Certificate Number: 5055.02

TEST REPORT

Report No.:	SRTC2022-9003(F)-0073
Model Name:	FLA-B19
Applicant:	Honor Device Co., Ltd.
Manufacturer:	Honor Device Co., Ltd.
Specification:	FCC Part15B (Certification) (2020 edition)
	ANSI C63.4-2014
FCC ID:	2AYGCFLA-B19

The State Radio_monitoring_center Testing Center (SRTC)

15th Building, No.30 Shixing Street, Shijingshan District,

Beijing, China

Tel: 86-10-57996183 Fax: 86-10-57996388

CONTENTS

1. General information

1.1 Notes of the test report

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The test results relate only to individual items of the samples which have been tested.

1.2 Information about the testing laboratory

Company:	The State Radio_monitoring_center Testing Center (SRTC)
Address:	15th Building, No.30 Shixing Street, Shijingshan District
Testing location：	No.80, Zhaojiachang, BeizangCun, Daxing District, Beijing, China.
City:	Beijing
Country or Region:	China
Contacted person:	Liu Jia
Tel:	+86 10 57996183
Fax:	+86 10 57996388
Email:	liujiaf@srtc.org.cn

1.3 Applicant’s details

Company:	Honor Device Co., Ltd.
Address:	Shum Yip Sky Park, No. 8089, Hongli West Road, Shenzhen, China
City:	Shenzhen
Country or Region:	China
Contacted person:	---
Tel:	---
Email:	---

1.4 Manufacturer’s details

Company:	Honor Device Co., Ltd.
Address:	Shum Yip Sky Park, No. 8089, Hongli West Road, Shenzhen, China
City:	Shenzhen
Country or Region:	China
Contacted person:	---
Tel:	---
Email:	---

1.5 Application details

Date of reception of test sample: 16th Nov. 2022
Date of test: 16h Nov. 2022 to 22th Nov. 2022

1.6 Reference specification

FCC Part 15B, 2020 (Certification)

1.7 Information of EUT

1.7.1 General information

Modle Name of EUT	FLA-B19
FCC ID	2AYGCFLA-B19
Frequency Range	BLE: 2.4~2.4835GHz
Power Supply	3.8V
Extreme Temperature	Lowest: -20°C Highest: +45°C
Extreme Voltage	Minimum: 3.5V Maximum: 4.45V
HW Version	LTAM230
SW Version	17.0.0.10

1.7.2EUT details

	Model Name	HW Version
EUT	FLA-B19	LTAM230

1.7.3 Auxiliary equipment details

AE (Auxiliary Equipment) 1#: Battery

Battery Type	HB351731EFW
Manufacturer	Honor Device Co.,Ltd.

AE (Auxiliary Equipment) 2#: Charger

Manufacturer	Huizhou BYD Electronics Co., Ltd
Model Number	HW-050200C01
S/N	B78590G6P20910

AE (Auxiliary Equipment) 3#: USB Cable1

Manufacturer	Guangdong Mingji Hi-Tech Electronics Co.,Ltd
Model Number	2622-00008-0

AE (Auxiliary Equipment) 4#: USB Cable2

Manufacturer	Luxshare Precision Industry Co.,Ltd.
Model Number	L125PG002-CS-H

AE (Auxiliary Equipment) 5#: USB Cable3

Manufacturer	Freeport Ji an Electronics Co.,Ltd
Model Number	AU0-CRO001HF

AE (Auxiliary Equipment) 6#: USB Cable4

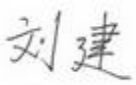
Manufacturer	Guangxi Broad Telecommunication Co.,Ltd.
Model Number	WA0045

Note1: As the information described in these above tables, there are four types of USB cables. After comparison, USB Cable4 is the worst.

2.Test information

2.1 Summary of the test results

No.	Test case	FCC reference	Verdict
1	Conducted emissions	15.107	Pass
2	Radiated emissions	15.109	Pass

Approved By: Mr. Guo Yu Vice director of the test department 	Checked By: Mr. Liu Jian 
Tested by: Mr. Wen Jianlong Test engineer 	Issued date: 2022.11.23

2.2 Test result

2.2.1Conducted Emissions-FCC Part15.107

Ambient condition:

Temperature	Relative humidity	Pressure
22.3°C	42.0%	101.0kPa

Test Setup with charger:

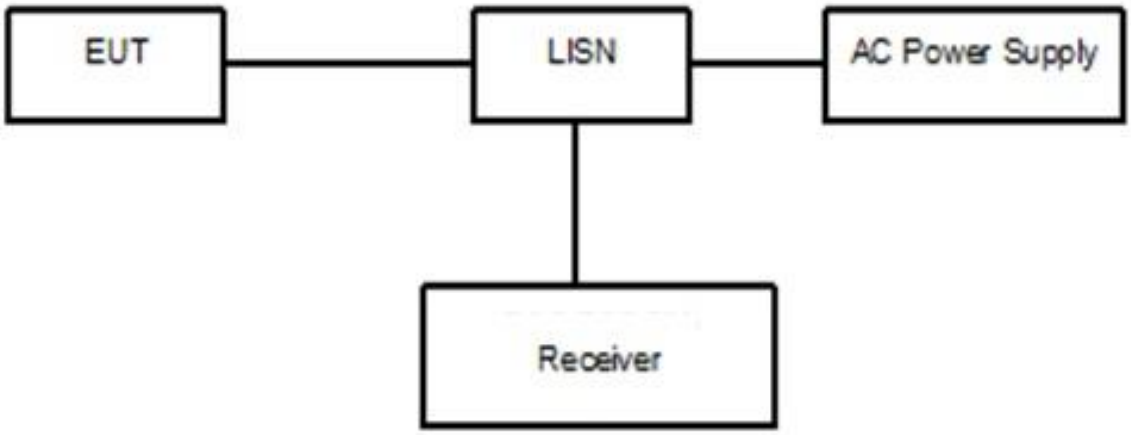


Figure 1

Test Procedure:

The EUT is placed on a non-matellic table 0.8m above the horizontal metal reference ground plane. The EUT is connected with LISN via the charger. The LISN is connected to the reference ground.

The test set-up and the test methods are performed according to ANSI C63.4:2014. Then start the test software EMC32. Sweep the whole frequency band through the range from 150 KHz to 30 MHz with RBW 9kHz, VBW 30kHz.The measurement should be done for both L line and N line. During pre-test, the receiver uses both peak detector and average detector. And the final test, the receiver uses both average detector and Quasi-peak detector.

The data of cable loss has been calibrated in full testing frequency range before the testing.

A “reference path loss” Corr.(dB) is established and the L_{cable} + ATT + VDF is the attenuation of ”reference path loss”, and including the cable loss, the attenuation of the attenuator, the voltage division factor of AMN.

The measurement results are obtained as described below:

$P_{result} = P_{mea} + Corr.(dB)$

Sample calculation: (26.13dBμV) = (-3.57dBμV) + (29.7dB), the corresponding

frequency is 0.35042MHz.

Frequency (MHz)	QuasiPeak (dBμV)	Average (dBμV)	Limit (dBμV)	Margin (dB)	Line	Corr. (dB)	Pmea QuasiPeak (dBμV)	Pmea Average (dBμV)
0.35042	26.13	---	58.95	32.82	N	29.7	-3.57	---

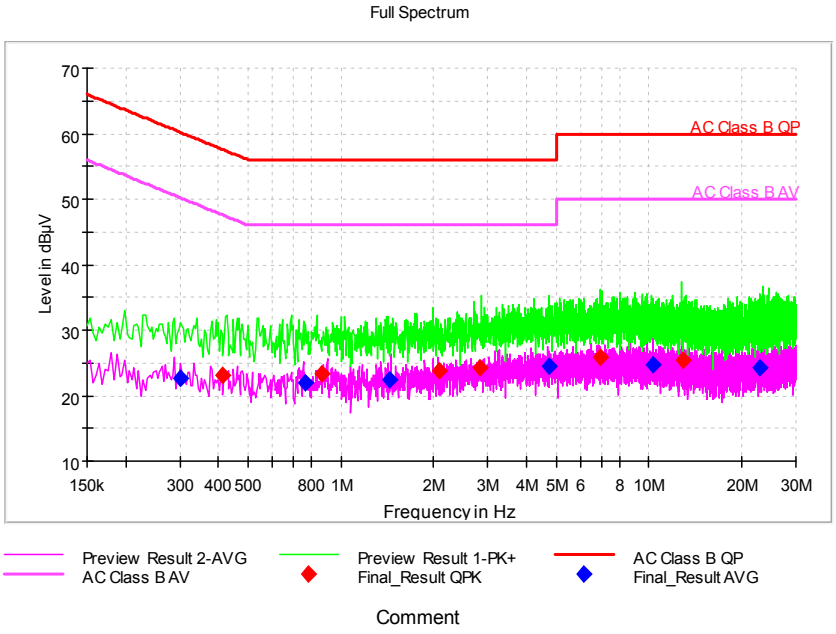
Limit:

Frequency of Emission(MHz)	Limits(dBμV)	
	Quasi-peak	Average
0.15～0.5	66 to 56*	56 to 46*
0.5～5	56	46
5～30	60	50

Note: * Decreases with the logarithm of the frequency

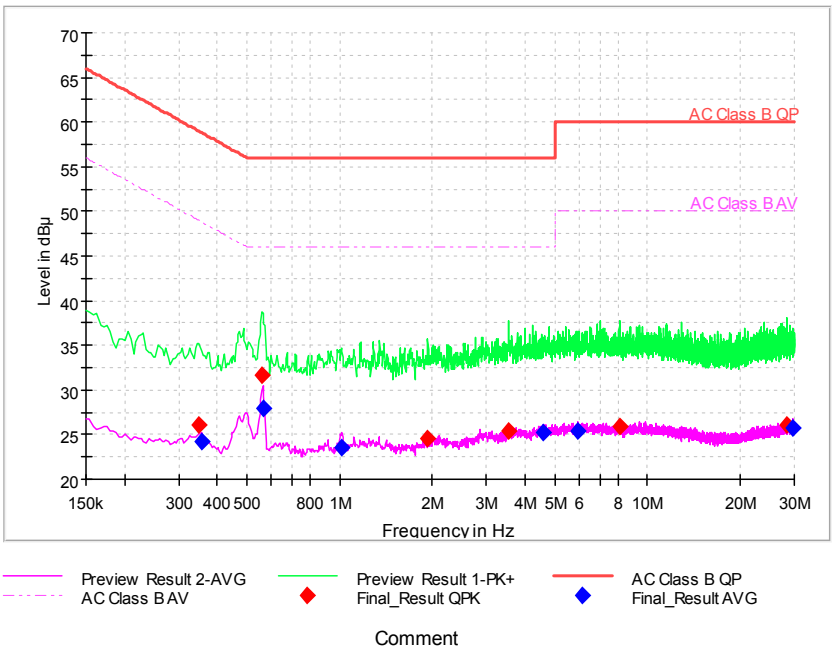
Test result:

Noise Level of the Measuring Instrument



Pic1.Conducted emission L and N Line

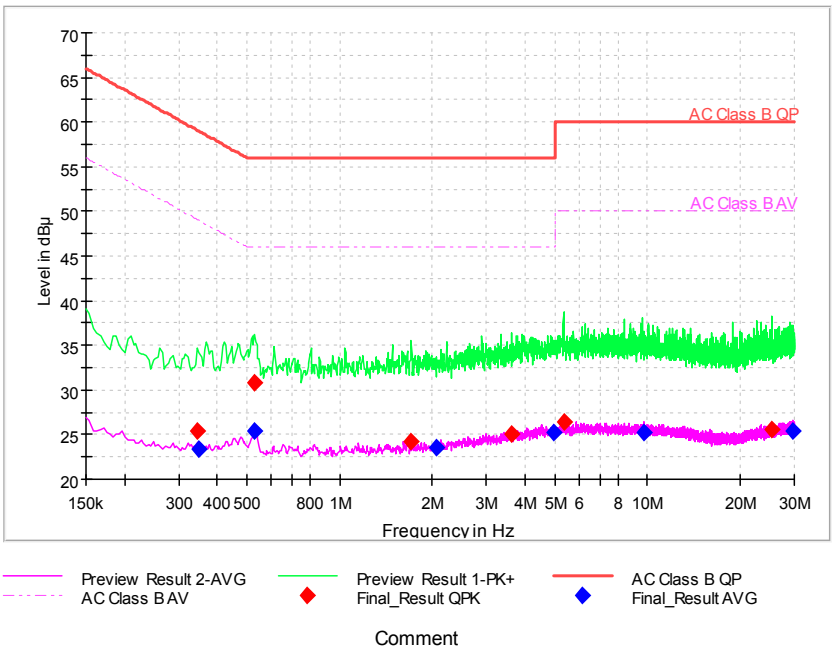
EUT+1#Battery+2#Charger+6#USB Cable4: AC240V



Pic2. Conducted emission L&N Line

Frequency (MHz)	QuasiPeak (dBµV)	Average (dBµV)	Limit (dBµV)	Margin (dB)	Line	Corr. (dB)	Pmea QuasiPeak (dBµV)	Pmea Average (dBµV)
0.35042	26.13	---	58.95	32.82	N	29.7	-3.57	---
0.35469	---	24.26	48.85	24.59	N	29.7	---	-5.44
0.55937	31.69	---	56	24.31	N	29.7	1.99	---
0.56364	---	28	46	18	N	29.7	---	-1.7
1.01991	---	23.58	46	22.42	N	29.7	---	-6.12
1.93247	24.63	---	56	31.37	N	29.8	-5.17	---
3.54437	25.37	---	56	30.63	L1	29.8	-4.43	---
4.58912	---	25.28	46	20.72	N	29.8	---	-4.52
5.95796	---	25.46	50	24.54	L1	29.9	---	-4.44
8.14127	25.93	---	60	34.07	N	29.9	-3.97	---
28.2559	26.01	---	60	33.99	L1	30	-3.99	---
29.7399	---	25.69	50	24.31	L1	30	---	-4.31

EUT+1#Battery+2#Charger+6#USB Cable4: AC120V



Pic3. Conducted emission L&N Line

Frequency (MHz)	QuasiPeak (dBµV)	Average (dBµV)	Limit (dBµV)	Margin (dB)	Line	Corr. (dB)	Pmea QuasiPeak (dBµV)	Pmea Average (dBµV)
0.34616	25.42	---	59.05	33.63	L1	29.7	-4.28	---
0.35042	---	23.33	48.95	25.62	N	29.7	---	-6.37
0.52952	30.78	---	56	25.22	N	29.7	1.08	---
0.52952	---	25.42	46	20.58	N	29.7	---	-4.28
1.71073	24.17	---	56	31.83	N	29.8	-5.63	---
2.0604	---	23.55	46	22.45	N	29.8	---	-6.25
3.62113	25.14	---	56	30.86	N	29.8	-4.66	---
4.97717	---	25.28	46	20.72	N	29.8	---	-4.52
5.33964	26.42	---	60	33.58	L1	29.9	-3.48	---
9.69774	---	25.27	50	24.73	N	29.9	---	-4.63
25.3946	25.62	---	60	34.38	L1	30	-4.38	---
29.7058	---	25.38	50	24.62	N	30	---	-4.62

2.2.2RadiatedEmissions-FCC Part15.109

Ambient condition:

Temperature	Relative humidity	Pressure
22.3°C	42.0%	101.0kPa

Test Setup:

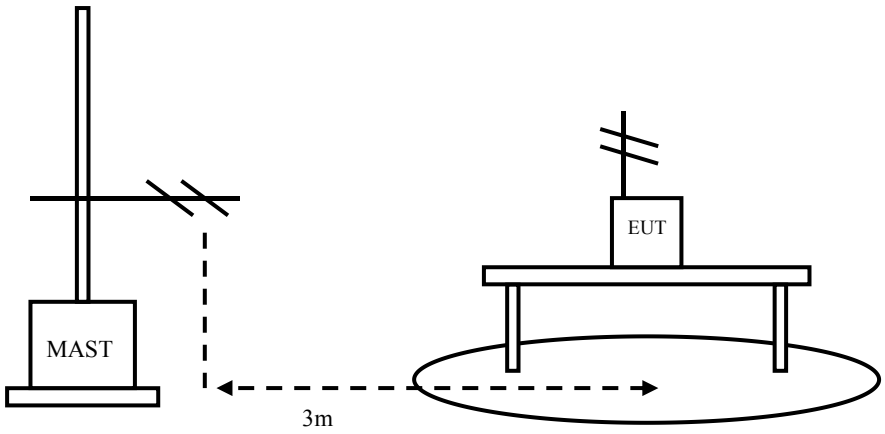


Figure 2

Test Procedure:

EUT + Charger:
The EUT should be placed on a non-metallic table 80cm above the ground plane. The receive antennas shall be moved from 1 to 4 meters. The distance between EUT and receive antenna should be 3 meters.
The EUT should work in idle mode. The test set-up and the test methods are performed according to ANSI C63.4:2014.
Then start the test software EMC32. Sweep the whole frequency band through the range from 30MHz to 1GHz, using receive log period antenna VULB 9163.
During the test, the height of receive antenna shall be moved from 1 to4 meters, and the antenna shall be performed under horizontal and vertical polarization. The turn table shall be rotated from 0 to 360 degrees for detecting the maximum of radiated spurious signal level. The measurements shall be repeated with orthogonal polarization of the test antenna. The EUT is laid in two modes as follow: 1. put the EUT in horizontal direction; 2. put the EUT in vertical direction.
The data of cable loss and antenna factor have been calibrated in full testing frequency range before the testing. All test results are performed with max hold at

the horizontal and vertical polarity.
RBW=120kHz, VBW=300kHz, when the test frequency: 30MHz<f<1GHz
RBW=1MHz, VBW=3MHz, when the test frequency: f>1GHz
A “reference path loss” is established and the A_{Rpl} is the attenuation of “reference path loss”, and including the gain of receive antenna, the gain of the preamplifier, the cable loss.
The measurement results are obtained as described below:
Result= P_{mea} + A_{Rpl}

Limit:

Frequency of Emission(MHz)	Limits	
	Detector	Unit (dBμV/m)
30～88	Quasi-peak	40
88～216	Quasi-peak	43.5
216～960	Quasi-peak	46
960～1000	Quasi-peak	54
1000～5th harmonic of the highest frequency or 40GHz, whichever is lower	Average Peak	54 74

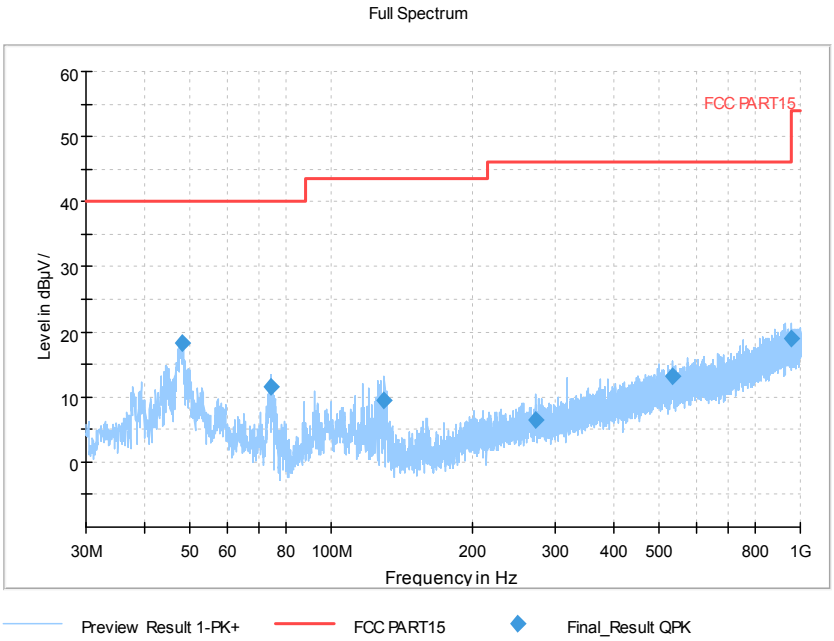
Test result:
Sample calculation: (18.39dBμV/m) = (36.09dBμV) + (-17.7dB/m), the corresponding frequency is 47.945MHz.

Frequency(MHz)	Result(dBμV/m)	Limit (dBμV/m)	ARpl (dB/m)	Pmea (dBμV)	Polarity
47.945	18.39	40.00	-17.7	36.09	V

EUT+1#Battery+2#Charger+6#USB Cable4:

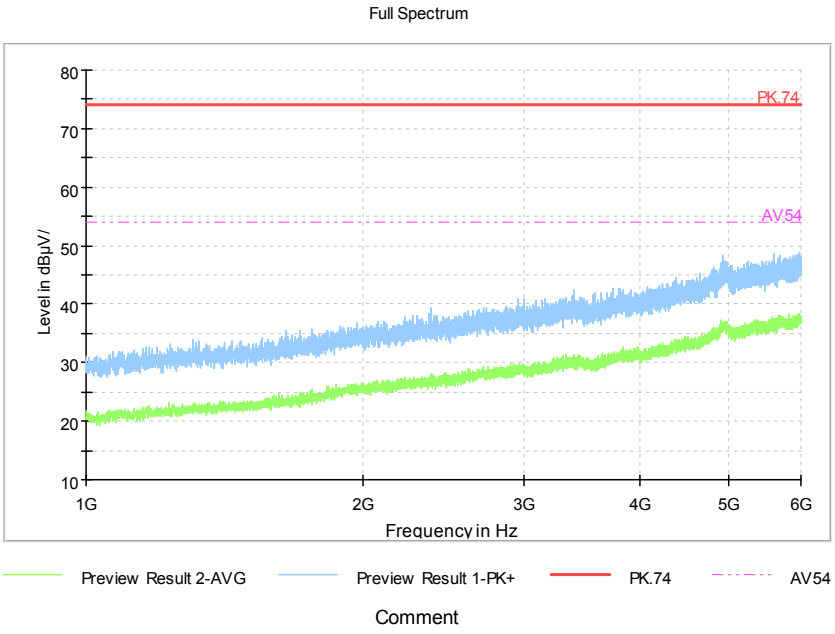
Frequency(MHz)	Result(dBμV/m)	Limit (dBμV/m)	ARpl (dB/m)	Pmea (dBμV)	Polarity
47.945	18.39	40.00	-17.7	36.09	V
74.329	11.58	40.00	-23.1	34.68	V
129.8615	9.51	43.50	-22.3	31.81	V
272.985	6.39	46.00	-16.7	23.09	V
535.1275	13.1	46.00	-10	23.1	V
954.313	18.98	46.00	-2.7	21.68	V

EUT+1#Battery+2#Charger+6#USB Cable4: refer to Pic4, Pic5, Pic6, Pic7



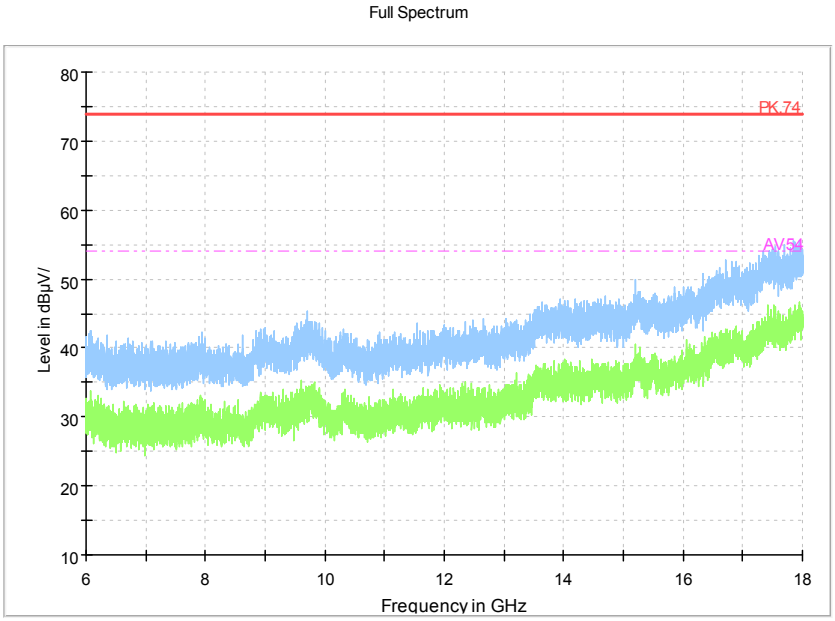
Pic4. Radiated emission(30MHz – 1GHz)

Note：The test data in the graph includes two polarizations: horizontal and vertical



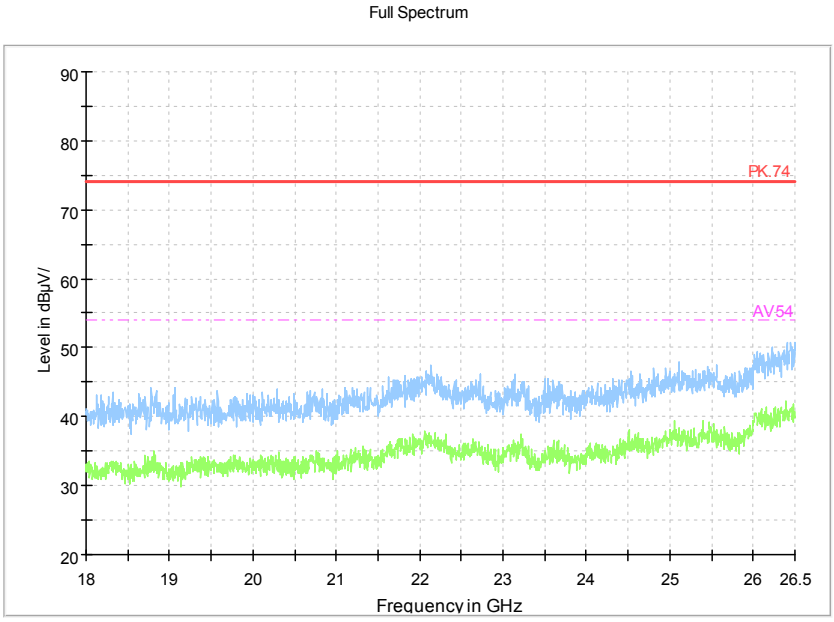
Pic5. Radiated emission (1GHz –6GHz)

Note：The test data in the graph includes two polarizations: horizontal and vertical.



Pic6. Radiated emission (6GHz –18GHz)

Note：The test data in the graph includes two polarizations: horizontal and vertical.



Pic7. Radiated emission (18GHz – 26GHz)

Note：The test data in the graph includes two polarizations: horizontal and vertical.

2.3. List of test equipments

No.	Name/Model	Manufacturer	S/N	Calibration Due Date	Calibration Date
1	23.18m×16.88m×9.60mSemi-AnechoicChamber	FRANKONIA	-----	2023.11.15	2018.11.16
2	ESW EMI test receiver	R&S	101574	2023.06.19	2022.06.20
3	ESR3EMI test receiver	R&S	102361	2023.04.11	2022.04.12
4	9.080m×5.255m×3.525m Shielding room	FRANKONIA	-----	2023.09.05	2018.09.06
5	VULB 9163 Ultra log test antenna	schwarzbeck	867	2023.05.28	2021.05.29
6	HF 907 Double-Ridged Waveguide Horn Antenna	R&S	100512	2023.05.12	2021.05.13
7	SAS-574 Horn Antenna	schwarzbeck	535	2023.06.19	2021.06.20
8	ENV216 AMN	R&S	101881	2023.06.19	2022.06.20
9	EMC32EMI test software	R&S	-----	-----	-----

----------The End----------