

FCC - TEST REPORTReport Number : **60.792.19.009.01E01** Date of Issue : February 5, 2020Model : **HG06061A-US-RX, HG06061B-US-RX**Product Type : **Wireless weather station**Applicant : Lidl US, LLCAddress : 3500 S. Clark Street, Arlington, VA 22202, USAProduction Facility : AOK Electronic LimitedAddress : Tianxin Ind. District, Dahou, Xiegang, Dongguan, Guangdong, ChinaTest Result : **Positive** **Negative**Total pages including Appendices : 18

TÜV SÜD Certification and Testing (China) Co., Ltd. Shenzhen Branch is a subcontractor to TÜV SÜD Product Service GmbH according to the principles outlined in ISO 17025.

TÜV SÜD Certification and Testing (China) Co., Ltd. Shenzhen Branch reports apply only to the specific samples tested under stated test conditions. Construction of the actual test samples has been documented. It is the manufacturer's responsibility to assure that additional production units of this model are manufactured with identical electrical and mechanical components. The manufacturer/importer is responsible to the Competent Authorities in Europe for any modifications made to the production units which result in non-compliance to the relevant regulations. TÜV SÜD Certification and Testing (China) Co., Ltd. Shenzhen Branch shall have no liability for any deductions, inferences or generalizations drawn by the client or others from TÜV SÜD Certification and Testing (China) Co., Ltd. Shenzhen Branch issued reports.

This report is the confidential property of the client. As a mutual protection to our clients, the public and ourselves, extracts from the test report shall not be reproduced except in full without our written approval

1 Table of Contents

1 Table of Contents	2
2 Description of the Equipment Under Test.....	3
3 Summary of Test Standards.....	4
4 Details about the Test Laboratory	5
4.1 Test Equipment Site List	6
4.2 Measurement System Uncertainty	7
5 Summary of Test Results	8
6 General Remarks	9
7 Test Setups	10
7.1 Radiated test setups 9kHz-30MHz.....	10
7.2 Radiated test setups Below 1GHz	10
7.3 Radiated test setups Above 1GHz.....	10
7.4 AC Power Line Conducted Emission	11
8 Emission Test Results	12
8.1 Radiated Emission	12
8.2 Conducted Emission at AC Power line	16
9 Appendix A - General Product Information.....	18

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: 2AJ90-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	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
FCC Title 47 Part 15.107 Conduct Emission 150kHz-30MHz	16-17	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

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.

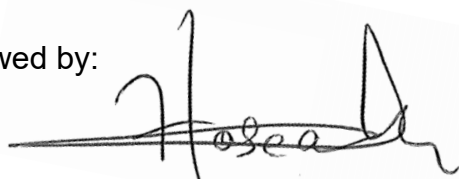
□ - **Does not** fulfill the general approval requirements.

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

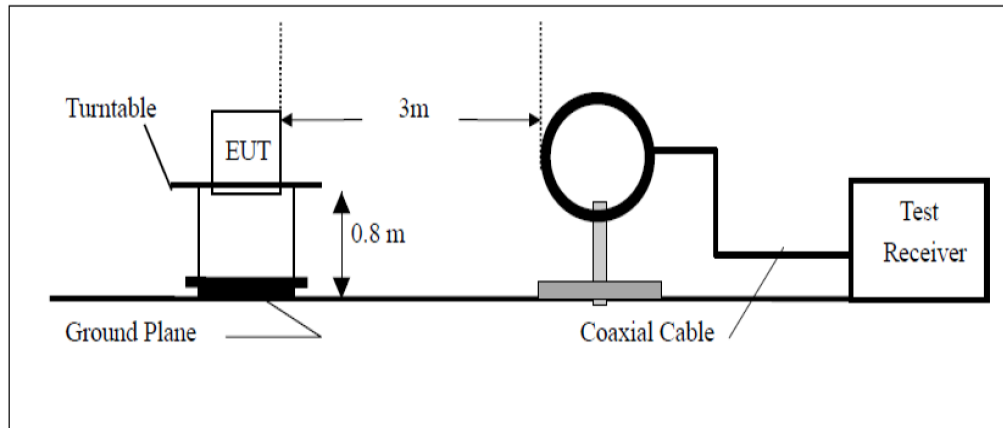
Prepared by:



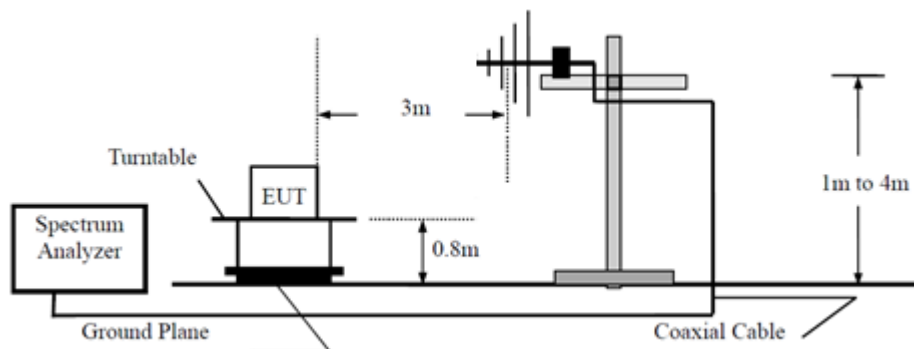
Eric LI
EMC Senior Project Engineer

7 Test Setups

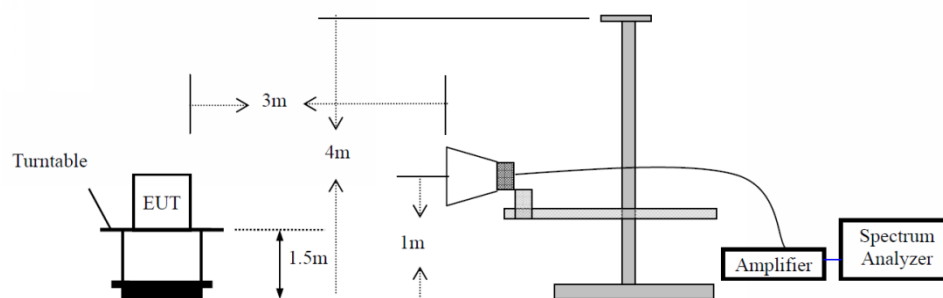
7.1 Radiated test setups 9kHz-30MHz



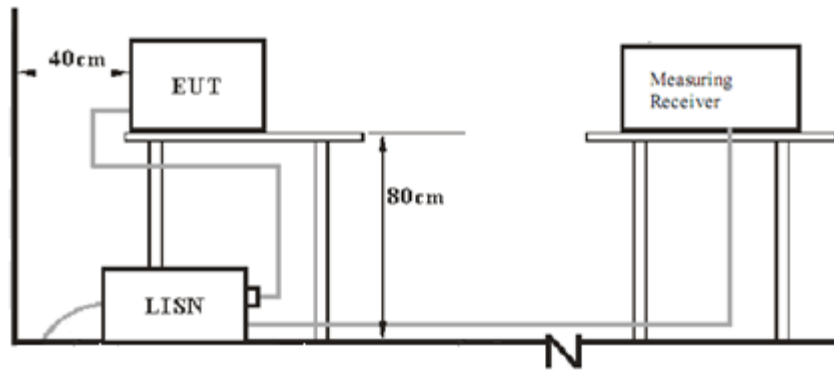
7.2 Radiated test setups Below 1GHz



7.3 Radiated test setups Above 1GHz



7.4 AC Power Line Conducted Emission

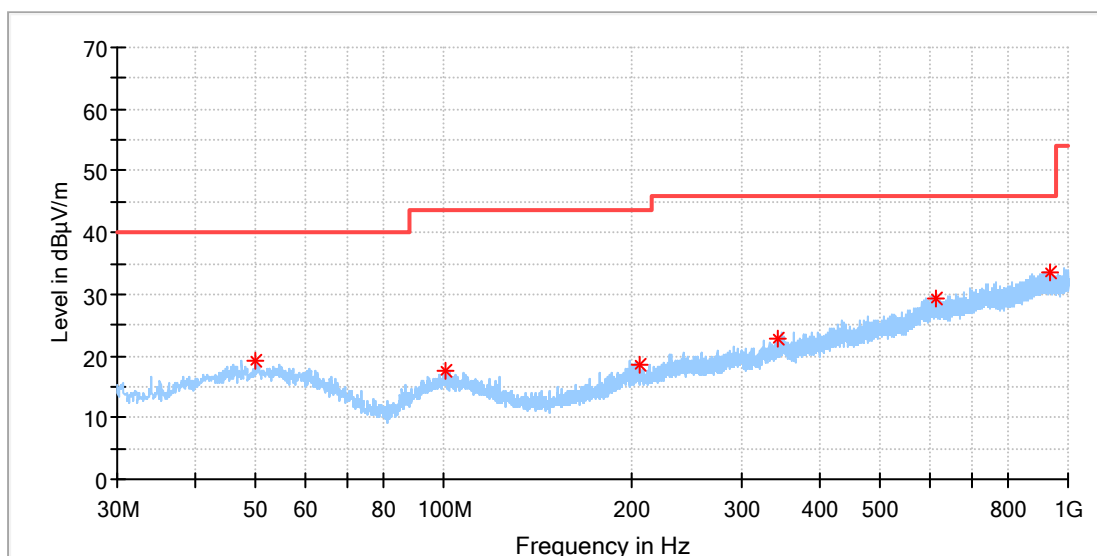


8 Emission Test Results

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	
<input checked="" type="checkbox"/>	Passed
<input type="checkbox"/>	Not Passed



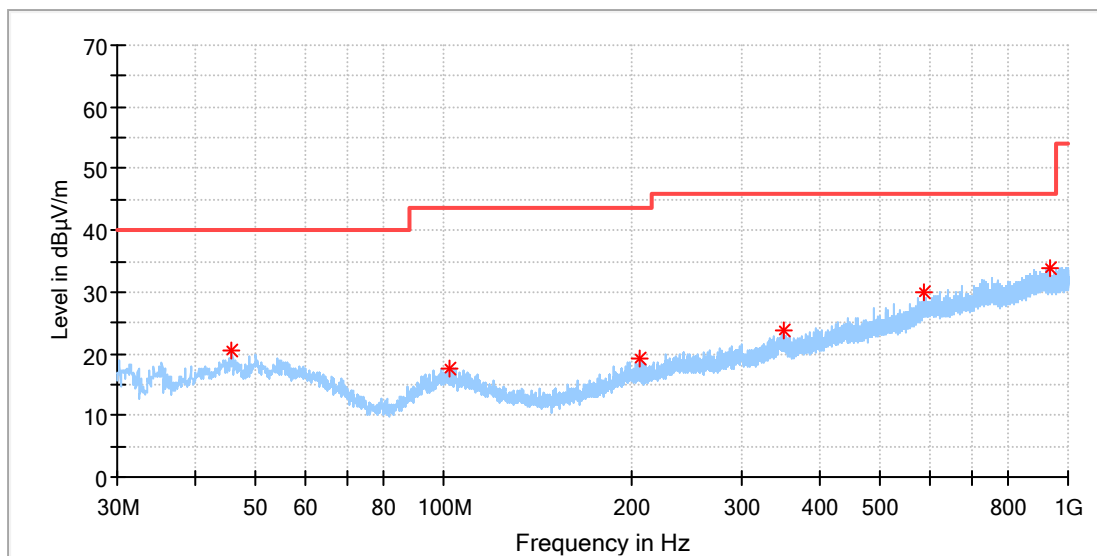
Frequency (MHz)	MaxPeak (dBµV/m)	Limit (dBµV/m)	Margin (dB)
49.885000	19.17	40.00	-20.83
100.810000	17.74	43.50	-25.76
205.570000	18.63	43.50	-24.87
343.734375	22.95	46.00	-23.05
615.940625	29.36	46.00	-16.64
937.010625	33.65	46.00	-12.35

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	
<input checked="" type="checkbox"/>	Passed
<input type="checkbox"/>	Not Passed



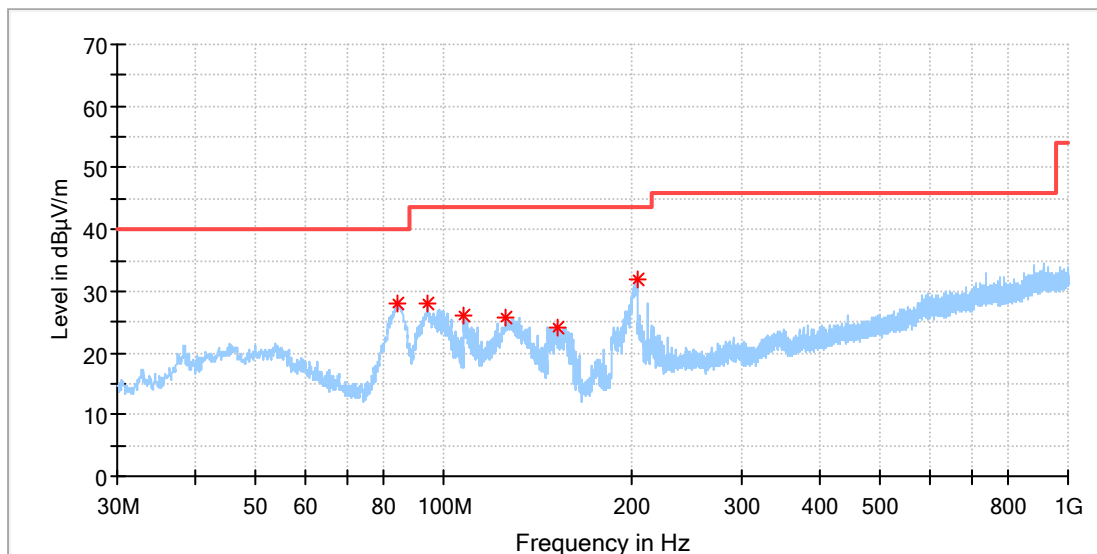
Frequency (MHz)	MaxPeak (dBµV/m)	Limit (dBµV/m)	Margin (dB)
45.762500	20.39	40.00	-19.61
102.204375	17.69	43.50	-25.81
205.933750	19.30	43.50	-24.20
351.555000	23.91	46.00	-22.09
589.508125	29.83	46.00	-16.17
938.708125	33.72	46.00	-12.28

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	
<input checked="" type="checkbox"/>	Passed
<input type="checkbox"/>	Not Passed



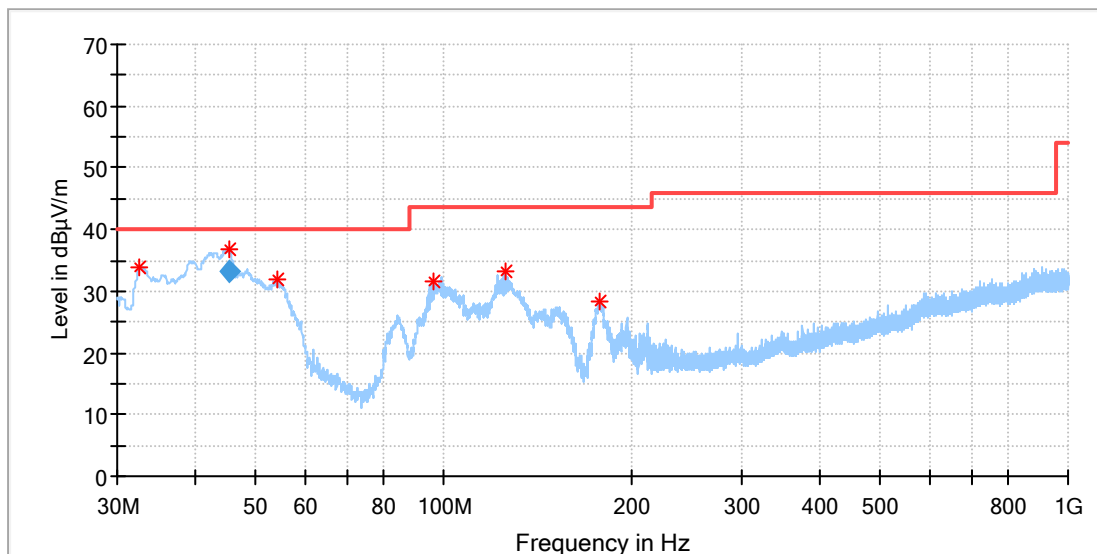
Frequency (MHz)	MaxPeak (dBµV/m)	Limit (dBµV/m)	Margin (dB)
84.380625	27.87	40.00	-12.13
93.959375	27.98	43.50	-15.52
107.600000	25.99	43.50	-17.51
125.666250	25.60	43.50	-17.90
152.341250	24.19	43.50	-19.31
204.357500	31.98	43.50	-11.52

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	
<input checked="" type="checkbox"/>	Passed
<input type="checkbox"/>	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

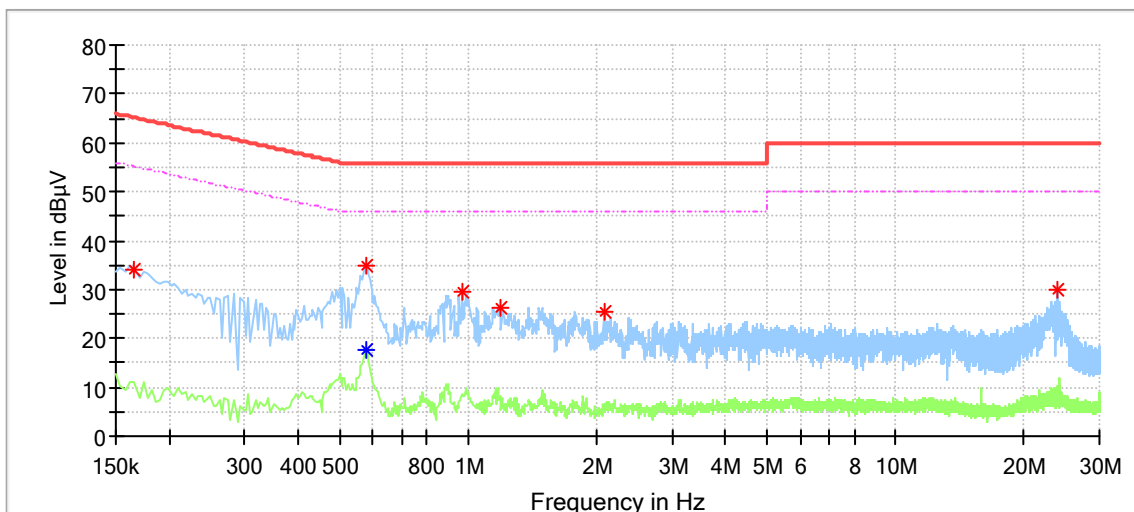
Frequency (MHz)	QuasiPeak (dBµV/m)	Limit (dBµV/m)	Margin (dB)
45.434063	33.25	40.00	-6.75

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	
<input checked="" type="checkbox"/>	Passed
<input type="checkbox"/>	Not Passed

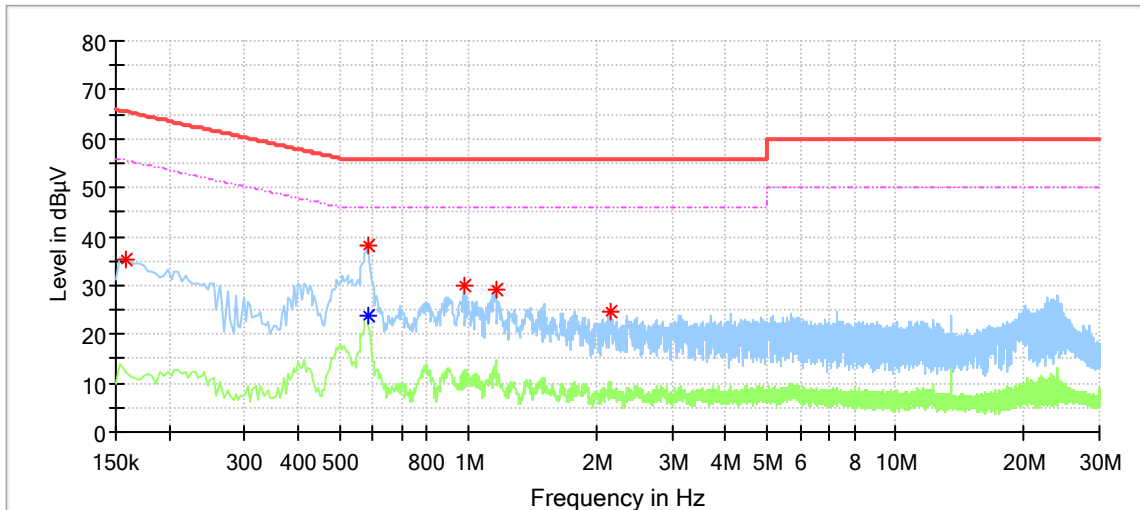


Frequency (MHz)	MaxPeak (dBµV)	Average (dBµV)	Limit (dBµV)	Margin (dB)
0.166000	34.22	---	65.16	-30.93
0.578000	---	17.45	46.00	-28.55
0.578000	34.91	---	56.00	-21.09
0.966000	29.44	---	56.00	-26.56
1.186000	26.42	---	56.00	-29.58
2.078000	25.38	---	56.00	-30.62
23.870000	29.88	---	60.00	-30.12

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	
<input checked="" type="checkbox"/>	Passed
<input type="checkbox"/>	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)