

# **FCC PART 15 SUBPART C FCC PART 15.247 TEST REPORT**

**FCC ID:2BSSW-L20**

**Report No:** CTSL2521220072ER

**Product Name:** MICRO CAM

**Main Test Model:** L20

**Series Models:** N/A

**Applicant:** Shenzhen Fulaifu Electronic Technology CO., Ltd.

## **EXECUTIVE SUMMARY**

A sample of this product was tested and found to be in compliance with  
FCC PART 15 SUBPART C (15.247).

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is only applicable to presented Test sample.

## **CTSL Testing (Dongguan) Co., Ltd.**

Main company address: Hexing Building, Houjie Avenue, Houjie Road Houjie Town,  
Guangdong Province Dongguan City, People's Republic of China

| Test Report             |                                                                                                                                                                                                                      |             |                       |            |            |
|-------------------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-------------|-----------------------|------------|------------|
| FCC ID:2BSSW-L20        |                                                                                                                                                                                                                      |             |                       |            |            |
| Applicant Name          | Shenzhen Fulaifu Electronic Technology CO., Ltd.                                                                                                                                                                     |             |                       |            |            |
| Applicant Address       | 601, Building D, Zone C, Shangxue Technology Industrial City, Xinxue Community, Bantian Street, Longgang District, Shenzhen                                                                                          |             |                       |            |            |
| Manufacturer Name       | Shenzhen Fulaifu Electronic Technology CO., Ltd.                                                                                                                                                                     |             |                       |            |            |
| Manufacturer Address    | 601, Building D, Zone C, Shangxue Technology Industrial City, Xinxue Community, Bantian Street, Longgang District, Shenzhen                                                                                          |             |                       |            |            |
| Trade Mark              | N/A                                                                                                                                                                                                                  |             |                       |            |            |
| Product name            | MICRO CAM                                                                                                                                                                                                            |             |                       |            |            |
| Main Test Model         | L20                                                                                                                                                                                                                  |             |                       |            |            |
| Series Models           | N/A                                                                                                                                                                                                                  |             |                       |            |            |
| Standard                | <b>FCC Part 15 Subpart C (15.247)</b><br><b>ANSI C63.10:2020</b><br><b>FCC KDB 558074 D01 15.247 Meas Guidance v05r02</b>                                                                                            |             |                       |            |            |
| Test Location           | ISO/IEC 17025 by ILAC-MRA is A2LA 7556.01<br>CTSL Testing (Dongguan) Co., Ltd.<br>Room 112, Building 1, No. 15, Jiaoyuansongshan Hetian Village, Houjie Town<br>Dongguan City, Guangdong, People's Republic of China |             |                       |            |            |
| Receipt Date            | 2025.12.10                                                                                                                                                                                                           | Test period | 2025.12.10-2025.12.24 | Issue Date | 2025.12.24 |
| Conclusion              | The equipment under test was found to be compliance with the requirements of the standards applied.                                                                                                                  |             |                       |            |            |
| Performs Testing:       | Ethan Zhao                                                                                                                                                                                                           |             |                       |            |            |
| Test Report Reviewer:   | Steve Qin                                                                                                                                                                                                            |             |                       |            |            |
| Test Report Authorizer: | Alan Li                                                                                                                                                                                                              |             |                       |            |            |

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# 1. GENERAL INFORMATION

## 1.1. General Description of EUT (Equipment Under Test)

| Product Information                |                                                                                                                                                          |
|------------------------------------|----------------------------------------------------------------------------------------------------------------------------------------------------------|
| Product Name                       | : MICRO CAM                                                                                                                                              |
| Main Test Model                    | : L20                                                                                                                                                    |
| Series Models                      | : --                                                                                                                                                     |
| Power supply                       | : DC 5V $\overline{=}$ 1A, 5W                                                                                                                            |
| Battery                            | : DC 3.7V 650mAh                                                                                                                                         |
| Software Version                   | : V1.0                                                                                                                                                   |
| Hardware Version                   | : V1.0                                                                                                                                                   |
| Equipment Under Test               |                                                                                                                                                          |
| Test supplied                      | : <input checked="" type="checkbox"/> supplied by the manufacturer<br><input type="checkbox"/> supplied by the lab (Auxiliary test supplied by test Lab) |
| Switching Power Supply information | : Switching Power Supply<br>Input: 100-240V~ 50/60Hz 2.5A Max<br>Input: DC 12V, 10.0A 120W                                                               |
| Wireless Specification             |                                                                                                                                                          |
| Supported Type                     | : 2.4G WLAN: 802.11b/802.11g/802.11n(HT20)                                                                                                               |
| Modulation Type                    | : IEEE 802.11b mode: DSSS(CCK/QPSK/BPSK)<br>IEEE 802.11g mode: OFDM (BPSK/QPSK/16QAM/64QAM)<br>IEEE 802.11n HT20& mode: OFDM (BPSK/QPSK/16QAM/64QAM)     |
| Transmit data rate (WLAN)          | : IEEE 802.11b: 1/2/5.5/11Mbps<br>IEEE 802.11g: 6/9/12/18/24/36/48/54Mbps<br>IEEE 802.11n HT20: up to 72.2Mbps                                           |
| Operation frequency                | : IEEE 802.11b/g/n HT20: 2412MHz-2462MHz                                                                                                                 |
| Number of channels                 | : IEEE 802.11b/g/n HT20: 11 Channels                                                                                                                     |
| Antenna Gain& type                 | : Refer to Section 1.2 of the report.                                                                                                                    |
| Sample Type                        | : Prototype production                                                                                                                                   |
| Type of Device                     | : <input type="checkbox"/> Portable Device; <input checked="" type="checkbox"/> Mobile Device; <input type="checkbox"/> Modular Device                   |

Note: For a more detailed features description, please refer to the manufacturer's specifications or the user's manual.

## 1.2. Antenna Information

| Ant No.                                                                                                                                                                                                          | Brand          | Model Name  | Antenna Type | Connector | Gain (dBi) |
|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|----------------|-------------|--------------|-----------|------------|
| 1                                                                                                                                                                                                                | 2400-2483.5MHz | 3216F245M02 | Chip Antenna | N/A       | 3.5        |
| Note:<br>1. The antenna gain is declared by the customer and the laboratory is not responsible for the accuracy of the antenna gain.<br>2. The test results of this report only apply to the sample as received. |                |             |              |           |            |

## 1.3. Information of RF Cable

| Cable Loss(dB)                                                                                                                                                                                                          | Provided by                               |
|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-------------------------------------------|
| 1.0                                                                                                                                                                                                                     | DONGGUAN FLY FAR INDUSTRIAL INVESTMENT CO |
| Note:<br>1. The customer declared the loss value of the RF Cable. and the test results of this report only apply to the sample as received.<br>2. The laboratory is not responsible for the accuracy of the cable loss. |                                           |

## 2. SUMMARY OF TEST

### 2.1. Test Standards

FCC Rules Part 15.247: Frequency Hopping, Direct Spread Spectrum and Hybrid Systems that are in operation within the bands of 902-928 MHz, 2400-2483.5 MHz, and 5725-5850 MHz.

ANSI C63.10:2020: American National Standard for Testing Unlicensed Wireless Devices  
FCC KDB 558074 D01 15.247 Meas Guidance v05r02

### 2.2. Summary of test result

| No. | Description of Test Item                  | FCC Standard Section                 | Results |
|-----|-------------------------------------------|--------------------------------------|---------|
| 1   | 6dB Bandwidth & 99% Bandwidth             | §15.247(a)(2)                        | PASS    |
| 2   | Maximum Peak Output Power                 | 15.247(b)(3)                         | PASS    |
| 3   | Power Spectral Density                    | 15.247(e)                            | PASS    |
| 4   | Conducted Band Edge                       | 15.247(d)                            | PASS    |
| 5   | Conducted Spurious Emissions              | 15.247(d)                            | PASS    |
| 6   | Radiated Spurious Emissions and Band Edge | 15.109/ 15.205/ 15.209/<br>15.247(d) | PASS    |
| 7   | AC Power Line Conducted Emissions         | 15.207(a)                            | PASS    |
| 8   | Antenna Requirement                       | 15.203                               | PASS    |

Note: "N/A" denotes test is not applicable in this test report.

## 2.3. Test Facilities

EMC Lab :

A2LA Certificate Number: 7556.01;  
CTSL Testing (Dongguan) Co., Ltd. has been listed by American Association for Laboratory Accreditation to perform electromagnetic emission measurement.  
The 3m-Semi anechoic test site fulfils CISPR 16-1-4 according to ANSI C63.10 and CISPR 16-1-4:2010.

FCC-Registration No.: 0037614732;  
Test Firm Registration Number:750639;  
CTSL Testing (Dongguan) Co., Ltd. has been listed on the US Federal Communications Commission list of test facilities recognized to perform electromagnetic emissions measurements.

Industry Canada Registration Number. Is: 34801;  
CAB identifier: CN0192;  
CTSL Testing (Dongguan) Co., Ltd. The Laboratory has been registered by Certification and Engineering Bureau of Industry Canada for radio equipment testing.

Name of Firm : CTSL Testing (Dongguan) Co.,Ltd.

EMC test location/satellite location:

Room 112, Building 1, No. 15, Jiaoyuansongshan Hetian Village, Houjie Town Dongguan City, Guangdong, People's Republic of China City, Guangdong, China

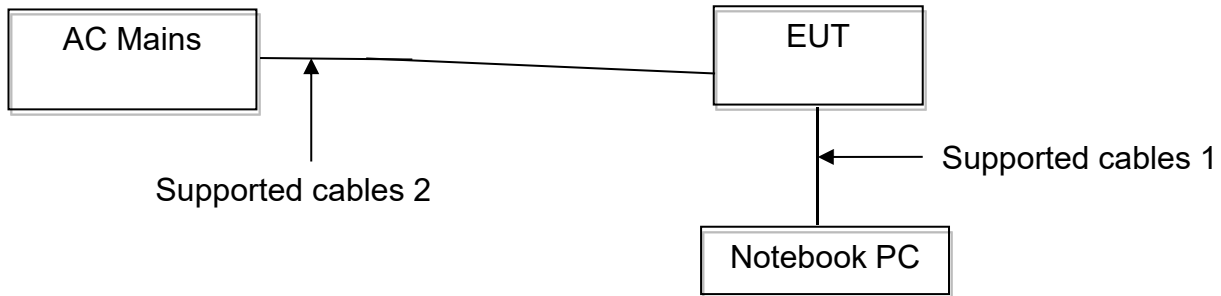
## 2.4. Measurement uncertainty

| Test Item                                                  | Uncertainty           |
|------------------------------------------------------------|-----------------------|
| Uncertainty for Conduction emission test                   | ±3.48dB               |
| Uncertainty for spurious emissions test<br>(Below 30MHz)   | ±1.62 dB              |
| Uncertainty for spurious emissions test<br>(30MHz-1GHz)    | ±4.60 dB(Polarize: H) |
|                                                            | ±4.68 dB(Polarize: V) |
| Uncertainty for spurious emissions test<br>(1GHz to 25GHz) | ±4.96dB               |
| Uncertainty for radio frequency                            | $7 \times 10^{-8}$    |
| Uncertainty for conducted RF Power                         | 1.08dB                |
| Uncertainty for Power density test                         | 0.26dB                |

Note: This uncertainty represents an expanded uncertainty expressed at approximately The 95% confidence level using a coverage factor of k=2.

## 2.5. Block Diagram

For radiated emissions test: EUT was placed on a turn table, which is 0.8 (or 1.5) meter high above ground. EUT was beset into Bluetooth test mode by software before test.



(EUT: MICRO CAM)

## 2.6. Assistant equipment used for test

| Item | Equipment | Brand  | Model Name/Type No. | FCC ID | Series No. |
|------|-----------|--------|---------------------|--------|------------|
| 1    | Adapter   | Xiaomi | AD652G              | -      | -          |
| -    | -         | -      | -                   | -      | -          |

| Supported cables |               |              |        |                                           |
|------------------|---------------|--------------|--------|-------------------------------------------|
| Item             | Shielded Type | Ferrite Core | Length | Note                                      |
| 1                | NO            | NO           | 0.5m   | USB Extension Cable, supplied by the Lab. |
| -                | -             | -            | -      | -                                         |

## 2.7. Test mode

Combining all the rates, modulations, and packet types, the Pre-scans had been carried out. The worst-case test mode was selected for the final test as listed below.

| Test Item                                | Mode              | Data Rate | Test Channel        |
|------------------------------------------|-------------------|-----------|---------------------|
| 6dB Bandwidth                            | IEEE 802.11b      | 1Mbps     | Low / Middle / High |
|                                          | IEEE 802.11g      | 6Mbps     | Low / Middle / High |
|                                          | IEEE 802.11n HT20 | MCS0      | Low / Middle / High |
| Maximum Peak Output Power                | IEEE 802.11b      | 1Mbps     | Low / Middle / High |
|                                          | IEEE 802.11g      | 6Mbps     | Low / Middle / High |
|                                          | IEEE 802.11n HT20 | MCS0      | Low / Middle / High |
| Power Spectral Density                   | IEEE 802.11b      | 1Mbps     | Low / Middle / High |
|                                          | IEEE 802.11g      | 6Mbps     | Low / Middle / High |
|                                          | IEEE 802.11n HT20 | MCS0      | Low / Middle / High |
| Conducted Band Edge                      | IEEE 802.11b      | 1Mbps     | Low / High          |
|                                          | IEEE 802.11g      | 6Mbps     | Low / High          |
|                                          | IEEE 802.11n HT20 | MCS0      | Low / High          |
| Conducted Spurious Emissions             | IEEE 802.11b      | 1Mbps     | Low / Middle / High |
|                                          | IEEE 802.11g      | 6Mbps     | Low / Middle / High |
|                                          | IEEE 802.11n HT20 | MCS0      | Low / Middle / High |
| Radiated Spurious Emissions (Below 1GHz) | IEEE 802.11b      | 1Mbps     | Low / Middle / High |
|                                          | IEEE 802.11g      | 6Mbps     | Low / Middle / High |
|                                          | IEEE 802.11n HT20 | MCS0      | Low / Middle / High |
| Radiated Spurious Emissions (Above 1GHz) | IEEE 802.11b      | 1Mbps     | Low / Middle / High |
|                                          | IEEE 802.11g      | 6Mbps     | Low / Middle / High |
|                                          | IEEE 802.11n HT20 | MCS0      | Low / Middle / High |
| Radiated Band Edge                       | IEEE 802.11b      | 1Mbps     | Low / High          |
|                                          | IEEE 802.11g      | 6Mbps     | Low / High          |
|                                          | IEEE 802.11n HT20 | MCS0      | Low / High          |
| AC Power Line Conducted Emissions        | IEEE 802.11b      | 1Mbps     | Low / Middle / High |
|                                          | IEEE 802.11g      | 6Mbps     | Low / Middle / High |
|                                          | IEEE 802.11n HT20 | MCS0      | Low / Middle / High |

Note: In radiated measurement, the EUT had been pre-scan on the positioned of each 3 axis (X, Y, Z), the worst case was found when positioned on **X-plane**.

## 2.8. Channel List

| IEEE 802.11b/802.11g/802.11n HT20 |                 |             |                 |             |                 |             |                 |
|-----------------------------------|-----------------|-------------|-----------------|-------------|-----------------|-------------|-----------------|
| Channel No.                       | Frequency (MHz) | Channel No. | Frequency (MHz) | Channel No. | Frequency (MHz) | Channel No. | Frequency (MHz) |
| <b>01</b>                         | <b>2412</b>     | 02          | 2417            | 03          | 2422            | 04          | 2427            |
| 05                                | 2432            | <b>06</b>   | <b>2437</b>     | 07          | 2442            | 08          | 2447            |
| 09                                | 2452            | 10          | 2457            | <b>11</b>   | <b>2462</b>     |             |                 |

## 2.9. Power Setting of Test Software

| Software Name             | EspRF Test Tool_v2.8 |         |         |
|---------------------------|----------------------|---------|---------|
| Frequency (MHz)           | 2412                 | 2437    | 2462    |
| IEEE 802.11b Setting      | Default              | Default | Default |
| IEEE 802.11g Setting      | Default              | Default | Default |
| IEEE 802.11n HT20 Setting | Default              | Default | Default |

Note: This information is provided by the applicant.

## 2.10. Test Equipment

| For Conducted Emission Test |                 |                      |            |                  |            |            |
|-----------------------------|-----------------|----------------------|------------|------------------|------------|------------|
| Equipment                   | Manufacturer    | Model No.            | Serial No. | Calibration Body | Last Cal.  | Next Cal.  |
| EMI Test Receiver           | Rohde & Schwarz | ESCI 3               | AT005      | GUANGZHOU NEM    | May 16,25  | May 15,26  |
| LISN                        | Rohde & Schwarz | ENV216               | AT006      | LISAI            | July 31,25 | July 30,26 |
| Pulse Limiter               | Rohde & Schwarz | ESH3-Z2              | AT007      | CCIC (Shenzhen)  | July 10,25 | July 09,26 |
| CE Cable                    | Times Microwave | LMR195UF-N MNM-1.50M | AT041      | GUANGZHOU NEM    | May 16,25  | May 15,26  |
| Test Software               | FARAD           | EZ-EMC Ver.3A1.1+    | N/A        | N/A              | N/A        | N/A        |

| For Radiated Emission Test (9kHz-30MHz) |                 |                   |            |                  |            |            |
|-----------------------------------------|-----------------|-------------------|------------|------------------|------------|------------|
| Equipment                               | Manufacturer    | Model No.         | Serial No. | Calibration Body | Last Cal.  | Next Cal.  |
| EMI TestReceiver                        | Rohde& Schwarz  | ESCI 7            | AT001      | Ti Group         | July 31,24 | July 30,26 |
| Active Loop Antenna                     | ZHINAN          | ZN30900C          | AT063      | LISAI            | Aug 03,24  | Aug 02,26  |
| Test Software                           | FARAD           | EZ-EMC Ver.3A1.1+ | N/A        | N/A              | N/A        | N/A        |
| 9kHz-30MHz Cable                        | Times Microwave | LMR195UF-N MNM-9M | AT045      | GUANGZHOU NEM    | May 16,25  | May 15,26  |

| For Radiated Emissions Test (30MHz-1000MHz) |                         |                                                                          |                   |                  |           |           |
|---------------------------------------------|-------------------------|--------------------------------------------------------------------------|-------------------|------------------|-----------|-----------|
| Equipment                                   | Manufacturer            | Model No.                                                                | Serial No.        | Calibration Body | Last Cal. | Next Cal. |
| EMI Test Receiver                           | Rohde& Schwarz          | ESCI 7                                                                   | AT001             | Ti Group         | Jun 12,25 | Jun 11,26 |
| Trilog-Broadband Antenna                    | SCHWARZBECK             | VULB 9168                                                                | AT002             | LISAI            | Aug 03,24 | Aug 02,26 |
| Test Software                               | FARAD                   | EZ-EMC Ver.3A1.1+                                                        | N/A               | N/A              | May 16,25 | May 15,26 |
| 30-1000MHz Cable                            | Times Microwave Systems | LMR195UF-N MRNMR-3.00M+<br>LMR400UF-N MNM-3.00M+<br>LMR400UF-N MNM-3.00M | AT042+AT043+AT044 | GUANGZHOU NEM    | May 16,25 | May 15,26 |

| For Radiated Emission test (Above 1000MHz) |                         |                                      |              |                                                    |            |           |
|--------------------------------------------|-------------------------|--------------------------------------|--------------|----------------------------------------------------|------------|-----------|
| Equipment                                  | Manufacturer            | Model No.                            | Serial No.   | Calibration Body                                   | Last Cal.  | Next Cal. |
| Horn Antenna 1-18G                         | SCHWARZBECK             | BBHA 9120 D                          | AT003        | Shenzhen Academy of Metrology & Quality Inspection | Sep 23,24  | Sep 22,26 |
| Horn Antenna 18-40GHz                      | XIBAO                   | XB-WDB18-40K                         | AT064        | LISAI                                              | Feb 25,25  | Feb 24,26 |
| Broadband Preamplifier                     | SCHWARZBECK             | BBV 9718 D                           | AT004        | CCIC (Shenzhen)                                    | July 10,25 | July 9,26 |
| Low Noise Amplifier                        | MWRFTest                | DLA8-18-40G-2078                     | AT065        | GUANGZHOU NEM                                      | July 10,25 | July 9,26 |
| Spectrum Analyzer 40G                      | Keysight                | N9020B                               | AT066        | GUANGZHOU NEM                                      | May 13,25  | May 12,26 |
| Spectrum Analyzer 26.5G                    | Keysight                | N9020A                               | AT050        | GUANGZHOU NEM                                      | Jun 12,25  | Jun 11,26 |
| Radio switching unit                       | TiGroup                 | SU319                                | AT055        | N/A                                                | N/A        | N/A       |
| Filtering unit                             | TiGroup                 | SU319F                               | AT056        | N/A                                                | N/A        | N/A       |
| Test Software                              | BL                      | BL410-E V25.5 en                     | N/A          | N/A                                                | N/A        | N/A       |
| Above 1GHz Cable                           | Times Microwave Systems | SFT205-NMN M-7.0M+ SFT205-NMN M-2.0M | AT057+ AT058 | N/A                                                | N/A        | N/A       |

| For Connect EUT Antenna Terminal Test (RF Test system) |               |                  |            |                  |           |           |
|--------------------------------------------------------|---------------|------------------|------------|------------------|-----------|-----------|
| Equipment                                              | Manufacturer  | Model No.        | Serial No. | Calibration Body | Last Cal. | Next Cal. |
| Spectrum analyzer                                      | Keysight      | N9020A           | AT050      | GUANGZHOU NEM    | Jun 12,25 | Jun 11,26 |
| Analog signal source                                   | Keysight      | N5173B           | AT051      | GUANGZHOU NEM    | Jun 12,25 | Jun 11,26 |
| WIDEBAND RADIO COMMUNICATION TESTER                    | Rohde&Schwarz | CMW500           | AT052      | GUANGZHOU NEM    | Jun 12,25 | Jun 11,26 |
| Power probe unit                                       | Ti Group      | SU319P           | AT053      | GUANGZHOU NEM    | Jun 12,25 | Jun 11,26 |
| Switch unit                                            | Ti Group      | SU319S           | AT054      | N/A              | N/A       | N/A       |
| Test Software                                          | BL            | BL410R 3.5.2.621 | N/A        | N/A              | N/A       | N/A       |

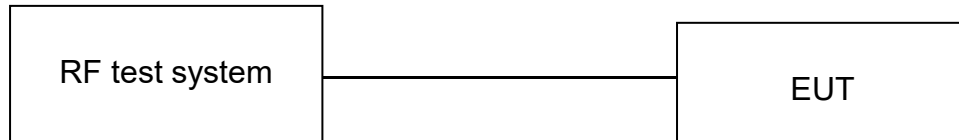
Remark: The power sensor is integrated into the Power Probe unit

### 3. 6DB BANDWIDTH

#### 3.1. Limit

Systems using digital modulation techniques operate in the 2400-2483.5 MHz, the minimum 6 dB bandwidth shall be at least 500 kHz.

#### 3.2. Test Setup



#### 3.3. Spectrum Analyzer Setting

**6dB Bandwidth**

| Spectrum Parameters | Setting                     |
|---------------------|-----------------------------|
| RBW                 | 300KHz                      |
| VBW                 | 1MHz                        |
| Span                | 30MHz(20MHz Bandwidth mode) |
| Sweep Time          | Auto                        |
| Detector            | Peak                        |
| Trace Mode          | Max Hold                    |

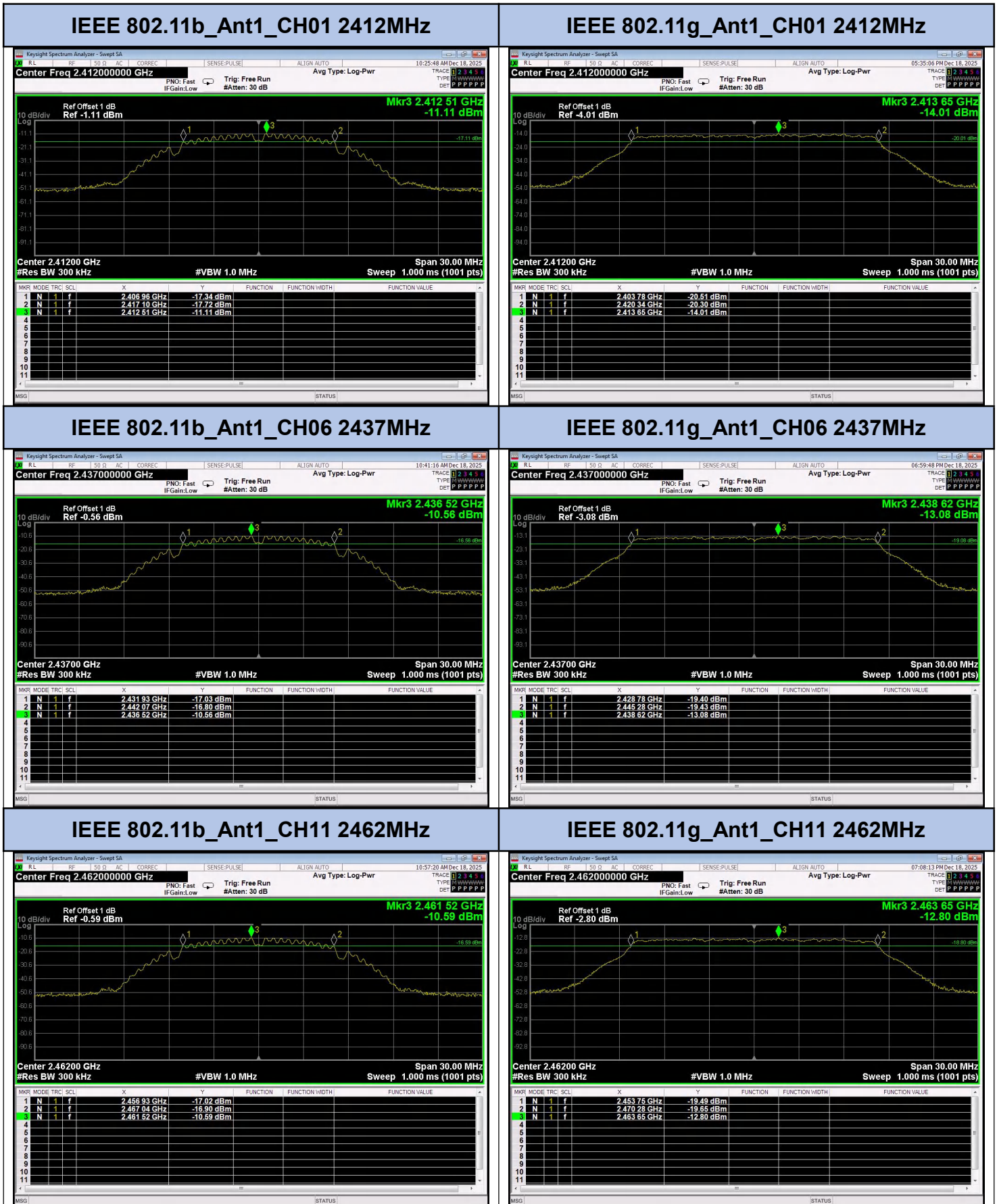
#### 3.4. Test Procedure

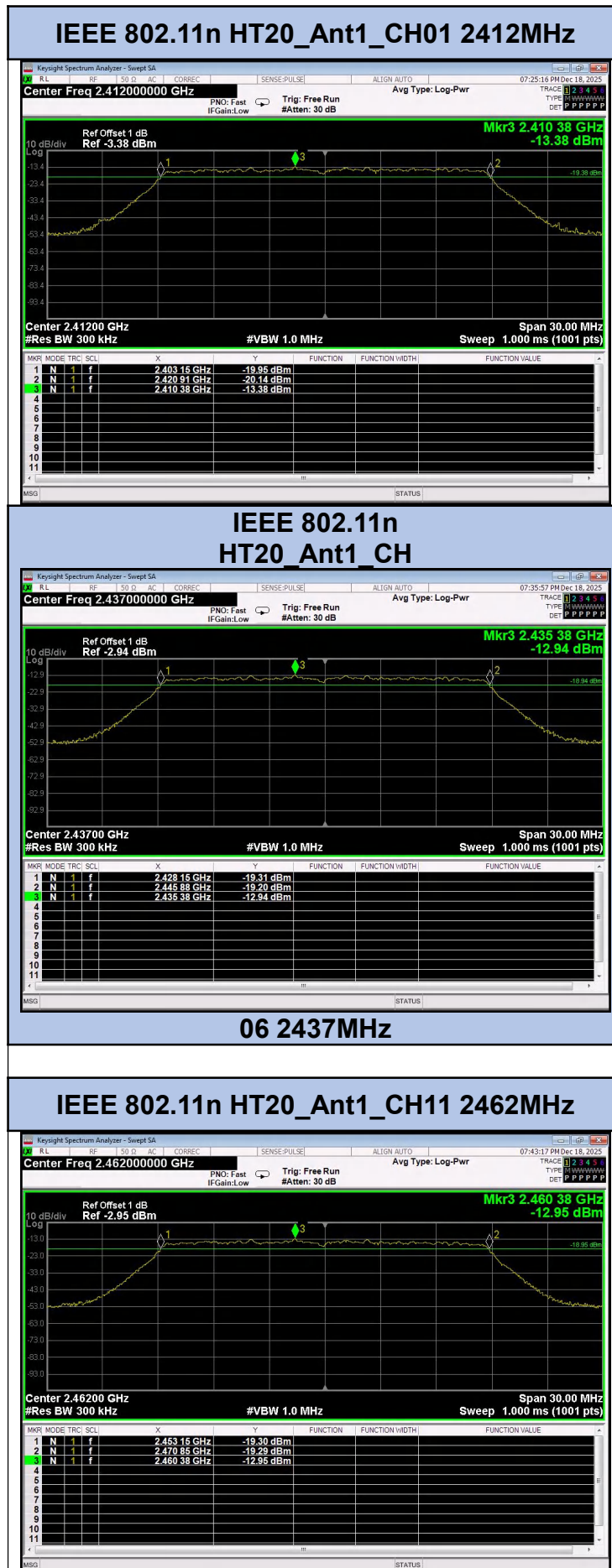
- The test according to ANSI C63.10 clause 11.8.
- Connect EUT antenna terminal to the spectrum analyzer with RF cable.
- Spectrum analyzer setting parameters in accordance with section 3.3.
- Set the EUT transmit continuously with maximum output power.
- Allow trace to stabilize, measure the maximum width of the emission that is constrained by the frequencies associated with the two outermost amplitude points (upper and lower frequencies) that are attenuated by 6 dB relative to the maximum level measured in the fundamental emission.
- Repeat above procedures until all channels and test modes were measured.
- Record the results in the test report.

### 3.5. Test Result

| Test Mode            | Antenna | Channel&<br>Frequency | 6dB<br>Bandwidth | 6dB<br>Bandwidth<br>Conducted<br>Limit | Result |
|----------------------|---------|-----------------------|------------------|----------------------------------------|--------|
|                      |         | MHz                   | MHz              | KHz                                    |        |
| IEEE 802.11b         | Ant1    | CH01 2412             | 10.140           | ≥500                                   | PASS   |
|                      |         | CH06 2437             | 10.140           |                                        |        |
|                      |         | CH11 2462             | 10.110           |                                        |        |
| IEEE 802.11g         | Ant1    | CH01 2412             | 16.560           | ≥500                                   | PASS   |
|                      |         | CH06 2437             | 16.500           |                                        |        |
|                      |         | CH11 2462             | 16.530           |                                        |        |
| IEEE 802.11n<br>HT20 | Ant1    | CH01 2412             | 17.760           | ≥500                                   | PASS   |
|                      |         | CH06 2437             | 17.730           |                                        |        |
|                      |         | CH11 2462             | 17.700           |                                        |        |

## 3.6.Original Test record



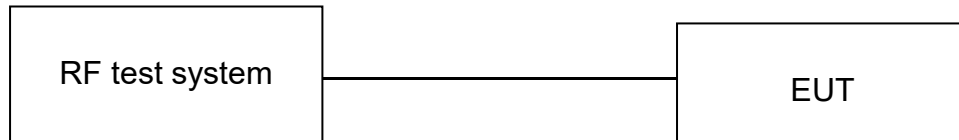


## 4. 99% BANDWIDTH

### 4.1.Limit

None; for reporting purpose only.

### 4.2. Test Setup



### 4.3. Spectrum Analyzer Setting

#### 99% Occupied Bandwidth

| Spectrum Parameters | Setting                     |
|---------------------|-----------------------------|
| RBW                 | 200KHz                      |
| VBW                 | 620KHz                      |
| Span                | 30MHz(20MHz Bandwidth mode) |
| Sweep Time          | Auto                        |
| Detector            | Peak                        |
| Trace Mode          | Max Hold                    |

### 4.4. Test Procedure

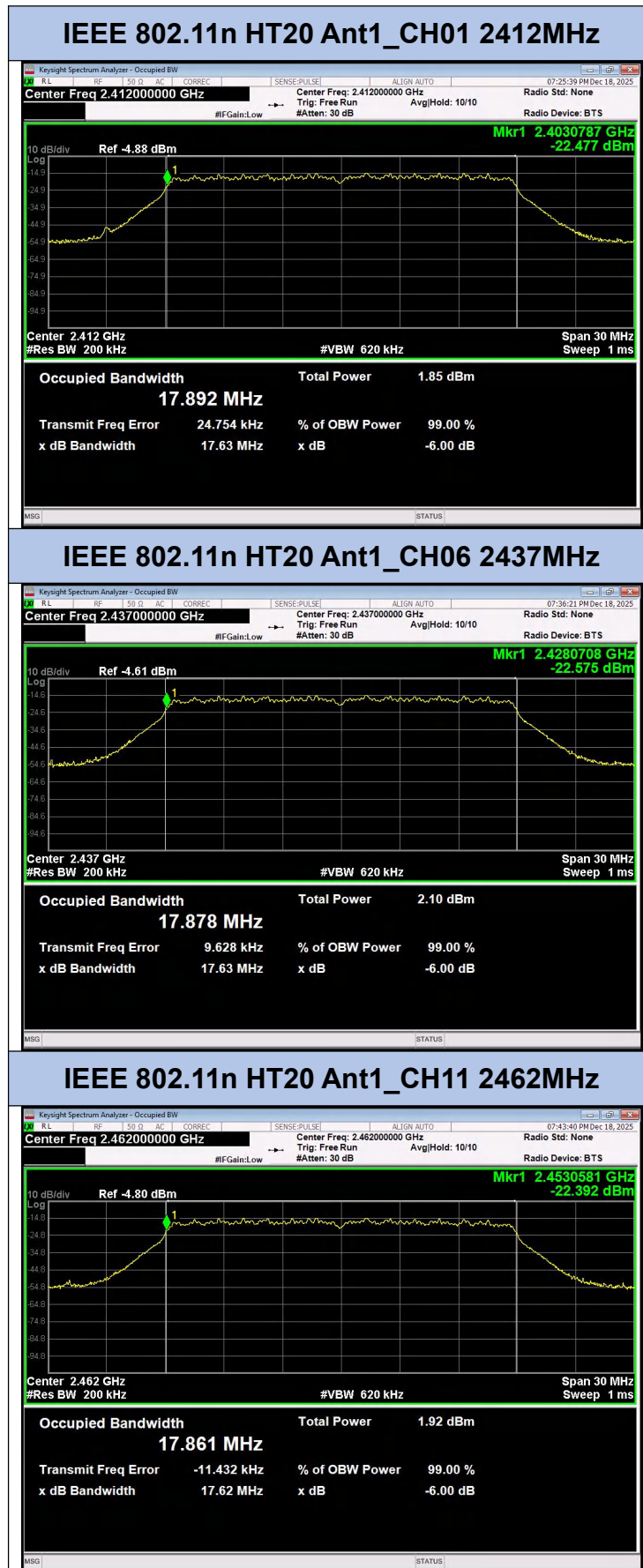
- The test according to ANSI C63.10 clause 6.9.3.
- Connect EUT antenna terminal to the spectrum analyzer with RF cable.
- Spectrum analyzer setting parameters in accordance with section 4.3.
- Set the EUT transmit continuously with maximum output power.
- Repeat above procedures until all channels and test modes were measured.
- Record the results in the test report.

## 4.5. Test Data

| Test Mode         | Antenna | Channel&<br>Frequency | Occupied Channel<br>Bandwidth |
|-------------------|---------|-----------------------|-------------------------------|
|                   |         | MHz                   | MHz                           |
| IEEE 802.11b      | Ant1    | CH01 2412             | 13.109                        |
|                   |         | CH06 2437             | 13.073                        |
|                   |         | CH11 2462             | 13.056                        |
| IEEE 802.11g      | Ant1    | CH01 2412             | 16.834                        |
|                   |         | CH06 2437             | 16.786                        |
|                   |         | CH11 2462             | 16.752                        |
| IEEE 802.11n HT20 | Ant1    | CH01 2412             | 17.892                        |
|                   |         | CH06 2437             | 17.878                        |
|                   |         | CH11 2462             | 17.861                        |

## 4.6.Original Test record





## 5. MAXIMUM PEAK OUTPUT POWER

### 5.1. Limit

For systems using digital modulation in the 902-928 MHz, 2400-2483.5 MHz, and 5725-5850 MHz bands: 1 Watt. If transmitting antennas of directional gain greater than 6 dBi are used, the conducted output power from the intentional radiator shall be reduced below the stated values as appropriate, by the amount in dB that the directional gain of the antenna exceeds 6 dBi..

### 5.2. Test Setup



### 5.3. Test Procedure

- a. Connect each EUT's antenna output to power sensor by RF cable.
- b. Measure the PK output power of each antenna port by power sensor.

## 5.4. Test Result

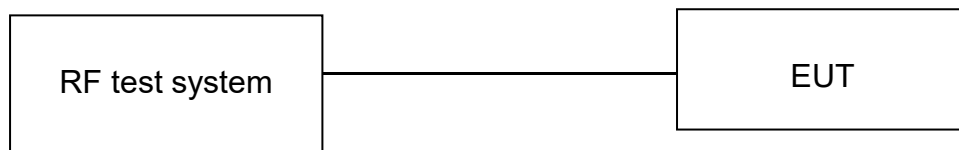
| Test Mode            | Antenna | Channel&<br>Frequency | Result | Limit | Result |
|----------------------|---------|-----------------------|--------|-------|--------|
|                      |         | MHz                   | dBm    | dBm   |        |
| IEEE 802.11b         | Ant1    | CH01 2412             | 3.91   | 30    | PASS   |
|                      |         | CH06 2437             | 3.99   |       |        |
|                      |         | CH11 2462             | 3.43   |       |        |
| IEEE 802.11g         | Ant1    | CH01 2412             | 3.76   | 30    | PASS   |
|                      |         | CH06 2437             | 3.55   |       |        |
|                      |         | CH11 2462             | 3.94   |       |        |
| IEEE 802.11n<br>HT20 | Ant1    | CH01 2422             | 3.26   | 30    | PASS   |
|                      |         | CH06 2437             | 3.52   |       |        |
|                      |         | CH11 2452             | 3.48   |       |        |

## 6. POWER SPECTRAL DENSITY

### 6.1.Limit

For digitally modulated systems, the power spectral density conducted from the intentional radiator to the antenna shall not be greater than 8 dBm in any 3 kHz band during any time interval of continuous transmission.

### 6.2.Test Setup



### 6.3.Spectrum Analyzer Setting

| Spectrum Parameters | Setting                     |
|---------------------|-----------------------------|
| RBW                 | 3KHz                        |
| VBW                 | 10KHz                       |
| Span                | 1.5 times the DTS bandwidth |
| Sweep Time          | Auto                        |
| Detector            | Peak                        |
| Trace Mode          | Max Hold                    |

### 6.4.Test Procedure

- Connect EUT antenna terminal to the spectrum analyzer with RF cable.
- Spectrum analyzer setting parameters in accordance with section 6.3.
- Set the EUT transmit continuously with maximum output power.
- Allow trace to stabilize, use the marker-to-peak function to set the marker to the peak of the emission.
- Repeat above procedures until all modes and channels were measured.
- Record the results in the test report.

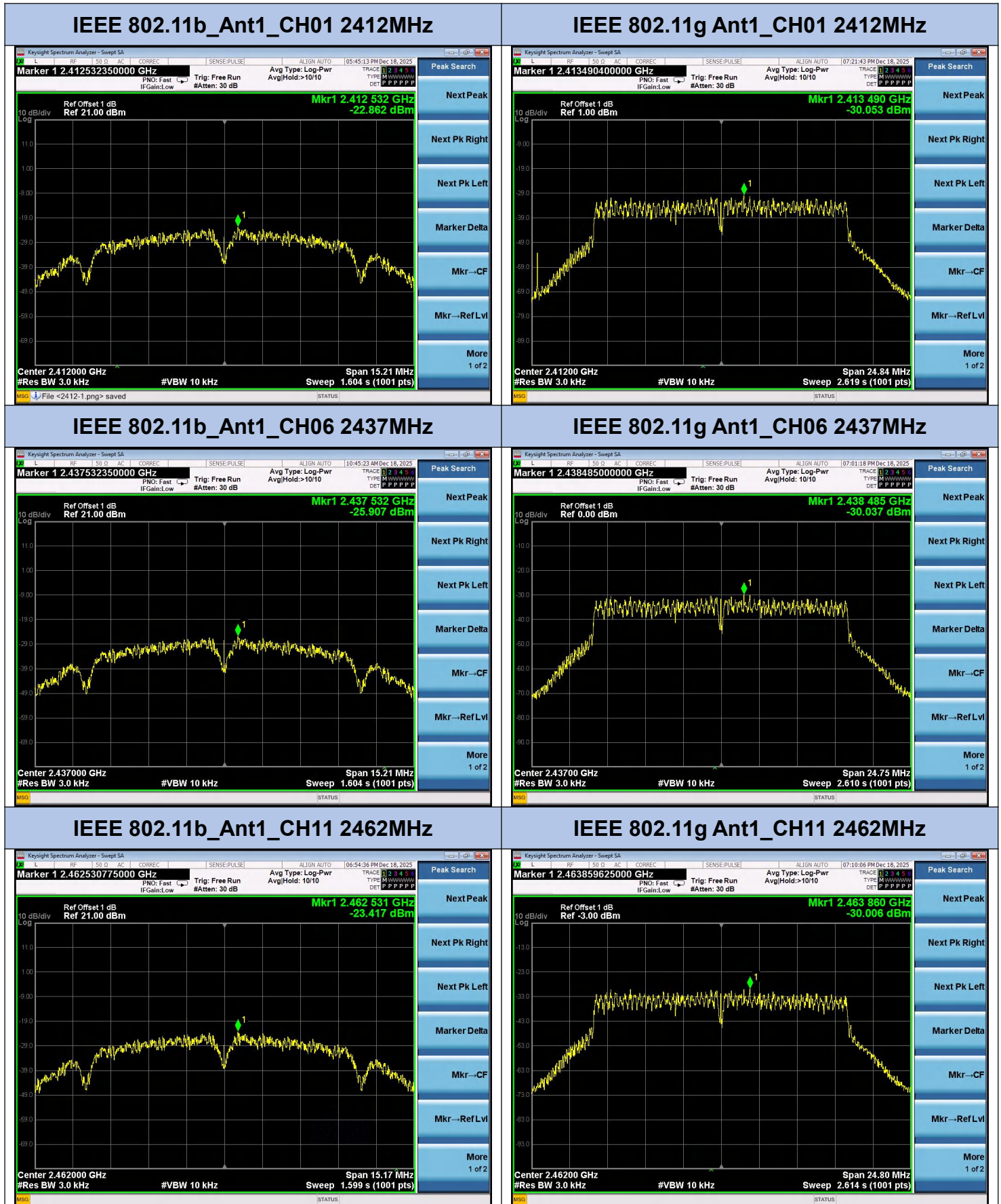
## 6.5. Test Result

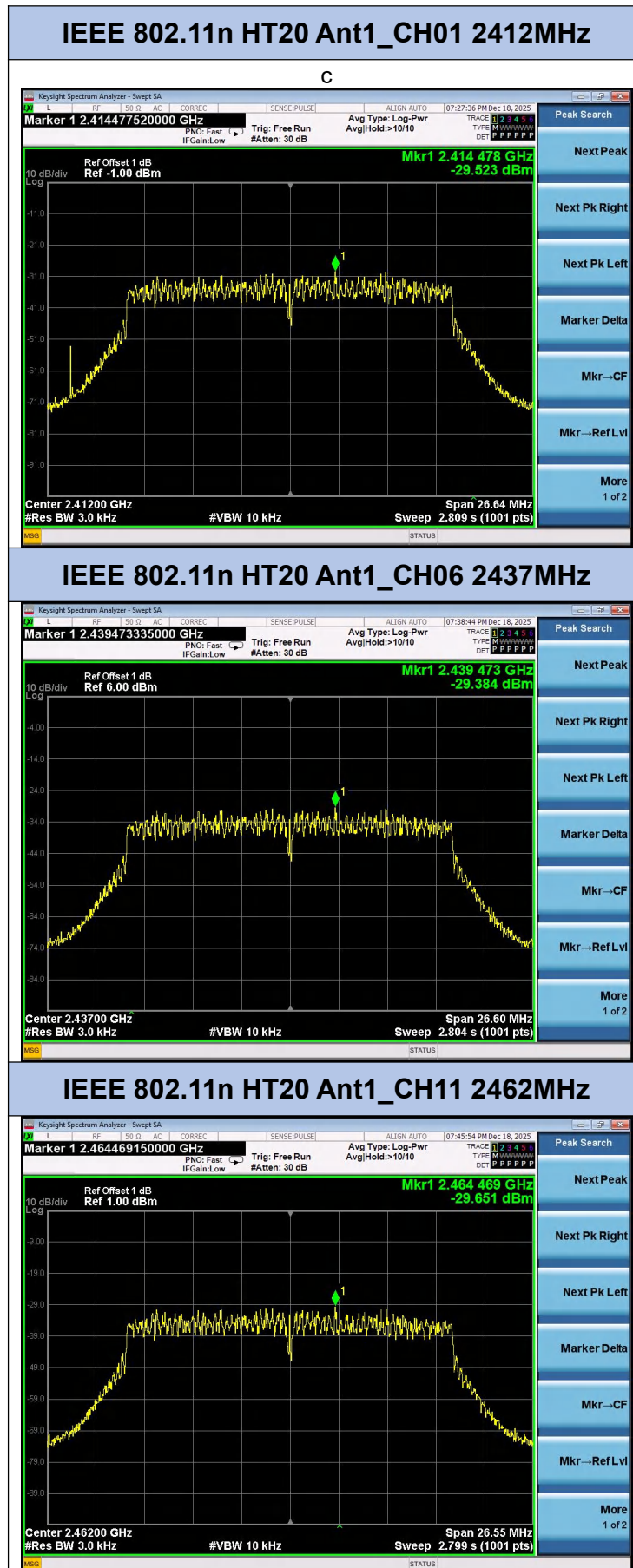
| Test Mode            | Antenna | Channel&<br>Frequency | Peak Power<br>Spectral<br>Density | Limit    | Result |
|----------------------|---------|-----------------------|-----------------------------------|----------|--------|
|                      |         | MHz                   | dBm/3KHz                          | dBm/3KHz |        |
| IEEE 802.11b         | Ant1    | CH01 2412             | -22.86                            | 8.00     | PASS   |
|                      |         | CH06 2437             | -25.91                            |          |        |
|                      |         | CH11 2462             | -23.42                            |          |        |
| IEEE 802.11g         | Ant1    | CH01 2412             | -30.05                            | 8.00     | PASS   |
|                      |         | CH06 2437             | -30.04                            |          |        |
|                      |         | CH11 2462             | -30.01                            |          |        |
| IEEE 802.11n<br>HT20 | Ant1    | CH01 2422             | -29.52                            | 8.00     | PASS   |
|                      |         | CH06 2437             | -29.38                            |          |        |
|                      |         | CH11 2452             | -29.65                            |          |        |

Note:

- 1) If the test results under the Peak detector meet the limit requirements, then there is no need to consider the coefficient obtained by multiplying by the Duty cycle.

## 6.6.Original Test record



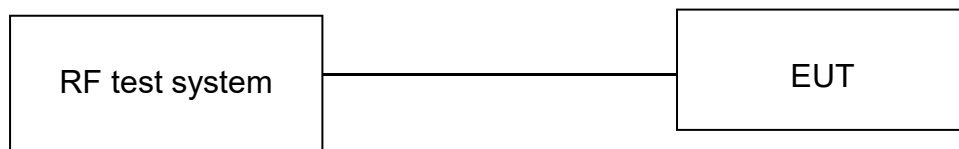


## 7. CONDUCTED BAND EDGE

### 7.1. Limit

In any 100 kHz bandwidth outside the frequency band in which the spread spectrum or digitally modulated intentional radiator is operating, the radio frequency power that is produced by the intentional radiator shall be at least 20 dB below that in the 100 kHz bandwidth within the band that contains the highest level of the desired power, based on either an RF conducted or a radiated measurement, provided the transmitter demonstrates compliance with the peak conducted power limits. If the transmitter complies with the conducted power limits based on the use of RMS averaging over a time interval, as permitted under paragraph (b)(3) of this section, the attenuation required under this paragraph shall be 30 dB instead of 20 dB. Attenuation below the general limits specified in §15.209(a) is not required. In addition, radiated emissions which fall in the restricted bands, as defined in §15.205(a), must also comply with the radiated emission limits specified in §15.209(a) (see §15.205(c)).

### 7.2. Test Setup



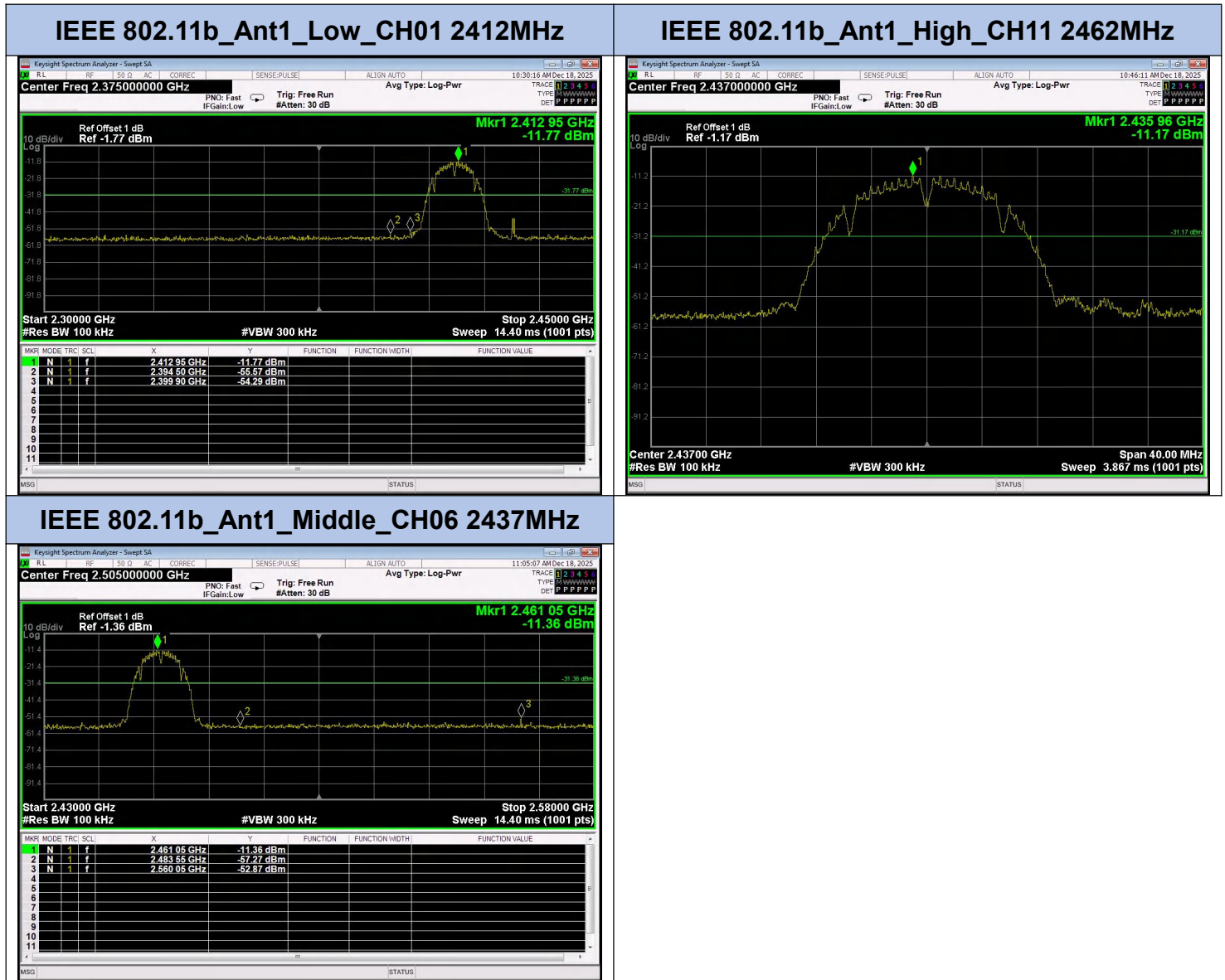
### 7.3. Spectrum Analyzer Setting

| Spectrum Parameters | Setting                     |
|---------------------|-----------------------------|
| RBW                 | 100KHz                      |
| VBW                 | 300KHz                      |
| Span                | 1.5 times the DTS bandwidth |
| Sweep Time          | Auto                        |
| Detector            | Peak                        |
| Trace Mode          | Max Hold                    |

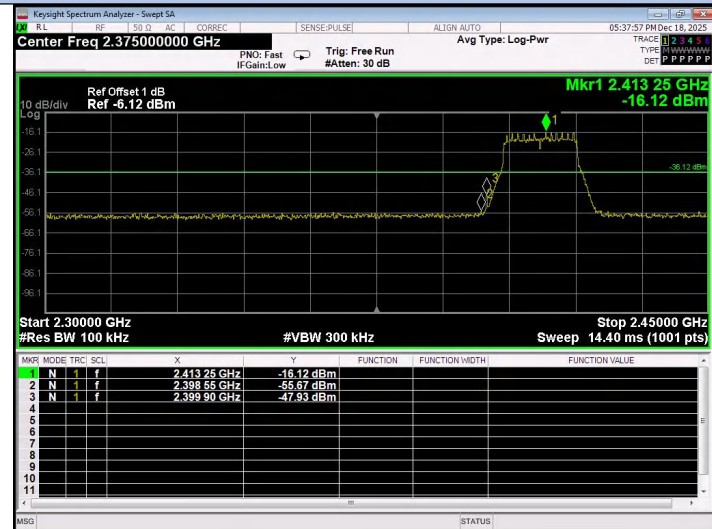
### 7.4. Test Procedure

- Connect EUT antenna terminal to the spectrum analyzer with RF cable.
- Spectrum analyzer setting parameters in accordance with section 7.3.
- Set the EUT transmit continuously with maximum output power.
- Allow trace to stabilize, use the marker function to mark the highest emission level outside the authorized band.
- Repeat above procedures until all modes and channels were measured.
- Record the results in the test report
- IEEE 802.11b, IEEE 802.11g, IEEE 802.11nH20, all have been tested, the test data was recorded in report.

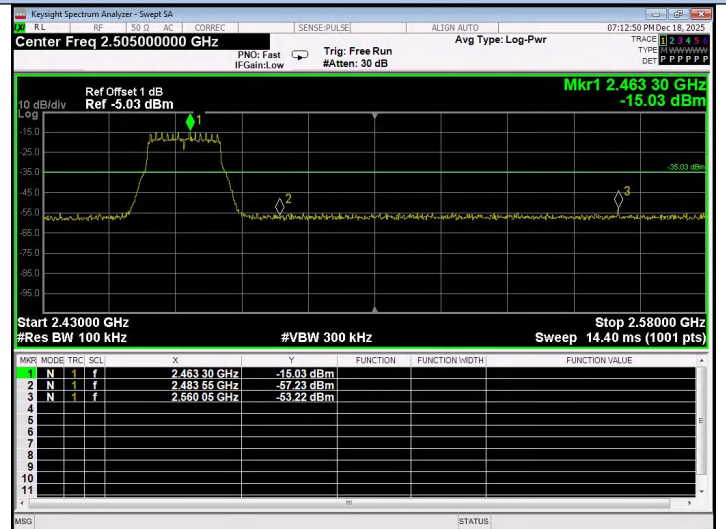
## 7.5. Test Result



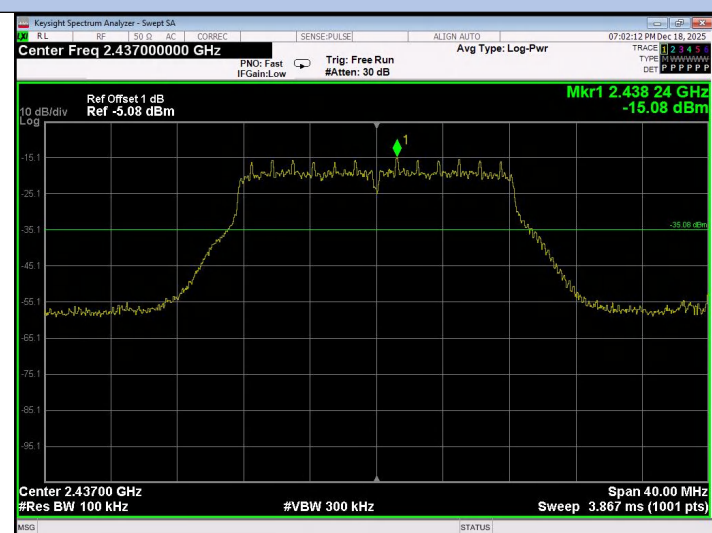
## IEEE 802.11g\_Ant1\_Low\_CH01 2412MHz



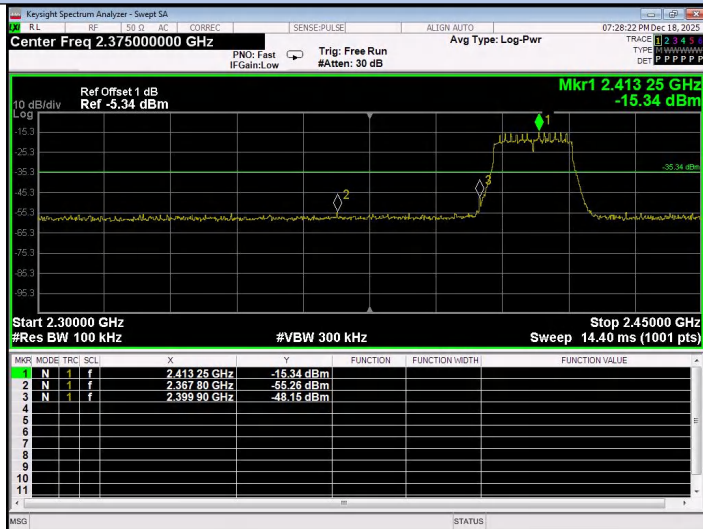
## IEEE 802.11g\_Ant1\_High\_CH11 2462MHz



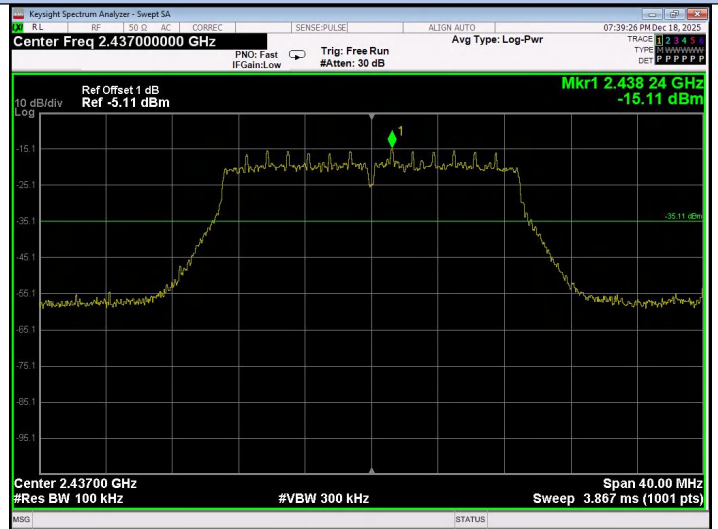
## IEEE 802.11g\_Ant1\_Middle\_CH06 2437MHz



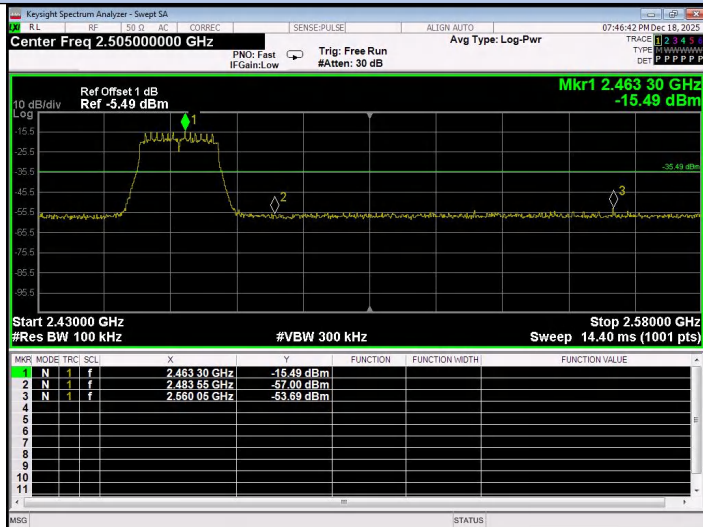
## IEEE 802.11n HT20\_Ant1\_Low\_CH01 2412MHz



## IEEE 802.11n HT20\_Ant1\_High\_CH11 2462MHz



## IEEE 802.11n HT20\_Ant1\_Middle\_CH06 2437MHz

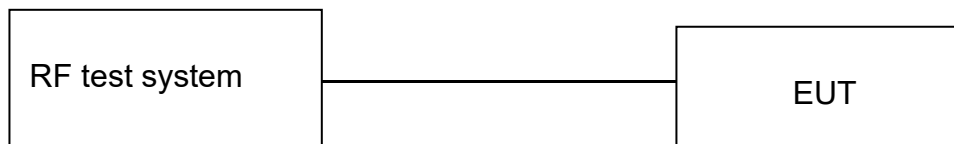


## 8. CONDUCTED SPURIOUS EMISSIONS

### 8.1. Limit

In any 100 kHz bandwidth outside the frequency band in which the spread spectrum or digitally modulated intentional radiator is operating, the radio frequency power that is produced by the intentional radiator shall be at least 20 dB below that in the 100 kHz bandwidth within the band that contains the highest level of the desired power, based on either an RF conducted or a radiated measurement, provided the transmitter demonstrates compliance with the peak conducted power limits. If the transmitter complies with the conducted power limits based on the use of RMS averaging over a time interval, as permitted under paragraph (b)(3) of this section, the attenuation required under this paragraph shall be 30 dB instead of 20 dB. Attenuation below the general limits specified in §15.209(a) is not required. In addition, radiated emissions which fall in the restricted bands, as defined in §15.205(a), must also comply with the radiated emission limits specified in §15.209(a) (see §15.205(c)).

### 8.2. Test Setup



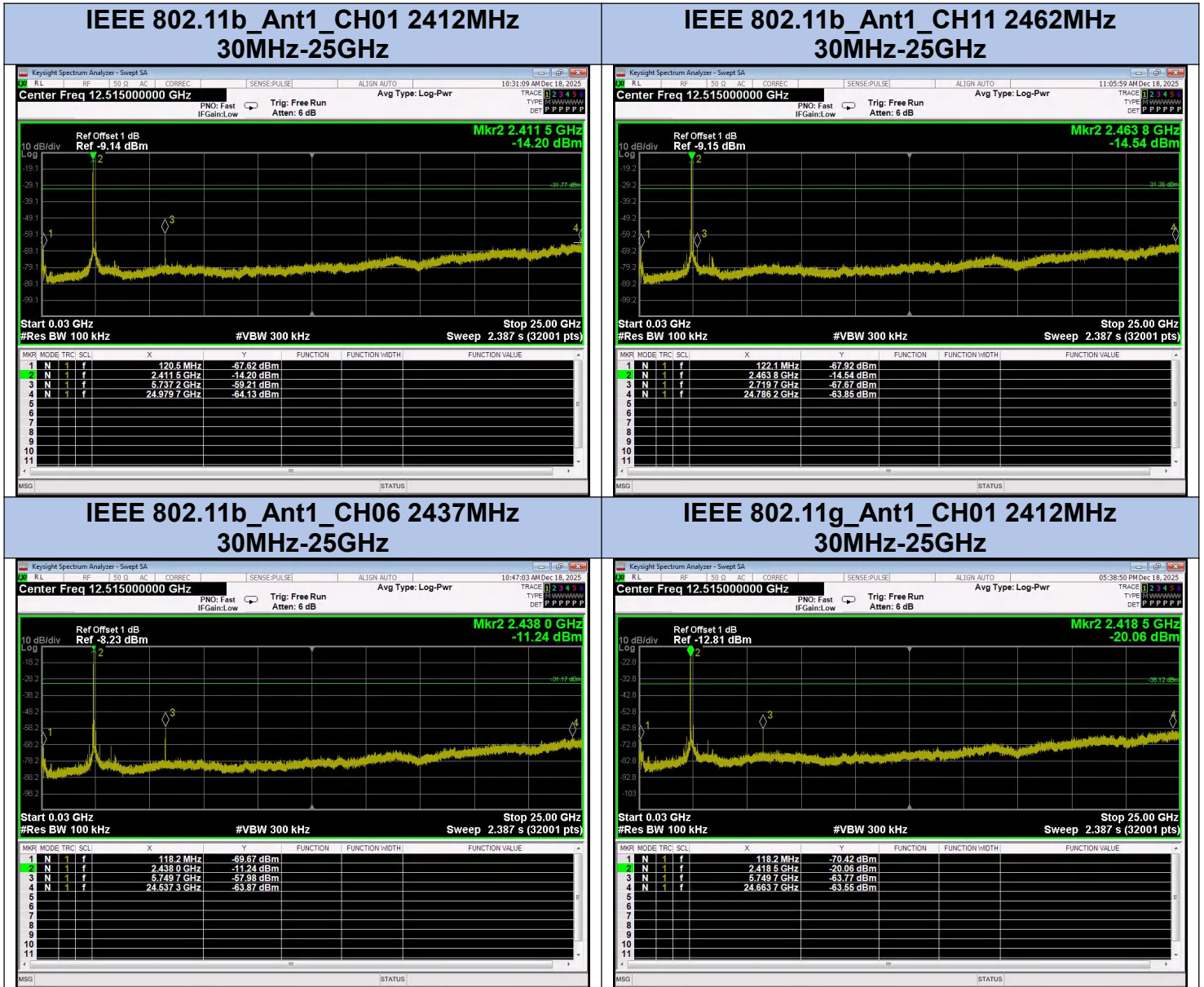
### 8.3. Spectrum Analyzer Setting

| Spectrum Parameters | Setting  |
|---------------------|----------|
| RBW                 | 100KHz   |
| VBW                 | 300KHz   |
| Start frequency     | 30MHz    |
| Stop frequency      | 25.0GHz  |
| Sweep Time          | Auto     |
| Detector            | Peak     |
| Trace Mode          | Max Hold |

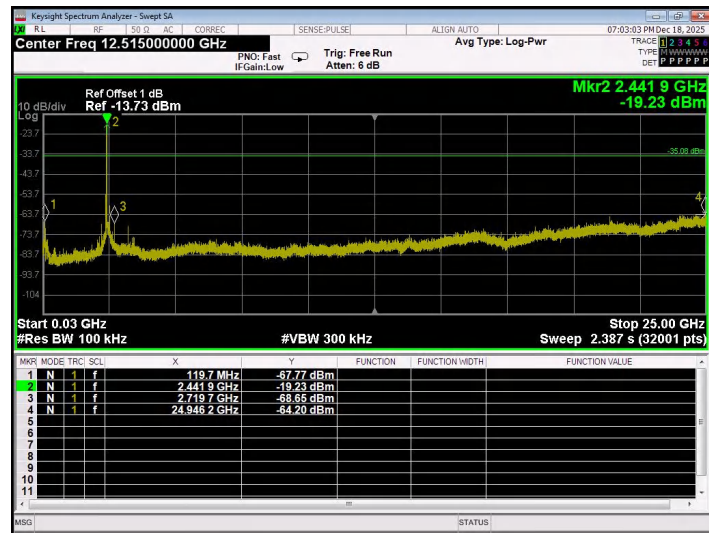
### 8.4. Test Procedure

- Connect EUT antenna terminal to the spectrum analyzer with RF cable.
- Spectrum analyzer setting parameters in accordance with section 8.3.
- Set the EUT transmit continuously with maximum output power.
- Allow trace to stabilize, use the marker function to mark the highest emission level outside the authorized band.
- Repeat above procedures until all modes and channels were measured.
- Record the results in the test report.
- IEEE 802.11b, IEEE 802.11g, IEEE 802.11n HT20, all have been tested, the test data was recorded in report.

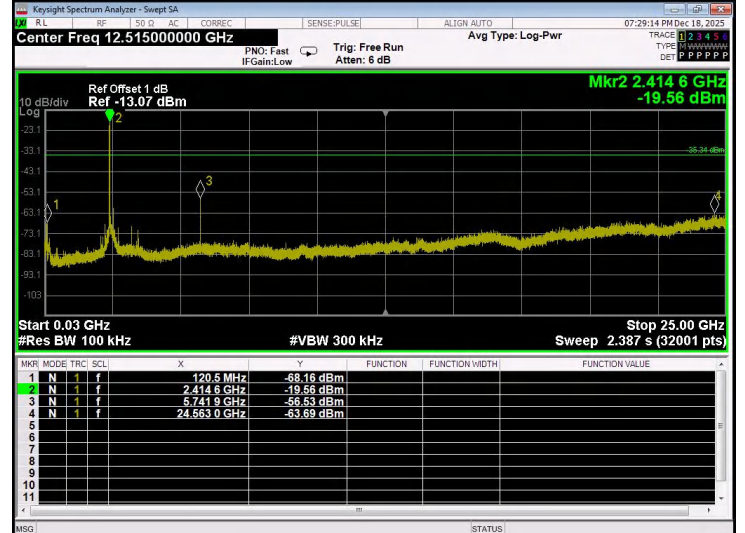
## 8.5. Test Result



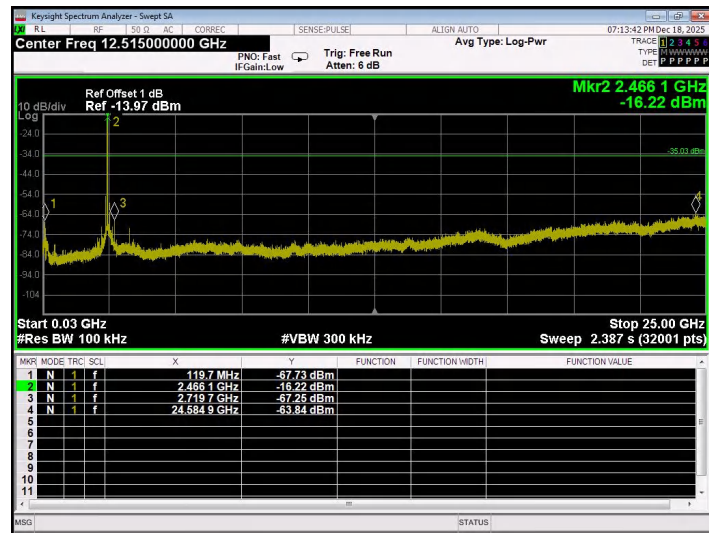
## IEEE 802.11g\_Ant1\_CH06 2437MHz 30MHz-25GHz



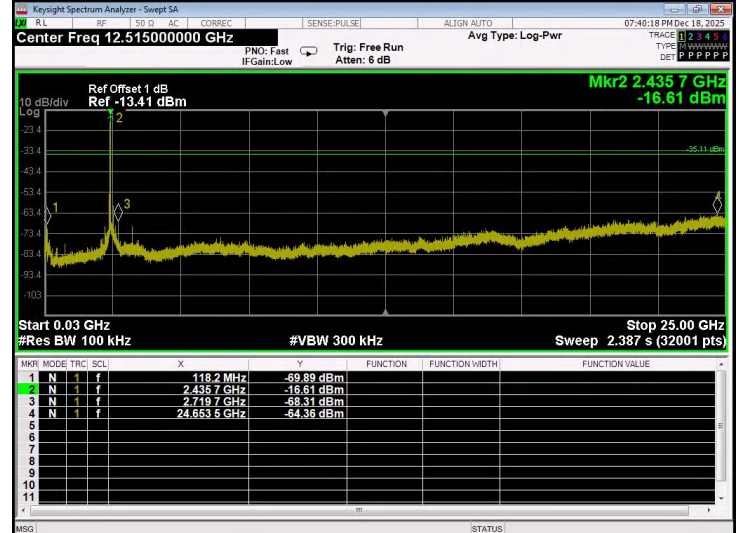
## IEEE 802.11n HT20\_Ant1\_CH01 2412MHz 30MHz-25GHz

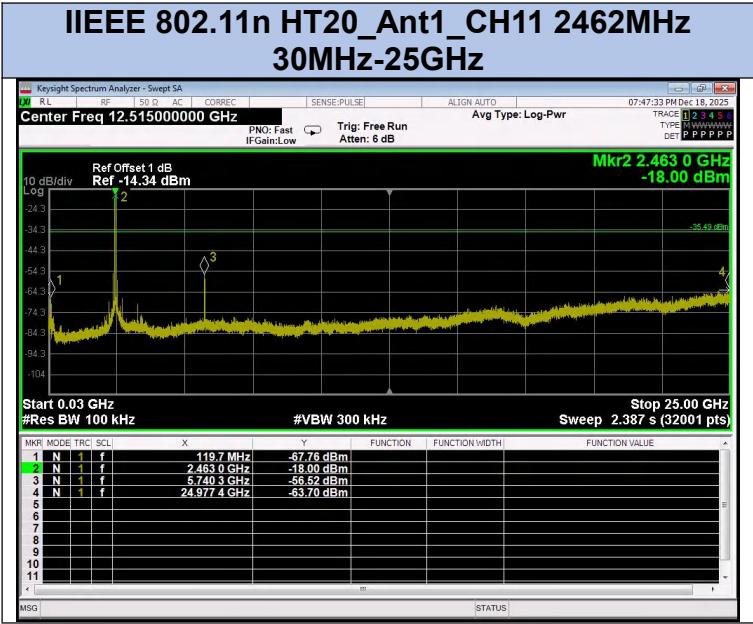


## IEEE 802.11g\_Ant1\_CH11 2462MHz 30MHz-25GHz



## IEEE 802.11n HT20\_Ant1\_CH06 2437MHz 30MHz-25GHz





## 9. RADIATED SPURIOUS EMISSIONS AND BAND EDGE

### 9.1. Limit

All the emissions appearing within 15.205 restricted frequency bands shall not exceed the limits shown in 15.209, all the other emissions shall be at least 20dB below the fundamental emissions, or comply with 15.209 limits.

#### 15.205 Restricted frequency band

| MHz                        | MHz                   | MHz             | GHz              |
|----------------------------|-----------------------|-----------------|------------------|
| 0.090 - 0.110              | 16.42 - 16.423        | 399.9 - 410     | 4.5 - 5.15       |
| <sup>1</sup> 0.495 - 0.505 | 16.69475 - 16.69525   | 608 - 614       | 5.35 - 5.46      |
| 2.1735 - 2.1905            | 16.80425 - 16.80475   | 960 - 1240      | 7.25 - 7.75      |
| 4.125 - 4.128              | 25.5 - 25.67          | 1300 - 1427     | 8.025 - 8.5      |
| 4.17725 - 4.17775          | 37.5 - 38.25          | 1435 - 1626.5   | 9.0 - 9.2        |
| 4.20725 - 4.20775          | 73 - 74.6             | 1645.5 - 1646.5 | 9.3 - 9.5        |
| 6.215 - 6.218              | 74.8 - 75.2           | 1660 - 1710     | 10.6 - 12.7      |
| 6.26775 - 6.26825          | 108 - 121.94          | 1718.8 - 1722.2 | 13.25 - 13.4     |
| 6.31175 - 6.31225          | 123 - 138             | 2200 - 2300     | 14.47 - 14.5     |
| 8.291 - 8.294              | 149.9 - 150.05        | 2310 - 2390     | 15.35 - 16.2     |
| 8.362 - 8.366              | 156.52475 - 156.52525 | 2483.5 - 2500   | 17.7 - 21.4      |
| 8.37625 - 8.38675          | 156.7 - 156.9         | 2690 - 2900     | 22.01 - 23.12    |
| 8.41425 - 8.41475          | 162.0125 - 167.17     | 3260 - 3267     | 23.6 - 24.0      |
| 12.29 - 12.293             | 167.72 - 173.2        | 3332 - 3339     | 31.2 - 31.8      |
| 12.51975 - 12.52025        | 240 - 285             | 3345.8 - 3358   | 36.43 - 36.5     |
| 12.57675 - 12.57725        | 322 - 335.4           | 3600 - 4400     | ( <sup>2</sup> ) |

#### 15.209 Limit

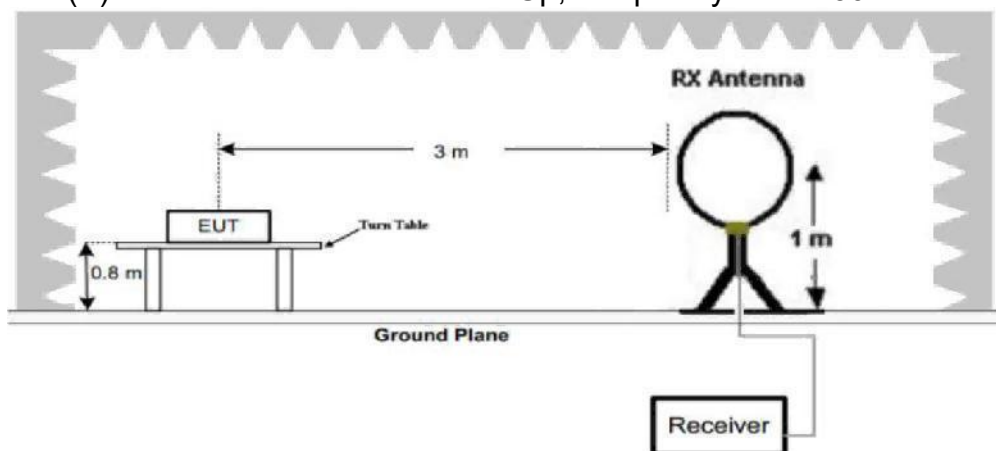
| Frequency (MHz) | Field Strength(μV/m) | Distance(m) |
|-----------------|----------------------|-------------|
| 0.009-0.490     | 2400/F(kHz)          | 300         |
| 0.490-1.705     | 24000/F(kHz)         | 30          |
| 1.705-30        | 30                   | 30          |
| 30-88           | 100                  | 3           |
| 88-216          | 150                  | 3           |
| 216-960         | 200                  | 3           |
| Above 960       | 500                  | 3           |

Note:

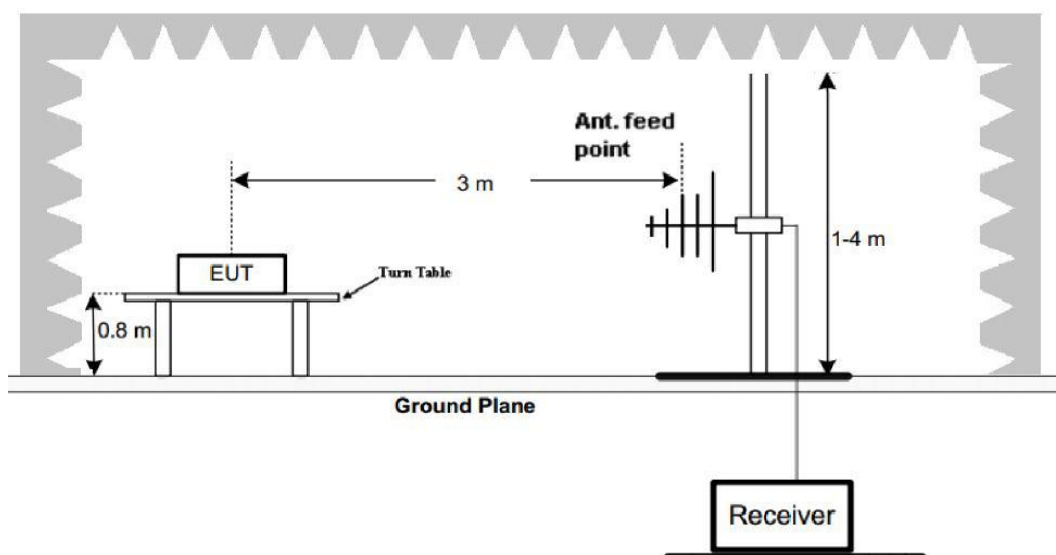
- (1) Emission level dBμV = 20 log Emission level μV/m.
- (2) The smaller limit shall apply at the cross point between two frequency bands.
- (3) Distance is the distance in meters between the measuring instrument, antenna and the closest point of any part of the device or system.

## 9.2. Test Setup

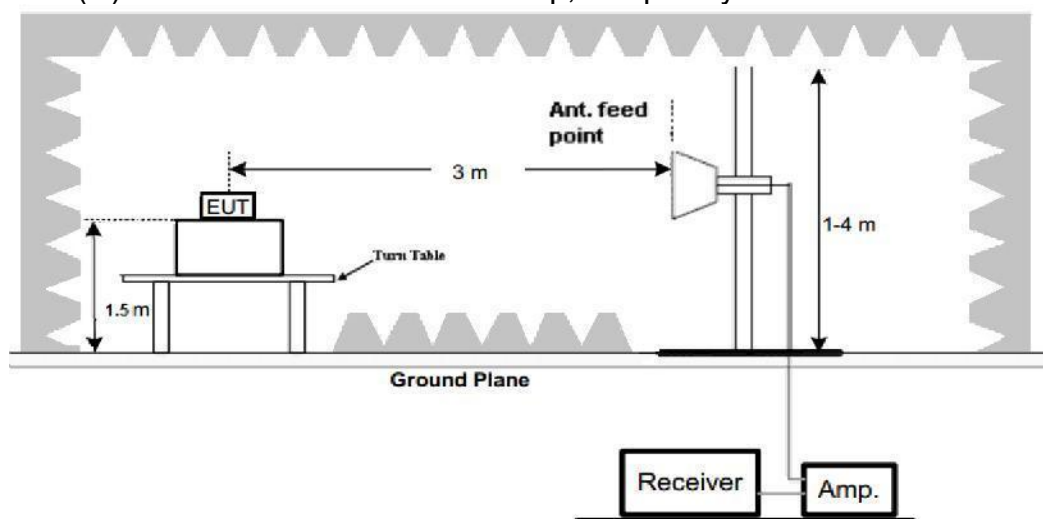
(A) Radiated Emission Test Set-Up, Frequency Below 30MHz

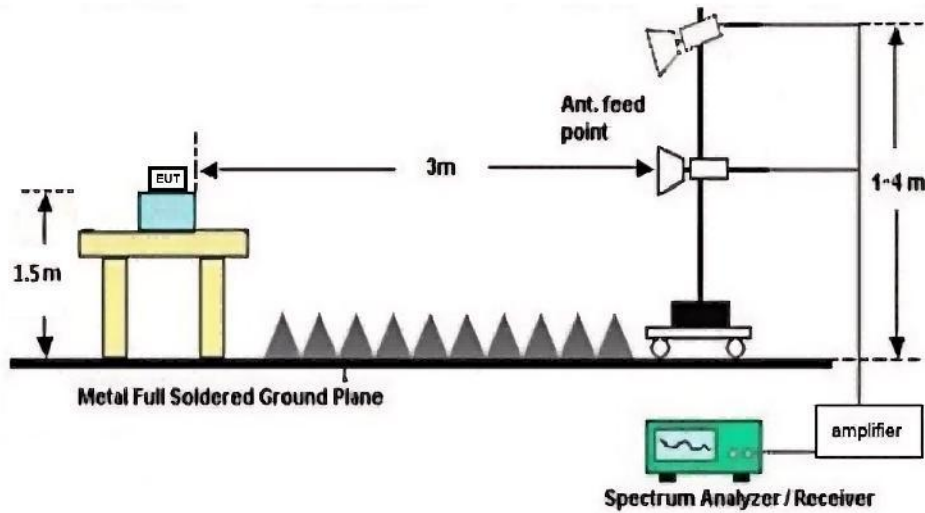


(B) Radiated Emission Test Set-Up, Frequency below 1000MHz



(C) Radiated Emission Test Set-Up, Frequency above 1GHz





### 9.3. Spectrum Analyzer Setting

#### For 9KHz-150KHz

| Spectrum Parameters | Setting                                   |
|---------------------|-------------------------------------------|
| RBW                 | 300Hz (for Peak&AVG)/CISPR 200Hz (for QP) |
| VBW                 | 300Hz (for Peak&AVG)/CISPR 200Hz (for QP) |
| Start frequency     | 9KHz                                      |
| Stop frequency      | 150KHz                                    |
| Sweep Time          | Auto                                      |
| Detector            | PEAK/QP/AVG                               |
| Trace Mode          | Max Hold                                  |

#### For 150KHz-30MHz

| Spectrum Parameters | Setting  |
|---------------------|----------|
| RBW                 | 9KHz     |
| VBW                 | 9KHz     |
| Start frequency     | 150KHz   |
| Stop frequency      | 30MHz    |
| Sweep Time          | Auto     |
| Detector            | QP       |
| Trace Mode          | Max Hold |

### For 30MHz-1GHz

| Spectrum Parameters |  | Setting  |
|---------------------|--|----------|
| RBW                 |  | 120KHz   |
| VBW                 |  | 300KHz   |
| Start frequency     |  | 30MHz    |
| Stop frequency      |  | 1GHz     |
| Sweep Time          |  | Auto     |
| Detector            |  | QP       |
| Trace Mode          |  | Max Hold |

### For Above 1GHz

| Spectrum Parameters |                  | Setting                  |
|---------------------|------------------|--------------------------|
| RBW                 |                  | 1MHz                     |
| VBW                 | PEAK Measurement | AVG Measurement          |
|                     | 3MHz             | Duty cycle≥98%, VBW=10Hz |
|                     |                  | Duty cycle<98%,VBW≥1/T   |
| Start frequency     |                  | 1GHz                     |
| Stop frequency      |                  | 25GHz                    |
| Sweep Time          |                  | Auto                     |
| Detector            |                  | PEAK                     |
| Trace Mode          |                  | Max Hold                 |

## 9.4. Test Procedure

- a. EUT was placed on a turn table, which is 0.8-meter high above ground for below 1GHz test, and which is 1.5-meter high above ground for above 1GHz test.
- b. The diameter of the turntable is 2 meters. The EUT is located at the center of the edge of the test support table. Since the turntable is large enough, the EUT is placed at the center of the edge of the test support table as well as at the center of the turntable.
- c. EUT is set 3 meters away from the receiving antenna, which is mounted on a antenna tower.
- d. Set the EUT transmit continuously with maximum output power.
- e. The turn table can rotate 360 degrees to determine the position of the maximum emission level.
- f. 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.
- g. EMI TestReceiver setting parameters in accordance with section 9.3.
- h. Repeat above procedures until all channels and test modes were measured.
- i. Record the results in the test report.

### Note:

1. For emissions above 1GHz, if peak level complies with average limit, then the average level is deemed to comply with average limit.
2. The frequency 2412MHz ,2437MHz and 2462MHz 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. For 30-1000MHz Radiation emissions, IEEE 802.11b, IEEE 802.11g, IEEE 802.11n HT20 mode all have been tested, only worse case: IEEE 802.11g mode with CH6 2437MHz is reported. it was conducted under both DC 3.7 input voltages. There was no significant change in radiation emission. Only the test data under DC 3.7V voltage was recorded and included in the report.
4. Radiated emission test from 9KHz to 10th harmonic of fundamental was verified, and no emission found except system noise floor in 9KHz to 30MHz and not recorded in this report.
5. The amplitude of 18GHz to 25GHz spurious emission-that-is attenuated by more than 20dB below the-permissible-limit has no need-to-be-reported.

## 9.5. Test Result

### Radiated Emissions 30-1000MHz

EUT: MICRO CAM

M/N: L20

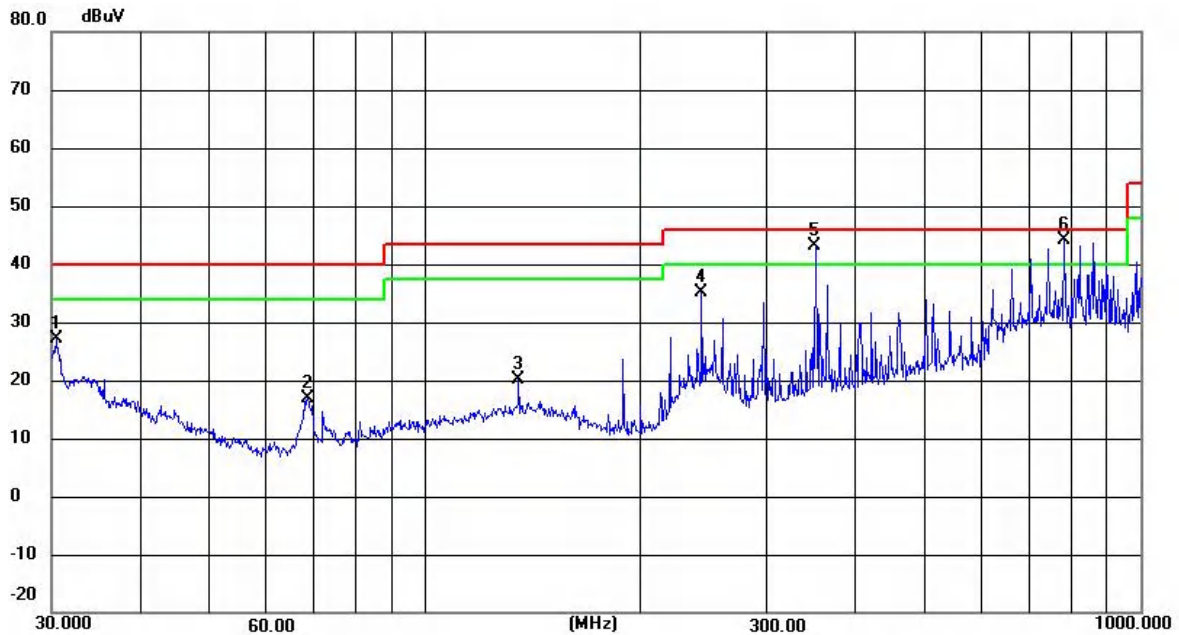
Test Voltage: DC 3.7V

Ant. Pol.: Horizontal

Test Mode: TX Mode

Note: only worse case: IEEE 802.11b mode with CH06 2437MHz is reported

Detailed results are shown below



Remarks: 1. Margin = Result (Result =Reading + Factor )–Limit  
 2. If Peak Result complies with QP limit, QP Result is deemed to comply with QP limit.  
 3. Test setup: RBW: 120 kHz, VBW: 300 kHz, Sweep time: auto.

| No. | Frequency<br>(MHz) | Reading<br>(dBuV) | Correct<br>Factor(dB/m) | Result<br>(dBuV/m) | Limit<br>(dBuV/m) | Margin<br>(dB) | Remark |
|-----|--------------------|-------------------|-------------------------|--------------------|-------------------|----------------|--------|
| 1   | 30.4238            | 34.69             | -7.46                   | 27.23              | 40.00             | -12.77         | QP     |
| 2   | 68.3908            | 36.91             | -20.03                  | 16.88              | 40.00             | -23.12         | QP     |
| 3   | 135.0319           | 52.38             | -32.15                  | 20.23              | 43.50             | -23.27         | QP     |
| 4   | 243.3772           | 67.21             | -31.98                  | 35.23              | 46.00             | -10.77         | QP     |
| 5   | 351.7079           | 74.90             | -31.74                  | 43.16              | 46.00             | -2.84          | QP     |
| 6   | 782.3453           | 74.85             | -30.83                  | 44.02              | 46.00             | -1.98          | QP     |

EUT: MICRO CAM

M/N: L20

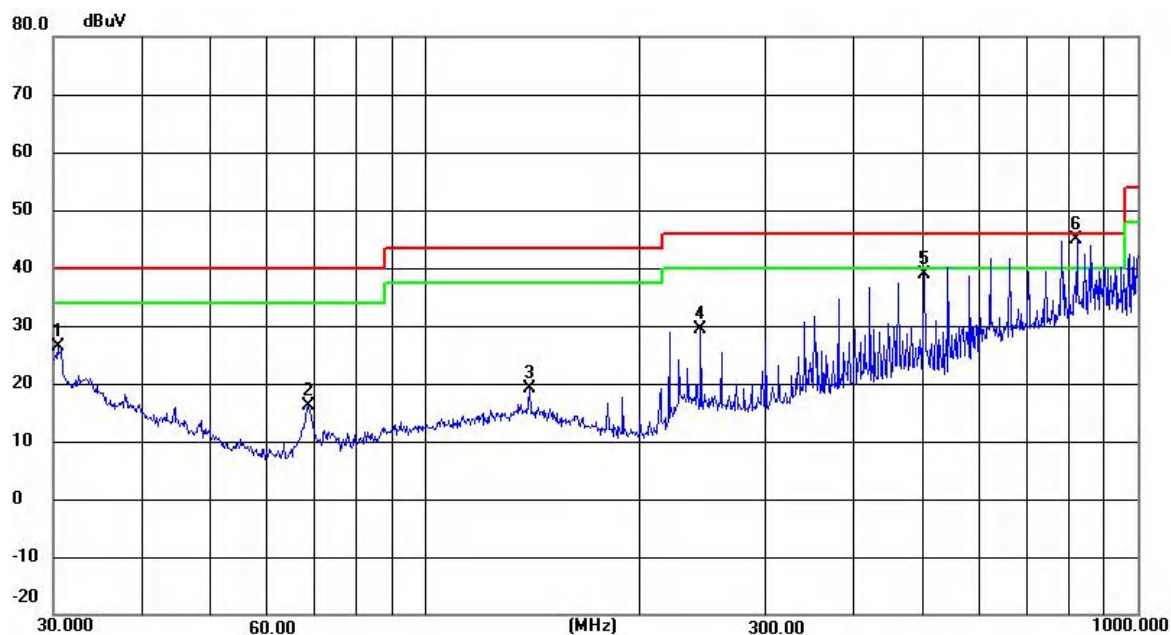
Test Voltage: DC 3.7V

Ant. Pol.: Vertical

Test Mode: TX Mode

Note: only worse case: IEEE 802.11b mode with CH06 2437MHz is reported

Detailed results are shown below



Remarks: 1. Margin = Result (Result =Reading + Factor )–Limit  
 2. If Peak Result complies with QP limit, QP Result is deemed to comply with QP limit.  
 3. Test setup: RBW: 120 kHz, VBW: 300 kHz, Sweep time: auto.

| No. | Frequency | Reading | Correct      | Result   | Limit    | Margin | Remark |
|-----|-----------|---------|--------------|----------|----------|--------|--------|
|     | (MHz)     | (dBuV)  | Factor(dB/m) | (dBuV/m) | (dBuV/m) | (dB)   |        |
| 1   | 30.4238   | 33.79   | -7.46        | 26.33    | 40.00    | -13.67 | QP     |
| 2   | 68.3908   | 36.17   | -20.03       | 16.14    | 40.00    | -23.86 | QP     |
| 3   | 139.8508  | 51.18   | -32.14       | 19.04    | 43.50    | -24.46 | QP     |
| 4   | 243.3772  | 61.30   | -31.98       | 29.32    | 46.00    | -16.68 | QP     |
| 5   | 501.1790  | 70.18   | -31.30       | 38.88    | 46.00    | -7.12  | QP     |
| 6   | 821.7103  | 75.60   | -30.78       | 44.82    | 46.00    | -1.18  | QP     |

## (1GHz~25GHz) Restricted band and Spurious emission Requirements

802.11b(Worst)-Low

Peak

| Frequency (MHz) | Reading (dBuV) | Antenna Factor (dB/m) | Cable Loss (dB) | Preamplifier Factor (dB/m) | Result (dBuV/m) | Limit (dBuV/m) | Margin (dB) | Remark     |
|-----------------|----------------|-----------------------|-----------------|----------------------------|-----------------|----------------|-------------|------------|
| 4824.00         | 33.93          | 31.78                 | 8.60            | 32.09                      | 42.22           | 74             | -31.78      | Vertical   |
| 7236.00         | 31.92          | 36.15                 | 11.65           | 32.00                      | 47.72           | 74             | -26.28      | Vertical   |
| 9648.00         | 32.8           | 37.95                 | 14.14           | 31.62                      | 53.27           | 74             | -20.73      | Vertical   |
| 12060.00        | *              |                       |                 |                            |                 | 74             |             | Vertical   |
| 14472.00        | *              |                       |                 |                            |                 | 74             |             | Vertical   |
| 4824.00         | 36.53          | 31.78                 | 8.60            | 32.09                      | 44.82           | 74             | -29.18      | Horizontal |
| 7236.00         | 31.72          | 36.15                 | 11.65           | 32.00                      | 47.52           | 74             | -26.48      | Horizontal |
| 9648.00         | 30.85          | 37.95                 | 14.14           | 31.62                      | 51.32           | 74             | -22.68      | Horizontal |
| 12060.00        | *              |                       |                 |                            |                 | 74             |             | Horizontal |
| 14472.00        | *              |                       |                 |                            |                 | 74             |             | Horizontal |

Avg

| Frequency (MHz) | Reading (dBuV) | Antenna Factor (dB/m) | Cable Loss (dB) | Preamplifier Factor (dB/m) | Result (dBuV/m) | Limit (dBuV/m) | Margin (dB) | Remark     |
|-----------------|----------------|-----------------------|-----------------|----------------------------|-----------------|----------------|-------------|------------|
| 4824.00         | 26.63          | 31.78                 | 8.60            | 32.09                      | 34.92           | 54             | -19.08      | Vertical   |
| 7236.00         | 18.77          | 36.15                 | 11.65           | 32.00                      | 34.57           | 54             | -19.43      | Vertical   |
| 9648.00         | 17.51          | 37.95                 | 14.14           | 31.62                      | 37.98           | 54             | -16.02      | Vertical   |
| 12060.00        | *              |                       |                 |                            |                 | 54             |             | Vertical   |
| 14472.00        | *              |                       |                 |                            |                 | 54             |             | Vertical   |
| 4824.00         | 30.65          | 31.78                 | 8.60            | 32.09                      | 38.94           | 54             | -15.06      | Horizontal |
| 7236.00         | 20.59          | 36.15                 | 11.65           | 32.00                      | 36.39           | 54             | -17.61      | Horizontal |
| 9648.00         | 17.7           | 37.95                 | 14.14           | 31.62                      | 38.17           | 54             | -15.83      | Horizontal |
| 12060.00        | *              |                       |                 |                            |                 | 54             |             | Horizontal |
| 14472.00        | *              |                       |                 |                            |                 | 54             |             | Horizontal |

Remark:

Final Level =Receiver Read level + Antenna Factor + Cable Loss- Preamplifier Factor

The emission levels of other frequencies are very lower than the limit and not show in test report.

3. “\*”, means this data is the too weak instrument of signal is unable to test.

## 802.11b(Worst)-Middle

## Peak

| Frequency (MHz) | Reading (dBuV) | Antenna Factor (dB/m) | Cable Loss (dB) | Preamp Factor (dB/m) | Result (dBuV/m) | Limit (dBuV/m) | Margin (dB) | Remark     |
|-----------------|----------------|-----------------------|-----------------|----------------------|-----------------|----------------|-------------|------------|
| 4874.00         | 35.41          | 31.78                 | 8.60            | 32.09                | 43.81           | 74             | -30.19      | Vertical   |
| 7311.00         | 29.62          | 36.15                 | 11.65           | 32.00                | 45.82           | 74             | -28.18      | Vertical   |
| 9748.00         | 29.69          | 37.95                 | 14.14           | 31.62                | 50.67           | 74             | -23.33      | Vertical   |
| 12185.00        | *              |                       |                 |                      |                 | 74             |             | Vertical   |
| 14622.00        | *              |                       |                 |                      |                 | 74             |             | Vertical   |
| 4874.00         | 39.83          | 31.78                 | 8.60            | 32.09                | 48.23           | 74             | -25.77      | Horizontal |
| 7311.00         | 31.52          | 36.15                 | 11.65           | 32.00                | 47.72           | 74             | -26.28      | Horizontal |
| 9748.00         | 31.6           | 37.95                 | 14.14           | 31.62                | 52.58           | 74             | -21.42      | Horizontal |
| 12185.00        | *              |                       |                 |                      |                 | 74             |             | Horizontal |
| 14622.00        | *              |                       |                 |                      |                 | 74             |             | Horizontal |

## Avg

| Frequency (MHz) | Reading (dBuV) | Antenna Factor (dB/m) | Cable Loss (dB) | Preamp Factor (dB/m) | Result (dBuV/m) | Limit (dBuV/m) | Margin (dB) | Remark     |
|-----------------|----------------|-----------------------|-----------------|----------------------|-----------------|----------------|-------------|------------|
| 4874.00         | 24.69          | 31.78                 | 8.60            | 32.09                | 33.09           | 54             | -20.91      | Vertical   |
| 7311.00         | 19.62          | 36.15                 | 11.65           | 32.00                | 35.82           | 54             | -18.18      | Vertical   |
| 9748.00         | 15.71          | 37.95                 | 14.14           | 31.62                | 36.69           | 54             | -17.31      | Vertical   |
| 12185.00        | *              |                       |                 |                      |                 | 54             |             | Vertical   |
| 14622.00        | *              |                       |                 |                      |                 | 54             |             | Vertical   |
| 4874.00         | 26.98          | 31.78                 | 8.60            | 32.09                | 35.38           | 54             | -18.62      | Horizontal |
| 7311.00         | 20.45          | 36.15                 | 11.65           | 32.00                | 36.65           | 54             | -17.35      | Horizontal |
| 9748.00         | 19.57          | 37.95                 | 14.14           | 31.62                | 40.55           | 54             | -13.45      | Horizontal |
| 12185.00        | *              |                       |                 |                      |                 | 54             |             | Horizontal |
| 14622.00        | *              |                       |                 |                      |                 | 54             |             | Horizontal |

## Remark:

Final Level =Receiver Read level + Antenna Factor + Cable Loss- Preamplifier Factor

The emission levels of other frequencies are very lower than the limit and not show in test report.

3. “\*”, means this data is the too weak instrument of signal is unable to test.

## 802.11b(Worst)-High

## Peak

| Frequency (MHz) | Reading (dBuV) | Antenna Factor (dB/m) | Cable Loss (dB) | Preamp Factor (dB/m) | Result (dBuV/m) | Limit (dBuV/m) | Margin (dB) | Remark     |
|-----------------|----------------|-----------------------|-----------------|----------------------|-----------------|----------------|-------------|------------|
| 4924.00         | 32.65          | 31.78                 | 8.60            | 32.09                | 41.15           | 74             | -32.85      | Vertical   |
| 7386.00         | 31.47          | 36.15                 | 11.65           | 32.00                | 48.07           | 74             | -25.93      | Vertical   |
| 9848.00         | 31.86          | 37.95                 | 14.14           | 31.62                | 53.17           | 74             | -20.83      | Vertical   |
| 12310.00        | *              |                       |                 |                      |                 | 74             |             | Vertical   |
| 14772.00        | *              |                       |                 |                      |                 | 74             |             | Vertical   |
| 4924.00         | 37.22          | 31.78                 | 8.60            | 32.09                | 45.72           | 74             | -28.28      | Horizontal |
| 7386.00         | 33.01          | 36.15                 | 11.65           | 32.00                | 49.61           | 74             | -24.39      | Horizontal |
| 9848.00         | 30.59          | 37.95                 | 14.14           | 31.62                | 51.9            | 74             | -22.1       | Horizontal |
| 12310.00        | *              |                       |                 |                      |                 | 74             |             | Horizontal |
| 14772.00        | *              |                       |                 |                      |                 | 74             |             | Horizontal |

## Avg

| Frequency (MHz) | Reading (dBuV) | Antenna Factor (dB/m) | Cable Loss (dB) | Preamp Factor (dB/m) | Result (dBuV/m) | Limit (dBuV/m) | Margin (dB) | Remark     |
|-----------------|----------------|-----------------------|-----------------|----------------------|-----------------|----------------|-------------|------------|
| 4924.00         | 22.72          | 31.78                 | 8.60            | 32.09                | 31.22           | 54             | -22.78      | Vertical   |
| 7386.00         | 16.83          | 36.15                 | 11.65           | 32.00                | 33.43           | 54             | -20.57      | Vertical   |
| 9848.00         | 15.95          | 37.95                 | 14.14           | 31.62                | 37.26           | 54             | -16.74      | Vertical   |
| 12310.00        | *              |                       |                 |                      |                 | 54             |             | Vertical   |
| 14772.00        | *              |                       |                 |                      |                 | 54             |             | Vertical   |
| 4924.00         | 31.17          | 31.78                 | 8.60            | 32.09                | 39.67           | 54             | -14.33      | Horizontal |
| 7386.00         | 21.11          | 36.15                 | 11.65           | 32.00                | 37.71           | 54             | -16.29      | Horizontal |
| 9848.00         | 18.33          | 37.95                 | 14.14           | 31.62                | 39.64           | 54             | -14.36      | Horizontal |
| 12310.00        | *              |                       |                 |                      |                 | 54             |             | Horizontal |
| 14772.00        | *              |                       |                 |                      |                 | 54             |             | Horizontal |

## Remark:

Final Level =Receiver Read level + Antenna Factor + Cable Loss- Preamplifier Factor

The emission levels of other frequencies are very lower than the limit and not show in test report.

3. “\*”, means this data is the too weak instrument of signal is unable to test

4.The amplitude of spurious emissions which are attenuated more than 20 dB below the limits are not reported.

## 802.11 b low CH

## Peak

| Frequency (MHz) | Read Level (dBuV) | Antenna Factor (dB/m) | Cable Loss (dB) | Preamp Factor (dB) | Level (dBuV/m) | Limit Line (dBuV/m) | Over Limit (dB) | Polarization |
|-----------------|-------------------|-----------------------|-----------------|--------------------|----------------|---------------------|-----------------|--------------|
| 2310.00         | 37.57             | 27.61                 | 5.36            | 30.18              | 40.36          | 74                  | -33.64          | Horizontal   |
| 2390.00         | 36.59             | 27.59                 | 5.38            | 30.18              | 39.38          | 74                  | -34.62          | Horizontal   |
| 2400.00         | 51.71             | 27.58                 | 5.39            | 30.18              | 54.5           | 74                  | -19.5           | Horizontal   |
| 2310.00         | 34.6              | 27.61                 | 5.36            | 30.18              | 37.39          | 74                  | -36.61          | Vertical     |
| 2390.00         | 37.79             | 27.59                 | 5.38            | 30.18              | 40.58          | 74                  | -33.42          | Vertical     |
| 2400.00         | 42.72             | 27.58                 | 5.39            | 30.18              | 45.51          | 74                  | -28.49          | Vertical     |

## Avg

| Frequency (MHz) | Read Level (dBuV) | Antenna Factor (dB/m) | Cable Loss (dB) | Preamp Factor (dB) | Level (dBuV/m) | Limit Line (dBuV/m) | Over Limit (dB) | Polarization |
|-----------------|-------------------|-----------------------|-----------------|--------------------|----------------|---------------------|-----------------|--------------|
| 2310.00         | 31.51             | 27.61                 | 5.36            | 30.18              | 34.3           | 54                  | -19.7           | Horizontal   |
| 2390.00         | 26.62             | 27.59                 | 5.38            | 30.18              | 29.41          | 54                  | -24.59          | Horizontal   |
| 2400.00         | 42.86             | 27.58                 | 5.39            | 30.18              | 42.46          | 54                  | -11.54          | Horizontal   |
| 2310.00         | 31.32             | 27.61                 | 5.36            | 30.18              | 34.11          | 54                  | -19.89          | Vertical     |
| 2390.00         | 29.26             | 27.59                 | 5.38            | 30.18              | 32.05          | 54                  | -21.95          | Vertical     |
| 2400.00         | 38                | 27.58                 | 5.39            | 30.18              | 40.79          | 54                  | -13.21          | Vertical     |

## 802.11 b High CH

## Peak

| Frequency (MHz) | Read Level (dBuV) | Antenna Factor (dB/m) | Cable Loss (dB) | Preamp Factor (dB) | Level (dBuV/m) | Limit Line (dBuV/m) | Over Limit (dB) | Polarization |
|-----------------|-------------------|-----------------------|-----------------|--------------------|----------------|---------------------|-----------------|--------------|
| 2483.50         | 36.52             | 27.53                 | 5.47            | 29.93              | 39.59          | 74                  | -34.41          | Horizontal   |
| 2500.00         | 38.58             | 27.55                 | 5.49            | 29.93              | 41.69          | 74                  | -32.31          | Horizontal   |
| 2483.50         | 41.31             | 27.53                 | 5.47            | 29.93              | 44.38          | 74                  | -29.62          | Vertical     |
| 2500.00         | 38.02             | 27.55                 | 5.49            | 29.93              | 41.13          | 74                  | -32.87          | Vertical     |

## Avg

| Frequency (MHz) | Read Level (dBuV) | Antenna Factor (dB/m) | Cable Loss (dB) | Preamp Factor (dB) | Level (dBuV/m) | Limit Line (dBuV/m) | Over Limit (dB) | Polarization |
|-----------------|-------------------|-----------------------|-----------------|--------------------|----------------|---------------------|-----------------|--------------|
| 2483.50         | 31.58             | 27.53                 | 5.47            | 29.93              | 34.65          | 54                  | -19.35          | Horizontal   |
| 2500.00         | 30.41             | 27.55                 | 5.49            | 29.93              | 33.52          | 54                  | -20.48          | Horizontal   |
| 2483.50         | 32.65             | 27.53                 | 5.47            | 29.93              | 35.72          | 54                  | -18.28          | Vertical     |
| 2500.00         | 27.9              | 27.55                 | 5.49            | 29.93              | 31.01          | 54                  | -22.99          | Vertical     |

3.The amplitude of spurious emissions which are attenuated more than 20 dB below the limits are not reported.

802.11 g Low CH  
Peak

| Frequency (MHz) | Read Level (dBuV) | Antenna Factor (dB/m) | Cable Loss (dB) | Preamp Factor (dB) | Level (dBuV/m) | Limit Line (dBuV/m) | Over Limit (dB) | Polarization |
|-----------------|-------------------|-----------------------|-----------------|--------------------|----------------|---------------------|-----------------|--------------|
| 2310.00         | 37.85             | 27.61                 | 5.36            | 30.18              | 40.64          | 74                  | -33.36          | Horizontal   |
| 2390.00         | 36.87             | 27.59                 | 5.38            | 30.18              | 39.66          | 74                  | -34.34          | Horizontal   |
| 2400.00         | 51.99             | 27.58                 | 5.39            | 30.18              | 54.78          | 74                  | -19.22          | Horizontal   |
| 2310.00         | 34.88             | 27.61                 | 5.36            | 30.18              | 37.67          | 74                  | -36.33          | Vertical     |
| 2390.00         | 38.07             | 27.59                 | 5.38            | 30.18              | 40.86          | 74                  | -33.14          | Vertical     |
| 2400.00         | 43                | 27.58                 | 5.39            | 30.18              | 45.79          | 74                  | -28.21          | Vertical     |

## Avg

| Frequency (MHz) | Read Level (dBuV) | Antenna Factor (dB/m) | Cable Loss (dB) | Preamp Factor (dB) | Level (dBuV/m) | Limit Line (dBuV/m) | Over Limit (dB) | Polarization |
|-----------------|-------------------|-----------------------|-----------------|--------------------|----------------|---------------------|-----------------|--------------|
| 2310.00         | 31.79             | 27.61                 | 5.36            | 30.18              | 34.58          | 54                  | -19.42          | Horizontal   |
| 2390.00         | 26.9              | 27.59                 | 5.38            | 30.18              | 29.69          | 54                  | -24.31          | Horizontal   |
| 2400.00         | 42.86             | 27.58                 | 5.39            | 30.18              | 42.74          | 54                  | -11.26          | Horizontal   |
| 2310.00         | 31.6              | 27.61                 | 5.36            | 30.18              | 34.39          | 54                  | -19.61          | Vertical     |
| 2390.00         | 29.54             | 27.59                 | 5.38            | 30.18              | 32.33          | 54                  | -21.67          | Vertical     |
| 2400.00         | 38.28             | 27.58                 | 5.39            | 30.18              | 41.07          | 54                  | -12.93          | Vertical     |

802.11 g High CH  
Peak

| Frequency (MHz) | Read Level (dBuV) | Antenna Factor (dB/m) | Cable Loss (dB) | Preamp Factor (dB) | Level (dBuV/m) | Limit Line (dBuV/m) | Over Limit (dB) | Polarization |
|-----------------|-------------------|-----------------------|-----------------|--------------------|----------------|---------------------|-----------------|--------------|
| 2483.50         | 36.8              | 27.53                 | 5.47            | 29.93              | 39.87          | 74                  | -34.13          | Horizontal   |
| 2500.00         | 38.86             | 27.55                 | 5.49            | 29.93              | 41.97          | 74                  | -32.03          | Horizontal   |
| 2483.50         | 41.59             | 27.53                 | 5.47            | 29.93              | 44.66          | 74                  | -29.34          | Vertical     |
| 2500.00         | 38.3              | 27.55                 | 5.49            | 29.93              | 41.41          | 74                  | -32.59          | Vertical     |

## Avg

| Frequency (MHz) | Read Level (dBuV) | Antenna Factor (dB/m) | Cable Loss (dB) | Preamp Factor (dB) | Level (dBuV/m) | Limit Line (dBuV/m) | Over Limit (dB) | Polarization |
|-----------------|-------------------|-----------------------|-----------------|--------------------|----------------|---------------------|-----------------|--------------|
| 2483.50         | 31.86             | 27.53                 | 5.47            | 29.93              | 34.93          | 54                  | -19.07          | Horizontal   |
| 2500.00         | 30.69             | 27.55                 | 5.49            | 29.93              | 33.8           | 54                  | -20.2           | Horizontal   |
| 2483.50         | 32.93             | 27.53                 | 5.47            | 29.93              | 36             | 54                  | -18             | Vertical     |
| 2500.00         | 28.18             | 27.55                 | 5.49            | 29.93              | 31.29          | 54                  | -22.71          | Vertical     |

3.The amplitude of spurious emissions which are attenuated more than 20 dB below the limits are not reported.

802.11 N 20 Low CH  
Peak

| Frequency (MHz) | Read Level (dBuV) | Antenna Factor (dB/m) | Cable Loss (dB) | Preamp Factor (dB) | Level (dBuV/m) | Limit Line (dBuV/m) | Over Limit (dB) | Polarization |
|-----------------|-------------------|-----------------------|-----------------|--------------------|----------------|---------------------|-----------------|--------------|
| 2310.00         | 37.71             | 27.61                 | 5.36            | 30.18              | 40.5           | 74                  | -33.5           | Horizontal   |
| 2390.00         | 36.73             | 27.59                 | 5.38            | 30.18              | 39.52          | 74                  | -34.48          | Horizontal   |
| 2400.00         | 51.85             | 27.58                 | 5.39            | 30.18              | 54.64          | 74                  | -19.36          | Horizontal   |
| 2310.00         | 34.74             | 27.61                 | 5.36            | 30.18              | 37.53          | 74                  | -36.47          | Vertical     |
| 2390.00         | 37.93             | 27.59                 | 5.38            | 30.18              | 40.72          | 74                  | -33.28          | Vertical     |
| 2400.00         | 42.86             | 27.58                 | 5.39            | 30.18              | 45.65          | 74                  | -28.35          | Vertical     |

## Avg

| Frequency (MHz) | Read Level (dBuV) | Antenna Factor (dB/m) | Cable Loss (dB) | Preamp Factor (dB) | Level (dBuV/m) | Limit Line (dBuV/m) | Over Limit (dB) | Polarization |
|-----------------|-------------------|-----------------------|-----------------|--------------------|----------------|---------------------|-----------------|--------------|
| 2310.00         | 31.65             | 27.61                 | 5.36            | 30.18              | 34.44          | 54                  | -19.56          | Horizontal   |
| 2390.00         | 26.76             | 27.59                 | 5.38            | 30.18              | 29.55          | 54                  | -24.45          | Horizontal   |
| 2400.00         | 42.86             | 27.58                 | 5.39            | 30.18              | 42.6           | 54                  | -11.4           | Horizontal   |
| 2310.00         | 31.46             | 27.61                 | 5.36            | 30.18              | 34.25          | 54                  | -19.75          | Vertical     |
| 2390.00         | 29.4              | 27.59                 | 5.38            | 30.18              | 32.19          | 54                  | -21.81          | Vertical     |
| 2400.00         | 38.14             | 27.58                 | 5.39            | 30.18              | 40.93          | 54                  | -13.07          | Vertical     |

802.11 N 20 High CH  
Peak

| Frequency (MHz) | Read Level (dBuV) | Antenna Factor (dB/m) | Cable Loss (dB) | Preamp Factor (dB) | Level (dBuV/m) | Limit Line (dBuV/m) | Over Limit (dB) | Polarization |
|-----------------|-------------------|-----------------------|-----------------|--------------------|----------------|---------------------|-----------------|--------------|
| 2483.50         | 36.66             | 27.53                 | 5.47            | 29.93              | 39.73          | 74                  | -34.27          | Horizontal   |
| 2500.00         | 38.72             | 27.55                 | 5.49            | 29.93              | 41.83          | 74                  | -32.17          | Horizontal   |
| 2483.50         | 41.45             | 27.53                 | 5.47            | 29.93              | 44.52          | 74                  | -29.48          | Vertical     |
| 2500.00         | 38.16             | 27.55                 | 5.49            | 29.93              | 41.27          | 74                  | -32.73          | Vertical     |

## Avg

| Frequency (MHz) | Read Level (dBuV) | Antenna Factor (dB/m) | Cable Loss (dB) | Preamp Factor (dB) | Level (dBuV/m) | Limit Line (dBuV/m) | Over Limit (dB) | Polarization |
|-----------------|-------------------|-----------------------|-----------------|--------------------|----------------|---------------------|-----------------|--------------|
| 2483.50         | 31.72             | 27.53                 | 5.47            | 29.93              | 34.79          | 54                  | -19.21          | Horizontal   |
| 2500.00         | 30.55             | 27.55                 | 5.49            | 29.93              | 33.66          | 54                  | -20.34          | Horizontal   |
| 2483.50         | 32.79             | 27.53                 | 5.47            | 29.93              | 35.86          | 54                  | -18.14          | Vertical     |
| 2500.00         | 28.04             | 27.55                 | 5.49            | 29.93              | 31.15          | 54                  | -22.85          | Vertical     |

## 10. AC POWER LINE CONDUCTED EMISSIONS

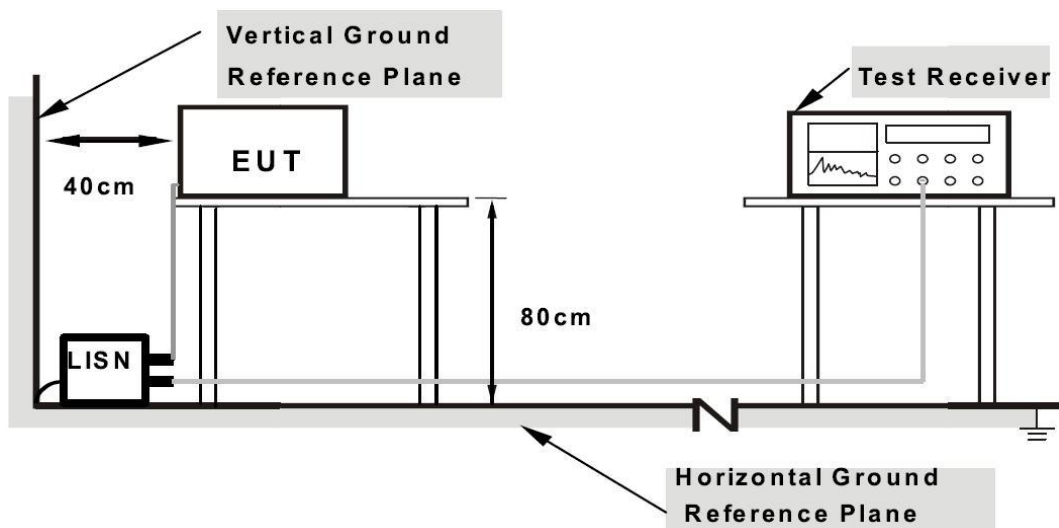
### 10.1. Limit

| Frequency       | Maximum RF Line Voltage          |                               |
|-----------------|----------------------------------|-------------------------------|
|                 | Quasi-Peak Level<br>dB( $\mu$ V) | Average Level<br>dB( $\mu$ V) |
| 150kHz ~ 500kHz | 66 ~ 56*                         | 56 ~ 46*                      |
| 500kHz ~ 5MHz   | 56                               | 46                            |
| 5MHz ~ 30MHz    | 60                               | 50                            |

Note:

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

### 10.2. Test Setup



### 10.3. Spectrum Analyzer Setting

| Spectrum Parameters | Setting  |
|---------------------|----------|
| RBW                 | 9KHz     |
| VBW                 | 9KHz     |
| Start frequency     | 150KHz   |
| Stop frequency      | 30MHz    |
| Sweep Time          | Auto     |
| Detector            | QP/AVG   |
| Trace Mode          | Max Hold |

#### 10.4. Test Procedure

- a. The EUT was placed on a non-metallic table, 80cm above the ground plane.
- b. The EUT Power connected to the power mains through a line impedance stabilization network.
- c. Provides a 50ohm coupling impedance for the EUT (Please refer the block diagram of the test setup and photographs).
- d. Set the EUT transmit continuously with maximum output power.
- e. EMI TestReceiver setting parameters in accordance with section 10.3.
- f. The AC line is checked to find out the maximum conducted emission. To find the maximum emission levels, the relative positions of equipment and all the interface cables shall be changed according to ANSI C63.10:2020 on Conducted Emission Test.
- g. Record the results in the test report. (only worse case: IEEE 802.11b mode with CH6 2437MHz is reported)

## 10.5. Test Result

EUT: MICRO CAM

M/N: L20

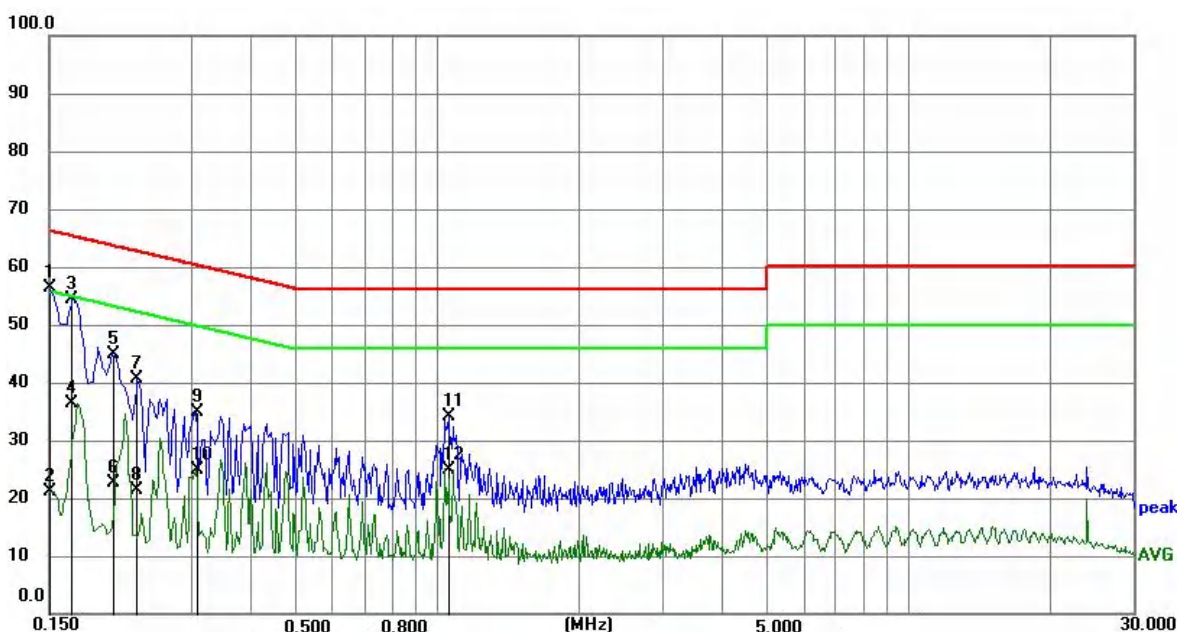
Test Voltage: DC 5V From Adapter 120V/60Hz

Phase: Live

Test Mode: TX Mode

Note: only worse case: IEEE 802.11b mode with CH06 2437MHz is reported

Detailed results are shown below

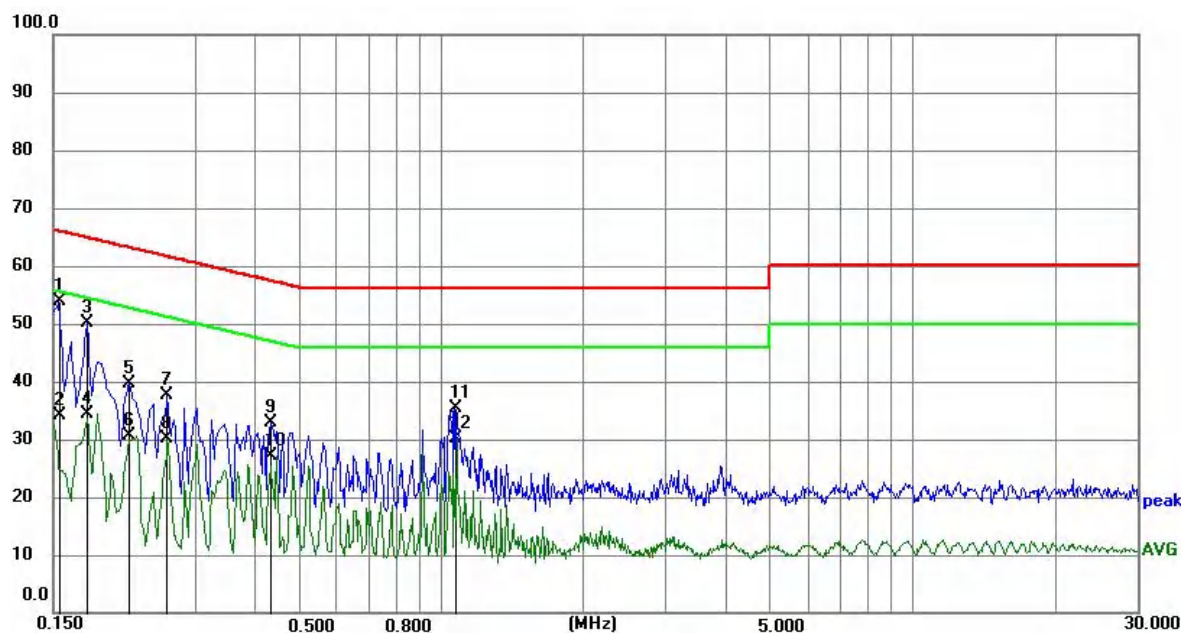


| No. | Frequency<br>(MHz) | Reading<br>(dBuV) | Correct<br>Factor(dB) | Result<br>(dBuV) | Limit<br>(dBuV) | Margin<br>(dB) | Remark |
|-----|--------------------|-------------------|-----------------------|------------------|-----------------|----------------|--------|
| 1   | 0.1500             | 46.34             | 10.14                 | 56.48            | 66.00           | 9.52           | QP     |
| 2   | 0.1500             | 11.01             | 10.14                 | 21.15            | 56.00           | 34.85          | AVG    |
| 3   | 0.1680             | 44.37             | 10.12                 | 54.49            | 65.06           | 10.57          | QP     |
| 4   | 0.1680             | 26.29             | 10.12                 | 36.41            | 55.06           | 18.65          | AVG    |
| 5   | 0.2040             | 34.73             | 10.08                 | 44.81            | 63.45           | 18.64          | QP     |
| 6   | 0.2040             | 12.55             | 10.08                 | 22.63            | 53.45           | 30.82          | AVG    |
| 7   | 0.2310             | 30.53             | 10.06                 | 40.59            | 62.41           | 21.82          | QP     |
| 8   | 0.2310             | 11.32             | 10.06                 | 21.38            | 52.41           | 31.03          | AVG    |
| 9   | 0.3075             | 24.85             | 10.02                 | 34.87            | 60.04           | 25.17          | QP     |
| 10  | 0.3075             | 14.86             | 10.02                 | 24.88            | 50.04           | 25.16          | AVG    |
| 11  | 1.0544             | 24.11             | 10.00                 | 34.11            | 56.00           | 21.89          | QP     |
| 12  | 1.0544             | 14.93             | 10.00                 | 24.93            | 46.00           | 21.07          | AVG    |

Remark: The test Result=Reading+ Lisn+ Cab L.

If the average limit is met when using a quasi-peak detector, the EUT shall be deemed to meet both limits and measurement with average detector is unnecessary.

EUT: MICRO CAM  
M/N: L20  
Test Voltage: DC 5V From Adapter 120V/60Hz  
Phase: Neutral  
Test Mode: TX Mode  
Note: only worse case: IEEE 802.11b mode with CH06 2437MHz is reported  
Detailed results are shown below



| No. | Frequency<br>(MHz) | Reading<br>(dBuV) | Correct<br>Factor(dB) | Result<br>(dBuV) | Limit<br>(dBuV) | Margin<br>(dB) | Remark |
|-----|--------------------|-------------------|-----------------------|------------------|-----------------|----------------|--------|
| 1   | 0.1545             | 43.70             | 10.08                 | 53.78            | 65.75           | 11.97          | QP     |
| 2   | 0.1545             | 24.07             | 10.08                 | 34.15            | 55.75           | 21.60          | AVG    |
| 3   | 0.1770             | 40.14             | 10.06                 | 50.20            | 64.63           | 14.43          | QP     |
| 4   | 0.1770             | 24.32             | 10.06                 | 34.38            | 54.63           | 20.25          | AVG    |
| 5   | 0.2175             | 29.63             | 10.05                 | 39.68            | 62.91           | 23.23          | QP     |
| 6   | 0.2175             | 20.59             | 10.05                 | 30.64            | 52.91           | 22.27          | AVG    |
| 7   | 0.2625             | 27.62             | 10.04                 | 37.66            | 61.35           | 23.69          | QP     |
| 8   | 0.2625             | 20.00             | 10.04                 | 30.04            | 51.35           | 21.31          | AVG    |
| 9   | 0.4335             | 22.86             | 10.00                 | 32.86            | 57.19           | 24.33          | QP     |
| 10  | 0.4335             | 17.07             | 10.00                 | 27.07            | 47.19           | 20.12          | AVG    |
| 11  | 1.0680             | 25.34             | 9.99                  | 35.33            | 56.00           | 20.67          | QP     |
| 12  | 1.0680             | 20.15             | 9.99                  | 30.14            | 46.00           | 15.86          | AVG    |

Remark: The test Result=Reading+ Lisen+ Cab L.

If the average limit is met when using a quasi-peak detector, the EUT shall be deemed to meet both limits and measurement with average detector is unnecessary.

## **11. ANTENNA REQUIREMENTS**

### **11.1. Limit**

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. The use of a permanently attached antenna or of an antenna that uses a unique coupling to the intentional radiator shall be considered sufficient to comply with the provisions of this section. The manufacturer may design the unit so that a broken antenna can be replaced by the user, but the use of a standard antenna jack or electrical connector is prohibited. This requirement does not apply to carrier current devices or to devices operated under the provisions of §§15.211, 15.213, 15.217, 15.219, 15.221, or §15.236. Further, this requirement does not apply to intentional radiators that must be professionally installed, such as perimeter protection systems and some field disturbance sensors, or to other intentional radiators which, in accordance with §15.31(d), must be measured at the installation site. However, the installer shall be responsible for ensuring that the proper antenna is employed so that the limits in this part are not exceeded.

### **11.2. Test Result**

The antennas used for this product is Chip antenna, so compliance with antenna requirements. (Please refer to the EUT Internal Photos for details)

## 12.APPENDIX

"EUT of External Photos, EUT Internal Photos & Test Setup Photos" Please refer to the Annex A, Annex B& Annex C document.

**Annex A. EUT External Photos**

**Annex B. EUT Internal Photos**

**Annex C. Test Setup Photos**

-----*End of Test Report*-----