at the transition frequency.

Note 2: Distance refers to the distance in meters between the measuring instrument antenna and the closed point of any part of the device or system.

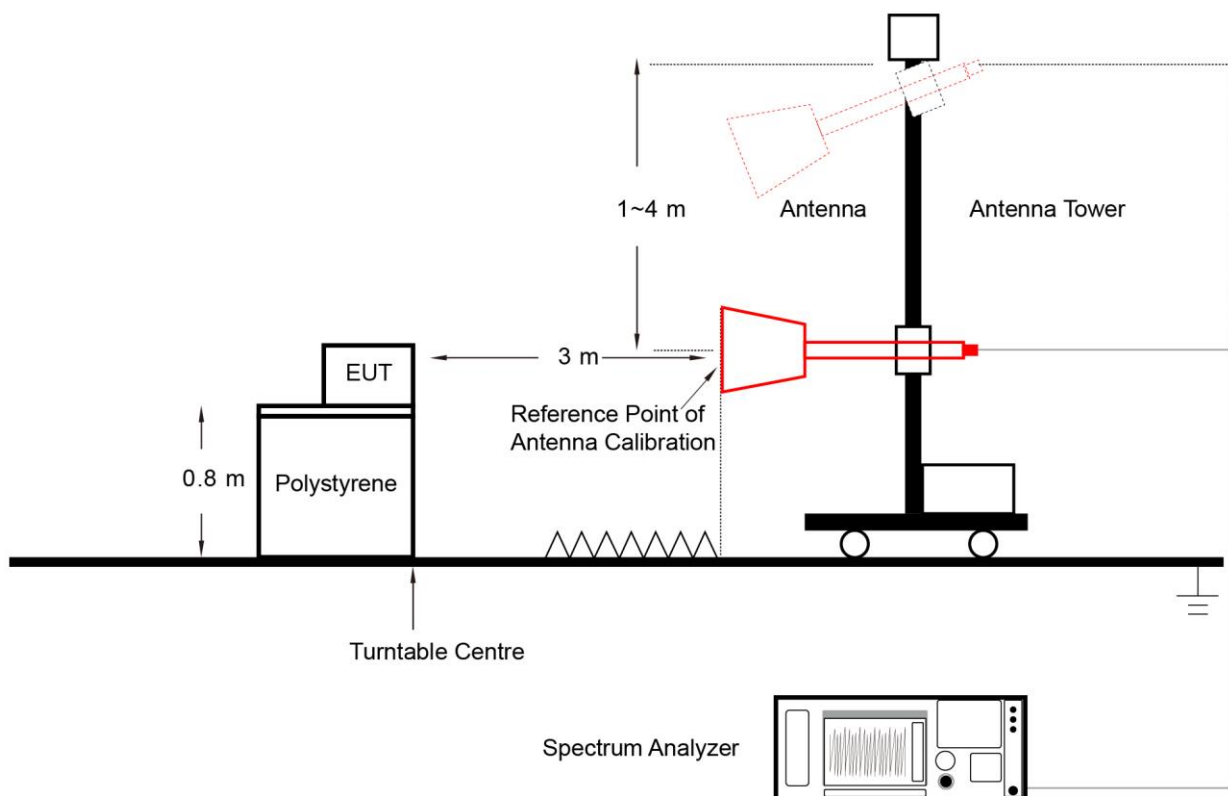
Note 3: E field strength (dBµV/m) = 20 log E field strength (µV/m)

5.3.2. Test Setup

Below 1GHz Test Setup:

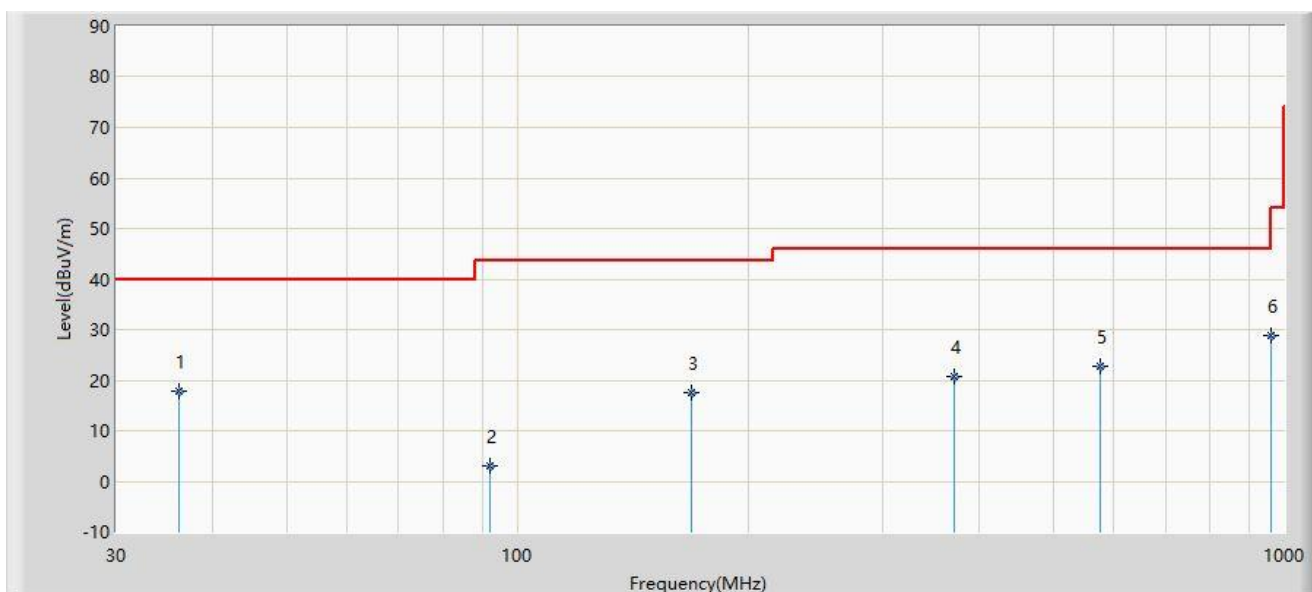


Above 1GHz Test Setup:



5.3.3. Test Result

Site: WZ-AC1	Test Date: 2023/06/25
Temperature: 24.9°C	Humidity: 49.9%
Limit: FCC_Part15.109_RE(3m)_Class B	Engineer: Carl Jiang
Probe: VULB 9168_25-2000MHz	Polarity: Horizontal
EUT: HAN Access Point	Power: AC 120V/60Hz
Test Mode 1	



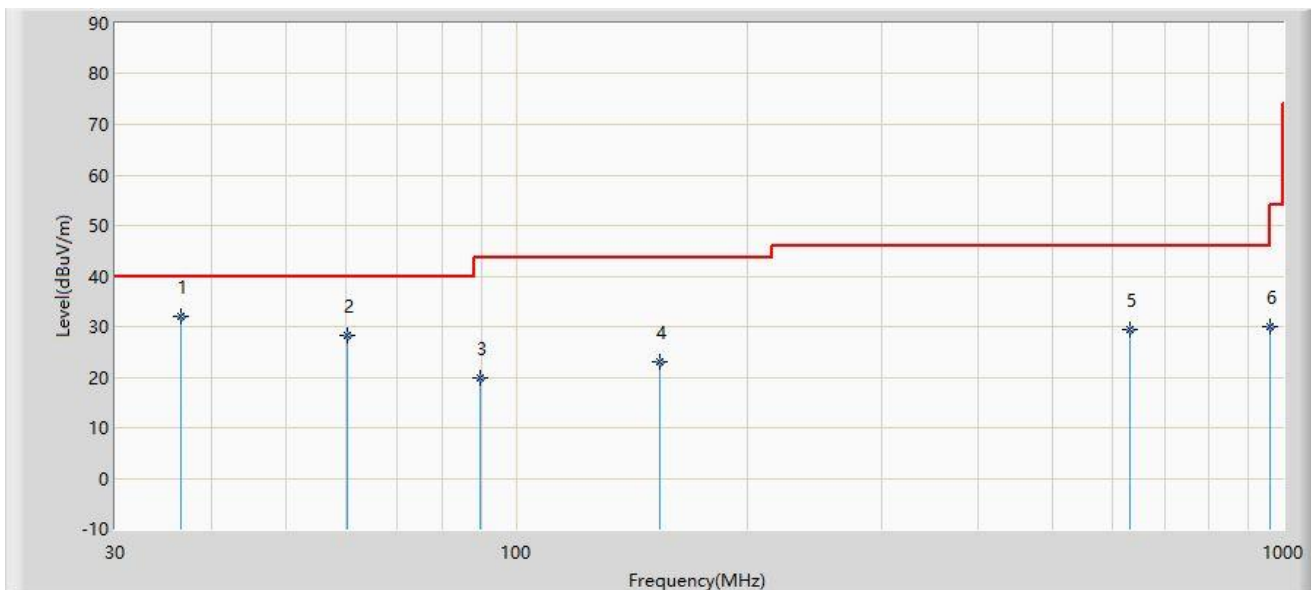
No	Mark	Frequency (MHz)	Measure Level (dBuV/m)	Reading Level (dBuV)	Margin (dB)	Limit (dBuV/m)	Factor (dB/m)	Type
1		36.180	17.965	0.100	-22.035	40.000	17.865	QP
2		92.120	2.925	-9.400	-40.575	43.500	12.325	QP
3		168.810	17.558	-0.300	-25.942	43.500	17.858	QP
4		371.500	20.805	0.600	-25.195	46.000	20.205	QP
5		575.990	22.731	-2.100	-23.269	46.000	24.831	QP
6	*	960.000	28.757	-1.100	-17.243	46.000	29.857	QP

Note 1: " * ", means this data is the worst emission level.

Note 2: Measure Level (dBuV/m) = Reading Level (dBuV) + Factor (dB/m).

Note 3: Factor (dB/m) = Cable Loss (dB) + Antenna Factor (dB/m).

Site: WZ-AC1	Test Date: 2023/06/25
Temperature: 24.9°C	Humidity: 49.9%
Limit: FCC_Part15.109_RE(3m)_Class B	Engineer: Carl Jiang
Probe: VULB 9168_25-2000MHz	Polarity: Vertical
EUT: HAN Access Point	Power: AC 120V/60Hz
Test Mode 1	



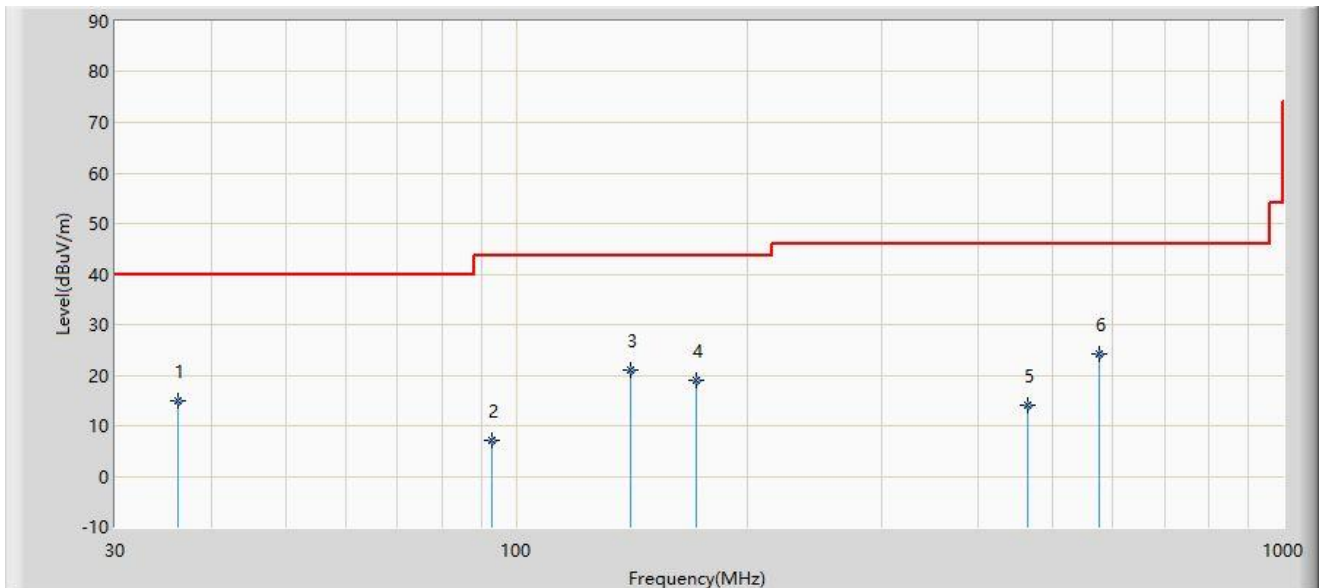
No	Mark	Frequency (MHz)	Measure Level (dBμV/m)	Reading Level (dBμV)	Margin (dB)	Limit (dBμV/m)	Factor (dB/m)	Type
1	*	36.520	32.106	14.200	-7.894	40.000	17.906	QP
2		60.260	28.199	10.800	-11.801	40.000	17.398	QP
3		89.670	19.985	7.700	-23.515	43.500	12.284	QP
4		154.090	23.045	4.900	-20.455	43.500	18.145	QP
5		630.510	29.352	3.300	-16.648	46.000	26.052	QP
6		960.000	30.057	0.200	-15.943	46.000	29.857	QP

Note 1: " * ", means this data is the worst emission level.

Note 2: Measure Level (dBμV/m) = Reading Level (dBμV) + Factor (dB/m).

Note 3: Factor (dB/m) = Cable Loss (dB) + Antenna Factor (dB/m).

Site: WZ-AC1	Test Date: 2023/06/25
Temperature: 24.9°C	Humidity: 49.9%
Limit: FCC_Part15.109_RE(3m)_Class B	Engineer: Carl Jiang
Probe: VULB 9168_25-2000MHz	Polarity: Horizontal
EUT: HAN Access Point	Power: By PoE
Test Mode 2	



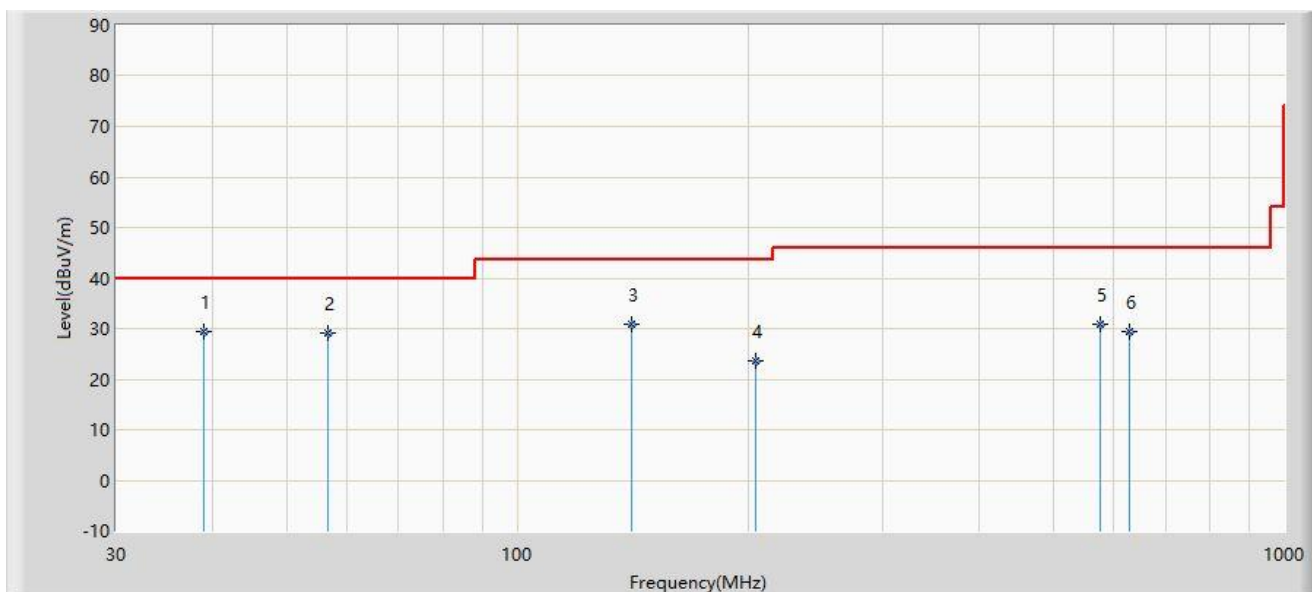
No	Mark	Frequency (MHz)	Measure Level (dBμV/m)	Reading Level (dBμV)	Margin (dB)	Limit (dBμV/m)	Factor (dB/m)	Type
1		36.170	14.964	-2.900	-25.036	40.000	17.863	QP
2		92.800	7.165	-5.200	-36.335	43.500	12.365	QP
3		141.170	20.886	3.300	-22.614	43.500	17.586	QP
4		171.630	18.911	1.300	-24.589	43.500	17.611	QP
5		464.840	13.994	-8.600	-32.006	46.000	22.594	QP
6	*	576.000	24.132	-0.700	-21.868	46.000	24.831	QP

Note 1: " * ", means this data is the worst emission level.

Note 2: Measure Level (dBμV/m) = Reading Level (dBμV) + Factor (dB/m).

Note 3: Factor (dB/m) = Cable Loss (dB) + Antenna Factor (dB/m).

Site: WZ-AC1	Test Date: 2023/06/25
Temperature: 24.9°C	Humidity: 49.9%
Limit: FCC_Part15.109_RE(3m)_Class B	Engineer: Carl Jiang
Probe: VULB 9168_25-2000MHz	Polarity: Vertical
EUT: HAN Access Point	Power: By PoE
Test Mode 2	



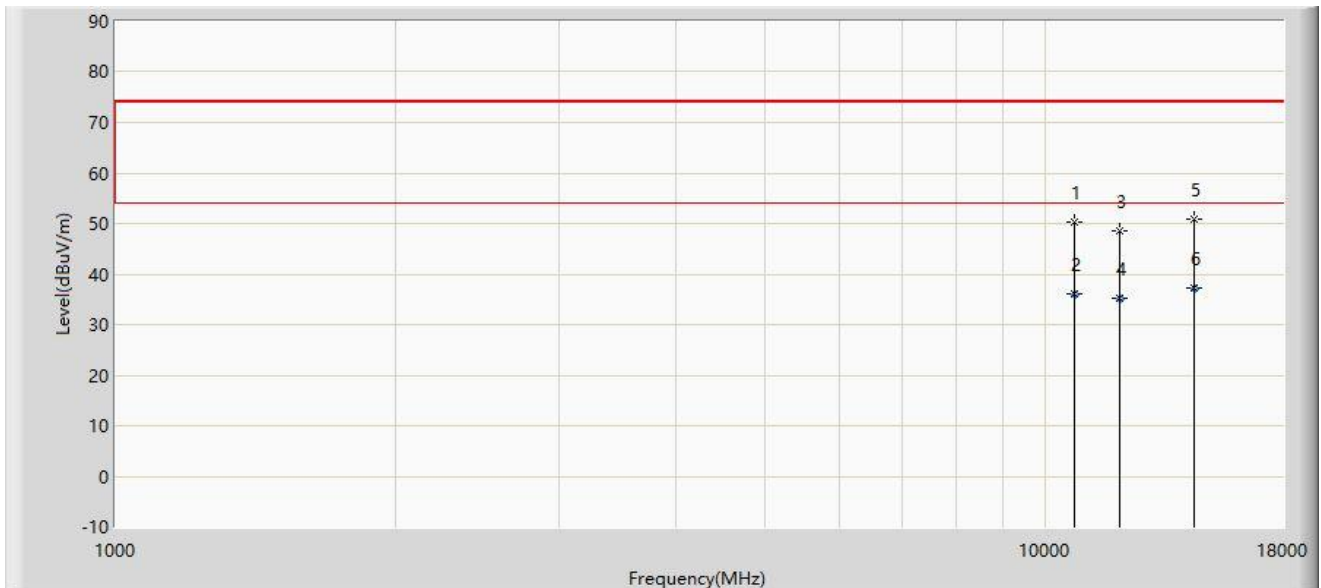
No	Mark	Frequency (MHz)	Measure Level (dBμV/m)	Reading Level (dBμV)	Margin (dB)	Limit (dBμV/m)	Factor (dB/m)	Type
1	*	39.007	29.548	11.400	-10.452	40.000	18.148	QP
2		56.700	29.121	11.400	-10.879	40.000	17.721	QP
3		141.200	30.788	13.200	-12.712	43.500	17.587	QP
4		204.250	23.749	9.100	-19.751	43.500	14.649	QP
5		575.990	30.831	6.000	-15.169	46.000	24.831	QP
6		629.014	29.520	3.500	-16.480	46.000	26.021	QP

Note 1: " * ", means this data is the worst emission level.

Note 2: Measure Level (dBμV/m) = Reading Level (dBμV) + Factor (dB/m).

Note 3: Factor (dB/m) = Cable Loss (dB) + Antenna Factor (dB/m).

Site: WZ-AC1	Test Date: 2023/06/25
Temperature: 24.9°C	Humidity: 49.9%
Limit: FCC_Part15.109_RE(3m)_Class B	Engineer: Carl Jiang
Probe: BBHA9120D_1167_1-18GHz	Polarity: Horizontal
EUT: HAN Access Point	Power: AC 120V/60Hz
Test Mode 1	



No	Mark	Frequency (MHz)	Measure Level (dBμV/m)	Reading Level (dBμV)	Margin (dB)	Limit (dBμV/m)	Factor (dB/m)	Type
1		10724.000	50.254	36.714	-23.746	74.000	13.540	PK
2		10724.000	36.080	22.540	-17.920	54.000	13.540	AV
3		12024.500	48.630	36.349	-25.370	74.000	12.281	PK
4		12024.500	35.311	23.030	-18.689	54.000	12.281	AV
5		14438.500	50.800	35.863	-23.200	74.000	14.937	PK
6	*	14438.500	37.327	22.390	-16.673	54.000	14.937	AV

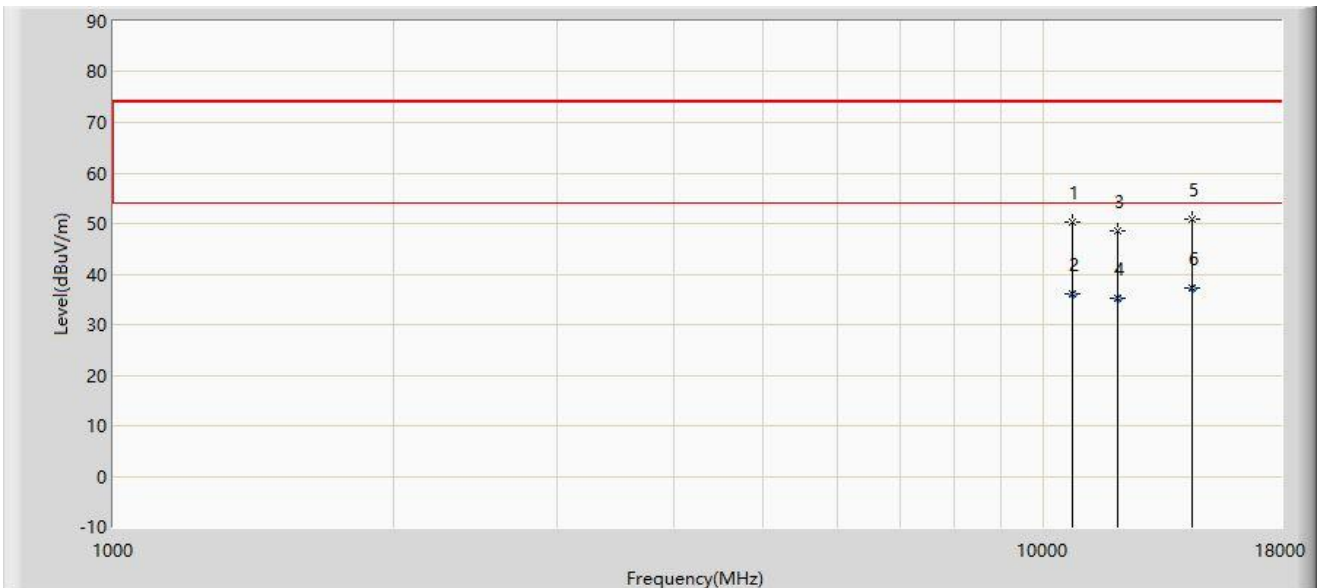
Note 1: " * ", means this data is the worst emission level.

Note 2: Measure Level (dBμV/m) = Reading Level (dBμV) + Factor (dB/m).

Note 3: Factor (dB/m) = Cable Loss (dB) + Antenna Factor (dB/m) - Pre_Amplifier Gain (dB).

Note 4: The amplitude of radiated emissions (frequency range from 18GHz to 40GHz) is that proximity to ambient noise, which also are attenuated more than 20 dB below the permissible value. Therefore, the data is not presented in the report.

Site: WZ-AC1	Test Date: 2023/06/25
Temperature: 24.9°C	Humidity: 49.9%
Limit: FCC_Part15.109_RE(3m)_Class B	Engineer: Carl Jiang
Probe: BBHA9120D_1167_1-18GHz	Polarity: Horizontal
EUT: HAN Access Point	Power: AC 120V/60Hz
Test Mode 1	



No	Mark	Frequency (MHz)	Measure Level (dBμV/m)	Reading Level (dBμV)	Margin (dB)	Limit (dBμV/m)	Factor (dB/m)	Type
1		10724.000	50.254	36.714	-23.746	74.000	13.540	PK
2		10724.000	36.080	22.540	-17.920	54.000	13.540	AV
3		12024.500	48.630	36.349	-25.370	74.000	12.281	PK
4		12024.500	35.311	23.030	-18.689	54.000	12.281	AV
5		14438.500	50.800	35.863	-23.200	74.000	14.937	PK
6	*	14438.500	37.327	22.390	-16.673	54.000	14.937	AV

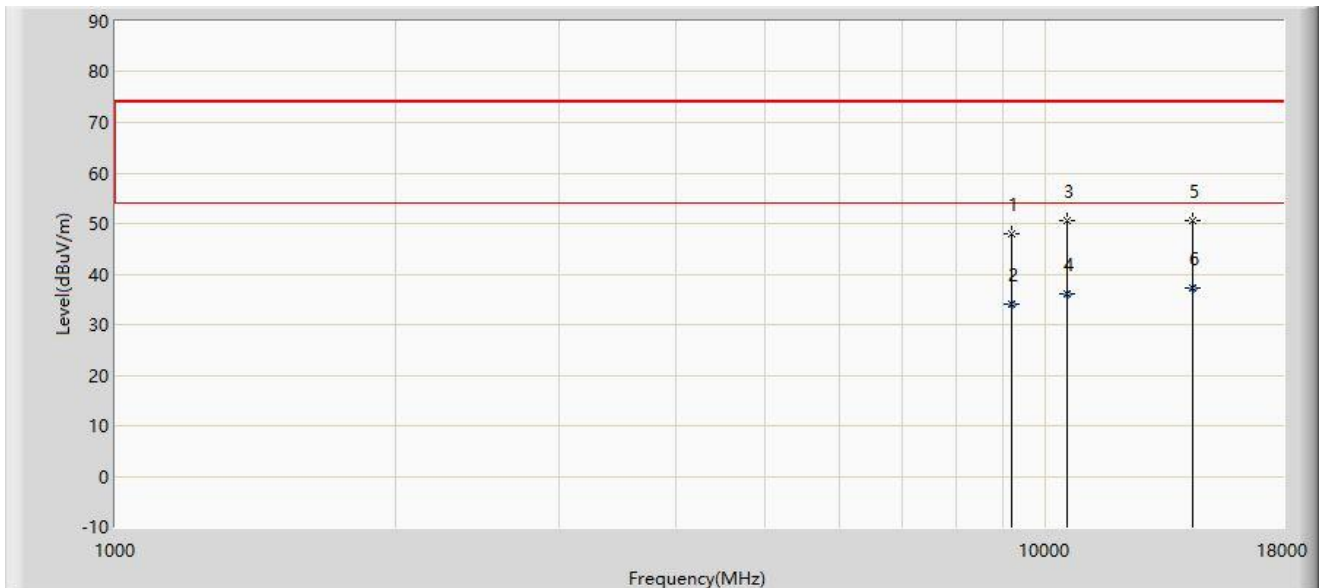
Note 1: " * ", means this data is the worst emission level.

Note 2: Measure Level (dBμV/m) = Reading Level (dBμV) + Factor (dB/m).

Note 3: Factor (dB/m) = Cable Loss (dB) + Antenna Factor (dB/m) - Pre_Amplifier Gain (dB).

Note 4: The amplitude of radiated emissions (frequency range from 18GHz to 40GHz) is that proximity to ambient noise, which also are attenuated more than 20 dB below the permissible value. Therefore, the data is not presented in the report.

Site: WZ-AC1	Test Date: 2023/06/25
Temperature: 24.9°C	Humidity: 49.9%
Limit: FCC_Part15.109_RE(3m)_Class B	Engineer: Carl Jiang
Probe: BBHA9120D_1167_1-18GHz	Polarity: Horizontal
EUT: HAN Access Point	Power: By PoE
Test Mode 2	



No	Mark	Frequency (MHz)	Measure Level (dBμV/m)	Reading Level (dBμV)	Margin (dB)	Limit (dBμV/m)	Factor (dB/m)	Type
1		9202.500	47.950	36.425	-26.050	74.000	11.525	PK
2		9202.500	34.085	22.560	-19.915	54.000	11.525	AV
3		10545.500	50.455	36.663	-23.545	74.000	13.792	PK
4		10545.500	36.062	22.270	-17.938	54.000	13.792	AV
5		14362.000	50.555	35.690	-23.445	74.000	14.865	PK
6	*	14362.000	37.125	22.260	-16.875	54.000	14.865	AV

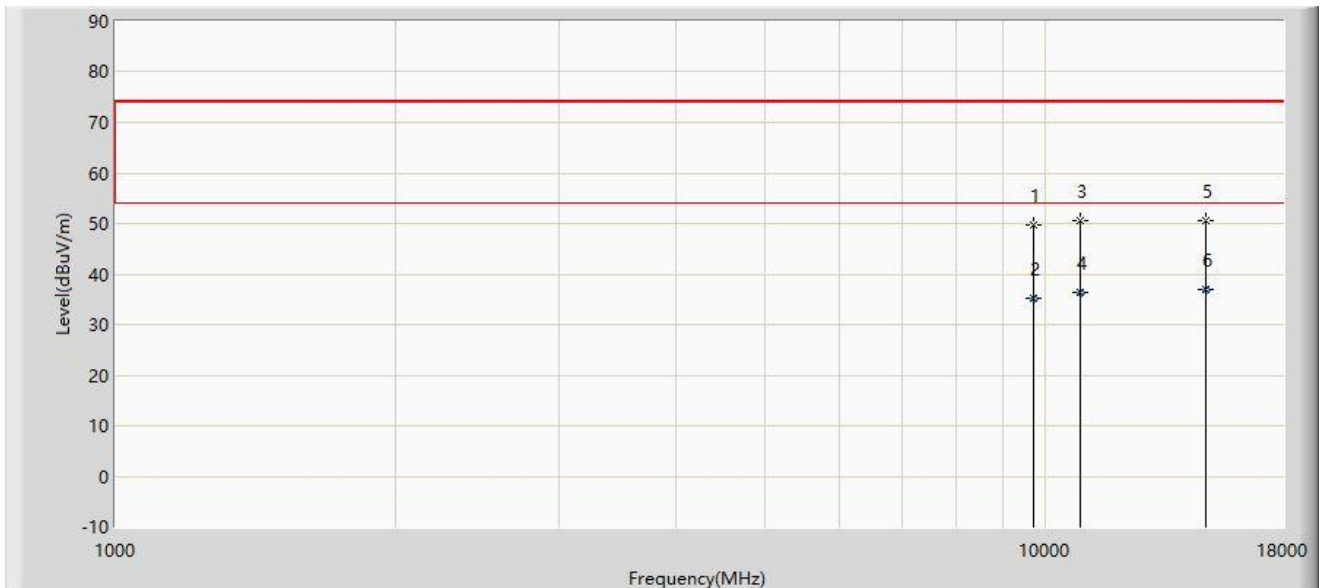
Note 1: " * ", means this data is the worst emission level.

Note 2: Measure Level (dBμV/m) = Reading Level (dBμV) + Factor (dB/m).

Note 3: Factor (dB/m) = Cable Loss (dB) + Antenna Factor (dB/m) - Pre_Amplifier Gain (dB).

Note 4: The amplitude of radiated emissions (frequency range from 18GHz to 40GHz) is that proximity to ambient noise, which also are attenuated more than 20 dB below the permissible value. Therefore, the data is not presented in the report.

Site: WZ-AC1	Test Date: 2023/06/25
Temperature: 24.9°C	Humidity: 49.9%
Limit: FCC_Part15.109_RE(3m)_Class B	Engineer: Carl Jiang
Probe: BBHA9120D_1167_1-18GHz	Polarity: Vertical
EUT: HAN Access Point	Power: By PoE
Test Mode 2	



No	Mark	Frequency (MHz)	Measure Level (dBμV/m)	Reading Level (dBμV)	Margin (dB)	Limit (dBμV/m)	Factor (dB/m)	Type
1		9695.500	49.681	36.859	-24.319	74.000	12.822	PK
2		9695.500	35.302	22.480	-18.698	54.000	12.822	AV
3		10902.500	50.454	36.824	-23.546	74.000	13.630	PK
4		10902.500	36.280	22.650	-17.720	54.000	13.630	AV
5		14863.500	50.548	35.677	-23.452	74.000	14.871	PK
6	*	14863.500	36.901	22.030	-17.099	54.000	14.871	AV

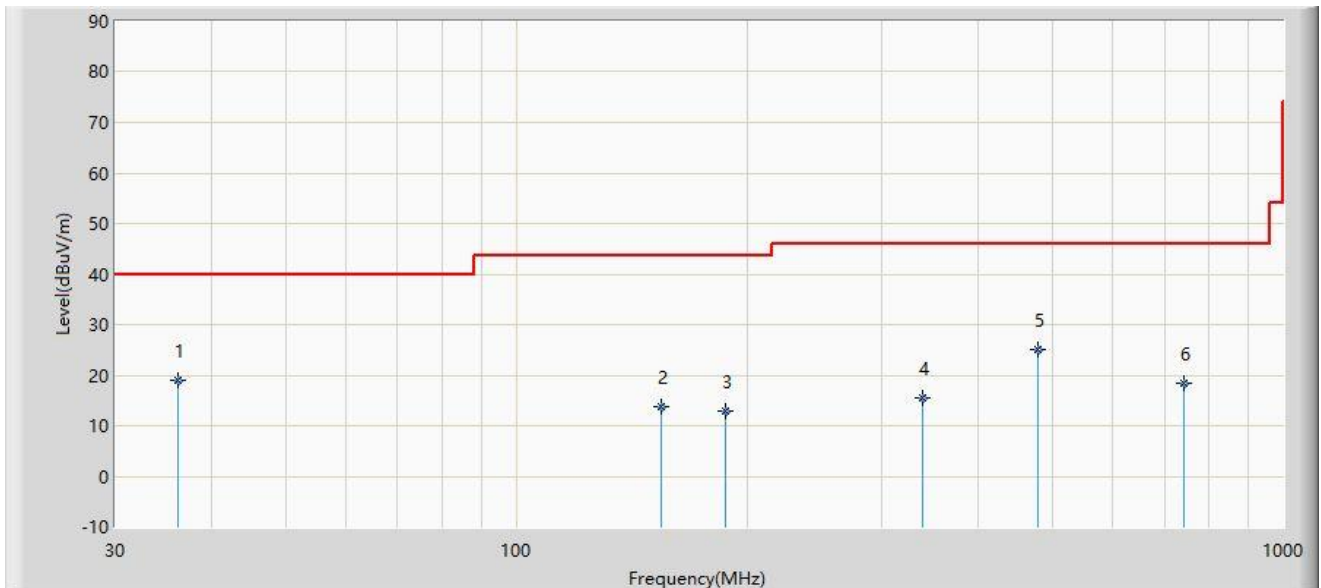
Note 1: " * ", means this data is the worst emission level.

Note 2: Measure Level (dBμV/m) = Reading Level (dBμV) + Factor (dB/m).

Note 3: Factor (dB/m) = Cable Loss (dB) + Antenna Factor (dB/m) - Pre_Amplifier Gain (dB).

Note 4: The amplitude of radiated emissions (frequency range from 18GHz to 40GHz) is that proximity to ambient noise, which also are attenuated more than 20 dB below the permissible value. Therefore, the data is not presented in the report.

Site: WZ-AC1	Test Date: 2023/06/25
Temperature: 25°C	Humidity: 52.5%
Limit: FCC_Part15.109_RE(3m)_Class B	Engineer: Carl Jiang
Probe: VULB 9168_25-2000MHz	Polarity: Horizontal
EUT: HAN Access Point	Power: AC 120V/60Hz
Test Mode 3	



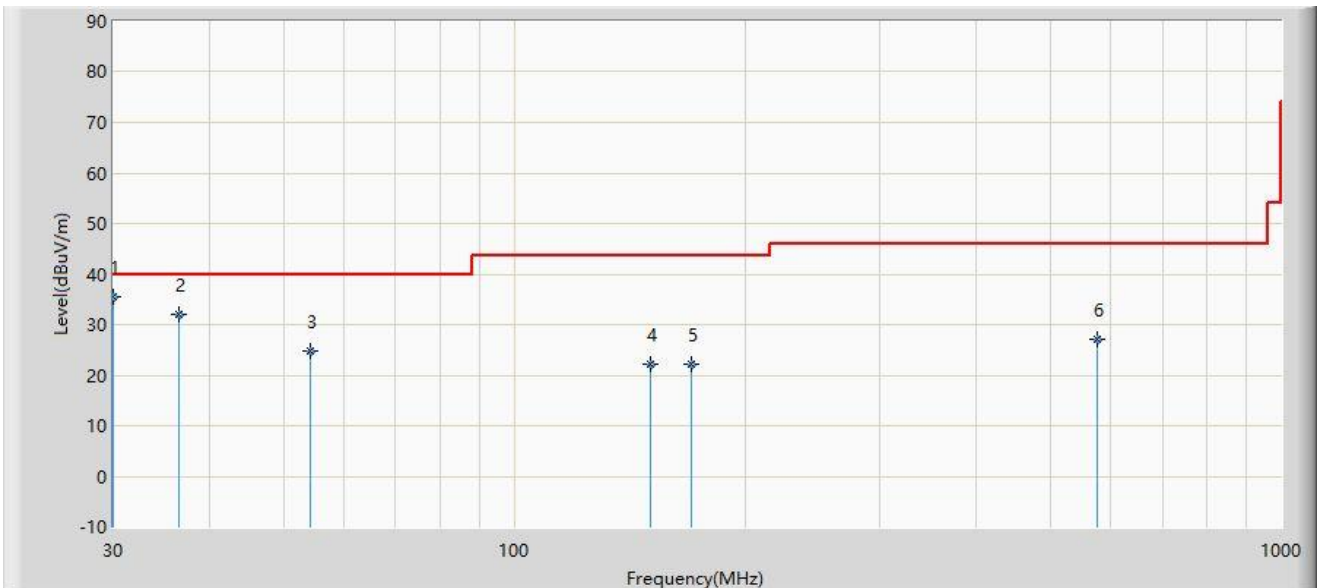
No	Mark	Frequency (MHz)	Measure Level (dBμV/m)	Reading Level (dBμV)	Margin (dB)	Limit (dBμV/m)	Factor (dB/m)	Type
1		36.250	18.973	1.100	-21.027	40.000	17.873	QP
2		154.460	13.647	-4.500	-29.853	43.500	18.148	QP
3		187.270	12.835	-2.900	-30.665	43.500	15.735	QP
4		339.050	15.554	-4.000	-30.446	46.000	19.555	QP
5	*	479.040	25.039	2.200	-20.961	46.000	22.839	QP
6		743.680	18.433	-9.500	-27.567	46.000	27.933	QP

Note 1: " * ", means this data is the worst emission level.

Note 2: Measure Level (dBμV/m) = Reading Level (dBμV) + Factor (dB/m).

Note 3: Factor (dB/m) = Cable Loss (dB) + Antenna Factor (dB/m).

Site: WZ-AC1	Test Date: 2023/06/25
Temperature: 25°C	Humidity: 52.5%
Limit: FCC_Part15.109_RE(3m)_Class B	Engineer: Carl Jiang
Probe: VULB 9168_25-2000MHz	Polarity: Vertical
EUT: HAN Access Point	Power: AC 120V/60Hz
Test Mode 3	



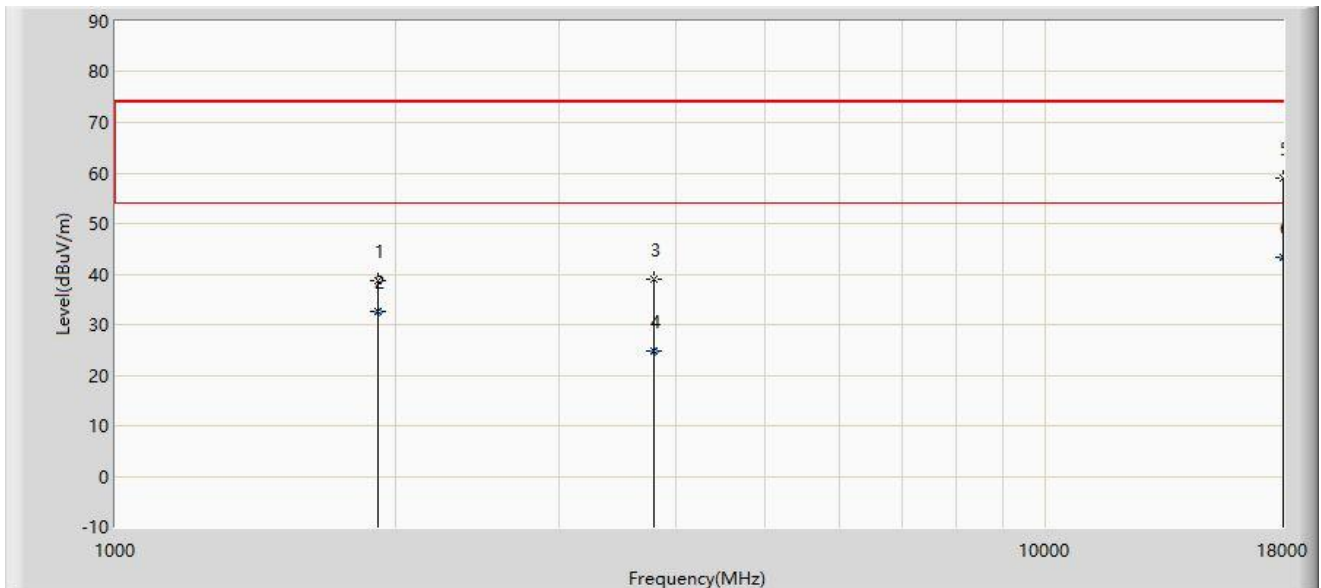
No	Mark	Frequency (MHz)	Measure Level (dBμV/m)	Reading Level (dBμV)	Margin (dB)	Limit (dBμV/m)	Factor (dB/m)	Type
1	*	30.000	35.499	18.200	-4.501	40.000	17.299	QP
2		36.550	31.909	14.000	-8.091	40.000	17.910	QP
3		54.220	24.807	6.900	-15.193	40.000	17.906	QP
4		150.240	22.312	4.300	-21.188	43.500	18.012	QP
5		170.014	22.258	4.500	-21.242	43.500	17.759	QP
6		575.980	27.131	2.300	-18.869	46.000	24.831	QP

Note 1: " * ", means this data is the worst emission level.

Note 2: Measure Level (dBμV/m) = Reading Level (dBμV) + Factor (dB/m).

Note 3: Factor (dB/m) = Cable Loss (dB) + Antenna Factor (dB/m).

Site: WZ-AC1	Test Date: 2023/06/25
Temperature: 25°C	Humidity: 52.5%
Limit: FCC_Part15.109_RE(3m)_Class B	Engineer: Carl Jiang
Probe: BBHA9120D_1167_1-18GHz	Polarity: Horizontal
EUT: HAN Access Point	Power: AC 120V/60Hz
Test Mode 3	



No	Mark	Frequency (MHz)	Measure Level (dBμV/m)	Reading Level (dBμV)	Margin (dB)	Limit (dBμV/m)	Factor (dB/m)	Type
1		1918.000	38.624	44.163	-35.376	74.000	-5.539	PK
2		1918.000	32.481	38.020	-21.519	54.000	-5.539	AV
3		3788.000	38.872	38.374	-35.128	74.000	0.498	PK
4		3788.000	24.848	24.350	-29.152	54.000	0.498	AV
5		17991.500	59.011	36.176	-14.989	74.000	22.835	PK
6	*	17991.500	43.195	20.360	-10.805	54.000	22.835	AV

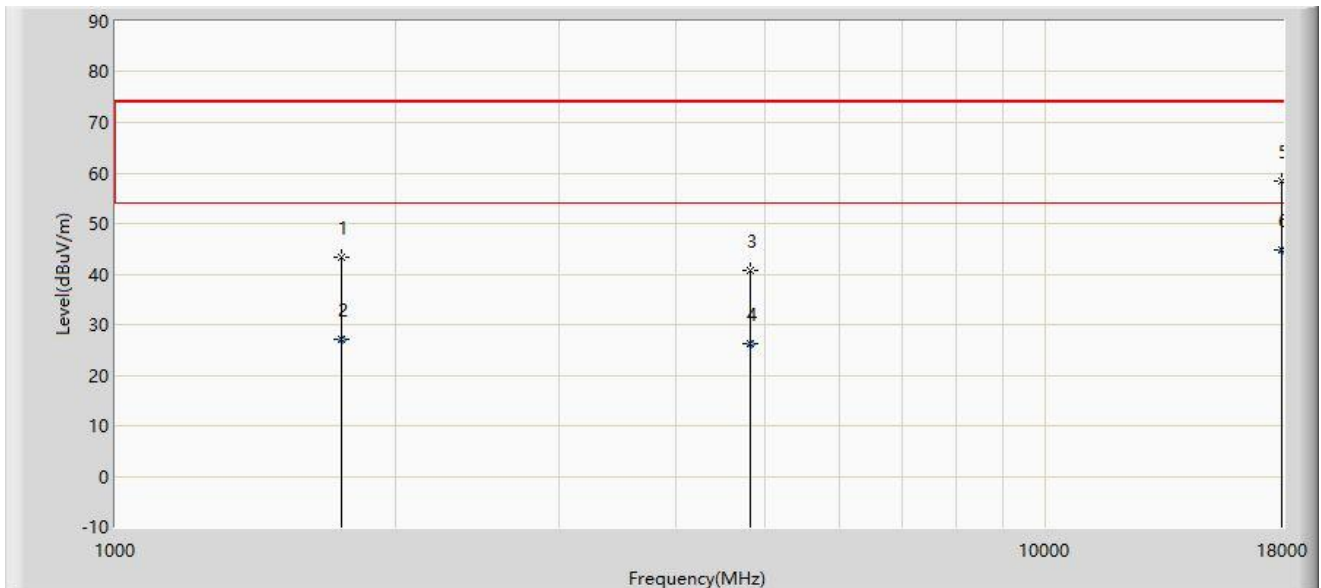
Note 1: " * ", means this data is the worst emission level.

Note 2: Measure Level (dBμV/m) = Reading Level (dBμV) + Factor (dB/m).

Note 3: Factor (dB/m) = Cable Loss (dB) + Antenna Factor (dB/m) - Pre_Amplifier Gain (dB).

Note 4: The amplitude of radiated emissions (frequency range from 18GHz to 40GHz) is that proximity to ambient noise, which also are attenuated more than 20 dB below the permissible value. Therefore, the data is not presented in the report.

Site: WZ-AC1	Test Date: 2023/06/25
Temperature: 25°C	Humidity: 52.5%
Limit: FCC_Part15.109_RE(3m)_Class B	Engineer: Carl Jiang
Probe: BBHA9120D_1167_1-18GHz	Polarity: Vertical
EUT: HAN Access Point	Power: AC 120V/60Hz
Test Mode 3	



No	Mark	Frequency (MHz)	Measure Level (dBμV/m)	Reading Level (dBμV)	Margin (dB)	Limit (dBμV/m)	Factor (dB/m)	Type
1		1748.000	43.229	49.312	-30.771	74.000	-6.083	PK
2		1748.000	27.027	33.110	-26.973	54.000	-6.083	AV
3		4816.500	40.856	37.874	-33.144	74.000	2.983	PK
4		4816.500	26.132	23.150	-27.868	54.000	2.983	AV
5		17949.000	58.278	36.041	-15.722	74.000	22.237	PK
6	*	17949.000	44.837	22.600	-9.163	54.000	22.237	AV

Note 1: " * ", means this data is the worst emission level.

Note 2: Measure Level (dBμV/m) = Reading Level (dBμV) + Factor (dB/m).

Note 3: Factor (dB/m) = Cable Loss (dB) + Antenna Factor (dB/m) - Pre_Amplifier Gain (dB).

Note 4: The amplitude of radiated emissions (frequency range from 18GHz to 40GHz) is that proximity to ambient noise, which also are attenuated more than 20 dB below the permissible value. Therefore, the data is not presented in the report.

Appendix A - Test Setup Photograph

Refer to “2303RSU029-UT” file.

Appendix B - EUT Photograph

Refer to '2303RSU029-UE' file.