FCC Part 15B
Measurement and Test Report

For

ZhuHaiBcom Electronic Technology Co., Ltd.

501 Room, 6 Building, No 19 YongTian Road, XiangZhou District, ZhuHai City, GuangDong Province, China

FCC Rule(s):	FCC Part 15 Subpart B
Product Description:	Indoor Monitor
Tested Model:	84706
Report No.:	STR17088193E-3
Tested Date:	2017-08-14 to 2017-08-15
Issued Date:	2017-08-15
Tested By:	Rode Liu / Engineer
Reviewed By:	Silin Chen / EMC Manager
Approved & Authorized By:	JandySo/PSQ Manager
Prepared By:	

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Shenzhen SEM.Test Technology Co.,Ltd. Approved

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1. GENERAL INFORMATION

1.1 Product Description for Equipment Under Test (EUT)

Client Information

Applicant:	ZhuHaiBcom Electronic Technology Co., Ltd.
Address of applicant:	501 Room, 6 Building, No 19 YongTian Road, XiangZhou District, ZhuHai City, GuangDong Province, China
Manufacturer:	ZhuHaiBcom Electronic Technology Co., Ltd.
Address of manufacturer:	501 Room, 6 Building, No 19 YongTian Road, XiangZhou District, ZhuHai City, GuangDong Province, China

General Description of EUT	
Product Name:	Indoor Monitor
Trade Name:	Bcomtech
Model No.:	84706
Adding Model(s):	Main test models:84706 8AXYZ:8 mean video or audio intercom, A mean series number, X mean monitor screen size or other, YZ mean the series different appearance. (notice: The number 0 in A mean access control system, 2 Mean anolog 2 wire video intercom system, 4 mean anolog 4 wire video intercom system, 5 mean anolog multi Building system, 6 mean IP doorbell system, 7 mean digital video intercom system, 8 mean smart home System; the number 1 in X mean 10 inch screen, 3Mean converter,4 mean 4 inch screen,5 mean audio,7 mean 7 inch screen; the number 00 to 99 in YZ mean different apperance.)
Note: The test data is gathered from a production sample,provided by the manufacturer.The appearance of others models listed in the report is different from main-test model 84706, but the circuit and the electronic construction do not change, declared by the manufacturer.	

Technical Characteristics of EUT	
Rated Voltage:	DC 12V
Rated Current:	1000mA
Rated Power:	/
Power Adapter Model:	/
Lowest Internal Frequency:	/
Highest Internal Frequency:	Below 108MHz
Classification of ITE:	Class B

1.2 Test Standards

The following report is prepared on behalf of the ZhuHaiBcom Electronic Technology Co., Ltd.in accordance with Part 2, Subpart J, and Part 15, Subparts AandB of the Federal Communication Commissions rules.

The objective is to determine compliance with FCC Part 15, Subpart B, and section15.205,15.107, and 15.109rules.

Maintenance of compliance is the responsibility of the manufacturer. Any modification of the product, which result in lowering the emission, should be checked to ensure compliance has been maintained.

1.3Test Methodology

All measurements contained in this report were conducted with ANSI C63.4-2014, American National Standard for Methods of Measurement of Radio-Noise Emissions from Low-Voltage Electrical and Electronic Equipment in the range of 9 kHz to 40 GHz.

1.4 Test Facility

FCC – Registration No.: 934118

Shenzhen SEM.Test Technology Co., Ltd. EMC Laboratory has been registered and fully described in a report filed with the (FCC) Federal Communications Commission. The acceptance letter from the FCC is maintained in our files and the Registration is 934118.

Industry Canada (IC) Registration No.: 11464A

The 3m Semi-anechoic chamber of Shenzhen SEM.Test Technology Co., Ltd. has been registered by Certification and Engineering Bureau of Industry Canada for radio equipment testing with Registration No.: 11464A.

CNAS Registration No.: L4062

Shenzhen SEM.Test Technology Co., Ltd. is a testing organization accredited by China National Accreditation Service for Conformity Assessment (CNAS) according to ISO/IEC 17025. The accreditation certificate number is L4062. All measurement facilities used to collect the measurement data are located at 1/F, Building A, HongweiIndustrial Park, Liuxian 2nd Road, Bao'an District, Shenzhen, P.R.C (518101).

1.5 EUT Setup and Operation Mode

The equipment under test (EUT) was configured to measure itshighest possible emission level. The test modes were adapted according to the operation manual for use, more detailed description as follows:

Test Mode List:

Test Mode	Description	Remark
TM1	Camera	Connect to display
TM2	Working	/

EUT Cable List and Details

Cable Description	Length (M)	Shielded/Unshielded	With Core/Without Core
/	/	/	/

Auxiliary Equipment List and Details

Description	Manufacturer	Model	Serial Number
Display	DELL	U2410f	50642P246601H(B) ZL

Special Cable List and Details

Cable Description	Length (M)	Shielded/Unshielded	With Core/Without Core
Audio cable	0.8	Unshielded	Without Core

1.6 Measurement Uncertainty

Measurement uncertainty		
Parameter	Conditions	Uncertainty
Conducted Emissions	Conducted	±2.88dB
Transmitter Spurious Emissions	Radiated	±5.1dB

1.7Test Equipment List and Details

No.	Description	Manufacturer	Model	Serial No.	Cal Date	Due Date
SEMT-1072	Spectrum Analyzer	Agilent	E4407B	MY41440400	2017-06-12	2018-06-11
SEMT-1031	Spectrum Analyzer	Rohde & Schwarz	FSP30	836079/035	2017-06-12	2018-06-11
SEMT-1007	EMI Test Receiver	Rohde & Schwarz	ESVB	825471/005	2017-06-12	2018-06-11
SEMT-1008	Amplifier	Agilent	8447F	3113A06717	2017-06-12	2018-06-11
SEMT-1043	Amplifier	C&D	PAP-1G18	2002	2017-06-12	2018-06-11
SEMT-1011	Broadband Antenna	Schwarz beck	VULB9163	9163-333	2017-06-12	2018-06-11
SEMT-1042	Horn Antenna	ETS	3117	00086197	2017-06-12	2018-06-11
SEMT-1069	Loop Antenna	Schwarz beck	FMZB 1516	9773	2017-06-12	2018-06-11
SEMT-1001	EMI Test Receiver	Rohde & Schwarz	ESPI	101611	2017-06-12	2018-06-11
SEMT-1003	L.I.S.N	Schwarz beck	NSLK8126	8126-224	2017-06-12	2018-06-11
SEMT-1002	Pulse Limiter	Rohde & Schwarz	ESH3-Z2	100911	2017-06-12	2018-06-11

2. SUMMARY OF TEST RESULTS

Description of Test	Result
§15.107 (a) Conducted Emission	Compliant
§15.109(a) Radiated Emission	Compliant

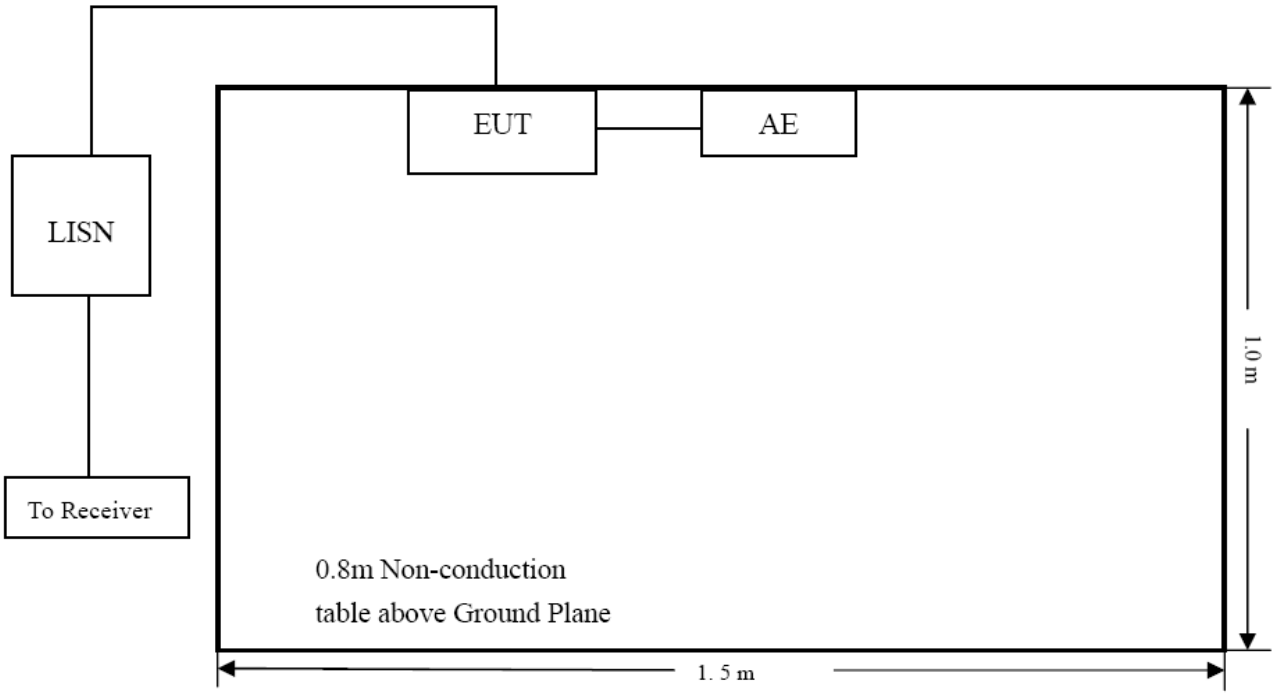
N/A: not applicable

3. Conducted Emissions

3.1Test Procedure

Test is conducting under the description of ANSI C63.4-2014, American National Standard for Methods of Measurement of Radio-Noise Emissions from Low-Voltage Electrical and Electronic Equipment in the range of 9 kHz to 40 GHz.

3.2Basic Test Setup Block Diagram



3.3Environmental Conditions

Temperature:	23 °C
Relative Humidity:	52%
ATM Pressure:	1011 mbar

3.4Summary of Test Results/Plots

According to the data in section 3.6, the EUT complied with the FCC Part 15.107(a) Conducted margin for a Class B device, with the *worst* margin reading of:

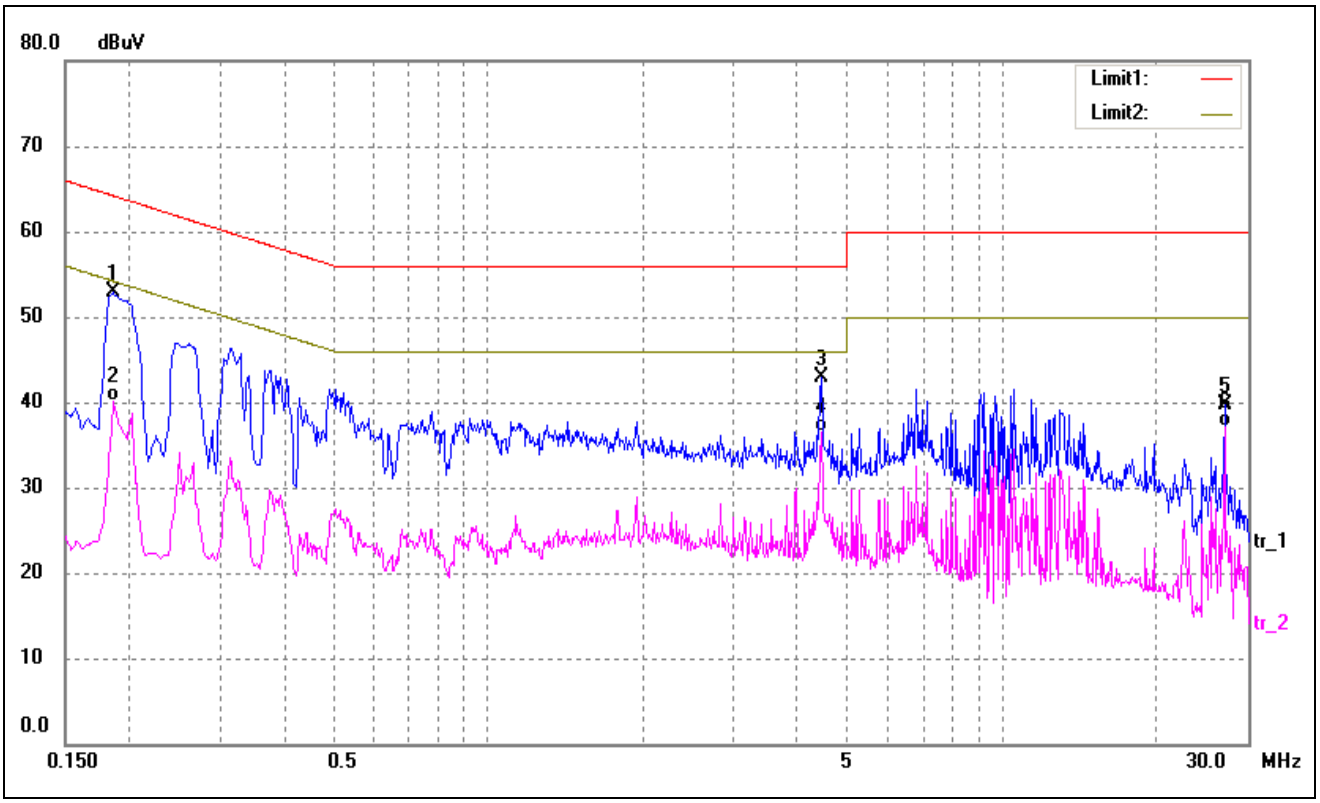
-9.47 dB at**4.4340MHz**in the**Line**, **Peak** detector, 0.15-30MHz

3.5Conducted Emissions Test Data

Plot of Conducted Emissions Test Data

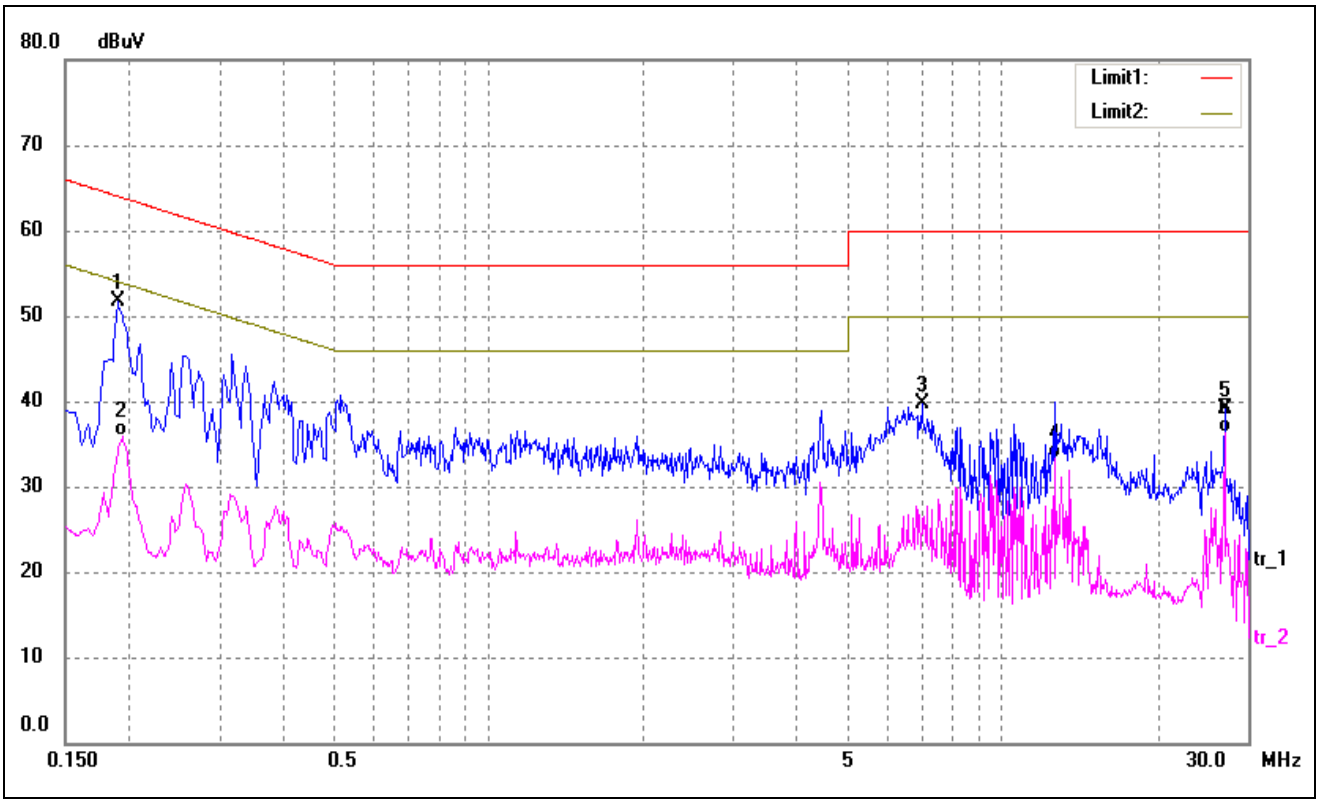
EUT: *Indoor Monitor*
Tested Model: *84706*
Operating Condition: *TM1*
Comment: *AC 120V/60Hz*

Test Specification: *Line*



No.	Frequency	Reading	Correct	Result	Limit	Margin	Detector
	(MHz)	(dBuV)	(dB/m)	(dBuV)	(dBuV)	(dB)	
1	0.1860	43.36	9.50	52.86	64.21	-11.35	QP
2	0.1860	30.56	9.50	40.06	54.21	-14.15	AVG
3	4.4340	32.82	10.00	42.82	56.00	-13.18	QP
4*	4.4340	26.53	10.00	36.53	46.00	-9.47	AVG
5	27.0020	26.73	13.00	39.73	60.00	-20.27	QP
6	27.0020	24.16	13.00	37.16	50.00	-12.84	AVG

Test Specification: *Neutral*

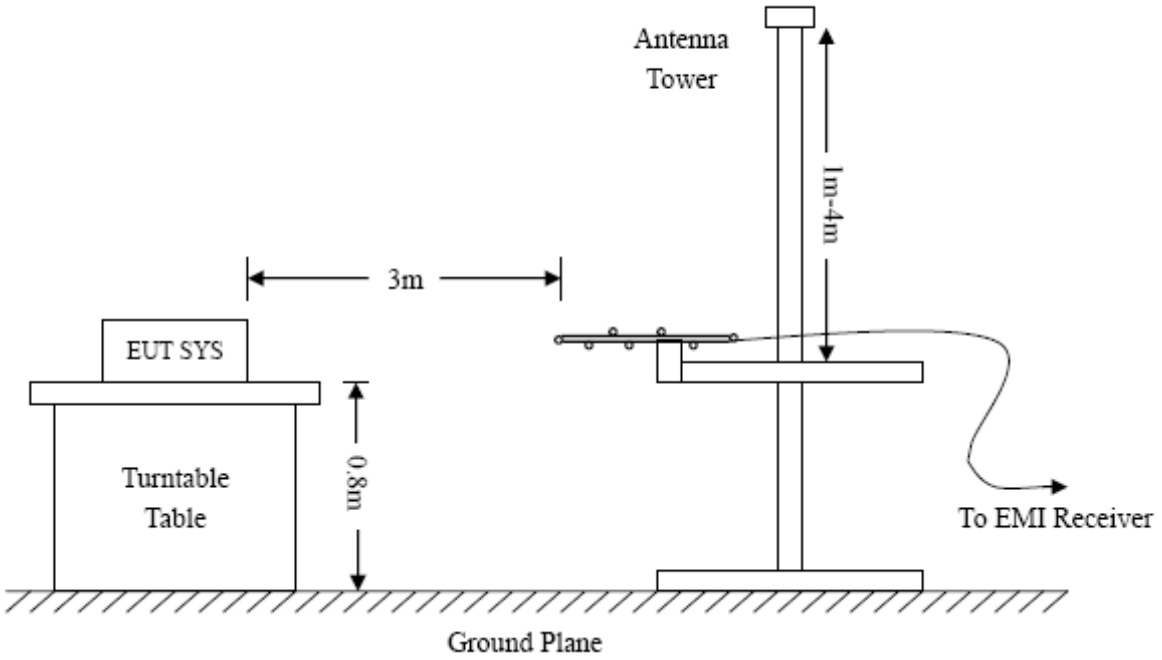


No.	Frequency	Reading	Correct	Result	Limit	Margin	Detector
	(MHz)	(dBuV)	(dB/m)	(dBuV)	(dBuV)	(dB)	
1*	0.1900	42.17	9.50	51.67	64.04	-12.37	QP
2	0.1940	26.34	9.50	35.84	53.86	-18.02	AVG
3	6.9540	29.62	10.00	39.62	60.00	-20.38	QP
4	12.6220	22.77	10.52	33.29	50.00	-16.71	AVG
5	27.0020	26.02	13.00	39.02	60.00	-20.98	QP
6	27.0020	23.24	13.00	36.24	50.00	-13.76	AVG

4. RADIATED EMISSION

4.1Test Procedure

The setup of EUT is according with per ANSI C63.4-2014 measurement procedure. The specification used was with the FCC Part 15.109 Limit.
The external I/O cables were draped along the test table and formed a bundle 30 to 40 cm long in the middle.
The spacing between the peripherals was 10 cm.



4.2Test Receiver Setup

Frequency :9kHz-30MHz	Frequency :30MHz-1GHz	Frequency :Above 1GHz
RBW=10KHz,	RBW=120KHz,	RBW=1MHz,
VBW =30KHz	VBW=300KHz	VBW=3MHz(Peak), 10Hz(AV)
Sweep time= Auto	Sweep time= Auto	Sweep time= Auto
Trace = max hold	Trace = max hold	Trace = max hold
Detector function = peak	Detector function = peak, QP	Detector function = peak, AV

4.3Corrected Amplitude & Margin Calculation

The Corrected Amplitude is calculated by adding the Antenna Factor and the Cable Factor, and subtracting the Amplifier Gain from the Amplitude reading. The basic equation is as follows:

Corr. Ampl. = Indicated Reading – Corr. Factor

The "**Margin**" column of the following data tables indicates the degree of compliance with the applicable limit. For example, a margin of -6dBμV means the emission is 6dBμV below the maximum limit for a Class B device. The equation for margin calculation is as follows:

Margin = Corr. Ampl. – FCCPart15.109(a) Limit

4.4Environmental Conditions

Temperature:	23 °C
Relative Humidity:	55 %
ATM Pressure:	1011 mbar

4.5Summary of Test Results/Plots

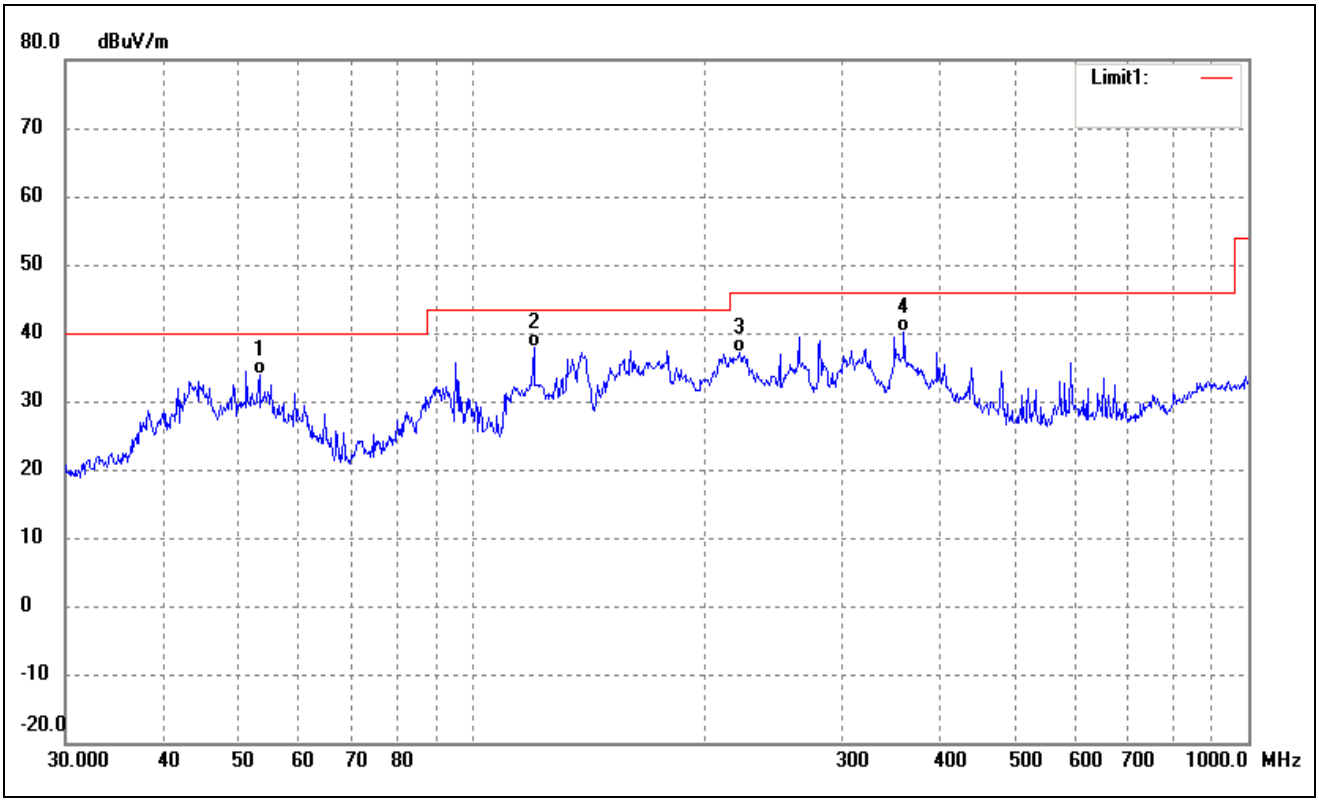
According to the data, the EUT complied with the FCC Part 15.109(a)rule, and had the worst margin of:

-2.84dB at **43.3534MHz**in the **Vertical** polarization,**30 MHz** to **1 GHz**, **3Meters**

Plot of Radiated Emissions Test Data

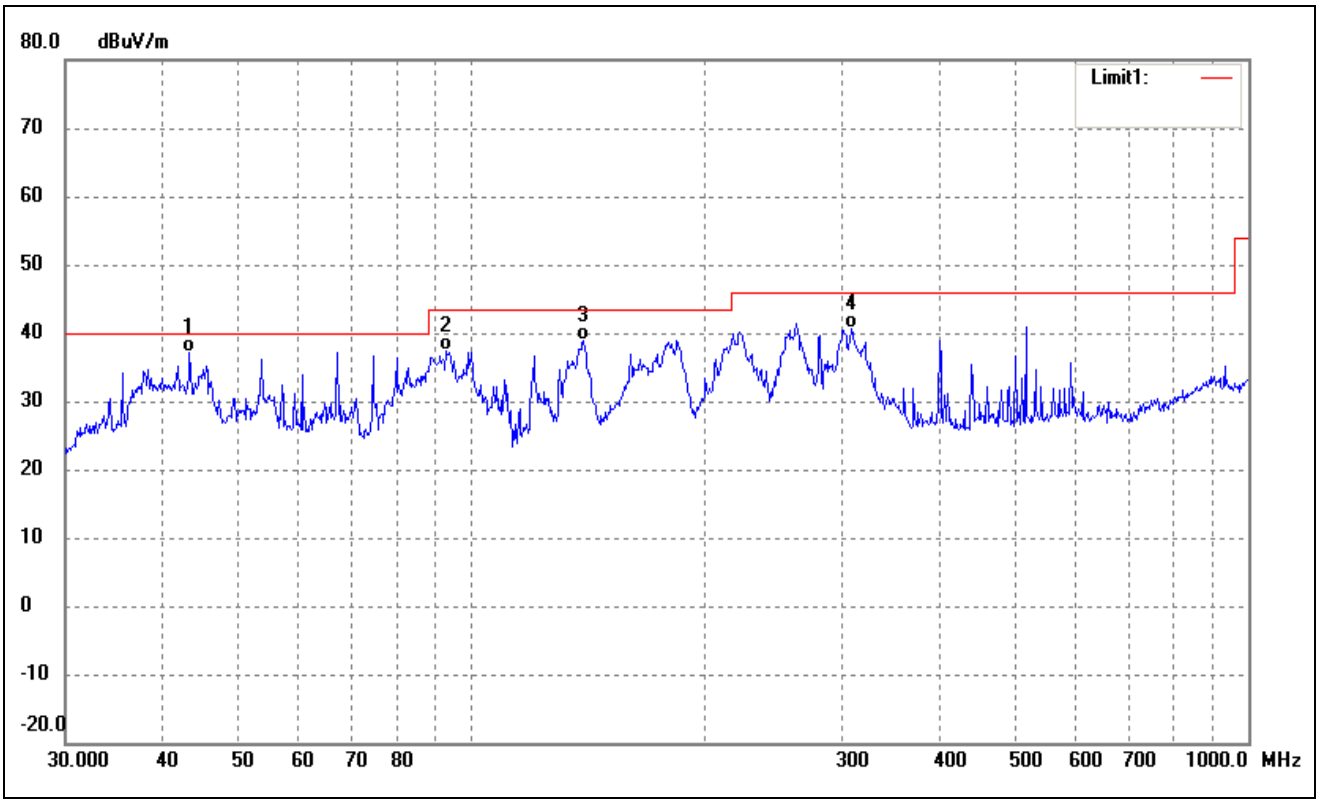
EUT: *Indoor Monitor*
Tested Model: *84706*
Operating Condition: *TM1*
Comment: *AC 120V/60Hz*

Test Specification: *Horizontal*



No.	Frequency	Reading	Correct	Result	Limit	Margin	Degree	Height	Remark
	(MHz)	(dBuV/m)	dB/m	(dBuV/m)	(dBuV/m)	(dB)	(°)	(cm)	
1	53.3179	26.58	7.30	33.88	40.00	-6.12	100	100	QP
2	120.2766	33.84	4.00	37.84	43.50	-5.66	100	100	QP
3	221.3920	32.01	5.20	37.21	46.00	-8.79	100	100	QP
4	360.4476	30.81	9.24	40.05	46.00	-5.95	100	100	QP

Test Specification: *Vertical*

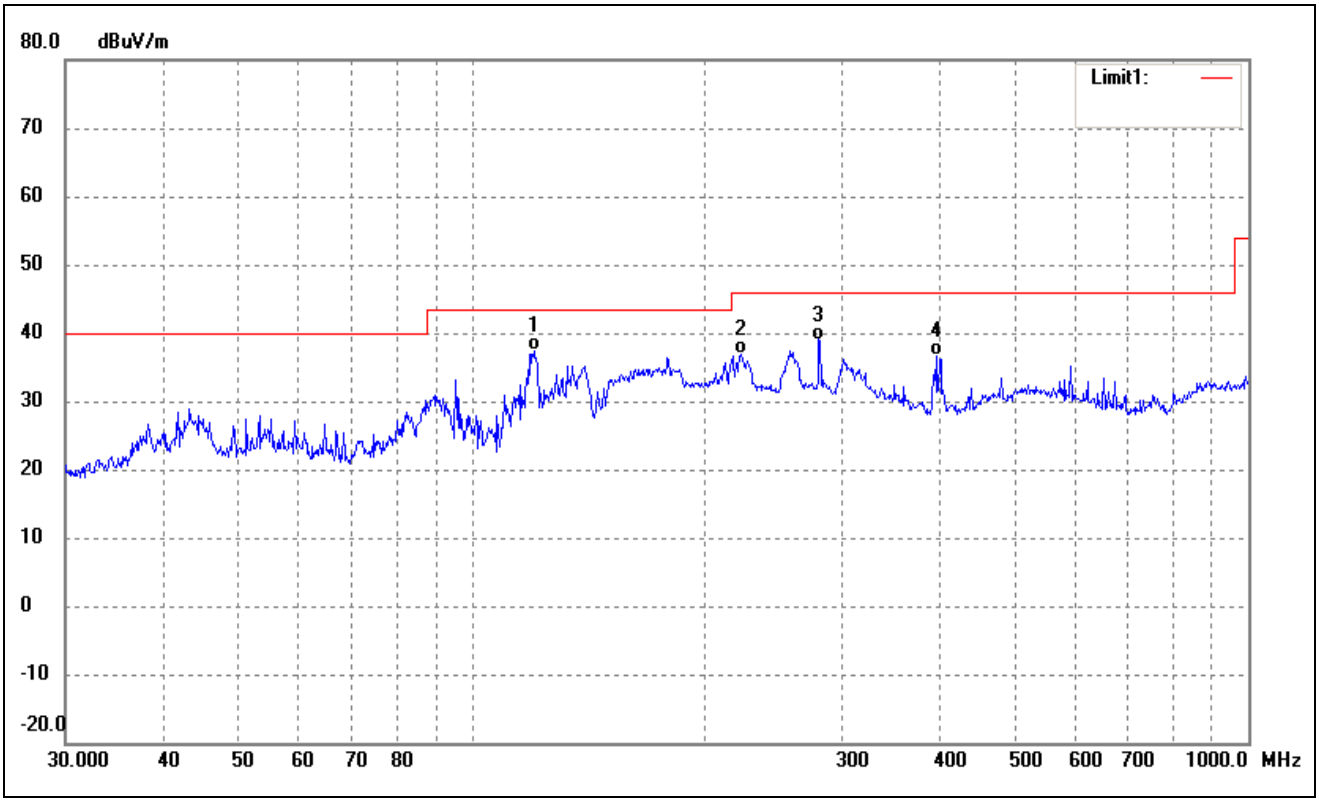


No.	Frequency	Reading	Correct	Result	Limit	Margin	Degree	Height	Remark
	(MHz)	(dBuV/m)	dB/m	(dBuV/m)	(dBuV/m)	(dB)	(°)	(cm)	
1	43.3534	29.25	7.91	37.16	40.00	-2.84	100	100	QP
2	92.7871	33.11	4.32	37.43	43.50	-6.07	100	100	QP
3	139.3612	36.35	2.46	38.81	43.50	-4.69	100	100	QP
4	308.9125	31.33	9.22	40.55	46.00	-5.45	100	100	QP

Plot of Radiated Emissions Test Data

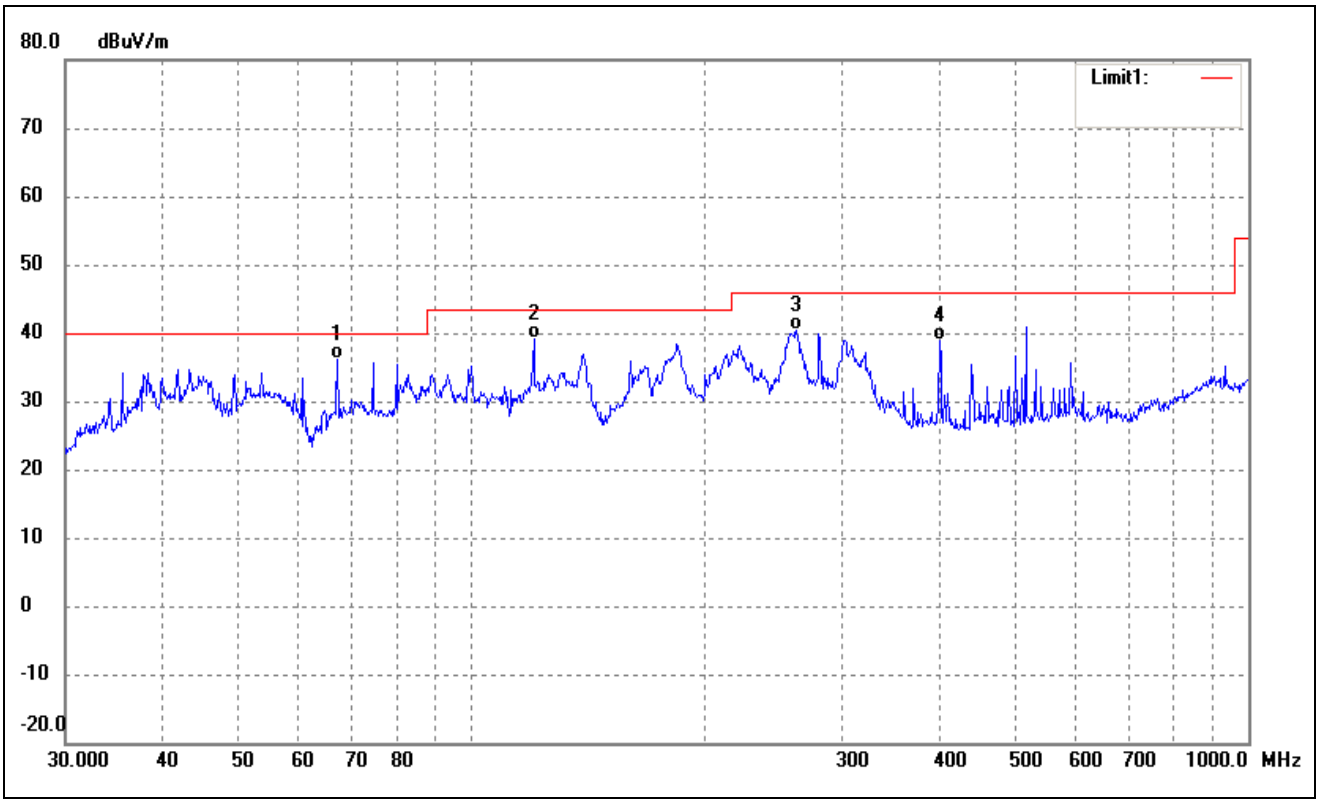
EUT: *Indoor Monitor*
Tested Model: *84706*
Operating Condition: *TM2*
Comment: *AC 120V/60Hz*

Test Specification: *Horizontal*



No.	Frequency	Reading	Correct	Result	Limit	Margin	Degree	Height	Remark
	(MHz)	(dBuV/m)	dB/m	(dBuV/m)	(dBuV/m)	(dB)	(°)	(cm)	
1	120.2766	33.34	4.00	37.34	43.50	-6.16	100	100	QP
2	222.1698	31.61	5.24	36.85	46.00	-9.15	100	100	QP
3	280.0237	30.60	8.40	39.00	46.00	-7.00	100	100	QP
4	397.6333	26.65	10.03	36.68	46.00	-9.32	100	100	QP

Test Specification: *Vertical*



No.	Frequency	Reading	Correct	Result	Limit	Margin	Degree	Height	Remark
	(MHz)	(dBuV/m)	dB/m	(dBuV/m)	(dBuV/m)	(dB)	(°)	(cm)	
1	67.2022	32.40	3.64	36.04	40.00	-3.96	100	100	QP
2	120.2766	35.20	4.00	39.20	43.50	-4.30	100	100	QP
3	261.9753	33.31	7.17	40.48	46.00	-5.52	100	100	QP
4	400.4318	28.77	10.12	38.89	46.00	-7.11	100	100	QP

EXHIBIT 1- PRODUCT LABELING

Proposed FCC Label Format

This device complies with Part 15 of the FCC Rules. Operation is subject to the following two conditions: (1) This device may not cause harmful interference, and (2) this device must accept any interference received, including interference that may cause undesired operation.

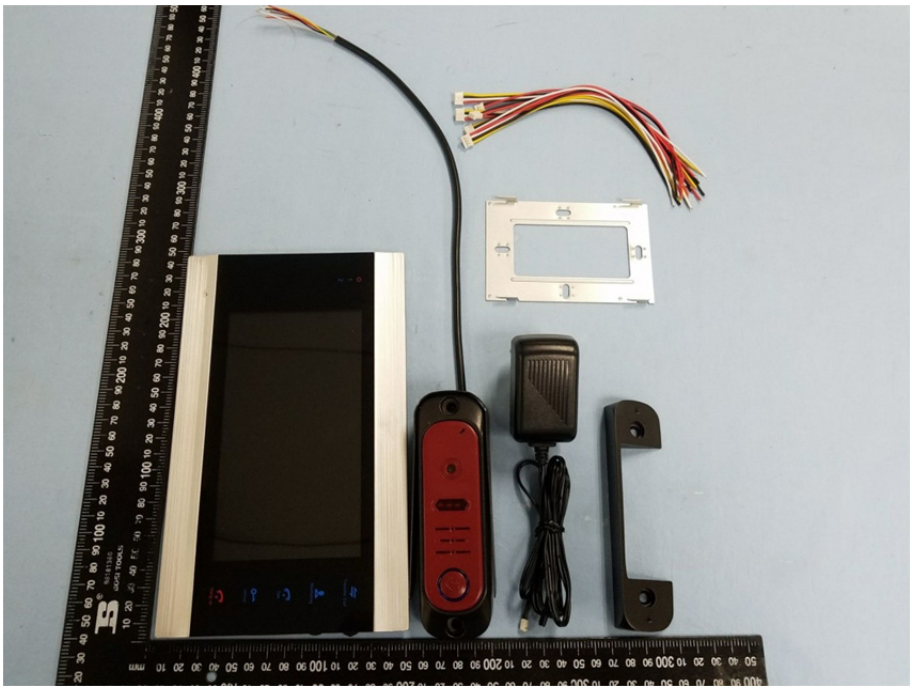
Specifications: Text is Black in color and is justified. Labels are printed in indelible ink on permanent adhesive backing or silk-screened onto the EUT or shall be affixed at a conspicuous location on the EUT. Where the EUT is constructed in two or more sections connected by wires and marketed together, the above statement is required to be affixed only to the main control unit.When the EUT is so small or for such use that it is not practicable to place the statement on it, the above information shall be placed in a prominent location in the instruction manual or pamphlet supplied to the user or, alternatively, shall be placed on the container in which the device is marketed.

Proposed Label Location on EUT

FCC Label Location

EXHIBIT 2 - EUT PHOTOGRAPHS

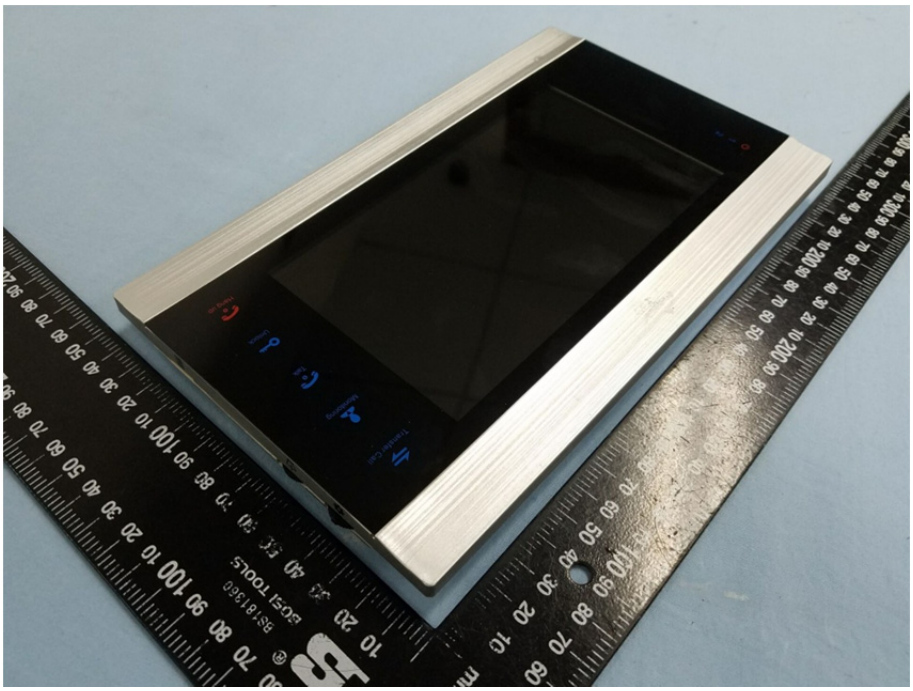
EUT View 1



EUT View 2

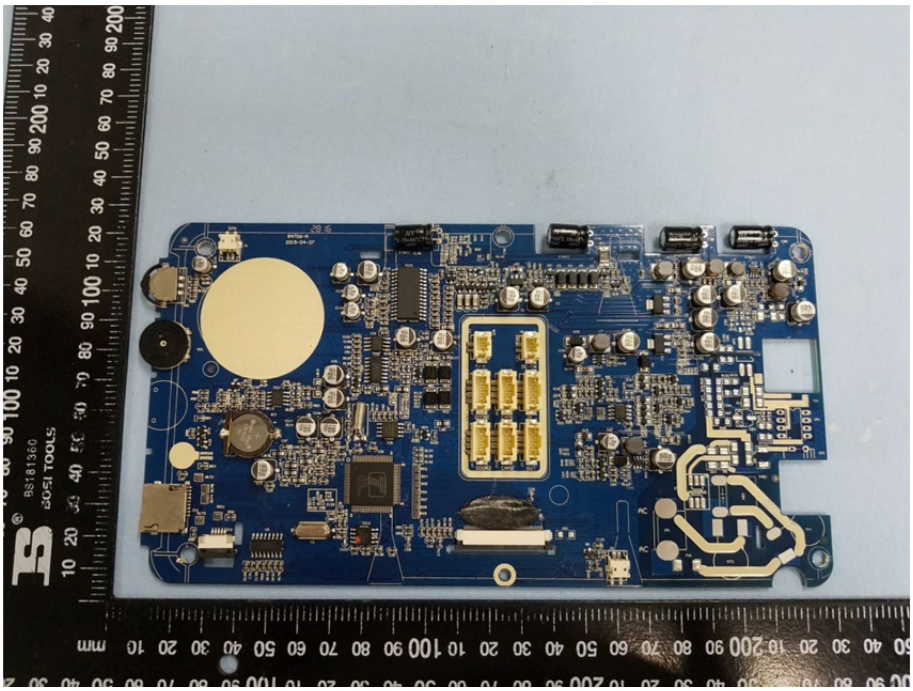
EUT View 3

EUT View 4



EUT Housing and Board View 1

Solder Board-Component View 1



Solder Board-Component View 2

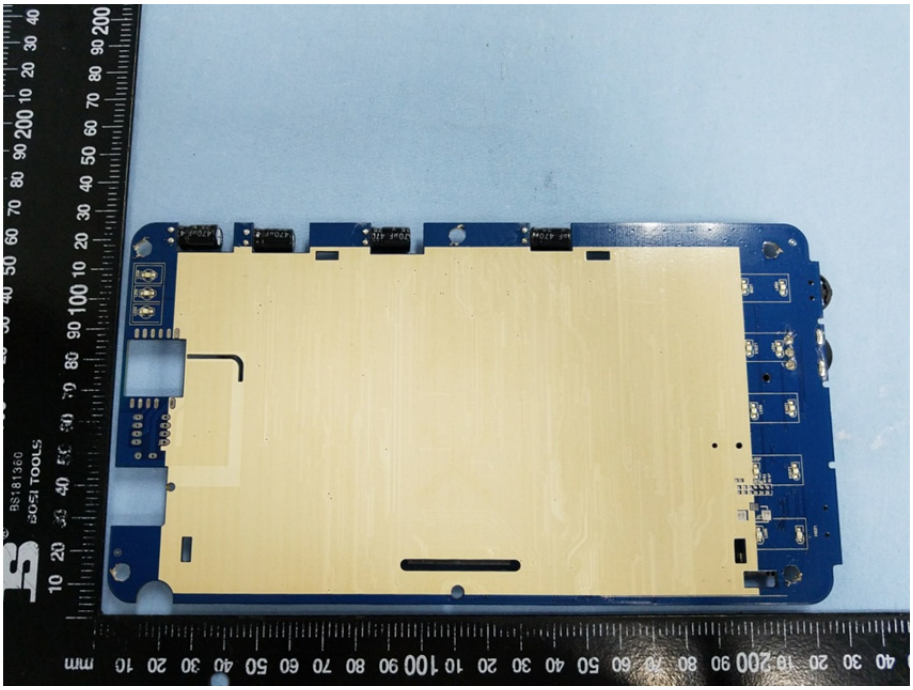
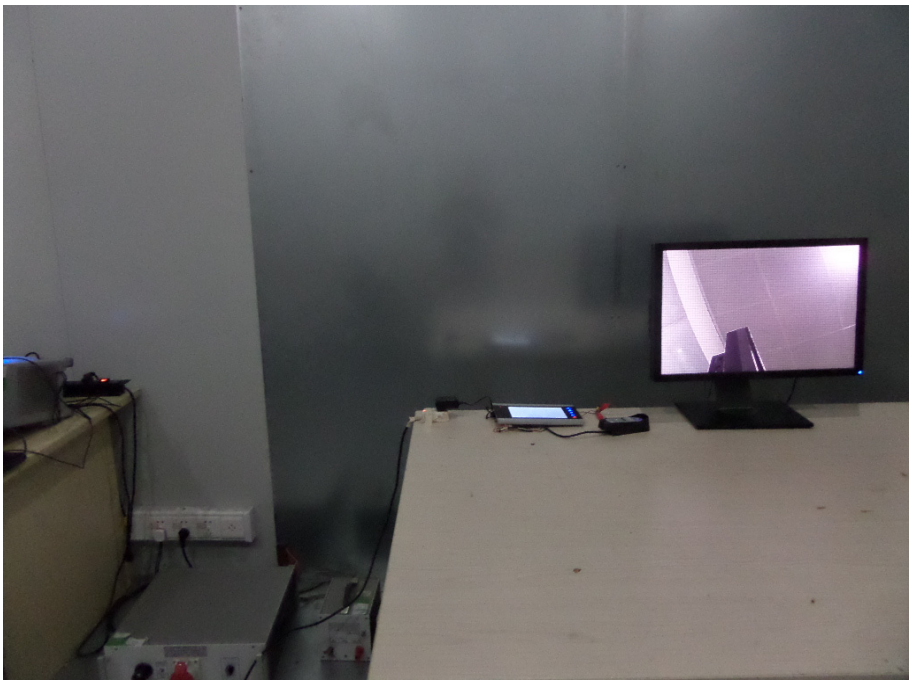


EXHIBIT 3 - TEST SETUP PHOTOGRAPHS

Conduction Emission View



Radiation Emission View

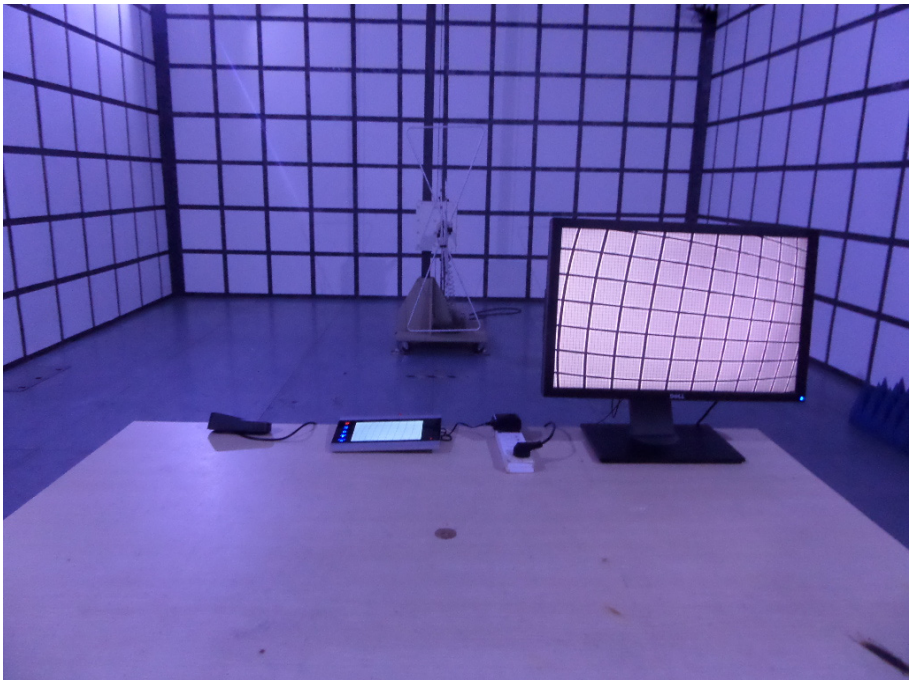


EXHIBIT4- USERS MANUAL

Information to Users

According to the FCC Part 15.19, 15.21, and 15.105 rules, forthis EUT, the instructions or operation manual furnished the user shall include the following or similar statement, placed in a prominent location in the text of the manual:

FCC Caution

This device complies with part 15 of the FCC Rules. Operation is subject to the following two conditions: (1) This device may not cause harmful interference, and (2) this device must accept any interference received, including interference that may cause undesired operation.

NOTE 1: This equipment has been tested and found to comply with the limits for a Class Bdigital device, pursuant to part 15 of the FCC Rules. These limits are designed to providereasonable protection against harmful interference in a residential installation. This equipmentgenerates, uses and can radiate radio frequency energy and, if not installed and used inaccordance with the instructions, may cause harmful interference to radio communications.However, there is no guarantee that interference will not occur in a particular installation. Ifthis equipment does cause harmful interference to radio or television reception, which can bedetermined by turning the equipment off and on, the user is encouraged to try to correct theinterference by one or more of the following measures:

- Reorient or relocate the receiving antenna.
- Increase the separation between the equipment and receiver.
-Connect the equipment into an outlet on a circuit different from that to which the receiver isconnected.
-Consult the dealer or an experienced radio/TV technician for help.

NOTE 2: Any changes or modifications to this unit not expressly approved by the party responsible for compliance could void the user's authority to operate the equipment.

*******END OF REPORT *******