

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.: AP431

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: 2023-05-25 ~ 2023-06-13

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.

The test report shall not be reproduced except in full without the written approval of MRT Technology (Suzhou) Co., Ltd.

Revision History

Report No.	Version	Description	Issue Date	Note
2303RSU029-U7	V01	Initial Report	2023-09-01	Valid

Note: This report is a copy report based on MRT original report (Report No. 2303RSU028-U7). 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.	AP431
EUT Identification No.	20230530Sample#08
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: POE60U-1BT-X Input: 100-240V ~ 1.5A, 50/60Hz Output: 56.0V, 0.535A, 30W PIN 3, 6+ PIN 1, 2 Return Output: 56.0V, 0.535A, 30W PIN 4, 5+ PIN 7, 8 Return
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: AP431 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.

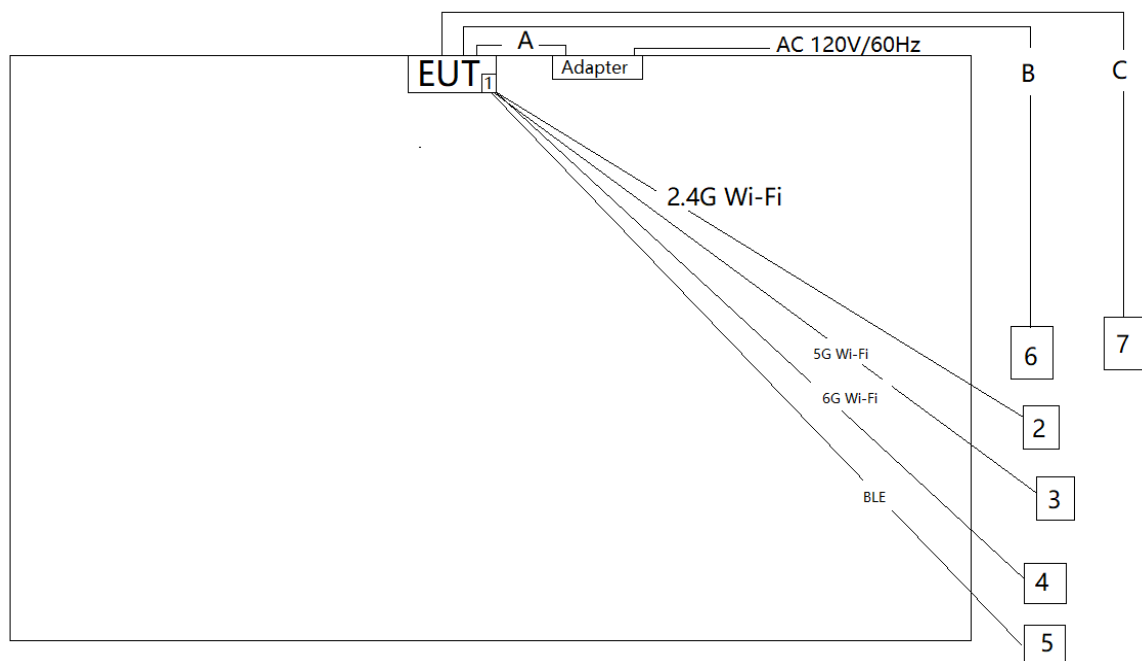
Mode 2: AP431 powered by PoE (Eth1 Port) + Eth0 port connect to notebook via LAN cable + Connect to mobile phone via 2.4G/5G/6G Wi-Fi + Connect to mobile phone via BLE + Plug USB flash and make it reading/writing.

Mode 3: AP431 powered by adapter + Make it in 2.4G/5G/6G Wi-Fi and BLE receiving mode.

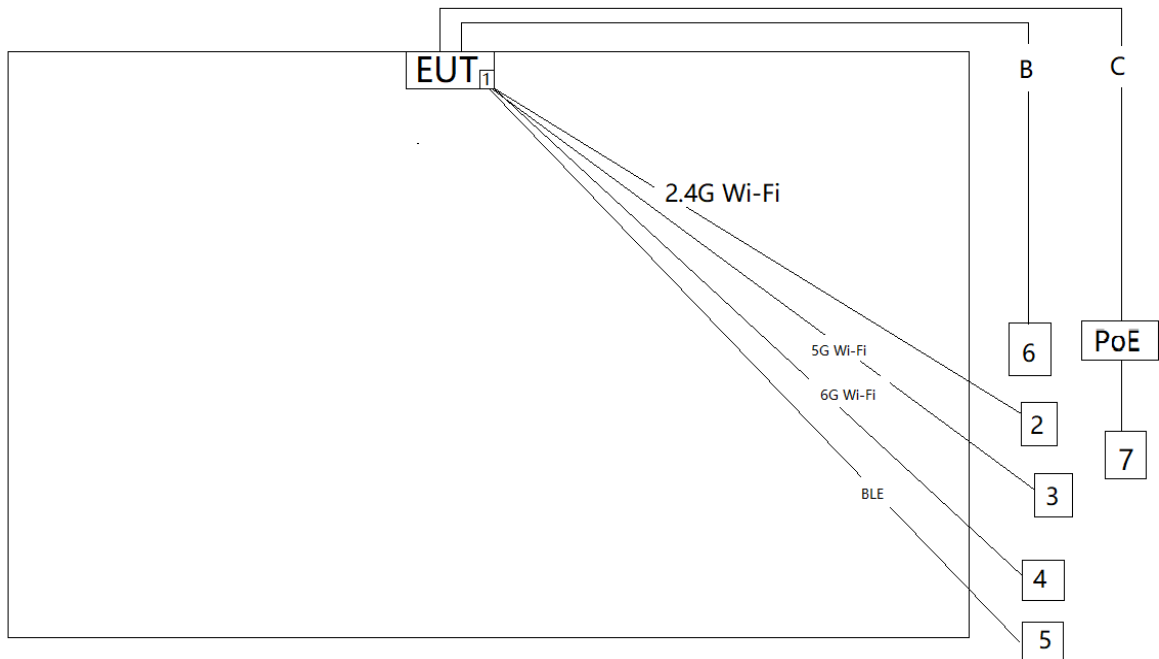
2.2. Configuration of Tested System

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

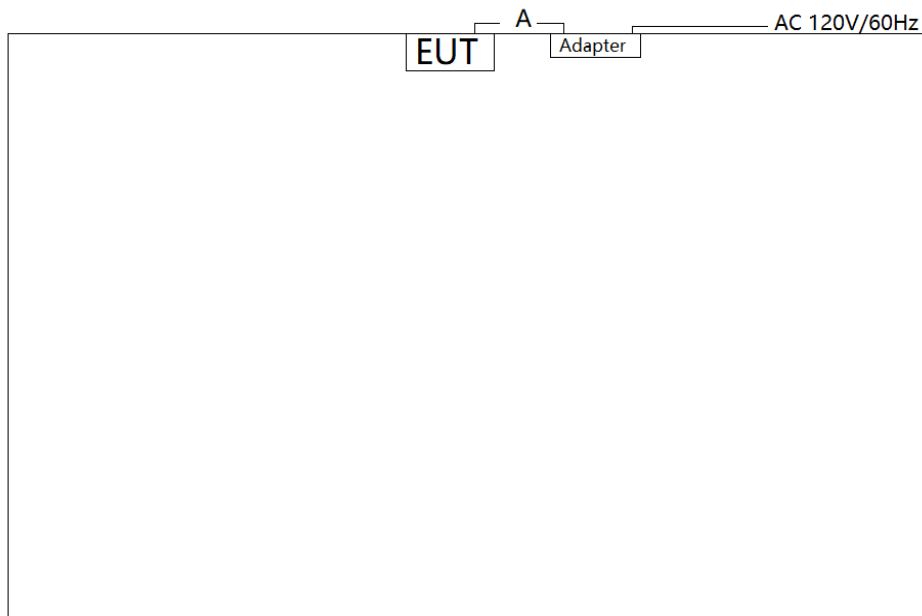
Mode 1



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

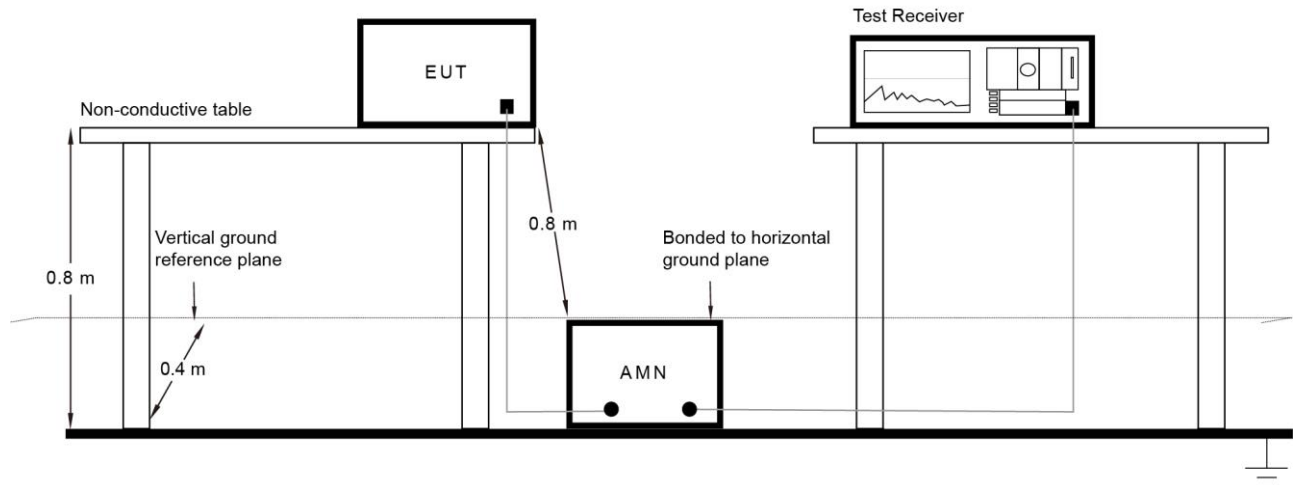
FCC Part Section(s)	Test Description	Verdict
15.107	Conducted Emission	Pass
15.109	Radiated Emission	Pass

5.2. Conducted Emission

5.2.1. Test Limit

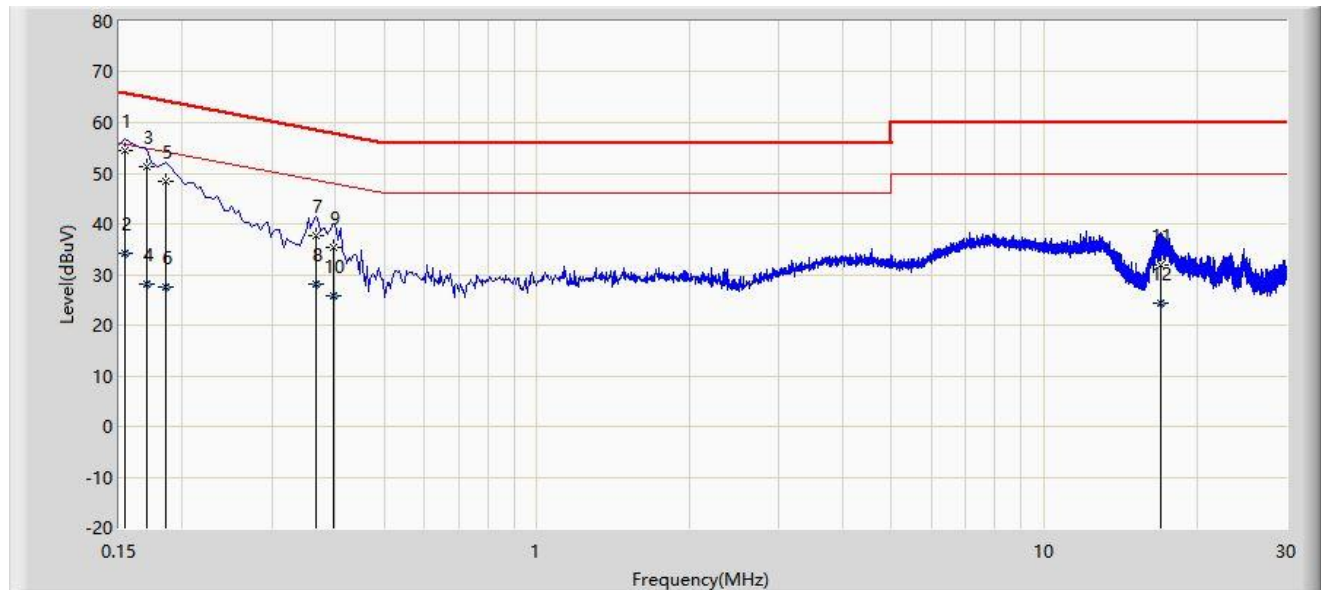
FCC Part 15.107 Conducted Emission Limits				
Frequency Range (MHz)	Class A Limits		Class B Limits	
	QP dB(μ V)	AV dB(μ V)	QP dB(μ V)	AV dB(μ V)
0.15 ~ 0.5	79	66	66 to 56	56 to 46
0.5 ~ 5	73	60	56	46
5 ~ 30	73	60	60	50

5.2.2. Test Setup



5.2.3. Test Result

Site: WZ-SR2	Test Date: 2023/05/25
Temperature: 23.5°C	Humidity: 42.3%
Limit: FCC_Part15.107_CE_AC Power_Class B	Engineer: Alin Zhou
Probe: ENV216_101683_Filter Off_C	Polarity: Line
EUT: HAN Access Point	Power: AC 120V/60Hz
Test Mode 1	



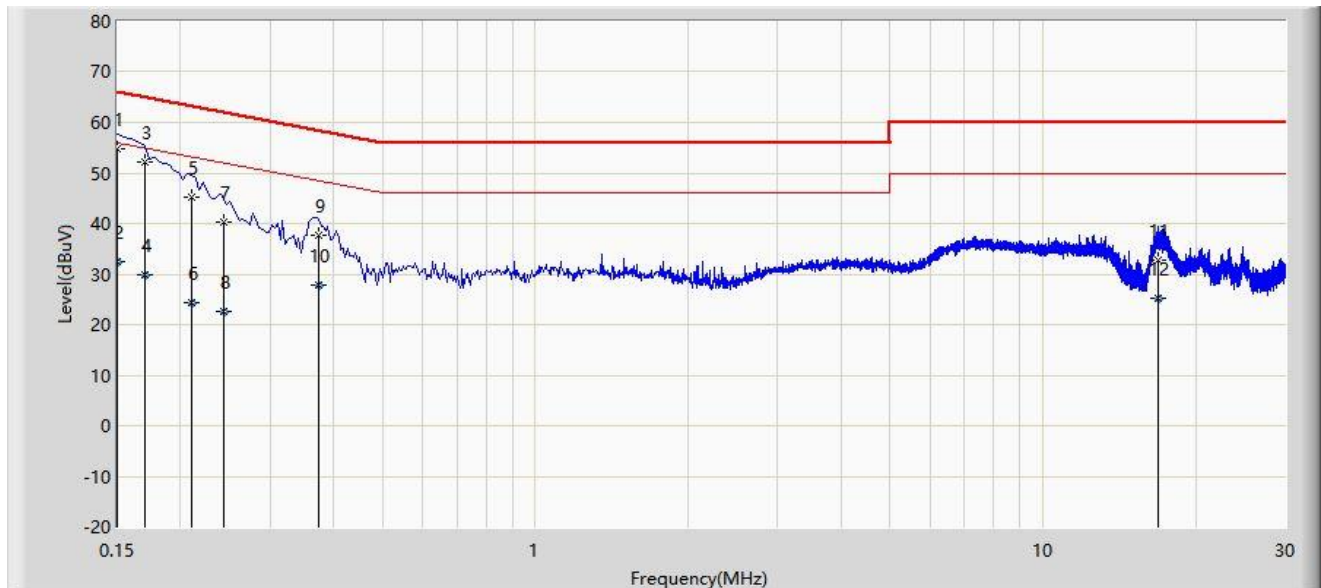
No	Mark	Frequency (MHz)	Measure Level (dBμV)	Reading Level (dBμV)	Margin (dB)	Limit (dBμV)	Factor (dB)	Type
1	*	0.154	54.363	44.808	-11.418	65.781	9.554	QP
2		0.154	34.143	24.589	-21.638	55.781	9.554	AV
3		0.170	51.200	41.642	-13.760	64.960	9.559	QP
4		0.170	28.115	18.557	-26.845	54.960	9.559	AV
5		0.186	48.467	38.904	-15.746	64.213	9.562	QP
6		0.186	27.659	18.097	-26.554	54.213	9.562	AV
7		0.366	37.603	27.960	-20.988	58.591	9.643	QP
8		0.366	28.000	18.357	-20.591	48.591	9.643	AV
9		0.398	35.394	25.733	-22.501	57.895	9.662	QP
10		0.398	25.702	16.040	-22.193	47.895	9.662	AV
11		16.986	31.848	21.315	-28.152	60.000	10.533	QP
12		16.986	24.277	13.744	-25.723	50.000	10.533	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: 2023/05/25
Temperature: 23.5°C	Humidity: 42.3%
Limit: FCC_Part15.107_CE_AC Power_Class B	Engineer: Alin Zhou
Probe: ENV216_101683_Filter Off_C	Polarity: Neutral
EUT: HAN Access Point	Power: AC 120V/60Hz
Test Mode 1	



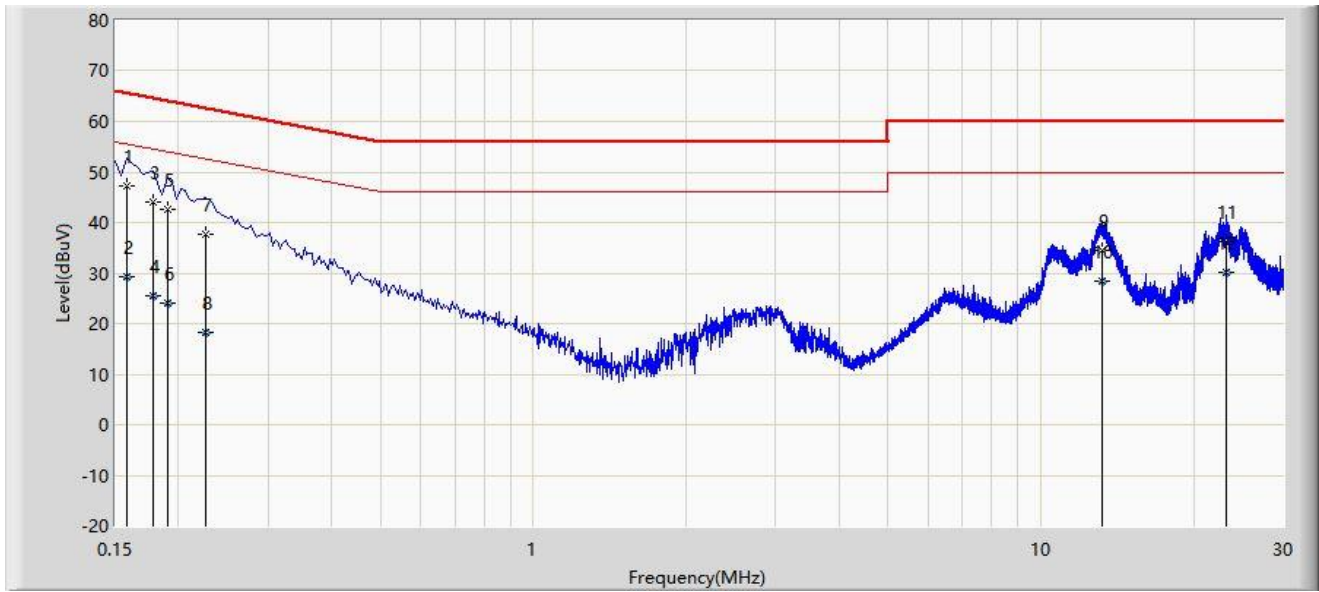
No	Mark	Frequency (MHz)	Measure Level (dBμV)	Reading Level (dBμV)	Margin (dB)	Limit (dBμV)	Factor (dB)	Type
1	*	0.150	54.702	45.116	-11.298	66.000	9.585	QP
2		0.150	32.461	22.875	-23.539	56.000	9.585	AV
3		0.170	52.073	42.480	-12.887	64.960	9.593	QP
4		0.170	29.779	20.186	-25.181	54.960	9.593	AV
5		0.210	45.347	35.737	-17.858	63.205	9.611	QP
6		0.210	24.322	14.712	-28.883	53.205	9.611	AV
7		0.243	40.308	30.685	-21.685	61.993	9.623	QP
8		0.243	22.590	12.967	-29.403	51.993	9.623	AV
9		0.374	37.616	27.929	-20.796	58.412	9.687	QP
10		0.374	27.710	18.023	-20.702	48.412	9.687	AV
11		16.810	32.753	22.238	-27.247	60.000	10.515	QP
12		16.810	25.289	14.773	-24.711	50.000	10.515	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: 2023/05/25
Temperature: 23.5°C	Humidity: 42.3%
Limit: FCC_Part15.107_CE_AC Power_Class B	Engineer: Alin Zhou
Probe: ENV216_101683_Filter Off_C	Polarity: Line
EUT: HAN Access Point	Power: AC 120V/60Hz
Test Mode 2	



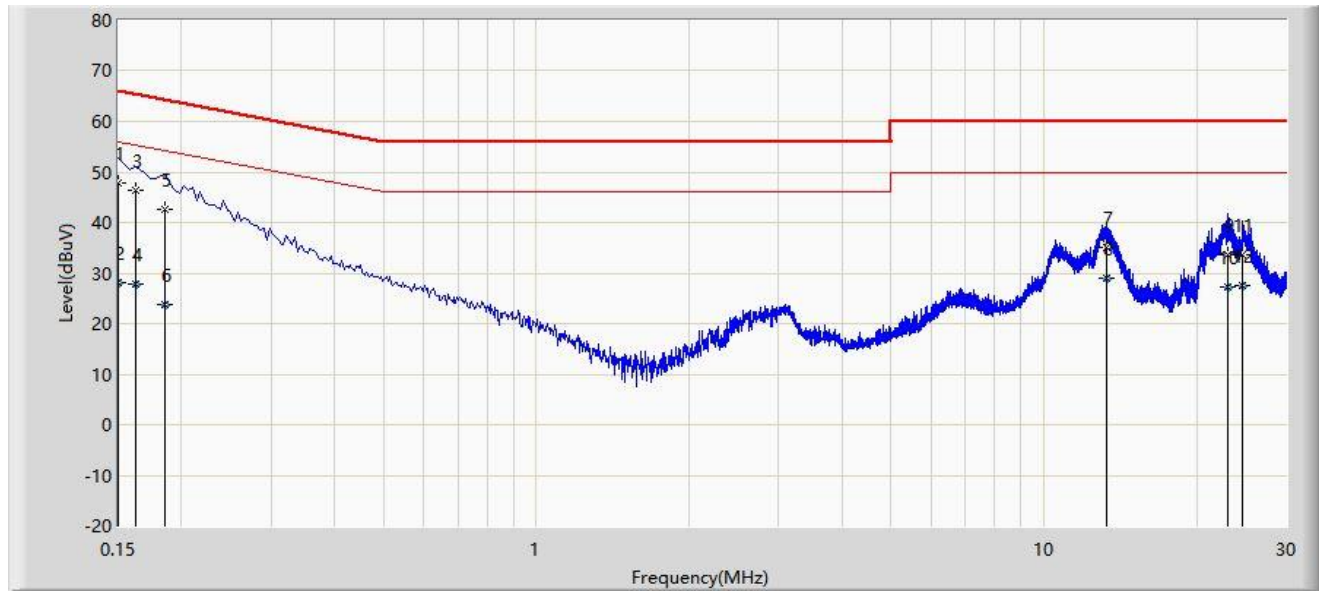
No	Mark	Frequency (MHz)	Measure Level (dBμV)	Reading Level (dBμV)	Margin (dB)	Limit (dBμV)	Factor (dB)	Type
1	*	0.158	47.211	37.656	-18.357	65.568	9.556	QP
2		0.158	29.298	19.743	-26.270	55.568	9.556	AV
3		0.178	44.045	34.484	-20.533	64.578	9.560	QP
4		0.178	25.370	15.810	-29.208	54.578	9.560	AV
5		0.190	42.575	33.012	-21.462	64.037	9.563	QP
6		0.190	23.921	14.357	-30.116	54.037	9.563	AV
7		0.226	37.658	28.081	-24.937	62.595	9.577	QP
8		0.226	18.298	8.721	-34.297	52.595	9.577	AV
9		13.206	34.362	23.993	-25.638	60.000	10.369	QP
10		13.206	28.357	17.988	-21.643	50.000	10.369	AV
11		23.242	36.301	25.428	-23.699	60.000	10.874	QP
12		23.242	30.128	19.254	-19.872	50.000	10.874	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: 2023/05/25
Temperature: 23.5°C	Humidity: 42.3%
Limit: FCC_Part15.107_CE_AC Power_Class B	Engineer: Alin Zhou
Probe: ENV216_101683_Filter Off_C	Polarity: Neutral
EUT: HAN Access Point	Power: AC 120V/60Hz
Test Mode 2	



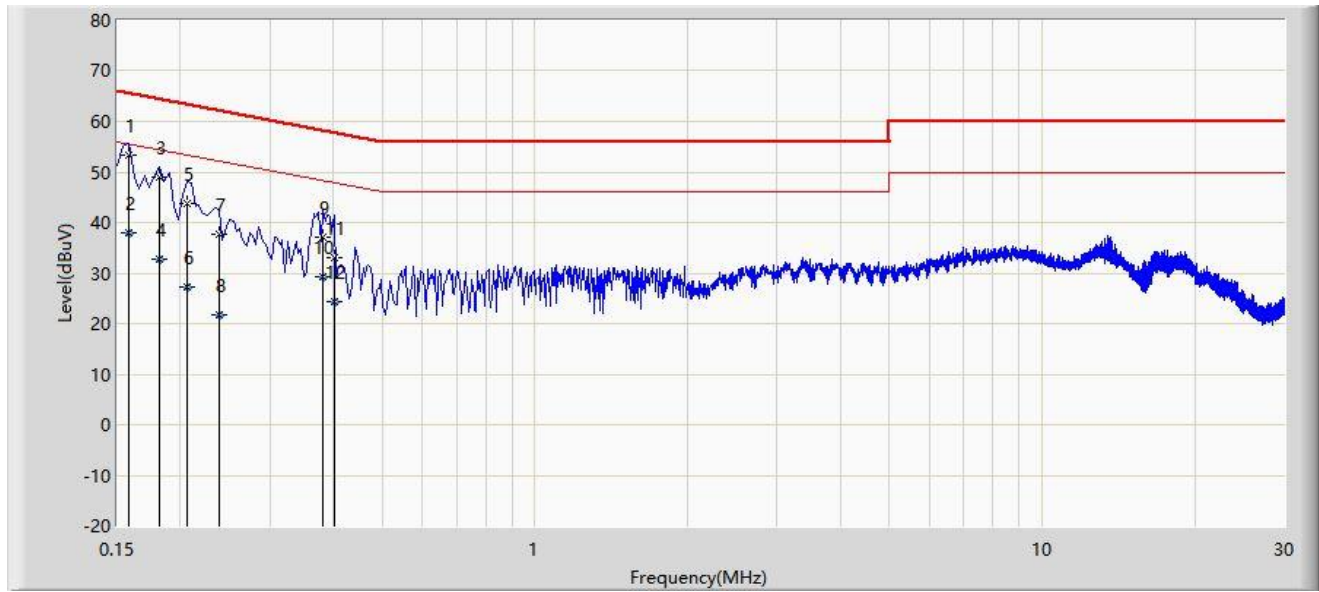
No	Mark	Frequency (MHz)	Measure Level (dBμV)	Reading Level (dBμV)	Margin (dB)	Limit (dBμV)	Factor (dB)	Type
1	*	0.150	47.905	38.319	-18.095	66.000	9.585	QP
2		0.150	28.180	18.595	-27.820	56.000	9.585	AV
3		0.162	46.344	36.754	-19.017	65.361	9.590	QP
4		0.162	27.697	18.108	-27.664	55.361	9.590	AV
5		0.186	42.641	33.041	-21.572	64.213	9.599	QP
6		0.186	23.634	14.034	-30.579	54.213	9.599	AV
7		13.290	34.959	24.573	-25.041	60.000	10.386	QP
8		13.290	28.970	18.584	-21.030	50.000	10.386	AV
9		23.006	33.560	22.660	-26.440	60.000	10.900	QP
10		23.006	27.353	16.453	-22.647	50.000	10.900	AV
11		24.602	33.557	22.561	-26.443	60.000	10.996	QP
12		24.602	27.488	16.492	-22.512	50.000	10.996	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: 2023/06/13
Temperature: 23.5°C	Humidity: 53.3%
Limit: FCC_Part15.107_CE_AC Power_Class B	Engineer: Alin Zhou
Probe: ENV216_101683_Filter Off_C	Polarity: Line
EUT: HAN Access Point	Power: AC 120V/60Hz
Test Mode 3	



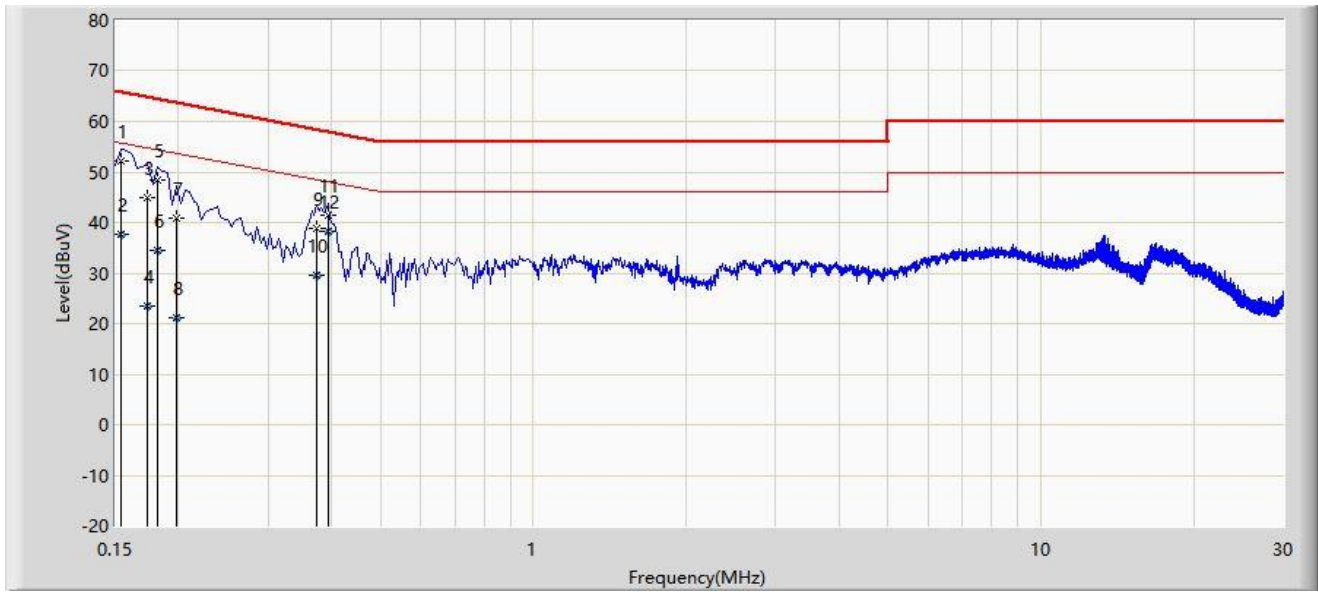
No	Mark	Frequency (MHz)	Measure Level (dBμV)	Reading Level (dBμV)	Margin (dB)	Limit (dBμV)	Factor (dB)	Type
1	*	0.158	53.421	43.865	-12.147	65.568	9.556	QP
2		0.158	37.864	28.308	-17.704	55.568	9.556	AV
3		0.182	49.018	39.457	-15.376	64.394	9.561	QP
4		0.182	32.868	23.307	-21.526	54.394	9.561	AV
5		0.206	43.805	34.236	-19.560	63.365	9.570	QP
6		0.206	27.317	17.748	-26.048	53.365	9.570	AV
7		0.238	37.781	28.200	-24.385	62.166	9.581	QP
8		0.238	21.843	12.262	-30.322	52.166	9.581	AV
9		0.382	37.209	27.558	-21.026	58.236	9.652	QP
10		0.382	29.284	19.632	-18.952	48.236	9.652	AV
11		0.402	33.074	23.410	-24.738	57.812	9.663	QP
12		0.402	24.224	14.560	-23.588	47.812	9.663	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: 2023/06/13
Temperature: 23.5°C	Humidity: 53.3%
Limit: FCC_Part15.107_CE_AC Power_Class B	Engineer: Alin Zhou
Probe: ENV216_101683_Filter Off_C	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		0.154	52.086	42.499	-13.696	65.781	9.587	QP
2		0.154	37.693	28.106	-18.088	55.781	9.587	AV
3		0.174	44.796	35.201	-19.971	64.767	9.595	QP
4		0.174	23.515	13.921	-31.252	54.767	9.595	AV
5		0.182	48.327	38.729	-16.067	64.394	9.598	QP
6		0.182	34.586	24.988	-19.808	54.394	9.598	AV
7		0.198	41.002	31.397	-22.693	63.694	9.605	QP
8		0.198	21.023	11.418	-32.671	53.694	9.605	AV
9		0.374	38.921	29.234	-19.490	58.412	9.687	QP
10		0.374	29.471	19.784	-18.940	48.412	9.687	AV
11		0.394	41.343	31.644	-16.636	57.979	9.699	QP
12	*	0.394	38.324	28.625	-9.654	47.979	9.699	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 (dB μ V/m)
30 - 88	3	40
88 - 216	3	43.5
216 - 960	3	46
Above 960	3	54

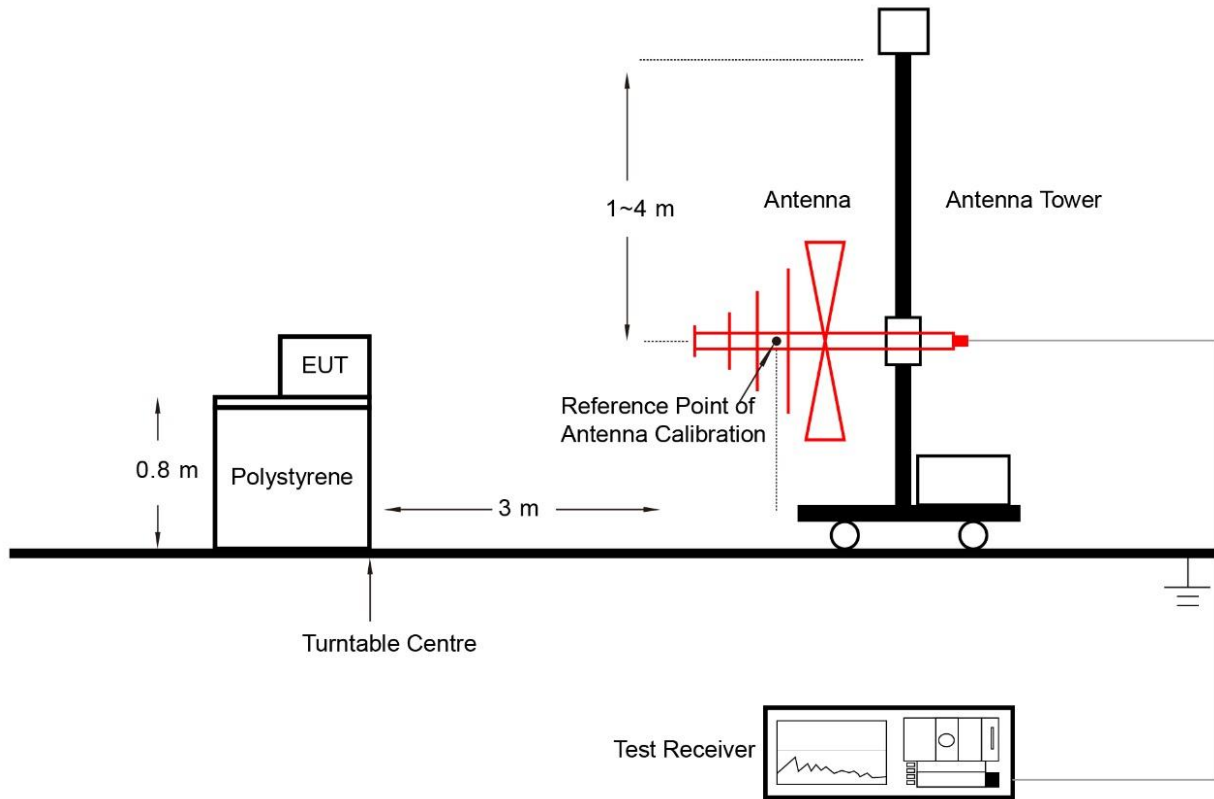
Note 1: The lower limit shall apply at the transition frequency.

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.

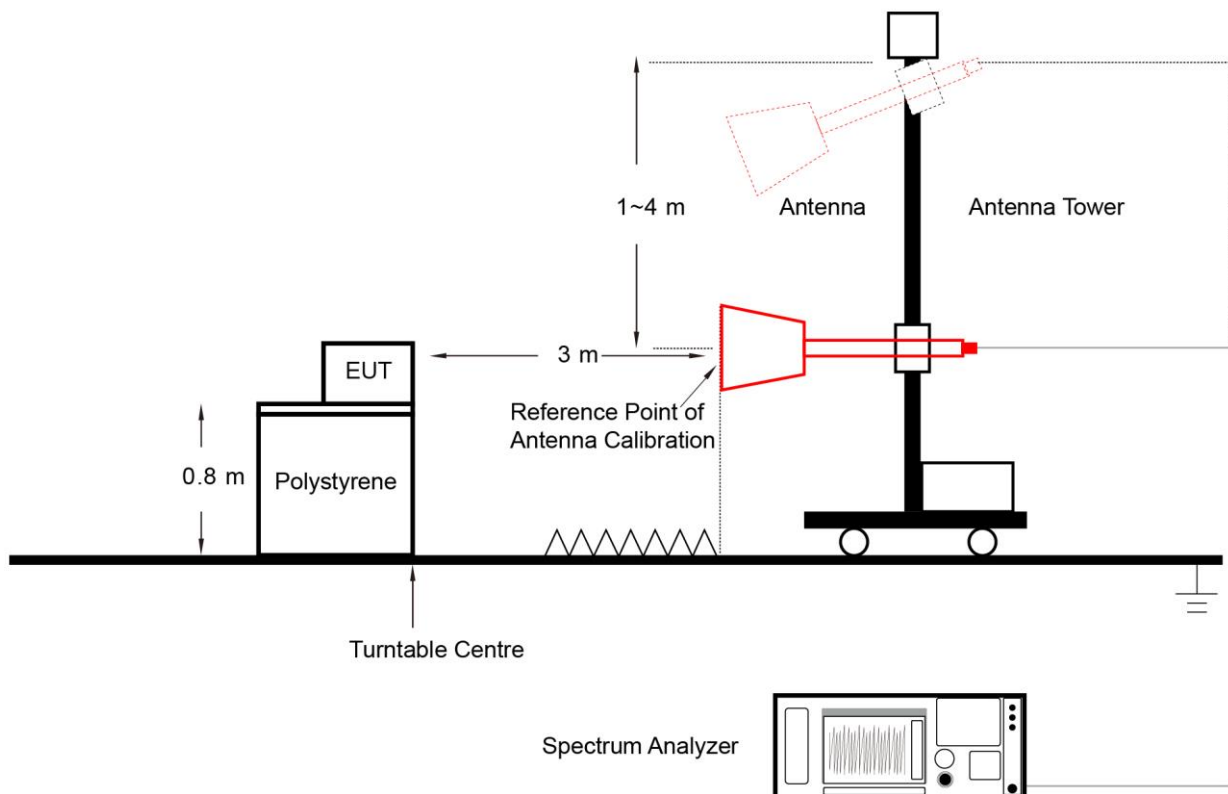
Note 3: E field strength (dB μ V/m) = 20 log E field strength (μ V/m)

5.3.2. Test Setup

Below 1GHz Test Setup:

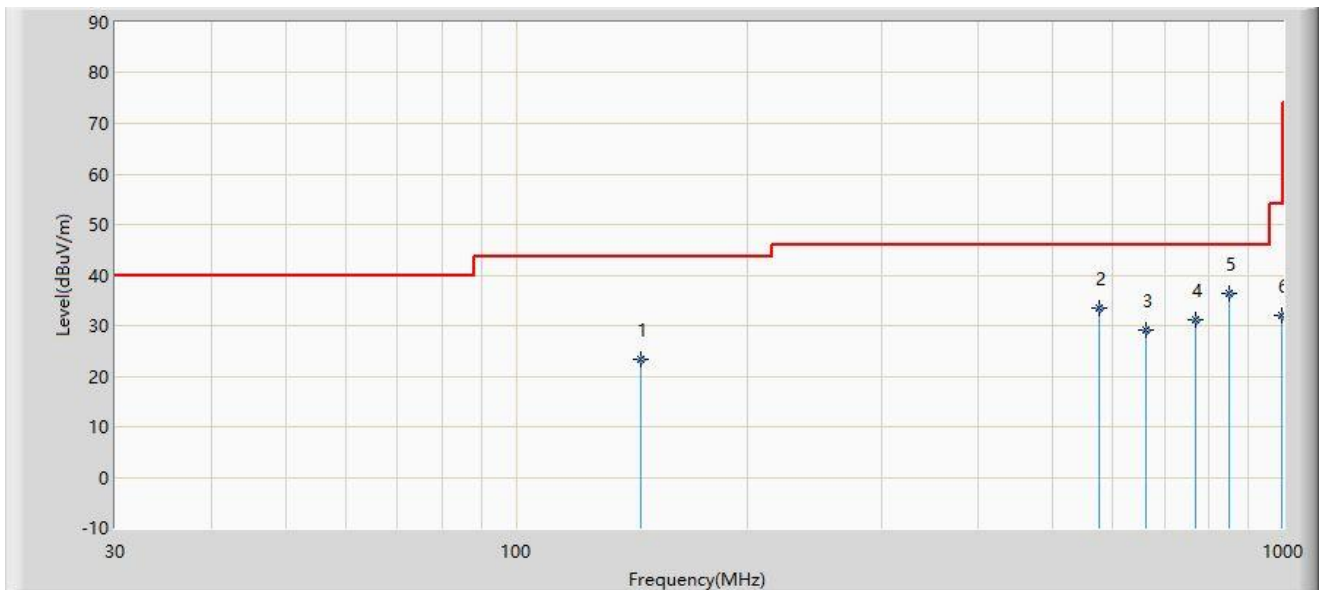


Above 1GHz Test Setup:



5.3.3. Test Result

Site: WZ-AC1	Test Date: 2023/06/05
Temperature: 25°C	Humidity: 53.2%
Limit: FCC_Part15.109_RE(3m)_Class B	Engineer: Carl Jiang
Probe: VULB9162_30-7000MHz	Polarity: Horizontal
EUT: HAN Access Point	Power: AC 120V/60Hz
Test Mode 1	



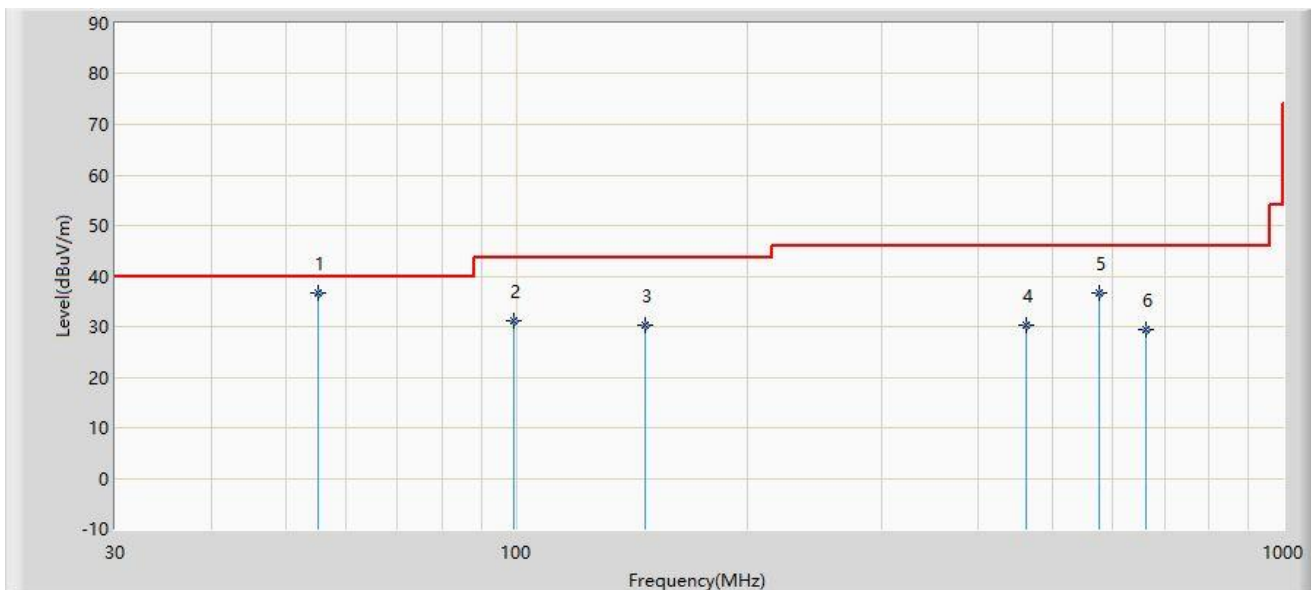
No	Mark	Frequency (MHz)	Measure Level (dBμV/m)	Reading Level (dBμV)	Margin (dB)	Limit (dBμV/m)	Factor (dB/m)	Type
1		145.540	23.390	8.579	-20.110	43.500	14.811	QP
2		576.000	33.451	7.455	-12.549	46.000	25.996	QP
3		662.900	29.081	1.571	-16.919	46.000	27.510	QP
4		768.000	31.154	2.386	-14.846	46.000	28.768	QP
5	*	850.800	36.481	5.556	-9.519	46.000	30.925	QP
6		995.200	32.100	0.369	-21.900	54.000	31.730	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: 2023/06/05
Temperature: 25°C	Humidity: 53.2%
Limit: FCC_Part15.109_RE(3m)_Class B	Engineer: Carl Jiang
Probe: VULB9162_30-7000MHz	Polarity: Vertical
EUT: HAN Access Point	Power: AC 120V/60Hz
Test Mode 1	



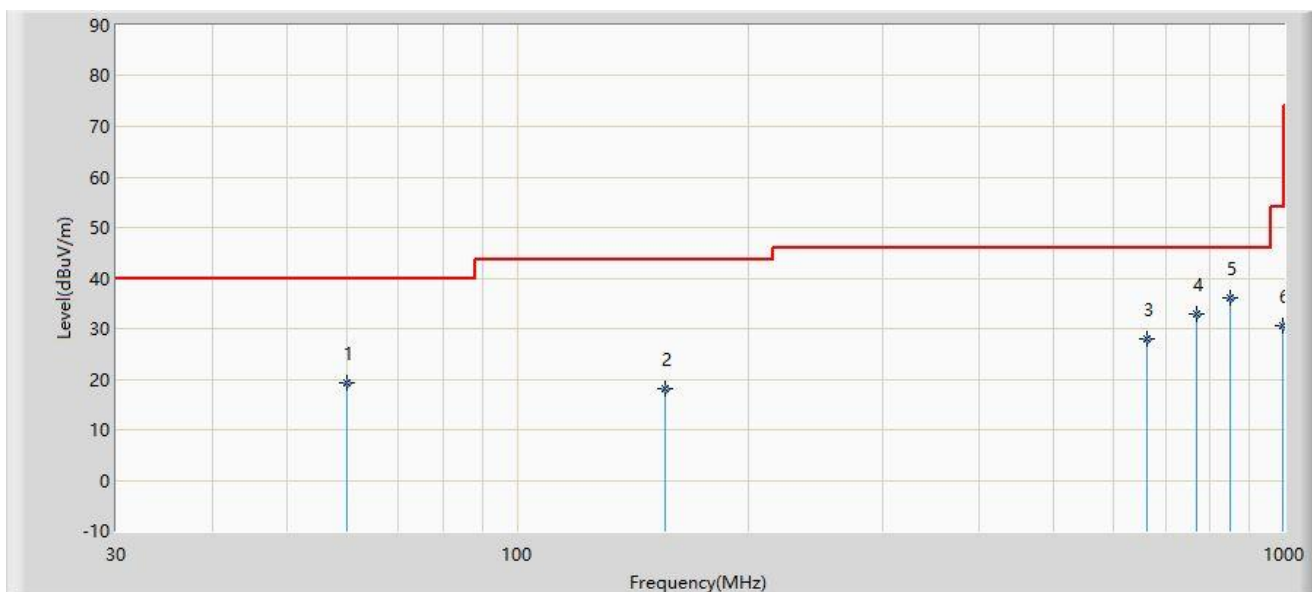
No	Mark	Frequency (MHz)	Measure Level (dBμV/m)	Reading Level (dBμV)	Margin (dB)	Limit (dBμV/m)	Factor (dB/m)	Type
1	*	55.200	36.537	16.570	-3.463	40.000	19.967	QP
2		99.150	31.211	13.020	-12.289	43.500	18.191	QP
3		147.500	30.235	15.380	-13.265	43.500	14.856	QP
4		462.120	30.375	6.399	-15.625	46.000	23.975	QP
5		576.000	36.706	10.710	-9.294	46.000	25.996	QP
6		663.400	29.368	1.822	-16.632	46.000	27.545	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: 2023/06/05
Temperature: 25°C	Humidity: 53.2%
Limit: FCC_Part15.109_RE(3m)_Class B	Engineer: Carl Jiang
Probe: VULB9162_30-7000MHz	Polarity: Horizontal
EUT: HAN Access Point	Power: By PoE
Test Mode 2	



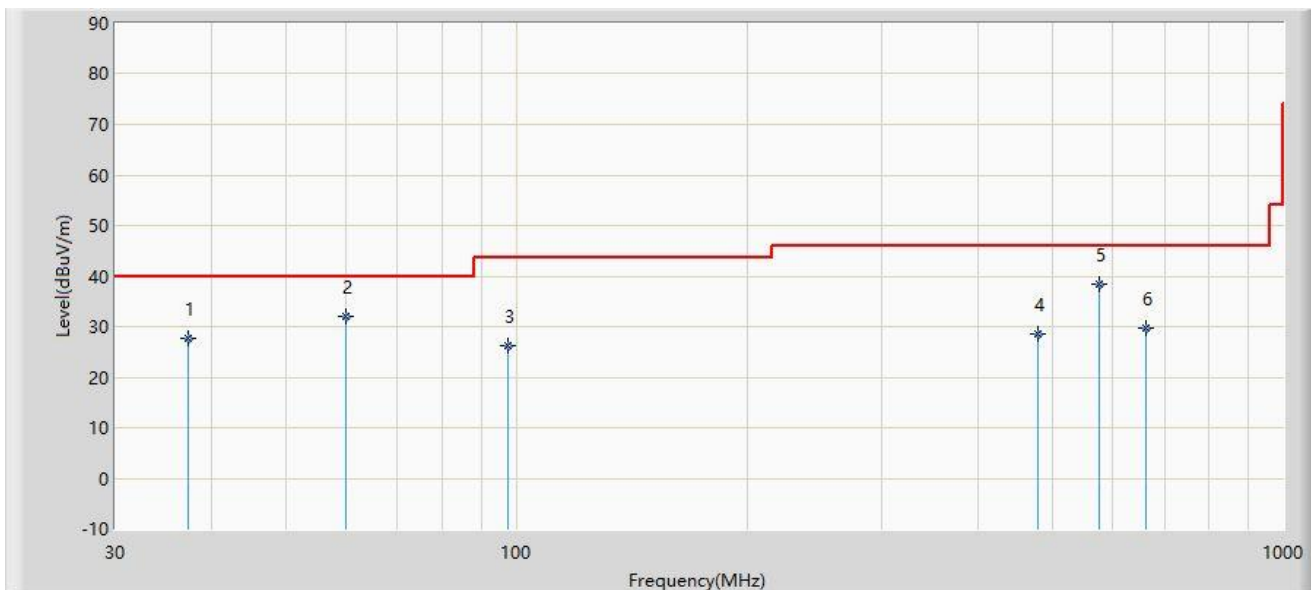
No	Mark	Frequency (MHz)	Measure Level (dBμV/m)	Reading Level (dBμV)	Margin (dB)	Limit (dBμV/m)	Factor (dB/m)	Type
1		60.010	19.309	0.190	-20.691	40.000	19.119	QP
2		156.000	18.204	3.005	-25.296	43.500	15.199	QP
3		662.600	28.028	0.540	-17.972	46.000	27.488	QP
4		768.000	32.884	4.116	-13.116	46.000	28.768	QP
5	*	850.900	36.062	5.142	-9.938	46.000	30.920	QP
6		994.400	30.540	-1.200	-23.460	54.000	31.741	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: 2023/06/05
Temperature: 25°C	Humidity: 53.2%
Limit: FCC_Part15.109_RE(3m)_Class B	Engineer: Carl Jiang
Probe: VULB9162_30-7000MHz	Polarity: Vertical
EUT: HAN Access Point	Power: By PoE
Test Mode 2	



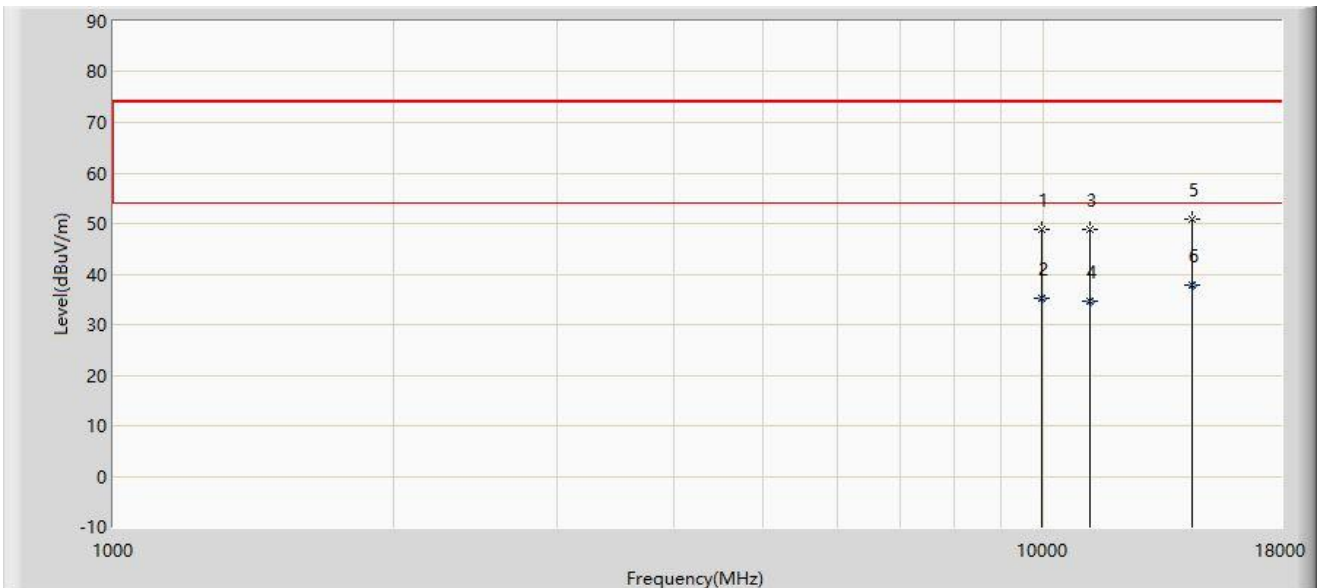
No	Mark	Frequency (MHz)	Measure Level (dBμV/m)	Reading Level (dBμV)	Margin (dB)	Limit (dBμV/m)	Factor (dB/m)	Type
1		37.340	27.705	9.610	-12.295	40.000	18.095	QP
2		60.050	32.021	12.910	-7.979	40.000	19.110	QP
3		97.570	26.198	8.250	-17.302	43.500	17.948	QP
4		479.800	28.445	3.926	-17.555	46.000	24.520	QP
5	*	576.000	38.306	12.310	-7.694	46.000	25.996	QP
6		662.100	29.853	2.397	-16.147	46.000	27.456	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: 2023/06/05
Temperature: 25°C	Humidity: 53.2%
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		9959.000	48.911	36.039	-25.089	74.000	12.872	PK
2		9959.000	35.122	22.250	-18.878	54.000	12.872	AV
3		11225.500	48.730	36.296	-25.270	74.000	12.434	PK
4		11225.500	34.664	22.230	-19.336	54.000	12.434	AV
5		14438.500	50.729	35.792	-23.271	74.000	14.937	PK
6	*	14438.500	37.907	22.970	-16.093	54.000	14.937	AV

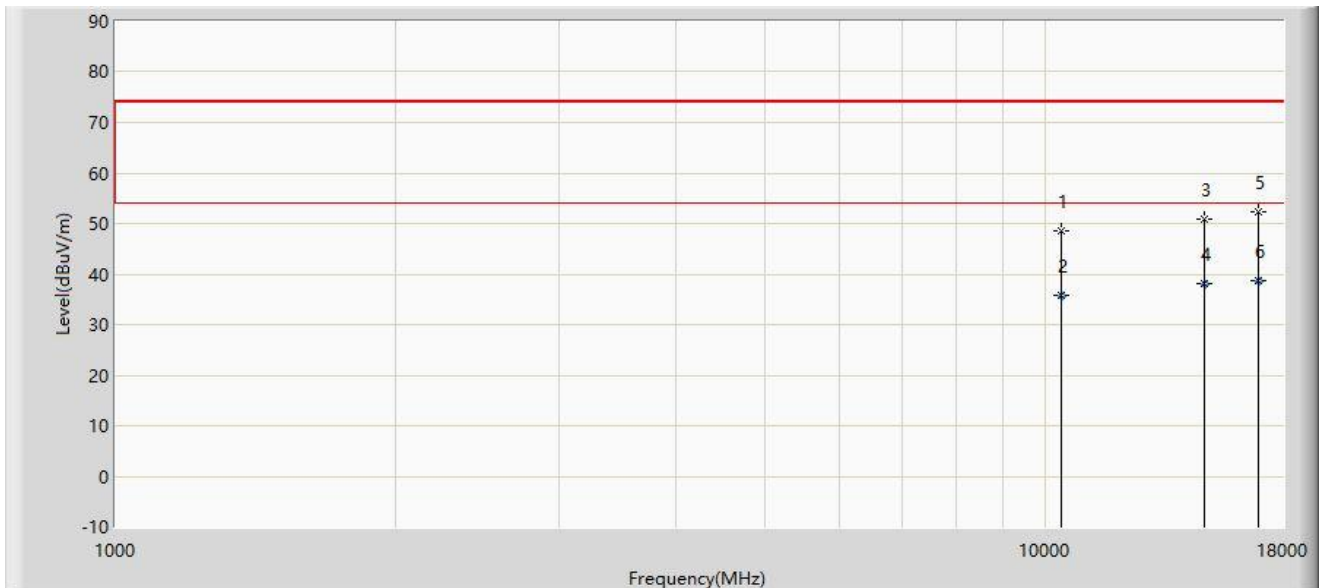
Note 1: " * ", means this data is the worst emission level.

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: 2023/06/05
Temperature: 25°C	Humidity: 53.2%
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 1	



No	Mark	Frequency (MHz)	Measure Level (dBuV/m)	Reading Level (dBuV)	Margin (dB)	Limit (dBuV/m)	Factor (dB/m)	Type
1		10375.500	48.556	34.922	-25.444	74.000	13.635	PK
2		10375.500	35.724	22.090	-18.276	54.000	13.635	AV
3		14829.500	50.824	35.923	-23.176	74.000	14.901	PK
4		14829.500	38.001	23.100	-15.999	54.000	14.901	AV
5		16903.500	52.360	37.547	-21.640	74.000	14.812	PK
6	*	16903.500	38.783	23.970	-15.217	54.000	14.812	AV

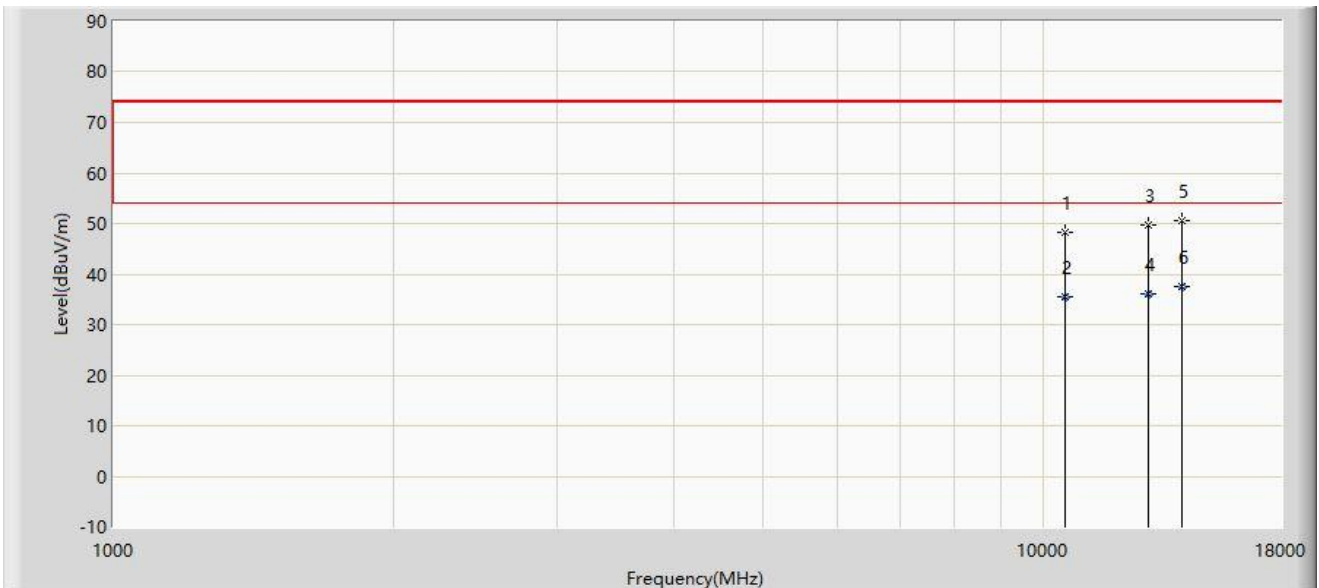
Note 1: " * ", means this data is the worst emission level.

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

Note 3: Factor (dB/m) = Cable Loss (dB) + Antenna Factor (dB/m) - 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: 2023/06/05
Temperature: 25°C	Humidity: 53.2%
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		10537.000	48.241	34.556	-25.759	74.000	13.684	PK
2		10537.000	35.455	21.770	-18.545	54.000	13.684	AV
3		12968.000	49.822	37.046	-24.178	74.000	12.776	PK
4		12968.000	36.046	23.270	-17.954	54.000	12.776	AV
5		14073.000	50.653	36.042	-23.347	74.000	14.611	PK
6	*	14073.000	37.631	23.020	-16.369	54.000	14.611	AV

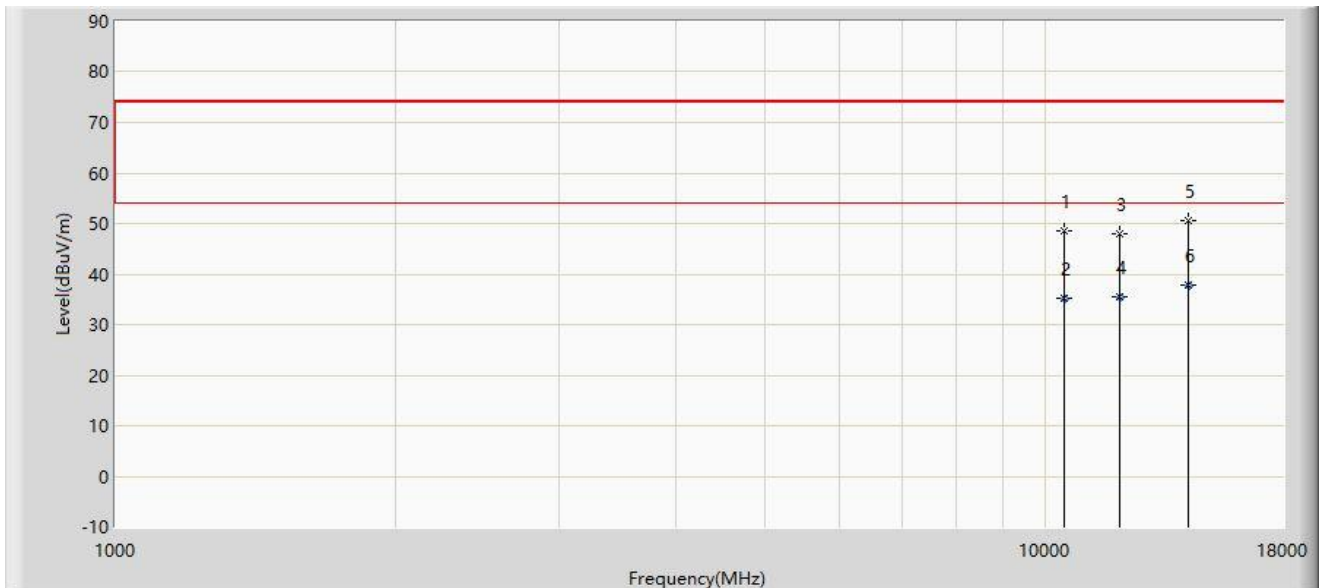
Note 1: " * ", means this data is the worst emission level.

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: 2023/06/05
Temperature: 25°C	Humidity: 53.2%
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		10469.000	48.642	34.902	-25.358	74.000	13.740	PK
2		10469.000	35.340	21.600	-18.660	54.000	13.740	AV
3		11990.500	48.016	35.871	-25.984	74.000	12.145	PK
4		11990.500	35.405	23.260	-18.595	54.000	12.145	AV
5		14234.500	50.476	35.643	-23.524	74.000	14.833	PK
6	*	14234.500	37.683	22.850	-16.317	54.000	14.833	AV

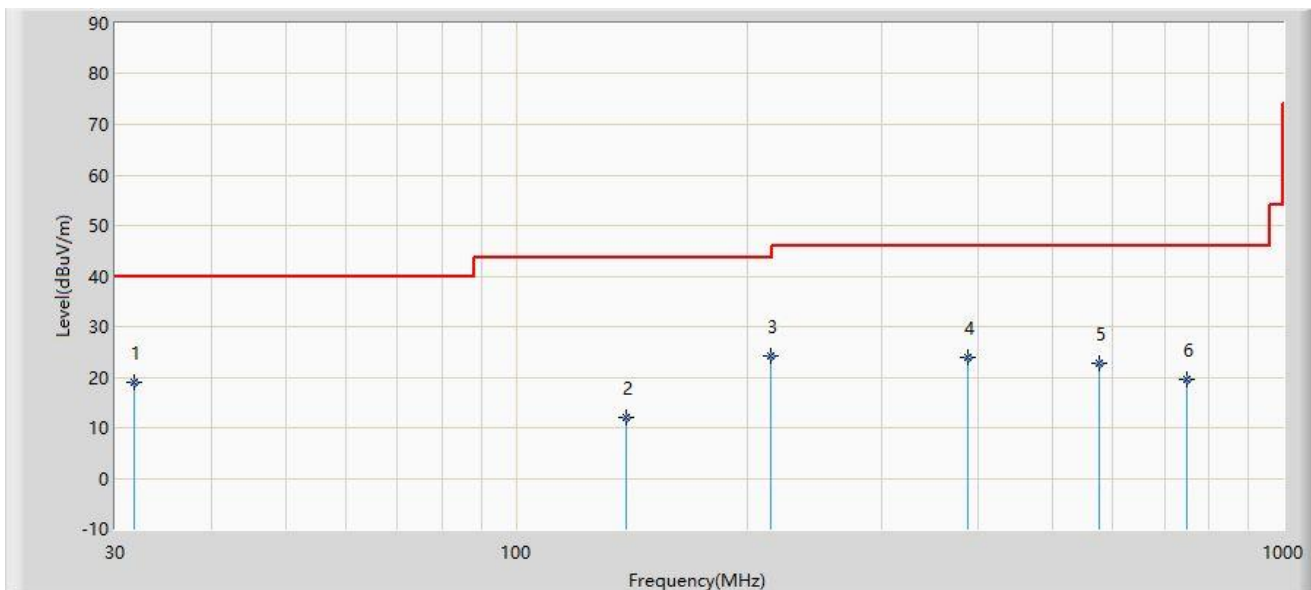
Note 1: " * ", means this data is the worst emission level.

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: 2023/06/13
Temperature: 25°C	Humidity: 53.2%
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	



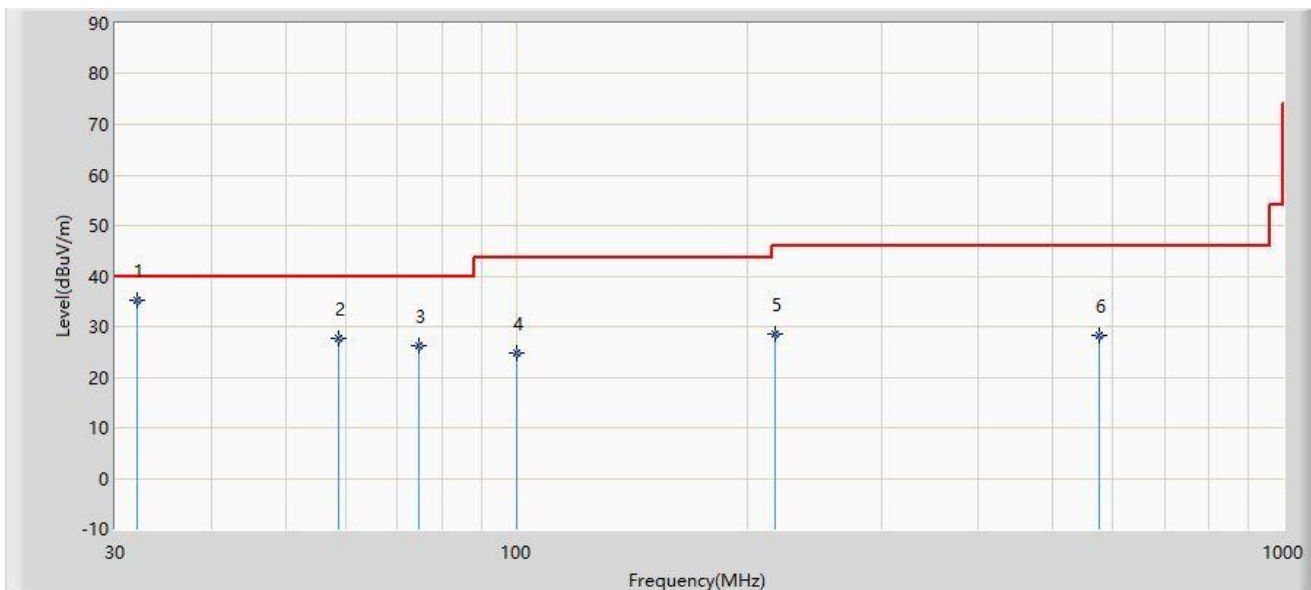
No	Mark	Frequency (MHz)	Measure Level (dBμV/m)	Reading Level (dBμV)	Margin (dB)	Limit (dBμV/m)	Factor (dB/m)	Type
1		31.780	18.864	1.500	-21.136	40.000	17.364	QP
2		139.240	12.140	-5.300	-31.360	43.500	17.440	QP
3	*	215.020	24.122	9.400	-19.378	43.500	14.722	QP
4		388.130	24.023	3.400	-21.977	46.000	20.623	QP
5		575.970	22.831	-2.000	-23.169	46.000	24.830	QP
6		748.770	19.657	-8.500	-26.343	46.000	28.157	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: 2023/06/13
Temperature: 25°C	Humidity: 53.2%
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	



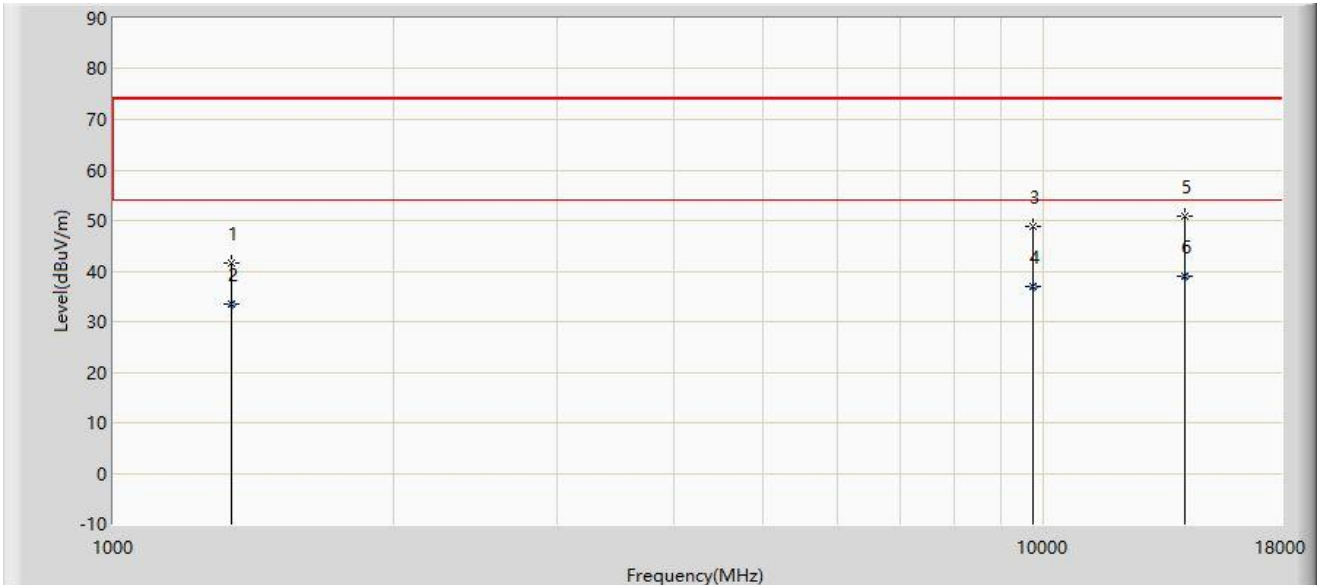
No	Mark	Frequency (MHz)	Measure Level (dBμV/m)	Reading Level (dBμV)	Margin (dB)	Limit (dBμV/m)	Factor (dB/m)	Type
1	*	32.040	35.279	17.900	-4.721	40.000	17.379	QP
2		58.720	27.736	10.200	-12.264	40.000	17.536	QP
3		74.730	26.323	11.000	-13.677	40.000	15.324	QP
4		100.350	24.694	11.400	-18.806	43.500	13.294	QP
5		217.420	28.527	13.800	-17.473	46.000	14.727	QP
6		575.990	28.131	3.300	-17.869	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: 2023/06/13
Temperature: 25°C	Humidity: 53.2%
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		1340.000	41.716	47.288	-32.284	74.000	-5.572	PK
2		1340.000	33.378	38.950	-20.622	54.000	-5.572	AV
3		9738.000	48.696	35.705	-25.304	74.000	12.992	PK
4		9738.000	36.821	23.830	-17.179	54.000	12.992	AV
5		14166.500	50.819	36.104	-23.181	74.000	14.716	PK
6	*	14166.500	39.105	24.390	-14.895	54.000	14.716	AV

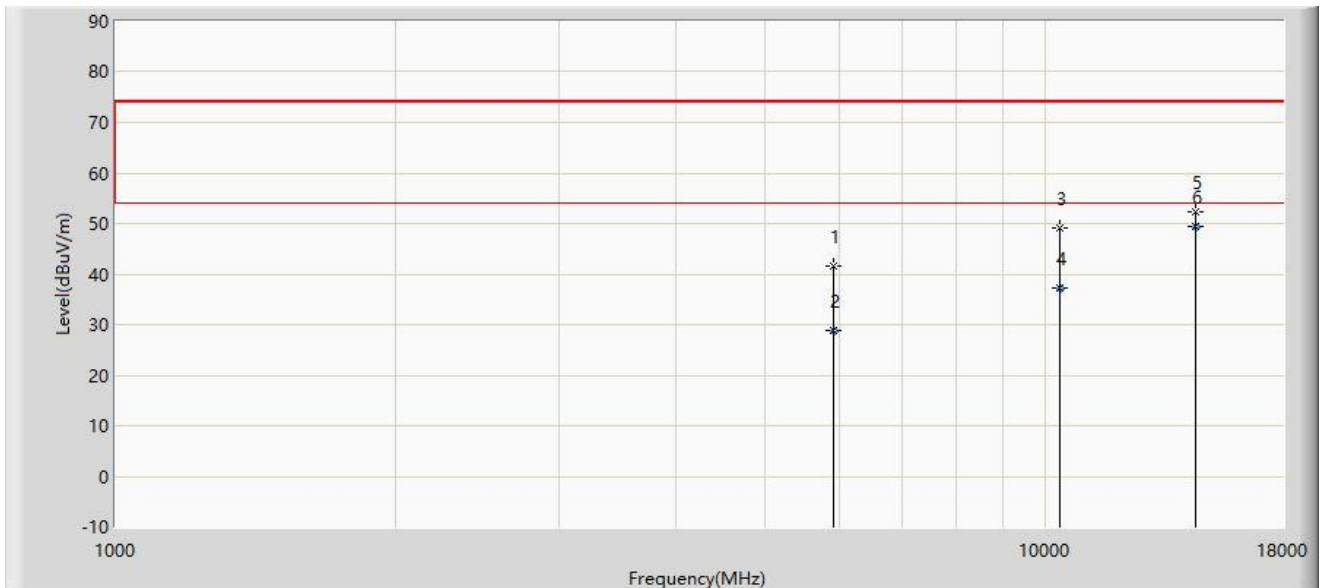
Note 1: " * ", means this data is the worst emission level.

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: 2023/06/13
Temperature: 25°C	Humidity: 53.2%
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		5921.500	41.698	36.950	-32.302	74.000	4.747	PK
2		5921.500	28.898	24.150	-25.102	54.000	4.747	AV
3		10341.500	49.190	35.569	-24.810	74.000	13.622	PK
4		10341.500	37.161	23.540	-16.839	54.000	13.622	AV
5		14472.500	52.449	37.286	-21.551	74.000	15.163	PK
6	*	14472.500	49.373	34.210	-4.627	54.000	15.163	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.