

FCC - TEST REPORT

Report Number : **60.792.19.009.01E01** Date of Issue : February 5, 2020

Model : **HG06061A-US-RX, HG06061B-US-RX**

Product Type : **Wireless weather station**

Applicant : Lidl US, LLC

Address : 3500 S. Clark Street, Arlington, VA 22202, USA

Production Facility : AOK Electronic Limited

Address : Tianxin Ind. District, Dahou, Xiegang, Dongguan, Guangdong, China

Test Result : ☒ **Positive** ☐ **Negative**

Total pages
including
Appendices : 18

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2 Description of the Equipment Under Test

Description of the Equipment Under Test

Product: Wireless weather station

Model no.: HG06061A-US-RX, HG06061B-US-RX

FCC ID: 2AJ9O-HG06061RX

Rating
 Input: 3 VDC (2 x 1.5 V AA battery)
 Or 5.0VDC, 2.5A form Adapter
 Output: 2 x USB port, 5VDC, 2.1A in total

Adapter input: 100-240V AC, 50/60Hz, 0.5A Max
 Adapter output: 5.0VDC, 2.5A

Remark: 433.92MHz (Rx)
 USB Load

Auxiliary Equipment Used during Test:

DESCRIPTION	MANUFACTURER	MODEL NO.(SHIELD)	REMARK
Resistance load	Shanghai ShenXin	--	5ohm resistor
Resistance load	Shanghai ShenXin	--	5ohm resistor

Remark: 1. The auxiliary equipment/accessories was provided by our TUV SUD lab.

3 Summary of Test Standards

Test Standards
FCC Part 15 Subpart B 10-1-18 Edition Federal Communications Commission, PART 15 — Radio Frequency Devices, Subpart B — Unintentional Radiators

All the tests were performed using the procedures from ANSI C63.4(2014).

4 Details about the Test Laboratory

Site 1

Company name: TÜV SÜD Certification and Testing (China) Co., Ltd. Shenzhen Branch
Building 12&13 Zhiheng Wisdomland Business Park,
Nantou Checkpoint Road 2,
Shenzhen 518052, P.R.China
FCC Registration Number: 514049

Emission Tests	
Test Item	Test Site
FCC Part 15 Subpart B	
FCC Title 47 Part 15.109 Radiated Emission	Site1
FCC Title 47 Part 15.107 Conduct Emission	Site1

4.1 Test Equipment Site List

Radiated emission Test – Site 1

DESCRIPTION	MANUFACTURER	MODEL NO.	SERIAL NO.	CAL. DUE DATE
EMI Test Receiver	Rohde & Schwarz	ESR 26	101269	2020-6-28
Signal Analyzer	Rohde & Schwarz	FSV40	101031	2020-6-28
Loop Antenna	Rohde & Schwarz	HFH2-Z2	100398	2020-7-7
Trilog Super Broadband Test Antenna	Schwarzbeck	VULB 9163	707	2020-7-5
Horn Antenna	Rohde & Schwarz	HF907	102294	2020-6-22
Wideband Horn Antenna	Q-PAR	QWH-SL-18-40-K-SG	12827	2020-7-5
Pre-amplifier	Rohde & Schwarz	SCU 18	102230	2020-6-28
Pre-amplifier	Rohde & Schwarz	SCU 40A	100432	2020-6-28
Attenuator	Agilent	8491A	MY39264334	2020-6-28
3m Semi-anechoic chamber	TDK	9X6X6	----	2020-7-7
Test software	Rohde & Schwarz	EMC32	Version 9.15.00	N/A

Conducted Emission Test – Site 1

DESCRIPTION	MANUFACTURER	MODEL NO.	SERIAL NO.	CAL. DUE DATE
EMI Test Receiver	Rohde & Schwarz	ESR 3	101782	2020-6-28
LISN	Rohde & Schwarz	ENV4200	100249	2020-6-28
LISN	Rohde & Schwarz	ENV432	101318	2020-7-19
LISN	Rohde & Schwarz	ENV216	100326	2020-6-28
ISN	Rohde & Schwarz	ENY81	100177	2020-6-28
ISN	Rohde & Schwarz	ENY81-CA6	101664	2020-6-28
High Voltage Probe	Rohde & Schwarz	TK9420(VT9420)	9420-584	2020-6-24
RF Current Probe	Rohde & Schwarz	EZ-17	100816	2020-7-2
Attenuator	Shanghai Huaxiang	TS2-26-3	080928189	2020-6-28
Test software	Rohde & Schwarz	EMC32	Version9.15.00	N/A

4.2 Measurement System Uncertainty

Measurement System Uncertainty Emissions

System Measurement Uncertainty	
Items	Extended Uncertainty
Uncertainty for Radiated Emission in 3m chamber 9kHz-30MHz	4.46dB
Uncertainty for Radiated Emission in 3m chamber 30MHz-1000MHz	Horizontal: 4.91dB; Vertical: 4.89dB;
Uncertainty for Radiated Emission in 3m chamber 1000MHz-25000MHz	Horizontal: 4.80dB; Vertical: 4.79dB;
Uncertainty for Conducted Emission 150kHz-30MHz	3.62dB

5 Summary of Test Results

Emission Tests				
FCC Part 15 Subpart B				
Test Condition	Pages	Test Result		
		Pass	Fail	N/A
FCC Title 47 Part 15.109 Radiated Emission 30MHz-1000MHz	12-15	☒	☐	☐
FCC Title 47 Part 15.107 Conduct Emission 150kHz-30MHz	16-17	☒	☐	☐

6 General Remarks

Remarks

Client informs that the **HG06061B-US-RX** have the same technical construction including circuit diagram, PCB Layout, components and component layout, all electrical construction and mechanical construction with **Temperature station LCD USA, 2 assorted, HG06061A-US-RX**. The difference lies only in the outlook/color of the different models. (Client's conformation letter shown at appendix A).

EMC Tests were performed on model: **HG06061A-US-RX**.

This submittal(s) (test report) is intended for **FCC ID: 2AJ90-HG06061RX**, complies with Section 15.107, 15.109 of the FCC Part 15, Subpart B rules.

SUMMARY:

- All tests according to the regulations cited on page 6 were

■ - Performed

□ - **Not** Performed

- The Equipment Under Test

■ - **Fulfills** the general approval requirements.

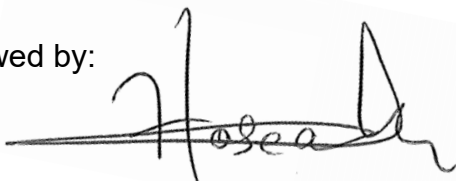
□ - **Does not** fulfill the general approval requirements.

Sample Received Date: December 12, 2019

Testing Start Date: December 16, 2019

Testing End Date: January 3, 2020

Reviewed by:



Hosea CHAN
EMC Project Engineer

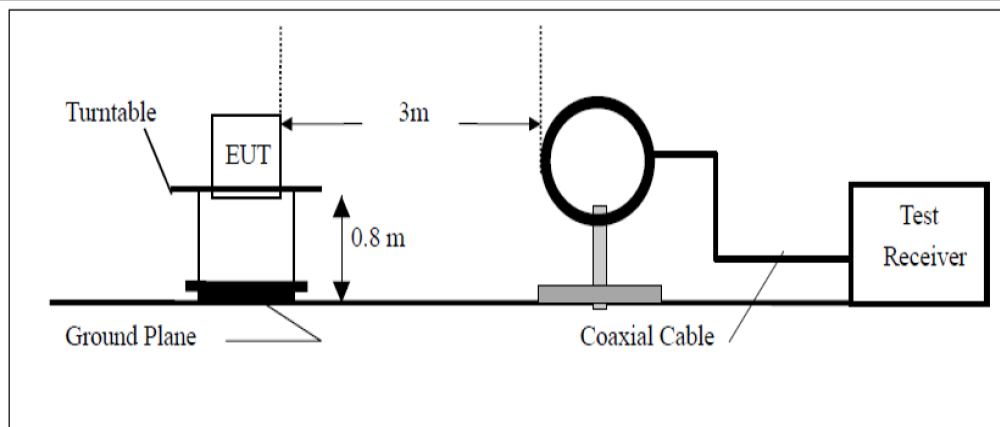
Prepared by:



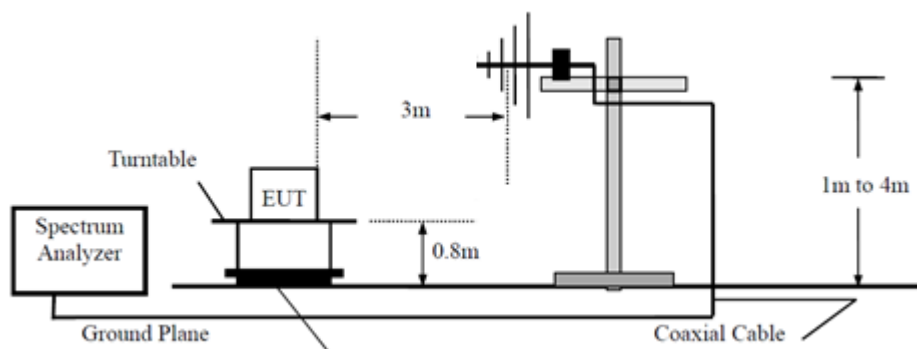
Eric LI
EMC Senior Project Engineer

7 Test Setups

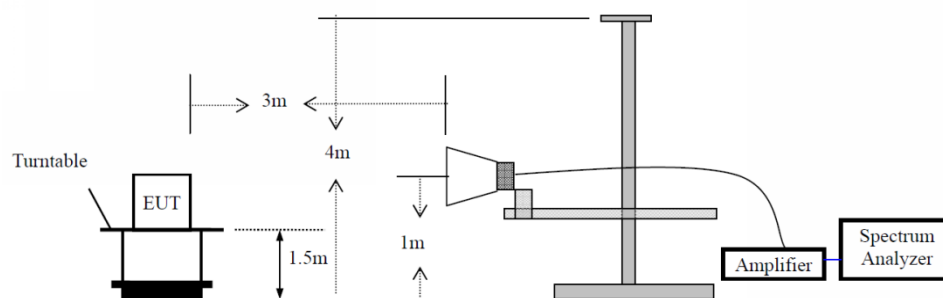
7.1 Radiated test setups 9kHz-30MHz



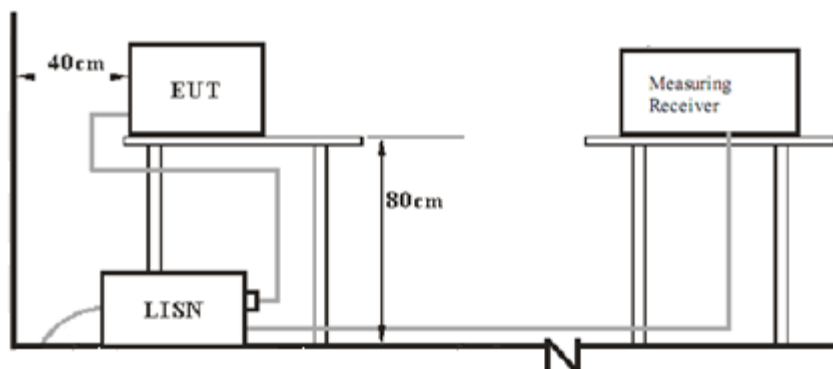
7.2 Radiated test setups Below 1GHz



7.3 Radiated test setups Above 1GHz



7.4 AC Power Line Conducted Emission



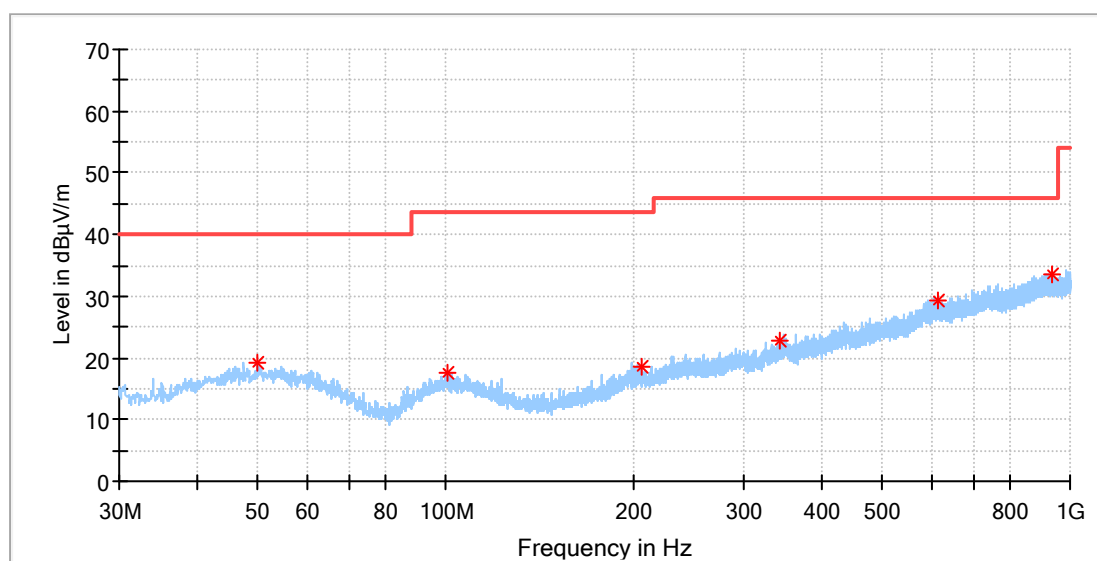
8 Emission Test Results

8.1 Radiated Emission

EUT: HG06061A-US-RX
 Op Condition: 433MHz Rx mode, with full USB load
 Test Specification: FCC 15.109
 Comment: Battery power: 3V DC, 30MHz-6GHz,
 Antenna: Horizontal

Test Result

☒ Passed

☐ Not Passed


Frequency (MHz)	MaxPeak (dBμV/m)	Limit (dBμV/m)	Margin (dB)
49.885000	19.17	40.00	-20.83
100.810000	17.74	43.50	-25.76
205.570000	18.63	43.50	-24.87
343.734375	22.95	46.00	-23.05
615.940625	29.36	46.00	-16.64
937.010625	33.65	46.00	-12.35

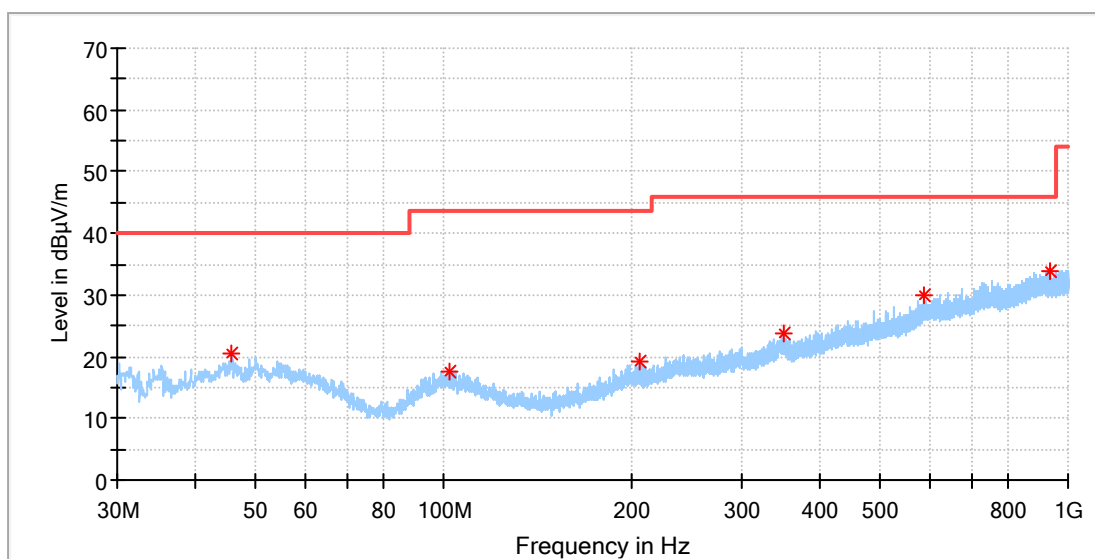
Remark: No obvious emission can be measured in the range of 1-5GHz.

Radiated Emission

EUT: HG06061A-US-RX
 Op Condition: 433MHz Rx mode, with full USB load
 Test Specification: FCC 15.109
 Comment: Battery power:3V DC, 30MHz-1GHz,
 Antenna: Vertical

Test Result

☒ Passed
☐ Not Passed



Frequency (MHz)	MaxPeak (dBµV/m)	Limit (dBµV/m)	Margin (dB)
45.762500	20.39	40.00	-19.61
102.204375	17.69	43.50	-25.81
205.933750	19.30	43.50	-24.20
351.555000	23.91	46.00	-22.09
589.508125	29.83	46.00	-16.17
938.708125	33.72	46.00	-12.28

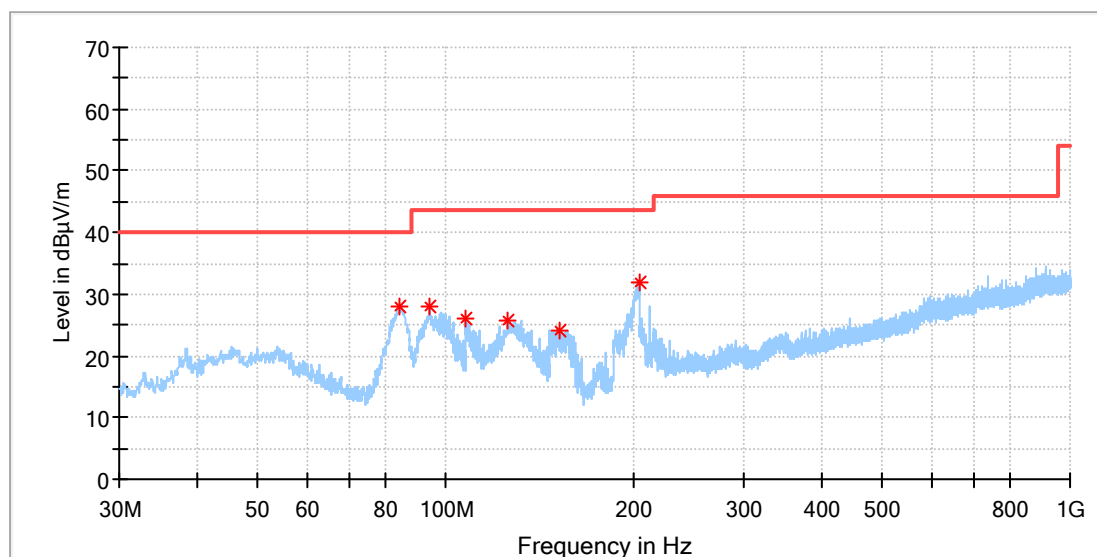
Remark: No obvious emission can be measured in the range of 1-5GHz.

Radiated Emission

EUT: HG06061A-US-RX
 Op Condition: 433MHz Rx mode, with full USB load
 Test Specification: FCC 15.109
 Comment: Adapter power: 120V AC, 30MHz-1GHz,
 Antenna: Horizontal

Test Result

☒ Passed
☐ Not Passed



Frequency (MHz)	MaxPeak (dBμV/m)	Limit (dBμV/m)	Margin (dB)
84.380625	27.87	40.00	-12.13
93.959375	27.98	43.50	-15.52
107.600000	25.99	43.50	-17.51
125.666250	25.60	43.50	-17.90
152.341250	24.19	43.50	-19.31
204.357500	31.98	43.50	-11.52

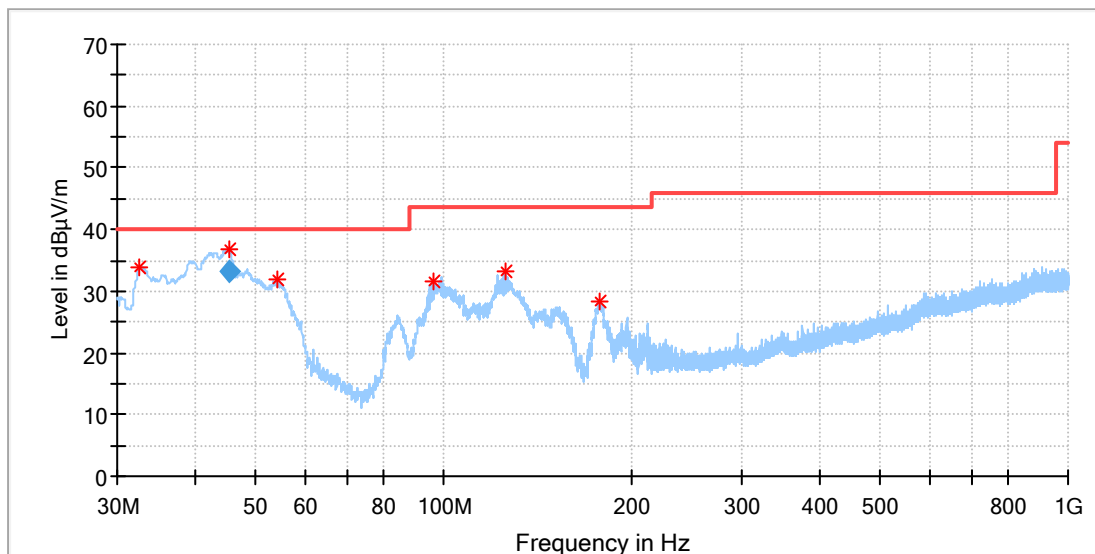
Remark: No obvious emission can be measured in the range of 1-5GHz.

Radiated Emission

EUT: HG06061A-US-RX
 Op Condition: 433MHz Rx mode, with full USB load
 Test Specification: FCC 15.109
 Comment: Adapter power: 120V AC, 30MHz-1GHz,
 Antenna: Vertical

Test Result

☒ Passed
☐ Not Passed



Frequency (MHz)	MaxPeak (dBμV/m)	Limit (dBμV/m)	Margin (dB)
32.546250	33.95	40.00	-6.05
45.434063	36.64	40.00	-3.36
54.128750	31.81	40.00	-8.19
96.445000	31.51	43.50	-11.99
125.726875	33.06	43.50	-10.44
177.743125	28.32	43.50	-15.18

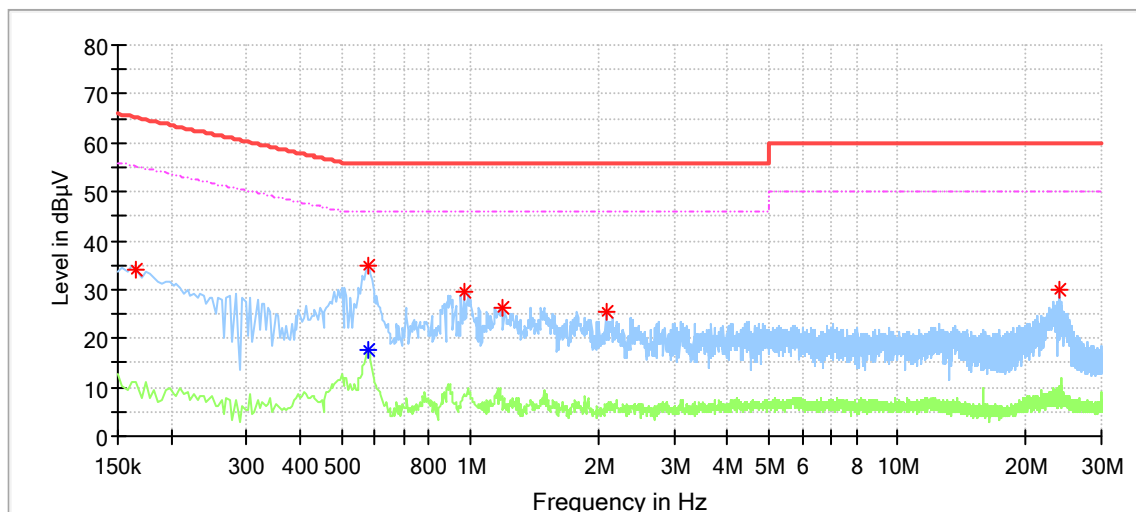
Frequency (MHz)	QuasiPeak (dBμV/m)	Limit (dBμV/m)	Margin (dB)
45.434063	33.25	40.00	-6.75

Remark: No obvious emission can be measured in the range of 1-5GHz.

8.2 Conducted Emission at AC Power line

EUT: HG06061A-US-RX
 Op Condition: 433MHz Rx mode, with full USB load
 Test Specification: FCC15.107
 Comment: Adapter power: 120V AC, L Line

Test Result

☒ Passed☐ Not Passed

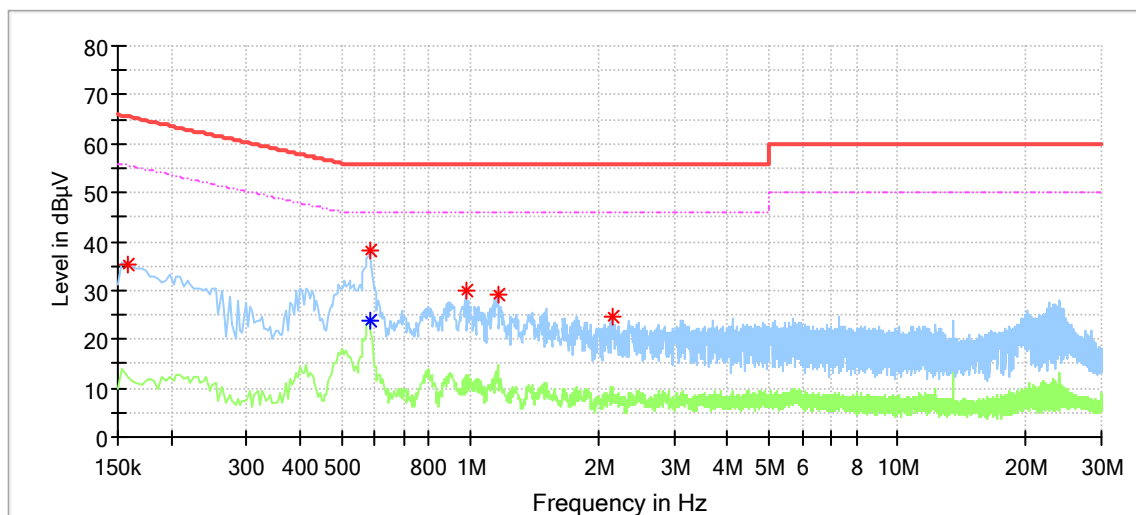
Frequency (MHz)	MaxPeak (dBμV)	Average (dBμV)	Limit (dBμV)	Margin (dB)
0.166000	34.22	---	65.16	-30.93
0.578000	---	17.45	46.00	-28.55
0.578000	34.91	---	56.00	-21.09
0.966000	29.44	---	56.00	-26.56
1.186000	26.42	---	56.00	-29.58
2.078000	25.38	---	56.00	-30.62
23.870000	29.88	---	60.00	-30.12

Conducted Emission at AC Power Line

EUT: HG06061A-US-RX
 Op Condition: 433MHz Rx mode, with full USB load
 Test Specification: FCC15.107
 Comment: Adapter power: 120V AC, N Line

Test Result

☒ Passed

☐ Not Passed


Frequency (MHz)	MaxPeak (dBμV)	Average (dBμV)	Limit (dBμV)	Margin (dB)
0.158000	35.40	---	65.57	-30.16
0.582000	38.05	---	56.00	-17.95
0.582000	---	23.88	46.00	-22.12
0.978000	29.98	---	56.00	-26.02
1.162000	29.05	---	56.00	-26.95
2.162000	24.68	---	56.00	-31.32

9 Appendix A - General Product Information

Declaration letter of model difference

To: TÜV SÜD HKG Ltd.

Attention:

From:

Date: February 12, 2020

Fax No:

Total Page (Cover Included): 1

Declaration Letter

Subject:

We:

Officially notify TÜV SÜD HKG Ltd. that the << HG06061B-US >> have the same technical construction including circuit diagram, PCB Layout, components and component layout, all electrical construction and mechanical construction, with << Wireless weather station >>, << HG06061A-US >>.

The difference lies only in outlook/ color & receiver frequency of the different models.

<<Additional Model >>: HG06061B-US

<<Main Test Model >>: HG06061A-US

<<Product>>: Wireless weather station

Applicant: LIDL US LLC

12-Feb, 2020

(Date)



(Applicant's authorized signature and company Chop)