

FCC 47 CFR PART 15 SUBPART B
CERTIFICATION TEST REPORT

Inlife-handnet Co., Ltd.

Virtual Reality Headset

Model No.: V9

FCC ID: 2AGQ9-VIULUXV9

Trademark: VIULUX

Prepared for : Inlife-handnet Co., Ltd.
Address : 15F, Bak Technology Buiding, Researach Road, Central
district of Science & Technology Park, Nanshan District,
Shenzhen City, Guangdong Province, P.R.C

Prepared by : EMTEK(SHENZHEN) CO., LTD.
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Report Number : ES161221003E
Date of Test : December 21, 2016 to December 26, 2016
Date of Report : December 26, 2016

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TEST REPORT DESCRIPTION

APPLICANT : Inlife-handnet Co., Ltd.
15F, Bak Technology Buiding, Researach Road, Central district of
Science & Technology Park,Nanshan District, Shenzhen City,
Guangdong Province, P.R.C

MANUFACTURER : Inlife-handnet Co., Ltd.
15F, Bak Technology Buiding, Researach Road, Central district of
Science & Technology Park,Nanshan District, Shenzhen City,
Guangdong Province, P.R.C

Trade Mark : VIULUX

EUT : Virtual Reality Headset

Model No. V9

Power Supply : 3.7V INTERNAL RECHARGEABLE LITHIUM BATTERY
DC 5V FROM USB ADAPTER
DC 5V FROM PC

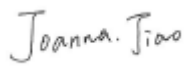
Measurement Procedure Used:


FCC Rules and Regulations Part 15: 2015 Subpart B Class B & FCC / ANSI C63.4-2014

The device described above is tested by EMTEK(SHENZHEN) CO., LTD. to determine the maximum emission levels emanating from the device and the severe levels of the device can endure and its performance criterion. The measurement results are contained in this test report and EMTEK(SHENZHEN) CO., LTD. is assumed full of responsibility for the accuracy and completeness of these measurements. Also, this report shows that the EUT (Equipment Under Test) is technically compliant with the FCC requirements.

This report applies to above tested sample only and shall not be reproduced in part without written approval of EMTEK(SHENZHEN) CO., LTD.

Date of Test : December 21, 2016 to December 26, 2016

Prepared by : 
Joanna Jiao/Editor

Reviewer : 
Joe Xia/Supervisor

Approved & Authorized Signer : 
Lisa Wang/Manager

Modified Information

Version	Report No.	Revision Data	Summary
Ver.1.0	ES161221003E	/	Original Version

1. SUMMARY OF TEST RESULT

EMISSION		
Description of Test Item	Standard & Limits	Results
Conducted Disturbance at Mains Terminals	FCC Part 15, Subpart B, Class B ANSI C63.4: 2014	Pass
Radiated Disturbance	FCC Part 15, Subpart B, Class B ANSI C63.4: 2014	Pass
Note: N/A is an abbreviation for Not Applicable.		

2. GENERAL INFORMATION

2.1. Description of Device (EUT)

EUT : Virtual Reality Headset

Model Number : V9

Applicant : Inlife-handnet Co., Ltd.
Address : 15F, Bak Technology Buiding, Research Road, Central district of Science & Technology Park, Nanshan District, Shenzhen City, Guangdong Province, P.R.C

Manufacturer : Inlife-handnet Co., Ltd.
Address : 15F, Bak Technology Buiding, Research Road, Central district of Science & Technology Park, Nanshan District, Shenzhen City, Guangdong Province, P.R.C

Date of Received : December 21, 2016

Date of Test : December 21, 2016 to December 26, 2016

2.2. Description of Support Device

Monitor : Manufacturer: DELL
M/N: E2013HC
S/N: CN-0841PW-64180-341-0KRS
CE, FCC

PC : Manufacturer:Lenovo
M/N:ThinkCentre 8701
S/N: 8701A53L3BC108
CE,FCC

Mouse : Manufacturer:Lenovo
M/N:MO28UOL
S/N:44D2639

Keyboard : Manufacturer:Lenovo
M/N: KB-0225
S/N: 41A5039

2.3. Description of Test Facility

Site Description
EMC Lab. : Accredited by CNAS, 2016.10.24
The certificate is valid until 2022.10.28
The Laboratory has been assessed and proved to be in compliance with CNAS-CL01:2006 (identical to ISO/IEC 17025:2005)
The Certificate Registration Number is L2291.

Name of Firm : EMTEK(SHENZHEN) CO., LTD.
Site Location : Bldg 69, Majialong Industry Zone,
Nanshan District, Shenzhen, Guangdong, China

2.4. Measurement Uncertainty

Test Item	Uncertainty
Conducted Emission Uncertainty	: 3.16dB(9k~150kHz Conduction 2#) 2.90dB(150k-30MHz Conduction 2#)
Radiated Emission Uncertainty (3m Chamber)	: 3.78dB (30M~1GHz Polarize: H) 4.27dB (30M~1GHz Polarize: V) 4.46dB (1~6GHz)

3. MEASURING DEVICE AND TEST EQUIPMENT

3.1. For Power Line Conducted Emission Measurement

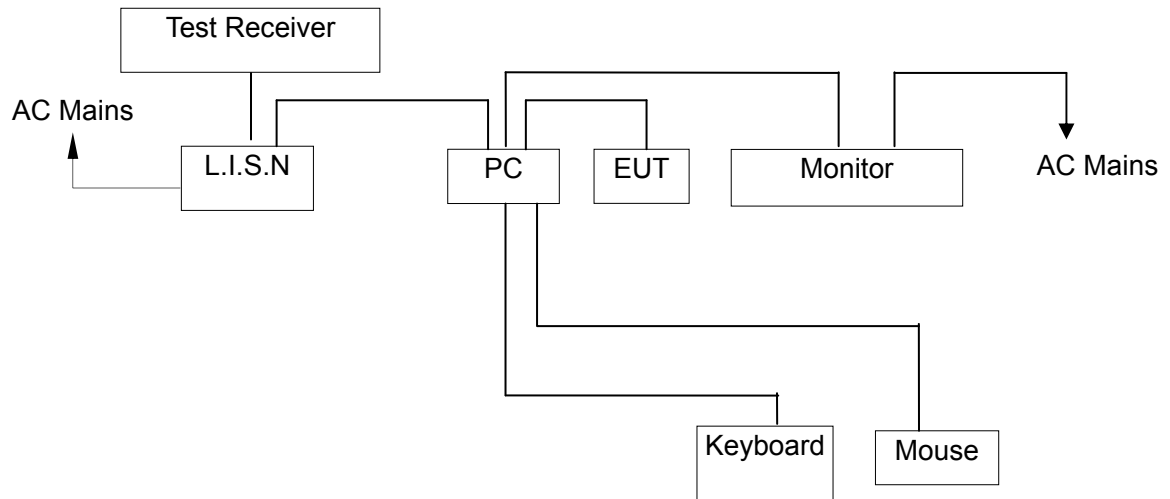
Used	Equipment	Manufacturer	Model No.	Serial No.	Last Cal.	Cal. Interval
<input checked="" type="checkbox"/>	L.I.S.N.	ROHDE & SCHWARZ	ESH3-Z6	100011	May 28, 2016	1 Year
<input checked="" type="checkbox"/>	L.I.S.N.	ROHDE & SCHWARZ	ESH3-Z6	100253	May 28, 2016	1 Year
<input checked="" type="checkbox"/>	50Ω Coaxial Switch	Anritsu	MP59B	M20531	May 29, 2016	1 Year
<input checked="" type="checkbox"/>	Pulse Limiter	Rohde & Schwarz	ESH3-Z2	100006	May 28, 2016	1 Year

3.2. For Radiated Emission Measurement

Used	Equipment	Manufacturer	Model No.	Serial No.	Last Cal.	Cal. Interval
<input checked="" type="checkbox"/>	EMI Test Receiver	Rohde & Schwarz	ESU	1302.6005.26	May 29, 2016	1 Year
<input checked="" type="checkbox"/>	Pre-Amplifier	HP	8447D	2944A07999	May 28, 2016	1 Year
<input checked="" type="checkbox"/>	Bilog Antenna	Schwarzbeck	VULB9163	142	May 28, 2016	1 Year
<input type="checkbox"/>	Loop Antenna	Schwarzbeck	FMZB 1519	012	May 28, 2016	1 Year
<input type="checkbox"/>	Horn Antenna	Schwarzbeck	BBHA 9170	BBHA9170399	May 28, 2016	1 Year
<input type="checkbox"/>	Horn Antenna	Schwarzbeck	BBHA 9120	D143	May 28, 2016	1 Year
<input checked="" type="checkbox"/>	Cable	Schwarzbeck	AK9513	ACRX1	May 29, 2016	1 Year
<input checked="" type="checkbox"/>	Cable	Rosenberger	N/A	FP2RX2	May 29, 2016	1 Year
<input checked="" type="checkbox"/>	Cable	Schwarzbeck	AK9513	CRPX1	May 29, 2016	1 Year
<input checked="" type="checkbox"/>	Cable	Schwarzbeck	AK9513	CRRX2	May 29, 2016	1 Year
<input type="checkbox"/>	Pre-Amplifier	A.H.	PAM-0126	1415261	May 28, 2016	1 Year

4. POWER LINE CONDUCTED EMISSION MEASUREMENT

4.1. Block Diagram of Test Setup



(EUT: Virtual Reality Headset)

4.2. Measuring Standard

FCC Part 15, Subpart B, Class B ANSI C63.4: 2014

4.3. Power Line Conducted Emission Limits (Class B)

Frequency (MHz)	Limit (dB μ V)	
	Quasi-peak Level	Average Level
0.15 ~ 0.50	66.0 ~ 56.0 *	56.0 ~ 46.0 *
0.50 ~ 5.00	56.0	46.0
5.00 ~ 30.00	60.0	50.0

NOTE1-The lower limit shall apply at the transition frequencies.
NOTE2-The limit decreases linearly with the logarithm of the frequency in the range 0.15MHz to 0.50MHz.

4.4. EUT Configuration on Measurement

The following equipments are installed on Conducted Emission Measurement to meet FCC requirements and operating in a manner which tends to maximize its emission characteristics in a normal application.

EUT : Virtual Reality Headset
Model Number : V9

4.5. Operating Condition of EUT

4.5.1. Setup the EUT as shown on Section 4.1.

4.5.2. Turn on the power of all equipments.

4.5.3. Let the EUT work in measuring mode (Connect to PC for data transmission) measure it.

Test software : WINTHRAX.

4.6. Test Procedure

The EUT is put on the plane 0.8m high above the ground by insulating support and connected to the AC mains through Line Impedance Stability Network (L.I.S.N). This provided a 50ohm coupling impedance for the tested equipments. Both sides of AC line are investigated to find out the maximum conducted emission according to the FCC regulations during conducted emission measurement.

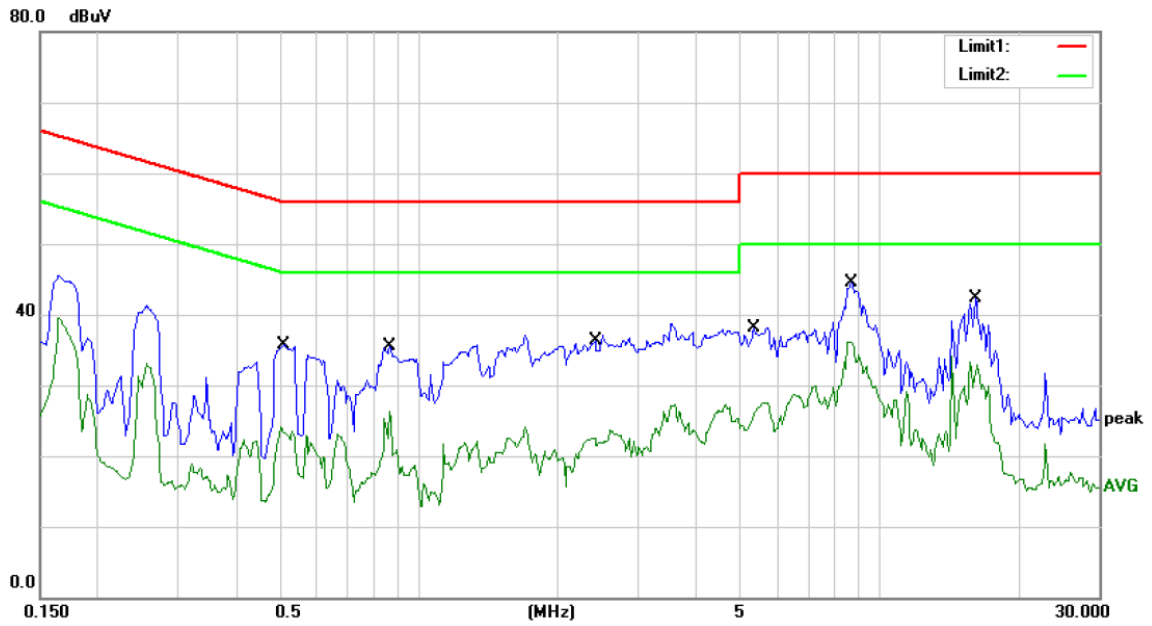
The bandwidth of the field strength meter (R&S Test Receiver ESCS30) is set at 9kHz in 150kHz~30MHz and 200Hz in 9kHz~150kHz.

The frequency range from 150kHz to 30MHz is investigated.
All the scanning waveform is put in the following pages.

4.7. Measuring Results

PASS.

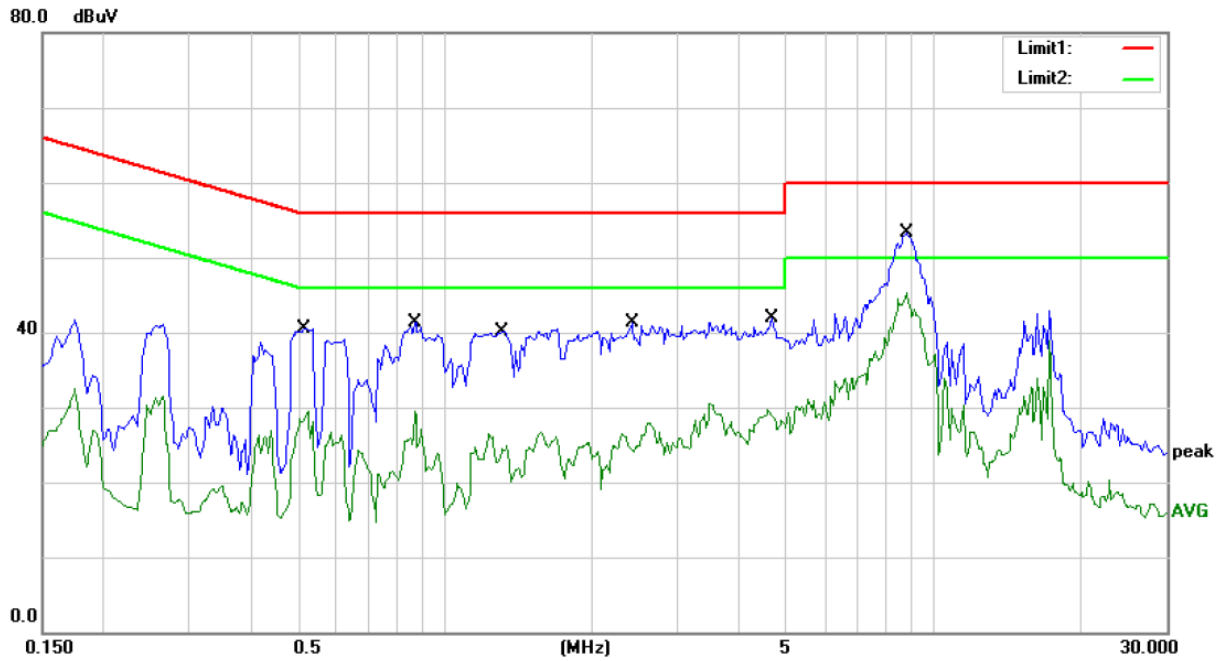
Please refer to following pages.



Site Conduction #1 Phase: **L1** Temperature: 22
 Limit: (CE)FCC PART 15 class B_QP Power: DC 5V From PC Humidity: 55 %
 Mode: Connect to pc
 Note:

No.	Mk.	Freq.	Reading Level	Correct Factor	Measurement	Limit	Over	Detector	Comment
		MHz	dBuV	dB	dBuV	dBuV	dB		
1		0.5100	35.77	0.00	35.77	56.00	-20.23	QP	
2		0.5100	24.11	0.00	24.11	46.00	-21.89	AVG	
3		0.8650	35.48	0.00	35.48	56.00	-20.52	QP	
4		0.8650	26.35	0.00	26.35	46.00	-19.65	AVG	
5		2.3961	36.08	0.00	36.08	56.00	-19.92	QP	
6		2.3961	23.61	0.00	23.61	46.00	-22.39	AVG	
7		5.3600	38.17	0.00	38.17	60.00	-21.83	QP	
8		5.3600	27.21	0.00	27.21	50.00	-22.79	AVG	
9	*	8.7200	44.50	0.00	44.50	60.00	-15.50	QP	
10		8.7200	32.60	0.00	32.60	50.00	-17.40	AVG	
11		16.2000	42.22	0.00	42.22	60.00	-17.78	QP	
12		16.2000	34.18	0.00	34.18	50.00	-15.82	AVG	

*:Maximum data x:Over limit !:over margin Comment: Factor build in receiver. Operator: Stan



Site Conduction #1 Phase: **N** Temperature: 22
 Limit: (CE)FCC PART 15 class B_QP Power: DC 5V From PC Humidity: 55 %
 Mode: Connect to pc
 Note:

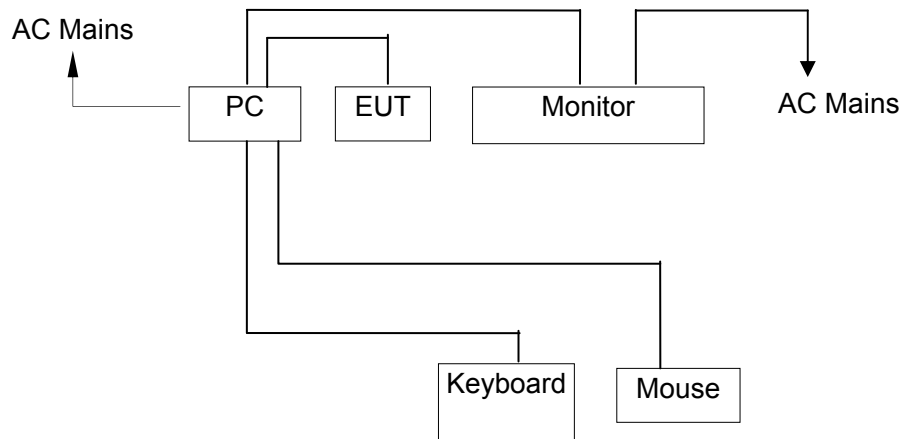
No.	Mk.	Freq.	Reading Level	Correct Factor	Measurement	Limit	Over	Detector	Comment
		MHz	dBuV	dB	dBuV	dBuV	dB		
1		0.5150	40.59	0.00	40.59	56.00	-15.41	QP	
2		0.5150	29.47	0.00	29.47	46.00	-16.53	AVG	
3		0.8700	41.38	0.00	41.38	56.00	-14.62	QP	
4		0.8700	29.57	0.00	29.57	46.00	-16.43	AVG	
5		1.3100	40.12	0.00	40.12	56.00	-15.88	QP	
6		1.3100	26.64	0.00	26.64	46.00	-19.36	AVG	
7		2.4150	41.22	0.00	41.22	56.00	-14.78	QP	
8		2.4150	27.99	0.00	27.99	46.00	-18.01	AVG	
9		4.6550	41.96	0.00	41.96	56.00	-14.04	QP	
10		4.6550	30.47	0.00	30.47	46.00	-15.53	AVG	
11		8.7900	53.30	0.00	53.30	60.00	-6.70	QP	
12	*	8.7900	45.39	0.00	45.39	50.00	-4.61	AVG	

*:Maximum data x:Over limit !:over margin Comment: Factor build in receiver. Operator: Stan

5. RADIATED EMISSION MEASUREMENT

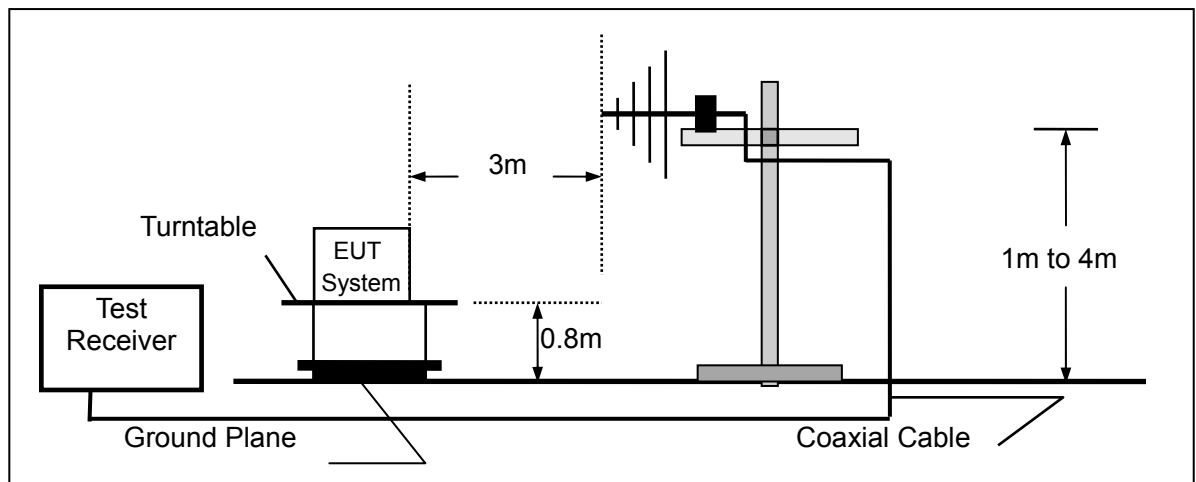
5.1. Block Diagram of Test Setup

5.1.1. Block diagram of EUT System



(EUT: Virtual Reality Headset)

5.1.2. Block diagram of test setup (In chamber)



(EUT: Virtual Reality Headset)

5.2. Measuring Standard

FCC Part 15, Subpart B, Class B ANSI C63.4: 2014

5.3. Radiated Emission Limits (Class B)

Frequency MHz	Distance Meters	Field Strengths Limit	
		$\mu\text{V}/\text{m}$	$\text{dB}(\mu\text{V})/\text{m}$
30 ~ 88	3	100	40.0
88 ~ 216	3	150	43.5
216 ~ 960	3	200	46.0
960 ~ 1000	3	500	54.0
Frequency MHz	Distance Meters	Field Strengths Limit	
		PK $\text{dB}(\mu\text{V})/\text{m}$	AV $\text{dB}(\mu\text{V})/\text{m}$
1000 ~ 6000	3	74	54

Remark: (1) Emission level $(\text{dB})\mu\text{V} = 20 \log$ Emission level $\mu\text{V}/\text{m}$
 (2) The smaller limit shall apply at the cross point between two frequency bands.
 (3) Distance is the distance in meters between the measuring instrument, antenna and the closest point of any part of the device or system.

5.4. EUT Configuration on Measurement

The FCC Class B regulations test method must be used to find the maximum emission during radiated emission measurement.

EUT : Virtual Reality Headset
 Model Number : V9

5.5. Operating Condition of EUT

5.5.1. Setup the EUT as shown on Section 5.1.

5.5.2. Turn on the power of all equipments.

5.5.3. Let the EUT work in measuring mode (Connect to PC for data transmission) and measure it.

Test software : WINTHRAX.

5.6. Test Procedure

The EUT is placed on a turn table which is 0.8 meter high above the ground. The turn table can rotate 360 degrees to determine the position of the maximum emission level. The EUT is set 3 meters away from the receiving antenna which is mounted on an antenna tower. The antenna can be moved up and down from 1 to 4 meters to find out the maximum emission level. Bilog antenna (calibrated by Dipole Antenna) is used as a receiving antenna. Both horizontal and vertical polarization of the antenna is set on test.

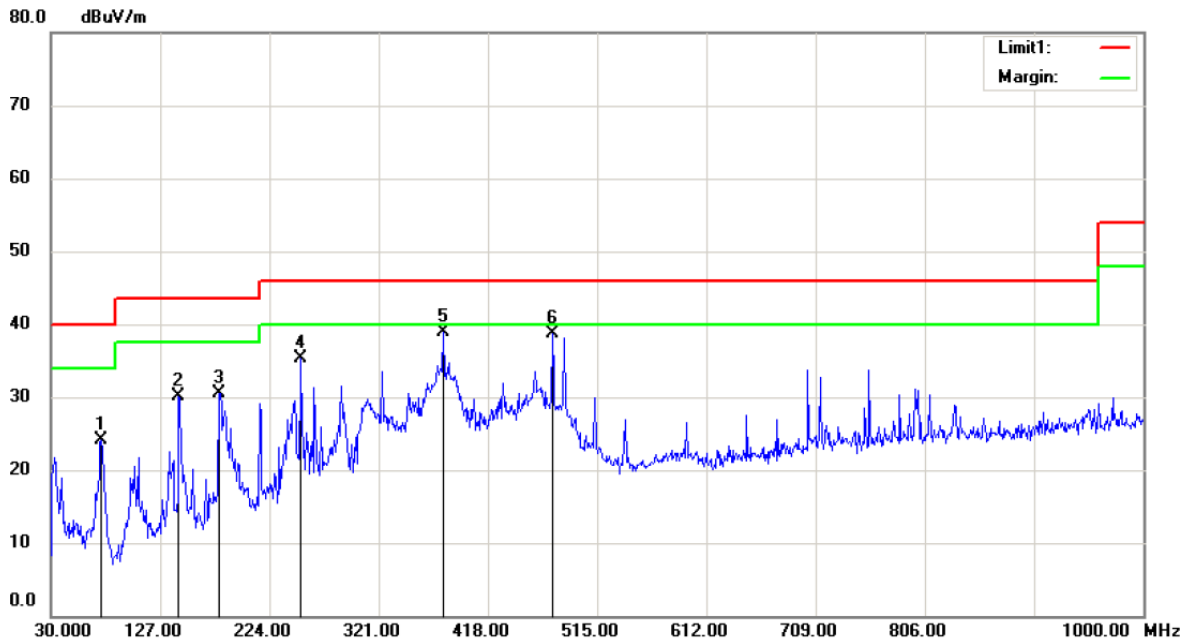
The bandwidth of the Receiver (ESU26) is set at 120kHz.
 The worst scanning curves are attached in following pages.

5.7. Measuring Results

PASS.

The frequency range from 30MHz to 6000MHz is investigated.

Please refer to following pages.



Site 3m Chamber #2

Polarization: *Horizontal*

Temperature: 22 C

Limit: (RE)FCC PART 15 CLASS B

Power: DC 5V FROM PC

Humidity: 55 %

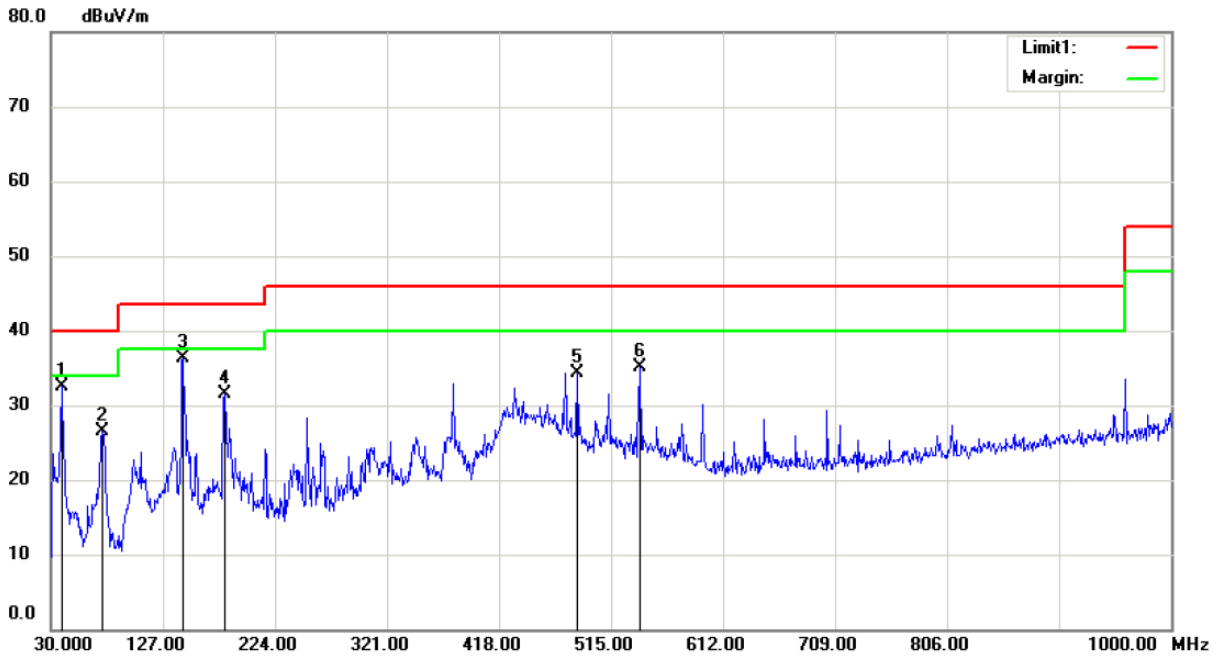
Mode:CONNECT TO PC

Note:

No.	Mk.	Freq.	Reading Level	Correct Factor	Measurement	Limit	Over	Antenna Height	Table Degree	
		MHz	dBuV	dB	dBuV/m	dBuV/m	dB	cm	degree	Comment
1		74.6200	42.69	-18.63	24.06	40.00	-15.94			QP
2		143.4900	48.85	-18.81	30.04	43.50	-13.46			QP
3		179.3800	47.41	-17.00	30.41	43.50	-13.09			QP
4		252.1300	49.06	-13.70	35.36	46.00	-10.64			QP
5	*	378.2300	48.45	-9.55	38.90	46.00	-7.10			QP
6		475.2300	46.72	-8.09	38.63	46.00	-7.37			QP

*:Maximum data x:Over limit !:over margin

Operator: Wang



Site 3m Chamber #2

Polarization: **Vertical**

Temperature: 22 C

Limit: (RE)FCC PART 15 CLASS B

Power: DC 5V FROM PC

Humidity: 55 %

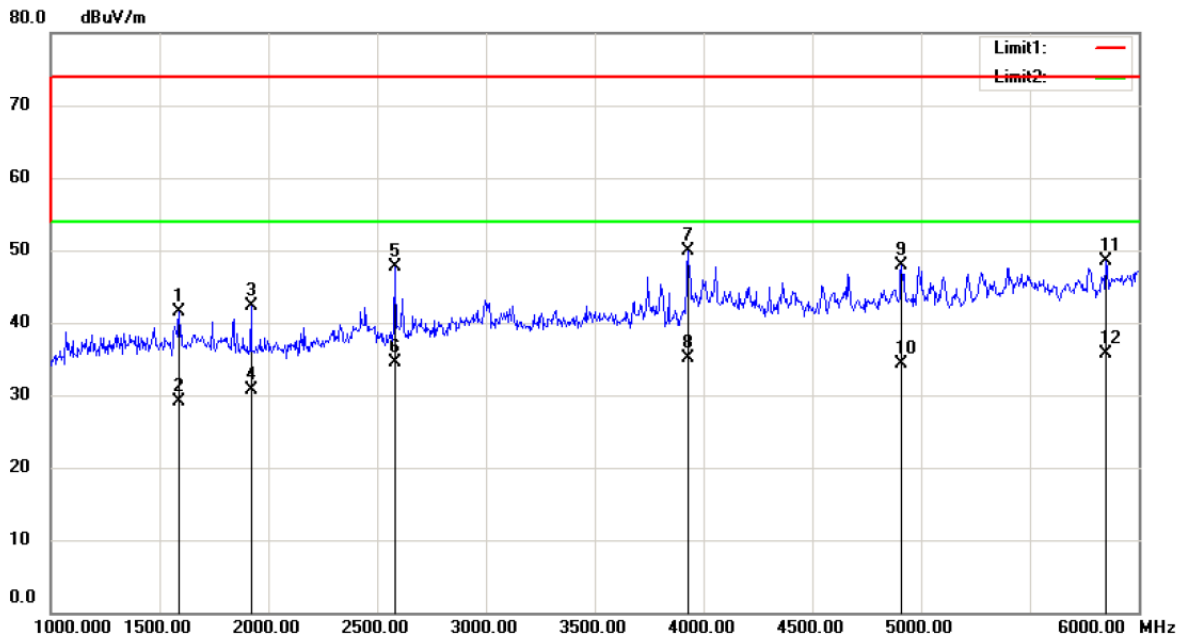
Mode:CONNECT TO PC

Note:

No.	Mk.	Freq.	Reading Level	Correct Factor	Measurement	Limit	Over	Antenna Height	Table Degree	
		MHz	dBuV	dB	dBuV/m	dBuV/m	dB	cm	degree	Comment
1		39.7000	47.05	-14.54	32.51	40.00	-7.49	QP		
2		74.6200	45.10	-18.63	26.47	40.00	-13.53	QP		
3	*	144.4600	55.05	-18.81	36.24	43.50	-7.26	QP		
4		180.3500	48.45	-16.99	31.46	43.50	-12.04	QP		
5		485.9000	42.22	-7.83	34.39	46.00	-11.61	QP		
6		540.2200	41.65	-6.59	35.06	46.00	-10.94	QP		

*:Maximum data x:Over limit !:over margin

Operator: Wang



Site 3m Chamber #2

Polarization: **Horizontal**

Temperature: 22 C

Limit: (RE)FCC PART 15 CLASS B

Power: DC 5V FROM PC

Humidity: 55 %

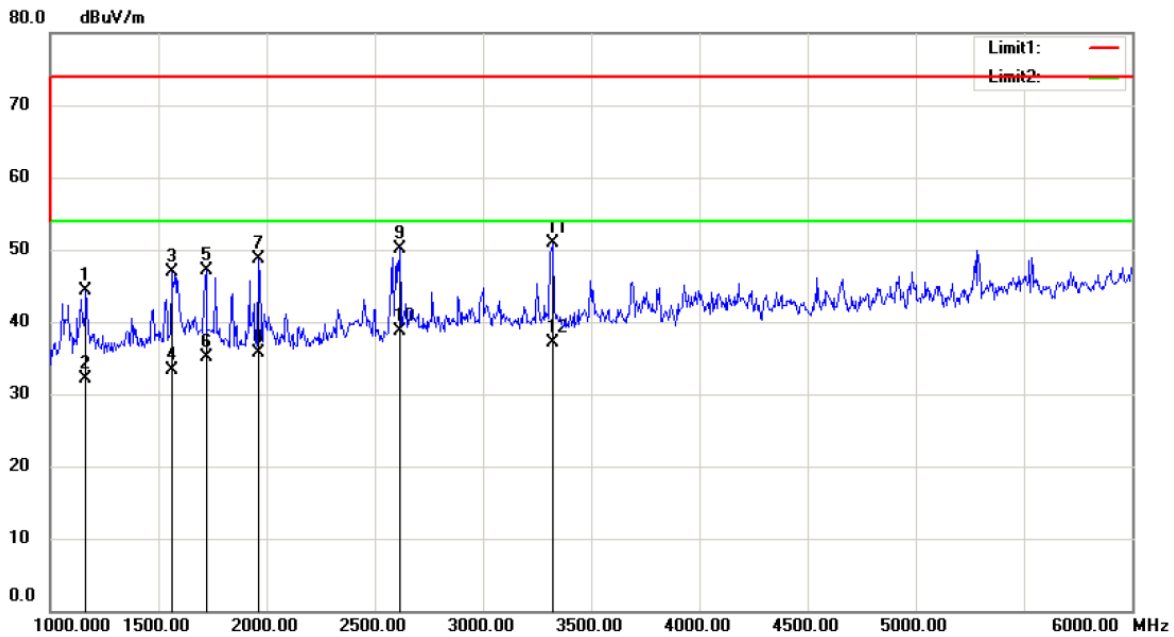
Mode:CONNECT TO PC

Note:

No.	Mk.	Freq.	Reading Level	Correct Factor	Measurement	Limit	Over	Antenna Height	Table Degree	
		MHz	dBuV	dB	dBuV/m	dBuV/m	dB	cm	degree	Comment
1		1590.000	57.41	-15.97	41.44	74.00	-32.56			peak
2		1590.000	45.17	-15.97	29.20	54.00	-24.80			AVG
3		1920.000	58.46	-16.13	42.33	74.00	-31.67			peak
4		1920.000	46.83	-16.13	30.70	54.00	-23.30			AVG
5		2580.000	60.92	-13.27	47.65	74.00	-26.35			peak
6		2580.000	47.87	-13.27	34.60	54.00	-19.40			AVG
7		3930.000	59.75	-9.89	49.86	74.00	-24.14			peak
8		3930.000	45.09	-9.89	35.20	54.00	-18.80			AVG
9		4910.000	55.85	-7.90	47.95	74.00	-26.05			peak
10		4910.000	42.20	-7.90	34.30	54.00	-19.70			AVG
11		5850.000	53.02	-4.51	48.51	74.00	-25.49			peak
12	*	5850.000	40.31	-4.51	35.80	54.00	-18.20			AVG

*:Maximum data x:Over limit !:over margin

Operator: Wang



Site 3m Chamber #2 Polarization: **Vertical** Temperature: 22 C
 Limit: (RE)FCC PART 15 CLASS B Power: DC 5V FROM PC Humidity: 55 %
 Mode:CONNECT TO PC
 Note:

No.	Mk.	Freq. MHz	Reading Level dBuV	Correct Factor dB	Measure- ment dBuV/m	Limit dBuV/m	Over dB	Detector	Antenna Height cm	Table Degree degree	Comment
1		1165.000	60.03	-15.77	44.26	74.00	-29.74	peak			
2		1165.000	47.87	-15.77	32.10	54.00	-21.90	AVG			
3		1560.000	62.89	-15.96	46.93	74.00	-27.07	peak			
4		1560.000	49.36	-15.96	33.40	54.00	-20.60	AVG			
5		1720.000	63.18	-16.04	47.14	74.00	-26.86	peak			
6		1720.000	51.14	-16.04	35.10	54.00	-18.90	AVG			
7		1960.000	64.91	-16.15	48.76	74.00	-25.24	peak			
8		1960.000	51.95	-16.15	35.80	54.00	-18.20	AVG			
9		2615.000	63.20	-13.10	50.10	74.00	-23.90	peak			
10	*	2615.000	51.80	-13.10	38.70	54.00	-15.30	AVG			
11		3325.000	61.74	-10.74	51.00	74.00	-23.00	peak			
12		3325.000	47.94	-10.74	37.20	54.00	-16.80	AVG			

*:Maximum data x:Over limit !:over margin

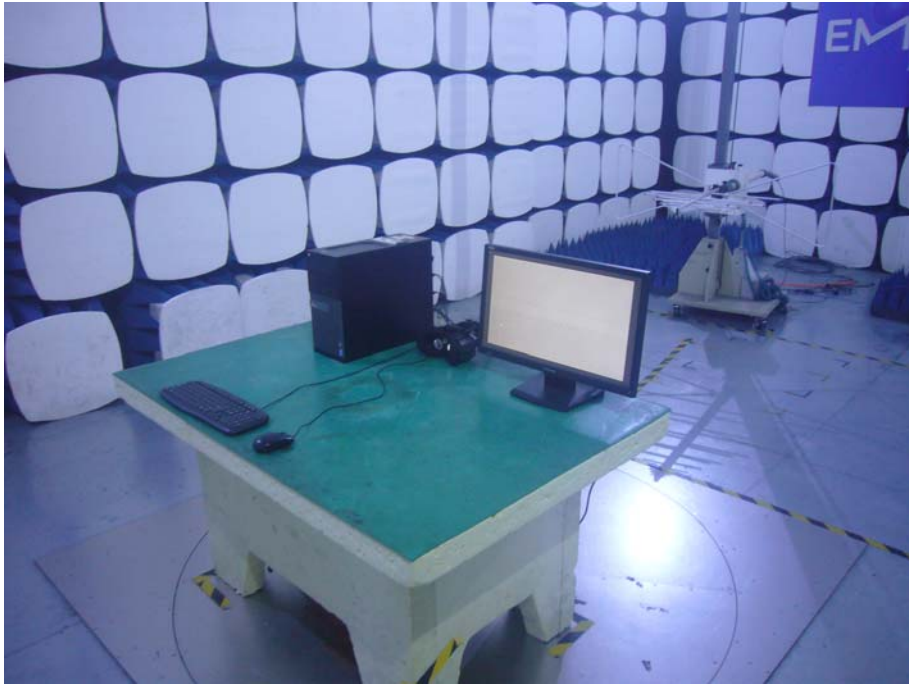
Operator: Wang

6. PHOTOGRAPHS

6.1. Photos of Conducted Emission Measurement



6.2. Photos of Radiation Emission Measurement



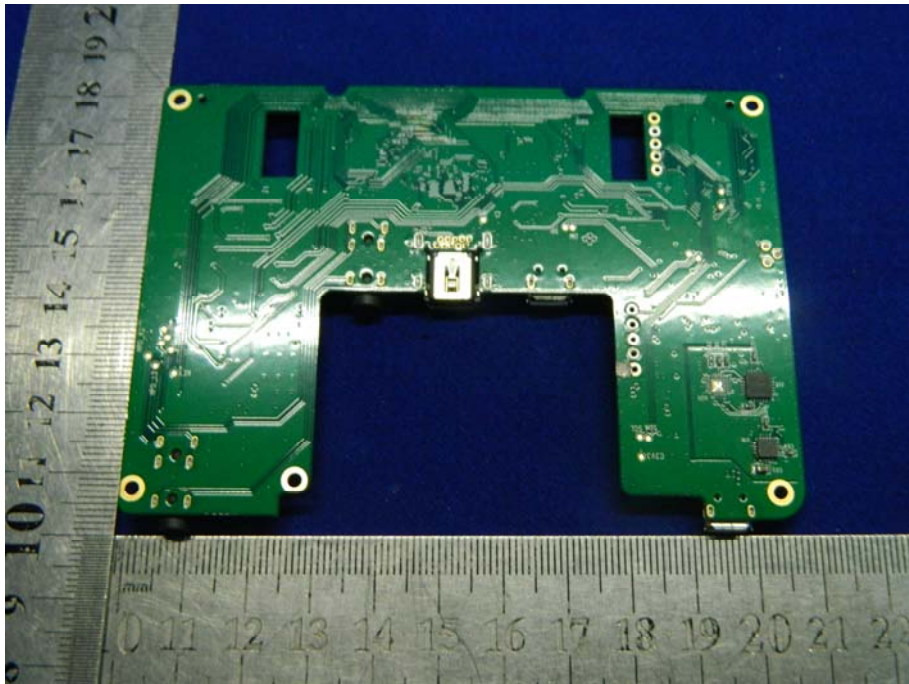


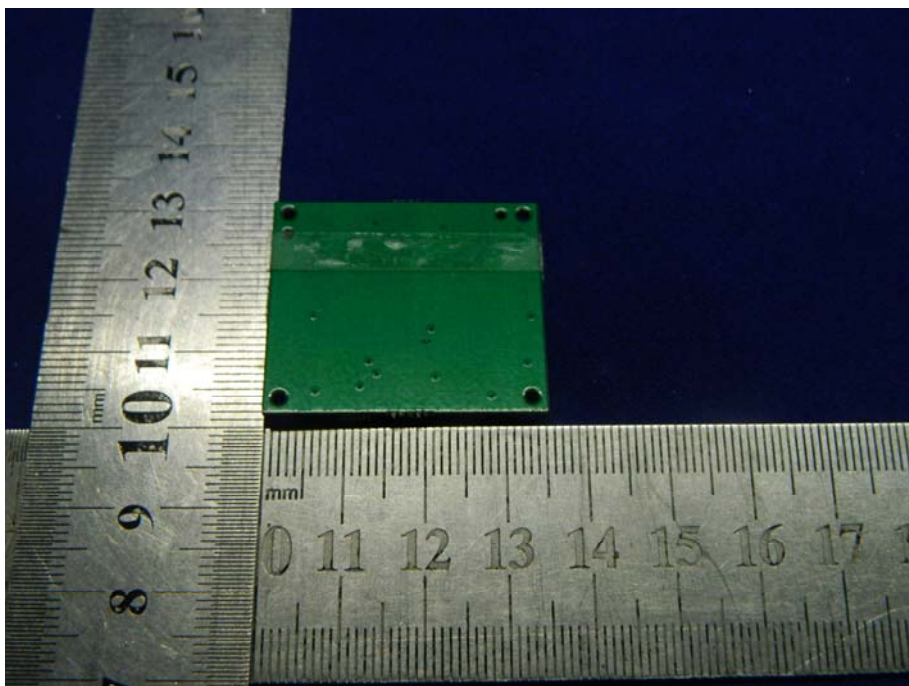
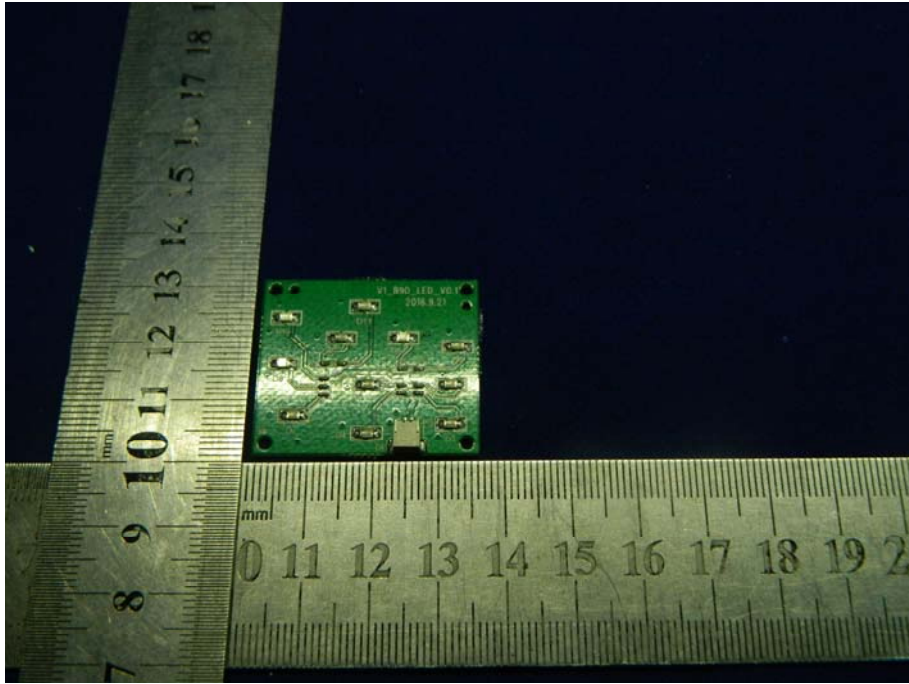
APPENDIX
(Photos of EUT)











-----THE END-----