

FCC Test Report

Report No.: AGC07716190801FE05A

FCC ID : 2AFENXK03S

APPLICATION PURPOSE: Class II Equipment

PRODUCT DESIGNATION : LED Projector

BRAND NAME : XGIMI

XK03S, XK04S, XK05S, XK06S, XK07S, XK08S, XK09S, XK10S,

XK11S, XK12S, XK13S, XK14S, XK15S, XK16S, XK17S, XK18S,

XK19S, XK20S, XK21S, XK22S, XK23S, XK24S, XK25S, XK26S,

XK27S, XK28S, XK29S, XK30S, XK31S, XK32S

APPLICANT : Chengdu XGIMI Technology Co., Ltd.

DATE OF ISSUE : Jan. 09, 2021

STANDARD(S)

MODEL NAME

TEST PROCEDURE(S) : FCC Part 15.247

REPORT VERSION: V1.0

Attestation of Global Compliance (Shenzhen) Co., Ltd

AGC CANCELL

Any report having not been signed by authorized approver, or having been altered without authorization, or having not been stamped by the Dedicated Fest Stamp" is deemed to be invalid. Copying or excerpting portion of, or altering the content of the report is not permitted without the written authorization of AGC presented in the report apply only to the tested sample. Any objections to report issued by AGC should be submitted to AGC within 15day after the issuance Further enquiry of validity or verification of the test report should be addressed to AGC by aqc@aqc-cert.com.



Report No.: AGC07716190801FE05A

Page 2 of 45

REPORT REVISE RECORD

Report Version	Revise Time	Issued Date	Valid Version	Notes
V1.0	1	Jan. 09, 2021	Valid	Re-certification Report

Note:

The original test report Ref. No. AGC07716190801FE05 dated Sep. 16, 2019, was modified on Jan. 09, 2021 to include the following changes:

- Changed the name of the Applicant
- Changed the name of the Manufacturer
- Changed the name and address of the Factory
- Changed the battery
- -Change the main chip packaging substrate;
- -Change the photos of EUT;
- -So the Conducted Emission and Radiated Emission had been tested for the Class II permissive change.

Any report having not been signed by authorized approver, or having been altered without authorization, or having not been stamped by the Bedicated Festing/Inspection Stamp" is deemed to be invalid. Copying or excerpting portion of, or altering the content of the report is not permitted without the written authorization of AGC he test results presented in the report apply only to the tested sample. Any objections to report issued by AGC should be submitted to AGC within 15day after the issuence of the test report. Further enquiry of validity or verification of the test report should be addressed to AGC by agc@agc-cert.com.



TABLE OF CONTENTS

1. VERIFICATION OF CONFORMITY	
2. GENERAL INFORMATION	
2.1. PRODUCT DESCRIPTION	5
2.2. TABLE OF CARRIER FREQUENCYS	
2.3. IEEE 802.11N MODULATION SCHEME	6
2.4. RELATED SUBMITTAL(S) / GRANT (S)	6
2.5. TEST METHODOLOGY	
2.6. SPECIAL ACCESSORIES	6
2.7. EQUIPMENT MODIFICATIONS	
3. MEASUREMENT UNCERTAINTY	
4. DESCRIPTION OF TEST MODES	
5. SYSTEM TEST CONFIGURATION	
5.1. CONFIGURATION OF EUT SYSTEM	9
5.2. EQUIPMENT USED IN EUT SYSTEM	9
5.3. SUMMARY OF TEST RESULTS	
6. TEST FACILITY	10
7. RADIATED EMISSION	11
7.1. MEASUREMENT PROCEDURE	
7.2. TEST SETUP	12
7.3. LIMITS AND MEASUREMENT RESULT	13
7.4. TEST RESULT	
8. FCC LINE CONDUCTED EMISSION TEST	19
8.1. LIMITS OF LINE CONDUCTED EMISSION TEST	19
8.2. BLOCK DIAGRAM OF LINE CONDUCTED EMISSION TEST	19
8.3. PRELIMINARY PROCEDURE OF LINE CONDUCTED EMISSION TEST	20
8.4. FINAL PROCEDURE OF LINE CONDUCTED EMISSION TEST	20
8.5. TEST RESULT OF LINE CONDUCTED EMISSION TEST	21
APPENDIX A: PHOTOGRAPHS OF TEST SETUP	23

Any report having not been signed by authorized approver, or having been altered without authorization, or having not been stamped by the Bedicated Pesting/Inspection Stamp" is deemed to be invalid. Copying or excerpting portion of, or altering the content of the report is not permitted without the writter authorization of AGC. The test results presented in the report apply only to the tested sample. Any objections to report issued by AGC should be submitted to AGC within 15day after the issuance of the test report. Further enquiry of validity or verification of the test report should be addressed to AGC by agc@agc-cert.com.



1. VERIFICATION OF CONFORMITY

Applicant	Chengdu XGIMI Technology Co., Ltd.
Address	Building Building A4, Tianfu Software Park, High-tech zone, Chengdu, Sichuan, China 610041
Manufacturer	Chengdu XGIMI Technology Co., Ltd.
Address	Building A4, Tianfu Software Park, High-tech zone, Chengdu, Sichuan, China 610041
Factory 1	TCL KING ELECTRICAL APPLIANCE (CHENG DU) CO., LTD.
Address	No.18 Kexin Road, Hi-Tech Development Zone (West Park), Chengdu, Sichuan
Factory 2	Yibin XGIMI Optoelectronics Co., Ltd.
Address	A3, Intelligent Terminal Industrial Park, Cuiping Disrict, Yibin City, Sichuan Province P.R.China Room 328, Enterprise Service Center, No.17, West Section 3, Changjiang North Road, Lingang Economic Development Zone, Yibin City, Sichuan Province P.R. China
Product Designation	LED Projector
Brand Name	XGIMI
Test Model	XK03S
Series Model	XK04S, XK05S, XK06S, XK07S, XK08S, XK09S, XK10S, XK11S, XK12S, XK13S, XK14S, XK15S, XK16S, XK17S, XK18S, XK19S, XK20S, XK21S, XK22S, XK23S, XK24S, XK25S, XK26S, XK27S, XK28S, XK29S, XK30S, XK31S, XK32S
Difference description	All the same except for the model name and different appearance color
Date of test	Dec. 04, 2020 to Jan. 08, 2021
Deviation	None
Condition of Test Sample	Normal
Test Result	Pass
Report Template	AGCRT-US-BGN/RF

We hereby certify that:

The above equipment was tested by Attestation of Global Compliance (Shenzhen) Co., Ltd. The test data, data evaluation, test procedures, and equipment configurations shown in this report were made in accordance with the procedures given in ANSI C63.10 (2013) and the energy emitted by the sample EUT tested as described in this report is in compliance with radiated emission limits of FCC Rules Part 15.247.

Prepared By	Sky dong	
	Sky Dong (Project Engineer)	Jan. 08, 2021
Reviewed By	Max Zhang	8
C CC	Max Zhang (Reviewer)	Jan. 09, 2021
Approved By	Formere	
GC -	Forrest Lei (Authorized Officer)	Jan. 09, 2021

Any report having not been signed by authorized approver, or having been altered without authorization, or having not been stamped by the Bedicated Festing/Inspection Stamp" is deemed to be invalid. Copying or excerpting portion of, or altering the content of the report is not permitted without the written authorization of AGC. The test results presented in the report apply only to the tested sample. Any objections to report issued by AGC should be submitted to AGC within 15day after the issuance of the test report. Further enquiry of validity or verification of the test report should be addressed to AGC by agc@agc-cert.com.



2. GENERAL INFORMATION

2.1. PRODUCT DESCRIPTION

The EUT is designed as "LED Projector". It is designed by way of utilizing the DSSS and OFDM technology to achieve the system operation.

A major technical description of EUT is described as following

Operation Frequency	2.412 GHz~2.462GHz	
Output Power	IEEE 802.11b:18.54dBm; IEEE 802.11g:15.99dBm; IEEE 802.11n(20):16.44dBm; IEEE 802.11n(40):16.27dBm	
Modulation	DSSS(DBPSK/DQPSK/CCK);OFDM(BPSK/QPSK/16-QAM/64-QAM)	
Number of channels	11	
Hardware Version	V03	
Software Version	V1.0.0	
Antenna Designation	FPC Antenna	
Number of transmit chain	2(802.11b/g/n20/n40 all used two antennas,but 802.11b/g support SISO and 802.11n20/n40 support MIMO)	
Antenna Gain	Ant 1: 2.85dBi Ant 2: 3.76dBi	
Power Supply DC 14.4V by battery or DC 19V by adapter		

2.2. TABLE OF CARRIER FREQUENCYS

Frequency Band	Channel Number	Frequency
100 40	1	2412 MHZ
	2	2417 MHZ
2C 2	3	2422 MHZ
30	4	2427 MHZ
	5	2432 MHZ
2400~2483.5MHZ	6	2437 MHZ
100	7	2442 MHZ
8	8	2447 MHZ
	9	2452 MHZ
S CO	10	2457 MHZ
0	11	2462 MHZ

Note: For 20MHZ bandwidth system use Channel 1 to Channel 11, For 40MHZ bandwidth system use Channel 3 to Channel 9

Any report having not been signed by authorized approver, or having been altered without authorization, or having not been stamped by the bedicated restrou/Inspection Stamp" is deemed to be invalid. Copying or excerpting portion of, or altering the content of the report is not permitted without the written authorization of AGC. The test results presented in the report apply only to the tested sample. Any objections to report issued by AGC should be submitted to AGC within 15days after the issuance of the test report. Further enquiry of validity or verification of the test report should be addressed to AGC by agc@agc-cert.com.



Report No.: AGC07716190801FE05A

Page 6 of 45

2.3. IEEE 802.11N MODULATION SCHEME

MCS Index	Nss	Modulation R	R NBPSC	NCBPS		NDBPS		Data rate(Mbps) 800nsGl		
					20MHz	40MHz	20MHz	40MHz	20MHz	40MHz
0	1	BPSK	1/2	1	52	108	26	54	6.5	13.5
1	1	QPSK	1/2	2	104	216	52	108	13.0	27.0
2	1	QPSK	3/4	2	104	216	78	162	19.5	40.5
3	1	16-QAM	1/2	4	208	432	104	216	26.0	54.0
4	1	16-QAM	3/4	4	208	432	156	324	39.0	81.0
5	1	64-QAM	2/3	6	312	648	208	432	52.0	108.0
6	1	64-QAM	3/4	6	312	648	234	489	58.5	121.5
7	<u></u> 1	64-QAM	5/6	6	312	648	260	540	65.0	135.0

Symbol	Explanation		
NSS	Number of spatial streams		
R	Code rate		
NBPSC	Number of coded bits per single carrier		
NCBPS	Number of coded bits per symbol		
NDBPS	Number of data bits per symbol		
GI	Guard interval		

2.4. RELATED SUBMITTAL(S) / GRANT (S)

This submittal(s) (test report) is intended for **FCC ID**: **2AFENXK03S** filing to comply with the FCC Part 15 requirements.

2.5. TEST METHODOLOGY

KDB 558074 D01 15.247 Meas Guidance v05: Guidance for compliance measurements on Digital transmission system, frequency hopping spread spectrum system, and hybrid system devices operating under section 15.247 of the FCC rules

ANSI C63.10:2013: American National Standard for Testing Unlicensed Wireless Devices

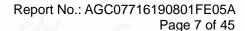
2.6. SPECIAL ACCESSORIES

Refer to section 5.2.

2.7. EQUIPMENT MODIFICATIONS

Not available for this EUT intended for grant.

Any report having not been signed by authorized approver, or having been altered without authorization, or having not been stamped by the Bedicated Pestud/Inspection Stamp" is deemed to be invalid. Copying or excerpting portion of, or altering the content of the report is not permitted without the written authorization of AGC. The test results presented in the report apply only to the tested sample. Any objections to report issued by AGC should be submitted to AGC within 15day after the issuance of the test report. Further enquiry of validity or verification of the test report should be addressed to AGC by agc@agc~cert.com.





3. MEASUREMENT UNCERTAINTY

The uncertainty is calculated using the methods suggested in the "Guide to the Expression of Uncertainty in measurement" (GUM) published by CISPR and ANSI.

- Uncertainty of Conducted Emission, Uc = ±3.2 dB
- Uncertainty of Radiated Emission below 1GHz, Uc = ±3.9 dB
- Uncertainty of Radiated Emission above 1GHz, Uc = ±4.8 dB

Any report having not been signed by authorized approver, or having been altered without authorization, or having not been stamped by the Bedicated Restrict/Inspection Stamp" is deemed to be invalid. Copying or excerpting portion of, or altering the content of the report is not permitted without the written authorization of AGC. The test results presented in the report apply only to the tested sample. Any objections to report issued by AGC should be submitted to AGC within 15day after the issuence of the test report. Further enquiry of validity or verification of the test report should be addressed to AGC by agc@agc-cert.com.



Report No.: AGC07716190801FE05A

Page 8 of 45

4. DESCRIPTION OF TEST MODES

NO.	TEST MODE DESCRIPTION
1	Low channel TX
2	Middle channel TX
3	High channel TX
4	Normal operating

Note:

Transmit by 802.11b with Date rate (1/2/5.5/11)

Transmit by 802.11g with Date rate (6/9/12/18/24/36/48/54)

Transmit by 802.11n (20MHz) with Date rate (6.5/13/19.5/26/39/52/58.5/65)

Transmit by 802.11n (40MHz) with Date rate (13.5/27/40.5/54/81/108/121.5/135)

Note:

- The EUT has been set to operate continuously on the lowest, middle and highest operation frequency Individually, and the eut is operating at its maximum duty cycle>or equal 98%
- 2. All modes under which configure applicable have been tested and the worst mode test data recording in the test report, if no other mode data.
- 3. The test software is the SecureCRTSecure_V7.0.0.326 which can set the EUT into the individual test

Any report having not been signed by authorized approver, or having been altered without authorization, or having not been stamped by the Bedicated Pestud/Inspection Stamp" is deemed to be invalid. Copying or excerpting portion of, or altering the content of the report is not permitted without the written authorization of AGC. The test results presented in the report apply only to the tested sample. Any objections to report issued by AGC should be submitted to AGC within 15day after the issuance of the test report. Further enquiry of validity or verification of the test report should be addressed to AGC by agc@agc~cert.com.



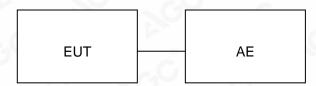
Report No.: AGC07716190801FE05A

Page 9 of 45

5. SYSTEM TEST CONFIGURATION

5.1. CONFIGURATION OF EUT SYSTEM

Configure 1:



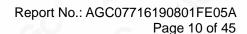
5.2. EQUIPMENT USED IN EUT SYSTEM

Item	Equipment Model No.		ID or Specification	Remark
1	LED Projector	XK03S	2AFENXK03S	EUT
2	Adapter	HKA06519034-6J	Input: AC 100-240V, 50/60Hz, 1.5A Output: DC 19V==3.42A	Market with EUT
3	Loudspeaker			AE
4	PC	Xiaomi	Air 13.3	AE

5.3. SUMMARY OF TEST RESULTS

FCC RULES	DESCRIPTION OF TEST	RESULT
§15.209	Radiated Emission	Compliant
§15.207	Line Conduction Emission	Compliant

Any report having not been signed by authorized approver, or having been altered without authorization, or having not been stamped by the Bedicated Pesting/Inspection Stamp" is deemed to be invalid. Copying or excerpting portion of, or altering the content of the report is not permitted without the writter authorization of AGC. The test results presented in the report apply only to the tested sample. Any objections to report issued by AGC should be submitted to AGC within 15day after the issuance of the test report. Further enquiry of validity or verification of the test report should be addressed to AGC by agc@agc-cert.com.





6. TEST FACILITY

Test Site	Attestation of Global Compliance (Shenzhen) Co., Ltd			
Location	1-2/F, Building 19, Junfeng Industrial Park, Chongqing Road, Heping Community, Fuhai Street, Bao'an District, Shenzhen, Guangdong, China			
Designation Number	CN1259			
FCC Test Firm Registration Number	975832			
A2LA Cert. No.	5054.02			
Description	Attestation of Global Compliance(Shenzhen) Co., Ltd is accredited by A2LA			

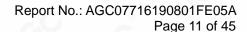
TEST EQUIPMENT OF CONDUCTED EMISSION TEST

Equipment	Manufacturer	Model	S/N	Cal. Date	Cal. Due
TEST RECEIVER	R&S	ESPI	101206	May 15, 2020	May 14, 2021
LISN	R&S	ESH2-Z5	100086	Jul. 03,2020	Jul. 02,2021
Test software	R&S	ES-K1 (Ver V1.71)	N/A	N/A	N/A

TEST EQUIPMENT OF RADIATED EMISSION TEST

Equipment	Manufacturer	Model	S/N	Cal. Date	Cal. Due
TEST RECEIVER	R&S	ESCI	10096	May 15, 2020	May 14, 2021
EXA Signal Analyzer	Aglient	N9010A	MY53470504	Dec. 07, 2020	Dec. 06, 2021
2.4GHz Filter	EM Electronics	2400-2500MHz	N/A	Mar. 23, 2020	Mar. 22, 2022
Attenuator	ZHINAN	E-002	N/A	Sep. 03, 2020	Sep. 02, 2022
Horn antenna	SCHWARZBECK	BBHA 9170	#768	Sep. 21, 2019	Sep. 20, 2021
Active loop antenna (9K-30MHz)	ZHINAN	ZN30900C	18051	May 22, 2020	May 21, 2022
Double-Ridged Waveguide Horn	ETS LINDGREN	3117	00034609	May 17, 2019	May 16, 2021
Broadband Preamplifier	ETS LINDGREN	3117PA	00225134	Sep. 03, 2020	Sep. 02, 2022
ANTENNA	SCHWARZBECK	VULB9168	494	Jan. 09, 2019	Jan. 08, 2021
Test software	FARA	EZ-EMC (Ver RA-03A)	N/A	N/A	N/A

Any report having not been signed by authorized approver, or having been altered without authorization, or having not been stamped by the Bedicated Pesting/Inspection Stamp" is deemed to be invalid. Copying or excerpting portion of, or altering the content of the report is not permitted without the written appropriation of AGE. The test results presented in the report apply only to the tested sample. Any objections to report issued by AGC should be submitted to AGC within 15day after the issuance of the test report. Further enquiry of validity or verification of the test report should be addressed to AGC by agc@agc-cert.com.





7. RADIATED EMISSION

7.1. MEASUREMENT PROCEDURE

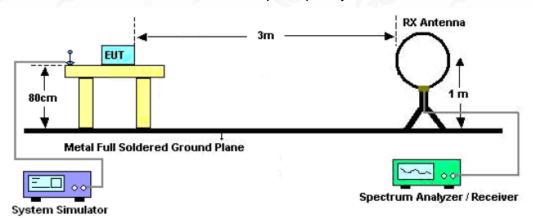
- The EUT was placed on the top of the turntable 0.8 or 1.5 meter above ground. The phase center of the receiving antenna mounted on the top of a height-variable antenna tower was placed 3 meters far away from the turntable.
- 2. Power on the EUT and all the supporting units. The turntable was rotated by 360 degrees to determine the position of the highest radiation.
- 3. The height of the broadband receiving antenna was varied between one meter and four meters above ground to find the maximum emissions field strength of both horizontal and vertical polarization.
- 4. For each suspected emissions, the antenna tower was scan (from 1 M to 4 M) and then the turntable was rotated (from 0 degree to 360 degrees) to find the maximum reading.
- 5. Set the test-receiver system to Peak or CISPR quasi-peak Detect Function with specified bandwidth under Maximum Hold Mode.
- 6. For emissions above 1GHz, use 1MHz RBW and 3MHz VBW for peak reading. Place the measurement antenna away from each area of the EUT determined to be a source of emissions at the specified measurement distance, while keeping the measurement antenna aimed at the source of emissions at each frequency of significant emissions, with polarization oriented for maximum response. The measurement antenna may have to be higher or lower than the EUT, depending on the radiation pattern of the emission and staying aimed at the emission source for receiving the maximum signal. The final measurement antenna elevation shall be that which maximizes the emissions. The measurement antenna elevation for maximum emissions shall be restricted to a range of heights of from 1 m to 4 m above the ground or reference ground plane.
- 7. When the radiated emissions limits are expressed in terms of the average value of the emissions, and pulsed operation is employed, the measurement field strength shall be determined by averaging over one complete pulse train, including blanking intervals, as long as the pulse train does not exceed 0.1 seconds. As an alternative (provided the transmitter operates for longer than 0.1 seconds) or in cases where the pulse train exceeds 0.1 seconds, the measured field strength shall be determined from the average absolute voltage during a 0.1 second interval during which the field strength is at its maximum values.
- 8.If the emissions level of the EUT in peak mode was 3 dB lower than the average limit specified, then testing will be stopped and peak values of EUT will be reported, otherwise, the emissions which do not have 3 dB margin will be repeated one by one using the quasi-peak method for below 1GHz.
- 9. For testing above 1GHz, the emissions level of the EUT in peak mode was lower than average limit (that means the emissions level in peak mode also complies with the limit in average mode), then testing will be stopped and peak values of EUT will be reported, otherwise, the emissions will be measured in average mode again and reported.
- 10. In case the emission is lower than 30MHz, loop antenna has to be used for measurement and the recorded data should be QP measured by receiver. High Low scan is not required in this case.

Any report having not been signed by authorized approver, or having been altered without authorization, or having not been stamped by the Bedicated Pestud/Inspection Stamp" is deemed to be invalid. Copying or excerpting portion of, or altering the content of the report is not permitted without the written authorization of AGC. The test results presented in the report apply only to the tested sample. Any objections to report issued by AGC should be submitted to AGC within 15days after the issuance of the test report. Further enquiry of validity or verification of the test report should be addressed to AGC by agc@agc-cert.com.

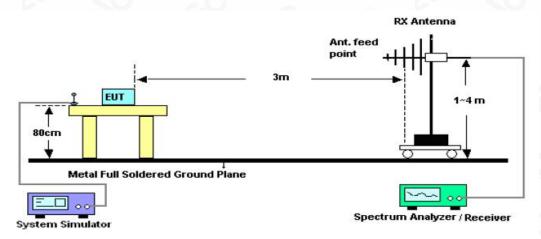


7.2. TEST SETUP

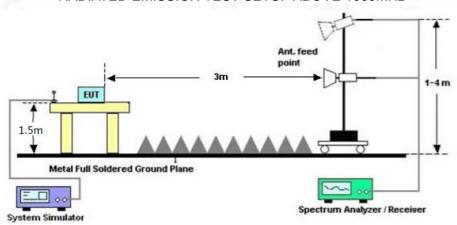
Radiated Emission Test-Setup Frequency Below 30MHz



RADIATED EMISSION TEST SETUP 30MHz-1000MHz



RADIATED EMISSION TEST SETUP ABOVE 1000MHz



Any report having not been signed by authorized approver, or having been altered without authorization, or having not been stamped by the coefficient of stamp" is deemed to be invalid. Copying or excerpting portion of, or altering the content of the report is not permitted without the writter pathorization of AGC, the test results presented in the report apply only to the tested sample. Any objections to report issued by AGC should be submitted to AGC within 15day after the issuance of the test report. Further enquiry of validity or verification of the test report should be addressed to AGC by agc@agc-cert.com.



Report No.: AGC07716190801FE05A

Page 13 of 45

7.3. LIMITS AND MEASUREMENT RESULT

15.209(a) Limit in the below table has to be followed

Frequencies (MHz)	Field Strength (micorvolts/meter)	Measurement Distance (meters)
0.009~0.490	2400/F(KHz)	300
0.490~1.705	24000/F(KHz)	30
1.705~30.0	30	30
30~88	100	3
88~216	150	3
216~960	200	3
Above 960	500	3

Note: All modes were tested For restricted band radiated emission, the test records reported below are the worst result compared to other modes.

7.4. TEST RESULT

RADIATED EMISSION BELOW 30MHZ

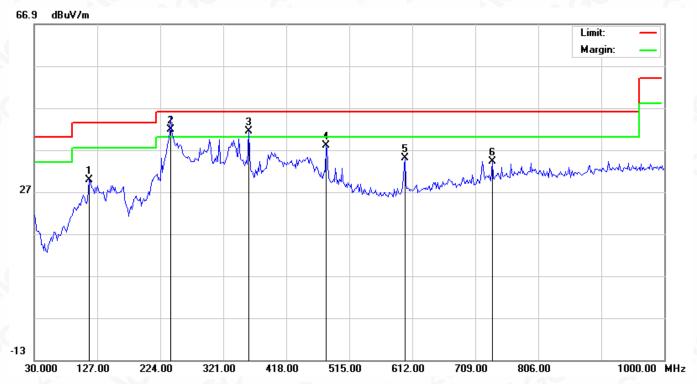
The amplitude of spurious emissions from 9kHz to 30MHz which are attenuated more than 20 dB below the permissible value need not be reported.

Any report having not been signed by authorized approver, or having been altered without authorization, or having not been stamped by the Bedicated Restriction Stamp" is deemed to be invalid. Copying or excerpting portion of, or altering the content of the report is not permitted without the writter exphorization of AGC. The test results presented in the report apply only to the tested sample. Any objections to report issued by AGC should be submitted to AGC within 15day after the issuance of the test report. Further enquiry of validity or verification of the test report should be addressed to AGC by agc@agc-cert.com.



RADIATED EMISSION BELOW 1GHZ

EUT	LED Projector	Model Name	XK03S
Temperature	21.8°C	Relative Humidity	58%
Pressure	960hPa	Test Voltage	Normal Voltage
Test Mode	802.11b with date rate 1 2412MHZ	Antenna	Horizontal



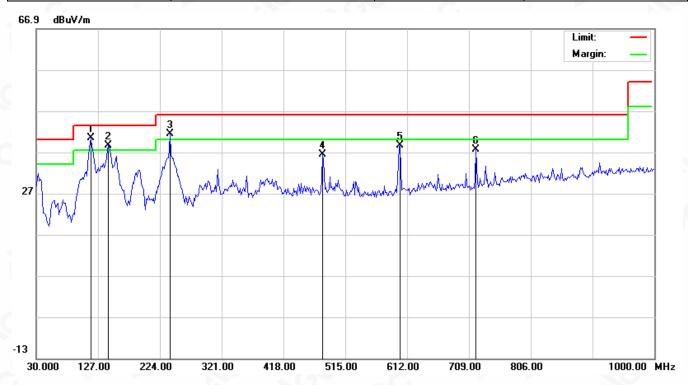
Mk	. Freq.	Reading Level	Correct Factor	Measure- ment	Limit	Over	
	MHz	dBuV	dB	dBuV/m	dBuV/m	dB	Detector
	114.0667	12.36	17.39	29.75	43.50	-13.75	peak
*	240.1667	23.14	18.66	41.80	46.00	-4.20	QP
ļ	359.8000	19.86	21.57	41.43	46.00	-4.57	peak
	479.4333	13.45	24.58	38.03	46.00	-7.97	peak
	600.6833	7.99	26.96	34.95	46.00	-11.05	peak
	734.8667	5.30	28.94	34.24	46.00	-11.76	peak
	*	MHz 114.0667 * 240.1667 ! 359.8000 479.4333 600.6833	Mk. Freq. Level MHz dBuV 114.0667 12.36 * 240.1667 23.14 ! 359.8000 19.86 479.4333 13.45 600.6833 7.99	Mk. Freq. Level Factor MHz dBuV dB 114.0667 12.36 17.39 * 240.1667 23.14 18.66 ! 359.8000 19.86 21.57 479.4333 13.45 24.58 600.6833 7.99 26.96	Mk. Freq. Level Factor ment MHz dBuV dB dBuV/m 114.0667 12.36 17.39 29.75 * 240.1667 23.14 18.66 41.80 ! 359.8000 19.86 21.57 41.43 479.4333 13.45 24.58 38.03 600.6833 7.99 26.96 34.95	Mk. Freq. Level Factor ment Limit MHz dBuV dB dBuV/m dBuV/m 114.0667 12.36 17.39 29.75 43.50 * 240.1667 23.14 18.66 41.80 46.00 ! 359.8000 19.86 21.57 41.43 46.00 479.4333 13.45 24.58 38.03 46.00 600.6833 7.99 26.96 34.95 46.00	Mk. Freq. Level Factor ment Limit Over MHz dBuV dB dBuV/m dBuV/m dB 114.0667 12.36 17.39 29.75 43.50 -13.75 * 240.1667 23.14 18.66 41.80 46.00 -4.20 ! 359.8000 19.86 21.57 41.43 46.00 -4.57 479.4333 13.45 24.58 38.03 46.00 -7.97 600.6833 7.99 26.96 34.95 46.00 -11.05

RESULT: PASS

Any report having not been signed by authorized approver, or having been altered without authorization, or having not been stamped by the Bedicated Pesting/Inspection Stamp" is deemed to be invalid. Copying or excerpting portion of, or altering the content of the report is not permitted without the writter authorization of AGC. The test results presented in the report apply only to the tested sample. Any objections to report issued by AGC should be submitted to AGC within 15day after the issuance of the test report. Further enquiry of validity or verification of the test report should be addressed to AGC by agc@agc-cert.com.



EUT	LED Projector	Model Name	XK03S
Temperature	21.8°C	Relative Humidity	58%
Pressure	960hPa	Test Voltage	Normal Voltage
Test Mode	802.11b with date rate 1 2412MHZ	Antenna	Vertical



No.	Mk	. Freq.	Reading Level	Correct Factor	Measure- ment	Limit	Over	
		MHz	dBuV	dB	dBuV/m	dBuV/m	dB	Detector
1	*	115.6833	22.77	17.55	40.32	43.50	-3.18	peak
2	İ	143.1667	19.44	19.22	38.66	43.50	-4.84	peak
3	İ	240.1667	22.76	18.66	41.42	46.00	-4.58	peak
4		479.4333	11.84	24.58	36.42	46.00	-9.58	peak
5		600.6833	11.71	26.96	38.67	46.00	-7.33	peak
6		720.3167	9.04	28.61	37.65	46.00	-8.35	peak

RESULT: PASS

Note:

- 1. Factor=Antenna Factor + Cable loss, Margin=Measurement-Limit.
- 2. The "Factor" value can be calculated automatically by software of measurement system.
- 3. All test modes had been pre-tested. The 802.11b at low channel is the worst case and recorded in the report.

Any report having not been signed by authorized approver, or having been altered without authorization, or having not been stamped by the Dedicated Festiva/Inspection Stamp" is deemed to be invalid. Copying or excerpting portion of, or altering the content of the report is not permitted without the written authorization of AGC where the test results presented in the report apply only to the tested sample. Any objections to report issued by AGC should be submitted to AGC within 15days after the issuence of the test report. Further enquiry of validity or verification of the test report should be addressed to AGC by agc@agc-cert.com.

c/Inspection
The test results
the test report.



RADIATED EMISSION ABOVE 1GHZ

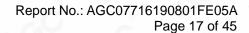
EUT	LED Projector	Model Name	XK03S
Temperature	21.8°C	Relative Humidity	58%
Pressure	960hPa	Test Voltage	Normal Voltage
Test Mode	802.11b with date rate 1 2412MHZ	Antenna	Horizontal

Frequency	Meter Reading	Factor	Emission Level	Limits	Margin	Value Type
(MHz)	(dBµV)	(dB)	(dBµV/m)	(dBµV/m)	(dB)	value Type
4824.066	48.04	3.72	51.76	74.00	-22.24	peak
4824.066	43.87	3.72	47.59	54.00	-6.41	AVG
7236.099	36.85	8.15	45.00	74.00	-29.00	peak
7236.099	32.83	8.15	40.98	54.00	-13.02	AVG
		8				8
			8			
Remark:		- (0			
actor = Ante	enna Factor + Ca	able Loss –	Pre-amplifier.			

EUT	LED Projector	Model Name	XK03S
Temperature	21.8°C	Relative Humidity	58%
Pressure	960hPa	Test Voltage	Normal Voltage
Test Mode	802.11b with date rate 1 2412MHZ	Antenna	Vertical

Frequency	Meter Reading	Factor	Emission Level	Limits	Margin	Value Type
(MHz)	(dBµV)	(dB)	(dBµV/m)	(dBµV/m)	(dB)	value Type
4824.066	50.05	3.72	53.77	74.00	-20.23	peak
4824.066	44.08	3.72	47.80	54.00	-6.20	AVG
7236.099	37.73	8.15	45.88	74.00	-28.12	peak
7236.099	34.87	8.15	43.02	54.00	-10.98	AVG
8				(8)		
	®					
temark:	- C1	0				
actor = Ante	enna Factor + Ca	ble Loss – I	Pre-amplifier.			

Any report having not been signed by authorized approver, or having been altered without authorization, or having not been stamped by the "Bedicated Pest Stamp" is deemed to be invalid. Copying or excerpting portion of, or altering the content of the report is not permitted without the written exthorization of AGC presented in the report apply only to the tested sample. Any objections to report issued by AGC should be submitted to AGC within 15day after the issue of Further enquiry of validity or verification of the test report should be addressed to AGC by agc@agc-cert.com.



g/Inspection
The test results
the test report.



EUT	LED Projector	Model Name	XK03S
Temperature	21.8°C	Relative Humidity	58%
Pressure	960hPa	Test Voltage	Normal Voltage
Test Mode	802.11b with date rate 1 2437MHZ	Antenna	Horizontal

Frequency	Meter Reading	Factor	Emission Level	Limits	Margin	Value Type
(MHz)	(dBµV)	(dB)	(dBµV/m)	(dBµV/m)	(dB)	Value Type
4874.066	46.95	3.75	50.70	74.00	-23.30	peak
4874.066	41.91	3.75	45.66	54.00	-8.34	AVG
7311.099	40.63	8.16	48.79	74.00	-25.21	peak
7311.099	37.02	8.16	45.18	54.00	-8.82	AVG
	13C	<u>®</u>	8		- GG	8
Remark:			(8)			
actor = Ante	enna Factor + Ca	ble Loss -	Pre-amplifier.	(6)		

EUT	LED Projector	Model Name	XK03S
Temperature	21.8°C	Relative Humidity	58%
Pressure	960hPa	Test Voltage	Normal Voltage
Test Mode	802.11b with date rate 1 2437MHZ	Antenna	Vertical

Frequency	Meter Reading	Factor	Emission Level	Limits	Margin	Value Tune
(MHz)	(dBµV)	(dB)	(dBµV/m)	(dBµV/m)	(dB)	Value Type
4874.066	48.65	3.75	52.40	74.00	-21.60	peak
4874.066	45.13	3.75	48.88	54.00	-5.12	AVG
7311.099	39.94	8.16	48.10	74.00	-25.90	peak
7311.099	37.89	8.16	46.05	54.00	-7.95	AVG
			@			0
Remark:				®		
actor = Ante	enna Factor + Ca	ble Loss - Pi	re-amplifier.	8		

Any report having not been signed by authorized approver, or having been altered without authorization, or having not been stamped by the "Bedicated Pesture Stamp" is deemed to be invalid. Copying or excerpting portion of, or altering the content of the report is not permitted without the written authorization of AGC presented in the report apply only to the tested sample. Any objections to report issued by AGC should be submitted to AGC within 15day after the issuance of Further enquiry of validity or verification of the test report should be addressed to AGC by agc@agc-cert.com.

he test results

he test report.



EUT	LED Projector	Model Name	XK03S
Temperature	21.8°C	Relative Humidity	58%
Pressure	960hPa	Test Voltage	Normal Voltage
Test Mode	802.11b with date rate 1 2462MHZ	Antenna	Horizontal

Frequency	Meter Reading	Factor	Emission Level	Limits	Margin	Value Type
(MHz)	(dBµV)	(dB)	(dBµV/m)	(dBµV/m)	(dB)	value Type
4924.066	46.95	3.81	50.76	74.00	-23.24	peak
4924.066	44.13	3.81	47.94	54.00	-6.06	AVG
7386.099	38.37	8.19	46.56	74.00	-27.44	peak
7386.099	36.23	8.19	44.42	54.00	-9.58	AVG
	1,C	3	©		- 66	8
Remark:		- ((8)			
actor = Ante	enna Factor + Ca	ble Loss -	Pre-amplifier.	8		

EUT	LED Projector	Model Name	XK03S
Temperature	21.8°C	Relative Humidity	58%
Pressure	960hPa	Test Voltage	Normal Voltage
Test Mode	802.11b with date rate 1 2462MHZ	Antenna	Vertical

Frequency	Meter Reading	Factor	Emission Level	Limits	Margin	Value Type
(MHz)	(dBµV)	(dB)	(dBµV/m)	(dBµV/m)	(dB)	value Type
4924.066	47.36	3.81	51.17	74.00	-22.83	peak
4924.066	43.79	3.81	47.60	54.00	-6.40	AVG
7386.099	40.65	8.19	48.84	74.00	-25.16	peak
7386.099	37.47	8.19	45.66	54.00	-8.34	AVG
					(8)	
						8
Remark:		@				G
Factor = Ante	enna Factor + Ca	ble Loss –	Pre-amplifier.			

RESULT: PASS

Note:

Other emissions from 1G to 25 GHz are considered as ambient noise. No recording in the test report. Factor = Antenna Factor + Cable loss - Amplifier gain, Over=Measure-Limit.

The "Factor" value can be calculated automatically by software of measurement system.

All test modes had been pre-tested. The 802.11b mode is the worst case and recorded in the report.

Any report having not been signed by authorized approver, or having been altered without authorization, or having not been stamped by the Dedicated Farmy" is deemed to be invalid. Copying or excerpting portion of, or altering the content of the report is not permitted without the written authorization of AGE presented in the report apply only to the tested sample. Any objections to report issued by AGC should be submitted to AGC within 15days after the issuence of Further enquiry of validity or verification of the test report should be addressed to AGC by agc@agc-cert.com.



8. FCC LINE CONDUCTED EMISSION TEST

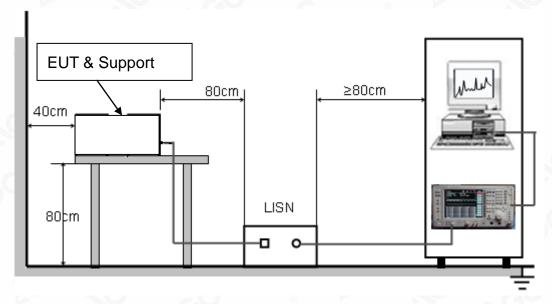
8.1. LIMITS OF LINE CONDUCTED EMISSION TEST

F	Maximum RF Line Voltage					
Frequency	Q.P.(dBuV)	Average(dBuV)				
150kHz~500kHz	66-56	56-46				
500kHz~5MHz	56	46				
5MHz~30MHz	60	50				

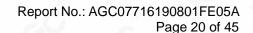
Note:

- 1. The lower limit shall apply at the transition frequency.
- 2. The limit decreases linearly with the logarithm of the frequency in the range 0.15 MHz to 0.50 MHz.

8.2. BLOCK DIAGRAM OF LINE CONDUCTED EMISSION TEST



Any report having not been signed by authorized approver, or having been altered without authorization, or having not been stamped by the Bedicated Residual





8.3. PRELIMINARY PROCEDURE OF LINE CONDUCTED EMISSION TEST

- 1. The equipment was set up as per the test configuration to simulate typical actual usage per the user's manual. When the EUT is a tabletop system, a wooden table with a height of 0.8 meters is used and is placed on the ground plane as per ANSI C63.10 (see Test Facility for the dimensions of the ground plane used). When the EUT is a floor-standing equipment, it is placed on the ground plane which has a 3-12 mm non-conductive covering to insulate the EUT from the ground plane.
- 2. Support equipment, if needed, was placed as per ANSI C63.10.
- 3. All I/O cables were positioned to simulate typical actual usage as per ANSI C63.10.
- 4. All support equipments received AC120V/60Hz power from a LISN, if any.
- 5. The EUT received charging voltage by adapter which received 120V/60Hzpower by a LISN...
- 6. The test program was started. Emissions were measured on each current carrying line of the EUT using a spectrum Analyzer / Receiver connected to the LISN powering the EUT. The LISN has two monitoring points: Line 1 (Hot Side) and Line 2 (Neutral Side). Two scans were taken: one with Line 1 connected to Analyzer / Receiver and Line 2 connected to a 50 ohm load; the second scan had Line 1 connected to a 50 ohm load and Line 2 connected to the Analyzer / Receiver.
- 7. Analyzer / Receiver scanned from 150 kHz to 30MHz for emissions in each of the test modes.
- 8. During the above scans, the emissions were maximized by cable manipulation.
- 9. The test mode(s) were scanned during the preliminary test.

Then, the EUT configuration and cable configuration of the above highest emission level were recorded for reference of final testing.

8.4. FINAL PROCEDURE OF LINE CONDUCTED EMISSION TEST

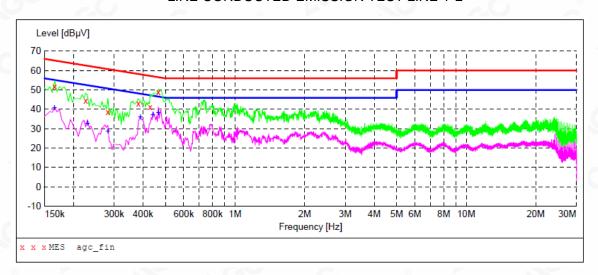
- 1. EUT and support equipment was set up on the test bench as per step 2 of the preliminary test.
- 2. A scan was taken on both power lines, Line 1 and Line 2, recording at least the six highest emissions. Emission frequency and amplitude were recorded into a computer in which correction factors were used to calculate the emission level and compare reading to the applicable limit. If EUT emission level was less –2dB to the A.V. limit in Peak mode, then the emission signal was re-checked using Q.P and Average detector.
- 3. The test data of the worst case condition(s) was reported on the Summary Data page.

Any report having not been signed by authorized approver, or having been altered without authorization, or having not been stamped by the content of Stamp" is deemed to be invalid. Copying or excerpting portion of, or altering the content of the report is not permitted without the written authorization of AGC. The test results presented in the report apply only to the tested sample. Any objections to report issued by AGC should be submitted to AGC within 15days after the issuance of the test report. Further enquiry of validity or verification of the test report should be addressed to AGC by agc@agc-cert.com.



8.5. TEST RESULT OF LINE CONDUCTED EMISSION TEST

LINE CONDUCTED EMISSION TEST LINE 1-L



MEASUREMENT RESULT: "agc fin"

2020/12/7 9: Frequency MHz		Transd dB	Limit dBµV	Margin dB	Detector	Line
0.166000 0.226000 0.282000	52.00 44.50 38.60	11.3 11.3 11.3	65 63 61	13.2 18.1 22.2	QP QP	L1 L1 L1
0.382000 0.430000 0.466000	43.10 41.20 48.80	11.3 11.3 11.3	58 57 57	15.1 16.1 7.8	QP QP QP	L1 L1 L1

MEASUREMENT RESULT: "agc fin2"

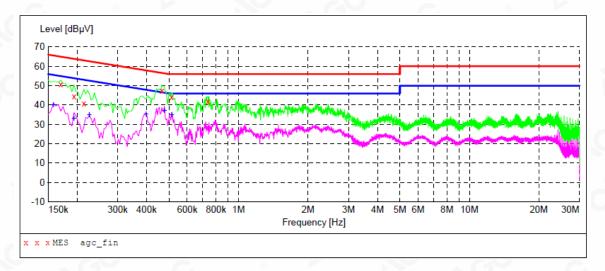
2020/12/7 Frequenc MF		Transd dB	Limit dBµV	Margin dB	Detector	Line
0.16600 0.23000 0.28200 0.39000	32.90 30 28.90 30 36.20	11.3 11.3 11.3	55 52 51 48	19.5 21.9 11.9	AV AV AV	L1 L1 L1 L1
0.44200 0.46600		11.3 11.3	47 47	9.9 8.4	AV AV	L1 L1

RESULT: PASS

Any report having not been signed by authorized approver, or having been altered without authorization, or having not been stamped by the Bedicated Pesting/Inspection Stamp" is deemed to be invalid. Copying or excerpting portion of, or altering the content of the report is not permitted without the writter authorization of AGC. The test results presented in the report apply only to the tested sample. Any objections to report issued by AGC should be submitted to AGC within 15day after the issuance of the test report. Further enquiry of validity or verification of the test report should be addressed to AGC by agc@agc~cert.com.



Line Conducted Emission Test Line 2-N



MEASUREMENT RESULT: "agc_fin"

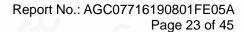
2	020/12/7 9:44		muon ad	Timi+	Manain	Detector	Tina
	Frequency MHz	dBµV	dB	dBµV	Margin dB	Detector	Tine
	0.170000	50.80	11.3	65	14.2	QP	N
	0.194000	44.60	11.3	64	19.3	QP	N
	0.214000	40.80	11.3	63	22.2	QP	N
	0.466000	47.40	11.3	57	9.2	QP	N
	0.514000	44.10	11.3	56	11.9	QP	N
	0.738000	42.10	11.3	56	13.9	QP	N

MEASUREMENT RESULT: "agc fin2"

2020/12/7 9 Frequency MHz	Level	Transd dB	Limit dBµV	Margin dB	Detector	Line
0.158000	40.10	11.3	56	15.5	AV	N
0.194000	33.30	11.3	54	20.6	AV	N
0.226000	34.90	11.3	53	17.7	AV	N
0.398000	35.30	11.3	48	12.6	AV	N
0.478000	37.30	11.3	46	9.1	AV	N
0.514000	35.10	11.3	46	10.9	AV	N

RESULT: PASS

Any report having not been signed by authorized approver, or having been altered without authorization, or having not been stamped by the Bedicated Pesting/Inspection Stamp" is deemed to be invalid. Copying or excerpting portion of, or altering the content of the report is not permitted without the writter authorization of AGC. The test results presented in the report apply only to the tested sample. Any objections to report issued by AGC should be submitted to AGC within 15day after the issuance of the test report. Further enquiry of validity or verification of the test report should be addressed to AGC by agc@agc~cert.com.





APPENDIX A: PHOTOGRAPHS OF TEST SETUP

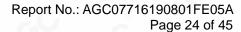
FCC LINE CONDUCTED EMISSION TEST SETUP



FCC RADIATED EMISSION TEST SETUP BELOW 1GHZ

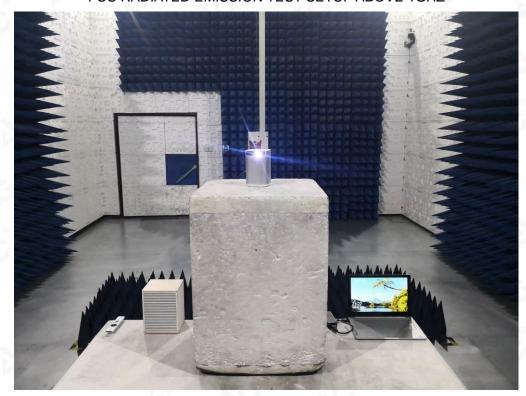


Any report having not been signed by authorized approver, or having been altered without authorization, or having not been stamped by the specificated resting/inspection Stamp" is deemed to be invalid. Copying or excerpting portion of, or altering the content of the report is not permitted without the writter pathorization of AGC, the test results presented in the report apply only to the tested sample. Any objections to report issued by AGC should be submitted to AGC within 15day after the issuance of the test report. Further enquiry of validity or verification of the test report should be addressed to AGC by agc@agc-cert.com.

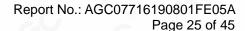




FCC RADIATED EMISSION TEST SETUP ABOVE 1GHZ



Any report having not been signed by authorized approver, or having been altered without authorization, or having not been stamped by the specificated resting/inspection Stamp" is deemed to be invalid. Copying or excerpting portion of, or altering the content of the report is not permitted without the writter pathorization of AGC, the test results presented in the report apply only to the tested sample. Any objections to report issued by AGC should be submitted to AGC within 15day after the issuance of the test report. Further enquiry of validity or verification of the test report should be addressed to AGC by agc@agc-cert.com.





APPENDIX B: PHOTOGRAPHS OF EUT

ALL VIEW OF EUT



TOP VIEW OF EUT



Any report having not been signed by authorized approver, or having been altered without authorization, or having not been stamped by the specificated resting/inspection Stamp" is deemed to be invalid. Copying or excerpting portion of, or altering the content of the report is not permitted without the writter pathorization of AGC, the test results presented in the report apply only to the tested sample. Any objections to report issued by AGC should be submitted to AGC within 15day after the issuance of the test report. Further enquiry of validity or verification of the test report should be addressed to AGC by agc@agc-cert.com.



BOTTOM VIEW OF EUT



FRONT VIEW OF EUT



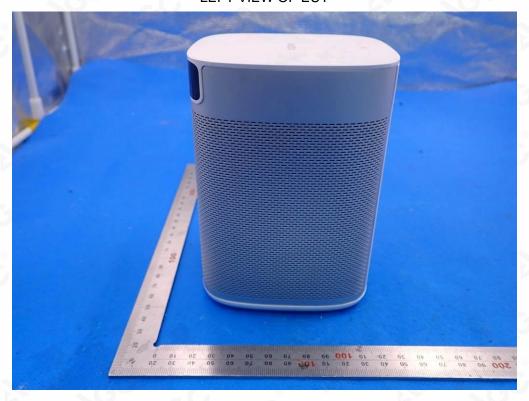
Any report having not been signed by authorized approver, or having been altered without authorization, or having not been stamped by the specificated resting/inspection Stamp" is deemed to be invalid. Copying or excerpting portion of, or altering the content of the report is not permitted without the writter pathorization of AGC, the test results presented in the report apply only to the tested sample. Any objections to report issued by AGC should be submitted to AGC within 15day after the issuance of the test report. Further enquiry of validity or verification of the test report should be addressed to AGC by agc@agc-cert.com.



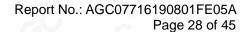
BACK VIEW OF EUT



LEFT VIEW OF EUT

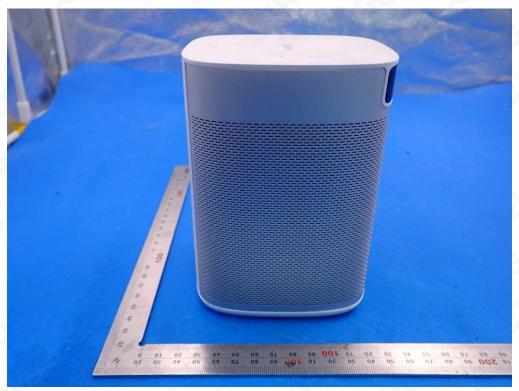


Any report having not been signed by authorized approver, or having been altered without authorization, or having not been stamped by the specificated resting/inspection Stamp" is deemed to be invalid. Copying or excerpting portion of, or altering the content of the report is not permitted without the writter pathorization of AGC, the test results presented in the report apply only to the tested sample. Any objections to report issued by AGC should be submitted to AGC within 15day after the issuance of the test report. Further enquiry of validity or verification of the test report should be addressed to AGC by agc@agc-cert.com.





RIGHT VIEW OF EUT



PORT VIEW OF EUT



Any report having not been signed by authorized approver, or having been altered without authorization, or having not been stamped by the Bedicated Restriction Stamp" is deemed to be invalid. Copying or excerpting portion of, or altering the content of the report is not permitted without the writter purportization of AGC, the test results presented in the report apply only to the tested sample. Any objections to report issued by AGC should be submitted to AGC within 15day after the issuance of the test report. Further enquiry of validity or verification of the test report should be addressed to AGC by agc@agc-cert.com.



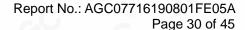
OPEN VIEW OF EUT



INTERNAL VIEW-1 OF EUT

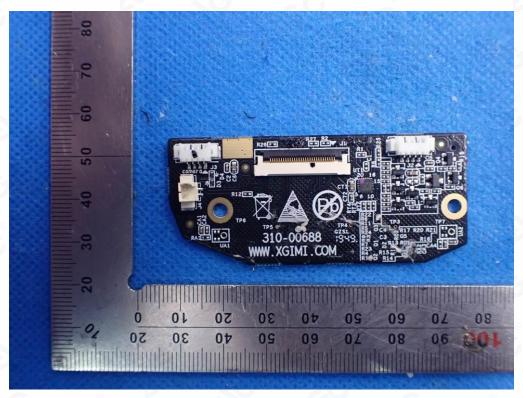


Any report having not been signed by authorized approver, or having been altered without authorization, or having not been stamped by the Dedicated Festing/Inspection Stamp" is deemed to be invalid. Copying or excerpting portion of, or altering the content of the report is not permitted without the written appropriation of AGC where test results presented in the report apply only to the tested sample. Any objections to report issued by AGC should be submitted to AGC within 15day after the issuance of the test report. Further enquiry of validity or verification of the test report should be addressed to AGC by agc@agc-cert.com.

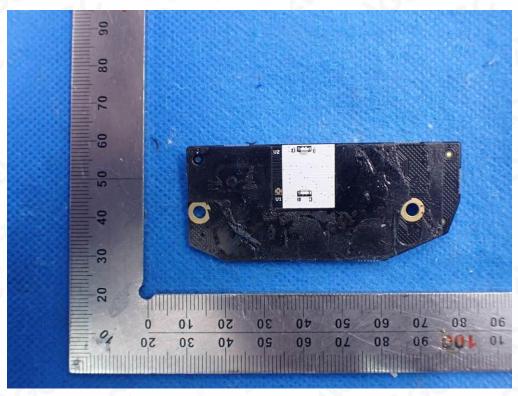




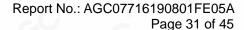
INTERNAL VIEW-2 OF EUT



INTERNAL VIEW-3 OF EUT

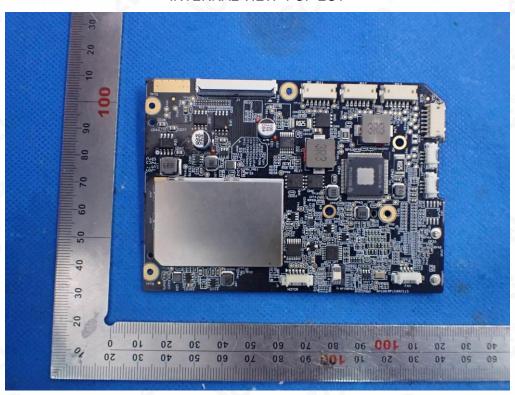


Any report having not been signed by authorized approver, or having been altered without authorization, or having not been stamped by the Bedicated Pesting/Inspection Stamp" is deemed to be invalid. Copying or excerpting portion of, or altering the content of the report is not permitted without the writter authorization of AGC. The test results presented in the report apply only to the tested sample. Any objections to report issued by AGC should be submitted to AGC within 15day after the issuance of the test report. Further enquiry of validity or verification of the test report should be addressed to AGC by agc@agc-cert.com.

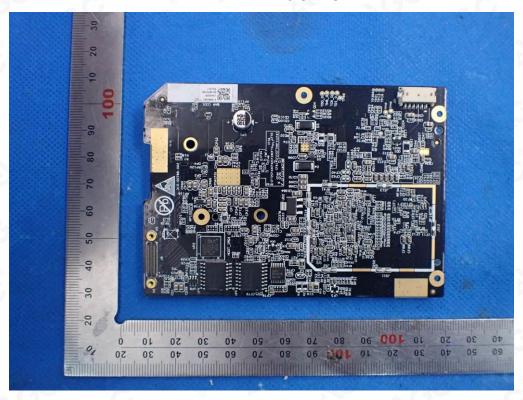




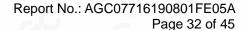
INTERNAL VIEW-4 OF EUT



INTERNAL VIEW-5 OF EUT



Any report having not been signed by authorized approver, or having been altered without authorization, or having not been stamped by the Bedicated Pesting/Inspection Stamp" is deemed to be invalid. Copying or excerpting portion of, or altering the content of the report is not permitted without the written perhorization of AGE. The test results presented in the report apply only to the tested sample. Any objections to report issued by AGC should be submitted to AGC within 15day after the issuance of the test report. Further enquiry of validity or verification of the test report should be addressed to AGC by agc@agc-cert.com.

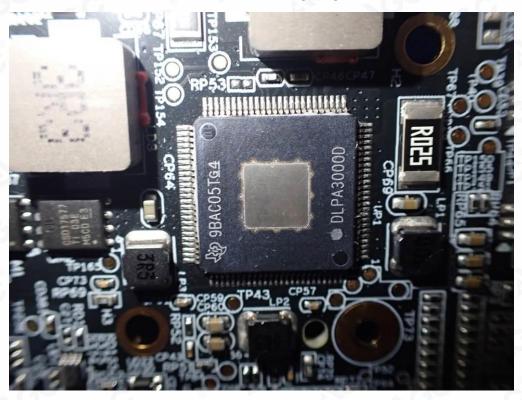




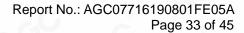
INTERNAL VIEW-6 OF EUT



INTERNAL VIEW-7 OF EUT

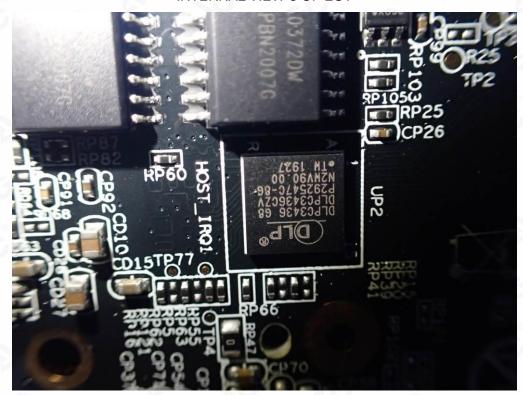


Any report having not been signed by authorized approver, or having been altered without authorization, or having not been stamped by the Bedicated Festing/Inspection Stamp" is deemed to be invalid. Copying or excerpting portion of, or altering the content of the report is not permitted without the written apphrorization of AGC where the test results presented in the report apply only to the tested sample. Any objections to report issued by AGC should be submitted to AGC within 15days after the issuance of the test report. Further enquiry of validity or verification of the test report should be addressed to AGC by agc@agc=cert.com.

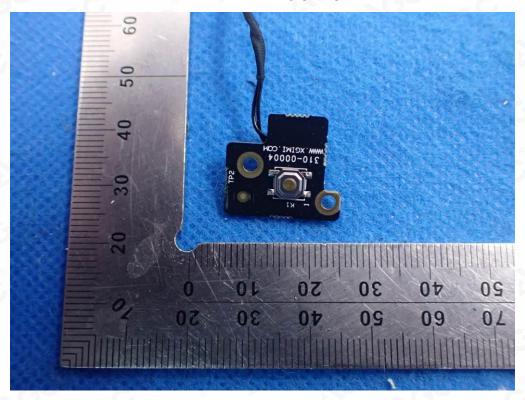




INTERNAL VIEW-8 OF EUT



INTERNAL VIEW-9 OF EUT



Any report having not been signed by authorized approver, or having been altered without authorization, or having not been stamped by the Bedicated Restriction Stamp" is deemed to be invalid. Copying or excerpting portion of, or altering the content of the report is not permitted without the written application of AGC, the test results presented in the report apply only to the tested sample. Any objections to report issued by AGC should be submitted to AGC within 15day after the issuance of the test report. Further enquiry of validity or verification of the test report should be addressed to AGC by agc@agc~cert.com.