

| FCC PART 15 SUBPART C TEST REPORT | | | | | | | |
|--|---|--|--|--|--|--|--|
| FCC PART 15.247 | | | | | | | |
| Report Reference No: | MTEB23090179-R2 2BA3N-BIPCR2 | | | | | | |
| Compiled by (position+printed name+signature): | File administrators Alisa Luo | Alisa Luo | | | | | |
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| Date of issue: | Sep.19,2023 | 100 | | | | | |
| Representative Laboratory Name. : | Shenzhen Most Technology Ser | vice Co., Ltd. | | | | | |
| Address: | No.5, 2nd Langshan Road, North District, Hi-tech Industrial Park, Nanshan, Shenzhen, Guangdong, China. | | | | | | |
| Applicant's name: | Shandong New Beiyang Information Technology Co.,Ltd | | | | | | |
| Address: | 169 HUOJU RD HI-TECH ZONE WEIHAI SHANDONG,Weihai, 264209,CHINA | | | | | | |
| Test specification: | | | | | | | |
| Standard | FCC Part 15.247 | | | | | | |
| TRF Originator | Shenzhen Most Technology Service | ce Co., Ltd. | | | | | |
| Shenzhen Most Technology Service | | | | | | | |
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| Test item description | Fanless Embedded Android Comp | uter | | | | | |
| Trade Mark | SNBC | | | | | | |
| Model/Type reference: | BIPC-R200 | | | | | | |
| Listed Models | N/A | | | | | | |
| Modulation Type | b: DSSS ,CCK | | | | | | |
| | g/n: BPSK,QPSK,QAM | | | | | | |
| Operation Frequency: | From 2412MHz~2462MHz | | | | | | |
| Rating | DC 12V | | | | | | |
| Hardware version | V1.2 | | | | | | |
| Software version: | snbcbox-android_arm-release-7.1. | 2-snbc-20230524.134909 | | | | | |
| Result | PASS | | | | | | |

TEST REPORT

| Equipment under Test | : | Fanless Embedded Android Computer |
|----------------------|---|---|
| Model /Type | : | BIPC-R200 |
| Listed Models | : | N/A |
| Remark | | N/A. |
| Applicant | : | Shandong New Beiyang Information Technology Co.,Ltd |
| Address | : | 169 HUOJU RD HI-TECH ZONE WEIHAI SHANDONG,Weihai, 264209,CHINA |
| Manufacturer | : | Shandong New Beiyang Information Technology Co.,Ltd |
| Address | : | 169 HUOJU RD HI-TECH ZONE WEIHAI SHANDONG,Weihai, 264209,CHINA |

| Test Result: | PASS |
|--------------|------|
|--------------|------|

The test report merely corresponds to the test sample. It is not permitted to copy extracts of these test result without the written permission of the test laboratory.

Contents

| 1 | REVISION HISTORY | 4 |
|------|---|----|
| 2 | TEST STANDARDS | 5 |
| 3 | SUMMARY | 6 |
| 3.1 | General Remarks | 6 |
| 3.2 | Product Description | 6 |
| 3.3 | Equipment Under Test | 6 |
| 3.4 | Short description of the Equipment under Test (EUT) | 6 |
| 3.5 | EUT operation mode | 6 |
| 3.6 | Block Diagram of Test Setup | 7 |
| 3.7 | Test Item (Equipment Under Test) Description* | 7 |
| 3.8 | Auxiliary Equipment (AE) Description | 7 |
| 3.9 | Antenna Information* | 7 |
| 3.10 | Related Submittal(s) / Grant (s) | 7 |
| 3.11 | Modifications | 8 |
| 3.12 | EUT configuration | 8 |
| 4 | TEST ENVIRONMENT | 9 |
| 4.1 | Address of the test laboratory | 9 |
| 4.2 | Test Facility | 9 |
| 4.3 | Environmental conditions | 9 |
| 4.4 | Test Description | 10 |
| 4.5 | Statement of the measurement uncertainty | 10 |
| 4.6 | Equipments Used during the Test | 11 |
| 5 | TEST CONDITIONS AND RESULTS | 12 |
| 5.1 | AC Power Conducted Emission | 12 |
| 5.2 | Radiated Emission | 15 |
| 5.3 | Maximum Conducted Output Power | 22 |
| 5.4 | Power Spectral Density | 23 |
| 5.5 | 6dB Bandwidth | 24 |
| 5.6 | Out-of-band Emissions | 25 |
| 5.7 | Duty Cycle Information | 26 |
| 5.8 | Antenna Requirement | 27 |
| 6 | TEST SETUP PHOTOS OF THE EUT | 28 |
| 7 | PHOTOS OF THE EUT | |
| APPE | ENDIX I.Conducted Peak Output Power | 30 |
| APPE | ENDIX II.99% Bandwidth | 31 |
| APPE | ENDIX III.6dB Bandwidth | 33 |
| APPE | ENDIX IV.Conducted Out Of Band Emission | 35 |
| | ENDIX V.Duty Cycle | 41 |
| APPE | ENDIX VI.Power Spectral Density | 46 |

1 <u>Revision History</u>

| Revision | Issue Date | Revisions | Revised By |
|----------|------------|---------------|------------|
| 00 | 2023-09-19 | Initial Issue | Alisa Luo |
| | | | |
| | | | |

2 TEST STANDARDS

The tests were performed according to following standards:

<u>FCC Rules Part 15.247</u>: 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. <u>ANSI C63.10-2013</u>: American National Standard for Testing Unlicensed Wireless Devices <u>KDB558074 D01 v05r02</u>: Guidance for Compliance Measurements on Digital Transmission Systems (DTS) ,Frequency Hopping Spread Spectrum System(HFSS), and Hybrid System Devices Operating Under §15.247 of The FCC rules.

3 <u>SUMMARY</u>

3.1 General Remarks

| Date of receipt of test sample | : | 2023.09.13 |
|--------------------------------|---|---------------|
| | | |
| Testing commenced on | : | 2023.09.14-18 |
| | | |
| Testing concluded on | : | 2023.09.19 |

3.2 **Product Description**

| Product Name: | Fanless Embedded Android Computer |
|-----------------------|---|
| Model/Type reference: | BIPC-R200 |
| Power Supply: | DC 12V |
| Testing sample ID: | МТҮР02939 |
| WIFI : | |
| Supported type: | 802.11b/802.11g/802.11n(H20) |
| Modulation: | b: DSSS ,CCK g/n: BPSK,QPSK,QAM |
| Operation frequency: | 802.11b/802.11g/802.11n(H20): 2412MHz~2462MHz |
| Channel number: | 802.11b/802.11g/802.11n(H20): 11 |
| Channel separation: | 5MHz |
| Antenna type: | Sucker Antenna |
| Antenna gain: | 1.91dBi |

3.3 Equipment Under Test

Power supply system utilised

| Power supply voltage | : | 0 | 230V / 50 Hz | 0 | 120V / 60Hz |
|--|---|---|--------------|---|-------------|
| | | 0 | 12 V DC | 0 | 24 V DC |
| Other (specified in blank below) | | | | | |
| | | | | | |

<u>DC 12V</u>

3.4 Short description of the Equipment under Test (EUT)

This is a Fanless Embedded Android Computer For more details, refer to the user's manual of the EUT.

3.5 EUT operation mode

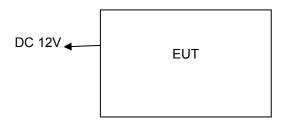
The application provider specific test software(AT command) to control sample in continuous TX and RX (Duty Cycle >98%) for testing meet KDB558074 test requirement.

Report No.: MTEB23090179-R2 Page 7 of 47

| Channel | Frequency(MHz) | Channel | Frequency(MHz) |
|---------|----------------|---------|----------------|
| 1 | 2412 | 8 | 2447 |
| 2 | 2417 | 9 | 2452 |
| 3 | 2422 | 10 | 2457 |
| 4 | 2427 | 11 | 2462 |
| 5 | 2432 | | |
| 6 | 2437 | | |
| 7 | 2442 | | |

IEEE 802.11b/g/n: Thirteen channels are provided to the EUT.

3.6 Block Diagram of Test Setup



3.7 Test Item (Equipment Under Test) Description*

| Short designation | EUT Name | EUT Description | Serial number | Hardware status | Software status |
|-------------------|----------|--------------------|---------------|--------------------|-----------------|
| EUT A | / | / | / | / | / |
| EUT B | / | / | / | / | / |
| | | | | | |

*: declared by the applicant. According to customers information EUTs A and B are the same devices.

3.8 Auxiliary Equipment (AE) Description

| AE short designation | EUT Name (if available) | EUT Description | Serial number (if available) | Software (if used) |
|----------------------|----------------------------|-----------------|---------------------------------|--------------------|
| AE 1 | Adapter | FJ-SW1202000C | / | 1 |
| AE 2 | / | 1 | 1 | 1 |

3.9 Antenna Information*

| Short designation | Antenna Name | Antenna Type | Frequency Range | Serial number | Antenna Peak Gain |
|-------------------|--------------|-------------------|--------------------|---------------|----------------------|
| Antenna 1 | | Sucker Antenna | 2.4 – 2.5 GHz | | 1.91dBi |
| Antenna 2 | | | | | |
| | | | | | |

*: declared by the applicant.

3.10 Related Submittal(s) / Grant (s)

This submittal(s) (test report) is intended for FCC ID: 2BA3N-BIPCR2 filing to comply with Section 15.247 of the FCC Part 15, Subpart C Rules.

Report No.: MTEB23090179-R2 Page 8 of 47

3.11 Modifications

No modifications were implemented to meet testing criteria.

3.12 EUT configuration

The following peripheral devices and interface cables were connected during the measurement:

- $\, \odot \,$ supplied by the manufacturer
- - Supplied by the lab

| ADAPTER | M/N: | FJ-SW1202000C |
|---------|---------------|------------------------------------|
| | Manufacturer: | Shenzhen Fujia Appliance Co., Ltd. |

4 TEST ENVIRONMENT

4.1 Address of the test laboratory

Shenzhen Most Technology Service Co., Ltd.

No.5, 2nd Langshan Road, North District, Hi-tech Industrial Park, Nanshan, Shenzhen, Guangdong, China. The 3m-Semi anechoic test site fulfils CISPR 16-1-4 according to ANSI C63.4:2014 and CISPR 16-1-4:2010 SVSWR requirement for radiated emission above 1GHz.

4.2 Test Facility

The test facility is recognized, certified, or accredited by the following organizations:

FCC-Registration No.: 0031192610

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

A2LA-Lab Cert. No.: 6343.01

Shenzhen Most Technology Service Co., Ltd. EMC Laboratory has been accredited by A2LA for technical competence in the field of electrical testing, and proved to be in compliance with ISO/IEC 17025: 2005 General Requirements for the Competence of Testing and Calibration Laboratories and any additional program requirements in the identified field of testing.

4.3 Environmental conditions

Radiated Emission:

| Temperature: | 24 ° C |
|-----------------------|--------------|
| | |
| Humidity: | 48 % |
| | |
| Atmospheric pressure: | 950-1050mbar |

AC Main Conducted testing:

| 24 ° C | |
|--------------|--|
| | |
| 45 % | |
| | |
| 950-1050mbar | |
| | |

Conducted testing:

| Temperature: | 24 ° C | |
|-----------------------|--------------|--|
| | | |
| Humidity: | 45 % | |
| | | |
| Atmospheric pressure: | 950-1050mbar | |

4.4 Test Description

| FCC PART 15.247 | | |
|---------------------------------|--------------------------------|------|
| FCC Part 15.207 | AC Power Conducted Emission | N/A |
| FCC Part 15.247(a)(2) | 6dB Bandwidth | PASS |
| FCC Part 15.247(d) | Spurious RF Conducted Emission | PASS |
| FCC Part 15.247(b) | Maximum Conducted Output Power | PASS |
| FCC Part 15.247(e) | Power Spectral Density | PASS |
| FCC Part 15.109/ 15.205/ 15.209 | Radiated Emissions | PASS |
| FCC Part 15.247(d) | Band Edge | PASS |
| FCC Part 15.203/15.247 (b) | Antenna Requirement | PASS |

Data Rate Used:

Preliminary tests were performed in different data rate to find the worst radiated emission. The data rate shown in the table below is the worst-case rate with respect to the specific test item. Investigation has been done on all the possible configurations for searching the worst cases. The following table is a list of the test modes shown in this test report.

| Test Items | Mode | Data Rate | Channel |
|--|-----------------|-----------|---------|
| Maximum Peak Conducted Output Power | 11b/DSSS | 1 Mbps | 1/6/11 |
| Maximum Peak Conducted Output Power Power Spectral Density 6dB Bandwidth Spurious RF conducted emission Radiated Emission 9KHz~1GHz& | 11g/OFDM | 6 Mbps | 1/6/11 |
| | 11n(20MHz)/OFDM | 6.5Mbps | 1/6/11 |
| Radiated Emission 1GHz~10 th Harmonic | 11n(40MHz)/OFDM | 6.5Mbps | 3/6/9 |
| | 11b/DSSS | 1 Mbps | 1/11 |
| Band Edge | 11g/OFDM | 6 Mbps | 1/11 |
| | 11n(20MHz)/OFDM | 6.5Mbps | 1/11 |
| | 11n(40MHz)/OFDM | 6.5Mbps | 3/9 |

4.5 Statement of the measurement uncertainty

The data and results referenced in this document are true and accurate. The reader is cautioned that there may be errors within the calibration limits of the equipment and facilities. The measurement uncertainty was calculated for all measurements listed in this test report acc. to CISPR 16 - 4 "Specification for radio disturbance and immunity measuring apparatus and methods – Part 4: Uncertainty in EMC Measurements" and is documented in the Shenzhen Most Technology Service Co., Ltd. quality system acc. to DIN EN ISO/IEC 17025. Furthermore, component and process variability of devices similar to that tested may result in additional deviation. The manufacturer has the sole responsibility of continued compliance of the device.

Hereafter the best measurement capability for Shenzhen Most Technology Service Co., Ltd. is reported:

| Test | Range | Measurement Uncertainty | Notes |
|-----------------------------------|------------|----------------------------|-------|
| Radiated Emission | 30~1000MHz | 4.10 dB | (1) |
| Radiated Emission | 1~18GHz | 4.32 dB | (1) |
| Radiated Emission | 18-40GHz | 5.54 dB | (1) |
| Conducted Disturbance | 0.15~30MHz | 3.12 dB | (1) |
| 6dB Bandwidth & 99% Bandwidth | 1 | 5% | (1) |
| Maximum Conducted Output Power | 1 | 0.80dB | (1) |
| Spurious RF Conducted Emission | 1 | 1.6dB | (1) |

(1) This uncertainty represents an expanded uncertainty expressed at approximately the 95% confidence level using a coverage factor of k=2.

| 4.6 | Equipments | Used | during | the | Test |
|-----|------------|------|--------|-----|------|
|-----|------------|------|--------|-----|------|

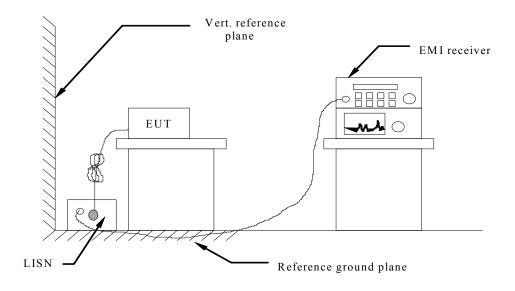
| Item | Equipment | Manufacturer | Model No. | Serial No. | Firmware versions | Last Cal. | Cal. Interval |
|------|---|------------------|-----------------|------------|---------------------|------------|---------------|
| 1. | L.I.S.N. | R&S | ENV216 | 100093 | / | 2023/03/17 | 1 Year |
| 2 | Three-phase artificial power network | Schwarzback Mess | NNLK8129 | 8129178 | / | 2023/03/17 | 1 Year |
| 3. | Receiver | R&S | ESCI | 100492 | V3.0-10-2 | 2023/03/17 | 1 Year |
| 4 | Receiver | R&S | ESPI | 101202 | V3.0-10-2 | 2023/03/17 | 1 Year |
| 5 | Spectrum analyzer | Agilent | 9020A | MT-E306 | A14.16 | 2023/03/17 | 1 Year |
| 6 | Bilong Antenna | Sunol Sciences | JB3 | A121206 | / | 2023/03/17 | 1 Year |
| 7 | Horn antenna | HF Antenna | HF Antenna | MT-E158 | / | 2023/03/17 | 1 Year |
| 8 | Loop antenna | Beijing Daze | ZN30900B | 1 | / | 2023/03/17 | 1 Year |
| 9 | Horn antenna | R&S | OBH100400 | 26999002 | / | 2023/03/17 | 1 Year |
| 10 | Wireless Communication Test Set | R&S | CMW500 | 1 | CMW-BASE- 3.7.21 | 2023/03/17 | 1 Year |
| 11 | Spectrum analyzer | R&S | FSP | 100019 | V4.40 SP2 | 2023/03/17 | 1 Year |
| 12 | High gain antenna | Schwarzbeck | LB-180400KF | MT-E389 | / | 2023/03/17 | 1 Year |
| 13 | Preamplifier | Schwarzbeck | BBV 9743 | MT-E390 | / | 2023/03/17 | 1 Year |
| 14 | Pre-amplifier | EMCI | EMC051845S E | MT-E391 | / | 2023/03/17 | 1 Year |
| 15 | Pre-amplifier | Agilent | 83051A | MT-E392 | / | 2023/03/17 | 1 Year |
| 16 | High pass filter unit | Tonscend | JS0806-F | MT-E393 | / | 2023/03/17 | 1 Year |
| 17 | RF Cable(below1GHz) | Times | 9kHz-1GHz | MT-E394 | / | 2023/03/17 | 1 Year |
| 18 | RF Cable(above 1GHz) | Times | 1-40G | MT-E395 | / | 2023/03/17 | 1 Year |
| 19 | RF Cable (9KHz-40GHz) | Tonscend | 170660 | N/A | / | 2023/03/17 | 1 Year |
| 20 | Power meter | R&S | NRVS | 100444 | / | 2023/03/17 | 1 Year |

Note: The Cal.Interval was one year.

5 TEST CONDITIONS AND RESULTS

AC Power Conducted Emission 5.1

TEST CONFIGURATION



TEST PROCEDURE

1 The equipment was set up as per the test configuration to simulate typical actual usage per the user's manual. The EUT is a tabletop system, a wooden table with a height of 0.8 meters is used and is placed on the ground plane as per ANSI C63.10-2013.

2 Support equipment, if needed, was placed as per ANSI C63.10-2013

3 All I/O cables were positioned to simulate typical actual usage as per ANSI C63.10-2013

4 The EUT received DC 12V power from adapter, the adapter received AC120V/60Hz and AC 240V/60Hz power through a Line Impedance Stabilization Network (LISN) which supplied power source and was grounded to the ground plane.

5 All support equipments received AC power from a second LISN, if any.

6 The EUT test program was started. Emissions were measured on each current carrying line of the EUT using a spectrum Analyzer / Receiver connected to the LISN powering the EUT. The LISN has two monitoring points: Line 1 (Hot Side) and Line 2 (Neutral Side). Two scans were taken: one with Line 1 connected to Analyzer / Receiver and Line 2 connected to a 50 ohm load; the second scan had Line 1 connected to a 50 ohm load and Line 2 connected to the Analyzer / Receiver.

7 Analyzer / Receiver scanned from 150 KHz to 30MHz for emissions in each of the test modes.

8 During the above scans, the emissions were maximized by cable manipulation.

AC Power Conducted Emission Limit

For intentional device, according to § 15.207(a) AC Power Conducted Emission Limits is as following :

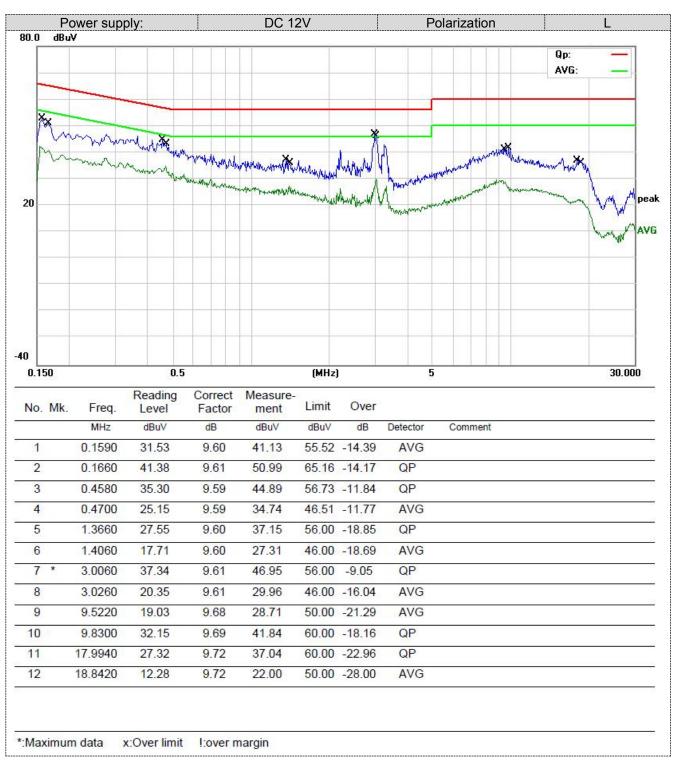
| Eroquoney rango (MHz) | Limit (dBuV) | | |
|--|--------------|-----------|--|
| Frequency range (MHz) | Quasi-peak | Average | |
| 0.15-0.5 | 66 to 56* | 56 to 46* | |
| 0.5-5 | 56 | 46 | |
| 5-30 | 60 | 50 | |
| * Decreases with the logarithm of the frequency. | | | |

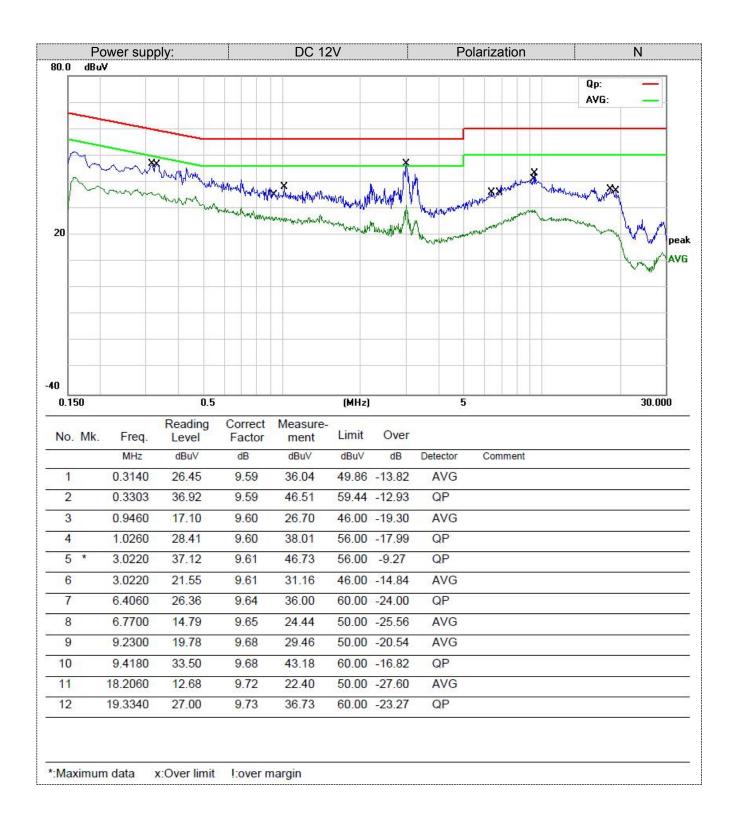
TEST RESULTS

Report No.: MTEB23090179-R2 Page 13 of 47

Remark:

1.WIFI modes were test at 802.11b/802.11g/802.11n (H20) (Low, Middle, and High channel); only the worst result of 802.11b Middle Channel was reported as below:

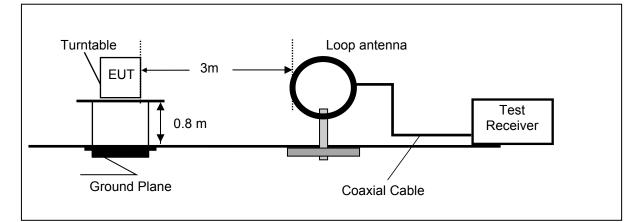




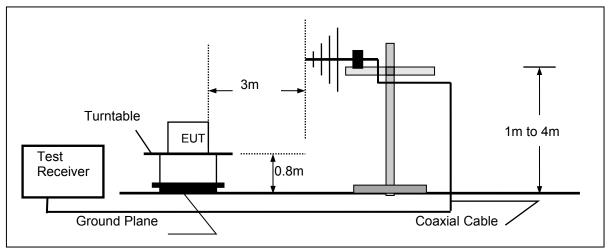
5.2 Radiated Emission

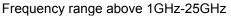
TEST CONFIGURATION

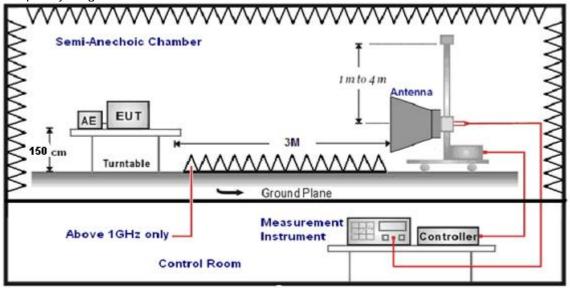
Frequency range 9 KHz – 30MHz



Frequency range 30MHz – 1000MHz







TEST PROCEDURE

- 1. The EUT was placed on a turn table which is 0.8m above ground plane when testing frequency range 9 KHz –1GHz;the EUT was placed on a turn table which is 1.5m above ground plane when testing frequency range 1GHz 25GHz.
- 2. Maximum procedure was performed by raising the receiving antenna from 1m to 4m and rotating the turn table from 0° to 360° to acquire the highest emissions from EUT.
- 3. And also, each emission was to be maximized by changing the polarization of receiving antenna both horizontal and vertical.
- 4. Repeat above procedures until all frequency measurements have been completed.
- 5. Radiated emission test frequency band from 9KHz to 25GHz.
- 6. The distance between test antenna and EUT as following table states:

| Test Frequency range | Test Antenna Type | Test Distance |
|----------------------|----------------------------|---------------|
| 9KHz-30MHz | Active Loop Antenna | 3 |
| 30MHz-1GHz | Ultra-Broadband Antenna | 3 |
| 1GHz-18GHz | Double Ridged Horn Antenna | 3 |
| 18GHz-25GHz | Horn Anternna | 1 |

7. Setting test receiver/spectrum as following table states:

| • . | | | | | |
|-----|----------------------|---|----------|--|--|
| | Test Frequency range | Test Receiver/Spectrum Setting | Detector | | |
| | 9KHz-150KHz | RBW=200Hz/VBW=3KHz,Sweep time=Auto | QP | | |
| | 150KHz-30MHz | RBW=9KHz/VBW=100KHz,Sweep time=Auto | QP | | |
| | 30MHz-1GHz | RBW=120KHz/VBW=1000KHz,Sweep time=Auto | QP | | |
| | 1GHz-40GHz | Peak Value: RBW=1MHz/VBW=3MHz, Sweep time=Auto Average Value: RBW=1MHz/VBW=10Hz, Sweep time=Auto | Peak | | |

Field Strength Calculation

The field strength is calculated by adding the Antenna Factor and Cable Factor and subtracting the Amplifier Gain and Duty Cycle Correction Factor(if any) from the measured reading. The basic equation with a sample calculation is as follows:

FS = RA + AF + CL - AG

| Where | FS = Field Strength | CL = Cable Attenuation Factor (Cable Loss) |
|-------|------------------------|--|
| | RA = Reading Amplitude | AG = Amplifier Gain |
| | AF = Antenna Factor | |

Transd=AF +CL-AG

RADIATION LIMIT

For intentional device, according to § 15.209(a), the general requirement of field strength of radiated emission from intentional radiators at a distance of 3 meters shall not exceed the following table. According to § 15.247(d), in any 100kHz bandwidth outside the frequency band in which the EUT is operating, the radio frequency power that is produced by the intentional radiator shall be at least 20dB below that in the100kHz bandwidth within the band that contains the highest level of desired power.

The pre-test have done for the EUT in three axes and found the worst emission at position shown in test setup photos.

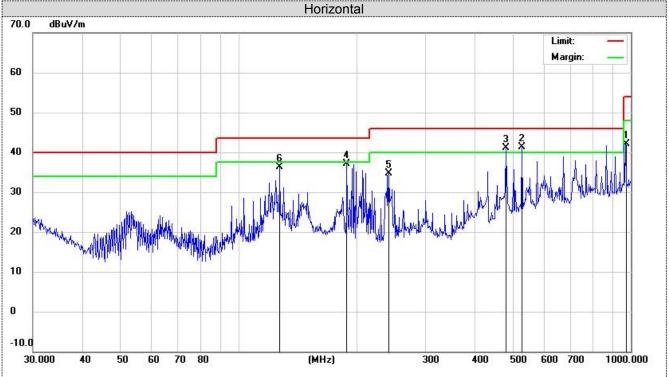
| Frequency (MHz) | Distance | Radiated (dBµV/m) | Radiated (µV/m) |
|-----------------|----------|----------------------------------|-----------------|
| | (Meters) | | |
| 0.009-0.49 | 3 | 20log(2400/F(KHz))+40log(300/3) | 2400/F(KHz) |
| 0.49-1.705 | 3 | 20log(24000/F(KHz))+ 40log(30/3) | 24000/F(KHz) |
| 1.705-30 | 3 | 20log(30)+ 40log(30/3) | 30 |
| 30-88 | 3 | 40.0 | 100 |
| 88-216 | 3 | 43.5 | 150 |
| 216-960 | 3 | 46.0 | 200 |
| Above 960 | 3 | 54.0 | 500 |

TEST RESULTS

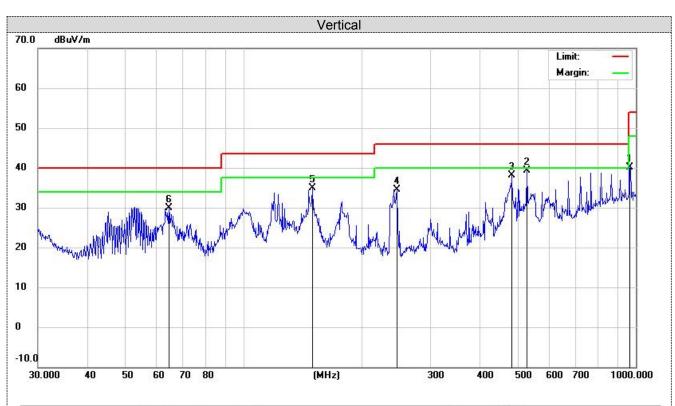
Remark:

- 1. This test was performed with EUT in X, Y, Z position and the worse case was found when EUT in X position.
- 2. All three channels (lowest/middle/highest) of each mode were measured below 1GHz and recorded worst case at 802.11b low channel.
- 3. Radiated emission test from 9 KHz to 10th harmonic of fundamental was verified, and no emission found except system noise floor in 9 KHz to 30MHz and not recorded in this report.
- 4. Remark: Result=Reading value+Factor

For 30MHz-1GHz



| No. | Mk | . Freq. | Reading Level | Correct Factor | Measure- ment | Limit | Over | | Antenna Height | Table Degree | |
|-----|----|----------|------------------|-------------------|------------------|---------------------|-----------------------|----------|-------------------|-----------------|---------|
| | | MHz | dBuV | dB | dBuV/m | dBuV/m | dB | Detector | cm | degree | Comment |
| 1 | | 968.9338 | 12.38 | 29.69 | 42.07 | 54.00 | - <mark>11</mark> .93 | QP | 200 | 158 | |
| 2 | * | 528.2458 | 18.28 | 23.01 | 41.29 | 46.00 | -4.71 | QP | 200 | 116 | |
| 3 | I | 480.5276 | 19.39 | 21.67 | 41.06 | 46.00 | -4.94 | QP | 200 | 258 | |
| 4 | | 189.0743 | 22.32 | 14.87 | 37.19 | 43.5 <mark>0</mark> | -6.31 | QP | 200 | 361 | |
| 5 | | 241.6763 | 20.70 | 14.03 | 34.73 | 46.00 | -11.27 | QP | 200 | 114 | |
| 6 | | 127.6645 | 20.30 | 16.07 | 36.37 | 43.50 | -7.13 | QP | 200 | 251 | |



| No. | Mk | . Freq. | Reading Level | Correct Factor | Measure- ment | Limit | Over | | Antenna Height | Table Degree | |
|-----|----|----------|------------------|-------------------|------------------|--------|--------|----------|-------------------|-----------------|---------|
| | | MHz | dBuV | dB | dBuV/m | dBuV/m | dB | Detector | cm | degree | Comment |
| 1 | | 962.1623 | 10.41 | 29.62 | 40.03 | 54.00 | -13.97 | QP | 100 | 187 | |
| 2 | * | 528.2458 | 16.32 | 23.01 | 39.33 | 46.00 | -6.67 | QP | 100 | 117 | |
| 3 | | 483.9094 | 16.17 | 21.85 | 38.02 | 46.00 | -7.98 | QP | 100 | 169 | |
| 4 | | 245.9509 | 20.69 | 13.91 | 34.60 | 46.00 | -11.40 | QP | 100 | 254 | |
| 5 | | 150.0108 | 17.13 | 17.70 | 34.83 | 43.50 | -8.67 | QP | 100 | 136 | |
| 6 | | 64.6594 | 20.88 | 8.93 | 29.81 | 40.00 | -10.19 | QP | 100 | | |

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

Report No.: MTEB23090179-R2 Page 19 of 47

For 1GHz to 25GHz

Note: 802.11b/802.11g/802.11n (H20) all have been tested, only worse case 802.11b mode is reported

| Polar (H/V) | Frequency | Meter Reading | Antenna Factor | Cable loss | Preamp factor | Emission Level | Limits | Margin | Detector |
|----------------|-----------|------------------|-------------------|---------------|------------------|-------------------|----------|--------|----------|
| | (MHz) | (dBuV) | (dB) | (dB) | (dB) | (dBuV/m) | (dBuV/m) | (dB) | Туре |
| | • | | | 802.11 | b-2412MH | Z | | | 1 |
| V | 4824 | 53.47 | 30.28 | 7.01 | 36.5 | 54.26 | 74 | 19.74 | PK |
| V | 4824 | 41.8 | 30.28 | 7.01 | 36.5 | 42.59 | 54 | 11.41 | AV |
| Н | 4824 | 56.42 | 30.28 | 7.01 | 36.5 | 57.21 | 74 | 16.79 | PK |
| Н | 4824 | 43.84 | 30.28 | 7.01 | 36.5 | 44.63 | 54 | 9.37 | AV |
| V | 7236 | 43.26 | 36.59 | 8.91 | 35.3 | 53.46 | 74 | 20.54 | PK |
| V | 7236 | 31.92 | 36.59 | 8.91 | 35.3 | 42.12 | 54 | 11.88 | AV |
| Н | 7236 | 41.59 | 36.59 | 8.91 | 35.3 | 51.79 | 74 | 22.21 | PK |
| Н | 7236 | 29.52 | 36.59 | 8.91 | 35.3 | 39.72 | 54 | 14.28 | AV |
| | • | | | 802.11 | b -2437M⊦ | z | | | |
| V | 4874 | 54.09 | 30.36 | 7.62 | 36.5 | 55.57 | 74 | 18.43 | PK |
| V | 4874 | 44.46 | 30.36 | 7.62 | 36.5 | 45.94 | 54 | 8.06 | AV |
| Н | 4874 | 56.18 | 30.36 | 7.62 | 36.5 | 57.66 | 74 | 16.34 | PK |
| Н | 4874 | 40.75 | 30.36 | 7.62 | 36.5 | 42.23 | 54 | 11.77 | AV |
| V | 7311 | 43.24 | 36.61 | 8.84 | 35.3 | 53.39 | 74 | 20.61 | PK |
| V | 7311 | 29.87 | 36.61 | 8.84 | 35.3 | 40.02 | 54 | 13.98 | AV |
| Н | 7311 | 39.15 | 36.61 | 8.84 | 35.3 | 49.3 | 74 | 24.7 | PK |
| Н | 7311 | 30.02 | 36.61 | 8.84 | 35.3 | 40.17 | 54 | 13.83 | AV |
| | • | | | 802.11 | b -2462MH | lz | | | |
| V | 4924 | 53.72 | 30.43 | 7.94 | 36.2 | 55.89 | 74 | 18.11 | PK |
| V | 4924 | 40.75 | 30.43 | 7.94 | 36.2 | 42.92 | 54 | 11.08 | AV |
| Н | 4924 | 56.43 | 30.43 | 7.94 | 36.2 | 58.6 | 74 | 15.4 | PK |
| Н | 4924 | 43.79 | 30.43 | 7.94 | 36.2 | 45.96 | 54 | 8.04 | AV |
| V | 7386 | 41.45 | 36.78 | 8.45 | 35.3 | 51.38 | 74 | 22.62 | PK |
| V | 7386 | 29.85 | 36.78 | 8.45 | 35.3 | 39.78 | 54 | 14.22 | AV |
| Н | 7386 | 43.62 | 36.78 | 8.45 | 35.3 | 53.55 | 74 | 20.45 | PK |
| Н | 7386 | 29.4 | 36.78 | 8.45 | 35.3 | 39.33 | 54 | 14.67 | AV |

Note:

1) Emission level (dBuV/m) = Meter Reading+ antenna Factor+ cable loss- preamp factor.

2) Margin value = Limits-Emission level.

3) -- Mean the PK detector measured value is below average limit.

4) The other emission levels were very low against the limit.

5) RBW1MHz VBW3MHz Peak detector is for PK value; RBW 1MHz VBW10Hz Peak detector is for AV value.

Report No.: MTEB23090179-R2 Page 20 of 47

Results of Band Edges Test (Radiated)

| Polar (H/V) | Frequency | Meter Reading | Antenna Factor | Cable loss | Preamp factor | Emission Level | Limits | Margin | Detector Type | | | | | |
|----------------|------------------|------------------|-------------------|---------------|------------------|-------------------|----------|--------|------------------|--|--|--|--|--|
| (100) | (MHz) | (dBuV) | (dB) | (dB) | (dB) | (dBuV/m) | (dBuV/m) | (dB) | Type | | | | | |
| | 802.11b -2412MHz | | | | | | | | | | | | | |
| V | 2390 | 59.47 | 27.49 | 3.32 | 36.22 | 54.06 | 74 | 19.94 | PK | | | | | |
| V | 2390 | 44.48 | 27.49 | 3.32 | 36.22 | 39.07 | 54 | 14.93 | AV | | | | | |
| Н | 2390 | 58.73 | 27.49 | 3.32 | 36.22 | 53.32 | 74 | 20.68 | PK | | | | | |
| Н | 2390 | 43.1 | 27.49 | 3.32 | 36.22 | 37.69 | 54 | 16.31 | AV | | | | | |
| V | 2400 | 56.02 | 27.55 | 3.41 | 36.22 | 50.76 | 74 | 23.24 | PK | | | | | |
| V | 2400 | 47.17 | 27.55 | 3.41 | 36.22 | 41.91 | 54 | 12.09 | AV | | | | | |
| Н | 2400 | 59.84 | 27.55 | 3.41 | 36.22 | 54.58 | 74 | 19.42 | PK | | | | | |
| Н | 2400 | 46.33 | 27.55 | 3.41 | 36.22 | 41.07 | 54 | 12.93 | AV | | | | | |
| | • | | | 802.11 | b -2462M⊦ | lz | | | | | | | | |
| V | 2483.5 | 56.92 | 27.45 | 3.38 | 36.34 | 51.41 | 74 | 22.59 | PK | | | | | |
| V | 2483.5 | 46.63 | 27.45 | 3.38 | 36.34 | 41.12 | 54 | 12.88 | AV | | | | | |
| Н | 2483.5 | 57.03 | 27.45 | 3.38 | 36.34 | 51.52 | 74 | 22.48 | PK | | | | | |
| Н | 2483.5 | 45.03 | 27.45 | 3.38 | 36.34 | 39.52 | 54 | 14.48 | AV | | | | | |
| V | 2500 | 55.63 | 27.41 | 3.47 | 36.35 | 50.16 | 74 | 23.84 | PK | | | | | |
| V | 2500 | 47.63 | 27.41 | 3.47 | 36.35 | 42.16 | 54 | 11.84 | AV | | | | | |
| Н | 2500 | 55.48 | 27.41 | 3.47 | 36.35 | 50.01 | 74 | 23.99 | PK | | | | | |
| Н | 2500 | 44.92 | 27.41 | 3.47 | 36.35 | 39.45 | 54 | 14.55 | AV | | | | | |

| Polar (H/V) | Frequency | Meter Reading | Antenna Factor | Cable loss | Preamp factor | Emission Level | Limits | Margin | Detector Type | | | | | |
|----------------|------------------|------------------|-------------------|---------------|------------------|-------------------|----------|--------|------------------|--|--|--|--|--|
| (10, •) | (MHz) | (dBuV) | (dB) | (dB) | (dB) | (dBuV/m) | (dBuV/m) | (dB) | Type | | | | | |
| | 802.11g -2412MHz | | | | | | | | | | | | | |
| V | 2390 | 57.4 | 27.49 | 3.32 | 36.22 | 51.99 | 74 | 22.01 | PK | | | | | |
| V | 2390 | 44.68 | 27.49 | 3.32 | 36.22 | 39.27 | 54 | 14.73 | AV | | | | | |
| Н | 2390 | 56.35 | 27.49 | 3.32 | 36.22 | 50.94 | 74 | 23.06 | PK | | | | | |
| Н | 2390 | 44.26 | 27.49 | 3.32 | 36.22 | 38.85 | 54 | 15.15 | AV | | | | | |
| V | 2400 | 55.96 | 27.55 | 3.41 | 36.22 | 50.7 | 74 | 23.3 | PK | | | | | |
| V | 2400 | 45.15 | 27.55 | 3.41 | 36.22 | 39.89 | 54 | 14.11 | AV | | | | | |
| Н | 2400 | 57.55 | 27.55 | 3.41 | 36.22 | 52.29 | 74 | 21.71 | PK | | | | | |
| Н | 2400 | 44.92 | 27.55 | 3.41 | 36.22 | 39.66 | 54 | 14.34 | AV | | | | | |
| | • | | | 802.11 | g -2462M⊦ | lz | | | | | | | | |
| V | 2483.5 | 58.32 | 27.45 | 3.38 | 36.34 | 52.81 | 74 | 21.19 | PK | | | | | |
| V | 2483.5 | 45.39 | 27.45 | 3.38 | 36.34 | 39.88 | 54 | 14.12 | AV | | | | | |
| Н | 2483.5 | 59.83 | 27.45 | 3.38 | 36.34 | 54.32 | 74 | 19.68 | PK | | | | | |
| Н | 2483.5 | 47.91 | 27.45 | 3.38 | 36.34 | 42.4 | 54 | 11.6 | AV | | | | | |
| V | 2500 | 59.88 | 27.41 | 3.47 | 36.35 | 54.41 | 74 | 19.59 | PK | | | | | |
| V | 2500 | 45.76 | 27.41 | 3.47 | 36.35 | 40.29 | 54 | 13.71 | AV | | | | | |
| Н | 2500 | 56.56 | 27.41 | 3.47 | 36.35 | 51.09 | 74 | 22.91 | PK | | | | | |
| Н | 2500 | 47.72 | 27.41 | 3.47 | 36.35 | 42.25 | 54 | 11.75 | AV | | | | | |