# TEST REPORT FOR CERTIFICATION
On Behalf of

Lorex Technology Inc

2.4G wireless camera product

Model Number: LWU3620-C

FCC ID : UCZ-LWU3620C

Prepared for : Lorex Technology Inc
250 Royal Crest Court Markham, ON L3R 3S1 Canada

Prepared By :EST Technology Co., Ltd.
Santun(guantai Road), Houjie Town, DongGuan City,
GuangDong, China.

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Report Number: ESTE-R1506014
Date of Test : April 28,2015~ June 05, 2015
Date of Report : June 06, 2015

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# Test Report Verification

| | |
|---|---|
| **Applicant:**<br>**Address:** | Lorex Technology Inc<br>250 Royal Crest Court Markham, ON L3R 3S1 Canada |
| **Manufacturer Address:** | OPCOM O.E.(DONG GUAN)INC.<br>Gu Cun Industry Estate Dajing Countryside Committee Houjie Town, Dongguan City Guangdong, China 523958 |
| **E.U.T:** | 2.4G wireless camera product |
| **Model Number:** | LWU3620-C<br>Note:（ “LWU3620-C”, only TX.） |
| **Power Supply:** | DC 12V From Adapter Input AC 100-240V; 50V/60Hz |
| **Test Voltage:** | DC 12V From Adapter Input AC 120V/60Hz |
| **Trade Name:** | ------ Serial No.: ------ |
| **Date of Receipt:** | April 28, 2015 Date of Test: April 28,2015~ June 05, 2015 |
| **Test Specification:** | FCC Rules and Regulations Part 15 Subpart C:2014<br>ANSI C63.10:2013 |
| **Test Result:** | The device described above is tested by EST Technology Co., Ltd.. The measurement results were contained in this test report and EST Technology Co., Ltd. was assumed full responsibility for the accuracy and completeness of these measurements. Also, this report shows that the EUT to be technically compliance with the FCC Rules and Regulations Part 15 Subpart C requirements.<br><br>This report applies to above tested sample only and shall not be reproduced in part without written approval of EST Technology Co., Ltd.<br>Date: June 06, 2015 |

| Prepared by: | Tested by: | Approved by: |
|---|---|---|
| Ada / Assistant | Tony.Tang/ Engineer | IcemanHu / Manager |

**Other Aspects:**

None.

*Abbreviations: OK/P=passed fail/F=failed n.a/N=not applicable E.U.T=equipment under tested*

*This test report is based on a single evaluation of one sample of above mentioned products ,It is not permitted to be duplicated in extracts without written approval of EST Technology Co., Ltd.*

# 1. GENERAL INFORMATION

## 1.1. Description of Device (EUT)

**Product Name** : 2.4G wireless camera product

**Model Number** : LWU3620-C

**FCC ID** : UCZ-LWU3620C

**Operation frequency** : 2408-2468 MHz

**Number of channel** : 16

**Antenna** : Whip antenna, 3 dBi gain

**Modulation** : GFSK

**Power Supply** : DC 12V From Adapter Input AC 120V/60Hz

**Sample Type** : Prototype production

# 2. SUMMARY OF TEST

## 2.1. Summary of test result

| Description of Test Item | Standard | Results |
|---|---|---|
| Power Line Conducted Emissions | FCC Part 15C: 15.207<br>ANSI C63.10-2013 | PASS |
| Radiated Emission Test | FCC Part 15C: 15.209<br>FCC Part 15C: 15.249<br>ANSI C63.10-2013 | PASS |
| 20 dB Bandwidth Test | FCC Part 15: 15.249<br>ANSI C63.10-2013 | PASS |
| Band Edge Compliance Test | FCC Part 15: 15.215<br>ANSI C63.10-2013 | PASS |
| Antenna requirement | FCC Part 15: 15.203 | PASS |
| N/A is an abbreviation for Not Applicable. | | |

## 2.2. Test Facilities

EMC Lab : Certificated by CNAL, CHINA
Registration No.: L5288
Date of registration: Nov 23, 2014

Certificated by FCC, USA
Registration No.: 989591
Date of registration: November 20, 2013

Certificated by Industry Canada
Registration No.: 9405A-1
Date of registration: January 03, 2013

Certificated by VCCI, Japan
Registration No.: R-3663 & C-4103
Date of registration: July 25, 2011

Certificated by TUV Rheinland, Germany
Registration No.: UA 50195514 0001
Date of registration: January 07, 2011

Certificated by TUV/PS, Shenzhen
Registration No.: SCN1017
Date of registration: January 27, 2011

Certificated by Intertek ETL SEMKO
Registration No.: 2011-RTL-L1-18
Date of registration: April 28, 2011

Certificated by Siemic, Inc.
Registration No.: SLCN021
Date of registration: November 8, 2011

Certificated by Nemko, Hong Kong
Registration No.: 175193
Date of registration: May 4, 2011

Name of Firm : EST Technology Co., Ltd.

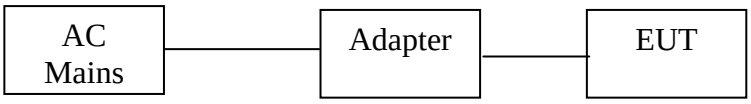
Site Location : San Tun Management Zone, Houjie District, Dongguan, Guangdong, China

## 2.3. Assistant equipment used for test

### 2.3.1. Adapter

| | |
|---|---|
| Model: | TEKA012-120100UK |
| Input: | 100-240V;50/60Hz 0.35A MAX |
| Output: | 12V/1A |

## 2.4. Block Diagram




(EUT: 2.4G wireless camera product)

## 2.5. Test mode

The test software was used to control EUT work in Continuous TX mode, and select test channel, wireless mode

| Mode | Channel | Frequency |
|---|---|---|
| TX | Low | 2408MHz |
| | Middle | 2440MHz |
| | High | 2468MHz |

## 2.6. Channel List for GFSK

| Channel No. | Frequency (MHz) | Channel No. | Frequency (MHz) |
|---|---|---|---|
| 1 | 2408 | 2 | 2412 |
| 3 | 2416 | 4 | 2420 |
| 5 | 2424 | 6 | 2428 |
| 7 | 2432 | 8 | 2436 |
| 9 | 2440 | 10 | 2444 |
| 11 | 2448 | 12 | 2452 |
| 13 | 2456 | 14 | 2460 |
| 15 | 2464 | 16 | 2468 |

## 2.7. Test Equipment

### 2.7.1. For conducted emission test

| Equipment | Manufacturer | Model No. | Serial No. | Last Cal. | Next Cal. |
|---|---|---|---|---|---|
| EMI Test Receiver | Rohde & Schwarz | ESHS30 | 832354 | June,28,14 | 1 Year |
| Artificial Mains Networ | Rohde & Schwarz | ENV216 | 101260 | June,28,14 | 1 Year |
| Pulse Limiter | Rohde & Schwarz | ESH3-Z2 | 101100 | June,28,14 | 1 Year |

### 2.7.2. For radiated emission test(30-1000MHz)

| Equipment | Manufacturer | Model No. | Serial No. | Last Cal. | Next Cal. |
|---|---|---|---|---|---|
| EMI Test Receiver | Rohde & Schwarz | ESVS10 | 100004 | June,28,14 | 1 Year |
| Spectrum Analyzer | Agilent | E4411B | MY50140697 | June,28,14 | 1 Year |
| Bilog Antenna | Teseq | CBL 6111D | 27090 | June,28,14 | 1 Year |
| Signal Amplifier | Agilent | 310N | 187037 | June,28,14 | 1 Year |

### 2.7.3. For radiated emission test(above 1GHz)

| Equipment | Manufacturer | Model No. | Serial No. | Last Cal. | Next Cal. |
|---|---|---|---|---|---|
| Horn Antenna | SCHWARZBECK | BBHA 9120 D | BBHA9120D1002 | June,28,14 | 1 Year |
| Signal Amplifier | SCHWARZBECK | BBV9718 | 9718-212 | June,28,14 | 1 Year |
| Spectrum Analyzer | Agilent | E4408B | MY44211139 | June,28,14 | 1 Year |
| RF Cable | Hubersuhner | RG 214/U | 513423 | June,28,14 | 1 Year |

# 3. RADIATED EMISSIONS

## 3.1. Limit

| FREQUENCY MHz | DISTANCE Meters | FIELD STRENGTHS LIMIT | |
|---|---|---|---|
| | | μV/m | dB(μV)/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 |
| Above 1000 | 3 | 74.0 dB(μV)/m (Peak)<br>54.0 dB(μV)/m (Average) | |

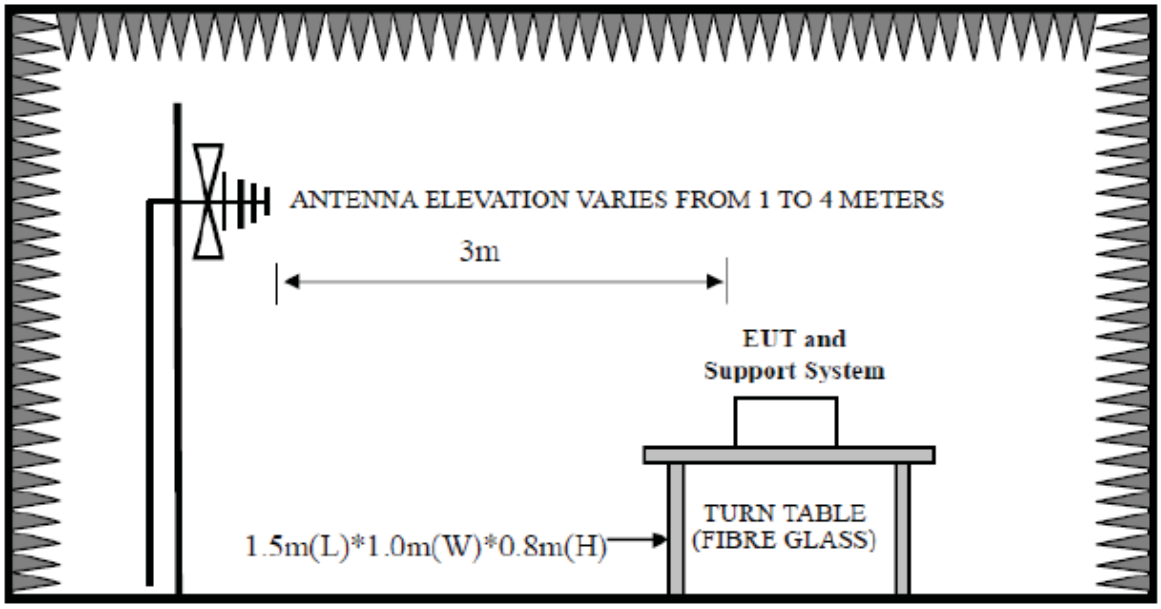
Remark：(1) Emission level dBμV = 20 log Emission level μV/m

(2) The smaller limit shall apply at the cross point between two frequency bands.

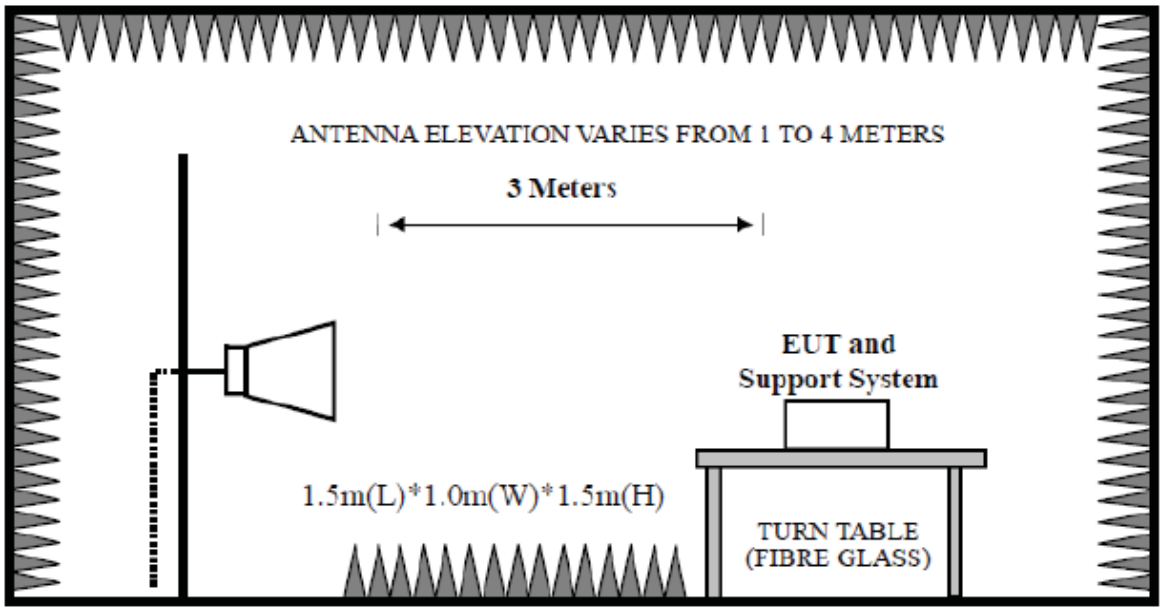
(3) Distance is the distance in meters between the measuring instrument, antenna and the closest point of any part of the device or system

## 3.2. Block Diagram of Test setup

30~1000MHz




Above 1GHz



## 3.3. Test Procedure

EUT was placed on a turn table, which is 0.8 meter high above ground. The turn table can rotate 360 degrees to determine the position of the maximum emission level. Power on the EUT and let it working in test mode, then test it. EUT is set 3 meters away from the receiving antenna, which is mounted on a antenna tower. The antenna can be moved up and down between 1 meter and 4 meters to find out the maximum emission level. Both horizontal and vertical polarization of the antenna are set on test.

The bandwidth of the EMI test receiver (R&S FSU) is set at 120kHz for frequency range from 30MHz to 1000 MHz.

The bandwidth of the Spectrum's VBW is set at 1MHz and RBW is set at 1MHz for peak emissions measurement above 1GHz and 1MHz RBW, 10Hz VBW for average emissions measure above 1GHz

PEAK detector, 1MHz/1MHz for PAEK measurement,

PEAK detector, 1MHz/10Hz for Average measurement

The frequency range from 30MHz to 10th harmonic (25GHz) are checked.

## 3.4. Test Result

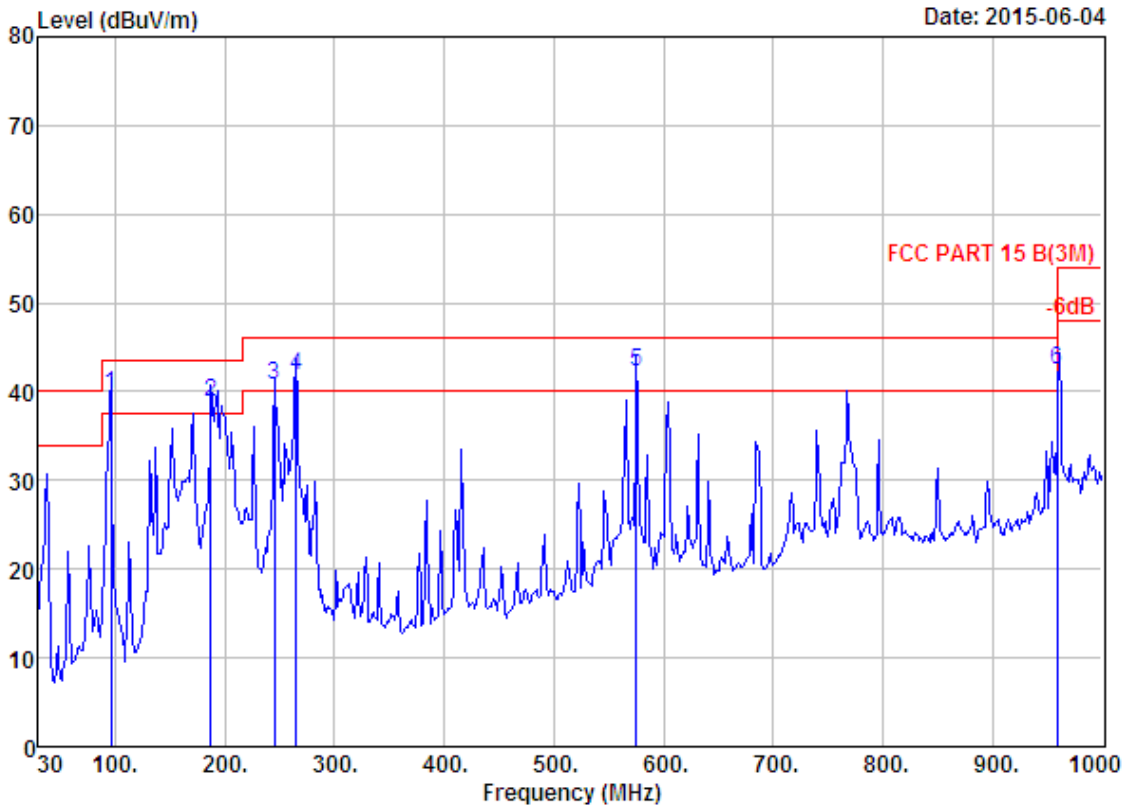
| 30MHz—25GHz Radiated emissison Test result |
|---|
| EUT: 2.4G wireless camera product M/N: LWU3620-C |
| Power: DC 12V From Adapter Input AC 120V/60Hz |
| Test date: 2015-04-30~2015-06-05 Test site: 3m Chamber Tested by: Tony Tang |
| Test mode: Tx |
| Pass |

Note: 1、For emissions above 1GHz, if peak level comply with average limit, then the average level is deemed to comply with average limit.

2、 The frequency 2408MHz 、2440MHz and 2468MHz is fundamental frequency which no limit, the limit on plots is automatically generated by the software, it's not fundamental limit, we can't remove it.

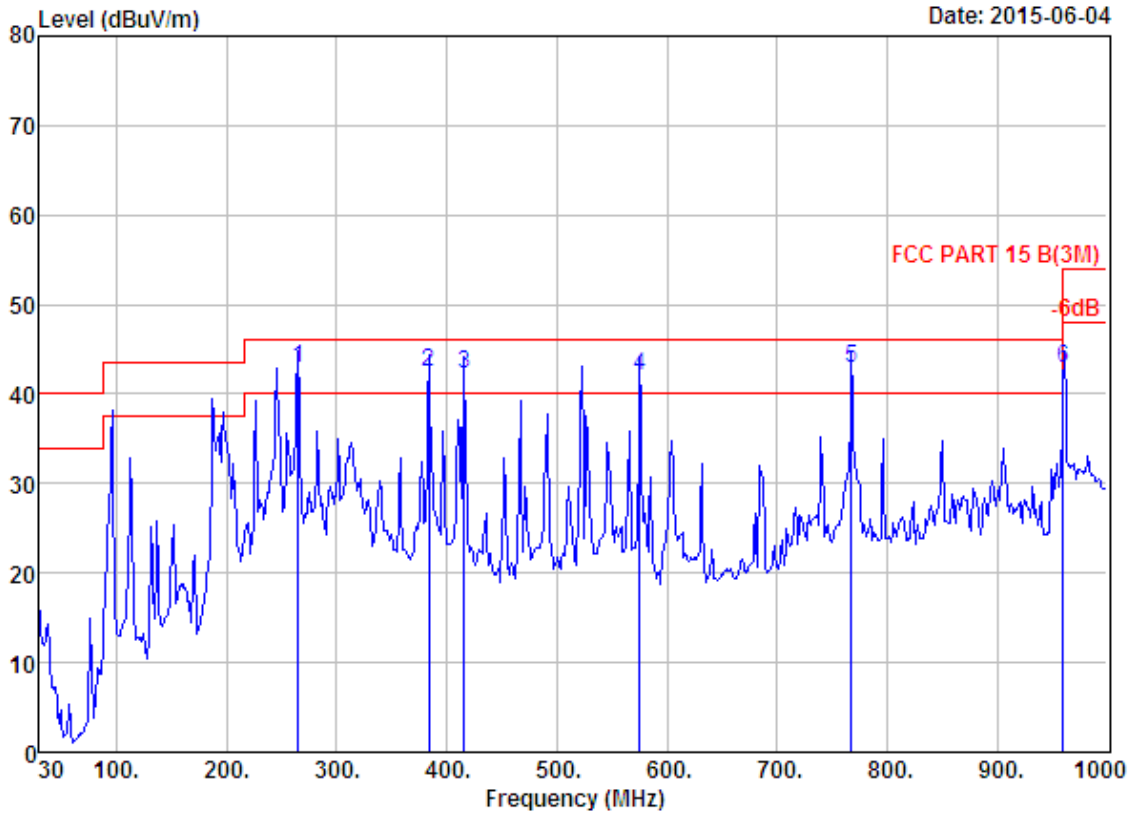
## 3.5. Test Data

### 30 MHz – 1000 MHz



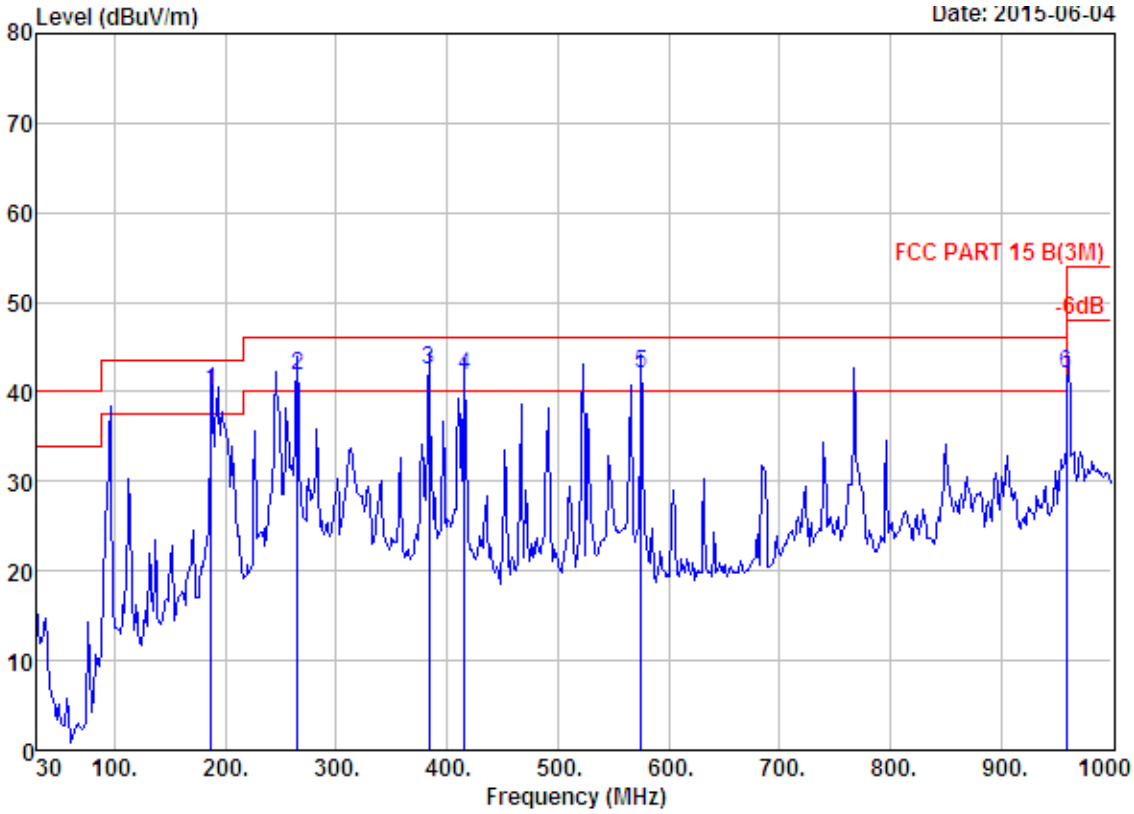

```
Site no.        : 966 1# chamber              Data no.   : 175
Dis. / Ant.     : 3m   27137                  Ant. pol.  : VERTICAL
Limit           : FCC PART 15 B(3M)
Env. / Ins.     : Temp:23.6';Humi:56%;Press:101.52kPa
Engineer        : Dick
EUT             : 2.4G wireless camera product
Power           : DC 5V From Adapter Input AC 120V/60Hz
M/N             : LWU3620-C
Test Mode       : TX 2408MHz
```

| | Freq. (MHz) | Ant. Factor (dB/m) | Cable Loss (dB) | Reading (dBuV) | Emission Level (dBuV/m) | Limits (dBuV/m) | Margin (dB) | Remark |
|---|---|---|---|---|---|---|---|---|
| 1 | 95.96 | 8.92 | 1.31 | 29.35 | 39.58 | 43.50 | 3.92 | QP |
| 2 | 187.14 | 8.26 | 1.84 | 28.71 | 38.81 | 43.50 | 4.69 | QP |
| 3 | 245.34 | 11.06 | 2.10 | 27.50 | 40.66 | 46.00 | 5.34 | QP |
| 4 | 264.74 | 12.94 | 2.28 | 26.54 | 41.76 | 46.00 | 4.24 | QP |
| 5 | 575.14 | 19.55 | 3.40 | 19.28 | 42.23 | 46.00 | 3.77 | QP |
| 6 | 959.34 | 24.48 | 4.67 | 13.32 | 42.47 | 46.00 | 3.53 | QP |



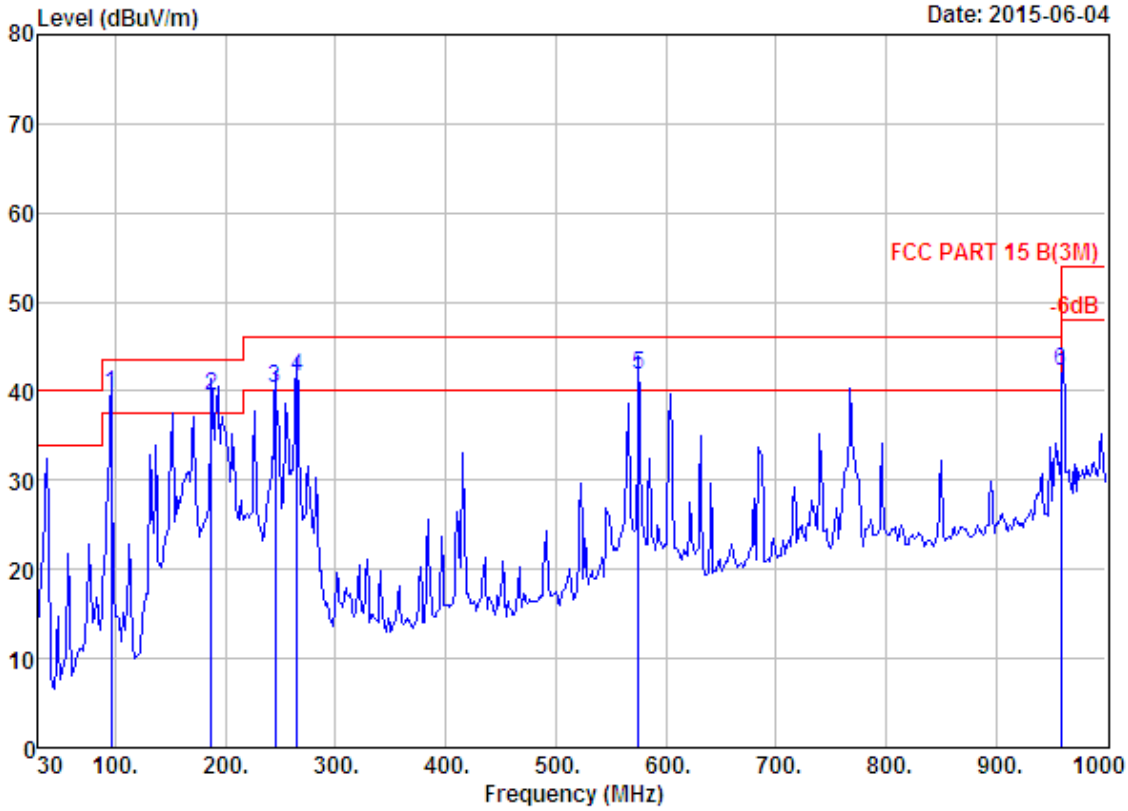

Site no. : 966 1# chamber Data no. : 176
Dis. / Ant. : 3m 27137 Ant. pol. : HORIZONTAL
Limit : FCC PART 15 B(3M)
Env. / Ins. : Temp:23.6';Humi:56%;Press:101.52kPa
Engineer : Dick
EUT : 2.4G wireless camera product
Power : DC 5V From Adapter Input AC 120V/60Hz
M/N : LWU3620-C
Test Mode : TX 2408MHz

| | Freq. (MHz) | Ant. Factor (dB/m) | Cable Loss (dB) | Reading (dBuV) | Emission Level (dBuV/m) | Limits (dBuV/m) | Margin (dB) | Remark |
|---|---|---|---|---|---|---|---|---|
| 1 | 264.74 | 12.94 | 2.28 | 27.66 | 42.88 | 46.00 | 3.12 | QP |
| 2 | 384.05 | 15.24 | 2.64 | 24.48 | 42.36 | 46.00 | 3.64 | QP |
| 3 | 416.06 | 16.30 | 2.75 | 23.09 | 42.14 | 46.00 | 3.86 | QP |
| 4 | 575.14 | 19.55 | 3.40 | 19.15 | 42.10 | 46.00 | 3.90 | QP |
| 5 | 767.20 | 22.04 | 3.87 | 16.88 | 42.79 | 46.00 | 3.21 | QP |
| 6 | 959.67 | 24.48 | 4.67 | 13.70 | 42.85 | 46.00 | 3.15 | QP |



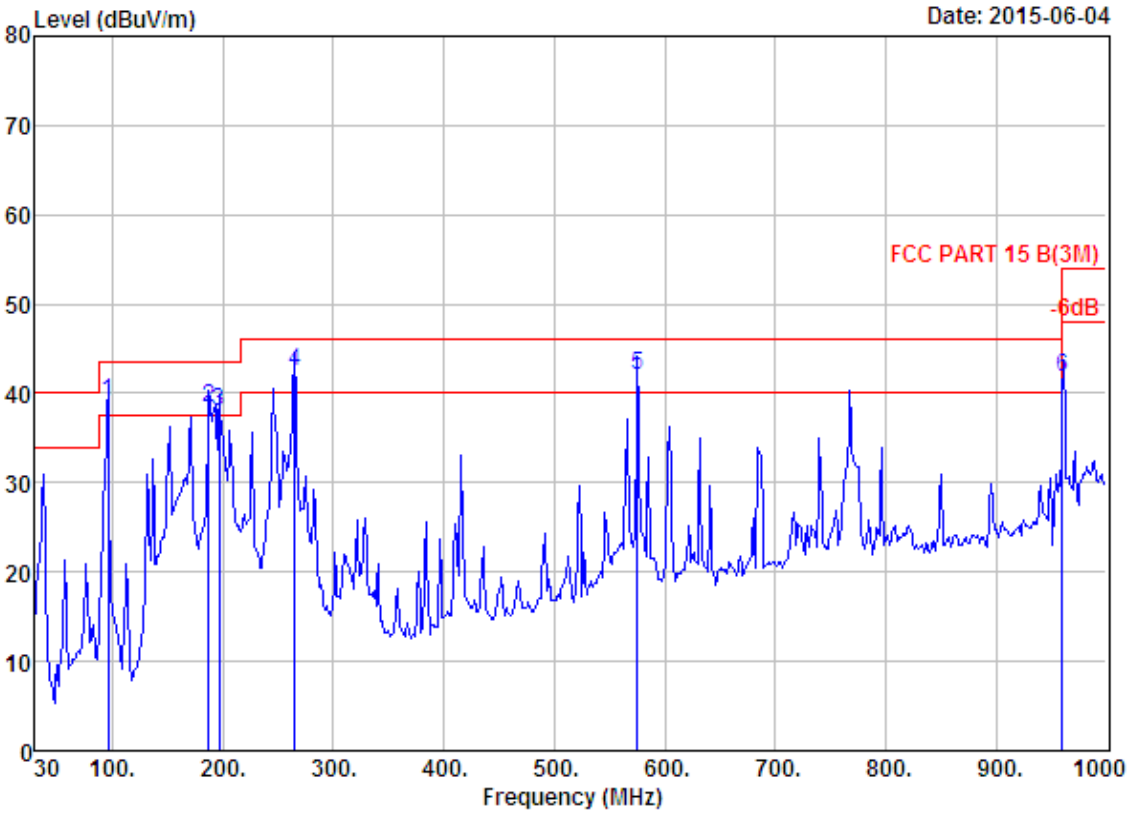

Site no. : 966 1# chamber Data no. : 177
Dis. / Ant. : 3m 27137 Ant. pol. : HORIZONTAL
Limit : FCC PART 15 B(3M)
Env. / Ins. : Temp:23.6';Humi:56%;Press:101.52kPa
Engineer : Dick
EUT : 2.4G wireless camera product
Power : DC 5V From Adapter Input AC 120V/60Hz
M/N : LWU3620-C
Test Mode : TX 2440MHz

| | Freq. (MHz) | Ant. Factor (dB/m) | Cable Loss (dB) | Reading (dBuV) | Emission Level (dBuV/m) | Limits (dBuV/m) | Margin (dB) | Remark |
|---|---|---|---|---|---|---|---|---|
| 1 | 187.14 | 8.26 | 1.84 | 30.09 | 40.19 | 43.50 | 3.31 | QP |
| 2 | 264.74 | 12.94 | 2.28 | 26.64 | 41.86 | 46.00 | 4.14 | QP |
| 3 | 384.05 | 15.24 | 2.64 | 24.48 | 42.36 | 46.00 | 3.64 | QP |
| 4 | 416.06 | 16.30 | 2.75 | 22.70 | 41.75 | 46.00 | 4.25 | QP |
| 5 | 575.14 | 19.55 | 3.40 | 19.18 | 42.13 | 46.00 | 3.87 | QP |
| 6 | 959.34 | 24.48 | 4.67 | 12.83 | 41.98 | 46.00 | 4.02 | QP |



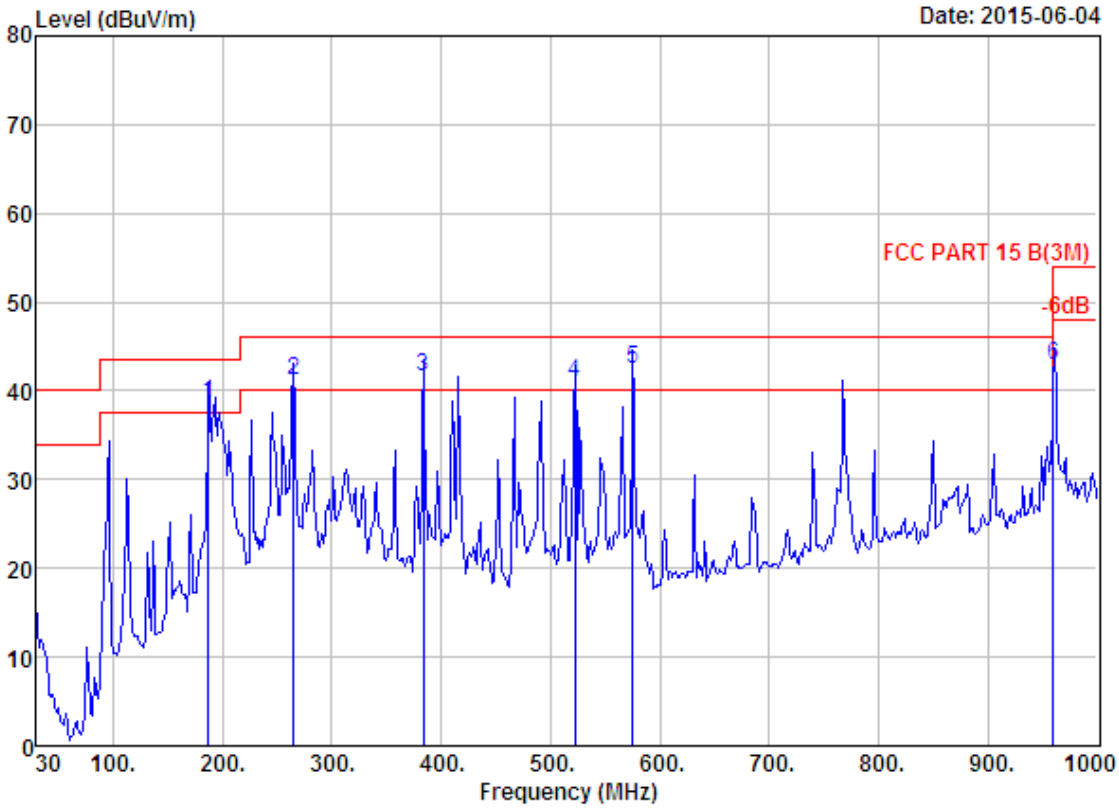

Site no. : 966 1# chamber Data no. : 178
Dis. / Ant. : 3m 27137 Ant. pol. : VERTICAL
Limit : FCC PART 15 B(3M)
Env. / Ins. : Temp:23.6';Humi:56%;Press:101.52kPa
Engineer : Dick
EUT : 2.4G wireless camera product
Power : DC 5V From Adapter Input AC 120V/60Hz
M/N : LWU3620-C
Test Mode : TX 2440MHz

| | Freq. (MHz) | Ant. Factor (dB/m) | Cable Loss (dB) | Reading (dBuV) | Emission Level (dBuV/m) | Limits (dBuV/m) | Margin (dB) | Remark |
|---|---|---|---|---|---|---|---|---|
| 1 | 95.96 | 8.92 | 1.31 | 29.42 | 39.65 | 43.50 | 3.85 | QP |
| 2 | 187.14 | 8.26 | 1.84 | 29.33 | 39.43 | 43.50 | 4.07 | QP |
| 3 | 245.34 | 11.06 | 2.10 | 27.19 | 40.35 | 46.00 | 5.65 | QP |
| 4 | 264.74 | 12.94 | 2.28 | 26.42 | 41.64 | 46.00 | 4.36 | QP |
| 5 | 575.14 | 19.55 | 3.40 | 18.90 | 41.85 | 46.00 | 4.15 | QP |
| 6 | 959.34 | 24.48 | 4.67 | 13.18 | 42.33 | 46.00 | 3.67 | QP |




Site no. : 966 1# chamber Data no. : 179
Dis. / Ant. : 3m 27137 Ant. pol. : VERTICAL
Limit : FCC PART 15 B(3M)
Env. / Ins. : Temp:23.6';Humi:56%;Press:101.52kPa
Engineer : Dick
EUT : 2.4G wireless camera product
Power : DC 5V From Adapter Input AC 120V/60Hz
M/N : LWU3620-C
Test Mode : TX 2468MHz

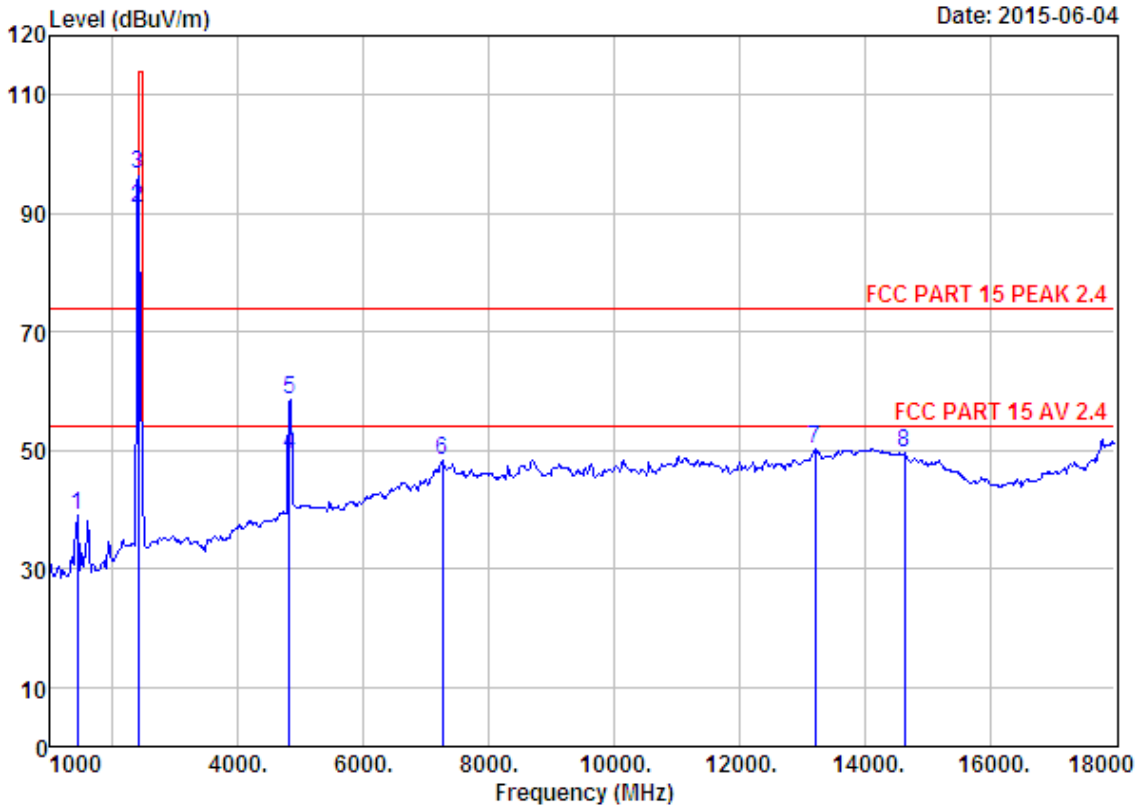
| | Freq. (MHz) | Ant. Factor (dB/m) | Cable Loss (dB) | Reading (dBuV) | Emission Level (dBuV/m) | Limits (dBuV/m) | Margin (dB) | Remark |
|---|---|---|---|---|---|---|---|---|
| 1 | 95.96 | 8.92 | 1.31 | 28.80 | 39.03 | 43.50 | 4.47 | QP |
| 2 | 187.14 | 8.26 | 1.84 | 28.27 | 38.37 | 43.50 | 5.13 | QP |
| 3 | 196.84 | 7.72 | 1.81 | 28.41 | 37.94 | 43.50 | 5.56 | QP |
| 4 | 264.74 | 12.94 | 2.28 | 27.30 | 42.52 | 46.00 | 3.48 | QP |
| 5 | 575.14 | 19.55 | 3.40 | 19.16 | 42.11 | 46.00 | 3.89 | QP |
| 6 | 959.55 | 24.48 | 4.67 | 12.60 | 41.75 | 46.00 | 4.25 | QP |




Site no. : 966 1# chamber Data no. : 180
Dis. / Ant. : 3m 27137 Ant. pol. : HORIZONTAL
Limit : FCC PART 15 B(3M)
Env. / Ins. : Temp:23.6';Humi:56%;Press:101.52kPa
Engineer : Dick
EUT : 2.4G wireless camera product
Power : DC 5V From Adapter Input AC 120V/60Hz
M/N : LWU3620-C
Test Mode : TX 2468MHz

| | Freq. (MHz) | Ant. Factor (dB/m) | Cable Loss (dB) | Reading (dBuV) | Emission Level (dBuV/m) | Limits (dBuV/m) | Margin (dB) | Remark |
|---|---|---|---|---|---|---|---|---|
| 1 | 187.14 | 8.26 | 1.84 | 28.57 | 38.67 | 43.50 | 4.83 | QP |
| 2 | 264.74 | 12.94 | 2.28 | 25.96 | 41.18 | 46.00 | 4.82 | QP |
| 3 | 384.05 | 15.24 | 2.64 | 23.72 | 41.60 | 46.00 | 4.40 | QP |
| 4 | 522.76 | 18.04 | 3.21 | 19.65 | 40.90 | 46.00 | 5.10 | QP |
| 5 | 575.14 | 19.55 | 3.40 | 19.58 | 42.53 | 46.00 | 3.47 | QP |
| 6 | 959.67 | 24.48 | 4.67 | 13.68 | 42.83 | 46.00 | 3.17 | QP |

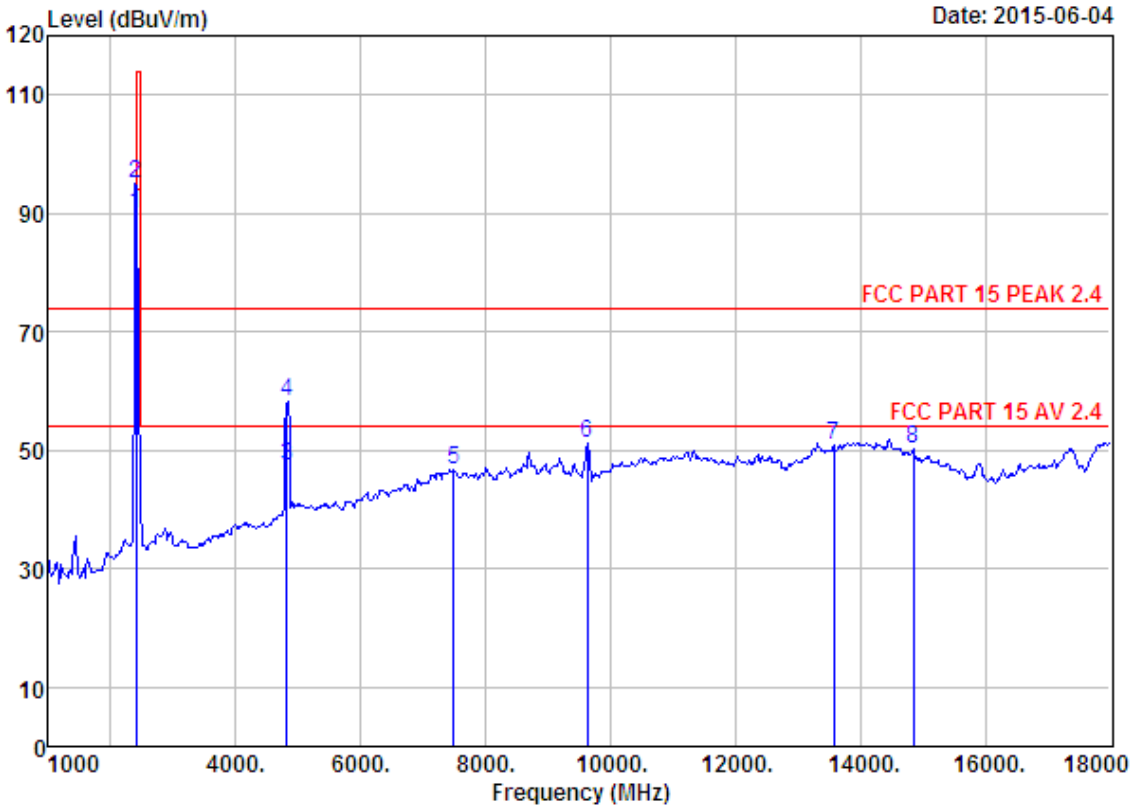
1000-18000MHz




Site no. : 1# 966 chamber Data no. : 191
Dis. / Ant. : 3m ANT 1-18G Ant. pol. : HORIZONTAL
Limit : FCC PART 15 PEAK 2.4
Env. / Ins. : Temp:23.6';Humi:56%;Press:101.52kPa
Engineer : Dick
EUT : 2.4G wireless camera product
Power : DC 12V From Adapter Inpuy AC 120V/60Hz
M/N : LWU3620-C
Test Mode : TX 2408MHz

| | Freq. (MHz) | Ant. Factor (dB/m) | Cable Loss (dB) | Amp Factor (dB) | Reading (dBuV) | Emission Level (dBuV/m) | Limits (dBuV/m) | Margin (dB) | Remark |
|---|---|---|---|---|---|---|---|---|---|
| 1 | 1425.00 | 25.09 | 4.20 | 35.06 | 44.92 | 39.15 | 74.00 | 34.85 | Peak |
| 2 | 2408.00 | 27.61 | 6.64 | 34.64 | 91.30 | 90.91 | 94.00 | 3.09 | Average |
| 3 | 2408.00 | 27.61 | 6.64 | 34.64 | 96.94 | 96.55 | 114.00 | 17.45 | Peak |
| 4 | 4816.00 | 31.25 | 11.77 | 35.66 | 42.03 | 49.39 | 54.00 | 4.61 | Average |
| 5 | 4816.00 | 31.25 | 11.77 | 35.66 | 51.28 | 58.64 | 74.00 | 15.36 | Peak |
| 6 | 7256.00 | 36.53 | 11.55 | 34.02 | 34.20 | 48.26 | 74.00 | 25.74 | Peak |
| 7 | 13206.00 | 39.38 | 11.46 | 32.79 | 32.12 | 50.17 | 74.00 | 23.83 | Peak |
| 8 | 14634.00 | 41.48 | 10.91 | 33.86 | 30.97 | 49.50 | 74.00 | 24.50 | Peak |

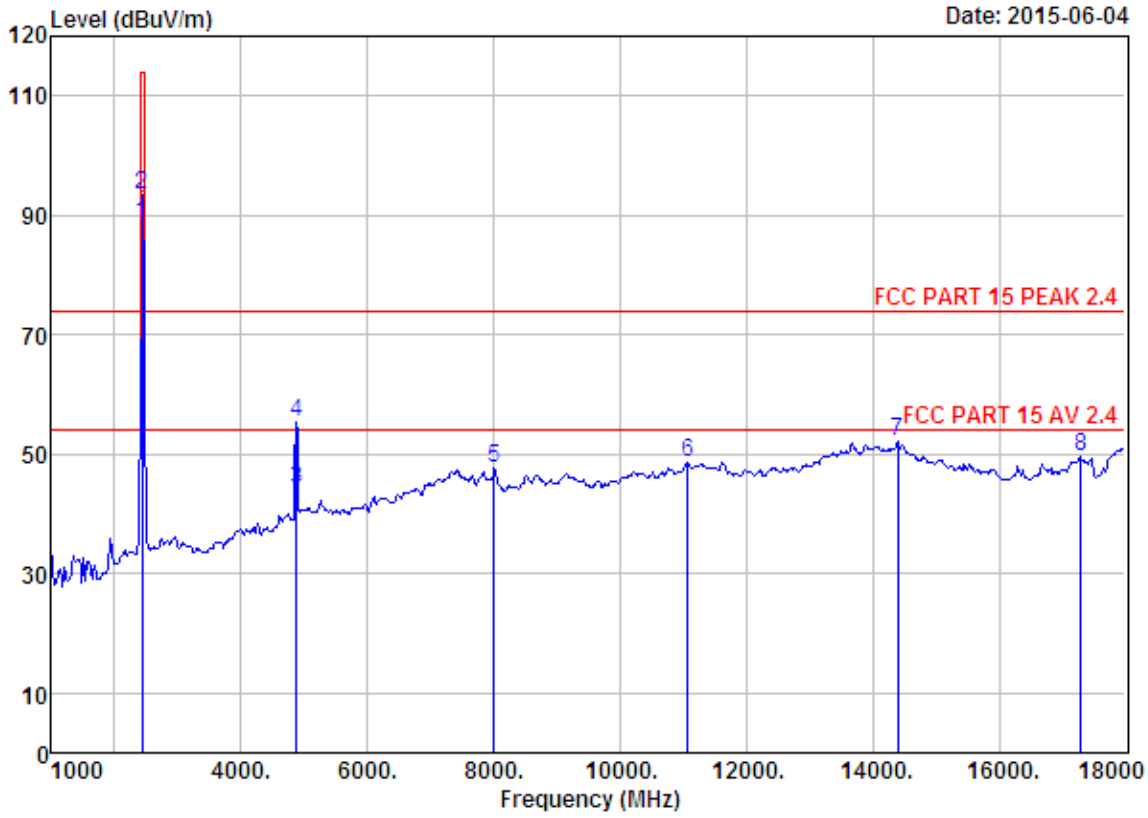
Remarks: 1. Emission Level= Antenna Factor + Cable Loss - Amp Factor + Reading.
2. The emission levels that are 20dB below the official limit are not reported.




Site no. : 1# 966 chamber Data no. : 192
Dis. / Ant. : 3m ANT 1-18G Ant. pol. : VERTICAL
Limit : FCC PART 15 PEAK 2.4
Env. / Ins. : Temp:23.6';Humi:56%;Press:101.52kPa
Engineer : Dick
EUT : 2.4G wireless camera product
Power : DC 12V From Adapter Inpuy AC 120V/60Hz
M/N : LWU3620-C
Test Mode : TX 2408MHz

| | Freq. (MHz) | Ant. Factor (dB/m) | Cable Loss (dB) | Amp Factor (dB) | Reading (dBuV) | Emission Level (dBuV/m) | Limits (dBuV/m) | Margin (dB) | Remark |
|---|---|---|---|---|---|---|---|---|---|
| 1 | 2408.00 | 27.61 | 6.64 | 34.64 | 90.35 | 89.96 | 94.00 | 4.04 | Average |
| 2 | 2408.00 | 27.61 | 6.64 | 34.64 | 95.56 | 95.17 | 114.00 | 18.83 | Peak |
| 3 | 4816.00 | 31.25 | 11.77 | 35.66 | 40.01 | 47.37 | 54.00 | 6.63 | Average |
| 4 | 4816.00 | 31.25 | 11.77 | 35.66 | 50.81 | 58.17 | 74.00 | 15.83 | Peak |
| 5 | 7494.00 | 36.48 | 11.62 | 34.18 | 32.74 | 46.66 | 74.00 | 27.34 | Peak |
| 6 | 9636.00 | 37.96 | 11.68 | 35.09 | 36.76 | 51.31 | 74.00 | 22.69 | Peak |
| 7 | 13580.00 | 40.31 | 11.40 | 32.64 | 31.86 | 50.93 | 74.00 | 23.07 | Peak |
| 8 | 14855.00 | 40.71 | 10.88 | 33.68 | 32.42 | 50.33 | 74.00 | 23.67 | Peak |

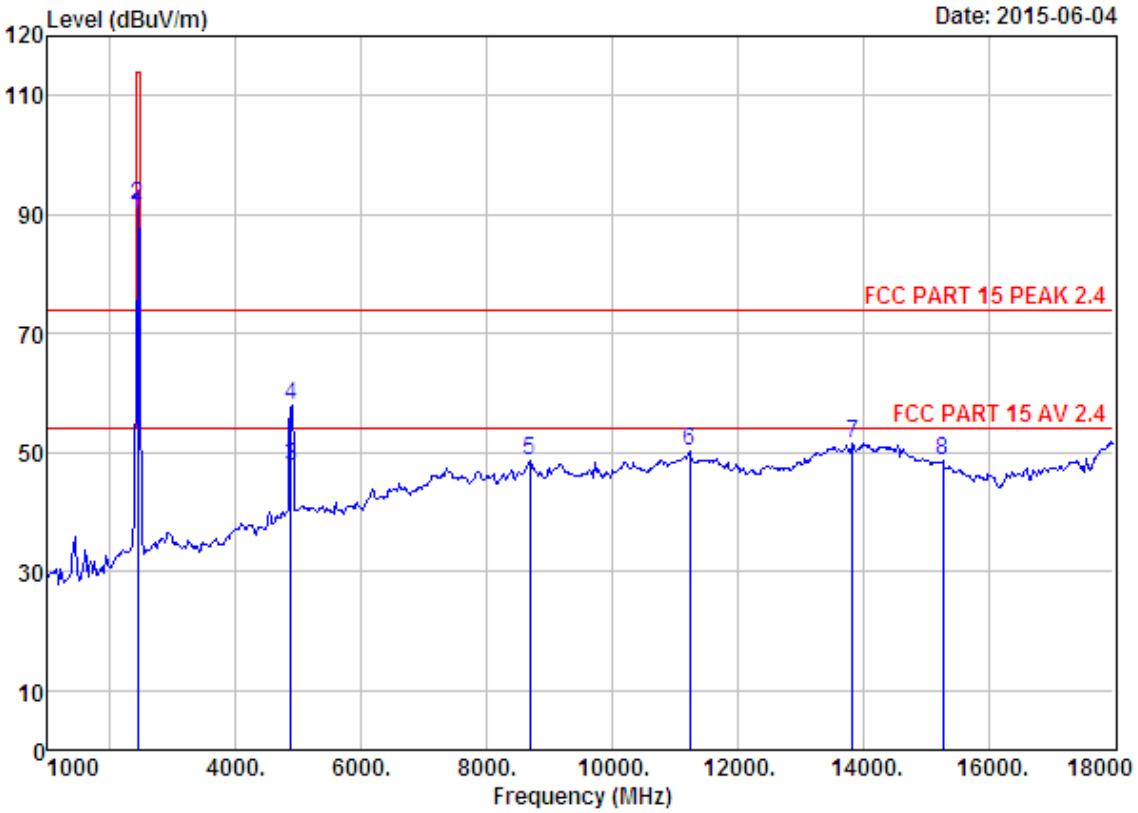
Remarks: 1. Emission Level= Antenna Factor + Cable Loss - Amp Factor + Reading.
2. The emission levels that are 20dB below the official limit are not reported.




Site no. : 1# 966 chamber Data no. : 195
Dis. / Ant. : 3m ANT 1-18G Ant. pol. : HORIZONTAL
Limit : FCC PART 15 PEAK 2.4
Env. / Ins. : Temp:23.6';Humi:56%;Press:101.52kPa
Engineer : Dick
EUT : 2.4G wireless camera product
Power : DC 12V From Adapter Inpuy AC 120V/60Hz
M/N : LWU3620-C
Test Mode : TX 2440MHz

| | Freq. (MHz) | Ant. Factor (dB/m) | Cable Loss (dB) | Amp Factor (dB) | Reading (dBuV) | Emission Level (dBuV/m) | Limits (dBuV/m) | Margin (dB) | Remark |
|---|---|---|---|---|---|---|---|---|---|
| 1 | 2440.00 | 27.60 | 6.67 | 34.85 | 89.21 | 88.63 | 94.00 | 5.37 | Average |
| 2 | 2440.00 | 27.60 | 6.67 | 34.85 | 94.10 | 93.52 | 114.00 | 20.48 | Peak |
| 3 | 4880.00 | 31.37 | 12.07 | 35.76 | 36.55 | 44.23 | 54.00 | 9.77 | Average |
| 4 | 4880.00 | 31.37 | 12.07 | 35.76 | 47.75 | 55.43 | 74.00 | 18.57 | Peak |
| 5 | 8004.00 | 37.01 | 11.40 | 34.96 | 34.15 | 47.60 | 74.00 | 26.40 | Peak |
| 6 | 11064.00 | 39.48 | 11.24 | 33.83 | 31.60 | 48.49 | 74.00 | 25.51 | Peak |
| 7 | 14396.00 | 41.79 | 10.92 | 33.39 | 32.74 | 52.06 | 74.00 | 21.94 | Peak |
| 8 | 17303.00 | 40.84 | 10.88 | 31.31 | 29.18 | 49.59 | 74.00 | 24.41 | Peak |

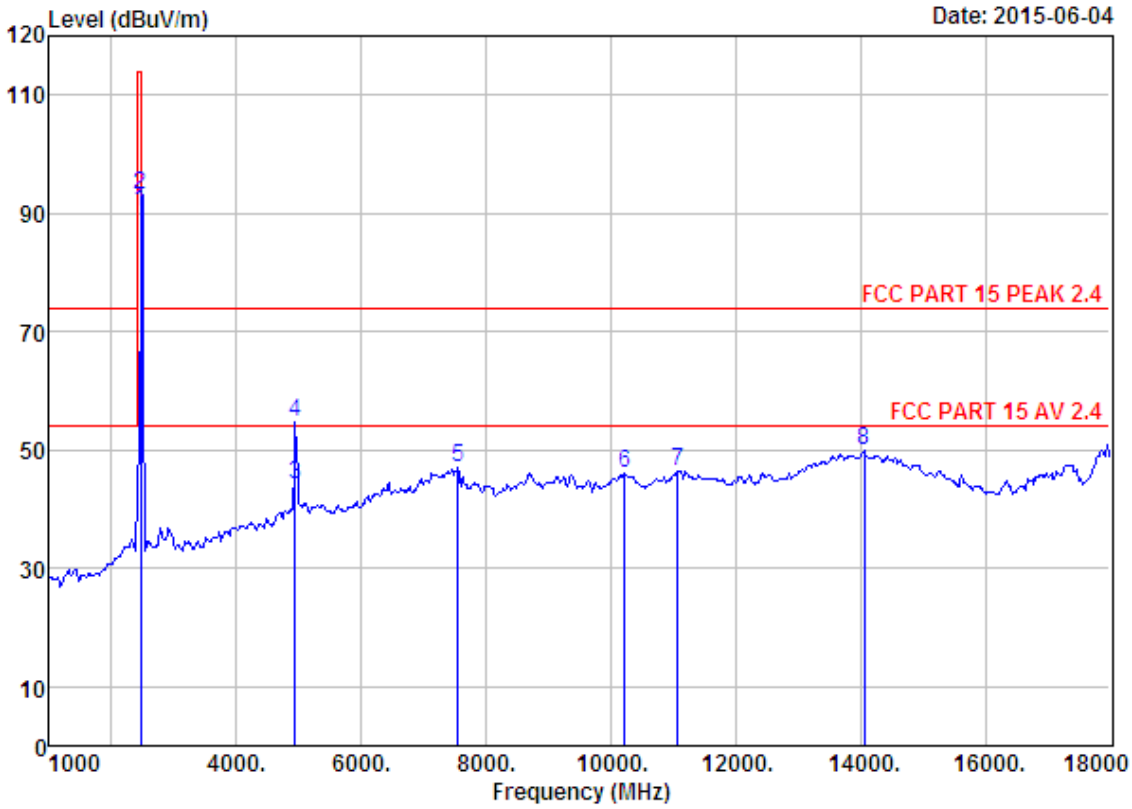
Remarks: 1. Emission Level= Antenna Factor + Cable Loss - Amp Factor + Reading.
2. The emission levels that are 20dB below the official limit are not reported.




Site no. : 1# 966 chamber Data no. : 196
Dis. / Ant. : 3m ANT 1-18G Ant. pol. : VERTICAL
Limit : FCC PART 15 PEAK 2.4
Env. / Ins. : Temp:23.6';Humi:56%;Press:101.52kPa
Engineer : Dick
EUT : 2.4G wireless camera product
Power : DC 12V From Adapter Inpuy AC 120V/60Hz
M/N : LWU3620-C
Test Mode : TX 2440MHz

| | Freq. (MHz) | Ant. Factor (dB/m) | Cable Loss (dB) | Amp Factor (dB) | Reading (dBuV) | Emission Level (dBuV/m) | Limits (dBuV/m) | Margin (dB) | Remark |
|---|---|---|---|---|---|---|---|---|---|
| 1 | 2440.00 | 27.60 | 6.67 | 34.85 | 90.41 | 89.83 | 94.00 | 4.17 | Average |
| 2 | 2440.00 | 27.60 | 6.67 | 34.85 | 92.00 | 91.42 | 114.00 | 22.58 | Peak |
| 3 | 4880.00 | 31.37 | 12.07 | 35.76 | 40.01 | 47.69 | 54.00 | 6.31 | Average |
| 4 | 4880.00 | 31.37 | 12.07 | 35.76 | 50.29 | 57.97 | 74.00 | 16.03 | Peak |
| 5 | 8684.00 | 37.32 | 11.45 | 33.66 | 33.48 | 48.59 | 74.00 | 25.41 | Peak |
| 6 | 11234.00 | 39.37 | 11.12 | 33.25 | 32.90 | 50.14 | 74.00 | 23.86 | Peak |
| 7 | 13835.00 | 41.02 | 11.10 | 33.06 | 32.46 | 51.52 | 74.00 | 22.48 | Peak |
| 8 | 15280.00 | 38.90 | 10.99 | 33.54 | 32.31 | 48.66 | 74.00 | 25.34 | Peak |

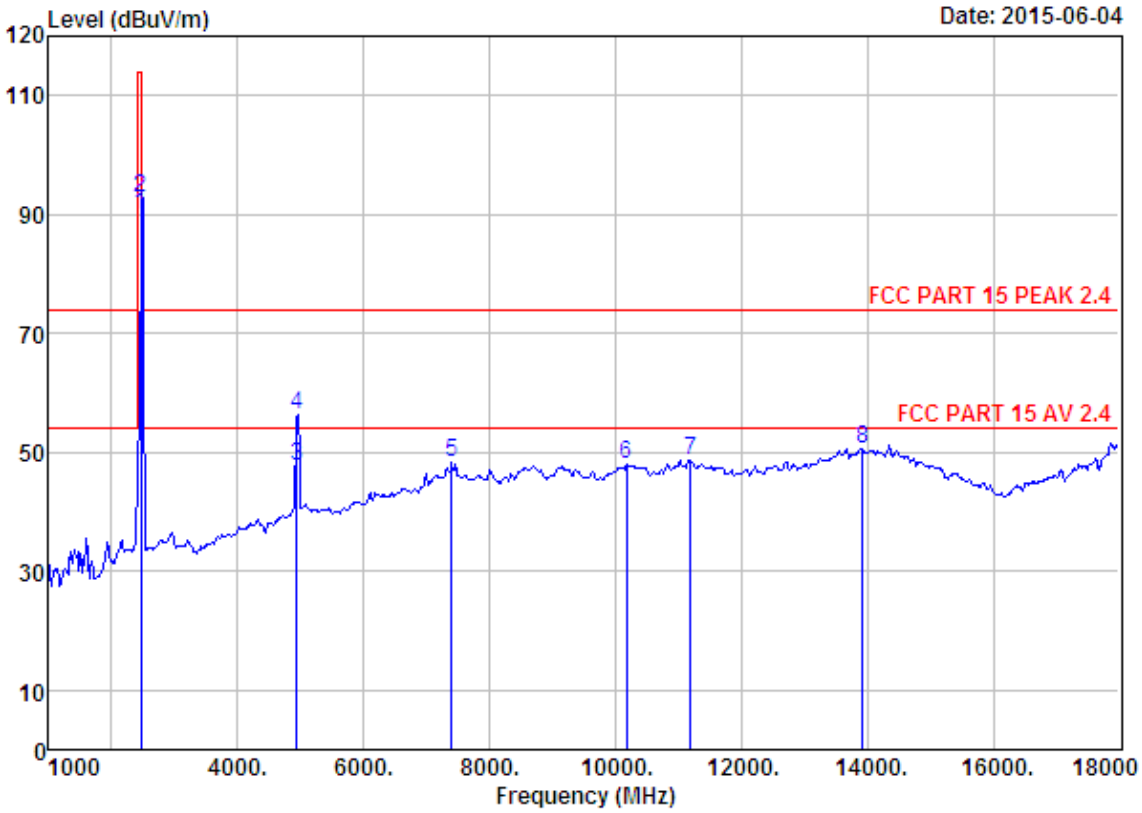
Remarks: 1. Emission Level= Antenna Factor + Cable Loss - Amp Factor + Reading.
2. The emission levels that are 20dB below the official limit are not reported.




Site no. : 1# 966 chamber Data no. : 197
Dis. / Ant. : 3m ANT 1-18G Ant. pol. : VERTICAL
Limit : FCC PART 15 PEAK 2.4
Env. / Ins. : Temp:23.6';Humi:56%;Press:101.52kPa
Engineer : Dick
EUT : 2.4G wireless camera product
Power : DC 12V From Adapter Inpuy AC 120V/60Hz
M/N : LWU3620-C
Test Mode : TX 2468MHz

| | Freq. (MHz) | Ant. Factor (dB/m) | Cable Loss (dB) | Amp Factor (dB) | Reading (dBuV) | Emission Level (dBuV/m) | Limits (dBuV/m) | Margin (dB) | Remark |
|---|---|---|---|---|---|---|---|---|---|
| 1 | 2468.00 | 27.58 | 6.69 | 34.98 | 91.02 | 90.31 | 94.00 | 3.69 | Average |
| 2 | 2468.00 | 27.58 | 6.69 | 34.98 | 93.86 | 93.15 | 114.00 | 20.85 | Peak |
| 3 | 4936.00 | 31.45 | 12.37 | 35.91 | 36.11 | 44.02 | 54.00 | 9.98 | Average |
| 4 | 4936.00 | 31.45 | 12.37 | 35.91 | 46.72 | 54.63 | 74.00 | 19.37 | Peak |
| 5 | 7545.00 | 36.43 | 11.60 | 34.15 | 33.19 | 47.07 | 74.00 | 26.93 | Peak |
| 6 | 10214.00 | 38.48 | 11.47 | 34.50 | 30.61 | 46.06 | 74.00 | 27.94 | Peak |
| 7 | 11064.00 | 39.48 | 11.24 | 33.83 | 29.59 | 46.48 | 74.00 | 27.52 | Peak |
| 8 | 14056.00 | 41.51 | 10.90 | 33.06 | 30.60 | 49.95 | 74.00 | 24.05 | Peak |

Remarks: 1. Emission Level= Antenna Factor + Cable Loss - Amp Factor + Reading.
2. The emission levels that are 20dB below the official limit are not reported.

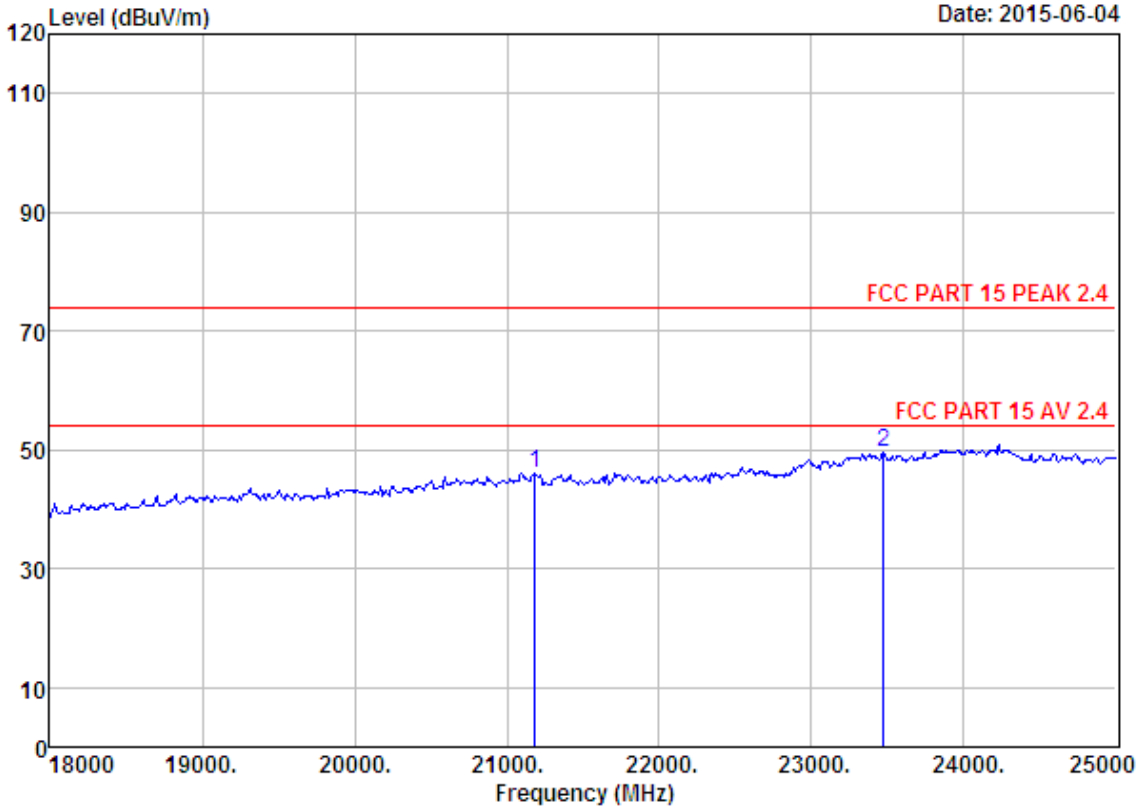



Site no. : 1# 966 chamber Data no. : 198
Dis. / Ant. : 3m ANT 1-18G Ant. pol. : HORIZONTAL
Limit : FCC PART 15 PEAK 2.4
Env. / Ins. : Temp:23.6';Humi:56%;Press:101.52kPa
Engineer : Dick
EUT : 2.4G wireless camera product
Power : DC 12V From Adapter Inpuy AC 120V/60Hz
M/N : LWU3620-C
Test Mode : TX 2468MHz

| | Freq. (MHz) | Ant. Factor (dB/m) | Cable Loss (dB) | Amp Factor (dB) | Reading (dBuV) | Emission Level (dBuV/m) | Limits (dBuV/m) | Margin (dB) | Remark |
|---|---|---|---|---|---|---|---|---|---|
| 1 | 2468.00 | 27.58 | 6.69 | 34.98 | 90.67 | 89.96 | 94.00 | 4.04 | Average |
| 2 | 2468.00 | 27.58 | 6.69 | 34.98 | 93.56 | 92.85 | 114.00 | 21.15 | Peak |
| 3 | 4936.00 | 31.45 | 12.37 | 35.91 | 39.87 | 47.78 | 54.00 | 6.22 | Average |
| 4 | 4936.00 | 31.45 | 12.37 | 35.91 | 48.34 | 56.25 | 74.00 | 17.75 | Peak |
| 5 | 7392.00 | 36.57 | 11.59 | 34.23 | 34.33 | 48.26 | 74.00 | 25.74 | Peak |
| 6 | 10180.00 | 38.42 | 11.49 | 34.53 | 32.68 | 48.06 | 74.00 | 25.94 | Peak |
| 7 | 11200.00 | 39.39 | 11.14 | 33.24 | 31.38 | 48.67 | 74.00 | 25.33 | Peak |
| 8 | 13920.00 | 41.26 | 11.00 | 33.00 | 31.30 | 50.56 | 74.00 | 23.44 | Peak |

Remarks: 1. Emission Level= Antenna Factor + Cable Loss - Amp Factor + Reading.
2. The emission levels that are 20dB below the official limit are not reported.

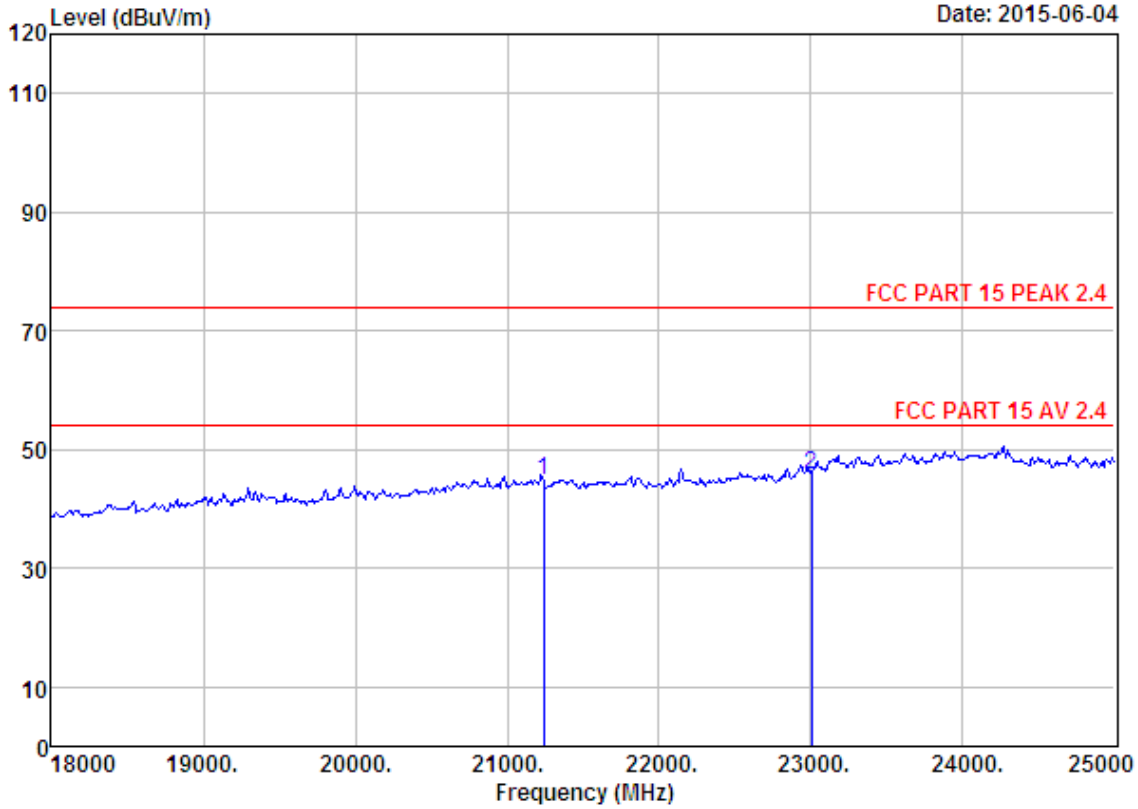
18000MHz-25000MHz




```
Site no.        : 1# 966 chamber              Data no.  : 201
Dis. / Ant.     : 3m   ANT ABOVE 18G          Ant. pol. : VERTICAL
Limit           : FCC PART 15 PEAK 2.4
Env. / Ins.     : Temp:23.6';Humi:56%;Press:101.52kPa
Engineer        : Dick
EUT             : 2.4G wireless camera product
Power           : DC 12V From Adapter Inpuy AC 120V/60Hz
M/N             : LWU3620-C
Test Mode       : TX 2408MHz
```

| | Freq. (MHz) | Ant. Factor (dB/m) | Cable Loss (dB) | Amp Factor (dB) | Reading (dBuV) | Emission Level (dBuV/m) | Limits (dBuV/m) | Margin (dB) | Remark |
|---|---|---|---|---|---|---|---|---|---|
| 1 | 21185.00 | 46.18 | 20.21 | 35.64 | 15.25 | 46.00 | 74.00 | 28.00 | Peak |
| 2 | 23474.00 | 45.70 | 21.57 | 33.35 | 15.66 | 49.58 | 74.00 | 24.42 | Peak |

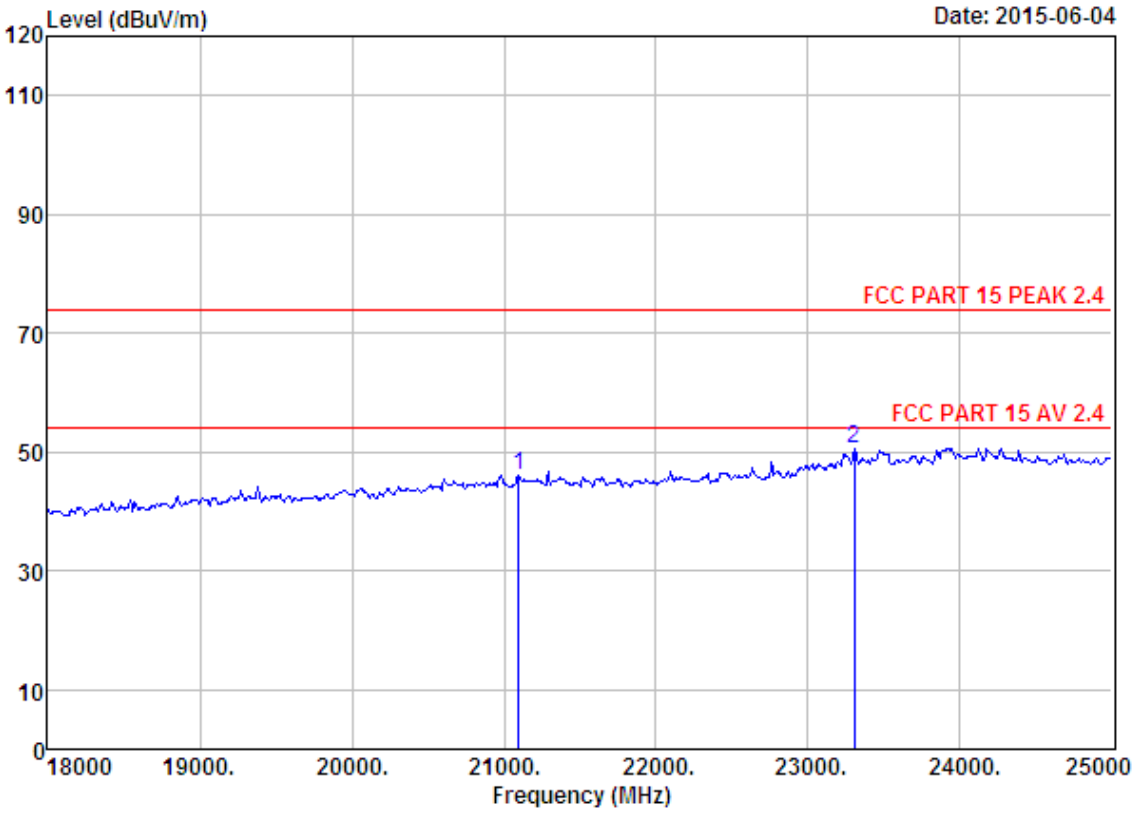
Remarks: 1. Emission Level= Antenna Factor + Cable Loss - Amp Factor + Reading.
2. The emission levels that are 20dB below the official limit are not reported.




```
Site no.        : 1# 966 chamber              Data no.   : 202
Dis. / Ant.     : 3m   ANT ABVOE 18G          Ant. pol. : HORIZONTAL
Limit           : FCC PART 15 PEAK 2.4
Env. / Ins.     : Temp:23.6';Humi:56%;Press:101.52kPa
Engineer        : Dick
EUT             : 2.4G wireless camera product
Power           : DC 12V From Adapter Inpuy AC 120V/60Hz
M/N             : LWU3620-C
Test Mode       : TX 2408MHz
```

| | Freq. (MHz) | Ant. Factor (dB/m) | Cable Loss (dB) | Amp Factor (dB) | Reading (dBuV) | Emission Level (dBuV/m) | Limits (dBuV/m) | Margin (dB) | Remark |
|---|---|---|---|---|---|---|---|---|---|
| 1 | 21241.00 | 46.16 | 20.23 | 35.58 | 13.90 | 44.71 | 74.00 | 29.29 | Peak |
| 2 | 23005.00 | 45.60 | 21.15 | 33.85 | 12.98 | 45.88 | 74.00 | 28.12 | Peak |

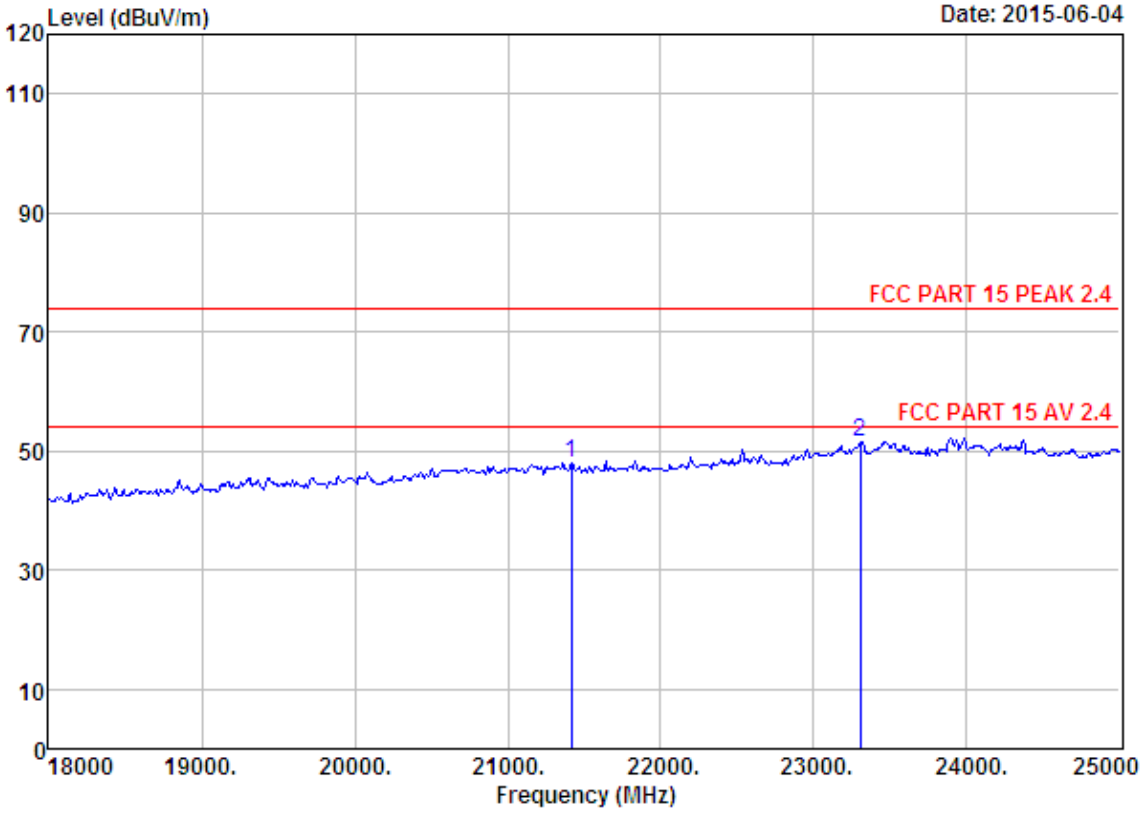
Remarks: 1. Emission Level= Antenna Factor + Cable Loss - Amp Factor + Reading.
2. The emission levels that are 20dB below the official limit are not reported.




```
Site no.        : 1# 966 chamber              Data no.   : 203
Dis. / Ant.     : 3m   ANT ABVOE 18G          Ant. pol. : HORIZONTAL
Limit           : FCC PART 15 PEAK 2.4
Env. / Ins.     : Temp:23.6';Humi:56%;Press:101.52kPa
Engineer        : Dick
EUT             : 2.4G wireless camera product
Power           : DC 12V From Adapter Inpuy AC 120V/60Hz
M/N             : LWU3620-C
Test Mode       : TX 2440MHz
```

| | Freq. (MHz) | Ant. Factor (dB/m) | Cable Loss (dB) | Amp Factor (dB) | Reading (dBuV) | Emission Level (dBuV/m) | Limits (dBuV/m) | Margin (dB) | Remark |
|---|---|---|---|---|---|---|---|---|---|
| 1 | 21094.00 | 46.23 | 20.17 | 35.71 | 15.55 | 46.24 | 74.00 | 27.76 | Peak |
| 2 | 23306.00 | 45.66 | 21.43 | 33.53 | 16.96 | 50.52 | 74.00 | 23.48 | Peak |

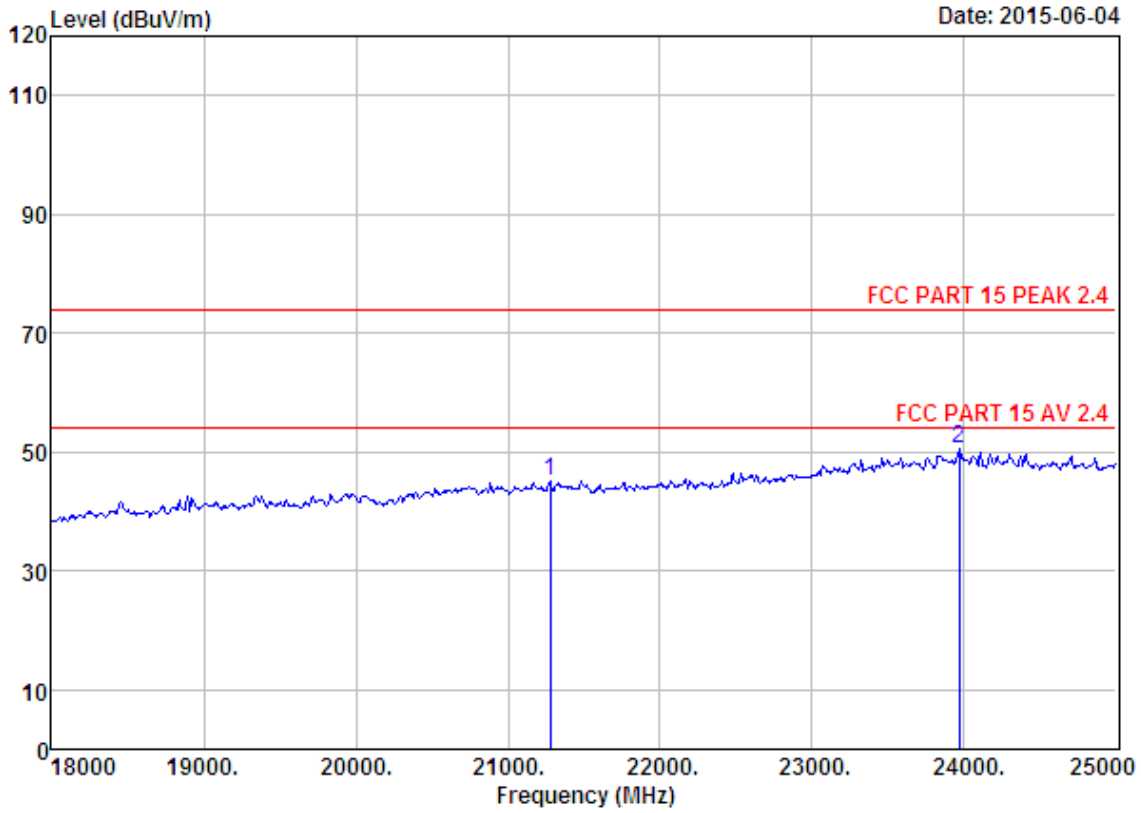
Remarks: 1. Emission Level= Antenna Factor + Cable Loss - Amp Factor + Reading.
2. The emission levels that are 20dB below the official limit are not reported.




```
Site no.        : 1# 966 chamber              Data no.   : 204
Dis. / Ant.     : 3m   ANT ABOVE 18G          Ant. pol. : VERTICAL
Limit           : FCC PART 15 PEAK 2.4
Env. / Ins.     : Temp:23.6';Humi:56%;Press:101.52kPa
Engineer        : Dick
EUT             : 2.4G wireless camera product
Power           : DC 12V From Adapter Inpuy AC 120V/60Hz
M/N             : LWU3620-C
Test Mode       : TX 2440MHz
```

| | Freq. (MHz) | Ant. Factor (dB/m) | Cable Loss (dB) | Amp Factor (dB) | Reading (dBuV) | Emission Level (dBuV/m) | Limits (dBuV/m) | Margin (dB) | Remark |
|---|---|---|---|---|---|---|---|---|---|
| 1 | 21416.00 | 46.05 | 20.31 | 35.42 | 17.15 | 48.09 | 74.00 | 25.91 | Peak |
| 2 | 23306.00 | 45.66 | 21.43 | 33.53 | 17.97 | 51.53 | 74.00 | 22.47 | Peak |

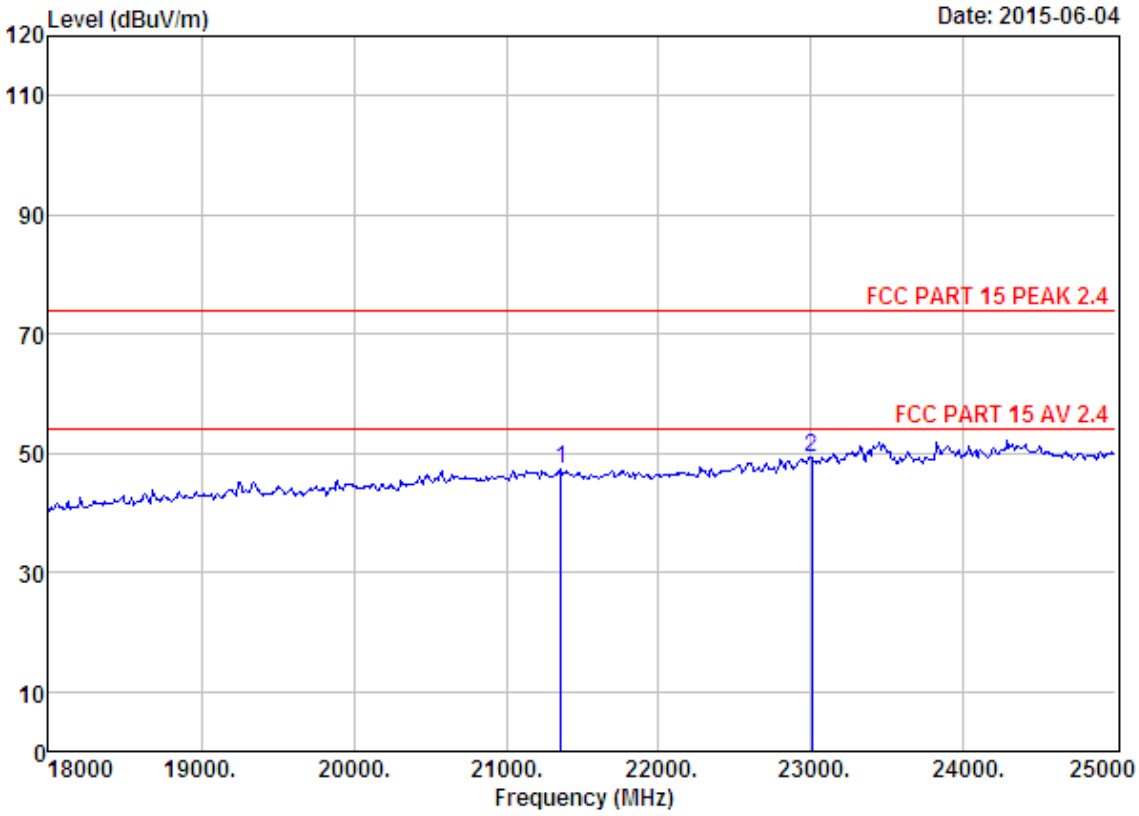
Remarks: 1. Emission Level= Antenna Factor + Cable Loss - Amp Factor + Reading.
2. The emission levels that are 20dB below the official limit are not reported.




```
Site no.        : 1# 966 chamber              Data no.  : 205
Dis. / Ant.     : 3m   ANT ABOVE 18G          Ant. pol. : VERTICAL
Limit           : FCC PART 15 PEAK 2.4
Env. / Ins.     : Temp:23.6';Humi:56%;Press:101.52kPa
Engineer        : Dick
EUT             : 2.4G wireless camera product
Power           : DC 12V From Adapter Inpuy AC 120V/60Hz
M/N             : LWU3620-C
Test Mode       : TX 2468MHz
```

| | Freq. (MHz) | Ant. Factor (dB/m) | Cable Loss (dB) | Amp Factor (dB) | Reading (dBuV) | Emission Level (dBuV/m) | Limits (dBuV/m) | Margin (dB) | Remark |
|---|---|---|---|---|---|---|---|---|---|
| 1 | 21276.00 | 46.13 | 20.25 | 35.55 | 14.36 | 45.19 | 74.00 | 28.81 | Peak |
| 2 | 23964.00 | 45.61 | 22.02 | 32.83 | 15.84 | 50.64 | 74.00 | 23.36 | Peak |

Remarks: 1. Emission Level= Antenna Factor + Cable Loss - Amp Factor + Reading.
2. The emission levels that are 20dB below the official limit are not reported.




```
Site no.        : 1# 966 chamber              Data no.  : 206
Dis. / Ant.     : 3m   ANT ABVOE 18G          Ant. pol. : HORIZONTAL
Limit           : FCC PART 15 PEAK 2.4
Env. / Ins.     : Temp:23.6';Humi:56%;Press:101.52kPa
Engineer        : Dick
EUT             : 2.4G wireless camera product
Power           : DC 12V From Adapter Inpuy AC 120V/60Hz
M/N             : LWU3620-C
Test Mode       : TX 2468MHz
```

| | Freq. (MHz) | Ant. Factor (dB/m) | Cable Loss (dB) | Amp Factor (dB) | Reading (dBuV) | Emission Level (dBuV/m) | Limits (dBuV/m) | Margin (dB) | Remark |
|---|---|---|---|---|---|---|---|---|---|
| 1 | 21360.00 | 46.08 | 20.28 | 35.49 | 16.35 | 47.22 | 74.00 | 26.78 | Peak |
| 2 | 23005.00 | 45.60 | 21.15 | 33.85 | 16.50 | 49.40 | 74.00 | 24.60 | Peak |

Remarks: 1. Emission Level= Antenna Factor + Cable Loss - Amp Factor + Reading.
2. The emission levels that are 20dB below the official limit are not reported.

# 4. 20 DB BANDWIDTH

## 4.1. Test Procedure

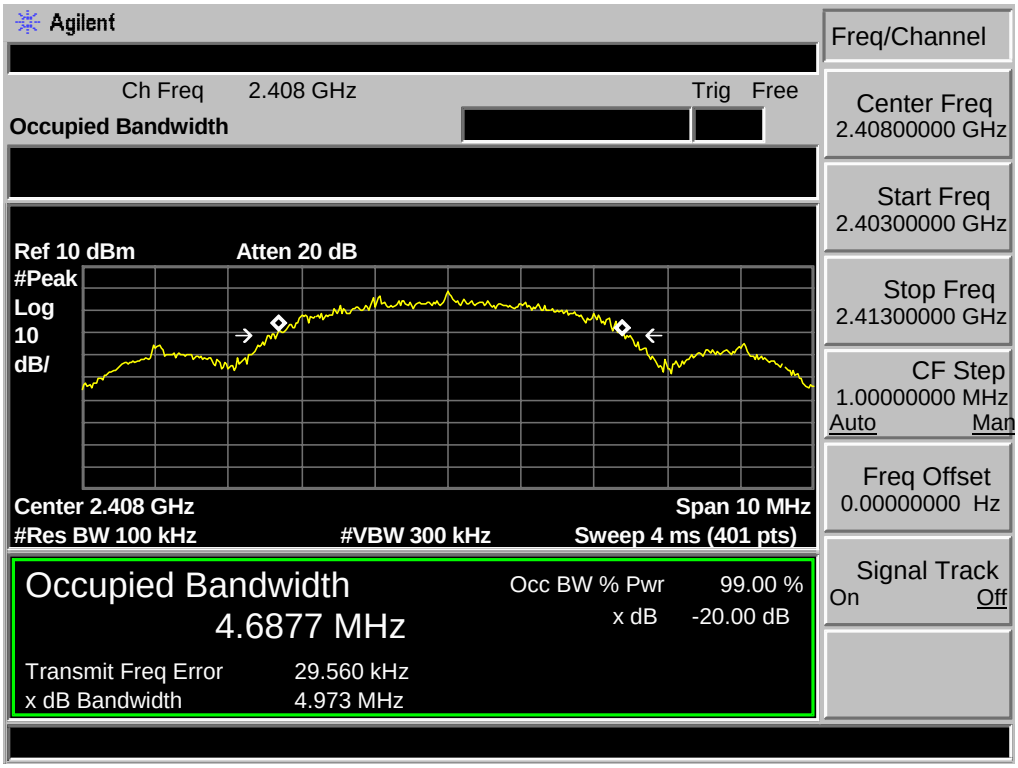
The transmitter output was coupled to a spectrum analyzer via a antenna. The bandwidth of the fundamental frequency was measured by spectrum analyzer with 100kHz RBW and 300kHz VBW. The 20dB bandwidth is defined as the total spectrum the power of which is higher than peak power minus 20dB.

## 4.2. Test Result

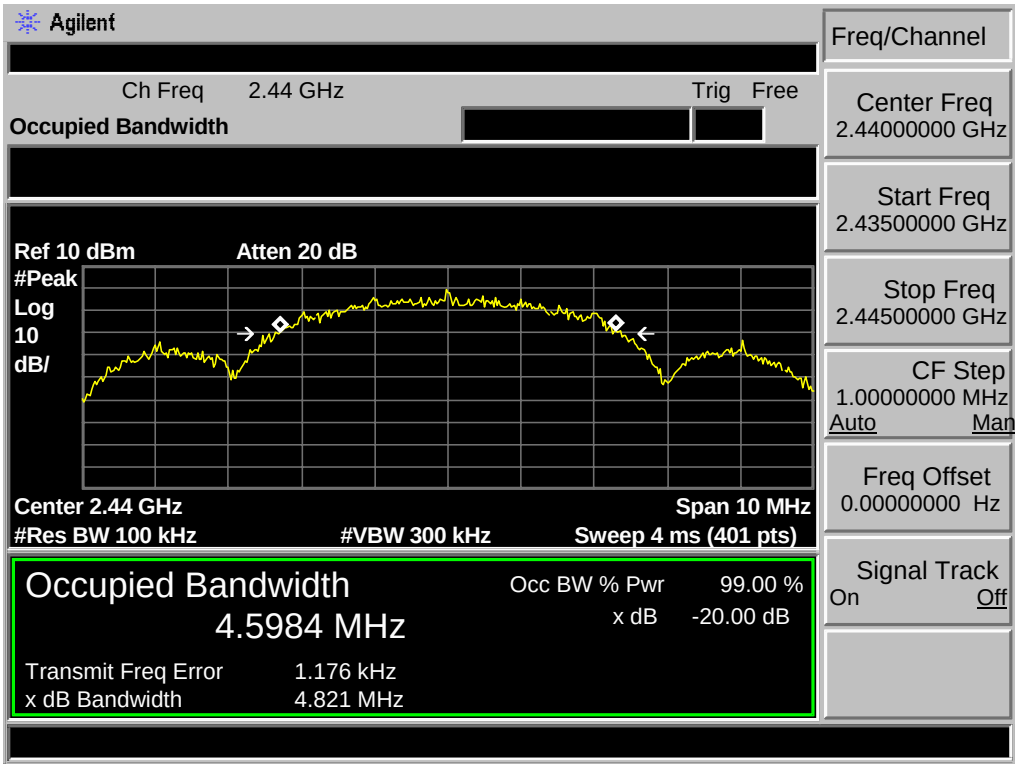
| EUT: 2.4G wireless camera product<br>M/N: LWU3620-C | | | | |
|---|---|---|---|---|
| Test date: 2015-05-28 | | Test site: RF site | | Tested by: Tony Tang |
| Mode | Freq (MHz) | 20dB Bandwidth (MHz) | Limit (kHz) | Conclusion |
| TX | 2408 | 4.973 | / | PASS |
| | 2440 | 4.821 | / | PASS |
| | 2468 | 4.882 | / | PASS |

## 4.3. Test Data

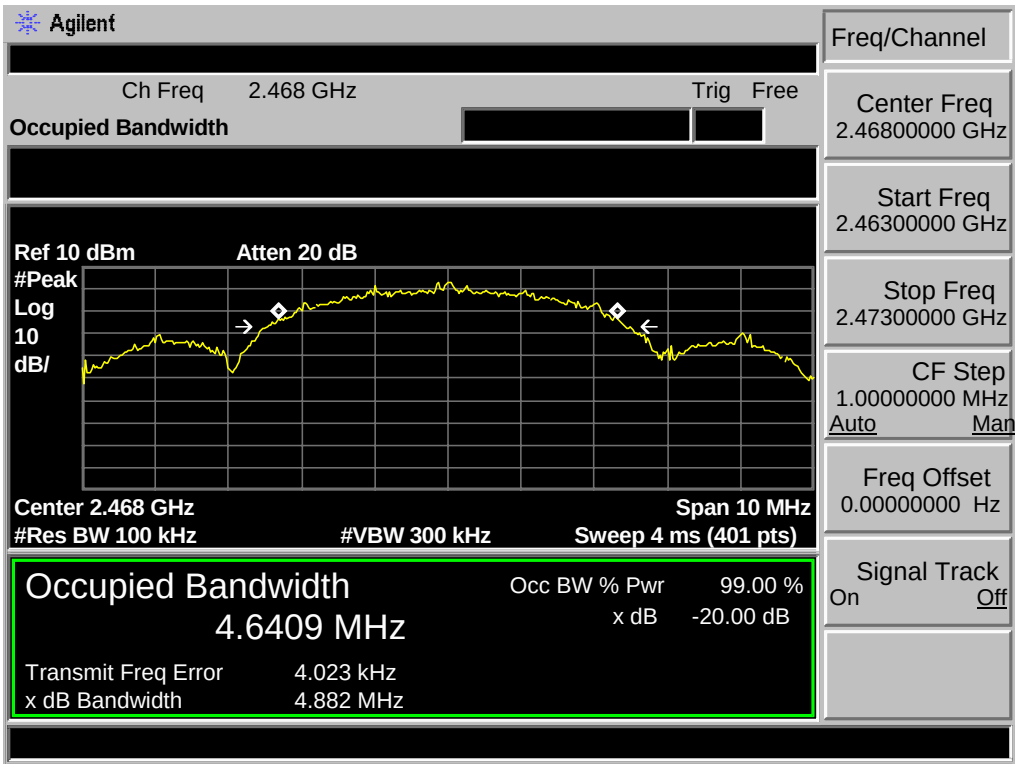
**TX 2408 MHz**




**TX 2440MHz**

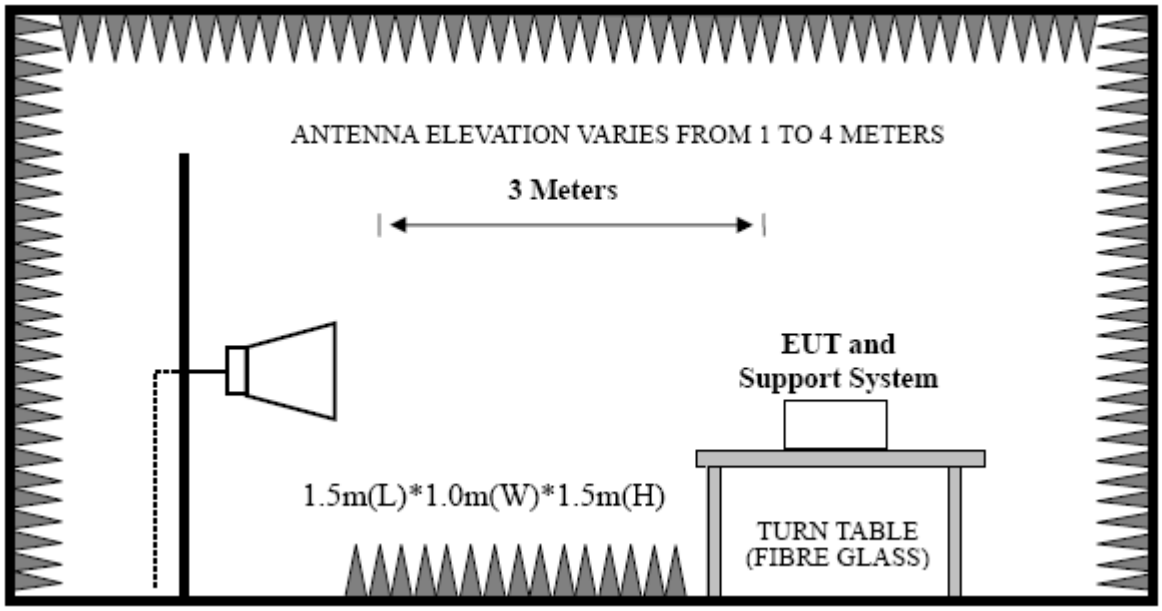


**TX 2468 MHz**


Agilent
Freq/Channel
Ch Freq 2.468 GHz
Trig Free
Occupied Bandwidth
Center Freq
2.46800000 GHz
Start Freq
2.46300000 GHz
Stop Freq
2.47300000 GHz
CF Step
1.00000000 MHz
Auto Man
Freq Offset
0.00000000 Hz
Ref 10 dBm
Atten 20 dB
#Peak
Log
10
dB/
Center 2.468 GHz
#Res BW 100 kHz
#VBW 300 kHz
Span 10 MHz
Sweep 4 ms (401 pts)
Occupied Bandwidth
4.6409 MHz
Occ BW % Pwr 99.00 %
x dB -20.00 dB
Transmit Freq Error 4.023 kHz
x dB Bandwidth 4.882 MHz
Signal Track
On Off

# 5. BAND EDGE COMPLIANCE

## 5.1. Block Diagram of Test setup




## 5.2. Test Procedure

EUT was placed on a turn table, which is 1.5 meter high above ground. The turn table can rotate 360 degrees to determine the position of the maximum emission level. Power on the EUT and let it working in test mode, then test it. EUT is set 3 meters away from the receiving antenna, which is mounted on a antenna tower. The antenna can be moved up and down between 1 meter and 4 meters to find out the maximum emission level. Both horizontal and vertical polarization of the antenna are set on test.

Set the spectrum analyzer in the following setting in order to capture the lower and upper band-edges of emissions

Peak : RBW = 1MHz, VBW = 1MHz, Detector=PEAK detector, Sweep time = auto.

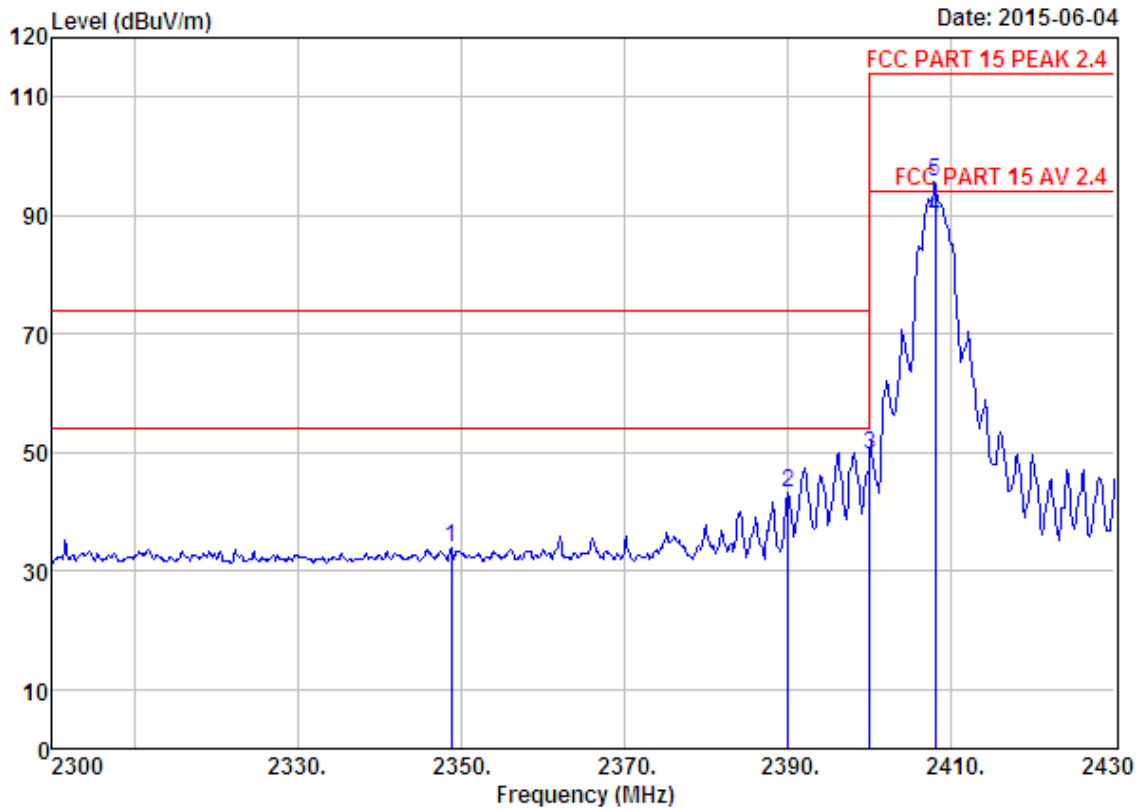
AV : RBW = 1MHz, VBW = 10Hz, Detector=PEAK detector, Sweep time = auto .

## 5.3. Test Result

| |
|---|
| EUT: 2.4G wireless camera product M/N: LWU3620-C |
| Power: DC 12V From Adapter Input AC 120V/60Hz |
| Test date: 2015-06-04 Test site: 3m Chamber Tested by: Tony Tang |
| Test mode: Tx Mode |
| Pass |

Note: If the PK measured levels comply with average limit, then the average level were deemed to comply with average limit.

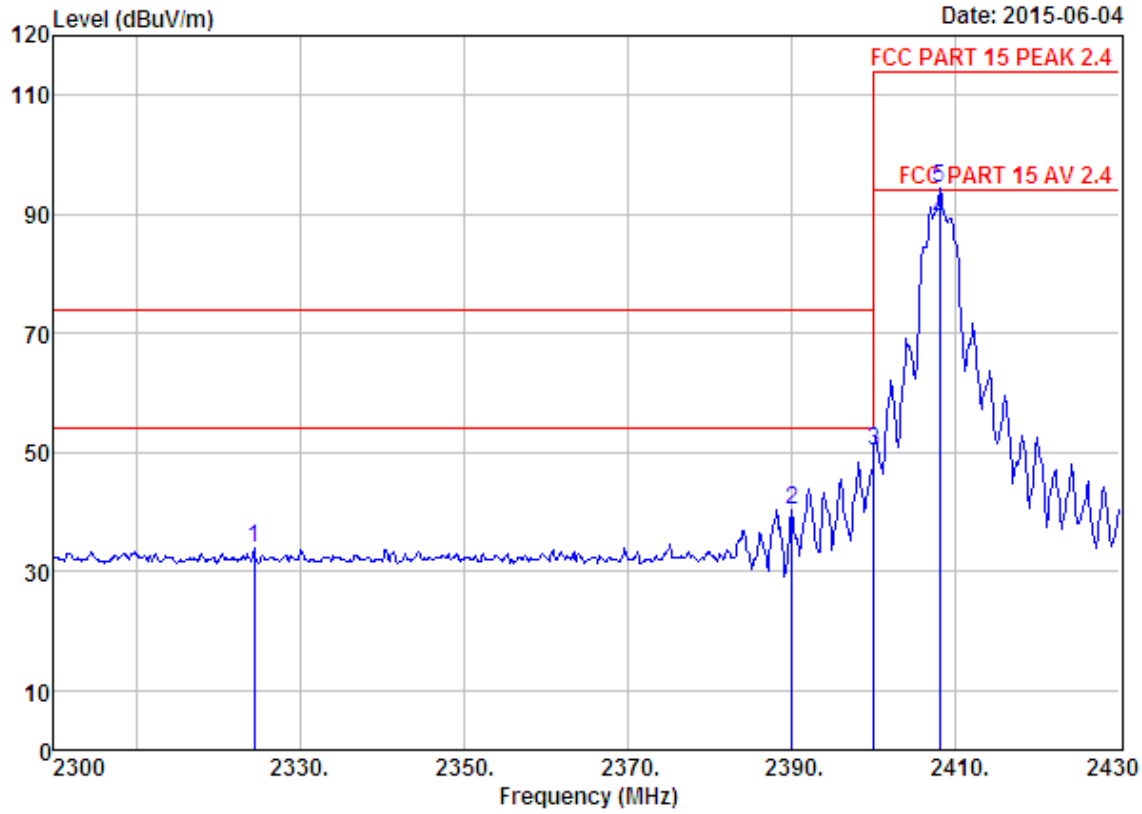
## 5.4. Test Data




Site no. : 1# 966 chamber Data no. : 193
Dis. / Ant. : 3m ANT 1-18G Ant. pol. : VERTICAL
Limit : FCC PART 15 PEAK 2.4
Env. / Ins. : Temp:23.6';Humi:56%;Press:101.52kPa
Engineer : Dick
EUT : 2.4G wireless camera product
Power : DC 12V From Adapter Inpuy AC 120V/60Hz
M/N : LWU3620-C
Test Mode : TX 2408MHz

| | Freq. (MHz) | Ant. Factor (dB/m) | Cable Loss (dB) | Amp Factor (dB) | Reading (dBuV) | Emission Level (dBuV/m) | Limits (dBuV/m) | Margin (dB) | Remark |
|---|---|---|---|---|---|---|---|---|---|
| 1 | 2348.75 | 27.70 | 6.56 | 34.57 | 34.36 | 34.05 | 74.00 | 39.95 | Peak |
| 2 | 2390.00 | 27.64 | 6.62 | 34.62 | 43.53 | 43.17 | 74.00 | 30.83 | Peak |
| 3 | 2400.00 | 27.61 | 6.62 | 34.64 | 49.87 | 49.46 | 74.00 | 24.54 | Peak |
| 4 | 2408.00 | 27.61 | 6.64 | 34.64 | 90.01 | 89.62 | 94.00 | 4.38 | Average |
| 5 | 2408.00 | 27.61 | 6.64 | 34.64 | 96.08 | 95.69 | 114.00 | 18.31 | Peak |

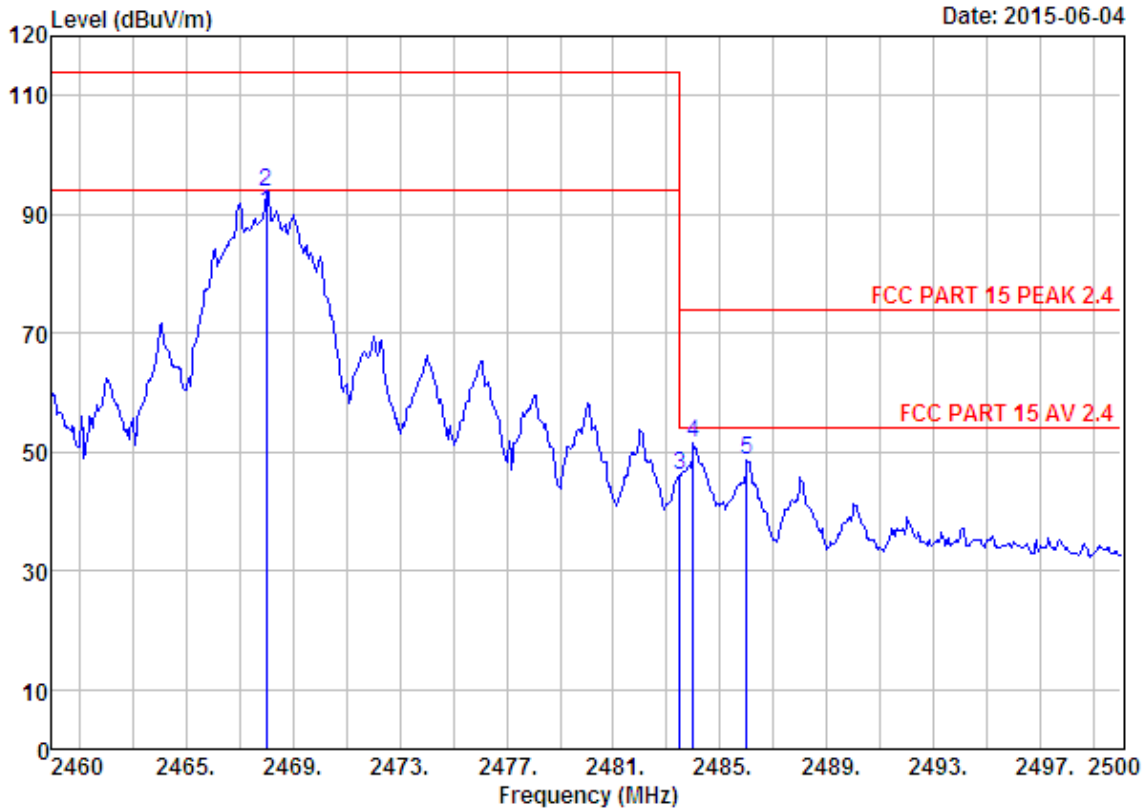
Remarks: 1. Emission Level= Antenna Factor + Cable Loss - Amp Factor + Reading.
2. The emission levels that are 20dB below the official limit are not reported.




Site no. : 1# 966 chamber Data no. : 194
Dis. / Ant. : 3m ANT 1-18G Ant. pol. : HORIZONTAL
Limit : FCC PART 15 PEAK 2.4
Env. / Ins. : Temp:23.6';Humi:56%;Press:101.52kPa
Engineer : Dick
EUT : 2.4G wireless camera product
Power : DC 12V From Adapter Inpuy AC 120V/60Hz
M/N : LWU3620-C
Test Mode : TX 2408MHz

| | Freq. (MHz) | Ant. Factor (dB/m) | Cable Loss (dB) | Amp Factor (dB) | Reading (dBuV) | Emission Level (dBuV/m) | Limits (dBuV/m) | Margin (dB) | Remark |
|---|---|---|---|---|---|---|---|---|---|
| 1 | 2324.44 | 27.73 | 6.54 | 34.60 | 34.14 | 33.81 | 74.00 | 40.19 | Peak |
| 2 | 2390.00 | 27.64 | 6.62 | 34.62 | 40.82 | 40.46 | 74.00 | 33.54 | Peak |
| 3 | 2400.00 | 27.61 | 6.62 | 34.64 | 50.75 | 50.34 | 74.00 | 23.66 | Peak |
| 4 | 2408.00 | 27.61 | 6.64 | 34.64 | 89.33 | 88.94 | 94.00 | 5.06 | Average |
| 5 | 2408.00 | 27.61 | 6.64 | 34.64 | 94.74 | 94.35 | 114.00 | 19.65 | Peak |

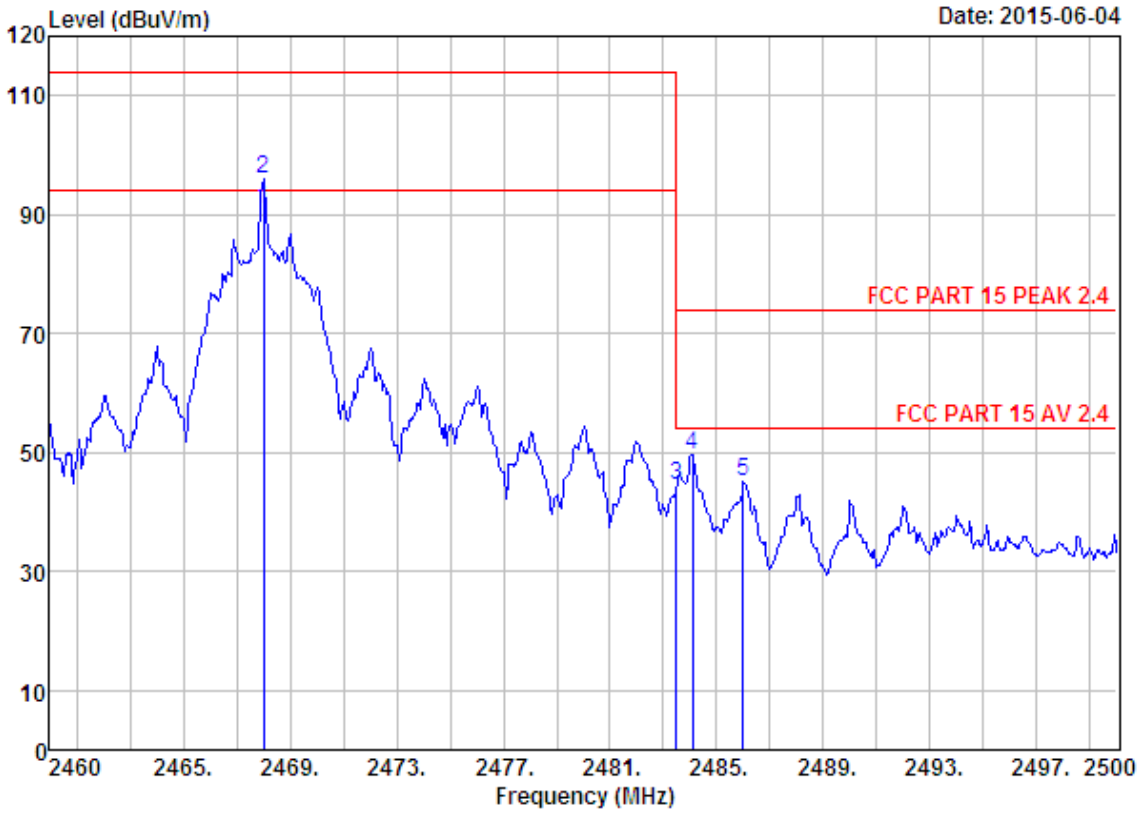
Remarks: 1. Emission Level= Antenna Factor + Cable Loss - Amp Factor + Reading.
2. The emission levels that are 20dB below the official limit are not reported.




Site no. : 1# 966 chamber Data no. : 199
Dis. / Ant. : 3m ANT 1-18G Ant. pol. : HORIZONTAL
Limit : FCC PART 15 PEAK 2.4
Env. / Ins. : Temp:23.6';Humi:56%;Press:101.52kPa
Engineer : Dick
EUT : 2.4G wireless camera product
Power : DC 12V From Adapter Inpuy AC 120V/60Hz
M/N : LWU3620-C
Test Mode : TX 2468MHz

| | Freq. (MHz) | Ant. Factor (dB/m) | Cable Loss (dB) | Amp Factor (dB) | Reading (dBuV) | Emission Level (dBuV/m) | Limits (dBuV/m) | Margin (dB) | Remark |
|---|---|---|---|---|---|---|---|---|---|
| 1 | 2468.00 | 27.58 | 6.69 | 34.98 | 91.01 | 90.30 | 94.00 | 3.70 | Average |
| 2 | 2468.00 | 27.58 | 6.69 | 34.98 | 94.40 | 93.69 | 114.00 | 20.31 | Peak |
| 3 | 2483.50 | 27.58 | 6.71 | 35.11 | 47.01 | 46.19 | 74.00 | 27.81 | Peak |
| 4 | 2484.00 | 27.58 | 6.71 | 35.11 | 52.24 | 51.42 | 74.00 | 22.58 | Peak |
| 5 | 2486.00 | 27.58 | 6.71 | 35.11 | 49.38 | 48.56 | 74.00 | 25.44 | Peak |

Remarks: 1. Emission Level= Antenna Factor + Cable Loss - Amp Factor + Reading.
2. The emission levels that are 20dB below the official limit are not reported.




Site no. : 1# 966 chamber Data no. : 200
Dis. / Ant. : 3m ANT 1-18G Ant. pol. : VERTICAL
Limit : FCC PART 15 PEAK 2.4
Env. / Ins. : Temp:23.6';Humi:56%;Press:101.52kPa
Engineer : Dick
EUT : 2.4G wireless camera product
Power : DC 12V From Adapter Inpuy AC 120V/60Hz
M/N : LWU3620-C
Test Mode : TX 2468MHz

| | Freq. (MHz) | Ant. Factor (dB/m) | Cable Loss (dB) | Amp Factor (dB) | Reading (dBuV) | Emission Level (dBuV/m) | Limits (dBuV/m) | Margin (dB) | Remark |
|---|---|---|---|---|---|---|---|---|---|
| 1 | 2468.00 | 27.58 | 6.69 | 34.98 | 91.47 | 90.76 | 94.00 | 3.24 | Average |
| 2 | 2468.00 | 27.58 | 6.69 | 34.98 | 96.67 | 95.96 | 114.00 | 18.04 | Peak |
| 3 | 2483.50 | 27.58 | 6.71 | 35.11 | 45.28 | 44.46 | 74.00 | 29.54 | Peak |
| 4 | 2484.08 | 27.58 | 6.71 | 35.11 | 50.36 | 49.54 | 74.00 | 24.46 | Peak |
| 5 | 2486.00 | 27.58 | 6.71 | 35.11 | 45.95 | 45.13 | 74.00 | 28.87 | Peak |

Remarks: 1. Emission Level= Antenna Factor + Cable Loss - Amp Factor + Reading.
2. The emission levels that are 20dB below the official limit are not reported.

# 6. POWER LINE CONDUCTED EMISSIONS

## 6.1. Limit

| Frequency | Maximum RF Line Voltage | |
|---|---|---|
| | Quasi-Peak Level dB(μV) | Average Level dB(μV) |
| 150kHz ~ 500kHz | 66 ~ 56* | 56 ~ 46* |
| 500kHz ~ 5MHz | 56 | 46 |
| 5MHz ~ 30MHz | 60 | 50 |

Notes: 1. * Decreasing linearly with logarithm of frequency.
2. The lower limit shall apply at the transition frequencies.

## 6.2. Test Procedure

The EUT was placed on a non-metallic table, 10cm above the ground plane. The EUT was charged form PC's USB port which connected to the power mains through a line impedance stabilization network (L.I.S.N. 1#).. Both sides of AC line are checked to find out the maximum conducted emission. In order to find the maximum emission levels, the relative positions of equipment and all of the interface cables shall be changed according to ANSI C63.4: 2009 on Conducted Emission Test.

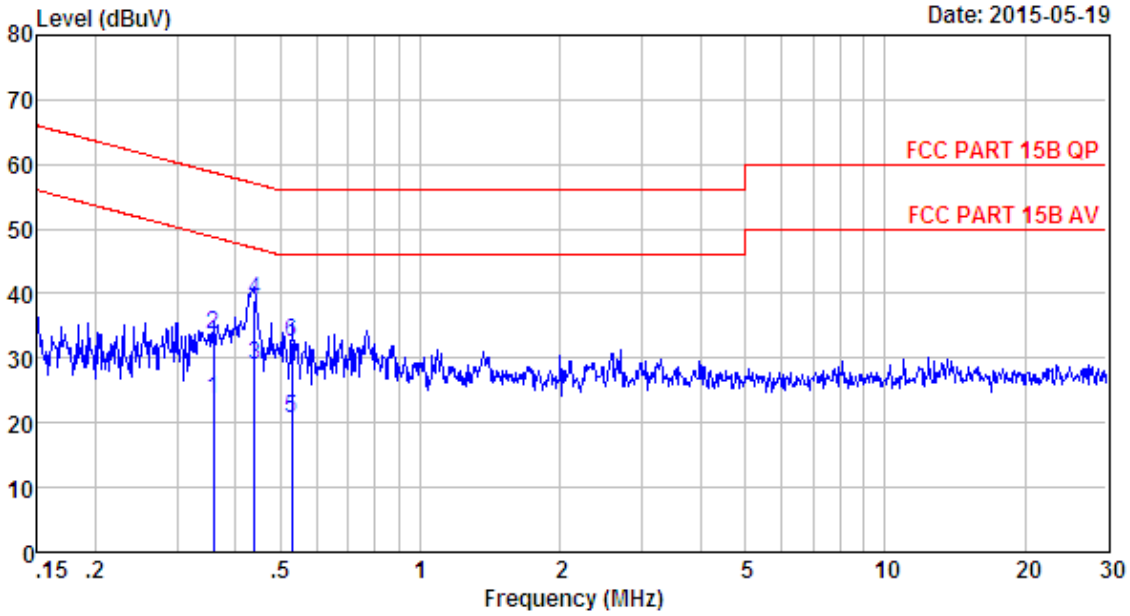
The bandwidth of test receiver (R & S ESHS30) is set at 10kHz.

The frequency range from 150kHz to 30MHz is checked.

## 6.3. Test Result

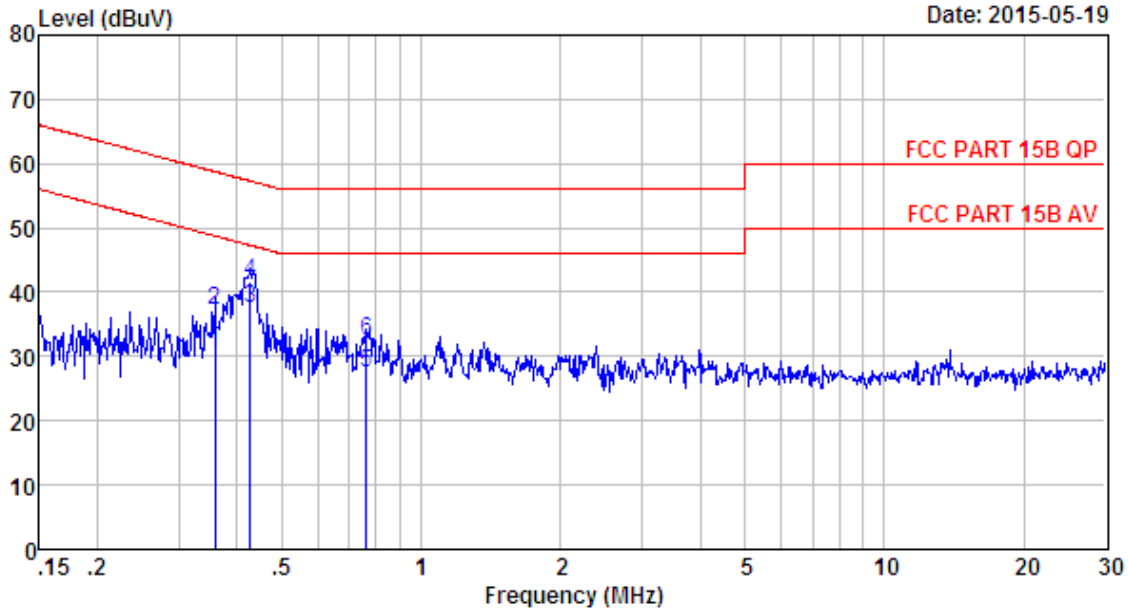
| 0.15MHz—30MHz Conducted emissison Test result |
|---|
| EUT: 2.4G wireless camera product M/N:LWU3620-C |
| Power: DC 12V From Adapter Input AC 120V/60Hz |
| Test date: 2015-05-19 Test site: 3m Chamber Tested by: Tony.Tang |
| Test mode: Tx Mode |
| Pass |

## 6.4. Test data




Site no : 844 Shield Room
Env. / Ins. : Temp:23.6';Humi:56%;Press:101.52kPa LINE
Limit : FCC PART 15B QP
Engineer : Dick
EUT : 2.4G wireless camera product
M/N : DC 12V From Adapter Input AC 120V/60Hz
Power : LWU3620-C
Test Mode : TX Mode

| | Freq. (MHz) | LISN Factor (dB) | Cable Loss (dB) | Reading (dBuV) | Emission Level (dBuv) | Limits (dBuv) | Margin (dB) | Remark |
|---|---|---|---|---|---|---|---|---|
| 1 | 0.36 | 9.61 | 9.82 | 4.20 | 23.63 | 48.74 | 25.11 | Average |
| 2 | 0.36 | 9.61 | 9.82 | 14.20 | 33.63 | 58.74 | 25.11 | QP |
| 3 | 0.44 | 9.61 | 9.81 | 9.52 | 28.94 | 47.07 | 18.13 | Average |
| 4 | 0.44 | 9.61 | 9.81 | 19.52 | 38.94 | 57.07 | 18.13 | QP |
| 5 | 0.53 | 9.61 | 9.81 | 1.10 | 20.52 | 46.00 | 25.48 | Average |
| 6 | 0.53 | 9.61 | 9.81 | 13.10 | 32.52 | 56.00 | 23.48 | QP |




Site no : 844 Shield Room
Env. / Ins. : Temp:23.6';Humi:56%;Press:101.52kPa NEUTRAL
Limit : FCC PART 15B QP
Engineer : Dick
EUT : 2.4G wireless camera product
M/N : DC 12V From Adapter Input AC 120V/60Hz
Power : LWU3620-C
Test Mode : TX Mode

| | Freq. (MHz) | LISN Factor (dB) | Cable Loss (dB) | Reading (dBuV) | Emission Level (dBuv) | Limits (dBuv) | Margin (dB) | Remark |
|---|---|---|---|---|---|---|---|---|
| 1 | 0.36 | 9.59 | 9.82 | 10.89 | 30.30 | 48.74 | 18.44 | Average |
| 2 | 0.36 | 9.59 | 9.82 | 17.89 | 37.30 | 58.74 | 21.44 | QP |
| 3 | 0.43 | 9.59 | 9.81 | 18.18 | 37.58 | 47.29 | 9.71 | Average |
| 4 | 0.43 | 9.59 | 9.81 | 22.18 | 41.58 | 57.29 | 15.71 | QP |
| 5 | 0.76 | 9.63 | 9.81 | 7.91 | 27.35 | 46.00 | 18.65 | Average |
| 6 | 0.76 | 9.63 | 9.81 | 12.91 | 32.35 | 56.00 | 23.65 | QP |

# 7. ANTENNA REQUIREMENTS

## 7.1. Limit

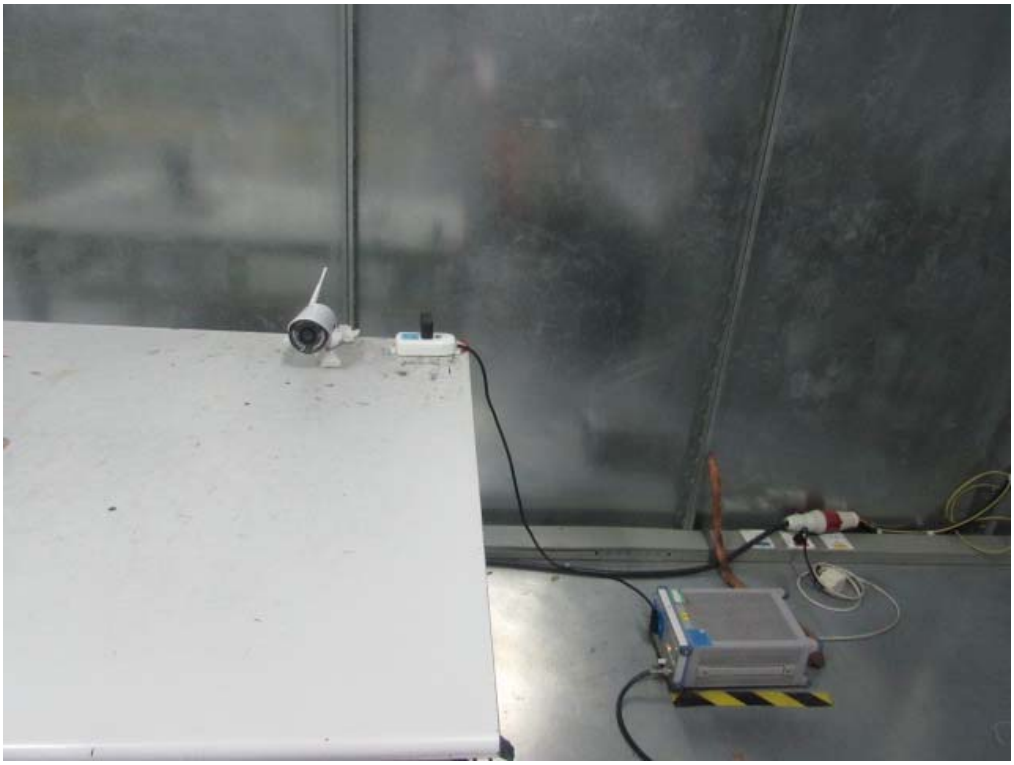
For intentional device, according to FCC 47 CFR Section 15.203, an intentional radiator shall be designed to ensure that no antenna other than that furnished by the responsible party shall be used with the device. And according to FCC 47 CFR Section 15.249 (b), if transmitting antennas of directional gain greater than 6dBi are used, the power shall be reduced by the amount in dB that the directional gain of the antenna exceeds 6dBi.

## 7.2. Result

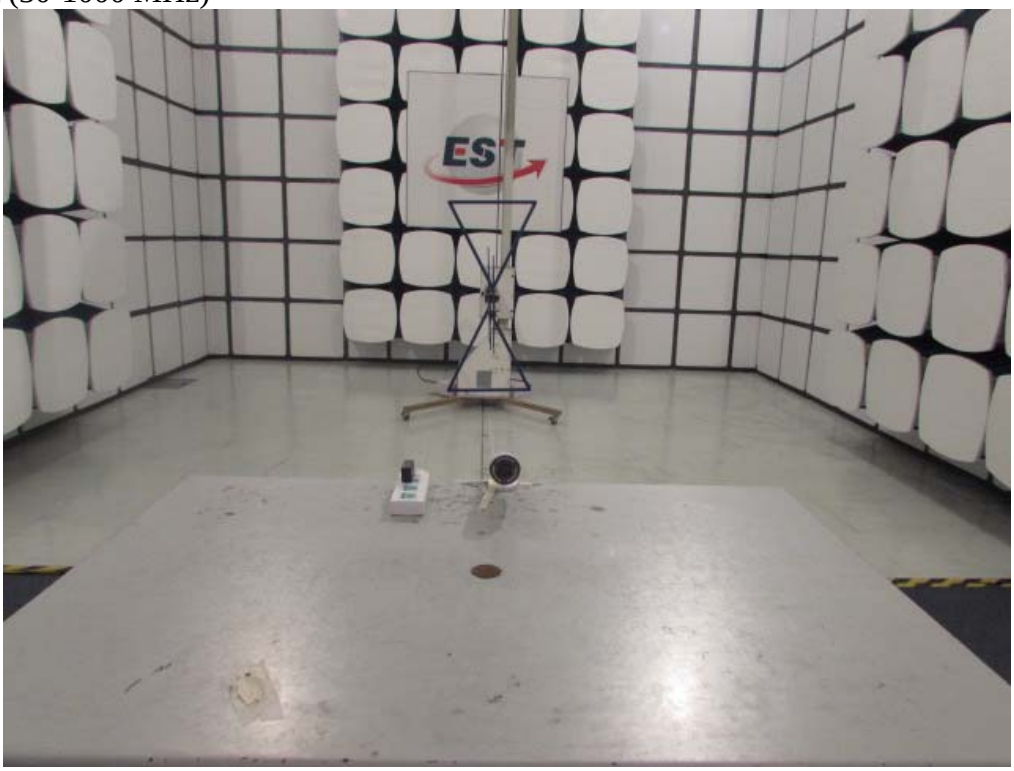
The antennas used for this product are integral Patch Antenna and that no antenna other than that furnished by the responsible party shall be used with the device, the maximum peak gain of the transmit antenna is only 3dBi.

# 8. TESTSETUP PHOTO

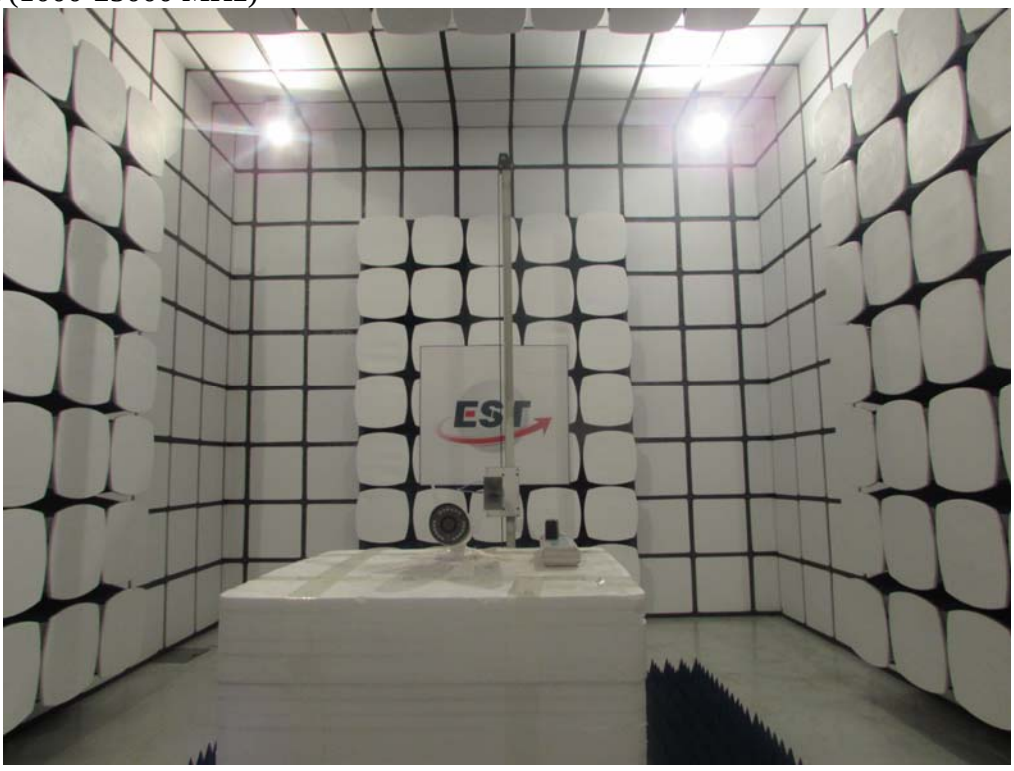
Conducted Test



Radiated Test (30-1000 MHz)



Radiated Test (1000-25000 MHz)



Photos of EUT

**External Photos**

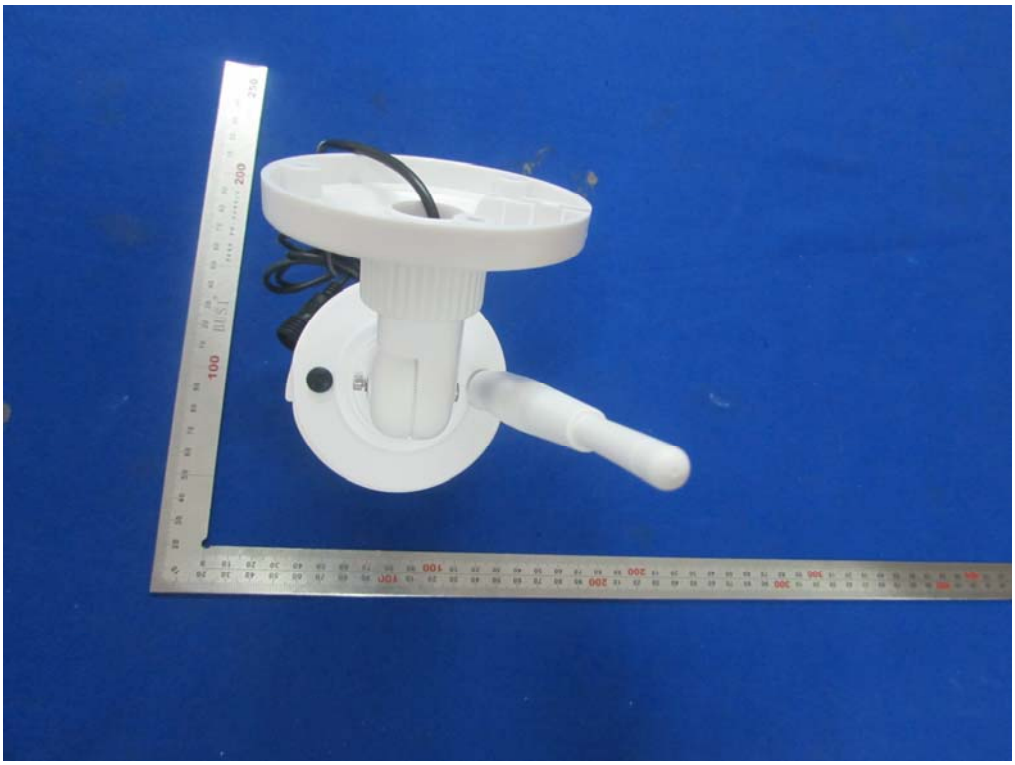
M/N: LWU3620-C


**External Photos**

M/N: LWU3620-C

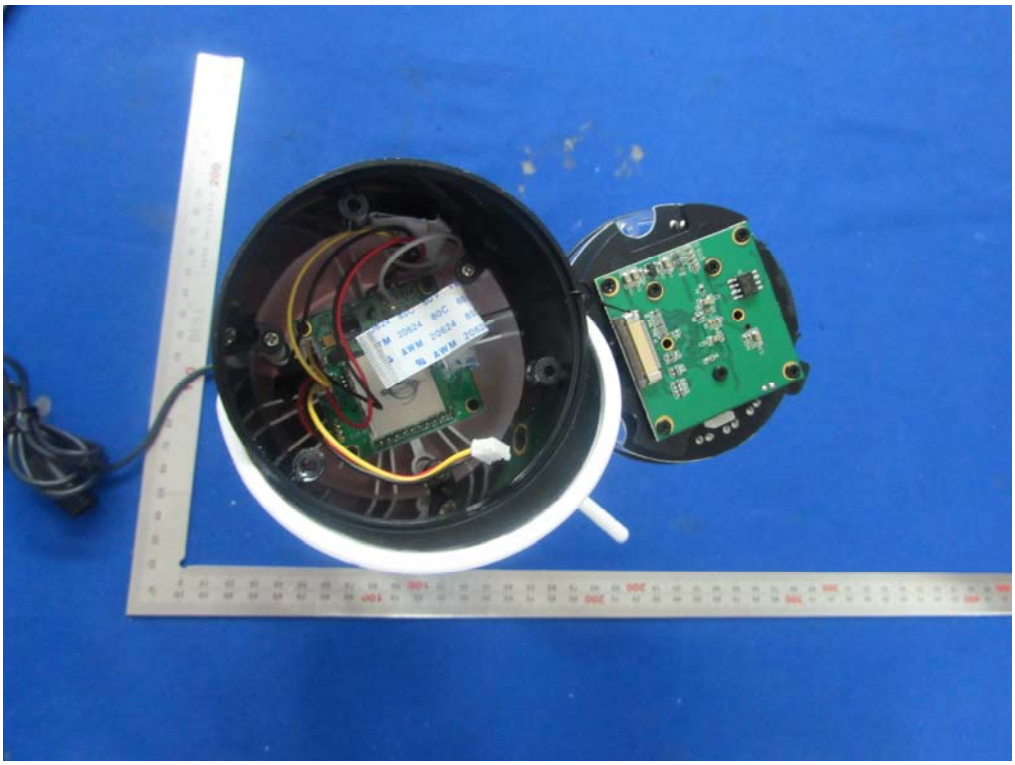

**External Photos**

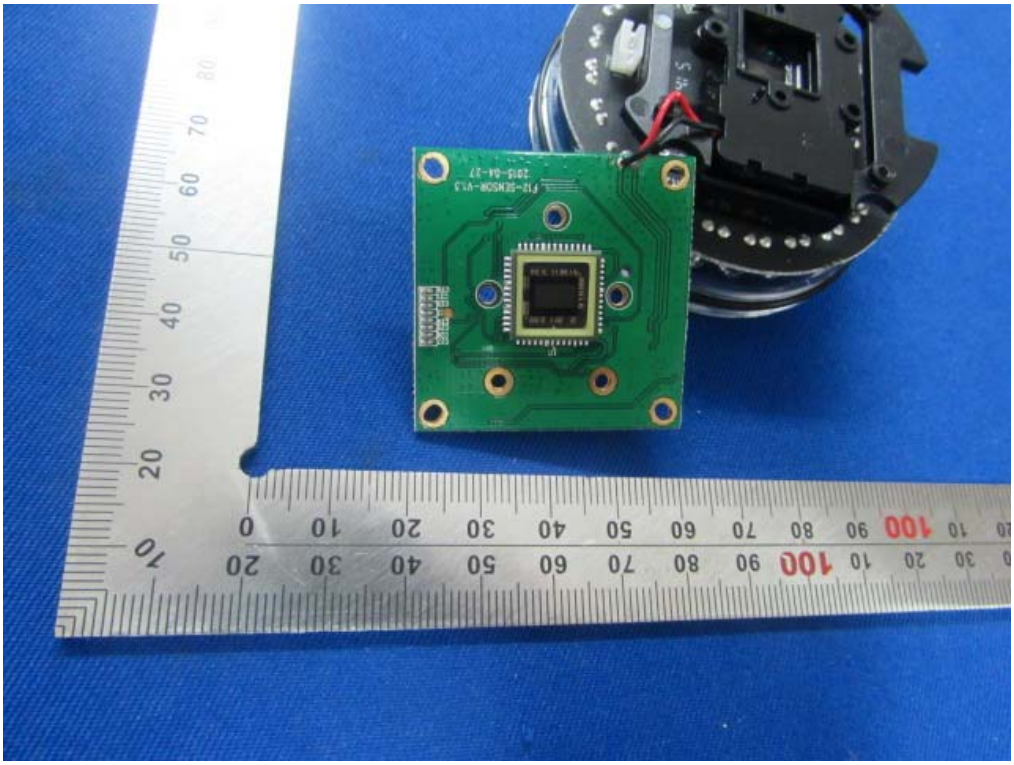
M/N: LWU3620-C



**Internal Photos**

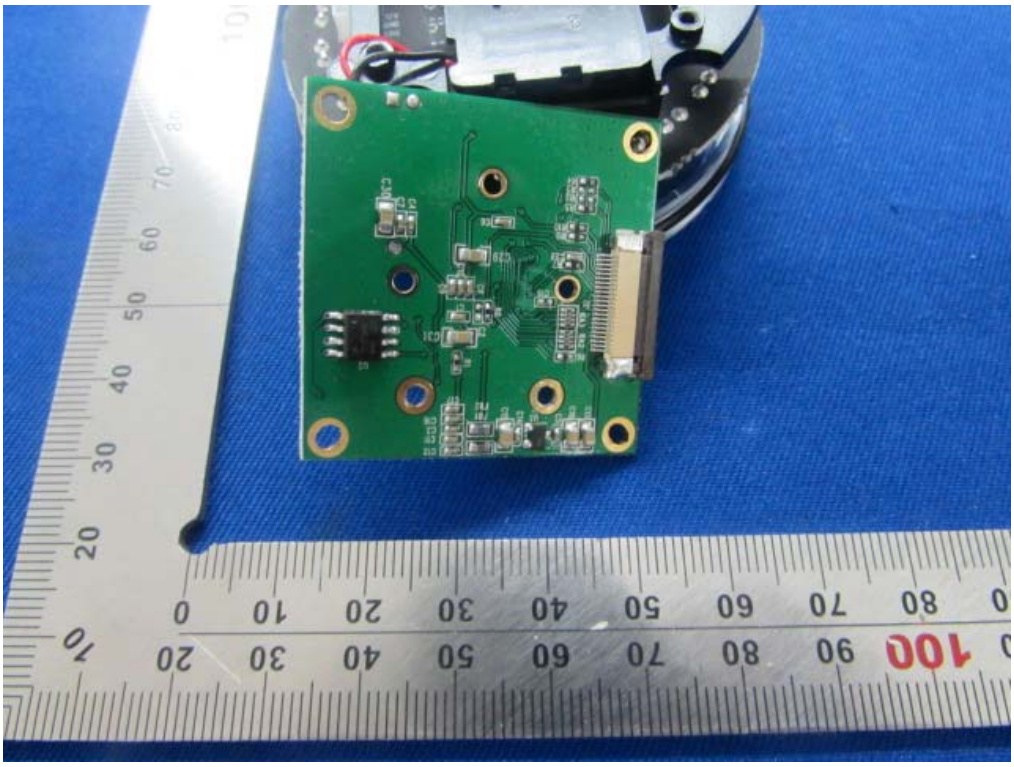
M/N: LWU3620-C

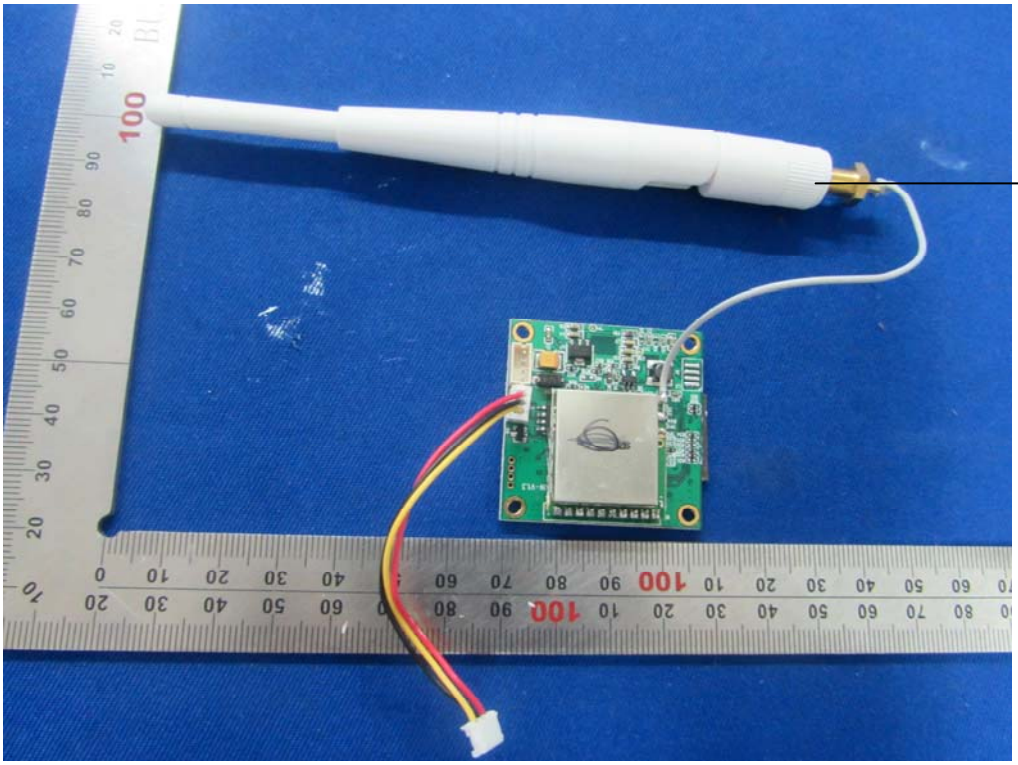




**Internal Photos**

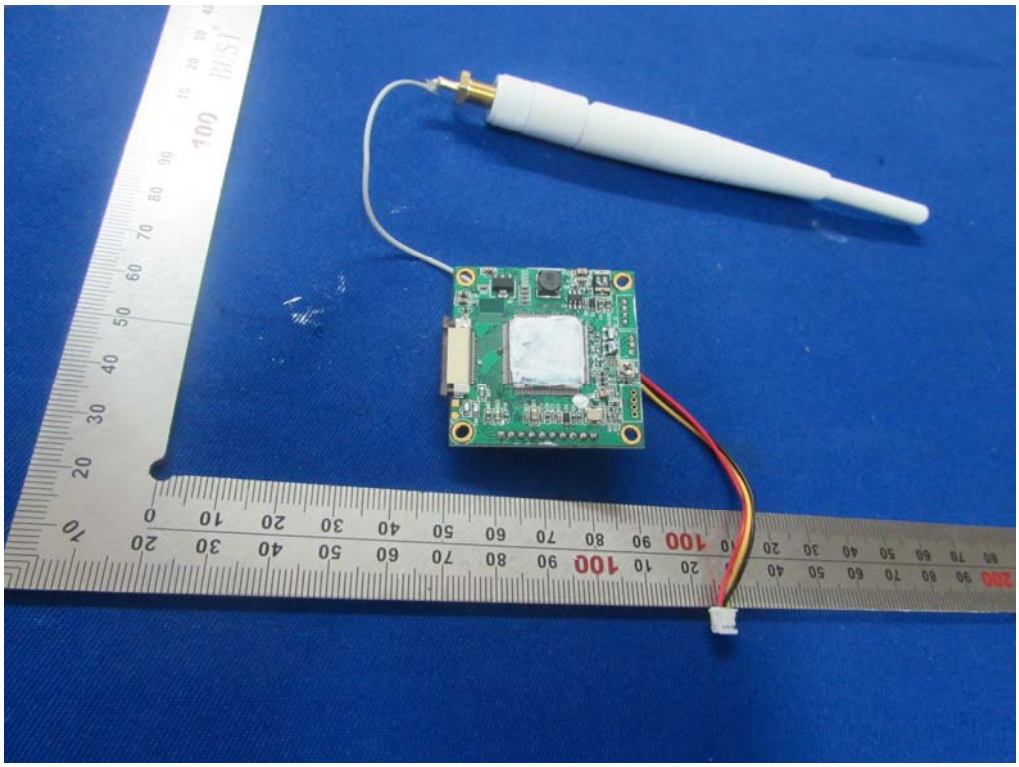
M/N: LWU3620-C

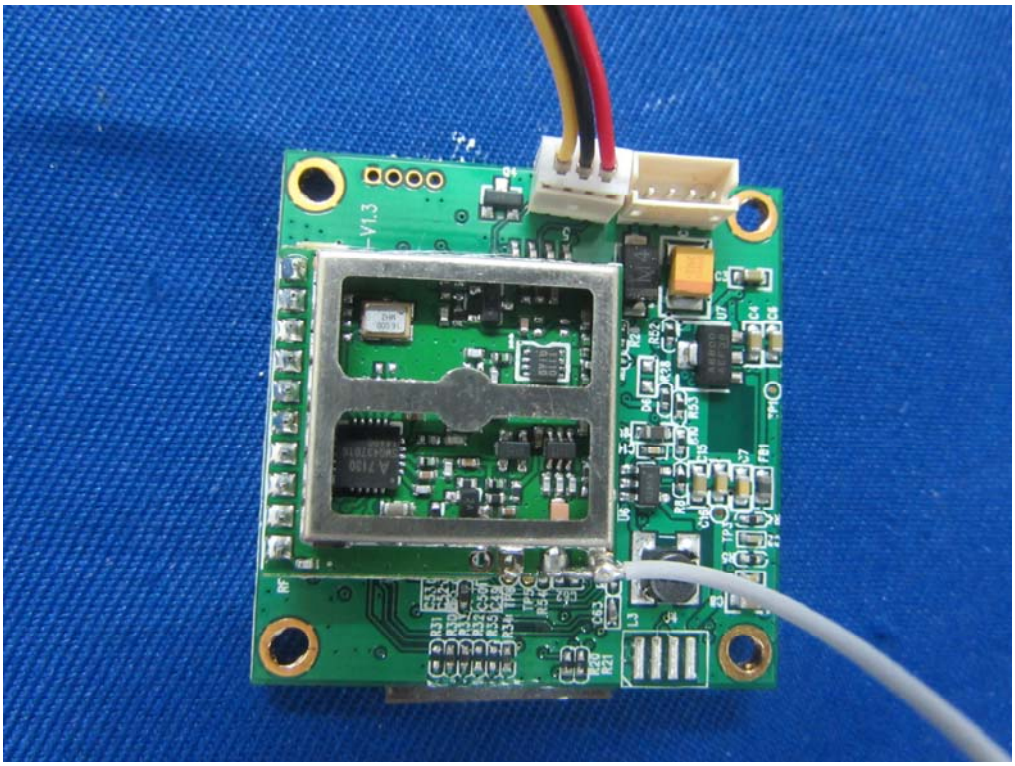




**Internal Photos**

M/N: LWU3620-C





Adapter