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FCC Test Report

Report No.: AGC07716190701FE05A

FCC ID	: 2AFENWK03A
APPLICATION PURPOSE	: Class II Equipment
PRODUCT DESIGNATION	: LED Projector
BRAND NAME	: XGIMI
MODEL NAME	WK03A, WK04A, WK05A, WK06A, WK07A, WK08A, WK09A, WK10A, WK11A, WK12A, WK13A, WK14A
APPLICANT	: Chengdu XGIMI Technology Co., Ltd.
DATE OF ISSUE	: Jan. 09, 2021
STANDARD(S) TEST PROCEDURE(S)	: FCC Part 15.247
REPORT VERSION	· V1 0



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REPORT REVISE RECORD

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

Note:

The original test report Ref. No. AGC07716190701FE05 dated Sep. 16, 2019 was modified on Jan. 09, 2021 to include the following changes:

- Change the name of the applicant;
- Change the name of the manufacture;
- Change the name and address of the factory;
- 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.

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Attestation of Global Compliance(Shenzhen)Co., Ltd Attestation of Global Compliance(Shenzhen)Std & Tech Co., Ltd Tel: +86-755 2523 4088 E-mail: agc@agc-cert.com Web: http://cn.agc-cert.com/	



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1. VERIFICATION OF CONFORMITY

Applicant	Chengdu XGIMI Technology Co., Ltd.			
Address	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 1	No.18 Kexin Road, Hi-Tech Development Zone (West Park), Chengdu, Sichuan			
Factory 2	Yibin XGIMI Optoelectronics Co., Ltd.			
Address 2	 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	WK03A			
Series Model	WK04A, WK05A, WK06A, WK07A, WK08A, WK09A, WK10A, WK11A, WK12A, WK13A, WK14A			
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	
	Max Zhang (Reviewer)	Jan. 09, 2021
Approved By	Formestics	
	Forrest Lei (Authorized Officer)	Jan. 09, 2021

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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:18.12dBm; IEEE 802.11g:15.65dBm;
	TEEE 802.11n(20):20.030Bm; TEEE 802.11n(40):16.410Bm
Modulation	DSSS(DBPSK/DQPSK/CCK);OFDM(BPSK/QPSK/16-QAM/64-QAM)
Number of channels	
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	3.97dBi
Power Supply	DC 11.01V by battery or DC 19V by adapter

2.2. TABLE OF CARRIER FREQUENCYS

Frequency Band	Channel Number	Frequency
		2412 MHZ
	2	2417 MHZ
	3	2422 MHZ
NO 20	4	2427 MHZ
	5	2432 MHZ
2400~2483.5MHZ	6	2437 MHZ
	7	2442 MHZ
	8	2447 MHZ
C C	9	2452 MHZ
	10	2457 MHZ
	11	2462 MHZ

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

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2.3. IEEE 802.11N MODULATION SCHEME

MCS		Modulation	R	NBPSC	NCBPS		NDBPS		Data rate(Mbps)	
Index	Nss								800nsGI	
					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	° 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: 2AFENWK03A** 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 transmissio n 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.

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

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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:	
Transm	it by 802.11b with Date rate (1/2/5.5/11)
Transm	it by 802.11g with Date rate (6/9/12/18/24/36/48/54)
Transm	it by 802.11n (20MHz) with Date rate (6.5/13/19.5/26/39/52/58.5/65)
Transm	it by 802.11n (40MHz) with Date rate (13.5/27/40.5/54/81/108/121.5/135)

Note:

1. 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 modes.

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5. SYSTEM TEST CONFIGURATION

5.1. CONFIGURATION OF EUT SYSTEM

Configure 1:

EUT	

AE

5.2. EQUIPMENT USED IN EUT SYSTEM

ltem	Equipment	Model No.	ID or Specification	Remark
1	LED Projector	WK03A	2AFENWK03A	EUT
3	Adapter	HKA09019047-6P	Input: AC 100-240V, 50/60Hz, 1.5A Output: DC 19V, 4.74A	Market with EUT
4	Loudspeaker			AE
5	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

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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 Fliter	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	D69250	Jan. 09, 2019	Jan. 08, 2021
Test software	FARA	EZ-EMC (Ver RA-03A)	N/A	N/A	N/A

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7. RADIATED EMISSION

7.1. MEASUREMENT PROCEDURE

- 1. 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.

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7.2. TEST SETUP

Radiated Emission Test-Setup Frequency Below 30MHz



RADIATED EMISSION TEST SETUP 30MHz-1000MHz



RADIATED EMISSION TEST SETUP ABOVE 1000MHz



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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.

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RADIATED EMISSION BELOW 1GHZ

EUT	LED Projector	Model Name	WK03A
Temperature	25°C	Relative Humidity	58%
Pressure	960hPa	Test Voltage	Normal Voltage
Test Mode	802.11b with date rate 1 2412MHZ	Antenna	Horizontal

66.9 dBuV/m



No.	Mk	. Freq.	Reading Level	Correct Factor	Measure- ment	Limit	Over	
		MHz	dBuV	dB	dBuV/m	dBuV/m	dB	Detector
1		120.5333	5.78	18.00	23.78	43.50	-19.72	peak
2		215.9167	12.94	14.79	27.73	43.50	-15.77	peak
3		359.8000	15.93	21.57	37.50	46.00	-8.50	peak
4		398.6000	12.70	22.93	35.63	46.00	-10.37	peak
5		720.3167	9.35	28.61	37.96	46.00	-8.04	peak
6	*	742.9500	8.85	29.12	37.97	46.00	-8.03	peak

RESULT: PASS

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EUT	LED Projector	Model Name	WK03A
Temperature	25°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		60.7167	6.43	15.96	22.39	40.00	-17.61	peak
2		120.5333	5.73	18.00	23.73	43.50	-19.77	peak
3		215.9167	10.52	14.79	25.31	43.50	-18.19	peak
4		359.8000	7.12	21.57	28.69	46.00	-17.31	peak
5	*	527.9333	7.24	25.54	32.78	46.00	-13.22	peak
6		822.1667	1.98	30.70	32.68	46.00	-13.32	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. Stamp" is deemed to be invalid. Copying or excerpting portion of, or altering the content of the report is not permitted without the written action of AC 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 15da e test report. Further enquiry of validity or verification of the test report should be addressed to AGC by agc@agc-cert.com.



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RADIATED EMISSION ABOVE 1GHZ

EUT	LED Projector	Model Name	WK03A
Temperature	25°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	
(MHz)	(dBµV)	(dB)	(dBµV/m)	(dBµV/m)	(dB)	value Type
4824.062	51.27	3.72	54.99	74.00	-19.01	peak
4824.062	44.29	3.72	48.01	54.00	-5.99	AVG
7236.093	46.18	8.15	54.33	74.00	-19.67	peak
7236.093	37.23	8.15	45.38	54.00	-8.62	AVG
		0			<u> </u>	8
			0			
Remark:			0			0
Factor = Ante	enna Factor + Ca	able Loss – I	Pre-amplifier.	8		

EUT	LED Projector	Model Name	WK03A
Temperature	25°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	
(MHz)	(dBµV)	(dB)	(dBµV/m)	(dBµV/m)	(dB)	value rype
4824.062	48.26	3.72	51.98	74.00	-22.02	peak
4824.062	42.74	3.72	46.46	54.00	-7.54	AVG
7236.093	43.15	8.15	51.30	74.00	-22.70	peak
7236.093	34.91	8.15	43.06	54.00	-10.94	AVG
			(2)			
				6		
Remark:					3	
Factor = Ante	enna Factor + Ca	able Loss –	Pre-amplifier.		8	

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EUT	LED Projector	Model Name	WK03A
Temperature	25°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	
(MHz)	(dBµV)	(dB)	(dBµV/m)	(dBµV/m)	(dB)	Value Type
4874.062	49.27	3.75	53.02	74.00	-20.98	peak
4874.062	43.17	3.75	46.92	54.00	-7.08	AVG
7311.093	42.58	8.16	50.74	74.00	-23.26	peak
7311.093	34.76	8.16	42.92	54.00	-11.08	AVG
Ø			1 - 0	C		
	0			a G	8	
Remark:					20	
Factor = Ante	enna Factor + Ca	ble Loss –	Pre-amplifier.			

EUT	LED Projector	Model Name	WK03A
Temperature	25°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	
(MHz)	(dBµV)	(dB)	(dBµV/m)	(dBµV/m)	(dB)	value Type
4874.062	48.16	3.75	51.91	74.00	-22.09	peak
4874.062	40.28	3.75	44.03	54.00	-9.97	AVG
7311.093	44.27	8.16	52.43	74.00	-21.57	peak
7311.093	35.19	8.16	43.35	54.00	-10.65	AVG
					Ø	
					0	8
emark:		8				G
actor = Ante	enna Factor + Ca	hle Loss –	Pre-amplifier			

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EUT	LED Projector	Model Name	WK03A
Temperature	25°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	
(MHz)	(dBµV)	(dB)	(dBµV/m)	(dBµV/m)	(dB)	value Type
4924.062	49.13	3.81	52.94	74.00	-21.06	peak
4924.062	41.37	3.81	45.18	54.00	-8.82	AVG
7386.093	45.19	8.19	53.38	74.00	-20.62	peak
7386.093	37.25	8.19	45.44	54.00	-8.56	AVG
®				C		
-G					(0)	
Remark:					20	
Factor = Ante	enna Factor + Ca	able Loss – I	Pre-amplifier.			

EUT	LED Projector	Model Name	WK03A
Temperature	25°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	
(MHz)	(dBµV)	(dB)	(dBµV/m)	(dBµV/m)	(dB)	value Type
4924.024	49.27	7.12	56.39	74.00	-17.61	peak
4924.024	42.57	7.12	49.69	54.00	-4.31	AVG
7386.036	43.58	9.84	53.42	74.00	-20.58	peak
7386.036	35.18	9.84	45.02	54.00	-8.98	AVG
(2)			- 61	8		
C .	®		6		8	
Remark:	- C.				.C	
actor = Ante	enna Factor + Ca	ble Loss – P	re-amplifier.			

RESULT: PASS

Note:

The amplitude of other spurious emissions from 1G to 25 GHz which are attenuated more than 20 dB below the permissible value need not be reported.

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.

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8. FCC LINE CONDUCTED EMISSION TEST

8.1. LIMITS OF LINE CONDUCTED EMISSION TEST

Frequency	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



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8.3. PRELIMINARY PROCEDURE OF LINE CONDUCTED EMISSION TEST

- 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.
- 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.

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8.5. TEST RESULT OF LINE CONDUCTED EMISSION TEST



LINE CONDUCTED EMISSION TEST LINE 1-L

No.	Freq. (MHz)	Reading_Level (dBuV)			Correct Factor	Measurement (dBuV)			Limit (dBuV)		Margin (dB)		P/F
		Peak	QP	AVG	dB	Peak	QP	AVG	QP	AVG	QP	AVG	
1	0.4180	26.24	24.20	23.70	13.55	39.79	37.75	37.25	57.49	47.49	-19.74	-10.24	Р
2	0.4460	32.83	31.94	29.90	13.62	46.45	45.56	43.52	56.95	46.95	-11.39	-3.43	Р
3	0.4660	29.95	26.97	19.34	13.66	43.61	40.63	33.00	56.58	46.58	-15.95	-13.58	Р
4	0.7100	24.78	24.00	19.54	13.81	38.59	37.81	33.35	56.00	46.00	-18.19	-12.65	Р
5	1.2180	24.94	18.61	12.82	13.78	38.72	32.39	26.60	56.00	46.00	-23.61	-19.40	Р
6	19.8819	28.25	26.19	24.35	13.12	41.37	39.31	37.47	60.00	50.00	-20.69	-12.53	Р

RESULT: PASS

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Line Conducted Emission Test Line 2-N

No.	Freq. (MHz)	Reading_Level (dBuV)			Correct Factor	Measurement (dBuV)			Limit (dBuV)		Margin (dB)		P/F
		Peak	QP	AVG	dB	Peak	QP	AVG	QP	AVG	QP	AVG	
1	0.4180	27.55	26.04	25.56	13.55	41.10	39.59	39.11	57.49	47.49	-17.90	-8.38	Р
2	0.4460	33.79	33.10	30.31	13.62	47.41	46.72	43.93	56.95	46.95	-10.23	-3.02	Р
3	0.4700	29.31	27.26	25.25	13.67	42.98	40.93	38.92	56.51	46.51	-15.58	-7.59	Р
4	0.6260	29.40	22.33	13.22	13.82	43.22	36.15	27.04	56.00	46.00	-19.85	-18.96	Р
5	0.8340	25.32	20.58	19.11	13.81	39.13	34.39	32.92	56.00	46.00	-21.61	-13.08	Р
6	19.8779	28.97	26.63	24.95	13.12	42.09	39.75	38.07	60.00	50.00	-20.25	-11.93	Р

RESULT: PASS

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APPENDIX A: PHOTOGRAPHS OF TEST SETUP

FCC LINE CONDUCTED EMISSION TEST SETUP



FCC RADIATED EMISSION TEST SETUP BELOW 1GHZ



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FCC RADIATED EMISSION TEST SETUP ABOVE 1GHZ

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APPENDIX B: PHOTOGRAPHS OF EUT ALL VIEW OF EUT



TOP VIEW OF EUT



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BOTTOM VIEW OF EUT



FRONT VIEW OF EUT



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BACK VIEW OF EUT



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10 500 30 80 10 60 70 40 30 50 10 100 30 80 10 60

40 30 30 10 90 20 40 30



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RIGHT VIEW OF EUT



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VIEW OF EUT (PORT)-2



OPEN VIEW - OF EUT-1



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OPEN VIEW - OF EUT-3



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BT-MS-P-BT

OPEN VIEW - OF EUT-4

VIEW OF BATTERY



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INTERNAL VIEW-1 OF EUT



INTERNAL VIEW-2 OF EUT



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INTERNAL VIEW-3 OF EUT



INTERNAL VIEW-4 OF EUT



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